INTRODUCTION

In this and subsequent issues revising and bring up-to-date our "Auto-Lite Bendix Parts Lists" we are separating the various Bendix drive assemblies into three classifications. These classifications include standard type, barrel type and compression type. We believe these sub divisions will make it easier to locate the information wanted and will at the same time facilitate keeping this information up-to-date.

In numbering the pages each section begins with page 1 and has a letter preceding the page number. The letter "A" applies to the section covering standard type Bendix, the letter "B" applies to barrel type Bendix while the letter "C" applies to compression type Bendix.

After having had a chance to use this Bendix information we will be interested in hearing from our Service Stations as to how they like this new arrangement and any suggestions they may have for its possible improvement.

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ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

AUTO-LITE BENDIX PARTS LIST
STANDARD TYPE

Assembly A-L No. EB	EB-1 S12 & AT-5G	EB-3 R-13	EB-4 L13	EB-5 R12	EB-5K R11-12	EB-6 L12	EB-6K L11-12
Driving Head	EB-103 AT-5G	EB-303 R13-105	EB-303 R13-105	EB-603 R12-105	EB-2303 SR10-105	EB-603 R12-105	EB-2303 SR10-105
Driving Spring	EB-105 R13-6	EB-105 R13-6	EB-205 L13-6	EB-505 R12-6	EB-2305 R10-6	EB-605 L12-6	EB-2805 L10-6
Shaft Spring Screw	EB-106 R13-9	EB-307 R13-7	EB-307 R13-7	EB-507 R12-7	EB-507 R12-7	EB-507 R12-7	EB-507 R12-7
Lock Washer (2 Used)	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8
Hd. Sp. Bolt or Sc.	EB-106 R13-9	EB-106 R13-9	EB-106 R13-9	EB-506 R12-9	EB-2306 SR10-109	EB-506 R12-9	EB-2306 SR10-109
Spring Bolt Nut	EB-117 R13-10*	EB-117 R13-10	EB-117 R13-10	EB-517 R12-10		EB-517 R12-10	
Compression Sleeve		EB-319 R13-112	EB-319 R13-112	EB-619 R12-112	EB-2319S R11-112R	EB-619 R12-112	EB-2319S R11-112R
Comp. Sleeve Spring (2 Used)		EB-1720 R13-113	EB-1720 R13-113	EB-1720 R13-113		EB-1720 R13-113	
Spring Support Clip							
S-A Assembly	EB-1111 S12-SA	EB-1311 R13-SA	EB-1411 L13-SA	EB-1501 R12-SA	EB-1511 R11-12-SA	EB-1601 L12-SA	EB-1611 L11-12SA

* 2 Used.

Assembly A-L No. EB	EB-8 L12-14T 10/12P	EB-9 S13 & AT-5G	EB-11 S12 & AT-5H	EB-13 R13X	EB-14 L13X	EB-15 S13 & AT-5H	EB-17 R13X & AT-105
Driving Head	EB-503 R12-5	EB-103 AT-5G	EB-1103 AT-5H	EB-303 R13-105	EB-303 R13-105	EB-1103 AT-5H	EB-1703 AT-105
Driving Spring	EB-605 L12-6	EB-105 R13-6	EB-105 R13-6	EB-1305 R13-6X	EB-1405 L13-6X	EB-105 R13-6	EB-1305 R13-6X
Shaft Spring Screw	EB-507 R12-7	EB-106 R13-9	EB-106 R13-9	EB-1307 R13-7X	EB-1307 R13-7X	EB-106 R13-9	EB-1307 R13-7X
Lock Washer (2 Used)	EB-508 R12-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8
Hd. Sp. Bolt or Sc.	EB-506 R12-9	EB-106 R13-9	EB-106 R13-9	EB-1306 R13-9X	EB-1306 R13-9X	EB-106 R13-9	EB-1306 R13-9X
Spring Bolt Nut	EB-517 R12-10	EB-117 R13-10*	EB-117 R13-10*	EB-117 R13-10	EB-117 R13-10	EB-117 R13-10*	EB-117 R13-10
Compression Sleeve				EB-319 R13-112	EB-319 R13-112		EB-1719 AT-112
Comp. Sleeve Spring (2 Used)				EB-1720 R13-113	EB-1720 R13-113		EB-1721 AT-113
Spring Support Clip							
S-A Assembly	EB-2611 L12-SA 14T 10/12P	EB-1911 S13-SA	EB-1111 S12-SA	EB-1311 R13-SA	EB-1411 L13-SA	EB-1911 S13-SA	EB-1311 R13-SA

* 2 Used.

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AUTO-LITE BENDIX PARTS LIST
STANDARD TYPE

Assembly A-L No. EB	EB-20 L12-13	EB-21 R10	EB-22 L10	EB-23 SR10	EB-24 L11X-10T 7/9P Spc.	EB-26 L13X & AT-205	EB-27 R11
Driving Head	EB-503 R12-5	EB-2203 R10-105	EB-2203 R10-105	EB-2303 SR10-105	EB-2403 R11-105N	EB-2603 AT-205	EB-2303 SR10-105
Driving Spring	EB-605 L12-6	EB-2305 R10-6	EB-2805 L10-6	EB-2305 R10-6	EB-2405 L11-6X	EB-1405 L13-6X	EB-2305 R10-6
Shaft Spring Screw	EB-507 R12-7	EB-507 R12-7	EB-507 R12-7	EB-507 R12-7	EB-2407 R11-7X	EB-1307 R13-7X	EB-507 R12-7
Lock Washer (2 Used)	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-108 R13-8	EB-508 R12-8
Hd. Sp. Bolt or Sc.	EB-506 R12-9	EB-2206 R10-109	EB-2206 R10-109	EB-2306 SR10-109	EB-2406 R11-109X	EB-1306 R13-9X	EB-2306 SR10-109
Spring Bolt Nut	EB-517 R12-10					EB-117 R13-10	
Compression Sleeve		EB-2219S R10-112R	EB-2219S R10-112R	EB-2319S R11-112R	EB-2319S R11-112R	EB-1719 AT-112	EB-2319S R11-112R
Comp. Sleeve Spring (2 Used)						EB-1721 AT-113	
Spring Support Clip (2 Used)					EB-2622 L11-21		
S-A Assembly	EB-2011 L12-13-SA	EB-2111 R10-SA	EB-2211 L10-SA	EB-2311 SR10-SA	EB-2411 L11X-10ASA	EB-1411 L13-SA	EB-2711 R11-SA

Assembly A-L No. EB	EB-28 L11	EB-29 SR10X-11T	EB-31 R11X	EB-32 L11X	EB-33 R11X-13T	EB-34 L11X-12T
Driving Head	EB-2303 SR10-105	EB-2303 SR10-105	EB-2303 SR10-105	EB-2303 SR10-105	EB-2303 SR10-105	EB-2303 SR10-105
Driving Spring	EB-2805 L10-6	EB-3105 R11-6X	EB-3105 R11-6X	EB-2405 L11-6X	EB-3105 R11-6X	EB-2405 L11-6X
Shaft Spring Screw	EB-507 R12-7	EB-2407 R11-7X	EB-2407 R11-7X	EB-2407 R11-7X	EB-2407 R11-7X	EB-2407 R11-7X
Lock Washer (2 Used)	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8
Hd. Sp. Bolt or Sc.	EB-2306 SR10-109	EB-2406 R11-109X	EB-2406 R11-109X	EB-2406 R11-109X	EB-2406 R11-109X	EB-2406 R11-109X
Spring Bolt Nut						
Compression Sleeve	EB-2319S R11-112R	EB-2319S R11-112R	EB-2319S R11-112R	EB-2319S R11-112R	EB-2319S R11-112R	EB-2319S R11-112R
Comp. Sleeve Spring						
Spring Support Clip (2 Used)		EB-2322 R11-21	EB-2322 R11-21	EB-2622 L11-21	EB-2322 R11-21	EB-2622 L11-21
S-A Assembly	EB-2811 L11-SA	EB-2911 SR10-11-SA	EB-3111 R11X-SA	EB-3211 L11X-SA	EB-3311 R11X-13-SA	EB-3411 L11X-12-SA

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AUTO-LITE BENDIX PARTS LIST
STANDARD TYPE

Assembly A-L No. EB	EB-35 L11XV	EB-36 LC-10Z	EB-37 R11X-L	EB-38 R10-XDL	EB-39 R11-13T	EB-40 BMR-13	EB-41 L11-13
Driving Head	EB-2303 SR10-105	EB-2203 R10-105	EB-2303 SR10-105	EB-2303 SR10-105	EB-2303 SR10-105	Furnished completely rebuilt.	EB-2303 SR10-105
Driving Spring	EB-2405 L11-6X	EB-2805 L10-6	EB-3105 R11-6X	EB-3105 R11-6X	EB-2305 R10-6		EB-2805 L10-6
Shaft Spring Screw	EB-2407 R11-7X	EB-507 R12-7	EB-2407 R11-7X	EB-2407 R11-7X	EB-507 R12-7		EB-507 R12-7
Lock Washer (2 Used)	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8		EB-508 R12-8
Hd. Sp. Bolt or Sc.	EB-2406 R11-109X	EB-2206 R10-109	EB-2406 R11-109X	EB-2406 R11-109X	EB-2306 SR10-109		EB-2306 SR10-109
Spring Bolt Nut							
Compression Sleeve	EB-2319S R11-112R	EB-2219S R10-112R	EB-2319S R11-112R	EB-2319S R11-112R	EB-2319S R11-112R		EB-2319S R11-112R
Comp. Sleeve Spring							
Spring Support Clip (2 Used)	EB-2622 L11-21		EB-2322 R11-21	EB-2322 R11-21			
S-A Assembly	EB-3511 L11-XV-SA	EB-3611 LC-10Z-SA	EB-3711 R11X-LSA	EB-3811 R10-XD-LSA	EB-3911 R11-13-SA		EB-4111 L11-13-SA

Assembly A-L No. EB	EB-42 R11X-12	EB-43 R10X-with R10-109XF	EB-44 R10-XD	EB-45 †† RC13XXX .747 Hd.	EB-45A RC13XXX .747 Hd. 2 5/16" Ctwt.	EB-46 BML-13
Driving Head	EB-2303 SR10-105	EB-2203 R10-105	EB-2303 SR10-105	EB-4503 RC13XXX-5	EB-4503 RC13XXX-5	Furnished completely rebuilt.
Driving Spring	EB-3105 R11-6X	EB-3105 R11-6X	EB-3105 R11-6X	EB-4505 RC13XXX-6	EB-4505 RC13XXX-6	
Shaft Spring Screw	EB-2407 R11-7X	EB-2407 R11-7X	EB-2407 R11-7X	EB-4507 RC13XXX-7	EB-4507 RC13XXX-7	
Lock Washer (2 Used)	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-108 R13-8	EB-108 R13-8	
Hd. Sp. Bolt or Sc.	EB-2406 R11-109X	EB-4306 R10-109XF	EB-2406 R11-109X	EB-4506 RC13XXX-9	EB-4506 RC13XXX-9	
Spring Bolt Nut						
Pinion Back Stop				EB-4515 RC13XXX-1A	EB-4515 RC13XXX-1A	
Pinion Back Stop Sc.				EB-4516 RC13XXX-1B	EB-4516 RC13XXX-1B	
Compression Sleeve	EB-2319S R11-112R	EB-2219S R10-112R	EB-2319S R11-112R	EB-4519S R13K-112R	EB-4519S R13K-112R	
Comp. Sleeve Spring						
Spring Support Clip (2 Used)	EB-2322 R11-21	EB-2322 R11-21	EB-2322 R11-21			
S-A Assembly	EB-4211 R11X-12-SA	EB-4311 R10X-SA	EB-4411 R10XD-SA	EB-4511 RC13XXX KSA	EB-4511A RC13XXX-KSA 2 5/16" Ctwt.	

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†† NOTE:- When replacing EB-45 or EB-47 complete assembly use EB-45A or EB-47A respectively.

AUTO-LITE BENDIX PARTS LIST
STANDARD TYPE

Assembly A-L No. EB	EB-47 †† LC13XXX .747 Hd.	EB-47A LC13XXX .747 Hd. 2 5/16" Ctwt.	EB-47B LC13XXX .747 Hd.	EB-48 R11XV	EB-49 R11-10	EB-50 REF-C-11
Driving Head	EB-4503 RC13XXX-5	EB-4503 RC13XXX-5	Same as EB-47 except special keyway staking.	EB-2303 SR10-105	EB-2303 SR10-105	Furnished completely rebuilt.
Driving Spring	EB-4705 LC13XXX-6	EB-4705 LC13XXX-6		EB-3105 R11-6X	EB-2305 R10-6	
Shaft Spring Screw	EB-4507 RC13XXX-7	EB-4507 RC13XXX-7		EB-2407 R11-7X	EB-507 R12-7	
Lock Washer (2 Used)	EB-108 R13-8	EB-108 R13-8		EB-508 R12-8	EB-508 R12-8	
Hd. Sp. Bolt or Sc.	EB-4506 RC13XXX-9	EB-4506 RC13XXX-9		EB-2406 R11-109X	EB-2306 SR10-109	
Spring Bolt Nut						
Pinion Back Stop	EB-4515 RC13XXX-1A	EB-4515 RC13XXX-1A				
Pinion Back Stop Sc.	EB-4516 RC13XXX-1B	EB-4516 RC13XXX-1B				
Compression Sleeve	EB-4519S R13K-112R	EB-4519S R13K-112R		EB-2319S R11-112R	EB-2319S R11-112R	
Comp. Sleeve Spring						
Spring Support Clip (2 Used)				EB-2322 R11-21		
S-A Assembly	EB-4711 LC13XXX-KSA	EB-4711A LC13XXX-KSA 2 5/16" Ctwt.		EB-4811 R11XV-SA	EB-4911 R11-10-SA	

Assembly A-L No. EB	EB-51 L11X-13	EB-52 L13-MX	EB-53 R13-MX	EB-54 L10-9	EB-55 L11X-10	EB-56 L10-XD
Driving Head	EB-2303 SR10-105	EB-5203 R13M-105	EB-5203 R13M-105	EB-22 03 R10-105	EB-2303 SR10-105	EB-2303 SR10-105
Driving Spring	EB-2405 L11-6X	EB-1405 L13-6X	EB-1305 R13-6X	EB-2805 L10-6	EB-2405 L11-6X	EB-2405 L11-6X
Shaft Spring Screw	EB-2407 R11-7X	EB-1307 R13-7X	EB-1307 R13-7X	EB-507 R12-7	EB-2407 R11-7X	EB-2407 R11-7X
Lock Washer (2 Used)	EB-508 R12-8	EB-108 R13-8	EB-108 R13-8	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8
Hd. Sp. Bolt or Sc.	EB-2406 R11-109X	EB-5206 R13XX-9	EB-5206 R13XX-9	EB-2206 R10-109	EB-2406 R11-109X	EB-2406 R11-109X
Spring Bolt Nut						
Pinion Back Stop						
Pinion Back Stop Sc.						
Compression Sleeve	EB-2319S R11-112R	EB-5219S R13M-112R	EB-5219S R13M-112R	EB-2219S R10-112R	EB-2319S R11-112R	EB-2319S R11-112R
Comp. Sleeve Spring						
Spring Support Clip (2 Used)	EB-2622 L11-21				EB-2622 L11-21	EB-2622 L11-21
S-A Assembly	EB-5111 L11X-13-SA	EB-5211 L13M-SA	EB-5311 R13M-SA	EB-5411 L10-9-SA	EB-5511 L11X-10-SA	EB-5611 L10-XD-SA

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†† NOTE:- When replacing EB-45 or EB-47 complete assembly use EB-45A or EB-47A respectively.

AUTO-LITE BENDIX PARTS LIST
STANDARD TYPE

Assembly A-L No. EB	EB-58 RB11-XX	EB-59 RB11XX-13	EB-60 LB11XX-13	EB-61 LCC10-9	EB-62 R10D-9	EB-63 R10-D
Driving Head	EB-5903 RB11-105	EB-5903 RB11-105	EB-5903 RB11-105	EB-2203 R10-105	EB-2303 SR10-105	EB-2303 SR10-105
Driving Spring	EB-5905 RB11XX-6	EB-5905 RB11XX-6	EB-6005 LB11XX-6	EB-2805 L10-6	EB-2305 R10-6	EB-2305 R10-6
Shaft Spring Screw	EB-5907 R11XX-7	EB-5907 R11XX-7	EB-5907 R11XX-7	EB-507 R12-7	EB-507 R12-7	EB-507 R12-7
Lock Washer (2 Used)	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8
Hd. Sp. Bolt or Sc.	EB-5906 R11XX-109	EB-5906 R11XX-109	EB-5906 R11XX-109	EB-2206 R10-109	EB-2306 SR10-109	EB-2306 SR10-109
Spring Bolt Nut						
Compression Sleeve	EB-2319S R11-112R	EB-2319S R11-112R	EB-2319S R11-112R	EB-2219S R10-112R	EB-2319S R11-112R	EB-2319S R11-112R
Comp. Sleeve Spring						
Spring Support Clip (2 Used)	EB-2322 R11-21	EB-2322 R11-21	EB-2622 L11-21			
S-A Assembly	EB-3111 R11X-SA	EB-3311 R11X-13-SA	EB-5111 L11X-13-SA	EB-6111 LCC10-9-SA	EB-6211 R10D-9-SA	EB-6311 R10D-SA

Assembly A-L No. EB	EB-64 R11X-10	EB-69 L10-FA	EB-70 LB11XX	EB-72 LC11X-10	EB-73 RC13XXX-15
Driving Head	EB-2303 SR10-105	EB-2203 R10-105	EB-5903 RB11-105	EB-2303 SR10-105	EB-4503 RC13XXX-5
Driving Spring	EB-3105 R11-6X	EB-2805 L10-6	EB-6005 LB11XX-6	EB-2405 L11-6X	EB-4505 RC13XXX-6
Shaft Spring Screw	EB-2407 R11-7X	EB-507 R12-7	EB-5907 R11XX-7	EB-2407 R11-7X	EB-4507 RC13XXX-7
Lock Washer (2 Used)	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8	EB-108 R13-8
Hd. Sp. Bolt or Sc.	EB-2406 R11-109X	EB-2206 R10-109	EB-5906 R11XX-109	EB-2406 R11-109X	EB-4506 RC13XXX-9
Spring Bolt Nut					
Pinion Back Stop					EB-4515 RC13XXX-1A
Pinion Back Stop Sc.					EB-4516 RC13XXX-1B
Compression Sleeve	EB-2319S R11-112R	EB-2219S R10-112R	EB-2319S R11-112R	EB-2319S R11-112R	EB-4519S R13K-112R
Comp. Sleeve Spring					
Spring Support Clip (2 Used)	EB-2322 R11-21		EB-2622 L11-21	EB-2622 L11-21	
S-A Assembly	EB-6411 R11X-10-SA	EB-6911 L10FA-SA	EB-3211 L11X-SA	EB-7211 LC11X-10-SA	EB-7311 RC13XXX-15-KSA

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ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

AUTO-LITE BENDIX PARTS LIST
STANDARD TYPE

Assembly A-L No. EB	EB-75 RB10XXT-D	EB-76 RC11-10	EB-77 RB11XX-12		EB-80 R10XD-9	EB-82 L11FX-10
Driving Head	EB-5903 RB11-105	EB-2303 SR10-105	EB-5903 RB11-105		EB-2303 SR10-105	EB-8503 R11F-5
Driving Spring	EB-5905 RB11XX-6	EB-2305 R10-6	EB-5905 RB11XX-6		EB-3105 R11-6X	EB-7805 L11F-6X
Shaft Spring Sc.	EB-5907 R11XX-7	EB-507 R12-7	EB-5907 R11XX-7		EB-2407 R11-7X	EB-7807 R11F-7X
Lock Washer (2 Used)	EB-508 R12-8	EB-508 R12-8	EB-508 R12-8		EB-508 R12-8	EB-108 R13-8
Hd. Sp. Bolt or Sc.	EB-5906 R11XX-109	EB-2306 SR10-109	EB-5906 R11XX-109		EB-2406 R11-109X	EB-7806 R11F-9X
Spring Bolt Nut						
Compression Sleeve	EB-2319S R11-112R	EB-2319S R11-112R	EB-2319S R11-112R		EB-2319S R11-112R	EB-7819S R11F-12R
Comp. Sleeve Spring						
Spring Support Clip (2 Used)	EB-2322 R11-21		EB-2322 R11-21		EB-2322 R11-21	
S-A Assembly	EB-7511 R10XT-DSA	EB-7611 RC11-10-SA	EB-4211 R11X-12-SA		EB-8011 R10XD-9-SA	EB-8211 L11F-10-SA

EB-78 Not in production

Assembly A-L No. EB	EB-83 LCD11X-10		EB-85 RC10HD	EB-86 A-1588	EB-87 RCD10FXD-9	EB-88 RB10FXXTD	EB-89 RC10FXD
Driving Head	EB-2303 SR10-105		EB-8503 R11F-5	EB-8503 R11F-5	EB-8503 R11F-5	EB-8803 RB11F-5	EB-8503 R11F-5
Driving Spring	EB-2405 L11-6X		EB-8505 R11H-6	EB-8605* L11H-6X	EB-8705 R11F-6X	EB-8805 RB11F-6XX	EB-8705 R11F-6X
Shaft Spring Sc.	EB-2407 R11-7X		EB-8507 R11F-7	EB-7807 R11F-7X	EB-7807 R11F-7X	EB-8807 R11F-7XX	EB-7807 R11F-7X
Lock Washer (2 Used)	EB-508 R12-8		EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8
Hd. Sp. Bolt or Sc.	EB-2406 R11-109X		EB-8506 R11F-9	EB-7806 R11F-9X	EB-7806 R11F-9X	EB-8806 R11F-9XX	EB-7806 R11F-9X
Spring Bolt Nut							
Compression Sleeve	EB-2319S R11-112R		EB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R
Comp. Sleeve Spring							
Spring Support Clip (2 Used)	EB-2622 L11-21						
Take up Spring			EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120
S-A Assembly	EB-8311 LCD11X-10-SA		EB-8511 RC10FD-SA	EB-8611 F-3030	EB-8711 RCD10FD-9SA	EB-8811 RB10FTD-SA	EB-8511 RC10FD-SA

Use EB-86 when a complete new drive is needed.

* The drive spring of this assembly has been changed from 7 turns to 6 1/2 turns. Use the new spring when servicing.

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AUTO-LITE BENDIX PARTS LIST
STANDARD TYPE

Assembly A-L No. EB	EB-90 LC11-10	EB-92 RB11FXX	EB-93 RB11FXX-13	EB-94 LB11FXX	EB-95 RB11FXX-12	EB-96 LB11FXX-13
Driving Head	EB-2303 SR10-105	EB-8803 RB11F-5	EB-8803 RB11F-5	EB-8803 RB11F-5	EB-8803 RB11F-5	EB-8803 RB11F-5
Driving Spring	EB-2805 L10-6	EB-8805 RB11F-6XX	EB-8805 RB11F-6XX	EB-9405 LB11F-6XX	EB-8805 RB11F-6XX	EB-9405 LB11F-6XX
Shaft Spring Sc.	EB-507 R12-7	EB-8807 R11F-7XX	EB-8807 R11F-7XX	EB-8807 R11F-7XX	EB-8807 R11F-7XX	EB-8807 R11F-7XX
Lock Washer (2 Used)	EB-508 R12-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8
Hd. Sp. Bolt or Sc.	EB-2306 SR10-109	EB-8806 R11F-9XX	EB-8806 R11F-9XX	EB-8806 R11F-9XX	EB-8806 R11F-9XX	EB-8806 R11F-9XX
Spring Bolt Nut						
Compression Sleeve	EB-2319S R11-112R	EB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R
Comp. Sleeve Spring						
Spring Support Clip						
Take up Spring	EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120
S-A Assembly	EB-9011 LC11-10SA	EB-9211 R11F-SA	EB-9311 R11F13-SA	EB-9411 L11F-SA	EB-9511 R11F12-SA	EB-9611 L11F13-SA

Assembly A-L No. EB	EB-97 R10FXD	EB-98 LC13XXX-15	EB-99 LCD11FX-10	EBA-1 RCD10FX-D	EBA-2 RCD11FX-10
Driving Head	EB-8503 R11F-5	EB-4503 RC13XXX-5	EB-8503 R11F-5	EB-8503 R11F-5	EB-8503 R11F-5
Driving Spring	EB-8705 R11F-6X	EB-4705 LC13XXX-6	EB-7805 L11F-6X	EB-8705 R11F-6X	EB-8705 R11F-6X
Shaft Spring Sc.	EB-7807 R11F-7X	EB-4507 RC13XXX-7	EB-7807 R11F-7X	EB-7807 R11F-7X	EB-7807 R11F-7X
Lock Washer (2 Used)	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8
Hd. Sp. Bolt or Sc.	EB-7806 R11F-9X	EB-4506 RC13XXX-9	EB-7806 R11F-9X	EB-7806 R11F-9X	EB-7806 R11F-9X
Spring Bolt Nut					
Compression Sleeve	EB-7819S R11F-12R	EB-4519S R13K-112R	EB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R
Pinion Back Stop		EB-4515 RC13XXX-1A			
Pinion Back Stop Sc.		EB-4516 RC13XXX-1B			
Take Up Spring	EB-8734 F-3120		EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120
S-A Assembly	EB-9711 R10FD-SA	EB-9811 LC13XXX-15KSA	EB-9911 LCD11F-10SA	EBA-111 RCD10FD-SA	EBA-211 RCD11F-10SA

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NOTE:- When servicing complete Bendix drives on MAH 12 volt starting motors which are equipped with an "Old Type" drive the "New Type" drive should be used. (See table below.) At the same time the assembly number of the starting motor must be changed to the number under "New Assy.". This change of motor assembly numbers is imperative in order that correct Bendix service parts may be had for the new Bendix drive.

Old Type	Old Assy.	New Type	New Assy.	Old Type	Old Assy.	New Type	New Assy.
EB-59	MAH-4001	EB-93	MAH-4017	EB-58	MAH-4007	EB-92	MAH-4014
EB-60	-4002	EB-96	-4018	EB-58	-4008	EB-92	-4022
EB-59	-4003	EB-93	-4019	EB-77	-4009	EB-95	-4023
EB-58	-4004	EB-92	-4020	EB-58	-4010	EB-92	-4015
EB-58	-4005	EB-92	-4013	EB-59	-4011	EB-93	-4024
EB-70	-4006	EB-94	-4021	EB-59	-4012	EB-93	-4016

AUTO-LITE BENDIX PARTS LIST
STANDARD TYPE

Assembly A-L No. EB	EBA-3A RC13XXX-11T	EBA-4 LCD11F-10	EBA-7 R11FX-10	EBA-8 RBCD11FXX-10
Driving Head	EB-4503 RC13XXX-5	EB-8503 R11F-5	EB-8503 R11F-5	EB-8803 RB11F-5
Driving Spring	EB-4505 RC13XXX-6	EBA-405 L11F-6	EB-8705 R11F-6X	EB-8805 RB11F-6XX
Shaft Spring Sc.	EB-4507 RC13XXX-7	EB-8507 R11F-7	EB-7807 R11F-7X	EB-8807 R11F-7XX
Lock Washer (2 Used)	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8
Hd. Sp. Bolt or Sc.	EB-4506 RC13XXX-9	EB-8506 R11F-9	EB-7806 R11F-9X	EB-8806 R11F-9XX
Spring Bolt Nut				
Compression Sleeve	EB-4519S R13K-112R	FB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R
Pinion Back Stop	EB-4515 RC13XXX-1A			
Pinion Back Stop Sc.	EB-4516 RC13XXX-1B			
Take'up Spring		EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120
S-A Assembly	EBA-311A RC13XXX-11G-KSA	EB-9911 LCD11F-10SA	EBA-711 R11F-10SA	EBA-211 RCD11F-10SA

Assembly A-L No. EB	EBA-9 LBCD11FXX-10	EBA-11 RCD11FX-13	EBA-14 RCD11F-10	EBA-16 LCD11FXV-10	EBA-17 RCD11FXV-10
Driving Head	EB-8803 RB11F-5	EB-8503 R11F-5	EB-8503 R11F-5	EB-8503 R11F-5	EB-8503 R11F-5
Driving Spring	EB-9405 LB11F-6XX	EB-8705 R11F-6X	EBA-1405 R11F-6	EB-7805 L11F-6X	EB-8705 R11F-6X
Shaft Spring Sc.	EB-8807 R11F-7XX	EB-7807 R11F-7X	EB-8507 R11F-7	EB-7807 R11F-7X	EB-7807 R11F-7X
Lock Washer (2 Used)	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8
Hd. Sp. Bolt or Sc.	EB-8806 R11F-9XX	EB-7806 R11F-9X	EB-8506 R11F-9	EB-7806 R11F-9X	EB-7806 R11F-9X
Spring Bolt Nut					
Compression Sleeve	EB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R
Pinion Back Stop					
Pinion Back Stop Sc					
Take Up Spring	EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120
S-A Assembly	EB-9911 LCD11F-10SA	EBA-1111 RCD11F-13SA	EBA-211 RCD11F-10SA	EBA-1611 LCD11FV-10SA	EBA-1711 RCD11FV-10SA

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AUTO-LITE BENDIX PARTS LIST
STANDARD TYPE

Assembly A-L No. EB	EBA-18 RC13XXX-12T	EBA-19 RCD10FD-9	EBA-23 RB11FXX-10	EBA-24 RBCD11FXX-13
Driving Head	EB-4503 RC13XXX-5	EB-8503 R11F-5	EB-8803 RB11F-5	EB-8803 RB11F-5
Driving Spring	EB-4505 RC13XXX-6	EBA-1405 R11F-6	EB-8805 RB11F-6XX	EB-8805 RB11F-6XX
Shaft Spring Screw	EB-4507 RC13XXX-7	EB-8507 R11F-7	EB-8807 R11F-7XX	EB-8807 R11F-7XX
Lock Washer (2 Used)	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8
Hd. Sp. Bolt or Sc.	EB-4506 RC13XXX-9	EB-8506 R11F-9	EB-8806 R11F-9XX	EB-8806 R11F-9XX
Spring Bolt Nut				
Compression Sleeve	EB-4519S R13K-112R	EB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R
Pinion Back Stop	EB-4515 RC13XXX-1A			
Pinion Back Stop Sc.	EB-4516 RC13XXX-1B			
Take up Spring		EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120
S-A Assembly	EBA-1811 RC13XXX-12GKSA	EB-8711 RCD10FD-9SA	EBA-711 R11F-10SA	EBA-1111 RCD11F-13SA

Assembly A-L No. EB	EBA-25 RBCD10FXXD-9	EBA-27 RCD11FX	EBA-36 LCD10FD	EBA-40 LCD11FX-13	EBA-41 A-2169
Driving Head	EB-8803 RB11F-5	EB-8503 R11F-5	EB-8503 R11F-5	EB-8503 R11F-5	EB-8503 R11F-5
Driving Spring	EB-8805 RB11F-6XX	EB-8705 R11F-6X	EBA-405 L11F-6	EB-7805 L11F-6X	EB-8505 R11H-6
Shaft Spring Screw	EB-8807 R11F-7XX	EB-7807 R11F-7X	EB-8507 R11F-7	EB-7807 R11F-7X	EB-8507 R11F-7
Lock Washer (2 Used)	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8
Hd. Sp. Bolt or Sc.	EB-8806 R11F-9XX	EB-7806 R11F-9X	EB-8506 R11F-9	EB-7806 R11F-9X	EB-8506 R11F-9
Spring Bolt Nut					
Compression Sleeve	EB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R	EB-7819S R11F-12R
Pinion Back Stop					
Pinion Back Stop Sc.					
Take up Spring	EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120	EB-8734 F-3120
S-A Assembly	EB-8711 RCD10FD-9SA	EBA-2711 RCD11F-SA	EBA-3611 LCD10FD-SA	EBA-4011 LCD11F-13SA	EBA-4111 F-3841

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AUTO-LITE BENDIX PARTS LIST
BARREL TYPE

Assembly A-L No. EB	EBA-5 A-1673	EBA-12 A-1729	EBA-29 A-1684	EBA-33 A-1792
Driving Spring	EB-8605 L11H-6X	EBA-1205 R11H-6X	EBA-2905 L11H-6	EBA-2105 F-3264
Shaft Spring Sc.	EBA-507 R11H-7X	EBA-507 R11H-7X	EBA-2907 R11H-7	
Lock Washer (2 Used)	EB-108 R13-8	EB-108 R13-8	EB-108 R13-8	
Hd. Sp. Bolt or Sc.	EB-7806 R11F-9X	EB-7806 R11F-9X	EB-8506 R11F-9	
Pinion Assembly	EBA-532 F-3000	EBA-1232 F-3200	EBA-532 F-3000	EBA-1232 F-3200
Meshing Spring	EBA-525 F-2995	EBA-1225 F-2998	EBA-525 F-2995	EBA-1225 F-2998
Anti-Drift Spring	EBA-513 F-3114	EBA-1213 F-3196	EBA-513 F-3114	EBA-1213 F-3196
Retaining Ring	EBA-533 F-2990	EBA-1233 F-3192	*	EBA-1233 F-3192
Screw Shaft Assy.	EBA-531 F-3115	EBA-1231 F-3199	EBA-531 F-3115	EBA-2031 F-3493
Spring Anchor Plate				EBA-2007 F-3266
Lock Ring				EBA-2008 F-3438
Head Screw				EBA-2006 F-3268

* EBA-533 (F-2990) Narrow Groove
EBA-1233 (F-3192) Wide Groove

Assembly A-L No. EB	EBA-34 A-1718	EBA-35 A-2033	EBA-38 A-1806BR	EBA-39 A-2089
Driving Spring	EB-8505 R11H-6	EBA-3505 F-3265	EBA-3505 F-3265	EBA-2105 F-3264
Shaft Spring Screw	EBA-2907 R11H-7			
Lock Washer (2 Used)	EB-108 R13-8			
Hd. Sp. Bolt or Sc.	EB-8506 R11F-9			
Pinion Assembly	EBA-1232 F-3200	EBA-3532 F-3220	EBA-532 F-3000	EBA-2032 F-3405
Meshing Spring	EBA-1225 F-2998	EBA-525 F-2995	EBA-525 F-2995	EBA-1225 F-2998
Anti-Drift Spring	EBA-1213 F-3196	EBA-513 F-3114	EBA-513 F-3114	EBA-1213 F-3196
Retaining Ring	EBA-1233 F-3192	EBA-1233 F-3192	EBA-1233 F-3192	EBA-1233 F-3192
Screw Shaft Assy.	EBA-1231 F-3199	EBA-3531 F-3584	EBA-3831 F-3492	EBA-2031 F-3439T
Spring Anchor Plate		EBA-3507 F-3267	EBA-3507 F-3267	EBA-2007 F-3266
Lock Ring		EBA-2008 F-3438	EBA-3008 F-3238	EBA-2008 F-3438
Head Screw			EBA-3806 F-3395	EBA-2006 F-3268

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AUTO-LITE BENDIX PARTS LIST
COMPRESSION TYPE

Assembly A-L No. EB	EB-65 LCEX-11-10	EB-68 RCEX-11-10	EB-71 LCK-11-10	EB-79 RCKX-11-10	EB-81 RCBX-11-10	EB-91 RCB-11-10
Shaft	EB-6501 LCB-31	EB-6801 RCE-31	EB-7101 LCK-31	EB-7901 RCK-31	EB-8101 RCB-31	EB-8101 RCB-31
Driving Spring	EB-6505 RCEX-36	EB-6505 RCEX-36	EB-6805 RCE-36	EB-6505 RCEX-36	EB-6505 RCEX-36	EB-6805 RCE-36
Drive Stop	EB-6502 RCB-32	EB-6802 RCE-32	EB-7902 RCEX-32	EB-7902 RCEX-32	EB-6502 RCE-32	EB-6502 RCB-32
Pinion	EB-6504S LCB-3104	EB-8104 RCB-310	EB-6504S LCB-3104	EB-8104S RCB-3104	EB-8104S RCB-3104	EB-8104S RCB-3104
Anti-Drift Spring	EB-6513 LCE-16	EB-6813 RCE-16	EB-6513 LCE-16	EB-6813 RCE-16	EB-6813 RCE-16	EB-6813 RCE-16
Thrust Washer (2 Used)	EB-6823 RCE-30	EB-6823 RCE-30	EB-6823 RCE-30	EB-6823 RCE-30	EB-6823 RCE-30	EB-6823 RCE-30
Driving Spring Support	EB-6824 RCE-37	EB-6824 RCE-37	EB-6824 RCE-37	EB-6824 RCE-37	EB-6824 RCE-37	EB-6824 RCE-37
Meshing Spring	EB-6825 RCE-34	EB-6825 RCE-34	EB-6825 RCE-34	EB-6825 RCE-34	EB-6825 RCE-34	EB-6825 RCE-34
Anti-Drift Sp. Sleeve	EB-6526 RCB-38	EB-6826 RCE-38	EB-6826 RCE-38	EB-6826 RCE-38	EB-6526 RCB-38	EB-6526 RCB-38
Pinion Washer	EB-6827 RCE-20	EB-6827 RCE-20	EB-6827 RCE-20	EB-6827 RCE-20	EB-6827 RCE-20	EB-6827 RCE-20
Castellated Nut	EB-6828 RCE-35	EB-6828 RCE-35	EB-6828 RCE-35	EB-6828 RCE-35	EB-6828 RCE-35	EB-6828 RCE-35
Spacing Collar	EB-6529 RCB-40				EB-6529 RCB-40	EB-6529 RCB-40

Assembly A-L No. EB	EBA-6 LCCBX-11-10	EBA-10 LCKX-11-10	EBA-13 RCK-11-10	EBA-26 RCCBX-11-10	EBA-28 LCEX11-10
Shaft	EB-6501 LCB-31	EB-7101 LCK-31	EB-7901 RCK-31	EB-8101 RCB-31	EBA-2801 LCE-31
Driving Spring	EB-6505 RCEX-36	EB-6505 RCEX-36	EB-6805 RCE-36	EB-6505 RCEX-36	EB-6505 RCEX-36
Drive Stop	EB-6502 RCB-32	EB-7902 RCEX-32	EB-7902 RCEX-32	EB-6502 RCB-32	EB-6802 RCE-32
Pinion	EB-6504 LCB-3104C	EB-6504S LCB-3104	EB-8104S RCB-3104	EBA-2604S RCB-3104C	EBA-2804 LCB-310
Anti-Drift Spring	EB-6513 LCE-16	EB-3513 LCE-16	EB-6813 RCE-16	EB-6513 LCE-16	EB-6513 LCE-16
Thrust Washer (2 Used)	EB-6823 RCE-30	EB-6823 RCE-30	EB-6823 RCE-30	EB-6823 RCE-30	EB-6823 RCE-30
Driving Spring Support	EB-6824 RCE-37	EB-6824 RCE-37	EB-6824 RCE-37	EB-6824 RCE-37	EB-6824 RCE-37
Meshing Spring	EB-6825 RCE-34	EB-6825 RCE-34	EB-6825 RCE-34	EB-6825 RCE-34	EB-6825 RCE-34
Anti-Drift Sp. Sleeve	EB-6526 RCB-38	EB-6826 RCE-38	EB-6826 RCE-38	EB-6813 RCE-16	EB-6826 RCE-38
Pinion Washer	EB-6827 RCE-20	EB-6827 RCE-20	EB-6827 RCE-20	EB-6827 RCE-20	EB-6827 RCE-20
Castellated Nut	EB-6828 RCE-35	EB-6828 RCE-35	EB-6828 RCE-35	EB-6828 RCE-35	EB-6828 RCE-35
Spacing Collar	EB-6529 RCB-40			EB-6529 RCB-40	

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AUTO-LITE BENDIX PARTS LIST
COMPRESSION TYPE

Assembly A-L No. EB	EBA-30 LCCBXX11-10	EBA-32 RCKXX11-10S	
Shaft	EB-6501 LCB-31	EB-7901 RCK-31	
Driving Spring	EBA-3005 RCEXX-36	EBA-3005 RCEXX-36	
Drive Stop	EBA-3002 RCBXX-32		
Pinion	EB-6504 LCB-3104C	EB-8104S RCB-3104	
Anti-Drift Spring	EB-6513 LCE-16		
Thrust Washer (1 Used)	EBA-3023 RCEXX-30	EBA-3023 RCEXX-30	
Driving Spring Support	EBA-3024 RCEXX-37	EBA-3024 RCEXX-37	
Meshing Spring	EBA-3025 RCEXX-34	EBA-3025 RCEXX-34	
Anti-Drift Sp. Sleeve	EB-6526 RCB-38		
Pinion Washer	EB-6827 RCE-20		
Castellated Nut	EBA-3028 RCEXX-35	EB-6828 RCE-35	
Spacing Collar	EB-6529 RCB-40	EBA-3223 RCEXX-30A	
Anti-Drift Sp. & Sleeve		EBA-3202 RCK-42S	

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Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
14L05	1	5/16 Lock Washer
13389	1	Terminal Washer
13391	1	5/16-18 Hex. Nut
13438	2	Plain Washer
(13612)	1	Frame & Field Assembly
14L05	1	5/16 Lock Washer
13384	6	Pole Piece
13389	1	Terminal Washer
13391	1	5/16-18 Hex. Nut
13613	1	Field Coil Assy. - Comp.
13637	1	Terminal Post
13701	2	Ins. Washer
13702	1	Ins. Bushing
13915	1	Terminal Post Ins.
14305410	6	Pole Piece Screw
13617	1	Field Connection Ins.

Comm. End Head Assembly & Parts Used With

14L60	2	#10 Lock Washer
13473	1	Comm. End Cover
13592	3	Brush - Short Pigtail
13593	1	Brush - Long Pigtail
13598	1	Comm. End Head Assembly
12N1600	2	#10-32 Hex. Nut
13576	1	Absorbent Bronze Brg.
13980	1	Brush Holder Plate Assy.
13979	4	Brush Spring
22169	2	#10 Lock Washer
22549	1	Dowel Pin
12160010	2	#10-32x5/8 Rd. Hd. Screw
16398	1	#10-32x3/8 Bdg. Hd. Screw
20053	1	#10 Skpf. Washer
14204308	3	1/4-20x1/2 Flat. Hd. Screw
20160004	2	#10-32x1/4 Rd. Hd. Screw
24158005	1	#8-32x5/16 Rd. Hd. Screw
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13170	4	Thrust Washer
13348	1	#6 Woodruff Key
13475	1	Thrust Washer
16437	1	Armature Assembly

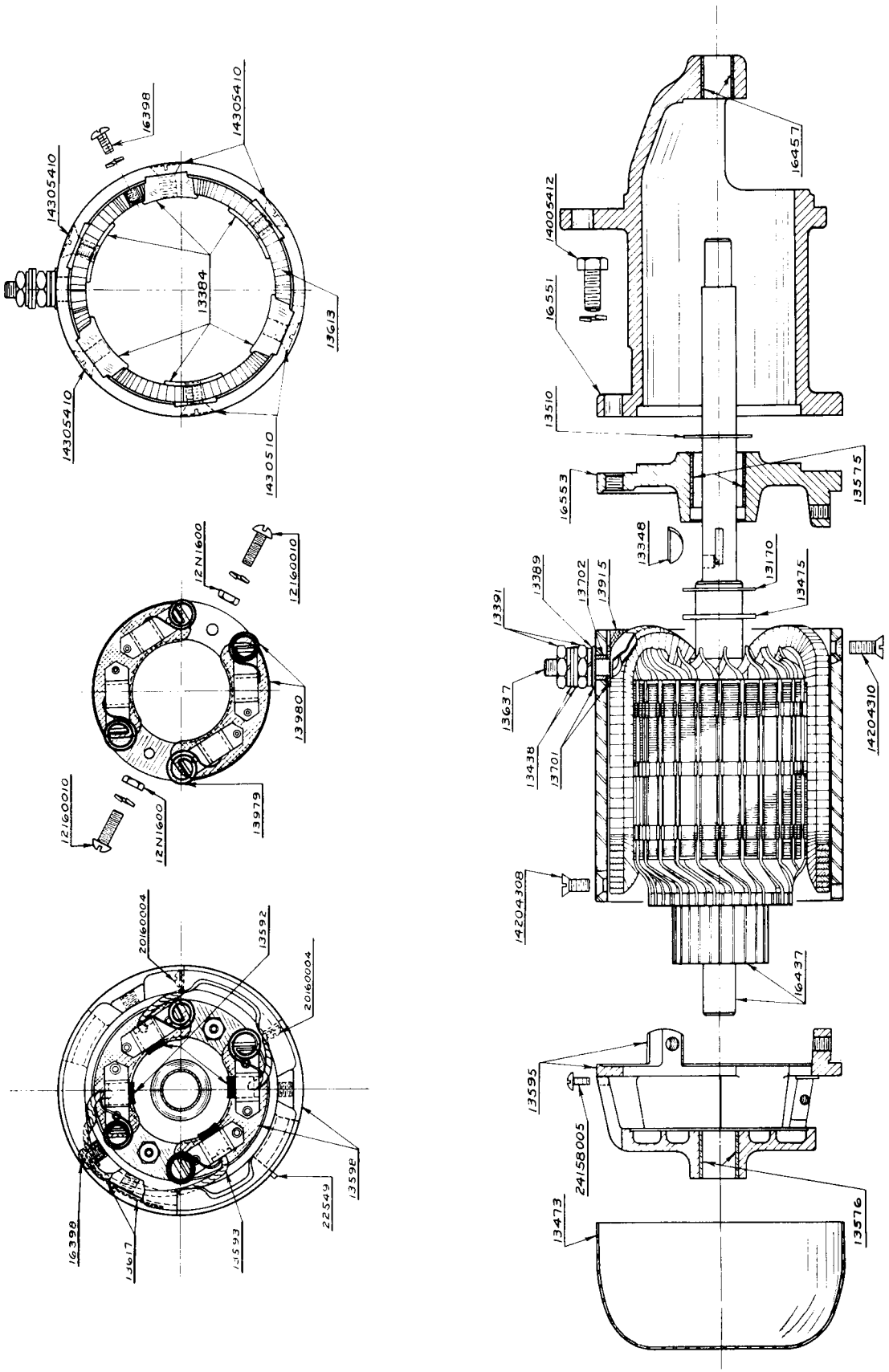
Miscellaneous Parts

14L05	3	5/16 Lock Washer
13510	1	Thrust Washer
16551	1	Pinion Housing Assy.
16457	1	Absorbent Bronze Brg.
16553	1	Intermediate Brg. Assy.
13575	1	Absorbent Bronze Brg.
16555	1	Bendix Drive Assembly
14005412	3	5/16-18x3/4 Hex. Hd. Sc.
14204310	3	1/4-20x5/8 Flat Hd. Screw
		1 2 3 4 5

(Issued 11-20-35)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

DI-1313 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
14L05	1	5/16 Lock Washer
13389	1	Terminal Washer
13391	1	5/16-18 Hex. Nut
13438	2	Plain Washer
(13612)	1	Frame & Field Assy.
14L05	1	5/16 Lock Washer
13384	6	Pole Piece
13389	1	Terminal Washer
13391	1	5/16-18 Hex. Nut
13613	1	Field Coil Assy. - Comp.
13637	1	Terminal Post
13701	2	Ins. Washer
13702	1	Ins. Bushing
13915	1	Terminal Post Ins.
14305410	6	Pole Piece Screw
13617	1	Field Connection Ins.

Comm. End Head Assembly & Parts Used With

14L60	2	#10 Lock Washer
13473	1	Comm. End Cover
13592	3	Brush - Short Pigtail
13593	1	Brush - Long Pigtail
13598	1	Comm. End Head Assembly
12N1600	2	#10-32 Hex. Nut
13576	1	Absorbent Bronze Brg.
13980	1	Brush Holder Plate Assy.
13979	4	Brush Spring
22169	2	#10 Lock Washer
22549	1	Dowel Pin
12160010	2	#10-32x5/8 Rd. Hd. Sc.
16398	1	#10-32x3/8 Bdg. Hd. Screw
20053	1	#10 Skpf. Washer
14204308	3	1/4-20x1/2 Flat Hd. Screw
20160004	2	#10-32x1/4 Rd. Hd. Screw
24158005	1	#8-32x5/16 Rd. Hd. Screw
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13170	4	Thrust Washer
13348	1	#6 Woodruff Key
13475	1	Thrust Washer
16437	1	Armature Assembly

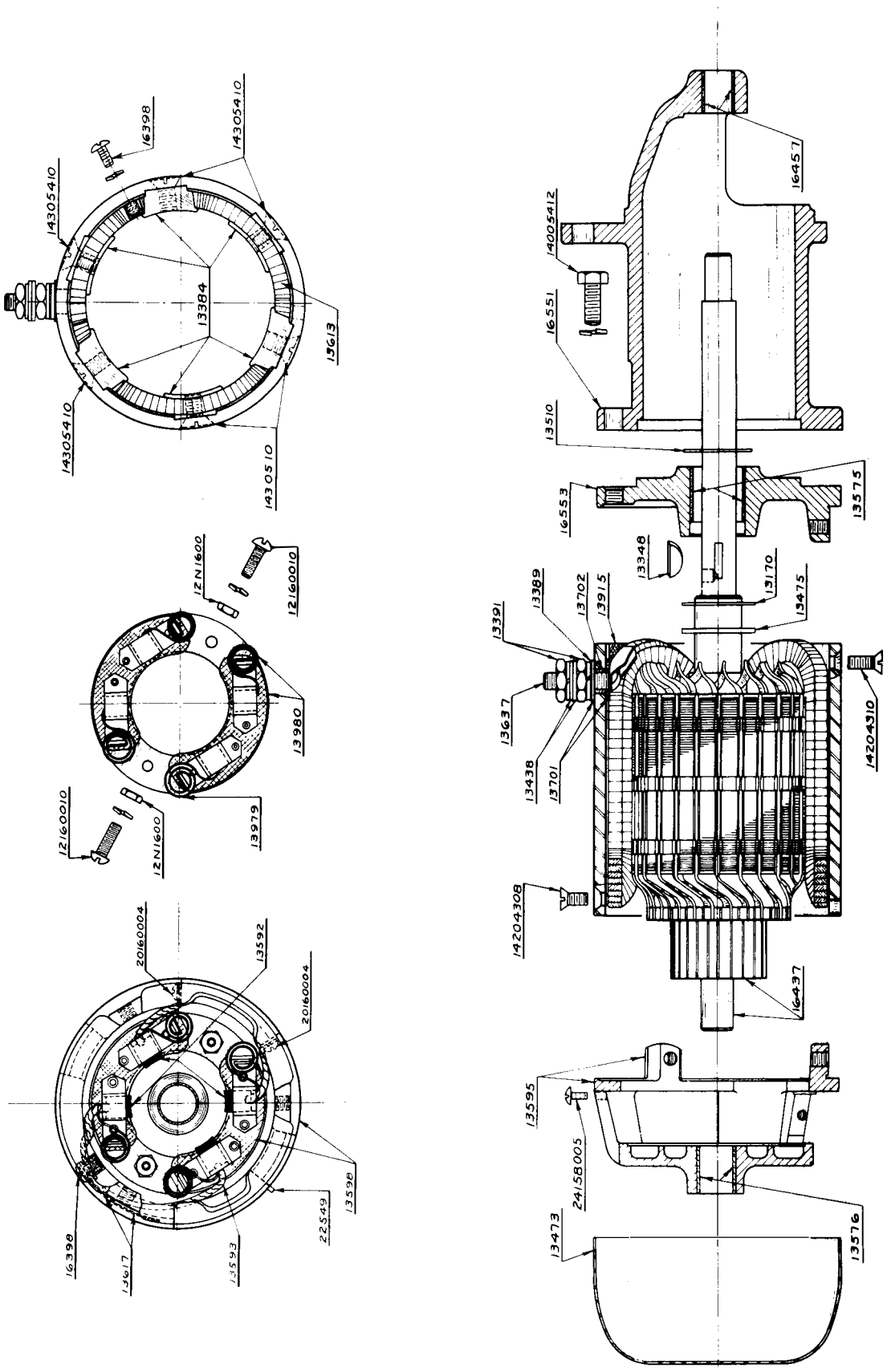
Miscellaneous Parts

14L05	3	5/16 Lock Washer
13510	1	Thrust Washer
16551	1	Pinion Housing Assy.
16457	1	Absorbent Bronze Brg.
16553	1	Intermediate Brg. Assy.
13575	1	Absorbent Bronze Brg.
16555	1	Bendix Drive Assembly
14005412	3	5/16-18x3/4 Hex. Hd. Sc.
14204310	3	1/4-20x5/8 Flat Hd. Screw
		1 2 3 4 5

(Issued 11-20-35)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete p rt can be ssembled s needed."

DI-1314 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13617	1	Field Connection Ins.
(16663)	1	Frame & Field & Switch Assy.
SS-4012	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	1	5/16-24 Hex. Nut
12X-1014	1	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
13389	1	Terminal Washer
13701	2	Insulating Washer
13702	1	Insulating Bushing
13915	1	Field Connection Ins.
16670	1	5/16-24 Hex. Nut
16671	1	Field Coil Assy. - Comp.
16673	1	Terminal
16684	6	Pole Piece
14205409	6	Pole Piece Screw
8X-321	1	#10-32x5/16 Rd. Hd. Screw
X-1284	1	5/16 Skpf. Washer
14L05	1	5/16 Lock Washer
14L60	1	#10 Lock Washer

Comm. End Head Assy. & Parts Used With

14L60	2	#10 Lock Washer
13473A	1	Comm. End Cover
13592	3	Brush - Short Pigtail
13593	1	Brush - Long Pigtail
16398	1	#10-32x3/8 Bdg. Hd. Screw
16683	1	Comm. End Head Assy.
12N1600	2	#10-32 Hex. Nut
13980	1	Brush Holder Plate Assy.
13979	4	Brush Spring
16682	1	C.E. Plate Part Assy.
13576	1	Absorbent Bronze Brg.
22169	2	#10 Lock Washer
22549	1	Dowel Pin
12160010	2	#10-32x5/8 Rd. Hd. Screw
14204308	3	1/4-20x1 1/2 Flat Hd. Screw
2X-11	1	#8-32x5/16 Rd. Hd. Screw
X-19	2	#10-32x1/4 Rd. Hd. Screw
X-1274	1	#10 Skpf. Washer
		1 2 3 4 5

Armature Assy. & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13170	*	Thrust Washer
13475	1	Thrust Washer
13510	1	Thrust Washer
16666	1	Armature Assy.
X-261	1	#6 Woodruff Key

Miscellaneous Parts

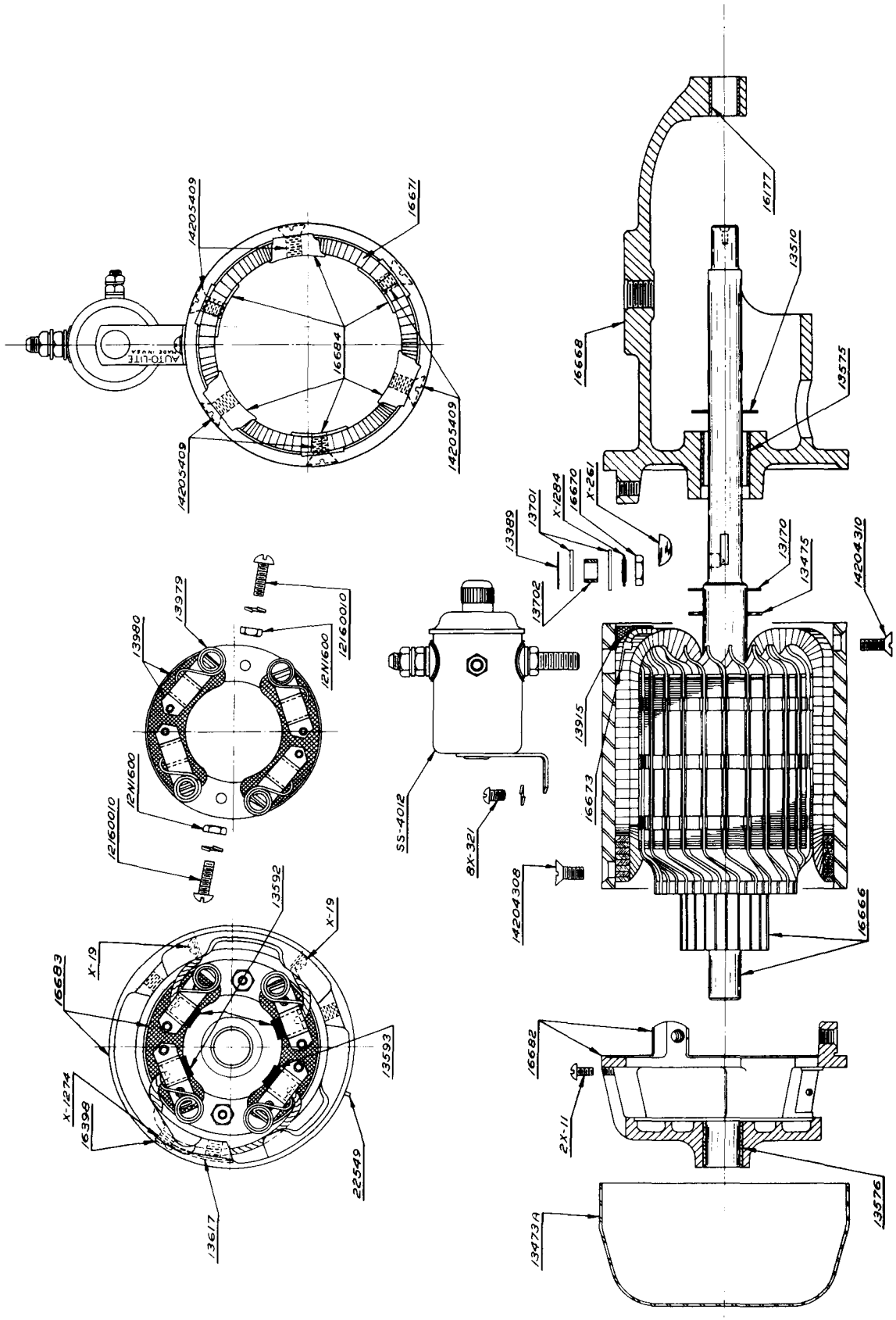
EBA-12	1	Bendix Drive Assembly
EB-108	2	Lock Washer
EB-7806	1	Hd. Spr. Bolt or Screw
EBA-507	1	Shaft Spring Screw
EBA-1205	1	Driving Spring
EBA-1213	1	Anti-Drift Spring
EBA-1225	1	Meshing Spring
EBA-1231	1	Screw Shaft Assembly
EBA-1232	1	Pinion Assembly
EBA-1233	1	Retaining Ring
16668	1	Pinion Housing Assy.
13575	1	Absorbent Bronze Brg.
16177	1	Absorbent Bronze Brg.
14204310	3	1/4-20x5/8 Flat Hd. Screw
		1 2 3 4 5

(Issued 9-26-38)

* Use as required.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

DI-1568 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13617	1	Field Connection Ins.
(16546)	1	Frame & Field Assy.
14L05	1	5/16 Lock Washer
13389	2	Terminal Washer
13391	1	5/16-18 Hex. Nut
13622	6	Pole Piece
13626	1	Field Coil Assy. - Comp.
13701	2	Ins. Washer
13702	1	Ins. Bushing
16135	1	Terminal Post
16533	1	Connector
14205410	12	Pole Piece Screw

Comm. End Head Assembly & Parts Used With

14L60	2	#10 Lock Washer
13592	3	Brush - Short Pigtail
13593	1	Brush - Long Pigtail
13627	1	Comm. End Head Assy.
12N1600	2	#10-32 Hex. Nut
13628	1	C.E. Plate Part Assy.
13576	1	Absorbent Bronze Brg.
13980	1	Brush Holder Plate Assy.
13979	4	Brush Spring
22169	2	#10 Lock Washer
22549	1	Dowel Pin
12160010	2	#10-32x5/8 Rd. Hd. Sc.
13629	1	Cover
16398	1	#10-32x3/8 Bdg. Hd. Sc.
20053	1	#10 Skpf. Washer
14204308	3	1/4-20x1/2 Flat Hd. Sc.
20160004	2	#10-32x1/4 Rd. Hd. Sc.
24158005	1	#8-32x5/16 Rd. Hd. Sc.
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13170	*	Thrust Washer
13348	1	#6 Woodruff Key
13409	1	Armature Assembly
13475	1	Thrust Washer
13510	1	Thrust Washer

Switch Assembly & Parts UsedWith

SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
22169	2	#10 Lock Washer
17160005	2	#10-32x5/16 Rd. Hd. Screw

Miscellaneous Parts

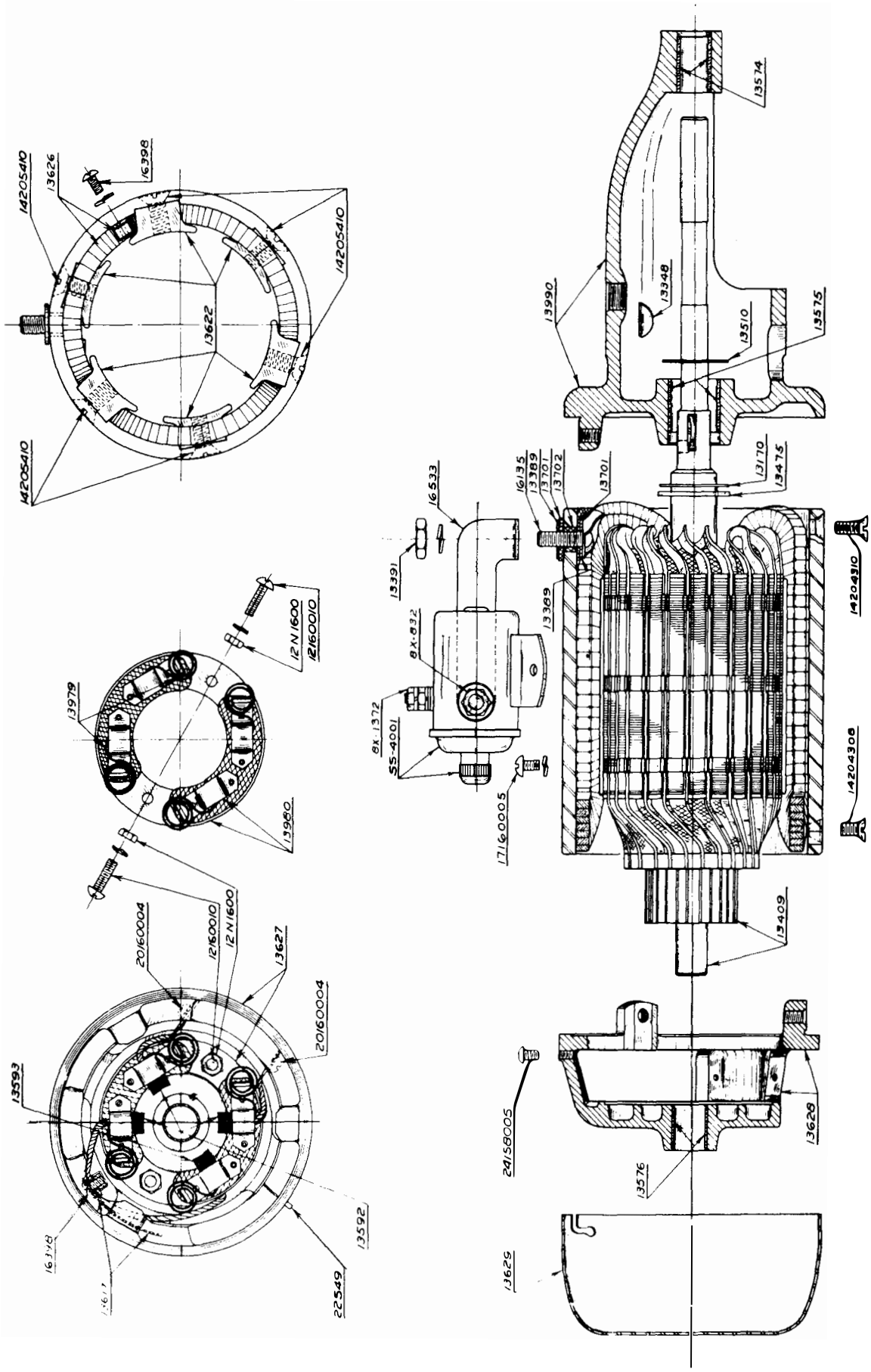
13990	1	Pinion Housing Assy.
13574	1	Absorbent Bronze Brg.
13575	1	Absorbent Bronze Brg.
16511	1	Bendix Drive Assy.
14204310	3	1/4-20x5/8 Flat Hd. Screw
		1 2 3 4 5

(Issued 9-24-35)
(R-3-24-37)

* Use as required.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

DN-1298 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13617	1	Field Connection Ins.
(16546)	1	Frame & Field Assy.
14L05	1	5/16 Lock Washer
13389	2	Terminal Washer
13391	1	5/16-18 Hex. Nut
13622	6	Pole Piece
13626	1	Field Coil Assy. - Comp.
13701	2	Ins. Washer
13702	1	Ins. Bushing
16135	1	Terminal Post
16533	1	Connector
14205410	12	Pole Piece Screw

Comm. End Head Assembly & Parts Used With

14L60	2	#10 Lock Washer
13592	3	Brush - Short Pigtail
13593	1	Brush - Long Pigtail
13627	1	Comm. End Head Assy.
12N1600	2	#10-32 Hex. Nut
13628	1	C.E. Plate Part Assy.
13576	1	Absorbent Bronze Brg.
13980	1	Brush Holder Plate Assy.
13979	4	Brush Spring
22169	2	#10 Lock Washer
22549	1	Dowel Pin
12160010	2	#10-32x5/8 Rd. Hd. Sc.
13629	1	Cover
16398	1	#10-32x3/8 Bdg. Hd. Sc.
20053	1	#10 Skpf. Washer
14204308	3	1/4-20x1/2 Flat Hd. Sc.
20160004	2	#10-32x1/4 Rd. Hd. Sc.
24158005	1	#8-32x5/16 Rd. Hd. Sc.
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13170	*	Thrust Washer
13348	1	#6 Woodruff Key
13409	1	Armature Assembly
13475	1	Thrust Washer
13510	1	Thrust Washer

Switch Assembly & Parts UsedWith

SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
22169	2	#10 Lock Washer
17160005	2	#10-32x5/16 Rd. Hd. Screw

Miscellaneous Parts

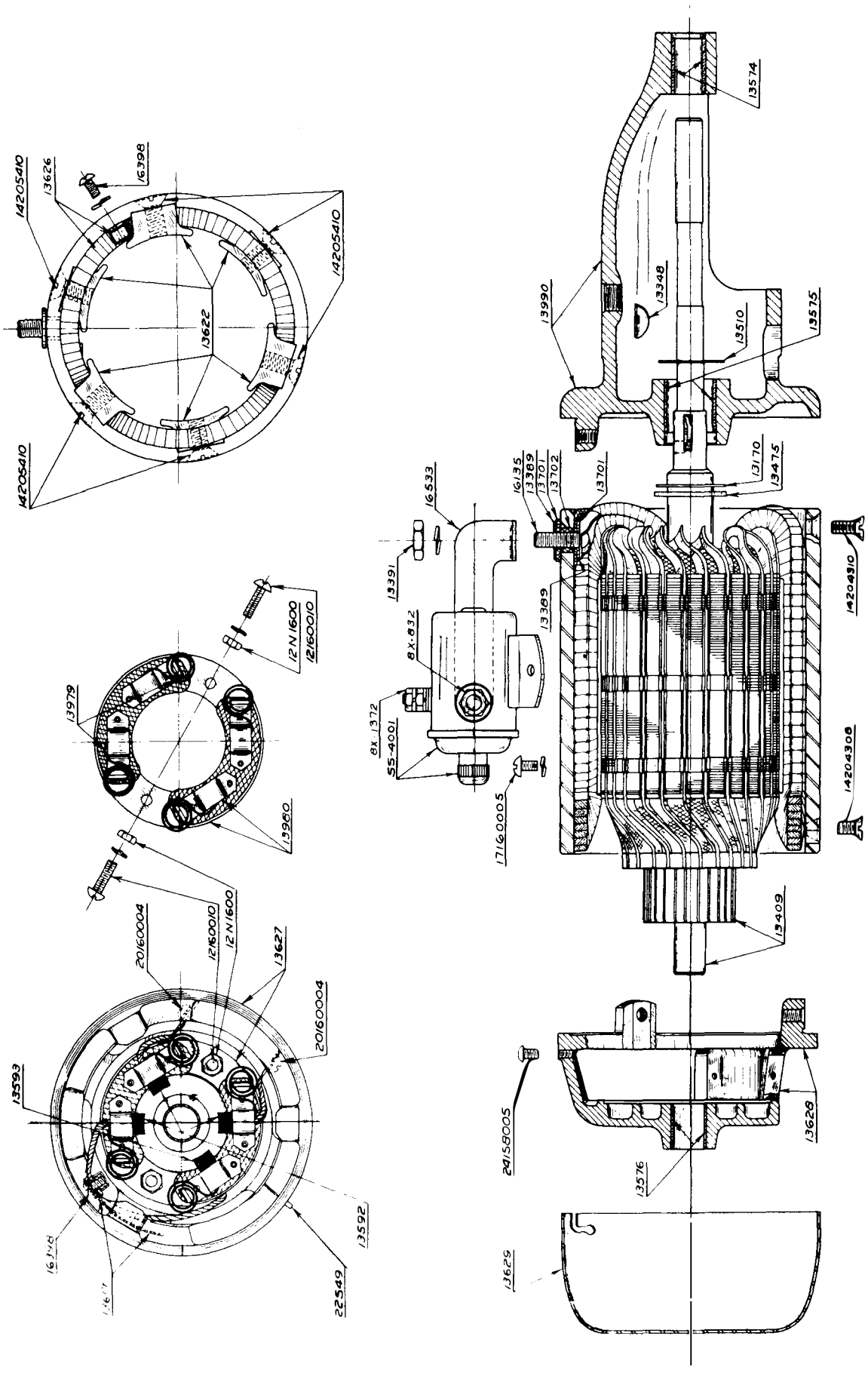
13990	1	Pinion Housing Assy.
13574	1	Absorbent Bronze Brg.
13575	1	Absorbent Bronze Brg.
16511	1	Bendix Drive Assy.
14204310	3	1/4-20x5/8 Flat Hd. Screw
		1 2 3 4 5

(Issued 9-24-35)
(R-3-24-37)

* Use as required.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

DN-1298 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13617	1	Field Connection Ins.
(16547)	1	Frame & Field Assy.
14L05	1	5/16 Lock Washer
13389	2	Terminal Washer
13391	1	5/16-18 Hex. Nut
13622	6	Pole Piece
13626	1	Field Coil Assy. - Comp.
13701	2	Ins. Washer
13702	1	Ins. Bushing
16135	1	Terminal Post
16541	1	Connector
14205410	12	Pole Piece Screw

Comm. End Head Assembly & Parts Used With

14L60	2	#10 Lock Washer
13592	3	Brush - Short Pigtail
13593	1	Brush - Long Pigtail
13627	1	Comm. End Head Assy.
12N1600	2	#10-32 Hex. Nut
13628	1	C.E. Plate Part Assy.
13576	1	Absorbent Bronze Brg.
13980	1	Brush Holder Plate Assy.
13979	4	Brush Spring
22169	2	#10 Lock Washer
22549	1	Dowel Pin
12160010	2	#10-32x5/8 Rd. Hd. Sc.
13629	1	Cover
16398	1	#10-32x3/8 Bdg. Hd. Sc.
20053	1	#10 Skpf. Washer
14204308	3	1/4-20x1/2 Flat Hd. Sc.
20160004	2	#10-32x1/4 Rd. Hd. Sc.
24158005	1	#8-32x5/16 Rd. Hd. Sc.
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13170	4	Thrust Washer
13348	1	#6 Woodruff Key
13409	1	Armature Assembly
13475	1	Thrust Washer
13510	1	Thrust Washer

Switch Assembly & Parts Used With

SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
22169	2	#10 Lock Washer
17160005	2	#10-32x5/16 Rd. Hd. Screw

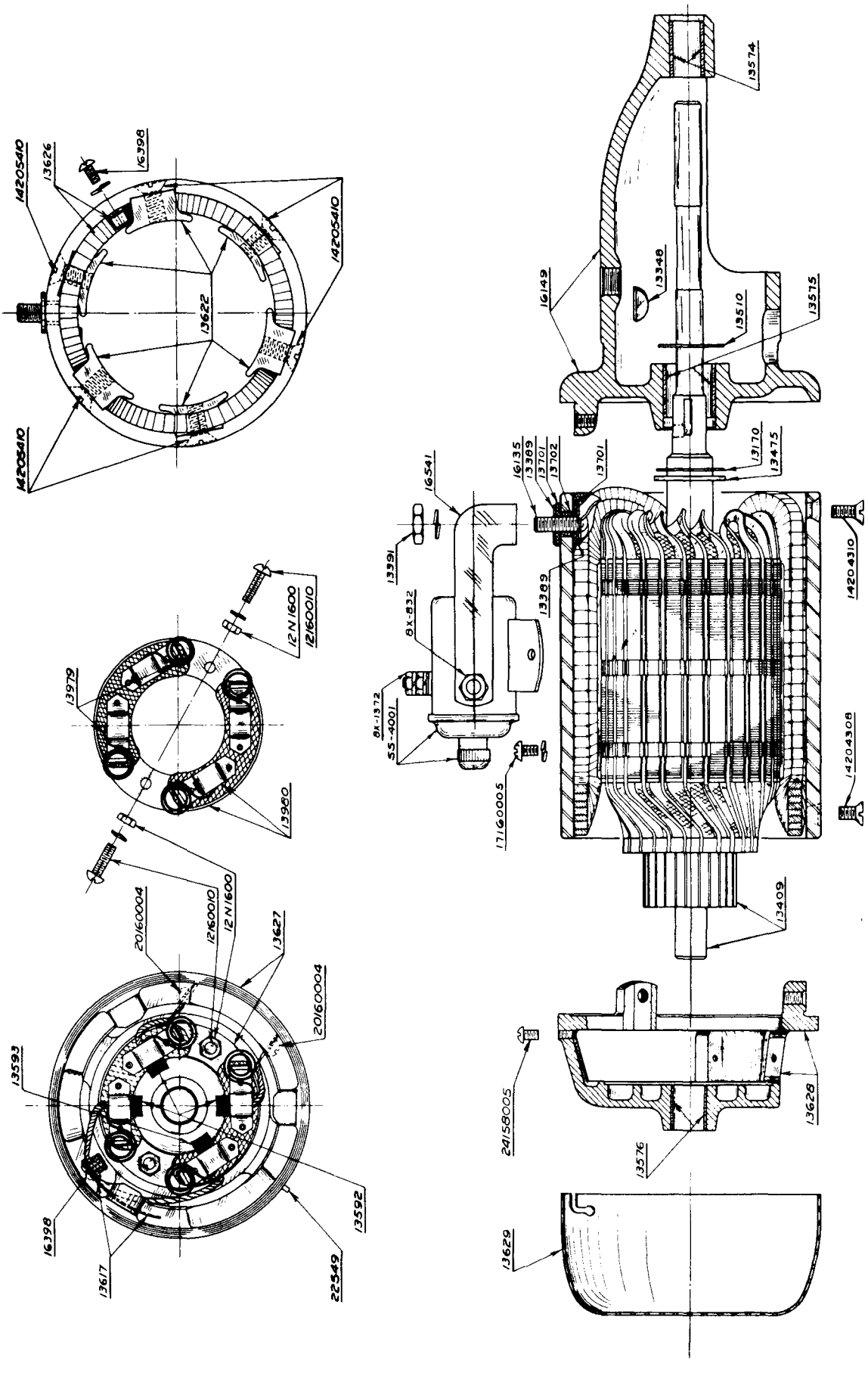
Miscellaneous Parts

16149	1	Pinion Housing Assy.
13574	1	Absorbent Bronze Brg.
13575	1	Absorbent Bronze Brg.
16511	1	Bendix Drive Assy.
14204310	3	1/4-20x5/8 Flat Hd. Screw
		1 2 3 4 5

(Issued 9-24-35)
(R-3-24-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

DN-1299 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13617	1	Field Connection Ins.
(16547)	1	Frame & Field Assy.
14L05	1	5/16 Lock Washer
13389	2	Terminal Washer
13391	1	5/16-18 Hex. Nut
13622	6	Pole Piece
13626	1	Field Coil Assy. - Comp.
13701	2	Ins. Washer
13702	1	Ins. Bushing
16135	1	Terminal Post
16541	1	Connector
14205410	12	Pole Piece Screw

Comm. End Head Assembly & Parts Used With

14L60	2	#10 Lock Washer
13592	3	Brush - Short Pigtail
13593	1	Brush - Long Pigtail
13627	1	Comm. End Head Assy.
12N1600	2	#10-32 Hex. Nut
13628	1	C.E. Plate Part Assy.
13576	1	Absorbent Bronze Brg.
13980	1	Brush Holder Plate Assy.
13979	4	Brush Spring
22169	2	#10 Lock Washer
22549	1	Dowel Pin
12160010	2	#10-32x5/8 Rd. Hd. Sc.
13629	1	Cover
16398	1	#10-32x3/8 Bdg. Hd. Sc.
20053	1	#10 Skpf. Washer
14204308	3	1/4-20x1/2 Flat Hd. Sc.
20160004	2	#10-32x1/4 Rd. Hd. Sc.
24158005	1	#8-32x5/16 Rd. Hd. Sc.
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13170	4	Thrust Washer
13348	1	#6 Woodruff Key
13409	1	Armature Assembly
13475	1	Thrust Washer
13510	1	Thrust Washer

Switch Assembly & Parts Used With

SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
22169	2	#10 Lock Washer
17160005	2	#10-32x5/16 Rd. Hd. Screw

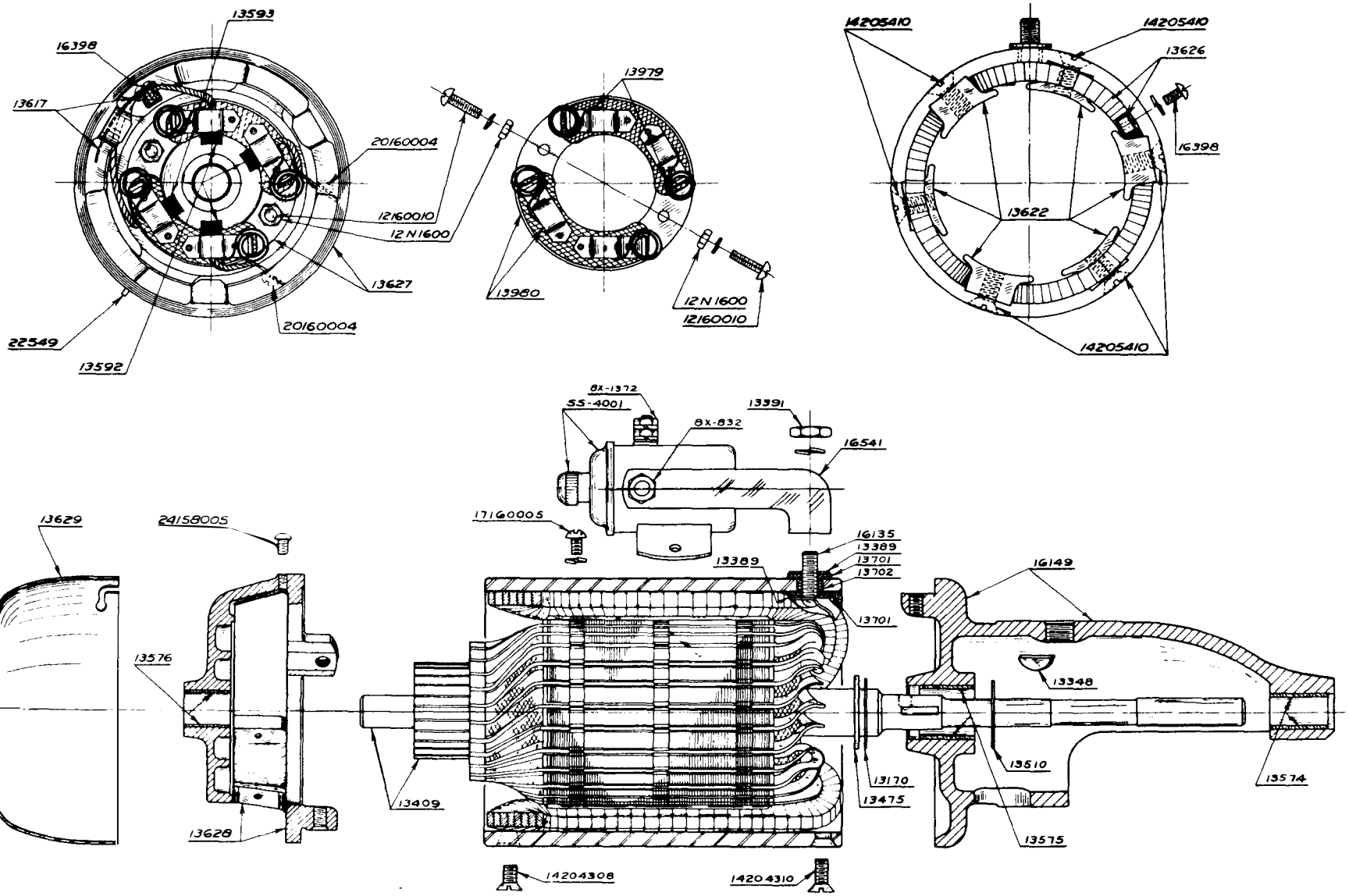
Miscellaneous Parts

16149	1	Pinion Housing Assy.
13574	1	Absorbent Bronze Brg.
13575	1	Absorbent Bronze Brg.
16511	1	Bendix Drive Assy.
14204310	3	1/4-20x5/8 Flat Hd. Screw
		1 2 3 4 5

(Issued 9-24-35)
(R-3-24-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

DN-1299 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13617	1	Field Connection Ins.
(16612)	1	Frame & Field Assy.
14L05	1	5/16 Lock Washer
13389	2	Terminal Washer
13391	1	5/16-18 Hex. Nut
13622	6	Pole Piece
13626	1	Field Coil Assy. - Comp.
13701	2	Insulating Washer
13702	1	Insulating Bushing
13915	1	Field Connection Ins.
16135	1	Terminal Post
14205410	2	Pole Piece Screw
14305410	10	Pole Piece Screw

Comm. End Head Assembly & Parts Used With

14L60	2	#10 Lock Washer
13592	3	Brush - Short Pigtail
13593	1	Brush - Long Pigtail
13627	1	Comm. End Head Assembly
12N1600	2	#10-32 Hex. Nut
13576	1	Absorbent Bronze Brg.
13980	1	Brush Holder Plate Assy.
13979	4	Brush Spring
22169	2	#10 Lock Washer
22549	1	Dowel Pin
12160010	2	#10-32x5/8 Rd. Hd. Screw
13629	1	Cover
16398	1	#10-32x3/8 Bdg. Hd. Screw
20053	1	#10 Skpf. Washer
14204308	3	1/4-20x1/2 Flat Hd. Screw
20160004	2	#10-32x1/4 Rd. Hd. Screw
24158005	1	#8-32x5/16 Rd. Hd. Screw
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13170	4	Thrust Washer
13348	1	#6 Woodruff Key
13409	1	Armature Assembly
13475	1	Thrust Washer
13510	1	Thrust Washer

Switch Assembly & Parts Used With

SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
16613	1	Connector
22169	2	#10 Lock Washer
17160005	2	#10-32x5/16 Rd. Hd. Screw

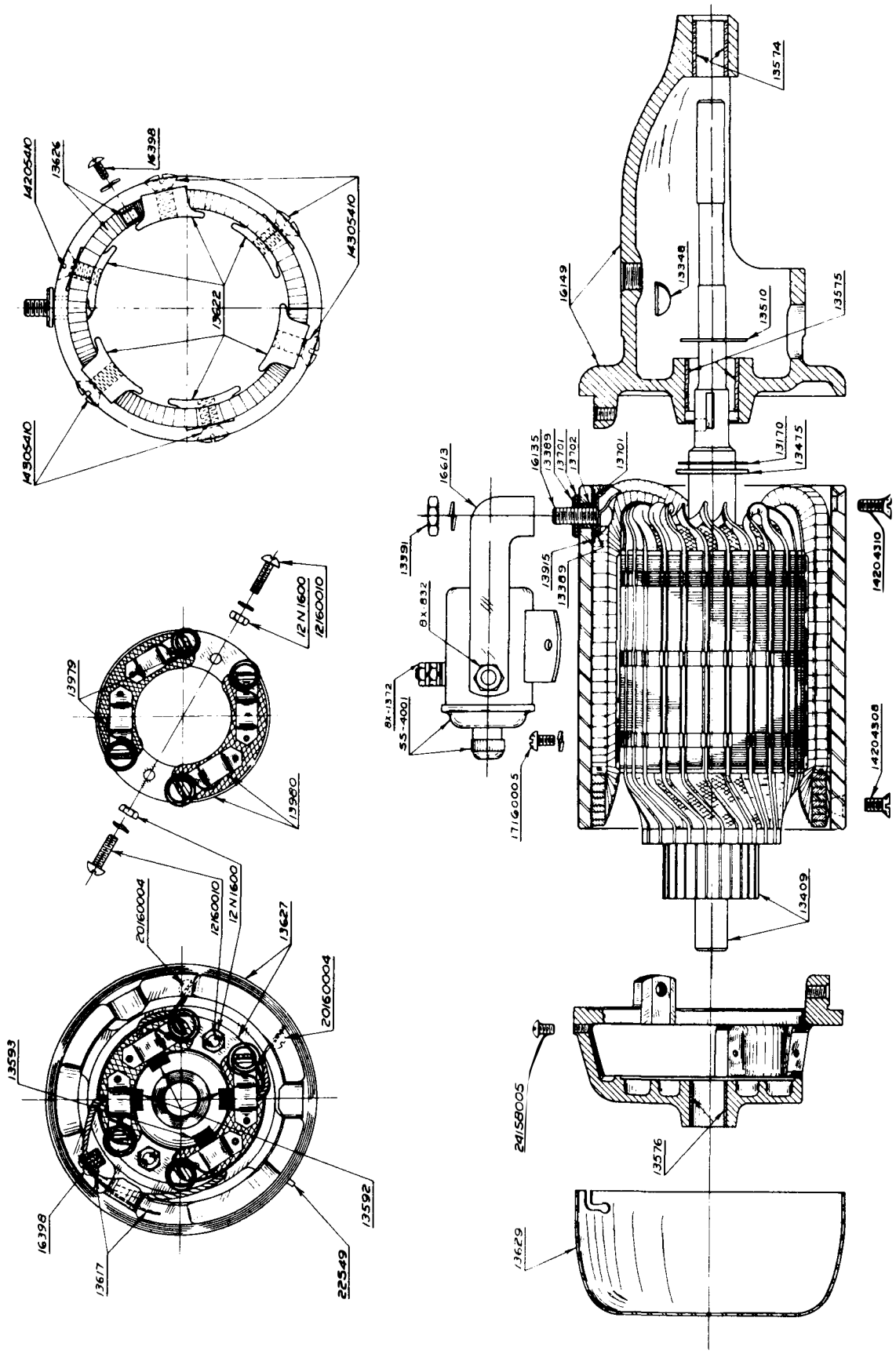
Miscellaneous Parts

16149	1	Pinion Housing Assy.
13574	1	Absorbent Bronze Brg.
13575	1	Absorbent Bronze Brg.
16511	1	Bendix Drive Assy.
14204310	3	1/4-20x5/8 Flat Hd. Screw
		1 2 3 4 5

(Issued 1-21-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

DN-1389 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13617	1	Field Connection Ins.
(16546)	1	Frame & Field Assy.
14L05	1	5/16 Lock Washer
13389	2	Terminal Washer
13391	1	5/16-18 Hex. Nut
13622	6	Pole Piece
13626	1	Field Coil Assy. - Comp.
13701	2	Ins. Washer
13702	1	Ins. Bushing
16135	1	Terminal Post
16533	1	Connector
14205410	12	Pole Piece Screw

Comm. End Head Assembly & Parts Used With

14L60	2	#10 Lock Washer
13592	3	Brush - Short Pigtail
13593	1	Brush - Long Pigtail
13627	1	Comm. End Head Assy.
12N1600	2	#10-32 Hex. Nut
13628	1	C.E. Plate Part Assy.
13576	1	Absorbent Bronze Brg.
13980	1	Brush Holder Plate Assy.
13979	4	Brush Spring
22169	2	#10 Lock Washer
22549	1	Dowel Pin
12160010	2	#10- 2x5/8 Rd. Hd. Sc.
13629	1	Cover
16398	1	#10-32x3/8 Bdg. Hd. Sc.
20053	1	#10 Skpf. Washer
14204308	3	1/4-20x1/2 Flat Hd. Sc.
20160004	2	#10-32x1/4 Rd. Hd. Sc.
24158005	1	#8-32x5/16 Rd. Hd. Sc.
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
13170	*	Thrust Washer
13348	1	#6 Woodruff Key
13409	1	Armature Assembly
13475	1	Thrust Washer
13510	1	Thrust Washer

Switch Assembly & Parts UsedWith

SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
22169	2	#10 Lock Washer
17160005	2	#10-32x5/16 Rd. Hd. Screw

Miscellaneous Parts

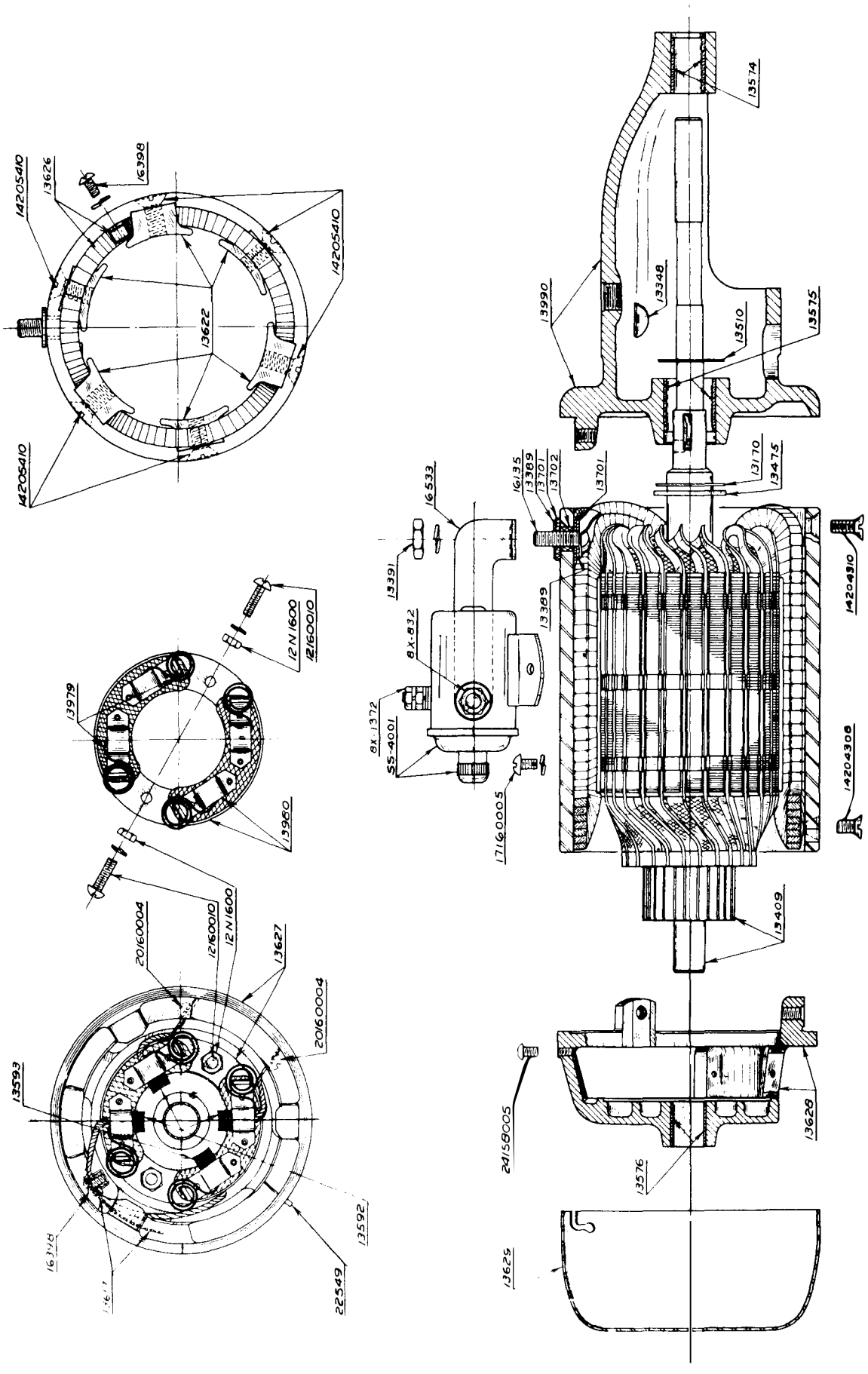
13990	1	Pinion Housing Assy.
13574	1	Absorbent Bronze Brg.
13575	1	Absorbent Bronze Brg.
16511	1	Bendix Drive Assy.
14204310	3	1/4-20x5/8 Flat Hd. Screw
		1 2 3 4 5

(Issued 9-24-35)
(R-3-24-37)

* Use as required.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

DN-1298 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAB-2001)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	FIELD COIL PACKAGE
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal,5/16-24
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
5X-1376	2	Nut, Term. Stud, Hex. 5/16-24
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing, Thrust
MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EB-33	1	BENDIX DRIVE ASSY.
EB-508	2	Lockwasher
EB-2303	1	Head, Drive
EB-2319S	1	Sleeve, Compression
EB-2322	2	Clip, Spring Support
EB-2406	1	Screw, Spring, Head
EB-2407	1	Screw, Spring, Shaft
EB-3105	1	SPRING, DRIVE
EB-3311	1	Shaft & Pinion
MAB-1024E	1	Band, Cover
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
PS-1003	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
X-489	1	Oiler
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
6X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012AS.

UNIT	APPLICATION
MAB-4005	Hercules, Universal

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4028 STARTING MOTOR PARTS LIST MAB-4028

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-1262	4	1/8x7/32 Oval Hd. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

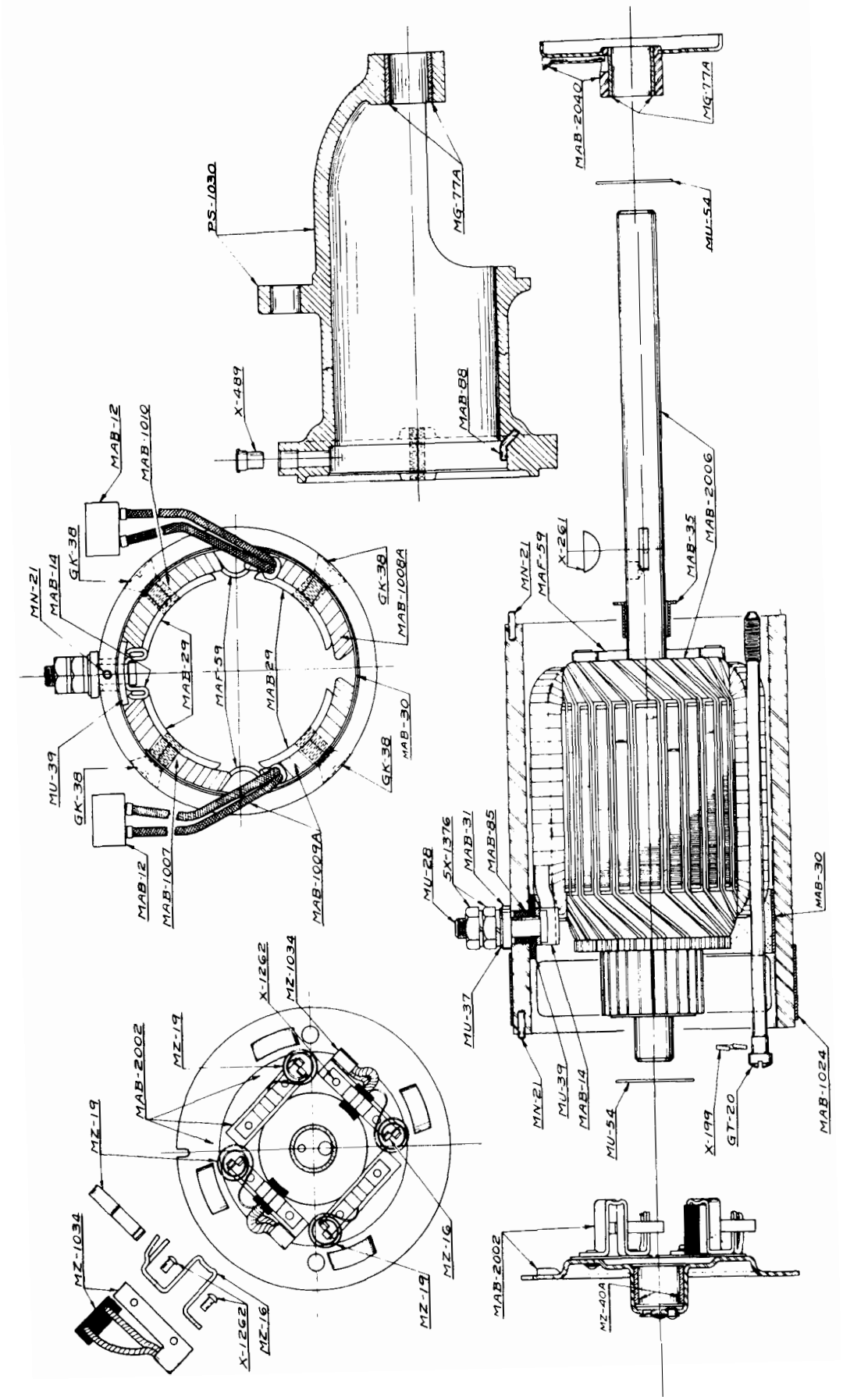
Miscellaneous Parts

EB-33	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assy.
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1030	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
6X-1010A	1	#8-32x1 1/4 Rd. Hd. Screw - Hardened
6X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 2-25-30)
(R-4-7-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4028 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
GT-20	2	Bolt, Thru
(MAB-2082)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12‡	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-83	1	Washer, Insulating
MAB-84	1	Stud, Terminal
MAB-1007G	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010F	1	Coil, Field, U.R.
MAF-31	1	Bushing, Ins., Term. Stud
MAF-48	1	Washer, Ins., Term. Stud
MAF-48A	1	Washer, Ins., Term. Stud
MAF-59	2	Connector, Field Coil
MN-21	2	Pin, Dowel
X-199	2	Washer, Lock, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034‡	2	Brush, Grounded
X-532	4	Rivet, Oval Hd., 1/8x1/4

Armature Assembly & Parts Used With

MAB-2086	1	Armature
ML-32	1	Washer, Thrust, Int. Bearing
MU-54	1	Washer, Thrust
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAB-136	1	Gasket, Switch
MAB-137	1	Gasket, Switch
MAB-3105S	1	Switch, Starter
X-196	4	Washer, Lock, #10
8X-321	4	Screw, Mtg. Switch, Rd. Hd., #10-32x5/16
X-1014	1	Washer, Lock, Term. Screw, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Miscellaneous Parts

Part No.	No. Used	Name of Part
EB-33	1	Bendix Drive Assy.
EB-508	2	Washer, Lock
EB-2303	1	Head, Drive
EB-2319S	1	Sleeve, Compression
EB-2322	2	Clip, Spring Support
EB-2406	1	Screw, Spring, Head
EB-2407	1	Screw, Spring, Shaft
EB-3105	1	Spring, Drive
EB-3311	1	Shaft & Pinion
MAB-87	1	Washer, Felt
MAB-103	1	Gasket, Intermediate Bearing
MAB-1024G	1	Band, Cover
MAB-1104	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Absorbent Bronze
PS-1204	1	Housing Assy., Pinion
MG-77A	1	Bearing, Absorbent Bronze
8X-120	3	Screw, Attaching, Int. Bearing, Fill. Hd., #10-32x5/8
X-196	3	Washer, Lock, #10
X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32

NOTE: The MAB-4040A starting motor uses EBA-69 Bendix Drive with sub parts as noted below.

EBA-69	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take-Up
EBA-6911	1	Shaft & Pinion

‡ Brush Set, Service, MAB-2012S.

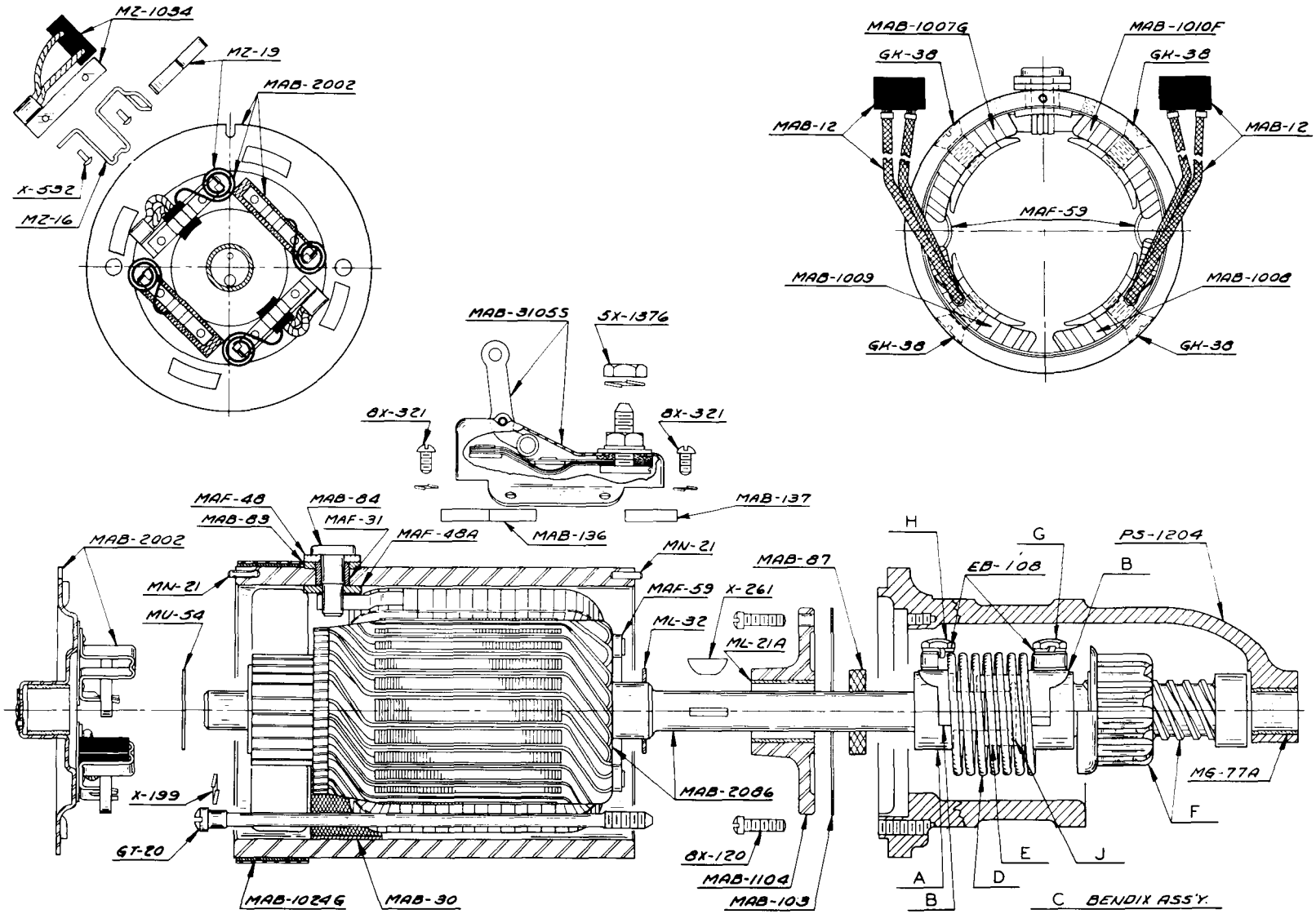
(Issued 3-4-44)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4040,A STARTING MOTOR ILLUSTRATION



UNIT	A	B	C	D	E	F	G	H	J
MAB-4040	EB-2303	EB-2322	EB-33	EB-3105	EB-2319S	EB-3311	EB-2407	EB-2406	NONE
MAB-4040A	EB-8503	NONE	EBA-69	EB-8705	EB-7819S	EBA-6911	EB-7807	EB-7806	EB-8734

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAB-2001)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12†	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	Field Coil Package
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-3002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	Armature Assy.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32'' Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EB-32	1	Bendix Drive Assy.
EB-508	2	Lockwasher
EB-2303	1	Head, Driving
EB-2319S	1	Sleeve, Compression
EB-2405	1	Spring, Driving
EB-2406	1	Screw, Spring, Head
EB-2407	1	Screw, Spring, Shaft
EB-2622	2	Clip, Support, Spring
EB-3211	1	Shaft & Pinion
MAB-1024E	1	Band, Cover
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
PS-1123A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-489	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

NOTE: The MAB-4044A Starting Motor uses EBA-68 Bendix Drive with sub parts as noted below:

EBA-68	1	Bendix Drive Assy.
EB-108	2	Lockwasher
EB-7805	1	Spring, Drive
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve
EB-8503	1	Head, Drive
EB-8734	1	Ring, Take-Up
EBA-6711	1	Shaft & Pinion

† Brush Set, Service MAB-2012AS.

UNIT	APPLICATION
MAB-4044,A	Continental, Lathrop (Marine)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAB-2001)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
GT-20	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

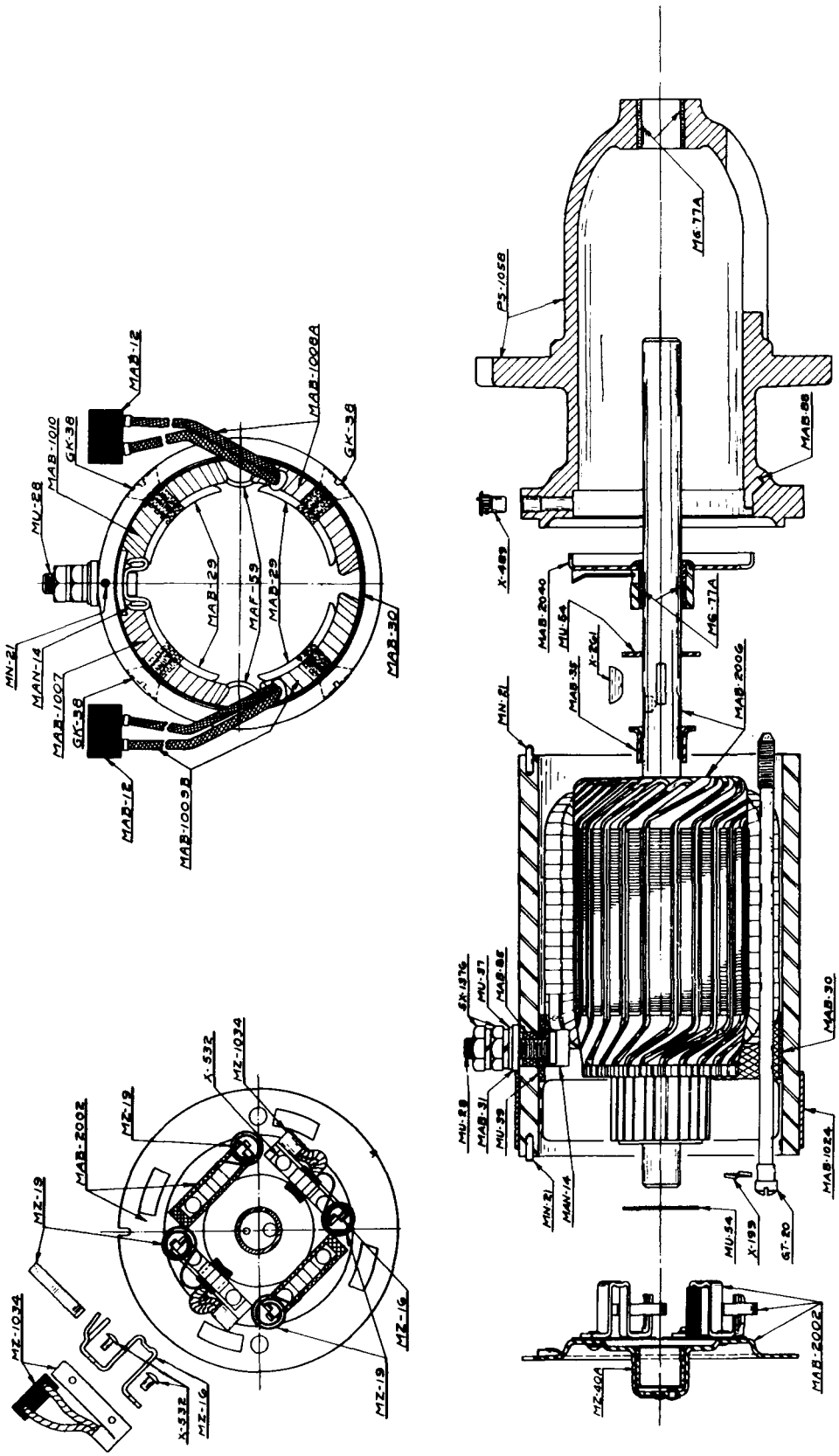
Miscellaneous Parts

EB-31	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1058	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
6X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8-5-35)
(R-1-11-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4045 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Bolt, Thru
(MAB-2001)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12‡	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Insulating, Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MAN-14	1	Terminal
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal, 5/16-24
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-199	2	Washer, Lock, Thru Bolt, 1/4
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034‡	2	Brush, Grounded
X-532	4	Rivet, Oval hd., 1/8x1/4

Armature Assembly & Parts Used With

MAB-2006	1	Armature Assy.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EB-31	1	Bendix Drive Assy.
EB-508	2	Washer, Lock
EB-2303	1	Head, Drive
EB-2319S	1	Sleeve, Compression
EB-2322	2	Clip, Spring Support
EB-2406	1	Screw, Spring Head
EB-2407	1	Screw, Spring, Shaft
EB-3105	1	Spring, Drive
EB-3111	1	Shaft & Pinion
MAB-1024	1	Band, Cover
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
PS-1075	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 3-4-44)

NOTE:- The MAB-4046A starting motor uses EBA-64 Bendix Drive with sub parts as noted below.

EBA-64	1	Bendix Drive Assy.
EB-108	2	Washer, Lock, Spring Screw
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take Up
EBA-6411	1	Shaft & Pinion

‡ Brush Set, Service, MAB-2012S.

MAB-4046,A STARTING MOTOR ILLUSTRATION

UNIT	A	B	C	D	E	F	G	H	J	K
MAB-4046	EB-2406	EB-308	EB-3105	NONE	EB-2407	EB-3111	EB-8322	EB-2319S	EB-2303	EB-31
MAB-4046A	EB-7806	EB-108	EB-8705	EB-8734	EB-7807	EBA-6411	NONE	EB-7819S	EB-8303	EBA-64

MAB-4054 STARTING MOTOR PARTS LIST MAB-4054

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAB-2082)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-83	1	Insulating Washer
MAB-84	1	Terminal Post
MAB-1007G	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010F	1	Field Coil - U.R.
MAF-31	1	Insulating Bushing
MAF-48	1	Insulating Washer
MAF-48A	1	Insulating Washer
MAF-59	2	Field Coil Connector
MN-21	2	Dowel Pin
MW-20	2	Frame Screw
X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-1262	4	1/8x7/32 Oval Hd. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2047	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EB-99	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assembly
MAB-1090A	1	Drive End Head Assy.
MAB-49A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
6X-794	1	#10-32 Square Nut

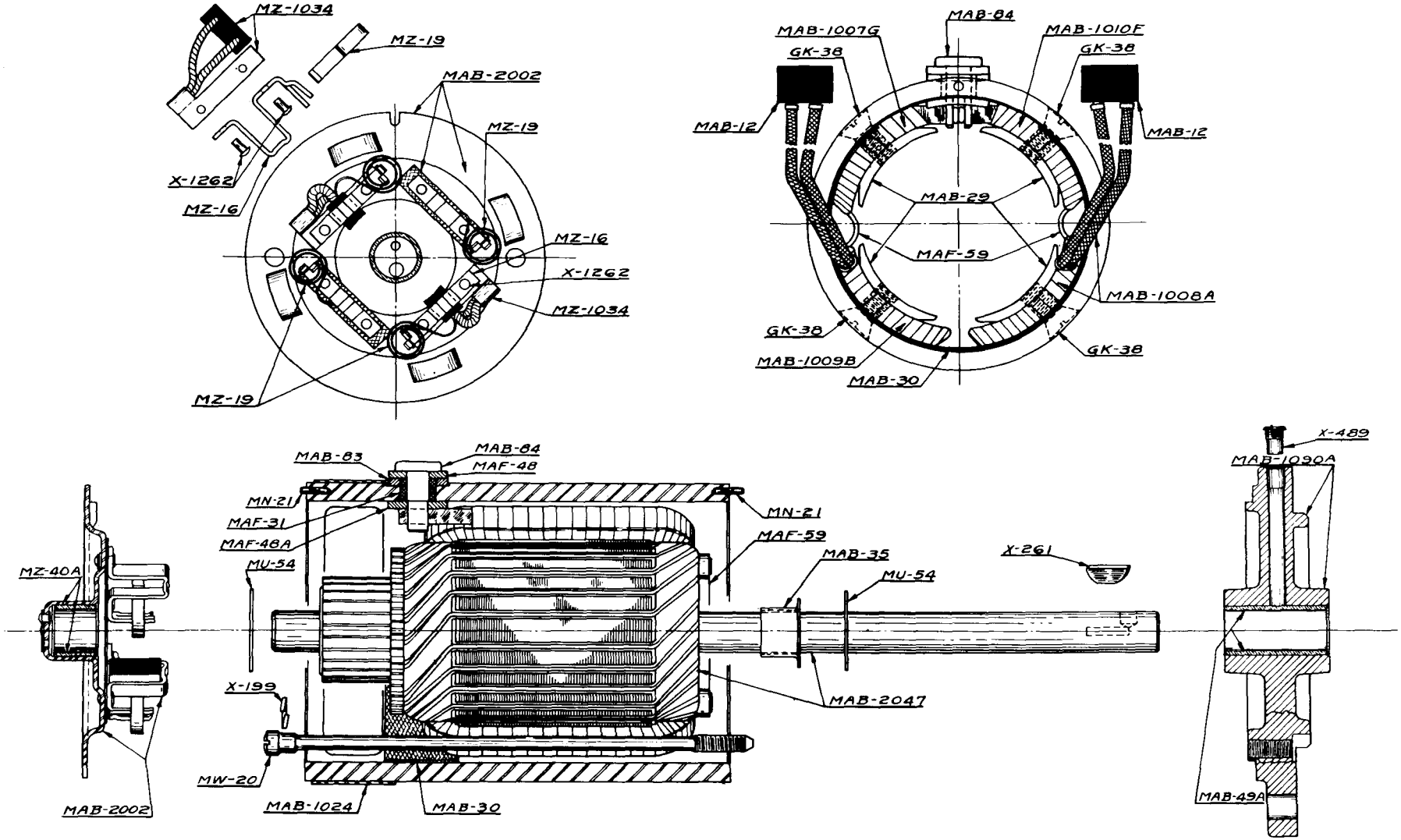
Switch Assembly & Parts Used With

VC-4003	1	Vacuum Starting Switch (See separate list for parts)
X-196	4	#10 Lock Washer
6X-311	4	#10-32x3/8 Rd. Hd. Screw
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
		1 2 3 4 5

(Issued 8-14-33)
(R-8-6-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be a sembled a needed."

MAB-4054 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2082)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-83	1	Insulating Washer
MAB-84	1	Terminal Post
MAB-1007G	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010F	1	Field Coil - U.R.
MAF-31	1	Insulating Bushing
MAF-48	1	Insulating Washer
MAF-48A	1	Insulating Washer
MAF-59	2	Field Coil Connector
MN-21	2	Dowel Pin
X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

MU-2208S	1	Starting Switch Assy.
8X-832	1	5/16-24 Hex. Nut
X-1014	1	5/16 Lock Washer
X-196	4	#10 Lock Washer
8X-321	4	#10-32x5/16 Rd. Hd. Screw

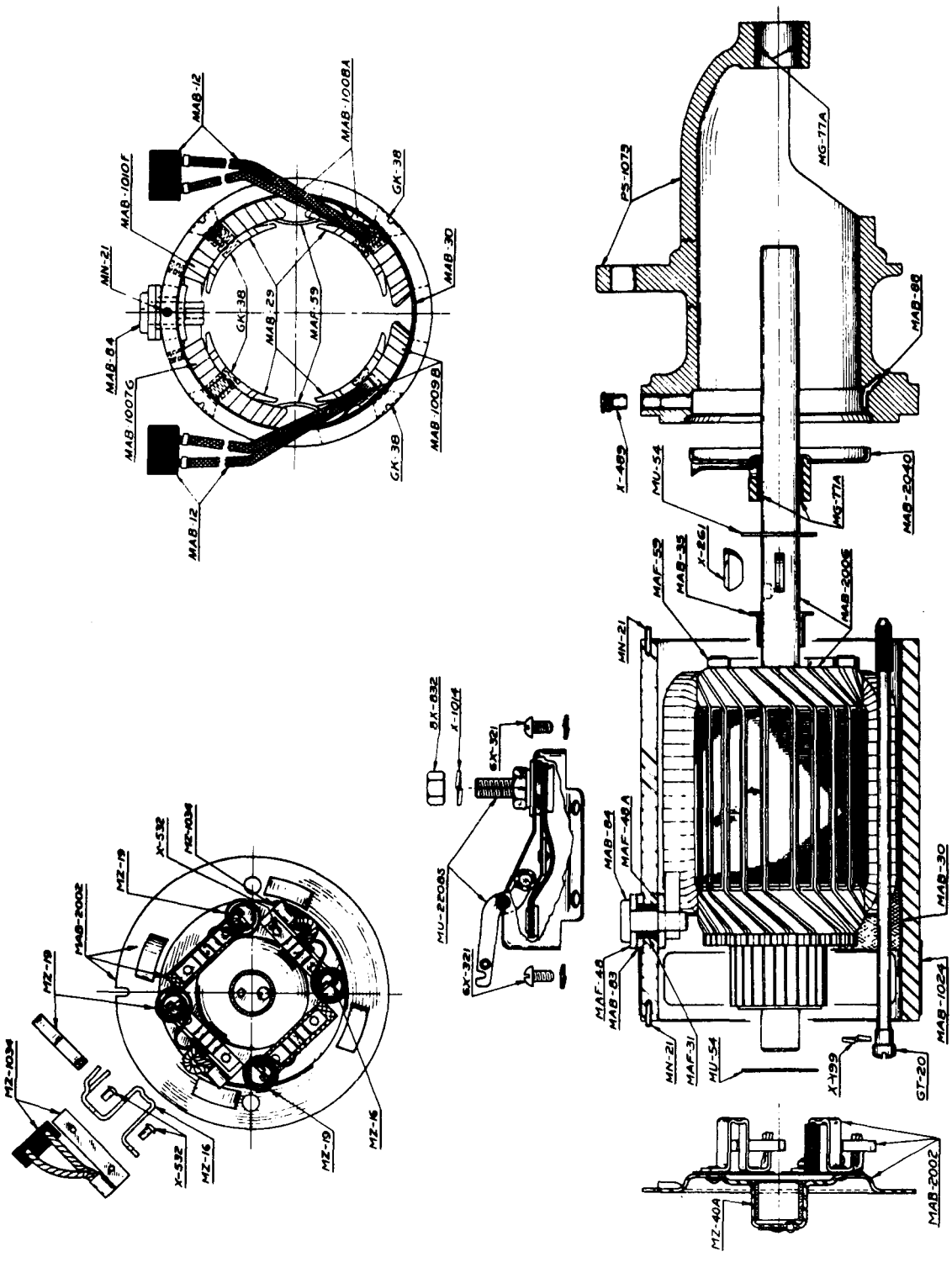
Miscellaneous Parts

EBA-2	1	Bendix Drive
MAB-1024	1	Head Band Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1073	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-22-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4058 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

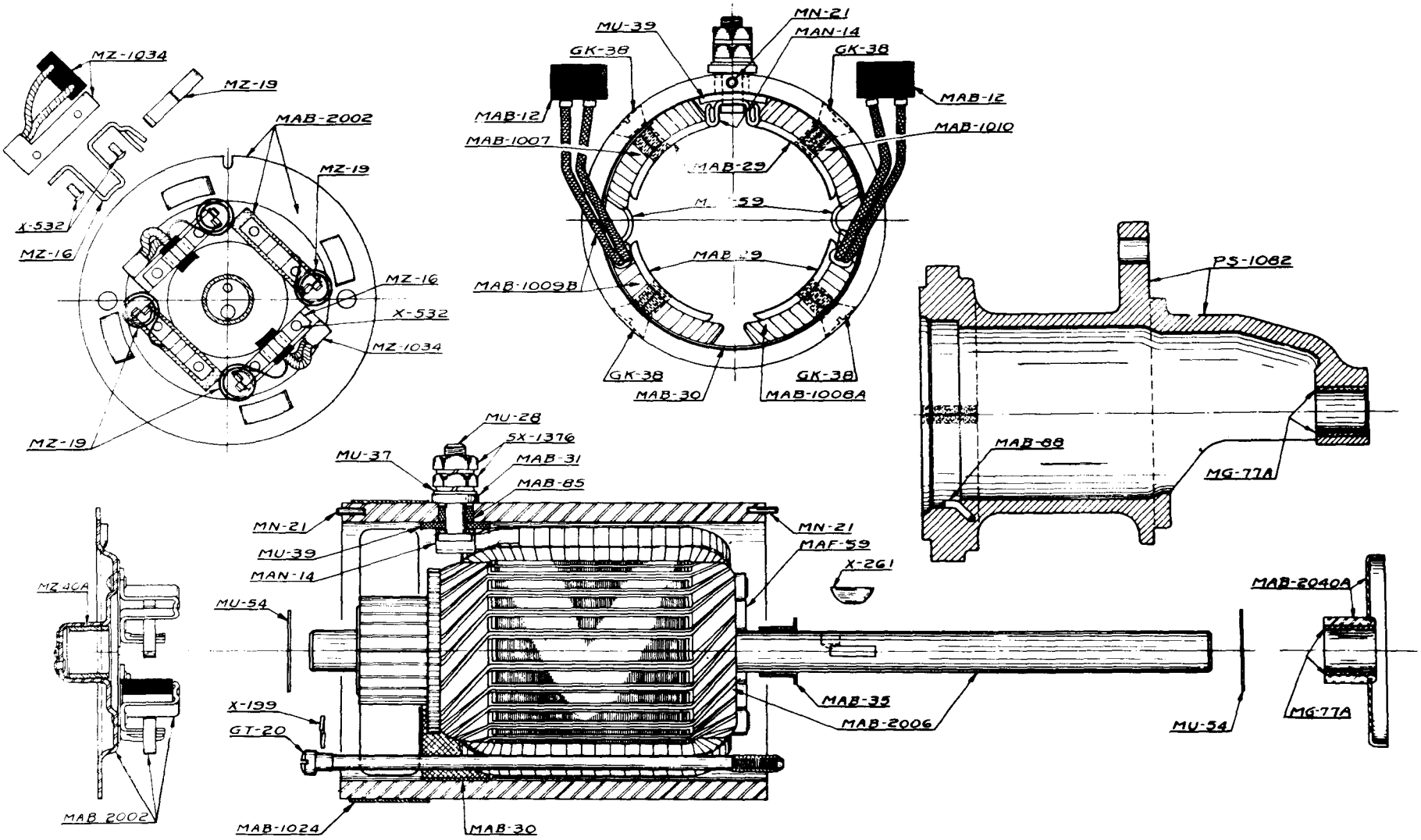
Miscellaneous Parts

EBA-7	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assembly
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1082	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
6X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 12-21-33)
(R-7-15-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4063 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2112)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2046	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EB-87	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1024	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
6X-794	1	#10-32 Square Nut

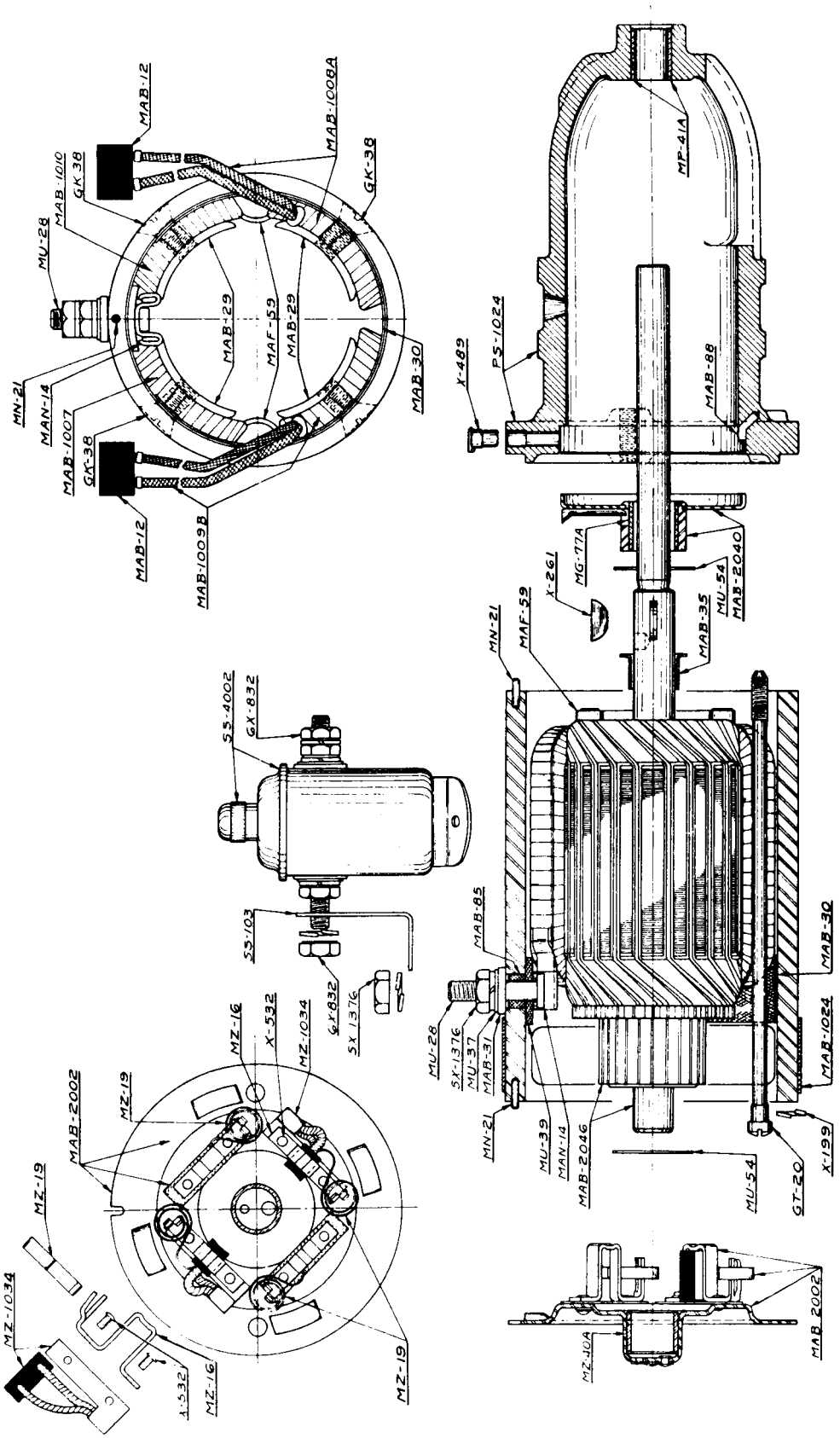
Switch Assembly & Parts Used With

SS-103	1	Connector
SS-4002	1	Solenoid Starting Switch
X-196	1	#10 Lock Washer
6X-832	2	5/16-24 Hex. Nut
X-1014	2	5/16 Lock Washer
6X-1372	1	#10-32 Hex. Nut
6X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1014	1	5/16 Lock Washer
X-1274	2	#10 Skpf. Washer
5X-1376	1	5/16-24 Hex. Nut
		1 2 3 4 5

(Issued 9-24-34)
(R-8-6-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4066 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAB-2112)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	FIELD COIL PACKAGE
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing, Thrust
MU-54	2	Washer, Thrust, 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

*	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-2**	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
MAB-1024E	1	Band, Cover
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
PS-1123A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012AS.

* See table following parts list for part number applying to assembly wanted.

** Applies to MAB-4069 & MAB-4069B ONLY. MAB-4069A has no Bendix Drive.

Assembly No.	Connector
MAB-4069	SS-6R
MAB-4069A	SS-6L
MAB-4069B	SS-6L

UNIT	APPLICATION
MAB-4069	Kermath, Worthington
MAB-4069A	Insley Mfg.
MAB-4069B	Insley Mfg., Galion, Hercules

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4071 STARTING MOTOR PARTS LIST MAB-4071

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Bolt, Thru
(MAB-2001)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12‡	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Insulating, Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAB-1007	1	Coil, Field, Upper Left
MAB-1008	1	Coil, Field, Lower Right
MAB-1009	1	Coil, Field, Lower Left
MAB-1010	1	Coil, Field, Upper Right
MAF-59	2	Connector, Field Coil
MAN-14	1	Terminal
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal, 5/16-24
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-199	2	Washer, Lock, Thru Bolt, 1/4
X-1014	1	Washer, Lock, Terminal Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034‡	2	Brush, Grounded
X-532	4	Rivet, Oval hd., 1/8x1/4

Armature Assembly & Parts Used With

MAB-2006	1	Armature Assy.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-2	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take up
EBA-211	1	Shaft & Pinion
MAB-1024	1	Band, Cover
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
PS-1123A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 3-15-44)

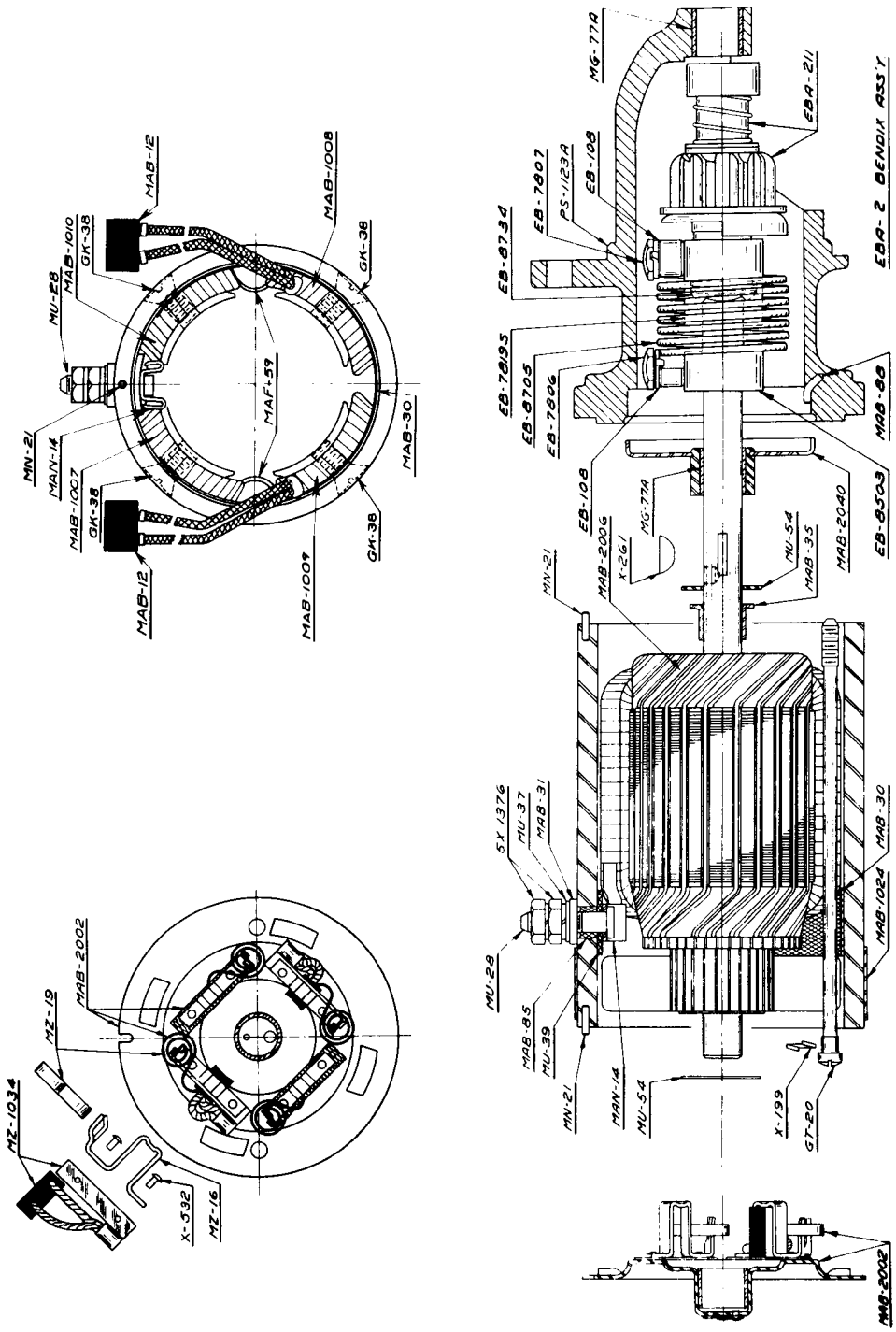
‡ Brush Set, Service, MAB-2012S.

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

MAB-4071 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAB-2001)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12†	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	FIELD COIL PACKAGE
MAB-1007	1	Coil, Field, Upper Left
MAB-1008	1	Coil, Field, Lower Right
MAB-1009	1	Coil, Field, Lower Left
MAB-1010	1	Coil, Field, Upper Right
MAF-59	2	Connector, Field Coil
MN-21	2	Pin, Dowel
MU-28	1	Stud, Term., 5/16-24
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
5X-1376	2	Nut, Term. Stud, Hex., 5/16-24
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EB-33	1	BENDIX DRIVE ASSY.
EB-508	2	Washer, Lock
EB-2303	1	Head, Drive
EB-2319S	1	Sleeve, Compression
EB-2322	2	Clip, Spring Support
EB-2406	1	Screw, Spring, Head
EB-2407	1	Screw, Spring, Shaft
EB-3105	1	SPRING, DRIVE
EB-3311	1	Shaft & Pinion
MAB-1024E	1	Band, Cover
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
PS-1102	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd., #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32

NOTE: The MAB-4072A starting motor uses EBA-11 Bendix Drive with sub parts as noted below.

EBA-11	1	BENDIX DRIVE ASSY.
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-1111	1	Shaft & Pinion

† BRUSH SET, SERVICE MAB-2012AS.

NOTE: Part numbers shown in parenthesis are not recommended for service.

UNIT	APPLICATION
MAB-4072	Hercules
MAB-4072A	Hercules; U.S. Motors

(Issued 3-6-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2112)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.-L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.-L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-3002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6R	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

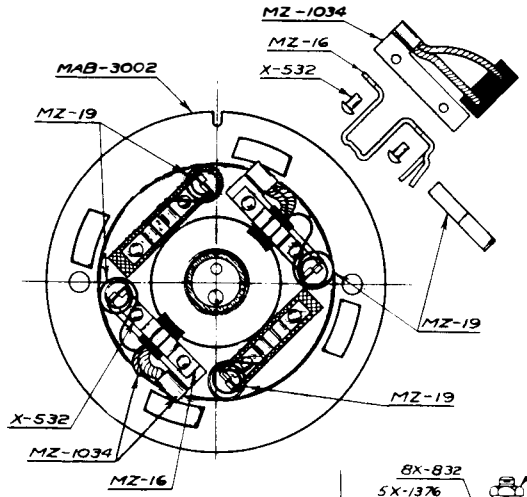
Miscellaneous Parts

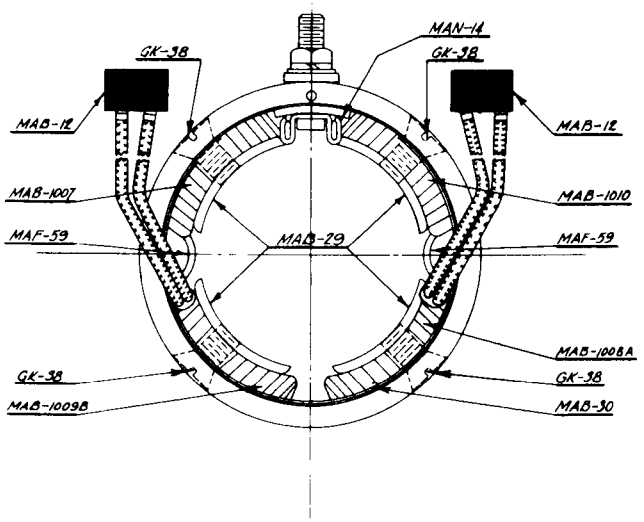
EB-99	1	Bendix Drive
MAB-1024	1	Head Band Assy.
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1088	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

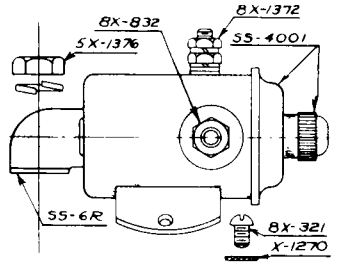
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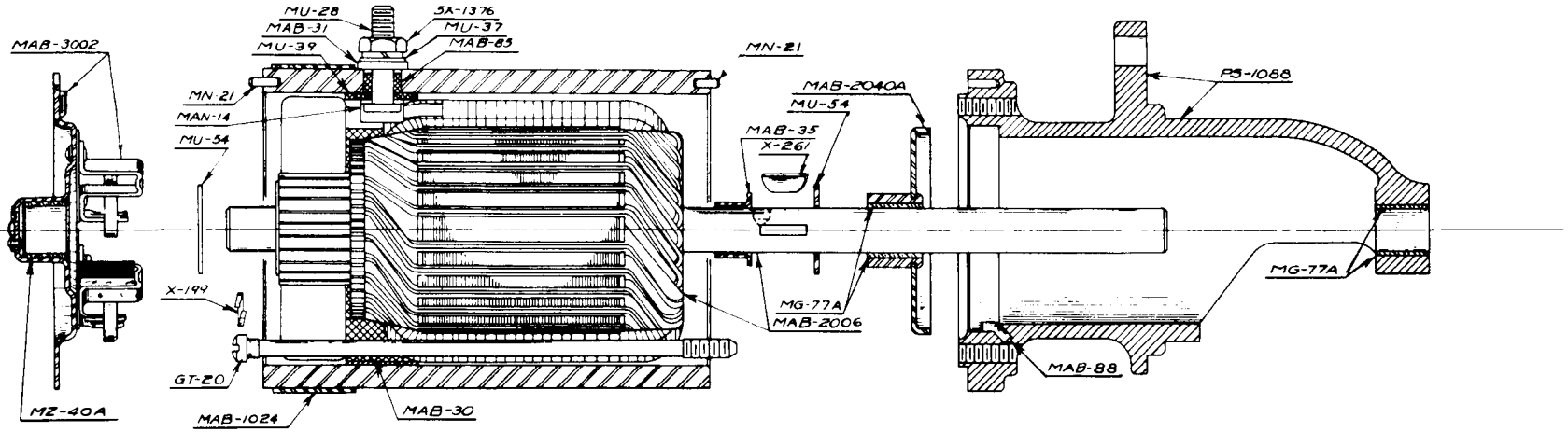
"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4073 STARTING MOTOR ILLUSTRATION









Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAB-2132)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
MAD-20	2	Frame Screw
X-146	2	1/4-20 Hex. Nut
X-199	2	1/4 Lock Washer
X-489	1	1/4 Oiler - Press in Type
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2113	1	Armature Assembly
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

MU-37	1	5/16 Plain Washer
SS-6R	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-949	1	Terminal
X-999	1	Terminal
X-1270	2	#10 Skpf. Washer
X-1461	1	Terminal

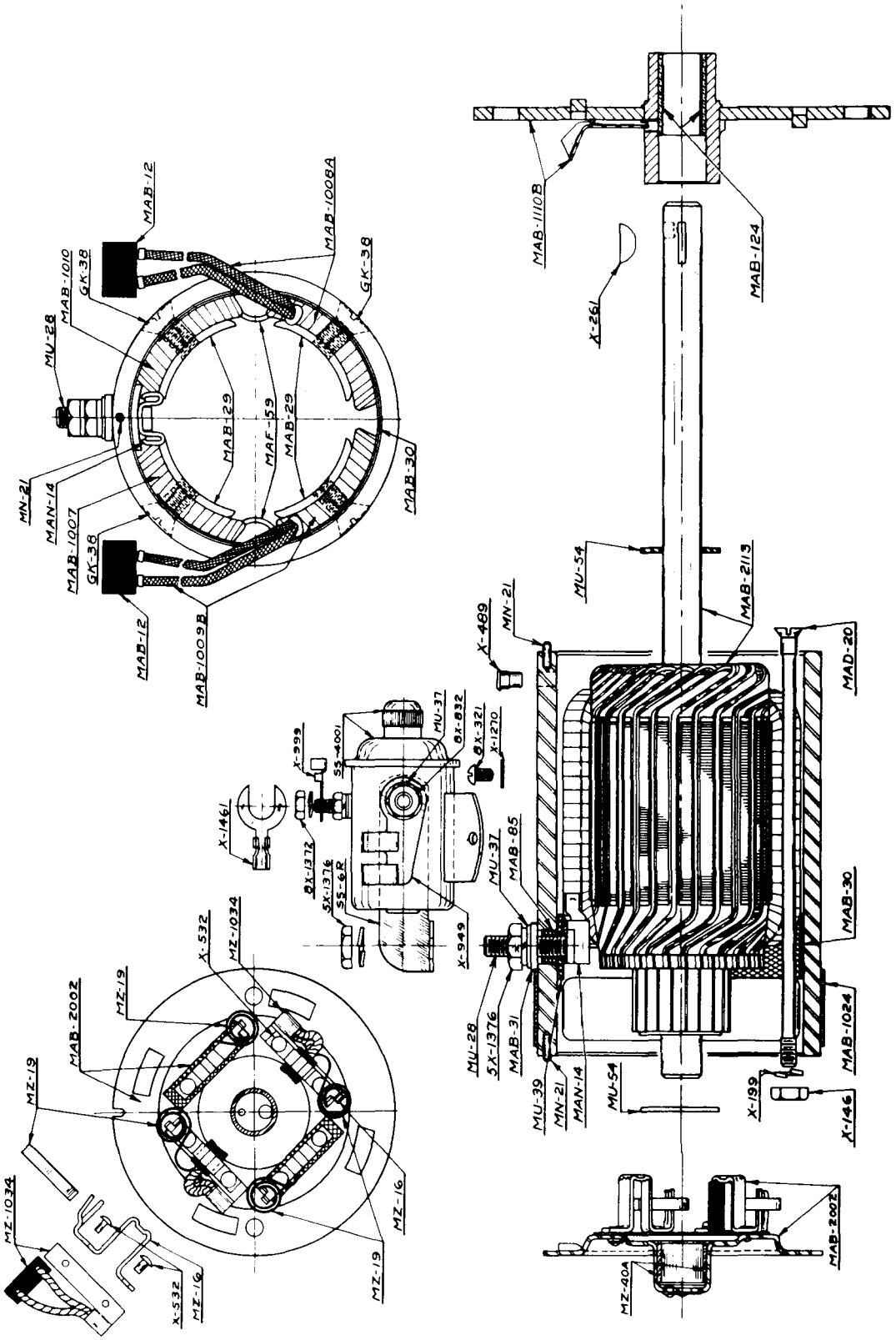
Miscellaneous Parts

EBA-5	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assembly
MAB-1110B	1	Drive End Head Assy.
MAB-124	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-18-38)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4075 STARTING MOTOR ILLUSTRATION



MAB-4076 STARTING MOTOR PARTS LIST MAB-4076

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2057	1	Armature Assembly
MAB-56	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EB-99	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-1125	1	Drive End Head Assy.
MAB-49A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

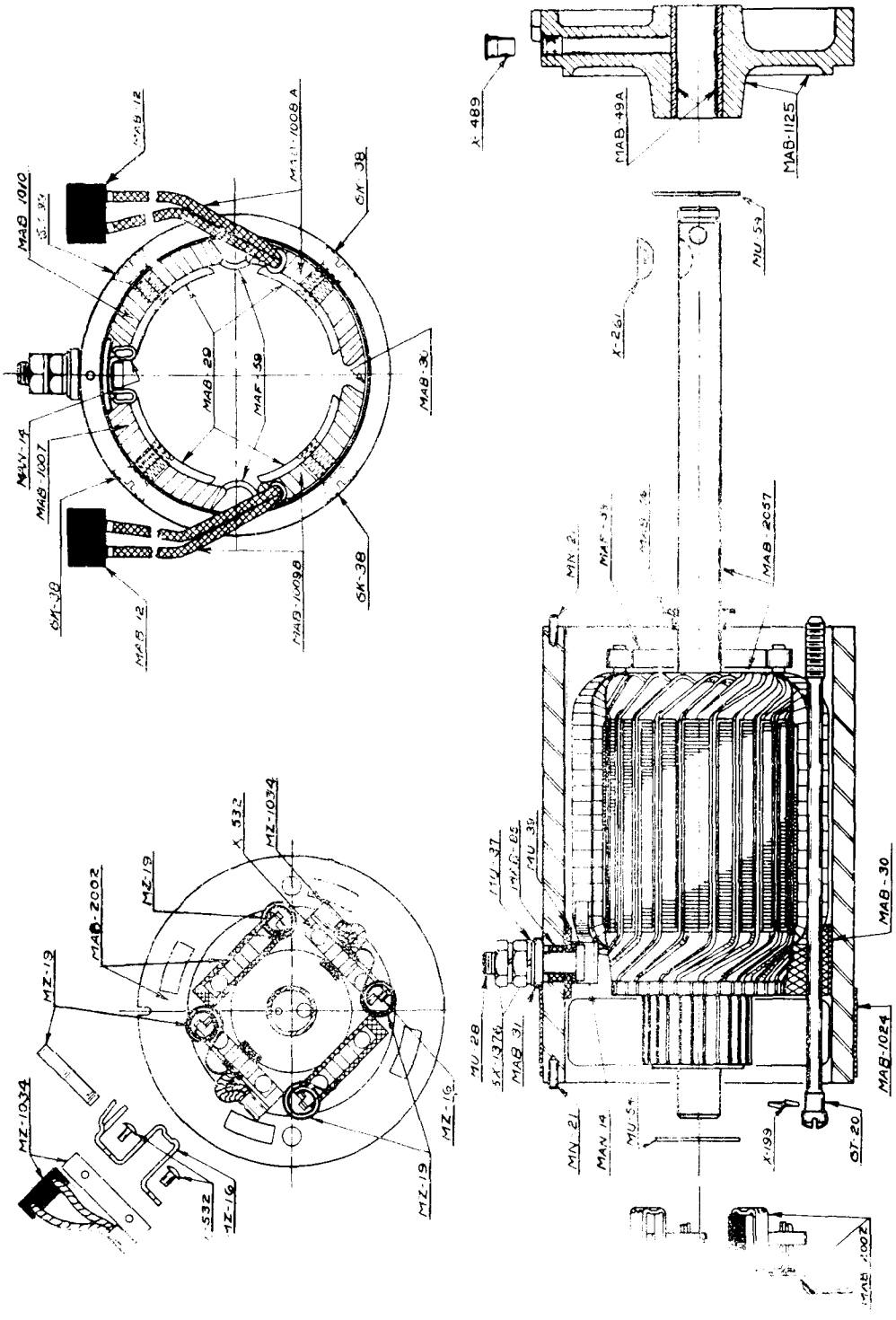
(Issued 7-16-35)
(R-3-24-37)

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File in Equipment & Parts Lists Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4076 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2082)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-83	1	Ins. Washer
MAB-84	1	Terminal Post
MAB-1007G	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Br. Assy. - L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Br. Assy. - L.L.
MAB-12	1	Brush
MAB-1010F	1	Field Coil - U.R.
MAF-31	1	Ins. Bushing
MAF-48	1	Ins. Washer
MAF-48A	1	Ins. Washer
MAF-59	2	Field Coil Connector
MN-21	2	Dowel Pin
X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8-1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2057	1	Armature Assembly
MAB-56	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

VC-4002	1	Vacuum Starting Switch (See separate list for parts)
X-196	4	#10 Lock Washer
8X-311	4	#10-32x3/8 Rd. Hd. Screw
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

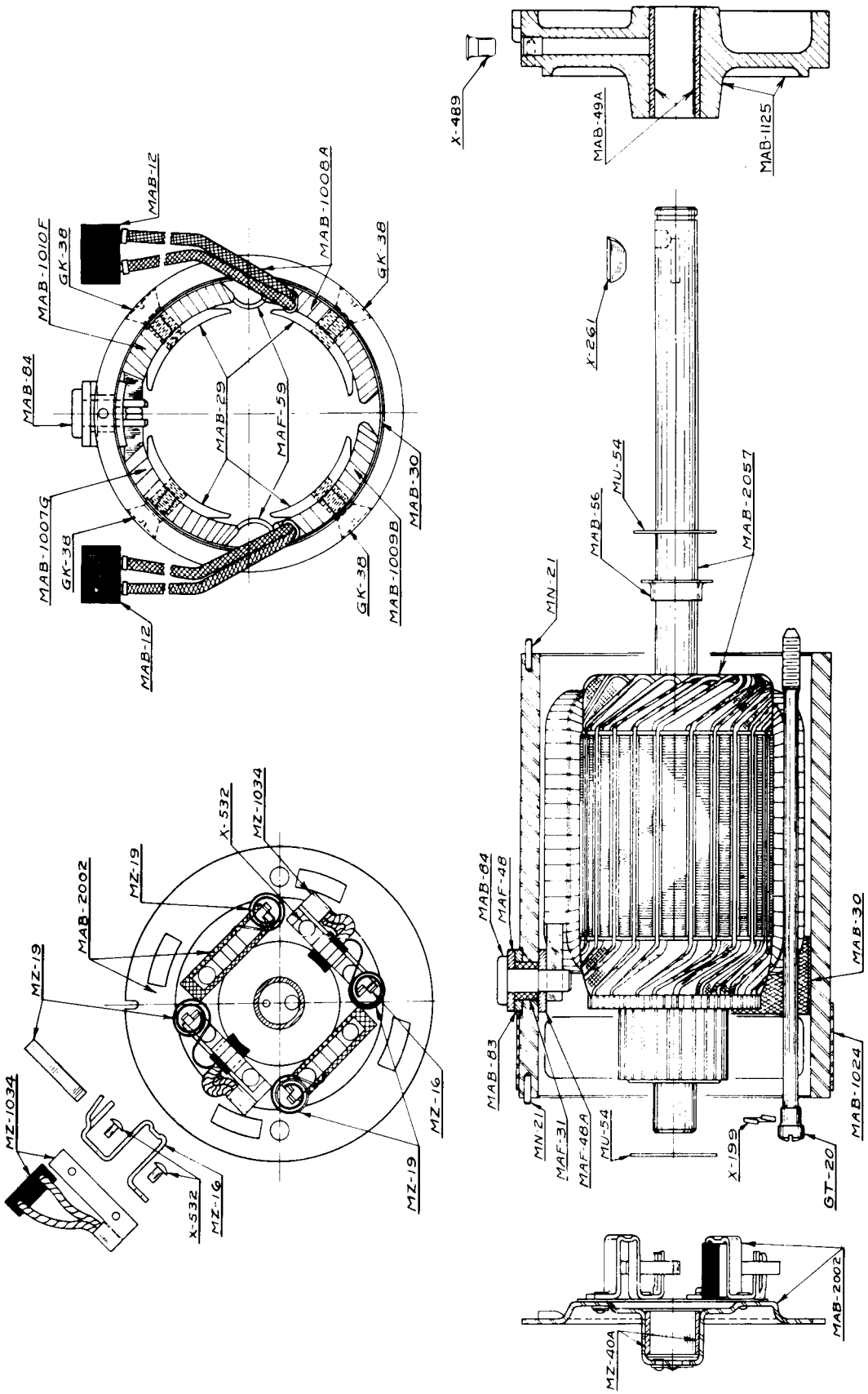
Miscellaneous Parts

EB-99	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-1125	1	Drive End Head Assy.
MAB-49A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 11-20-35)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4077 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.-L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.-L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assy.
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

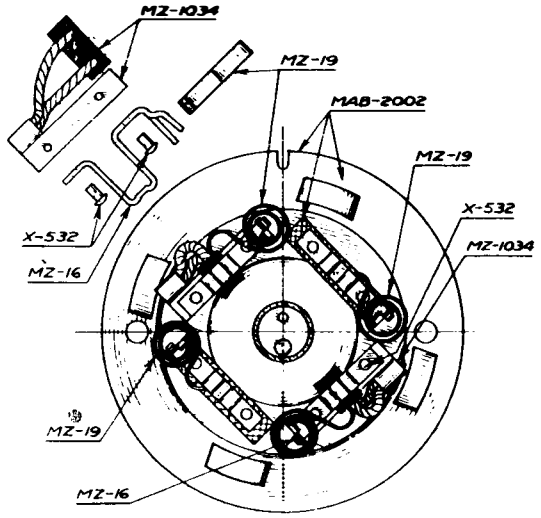
Miscellaneous Parts

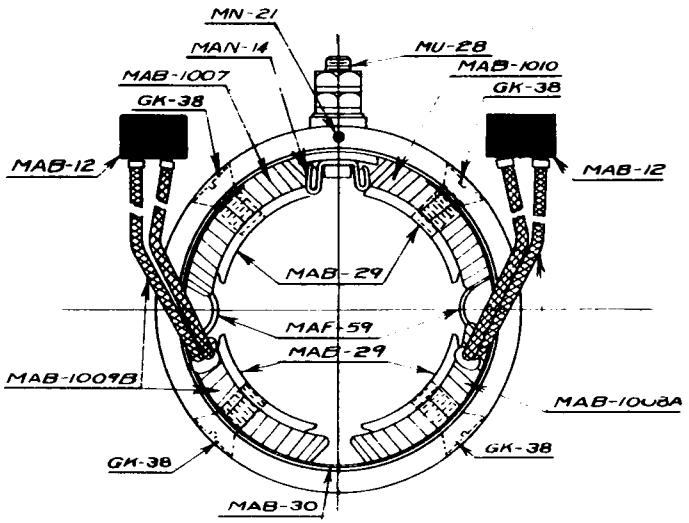
EBA-2	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assy.
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1088	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

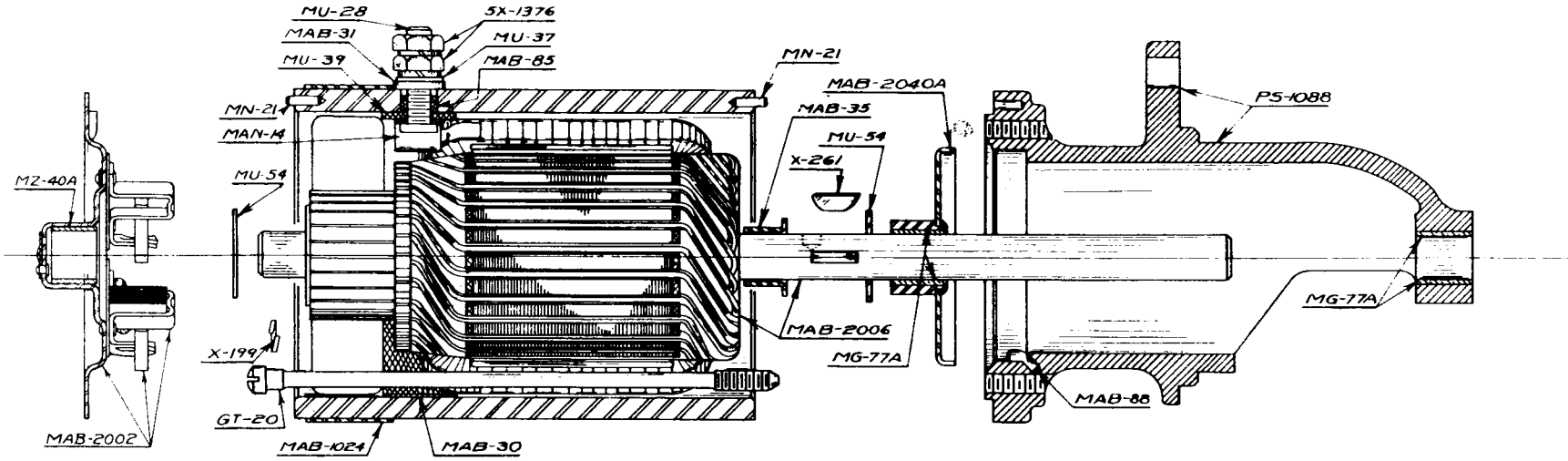
(Issued 11-20-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4078 STARTING MOTOR ILLUSTRATION







Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2112)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8xl/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

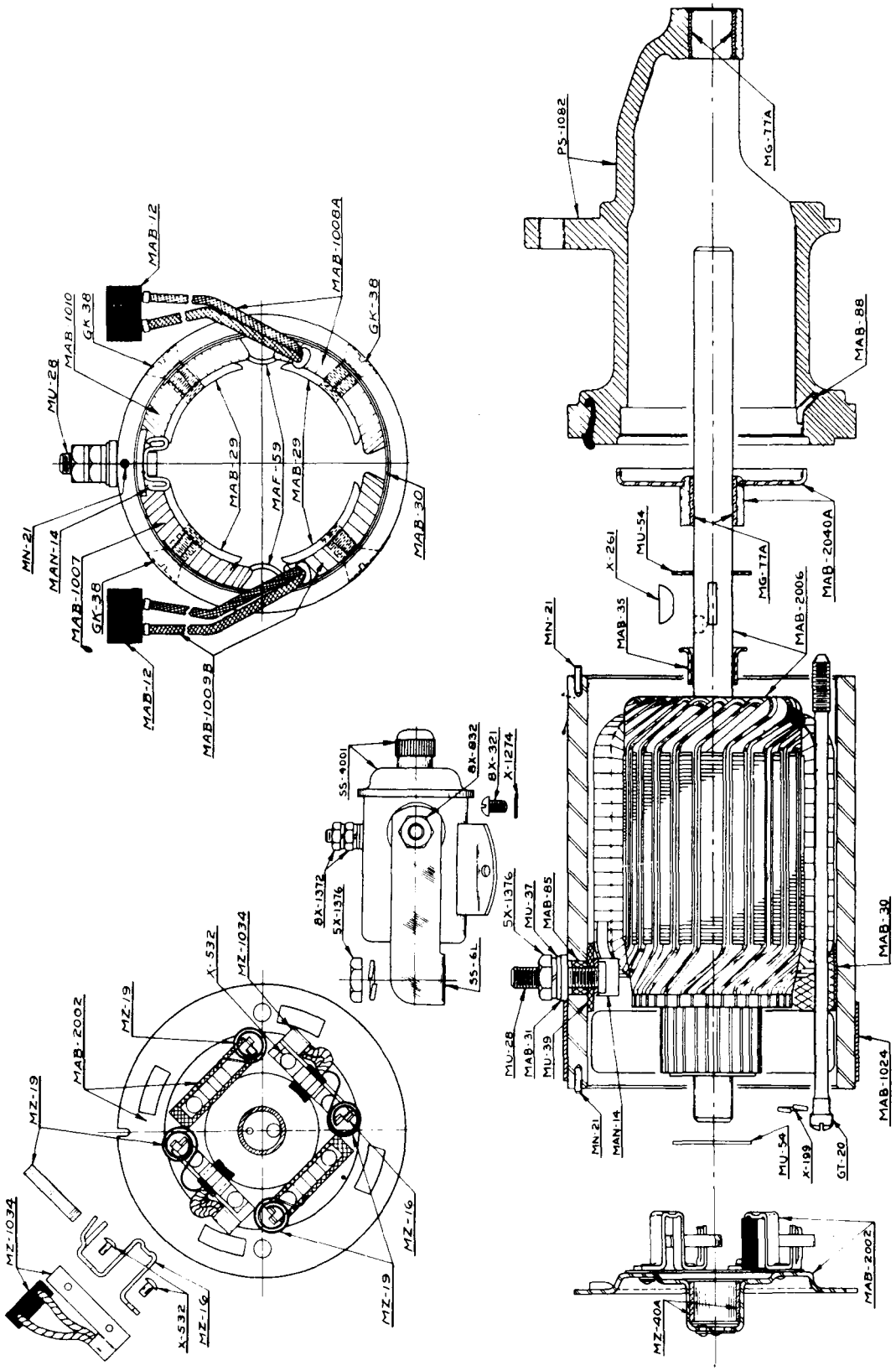
Miscellaneous Parts

EBA-7	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assembly
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1082	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32xl 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 7-16-35)
(R-5-10-37)

"NOTE: Where p rt numbers are shown in parenthesis they re for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4079 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2001)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	BRUSH
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	BRUSH
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAB-2002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	BRUSH ASSY.- GROUNDED
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2046	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EB-87	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7806	1	Hd. Spring Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	DRIVE SPRING
EB-8711	1	S-A Assembly
EB-8734	1	Take-Up Spring
MAB-1024	1	Head Band Assembly
MAB-2040A	1	INTERMEDIATE BRG. ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1043	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

UNIT	APPLICATION
MAB-4080	Continental

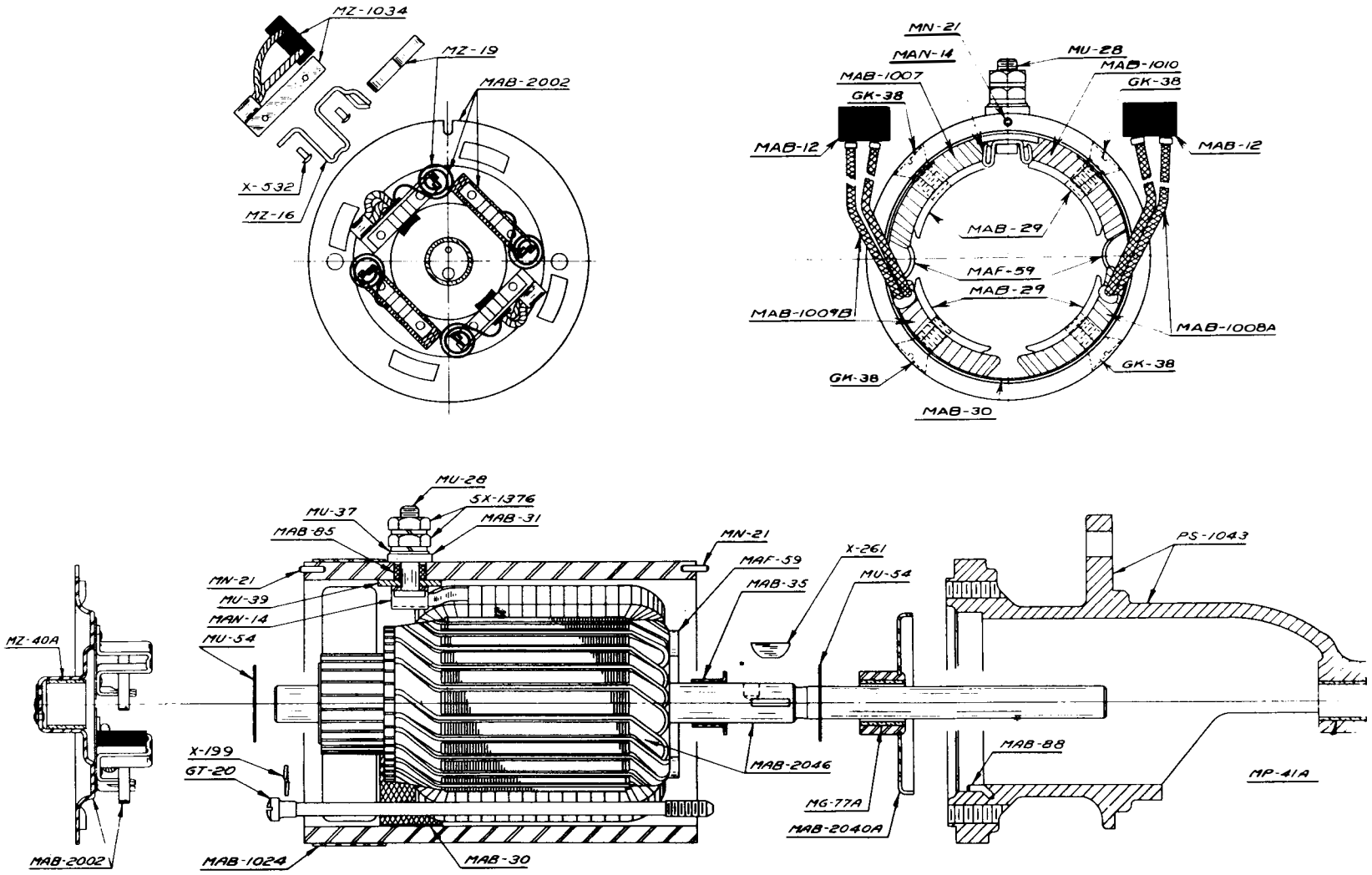
(Issued 12-7-39)

Printed in U. S. A.

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4080 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
GT-20	2	Frame Screw
(MAB-2082)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-83	1	Ins. Washer
MAB-84	1	Terminal Post
MAB-1007G	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010F	1	Field Coil - U.R.
MAF-31	1	Ins. Bushing
MAF-48	1	Ins. Washer
MAF-48A	1	Ins. Washer
MAF-59	2	Field Coil Connector
MN-21	2	Dowel Pin
X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
	1 2 3 4 5	

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
MAB-2046	1	Armature Assembly
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SW-3752S	1	Starting Switch
X-196	4	#10 Lock Washer
8X-321	4	#10-32x5/16 Rd. Hd. Screw
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

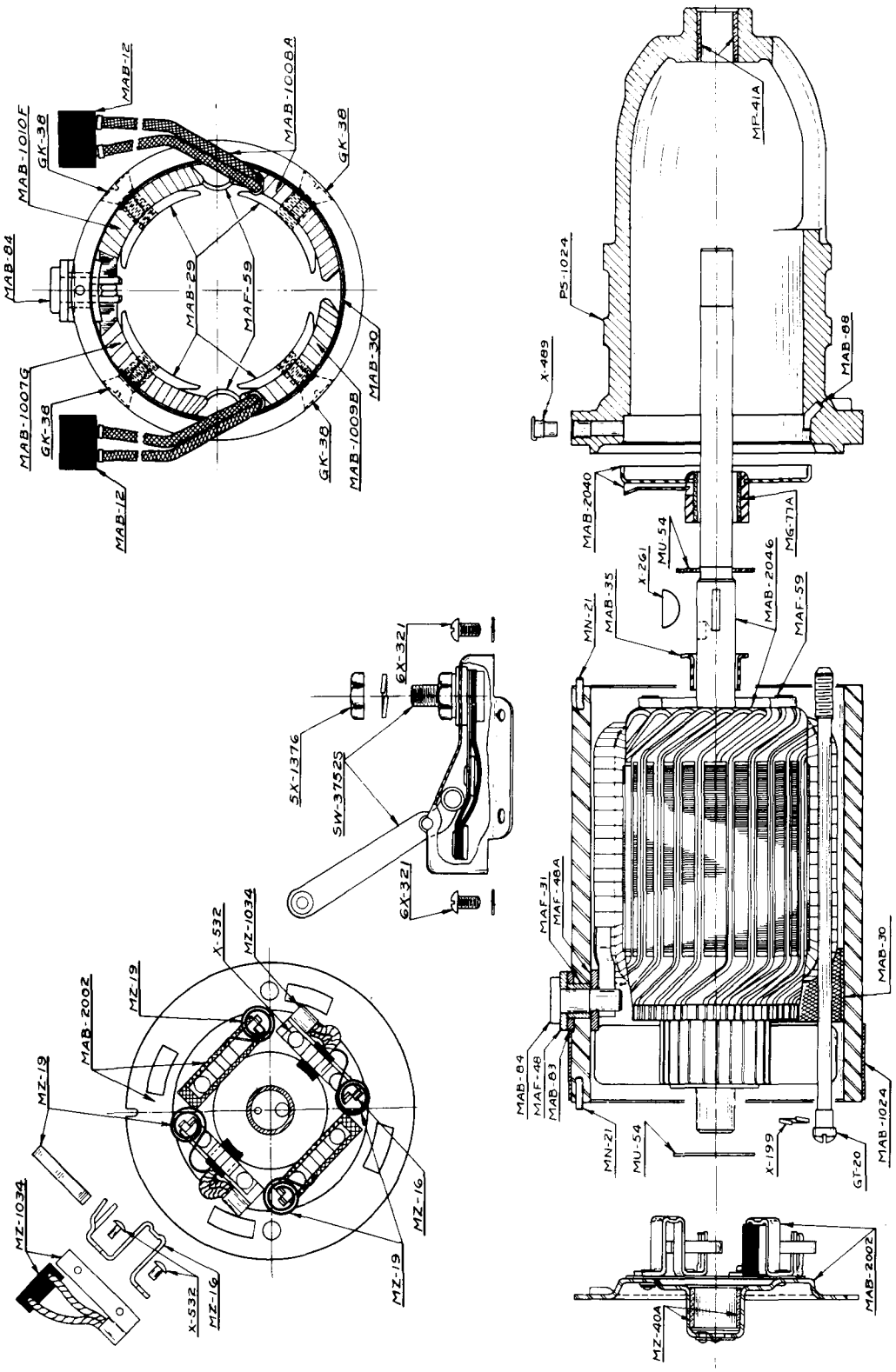
Miscellaneous Parts

EB-87	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1024	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
	1 2 3 4 5	

(Issued 11-20-35)

"NOTE: Where part n mbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4081 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No,	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2112)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	BRUSH
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	BRUSH
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAB-2002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	BRUSH ASSY.- GROUNDED
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

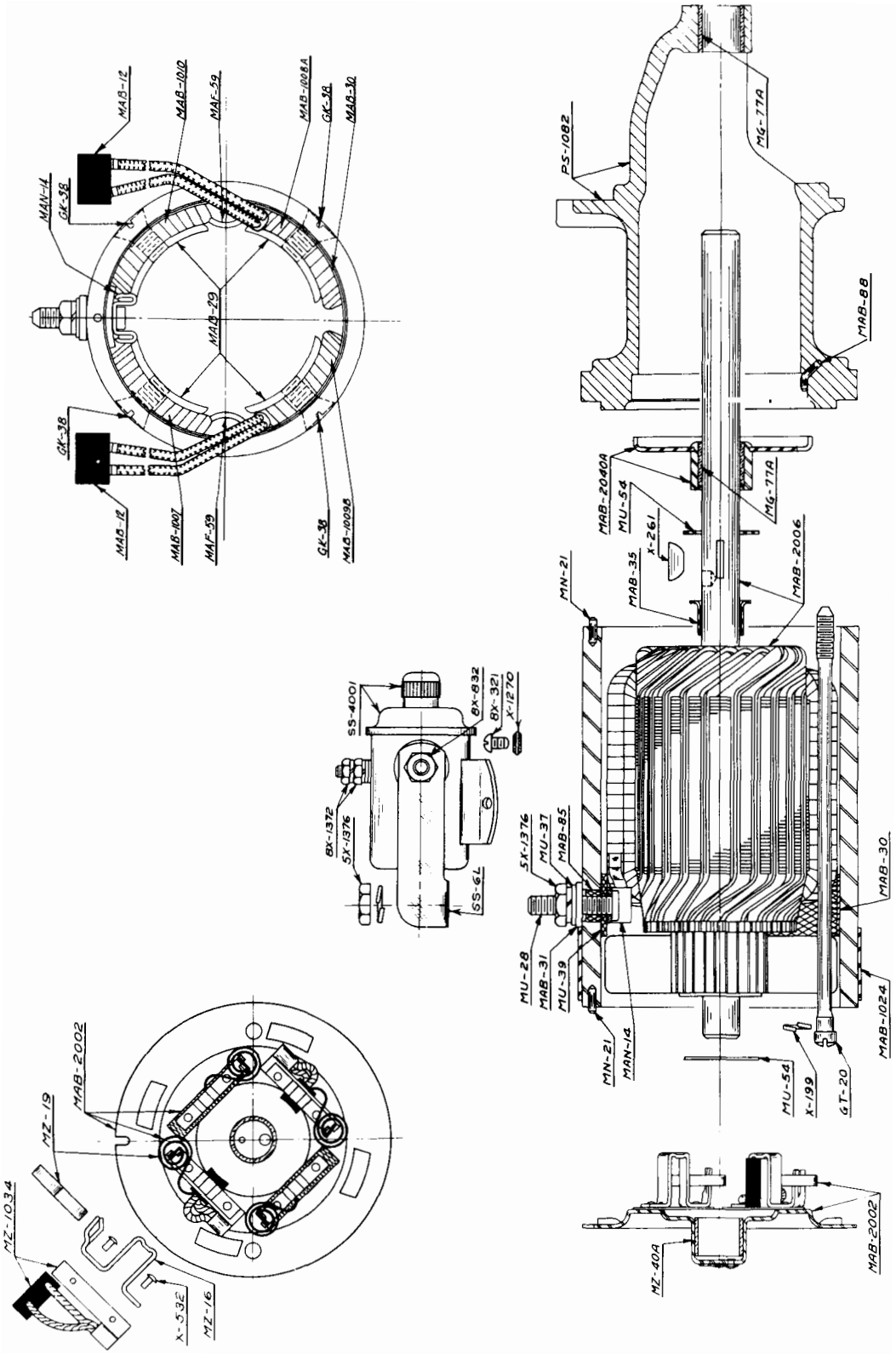
EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7806	1	Hd. Spring Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	DRIVE SPRING
EB-8734	1	Take-Up Spring
EBA-211	1	S-A Assembly
MAB-1024	1	Head Band Assembly
MAB-2040A	1	INTERMEDIATE BRG. ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1082	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 12-7-39)

UNIT	APPLICATION
MAB-4083	Checker Cab

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4083 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

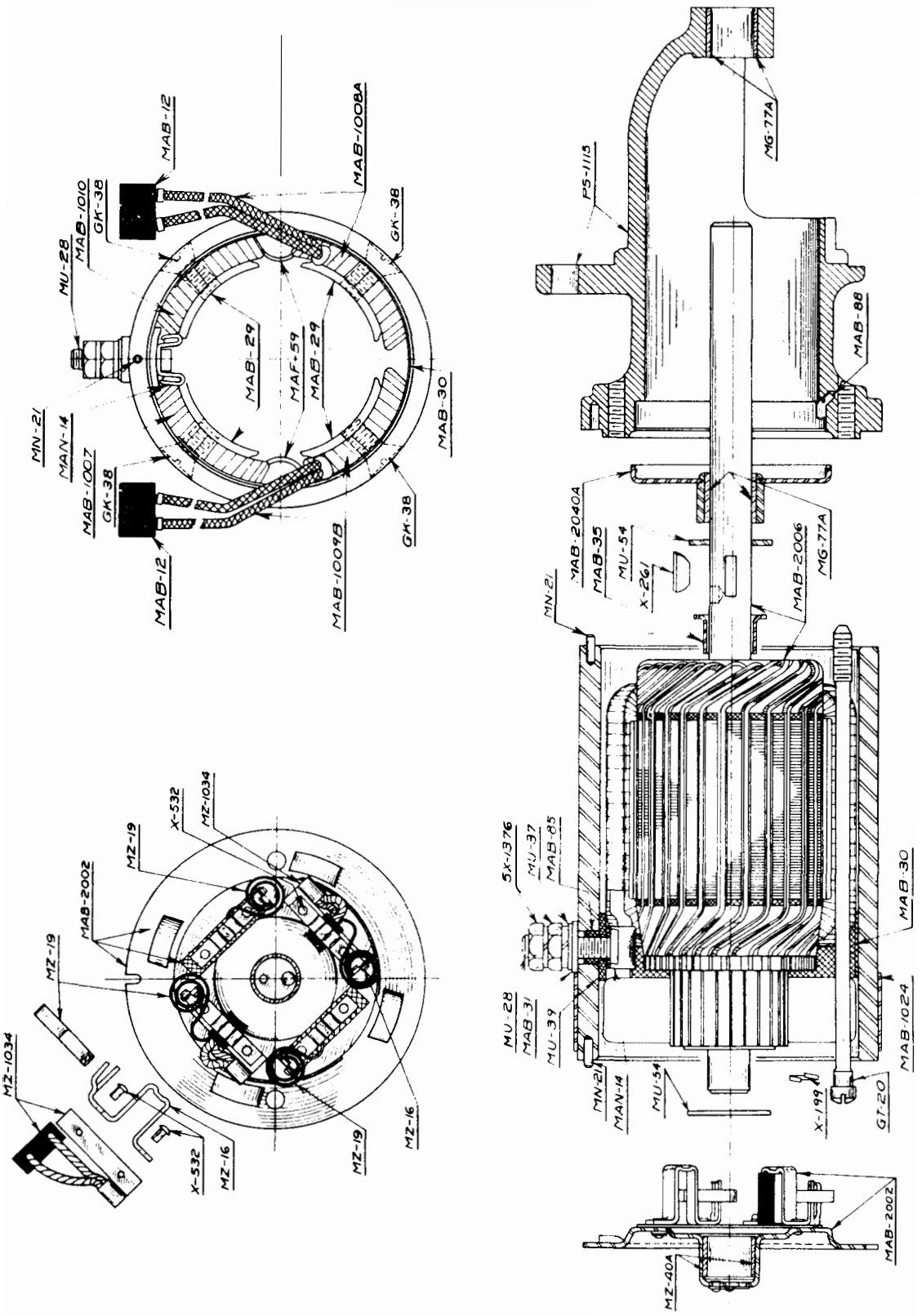
Miscellaneous Parts

EBA-2	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assy.
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1115	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 7-19-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4084 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAB-2001)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	FIELD COIL PACKAGE
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal, 5/16-24
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
5X-1376	2	Nut, Term. Stud, Hex. 5/16-24
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, 1/32'' Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EB-33	1	BENDIX DRIVE ASSY.
EB-508	2	Washer, Lock
EB-2303	1	Head, Drive
EB-2319S	1	Sleeve, Compression
EB-2322	2	Clip, Spring Support
EB-2406	1	Screw, Spring, Head
EB-2407	1	Screw, Spring, Shaft
EB-3105	1	SPRING, DRIVE
EB-3311	1	Shaft, & Pinion
*	1	Band, Cover
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
PS-1115	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

NOTE: - MAB-4085A,B STARTING MOTORS use EBA-11 Bendix Drive Assy. with sub parts as noted below:

EBA-11	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-1111	1	Shaft & Pinion

† BRUSH SET, SERVICE MAB-2012AS.

* See table following parts list for part number applying to assembly wanted.

Assembly No.	Cover Band
MAB-4085	MAB-1024E
MAB-4085A	MAB-1024E
MAB-4085B	MAB-1024G

(Issued 10-18-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2112)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-87	1	Felt Washer
MAB-2086	1	Armature Assembly
ML-32	1	Thrust Washer
MU-54	1	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

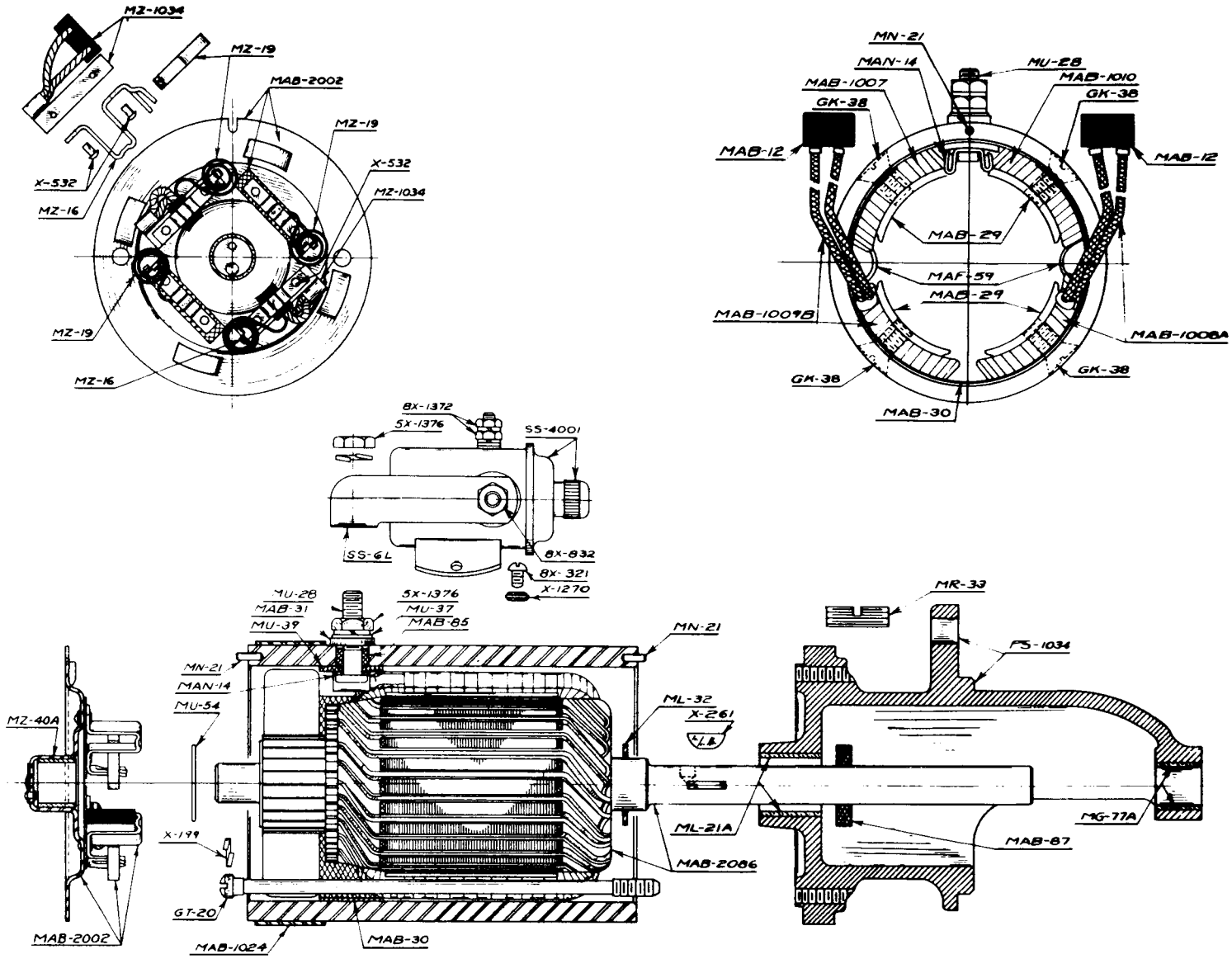
Miscellaneous Parts

EBA-2	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MR-33	1	Plug
PS-1034	1	Pinion Housing Assy.
MG-77A	1	Absorbent Bronze Brg.
ML-21A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 4-30-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4087 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2112)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-195	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

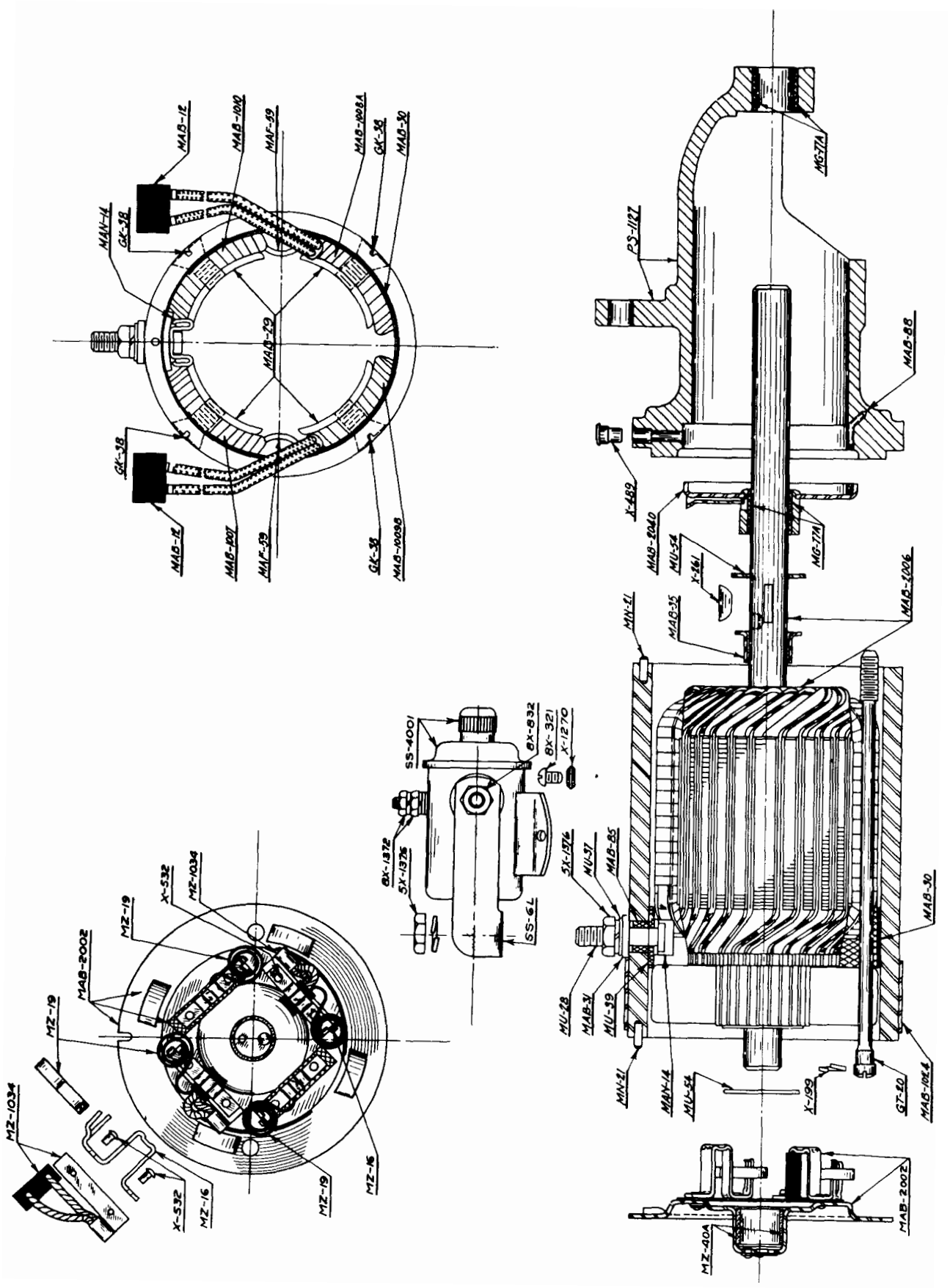
Miscellaneous Parts

EBA-2	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assy.
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1127	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 7-19-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the com lete part can be assembled as needed."

MAB-4088 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2112)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-3002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

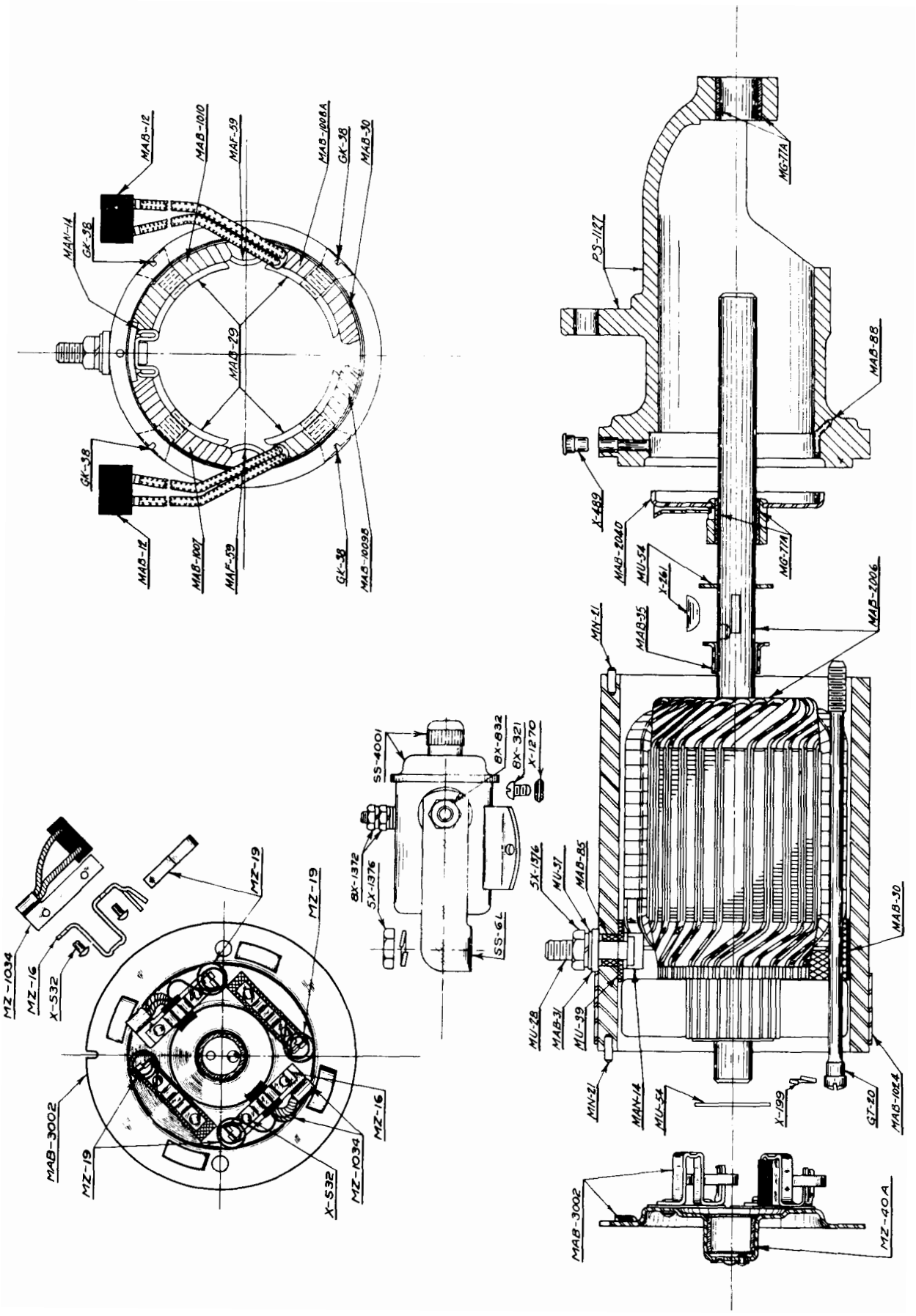
Miscellaneous Parts

EB-99	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1127	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 7-19-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4089 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAB-4090 STARTING MOTOR PARTS LIST MAB-4090

PRELIMINARY

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2001)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12‡	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12‡	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-3002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-1034‡	2	Brush Assy.- Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EB-51	1	BENDIX DRIVE ASSEMBLY
EB-508	2	Lock Washer
EB-2303	1	Driving Head
EB-2319S	1	Compression Sleeve
EB-2405	1	DRIVING SPRING
EB-2406	1	Hd. Spr. Bolt or Screw
EB-2407	1	Shaft Spring Screw
EB-2622	2	Spring Support Clip
EB-5111	1	S-A Assembly
MAB-1024	1	Head Band Assembly
MAB-2040	1	INTERMEDIATE BEARING ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1003	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-7-41)

‡ SERVICE BRUSH SET MAB-2012S.

UNIT	APPLICATION
MAB-4090	Universal

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assy. with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2112)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.-L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.-L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy.-Grounded
X-532	4	1/8x1/4 Oval Hd.Tub.Rivet
		1 2 3 4 5

Armature Assy. & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assy.
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EBA-2	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assy.
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1123	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut

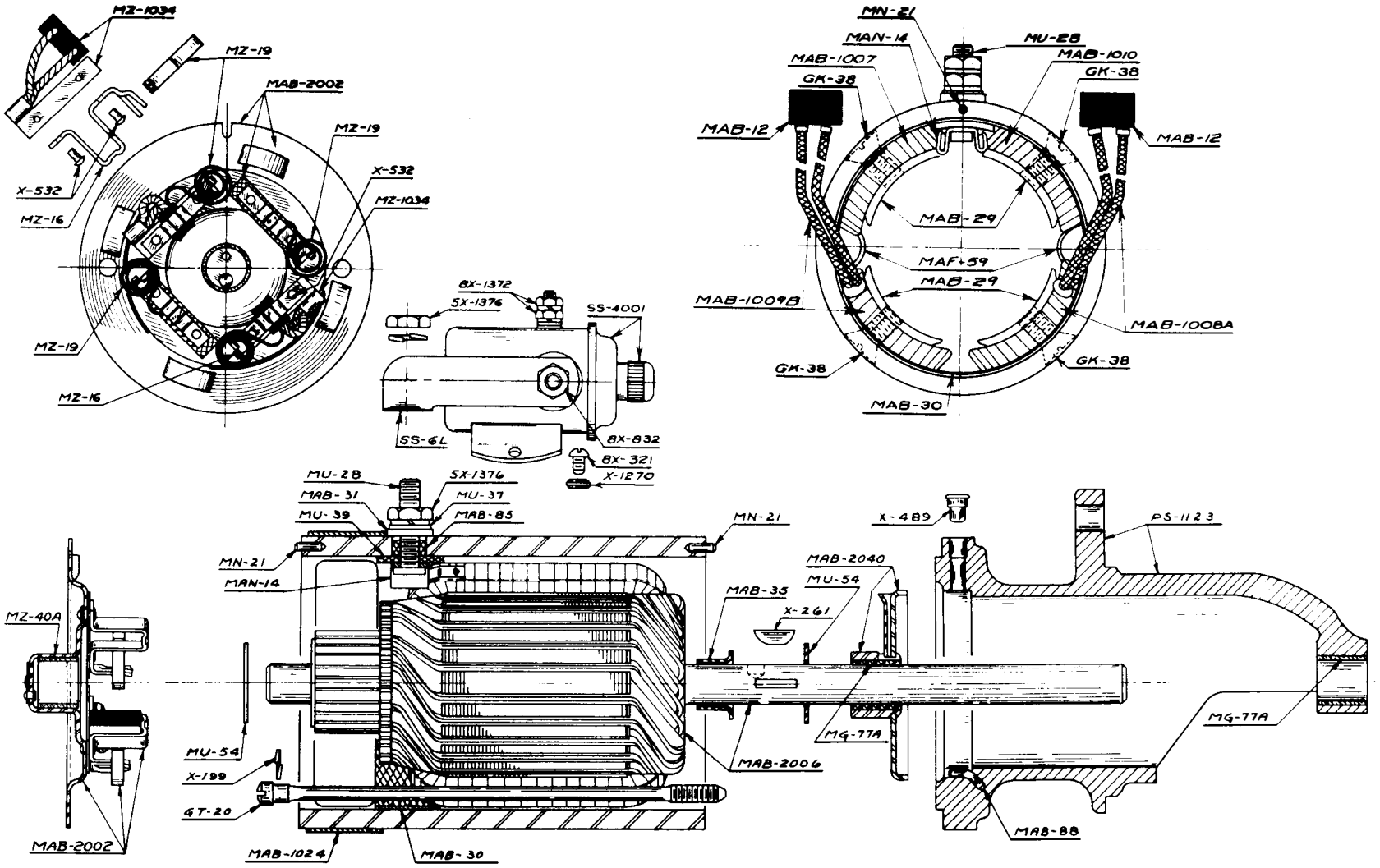
Switch Assy. & Parts Used With

SS-6L	1	Connector
SS-4001	1	Solendid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer
		1 2 3 4 5

(Issued 11-30-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

MAB-4091 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAB-4092 STARTING MOTOR PARTS LIST MAB-4092

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Bolt, Thru
(MAB-2112)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12‡	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MAN-14	1	Terminal
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-199	2	Washer, Lock, Thru Bolt, 1/4
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034‡	2	Brush, Grounded
X-532	4	Rivet, Oval hd., 1/8x1/4

Armature Assembly & Parts Used With

MAB-2006	1	Armature Assy.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, Comm.. End & Intermediate
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6L	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	Washer, Lock, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Washer, Lock, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Mtg. Switch, Rd. hd., #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Sc., #10

Miscellaneous Parts

EBA-11	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take up
EBA-1111	1	Shaft & Pinion
MAB-1024	1	Band, Cover
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
PS-1123A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-489	1	Oiler, Hinge Top, Press in, 1/4
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 3-4-44)

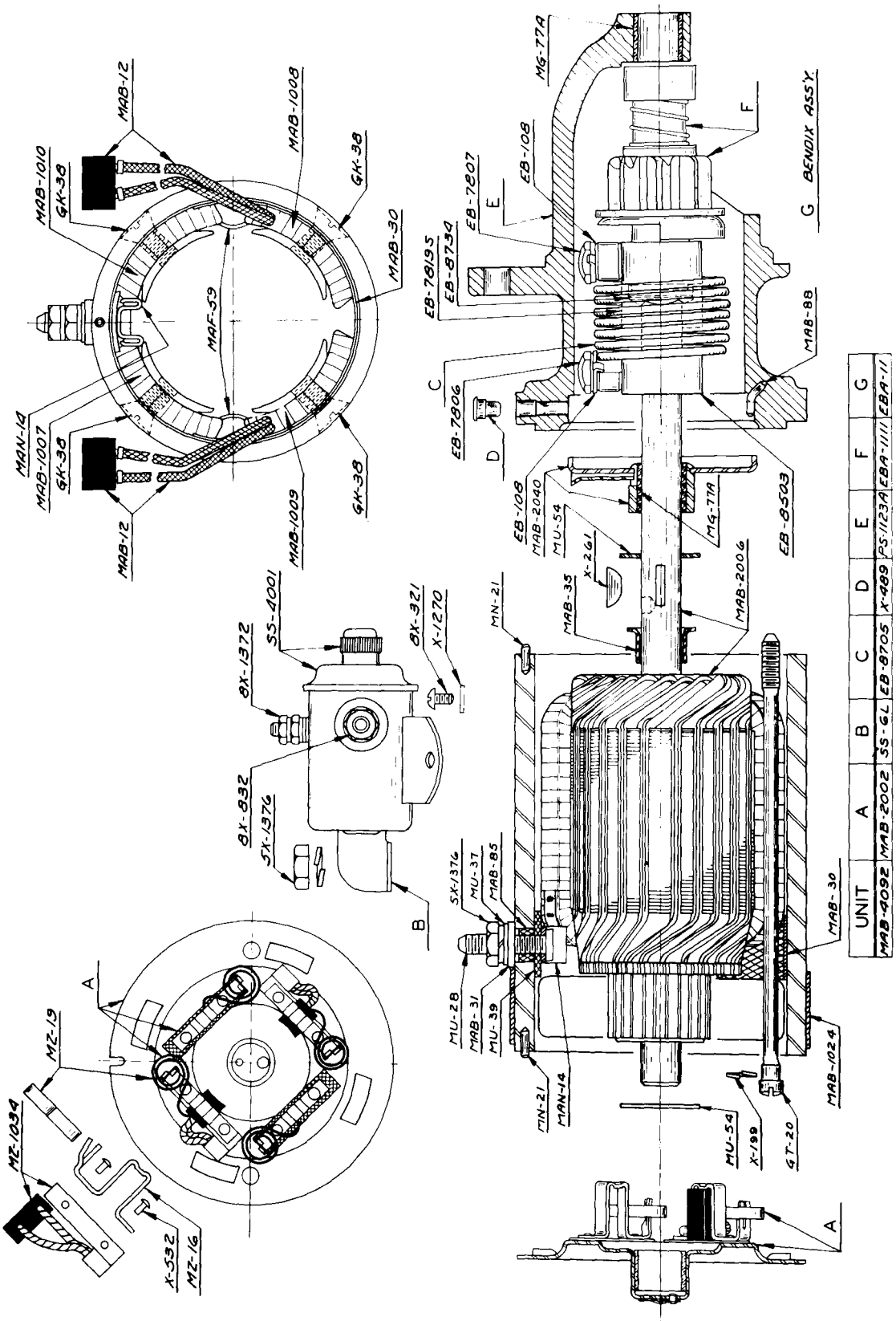
‡ Contact Set, Service, MAB-2012S.

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

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MAB-4092 STARTING MOTOR ILLUSTRATION



UNIT	A	B	C	D	E	F	G
MAB-4092	MAB-2002	35-GL	EB-8705	X-489	PS-11234	EBA-1111	EBA-11

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Bolt, Thru
(MAB-2112)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12‡	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MAN-14	1	Terminal
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-38	1	Washer, Ins., Term. Stud, Inner
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-199	2	Washer, Lock, Thru Bolt, 1/4
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034‡	2	Brush, Grounded
X-532	4	Rivet, Oval hd., 1/8x1/4

Armature Assembly & Parts Used With

MAB-2006	1	Armature Assy.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6L	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	Washer, Lock, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Washer, Lock, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Mtg. Switch, Rd. hd., #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Sc., #10

Miscellaneous Parts

EBA-27	1	Bendix Drive Assembly
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take up
EBA-2711	1	Shaft & Pinion
MAB-1024	1	Band, Cover
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
PS-1139C	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 3-4-44)

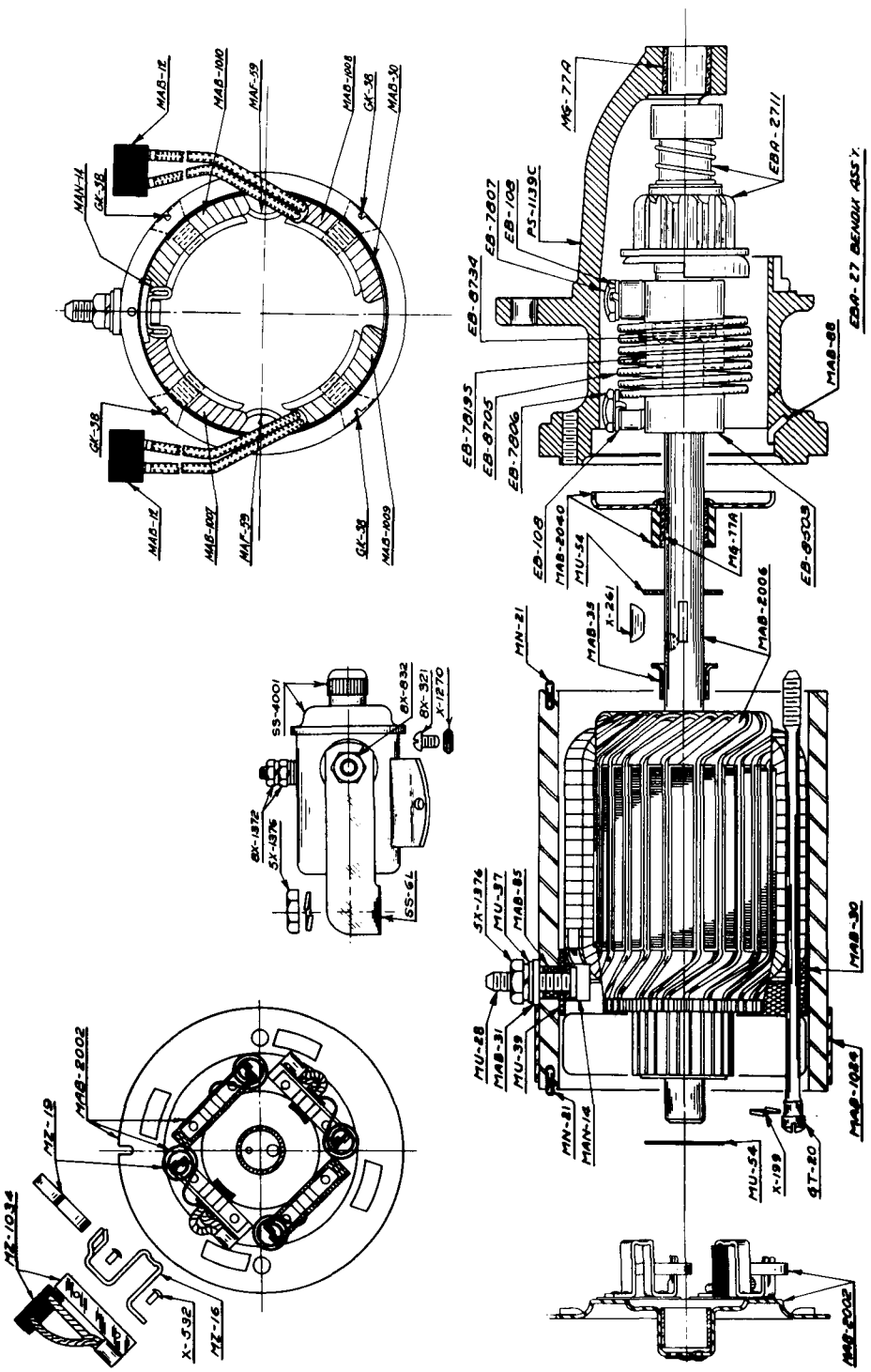
‡ Brush Set, Service, MAB-2012S.

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

MAB-4093 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EBA-27	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assembly
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1139A	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8/12/38)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAB-2082)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-83	1	Ins. Washer
MAB-84	1	Terminal Post
MAB-1007G	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAB-1010F	1	Field Coil - U.R.
MAF-31	1	Ins. Bushing
MAF-48	1	Ins. Washer
MAF-48A	1	Ins. Washer
MAF-59	2	Field Coil Connector
MN-21	2	Dowel Pin
GT-20	2	Frame Screw
X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet

Armature Assembly & Parts Used With

MAB-2046	1	Armature Assembly
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-3737CS	1	Starting Switch
X-196	4	#10 Lock Washer
8X-321	4	#10-32x5/16 Rd. Hd. Screw
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

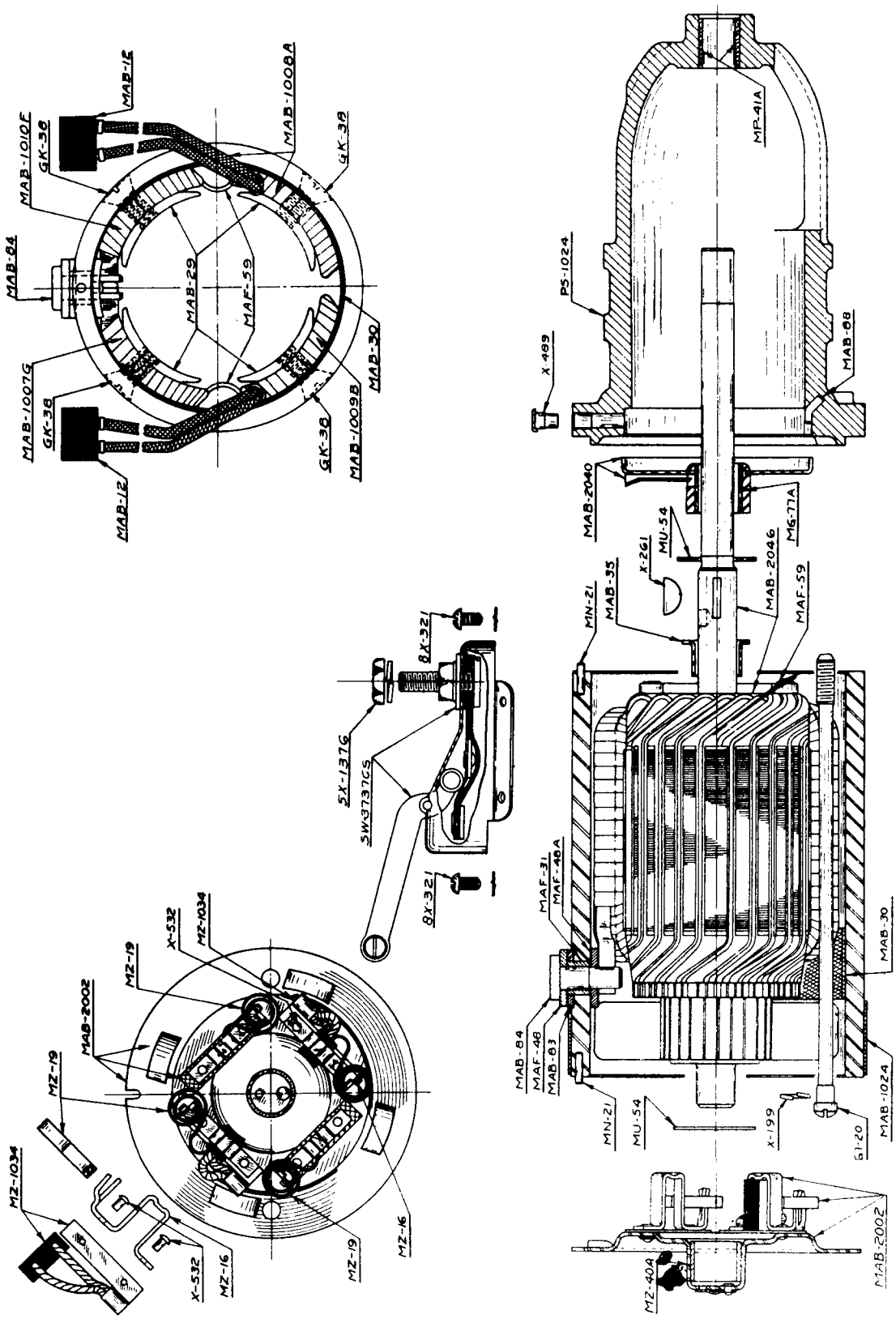
Miscellaneous Parts

EB-87	1	Bendix Drive Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
MAB-1024	1	Head Band Assy.
PS-1024	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-16-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4095 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2112)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.-L.R.
MAB-12	1	BRUSH
MAB-1009B	1	Field Coil & Brush Assy.-L.L.
MAB-12	1	BRUSH
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	ABSORBENT BRONZE BRG.
MZ-1034	2	BRUSH ASSY.-GROUNDED
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer-1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Sc.
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

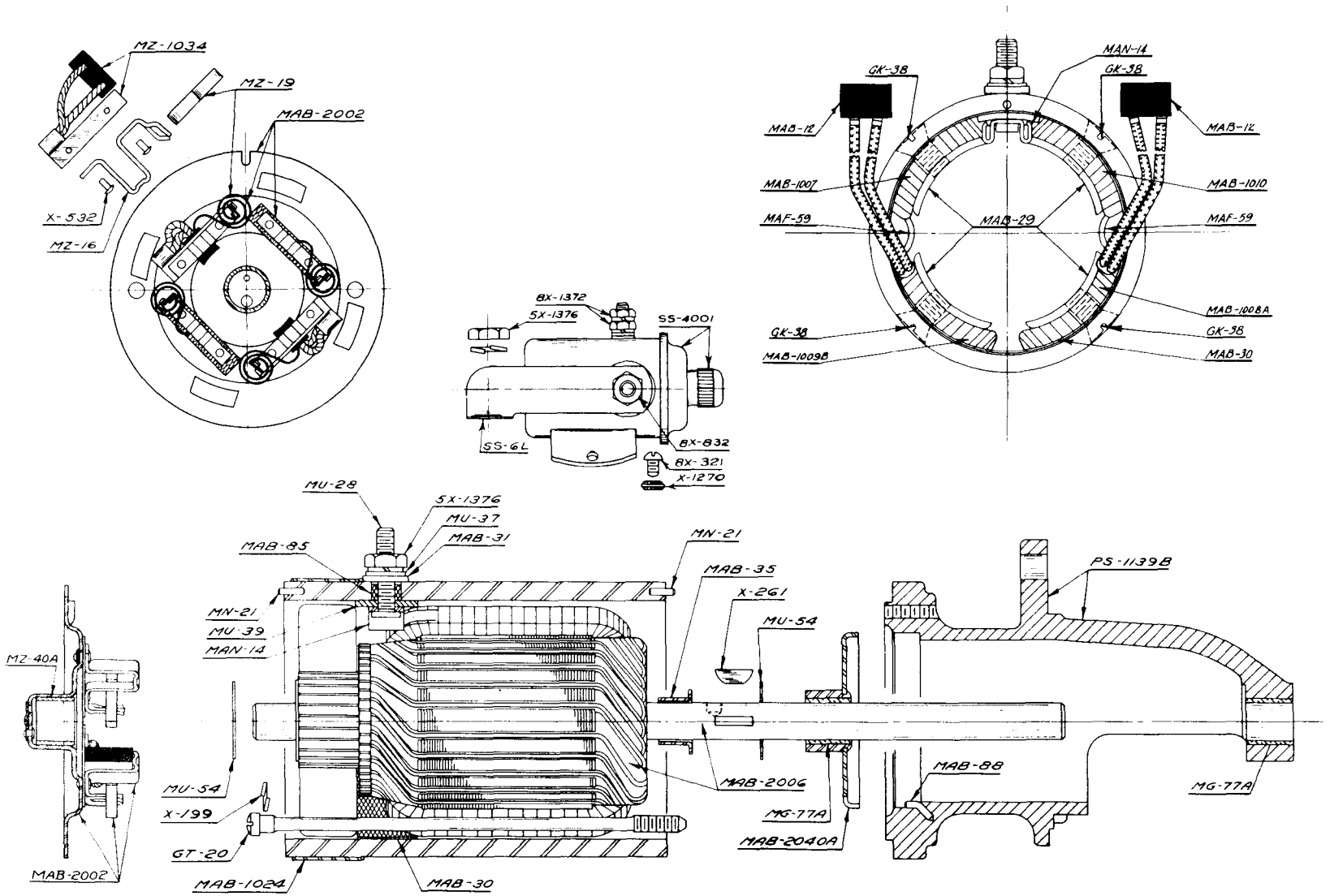
EBA-27	1	BENDIX DRIVE ASSY.
MAB-1024	1	Head Band Assembly
MAB-2040A	1	INTERMEDIATE BRG. ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1139B	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 3-6-39)

UNIT	APPLICATION
MAB-4098	Diamond T

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4098 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAB-2132)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	BRUSH
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	BRUSH
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	1	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
MAD-20	2	Frame Screw
X-146	2	1/4-20 Hex. Nut
X-199	2	1/4 Lock Washer
X-489	1	1/4 Oiler - Press in Type
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	ABSORBENT BRONZE BRG.
MZ-1034	2	BRUSH ASSY.- Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet

Armature Assembly & Parts Used With

MAB-2113	1	ARMATURE ASSEMBLY
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MU-37	1	5/16 Plain Washer
SS-6R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
X-949	1	Terminal
X-999	1	Terminal
X-1274	2	#10 Skpf. Washer
X-1461	1	Terminal
8X-1555	2	#10-32x5/16 Rd. Hd. Screw

Miscellaneous Parts

EBA-29	1	BENDIX DRIVE ASSY.
EB-108	2	Lock Washer
EB-8506	1	Hd. Sp. Bolt or Screw
EBA-513	1	Anti-Drift Spring
EBA-525	1	Meshing Spring
EBA-531	1	Screw Shaft Assembly
EBA-532	1	Pinion Assembly
EBA-533*	1	Retaining Ring (Narrow Groove)
EBA-1233*	1	Retaining Ring (Wide Groove)
EBA-2905	1	DRIVE SPRING
EBA-2907	1	Shaft Spring Screw
MAB-1024	1	Head Band Assembly
MAB-1110B	1	Drive End Head Assembly
MAB-124	1	ABSORBENT BRONZE BRG.
X-66	2	#10-32x1/2 Flat Hd. Screw
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

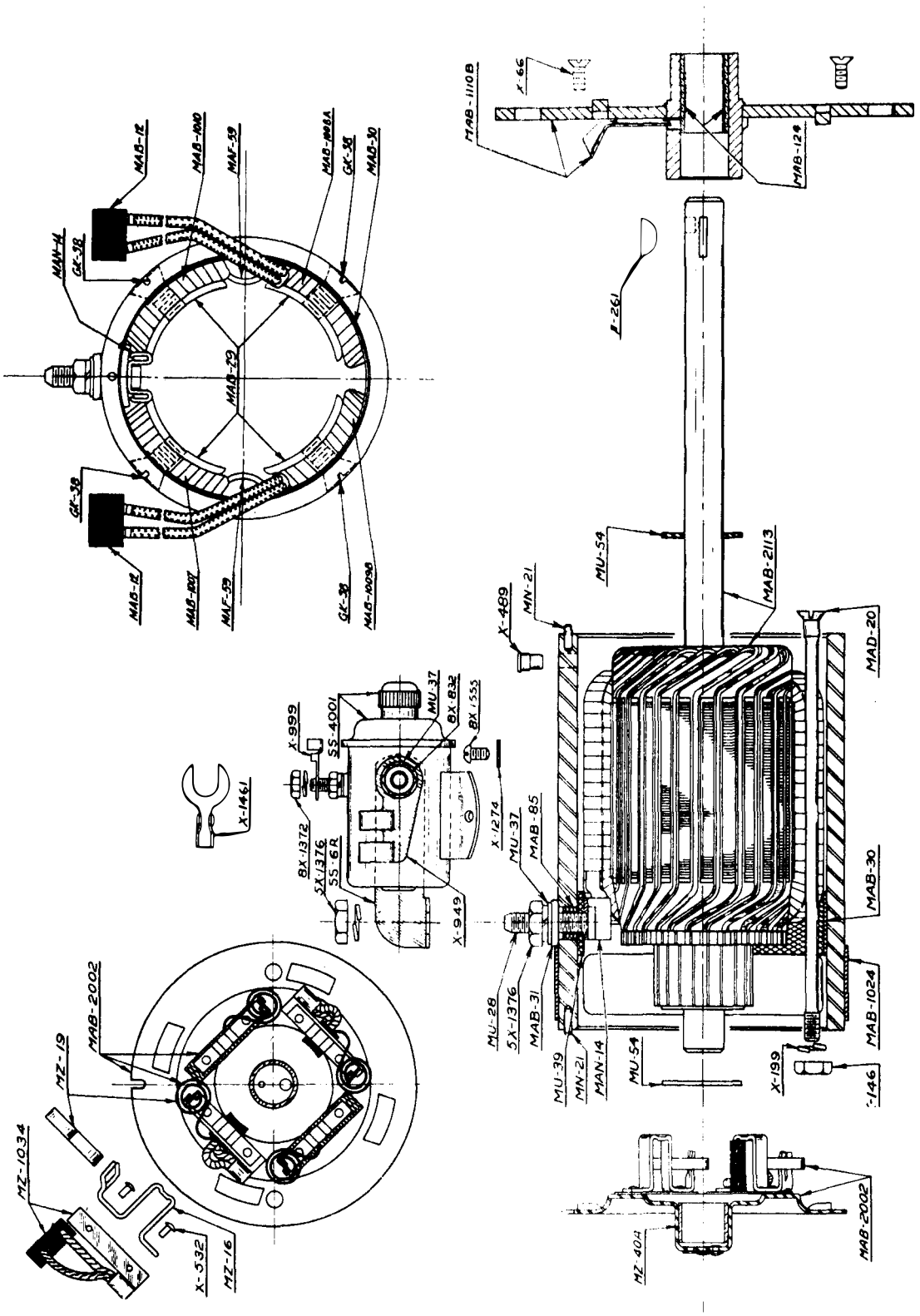
(Issued 8-22-39)

* Use as required.

UNIT	APPLICATION
MAB-4100	Hudson

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4100 STARTING MOTOR ILLUSTRATION



MAB-4101,A STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAB-2112)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12†	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	FIELD COIL PACKAGE
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing, Thrust
MU-54	2	Washer, Thrust, 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-11	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-1111	1	Shaft & Pinion
*	1	Cover Band
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
PS-1139C	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012AS.

* See table following parts list for part number applying to assembly wanted.

Assembly No.	Cover Band
MAB-4101	MAB-1024E
MAB-4101A	MAB-1024V

UNIT	APPLICATION
MAB-4101	Hercules
MAB-4101A	Hercules, Massey Harris

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAB-2134)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12†	2	Brush
MAB-30	1	Insulation Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing Ins., Term. Stud
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MAN-14	1	Terminal
MN-21	1	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer Ins., Term. Stud, Inner
X-1014	2	Lockwasher, Term. Stud, 5/16
5X-1376	2	Nut, Term. Stud, Hex., 5/16-24
MAD-20	2	Bolt, Thru
X-146	2	Nut, Thru Bolt, Hex. 1/4-20
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034†	2	Brush, Grounded
X-532	4	Rivet, Oval Hd., 1/8x1/4

Armature Assembly & Parts Used With

MAB-2113	1	Armature
MU-54	2	Washer, Thrust 1/32" Thick
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MU-37*	1	Washer, Plain, 5/16
12X-196*	1	Lockwasher, Terminal Stud, #10
8X-832*	2	Nut, Terminal Stud, Hex. 5/16-24
X-949*	1	Terminal
X-999*	1	Terminal
12X-1014*	2	Lockwasher, Switch Term., 5/16
X-1274*	2	Washer, Switch Mtg., Skpf. #10
8X-1372*	1	Nut, Switch Terminal, Hex. #10-32
X-1461*	1	Terminal
8X-1555*	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
XA-554*	1	Solenoid Starting Switch
XA-555*	1	Connector

Miscellaneous Parts

EBA-29	1	Bendix Drive Assembly
EB-108	2	Lock Washer
EB-8506	1	Screw, Spring, Head
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-531	1	Shaft
EBA-532	1	Pinion Assy.
EBA-533+	1	Ring, Retaining
EBA-1233+	1	Ring, Retaining
EBA-2905	1	Spring, Drive
EBA-2907	1	Screw, Spring, Shaft
MAB-1024K	1	Band, Cover
MAB-1110B	1	Head Assy., Drive End
MAB-124	1	Bearing, Absorbent Bronze
X-66	2	Screw, Drive End, Flat Hd., #10-32x1/2
X-489	1	Oiler, Hinge Top, Press in, 1/4
X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† Brush Set, Service MAB-2012S.

* Used only on assembly MAB-4103A.

+ Use as required.

(Issued 9-19-46)

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
(MAB-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	BRUSH
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	BRUSH
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
MW-20	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	ABSORBENT BRONZE BRG.
MZ-1034	2	BRUSH ASSY.- GROUNDED
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
	1 2 3 4 5	

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
MAB-2047	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick

Miscellaneous Parts

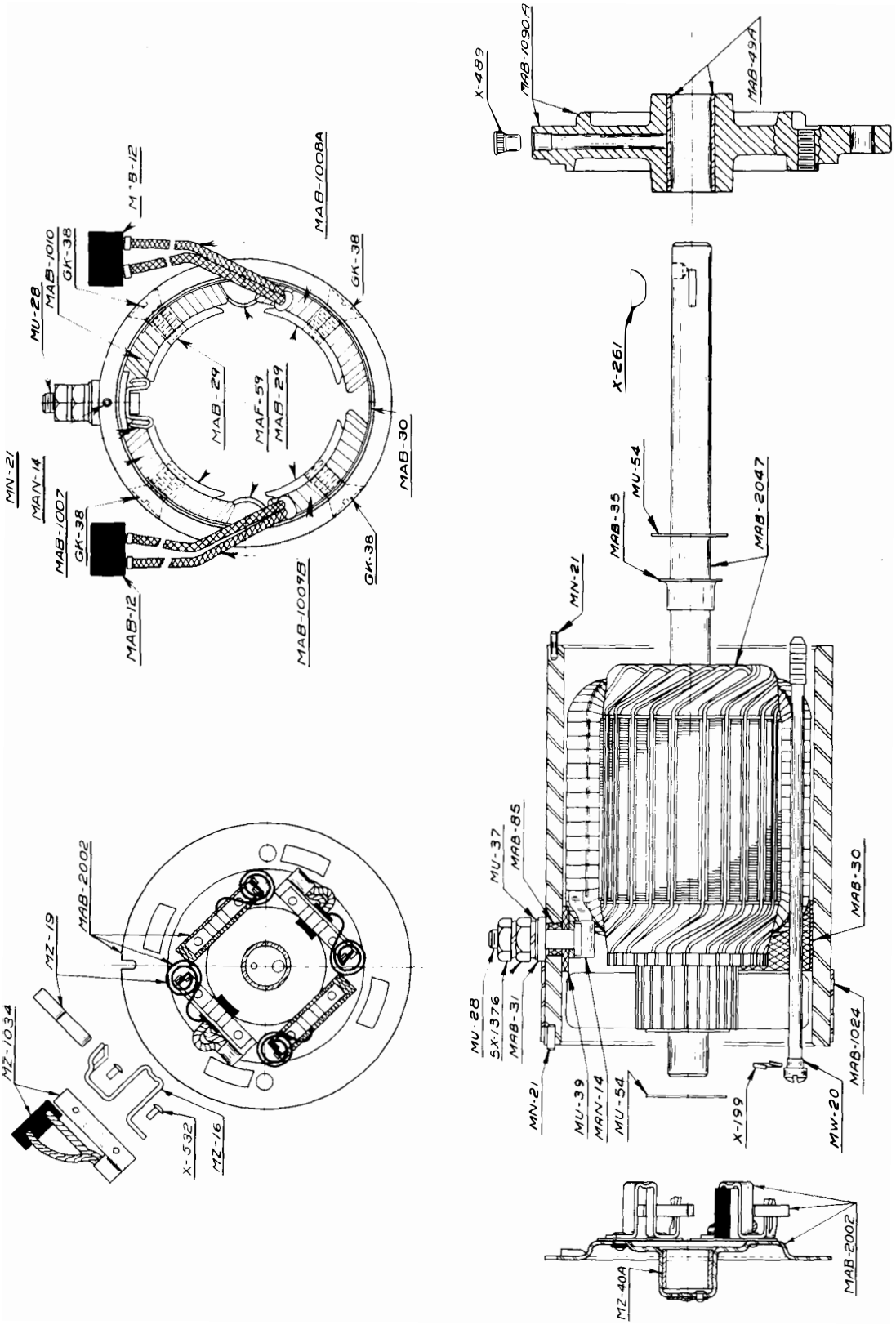
EB-99	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7805	1	DRIVE SPRING
EB-7806	1	Hd. Sp. Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8734	1	Take Up Spring
EB-9911	1	S-A Assembly
MAB-1024	1	Head Band Assembly
MAB-1090A	1	Drive End Head Assy.
MAB-49A	1	ABSORBENT BRONZE BRG.
X-261	1	#6 Woodruff Key
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
	1 2 3 4 5	

(Issued 7-14-39)

UNIT	APPLICATION
MAB-4104	Nash

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4104 STARTING MOTOR ILLUSTRATION



MAB-4105 STARTING MOTOR PARTS LIST

MAB-4105
(Issued 6-21-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
MAB-2001	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-12‡	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	FIELD COIL PACKAGE
MAB-1007	1	Coil, Field, U. L.
MAB-1008	1	Coil, Field, L. R.
MAB-1009	1	Coil, Field, L. L.
MAB-1010	1	Coil, Field, U. R.
MAF-59	2	Connector, Field Coil
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal, 5/16-24
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S‡	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2086	1	ARMATURE
ML-32	1	Washer, Thrust, Int. Bearing
MU-54	*	Washer, Thrust, C. E. 1/32"
MU-54B	*	Washer, Thrust, C. E. 3/64"
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take up
EBA-211	1	Shaft & Pinion
MAB-87	1	Washer, Felt
MAB-103	1	Gasket, Intermediate Bearing
MAB-1024G	1	Band, Cover
MAB-1104	1	Bearing Assy., Intermediate
ML-21A	1	BEARING, ABSORBENT BRONZE
PS-1204	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABSORBENT BRONZE
8X-120	3	Screw, Int. Bearing, Fill. Hd. #10-32x5/8
X-196	3	Lockwasher, Brg. Screw, #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

‡ BRUSH SET, SERVICE, MAB-2012AS.

* Use as required.

UNIT	APPLICATION
MAB-4105	Case (Tractor)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2112)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12‡	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12‡	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-1034‡	2	Brush Assy.- Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EBA-27	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7806	1	Hd. Spr. Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	DRIVE SPRING
EB-8734	1	Tak-Up Spring
EBA-2711	1	S-A Assembly
MAB-1024	1	Head Band Assembly
MAB-2040A	1	INTERMEDIATE BEARING ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1139C	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-7-41)

‡ SERVICE BRUSH SET MAB-2012S.

UNIT	APPLICATION
MAB-4106	Hercules

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2112)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field Coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12‡	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12‡	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-1034‡	2	Brush Assy.- Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7806	1	Hd. Spr. Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	DRIVE SPRING
EB-8734	1	Take-Up Spring
EBA-211	1	S-A Assembly
MAB-1024	1	Head Band Assembly
MAB-2040	1	INTERMEDIATE BEARING ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1037	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-7-41)

‡ SERVICE BRUSH SET MAB-2012S.

UNIT	APPLICATION
MAB-4108	Chris Craft

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

PRELIMINARY

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2112)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12‡	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12‡	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-3002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-1034‡	2	Brush Assy.- Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EB-99	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7805	1	DRIVE SPRING
EB-7806	1	Hd. Spr. Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8734	1	Take-Up Spring
EB-9911	1	S-A Assembly
MAB-1024	1	Head Band Assembly
MAB-2040	1	INTERMEDIATE BEARING ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1037	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-7-41)

‡ SERVICE BRUSH SET MAB-2012S.

UNIT	APPLICATION
MAB-4109	Chris Craft

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

PRELIMINARY

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2112)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12‡	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12‡	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-3002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-1034‡	2	Brush Assy.- Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EB-99	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7805	1	DRIVE SPRING
EB-7806	1	Hd. Spr. Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8734	1	Take-Up Spring
EB-9911	1	S-A Assembly
MAB-1024	1	Head Band Assembly
MAB-2040	1	INTERMEDIATE BEARING ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1037	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-7-41)

‡ SERVICE BRUSH SET MAB-2012S.

UNIT	APPLICATION
MAB-4109	Chris Craft

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAB-2112)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-1007	1	Field coil - U.L.
MAB-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12‡	1	Brush
MAB-1009B	1	Field Coil & Brush Assy.- L.L.
MAB-12‡	1	Brush
MAB-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-3002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-1034‡	2	Brush Assy.- Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EB-99	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7805	1	DRIVE SPRING
EB-7806	1	Hd. Spr. Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8734	1	Take-Up Spring
EB-9911	1	S-A Assembly
MAB-1024	1	Head Band Assembly
MAB-2040	1	INTERMEDIATE BEARING ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1037	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-7-41)

‡ SERVICE BRUSH SET MAB-2012S.

UNIT	APPLICATION
MAB-4109	Chris Craft

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Bolt, Thru
(MAB-2112)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12‡	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MAN-14	1	Terminal
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-199	2	Washer, Lock, Thru Bolt, 1/4
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034‡	2	Brush, Grounded
X-532	4	Rivet, Oval hd., 1/8x1/4

Armature Assembly & Parts Used With

MAB-2006	1	Armature Assy.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6R	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	Washer, Lock, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Washer, Lock, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Mtg. Switch, Rd. hd., #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Sc., #10

Miscellaneous Parts

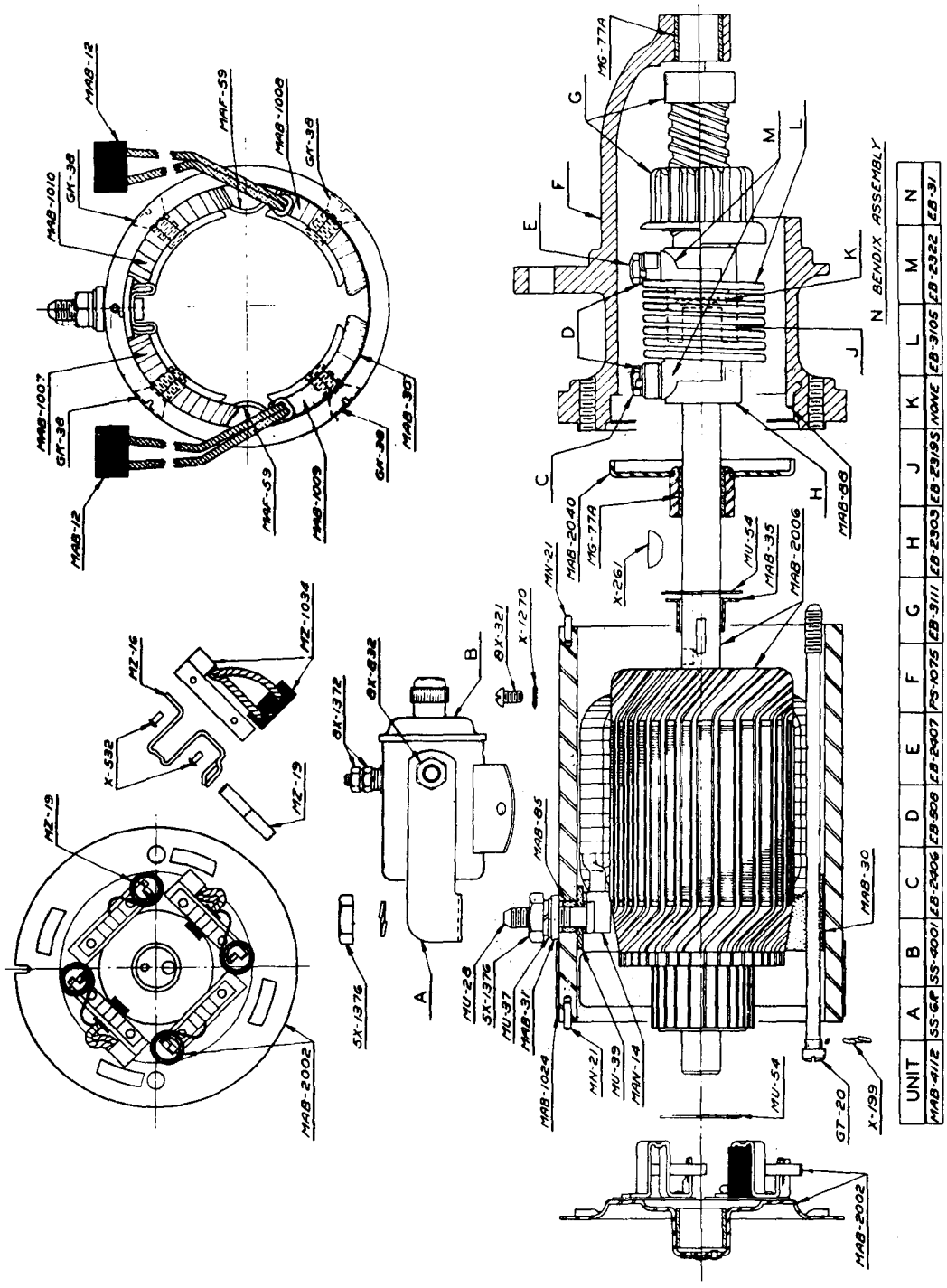
EB-31	1	Bendix Drive Assy.
EB-508	2	Washer, Lock
EB-2303	1	Head, Driving
EB-2319S	1	Sleeve, Compression
EB-2322	1	Clip, Spring, Support
EB-2406	1	Screw, Spring, Head
EB-2407	1	Screw, Spring, Shaft
EB-3105	1	Spring, Drive
EB-3111	1	Shaft & Pinion
MAB-1024	1	Band, Cover
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
PS-1075	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 3-4-44)

‡ Brush Set, Service, MAB-2012S.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4112 STARTING MOTOR ILLUSTRATION



UNIT	A	B	C	D	E	F	G	H	J	K	L	M	N
MAB-4112	SS-GP	SS-4001	EB-2406	EB-508	EB-2407	PS-1075	EB-3111	EB-2303	EB-2395	NONE	EB-3105	EB-2322	EB-31

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20A	2	Bolt, Thru
(MAB-2146)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12†	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MAN-14	1	Terminal
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-3002	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034†	2	Brush, Grounded
X-532	4	Rivet, Oval Hd., 1/8x1/4

Armature Assembly & Parts Used With

MAB-2006	1	Armature Assy.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust 1/32" thick
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6R	1	Connector, Switch to Motor
SS-4001	1	Solenoid Starting Switch
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-68	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7805	1	Spring, Drive
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8734	1	Ring, Take Up
EBA-6711	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
MAW-24	1	Band, Cover
PS-1075	1	Housing Assy. Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† Brush Set, Service MAB-2012S.

Unit	Application
MAB-4115	Centaur Tractor

(Issued 10-14-46)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAB-2147)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	Field Coil Package
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MAN-14	1	Terminal
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	Armature Assy.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4003	1	Switch, Solenoid
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-11	1	Bendix Drive Assy.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take-Up
EBA-1111	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1123C	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAB-2012AS

UNIT	APPLICATION
MAB-4116	Universal

(Issued 7-13-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4117 STARTING MOTOR PARTS LIST

MAB-4117

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAB-2147)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	Field Coil Package
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MAN-14	1	Terminal
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-3002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	Armature Assy.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4003	1	Switch, Solenoid
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-40	1	Bendix Drive Assembly
EB-108	2	Lockwasher
EB-2805	1	Spring, Drive
EB-7806	1	Screw, Spring Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8734	1	Ring, Take-Up
EBA-4011	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1123C	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAB-2012AS

UNIT	APPLICATION
MAB-4117	Universal

(Issued 7-13-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAB-2147)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12†	2	Brush
MAB-30	1	Insulation, Field Conn.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	FIELD COIL PACKAGE
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SST-4004	1	SOLENOID SWITCH
8X-164	2	Nut, Hex., 5/16x18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Shaft Spring
EB-7819S	1	Compression Sleeve
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	S-A Assembly
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
*	1	Band, Cover
PS-1139C	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bushing, Abs. Bronze
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012AS.

* See table following parts list for part number applying to assembly wanted.

Assembly No.	Cover Band
MAB-4118	MAW-24
MAB-4118A	MAX-1024

UNIT	APPLICATION
MAB-4118	Diamond T
MAB-4118A	J.I. Case

(Issued 3-6-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAB-2147)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	FIELD COIL PACKAGE
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-6L	1	Connector
SST-4004	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Shaft Spring
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1139B	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012AS.

UNIT	APPLICATION
MAB-4119	Diamond T., Hercules

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4120 STARTING MOTOR PARTS LIST

MAB-4120

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAB-2149)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	Field Coil Package
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MAN-14	1	Terminal
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
5X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002C	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	Armature Assy.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector, Switch to Motor
SS-4020	1	Solenoid Switch
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-27	1	Bendix Drive Assembly
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take Up
EBA-2711	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
MAX-1024	1	Band, Cover
PS-1139CA	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAB-2012AS.

UNIT	APPLICATION
MAB-4120	Hercules

(Issued 7-14-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAB-2001)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	FIELD COIL PACKAGE
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal, 5/16-24
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
5X-1376	2	Nut, Term. Stud, Hex. 5/16-24
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAB-2150	1	ARMATURE
MAB-56	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, 1/32'' Thick

Miscellaneous Parts

MAB-1024E	1	Band, Cover
MAB-1125	1	Head Assy., Drive End
MAB-49A	1	BEARING, ABS. BRONZE
X-489	1	Oiler
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012AS.

UNIT	APPLICATION
MAB-4121	Meyers Products

(Issued 9-29-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4123 STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAB-2146)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	FIELD COIL PACKAGE
MAB-1007	1	Coil, Field, U.L.
MAB-1008	1	Coil, Field, L.R.
MAB-1009	1	Coil, Field, L.L.
MAB-1010	1	Coil, Field, U.R.
MAF-59	2	Connector, Field Coil
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing, Thrust
MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-6R	1	Connector
SST-4004	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1139C	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012AS.

UNIT	APPLICATION
MAB-4123	Diamond T

(Issued 3-6-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
MAB-2112	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12†	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	FIELD COIL PACKAGE
MAB-1007	1	Coil, Field, U. L.
MAB-1008	1	Coil, Field, L. R.
MAB-1009	1	Coil, Field, L. L.
MAB-1010	1	Coil, Field, U. R.
MAF-59	2	Connection, Field Coil
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-3002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2133	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, 1/32" Thick
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

MAB-1024E	1	Cover, Band
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012AS.

UNIT	APPLICATION
MAB-4124	Insley Mfg.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAB-4125 STARTING MOTOR PARTS LIST

MAB-4125
(Issued 3-13-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
MAB-2149	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Conn.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAB-3005S	1	FIELD COIL PACKAGE
MAB-1007	1	Coil, Field, U. L.
MAB-1008	1	Coil, Field, L. R.
MAB-1009	1	Coil, Field, L. L.
MAB-1010	1	Coil, Field, U. R.
MAF-59	2	Connector, Field Coil
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002C	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing, Thrust
MU-54	2	Washer, Thrust, C. E. & Intermediate, 1/32" Thick
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4021A	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-27	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EBA-2711	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MAX-1024	1	Band, Cover
PS-1139E	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012AS.

UNIT	APPLICATION
MAB-4125	Hercules

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GJ-20	2	Frame Screw
(MAD-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAD-29	4	Pole Piece
MAD-1007	1	Field Coil - U.L.
MAD-1008A	1	Field Coil & Brush Assy.-L.R.
MAB-12	1	Brush
MAD-1009A	1	Field Coil & Brush Assy.-L.L.
MAB-12	1	Brush
MAD-1010	1	Field Coil - U.R.
MAF-59	2	Field Coil Connector
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-3002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-1262	4	1/8x7/32 Oval Hd. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAD-2057	1	Armature Assembly
MU-54	1	Thrust Washer
X-261	1	#6 Woodruff Key

Drive End Head Assembly & Parts Used With

MAD-59	1	Bendix Drive Shaft
MAD-1058	1	Intermediate Plate Assy.
MG-77A	1	Absorbent Bronze Brg.
ML-18A	1	Absorbent Bronze Brg.
MN-1	1	Felt Washer Retainer
MN-6	1	Bendix Shaft Gear
MN-19	1	Felt Washer
X-196	3	#10 Lock Washer
X-261	1	#6 Woodruff Key
6X-312	3	#10-32x1/4 Rd. Hd. Screw
6X-505	1	1/8 Pipe Plug

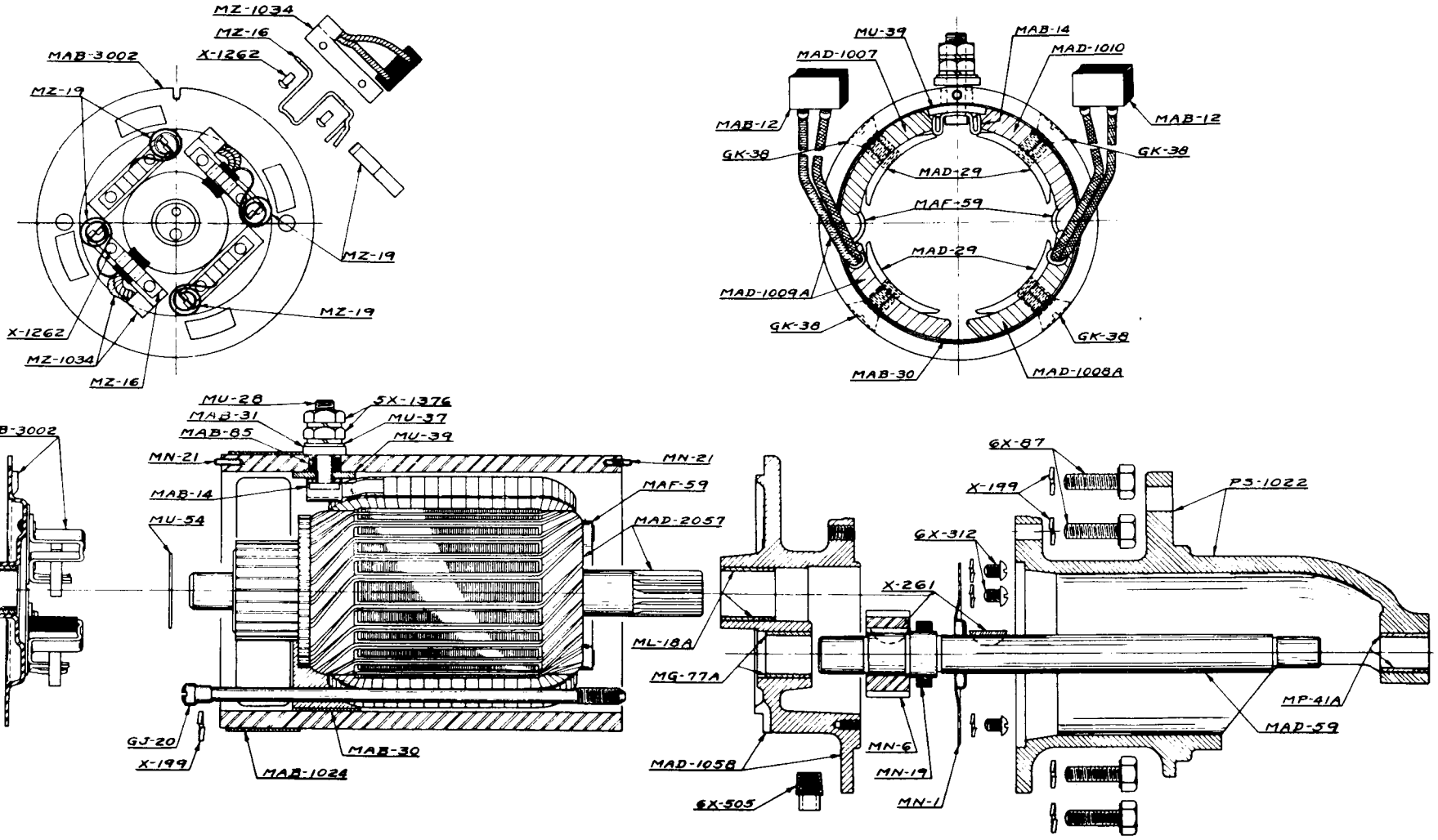
Miscellaneous Parts

EB-48	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assy.
PS-1022	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
6X-87	4	1/4-20x7/8 Hex. Hd. Sc.
X-199	4	1/4 Lock Washer
6X-1010A	1	#8-32x1 1/4 Rd. Hd. Sc.
6X-1410	1	#8-32 Hex. Nut
		1 2 3 4 5

(Issued 10-20-31)
(R-5-7-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAD-4106 STARTING MOTOR ILLUSTRATION



MAJ-4011 STARTING MOTOR PARTS LIST MAJ-4011

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.-L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.-L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
MZ-30	1	Field Connection Ins.
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.-1/16 Wall
MZ-1034	2	Brush Assy.-Grounded
X-1262	4	1/8x7/32 Oval Hd. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2006	1	Armature Assembly
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

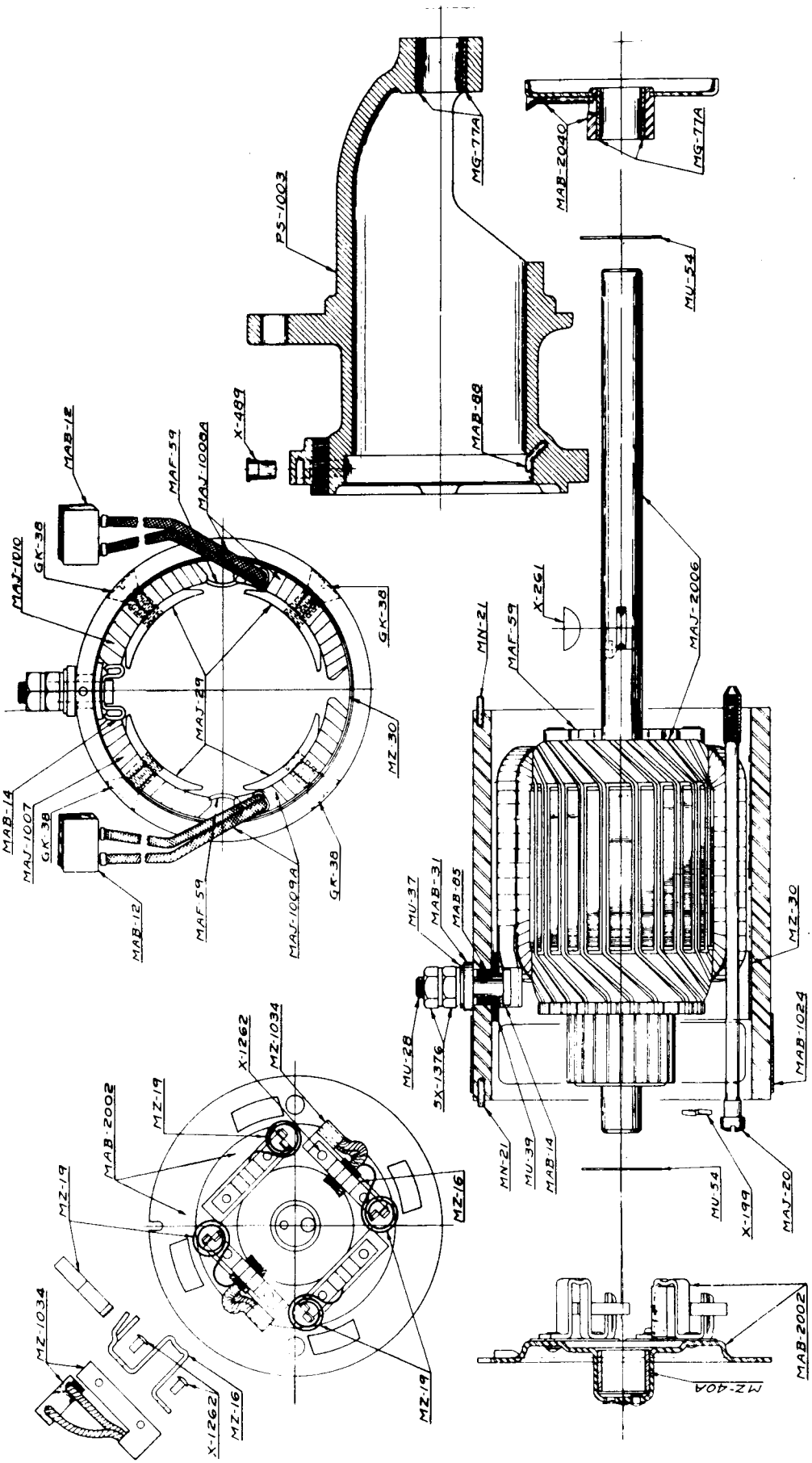
Miscellaneous Parts

EB-31	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.-1/16 Wall
PS-1003	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.-1/16 Wall
X-489	1	1/4 Oiler-Press in Type
6X-1010A	1	#8-32x1 1/4 Rd. Hd. Sc.-Hardened
6X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 4-1-31)
(R-5-7-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4011 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
MAJ-20	2	Frame Screw
(MAJ-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
	1 2 3 4 5	

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
MAJ-2006	1	Armature Assy.
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

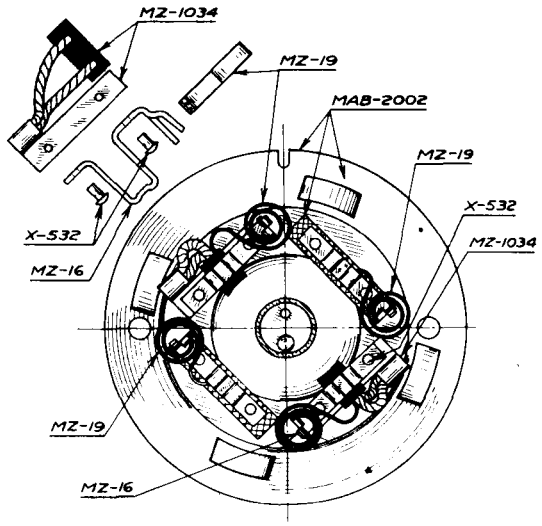
Miscellaneous Parts

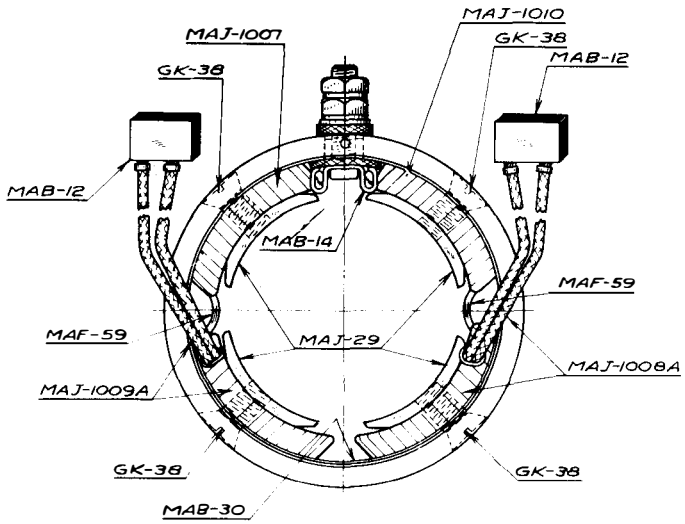
EB-33	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assy.
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1003	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
	1 2 3 4 5	

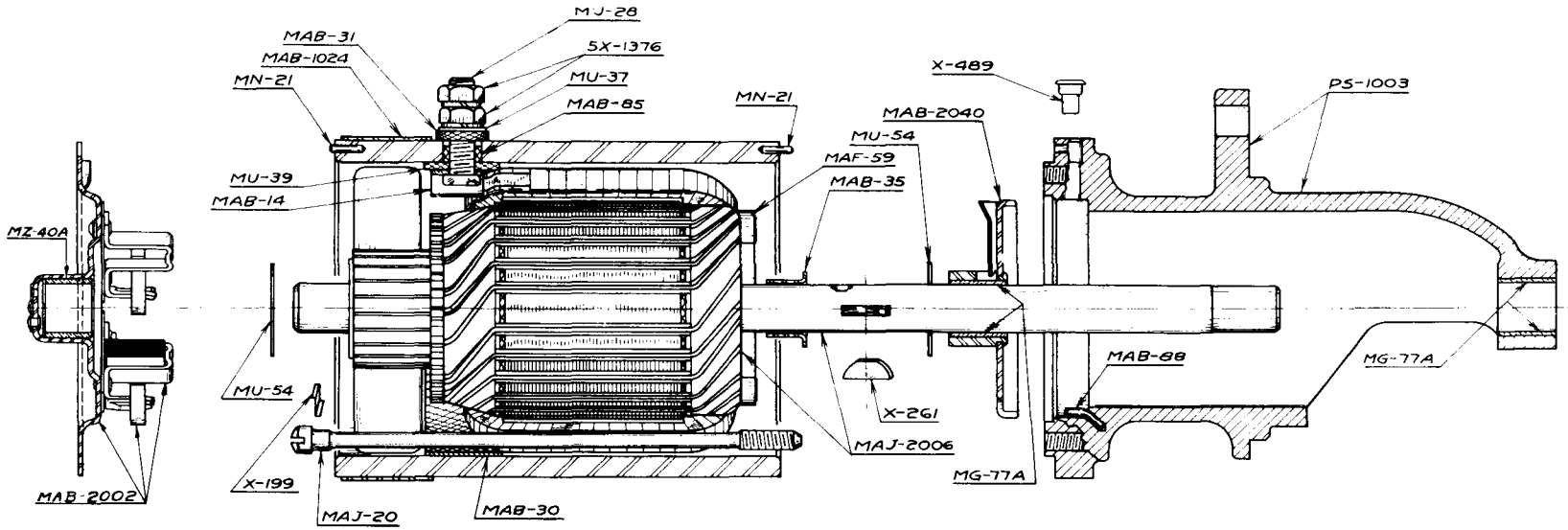
(Issued 3-2-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete par can be assembled as needed."

MAJ-4016 STARTING MOTOR ILLUSTRATION







Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

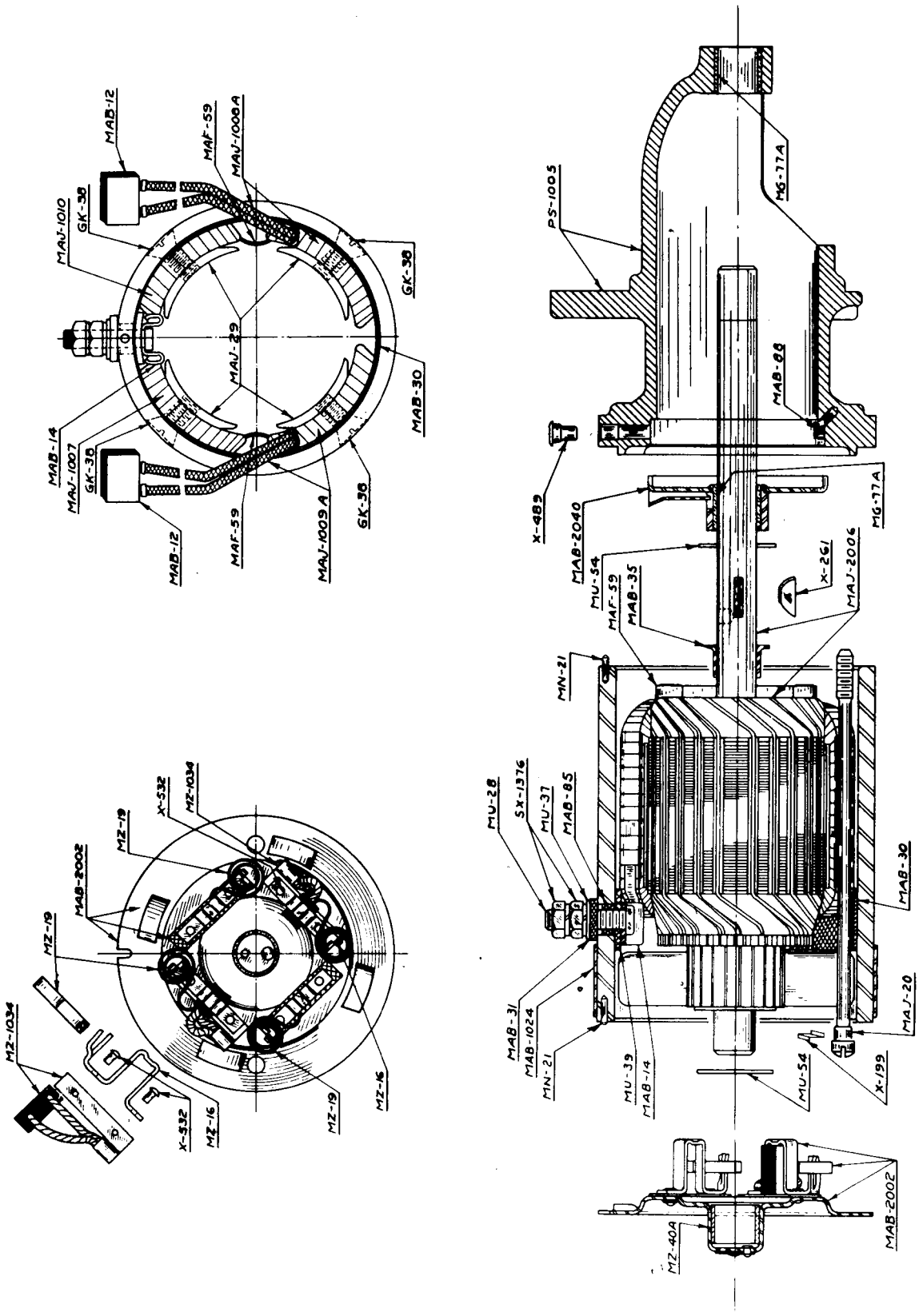
Miscellaneous Parts

EB-31	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1005	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-22-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4017 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Br. Assy.- L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Br. Assy.- L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg. - 1/16 Wall
MZ-1034	2	Brush Assembly - Grounded
X-1262	4	1/8x7/32 Oval Hd. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2006	1	Armature Assembly
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

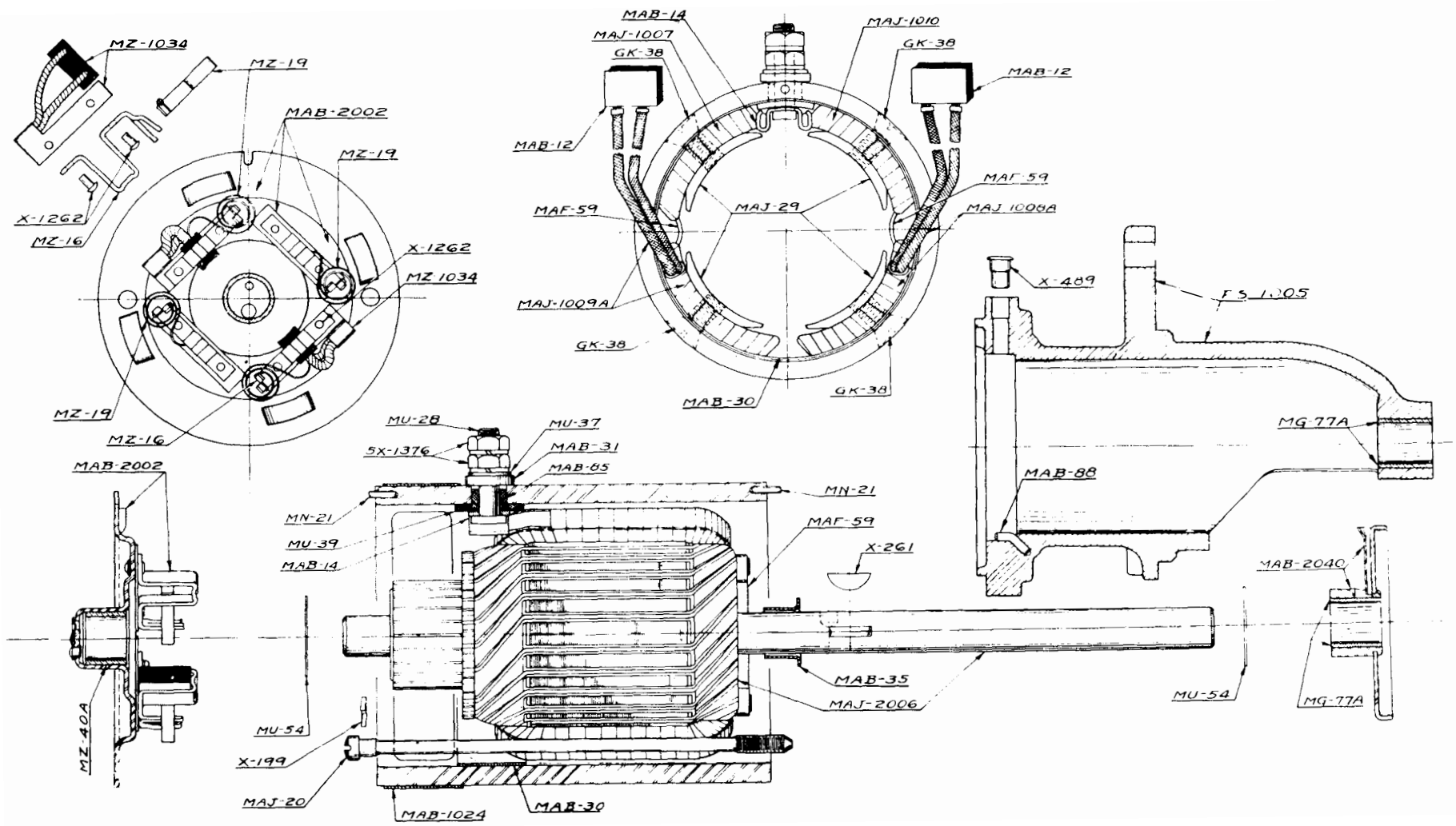
Miscellaneous Parts

EB-33	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg. - 1/16 Wall
PS-1005	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg. - 1/16 Wall
X-489	1	1/4 Oiler - Press in Type
6X-1010A	1	#8-32x1 1/4 Rd. Hd. Sc.- Hardened
6X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 9-30-31)
(R-5-7-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be as embled as needed."

MAJ-4018 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy. - L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
K-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assy. & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2006	1	Armature Assembly
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
K-261	1	#6 Woodruff Key

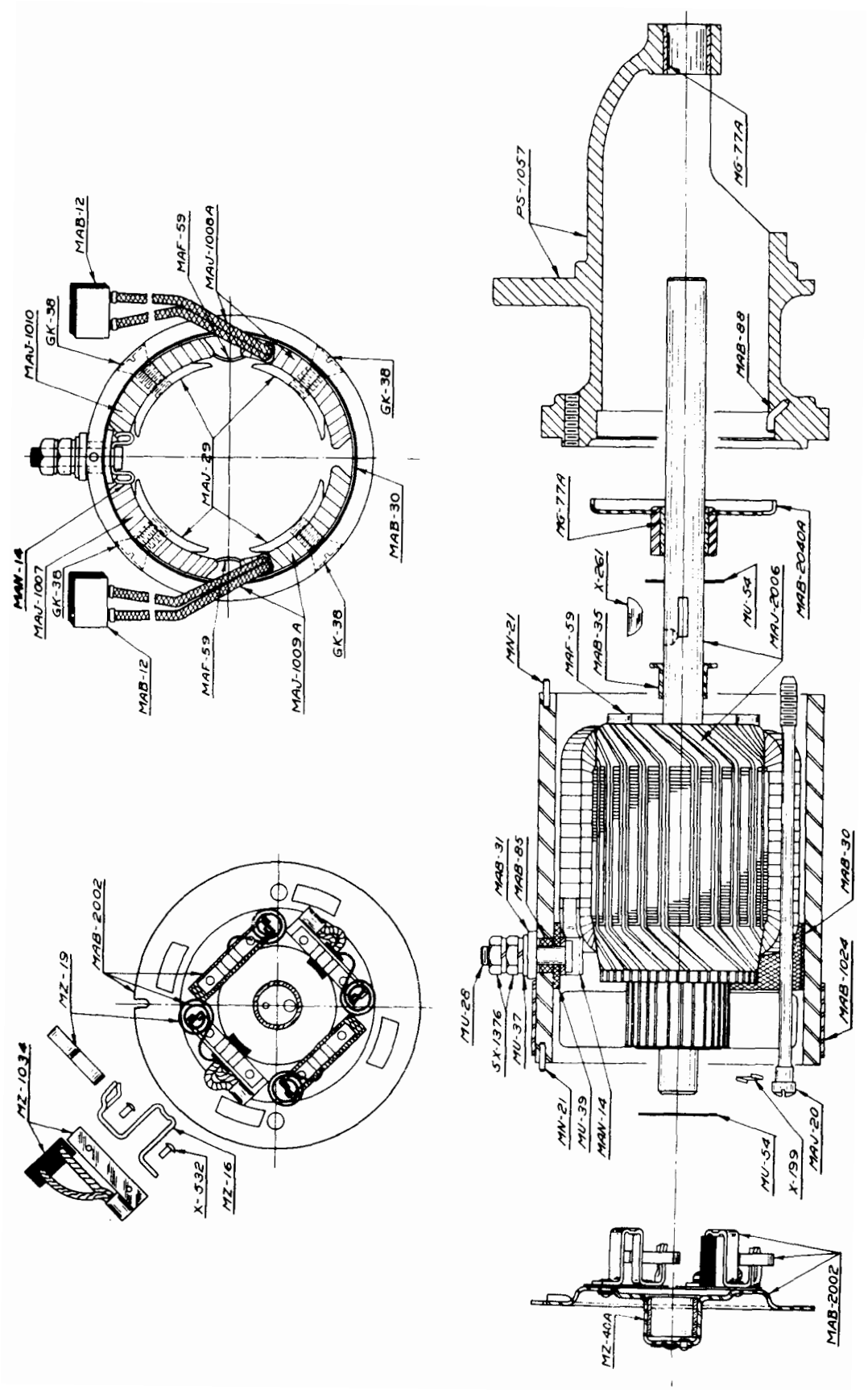
Miscellaneous Parts

EB-31	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1057	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
6X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 12/13/38)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4021 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAF-59	2	Field Coil Connection
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy.-Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet

Armature Assembly & Parts Used With

MAJ-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer-1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

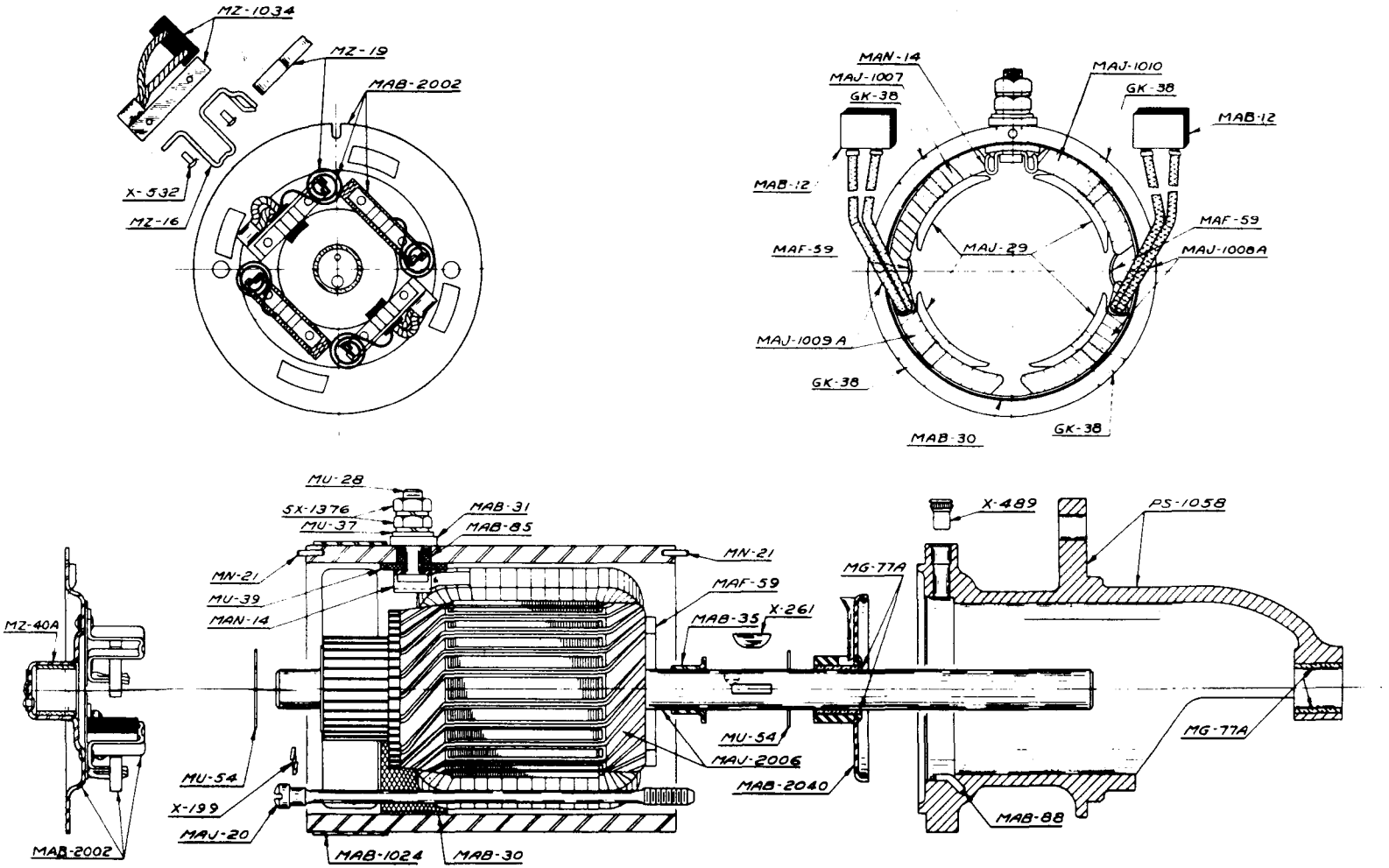
Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EB-31	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1058	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd.Hd. Screw
6X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 12/9/38)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

MAJ-4024 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
MAJ-20	2	Frame Screw
(MAJ-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
	1 2 3 4 5	

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
MAJ-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

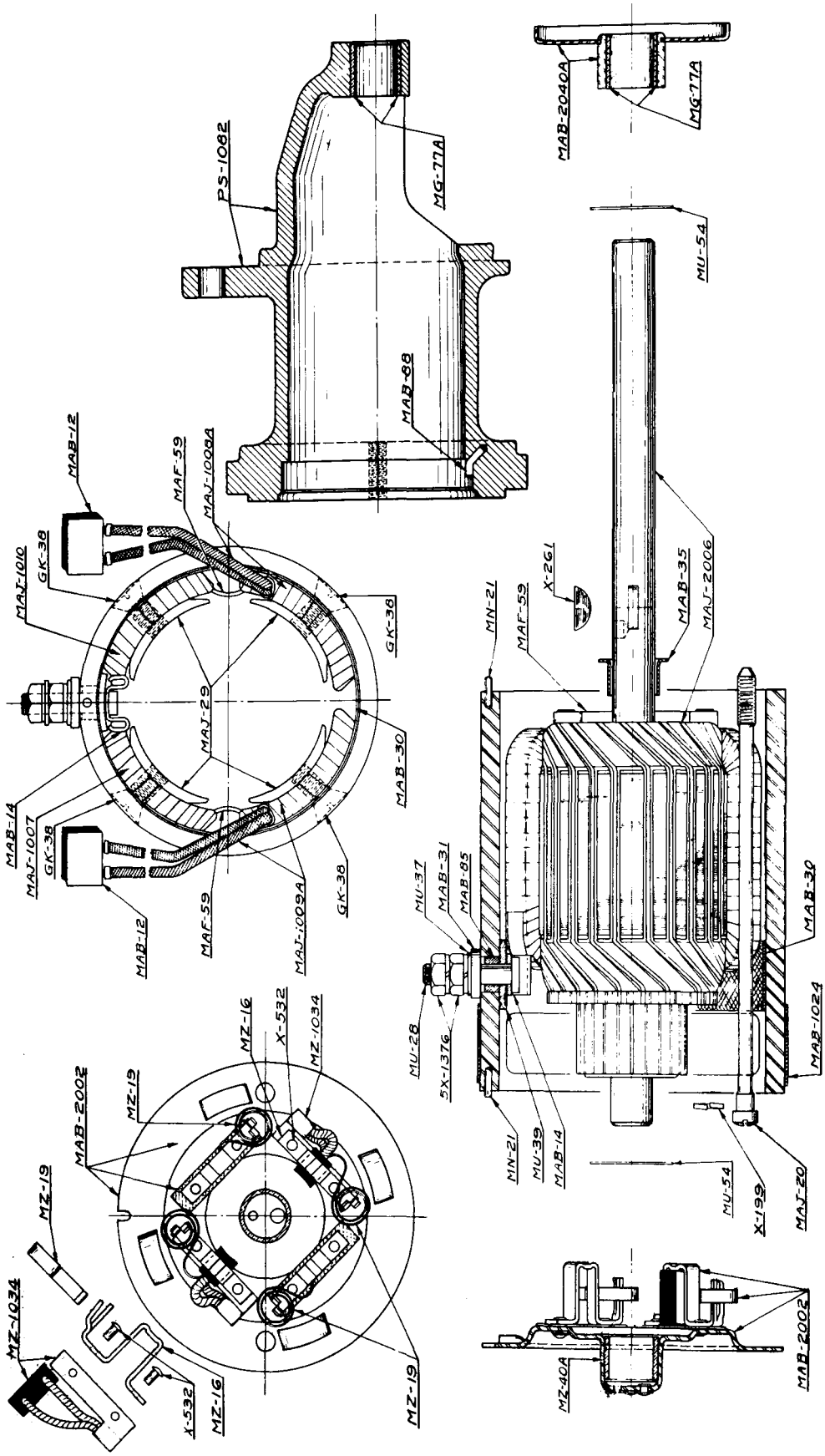
Miscellaneous Parts

EBA-7	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assembly
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1082	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
6X-794	1	#10-32 Square Nut
	1 2 3 4 5	

(Issued 12-21-33)
(R-7-15-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4033 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2059)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EBA-7	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1020	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
6X-794	1	#10-32 Square Nut

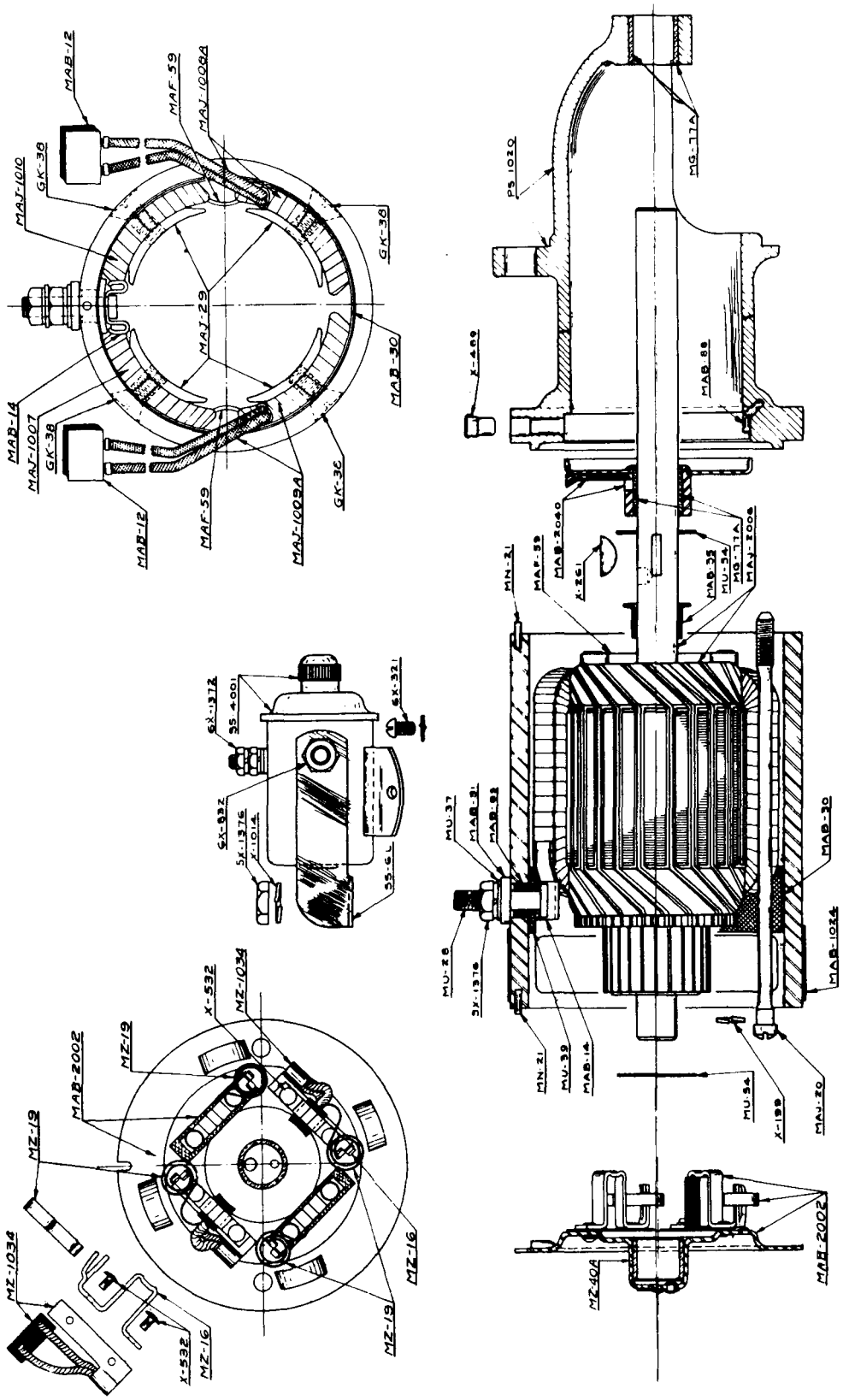
Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4001	1	Solenoid Starting Switch
X-196	1	#10 Lock Washer
6X-832	2	5/16-24 Hex. Nut
X-1014	2	5/16 Lock Washer
6X-1372	1	#10-32 Hex. Nut
6X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1014	1	5/16 Lock Washer
X-1274	2	#10 Skpf. Washer
5X-1376	1	5/16-24 Hex. Nut
		1 2 3 4 5

(Issued 9-24-34)
(R-8-6-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assemble as needed."

MAJ-4034 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2047)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-83	1	Insulating Washer
MAB-84	1	Terminal Post
MAF-31	1	Insulating Bushing
MAF-48	2	Insulating Washer
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007B	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAJ-1010A	1	Field Coil - U.R.
MN-21	2	Dowel Pin
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SW-3737S	1	Starting Switch
X-196	4	#10 Lock Washer
6X-321	4	#10-32x5/16 Rd. Hd. Screw

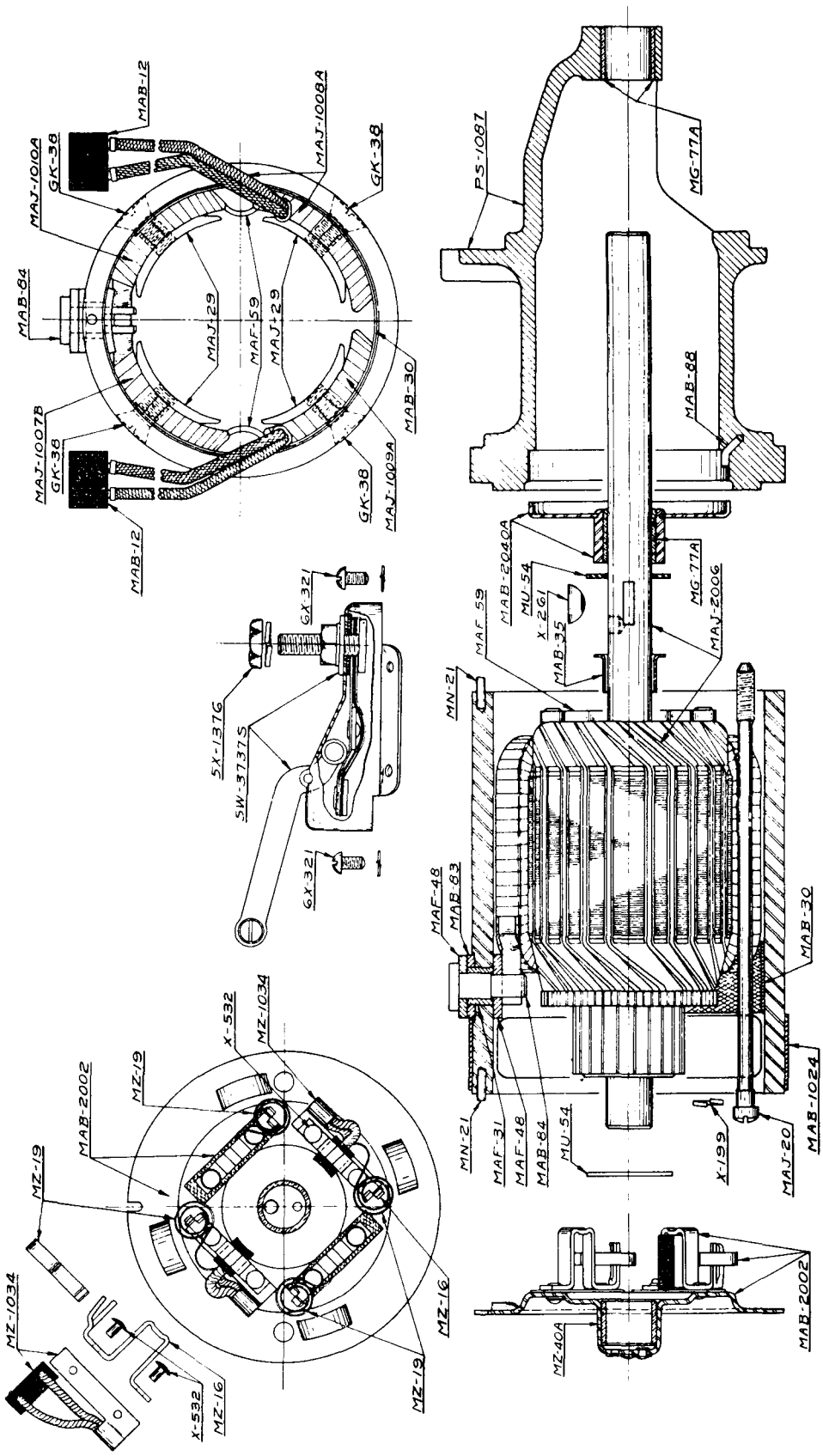
Miscellaneous Parts

EBA-7	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assembly
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1087	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
6X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 3-11-35)
(R-3-24-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4035 STARTING MOTOR ILLUSTRATION



MAJ-4038 STARTING MOTOR PARTS LIST MAJ-4038

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2046	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

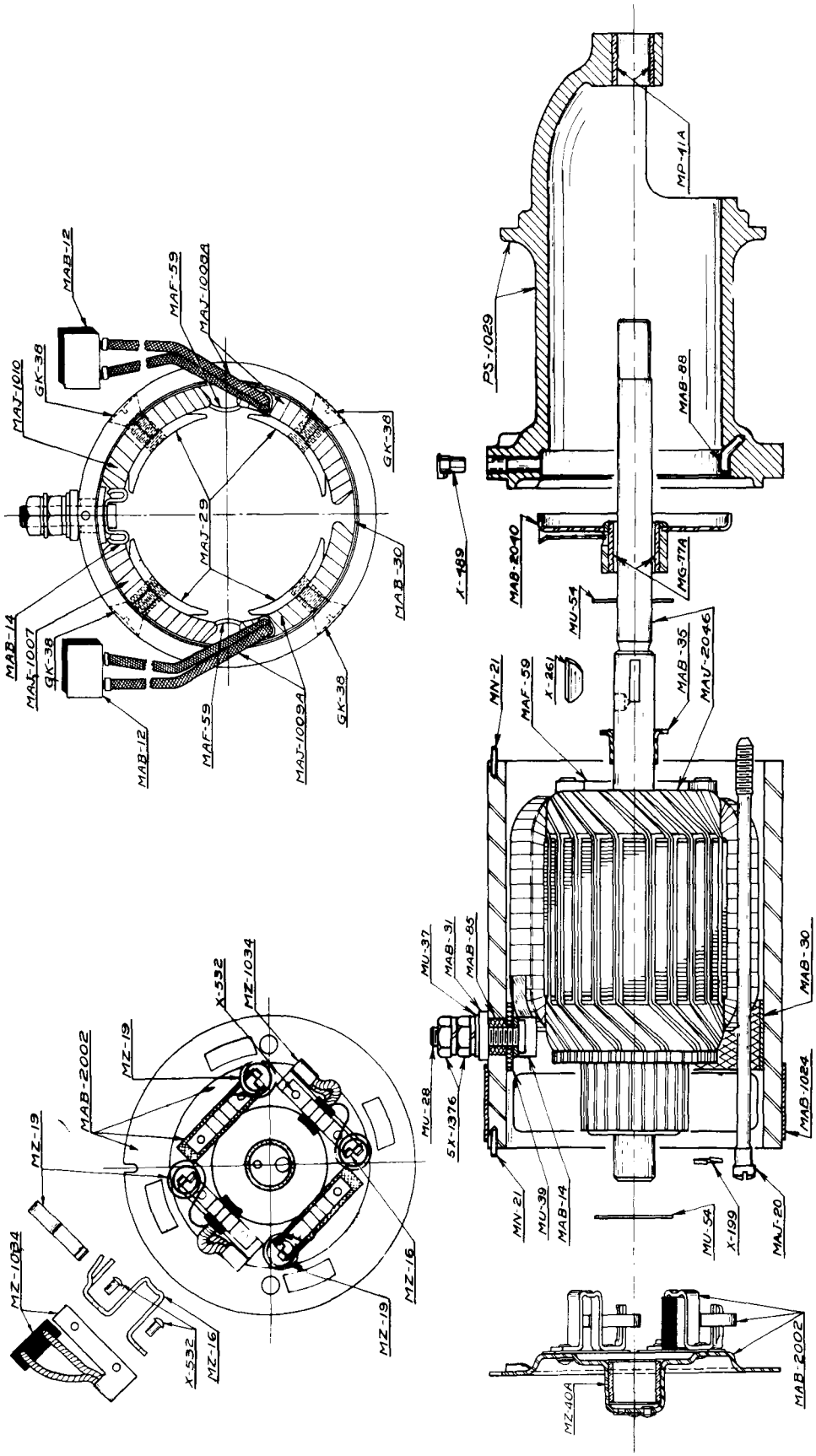
Miscellaneous Parts

EB-87	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1029	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 2-13-35)
(R-10-30-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4038 STARTING MOTOR ILLUSTRATION



MAJ-4040 STARTING MOTOR PARTS LIST

MAJ-4040
(Issued 3-13-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAJ-20	2	Bolt, Thru
MAJ-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Conn.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAJ-3005S	1	FIELD COIL PACKAGE
MAF-59	2	Connector, Field Coil
MAJ-1007	1	Coil, Field, U. L.
MAJ-1008	1	Coil, Field, L. R.
MAJ-1009	1	Coil, Field, L. L.
MAJ-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded

Armature Assembly & Parts Used With

MAJ-2046	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C. E. & Int., 1/32" Thick
X-261	1	Key, Woodruff, D. E. #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EB-87	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8711	1	Shaft & Pinion
MAB-1024E	1	Band, Cover
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Absorbent Bronze
PS-1043	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE, MAB-2012AS

UNIT	APPLICATION
MAJ-4040	Continental

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2001)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.-L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.-L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

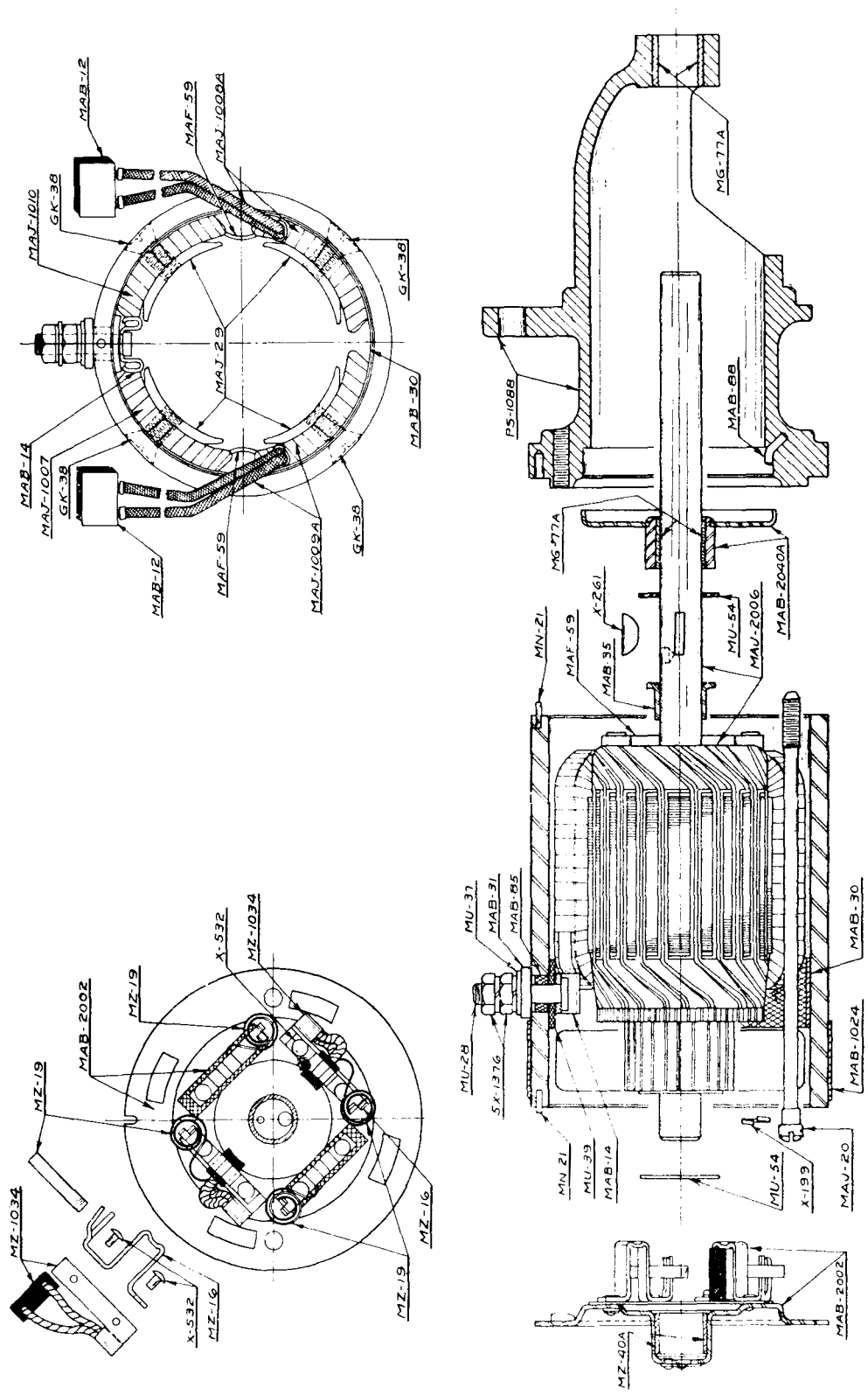
Miscellaneous Parts

EBA-2	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1088	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8-5-35)
(R-5-10-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4041 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2001)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2046	1	Armature Assembly
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

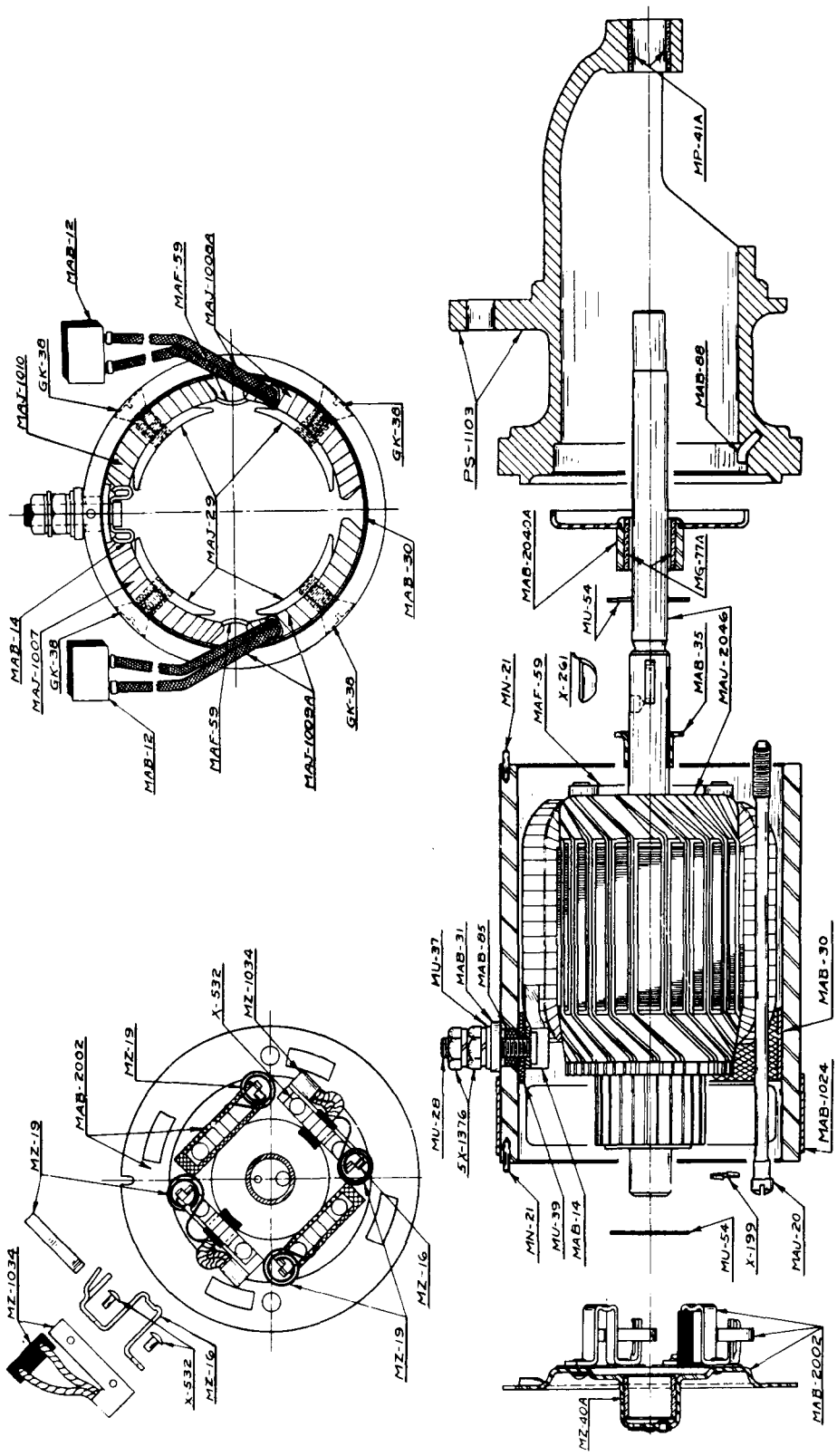
Miscellaneous Parts

EB-87	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1103	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8-5-35)
(R-3-24-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assemble as needed."

MAJ-4042 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2047)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-83	1	Insulating Washer
MAB-84	1	Terminal Post
MAF-31	1	Insulating Bushing
MAF-48	2	Insulating Washer
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007B	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAJ-1010A	1	Field Coil - U.R.
MN-21	2	Dowel Pin
X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2048	1	Armature Assembly
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SW-3737CS	1	Starting Switch
X-196	4	#10 Lock Washer
8X-321	4	#10-32x5/16 Rd. Hd. Sc.
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

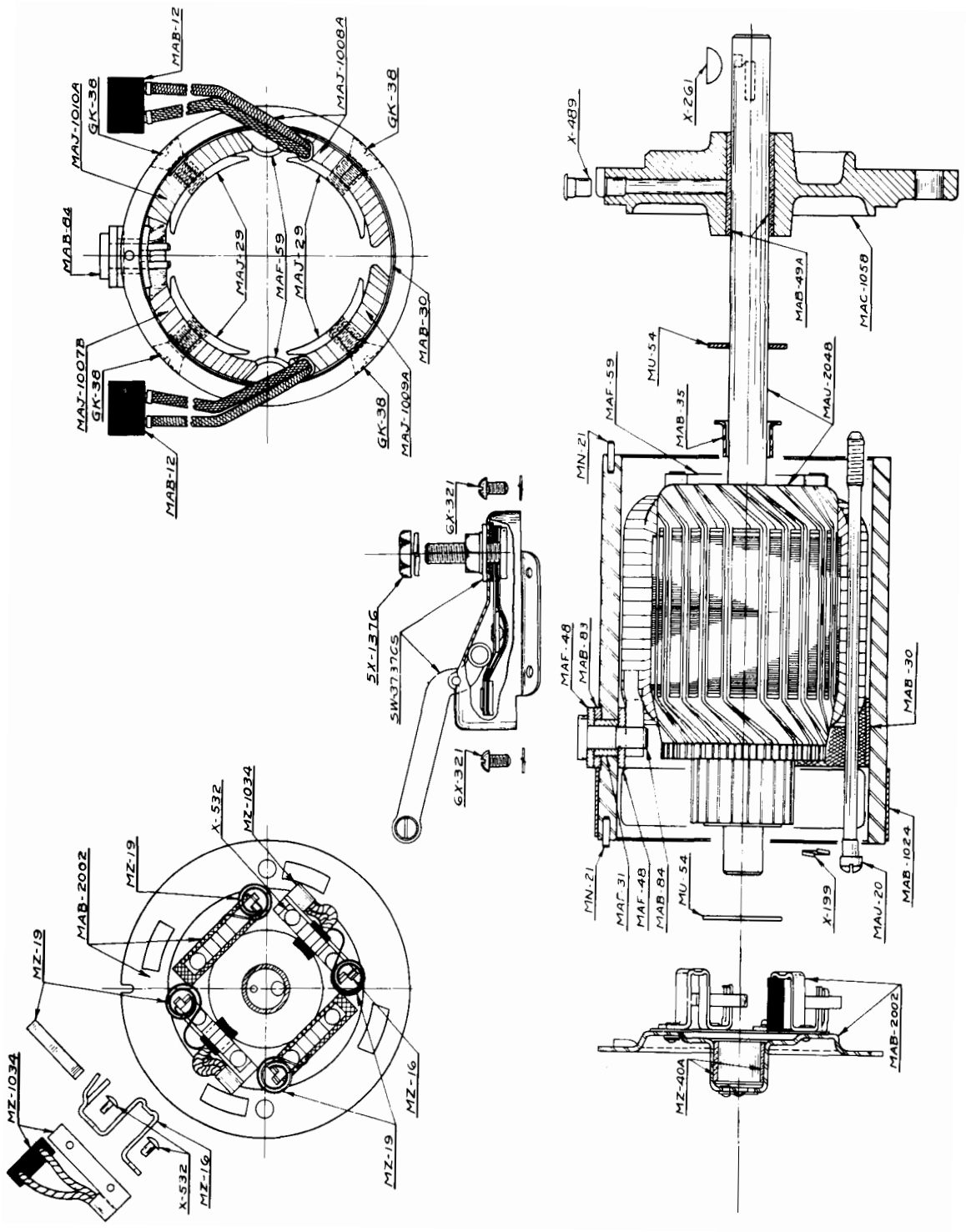
Miscellaneous Parts

EB-99	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAC-1058	1	Drive End Head Assy.
MAB-49A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 11-20-35)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4044 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.-L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.-L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2046	1	Armature Assembly
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

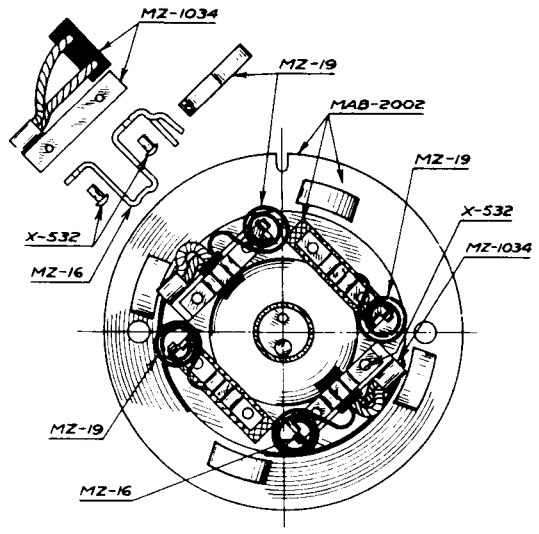
Miscellaneous Parts

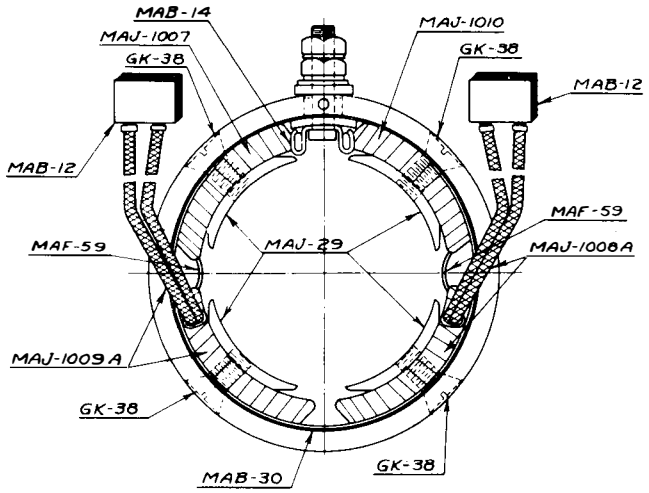
EBA-1	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Bearing
PS-1113	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MP-41A	1	Absorbent Bronze Bearing
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

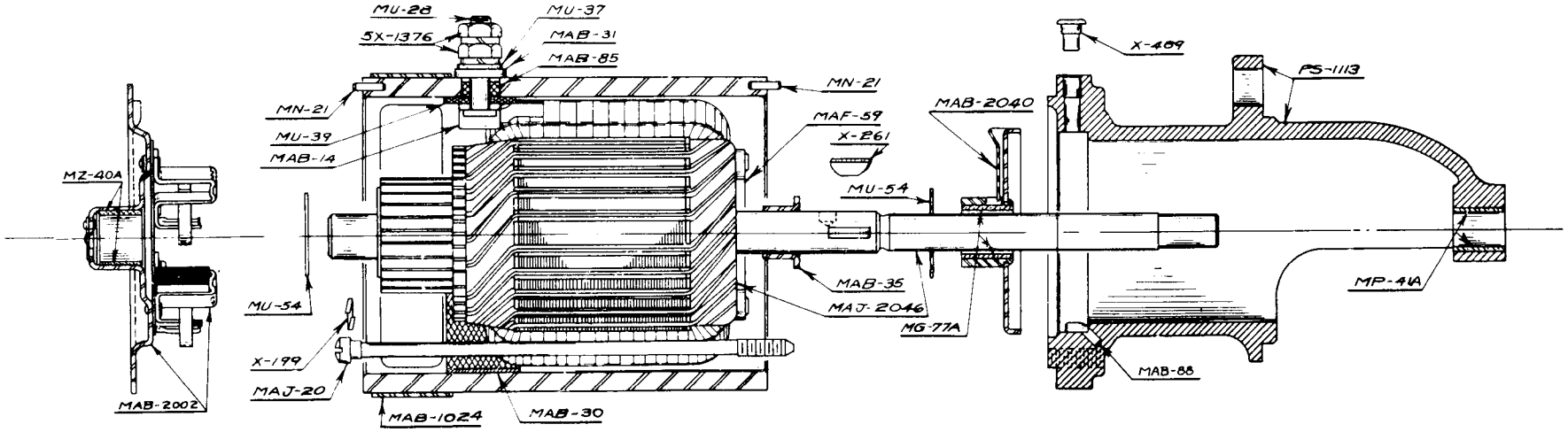
(Issued 7-19-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4045 STARTING MOTOR ILLUSTRATION







Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2059)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

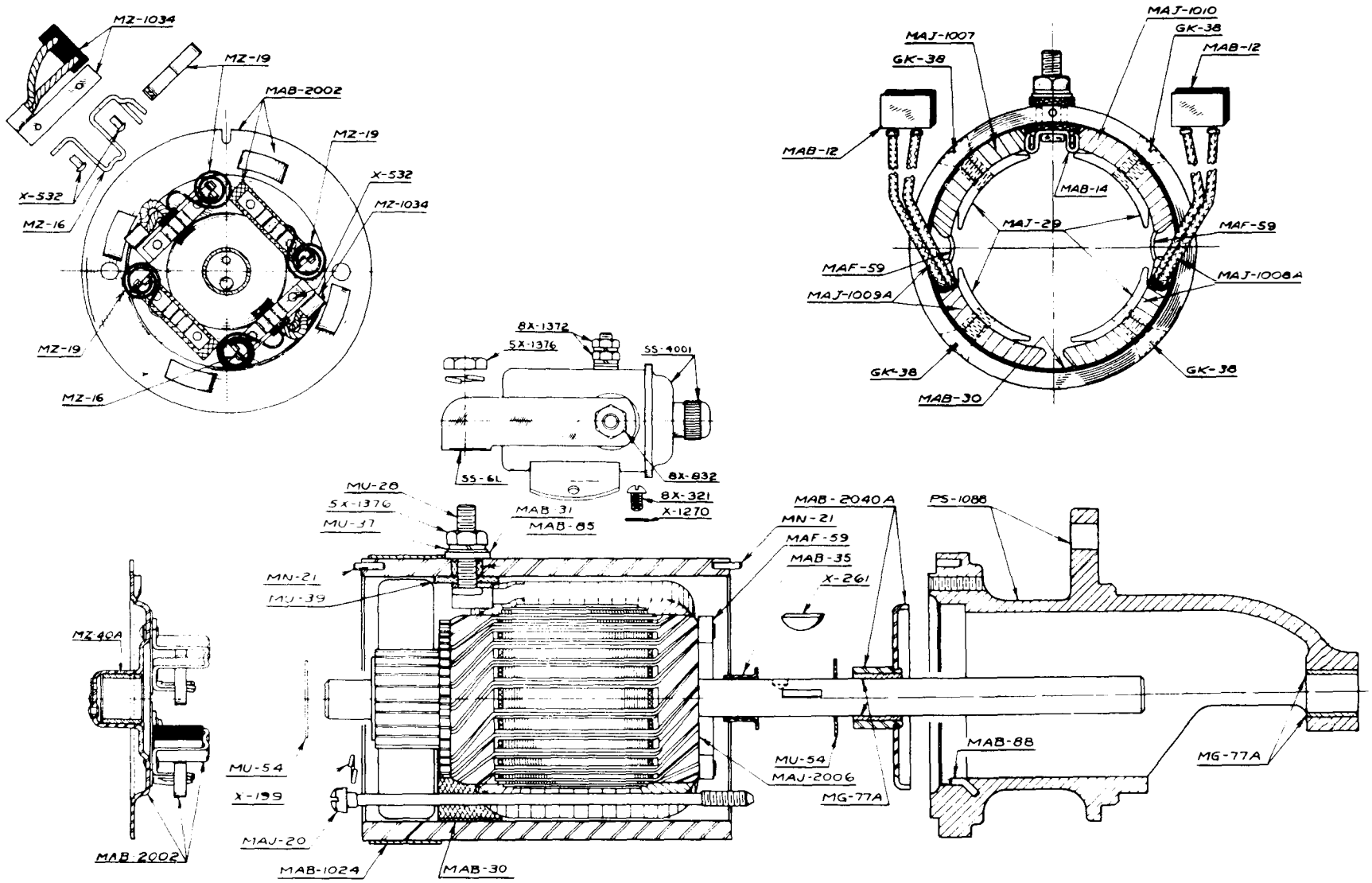
Miscellaneous Parts

EBA-2	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assy.
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1088	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 3-2-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assemble as needed."

MAJ-4046 STARTING MOTOR ILLUSTRATION



MAJ-4047 STARTING MOTOR PARTS LIST

MAJ-4047
(Issued 3-14-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAJ-20	2	Bolt, Thru
MAJ-2059	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Conn.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins. Term. Stud
MAJ-3005S	1	FIELD COIL PACKAGE
MAF-59	2	Connector, Field Coil
MAJ-1007	1	Coil, Field, U. L.
MAJ-1008	1	Coil, Field, L. R.
MAJ-1009	1	Coil, Field, L. L.
MAJ-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded

Armature Assembly & Parts Used With

MAJ-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C.E. & Int., 1/32" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc. Skpf. #10

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING. DRIVE
EBA-211	1	Shaft & Pinion
MAB-1024E	1	Band, Cover
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
PS-1114	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012AS

UNIT	APPLICATION
MAJ-4047	Kermath (Marine)

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File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4048 STARTING MOTOR PARTS LIST MAJ-4048

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2059)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-3002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2006	1	Armature Assy.
MAB-35	1	Brg. Thrust Spacer.
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

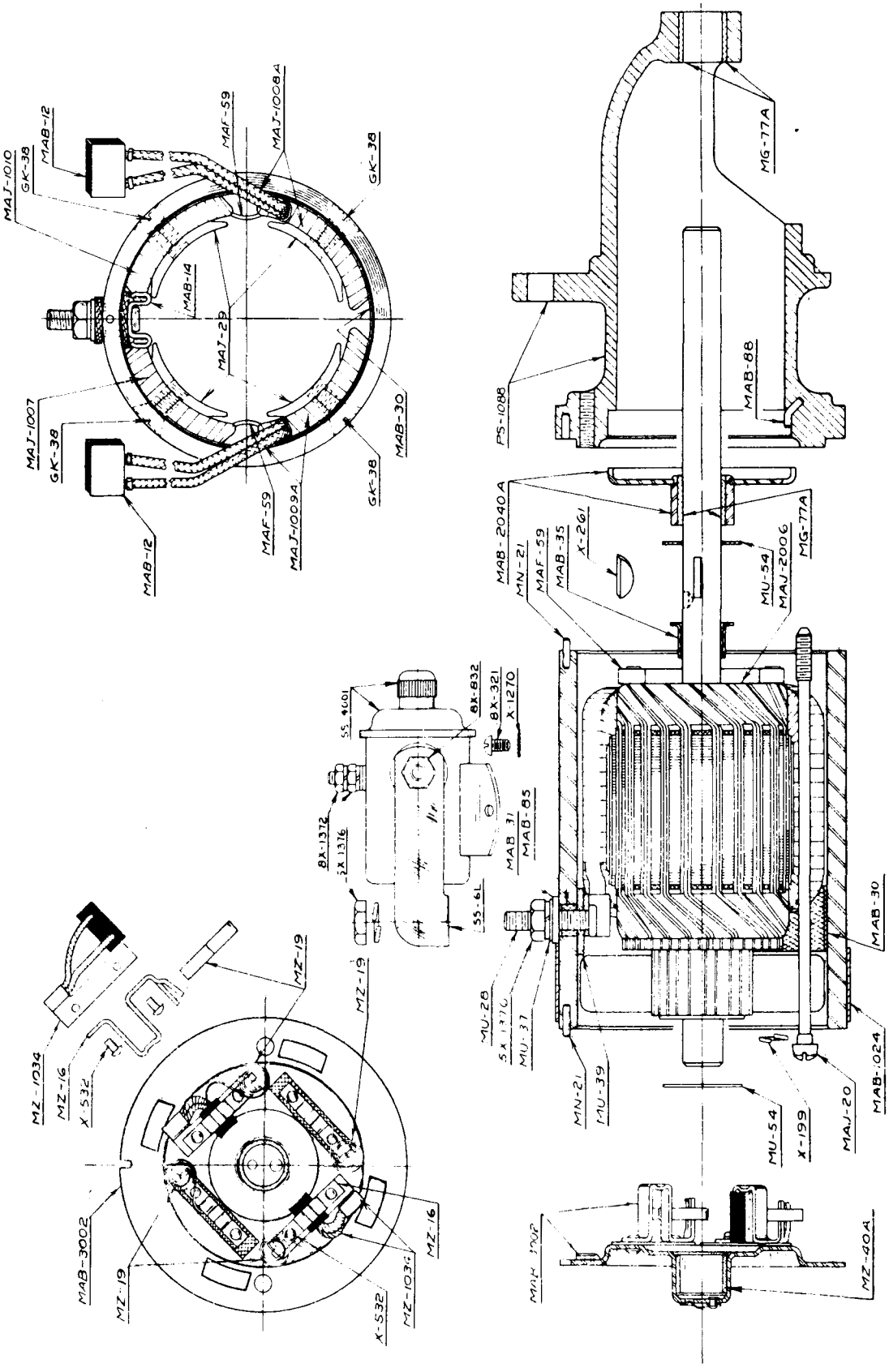
Miscellaneous Parts

EB-99	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assy.
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1088	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 3-2-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4048 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2059)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.-L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.-L.R.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAB-3002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy.-Grounded
X-532	4	1/8x1/4 Oval Hd.Tub.Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2006	1	Armature Assy.
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EB-99	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assy.
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1114	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut

Switch Assy. & Parts Used With

SS-6L	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer
		1 2 3 4 5

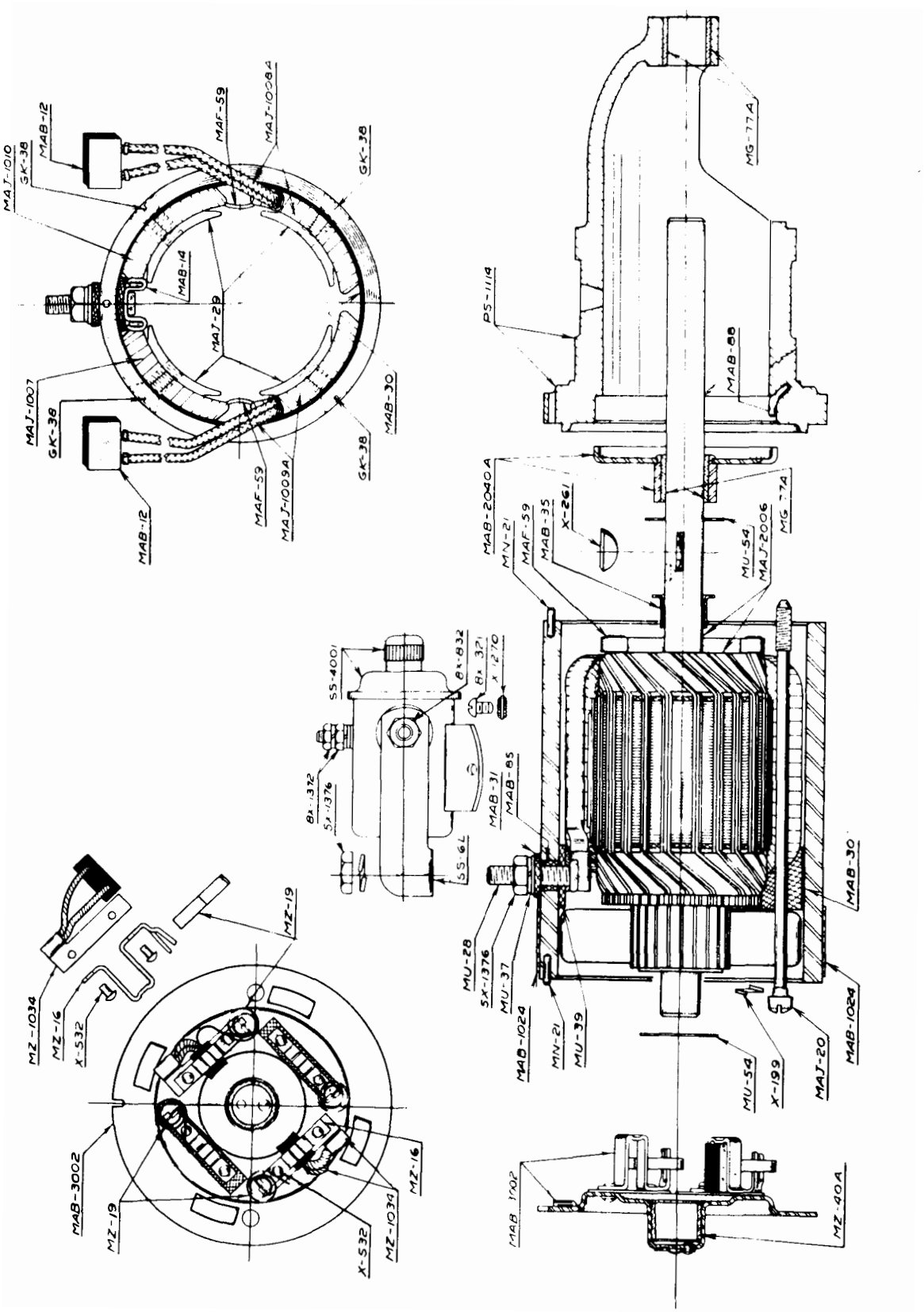
(Issued 11-30-37)

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4049 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2001)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	BRUSH
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	BRUSH
MAJ-1010	1	Field Coil - U.R.
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	ABSORBENT BRONZE BRG.
MZ-1034	2	BRUSH ASSY. - GROUNDED
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Brg. Thrust Spacer
MU-34	2	Thrust Washer
X-261	1	#6 Woodruff Key

Miscellaneous Parts

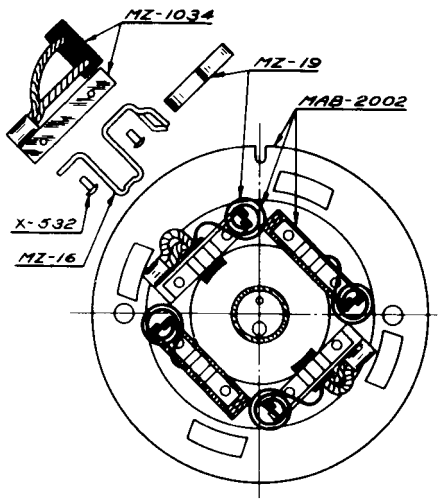
EBA-2	1	BENDIX DRIVE ASSEMBLY
MAB-1024	1	Head Band Assembly
MAB-2040	1	INTERMEDIATE BRG. ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1116	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

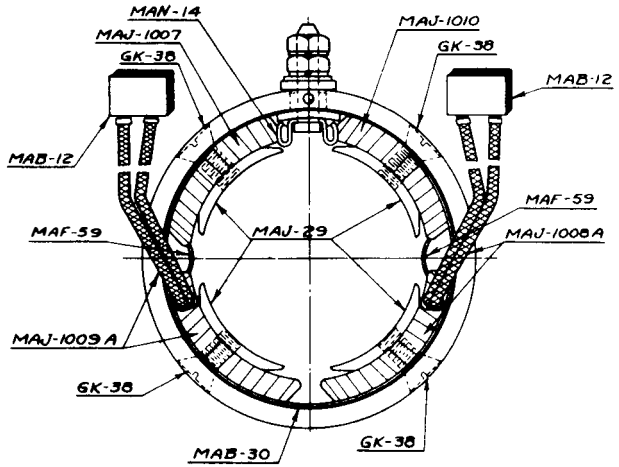
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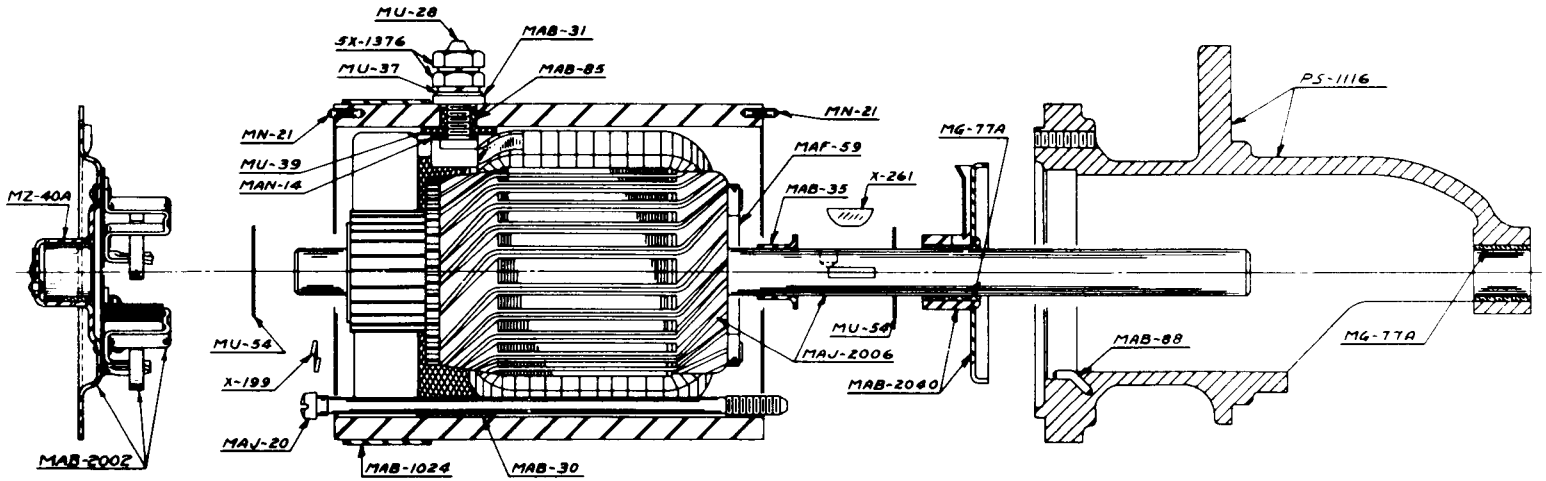
UNIT	APPLICATION
MAJ-4050	Le Roi Co.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4050 STARTING MOTOR ILLUSTRATION







Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2059)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.-L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.-L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

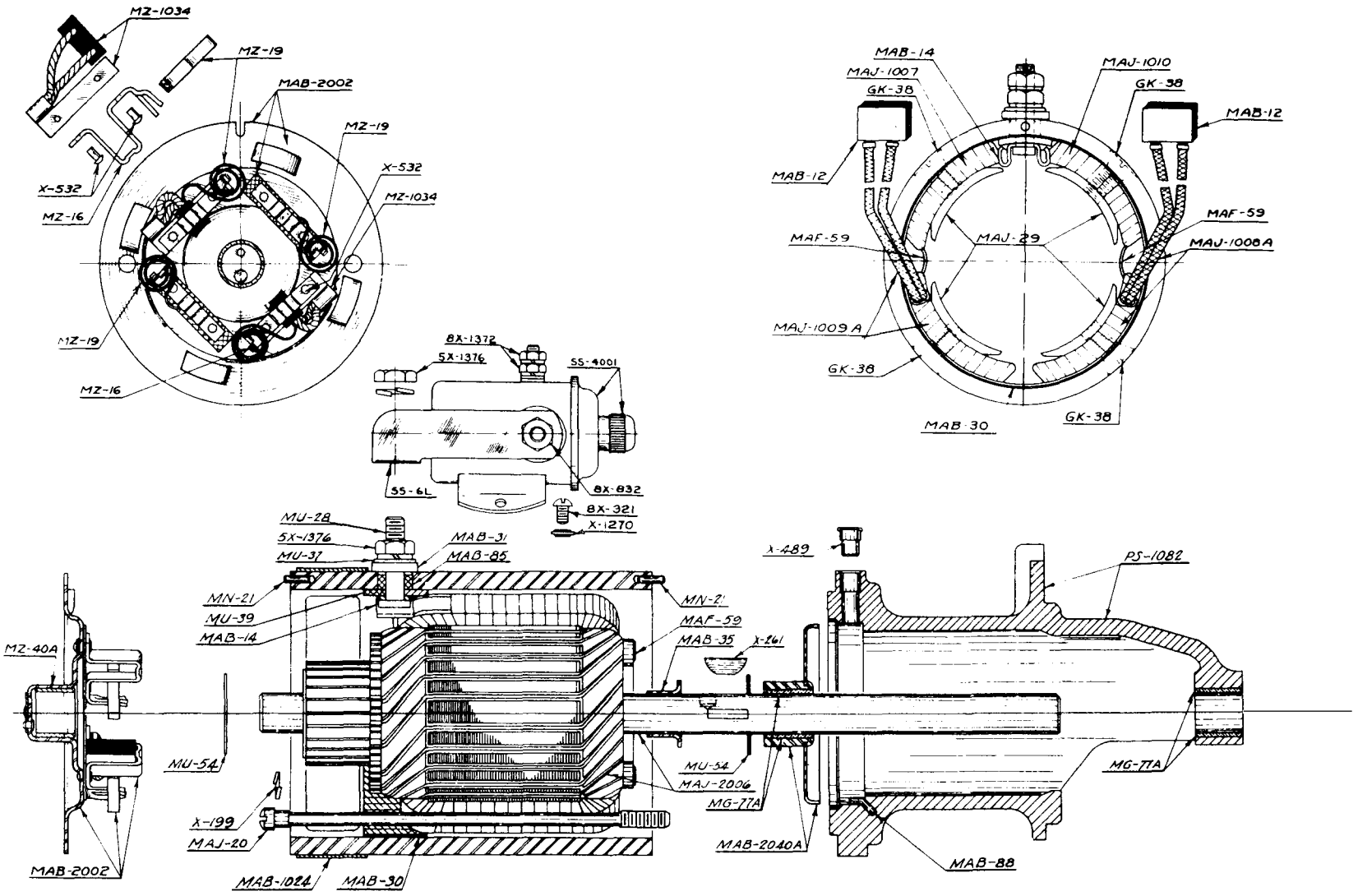
Miscellaneous Parts

EBA-7	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1082	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 1-22-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4053 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2059)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	BRUSH
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	BRUSH
MAJ-1010	1	Field Coil - U.R.
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	ABSORBENT BRONZE BEARING
MZ-1034	2	BRUSH ASSY. - GROUNDED
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2046	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

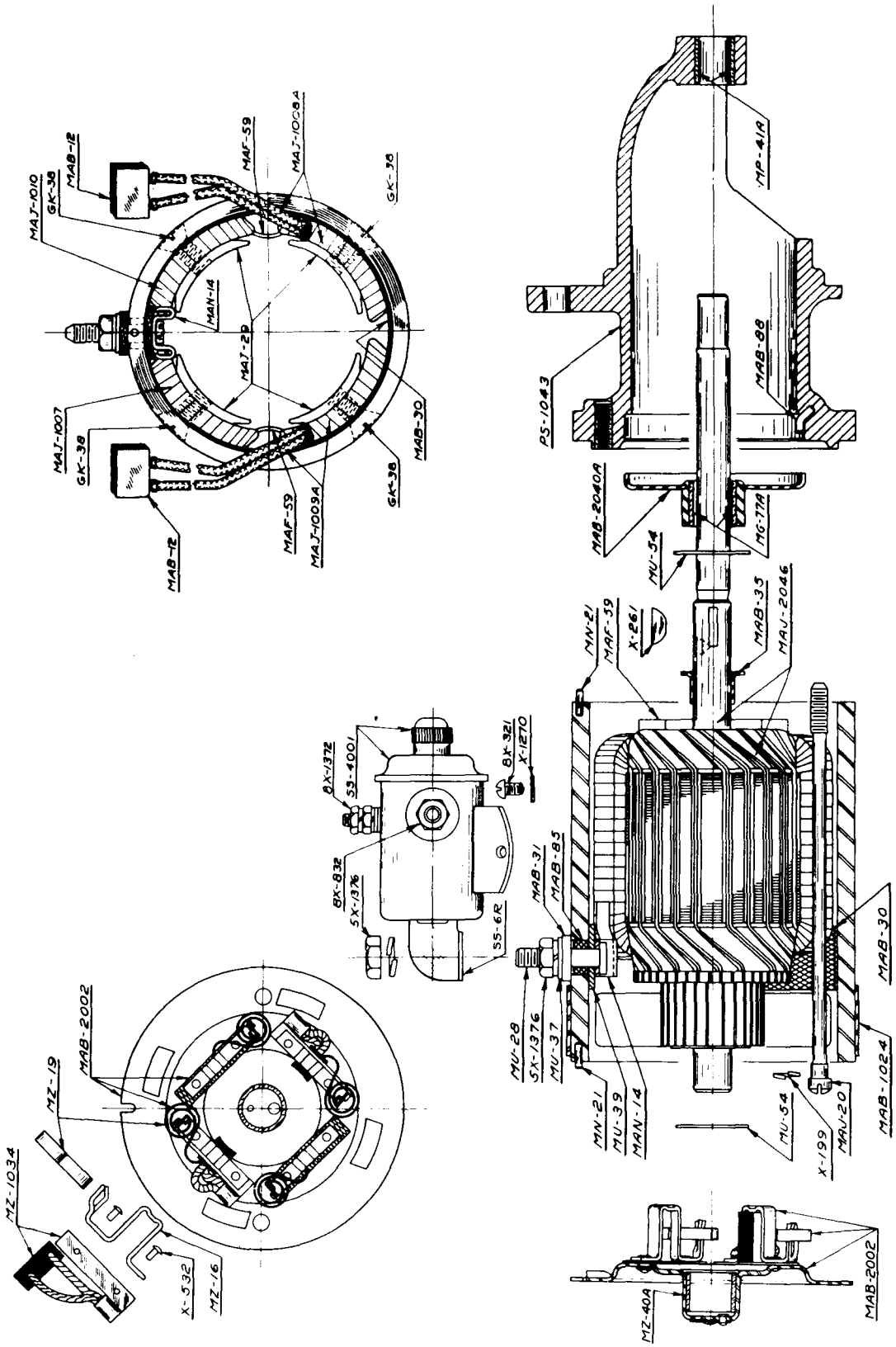
EB-87	1	BENDIX DRIVE ASSEMBLY
MAB-1024	1	Head Band Assembly
MAB-2040A	1	INTERMEDIATE BRG. ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1043	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg. 1/16 Wall
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 4-4-39)

UNIT	APPLICATION
MAJ-4054	Continental, Nelson LeMoon

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4054 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2059)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-3002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

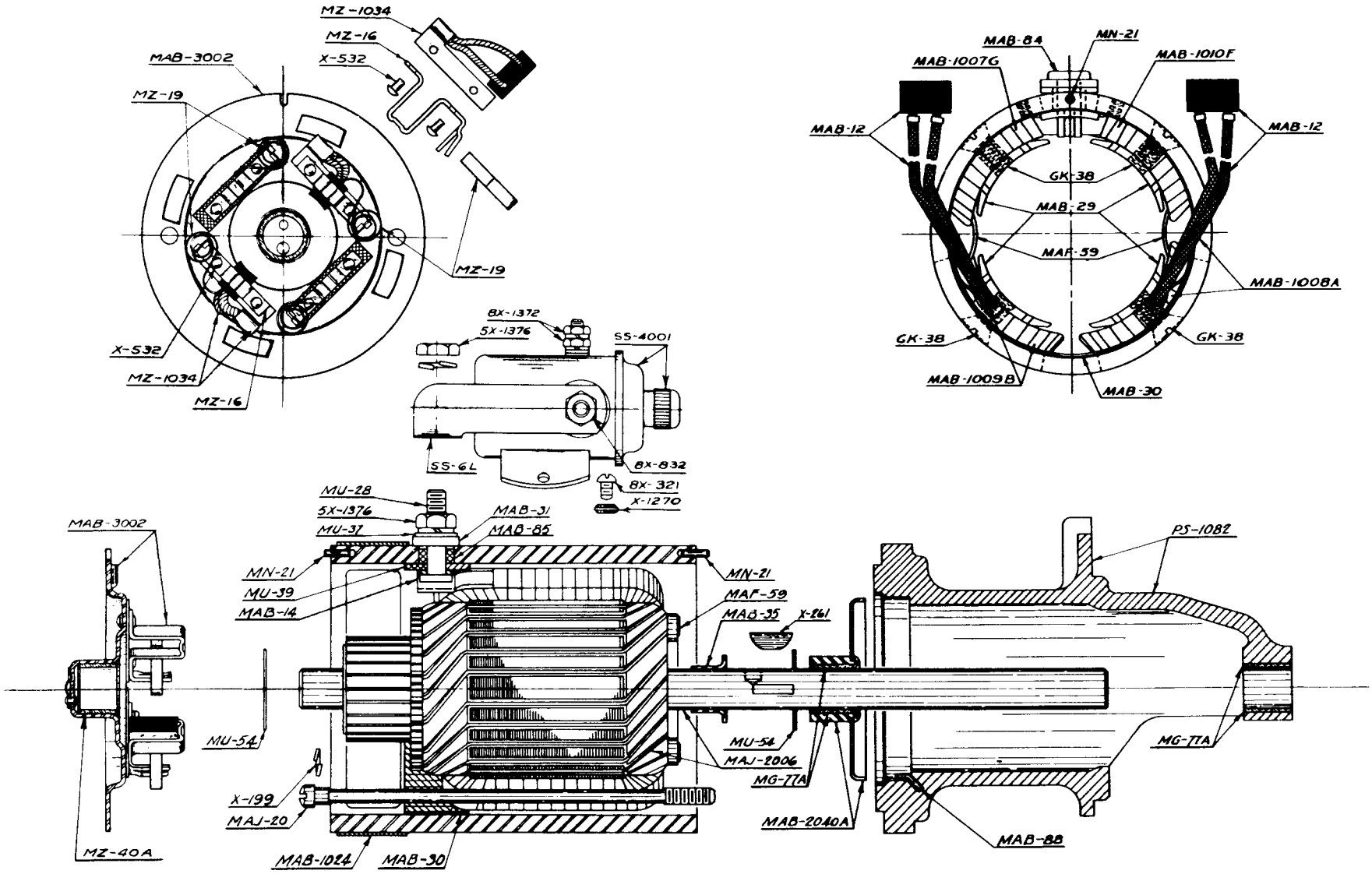
Miscellaneous Parts

EB-82	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1082	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-22-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

MAJ-4055 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Bolt, Thru
(MAJ-2060)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12‡	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud
MAB-85	1	Bushing, Ins., Term. Stud
MAF-59	2	Connector, Field Coil
MAJ-1007	1	Coil, Field, U.L
MAJ-1008	1	Coil, Field, L.R.
MAJ-1009	1	Coil, Field, L.L.
MAJ-1010	1	Coil, Field, U.R.
MAN-14	1	Terminal
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-199	2	Washer, Lock, Thru Bolt, 1/4
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly With Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034‡	2	Brush, Grounded
X-532	4	Rivet, Oval hd., 1/8x1/4

Armature Assembly & Parts Used With

MAJ-2046	1	Armature Assy.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Miscellaneous Parts

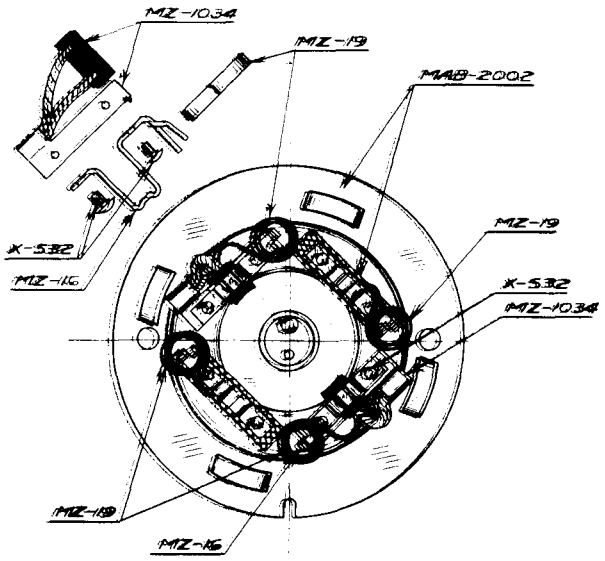
Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-1	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take up
EBA-111	1	Shaft & Pinion
MAB-1024G	1	Band, Cover
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
PS-1107	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	Bearing, Absorbent Bronze
X-489	1	Oiler, Hinge Top, Press in, 1/4
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

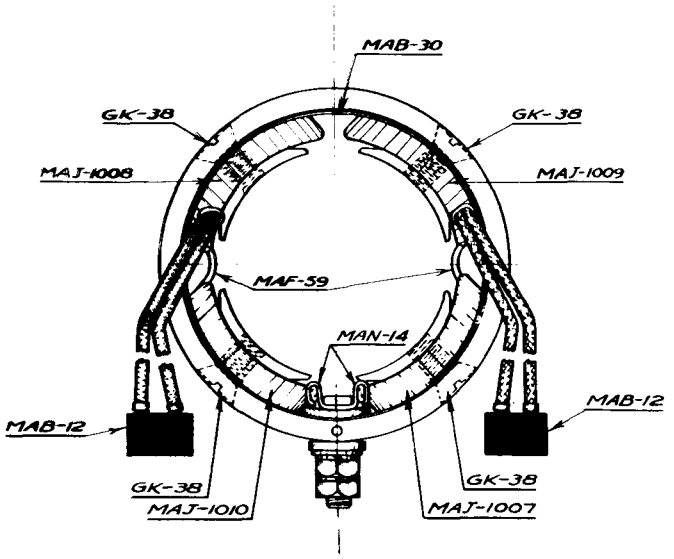
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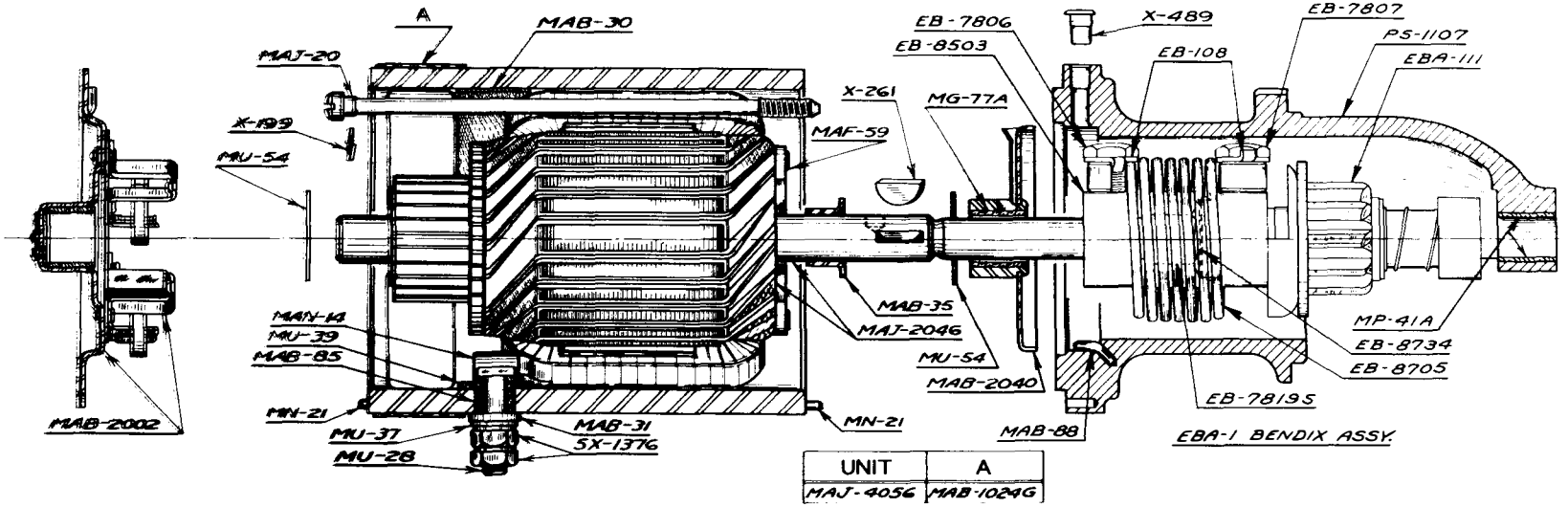
‡ Brush Set, Service, MAB-2012S.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4056 STARTING MOTOR ILLUSTRATION







UNIT	A
MAJ-4056	MAB-1024G

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-58	2	Frame Screw
(MAJ-2061)	1	Frame & Field Assy.
CK-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.-L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.-L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-146	2	1/4-20 Hex. Nut
X-199	2	1/4 Lock Washer
X-489	1	1/4 Oiler - Press in Type
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2062	1	Armature Assembly
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EBA-5	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assy.
MAB-1110A	1	Drive End Head Assy.
MAB-124	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

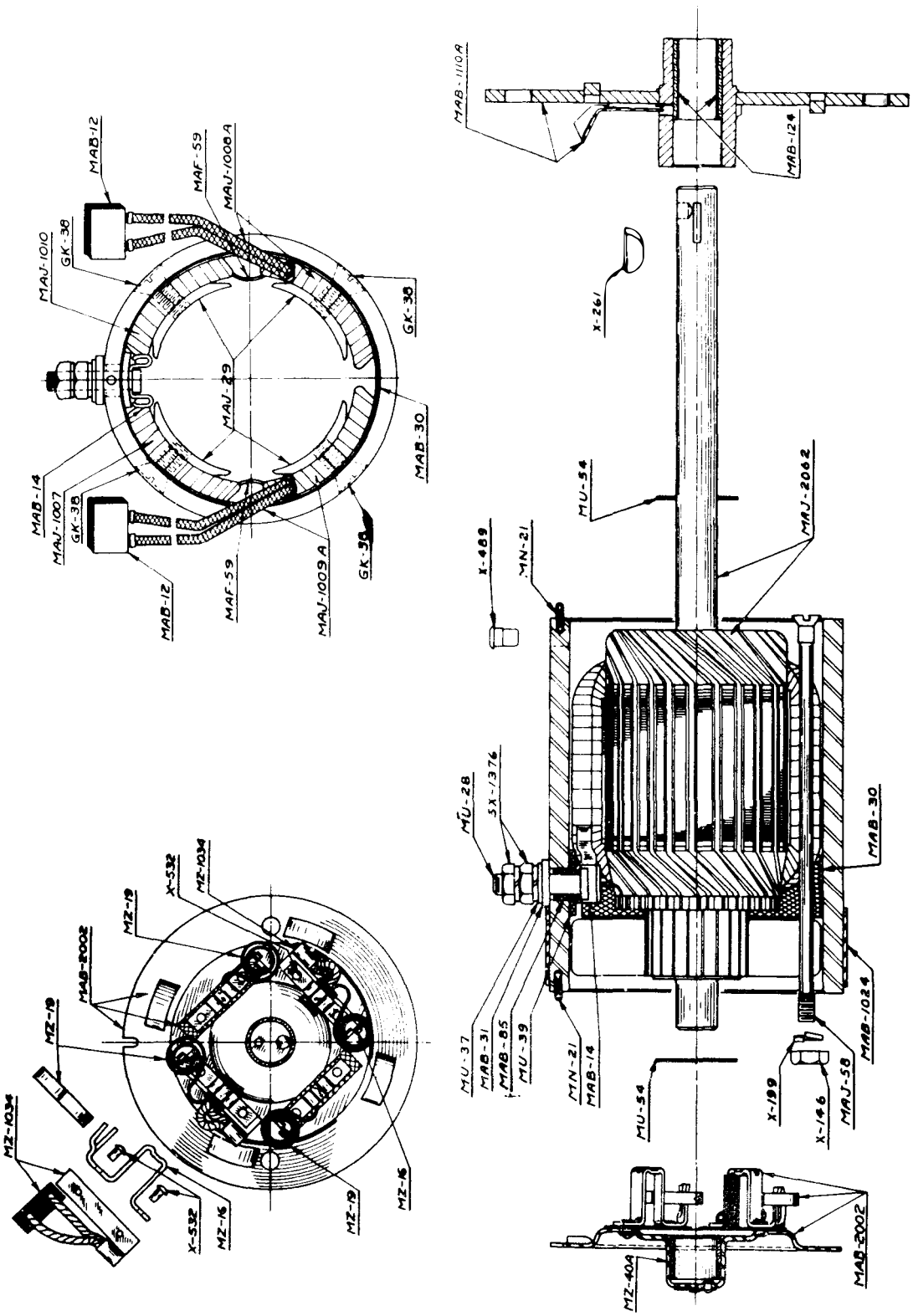
(Issued 1-14-38)

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4057 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAJ-4057 STARTING MOTOR PARTS LIST MAJ-4057

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-58	2	Frame Screw
(MAJ-2061)	1	Frame & Field Assy.
CE-38	4	Pole Piece Screw
MAB-14	1	Terminal
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAB-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	Brush
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	Brush
MAJ-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-146	2	1/4-20 Hex. Nut
X-199	2	1/4 Lock Washer
X-489	1	1/4 Oiler - Press in Type
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2062	1	Armature Assembly
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EBA-5	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assy.
MAB-1110A	1	Drive End Head Assy.
MAB-124	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

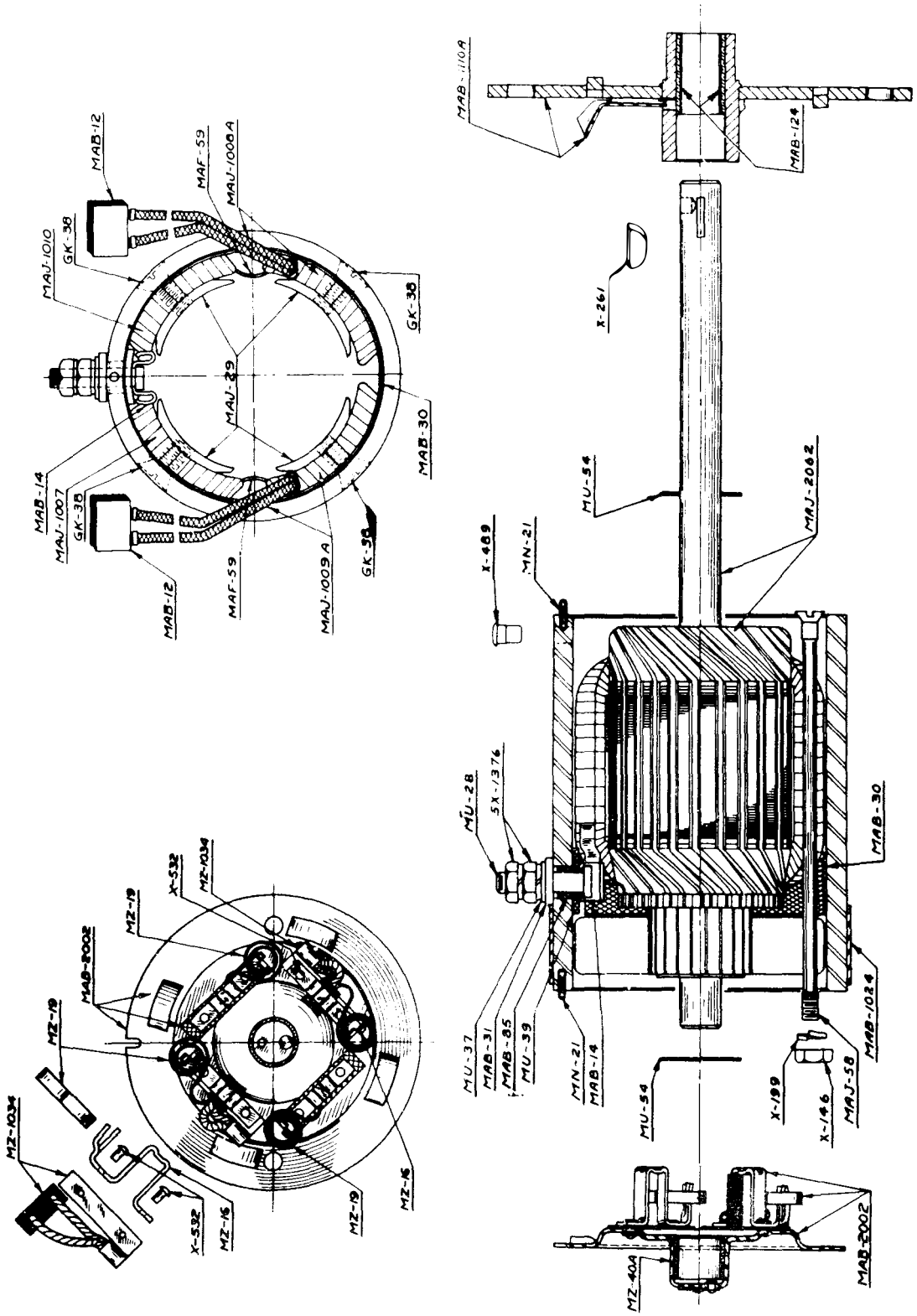
(Issued 1-14-38)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4057 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2059)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	BRUSH
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	BRUSH
MAJ-1010	1	Field Coil - U.R.
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAB-3002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	BRUSH ASSY.- Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet

Armature Assembly & Parts Used With

MAJ-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

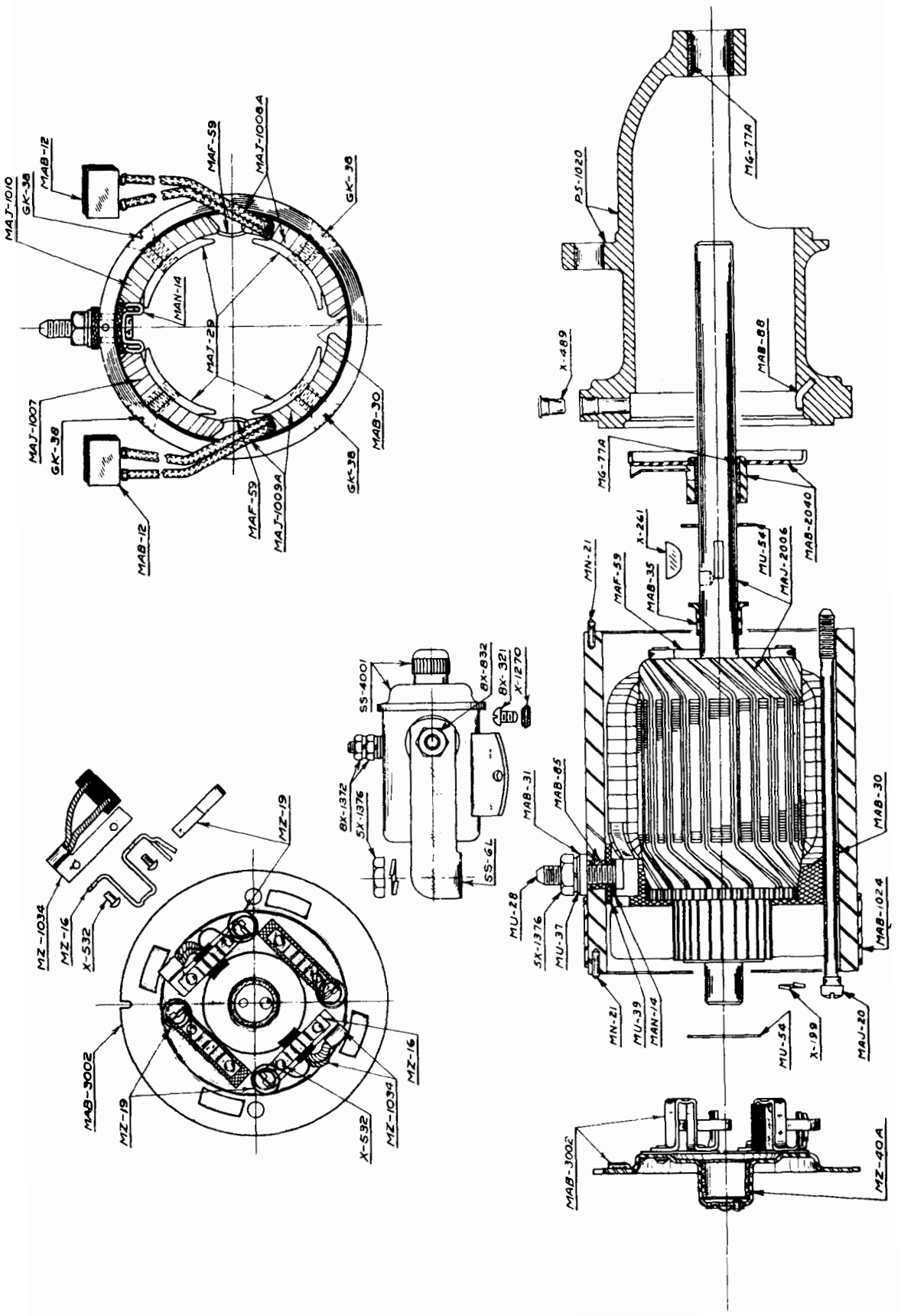
EB-82	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7805	1	DRIVE SPRING
EB-7806	1	Hd. Sp. Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8211	1	S-A Assembly
EB-8503	1	Driving Head
MAB-1024	1	Head Band Assembly
MAB-2040	1	INTERMEDIATE BEARING ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1020	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8-22-39)

UNIT	APPLICATION
MAJ-4058	Gray Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4058 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-58	2	Frame Screw
(MAJ-2061)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.-L.R.
MAB-12	1	BRUSH
MAJ-1009A	1	Field Coil & Brush Assy.-L.L.
MAB-12	1	BRUSH
MAJ-1010	1	Field Coil - U.R.
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-146	2	1/4-20 Hex. Nut
X-199	2	1/4 Lock Washer
X-489	1	1/4 Oiler-Press in Type
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	BRUSH ASSY. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2062	1	ARMATURE ASSEMBLY
MU-54	2	Thrust Washer-1/32" Thick
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EBA-29	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-8506	1	Hd. Spring Bolt or Screw
EBA-513	1	Anti-Drift Spring
EBA-525	1	Meshing Spring
EBA-531	1	Screw Shaft Assembly
EBA-532	1	Pinion Assembly
EBA-533	*	Retaining Ring (Narrow Groove)
EBA-1233	*	Retaining Ring (Wide Groove)
EBA-2905	1	DRIVE SPRING
EBA-2907	1	Shaft Spring Screw
MAB-1024	1	Head Band Assembly
MAB-1110A	1	Drive End Head Assembly
MAB-124	1	ABSORBENT BRONZE BRG.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

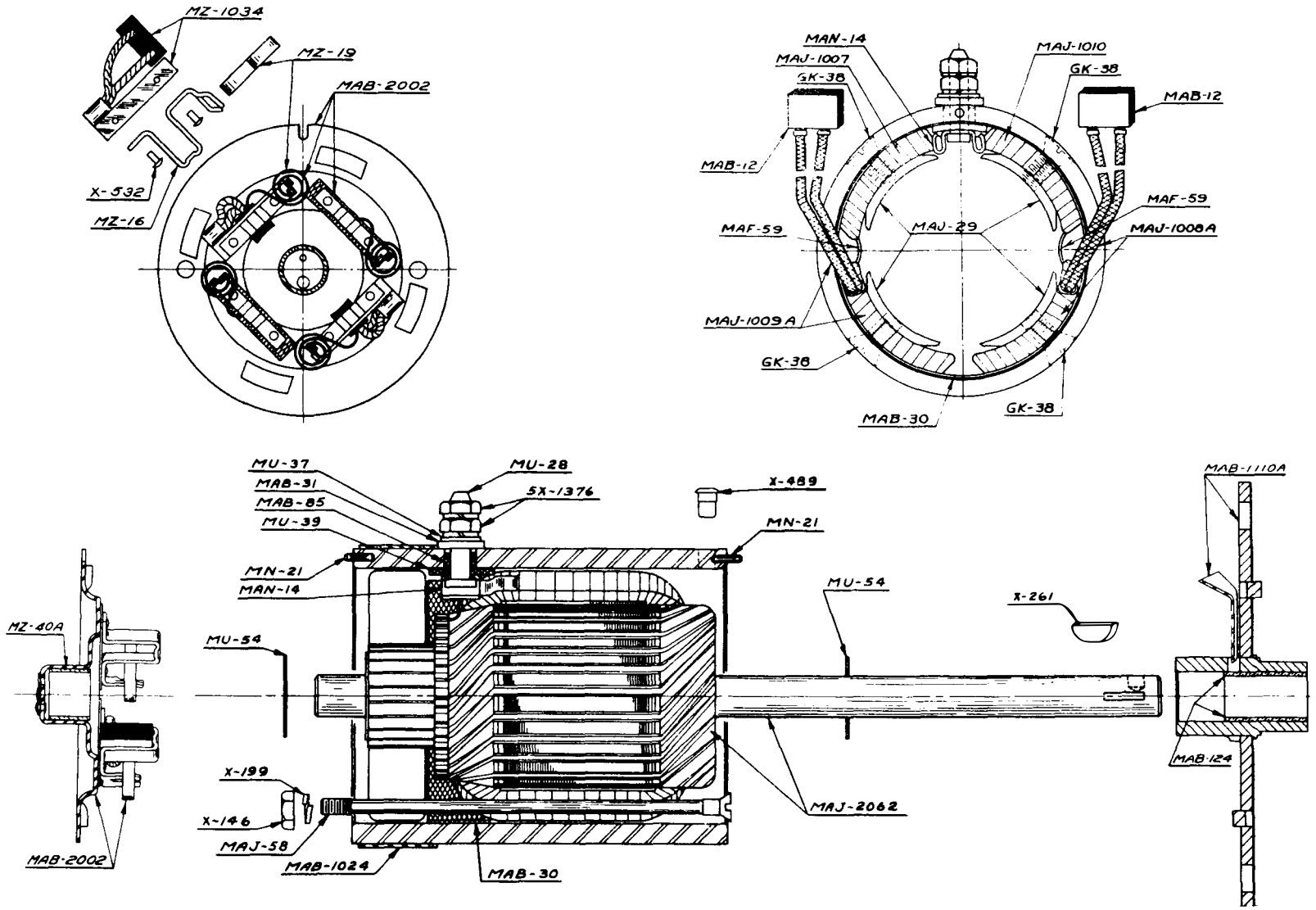
(Issued 3-29-40)

* Use as required.

UNIT	APPLICATION
MAJ-4061	Hudson

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4061 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MAJ-2059)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	2	Field Coil Connector
MAJ-29	4	Pole Piece
MAJ-1007	1	Field Coil - U.L.
MAJ-1008A	1	Field Coil & Brush Assy.- L.R.
MAB-12	1	BRUSH
MAJ-1009A	1	Field Coil & Brush Assy.- L.L.
MAB-12	1	BRUSH
MAJ-1010	1	Field Coil - U.R.
MAN-14	1	Terminal
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer

Comm. End Plate Assy. & Parts Used With

MAB-2002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	BRUSH ASSY.- Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet

Armature Assembly & Parts Used With

MAJ-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1014	1	5/16 Lock Washer
X-1270	2	#10 Skpf. Washer
5X-1376	1	5/16-24 Hex. Nut

Miscellaneous Parts

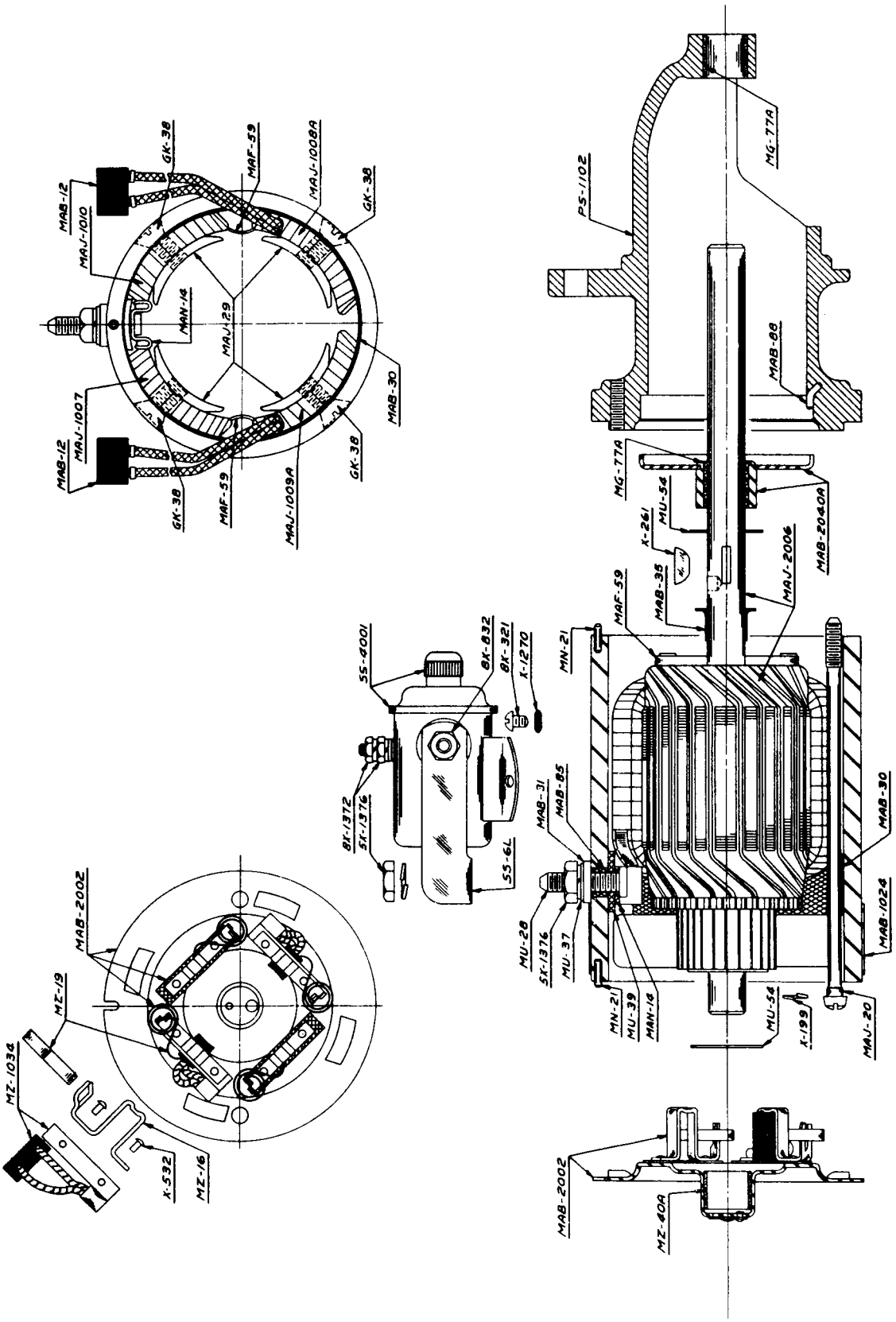
EBA-27	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7806	1	Hd. Sp. Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7919S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	DRIVE SPRING
EB-8734	1	Take-Up Spring
EBA-2711	1	S-A Assembly
MAB-1024	1	Head Band Assembly
MAB-2040A	1	INTERMEDIATE BRG. ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1102	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 4-3-40)

UNIT	APPLICATION
MAJ-4062	Checker Cab

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAJ-4062 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
MAJ-20	2	Bolt, Thru
(MAJ-2001)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAJ-3005S	1	Field Coil Package
MAF-59	2	Connector, Field Coil
MAJ-1007	1	Coil, Field, U.L.
MAJ-1008	1	Coil, Field, L.R.
MAJ-1009	1	Coil, Field, L.L.
MAJ-1010	1	Coil, Field, U.R.
MAN-14	1	Terminal
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal, 5/16-24
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAJ-2006	1	Armature Assembly
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBA-2	1	Bendix Drive Assy.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
MAB-1024E	1	Band, Cover
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
PS-1219	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAB-2012AS.

UNIT	APPLICATION
MAJ-4063	Buda

(Issued 7-14-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-20	2	Frame Screw
(MAK-2001)	1	Frame & Field Assy.
MAK-28	1	Terminal Post
MAK-29	4	Pole Piece
MAK-30	1	Insulation
MAK-44	2	Field Coil Connector
MAK-49	2	Insulating Washer
MAK-50	1	Plain Washer
MAK-51	1	Ins. Bushing
MAK-1007	1	Field Coil - U.R.
MAK-1008S	1	Field Coil & Brush Assy. - L.R.
MAK-12	1	Brush
MAK-1009S	1	Field Coil & Brush Assy. - L.L.
MAK-12	1	Brush
MAK-1010	1	Field Coil - U.L.
MZ-38	4	Pole Piece Screw
5X-146	1	1/4-20 Hex. Nut
X-199	1	1/4 Lock Washer
5X-146	1	1/4-20 Hex. Nut
8X-173	2	#10-32 Hex. Nut
X-196	2	#10 Lock Washer
X-199	1	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAK-2002	1	Comm. End Plate Assy.
MAK-16	2	Brush Holder
MAK-19	4	Brush Spring
MAK-40	1	Absorbent Bronze Brg.
MAK-59	1	Felt Pad
MAK-1034	2	Brush - Grounded
X-521	4	9/32 Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-54	1	Thrust Washer
MAK-55	1	Thrust Washer
MAK-2006	1	Armature Assembly

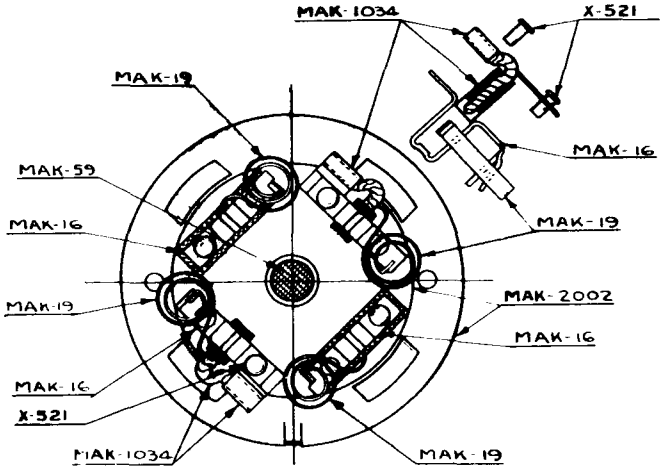
Miscellaneous Parts

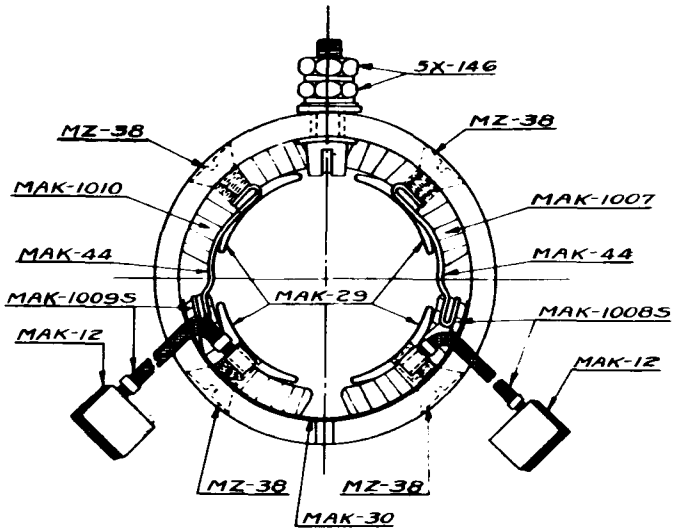
EB-68	1	Bendix Drive Assy.
GAS-1024	1	Head Band Assy.
MAK-1048	1	Drive End Head Assy.
MAK-39	1	Absorbent Bronze Brg.
X-386	1	Ball Oiler - 1/4 Press in
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

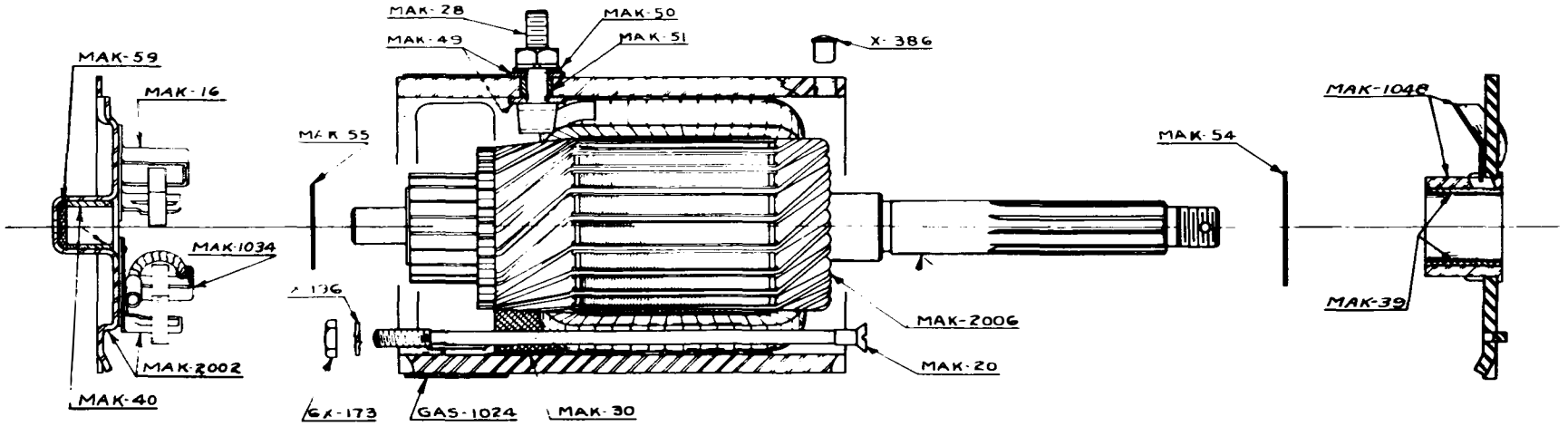
(Issued 6-11-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled a needed."

MAK-4001 STARTING MOTOR ILLUSTRATION







MAK-4003 STARTING MOTOR PARTS LIST MAK-4003

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MAK-73	2	Frame Screw
(MAK-2001)	1	Frame & Field Assy.
MAK-28	1	Terminal Post
MAK-29	4	Pole Piece
MAK-30	1	Insulation
MAK-44	2	Field Coil Connector
MAK-49	2	Ins. Washer
MAK-50	1	Plain Washer
MAK-51	1	Ins. Bushing
MAK-1007	1	Field Coil-U.R.
MAK-1008S	1	Field Coil & Brush Assy.-L.R.
MAK-12	1	Brush
MAK-1009S	1	Field Coil & Brush Assy.-L.L.
MAK-12	1	Brush
MAK-1010	1	Field Coil-U.L.
MZ-38	4	Pole Piece Screw
5X-146	1	1/4-20 Hex. Nut
X-199	1	1/4 Lock Washer
5X-146	1	1/4-20 Hex. Nut
6X-173	2	#10-32 Hex. Nut
X-196	2	#10 Lock Washer
X-199	1	1/4 Lock Washer
X-386	1	Ball Oiler - 1/4 Press in

Comm. End Plate Assembly & Parts Used With

MAK-2002	1	Comm. End Plate Assy.
MAK-16	2	Brush Holder
MAK-19	4	Brush Spring
MAK-40	1	Absorbent Bronze Brg.
MAK-59	1	Felt Pad
MAK-1034	2	Brush - Grounded
X-1442	4	1/8x1/4 Tubular Rivet

1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MAK-54	1	Thrust Washer
MAK-55	1	Thrust Washer
MAK-2072	1	Armature Assembly
X-260	1	#5 Woodruff Key

Drive End Head Assembly & Parts Used With

MAK-1048	1	Drive End Head Assy.
MAK-39	1	Absorbent Bronze Brg.

Miscellaneous Parts

GAS-1024	1	Head Band Assembly
6X-1010A	1	#8-32x1 1/4 Rd. Hd. Screw-Hardened
6X-1410	1	#8-32 Square Nut

1 2 3 4 5

(Issued 5-18-31)
(R-5-7-36)

Printed in U. S. A.

File in Equipment & Parts Lists Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembl d as needed."

MAK-4008 STARTING MOTOR PARTS LIST

MAK-4008
(Issued 2-4-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-20	2	Bolt, Thru
MAK-2001	1	Frame & Field Assy.
MAK-12†	2	Brush
MAK-28	1	Stud, Terminal
MAK-30	1	Insulation, Field Connection
MAK-49	2	Washer, Ins., Term. Stud
MAK-51	1	Bushing, Ins., Term. Stud
MAK-3005S	1	FIELD COIL PACKAGE
MAK-44	2	Connector, Field Coil
MAK-1007	1	Coil, Field, U.R.
MAK-1008	1	Coil, Field, L.R.
MAK-1009	1	Coil, Field, L.L.
MAK-1010	1	Coil, Field, U.L.
MZ-38A	4	Screw, Pole Shoe
SSA-43	2	Washer, Plain, Term. Stud
8X-146	2	Nut, Term. Stud, Hex. 1/4-20
12X-199	2	Lockwasher, Term. Stud, 1/4
8X-173	2	Nut, Thru Bolt, Hex. #10-32
12X-196	2	Lockwasher, Thru Bolt, #10

Comm. End Head Assembly & Parts Used With

MAK-3002	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, Arm. Shaft, D.E.
MAK-55	1	Washer, Thrust, Arm. Shaft, C.E.
MAK-2006	1	ARMATURE

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-10	1	BENDIX DRIVE ASSY.
EB-6504S	1	Pinion
EB-6505	1	SPRING, DRIVE
EB-6511	1	Spring, Anti-Drift
EB-6823	2	Washer, Thrust
EB-6824	1	Support, Drive Spring
EB-6825	1	Spring, Meshing
EB-6826	1	Sleeve, Anti-Drift Spring
EB-6827	1	Washer, Pinion
EB-6828	1	Nut, Castellated
EB-7101	1	Shaft
EB-7902	1	Stop, Drive
X-528	1	Pin, Cotter
GAS-1024F	1	Band, Cover
MAK-1048	1	Head Assy., Drive End
MAK-39	1	BEARING, ABS. BRONZE
X-386	1	Oiler
X-404	1	Pin, Cotter
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAK-2012AS.

UNIT	APPLICATION
MAK-4008	Wisconsin

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAK-4009 STARTING MOTOR PARTS LIST MAK-4009

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MAK-20	2	Frame Screw
(MAK-2001)	1	Frame & Field Assy.
MAK-28	1	Terminal Post
MAK-29	4	Pole Piece
MAK-30	1	Insulation
MAK-44	2	Field Coil Connector
MAK-49	2	Insulating Washer
MAK-50	1	Plain Washer
MAK-51	1	Insulating Bushing
MAK-1007	1	Field Coil - U.R.
MAK-1008S	1	Field Coil & Brush Assy.- L.R.
MAK-12	1	Brush
MAK-1009S	1	Field Coil & Brush Assy.- L.L.
MAK-12	1	Brush
MAK-1010	1	Field Coil - U.L.
MZ-38	4	Pole Piece Screw
5X-146	1	1/4-20 Hex. Nut
X-199	1	1/4 Lock Washer
5X-146	1	1/4-20 Hex. Nut
6X-173	2	#10-32 Hex. Nut
X-196	2	#10 Lock Washer
X-199	1	1/4 Lock Washer
X-386	1	Ball Oiler - 1/4 Press in

Comm. End Plate Assembly & Parts Used With

MAK-3002	1	Comm. End Plate Assy.
MAK-16A	4	Brush Holder
MAK-19	4	Brush Spring
MAK-40	1	Absorbent Bronze Brg.
MAK-59	1	Felt Pad
MAK-1034	2	Brush - Grounded
X-1442	4	1/8x1/4 Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MAK-54	1	Thrust Washer
MAK-55	1	Thrust Washer
MAK-2006	1	Armature Assembly

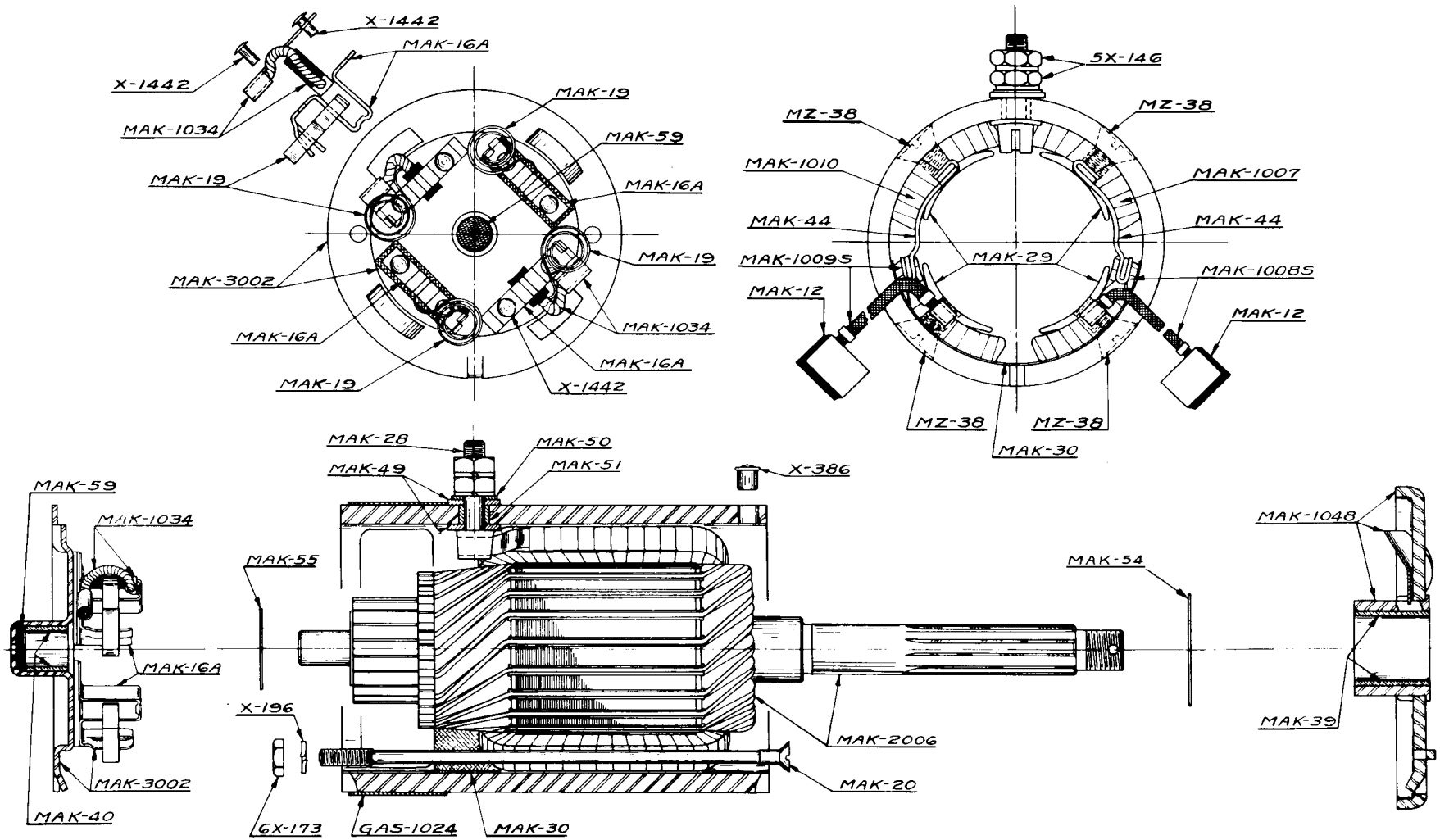
Miscellaneous Parts

EB-91	1	Bendix Drive Assy.
GAS-1024	1	Head Band Assembly
MAK-1048	1	Drive End Head Assy.
MAK-39	1	Absorbent Bronze Brg.
6X-1010A	1	#8-32x1 1/4 Rd. Hd. Sc. - Hardened
6X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 4-27-33)
(R-7-15-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAK-4009 STARTING MOTOR ILLUSTRATION



MAK-4011 STARTING MOTOR PARTS LIST MAK-4011

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-20	2	Frame Screw
(MAK-2086)	1	Frame & Field Assy.
MAK-28	1	Terminal Post
MAK-29	4	Pole Piece
MAK-30	1	Insulation
MAK-44	2	Field Coil Connector
MAK-49	2	Insulating Washer
MAK-50	1	Plain Washer
MAK-51	1	Insulating Bushing
MAK-1007	1	Field Coil - U.R.
MAK-1008S	1	Field Coil & Brush Assy.- L.R.
MAK-12	1	Brush
MAK-1009S	1	Field Coil & Brush Assy.- L.L.
MAK-12	1	Brush
MAK-1010	1	Field Coil - U.L.
MZ-38	4	Pole Piece Screw
5X-146	1	1/4-20 Hex. Nut
X-199	1	1/4 Lock Washer
5X-146	1	1/4-20 Hex. Nut
6X-173	2	#10-32 Hex. Nut
X-196	2	#10 Lock Washer
X-199	1	1/4 Lock Washer
X-386	1	Ball Oiler - 1/4 Press in

Comm. End Plate Assembly & Parts Used With

MAK-2093	1	Comm. End Plate Assy.
MAK-16	2	Brush Holder
MAK-19	4	Brush Spring
MAK-40	1	Absorbent Bronze Brg.
MAK-59	1	Felt Pad
MAK-1034	2	Brush - Grounded
X-1442	4	1/8x1/4 Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-54	1	Thrust Washer
MAK-55	1	Thrust Washer
MAK-2006	1	Armature Assembly

Miscellaneous Parts

EBA-13	1	Bendix Drive Assy.
GAS-1024	1	Head Band Assembly
MAK-1048	1	Drive End Head Assy.
MAK-39	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
6X-794	1	#10-32 Square Nut

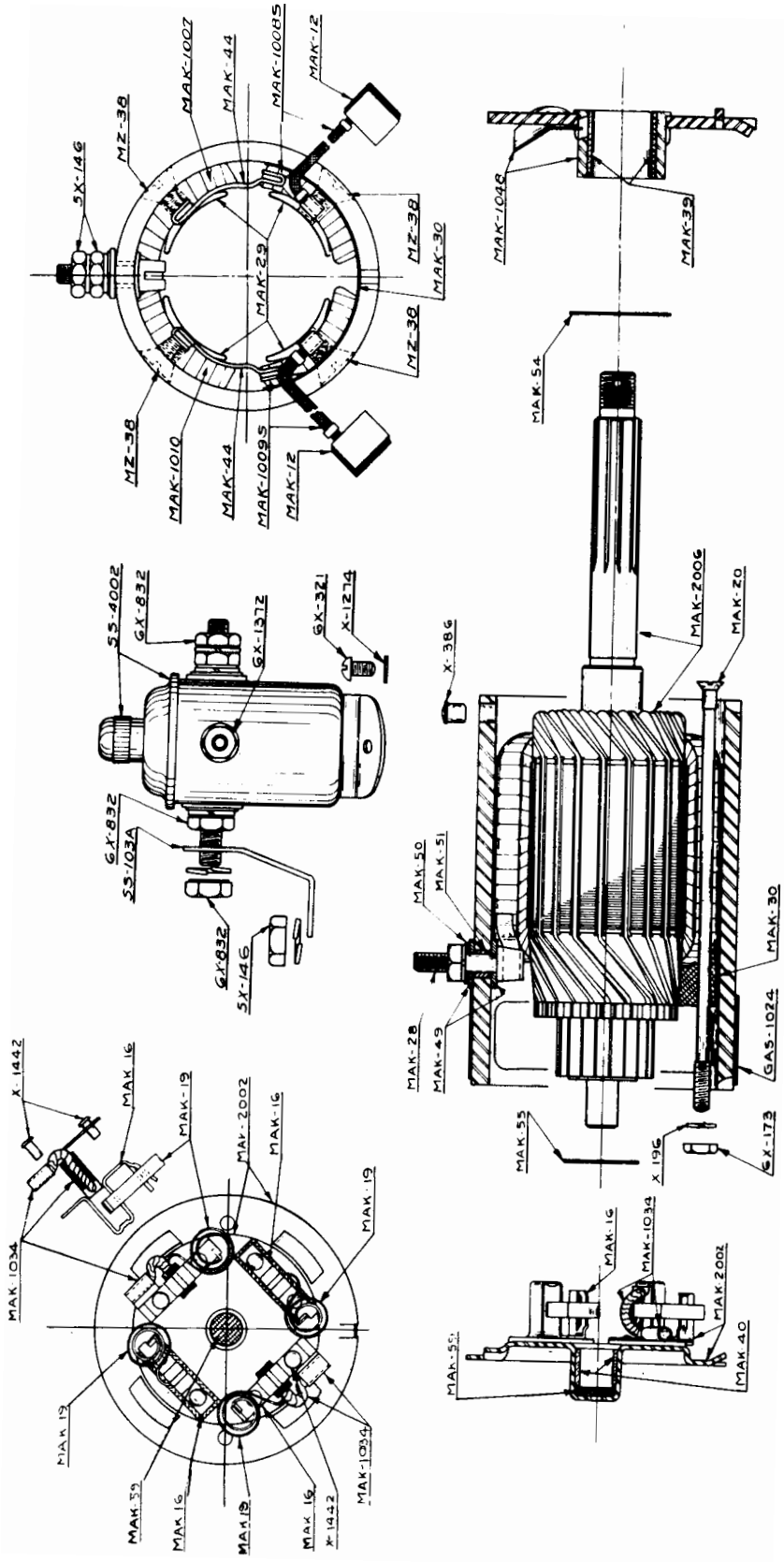
Switch Assembly & Parts Used With

SS-103A	1	Connector
SS-4002	1	Solenoid Starting Switch
X-196	1	#10 Lock Washer
6X-832	2	5/16-24 Hex. Nut
X-1014	2	5/16 Lock Washer
6X-1372	1	#10-32 Hex. Nut
6X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1274	2	#10 Skpf. Washer
		1 2 3 4 5

(Issued 10-16-34)
(R-8-6-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAK-4011 STARTING MOTOR PARTS LIST



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-20	2	Frame Screw
(MAK-2086)	1	Frame & Field Assembly
MAK-28	1	Terminal Post
MAK-29	4	Pole Piece
MAK-30	1	Insulation
MAK-44	2	Field Coil Connector
MAK-49	2	Insulating Washer
MAK-50	1	Plain Washer
MAK-51	1	Insulating Bushing
MAK-1007	1	Field Coil - U.R.
MAK-1008S	1	Field Coil & Brush Assy.- L.R.
MAK-12	1	BRUSH
MAK-1009S	1	Field Coil & Brush Assy.- L.L.
MAK-12	1	BRUSH
MAK-1010	1	Field Coil - U.L.
MZ-38	4	Pole Piece Screw
5X-146	1	1/4-20 Hex. Nut
X-199	1	1/4 Lock Washer
8X-173	2	#10-32 Hex. Nut
X-196	3	#10 Lock Washer
X-386	1	Ball Oiler - 1/4 Press in

Comm. End Plate Assy. & Parts Used With

MAK-3002	1	Comm. End Plate Assembly
MAK-16A	2	Brush Holder
MAK-19	4	Brush Spring
MAK-40	1	Absorbent Bronze Brg.
MAK-59	1	Felt Pad
MAK-1034	2	BRUSH - Grounded
X-521	4	9/32 Tubular Rivet

Armature Assembly & Parts Used With

MAK-54	1	Thrust Washer
MAK-55	1	Thrust Washer
MAK-2006	1	ARMATURE ASSEMBLY
		1 2 3 4 5

Starting Switch Assy. & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-103A	1	Connector
SS-4002	1	SOLENOID STARTING SWITCH
X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

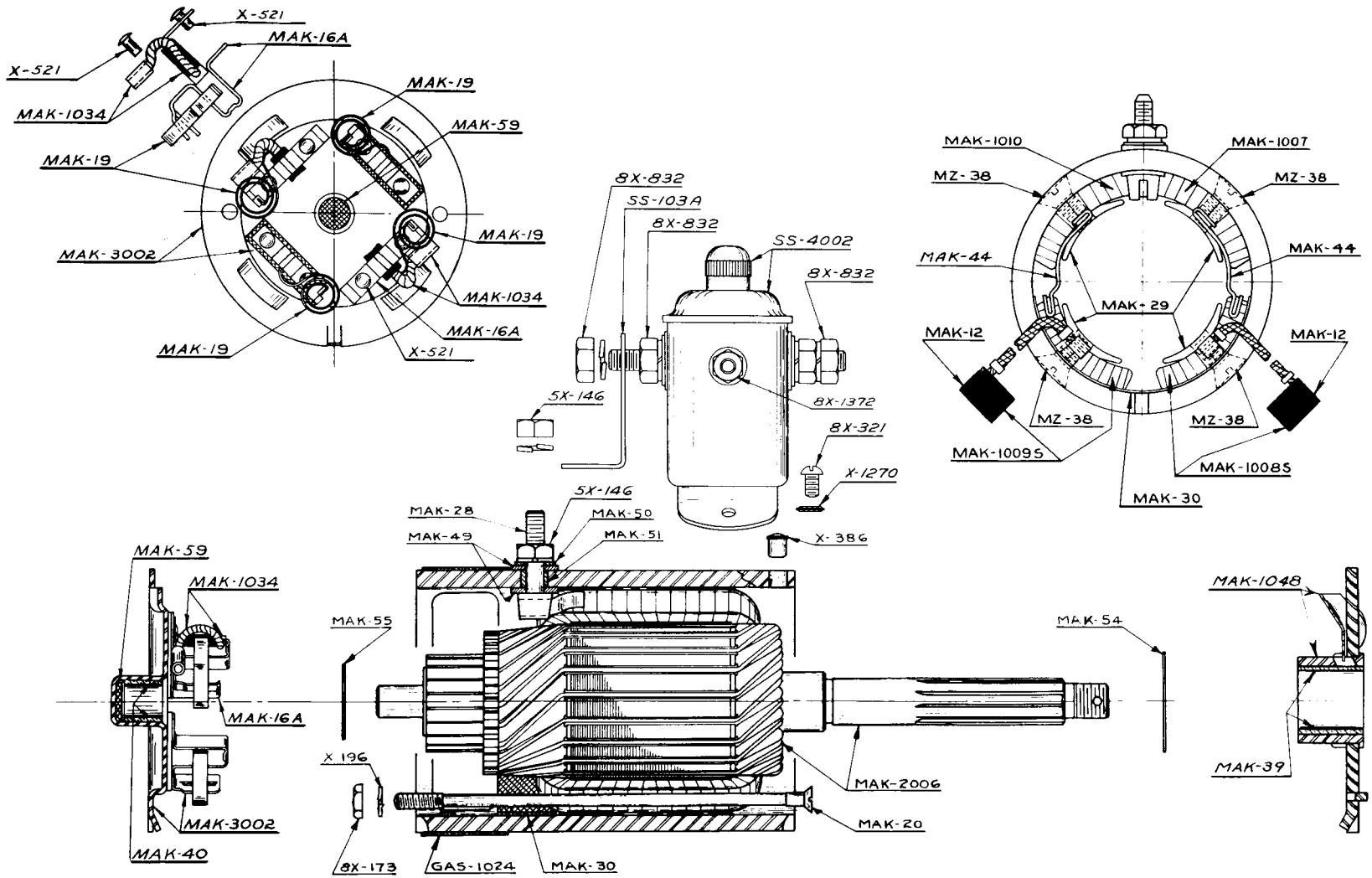
EBA-10	1	BENDIX DRIVE ASSEMBLY
EB-6504S	1	Pinion
EB-6505	1	DRIVE SPRING
EB-6513	1	Anti-Drift Spring
EB-6823	2	Thrust Washer
EB-6824	1	Drive Spring Support
EB-6825	1	Meshing Spring
EB-6826	1	Anti-Drift Sp. Sleeve
EB-6827	1	Pinion Washer
EB-6828	1	Castellated Nut
EB-7101	1	Shaft
EB-7902	1	Drive Stop
GAS-1024	1	Head Band Assembly
MAK-1048	1	Drive End Head Assembly
MAK-39	1	ABSORBENT BRONZE BRG.
5X-146	1	1/4-20 Hex. Nut
X-199	1	1/4 Lock Washer
X-714	1	#10-32xl 1/2 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 7-31-40)

UNIT	APPLICATION
MAK-4012	Gray Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAK-4012 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-79	2	Frame Screw
(MAK-2084)	1	Frame & Field Assy.
MAK-28	1	Terminal Post
MAK-29	4	Pole Piece
MAK-30	1	Insulation
MAK-44	2	Field Coil Connector
MAK-49	2	Insulating Washer
MAK-50	1	Plain Washer
MAK-51	1	Insulating Bushing
MAK-1007	1	Field Coil - U.R.
MAK-1008S	1	Field Coil & Brush Assy.- L.R.
MAK-12	1	Brush
MAK-1009S	1	Field Coil & Brush Assy.- L.L.
MAK-12	1	Brush
MAK-1010	1	Field Coil - U.L.
MZ-38	4	Pole Piece Screw
5X-146	1	1/4-20 Hex. Nut
X-199	1	1/4 Lock Washer
5X-146	1	1/4-20 Hex. Nut
X-196	2	#10 Lock Washer
X-199	1	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAK-3002	1	Comm. End Plate Assy.
MAK-16A	2	Brush Holder
MAK-19	4	Brush Spring
MAK-40	1	Absorbent Bronze Brg.
MAK-59	1	Felt Pad
MAK-1034	2	Brush - Grounded
X-521	4	9/32 Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-55	1	Thrust Washer
MAK-2088	1	Armature Assembly
MU-54	1	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

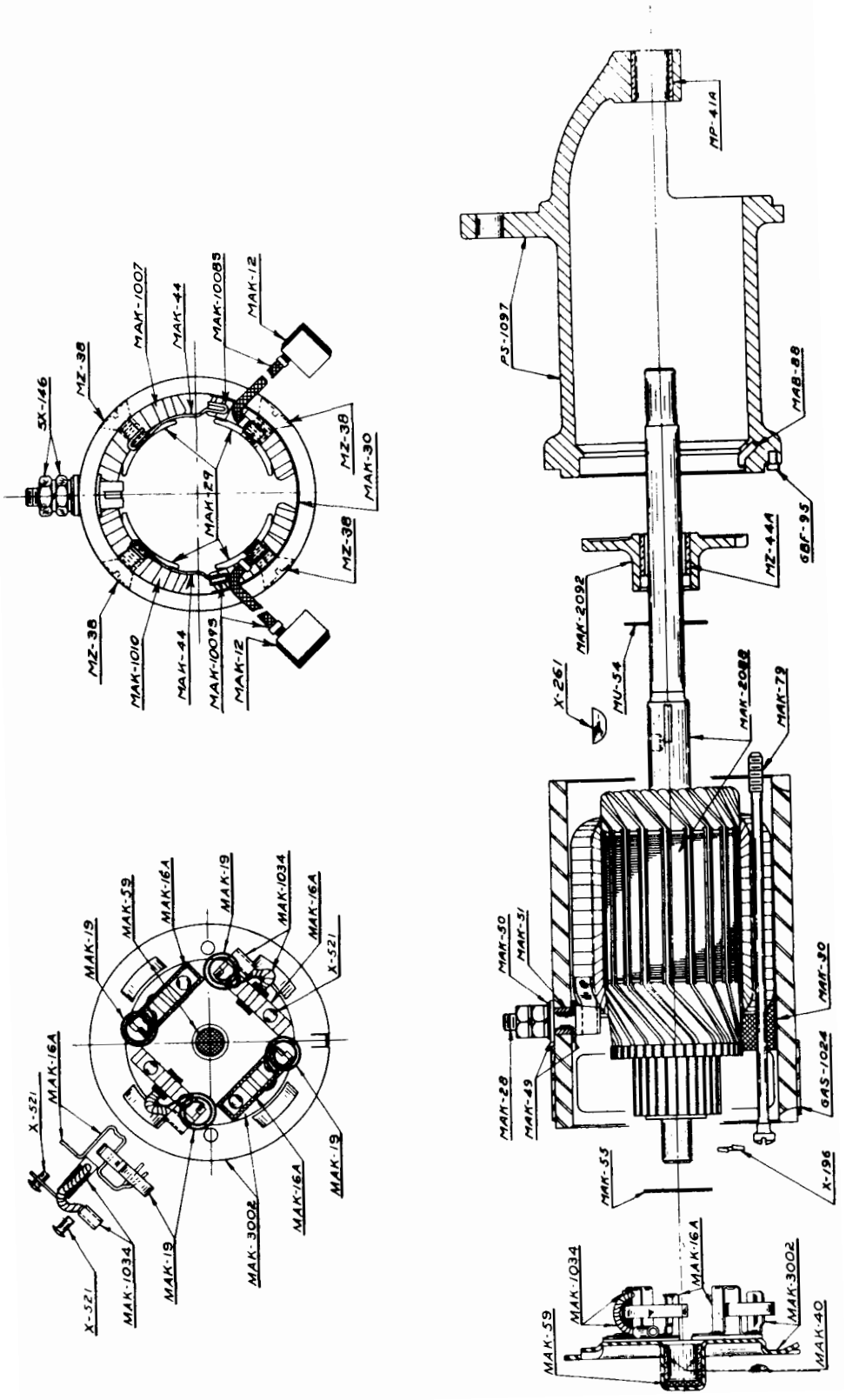
Miscellaneous Parts

EB-56	1	Bendix Drive Assy.
GAS-1024	1	Head Band Assembly
MAK-2092	1	Intermediate Brg. Assy.
MZ-44A	1	Absorbent Bronze Brg.
PS-1097	1	Pinion Housing Assy.
GBF-95	1	Dowel Pin
MAB-88	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
X-714	1	#10-32x1 1/2 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8/12/38)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAK-4013 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-20	2	Frame Screw
(MAK-2089)	1	Frame & Field Assy.
MAK-28	1	Terminal Post
MAK-29	4	Pole Piece
MAK-30	1	Insulation
MAK-44	2	Field Coil Connector
MAK-49	2	Ins. Washer
MAK-50	1	Plain Washer
MAK-51	1	Ins. Bushing
MAK-1007	1	Field Coil - U.R.
MAK-1008S	1	Field Coil & Brush Assy. - L.R.
MAK-12	1	Brush
MAK-1009S	1	Field Coil & Brush Assy. - L.L.
MAK-12	1	Brush
MAK-1010	1	Field Coil - U.L.
MZ-38	4	Pole Piece Screw
5X-146	1	1/4-20 Hex. Nut
X-199	1	1/4 Lock Washer
5X-146	1	1/4-20 Hex. Nut
8X-173	2	#10-32 Hex. Nut
X-196	2	#10 Lock Washer
X-199	1	1/4 Lock Washer
X-386	1	Ball Oiler - 1/4 Press in

Comm. End Plate Assembly & Parts Used With

MAK-2002	1	Comm. End Plate Assy.
MAK-16	2	Brush Holder
MAK-19	4	Brush Spring
MAK-40	1	Absorbent Bronze Brg.
MAK-59	1	Felt Pad
MAK-1034	2	Brush - Grounded
X-521	4	9/32 Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-54	1	Thrust Washer
MAK-55	1	Thrust Washer
MAK-2006	1	Armature Assembly

Switch Assembly & Parts Used With

SS-121R	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
9X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

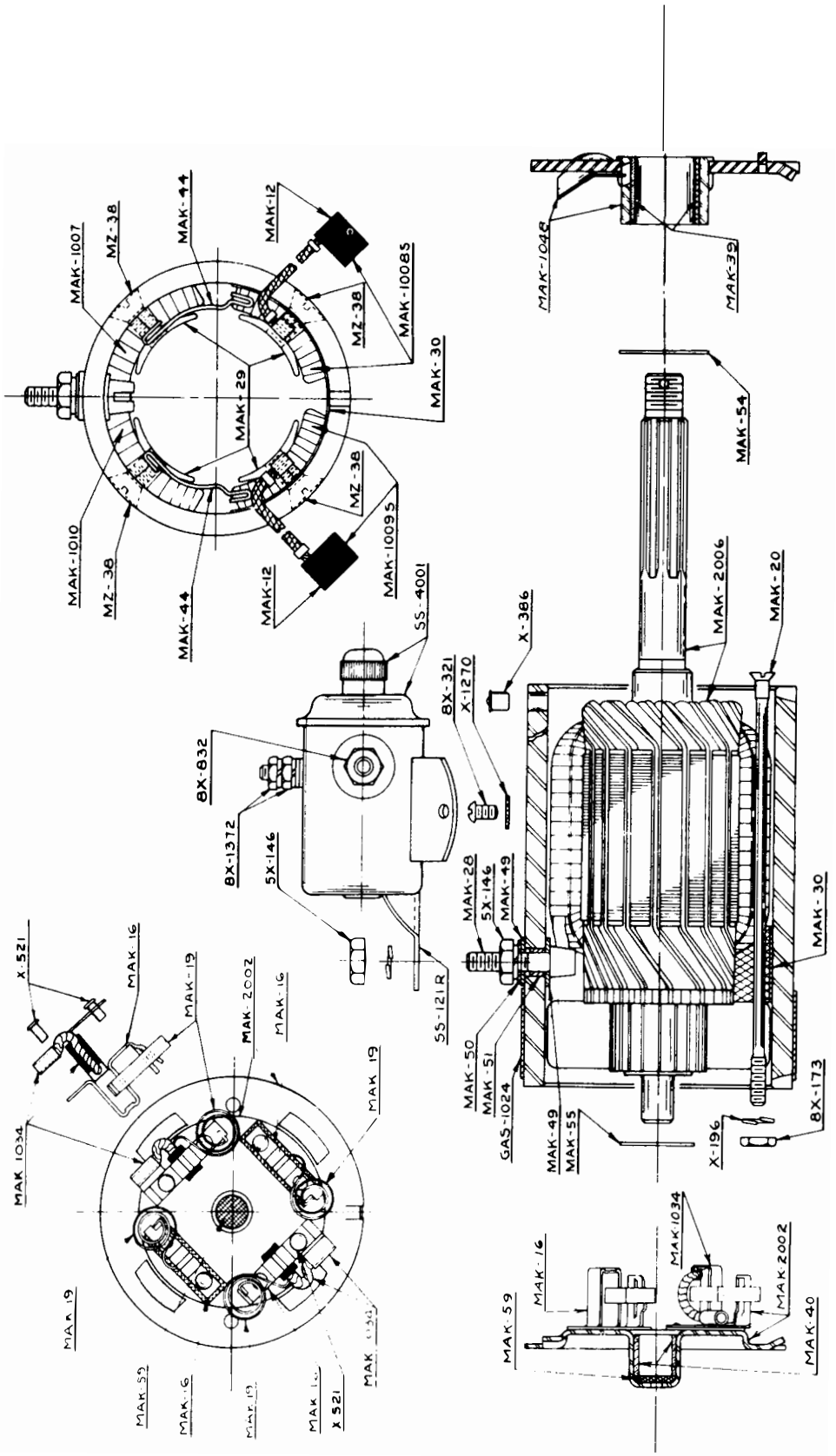
Miscellaneous Parts

EBA-13	1	Bendix Drive Assy.
GAS-1024	1	Head Band Assy.
MAK-1048	1	Drive End Head Assy.
MAK-39	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 1-24-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAK-4014 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-20	2	Frame Screw
(MAK-2001)	1	Frame & Field Assy.
MAK-28	1	Terminal Post
MAK-29	4	Pole Piece
MAK-30	1	Insulation
MAK-44	2	Field Coil Connector
MAK-49	2	Insulating Washer
MAK-50	1	Plain Washer
MAK-51	1	Insulating Bushing
MAK-1007	1	Field Coil - U.R.
MAK-1008S	1	Field Coil & Brush Assy.- L.R.
MAK-12	1	Brush
MAK-1009S	1	Field Coil & Brush Assy.- L.L.
MAK-12	1	Brush
MAK-1010	1	Field Coil - U.L.
MZ-38	4	Pole Piece Screw
5X-146	1	1/4-20 Hex. Nut
X-199	1	1/4 Lock Washer
5X-146	1	1/4-20 Hex. Nut
8X-173	2	#10-32 Hex. Nut
X-196	2	#10 Lock Washer
X-199	1	1/4 Lock Washer
X-386	1	Ball Oiler - 1/4 Press in

Comm. End Plate Assembly & Parts Used With

MAK-2002	1	Comm. End Plate Assy.
MAK-16	2	Brush Holder
MAK-19	4	Brush Spring
MAK-40	1	Absorbent Bronze Brg.
MAK-59	1	Felt Pad
MAK-1034	2	Brush - Grounded
X-521	4	9/32 Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-54	1	Thrust Washer
MAK-55	1	Thrust Washer
MAK-2090	1	Armature Assembly

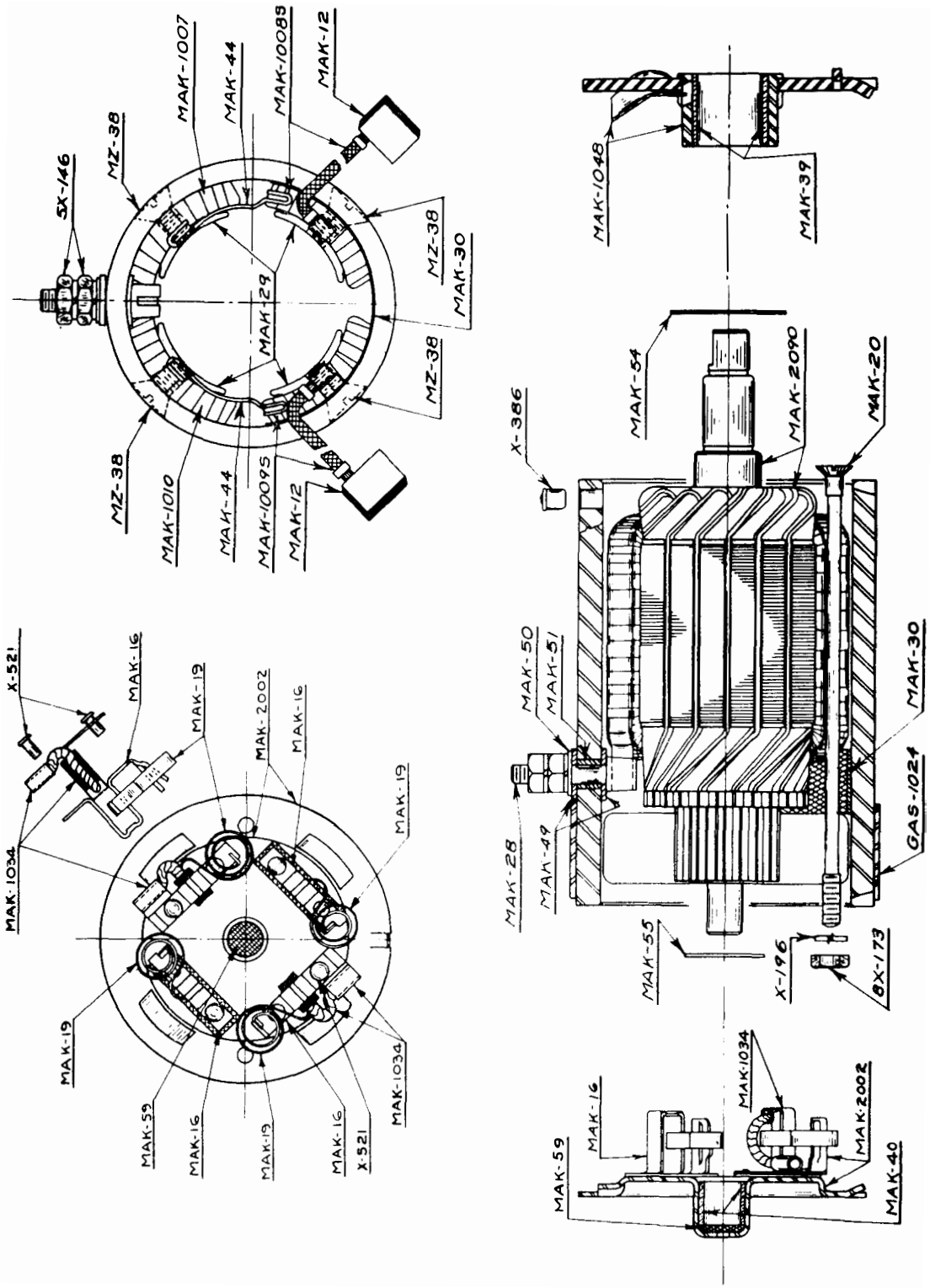
Miscellaneous Parts

GAS-1024	1	Head Band Assembly
MAK-1048	1	Drive End Head Assy.
MAK-39	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 1-7-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAK-4015 STARTING MOTOR ILLUSTRATION



MAK-4016 STARTING MOTOR PARTS LIST MAK-4016

Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-20	2	Frame Screw
(MAK-2001)	1	Frame & Field Assy.
MAK-28	1	Terminal Post
MAK-29	4	Pole Piece
MAK-30	1	Insulation
MAK-44	2	Field Coil Connector
MAK-49	2	Ins. Washer
MAK-50	1	Plain Washer
MAK-51	1	Ins. Bushing
MAK-1007	1	Field Coil - U.R.
MAK-1008S	1	Field Coil & Brush Assy.- L.R.
MAK-12	1	Brush
MAK-1009S	1	Field Coil & Brush Assy.- L.L.
MAK-12	1	Brush
MAK-1010	1	Field Coil - U.L.
MZ-38	4	Pole Piece Screw
5X-146	1	1/4-20 Hex. Nut
X-199	1	1/4 Lock Washer
5X-146	1	1/4-20 Hex. Nut
8X-173	2	#10-32 Hex. Nut
X-196	2	#10 Lock Washer
X-199	1	1/4 Lock Washer
X-386	1	Ball Oiler - 1/4 Press in

Comm. End Plate Assy. & Parts Used With

MAK-3002	1	Comm. End.Plate Assy.
MAK-16A	2	Brush Holder
MAK-19	4	Brush Spring
MAK-40	1	Absorbent Bronze Brg.
MAK-59	1	Felt Pad
MAK-1034	2	Brush - Grounded
X-521	4	9/32 Tubular Rivet
		1 2 3 4 5

Armature Assy. & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-54	1	Thrust Washer
MAK-55	1	Thrust Washer
MAK-2090	1	Armature Assembly

Drive End Head Assy. & Parts Used With

MAK-1048	1	Drive End Head Assy.
MAK-39	1	Absorbent Bronze Brg.

Miscellaneous Parts

GAS-1024	1	Head Band Assy.
X-714	1	#10-32x1 1/2 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 11-30-37)

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAK-4016 STARTING MOTOR ILLUSTRATION

Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MAK-79	2	Frame Screw
(MAK-2091)	1	Frame & Field Assy.
MAK-28	1	Terminal Post
MAK-29	4	Pole Piece
MAK-30	1	Insulation
MAK-44	2	Field Coil Connector
MAK-49	2	Ins. Washer
MAK-50	1	Plain Washer
MAK-51	1	Ins. Bushing
MAK-1007	1	Field Coil - U.R.
MAK-1008S	1	Field Coil & Brush Assy.- L.R.
MAK-12	1	Brush
MAK-1009S	1	Field Coil & Brush Assy.- L.L.
MAK-12	1	Brush
MAK-1010	1	Field Coil - U.L.
MZ-38	4	Pole Piece Screw
5X-146	1	1/4-20 Hex. Nut
X-199	1	1/4 Lock Washer
5X-146	1	1/4-20 Hex. Nut
X-196	2	#10 Lock Washer
X-199	1	1/4 Lock Washer

Comm. End Plate Assy. & Parts Used With

MAK-2002	1	Comm. End Plate Assy.
MAK-16	2	Brush Holder
MAK-19	4	Brush Spring
MAK-40	1	Absorbent Bronze Brg.
MAK-59	1	Felt Pad
MAK-1034	2	Brush - Grounded
X-521	4	9/32 Tubular Rivet

1 2 3 4 5

Armature Assy. & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MAK-54	1	Thrust Washer
MAK-55	1	Thrust Washer
MAK-2006	1	Armature Assembly

Miscellaneous Parts

EBA-13	1	Bendix Drive Assembly
GAS-1024	1	Head Band Assembly
PS-1137	1	Drive End Head Assy.
GBF-95	1	Dowel Pin
MAK-39	1	Absorbent Bronze Bearing
X-714	1	#10-32x1 1/2 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut

Switch Assy. & Parts Used With

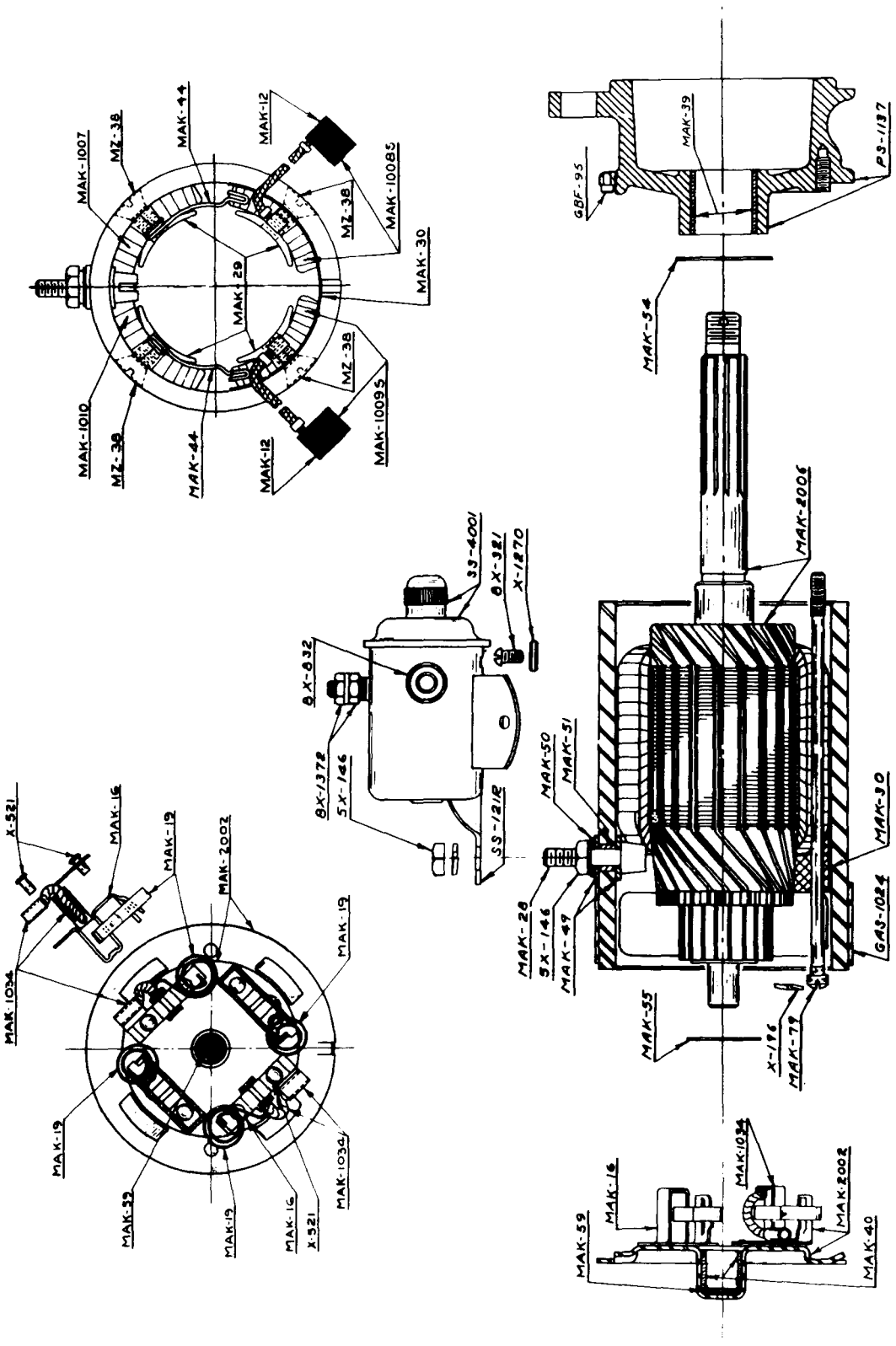
SS-121R	1	Connector
SS-4001	1	Solendid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

1 2 3 4 5

(Issued 11-30-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled a needed."

MAK-4017 STARTING MOTOR ILLUSTRATION



MAK-4018A STARTING MOTOR PARTS LIST

MAK-4018A
(Issued 10-3-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-20	2	Bolt, Thru
MAK-2001A	1	Frame & Field Assy.
MAK-12 †	2	Brush
MAK-28	1	Stud, Terminal
MAK-30	1	Insulation, Field Connection
MAK-49	2	Washer, Ins., Term. Stud
MAK-51	1	Bushing, Ins., Term. Stud
MAK-3005S	1	FIELD COIL PACKAGE
MAK-44	2	Connector, Field Coil
MAK-1007	1	Coil, Field, U. R.
MAK-1008	1	Coil, Field, L. R.
MAK-1009	1	Coil, Field, L. L.
MAK-1010	1	Coil, Field, U. L.
MZ-38A	4	Screw, Pole Shoe
SSA-43	2	Washer, Plain, Term. Stud
8X-146	2	Nut, Term. Stud, Hex. 1/4-20
12X-199	2	Lockwasher, Term. Stud, 1/4
8X-173	2	Nut, Thru Bolt, Hex. #10-32
12X-196	2	Lockwasher, Thru Bolt, #10

Comm. End Head Assembly & Parts Used With

MAK-3002	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S †	2	Brush, Grounded

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, D. E., 1/32" Thick
MAK-55	1	Washer, Thrust, C. E., 1/32" Thick
MAK-2074	1	ARMATURE
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
GAS-24F	1	Band, Cover
MAK-1048	1	Head Assy., Drive End
MAK-39	1	BEARING, ABSORBENT BRONZE
X-386	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAK-2012AS.

UNIT	APPLICATION
MAK-4018A	Chief Industries

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-79	2	Frame Screw
(MAK-2084)	1	Frame & Field Assembly
MAK-28	1	Terminal Post
MAK-29	4	Pole Piece
MAK-30	1	Insulation
MAK-44	2	Field Coil Connector
MAK-49	2	Insulating Washer
MAK-50	1	Plain Washer
MAK-51	1	Insulating Bushing
MAK-1007	1	Field Coil - U.R.
MAK-1008S	1	Field Coil & Brush Assy.- L.R.
MAK-12	1	BRUSH
MAK-1009S	1	Field Coil & Brush Assy.- L.L.
MAK-12	1	BRUSH
MAK-1010	1	Field Coil - U.L.
MZ-38A	4	Pole Piece Screw
5X-146	1	1/4-20 Hex. Nut
X-199	1	1/4 Lock Washer
5X-146	1	1/4-20 Hex. Nut
X-196	2	#10 Lock Washer
X-199	1	1/4 Lock Washer

Comm. End Plate Assy. & Parts Used With

MAK-3002	1	Comm. End Plate Assembly
MAK-16A	2	Brush Holder
MAK-19	4	Brush Spring
MAK-40	1	ABSORBENT BRONZE BRG.
MAK-59	1	Felt Pad
MAK-1034	2	BRUSH - Grounded
X-521	4	9/32 Tubular Rivet

Armature Assembly & Parts Used With

MAK-55	1	Thrust Washer
MAK-2088	1	ARMATURE ASSEMBLY
MU-54	1	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Miscellaneous Parts

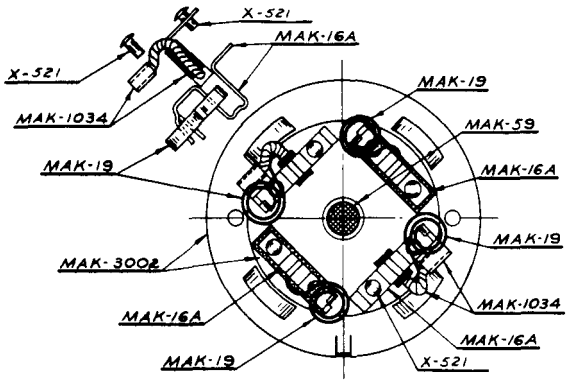
Part No.	No. Used	Name of Part
		1 2 3 4 5
EB-56	1	BENDIX DRIVE ASSEMBLY
EB-508	2	Lock Washer
EB-2303	1	Driving Head
EB-2319S	1	Compression Sleeve
EB-2405	1	DRIVE SPRING
EB-2406	1	Hd. Sp. Bolt or Screw
EB-2407	1	Shaft Spring Screw
EB-2622	2	Spring Support Clip
EB-5611	1	S-A Assembly
GAS-1024	1	Head Band Assembly
MAK-2092	1	INTERMEDIATE BEARING ASSY.
MZ-44A	1	Absorbent Bronze Brg.
PS-1153	1	Pinion Housing Assembly
GBF-95	1	Dowel Pin
MAB-88	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
X-714	1	#10-32x1 1/2 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

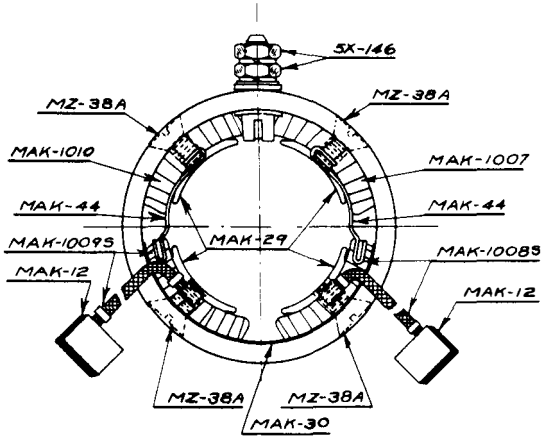
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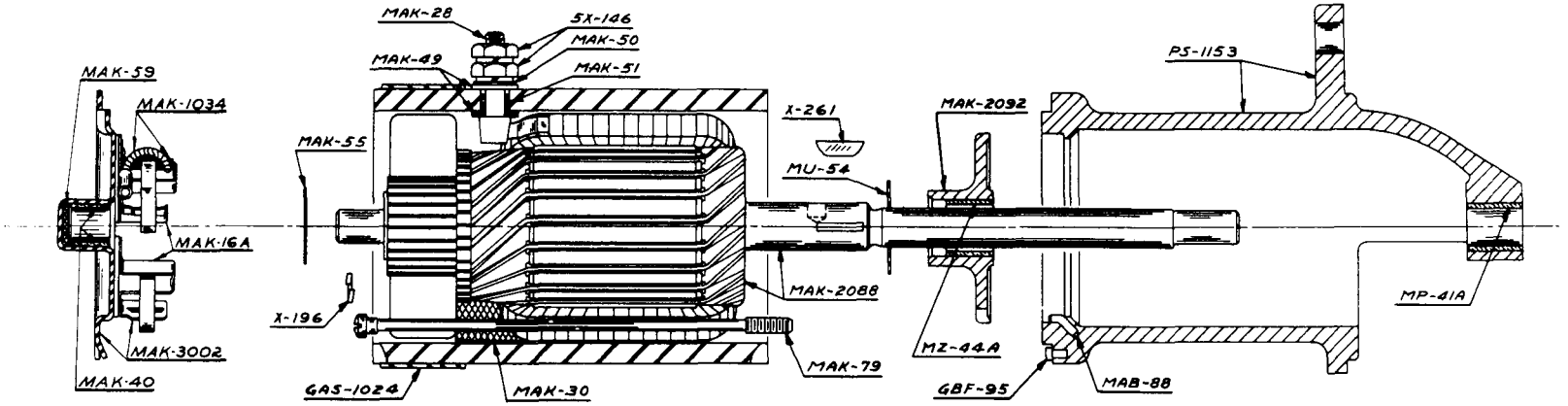
UNIT	APPLICATION
MAK-4020	Wisconsin Motor Co.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAK-4020 STARTING MOTOR ILLUSTRATION







Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-20	2	Frame Screw
(MAK-2093)	1	Frame & Field Assembly
MAK-28	1	Terminal Post
MAK-29	4	Pole Piece
MAK-30	1	Insulation
MAK-44	2	Field Coil Connector
MAK-49	2	Insulating Washer
MAK-50	1	Plain Washer
MAK-51	1	Insulating Bushing
MAK-1007	1	Field Coil - U.R.
MAK-1008S	1	Field Coil & Brush Assy.- L.R.
MAK-12	1	BRUSH
MAK-1009S	1	Field Coil & Brush Assy.- L.L.
MAK-12	1	BRUSH
MAK-1010	1	Field Coil - U.L.
MZ-38	4	Pole Piece Screw
5X-146	1	1/4-20 Hex. Nut
X-199	1	1/4 Lock Washer
5X-146	1	1/4-20 Hex. Nut
8X-173	2	#10-32 Hex. Nut
X-196	2	#10 Lock Washer
X-199	1	1/4 Lock Washer

Comm. End Plate Assy. & Parts Used With

MAK-2002	1	Comm. End Plate Assembly
MAK-16	2	Brush Holder
MAK-19	4	Brush Spring
MAK-40	1	Absorbent Bronze Brg.
MAK-59	1	Felt Pad
MAK-1034	2	BRUSH - Grounded
X-521	4	9/32 Tubular Rivet

Armature Assembly & Parts Used With

MAK-54	1	Thrust Washer
MAK-55	1	Thrust Washer
MAK-2006	1	ARMATURE ASSEMBLY
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-159L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

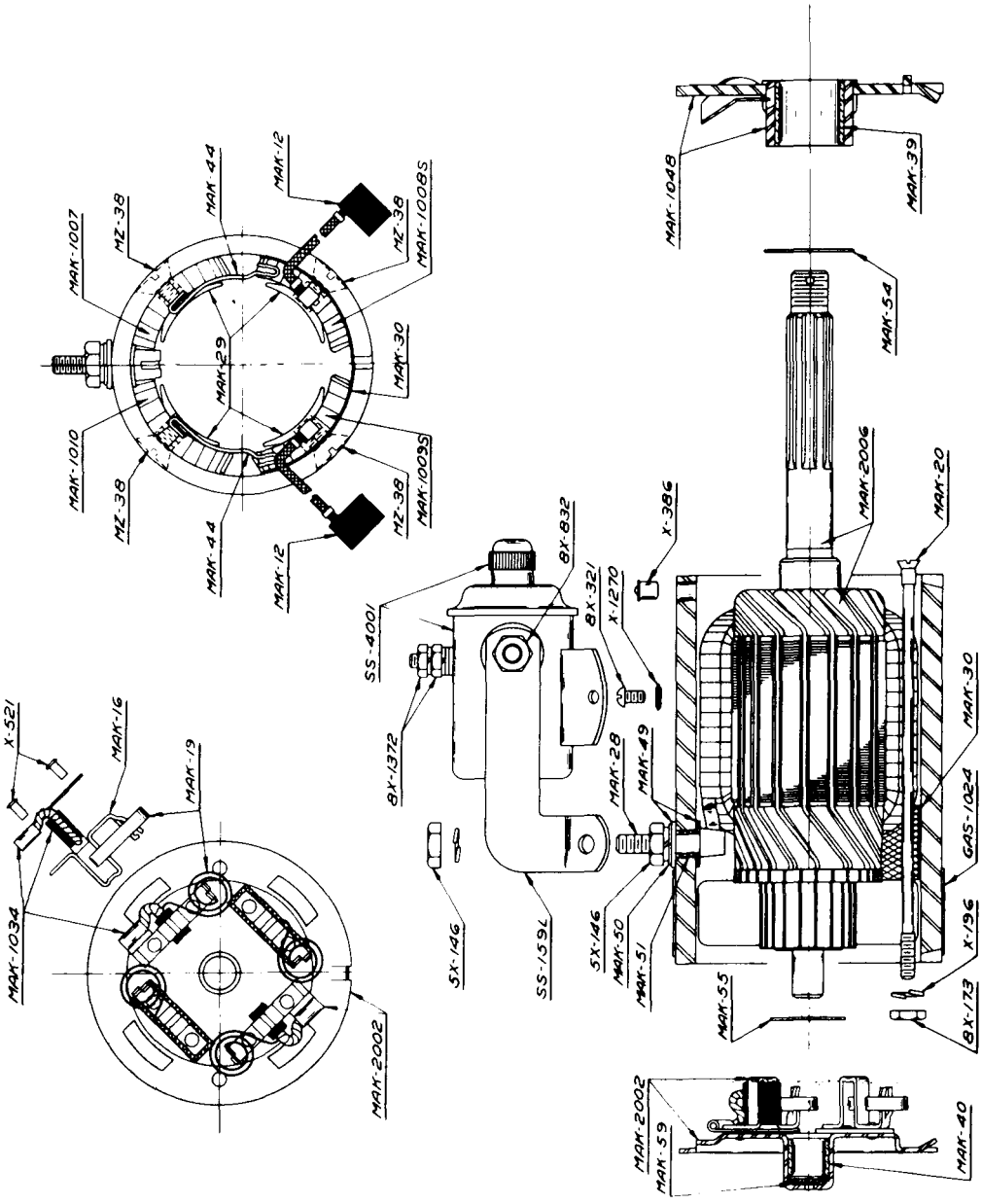
EB-79	1	BENDIX DRIVE ASSEMBLY
EB-6505	1	DRIVE SPRING
EB-6813	1	Anti-Drift Spring
EB-6823	2	Thrust Washer
EB-6824	1	Drive Spring Support
EB-6825	1	Meshing Spring
EB-6826	1	Anti-Drift Spr. Sleeve
EB-6827	1	Pinion Washer
EB-6828	1	Castellated Nut
EB-7901	1	Shaft
EB-7902	1	Drive Stop
EB-8104S	1	Pinion
GAS-1024	1	Head Band Assembly
MAK-1048	1	Drive End Head Assembly
MAK-39	1	ABSORBENT BRONZE BRG.
X-386	1	Ball Oiler - 1/4 Press In
X-714	1	#10-32x1 1/2 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 4-3-40)

UNIT	APPLICATION
MAK-4021	S. H. Arnolt

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAK-4021 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAK-4022 STARTING MOTOR PARTS LIST

MAK-4022
(Issued 2-4-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-79	2	Bolt, Thru
MAK-2084	1	Frame & Field Assy.
MAK-12†	2	Brush
MAK-28	1	Stud, Terminal
MAK-30	1	Insulation, Field Connection
MAK-49	2	Washer, Ins., Term. Stud
MAK-51	1	Bushing, Ins., Term. Stud
MAK-3005S	1	FIELD COIL PACKAGE
MAK-44	2	Connector, Field Coil
MAK-1007	1	Coil, Field, U. R.
MAK-1008	1	Coil, Field, L. R.
MAK-1009	1	Coil, Field, L. L.
MAK-1010	1	Coil, Field, U. L.
MZ-38A	4	Screw, Pole Shoe
SSA-43	2	Plain Washer. Term. Stud
8X-146	2	Nut, Term. Stud, Hex. 1/4-20
12X-199	2	Lockwasher, Term. Stud, 1/4
12X-196	2	Lockwasher, Thru Bolt, #10

Comm. End Head Assembly & Parts Used With

MAK-3002	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAK-55	1	Washer, Thrust, C. E., 1/32'' Thick
MAK-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32'' Thick
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-36A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8506A	1	Screw, Spring, Head
EB-8507A	1	Screw, Spring, Shaft
EB-8734A	1	Ring, Take-Up
EBA-405A	1	SPRING, DRIVE
EBA-3611A	1	Shaft & Pinion
GAS-1024F	1	Band, Cover
MAK-2092	1	BEARING ASSY., INTERMEDIATE
MZ-44A	1	Bearing, Abs. Bronze
PS-1153A	1	Housing Assy., Pinion
GBF-95	1	Pin, Dowel
MAB-88	1	Pin, Dowel
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAK-2012AS.

UNIT	APPLICATION
MAK-4022	Wisconsin

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

PRELIMINARY

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-20	2	Frame Screw
(MAK-2001)	1	Frame & Field Assy.
MAK-28	1	Terminal Post
MAK-29	4	Pole Piece
MAK-30	1	Insulation
MAK-44	2	Field Coil Connector
MAK-49	2	Insulating Washer
MAK-50	1	Plain Washer
MAK-51	1	Insulating Bushing
MAK-1007	1	Field Coil - U.R.
MAK-1008S	1	Field Coil & Brush Assy. - L.R.
MAK-12	1	BRUSH
MAK-1009S	1	Field Coil & Brush Assy. - L.L.
MAK-12	1	BRUSH
MAK-1010	1	Field Coil - U.L.
MZ-38	4	Pole Piece Screw
5X-146	1	1/4-20 Hex. Nut
X-199	1	1/4 Lock Washer
5X-146	1	1/4-20 Hex. Nut
8X-173	2	#10-32 Hex. Nut
X-196	2	#10 Lock Washer
X-199	1	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAK-2002	1	Comm. End Plate Assy.
MAK-16	2	Brush Holder
MAK-19	4	Brush Spring
MAK-59	1	Felt Pad
MAK-1034	2	BRUSH - GROUNDED
X-521	4	9/32 Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-54	1	Thrust Washer
MAK-55	1	Thrust Washer
MAK-2006	1	ARMATURE ASSEMBLY
		Miscellaneous Parts
EB-79	1	BENDIX DRIVE ASSY.
EB-6505	1	DRIVE SPRING
EB-6813	1	Anti-Drift Spring
EB-6823	2	Thrust Washer
EB-6824	1	Drive Spring Support
EB-6825	1	Meshing Spring
EB-6826	1	Anti-Drift Sp. Sleeve
EB-6827	1	Pinion Washer
EB-6828	1	Castellated Nut
EB-7901	1	Shaft
EB-7902	1	Drive Stop
EB-8104S	1	Pinion
GAS-1024	1	Head Band Assy.
MAK-1048	1	Drive End Head Assy.
MAK-39	1	ABSORBENT BRONZE BRG.
X-386	1	Ball Oiler - 1/4 Press in
X-714	1	#10-32x1 1/2 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-16-41)

UNIT	APPLICATION
MAK-4023	Stover Mfg., Universal

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAK-4026 STARTING MOTOR PARTS LIST

MAK-4026

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
MAK-20	2	Bolt, Thru
(MAK-2097)	1	Frame & Field Assy.
MAK-12 †	2	Brush
MAK-28	1	Stud, Terminal
MAK-30	1	Insulation, Field Connection
MAK-49	2	Washer, Insulating
MAK-51	1	Bushing, Ins., Term. Stud
MAK-3005S	1	Field Coil Package
MAK-44	2	Connector, Field Coil
MAK-1007	1	Coil, Field, U.R.
MAK-1008	1	Coil, Field, L.R.
MAK-1009	1	Coil, Field, L.L.
MAK-1010	1	Coil, Field, U.L.
MZ-38A	4	Screw, Pole Shoe
SSA-42	2	Washer Plain Term. Stud
8X-146	2	Nut, Term. Stud, Hex. 1/4-20
12X-199	2	Lockwasher, Term. Stud, 1/4
8X-173	2	Nut, Thru Bolt, Hex. #10-32
12X-196	2	Lockwasher, Thru Bolt, #10

Comm. End Head Assembly & Parts Used

MAK-2002	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, Arm. Shaft, D.E.
MAK-55	1	Washer, Thrust, Arm. Shaft, C.E.
MAK-2006	1	Armature

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-228	1	Connector
SS-4001	1	Solenoid Starting Switch
8X-173	1	Nut, Hex., #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EB-79	1	Bendix Drive Assembly
EB-6505	1	Spring, Drive
EB-6813	1	Spring, Anti-Drift
EB-6823	2	Washer, Thrust
EB-6824	1	Support, Drive Spring
EB-6825	1	Spring, Meshing
EB-6826	1	Sleeve, Anti-Drift Spring
EB-6827	1	Washer, Pinion
EB-6828	1	Nut
EB-7901	1	Shaft
EB-7902	1	Drive Stop
EB-8104S	1	Pinion
GAS-24F	1	Band, Cover
MAK-1048	1	Head Assy., Drive End
MAK-39	1	Bearing, Absorbent Bronze
X-386	1	Oiler, Ball, Press in, 1/4
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAK-2012AS.

UNIT	APPLICATION
MAK-4026	Universal

(Issued 7-14-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-20	2	Bolt, Thru
MAK-2001A	1	Frame & Field Assembly
MAK-12†	2	Brush
MAK-28	1	Stud, Terminal
MAK-30	1	Insulation, Field Connection
MAK-49	2	Washer, Ins., Term. Stud
MAK-51	1	Bushing, Ins., Term. Stud
MAK-3005S	1	FIELD COIL PACKAGE
MAK-44	2	Connector, Field Coil
MAK-1007	1	Coil, Field, U.R.
MAK-1008	1	Coil, Field, L.R.
MAK-1009	1	Coil, Field, L.L.
MAK-1010	1	Coil, Field, U.L.
MZ-38A	4	Screw, Pole Shoe
SSA-43	2	Washer, Plain, Term. Stud
8X-146	2	Nut, Term. Stud, Hex. 1/4-20
12X-199	2	Lockwasher, Term. Stud, 1/4
8X-173	2	Nut, Thru Bolt, Hex. #10-32
12X-196	2	Lockwasher, Thru Bolt, #10

Comm. End Head Assembly & Parts Used With

MAK-2002A	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, D.E.
MAK-55	1	Washer, Thrust, C.E.
MAK-2074	1	ARMATURE
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
**	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7809S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8734	1	Ring, Take-Up
EBA-405	1	SPRING, DRIVE
EBA-9711	1	Shaft & Pinion
GAS-24F	1	Band, Cover
MAK-1048	1	Head Assy., Drive End
MAK-39	1	BEARING, ABS. BRONZE
X-386	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAK-2012AS.

** See table following parts list for part number applying to assembly wanted.

Assembly No.	Bendix Drive Assy.
MAK-4027	EBA-97
MAK-4027A	None

UNIT	APPLICATION
MAK-4027	Crosley
MAK-4027A	Chief Industries

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-79	2	Bolt, Thru
(MAK-2098)	1	Frame & Field Assy.
MAK-12 †	2	Brush
MAK-28	1	Stud, Terminal
MAK-30	1	Insulation, Field Connection
MAK-49	2	Washer, Ins., Term. Stud
MAK-51	1	Bushing, Ins., Term. Stud
MAK-3005S	1	FIELD COIL PACKAGE
MAK-44	2	Connector, Field Coil
MAK-1007	1	Coil, Field, U.R.
MAK-1008	1	Coil, Field, L.R.
MAK-1009	1	Coil, Field, L.L.
MAK-1010	1	Coil, Field, U.L.
MZ-38A	4	Screw, Pole Shoe
SSA-43	2	Washer, Plain, Term. Stud
8X-146	2	Nut, Term. Stud, Hex. 1/4-20
12X-199	2	Lockwasher, Term. Stud, 1/4
12X-196	2	Lockwasher, Thru Bolt, #10

Comm. End Head Assembly & Parts Used With

MAK-3002	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S	†2	Brush, Grounded

Armature Assembly & Parts Used With

MAK-55	*	Washer, Arm. Thrust, C.E., 1/32" Thick
MAK-55A	*	Washer, Arm. Thrust, C.E., .015" Thick
MAK-55B	*	Washer, Arm. Thrust, C.E., .045" Thick
MAK-2099	1	ARMATURE
MU-54	*	Washer, Arm. Thrust, Intermediate, 1/32" Thick
MU-54A	*	Washer, Arm. Thrust, Intermediate, 1/64" Thick
MU-54B	*	Washer, Arm. Thrust, Intermediate, 3/64" Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-80B	1	BENDIX DRIVE ASSY.
EBA-4431A	1	Screw Shaft
EBA-4805	1	Spring, Drive
EBA-4807	2	Plate, Spring Anchor
EBA-4808	1	Ring, Lock
EBA-4813	1	Spring, Anti-Drift
EBA-4825	1	Spring, Meshing
EBA-4833	1	Ring, Retaining
EBA-7906	1	Pin, Locating
EBA-8032A	1	Pinion
GAS-24F	1	Band, Cover
MAK-2092	1	Bearing Assy., Intermediate
MZ-44A	1	BEARING, ABSORBENT BRONZE
PS-1271S	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAK-2012AS.

* Use As Required.

UNIT	APPLICATION
MAK-4028	Wisconsin

Printed in U. S. A.

(Issued 6-15-48) File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
MAK-79	2	Bolt, Thru
(MAK-2091)	1	Frame & Field Assy.
MAK-12 †	2	Brush
MAK-28	1	Stud, Terminal
MAK-30	1	Insulation, Field, Connection
MAK-49	2	Washer, Ins.
MAK-51	1	Bushing, Ins., Term. Stud
MAK-3005S	1	Field Coil Package
MAK-44	2	Connector, Field Coil
MAK-1007	1	Coil, Field, U.R.
MAK-1008	1	Coil, Field, L.R.
MAK-1009	1	Coil, Field, L.L.
MAK-1010	1	Coil, Field, U.L.
MZ-38	4	Screw, Pole Shoe
SSA-43	2	Washer, Plain, Term. Stud
8X-146	2	Nut, Term. Stud, Hex., 1/4-20
12X-199	2	Lockwasher, Term. Stud, 1/4
12X-196	2	Lockwasher, Thru Bolt, #10

Comm. End Head Assembly & Parts Used

MAK-3002	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, Arm. Shaft, D.E.
MAK-55	1	Washer, Thrust, Arm. Shaft, C.E.
MAK-2006	1	Armature

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-121R	1	Connector
SS-4001	1	Solenoid Starting Switch
8X-173	1	Nut, Hex., #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-10	1	Bendix Drive Assy.
EB-6504S	1	Pinion
EB-6505	1	Spring, Drive
EB-6513	1	Spring, Anti-Drift
EB-6823	2	Washer, Thrust
EB-6824	1	Support Drive Spring
EB-6825	1	Spring, Meshing
EB-6826	1	Sleeve, Anti-Drift
EB-6827	1	Pinion Washer
EB-6828	1	Castellated Nut
EB-7101	1	Shaft
EB-7902	1	Drive Stop
GAS-24F	1	Band, Cover
PS-1137A	1	Head Assy., Drive End
GBF-95	1	Pin, Dowel
MAK-39	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32

† Brush Set, Service MAK-2012AS.

UNIT	APPLICATION
MAK-4029	Towmotor

(Issued 7-14-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-20A	2	Bolt, Thru
(MAK-2001B)	1	Frame & Field Assy.
MAK-12 †	2	Brush
MAK-28	1	Stud, Terminal
MAK-30	1	Insulation, Field Conn.
MAK-49	1	Washer, Ins., Term. Stud, Inner
MAK-49A	1	Washer, Ins., Term. Stud, Outer
MAK-51	1	Bushing, Ins., Term. Stud
MAK-3005S	1	Field Coil Package
MAK-44	2	Connector, Field Coil
MAK-1007	1	Coil, Field, U.R.
MAK-1008	1	Coil, Field, L.R.
MAK-1009	1	Coil, Field, L.L.
MAK-1010	1	Coil, Field, U.L.
MZ-38A	4	Screw, Pole Shoe
SSA-43	2	Washer, Plain, Term. Stud
8X-146	2	Nut, Term. Stud, Hex. 1/4-20
12X-199	2	Lockwasher, Term. Stud, 1/4
8X-173	2	Nut, Thru Bolt, Hex. #10-32
12X-196	2	Lockwasher, Thru Bolt, #10

Comm. End Head Assembly & Parts Used With

MAK-2002A	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, Arm. Shaft, D.E.
MAK-55	1	Washer, Thrust, Arm. Shaft, C.E.
MAK-2006	1	Armature

Miscellaneous Parts

Part No.	No. Used	Name of Part
EB-79	1	Bendix Drive Assy.
EB-6505	1	Spring, Drive
EB-6813	1	Spring, Anti-Drift
EB-6823	2	Washer, Thrust
EB-6824	1	Support, Drive Spring
EB-6825	1	Spring, Meshing
EB-6826	1	Sleeve, Anti-Drift Spring
EB-6827	1	Washer, Pinion
EB-6828	1	Nut
EB-7901	1	Shaft
EB-7902	1	Drive Stop
EB-8104S	1	Pinion
GAS-1024K	1	Band, Cover
MAK-1048A	1	Head Assy., Drive End
GBF-95	1	Pin, Dowel
MAK-39	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAK-2012AS.

UNIT	APPLICATION
MAK-4030	Waukesha

(Issued 7-14-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-20A	1	Bolt, Thru
(MAK-2100)	1	Frame & Field Assy.
MAK-12 †	2	Brush
MAK-28	1	Stud, Terminal
MAK-30	1	Insulation, Field Connection
MAK-49	2	Washer, Ins., Term. Stud
MAK-51	1	Bushing, Ins., Term. Stud
MAK-3005S	1	FIELD COIL PACKAGE
MAK-44	2	Connector, Field Coil
MAK-1007	1	Coil, Field, U.R.
MAK-1008	1	Coil, Field, L.R.
MAK-1009	1	Coil, Field, L.L.
MAK-1010	1	Coil, Field, U.L.
MZ-38A	4	Screw, Pole Shoe
SSA-43	2	Washer, Plain, Term. Stud
8X-146	2	Nut, Term. Stud, Hex. 1/4-20
12X-199	2	Lockwasher, Term. Stud, 1/4
8X-173	2	Nut, Thru Bolt, Hex. #10-32
12X-196	2	Lockwasher, Thru Bolt, #10

Comm. End Head Assembly & Parts Used With

MAK-3002B	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S †	2	Brush, Grounded

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, Arm. Shaft, D.E.
MAK-55	1	Washer, Arm. Thrust, C.E., 1/32" Thick
MAK-2006	1	ARMATURE

Switch Assembly & Parts Used With

SS-104R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-10	1	BENDIX DRIVE ASSY.
EB-6504S	1	Pinion
EB-6505	1	SPRING, DRIVE
EB-6513	1	Spring, Anti-Drift
EB-6823	2	Washer, Thrust
EB-6824	1	Support, Drive Spring
EB-6825	1	Spring, Meshing
EB-6826	1	Anti-Drift Sp. Sleeve
EB-6827	1	Pinion Washer
EB-6828	1	Castellated Nut
EB-7101	1	Shaft
EB-7902	1	Drive Stop
GAS-24F	1	Band, Cover
MAK-1101	1	Head Assy., Drive End
MAK-39	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAK-2012AS.

UNIT	APPLICATION
MAK-4031	Kermath

(Issued 8-25-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAK-4032 STARTING MOTOR PARTS LIST

MAK-4032
(Issued 4-2-53)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-73A	2	Bolt, Thru
MAK-2102	1	Frame & Field Assy.
MAK-12 †	2	Brush
MAK-28	1	Stud, Terminal
MAK-30	1	Insulation, Field Connection
MAK-49	2	Washer, Ins., Term. Stud
MAK-51	1	Bushing, Ins., Term. Stud
MAK-3005S	1	FIELD COIL PACKAGE
MAK-44	2	Connector, Field Coil
MAK-1007	1	Coil, Field, U.R.
MAK-1008	1	Coil, Field, L.R.
MAK-1009	1	Coil, Field, L.L.
MAK-1010	1	Coil, Field, U.L.
MZ-38A	4	Screw, Pole Shoe
SSA-43	2	Washer, Plain, Term. Stud
8X-146	2	Nut, Term. Stud, Hex. 1/4-20
12X-199	2	Lockwasher, Term. Stud, 1/4
8X-173	2	Nut, Thru Bolt, Hex. #10-32
12X-196	2	Lockwasher, Thru Bolt, #10

Comm. End Head Assembly & Parts Used With

MAK-2002A	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, Arm. Shaft, D.E., 1/32" Thick
MAK-55	1	Washer, Thrust, C.E., 1/32" Thick
MAK-2103	1	ARMATURE
X-260	1	Key, Woodruff, D.E., #5

Miscellaneous Parts

Part No.	No. Used	Name of Part
GAS-24F	1	Band, Cover
MAK-1101	1	Head Assy., Drive End
MAK-39	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAK-2012AS.

UNIT	APPLICATION
MAK-4032	Lausen Marine

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

MAK-4033M STARTING MOTOR PARTS LIST

MAK-4033M
(Issued 2-24-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-105	2	Bolt, Thru
MAK-2084A	1	Frame & Field Assembly
MAK-12B†	2	Brush
MAK-28A	1	Stud, Terminal
MAK-30	1	Insulation, Field Connection
MAK-44	2	Connector, Field Coil
MAK-49	2	Washer, Ins., Term.Stud
MAK-51A	1	Bushing, Ins., Term. Stud
MAK-1007B	1	COIL, FIELD, U.R.
MAK-1008A	1	COIL, FIELD, L.R.
MAK-1009A	1	COIL, FIELD, L.L.
MAK-1010B	1	COIL, FIELD, U.L.
MZ-38C	4	Screw, Pole Shoe
SSA-43A	2	Washer, Plain Term. Stud
X-146A	2	Nut, Term. Stud, Hex. 1/4-20
12X-199	2	Lockwasher, Term. Stud, 1/4
X-163	2	Nut, Thru Bolt, Hex. 1/4-20
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAK-3002D	1	Head Assy., Comm. End
MAK-19B	4	Spring, Brush
MAK-59	1	Felt
MAK-1034BS†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, Intermediate
MAK-55	1	Washer, Thrust, C.E.
MAK-2104	1	ARMATURE

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-35A	1	BENDIX DRIVE ASSEMBLY
EB-6505A	1	SPRING, DRIVE
EB-6823A	2	Washer, Thrust
EB-6824A	1	Support, Drive Spring
EB-6826A	1	Sleeve, Anti-Drift Spring
EB-6827A	1	Washer, Pinion
EB-6828A	1	Nut, Hex., Castellated
EB-7902A	1	Stop, Drive
EBB-3501A	1	Screw Shaft
EBB-3504SA	1	Pinion
EBB-3513A	1	Spring, Anti-Drift
EBB-3525A	1	Spring, Meshing
19X-404	1	Pin, Cotter
GAS-1024L	1	Band, Cover
MAK-1047	1	Head Assy., Drive End
MAK-39	1	BEARING, ABS. BRONZE
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2
X-2875	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAK-2012CS.

UNIT	APPLICATION
MAK-4033M	Evinrude (Marine), Johnson (Marine)

Printed in U.S.A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAK-4034 STARTING MOTOR PARTS LIST

MAK-4034
(Issued 4-19-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-73A	2	Bolt, Thru
MAK-2001A	1	Frame & Field Assembly
MAK-12†	2	Brush
MAK-28	1	Stud, Terminal
MAK-30	1	Insulation, Field Connection
MAK-49	2	Washer, Ins., Term. Stud
MAK-51	1	Bushing, Ins., Term. Stud
MAK-3005S	1	FIELD COIL PACKAGE
MAK-44	2	Connector, Field Coil
MAK-1007	1	Coil, Field, U.R.
MAK-1008	1	Coil, Field, L.R.
MAK-1009	1	Coil, Field, L.L.
MAK-1010	1	Coil, Field, U.L.
MZ-38A	4	Screw, Pole Shoe
SSA-43	2	Washer, Plain, Term. Stud
8X-146	2	Nut, Term. Stud, Hex. 1/4-20
12X-199	2	Lockwasher, Term. Stud, 1/4
8X-173	2	Nut, Thru Bolt, Hex. #10-32
12X-196	2	Lockwasher, Thru Bolt, #10

Comm. End Head Assembly & Parts Used With

MAK-3002	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-54	1	Washer, Thrust, D.E., 1/32" Thick
MAK-55	1	Washer, Thrust, C.E., 1/32" Thick
MAK-2074	1	ARMATURE
X-260	1	Key, Woodruff, D.E., #5

Miscellaneous Parts

EBA-14	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
X-8503	1	Head, Drive
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
EBA-1405	1	SPRING, DRIVE
GAS-24F	1	Band, Cover
MAK-1048D	1	Head Assy., Drive End
MAK-39	1	BEARING, ABS. BRONZE
X-386	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAK-2012AS.

UNIT	APPLICATION
MAK-4034	Kohler Engine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAK-4035 STARTING MOTOR PARTS LIST

MAK-4035
(Issued 10-3-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-20	2	Bolt, Thru
MAK-2001A	1	Frame & Field Assy.
MAK-12 †	2	Brush
MAK-28	1	Stud, Terminal
MAK-30	1	Insulation, Field Connection
MAK-49	2	Washer, Ins., Term. Stud
MAK-51	1	Bushing, Ins., Term. Stud
MAK-3005S	1	FIELD COIL PACKAGE
MAK-44	2	Connector, Field Coil
MAK-1007	1	Coil, Field, U. R.
MAK-1008	1	Coil, Field, L. R.
MAK-1009	1	Coil, Field, L. L.
MAK-1010	1	Coil, Field, U. L.
MZ-38A	4	Screw, Pole Shoe
SSA-43	2	Washer, Plain, Term. Stud
8X-146	2	Nut, Term. Stud, Hex. 1/4-20
12X-199	2	Lockwasher, Term. Stud, 1/4
8X-173	2	Nut, Thru Bolt, Hex. #10-32
12X-196	2	Lockwasher, Thru Bolt, #10

Comm. End Head Assembly & Parts Used With

MAK-2002A	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S †	2	Brush, Grounded

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-54	1	Washer, Thrust, D. E., 1/32" Thick
MAK-55	1	Washer, Thrust, C. E., 1/32" Thick
MAK-2107	1	ARMATURE

Miscellaneous Parts

GAS-24F	1	Band, Cover
MAK-1048	1	Head Assy., Drive End
MAK-39	1	BEARING, ABSORBENT BRONZE
X-386	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAK-2012AS.

UNIT	APPLICATION
MAK-4035	Chief Industries

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MA0-4003B STARTING MOTOR PARTS LIST MA0-4003B

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MA0-20A	2	Frame Screw
(MA0-2001A)	1	Frame & Field Assembly
MA0-28A	1	Terminal Post
MA0-29	4	Pole Piece
MA0-1007	1	Field Coil - U.L.
MA0-1008	1	Field Coil - L.R.
MA0-1009	1	Field Coil - L.L.
MA0-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
SA-22	1	Ins. Washer
SA-23	1	Ins. Washer
SA-24	1	Ins. Bushing
SA-34B	2	3/8-16 Hex. Nut
SA-48B	1	3/8 Washer
SB-8B	8	Pole Piece Screw
SC-9	1	Field to Br. Connector - Short
SC-26	2	Field Coil Connector
SC-40	1	Field to Br. Connector
SC-112	2	Field Connector Ins.
SC-113	1	Field Connector Ins.
X-201	2	3/8 Lock Washer
8X-159	2	3/8-24 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

(MA0-2002A)	1	Comm. End Head Assembly
MA0-12	4	Brush
SA-38B	2	Brush Holder Plate Screw
SB-19	1	Flat Oil Guard
SB-32B	1	Bearing Cover
SC-1011	1	Brush Holder Plate Assy.
DA-36	4	Brush Holder
DA-48	4	Brush Spring
SA-12	2	Brush Holder Ins.
2X-56	8	#8-32x7/16 Rd. Hd. Sc.
X-195	8	#8 Lock Washer
2X-350	4	#8 Plain Washer
SC-1028	1	Comm. End Head Part Assy.
SB-27	1	Bronze Bearing
X-196	4	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
X-489	1	1/4 Oiler - Press in Type
SA-30B	1	Wick Retaining Screw - 5/16-18x9/32
SA-1029	1	Wick & Spring
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw 1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MA0-45	1	Thrust Washer
MA0-49	1	Spring Retainer
MA0-50	1	Spring Retainer
MA0-51	1	Brake Washer
MA0-52	1	Brake Spring
MA0-2006	1	Armature Assembly
SB-18A	1	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-104L	1	Connector
SS-4004	1	Solenoid Starting Switch
X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
X-196	1	#10 Lock Washer
X-199	2	1/4 Lock Washer
8X-836	2	5/16-24 Hex. Nut
8X-909	2	1/4-28x7/16 Fill. Hd. Screw
X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut

Miscellaneous Parts

EB-88	1	Bendix Drive Assembly
GBC-2024A	1	Head Band Assembly
ML-2027B	1	Intermediate Brg. Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1068A	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
SA-31	1	Felt Wick
8X-120	1	#10-32x5/8 Fill. Hd. Screw
X-489	1	1/4 Oiler - Press in Type 1 2 3 4 5

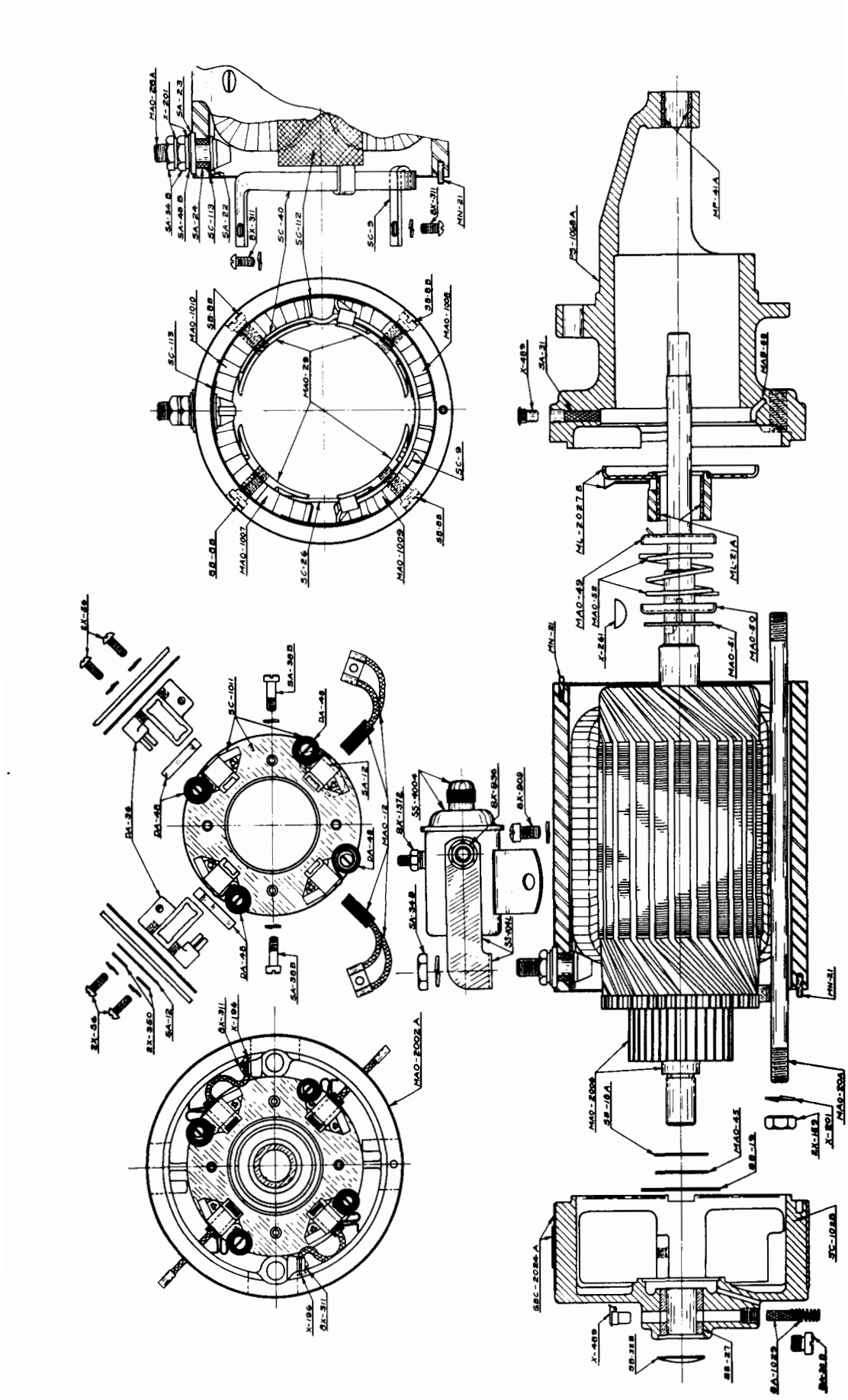
(Issued 1-30-35)
(R-12-10-36)

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File in Eq ipment & P rts Lists Binder

"NOTE: Where part numbers are shown in parenthesis they re for reference only. By stocking sub-parts the complete part can be assemble as needed."

MAO-4003B STARTING MOTOR ILLUSTRATION



MA0-4003B STARTING MOTOR PARTS LIST MA0-4003B

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MA0-20A	2	Frame Screw
(MA0-2001A)	1	Frame & Field Assembly
MA0-28A	1	Terminal Post
MA0-29	4	Pole Piece
MA0-1007	1	Field Coil - U.L.
MA0-1008	1	Field Coil - L.R.
MA0-1009	1	Field Coil - L.L.
MA0-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
SA-22	1	Ins. Washer
SA-23	1	Ins. Washer
SA-24	1	Ins. Bushing
SA-34B	2	3/8-16 Hex. Nut
SA-48B	1	3/8 Washer
SB-8B	8	Pole Piece Screw
SC-9	1	Field to Br. Connector - Short
SC-26	2	Field Coil Connector
SC-40	1	Field to Br. Connector
SC-112	2	Field Connector Ins.
SC-113	1	Field Connector Ins.
X-201	2	3/8 Lock Washer
8X-159	2	3/8-24 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

(MA0-2002A)	1	Comm. End Head Assembly
MA0-12	4	Brush
SA-38B	2	Brush Holder Plate Screw
SB-19	1	Flat Oil Guard
SB-32B	1	Bearing Cover
SC-1011	1	Brush Holder Plate Assy.
DA-36	4	Brush Holder
DA-48	4	Brush Spring
SA-12	2	Brush Holder Ins.
2X-56	8	#8-32x7/16 Rd. Hd. Sc.
X-195	8	#8 Lock Washer
2X-350	4	#8 Plain Washer
SC-1028	1	Comm. End Head Part Assy.
SB-27	1	Bronze Bearing
X-196	4	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
X-489	1	1/4 Oiler - Press in Type
SA-30B	1	Wick Retaining Screw - 5/16-18x9/32
SA-1029	1	Wick & Spring
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw

1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MA0-45	1	Thrust Washer
MA0-49	1	Spring Retainer
MA0-50	1	Spring Retainer
MA0-51	1	Brake Washer
MA0-52	1	Brake Spring
MA0-2006	1	Armature Assembly
SB-18A	1	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-104L	1	Connector
SS-4004	1	Solenoid Starting Switch
X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
X-196	1	#10 Lock Washer
X-199	2	1/4 Lock Washer
8X-836	2	5/16-24 Hex. Nut
8X-909	2	1/4-28x7/16 Fill. Hd. Screw
X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut

Miscellaneous Parts

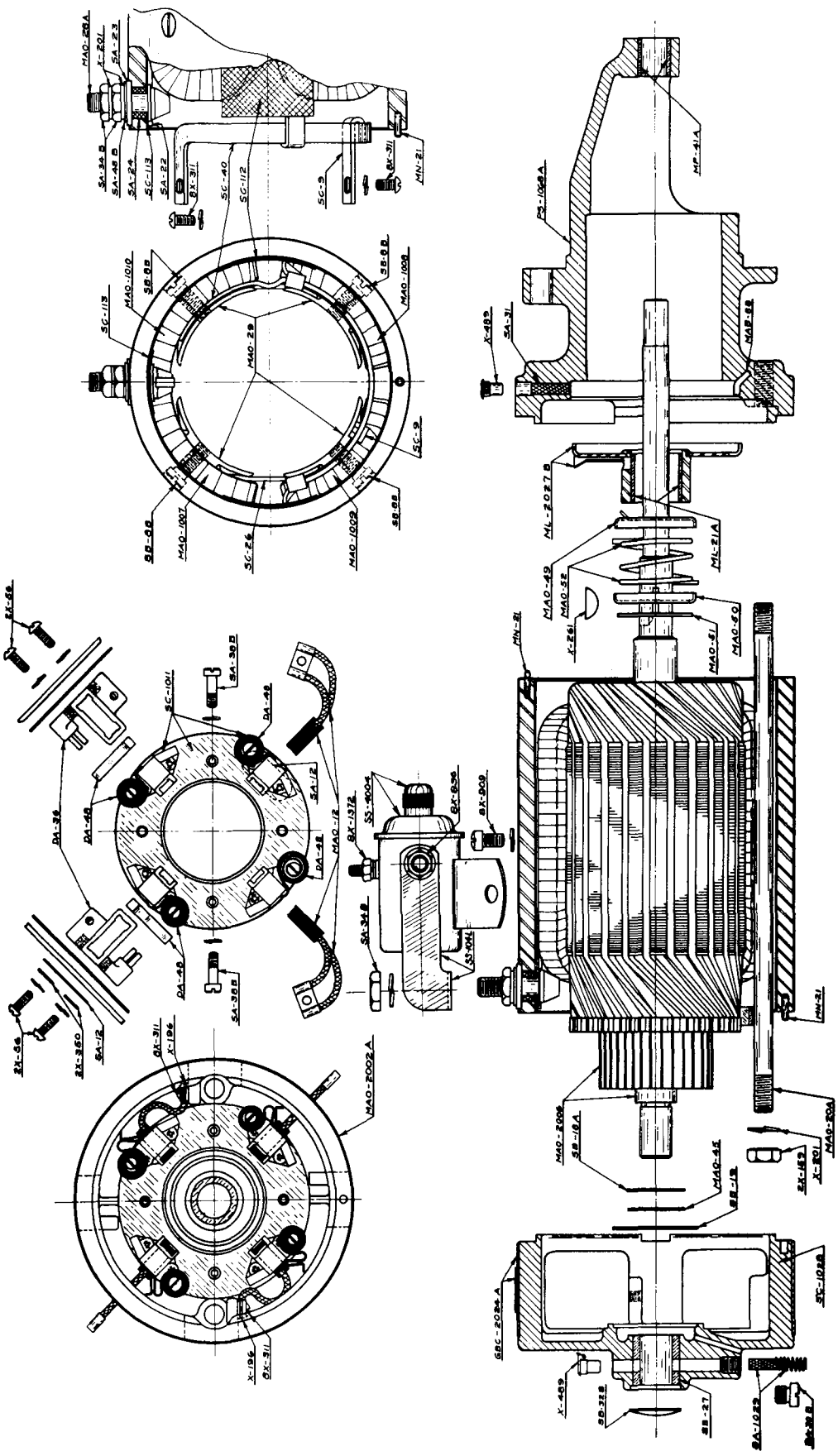
EB-88	1	Bendix Drive Assembly
GBC-2024A	1	Head Band Assembly
ML-2027B	1	Intermediate Brg. Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1068A	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
SA-31	1	Felt Wick
8X-120	1	#10-32x5/8 Fill. Hd. Screw
X-489	1	1/4 Oiler - Press in Type

1 2 3 4 5

(Issued 1-30-35)
(R-12-10-36)

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MAO-4003B STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MA0-59	2	Frame Screw
(MA0-2001A)	1	Frame & Field Assembly
MA0-28A	1	Terminal Post
MA0-29	4	Pole Piece
MA0-1007	1	Field Coil - U.L.
MA0-1008	1	Field Coil - L.R.
MA0-1009	1	Field Coil - L.L.
MA0-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
SA-22	1	Insulating Washer
SA-23	1	Insulating Washer
SA-24	1	Insulating Bushing
SA-34B	2	3/8-16 Hex. Nut
SA-48B	1	3/8 Washer
SB-8B	8	Pole Piece Screw
SC-9	1	Field Br. Connector
SC-26	2	Field Coil Connector
SC-40	1	Field To Brush Connector
SC-112	2	Field Connector Ins.
SC-113	1	Field Connector Ins.
X-201	2	3/8 Lock Washer
8X-159	2	3/8-24 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assy. & Parts Used With

(MA0-2002A)	1	Comm. End Head Assembly
MA0-12	4	BRUSH
SA-38B	2	Br. Holder Plate Screw
SB-19	1	Flat Oil Guard
SB-32B	1	Bearing Cover
SC-1011	1	Brush Holder Plate Assy.
DA-36	4	Brush Holder
DA-48	4	Brush Spring
SA-12	2	Brush Holder Ins.
2X-56	8	#8-32x7/16 Rd. Hd. Sc.
X-195	8	#8 Lock Washer
2X-350	4	#8 Plain Washer
SC-1028	1	C. E. Head Part Assembly
SB-27	1	Bronze Bearing
X-196	4	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
SA-30B	1	Wick Retaining Screw
SA-1029	1	Wick & Spring
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
X-489	1	1/4 Oiler - Press in Type
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MA0-45	1	Thrust Washer
MA0-2057	1	ARMATURE ASSEMBLY
MG-61	1	7/8 Plain Washer
SB-18A	1	Thrust Washer

Miscellaneous Parts

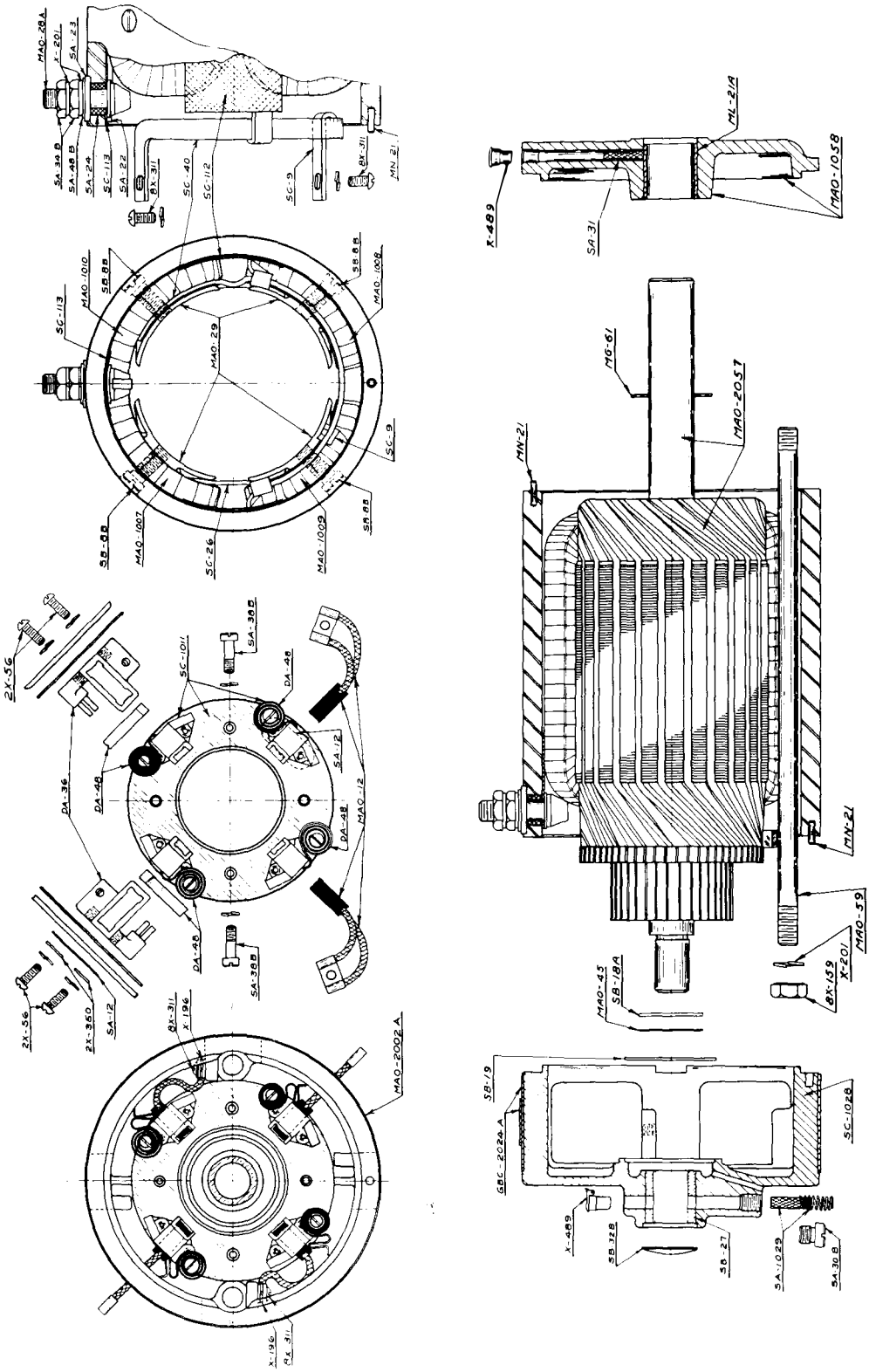
GBC-2024A	1	Head Band Assembly
MA0-1058	1	Drive End Head Assembly
ML-21A	1	ABSORBENT BRONZE BRG.
X-489	1	1/4 Oiler - Press in Type
SA-31	1	Felt Wick
8X-120	1	#10-32x5/8 Fill. Hd. Screw
		1 2 3 4 5

(Issued 5-2-40)

UNIT	APPLICATION
MA0-4009	Jos. Weidenhoff

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAO-4009 STARTING MOTOR ILLUSTRATION



MAS-4001 STARTING MOTOR PARTS LIST MAS-4001

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAS-3025)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAS-22	1	Field Connection Ins.
MAS-23	1	Field Coil Connector
MAS-25	1	Field Coil Connector
MAS-1008	1	Field Coil - L.R.
MAS-1009	1	Field Coil - L.L.
MAS-1021	1	Terminal Post Assy.
MAS-21	1	Term. Post Connector
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Ins. Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer
MAS-2010A	1	Field Coil Assy. - U.R.
MAS-26	1	Field Coil Lead Assy.
X-983	2	Terminal
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
MN-21	1	Dowel Pin
MH-20	2	Frame Screw
X-1014	2	5/16 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-3090)	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-17	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Ins. Bushing
GT-37	2	Ins. Washer
GT-41	2	Br. Holder Post Clip
MG-73	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MR-3	1	Absorbent Bronze Bearing
6X-1452	4	3/16x5/16 Oval Hd. Rivet
6X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
6X-311	2	#10-32x3/8 Rd. Hd. Screw
6X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAS-2006	1	Armature Assembly
MG-61	2	7/8 Plain Washer
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EBA-8	1	Bendix Drive Assy.
GX-1024	1	Head Band Assembly
ML-95	1	Lock Spring Ring
ML-1094	1	Intermediate Plate Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1085	1	Pinion Housing Assy.
MG-77A	1	Absorbent Bronze Brg.
MN-21	1	Dowel Pin
X-489	1	1/4 Oiler - Press in Type
6X-716	1	#8-32x1 1/8 Rd. Hd. Screw
6X-1410	1	#8-32 Square Nut
		1 2 3 4 5

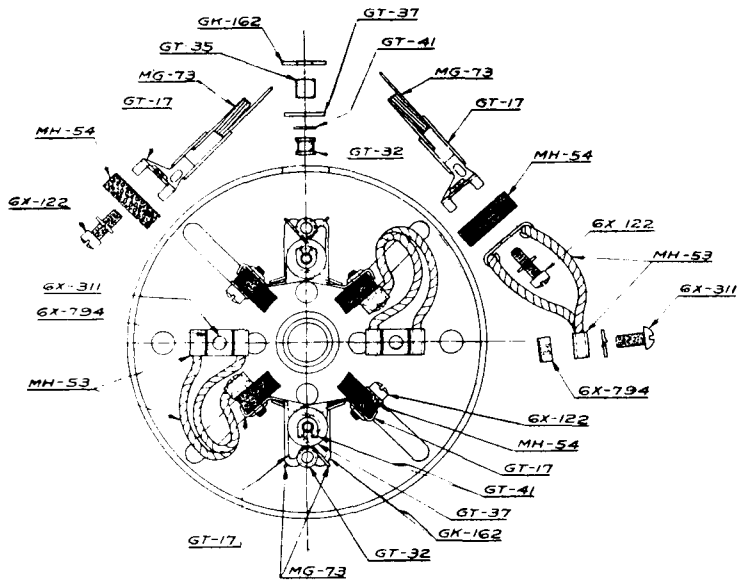
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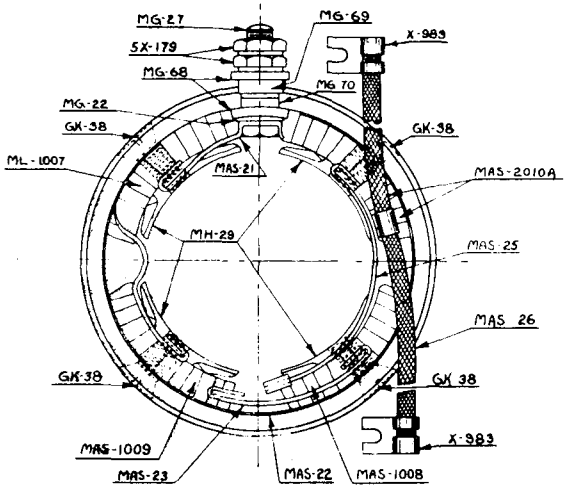
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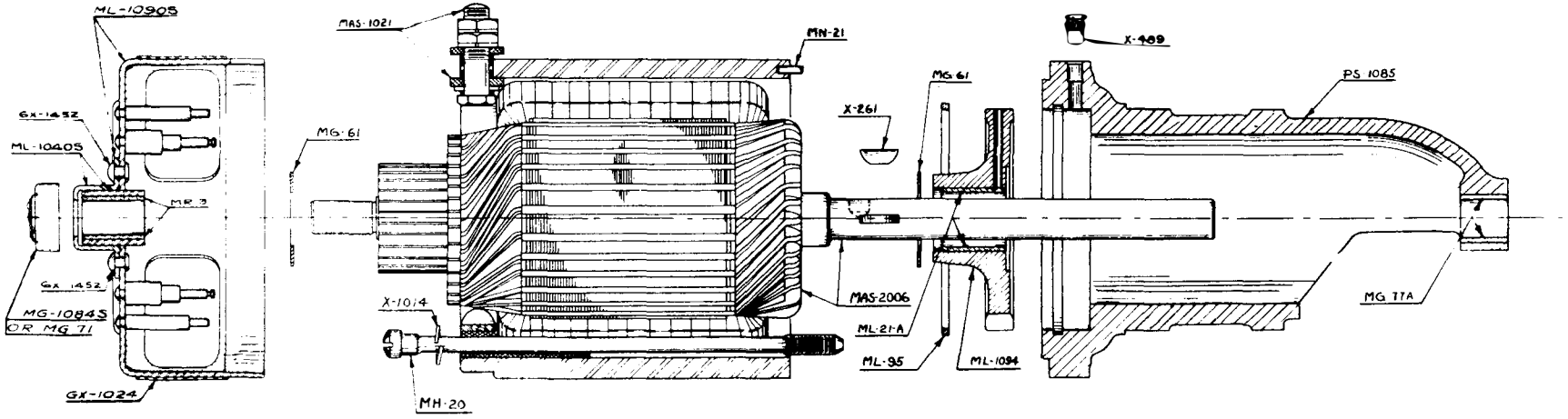
File in Equipment & Parts Lists Binder

"NOTE. Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete pa t can be assembled as needed."

MAS-4001 STARTING MOTOR PARTS LIST







Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAS-2025)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAS-22	1	Field Connection Ins.
MAS-23	1	Field Coil Connector
MAS-25	1	Field Coil Connector
MAS-1008	1	Field Coil - L.R.
MAS-1009	1	Field Coil - L.L.
MAS-1010A	1	Field Coil Assy. - U.R.
MAS-26	1	Field Coil Lead Assy.
X-983	2	Terminal
MAS-1021	1	Terminal Post Assy.
MAS-21	1	Term. Post Connector
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Ins. Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
MN-21	1	Dowel Pin
MH-20	2	Frame Screw
X-1014	2	5/16 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MR-3	1	Absorbent Bronze Brg
8X-1452	4	3/16x5/16 Oval Head Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAS-2006	1	Armature Assembly
MG-61	2	7/8 Plain Washer
X-261	1	#6 Woodruff Key

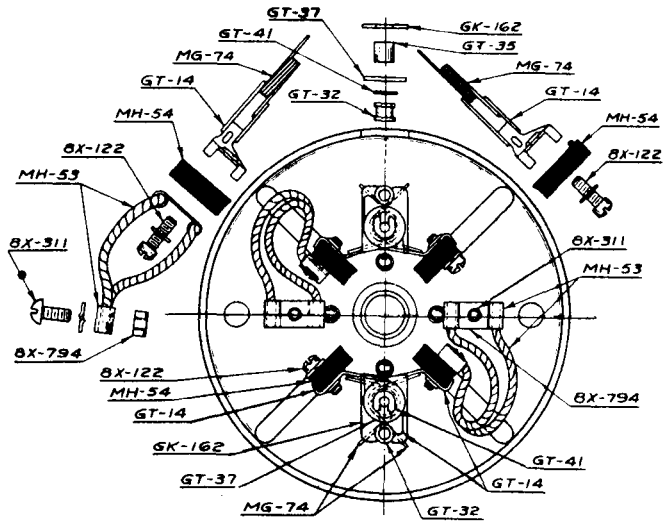
Miscellaneous Parts

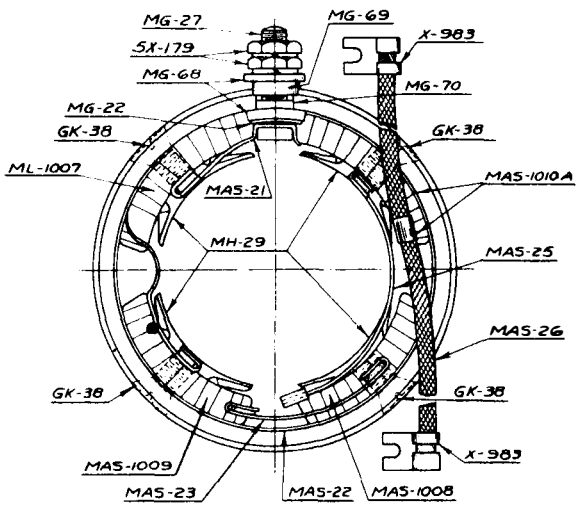
EBA-9	1	Bendix Drive Assembly
GX-1024	1	Head Band Assy.
ML-95	1	Lock Spring Ring
ML-1094	1	Intermediate Plate Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1085	1	Pinion Housing Assy.
MG-77A	1	Absorbent Bronze Brg.
MN-21	1	Dowel Pin
X-489	1	1/4 Oiler - Press in Type
8X-716	1	#8-32x1 1/8 Rd. Hd. Screw
8X-1410	1	#8-32 Square Nut
		1 2 3 4 5

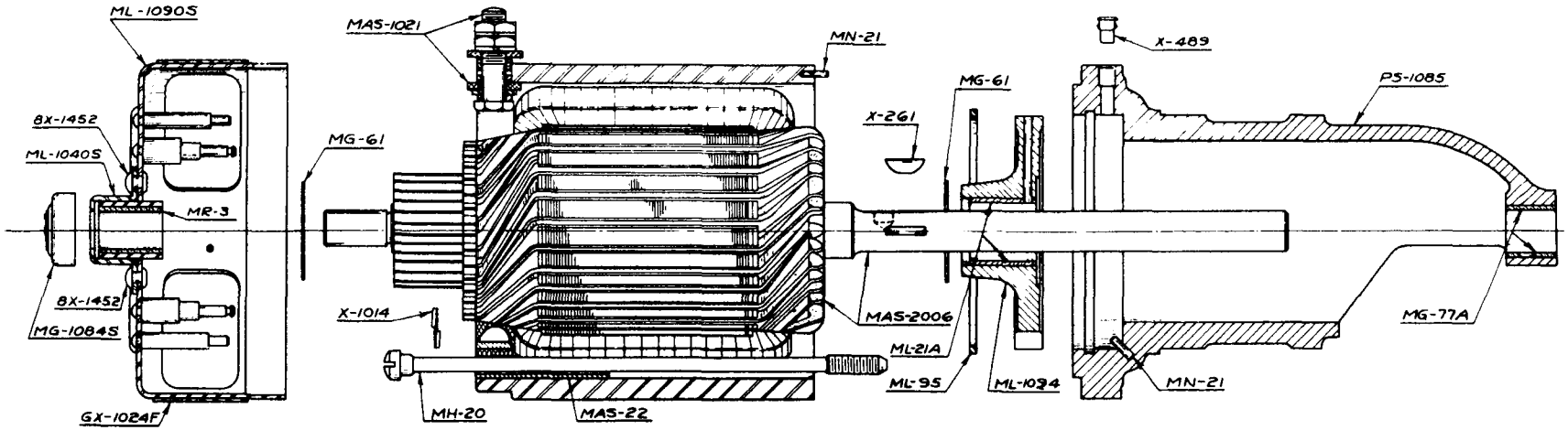
(Issued 11-23-36)

"NOTE: Where p rt numbers are shown in parenthesis they re for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAS-4002 STARTING MOTOR ILLUSTRATION







Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAS-3025)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAS-22	1	Field Connection Ins.
MAS-23	1	Field Coil Connector
MAS-25	1	Field Coil Connector
MAS-1008	1	Field Coil - L.R.
MAS-1009	1	Field Coil - L.L.
MAS-1021	1	Terminal Post Assy.
MAS-21	1	Term. Post Connector
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Ins. Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer
MAS-2010A	1	Field Coil Assy. - U.R.
MAS-26	1	Field Coil Lead Assy.
X-983	2	Terminal
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
MN-21	1	Dowel Pin
MH-20	2	Frame Screw
X-1014	2	5/16 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-3090)	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-17	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Ins. Bushing
GT-37	2	Ins. Washer
GT-41	2	Br. Holder Post Clip
MG-73	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MR-3	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MAS-2035	1	Armature Assembly
MG-61	1	7/8 Plain Washer
X-261	1	#6 Woodruff Key

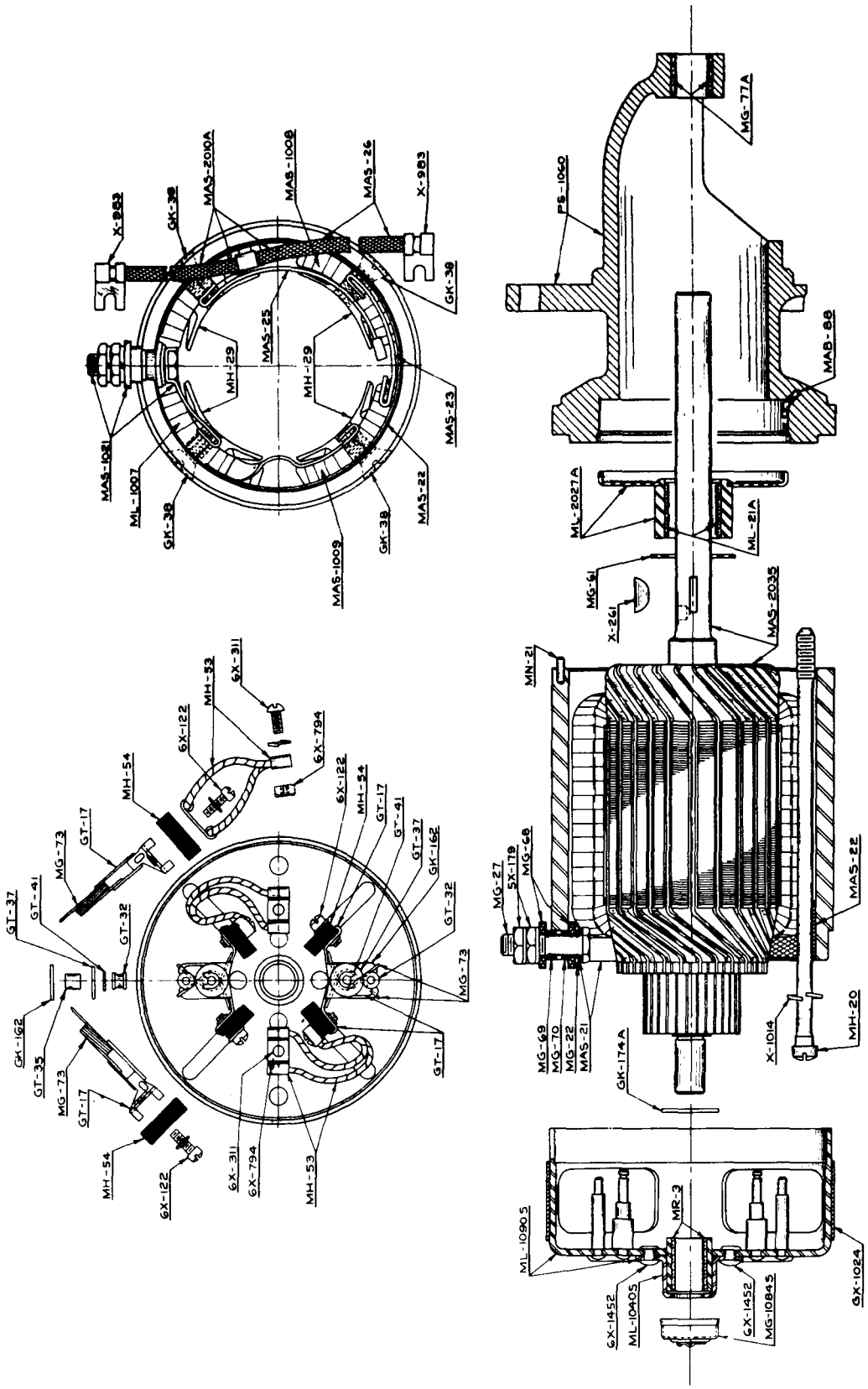
Miscellaneous Parts

EBA-2	1	Bendix Drive Assy.
GX-1024	1	Head Band Assy.
ML-2027A	1	Intermediate Brg. Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1060	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
8X-716	1	#8-32x1 1/8 Rd. Hd. Screw
8X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 5-12-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAS-4003 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAS-4004 STARTING MOTOR PARTS LIST

MAS-4004
(Issued 10-10-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-2097	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAS-21	1	Terminal
MAS-22	1	Insulation, Field Conn.
MAS-26	1	Lead Assy., Field Coil
X-983	2	Terminal
MAS-3005S	1	FIELD COIL PACKAGE
MAS-23	1	Connector, Field Coil
MAS-1009	1	Coil, Field, L. L.
MAS-1010J	1	Coil, Field, U. R.
ML-1007	2	Coil, Field, U. L. &L. R.
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Terminal
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Insulation, Term. Stud, Outer
MG-70	1	Insulation, Term. Stud, Inner
MN-21	1	Pin, Dowel
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
MH-20	2	Bolt, Thru
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-3090AS	1	Head Assy., Comm. End
GK-162	2	Insulation, Brush Holder
GT-17	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-73	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54†	4	Brush
MR-1005	1	Head Assy., Partial, C. E.
MAL-40A	1	BEARING, ABS. BRONZE
MR-1062A	1	Cover, Bearing, Comm. End
8X-122	4	Screw, Brush, Fill Hd. 8-32x1/2
12X-195	4	Lockwasher, Br. Sc., #8
12X-196	2	Lockwasher, Ground Sc., #10
8X-311	2	Screw, Ground Rd. Hd. #10-32x3/8
8X-794	2	Nut, Ground Sc., Square #10-32

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Thrust C. E.
MAS-2035	1	ARAMTURE
MG-61	1	Washer, Thrust, Intermediate
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4301	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EB-33	1	BENDIX DRIVE ASSY.
EB-508	2	Lockwasher
EB-2303	1	Head Drive
EB-2319S	1	Sleeve, Compression
EB-2322	2	Clip, Spring Support
EB-2406	1	Screw, Spring, Head
EB-2407	1	Screw, Spring, Shaft
EB-3105	1	SPRING, DRIVE
EB-3311	1	Shaft & Pinion
GX-1024F	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing Abs. Bronze
PS-1060D	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MH-1054S.

UNIT	APPLICATION
MAS-4004	Gray Marine

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAS-2097)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAS-22	1	Field Connection Ins.
MAS-23	1	Field Coil Connector
MAS-25	1	Field Coil Connector
MAS-1008	1	Field Coil - L.R.
MAS-1009	1	Field Coil - L.L.
MAS-1021	1	Terminal Post Assy.
MAS-21	1	Terminal Post Connector
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Ins. Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer
MAS-2010A	1	Field Coil Assy. - U.R.
MAS-26	1	Field Coil Lead Assy.
X-983	2	Terminal
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
MN-21	1	Dowel Pin
MH-20	2	Frame Screw
X-1014	2	5/16 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-3090)	1	Comm. End Head Assembly
GK-162	2	Br. Holder Spacing Ins.
GT-17	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Ins. Bushing
GT-37	2	Ins. Washer
GT-41	2	Br. Holder Post Clip
MG-73	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MR-3	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAS-2006	1	Armature Assembly
MG-61	2	7/8 Plain Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4003	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

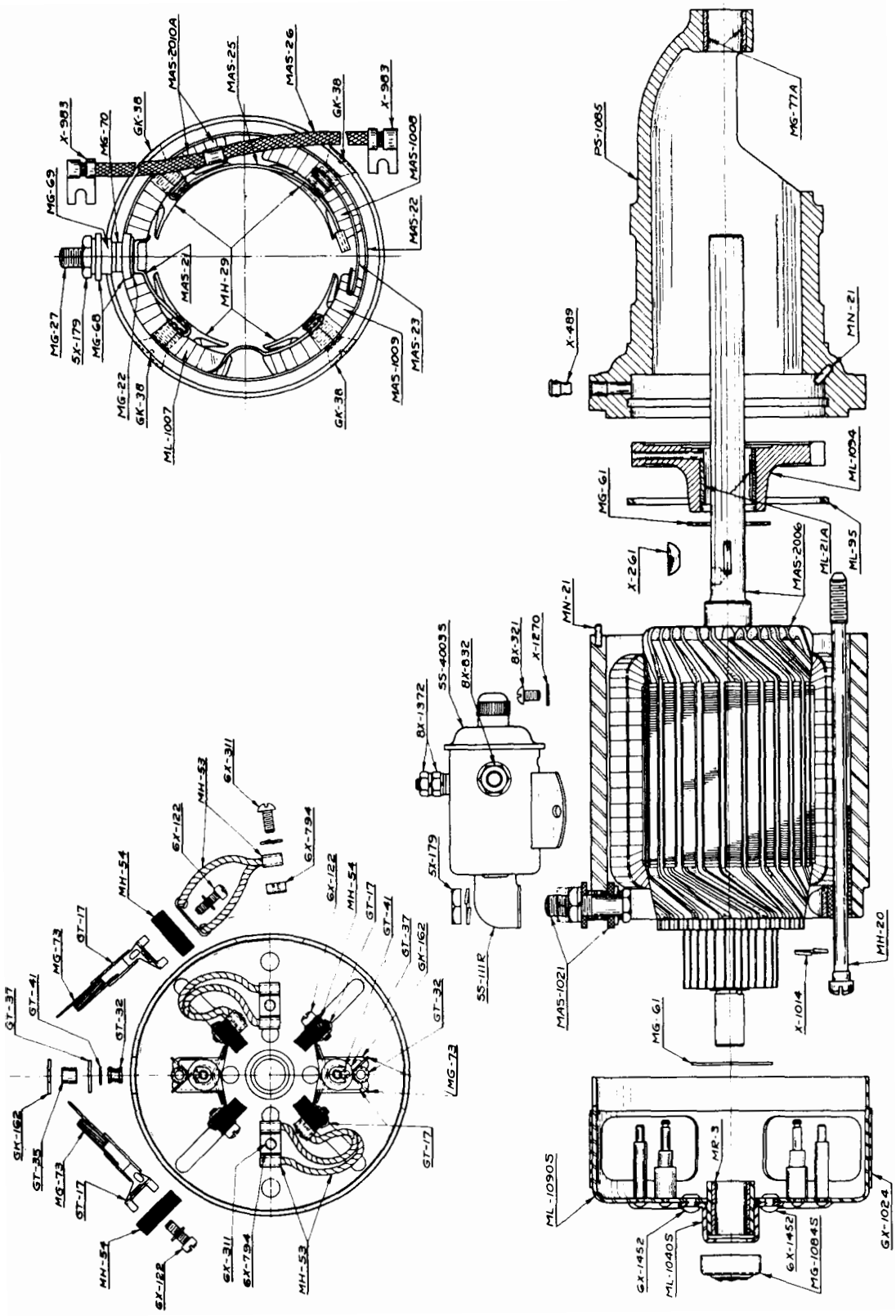
Miscellaneous Parts

EBA-8	1	Bendix Drive Assy.
GX-1024	1	Head Band Assy.
ML-95	1	Lock Spring Ring
ML-1094	1	Intermediate Plate Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1085	1	Pinion Housing Assy.
MG-77A	1	Absorbent Bronze Brg.
MN-21	1	Dowel Pin
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-12-36)

"NOTE: Where part numb rs are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAS-4005 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAS-3097)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAS-22	1	Field Connection Ins.
MAS-23	1	Field Coil Connector
MAS-25	1	Field Coil Connector
MAS-1008	1	Field Coil - L.R.
MAS-1009	1	Field Coil - L.L.
MAS-1010A	1	Field Coil Assy. - U.R.
MAS-26	1	Field Coil Lead Assy.
X-983	2	Terminal
MAS-1021	1	Terminal Post Assembly
MAS-21	1	Term. Post Connector
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
MN-21	1	Dowel Pin
MH-20	2	Frame Screw
X-1014	3	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Head Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAS-2006	1	Armature Assembly
MG-61	2	7/8 Plain Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4301	1	Solenoid Starting Switch
X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

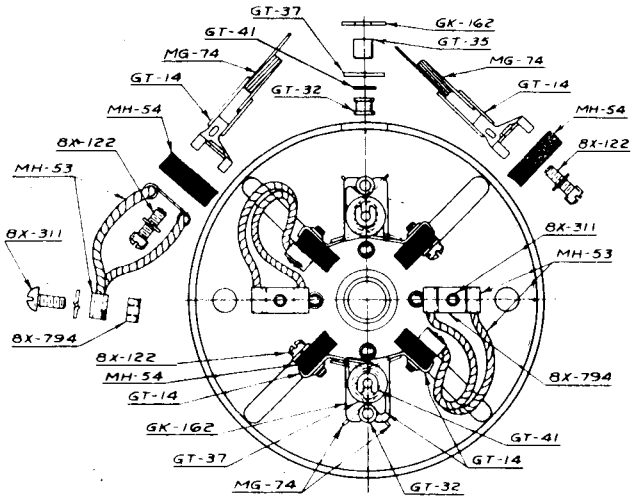
Miscellaneous Parts

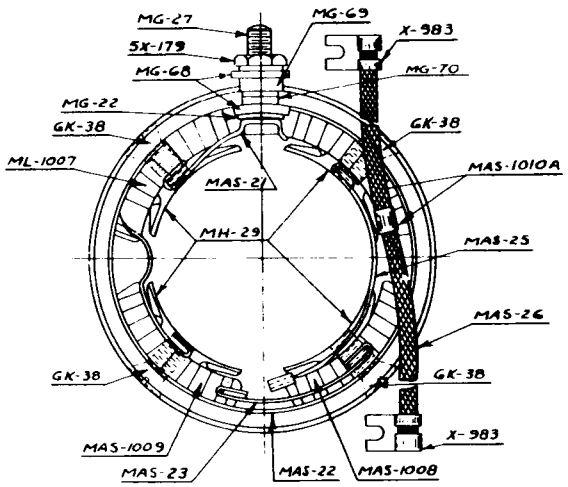
EBA-9	1	Bendix Drive Assembly
GX-1024F	1	Head Band Assembly
ML-95	1	Lock Spring Ring
ML-1094	1	Intermediate Plate Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1085	1	Pinion Housing Assy.
MG-77A	1	Absorbent Bronze Brg.
MN-21	1	Dowel Pin
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

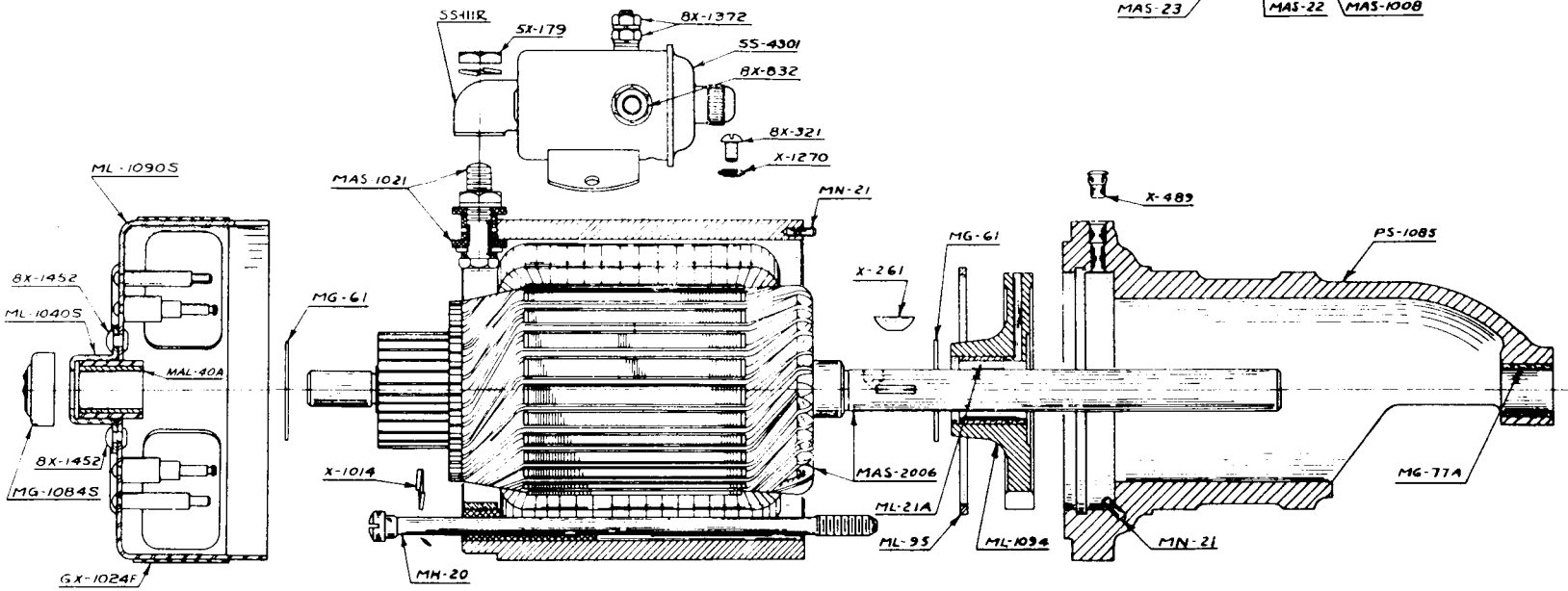
(Issued 10-22-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAS-4006 STARTING MOTOR ILLUSTRATION







ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAS-4007 STARTING MOTOR PARTS LIST

MAS-4007
(Issued 10-10-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-3097	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAS-21	1	Connector, Term. Stud
MAS-22	1	Insulation, Field Connection
MAS-26	1	Lead Assy., Field Coil
X-983	2	Terminal
MAS-3005S	1	FIELD COIL PACKAGE
MAS-23	1	Connector, Field Coil
MAS-1009	1	Coil, Field, L. L.
MAS-1010J	1	Coil, Field, U. R.
ML-1007	2	Coil, Field, U. L. &L. R.
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Terminal
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Insulation, Term. Stud, Outer
MG-70	1	Insulation, Term. Stud, Inner
MN-21	1	Pin., Dowel
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
MH-20	2	Bolt, Thru
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2090S	1	Head Assy., Comm. End
GK-162	2	Insulation, Br. Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54†	4	Brush
MR-1005	1	Head Assy., Partial, Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
MR-1062A	1	Cover, Bearing, Comm. End
8X-122	4	Screw, Brush, Fill. Hd. #8-32x1/2
12X-195	4	Lockwasher, Brush Sc., #8
12X-196	2	Lockwasher, Ground Sc., #10
8X-311	2	Screw, Ground, Rd. Hd. #10-32x3/8
8X-794	2	Nut, Ground Sc., Square #10-32

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Thrust, C. E.
MAS-2035	1	ARMATURE
MG-61	1	Washer, Thrust, Int.
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4301	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EB-51	1	BENDIX DRIVE ASSY.
EB-508	2	Lockwasher
EB-2303	1	Head Drive
EB-2319S	1	Sleeve, Compression
EB-2405	1	SPRING, DRIVE
EB-2406	1	Screw, Spring, Head
EB-2407	1	Screw, Spring, Shaft
EB-2622	2	Clip, Spring Support
EB-5111	1	Shaft & Pinion
GX-1024F	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1060D	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MH-1054S

UNIT	APPLICATION
MAS-4007	Gray Marine

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAS-3025)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAS-22	1	Field Connection Ins.
MAS-23	1	Field Coil Connector
MAS-25	1	Field Coil Connector
MAS-1008	1	Field Coil - L.R.
MAS-1009	1	Field Coil - L.L.
MAS-1021	1	Terminal Post Assembly
MAS-21	1	Term. Post Connector
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Ins. Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer
MAS-2010A	1	Field Coil Assy. - U.R.
MAS-26	1	Field Coil Lead Assy.
X-983	2	Terminal
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
MN-21	1	Dowel Pin
MH-20	2	Frame Screw
X-1014	2	5/16 Lock Washer

Comm. End Head Assy. & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-3090)	1	Comm. End Head Assembly
GK-162	2	Br. Holder Spacing Ins.
GT-17	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-73	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
ML-1090S	1	C. E. Head Part Assembly
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Sc.
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MAS-2098	1	ARMATURE ASSEMBLY
MG-61	1	7/8 Plain Washer
X-261	1	#6 Woodruff Key

Miscellaneous Parts

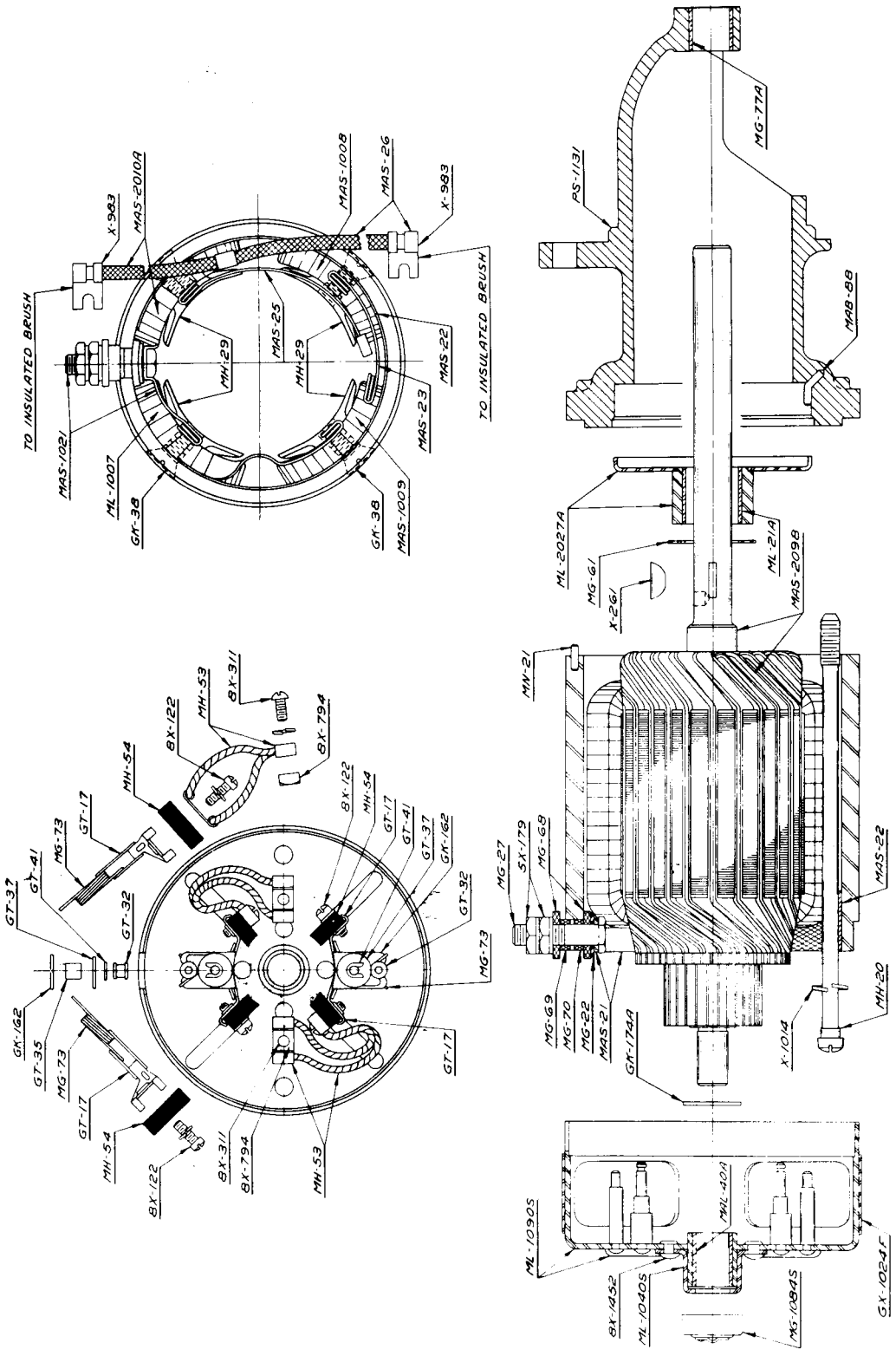
EBA-24	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7819S	1	Compression Sleeve
EB-8734	1	Take Up Spring
EB-8803	1	Driving Head
EB-8805	1	DRIVING SPRING
EB-8806	1	Hd. Sp. Bolt or Screw
EB-8807	1	Shaft Spring Screw
EBA-1111	1	S-A Assembly
GX-1024F	1	Head Band Assembly
ML-2027A	1	INTERMEDIATE BRG. ASSY.
ML-21A	1	Absorbent Bronze Brg.
PS-1131	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-2-40)

UNIT	APPLICATION
MAS-4008	Reo, Buda Co.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAS-4008 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly with Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
(MAS-3092)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAS-21	1	Terminal
MAS-22	1	Insulation, Field Conn.
MAS-23	1	Connector, Field Coil
MAS-26	1	Lead Assy., Field Coil
X-983	2	Terminal
MAS-1009	1	Coil, Field, L.L.
MAS-1010	1	Coil, Field, U.R.
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Term., 3/8-16
MG-68	2	Washer, Ins., Terminal Stud, Inner
MG-69	1	Insulation, Term. Stud, Outer
MG-70	1	Insulation, Term. Stud, Inner
ML-1007	2	Coil, Field, U.L. & L.R.
MN-21	1	Pin, Dowel
8X-179	2	Nut, Term. Stud, Hex.,3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
MH-20	2	Bolt, Thru
X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm.. End Head Assembly & Parts Used With

ML-3090A	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Br. Holder
GT-17	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-73	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
MR-1005	1	Head Assy., Partial, C.E.
MAL-40A	1	Bearing, Abs. Bronze
8X-122	4	Screw, Brush, Fil. Hd., #8-32x1/2
	1 2 3 4 5	

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
	1 2 3 4 5	
X-195	4	Lockwasher, Brush Sc., #8
X-196	2	Lockwasher, Ground Sc., #10
8X-311	2	Screw, Ground, Rd. Hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32
MR-1062A	1	Cover, Bearing, Comm. End

Armature Assembly & Parts Used With

GK-174A	1	Washer, Thrust, Armature Shaft
MAS-2098	1	Armature
MG-61	1	Washer, Thrust, Armature Shaft, Int.
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EB-92	1	Bendix Drive Assy.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8734	1	Ring, Take Up
EB-8803	1	Head, Driving
EB-8805	1	Spring, Drive
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw, Spring, Shaft
EB-9211	1	Shaft & Pinion
GX-1024F	1	Band, Cover
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Abs. Bronze
PS-1131	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32
	1 2 3 4 5	

UNIT	APPLICATION
MAS-4009	Four Wheel Drive
MAS-4009	Sterling
MAS-4009	Ward LaFrance

(Issued 8-20-47)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAS-2097)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAS-21	1	Terminal
MAS-22	1	Insulation, Field Conn.
MAS-23	1	Connector, Field Coil
MAS-26	1	Lead Assembly, Field Coil
X-983	2	Terminal
MAS-1009	1	Coil, Field, L.L.
MAS-1010	1	Coil, Field, U.R.
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Term., 3/8-16
MG-68	2	Washer, Ins. Term. Stud, Inner
MG-69	1	Insulation, Term. Stud, Outer
MG-70	1	Insulation, Term. Stud, Inner
ML-1007	1	Coil, Field, U.L. & L.R.
MN-21	1	Pin, Dowel
8X-179	2	Nut, Term. Stud, Hex., 3/8-16
12X-201	2	Lockwasher, Term., Stud, 3/8
MH-20	2	Bolt, Thru
X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-3090A	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Br. Holder
GT-17	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-73	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
MR-1005	1	Head Assy., Partial, C.E.
MAL-40A	1	Bearing, Abs. Bronze
8X-122	4	Screw, Brush, Fill. Hd., #8-32x1/2
X-195	4	Lockwasher, Br. Sc., #8
X-196	2	Lockwasher, Ground Sc., #10
8X-311	2	Screw, Ground, Rd. Hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32
MR-1062A	1	Cover, Bearing, Comm. End
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Thrust, Arm. Shaft C.E.
MAS-2098	1	Armature
MG-61	1	Washer, Thrust, Arm. Shaft, Intermediate
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-6LA	1	Connector
SS-4301	1	Switch, Starting, Solenoid
X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
X-1014	2	Lockwasher, 5/16
8X-173	1	Nut, Hex., #10-32
8X-321	2	Screw, Switch Mtg., Rd. Hd, #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg., Screw, #10

Miscellaneous Parts

EBA-8	1	Bendix Drive Assy.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8734	1	Ring, Take-Up
EB-8803	1	Head, Driving
EB-8805	1	Spring, Drive
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw, Spring, Shaft
EBA-211	1	Shaft, & Pinion
GX-1024F	1	Band, Cover
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Abs. Bronze
PS-1162A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd, #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

UNIT	APPLICATION
MAS-4011	Crown Body & Coach
MAS-4011	Hug

Printed in U. S. A. (Issued 8-20-47) File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAS-4016 STARTING MOTOR PARTS LIST

MAS-4016
(Issued 1-13-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-2097	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAS-21	1	Terminal
MAS-22	1	Insulation, Field Connection
MAS-26	1	Lead Assy., Field Coil
X-983	2	Terminal
MAS-3005S	1	FIELD COIL PACKAGE
MAS-23	1	Connector, Field Coil
MAS-1009	1	Coil, Field, L. L.
MAS-1010J	1	Coil, Field, U. R.
ML-1007	2	Coil, Field, U. L. & L. R.
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Terminal, 3/8-16
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Insulation, Term. Stud, Outer
MG-70	1	Insulation, Term. Stud, Inner
MN-21	1	Pin, Dowel
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
MH-20	2	Bolt, Thru
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-3090AS	1	Head Assy., Comm. End
GK-162	2	Insulation, Brush Holder
GT-17	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-73	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54†	4	Brush
MR-1005	1	Head Assy., Partial, C. E.
MAL-40A	1	BEARING, ABS. BRONZE
MR-1062A	1	Cover, Bearing, Comm. End
8X-122	4	Screw, Brush, Fill. Hd. #8-32x1/2
12X-195	4	Lockwasher, Brush Sc. #8
12X-196	2	Lockwasher, Ground Sc. #10
8X-311	2	Screw, Ground, Rd. Hd. #10-32x3/8
8X-794	2	Nut, Ground Sc., Square #10-32

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Thrust, C. E.
MAS-2098	1	ARMATURE
MG-61	1	Washer, Thrust, Intermediate
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

SS-6LA	1	Connector
SS-4301	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-24	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8803	1	Head, Drive
EB-8805	1	Spring, Drive
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw, Spring, Shaft
EBA-1111	1	Shaft & Pinion
GX-1024F	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1218	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MH-1054S

UNIT	APPLICATION
MAS-4016	Buda

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(MAS-2127)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAS-21	1	Connector, Term. Stud
MAS-22	1	Insulation, Field Conn.
MAS-1012†	1	Brush, Insulated
MAS-3005S	1	FIELD COIL PACKAGE
MAS-23	1	Connector, Field Coil
MAS-1009	1	Coil, Field, L.L.
MAS-1010	1	Coil, Field, U.R.
ML-1007	2	Coil, Field, U.L. & L.R.
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MLA-28	1	Stud, Terminal, 3/8-16
MN-21	1	Pin, Dowel
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-3002A	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, C.E. Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C.E.
MAS-2098	1	ARMATURE
MG-61	1	Washer, Arm. Thrust, Intermediate
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-24	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8734	1	Ring, Take-Up
EB-8803	1	Head, Drive
EB-8805	1	SPRING, DRIVE
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw, Spring, Shaft
EBA-1111	1	Shaft & Pinion
GEB-24B	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1296	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, #10
8X-312	2	Screw, Rd. Hd. #10-32x1/4
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAS-2012S.

UNIT	APPLICATION
MAS-4104	Buda

(Issued 4-5-49)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAS-4106 STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(MAS-2127)	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAS-21	1	Connector, Term. Stud
MAS-22	1	Insulation, Field Connection
MAS-1012†	1	Brush, Insulated
MAS-3005S	1	FIELD COIL PACKAGE
MAS-23	1	Connector, Field Coil
MAS-1009	1	Coil, Field, L.L.
MAS-1010	1	Coil, Field, U.R.
ML-1007	2	Coil, Field, U.L. & L.R.
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MLA-28	1	Stud, Terminal, 3/8-16
MN-21	1	Pin, Dowel
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-3002A	1	Head Assy., Comm. End
MAL-40A	1	Bearing, Abs. Bronze
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, C.E.
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C.E.
MAS-2098	1	ARMATURE
MG-61	1	Washer, Arm. Thrust, Intermediate
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-40L	1	Connector
SSW-4001	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-24	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8734	1	Ring, Take-Up
EB-8803	1	Head, Drive
EB-8805	1	SPRING, DRIVE
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw, Spring, Shaft
EBA-1111	1	Shaft & Pinion
GEB-24B	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1296A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Sq. #10-32

† BRUSH SET, SERVICE MAS-2012S.

UNIT	APPLICATION
MAS-4106	Hercules

(Issued 3-6-50)

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
MAS-2127	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAS-21	1	Connector, Term. Stud
MAS-22	1	Insulation, Field Conn.
MAS-1012†	1	Brush, Insulated
MAS-3005S	1	FIELD COIL PACKAGE
MAS-23	1	Connector, Field Coil
MAS-1009	1	Coil, Field, L. L.
MAS-1010	1	Coil, Field, U. R.
ML-1007	2	Coil, Field, U. L. & L. R.
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
8X-179	2	Nut, Terminal Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-3002AS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, C. E. Head Screw, #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C. E.
MAS-2098	1	ARMATURE
MG-61	1	Washer, Arm. Thrust, Intermediate
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-8	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8734	1	Ring, Take-Up
EB-8803	1	Head, Drive
EB-8805	1	SPRING, DRIVE
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw, Spring, Shaft
EBA-211	1	Shaft & Pinion
GEB-24B	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1314	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Switch Mtg. Sc., #10
8X-312	2	Screw, Switch Mtg., Rd. Hd. #10-32x1/4
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAS-2012S.

UNIT	APPLICATION
MAS-4107	Hercules

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-2127	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAS-21	1	Connector, Term. Stud
MAS-22	1	Insulation, Field Connection
MAS-1012 †	1	Brush, Insulated
MAS-3005S	1	FIELD COIL PACKAGE
MAS-23	1	Connector, Field Coil
MAS-1009	1	Coil, Field, L. L.
MAS-1010J	1	Coil, Field, U. R.
ML-1007	2	Coil, Field, U. L. & L. R.
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MLA-28	1	Stud, Terminal, 3/8-16
MN-21	1	Pin, Dowel
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
MH-20	2	Bolt, Thru
12X-1014	2	Lockwasher, Thru Bolt, #10

Comm. End Head Assembly & Parts Used With

ML-3002AS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S †	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, C. E.
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C. E.
MAS-2098	1	ARMATURE
MG-61	1	Washer, Arm. Thrust, Intermediate
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-40	1	Connector
SSW-4001	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-8	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8734	1	Ring, Take-Up
EB-8803	1	Head, Drive
EB-8805	1	SPRING, DRIVE
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw, Spring Shaft
EBA-211	1	Shaft & Pinion
GEB-24B	1	Band, Cover
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	BEARING, ABS. BRONZE
PS-1314A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAS-2012S.

UNIT	APPLICATION
MAS-4108	Chris Craft

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAS-4109 STARTING MOTOR PARTS LIST

MAS-4109
(Issued 2-24-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-3127	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAS-21A	1	Connector, Term. Stud
MAS-22	1	Insulation, Field Connection
MAS-23	1	Connector, Field Coil
MAS-1007	1	COIL, FIELD, U. L.
MAS-1008B	1	COIL, FIELD, L. R.
MAS-1010K	2	COIL, FIELD, U. R. & L. L.
MAS-1012†	1	Brush
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
MH-20	2	Bolt, Thru
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Thrust, C. E.
MAS-2098	1	ARMATURE
MG-61	1	Washer, Thrust, Intermediate
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-40	1	Connector
SSW-4001	1	SOLENOID STARTING SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBA-9	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8734	1	Ring, Take-Up
EB-8803	1	Head, Drive
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw, Spring, Shaft
EB-9405	1	SPRING, DRIVE
EB-9911	1	Shaft & Pinion
GEB-24B	1	Band, Cover
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	BEARING, ABS. BRONZE
PS-1314A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAS-2012S.

UNIT	APPLICATION
MAS-4109	Chris Craft

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAU-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insuating Washer
MAB-85	1	Insulating Bushing
MAF-59	1	Field Coil Connector
MAU-1007A	1	Field Coil Assy. - U.L.
MAU-14	1	Terminal
MAU-1008	1	Field Coil - L.R.
MAU-1009	1	Field Coil - L.L.
MAU-1010A	1	Field Coil Assy. - U.R.
MAU-1033	1	Connector & Brush Assy.
MAB-12	1	Brush
MAU-12	1	Brush
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

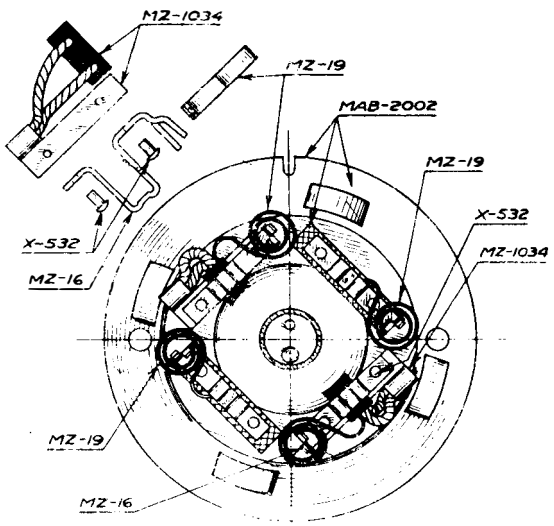
Miscellaneous Parts

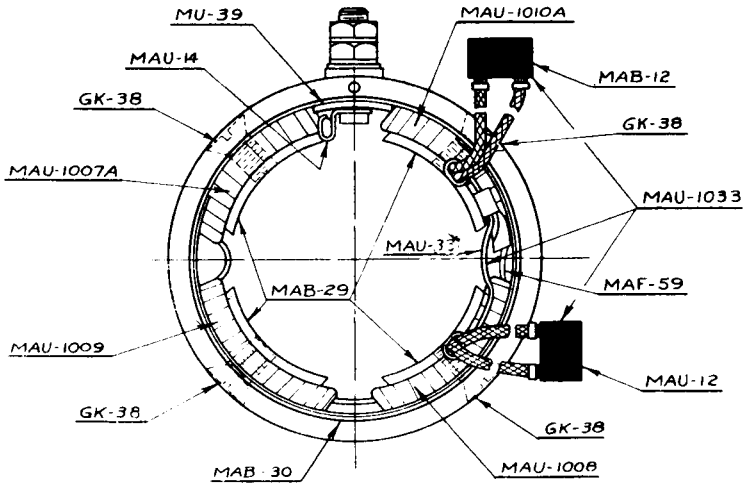
EBA-2	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1088	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

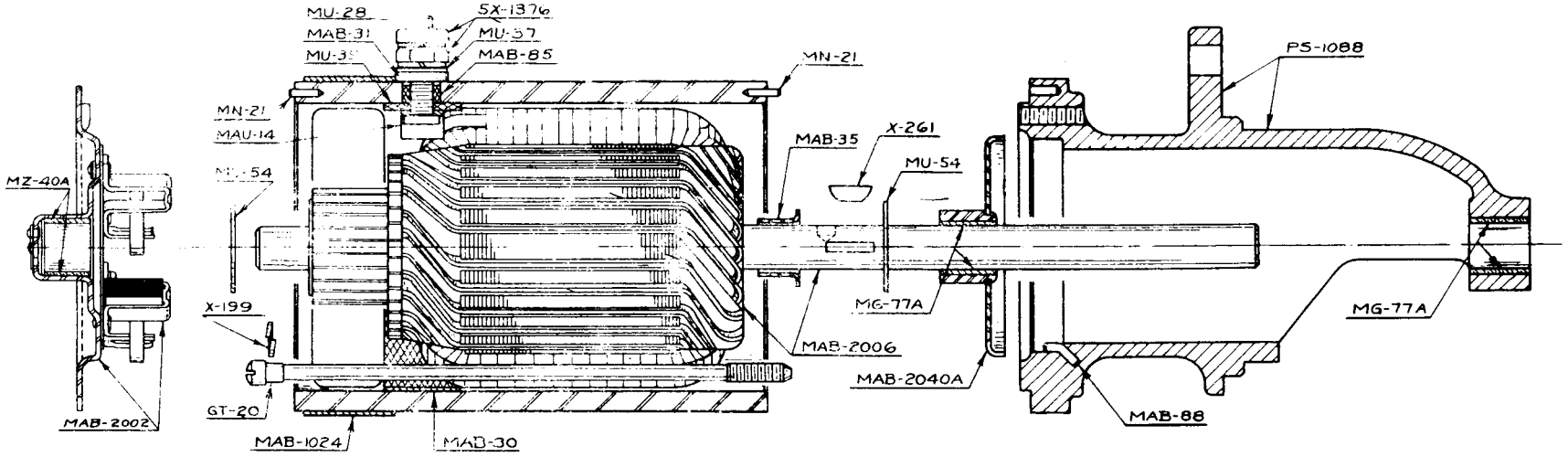
(Issued 1-24-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAU-4005 STARTING MOTOR ILLUSTRATION







Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAS-3097)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAS-22	1	Field Connection Ins.
MAS-23	1	Field Coil Connector
MAS-25	1	Field Coil Connector
MAS-1008	1	Field Coil - L.R.
MAS-1009	1	Field Coil - L.L.
MAS-1010A	1	Field Coil Assy. - U.R.
MAS-26	1	Field Coil Lead Assy.
X-983	2	Terminal
MAS-1021	1	Terminal Post Assembly
MAS-21	1	Term. Post Connector
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
8X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
MN-21	1	Dowel Pin
MH-20	2	Frame Screw
X-1014	3	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Head Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAS-2006	1	Armature Assembly
MG-61	2	7/8 Plain Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4301	1	Solenoid Starting Switch
X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

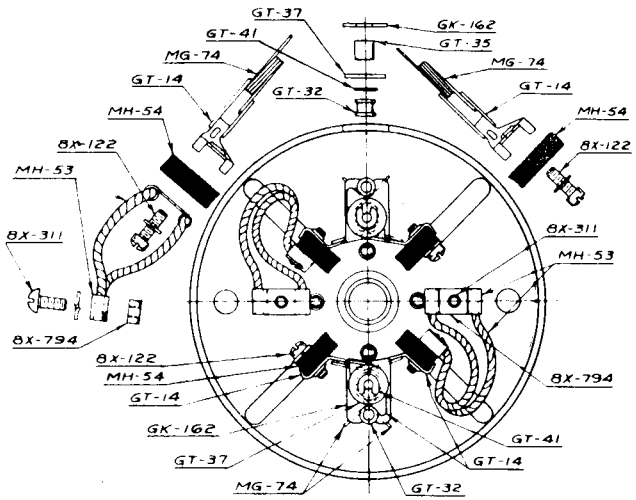
Miscellaneous Parts

EBA-9	1	Bendix Drive Assembly
GX-1024F	1	Head Band Assembly
ML-95	1	Lock Spring Ring
ML-1094	1	Intermediate Plate Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1085	1	Pinion Housing Assy.
MG-77A	1	Absorbent Bronze Brg.
MN-21	1	Dowel Pin
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-22-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAS-4006 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAU-2112)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	1	Field Coil Connector
MAU-1007A	1	Field Coil Assy. - U.L.
MAU-14	1	Terminal
MAU-1008	1	Field Coil - L.R.
MAU-1009	1	Field Coil - L.L.
MAU-1010A	1	Field Coil Assy. - U.R.
MAU-1033	1	Connector & Brush Assembly
MAB-12	1	Brush
MAU-12	1	Brush
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4003	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

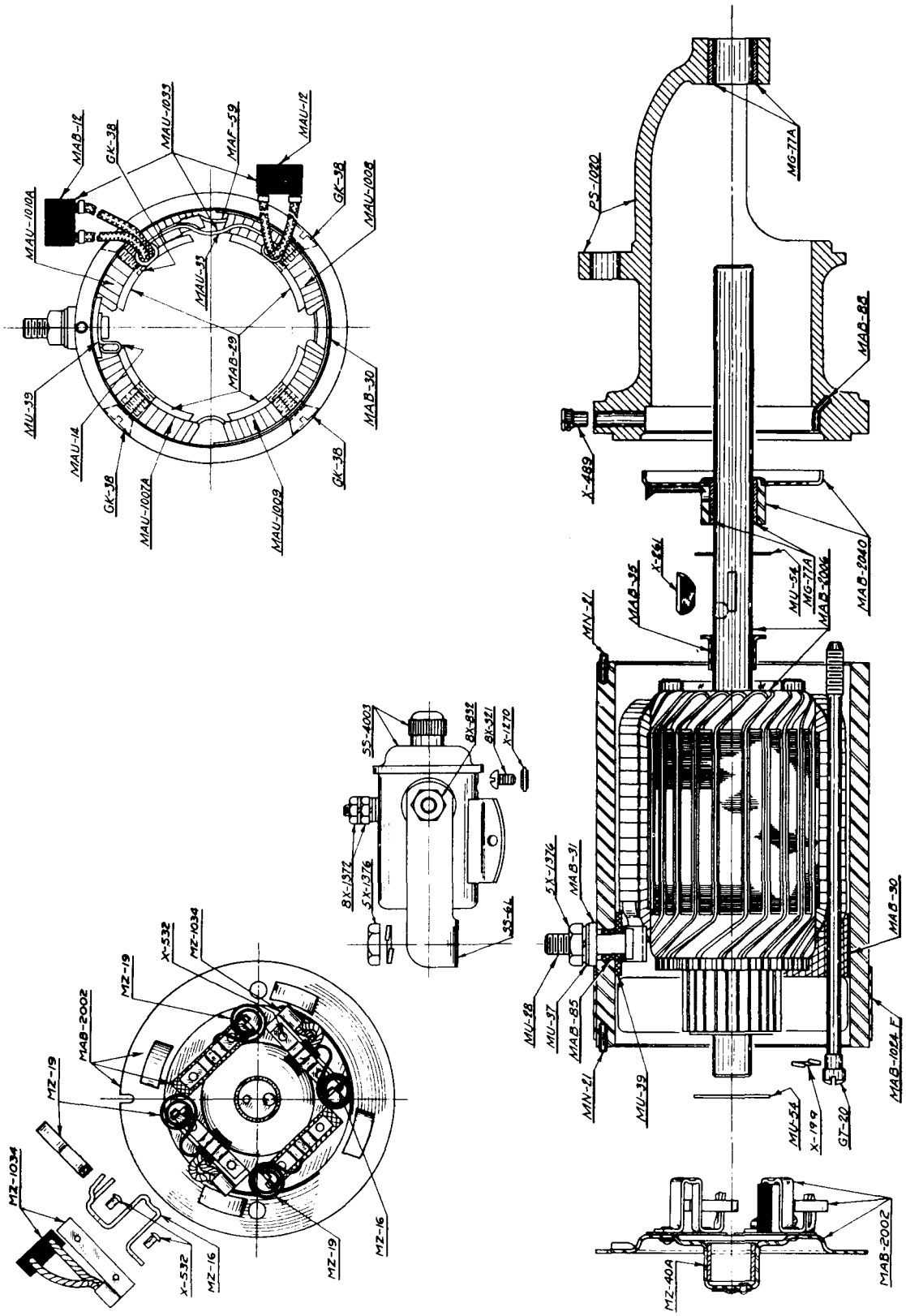
Miscellaneous Parts

EBA-2	1	Bendix Drive Assy.
MAB-1024F	1	Head Band Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1C20	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 11-25-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAU-4007 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAU-3112)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	1	Field Coil Connector
MAU-1007A	1	Field Coil Assy.-U.L.
MAU-14	1	Terminal
MAU-1008	1	Field Coil - L.R.
MAU-1009	1	Field Coil - L.L.
MAU-2010	1	Field Coil Assy.-U.R.
MAU-2033	1	Connector & Brush Assembly
MAB-12	1	Brush
MAU-12	1	Brush
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAB-3002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy.-Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet

Armature Assembly & Parts Used With

MAB-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer-1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6L	1	Connector
SS-4003	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd.Hd. Screw
X-1270	2	#10 Skpf. Washer

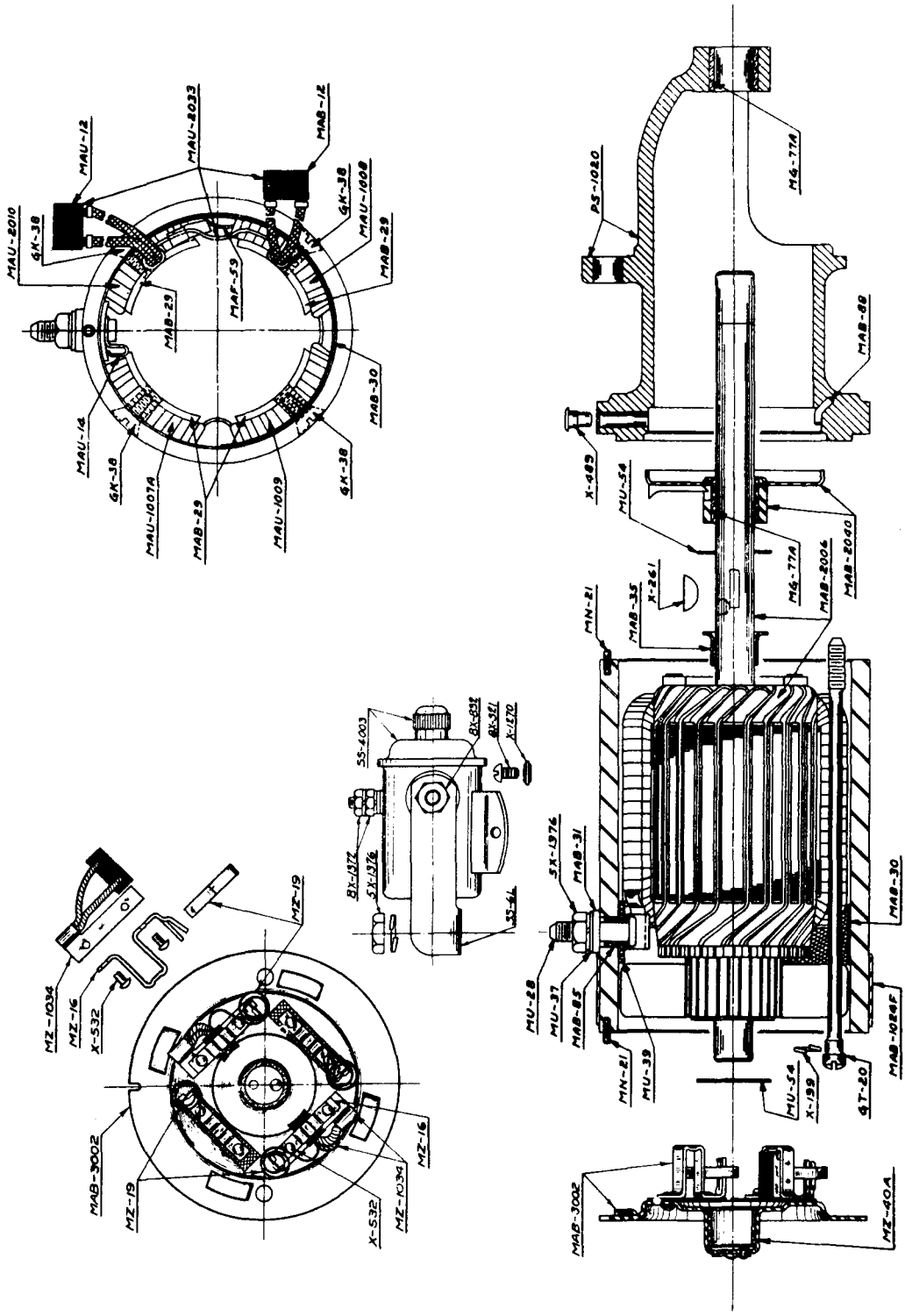
Miscellaneous Parts

EB-99	1	Bendix Drive Assy.
MAB-1024F	1	Head Band Assy.
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1020	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd.Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 12/9/38)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAU-4008 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAU-3001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAF-59	1	Field Coil Connector
MAU-1007A	1	Field Coil Assy.-U.L.
MAU-14	1	Terminal
MAU-1008	1	Field Coil - L.R.
MAU-1009	1	Field Coil - L.L.
MAU-2010	1	Field Coil Assy.-U.R.
MAU-2033	1	Connector & Brush Assembly
MAB-12	1	Brush
MAU-12	1	Brush
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAB-3002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy.-Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer-1/32" Thick
X-261	1	#6 Woodruff Key

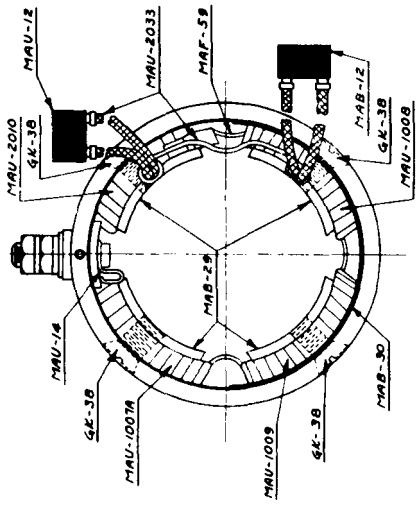
Miscellaneous Parts

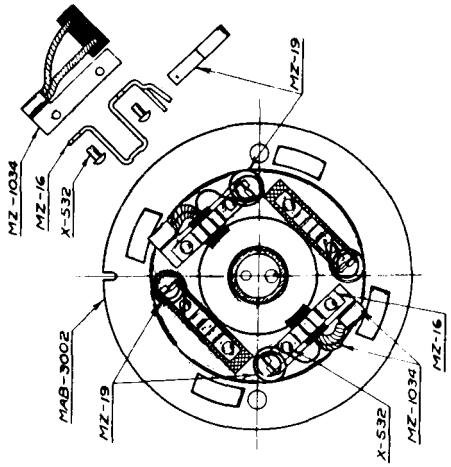
EB-99	1	Bendix Drive Assy.
MAB-1024F	1	Head Band Assy.
MAB-2040A	1	Intermediate Bearing Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1088	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd.Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

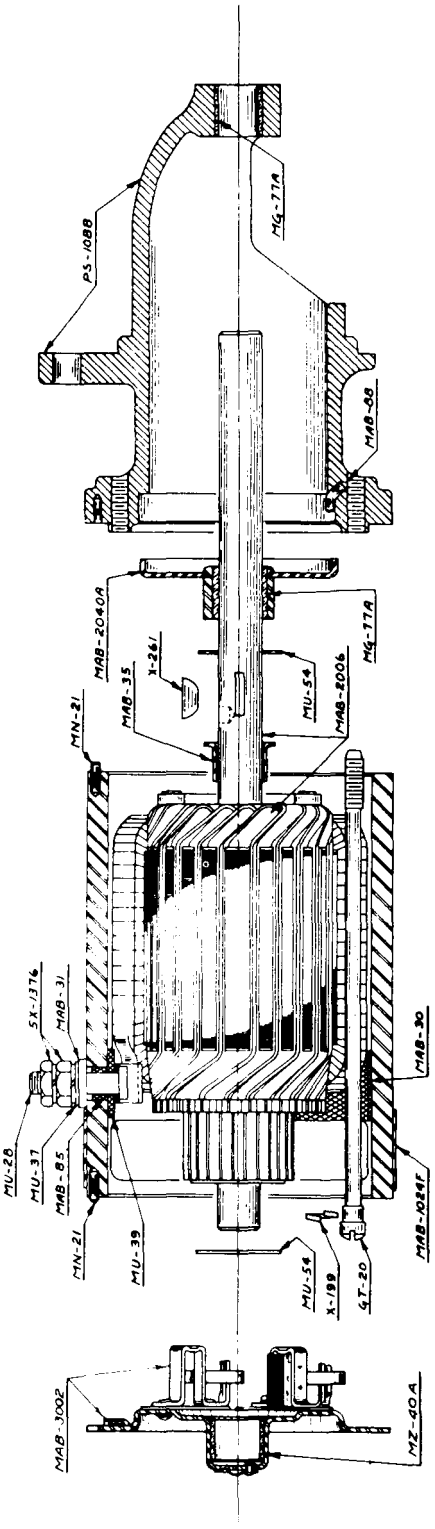
(Issued 12/9/38)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAU-4010 STARTING MOTOR ILLUSTRATION







Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAU-3001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	1	Field Coil Connector
MAU-1007A	1	Field Coil Assy. - U.L.
MAN-14	1	Terminal
MAU-1008	1	Field Coil - L.R.
MAU-1009	1	Field Coil - L.L.
MAU-2010	1	Field Coil Assy. - U.R.
MAU-2033	1	Connector & Br. Assy.
MAB-12	1	BRUSH
MAU-12	1	BRUSH
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
MW-20A	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-3002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-1034	2	BRUSH ASSY. - GROUNDED
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2115	1	ARMATURE ASSEMBLY
MU-54	1	Thrust Washer - 1/32 Thick

Miscellaneous Parts

EB-92	1	BENDIX DRIVE ASSY.
EB-108	2	Lock Washer
EB-7819S	1	Compression Sleeve
EB-8734	1	Take-Up Spring
EB-8803	1	Driving Head
EB-8805	1	DRIVE SPRING
EB-8806	1	Hd. Spring Bolt or Screw
EB-8807	1	Shaft Spring Screw
EB-9211	1	S - A Assembly
MAB-1024F	1	Head Band Assy.
MAD-1058	1	Intermediate Plate Assy.
MG-77A	1	ABSORBENT BRONZE BRG.
ML-18A	1	ABSORBENT BRONZE BRG.
MAH-15	1	Bendix Drive Shaft
MN-1	1	Felt Washer Retainer
MN-6	1	Bendix Shaft Gear
MN-19	1	Felt Washer
PS-1099	1	Pinion Housing Assy.
MN-21	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
8X-87	4	1/4-20x7/8 Hex. Hd. Sc.
X-196	3	#10 Lock Washer
X-199	4	1/4 Lock Washer
X-261	2	#6 Woodruff Key
8X-312	3	#10-32x1/4 Rd. Hd. Screw
8X-505	1	1/8 Pipe Plug
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-16-41)

UNIT	APPLICATION
MAU-4011	Brockway

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAU-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	1	Field Coil Connector
MAU-1007A	1	Field Coil Assy. - U.L.
MAU-14	1	Terminal
MAU-1008	1	Field Coil - L.R.
MAU-1009	1	Field Coil - L.L.
MAU-1010A	1	Field Coil Assy. - U.R.
MAU-1033	1	Connector & Brush Assembly
MAB-12	1	Brush
MAU-12	1	Brush
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
MZ-1034	2	Brush Assy. - Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAH-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

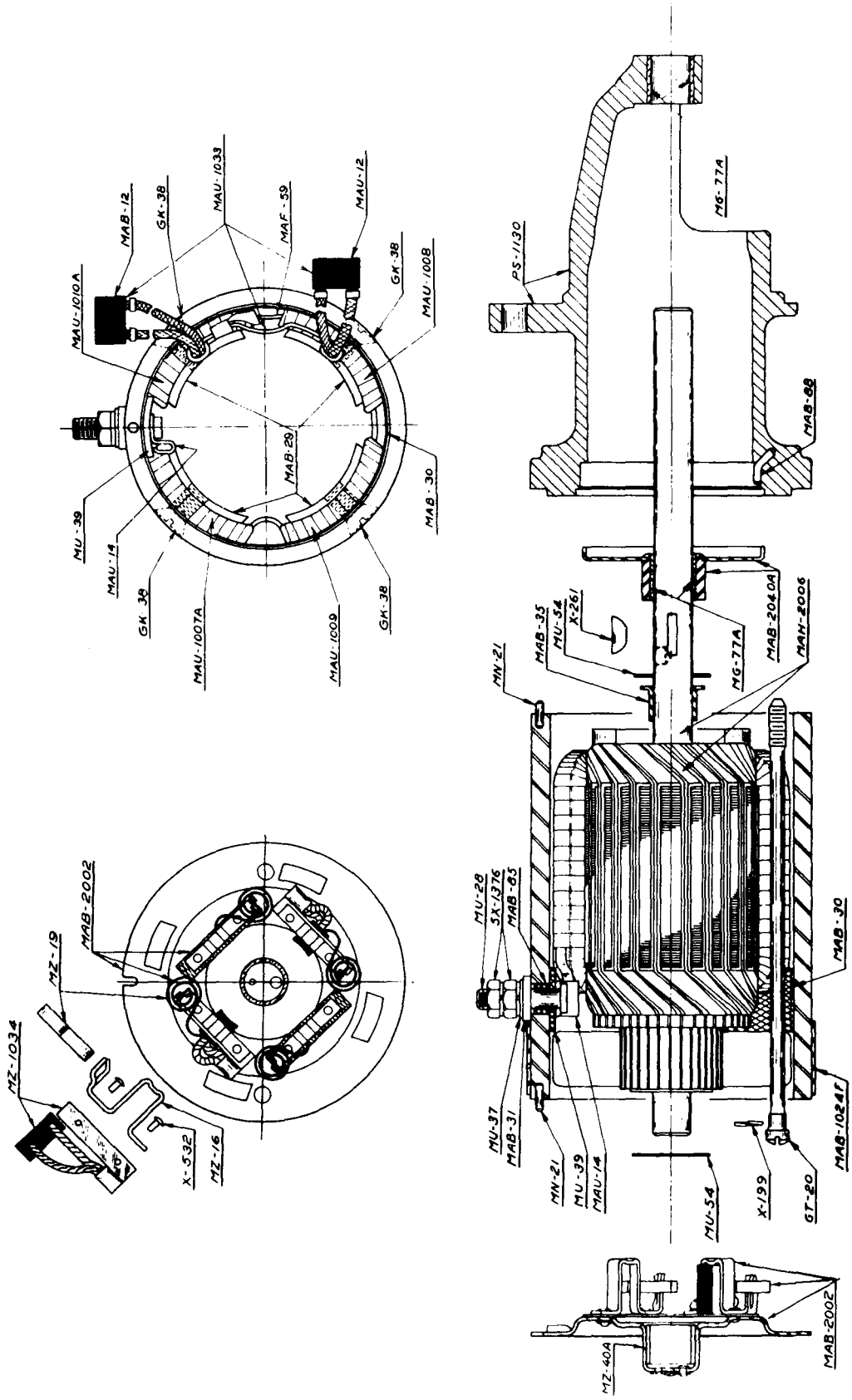
Miscellaneous Parts

EBA-8	1	Bendix Drive Assembly
MAB-1024F	1	Head Band Assembly
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1130	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8/12/38)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAU-4013 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAU-4016 STARTING MOTOR PARTS LIST

MAU-4016

PRELIMINARY

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAU-2112)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	1	Field Coil Connector
MAU-1007A	1	Field Coil Assy.- U.L.
MAN-14	1	Terminal
MAU-1008	1	Field Coil - L.R.
MAU-1009	1	Field Coil - L.L.
MAU-1010A	1	Field Coil Assy.- U.R.
MAU-1033	1	Connector & Brush Assy.
MAB-12	1	BRUSH
MAU-12	1	BRUSH
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Comm. End Head Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-1034	2	BRUSH ASSY.- Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet

Armature Assembly & Parts Used With

MAH-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6L	1	Connector
SS-4003	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EB-92	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7819S	1	Compression Sleeve
EB-8734	1	Take-Up Spring
EB-8803	1	Driving Head
EB-8805	1	DRIVE SPRING
EB-8806	1	Hd. Spring Bolt or Screw
EB-8807	1	Shaft Spring Screw
EB-9211	1	S-A Assembly
MAB-1024F	1	Head Band Assembly
MAB-2040	1	INTERMEDIATE BEARING ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1147	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 1-19-42)

UNIT	APPLICATION
MAU-4016	Diamond T

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAU-3001)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	1	Field Coil Connector
MAU-1007A	1	Field Coil Assy. - U.L.
MAU-14	1	Terminal
MAU-1008	1	Field Coil - L.R.
MAU-1009	1	Field Coil - L.L.
MAU-2010	1	Field Coil Assy. - U.R.
MAU-2033	1	Connector & Brush Assy.
MAB-12	1	BRUSH
MAU-12	1	BRUSH
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAB-3002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	ABSORBENT BRONZE BRG.
MZ-1034	2	BRUSH ASSY. - GROUNDED
X-532	4	1/8x1/4 Oval Head Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2128	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EBA-9	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7819S	1	Compression Sleeve
EB-8734	1	Take-Up Spring
EB-8803	1	Driving Head
EB-8806	1	Hd. Spring Bolt or Screw
EB-8807	1	Shaft Spring Screw
EB-9405	1	DRIVE SPRING
EB-9911	1	S-A Assembly
*	1	Head Band Assembly
MAB-2040A	1	INTERMEDIATE BEARING ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1040A	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	ABSORBENT BRONZE BRG.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 9-13-39)

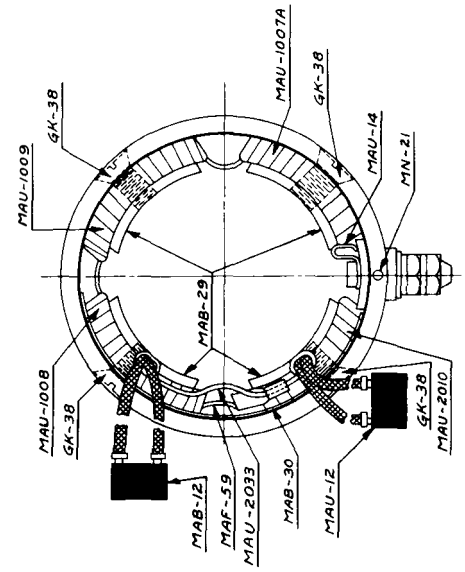
Assembly No.	Head Band Assembly
MAU-4019	MAB-1024F
MAU-4019B	MAU-1024

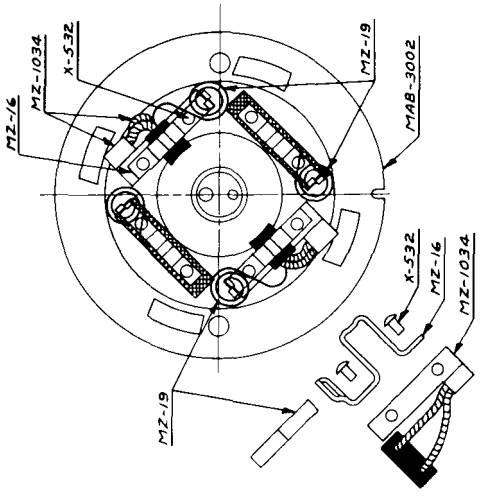
* See table following parts list for part number applying to assembly wanted.

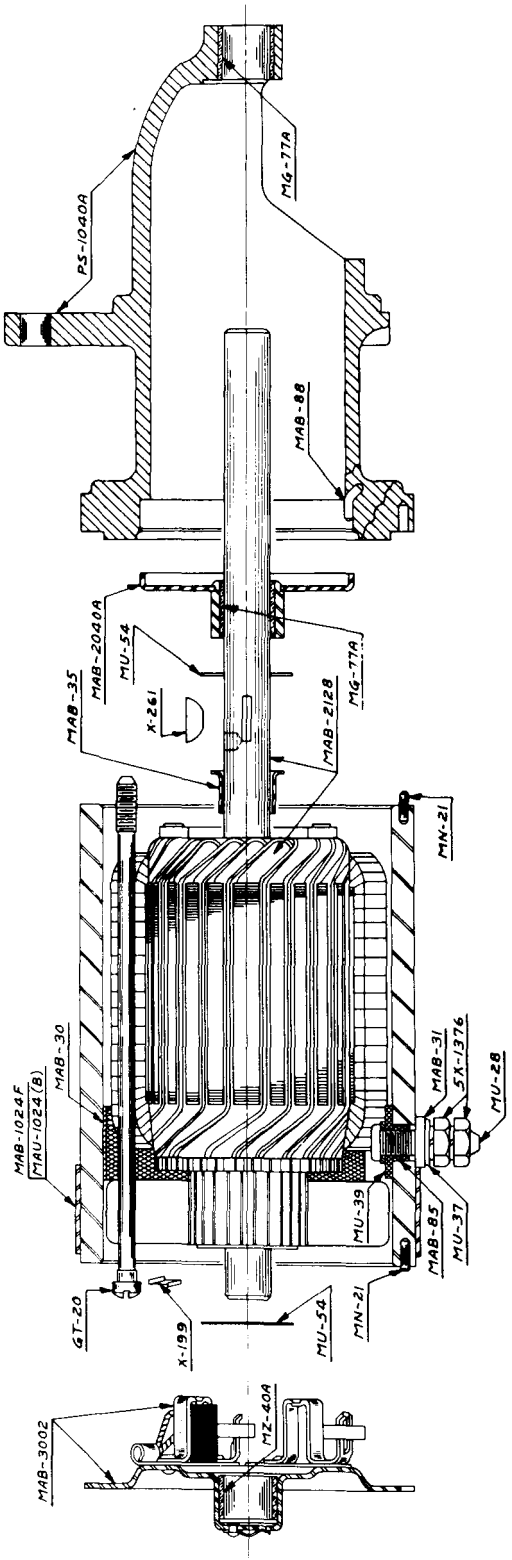
UNIT	APPLICATION
MAU-4019	Witte Engine Co.
MAU-4019B	

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAU-4019.B STARTING MOTOR ILLUSTRATION







Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAU-2001)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAF-59	1	Field Coil Connector
MAU-1007A	1	Field Coil Assy. - U.L.
MAU-14	1	Terminal
MAU-1008	1	Field Coil - L.R.
MAU-1009	1	Field Coil - L.L.
MAU-1010A	1	Field Coil Assy. - U.R.
MAU-1033	1	Connector & Brush Assy.
MAB-12	1	BRUSH
MAU-12	1	BRUSH
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Ins. Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAB-2002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	ABSORBENT BRONZE BRG.
MZ-1034	2	BRUSH ASSY. - GROUNDED
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2129	1	ARMATURE ASSEMBLY
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Miscellaneous Parts

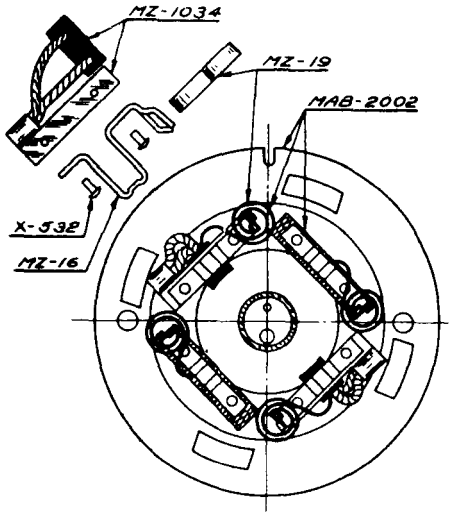
EBA-25	1	BENDIX DRIVE ASSEMBLY
MAB-1024F	1	Head Band Assembly
MAB-2040A	1	INTERMEDIATE BRG. ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1143A	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

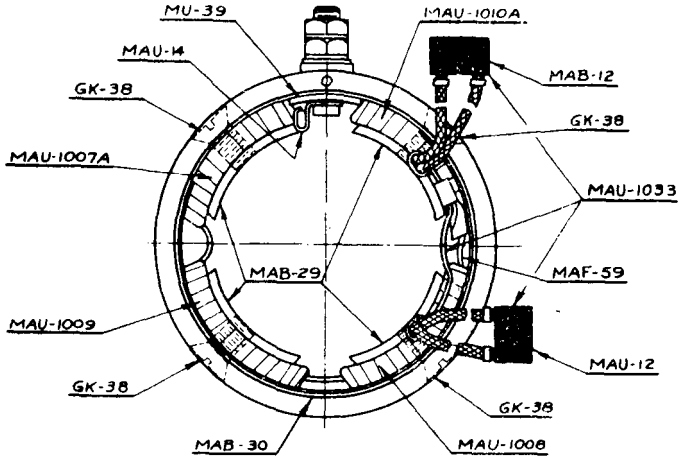
(Issued 4-4-39)

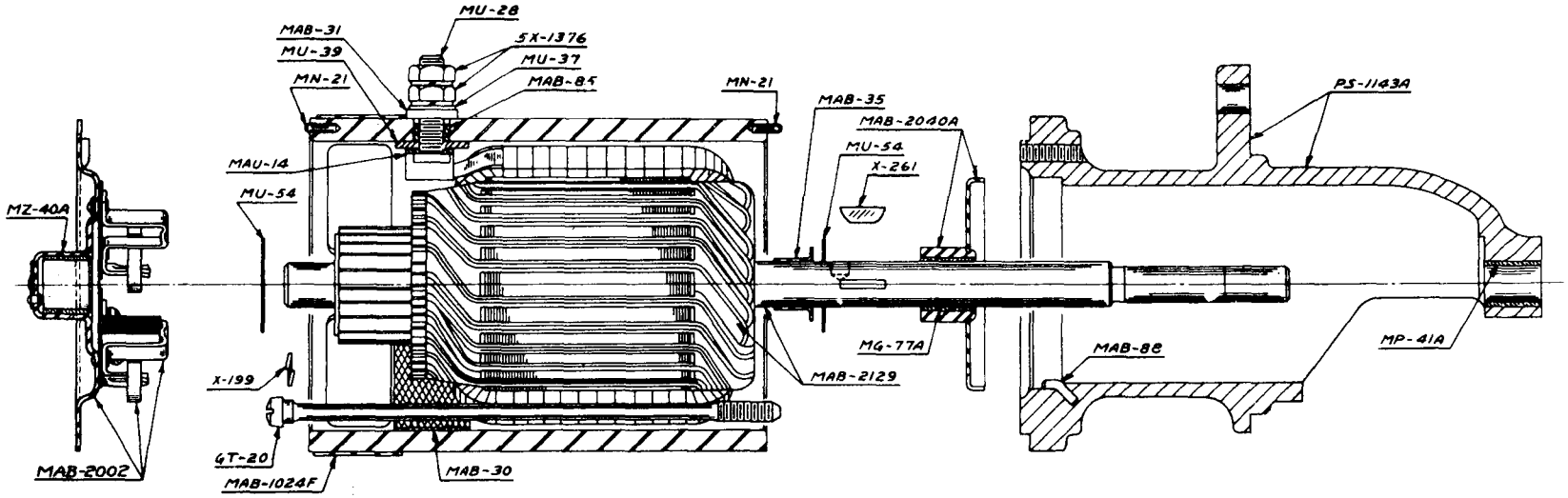
UNIT	APPLICATION
MAU-4022	Brockway

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAU-4022 STARTING MOTOR ILLUSTRATION







Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAU-3112)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	1	Field Coil Connector
MAU-1007A	1	Field Coil Assy. - U.L.
MAU-14	1	Terminal
MAU-1008	1	Field Coil - L.R.
MAU-1009	1	Field Coil - L.L.
MAU-2010	1	Field Coil Assy. - U.R.
MAU-2033	1	Connector & Brush Assy.
MAB-12	1	BRUSH
MAU-12	1	BRUSH
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAB-3002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	ABSORBENT BRONZE BRG.
MZ-1034	2	BRUSH ASSY. - GROUNDED
X-532	4	1/8x1/4 Oval Head Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2133	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer
X-261	2	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

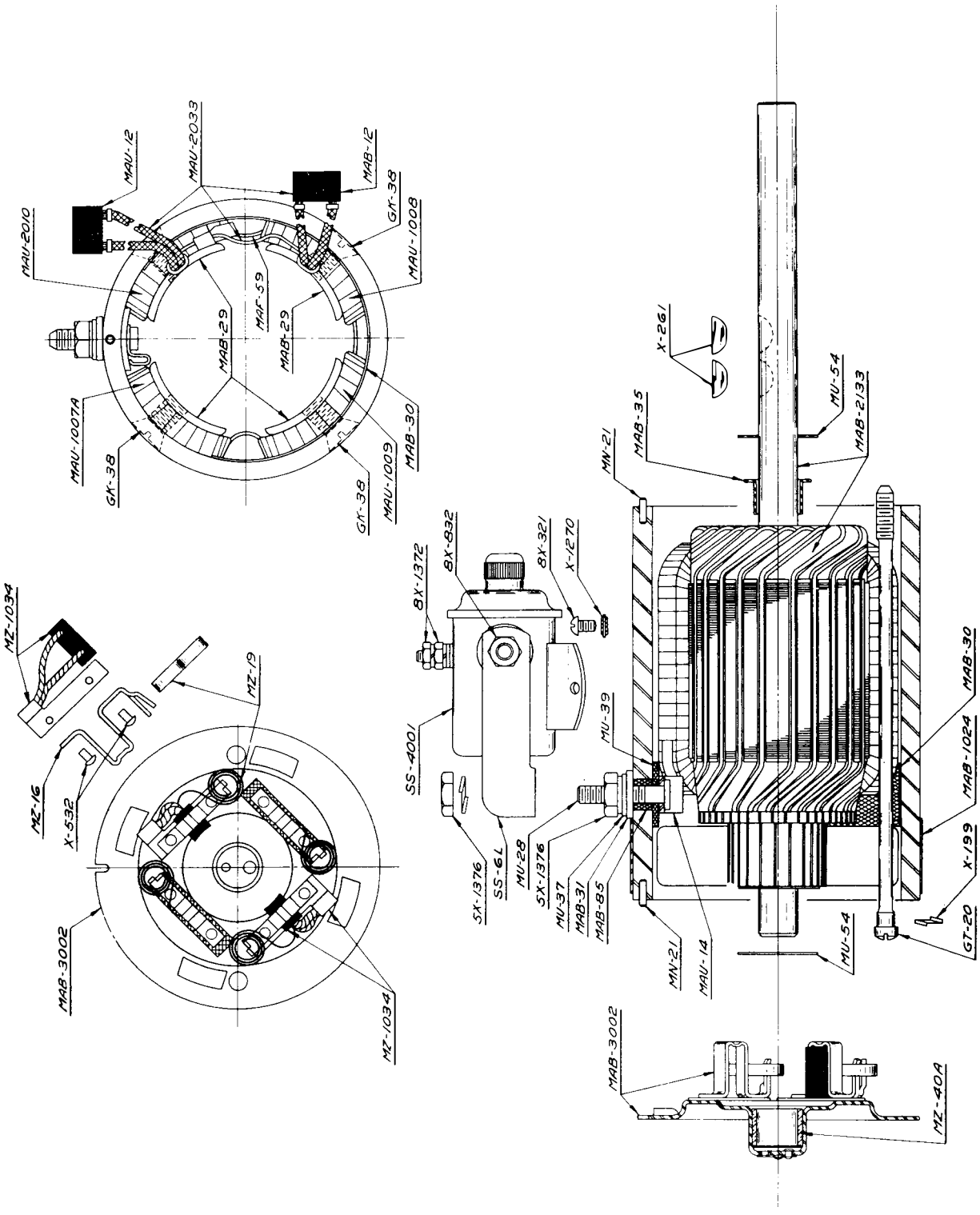
MAB-1024	1	Head Band Assembly
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 9-13-39)

UNIT	APPLICATION
MAU-4023	Insley Mfg. Co.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAU-4023 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20	2	Frame Screw
(MAU-2001)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-29	4	Pole Piece
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAF-59	1	Field Coil Connector
MAU-1007A	1	Field Coil Assy. - U.L.
MAU-14	1	Terminal
MAU-1008	1	Field Coil - L.R.
MAU-1009	1	Field Coil - L.L.
MAU-1010A	1	Field Coil Assy. - U.R.
MAU-1033	1	Connector & Brush Assy.
MAB-12	1	BRUSH
MAU-12	1	BRUSH
MN-21	2	Dowel Pin
MU-28	1	Terminal Post
MU-37	1	5/16 Plain Washer
MU-39	1	Insulating Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAB-2002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	ABSORBENT BRONZE BRG.
MZ-1034	2	BRUSH ASSY. - GROUNDED
X-532	4	1/8x1/4 Oval Head Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAB-2129	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Miscellaneous Parts

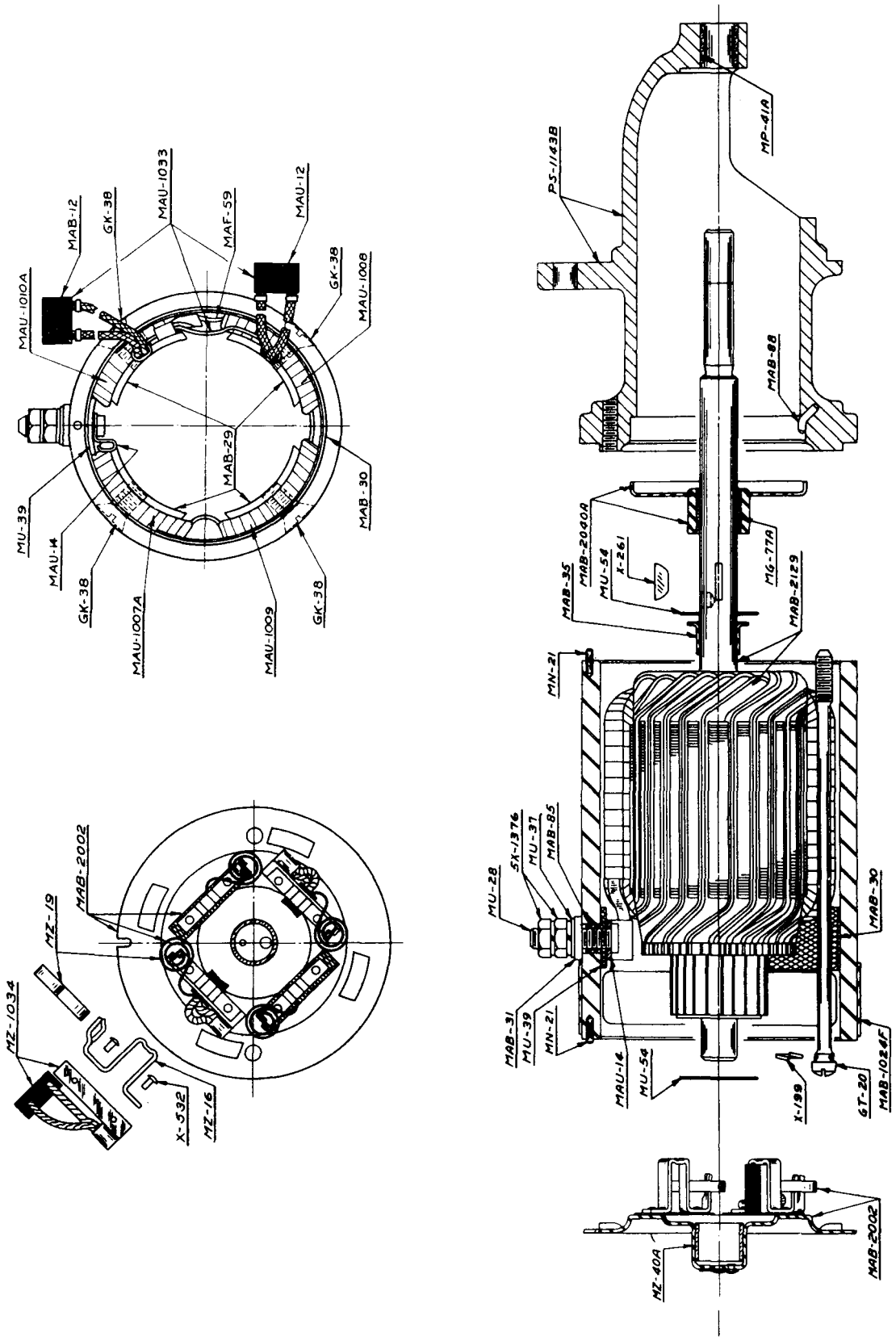
EBA-25	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7819S	1	Compression Sleeve
EB-8711	1	S-A Assembly
EB-8734	1	Take-Up Spring
EB-8803	1	Driving Head
EB-8805	1	DRIVE SPRING
EB-8806	1	Hd. Spring Bolt or Screw
EB-8807	1	Shaft Spring Screw
MAB-1024F	1	Head Band Assembly
MAB-2040A	1	INTERMEDIATE BEARING ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1143B	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MP-41A	1	ABSORBENT BRONZE BRG.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 9-13-39)

UNIT	APPLICATION
MAU-4025	S.K.F. Industries

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -p rts the complete p rt can be assembled as needed."

MAU-4025 STARTING MOTOR ILLUSTRATION



MAU-4027 STARTING MOTOR PARTS LIST

MAU-4027
(Issued 1-29-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
MAU-2112	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12†	1	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAU-12†	1	Brush
MAU-33	1	Connector
MAU-3005S	1	FIELD COIL PACKAGE
MAF-59	1	Connector, Field Coil
MAU-1007A	1	Coil Assy., Field, U.L. Terminal
MAB-65	1	Coil, Field, L.R.
MAU-1008	1	Coil, Field, L.L.
MAU-1009	1	Coil, Field, U.R.
MAU-1010	1	Pin, Dowel
MN-21	2	Stud, Terminal, 5/16-24
MU-28	1	Washer, Plain, Term. Stud, 5/16
MU-37	1	Washer, Ins., Term. Stud, Inner
MU-39	1	Lockwasher, Term. Stud, 5/16
12X-1014	2	Nut, Term. Stud, Hex. 5/16-24
8X-1376	2	Lockwasher, 1/4
12X-199	2	

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2128	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C.E. & Inter., 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector, Switch to Motor
SS-4003	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Sw. Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-8	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8734	1	Spring, Take-Up
EB-8803	1	Head, Drive
EB-8805	1	SPRING, DRIVE
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw, Spring, Shaft
EBA-211	1	Shaft, & Pinion
MAB-1024F	1	Band, Cover
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
PS-1143	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012BS.

UNIT	APPLICATION
MAU-4027	Universal (Marine)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAU-3112)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	1	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAU-12 †	1	Brush
MAU-33	1	Connector
MAU-3005S	1	FIELD COIL PACKAGE
MAF-59	1	Connector, Field Coil
MAU-1007A	1	Coil Assy., Field, U.L.
MAB-65	1	Terminal
MAU-1008	1	Coil, Field, L-R.
MAU-1009	1	Coil, Field, L.L.
MAU-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12 X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24
GT-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-3002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2138	1	ARMATURE
MU-54	1	Washer, Thrust, 1/32'' Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4308	1	SOLENOID STARTING SWITCH
X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
X-1014	2	Lockwasher, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Switch Mtg., Rd. Hd., #10-32x5/16
X-1270	2	Washer Sw. Mtg. Sc. Skpf. #10

Miscellaneous Parts

MAB-1024E	1	Band, Cover
8X-714	1	Screw, Cover Band, Rd. Hd., #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012BS.

UNIT	APPLICATION
MAU-4032	Harnischfeger

(Issued 1-3-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAU-4034 STARTING MOTOR PARTS LIST MAU-4034

(Issued 10-29-53)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
MAU-2112	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-12†	1	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAU-12†	1	Brush
MAU-33	1	Connector
MAU-3005S	1	FIELD COIL PACKAGE
MAF-59	1	Connector, Field Coil
MAU-1007A	1	Coil Assy., Field, U. L. Terminal
MAB-65	1	Coil, Field, L. R.
MAU-1008	1	Coil, Field, L. L.
MAU-1009	1	Coil, Field, U. R.
MAU-1010	1	Pin, Dowel
MN-21	2	Stud, Terminal
MU-28	1	Washer, Plain, Term. Stud, 5/16
MU-37	1	Washer, Ins., Term. Stud, Inner
MU-39	1	Lockwasher, Term. Stud, 5/16
12X-1014	2	Nut, Term. Stud, Hex. 5/16-24
8X-1376	2	Lockwasher, Thru Bolt, 1/4
12X-199	2	

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2128	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C. E. & Intermediate, 1/32" Thick
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4003	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-8	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8734	1	Ring, Take Up
EB-8803	1	Head, Driving
EB-8805	1	SPRING, DRIVE
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw, Spring, Shaft
EBA-211	1	Shaft & Pinion
MAB-1024F	1	Band, Cover
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
PS-1202	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING ABS. BRONZE
X-489	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012BS.

UNIT	APPLICATION
MAU-4034	Chris Craft Marine, Lathrop Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
MAU-3112	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-12†	1	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAU-12†	1	Brush
MAU-33	1	Connector
MAU-3005S	1	FIELD COIL PACKAGE
MAF-59	1	Connector, Field Coil
MAU-1007A	1	Coil Assy., Field, U. L.
MAB-65	1	Terminal
MAU-1008	1	Coil, Field, L.R.
MAU-1009	1	Coil, Field, L.L.
MAU-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-3002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2128	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32'' Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4003	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-9	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8734	1	Ring, Take Up
EB-8803	1	Head, Drive
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw, Spring, Shaft
EB-9405	1	SPRING, DRIVE
EB-9911	1	Shaft & Pinion
MAB-1024F	1	Band, Cover
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
PS-1202	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
X-489	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012BS

UNIT	APPLICATION
MAU-4035	Chris Craft Marine, Lathrop Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAU-3112)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	1	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAU-12 †	1	Brush
MAU-33	1	Connector
MAU-3005S	1	FIELD COIL PACKAGE
MAF-59	1	Connectior, Field Coil
MAU-1007A	1	Coil Assy., Field, U.L.
MAB-65	1	Terminal
MAU-1008	1	Coil, Field, L.R.
MAU-1009	1	Coil, Field, L.L.
MAU-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-3002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2128	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, 1/32'' Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4003	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-173	1	Nut, Hex., #10-32
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Sc., Skpf. #10

Miscellaneous Parts

EBA-9	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8734	1	Ring, Take-Up
EB-8803	1	Head, Driving
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw, Spring, Shaft
EB-9405	1	SPRING, DRIVE
EB-9911	1	Shaft & Pinion
MAB-1024F	1	Band, Cover
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
PS-1040D	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012BS.

UNIT	APPLICATION
MAU-4036	Atlas Diesel

(Issued 1-3-49)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAU-3144)	1	Frame & Field Assy
GK-38	4	Screw, Pole Shoe
MAB-12†	1	Brush
MAB-30	1	Insulation, Field Conn.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAU-12†	1	Brush
MAU-33	1	Connector
MAU-3005S	1	FIELD COIL PACKAGE
MAF-59	1	Connector, Field Coil
MAU-1007A	1	Coil Assy., Field, U.L.
MAB-65	1	Terminal
MAU-1008	1	Coil, Field, L.R
MAU-1009	1	Coil, Field, L.L.
MAU-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
X-1014	2	Lockwasher, Term. Stud, 5/16
5X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-3002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2115	1	ARMATURE
MU-54	1	Washer, Thrust, 1/32" Thick
X-261	2	Key, Woodruff #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
E[illegible]-83	1	BENDIX DRIVE ASSY.
MAD-1154	1	Bearing Assy., Intermediate
MG-77A	1	BEARING, ABS. BRONZE
ML-18A	1	BEARING, ABS. BRONZE
MAH-15	1	Shaft, Drive, Bendix
MAU-34	1	Spacer, Bendix Shaft
MAW-24	1	Band, Cover
MN-1	1	Retainer, Felt Washer
MN-6	1	Gear
MN-19	1	Washer, Felt
PS-1099	1	Housing Assy., Pinion
MN-21	1	Pin, Dowel
MP-41A	1	BEARING, ABS. BRONZE
8X-89	4	Screw, Housing, Hex. Hd. 1/4-20x1
12X-196	3	Lockwasher, Retainer Sc. #10
12X-199	4	Lockwasher, Housing Screw 1/4
8X-312	3	Screw, Retainer, Rd. Hd. #10-32x1/4
8X-505	1	Plug, Pipe, 1/8
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012BS.

UNIT	APPLICATION
MAU-4040	Southern Coach

(Issued 10-19-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
(MAU-2112)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	1	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAU-12 †	1	Brush
MAU-33	1	Connector
MAU-3005S	1	FIELD COIL PACKAGE
MAF-59	1	Connector, Field Coil
MAU-1007A	1	Coil Assy., Field, U.L.
MAB-65	1	Terminal
MAU-1008	1	Coil, Field, L.R.
MAU-1009	1	Coil, Field, L.L.
MAU-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal, 5/16-24
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002C	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAH-2006	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector, Switch to Motor
SS-4003	1	SWITCH, SOLENOID
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EB-92	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8734	1	Ring, Take-Up
EB-8803	1	Head, Driving
EB-8805	1	SPRING, DRIVE
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw, Spring, Shaft
EB-9211	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MAU-1024	1	Band, Cover
PS-1147A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012BS.

UNIT	APPLICATION
MAU-4041	Hercules

(Issued 1-9-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
MAU-2112	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12†	1	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAU-12†	1	Brush
MAU-33	1	Connector
MAU-3005S	1	FIELD COIL PACKAGE
MAF-59	1	Connector, Field Coil
MAU-1007A	1	Coil Assy., Field, U. L.
MAB-65	1	Terminal
MAU-1008	1	Coil, Field, L. R.
MAU-1009	1	Coil, Field, L. L.
MAU-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C. E. & Inter., 1/32" Thick
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector, Switch to Motor
SS-4003	1	SWITCH, SOLENOID STARTING
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
MAB-1024F	1	Band, Cover
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
PS-1139B	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012BS.

UNIT	APPLICATION
MAU-4042	Clinton Machine Co.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
MAU-3112	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12†	1	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAU-12†	1	Brush
MAU-33	1	Connector
MAU-3005S	1	FIELD COIL PACKAGE
MAF-59	1	Connector, Field Coil
MAU-1007A	1	Coil Assy., Field, U.L. Terminal
MAB-65	1	Coil, Field, L.R.
MAU-1008	1	Coil, Field, L.L.
MAU-1009	1	Coil, Field, U.R.
MAU-1010	1	Pin, Dowel
MN-21	2	Stud, Terminal
MU-28	1	Washer, Plain, Term. Stud, 5/16
MU-37	1	Washer, Ins., Term. Stud, Inner
MU-39	1	Lockwasher, Term. Stud, 5/16
12X-1014	2	Nut, Term. Stud, Hex. 5/16-24
8X-1376	2	Lockwasher, Thru Bolt, 1/4
12X-199	2	

Comm. End Head Assembly & Parts Used With

MAB-3002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4003	1	SWITCH, SOLENOID
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EB-99	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7805	1	SPRING, DRIVE
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8734	1	Ring, Take-Up
EB-9911	1	Shaft & Pinion
MAB-1024F	1	Band, Cover
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
PS-1139B	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012BS.

UNIT	APPLICATION
MAU-4043	Nordberg

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAU-4045 STARTING MOTOR PARTS LIST

MAU-4045
(Issued 2-4-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
MAU-2112	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12†	1	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAU-12†	1	Brush
MAU-33	1	Connector
MAU-3005S	1	FIELD COIL PACKAGE
MAF-59	1	Connector, Field Coil
MAU-1007A	1	Coil Assy., Field, U. L.
MAB-65	1	Terminal
MAU-1008	1	Coil, Field, L. R.
MAU-1009	1	Coil, Field, L. L.
MAU-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002C	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAH-2006	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C. E. & Intermediate, 1/32'' Thick
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector
SS-4003	1	SWITCH, SOLENOID STARTING
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-8	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8734	1	Ring, Take-Up
EB-8803	1	Head, Drive
EB-8805	1	SPRING, DRIVE
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw Spring, Shaft
EBA-211	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MAU-1024	1	Band, Cover
PS-1147A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012BS.

UNIT	APPLICATION
MAU-4045	Diamond T

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File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAU-4046 STARTING MOTOR PARTS LIST

MAU-4046
(Issued 2-24-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
MAU-2112	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-12†	1	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAU-12†	1	Brush
MAU-33	1	Connector
MAU-3005S	1	FIELD COIL PACKAGE
MAF-59	1	Connector, Field Coil
MAU-1007A	1	Coil Assy., Field, U. L.
MAB-65	1	Terminal
MAU-1008	1	Coil, Field, L. R.
MAU-1009	1	Coil, Field, L. L.
MAU-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-2002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C. E. & Int., 1/32" Thick
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4003	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	BEARING, ABS. BRONZE
MAB-1024F	1	Band, Cover
PS-1139D	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012BS.

UNIT	APPLICATION
MAU-4046	Nordberg (Marine)

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File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAU-4047 STARTING MOTOR PARTS LIST

MAU-4047
(Issued 5-20-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GT-20A	2	Bolt, Thru
MAU-3112	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-12 †	1	Brush
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAU-12 †	1	Brush
MAU-33	1	Connector
MAU-3005S	1	FIELD COIL PACKAGE
MAF-59	1	Connector, Field Coil
MAU-1007A	1	Coil Assy., Field, U.L.
MAB-65	1	Terminal
MAU-1008	1	[illegible] Field, L.R.
MAU-1009	1	Co[illegible]ield, L.L.
MAU-1010	1	Coil, [illegible] U.R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Termin[illegible]
MU-37	1	Washer, Plai[illegible]m. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAB-3002	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded

Armature Assembly & Parts Used With

MAB-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
X-261	1	Key, Woodruff, D.E. #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4003	1	Switch, Solenoid Starting
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/[illegible]
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EB-99	1	Bendix Drive Assembly
EB-108	2	Lockwasher
EB-7805	1	Spring DRIVE
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Sha[illegible]
EB-7819S	1	Sleeve, Compress[illegible]
EB-8503	1	Head, Drive
EB-8734	1	Ring, Take-Up
EB-9911	1	Shaft & Pinion
MAB-1024F	1	Band, Cover
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	BEARING, ABSORBENT BRONZE
PS-1139D	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABSORBENT BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012BS.

UNIT	APPLICATION
MAU-4047	Nordberg Marine

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GJ-20	2	Frame Screw
(MAW-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAT-28	1	Terminal Post
MAT-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-59	1	Equalizer
MAW-1009A	1	Field Coil Assy.-Left
MAW-12	1	Brush
MAW-1010A	1	Field Coil Assy.-Right
MAW-12	1	Brush
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAW-2002	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	5/8 Steel Washer
MAW-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

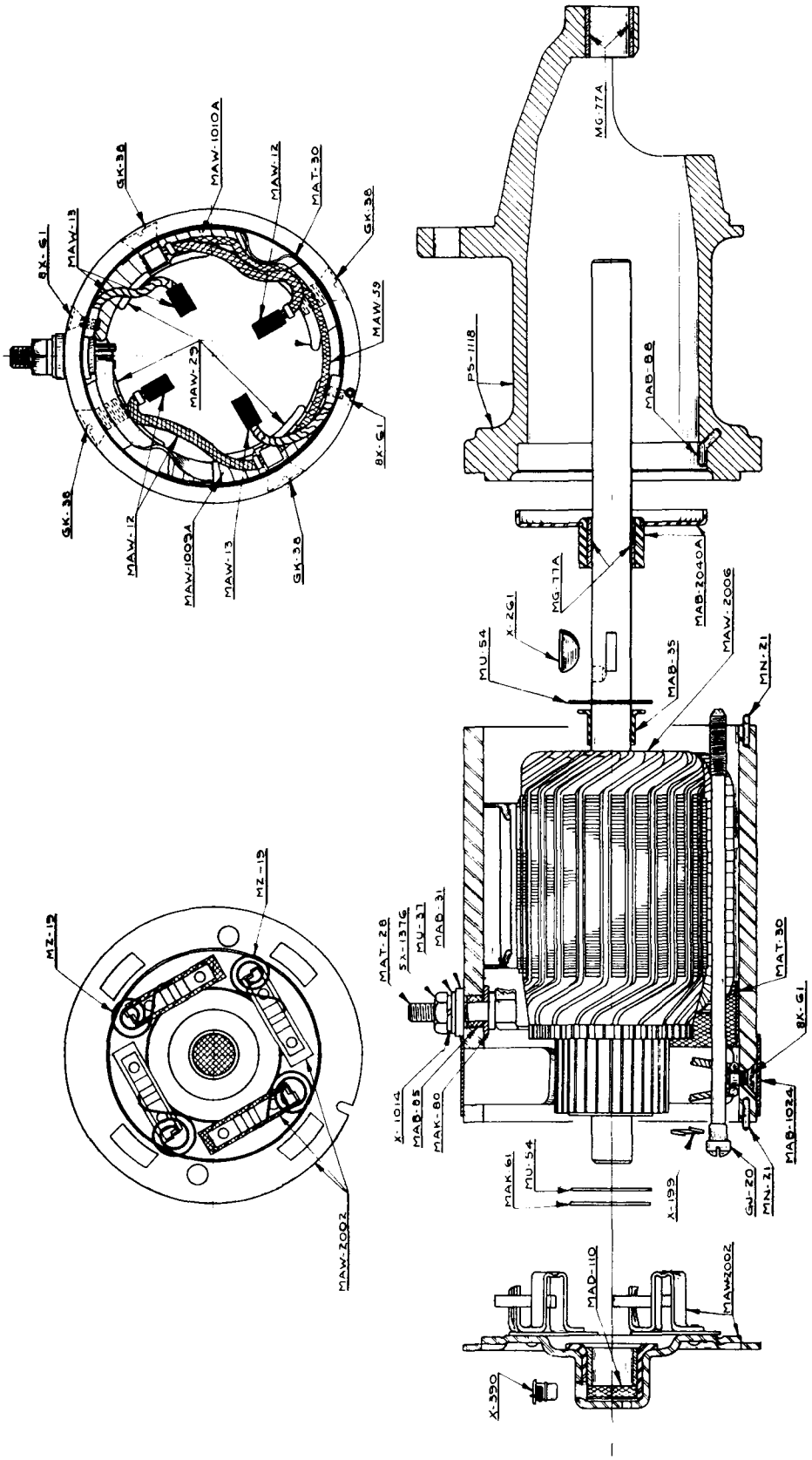
Miscellaneous Parts

EBA-12	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assembly
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1118	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-26-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the com lete part can be assembled as needed."

MAW-4001 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2036)	1	Frame & Field Assy.
DK-45	1	Ins. Washer
GK-38	4	Pole Piece Screw
MAT-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-35	1	Terminal Post
MAW-37	1	Ins. Bushing
MAW-39	1	Ins. Block
MAW-51	1	Terminal Post Ins.
MAW-58	1	Equalizer
MAW-1009BS	1	Field Coil Assy. - Left
MAW-12	1	Brush
MAW-1010BS	1	Field Coil Assy. - Right
MAW-12	1	Brush
MN-21	2	Dowel Pin
SW-763	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAW-2002A	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	Armature Assembly
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2677A	1	Starting Switch Assy.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-3099	1	Starter Clutch Assy.
MAW-33	1	Pivot Screw
MAW-2048	1	Yoke Assembly
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1090S	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

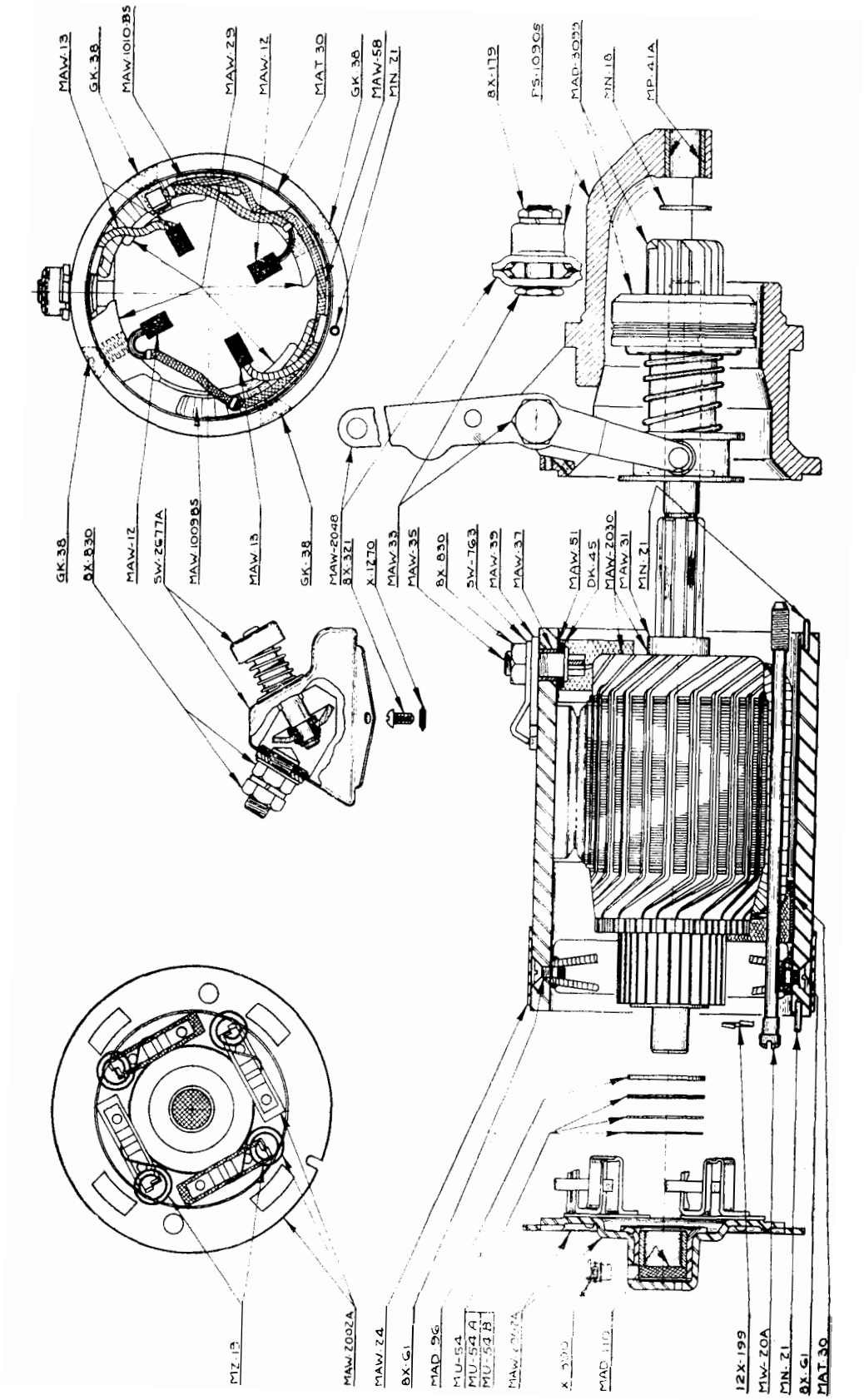
(Issued 8-16-40)

Unit	Application
MAW-4002	Dodge, Dodge Truck, Plymouth

* Use as required.

"NOTE: Where par numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAW-4002 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2036A)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38B	4	Pole Piece Screw
MAT-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-35	1	Terminal Post
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAW-51	1	Term. Post Insulation
MAW-58	1	Equalizer
MAW-1009BS	1	Field Coil Assy. - Left
MAW-12	1	Brush
MAW-1010BS	1	Field Coil Assy. - Right
MAW-12	1	Brush
MN-21	2	Dowel Pin
SW-764	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAW-2002A	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	Armature Assembly
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

* Use as required.

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2813	1	Starting Switch Assembly
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-3099	1	Starter Clutch Assy.
MAD-102	1	Shift Collar
MAD-105	1	Shift Spring
MAD-106	1	Lock Spring Ring
MAW-33	1	Pivot Screw
MAW-2048	1	Yoke Assembly
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

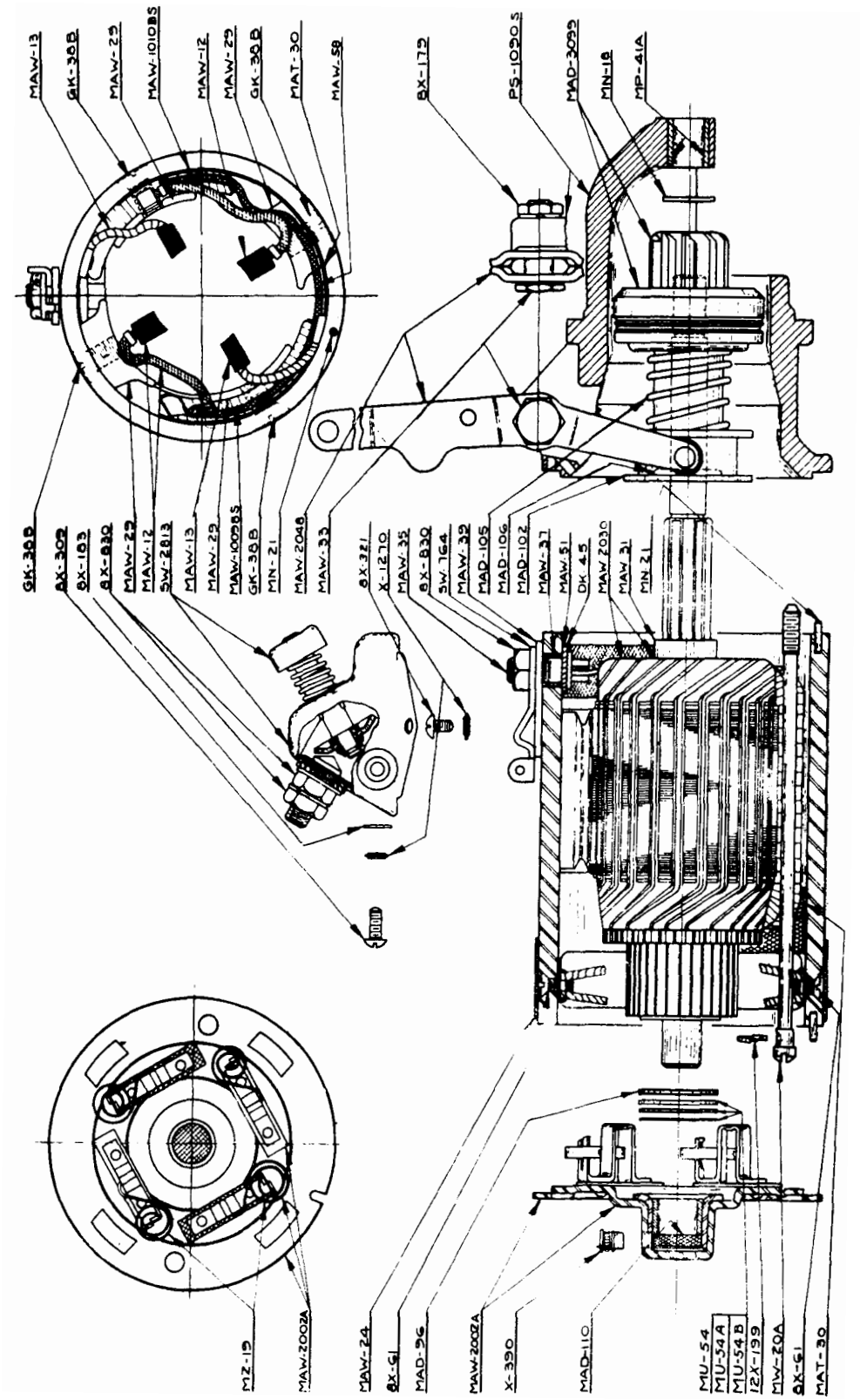
Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1090S	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 6-11-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAW-4803 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2036)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud
GK-38	4	Screw, Pole Shoe
MAT-30	1	Insulation, Field Connection
MAW-12‡	2	Brush
MAW-13‡	2	Brush, Grounded
MAW-35	1	Stud, Terminal
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Insulation Block
MAW-51	1	Insulation, Term. Stud
MAW-58	1	Equalizer
MAW-1009B	1	Coil, Field, Left
MAW-1010B	1	Coil, Field, Right
MN-21	2	Pin, Dowel
SW-763	1	Contact, Switch Lower
8X-61	2	Screw, Brush Ground, Flat hd., #10-32x7/16
8X-830	1	Nut, Term. Stud, Hex., 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Washer, Lock, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002A	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler

Armature Assembly & Parts Used With

MAD-96	1	Washer, Thrust
MAW-2030	1	Armature Assy.
MAW-31	1	Spacer, Armature Shaft
MU-54	*	Washer, Thrust, 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick

Switch Assembly & Parts Used With

SW-2677A	1	Switch, Starting
12X-201	1	Washer, Lock, 3/8
8X-830	1	Nut, Hex., 3/8-16
8X-321	2	Screw, Mtg. Switch, Rd. hd., #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Sc., #10
		1 2 3 4 5

Starter Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-33	1	Screw, Pivot
MAW-2054	1	Yoke
MAW-3132	1	Starter Clutch
8X-179	1	Nut, Yoke Pin, Hex., 3/8-16
12X-201	1	Washer, Lock, Yoke Pin, 3/8
		Miscellaneous Parts
MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1090S	1	Housing Assy., Pinion
MP-41A	1	Bearing, Absorbent Bronze
8X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

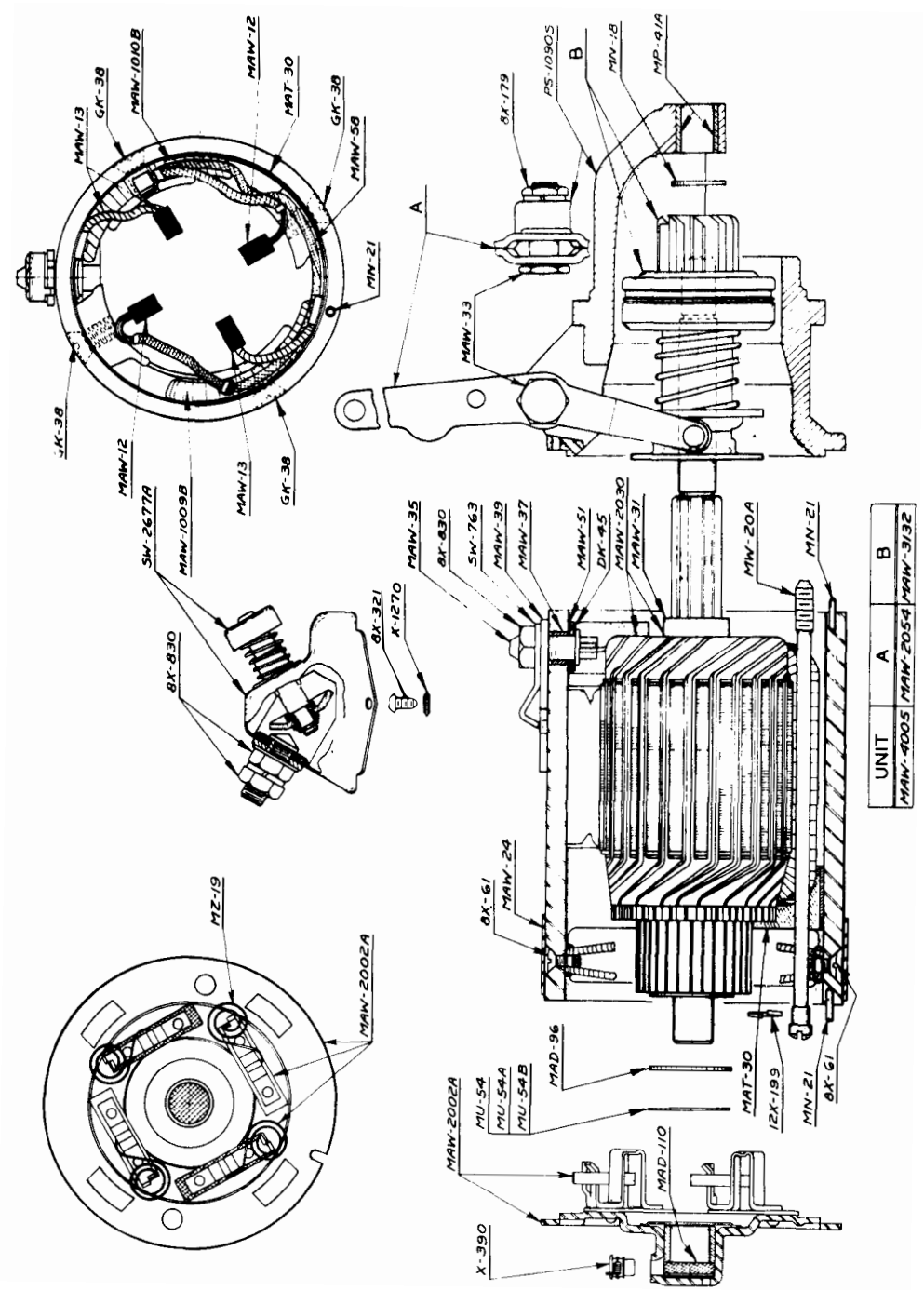
(Issued 3-6-44)

‡ Brush Set, Service, MAW-2012S.

* Use as required.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAW-4005 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2057)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38B	4	Pole Piece Screw
MAW-13	2	Brush Assy. - Grounded
MAW-28	1	Terminal Post
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAW-53	1	Field Connection Ins.
MAW-59	1	Equalizer
MAW-1009A	1	Field Coil Assy. - Left
MAW-12	1	Brush
MAW-1010A	1	Field Coil Assy. - Right
MAW-12	1	Brush
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAW-2002A	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	5/8 Steel Washer
MAW-2064	1	Armature Assembly
MN-18	1	Thrust Washer
MU-54	1	Thrust Washer
X-261	1	#6 Woodruff Key

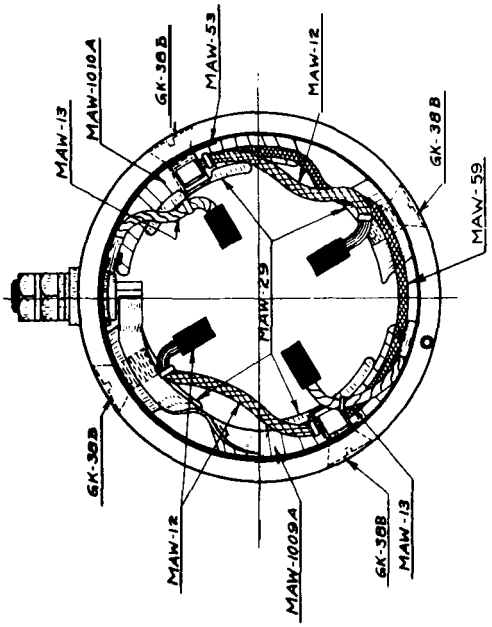
Miscellaneous Parts

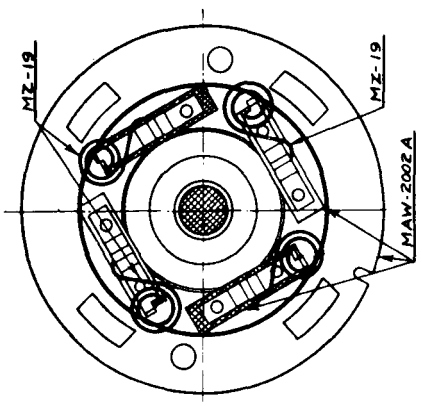
EBA-2	1	Bendix Drive Assembly
MAW-24	1	Head Band
PS-1100	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

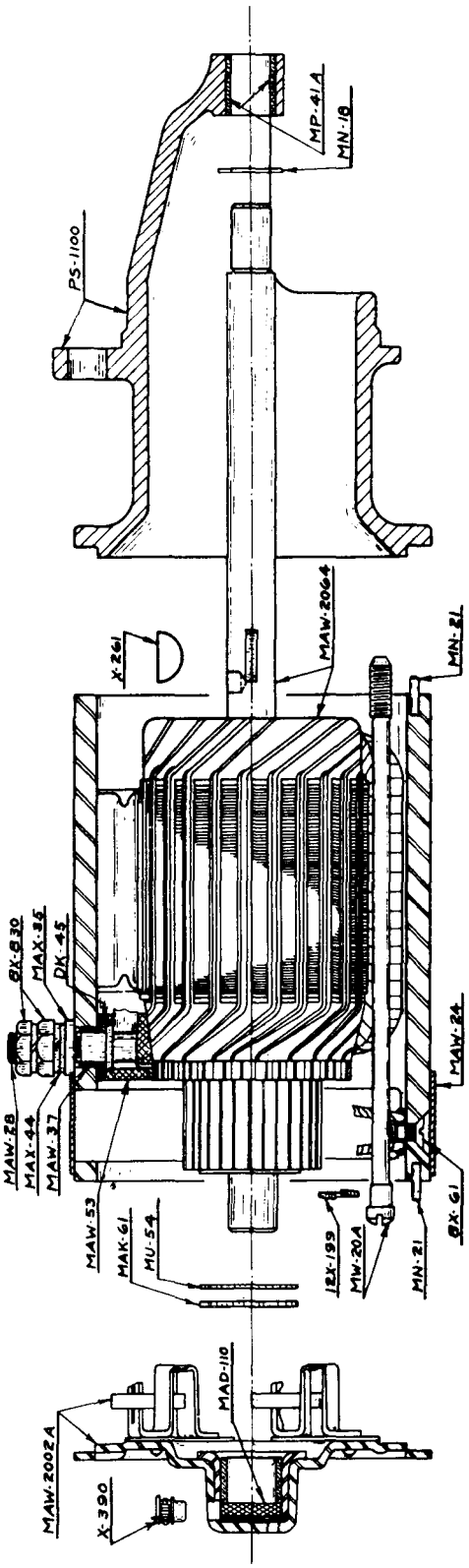
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"NOTE: Where p t number are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be sembled as needed."

MAW-4006 STARTING MOTOR ILLUSTRATION







ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAW-4007,A STARTING MOTOR PARTS LIST

MAW-4007,A
(Issued 3-9-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAW-3065)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud, Inner
GK-38	4	Screw, Pole Shoe
MAT-30	1	Insulation, Field Connection
MAW-13 †	2	Brush, Grounded
MAW-28	1	Stud, Terminal
MAW-37	1	Bushing, Ins., Term. Stud
MAW-59	1	Equalizer
MAW-3005S	1	FIELD COIL PACKAGE
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MAX-35	1	Washer, Ins., Term. Stud, Outer
MAX-44	1	Washer, Term. Stud, 3/8
MAY-12A †	2	Brush
MN-21	2	Pin, Dowel
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-201	2	Lockwasher, Term. Stud,3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-3002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2064	1	ARMATURE
MU-54	1	Washer, Thrust, C.E., 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAW-167R	1	Connector
MU-37D	1	Washer, Plain, Switch Term., 5/16
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EB-99A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7805A	1	SPRING, DRIVE
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8734A	1	Ring, Take-Up
EB-9911A	1	Shaft & Pinion
MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1100	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAY-2012AS.

UNIT	APPLICATION
MAW-4007	Chrysler (Marine)
MAW-4007A	Gray (Marine)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAW-4007M STARTING MOTOR PARTS LIST

MAW-4007M

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-3065A)	1	Frame & Field Assembly
GK-38C	4	Screw, Pole Shoe
MAT-30	1	Insulation, Field Conn.
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-28A	1	Stud, Terminal
MAW-37A	1	Bushing, Ins., Term. Stud
MAW-59	1	Equalizer
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MAX-35	1	Washer, Ins., Term. Stud, Outer
MN-21A	2	Pin, Dowel
MN-47B	1	Washer, Plain, Term. Stud, 3/8
WSE-41	1	Washer, Ins., Term. Stud, Inner
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-2845	2	Nut, Term. Stud, Hex. 3/8-16
8X-2889	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
MN-20C	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-3002C	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Arm. Thrust, Comm. End
MAW-2064M	1	ARMATURE ASSY.
MU-54	1	Washer, Thrust, 1/32" thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAW-167R	1	Connector
MU-37G	1	Washer, Plain, Sw. Term., 5/16
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg. Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EB-99A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7805A	1	SPRING, DRIVE
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8734A	1	Ring, Take Up
EB-9911A	1	Shaft & Pinion
MAB-1024N	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1100B	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABSORBENT BRONZE
X-2873	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
X-2875	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† Brush Set, Service MAW-2012S

NOTE: - Part numbers shown in parenthesis are not recommended for service.

UNIT	APPLICATION
MAW-4007M	Chrysler (Marine)

(Issued 1-19-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAW-4008,A STARTING MOTOR PARTS LIST

MAW-4008,A
(Issued 3-9-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAW-2065)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud, Inner
GK-38	4	Screw, Pole Shoe
MAT-30	1	Insulation, Field Connection
MAW-12 †	2	Brush, Insulated
MAW-13 †	2	Brush, Grounded
MAW-28	1	Stud, Terminal
MAW-37	1	Bushing, Ins., Term. Stud
MAW-59	1	Equalizer
MAW-3005S	1	FIELD COIL PACKAGE
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MAX-35	1	Washer, Ins., Term. Stud, Outer
MAX-44	1	Washer, Term. Stud, 3/8
MN-21	2	Pin, Dowel
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2064	1	ARMATURE
MU-54	1	Washer, Thrust, C.E., 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAW-167R	1	Connector
MU-37D	1	Washer, Plain, Switch Term., 5/16
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneouw Parts

Part No.	No. Used	Name of Part
EBA-2A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8705A	1	SPRING, DRIVE
EB-8734A	1	Ring, Take-Up
EBA-211A	1	Shaft & Pinion
MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1100	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAW-2012S.

UNIT	APPLICATION
MAW-4008	Chrysler (Marine) Hobart Bros., Massey Harris
MAW-4008A	Gray (Marine)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2065A)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAT-30	1	Insulation, Field Connection
MAW-12 †	2	Brush
MAW-13 †	2	Brush, Grounded
MAW-28A	1	Stud, Terminal
MAW-37A	1	Bushing, Ins., Term. Stud
MAW-59	1	Equalizer
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MAX-35	1	Washer, Ins., Term. Stud, Outer
MN-21A	2	Pin, Dowel
MN-47B	1	Washer, Term. Stud, Plain 3/8
WSE-41	1	Washer, Ins., Term. Stud, Inner
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-2845	2	Nut, Term. Stud, Hex. 3/8-16
8X-2889	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
MW-20C	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002E	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Arm. Thrust, C.E.
MAW-2064M	1	ARMATURE
MU-54	1	Washer, Thrust
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAW-167R	1	Connector
MU-37G	1	Washer, Plain, 5/16
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
8X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-2A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8705A	1	SPRING, DRIVE
EB-8734A	1	Ring, Take up
EBA-211A	1	Shaft & Pinion
MAB-1024N	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1100B	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-2873	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-2875	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† BRUSH SET, SERVICE, MAW-2012S.

UNIT	APPLICATION
MAW-4008M	Chrysler Marine

(Issued 1-23-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2088)	1	Frame & Field Assembly
DK-45	1	Ins. Washer
GK-38B	4	Pole Piece Screw
MAT-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-35	1	Terminal Post
MAW-37	1	Ins. Bushing
MAW-39	1	Insulating Block
MAW-51	1	Field Connection Ins.
MAW-58	1	Equalizer
MAW-1009BS	1	Field Coil Assy.- Left
MAW-12	1	Brush
MAW-1010BS	1	Field Coil Assy.-Right
MAW-12	1	Brush
MN-21	2	Dowel Pin
SW-763	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MAX-45	1	Bracket
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
8X-467	2	1/4-20x3/8 Hex. Hd. Sc.
X-1272	2	1/4 Skpf. Washer

Comm. End Plate Assembly & Parts Used With

MAW-2002A	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	Armature Assembly
MAW-31	1	Armature Shaft Spacer
MU-64	*	Thrust Washer - 1/32" Thick
MU-64A	*	Thrust Washer - 1/64" Thick
MU-64B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2677A	1	Starting Switch Assembly
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-3099	1	Starter Clutch Assembly
MAD-102	1	Shift Collar
MAD-105	1	Shift Spring
MAD-106	1	Lock Spring Ring
MAW-33	1	Pivot Screw
MAW-2089	1	Yoke Assembly
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

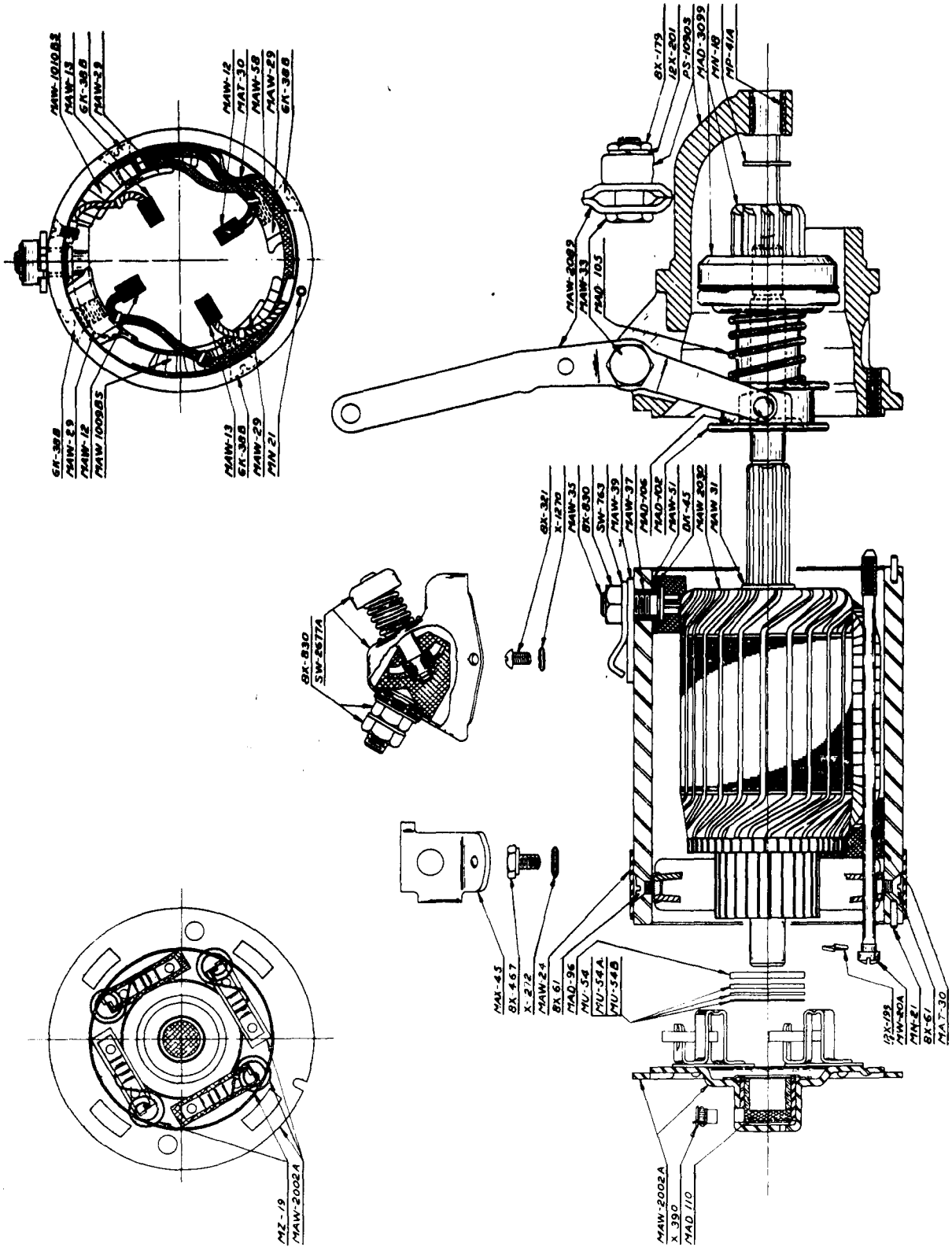
MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1090S	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-7-37)

* Used as required.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAW-4009 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2088A)	1	Frame & Field Assembly
DK-45	1	Ins. Washer
GK-38B	4	Pole Piece Screw
MAT-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-35	1	Terminal Post
MAW-37	1	Ins. Bushing
MAW-39	1	Insulating Block
MAW-51	1	Field Connection Ins.
MAW-58	1	Equalizer
MAW-1009BS	1	Field Coil Assy.-Left
MAW-12	1	Brush
MAW-1010BS	1	Field Coil Assy.-Right
MAW-12	1	Brush
MN-21	2	Dowel Pin
SW-764	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex Nut
MAX-45	1	Bracket
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
8X-467	2	1/4-20x3/8 Hex. Hd. Screw
X-1272	2	1/4 Skpf. Washer

Comm. End Plate Assembly & Parts Used With

MAW-2002A	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	Armature Assembly
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

* Used as required.

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2813	1	Starting Switch Assy.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Sc.
X-1270	2	#10 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-3099	1	Starter Clutch Assembly
MAD-102	1	Shift Collar
MAD-105	1	Shift Spring
MAD-106	1	Lock Spring Ring
MAW-33	1	Pivot Screw
MAW-2089	1	Yoke Assembly
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

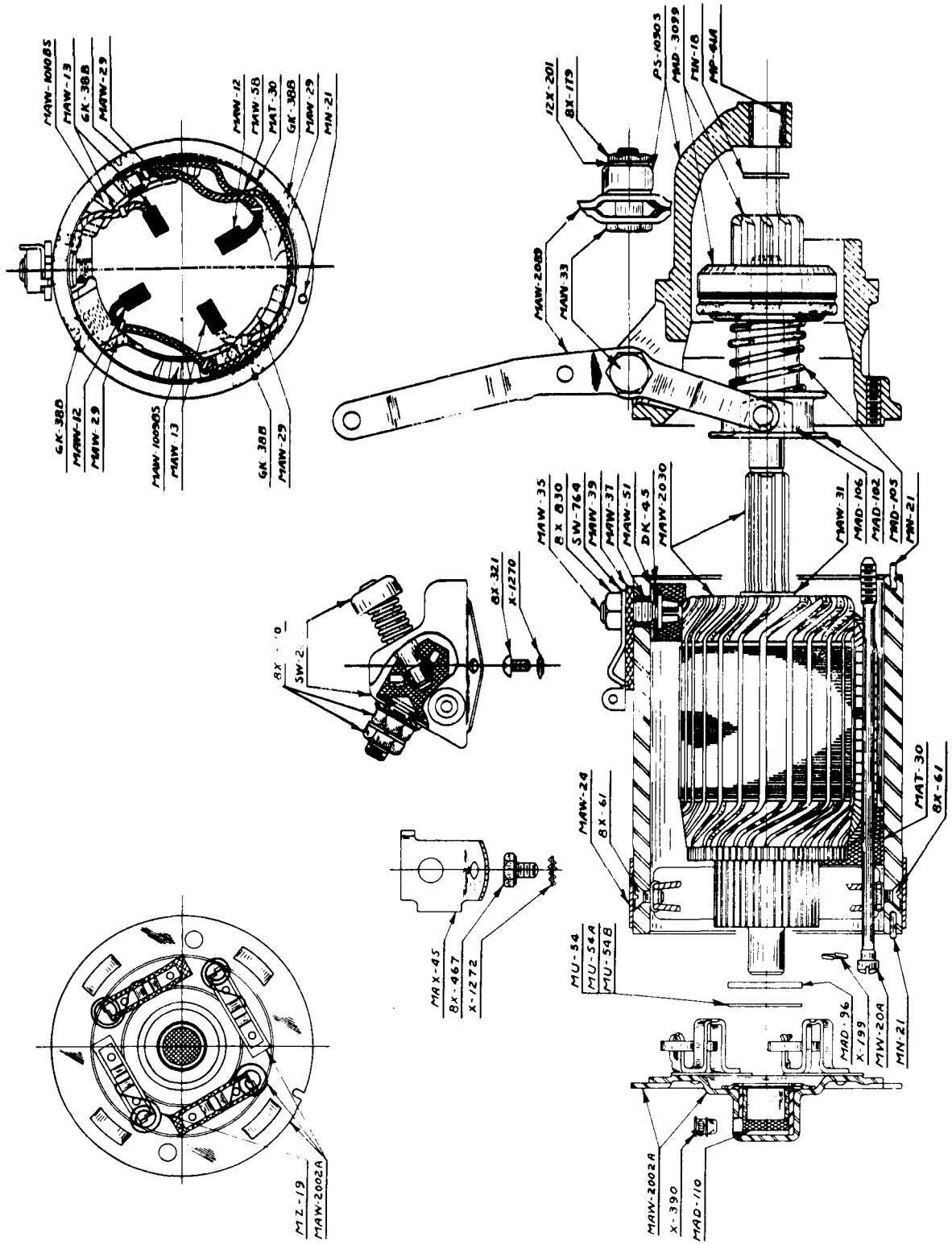
Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1090S	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-7-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAW-4010 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2036)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAT-30	1	Field Connection Ins.
MAW-13‡	2	Brush Assy.- Grounded
MAW-29	4	Pole Piece
MAW-35	1	Terminal Post
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAW-51	1	Terminal Post Ins.
MAW-58	1	Equalizer
MAW-1009BS	1	Field Coil Assy.-Left
MAW-12‡	1	Brush
MAW-1010BS	1	Field Coil Assy.-Right
MAW-12‡	1	Brush
MN-21	2	Dowel Pin
SW-763	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAW-2002A	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2677A	1	STARTING SWITCH ASSEMBLY
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Starter Clutch & Parts Used With

**	1	STARTER CLUTCH ASSEMBLY
MAW-33	1	Pivot Screw
**	1	Yoke Assembly
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1090S	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-7-41)

Assembly No.	Starter Clutch	Yoke Assy.
MAW-4013	MAD-3099	MAW-2103A
MAW-4013A	MAD-3099	MAW-2103
MAW-4013B	MAW-3132	MAW-2103

‡ SERVICE BRUSH SET MAW-2012S.

* Use as required.

** See table following parts list for part number applying to assembly wanted.

UNIT	APPLICATION
MAW-4013,A,B	Dodge Truck

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2109)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAT-28	1	Terminal Post
MAT-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-59	1	Equalizer
MAW-1009A	1	Field Coil Assy. - Left
MAW-12	1	Brush
MAW-1010A	1	Field Coil Assy. - Right
MAW-12	1	Brush
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
MU-37	1	5/16 Plain Washer
MW-20	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAW-2002B	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	5/8 Steel Washer
MAW-2091	1	Armature Assembly
MU-54	1	Thrust Washer
X-261	1	#6 Woodruff Key

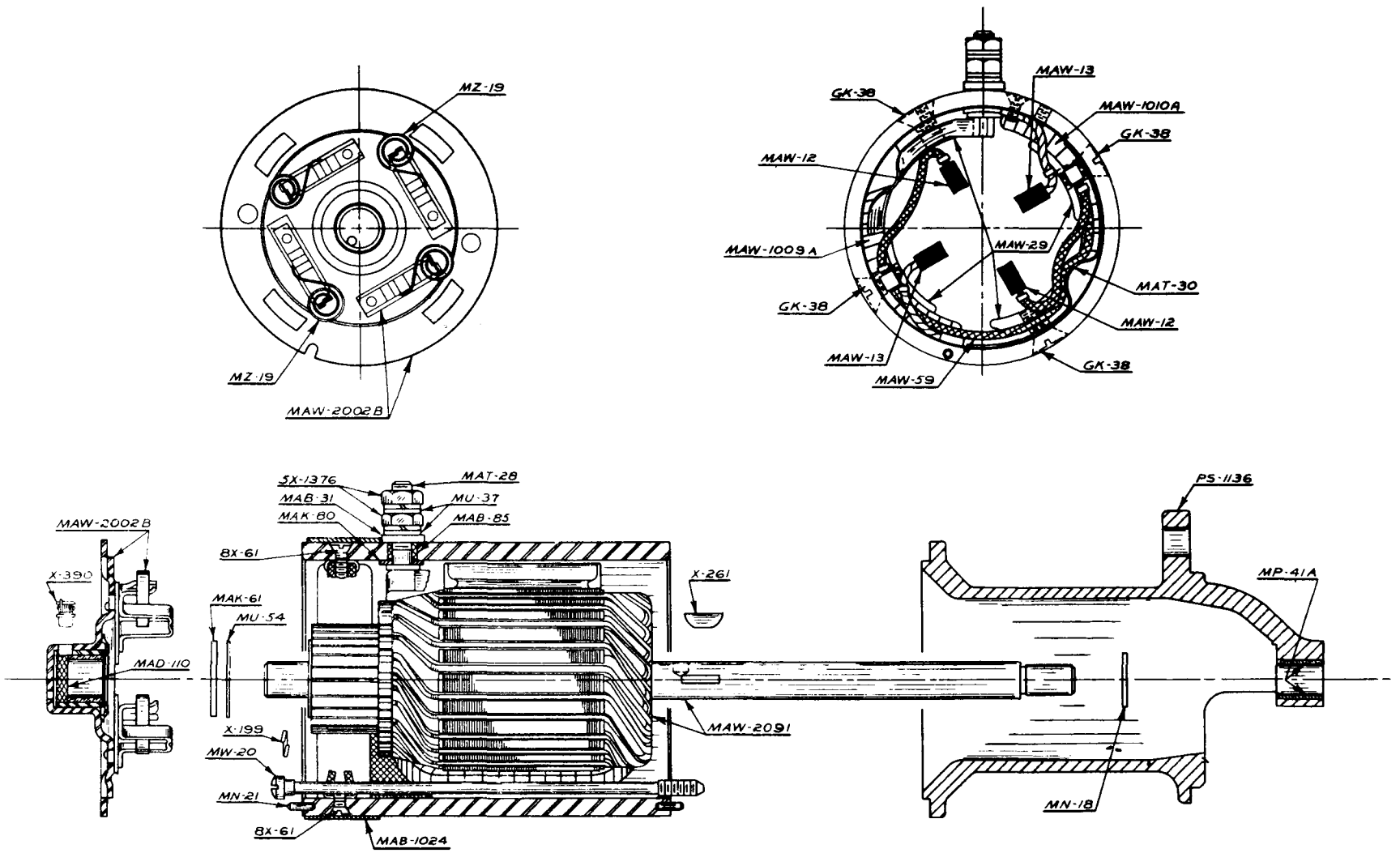
Miscellaneous Parts

EBA-12	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assembly
MN-18	1	Thrust Washer
PS-1136	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-8-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

MAW-4015 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2036A)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAT-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-35	1	Terminal Post
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAW-51	1	Terminal Post Ins.
MAW-58	1	Equalizer
MAW-1009BS	1	Field Coil Assy. - Left
MAW-12	1	Brush
MAW-1010BS	1	Field Coil Assy. - Right
MAW-12	1	Brush
MN-21	2	Dowel Pin
SW-764	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Plate Assy. & Parts Used With

MAW-2002A	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assy. & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	Armature Assy.
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assy. & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2813	1	Starting Switch Assy.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Starter Clutch Assy. & Parts Used With

MAD-95	1	Spring Retainer
MAD-3099	1	Starter Clutch Assy.
MAW-95	1	Yoke Spring
MAW-2111	1	Yoke Assembly
MZ-116	1	Yoke Pin
8X-146	1	1/4-20 Hex. Nut
8X-179	1	3/8-16 Hex. Nut
12X-199	1	1/4 Lock Washer
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

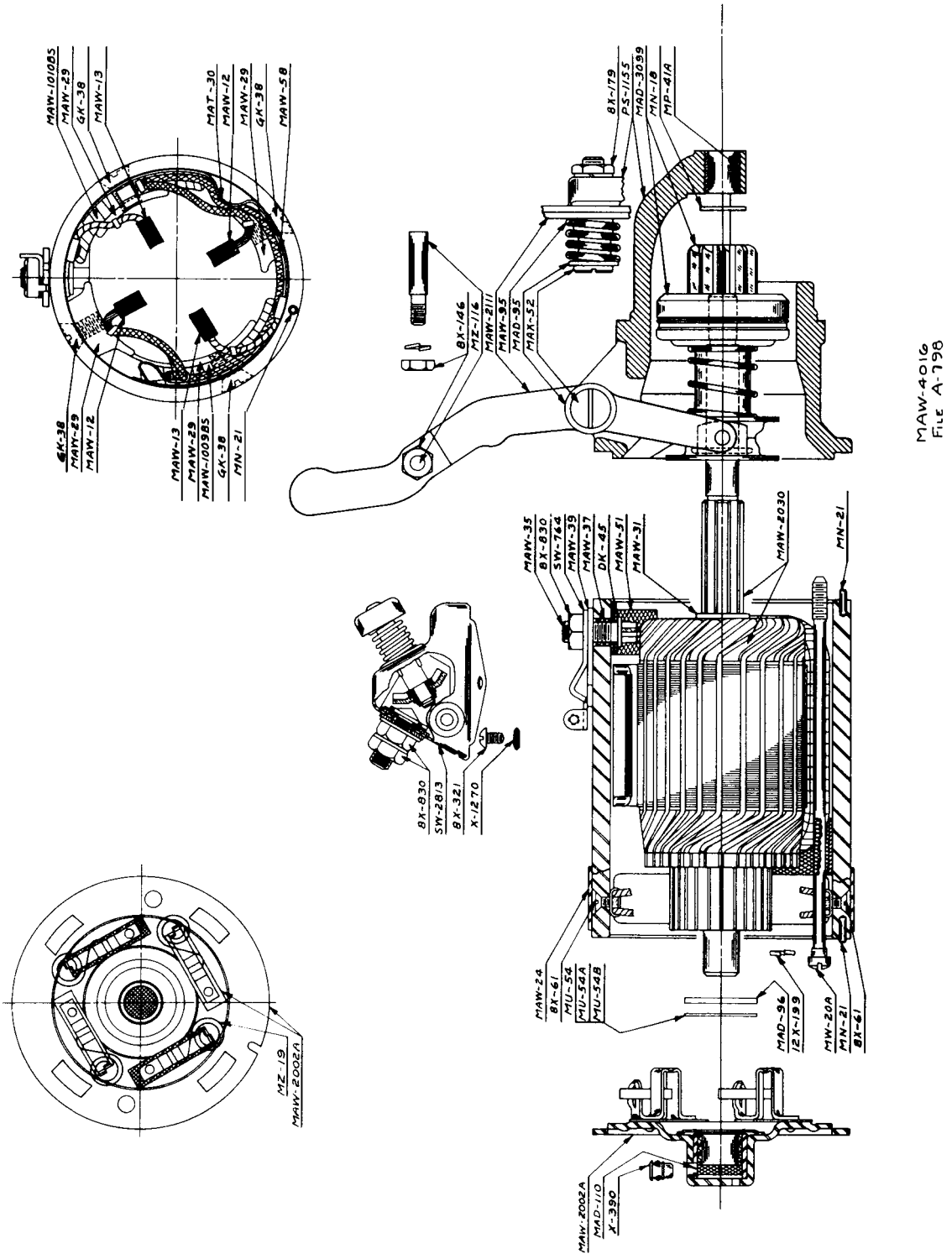
MAW-24	1	Head Band
MAX-52	1	Yoke Pin
MN-18	1	Thrust Washer
PS-1155	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-3-38)

* Use as required.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

MAW-4016 STARTING MOTOR ILLUSTRATION



MAW-4016
File A-198

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2119)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAT-28	1	Terminal Post
MAW-13	2	BRUSH ASSY. - Grounded
MAW-29	4	Pole Piece
MAW-51	1	Field Connection Ins.
MAW-59	1	Equalizer
MAW-1009A	1	Field Coil Assy.-Left
MAW-12	1	BRUSH
MAW-1010A	1	Field Coil Assy.-Right
MAW-12	1	BRUSH
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut
MW-20A	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAW-2002A	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-121R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

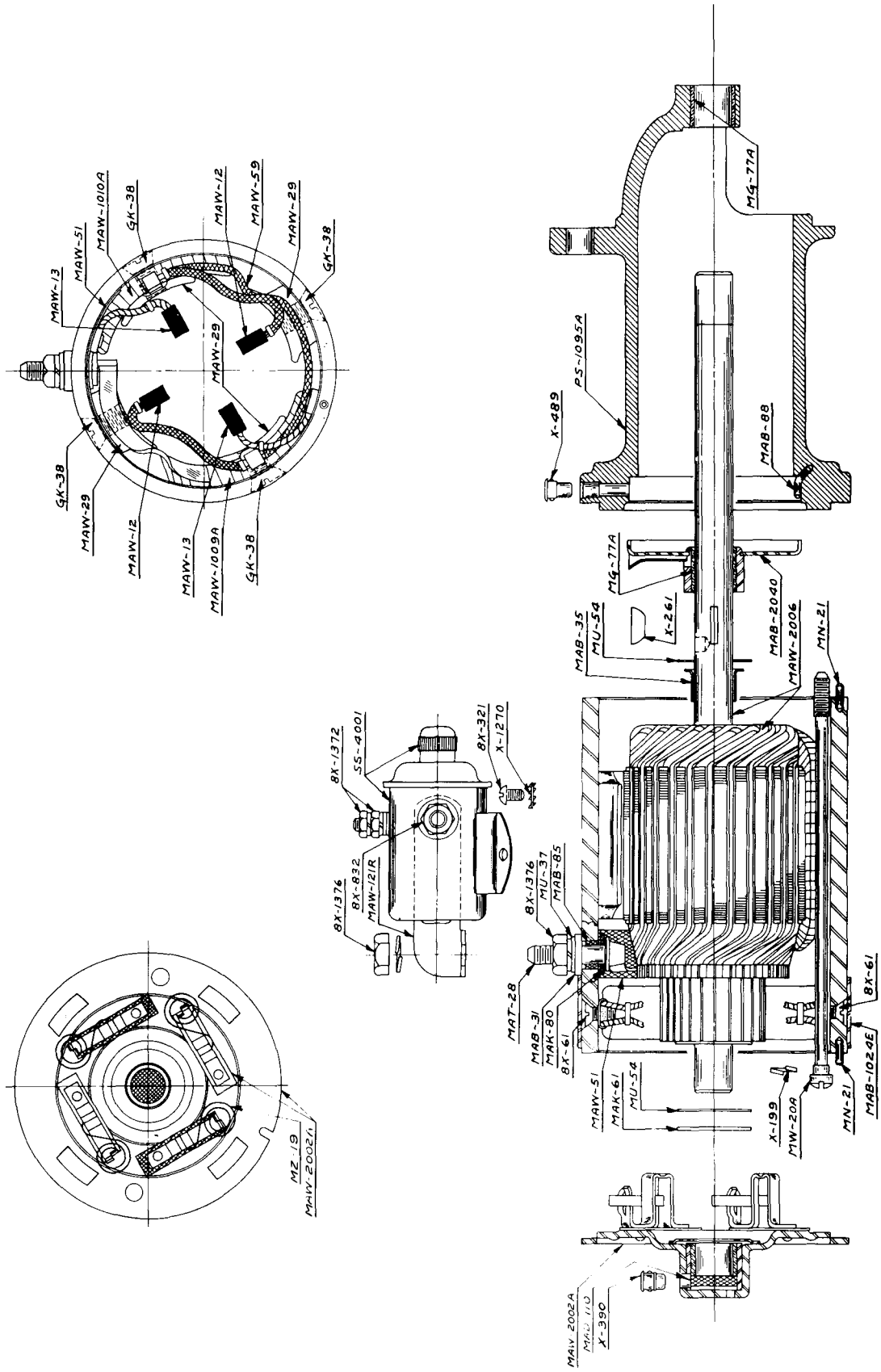
EBA-34	1	BENDIX DRIVE ASSY.
EB-108	2	Lock Washer
EB-8505	1	DRIVE SPRING
EB-8506	1	Head Spring Screw
EBA-1213	1	Anti-Drift Spring
EBA-1225	1	Meshing Spring
EBA-1231	1	Screw Shaft Assy.
EBA-1232	1	Pinion Assembly
EBA-1233	1	Retaining Ring
EBA-2907	1	Shaft Spring Screw
MAB-1024E	1	Head Band Assembly
MAB-2040	1	INTERMEDIATE BRG. ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1095A	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
8X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 4-25-41)

UNIT	APPLICATION
MAW-4018	Packard

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAW-4018 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2036A)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAT-30	1	Field Connection Ins.
MAW-13‡	2	Brush Assy.- Grounded
MAW-29	4	Pole Piece
MAW-35	1	Terminal Post
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAW-51	1	Terminal Post Ins.
MAW-58	1	Equalizer
MAW-1009BS	1	Field Coil Assy.-Left
MAW-12‡	1	Brush
MAW-1010BS	1	Field Coil Assy.-Right
MAW-12‡	1	Brush
MN-21	2	Dowel Pin
SW-764	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAW-2002A	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick

Switch Assembly & Parts Used With

SW-2813	1	STARTING SWITCH ASSEMBLY
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer
		1 2 3 4 5

Starter Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAD-95	1	Spring Retainer
**	1	STARTER CLUTCH ASSEMBLY
MAW-127	1	Yoke Spring
MAW-2126	1	Yoke Assembly
MAX-52	1	Yoke Pin
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1174	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-8-41)

Assembly No.	Starter Clutch
MAW-4019	MAD-3099
MAW-4019A	MAW-3132

* Use as required.

** See table following parts list for part number applying to assembly wanted.

‡ SERVICE BRUSH SET MAW-2012S.

UNIT	APPLICATION
MAW-4019,A	DeSoto

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(*)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud
MAT-28	1	Stud, Terminal
MAT-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-59	1	Equalizer
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MN-21	2	Pin Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24
MU-37	1	Washer, Plain, 5/16
MW-20A	2	Bolt, Thru
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	Washer, Steel
MAW-2091	1	Armature
MN-18	1	Washer, Thrust, D.E.
MU-54	1	Washer, Arm. Thrust, Comm. End & Intermediate
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBA-12	1	Bendix Drive Assembly
EB-108	2	Lock Washer
EB-7806	1	Hd. Spring Screw
EBA-507	1	Shaft Spring Screw
EBA-1205	1	Drive Spring
EBA-1213	1	Anti-Drift Spring
EBA-1225	1	Meshing Spring
EBA-1231	1	Screw Shaft Assy.
EBA-1232	1	Pinion Assy.
EBA-1233	1	Retaining Ring
*	1	Band, Cover
PS-1136	1	Housing Assy., Pinion
MP-41A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

* See table following parts list for part number applying to assembly wanted.

† Brush Set, Service MAW-2012S.

Assembly No.	Frame & Field	Band, Cover
MAW-4020	MAW-2001	MAB-1024
MAW-4020A	MAW-2202	MAW-24

(Issued 9-18-46)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2119)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAT-28	1	Terminal Post
MAW-13	2	BRUSH ASSY. - Grounded
MAW-29	4	Pole Piece
MAW-51	1	Field Connection Ins.
MAW-59	1	Equalizer
MAW-1009A	1	Field Coil Assy.-Left
MAW-12	1	BRUSH
MAW-1010A	1	Field Coil Assy.-Right
MAW-12	1	BRUSH
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut
MW-20A	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAW-2002A	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler-1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-2006	1	ARMATURE ASSEMBLY
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer-1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-121R	1	Connector
SS-4017	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Sc.
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

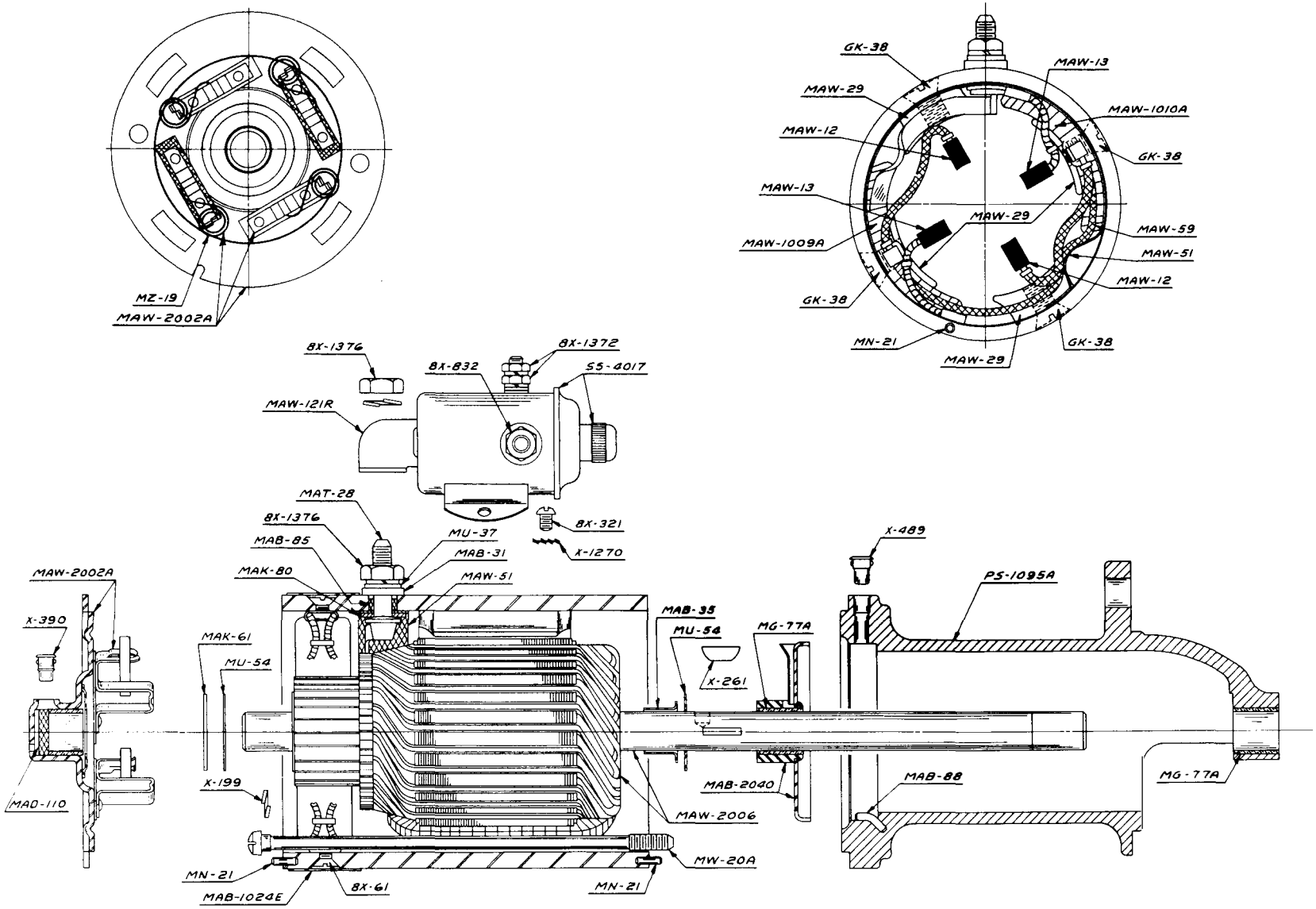
EBA-34	1	BENDIX DRIVE ASSY.
EB-108	2	Lock Washer
EB-8505	1	DRIVE SPRING
EB-8506	1	Head Spring Screw
EBA-1213	1	Anti-Drift Spring
EBA-1225	1	Meshing Spring
EBA-1231	1	Screw Shaft Assy.
EBA-1232	1	Pinion Assembly
EBA-1233	1	Retaining Ring
EBA-2907	1	Shaft Spring Screw
MAB-1024E	1	Head Band Assembly
MAB-2040	1	INTERMEDIATE BRG. ASSY.
MG-77A	1	Absorbent Bronze Brg.
PS-1095A	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
8X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 7-2-40)

UNIT	APPLICATION
MAW-4021	Packard

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAW-4021 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

PRELIMINARY

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2050)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAW-13‡	2	Brush Assy.- Grounded
MAW-28	1	Terminal Post
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAW-51	1	Field Connection Ins.
MAW-59	1	Equalizer
MAW-1009A	1	Field Coil Assy.-Left
MAW-12‡	1	Brush
MAW-1010A	1	Field Coil Assy.-Right
MAW-12‡	1	Brush
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAW-2002A	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick

Switch Assembly & Parts Used With

SS-116L	1	Connector
SS-1128	1	Moving Core Assembly
SS-59	1	Link Screw
SS-61	1	Spring
SS-128	1	Core
SS-4704	1	SOLENOID STARTING SWITCH (See separate list for parts)
12X-201	2	3/8 Lock Washer
8X-467	4	1/4-20x3/8 Hex. Hd. Screw
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer
		1 2 3 4 5

Starter Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAD-2087	1	Yoke Assembly
MAX-37	1	Gasket
MAX-38	1	Dust Cover
MAX-39	1	Dust Plate
MAX-41	1	Yoke Pivot Bushing
MAX-42	1	Yoke Pivot Bushing
MAX-46	1	Yoke Spring
**	1	STARTER CLUTCH ASSEMBLY
SS-56	1	Link Pin
8X-97	1	5/16-18x3 1/4 Hex. Hd. Sc.
8X-147	1	5/16-18 Hex. Nut
8X-311	4	#10-32x3/8 Rd. Hd. Screw
X-401	1	1/16x3/8 Cotter Pin
12X-1014	1	5/16 Lock Washer
X-1270	4	#10 Skpf. Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1094A	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-8-41)

Assembly No.	Starter Clutch
MAW-4022	MAY-3099
MAW-4022A	MAW-3132A

* Use as required.

** See table following parts list for part number applying to assembly wanted.

‡ SERVICE BRUSH SET MAW-2012S.

UNIT	APPLICATION
MAW-4022,A	Dodge, DeSoto, Plymouth

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2C36A)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAT-30	1	Field Connection Ins.
MAW-13‡	2	Brush Assy.- Grounded
MAW-29	4	Pole Piece
MAW-35	1	Terminal Post
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAW-51	1	Terminal Post Insulation
MAW-58	1	Equalizer
MAW-1009BS	1	Field Coil Assy.-Left
MAW-12‡	1	Brush
MAW-1010BS	1	Field Coil Assy.-Right
MAW-12‡	1	Brush
MN-21	2	Dowel Pin
SW-764	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAW-2002A	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick

Switch Assembly & Parts Used With

SW-2813	1	STARTING SWITCH ASSEMBLY
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer
		1 2 3 4 5

Starter Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
**	1	STARTER CLUTCH ASSEMBLY
MAW-33	1	Pivot Screw
MAW-2103	1	Yoke Assembly
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1090S	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BEARING
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-8-41)

Assembly No.	Starter Clutch
MAW-4023	MAD-3099
MAW-4023A	MAW-3132

* Use as required.

** See table following parts list for part number applying to assembly wanted.

‡ SERVICE BRUSH SET MAW-2012S.

UNIT	APPLICATION
MAW-4023,A	Dodge Truck

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2119)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAT-28	1	Terminal Post
MAW-13	2	BRUSH ASSY.- Grounded
MAW-29	4	Pole Piece
MAW-51	1	Field Connection Ins.
MAW-59	1	Equalizer
MAW-1009A	1	Field Coil Assy.- Left
MAW-12	1	BRUSH
MAW-1010A	1	Field Coil Assy.- Right
MAW-12	1	BRUSH
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut
MW-20A	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAW-2002A	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-2128	1	ARMATURE ASSEMBLY
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-121R	1	Connector
SS-4017	1	SOLENOID SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

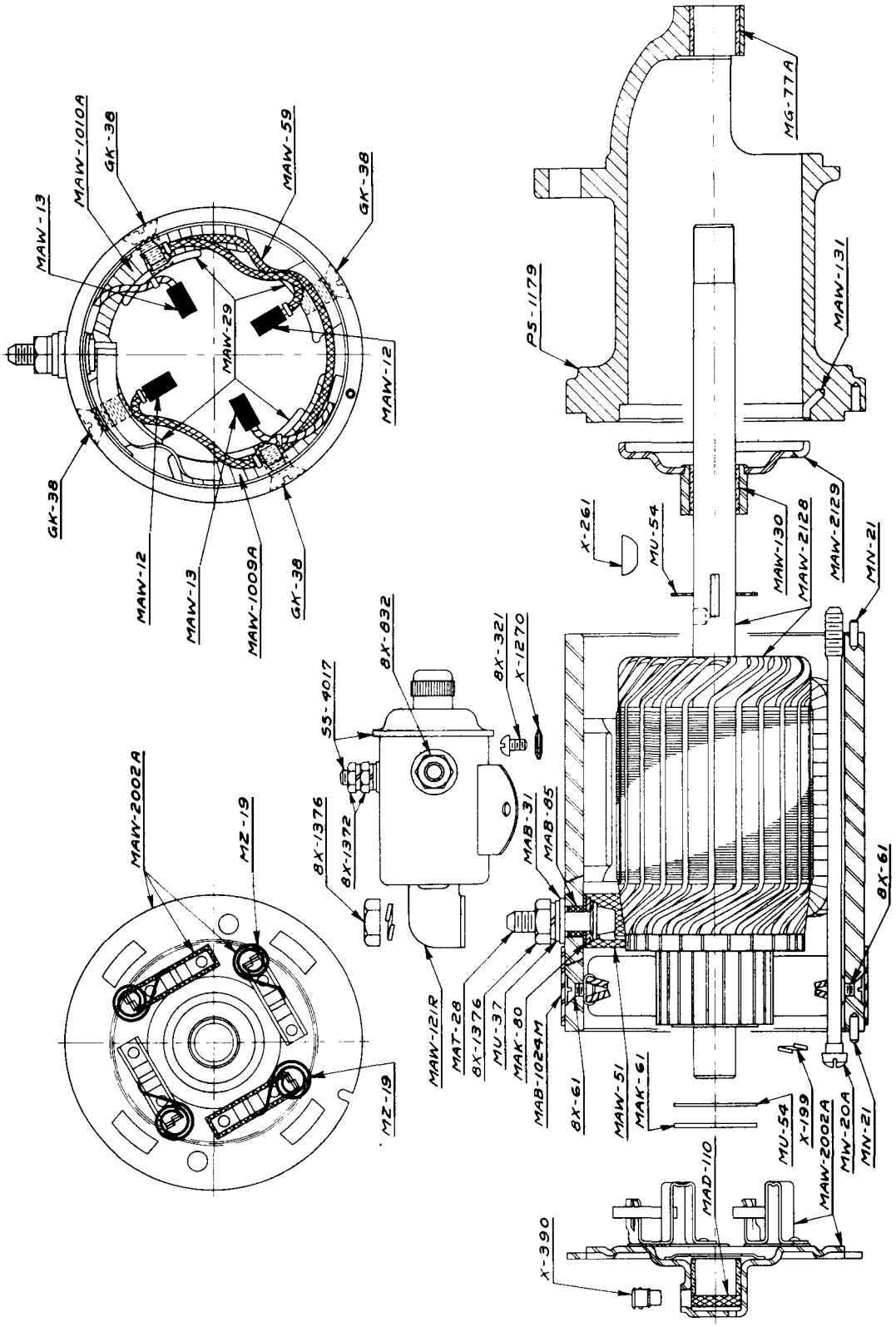
EBA-33	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Anti-Drift Spring
EBA-1225	1	Meshing Spring
EBA-1232	1	Pinion Assembly
EBA-1233	1	Retaining Ring
EBA-2006	1	Locating Pin
EBA-2007	2	Spring Anchor Plate
EBA-2008	1	Lock Ring
EBA-2031	1	S-A Assembly
EBA-2105	1	DRIVE SPRING
MAB-1024M	1	Head Band Assembly
MAW-2129	1	INTERMEDIATE BRG. ASSY.
MAW-130	1	Absorbent Bronze Brg.
PS-1179	1	Pinion Housing Assembly
MAW-131	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-2-40)

UNIT	APPLICATION
MAW-4024	Packard

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAW-4024 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

PRELIMINARY

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2145)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAW-13	2	BRUSH ASSY.- Grounded
MAW-28	1	Terminal Post
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAW-51	1	Field Connection Ins.
MAW-59	1	Equalizer
MAW-1009A	1	Field Coil Assy.- Left
MAW-12	1	BRUSH
MAW-1010A	1	Field Coil Assy.- Right
MAW-12	1	BRUSH
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAW-2002C	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54B	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAX-74	1	Connector
SS-4705	1	STARTING SWITCH ASSEMBLY (See Separate List for Parts)
12X-201	2	3/8 Lock Washer
8X-467	4	1/4-20x3/8 Hex. Hd. Screw
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAW-144	1	Yoke Spring
MAW-3132A	1	STARTER CLUTCH ASSEMBLY
MAX-70	1	Yoke Pin Sleeve
MAX-71	1	Yoke Pin
MAX-2072	1	Yoke Assembly
SS-56	1	Link Pin
12X-201	1	3/8 Lock Washer
X-401	1	1/16x3/8 Cotter Pin
8X-830	1	3/8-16 Hex. Nut

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1190A	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8-13-41)

* Use as required.

UNIT	APPLICATION
MAW-4025	Dodge, Plymouth

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2036A)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAT-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY.- Grounded
MAW-29	4	Pole Piece
MAW-35	1	Terminal Post
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAW-51	1	Terminal Post Insulation
MAW-58	1	Equalizer
MAW-1009BS	1	Field Coil Assy.-Left
MAW-12	1	BRUSH
MAW-1010BS	1	Field Coil Assy.-Right
MAW-12	1	BRUSH
MN-21	2	Dowel Pin
SW-764	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAW-2002A	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2813	1	STARTING SWITCH ASSEMBLY
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAW-2146	1	Yoke Assembly
MAW-3132	1	STARTER CLUTCH ASSEMBLY
MZ-175	1	Pivot Screw
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1187	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8-1-41)

* Use as required.

UNIT	APPLICATION
MAW-4026	Dodge, Plymouth (Canada)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2119)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAT-28	1	Terminal Post
MAW-13	2	BRUSH ASSY.- Grounded
MAW-29	4	Pole Piece
MAW-51	1	Field Connection Insulator
MAW-59	1	Equalizer
MAW-1009A	1	Field Coil Assy.- Left
MAW-12	1	BRUSH
MAW-1010A	1	Field Coil Assy.- Right
MAW-12	1	BRUSH
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Screw
X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut
MW-20A	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAW-2002A	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-2128	1	ARMATURE ASSEMBLY
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-66R	1	Connector
SS-4025	1	SOLENOID SWITCH ASSEMBLY
12X-196	2	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	2	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EBA-33	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Anti-Drift Spring
EBA-1225	1	Meshing Spring
EBA-1232	1	Pinion Assembly
EBA-1233	1	Retaining Ring
EBA-2006	1	Locating Pin
EBA-2007	2	Spring Anchor Plate
EBA-2008	1	Lock Ring
EBA-2031	1	S-A Assembly
EBA-2105	1	DRIVE SPRING
MAB-1024M	1	Head Band Assembly
MAW-2129	1	INTERMEDIATE BEARING ASSY.
MAW-130	1	Absorbent Bronze Brg.
PS-1179	1	Pinion Housing Assembly
MAW-131	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8-1-41)

UNIT	APPLICATION
MAW-4027	Packard

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2147)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-31	1	Insulating Washer
M&B-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAT-28	1	Terminal Post
MAT-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY.- Grounded
MAW-29	4	Pole Piece
MAW-59	1	Equalizer
MAW-1009A	1	Field Coil Assy.- Left
MAW-12	1	BRUSH
MAW-1010A	1	Field Coil Assy.- Right
MAW-12	1	BRUSH
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
MU-37	1	5/16 Plain Washer
MW-20	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAW-2002B	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	5/8 Steel Washer
MAW-2091	1	ARMATURE ASSEMBLY
MU-54	1	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EBA-12	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7806	1	Hd. Spring Screw
EBA-507	1	Shaft Spring Screw
EBA-1205	1	DRIVE SPRING
EBA-1213	1	Anti-Drift Spring
EBA-1225	1	Meshing Spring
EBA-1231	1	Screw Shaft Assy.
EBA-1232	1	Pinion Assembly
EBA-1233	1	Retaining Ring
MAB-1024	1	Head Band Assembly
MN-18	1	Thrust Washer
PS-1136	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8-13-41)

UNIT	APPLICATION
MAW-4028	Studebaker

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2036A)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAT-30	1	Field Connection Ins.
MAW-131	2	Brush Assy.- Grounded
MAW-29	4	Pole Piece
MAW-35	1	Terminal Post
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAW-51	1	Terminal Post Insulation
MAW-58	1	Equalizer
MAW-1009BS	1	Field Coil Assy.-Left
MAW-12‡	1	Brush
MAW-1010BS	1	Field Coil Assy.-Right
MAW-12‡	1	Brush
MN-21	2	Dowel Pin
SW-764	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAW-2002A	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick

Switch Assembly & Parts Used With

SW-2813	1	STARTING SWITCH ASSEMBLY
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer
		1 2 3 4 5

Starter Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-2148	1	Yoke Assembly
MAW-3132	1	STARTER CLUTCH ASSEMBLY
MZ-175	1	Pivot Screw
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1194	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BEARING
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-8-41)

* Use as required.

‡ SERVICE BRUSH SET MAW-2012S.

UNIT	APPLICATION
MAW-4029	Dodge Truck

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-3151)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-85	1	Bushing, Insulating, Term. Stud
MAK-80	1	Washer, Insulating, Term. Stud, Inner
MAT-30	1	Insulation, Field Connection
MAW-12‡	2	Brush
MAW-13‡	2	Brush, Grounded
MAW-58	1	Equalizer
MAW-1009B	1	Coil, Field, Left
MAW-1010B	1	Coil, Field, Right
MBA-21	1	Insulation, Contact, Lower
MBA-22	1	Contact, Switch, Lower
MBA-25	1	Stud, Terminal, 5/16-24
MN-21	2	Pin, Dowel
MZ-197	1	Insulation, Contact
8X-61	2	Screw, Brush Grd., Flat hd., #10-32x7/16
8X-183A	1	Washer, Plain, Contact Sc., #10
X-196	1	Washer, Lock, Contact Sc., #10
8X-309	1	Screw, Switch Contact, Lower, Rd. hd., #10-32x1/2
8X-1376	1	Nut, Terminal Stud, Hex., 5/16-24
MW-20A	2	Bolt, Thru
X-199	2	Washer, Lock, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-3002A	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler, Press in Type, 1/4

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, Comm. End
MAW-2105	1	Armature Assembly
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
EW-200	1	Washer, Plain
MBA-24	1	Gasket, Switch
MBA-31	1	Gasket, Switch
MBA-32	1	Lever, Switch
MZ-170	1	Pin, Switch Lever
SW-2916A	1	Switch, Starting
8X-321	2	Screw, Mtg. Switch, Rd. hd., #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Sc., #10
X-1531	1	Pin, Cotter, 1/16x1/2

Miscellaneous Parts

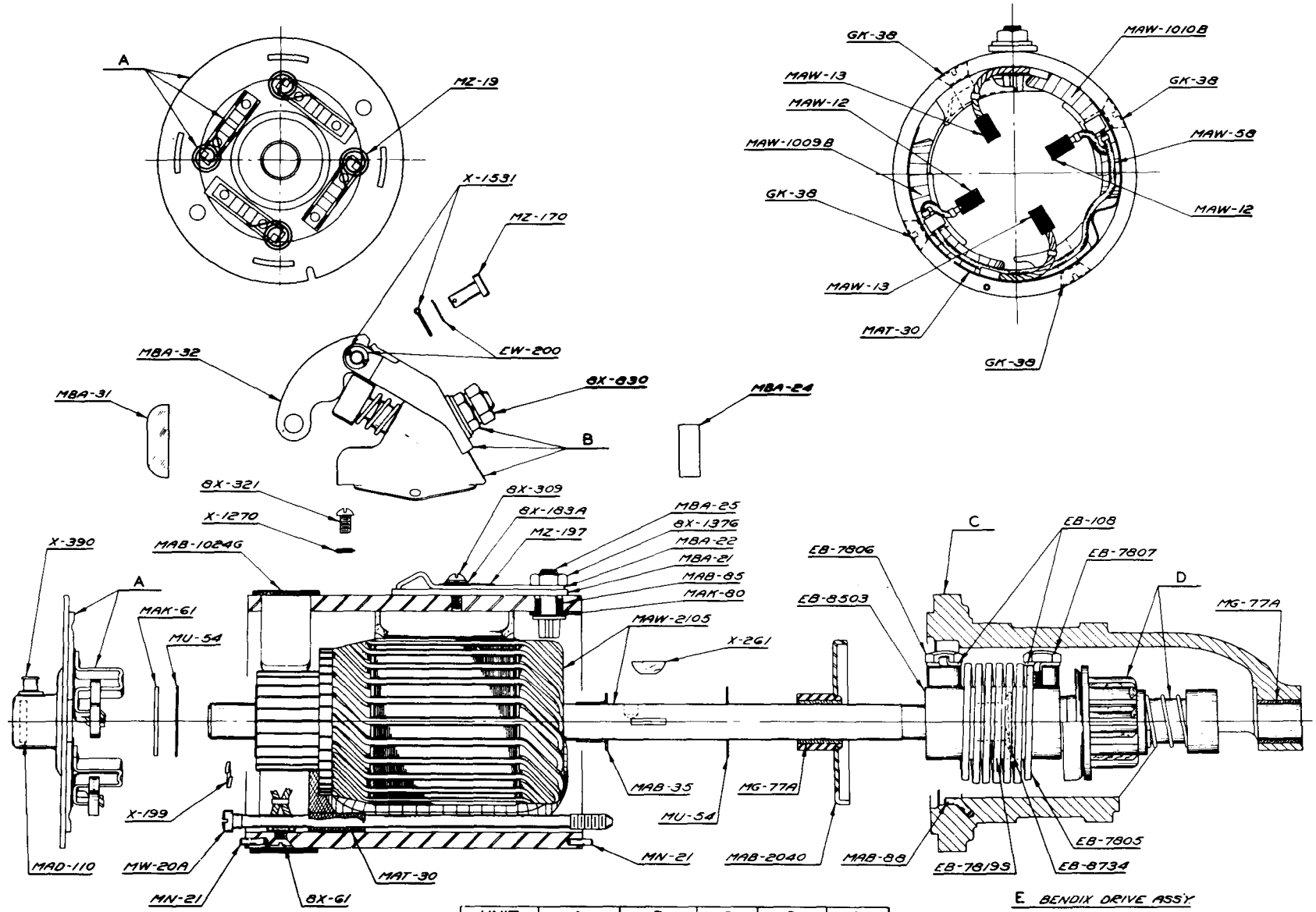
EB-99	1	Bendix Drive Assembly
EB-108	2	Washer, Lock
EB-7805	1	Spring, Drive
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8734	1	Ring, Take up
EB-9911	1	Shaft & Pinion
MAB-1024G	1	Band, Cover
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
PS-1212	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 3-6-44)

‡ Brush Set, Service, MAW-2012S.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAW-4030 STARTING MOTOR ILLUSTRATION



UNIT	A	B	C	D	E
MAW-4030	MAW-3002A	SW-2916A	PS-1212	EB-9911	EB-99

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-3151)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-85	1	Bushing, Insulating, Term. Stud
MAK-80	1	Washer, Insulating, Term. Stud, Inner
MAT-30	1	Insulation, Field Connection
MAW-12‡	2	Brush
MAW-13‡	2	Brush, Grounded
MAW-58	1	Equalizer
MAW-1009B	1	Coil, Field, Left
MAW-1010B	1	Coil, Field, Right
MBA-21	1	Insulation, Contact, Lower
MBA-22	1	Contact, Switch, Lower
MBA-25	1	Stud, Terminal, 5/16-24
MN-21	2	Pin, Dowel
MZ-197	1	Insulation, Contact
8X-61	2	Screw, Brush Grd., Flat hd., #10-32x7/16
8X-183A	1	Washer, Plain, Contact Sc., #10
X-196	1	Washer, Lock, Contact Sc., #10
8X-309	1	Screw, Switch Contact, Lower, Rd. hd., #10-32x1/2
8X-1376	1	Nut, Terminal Stud, Hex., 5/16-24
MW-20A	2	Bolt, Thru
X-199	2	Washer, Lock, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-3002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler, Press in Type, 1/4

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, Comm. End
MAW-2105	1	Armature Assy.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
EW-200	1	Washer, Plain
MBA-24	1	Gasket, Switch
MBA-31	1	Gasket, Switch
MBA-32	1	Lever, Switch
MZ-170	1	Pin, Switch Lever
SW-2916B	1	Switch, Starting
8X-321	2	Screw, Mtg. Switch, Rd. hd., #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Sc., #10
X-1531	1	Pin, Cotter, 1/16x1/2

Miscellaneous Parts

EBA-55	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7805	1	Spring, Drive
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8734	1	Ring, Take up
EBA-5511	1	Shaft & Pinion
MAB-1024G	1	Band, Cover
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
PS-1213	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 3-6-44)

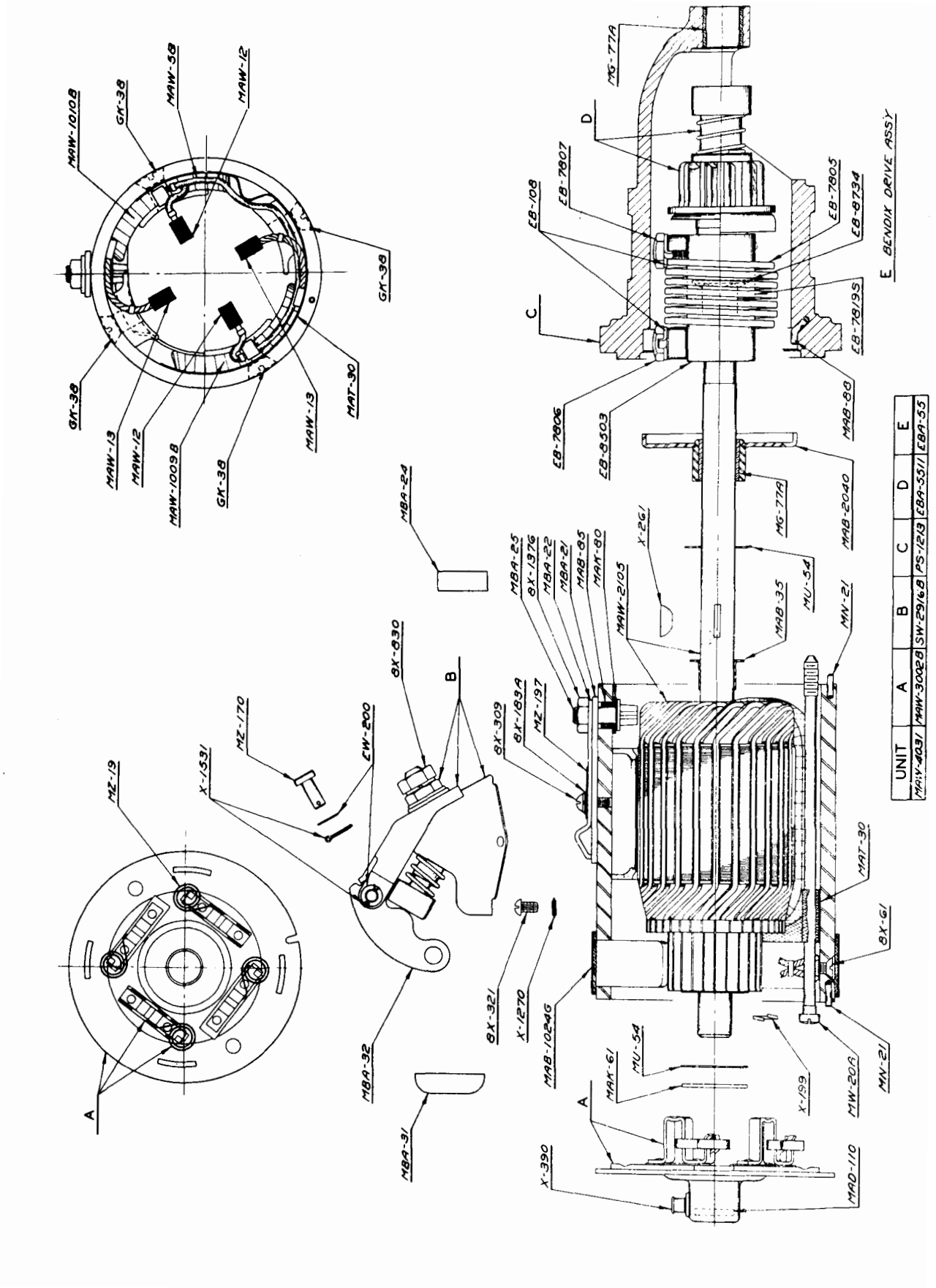
‡ Brush Set, Service, MAW-2012S.

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

MAW-4031 STARTING MOTOR ILLUSTRATION



UNIT	A	B	C	D	E
MAW-4031	MAW-3002B	SW-2916B	PS-1213	E8A-3511	E8A-33

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAW-4032 STARTING MOTOR PARTS LIST — MAW-4032 (Issued 1-25-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAW-2036A	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud
GK-38	4	Screw, Pole Shoe
MAT-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-35	1	Stud, Terminal
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Insulation, Switch Contact
MAW-51	1	Insulation, Term. Stud
MAW-58	1	Equalizer
MAW-3005AS	1	FIELD COIL PACKAGE
MAW-1009B	1	Coil, Field, Left
MAW-1010B	1	Coil, Field, Right
MN-21	2	Pin, Dowel
SW-764	1	Contact, Switch, Lower
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Arm. Thrust, C.E.
MAW-2030	1	ARMATURE ASSY.
MAW-31	1	Spacer, Armature Shaft
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SW-2813	1	SWITCH, STARTER
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch, Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Starter Clutch Assy. & Parts Used With

MAD-95	1	Retainer, Yoke Spring
MAW-161	1	Spring, Yoke
MAW-2160	1	Yoke
MAX-52	1	Pin, Yoke
MAX-3098	1	STARTER CLUTCH
8X-179	1	Nut, Yoke Pin, Hex. 3/8-16
12X-201	1	Lockwasher, Yoke Pin, 3/8

Miscellaneous Parts

MAW-24	1	Band, Cover
PS-1194	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAW-2012S.

* Use as required.

UNIT	APPLICATION
MAW-4032	Chrysler Industrial

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAW-2165)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAT-28	1	Stud, Terminal
MAT-30	1	Insulation, Field Conn.
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-59	1	Equalizer
MAW-3005S	1	FIELD COIL PACKAGE
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-2105	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Brg. Thrust
MU-54	2	Washer, Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBA-64	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher, Spring Screw
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EB-9211	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1102A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd., #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE, MAW-2012S.

UNIT	APPLICATION
MAW-4034	Continental, White Motor

(Issued 10-20-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
(MAW-2173)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAT-28	1	Stud, Terminal
MAT-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-59	1	Equalizer
MAW-3005S	1	Field Coil Package
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-2105	1	Armature Assembly
MAB-35	1	Spacer, Brg. Thrust
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-64	1	Bendix Drive Assy.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take-Up
EB-9211	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1102B	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAW-2012S.

UNIT	APPLICATION
MAW-4038	Continental

(Issued 7-14-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAW-4039 STARTING MOTOR PARTS LIST MAW-4039

Frame & Field Assembly with Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
(MAW-2178)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31	1	Washer, Term. Stud Ins., Outer
MAB-85	1	Bushing, Term. Stud Ins.
MAK-80	1	Washer, Term. Stud Ins., Inner
MAT-28	1	Stud, Terminal
MAT-30	1	Insulation, Field Conn.
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-59	1	Equalizer
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MU-37	1	Washer, Term. Stud Plain, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24
MW-20A	2	Bolt, Thru
X-199	2	Washer, Lock, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-2063	1	Armature Assembly
MAB-35	1	Spacer, Armature Shaft
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6
	1 2 3 4 5	

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
MAW-66R	1	Connector, Switch
SS-4001	1	Switch, Starting
12X-196	1	Washer, Lock, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Washer, Lock, 5/16
8X-173	1	Nut, Hex., #10-32
8X-321	2	Screw, Mtg., Switch, Rd. Hd., #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Screw, #10

Miscellaneous Parts

EB-87	1	Bendix Drive Assembly
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8711	1	Shaft & Pinion
EB-8734	1	Ring, Take-Up
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1249	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32
	1 2 3 4 5	

† Brush Set, Service MAW-2012S.

UNIT	APPLICATION
MAW-4039	Continental

(Issued 8-18-47)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAW-4039M STARTING MOTOR PARTS LIST

MAW-4039M
(Issued 4-11-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAW-2178B)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85A	1	Bushing, Ins., Term. Stud
MAK-80A	1	Washer, Ins., Term. Stud, Inner
MAT-28	1	Stud, Terminal
MAT-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-59	1	Equalizer
MAW-3005S	1	FIELD COIL PACKAGE
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MW-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Std. 5/16
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2889	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
MW-20C	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002E	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Arm. Thrust, Comm. End
MAW-2063M	1	ARMATURE ASSY.
MAB-35	1	Spacer
MU-54	2	Washer, Thrust, C.E. & Intermediate 1/32'' Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAW-167R	1	Connector
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EB-87A	1	BENDIX DRIVE ASSEMBLY
EB-108A	2	Lockwasher
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8705A	1	SPRING, DRIVE
EB-8711A	1	Shaft & Pinion
EB-8734A	1	Ring, Take-Up
MAB-1024N	1	Band, Cover
MAB-2040C	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
PS-1249A	1	Housing Assy., Pinion
MAB-88A	1	Pin, Dowel
MP-41A	1	BEARING, ABS. BRONZE
X-2875	1	Nut, Cover Band, Square #10-32
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

† BRUSH SET, SERVICE MAW-2012S.

UNIT	APPLICATION
MAW-4039M	Continental

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
(MAW-2180	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud
MAT-28	1	Stud, Terminal
MAT-30	1	Insulation, Field Connection
MAW-12 †	2	Brush
MAW-13 †	2	Brush, Grounded
MAW-59	1	Equalizer
MAW-3005S	1	Field Coil Package
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-2105	1	Armature Assembly
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAW-121L	1	Connector
SS-4001	1	Switch, Solenoid
8X-173	1	Nut, Hex., #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-11	1	Bendix Drive Assy.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take-Up
EBA-1111	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1251	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAW-2012S.

UNIT	APPLICATION
MAW-4040	Universal

(Issued 7-14-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAW-2182)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31	1	Washer, Outer Term. Stud Insulating
MAB-85	1	Bushing, Term. Stud Ins.
MAK-80	1	Washer, Inner Term. Stud Insulating
MAT-30	1	Insulation, Field Connection
MAW-12‡	2	Brush, Insulated
MAW-13‡	2	Brush, Grounded
MAW-59	1	Equalizer
MAW-183	1	Stud, Terminal, 5/16-18
MAW-3005S	1	FIELD COIL PACKAGE
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term Stud, 5/16
8X-61	2	Screw, Brush Grd., Flat Hd. #10-32x7/16
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2128	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & D.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-8	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
EBB-832	1	Pinion
MAW-24	1	Band, Cover
MAW-2129	1	BRG. ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
PS-1252	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABSORBENT BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

‡ BRUSH SET, SERVICE. MAW-2012S.

* Use as required.

UNIT	APPLICATION
MAW-4041	Dodge; Plymouth (Can.)

(Issued 4-14-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2173)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAT-28	1	Stud, Terminal
MAT-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-59	1	Equalizer
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002A	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	Washer, Steel
MAW-2063	1	ARMATURE ASSY.
MAB-35	1	Spacer, Armature Shaft
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EB-87	1	BENDIX DRIVE ASSY.
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8711	1	Shaft & Pinion
EB-8734	1	Ring, Take-Up
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1255	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	Bearing
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† BRUSH SET, Service MAW-2012S.

Unit	Application
MAW-4042	Brockway

(Issued 2-19-47)
File in
Equipment & Parts List Binder

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2178A)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31	1	Washer, Term. Stud Ins., Outer
MAB-85	1	Bushing, Term. Stud Ins.
MAK-80	1	Washer, Term. Stud Ins., Inner
MAT-28	1	Stud, Terminal
MAT-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-59	1	Equalizer
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MU-37	1	Washer, Term. Stud Plain, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud Hex., 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-2128	1	Armature
MU-54	*	Washer, Thrust, 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-66R	1	Connector, Switch
SS-4001	1	Solenoid Starting Switch
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-33	1	Bendix Drive Assembly
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Locating Pin
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Lock Ring
EBA-2031	1	Shaft
EBA-2105	1	Spring, Drive
MAW-24	1	Band, Cover
MAW-2129	1	Brg. Assy., Intermediate
MAW-130	1	Bearing, Absorbent Bronze
PS-1252A	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
8X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

* Use as required.

† Brush Set, Service MAW-2012S.

Unit	Application
MAW-4043	Kaiser, Frazer

(Issued 10-22-46)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2036)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud
GK-38	4	Screw, Pole Shoe
MAT-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-35	1	Stud, Terminal
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Ins., Block
MAW-51	1	Insulation Term. Stud
MAW-58	1	Equalizer
MAW-1009B	1	Coil, Field, Left
MAW-1010B	1	Coil, Field, Right
MN-21	2	Pin, Dowel
SW-763	1	Contact, Switch, Lower
8X-61	2	Screw, Brush Grounded, Flat Hd., #10-32x7/16
8X-830	1	Nut, Term. Stud, Hex., 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Arm. Thrust, C.E.
MAW-2030	1	ARMATURE ASSY.
MAW-31	1	Spacer, Armature Shaft
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2677A	1	STARTING SWITCH
12X-201	1	Washer, Lock, 3/8
8X-830	1	Nut, Hex., 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Starter Clutch Assembly & Parts Used With

MAD-95	1	Retainer, Yoke Spring
MAW-161	1	Spring, Yoke
MAW-2197	1	Yoke
MAW-3185	1	STARTER CLUTCH
MAX-52	1	Pin, Yoke
8X-179	1	Nut, Yoke Pivot, Hex. 3/8-16
12X-201	1	Lockwasher, Yoke Pivot, 3/8

Miscellaneous Parts

MAW-24	1	Band, Cover
PS-1194C	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

* Use as required.

† BRUSH SET, Service MAW-2012S.

Unit	Application
MAW-4044	Dodge (Truck)

(Issued 2-19-47)

File in Equipment & Parts List Binder

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAW-4045M STARTING MOTOR PARTS LIST MAW-4045M

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20A	2	Bolt, Thru
(MAW-2166)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAT-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-28A	1	Stud, Terminal
MAW-37A	1	Bushing, Ins., Term. Stud
MAW-59	1	Equalizer
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MAX-35	1	Washer, Ins., Term. Stud, Outer
MN-21A	2	Pin, Dowel
MN-47B	1	Washer, Term. Stud, 3/8
WSE-41	1	Inner
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-2845	2	Nut, Term. Stud, Hex. 3/8-16
8X-2889	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002E	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Arm. Thrust, C.E.
MAW-2179M	1	ARMATURE
MU-54F	*	Washer, Arm. Thrust C.E. 1/32" thick
MU-54G	*	Washer, Arm. C.E. 1/64" thick
MU-54J	*	Washer, Arm. C.E. .046" thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAX-89 R	1	Connector
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Washer, Lock, #10
12X-1014	2	Washer, Lock, 5/16
8X-2843	2	Nut, Hex., 5/16-24
8X-2853	1	Nut, Hex., #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-2857	2	Washer, Skpf., Switch Mtg., #10
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-79	1	BENDIX DRIVE ASSY.
EBA-4808	1	Ring, Lock
EBA-4833	1	Ring, Retaining
EBA-7213	1	Spring, Anti-Drift
EBA-7225	1	Spring, Meshing
EBA-7905	1	SPRING, DRIVE
EBA-7906	1	Pin, Locating
EBA-7907	2	Plate, Spring Anchor
EBA-7931	1	Shaft, Screw
EBA-7932	1	Pinion
MAB-1024N	1	Band, Cover
MAX-80	1	Gasket, Int. Bearing
MAX-1078	1	INTERMEDIATE BRG. & OIL SEAL
MN-18	1	Washer, Thrust, D.E.
MN-18B	*	Washer, Arm. Thrust, D.E. .032" thick
MN-18C	*	Washer, Arm. Thrust, D.E. .015" thick
MN-18D	*	Washer, Arm. Thrust, D.E. .042" thick
PS-1250A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABSORBNET BRONZE
19X-933	3	Screw, Attaching, Int. Bearing, Flat Hd. #10-32x9/16
X-2873	1	Screw, Cover Band Rd. Hd., #10-32x1 1/4
X-2875	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

* Used as required.

† Brush Set, Service MAW-2012S.

UNIT	APPLICATION
MAW-4045M	Chrysler (Marine)

(Issued 1-21-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20A	2	Bolt, Thru
(MAW-3166)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAT-30	1	Insulation, Field Connection
MAW-12†	2	BRUSH
MAW-13†	2	BRUSH
MAW-28A	1	Stud, Terminal
MAW-37A	1	Bushing, Ins., Term. Stud
MAW-59	1	Equalizer
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MAX-35	1	Washer, Ins., Term. Stud, Outer
MN-21A	1	Pin, Dowel
MN-47B	1	Washer, Term. Stud, 3/8"
WSE-41	1	Washer, Ins., Term. Stud, Inner
12X-201	2	Lockwasher, Term. Stud, 3/8"
8X-2845	2	Nut, Term. Stud, Hex. 3/8-16
8X-2889	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-3002C	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Arm. Thrust, C.E.
MAW-2179M	1	ARMATURE
MU-54F	*	Washer, Arm. Thrust C.E. 1/32" thick
MU-54G	*	Washer, Arm. C.E. 1/64" thick
MU-54J	*	Washer, Arm. C.E. .046" thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SSP-4001M	1	SWITCH SOLENOID
12X-196	1	Washer, Lock, #10
12X-1014	2	Washer, Lock, 5/16
8X-2843	2	Nut, Hex., 5/16-24
8X-2853	1	Nut, Hex., #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-2857	2	Washer, Skpf., Switch Mtg., #10
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-87	1	BENDIX DRIVE ASSEMBLY
EBA-4805	1	SPRING, DRIVE
EBA-4807	2	Plate, Spring Anchor
EBA-4808	1	Lock Ring
EBA-4813	1	Spring, Anti-Drift
EBA-4825	1	Spring, Meshing
EBA-4833	1	Ring, Retaining
EBA-7906	1	Pin, Locating
EBA-8731	1	Shaft
EBA-8732	1	Pinion
MAB-1024N	1	Band, Cover
MAX-80	1	Gasket, Int. Bearing
MAX-1078	1	INTERMEDIATE BRG; & OIL SEAL
MN-18	1	Washer, Thrust, D.E.
MN-18B	*	Washer, Arm. Thrust, D.E. .032" thick
MN-18C	*	Washer, Arm. Thrust, C.E. .015" thick
MN-18D	*	Washer, Arm. Thrust, D.E. .042" thick
PS-1250A	1	Housing Assy., Pinion
MP-41A	1	Bearing, Absorbent Bronze
19X-933	3	Screw, Attaching, Int. Bearing, Flat Hd. #10-32x9/16
X-2873	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
X-2875	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

* Used as required.

† BRUSH SET, Service MAW-2012S.

UNIT	APPLICATION
MAW-4046M	Chrysler (Marine)

(Issued 1-21-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2036B)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud
GK-38	4	Screw, Pole Shoe
MAT-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-35	1	Stud, Terminal
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Ins. Block
MAW-51	1	Insulation, Term. Stud
MAW-58	1	Equalizer
MAW-1009B	1	Coil, Field, Left
MAW-1010B	1	Coil, Field, Right
MN-21	2	Pin, Dowel
SW-764	1	Contact Switch, Lower
8X-61	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
8X-830	1	Nut, Term. Stud, Hex., 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Armature Thrust, C.E.
MAW-2030	1	Armature Assembly
MAW-31	1	Spacer, Armature Shaft
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2813	1	Switch, Starter
12X-201	1	Washer, Lock, 3/8
8X-830	1	Nut, Hex., 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd., #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Starter Clutch Assembly & Parts Used With

MAW-3140A	1	Starter Clutch
MAX-2087	1	Yoke
MZ-175	1	Screw, Pivot
8X-179	1	Nut, Yoke Pivot, Hex. 3/8-16
12X-201	1	Lockwasher, Yoke Pivot, 3/8

Miscellaneous Parts

MAW-24	1	Band, Cover
PS-1194D	1	Housing Assy., Pinion
MP-41A	1	Bearing, Abs. Bronze
8X-715	1	Screw, Cover Band, Rd. Hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

* Use as required.

† Brush Set, Service, MAW-2012S.

(Issued 4-23-46)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
(MAW-3200)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud
MAT-28	1	Stud, Terminal
MAT-30	1	Insulation, Field Connection
MAY-12A †	2	Brush
MAW-13 †	2	Brush, Grounded
MAW-59	1	Equalizer
MAW-3005S	1	Field Coil Package
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
8X-61	2	Screw, Brush, Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-3002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-2105	1	Armature Assembly
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAW-66R	1	Connector
SS-4020	1	Solenoid Switch
8X-173	1	Nut, Hex., #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EB-99	1	Bendix Drive Assembly
EB-108	2	Lockwasher
EB-7805	1	Spring, Drive
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8734	1	Ring, Take-Up
EB-9911	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
MAX-1024	1	Band, Cover
PS-1212	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x 1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAY-2012AS.

UNIT	APPLICATION
MAW-4049	Allis Chalmers

Printed in U. S. A. (Issued 7-14-48) File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
(MAW-2173)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAT-28	1	Stud, Terminal
MAT-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-59	1	Equalizer
MAW-3005S	1	Field Coil Package
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-2063	1	Armature Assy.
MAB-35	1	Spacer, Armature Shaft
MU-54	2	Washer, Thrust, 1/32'' Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EB-87	1	Bendix Drive Assembly
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8711	1	Shaft & Pinion
EB-8734	1	Ring, Take Up
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1249	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	Bearing, Abs. Bronze
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAW-2012S.

UNIT	APPLICATION
MAW-4051	Brockway

(Issued 7-14-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAW-2036)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud
GK-38	4	Screw, Pole Shoe
MAT-30	1	Insulation, Field Connection
MAW-12 †	2	Brush
MAW-13 †	2	Brush, Grounded
MAW-35	1	Stud, Terminal
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Insulating Block
MAW-51	1	Insulation Term. Stud
MAW-58	1	Equalizer
MAW-1009B	1	Coil, Field, Left
MAW-1010B	1	Coil, Field, Right
MN-21	2	Pin, Dowel
SW-763	1	Contact, Switch, Lower
8X-61	2	Screw, Brush Grounded, Flat Hd. #10-32x7/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Arm. Thrust, C.E.
MAW-2030	1	ARMATURE ASSY.
MAW-31	1	Spacer, Armature Shaft
MU-54	*	Washer, Thrust, 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2813	1	STARTING SWITCH
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Starter Clutch Assembly & Parts Used With

MAB-95	1	Retainer, Yoke Spring
MAW-161	1	Spring, Yoke
MAW-2206	1	Yoke
MAW-3132	1	STARTER CLUTCH
MAX-52	1	Pin, Yoke
8X-179	1	Nut, Yoke Pivot, Hex. 3/8-16
12X-201	1	Lockwasher, Yoke Pivot, 3/8

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1194C	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† BRUSH SET, SERVICE MAW-2012S.

* Use as Required.

UNIT	APPLICATION
MAW-4052	Dodge Truck

(Issued 2-24-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAW-4054,A STARTING MOTOR PARTS LIST

MAW-4054,A
(Issued 1-15-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAW-2173)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAT-28	1	Stud, Terminal
MAT-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-59	1	Equalizer
MAW-3005S	1	FIELD COIL PACKAGE
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, C.E.
MAW-2128	1	ARMATURE
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-33	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
**	1	Band, Cover
MAW-2129	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
PS-1252A	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAW-2012S.

* Use as Required.

** See table following parts list for part number applying to assembly wanted.

Assembly No.	Band, Cover
MAW-4054	MAW-24
MAW-4054A	MAX-1024

UNIT	APPLICATION
MAW-4054	Frazer
MAW-4054A	Massey-Harris

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MAW-2214)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud, Inner
GK-38	4	Screw, Pole Shoe
MAT-30	1	Insulation, Field Conn.
MAW-12 †	2	Brush
MAW-13 †	2	Brush, Grounded
MAW-28	1	Stud, Terminal
MAW-37	1	Bushing, Insulation
MAW-59	1	Equalizer
MAW-3005S	1	FIELD COIL PACKAGE
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MAX-35	1	Washer, Ins., Term. Stud, Outer
MAX-44	1	Washer, Term. Stud, 3/8
MN-21	2	Pin, Dowel
8X-61	2	Screw, Ground Flat Hd. #10-32x7/16
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-179	1	Nut, Term. Stud, Hex. 3/8-16
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Arm. Thrust, Comm. End
MAW-2213	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, D.E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-111	1	Connector
SS-4707	1	Solenoid Starting Switch (See separate list for parts)
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-830	1	Nut, Switch Term., Hex. 3/8-16
X-1272	4	Washer, Switch Mtg., Skpf. 1/4

Clutch Assembly & Parts Used With

MAX-71	1	Pin, Yoke
MCH-58	2	Retainer, Yoke Spring
MCH-62	1	Spring, Yoke
MCH-2056	1	Yoke
MCL-3098A	1	CLUTCH, STARTER
SS-56	1	Pin, Link
12X-201	1	Lockwasher, Yoke Pin, 3/8
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
8X-830	1	Nut, Yoke Pin, Hex. 3/8-16

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1298	1	Housing Assy., Pinion
MP-41A	1	Bearing, Abs. Bronze
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAW-2012S.

* Use as required.

UNIT	APPLICATION
MAW-4055	DeSoto (Canada)

(Issued 2-9-49)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAW-2173)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAT-28	1	Stud, Terminal
MAT-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-59	1	Equalizer
MAW-3005S	1	FIELD COIL PACKAGE
MAW-1009	1	Coil, Field, Left
MAW-1010	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAW-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2128	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32'' Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64'' Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-33	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
MAW-24	1	Band, Cover
MAW-2129	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
PS-1305	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAW-2012S.

* Use as required.

UNIT	APPLICATION
MAW-4057	Frazer

(Issued 9-19-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2113)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAX-49	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
SW-764	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAX-2002	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	Armature Assembly
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

* Use as required.

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2813	1	Starting Switch Assy.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-3099	1	Starter Clutch Assy.
MAW-33	1	Pivot Screw
MAW-2048	1	Yoke Assembly
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1090S	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8-16-40)

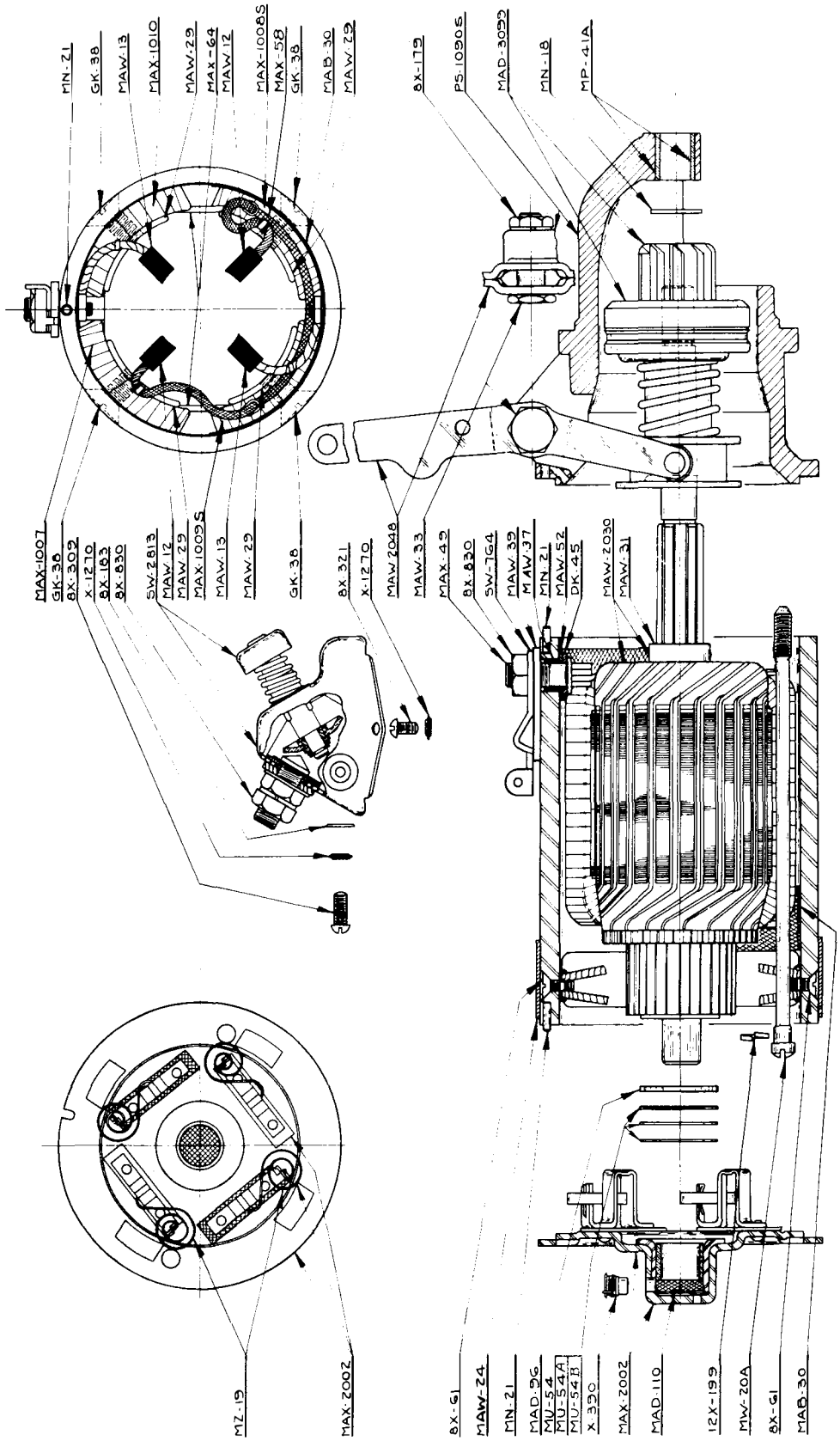
Unit	Application
MAX-4002	Chrysler, De Soto

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File in Equipment & Parts Lists Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4002 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
(MAX-2115)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY. - GROUNDED
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy.- L.R.
MAW-12	1	BRUSH
MAX-1009S	1	Field Coil Assy.- L.L.
MAW-12	1	BRUSH
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAX-2002	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
SS-107L	1	Connector
**	1	Moving Core Assembly
**	1	Core
SS-59	1	Link Screw
SS-61	1	Spring
**	1	SWITCH ASSEMBLY
12X-201	2	3/8 Lock Washer
8X-467	4	1/4-20x3/8 Hex. Hd. Sc.
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer

Starter Clutch & Parts Used With

MAD-2087	1	Yoke Assembly
MAD-3099	1	STARTER CLUTCH ASSY.
MAX-37	1	Gasket
MAX-38	1	Dust Cover
MAX-39	1	Dust Plate
MAX-41	1	Yoke Pivot Bushing
MAX-42	1	Yoke Pivot Bushing
MAX-46	1	Yoke Spring
SS-56	1	Link Pin
8X-97	1	5/16-18x3 1/4 Hex. Hd. Sc.
8X-147	1	5/16-18 Hex. Nut
8X-311	4	#10-32x3/8 Rd. Hd. Screw
X-401	1	1/16x3/8 Cotter Pin
12X-1014	1	5/16 Lock Washer
X-1270	4	#10 Skpf. Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1092	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-23-39)

* Use as required.

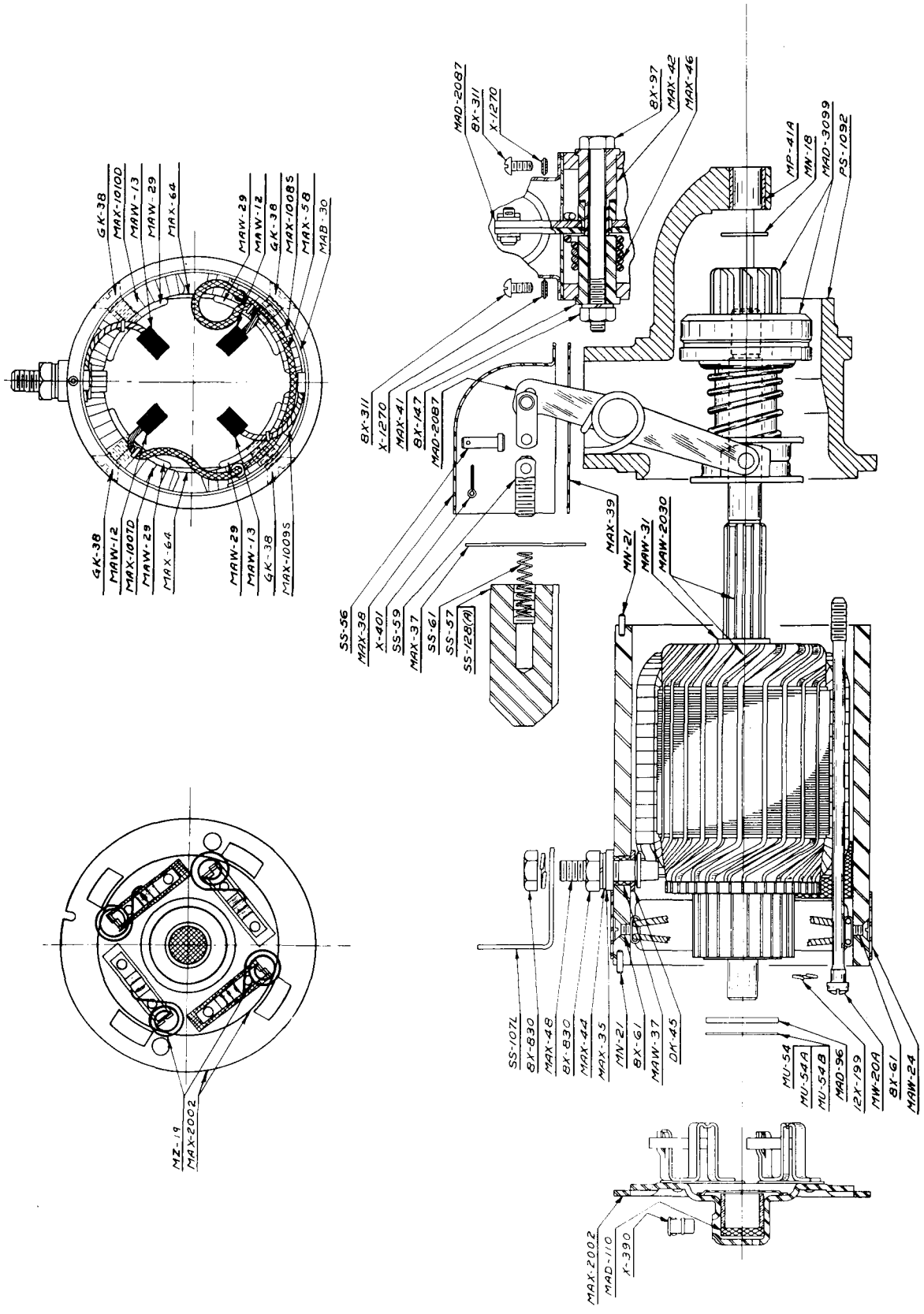
** See table following parts list for part number applying to assembly wanted.

Assembly No.	Core Assembly	Core	Switch Assembly
MAX-4003	SS-1057A	SS-57	SS-4101
MAX-4003A	SS-1128	SS-128	SS-4201

UNIT	APPLICATION
MAX-4003,A	Chrysler

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4003,A STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAX-45	1	Bracket
(MAX-2116)	1	Frame & Field Assy.
DK-45	1	Ins. Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAW-52	1	Terminal Post Insulation
MAX-49	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
SW-764	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
8X-467	2	1/4-20x3/8 Hex. Hd. Screw
X-1272	2	1/4 Skpf. Washer

Comm. End Plate Assembly & Parts Used With

MAX-2002	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	Armature Assy.
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2813	1	Starting Switch Assy.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-3099	1	Starter Clutch Assy.
MAW-33	1	Pivot Screw
MAX-2050	1	Yoke Assembly
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1090S	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

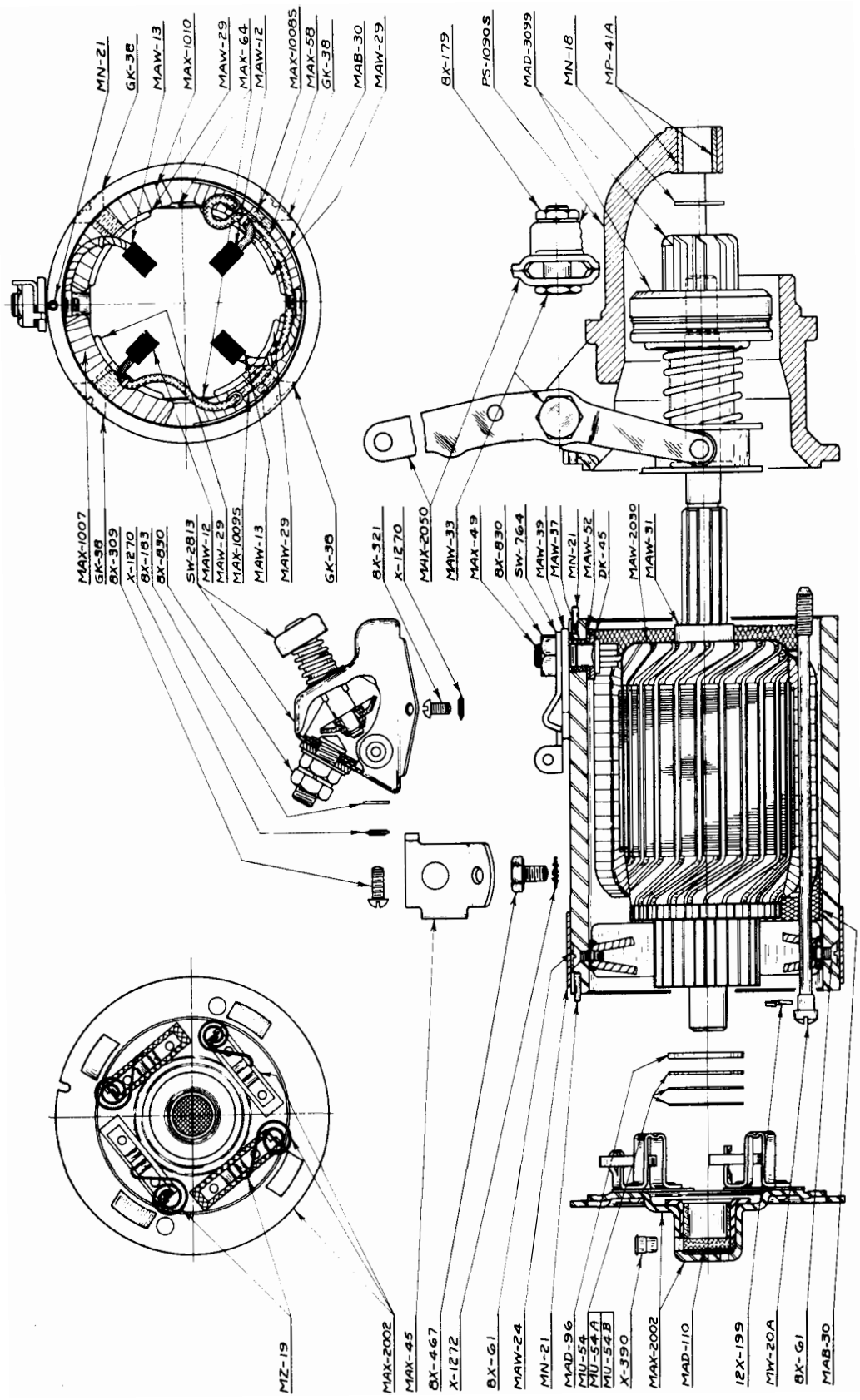
(Issued 8-16-40)

Unit	Application
MAX-4004	Chrysler

* Use as required.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4004 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2117)	1	Frame & Field Assy.
GK-38B	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-52	1	Field Connector Ins.
MAX-26	2	Field Coil Connector
MAX-47	1	Terminal Post
MAX-58	1	Equalizer
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
MW-20A	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	5/8 Steel Washer
MAW-2006	1	Armature Assy.
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6R	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

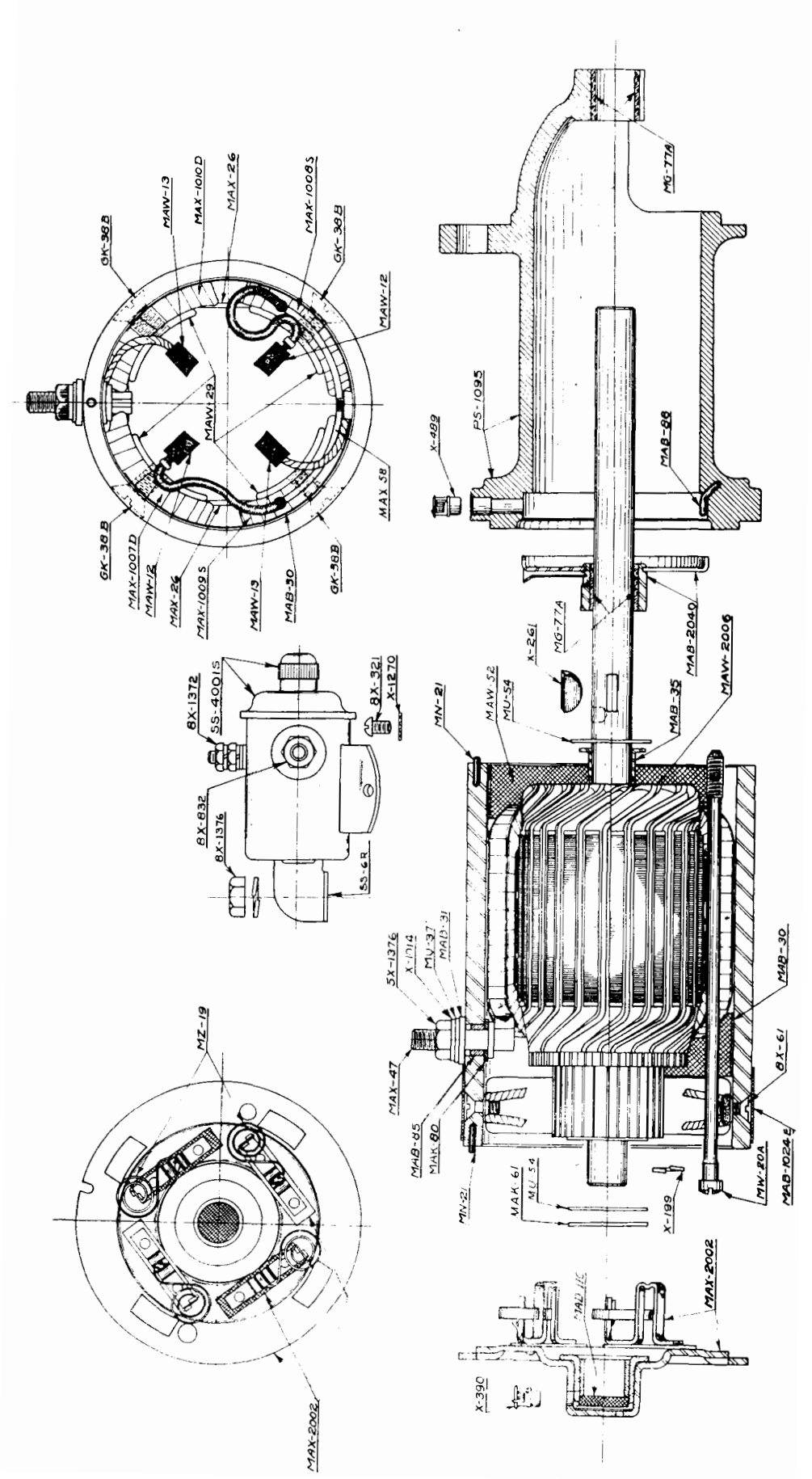
Miscellaneous Parts

EBA-12	1	Bendix Drive Assy.
MAB-1024E	1	Head Band Assy.
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1095	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 2-14-35)
(R-8-31-36)

"NOTE: Where pa t n mbers are shown in parenthesis they re for eference only. By stocking sub-parts the complete part can be assembled s needed."

MAX-4006 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2113A)	1	Frame & Field Assy.
DK-45	1	Ins. Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAX-49	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
SW-763	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAX-2002	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	Armature Assy.
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2677A	1	Starting Switch Assy.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-3099	1	Starter Clutch Assy.
MAW-33	1	Pivot Screw
MAW-2054	1	Yoke Assembly
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8-16 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1090S	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8-16-40)

Unit	Application
MAX-4007	Dodge Truck

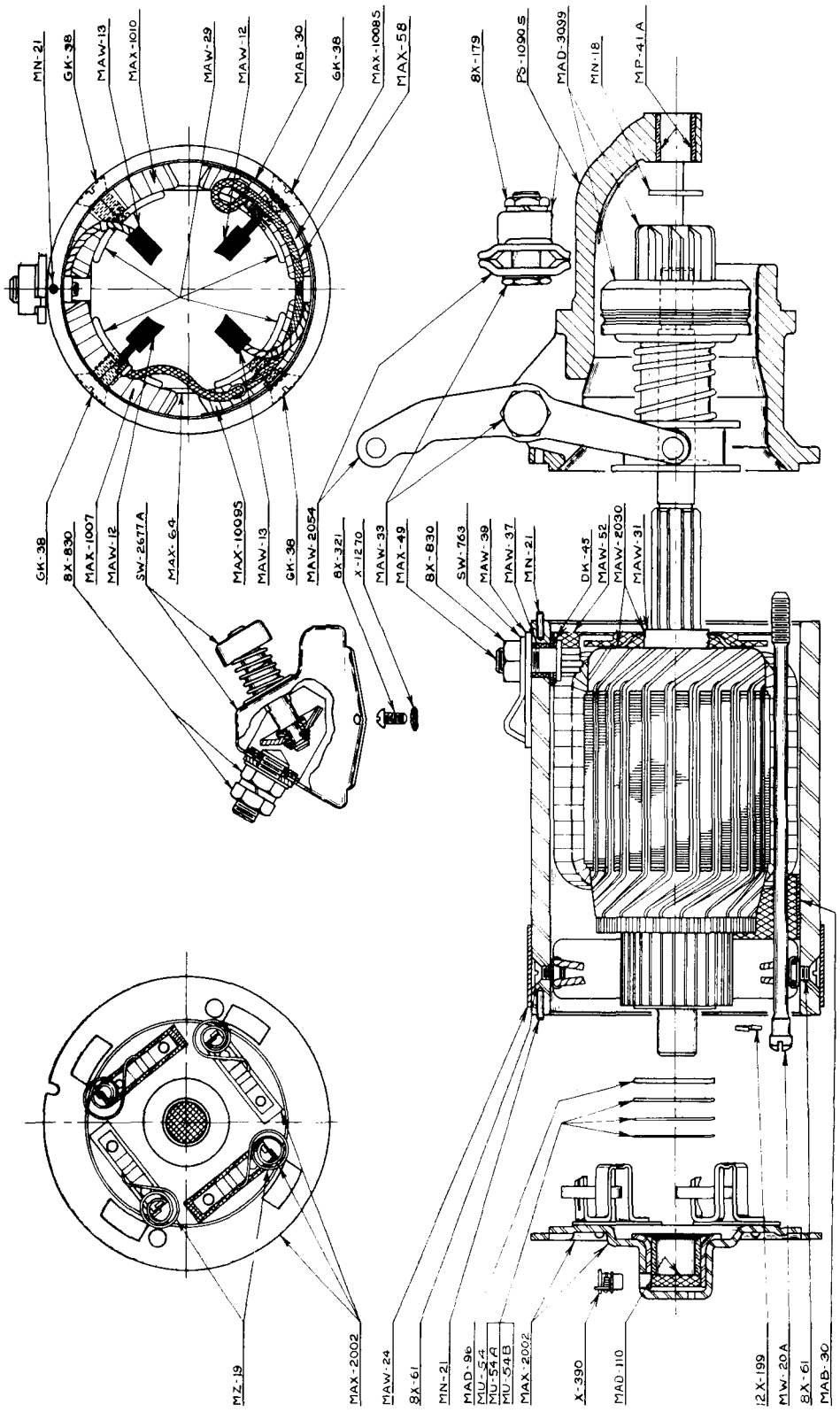
* Use as required.

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"NOTE: Where part numbers re shown in parenthesis they re for reference only. By stocking sub-parts the complete part can be assembled s needed."

MAX-4007 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2120)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-37	1	Ins. Bushing
MAX-35	1	Ins. Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy.-L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy.-L.L.
MAW-12	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002A	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	Armature Assy.
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

* Use as required.

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-93L	1	Connector
SS-1053	1	Clamp Assy.
8X-47	1	#8-32x9/16 Rd. Hd. Sc.
8X-141	1	#8-32 Hex. Nut
SS-1057	1	Moving Core Assy.
SS-54	1	Rubber Cap
SS-57	1	Core
SS-59	1	Link Screw
SS-60	1	3/8 Steel Washer
SS-61	1	Spring
SS-4101	1	Solenoid Starting Switch (See separate list for parts.)
12X-201	2	3/8 Lock Washer
8X-467	4	1/4-20x3/8 Hex. Hd. Sc.
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-93	1	Yoke Spring
MAD-95	1	Spring Retainer
MAD-2087A	1	Yoke Assembly
MAD-3099	1	Starter Clutch Assy.
MAX-52	1	Yoke Pin
SS-56	1	Link Pin
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer
X-401	1	1/16x3/8 Cotter Pin

Miscellaneous Parts

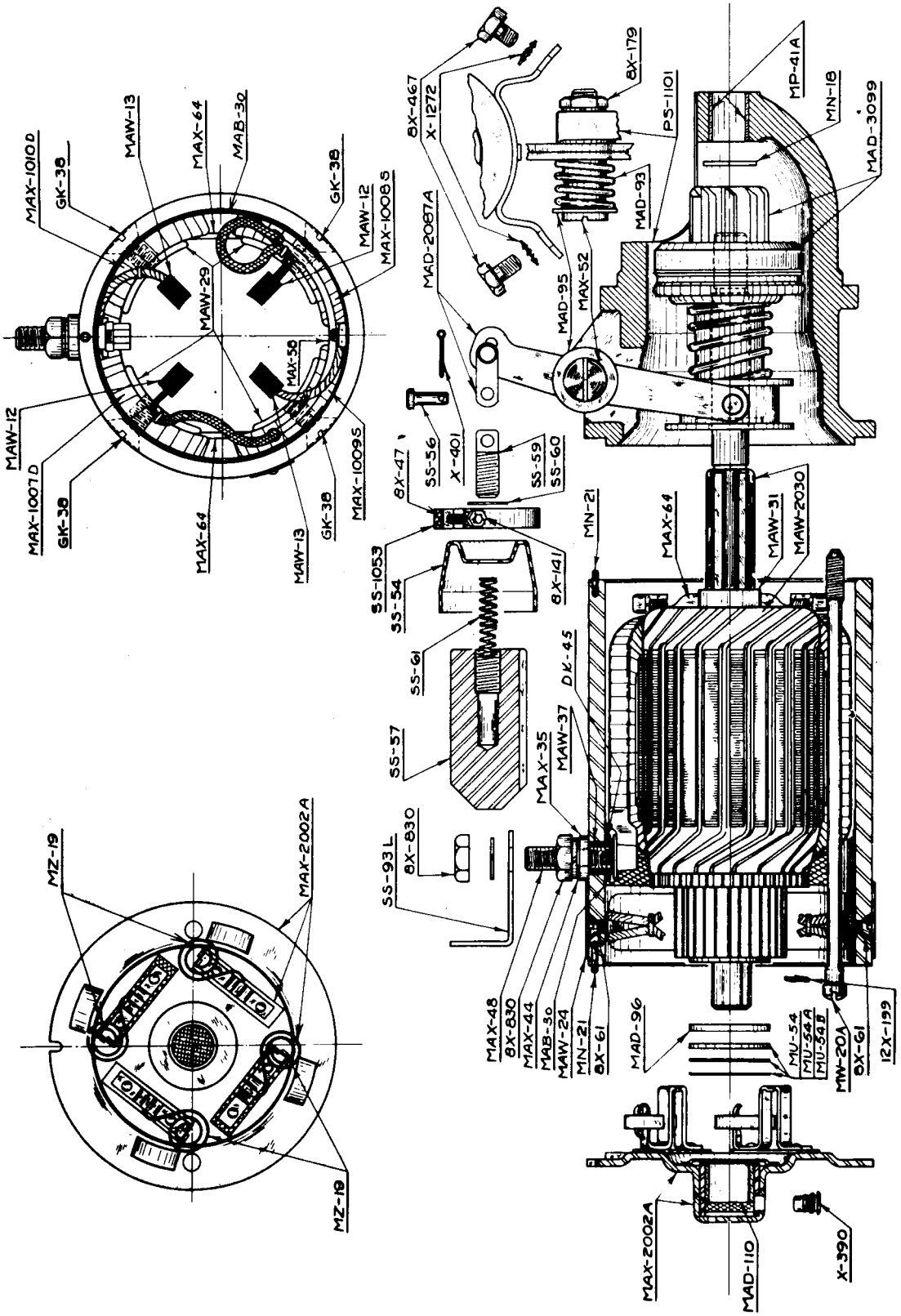
MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1101	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32xSquare Nut
		1 2 3 4 5

(Issued 2-1-40)

UNIT	APPLICATION
MAX-4008	Chrysler Industrial

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4008 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-3113)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY. - GROUNDED
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAX-49	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy.-L.R.
MAW-12	1	BRUSH
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	BRUSH
MAX-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
SW-763	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Plate Assy. & Parts Used With

MAX-3059	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-75	1	Thrust Washer
MAW-76	1	Thrust Washer
MAW-2069	1	ARMATURE ASSEMBLY
MU-54	1	Thrust Washer - 1/32" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2677A	1	STARTING SWITCH ASSY.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Sc.
X-1270	2	#10 Skpf. Washer

Starter Clutch & Parts Used With

MAW-33	1	Pivot Screw
MAW-70	1	Felt Washer
MAW-71	1	Felt Retainer
MAW-72	1	Felt Guard
MAW-73	1	Thrust Washer
MAW-74	1	Starter Clutch Shaft Gear
MAW-79	1	Starter Clutch Shaft
MAW-2080	1	Yoke Assembly
MAW-3086	1	STARTER CLUTCH ASSY.
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer
X-261	1	#6 Woodruff Key

Miscellaneous Parts

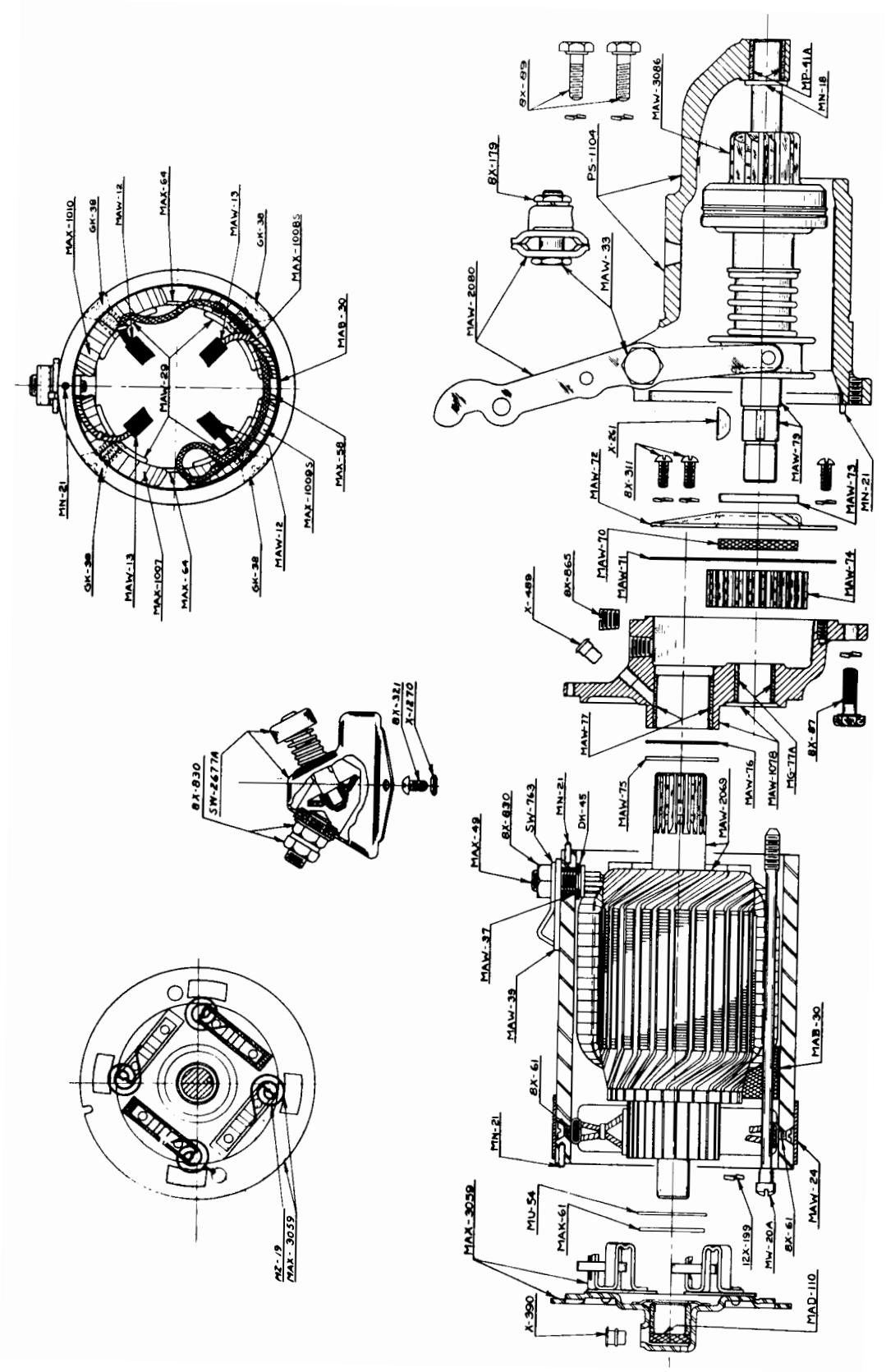
MAW-24	1	Head Band
MAW-1078	1	Intermediate Plate Assy.
MAW-77	1	ABSORBENT BRONZE BRG.
MG-77A	1	ABSORBENT BRONZE BRG.
X-489	1	1/4 Oiler - Press in Type
MN-18	1	Thrust Washer
PS-1104	1	Pinion Housing Assy.
MN-21	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
8X-87	1	1/4-20x7/8 Hex. Hd. Sc.
8X-89	2	1/4-20x1 Hex. Hd. Screw
X-196	3	#10 Lock Washer
12X-199	3	1/4 Lock Washer
8X-311	3	#10-32x3/8 Rd. Hd. Screw
8X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
8X-865	1	1/8 Pipe Plug
		1 2 3 4 5

(Issued 5-23-39)

UNIT	APPLICATION
MAX-4009	Dodge Truck

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4009 STARTING MOTOR ILLUSTRATION



Frame & Field With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-3121)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY.- GROUNDED
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	BRUSH
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	BRUSH
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAX-3059	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-75	1	Thrust Washer
MAW-76	1	Thrust Washer
MAW-2069	1	ARMATURE ASSEMBLY
MU-54	1	Thrust Washer - 1/32" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-66R	1	Connector
MU-37	1	5/16 Plain Washer
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Sc.
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

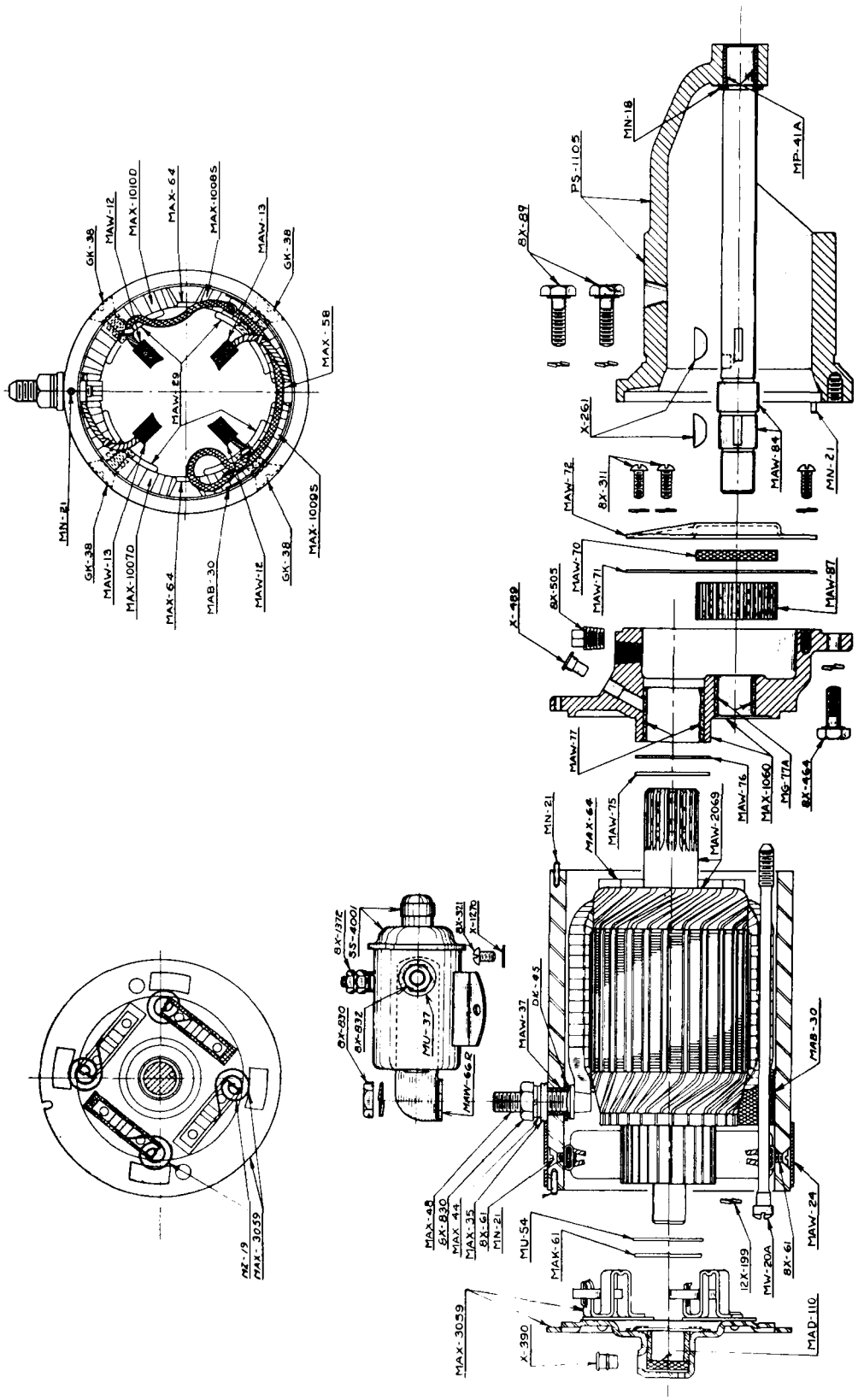
EB-48	1	BENDIX DRIVE
MAW-24	1	Head Band
MAW-70	1	Felt Washer
MAW-71	1	Felt Retainer
MAW-72	1	Felt Guard
MAW-84	1	Bendix Drive Shaft
MAW-87	1	Bendix Shaft Gear
MAX-1060	1	Intermediate Plate Assy.
MAW-77	1	ABSORBENT BRONZE BRG.
MC-77A	1	ABSORBENT BRONZE BRG.
X-489	1	1/4 Oiler - Press in Type
MN-18	1	Thrust Washer
PS-1105	1	Pinion Housing Assy.
MN-21	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
8X-89	2	1/4-20x1 Hex. Hd. Screw
X-196	3	#10 Lock Washer
12X-199	3	1/4 Lock Washer
X-261	2	#6 Woodruff Key
8X-311	3	#10-32x3/8 Rd. Hd. Screw
8X-464	1	1/4-20x3/4 Hex. Hd. Screw
8X-505	1	1/8 Pipe Plug
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-23-39)

UNIT	APPLICATION
MAX-4010	Chrysler Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4010 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-3121)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY.- GROUNDED
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	BRUSH
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	BRUSH
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAX-3059	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-75	1	Thrust Washer
MAW-76	1	Thrust Washer
MAW-2069	1	ARMATURE ASSEMBLY
MU-54	1	Thrust Washer - 1/32" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-66R	1	Connector
MU-37	1	5/16 Plain Washer
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

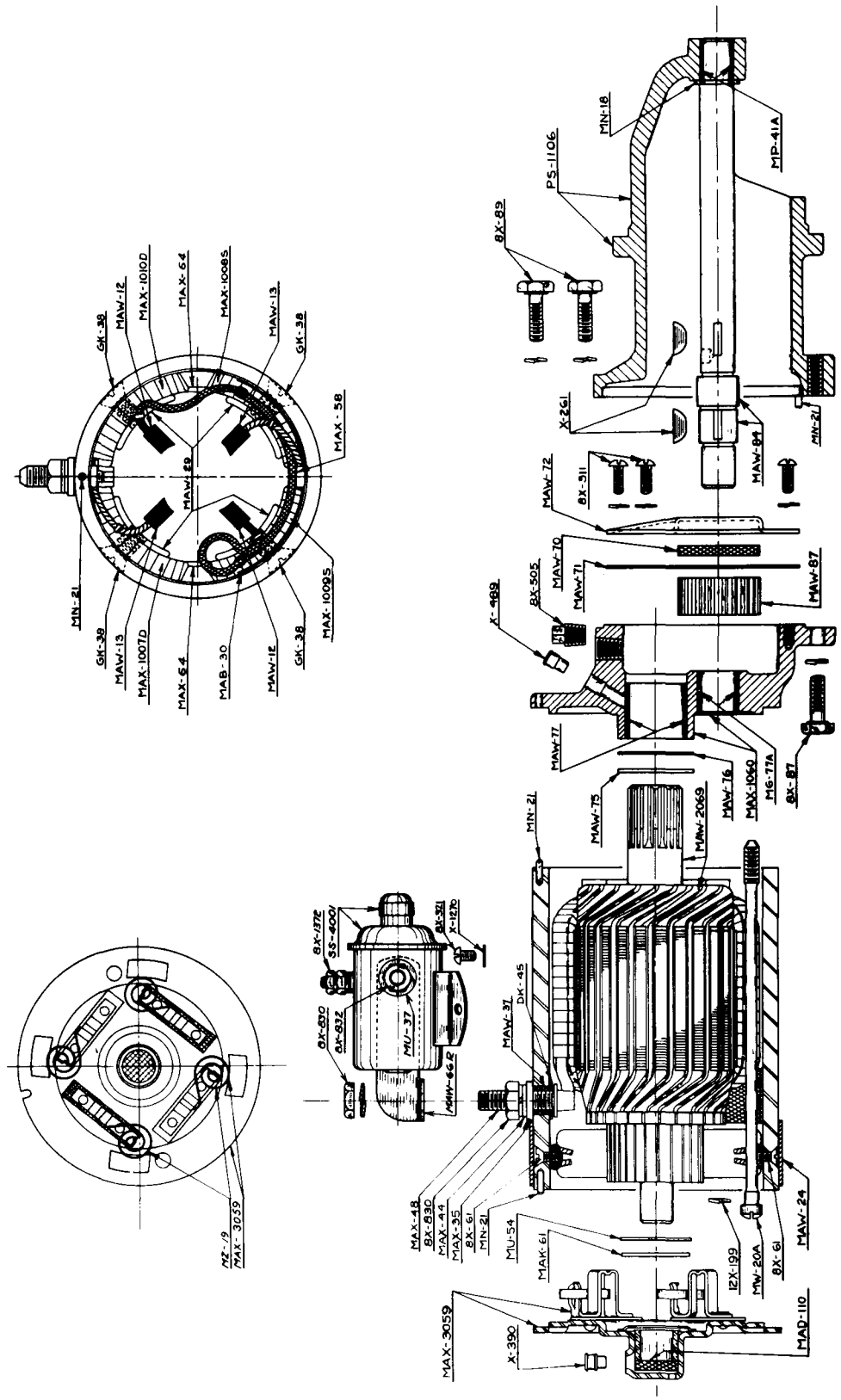
EB-48	1	BENDIX DRIVE ASSEMBLY
MAW-24	1	Head Band
MAW-70	1	Felt Washer
MAW-71	1	Felt Retainer
MAW-72	1	Felt Guard
MAW-84	1	Bendix Drive Shaft
MAW-87	1	Bendix Shaft Gear.
MAX-1060	1	Intermediate Plate Assy.
MAW-77	1	ABSORBENT BRONZE BRG.
MG-77A	1	ABSORBENT BRONZE BRG.
X-489	1	1/4 Oiler - Press in Type
MN-18	1	Thrust Washer
PS-1106	1	Pinion Housing Assy.
MN-21	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
8X-87	1	1/4-20x7/8 Hex. Hd. Sc.
8X-89	2	1/4-20x1 Hex. Hd. Screw
X-196	3	#10 Lock Washer
12X-199	3	1/4 Lock Washer
X-261	2	#6 Woodruff Key
8X-311	3	#10-32x3/8 Rd. Hd. Screw
8X-505	1	1/8 Pipe Plug
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-23-39)

UNIT	APPLICATION
MAX-4011	Chrysler Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4011 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2123)	1	Frame & Field Assy.
GK-38A	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-52	1	Field Connection Ins.
MAX-26	2	Field Coil Connector
MAX-47	1	Terminal Post
MAX-58	1	Equalizer
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut
MW-20B	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002B	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4-Hinged Top
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	5/8 Steel Washer
MAW-2090	1	Armature Assy.
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6RA	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
2X-321	2	#10-32x5/16 Rd. Hd. Sc.
X-1270	2	#10 Skpf. Washer

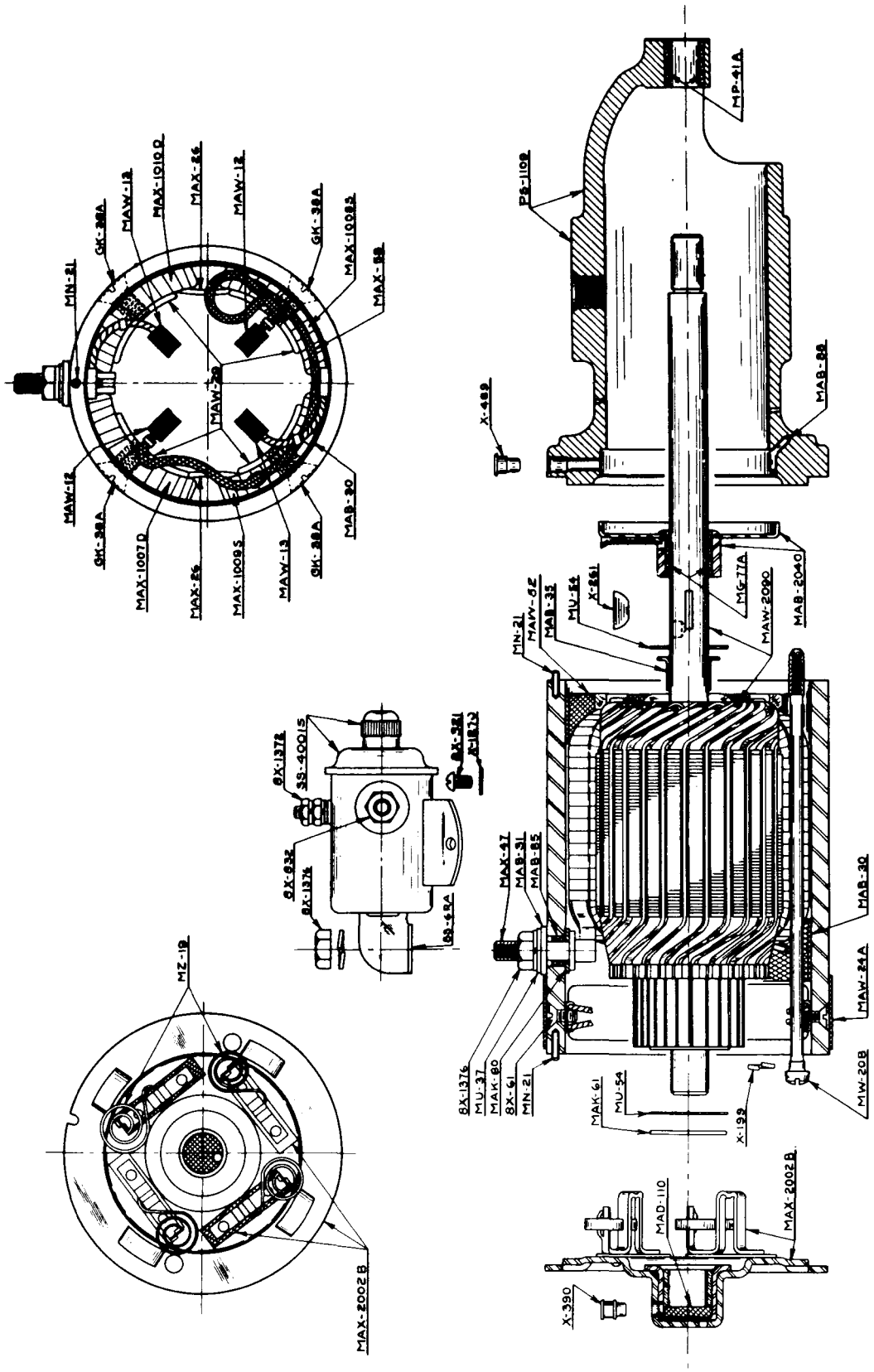
Miscellaneous Parts

EBA-12	1	Bendix Drive Assembly
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
MAW-24A	1	Head Band
PS-1109	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
2X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
2X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 1-19-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4014 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAX-45	1	Bracket
(MAX-2116)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY.- GROUNDED
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAX-49	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007	1	Field Coil - U.L.
MAX-1008S	1	FIELD COIL Assy.-L.R.
MAW-12	1	BRUSH
MAX-1009S	1	Field Coil Assy.-L.L.
MAW-12	1	BRUSH
MAX-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
SW-764	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
8X-467	2	1/4-20x3/8 Hex. Hd. Screw
X-1272	2	1/4 Skpf. Washer

Comm. End Plate Assy. & Parts Used With

MAX-2002	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick

Starting Switch & Parts Used With

SW-2813	1	STARTING SWITCH ASSY.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer
		1 2 3 4 5

Starter Clutch & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAD-3099	1	STARTER CLUTCH ASSY.
MAW-33	1	Pivot Screw
MAW-2089	1	Yoke Assembly
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1090A	1	Pinion Housing Assy.
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

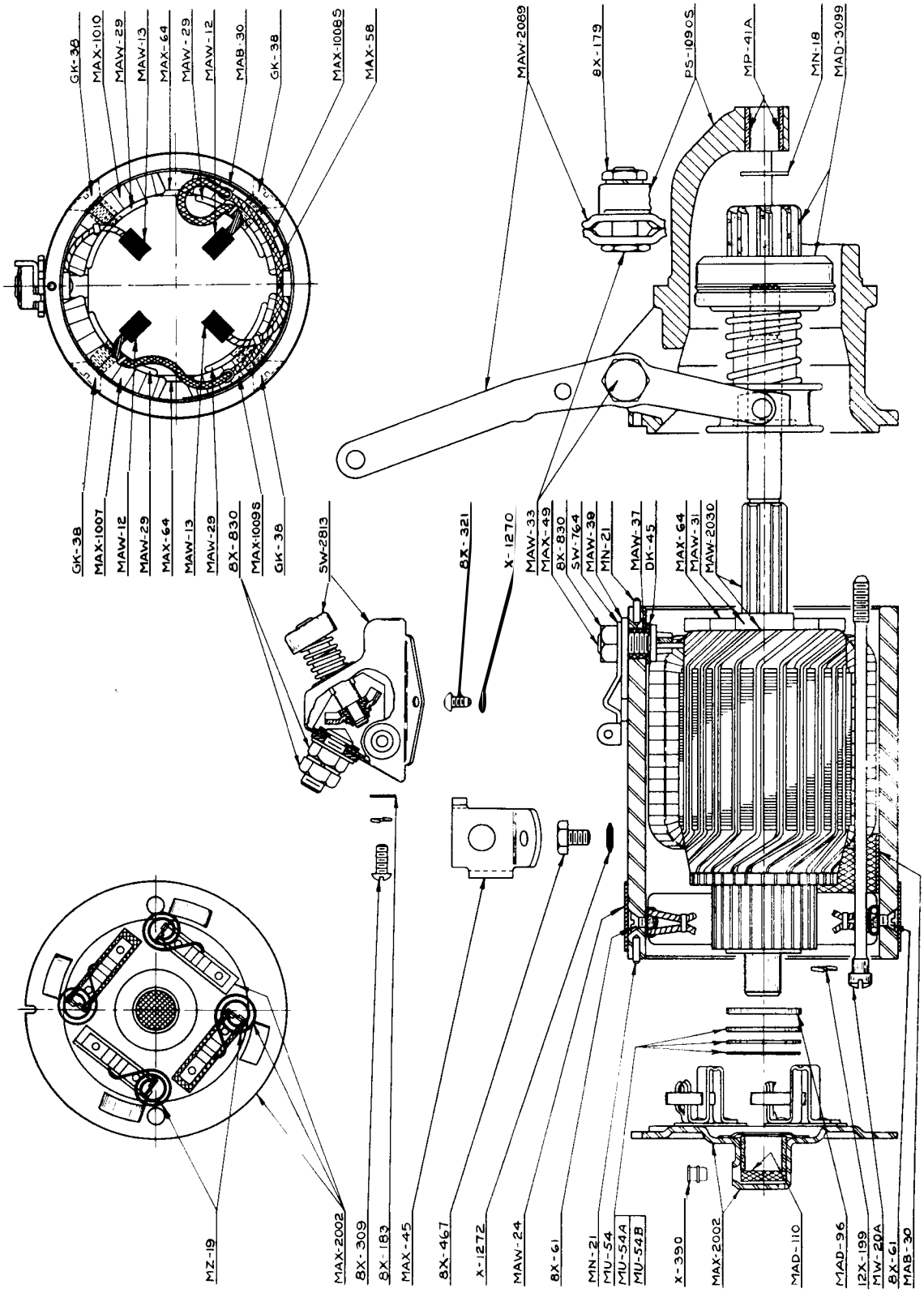
(Issued 5-23-39)

* Use as required.

UNIT	APPLICATION
MAX-4015	Chrysler, De Soto

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4015 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2115)	1	Frame & Field Assy.
GK-38B	4	Pole Piece Screw
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-37	1	Ins. Bushing
MAW-52	2	Field Connection Ins.
MAX-14	1	Terminal
MAX-21	1	Term. Post Ins. Washer
MAX-35	1	Ins. Washer
MAX-43	1	Terminal Post
MAX-44	1	3/8 Steel Washer
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007B	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy.-L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy.-L.L.
MAW-12	1	Brush
MAX-1010B	1	Field Coil - U.R
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Screw
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	Armature Assy.
MAW-31	1	Armature Shaft Spacer
MU-54	**	Thrust Washer - 1/32" Thick
MU-54A	**	Thrust Washer - 1/64" Thick
MU-54B	**	Thrust Washer - 3/64" Thick
		1 2 3 4 5

** Use as required.

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-116L	1	Connector
*	1	Solenoid Starting Switch (See separate list for parts.)
*	1	Moving Core Assy.
SS-59	1	Link Screw
SS-61	1	Spring
*	1	Core
12X-201	2	3/8 Lock Washer
8X-467	4	1/4-20x3/8 Hex. Hd. Screw
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-2087	1	Yoke Assembly
MAD-3099	1	Starter Clutch Assy.
MAD-102	1	Shift Collar
MAD-105	1	Shift Spring
MAD-106	1	Lock Spring Ring
MAX-37	1	Gasket
MAX-38	1	Dust Cover
MAX-39	1	Dust Plate
MAX-41	1	Yoke Pivot Bushing - 1 1/4 L.
MAX-42	1	Yoke Pivot Bushing - 1 9/16 L.
MAX-46	1	Yoke Spring
SS-56	1	Link Pin
8X-97	1	5/16-18x3 1/4 Hex. Hd. Screw
8X-147	1	5/16-18 Hex. Nut
8X-311	4	#10-32x3/8 Rd. Hd. Screw
X-401	1	1/16x3/8 Cotter Pin
12X-1014	1	5/16 Lock Washer
X-1270	4	#10 Skpf. Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1094	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 9-8-37.)

Assembly No.	Starting Switch	Core Assembly	Core
MAX-4016	SS-4104	SS-1057A	SS-57
MAX-4016A	SS-4203	SS-1128	SS-128

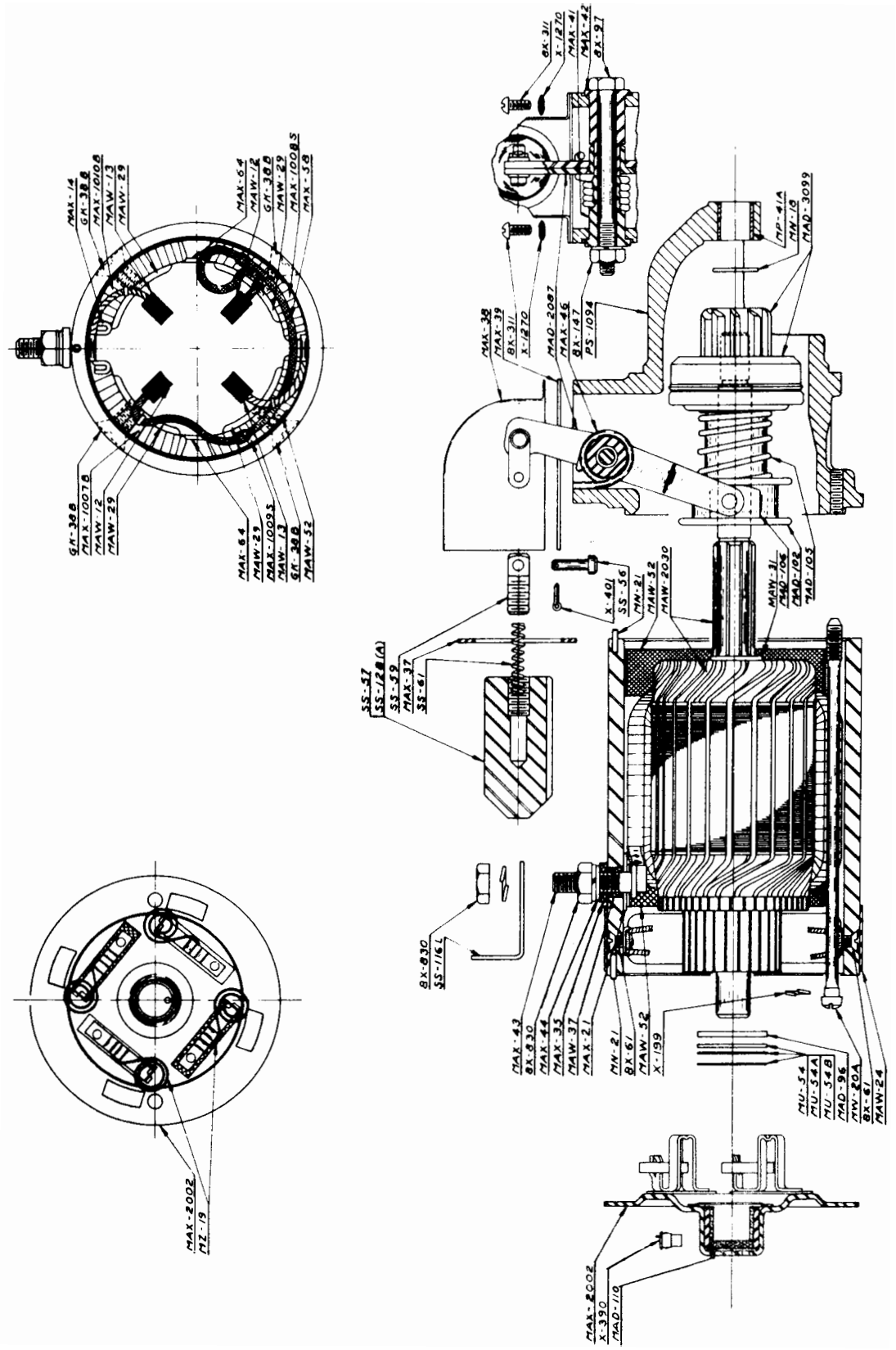
* See table showing parts list for part number applying to assembly wanted.

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4016,A STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2124)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-52	1	Field Connection Ins.
MAX-47	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut
MU-37	1	5/16 Plain Washer
MW-20	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002E	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	5/8 Steel Washer
MAW-2091	1	Armature Assembly
MU-54	1	Thrust Washer
X-261	1	#6 Woodruff Key

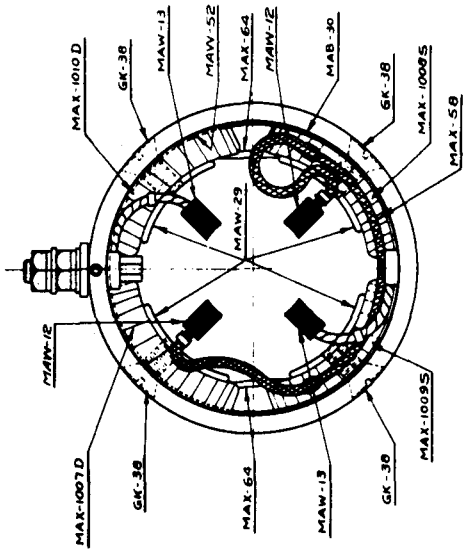
Miscellaneous Parts

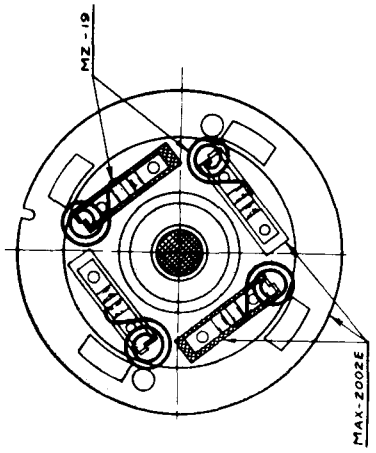
EBA-12	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MN-18	1	Thrust Washer
PS-1110	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

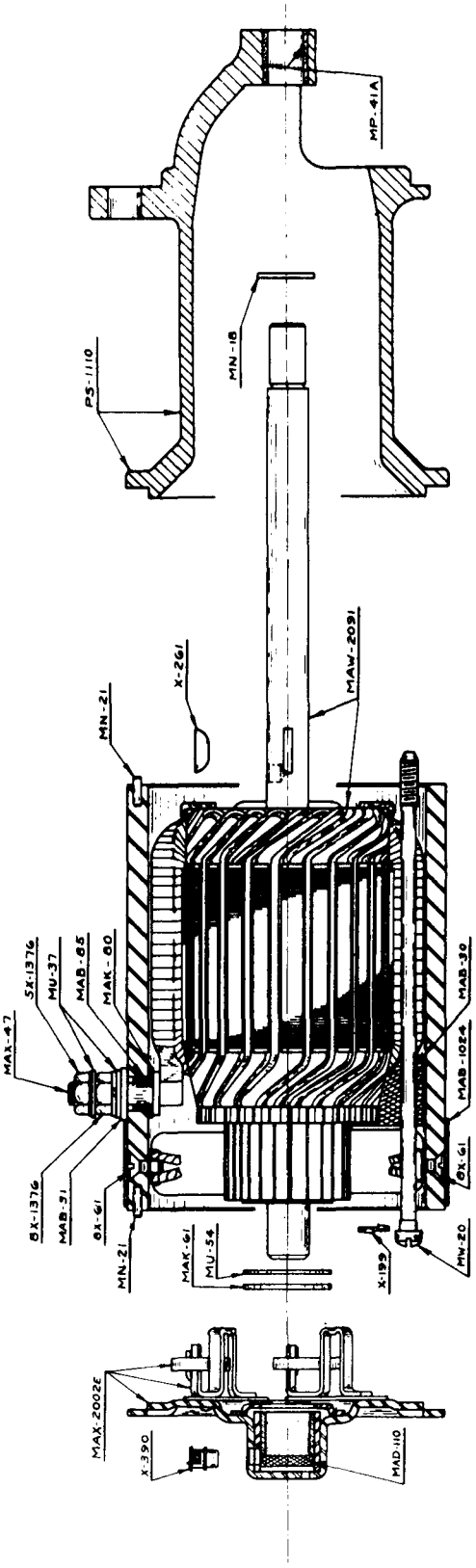
(Issued 9-8-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4018 STARTING MOTOR ILLUSTRATION







Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2125)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-83	1	Ins. Washer
MAF-31	1	Ins. Bushing
MAF-48	1	Ins. Washer
MAF-48A	1	Ins. Washer
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-52	1	Field Connection Ins.
MAX-58	1	Equalizer
MAX-61	1	Terminal Post
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Screw
MW-20	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	#10-32x3/16 Rd. Hd. Screw
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002E	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	5/8 Steel Washer
MAW-2091	1	Armature Assembly
MU-54	1	Thrust Washer
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

MU-37	1	5/16 Plain Washer
SW-1735	1	Switch Control Bracket Assy.
SW-735	1	Sw. Control Bracket - R.H.
SW-736	1	Sw. Control Bracket - L.H.
6X-119	1	#10-32x1/2 Fill. Hd. Sc.
X-196	1	#10 Lock Washer
6X-794	1	#10-32 Square Nut
SW-3737S	1	Starting Switch
X-196	4	#10 Lock Washer
8X-311	4	#10-32x3/8 Rd. Hd. Screw

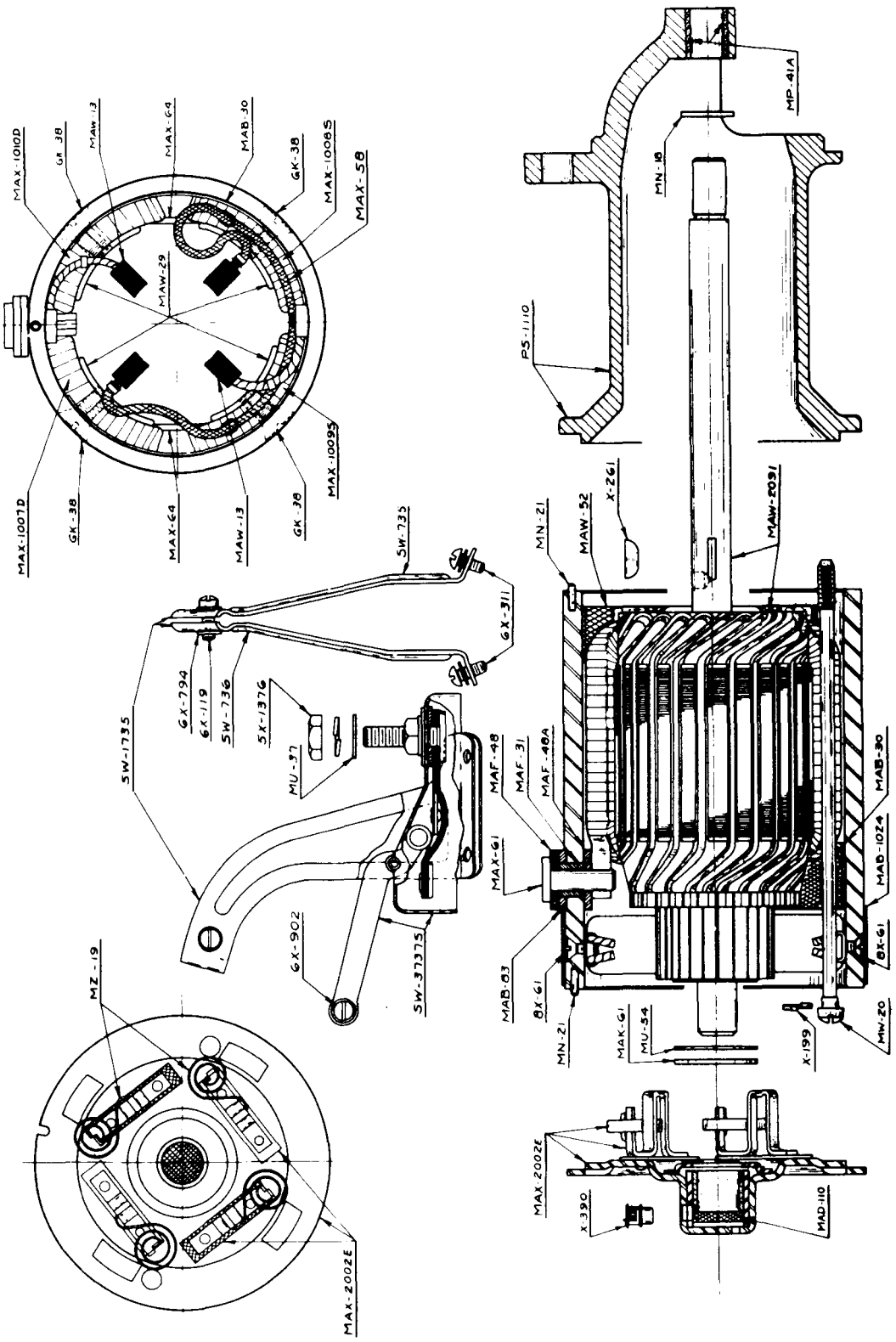
Miscellaneous Parts

EBA-12	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MN-18	1	Thrust Washer
PS-1110	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 9-8-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4019 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2120)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38B	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002A	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	Armature Assembly
MAW-31	1	Armature Shaft Spacer
MU-54	**	Thrust Washer - 1/32" Thick
MU-54A	**	Thrust Washer - 1/64" Thick
MU-54B	**	Thrust Washer - 3/64" Thick
		1 2 3 4 5

** Use as required.

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-117L	1	Connector
*	1	Solenoid Starting Switch (See separate list for parts)
12X-201	2	3/8 Lock Washer
8X-467	4	1/4-20x3/8 Hex. Hd. Screw
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-93	1	Yoke Spring
MAD-95	1	Spring Washer
MAD-3099	1	Starter Clutch Assy.
MAW-2092	1	Yoke Assembly
MAX-52	1	Yoke Pin
SS-56	1	Link Pin
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer
X-401	1	1/16x3/8 Cotter Pin

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1111	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-18-38)

Assembly No.	Starting Switch
MAX-4020	SS-4106†
MAX-4020A	SS-4206

† For service use SS-4206.

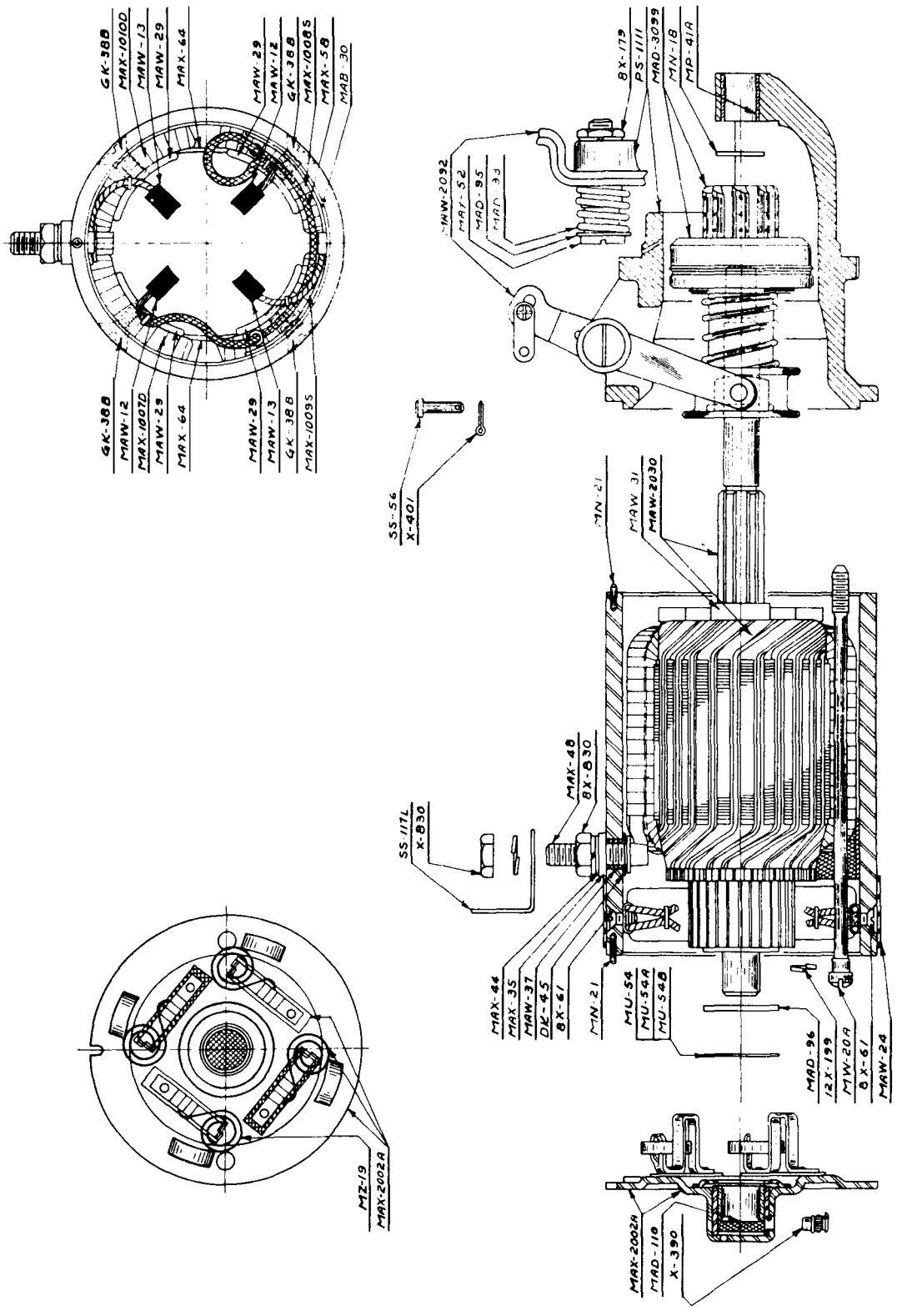
* See table following parts list for part number applying to assembly wanted.

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4020,A STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2124)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-32	1	Field Connection Ins.
MAX-47	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut
MW-20	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002C	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	5/8 Steel Washer
MAW-2006	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

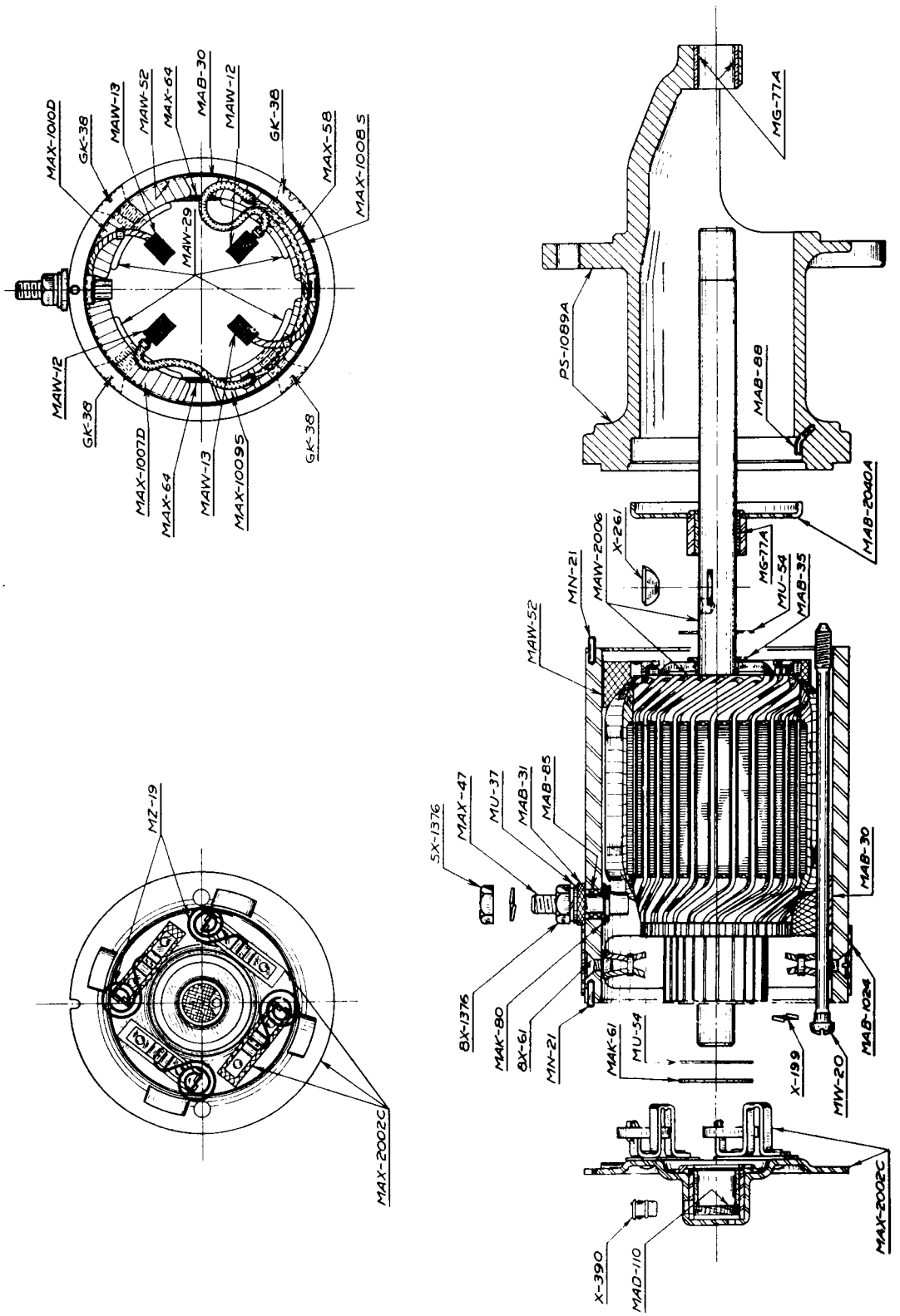
Miscellaneous Parts

EBA-12	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assembly
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1089A	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32xl 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 9-8-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4021 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-3121)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38B	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	4	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAX-3059	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-75	1	Thrust Washer
MAW-76	1	Thrust Washer
MAW-2069	1	Armature Assy.
MU-54	1	Thrust Washer - 1/32" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-66R	1	Connector
MU-37	1	5/16 Plain Washer
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

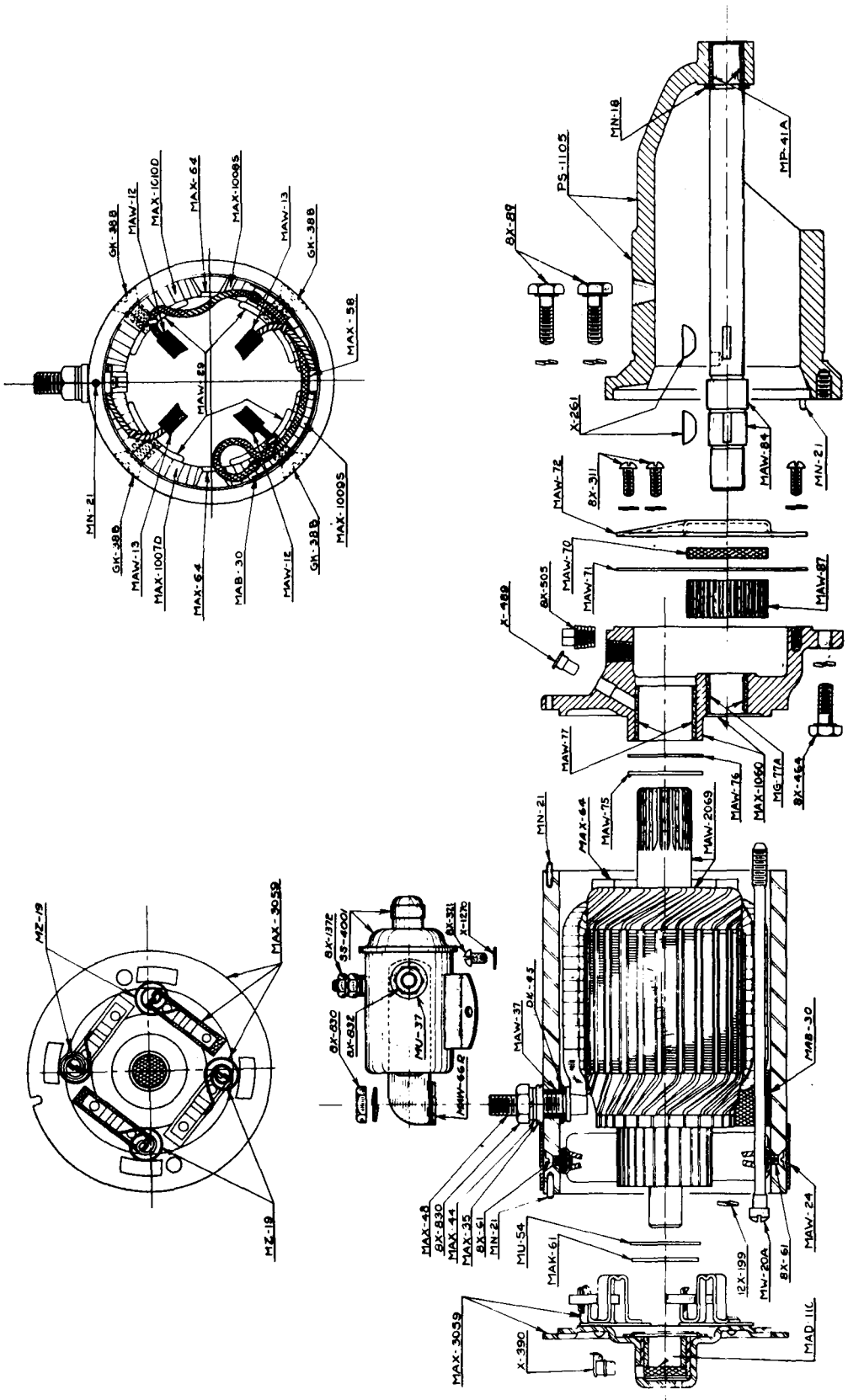
Miscellaneous Parts

BBA-17	1	Bendix Drive Assy.
MAW-24	1	Head Band
MAW-70	1	Felt Washer
MAW-71	1	Felt Retainer
MAW-72	1	Felt Guard
MAW-84	1	Bendix Drive Shaft
MAW-87	1	Bendix Shaft Gear
MAX-1060	1	Intermediate Plate Assy.
MAW-77	1	Absorbent Bronze Brg.
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
MN-18	1	Thrust Washer
PS-1105	1	Pinion Housing Assy.
MN-21	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
8X-89	2	1/4-20x1 Hex. Hd. Screw
X-196	3	#10 Lock Washer
12X-199	3	1/4 Lock Washer
X-261	2	#6 Woodruff Key
8X-311	3	#10-32x3/8 Rd. Hd. Screw
8X-464	1	1/4-20x3/4 Hex. Hd. Screw
8X-505	1	1/8 Pipe Plug
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 11-22-38)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4022 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-3121)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY. - GROUNDED
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	BRUSH
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	BRUSH
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Screw
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-3059	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-75	1	Thrust Washer
MAW-76	1	Thrust Washer
MAW-2069	1	ARMATURE ASSEMBLY
MU-54	1	Thrust Washer
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-66R	1	Connector
MU-37	1	5/16 Plain Washer
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

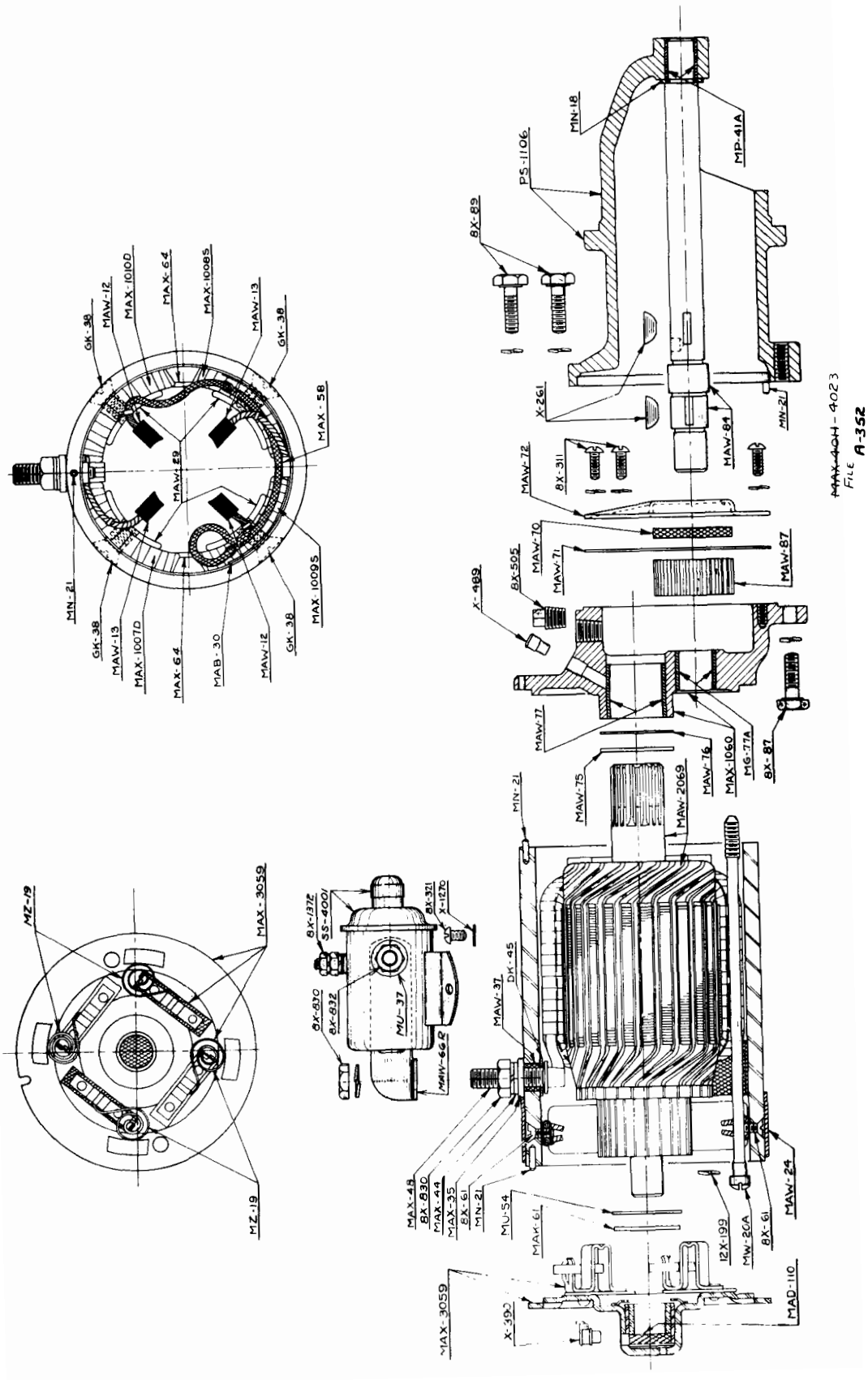
Miscellaneous Parts

EBA-17	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7806	1	Hd. Sp. Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	DRIVING SPRING
EB-8734	1	Take Up Spring
EBA-1711	1	S-A Assembly
MAW-24	1	Head Band
MAW-70	1	Felt Washer
MAW-71	1	Felt Retainer
MAW-72	1	Felt Guard
MAW-84	1	Bendix Drive Shaft
MAW-87	1	Bendix Shaft Gear
MAX-1060	1	Intermediate Plate Assy.
MAW-77	1	ABSORBENT BRONZE BRG.
MG-77A	1	ABSORBENT BRONZE BRG.
X-489	1	1/4 Oiler - Press in Type
MN-18	1	Thrust Washer
PS-1106	1	Pinion Housing Assy.
MN-21	1	Dowel Pin
MP-41A	1	ABSORBENT BRONZE BRG.
8X-87	1	1/4-20x7/8 Hex. Hd. Screw
8X-89	2	1/4-20x1 Hex. Hd. Screw
X-196	3	#10 Lock Washer
12X-199	3	1/4 Lock Washer
X-261	2	#6 Woodruff Key
8X-311	3	#10-32x3/8 Rd. Hd. Screw
8X-505	1	1/8 Pipe Plug
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-12-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4023 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-3121A)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-37A	1	Bushing, Ins.,, Term. Stud
MAX-35	1	Washer, Ins., Term. Stud, Outer
MAX-48A	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007F	1	Coil, Field, U.L.
MAX-1008B	1	Coil, Field, L.R.
MAX-1009B	1	Coil, Field, L.L.
MAX-1010F	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MN-47B	1	Washer, Plain, Term. Stud, 3/8
WSE-41	1	Washer, Ins., Term. Stud, Inner
12X-201	2	Lockwasher, Term. Stud 3/8
8X-2845	2	Nut, Term. Stud, Hex. 3/8-16
8X-2889	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
MW-20C	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-3059D	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Arm. Thrust, Comm. End
MAW-75A	1	Washer, Thrust, Intermediate
MAW-76	1	Washer, Thrust, Intermediate
MAW-2069M	1	ARMATURE
MU-54	1	Washer, Thrust
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAW-167R	1	Connector
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
8X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-17A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8705A	1	SPRING: DRIVE
EB-8734A	1	Ring, Take Up
EBA-1711A	1	Shaft & Pinion
MAB-1024N	1	Band, Cover
MAW-70	1	Washer, Felt, Int. Plate
MAW-71A	1	Retainer, Felt Washer, Int. Plate
MAW-72A	1	Guard, Felt Washer, Int. Plate
MAW-84A	1	Shaft, Bendix Drive
MAW-87	1	Gear, Bendix Shaft
MAX-1060A	1	Bearing Assy., Intermediate
MAW-77	1	BEARING, ABSORBENT BRONZE
MG-77A	1	BEARING ABSORBENT BRONZE
X-489A	1	Oiler, Hinge Top, Press In, 1/4
MN-18	1	Washer, Thrust, D.E.
PS-1106A	1	Housing Assy., Pinion
MN-21A	1	Pin, Dowel
MP-41A	1	BEARING, ABSORBENT BRONZE
8X-21	3	Screw, Retainer, Rd. Hd. #10-32x3/8
19X-89	3	Screw, Housing, Hex. Hd. 1/4-20x1
12X-196	3	Lockwasher, Retainer, Sc. #10
12X-199	3	Lockwasher, Housing Sc., 1/4
8X-2873	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-2875	1	Nut, Cover Band, Square #10-32
8X-2892	1	Plug, Pipe, 1/8
		1 2 3 4 5

† BRUSH SET, SERVICE MAW-2012S

NOTE: - Part numbers shown in parenthesis are not recommended for service.

UNIT	APPLICATION
MAX-4023M	Chrysler (Marine)

(Issued 1-19-48)

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2121)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38B	4	Pole Piece Screw
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-37	1	Ins. Bushing
MAW-52	1	Field Connection Ins.
MAX-35	1	Ins. Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-75	1	Thrust Washer
MAW-76	1	Thrust Washer
MAW-2069	1	Armature Assembly
MU-54	1	Thrust Washer - 1/32" Thick

Starter Clutch Assembly & Parts Used With

MAW-66R	1	Connector
MU-37	1	5/16 Plain Washer
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-16	1	Bendix Drive Assy.
EB-108	2	Lock Washer
EB-7805	1	Driving Spring
EB-7806	1	Hd. Sp. Bolt or Sc.
EB-7807	1	Shaft Spring Sc.
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8734	1	Take Up Spring
EBA-1611	1	S-A Assembly
MAW-24	1	Head Band
MAW-70	1	Felt Washer
MAW-71	1	Felt Retainer
MAW-72	1	Felt Guard
MAW-84	1	Bendix Drive Shaft
MAW-87	1	Bendix Shaft Gear
MAX-1060	1	Intermediate Plate Assy.
MAW-77	1	Absorbent Bronze Brg.
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler Press in Type
MN-18	1	Thrust Washer
PS-1105	1	Pinion Housing Assy.
MN-21	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
8X-89	2	1/4-20x1 Hex. Hd. Sc.
8X-196	3	#10 Lock Washer
12X-199	3	1/4 Lock Washer
X-261	2	#6 Woodruff Key
8X-311	3	#10-32x3/8 Rd. Hd. Screw
8X-464	1	1/4-20x3/4 Hex. Hd. Sc.
8X-505	1	1/8 Pipe Plug
8X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

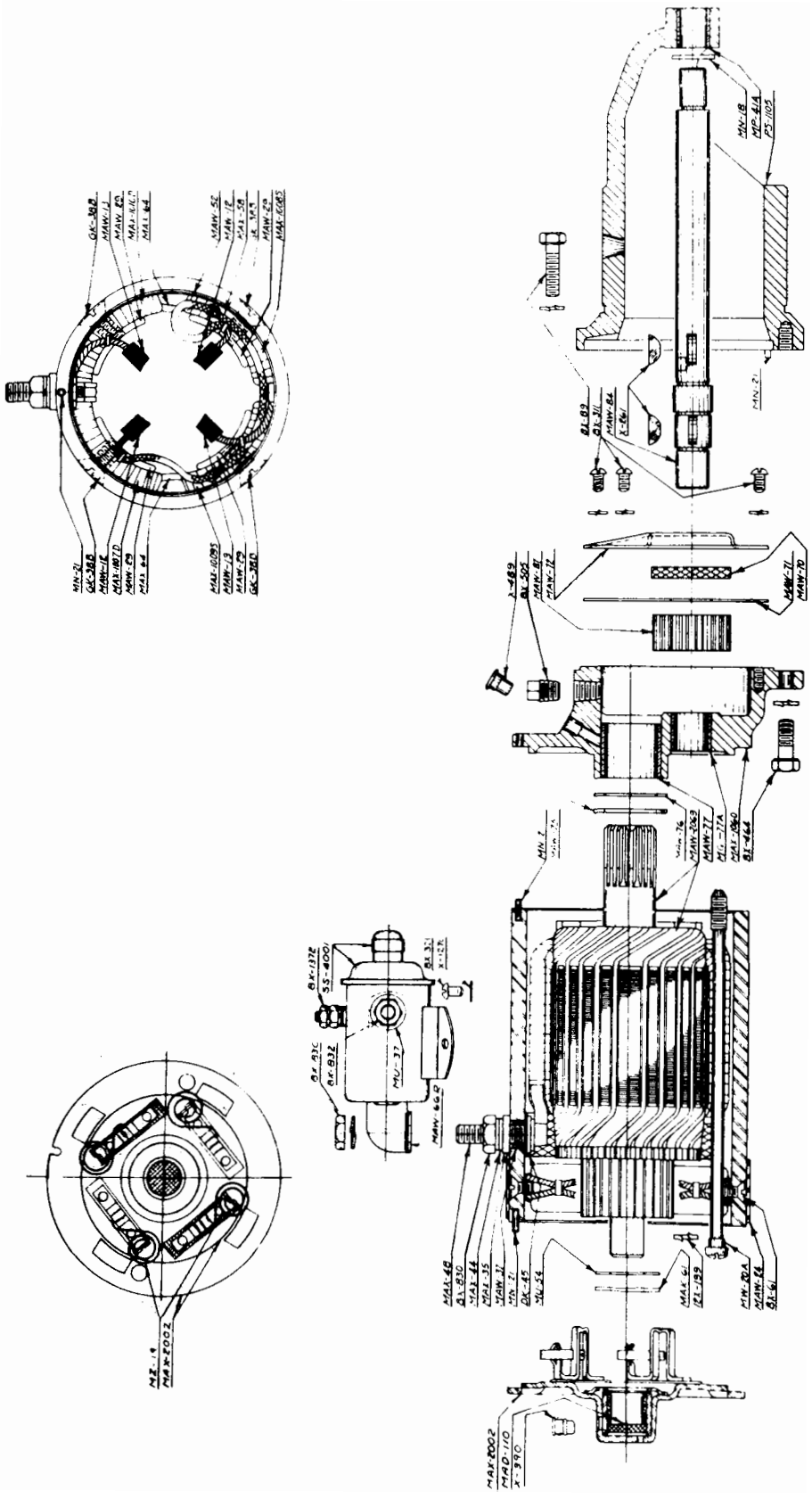
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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4025 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2121)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38B	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAX-2002	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assy. & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-75	1	Thrust Washer
MAW-76	1	Thrust Washer
MAW-2069	1	Armature Assy.
MU-54	1	Thrust Washer - 1/32" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-66R	1	Connector
MU-37	1	5/16 Plain Washer
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EBA-16	1	Bendix Drive Assy.
MAW-24	1	Head Band
MAW-70	1	Felt Washer
MAW-71	1	Felt Retainer
MAW-72	1	Felt Guard
MAW-84	1	Bendix Drive Shaft
MAW-87	1	Bendix Shaft Gear
MAX-1060	1	Intermediate Plate Assy.
MAW-77	1	Absorbent Bronze Brg.
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
MN-18	1	Thrust Washer
PS-1106	1	Pinion Housing Assy.
MN-21	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
8X-87	1	1/4-20x7/8 Hex. Hd. Screw
8X-89	2	1/4-20x1 Hex. Hd. Screw
X-196	3	#10 Lock Washer
12X-199	3	1/4 Lock Washer
X-261	2	#6 Woodruff Key
8X-311	3	#10-32x3/8 Rd. Hd. Screw
8X-505	1	1/8 Pipe Plug
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

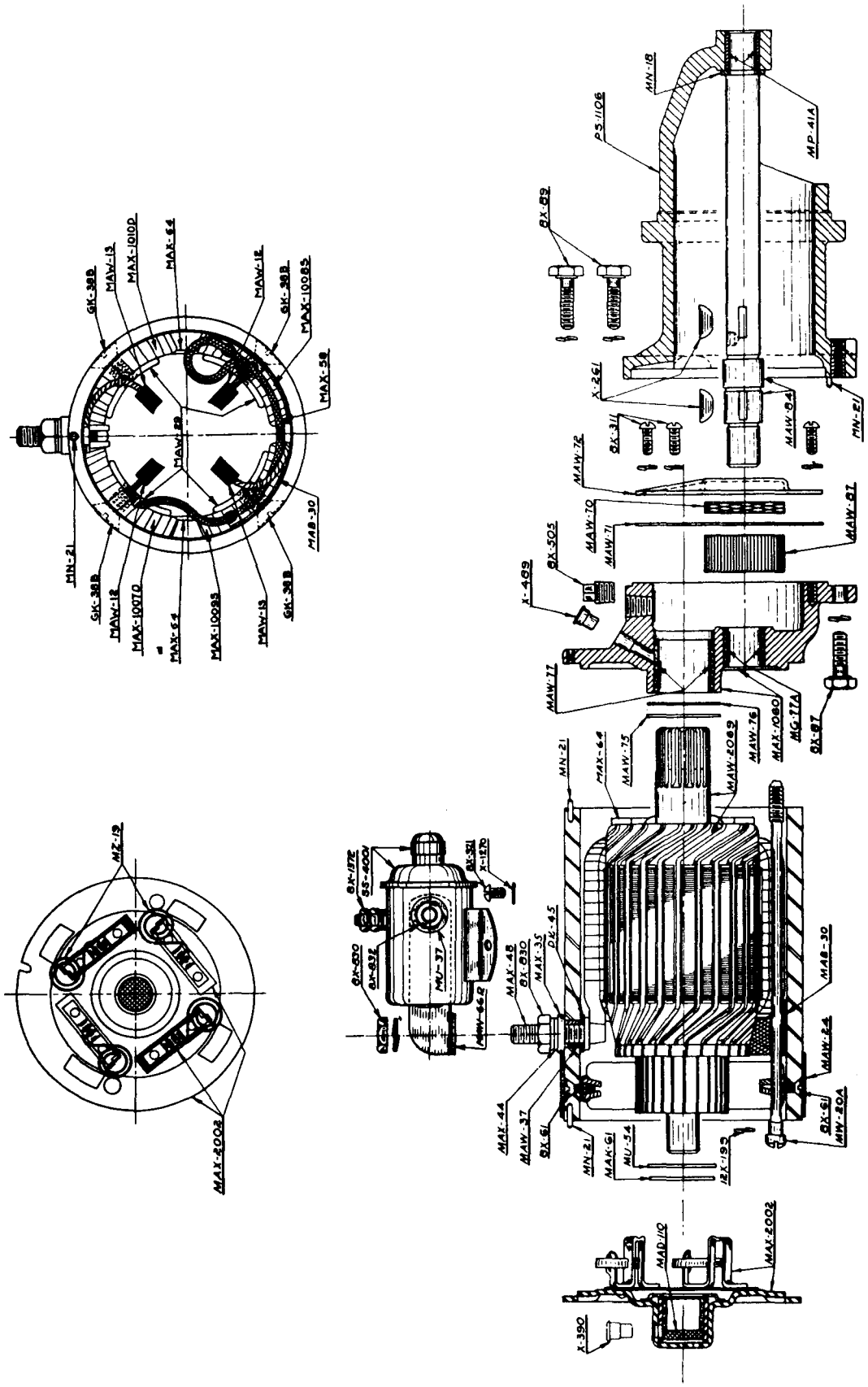
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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4026 STARTING MOTOR ILLUSTRATION



MAX-4026M STARTING MOTOR PARTS LIST MAX-4026M

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2121A)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAW-12 †	2	Brush
MAW-13 †	2	Brush, Grounded
MAW-37A	1	Bushing, Ins., Term. Stud
MAX-35	1	Washer, Ins., Term. Stud, Outer
MAX-48A	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007F	1	Coil, Field, U.L.
MAX-1008B	1	Coil, Field, L.R.
MAX-1009B	1	Coil, Field, L.L.
MAX-1010F	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MN-47B	1	Washer, Plain, Term. Stud, 3/8
WSE-41	1	Washer, Ins., Term. Stud, Inner
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-2845	2	Nut, Term. Stud, Hex. 3/8-16
8X-2889	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
MW-20C	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002L	1	Head Assembly, Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Arm. Thrust, Comm. End
MAW-75A	1	Washer, Thrust, Intermediate
MAW-76	1	Washer, Thrust, Intermediate
MAW-2069M	1	ARMATURE
MU-54	1	Washer, Thrust, 1/32" thick
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAW-167R	1	Connector
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
8X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-16A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7805A	1	SPRING, DRIVE
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8734A	1	Ring, Take Up
EBA-1611A	1	Shaft & Pinion
MAB-1024N	1	Band, Cover
MAW-70	1	Washer, Felt, Int. Plate
MAW-71A	1	Retainer, Felt Washer, Int. Plate
MAW-72A	1	Guard, Felt Washer, Int. Plate
MAW-84A	1	Shaft, Bendix Drive
MAW-87	1	Gear, Bendix Shaft
MAX-1060A	1	Bearing Assy., Int.
MAW-77	1	BEARING, ABSORBENT BRONZE
MG-77A	1	BEARING, ABSORBENT BRONZE
X-489A	1	Oiler, Hinge Top, Press in, 1/4
MN-18	1	Washer, Thrust, D.E.
PS-1106A	1	Housing Assy., Pinion
MN-21A	1	Pin, Dowel
MP-41A	1	BEARING, ABSORBENT BRONZE
8X-21	3	Screw, Retainer, Rd. Hd. #10-32x3/8
19X-89	3	Screw, Housing, Hex. Hd. 1/4-20x1
12X-196	3	Lockwasher, Retainer Sc., #10
12X-199	3	Lockwasher, Housing Sc., 1/4
8X-2873	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-2875	1	Nut, Cover Band, Sq. #10-32
8X-2892	1	Plug, Pipe, 1/8
		1 2 3 4 5

† BRUSH SET, SERVICE MAW-2012S.

NOTE: - Part numbers shown in parenthesis are not recommended for service.

UNIT	APPLICATION
MAX-4026M	Chrysler (Marine)

(Issued 1-19-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
(MAX-2126)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAX-49	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
SW-763	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20	2	Frame Screw
X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAX-2002E	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	Armature Assembly
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
	1 2 3 4 5	

* Use as required.

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
SW-2677B	1	Starting Switch Assy.
X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-95	1	Spring Retainer
MAW-95	1	Yoke Spring
MAW-2096	1	Yoke Assembly
MAW-3099	1	Starter Clutch Assy.
MAX-52	1	Yoke Pin
8X-179	1	3/8-16 Hex. Nut
X-201	1	3/8 Lock Washer

Miscellaneous Parts

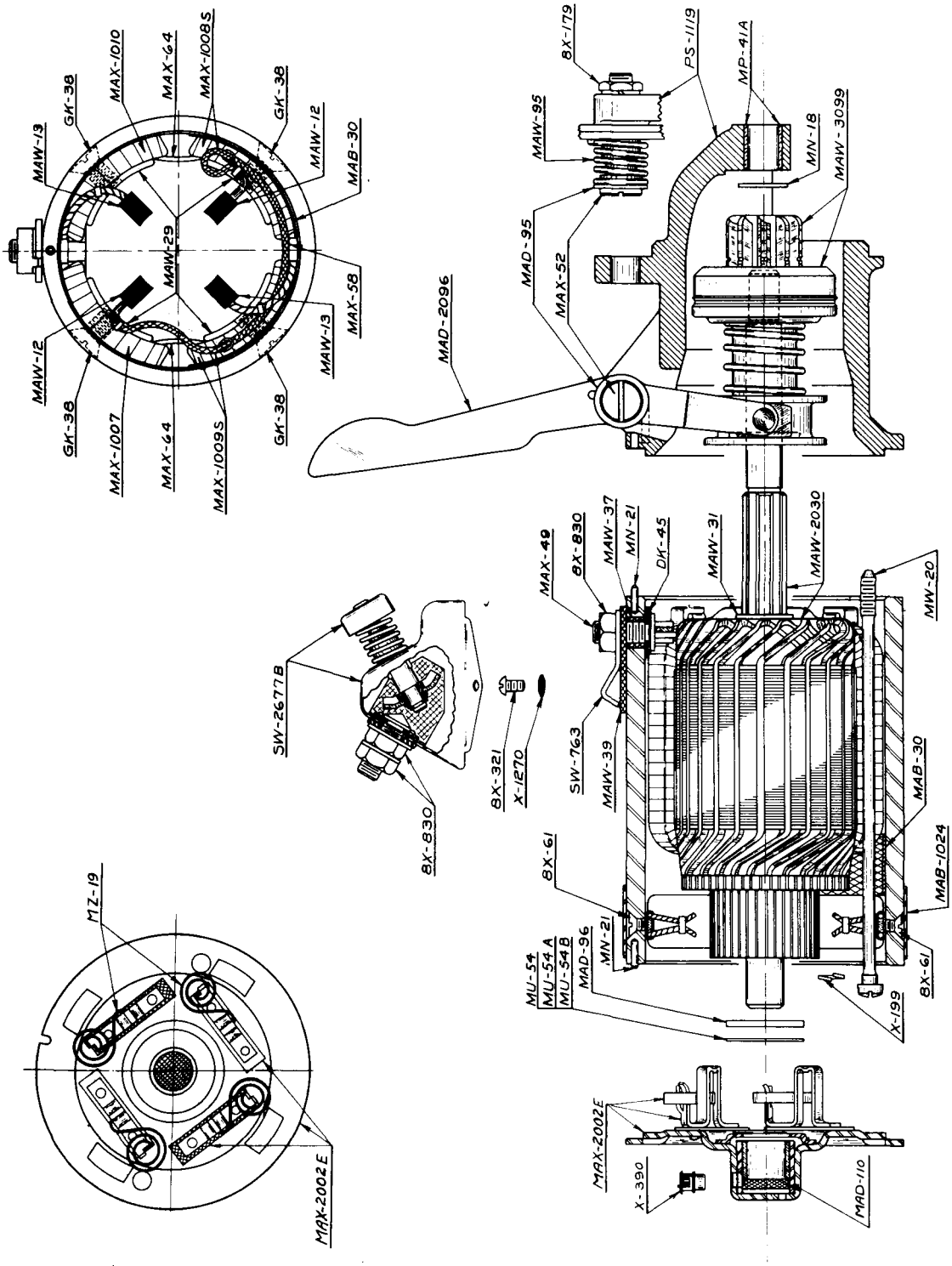
MAB-1024	1	Head Band Assembly
MN-18	1	Thrust Washer
PS-1119	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
	1 2 3 4 5	

(Issued 8-16-40)

Unit	Application
MAX-4028	Studebaker

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete p t can be assembled as needed."

MAX-4028 STRATING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

PRELIMINARY

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2113A)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13‡	2	Brush Assy.- Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAX-49	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy.- L.R.
MAW-12‡	1	Brush
MAX-1009S	1	Field Coil Assy.- L.L.
MAW-12‡	1	Brush
MAX-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
SW-763	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Comm. End Head Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	+	Thrust Washer - 1/32" Thick
MU-54A	+	Thrust Washer - 1/64" Thick
MU-54B	+	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2677A	1	STARTING SWITCH ASSEMBLY
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Starter Clutch Assy. & Parts Used With

MAW-33	1	Pivot Screw
*	1	Yoke Assembly
*	1	STARTER CLUTCH ASSEMBLY
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1090S	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 1-19-42)

Assembly No.	Yoke Assembly	Starter Clutch
MAX-4031	MAW-2103A	MAW-3132
MAX-4031A	MAW-2103	MAD-3099
MAX-4031B	MAW-2103	MAW-3132

* See table following parts list for part number applying to assembly wanted.

‡ SERVICE BRUSH SET MAW-2012S.

\+ Use as required.

UNIT	APPLICATION
MAX-4031,A,B	Dodge Truck

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2118)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Ins. Washer
MAB-85	1	Ins. Bushing
MAK-80	1	Ins. Washer
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAX-47	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
MW-20	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002D	1	Comm. End Plate Assy.
MZ-19	4	Brush Spring
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	5/8 Steel Washer
MAW-2064	1	Armature Assembly
MU-54	1	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

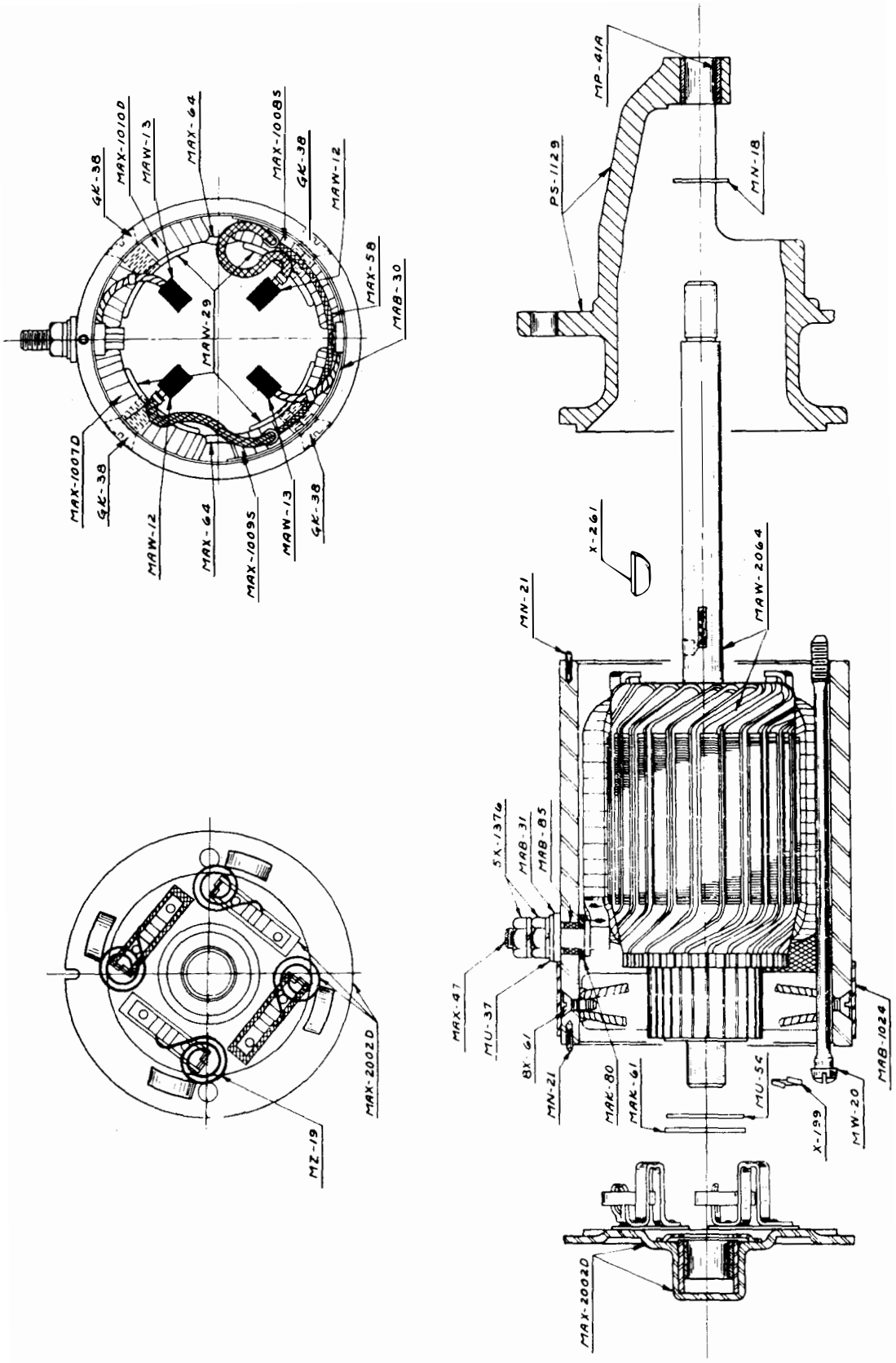
Miscellaneous Parts

EBA-2	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assy.
MN-18	1	Thrust Washer
PS-1129	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 11-30-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4032 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2124)	1	Frame & Field Assy.
CK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-52	1	Field Connection Ins.
MAX-26	2	Field Coil Connector
MAX-47	1	Terminal Post
MAX-58	1	Equalizer
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut
MW-20	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002C	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	5/8 Steel Washer
MAW-2105	1	Armature Assembly
MU-54	2	Thrust Washer
X-261	1	#6 Woodruff Key

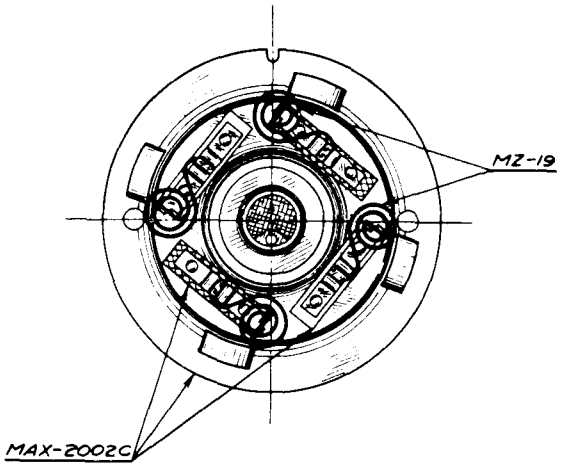
Miscellaneous Parts

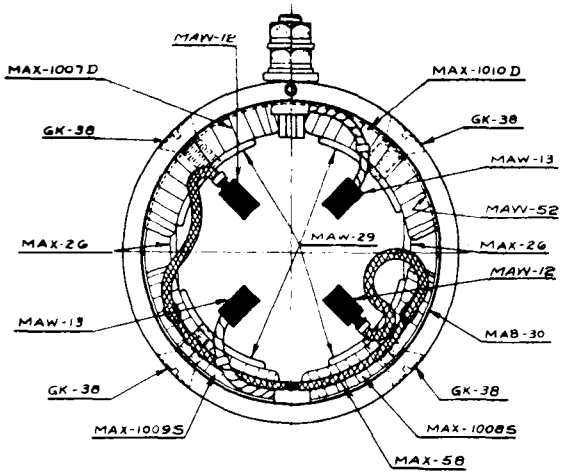
EBA-2	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assy.
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1133	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

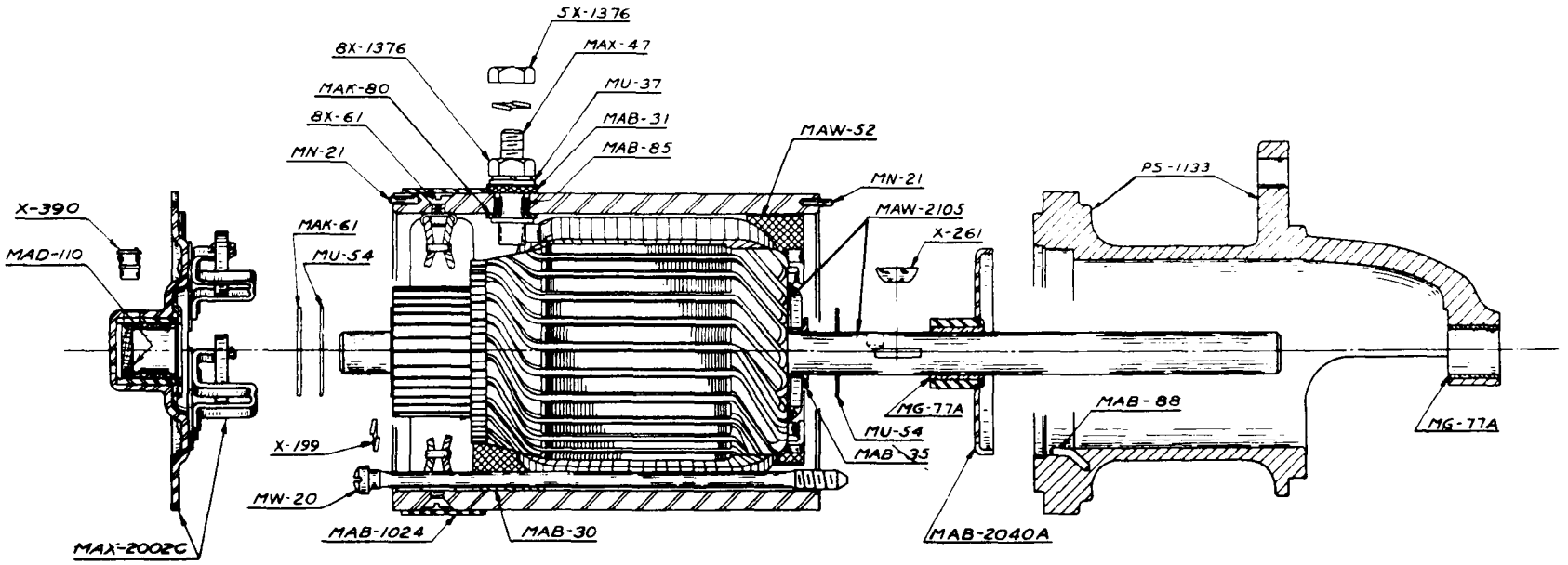
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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4033 STARTING MOTOR ILLUSTRATION







Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-3113)	1	Frame & Field Assy.
DK-45	1	Ins. Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-37	1	Ins. Bushing
MAW-39	1	Ins. Block
MAX-49	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
SW-763	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Plate Assembly & Parts Used With

MAX-3059	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-75	1	Thrust Washer
MAW-76	1	Thrust Washer
MAW-2069	1	Armature Assembly
MU-54	1	Thrust Washer

Switch Assembly & Parts Used With

SW-2677A	1	Starting Switch Assy.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer
		1 2 3 4 5

Starter Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-33	1	Pivot Screw
MAW-70	1	Felt Washer
MAW-71	1	Felt Retainer
MAW-72	1	Felt Guard
MAW-73	1	Thrust Washer
MAW-74	1	Starter Clutch Shaft Gear
MAW-100	1	Starter Clutch Shaft
MAW-2097	1	Yoke Assembly
MAW-3086A	1	Starter Clutch Assy.
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer
X-261	1	#6 Woodruff Key

Miscellaneous Parts

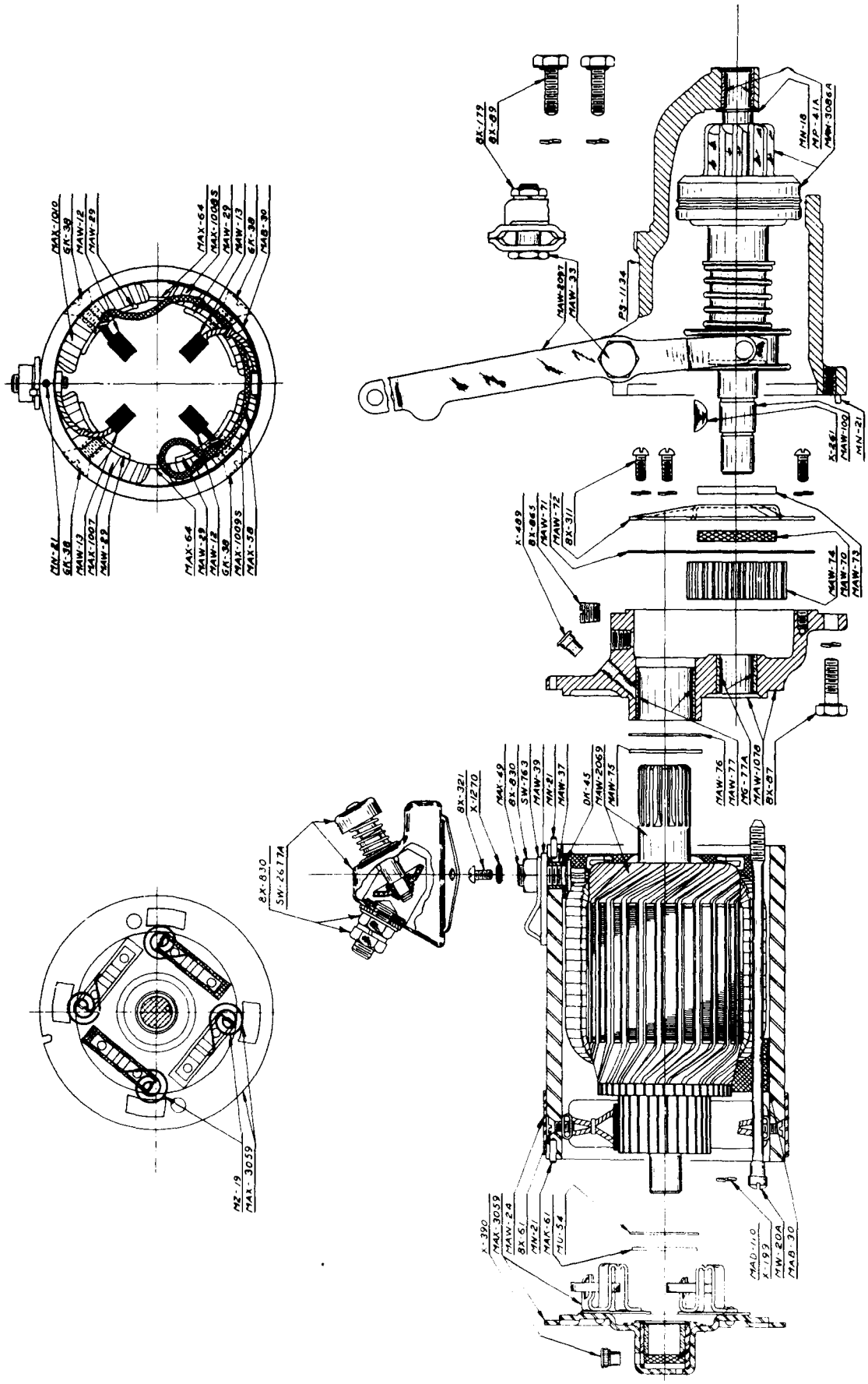
MAW-24	1	Head Band
MAW-1078	1	Intermediate Plate Assy.
MAW-77	1	Absorbent Bronze Brg.
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
MN-18	1	Thrust Washer
PS-1134	1	Pinion Housing Assy.
MN-21	1	Dowel
MP-41A	1	Absorbent Bronze Brg.
8X-87	1	1/4-20x7/8 Hex. Hd. Screw
8X-89	2	1/4-20x1 Hex. Hd. Screw
X-196	3	#10 Lock Washer
12X-199	3	1/4 Lock Washer
8X-311	3	#10-32x3/8 Rd. Hd. Screw
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
8X-865	1	1/8 Pipe Plug
		1 2 3 4 5

(Issued 2-1-40)

UNIT	APPLICATION
MAX-4034	Dodge Truck

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4034 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-3129)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38B	4	Pole Piece Screw
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-37	1	Ins. Bushing
MAW-52	1	Field Connection Ins.
MAX-35	1	Ins. Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-3059	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top.

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-75	1	Thrust Washer
MAW-76	1	Thrust Washer
MAW-2069	1	Armature Assembly
MU-54	1	Thrust Washer - 1/32" Thick

Switch Assembly & Parts Used With

SS-132	1	Connector
SS-1128	1	Moving Core Assy.
SS-59	1	Link Screw
SS-61	1	Spring
SS-128	1	Core
SS-4205	1	Solenoid Starting Switch (See separate list for parts.)
12X-201	2	3/8 Lock Washer
8X-467	4	1/4-20x3/8 Hex. Hd. Sc.
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer
		1 2 3 4 5

Starter Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-70	1	Felt Washer
MAW-71	1	Felt Retainer
MAW-72	1	Felt Guard
MAW-73	1	Thrust Washer
MAW-74	1	Starter Clutch Shaft Gear
MAW-100	1	Starter Clutch Shaft
MAW-3086A	1	Starter Clutch Assy.
MAD-102	1	Shift Collar
MAD-105	1	Shift Spring
MAD-106	1	Lock Spring Ring
MAX-37	1	Gasket
MAX-41	1	Yoke Pivot Bushing - 1 1/4 L.
MAX-42	1	Yoke Pivot Bushing - 1 9/16 L.
MLA-38	1	Dust Plate
MLA-41	1	Yoke Spring
MLA-42	1	Dust Cover
MLA-1035	1	Yoke Spring Pin
MLA-2037	1	Yoke Assembly
SS-56	1	Link Pin
SS-133	1	Link Pin
8X-97	1	5/16-18x3 1/4 Hex. Hd. Sc.
8X-147	1	5/16-18 Hex. Nut
X-261	1	#6 Woodruff Key
8X-311	4	#10-32x3/8 Rd. Hd. Sc.
X-401	1	1/16x3/8 Cotter Pin
X-409	1	1/16x5/8 Cotter Pin
12X-1014	1	5/16 Lock Washer
X-1270	4	#10 Skpf. Washer

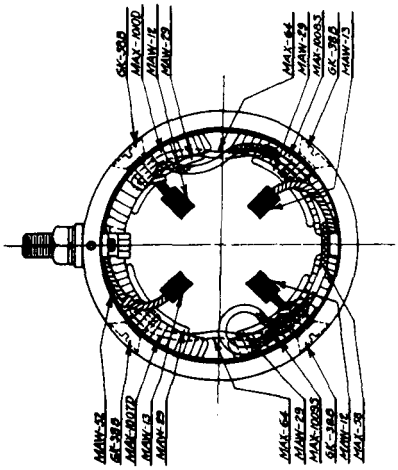
Miscellaneous Parts

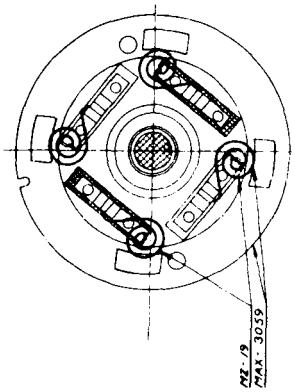
MAW-24	1	Head Band
MAX-1063	1	Intermediate Plate Assy.
MAW-77	1	Absorbent Bronze Brg.
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/ 4 Oiler Press in Type
MN-18	1	Thrust Washer
PS-1135	1	Pinion Housing Assy.
MN-21	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
8X-87	1	1/4-20x7/8 Hex. Hd. Screw
8X-89	2	1/4-20x1 Hex. Hd. Screw
X-196	3	#10 Lock Washer
12X-199	3	1/4 Lock Washer
8X-311	3	#10-32x3/8 Rd. Hd. Sc.
8X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
8X-865	1	1/8 Pipe Plug
		1 2 3 4 5

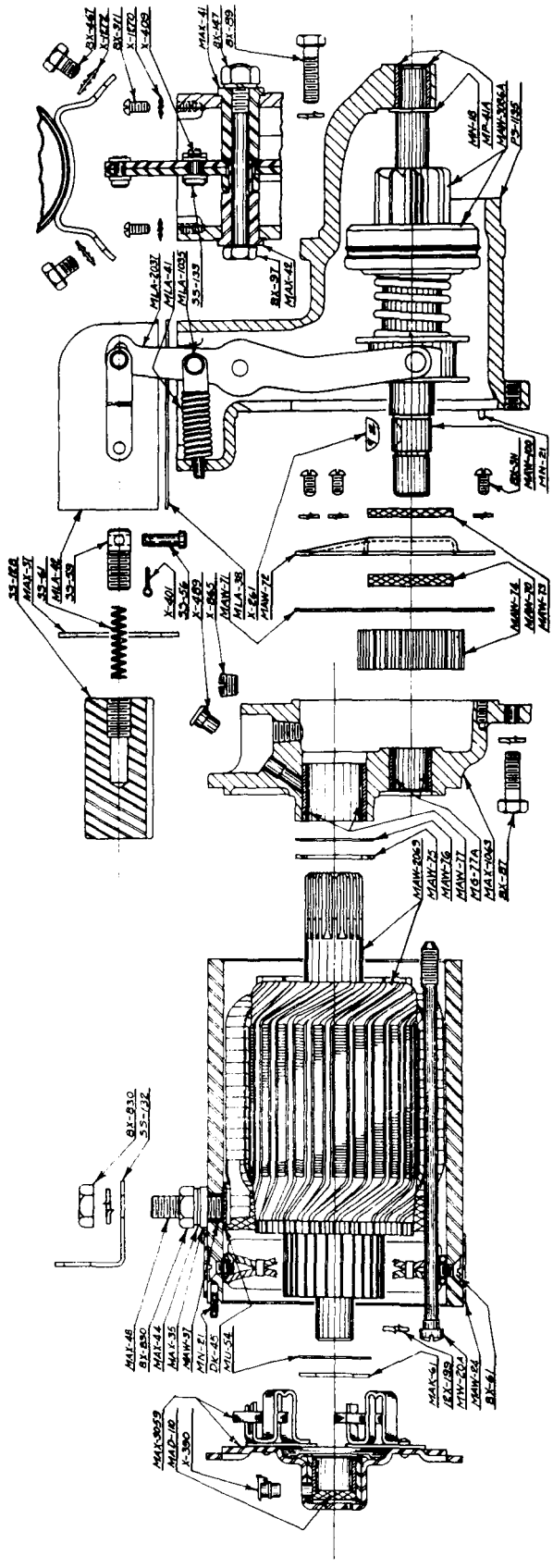
(Issued 11-30-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4035 STARTING MOTOR ILLUSTRATION







Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2120)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38B	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	Brush Assy. - Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	Brush
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002A	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	Armature Assembly
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

* Use as required.

Switch Assembly & Parts Used

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-117L	1	Connector
SS-4206	1	Solenoid Starting Switch (See separate list for parts)
12X-201	2	3/8 Lock Washer
8X-467	4	1/4-20x3/8 Hex. Hd. Screw
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-93	1	Yoke Spring
MAD-95	1	Spring Retainer
MAD-3099	1	Starter Clutch Assy.
MAW-2092	1	Yoke Assembly
MAX-52	1	Yoke Pin
SS-56	1	Link Pin
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer
X-401	1	1/16x3/8 Cotter Pin

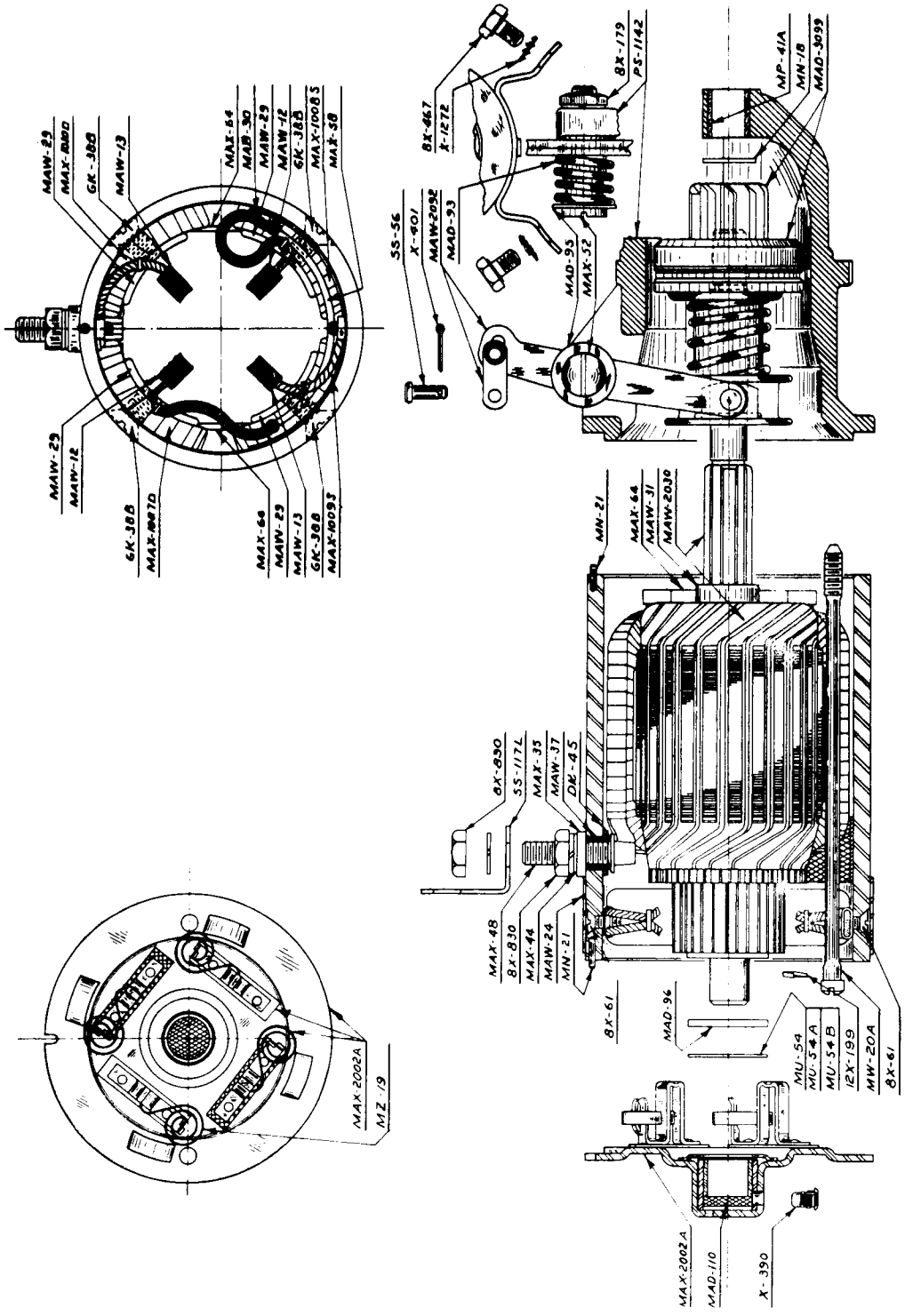
Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1142	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
8X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-18-38)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4037 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAX-4038 STARTING MOTOR PARTS LIST MAX-4038

Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2120)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY. - GROUNDED
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	BRUSH
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	BRUSH
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAX-2002A	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-93L	1	Connector
SS-4208	1	SOLENOID STARTING SWITCH (See separate list for parts)
12X-201	2	3/8 Lock Washer
8X-467	4	1/4-20x3/8 Hex. Hd. Screw
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer

Starting Clutch Assy. & Parts Used With

MAD-93	1	Yoke Spring
MAD-95	1	Spring Retainer
MAD-3099	1	STARTER CLUTCH ASSY.
MAW-2092	1	Yoke Assembly
M X-52	1	Yoke Pin
SS-56	1	Link Pin
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer
X-401	1	1/16x3/8 Cotter Pin

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1146	1	Pinion Housing Assy.
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

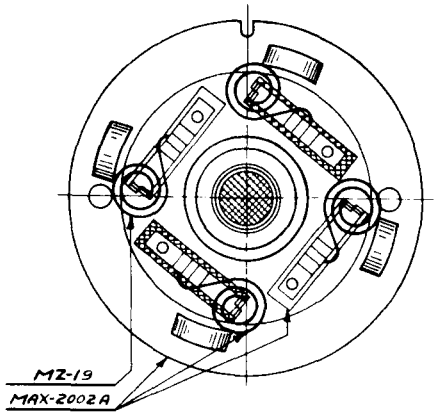
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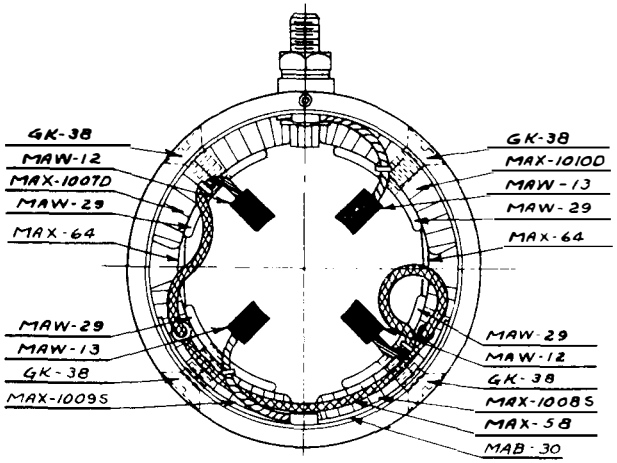
*** Use as required.**

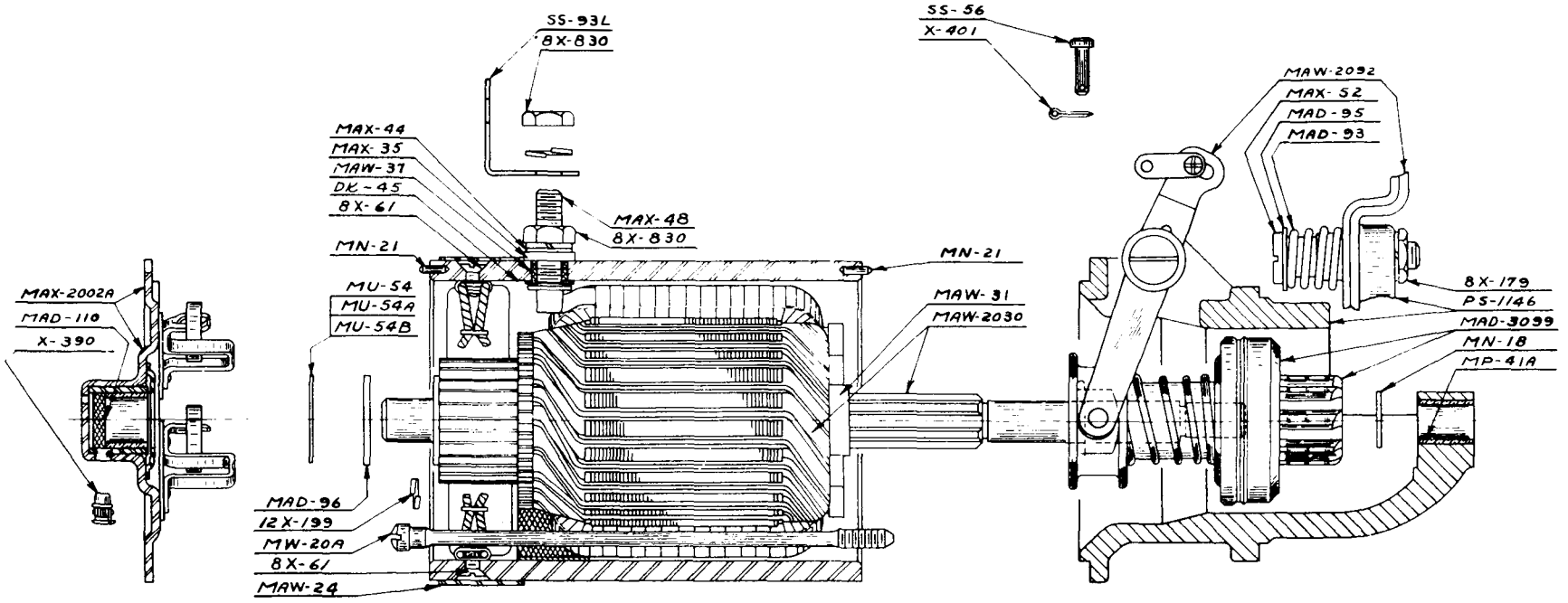
UNIT	APPLICATION
MAX-4038	Chrysler

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4038 STARTING MOTOR ILLUSTRATION







ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2113A)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38B	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY.- GROUNDED
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAX-49	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy. - L.R.
MAW-12	1	BRUSH
MAX-1009S	1	Field Coil Assy. - L.L.
MAW-12	1	BRUSH
MAX-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
SW-763	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Plate Assy. & Parts Used With

MAX-2002	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2677A	1	STARTING SWITCH ASSY.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Starter Clutch Assy. & Parts Used With

MAD-3099	1	STARTER CLUTCH ASSY.
MAW-33	1	Pivot Screw
MAX-2066	1	Yoke Assembly
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1090S	1	Pinion Housing Assy.
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-9-39)

* Use as required.

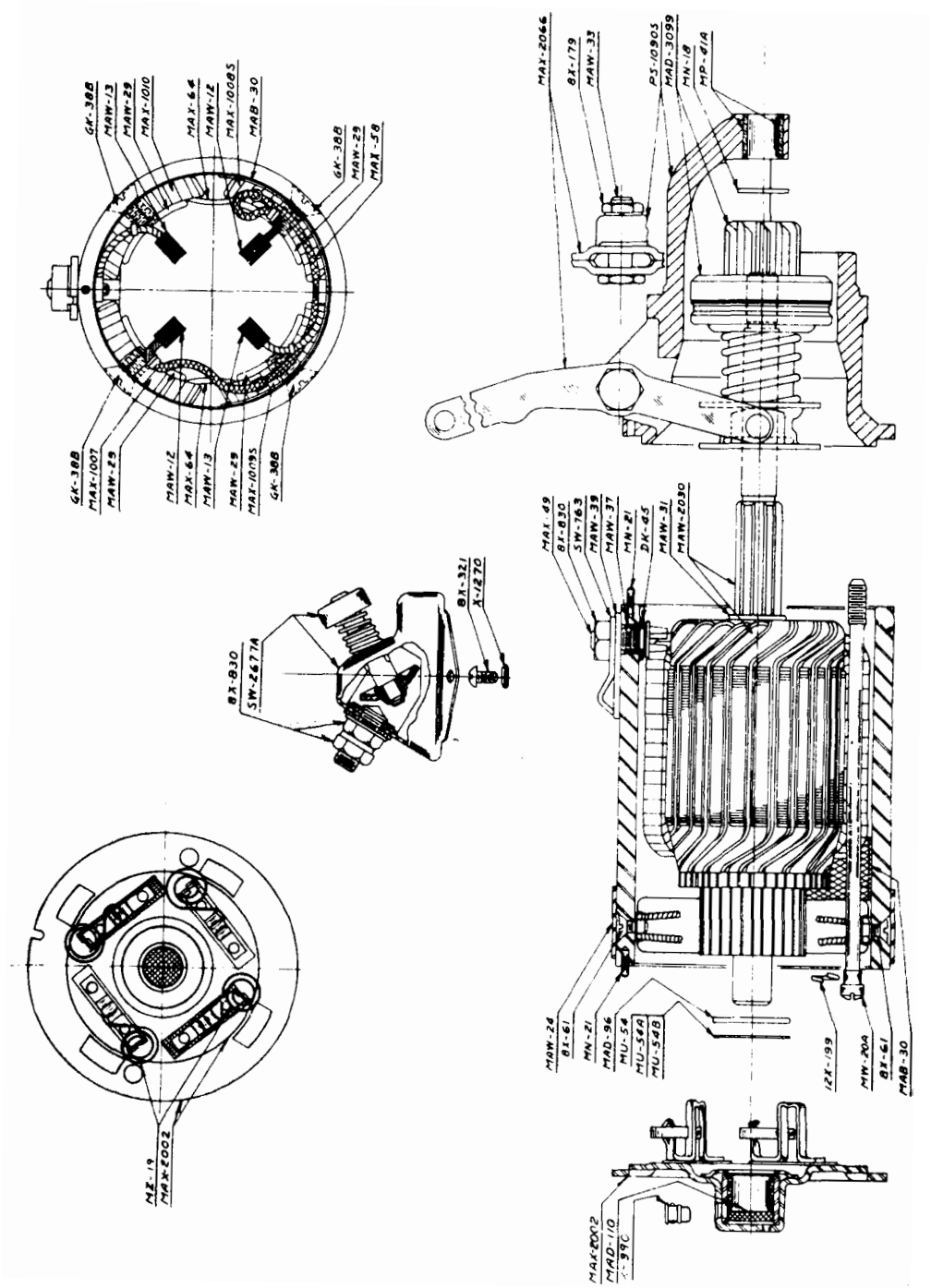
UNIT	APPLICATION
MAX-4039	Dodge Truck

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4039 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2115)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY. - Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy.-L.R.
MAW-12	1	BRUSH
MAX-1009S	1	Field Coil Assy.-L.L.
MAW-12	1	BRUSH
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer-1/32" Thick
MU-54A	*	Thrust Washer-1/64" Thick
MU-54B	*	Thrust Washer-3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-95	1	Grounding Cup
SS-149L	1	Connector
SS-1128	1	Moving Core Assy.
SS-59	1	Link Screw
SS-61	1	Spring
SS-128	1	Core
SS-4205	1	SOLENOID STARTING SWITCH (See separate list for parts.)
8X-183	1	#10 Brass Washer
12X-196	2	#10 Lock Washer
12X-201	2	3/8 Lock Washer
8X-309	2	#10-32x1/2 Rd. Hd. Screw
8X-467	4	1/4-20x3/8 Hex. Hd. Screw
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-2087	1	Yoke Assembly
MAD-3099	1	STARTER CLUTCH ASSY.
MAX-37	1	Gasket
MAX-38	1	Dust Cover
MAX-39	1	Dust Plate
MAX-41	1	Yoke Pivot Bushing - 1 1/4 L.
MAX-42	1	Yoke Pivot Bushing - 1 9/16 L.
MAX-46	1	Yoke Spring
SS-56	1	Link Pin
8X-97	1	5/16-18x3 1/4 Hex. Hd. Screw
8X-147	1	5/16-18 Hex. Nut
8X-311	4	#10-32x3/8 Rd. Hd. Screw
X-401	1	1/16x3/8 Cotter Pin
12X-1014	1	5/16 Lock Washer
X-1270	4	#10 Skpf. Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1151	1	Pinion Housing Assy.
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 3-4-41)

* Use as required.

UNIT	APPLICATION
MAX-4040	Dodge Truck

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-3136)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connections Ins.
MAW-13	2	BRUSH ASSY.- GROUNDED
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy.-L.R.
MAW-12	1	BRUSH
MAX-1009S	1	Field Coil Assy.-L.L.
MAW-12	1	BRUSH
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAX-3059	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-75	1	Thrust Washer
MAW-76	1	Thrust Washer
MAW-2069	1	ARMATURE ASSEMBLY
MU-54	1	Thrust Washer - 1/32" Thick

Switch Assembly & Parts Used With

SS-132	1	Connector
SS-1128	1	Moving Core Assembly
SS-59	1	Link Screw
SS-61	1	Spring
SS-128	1	Core
SS-4205	1	STARTING SWITCH (See separate list for parts)
12X-201	2	3/8 Lock Washer
8X-467	4	1/4-20x3/8 Hex. Hd. Screw
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer
		1 2 3 4 5

Starter Clutch Assy. & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-70	1	Felt Washer
MAW-71	1	Felt Retainer
MAW-72	1	Felt Guard
MAW-73	1	Thrust Washer
MAW-74	1	St. Clutch Shaft Gear
MAW-122	1	Clutch Shaft
MAX-37	1	Gasket
MAX-41	1	Yoke Pivot Bushing
MAX-42	1	Yoke Pivot Bushing
MAX-3065	1	STARTER CLUTCH ASSY.
MLA-38	1	Dust Plate
MLA-41	1	Yoke Spring
MLA-42	1	Dust Cover
MLA-1035	1	Yoke Spring Pin
MLA-2037	1	Yoke Assembly
SS-56	1	Link Pin
SS-133	1	Link Pin
8X-97	1	5/16-18x3 1/4 Hex. Hd. Screw
8X-147	1	5/16-18 Hex. Nut
X-261	1	#6 Woodruff Key
8X-311	4	#10-32x3/8 Rd. Hd. Screw
X-401	1	1/16x3/8 Cotter Pin
X-409	1	1/16x5/8 Cotter Pin
12X-1014	1	5/16 Lock Washer
X-1270	4	#10 Skpf. Washer

Miscellaneous Parts

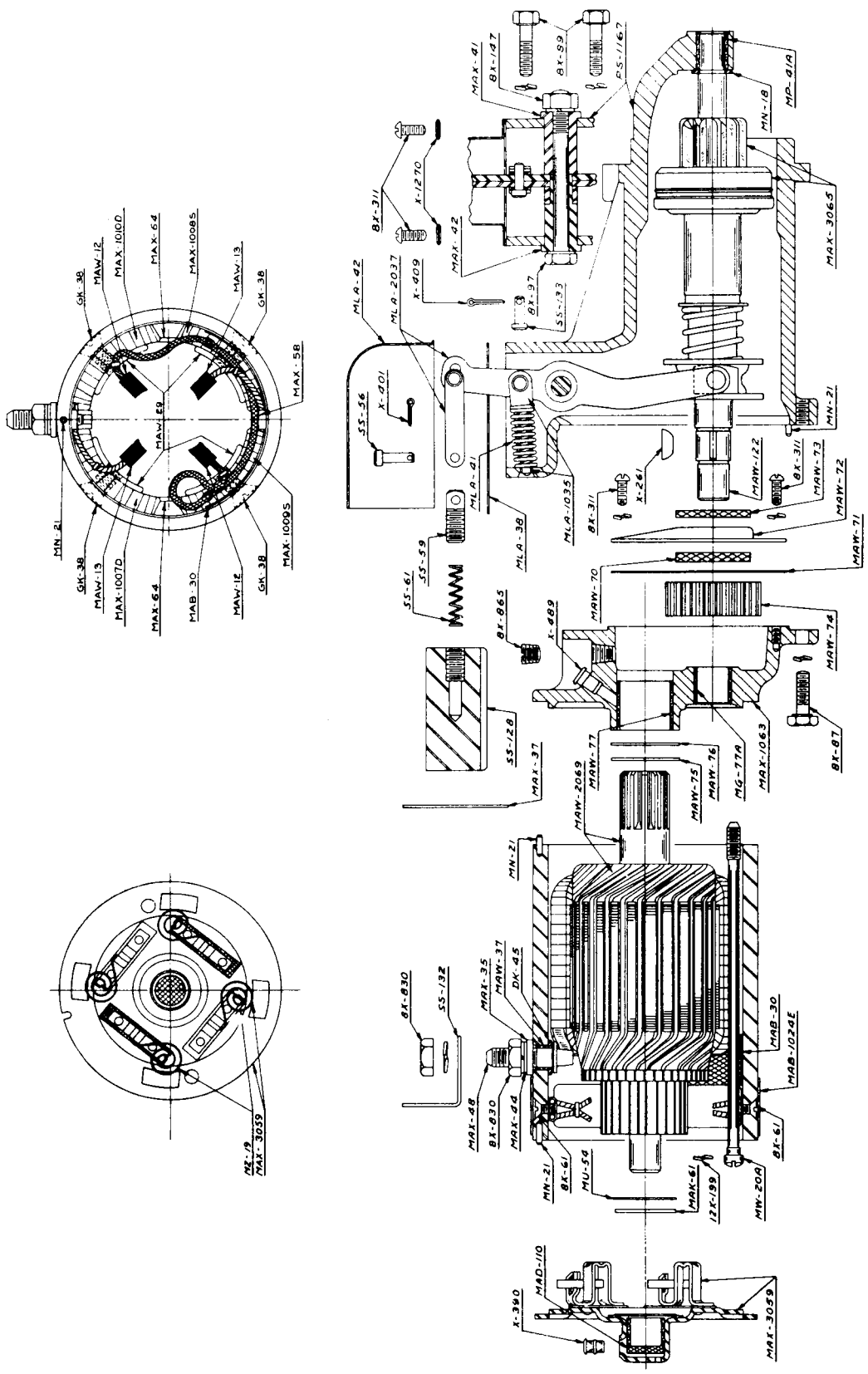
MAB-1024E	1	Head Band Assembly
MAX-1063	1	Intermediate Plate Assy.
MAW-77	1	ABSORBENT BRONZE BRG.
MG-77A	1	ABSORBENT BRONZE BRG.
X-489	1	1/4 Oiler - Press in Type
MN-18	1	Thrust Washer
PS-1167	1	Pinion Housing Assembly
MN-21	1	Dowel Pin
MP-41A	1	ABSORBENT BRONZE BRG.
8X-87	1	1/4-20x7/8 Hex. Hd. Screw
8X-89	2	1/4-20x1 Hex. Hd. Screw
X-196	3	#10 Lock Washer
12X-199	3	1/4 Lock Washer
8X-311	3	#10-32x3/8 Rd. Hd. Screw
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
8X-865	1	1/8 Pipe Plug
		1 2 3 4 5

(Issued 6-29-39)

UNIT	APPLICATION
MAX-4041	Packard

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4041 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAX-4044 STARTING MOTOR PARTS LIST MAX-4044

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2139)	1	Frame & Field Assy.
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY.-Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy.-L.R.
MAW-12	1	BRUSH
MAX-1009S	1	Field Coil Assy.-L.L.
MAW-12	1	BRUSH
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002E	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer-1/32" Thick
MU-54A	*	Thrust Washer-1/64" Thick
MU-54B	*	Thrust Washer-3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-93L	1	Connector
SS-4702	1	SOLENOID STARTING SWITCH (See separate list for parts)
12X-201	2	3/8 Lock Washer
X-467	4	1/4-20x3/8 Hex. Hd. Screw
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-93	1	Yoke Spring
MAD-95	1	Spring Retainer
MAW-3099A	1	STARTER CLUTCH ASSY.
MAX-52	1	Yoke Pin
MAX-2068	1	Yoke Assembly
SS-56	1	Link Pin
X-179	1	3/8-16 Hex. Nut
X-201	1	3/8 Lock Washer
X-401	1	1/16x3/8 Cotter Pin

Miscellaneous Parts

MAB-1024	1	Head Band Assembly
MN-18	1	Thrust Washer
PS-1176	1	Pinion Housing Assy.
MP-41A	1	ABSORBENT BRONZE BRG.
X-205	1	7/16 Lock Washer
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
X-1584	1	7/16-14x1 1/2 Hex. Hd. Sc.
		1 2 3 4 5

(Issued 6-25-40)

* Use as required.

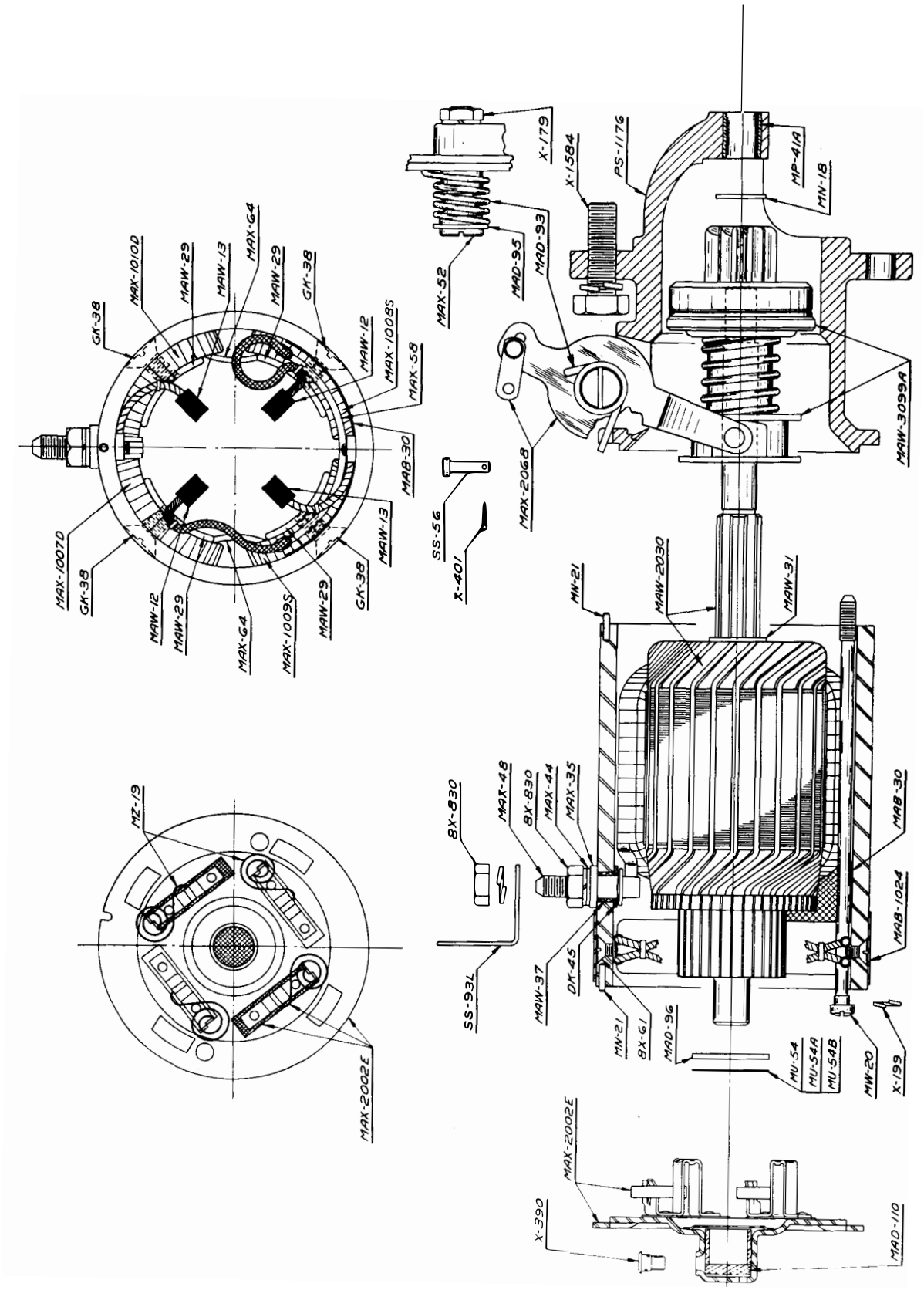
UNIT	APPLICATION
MAX-4044	Studebaker

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4044 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2120)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13‡	2	Brush Assy.- Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy.- L.R.
MAW-12‡	1	Brush
MAX-1009S	1	Field Coil Assy.- L.L.
MAW-12‡	1	Brush
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Head Assembly & Parts Used With

MAX-2002A	1	Comm. End Head Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	+	Thrust Washer - 1/32" Thick
MU-54A	+	Thrust Washer - 1/64" Thick
MU-54B	+	Thrust Washer - 3/64" Thick

Switch Assembly & Parts Used With

SS-117L	1	Connector
SS-4703	1	SOLENOID STARTING SWITCH (See separate list for parts)
12X-201	2	3/8 Lock Washer
8X-467	4	1/4-20x3/8 Hex. Hd. Screw
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer
		1 2 3 4 5

Starter Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAX-69	1	Yoke Spring
MAX-70	1	Yoke Pin Sleeve
MAX-71	1	Yoke Pin
MAX-2072	1	Yoke Assembly
*	1	STARTER CLUTCH ASSEMBLY
SS-56	1	Link Pin
12X-201	1	3/8 Lock Washer
X-401	1	1/16x3/8 Cotter Pin
8X-830	1	3/8-16 Hex. Nut

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1177	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 1-19-42)

Assembly No.	Starter Clutch
MAX-4045	MAY-3099
MAX-4045A	MAW-3132A

* See table following parts list for part number applying to assembly wanted.

\+ Use as required.

‡ SERVICE BRUSH SET MAW-2012S.

UNIT	APPLICATION
MAX-4045,A	Dodge Truck

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2117A)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins. Term. Stud Inner
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007D	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
X-1014	2	Lockwasher, Term. Stud, 5/16
5X-1376	2	Nut, Term. Stud, Hex., 5/16-24
MW-20A	2	Bolt, Thru
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler

Armature Assembly & Parts Used With

MAK-61	1	Washer, Steel
MAW-2128	1	Armature
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6R	1	Connector, Switch to Motor
SS-4001	1	Solenoid Starting Switch
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-45	1	Bendix Drive Assy.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-4505	1	Spring, Drive
MAB-1024	1	Band, Cover
MAW-2129	1	Brg. Assy., Intermediate
MAW-130	1	Bearing, Absorbent Bronze
PS-1181	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† Brush Set, Service MAW-2012S.

Unit	Application
MAX-4046	Reo Truck

(Issued 7-24-46)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAX-4048 STARTING MOTOR PARTS LIST MAX-4048

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAX-2141)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins. Term. Stud, Inner
MAW-12‡	2	Brush
MAW-13‡	2	Brush, Grounded
MAX-47	1	Stud, Terminal
MAX-58	1	Equalizer
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2128	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & D.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6LB	1	Connector
SS-4020	1	SOLENOID SWITCH
8X-173	1	Nut, Hex., #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Mtg. Switch, Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBB-8	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
EBB-832	1	Pinion
MAW-2129	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
MAX-1024	1	Band, Cover
PS-1182	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABSORBENT BRONZE
8X-714	1	Screw, Cover Band, Rd.Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

‡ BRUSH SET, SERVICE, MAW-2012S.

* Use As Required.

UNIT	APPLICATION
MAX-4048	Chrysler (Industrial)

(Issued 4-14-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAX-4050 STARTING MOTOR PARTS LIST MAX-4050

PRELIMINARY

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2143)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY.- Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy.-L.R.
MAW-12	1	BRUSH
MAX-1009S	1	Field Coil Assy.-L.L.
MAW-12	1	BRUSH
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002G	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAX-74	1	Connector
SS-4705	1	STARTING SWITCH ASSEMBLY (See Separate List for Parts)
12X-201	2	3/8 Lock Washer
8X-467	4	1/4-20x3/8 Hex. Hd. Screw
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAW-144	1	Yoke Spring
MAW-3132A	1	STARTER CLUTCH ASSEMBLY
MAX-70	1	Yoke Pin Sleeve
MAX-71	1	Yoke Pin
MAX-2072	1	Yoke Assembly
SS-56	1	Link Pin
12X-201	1	3/8 Lock Washer
X-401	1	1/16x3/8 Cotter Pin
8X-830	1	3/8-16 Hex. Nut

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1190	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8-13-41)

* Use as required.

UNIT	APPLICATION
MAX-4050	Chrysler

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2139)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY.- Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy.-L.R.
MAW-12	1	BRUSH
MAX-1009S	1	Field Coil Assy.-L.L.
MAW-12	1	BRUSH
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002E	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-93L	1	Connector
SS-4702	1	STARTING SWITCH ASSEMBLY (See Separate List for Parts)
12X-201	2	3/8 Lock Washer
X-467	4	1/4-20x3/8 Hex. Hd. Screw
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer

Starter Clutch Assembly & Parts Used With

MAD-93	1	Yoke Spring
MAD-95	1	Spring Retainer
MAW-3140	1	STARTER CLUTCH ASSEMBLY
MAX-52	1	Yoke Pin
MAX-2068	1	Yoke Assembly
SS-56	1	Link Pin
X-179	1	3/8-16 Hex. Nut
X-201	1	3/8 Lock Washer
X-401	1	1/16x3/8 Cotter Pin

Miscellaneous Parts

MAB-1024	1	Head Band Assembly
MN-18	1	Thrust Washer
PS-1176	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BRG.
X-205	1	7/16 Lock Washer
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
X-1584	1	7/16-14x1 1/2 Hex. Hd. Sc.
		1 2 3 4 5

(Issued 8-13-41)

* Use as required.

UNIT	APPLICATION
MAX-4051	Studebaker

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAX-4052 STARTING MOTOR PARTS LIST MAX-4052

PRELIMINARY

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-3136)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY.- Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAX-35	1	Insulating Washer
MAX-44	1	3/8 Steel Washer
MAX-48	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007D	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy.-L.R.
MAW-12	1	BRUSH
MAX-1009S	1	Field Coil Assy.-L.L.
MAW-12	1	BRUSH
MAX-1010D	1	Field Coil - U.R.
MN-21	2	Dowel Pin
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-3059	1	Comm. End Plate Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler-1/4 Hinged top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-75	1	Thrust Washer
MAW-76	1	Thrust Washer
MAW-2069	1	ARMATURE ASSEMBLY
MU-54	1	Thrust Washer - 1/32" Thick

Switch Assembly & Parts Used With

SS-132	1	Connector
SS-1128	1	Moving Core Assembly
SS-59	1	Link Screw
SS-61	1	Spring
SS-128	1	Core
SS-4205	1	SOLENOID STARTING SWITCH (See separate list for parts)
8X-183	1	#10 Brass Washer
12X-196	2	#10 Lock Washer
12X-201	2	3/8 Lock Washer
8X-309	2	#10-32x1/2 Rd. Hd. Screw
8X-467	4	1/4-20x3/8 Hex. Hd. Screw
8X-830	2	3/8-16 Hex. Nut
X-1272	4	1/4 Skpf. Washer
		1 2 3 4 5

Starter Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-70	1	Felt Washer
MAW-71	1	Felt Retainer
MAW-72	1	Felt Guard
MAW-73	1	Thrust Washer
MAW-74	1	St. Clutch Shaft Gear
MAW-122	1	Clutch Shaft
MAX-37	1	Gasket
MAX-41	1	Yoke Pivot Bushing
MAX-42	1	Yoke Pivot Bushing
MAX-3075	1	STARTER CLUTCH ASSEMBLY
MLA-38	1	Dust Plate
MLA-41	1	Yoke Spring
MLA-42	1	Dust Cover
MLA-1035	1	Yoke Spring Pin
MLA-2037	1	Yoke Assembly
SS-56	1	Link Pin
SS-133	1	Link Pin
8X-97	1	5/16-18x3 1/4 Hex. Hd. Sc.
8X-147	1	5/16-18 Hex. Nut
X-261	1	#6 Woodruff Key
8X-311	4	#10-32x3/8 Rd. Hd. Screw
X-401	1	1/16x3/8 Cotter Pin
X-409	1	1/16x5/8 Cotter Pin
12X-1014	1	5/16 Lock Washer
X-1270	4	#10 Skpf. Washer

Miscellaneous Parts

MAB-1024M	1	Head Band Assembly
MAX-1063	1	Intermediate Plate Assy.
MAW-77	1	ABSORBENT BRONZE BRG.
MG-77A	1	ABSORBENT BRONZE BRG.
X-489	1	1/4 Oiler-Press in Type
MN-18	1	Thrust Washer
PS-1167	1	Pinion Housing Assembly
MN-21	1	Dowel Pin
MP-41A	1	Absorbent Bronze Brg.
8X-87	1	1/4-20x7/8 Hex. Hd. Screw
8X-89	2	1/4-20xl Hex. Hd. Screw
X-196	3	#10 Lock Washer
12X-199	3	1/4 Lock Washer
8X-311	3	#10-32x3/8 Rd. Hd. Screw
8X-715	1	#10-32xl 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
8X-865	1	1/8 Pipe Plug
		1 2 3 4 5

(Issued 8-1-41)

UNIT	APPLICATION
MAX-4052	Packard

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
(MAX-2142)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13‡	2	Brush Assy.- Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAX-49	1	Terminal Post
MAX-58	1	Equalizer
MAX-64	2	Field Coil Connector
MAX-1007	1	Field Coil - U.L.
MAX-1008S	1	Field Coil Assy.- L.R.
MAW-12‡	1	Brush
MAX-1009S	1	Field Coil Assy.- L.L.
MAW-12‡	1	Brush
MAX-1010	1	Field Coil - U.R.
MN-21	2	Dowel Pin
SW-764	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Comm. End Head Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick

Switch Assembly & Parts Used With

SW-2813	1	STARTING SWITCH ASSEMBLY
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer
		1 2 3 4 5

Starter Clutch Assy. & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MAW-2148	1	Yoke Assembly
MAW-3132	1	STARTER CLUTCH ASSEMBLY
MZ-175	1	Pivot Screw
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1194A	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 1-19-42)

* Use as required.

‡ SERVICE BRUSH SET MAW-2012S.

UNIT	APPLICATION
MAX-4053	Dodge Truck

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2142)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAW-12†	2	BRUSH
MAW-13†	2	BRUSH, GROUNDED
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Insulating Block
MAX-49	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
SW-764	1	Contact, Switch Lower
8X-61	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
8X-830	1	Nut, Term. Stud, Hex., 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Thrust
MAW-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Spacer, Armature Shaft
MU-54	*	Washer, Thrust, 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2813	1	SWITCH, STARTER
12X-201	1	Washer, Lock, 3/8
8X-830	1	Nut, Hex., 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Starter Clutch Assembly & Parts Used With

MAW-3132	1	STARTER CLUTCH
MAX-2076	1	Yoke
MZ-175	1	Screw, Pivot
8X-179	1	Nut, Yoke Pivot, Hex. 3/8-16
12X-201	1	Lockwasher, Yoke Pivot, 3/8

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1194A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABSORBENT BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

* Use as required.

† BRUSH SET, Service MAW-2012S.

Unit	Application
MAX-4054	Dodge Truck

(Issued 2-19-47)
File in
Equipment & Parts List Binder

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-3124)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud Inner
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007D	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
X-1014	1	Washer, Lock, Term. Stud 5/16
8X-1376	1	Nut, Term. Stud Hex., 5/16-24
MW-20A	2	Bolt, Thru
X-199	2	Lockwasher, Thru Bolt, 1/4
X-1014	1	Lockwasher, Term. Stud, 5/16
8X-1376	1	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MAX-3059	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-75	1	Washer, Thrust, Intermediate
MAW-76	1	Washer, Thrust, Intermediate
MAW-2069	1	Armature
MU-54	1	Washer, Arm. Thrust, C.E.
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-17	1	Bendix Drive Assembly
EB-108	2	Lock Washer
EB-7806	1	Hd. Sp. Bolt or Screw
EB-7807	1	Shaft Spring Sc.
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	Driving Spring
EB-8734	1	Take Up Ring
EBA-1711	1	S-A Assembly
MAB-1024	1	Band, Cover
MAW-70	1	Washer, Felt, Int. Plate
MAW-71	1	Retainer, Felt Washer, Int. Plate
MAW-72	1	Guard, Felt Washer, Int. Plate
MAW-84	1	Shaft, Bendix Drive
MAW-87	1	Gear, Bendix Shaft
MAX-1077	1	Bearing Assy., Intermediate
MAW-77	1	Bearing, Arm. Shaft, Absorbent Bronze
MG-77A	1	Bearing, Bendix Shaft, Absorbent Bronze
X-489	1	Oiler, Hinge Top, Press in 1/4
MN-18	1	Washer, Thrust, D.E.
PS-1220	1	Housing Assy. Pinion
MN-21	1	Pin, Dowel
MP-41A	1	Bearing, Absorbent Bronze
8X-89	3	Screw, Housing Attaching, Hex. Hd. 1/4-20x1
X-196	3	Lockwasher, Retainer Sc., #10
X-199	3	Lockwasher, Housing Sc., 1/4
X-261	2	Key, Woodruff #6
8X-311	3	Screw, Retainer, Rd. Hd. #10-32x 3/8
X-505	1	Plug, Pipe, 1/8
X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† Brush Set, Service MAW-2012S.

UNIT	APPLICATION
MAX-4057	Autocar

(Issued 10-10-46)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAX-2127)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12**	2	Brush
MAW-13**	2	Brush, Grounded
MAX-47	1	Stud, Terminal
MAX-58	1	Equalizer
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2128	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & D.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6RA	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBB-8	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
EBB-832	1	Pinion
MAW-2129	1	BRG. ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
MAX-1024	1	Band, Cover
PS-1223	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required.

** BRUSH SET, SERVICE MAW-2012S.

UNIT	APPLICATION
MAX-4058	Chrysler (Industrial)

(Issued 4-14-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
(MAX-3118)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-3005AS	1	Field Coil Package
MAX-64	2	Connector, Field Coil
MAX-1007D	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-3059	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-2159	1	Armature
MU-54	1	Washer, Arm. Thrust, C.E.
X-261	2	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-66	1	Bendix Drive Assy.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take Up
EBA-6611	1	Shaft & Pinion
MAB-1024E	1	Band, Cover
MAD-59	1	Shaft, Bendix Drive
MAD-1058	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
ML-18A	1	Bearing, Abs. Bronze
MN-1	1	Retainer, Felt Washer
MN-6	1	Gear
MN-19	1	Washer, Felt
PS-1022	1	Housing Assy., Pinion
MN-21	1	Pin, Dowel
MP-41A	1	Bearing, Abs. Bronze
8X-89	4	Screw, Housing, Hex. Hd. 1/4-20x1
X-196	3	Lockwasher, Retainer Screw, #10
X-199	4	Lockwasher, Housing Screw, 1/4
8X-312	3	Screw, Retainer, Rd. Hd. #10-32x1/4
8X-505	1	Plug, Pipe, 1/8
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service, MAW-2012S.

UNIT	APPLICATION
MAX-4059	Continental, Hercules

(Issued 7-15-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
(MAX-2115)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud, Inner
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	1	Washer, Ins., Term. Stud, Outer
MAX-44	1	Washer, Term. Stud, 3/8
MAX-48	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007D	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Thrust, C.E.
MAW-2030	1	ARMATURE ASSY.
MAW-31	1	Spacer Arm. Shaft
MU-54	*	Washer, Thrust, C.E.
MU-54A	*	Washer, Thrust, C.E.
MU-54B	*	Washer, Thrust, C.E.

Switch Assembly & Parts Used With

SS-107L	1	Connector
SS-1128	1	Core Assy.
SS-59	1	Screw, Link
SS-61	1	Spring
SS-128	1	Core
SS-4706	1	SOLENOID STARTING SWITCH
12X-201	2	Lockwasher, Switch Term., 3/8
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-830	2	Nut, Switch Term., Hex. 3/8-16
X-1272	4	Washer, Switch Mtg., Skpf. 1/4
	1 2 3 4 5	

Starter Clutch Assy. & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
MAD-2087	1	Yoke
MAW-3132A	1	STARTER CLUTCH
MAX-37	1	Gasket, Dust Cover To Switch
MAX-38	1	Cover, Dust
MAX-39	1	Plate, Dust
MAX-41	1	Bushing, Yoke Pivot, 1 1/4"
MAX-42	1	Bushing, Yoke Pivot, 1 9/16" long
MAX-46	1	Spring, Yoke
SS-56	1	Pin, Link
8X-97	1	Screw, Yoke Pivot, Hex. Hd. 5/16-18x3 1/4
8X-147	1	Nut, Yoke Pivot, Hex. 5/16-18
8X-311	4	Screw, Dust Cover, Rd. Hd. #10-32x3/8
X-401	1	Pin, Cotter, 1/16x3/8
12X-1014	1	Lockwasher, Yoke Pivot, 5/16
X-1270	4	Washer, Dust Cover, Skpf. #10

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1234	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
	1 2 3 4 5	

† BRUSH SET, SERVICE MAW -2012S.

* Use as required.

UNIT	APPLICATION
MAX-4062	Chrysler Industrial

(Issued 1-23-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAX-4063 STARTING MOTOR PARTS LIST MAX-4063

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
(MAX-2152)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud.
MAB-85	1	Bushing, Ins., Term. Stud.
MAK-80	1	Washer, Ins.
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal 5/16-24
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007D	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
X-1014	2	Washer, Lock, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24
MW-20A	2	Bolt, Thru
X-199	2	Lockwasher, Thru Bolt 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, Comm. End
MAW-2204	1	Armature Assembly
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer Arm. Thrust, Comm. End & Intermediate
X-261	1	Key, Woodruff, #6
	1 2 3 4 5	

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
SS-6R	1	Connector, Switch to Motor
SS-4001	1	Switch, Starting
12X-196	1	Washer, Lock, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Washer, Lock, 5/16
8X-173	1	Nut, Hex., #10-32
8X-321	2	Screw, Mtg., Switch Rd. #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Sc., #10

Miscellaneous Parts

EBA-2	1	Bendix Drive Assembly
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Tak-Up
EBA-211	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
MAW-24	1	Band, Cover
PS-1281	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square #10-32
	1 2 3 4 5	

† Brush Set, Service, MAW-2012S.

UNIT	APPLICATION
MAX-4063	Lincoln Electric

(Issued 8-18-47)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2151)	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins. Term. Stud Inner
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal 5/16-24
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007D	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud 5/16
8X-61	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24
MW-20A	2	Bolt, Thru
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-2128	1	Armature
MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6R	1	Connector, Switch to Motor
SS-4001	1	Solenoid Starting Switch
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Switch Mtg. Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-52	1	Bendix Drive Assembly
EBA-1213	1	Anti-Drift Spring
EBA-1225	1	Meshing Spring
EBA-1233	1	Retaining Ring
EBA-2006	1	Locating Pin
EBA-2007	2	Spring Anchor Plate
EBA-2008	1	Lock Ring
EBA-2031	1	Screw Shaft Assy.
EBA-2105	1	Drive Spring
EBA-5232	1	Pinion Assy.
MAW-24	1	Band, Cover
MAW-2129	1	Bearing Assy., Intermediate
MAW-130	1	Bearing, Absorbent Bronze
PS-1241	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	Bushing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† Brush Set, Service MAW-2012S.

(Issued 9-19-46)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAX-4065 STARTING MOTOR PARTS LIST

MAX-4065
(Issued 8-22-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAX-2127)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal, 5/16-24
MAX-58	1	Equalizer
MCL-3005CS	1	Field Coil Package
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002CS	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2105	1	Armature Assembly
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
X-261	1	Key, Woodruff, D.E. #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector, Switch to Motor
SS-4001	1	Solenoid Starting Switch
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-2	1	Bendix Drive Assembly
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1102	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAW-2012S.

UNIT	APPLICATION
MAX-4065	Easthope Bros.

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAX-2153)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Conn.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal, 5/16-24
MAX-58	1	Equalizer
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2105	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MAX-1024	1	Band, Cover
PS-1242	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAW-2012S.

UNIT	APPLICATION
MAX-4066	John Deere, Ventnor (Marine)

(Issued 10-21-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20A	2	Bolt, Thru
(MAX-3127A)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Insulating Term. Stud, Outer
MAB-85A	1	Bushing, Insulation Term. Stud, Outer
MAK-80A	1	Washer, Insulating, Term. Stud, Inner
MAW-12†	2	BRUSH
MAW-13†	2	BRUSH, GROUNDED
MAX-47A	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007F	1	Coil, Field, U.L.
MAX-1008B	1	Coil, Field, L.R.
MAX-1009B	1	Coil, Field, L.L.
MAX-1010F	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MU-37D	1	Washer, Term. Stud
X-180	2	Nut, Term. Stud, Hex. Hd., 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2889	2	Screw, Brush, Grounded, Flat Hd., #10-32x7/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-3059D	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Arm. Thrust, C.E.
MAW-2179M	1	ARMATURE
MU-54F	*	Washer, Arm. Thrust, C.E. 1/32" thick
MU-54G	*	Washer, Arm. C.E. 1/64" thick
MU-54J	*	Washer, Arm. C.E. .046" thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex., 5/16-24
8X-2853	1	Nut, Hex., #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd., #10-32x5/16
X-2857	2	Washer, Switch Mtg., Skpf., #10
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-87	1	BENDIX DRIVE ASSEMBLY
EBA-4805	1	SPRING, DRIVE
EBA-4807	2	Plate, Spring Anchor
EBA-4808	1	Lock Ring
EBA-4813	1	Spring, Anti-Drift
EBA-4825	1	Spring, Meshing
EBA-4833	1	Ring, Retaining
EBA-7906	1	Pin, Locating
EBA-8731	1	Shaft
EBA-8732	1	Pinion
MAB-1024N	1	Band, Cover
MAX-80	1	Gasket, Int. Bearing
MAX-1078	1	INTERMEDIATE BRG. & OIL SEAL
MN-18	1	Washer, Thrust, D.E.
MN-18B	*	Washer, Arm. Thrust, D.E. .032" thick
MN-18C	*	Washer, Arm. Thrust, D.E. .015" thick
MN-18D	*	Washer, Arm. Thrust, D.E. .042" thick
PS-1250	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
19X-933	3	Screw, Int. Bearing, Flat Hd., #10-32x9/16
X-2873	1	Screw, Cover Band, Rd. Hd., #10-32x1 1/4
X-2875	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

* Used as required.

† BRUSH SET, Service MAW-2012S.

Unit	Application
MAX-4069M	Chrysler Marine

(Issued 1-20-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20A	2	Bolt, Thru
(MAX-2127A)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Conn.
MAB-31A	1	Washer, Insulating Term. Stud, Outer
MAB-85A	1	Bushing, Insulation Term. Stud, Outer
MAK-80A	1	Washer, Insulating Term. Stud, Inner
MAW-12†	2	BRUSH
MAW-13†	2	BRUSH, GROUNDED
MAX-47A	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007F	1	Coil, Field, U.L.
MAX-1008B	1	Coil, Field, L.R.
MAX-1009B	1	Coil, Field, L.L.
MAX-1010F	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Term. Stud
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2889	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assy. & Parts Used With

MAX-2002L	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Arm. Thrust, C.E.
MAW-2179M	1	ARMATURE
MU-54F	*	Washer, Arm. Thrust C.E. 1/32" thick
MU-54G	*	Washer, Arm. C.E. 1/64" thick
MU-54J	*	Washer, Arm. C.E. .046" thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex., 5/16-24
8X-2853	1	Nut, Hex., #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd., #10-32x5/16
X-2857	2	Washer, Switch Mtg., Skpf., #10
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-79	1	BENDIX DRIVE ASSY.
EBA-4808	1	Ring, Lock
EBA-4833	1	Ring, Retaining
EBA-7213	1	Spring, Anti-Drift
EBA-7225	1	Spring, Meshing
EBA-7905	1	SPRING, DRIVE
EBA-7906	1	Pin, Locating
EBA-7907	2	Plate, Spring Anchor
EBA-7931	1	Shaft, Screw
EBA-7932	1	Pinion
MAB-1024N	1	Band, Cover
MAX-80	1	Gasket, Int. Bearing
MAX-1078	1	INTERMEDIATE BRG. & OIL SEAL
MN-18	1	Washer, Thrust, D.E.
MN-18B	*	Washer, Arm. Thrust, D.E. .032" thick
MN-18C	*	Washer, Arm. Thrust, D.E. .015" thick
MN-18D	*	Washer, Arm. Thrust, D.E. .042" thick
PS-1250	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
19X-933	3	Screw Int. Bearing, Flat Hd., #10-32x9/16
X-2873	1	Screw, Cover Band, Rd. Hd., #10-32x1 1/4
X-2875	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

* Used as required.

† BRUSH SET, Service MAW-2012S.

UNIT	APPLICATION
MAX-4070M	Chrysler Marine

(Issued 1-20-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAX-4072 STARTING MOTOR PARTS LIST MAX-4072

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAX-2127)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud,
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12 †	2	Brush
MAW-13 †	2	Brush, Grounded
MAX-47	1	Stud, Terminal, 5/16-24
MAX-58	1	Equalizer
MAX-3005AS	1	Field Coil Package
MAX-64	2	Connector, Field Coil
MAX-1007D	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-2105	1	Armature Assembly
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-6L	1	Connector
SS-4001	1	Solenoid Starting Switch
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
	2	Lockwasher, 5/16
	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-11	1	Bendix Drive Assy.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take-Up
EBA-1111	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
MAW-24	1	Band, Cover
PS-1123A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAW-2012S.

UNIT	APPLICATION
MAX-4072	Ross Carrier

(Issued 7-14-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2156)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12†	2	Brush, Insulated
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007D	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002CS	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-2105	1	Armature Assembly
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6R	1	Connector, Switch to Motor
SS-4001	1	Solenoid Starting Switch
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-90	1	Bendix Drive Assy.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take-Up
EBA-9011	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1260	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† Brush Set, Service MAW-2012S.

(Issued 3-11-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2156)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12 †	2	Brush
MAW-13 †	2	Brush, Grounded
MAX-47	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007D	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm, Thrust, C.E.
MAW-2108	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick
X-261	2	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6R	1	Connector, Switch to Motor
SS-4301	1	SWITCH, STARTING SOLENOID
8X-173	1	Nut, Hex. #10-32
X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBB-12	1	BENDIX DRIVE ASSY.
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-4713	1	Spring, Anti-Drift
EBB-906	1	Screw, Shaft
EBB-1231	1	SHAFT & DRIVE SPRING
EBB-1232	1	Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Absorbent Bronze
MAW-24	1	Band, Cover
PS-1265	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† BRUSH SET, SERVICE MAW-2012S.

* Use as Required.

UNIT	APPLICATION
MAX-4075	Buda

(Issued 3-22-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2142)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Insulating Block
MAW-205	1	Insulation, Switch Contact
MAX-49	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
SW-764	1	Contact, Switch, Lower
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Arm. Thrust, Comm. End
MAW-2030	1	ARMATURE ASSY.
MAW-31	1	Spacer, Armature Shaft
MU-54	*	Washer, Thrust, 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick

Switch Assembly & Parts Used With

SW-2813	1	SWITCH, STARTER
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10
		1 2 3 4 5

Starting Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAD-95	1	Retainer, Yoke Spring
MAW-161	1	Spring, Yoke
MAW-2199	1	Yoke
MAW-3132	1	STARTER CLUTCH
MAX-52	1	Pin, Yoke
8X-179	1	Nut, Yoke Pivot, Hex. 3/8-16
12X-201	1	Lockwasher, Yoke Pivot, 3/8

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1194B	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABSORBENT BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Sq. #10-32
		1 2 3 4 5

† BRUSH SET, SERVICE MAW-2012S.

* Use as Required.

NOTE: - Part numbers shown in parenthesis are not recommended for service.

UNIT	APPLICATION
MAX-4076	Dodge (Truck)

(Issued 2-24-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-3151)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins. Term. Stud Inner
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007D	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
12X-1014	2	Washer, Lock, Term. Stud 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-3059A	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler Press in, 1/4

Armature Assembly & Parts Used With

MAK-61	1	Washer, Steel
MAW-75	1	Washer, Thrust, Intermediate
MAW-76	1	Washer, Thrust, Intermediate
MAW-2069	1	Armature
MU-54	1	Washer, Arm. Thrust, Comm. End & Intermediate
MU-54F	*	Washer, Arm. Thrust C.E. 1/32" thick
MU-54G	*	Washer, Arm. C.E. 1/64" thick
MU-54J	*	Washer, Arm. C.E. .046" thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6R	1	Connector, Switch to Motor
SS-4001	1	Solenoid Starting Switch
12X-196	1	Washer, Lock, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Washer, Lock, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Switch Mtg. Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-93	1	Bendix Drive
MAW-24	1	Band, Cover
MAW-62	1	Shaft, Bendix Drive
MAW-70	1	Washer, Felt, Int. Plate
MAW-71	1	Retainer, Felt Washer, Int. Plate
MAW-72	1	Guard, Felt Washer, Int. Plate
MAW-74	1	Gear
MAX-1088	1	Bearing Assy., Intermediate
MAW-77	1	Bearing, Arm. Shaft, Abs. Bronze
MG-77A	1	Bearing, Bendix Shaft, Abs. Bronze
X-489	1	Oiler, Hinge Top, Press in, 1/4
MN-18	1	Washer, Thrust, D.E.
MN-18B	*	Washer, Arm. Thrust, D.E. .032" thick
MN-18C	*	Washer, Arm. Thrust, D.E. .015" thick
MN-18D	*	Washer, Arm. Thrust, D.E. .042" thick
PS-1267	1	Housing Assy. Pinion
MN-21	1	Pin, Dowel
MP-41A	1	Bearing, Absorbent Bronze
X-89	3	Screw, Housing Attaching, Hex. Hd. 1/4-20x1
12X-196	3	Lockwasher, Retainer Sc., #10
12X-199	3	Lockwasher, Housing Sc., 1/4
X-261	2	Key, Woodruff, #6
8X-311	3	Screw, Retainer, Rd. Hd. #10-32x3/8
X-505	1	Plug, Pipe, 1/8
8X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† Brush Set, Service MAW-2012S.

* Used as required.

Unit	Application
MAX-4077	White Motor

(Issued 5-24-46)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAX-2150)	1	Frame & Field Assembly.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal, 5/16-24
MAX-58	1	Equalizer
MAX-3005AS	1	Field Coil Package
MAX-64	2	Connector, Field Coil
MAX-1007D	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37C	1	Washer, Plain Term. Stud 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002CS	1	Head Assy. Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-2105	1	Armature Assembly
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, 1/32" Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-2	1	Bendix Drive Assembly
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take Up
EBA-211	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent, Bronze
MAX-1024	1	Band, Cover
PS-1263	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAW-2012S.

UNIT	APPLICATION
MAX-4078	Massey Harris

(Issued 7-14-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part (1 2 3 4 5)
(MAX-2142A)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Insulating Block
MAX-49	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
SW-763	1	Contact, Switch, Lower
8X-61	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
8X-830	1	Nut, Term. Stud, Hex., 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Armature Thrust, C.E.
MAW-2030	1	ARMATURE ASSY.
MAW-31	1	Spacer, Armature Shaft
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick

Switch Assembly & Parts Used With

SW-2813	1	SWITCH, STARTER
12X-201	1	Washer, Lock, 3/8
8X-830	1	Nut, Hex., 3/8-16
8X-321	2	Screw, Mtg., Switch, Rd. Hd. #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Sc., #10 (1 2 3 4 5)

Starter Clutch Assy. & Parts Used With

Part No.	No. Used	Name of Part (1 2 3 4 5)
MAD-95	1	Retainer, Yoke Spring
MAW-161	1	Spring, Yoke
MAW-2197	1	Yoke
MAW-3132	1	STARTER CLUTCH
MAX-52	1	Pin, Yoke
8X-179	1	Nut, Yoke Pivot, Hex., 3/8-16
12X-201	1	Lockwasher, Yoke Pivot, 3/8

Miscellaneous Parts

MAW-24	1	Band, Cover
PS-1194B	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover, Band, Rd. Hd., #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32 (1 2 3 4 5)

† BRUSH SET, SERVICE MAW-2012S.

* Used as Required.

UNIT	APPLICATION
MAX-4079	Dodge Truck

(Issued 2-24-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAX-2150A)	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins. Term. Stud Inner
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal 5/16-24
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007D	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37C	1	Washer, Plain Term. Stud 5/16
8X-61	2	Screw, Brush Ground Flat Hd. #10-32x7 1/16
12X-1014	2	Lockwasher, Term. Stud 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	Washer, Steel
MAW-2105	1	Armature Assembly
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate

Miscellaneous Parts

EBA-2	1	Bendix Drive Assembly
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take Up
EBA-211	1	Shaft & Pinion
MAB-1024	1	Band, Cover
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
PS-1102C	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-261	1	Key, Woodruff, #6
X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† Brush Set, Service MAW-2012S.

Unit	Application
MAX-4080	Massey Harris

(Issued 1-14-47)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
(MAX-3159)	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-85	1	Bushing Ins. Term. Stud
MAK-80	1	Washer, Ins.
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-58	1	Equalizer
MAX-158	1	Stud, Terminal
MAX-3005S	1	Field Coil Package
MAX-64	2	Connector, Field Coil
MAX-1007	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010	1	Coil, Field, U.R.
MBA-21	1	Insulation, Sw. Contact
MBA-22	1	Contact, Switch, Lower
MZ-197	1	Insulation, Term. Sc.
8X-61	2	Screw, Brush Ground Flat Hd. #10-32x7/16
8X-183A	1	Washer, Terminal Sc., #10
8X-309	1	Screw, Switch Term., Rd. Hd. #10-32x1/2
12X-196	1	Lockwasher, Switch Term. Sc., #10
8X-1376	1	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-3059	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, C.E.
MAW-2105	1	Armature Assembly
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
EW-200	1	Plain Washer
MBA-24	1	Gasket, Switch
MBA-31	1	Gasket, Switch
MBA-32	1	Lever, Switch
MZ-170	1	Pin, Switch Lever
SW-2916B	1	Switch, Starting
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10
X-1531	1	Pin, Cotter, 1/16x1/2

Miscellaneous Parts

EB-99	1	Bendix Drive Assembly
EB-108	2	Lockwasher
EB-7805	1	Spring, Drive
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8734	1	Ring, Take-Up
EB-9911	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
MAX-1024	1	Band, Cover
PS-1274	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAW-2012S.

UNIT	APPLICATION
MAX-4081	Cockshutt

Printed in U. S. A. (Issued 7-14-48) File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
(MAX-2142A)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAW-12 †	2	Brush
MAW-13†	2	Brush, Grounded
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Insulating Block
MAX-49	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
SW-763	1	Contact, Switch, Lower
8X-61	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Arm Thrust, C.E.
MAW-2030	1	ARMATURE ASSY.
MAW-31	1	Spacer, Armature Shaft
MU-54	*	Washer, Thrust, 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust 3/64" thick
	1 2 3 4 5	

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
SW-2813	1	STARTING SWITCH
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex., 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Starter Clutch Assy. & Parts Used With

MAD-95	1	Retaniner, Yoke Spring
MAW-161	1	Spring, Yoke
MAW-2206	1	Yoke
MAW-3132	1	STARTER CLUTCH
MAX-52	1	Pin, Yoke
8X-179	1	Nut, Yoke Pivot, Hex. 3/8-16
12X-201	1	Lockwasher, Yoke Pivot, 3/8

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1194B	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS; BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Sq. #10-32
	1 2 3 4 5	

† BRUSH SET, SERVICE MAW-2012S.

* Use as Required.

UNIT	APPLICATION
MAX-4085	Dodge Truck

(Issued 2-24-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
(MAX-2142)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAW-12 †	2	Brush
MAW-13 †	2	Brush, Grounded
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Insulating Block
MAW-205	1	Insulation, Switch Contact
MAX-49	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1007	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
SW-764	1	Contact, Switch, Lower
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Part Used

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Arm. Thrust, C.E.
MAW-2030	1	ARMATURE ASSY.
MAW-31	1	Spacer, Armature Shaft
MU-54	*	Washer, Thrust, 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick

Switch Assembly & Parts Used With

SW-2813	1	SWITCH, STARTER
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10
	1 2 3 4 5	

Starter Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
MAD-95	1	Retainer, Yoke Spring
MAW-161	1	Spring, Yoke
MAW-2208	1	Yoke
MAW-3132	1	STARTER CLUTCH
MAX-52	1	Pin, Yoke
8X-179	1	Nut, Yoke Pivot, Hex. 3/8-16
12X-201	1	Lockwasher, Yoke Pivot, 3/8

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1194B	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
	1 2 3 4 5	

* Use As Required.

† BRUSH SET, SERVICE MAW-2012S.

UNIT	APPLICATION
MAX-4086	Dodge Truck

(Issued 2-24-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAX-2127)	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal, 5/16-24
MAX-58	1	Equalizer
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2128	1	ARMATURE
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6LB	1	Connector
SS-4014A	1	SWITCH, SOLENOID
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-33	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Locating Pin
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Lock Ring
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
MAW-24	1	Band, Cover
MAW-2129	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Absorbent Bronze
PS-1223	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAW-2012S.

* Use as required.

UNIT	APPLICATION
MAX-4087	Aircooled

(Issued 3-6-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAX-2150)	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12 †	2	Brush
MAW-13 †	2	Brush, Grounded
MAX-47	1	Stud, Terminal, 5/16-24
MAX-58	1	Equalizer
MAX-3005AS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1007D	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37C	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2105	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, 1/32" Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Absorbent Bronze
MAW-24	1	Band, Cover
PS-1123A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAW-2012S.

UNIT	APPLICATION
MAX-4088	Autocar

(Issued 1-3-49)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAX-4089 STARTING MOTOR PARTS LIST

MAX-4089
(Issued 11-27-50)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MAX-2150A)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Conn.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal
MAX-58	1	Equalizer
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37C	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2212	1	ARMATURE ASSY.
MZ-35	1	Spacer, Bearing Thrust
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & D.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-16	1	BENDIX DRIVE ASSY.
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Retaining Ring
EBA-8032	1	Pinion
EBB-1631	1	SHAFT & DRIVE SPRING
MAX-132	1	Pin, Bendix
MAX-1024	1	Band, Cover
MAX-1133	1	Head Assy., Drive End
MAB-49A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAW-2012S.

* Use as required.

UNIT	APPLICATION
MAX-4089	Continental

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MAX-2110)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud, Inner
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAW-12 †	2	Brush
MAW-13 †	2	Brush, Grounded
MAW-37	1	Bushing, Insulation
MAX-35	1	Washer, Ins., Term. Stud, Outer
MAX-44	1	Washer, Term. Stud, 3/8
MAX-48	1	Stud, Terminal
MAX-58	1	Equalizer
MAX-3005AS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1007D	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MAX-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-179	1	Nut, Term. Stud, Hex. 3/8-16
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Arm Thrust, Comm. End
MAW-2213	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, D.E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-111	1	Connector
SS-4707	1	SOLENOID STARTING SWITCH (See separate list for parts)
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-830	1	Nut, Switch Term., Hex. 3/8-16
X-1272	4	Washer, Switch Mtg., Skpf. 1/4

Clutch Assembly & Parts Used With

MAX-71	1	Pin, Yoke
MCH-58	2	Retainer, Yoke Spring
MCH-62	1	Spring, Yoke
MCH-2056	1	Yoke
MCL-3098A	1	CLUTCH, STARTER
SS-56	1	Pin, Link
12X-201	1	Lockwasher, Yoke Pin, 3/8
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
8X-830	1	Nut, Yoke Pin, Hex. 3/8-16

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1298A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAW-2012S.

* Used as required.

UNIT	APPLICATION
MAX-4090	Chrysler (Canada)

(Issued 2-16-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAX-4091 STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAX-2127)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal, 5/16-24
MAX-58	1	Equalizer
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., C.E.
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2105	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1123D	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAW-2012S.

UNIT	APPLICATION
MAX-4091	Palmer Bros.

(Issued 4-18-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MAX-2156	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal
MAX-58	1	Equalizer
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2184	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C.E. & D.E., 1/32" Thick
X-264	1	Key, Woodruff, #9

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector, Switch to Motor
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

MAC-1058B	1	Head Assy., Drive End
MAB-49A	1	BEARING, ABS. BRONZE
MAW-24	1	Band, Cover
X-489	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAW-2012S.

UNIT	APPLICATION
MAX-4093	Columbian Bronze

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAX-4094 STARTING MOTOR PARTS LIST

MAX-4094
(Issued 2-4-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MAX-2150	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Conn.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal
MAX-58	1	Equalizer
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007F	1	Coil, Field, U. L.
MCL-1010F	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37C	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MAW-2184	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C. E. & D. E., 1/32" Thick
X-264	1	Key, Woodruff, #9

Miscellaneous Parts

MAC-1058B	1	Head Assy., Drive End
MAB-49A	1	BEARING, ABS. BRONZE
MAW-24	1	Band, Cover
X-489	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAW-2012S.

UNIT	APPLICATION
MAX-4094	Daybrook

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAX-4095 STARTING MOTOR PARTS LIST

MAX-4095
(Issued 2-24-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-2156A	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-12†	2	Brush
MAW-13†	2	Brush, Grounded
MAX-47	1	Stud, Terminal
MAX-58	1	Equalizer
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2105	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C.E. & Int., 1/32" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-140L	1	Connector
SST-4012	1	SOLENOID STARTING SWITCH
8X-164	2	Nut, Hex. 5/16-24
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
MAX-1024	1	Band, Cover
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	BEARING, ABS. BRONZE
PS-1260B	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAW-2012S.

UNIT	APPLICATION
MAX-4095	J. I. Case

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAY-2115A)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud, Inner
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAW-13†	2	Brush, Grounded
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	1	Washer, Ins., Term. Stud, Outer
MAX-44	1	Washer, Term. Stud, 3/8
MAX-64	2	Connector, Field Coil
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A†	2	Brush
MAY-28	1	Stud, Terminal
MAY-33	1	Connector
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-201	2	Lockwasher, Term. Stud,3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Thrust, C.E.
MAY-2030	1	ARMATURE ASSY.
MAW-31	1	Spacer, Arm. Shaft
MU-54	1	Washer, Thrust 1/32" thick
MU-54A	1	Washer, Thrust 1/64" thick
MU-54B	1	Washer, Thrust 3/64" thick

Switch Assembly & Parts Used With

SS-116L	1	Connector
SS-1128	1	Core Assy.
SS-59	1	Screw, Link
SS-61	1	Spring
SS-128	1	Core
SS-4204A	1	SOLENOID STARTING SWITCH
12X-201	2	Lockwasher, Switch Term.,3/8
		1 2 3 4 5

Switch Assembly & Parts (Continued)

Part No.	No. Used	Name of Part
		1 2 3 4 5
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-830	2	Nut, Switch Term. Hex. 3/8-16
X-1272	4	Washer, Switch Mtg., Skpf. 1/4

Starter Clutch Assembly & Parts Used With

MAD-2087	1	Yoke
MAW-3132A	1	STARTER CLUTCH
MAX-37	1	Gasket, Dust Cover to Switch
MAX-38	1	Cover, Dust
MAX-39	1	Plate, Dust
MAX-46	1	Spring, Yoke
MAX-41	1	Bushing, Yoke Pivot, 1 1/4"
MAX-42	1	Bushing, Yoke Pivot, 1 9/16"
SS-56	1	Pin, Link
8X-97	1	Screw, Hex. Hd. 5/16-18x3 1/4
8X-147	1	Nut, Yoke Pivot, Hex 5/16-18
8X-311	4	Screw, Dust Cover, Rd. Hd. #10-32x3/8
X-401	1	Pin, Cotter, 1/16x3/8
12X-1014	1	Lockwasher, Yoke Pivot, 5/16
X-1270	4	Washer, Dust Cover Skpf. #10

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1094	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† BRUSH SET, SERVICE MAY-2012AS.

UNIT	APPLICATION
MAY-4109A,B	Chrysler Corp.

(Issued 1-23-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAY-2113B)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY.- Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAX-64	2	Field Coil Connector
MAX-67	1	Insulation
MAY-31	1	Terminal Post
MAY-1007G	1	Field Coil - U.L.
MAY-1008A	1	Field Coil - L.R.
MAY-1009A	1	Field Coil - L.L.
MAY-1010A	1	Field Coil & Brush Assy.- U.R.
MAY-1033	1	Connector & Brush Assy.
MAY-12A	2	BRUSH
MN-21	2	Dowel Pin
SW-763	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Comm. End Head Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAY-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	+	Thrust Washer - 1/32" Thick
MU-54A	+	Thrust Washer - 1/64" Thick
MU-54B	+	Thrust Washer - 3/64" Thick

Switch Assembly & Parts Used With

SW-2677A	1	STARTING SWITCH ASSEMBLY
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer
		1 2 3 4 5

Starter Clutch Assy. & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-33	1	Pivot Screw
*	1	Yoke Assembly
*	1	STARTER CLUTCH ASSEMBLY
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1090S	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 1-19-42)

Assembly No.	Yoke Assembly	Starter Clutch
MAY-4114	MAW-2103A	MAW-3132A
MAY-4114A	MAW-2103	MAY-3099
MAY-4114B	MAW-2103	MAW-3132A

* See table following parts list for part number applying to assembly wanted.

\+ Use as required.

UNIT	APPLICATION
MAY-4114,A,B	Dodge Truck

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the comp ete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAY-3140)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAW-13	2	BRUSH ASSY.- GROUNDED
MAW-29	4	Pole Piece
MAX-64	2	Field Coil Connector
MAX-67	1	Insulation
MAY-34	1	Terminal Post
MAY-1007F	1	Field Coil - U.L.
MAY-1008A	1	Field Coil - L.R.
MAY-1009A	1	Field Coil - L.L.
MAY-2010A	1	Field Coil & Brush Assy.
MAY-2033	1	Connector & Br. Assy.
MAY-12A	1	BRUSH-3" Pigtail
MAY-12B	1	BRUSH-4 1/2" Pigtail
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-3059	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAY-2064	1	ARMATURE ASSEMBLY
MU-54	1	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MU-37	1	5/16 Plain Washer
SS-6RA	1	Connector
SS-4003	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EB-99	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7805	1	DRIVE SPRING
EB-7806	1	Hd. Sp. Bolt or Screw
EB-7807	1	Shaft Spring Sc.
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8734	1	Take Up Spring
EB-9911	1	S - A Assembly
MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1100A	1	Pinion Housing Assy.
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-16-41)

UNIT	APPLICATION
MAY-4130	Chrysler Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAY-3140A)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85A	1	Bushing, Ins., Term. Stud
MAK-80A	1	Washer, Ins., Term. Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A†	1	Brush
MAY-12B†	1	Brush
MAY-33	1	Connector
MAY-34A	1	Stud, Terminal
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain Term. Stud
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2889	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
MW-20C	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-3059D	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Steel
MAY-2064M	1	ARMATURE ASSY.
MU-54	1	Washer, Thrust, 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-140R	1	Connector
SSR-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
8X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EB-99A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7805A	1	SPRING, DRIVE
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8734A	1	Ring, Take-Up
EB-9911A	1	Shaft & Pinion
MAB-1024N	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1100C	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-2875	1	Nut, Cover Band, Square #10-32
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

† BRUSH SET, SERVICE MAY-1012AS.

UNIT	APPLICATION
MAY-4130M	Chrysler Marine

(Issued 4-18-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAY-2140)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAW-13	2	BRUSH ASSY. - GROUNDED
MAW-29	4	Pole Piece
MAX-64	2	Field Coil Connector
MAX-67	1	Insulation
MAY-34	1	Terminal Post
MAY-1007F	1	Field Coil - U.L.
MAY-1008A	1	Field Coil - L.R.
MAY-1009A	1	Field Coil - L.L.
MAY-1010A	1	Field Coil & Br. Assy.- U.R.
MAY-1033	1	Connector & Br. Assy.
MAY-12A	2	BRUSH-Long Pigtail
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer
12X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MAX-2002	1	Comm. End Plate Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAY-2064	1	ARMATURE ASSEMBLY
MU-54	1	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MU-37	1	5/16 Plain Washer
SS-6RA	1	Connector
SS-4003	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7806	1	Hd. Spring Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	DRIVE SPRING
EB-8734	1	Take Up Spring
EBA-211	1	S - A Assembly
MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1100A	1	Pinion Housing Assy.
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-16-41)

UNIT	APPLICATION
MAY-4131	Chrysler Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAY-2140A)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85A	1	Bushing, Ins., Term. Stud
MAK-80A	1	Washer, Ins., Term. Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A†	2	Brush
MAY-33	1	Connector
MAY-34A	1	Stud, Terminal
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Stud
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2889	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
MW-20C	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002L	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Thrust, C.E.
MAY-2064M	1	ARMATURE ASSY.
MN-18	1	Washer, Thrust, D.E.
MU-54	1	Washer, Thrust, 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-140R	1	Connector
SSR-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
8X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-2A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8705A	1	SPRING, DRIVE
EB-8734A	1	Ring, Take-Up
EBA-211A	1	Shaft & Pinion
MAB-1024N	1	Band, Cover
PS-1100C	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-2875	1	Nut, Cover Band, Square #10-32
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

† BRUSH SET, SERVICE MAY-2012AS.

UNIT	APPLICATION
MAY-4131M	Chrysler Marine

(Issued 4-18-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAY-4132 STARTING MOTOR PARTS LIST MAY-4132

PRELIMINARY

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAY-2142)	1	Frame & Field Assembly
DK-45	1	Insulating Washer
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAW-13	2	BRUSH ASSY.- Grounded
MAW-29	4	Pole Piece
MAW-37	1	Insulating Bushing
MAW-39	1	Insulating Block
MAX-64	2	Field Coil Connector
MAX-67	1	Insulation
MAY-31	1	Terminal Post
MAY-1007G	1	Field Coil - U.L.
MAY-1008A	1	Field Coil - L.R.
MAY-1009A	1	Field Coil - L.L.
MAY-1010A	1	Field Coil & Brush Assy.- U.R.
MAY-1033	1	Connector & Brush Assy.
MAY-12A	2	BRUSH
MN-21	2	Dowel Pin
SW-764	1	Switch Contact - Lower
8X-61	2	#10-32x7/16 Flat Hd. Sc.
8X-830	1	3/8-16 Hex. Nut
MW-20A	2	Frame Screw
12X-199	2	1/4 Lock Washer

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Comm. End Head Assembly
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler - 1/4 Hinged Top

Armature Assembly & Parts Used With

MAD-96	1	Thrust Washer
MAY-2030	1	ARMATURE ASSEMBLY
MAW-31	1	Armature Shaft Spacer
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick

Switch Assembly & Parts Used With

SW-2813	1	STARTING SWITCH ASSEMBLY
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer
		1 2 3 4 5

Starter Clutch Assy. & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-2148	1	Yoke Assembly
MAW-3132A	1	STARTER CLUTCH ASSEMBLY
MZ-175	1	Pivot Screw
8X-179	1	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer

Miscellaneous Parts

MAW-24	1	Head Band
MN-18	1	Thrust Washer
PS-1194A	1	Pinion Housing Assembly
MP-41A	1	ABSORBENT BRONZE BRG.
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 1-20-42)

* Use as required.

UNIT	APPLICATION
MAY-4132	Dodge Truck

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAY-3121A)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85A	1	Bushing, Ins., Term. Stud
MAK-80A	1	Washer, Ins., Term.Stud, Inner
MAW-13 †	2	Brush, Grounded
MAX-64	2	Connector, Field Coil
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A †	1	Brush
MAY-12B †	1	Brush
MAY-33	1	Connector
MAY-34A	1	Stud, Terminal
MAY-1007R	1	Coil, Field, U.L.
MAY-1008B	1	Coil, Field, L.R.
MAY-1009B	1	Coil, Field, L.L.
MAY-1010H	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Term. Stud, Plain 5/16
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2889	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
MW-20C	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-3059D	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Arm. Thrust, Comm. End
MAW-75A	1	Washer, Thrust, Intermediate
MAW-76	1	Washer, Thrust, Intermediate
MAY-2069M	1	ARMATURE
MU-54	1	Washer, Thrust
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAW-167R	1	Connector
SSR-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
8X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-17A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8705A	1	SPRING, DRIVE
EB-8734A	1	Ring, Take Up
EBA-1711A	1	Shaft & Pinion
MAB-1024N	1	Band, Cover
MAW-70	1	Washer, Felt, Int. Plate
MAW-71A	1	Retainer, Felt Washer, Int. Plate
MAW-72A	1	Guard, Felt Washer, Int. Plate
MAW-84A	1	Shaft, Bendix Drive
MAW-87	1	Gear, Bendix Shaft
MAX-1060A	1	Bearing Assy., Intermediate
MAW-77	1	BEARING, ABSORBENT BRONZE
MG-77A	1	BEARING, ABSORBENT BRONZE
X-489A	1	Oiler, Hinge Top, Press in, 1/4
MN-18	1	Washer, Thrust, D.E.
PS-1106A	1	Housing Assy., Pinion
MN-21A	1	Pin, Dowel
MP-41A	1	Bearing, Absorbent Bronze
8X-21	3	Screw, Retainer, Rd. Hd. #10-32x3/8
19X-89	3	Screw, Housing, Hex. Hd. 1/4-20x1
12X-196	3	Lockwasher, Retainer Sc., #10
12X-199	3	Lockwasher, Housing Sc., 1/4
8X-2873	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-2875	1	Nut, Cover Band, Square #10-32
8X-2892	1	Plug, Pipe, 1/8
		1 2 3 4 5

† BRUSH SET, SERVICE MAY -1012AS

NOTE: - Part numbers shown in parenthesis are not recommended for service.

UNIT	APPLICATION
MAY-4134M	Chrysler Marine

(Issued 1-26-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
(MAY-2121A)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85A	1	Bushing, Ins., Term. Stud
MAW-13 †	2	Brush, Grounded
MAX-64	2	Connector
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A†	2	Brush
MAY-33	1	Connector
MAY-34A	1	Stud, Terminal
MAY-1007R	1	Coil, Field, U.L.
MAY-1008B	1	Coil, Field, L.R.
MAY-1009B	1	Coil, Field, L.L.
MAY-1010H	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Term. Stud, Plain 5/16
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud 5/16
X-2889	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
MW-20C	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002L	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Arm. Thrust, Comm. End
MAW-75A	1	Washer, Thrust, Intermediate
MAW-76	1	Washer, Thrust, Intermediate
MAY-2069M	1	ARMATURE
MU-54	1	Washer, Thrust
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAW-167R	1	Connector
SSR-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
8X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-127U	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part 1 2 3 4 5
EBA-16A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7805A	1	SPRING, DRIVE
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8734A	1	Ring, Take Up
EBA-1611A	1	Shaft & Pinion
MAB-1024N	1	Band, Cover
MAW-70	1	Washer, Felt,Int. Plate
MAW-71A	1	Retainer, Felt Washer, Int. Plate
MAW-72A	1	Guard, Felt Washer, Int. Plate
MAW-84A	1	Shaft, Bendix Drive
MAW-87	1	Gear, Bendix Shaft
MAX-1060A	1	Bearing Assy., Intermediate
MAW-77	1	BEARING, ABSORBENT BRONZE
MG-77A	1	BEARING, ABSORBENT BRONZE
X-489A	1	Oiler, Hinge Top, Press In, 1/4
MN-18	1	Washer, Thrust, D.E.
PS-1106A	1	Housing Assy., Pinion
MN-21A	1	Pin, Dowel
MP-41A	1	Bearing, Absorbnet Bronze
8X-21	3	Screw, Retainer, Rd. Hd. #10-32x3/8
19X-89	3	Screw, Housing, Hex. Hd. 1/4-20x1
12X-196	3	Lockwasher, Retainer Sc., #10
12X-199	3	Lockwasher, Housing Sc., 1/4
8X-2873	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-2875	1	Nut, Cover Band, Square #10-32
8X-2892	1	Plug, Pipe, 1/8 1 2 3 4 5

† BRUSH SET, SERVICE MAY-2012AS.

NOTE: - Part numbers shown in parenthesis are not recommended for service.

UNIT	APPLICATION
MAY-4135M	Chrysler Marine

(Issued 1-26-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAY-4138 STARTING MOTOR PARTS LIST

MAY-4138
(Issued 1-15-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAY-2118A)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A†	2	Brush
MAY-33	1	Connector
MAY-34	1	Stud, Terminal
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002CS	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, C.E.
MAY-2006	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-59	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EBA-507	1	Screw, Spring, Shaft
EBA-1205	1	SPRING, DRIVE
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1231	1	Screw Shaft
EBA-1233	1	Ring, Retaining
EBA-5932	1	Pinion
MAB-1024F	1	Band, Cover
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs., Bronze
PS-1209	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAY-2012AS.

UNIT	APPLICATION
MAY-4138	Fairbanks Morse Co., U.S. Motors

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAY-3124)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection, C.E.
MAB-31	1	Washer, Insulating, Term. Stud, Outer
MAB-85	1	Bushing, Insulating, Term. Stud
MAK-80	1	Washer, Insulating, Term. Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-64	2	Connector, Field Coil
MAX-67	1	Insulation, Field Connection, D.E.
MAY-12A†	1	Brush
MAY-12B†	1	Brush
MAY-33	1	Connector, Brush
MAY-34	1	Stud, Terminal, 5/16-24
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud 5/16
8X-61	2	Screw, Brush Grd., Flat Hd., #10-32x7/16
X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24
MW-20A	2	Bolt, Thru
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-3059	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Steel
MAW-75	1	Washer, Thrust, Intermediate
MAW-76	1	Washer, Thrust, Intermediate
MAY-2069	1	Armature
MU-54	1	Washer, Thrust 1/32" thick
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-17	1	Bendix Drive Assembly
EB-108	2	Lock Washer
EB-7806	1	Hd. Sp. Bolt or Screw
EB-7807	1	Shaft Spring Sc.
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	Driving Spring
EB-8734	1	Take Up Ring
EBA-1711	1	S-A Assembly
MAB-1024F	1	Band, Cover
MAW-70	1	Washer, Felt, Int. Plate
MAW-71	1	Retainer, Felt Washer, Int. Plate
MAW-72	1	Guard, Felt Washer, Int. Plate
MAW-84	1	Shaft, Bendix Drive
MAW-87	1	Gear, Bendix Shaft
MAX-1077	1	Bearing Assy., Intermediate
MAW-77	1	Bearing, Arm. Shaft, Absorbent Bronze
MG-77A	1	Bearing, Bendix Shaft, Absorbent Bronze
X-489	1	Oiler, Hinge Top, Press in 1/4
MN-18	1	Washer, Thrust, D.E.
PS-1220	1	Housing Assy., Pinion
MN-21	1	Pin, Dowel
MP-41A	1	Bearing, Absorbent Bronze
8X-89	3	Screw, Housing Attaching, Hex. Hd. 1/4-20x1
X-196	3	Lockwasher, Brg. Retainer Sc., #10
X-199	3	Lockwasher, Housing Sc., 1/4
X-261	2	Key, Woodruff, #6
8X-311	3	Screw, Bearing Retainer, Rd. Hd. #10-32x3/8
X-505	1	Plug, Pipe, 1/8
X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† Brush Set, Service MAY-1012AS.

UNIT	APPLICATION
MAY-4139	Autocar

(Issued 10-10-46)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAY-2127)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A†	2	Brush, Insulated
MAY-33	1	Connector
MAY-34	1	Stud, Terminal
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAY-2163	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & D.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector
SS-4003	1	SWITCH, SOLENOID
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc. Skpf. #10

Miscellaneous Parts

EBB-8	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
EBB-832	1	Pinion
MAW-2129	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing Abs. Bronze
MAX-1024	1	Band, Cover
PS-1223	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use As Required.

† BRUSH SET, SERVICE MAY-2012AS.

UNIT	APPLICATION
MAY-4145	Chrysler (Industrial)

(Issued 4-17-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MAY-3150)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Conn.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A†	1	Brush
MAY-12B†	1	Brush
MAY-33	1	Connector
MAY-34	1	Stud, Terminal
MAY-3005BS	1	Field Coil Package
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used

MAX-3059	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Arm. Thrust, C.E.
MAY-2184	1	Armature Assembly
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, 1/32" Thick
X-264	1	Key, Woodruff, #9

Miscellaneous Parts

MAC-1058	1	Head Assy., Drive End
MAB-49A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
X-489	1	Oiler, Hinge Top, Press in 1/4
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAY-1012AS.

UNIT	APPLICATION
MAY-4146	Lift Truck Inc.

(Issued 7-14-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can e assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAY-2157)	1	Frame & Field Assy.
DK- 45	1	Washer, Ins., Term. Stud Inner
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAW-13†	2	Brush, Grounded
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	1	Washer, Ins. Term. Stud Inner
MAX-44	1	Washer, Term. Stud, 3/8
MAX-64	2	Connector, Field Coil
MAX-67	1	Insulation
MAY-12A†	2	Brush
MAY-28	1	Stud, Terminal
MAY-33	1	Connector
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
8X-61	2	Screw, Brush Ground Flat Hd., #10-32x7/16
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex., 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002A	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler, Hinge Top Press in 1/4

Armature Assembly & Parts Used With

MAD-96	1	Washer, Armature Thrust, C.E.
MAY-2030	1	Armature Assy.
MAW-31	1	Spacer, Armature Shaft
MU-54	*	Washer, Thrust, 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-116L	1	Connector
SS-1057A	1	Moving Core Assy.
SS-57	1	Cover
SS-59	1	Link Screw
SS-61	1	Spring
SS-4204	1	Solenoid Starting Switch
12X-201	2	Lockwasher, Switch Term., 3/8
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-830	2	Nut, Switch Term., Hex. 3/8-16
X-1272	4	Washer, Switch Mtg., Skpf. 1/4

Starter Clutch Assembly & Parts Used With

MAD-2087	1	Yoke
MAX-37	1	Gasket, Dust Cover to Switch
MAX-38	1	Cover, Dust
MAX-39	1	Plate, Dust
MAX-41	1	Bushing, Yoke Pivot, 1 1/4 L.
MAX-42	1	Bushing, Yoke Pivot, 1 9/16 L.
MAX-46	1	Spring, Yoke
MAY-3158	1	Starter, Clutch
SS-56	1	Pin, Link
8X-97	1	Screw, Yoke Pivot, Hex. Hd. 5/16-18x3 1/4
8X-147	1	Nut, Yoke Pivot, Hex. 5/16-18
8X-311	4	Screw, Dust Cover, Rd. Hd. #10-32x3/8
X-401	1	Pin, Cotter, Yoke Pin, 1/16x3/8
12X-1014	1	Lockwasher, Yoke Pivot, 5/16
X-1270	4	Washer, Dust Cover, Skpf.#10

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1094	1	Housing Assy., Pinion
MP-41A	1	Bearing, Abs. Bronze
8X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† Brush Set, Service MAY-2012AS.

* Use as required.

Unit	Application
MAY-4147	D.W. Onan

(Issued 1-14-47)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAY-4149M STARTING MOTOR PARTS LIST MAY-4149M

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20A	2	Bolt, Thru
(MAY-3127)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-30	1	Insulation, Filed Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85A	1	Bushing, Ins., Term. Stud
MAK-80A	1	Washer, Ins., Term.Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-64	2	Connector, Field Coil
MAX-67	1	Insulation, Field Conn. D.E
MAY-12A†	1	Brush, Insulated
MAY-12B†	1	Brush, Insulated
MAY-33	1	Connector
MAY-34A	1	Stud, Terminal
MAY-1007R	1	Coil, Field, U.L.
MAY-1008B	1	Coil, Field, L.R.
MAY-1009B	1	Coil, Field, L.L.
MAY-1010H	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Stud, 5/16
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2889	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-3059D	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Arm. Thrust, C.E.
MAY-2179M	1	ARMATURE
MU-54F	*	Washer, Arm. Thrust, C.E. 1/32" thick
MU-54G	*	Washer, Arm. Thrust, C.E., 1/64" thick
MU-54J	*	Washer, Arm. Thrust, C.E., .046" thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SSR-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
		1 2 3 4 5

Switch Assembly & Parts(Continued)

Part No.	No. Used	Name Of Part
		1 2 3 4 5
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-87	1	BENDIX DRIVE ASSY.
EBA-4805	1	SPRING, DRIVE
EBA-4807	2	Plate, Spring Anchor
EBA-4808	1	Ring, Lock
EBA-4813	1	Spring, Anti-Drift
EBA-4825	1	Spring, M shing
EBA-4833	1	Ring, Retaining
EBA-7906	1	Pin, Locating
EBA-8731	1	Shaft
EBA-8732	1	Pinion
MAB-1024N	1	Band, Cover
MAX-80	1	Gasket, Int. Bearing
MAX-1078	1	Int. Brg. & Oil Seal
MN-18	1	Washer, Thrust, D.E.
MN-18B	*	Washer, Arm. Thrust, D.E., .032" thick
MN-18C	*	Washer, Arm. Thrust, D.E., .015" thick
MN-18D	*	Washer, Arm. Thrust, D.E., .042" thick
PS-1250	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABSORBENT BRONZE
19X-933	3	Screw, Int. Brg., Flat Hd. #10-32x9/16
X-2873	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
X-2875	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

†BRUSH SET, SERVICE MAY-1012AS.

* Use as required.

UNIT	APPLICATION
MAY-4149M	Chrysler Marine

(Issued 1-19-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GT-20A	2	Bolt, Thru
(MAY-2127A)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85A	1	Bushing, Ins., Term. Stud
MAK-80A	1	Washer, Ins., Term. Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-64	2	Connector, Field Coil
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A†	2	Brush, Insulated
MAY-33	1	Connector
MAY-34A	1	Stud, Terminal
MAY-1007R	1	Coil, Field, U.L.
MAY-1008B	1	Coil, Field, L.R.
MAY-1009B	1	Coil, Field, L.L.
MAY-1010H	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Stud, 5/16
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2889	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002L	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Arm. Thrust, C.E.
MAY-2179M	1	ARMATURE
MU-54F	*	Washer, Arm. Thrust, C.E., 1/32" thick
MU-54G	*	Washer, Arm. Thrust, C.E., 1/64" thick
MU-54J	*	Washer, Arm. Thrust, C.E., .046" thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SSR-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
		1 2 3 4 5

Switch Assembly & Parts (Continued)

Part No.	No. Used	Name Of Part
		1 2 3 4 5
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-79	1	BENDIX DRIVE ASSY.
EBA-4808	1	Ring, Lock
EBA-4833	1	Ring, Retaining
EBA-7213	1	Spring, Anti-Drift
EBA-7225	1	Spring, Meshing
EBA-7905	1	SPRING, DRIVE
EBA-7906	1	Pin, Locating
EBA-7907	2	Plate, Spring Anchor
EBA-7931	1	Shaft, Screw
EBA-7932	1	Pinion
MAB-1024N	1	Band, Cover
MAX-80	1	Gasket, Int. Bearing
MAX-1078	1	Int. Brg. & Oil Seal
MN-18	1	Washer, Thrust, D.E.
MN-18B	*	Washer, Arm. Thrust, D.E., .032" thick
MN-18C	*	Washer, Arm. Thrust, D.E., .015" thick
MN-18D	*	Washer, Arm. Thrust D.E., .042" thick
PS-1250	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABSORBENT BRONZE
19X-933	1	Screw, Int. Brg., Flat Hd. #10-32x9/16
X-2873	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
X-2875	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† BRUSH SET, SERVICE MAY-2012AS.

* Use as required.

UNIT	APPLICATION
MAY-4150M	Chrysler (Marine)

(Issued 1-20-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAY-4151 STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAY-2142)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAW-13†	2	Brush, Grounded
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Insulating Block
MAW-205	1	Insulation, Switch Contact
MAX-64	2	Connector, Field Coil
MAX-67	1	Insulation, Field Connection D.E.
MAY-12A †	2	Brush
MAY-31	1	Stud, Terminal
MAY-33	1	Connector
MAY-1007G	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
SW-764	1	Contact, Switch, Lower
8X-61	2	Screw, Brush, Ground Flat Hd., #10-32x7/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Arm. Thrust, Comm. End
MAY-2030	1	ARMATURE ASSY.
MAW-31	1	Spacer, Armature Shaft
MU-54	*	Washer, Thrust, 1/32'' thick
MU-54A	*	Washer, Thrust, 1/64'' thick
MU-54B	*	Washer, Thrust, 3/64'' thcik

Switch Assembly & Parts Used With

SW-2813	1	SWITCH, STARTER
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10
		1 2 3 4 5

Starting Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAD-95	1	Retainer, Yoke Spring
MAW-161	1	Spring, Yoke
MAW-2199	1	Yoke
MAW-3132A	1	STARTER CLUTCH
MAX-52	1	Pin, Yoke
8X-179	1	Nut, Yoke Pivot, Hex. 3/8-16
12X-201	1	Lockwasher, Yoke Pivot, 3/8

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1194B	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABSORBENT BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x 1 1/2
8X-794	1	Nut, Cover Band, Sq. #10-32
		1 2 3 4 5

† BRUSH SET, SERVICE MAY-2012AS

* Use as Required.

NOTE: - Part numbers shown in parenthesis are not recommended for service.

UNIT	APPLICATION
MAY-4151	Dodge (Truck)

(Issued 2-24-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAY-2166	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud
MAX-67	1	Insulation, Field Conn., D. E.
MAY-33	1	Connector, Brush
MAY-34	1	Stud, Terminal
MAY-2012AS	1	BRUSH SET
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U. L.
MAY-1008A	1	Coil, Field, L. R.
MAY-1009A	1	Coil, Field, L. L.
MAY-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Br. Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Part Used With

MAK-61	1	Washer, Thrust, Comm. End
MAY-2181	1	ARMATURE
MU-54	2	Washer, Thrust, C. E. & Int., 1/32" Thick
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-140R	1	Connector
SS-4003	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EB-87	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8711	1	Shaft & Pinion
EB-8734	1	Ring, Take-Up
MAW-24	1	Cover, Band
MAW-2129	1	Bearing Assy., Intermediate
MAW-130	1	BEARING, ABS. BRONZE
PS-1211A	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

UNIT	APPLICATION
MAY-4152	Continental

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAY-4153 STARTING MOTOR PARTS LIST

MAY-4153
(Issued 1-13-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAY-2150C	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-67	1	Insulation, Field Connection, D.E.
MAY-33	1	Connector
MAY-34	1	Stud, Terminal
MAY-2012ES	1	BRUSH SET
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U. L.
MAY-1008A	1	Coil, Field, L. R.
MAY-1009A	1	Coil, Field, L. L.
MAY-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Br. Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002CS	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MAY-2217	1	ARMATURE
MU-54	2	Washer, Thrust, C.E. & D.E., 1/32" Thick

Miscellaneous Parts

MAC-1062	1	Head Assy., Drive End
MAB-124	1	BEARING, ABS. BRONZE
MAW-24	1	Band, Cover
X-489	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

UNIT	APPLICATION
MAY-4153	Meyer Products

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File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAY-4154 STARTING MOTOR PARTS LIST

MAY-4154
(Issued 6-28-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAY-2166	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-67	1	Insulation, Field Conn., D. E.
MAY-33	1	Connector, Brush
MAY-34	1	Stud, Terminal
MAY-2012AS	1	BRUSH SET
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U. L.
MAY-1008A	1	Coil, Field, L. R.
MAY-1009A	1	Coil, Field, L. L.
MAY-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Br. Ground, Flat Hd. 10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAY-2181	1	ARMATURE
MU-54	2	Washer, Thrust, C. E. & Int., 1/32" Thick
X-261	1	Key, Woodruff, D. E., 6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-140R	1	Connector
SS-4003	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. 10-32
12X-196	1	Lockwasher, 10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. 10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. 10

Miscellaneous Parts

EB-87	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8711	1	Shaft & Pinion
MAW-24	1	Band, Cover
MAW-2129	1	Bearing Assy., Intermediate
MAW-130	1	BEARING, ABS. BRONZE
PS-1211B	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. 10-32x1 1/2
8X-794	1	Nut, Cover Band, Square 10-32

UNIT	APPLICATION
MAY-4154	Jaeger

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAY-2150A)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-67	1	Insulation, Field Connector, D.E.
MAY-12D†	2	Brush
MAY-13†	2	Brush, Grounded
MAY-33	1	Connector, Brush
MAY-34	1	Stud, Terminal
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-2002CS	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, C.E.
MAY-2162	1	ARMATURE
MU-54	1	Washer, Thrust 1/32" Thick

Miscellaneous Parts

MAW-24	1	Band, Cover
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32

† BRUSH SET, SERVICE MAY-2012BS.

UNIT	APPLICATION
MAY-4201	Yale & Towne, Lewis Sheppard

(Issued 4-18-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MAY-4301 STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MAY-2156)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-67	1	Insulation, Field Connection, D.E.
MAY-12D†	2	Brush
MAY-13 †	2	Brush, Grounded
MAY-33	1	Connector
MAY-34	1	Stud, Terminal
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002CS	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAY-2184	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, 1/32" Thick
X-264	1	Key, Woodruff, #9

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector, Switch to Motor
SSK-4005	1	SWITCH, STARTING
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-173	1	Nut, Hex., #10-32
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Sc., Skpf. #10

Miscellaneous Parts

MAC-1058B	1	Head Assy., Drive End
MAB-49A	1	BEARING, ABSORBENT BRONZE
MAW-24	1	Band, Cover
X-489	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAY-2012BS.

UNIT	APPLICATION
MAY-4301	Lewis Sheppard

(Issued 3-6-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAY-4302 STARTING MOTOR PARTS LIST **MAY-4302**
(Issued 3-29-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MAY-2161)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31	2	Washer, Ins., Term. Stud, Outer
MAB-32	1	Insulation, Field Connection
MAB-85	2	Bushing, Ins., Term. Stud
MAB-118	1	Terminal
MAB-119	1	Insulation, Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-67	1	Insulation, Field Connection, D.E.
MAY-12D†	3	Brush
MAY-12F†	1	Brush
MAY-33	1	Connector
MAY-34	1	Stud, Terminal
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U;R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	2	Washer, Plain, Term. Stud, 5/16
12X-1014	4	Lockwasher, Term. Stud, 5/16
8X-1376	4	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002J	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAY-2184	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C.E. & D.E., 1/32" Thick
X-264	1	Key, Woodruff, #9

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector, Switch to Motor
SS-4029	1	SOLENOID STARTING SWITCH
8X-173	2	Nut, Hex. #10-32
12X-196	2	Lockwasher, #10
8X-832	1	Nut, Hex. 5/16-24
12X-1014	1	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

MAC-1058B	1	Head Assy., Drive End
MAB-49A	1	BEARING, ABS. BRONZE
MAW-24	1	Band, Cover
X-489	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAY-2012CS.

UNIT	APPLICATION
MAY-4302	Lewis-Sheppard

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MAY-2165	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31	2	Washer, Ins., Term. Stud, Outer
MAB-32	1	Insultaion, Field Connection
MAB-85	2	Bushing, Ins., Term. Stud
MAB-118	1	Terminal
MAB-119	1	Insulation, Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-67	1	Insulation, Field Connection, D.E.
MAY-12D †	3	Brush
MAY-12F †	1	Brush
MAY-33	1	Connector, Brush
MAY-34	1	Stud, Terminal
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	2	Washer, Plain, Term. Stud, 5/16
12X-1014	4	Lockwasher, Term. Stud, 5/16
8X-1376	4	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-2002J	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAY-2216	1	ARMATURE
MU-54	2	Washer, Thrust, C.E. & D.E., 1/32 inch Thick

Miscellaneous Parts

MAC-1058B	1	Head Assy., Drive End
MAB-49A	1	BEARING, ABSORBENT BRONZE
MAW-24	1	Band, Cover
X-489	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAY-2012CS.

UNIT	APPLICATION
MAY-4303	Moto Truc

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MBA-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAJ-29	4	Pole Piece
MAK-80	1	Insulating Washer
MAT-28	1	Terminal Post
MAT-30	1	Field Connection Ins.
MAW-59	1	Equalizer
MBA-12	2	Brush
MBA-13	2	Brush - Grounded
MBA-1009	1	Field Coil - Left
MBA-1010	1	Field Coil - Right
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MBA-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
X-532	4	1/8x1/4 Oval Hd. Tub. Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MBA-2006	1	Armature Assembly
MU-54	1	Thrust Washer
X-261	1	#6 Woodruff Key

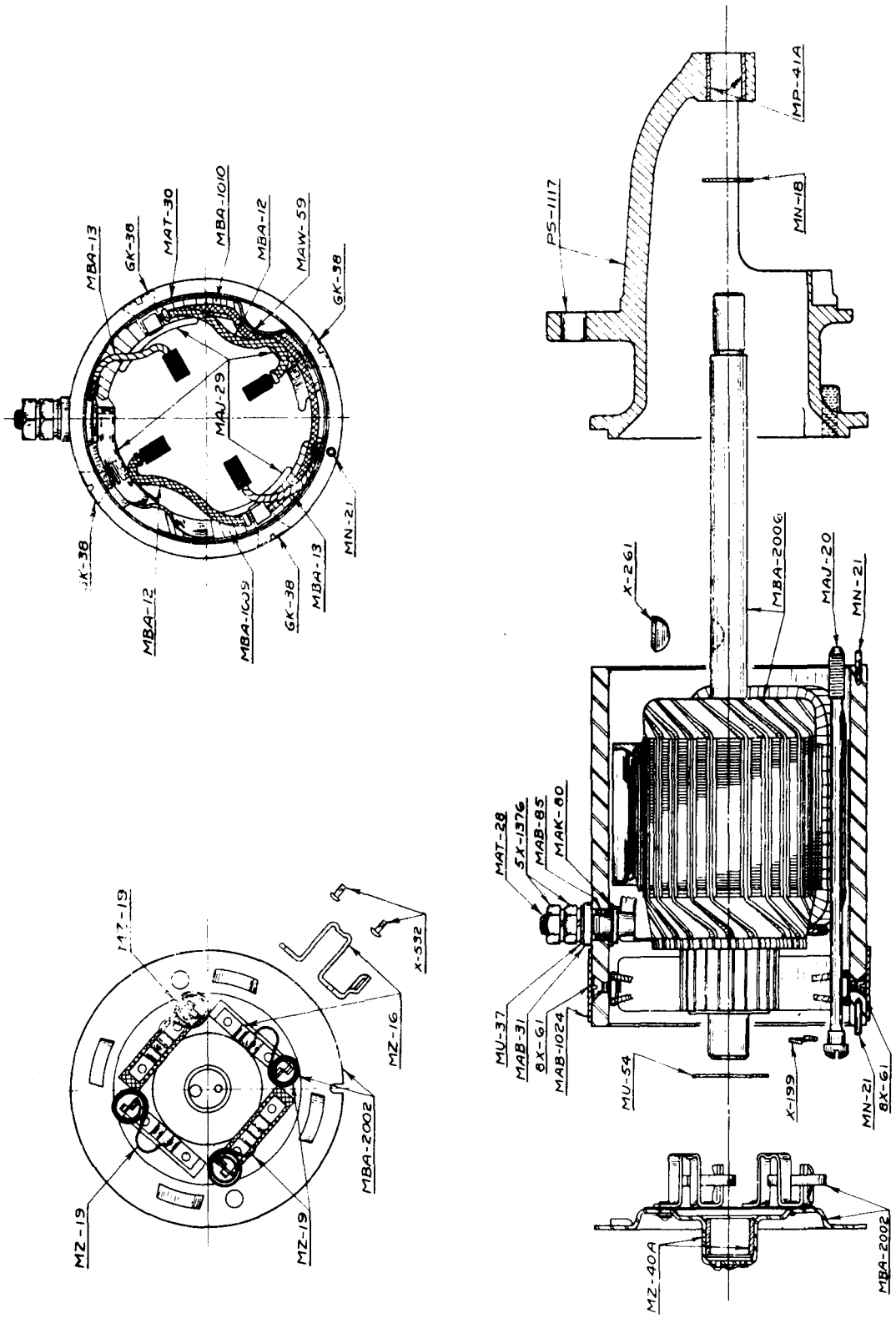
Miscellaneous Parts

EBA-2	1	Bendix Drive Assy.
MAB-1024	1	Head Band Assy.
MN-18	1	Thrust Washer
PS-1117	1	Pinion Housing Assy.
MP-41A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-29-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBA-4001 STARTING MOTOR ILLUSTRATION



MBA-4002 STARTING MOTOR PARTS LIST MBA-4002

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-20	2	Frame Screw
(MBA-2001)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAJ-29	4	Pole Piece
MAK-80	1	Insulating Washer
MAT-28	1	Terminal Post
MAT-30	1	Field Connection Ins.
MAW-59	1	Equalizer
MBA-12	2	Brush
MBA-13	2	Brush - Grounded
MBA-1009	1	Field Coil - Left
MBA-1010	1	Field Coil - Right
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MBA-2002	1	Comm. End Plate Assy.
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-40A	1	Absorbent Bronze Brg.
X-532	4	1/8x1/4 Oval Hd.Tub.Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAJ-2006	1	Armature Assy.
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EBA-2	1	Bendix Drive Assembly
MAB-1024	1	Head Band Assy.
MAB-2040A	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1139	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

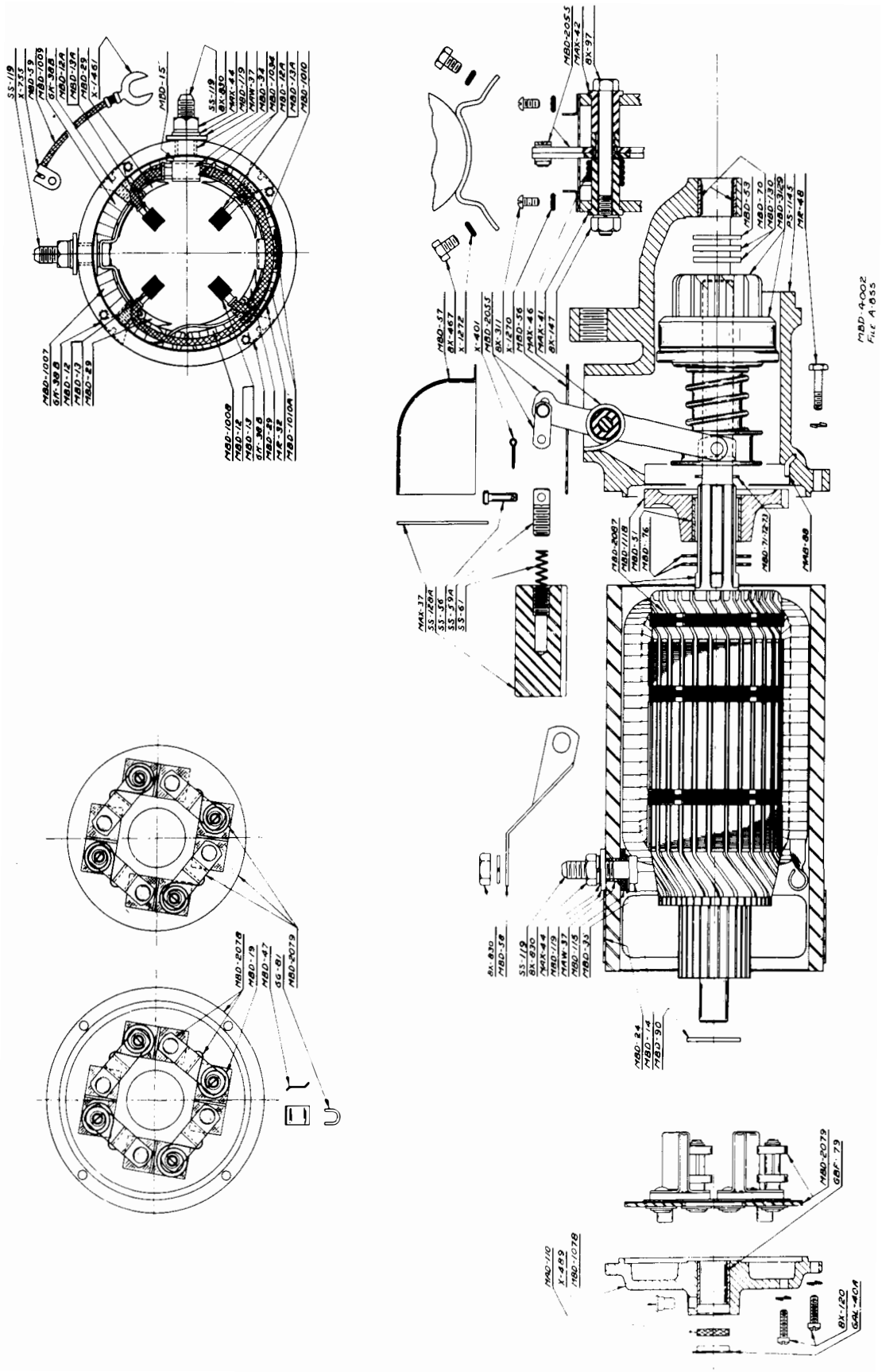
(Issued 11-30-37)

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBD-4002 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly with Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MBD-2122	1	Frame & Field Assy.
GAR-21	2	Dowel, Aligning
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer, 3/8
MBD-12†	2	Brush
MBD-12A†	2	Brush
MBD-13†	2	Brush
MBD-13A†	2	Brush
MBD-34	1	Terminal
MBD-119	2	Washer, Ins., Term. Stud
MBD-121	1	Stud, Terminal
MBD-233	1	Stud, Terminal
MC-51A	1	Washer, Plain, Term. Stud, Inner, 3/8
12X-201	1	Washer, Lock, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex., 3/8-16
12X-201	1	Washer, Lock, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex., 3/8-16

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Brg., Comm. End
MAD-110	1	Felt, C.E. Head
MBD-2078	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1078	1	Head Assy., Partial, C.E.
GBF-79	1	Bearing, Absorbent Bronze
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring
8X-120	4	Screw, Brush Plate, Fil. Hd., #10-32x5/8
X-196	4	Lock Washer, Brush Plate Screw, #10
X-1573	1	Oiler, Press in Type, 3/8
8X-120	4	Screw, Attaching, C.E. Head, Fil. Hd., #10-32x5/8
12X-544	4	Washer, Lock, Attaching, C.E. Head, #10

Armature Assembly & Parts Used With

MAD-96	1	Washer, Arm. Thrust, C.E.
MBD-71	*	Washer, Arm. Thrust, .095" Thick
MBD-72	*	Washer, Arm. Thrust, .065" Thick
MBD-73	*	Washer, Arm. Thrust, .032" Thick
MBD-76	2	Washer, Arm. Thrust, Int.
MBD-2087	1	Armature
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MBD-91	1	Stud, Terminal, Battery, 3/8-16
MBD-93	1	Lead Assembly, 5" Long
X-767	1	Terminal
X-976	1	Terminal
MBD-94	1	Connector, Switch to Motor
MBD-96	1	Grommet, Rubber, Battery Term.
MBD-108	2	Bushing, Rubber, Term. Stud, #10
MBD-109	2	Stud, Terminal, #10-32
MBD-116	1	Plate, Switch Cover
MBD-117	1	Lead Assembly, 2" Long
X-767	1	Terminal
X-976	1	Terminal
MBD-128	1	Washer, Battery Term., Plain
MBD-134	1	Spring, Switch Plunger
MBD-135	1	Spring Seat, Switch Plunger
MBD-147	1	Connector, Sw. Term. to Resistor
MBD-148	1	Connector, Sw. Term. to Resistor
MBD-1107	1	Connector & Terminal Assy.
MBD-97	1	Lead Assy., 3 1/16" Long
X-976	1	Terminal
MBD-98	1	Lead Assy., 2 5/16" Long
X-976	1	Terminal
MBD-1126	1	Cover, Switch
MBD-1127	1	Base, Switch Mounting
MBD-2144	1	Resistance
ML-17	1	Nut, Switch Term. Stud & Connector, Hex., 3/8-16
MU-37	2	Washer, Plain, 5/16
SS-60B	2	Washer, Switch Term., Plain, 3/8
SS-4503	2	Solenoid Starting Switch
12X-196	1	Lock Washer, #10
12X-201	2	Lock Washer, 3/8
8X-830	2	Nut, Hex., 3/8-16
8X-1372	1	Nut, #10-32
8X-173	4	Nut, Term. Stud & Cover Attaching, Hex., #10-32
12X-195	4	Washer, Lock, Lead Screw, #8
12X-196	15	Lock Washer, #10
12X-199	2	Lock Washer, Resistor Term. Screw, 1/4
12X-201	3	Lock Washer, Switch Term., 3/8
8X-305	4	Screw, Lead Connection, Rd. Hd., #8-32x1/4
8X-312	9	Screw, Switch Mtg., Resistor Mtg. & Sw. Cover Plate, Rd. Hd., #10-32x1/4
8X-321	4	Screw, Mtg., Switch, Rd. Hd., #10-32x5/16
8X-830	1	Nut, Switch Term., Hex., 3/8-16
8X-1002	2	Screw, Resistor Term., Rd. Hd., 1/4-20x1/2
X-1270	4	Washer, Skpf., Switch Mtg. Sc., #10
XA-539	1	Switch, Starting
		1 2 3 4 5

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Starter Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAW-33	1	Screw, Yoke Pivot
MBD-89	1	Screw, Yoke Adjusting
MBD-132	1	Bracket, Yoke
MBD-133	1	Screw, Switch Plunger
MBD-136	1	Pin, Yoke Link
MBD-2131	1	Yoke
MBD-3125	1	Starter Clutch
8X-163	2	Nut, Yoke Bracket Sc., Hex., 1/4-20
8X-179	1	Nut, Yoke Pivot, Hex., 3/8-16
12X-199	2	Lock Washer, Bracket Sc., 1/4
12X-201	1	Lock Washer, Yoke Pivot, 3/8
X-401	1	Pin, Cotter, Yoke Pin, 1/16x3/8
8X-464	2	Screw, Yoke Bracket, 1/4-20 x3/4
8X-832	1	Nut, Yoke Adjusting Sc., Hex., 5/16-24
8X-1444	1	Rivet, Yoke Adjusting Screw
		1 2 3 4 5

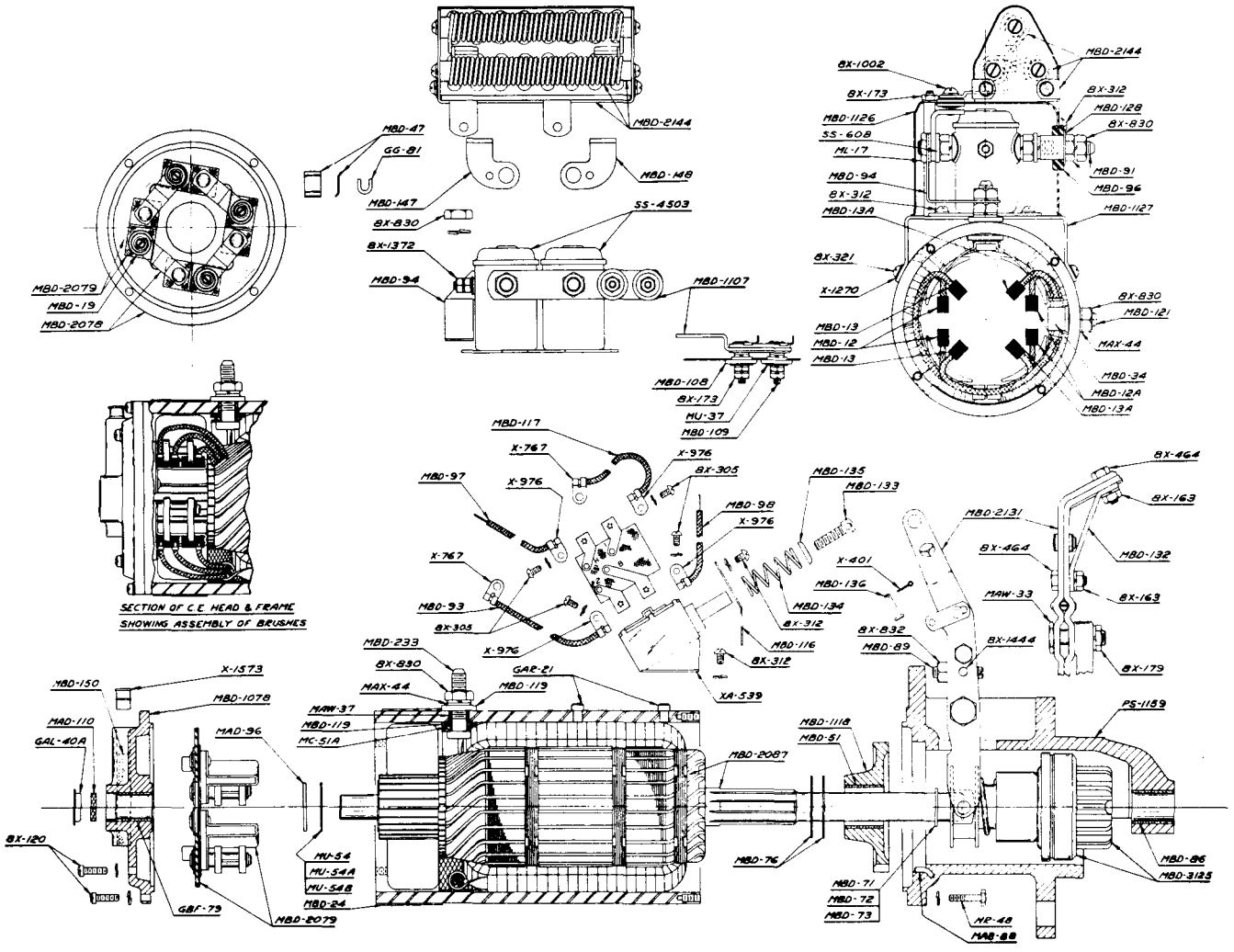
Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
PS-1159	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-86	1	Bearing, Absorbent Bronze
MBD-24	1	Band, Cover
MBD-1118	1	Bearing Assy., Intermediate
MBD-51	1	Bearing, Absorbent Bronze
MR-48	8	Screw, Attaching, Pinion Housing, Hex. Hd., #10-40x7/8
12X-196	8	Lock Washer, #10
8X-715	1	Screw, Cover Band, Rd. Hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 5-16-45)

† Brush Set, Service MBD-1012S.

* Use as required.



Part No.	No. Used	Name of Part
		1 2 3 4 5
Frame & Field Assembly & Parts Used With		
MBD-2170	1	Frame & Field Assy.
MBD-12†	2	Brush
MBD-12A†	2	Brush
MBD-13†	2	Brush
MBD-13A†	2	Brush
MN-47A	1	Washer, Steel, Plain, 3/8
X-201	2	Washer, Lock, 3/8
8X-830	2	Nut, Hex., 3/8-16
Comm. End Head Assembly & Parts Used With		
GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt (3/4 dia. x 5/32)
MBD-2078A	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1078	1	Head Assy., Partial, C.E.
GBF-79	1	Bearing, Abs. Bronze
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
GFM-4F	4	Screw, Fill. Hd.,#10-32x5/8
X-196	4	Washer, Lock, #10
X-1573	1	Oiler, Press in Type, 3/8
8X-120	4	Screw, Fill. Hd., #10-32x5/8
X-544	4	Washer, Lock, #10
Armature Assembly & Parts Used With		
MAK-61	1	Washer, Steel
MBD-76	2	Washer, Thrust
MBD-2154	1	Armature
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick
X-261	2	Key, Woodruff, #6
Switch Assembly & Parts Used With		
HRG-4001	1	Relay, Time Delay
X-196	4	Washer, Lock, #10
8X-312	4	Screw, Rd. Hd., #10-32x1/4
MBD-91	1	Post, Terminal, 3/8-16
MBD-92	1	Clamp
MBD-94	1	Connector, Terminal
MBD-95	1	Insulation, Connector
MBD-96	1	Bushing, Insulating
MBD-108	3	Bushing, Rubber
MBD-109	3	Post, Terminal, #10-32
MBD-128	1	Washer, Plain
MBD-164	1	Lead Assy., 1 15/16"
X-767	1	Terminal
X-770	1	Terminal
MBD-165	1	Lead Assy., 4 1/2"
X-770	1	Terminal
X-1461	1	Terminal
MBD-167	1	Support, Resistor, Ins.
MBD-168	1	Lead Assy., 7"
EC-41	1	Grommet
X-767	1	Terminal
X-1461	1	Terminal
		1 2 3 4 5

† Brush Set, Service MBD-1012S.

* Use as required.

Part No.	No. Used	Name of Part
		1 2 3 4 5
Switch Assembly (Continued)		
MBD-169	2	Lead Assy., 2 1/4"
X-767	2	Terminal
X-976	2	Terminal
MBD-171	1	Lead Assy., 4 3/4"
X-767	2	Terminal
MBD-1102	1	Resistance
MBD-1155	1	Base, Switch, Mounting
MBD-1160	1	Connector Assy.
MBD-157	1	Lead Assy., 4 1/2"
X-767	1	Terminal
MBD-159	2	Lead Assy., 2 1/4"
X-770	2	Terminal
MBD-1166	1	Cover, Switch
MU-37	3	Washer, Plain (5/16)
SS-4504	2	Switch Assy., Solenoid
X-196	4	Washer, Lock, #10
X-201	4	Washer, Lock, 3/8
8X-830	4	Nut, Hex., 3/8-16
8X-1372	4	Nut, Hex., #10-32
TC-51N	1	Resistance, Carbon, Marked 80
8X-54	2	Screw, Rd. Hd., #8-32x1/2
8X-173	5	Nut, Hex., #10-32
X-195	2	Washer, Lock, #8
X-196	12	Washer, Lock, #10
X-201	1	Washer, Lock, 3/8
8X-311	2	Screw, Rd. Hd., #10-32x3/8
8X-312	2	Screw, Rd. Hd., #10-32x1/4
8X-321	4	Screw, Rd. Hd., #10-32x5/16
8X-348	2	Washer, Special, #8
X-544	2	Washer, Lock, #10
8X-706	2	Screw, Bdg. Hd., #10-32x5/16
8X-830	1	Nut, Hex., 3/8-16
X-1270	4	Washer, Skpf., #10
8X-1375	2	Nut, Hex., #8-32
Miscellaneous Parts		
EBA-43	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-4503	1	Head
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve
EBA-1811	1	Shaft & Pinion
EBA-4305	1	Spring, Drive
EBA-4306	1	Screw, Spring, Head
EBA-4307	1	Screw, Spring, Shaft
MBD-1024	1	Band, Head
MBD-1118	1	Bearing Assy., Intermediate
MBD-51	1	Bearing, Absorbent Bronze
MR-48	8	Screw, Hex. Hd., #10-40x7/8
PS-1180	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-152	1	Bearing, Absorbent Bronze
X-196	8	Washer, Lock, #10
8X-715	1	Screw, Rd. Hd., #10-32x1 1/4
8X-794	1	Nut, Square, #10-32
		1 2 3 4 5

(Issued 1-12-43

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
(MBD-2122)	1	Frame & Field Assy.
GAR-21	2	Aligning Dowel
GK-38	8	Pole Piece Screw
MAW-37	1	Insulating Bushing
MAX-44	2	3/8 Steel Washer
MBD-14	1	Terminal
MBD-29	4	Pole Piece
MBD-35	1	Washer
MBD-115	1	Insulating Washer
MBD-119	1	Insulating Washer
MBD-120	1	Special Steel Washer
MBD-121	1	Terminal Post
MBD-1007	1	Field Coil - U.L.
MBD-1009	1	Field Coil - U.R.
MBD-1010A	1	Field Coil & Brush Assy.
MBD-12	1	BRUSH ASSY.
MBD-12A	1	BRUSH ASSY.
MBD-13	1	BRUSH ASSY.
MBD-13A	1	BRUSH ASSY.
MBD-1008	1	Field Coil - L.L.
MBD-1010	1	Field Coil - L.R.
MBD-1034	1	Terminal & Brush Assy.
MBD-12	1	BRUSH ASSY.
MBD-12A	1	BRUSH ASSY.
MBD-13	1	BRUSH ASSY.
MBD-13A	1	BRUSH ASSY.
MBD-34	1	Terminal
MR-32	1	Field Connection Ins.
SS-119	1	Terminal Post
12X-201	1	3/8 Lock Washer
8X-830	2	3/8-16 Hex. Nut
12X-201	1	3/8 Lock Washer
8X-830	1	3/8-16 Hex. Nut

Comm. End Plate Assembly & Parts Used With

GAL-40A	1	Bearing Cover
MAD-110	1	Felt Pad
MBD-2078	1	Comm. End Plate Assy.
MBD-150	1	Wick
MBD-1078	1	Comm. End Plate Part Assy.
GBF-79	1	Absorbent Bronze Brg.
MBD-2079	1	Brush Holder Plate Assy.
GG-81	4	Brush Holder Clip
MBD-19	8	Brush Spring
MBD-47	4	Spacer
8X-120	4	#10-32x5/8 Fill. Hd. Sc.
X-196	4	#10 Lock Washer
X-1573	1	3/8 Oiler-Press in Type
8X-120	4	#10-32x5/8 Fill. Hd. Screw
12X-544	4	#10 Lock Washer

Armature Assembly & Parts Used With

MBD-71	*	Thrust Washer
MBD-72	*	Thrust Washer
MBD-73	*	Thrust Washer
MBD-76	2	Thrust Washer
MBD-90	1	Thrust Washer
MBD-2087	1	ARMATURE ASSEMBLY
MU-54	*	Thrust Washer - 1/32" Thick
MU-54A	*	Thrust Washer - 1/64" Thick
MU-54B	*	Thrust Washer - 3/64" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MBD-91	1	Terminal Stud - 3/8-16
MBD-93	1	Lead Assy. - 5" Long
X-767	1	Terminal
X-976	1	Terminal
MBD-94	1	Terminal Connector
MBD-96	1	Insulating Bushing
MBD-97	1	Lead Assy. - 3 1/16" Long
X-976	1	Terminal
MBD-98	1	Lead Assy. - 2 5/16" Long
X-976	1	Terminal
MBD-108	2	Rubber Bushing
MBD-109	2	Terminal Stud - 10-32
MBD-116	1	Switch Cover Plate
MBD-117	1	Lead Assy. - 2" Long
X-767	1	Terminal
X-976	1	Terminal
MBD-128	1	Plain Steel Washer
MBD-134	1	Plunger Spring
MBD-135	1	Plunger Spring Seat
MBD-143	1	Switch Terminal Insulation
MBD-147	1	Switch Terminal Connector
MBD-148	1	Switch Terminal Connector
MBD-1107	1	Connector
MBD-1126	1	Cover
MBD-1127	1	Switch Mounting Base
MBD-2144	1	Resistance Assembly
ML-17	1	3/8-16 Hex. Nut
MU-37	2	5/16 Plain Washer
SS-4503S	2	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
12X-201	2	3/8 Lock Washer
8X-830	2	3/8-16 Hex. Nut
8X-1372	1	#10-32 Hex. Nut
8X-173	4	#10-32 Hex. Nut
12X-195	4	#8 Lock Washer
12X-196	15	#10 Lock Washer
12X-199	2	1/4 Lock Washer
12X-201	3	3/8 Lock Washer
8X-305	4	#8-32x1/4 Rd. Hd. Screw
8X-312	9	#10-32x1/4 Rd. Hd. Screw
8X-321	4	#10-32x5/16 Rd. Hd. Screw
8X-830	1	3/8-16 Hex. Nut
8X-1002	2	1/4-20x1/2 Rd. Hd. Screw
X-1270	4	#10 Skpf. Washer
XA-539	1	STARTING SWITCH

Starter Clutch Assembly & Parts Used With

MAW-33	1	Pivot Screw
MBD-89	1	Yoke Stud
MBD-132	1	Yoke Arm Brace
MBD-133	1	Plunger Screw
MBD-136	1	Link Pin
MBD-2131	1	Yoke Assembly
MBD-3174	1	STARTER CLUTCH ASSY.
		1 2 3 4 5

* Use as Required

SEE REVERSE SIDE

UNIT	APPLICATION
MBD-4005	Dodge Truck

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Starter Clutch Assy. & Parts Used With Con't

Part No.	No. Used	Name of Part
		1 2 3 4 5
8X-163	2	1/4-20 Hex. Nut
8X-179	1	3/8-16 Hex. Nut
12X-199	2	1/4 Lock Washer
12X-201	1	3/8 Lock Washer
X-401	1	1/16x3/8 Cotter Pin
8X-464	2	1/4-20x3/4 Hex. Hd. Screw
8X-832	1	5/16-24 Hex. Nut
8X-1444	1	1/8 Iron Rivet
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
MBD-24	1	Head Band Assembly
MBD-1118	1	INTERMEDIATE BEARING ASSY.
MBD-51	1	Absorbent Bronze Brg.
MR-48	8	#10-40x7/8 Hex. Hd. Screw
PS-1159	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MBD-86	1	Absorbent Bronze Brg.
12X-196	8	#10 Lock Washer
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-20-41)

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MBD-2239	1	Frame & Field Assy.
MAW-37	2	Bushing, Ins., Term. Post
MAX-44	2	Washer, Plain, 3/8
MBD-12†	2	Brush
MBD-12A†	2	Brush
MBD-13†	2	Brush
MBD-13A†	2	Brush
MBD-15	1	Insulation, Terminal
MBD-34	1	Terminal
MBD-119	3	Washer, Insulating
MBD-233	1	Post, Terminal
MC-51A	1	Washer, Plain, 3/8
SS-119	1	Post, Terminal
X-201	2	Washer, Lock, 3/8
8X-830	2	Nut, Hex., 3/8-16
MN-47A	1	Washer, Plain, 3/8
X-201	2	Washer, Lock, 3/8
8X-830	2	Nut, Hex., 3/8-16

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
GFM-4F	12	Screw, Fill. Hd., #10-32x5/8
MAD-110	1	Felt
MBD-2236	1	Head Assy., Comm. End
GFM-4F	4	Screw, Fill. Hd.,#10-32x5/8
MBD-150	1	Wick, Felt (3/8x2 3/8)
MBD-1236	1	Head Assy., Partial, Comm. End
GBF-79	1	Bearing, Absorbent Bronze
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
X-196	4	Washer, Lock, #10
X-1573	1	Oiler, Press in Type, 3/8
X-544	12	Washer, Lock, #10
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	Washer, Steel
MBD-76	2	Washer, Thrust
MBD-2212	1	Armature
MU-54	*	Washer, Thrust
MU-54A	*	Washer, Thrust
MU-54B	*	Washer, Thrust

Miscellaneous Parts

EBA-70	1	Bendix Drive
GFM-4	1	Screw, Head Band, Fill. Hd., #10-32x1 1/4
MBD-181	6	Screw, Pinion Housing, Hex. Hd., #10-32x7/8
MBD-1118	1	Bearing Assy., Intermediate
MBD-51	1	Bearing, Absorbent Bronze
MBD-1024B	1	Band, Head
PS-1206	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-220	1	Bearing, Absorbent Bronze
X-196	8	Washer, Lock, #10
8X-794	1	Nut, Square, #10-32
		1 2 3 4 5

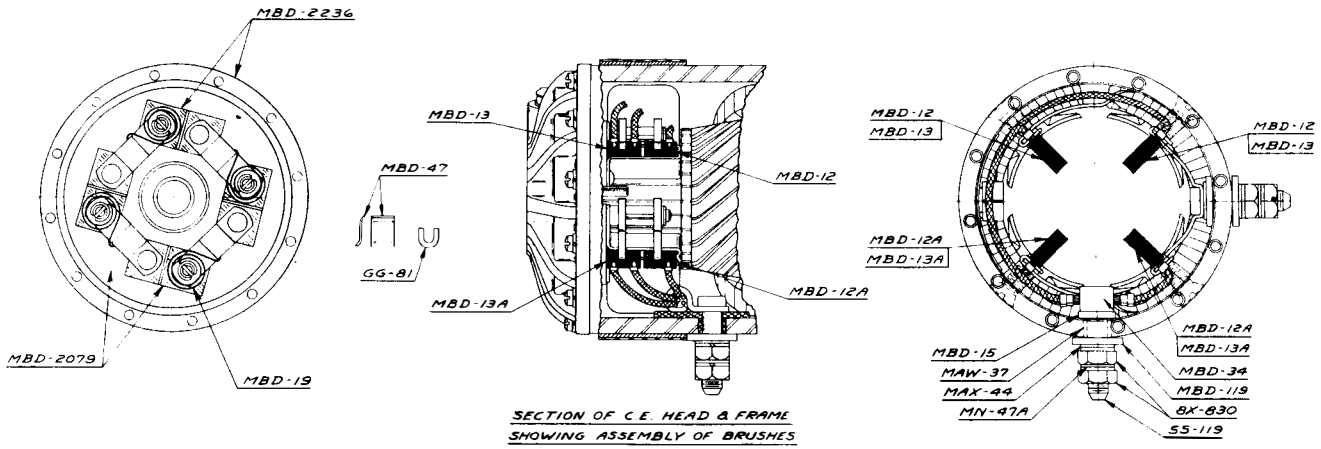
(Issued 3-1-43)

† Service Brush Set MBD-1012S.

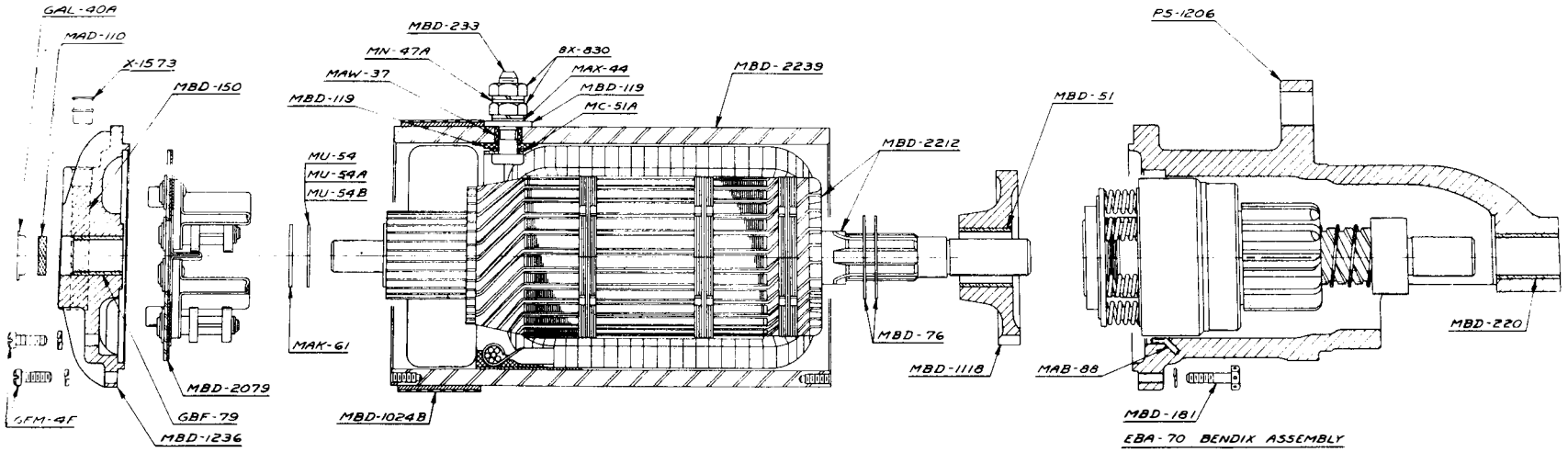
* Use as required.

UNIT	APPLICATION
MBD-4013	R. H. Sheppard

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."



SECTION OF C.E. HEAD & FRAME
SHOWING ASSEMBLY OF BRUSHES



EBA-70 BENDIX ASSEMBLY

MBD-4016 STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBD-2239)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	2	Bushing, Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-12†	2	Brush
MBD-12A†	2	Brush
MBD-13†	2	Brush
MBD-13A†	2	Brush
MBD-15	1	Insulation, Term. Stud, Inner
MBD-34	1	Terminal
MBD-119	3	Washer, Insulating, Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBD-3005S	1	Field Coil Package
MBD-1007S	1	Coil, Field, U.L.
MBD-1008S	1	Coil, Field, L.L.
MBD-1009S	1	Coil, Field, U.R.
MBD-1010S	1	Coil, Field, L.R.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MR-32	1	Insulation, Field Connection
SS-119	1	Stud, Terminal
12X-201	4	Lockwasher, Term. Stud, 3/8
8X-830	4	Nut, Term. Stud, Hex. 3/8-16
MN-47A	2	Washer, Plain, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, C.E.
MAD-110	1	Felt
MBD-2236C	1	Head Assy., Comm. End
GFM-4F	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	Bearing, Absorbent Bronze
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring
X-196	4	Lockwasher, Brush Plate Sc. #10
X-1573	1	Oiler
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
X-544	12	Lockwasher, C.E. Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Arm. Thrust, C.E.
MBD-76	2	Washer, Arm. Thrust, Int.
MBD-2212	1	Armature
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick

Miscellaneous Parts

EBA-75	1	Bendix Drive
MBD-24	1	Band, Cover
MBD-254	8	Screw, Housing, Hex. Hd. #10-32x7/8
MBD-1118	1	Bearing Assy., Intermediate
MBD-285	1	Bearing, Abs. Bronze
PS-1228	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-257	1	Bearing, Abs. Bronze
X-196	8	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required.

† Brush Set, Service MBD-1012S.

UNIT	APPLICATION
MBD-4016	Buda

(Issued 7-14-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MBD-2170	1	Frame & Field Assy.
GAR-21	2	Dowel, Aligning
MAW-37	2	Bushing, Insulating, Term. Post
MAX-44	2	Washer, Plain, 3/8
MBD-12†	2	Brush
MBD-12A†	2	Brush
MBD-13†	2	Brush
MBD-13A†	2	Brush
MBD-15	1	Insulation, Terminal
MBD-34	1	Terminal
MBD-119	3	Washer, Insulating
MBD-231	1	Connector, Term. Post
MBD-233	1	Post, Terminal
MC-51A	1	Washer, Plain, 3/8
SS-119	1	Post, Terminal
X-201	2	Washer, Lock, Term. Post, 3/8
8X-830	2	Nut, Hex., Term. Post, 3/8-16
X-201	2	Washer, Lock, Term. Post, 3/8
8X-312	2	Screw, Rd. Hd., #10-32x1/4
8X-830	2	Nut, Hex., Terminal Post, 3/8-16

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, C.E.
MAD-110	1	Felt
(MBD-2078)	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1078	1	Head Assy., Partial, C.E.
GBF-79	1	Bearing, Abs. Bronze
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fil. Hd., #10-32x5/8
X-196	4	Washer, Lock, Brush Plate Screw, #10
X-1573	1	Oiler, Press in Type, 3/8
8X-120	4	Screw, Attaching, C.E. Head, Fil. Hd., #10-32x5/8
X-544	4	Washer, Lock, Attaching, C.E. Head, #10

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MBD-76	2	Washer, Arm. Thrust, Int.
MBD-2154	1	Armature
MU-54	*	Washer, Thrust
MU-54A	*	Washer, Thrust
MU-54B	*	Washer, Thrust
X-261	2	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MBD-1253	1	Switch & Bracket Assy.
MBD-253	1	Bracket
MBD-255	1	Connector
WSE-4002	1	Switch, Solenoid
8X-343	2	Screw, Switch Mtg., Hex. Hd., 1/4-28x5/8
XA-595	2	Nut, Switch Mtg., Hex., 1/4-28
X-196	2	Washer, Lock, #8
8X-709	2	Screw, Attaching, Switch, Fil. Hd., #10-32x7/16

Miscellaneous Parts

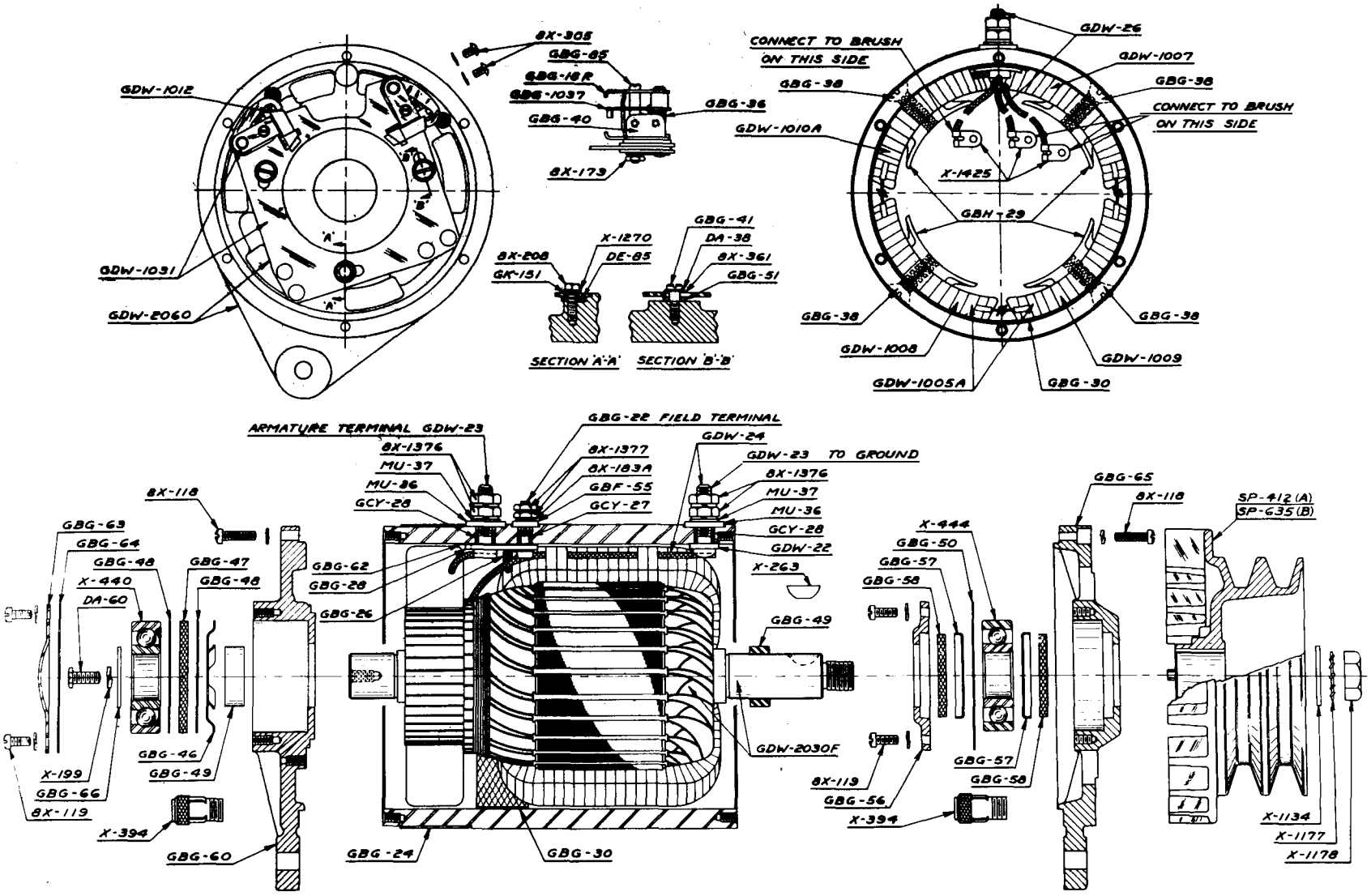
EBA-43	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-4503	1	Head
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve, Compression
EBA-1811	1	Shaft & Pinion
EBA-4305	1	Spring, Drive
EBA-4306	1	Screw, Spring, Head
EBA-4307	1	Screw, Spring, Shaft
MBD-256	1	Lead Assy., Control Term. to Motor
X-767	1	Terminal
X-1461	1	Terminal
MBD-1024	1	Band, Head
MBD-1118	1	Bearing Assy., Intermediate
MBD-51	1	Bearing, Abs. Bronze
MR-48	8	Screw, Attaching, Pinion Housing, Hex. Hd., #10-40x7/8
PS-1180	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-152	1	Bearing, Abs. Bronze
X-196	8	Washer, Lock, Attaching, Housing, #10
8X-715	1	Screw, Head Band, Rd. Hd., #10-32x1 1/4
8X-794	1	Nut, Head Band, Square, #10-32
		1 2 3 4 5

(Issued 11-4-43)

† Brush Set, Service, MBD-1012S.

* Use as required.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."



1731 (GDW-4604B)

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBD-4024 STARTING MOTOR PARTS LIST MBD-4024

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBD-2239)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	2	Bushing, Insulating, Term. Stud
MAX-44	2	Washer, Plain, Term. Stud , Outer, 3/8
MBD-12 †	2	Brush
MBD-12A †	2	Brush
MBD-13 †	2	Brush
MBD-13A †	2	Brush
MBD-15	1	Insulation, Term. Stud, Inner
MBD-34	1	Terminal
MBD-119	3	Washer, Insulating, Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBD-3005S	1	FIELD COIL PACKAGE
MBD-1007S	1	Coil, Field, U.L.
MBD-1008S	1	Coil, Field, L.L.
MBD-1009S	1	Coil, Field, U.R.
MBD-1010S	1	Coil, Field, L.R.
MC-51A	1	Washer, Plain, Term. Stud, Inner, 3/8
MR-32	1	Insulation, Field Conn.
SS-119	1	Stud, Terminal
12X-201	4	Lockwasher, Term. Stud, 3/8
8X-830	4	Nut, Term. Stud, Hex. 3/8-16
MN-47A	2	Washer, Plain,Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBD-2236C	1	Head Assy., Comm. End
GFM-4F	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	BEARING, ABS. BRONZE
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring
X-196	4	Lockwasher, Brush Plate Screw, #10
X-1573	1	Oiler, Press in Type, 3/8
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
X-544	12	Lockwasher, C.E. Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Arm. Thrust, C.E.
MBD-76	2	Washer, Arm. Thrust, Int.
MBD-2212	1	ARMATURE
MU-54	*	Washer, Thrust, 1/32'' Thick
MU-54A	*	Washer, Thrust, 1/64'' Thick
MU-54B	*	Washer, Thrust, 3/64'' Thick

Miscellaneous Parts

EBA-75	1	BENDIX DRIVE
MBD-24	1	Band, Cover
MBD-254	8	Screw, Pinion Housing, Hex. Hd. #10-32x7/8
MBD-1118	1	Bearing Assy., Intermediate
MBD-285	1	BEARING, ABS. BRONZE
PS-1228	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-257	1	BEARING, ABS. BRONZE
X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBD-1012S.

* Use As Required.

UNIT	APPLICATION
MBD-4024	Buda

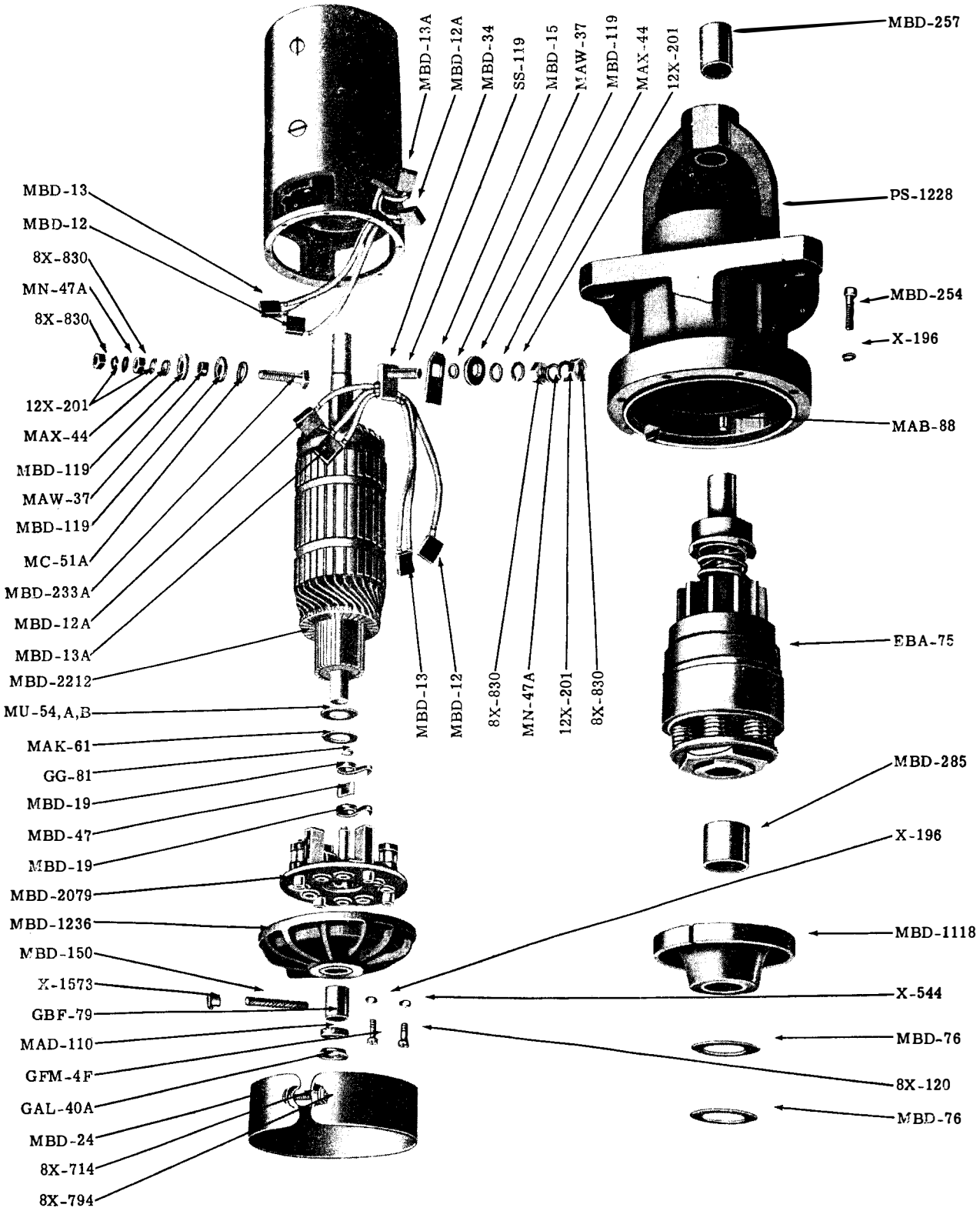
(Issued 6-16-48)

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBD-4024 STARTING MOTOR PARTS ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBD-2267A)	1	Frame & Field Assy.
MAW-37	2	Bushing, Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer, 3/8
MBD-12 †	2	Brush
MBD-12A †	2	Brush
MBD-13 †	2	Brush
MBD-13A †	2	Brush
MBD-15	1	Insulation, Term. Stud, Inner
MBD-34	1	Terminal
MBD-119	3	Washer, Term. Stud Ins.
MBD-233A	1	Stud, Terminal
MBD-3005S	1	FIELD COIL PACKAGE
MBD-1007S	1	Coil, Field, U.L.
MBD-1008S	1	Coil, Field, L.L.
MBD-1009S	1	Coil, Field, U.R.
MBD-1010S	1	Coil, Field, L.R.
MC-51A	1	Washer, Plain, Term. Stud, Inner, 3/8
SS-119	1	Stud, Terminal
12X-201	4	Lockwasher, Term. Stud, 3/8
8X-830	4	Nut, Term. Stud, Hex. 3/8-16
MN-47A	1	Washer, Plain, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, C.E.
MAD-110	1	Felt
MBD-2236C	1	Head Assy., Comm. End
GFM-4F	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	BEARING, ABS. BRONZE
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring
X-196	4	Lockwasher, Brush Plate Screw, #10
X-1573	1	Oiler
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MBD-76	2	Washer, Arm. Thrust, Intermediate
MBD-2212	1	ARMATURE

Armature Assembly & Parts (Continued)

Part No.	No. Used	Name of Part
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick

Switch Assembly & Parts Used With

MBD-1252A	1	Switch & Bracket Assy.
MBD-252A	1	Bracket, Switch
MBD-268	1	Connector, Switch to Motor
WSE-4101	1	SWITCH, SOLENOID (See separate list for parts)
19X-343	2	Screw, Switch Mtg., Hex. Hd. 1/4-28x5/8
XA-595	2	Nut, Switch Mtg., Hex. 1/4-28
12X-199	4	Lockwasher, Brkt. Sc., 1/4
8X-905	4	Screw, Mtg. Brkt., Fill. Hd. 1/4-20x7/16

Miscellaneous Parts

EBA-74	1	BENDIX DRIVE ASSY.
MBD-254	8	Screw, Pinion Housing, Hex. Hd. #10-32x7/8
MBD-256	1	Lead Assy., Control Term. to Motor
X-767	1	Terminal
X-1461	1	Terminal
MBD-1024J	1	Band, Cover
MBD-1118	1	BEARING ASSY., INTERMEDIATE
MBD-285	1	Bearing, Abs. Bronze
PS-1206D	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-220	1	BEARING, ABS. BRONZE
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBD-1012S.

* Use as required.

UNIT	APPLICATION
MBD-4026	Hill Diesel

(Issued 10-18-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBD-3293)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-12 †	2	Brush
MBD-12A†	2	Brush
MBD-13 †	2	Brush
MBD-13A†	2	Brush
MBD-34	1	Terminal
MBD-119	2	Washer, Ins., Term. Stud
MBD-121	1	Stud, Terminal
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBD-3005S	1	Field Coil Package
MBD-1007S	1	Coil, Field, U.L.
MBD-1008S	1	Coil, Field, L.L.
MBD-1009S	1	Coil, Field, U.R.
MBD-1010S	1	Coil, Field, L.R.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MR-32	1	Insulation, Field Connection
12X-201	3	Lockwasher, Term. Stud, 3/8
8X-830	3	Nut, Term. Stud, Hex. 3/8-16
MN-47A	1	Washer, Plain, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBD-2236C	1	Head Assy., Comm. End
GFM-4F	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	Bearing, Absorbent Bronze
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
X-196	4	Lockwasher, Brush Plate Screw, #10
X-1573	1	Oiler, Press in Type, 3/8
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-544	12	Lockwasher, C.E. Head Sx., #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Arm. Thrust C.E.
MBD-76	2	Washer, Arm. Thrust, Intermediate
MBD-2212	1	Armature
MU-54	*	Washer, Thrust, 1/32 Thick
MU-54A	*	Washer, Thrust, 1/64'' Thick
MU-54B	*	Washer, Thrust, 3/64'' Thick

Miscellaneous Parts

EBB-1	1	Bendix Drive
MBD-254	8	Screw, Housing Hex. Hd. #10-32x7/8
MBD-1024J	1	Band, Cover
MBD-1118	1	Bearing Assy., Intermediate
MBD-285	1	Bearing, Abs. Bronze
PS-1206	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-220	1	Bearing, Abs. Bronze
12X-196	8	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MBD-1012S.

* Use as required.

UNIT	APPLICATION
MBD-4028,A	Venn Severin

Printed in U. S. A. (Issued 7-14-48) File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBD-2276)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer 3/8
MBD-12 †	2	Brush
MBD-12A †	2	Brush
MBD-13 †	2	Brush
MBD-13A †	2	Brush
MBD-34	1	Terminal
MBD-119	2	Washer, Ins., Term. Stud
MBD-121	1	Stud, Terminal
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBD-3005S	1	FIELD COIL PACKAGE
MBD-1007S	1	Coil, Field, U.L.
MBD-1008S	1	Coil, Field, L.L.
MBD-1009S	1	Coil, Field, U.R.
MBD-1010S	1	Coil, Field, L.R.
MC-51A	1	Washer, Plain, Term. Stud Inner, 3/8
MR-32	1	Insulation, Field Conn.
12X-201	3	Lockwasher, Term. Stud, 3/8
8X-830	3	Nut, Term. Stud, Hex. 3/8-16
MN-47A	1	Washer, Plain, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, C.E.
MAD-110	1	Felt
MBD-2236C	1	Head Assy., Comm. End
GFM-4F	4	Screw, Br. Plate, Fill. Hd. #10-32x5/8
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	BEARING, ABS; BRONZE
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
X-196	4	Lockwasher, Br. Plate Sc., #10
X-1573	1	Oiler, Press in Type, 3/8
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-544	12	Lockwasher, C.E. Head Sc., #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Arm. Thrust, C.E.
MBD-76	2	Washer, Arm. Thrust, Intermediate
MBD-247A	1	Washer, Arm. Thrust, Intermediate
MBD-2286	1	ARMATURE
MU-54	*	Washer, Thrust, 1/32'' Thick
MU-54A	*	Washer, Thrust, 1/64'' Thick
MU-54B	*	Washer, Thrust, 3/64'' Thick

Miscellaneous Parts

EBA-74	1	BENDIX DRIVE ASSY.
MBD-254	8	Screw, Pinion Housing, Hex. Hd. #10-32x7/8
MBD-1024K	1	Band, Cover
MBD-1118	1	Brg. Assy., Intermediate
MBD-285	1	BRG., ABS. BRONZE
PS-1206	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-220	1	BEARING, ABS. BRONZE
12X-196	8	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBD-1012S.

UNIT	APPLICATION
MBD-4031	Venn Severin, Harnischfeger

(Issued 6-15-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBD-4032 STARTING MOTOR PARTS LIST MBD-4032

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBD-2276)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-12 †	2	Brush
MBD-12A †	2	Brush
MBD-13 †	2	Brush
MBD-13A †	2	Brush
MBD-34	1	Terminal
MBD-119	2	Washer, Ins., Term. Stud
MBD-121	1	Stud, Terminal
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBD-3005S	1	Field Coil Package
MBD-1007S	1	Coil, Field, U.L.
MBD-1008S	1	Coil, Field, L.L.
MBD-1009S	1	Coil, Field, U.R.
MBD-1010S	1	Coil, Field, L.R.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MR-32	1	Insulation, Field Connection
12X-201	3	Lockwasher, Term. Stud, 3/8
8X-830	3	Nut, Term. Stud, Hex. 3/8-16
MN-47A	1	Washer, Plain, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBD-2236C	1	Head Assy., Comm. End
GFM-4F	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	Bearing, Absorbent Bronze
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring
X-196	4	Lockwasher, Brush Plate Sc., #10
X-1573	1	Oiler, Press in, 3/8
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-544	12	Lockwasher, C.E. Head Sc.,#10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Arm. Thrust, C.E.
MBD-76	2	Washer, Arm. Thrust, Intermediate
MBD-2212	1	Armature
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick

Miscellaneous Parts

EBA-75	1	Bendix Drive
MBD-24	1	Band, Cover
MBD-254	8	Screw, Housing, Hex. Hd. #10-32x7/8
MBD-1118	1	Bearing Assy., Intermediate
MBD-285	1	Bearing, Absorbent Bronze
PS-1228	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-257	1	Bearing, Absorbent Bronze
12X-196	8	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required.

† Brush Set, Service MBD-1012S.

UNIT	APPLICATION
MBD-4032	Continental

(Issued 7-15-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBD-4033 STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBD-2239)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	2	Bushing, Insulating, Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-12 †	2	Brush
MBD-12A †	2	Brush
MBD-13 †	2	Brush
MBD-13A †	2	Brush
MBD-15	1	Insulation, Term. Stud, Inner
MBD-34	1	Terminal
MBD-119	3	Washer, Insulating, Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBD-3005S	1	FIELD COIL PACKAGE
MBD-1007S	1	Coil, Field, U.L.
MBD-1008S	1	Coil, Field, L.L.
MBD-1009S	1	Coil, Field, U.R.
MBD-1010S	1	Coil, Field, L.R.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MR-32	1	Insulation, Field Conn.
SS-119	1	Stud, Terminal
12X-201	4	Lockwasher, Term. Stud, 3/8
8X-830	4	Nut, Term. Stud, Hex., 3/8-16
MN-47A	2	Washer, Plain, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

MAD-110	1	Felt
GAL-40A	1	Cover, Bearing, Comm. End
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
MBD-2236C	1	Head Assy., Comm. End
GFM-4F	4	Screw, Brush Plate, Fill. Hd., #10-32x5/8
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, Comm. End
GBF-79	1	BEARING, ABS. BRONZE
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring
X-196	4	Lockwasher, Brush Plate Sc., #10
X-1573	1	Oiler
12X-544	12	Lockwasher, C.E. Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBD-311	2	Washer, Thrust, Intermediate
MBD-2212	1	ARMATURE
MU-54	*	Washer, Thrust 1/32"Thick
MU-54A	*	Washer, Thrust 1/64"Thick
MU-54B	*	Washer, Thrust 3/64"Thick

Miscellaneous Parts

EBA-70	1	BENDIX, DRIVE
MBD-254	8	Screw, Pinion Housing, Hex. Hd. #10-32x7/8
MBD-1024K	1	Band, Cover
MBD-1118	1	BRG. ASSY., INTERMEDIATE
MBD-285	1	Brg., Absorbent Bronze
PS-1282	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-220	1	BEARING, ABS. BRONZE
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBD-1012S.
* Use as required.

UNIT	APPLICATION
MBD-4033	R.H. Sheppard

(Issued 1-3-49)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBD-4034 STARTING MOTOR PARTS LIST

MBD-4034
(Issued 3-29-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBD-2239)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	2	Bushing, Insulating, Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-12 †	2	Brush
MBD-12A †	2	Brush
MBD-13 †	2	Brush
MBD-13A†	2	Brush
MBD-15	1	Insulation, Term. Stud, Inner
MBD-34	1	Terminal
MBD-119	3	Washer, Insulating, Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBD-3005S	1	FIELD COIL PACKAGE
MBD-1007S	1	Coil, Field, U.L.
MBD-1008S	1	Coil, Field, L.L.
MBD-1009S	1	Coil, Field, U.R.
MBD-1010S	1	Coil, Field, L.R.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MR-32	1	Insulation, Field Connection
SS-119	1	Stud, Terminal
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16
8X-148	2	Nut, Term. Stud, Hex. #3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBD-2236C	1	Head Assy., Comm. End
GFM-4F	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	BEARING, ABS. BRONZE
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
X-196	4	Lockwasher, Brush Plate Sc., #10
X-1573	1	Oiler
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBD-2316	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Miscellaneous Parts

MBD-24	1	Band, Cover
MBD-317	1	Head, Drive End
8X-120	8	Screw, D.E. Head, Fill. Hd. #10-32x5/8
12X-196	8	Lockwasher, Head Screw, #10
X-367	1	BEARING, BALL, SEALED, S.A.E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBD-1012S.

* Use as required.

UNIT	APPLICATION
MBD-4034	J.S. Barnes

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBD-4037 MOTOR PARTS LIST

MBD-4037
(Issued 4-1-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBD-2325	1	Frame & Field Assembly
GK-38	8	Screw, Pole Shoe
MAW-37	2	Bushing, Insulating, Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-115	1	Washer, Ins., Term. Stud, Inner
MBD-119	3	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBD-322	1	Terminal, Brush
MBD-324	1	Terminal, Brush
MBD-1107S	1	COIL, FIELD, U. L.
MBD-1008CS	1	COIL, FIELD, L. L.
MBD-1009S	1	COIL, FIELD, U. R.
MBD-1010ES	1	COIL, FIELD, L. R.
MBD-1323†	2	Terminal & Brush Assy.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MR-32	1	Insulation, Field Connection
SS-119	1	Stud, Terminal
12X-201	2	Lockwasher, Terminal Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16
X-3177	2	Screw, Br. Terminal, Rd. Hd. 1/4-20x3/8
8X-148	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBD-258	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8
MBD-2236C	1	Head Assy., Comm. End
GFM-4F	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C. E.
GBF-79	1	BEARING, ABSORBENT BRONZE
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
12X-196	4	Lockwasher, Brush Plate Screw, #10
X-1573	1	Oiler
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MBD-2316	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Miscellaneous Parts

MBD-24	1	Band, Cover
MBD-258	8	Screw, D. E. Head, Fill. Hd. #10-32x5/8
MBD-317	1	Head, Drive End
12X-196	8	Lockwasher, Head Screw, #10
X-367	1	BEARING, BALL, SEALED S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBD-1323S.

* Use as required.

UNIT	APPLICATION
MBD-4037	J. S. Barnes, Lewis-Sheppard, Yale & Towne

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBD-2325	1	Frame & Field Assembly
GK-38	8	Screw, Pole Shoe
MAW-37	2	Bushing, Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-115	1	Washer, Term. Stud, Inner
MBD-119	3	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBD-322	1	Terminal, Brush
MBD-324	1	Terminal, Brush
MBD-1007S	1	COIL, FIELD, U. L.
MBD-1008CS	1	COIL, FIELD, L. L.
MBD-1009S	1	COIL, FIELD, U. R.
MBD-1010ES	1	COIL, FIELD, L. R.
MBD-1323†	2	Terminal & Brush Assy.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MR-32	1	Insulation, Field Connection
SS-119	1	Stud, Terminal
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16
X-3177	2	Screw, Brush Terminal, Rd. Hd. 1/4-20x3/8
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, 3/8-16

Comm. End Head Assembly & Parts Used With

MBD-258	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8
MBD-390	1	Cover, Bearing, C. E.
MBD-2394	1	Head Assy., Comm. End
MBD-394	1	Head, C. E.
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Screw, #10
12X-196	12	Lockwasher, C. E. Head Screw, #10
X-3212	1	BEARING, BALL, SEALED
XA-811	1	Retainer, Bearing

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBD-389	1	Key
MBD-391	*	Washer, Thrust, C. E., .032'' Thick
MBD-391A	*	Washer, Thrust, C. E., .015'' Thick
MBD-2393	1	ARMATURE

Miscellaneous Parts

MBD-24	1	Band, Cover
MBD-258	8	Screw, Drive End Head, Fill. Hd. #10-32x5/8
12X-196	8	Lockwasher, D. E. Head Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band Square #10-32
X-3213	1	BEARING, BALL, SEALED

* Use as required.

† BRUSH SET, SERVICE MBD-1323S.

UNIT	APPLICATION
MBD-4039	Lewis Sheppard

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBD-4041 MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBD-2404	1	Frame & Field Assembly
GK-38	8	Screw, Pole Shoe
MAW-37	2	Bushing, Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-115	1	Washer, Ins., Term. Stud, Inner
MBD-119	3	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBD-322	1	Terminal, Brush
MBD-324	1	Terminal, Brush
MBD-405	1	Bracket, Mounting
MBD-1007S	1	COIL; FIELD, U. L.
MBD-1008CS	1	COIL, FIELD, L. L.
MBD-1009S	1	COIL, FIELD, U. R.
MBD-1010ES	1	COIL, FIELD, L. R.
MBD-1323S	1	BRUSH SET
MC-51A	1	Washer, Plain, Term. Stud, Inner
MR-32	1	Insulation, Field Connection
MZ-38C	4	Screw, Mounting Bracket
SS-119	1	Stud, Terminal
12X-201	4	Lockwasher, Term. Stud, 3/8
8X-830	4	Nut, Term. Stud, Hex. 3/8-16
X-3177	2	Screw, Br. Terminal, Rd. Hd. 1/4-20x3/8

Comm. End Head Assembly & Parts Used With

MBD-258	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8
MBD-390	1	Cover, Bearing, C. E.
MBD-2394	1	Head Assy., Comm. End
MBD-394	1	Head, C. E.
MBD-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Screw, #10

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
12X-196	12	Lockwasher, C. E. Head Screw, #10
X-3212	1	BEARING, BALL, SEALED
XA-811	1	Retainer, Bearing

Armature Assembly & Parts Used With

MBD-389	1	Key
MBD-391	*	Washer, Thrust, C. E. .032" Thick
MBD-391A	*	Washer, Thrust, C. E. .015" Thick
MBD-2393	1	ARMATURE

Miscellaneous Parts

MBD-24	1	Band, Cover
MBD-258	8	Screw, Drive End Head Fill. Hd. #10-32x5/8
MBD-408	1	Head, Drive End
12X-196	8	Lockwasher, D. E. Head Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
X-3213	1	BEARING, BALL, SEALED

* Use as Required

UNIT	APPLICATION
MBD-4041	Lewis-Sheppard

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-20	2	Frame Screw
(MBE-2094)	1	Frame & Field Assy.
MAB-30	1	Field Connection Ins.
MAK-29	4	Pole Piece
MAK-49	2	Insulating Washer
MAK-50	1	Plain Washer
MAK-51	1	Insulating Bushing
MBC-28	1	Terminal Post
MBE-30	1	Clamp
MBE-43	1	Field Coil Connector
MBE-1007	1	Field Coil - U.R.
MBE-1008	1	Field Coil - L.R.
MBE-1009	1	Field Coil - L.L.
MBE-1010	1	Field Coil - U.L.
MBE-1044	1	Connector & Brush Assy.
MAK-12	2	BRUSH
MZ-38	4	Pole Piece Screw
5X-146	1	1/4-20 Hex. Nut
X-196	1	#10 Lock Washer
X-199	1	1/4 Lock Washer
8X-664	1	#10-32x9/16 Rd. Hd. Sc.
5X-146	1	1/4-20 Hex. Nut
8X-173	2	#10-32 Hex. Nut
X-196	2	#10 Lock Washer
X-199	1	1/4 Lock Washer
X-386	1	Ball Oiler - 1/4 Press in

Comm. End Plate Assembly & Parts Used With

MAK-2002	1	Comm. End Plate Assy.
MAK-16	2	Brush Holder
MAK-19	4	Brush Spring
MAK-40	1	Absorbent Bronze Brg.
MAK-59	1	Felt Pad
MAK-1034	2	BRUSH - Grounded
X-521	4	9/32 Tubular Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

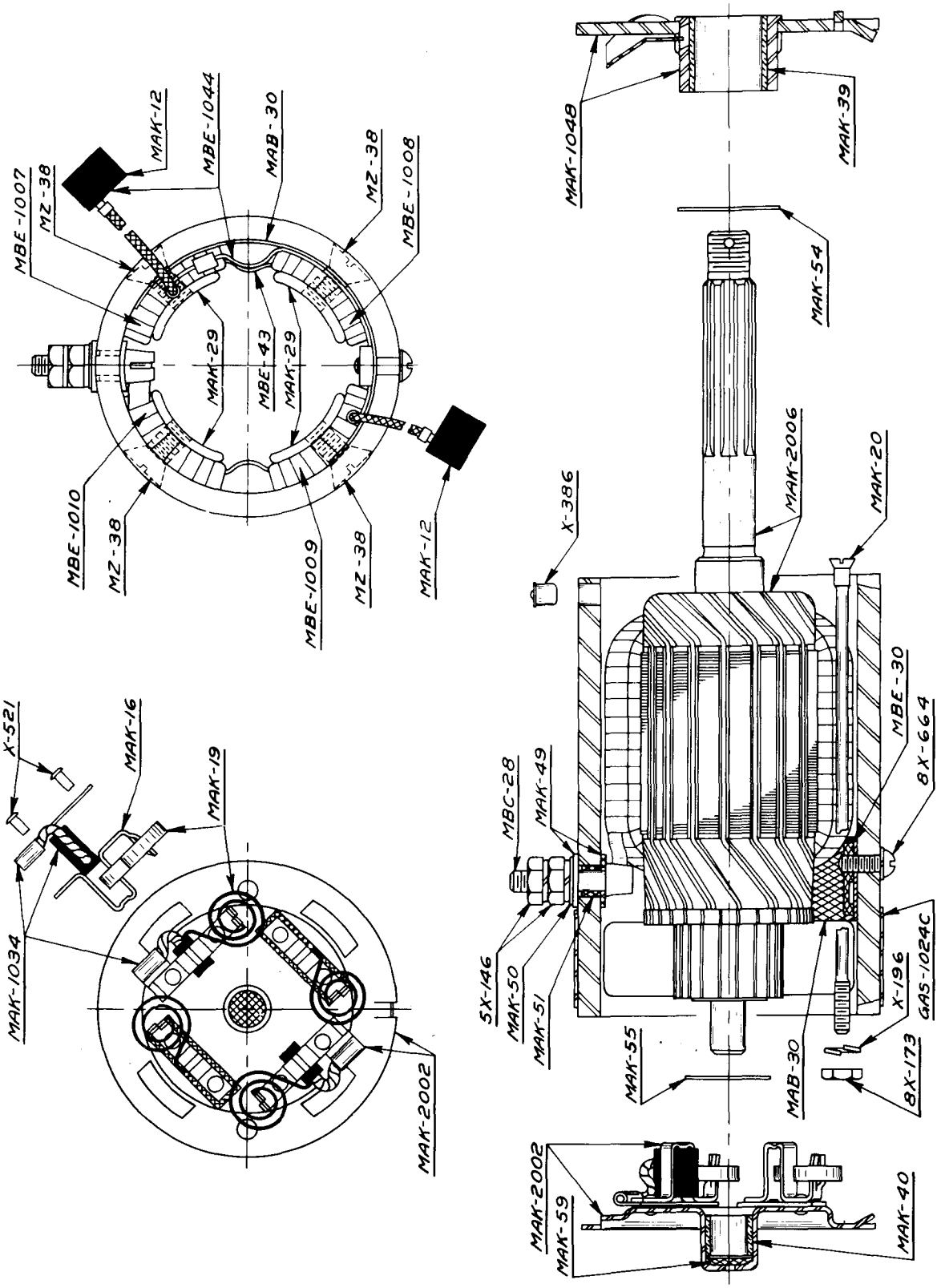
Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-54	1	Thrust Washer
MAK-55	1	Thrust Washer
MAK-2006	1	ARMATURE ASSEMBLY
		Miscellaneous Parts
EB-79	1	BENDIX DRIVE ASSY.
EB-6505	1	DRIVE SPRING
EB-6813	1	Anti-Drift Spring
EB-6823	2	Thrust Washer
EB-6824	1	Drive Spring Support
EB-6825	1	Meshing Spring
EB-6826	1	Anti-Drift Spring Sleeve
EB-6827	1	Pinion Washer
EB-6828	1	Castellated Nut
EB-7901	1	Shaft
EB-7902	1	Drive Stop
EB-8104S	1	Pinion
GAS-1024C	1	Head Band Assembly
MAK-1048	1	Drive End Head Assy.
MAK-39	1	ABSORBENT BRONZE BRG.
X-714	1	#10-32xl 1/2 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 2-4-41)

UNIT	APPLICATION
MBE-4001	Climax, Waukesha

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBE-4001 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-79	2	Screw, Frame
(MBE-2095)	1	Frame & Field Assy.
MAK-12†	2	Brush
MAK-49	2	Washer, Insulating, Term. Post
MAK-51	1	Bushing, Insulating, Term. Post.
MBC-28	1	Post, Terminal, 1/4-20
MBE-30	1	Clamp
MBE-31	1	Insulation, Field Connection
MBE-44	1	Connector, Brush
MBE-3005S	1	FIELD COIL PACKAGE
MBE-43	1	Connector, Field Coil
MBE-1007	1	Coil, Field, U.R.
MBE-1008	1	Coil, Field, L.R.
MBE-1009	1	Coil, Field, L.L.
MBE-1010	1	Coil, Field, U.L.
MZ-38	4	Screw, Pole Piece
SSA-43	2	Washer, Plain
5X-146	1	Nut, Terminal, Hex., 1/4-20
12X-196	1	Lockwasher, #10
12X-199	1	Lockwasher, Term. Post, 1/4
8X-664	1	Screw, Ground, Rd. Hd., #10-32x9/16
X-196	2	Lockwasher, Frame Screw, #10
X-199	1	Lockwasher, Term. Post. 1/4
5X-146	1	Nut, Terminal, Hex., 1/4-20

Comm. End Head Assembly & Parts Used With

MAK-3002	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAK-55	1	Washer, Thrust, Arm. Shaft, C.E.
MAK-2088	1	ARMATURE
MU-54	1	Washer, Thrust
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EB-56	1	BENDIX DRIVE ASSY.
EB-508	2	Lockwasher
EB-2303	1	Driving Head
EB-2319S	1	Sleeve, Compression
EB-2405	1	SPRING, DRIVE
EB-2406	1	Screw, Spring, Head
EB-2407	1	Screw, Spring, Shaft
EB-2622	2	Clip, Spring Support
EB-5611	1	Shaft & Pinion
GAS-1024C	1	Band, Head
MAK-2092	1	BEARING ASSY., INTERMEDIATE
MZ-44A	1	Bearing, Abs. Bronze
PS-1153A	1	Housing Assy., Pinion
GBF-95	1	Pin, Dowel
MAB-88	1	Pin, Dowel
MP-41A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Head Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Head Band, Square #10-32

NOTE: MBE-4003A Starting Motor uses EBA-56 Bendix Drive Assy. with sub parts as noted below:

EBA-56	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7805	1	SPRING, DRIVE
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8734	1	Ring, Take-Up
EBA-3611	1	Shaft & Pinion

† BRUSH SET, SERVICE MAK-2012AS.

UNIT	APPLICATION
MBE-4003,A	Wisconsin

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assy. With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MBE-20	2	Frame Screw
(MBE-2060)	1	Frame & Field Assembly
MAB-30	1	Field Connection Ins.
MAK-29	4	Pole Piece
MAK-80	2	Insulating Washer
MBC-30	1	Terminal Post
MBE-30	1	Connector Clamp
MBE-43	1	Field Coil Connector
MBE-1007	1	Field Coil - U.R.
MBE-1008	1	Field Coil - L.R.
MBE-1009	1	Field Coil - L.L.
MBE-1010	1	Field Coil - U.L.
MBE-1044	1	Connector & Brush Assy.
MAK-12	2	BRUSH
MU-31	1	Insulating Bushing
MU-37	1	5/16 Plain Washer
MZ-38	4	Pole Piece Screw
X-196	1	#10 Lock Washer
8X-664	1	#10-32x9/16 Rd. Hd. Sc.
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assy. & Parts Used With

MAK-3002A	1	Comm. End Plate Assembly
MAK-16A	2	Brush Holder
MAK-19	4	Brush Spring
MAK-40	1	Absorbent Bronze Brg.
MAK-59	1	Felt Pad
MAK-1034	2	BRUSH - Grounded
X-521	4	9/32 Tubular Rivet

Armature Assembly & Parts Used With

MAD-47	1	Thrust Washer
MAK-55	1	Thrust Washer
MAK-2062	1	ARMATURE ASSEMBLY
		1 2 3 4 5

Miscellaneous Parts

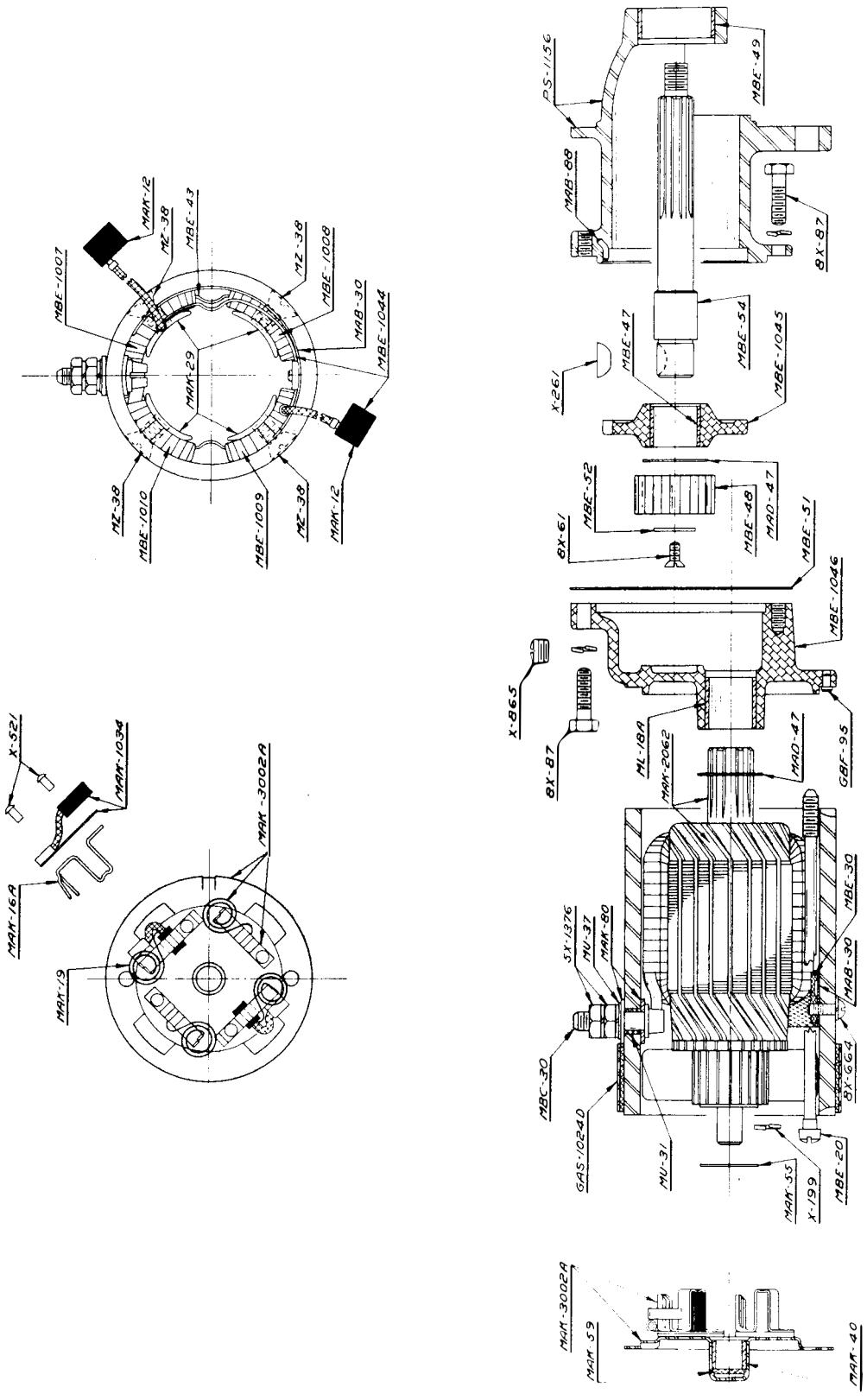
Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-32	1	BENDIX DRIVE ASSEMBLY
EB-6828	1	Castellated Nut
EB-7901	1	Screw Sleeve
EB-8104S	1	Pinion
EBA-3005	1	DRIVE SPRING
EBA-3023	1	Thrust Washer
EBA-3024	1	Drive Spring Support
EBA-3025	1	Meshing Spring
EBA-3202	1	Anti-Drift Spring & Sleeve Assembly
EBA-3223	1	Thrust Washer
GAS-1024D	1	Head Band Assembly
MAD-47	1	Thrust Washer
MBE-48	1	Bendix Shaft Gear
MBE-51	1	Gasket
MBE-52	1	Bearing Retaining Washer
MBE-54	1	Bendix Drive Shaft
MBE-1045	1	INTERMEDIATE BEARING ASSY.
MBE-47	1	Absorbent Bronze Brg.
MBE-1046	1	Intermediate Plate Assy.
GBF-95	1	Dowel Pin
ML-18A	1	Absorbent Bronze Brg.
PS-1156	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MBE-49	1	Bushing
8X-61	1	#10-32x7/16 Flat Hd. Sc.
8X-87	4	1/4-20x7/8 Hex. Hd. Sc.
X-199	4	1/4 Lock Washer
X-261	1	#6 Woodruff Key
X-714	1	#10-32x1 1/2 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
X-865	1	1/8 Pipe Plug
		1 2 3 4 5

(Issued 5-2-40)

UNIT	APPLICATION
MBE-4004	Waukesha Motor

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBE-4004 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBE-4005 STARTING MOTOR PARTS LIST

MBE-4005
(Issued 6-29-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-20	2	Bolt, Thru
MBE-2094	1	Frame & Field Assy.
MAK-12 †	2	BRUSH
MAK-49	2	Washer, Ins., Term. Stud
MAK-51	1	Bushing, Ins., Term. Stud
MBC-28	1	Stud, Terminal
MBE-30	1	Clamp, Connector
MBE-31	1	Insulation, Field Connection
MBE-44	1	Connector, Brush
MBE-3005S	1	FIELD COIL PACKAGE
MBE-43	1	Connector, Field Coil
MBE-1007	1	Coil, Field, U.R.
MBE-1008	1	Coil, Field, L.R.
MBE-1009	1	Coil, Field, L.L.
MBE-1010	1	Coil, Field, U.L.
MZ-38A	4	Screw, Pole Shoe
SSA-43	2	Washer, Plain, Term. Stud
8X-146	2	Nut, Term. Stud, Hex. 1/4-20
12X-196	1	Lockwasher, Connector Clamp Sc., 10
12X-199	2	Lockwasher, Term. Stud, 1/4
8X-664	1	Screw, Br. Connector Clamp, Rd. Hd. 10-32x9/16
8X-173	2	Nut, Thru Bolt, Hex. 10-32
12X-196	2	Lockwasher, Thru Bolt, 10

Comm. End Head Assembly & Parts Used With

MAK-3002	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S †	2	BRUSH, GROUNDED

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-54	1	Washer, Thrust, D.E., 1/32" Thick
MAK-55	1	Washer, Thrust, C.E., 1/32" Thick
MAK-2006	1	ARMATURE

Miscellaneous Parts

EBA-10	1	BENDIX DRIVE ASSY.
EB-6504S	1	Pinion
EB-6505	1	SPRING, DRIVE
EB-6513	1	Spring, Anti-Drift
EB-6823	2	Washer, Thrust
EB-6824	1	Support, Drive Spring
EB-6825	1	Spring, Meshing
EB-6826	1	Sleeve, Anti-Drift Spring
EB-6827	1	Washer, Pinion
EB-6828	1	Nut, Castellated
EB-7101	1	Shaft
EB-7902	1	Drive Stop
X-404	1	Pin, Cotter
GAS-1024C	1	Band, Cover
MAK-1048	1	Head Assy., Drive End
MAK-39	1	BEARING, ABS. BRONZE
X-386	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. 10-32x1 1/2
8X-794	1	Nut, Cover Band, Square 10-32

† BRUSH SET, SERVICE MAK-2012AS.

UNIT	APPLICATION
MBE-4005	Wisconsin Eng.

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-20	2	Bolt, Thru
MBE-2094	1	Frame & Field Assy.
MAK-12†	2	Brush
MAK-49	2	Washer, Ins., Term. Stud
MAK-51	1	Bushing, Ins., Term. Stud
MBC-28	1	Stud, Terminal
MBE-30	1	Clamp, Connector
MBE-31	1	Insulation, Field Connection
MBE-44	1	Connector, Brush
MBE-3005S	1	FIELD COIL PACKAGE
MBE-43	1	Connector, Field Coil
MBE-1007	1	Coil, Field, U. R.
MBE-1008	1	Coil, Field, L. R.
MBE-1009	1	Coil, Field, L. L.
MBE-1010	1	Coil, Field, U. L.
MZ-38A	4	Screw, Pole Shoe
SSA-43	2	Washer, Plain, Term. Stud
8X-146	2	Nut, Term. Stud. Hex. 1/4-20
12X-196	1	Lockwasher, Connector Clamp Sc., #10
12X-199	2	Lockwasher, Term. Stud1/4
8X-664	1	Screw, Br. Connector Clamp, Rd. Hd. #10-32x9/16
8X-173	2	Nut, Thru Bolt, Hex. #10-32
12X-196	2	Lockwasher, Thru Bolt, #10

Comm. End Head Assembly & Parts Used With

MAK-3002	1	Head Assy., Comm. End
MAK-19	4	Spring, Brush
MAK-59	1	Felt
MAK-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, D. E., 1/32" Thick
MAK-55	1	Washer, Thrust, C. E., 1/32" Thick
MAK-2090	1	ARMATURE

Miscellaneous Parts

Part No.	No. Used	Name of Part
GAS-1024C	1	Band. Cover
MAK-1048	1	Head Assy., Drive End
MAK-39	1	BEARING, ABS. BRONZE
X-386	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAK-2012AS

UNIT	APPLICATION
MBE-4006	Henney Hearse

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBG-4004 STARTING MOTOR PARTS LIST

MBG-4004
(Issued 10-17-50)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBG-2001)	1	Frame & Field Assy.
MAB-30A	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAK-80	1	Washer, Ins. Term. Stud, Inner
MAX-67	1	Insulation, Field Connection, Drive End
MBG-28	1	Stud, Terminal
MBG-30	1	Clamp, Connector
MBG-37	1	Connector
MBG-3005S	1	FIELD COIL PACKAGE
MBG-1007	1	Coil, Field, U.L.
MBG-1008	1	Coil, Field, L.R.
MBG-1009	1	Coil, Field, L.L.
MZ-32	2	Connector, Field Coil
MZ-1010B	1	Coil, Field, U.R.
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12 †	2	Brush
MZ-38A	4	Screw, Pole Shoe
X-196	1	Lockwasher, Connector Clamp Sc., #10
8X-664	1	Screw, Connector Clamp, Rd. Hd. #10-32x9/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, Arm. Shaft, D.E.
MU-54	1	Washer, Thrust, C.E., 1/32'' Thick
MZ-2113	1	ARMATURE

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-30	1	BENDIX DRIVE ASSEMBLY
EB-6501	1	Screw Sleeve
EB-6513	1	Spring, Anti-Drift
EB-6529	1	Collar, Spacing
EBA-604S	1	Pinion
EBA-635	1	Sleeve, Anti-Drift Spring
EBA-3002	1	Cup, Spring, Pinion
EBA-3005	1	SPRING, DRIVE
EBA-3023	1	Washer, Thrust
EBA-3024	1	Support, Spring, Drive
EBA-3025	1	Spring, Meshing
EBA-3028	1	Nut, Castellated
X-528	1	Pin, Cotter
MZ-1024A	1	Band, Cover
MZ-1114	1	Head Assy., Drive End
MAK-39	1	BRG., ABS. BRONZE
8X-119	4	Screw, D.E. Head, Fill. Hd. #10-32x1/2
12X-196	4	Lockwasher, Head Screw, #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MBG-4004	Hercules

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBG-4006 STARTING MOTOR PARTS LIST

MBG-4006
(Issued 1-16-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBG-2032	1	Frame & Field Assy.
MAB-30E	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAK-80	1	Washer, Ins., Term. Stud, Inner
MBG-28	1	Stud, Terminal
MBG-30	1	Clamp, Connector
MBG-37	1	Connector
MBG-50	1	Insulation, Field Connection, D. E.
MBG-3005S	1	FIELD COIL PACKAGE
MBG-1007	1	Coil, Field, U. L.
MBG-1008	1	Coil, Field, L. R.
MBG-1009	1	Coil, Field, L. L.
MZ-32	2	Connector, Field Coil
MZ-1010B	1	Coil, Field, U. R.
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12†	2	Brush
MZ-38A	4	Screw, Pole Shoe
12X-196	1	Lockwasher, Clamp Sc., #10
8X-664	1	Screw, Clamp, Rd. Hd. #10-32x9/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Thrust, C. E. & Int., 1/32" Thick
MZ-2049	1	ARMATURE ASSY.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4003	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-14	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EBA-211	1	Shaft & Pinion
EBA-1405	1	Spring, Drive
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
MZ-1024A	1	Band, Cover
PS-1064	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS

UNIT	APPLICATION
MBG-4006	Chris Craft

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBG-2032)	1	Frame & Field Assy.
MAB-30A	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-67	1	Insulation, Field Connection, D.E.
MBG-28	1	Stud, Terminal
MBG-30	1	Clamp
MBG-37	1	Connector
MBG-3005S	1	Field Coil Package
MBG-1007	1	Coil, Field, U.L.
MBG-1008	1	Coil, Field, L.R.
MBG-1009	1	Coil, Field, L.L.
MZ-32	2	Connector, Field Coil
MZ-1010B	1	Coil, Field, U.R.
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12†	2	Brush
MZ-38A	4	Screw, Pole Shoe
X-196	1	Lockwasher, Clamp Sc., #10
8X-664	1	Screw, Clamp, Rd. Hd. #10-32x9/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Thrust, 1/32'' Thick
MZ-2049	1	Armature Assy.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4003	1	Switch, Solenoid
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-4	1	Bendix Drive Assembly
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8734	1	Ring, Take-Up
EB-9911	1	Shaft & Pinion
EBA-405	1	Spring, Drive
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
MZ-1024A	1	Band, Cover
PS-1064	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
12X-196	4	Lockwasher, Housing Screw, #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MZ-2012AS.

UNIT	APPLICATION
MBG-4007	Hallett

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBG-2032)	1	Frame & Field Assy.
MAB-30A	1	Insulation, Field Conn.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-67	1	Insulation, Field Conn., D.E.
MBG-28	1	Stud, Terminal
MBG-30	1	Clamp
MBG-37	1	Connector
MBG-3005S	1	FIELD COIL PACKAGE
MBG-1007	1	Coil, Field, U.L.
MBG-1008	1	Coil, Field, L.R.
MBG-1009	1	Coil, Field, L.L.
MZ-32	2	Connector, Field Coil
MZ-1010B	1	Coil, Field, U.R.
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12†	2	Brush
MZ-38A	4	Screw, Pole Shoe
X-196	1	Lockwasher, Clamp Sc., #10
8X-664	1	Screw, Clamp, Rd. Hd., #10-32x9/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
X-196	4	Lockwasher, Head Sc., #10
X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MN-18	1	Washer, Thrust, D.E.
MU-54	1	Washer, Thrust, C.E.
MZ-2141	1	ARMATURE
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4003	1	SWITCH, SOLENOID
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
MZ-1024A	1	Band, Cover
PS-1171	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
X-118	4	Screw, Pinion Housing, Fill. Hd. #10-32x3/4
X-196	4	Lockwasher, Housing Sc., #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS

UNIT	APPLICATION
MBG-4008	Gray Marine

(Issued 10-25-49)

"NOTE: Where part numbers are shown in parenthe thev are for reference only. By stocking sub parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MBG-2033)	1	Frame & Field Assembly
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAK-80	1	Insulating Washer
MAX-67	1	Insulation
MBG-28	1	Terminal Post
MBG-30	1	Clamp
MBG-1007	1	Field Coil - U.L.
MBG-1008	1	Field Coil - L.R.
MBG-1009	1	Field Coil - L.L.
MBG-1010	1	Field Coil Assy.
MZ-1010B	1	Field Coil - U.R.
MZ-1102	1	Connector & Brush Assy.
MZ-12	2	BRUSH
MU-31	1	Insulating Bushing
MU-37	1	5/16 Plain Washer
MZ-29	4	Pole Piece
MZ-32	2	Field Coil Connector
MZ-38A	4	Pole Piece Screw
X-196	1	#10 Lock Washer
8X-664	1	#10-32x9/16 Rd. Hd.Screw
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MZ-2002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-1034	2	BRUSH ASSEMBLY-GROUNDED
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
X-544	4	#10 Lock Washer
X-902	4	#10-32x3/8 Fill. Hd. Screw

Armature Assembly & Parts Used With

MU-54	2	Thrust Washer - 1/32" Thick
MZ-148	1	Thrust Washer
MZ-2145	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MZ-144	1	Connector
SS-4003	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1274	2	#10 Skpf. Washer

Miscellaneous Parts

EBA-35	1	BENDIX DRIVE ASSEMBLY
EBA-513	1	Anti-Drift Spring
EBA-525	1	Meshing Spring
EBA-1233	1	Retaining Ring
EBA-2008	1	Lock Ring
EBA-3505	1	DRIVE SPRING
EBA-3507	2	Spring Anchor Plate
EBA-3531	1	Screw Shaft Assy.
EBA-3532	1	Pinion Assy.
MZ-124	1	Bendix Drive Pin
MZ-1024A	1	Head Band Assy.
MZ-1147	1	Drive End Head Assy.
MAB-124	1	ABSORBENT BRONZE BRG.
XA-560	1	Oil Seal
8X-119	4	#10-32x1/2 Fill. Hd. Screw
X-196	4	#10 Lock Washer
X-308	1	#10-32x1 3/8 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-20-41)

UNIT	APPLICATION
MBG-4009	Aircooled Motor

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBG-4011 STARTING MOTOR PARTS LIST MBG-4011

PRELIMINARY

Frame & Field Assembly With Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MBG-2033)	1	Frame & Field Assembly
MAB-30	1	Field Connection Insulator
MAB-31	1	Insulating Washer
MAK-80	1	Insulating Washer
MAX-67	1	Insulation
MBG-28	1	Terminal Post
MBG-30	1	Clamp
MBG-1007	1	Field Coil - U.L.
MBG-1008	1	Field Coil - L.R.
MBG-1009	1	Field Coil - L.L.
MBG-1010	1	Field Coil Assembly
MZ-1010B	1	Field Coil - U.R.
MZ-1102	1	Connector & Brush Assy.
MZ-12‡	2	Brush
MU-31	1	Insulating Bushing
MU-37	1	5/16 Plain Washer
MZ-29	4	Pole Piece
MZ-32	2	Field Coil Connector
MZ-38A	4	Pole Piece Screw
X-196	1	#10 Lock Washer
8X-664	1	#10-32x9/16 Rd. Hd. Screw
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MZ-2002	1	Comm. End Plate Assembly
MZ-16	2	Brush Holder
MZ-19	4	Brush Spring
MZ-1034‡	2	Brush Assy.- Grounded
X-532	4	1/8x1/4 Oval Hd. Tubular Rivet
X-544	4	#10 Lock Washer
X-902	4	#10-32x3/8 Fill. Hd. Screw

Armature Assembly & Parts Used With

MZ-148	1	Thrust Washer
MZ-2180	1	ARMATURE ASSEMBLY
MAB-35	1	Bearing Thrust Spacer
MU-54	2	Thrust Washer - 1/32" Thick
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MZ-144	1	Connector
SS-4003	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1274	2	#10 Skpf. Washer

Miscellaneous Parts

EBA-48	1	BENDIX DRIVE ASSEMBLY
EBA-4805	1	DRIVE SPRING
EBA-4807	2	Spring Anchor Plate
EBA-4808	1	Lock Ring
EBA-4813	1	Anti-Drift Spring
EBA-4825	1	Meshing Spring
EBA-4831	1	Screw Shaft Assembly
EBA-4832	1	Pinion Assembly
EBA-4833	1	Retaining Ring
MZ-124	1	Bendix Drive Pin
MZ-1024A	1	Head Band Assembly
MZ-1147	1	Drive End Head Assembly
MAB-124	1	ABSORBENT BRONZE BRG.
XA-560	1	Oil Seal
8X-119	4	#10-32x1/2 Fill. Hd. Screw
X-196	4	#10 Lock Washer
X-308	1	#10-32x1 3/8 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-8-41)

‡ SERVICE BRUSH SET MZ-2012S.

UNIT	APPLICATION
MBG-4011	Airoooled Motors

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the comp ete p rt c n be assembled as needed."

MBG-4015 STARTING MOTOR PARTS LIST

MBG-4015
(Issued 1-16-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBG-2001	1	Frame & Field Assy.
MAB-30E	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAK-80	1	Washer, Ins., Term. Stud, Inner
MBG-28	1	Stud, Terminal
MBG-30	1	Clamp, Connector
MBG-37	1	Connector
MBG-50	1	Insulation, Field Connection, D. E.
MBG-3005S	1	FIELD COIL PACKAGE
MBG-1007	1	Coil, Field, U. L.
MBG-1008	1	Coil, Field, L. R.
MBG-1009	1	Coil, Field, L. L.
MZ-32	2	Connector, Field Coil
MZ-1010B	1	Coil, Field, U. R.
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12†	2	Brush
MZ-38A	4	Screw, Pole Shoe
12X-196	1	Lockwasher, Clamp Sc., #10
8X-664	1	Screw, Clamp, Rd. Hd. #10-32x9/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MU-54	2	Washer, Thrust, C. E. & Int., 1/32" Thick
MZ-2089	1	ARMATURE ASSY.
MZ-51	1	Spacers Bearing Thrust
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

EB-87	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	Spring, Drive
EB-8711	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
MZ-1024A	1	Band, Cover
PS-1121	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS

UNIT	APPLICATION
MBG-4015	Continental

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
(MBG-2042)	1	Frame and Field Assy.
MAB-30A	1	Insulation, Field Connection, C.E.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-67	1	Insulation, Field Connection, D.E.
MBG-28	1	Stud, Terminal
MBG-30	1	Clamp, Connector
MBG-37	1	Connector
MBG-3005S	1	FIELD COIL PACKAGE
MBG-1007	1	Coil, Field, U.L.
MBG-1008	1	Coil, Field, L.R.
MBG-1009	1	Coil, Field, L.L.
MZ-32	2	Connector, Field Coil
MZ-1010B	1	Coil, Field, U.R.
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12 †	2	Brush
MZ-38A	4	Screw, Pole Shoe
12X-196	1	Lockwasher, Clamp Sc. #10
8X-664	1	Screw, Connector Clamp
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-544	4	Lockwasher, C.E. Head Screw, #10
X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MU-54	2	Washer, Thrust, 1/32" Thick
MZ-2089	1	ARMATURE ASSY.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBA-92	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7805	1	SPRING, DRIVE
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8734	1	Ring, Take-Up
EBA-9211	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Absorbent Bronze
MZ-24A	1	Band, Cover
MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
PS-1121	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	BEARING,ABS., BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MBG-4017	Continental

(Issued 1-3-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
(MBG-2043)	1	Frame & Field Assy.
MAB-30A	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-67	1	Insulation, Field Connection, D.E.
MBG-28	1	Stud, Terminal
MBG-30	1	Clamp, Connector
MBG-37	1	Connector
MBG-3005S	1	FIELD COIL PACKAGE
MBG-1007	1	Coil, Field, U.L.
MBG-1008	1	Coil, Field, L.R.
MBG-1009	1	Coil, Field, L.L.
MZ-32	2	Connector, Field Coil
MZ-1010B	1	Coil, Field, U.R.
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12 †	2	Brush
MZ-38A	4	Screw, Pole Shoe
12X-196	1	Lockwasher, Clamp Sc., #10
8X-664	1	Screw, Clamp, #10-32x9/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-544	4	Lockwasher, C.E. Head Sc., #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer Thrust, 1/32" Thick
MZ-2089	1	ARMATURE ASSY.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6LA	1	Connector
SS-4311	1	SOLENOID SWITCH
8X-173	2	Nut, Hex. #10-32
12X-196	2	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Sc. Skpf. #10

Miscellaneous Parts

EBA-92	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7805	1	SPRING, DRIVE
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8734	1	Ring, Take-Up
EBA-9211	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MZ-24A	1	Band, Cover
MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
PS-1121A	1	Housing Assy. Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MBG-4018	Continental

(Issued 1-3-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBG-2043	1	Frame & Field Assy.
MAB-30A	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-67	1	Insulation, Field Connection, D. E.
MBG-28	1	Stud, Terminal
MBG-30	1	Clamp, Connector
MBG-37	1	Connector
MBG-3005S	1	FIELD COIL PACKAGE
MBG-1007	1	Coil, Field, U. L.
MBG-1008	1	Coil, Field, L. R.
MBG-1009	1	Coil, Field, L. L.
MZ-32	2	Connector, Field. Coil
MZ-1010B	1	Coil, Field, U. R.
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud 5/16
MZ-12†	2	Brush
MZ-38A	4	Screw, Pole Shoe
12X-196	1	Lockwasher, Clamp Sc., #10
8X-664	1	Screw, Clamp, Rd. Hd. #10-32x9/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy. Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Thrust, C. E. & Intermediate, 1/32" Thick
MZ-2089	1	ARMATURE ASSY.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4003	1	SWITCH, SOLENOID STARTING
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc. Skpf. #10

Miscellaneous Parts

EBA-92	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7805	1	SPRING, DRIVE
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8734	1	Ring, Take-Up
EBA-9211	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MZ-24A	1	Band, Cover
MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
PS-1121	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MBG-4021	Carrier Corp.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBG-3051	1	Frame & Field Assy.
MAB-31	3	Washer, Ins., Term. Stud
MBG-28	1	Stud, Terminal
MBG-50	1	Insulation, Field Connection D.E.
MBG-52	1	Insulation, Term. Stud, Inner
MBG-53	1	Stud, Terminal
MBG-54	1	Connector, Terminal
MBG-55	1	Insulation, Field Connec Connection
MBG-1007D	1	Coil, Field, U.L.
MBG-1008	1	Coil, Field, L.R.
MBG-1009	1	Coil, Field, L.L.
MU-31	2	Bushing, Ins., Term. Stud
MU-37	2	Washer, Plain, Term. Stud
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-1010M	1	Coil, Field, U.R.
MZ-1012A †	2	Brush
8X-56	2	Screw, Brush Lead, Rd. Hd. #8-32x7/16
12X-195	2	Lockwasher, Brush Lead Sc., #8
12X-1014	4	Lockwasher, Term. Stud, 5/16
8X-1376	4	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002L	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
12X-196	4	Lockwasher, C.E. Head #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MZ-2352	1	ARMATURE

Miscellaneous Parts

Part No.	No. Used	Name of Part
MBG-56	1	Head, Drive End
MZ-24A	1	Band, Cover
12X-196	4	Lockwasher, D.E. Head, #10
X-367	1	BEARING, BALL, SEALED, S.A.E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1151	4	Screw, D.E. Head, Rd. Hd. #10-32x13/16

* Use as required.

† BRUSH SET, SERVICE MZ-2012HS.

UNIT	APPLICATION
MBG-4022	J.S. Barnes

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBG-2043	1	Frame & Field Assembly
MAB-30E	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAK-80	1	Washer, Ins., Term. Stud, Inner
MBG-28	1	Stud, Terminal
MBG-30	1	Clamp, Connector
MBG-37	1	Connector
MBG-50	1	Insulation, Field Connection, D.E.
MBG-3005S	1	Field Coil Package
MBG-1007	1	Coil, Field, U.L.
MBG-1008	1	Coil, Field, L.R.
MBG-1009	1	Coil, Field, L.L.
MZ-32	2	Connector, Field Coil
MZ-1010B	1	Coil, Field, U.R.
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12†	2	Brush
MZ-38A	4	Screw, Pole Shoe
12X-196	1	Lockwasher, Clamp Sc., #10
8X-664	1	Screw, Clamp, Rd. Hd. #10-32x9/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, C.E., Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
MZ-2089	1	Armature Assembly
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4003	1	Switch, Solenoid Starting
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBA-92	1	Bendix Drive Assembly
EB-108	2	Lockwasher
EB-7805	1	Spring, Drive
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8734	1	Ring, Take-Up
EBA-9211	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
MZ-24A	1	Band, Cover
MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
PS-1121	1	Housing Assembly, Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	Bearing, Absorbent Bronze
12X-196	4	Lockwasher, Pinion Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MBG-4023	Carrier Corp.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBG-4024 STARTING MOTOR PARTS LIST

MBG-4024
(Issued 10-3-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBG-2042	1	Frame & Field Assy.
MAB-30E	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAK-80	1	Washer, Ins., Term. Stud, Inner
MBG-28	1	Stud, Terminal
MBG-30	1	Clamp, Connector
MBG-37	1	Connector
MBG-50	1	Insulation, Field Connection, D. E.
MBG-3005S	1	FIELD COIL PACKAGE
MBG-1007	1	Coil, Field, U. L.
MBG-1008	1	Coil, Field, L. R.
MBG-1009	1	Coil, Field, L. L.
MZ-32	2	Connector, Field Coil
MZ-1010B	1	Coil, Field, U. R.
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12 †	2	Brush
MZ-38A	4	Screw, Pole Shoe
12X-196	1	Lockwasher, Clamp Sc., #10
8X-664	1	Screw, Connector Clamp, Rd. Hd. #10-32x9/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-196	4	Lockwasher, C. E. Head Screw, #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MU-54	2	Washer, Thrust, C. E. & Int., 1/32" Thick
MZ-357	2	Washer, Thrust, Int.
MZ-365	1	Washer, Spring, Int.
MZ-2366	1	ARMATURE
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

EBB-44A	1	BENDIX DRIVE
MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
MZ-359	1	Gasket, Int. Bearing
MZ-1024U	1	Band, Cover
MZ-1360	1	BEARING ASSY., INTERMEDIATE
PS-1330	1	Housing Assy., Pinion
MZ-358	1	Bearing Cap
MZ-364	1	BEARING, ABS. BRONZE
XA-832	1	Oil Seal
8X-63	4	Screw, Int. Bearing, Flat Hd. #8-32x3/8
12X-196	4	Lockwasher, Pinion Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MBG-4024	Wisconsin

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBG-4025 STARTING MOTOR PARTS LIST

MBG-4025
(Issued 1-16-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBG-2001	1	Frame & Field Assy.
MAB-30E	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAK-80	1	Washer, Ins., Term. Stud, Inner
MBG-28	1	Stud, Terminal
MBG-30	1	Clamp, Connector
MBG-37	1	Connector
MBG-50	1	Insulation, Field Connection, D. E.
MBG-3005S	1	FIELD COIL PACKAGE
MBG-1007	1	Coil, Field, U. L.
MBG-1008	1	Coil, Field, L. R.
MBG-1009	1	Coil, Field, L. L.
MZ-32	2	Connector, Field Coil
MZ-1010B	1	Coil, Field, U. R.
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12†	2	Brush
MZ-38A	4	Screw, Pole Shoe
12X-196	1	Lockwasher, Clamp Sc., #10
8X-664	1	Screw, Clamp, Rd. Hd. #10-32x9/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MN-18	1	Washer, Thrust, D. E., .065" Thick
MU-54	1	Washer, Thrust, C. E., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MZ-2134	1	ARMATURE
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

EBB-31	1	BENDIX DRIVE
MZ-1024A	1	Band, Cover
PS-1192	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-118	4	Screw, Pinion Housing, Fill. Hd. #10-32x3/4
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS

UNIT	APPLICATION
MBG-4025	Ready Power

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

MBG-4101 STARTING MOTOR PARTS LIST

MBG-4101
(Issued 8-31-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBG-2341	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAK-80	1	Washer, Ins., Term. Stud, Inner
MBG-12 ‡	2	Brush
MBG-14	1	Connector
MBG-23	1	Stud, Terminal
MBG-50	1	Insulation, Field Connection, D. E.
MBG-3005S	1	FIELD COIL PACKAGE
MBG-1007	1	Coil, Field, U. L.
MBG-1008	1	Coil, Field, L. R.
MBG-1009	1	Coil, Field, L. L.
MZ-32	2	Connector, Field Coil
MZ-1010B	1	Coil, Field, U. R.
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MZ-2002Q	1	Head Assy., Comm. End
MAD-110	1	Felt
MBG-1021S ‡	2	Brush, Grounded
MZ-19	4	Spring, Brush
12X-196	4	Lockwasher, Head Sc., #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MU-54	1	Washer, Thrust, D. E. 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MZ-2312A	1	ARMATURE

Miscellaneous Parts

EBB-7	1	BENDIX DRIVE ASSY.
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2008	1	Ring, Lock
EBA-3307	2	Plate, Spring Anchor
EBA-3505	1	SPRING, DRIVE
EBA-3531	1	Shaft
EBB-732	1	Pinion
MZ-24A	1	Band, Cover
MZ-124	1	Pin, Bendix
MZ-1003A	1	Head Assy., Drive End
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
X-3048	4	Screw, D. E. Head, Flat Hd. #10-32x3/8

* Use as required.

‡ MBG-2012S BRUSH SET, SERVICE

UNIT	APPLICATION
MBG-4101	Hudson (6)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBG-4102 STARTING MOTOR PARTS LIST

MBG-4102
(Issued 8-31-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBG-2022	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAK-80	1	Washer, Ins., Term. Stud, Inner
MBG-12 ‡	2	Brush
MBG-14	1	Connector
MBG-23	1	Stud, Terminal
MBG-50	1	Insulation, Field Connection, D. E.
MBG-3005S	1	FIELD COIL PACKAGE
MBG-1007	1	Coil, Field, U. L.
MBG-1008	1	Coil, Field, L. R.
MBG-1009	1	Coil, Field, L. L.
MZ-32	2	Connector, Field Coil
MZ-1010B	1	Coil, Field, U. R.
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MZ-2002Q	1	Head Assy., Comm. End
MAD-110	1	Felt
MBG-1021S ‡	2	Brush, Grounded
MZ-19	4	Spring, Brush
12X-196	4	Lockwasher, Head Sc., #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MZ-2023	1	ARMATURE
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-33	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
EBA-3307	2	Plate, Spring Anchor
MZ-24A	1	Band, Cover
MZ-177	1	Screw, Pinion Housing, Hex. Hd. #10-32x3/4
MZ-1236	1	BEARING ASSY., INTERMEDIATE
MZ-339	1	BEARING, ABS. BRONZE
PS-1318	1	HOUSING ASSY., PINION
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
X-1274	2	Washer, Int. Bearing Sc., Skpf. #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as required.

‡ MBG-2012S BRUSH SET, SERVICE.

UNIT	APPLICATION
MBG-4102	Hudson (6)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBG-4103 STARTING MOTOR PARTS LIST

MBG-4103
(Issued 11-11-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBG-2368	1	Frame & Field Assy.
MAB-30E	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAK-80	1	Washer, Ins., Term. Stud, Inner
MBG-12 ‡	2	Brush
MBG-14	1	Connector
MBG-28	1	Stud, Terminal
MBG-50	1	Insulation, Field Connection, D. E.
MBG-3005S	1	FIELD COIL PACKAGE
MBG-1007	1	Coil, Field, U. L.
MBG-1008	1	Coil, Field, L. R.
MBG-1009	1	Coil, Field, L. L.
MZ-32	2	Connector, Field Coil
MZ-1010B	1	Coil, Field, U. R.
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-38A	4	Screw, Pole Shoe
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002Q	1	Head Assy., Comm. End
MAD-110	1	Felt
MBG-1021S ‡	2	Brush, Grounded
MZ-19	4	Spring, Brush
12X-196	4	Lockwasher, C. E. Head Sc., #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	*	Washer, Thrust, C. E. & Int., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E. & Int., 3/64" Thick
MZ-2367	1	ARMATURE
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-48	1	BENDIX DRIVE
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft, Screw
EBA-2105	1	SPRING, DRIVE
EBA-3307	2	Plate, Spring Anchor
EBB-4832	1	Pinion Assy.
MZ-24A	1	Band, Cover
MZ-1236	1	BEARING ASSY., INTERMEDIATE
MZ-339	1	BEARING, ABS. BRONZE
PS-1290A	1	HOUSING ASSY., PINION
MDD-34	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
X-1274	2	Washer, Int. Bearing Sc., Skpf. #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
8X-2987	4	Screw, Pinion Housing, Hex. Hd. #10-32x7/8

* Use as required.

‡ BRUSH SET. SERVICE MBG-2012S.

UNIT	APPLICATION
MBG-4103	Studebaker Champion

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

MBJ-4101 STARTING MOTOR PARTS LIST

MBJ-4101
(Issued 2-24-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAY-2117B	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-67	1	Insulation, Field Conn., D. E.
MAY-12A†	2	Brush
MAY-33	1	Connector, Brush
MAY-34	1	Stud, Terminal
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U. L.
MAY-1008A	1	Coil, Field, L. R.
MAY-1009A	1	Coil, Field, L. L.
MAY-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002CS	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, C. E.
MAW-2105	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C. E. & Int., 1/32" Thick
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector
SS-4003	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-up
EBA-211	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	BEARING, ABS. BRONZE
MAU-1024	1	Band, Cover
PS-1169	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAY-2012AS.

UNIT	APPLICATION
MBJ-4101	Atlas Diesel, U. S. Motors

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAY-2117B)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Conn.
MAB-31	1	Washer, Ins., Term. Stud
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins. Term. Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A†	2	Brush
MAY-33	1	Connector, Brush
MAY-34	1	Stud, Terminal
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Br. Grd., Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-2105	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector.
SS-4301	1	SWITCH, STARTING, SOLENOID
8X-173	1	Nut, Hex. #10-32
X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch, Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf., #10

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
MAB-1024F	1	Band, Cover
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
PS-1057	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAY-2012AS.

UNIT	APPLICATION
MBJ-4103	Hallet Mfg.

(Issued 4-18-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAY-2117B)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MAB-30	1	Field Connection Ins.
MAB-31	1	Insulating Washer
MAB-85	1	Insulating Bushing
MAK-80	1	Insulating Washer
MAW-13	2	Brush Assy.-Grounded
MAW-29	4	Pole Piece
MAX-64	2	Field Coil Connector
MAX-67	1	Insulation
MAY-34	1	Terminal Post
MAY-1007F	1	Field Coil - U.L.
MAY-1008A	1	Field Coil - L.R.
MAY-1009A	1	Field Coil - L.L.
MAY-1010A	1	Field Coil & Brush Assy.-U.R.
MAY-1033	1	Connector & Brush Assy.
MAY-12A	2	Brush-Long Pigtail
MN-21	2	Dowel Pin
MU-37	1	5/16 Plain Washer
8X-61	2	#10-32x7/16 Flat Hd. Sc.
12X-1014	1	5/16 Lock Washer
8X-1376	1	5/16-24 Hex. Nut
MW-20A	2	Frame Screw
X-199	2	1/4 Lock Washer
X-1014	1	5/16 Lock Washer
5X-1376	1	5/16-24 Hex. Nut

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Comm. End Head Assy.
MAD-110	1	Felt Pad
MZ-19	4	Brush Spring
X-390	1	Oiler-1/4 Hinged Top

Armature Assembly & Parts Used With

MAK-61	1	5/8 Steel Washer
MAW-2105	1	Armature Assembly
MAB-35	1	Brg. Thrust Spacer
MU-54	2	Thrust Washer-1/32'' Thick
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6L	1	Connector
SS-4003	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Sc.
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

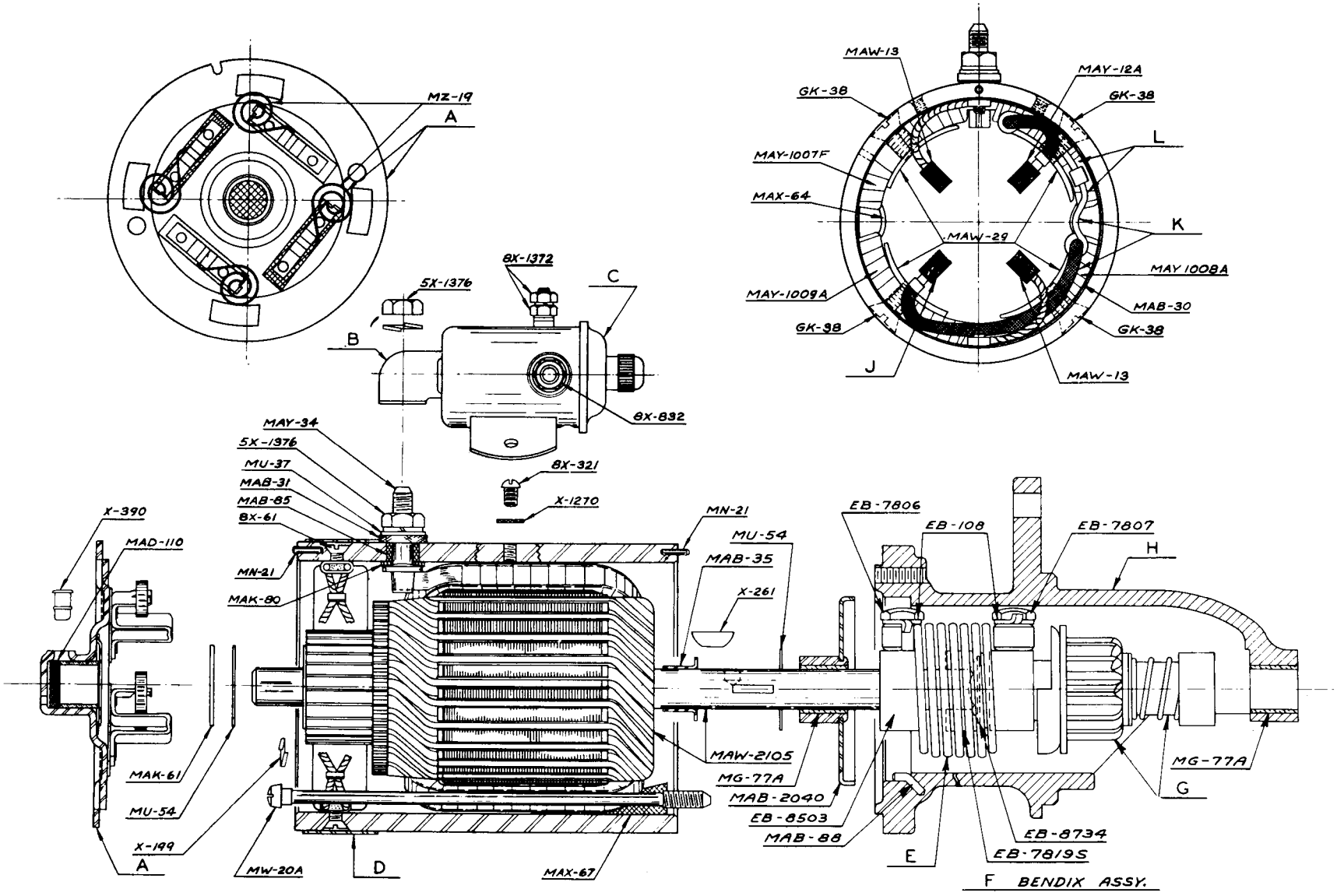
EBA-11	1	Bendix Drive Assy.
EB-108	2	Lock Washer
EB-7806	1	Hd. Spring Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	Drive Spring
EB-8734	1	Take-up Ring
EBA-1111	1	S-A Assembly
MAB-1024F	1	Head Band Assy.
MAB-2040	1	Intermediate Brg. Assy.
MG-77A	1	Absorbent Bronze Brg.
PS-1116	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 9-25-42)

† Service BRUSH SET MAY-2012AS.

UNIT	APPLICATION
MBJ-4105	R. H. Sheppard

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."



UNIT	A	B	C	D	E	F	G	H	J	K	L
MBJ-4105	MAX-2002	SS-6L	SS-4003	MAB-1024F	EB-8705	EBA-11	EBA-1111	PS-1116	MAY-12A	MAY-1039	MAY-1010A

MBJ-4106 STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAY-2117B)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins. Term. Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-67	1	Insulation
MAY-12A†	2	Brush, Insulated
MAY-33	1	Connector, Brush
MAY-34	1	Stud, Terminal
MAY-3005BS	1	Field Coil Package
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002CS	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler, Press in Type, 1/4

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MAW-2149	1	Armature Assembly
MAB-35	1	Spacer, Brg. Thrust
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4301	1	Switch, Solenoid
8X-173	1	Nut, Hex. #10-32
X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg.. Sc., Skpf. #10

Miscellaneous Parts

EBA-8	1	Bendix Drive Assy.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8734	1	Ring, Take-Up
EB-8803	1	Head, Driving
EB-8805	1	Spring, Drive
EB-8806	1	Screw, Spring, Head
EB-8807	1	Screw, Spring, Shaft
EBA-211	1	Shaft & Pinion
MAB-1024F	1	Band, Cover
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
PS-1143D	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x 1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAY-2012AS.

UNIT	APPLICATION
MBJ-4106	U.S. Motors

(Issued 7-15-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAY-3117)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Piece
MAB-30	1	Insulation, Field Conn.
MAB-31	1	Washer, Ins. Term. Stud, Outer
MAB-85	1	Bushing, Insulating
MAK-80	1	Washer, Ins. Term. Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-67	1	Insulation, Field Connection, D.E.
MAY-12A†	1	Brush
MAY-12B†	1	Brush
MAY-33	1	Connector
MAY-34	1	Stud, Terminal
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Ground, Flat Hd. #10-32x7/16
12X-1014	2	Washer, Lock, 5/16
8X-1376	2	Nut, Hex., 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, 1/4

Comm. End Head Assembly & Parts Used With

MAX-3059	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, C.E.
MAW-2105	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector
SS-4301	1	SWITCH, STARTING, SOLENOID
8X-173	1	Nut, Hex. #10-32
X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EB-99	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7805	1	SPRING, DRIVE
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8734	1	Ring, Take-Up
EB-9911	1	Shaft & Pinion
MAB-1024F	1	Band, Head
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Brg. Abs. Bronze
PS-1057	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BRG., ABS. BRONZE
X-714	1	Screw, Cover Band Rd. Hd. #10-32x 1 1/2
8X-794	1	Nut, Cover Band Square #10-32

† SERVICE BRUSH SET MAY-1012AS.

UNIT	APPLICATION
MBJ-4107	Witte Eng., Hallet Mfg.

(Issued 4-18-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAY-2117B)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-13 †	2	Brush, Grounded
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A †	2	Brush, Insulated
MAY-33	1	Connector, Brush
MAY-34	1	Stud, Terminal
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2150	1	ARMATURE
MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4301	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc. Skpf. #10

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
MAB-1024F	1	Band, Cover
MAW-2129	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
PS-1211	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABSORBENT BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAY-2012AS.

UNIT	APPLICATION
MBJ-4110	Duplex, U.S. Motors

(Issued 1-3-49)

"NOTE: Where part num ers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBJ-4112 STARTING MOTOR PARTS LIST MBJ-4112

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAY-3118A)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud, Inner
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection, C.E.
MAW-13†	2	Brush, Grounded
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	1	Washer, Ins., Term. Stud, Outer
MAX-44	1	Washer, Plain, Term. Stud, 3/8
MAX-64	2	Connector, Field Coil
MAX-67	1	Insulation, Field Connection D.E.
MAY-12A†	1	Brush, Insulated
MAY-12B†	1	Brush, Insulated
MAY-28	1	Stud, Terminal, 3/8-16
MAY-33	1	Connector, Brush
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel, Locating
8X-61	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex., 3/8-16
MW-20A	2	Bolt, Thru

Comm. End Head Assembly & Parts Used With

MAX-3059B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler, Hinged Top, 1/4

Armature Assembly & Parts Used With

MAK-61	1	Washer, Steel
MAW-75	1	Washer, Thrust, Intermediate
MAW-76	1	Washer, Thrust, Intermediate
MAW-2069	1	Armature
MU-54	1	Washer, Thrust 1/32" thick
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-72	1	Bendix Drive Assy.
EB-108A	2	Washer, Lock
EB-7806A	1	Screw, Spring, Head
EBA-507A	1	Screw, Spring, Shaft
EBA-4833	1	Ring, Retaining
EBA-7205	1	Spring, Drive
EBA-7213	1	Spring, Anti-Drift
EBA-7225	1	Spring, Meshing
EBA-7231	1	Shaft
EBA-7232	1	Pinion
MAB-1024J	1	Band, Head
MAW-70	1	Washer, Felt, Int. Plate
MAW-71	1	Retainer, Felt Washer, Int. Plate
MAW-72	1	Guard, Felt Washer, Int. Plate
MAW-74	1	Gear
MAW-154	1	Washer, Thrust, Bendix Shaft
MAW-168	1	Gasket, Int. Brg. to Housing
MAW-169	1	Shaft, Bendix Drive
MAW-1078	1	Bearing Assy., Intermediate
MAW-77	1	Bearing, Absorbent Bronze
MG-77A	1	Bearing, Absorbent Bronze
X-489	1	Oiler, Press in Type, 1/4
PS-1222	1	Housing Assy., Pinion
MN-21	1	Pin, Dowel
8X-89	3	Screw, Housing Attaching, Hex. Hd. 1/4-20x1
12X-196	3	Lockwasher, Retainer Sc., #10
12X-199	5	Lockwasher, Housing Sc., 1/4
X-261	2	Key, Woodruff, #6
8X-311	3	Screw, Retainer, Rd. Hd. #10-32x3/8
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-865	1	Plug, Pipe, 1/8
		1 2 3 4 5

† Brush Set, Service MAY-1012AS.

Unit	Application
MBJ-4112	Aircooled

(Issued 11-27-46)
File in
Equipment & Parts List Binder

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MAY-2152)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insualtion, Field Connection
MAB-31	1	Washer, Ins., Term. Stud Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-64	2	Connector, Field Coil
MAX-67	1	Insulation, Field Connection
MAY-12A†	2	Brush
MAY-33	1	Connector
MAY-34	1	Stud, Terminal
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil. Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd., #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt. 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts UsedWith

MAK-61	1	Washer, Arm. Thrust, Comm. End
MAW-2105	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6R	1	Connector, Switch to Motor
SS-4301	1	SWITCH, STARTING, SOLENOID
X-196	1	Lockwasher #10
8X-832	2	Nut, Hex., 5/16-24
X-1014	2	Lockwasher, 5/16
8X-173	1	Nut, Hex., #10-32
8X-321	2	Screw, Switch Mtg., Rd. Hd., #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf.,#10

Miscellaneous Parts

EBA-11	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take Up
EBA-1111	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Absorbent Bronze
MAW-24	1	Band Cover
PS-1075	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-714	1	Screw, Cover Band, Rd. Hd., #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† BRUSH SET, SERVICE MAY-2012AS

UNIT	APPLICATION
MBJ-4114	R.H. Sheppard

(Issued 8-20-47)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBJ-4115 STARTING MOTOR PARTS LIST

MBJ-4115
(Issued 10-9-50)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAY-2157)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud, Inner
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAW-13	2	Brush, Grounded
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	1	Washer, Ins., Term. Stud, Outer
MAX-44	1	Washer, Plain, Term. Stud, 3/8
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A†	2	Brush
MAY-28	1	Stud, Terminal
MAY-33	1	Connector
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
8X-61	2	Screw, Brush Ground Flat Hd. #10-32x7/16
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAD-96	1	Washer, Arm. Thrust, Comm. End
MAW-2030	1	ARMATURE ASSY.
MAW-31	1	Spacer, Armature Shaft
MU-54	*	Washer, Thrust, C.E., 1/32'' Thick
MU-54A	*	Washer, Thrust, C.E., 1/64'' Thick
MU-54B	*	Washer, Thrust, C.E., 3/64'' Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-116L	1	Connector
SS-1128	1	Core Assy.
SS-59	1	Screw, Link
SS-61	1	Spring
SS-128	1	Core
SS-4204	1	SOLEDNOID STARTING SWITCH (See Separate List for Parts.)
12X-201	2	Lockwasher, Switch Term., 3/8
8X-830	2	Nut, Switch Term., Hex. 3/8-16
X-3002	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8

Clutch Assembly & Parts Used With

MAD-2087	1	Yoke
MAX-37	1	Gasket, Dust Cover
MAX-38	1	Cover, Dust
MAX-39	1	Plate, Dust
MAX-41	1	Bushing, Yoke Pivot
MAX-42	1	Bushing, Yoke Pivot
MAX-46	1	Spring, Yoke
MAY-3048	1	STARTER CLUTCH
MCH-76	1	Pin, Link
8X-97	1	Screw, Yoke Pivot, Hex. Hd. 5/16-18x3 1/4
8X-147	1	Nut, Yoke Pivot, Hex. 5/16-18
8X-311	4	Screw, Dust Cover, Rd. Hd. #10-32x3/8
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
12X-1014	1	Lockwasher, Yoke Pivot, 5/16
X-1270	4	Washer, Dust Cover, Skpf. #10

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1094B	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAY-2012AS.

* Use as required.

UNIT	APPLICATION
MBJ-4115	D.W. Onan

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAY-2156A	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A†	2	Brush
MAY-33	1	Connector, Brush
MAY-34	1	Stud, Terminal
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, C.E.
MAW-2198	1	ARMATURE ASSEMBLY
MAB-35	1	Spacer, Bearing Thrust
MU-54	*	Washer, Thrust, C.E. & D.E. 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & D.E. 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E. 3/64" Thick
X-261	1	Key, Woodruff, D.E., #5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector
SSW-4001	1	SWITCH, SOLENOID
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBB-12	1	BENDIX DRIVE ASSEMBLY
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-4713	1	Spring, Anti-Drift
EBB-906	1	Screw, Shaft
EBB-1231	1	SHAFT & DRIVE SPRING
EBB-1232	1	Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1265	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required.

† BRUSH SET, SERVICE MAY-2012AS.

UNIT	APPLICATION
MBJ-4116	Buda

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBJ-4118 STARTING MOTOR PARTS LIST MBJ-4118

(Issued 7-8-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAY-3150	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAW-13†	2	Brush, Grounded
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A†	1	Brush
MAY-12B†	1	Brush
MAY-33	1	Connector, Brush
MAY-34	1	Stud, Terminal
MAY-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007F	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-3059	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAD-47	1	Washer, Thrust, D.E.
MAK-61	1	Washer, Thrust, C.E.
MAW-2152	1	ARMATURE ASSEMBLY
MU-54	1	Washer, Thrust, C.E., 1/32" Thick

Miscellaneous Parts

MAW-24	1	Band, Cover
MAY-2148C	1	Head Assy., Drive End
MAY-149	3	Stud
MAY-1148	1	Head Assy., Partial, Drive End
ML-18A	1	BEARING, ABS. BRONZE
X-489	1	OILER
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAY-1012AS.

UNIT	APPLICATION
MBJ-4118	Fairbanks Morse

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBJ - 4120 STARTING MOTOR PARTS LIST

MBJ - 4120
(Issued 9 - 25 - 56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAY - 2117B	1	Frame & Field Assy.
GK - 38	4	Screw, Pole Shoe
MAB - 30	1	Insulation, Field Connection
MAB - 31	1	Washer, Ins., Term. Stud, Outer
MAB - 85	1	Bushing, Ins., Term. Stud
MAK - 80	1	Washer, Ins., Term. Stud, Inner
MAX - 67	1	Insulation, Field Conn., D. E.
MAY - 33	1	Connector, Brush
MAY - 34	1	Stud, Terminal
MAY - 2012AS	1	BRUSH SET
MAY - 3005BS	1	FIELD COIL PACKAGE
MAX - 64	2	Connector, Field Coil
MAY - 1007F	1	Coil, Field, U. L.
MAY - 1008A	1	Coil, Field, L. R.
MAY - 1009A	1	Coil, Field, L. L.
MAY - 1010	1	Coil, Field, U. R.
MN - 21	2	Pin, Dowel
MU - 37	1	Washer, Plain, Term. Stud, 5/16
8X - 61	2	Screw, Brush Ground, Flat Hd., #10 - 32x7/16
12X - 1014	2	Lockwasher, Term. Stud, 5/16
8X - 1376	2	Nut, Term. Stud, Hex. 5/16 - 24
MW - 20A	2	Bolt, Thru
12X - 199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX - 2002	1	Head Assy., Comm. End
MAD - 110	1	Felt
MZ - 19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK - 61	1	Washer, Thrust, Comm. End
MAW - 2105	1	ARMATURE ASSY.
MAB - 35	1	Spacer, Bearing Thrust
MU - 54	2	Washer, Thrust, C. E. & Int., 1/32" Thick
X - 261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS - 6R	1	Connector
SS - 4003	1	SOLENOID STARTING SWITCH
8X - 173	1	Nut, Hex. #10 - 32
12X - 196	1	Lockwasher, #10
8X - 832	2	Nut, Hex. 5/16 - 24
12X - 1014	2	Lockwasher, 5/16
8X - 321	2	Screw, Switch Mtg., Rd. Hd. #10 - 32x5/16
X - 1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA - 90	1	BENDIX DRIVE ASSY.
EB - 108	2	Lockwasher
EB - 7806	1	Screw, Spring, Head
EB - 7807	1	Screw, Spring, Shaft
EB - 7819S	1	Sleeve, Compression
EB - 8503	1	Head, Drive
EB - 8705	1	Spring, Drive
EBA - 9011	1	Shaft & Pinion
MAB - 1024F	1	Band, Cover
MAB - 2040	1	Bearing Assy., Intermediate
MG - 77A	1	BEARING, ABS. BRONZE
PS - 1057	1	Housing Assy., Pinion
MAB - 88	1	Pin, Dowel
MG - 77A	1	BEARING, ABS. BRONZE
8X - 714	1	Screw, Cover Band, Rd. Hd. #10 - 32x1 1/2
8X - 794	1	Nut, Cover Band, Square #10 - 32

UNIT	APPLICATION
MBJ - 4120	R. H. Sheppard

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAY-2147)	1	Frame & Field Assy.
CB-157	1	Insulation, Term. Stud, Inner
GK-38	4	Screw, Pole Shoe
MAB-31	3	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAB-118	1	Terminal
MAB-119	1	Insulation, Term. Stud
MAK-80	2	Washer, Ins., Term. Stud, Inner
MAW-13 †	2	Brush, Grounded
MAX-67	1	Insulation, Field Conn., D.E.
MAY-12A†	1	Brush
MAY-12C†	1	Brush
MAY-34	2	Stud, Terminal
MAY-3005ES	1	Field Coil Package
MAX-64	2	Connector, Field Coil
MAY-1007N	1	Coil, Field U.L.
MAY-1008A	1	Coil, Field L.R.
MAY-1009A	1	Coil, Field L.L.
MAY-1010E	1	Coil, Field U.R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-31	2	Bushing, Ins., Term. Stud
MU-37	3	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Br. Grd., Flat Hd. #10-32x7/16
X-1014	6	Lockwasher, Term. Stud, 5/16
8X-1376	6	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002G	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler, Hinge Top, Press in 1/4

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAD-47	1	Washer, Thrust, D.E.
MAK-61	1	Washer, Thrust, C.E.
MAW-2152	1	Armature
MU-54	1	Washer, Thrust, C.E.

Miscellaneous Parts

MAB-1024F	1	Band, Cover
MAY-2148	1	Head Assy., Drive End
MAY-149	4	Stud
MAY-1148	1	Head Assy., Partial, D.E.
ML-18A	1	Bearing, Abs. Bronze
X-489	1	Oiler, Press in Type, 1/4
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAY-1012BS.

UNIT	APPLICATION
MBJ-4201	Massey Harris

Printed in U. S. A. (Issued 7-15-48) File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MAY-2147)	1	Frame & Field Assy.
CB-157	1	Washer, Ins., Term. Stud, Inner
GK-38	4	Screw, Pole Shoe
MAB-31	3	Washer, Ins., Term. Stud
MAB-85	1	Bushing, Ins., Term. Stud
MAB-118	1	Terminal
MAB-119	1	Insulation, Term. Stud
MAK-80	2	Washer, Ins., Term. Stud
MAW-13†	2	Brush, Grounded
MAX-67	1	Insulation, Field Connection, D.E.
MAY-12A†	1	Brush
MAY-12C†	1	Brush
MAY-34	2	Stud, Terminal
MAY-3005ES	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007N	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010E	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-31	2	Bushing, Ins., Term. Stud
MU-37	3	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	6	Lockwasher, Term. Stud, 5/16
8X-1376	6	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-2002G	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
X-390	1	Oiler

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MAW-2203	1	ARMATURE
MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32" Thick

Miscellaneous Parts

MAB-1024J	1	Band, Cover
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAY-1012BS.

UNIT	APPLICATION
MBJ-4202	Baldwin Ward

(Issued 10-26-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
(MAY-2147)	1	Frame & Field Assy.
CB-157	1	Insulation, Term. Stud. Inner
GK-38	4	Screw, Pole Shoe
MAB-31	3	Washer, Ins., Term. Stud
MAB-85	1	Bushing, Ins., Term. Stud
MAB-118	1	Terminal
MAB-119	1	Insulation, Term. Stud
MAK-80	2	Washer, Ins., Term. Stud
MAW-13 †	2	Brush, Grounded
MAX-67	1	Insulation, Field Connection, D.E.
MAY-12A†	1	Brush
MAY-12C†	1	Brush
MAY-34	2	Stud, Terminal
MAY-3005ES	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1007N	1	Coil, Field, U.L.
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010E	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-31	2	Bushing, Ins., Term. Stud
MU-37	3	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
X-1014	6	Lockwasher, Term. Stud, 5/16
8X-1376	6	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Aramture Assembly & Parts Used With

Part No.	No. Used	Name of Part
GDY-28B	1	Washer, Plain, Arm. Shaft, 7/16
MAK-61	1	Washer, Thrust, Comm. End
MAW-2209	1	ARMATURE
MAX-54	1	Spacer, Arm. Shaft
MU-54	1	Washer, Thrust, 1/32" Thick
X-407	1	Pin. Cotter, 3/32x3/4
X-1581	1	Nut, Shaft, Castel. 7/16-20

Miscellaneous Parts

MAU-1024	1	Band, Cover
MAX-1081	1	Head Assy., Drive End
MAX-53	1	Spacer, Bearing
MAX-81	1	Head
X-1499	1	BEARING, BALL, S.A.E. #203
XA-741	1	Ring, Brg. Retaining
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAY-1012BS.

(Issued 1-3-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBL-2093)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MBL-30	1	Insulation, Field Connection
MBL-1005	1	COIL ASSY., FIELD, COMPLETE
MBL-12	1	Brush
MBM-33	1	Connector, Field Coil Terminal
MU-14	1	Coil, Field, U.L.
MZ-1007	1	Coil, Field, L.R.
MZ-1008	1	Stud, Terminal
MU-28	1	Bushing, Ins., Term. Stud
MU-31	1	Washer, Plain, Term. Stud, 5/16
MU-37	1	Washer, Ins., Term. Stud, Inner
MU-39	1	Screw, Pole Shoe
MZ-38A	4	Lockwasher, Term. Stud, 5/16
12X-1014	2	Nut, Term. Stud, Hex., 5/16-24
8X-1376	2	

Comm. End Head Assembly & Parts Used With

MBL-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MBL-1034	1	Brush, Grounded
MZ-19	2	Spring, Brush
X-196	2	Lockwasher, Head Sc., #10
X-902	2	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MZ-2151	1	ARMATURE ASSY.
MBL-35	1	Spacer, Bearing Thrust
MU-54	1	Washer, Thrust, 1/32" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1274	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

MZ-1024D	1	Band, Cover
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

UNIT	APPLICATION
MBL-4001	Dura Co.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBL-2189)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MBL-30	1	Insulation, Field Connection
MBL-1005	1	COIL ASSY., FIELD, COMPLETE
MBL-12	1	Brush
MBM-33	1	Connector, Field Coil
MU-14	1	Terminal
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-38A	4	Screw, Pole Shoe
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MBL-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MBL-1034	1	Brush, Grounded
MZ-19	2	Spring, Brush
X-196	2	Lockwasher, Head Sc., #10
X-902	2	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAL-50	1	Washer, Thrust, D.E.
MBU-11	1	Washer, Thrust, D.E.
MU-54	1	Washer, Thrust, 1/32" Thick
MZ-2190	1	ARMATURE

Miscellaneous Parts

Part No.	No. Used	Name of Part
MBU-1003	1	Head Assy., Drive End
XA-597	1	Oil Seal
MZ-1024D	1	Band, Cover
X-119	4	Screw, D.E. Head, Fill. Hd. #10-32x1/2
X-196	4	Lockwasher, Head Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

UNIT	APPLICATION
MBL-4002	Dura Co.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBL-4003 MOTOR PARTS LIST

MBL-4003
(Issued 12-26-50)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBL-2212)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MBL-30	1	Insulation, Field Connection
MBL-1005	1	COIL ASSY., FIELD, COMPLETE
MBL-12	1	Brush
MBM-33	1	Connector, Field Coil
MU-14	1	Terminal
MZ-1007	1	Field, Coil, U.L.
MZ-1008	1	Coi., Field, L.R.
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-38A	4	Screw, Pole Shoe
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MBL-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MBL-1034	1	Brush, Grounded
MZ-19	2	Spring, Brush
12X-196	3	Lockwasher, C.E. Head Sc., #10
X-902	3	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2213	1	ARMATURE

Miscellaneous Parts

MZ-24A	1	Band, Cover
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

UNIT	APPLICATION
MBL-4003	Dura Co.

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBL-4004 MOTOR PARTS LIST

MBL-4004
(Issued 12-26-50)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBL-2230)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MBL-30	1	Insulation, Field Connection
MBL-32	1	Stud, Terminal, Grounded
MBL-1005	1	COIL ASSY., FIELD, COMPLETE
MBL-12	1	Brush
MBM-33	1	Connector, Field Coil Terminal
MU-14	1	Terminal
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-38A	4	Screw, Pole Shoe
12X-1014	4	Lockwasher, Term. Stud, 5/16
8X-1376	3	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MBL-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MBL-1034	1	Brush, Grounded
MZ-19	2	Spring, Brush
12X-196	3	Lockwasher, C.E. Head Sc., #10
X-902	3	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2213	1	ARMATURE

Miscellaneous Parts

MZ-24A	1	Band, Cover
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

UNIT	APPLICATION
MBL-4004	Dura Co.

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly with Terminal Post & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MBM-2001)	1	Frame & Field Assy.
MAB-31	2	Insulating Washer
MBM-32	1	Field Coil Connector
MBM-33	1	Field Coil Connector
MBM-34	1	Field Coil Connector
MBM-1007	1	Field Coil - U.L.
MBM-1008	1	Field Coil - L.L.
MBM-1009	1	Field Coil - L.R.
MU-14	2	Terminal
MU-28	2	Terminal Post
MU-31	2	Insulating Bushing
MU-37	2	5/16 Plain Washer
MU-39	2	Insulating Washer
MZ-12	1	BRUSH
MZ-29	4	Pole Piece
MZ-30A	1	Field Connection Ins.
MZ-38A	4	Pole Piece Screw
MZ-1007	1	Field Coil - U.R.
X-1014	2	5/16 Lock Washer
5X-1376	2	5/16-24 Hex. Nut
X-1014	2	5/16 Lock Washer
5X-1376	2	5/16-24 Hex. Nut

Comm. End Plate Assembly & Parts Used With

MBL-2002	1	Comm. End Plate Assy.
MZ-16	1	Brush Holder
MZ-19	2	Brush Spring
MZ-1034	1	BRUSH ASSY. - Grounded
X-532	2	1/8x1/4 Oval Hd. Tubular Rivet
X-544	2	#10 Lock Washer
X-902	2	#10-32x3/8 Fill. Hd. Sc.
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MU-54	1	Thrust Washer-1/32" Thick
MZ-2151	1	ARMATURE ASSEMBLY
MBL-35	1	Bearing Thrust Spacer

Miscellaneous Parts

MZ-1024	1	Head Band Assembly
8X-308	1	#10-32x1 3/8 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 3-4-41)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBO-4002 MOTOR PARTS LIST

MBO-4002
(Issued 12-26-50)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBO-2036)	1	Frame & Field Assy.
MAK-80	4	Washer, Ins., Term. Stud
MBC-30	2	Stud, Terminal
MBO-1005	1	COIL ASSY., FIELD, COMPLETE
MBL-12	1	Brush
MBO-17	2	Connector, Field Coil
MBO-18	1	Connector, Field Coil
MBO-1007	1	Coil, Field, U.R.
MBO-1008	1	Coil, Field, L.R.
MBO-1009	1	Coil, Field, L.L.
MBO-1010	1	Coil, Field, U.L.
MU-31	2	Bushing, Ins., Term. Stud
MU-37	2	Washer, Plain, Term. Stud, 5/16
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
X-1014	4	Lockwasher, Term. Stud, 5/16
8X-1376	4	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MBL-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MBL-1034	1	Brush, Grounded
MZ-19	2	Spring, Brush
X-196	2	Lockwasher, C.E. Head Sc., #10
8X-902	2	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MU-54	1	Washer, Thrust, 1/32" Thick
MZ-2151	1	ARMATURE ASSY.
MBL-35	1	Spacer, Bearing Thrust

Miscellaneous Parts

MZ-1024D	1	Band, Cover
8X-714	1	Screw, Cover, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

UNIT	APPLICATION
MBO-4002	Dura Co.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBO-2036)	1	Frame & Field Assy.
MAK-80	4	Washer, Ins., Term. Stud
MBC-30	2	Stud, Terminal
MBO-1005	1	COIL ASSY., FIELD, COMPLETE
MBL-12	1	Brush
MBO-17	2	Connector, Field Coil
MBO-18	1	Connector, Field Coil
MBO-1007	1	Coil, Field, U.R.
MBO-1008	1	Coil, Field, L.R.
MBO-1009	1	Coil, Field, L.L.
MBO-1010	1	Coil, Field, U.L.
MU-31	2	Bushing, Ins., Term. Stud
MU-37	2	Washer, Plain, Term. Stud, 5/16
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
X-1014	4	Lockwasher, Term. Stud, 5/16
8X-1376	4	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MBL-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MBL-1034	1	Brush, Grounded
MZ-19	2	Spring, Brush
X-196	2	Lockwasher, C.E. Head Sc.,#10
X-902	2	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAL-50	1	Washer, Thrust, D.E.
MBU-11	1	Washer, Thrust, D.E.
MU-54	1	Washer, Thrust 1/32" Thick
MZ-2190	1	ARMATURE

Miscellaneous Parts

Part No.	No. Used	Name of Part
MBU-1003	1	Head Assy. Drive End
XA-597	1	Oil Seal
MZ-1024D	1	Band, Cover
X-119	4	Screw, D.E. Head, Fill. Hd. #10-32x1/2
X-196	4	Lockwasher, D.E. Head Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

UNIT	APPLICATION
MBO-4003	Dura Co.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBR-2030)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins,, Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Terminal
MBD-233A	1	Stud, Terminal
MBR-12 †	2	Brush
MBR-12A †	2	Brush
MBR-13 †	2	Brush
MBR-13A †	2	Brush
MBR-34	1	Connector
MBR-3005S	1	FIELD COIL PACKAGE
MBR-1007	1	Coil, Field, U.L.
MBR-1008	1	Coil, Field, L.R.
MBR-1009	1	Coil, Field, U.R.
MBR-1010	1	Coil, Field, L.L.
MC-51A	1	Washer, Term. Stud, Inner
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBR-2078	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1078	1	Head Assy., Partial, Comm. End
GBF-79	1	BEARING, ABSORBENT BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
X-196	4	Lockwasher, Brush Plate Sc., #10
X-1573	1	Oiler, Press in Type, 3/8
8X-120	4	Screw, C.E. Head, Fill. Hd. #10-32x5/8
X-544	4	Lockwasher, C.E. Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Arm. Thrust, Comm. End
MBD-76	2	Washer, Arm. Thrust, Intermediate
MBR-2215	1	ARMATURE
MU-54	*	Washer, Arm. Thrust, C.E., 1/32'' Thick
MU-54A	*	Washer, Arm. Thrust, C.E., 1/64'' Thick
MU-54B	*	Washer, Arm. Thrust, C.E., 3/64'' Thick
X-261	2	Key, Woodruff, #6

Miscellaneous Parts

EBA-50	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-4503	1	Head, Drive
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-5219S	1	Sleeve, Compression
EBA-5005	1	SPRING, DRIVE
EBA-5011	1	Shaft & Pinion
MBD-1118	1	Brg. Assy., Intermediate
MBD-285	1	BRG., ABSORBENT BRONZE
MBR-1024A	1	Band, Cover
MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
PS-1207	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-213	1	BEARING, ABSORBENT BRONZE
X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBR-1012S.

UNIT	APPLICATION
MBR-4004	Buda

Printed in U. S. A. (Issued 6-15-48) File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBR-2032)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Terminal
MBD-233A	1	Stud, Terminal
MBR-12 †	2	Brush
MBR-12A†	2	Brush
MBR-13 †	2	Brush
MBR-13A†	2	Brush
MBR-34	1	Connector
MBR-3005S	1	FIELD COIL PACKAGE
MBR-1007	1	Coil, Field, U.L.
MBR-1008	1	Coil, Field, L.R.
MBR-1009	1	Coil, Field, U.R.
MBR-1010	1	Coil, Field, L.L.
MC-51A	1	Washer, Term. Stud, Inner
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBR-2236	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	BEARING, ABS. BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Sc., #10
X-1573	1	Oiler
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-544	12	Lockwasher, Head Sc., #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Arm. Thrust, C.E.
MBD-76	2	Washer, Arm. Thrust, Int.
MBR-2215	1	ARMATURE
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-6LA	1	Connector
SS-4301	1	SWITCH, STARTING SOLENOID
8X-173	1	Nut, Hex. #10-32
X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-50	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-4503	1	Head, Drive
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-5219S	1	Sleeve, Compression
EBA-5005	1	SPRING, DRIVE
EBA-5011	1	Shaft & Pinion
MBD-24	1	Band, Cover
MBD-1118	1	BEARING ASSY., INTERMEDIATE
MBD-285	1	Bearing, Abs. Bronze
MR-48	8	Screw, Pinion Housing, Hex. Hd., #10-40x7/8
PS-1207B	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	BEARING, ABS. BRONZE
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBR-1012S.

* Use as Required.

UNIT	APPLICATION
MBR-4006	Buda, Climax

(Issued 10-20-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBR-2032)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Terminal
MBD-233A	1	Stud, Terminal
MBR-12 †	2	Brush
MBR-12A†	2	Brush
MBR-13 †	2	Brush
MBR-13A†	2	Brush
MBR-34	1	Connector
MBR-3005S	1	FIELD COIL PACKAGE
MBR-1007	1	Coil, Field, U.L.
MBR-1008	1	Coil, Field, L.R.
MBR-1009	1	Coil, Field, U.R.
MBR-1010	1	Coil, Field, L.L.
MC-51A	1	Washer, Term. Stud, Inner
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBR-2236	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	BEARING, ABS. BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Sc., #10
X-1573	1	Oiler
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-544	12	Lockwasher, Head Sc., #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Arm. Thrust, C.E.
MBD-76	2	Washer, Arm. Thrust, Int.
MBR-2215	1	ARMATURE
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-6LA	1	Connector
SS-4301	1	SWITCH, STARTING SOLENOID
8X-173	1	Nut, Hex. #10-32
X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-50	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-4503	1	Head, Drive
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-5219S	1	Sleeve, Compression
EBA-5005	1	SPRING, DRIVE
EBA-5011	1	Shaft & Pinion
MBD-24	1	Band, Cover
MBD-1118	1	BEARING ASSY., INTERMEDIATE
MBD-285	1	Bearing, Abs. Bronze
MR-48	8	Screw, Pinion Housing, Hex. Hd., #10-40x7/8
PS-1207C	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	BEARING, ABS. BRONZE
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBR-1012S.
* Use as Required.

UNIT	APPLICATION
MBR-4007	Climax

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBR-2032)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Terminal
MBD-233A	1	Stud, Terminal
MBR-12 †	2	Brush
MBR-12A †	2	Brush
MBR-13 †	2	Brush
MBR-13A †	2	Brush
MBR-34	1	Connector
MBR-3005S	1	FIELD COIL PACKAGE
MBR-1007	1	Coil, Field, U.L.
MBR-1008	1	Coil, Field, L.R.
MBR-1009	1	Coil, Field, U.R.
MBR-1010	1	Coil, Field, L.L.
MC-51A	1	Washer, Term. Stud, Inner
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBR-2236	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, Comm. End
GBF-79	1	BEARING, ABSORBENT BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Sc., #10
X-1573	1	Oiler
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-544	12	Lockwasher, C.E. Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBD-76	2	Washer, Thrust, Intermediate
MBR-2305	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4301	1	SWITCH, SOLENOID
8X-173	1	Nut, Hex. #10-32
X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-84A	1	BENDIX DRIVE
MBD-24	1	Band, Cover
MBD-1118	1	Bearing Assy., Intermediate
MBD-285	1	BEARING, ABS. BRONZE
MR-48	8	Screw, Housing Hex. Hd. #10-40x7/8
PS-1248	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBR-51	1	BEARING, ABS. BRONZE
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBR-1012S.

* Use as required.

UNIT	APPLICATION
MBR-4010	Climax

(Issued 10-19-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBR-2032)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Terminal
MBD-233A	1	Stud, Terminal
MBR-12 †	2	Brush
MBR-12A †	2	Brush
MBR-13 †	2	Brush
MBR-13A †	2	Brush
MBR-34	1	Connector
MBR-3005S	1	Field Coil Package
MBR-1007	1	Coil, Field, U.L.
MBR-1008	1	Coil, Field, L.R.
MBR-1009	1	Coil, Field, U.R.
MBR-1010	1	Coil, Field, L.L.
MC-51A	1	Washer, Term. Stud, Inner
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBR-2236	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, Comm. End
GBF-79	1	Bearing, Absorbent Bronze
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Sc., #10
X-1573	1	Oiler
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-544	12	Lockwasher, C.E. Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBD-76	2	Washer, Thrust, Intermediate
MBR-2215	1	Armature
MU-54	*	Washer, Thrust, C.E. 1/32'' Thick
MU-54A	*	Washer, Thrust, C.E. 1/64'' Thick
MU-54B	*	Washer, Thrust, C.E. 3/64'' Thick
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-6LA	1	Connector
SS-4301	1	Solenoid Starting Switch
8X-173	1	Nut, Hex. #10-32
X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-50	1	Bendix Drive Assy.
EB-108	2	Lockwasher
EB-4503	1	Head, Drive
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-5219S	1	Sleeve, Compression
EBA-5005	1	Spring, Drive
EBA-5011	1	Shaft & Pinion
MBD-24	1	Band, Cover
MBD-1118	1	Bearing Assy., Intermediate
MBD-285	1	Bearing, Abs. Bronze
MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
PS-1207A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	Bearing, Abs. Bronze
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MBR-1012S.
* Use as required.

UNIT	APPLICATION
MBR-4012	U.S. Motors

(Issued 12-22-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBR-2033)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBR-12†	2	Brush
MBR-12A†	2	Brush
MBR-13 †	2	Brush
MBR-13A†	2	Brush
MBR-34	1	Connector, Brush
MBR-3005S	1	Field Coil Package
MBR-1007	1	Coil, Field, U.L.
MBR-1008	1	Coil, Field, L.R.
MBR-1009	1	Coil, Field, U.R.
MBR-1010	1	Coil, Field, L.L.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MN-47B	1	Washer, Plain, Term. Stud, Outer
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover Bearing, Comm. End
MAD-110	1	Felt
MBR-2236	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	Bearing, Absorbent B Bronze
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Sc., #10
X-1573	1	Oiler, Press in Type, 3/8
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-544	12	Lockwasher, C.E. Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Arm. Thrust, C.E.
MBD-76	2	Washer, Arm. Thrust, Intermediate
MBR-2212	1	Armature
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick
X-261	2	Key Woodruff, #6

Miscellaneous Parts

EBA-74	1	Bendix Drive
MBD-24	1	Band, Cover
MF[illegible]-1118	1	Bearing Assy., Intermediate
MB[illegible]-285	1	Bearing, Absorbent Bronze
MR-48	8	Screw, Housing, Hex. Hd. #10-40x7/8
PS-1206	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-220	1	Bearing, Abs. Bronze
12X-196	8	Lockwasher, Housing Sc., #10
8X-714	1	Screw Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32

† Brush Set, Service MBR-1012S.

* Use as required.

UNIT	APPLICATION
MBR-4013	Harnischfeger

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MBR-2054)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Insulating Arm. Term., Inner
MAX-44	1	Washer, Plain Arm. Term., 3/8
MBD-119	2	Washer, Insulating, Inner
MBD-231	1	Connector, Term. Stud
MBD-233	1	Stud, Terminal
MBR-12	2	Brush
MBR-12A	2	Brush
MBR-13	2	Brush
MBR-13A	2	Brush
MBR-34	1	Connector
MBR-1007	1	Coil, Field, U.L.
MBR-1008	1	Coil, Field, L.R.
MBR-1009	1	Coil, Field, U.R.
MBR-1010	1	Coil, Field, L.L.
MC-51A	1	Washer, Term. Stud, Inner
MR-32	2	Insulating, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd., #10-32x1/2
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term., Stud, Hex. Hd., 3/8-16

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover Bearing, Comm. End
MAD-110	1	Felt
MBR-2236	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236B	1	Head Assy., Partial, C.E. Bearing, Abs. Bronze
GBF-79	1	Plate Assy., Brush
MBR-2079	1	Clip, Brush Holder
GG-81	4	Spring, Brush
MBD-19	8	Spacer
MBD-47	4	Screw, Brush, Plate, Fil. Hd., #10-32x5/8
8X-120	4	Lockwasher, Brush Plate Sc., #10
12X-196	4	Oiler, Press in Type, 3/8
X-1573	1	Screw, C.E. Head, Fil. Hd., #10-32x5/8
8X-120	12	Lockwasher, C.E. Head Sc., #10
12X-544	12	1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	Washer, Arm. Thrust, C.E.
MBD-76	2	Washer, Arm. Thrust, Intermediate
MBR-2308	1	Armature
MU-54	*	Washer, Thrust, 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

MBD-310	1	Connector
MBR-1309	1	Solenoid Switch & Bracket Assy.
MBD-309	1	Bracket
WSM-4101A	1	Switch, Solenoid
19X-343	2	Screw, Bracket Mtg., Hex. Hd., 1/4-28x5/8
XA-595	2	Nut, Bracket Mtg., Elastic Stop 1/4-28
12X-535	4	Lockwasher, 1/4
8X-905	4	Screw, Switch Mtg., Fil. Hd., 1/4-20x7/16

Miscellaneous Parts

EBA-51	1	Bendix Drive Assy.
MBD-24	1	Band, Cover
MBD-1118	1	Brg. Assy., Intermediate
MBD-285	1	Brg., Abs. Bronze
MR-48	8	Screw, Attaching, Pinion Housing, Hex. Hd., #10-40x7/8
PS-1266	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
12X-196	8	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd., #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

* Used as required.

Unit	Application
MBR-4014	Hercules

(Issued 1-14-47)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
(MBR-2032A)	1	Frame & Field Assy.
GK-38C	8	Screw, Pole Shoe
MAW-37C	1	Bushing, Ins., Term. Stud
MBD-119	1	Washer, Ins., Term. Stud
MBD-231	1	Terminal
MBD-233A	1	Stud, Terminal
MBR-12 †	2	Brush
MBR-12A †	2	Brush
MBR-13 †	2	Brush
MBR-13A †	2	Brush
MBR-34	1	Connector
MBR-3005S	1	FIELD COIL PACKAGE
MBR-1007	1	Coil, Field, U.L.
MBR-1008	1	Coil, Field, L.R.
MBR-1009	1	Coil, Field, U.R.
MBR-1010	1	Coil, Field, L.L.
MC-51B	1	Washer, Term. Stud, Inner
MN-47B	1	Washer, Plain, Term. Stud, Outer
MR-32	2	Insulation, Field Connection
12X-201	2	Lockwasher, Term. Stud, 3/8
X-2845	2	Nut, Term. Stud, Hex. 3/8-16
X-2876	4	Screw, Brush Lead, Flat Hd., #10-32x1/2

Comm. End Head Assembly & Parts Used With

GAL-40B	1	Cover, Bearing
MAD-110	1	Felt
MBD-258	12	Screw, Fil. Hd. #10-32x5/8, Attaching, C.E. Head
MBR-2236C	1	Head Assy., Comm. End
MBD-150	1	Felt Wick
MBD-1236A	1	Head Assy., Partial, C.E.
GBF-79	1	BEARING, ABS. BRONZE
MBR-2079A	1	Plate Assy., Brush
GG-81A	4	Clip, Brush Holder
MBD-19A	8	Spring, Brush
MBD-47A	4	Spacer
12X-196	4	Lockwasher, Brush Plate Sc. #10
X-1573A	1	Oiler, Press in Type, 3/8
X-1672	4	Screw, Brush Plate, Fil. Hd. #10-32x5/8
12X-544	12	Lockwasher, C.E. Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61A	1	Washer, Arm. Thrust, C.E.
MBD-76	2	Washer, Arm. Thrust, Intermediate
MBR-2305M	1	ARMATURE
MU-54	*	Washer, Thrust 1/32'' Thick
MU-54A	*	Washer, Thrust 1/64'' Thick
MU-54B	*	Washer, Thrust 3/64'' Thick
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

MBR-40	1	Connector
SSR-4001M	1	SWITCH, SOLENOID
12X-196	1	Washer, Lock, #10
12X-1014	2	Washer, Lock, 5/16
8X-2843	2	Nut, Hex., 5/16-24
8X-2853	1	Nut, Hex., #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-84A	1	BENDIX DRIVE
MBD-1024F	1	Cover, Band
MBD-1118A	1	Bearing Assy., Intermediate
MBD-285	1	BEARING, ABS. BRONZE
MR-48A	8	Screw, Attaching, Pinion Housing, Hex. Hd. #10-40x7/8
PS-1248A	1	Housing Assy., Pinion
MAB-88A	1	Pin, Dowel
MBR-51	1	BEARING, ABSORBENT BRONZE
12X-196	8	Lockwasher, Housing Sc., #10
X-2873	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
X-2875	1	Nut, Cover Band, Square #10-32

* Use as Required.

† BRUSH SET, SERVICE MBR-1012S.

UNIT	APPLICATION
MBR-4017M	Gray Marine

(Issued 8-25-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBR-3056)	1	Frame & Field Assy.
GK-38C	8	Screw, Pole Shoe
MAW-37A	1	Bushing, Ins., Term. Stud
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal, 3/8-16
MBR-12 †	2	Brush
MBR-12A†	2	Brush
MBR-13 †	2	Brush
MBR-13A†	2	Brush
MBR-34	1	Connector
MBR-3005S	1	FIELD COIL PACKAGE
MBR-1007	1	Coil, Field, U.L.
MBR-1008	1	Coil, Field, L.R.
MBR-1009	1	Coil, Field, U.R.
MBR-1010	1	Coil, Field, L.L.
MC-51B	1	Washer, Plain, Term. Stud, Inner
MN-47B	1	Washer, Plain, Term. Stud, Outer
MR-32	2	Insulation, Field Connection
12X-201	2	Lockwasher, Term. Stud, 3/8
X-2845	2	Nut, Term. Stud, Hex. 3/8-16
X-2876	4	Screw, Brush Lead, Flat Hd. #10-32x1/2

Comm. End Head Assembly & Parts Used With

GAL-40B	1	Cover, Bearing, C.E.
MAD-110	1	Felt
MBD-258	12	Screw, C.E. Head, Fil. Hd. #10-32x5/8
MBR-2236C	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236A	1	Head Assy., Partial, Comm. End
GBF-79	1	BEARING, ABS. BRONZE
MBR-2079A	1	Plate Assy., Brush
GG-81A	4	Clip, Brush Holder
MBD-19A	8	Spring, Brush
MBD-47A	4	Spacer
12X-196	4	Lockwasher, Brush Plate Sc., #10
X-1573A	1	Oiler, Press in Type, 3/8
X-1672	4	Screw, Brush Plate, Fil. Hd., #10-32x5/8
12X-544	12	Lockwasher, C.E. Head Screw #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61A	1	Washer, Arm. Thrust, Comm. End
MBD-76	2	Washer, Arm. Thrust, Int.
MBR-2305M	1	ARMATURE
MU-54	*	Washer, Thrust, 1/32'' Thick
MU-54A	*	Washer, Thrust, 1/64'' Thick
MU-54B	*	Washer, Thrust, 3/64'' Thick
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

MBR-40	1	Connector
SSR-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex., 5/16-24
8X-2853	1	Nut, Hex., #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-98A	1	BENDIX DRIVE ASSEMBLY
MBD-254A	8	Screw, Housing, Hex. Hd. #10-32x7/8
MBD-1024F	1	Band, Cover
MBD-1118A	1	Bearing Assy., Int.
MBD-285	1	BEARING, ABS. BRONZE
PS-1248A	1	Housing Assy., Pinion
MAB-38A	1	Pin, Dowel
MBR-51	1	BEARING, ABS. BRONZE
12X-196	8	Lockwasher, Housing Screw, #10
X-2873	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
X-2875	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBR-1012S.

UNIT	APPLICATION
MBR-4018M	Gray Marine

(Issued 8-25-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBR-4020 STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBR-2033)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBR-12 †	2	Brush
MBR-12A †	2	Brush
MBR-13 †	2	Brush
MBR-13A †	2	Brush
MBR-34	1	Connector, Brush
MBR-3005S	1	FIELD COIL PACKAGE
MBR-1007	1	Coil, Field, U.L.
MBR-1008	1	Coil, Field, L.R.
MBR-1009	1	Coil, Field, U.R.
MBR-1010	1	Coil, Field, L.L.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MAX-44	1	Washer, Plain, Term. Stud, Outer
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd., #10-32x1/2
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBR-2236	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	BEARING, ABS. BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Sc., #10
X-1573	1	Oiler
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBD-311	2	Washer, Thrust, Intermediate
MBR-2212	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32'' Thick
MU-54A	*	Washer, Thrust, C.E., 1/64'' Thick
MU-54B	*	Washer, Thrust, C.E., 3/64'' Thick
X-261	2	Key, Woodruff, #6

Miscellaneous Parts

EBB-3	1	BENDIX DRIVE ASSY.
MBD-24	1	Band, Cover
MBD-1315	1	BEARING ASSY., INTERMEDIATE
MBD-312	1	Retainer, Felt
MBD-313	1	Felt Washer
MBD-314	1	Bearing, Abs. Bronze
MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
PS-1228	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-257	1	BEARING, ABS. BRONZE
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required.

† BRUSH SET, SERVICE MBR-1012S.

UNIT	APPLICATION
MBR-4020	Buda

(Issued 6-3-49)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBR-2033)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBR-12 †	2	Brush
MBR-12A †	2	Brush
MBR-13 †	2	Brush
MBR-13A †	2	Brush
MBR-34	1	Connector
MBR-3005S	1	FIELD COIL PACKAGE
MBR-1007	1	Coil, Field, U.L.
MBR-1008	1	Coil, Field, L.R.
MBR-1009	1	Coil, Field, U.R.
MBR-1010	1	Coil, Field, L.L.
MC-51A	1	Washer, Plain, Term. Stud Inner
MN-47B	1	Washer, Plain, Term. Stud Outer
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBD-258	12	Screw, C.E. Head, Fil. Hd. #10-32x5/8
MBR-2236	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, Comm. End
GBF-79	1	BEARING, ABSORBENT BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Sc. #10
X-1573	1	Oiler, Press in Type, 3/8
12X-544	12	Lockwasher, C.E. Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Arm. Thrust, Comm. End
MBD-76	2	Washer, Arm. Thrust, Intermediate
MBR-2212	1	ARMATURE
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick
X-261	2	Key, Woodruff, #6

Miscellaneous Parts

EBB-3	1	BENDIX DRIVE ASSY.
MBD-24	1	Band, Cover
MBD-1118	1	Brg. Assy., Intermediate
MBD-285	1	BEARING, ABS. BRONZE
MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
PS-1228	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-257	1	BEARING, ABSORBENT BRONZE
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as Required.

† BRUSH SET, SERVICE MBR-1012S.

UNIT	APPLICATION
MBR-4021	Buda

(Issued 6-16-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBR-4022 STARTING MOTOR PARTS LIST

MBR-4022
(Issued 6-20-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-3056A	1	Frame & Field Assembly
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBR-34	1	Connector, Brush
MBR-1012S	1	BRUSH SET
MBR-3005S	1	FIELD COIL PACKAGE
MBR-1007	1	Coil, Field, U. L.
MBR-1008	1	Coil, Field, L. R.
MBR-1009	1	Coil, Field, U. R.
MBR-1010	1	Coil, Field, L. L.
MC-51A	1	Washer, Plain, Term. Stud Inner
MCK-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Grd., Flat Hd. #10-32x1/2
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-148	1	Nut, Term. Stud, Hex. 3/8-16
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBD-258	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8
MBR-2236	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C. E.
GBF-79	1	BEARING, ABSORBENT BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Plate Screw, #10
X-1573	1	Oiler
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBD-311	2	Washer, Thrust, Intermediate
MBR-2212	1	ARMATURE
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick

Switch Assembly & Parts Used With

MBR-40	1	Connector
SSW-4001	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBB-15	1	BENDIX DRIVE
MBD-1024K	1	Band, Cover
MBD-1315	1	BRG. ASSY., INTERMEDIATE
MBD-312	1	Retainer, Felt Washer
MBD-313	1	Washer, Felt
MBD-314	1	Brg., Absorbent Bronze
MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
PS-1228	1	Housing Assembly, Pinion
MAB-88	1	Pin, Dowel
MBD-257	1	BEARING, ABSORBENT BRONZE
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required.

UNIT	APPLICATION
MBR-4022	Cockshutt, Co-Op

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBR-4023 STARTING MOTOR PARTS LIST

MBR-4023
(Issued 6-20-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-2033	1	Frame & Field Assembly
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBR-34	1	Connector, Brush
MBR-1012S	1	BRUSH SET
MBR-3005S	1	FIELD COIL PACKAGE
MBR-1007	1	Coil, Field, U. L.
MBR-1008	1	Coil, Field, L. R.
MBR-1009	1	Coil, Field, U. R.
MBR-1010	1	Coil, Field, L. L.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MCK-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-148	1	Nut, Term. Stud, Hex. 3/8-16
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, C. E.
MAD-110	1	Felt
MBD-258	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8
MBR-2236	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C. E.
GBF-79	1	BEARING, ABSORBENT BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Screw, #10
X-1573	1	Oiler
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBD-311	2	Washer, Thrust, Intermediate
MBR-2212	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Miscellaneous Parts

EBB-3	1	BENDIX DRIVE
MBD-1024K	1	Band, Cover
MBD-1315	1	BEARING ASSEMBLY, INTERMEDIATE
MBD-312	1	Retainer, Felt
MBD-313	1	Felt Washer
MBD-314	1	Bearing, Abs. Bronze
MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
PS-1228	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-257	1	BEARING, ABSORBENT BRONZE
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required.

UNIT	APPLICATION
MBR-4023	Cockshutt, Co-Op

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBR-4024 STARTING MOTOR PARTS LIST — MBR-4024 (Issued 2-13-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-2054	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBR-12†	2	Brush
MBR-12A†	2	Brush
MBR-13†	2	Brush
MBR-13A†	2	Brush
MBR-34	1	Connector, Brush
MBR-3005S	1	FIELD COIL PACKAGE
MBR-1007	1	Coil, Field, U. L.
MBR-1008	1	Coil, Field, L. R.
MBR-1009	1	Coil, Field, U. R.
MBR-1010	1	Coil, Field, L. L.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-148	1	Nut, Term. Stud, Hex. 3/8-16
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBR-2236	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C. E.
GBF-79	1	BEARING, ABS. BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Sc., #10
X-1573	1	Oiler
8X-120	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBD-311	2	Washer, Thrust, Intermediate
MBR-2318	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54A	*	Washer, Thrust, C. E., 1/64" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

MBD-310	1	Connector, Switch to Motor
MBR-1309	1	Switch & Bracket Assy., Solenoid
MBD-309	1	Bracket, Solenoid Mtg.
WSM-4101A	1	SWITCH, SOLENOID STARTING (See Separate List for Parts)
19X-343	2	Screw, Bracket Mtg., Hex. Hd. 1/4-20x5/8
XA-595	2	Nut, Bracket Mtg., Elastic Stop, Hex. 1/4-28
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
8X-905	4	Screw, Switch Mtg., Fill. Hd. 1/4-20x7/16

Miscellaneous Parts

EBB-18	1	BENDIX DRIVE
MBD-24	1	Band, Cover
MBD-1315	1	Bearing Assy., Intermediate
MBD-312	1	Retainer, Felt
MBD-313	1	Felt Washer
MBD-314	1	BEARING, ABS. BRONZE
MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
PS-1266	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBR-1012S.

* Use as required.

UNIT	APPLICATION
MBR-4024	Hercules

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBR-4025 STARTING MOTOR PARTS LIST

MBR-4025
(Issued 10-5-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBR-2033)	1	Frame & Field Assy.
GK-38	2	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBR-12†	2	Brush
MBR-12A†	2	Brush
MBR-13†	2	Brush
MBR-13A†	2	Brush
MBR-34	1	Connector, Brush
MBR-3005S	1	FIELD COIL PACKAGE
MBR-1007	1	Coil, Field, U.L.
MBR-1008	1	Coil, Field, L.R.
MBR-1009	1	Coil, Field, U.R.
MBR-1010	1	Coil, Field, L.L.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut,, Term. Stud, Hex. 3/8-16
8X-148	1	Nut, Term. Stud, Hex. 3/8-16
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBR-2236	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	BEARING, ABS. BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Sc., #10
X-1573	1	Oiler
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBD-311	2	Washer, Thrust, Intermediate
MBR-2318	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Miscellaneous Parts

EBB-18	1	BENDIX DRIVE
MBD-24	1	Band, Cover
MBD-1315	1	BEARING ASSY., INTERMEDIATE
MBD-312	1	Retainer, Felt
MBD-313	1	Felt Washer
MBD-314	1	Bearing, Abs. Bronze
MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
PS-1266	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBR-1012S.

* Use as required.

UNIT	APPLICATION
MBR-4025	Hercules

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBR-4026 STARTING MOTOR PARTS LIST

MBR-4026
(Issued 11-19-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-2033	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBR-12†	2	Brush
MBR-12A†	2	Brush
MBR-13†	2	Brush
MBR-13A†	2	Brush
MBR-34	1	Connector, Brush
MBR-3005S	1	FIELD COIL PACKAGE
MBR-1007	1	Coil, Field, U.L.
MBR-1008	1	Coil, Field, L.R.
MBR-1009	1	Coil, Field, U.R.
MBR-1010	1	Coil, Field, L.L.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd., #10-32x1/2
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-148	1	Nut, Term. Stud, Hex. 3/8-16
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, C.E.
MAD-110	1	Felt
MBR-2236B	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	BEARING, ABS. BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Sc., #10
X-2964A	1	Oiler
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBD-311	1	Washer, Thrust, Intermediate
MBR-2305	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
X-261	2	Key, Woodruff, D.E., #6

Miscellaneous Parts

EBA-84A	1	BENDIX DRIVE
MBD-1024K	1	Band, Cover
MBD-1315	1	BEARING ASSY., INTERMEDIATE
MBD-312	1	Retainer, Felt
MBD-313	1	Felt Washer
MBD-314	1	Bearing, Abs. Bronze
MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
PS-1248	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBR-51	1	BEARING, ABS. BRONZE
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBR-1012S

* Use as required.

UNIT	APPLICATION
MBR-4026	Harnischfeger

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-2058	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	2	Bushing, Insulating, Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-15	1	Insulation, Term. Stud, Inner
MBD-34	1	Terminal
MBD-119	3	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBR-12D†	2	Brush
MBR-12E†	2	Brush
MBR-13D†	2	Brush
MBR-13E†	2	Brush
MBR-3005BS	1	FIELD COIL PACKAGE
MBR-1007B	1	Coil, Field, U. L.
MBR-1008B	1	Coil, Field, L. L.
MBR-1009B	1	Coil, Field, U. R.
MBR-1010B	1	Coil, Field, L. R.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MR-32	1	Insulation, Field Connection
SS-119	1	Stud, Terminal
12X-201	2	Lockwasher, Terminal Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16
8X-148	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBR-2236	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C. E.
GBF-79	1	BEARING, ABS. BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Sc., #10
X-1573	1	Oiler
8X-120	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8
12X-196	12	Lockwasher, C. E. Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBR-2316	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54A	*	Washer, Thrust, C. E., 1/64" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Miscellaneous Parts

MBD-24	1	Band, Cover
MBD-317	1	Head, Drive End
8X-120	8	Screw, D. E. Head, Fill. Hd. #10-32x5/8
12X-196	8	Lockwasher, D. E. Head Screw, #10
X-367	1	Bearing, Ball, Sealed, S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBR-1012BS.

* Use as required.

UNIT	APPLICATION
MBR-4027	J. S. Barnes

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-2325	1	Frame & Field Assembly
GK-38	8	Screw, Pole Shoe
MAW-37	2	Bushing Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-115	1	Washer, Ins., Term. Stud, Inner
MBD-119	3	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBD-322	1	Terminal, Brush
MBD-324	1	Terminal, Brush
MBR-1007B	1	COIL, FIELD, U. L.
MBR-1008C	1	COIL, FIELD, L. L.
MBR-1009B	1	COIL, FIELD, U. R.
MBR-1010D	1	COIL, FIELD, L. R.
MBR-1323†	2	Terminal & Brush Assy.
MC-51A	1	Washer, Plain, Term. Stud, Inner
MR-32	1	Insulation, Field Connection
SS-119	1	Stud, Terminal
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16
X-3177	2	Screw, Br. Terminal, Rd. Hd. 1/4-20x3/8
8X-148	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBD-258	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8
MBR-2236	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C. E.
GBF-79	1	BEARING, ABSORBENT BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
12X-196	4	Lockwasher, Brush Plate Screw, #10
X-1573	1	Oiler
12X-196	12	Lockwasher, C. E. Head Screw, #10

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MBR-2316	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Miscellaneous Parts

MBD-24	1	Band, Cover
MBD-258	8	Screw, D. E. Head, Fill. Hd. #10-32x5/8
MBD-317	1	Head, Drive End
12X-196	8	Lockwasher, D. E. Head Screw, #10
X-367	1	BEARING, BALL, SEALED, S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBR-1323S.

* Used as required.

UNIT	APPLICATION
MBR-4028	J. S. Barnes

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBR-4029 MOTOR PARTS LIST

MBR-4029
(Issued 2-24-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-2063	1	Frame & Field Assembly
GK-38	8	Screw, Pole Shoe
MAW-37	2	Bushing, Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-115	1	Washer, Ins., Term. Stud, Inner
MBD-119	3	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBD-322	1	Terminal, Brush
MBD-324	1	Terminal, Brush
MBR-64	1	Insulation, Field Coil
MBR-1007B	1	COIL, FIELD, U. L.
MBR-1008C	1	COIL, FIELD, L. L.
MBR-1009C	1	COIL, FIELD, U. R.
MBR-1010D	1	COIL, FIELD, L. R.
MBR-1323†	2	Terminal & Brush Assy.
MC-51A	1	Washer, Plain, Term. Stud, Inner
SS-119	1	Stud, Terminal
12X-201	2	Lockwasher, Terminal Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16
X-3177	2	Screw, Br. Terminal, Rd. Hd. 1/4-20x3/8
8X-148	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBD-258	4	Screw, C.E. Head, Fill. Hd. #10-32x5/8
MBR-2078	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1078	1	Head Assy., Partial, C. E.
GBF-79	1	BEARING, ABSORBENT BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Screw, #10
X-1573	1	Oiler
12X-196	4	Lockwasher, C. E Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBR-2316	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32'' Thick
MU-54B	*	Washer, Thrust, C. E., 3/64'' Thick

Miscellsneous Parts

MBD-258	8	Screw, D. E. Head, Fill. Hd. #10-32x5/8
MBD-317	1	Head, Drive End
MBD-1406	1	Band, Cover
12X-196	8	Lockwasher, D. E. Head Screw, #10
X-367	1	Bearing, Ball, Sealed, S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBR-1323S.

* Use as required.

UNIT	APPLICATION
MBR-4029	J.S. Barnes

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBS-2030	1	Frame & Field Assy.
GBG-23	2	Stud, Terminal
GBG-38	8	Screw, Pole Shoe
GCY-28	6	Bushing, Ins., Term. Stud
GDW-33S	1	Bracket, Mounting
MBS-23	4	Stud, Terminal
MBS-26	1	Lead Assy.
MBS-14	1	Clip, Terminal
X-1743	2	Terminal
MBS-27	1	Lead Assy.
MBS-14	1	Clip, Terminal
X-1743	2	Terminal
MBS-31	1	Connector, Field Coil
MBS-33	2	Insulation, Term. Stud
MBS-37	3	Insulation, Term. Stud
MBS-1007A	1	COIL, FIELD, U. L.
MBS-1008A	1	COIL, FIELD, L. R.
MBS-1009A	1	COIL, FIELD, L. L.
MBS-1010A	1	COIL, FIELD, U. R.
MBS-1034	1	Connector, Field Coil
MU-36	6	Washer, Ins., Term. Stud, Outer
MU-37	6	Washer, Plain, Term. Stud
12X-201	4	Lockwasher, Bracket Sc., 3/4
8X-465	4	Screw, Mtg. Bracket, Hex. Hd. 3/8-24x3/4
12X-1014	12	Lockwasher, Term. Stud, 5/16
8X-1376	12	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

DA-60	1	Screw, Bearing Retaining
GBG-46	1	Washer, Spring
GBG-47	1	Washer, Felt
GBG-48	2	Retainer, Felt Washer
GBG-63	1	Cover, Comm. End
GBG-64	1	Gasket, Comm. End Cover
GBG-66	1	Washer, Bearing Retaining
MBS-2093	1	Head Assy., Comm. End
DA-38	2	Washer, Spring, Br. Plate Screw
DE-85	1	Washer, Steel, Plate Adj. Screw
GBG-41	2	Screw, Brush Plate
GBG-51	2	Washer, Plain, Brush Plate Screw
GBG-93	1	Head, Comm. End
GDX-1031	1	Plate Assy., Br. Holder

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
GBG-18R	4	Holder, Brush
GBG-36	4	Spring, Brush
GBG-40	4	Terminal, Brush Holder
GBG-85	4	Stud, Brush Holder
GBG-1037	4	Arm, Brush
8X-173	4	Nut, Brush Stud, Hex. #10-32
X-196	4	Lockwasher, Brush Stud #10
GK-151	1	Washer, Plain, Plate Adj. Screw
MCP-1012†	4	Brush
12X-195	4	Lockwasher, Brush Lead Sc., #8
8X-208	1	Screw, Plate Adj., Hex. Hd. #10-32x9/16
8X-305	4	Screw, Brush Lead, Rd. Hd. #8-32x1/4
8X-361	2	Washer, Plain, Brush Plate Sc., 1/4
X-1270	1	Washer, Plate Adj. Sc., Skpf. #10
8X-118	6	Screw, C. E. Head, Fill. Hd. #10-32x3/4
12X-195	4	Lockwasher, Br. Lead Conn. Sc., #8
12X-196	10	Lockwasher, C. E. Head Sc. (6) & Cover Sc. (4), #10
12X-199	1	Lockwasher, Brg. Retaining Sc., 1/4
8X-305	4	Screw, Br. Lead Connection, #8-32x1/4
X-394	1	Oiler
X-440	1	Bearing, Ball, Shielded, S. A. E. #305
8X-870	4	Screw, C. E. Cover, Fill. Hd. #10-32x5/16

Armature Assembly & Parts Used With

GBG-49	2	Spacer, Arm. Shaft, C. E. & D. E.
GBG-81	1	Snap Ring
MBS-2032F	1	ARMATURE ASSY.
X-158	1	Nut, Shaft, D. E., Hex. 1/2-20
12X-198	1	Lockwasher, Shaft, D. E., 1/2
X-261	1	Key, Woodruff, D. E., #6
X-263	1	Key, Woodruff, D. E., #8
X-358	1	Washer, Plain, Shaft, D. E., 1/2

(Continued on Reverse Side)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBS-4002 STARTING MOTOR PARTS (Cont.)

Miscellaneous Parts

Part No.	No. Used	Name of Part
GBG-1068	1	Head Assy., Drive End
GBG-50	1	Gasket, Bearing Retainer
GBG-57	1	Retainer, Felt Washer, Outer
GBG-58	1	Washer, Felt, Outer
GBG-68	1	Head, Drive End
GBG-1056	1	Retainer Assy., Bearing
GBG-56	1	Retainer, Bearing
GBG-57	1	Retainer, Felt Washer
GBG-58	1	Washer, Felt
8X-119	4	Screw, Brg. Retainer, Fill. Hd. #10-32x1/2
X-196	4	Lockwasher, Retainer Sc., #10
X-444	1	BEARING, BALL, S.A.E. #305
MBS-24A	1	Band, Cover
8X-118	6	Screw, D.E. Head, Fill. Hd. #10-32x3/4
12X-196	6	Lockwasher, D.E. Head Sc., #10
X-394	1	Oiler, D.E.
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MCP-2012S.

UNIT	APPLICATION
MBS-4002	Automatic Trans.

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBS-2039)	1	Frame & Field Assy.
GBG-23	2	Stud, Terminal
GBG-38	8	Screw, Pole Shoe
GBW-27	4	Insulation, Pole Shoe
GCY-28	4	Bushing, Ins., Term. Stud
GDW-33S	1	Bracket, Mounting
MBS-26	1	Lead Assy.
MBS-14	1	Clip, Terminal
X-1743	2	Terminal
MBS-27	1	Lead Assy.
MBS-14	1	Clip, Terminal
X-1743	2	Terminal
MBS-33	2	Insulation, Term. Stud, Inner
MBS-35	2	Connector, Field Coil
MBS-37	2	Insulation, Term. Stud, Inner
MBS-38	2	Stud, Terminal
MBS-1007B	1	Coil, Field, U.L.
MBS-1008B	1	Coil, Field, L.R.
MBS-1009B	1	Coil, Field, L.L.
MBS-1010B	1	Coil, Field, U.R.
MU-36	4	Washer, Ins. Term. Stud
MU-37	4	Washer, Plain, Term. Stud, 5/16
12X-201	4	Lockwasher, Bracket Sc., 3/8
8X-465	4	Screw, Bracket Mtg., Hex. Hd. 3/8-24x3/4
12X-1014	8	Lockwasher, Term. Stud, 5/16
8X-1376	8	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

DA-60	1	Screw, Bearing Retaining
GBG-46	1	Washer, Spring
GBG-47	1	Washer, Felt
GBG-48	2	Retainer, Felt Washer
GBG-63	1	Cover, Comm. End
GBG-64	1	Gasket, Comm. End Cover
GBG-66	1	Washer, Bearing Retaining
MBS-2093	1	Head Assy., Comm. End
DA-38	2	Washer, Spring
DE-85	1	Washer, Steel
GBG-41	2	Screw, Brush Holder Plate
GBG-51	2	Washer, Plain
GBG-93	1	Head, Comm. End
GDX-1031	1	Brush Holder Plate Assy.
GBG-18R	4	Holder, Brush
GBG-36	4	Spring, Brush
GBG-40	4	Terminal, Brush Holder

Comm. End Head Assembly (Con't.)

Part No.	No. Used	Name of Part
GBG-85	4	Stud, Brush Holder
GBG-1037	4	Arm, Brush
8X-173	4	Nut, Brush Holder Stud, Hex., #10-32
X-196	4	Lock Washer, Brush Holder Stud, #10
GK-151	1	Washer, Plain
MCP-1012†	4	Brush
X-195	4	Lockwasher, Brush Sc., #8
8X-208	1	Screw, Hex. Hd. #10-32x9/16
8X-305	4	Screw, Brush Lead, Rd. Hd. #8-32x1/4
8X-361	2	Washer, Plain, 1/4
X-1270	1	Washer, Skpf., #10
8X-118	6	Screw, C.E. Hd. Fill. Hd. #10-32x3/4
12X-195	4	Lockwasher, Brush Lead Sc. #8
12X-196	10	Lockwasher, C.E. Head & Cover Screw, #10
12X-199	1	Lockwasher, Brg. Retaining Screw, 1/4
8X-305	4	Screw, Brush Lead, Rd. Hd. #8-32x1/4
X-394	1	Oiler
X-440	1	BEARING, BALL, SHIELDED, S.A.E. #305
8X-870	4	Screw, Cover, Fill. Hd. #10-32x5/16

Armature Assembly & Parts Used With

GBG-49	2	Spacer, Armature Shaft
MBS-2061F	1	ARMATURE
X-261	2	Key, Woodruff, #6

Miscellaneous Parts

GBG-1003	1	Head Assy., Drive End
GBG-3	1	Head, Drive End
GBG-50	1	Gasket, Bearing Retainer
GBG-57	1	Retainer, Felt Washer
GBG-58	1	Washer, Felt
GBG-1056	1	Retainer Assy., Bearing
GBG-56	1	Retainer, Bearing
GBG-57	1	Retainer, Felt Washer
GBG-58	1	Washer, Felt
8X-119	4	Screw, Bearing Retainer Fill. Hd. #10-32x1/2
X-196	4	Lockwasher, Retainer Sc., #10
X-444	1	BEARING, BALL, S.A.E. #305
MBS-24A	1	Band, Cover

(Continued on Reverse Side)

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MBS-4005 STARTING MOTOR PARTS (Cont'd.)

Miscellaneous Parts (Cont'd.)

Part No.	No. Used	Name of Part
8X-118	6	Screw, D.E. Head, Fill. Hd. #10-32x3/4
12X-196	6	Lockwasher, D.E. Head Sc., #10
X-394	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32

† BRUSH SET, SERVICE MCP-2012S.

UNIT	APPLICATION
MBS-4005	Automatic Trans.

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBY-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Conn.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-67	1	Insulation, Field Conn., Drive End
MBY-12†	2	Brush
MBY-13†	2	Brush, Grounded
MBY-28	1	Stud, Terminal
MBY-33	1	Connector, Brush
MBY-3005S	1	FIELD COIL PACKAGE
MBY-32	2	Connector, Field Coil
MBY-1007	1	Coil, Field, U. L.
MBY-1008	1	Coil, Field, L. R.
MBY-1009	1	Coil, Field, L. L.
MBY-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MBY-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, C. E.
MBY-2030F	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Thrust, C. E. & Intermediate, 1/32" Thick
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

SS-6R	1	Connector, Switch to Motor
SS-4801	1	SWITCH, SOLENOID STARTING
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10

Switch Assembly & Parts (Continued)

Part No.	No. Used	Name of Part
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EB-87	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8711	1	Shaft & Pinion
EB-8734	1	Ring, Take-Up
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1221	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBY-2012S.

UNIT	APPLICATION
MBY-4003	Continental, Hobart Bros.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MBY-2034)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-67	1	Insulation, Field Conn., D.E.
MBY-12 †	2	Brush, Insulated
MBY-13 †	2	Brush, Grounded
MBY-28	1	Stud, Terminal
MBY-33	1	Connector, Ins. Brush
MBY-3005S	1	FIELD COIL PACKAGE
MBY-32	2	Connector, Field Coil
MBY-1007	1	Coil, Field, U.L.
MBY-1008	1	Coil, Field, L.R.
MBY-1009	1	Coil, Field, L.L.
MBY-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MBY-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Arm. Thrust, C.E.
MBY-2015F	1	ARMATURE ASSY.
MAB-35	1	Spacer, Bearing Thrust
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBA-11	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take Up
EBA-1111	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MAW-24	1	Band, Cover
PS-1123	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd.Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBY-2012S.

UNIT	APPLICATION
MBY-4004	Buda, Le Tourneau

(Issued 8-17-48)

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBY-2001	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-34	1	Insulation, Field Connection
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-67	1	Insulation, Field Connection, D. E.
MBY-12†	2	Brush
MBY-13†	2	Brush, Grounded
MBY-28	1	Stud, Terminal
MBY-33	1	Connector, Brush
MBY-3005S	1	FIELD COIL PACKAGE
MBY-32	2	Connector, Field Coil
MBY-1007	1	Coil, Field, U. L.
MBY-1008	1	Coil, Field, L. R.
MBY-1009	1	Coil, Field, L. L.
MBY-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	2	Lockwasher, Term. Stud 5/16
8X-1376	2	Nut, Term., Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MBY-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MBY-2022F	1	ARMATURE
MU-54	2	Washer, Thrust, C. E. & D. E., 1/32" Thick
X-264	1	Key, Woodruff, D. E., #9

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector
SS-4801	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

MAC-1058E	1	Head Assy., Drive End
MAB-49A	1	BEARING, ABS. BRONZE
MAW-24	1	Band, Cover
X-489	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBY-2012S.

UNIT	APPLICATION
MBY-4009	Hale (Fire Pump)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBZ-26	1	Bracket, Mounting
(MBZ-2001)	1	Frame & Field Assy.
GAL-44	1	Insulation, Field Connection
GAM-1005Q	1	COIL ASSY., FIELD, COMP.
GAM-1007L	1	Coil Assy., Field, Left
MBZ-15	1	Stud, Terminal
MBZ-31	1	Lead Assy.
X-1425	1	Terminal
GAM-1008K	1	Coil Assy., Field,Right
X-959	1	Terminal
GK-38	2	Screw, Pole Shoe
MAB-31	1	Washer, Ins., Term. Stud, Outer
MBZ-25	1	Insulation, Term. Stud, Inner
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud 5/16
8X-140	1	Nut, Field Ground Sc., Hex. #6-32
X-194	1	Lockwasher, Ground Sc., #6
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
8X-1420	1	Screw, Field Grd., Flat Hd. #6-32x9/16
X-344	4	Screw, Mounting Bracket, Hex. Hd. 1/4-20x7/16
X-1272	4	Washer, Mtg. Bracket Sc., Skpf. 1/4

Comm. End Head Assembly & Parts Used With

GAS-69A	1	Cover, Comm. End
GAS-70	1	Gasket, Cover, Comm. End
GAS-71	1	Washer, Bearing Retaining Sc.
MBZ-38	1	Spacer, Bearing
MBZ-39	1	Washer, Bearing
MBZ-40	1	Washer, Felt
MBZ-42	1	Retainer, Felt Washer
MBZ-2002	1	Head Assy., Comm. End
MBZ-1002	1	Head Assy., Partial, C.E.
GAR-219	2	Arm, Brush
GAR-221	2	Spring, Brush
MBZ-1012†	2	Brush
12X-195	2	Lockwasher, Brush Lead Sc., #8
8X-305	2	Screw, Brush Lead, Rd. Hd. #8-32x1/4

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
8X-61	1	Screw, Brg. Retaining, Flat Hd. #10-32x7/16
X-63	3	Screw, C.E. Cover, Flat Hd. #8-32x3/8
8X-119	4	Screw, Comm. End Head, Fill. Hd. #10-32x1/2
12X-196	4	Lockwasher, C.E. Head Sc., #10
X-293	1	BEARING, BALL, S.A.E. #201

Armature Assembly & Parts Used With

MBZ-41	1	Spacer, Armature Shaft
MBZ-2050F	1	ARMATURE
SP-633	1	Fan, Ventilating
X-260	1	Key, Woodruff, #5

Switch Assembly & Parts Used With

SS-108	1	Connector
SSM-4002	1	SWITCH, STARTING
8X-173	1	Nut, Hex. #10-32
12X-196	1	Washer, Lock, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Washer, Lock, 5/16
8X-311	2	Screw, Switch Mtg., Rd. Hd. #10-32x3/8
X-1274	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

GAL-1024	1	Band, Cover
MBZ-44	1	Collar, D.E.
MBZ-45	1	Collar, D.E.
MBZ-1047S	1	Head Assy., Drive End
DA-39	3	Washer, Felt Retaining
GAS-103	1	Retainer, Felt Washer, Cupped
GG-164	1	Washer, Felt
MBZ-36	1	Gasket, Bearing Retainer
MBZ-46	1	Washer, Felt
MBZ-47S	1	Head, Drive End
MBZ-1034	1	Retainer, Bearing
X-295	1	BEARING, BALL
X-196	3	Lockwasher, Retainer Sc.#10
8X-709	3	Screw, Bearing Retainer Fill. Hd. #10-32x7/16
8X-120	4	Screw, D.E. Head, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, D.E. Head Sc.#10

(Continued on Reverse Side)

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Miscellaneous Parts (Continued)

Part No.	No. Used	Name of Part
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBZ-2012S.

UNIT	APPLICATION
MBZ-4004	Johnson Service

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBZ-26	1	Bracket, Mounting
(MCA-2001)	1	Frame & Field Assy.
GAL-44	1	Insulation, Field Connection
GK-38	2	Screw, Pole Shoe
MAB-31	1	Washer, Ins., Term. Stud, Outer
MBZ-25	1	Insulation, Term. Stud, Inner
MCA-1005	1	COIL ASSY., FIELD, COMP.
MCA-1007	1	Coil Assy., Field, Left
MBZ-15	1	Stud, Terminal
MBZ-31	1	Lead Assy.
X-1425	1	Terminal
MCA-1008	1	Coil Assy., Field, Right
X-959	1	Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-140	1	Nut, Field Ground Sc., Hex. #6-32
X-194	1	Lockwasher, Ground Sc., #6
X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
8X-1420	1	Screw, Field Grd., Flat Hd. #6-32x9/16
X-344	4	Screw, Mounting Bracket, Hex. Hd. 1/4-20x7/16
X-1272	4	Washer, Mtg. Bracket Sc., Skpf. 1/4

Comm. End Head Assembly & Parts Used With

GAS-69A	1	Cover, Comm. End
GAS-70	1	Gasket, Cover, Comm. End
GAS-71	1	Washer, Bearing Retaining Sc.
MBZ-38	1	Spacer, Bearing
MBZ-39	1	Washer, Bearing
MBZ-40	1	Washer, Felt
MBZ-41	1	Spacer, Armature Shaft
MBZ-42	1	Retainer, Felt Washer
MBZ-2002	1	Head Assy., Comm. End
MBZ-1002	1	Head Assy., Partial, C.E.
GAR-219	2	Arm, Brush
GAR-221	2	Spring, Brush
MBZ-1012†	2	Brush
X-195	1	Lockwasher, Brush Lead Sc., #8
8X-305	1	Screw, Brush Lead, Rd. Hd. #8-32x1/4
8X-61	1	Screw, Bearing Retaining, Flat Hd. #10-32x7/16

Comm. End Head Assembly & Parts (Cont'd.)

Part No.	No. Used	Name of Part
X-63	3	Screw, C.E. Cover, Flat Hd. #8-32x3/8
8X-119	4	Screw, C.E. Head, Fill. Hd. #10-32x1/2
12X-195	1	Lockwasher, Brush Lead Sc., #8
12X-196	4	Lockwasher, C.E. Head Sc., #10
X-293	1	Bearing, Ball, S.A.E. #201
8X-305	1	Screw, Brush Lead, Rd. Hd. #8-32x1/4

Armature Assembly & Parts Used With

MCA-2006F	1	ARMATURE
SP-633	1	Fan, Ventilating
X-260	1	Key, Woodruff, #5

Switch Assembly & Parts Used With

SS-108	1	Connector
SSK-4005	1	SWITCH, STARTING
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-311	2	Screw, Switch Mtg., Rd. Hd. #10-32x3/8
X-1274	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

GAL-1024E	1	Band, Head
MBZ-44	1	Collar, D.E.
MBZ-45	1	Collar, D.E.
MBZ-1047S	1	Head Assy., Drive End
DA-39	3	Washer, Felt Retaining
GAS-103	1	Retainer, Felt Washer, Cupped
GG-164	1	Washer, Felt
MBZ-36	1	Gasket, Bearing Retainer
MBZ-46	1	Washer, Felt
MBZ-47S	1	Head, D.E.
MBZ-1034	1	Retainer, Bearing
X-196	3	Lockwasher, Retainer Screw, #10
X-295	1	BEARING, BALL, S.A.E. #203
8X-709	3	Screw, Bearing Retainer Fill. Hd. #10-32x7/16

(Continued on Reverse Side)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCA-4002 STARTING MOTOR PARTS (Cont'd.)

Miscellaneous Parts (Continued)

Part No.	No. Used	Name of Part
8X-120	4	Screw, D.E. Head, Fill. Hd., #10-32x5/8
12X-196	4	Lockwasher, Drive End Head Screw, #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBZ-2012S.

UNIT	APPLICATION
MCA-4002	Towmotor, Lewis Sheppard

(Issued 4-5-49)

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBZ-26	1	Bracket, Mounting
(MCA-2001)	1	Frame & Field Assy.
GAL-44	1	Insulation, Field Connection
GK-38	2	Screw, Pole Shoe
MAB-31	1	Washer, Ins., Term. Stud, Outer
MBZ-25	1	Insulation, Term. Stud, Inner
MCA-1005	1	COIL ASSY., FIELD, COMP.
MCA-1007	1	Coil Assy., Field, Left
MBZ-15	1	Stud, Terminal
MBZ-31	1	Lead Assy.
X-1425		Terminal
MCA-1008	1	Coil Assy., Field, Right
X-959	1	Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-140	1	Nut, Field Ground Sc., Hex. #6-32
X-194	1	Lockwasher, Ground Sc., #6
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
8X-1420	1	Screw, Field Grd., Flat Hd. #6-32x9/16
X-344	4	Screw, Mtg. Bracket, Hex. Hd. 1/4-20x7/16
X-1272	4	Washer, Mtg. Bracket Sc., Skpf. 1/4

Comm. End Head Assembly & Parts Used With

GAS-69A	1	Cover, Comm. End
GAS-70	1	Gasket, Cover, Comm. End
GAS-71	1	Washer, Bearing Retaining Sc.
MBZ-28	1	Spacer, Bearing
MBZ-2002	1	Head Assy., Comm. End
MBZ-1002	1	Head Assy., Partial, C.E.
GAR-219	2	Arm, Brush
GAR-221	2	Spring, Brush
MBZ-1012†	2	Brush
12X-195	2	Lockwasher, Brush Lead Sc., #8
8X-305	2	Screw, Brush Lead, Rd. Hd. #8-32x1/4
8X-61	1	Screw, Bearing Retaining, Flat Hd. #10-32x7/16
X-63	3	Screw, Cover, Flat Hd. #8-32x3/8

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
8X-119	4	Screw, C.E. Head, Fill. Hd. #10-32x1/2
12X-196	4	Lockwasher, C.E. Head Sc., #10
X-1498	1	Bearing, Ball

Armature Assembly & Parts Used With

MCA-2050F	1	ARMATURE
SP-633	1	Fan, Ventilating
X-260	1	Key, Woodruff, #5

Switch Assembly & Parts Used With

SS-108	1	Connector
SSK-4005	1	SWITCH, STARTING
8X-173	1	Nut, Hex., #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-311	2	Screw, Switch Mtg., Rd. Hd. #10-32x3/8
X-1274	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

GAL-1024E	1	Band, Cover
MBZ-1003	1	Head Assy., Drive End
MBZ-3	1	Head
MBZ-36	1	Gasket, Bearing Retainer
MBZ-1034	1	Retainer, Bearing
12X-196	3	Lockwasher, Retainer Sc., #10
8X-709	3	Screw, Retainer, Fill. Hd. #10-32x7/16
X-1499	1	BEARING, BALL
8X-120	4	Screw, D.E. Head, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, D.E. Hd. Screw, #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MBZ-2012S

UNIT	APPLICATION
MCA-4003	Defiance

(Issued 3-6-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12†	2	Brush
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAT-30	1	Insulation, Field Connection
MCH-3005S	1	FIELD COIL PACKAGE
MCH-1009	1	Coil, Field, Left
MCH-1010	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud Inner
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCH-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-2006	1	Armature
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBA-33	1	Bendix Drive Assembly
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	Spring, Drive
MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1264	1	Housing Assy., Pinion
MP-41A	1	Bearing, Absorbent Bronze
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MAB-2012AS.

* Use as Required.

UNIT	APPLICATION
MCH-4001	Studebaker, Studebaker (Truck)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCH-2031A	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-12†	2	Brush
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85A	1	Bushing, Ins., Term. Stud
MAT-30	1	Insulation, Field Connection
MAW-59	1	Equalizer
MCH-3005S	1	FIELD COIL PACKAGE
MCH-1009	1	Coil, Field, Left
MCH-1010	1	Coil, Field, Right
MN-21A	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37G	1	Washer, Plain, Term. Stud
MU-39A	1	Washer, Ins., Term. Stud, Inner
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCH-2002A	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021M	1	ARMATURE
MU-54F	*	Washer, Arm. Thrust, C.E. & D.E. 1/32" Thick
MU-54G	*	Washer, Arm. Thrust, C.E. & D.E., 1/64" Thick
MU-54J	*	Washer, Arm. Thrust, C.E. & D.E., .046" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf., #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-33A	1	Bendix Drive Assembly
EBA-1232A	1	Pinion
EBA-4808	1	Ring, Lock
EBA-4833	1	Ring, Retaining
EBA-7213	1	Spring, Anti-Drift
EBA-7225	1	Spring, Meshing
EBA-7905	1	Spring, Drive
EBA-7906	1	Pin, Locating
EBA-7907	2	Plate, Spring Anchor
EBA-7931	1	Shaft, Screw
MAB-1024N	1	Band, Cover
MCH-1040B	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Absorbent Bronze
PS-1283A	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2881	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

† BRUSH SET, SERVICE MAB-2012AS.

* Use as required.

UNIT	APPLICATION
MCH-6001M	Packard (Marine)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCH-3031A	1	Frame & Field Assembly
GK-38C	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85A	1	Bushing, Ins., Term. Stud
MAT-30	1	Insulation, Field Connection
MAW-59	1	Equalizer
MCH-3005S	1	FIELD COIL PACKAGE
MCH-1009	1	Coil, Field, Left
MCH-1010	1	Coil, Field, Right
MCJ-12†	2	Brush
MN-21A	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37G	1	Washer, Plain, Term. Stud
MU-39A	1	Washer, Ins., Term. Stud, Inner
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCH-3030A	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021M	1	ARMATURE
MU-54F	*	Washer, Arm. Thrust, C.E. & Int., 1/32" Thick
MU-54G	*	Washer, Arm. Thrust, C.E. & Int., 1/64" Thick
MU-54J	*	Washer, Arm. Thrust, C.E. & Int., .046" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-4A	1	BENDIX DRIVE ASSY.
EBA-4431A	1	Shaft
EBA-4805	1	SPRING, DRIVE
EBA-4807	2	Plate, Spring Anchor
EBA-4808	1	Ring, Lock
EBA-4813	1	Spring, Anti-Drift
EBA-4825	1	Spring, Meshing
EBA-4832	1	Pinion
EBA-4833	1	Ring, Retaining
EBA-7906	1	Pin, Locating
MAB-1024N	1	Band, Cover
MCH-1040B	1	BEARING, ASSY., INTERMEDIATE
MAW-130	1	Bearing, Absorbent Bronze
PS-1283A	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2881	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

* Use as required.

† BRUSH SET, SERVICE MCJ-2012BS.

UNIT	APPLICATION
MCH-6002M	Packard (Marine)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCH-6003 STARTING MOTOR PARTS LIST

MCH-6003
(Issued 3-17-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCH-2031	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12†	2	Brush
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAT-30	1	Insulation, Field Connection
MAW-59	1	Equalizer
MCH-3005S	1	FIELD COIL PACKAGE
MCH-1009	1	Coil, Field, Left
MCH-1010	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-209	1	Stud, Terminal
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCH-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & Int., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & Int., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & Int., 3/64" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SS-4017	1	SWITCH, SOLENOID
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
12X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-33	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
MAW-24	1	Band, Cover
MCH-1040	1	BEARING ASSY., INT.
MAW-130	1	Bearing, Absorbent Bronze
PS-1283C	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc. #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MAB-2012AS.

* Use as required.

UNIT	APPLICATION
MCH-6003	Packard

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
(MCH-2031)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal Clip
MAB-85	1	Bushing, Ins., Term. Stud
MAT-30	1	Insulation, Field Connection
MAW-59	1	Equalizer
MCH-3005S	1	Field Coil Package
MCH-1009	1	Coil, Field, Left
MCH-1010	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-209	1	Stud, Terminal
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used

MCH-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021	1	Armature
MU-54	*	Washer, Thrust, 1/32'' Thick
MU-54A	*	Washer, Thrust, 1/64'' Thick
MU-54B	*	Washer, Thrust, 3/64'' Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89L	1	Connector
SST-4004	1	Solenoid Switch
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-52	1	Bendix Drive Assy.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Screw Shaft
EBA-2105	1	Spring, Drive
EBA-7632	1	Pinion
MAW-24	1	Band, Cover
MCJ-1040	1	Bearing Assy., Intermediate
MAW-130	1	Bearing, Abs. Bronze
PS-1287	1	Housing Assy., Pinion
MG-77A	1	Bearing, Abs. Bronze
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as required.

† Brush Set, Service MAB-2012AS.

UNIT	APPLICATION
MCH-6004	Checker Cab

(Issued 7-15-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCH-6101 STARTING MOTOR PARTS LIST

MCH-6101
(Issued 1-10-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCH-2035)	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13 †	2	Brush, Grounded
MCH-34	1	Stud, Terminal, 5/16-18
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Terminal Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCH-2002C	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2028	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick
MU-54L	*	Washer, Thrust, C.E. & D.E., 1/16" Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name Of Part
EBB-8	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti- Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
EBB-832	1	Pinion
MCH-1024	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1291	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCH-6101	Dodge, Plymouth

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCH-2035A	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13†	2	Brush, Grounded
MCH-34A	1	Stud, Terminal
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Terminal Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCH-2002C	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2039	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MU-54K	*	Washer, Thrust, C.E., .080" Thick

Switch Assembly & Parts Used With

MCH-63	1	Connector
SS-4707	1	SOLENOID STARTING SWITCH (See Separate List for Parts)
12X-201	2	Lockwasher, Switch Term., 3/8
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-830	2	Nut, Switch Term. Hex. 3/8-16
X-1272	4	Washer, Switch Mtg., Skpf., 1/4

Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-71	1	Pin, Yoke
MCH-58	2	Retainer, Yoke Spring
MCH-62	1	Spring, Yoke
MCH-76	1	Pin, Link
MCH-2056	1	Yoke
MCL-3098A	1	CLUTCH, STARTER
12X-201	1	Lockwasher, Yoke Pin, 3/8
X-401	1	Pin, Cotter, 1/16x3/8
8X-830	1	Nut, Yoke Pin, Hex. 3/8-16

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1293	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012BS.

* Use as Required.

UNIT	APPLICATION
MCH-6102	De Soto

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCH-2055)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAT-30	1	Insulation, Field Connection
MAW-35	1	Stud, Terminal
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Insulation, Switch Contact
MAW-51	1	Insulation, Field Connection
MCH-13 †	2	Brush, Grounded
MCH-25	1	Washer, Ins., Term. Stud, Inner
MCH-66	1	Equalizer
MCH-3005CS	1	FIELD COIL PACKAGE
MCH-1009C	1	Coil, Field, Left
MCH-1010C	1	Coil, Field, Right
MN-21	2	Pin, Dowel
SW-763	1	Contact, Switch
12X-196	2	Lockwasher, Brush Grd. Sc., #10
8X-321	2	Screw, Brush Grd., Rd. Hd. #10-32x5/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCH-2064	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2039	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32'' Thick
MU-54B	*	Washer, Thrust, C.E., 3/64'' Thick

Switch Assembly & Parts Used With

SW-2813	1	SWITCH, STARTER
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Sw. Mtg. Screw, Skpf. #10

Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-71	1	Pin, Yoke
MCH-58	2	Retainer, Yoke Spring
MCH-62	1	Spring, Yoke
MCH-2059	1	Yoke
MCL-3098A	1	STARTER CLUTCH
12X-201	1	Lockwasher, Yoke Pin, 3/8
8X-830	1	Nut, Yoke Pin, Hex. 3/8-16

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1294	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012CS.

* Use as Required.

UNIT	APPLICATION
MCH-6103	Dodge (Truck)

Printed in U. S. A. (Issued 2-18-49) File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCH-2071)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13†	2	Brush, Grounded
MCH-47	1	Equalizer
MCH-72	1	Stud, Terminal
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12†	2	Brush
12X-196	2	Lockwasher, Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCH-2002C	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070	1	ARMATURE ASSY.
MCH-27	1	Spacer
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32 Thick
MU-54B	*	Washer, Thrust, C.E., 3/64 Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-80	1	Connector
SSX-4001	1	SOLENOID SWITCH
12X-200	1	Lockwasher, Switch Term., 5/16
X-1272	4	Washer, Switch Mtg., Skpf. 1/4
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-77	1	Pin, Yoke
MCH-2074	1	Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer, Snap Ring
MCS-47	1	Ring, Snap
PS-1301A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MZ-2012BS.

* Use as Required.

UNIT	APPLICATION
MCH-6105	De Soto

(Issued 9-15-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCH-6106 STARTING MOTOR PARTS LIST

MCH-6106
(Issued 10-9-50)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCH-2097)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-35	1	Stud, Terminal
MAW-37	1	Bushing, Insulation
MAW-39	1	Insulation, Switch Contact
MAW-51	1	Insulation, Field Connection
MAW-205	1	Insulation, Switch Contact
MCH-13†	2	Brush, Grounded
MCH-25A	1	Washer, Ins. Term. Stud
MCH-47	1	Equalizer
MCH-3005ES	1	FIELD COIL PACKAGE
MCH-1009E	1	Coil, Field, Left
MCH-1010E	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MZ-12 †	2	Brush
SW-763	1	Contact, Switch
12X-196	2	Lockwasher, Ground Sc., #10
12X-201	1	Lockwasher, Term. Stud 3/8
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assy. & Parts Used With

MCH-2002C	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070	1	ARMATURE ASSY.
MCH-27	1	Spacer
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SW-2827	1	SWITCH, STARTING
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Clutch Assembly & Parts Used With

MCH-77	1	Pin, Yoke
MCH-2099	1	Yoke
MCL-3075	1	CLUTCH, STARTER
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer, Snap Ring
MCS-47	1	Ring, Snap
PS-1302	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCH-6106	Dodge (Truck)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCH-2097CS	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-35	1	Stud, Terminal
MAW-37	1	Bushing, Ins., Term. Stud
MAW-51	1	Insulation, Field Connection
MCH-13†	2	Brush, Grounded
MCH-25A	1	Washer, Ins., Term. Stud
MCH-47	1	Equalizer
MCH-1009ES	1	COIL, FIELD, LEFT
MCH-1010ES	1	COIL, FIELD, RIGHT
MN-21	2	Pin, Dowel
MZ-12†	2	Brush
SW-764S	1	Switch Contact Package
12X-196	2	Lockwasher, Ground Sc., #10
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCH-2002H	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19D	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070B	1	ARMATURE
MN-18	1	Washer, Armature Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

SW-2827S	1	STARTING SWITCH
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-77	1	Pin, Yoke
MCH-2099	1	Yoke
MCL-3075	1	STARTER CLUTCH
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024S	1	Band, Cover
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1302D	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MZ-2012BS.

* Use as Required.

UNIT	APPLICATION
MCH-6106F	Dodge Truck

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCH-2100)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13†	2	Brush, Grounded
MCH-34A	1	Stud, Terminal
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCH-2002D	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2028	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-33	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
MCH-1024A	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1306	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCH-6107	Hudson

(Issued 10-17-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAJ-51	2	Bolt, Thru
(MCH-2102)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins. Term. Stud
MCH-13 †	2	Brush, Grounded
MCH-34A	1	Stud, Terminal
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	1	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
X-146	2	Nut, Thru Bolt, Hex. 1/4-20
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCH-2002E	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2084	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32'' Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64'' Thick

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-7	1	BENDIX DRIVE ASSY.
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2008	1	Ring, Lock
EBA-3505	1	SPRING, DRIVE
EBA-3507	2	Plate, Spring Anchor
EBA-3531	1	Shaft
EBB-732	1	Pinion
MCH-1024A	1	Band, Cover
MCL-1003A	1	Head Assy., Drive End
MG-77A	1	BEARING, ABS. BRONZE
MZ-124	1	Pin, Bendix
X-66	2	Screw, D.E. Head, Flat Hd. #10-32x1/2

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCH-6109	Hudson

(Issued 10-17-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCH-2097A	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-35	1	Stud, Terminal
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Insulation, Switch Contact
MAW-51	1	Insulation, Field Connection
MCH-13†	2	Brush, Grounded
MCH-25A	1	Washer, Ins., Term. Stud, Inner
MCH-47	1	Equalizer
MCH-3005ES	1	FIELD COIL PACKAGE
MCH-1009E	1	Coil, Field, Left
MCH-1010E	1	Coil, Field, Right
MN-21	2	Pin, Dowel
MZ-12†	2	Brush
SW-764	1	Contact, Switch
12X-196	2	Lockwasher, Ground Sc., #10
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCH-2002C	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070	1	ARMATURE ASSY.
MCH-27	1	Spacer
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

SW-2827B	1	SWITCH, STARTING
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-77	1	Pin, Yoke
MCH-2099	1	Yoke
MCL-3075	1	CLUTCH, STARTER
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer, Snap Ring
MCS-47	1	Ring, Snap
PS-1302	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCH-6110	Chrysler Ind. (Canada)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCH-6111 STARTING MOTOR PARTS LIST

MCH-6111
(Issued 11-20-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCH-2105	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13†	2	Brush, Grounded
MCH-34A	1	Stud, Terminal
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
12X-196	2	Lockwasher, Br. Grd. Sc., #10
8X-321	2	Screw, Br. Grd., Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-200	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCH-2002D	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Part Used With

Part No.	No. Used	Name of Part
MCH-2106	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick

Miscellaneous Parts

EBB-22	1	BENDIX DRIVE
MCH-1024A	1	Band, Cover
MCH-1107	1	Head Assy., Drive End
MG-77A	1	BEARING, ABS. BRONZE
MZ-124	1	Pin, Bendix

† BRUSH SET, SERVICE MZ-2012BS.

* Use As Required.

UNIT	APPLICATION
MCH-6111	Nash (Canada)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCH-2078	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer,Ins.,Term. Stud, Outer
MAB-85	1	Bushing,Ins.,Term. Stud
MCH-13†	2	Brush, Grounded
MCH-47	1	Equalizer
MCH-72	1	Stud, Terminal
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil,Field, Left
MCH-1010B	1	Coil,Field, Right
MCJ-39B	1	Washer,Ins.,Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer,Plain, Term. Stud, 5/16
MZ-12†	2	Brush
12X-196	2	Lockwasher,Ground Sc., #10
12X-200	2	Lockwasher,Term. Stud, 5/16
8X-321	2	Screw,Br. Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCH-2002C	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer,Thrust,Comm. End
MCH-2110	1	ARMATURE
MN-18	1	Washer, Thrust,D.E.
MU-54	*	Washer,Thrust, C.E. 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

MCL-51	1	Connector
SSX-34	1	Spring
SSX-36	1	Plug
SSX-1021B	1	Moving Core Assy.
SS-60	1	Washer,Steel, 3/8
SSX-21	1	Core, Moving
SSX-22	1	Link Screw
SSX-35	1	Spring

Switch Assembly & Parts Used With (Cont.)

Part No.	No. Used	Name of Part
SSX-1023	1	Clamp Assy.
8X-53	1	Screw,Rd. Hd. #8-32x5/8
8X-141	1	Nut,Hex. #8-32
SSX-4004	1	SOLENOID STARTING SWITCH (See Separate List for Parts)
12X-199	4	Lockwasher,Switch Mtg. Sc., 1/4
12X-200	1	Lockwasher,Switch Term., 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut,Switch Term.,Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-2074C	1	Yoke
**	1	Pin, Yoke
**	1	Clamp, Yoke Cover
**	1	Cover, Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
**	1	Pin,Cotter,Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer, Snap Ring
MCS-47A	1	Ring, Snap
PS-1316A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Interm. Plate Sc., #10
8X-311	2	Screw,Inter. Plate Rd. Hd. #10-32x3/8

† BRUSH SET, SERVICE MZ-2012BS.

* Used as required.

** See table following parts list for part number applying to assembly wanted.

(See Reverse Side)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCH-6113, A STARTING MOTOR (Continued)

Assembly No.	Pin, Yoke	Clamp, Yoke Cover	Cover, Yoke	Pin, Cotter, Yoke Pin
MCH-6113	MCL-54	MCL-56	MCL-57	X-406
MCH-6113A	MCL-58	MCL-59	MCL-60	None

UNIT	APPLICATION
MCH-6113, A	De Soto (8)

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File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCH-2035)	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13†	2	Brush, Grounded
MCH-34	1	Stud, Terminal, 5/16-18
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCH-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MU-54L	*	Washer, Thrust, C.E., 1/16" Thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-8	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	Spring, Drive
EBB-832	1	Pinion
MCH-1024	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1291	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCH-6201	Dodge, Plymouth

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCH-2035)	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13 †	2	Brush, Grounded
MCH-34A	1	Stud, Terminal, 5/16-18
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCH-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick
MU-54L	*	Washer, Thrust, C.E. & D.E., 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-8	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
EBB-832	1	Pinion
MCH-1024	1	Band,, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1291A	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCH-6202	Plymouth (Canada)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCH-6203 STARTING MOTOR PARTS LIST

MCH-6203
(Issued 3-18-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCH-2103	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13†	2	Brush, Grounded
MCH-34A	1	Stud, Terminal
MCH-47	1	Equalizer
MCH-3005BS	1	Field Coil Package
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground. Sc., #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCH-2104	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088	1	Armature
MU-54	*	Washer, Thrust, C.E. & Int., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E. & Int., 3/64" Thick
MU-54L	*	Washer, Thrust, C.E. & Int., 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89L	1	Connector
SS-4018	1	Solenoid Switch
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBB-19	1	Bendix Drive
MCH-1024A	1	Band, Cover
MCH-1051	1	Bearing Assy., Intermediate
MCH-53	1	Bearing, Abs. Bronze
PS-1311	1	Housing Assy., Pinion
MG-77A	1	Bearing, Abs. Bronze
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† Brush Set, Service MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCH-6203	Willys 6

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File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCH-2100	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13 †	2	Brush, Grounded
MCH-34A	1	Stud, Terminal
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCH-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & Int., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E. & Int., 3/64" Thick
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-33	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
MCH-1024A	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1306	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCH-6204	Hudson

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCH-2035)	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13 †	2	Brush, Grounded
MCH-34A	1	Stud, Terminal
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCH-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & Interm., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E. & Interm., 3/64" Thick
MU-54L	*	Washer, Thrust, C.E. & Interm., 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-20	1	BENDIX DRIVE
MCH-1024	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1291	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCH-6205	Plymouth

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCH-2035	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13†	2	Brush, Grounded
MCH-34A	1	Stud, Terminal
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCH-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & Interm., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E. & Interm., 3/64" Thick
MU-54L	*	Washer, Thrust, C.E. & Interm., 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-20	1	BENDIX DRIVE
MCH-1024	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1291A	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Inter. Brg. Sc., #10
8X-1368	2	Screw, Inter. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCH-6206	Plymouth (Canada)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCH-6207 STARTING MOTOR PARTS LIST MCH-6207
(Issued 10-17-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCH-2113	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13 †	2	Brush, Grounded
MCH-34A	1	Stud, Terminal
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
12X-196	2	Lockwasher, Br. Ground Sc., #10
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCH-2104	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MU-54L	*	Washer, Thrust, C.E., 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Part

Part No.	No. Used	Name of Part
EBB-19	1	BENDIX DRIVE
MCH-1024A	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1311	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCH-6207	Willys

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCH-6208M STARTING MOTOR PARTS LIST

MCH-6208M
(Issued 2-5-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCH-3114S	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13†	2	Brush, Grounded
MCH-34	1	Stud, Terminal
MCH-66	1	Equalizer
MCH-2009S	1	COIL, FIELD, LEFT
MCH-2010S	1	COIL, FIELD, RIGHT
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Stud, 5/16
MZ-12†	2	Brush
X-20	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Br. Ground Screw, #10
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2976	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCH-3030B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088M	1	ARMATURE ASSY.
MU-54F	1	Washer, Thrust, Int., 1/32" Thick
MU-54F	*	Washer, Thrust, C.E., 1/32" Thick
MU-54J	*	Washer, Thrust, C.E., .046" Thick
MU-54N	*	Washer, Thrust, C.E., 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89R	1	Connector
SSP-4001M	1	SOLENOID STARTING SWITCH
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
X-2843	2	Nut, Hex. 5/16-24
X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBB-32A	1	BENDIX DRIVE
MAB-1024NS	1	Band, Cover
MCH-1051A	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1291C	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2881	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

† BRUSH SET, SERVICE MZ-2012BS.

* Use as Required.

UNIT	APPLICATION
MCH-6208M	Chrysler Marine

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCH-2114S	1	Frame & Field Assembly
GK-38C	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud Outer
MAB-85A	1	Bushing, Ins., Term. Stud
MCH-13†	2	Brush, Grounded
MCH-34	1	Stud, Terminal
MCH-47	1	Equalizer
MCH-1009GS	1	COIL, FIELD, LEFT
MCH-1010GS	1	COIL, FIELD, RIGHT
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Stud, 5/16
MZ-12†	2	Brush
X-20	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Brush Ground Screw, #10
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2976	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCH-2002J	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088M	1	ARMATURE ASSEMBLY
MU-54F	*	Washer, Thrust, C.E., 1/32" Thick
MU-54G	*	Washer, Thrust, C.E., 1/64" Thick
MU-54J	*	Washer, Thrust, C.E., .046" Thick
MU-54N	1	Washer, Thrust, Intermediate 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89R	1	Connector
SSP-4001M	1	SOLENOID STARTING SWITCH
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
X-2843	2	Nut, Hex. 5/16-24
X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBB-26A	1	BENDIX DRIVE
MAB-1024NS	1	Band, Cover
MCH-1051A	1	BEARING ASSEMBLY, INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1291C	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Intermediate Bearing Screw, #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2881	2	Screw, Intermediate Bearing, Rd. Hd. #10-32x7/16
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

† BRUSH SET, SERVICE MZ-2012BS

* Use as required.

UNIT	APPLICATION
MCH-6209M	Chrysler Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCH-2035	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13†	2	Brush
MCH-34A	1	Stud, Terminal
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCH-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MU-54K	*	Washer, Thrust, C.E., .080" Thick
MU-54L	*	Washer, Thrust, C.E., 1/16" Thick
MU-54L	1	Washer, Thrust, Int., 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-19	1	BENDIX DRIVE
MCH-1024	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1291	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as Required.

† BRUSH SET, SERVICE MZ-2012BS.

UNIT	APPLICATION
MCH-6210	Willys

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCH-6211 STARTING MOTOR PARTS LIST

MCH-6211
(Issued 12-24-53)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCH-2035	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13†	2	Brush
MCH-34A	1	Stud, Terminal
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCH-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MU-54K	*	Washer, Thrust, C.E., .080" Thick
MU-54L	*	Washer, Thrust, C.E., 1/16" Thick
MU-54L	1	Washer, Thrust, Int., 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-19	1	BENDIX DRIVE
MCH-1024	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1323	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as Required.

† BRUSH SET, SERVICE MZ-2012BS.

UNIT	APPLICATION
MCH-6211	Willys

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

MCH-6213 STARTING MOTOR PARTS LIST MCH-6213
(Issued 1-16-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCH-2114A	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-34A	1	Stud, Terminal
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCH-1009B	1	Coil, Field, Left
MCH-1010B	1	Coil, Field, Right
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-2012BS	1	BRUSH SET
8X-321	2	Screw, Br. Ground Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
X-1270	2	Washer, Br. Ground Sc., Skpf. #10
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCH-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MU-54K	*	Washer, Thrust C.E., .080" Thick
MU-54L	*	Washer, Thrust, C.E., 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

MAX-89L	1	Connector
SST-4004	1	SOLENOID STARTING SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-312	2	Screw, Switch Mtg., Rd. Hd. #10-32x1/4
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBB-26	1	BENDIX DRIVE
MCH-1024	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
PS-1291J	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as required.

UNIT	APPLICATION
MCH-6213	Checker Cab

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCH-6305 STARTING MOTOR PARTS LIST MCH-6305
(Issued 10-18-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCH-2035B	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13 †	2	Brush, Grounded
MCH-34A	1	Stud, Terminal
MCH-47	1	Equalizer
MCH-3005BS	1	FIELD COIL PACKAGE
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Br. Ground Screw, #10
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCH-2002F	1	Head Assy., Comm End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

EBB-20	1	BENDIX DRIVE
MCH-1024	1	Band, Cover
MCH-1051	1	BEARING ASSEMBLY, INTERMEDIATE
PS-1291E	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Brg. Screw, #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as required.

† BRUSH SET, SERVICE MZ-2012BS.

UNIT	APPLICATION
MCH-6305	Dodge (6 & 8), Plymouth (6 & 8)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCH-2100A	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13 †	2	Brush, Grounded
MCH-34A	1	Stud, Terminal
MCH-3005BS	1	FIELD COIL PACKAGE
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
X-1270	2	Washer, Br. Ground Screw, Skpf. #10
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCH-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MU-54K	*	Washer, Thrust, C.E., .080" Thick
MU-54L	*	Washer, Thrust, C.E., 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-33	1	BENDIX DRIVE
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING: DRIVE
EBA-3307	2	Plate, Spring Anchor
MCH-1024	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
PS-1326A	1	Housing Assy., Pinion
MG-77A	1	BEARING ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Brg. Screw, #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS

* Use as required.

UNIT	APPLICATION
MCH-6306	Hudson

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MCJ-3001)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30C	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-64	2	Connector, Field Coil
MAX-67	1	Insulation, Field Conn. D.E.
MAY-33	1	Connector
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MAY-1010	1	Coil, Field, U.R.
MCJ-12†	1	Brush
MCJ-12A†	1	Brush
MCJ-14	1	Terminal
MCJ-39	1	Washer, Ins., Term. Stud Inner
MCJ-1007	1	Coil, Field, U.L.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37	1	Washer, Plain Term. Stud 5/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-3002	1	Head Assy., Comm. End
MAD-110	1	Felt
MCJ-1034†	2	Brush, Grounded
MZ-16	4	Brush, Holder
MZ-19	4	Brush, Spring
8X-532	4	Rivet
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MCJ-2020	1	Armature
MAB-35	1	Spacer, Bearing Thrust
MU-54	*	Washer, Thrust 1/32" thick
MU-54A	*	Washer, Thrust 1/64" thick
MU-54B	*	Washer, Thrust 3/64" thick
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBA-44A	1	Bendix Drive Assembly
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
MAW-24	1	Band, Cover
PS-1273	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
8X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band Square #10-32
		1 2 3 4 5

† Brush Set, Service MCJ-2012S.

* Use as required.

Unit	Application
MCJ-4001	Aircooled

(Issued 9-16-46)

File in Equipment & Parts List Binder

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
GJ-20A	2	Bolt, Thru
(MCJ-2031A)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-30C	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85A	1	Bushing, Ins., Term. Stud
MAX-64	2	Connector, Field, Coil
MAX-67	1	Insulation, Field Connection, D.E.
MAY-33	1	Connector, Brush
MAY-1008B	1	Coil, Field, L.R.
MAY-1009B	1	Coil, Field, L.L.
MAY-1010H	1	Coil, Field, U.R.
MCJ-12†	2	Brush
MCJ-14	1	Terminal
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCJ-1007B	1	Coil, Field, U.L.
MN-21A	2	Pin, Dowel
MU-28	1	Stud, Terminal, 5/16-24
MU-37G	1	Washer, Plain, Term. Stud
X-180	2	Nut, Term. Stud, Hex., 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-2030A	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCJ-2021M	1	ARMATURE
MU-54F	*	Washer, Arm. Thrust, C.E., 1/32" thick
MU-54G	*	Washer, Arm. Thrust, C.E., 1/64" thick
MU-54J	*	Washer, Arm. Thrust, C.E., .046" thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SSR-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex., 5/16-24
8X-2853	1	Nut, Hex., #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd., #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf., #10
	1 2 3 4 5	

Miscellaneous Parts

Part No.	No. Used	Name of Part
	1 2 3 4 5	
EBA-45A	1	BENDIX DRIVE ASSY.
EBA-1232A	1	Pinion
EBA-4505	1	SPRING, DRIVE
EBA-4808	1	Ring, Lock
EBA-4833	1	Ring, Retaining
EBA-7213	1	Spring, Anti-Drift
EBA-7225	1	Spring, Meshing
EBA-7906	1	Pin, Locating
EBA-7907	2	Plate, Spring Anchor
EBA-7931	1	Shaft
MAB-1024N	1	Band, Cover
MCH-1040B	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Absorbent Bronze
PS-1283B	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
X-2873	1	Screw, Cover Band, Rd. Hd., #10-32x1 1/4
X-2875	1	Nut, Cover Band, Square, #10-32
X-2881	2	Screw, Int. Bearing, Rd. Hd., #10-32x7/16
	1 2 3 4 5	

†MCJ-2012BS Brush Set, Service

* Use as required.

UNIT	APPLICATION
MCJ-6001M	Packard (Marine)

Printed in U. S. A. (Issued 10-23-47) File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
GJ-20A	2	Bolt, Thru
(MCJ-3031A)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-30C	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85A	1	Bushing, Ins., Term. Stud
MAX-64	2	Connector, Field Coil
MAX-67	1	Insulation, Field Connection D.E.
MAY-33	1	Connector, Brush
MAY-1008B	1	Coil, Field, L.R.
MAY-1009B	1	Coil, Field, L.L.
MAY-1010H	1	Coil, Field, U.R.
MCJ-12†	1	Brush
MCJ-12A†	1	Brush
MCJ-14	1	Terminal
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCJ-1007B	1	Coil, Field, U.L.
MN-21A	2	Pin, Dowel
MU-28	1	Stud, Terminal, 5/16-24
MU-37G	1	Washer, Plain, Term. Stud
X-180	2	Nut, Term. Stud, Hex., 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-3002A	1	Head Assy., C.E.
MAD-110	1	Felt
MZ-19A	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCJ-2021M	1	ARMATURE
MU-54F	*	Washer, Arm. Thrust, C.E., 1/32'' thick
MU-54G	*	Washer, Arm. Thrust, C.E., 1/64'' thick
MU-54J	*	Washer, Arm. Thrust, C.E., .046'' thick
X-261	1	Key, Woodruff, #6
	1 2 3 4 5	

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
MAX-89R	1	Connector
SSR-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex., 5/16-24
8X-2853	1	Nut, Hex., #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd., #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf.,#10

Miscellaneous Parts

EBA-44A	1	BENDIX DRIVE ASSY.
EBA-4405A	1	SPRING, DRIVE
EBA-4431A	1	Shaft
EBA-4807	2	Plate, Spring Anchor
EBA-4808	1	Ring, Lock
EBA-4813	1	Spring, Anti-Drift
EBA-4825	1	Spring, Meshing
EBA-4832	1	Pinion
EBA-4833	1	Ring, Retaining
EBA-7906	1	Screw, Head
MAB-1024N	1	Band, Cover
MCH-1040B	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Absorbent Bronze
PS-1283B	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc.#10
X-2873	1	Screw, Cover Band, Rd. Hd., #10-32x1 1/4
X-2875	1	Nut, Cover Band, Square, #10-32
X-2881	2	Screw, Int. Bearing, Rd. Hd., #10-32x7/16
	1 2 3 4 5	

† MCJ-2012AS BRUSH SET, SERVICE.

* Use as required.

UNIT	APPLICATION
MCJ-6002M	Packard (Marine)

(Issued 10-23-47)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCK-4001 STARTING MOTOR PARTS LIST

MCK-4001
(Issued 10-15-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCK-2001	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins, Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBR-34	1	Connector
MBR-1012S	1	BRUSH SET
MC-51A	1	Washer, Plain, Term. Stud, Inner
MCK-32	2	Insulation, Field Connection
MCK-3005S	1	FIELD COIL PACKAGE
MCK-1007	1	Coil, Field, U. L.
MCK-1008	1	Coil, Field, L. R.
MCK-1009	1	Coil, Field, U. R.
MCK-1010	1	Coil, Field, L. L.
8X-66	4	Screw, BR. Grd., Flat Hd. #10-32x1/2
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex.3/8-16
8X-148	1	Nut, Term. Stud, Hex. 3/8-16
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBD-258	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8
MBR-2410	1	Head Assy., Comm. End.
MBD-150	1	Wick, Felt
MBD-1410	1	Head Assy., Partial, Comm. End
GBF-79	1	BEARING
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Screw, #10
X-2964A	1	Oiler
12X-196	12	Lockwasher, C. E. Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, C. E.
MBD-311	*	Washer, Thrust, Int.
MCK-2006	1	ARMATURE
MU-54	1	Washer, Thrust, C. E., 1/32" Thick
X-261C	2	Key, Woodruff, D. E., #6

Miscellaneous Parts

EBB-11	1	Bendix Drive Assy.
EBA-5716	1	Screw, Pinion Back Stop
EBB-1104	1	Pinion
EBB-1113	1	Spring, Anti-Drift
EBB-1115A	1	Stop, Pinion Back
EBB-1125	1	Spring, Meshing
EBB-1131	1	Shaft, Screw
EBB-1140	1	Screw, Head
EBB-1141	1	Pin, Lock, Head Screw
EBB-1142	1	Pin, Stop Nut
EBB-3011S	1	Spring Kit, Anti-Drift
EBB-3013S	1	Pinion Kit
EBB-3014S	1	Clutch Assembly Kit
MBD-254	8	Screw, Pinion Housing, Hex. Hd. #10-32x7/8
MBD-1315	1	Bearing Assy., Intermediate
MBD-312	1	Retainer, Felt, Washer
MBD-313	1	Felt, Washer
MBD-314	1	BEARING:ABSORBENT BRONZE
MCK-1024	1	Band, Cover
PS-1278	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-257	1	BEARING, ABSORENT BRONZE
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. HD. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use As Required

Unit	APPLICATION
MCK-4001	Continental, Massey-Harris

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MCK-2001)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBR-12 †	2	Brush
MBR-12A†	2	Brush
MBR-13 †	2	Brush
MBR-13A†	2	Brush
MBR-34	1	Connector, Coil
MC-51A	1	Washer, Plain, Term. Stud, Inner
MCK-3005S	1	FIELD COIL PACKAGE
MCK-1007	1	Coil, Field, U.L.
MCK-1008	1	Coil, Field, L.R.
MCK-1009	1	Coil, Field, U.R.
MCK-1010	1	Coil, Field, L.L.
MR-32	1	Insulation, Field Connection
8X-66	4	Screw, Br. Grd., Flat Hd. #10-32x1/2
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBR-2236B	1	Head Assy., Comm. End, Complete
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	BEARING, ABS. BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Screw, #10
X-2964	1	Oiler
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBD-247A	1	Washer, Thrust, Intermediate
MBD-311	2	Washer, Thrust, Intermediate
MCK-2045	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32'' Thick
MU-54A	*	Washer, Thrust, C.E., 1/64'' Thick
MU-54B	*	Washer, Thrust, C.E., 3/64'' Thick

Miscellaneous Parts

EBA-74	1	Bendix Drive Assy.
MBD-254	8	Screw, Pinion Housing, Hex. Hd. #10-32x7/8
MBD-1024K	1	Band, Cover
MBD-1315	1	Bearing Assy., Intermediate
MBD-312	1	Retainer, Felt
MBD-313	1	Felt Washer
MBD-314	1	BEARING, ABS. BRONZE
PS-1282	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-220	1	BEARING, ABS. BRONZE
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required.

† BRUSH SET, SERVICE MBR-1012S.

UNIT	APPLICATION
MCK-4002	Sheppard

(Issued 10-3-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCK-4003 STARTING MOTOR PARTS LIST

MCK-4003
(Issued 10-25-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCK-2001	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBR-34	1	Connector
MBR-1012S	1	Brush Set
MC-51A	1	Washer, Plain, Term. Stud, Inner
MCK-32	2	Insulation, Field Connection
MCK-3005S	1	FIELD COIL PACKAGE
MCK-1007	1	Coil, Field, U. L.
MCK-1008	1	Coil, Field, L. R.
MCK-1009	1	Coil, Field, U. R.
MCK-1010	1	Coil, Field, L. L.
8X-66	4	Screw, Br. Grd., Flat Hd. # 10-32x1/2
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-148	1	Nut, Term. Stud, Hex. 3/8-16
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, Comm. End
MAD-110	1	Felt
MBD-258	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8
MBR-2410	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1410	1	Head Assy., Partial, Comm. End
GBF-79	1	BEARING, ABSORBENT BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Screw, # 10
X-2964A	1	Oiler
12X-196	12	Lockwasher, C. E. Head Sc., #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, C. E.
MBD-247A	1	Washer, Thrust, Int.
MBD-311	*	Washer, Thrust, Int.
MCK-2045	1	ARMATURE
MU-54	1	Washer, Thrust, C. E., 1/32" Thick

Miscellaneous Parts

EBB-28	1	Bendix Drive
MBD-254	8	Screw, Pinion Housing, Hex. Hd. #10-32x7/8
MBD-1315	1	Bearing Assy., Intermediate
MBD-312	1	Retainer, Felt, Washer
MBD-313	1	Washer, Felt
MBD-314	1	BEARING, ABS. BRONZE
MCK-1024	1	Band, Cover
PS-1278	1	Housing Assy, Pinion
MAB-88	1	Pin., Dowel
MBD-257	1	BEARING, ABSORBENT BRONZE
12X-196	8	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as Required.

UNIT	APPLICATION
MCK-4003	Towmotor

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCK-4004 STARTING MOTOR PARTS LIST

MCK-4004
(Issued 9-17-53)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCK-2046	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-231	1	Connector, Term. Stud
MBD-233A	1	Stud, Terminal
MBR-12 ‡	2	Brush
MBR-12A‡	2	Brush
MBR-13 ‡	2	Brush
MBR-13A‡	2	Brush
MBR-34	1	Connector
MC-51A	1	Washer, Plain, Term. Stud, Inner
MCK-3005S	1	Field Coil Package
MCK-1007	1	Coil, Field, U.L.
MCK-1008	1	Coil, Field, L.R.
MCK-1009	1	Coil, Field, U.R.
MCK-1010	1	Coil, Field, L.L.
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Br. Grd., Flat Hd. #10-32x1/2
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-148	1	Nut, Term. Stud, Hex. 3/8-16
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, C.E.
MAD-110	1	Felt
MBR-2236B	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	Bearing, Abs. Bronze
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Screw, #10
X-2964A	1	Oiler
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Arm. Thrust, Comm. End
MBD-247A	1	Washer, Thrust, Intermediate
MBD-311	*	Washer, Thrust, Intermediate
MCK-2045	1	Armature
MU-54	1	Washer, Thrust, C.E., 1/32" Thick

Switch Assembly & Parts Used With

MBD-1253C	1	Switch & Bracket Assy.
MBD-253	1	Bracket
MCC-34	1	Connector
WSM-4101A	1	Switch, Solenoid (See Separate List for Parts)
8X-343	2	Screw, Switch Mtg., Hex. Hd. 1/4-28x5/8
XA-595	2	Nut, Switch Mtg., Hex. 1/4-28
12X-196	2	Lockwasher, Bracket Mtg. Sc., #10
8X-709	2	Screw, Bracket Mtg., Fill. Hd. #10-32x7/16

Miscellaneous Parts

EBB-3	1	Bendix Drive Assy.
MBD-254	8	Screw, Pinion Housing, Hex. Hd. #10-32x7/8
MBD-1315	1	Bearing Assy., Intermediate
MBD-312	1	Retainer, Felt
MBD-313	1	Washer, Felt
MBD-314	1	Bearing, Abs. Bronze
MCK-1024	1	Band, Cover
PS-1228	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-257	1	Bearing, Abs. Bronze
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

‡ Brush Set, Service MBR-1012S
* Use as Required.

UNIT	APPLICATION
MCK-4004	National Supply

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCK-4005 STARTING MOTOR PARTS LIST

MCK-4005
(Issued 10-24-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCK-2047	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	1	Washer, Ins., Term. Stud, Outer
MBD-401C	1	Insulation, Sleeve
MCH-25A	1	Washer, Ins., Term. Stud, Inner
MCK-28	1	Stud, Terminal
MCK-35	1	Stud, Terminal, Grounded
MCK-50	4	Plate, Brush Lock
MCK-1007DS	1	COIL ASSY., FIELD, UPPER
MCK-1008DS	1	COIL ASSY., FIELD, LOWER
MCK-1012S	1	BRUSH SET
MN-47B	1	Washer, Plain, Term. Stud, Grounded
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex.3/8-16
X-3268	8	Screw, Brush, Bdg. Hd. #8-32x3/8
8X-148	1	Nut, Term. Stud, Hex. 3/8-16
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, C. E.
MAD-110	1	Felt
MBD-258	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8
MBR-2236B	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C. E.
GBF-79	1	BEARING, ABS. BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Screw, #10
X-2964A	1	Oiler
12X-196	12	Lockwasher, C. E. Head Sc., #10

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MCK-22	*	Washer, Thrust, Int., .032" Thick
MCK-22A	1	Washer, Thrust, Int., .065" Thick

Armature Assembly (Continued)

Part No.	No. Used	Name of Part
MCK-2021	1	ARMATURE
MU-54	1	Washer, Thrust, C. E., 1/32" Thick

Switch Assembly & Parts Used With

MCK-1053	1	Switch & Bracket Assy.
MBD-252	1	Bracket
MCK-68	1	Connector
WSM-4101A	1	SOLENOID STARTING SWITCH (See separate list for parts)
8X-343	2	Screw, Switch Mtg., Hex. Hd. 1/4-28x5/8
XA-595	2	Nut, Switch Mtg., Hex. 1/4-28
12X-199	4	Lockwasher, Bracket Mtg. Sc., 1/4
8X-905	4	Screw, Bracket Mtg., Fill. Hd. 1/4-20x7/16

Miscellaneous Parts

EBB-13	1	BENDIX DRIVE ASSY.
EBA-5716	1	Screw, Pinion Back Stop
EBB-1104	1	Pinion
EBB-1113	1	Spring, Anti-Drift
EBB-1115A	1	Stop, Pinion Back
EBB-1131	1	Shaft, Screw
EBB-1142	1	Pin, Stop Nut
EBB-1325	1	Spring, Meshing
EBB-3011S	1	Spring Kit, Anti-Drift
EBB-3013S	1	Pinion Kit
EBB-3015S	1	Clutch Assembly Kit
MBD-1403	1	Bearing Assy., Intermediate
MBD-295	1	BEARING, ABS. BRONZE
MBD-312	1	Retainer, Felt
MBD-313	1	Washer, Felt
MCK-36	8	Screw, Pinion Housing, Hex. Hd. #10-32x1 1/4
MCK-1024	1	Band, Cover
PS-1317A	1	Housing Assy., Pinion
MBD-257	1	BEARING, ABS. BRONZE
8X-65	3	Screw, Int. Bearing, Flat Hd. #10-32x3/4
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required.

UNIT	APPLICATION
MCK-4005	J. I. Case

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCL-6001AM,M STARTING MOTOR PARTS LIST

MCL-6001AM,M
(Issued 3-19-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCL-2031A	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85A	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007	1	Coil, Field, U.L.
MCL-1010	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37G	1	Washer, Plain, Term. Stud
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-2030A	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021M	1	ARMATURE
MU-54F	*	Washer, Thrust, C.E. & Inter., 1/32" Thick
MU-54G	*	Washer, Thrust, C.E. & Inter., 1/64" Thick
MU-54J	*	Washer, Thrust, C.E. & Inter., .046" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16

Switch Assembly (Continued)

Part No.	No. Used	Name of Part
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-52A	1	BENDIX DRIVE ASSY.
EBA-4808	1	Ring, Lock
EBA-4833	1	Ring, Retaining
EBA-7213	1	Spring, Anti-Drift
EBA-7225	1	Spring, Meshing
EBA-7232	1	Pinion
EBA-7905	1	SPRING, DRIVE
EBA-7906	1	Pin, Locating
EBA-7907	2	Plate, Spring Anchor
EBA-7931	1	Shaft, Screw
MAB-1024N	1	Band, Cover
MCH-1040B	1	BEARING ASSY. INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
PS-1283B	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2881	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

NOTE: MCL-6001M Starting Motor uses EBA-45A Bendix Drive with sub parts as noted below:

EBA-45A	1	BENDIX DRIVE ASSY.
EBA-1232A	1	Pinion
EBA-4505	1	SPRING, DRIVE
EBA-4808	1	Ring, Lock
EBA-4833	1	Ring, Retaining
EBA-7213	1	Spring, Anti-Drift
EBA-7225	1	Spring, Meshing
EBA-7906	1	Pin, Locating
EBA-7907	2	Plate, Spring Anchor
EBA-7931	1	Shaft

† BRUSH SET, SERVICE MAB-2012AS.

* Use as required.

UNIT	APPLICATION
MCL-6001AM	Owens Yacht
MCL-6001M	Packard (Marine)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCL-3031A	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-12†	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85A	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007	1	Coil, Field, U.L.
MCL-1010	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-37G	1	Washer, Plain, Term. Stud
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-3002A	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021M	1	ARMATURE
MU-54F	*	Washer, Thrust, C.E. & Inter., 1/32" Thick
MU-54G	*	Washer, Thrust, C.E. & Inter., 1/64" Thick
MU-54J	*	Washer, Thrust, C.E. & Inter., .046" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16

Switch Assembly (Continued)

Part No.	No. Used	Name of Part
8X-2843	2	Nut, Hex. 5/16-24
8X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-80B	1	BENDIX DRIVE ASSY.
EBA-4431A	1	Screw Shaft
EBA-4805	1	SPRING, DRIVE
EBA-4807	2	Plate, Spring Anchor
EBA-4808	1	Ring, Lock
EBA-4813	1	Spring, Anti-Drift
EBA-4825	1	Spring, Meshing
EBA-4833	1	Ring, Retaining
EBA-7906	1	Pin, Locating
EBA-8032A	1	Pinion
MAB-1024N	1	Band, Cover
MCH-1040B	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
PS-1283B	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2881	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

NOTE: MCL-6002M Starting Motor uses EBA-44A Bendix Drive with sub parts as noted below:

EBA-44A	1	BENDIX DRIVE ASSY.
EBA-4431A	1	Shaft
EBA-4807	2	Plate, Spring Anchor
EBA-4808	1	Ring, Lock
EBA-4813	1	Spring, Anti-Drift
EBA-4825	1	Spring, Meshing
EBA-4832	1	Pinion
EBA-4833	1	Ring, Retaining
EBA-7906	1	Screw, Head
EBA-9605A	1	SPRING, DRIVE

† BRUSH SET, SERVICE MAB-2012AS.

* Use as required.

UNIT	APPLICATION
MCL-6002AM	Owens Yacht
MCL-6002M	Packard (Marine)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCL-2041	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39	1	Washer, Ins., Term. Stud, Inner
MCL-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007	1	Coil, Field, U.L.
MCL-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
MZ-209	1	Stud, Terminal
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & Inter., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & Inter., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & Inter., 3/64" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SS-4017	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10

Switch Assembly (Continued)

Part No.	No. Used	Name of Part
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-45	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-4505	1	SPRING, DRIVE
MAW-24	1	Band, Cover
MCH-1040	1	Bearing Assy., Intermediate
MAW-130	1	Bearing, Abs. Bronze
PS-1283	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MCL-6003	Packard

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCL-2031	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39	1	Washer, Ins., Term. Stud, Inner
MCL-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007	1	Coil, Field, U. L.
MCL-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
MZ-209	1	Stud, Terminal
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021	1	ARMATURE
MU-54	*	Washer, Thrust, C. E. & Inter., 1/32" Thick
MU-54A	*	Washer, Thrust, C. E. & Inter., 1/64" Thick
MU-54B	*	Washer, Thrust, C. E. & Inter., 3/64" Thick
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SST-4004	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16

Switch Assembly (Continued)

Part No.	No. Used	Name of Part
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-52	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Screw, Shaft
EBA-2105	1	SPRING, DRIVE
EBA-7632	1	Pinion
MAW-24	1	Band, Cover
MCJ-1040	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Absorbent Bronze
PS-1285	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as required.

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MCL-6004	Chris Craft, Nordberg, Massey Harris

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCL-3031	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39	1	Washer, Ins., Term. Stud, Inner
MCL-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007	1	Coil, Field, U.L.
MCL-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
MZ-209	1	Stud, Terminal
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-3002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & Inter., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & Inter., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & Inter., 3/64" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SST-4004	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16

Switch Assembly (Continued)

Part No.	No. Used	Name of Part
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Sc., Skpf. #10

Miscellaneous Parts

EBA-80	1	BENDIX DRIVE ASSEMBLY
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-3505	1	SPRING, DRIVE
EBA-3507	2	Plate, Spring Anchor
EBA-4431	1	Shaft, Screw
EBA-8032	1	Pinion
MAW-24	1	Band, Cover
MCJ-1040	1	BEARING ASSY. INTERMEDIATE
MAW-130	1	Bearing, Absorbent Bronze
PS-1285	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as required.

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MCL-6005	Nordberg (Marine), Chris Craft

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAW-20A	2	Bolt, Thru
MCL-2035	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39	1	Washer, Ins., Term. Stud, Inner
MCL-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007	1	Coil, Field, U. L.
MCL-1010	1	Coil, Field, U. R.
MN-21	1	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
MZ-209	1	Stud, Terminal
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-146	2	Nut, Thru Bolt, Hex. 1/4-20
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2023	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & D.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick

Switch Assembly & Parts Used With

MCL-29	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16

Switch Assy. (Continued)

Part No.	No. Used	Name of Part
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1737	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBB-7	1	BENDIX DRIVE ASSY.
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2008	1	Ring, Lock
EBA-3505	1	SPRING, DRIVE
EBA-3507	2	Plate, Spring Anchor
EBA-3531	1	Shaft
EBB-732	1	Pinion
MAW-24	1	Band, Cover
MCL-1003	1	Head Assy., Drive End
MCL-27	1	Bearing, Abs. Bronze
MZ-124	1	Pin, Bendix
8X-66	2	Screw, Drive End Flat Hd. #10-32x1/2
X-386	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

* Use as Required.

UNIT	APPLICATION
MCL-6006	Hudson

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCL-2031	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39	1	Washer, Ins., Term. Stud, Inner
MCL-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007	1	Coil, Field, U.L.
MCL-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
MZ-209	1	Stud, Terminal
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & Intermediate, 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & Intermediate, 3/64" Thick
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-52	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Screw Shaft
EBA-2105	1	SPRING, DRIVE
EBA-7632	1	Pinion
MAW-24	1	Band, Cover
MCJ-1040	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Absorbent Bronze
PS-1289	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABSORBENT BRONZE
12X-196	4	Lockwasher, Int. Bearing & Switch Mtg. Sc., #10
8X-312	2	Screw, Switch Mtg., Rd. Hd. #10-32x1 /4
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MCL-6007	Buda

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCL-6008 STARTING MOTOR PARTS LIST

MCL-6008
(Issued 3-21-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCL-2037	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39	1	Washer, Ins., Term. Stud, Inner
MCL-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007	1	Coil, Field, U. L
MCL-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
MZ-209	1	Stud, Terminal
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-2038	1	ARMATURE ASSY.
MAB-35	1	Spacer, Brg. Thrust
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & D.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick

Miscellaneous Parts

EBA-35	1	BENDIX DRIVE ASSY.
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2008	1	Ring, Lock
EBA-3505	1	SPRING, DRIVE
EBA-3507	2	Plate, Spring Anchor
EBA-3531	1	Shaft
EBA-3532	1	Pinion
MAW-24	1	Band, Cover
MCL-1036	1	Head Assy., Drive End
MAB-49A	1	BEARING, ABSORBENT BRONZE
MZ-124	1	Pin, Bendix
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Used as Required.

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MCL-6008	Nash

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCL-2037	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39	1	Washer, Ins., Term. Stud, Inner
MCL-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007	1	Coil, Field, U. L.
MCL-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
MZ-209	1	Stud, Terminal
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., 080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
‡EBA-52	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-2031	1	Screw Shaft
EBA-2105	1	SPRING, DRIVE
EBA-3307	2	Plate, Spring Anchor
EBA-7632	1	Pinion
**	1	Band, Cover
MCJ-1040	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
PS-1285	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012AS
* Use as Required.
‡ Starting motor MCL-6009B uses EBB-31 BENDIX DRIVE with no sub parts.
** See table following parts list for part number applying to assembly wanted.

Assembly No.	Cover Band
MCL-6009	MAW-24
MCL-6009A	MAX-1024
MCL-6009B	MAW-24

UNIT	APPLICATION
MCL-6009	Continental, Ross Carrier
MCL-6009A	Tractomotive Corp.
MCL-6009B	Continental

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
(MCL-2031A)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85A	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R
MAX-1009	1	Coil, Field, L.L.
MCL-1007	1	Coil, Field, U.L.
MCL-1010	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MU-28	1	Stud, Terminal, 5/16-24
MU-37G	1	Washer, Plain, Term..Stud
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-2030A	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021M	1	ARMATURE
MU-54F	*	Washer, Arm. Thrust, Int., 1/32'' Thick
MU-54G	*	Washer, Arm. Thrust, Int., 1/64'' Thick
MU-54J	*	Washer, Arm. Thrust, Int., .046'' Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAX-89L	1	Connector
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24

Switch Assembly & Parts (Continued)

Part No.	No. Used	Name of Part
8X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-52A	1	BENDIX DRIVE ASSY.
EBA-4808	1	Ring, Lock
EBA-4833	1	Ring, Retaining
EBA-7213	1	Spring, Anti-Drift
EBA-7225	1	Spring, Meshing
EBA-7232	1	Pinion
EBA-7905	1	SPRING, DRIVE
EBA-7906	1	Pin, Locating
EBA-7907	2	Plate, Spring Anchor
EBA-7931	1	Shaft, Screw
MAB-1024N	1	Band, Cover
MCH-1040B	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Absorbent Bronze
PS-1283D	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
X-2882	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
X-2875	1	Nut, Cover Band, Square #10-32
X-2881	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MAB-2012AS.

* Use as Required.

UNIT	APPLICATION
MCL-6010M	Owens Yacht

(Issued 10-4-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
(MCL-3031A)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAB-12†	2	Brush
MAB-30	1	Insulation, Field Conn.
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85A	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007	1	Coil, Field, U.L.
MCL-1010	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MU-28	1	Stud, Terminal, 5/16-24
MU-37G	1	Washer, Plain, Term. Stud
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-3002A	1	Head Assy., Comm End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021M	1	ARMATURE
MU-54F	*	Washer, Arm. Thrust, Int., 1/32" Thick
MU-54G	*	Washer, Arm. Thrust, Int., 1/64" Thick
MU-54J	*	Washer, Arm. Thrust, Int., .046" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAX-89L	1	Connector
SSP-4001M	1	SWITCH, SOLENOID
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-2843	2	Nut, Hex. 5/16-24

Switch Assembly & Parts Used With (Continued)

Part No.	No. Used	Name of Part
8X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-80B	1	BENDIX DRIVE ASSY.
EBA-4431A	1	Screw Shaft
EBA-4805	1	SPRING, DRIVE
EBA-4807	2	Plate, Spring Anchor
EBA-4808	1	Ring, Lock
EBA-4813	1	Spring, Anti-Drift
EBA-4825	1	Spring, Meshing
EBA-4833	1	Ring, Retaining
EBA-7906	1	Pin, Locating
EBA-8032A	1	Pinion
MAB-1024N	1	Band, Cover
MCH-1040B	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Absorbent Bronze
PS-1283D	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
X-2882	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
X-2875	1	Nut, Cover Band, Square #10-32
X-2881	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MAB-2012AS.

* As Required.

UNIT	APPLICATION
MCL-6011M	Owens Yacht

(Issued 10-4-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCL-6013 STARTING MOTOR PARTS LIST MCL-6013

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
(MCL-2031)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39	1	Washer, Ins., Term. Stud, Inner
MCL-3005S	1	Field Coil Package
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007	1	Coil, Field, U.L.
MCL-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
MZ-209	1	Stud, Terminal
8X-164	2	Nut, Terminal Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021	1	Armature
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & D.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89L	1	Connector
SST-4004	1	Solenoid Switch
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-52	1	Bendix Drive Assembly
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Screw Shaft
EBA-2105	1	Spring, Drive
EBA-7632	1	Pinion
MAW-24	1	Band, Cover
MCJ-1040	1	Bearing Assy., Intermediate
MAW-130	1	Bearing, Abs. Bronze
PS-1287A	1	Housing Assy., Pinion
MG-77A	1	Bearing, Abs. Bronze
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

NOTE: Part numbers shown in parenthesis are not recommended for service.

UNIT	APPLICATION
MCL-6013	Checker Cab

(Issued 8-2-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCL-3031	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39	1	Washer, Ins., Term. Stud, Inner
MCL-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007	1	Coil, Field, U.L.
MCL-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
MZ-209	1	Stud, Terminal
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-3002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & Int., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & Int., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & Int., 3/64" Thick
X-261	1	Key, Woodruff, D.E. #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-80	1	BENDIX DRIVE ASSY.
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-3307	2	Plate, Spring Anchor
EBA-3505	1	SPRING, DRIVE
EBA-4431	1	Screw Shaft
EBA-8032	1	Pinion
MAW-24	1	Band, Cover
MCJ-1040	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
PS-1285	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MCL-6014	Nordberg Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCL-6015 STARTING MOTOR PARTS LIST

MCL-6015
(Issued 1-28-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCL-2031	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39	1	Washer, Ins., Term. Stud, Inner
MCL-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007	1	Coil, Field, U. L.
MCL-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
MZ-209	1	Stud, Terminal
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded

Armature Assembly & Parts Used With

MCH-2021	1	ARMATURE
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & D.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10

Switch Assembly & Parts Used (Cont.)

Part No.	No. Used	Name of Part
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-52	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft, Screw
EBA-2105	1	SPRING, DRIVE
EBA-7632	1	Pinion
MAW-24	1	Band, Cover
MCJ-1040	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
PS-1285	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MCL-6015	Nordberg (Marine)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCL-6017 STARTING MOTOR PARTS LIST

MCL-6017
(Issued 3-27-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAW-20A	2	Bolt, Thru
MCL-2035	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	1	Washer, Ins., Term. Stud, Outer
MAB-65	1	Terminal
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39	1	Washer, Ins., Term. Stud Inner
MCL-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007	1	Coil, Field, U. L.
MCL-1010	1	Coil, Field, U. R.
MN-21	1	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 ‡	2	Brush
MZ-209	1	Stud, Terminal
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-146	2	Nut, Thru Bolt, Hex. 1/4-20
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCJ-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S ‡	2	Brush, Grounded

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-2023	1	ARMATURE
MU-54	1	Washer, Thrust, D. E., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick

Miscellaneous Parts

EBB-52	1	BENDIX DRIVE ASSY.
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2008	1	Ring, Lock
EBA-3307	2	Plate, Spring Anchor
EBA-3505	1	SPRING, DRIVE
EBA-3531	1	Shaft, Screw
EBA-8032	1	Pinion Assy.
MAX-1024	1	Band, Cover
MCL-1003	1	Head Assy., Drive End
MCL-27	1	BEARING, ABS. BRONZE
MZ-124	1	Pin, Bendix
8X-66	2	Screw, D. E. Head. Flat Hd. #10-32x1/2
X-386	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

‡ BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MCL-6017	Co-op, Cockshutt

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCL-6101 STARTING MOTOR PARTS LIST

MCL-6101
(Issued 3-24-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2032	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-34	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007F	1	Coil, Field, U. L.
MCL-1010F	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Terminal Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2039	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-63	1	Connector
SS-4707	1	SOLENOID STARTING SWITCH (See Separate List for Parts)
12X-201	2	Lockwasher, Switch Term., 3/8
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-830	1	Nut, Switch Term., Hex. 3/8-16
X-1272	4	Washer, Switch Mtg., Skpf. 1/4

Clutch Assembly & Parts Used With

MAX-71	1	Pin, Yoke
MCH-58	2	Retainer, Yoke Spring
MCH-62	1	Spring, Yoke
MCH-76	1	Pin, Link
MCH-2056	1	Yoke
MCL-3098A	1	CLUTCH, STARTER
12X-201	1	Lockwasher, Yoke Pin, 3/8
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
8X-830	1	Nut, Yoke Pin, Hex. 3/8-16

Misecellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D. E.
PS-1293A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCL-6101	Chrysler

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2038A	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAW-37	1	Bushing, Ins., Term. Stud
MAX-49	1	Stud, Terminal
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCH-25A	1	Washer, Ins., Term. Stud
MCL-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1007	1	Coil, Field, U. L.
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1010D	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MZ-12†	2	Brush
SW-763S	1	Switch Contact Package
12X-196	2	Lockwasher, Brush Grd. Sc., #10
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-321	2	Screw, Brush Grd., Rd. Hd. #10-32x5/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2039	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SW-2813	1	SWITCH, STARTER
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Sw. Mtg. Screw, Skpf. #10

Clutch Assembly & Parts Used With

MAX-71	1	Pin, Yoke
MCH-58	2	Retainer, Yoke Spring
MCH-62	1	Spring, Yoke
MCH-2059	1	Yoke
MCL-3098A	1	STARTER CLUTCH
12X-201	1	Lockwasher, Yoke Pin, 3/8
8X-830	1	Nut, Yoke Pin, Hex. 3/8-16

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D. E.
PS-1294A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012BS.

* Use as Required.

UNIT	APPLICATION
MCL-6102	Dodge (Truck)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2038	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAW-37	1	Bushing, Ins., Term. Stud
MAX-49	1	Stud, Terminal
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCH-25A	1	Washer, Ins., Term. Stud
MCL-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1007	1	Coil, Field, U. L.
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1010D	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MZ-12†	2	Brush, Insulated
SW-764S	1	Switch, Contact Package
12X-196	2	Lockwasher, Brush Grd. Sc., #10
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-321	2	Screw, Brush Grd., Rd. Hd. #10-32x5/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2039	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SW-2813	1	SWITCH, STARTER
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Sw. Mtg. Screw, Skpf. #10

Clutch Assembly & Parts Used With

MAX-71	1	Pin, Yoke
MCH-58	2	Retainer, Yoke Spring
MCH-62	1	Spring, Yoke
MCH-2060	1	Yoke
MCL-3098A	1	STARTER CLUTCH
12X-201	1	Lockwasher, Yoke Pin, 3/8
8X-830	1	Nut, Yoke Pin, Hex. 3/8-16

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D. E.
PS-1294A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012BS.

* Used as required.

UNIT	APPLICATION
MCL-6103	Dodge (Truck)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCL-6104 STARTING MOTOR PARTS LIST

MCL-6104
(Issued 3-24-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-3033	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-85	1	Bushing, Ins., Term. Stud
MAK-80	1	Washer, Ins., Term. Stud, Inner
MAX-58	1	Equalizer
MAX-158	1	Stud, Terminal
MBA-21	1	Insulation, Sw. Contact
MBA-22	1	Contact, Switch
MCH-13†	2	Brush, Grounded
MCL-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1007	1	Coil, Field, U. L.
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1010D	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MZ-12†	2	Brush
MZ-197	1	Insulation, Contact Sc.
8X-183A	1	Washer, Contact Sc., Plain #10
12X-196	3	Lockwasher, Brush Grd. & Contact Sc., #10
8X-309	1	Screw, Sw. Contact, Rd. Hd. #10-32x1/2
8X-321	2	Screw, Brush Grd.,, Rd. Hd. #10-32x5/16
8X-1376	1	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-3002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2067	1	ARMATURE
MU-54	2	Washer, Thrust, C. E. & Intermediate, 1/32" Thick
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBA-24	1	Gasket, Switch
MBA-31	1	Gasket, Switch
MCL-44	1	Lever, Switch
MZ-170	1	Pin, Switch Lever
SW-2916B	1	SWITCH, STARTING
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Sc., Skpf. #10
X-1531	1	Pin, Cotter

Miscellaneous Parts

EB-99	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7805	1	SPRING, DRIVE
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8734	1	Ring, Take-Up
EB-9911	1	Shaft & Pinion
MAX-1024	1	Band, Cover
MCH-1051	1	BEARING ASSY. INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1007C	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS.

UNIT	APPLICATION
MCL-6104	Allis Chalmers

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCL-2046)	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud,
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-34	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2068	1	ARMATURE
MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32'' Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89R	1	Connector
SST-4004	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-2A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8705A	1	SPRING, DRIVE
EB-8734A	1	Ring, Take-Up
EBA-211A	1	Shaft & Pinion
MAW-24	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1297	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc. #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS.

UNIT	APPLICATION
MCL-6105	Gray Marine

(Issued 4-18-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
(MCL-2046A)	1	Frame & Field Assembly
GK-38C	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85A	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-34	1	Stud, Terminal
MCL-3005CS	1	FILED COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
X-20	2	Screw, Ground Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Ground Sc., #10
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2976	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030A	1	Head Assy., Comm.. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2068M	1	ARMATURE
MU-54F	2	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89R	1	Connector
SST-4005M	1	SOLENOID SWITCH
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
X-2853	1	Hex. Nut, #10-32
X-2976	2	Hex. Nut, 5/16-18
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-2A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8705A	1	SPRING, DRIVE
EB-8734A	1	Ring, Take-Up
EBA-211A	1	Shaft & Pinion
MAB-1024N	1	Band, Cover
MCH-1051A	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1297A	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc. #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2881	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

† BRUSH SET, SERVICE MZ-2012BS.

UNIT	APPLICATION
MCL-6105M	Gray Marine

(Issued 4-19-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCL-6106 STARTING MOTOR PARTS LIST

MCL-6106
(Issued 10-6-50)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCL-3046)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-34	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-196	2	Lockwasher, Ground Screw, #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-3002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2068	1	ARMATURE
MU-54	2	Washer, Thrust, C.E. & Intermediate 1/32'' Thick
X-261	1	Key, Woodruff #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SST-4004	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32

Switch Assembly & Parts (Continued)

Part No.	No. Used	Name of Part
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
12X-196	2	Lockwasher, Switch Mtg. Sc., #10
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16

Miscellaneous Parts

EB-99A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7805A	1	SPRING, DRIVE
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8734A	1	Ring, Take Up
EB-9911A	1	Shaft & Pinion
MAW-24	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1297	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS.

UNIT	APPLICATION
MCL-6106	Gray Marine

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCL-2032)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13 †	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-34	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Ground Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2039	1	ARMATURE
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-63	1	Connector
SS -4708	1	SOLENOID STARTING SWITCH
12X-201	2	Lockwasher, Switch Term., 3/8
8X-830	2	Nut, Switch Term., Hex. 3/8-16
X-3002	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8

Clutch Assembly & Parts Used With

MAX-71	1	Pin, Yoke
MCH-58	2	Retainer, Yoke Spring
MCH-62	1	Spring, Yoke
MCH-2056	1	Yoke
MCL-3098A	1	CLUTCH, STARTER
SS-56	1	Pin, Link
12X-201	1	Lockwasher, Yoke Pin
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
8X-830	1	Nut, Yoke Pin, Hex. 3/8-16

Miscellaneous Parts

MAW-24	1	Band, Cover
PS-1294B	1	Housing Assy., Pinion
MP-41A	1	Bearing, Abs. Bronze
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCL-6107	Chrysler Industrial

(Issued 6-6-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCL-2047)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12†	2	Brush
12X-196	2	Lockwasher, Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070	1	ARMATURE ASSY.
MCH-27	1	Spacer
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCL-49	1	Connector
SSX-4101	1	SOLENOID SWITCH
12X-200	1	Lockwasher, Switch Term., 5/16
X-1272	4	Washer, Switch Mtg., Skpf. 1/4
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-77	1	Pin, Yoke
MCH-2074	1	Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16-38
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer, Snap Ring
MCS-47	1	Ring, Snap
PS-1301	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MZ-2012BS.

* Use as Required.

UNIT	APPLICATION
MCL-6108	Chrysler (8)

(Issued 9-15-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCL-2047)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12†	2	Brush
12X-196	2	Lockwasher, Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070	1	ARMATURE ASSY.
MCH-27	1	Spacer
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32 Thick
MU-54B	*	Washer, Thrust, C.E., 3/64 Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-80	1	Connector
SSX-4001	1	SOLENOID SWITCH
12X-200	1	Lockwasher, Switch Term., 5/16
X-1272	4	Washer, Switch Mtg., Skpf. 1/4
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-77	1	Pin, Yoke
MCH-2074	1	Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16-3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer, Snap Ring
MCS-47	1	Ring, Snap
PS-1301	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MZ-2012BS.

* Use as Required.

UNIT	APPLICATION
MCL-6109	Chrysler (6)

(Issued 9-15-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCL-2113)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Insulation, Switch Contact
MAW-205	1	Insulation, Switch Contact
MAX-49	1	Stud, Terminal
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCH-25A	1	Washer, Ins., Term. Stud
MCL-30	1	Insulation, Field Connection
MCL-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1007	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil,Field, L.L.
MCL-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MZ-12†	2	Brush, Insulated
SW-763	1	Contact, Switch
12X-196	2	Lockwasher, Br. Ground Sc., #10
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070	1	ARMATURE ASSY.
MCH-27	1	Spacer
MN-18	1	Washer, Thrust, C.E.
MU-54	*	Washer, Thrust, C.E., 1/32 Thick
MU-54B	*	Washer, Thrust, C.E., 3/64 Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SW-2827	1	SWITCH, STARTING
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Clutch Assembly & Parts Used With

MCH-77	1	Pin, Yoke
MCH-2099	1	Yoke
MCL-3075	1	CLUTCH, STARTER
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band , Cover
MCS-46	1	Retainer, Snap Ring
MCS-47	1	Ring, Snap
PS-1302A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MZ-2012BS.

* Use as Required.

UNIT	APPLICATION
MCL-6110	Dodge Tr.
	De Soto Tr. - Export
	Fargo Tr.

(Issued 9-15-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCL-2113)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAW-39	1	Insulation, Switch Contact
MAW-205	1	Insulation, Switch Contact
MAX-49	1	Stud, Terminal
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCH-25A	1	Washer, Ins., Term. Stud
MCL-30	1	Insulation, Field Connection
MCL-3005BS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1007	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MZ-12†	2	Brush, Insulated
SW-763	1	Contact, Switch
12X-196	2	Lockwasher, Brush Grd. Sc., #10
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-321	2	Screw, Brush Grd., Rd. Hd. #10-32x5/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070	1	ARMATURE ASSY.
MCH-27	1	Spacer
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32 Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SW-2827	1	SWITCH, STARTING
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Clutch Assembly & Parts Used With

MCH-77	1	Pin, Yoke
MCH-2098	1	Yoke
MCL-3075	1	CLUTCH STARTER
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer, Snap Ring
MCS-47	1	Ring, Snap
PS-1302A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MZ-2012BS.

* Use as Required.

UNIT	APPLICATION
MCL-6111	Dodge (Truck)

(Issued 9-19-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCL-2046B)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13 †	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2028	1	ARMATURE
MU-54	*	Washer, Thrust, 1/32'' Thick
MU-54B	*	Washer, Thrust, 3/64'' Thick
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89R	1	Connector
SS-4017	1	SOLENOID SWITCH
8X-173	1	#10-32 Hex. Nut
12X-196	1	#10 Lockwasher
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lockwasher
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1737	2	Washer, Switch Mtg. Sc. Skpf. #10

Miscellaneous Parts

EBA-33	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
MCH-1024A	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1307	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCL-6113	Packard 8

(Issued 8-25-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCL-6114 STARTING MOTOR PARTS LIST

MCL-6114
(Issued 11-27-50)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCL-2047)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Inns., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070	1	ARMATURE
MCH-27	1	Spacer
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCL-50	1	Connector
SSX-4102	1	SOLENOID STARTING SWITCH (See separate list for parts)
12X-200	1	Lockwasher, Switch Term., 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
X-1272	4	Washer, Switch Mtg. Skpf. 1/4
8X-2988	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-77	1	Pin, Yoke
MCH-2074	1	Yoke
MCL-3161	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link, Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer, Snap Ring
MCS-47	1	Ring, Snap
PS-1308	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCL-6114	Packard

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCL-6115 STARTING MOTOR PARTS LIST MCL-6115

(Issued 10-3-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2114A	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13 †	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007F	1	Coil, Field, U. L.
MCL-1010F	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070	1	ARMATURE ASSY.
MCH-27	1	Spacer
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-90	1	Connector
SSX-4103	1	SOLENOID STARTING SWITCH (See separate list for parts)
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	1	Lockwasher, Switch Term., 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-77	1	Pin, Yoke
MCH-2074	1	Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1309A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCL-6115	Chrysler Ind.

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCL-6116 STARTING MOTOR PARTS LIST

MCL-6116
(Issued 11-29-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCL-2115)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12†	2	Brush
12X-196	2	Lockwasher, Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070	1	ARMATURE ASSY.
MCH-27	1	Spacer
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCL-51	1	Connector
SSX-4002	1	SOLENOID STARTING SWITCH (See separate list for parts.)
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	1	Lockwasher, Switch Term., 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-77	1	Pin, Yoke
MCH-2074B	1	Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer, Snap Ring
MCS-47	1	Ring, Snap
PS-1301	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCL-6116	De Soto

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCL-2114A)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud,
MAX-58	1	Equalizer
MCH-13 †	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12†	2	Brush
12X-196	2	Lockwasher, Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070	1	ARMATURE ASSY.
MCH-27	1	Spacer
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-93L	1	Connector
SSX-4003	1	SOLENOID STARTING SWITCH (See separate list for parts.)
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	1	Lockwasher, Switch Term., 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-77	1	Pin, Yoke
MCH-2074	1	Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer, Snap Ring
MCS-47	1	Ring, Snap
PS-1309A	1	Housing Assy., Pinion
MP-41A	1	Bearing, Abs. Bronze

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCL-6117	De Soto

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2117	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud
MCL-34	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-196	2	Lockwasher, Brush Ground Screw, #10
8X-321	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, D.E., 1/32" Thick
MCH-2075	1	ARMATURE ASSEMBLY
MU-54	1	Washer, Thrust, C.E., 1/32" Thick
8X-157	1	Nut, Shaft, D.E., Slotted 1/2-20
8X-358	1	Washer, Shaft, D.E., Plain 1/2
8X-1530	1	Pin, Cotter, Shaft

Miscellaneous Parts

MAW-24	1	Band, Cover
MCL-1052	1	Head Assy., Drive End
MAK-39	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012BS.

UNIT	APPLICATION
MCL-6120	Fairmount Railway Mtrs.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCL-6121 STARTING MOTOR PARTS LIST

MCL-6121
(Issued 10-7-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2115	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007F	1	Coil, Field, U. L.
MCL-1010F	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2110	1	ARMATURE
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E. 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

MCL-51	1	Connector
SSX-34	1	Spring
SSX-36	1	Plug
SSX-1021B	1	Moving Core Assy.

Switch Assembly & Parts Used (Cont.)

Part No.	No. Used	Name of Part
SS-60	1	Washer, Steel, 3/8
SSX-21	1	Core, Moving
SSX-22	1	Link Screw
SSX-35	1	Spring
SSX-1023	1	Clamp Assy.
8X-53	1	Screw, Rd. Hd. #8-32x5/8
8X-141	1	Nut, Hex. #8-32
SSX-4004	1	SOLENOID STARTING SWITCH (See Separate List for Parts)
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	1	Lockwasher, Switch Term., 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-2074C	1	Yoke
MCL-54	1	Pin, Yoke
MCL-56	1	Clamp, Yoke Cover
MCL-57	1	Cover, Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer, Snap Ring
MCS-47	1	Ring, Snap
PS-1316	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Interm. Plate Sc., #10
8X-311	2	Screw, Interm. Plate, Rd. Hd. #10-32x3/8

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCL-6121	Chrysler (8)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCL-6121A STARTING MOTOR PARTS LIST

MCL-6121A
(Issued 10-29-53)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2115	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
12X-196	2	Lockwasher, Brush Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2110	1	ARMATURE
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

MCL-51	1	Connector
SSX-34	1	Spring
SSX-36	1	Plug
SSX-1021B	1	Moving Core Assembly
SS-60	1	Washer, Steel, 3/8
SSX-21	1	Core, Moving
SSX-22	1	Link Screw
SSX-35	1	Spring

Switch Assembly & Parts Used (Cont.)

Part No.	No. Used	Name of Part
SSX-1023	1	Clamp Assembly
8X-53	1	Screw, Rd. Hd. #8-32x5/8
8X-141	1	Nut, Hex. #8-32
SSX-4004	1	SOLENOID STARTING SWITCH (See Separate List for Parts)
12X-199	4	Lockwasher, Sw. Mtg. Screw, 1/4
12X-200	1	Lockwasher, Switch Term. 5/16
8X-467	4	Screw, Sw. Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-2074C	1	Yoke
MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MCL-60	1	Cover, Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer, Snap Ring
MCS-47A	1	Ring, Snap
PS-1316	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Plate Screw, #10
8X-311	2	Screw, Inter. Plate, Rd. Hd. #10-32x3/8

† BRUSH SET, SERVICE MZ-2012BS.

* Used as required.

UNIT	APPLICATION
MCL-6121A	Chrysler 8

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Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2046B	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13 †	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007F	1	Coil, Field, U. L.
MCL-1010F	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
12X-200	1	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2028	1	ARMATURE
MU-54	*	Washer, Thrust, C. E. & Interm., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E. & Interm., 3/64" Thick
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89R	1	Connector, Switch to Motor
SS-4017	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1737	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBB-19	1	BENDIX DRIVE
MCH-1024A	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1307	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCL-6122	Packard

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCL-6124 STARTING MOTOR PARTS LIST

MCL-6124
(Issued 9-3-53)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2115	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-48	1	Stud, Terminal
MCL-3005CS	1	Field Coil Package
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007F	1	Coil, Field, U. L.
MCL-1010F	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12[illegible]	2	Brush
12X-196	2	Lockwasher, Brush Ground Sc., #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assembly, Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2110	1	Armature
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E. 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCL-51	1	Connector
SSX-34	1	Spring
SSX-36	1	Plug
SSX-1021B	1	Moving Core Assembly
SS-60	1	Washer, Steel, 3/8
SSX-21	1	Core, Moving
SSX-22	1	Link Screw
SSX-35	1	Spring
SSX-1023	1	Clamp Assembly
8X-53	1	Screw, Rd. Hd. #8-32x5/8
8X-141	1	Nut, Hex. #8-32
SSX-4004	1	Solenoid Starting Switch (See Separate List for Parts)
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	1	Lockwasher, Switch Term., 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-2074C	1	Yoke
MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MCL-60	1	Cover, Yoke
MCL-3075	1	Clutch, Starter
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer, Snap Ring
MCS-47A	1	Ring, Snap
PS-1319	1	Housing Assembly, Pinion
MP-41A	1	Bearing, Abs. Bronze
12X-196	2	Lockwasher, Int. Plate Sc., #10
8X-311	2	Screw, Int. Plate, Rd. Hd. #10-32x3/8

† Brush Set, Service MZ-2012BS.
* Use as required.

UNIT	APPLICATION
MCL-6124	Dodge Truck, Fargo Truck

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2113	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-49	1	Stud, Terminal
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCH-25A	1	Washer, Ins., Term. Stud
MCL-30	1	Insulation, Field Connection
MCL-3005BS	1	Field Coil Package
MAX-64	2	Connector, Field Coil
MAX-1007	1	Coil, Field, U.L.
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1010D	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MZ-12†	2	Brush
SW-764S	1	Switch Contact Package
12X-196	2	Lockwasher, Brush Ground Sc., #10
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-321	2	Screw, Brush Grd., Rd. Hd. #10-32x5/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070	1	Armature Assembly
MCH-27	1	Spacer
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SW-2827	1	Switch, Starting
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Clutch Assembly & Parts Used With

MCH-77	1	Pin, Yoke
MCL-2095	1	Yoke
MCL-3075	1	Clutch, Starter
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer, Snap Ring
MCS-47A	1	Ring, Snap
PS-1302A	1	Housing Assy., Pinion
MP-41A	1	Bearing, Abs. Bronze

† Brush Set, Service MZ-2012BS.

* Use as Required.

UNIT	APPLICATION
MCL-6126	Dodge Truck, Fargo Truck

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

MCL-6126F STARTING MOTOR PARTS LIST

MCL-6126F
(Issued 9-25-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2113CS	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-49	1	Stud, Terminal
MAX-58	1	Equalizer
MCH-25A	1	Washer, Ins., Term. Stud
MCL-30	1	Insulation, Field Connection
MCL-3005FS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1007S-1	1	Coil, Field, U. R.
MAX-1008S-2	1	Coil, Field, L. R.
MAX-1009S-2	1	Coil, Field, L. L.
MCL-1010DS-1	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MZ-2012BS	1	BRUSH SET
SW-764S	1	Switch Contact Package
12X-196	2	Lockwasher, Br. Ground Sc., #10
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030E	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19D	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070B	1	ARMATURE
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SW-2827S	1	STARTING SWITCH
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Clutch Assembly & Parts Used With

MCH-77	1	Pin, Yoke
MCL-2095	1	Yoke
MCL-3075	1	STARTER CLUTCH
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024S	1	Band, Cover
MCS-46	1	Retainer, Snap Ring
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1302E	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

* Use as required.

UNIT	APPLICATION
MCL-6126F	Dodge Truck

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCL-3118	1	Frame & Field Assembly
GK-38C	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1008S-1	1	COIL, FIELD, L.R.
MAX-1009S-1	1	COIL, FIELD, L.L.
MCH-13†	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-34	1	Stud, Terminal
MCL-1007FS	1	COIL, FIELD, U.L.
MCL-1010FS	1	COIL, FIELD, U.R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
X-20	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Ground Sc., #10
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2976	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-3002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, Int., 1/32" Thick
MCH-2079M	1	ARMATURE
MN-18	*	Washer, Thrust, D.E., .065" Thick
MN-18E	*	Washer, Thrust, D.E., .095" Thick
X-261C	3	Key, Woodruff, D.E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
DA-22A	1	Washer, Gear Retaining Sc.
DA-60B	1	Screw, Gear Retaining
EBB-26A	1	BENDIX DRIVE
MAB-1024N	1	Band, Cover
MCL-63	1	Shaft, Bendix Drive
MCL-100	2	Gear
MCL-101	1	Plate, Intermediate
MCL-102	1	Gasket, Int. Plate
MCL-103	1	Gasket, Housing
MCL-1104	1	BEARING ASSY., INTERMEDIATE
MAK-39	1	Bearing, Abs. Bronze
PS-1321	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
19X-66	4	Screw, Int. Plate, Flat Hd. #10-32x1/2
19X-93	6	Screw, Pinion Housing, Hex. Hd. 5/16-18x1
12X-199	1	Lockwasher, Gear Retaining Sc., 1/4
12X-1014	6	Lockwasher, Pinion Housing Sc., 5/16
X-1621A	4	Washer, Int. Plate Sc., Skpf. #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2
XA-813	1	Oil Seal

† BRUSH SET, SERVICE MZ-2012BS.

UNIT	APPLICATION
MCL-6127M	Chrysler Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCL-2118	1	Frame & Field Assembly
GK-38C	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1008S-1	1	COIL, FIELD, L. R.
MAX-1009S-1	1	COIL, FIELD, L. L.
MCH-13†	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-34	1	Stud, Terminal
MCL-1007FS	1	COIL, FIELD, U. L.
MCL-1010FS	1	COIL, FIELD, U. R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Stud, 5/16
MZ-12†	2	Brush
X-20	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Br. Ground Sc., #10
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2976	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030A	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, Int., 1/32" Thick
MCH-2079M	1	ARMATURE
MN-18	*	Washer, Thrust, D. E., .065" Thick
MN-18E	*	Washer, Thrust, D. E., .095" Thick
X-261C	3	Key, Woodruff, D. E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
DA-22A	1	Washer, Gear Retaining Sc.
DA-60B	1	Screw, Gear Retaining
EBB-32A	1	BENDIX DRIVE
MAB-1024N	1	Band, Cover
MCL-63	1	Shaft, Bendix Drive
MCL-100	2	Gear
MCL-101	1	Plate, Intermediate
MCL-102	1	Gasket, Int. Plate
MCL-103	1	Gasket, Housing
MCL-1104	1	BEARING ASSY. INTERMEDIATE
MAK-39	1	Bearing, Abs. Bronze
PS-1321	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
19X-66	4	Screw, Int. Plate, Flat Hd. #10-32x1/2
19X-93	6	Screw, Pinion Housing, Hex. Hd. 5/16-18x1
12X-199	1	Lockwasher, Gear Retaining Sc., 1/4
12X-1014	6	Lockwasher, Pinion Housing Sc., 5/16
X-1621A	4	Washer, Int. Plate Sc., Skpf. #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2
XA-813	1	Oil Seal

† BRUSH SET, SERVICE MZ-2012BS.

UNIT	APPLICATION
MCL-6128M	Chrysler Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCL-6129 STARTING MOTOR PARTS LIST

MCL-6129
(Issued 11-24-53)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2046B	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-48	1	Stud, Terminal
MCL-3005CS	1	Field Coil Package
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly& Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2028	1	Armature
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MU-54L	1	Washer, Thrust, Int., 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89R	1	Connector
SST-4010	1	Solenoid Starting Switch
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-33	1	Bendix Drive
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	Spring, Drive
EBA-3307	2	Plate, Spring Anchor
MCH-1024A	1	Band, Cover
MCH-1051	1	Bearing Assy., Intermediate
MCH-53	1	Bearing, Abs. Bronze
PS-1307	1	Housing Assy., Pinion
MG-77A	1	Bearing, Abs. Bronze
12X-196	2	Lockwasher, Int. Bearing Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† Brush Set, Service MZ-2012BS.

* Used as Required.

UNIT	APPLICATION
MCL-6129	Packard

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCL-6130 STARTING MOTOR PARTS LIST — MCL-6130 (Issued 5-20-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2115	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13†	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Bush
12X-196	2	Lockwasher, Brush Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2110	1	ARMATURE
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32 inch Thick
MU-54B	*	Washer, Thrust, C.E., 3/64 inch Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCL-25	1	Connector
SSX-34	1	Spring
SSX-36	1	Plug
SSX-1021B	1	Moving Core Assembly
SS-60	1	Washer, Steel, 3/8
SSX-21	1	Core, Moving
SSX-22	1	Link Screw
SSX-35	1	Spring
SSX-1023	1	Clamp Assembly
8X-53	1	Screw, Rd. Hd. #8-32x5/8
8X-141	1	Nut, Hex. #8-32
SSX-4004	1	Solenoid Starting Switch (See Separate List For Parts)
8X-173	1	Nut, Switch Terminal, Hex. #10-32
12X-196	1	Lockwasher, Switch Terminal #10
12X-199	4	Lockwasher, Switch Mtg. Screw, 1/4
12X-200	1	Lockwasher, Switch Term., 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-2074C	1	Yoke
MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MCL-60	1	Cover, Yoke
MCL-3161	1	Clutch, Starter
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1324	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Plate Screw, #10
8X-311	2	Screw, Int. Plate, Rd. Hd. #10-32x3/8

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCL-6130	Ford Truck

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCL-6131 STARTING MOTOR PARTS LIST MCL-6131
(Issued 5-20-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2046	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13 †	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-34	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-196	2	Lockwasher, Ground Screw, #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2028	1	ARMATURE
MU-54	1	Washer, Thrust, Intermediate, 1/32'' Thick
MU-54	*	Washer, Thrust, C.E., 1/32'' Thick
MU-54B	*	Washer, Thrust, C.E., 3/64'' Thick
MU-54K	*	Washer, Thrust, C.E., .080'' Thick
MU-54L	*	Washer, Thrust, C E., 1/16'' Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89R	1	Connector
SST-4004	1	Solenoid Starting Switch
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Screw, Skpf. #10

Miscellaneous Parts

EBB-38	1	Bendix Drive
MCH-1024	1	Band, Cover
MCH-1051	1	Bearing Assy., Intermediate
MCH-53	1	BEARING, ABSORBENT BRONZE
PS-1315	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Brg. Screw, #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012BS.

* Use as Required.

UNIT	APPLICATION
MCL-6131	Contenental, Jaeger

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2114A	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13 †	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Ground Sc., #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2122	1	ARMATURE
MCL-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-76	1	Pin, Link
MCH-77	1	Pin, Yoke
MCH-2074	1	Yoke
MCL-3123	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Switch Assembly & Parts Used With

MCH-90	1	Connector
SSX-4003	1	SOLENOID STARTING SWITCH (See Separate List for Parts)
12X-199	4	Lockwasher, Switch Mtg. Screw, 1/4
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCL-127	1	Ring, Snap, Retainer & Pinion Stop
MCL-129	1	Retainer & Pinion Stop
PS-1327	1	Housing Assy., Pinion
MDD-34	1	BEARING, ABSORBENT BRONZE

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCL-6132	Hudson, Nash

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCL-6133 STARTING MOTOR PARTS LIST

MCL-6133
(Issued 4-19-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2130	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007F	1	Coil, Field, U. L.
MCL-1010F	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-2012BS	1	BRUSH SET
12X-196	2	Lockwasher, Br. Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070	1	ARMATURE ASSEMBLY
MCH-27	1	Spacer
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E. 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCZ-82	1	Connector
SSX-4005	1	SOLENOID STARTING SWITCH (See Separate List for Parts)
12X-199	4	Lockwasher, Switch Mtg. Screw, 1/4
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-77	1	Pin, Yoke
MCH-2074	1	Yoke
MCL-3075	1	STARTER CLUTCH
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1328	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABSORBENT BRONZE

* Use as required.

UNIT	APPLICATION
MCL-6133	Dodge 6 (Canada) Plymouth 6 (Canada)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2115	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007F	1	Coil, Field, U. L.
MCL-1010F	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-2012BS	1	BRUSH SET
12X-196	2	Lockwasher, Br. Grd. Sc., #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2110	1	ARMATURE
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

* Use as required.

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCL-25	1	Connector
MCL-51	1	Connector, Switch to Motor
SSX-34	1	Spring, Plunger, 3 25/32"
SSX-36	1	Plug
SSX-1021B	1	Moving Core Assy.
SS-60	1	Washer, Steel, 3/8
SSX-21	1	Core, Moving
SSX-22	1	Link Screw
SSX-35	1	Spring
SSX-1023	1	Clamp Assy.
8X-53	1	Screw, Rd. Hd. #8-32x5/8
8X-141	1	Nut, Hex. #8-32
SSX-4004	1	SOLENOID STARTING SWITCH (See separate list for parts)
8X-173	1	Nut, Switch Terminal, Hex. #10-32
12X-196	1	Lockwasher, Term. Sc., #10
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	1	Lockwasher, Switch Term., 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-2074C	1	Yoke
MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MCL-60	1	Cover, Yoke
MCL-3161	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1324A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Plate Sc., #10
8X-311	2	Screw, Int. Plate, Rd. Hd. #10-32x3/8

UNIT	APPLICATION
MCL-6135	Ford Tr. (6)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCL-6201M STARTING MOTOR PARTS LIST MCL-6201M

(Issued 10-29-53)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCL-2118	1	Frame & Field Assembly
GK-38C	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85A	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1008S-1	1	COIL, FIELD, L. R.
MAX-1009S-1	1	COIL, FIELD, L. L.
MCH-13†	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCL-34	1	Stud, Terminal
MCL-1007FS	1	COIL, FIELDU. L.
MCL-1010FS	1	COIL, FIELD, U. R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
X-20	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Ground Screw, #10
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2971	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030DS	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088M	1	Armature
MU-54F	*	Washer, Thrust, C. E., 1/32" Thick
MU-54G	*	Washer, Thrust, C. E., 1/64" Thick
MU-54J	*	Washer, Thrust, C. E., .046" Thick
MU-54N	1	Washer, Thrust, Intermediate, 1/16" Thick
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-26A	1	BENDIX DRIVE
MAB-1024NS	1	Band, Cover
MCH-1051A	1	BEARING ASSEMBLY, INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1291B	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Screw, #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2881	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

* Use as required.

† BRUSH SET, SERVICE MZ-2012BS

UNIT	APPLICATION
MCL-6201M	Chrysler Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCL-6202 STARTING MOTOR PARTS LIST

MCL-6202
(Issued 11-11-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2046	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-34	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007F	1	Coil, Field, U. L.
MCL-1010F	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-2012BS	1	BRUSH SET
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-196	2	Lockwasher, Ground Sc., #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030G	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89R	1	Connector
SSP-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-836	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBB-26	1	BENDIX DRIVE
MAX-1024	1	Band, Cover
MCH-1051	1	BEARING ASSY., INTERMEDIATE
PS-1291F	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as required.

UNIT	APPLICATION
MCL-6202	Chrysler (Industrial)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

MCL-6202M STARTING MOTOR PARTS LIST MCL-6202M

(Issued 10-29-53)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCL-2046AS	1	Frame & Field Assembly
GK-38C	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85A	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MAX-64	2	Connector, Field Coil
MAX-1008S-1	1	COIL, FIELD, L.R.
MAX-1009S-1	1	COIL, FIELD, L.L.
MCH-13†	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-34	1	Stud, Terminal
MCL-1007FS	1	COIL, FIELD, U.L.
MCL-1010FS	1	COIL, FIELD, U.R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
X-20	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Ground Screw, #10
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2976	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030DS	1	Head Assembly, Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-2088M	1	ARMATURE
MU-54F	*	Washer, Thrust, C.E., 1/32" Thick
MU-54G	*	Washer, Thrust, C.E., 1/64" Thick
MU-54J	*	Washer, Thrust, C.E., .046" Thick
MU-54N	1	Washer, Thrust, Intermediate, 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89R	1	Connector
SSP-4001M	1	SOLENOID STARTING SWITCH
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
X-2843	2	Nut, Hex. 5/16-24
X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBB-26A	1	BENDIX DRIVE
MAB-1024NS	1	Band, Cover
MCH-1051A	1	BEARING ASSEMBLY, INTERMEDIATE
MCH-53	1	Bearing, Abs. Bronze
PS-1291D	1	Housing Assembly, Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Brg. Screw, #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2881	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

* Use as required.

† BRUSH SET, SERVICE MZ-2012BS.

UNIT	APPLICATION
MCL-6202M	Chrysler Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCL-6204 STARTING MOTOR PARTS LIST MCL-6204
(Issued 10-15-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2043	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCH-13 †	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-34	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-196	2	Lockwasher, Ground Screw, #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030G	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-2088	1	ARMATURE
MU-54	1	Washer, Thrust, 1/32" Thick
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MU-54L	*	Washer, Thrust, C.E. 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Parts

EBB-20	1	BENDIX DRIVE ASSEMBLY
MCH-1024	1	Band, Cover
MCH-1051	1	BEARING ASSEMBLY, INTERMEDIATE
PS-1291F	1	Housing Assy., Pinion
MG-77A	1	Bearing, Abs. Br
12X-196	2	Lockwasher, Int. Brg. Screw, #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as required.

† BRUSH SET, SERVICE MZ-2012BS.

UNIT	APPLICATION
MCL-6204	Chrysler Corp. (Canada)

Printed in U.S.A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

MCL-6304 STARTING MOTOR PARTS LIST

MCL-6304
(Issued 10-15-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2115A	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13 †	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12 †	2	Brush
12X-196	2	Lockwasher, Br. Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2110	1	ARMATURE
MN-18	1	Washer, Thrust, Drive End
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

MCL-51	1	Connector
SSX-34	1	Spring, Plunger, 3 25/32"
SSX-36	1	Plug
SSX-1021B	1	Moving Core Assembly
SS-60	1	Washer, Steel, 3/8
SSX-21	1	Core, Moving
SSX-22	1	Link Screw
SSX-35	1	Spring
SSX-1023	1	Clamp Assembly
8X-53	1	Screw, Rd. Hd. #8-32x5/8
8X-141	1	Nut, Hex. #8-32

Switch Assembly & Parts (Continued)

Part No.	No. Used	Name of Part
SSX-4004	1	SOLENOID STARTING SWITCH (See Separate List for Parts)
12X-199	4	Lockwasher, Switch Mtg. Screw, 1/4
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-2074C	1	Yoke
MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MCL-60	1	Cover, Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1316	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Plate Screw, #10
8X-311	2	Screw, Int. Plate, Rd. Hd. #10-32x3/8

† BRUSH SET, SERVICE MZ-2012BS.

* Use As Required.

UNIT	APPLICATION
MCL-6304	Chrysler (8), DeSoto (8)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCL-6308 STARTING MOTOR PARTS LIST

MCL-6308
(Issued 3-1-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-2120	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-13†	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L.R.
MAX-1009	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCL-1010F	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-12†	2	Brush
12X-196	2	Lockwasher, Br. Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2070	1	ARMATURE ASSEMBLY
MCH-27	1	Spacer
MN-18	1	Washer, Thrust, Drive End
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCL-65	1	Connector
SSX-4104	1	SOLENOID STARTING SWITCH (See separate list for parts)
12X-199	4	Lockwasher, Mtg. Sc., 1/4
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-77	1	Pin, Yoke
MCH-2074E	1	Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1325A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MZ-2012BS.

* Use as required.

UNIT	APPLICATION
MCL-6308	Chrysler (Ind.)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCL-6309 STARTING MOTOR PARTS LIST

MCL-6309
(Issued 4-20-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCL-3120	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-58	1	Equalizer
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-48	1	Stud, Terminal
MCL-3005CS	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, L. R.
MAX-1009	1	Coil, Field, L. L.
MCL-1007F	1	Coil, Field, U. L.
MCL-1010F	1	Coil, Field, U. R.
MCU-15	1	Insulation, Brush Connection
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-2012BS	1	BRUSH SET
12X-196	2	Lockwasher, Br. Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-3002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCH-2039	1	ARMATURE
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCL-65	1	Connector
SSX-4104	1	SOLENOID STARTING SWITCH (See Separate List for Parts)
12X-199	4	Lockwasher, Switch Mtg. Screw, 1/4
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-77	1	Pin, Yoke
MCH-2074E	1	Yoke
MCL-3109A	1	Starter Clutch
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
PS-1329	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABSORBENT BRONZE

* Use as required.

UNIT	APPLICATION
MCL-6309	Chrysler (Ind.)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MCO-2032)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-233A	1	Stud, Terminal
MC -51A	1	Washer, Plain, Term. Stud, Inner
MCO-13 †	4	Brush, Grounded
MCO-13A†	4	Brush
MCO-34	1	Connector, Brush
MCO-3005S	1	FIELD COIL PACKAGE
MCO-1007	1	Coil, Field, U.L.
MCO-1008	1	Coil, Field, L.R.
MCO-1009	1	Coil, Field, U.R.
MCO-1010	1	Coil, Field, L.L.
MR-28	1	Connector, Term. Stud
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-830	2	Nut, Term. Stud, Hex. 3/8-16

Comm. End Head Assembly & Parts Used With

GAL-40C	1	Cover,Bearing, C.E.
MAD-110	1	Felt
MBR-2236B	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, Comm. End
GBF-79	1	Bearing, Absorbent Bronze
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Screw, #10
X-2964	1	Oiler
8X-120	12	Screw, Cover, Fill. Hd. #10-32x5/8
12X-196	12	Lockwasher, Cover Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBD-247A	1	Washer, Thrust, Intermediate
MBD-311	2	Washer, Thrust, Intermediate
MCO-2288	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Miscellaneous Parts

EBB-13	1	BENDIX DRIVE
MCK-1024	1	Band, Cover
MBD-1315	1	Bearing Assy., Intermediate
MBD-312	1	Retainer, Felt
MBD-313	1	Felt Washer
MBD-314	1	BEARING, ABS. BRONZE
MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
PS-1228	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-257	1	Bearing, Abs. Bronze
12X-196	2	Lockwasher, #10
12X-196	8	Lockwasher, Housing Screw, #10
8X-312	2	Screw, Rd. Hd. #10-32x1/4
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MCO-1013S.

* Use as required.

UNIT	APPLICATION
MCO-4002	Massey Harris

(Issued 3-6-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCO-2032	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-233A	1	Stud, Terminal
MC-51A	1	Washer, Plain, Term. Stud, Inner
MCO-13†	4	Brush
MCO-13A†	4	Brush, Grounded
MCO-34	1	Connector, Brush
MCO-3005S	1	FIELD COIL PACKAGE
MCO-1007	1	Coil, Field, U. L.
MCO-1008	1	Coil, Field, L. R.
MCO-1009	1	Coil, Field, U. R.
MCO-1010	1	Coil, Field, L. L.
MR-28	1	Connector, Term. Stud
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-148	1	Nut, Term. Stud, Hex. 3/8-16
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40C	1	Cover, Bearing, C. E.
MAD-110	1	Felt
MBR-2236B	1	Head Assy., Comm. End, Complete
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C. E.
GBF-79	1	Bearing, Abs. Bronze
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Screw, #10
X-2964	1	Oiler
8X-120	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MBD-247A	1	Washer, Thrust, Intermediate
MBD-311	2	Washer, Thrust, Intermediate
MCO-2288	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54A	*	Washer, Thrust, C. E., 1/64" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Miscellaneous Parts

EBB-13	1	Bendix Drive
MBD-1315	1	Bearing Assy., Intermediate
MBD-312	1	Retainer, Felt
MBD-313	1	Felt Washer
MBD-314	1	BEARING, ABS. BRONZE
MCK-1024	1	Band, Cover
MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
PS-1228	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MBD-257	1	BEARING, ABS. BRONZE
12X-196	10	Lockwasher, Housing Screw & Switch Mtg. Sc., #10
8X-312	2	Screw, Switch Mtg., Rd. Hd. #10-32x1/4
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MCO-1013S.

* Use as required.

UNIT	APPLICATION
MCO-4003	Continental

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCO-4004 STARTING MOTOR PARTS LIST (MCO-4004)
(Issued 9-18-53)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCO-2062	1	Frame & Field Assembly
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-233A	1	Stud, Terminal
MC-51A	1	Washer, Plain, Term. Stud, Inner
MCO-13†	4	Brush
MCO-13A†	4	Brush, Grounded
MCO-34	1	Connector, Brush
MCO-3005S	1	Field Coil Package
MCO-1007	1	Coil, Field, U. L.
MCO-1008	1	Coil, Field, L. R.
MCO-1009	1	Coil, Field, U. R.
MCO-1010	1	Coil, Field, L. L.
MR-28	1	Connector, Term. Stud
MR-32	2	Insulation, Field Connection
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-148	1	Nut, Term. Stud, Hex. 3/8-16
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, C.E.
MAD-110	1	Felt
MBR-2236B	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	Bearing, Abs. Bronze
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Screw, #10
X-2964A	1	Oiler
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, C.E.
MBD-283	2	Washer, Thrust, Intermediate
MCO-2397	1	Armature
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

MBD-1252D	1	Switch & Bracket Assy.
MBD-252A	1	Bracket
MBD-268	1	Connector, Switch to Motor
WSM-4101A	1	Solenoid Starting Switch (See Separate List for Parts)
19X-343	2	Screw, Switch Mtg., Hex. Hd. 1/4-28x5/8
XA-595	2	Nut, Switch Mtg., Hex. 1/4-28
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
8X-905	4	Screw, Switch Mtg., Fill. Hd. 1/4-20x7/16

Miscellaneous Parts

EBB-13	1	Bendix Drive
MBD-281	1	Gasket, Int. Bearing
MBD-1296	1	Bearing Assy., Intermediate
MBD-295	1	Bearing, Abs. Bronze
XA-717	1	Oil Seal
MCK-1024	1	Band, Cover
MCO-30	8	Screw, Housing, Hex. Hd. #10-40x1 5/16
PS-1317A	1	Housing Assy., Pinion
MBD-257	1	Bearing, Abs. Bronze
8X-65	3	Screw, Int. Bearing, Flat Hd. #10-32x3/4
12X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MCO-1013S.
* Use as Required.

UNIT	APPLICATION
MCO-4004	Case Tractor

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCO-4005 STARTING MOTOR PARTS LIST

MCO-4005
(Issued 3-1-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCO-2032	1	Frame & Field Assembly
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-233A	1	Stud, Terminal
MC-51A	1	Washer, Plain Term. Stud, Inner
MCK-32	2	Insulation, Field Connection
MCO-13†	4	Brush
MCO-13A†	4	Brush, Grounded
MCO-34	1	Connector, Brush
MCO-3005S	1	FIELD COIL PACKAGE
MCO-1007	1	Coil, Field, U. L.
MCO-1008	1	Coil, Field, L. R.
MCO-1009	1	Coil, Field, U. R.
MCO-1010	1	Coil, Field, L. L.
MR-28	1	Connector, Term. Stud
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-148	1	Nut, Term. Stud, Hex. 3/8-16
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40C	1	Cover, Bearing, C. E.
MAD-110	1	Felt
MBD-258	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8
MBR-2236B	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C. E.
GBF-79	1	BEARING, ABS. BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Screw, #10
X-2964A	1	Oiler
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, C. E.
MCK-22	2	Washer, Thrust, Intermediate
MCO-2397	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E:, 3/64" Thick

Miscellaneous Parts

EBB-13	1	BENDIX DRIVE
MBD-1403	1	Bearing Assy., Intermediate
MBD-295	1	BEARING, ABS. BRONZE
MBD-312	1	Retainer, Felt
MBD-313	1	Washer, Felt
MCK-1024	1	Band, Cover
MCO-30	8	Screw, Housing, Hex. Hd. #10-40x1 5/16
PS-1317B	1	Housing Assy., Pinion
MBD-257	1	BEARING, ABS. BRONZE
8X-65	3	Screw, Int. Bearing, Flat Hd. #10-32x3/4
12X-196	10	Lockwasher, Housing & Switch Mtg. Screw, #10
8X-312	2	Screw, Switch Mtg., Rd. Hd. #10-32x1/4
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MCO-1013S.

* Use as required.

UNIT	APPLICATION
MCO-4005	Massey-Harris

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

MCO-4006 STARTING MOTOR PARTS LIST

MCO-4006
(Issued 1-12-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCO-2032	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-233A	1	Stud, Terminal
MC-51A	1	Washer, Plain, Term. Stud, Inner
MCK-32	2	Insulation, Field Connection
MCO-34	1	Connector, Brush
MCO-1013S	1	BRUSH SET
MCO-3005S	1	FIELD COIL PACKAGE
MCO-1007	1	Coil, Field, U. L.
MCO-1008	1	Coil, Field, L. R.
MCO-1009	1	Coil, Field, U. R.
MCO-1010	1	Coil, Field, L. L.
MR-28	1	Connector, Term. Stud
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-148	1	Nut, Term. Stud, Hex. 3/8-16
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40C	1	Cover, Bearing, C.E.
MAD-110	1	Felt
MBD-258	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8
MBR-2236B	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C.E.
GBF-79	1	BEARING, ABS. BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Sc., #10
X-2964A	1	Oiler
12X-196	12	Lockwasher, Head Screw, #10

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, C.E.
MCK-22	2	Washer, Thrust, Intermediate
MCO-2397	1	ARMATURE
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Miscellaneous Parts

EBB-13	1	BENDIX DRIVE ASSY.
EBA-5716	1	Screw, Pinion Back Stop
EBB-1104	1	Pinion
EBB-1113	1	Spring, Anti-Drift
EBB-1115A	1	Stop, Pinion Back
EBB-1131	1	Shaft, Screw
EBB-1142	1	Pin, Stop Nut
EBB-1325	1	Spring, Meshing
EBB-3011S	1	Spring Kit, Anti-Drift
EBB-3013S	1	Pinion Kit
EBB-3015S	1	Clutch Assembly Kit
MBD-281	1	Gasket, Int. Bearing
MBD-1403	1	BEARING ASSY., INTERMEDIATE
MBD-295	1	Bearing, Abs. Bronze
MBD-312	1	Retainer, Felt
MBD-313	1	Washer, Felt
MCK-1024	1	Band, Cover
MCO-30	8	Screw, Pinion Housing, Hex. Hd. #10-40x1 5/16
PS-1317B	1	Housing Assy., Pinion
MBD-257	1	BEARING, ABS. BRONZE
8X-65	3	Screw, Int. Bearing, Flat Hd. #10-32x3/4
12X-196	10	Lockwasher, Housing & Switch Mtg. Screw, #10
8X-312	2	Screw, Switch Mtg., Rd. Hd. #10-32x1/4
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required.

UNIT	APPLICATION
MCO-4006	Continental

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCO-4008 STARTING MOTOR PARTS LIST

MCO-4008
(Issued 9-25-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCO-2062	1	Frame & Field Assembly
GK-38	8	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud
MBD-233A	1	Stud, Terminal
MC-51A	1	Washer, Plain, Term. Stud, Inner
MCK-32	2	Insulation, Field Connection
MCO-34	1	Connector, Brush
MCO-1013S	1	BRUSH SET
MCO-3005S	1	FIELD COIL PACKAGE
MCO-1007	1	Coil, Field, U. L.
MCO-1008	1	Coil, Field, L. R.
MCO-1009	1	Coil, Field, U. R.
MCO-1010	1	Coil, Field, L. L.
MR-28	1	Connector, Term. Stud
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-148	1	Nut, Term. Stud, Hex. 3/8-16
12X-201	1	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

GAL-40A	1	Cover, Bearing, C. E.
MAD-110	1	Felt
MBD-258	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8
MBR-2236B	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
MBD-1236	1	Head Assy., Partial, C. E.
GBF-79	1	BEARING, ABS. BRONZE
MBR-2079	1	Plate Assy., Brush
GG-81	4	Clip, Brush Holder Post
MBD-19	8	Spring, Brush
MBD-47	4	Spacer, Spring, Brush
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8
12X-196	4	Lockwasher, Brush Plate Screw, #10
X-2964A	1	Oiler
12X-196	12	Lockwasher, Head Screw, #10

* Use as required.

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, C. E.
MBD-283	2	Washer, Thrust, Intermediate
MCO-2397	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

MBD-1252D	1	Switch & Bracket Assy.
MBD-252A	1	Bracket
MBD-268	1	Connector, Switch to Motor
WSM-4101A	1	SOLENOID STARTING SWITCH (See separate list for parts)
19X-343	2	Screw, Switch Mtg., Hex. Hd. 1/4-28x5/8
XA-595	2	Nut, Switch Mtg., Hex. 1/4-28
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
8X-905	4	Screw, Switch Mtg., Fill. Hd. 1/4-20x7/16

Miscellaneous Parts

EBB-13	1	BENDIX DRIVE ASSY.
EBA-5716	1	Screw, Pinion Back Stop
EBB-1104	1	Pinion
EBB-1113	1	Spring, Anti-Drift
EBB-1115A	1	Stop, Pinion Back
EBB-1131	1	Shaft, Screw
EBB-1142	1	Pin, Stop Nut
EBB-1325	1	Spring, Meshing
EBB-3011S	1	Spring Kit, Anti-Drift
EBB-3013S	1	Pinion Kit
EBB-3015S	1	Clutch Assembly Kit
MBD-1403	1	Bearing Assy., Intermediate
MBD-295	1	BEARING, ABS. BRONZE
MBD-312	1	Retainer, Felt
MBD-313	1	Washer, Felt
MCK-1024	1	Band, Cover
MCO-30	8	Screw, Housing, Hex. Hd. #10-40x1 5/16
PS-1317A	1	Housing Assy., Pinion
MBD-257	1	BEARING, ABS. BRONZE
8X-65	3	Screw, Int. Bearing, Flat Hd. #10-32x3/4
12X-196	8	Lockwasher, Hsg. Screw, #10
8X-714	1	Sc. Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

UNIT	APPLICATION
MCO-4008	J. I. Case

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MCP-2039)	1	Frame & Field Assy.
GBG-23	2	Stud, Terminal
GBW-27	4	Insulation, Field Coil
GCY-28	4	Bushing, Ins., Term. Stud
GDW-33S	1	Bracket, Mtg., Gen.
GFR-44	8	Screw, Pole Shoe
MBS-26	1	Lead Assy.
MBS-14	1	Clip, Terminal
X-1743	2	Terminal
MBS-27	1	Lead Assembly
MBS-14	1	Clip, Terminal
X-1743	2	Terminal
MBS-33	2	Insulation, Term. Stud
MBS-37	2	Insulation, Term. Stud
MBS-38	2	Stud, Terminal
MCP-3005S	1	FIELD COIL PACKAGE
MCP-35	2	Connector, Field Coil
MCP-1007	1	Coil, Field, U.L.
MCP-1008	1	Coil, Field, L.R.
MCP-1009	1	Coil, Field, L.L.
MCP-1010	1	Coil, Field, U.R.
MU-36	4	Washer, Ins., Term. Stud
MU-37	4	Washer, Plain, Term. Stud, 5/16
8X-465	4	Screw, Mtg. Brkt., Hex. Hd. 3/8-24x3/4
12X-201	4	Lockwasher, Bracket Sc., 3/8
12X-1014	8	Lockwasher, Term. Stud, 5/16
8X-1376	8	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

DA-60	1	Screw, Bearing Retaining
GBG-46	1	Washer, Spring
GBG-47	1	Washer, Felt
GBG-48	2	Retainer, Felt Washer
GBG-63	1	Cover, Comm. End
GBG-64	1	Gasket, Comm. End Cover
GBG-66	1	Washer, Bearing Retaining
MCP-2093	1	Head Assy., Comm. End
DA-38	2	Washer, Spring, Br. Plate Sc.
DE-85	1	Washer, Steel, Plate Adj. Sc.
GBG-41	2	Screw, Brush Plate
GBG-51	2	Washer, Plain, Br. Plate Sc.
GBG-93	1	Head
MCP-1031	1	Plate Assy., Br. Holder

Comm. End Head Assembly & Parts (Cont'd.)

Part No.	No. Used	Name of Part
GBG-18R	4	Holder, Brush
GBG-40	4	Terminal, Brush Holder
GBG-85	4	Stud, Brush Holder
GBG-1037	4	Arm, Brush
MCP-19	4	Spring, Brush
8X-173	4	Nut, Brush Stud, Hex. #10-32
12X-196	4	Lockwasher, Brush, Stud, #10
GK-151	1	Washer, Plain, Plate Adj. Sc.
MCP-1012†	4	Brush
12X-195	4	Lockwasher, Brush Lead Sc., #8
8X-208	1	Screw, Plate Adj. Hex. Hd. #10-32x9/16
8X-305	4	Screw, Brush Lead, Rd. Hd. #8-32x1/4
8X-361	2	Washer, Plain, Br. Plate Sc.
X-1270	1	Washer, Plate Adj. Sc., Skpf. #10
8X-118	6	Screw, C E. Head, Fill. Hd. #10-32x3/4
12X-195	4	Lockwasher, Lead Screw, #8
12X-196	10	Lockwasher, Head Screw & Cover Screw, #10
12X-199	1	Lockwasher, Brg. Retaining Sc., 1/4
8X-305	4	Screw, Lead Connection Rd. Hd. #8-32x1/4
X-394	1	Oiler
X-440	1	BEARING, BALL, SHIELDED S.A.E. #305
8X-870	4	Screw, Cover, Fill. Hd. #10-32x5/16

Armature Assembly & Parts Used With

GBG-49	2	Spacer, Armature Shaft
MCP-2006F	1	ARMATURE
X-261	2	Key, Woodruff, D.E. #6

Miscellaneous Parts

MBS-24A	1	Band, Cover
MCP-1003	1	Head Assy., Drive End
GBG-50	1	Gasket, Brg. Retainer
GBG-57	1	Retainer, Felt Washer
GBG-58	1	Washer, Felt
GBG-1056	1	Retainer Assy., Bearing

(Continued on Reverse Side)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCP-4001 STARTING MOTOR PARTS (Cont'd.)

Miscellaneous Parts

Part No.	No. Used	Name of Part
GBG-56	1	Retainer, Bearing
GBG-57	1	Retainer, Felt Washer
GBG-58	1	Washer, Felt
MCP-3	1	Head
8X-119	4	Screw, Retainer, Fill. Hd. #10-32x1/2
12X-196	4	Lockwasher, Retainer Sc., #10
X-444	1	BEARING, BALL, S.A.E. #305
8X-118	6	Screw, D.E. Head, Fill. Hd. #10-32x3/4
12X-196	6	Lockwasher, Head Screw, #10
X-394	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MCP-2012S.

UNIT	APPLICATION
MCP-4001	Automatic Transportation

(Issued 10-4-49)

Printed in U. S. A.

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Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MCP-2032)	1	Frame & Field Assy.
GFR-44	8	Screw, Pole Shoe
MCP-22	1	Bracket
MCP-25	4	Bushing, Insulation
MCP-26	1	Lead Assy.
X-1743	2	Terminal
MCP-27	1	Lead Assy.
X-1743	2	Terminal
MCP-28	1	Lead, Field Coil
MCP-28A	1	Lead, Field Coil
MCP-41	2	Insulation, Field Connection
MCP-3005AS	1	FIELD COIL PACKAGE
MCP-35	2	Connector, Field Coil
MCP-1007A	1	Coil, Field, U.L.
MCP-1008A	1	Coil, Field, L.R.
MCP-1009B	1	Coil, Field, L.L.
MCP-1010B	1	Coil, Field, U.R.
SP-172	3	Grommet
12X-196	2	Lockwasher, #10
8X-902	2	Screw, Fill. Hd. #10-32x3/8
X-1658	2	Terminal
X-3064	1	Terminal
X-3065	1	Terminal

Comm. End Head Assembly & Parts Used With

DA-60	1	Screw, Bearing Retaining
GBG-46	1	Washer, Spring
GBG-47	1	Washer, Felt
GBG-48	2	Retainer, Felt Washer
GBG-63	1	Cover, Comm. End
GBG-64	1	Gasket, Comm. End Cover
GBG-66	1	Washer, Bearing Retaining Sc.
MCP-2093A	1	Head Assy., Comm. End
DA-38	2	Washer, Spring, Br. Plate Screw
DE-85	1	Washer, Steel, Plate Adj. Screw
GBG-41	2	Screw, Brush Plate
GBG-51	2	Washer, Plain, Br. Plate Sc.
GBG-93A	1	Head
GK-151	1	Washer, Plain, Plate Adj. Sc.
MCP-1012†	4	Brush
MCP-1031	1	Plate Assy., Br. Holder
GBG-18R	4	Holder, Brush
GBG-40	4	Terminal, Brush Holder
GBG-85	4	Stud, Brush Holder
GBG-1037	4	Arm, Brush

Comm. End Head Assembly & Parts (Cont'd.)

Part No.	No. Used	Name of Part
MCP-19	4	Spring, Brush
8X-173	4	Nut, Brush Stud, Hex. #10-32
12X-196	4	Lockwasher, Brush Stud, #10
8X-208	1	Screw, Plate Adj., Hex. Hd. #10-32x9/16
8X-305	4	Screw, Brush Lead, Rd. Hd. #8-32x1/4
8X-361	2	Washer, Plain, Br. Plate Sc.
X-1270	1	Washer, Plate Adj. Sc., Skpf. #10
X-1276	4	Washer, Brush Lead Sc., Skpf. #8
8X-118	6	Screw, C.E. Head, Fill. Hd. #10-32x3/4
12X-196	10	Lockwasher, Head Screw & Cover Screw, #10
12X-199	1	Lockwasher, Brg. Retaining Sc., 1/4
X-440	1	BEARING, BALL, SHIELDED, S.A.E. #305
8X-870	4	Screw, Cover, Fill. Hd. #10-32x5/16

Armature Assembly & Parts Used With

GBG-49	1	Spacer, Armature Shaft
MCP-2021F	1	ARMATURE

Miscellaneous Parts

GEK-1024A	1	Band, Cover
MCP-23	1	Washer, Steel
MCP-30	1	Head, Drive End
12X-199	6	Lockwasher, Head Sc., 1/4
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
X-3019	6	Screw, D.E. Head, Fill. Hd. 1/4-28x11/16
X-3020	1	Bearing, Sealed
XA-752	1	Ring, Retaining

† BRUSH SET, SERVICE MCP-2012S.

UNIT	APPLICATION
MCP-4002	Yale & Towne

(Issued 4-19-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCP-2044	1	Frame & Field Assy.
GBG-23	2	Stud, Terminal
GBW-27	4	Insulation, Field Coil
GCY-28	4	Bushing, Ins., Term. Stud
GFR-44	8	Screw, Pole Shoe
MBS-26	1	Lead Assy.
MBS-14	1	Clip, Terminal
X-1743	2	Terminal
MBS-27	1	Lead Assy.
MBS-14	1	Clip, Terminal
X-1743	2	Terminal
MBS-33	2	Insulation, Term. Stud
MBS-37	2	Insulation, Term. Stud
MBS-38	2	Stud, Terminal
MCP-3005S	1	FIELD COIL PACKAGE
MCP-35	2	Connector, Field Coil
MCP-1007	1	Coil, Field, U. L.
MCP-1008	1	Coil, Field, L. R.
MCP-1009	1	Coil, Field, L. L.
MCP-1010	1	Coil, Field, U. R.
MU-36	4	Washer, Ins., Term. Stud
MU-37	4	Washer, Plain, Term. Stud, 5/16
12X-1014	8	Lockwasher, Term. Stud, 5/16
8X-1376	8	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

DA-60	1	Screw, Bearing Retaining
GBG-63	1	Cover, Comm. End
GBG-66	1	Washer, Bearing Retaining
MCP-37	1	Spacer, Bearing
MCP-38	1	Spacer, Bearing
MCP-2093A	1	Head Assy., Comm. End
DA-38	2	Washer, Spring, Br. Plate Screw
DE-85	1	Washer, Steel, Plate Adj. Screw
GBG-41	2	Screw, Brush Plate
GBG-51	2	Washer, Plain, Br. Plate Screw
GBG-93A	1	Head
GK-151	1	Washer, Plain, Plate Adj. Screw
MCP-1012	4	Brush
MCP-1031	1	Plate Assy., Br. Holder
GBG-18R	4	Holder, Brush
GBG-40	4	Terminal, Brush Holder

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
GBG-85	4	Stud, Brush Holder
GBG-1037	4	Arm, Brush
MCP-19	4	Spring, Brush
8X-173	4	Nut, Brush Stud, Hex. #10-32
12X-196	4	Lockwasher, Brush Stud, #10
8X-208	1	Screw, Plate Adj., Hex. Hd. #10-32x9/16
8X-305	4	Screw, Brush Lead, Rd. Hd. #8-32x1/4
8X-361	2	Washer, Plain, Br. Plate Screw
X-1270	1	Washer, Plate Adj. Sc., Skf. #10
X-1276	4	Washer, Brush Lead Screw, Skpf. #8
8X-118	6	Screw, C. E. Head, Fill. Hd. #10-32x3/4
12X-196	10	Lockwasher, Head Screw & Cover Screw, #10
12X-199	1	Lockwasher, Brg. Retaining Sc., 1/4
8X-870	4	Screw, Cover, Fill. Hd. #10-32x5/16
X-1699	1	BEARING, BALL, SHIELDED, S. A. E. #305

Armature Assembly & Parts Used With

GBG-49	1	Spacer, Armature Shaft
MCP-2042F	1	ARMATURE

Miscellaneous Parts

MCP-33	1	Head, D. E.
MCP-1024	1	Band, Cover
12X-199	6	Lockwasher, Head Sc., 1/4
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1544	6	Screw, D. E. Head, Fill. Hd. 1/4-20x7/8
X-3165	1	BEARING, BALL, SEALED

† BRUSH SET, SERVICE MCP-2012S.

UNIT	APPLICATION
MCP-4003	Revolvator Co.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCP-4005 MOTOR PARTS LIST

MCP-4005
(Issued 4-21-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCP-2048	1	Frame & Field Assy.
GFR-44	8	Screw, Pole Shoe
MCP-25	4	Bushing, Ins., Lead
MCP-28B	1	Lead, Field Coil, 8 5/8"
MCP-28C	1	Lead, Field Coil, 23 3/4"
MCP-41	2	Insulation, Field Connection
MCP-53	1	Lead Assy., Brush, 10 1/2
X-1743	2	Terminal
MCP-54	1	Lead Assy., Brush 10 3/4"
X-1743	2	Terminal
MCP-3005AS	1	FIELD COIL PACKAGE
MCP-35	2	Connector, Field Coil
MCP-1007A	1	Coil, Field, U. L.
MCP-1008A	1	Coil, Field, L. R.
MCP-1009B	1	Coil, Field, L. L.
MCP-1010B	1	Coil, Field, U. R.
X-1658	4	Terminal

Comm. End Head Assembly & Parts Used With

MCP-49	1	Cover, Comm. End
MCP-2046	1	Head Assy., Comm. End
DA-38	2	Washer, Spring, Brush Plate Sc.
DE-85	1	Washer, Steel, Plate Adj. Sc.
GBG-41	2	Screw, Brush Plate
GBG-51	2	Washer, Plain, Br. Plate Sc.
GK-151	1	Washer, Plain, Plate Adj. Sc.
MCP-43	1	Head, C. E.
MCP-1012†	4	Brush
MCP-1031	1	Plate Assy., Br. Holder
GBG-18R	4	Holder, Brush
GBG-40	4	Terminal, Brush Holder
GBG-85	4	Stud, Brush Holder
GBG-1037	4	Arm, Brush
MCP-19	4	Spring, Brush
8X-173	4	Nut, Brush Stud, Hex. #10-32
12X-196	4	Lockwasher, Brush Stud, #10
8X-208	1	Screw, Plate Adj., Hex. Hd. #10-32x9/16
8X-305	4	Screw, Brush Lead, Rd. Hd. #8-32x1/4
8X-361	2	Washer, Plain, Br. Plate Sc.
X-1270	1	Washer, Plate Adj. Sc., Skpf. #10
X-1276	4	Washer, Br. Lead Sc., Skpf. #8

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
12X-196	4	Lockwasher, Cover Screw, #10
8X-870	4	Screw, Cover, Fill. Hd. #10-32x5/16
X-1699	1	BEARING, BALL, SHIELDED, S. A. E. #305
8X-3150	4	Screw, C. E. Head, Fill. Hd. 1/4-28x3/4

Armature Assembly & Parts Used With

MCP-2052F	1	ARMATURE

Miscellaneous Parts

GBG-1024G	1	Band, Cover
MCP-47	1	Head, Drive End
MZ-148	1	Washer, Thrust, Comm. End
12X-199	8	Lockwasher, D. E. Head Sc., 1/4
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1178	1	Nut, Shaft, C. E., Hex. 5/8-18
X-1699	1	BEARING, BALL, SHIELDED, S. A. E. #305
8X-3147	8	Screw, D. E. Head, Fill. Hd. 1/4-28x7/8

† BRUSH SET, SERVICE MCP-2012S.

UNIT	APPLICATION
MCP-4005	Lewis-Shepard

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCP-2039A	1	Frame & Field Assy.
GBG-23	2	Stud, Terminal
GCY-28C	4	Bushing, Ins., Term. Stud
GDW-33S	1	Bracket, Mtg.
GEB-23A	4	Insulation, Field Coil
GFR-44	8	Screw, Pole Shoe
MBS-26A	1	Lead Assy.
MBS-14	1	Clip, Terminal
X-1743	2	Terminal
MBS-27A	1	Lead Assy.
MBS-14	1	Clip, Terminal
X-1743	2	Terminal
MBS-33A	2	Insulation, Term. Stud
MBS-37A	2	Insulation, Term. Stud
MBS-38	2	Stud, Terminal
MCP-35	2	Connector, Field Coil
MCP-1007B	1	Coil, Field, U.L.
MCP-1008B	1	Coil, Field, L.R.
MCP-1009C	1	Coil, Field, L.L.
MCP-1010C	1	Coil, Field, U.R.
MU-36C	4	Washer, Ins., Term. Stud
MU-37	4	Washer, Plain, Term. Stud, 5/16
12X-201	4	Lockwasher, Bracket Screw, 3/8
8X-465	4	Screw, Bracket, Hex. Hd. 3/8-24x3/4
12X-1014	8	Lockwasher, Term. Stud 5/16
8X-1376	8	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

DA-60	1	Screw, Bearing Retaining
GBG-63	1	Cover, Comm. End
GBG-64A	1	Gasket, Comm. End Cover
GBG-66	1	Washer, Bearing Retaining
MCP-2093B	1	Head Assy., Comm. End
DA-38	2	Washer, Spring, Br. Plate Screw
DE-85	1	Washer, Steel, Plate Adj. Screw
GBG-41	2	Screw, Brush Plate
GBG-51	2	Washer, Plain, Br. Plate Screw
GBG-93B	1	Head, C.E.
GK-151	1	Washer, Plain, Plate Adj. Screw
MCP-1012A †	4	Brush
MCP-1031A	1	Plate Assy., Br. Holder
GBG-18R	4	Holder, Brush
GBG-40	4	Terminal, Brush Holder
GBG-85	4	Stud, Brush Holder

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
GBG-1037	4	Arm, Brush
MCP-19	4	Spring, Brush
8X-173	4	Nut, Brush Stud, Hex. #10-32
12X-196	4	Lockwasher, Brush Stud, #10
8X-208	1	Screw, Plate Adj., Hex. Hd. #10-32x9/16
8X-305	4	Screw, Brush Lead, Rd. Hd. #8-32x1/4
8X-361	2	Washer, Plain, Brush Plate Screw
X-1270	1	Washer, Plate Adj. Sc., Skpf. #10
12X-1276	4	Lockwasher, Brush Lead Screw, Skpf. #8
8X-118	6	Screw, C.E. Head, Fill. Hd. #10-32x3/4
12X-196	10	Lockwasher, Head Screw & Cover Screw, #10
12X-199	1	Lockwasher, Brg. Retaining Sc., 1/4
8X-870	4	Screw, Cover, Fill. Hd. #10-32x5/16
X-3206	1	Bearing, Ball, Sealed

Armature Assembly & Parts Used With

GBG-49	2	Spacer, Arm. Shaft, C.E. & D.E.
MCP-2006AF	1	Armature
X-261	2	Key, Woodruff, D.E., #6

Miscellaneous Parts

GBG-1144B	1	Head Assy., D.E.
GBG-56	1	Retainer, Bearing
GBG-144B	1	Head, D.E.
8X-119	4	Screw, Retainer, Fill. Hd. #10-32x1/2
12X-196	4	Lockwasher, Retainer Sc., #10
X-3206	1	Bearing, Ball, Sealed
MBS-24A	1	Band Cover
8X-118	6	Screw, D.E. Head, Fill. Hd. #10-32x3/4
12X-196	6	Lockwasher, Head Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MCP-2012AS.

UNIT	APPLICATION
MCP-4006	Automatic Trans.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCP-2056	1	Frame & Field Assembly
GFR-44	8	Screw, Pole Shoe
MCP-25	4	Bushing, Ins., Lead
MCP-28D	1	Lead, Field Coil, 29 1/4''
MCP-28E	1	Lead, Field Coil, 32 5/8''
MCP-41	2	Insulation, Field Connection
MCP-53A	1	Lead Assy., Brush, 10 1/2''
X-1743	2	Terminal
MCP-54A	1	Lead Assy., Brush, 10 3/4''
X-1743	2	Terminal
MCP-3005AS	1	FIELD COIL PACKAGE
MCP-35	2	Connector, Field Coil
MCP-1007A	1	Coil, Field, U. L.
MCP-1008A	1	Coil, Field, L. R.
MCP-1009B	1	Coil, Field, L. L.
MCP-1010B	1	Coil, Field, U. R.
MN-21	1	Pin, Dowel
X-1658	4	Terminal

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCP-2061	1	Head Assy., Comm. End
DA-38	2	Washer, Spring, Brush Plate Screw
DE-85	1	Washer, Steel, Plate Adj. Screw
GBG-41	2	Screw, Brush Plate
GBG-51	2	Washer, Plain, Br. Plate Screw
GK-151	1	Washer, Plain, Plate Adj. Screw
MCP-61	1	Head, C. E.
MCP-1012†	4	Brush
MCP-1031	1	Plate Assy., Brush Holder
GBG-18R	4	Holder, Brush
GBG-40	4	Terminal, Brush Holder
GBG-85	4	Stud, Brush Holder
GBG-1037	4	Arm, Brush
MCP-19	4	Spring, Brush
8X-173	4	Nut, Brush Stud, Hex. #10-32
12X-196	4	Lockwasher, Brush Stud, #10

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
8X-208	1	Screw, Plate Adj., Hex. Hd. #10-32x9/16
8X-305	4	Screw, Brush Lead, Rd. Hd. #8-32x1/4
8X-361	2	Washer, Plain, Br. Plate Screw
X-1270	1	Washer, Plate Adj. Screw, Skpf. #10
X-1276	4	Washer, Br. Lead Screw, Skpf. #8
12X-199	6	Lockwasher, Head Screw, 1/4
8X-879	6	Screw, C. E. Head, Fill. Hd. 1/4-20x5/8
X-3204	1	BEARING, BALL, SEALED

Armature Assembly & Parts Used With

MCP-2059F	1	ARMATURE

Miscellaneous Parts

MCP-60	1	Head, Drive End
MCP-62	1	Collar, Arm. Shaft, D. E.
MCP-63	*	Washer, Thrust, Comm. End
MCP-1024	1	Band, Cover
12X-199	6	Lockwasher, Head Screw, 1/4
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Sq. #10-32
8X-880	6	Screw, D. E. Head, Fill. Hd. 1/4-20x1
X-3204	1	BEARING, BALL, SEALED
XA-752	1	Ring, Retaining

† BRUSH SET, SERVICE MCP-2012S.

* Use as required.

UNIT	APPLICATION
MCP-4007	Clark Equipment

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCP-4008 MOTOR PARTS LIST

MCP-4008
(Issued 3-1-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCP-2032A	1	Frame & Field Assembly
GFR-44	8	Screw, Pole Shoe
MCP-25	4	Bushing, Insulating
MCP-26	1	Lead Assembly
X-1743	2	Terminal
MCP-27	1	Lead Assembly
X-1743	2	Terminal
MCP-28	1	Lead, Field Coil, 8 1/2"
MCP-28A	1	Lead, Field Coil, 16 1/4"
MCP-41	2	Insulation, Field Connection
MCP-50	1	Bracket
MCP-3005AS	1	FIELD COIL PACKAGE
MCP-35	2	Connector, Field Coil
MCP-1007A	1	Coil, Field, U. L.
MCP-1008A	1	Coil, Field, L. R.
MCP-1009B	1	Coil, Field, L. L.
MCP-1010B	1	Coil, Field, U. R.
SP-172	3	Grommet
12X-196	2	Lockwasher, Bracket Screw, #10
8X-902	2	Screw, Bracket Mtg., Fill. Hd. #10-32x3/8
X-1658	2	Terminal
X-3064	1	Terminal
X-3065	1	Terminal

Comm. End Head Assembly & Parts Used With

DA-60	1	Screw, Bearing Retaining
GBG-46	1	Washer, Spring
GBG-47	1	Washer, Felt
GBG-48	2	Retainer, Felt Washer
GBG-63	1	Cover, Comm. End
GBG-64	1	Gasket, Comm. End Cover
GBG-66	1	Washer, Bearing Retaining
MCP-2093A	1	Head Assy., Comm. End
DA-38	2	Washer, Spring, Brush Plate Screw
DE-85	1	Washer, Steel, Plate Adj. Screw
GBG-41	2	Screw, Brush Plate
GBG-51	2	Washer, Plain, Brush Plate Screw
GBG-93A	1	Head, C. E.
GK-151	1	Washer, Plain, Plate Adj. Screw
MCP-1012†	4	Brush
MCP-1031	1	Plate Assy., Br. Holder
GBG-18R	4	Holder, Brush
GBG-40	4	Terminal, Brush Holder
GBG-85	4	Stud, Brush Holder
GBG-1037	4	Arm, Brush
MCP-19	4	Spring, Brush
8X-173	4	Nut, Br. Stud, Hex. #10-32
12X-196	4	Lockwasher, Brush Stud, #10

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
8X-208	1	Screw, Plate Adj., Hex. Hd. #10-32x9/16
8X-305	4	Screw, Brush Lead, Rd. Hd. #8-32x1/4
8X-361	2	Washer, Plain, Br. Plate Screw
X-1270	1	Washer, Plate Adj. Screw, Skpf. #10
X-1276	4	Washer, Br. Lead Screw, Skpf. #8
8X-118	6	Screw, C. E. Head, Fill. Hd. #10-32x3/4
12X-196	10	Lockwasher, Head Screw & Cover Screw, #10
12X-199	1	Lockwasher, Brg. Retaining Screw, 1/4
X-440	1	BEARING, BALL, SHIELDED, S. A. E. #305
8X-870	4	Screw, Cover, Fill. Hd. #10-32x5/16

Armature Assembly & Parts Used With

GBG-49	1	Spacer, Arm. Shaft, C. E.
MCP-2021F	1	ARMATURE

Miscellaneous Parts

MCP-23	1	Washer, Steel
MCP-30	1	Head, Drive End
MCP-1024A	1	Band, Cover
12X-199	6	Lockwasher, Head Screw, 1/4
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-3019	6	Screw, D. E. Head, Fill. Hd. 1/4-28x11/16
X-3020	1	BEARING, SEALED
8X-3163	1	Nut, D. E. Armature Shaft, Hex. 5/8-18
XA-752	1	Ring, Retaining

† BRUSH SET, SERVICE MCP-2012S.

UNIT	APPLICATION
MCP-4008	Yale & Towne

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCP-4009 MOTOR PARTS LIST

MCP-4009
(Issued 9-25-56)

Frame & Field Assembly & Parts used With

Part No.	No. Used	Name of Part
MCP-2056	1	Frame & Field Assy.
GFR-44	8	Screw, Pole Shoe
MCP-25	4	Bushing, Ins., Lead
MCP-28D	1	Lead, Field Coil, 29 1/4"
MCP-28E	1	Lead, Field Coil, 32 5/8"
MCP-41	2	Insulation, Field Connection
MCP-53A	1	Lead Assy., Brush, 10 1/2"
X-1743	2	Terminal
MCP-54A	1	Lead Assy., Brush, 10 3/4"
X-1743	2	Terminal
MCP-3005AS	1	FIELD COIL PACKAGE
MCP-35	2	Connector, Field Coil
MCP-1007A	1	Coil, Field, U. L.
MCP-1008A	1	Coil, Field, L. R.
MCP-1009B	1	Coil, Field, L. L.
MCP-1010B	1	Coil, Field, U. R.
MN-21	1	Pin, Dowel
X-1658	4	Terminal

Comm. End Head Assembly & Parts Used With

MCP-2065	1	Head Assy., Comm. End
DA-38	2	Washer, Spring, Brush Plate Sc.
DE-85	1	Washer, Steel, Plate Adj. Sc.
GBG-41	2	Screw, Brush Plate
GBG-51	2	Washer, Plain, Br. Plate Screw
GK-151	1	Washer, Plain, Plate Adj. Sc.
MCP-65	1	Head, C. E.
MCP-1012 †	4	Brush
MCP-1031	1	Plate Assy., Br. Holder
GBG-18R	4	Holder, Brush
GBG-40	4	Terminal, Brush Holder
GBG-85	4	Stud, Brush Holder
GBG-1037	4	Arm, Brush
MCP-19	4	Spring, Brush
8X-173	4	Nut, Brush Stud, Hex. #10-32
12X-196	4	Lockwasher, Brush Stud, #10
8X-208	1	Screw, Plate Adj., Hex. Hd. #10-32x9/16
8X-305	4	Screw, Brush Lead, Rd. Hd. #8-32x1/4

Comm. End Head Assembly (Con't)

Part No.	No. Used	Name of Part
8X-361	2	Washer, Plain, Br. Plate Sc.
X-1270	1	Washer, Plate Adj. Sc., Skpf. #10
X-1276	4	Washer, Br. Lead Sc., Skpf. #8
12X-199	6	Lockwasher, C. E. Head Sc., 1/4
8X-879	6	Screw, C. E. Head, Fill Hd. 1/4-20x5/8

Armature Assembly & Parts Used With

MCP-2059F	1	ARMATURE

Miscellaneous Parts

MCP-62	1	Collar, Arm. Shaft, D. E.
MCP-63	*	Washer, Thrust, Comm. End
MCP-64	1	Head, Drive End
MCP-1024	1	Band, Cover
12X-199	6	Lockwasher, D. E. Head Sc., 1/4
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-880	6	Screw, D. E. Head, Fill. Hd. 1/4-20x1
X-3204	2	BEARING, BALL, SEALED
XA-752	1	Ring, Retaining

† BRUSH SET, SERVICE MCP-2012S.

* Use as required.

UNIT	APPLICATION
MCP-4009	Clark Equip. Co.

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCP-4010 MOTOR PARTS LIST

MCP-4010
(Issued 9-25-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCP-2068	1	Frame & Field Assy.
GBG-23	2	Stud, Terminal
GCY-28	4	Bushing, Ins., Term. Stud
GEB-23	4	Insulation, Field Coil
GFR-44	8	Screw, Pole Shoe
MBS-26	1	Lead Assy.
MBS-14	1	Clip, Terminal
X-1743	2	Terminal
MBS-27	1	Lead Assy.
MBS-14	1	Clip, Terminal
X-1743	2	Terminal
MBS-33	2	Insulation, Term. Stud
MBS-37	2	Insulation, Term. Stud
MBS-38	2	Stud, Terminal
MCP-3005S	1	FIELD COIL PACKAGE
MCP-35	2	Connector, Field Coil
MCP-1007	1	Coil, Field, U. L.
MCP-1008	1	Coil, Field, L. R.
MCP-1009	1	Coil, Field, L. L.
MCP-1010	1	Coil, Field, U. R.
MU-36	4	Washer, Ins., Term. Stud
MU-37	4	Washer, Plain, Term. Stud, 5/16
12X-1014	8	Lockwasher, Term. Stud, 5/16
8X-1376	8	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

DA-60	1	Screw, Bearing Retaining
GBG-46	1	Washer, Spring
GBG-47	1	Washer, Felt
GBG-48	2	Retainer, Felt Washer
GBG-66	1	Washer, Bearing Retaining
MCP-2029	1	Head Assy., Comm. End
DA-38	2	Washer, Spring, Br. Plate Sc.
DE-85	1	Washer, Steel, Plate Adj. Sc.
GBG-41	2	Screw, Brush Plate
GBG-51	2	Washer, Plain, Br. Plate Sc.
GK-151	1	Washer, Plain, Plate Adj. Sc.
MCP-29	1	Head, C. E.
MCP-1012 †	4	Brush
MCP-1031	1	Plate Assy., Br. Holder

Comm. End Head Assembly (Con't)

Part No.	No. Used	Name of Part
GBG-18R	4	Holder, Brush
GBG-40	4	Terminal, Brush Holder
GBG-85	4	Stud, Brush Holder
GBG-1037	4	Arm, Brush
MCP-19	4	Spring, Brush
8X-173	4	Nut, Brush Stud, Hex. #10-32
12X-196	4	Lockwasher, Brush Stud, #10
8X-208	1	Screw, Plate Adj., Hex. Hd. #10-32x9/16
8X-305	4	Screw, Brush Lead, Rd. Hd. #8-32x1/4
8X-361	2	Washer, Plain, Br. Plate Sc.
X-1270	1	Washer, Plate Adj. Sc., Skpf. #10
X-1276	4	Washer, Br. Lead Sc., Skpf. #8
8X-119	6	Screw, C. E. Head, Fill. Hd. #10-32x1/2
12X-196	6	Lockwasher, Head Screw, #10
12X-199	1	Lockwasher, Brg. Retaining Sc., 1/4
X-440	1	BEARING, BALL, SHIELDED, S. A. E. #305

Armature Assembly & Parts Used With

GBG-49	1	Spacer, Arm. Shaft, C. E.
MCP-2020F	1	ARMATURE

Miscellaneous Parts

MCP-1066	1	Head Assy., Drive End
MBD-182B	3	Screw, Cover, Hex. Hd. 1/4-20x1/2
MCP-18	1	Cover
MCP-66	1	Head
12X-199	3	Lockwasher, Cover Sc., 1/4
X-3303	1	BEARING, BALL, SEALED
MCP-1069	1	Band, Cover
12X-196	6	Lockwasher, Head Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-898	6	Screw, D. E. Head, Fill Hd. #10-32x1

† Brush Set, Service MCP-2012S

UNIT	APPLICATION
MCP-4010	Automatic Transportation Co.

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
(MCR-2001)	1	Frame & Field Assy.
CB-157	1	Washer, Ins., Term. Stud, Inner
GK-38	4	Screw, Pole Shoe
MAB-31	3	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAB-118	1	Terminal
MAB-119	1	Insulation, Term. Stud
MAK-80	2	Washer, Ins., Term. Stud, Inner
MAX-47	2	Stud, Terminal
MBY-12†	1	Brush
MBY-13†	2	Brush, Grounded
MCR-12†	1	Brush
MCR-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MCR-1007	1	Coil, Field, U.L.
MCR-1008	1	Coil, Field, L.R.
MCR-1009	1	Coil, Field, L.L.
MCR-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-31	2	Bushing, Ins., Term. Stud
MU-37	3	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	6	Lockwasher, Term. Stud, 5/16
8X-1376	6	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GDY-28B	1	Washer, Plain, Arm. Shaft, 7/16
MAK-61	1	Washer, Thrust, Comm. End
MAW-2209	1	ARMATURE
MAX-54	1	Spacer, Arm. Shaft
MU-54	1	Washer, Thrust, 1/32" Thick
X-407	1	Pin, Cotter Shaft, 3/32x3/4
8X-1581	1	Nut, Shaft, D.E., Castellated 7/16-20

Miscellaneous Parts

MAB-1024G	1	Band, Cover
MAX-1081	1	Head Assy., Drive End
MAX-53	1	Spacer, Bearing
MAX-81	1	Head
X-1499	1	BEARING, BALL, S.A.E. #203
XA-741	1	Ring, Brg. Retaining
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MCR-2012S.

UNIT	APPLICATION
MCR-4001	Auburn Machine, Yale & Towne

(Issued 4-19-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MCR-2001)	1	Frame & Field Assy.
CB-157	1	Washer, Ins., Term. Stud, Inner
GK-38	4	Screw, Pole Shoe
MAB-31	3	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAB-118	1	Terminal
MAB-119	1	Insulation, Term. Stud
MAK-80	2	Washer, Ins., Term. Stud, Inner
MAX-47	2	Stud, Terminal
MBY-12†	1	Brush
MBY-13†	2	Brush, Grounded
MCR-12†	1	Brush
MCR-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MCR-1007	1	Coil, Field, U.L.
MCR-1008	1	Coil, Field, L.R.
MCR-1009	1	Coil, Field, L.L.
MCR-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-28	1	Stud, Terminal
MU-31	2	Bushing, Ins., Term. Stud
MU-37	3	Washer, Plain, Term. Stud, 5/16
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16
12X-1014	6	Lockwasher, Term. Stud, 5/16
8X-1376	6	Nut, Term. Stud, Hex. 5/16-24
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MAX-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAD-47	1	Washer, Thrust, D.E.
MAK-61	1	Washer, Thrust, Comm. End
MAW-2152	1	ARMATURE
MU-54	1	Spacer, Arm. Shaft

Miscellaneous Parts

MAB-1024E	1	Band, Cover
MAY-2148A	1	Head Assy., Drive End
MAY-149	4	Stud
MAY-1148A	1	Head Assy., Partial, Drive End
ML-18A	1	BEARING, ABS. BRONZE
X-489	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x 1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MCR-2012S.

UNIT	APPLICATION
MCR-4002	U.S. Machine

(Issued 4-19-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCT-6101 STARTING MOTOR PARTS LIST

MCT-6101
(Issued 10-9-50)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCT-2032)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	2	Brush
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-67	1	Insulation, Field Conn., D.E.
MAY-33	1	Connector
MCH-13†	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCT-34	1	Stud, Terminal
MCT-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MCL-1007F	1	Coil, Field, U.L.
MCT-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-196	2	Lockwasher, Ground Screw, #10
8X-321	2	Screw, Ground, Rd. Hd. #10-32x5/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCT-2039	1	ARMATURE ASSY.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-63	1	Connector
SS-4214	1	SOLENOID STARTING SWITCH (See Separate List For Parts)
12X-201	2	Lockwasher, Switch Term., 3/8
8X-830	2	Nut, Switch Term. Hex. 3/8-16
X-3002	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8

Clutch Assembly & Parts Used With

MAX-71	1	Pin, Yoke
MCH-58	2	Retainer, Yoke Spring
MCH-62	1	Spring, Yoke
MCH-76	1	Pin, Link
MCH-2056	1	Yoke
MCL-3098A	1	CLUTCH, STARTER
12X-201	1	Lockwasher, Yoke Pin, 3/8
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
8X-830	1	Nut, Yoke Pin, Hex. 3/8-16

Miscellaneous Parts

MAW-24	1	Band, Cover
MN-18	1	Washer, Thrust, D.E.
PS-1294B	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MAB-2012CS.

* Use as required.

UNIT	APPLICATION
MCT-6101	Chrysler (Industrial)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCT-2114A	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	1	Brush
MAB-12C †	1	Brush
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-67	2	Insulation, Field Connection
MCH-13 †	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCT-34	1	Stud, Terminal
MCT-35	1	Connector, Brush
MCT-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1008A	1	Coil, Field, L. R.
MAY-1009A	1	Coil, Field, L. L.
MCL-1007F	1	Coil, Field, U. L.
MCT-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
12X-196	2	Lockwasher, Br. Ground Sc., #10
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-200	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-96	1	Washer, Thrust, Comm. End
MCT-2070	1	ARMATURE
MN-18	1	Washer, Thrust, Drive End
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

MCH-90	1	Connector
SSY-4101	1	SOLENOID STARTING SWITCH (See separate list for parts)
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
X-1272	4	Washer, Switch Mtg. Sc., Skpf. 1/4
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-77	1	Pin, Yoke
MCH-2074	1	Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1309A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MAB-2012HS.

* Use as required.

UNIT	APPLICATION
MCT-6103	Chrysler Ind.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCT-3118S	1	Frame & Field Assembly
GK-38C	4	Screw, Pole Shoe
MAB-12B†	1	Brush
MAB-12C†	1	Brush
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-64	2	Connector, Field Coil
MAX-67	2	Insulation, Field Connection
MAY-1008AS	1	COIL, FIELD, L. R.
MAY-1009AS	1	COIL, FIELD, L. L.
MCH-13†	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-1007FS	1	COIL, FIELD, U. L.
MCT-34A	1	Stud, Terminal
MCT-35	1	Connector, Brush
MCT-1010S	1	COIL, FIELD, U. R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Stud
X-20	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Br. Ground Sc., #10
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2976	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-3002BS	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, Int., 1/32" Thick
MCT-2079M	1	ARMATURE
MN-18	*	Washer, Thrust, D. E., .065" Thick
MN-18E	*	Washer, Thrust, D. E., .095" Thick
X-261C	3	Key, Woodruff, D. E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
DA-22A	1	Washer, Gear Retaining Sc.
DA-60B	1	Screw, Gear Retaining
EBB-26A	1	BENDIX DRIVE
MAB-1024NS	1	Band, Cover
MCL-63	1	Shaft, Bendix Drive
MCL-100	2	Gear
MCL-101	1	Plate, Intermediate
MCL-102	1	Gasket, Int. Plate
MCL-103	1	Gasket, Housing
MCL-1104S	1	BEARING ASSY. INTERMEDIATE
MAK-39	1	Bearing, Abs. Bronze
PS-1321S	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
19X-66	4	Screw, Int. Plate, Flat Hd. #10-32x1/2
19X-93	6	Screw, Pinion Housing, Hex. Hd. 5/16-18x1
12X-199	1	Lockwasher, Gear Retaining Sc., 1/4
12X-1014	6	Lockwasher, Pinion Housing Sc., 5/16
X-1621	4	Washer, Int. Plate Sc., Skpf. #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2
XA-813	1	Oil Seal

† BRUSH SET, SERVICE MAB-2012GS.

* Use as Required.

UNIT	APPLICATION
MCT-6105M	Chrysler Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCT-2118S	1	Frame & Field Assembly
GK-38C	4	Screw, Pole Shoe
MAB-12†	1	Brush
MAB-12C†	1	Brush
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-64	2	Connector, Field Coil
MAX-67	2	Insulation, Field Connection
MAY-1008AS	1	COIL, FIELD, L. R.
MAY-1009AS	1	COIL, FIELD, L. L.
MCH-13†	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-1007FS	1	COIL, FIELD, U. L.
MCT-34A	1	Stud, Terminal
MCT-35	1	Connector, Brush
MCT-1010S	1	COIL, FIELD, U. R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Stud
X-20	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Br. Ground Sc., #10
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2976	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030AS	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, Int., 1/32" Thick
MCT-2079M	1	ARMATURE
MN-18	*	Washer, Thrust, D.E., .065" Thick
MN-18E	*	Washer, Thrust, D. E., .095" Thick
X-261C	3	Key, Woodruff, D.E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
DA-22A	1	Washer, Gear Retaining Sc.
DA-60B	1	Screw, Gear Retaining
EBB-32A	1	BENDIX DRIVE
MAB-1024NS	1	Band, Cover
MCL-63	1	Shaft, Bendix Drive
MCL-100	2	Gear
MCL-101	1	Plate, Intermediate
MCL-102	1	Gasket, Int. Plate
MCL-103	1	Gasket, Housing
MCL-1104S	1	BEARING ASSY., INTERMEDIATE
MAK-39	1	Bearing, Abs. Bronze
PS-1321S	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
19X-66	4	Screw, Int. Plate, Flat Hd. #10-32x1/2
19X-93	6	Screw, Pinion Housing, Hex. Hd. 5/16-18x1
12X-199	1	Lockwasher, Gear Retaining Sc., 1/4
12X-1014	6	Lockwasher, Pinion Housing Sc., 5/16
X-1621	4	Washer, Int. Plate Sc., Skpf. #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2
XA-813	1	Oil Seal

† BRUSH SET, SERVICE MAB-2012HS.

* Use as Required.

UNIT	APPLICATION
MCT-6106M	Chrysler Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20B	2	Bolt, Thru
**MCT-2120S	1	Frame & Field Assembly
MAB-2012JS	1	BRUSH SET
X-20	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Br. Ground, #10
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-200	1	Lockwasher, Term. Stud, 5/16
X-3130	1	Nut, Term. Stud, Hex. 5/16-18

Comm. End Head Assembly & Parts Used With

MCL-2030C	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19C	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCT-2070A	1	ARMATURE
MN-18A	1	Washer, Armature Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

MCL-65	1	Connector
SSY-4102T	1	SOLENOID STARTING SWITCH (See Separate List for Parts)
12X-199	4	Lockwasher, Mtg. Screw, 1/4
12X-200	1	Lockwasher, Switch Term., 5/16
X-467A	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
X-3130	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-76A	1	Pin, Link
MCH-77A	1	Pin, Yoke
MCH-2074D	1	Yoke
MCS-3075	1	STARTER CLUTCH
X-401A	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406A	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024B	1	Band, Cover
MCS-46A	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1325	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

* Use as required.

**NOTE: Due to the method of installing field coils and other components in the frame and field of fungus resistant assemblies, it is necessary to replace the frame and field assembly if field coils are required.

UNIT	APPLICATION
MCT-6109T	Chrysler (Ind.)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCT-6110 STARTING MOTOR PARTS LIST MCT-6110

(Issued 10-3-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCT-2114A	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-12 †	1	Brush
MAB-12C †	1	Brush
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-67	2	Insulation, Field Connection
MCH-13 †	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCT-34	1	Stud, Terminal
MCT-35	1	Connector, Brush
MCT-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1008A	1	Coil, Field, L. R.
MAY-1009A	1	Coil, Field, L. L.
MCL-1007F	1	Coil, Field, U. L.
MCT-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
12X-196	2	Lockwasher, Br. Ground Sc., #10
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-200	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18

Comm. End Head Assembly & Parts Used With

MCL-2080	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCT-2070	1	ARMATURE
MN-18	1	Washer, Thrust, Drive End
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-90	1	Connector
SSY-4101	1	SOLENOID STARTING SWITCH (See separate list for parts)
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
X-1272	4	Washer, Switch Mtg. Sc., Skpf. 1/4
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-77	1	Pin, Yoke
MCH-2074	1	Yoke
MCL-3121A	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1309A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MAB-2012HS.

* Use as required.

UNIT	APPLICATION
MCT-6110	D. W. Onan

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCT-3046S	1	Frame & Field Assembly
GK-38C	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAB-2012GS	1	BRUSH SET
MAX-64	2	Connector, Field Coil
MAX-67	2	Insulation, Field & Brush Connection
MAY-1008AS	1	COIL, FIELD, L. R.
MAY-1009AS	1	COIL, FIELD, L. L.
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-1007FS	1	COIL, FIELD, U. L.
MCT-34A	1	Stud, Terminal
MCT-35	1	Connector Brush
MCT-1010S	1	COIL, FIELD, U. R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Stud
X-20	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Brush Ground Screw, #10
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2976	2	Nut, Terminal Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-3002A	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCT-2088M	1	ARMATURE
MU-54F	1	Washer, Thrust, Int., 1/32" Thick
MU-54F	*	Washer, Thrust, C.E., 1/32" Thick
MU-54J	*	Washer, Thrust, C.E., .046" Thick
MU-54N	*	Washer, Thrust, C.E., 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

MAX-89R	1	Connector
SSR-4001M	1	SOLENOID STARTING SWITCH
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
X-2843	2	Nut, Hex. 5/16-24
X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Screw Skpf. #10

Miscellaneous Parts

EBB-32A	1	BENDIX DRIVE
MAB-1024NS	1	Band, Cover
MCH-1051A	1	Bearing Assy., Intermediate
PS-1291D	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Screw, #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2881	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

* Use as requird.

UNIT	APPLICATION
MCT-6202M	Chrysler (Marine)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCT-6203M STARTING MOTOR PARTS LIST MCT-6203M
(Issued 5-20-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru
MCT-2046S	1	Frame & Field Assembly
GK-38C	4	Screw, Pole Shoe
MAB-12†	1	Brush
MAB-12C†	1	Brush
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-64	2	Connector, Field Coil
MAX-67	2	Insulation, Field Connection
MAY-1008AS	1	COIL, FIELD, L.R.
MAY-1009AS	1	COIL, FIELD, L.L.
MCH-13†	2	Brush, Grounded
MCJ-39A	1	Washer, Ins., Term. Stud, Inner
MCL-1007FS	1	COIL, FIELD, U.L.
MCT-34A	1	Stud, Terminal
MCT-35	1	Connector, Brush
MCT-1010S	1	COIL, FIELD, U.R.
MN-21A	2	Pin, Dowel
MU-37G	1	Washer, Plain, Term. Stud
X-20	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Br. Ground Screw, #10
12X-1014	2	Lockwasher, Term. Stud, 5/16
X-2976	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030DS	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush

Armature Assembly & Parts Used With

MCT-2088M	1	ARMATURE ASSEMBLY
MU-54F	1	Washer, Thrust, Int., 1/32" Thick
MU-54F	*	Washer, Thrust, C.E., 1/32" Thick
MU-54J	*	Washer, Thrust, C.E., .046" Thick
MU-54N	*	Washer, Thrust, C.E., 1/16" Thick
X-261	1	Key, Woodruff, D.E.,#6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89R	1	Connector
SSR-4001M	1	Solenoid Starting Switch
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
X-2843	2	Nut, Hex. 5/16-24
X-2853	1	Nut, Hex. #10-32
X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBB-26A	1	Bendix Drive
MAB-1024NS	1	Band, Cover
MCH-1051A	1	BEARING ASSEMBLY, INTERMEDIATE
PS-1291D	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Bearing Screw, #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2881	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

† BRUSH SET, SERVICE MAB-2012HS.

* Use as required.

UNIT	APPLICATION
MCT-6203M	Chrysler Marine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCT-6301 STARTING MOTOR PARTS LIST MCT-6301

(Issued 10-3-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCT-2120A	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-67	1	Insulation, Field Connection
MCH-13 †	2	Brush, Grounded
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCT-34	1	Stud, Terminal
MCT-1005E	1	FIELD COIL ASSY.
MCU-15	1	Insulation, Field Conn., D. E
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
12X-196	2	Lockwasher, Br. Ground Sc., #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCT-2070	1	ARMATURE
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCL-65	1	Connector
SSY-4102	1	SOLENOID STARTING SWITCH (See separte list for parts)
12X-199	4	Lockwasher, Switch Mtg., Sc, 1/4
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-77	1	Pin, Yoke
MCH-2074	1	Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1325A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

† BRUSH SET, SERVICE MDC-2012BS.

* Use as required.

UNIT	APPLICATION
MCT-6301	Chrysler Ind.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MCU-4001 MOTOR PARTS LIST

MCU-4001
(Issued 11-27-50)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
(MCU-2001)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	2	Washer, Ins., Term. Stud, Outer
MAB-85	2	Bushing, Ins., Term. Stud
MAY-34	2	Stud, Terminal
MCU-12 †	2	Brush
MCU-13 †	2	Brush
MCU-15	1	Insulation, Field Conn., D.E.
MCU-28	1	Equalizer
MCU-3005S	1	FIELD COIL PACKAGE
MAE-1017	2	Connector, Field Coil
MCU-1007	1	Coil, Field, U.L.
MCU-1008	1	Coil, Field, L.R.
MCU-1009	1	Coil, Field, L.L.
MCU-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	2	Washer, Term. Stud, Plain 5/16
SS-13A	2	Washer, Ins., Term. Stud, Inner
12X-196	2	Lockwasher, Grd. Sc., #10
8X-321	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
12X-1014	4	Lockwasher, Term. Stud, 5/16
8X-1376	4	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-3002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAD-47	1	Washer, Thrust, D.E.
MCH-2083	1	ARMATURE
MU-54	2	Washer, Thrust, C.E., 1/32'' Thick

Miscellaneous Parts

MAB-1024E	1	Band, Cover
MAY-2148B	1	Head Assy., Drive End
MAY-149	4	Stud
MAY-1148B	1	Head Assy., Partial, D.E.
ML-18A	1	BEARING, ABS. BRONZE
X-489	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MCU-2012S.

UNIT	APPLICATION
MCU-4001	Massey Harris

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCU-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	2	Washer, Ins., Term. Stud, Outer
MAB-85	2	Bushing, Ins., Term. Stud
MAY-34	2	Stud, Terminal
MCU-12†	2	Brush
MCU-13†	2	Brush, Grounded
MCU-15	1	Insulation, Field Conn., D.E.
MCU-28	1	Equalizer
MCU-3005S	1	FIELD COIL PACKAGE
MAE-1017	2	Connector, Field Coil
MCU-1007	1	Coil, Field, U.L.
MCU-1008	1	Coil, Field, L.R.
MCU-1009	1	Coil, Field, L.L.
MCU-1010	1	Coil, Field, U.R.
MN-21	2	Pin, Dowel
MU-37	2	Washer, Term. Stud, Plain 5/16
SS-13A	2	Washer, Ins., Term. Stud, Inner
12X-196	2	Lockwasher, Grd. Sc., #10
8X-321	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
12X-1014	4	Lockwasher, Term. Stud, 5/16
8X-1376	4	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-3002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MAW-56	1	Washer, Thrust, D.E., .065" Thick
MCH-2112	1	ARMATURE
MCU-17	1	Washer, Thrust, D.E., 1/32" Thick
MU-54	2	Washer, Thrust, C.E., 1/32" Thick

Miscellaneous Parts

Part No.	No. Used	Name of Part
MAB-1024E	1	Band, Cover
MCU-2003	1	Head Assy., Drive End
MAY-149	4	Stud
MCU-1003	1	Head Assy., Partial, D.E.
ML-18A	1	BEARING, ABS. BRONZE
XA-805	1	Seal, Oil
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MCU-2012S.

UNIT	APPLICATION
MCU-4002	American Chain & Cable Co.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MCU-4003 STARTING MOTOR PARTS LIST

MCU-4003
(Issued 2-5-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MCU-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	2	Washer, Ins., Term. Stud, Outer
MAB-85	2	Bushing, Ins., Term. Stud
MAY-34	2	Stud, Terminal
MCU-12†	2	Brush
MCU-13†	2	Brush, Grounded
MCU-15	1	Insulation, Field Connection D. E.
MCU-28	1	Equalizer
MCU-3005S	1	FIELD COIL PACKAGE
MAE-1017	2	Connector, Field Coil
MCU-1007	1	Coil, Field, U. L.
MCU-1008	1	Coil, Field, L. R.
MCU-1009	1	Coil, Field, L. L.
MCU-1010	1	Coil, Field, U. R.
MN-21	2	Pin, Dowel
MU-37	2	Washer, Term. Stud, Plain 5/16
SS-13A	2	Washer, Ins., Term. Stud, Inner
12X-196	2	Lockwasher, Grd. Sc., #10
8X-321	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
12X-1014	4	Lockwasher, Term. Stud, 5/16
8X-1376	4	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-3002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAD-47	1	Washer, Thrust, D. E.
MCH-2119	1	ARMATURE
MU-54	2	Washer, Thrust, C. E., 1/32" Thick

Miscellaneous Parts

MAB-1024E	1	Band, Cover
MAY-2148B	1	Head Assy., Drive End
MAY-149	4	Stud
MAY-1148B	1	Head Assy., Partial, D. E.
ML-18A	1	BEARING, ABS. BRONZE
X-489	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MCU-2012S.

UNIT	APPLICATION
MCU-4003	DeLux Neon

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MCX-3001)	1	Frame & Field Assy.
DK-45	1	Washer, Ins., Term. Stud, Inner
GK-38	4	Screw, Pole Shoe
MAP-12†	1	Brush, Grounded
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	1	Washer, Ins., Term. Stud, Outer
MAX-44	1	Washer, Plain, Term. Stud, 3/8
MAY-28	1	Stud, Terminal
MCL-30	1	Insulation, Field Connection
MCX-3005S	1	Field Coil Package
MAX-64	2	Connector, Field Coil
MAX-1008	1	Coil, Field, U.L.
MCX-1008	1	Coil, Field, L.R.
MCX-1009	1	Coil, Field, L.L.
MCX-1010	1	Coil, Field, U.R.
MZ-12C†	1	Brush
12X-196	1	Lockwasher, Ground Screw, #10
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-321	1	Screw, Ground, Rd. Hd. #10-32x5/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16

Comm. End Head Assembly & Parts Used With

DJ-4	1	Cover, Comm. End
DJ-10	1	Gasket, C.E. Cover
MCW-3002	1	Head Assy., Comm. End
MAP-1014	1	Plate Assy., Br. Holder
MZ-19	2	Spring, Brush
MCW-2	1	Head
12X-196	2	Lockwasher, #10
8X-311	2	Screw, Rd. Hd. #10-32x3/8
12X-195	4	Lockwasher, Head Screw, #8
12X-196	3	Lockwasher, Cover Screw, #10
X-489	1	Oiler
8X-709	3	Screw, C.E. Cover, Fill. Hd. #10-32x7/16
8X-878	4	Screw, C.E. Head, Fill. Hd. #8-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
DA-22	1	Washer, Bearing Retaining
DA-60	1	Screw, Bearing Retaining
GY-36	1	Washer, Thrust, Plain
MCX-2006	1	Armature
12X-199	1	Lockwasher, Brg. Retaining Sc., 1/4
X-294	1	Bearing, Ball, S.A.E. #202

Miscellaneous Parts

MAB-1024E	1	Band, Cover
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MCW-2012S.

UNIT	APPLICATION
MCX-4001	Federal Enterprises, Inc.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-20C	2	Bolt, Thru
**MCZ-2046S	1	Frame & Field Assembly
MCS-1012S	1	BRUSH SET
X-20	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Br. Ground Screw, #10
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-200	1	Lockwasher, Term. Stud, 5/16
X-3130	1	Nut, Term. Stud, Hex. 5/16-18

Comm. End Head Assembly & Parts Used With

MCZ-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19C	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCZ-2047F	1	ARMATURE
MN-18A	1	Washer, Arm. Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32'' Thick
MU-54B	*	Washer, Thrust, C.E., 3/64'' Thick

Switch Assembly & Parts Used With

MCZ-82	1	Connector
SAA-4002T	1	Solenoid Starting Switch (See Separate List For Parts)
SSX-34A	1	Spring, Plunger
SSX-36A	1	Plug, Spring
SSX-1021D	1	Moving Core Assembly
SS-60C	1	Washer, Steel, 3/8
SSX-21	1	Core, Moving
SSX-22A	1	Link Screw
SSX-35A	1	Spring, Rubber Cap
SSX-1023B	1	Clamp Assembly
X-15	1	Screw, Rd. Hd. #8-32x5/8
X-3217	1	Nut, Hex. #8-32
12X-199	4	Lockwasher, Switch Mtg. Screw, 1/4
12X-200	1	Lockwasher, Switch Term., 5/16
X-467A	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
X-3130	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-76A	1	Pin, Link
MCH-2074A	1	Yoke
MCL-58A	1	Pin, Yoke
MCL-59A	1	Clamp, Yoke Cover
MCS-3075	1	Starter Clutch
MCZ-61	1	Cover, Yoke
X-401A	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCH-1024B	1	Band, Cover
MCS-46A	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1309	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABSORBENT BRONZE

* Use as required.

** Due to the method of installing field coils and other components in the frame and field of fungus resistant assemblies, it is necessary to replace the frame and field assembly if field coils are required.

UNIT	APPLICATION
MCZ-4103T	Chrysler Industrial

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-20C	2	Bolt, Thru
**MCZ-2081S	1	Frame & Field Assembly
MCS-1012S	1	BRUSH SET
X-20	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Br. Ground Screw, #10
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-200	1	Lockwasher, Term. Stud, 5/16
X-3130	1	Nut, Term. Stud, Hex. 5/16-18

Comm. End Head Assembly & Parts Used With

MCZ-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19C	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCZ-2047F	1	ARMATURE
MN-18A	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

MCL-50	1	Connector
SAA-4004T	1	SOLENOID STARTING SWITCH (See Separate List for Parts)
12X-199	4	Lockwasher, Switch Mtg. Screw, 1/4
12X-200	1	Lockwasher, Switch Term., 5/16
8X-467A	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
X-3130	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-76A	1	Pin, Link
MCH-77A	1	Pin, Yoke
MCH-2074D	1	Yoke
MCS-3075	1	CLUTCH, STARTER
X-401A	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406A	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024B	1	Band, Cover
MCS-46A	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1325	1	Housing Assy., Pinion
MP-41A	1	BEARING; ABSORBENT BRONZE

* Use as required.

**NOTE: Due to the method of installing field coils and other components in the frame and field of fungus resistant assemblies, it is necessary to replace the frame and field assembly if field coils are required.

UNIT	APPLICATION
MCZ-4107T	Chrysler (Ind.)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDB-6001 STARTING MOTOR PARTS LIST

MDB-6001
(Issued 10-7-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-20A	2	Bolt, Thru
MDB-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAY-33	1	Connector, Brush
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-30	1	Insulation, Field Connection
MCU-13†	2	Brush, Grounded
MDB-12†	2	Brush
MDB-28	1	Stud, Terminal
MDB-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1008A	1	Coil, Field, L. R.
MAY-1009A	1	Coil, Field, L. L.
MCT-1010	1	Coil, Field, U. R.
MDB-1007	1	Coil, Field, U. L.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
12X-196	2	Lockwasher, Brush Ground Sc., #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MDB-2006F	1	ARMATURE
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

MDB-25	1	Connector
SSX-34	1	Spring
SSX-36	1	Plug
SSX-1021B	1	Moving Core Assy.

Switch Assembly & Parts Used With (Cont.)

Part No.	No. Used	Name of Part
SS-60	1	Washer, Steel, 3/8
SSX-21	1	Core, Moving
SSX-22	1	Link Screw
SSX-35	1	Spring
SSX-1023	1	Clamp Assy.
8X-53	1	Screw, Rd. Hd. #8-32x5/8
8X-141	1	Nut, Hex. #8-32
SSY-4002	1	SOLENOID STARTING SWITCH (See Separate List for Parts)
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	1	Lockwasher, Switch Term., 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-2074C	1	Yoke
MCL-54	1	Pin, Yoke
MCL-56	1	Clamp, Yoke Cover
MCL-57	1	Cover, Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer, Snap Ring
MCS-47	1	Ring, Snap
PS-1316	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Interm. Plate Sc., #10
8X-311	2	Screw, Interm. Plate, Rd. Hd. #10-32x3/8

† BRUSH SET, SERVICE MDB-2012S.

* Use as required.

UNIT	APPLICATION
MDB-6001	Chrysler (8)

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File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDB-6001A STARTING MOTOR PARTS LIST

MDB-6001A
(Issued 11-3-53)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-20A	2	Bolt, Thru
MDB-2001	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-67	1	Insulation, Field Connection, D.E.
MAY-33	1	Connector, Brush
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCU-13 †	2	Brush, Grounded
MDB-12 †	2	Brush
MDB-28	1	Stud, Terminal
MDB-3005S	1	FIELD COIL PACKAGE
MAX-64	2	Connector, Field Coil
MAY-1008A	1	Coil, Field, L.R.
MAY-1009A	1	Coil, Field, L.L.
MCT-1010	1	Coil, Field, U.R.
MDB-1007	1	Coil, Field, U.L.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-30A	1	Insulation, Field Connection
12X-196	2	Lockwasher, Brush Ground Sc., #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MDB-2006F	1	ARMATURE
MN-18	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDB-26	1	Connector
SSX-34	1	Spring
SSX-36	1	Plug
SSX-1021B	1	Moving Core Assembly
SS-60	1	Washer, Steel, 3/8
SSX-21	1	Core, Moving
SSX-22	1	Link Screw
SSX-35	1	Spring
SSX-1023	1	Clamp Assembly
8X-53	1	Screw, Rd. Hd. #8-32x5/8
8X-141	1	Nut, Hex. #8-32
SSY-4002	1	SOLENOID STARTING SWITCH (See Separate List for Parts)
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	1	Lockwasher, Switch Term., 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Term., Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-2074C	1	Yoke
MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MCL-60	1	Cover, Yoke
MCL-3075	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer, Snap Ring
MCS-47A	1	Ring, Snap
PS-1316	1	Housing Assembly, Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Plate Sc., #10
8X-311	2	Screw, Int. Plate, Rd. Hd. #10-32x3/8

† BRUSH SET, SERVICE MDB-2012S.

* Use as required.

UNIT	APPLICATION
MDB-6001A	Chrysler 8

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDC-2001	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-48B	1	Stud, Terminal
MDC-13 †	2	Brush, Grounded
MDC-1005	1	FIELD COIL ASSEMBLY
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
12X-196	2	Lockwasher, Br. Ground Screw, #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MDC-2006	1	ARMATURE
MN-18	1	Washer, Thrust, D. E., .065" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

MDC-33	1	Connector
SSX-34	1	Spring, Plunger, 3 25/32"
SSX-36	1	Plug
SSX-1021B	1	Moving Core Assembly
SS-60	1	Washer, Steel, 3/8
SSX-21	1	Core, Moving
SSX-22	1	Link Screw
SSX-35	1	Spring
SSX-1023	1	Clamp Assembly
8X-53	1	Screw, Rd. Hd. #8-32x5/8

Switch Assembly & Parts (Continued)

Part No.	No. Used	Name of Part
8X-141	1	Nut, Hex. #8-32
SSY-4002	1	SOLENOID STARTING SWITCH (See Separate List for Parts)
12X-199	4	Lockwasher, Switch Mtg. Screw, 1/4
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-2074C	1	Yoke
MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MCL-60	1	Cover, Yoke
MCL-3075	1	STARTER CLUTCH
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1316	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Plate Screw, #10
8X-311	2	Screw, Int. Plate, Rd. Hd. #10-32x3/8

† BRUSH SET, SERVICE MDC-2012S.

* Use as required.

UNIT	APPLICATION
MDC-6301	Chrysler (8)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MDC-6302 STARTING MOTOR PARTS LIST

MDC-6302
(Issued 11-11-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDC-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-48B	1	Stud, Terminal
MDC-13 ‡	2	Brush, Grounded
MDC-1005	1	FIELD COIL ASSY.
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
12X-196	2	Lockwasher, Br. Ground Sc., #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MDC-2006	1	ARMATURE
MN-18	1	Washer, Thrust, D. E., .065" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

MDC-33	1	Connector
SSX-34	1	Spring, Plunger, 3 25/32"
SSX-36	1	Plug
SSX-1021B	1	Moving Core Assy.
SS-60	1	Washer, Steel, 3/8
SSX-21	1	Core, Moving
SSX-22	1	Link Screw
SSX-35	1	Spring
SSX-1023	1	Clamp Assy.
8X-53	1	Screw, Rd. Hd. #8-32x5/8
8X-141	1	Nut, Hex. #8-32
SSY-4002	1	SOLENOID STARTING SWITCH (See Separate List For Parts)
12X-199	4	Lockwasher, Switch Mtg. Screw, 1/4

Switch Assembly (Continued)

Part No.	No. Used	Name of Part
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-2074C	1	Yoke
MCL-58	1	Pin Yoke
MCL-59	1	Clamp, Yoke Cover
MCL-60	1	Cover, Yoke
MCL-3075	1	STARTER CLUTCH
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1319	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Plate Screw, #10
8X-311	2	Screw, Int. Plate, Rd. Hd. #10-32x3/8

‡ BRUSH SET, SERVICE MDC-2012S.

* Use as required.

UNIT	APPLICATION
MDC-6302	Dodge Truck

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDC-6303T STARTING MOTOR PARTS LIST

MDC-6303T
(Issued 11-11-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
** MDC-2039S	1	Frame & Field Assy.
MDC-2012CS	1	BRUSH SET
X-20	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
12X-196	2	Lockwasher, Br. Ground Sc., #10
MW-20D	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-200	1	Lockwasher, Term. Stud, 5/16
X-3130	1	Nut, Term. Stud, Hex. 5/16-18

Comm. End Head Assembly & Parts Used With

MCL-2030H	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19C	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MDC-2041	1	ARMATURE
MN-18A	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

MDC-40	1	Connector
SSY-4102T	1	SOLENOID STARTING SWITCH (See separate list for parts)
12X-199	4	Lockwasher, Switch Mtg. Screw, 1/4
12X-200	1	Lockwasher, Switch Terminal, 5/16
X-467A	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
X-3130	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-76A	1	Pin, Link
MCH-77A	1	Pin, Yoke
MCH-2074D	1	Yoke
MCS-3075	1	STARTER CLUTCH
X-401A	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406A	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCH-1024B	1	Band, Cover
MCS-46A	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1325	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

* Use as required.

** Note:-Due to the method of installing field coils and other components in the frame and field of fungus resistant assemblies, it is necessary to replace the frame and field assembly if field coils are required.

UNIT	APPLICATION
MDC-6303T	Chrysler (Industrial)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDD-2001	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MAX-67	1	Insulation, Field Connection
MCH-34B	1	Stud, Terminal
MCJ-39B	1	Washer, Ins., Term. Stud
MCL-15	1	Insulation, Field Connection, D.E.
MDC-13 †	1	Brush, Grounded
MDD-1005S	1	FIELD COIL PACKAGE
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
12X-196	1	Lockwasher, Ground Screw, #10
8X-321	1	Screw, Br. Ground, Rd. Hd. #10-32x5/16
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MDD-2002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	2	Spring, Brush

Armature Assembly & Parts Used With

MDC-2037	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MU-54K	*	Washer, Thrust, C.E., 080" Thick
MU-54L	*	Washer, Thrust, C.E., 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89R	1	Connector
SSW-4101	1	SOLENOID STARTING SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	2	Nut, Hex. #10-32
12X-196	2	Lockwasher, #10
12X-200	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBB-39	1	BENDIX DRIVE
MCH-1024	1	Band, Cover
MCH-1051	1	BEARING ASSEMBLY, INTERMEDIATE
PS-1326	1	Housing Assy., Pinion
MDD-34	1	BEARING, ABSORBENT BRONZE
12X-196	2	Lockwasher, Int. Brg. Screw, #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as required.

† BRUSH SET, SERVICE MDC-2012AS.

UNIT	APPLICATION
MDD-6301	Packard

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDD-2036	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCL-48B	1	Stud, Terminal
MDD-13 †	2	Brush, Grounded
MDD-1005AS	1	FIELD COIL PACKAGE
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
12X-196	2	Lockwasher, Br. Ground Sc., #10
12X-200	2	Lockwasher, Term. Stud, 5/16
8X-321	2	Screw, Br. Ground, Rd. Hd. #10-32x5/16
8X-2988	2	Nut, Term. Stud, Hex. 5/16-18
MW-20A	2	Bolt, Thru
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-2030F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MDC-2006	1	ARMATURE
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

MDC-33	1	Connector
SSX-34	1	Spring, Plunger, 3 25/32"
SSX-36	1	Plug
SSX-1021B	1	Moving Core Assy.
SS-60	1	Washer, Steel, 3/8
SSX-21	1	Core, Moving
SSX-22	1	Link Screw
SSX-35	1	Spring

Switch Assembly (Continued)

Part No.	No. Used	Name of Part
SSX-1023	1	Clamp Assy.
8X-53	1	Screw, Rd. Hd. #8-32x5/8
8X-141	1	Nut, Hex. #8-32
SSY-4002	1	SOLENOID STARTING SWITCH (See separate list for parts)
12X-199	4	Lockwasher, Switch Mtg. Screw, 1/4
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-76	1	Pin, Link
MCH-2074C	1	Yoke
MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MCL-60	1	Cover, Yoke
MCL-3075	1	STARTER CLUTCH
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCH-1024	1	Band, Cover
MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1316	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Plate Screw, #10
8X-311	2	Screw, Int. Plate, Rd. Hd. #10-32x3/8

† BRUSH SET, SERVICE MDD-2012S.

* Use as required.

UNIT	APPLICATION
MDD-6401	Crown Imperial

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDE-2001	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAB-30	1	Insulation, Field Connection
MAB-31	2	Washer, Ins. Term. Stud, Outer
MAB-85	2	Bushing, Ins., Term. Stud
MCU-15	1	Insulation, Field Conn., D. E.
MCU-28	1	Equalizer
MCU-2012S	1	Brush Set
MDE-34	2	Stud, Terminal
MDE-1007	1	COIL, FIELD, U. L.
MDE-1008	1	COIL, FIELD, L. R.
MDE-1009	1	COIL, FIELD, L. L.
MDE-1010	1	COIL, FIELD, U. R.
MDE-1017	2	Connector, Field Coil
MN-21	2	Pin, Dowel
MU-37	2	Washer, Plain, Term. Stud, 5/16
SS-13A	2	Washer, Ins., Term. Stud, Inner
12X-196	2	Lockwasher, Grd. Sc., #10
8X-321	2	Screw, Brush Ground, Rd. Hd. #10-32x5/16
12X-1014	4	Lockwasher, Term. Stud, 5/16
8X-1376	4	Nut, Term. Stud, Hex. 5/16-24
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MCL-3002	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAD-47	1	Washer, Thrust, D. E.
MDE-2112	1	ARMATURE
MU-54	2	Washer, Thrust, C. E., 1/32" Thick

Miscellaneous Parts

MAB-1024F	1	Band, Cover
MAY-2148B	1	Head Assy., Drive End
MAY-149	4	Stud
MAY-1148B	1	Head Assy., Partial, D. E.
ML-18A	1	BEARING, ABSORBENT BRONZE
X-489	1	Oiler
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

UNIT	APPLICATION
MDE-4001	John Bean

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDF-6001 STARTING MOTOR PARTS LIST

MDF-6001
(Issued 6-1-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDF-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MDF-16	4	Holder, Brush
MDF-23	1	Grommet, Connector
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-26	1	Connector, Switch
MDF-30	1	Insulation, Br. Holder, Upper
MDF-31	1	Insulation, Br. Holder, Lower
MDF-1005S	1	FIELD COIL PACKAGE
MDF-2012S	1	BRUSH SET
MN-21	2	Pin, Dowel
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. 8-32x3/16
12X-195	6	Lockwasher, Lead & Brush & Connector Sc., 8
8X-304	5	Screw, Brush & Connector, Rd. Hd. 8-32x5/16
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MDF-2006	1	ARMATURE
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

SAD-27	1	Spring, Plunger, 3 17/32"
SAD-1021	1	Moving Core Assy.
SAD-21	1	Core, Moving
SAD-33	1	Rubber Cap
SAD-1022	1	Screw & Link Assy.
SS-60	1	Washer, Steel, 3/8
SSX-35	1	Spring, Rubber Cap
SAD-4001	1	SOLENOID STARTING SWITCH (See separate list for parts)

Switch Assembly (Continued)

Part No.	No. Used	Name of Part
SSX-36	1	Plug
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-1074D	1	Yoke
MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MCL-3075	1	CLUTCH, STARTER
MDF-27	1	Pin, Link
MDF-28	1	Cover, Yoke
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1316B	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Plate Sc., 10
8X-311	2	Screw, Int. Plate, Rd. Hd. 10-32x3/8

* Use as required

UNIT	APPLICATION
MDF-6001	Chrysler, DeSoto, Imperial

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDF-6002 STARTING MOTOR PARTS LIST

MDF-6002
(Issued 6-1-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDF-2033	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCT-34B	1	Stud, Terminal
MDF-16	4	Holder, Brush
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-31	1	Insulation, Br. Holder, Lower
MDF-1005AS	1	FIELD COIL PACKAGE
MDF-2012S	1	BRUSH SET
MDG-30	1	Insulation, Br. Holder, Upper
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. 8-32x3/16
12X-195	5	Lockwasher, Lead Conn. & Brush Sc., 8
8X-304	4	Screw, Brush, Rd. Hd. 8-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MDF-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32'' Thick
MU-54	*	Washer, Thrust, C. E., 1/32'' Thick
MU-54B	*	Washer, Thrust, C. E., 3/64'' Thick
MU-54K	*	Washer, Thrust, C. E., .080'' Thick
MU-54L	*	Washer, Thrust, C. E., 1/16'' Thick
X-261	1	Key, Woodruff, D. E., 6

Miscellaneous Parts

EBB-20	1	BENDIX DRIVE
MCH-1051	1	Bearing Assy., Intermediate
PS-1291G	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., 10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. 10-32x7/16

* Use as required.

UNIT	APPLICATION
MDF-6002	Dodge & Plymouth

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDF-6003 STARTING MOTOR PARTS LIST

MDF-6003
(Issued 6-1-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDF-2034	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAY-31B	1	Stud, Terminal
MCH-25A	1	Washer, Ins., Term. Stud
MDF-16	4	Holder, Brush
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-31	2	Insulation, Br. Holder
MDF-1005BS	1	FIELD COIL PACKAGE
MDF-2012S	1	BRUSH SET
MN-21	2	Pin, Dowel
MZ-19	4	Spring, Brush
SW-764S	1	Switch Contact Package
8X-59	1	Screw, Lead Conn., Rd. Hd. 8-32x3/16
12X-195	5	Lockwasher, Lead Conn. & Brush Sc., 8
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-304	4	Screw, Brush, Rd. Hd. 8-32x5/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-96	1	Washer, Thrust, C. E.
MDF-2070	1	ARMATURE
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

SW-2827	1	STARTING SWITCH
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. 10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. 10

Clutch Assembly & Parts Used With

MCH-77	1	Pin, Yoke
MCH-2099	1	Yoke
MCL-3075	1	CLUTCH, STARTER
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1302A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

* Use as required.

UNIT	APPLICATION
MDF-6003	Dodge Truck

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File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDF-6005 STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDF-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MDF-16	4	Holder, Brush
MDF-23	1	Grommet, Connector
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-26	1	Connector, Switch
MDF-30	1	Insulation, Br. Holder, Upper
MDF-31	1	Insulation, Br. Holder, Lower
MDF-1005S	1	FIELD COIL PACKAGE
MDF-2012S	1	BRUSH SET
MN-21	2	Pin, Dowel
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. 8-32x3/16
12X-195	6	Lockwasher, Lead&Brush& Connector Sc., 8
8X-304	5	Screw, Brush&Connector, Rd. Hd. 8-32x5/16
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MDF-2006	1	ARMATURE
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

SAD-27	1	Spring, Plunger, 3 17/32"
SAD-1021	1	Moving Core Assy.
SAD-21	1	Core, Moving
SAD-33	1	Rubber Cap
SAD-1022	1	Screw & Link Assy.
SS-60	1	Washer, Steel, 3/8

Switch Assembly (Continued)

Part No.	No. Used	Name of Part
SSX-35	1	Spring, Rubber Cap
SAD-4001	1	SOLENOID STARTING SWITCH (See separate list for parts)
SSX-36	1	Plug
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-1074D	1	Yoke
MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MCL-3075	1	Clutch, Starter
MDF-27	1	Pin, Link
MDF-28	1	Cover, Yoke
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1319A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Plate Sc., 10
8X-311	2	Screw, Int. Plate, Rd. Hd. 10-32x3/8

* Use as required.

UNIT	APPLICATION
MDF-6005	Dodge Truck

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDF-6006 STARTING MOTOR PARTS LIST

MDF-6006
(Issued 6-1-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDF-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MDF-16	4	Holder, Brush
MDF-23	1	Grommet, Connector
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-26	1	Connector, Switch
MDF-30	1	Insulation, Br. Holder, Upper
MDF-31	1	Insulation, Br. Holder, Lower
MDF-1005S	1	FIELD COIL PACKAGE
MDF-2012S	1	BRUSH SET
MN-21	2	Pin, Dowel
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. 8-32x3/16
12X-195	6	Lockwasher, Lead&Brush& Connector Sc., 8
8X-304	5	Screw, Brush&Connector, Rd. Hd. 8-32x5/16
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MDF-2006	1	ARMATURE
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

SAD-27	1	Spring, Plunger, 3 17/32"
SAD-1021	1	Moving Core Assy.
SAD-21	1	Core, Moving
SAD-33	1	Rubber Cap
SAD-1022	1	Screw & Link Assy.

Switch Assembly (Continued)

Part No.	No. Used	Name of Part
SS-60	1	Washer, Steel, 3/8
SSX-35	1	Spring, Rubber Cap
SAD-4001	1	SOLENOID STARTING SWITCH (See separate list for parts)
SSX-36	1	Plug
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	2	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	2	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-1074D	1	Yoke
MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MCL-3075	1	Clutch, Starter
MDF-27	1	Pin, Link
MDF-28	1	Cover, Yoke
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1332	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Plate Sc., 10
8X-311	2	Screw, Int. Plate, Rd. Hd. 10-32x3/8

* Use as required.

UNIT	APPLICATION
MDF-6006	Dodge Truck

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File in
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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDF-6007 STARTING MOTOR PARTS LIST

MDF-6007
(Issued 6-1-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDF-2033	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCT-34B	1	Stud, Terminal
MDF-16	4	Holder, Brush
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-31	1	Insulation, Br. Holder, Lower
MDF-1005AS	1	FIELD COIL PACKAGE
MDF-2012S	1	BRUSH SET
MDG-30	1	Insulation, Br. Holder, Upper
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. 8-32x3/16
12X-195	5	Lockwasher, Lead Conn. & Brush Sc., 8
8X-304	4	Screw, Brush, Rd. Hd. 8-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MDF-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick
X-261	1	Key, Woodruff, D. E., 6

Miscellaneous Parts

EBB-20	1	BENDIX DRIVE
MCH-1051	1	Bearing Assy., Intermediate
PS-1291H	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing, Sc., 10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. 10-32x7/16

* Use as required.

UNIT	APPLICATION
MDF-6007	Dodge

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File in
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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDF-6008 STARTING MOTOR PARTS LIST

MDF-6008
(Issued 6-1-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDF-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MDF-16	4	Holder, Brush
MDF-23	1	Grommet, Connector
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-26	1	Connector, Switch
MDF-30	1	Insulation, Br. Holder, Upper
MDF-31	1	Insulation, Br. Holder, Lower
MDF-1005S	1	FIELD COIL PACKAGE
MDF-2012S	1	BRUSH SET
MN-21	2	Pin, Dowel
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn. Rd. Hd. 8-32x3/16
12X-195	6	Lockwasher, Lead&Brush& Connector Sc., 8
8X-304	5	Screw, Brush&Connector, Rd. Hd. 8-32x5/16
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCL-132	1	Washer, Thrust, D. E.
MDF-2122	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SAD-27	1	Spring, Plunger, 3 17/32"
SAD-1021A	1	Moving Core Assy.
SAD-21	1	Core, Moving
SAD-33	1	Rubber Cap
SAD-1022A	1	Screw & Link Assy.
SS-60	1	Washer, Steel, 3/8
SSX-35	1	Spring, Rubber Cap
SAD-4101	1	SOLENOID STARTING SWITCH (See separate list for parts)
SSX-36	1	Plug
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-77	1	Pin, Yoke
MCH-1074E	1	Yoke
MCL-3123	1	CLUTCH, STARTER
MDF-27	1	Pin, Link
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8
X-406	1	Pin, Cotter, Yoke pin, 3/32x1/2

Miscellaneous Parts

MCL-127	1	Ring, Snap, Retainer & Pinion Stop
MCL-129	1	Retainer & Pinion Stop
PS-1327A	1	Housing Assy., Pinion
MDD-34	1	BEARING, ABS. BRONZE

* Use as required.

UNIT	APPLICATION
MDF-6008	Clipper, Hudson & Nash, Studebaker Goldenhawk

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MDF-6009 STARTING MOTOR PARTS LIST

MDF-6009
(Issued 6-1-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDF-2033	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCT-34B	1	Stud, Terminal
MDF-16	4	Holder, Brush
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-31	1	Insulation, Br. Holder, Lower
MDF-1005AS	1	FIELD COIL PACKAGE
MDF-2012S	1	BRUSH SET
MDG-30	1	Insulation, Br. Holder, Upper
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. 8-32x3/16
12X-195	5	Lockwasher, Lead Conn. & Brush Sc., 8
8X-304	4	Screw, Brush, Rd. Hd. 8-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MDF-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick
X-261	1	Key, Woodruff, D. E., 6

Miscellaneous Parts

EBB-19	1	BENDIX DRIVE
MCH-1051	1	Bearing Assy., Intermediate
PS-1333A	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., 10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. 10-32x7/16

* Use as required.

UNIT	APPLICATION
MDF-6009	Nash

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File in
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ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDF-6010 STARTING MOTOR PARTS LIST

MDF-6010
(Issued 6-1-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDF-2033	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCT-34B	1	Stud, Terminal
MDF-16	4	Holder, Brush
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-31	1	Insulation, Br. Holder, Lower
MDF-1005AS	1	FIELD COIL PACKAGE
MDF-2012S	1	BRUSH SET
MDG-30	1	Insulation, Br. Holder, Upper
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. 8-32x3/16
12X-195	5	Lockwasher, Lead Conn. & Brush Sc., 8
8X-304	4	Screw, Brush, Rd. Hd. 8-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MDF-2037	1	ARMATURE
MU-54	1	Washer, Thrust, D. E., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick

Miscellaneous Parts

EBA-35	1	BENDIX DRIVE ASSY.
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2008	1	Ring, Lock
EBA-3307	2	Plate, Spring Anchor
EBA-3505	1	SPRING, DRIVE
EBA-3531	1	Shaft
EBA-3532	1	Pinion
MCL-1036B	1	Head Assy., Drive End
MAB-49A	1	BEARING, ABS. BRONZE
MZ-124	1	Pin, Bendix

* Use as required.

UNIT	APPLICATION
MDF-6010	Nash

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDF-6011 STARTING MOTOR PARTS LIST

MDF-6011
(Issued 6-1-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAW-20A	2	Bolt, Thru
MDF-2038	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCT-34B	1	Stud, Terminal
MDF-16	4	Holder, Brush
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-31	1	Insulation, Br. Holder, Lower
MDF-1005AS	1	FIELD COIL PACKAGE
MDF-2012S	1	BRUSH SET
MDG-30	1	Insulation, Br. Holder, Upper
MN-21	1	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. 8-32x3/16
12X-195	5	Lockwasher, Lead Conn. & Brush Sc., 8
8X-304	4	Screw, Brush, Rd. Hd. 8-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
8X-146	2	Nut, Thru Bolt, Hex. 1/4-20
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MDF-2026	1	ARMATURE
MU-54	1	Washer, Thrust, D.E., 1/32" Thick
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Miscellaneous Parts

EBB-7	1	BENDIX DRIVE ASSY.
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2008	1	Ring, Lock
EBA-3307	2	Plate, Spring Anchor
EBA-3505	1	SPRING, DRIVE
EBA-3531	1	Shaft
EBB-732	1	Pinion
MCL-1003B	1	Head Assy., Drive End
MG-77A	1	BEARING, ABS. BRONZE
MZ-124	1	Pin, Bendix
8X-66	2	Screw, D.E. Head, Flat Hd. 10-32x1/2

* Use as required.

UNIT	APPLICATION
MDF-6011	Hudson

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDF-6012 STARTING MOTOR PARTS LIST

MDF-6012
(Issued 6-1-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDF-2033	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCT-34B	1	Stud, Terminal
MDF-16	4	Holder, Brush
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-31	1	Insulation, Br. Holder, Lower
MDF-1005AS	1	FIELD COIL PACKAGE
MDF-2012S	1	BRUSH SET
MDG-30	1	Insulation, Br. Holder, Upper
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. 8-32x3/16
12X-195	5	Lockwasher, Lead Conn. & Brush Sc., 8
8X-304	4	Screw, Brush, Rd. Hd. 8-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDF-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick
X-261	1	Key, Woodruff, D. E., 6

Miscellaneous Parts

EBA-33	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
EBA-3307	2	Plate, Spring Anchor
MCH-1051	1	Bearing Assy., Intermediate
PS-1326B	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc. 10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. 10-32x7/16

* Use as required.

UNIT	APPLICATION
MDF-6012	Hudson

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File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDF-6013 STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDF-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MDF-16	4	Holder, Brush
MDF-23	1	Grommet, Connector
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-26	1	Connector, Switch
MDF-30	1	Insulation, Br. Holder, Upper
MDF-31	1	Insulation, Br. Holder, Lower
MDF-1005S	1	FIELD COIL PACKAGE
MDF-2012S	1	BRUSH SET
MN-21	2	Pin, Dowel
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. 8-32x3/16
12X-195	6	Lockwasher, Lead&Brush&Connector Sc., 8
8X-304	5	Screw, Brush&Connector, Rd. Hd. 8-32x5/16
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MDF-2006	1	ARMATURE
MN-18	1	Washer, Thrust, D, E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

MDF-24	1	Connector
SAD-27	1	Spring, Plunger, 3 17/32"
SAD-1021	1	Moving Core Assy.
SAD-21	1	Core, Moving
SAD-33	1	Rubber Cap
SAD-1022	1	Screw & Link Assy.

Switch Assembly (Continued)

Part No.	No. Used	Name of Part
SS-60	1	Washer, Steel, 3/8
SSX-35	1	Spring, Rubber Cap
SAD-4001A	1	SOLENOID STARTING SWITCH (See separate list for parts)
SSX-36	1	Plug
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	2	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	2	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MCL-3161	1	CLUTCH, STARTER
MCH-1074D	1	Yoke
MDF-27	1	Pin, Link
MDF-28	1	Cover, Yoke
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1324B	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Plate Sc., 10
8X-311	2	Screw, Int. Plate, Rd. Hd. 10-32x3/8

* Use as required.

UNIT	APPLICATION
MDF-6013	Ford Truck

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File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDF-6014 STARTING MOTOR PARTS LIST

MDF-6014
(Issued 6-1-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDF-2042	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MCT-34B	1	Stud, Terminal
MDF-16	4	Holder, Brush
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-31	1	Insulation, Br. Holder, Lower
MDF-1005AS	1	FIELD COIL PACKAGE
MDF-2012S	1	BRUSH SET
MDG-30	1	Insulation, Br. Holder, Upper
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. 8-32x3/16
12X-195	5	Lockwasher, Lead Conn. & Brush Sc., 8
8X-304	4	Screw, Brush, Rd. Hd. 8-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term.Stud, 5/16

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MDF-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16 " Thick
X-261	1	Key, Woodruff, D. E., 6

Miscellaneous Parts

EBB-50	1	BENDIX DRIVE
MCH-1051	1	Bearing Assy., Intermediate
PS-1336	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., 10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. 10-32x7/16

* Use as required.

UNIT	APPLICATION
MDF-6014	Massey-Harris

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File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDF-6015 STARTING MOTOR PARTS LIST

MDF-6015
(Issued 7-2-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDF-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MDF-16	4	Holder, Brush
MDF-23	1	Grommet, Connector
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-26	1	Connector, Switch
MDF-30	1	Insulation, Br. Holder, Upper
MDF-31	1	Insulation, Br. Holder, Lower
MDF-1005S	1	FIELD COIL PACKAGE
MDF-2012S	1	BRUSH SET
MN-21	2	Pin, Dowel
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. 8-32x3/16
12X-195	6	Lockwasher, Lead&Brush& Connector Sc., 8
8X-304	5	Screw, Brush&Connector, Rd. Hd. 8-32x5/16
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MDF-2006	1	ARMATURE
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SAD-27	1	Spring, Plunger, 3 17/32"
SAD-1021	1	Moving Core Assembly
SAD-21	1	Core, Moving
SAD-33	1	Rubber, Cap
SAD-1022	1	Screw & Link Assy.
SS-60	1	Washer, Steel, 3/8
SSX-35	1	Spring, Rubber Cap
SAF-4001	1	SOLENOID STARTING SWITCH (See separate list for parts)
SSX-36	1	Plug
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	2	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	2	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-1074D	1	Yoke
MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MCL-3075	1	CLUTCH, STARTER
MDF-27	1	Pin, Link
MDF-28	1	Cover Yoke
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCL-53	1	Plate, Intermediate
MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1319A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Plate Sc., 10
8X-311	2	Screw, Int. Plate, Rd. Hd. 10-32x3/8

* Use as required.

UNIT	APPLICATION
MDF-6015	Dodge Tr. (Canada)

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File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDG-6001 STARTING MOTOR PARTS LIST

MDG-6001
(Issued 6-4-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDG-2033	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins. Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-34C	1	Stud, Terminal
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MDF-16	4	Holder, Brush
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-31	1	Insulation, Br. Holder, Lower
MDF-2012S	1	BRUSH SET
MDG-30	1	Insulation, Br. Holder, Upper
MDG-1005S	1	FIELD COIL PACKAGE
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. #8-32x3/16
12X-195	5	Lockwasher, Lead Conn. & Brush Sc., #8
8X-304	4	Screw, Brush, Rd. Hd. #8-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MDF-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MU-54K	*	Washer, Thrust, C.E., .080" Thick
MU-54L	*	Washer, Thrust, C.E., 1/16" Thick
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Part

EBB-20	1	BENDIX DRIVE
MCH-1051	1	Bearing Assy., Intermediate
PS-1291G	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as required.

UNIT	APPLICATION
MDG-6001	Dodge & Plymouth

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File in
Equipment & Parts List Binder

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ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDG-6002 STARTING MOTOR PARTS LIST

MDG-6002
(Issued 6-4-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDG-2033	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-34C	1	Stud, Terminal
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MDF-16	4	Holder, Brush
MDF-25	4	Bushing, Ins., Br. Holder Rivet
MDF-31	1	Insulation, Br. Holder, Lower
MDF-2012S	1	BRUSH SET
MDG-30	1	Insulation, Br. Holder, Upper
MDG-1005S	1	FIELD COIL PACKAGE
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. #8-32x3/16
12X-195	5	Lockwasher, Lead Conn. & Brush Sc., #8
8X-304	4	Screw, Brush, Rd. Hd. #8-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MDF-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

EBB-20	1	BENDIX DRIVE
MCH-1051	1	Bearing Assy., Intermediate
PS-1291H	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
8X-1368	2	Screw, Int. Bearing Rd. Hd. #10-32x7/16

* Use as required.

UNIT	APPLICATION
MDG-6002	Dodge & Plymouth

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File in
Equipment & Parts List Binder

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ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDG-6003 STARTING MOTOR PARTS LIST

MDG-6003
(Issued 7-2-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDG-2034	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAY-31C	1	Stud, Terminal
MCH-25A	1	Washer, Ins., Term. Stud
MDF-16	4	Holder, Brush
MDF-25	4	Washer, Ins., Br. Holder Rivet
MDF-31	2	Insulation, Br. Holder
MDF-2012S	1	BRUSH SET
MDG-1005AS	1	FIELD COIL PACKAGE
MN-21	2	Pin, Dowel
MZ-19	4	Spring, Brush
SW-764S	1	Switch Contact Package
8X-59	1	Screw, Lead Conn., Rd. Hd. #8-32x3/16
12X-195	5	Lockwasher, Lead Conn. & Brush Sc., #8
12X-201	1	Lockwasher, Term. Stud, 3/8
8X-304	4	Screw, Brush, Rd. Hd. #8-32x5/16
8X-830	1	Nut, Term. Stud, Hex. 3/8-16
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MCH-96	1	Washer, Thrust, C. E.
MDF-2070	1	ARMATURE
MN-18	1	Washer, Thrust, D. E.
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

SW-2827	1	STARTING SWITCH
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Clutch Assembly & Parts Used With

MCH-77	1	Pin, Yoke
MCH-2099	1	Yoke
MCL-3075	1	CLUTCH, STARTER
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MCS-46	1	Retainer & Pinion Stop
MCS-47A	1	Ring, Snap, Retainer & Pinion Stop
PS-1302A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE

* Use as required.

UNIT	APPLICATION
MDG-6003	Dodge Truck

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File in
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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDG-6004 STARTING MOTOR PARTS LIST

MDG-6004
(Issued 7-2-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAJ-20	2	Bolt, Thru
MDG-2033	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MAB-85	1	Bushing, Ins., Term. Stud
MCH-34C	1	Stud, Terminal
MCJ-39B	1	Washer, Ins., Term. Stud, Inner
MDF-16	4	Holder, Brush
MDF-25	4	Washer, Ins., Br. Holder Rivet
MDF-31	1	Insulation, Br. Holder, Lower
MDF-2012S	1	BRUSH SET
MDG-30	1	Insulation, Br. Holder, Upper
MDG-1005S	1	FIELD COIL PACKAGE
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
MZ-19	4	Spring, Brush
8X-59	1	Screw, Lead Conn., Rd. Hd. #8-32x3/16
12X-195	5	Lockwasher, Lead Conn. & Brush Sc., #8
8X-304	4	Screw, Brush, Rd. Hd. #8-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
8X-3277	4	Rivet, Grounded Br. Holder
8X-3284	4	Rivet, Insulated Br. Holder
8X-164	1	Nut, Term. Stud, Hex.5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDF-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MDF-2020	1	ARMATURE
MU-54	1	Washer, Thrust, D. E., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick

Miscellaneous Parts

EBA-35	1	BENDIX DRIVE ASSY.
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2008	1	Ring, Lock
EBA-3307	2	Plate, Spring Anchor
EBA-3505	1	SPRING, DRIVE
EBA-3531	1	Shaft
EBA-3532	1	Pinion
MDG-1003	1	Head Assy., Drive End
MAB-124	1	BEARING, ABS. BRONZE
MZ-124	1	Pin, Bendix

* Use as required.

UNIT	APPLICATION
MDG-6004	Studebaker Truck

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File in
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MDH-4001M STARTING MOTOR PARTS LIST

MDH-4001M
(Issued 7-1-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDH-20	2	Bolt, Thru
MDH-3001	1	Frame & Field Assembly
MAK-49	1	Washer, Ins., Term. Stud, Inner
MAK-49A	1	Washer, Ins., Term. Stud, Outer
MDH-27	1	Bushing, Ins., Term. Stud
MDH-28	1	Stud, Terminal
MDH-38	4	Screw, Pole Shoe
MDH-45	1	Insulation, Field Connection
MDH-3005S	1	FIELD COIL PACKAGE
MDH-1007A	1	Coil Assy., Field, Left Brush
MDH-12A†	1	
MDH-1010A	1	Coil Assy., Field, Right Brush
MDH-12†	1	
SSA-43A	1	Washer, Plain, Term. Stud
12X-199	2	Lockwasher, Term. Stud, 1/4
X-3275	2	Nut, Term. Stud, Hex. 1/4-20
12X-199	2	Lockwasher, Thru Bolt, 1/4
8X-3075	2	Nut, Thru Bolt, Hex. 1/4-20

Comm. End Head Assembly & Parts Used With

MDH-3002	1	Head Assy., Comm. End
MDH-18	4	Spring, Brush
MDH-42	1	Felt
MDH-1044S†	2	Brush, Grounded

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDH-37	1	Washer, Thrust, D.E., 1/32" Thick
MDH-39	1	Washer, Thrust, C.E., .045" Thick
MDH-40	1	Washer, Thrust, C.E., 1/32" Thick
MDH-2006	1	ARMATURE

Miscellaneous Parts

EBB-47A	1	DRIVE ASSEMBLY
EB-6828A	1	Nut, Hex., Castellated
EBB-4701A	1	Screw Shaft
EBB-4702A	1	Stop, Pinion
EBB-4704A	1	Pinion
EBB-4713A	1	Spring, Anti-Drift
EBB-4723A	1	Washer, Thrust, Cushion
EBB-4726A	1	Sleeve, Anti-Drift Spring
EBB-4727A	1	Washer, Pinion
EBB-4736A	1	Cup, Cushion
EBB-4737A	1	Cushion
EBB-4738A	1	Spacer, Cushion
EBB-4739A	1	Washer, Thrust, Cup
19X-404	1	Pin, Cotter
MDH-1003	1	Head Assy., Drive End
MDH-1024	1	Cover Band
X-2875	1	Nut, Cover Band, Square #10-32
X-2882	1	Screw, Cover Band, Fill. Hd. #10-32x1 1/2

† BRUSH SET, SERVICE MDH-2012S.

UNIT	APPLICATION
MDH-4001M	Evinrude, Johnson

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDH-4002M STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDH-20	2	Bolt, Thru
MDH-2001	1	Frame & Field Assy.
MAK-49	1	Washer, Ins., Term. Stud, Inner
MAK-49A	1	Washer, Ins., Term. Stud, Outer
MDH-12 †	1	BRUSH
MDH-12A †	1	BRUSH
MDH-27	1	Bushing, Ins., Term. Stud
MDH-28	1	Stud, Terminal
MDH-38	4	Screw, Pole Shoe
MDH-45	1	Insulation, Field Connection
MDH-3005AS	1	FIELD COIL PACKAGE
MDH-1007BS	1	Coil Assy., Field, Left
MDH-1010BS	1	Coil Assy., Field, Right
SSA-43A	1	Washer, Plain, Term. Stud
12X-199	2	Lockwasher, Term. Stud, 1/4
X-3275	2	Nut, Term. Stud, Hex. 1/4-20
12X-199	2	Lockwasher, Thru Bolt, 1/4
8X-3075	2	Nut, Thru Bolt, Hex. 1/4-20

Comm. End Head Assembly & Parts Used With

MDH-2035	1	Head Assy., Comm. End
MDH-18	4	Spring, Brush
MDH-42	1	Felt
MDH-1044S †	2	BRUSH, GROUNDED

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDH-37	1	Washer, Thrust, D.E., 1/32" Thick
MDH-39	1	Washer, Thrust, C.E., .045" Thick
MDH-40	*	Washer, Thrust, C.E., 1/32" Thick
MDH-2006	1	ARMATURE

Miscellaneous Parts

EBB-54A	1	DRIVE ASSY.
MDH-1003	1	Head Assy., Drive End
MDH-1024	1	Band, Cover
X-26	1	Screw, Cover Band, Rd. Hd. 10-32x1
X-2875	1	Nut, Cover Band, Square 10-32

† BRUSH SET, SERVICE MDH-2012S.

* Use as required.

UNIT	APPLICATION
MDH-4002M	Fageol, Twin Coach

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File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDL-6001 STARTING MOTOR PARTS LIST

MDL-6001
(Issued 9-28-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDL-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MDF-23	1	Grommet, Connector
MDF-26	1	Connector, Switch
MDL-23	2	Holder, Brush, Insulated
MDL-24	2	Holder, Brush, Grounded
MDL-25	2	Spring, Brush
MDL-26	2	Pin, Brush Holder
MDL-31A	2	Insulation, Field Connection
MDL-1005S	1	FIELD COIL PACKAGE
MDL-2012S	1	BRUSH SET
MN-21	2	Pin, Dowel
8X-59	1	Screw, Ground Lead, Rd. Hd. #8-32x3/16
12X-195	2	Lockwasher, Switch Conn. & Grd. Lead Sc., #8
8X-304	1	Screw, Switch Connector, Rd. Hd. #8-32x5/16
X-3305	4	Screw, Brush, Bdg. Hd. #6-32x5/8
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MDL-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCL-132	1	Washer, Thrust, D. E.
MDL-2006	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SAD-27	1	Spring, Plunger, 3 17/32"
SAD-1021	1	Moving Core Assy.
SAD-21	1	Cover, Moving
SAD-33	1	Rubber, Cap
SAD-1022	1	Screw & Link Assy.
SS-60	1	Washer, Steel, 3/8
SSX-35	1	Spring, Rubber Cap
SAD-4301	1	SOLENOID STARTING SWITCH (See separate list for parts)
SSX-36	1	Plug
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-1074E	1	Yoke
MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MDF-27	1	Pin, Link
MDF-28	1	Cover, Yoke
MDL-3123	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCL-53	1	Plate, Intermediate
MCL-127	1	Ring, Snap, Retainer & Pinion Stop
MCL-129	1	Retainer & Pinion Stop
PS-1316C	1	Housing Assy., Pinion
MDD-34	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Plate Sc., #10
8X-311	2	Screw, Int. Plate, Rd. Hd. #10-32x3/8

* Use as required.

UNIT	APPLICATION
MDL-6001	Chrysler, DeSoto, Imperial

Printed in U. S. A.

File in
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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDL-6003 STARTING MOTOR PARTS LIST

MDL-6003
(Issued 9-28-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDL-2033	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31C	1	Washer, Ins., Term. Stud, Outer
MDL-23	2	Holder, Brush, Insulated
MDL-24	2	Holder, Brush, Grounded
MDL-25	2	Spring, Brush
MDL-26	2	Pin, Brush Holder
MDL-31A	2	Insulation, Field Connection
MDL-90	1	Bushing, Ins., Term. Stud
MDL-1005S	1	FIELD COIL PACKAGE
MDL-2012S	1	BRUSH SET
MDM-27	1	Washer, Ins., Term. Stud, Inner
MDM-28	1	Stud, Terminal
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-59	1	Screw, Ground Lead, Rd. Hd. #8-32x3/16
12X-195	2	Lockwasher, Term. Stud & Grd. Lead Sc., #8
8X-304	1	Screw, Term. Stud Lead, Rd. Hd. #8-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
X-3305	4	Screw, Brush, Bdg. Hd. #6-32x5/8
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MDL-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDL-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

EBB-53	1	BENDIX DRIVE
MCH-1051	1	Bearing Assy., Intermediate
PS-1291L	1	Housing Assy., Pinion
MDD-34	1	BEARING, ABS. BRONZE
12X-196	2	Screw, Int. Bearing Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as required.

UNIT	APPLICATION
MDL-6003	Dodge 8, DeSoto

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDL-6004 STARTING MOTOR PARTS LIST

MDL-6004
(Issued 9-28-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDL-2033	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31C	1	Washer, Ins., Term. Stud, Outer
MDL-23	2	Holder, Brush, Insulated
MDL-24	2	Holder, Brush, Grounded
MDL-25	2	Spring, Brush
MDL-26	2	Pin, Brush, Holder
MDL-31A	2	Insulation, Field Connection
MDL-90	1	Bushing, Ins., Term. Stud
MDL-1005S	1	FIELD COIL PACKAGE
MDL-2012S	1	BRUSH SET
MDM-27	1	Washer, Ins., Term. Stud, Inner
MDM-28	1	Stud, Terminal
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-59	1	Screw, Ground Lead, Rd. Hd. #8-32x3/16
12X-195	2	Lockwasher, Term. Stud & Grd. Lead Sc., #8
8X-304	1	Screw, Term. Stud Lead, Rd. Hd. #8-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
X-3305	4	Screw, Brush, Bdg. Hd. #6-32x5/8
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MDL-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDL-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

EBB-53	1	BENDIX DRIVE
MCH-1051	1	Bearing Assy., Intermediate
PS-1291M	1	Housing Assy., Pinion
MDD-34	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as required.

UNIT	APPLICATION
MDL-6004	Dodge 6, Plymouth 6

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MDL-6005 STARTING MOTOR PARTS LIST

MDL-6005
(Issued 10-12-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDL-2001	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MDF-23	1	Grommet, Connector
MDF-26	1	Connector, Switch
MDL-23	2	Holder, Brush, Insulated
MDL-24	2	Holder, Brush, Grounded
MDL-25	2	Spring, Brush
MDL-26	2	Pin, Brush Holder
MDL-31A	2	Insulation, Field Connection
MDL-1005S	1	FIELD COIL PACKAGE
MDL-2012S	1	BRUSH SET
MN-21	2	Pin, Dowel
8X-59	1	Screw, Ground Lead, Rd. Hd. #8-32x3/16
12X-195	2	Lockwasher, Switch Conn. & Grd. Lead Sc., #8
8X-304	1	Screw, Switch Connector, Rd. Hd. #8-32x5/16
X-3305	4	Screw, Brush, Bdg. Hd. #6-32x5/8
12X-199	2	Lockwasher, Thru Bolt, 1/4

Comm. End Head Assembly & Parts Used With

MDL-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

MCH-96	1	Washer, Thrust, Comm. End
MCL-132	1	Washer, Thrust, D. E.
MDL-2006	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64")Thick

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SAD-27	1	Spring, Plunger, 3 17/32"
SAD-1021	1	Moving Core Assy.
SAD-21	1	Core, Moving
SAD-33	1	Rubber Cap
SAD-1022	1	Screw & Link Assy.
SS-60	1	Washer, Steel, 3/8
SSX-35	1	Spring, Rubber Cap
SAG-4001	1	SOLENOID STARTING SWITCH (See separate list for parts)
SSX-36	1	Plug, Plunger Spring
12X-199	4	Lockwasher, Switch Mtg. Sc., 1/4
12X-200	1	Lockwasher, Switch Terminal, 5/16
8X-467	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8
8X-2988	1	Nut, Switch Terminal, Hex. 5/16-18

Clutch Assembly & Parts Used With

MCH-1074E	1	Yoke
MCL-58	1	Pin, Yoke
MCL-59	1	Clamp, Yoke Cover
MDF-27	1	Pin, Link
MDF-28	1	Cover, Yoke
MDL-3123	1	CLUTCH, STARTER
X-401	1	Pin, Cotter, Link Pin, 1/16x3/8

Miscellaneous Parts

MCL-53	1	Plate, Intermediate
MCL-127	1	Ring, Snap, Retainer & Pinion Stop
MCL-129	1	Retainer & Pinion Stop
PS-1319B	1	Housing Assy., Pinion
MDD-34	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Plate Sc., #10
8X-311	2	Screw, Int. Plate, Rd. Hd. #10-32x3/8

* Use as required.

UNIT	APPLICATION
MDL-6005	Dodge Truck

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ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDM-6001 STARTING MOTOR PARTS LIST

MDM-6001
(Issued 9-28-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDM-2033	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31C	1	Washer, Ins., Term. Stud, Outer
MDL-23	2	Holder, Brush, Insulated
MDL-24	2	Holder, Brush, Grounded
MDL-25	2	Spring, Brush
MDL-26	2	Pin, Brush Holder
MDL-31A	2	Insulation, Field Connection
MDL-90	1	Bushing, Ins., Term. Stud
MDL-2012S	1	BRUSH SET
MDM-27	1	Washer, Ins., Term. Stud, Inner
MDM-28	1	Stud, Terminal
MDM-1005S	1	FIELD COIL PACKAGE
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-59	1	Screw, Ground Lead, Rd. Hd. #8-32x3/16
12X-195	2	Lockwasher, Term. Stud & Grd. Lead Sc., #8
8X-304	1	Screw, Term. Stud Lead, Rd. Hd. #8-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
X-3305	4	Screw, Brush, Bdg. Hd. #6-32x5/8
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MDL-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDL-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

EBB-53	1	BENDIX DRIVE
MCH-1051	1	Bearing Assy., Intermediate
PS-1291L	1	Housing Assy., Pinion
MDD-34	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as required.

UNIT	APPLICATION
MDM-6001	Dodge 6, Plymouth 6-8

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MDM-6002 STARTING MOTOR PARTS LIST

MDM-6002
(Issued 9-28-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru
MDM-2033	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAB-31C	1	Washer, Ins., Term. Stud, Outer
MDL-23	2	Holder, Brush, Insulated
MDL-24	2	Holder, Brush, Grounded
MDL-25	2	Spring, Brush
MDL-26	2	Pin, Brush Holder
MDL-31A	2	Insulation, Field Connection
MDL-90	1	Bushing, Ins., Term. Stud
MDL-2012S	1	BRUSH SET
MDM-27	1	Washer, Ins., Term. Stud, Inner
MDM-28	1	Stud, Terminal
MDM-1005S	1	FIELD COIL PACKAGE
MN-21	2	Pin, Dowel
MU-37	1	Washer, Plain, Term. Stud, 5/16
8X-59	1	Screw, Ground Lead, Rd. Hd. #8-32x3/16
12X-195	2	Lockwasher, Term. Stud & Grd. Lead Sc., #8
8X-304	1	Screw, Term. Stud Lead, Rd. Hd. #8-32x5/16
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-2988	1	Nut, Term. Stud, Hex. 5/16-18
X-3305	4	Screw, Brush, Bdg. Hd. #6-32x5/8
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-199	2	Lockwasher, Thru Bolt, 1/4
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MDL-1002	1	Head Assy., Comm. End
MAD-110	1	Felt

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDL-2088	1	ARMATURE
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

EBB-53	1	BENDIX DRIVE
MCH-1051	1	Bearing Assy., Intermediate
PS-1291M	1	Housing Assy., Pinion
MDD-34	1	BEARING, ABS. BRONZE
12X-196	2	Lockwasher, Int. Bearing Sc., #10
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16

* Use as required.

UNIT	APPLICATION
MDM-6002	Plymouth 8

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File in
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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MDO-4002M STARTING MOTOR PARTS LIST

MDO-4002M
(Issued 10-29-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDO-20	2	Bolt, Thru
MDO-2001	1	Frame & Field Assy.
MAK-49A	1	Washer, Ins., Term. Stud, Outer
MDO-12	† 1	Brush
MDO-22	1	Stud, Terminal
MDO-31	1	Insulation, Field Connection
MDO-32	1	Insulation, Field Coil
MDO-42	1	Washer, Ins., Term. Stud, Inner
MDO-43	2	Bushing, Ins., Term. Stud
MDO-3005S	1	FIELD COIL PACKAGE
MDO-1007	1	Coil, Field, Left
MDO-1008	1	Coil, Field, Right
SSA-43A	1	Washer, Plain, Term, Stud
12X-199	2	Lockwasher, Term, Stud, 1/4
19X-1521	2	Screw, Pole Shoe
X-3275	2	Nut, Term. Stud, Hex, 1/4-20
XA-866	1	Connector, Field Coil
12X-199	2	Lockwasher, Thru Bolt, 1/4
8X-3075	2	Nut, Thru Bolt, Hex. 1/4-20

Comm. End Head Assembly & Parts Used With

MDO-3002	1	Head Assy., Comm. End
MDH-18	2	Spring, Brush
MDH-42	1	Felt
MDO-1034S	† 1	Brush, Grounded

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MDH-37	1	Washer, Thrust, D. E., 1/32" Thick
MDO-38	1	Washer, Thrust, D. E., .042" Thick
MDH-40	*	Washer, Thrust, C. E., 1/32" Thick
MDH-39	1	Washer, Thrust, C. E., .045" Thick
MDO-2006	1	ARMATURE

Miscellaneous Parts

EBB-56A	1	DRIVE ASSEMBLY
EB-6828A	1	Nut, Hex., Castellated
EBB-4723A	1	Washer, Thrust, Cushion
EBB-5601A	3	Screw Shaft
EBB-5602A	1	Stop, Pinion
EBB-5604A	1	Pinion
EBB-5613A	1	Spring, Anti-Drift
EBB-5626A	1	Sleeve, Anti-Drift Spring
EBB-5627A	1	Washer, Pinion
EBB-5636A	1	Cup, Cushion
EBB-5637A	1	Cushion
EBB-5638A	1	Spacer, Cushion
EBB-5634A	1	Washer, Thrust, Cup
19X-404	1	Pin, Cotter
MDO-1003	1	Head Assy., Drive End

* Use as Required

† BRUSH SET, SERVICE MDO-2012S

UNIT	APPLICATION
MDO-4002M	Evinrude

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-2090 (C.W.D.E.)

Part No.	No. Used	Name of Part
	1 2 3 4 5	
ML-2090	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
6X-1452	4	3/16x5/16 Oval Hd. Rivet
6X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
6X-311	2	#10-32x3/8 Rd. Hd. Screw
6X-794	2	#10-32 Square Nut
	1 2 3 4 5	

ML-3090 (C.C.W.D.E.)

Part No.	No. Used	Name of Part
	1 2 3 4 5	
ML-3090	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-17	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-73	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
6X-1452	4	3/16x5/16 Oval Hd. Rivet
6X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
6X-311	2	#10-32x3/8 Rd. Hd. Screw
6X-794	2	#10-32 Square Nut
	1 2 3 4 5	

NOTE:- The ML-2090 and ML-3090 commutator end head assemblies are new heads designed with special reinforcement to take the heavy end thrust of the 12 volt starters. These commutator end heads will replace the MH-3075 and MH-2075 commutator end heads respectively as complete heads but the sub parts are not all interchangeable. Manual Bulletin M-2 covers in further detail this change of commutator end heads.

The ML-2090 head assembly is used on starting motors:

ML-4123 ML-4145
ML-4124 ML-4147
ML-4136 ML-4148
ML-4137 ML-4153
ML-4138

The ML-3090 head assembly is used on starting motors:

ML-4127 ML-4142
ML-4135 ML-4143
ML-4140

(Issued 9-22-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2025)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	I	Field Coil Lead Assy.
X-983	2	Side Open Terminal
MR-32	1	Field Lead Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assy.
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Terminal Post Cover Ins.
MG-70	1	Terminal Post Frame Ins.
MH-28	1	Terminal Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-10843	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-10903	1	C.E. Head Part Assy.
ML-10403	1	C.E. Cap & Brg. Assy.
MR-3	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Head Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2039	1	Armature Assembly
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EB-31	1	Bendix Drive Assy.
GX-1024	1	Head Band Assy.
HS-1041	1	Pinion Housing Assy.
MG-77	1	Bronze Graphite Brg.
MH-1034	1	Intermediate Plate Assy.
MH-77	1	Bronze Graphite Brg.
X-95	4	5/16-18x7/8 Hex. Hd. Sc.
6X-1010A	1	#8-32x1 1/4 Rd. Hd. Sc. - Hardened
X-1014	4	5/16 Lock Washer
6X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 7-27-27)
(R-1-11-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the comple e part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2025)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Lead Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assy.
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Terminal Post Cover Ins.
MG-70	1	Terminal Post Frame Ins.
MH-28	1	Terminal Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MR-3	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Head Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2085	1	Armature Assy.
X-261	2	#6 Woodruff Key

Miscellaneous Parts

EB-45A	1	Bendix Drive Assy.
GX-1024	1	Head Band Assy.
HS-1082	1	Pinion Housing Assy.
ML-18	1	Bronze Graphite Brg. - 1/32 Wall
MN-21	1	Dowel Pin
ML-2019	1	Intermediate Brg. Assy.
ML-21	1	Bronze Graphite Brg. - 1/32 Wall
8X-716	1	#8-32x1 1/8 Rd. Hd. Screw
8X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 8-28-30)
(R-7-7-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MH-20	2	Frame Screw
(ML-2025)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Lead Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assy.
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
MH-28	1	Term. Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(MH-3075)	1	Comm. End Head Assy.
GK-162	2	Brush Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
MH-1075B	1	Comm. End Head Part Assy.
MG-1036	1	Comm. End Cap & Brg. Assembly
MR-3	1	Absorbent Bronze Bearing
6X-245	4	1/8x3/8 Oval Hd. Rivet
6X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
6X-311	2	#10-32x3/8 Rd. Hd. Screw
6X-794	2	#10-32 Square Nut

1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
GK-174A	1	17/32 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2035	1	Armature Assembly
X-261	1	#6 Woodruff Key

Miscellaneous Parts

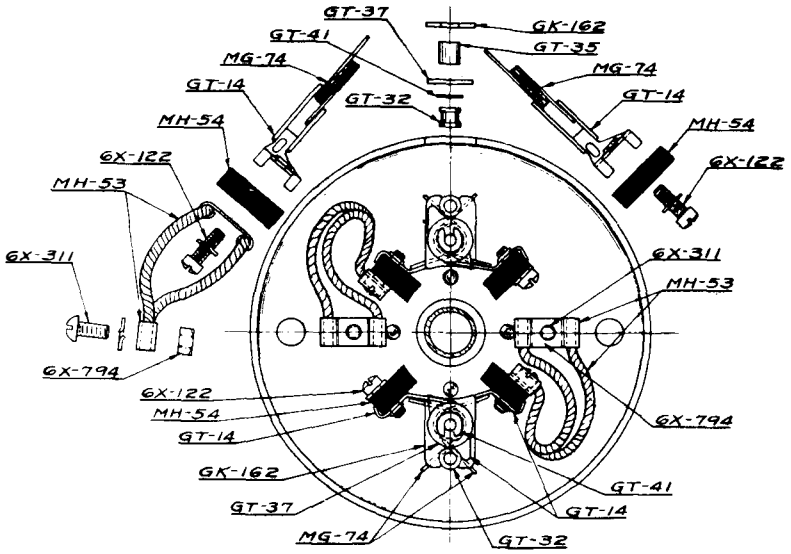
EB-33	1	Bendix Drive Assy.
GX-1024	1	Head Band Assy.
ML-2027	1	Intermediate Brg. Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1047	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-489	1	1/4 Oiler - Press in Type
6X-1010A	1	#8-32x1 1/4 Rd. Hd. Screw - Hardened
6X-1410	1	#8-32 Square Nut

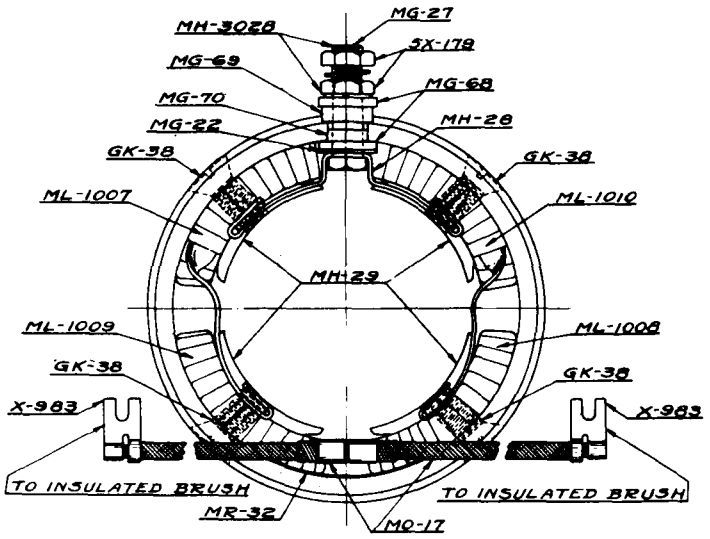
1 2 3 4 5

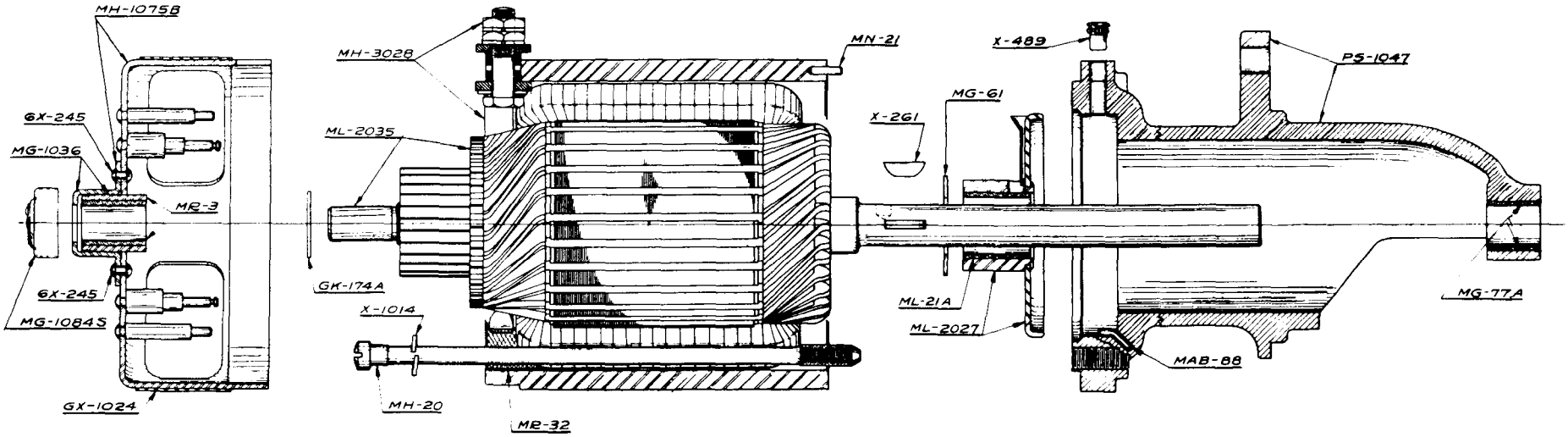
(Issued 5-17-32)
(R-7-15-36)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4151 STARTING MOTOR ILLUSTRATION







Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2025)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Lead Insulation
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assy.
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Terminal Post Cover Ins.
MG-70	1	Terminal Post Frame Ins.
MH-28	1	Terminal Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assembly
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Head Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Sc.
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2035	1	Armature Assembly
X-261	1	#6 Woodruff Key

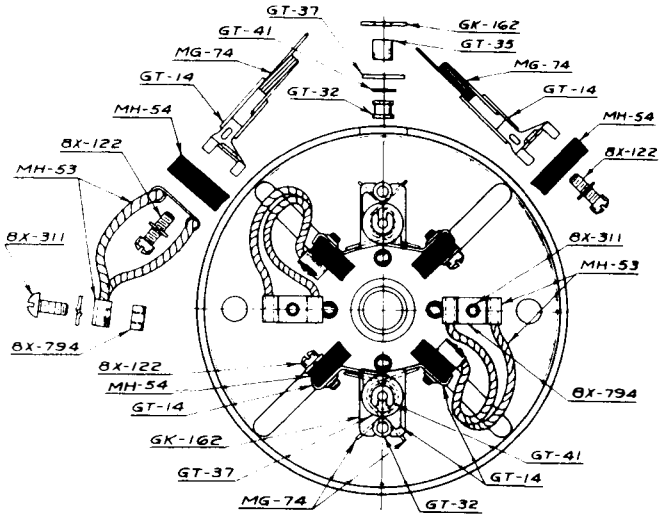
Miscellaneous Parts

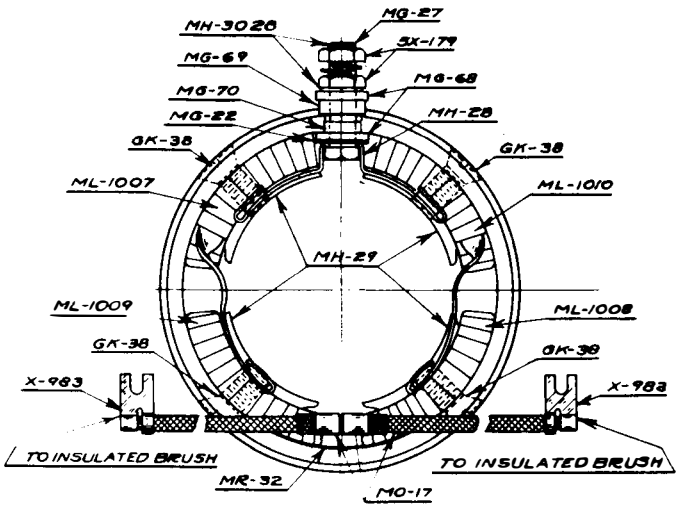
EB-31	1	Bendix Drive
GX-1024	1	Head Band Assembly
ML-2027A	1	Intermediate Brg. Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1050	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
8X-1010A	1	#8-32x1 1/4 Rd. Hd. Screw - Hardened
8X-1410	1	#10-32 Square Nut
		1 2 3 4 5

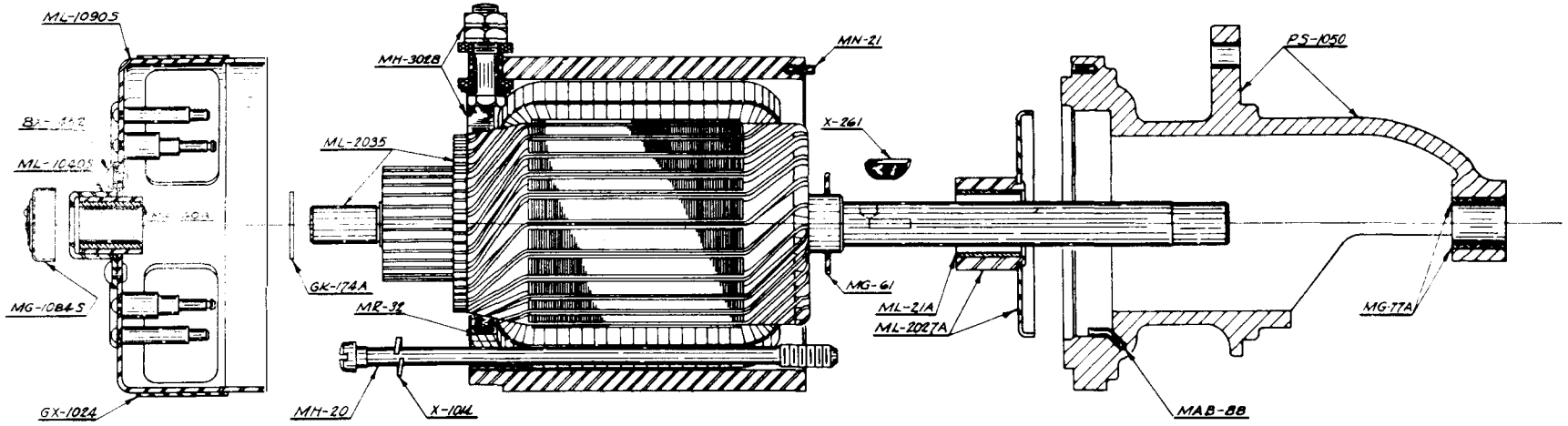
(Issued 10-22-37)

NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4154 STARTING MOTOR ILLUSTRATION







Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-3083)	1	Frame & Field Assembly
GK-38B	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil --L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Side Open Terminal
MR-32	1	Field Coil Lead Ins.
12X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028B	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Terminal Post Cover Ins.
MG-70	1	Terminal Post Frame Ins.
MH-28	1	Terminal Post Connector
8X-179	2	3/8-16 Hex. Nut
12X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-3090A)	1	Comm. End Head Assembly
GK-162	2	Brush Holder Spacing Ins.
GT-17	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-73	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
ML-1090S	1	C.E. Head Part Assembly
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	ABSORBENT BRONZE BRG.
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

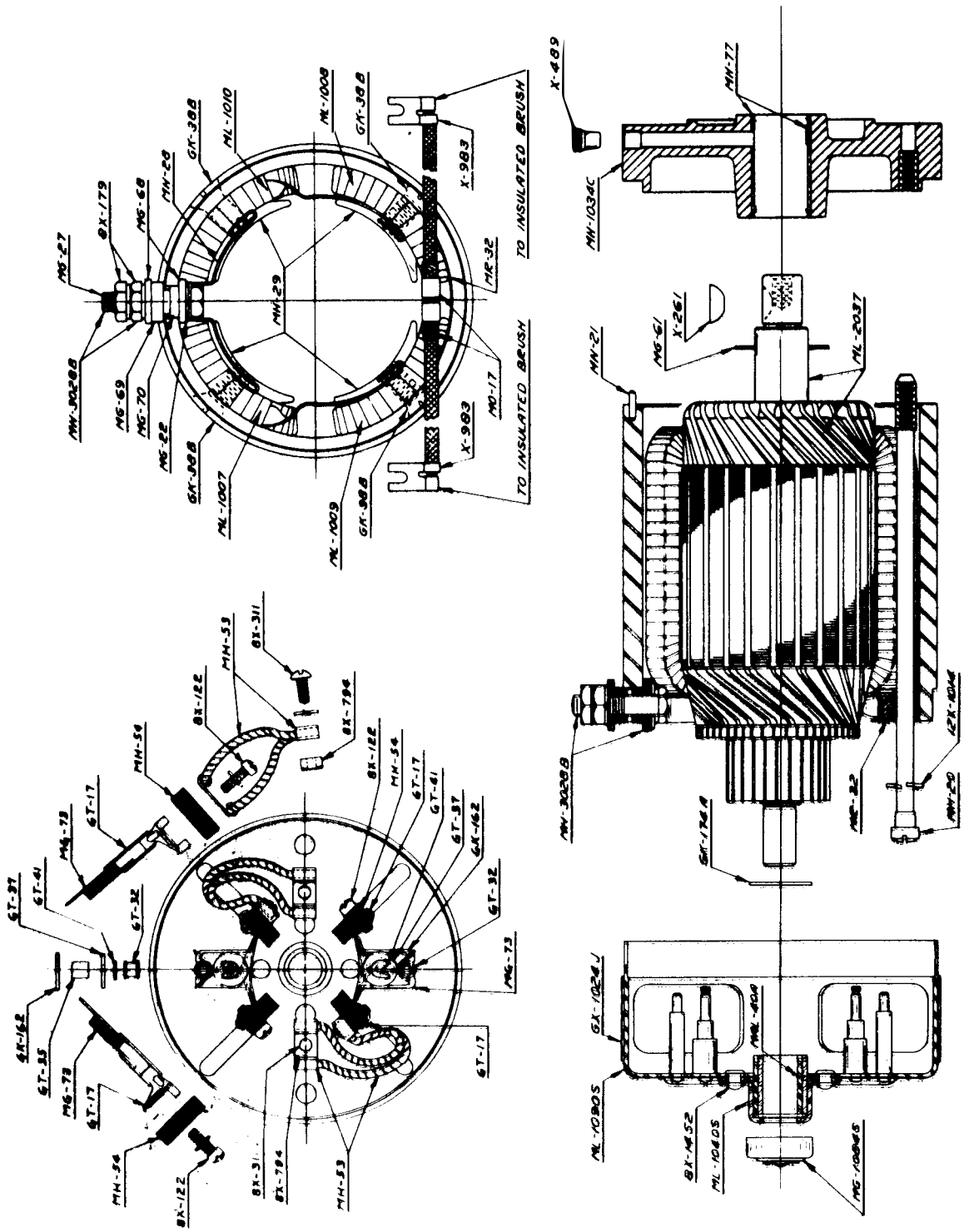
Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2037	1	ARMATURE ASSEMBLY
X-261	1	#6 Woodruff Key
		Miscellaneous Parts
GX-1024J	1	Head Band Assembly
MH-1034C	1	INTERMEDIATE PLATE ASSY.
MH-77	1	Bronze Graphite Brg.
X-489	1	1/4 Oiler - Press in Type
8X-1010A	1	#8-32x1 1/4 Rd. Hd. Screw
8X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 5-10-39)

UNIT	APPLICATION
ML-4159	Auto Engine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4159 STARTING MOTOR ILLUSTRATION


MW-1034C
X-489
MW-77
MW-27
MW-30208
MW-2
MW-20
MW-29
MW-28
MW-53
MW-54
MW-56
MW-1008
MW-1010
MW-1007
MW-1009
MW-30208
MW-1034C
MW-2037
MW-2261
MW-1744
MW-1080S
MW-1040S
MW-1080S
MW-1040S
MW-1080S
MW-1040S

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-1086)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Connection Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-1087	1	Terminal Post Assy.
MC-12	1	3/8 Insulating Washer
MG-22	1	Plain Steel Washer
MG-68	1	Insulating Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
MH-28	1	Term. Post Connector
MH-87	1	Terminal Post
MN-47	1	3/8 Plain Steel Washer
X-201	1	3/8 Lock Washer
X-1064	1	3/8-16 Hex. Nut

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	Comm. End Cap & Brg. Assembly
MR-3	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Head Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Sc.
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2035	1	Armature Assembly
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

MU-2208S	1	Starting Switch Assy.
8X-832	1	5/16-24 Hex. Nut
X-1014	1	5/16 Lock Washer
X-196	4	#10 Lock Washer
6X-321	4	#10-32x5/16 Rd. Hd. Screw

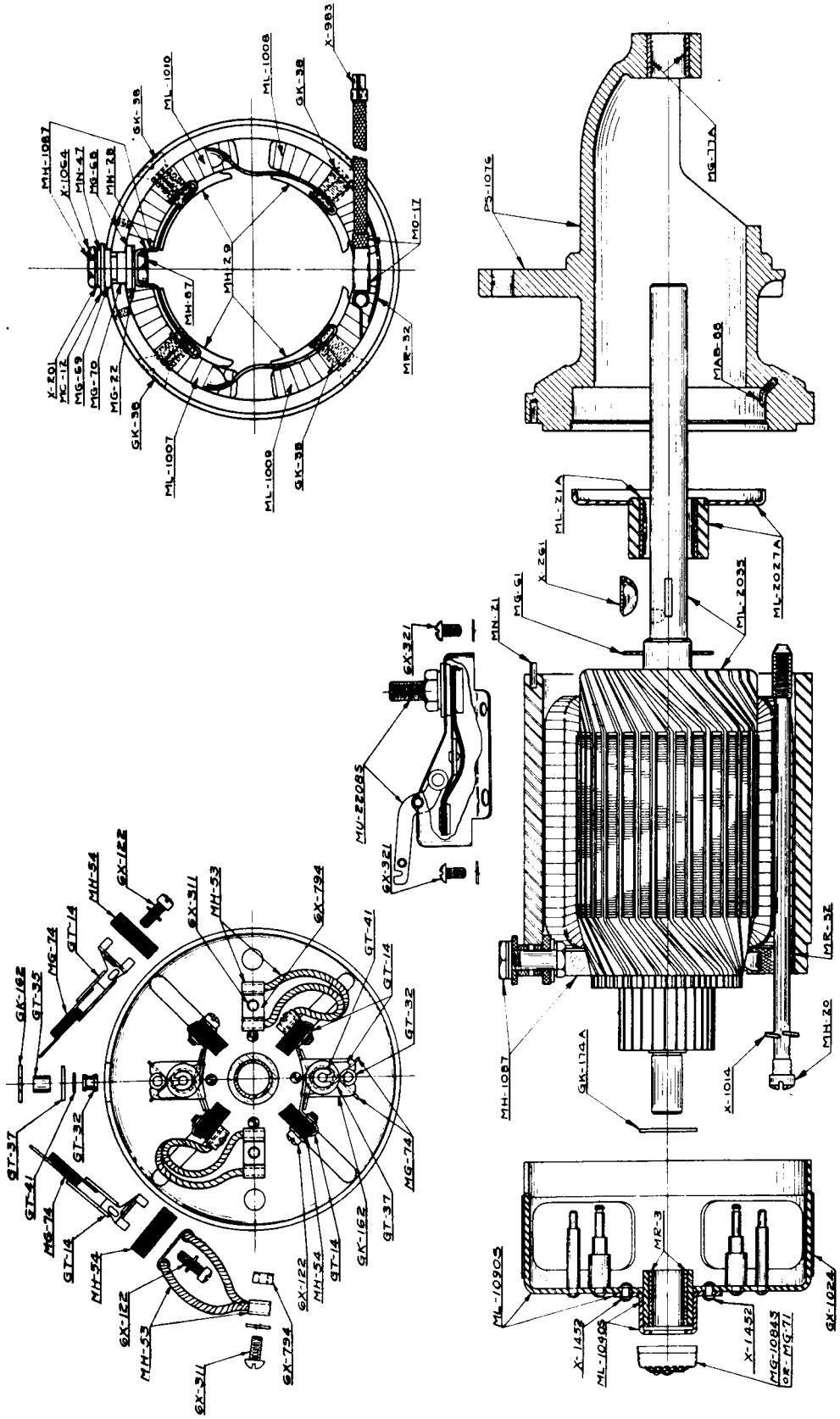
Miscellaneous Parts

EB-31	1	Bendix Drive Assy.
GX-1024	1	Head Band Assembly
ML-2027A	1	Intermediate Brg. Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1076	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-1010A	1	#8-32x1 1/4 Rd. Hd. Screw - Hardened
6X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 3-11-35)
(R-3-24-37)

"NOTE: Where part number are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4166 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
(ML-1086)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MC-12	1	Washer, Ins., Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-68	1	Washer, Ins., Term. Stud, Inner
MG-69	1	Bushing, Ins., Term. Stud, Outer
MG-70	1	Bushing, Ins., Term. Stud, Inner
MH-28	1	Connector, Term. Stud to Coil
MH-87	1	Stud, Terminal, 3/8-16
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MN-21	1	Pin, Dowel, Housing Locating
MN-47	1	Washer, Plain, Term. Stud, Outer
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-32	1	Insulation, Field Connection
X-201	1	Washer, Lock, Term. Stud, 3/8
X-1064	1	Nut, Term. Stud, Hex., 3/8-16
X-1014	2	Washer, Lock, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Cover, Bearing, Comm. End
(ML-2090)	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
ML-1090S	1	Head Assy., Partial, Comm. End
MAL-40A	1	Bearing, Absorbent Bronze
8X-122	4	Screw, Brush, Fill. Hd., #8-32x1/2
X-195	4	Washer, Lock, Brush Sc., #8

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
X-196	2	Washer, Lock, Ground Sc., #10
8X-311	2	Screw, Ground, Rd. Hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32

Armature Assembly & Parts Used With

GK-174A	1	Washer, Thrust, Arm. Shaft, C.E.
ML-32	1	Washer, Thrust, Int. Bearing
ML-91	1	Retainer, Felt
ML-2057	1	Armature
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

MAB-136	1	Gasket, Switch
MAB-137	1	Gasket, Switch
SW-3756S	1	Switch, Starting
X-196	4	Washer, Lock, #10
8X-321	4	Screw, Mtg. Switch, Rd. Hd. #10-32x5/16
X-1014	1	Washer, Lock, 5/16
5X-1376	1	Nut, Hex., 5/16-24

Miscellaneous Parts

EB-31	1	Bendix Drive Assy.
EB-508	2	Washer, Lock
EB-2303	1	Head, Driving
EB-2319S	1	Sleeve, Compression
EB-2322	2	Clip, Spring Support
EB-2406	1	Screw, Spring, Head
EB-2407	1	Screw, Spring, Shaft
EB-3105	1	Spring, Drive
EB-3111	1	Shaft & Pinion
GAG-54	1	Washer, Felt
GX-1024C	1	Band, Head
ML-82	1	Gasket, Intermediate Bearing
ML-1093	1	Bearing Assy., Intermediate
ML-92A	1	Bearing, Absorbent Bronze
PS-1074	1	Housing Assy., Pinion
MG-77A	1	Bearing, Absorbent Bronze
X-195	4	Washer, Lock, Int. Bearing Sc., #8
X-715	1	Screw, Cover Band, Rd. Hd., #10-32x 1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
8X-878	4	Screw, Attaching, Int. Bearing, Fill. Hd., #8-32x7/16

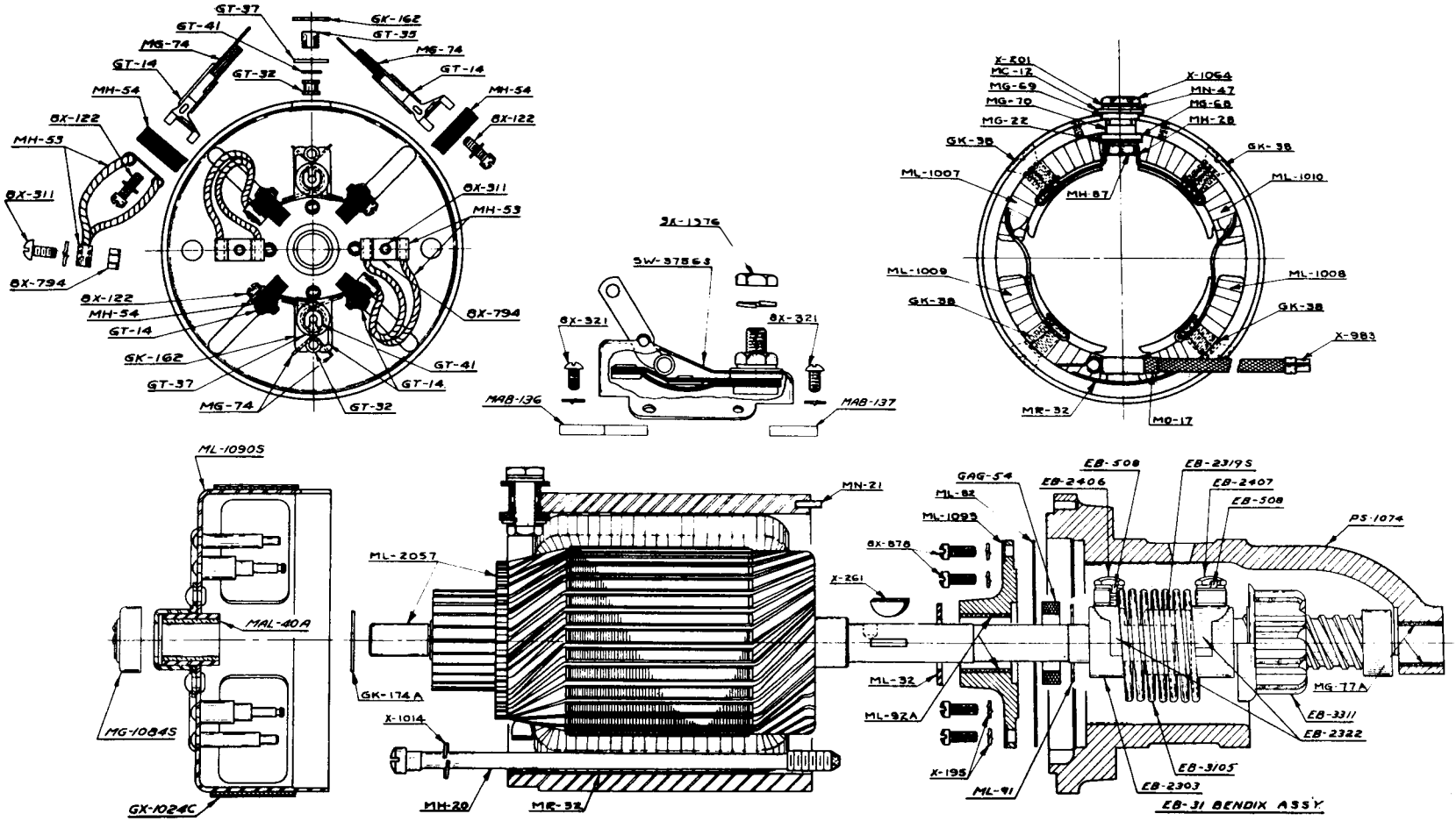
(Issued 3-7-44)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4170 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2083A)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assembly
X-983	2	Terminal
MR-32	1	Field Coil Lead Ins.
12X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3073B	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Terminal Post Cover Ins.
MG-70	1	Terminal Post Frame Ins.
MH-28	1	Terminal Post Connector
8X-179	2	3/8-16 Hex. Nut
12X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assembly
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
ML-1090S	1	C. E. Head Part Assembly
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2037	1	ARMATURE ASSEMBLY
X-261	1	#6 Woodruff Key

Miscellaneous Parts

GX-1024J	1	Head Band Assembly
MH-1034C	1	Intermediate Plate Assembly
MH-77	1	BRONZE GRAPHITE BRG.
X-489	1	1/4 Oiler - Press in Type
8X-1010A	1	#8-32x1 1/4 Rd. Hd. Sc.- Hardened
8X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 10-9-41)

UNIT	APPLICATION
ML-4172	Auto Engine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Bolt, Thru
(ML-2025)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Terminal, 3/8-16
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Bushing, Ins., Term. Stud, Outer
MG-70	1	Bushing, Ins., Term. Stud, Inner
MH-28	1	Connector, Term. Stud to Coil
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MN-21	1	Pin, Dowel, Housing Locating
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-32	1	Insulation, Field Connection
5X-179	2	Nut, Term. Stud, Hex., 3/8-16
X-201	2	Washer, Lock, Term. Stud, 3/8
X-1014	2	Washer, Lock, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Cover, Bearing, Comm. End
(ML-2090)	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
ML-1090S	1	Head Assy., Partial, Comm. End
MAL-40A	1	Bearing, Absorbent Bronze
8X-122	4	Screw, Brush, Fil. hd., #8-32x1/2
X-195	4	Washer, Lock, Brush Sc., #8
X-196	2	Washer, Lock, Grd. Sc., #10
8X-311	2	Screw, Ground, Rd. hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MG-61	2	Washer, Thrust, Arm. Shaft, Int.
ML-2085	1	Armature
X-261	2	Key, Woodruff, #6

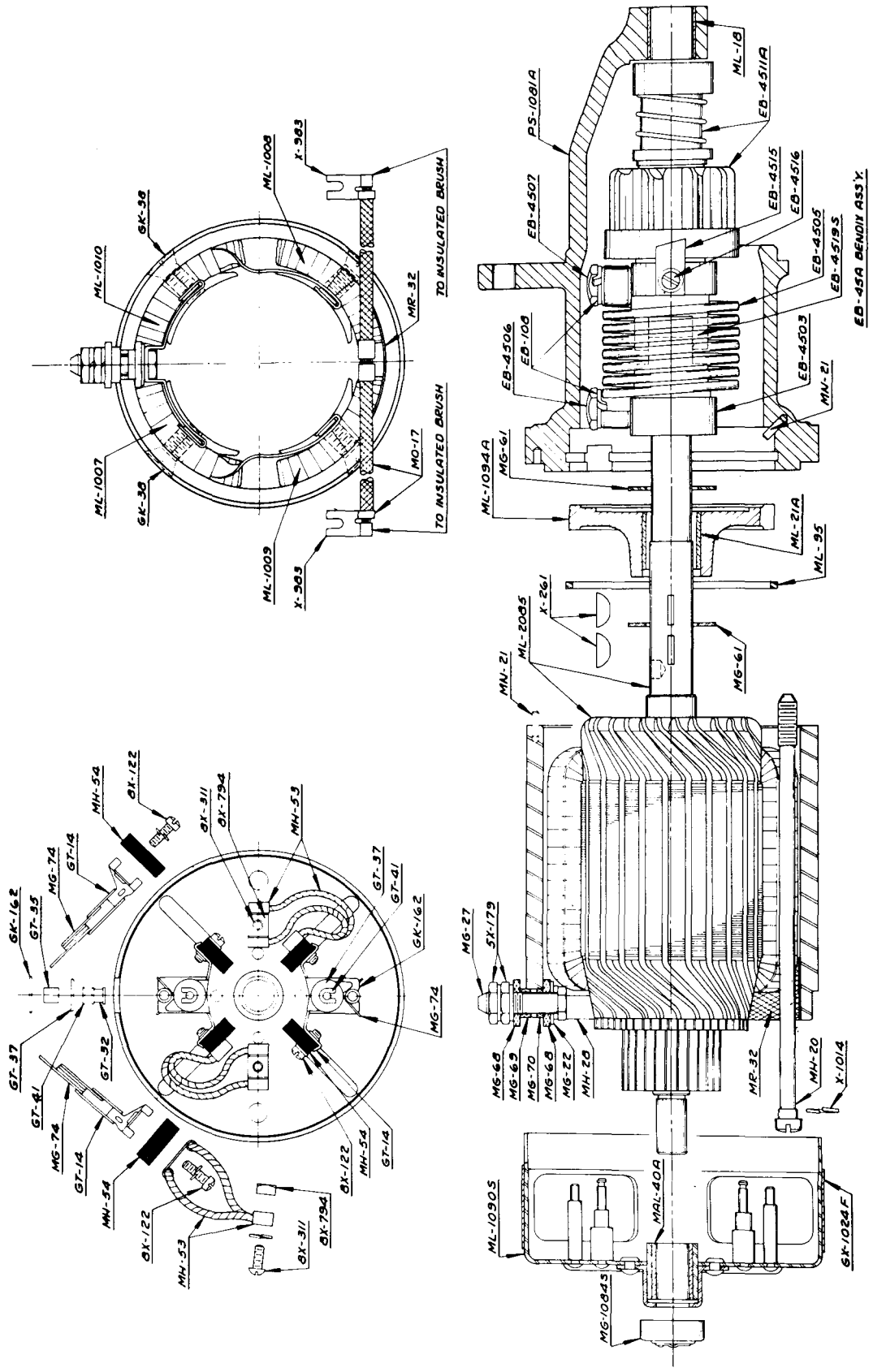
Miscellaneous Parts

EB-45A	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-4503	1	Head, Driving
EB-4505	1	Spring, Drive
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4511A	1	Shaft & Pinion
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve, Compression
GX-1024F	1	Band, Head
ML-95	1	Ring, Lock, Intermediate Brg.
ML-1094A	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Absorbent Bronze
PS-1081A	1	Housing Assy., Pinion
ML-18	1	Bearing, Bronze Graphite
MN-21	1	Pin, Dowel
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 3-7-44)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4173 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2025)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MK-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Side Open Terminal
MR-32	1	Field Lead Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assy.
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Terminal Post Cover Ins.
MG-70	1	Terminal Post Frame Ins.
MH-28	1	Terminal Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assembly
GK-162	2	Brush Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
ML-1090S	1	C.E. Head Part Assembly
ML-1040S	1	C.E. Cap & Bearing Assy
MAL-40A	1	ABSORBENT BRONZE BEARING
8X-1452	4	3/16x5/16 Oval Hd. Rivet
6X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
6X-311	2	#10-32x3/8 Rd. Hd. Screw
6X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MG-61	2	7/8 Plain Washer
ML-2096	1	ARMATURE ASSEMBLY
X-261	1	#6 Woodruff Key

Miscellaneous Parts

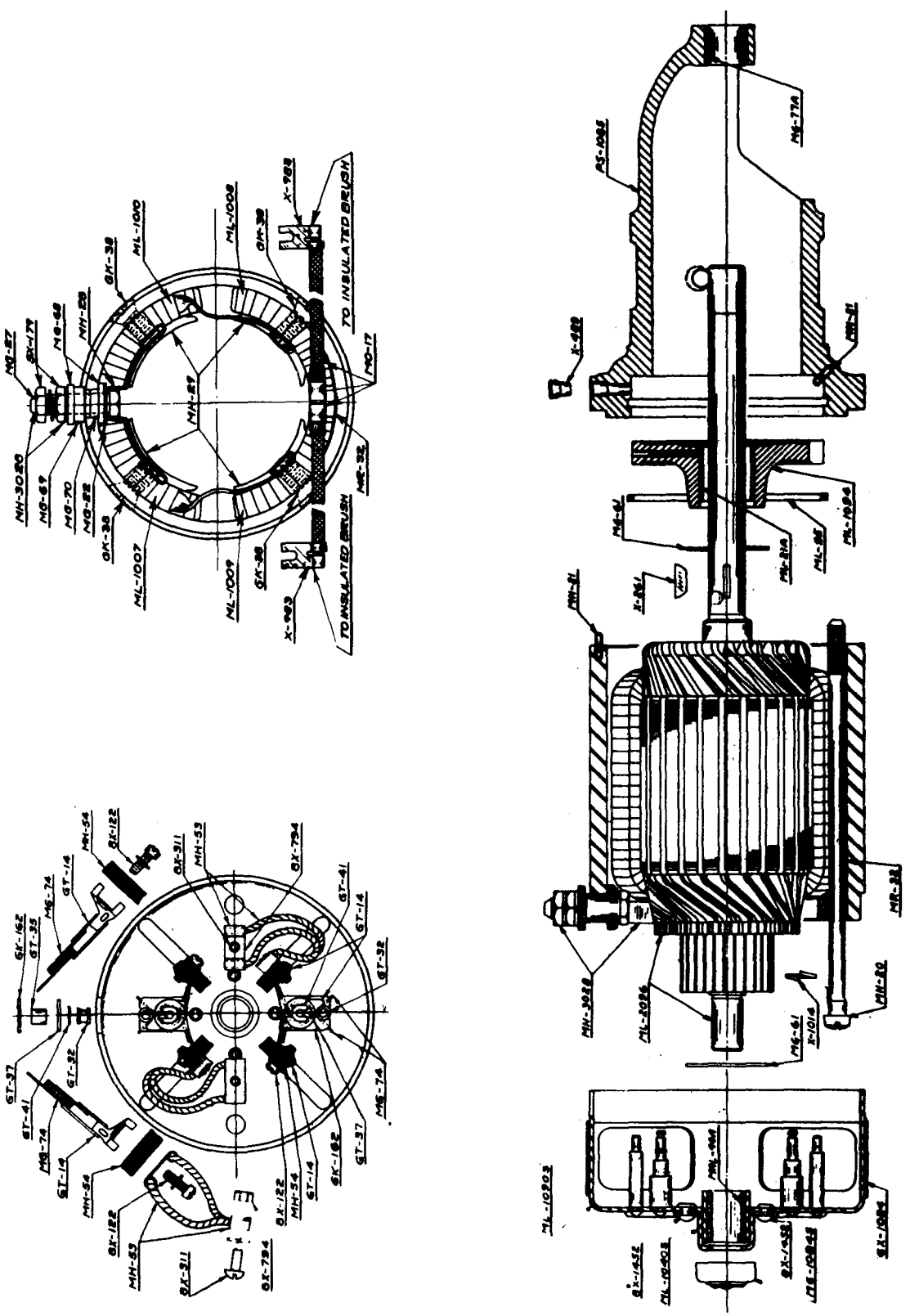
EBA-8	1	BENDIX DRIVE ASSEMBLY
GX-1024	1	Head Band Assembly
ML-95	1	Lock Spring Ring
ML-1094	1	INTERMEDIATE PLATE ASSY.
ML-21A	1	Absorbent Bronze Brg.
PS-1085	1	Pinion Housing Assembly
MG-77A	1	Absorbent Bronze Brg.
MN-21	1	Dowel Pin
X-489	1	1/4 Oiler - Press in Type
6X-716	1	#8-32x1 1/8 Rd. Hd. Screw
6X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 4-4-39)

UNIT	APPLICATION
ML-4175	Kermath

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4175 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
(ML-2097)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Terminal
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Ins., Term. Stud, Outer
MG-70	1	Ins., Term. Stud, Inner
MH-28	1	Connector
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MN-21	1	Pin, Dowel
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-32	1	Insulation, Field Connection
5X-179	2	Nut, Term. Stud, Hex. 3/8-16
X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2090	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Br. Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54†	4	Brush
MR-1005	1	Head Assy., Partial, C.E.
MAL-40A	1	Bearing, Abs. Bronze
8X-122	4	Screw, Brush, Fill. Hd. #8-32x1/2
X-195	4	Lockwasher, Brush Sc., #8
X-196	2	Lockwasher, Grd. Sc., #10
6X-311	2	Screw, Grd., Rd. Hd. #10-32x3/8
8X-794	2	Nut, Grd. Sc., Square #10-32
MR-1062A	1	Cover, Bearing, Comm. End

Armature Assembly & Parts Used With

GK-174A	1	Washer, Plain, 1/2
MG-61	1	Washer, Thrust, Inst.
ML-2035A	1	Armature
X-261	1	Key, Woodruff, #6

Part No.	No. Used	Name of Part

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4001	1	SWITCH, STARTING
8X-173	1	Nut, Hex., #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch, Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EB-33	1	BENDIX DRIVE ASSY.
EB-508	2	Lockwasher
EB-2303	1	Head, Drive
EB-2319S	1	Sleeve, Compression
EB-2322	2	Clip, Spring Support
EB-2406	1	Screw, Spring, Head
EB-2407	1	Screw, Spring, Shaft
EB-3105	1	SPRING, DRIVE
EB-3311	1	Shaft & Pinion
GX-1024	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1060A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

NOTE: The ML-4176A starting motor uses EBA-11 Bendix Drive with sub parts as noted below.

EBA-11	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-1111	1	Shaft & Pinion

† BRUSH SET, SERVICE MH-1054S.

UNIT	APPLICATION
ML-4176,A	Gray Marine

(Issued 3-6-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Bolt, Thru
(ML-2025)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Terminal,3/8-16
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Bushing, Ins., Term. Stud, Outer
MG-70	1	Bushing, Ins., Term. Stud, Inner
MH-28	1	Connector, Term. Stud to Coil
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MN-21	1	Pin, Dowel, Housing Locating
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-32	1	Insulation, Field Connection
5X-179	2	Nut, Term. Stud, Hex., 3/8-16
X-201	2	Washer, Lock, Term. Stud, 3/8
X-1014	2	Washer, Lock, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Cover, Bearing, Comm. End
(ML-2090)	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
ML-1090S	1	Head Assy., Partial, Comm. End
MAL-40A	1	Bearing, Absorbent Bronze
8X-122	4	Screw, Brush, Fil. hd., #8-32x1/2
X-195	4	Washer, Lock, Brush Sc., #8
X-196	2	Washer, Lock, Grd. Sc., #10
8X-311	2	Screw, Ground, Rd. hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Thrust, Armature Shaft, C.E.
MG-61	1	Washer, Thrust, Arm. Shaft, Int.
ML-2085	1	Armature
X-261	2	Key, Woodruff, #6

Micellaneous Parts

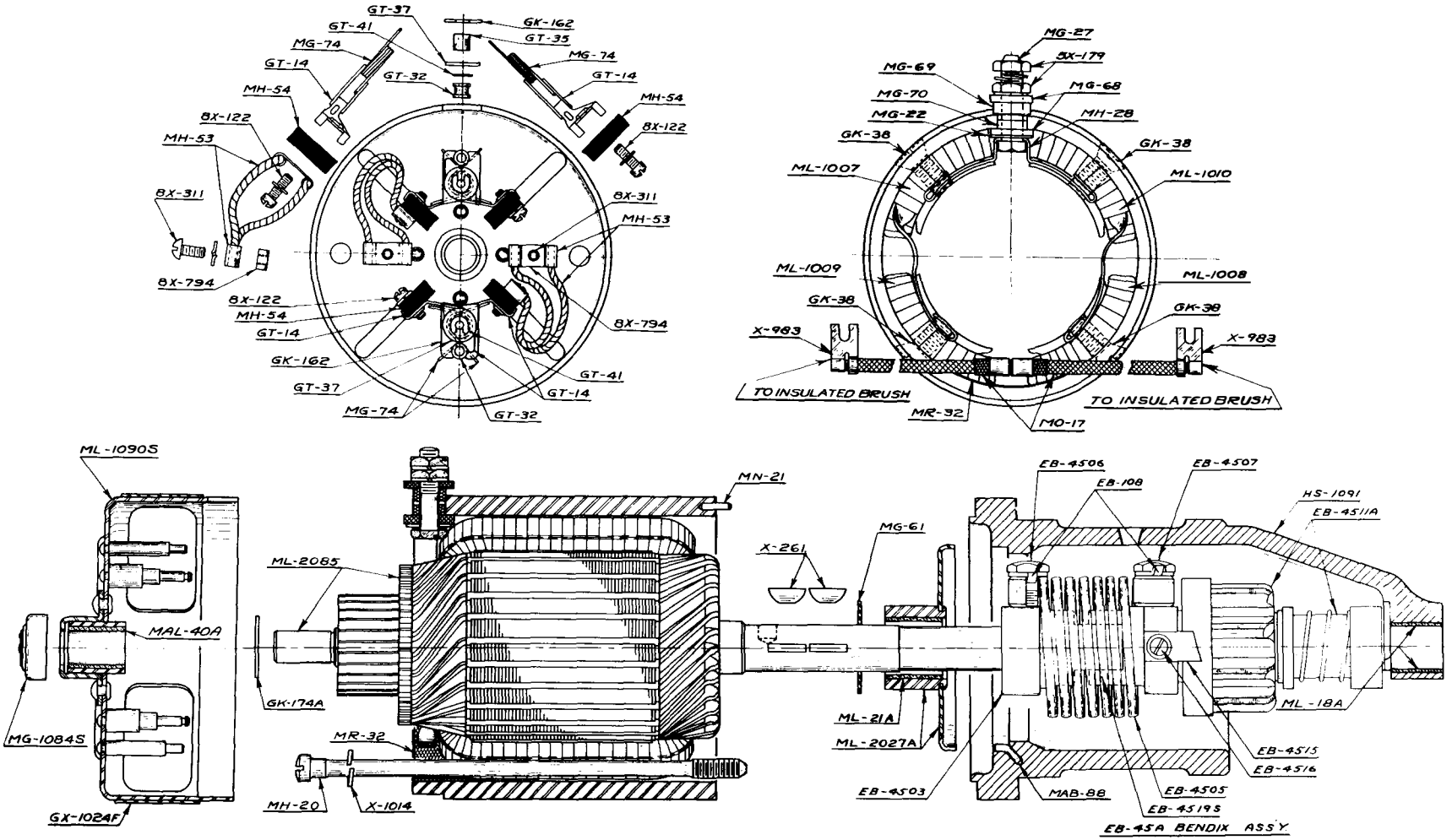
EB-45A	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-4503	1	Head, Driving
EB-4505	1	Spring, Drive
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4511A	1	Shaft & Pinion
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve, Compression
GX-1024F	1	Band, Head
HS-1091	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	Bearing, Absorbent Bronze
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 3-7-44)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

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ML-4177 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Bolt, Thru
(ML-2025)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Terminal, 3/8-16
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Bushing, Ins., Term. Stud, Outer
MG-70	1	Bushing, Ins., Term. Stud, Inner
MH-28	1	Connector, Term. Stud to Coil
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MN-21	1	Pin, Dowel, Housing Locating
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-32	1	Insulation, Field Connection
5X-179	2	Nut, Term. Stud, Hex., 3/8-16
X-201	2	Washer, Lock, Term. Stud, 3/8
X-1014	2	Washer, Lock, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Cover, Bearing, Comm. End
(ML-2090)	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
ML-1090S	1	Head Assy., Partial, Comm. End
MAL-40A	1	Bearing, Absorbent Bronze
8X-122	4	Screw, Brush, Fil. hd., #8-32x1/2
X-195	4	Washer, Lock, Brush Sc., #8
X-196	2	Washer, Lock, Grd. Sc., #10
8X-311	2	Screw, Ground, Rd. hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Thrust, Armature Shaft, C.E.
MG-61	1	Washer, Thrust, Arm. Shaft, Int.
ML-2085	1	Armature
X-261	2	Key, Woodruff, #6

Micellaneous Parts

EB-45A	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-4503	1	Head, Driving
EB-4505	1	Spring, Drive
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4511A	1	Shaft & Pinion
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve, Compression
GX-1024F	1	Band, Head
HS-1091A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	Bearing, Absorbent Bronze
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

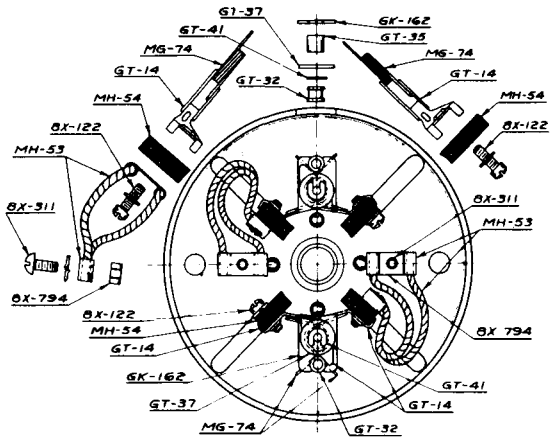
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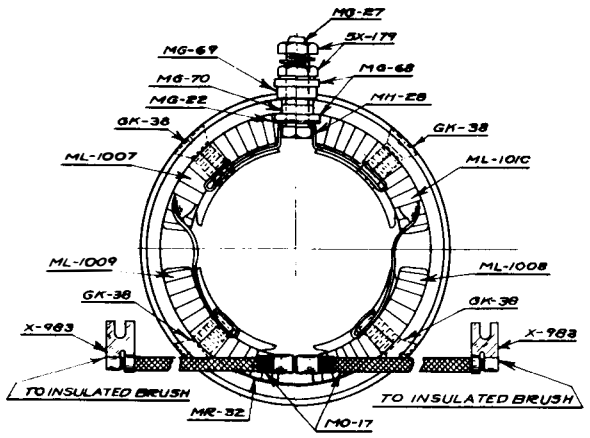
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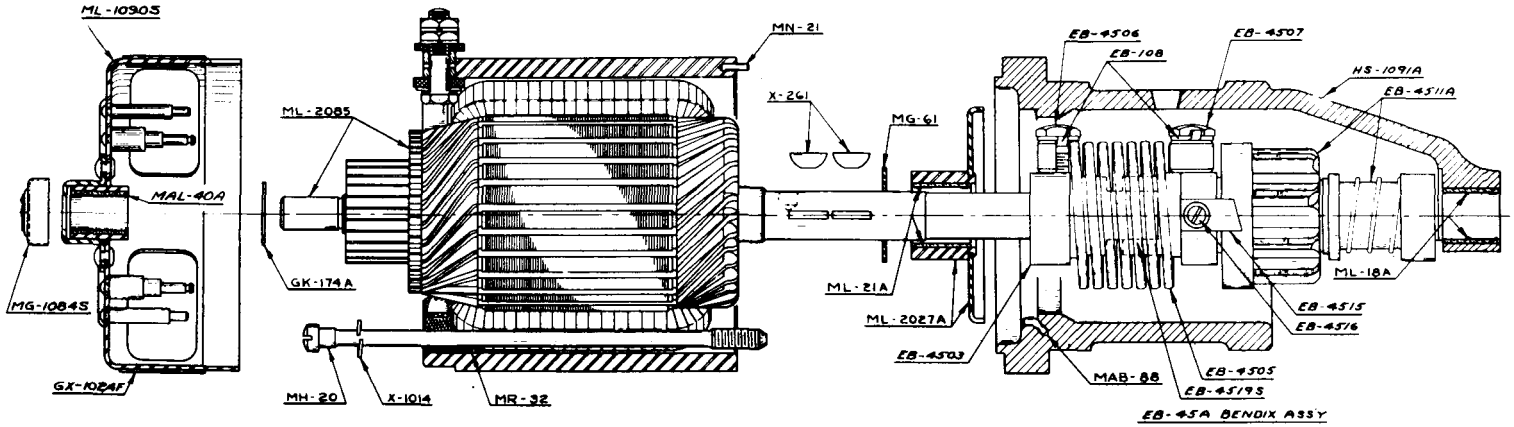
"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

ML-4178 STARTING MOTOR ILLUSTRATION







Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2025)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Lead Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assy.
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
MH-28	1	Term. Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-61	1	7/8 Plain Washer
MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Brg.
8X-1452	4	3/16x5/16 Oval Hd. Rivet
6X-122	4	#8-32x1/2 Fill.Hd.Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
6X-311	2	#10-32x3/8 Rd. Hd. Screw
6X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
ML-2035	1	Armature Assembly
X-261	1	#6 Woodruff Key

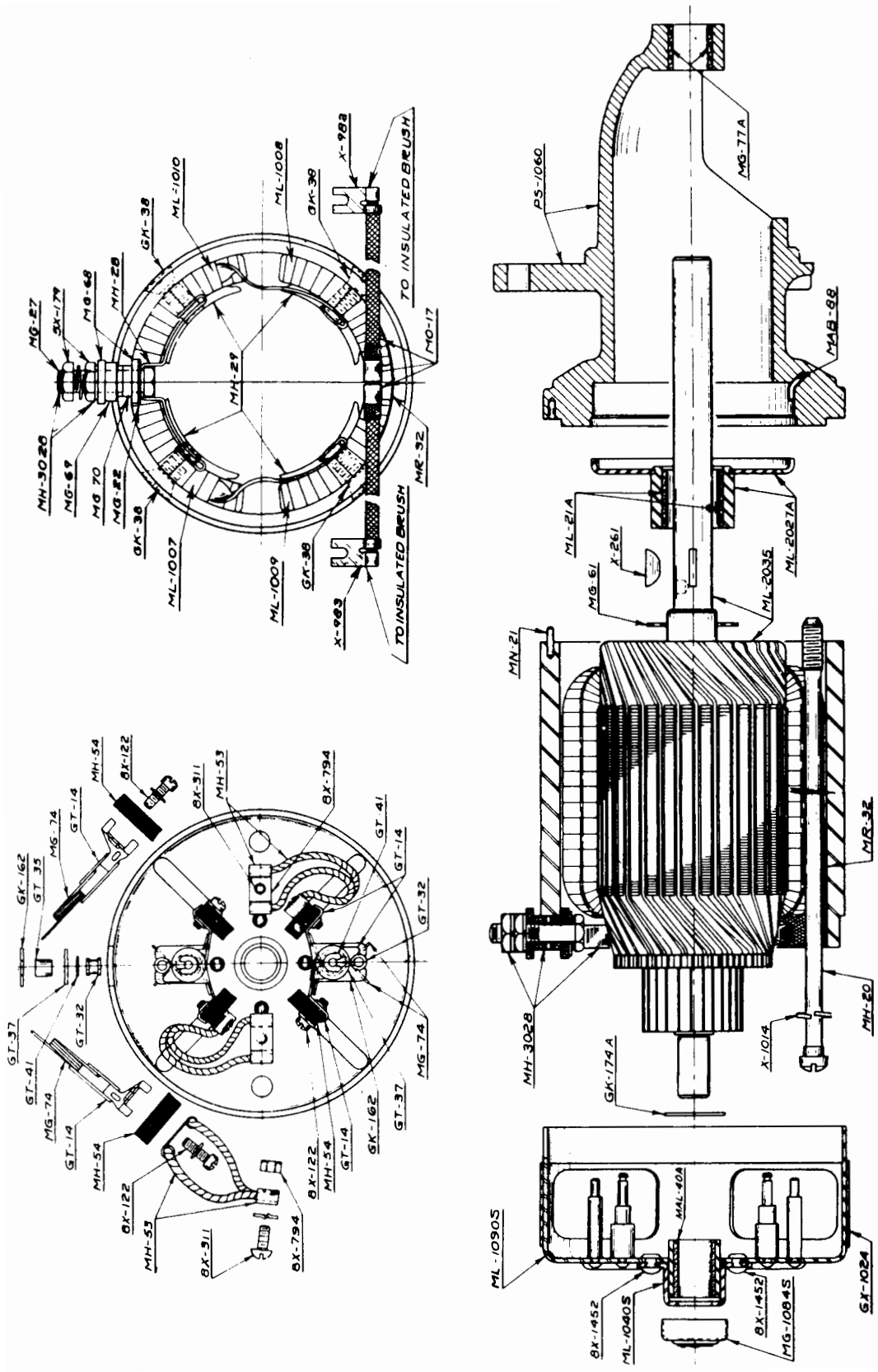
Miscellaneous Parts

EBA-11	1	Bendix Drive Assy.
GX-1024	1	Head Band Assy.
ML-2027A	1	Intermediate Brg. Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1060	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 9-9-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4179 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2025)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Lead Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Terminal Post Cover Ins.
MG-70	1	Terminal Post Frame Ins.
MH-28	1	Terminal Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-61	1	7/8 Plain Washer
MG-1084S	1	Bearing Cover with Oiler
(MH-3075)	1	Comm. End Head Assembly
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
MH-1075B	1	Comm. End Head Part Assy.
MG-1036	1	Comm. End Cap & Brg. Assembly
MR-3	1	Absorbent Bronze Bearing
8X-245	4	1/8x3/8 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
ML-2035	1	Armature Assembly
X-261	1	#6 Woodruff Key

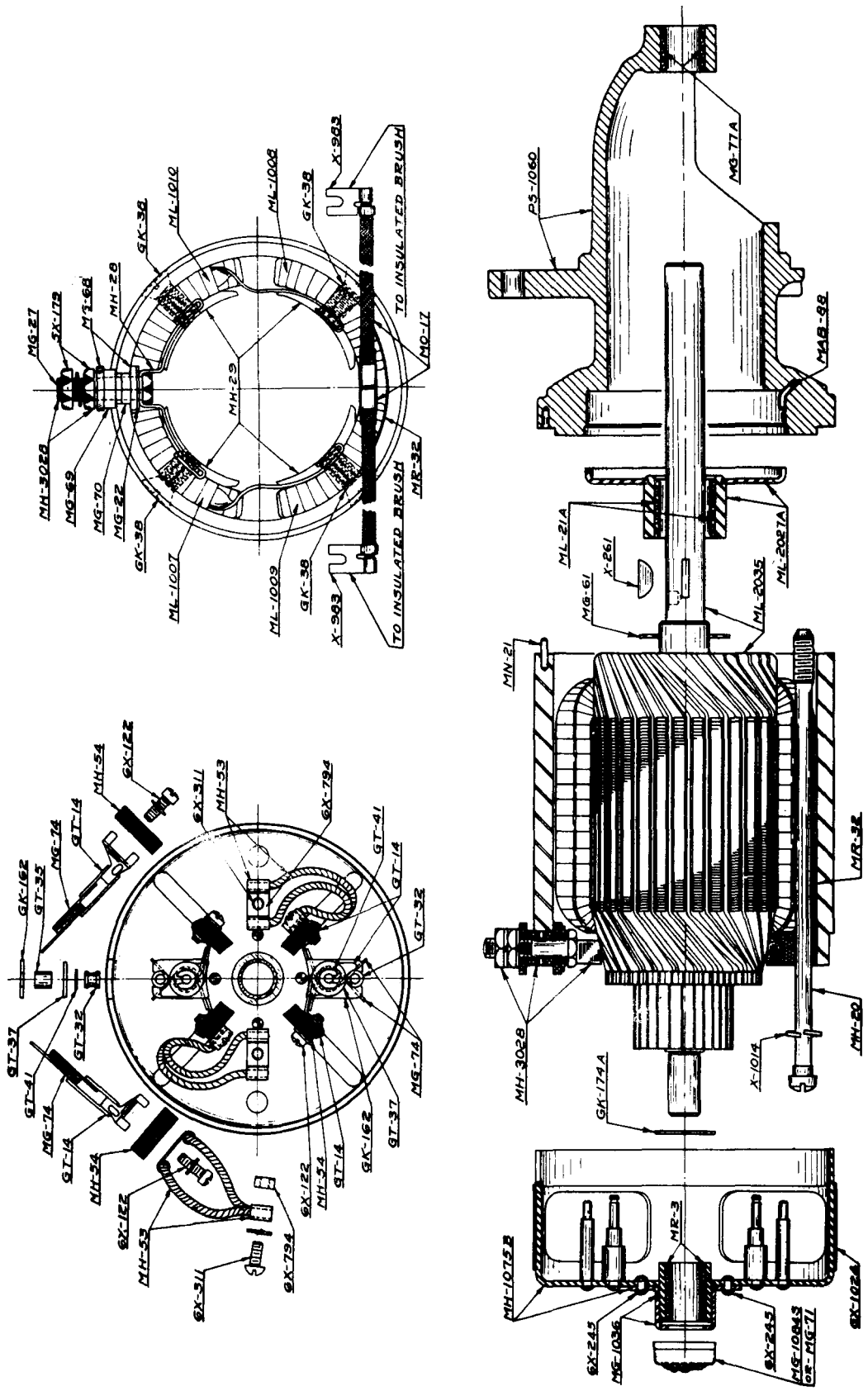
Miscellaneous Parts

EBA-2	1	Bendix Drive Assembly
GX-1024	1	Head Band Assembly
ML-2027A	1	Intermediate Brg. Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1060	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 11-11-35)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4180 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-3097)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Connection Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assy.
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
MH-28	1	Term. Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-3090)	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-17	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-73	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Sc.
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2035	1	Armature Assembly
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EB-51	1	Bendix Drive Assy.
GX-1024	1	Head Band Assembly
ML-2027A	1	Intermediate Brg. Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1060A	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8/12/38)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the comp ete part can be assembled as needed."

ML-4181 STARTING MOTOR ILLUSTRATION

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Bolt, Thru
(ML-2097)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Terminal, 3/8-16
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Bushing, Ins., Term. Stud, Outer
MG-70	1	Bushing, Ins., Term. Stud, Inner
MH-28	1	Connector, Term. Stud to Coil
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MN-21	1	Pin, Dowel, Housing Locating
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-32	1	Insulation, Field Connection
5X-179	2	Nut, Term. Stud, Hex., 3/8-16
X-201	2	Washer, Lock, Term. Stud, 3/8
X-1014	2	Washer, Lock, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Cover, Bearing, Comm. End
(ML-2090)	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
ML-1090S	1	Head Assy., Partial, Comm. End
MAL-40A	1	Bearing, Absorbent Bronze
8X-122	4	Screw, Brush, Fil. hd., #8-32x1/2
X-195	4	Washer, Lock, Brush Sc., #8
X-196	2	Washer, Lock, Grd. Sc., #10
8X-311	2	Screw, Ground, Rd. hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Thrust, Armature Shaft, C.E.
MG-61	1	Washer, Thrust, Arm. Shaft, Int.
ML-2085	1	Armature
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4301	1	Switch, Starting, Solenoid
X-196	1	Washer, Lock, #10
8X-832	2	Nut, Hex., 5/16-24
X-1014	2	Washer, Lock, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Mtg. Switch, Rd. hd., #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Sc., #10

Miscellaneous Parts

EB-45A	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-4503	1	Head, Driving
EB-4505	1	Spring, Drive
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4511A	1	Shaft & Pinion
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve, Compression
GX-1024F	1	Band, Head
HS-1091B	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	Bearing, Absorbent Bronze
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 3-7-44)

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

ML-4185 STARTING MOTOR ILLUSTRATION

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MH-20	2	Frame Screw
(ML-2025)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Lead Insulation
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Terminal Post Cover Ins.
MG-70	1	Terminal Post Frame Ins.
MH-28	1	Terminal Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assembly
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MR-3	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Head Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut

1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2035	1	Armature Assembly
X-261	1	#6 Woodruff Key

Miscellaneous Parts

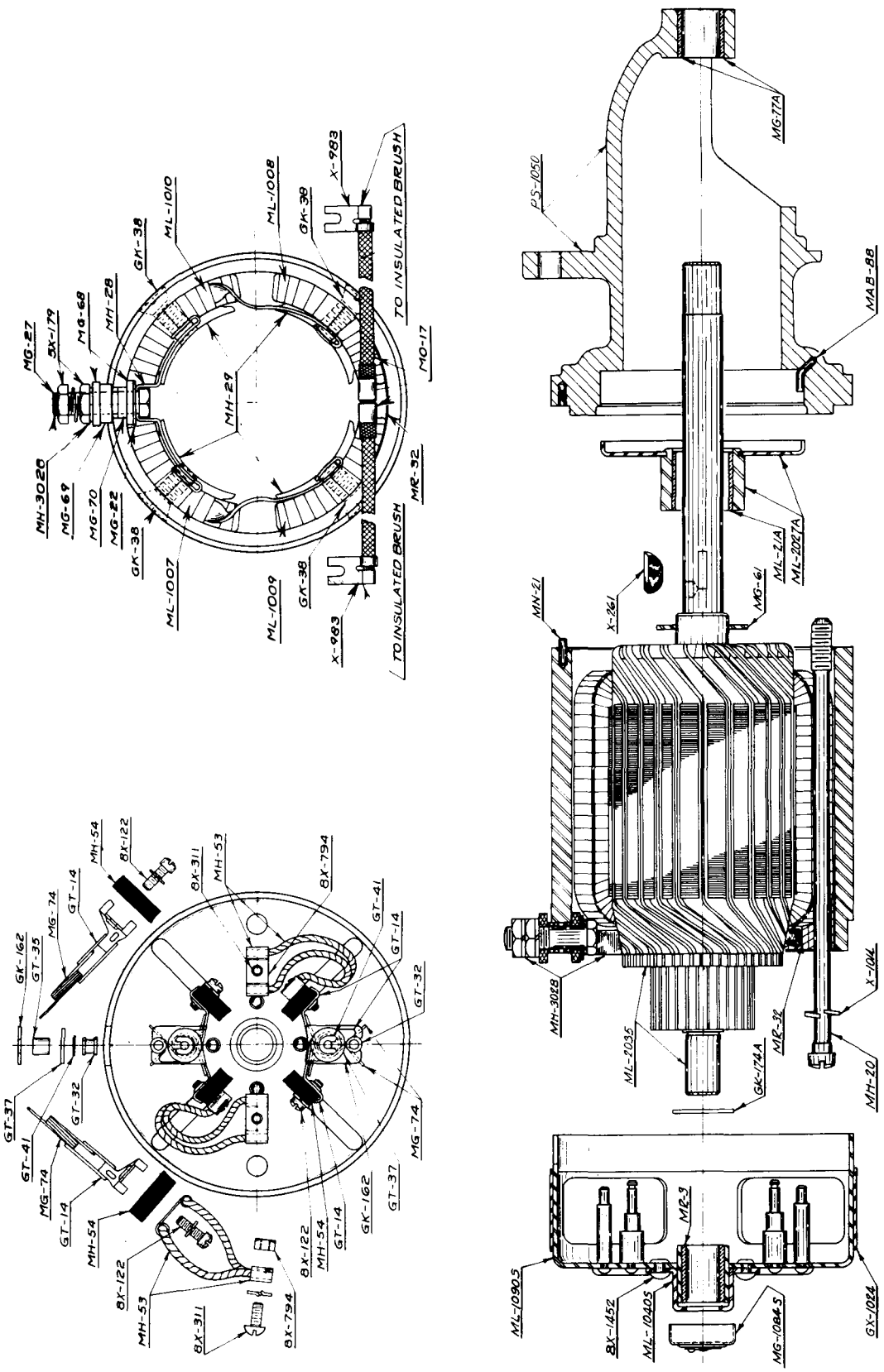
EBA-11	1	Bendix Drive Assy.
GX-1024	1	Head Band Assembly
ML-2027A	1	Intermediate Brg. Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1050	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut

1 2 3 4 5

(Issued 1-28-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4186 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Bolt, Thru
(ML-2097)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Terminal, 3/8-16
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Bushing, Ins., Term. Stud, Outer
MG-70	1	Bushing, Ins., Term. Stud, Inner
MH-28	1	Connector, Term. Stud to Coil
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MN-21	1	Pin, Dowel, Housing Locating
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-32	1	Insulation, Field Connection
5X-179	2	Nut, Term. Stud, Hex., 3/8-16
X-201	2	Washer, Lock, Term. Stud, 3/8
X-1014	2	Washer, Lock, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Cover, Bearing, Comm. End
(ML-2090)	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
ML-1090S	1	Head Assy., Partial, Comm. End
MAL-40A	1	Bearing, Absorbent Bronze
8X-122	4	Screw, Brush, Fil. hd., #8-32x1/2
X-195	4	Washer, Lock, Brush Sc., #8
X-196	2	Washer, Lock, Grd. Sc., #10
8X-311	2	Screw, Ground, Rd. hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Thrust, Arm. Shaft, C.E.
MG-61	1	Washer, Thrust, Arm. Shaft, Int.
ML-2035	1	Armature
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-6LA	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	Washer, Lock, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Washer, Lock, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Mtg. Switch, Rd. hd., #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Sc., #10

Miscellaneous Parts

EBA-2	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take up
EBA-211	1	Shaft & Pinion
GX-1024	1	Band, Head
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Absorbent Bronze
PS-1050	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

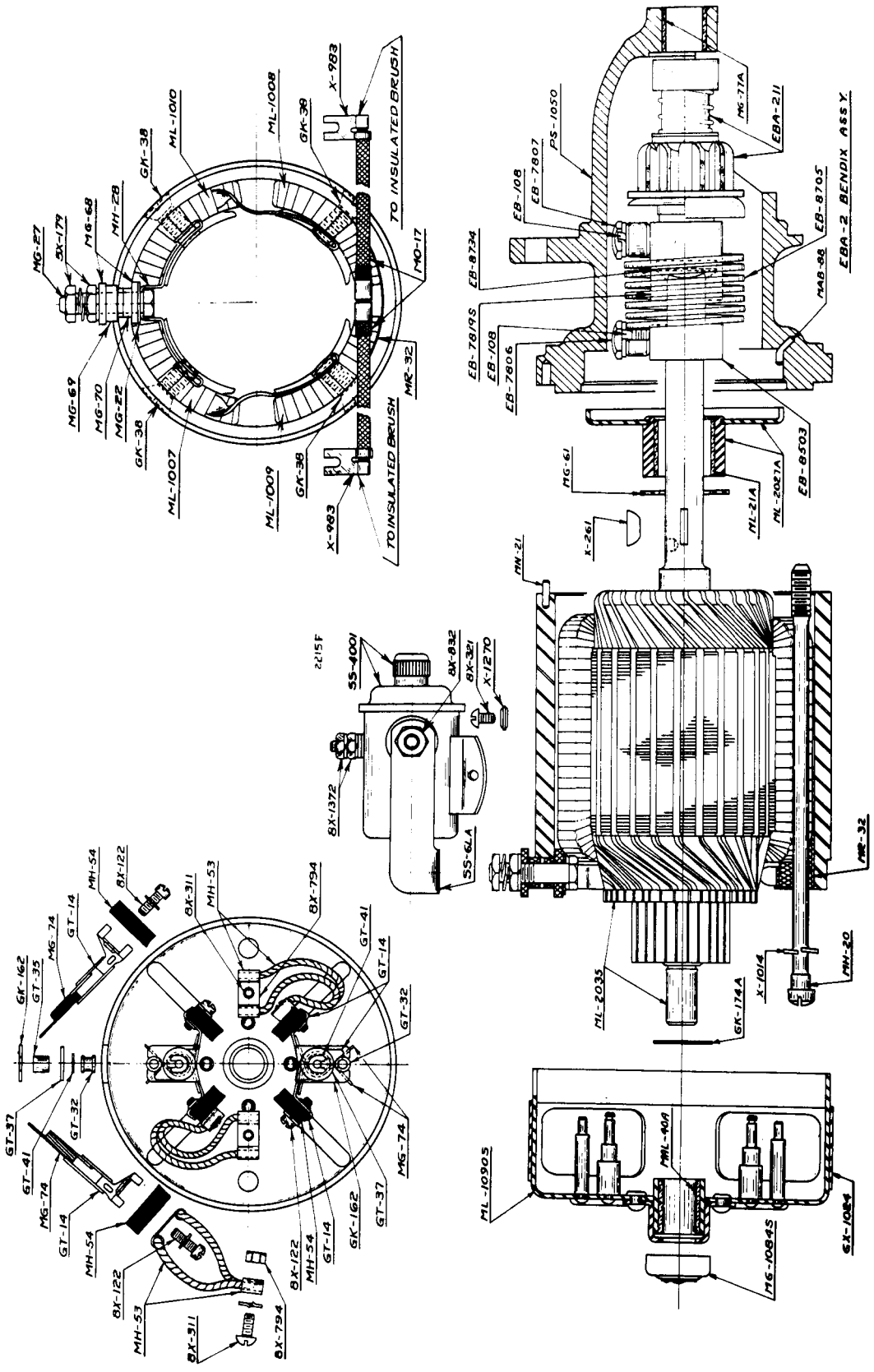
(Issued 3-7-44)

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

ML-4187 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2025)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Lead Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assy.
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
MH-28	1	Term. Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-57	2	Ground Connector
MH-54	4	Brush
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Sc.
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2035	1	Armature Assembly
X-261	1	#6 Woodruff Key

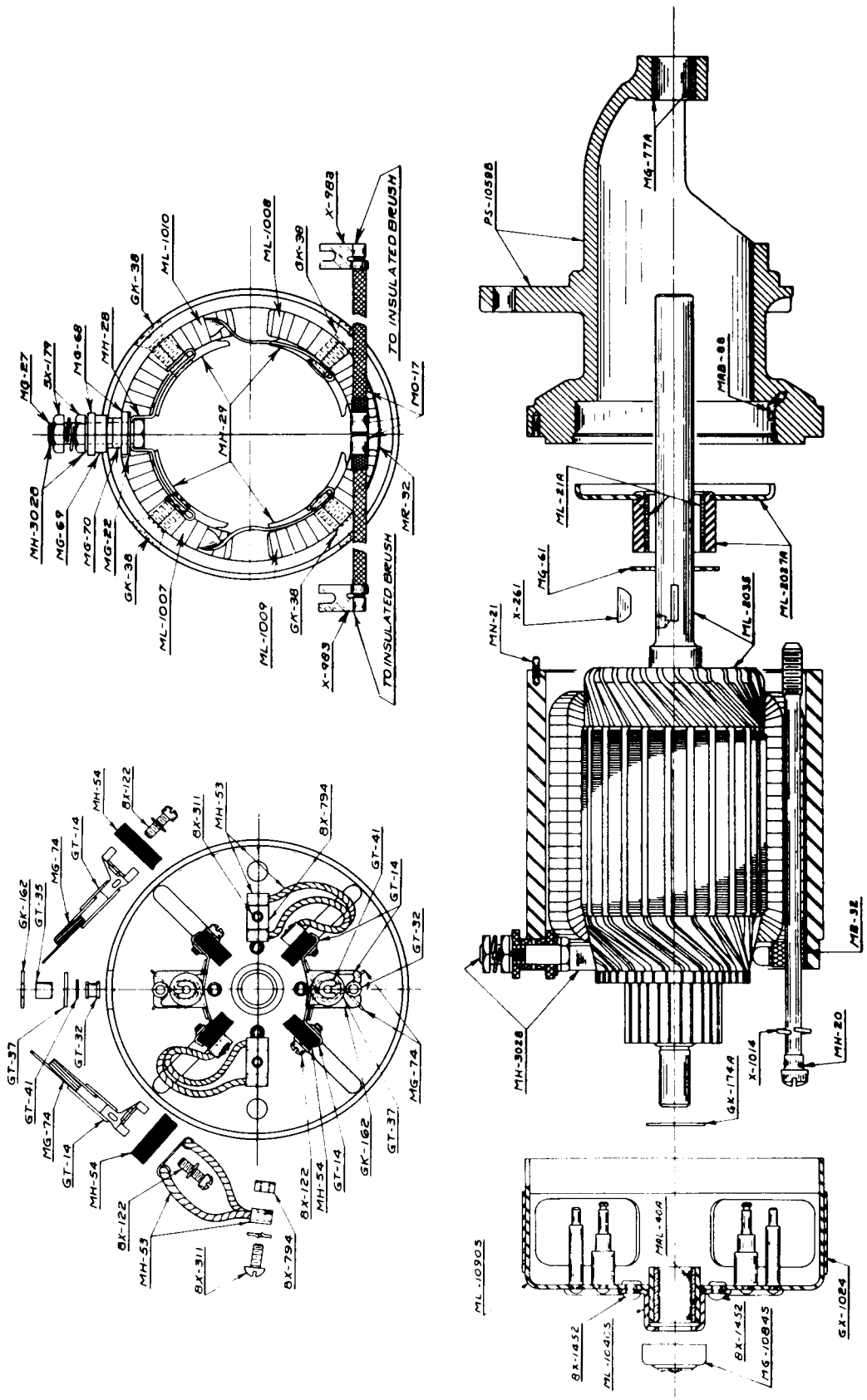
Miscellaneous Parts

EBA-11	1	Bendix Drive Assy.
GX-1024	1	Head Band Assembly
ML-2027A	1	Intermediate Brg. Assy.
ML-21A	1	Absorbent Bronze Brg.
PS-1059B	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 8/12/38)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4191 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2097)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Coil Lead Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assy.
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
MH-28	1	Term. Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	ABSORBENT BRONZE BRG.
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Sc.
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2035	1	ARMATURE ASSEMBLY
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSY.
GX-1024	1	Head Band Assy.
ML-2027A	1	INTERMEDIATE BRG. ASSY.
ML-21A	1	Absorbent Bronze Brg.
PS-1059A	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 3-6-39)

UNIT	APPLICATION
ML-4192	Diamond T, Chris Craft

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4192 STARTING MOTOR ILLUSTRATION

Frame & Field Assy. & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2097)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Coil Lead Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assy. & Parts Used With

MH-3028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
MH-28	1	Terminal Post Connector
8X-179	2	3/8-16 Hex. Nut
12X-201	2	3/8 Lock Washer

Comm. End Head Assy. & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assembly
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
ML-1090S	1	C. E. Head Part Assembly
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MG-61	2	7/8 Plain Washer
ML-2085	1	ARMATURE ASSEMBLY
X-261	2	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4301	1	SOLENOID STARTING SWITCH
X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EB-45A	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-4503	1	Driving Head
EB-4505	1	DRIVE SPRING
EB-4506	1	Head Spring Screw
EB-4507	1	Shaft Spring Screw
EB-4511A	1	S-A Assembly
EB-4515	1	Pinion Back Stop
EB-4516	1	Pinion Back Stop Sc.
EB-4519S	1	Compression Sleeve
GX-1024F	1	Head Band Assembly
ML-95	1	Lock Spring Ring
ML-1094	1	Intermediate Plate Assy.
ML-21A	1	ABSORBENT BRONZE BRG.
PS-1081	1	Pinion Housing Assy.
ML-18	1	Bronze Graphite Brg.
MN-21	1	Dowel Pin
X-489	1	1/4 Oiler - Press in Type
8X-716	1	#8-32x1 1/8 Rd. Hd. Screw
8X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 4-3-40)

UNIT	APPLICATION
ML-4193	Koehring, Hill Diesel

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4193 STARTING MOTOR ILLUSTRATION

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Bolt, Thru
(ML-2097)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Terminal, 3/8-16
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Bushing, Ins., Term. Stud, Outer
MG-70	1	Bushing, Ins., Term. Stud, Inner
MH-28	1	Connector, Term. Stud to Coil
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MN-21	1	Pin, Dowel, Housing Locating
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-32	1	Insulation, Field Connection
5X-179	2	Nut, Term. Stud, Hex., 3/8-16
X-201	2	Washer, Lock, Term. Stud, 3/8
X-1014	2	Washer, Lock, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Cover, Bearing, Comm. End
(ML-2090)	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
ML-1090S	1	Head Assy., Partial, Comm. End
MAL-40A	1	Bearing, Absorbent Bronze
8X-122	4	Screw, Brush, Fil. hd., #8-32x1/2
X-195	4	Washer, Lock, Brush Sc., #8
X-196	2	Washer, Lock, Grd. Sc., #10
8X-311	2	Screw, Ground, Rd. hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Thrust, Armature Shaft, C.E.
MG-61	1	Washer, Thrust, Arm. Shaft, Int.
ML-2085	1	Armature
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4301	1	Switch, Starting, Solenoid
X-196	1	Washer, Lock, #10
8X-832	2	Nut, Hex., 5/16-24
X-1014	2	Washer, Lock, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Mtg. Switch, Rd. hd., #10-32x5/16
X-1274	2	Washer, Skpf., Switch Mtg., #10

Miscellaneous Parts

EB-45A	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-4503	1	Head, Driving
EB-4505	1	Spring, Drive
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4511A	1	Shaft & Pinion
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve, Compression
GX-1024F	1	Band, Head
HS-1091C	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	Bearing, Absorbent Bronze
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

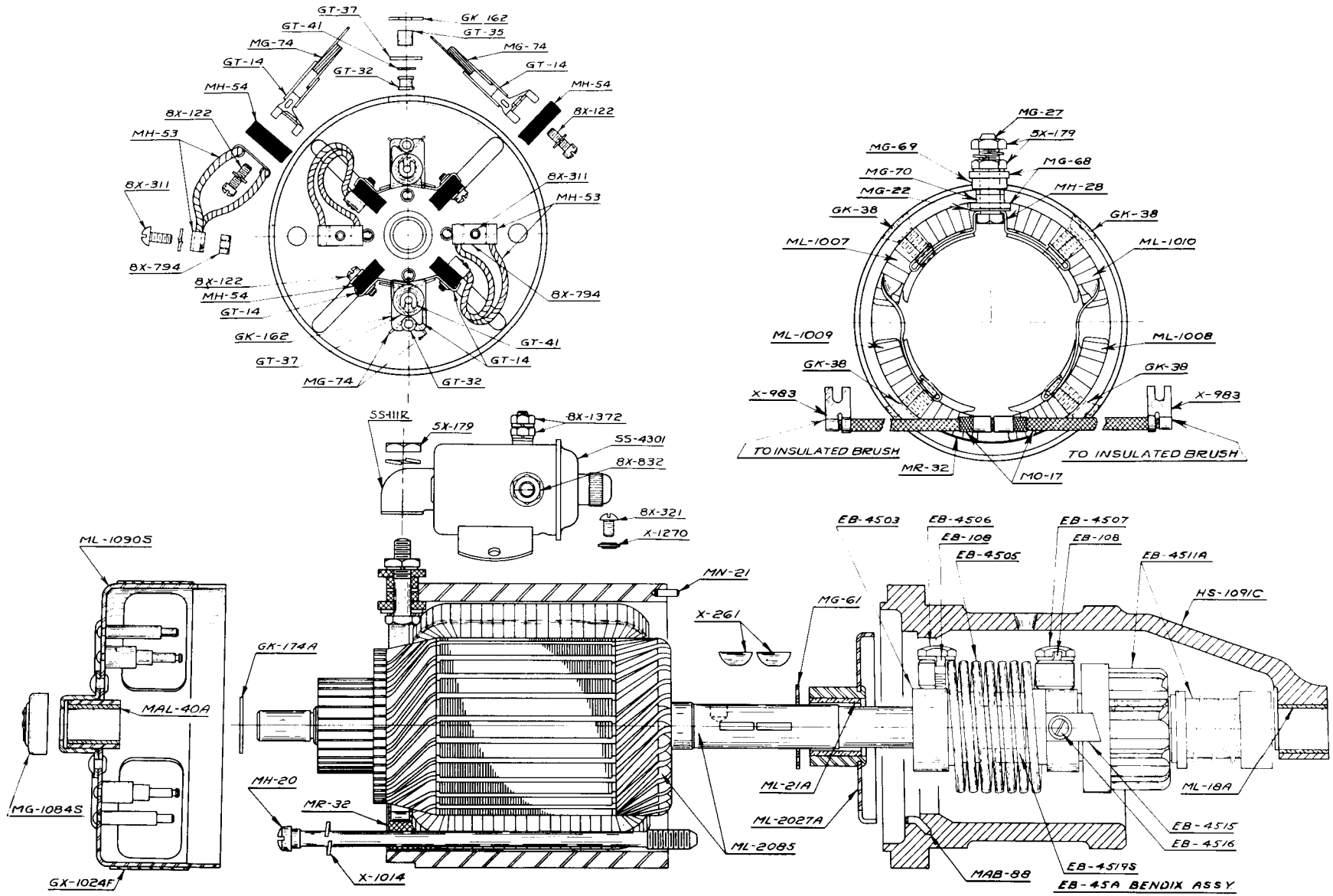
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File in Equipment & Parts List Binder

ML-4196 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assy. & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2097)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Coil Lead Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assy. & Parts Used With

MH-3028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
MH-28	1	Terminal Post Connector
8X-179	2	3/8-16 Hex. Nut
12X-201	2	3/8 Lock Washer

Comm. End Head Assy. & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assembly
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
ML-1090S	1	C. E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Head Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2035	1	ARMATURE ASSEMBLY
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7806	1	Hd. Spring Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	DRIVE SPRING
EB-8734	1	Take-Up Spring
EBA-211	1	S-A Assembly
GX-1024	1	Head Band Assembly
ML-2027A	1	INTERMEDIATE BRG. ASSY.
ML-21A	1	Absorbent Bronze Brg.
PS-1165	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 4-3-40)

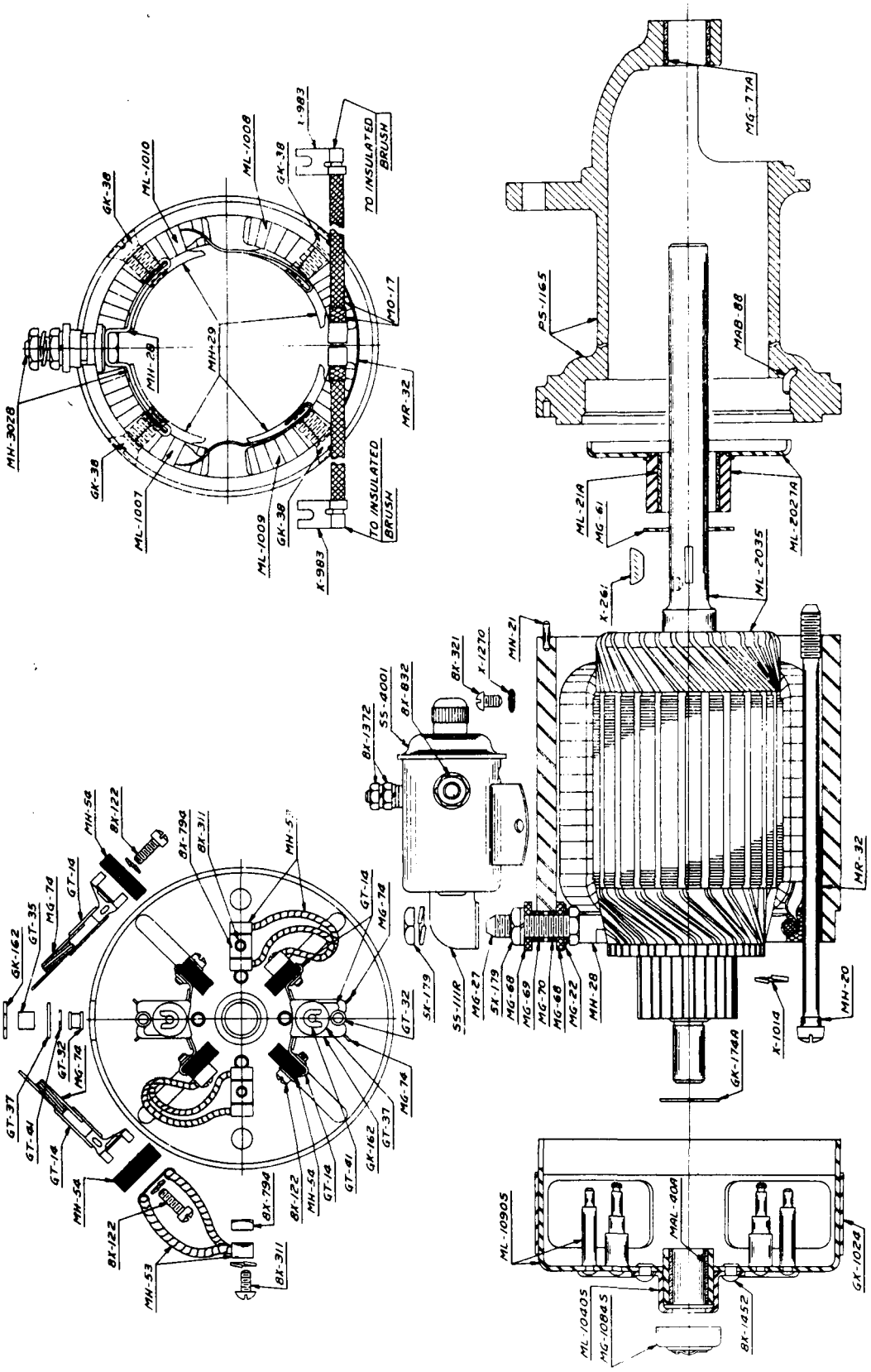
UNIT	APPLICATION
ML-4199	Seagrave Corp.

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4199 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2097)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Coil Lead Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
MH-28	1	Term. Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
ML-2090	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Sc.
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2035	1	ARMATURE ASSEMBLY
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

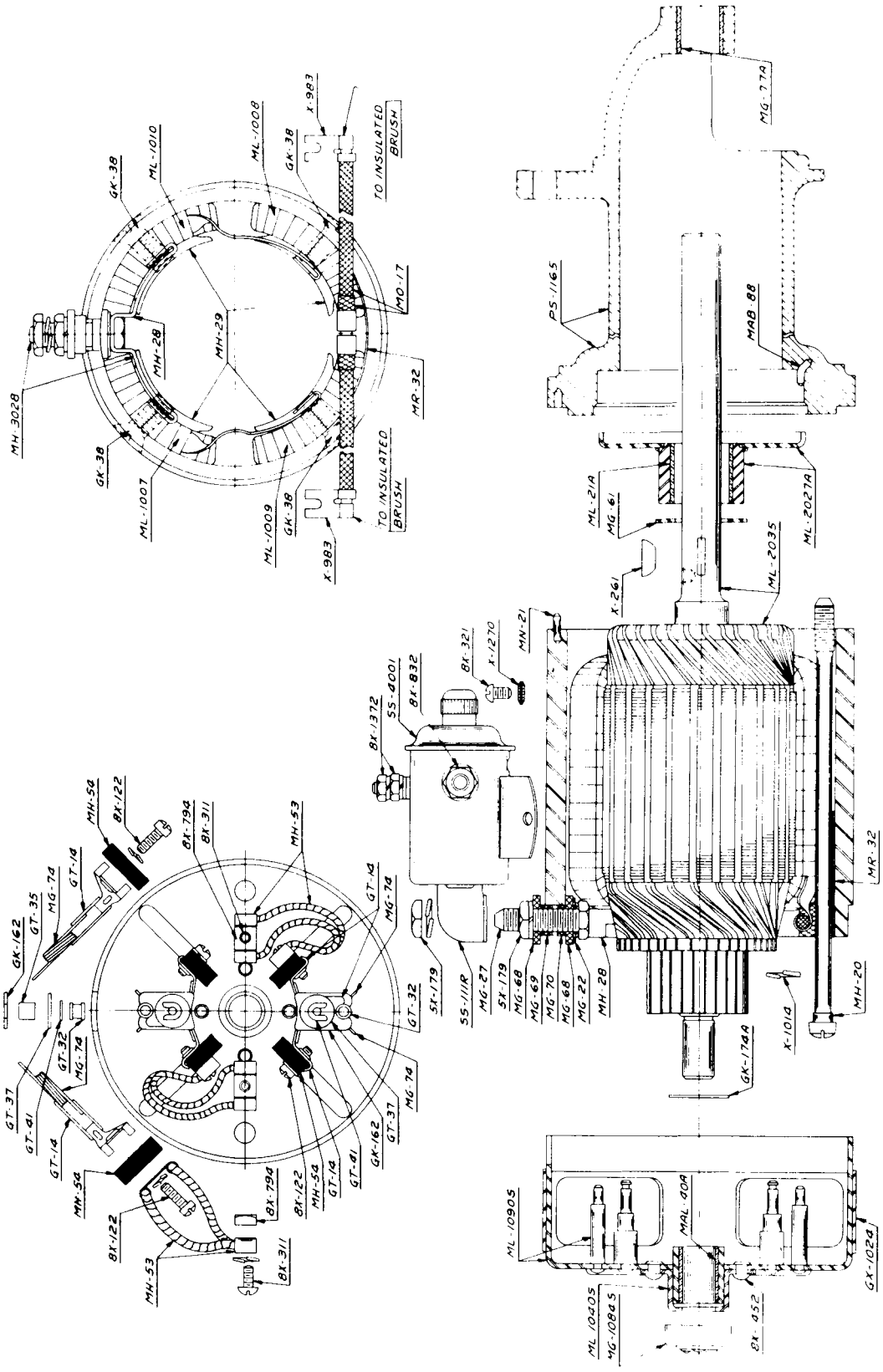
EBA-2	1	BENDIX DRIVE ASSY.
EB-108	2	Lock Washer
EB-7806	1	Hd. Sp. Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	DRIVING SPRING
EB-8734	1	Take Up Spring
EBA-211	1	S-A Assembly
GX-1024	1	Head Band Assembly
ML-2027A	1	INTERMEDIATE BRG. ASSY.
ML-21A	1	Absorbent Bronze Brg.
PS-1165	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 4-18-40)

UNIT	APPLICATION
ML-4200	Seagrave Corp.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4200 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Bolt, Thru
(ML-2100)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Post, Terminal, 3/8-16
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Bushing, Ins., Term. Stud, Outer
MG-70	1	Bushing, Ins., Term. Stud, Inner
MH-28	1	Connector, Term. Stud to Coil
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MN-21	1	Pin, Dowel, Housing Locating
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-32	1	Insulation, Field Connection
5X-179	2	Nut, Term. Stud, Hex., 3/8-16
X-201	2	Washer, Lock, Term. Stud, 3/8
X-1014	2	Washer, Lock, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Cover, Bearing, Comm. End
(ML-2090)	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
ML-1090S	1	Head Assy., Partial, Comm. End
MAL-40A	1	Bearing, Absorbent Bronze
8X-122	4	Screw, Brush, Fil. hd., #8-32x1/2
X-195	4	Washer, Lock, Brush Sc., #8
X-196	2	Washer, Lock, Grd. Sc., #10
8X-311	2	Screw, Ground, Rd. hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Thrust, Arm. Shaft, C.E.
MG-61	1	Washer, Thrust, Arm. Shaft, Int.
ML-2085	1	Armature
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-171	1	Connector
SS-4301	1	Switch, Starting, Solenoid
X-196	1	Washer, Lock, #10
8X-832	2	Nut, Hex., 5/16-24
X-1014	2	Washer, Lock, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Mtg. Switch, Rd. hd., #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Sc., #10

Miscellaneous Parts

EB-45A	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-4503	1	Head, Driving
EB-4505	1	Spring, Drive
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4511A	1	Shaft & Pinion
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve, Compression
GX-1024F	1	Band, Head
HS-1091C	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	Bearing, Absorbent Bronze
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

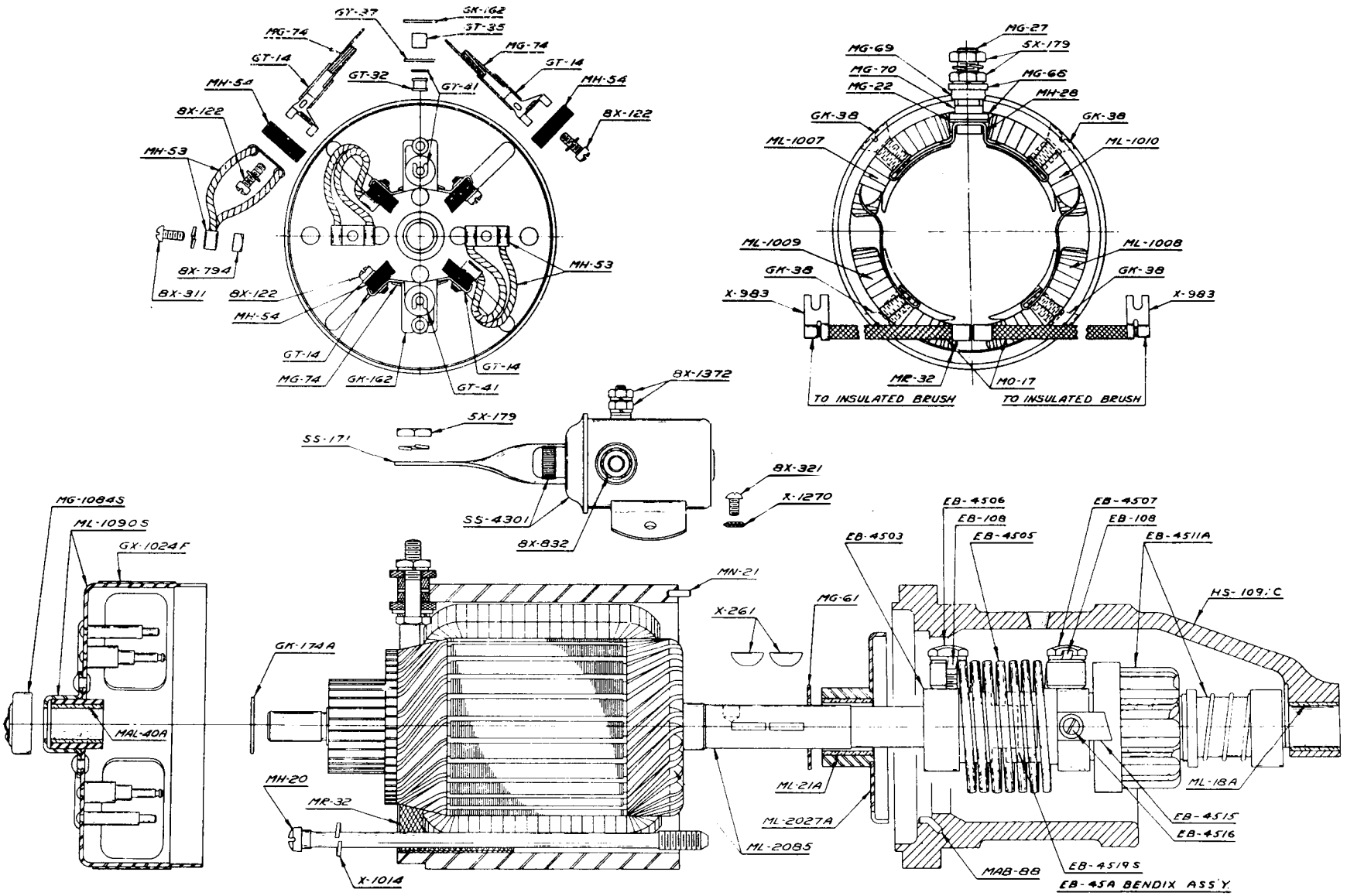
(Issued 3-8-44)

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

ML-4201 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assy. & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2097)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Coil Lead Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assy. & Parts Used With

MH-3028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Terminal Post Cover Ins.
MG-70	1	Terminal Post Frame Ins.
MH-28	1	Terminal Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assy. & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assembly
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Brg
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2035	1	ARMATURE ASSEMBLY
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-6LA	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7806	1	Hd. Spring Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	DRIVE SPRING
EB-8734	1	Take Up Spring
EBA-211	1	S-A Assembly
GX-1024	1	Head Band Assembly
ML-2027A	1	INTERMEDIATE BRG. ASSY.
ML-21A	1	Absorbent Bronze Brg.
PS-1059C	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 12-7-39)

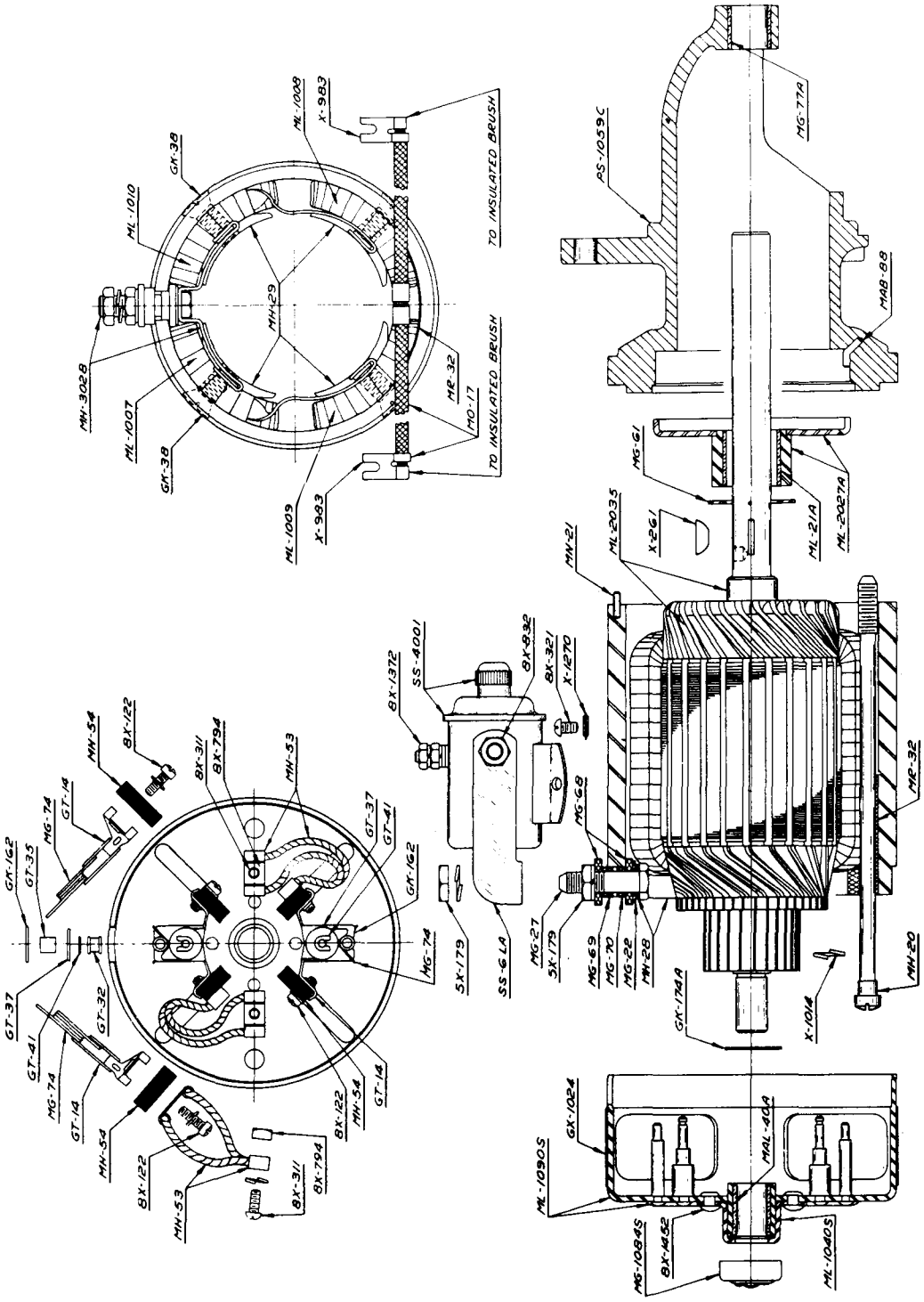
UNIT	APPLICATION
ML-4202	Diamond T

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4202 STARTING MOTOR ILLUSTRATION



Frame & Field Assy. & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2097)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Coil Lead Ins.
8X-832	1	5/16-24 Hex. Nut
X-1014	2	5/16 Lock Washer

Terminal Post Assy. & Parts Used With

MH-3028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
MH-28	1	Terminal Post Connector
8X-179	2	3/8-16 Hex. Nut
12X-201	2	3/8 Lock Washer

Comm. End Head Assy. & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assembly
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2035	1	ARMATURE ASSEMBLY
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

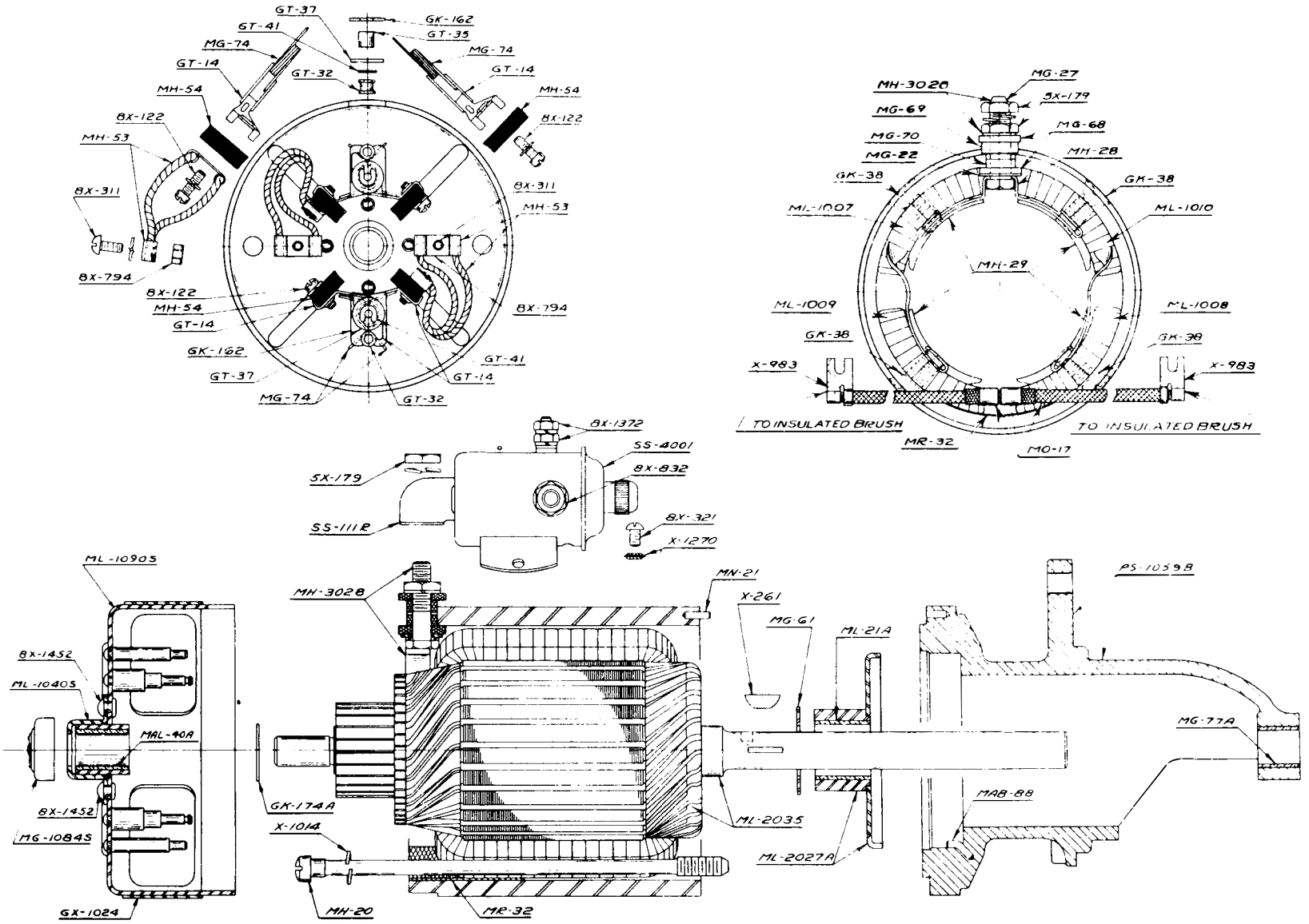
EBA-11	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7806	1	Head Spring Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	DRIVE SPRING
EB-8734	1	Take-Up Spring
EBA-1111	1	S-A Assembly
GX-1024	1	Head Band Assembly
ML-2027A	1	INTERMEDIATE BRG. ASSY.
ML-21A	1	Absorbent Bronze Brg.
PS-1059B	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 4-4-40)

UNIT	APPLICATION
ML-4205	General Electric

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4205 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Bolt, Thru
(ML-2025)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Terminal, 3/8-16
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Bushing, Ins., Term. Stud, Outer
MG-70	1	Bushing, Ins., Term. Stud, Inner
MH-28	1	Connector, Term. Stud to Coil
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MN-21	1	Pin, Dowel, Housing Locating
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-32	1	Insulation, Field Connection
5X-179	2	Nut, Term. Stud, Hex., 3/8-16
X-201	2	Washer, Lock, Term. Stud, 3/8
X-1014	2	Washer, Lock, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Cover, Bearing, Comm. End
(ML-2090)	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
ML-1090S	1	Head Assy.. Partial, C.E.
MAL-40A	1	Bearing, Absorbent Bronze
8X-122	4	Screw, Brush, Fil. hd., #8-32x1/2
X-195	4	Washer, Lock, Brush Sc., #8
X-196	2	Washer, Lock, Ground Screw, #10
8X-311	2	Screw, Ground, Rd. hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Thrust, Armature Shaft, C.E.
ML-32	1	Washer, Thrust, Int. Bearing
ML-2057	1	Armature
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EB-31	1	Bendix Drive Assy.
EB-508	2	Washer, Lock
EB-2303	1	Head, Driving
EB-2319S	1	Sleeve, Compression
EB-2322	2	Clip, Spring, Support
EB-2406	1	Screw, Spring, Head
EB-2407	1	Screw, Spring, Shaft
EB-3105	1	Spring, Drive
EB-3111	1	Shaft & Pinion
GAG-54	1	Washer, Felt
GX-1024C	1	Band, Head
ML-82	1	Gasket, Intermediate Bearing
ML-91	1	Retainer, Felt
ML-1093	1	Bearing Assy., Intermediate
ML-92A	1	Bearing, Absorbent Bronze
PS-1074	1	Housing Assy., Pinion
MG-77A	1	Bearing, Absorbent Bronze
X-195	4	Washer, Lock, #8
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
8X-878	4	Screw, Attaching, Int. Bearing, Fil. hd., #8-32x7/16
		1 2 3 4 5

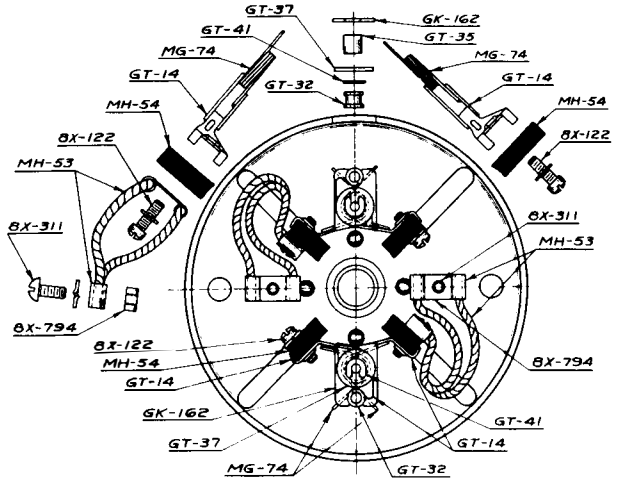
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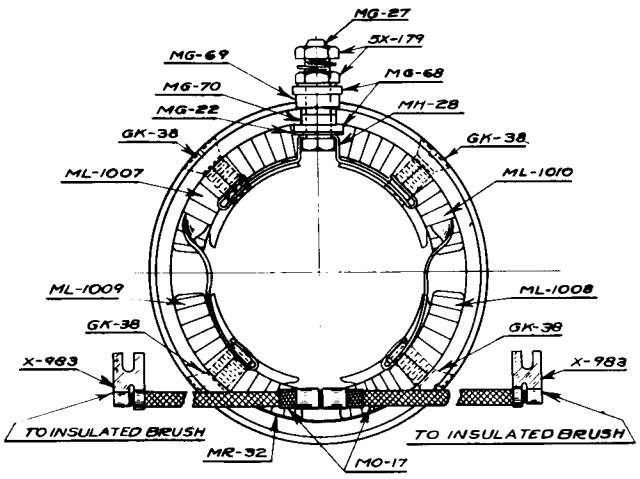
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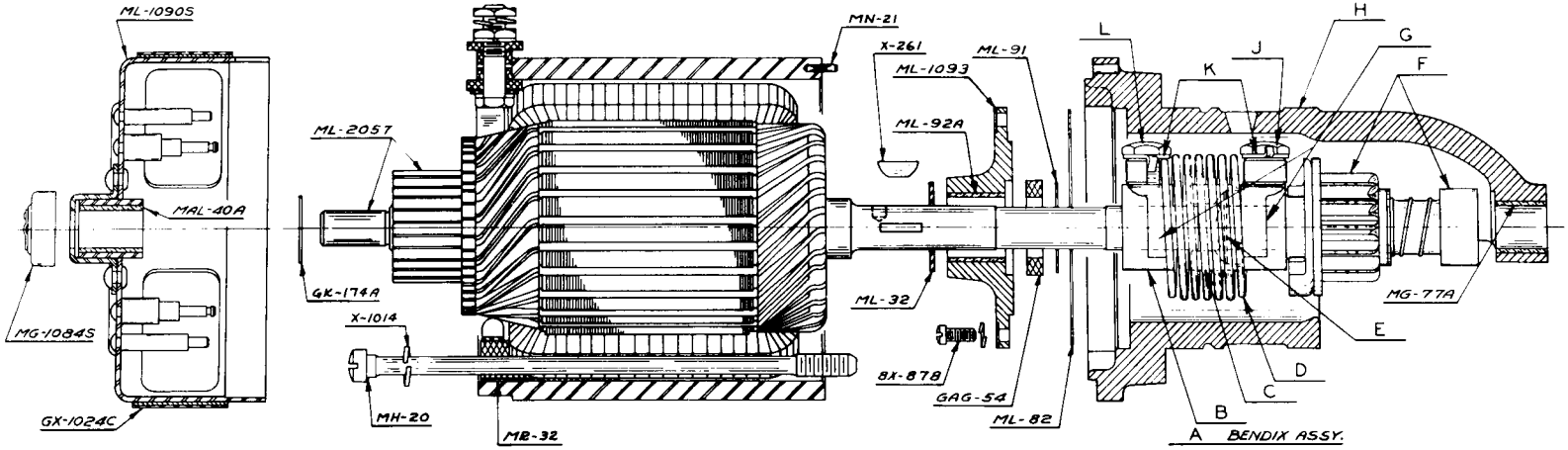
"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

ML-4207 STARTING MOTOR ILLUSTRATION







UNIT	A	B	C	D	E	F	G	H	J	K	L
ML-4207	EB-31	EB-2303	EB-2319S	EB-3105	NONE	EB-3111	EB-2322	PS-1074	EB-2407	EB-508	EB-2406

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2110)	1	Frame & Field Assy.
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-32	1	Field Connection Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assy.
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Term. Post Cover Ins.
MG-70	1	Term. Post Frame Ins.
MH-28	1	Terminal Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assy.
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Sc.
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MG-61	2	7/8 Plain Washer
ML-2085	1	ARMATURE ASSEMBLY
X-261	2	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-183	1	Connector
X-877	2	1/4-20x5/16 Fill. Hd. Sc.
X-1272	2	1/4 Skpf. Washer
XA-569	1	STARTING SWITCH

Miscellaneous Parts

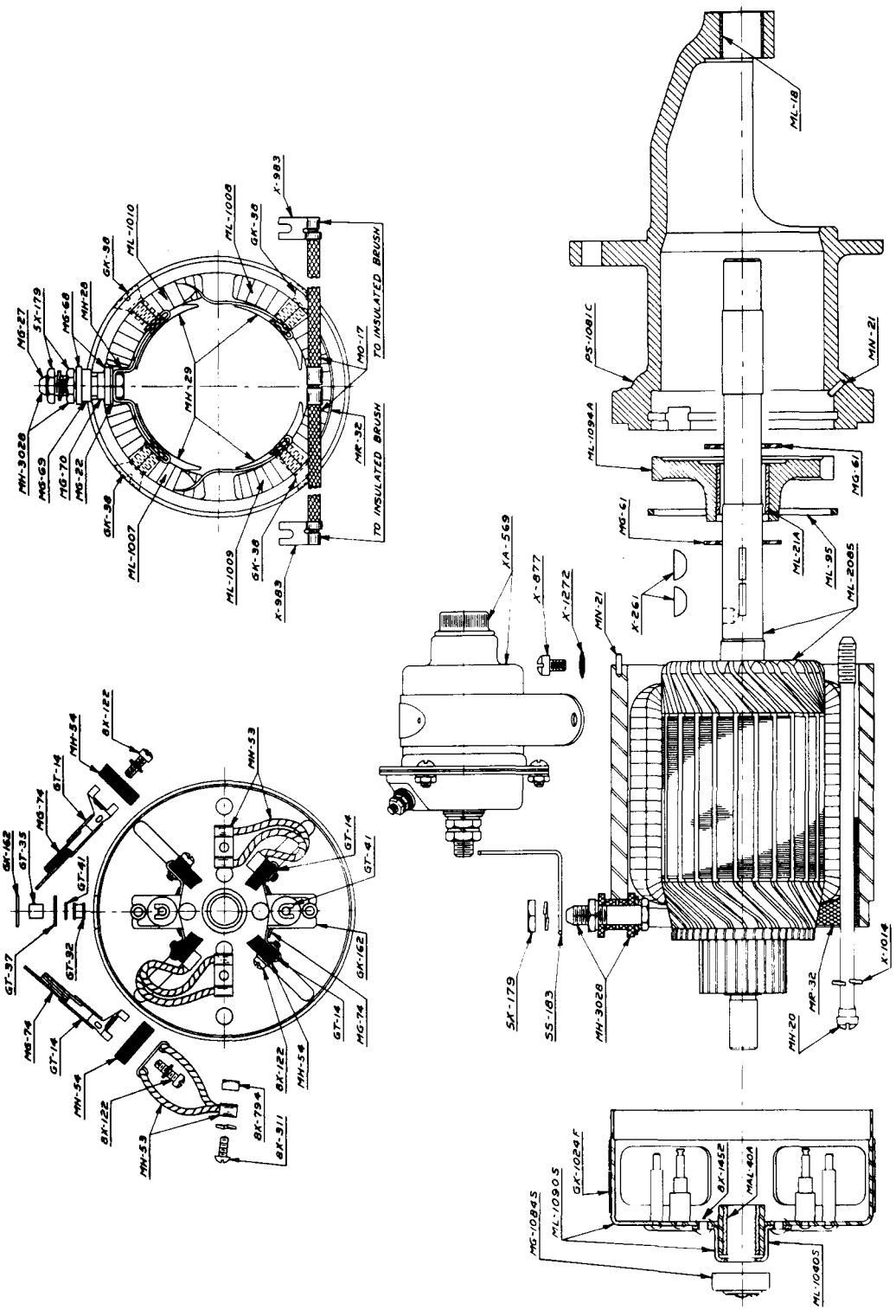
EB-45A	1	BENDIX DRIVE ASSY.
EB-108	2	Lock Washer
EB-4503	1	Driving Head
EB-4505	1	DRIVE SPRING
EB-4506	1	Head Spring Screw
EB-4507	1	Shaft Spring Screw
EB-4511A	1	S-A Assembly
EB-4515	1	Pinion Back Stop
EB-4516	1	Pinion Back Stop Screw
EB-4519S	1	Compression Sleeve
GX-1024F	1	Head Band Assembly
ML-95	1	Lock Spring Ring
ML-1094A	1	Intermediate Plate Assy.
ML-21A	1	ABSORBENT BRONZE BRG.
PS-1081C	1	Pinion Housing Assy.
ML-18	1	Bronze Graphite Brg.
MN-21	1	Dowel Pin
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 3-4-41)

UNIT	APPLICATION
ML-4209	Diamond T

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4209 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4210 STARTING MOTOR PARTS LIST ML-4210

PRELIMINARY

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
MH-20	2	Frame Screw
(ML-2097)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Side Open Terminal
MR-32	1	Field Coil Head Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Terminal Post Cover Ins.
MG-70	1	Terminal Post Frame Ins.
MH-28	1	Terminal Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Plate Assembly & Parts Used With

MG-1084S	1	Bearing Cover With Oiler
ML-2102	1	Comm. End Head Assy.
GK-162	2	Brush Holder Spacing Ins.
GT-14	4	Brush Holder
GT-35	4	Insulating Bushing
GT-37	4	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-68	1	Terminal Post Ins. Washer
MG-74	4	Brush Spring
MH-54	4	BRUSH
ML-101	1	Terminal Post Insulation
ML-104	1	Terminal Post Insulation
ML-105	1	Terminal Post 3/8-16
ML-109	2	Brush Stud Insulation
ML-1102	1	Comm. End Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Brg.
8X-1452	4	3/16x5/16 Oval Hd.Rivet
ML-1108	1	Brush Lead
ML-108	1	Terminal
X-983	2	Terminal
SW-688	1	Insulating Bushing
8X-122	4	#8-32x1/2 Fill. Hd. Screw
5X-179	2	3/8-16 Hex. Nut
X-195	4	#8 Lock Washer
X-201	2	3/8 Lock Washer
	1 2 3 4 5	

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
MG-61	2	7/8 Plain Washer
ML-2085	1	ARMATURE ASSEMBLY
X-261	2	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4305	1	SOLENOID STARTING SWITCH
X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EBA-43	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-4503	1	Driving Head
EB-4515	1	Pinion Back Stop
EB-4516	1	Pinion Back Stop Screw
EB-4519S	1	Compression Sleeve
EBA-1811	1	S -A Assembly
EBA-4305	1	DRIVE SPRING
EBA-4306	1	Head Spring Screw
EBA-4307	1	Shaft Spring Screw
GK-1024F	1	Head Band Assembly
ML-95	1	Lock Spring Ring
ML-1094A	1	Intermediate Plate Assy.
ML-21A	1	ABSORBENT BRONZE BRG.
PS-1081B	1	Pinion Housing Assy.
ML-18	1	Bronze Graphite Bearing
MN-21	1	Dowel Pin
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
	1 2 3 4 5	

(Issued 5-20-41)

UNIT	APPLICATION
ML-4210	Hill Diesel

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4211 STARTING MOTOR PARTS LIST ML-4211

PRELIMINARY

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2097)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assy.
X-983	2	Side Open Terminal
MR-32	1	Field Coil Head Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Terminal Post Cover Ins.
MG-70	1	Terminal Post Frame Ins.
MH-28	1	Terminal Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Plate Assembly & Parts Used With

MG-1084S	1	Bearing Cover With Oiler
(ML-2090)	1	Comm. End Head Assembly
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
ML-1090S	1	C.E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Brg.
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2035	1	ARMATURE ASSEMBLY
X-261	1	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7806	1	Hd. Spring Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	DRIVE SPRING
EB-8734	1	Take Up Spring
EBA-211	1	S - A Assembly
GX-1024	1	Head Band Assembly
ML-2027A	1	INTERMEDIATE BEARING ASSY.
ML-21A	1	Absorbent Bronze Brg.
PS-1059	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-21-41)

UNIT	APPLICATION
ML-4211	Hercules Motors

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part num ers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can e assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Bolt, Thru
(ML-2111)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Post, Terminal, 3/8-16
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Bushing, Ins., Term. Stud, Outer
MG-70	1	Bushing, Ins., Term. Stud, Inner
MH-28	1	Connector, Term. Stud to Coil
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MN-21	1	Pin, Dowel, Housing Locating
MO-17	1	Lead Assy., Field Coil Terminal
X-983	2	
MR-32	1	Insulation, Field Connection
5X-179	2	Nut, Term. Stud, Hex., 3/8-16
X-201	2	Washer, Lock, Term. Stud, 3/8
X-1014	2	Washer, Lock, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Cover, Bearing, Comm. End
(ML-2090)	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
ML-1090S	1	Head Assy., Partial, C.E.
MAL-40A	1	Bearing, Absorbent Bronze
8X-122	4	Screw, Brush, Fil. hd., #8-32x1/2
X-195	4	Washer, Lock, Brush Sc., #8
X-196	2	Washer, Lock, Ground Screw #10
8X-311	2	Screw, Ground, Rd. hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Thrust, Armature Shaft, C.E.
MG-61	1	Washer, Thrust, Arm. Shaft, Int.
ML-2085	1	Armature
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-203	1	Connector
SS-4301	1	Switch, Starting, Solenoid
X-196	1	Washer, Lock, #10
8X-832	2	Nut, Hex., 5/16-24
X-1014	2	Washer, Lock, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Mtg. Switch, Rd. hd., #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Sc., #10

Miscellaneous Parts

EB-45A	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-4503	1	Head, Driving
EB-4505	1	Spring, Drive
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4511A	1	Shaft & Pinion
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve, Compression
GX-1024F	1	Band, Cover
HS-1091A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	Bearing, Absorbent Bronze
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

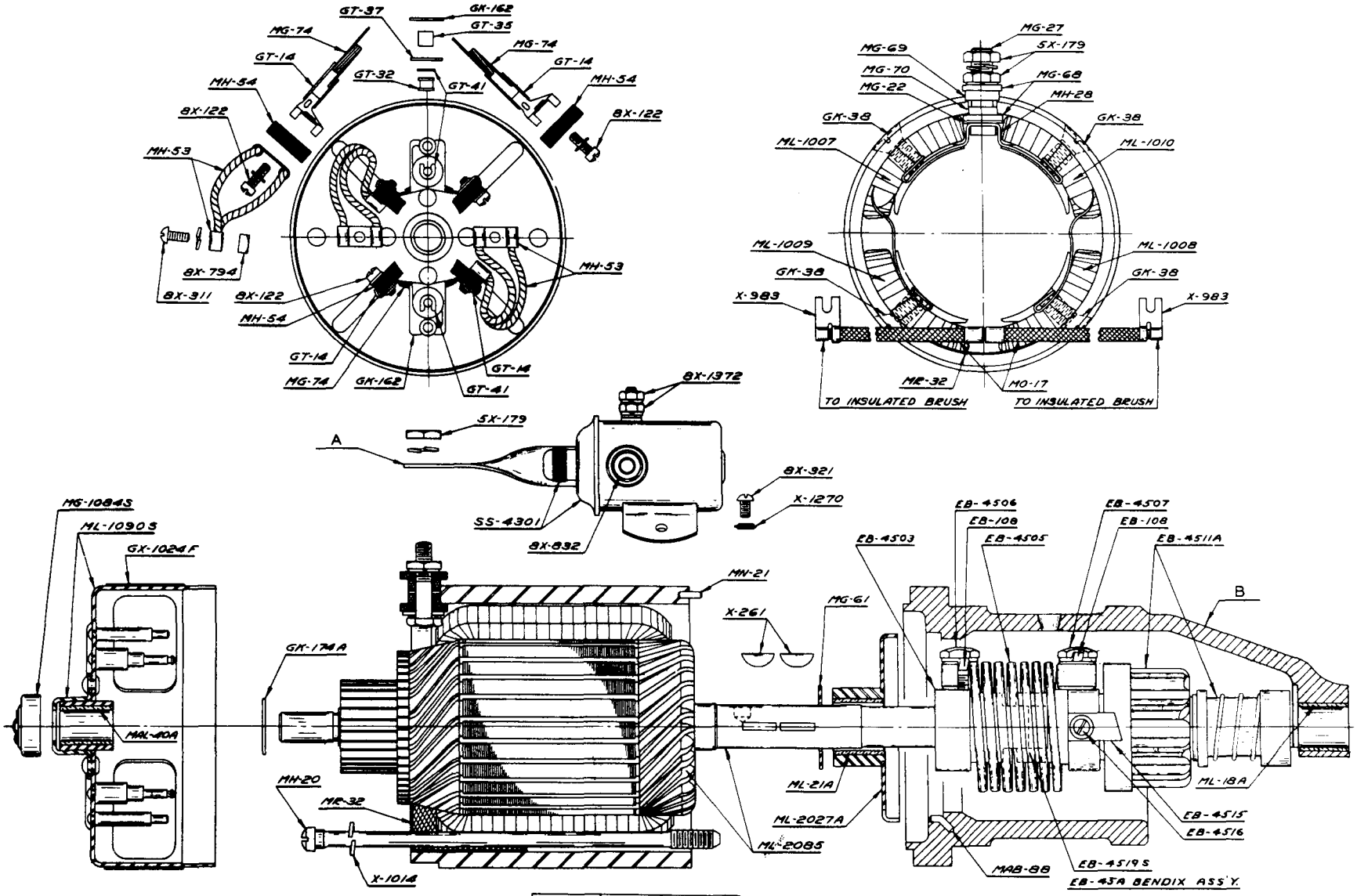
(Issued 3-15-44)

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

ML-4213 STARTING MOTOR ILLUSTRATION



UNIT	A	B
ML-4213	SB-203	HS-1081A

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Bolt, Thru
(ML-2025)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Terminal, 3/8-16
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Bushing, Ins., Term. Stud, Outer
MG-70	1	Bushing, Ins., Term. Stud, Inner
MH-28	1	Connector, Term. Stud to Coil
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field. U.R.
MN-21	1	Pin, Dowel, Housing Locating
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-32	1	Insulation, Field Connection
5X-179	2	Nut, Term. Stud, Hex., 3/8-16
X-201	2	Washer, Lock, Term. Stud, 3/8
8X-1014	2	Washer, Lock 5/16

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Cover, Bearing, Comm. End
(ML-2090)	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
ML-1090S	1	Head Assy., Partial, C.E
MAL-40A	1	Bearing, Absorbent Bronze
8X-122	4	Screw, Brush, Fil. hd., #8-32x1/2
X-195	4	Washer, Lock, Brush Sc., #8
X-196	2	Washer, Lock, Ground Sc., #10
8X-311	2	Screw, Ground. Rd. hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Thrust, Arm. Shaft, C.E.
ML-32	1	Washer, Thrust, Int. Bearing
ML-112	1	Spacer, Armature Shaft
ML-2091	1	Armature
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBA-11	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take Up
EBA-1111	1	Shaft & Pinion
GAG-54	1	Washer, Felt
GX-1024	1	Band, Cover
ML-82	1	Gasket, Intermediate Bearing
ML-91	1	Retainer, Felt
ML-1093	1	Bearing Assy., Intermediate
ML-92A	1	Bearing, Absorbent Bronze
PS-1191	1	Housing Assy., Pinion
MG-77A	1	Bearing. Absorbent Bronze
X-195	4	Washer, Lock, Int. Bearing Screw, #8
X-715	1	Screw. Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
8X-878	4	Screw, Attaching, Int. Bearing, Fil. hd., #8-32x7/16
		1 2 3 4 5

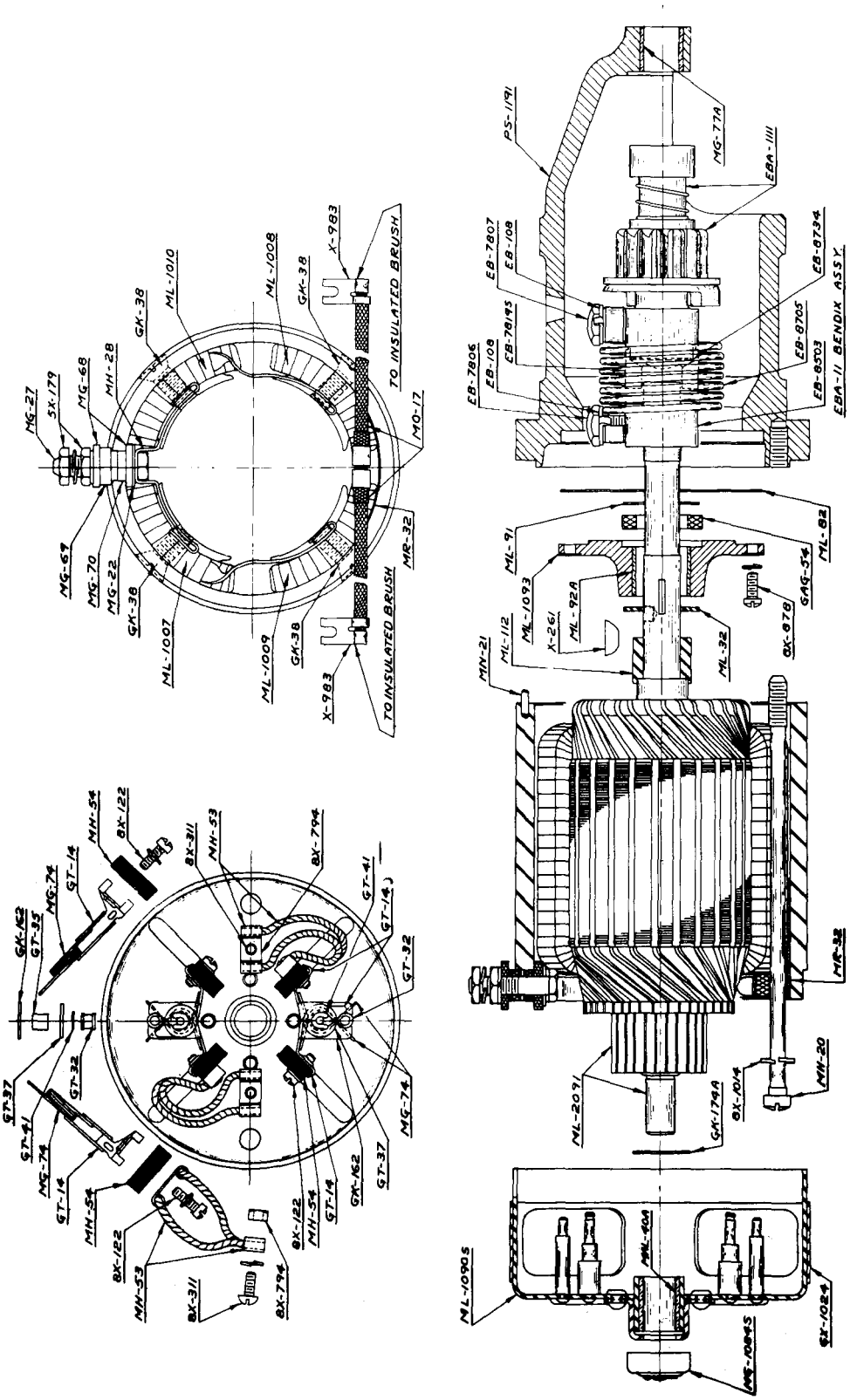
(Issued 5-17-44)

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

ML-4214 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

PRELIMINARY

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Frame Screw
(ML-2025)	1	Frame & Field Assembly
GK-38	4	Pole Piece Screw
MH-29	4	Pole Piece
ML-1007	1	Field Coil - U.L.
ML-1008	1	Field Coil - L.R.
ML-1009	1	Field Coil - L.L.
ML-1010	1	Field Coil - U.R.
MN-21	1	Dowel Pin
MO-17	1	Field Coil Lead Assembly
X-983	2	Terminal
MR-32	1	Field Lead Ins.
X-1014	2	5/16 Lock Washer

Terminal Post Assembly & Parts Used With

MH-3028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-27	1	Terminal Post
MG-68	2	Insulating Washer
MG-69	1	Terminal Post Cover Ins.
MG-70	1	Terminal Post Frame Ins.
MH-28	1	Terminal Post Connector
5X-179	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(ML-2090)	1	Comm. End Head Assembly
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Br. Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
ML-1090S	1	C. E. Head Part Assy.
ML-1040S	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
8X-1452	4	3/16x5/16 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
ML-2035	1	ARMATURE ASSEMBLY
X-261	1	#6 Woodruff Key

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-7806	1	Hd. Spr. Bolt or Screw
EB-7807	1	Shaft Spring Screw
EB-7819S	1	Compression Sleeve
EB-8503	1	Driving Head
EB-8705	1	DRIVE SPRING
EB-8734	1	Take-Up Spring
EBA-211	1	S-A Assembly
GX-1024	1	Head Band Assembly
ML-2027A	1	INTERMEDIATE BEARING ASSY.
ML-21A	1	Absorbent Bronze Brg.
PS-1196	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
MG-77A	1	Absorbent Bronze Brg.
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 10-9-41)

UNIT	APPLICATION
ML-4215	U. S. Motors

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Bolt, Thru
(ML-2025)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Terminal, 3/8-16
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Bushing, Ins., Term. Stud, Outer
MG-70	1	Bushing, Ins., Term. Stud, Inner
MH-28	1	Connector, Term. Stud to Coil
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MN-21	1	Pin, Dowel, Housing Locating
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-32	1	Insulation, Field Connection
5X-179	2	Nut, Term. Stud, Hex., 3/8-16
X-201	2	Washer, Lock, Term. Stud, 3/8
X-1014	2	Washer, Lock, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Cover, Bearing, Comm. End
(ML-2090)	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
ML-1090S	1	Head Assy., Partial, C.E.
MAL-40A	1	Bearing, Absorbent Bronze
8X-122	4	Screw, Brush, Fil. hd., #8-32x1/2
X-195	4	Washer, Lock, Brush Sc., #8
X-196	2	Washer, Lock, Ground Screw, #10
8X-311	2	Screw, Ground, Rd. hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Thrust, Armature Shaft, C.E.
ML-32	1	Washer, Thrust, Int. Bearing
ML-2057	1	Armature
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBA-2	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take up
EBA-211	1	Shaft & Pinion
GAG-54	1	Washer, Felt
GX-1024C	1	Band, Cover
ML-82	1	Gasket, Intermediate Bearing
ML-91	1	Retainer, Felt
ML-1093	1	Bearing Assy., Intermediate
ML-92A	1	Bearing, Absorbent Bronze
PS-1203	1	Housing Assy., Pinion
MG-77A	1	Bearing, Absorbent Bronze
X-195	4	Washer, Lock, #8
X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
8X-878	4	Screw, Attaching, Int. Bearing, Fil. hd., #8-32x7/16
		1 2 3 4 5

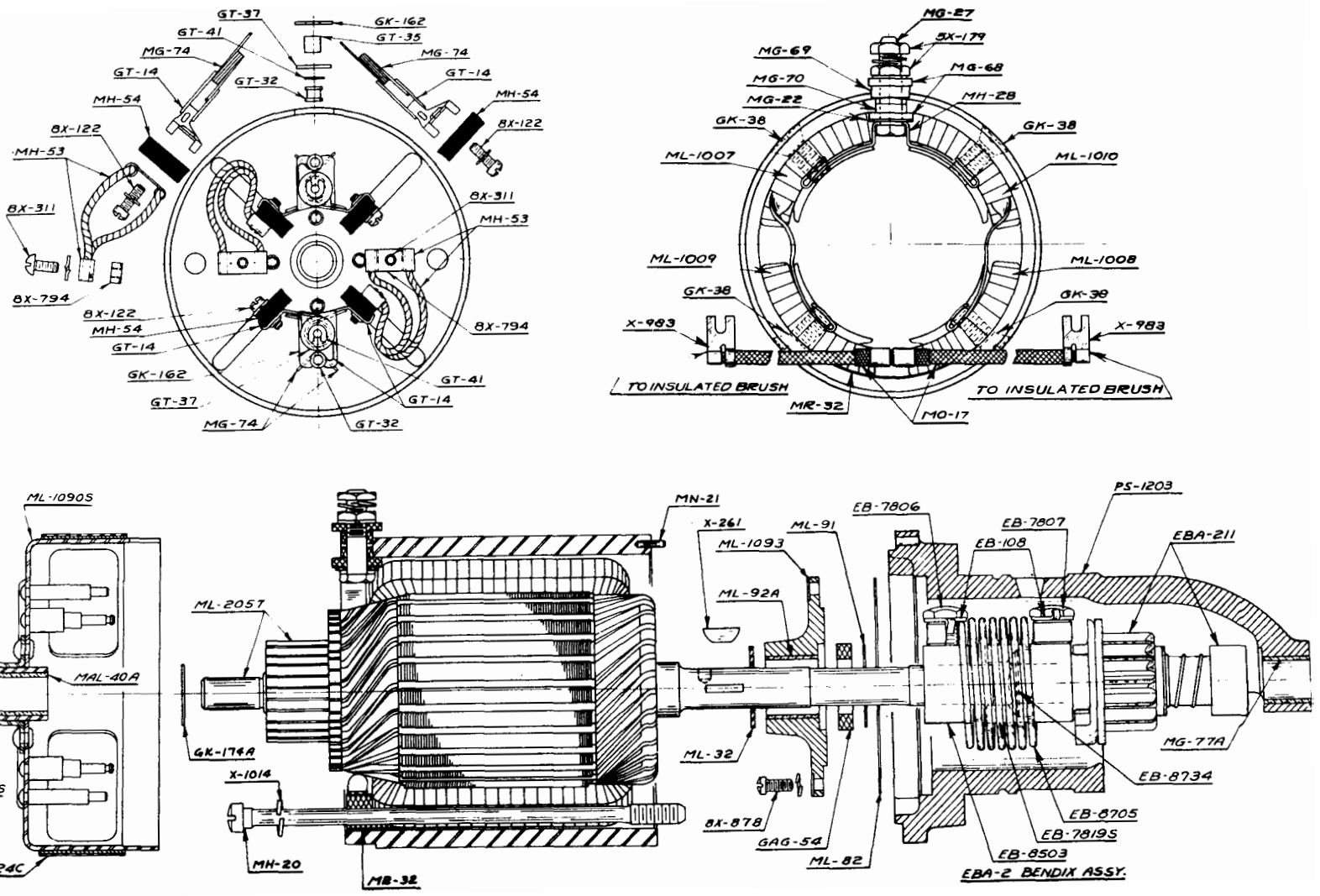
(Issued 3-15-44)

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

ML-4216 STARTING MOTOR ILLUSTRATION



ML-4218 STARTING MOTOR PARTS LIST

ML-4218
(Issued 1-13-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2097	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud, Inner
MG-27	1	Stud, Terminal
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Bushing, Ins., Term. Stud, Outer
MG-70	1	Bushing, Ins., Term. Stud, Inner
MH-28	1	Connector, Term. Stud
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MN-21	1	Pin, Dowel
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-32	1	Insulation, Field Conn.
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2090S	1	Head Assy., Comm. End
GK-162	2	Insulation, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54†	4	Brush
MR-1005	1	Head Assy., Partial, C. E.
MAL-40A	1	BEARING, ABS. BRONZE
MR-1062A	1	Cover, Bearing, Comm. End
8X-122	4	Screw, Brush, Fill. Hd. #8-32x1/2
12X-195	4	Lockwasher, Br. Sc., #8
12X-196	2	Lockwasher, Ground Sc., #10
8X-311	2	Screw, Ground, Rd. Hd. #10-32x3/8
8X-794	2	Nut, Ground Sc., Square #10-32

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MG-61	2	Washer, Thrust, Intermediate
ML-2085	1	ARMATURE
X-261	2	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4301	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-43	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-4503	1	Head, Drive
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve, Compression
EBA-1811	1	Shaft & Pinion
EBA-4305	1	SPRING, DRIVE
EBA-4306	1	Screw, Spring, Head
EBA-4307	1	Screw, Spring, Shaft
GX-1024F	1	Band, Cover
ML-95	1	Ring, Lock, Intermediate Bearing
ML-1094	1	BEARING ASSY. INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1081B	1	Housing Assy., Pinion
ML-18	1	BEARING
MN-21	1	Pin, Dowel
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MH-1054S.

UNIT	APPLICATION
ML-4218	Continental, Worthington

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MH-20	2	Bolt, Thru
(ML-2097)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term, Stud, Inner
MG-27	1	Stud, Terminal, 3/8-16
MG-68	2	Washer, Ins., Term. Stud
MG-69	1	Brushing, Ins., Term. Stud, Outer
MG-70	1	Bushing, Ins., Term. Stud, Inner
MH-28	1	Connector, Term. Stud
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MN-21	1	Pin, Dowel
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-32	1	Insulation, Field Conn,
5X-179	2	Nut, Term. Stud, Hex. 3/8-16
X-201	2	Lockwasher, Term. Stud, 3/8
X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2090	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Spring
GT-35	2	Bushing, Insulating
GT-37	2	Washer, Insulating
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54†	4	Brush
MR-1005	1	Head Assy., Partial C.E.
MAL-40A	1	Bearing, Abs. Bronze
8X-122	4	Screw, Brush, Fill. Hd. #8-32x1/2
X-195	4	Lockwasher, Br. Sc., #8
X-196	2	Lockwasher, Ground Sc., #10
8X-311	2	Screw, Ground, Rd. Hd. #10-32x3/8
8X-794	2	Nut, Ground Sc., Square #10-32
MR-1062A	1	Cover, Bearing, Comm. End
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Armature Thrust, C.E.
MG-61	1	Washer, Arm, Thrust, Intermediate
ML-2035	1	ARMATURE
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-6LA	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut Hex., #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-11	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take Up
EBA-1111	1	Shaft & Pinion
GX-1024	1	Band, Cover
ML-2027A	1	BEARING ASSY.,INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1050	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

†BRUSH SET, SERVICE MH-1054S

NOTE: Part numbers shown in parenthesis are not recommended for service.

(Issued 3-16-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAS-20	2	Bolt, Thru
(ML-2117)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins. Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
ML-1012	1	BRUSH ASSY., INSULATED
MLA-28	1	Stud, Terminal, 3/8-16
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex., 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	BEARING ABS. BRONZE
ML-122	1	Felt
ML-1034	2	BRUSH, GROUNDED
MR-1062A	1	Cover, Bearing, C.E.
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
X-521	4	Rivet, Brush Holder, Oval Hd., Tub. 1/4x9/32
X-544	6	Lockwasher, C.E. Hd. Sc., #10
X-709	6	Screw, C.E. Head, Fil. Hd. #10-32x7/16
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Arm. Thrust, C.E.
MG-61	1	Washer, Thrust, Arm. Shaft, Int.
ML-2115	1	ARMATURE
X-261	2	Key, Woodruff, #6

Miscellaneous Parts

EBA-76	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-7605	1	SPRING, DRIVE
EBA-7607	2	Plate, Spring Anchor
EBA-7631	1	Shaft, Screw
EBA-7632	1	Pinion
GCE-24	1	Band, Cover
ML-2027A	1	BEARING, ASSY., INTERMEDIATE
ML-21A	1	Bearing, Absorbent Bronze
PS-1231	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MZ-46A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

Unit	Application
ML-4301	Brockway, Continental

(Issued 2-19-47)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAS-20	2	Bolt, Thru
(ML-2117)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Insulating, Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
ML-1012	1	BRUSH ASSY., INS.
MLA-28	1	Stud, Terminal, 3/8-16
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Terminal Stud, Hex., 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
8X-179	1	Nut, Term. Stud, Hex. 3/8-16
X-201	1	Lockwasher, Term. Stud, 3/8
X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034	2	BRUSH GROUNDED
MR-1062A	1	Cover, Bearing, C.E.
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
X-521	4	Rivet, Brush Holder, Oval Hd., Tub. 1/4x9/32
X-544	6	Lockwasher, C.E. Head Sc., #10
X-709	6	Screw, C.E. Head, Fil. Hd. #10-32x7/16
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Arm. Thrust, C.E.
MG-61	1	Washer, Thrust, Arm. Shaft, Int.
ML-128	*	Washer, Thrust, 1/32" thick
ML-128A	*	Washer, Thrust, .015" thick
ML-128B	*	Washer, Thrust, .045" thick
ML-129	*	Washer, Thrust, 1/32" thick
ML-129A	*	Washer, Thrust, .015" thick
ML-129B	*	Washer, Thrust, .045" thick
ML-2115	1	ARMATURE
X-261	2	Key, Woodruff, #6

Miscellaneous Parts

EBA-76	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-7605	1	SPRING, DRIVE
EBA-7607	2	Plate, Spring Anchor
EBA-7631	1	Shaft, Screw
EBA-7632	1	Pinion
GCE-24	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Absorbent Bronze
PS-1243	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MZ-46A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

* Use as required.

Unit	Application
ML-4304	Brockway

(Issued 2-19-47)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2117)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush, Insulated
ML-3005S	1	Field Coil Package
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	Bearing, Abs. Bronze
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-544	6	Lockwasher, C.E. Head Sc., #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Thrust, Arm. Shaft, C.E.
MG-61	1	Washer, Thrust, Arm. Shaft, Intermediate
ML-2035	1	Armature
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBA-2	1	Bendix Drive Assy.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
GCE-24	1	Band, Cover
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Abs. Bronze
PS-1078	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service ML-2012S.

UNIT	APPLICATION
ML-4305	Continental

(Issued 7-15-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly with Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAS-20	2	Bolt, Thru
(ML-2125)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins. Term. Stud
MAX-35	2	Washer, Ins. Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1007	1	Coil Field, U.L.
ML-1008	1	Coil Field, L.R.
ML-1009	1	Coil Field, L.L.
ML-1010	1	Coil Field, U.R.
ML-1012	1	Brush Assy., Insulated
MLA-28	1	Stud, Terminal, 3/8-16
MN-21	1	Pin, Dowel
MR-32	1	Insulation Field Conn.
8X-179	2	Nut, Terminal Stud, Hex., 3/8-16
X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	Bearing, Abs. Bronze
ML-122	1	Felt
ML-1034	2	Brush Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-16	2	Holder Brush
MZ-19	4	Spring, Brush
X-521	4	Rivet, Brush Holder, Oval Hd., Tub., 1/4x9/32
12X-544	6	Lockwasher C.E. Head Sc., #10
8X-709	6	Screw C.E. Head, Fil Hd., #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Thrust, C.E.
MG-61	1	Washer, Thrust, Arm. Shaft, Int.
ML-128	*	Washer, Thrust, C.E. 1/32" Thick
ML-128A	*	Washer, Thrust, C.E. .015" Thick
ML-128B	*	Washer, Thrust, C.E. .045" Thick
ML-129	*	Washer, Thrust, D.E. 1/32" Thick
ML-129A	*	Washer, Thrust, D.E. .015" Thick
ML-129B	*	Washer, Thrust, D.E. .045" Thick
ML-2115	1	Armature
X-261	2	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MBR-40	1	Connector
SSW-4001	1	Switch, Starting, Solenoid
8X-173	1	Nut, Hex., #10-32
12X-196	1	Lockwasher, #10
8X-164	2	Nut, Hex., 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Screw, #10

Miscellaneous Parts

EBA-76	1	Bendix Drive Assy.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-7605	1	Spring, Drive
EBA-7607	2	Plate, Spring, Anchor
EBA-7631	1	Shaft, Screw
EBA-7632	1	Pinion
GCE-24	1	Band, Cover
ML-2027A	1	Bearing, Assy., Intermediate
ML-21A	1	Bearing, Abs. Bronze
PS-1243A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MZ-46A	1	Bearing, Abs. Bronze
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

* Used As Required

UNIT	APPLICATION
ML-4306	Ward LaFrance

Printed in U. S. A. (Issued 8-21-47) File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MAS-20	2	Bolt, Thru
(ML-2125)	1	Frame & Field Assy.
GK-38	4	Screw Pole Shoe
MAW-37	1	Bushing, Ins. Term. Stud
MAX-35	2	Washer Ins. Term. Stud
MAX-44	1	Washer, Plain Term. Stud Outer
MG-22	1	Washer, Plain Term. Stud Inner
MH-28	1	Connector
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
ML-1012	1	Brush Assy., Insulated
MLA-28	1	Stud, Terminal, 3/8-16
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
X-201	2	Lockwasher, Term. Stud 3/8
X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	Bearing, Abs. Bronze
ML-122	1	Felt
ML-1034	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
X-521	4	Rivet, Brush Holder, Oval Hd., Tub. 1/4x9/32
X-544	6	Lockwasher, Attaching, C.E. Head, #10
X-709	6	Screw, Attaching, C.E. Head, Fil. Hd., #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Thrust, C.E.
MG-61	1	Washer, Thrust, Arm. Shaft, Int.
ML-2115	1	Armature
X-261	2	Key, Woodruff, #6 1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
SS-111R	1	Connector
SS-4301	1	Switch, Starting, Solenoid
X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
X-1014	2	Lockwasher, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Mtg., Switch, Rd. Hd. #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Screw, #10

Miscellaneous Parts

EBA-76	1	Bendix Drive Assy.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-7605	1	Spring, Drive
EBA-7607	2	Plate, Spring Anchor
EBA-7631	1	Shaft, Screw
EBA-7632	1	Pinion
GCE-24	1	Band, Cover
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Abs. Bronze
PS-1231A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MZ-46A	1	Bearing, Abs. Bronze
X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32 1 2 3 4 5

Unit	Application
ML-4307	Diamond T, Ward LaFrance

(Issued 10-25-46)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MAS-20	2	Bolt, Thru
(ML-2125)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012 †	1	Brush, Insulated
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S †	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-544	6	Lockwasher, C.E. Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

MG-61	2	Washer, Arm. Thrust, Intermediate
ML-2126	1	ARMATURE
X-261	2	Key, Woodruff, #6 1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
MBR-40	1	Connector
SSW-4001	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-24
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-50	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-4503	1	Head, Drive
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-5219S	1	Sleeve, compression
EBA-5005	1	SPRING, DRIVE
EBA-5011	1	Shaft & Pinion
GCE-24	1	Band, Cover
ML-95	1	Ring, Lock, Intermediate Brg.
ML-1094	1	Bearing Assy., Intermediate
ML-21A	1	BEARING, ABS. BRONZE
PS-1258	1	Housing Assy., Pinion
ML-18A	1	BEARING, ABS. BRONZE
MZ-21	1	Pin, Dowel
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32 1 2 3 4 5

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4308	Buda

(Issued 4-20-48)

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2117	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush, Insulated
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABSORBENT BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Arm. Thrust, C. E.
MG-61	1	Washer, Arm. Thrust, Intermediate
ML-128	*	Washer, Arm. Thrust, C. E., 1/32"
ML-128B	*	Washer, Arm. Thrust, C. E., .045"
ML-2035A	1	ARMATURE
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take Up
EBA-211	1	Shaft & Pinion
ML-1024	1	Band, Cover
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	BEARING, ABSORBENT BRONZE
PS-1050B	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABSORBENT BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

* Use as required.

UNIT	APPLICATION
ML-4309	Massey-Harris

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2125)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	1	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012 †	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	Bearing, Abs. Bronze
ML-122	1	Felt
ML-1034S †	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16
12X-544	6	Lockwasher, C.E. Head Screw, #10

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C.E.
MG-61	1	Washer, Arm. Thrust, Intermediate
ML-2035A	1	ARMATURE
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
*	1	Connector
*	1	SOLENOID STARTING SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
*	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
*	2	Lockwasher, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-11	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-1111	1	Shaft & Pinion
GCE-1024J	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1050	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

* See table following parts list for part number applying to assembly wanted.

Assembly No.	Switch	Connector	Screw	Lockwasher
ML-4310	SST-4004	MBR-40L	8X-321	X-1270
ML-4310A	None	None	8X-312	12X-196

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAS-20	2	Bolt, Thru
(ML-2125)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins. Term. Stud
MAX-35	2	Washer, Ins. Term. Stud
MAX-44	1	Washer, Plain Term. Stud Outer
MG-22	1	Washer, Plain Term. Stud Inner
MH-28	1	Connector
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
ML-1012	1	Brush Assy., Insulated
MLA-28	1	Stud, Terminal, 3/8-16
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Terminal Stud, Hex. 3/8-16
X-201	2	Lockwasher, Term. Stud 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	Bearing, Abs. Bronze
ML-122	1	Felt
ML-1034	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
X-521	4	Rivet, Brush Holder, Oval Hd., Tub. 1/4x9/32
12X-544	6	Lockwasher, C.E. Head Sc., #10
X-709	6	Screw, C.E. Head, Fil. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Plain, 1/2
MG-61	1	Washer, Plain, 7/8
ML-2035	1	Armature
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6LA	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-2	1	Bendix Drive Assembly
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take Up
EBA-211	1	Shaft & Pinion
GCE-24C	1	Band, Cover
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Absorbent Bronze
PS-1050A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-715	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

Unit	Application
ML-4312	Diamond T

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4313 STARTING MOTOR PARTS LIST

ML-4313
(Issued 4-12-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2125)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush, Insulated
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connecti Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	Bearing, Abs. Bronze
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, C.E.
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C.E.
MG-61	1	Washer, Arm. Thrust, Intermediate
ML-2035A	1	ARMATURE
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-40	1	Connector
SST-4004	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-11	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Spring, Screw, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-1111	1	Shaft & Pinion
GCE-24	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1237	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4313	Hanson Clutch

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4314 STARTING MOTOR PARTS LIST

ML-4314
(Issued 6-27-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2125)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush, Insulated
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

MG-61	2	Washer, Arm. Thrust, Intermediate
ML-2126	1	ARMATURE
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

MBR-40L	1	Connector
SSW-4001	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-95	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-4503	1	Head
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EBA-5005	1	SPRING, DRIVE
EBA-5219S	1	Sleeve, Compression
EBA-5411	1	Shaft, & Pinion
GCE-24	1	Band, Cover
ML-95	1	Ring, Lock, Intermediate Bearing
ML-1094	1	Bearing Assy., Intermediate
ML-21A	1	BEARING, ABS. BRONZE
PS-1272	1	Housing Assy., Pinion
ML-18A	1	BEARING, ABS. BRONZE
MN-21	1	Pin, Dowel
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4314	Harnischefeger, Universal

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2117)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush Assy., Insulated
ML-3005S	1	Field Coil Package
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Terminal Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	Bearing, Abs., Bronze
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring. Brush
12X-544	6	Lockwasher, C.E. Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MG-61	2	Washer, Thrust, Arm. Shaft
ML-2126	1	Armature
X-261	2	Key, Woodruff, #6

Miscellaneous Parts

EBA-95	1	Bendix Drive Assy.
EB-108	2	Lockwasher
EB-4503	1	Head
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EBA-5005	1	Spring, Drive
EBA-5219S	1	Sleeve, Compression
EBA-5411	1	Shaft & Pinion
GCE-24	1	Band, Cover
ML-95	1	Ring, Lock, Intermediate Brg.
ML-1094	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Absorbent Bronze
PS-1272A	1	Housing Assy., Pinion
ML-18A	1	Bearing, Absorbent Bronze
MN-21	1	Pin, Dowel
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service ML-2012S.

UNIT	APPLICATION
ML-4316	Continental

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2117)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012	1	Brush Assy., Insulated
ML-3005S	1	Field Coil Package
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	Bearing, Abs. Bronze
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, C.E.
MZ-19	4	Spring, Brush
12X-544	6	Lockwasher, C.E. Head Sc., #10
X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Thrust Arm. Shaft 1/2
MG-61	1	Washer, Thrust, Arm. Shaft, 7/8
ML-2035	1	Armature
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-2	1	Bendix Drive Assembly
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
GCE-24	1	Band, Cover
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Abs. Bronze
PS-1060	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service ML-2012S.

(Issued 7-15-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2125)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012 †	1	Brush, Insulated
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

GK-174A	1	Washer, Plain 1/2
ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-544	6	Lockwasher, C.E. Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

MG-61	1	Washer, Arm, Thrust, Intermediate
ML-2085	1	ARMATURE
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-40	1	Connector
SSW-4001	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EB-45A	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-4503	1	Head, Driving
EB-4505	1	SPRING, DRIVE
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4511A	1	Shaft & Pinion
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve, Compression
GCE-24	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Absorbent Bronze
PS-1286	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4319	Harnishfeger, Hercules

(Issued 1-4-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2117B)	1	Frame & Field Assy.
GK-38C	4	Screw, Pole Shoe
MAW-37A	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MC-51B	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Field Coil, U.L.
ML-1008	1	Field Coil, L.R.
ML-1009	1	Field Coil, L.L.
ML-1010	1	Field Coil, U.R.
ML-1012 †	1	Brush Assy., Insulated
MLA-28	1	Stud, Terminal, 3/8x16
MN-21A	1	Pin, Dowel
MN-47B	1	Washer, Plain, Term. Stud Outer
MR-32	1	Insulation, Field Connection
12X-201	2	Lockwasher, Term. Stud 3/8
X-2845	2	Nut. Term. Stud, Hex. 3/8x16
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002D	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, C.E.
MZ-19A	4	Spring, Brush
12X-544	6	Lockwasher, C.E. Head Sc., #10
19X-709	6	Screw, C.E. Head, Fil. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Thrust, C.E.
MG-61	1	Washer, Thrust, Arm. Shaft, Int.
ML-2131M	1	ARMATURE
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-40	1	Connector
SST-4005M	1	SOLENOID SWITCH
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
X-2853	1	Hex. Nut, #10-32
X-2976	2	Hex. Nut, 5/16-18
19X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-11A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7806A	1	Screw, Spring, Head
EB-7807A	1	Screw, Spring, Shaft
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8705A	1	Spring, Drive
EB-8734A	1	Take-Up Ring
EBA-1131A	1	Shaft, & Pinion
GCE-1024F	1	Band, Cover
ML-2027D	1	Bearing Assy., Intermediate
ML-21A	1	Bearing, Abs. Bronze
PS-1059E	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing Abs. Bronze
X-2873	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
X-2875	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4321M	Gray Marine

(Issued 8-25-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2125)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012 †	1	Brush, Insulated
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal, 3/8-16
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	Bearing, Abs. Bronze
ML-122	1	Felt
ML-1034S †	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-544	6	Lockwasher, C.E. Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Armature Thrust, C.E.
MG-61	1	Washer, Arm. Thrust, Intermediate
ML-2085	1	ARMATURE
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

MBR-40L	1	Connector
SSW-4001	1	SOLENOID SWITCH
8X-173	1	Hex. Nut, #10-32
12X-196	1	Lockwasher, #10
8X-164	2	Hex. Nut, 5/16-24
12X-1014	2	Lockwasher, 5/16

Switch Assembly (Continued)

Part No.	No. Used	Name of Part
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EB-45A	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-4503	1	Head, Driving
EB-4505	1	SPRING, DRIVE
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4511A	1	Shaft, & Pinion
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve, Compression
GCE-24	1	Band, Cover
ML-2027A	1	BEARING, ASSY., INTERMEDIATE
ML-21A	1	Bearing, Absorbent Bronze
PS-1081 E	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	Bearing, Abs. Bronze
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4322	Ward LaFrance, Diamond T

Printed in U. S. A. (Issued 6-15-48) File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2125)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush, Insulated
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy. Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-544	6	Lockwasher, C.E. Head Sc., #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Thrust, C.E.
MG-61	1	Washer, Thrust, Intermediate
ML-2035A	1	ARMATURE
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-40L	1	Connector
SST-4004	1	SWITCH, SOLENOID
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Sw. Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
GCE-24	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1060	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4324	Chris Craft

(Issued 8-25-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4325 STARTING MOTOR PARTS LIST ML-4325

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-3125)	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush, Insulated
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal, 3/8-16
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-3002A	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, C.E.
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C.E.
MG-61	1	Washer, Arm. Thrust, Intermediate
ML-2035A	1	ARMATURE
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-40L	1	Connector
SST-4004	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Term. Stud, Skpf. #10

Miscellaneous Parts

EB-99	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7805	1	SPRING, DRIVE
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8734	1	Ring, Take-Up
EB-9911	1	Shaft, & Pinion
GCE-24	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1060	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4325	Chris Craft

(Issued 9-19-49)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2117)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, C.E.
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Arm. Shaft, C.E.
MG-61	1	Washer, Arm. Thrust, Intermediate
ML-2085	1	ARMATURE
X-261	2	Key, Woodruff, #6

Miscellaneous Parts

EB-45A	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-4503	1	Head, Driving
EB-4505	1	SPRING, DRIVE
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4511A	1	Shaft & Pinion
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve, Compression
GCE-24	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1081E	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4327	Hercules

(Issued 9-30-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2117C)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
ML-1012B	1	Brush, Insulated
MLA-28	1	Stud, Terminal, 3/8-16
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002E	1	Head Assy., Comm. End
MAL-40A	1	Bearing, Abs. Bronze
ML-122	1	Felt
ML-1034AS	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-544	6	Lockwasher, C.E. Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Armature Thrust, C.E.
ML-128	*	Washer, Thrust, C.E. 1/32'' Thick
ML-128A	*	Washer, Thrust, C.E. .015'' Thick
ML-128B	*	Washer, Thrust, C.E. .045'' Thick
ML-2133	1	ARMATURE

Miscellaneous Parts

GCE-24	1	Band, Cover
ML-132	1	Head, Drive End
X-367	1	Bearing, Ball, Sealed, S.A.E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32

† BRUSH SET, SERVICE ML-2012AS.

UNIT	APPLICATION
ML-4328	Yale & Towne

(Issued 8-25-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4329 STARTING MOTOR PARTS LIST

ML-4329
(Issued 2-14-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2117	1	Frame & Field Assembly
GK-38	2	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	Bearing, Abs. Bronze
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Arm. Thrust, C. E.
ML-128	*	Washer, Thrust, C. E., 1/32" Thick
ML-128B	*	Washer, Thrust, C. E., .045" Thick
ML-134	1	Washer, Thrust, Intermediate
ML-2035A	1	ARMATURE
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
GCE-1024J	1	Band, Cover
ML-82	1	Gasket, Intermediate Bearing
ML-2135	1	BEARING ASSY., INTERMEDIATE
GEG-49	1	Retainer, Felt Washer
GT-78A	1	Washer, Felt
ML-92A	1	Bearing, Abs. Bronze
PS-1295	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-195	4	Lockwasher, Int. Brg. Screw, #8
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-878	4	Screw, Int. Bearing, Fill. Hd. #8-32x7/16

† BRUSH SET, SERVICE ML-2012S.

* Use as required.

UNIT	APPLICATION
ML-4329	J. I. Case

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2117)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C.E.
MG-61	1	Washer, Arm, Thrust, Intermediate
ML-2035A	1	ARMATURE
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-11	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-1111	1	Shaft & Pinion
GCE-24	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1050A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4330	Buda

(Issued 4-5-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2125)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush, Insulated
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher , Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C.E. Head Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C.E.
MG-61	1	Washer, Arm. Thrust Intermediate
ML-2035	1	ARMATURE
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-111R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
GCE-24	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1165	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4331	Seagrave Corp.

(Issued 10-3-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4332 STARTING MOTOR PARTS LIST

ML-4332
(Issued 10-11-50)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2125)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush, Insulated
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002C	1	Head Assy., Comm. End
MAL-40A	1	Bearing, Abs. Bronze
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C.E.
MG-61	1	Washer, Arm. Thrust, Intermediate
ML-2035	1	ARMATURE
X-261	2	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-111RA	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBA-18	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-4503	1	Head, Driving
EB-4505	1	SPRING, DRIVE
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4515	1	Stop, Pinion Back
EB-4516	1	Screw, Pinion Back Stop
EB-4519S	1	Sleeve, Compression
EBA-1811	1	Shaft & Pinion
GCE-24	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1286	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4332	Worthington Pump

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2117C)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012B †	1	Brush, Insulated
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal, 3/8-16
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002E	1	Head Assy., Comm. End
MAL-40A	1	Bearing, Abs. Bronze
ML-122	1	Felt
ML-1034AS†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, C.E.
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Arm. Shaft, C.E.
ML-128	1	Washer, Thrust, C.E., 1/32" Thick
ML-2133	1	ARMATURE

Miscellaneous Parts

GCE-24	1	Band, Cover
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012AS.

NOTE: Part numbers shown in parenthesis are not recommended for service.

UNIT	APPLICATION
ML-4333	Moto-Truc

(Issued 3-13-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4334 STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAS-20	2	Bolt, Thru
(ML-2117)	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Sc., #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C.E.
MG-61	1	Washer, Thrust, Intermediate
ML-2035A	1	ARMATURE
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-11	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-1111	1	Shaft & Pinion
GCE-24	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1060	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4334	Davey Compressor, Duplex, Hercules

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4335 MOTOR PARTS LIST

ML-4335
(Issued 3-21-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2136	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	2	Bushing, Ins., Term. Stud
MAX-35	4	Washer, Ins., Term. Stud, Outer
MAX-44	2	Washer, Plain, Term. Stud
MC-51A	1	Washer, Plain, Term. Stud
MH-28	1	Connector, Term. Stud
ML-119	1	Insulation, Term. Stud, Inner
ML-120	1	Insulation, Term. Stud, Inner
ML-2012BS	1	BRUSH SET, SERVICE
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	2	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	4	Nut, Term. Stud, Hex. 3/8-16
12X-201	4	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002FS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABSORBENT BRONZE
ML-122	1	Felt
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Arm. Shaft, C.E.
ML-128	*	Washer, Thrust, C.E., 1/32" Thick
ML-128A	*	Washer, Thrust, C.E., .015" Thick
ML-128B	*	Washer, Thrust, C.E., .045" Thick
ML-2133	1	ARMATURE

Miscellaneous Parts

GCE-1024L	1	Band, Cover
ML-132	1	Head, Drive End
X-367	1	BEARING, BALL, SEALED, S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required.

UNIT	APPLICATION
ML-4335	J. S. Barnes Corp., Yale & Towne

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2136	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	2	Bushing, Ins., Term. Stud
MAX-35	4	Washer, Ins., Term. Stud, Outer
MAX-44	2	Washer, Plain, Term. Stud
MC-51A	1	Washer, Plain, Term. Stud
MH-28	1	Connector, Term. Stud
ML-119	1	Insulation, Term. Stud, Inner
ML-120	1	Insulation, Term. Stud, Inner
ML-2012BS	1	BRUSH SET, SERVICE
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	2	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	4	Nut, Term. Stud, Hex. 3/8-16
12X-201	4	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002FS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABSORBENT BRONZE
ML-122	1	Felt
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Arm. Shaft, C. E.
ML-128	*	Washer, Thrust, C. E., 1/32" Thick
ML-128A	*	Washer, Thrust, C. E., .015" Thick
ML-128B	*	Washer, Thrust, C. E., .045" Thick
ML-2133	1	ARMATURE

Miscellaneous Parts

GCE-1024N	1	Band, Cover
X-367	1	BEARING, BALL, SEALED, S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required.

UNIT	APPLICATION
ML-4336	J.S. Barnes Corp.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4337 MOTOR PARTS LIST

ML-4337
(Issued 3-21-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2136	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	2	Bushing, Ins., Term. Stud
MAX-35	4	Washer, Ins., Term. Stud, Outer
MAX-44	2	Washer, Plain, Term. Stud
MC-51A	1	Washer, Plain, Term. Stud
MH-28	1	Connector, Term. Stud
ML-119	1	Insulation, Term. Stud, Inner
ML-120	1	Insulation, Term. Stud, Inner
ML-2012BS	1	BRUSH SET, SERVICE
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	2	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	4	Nut, Term. Stud, Hex. 3/8-16
12X-201	4	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
ML-2002FS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C. E.
ML-128	1	Washer, Thrust, C. E., 1/32" Thick
ML-2133	1	ARMATURE

Miscellaneous Parts

GCE-24M	1	Band, Cover
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

UNIT	APPLICATION
ML-4337	Moto-Truck Co., Revolvator Co

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2136	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	2	Bushing, Ins., Term. Stud
MAX-35	4	Washer, Ins., Term. Stud, Outer
MAX-44	2	Washer, Plain, Term. Stud
MC-51A	1	Washer, Plain, Term. Stud
MH-28	1	Connector, Term. Stud
ML-119	1	Insulation, Term. Stud, Inner
ML-120	1	Insulation, Term. Stud, Inner
ML-2012BS	1	BRUSH SET, SERVICE
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	2	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	4	Nut, Term. Stud, Hex. 3/8-16
12X-201	4	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002FS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Arm. Shaft, C. E.
ML-128	*	Washer, Thrust, C. E., 1/32" Thick
ML-128A	*	Washer, Thrust, C. E., .015" Thick
ML-128B	*	Washer, Thrust, C. E., .045" Thick
ML-2133	1	ARMATURE

Miscellaneous Parts

GCE-1024M	1	Band, Cover
X-367	1	BEARING, BALL, SEALED, S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required.

UNIT	APPLICATION
ML-4339	J. S. Barnes Corp.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4340 STARTING MOTOR PARTS LIST

ML-4340
(Issued 4-23-52)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
ML-2143	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAS-22	1	Insulation, Field Connection
MAW-37	2	Bushing, Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud
MBD-119	2	Washer, Ins., Term. Stud
ML-144	1	Insulation, Term. Stud, Inner
ML-145	1	Stud, Terminal
ML-146	1	Stud, Terminal
ML-147	1	Connector, Terminal
ML-148	1	Connector, Term. Stud
ML-1012E†	2	Brush
ML-3005BS	1	FIELD COIL PACKAGE
ML-1007B	1	Coil, Field, U. L.
ML-1008B	1	Coil, Field, L. R.
ML-1009G	1	Coil, Field, L. L.
ML-1010B	1	Coil, Field, U. R.
MN-21	1	Pin, Dowel
8X-179	4	Nut, Term. Stud, Hex. 3/8-16
12X-196	2	Lockwasher, Brush Lead Sc., #10
12X-201	4	Lockwasher, Term. Stud, 3/8
8X-309	1	Screw, Brush Lead, Rd. Hd. #10-32x1/2
8X-311	1	Screw, Brush Lead, Rd. Hd. #10-32x3/8
SB-42	2	Bolt, Thru
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

GAL-40C	1	Cover, Bearing, C. E.
ML-2140	1	Head Assy., Comm. End
MBD-150	1	Wick, Felt
ML-1140	1	Head Assy., Partial, C. E.
MAL-40A	1	BEARING, ABS. BRONZE
ML-1142	1	Plate Assy., Brush
MZ-19	4	Spring, Brush
12X-196	4	Lockwasher, Brush Plate Sc., #10
8X-898	4	Screw, Brush Plate, Fill. Hd. #10-32x1
X-3172	1	Oiler
12X-196	6	Lockwasher, Head Screw, #10
8X-2994	6	Screw, C. E. Head, Fill. Hd. #10-32x9/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Arm. Shaft, C. E.
ML-128	*	Washer, Thrust, C. E., 1/32" Thick
ML-128A	*	Washer, Thrust, C. E., .015" Thick
ML-128B	*	Washer, Thrust, C. E., .045" Thick
ML-2133	1	ARMATURE

Miscellaneous Parts

GCE-1024P	1	Cover, Band
ML-132	1	Head, Drive End
X-367	1	BEARING, BALL, SEALED, S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012ES.

* Use as Required.

UNIT	APPLICATION
ML-4340	Yale & Towne, J. S. Barnes

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4341 MOTOR PARTS LIST

ML-4341
(Issued 3-1-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
ML-2150	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	2	Bushing, Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud, Outer
ML-144	1	Insulation, Term. Stud Inner
ML-145	1	Stud, Terminal
ML-146	1	Stud, Terminal
ML-147	1	Connector, Terminal
ML-148	1	Connector, Term. Stud
ML-152	1	Insulation, Field Connection
ML-153	1	Ins., Field Connection, 6 3/4" Long
ML-1007C	1	Coil, Field, U. L.
ML-1008C	1	Coil, Field, L. R.
ML-1009K	1	Coil, Field, L. L.
ML-1010C	1	Coil, Field, U. R.
ML-1012E†	2	Brush
MN-21	1	Pin, Dowel
8X-179	4	Nut, Term. Stud, Hex. 3/8-16
12X-196	2	Lockwasher, Brush Lead Screw, #10
12X-201	4	Lockwasher, Term. Stud, 3/8
8X-309	1	Screw, Brush Lead, Rd. Hd. #10-32x1/2
8X-311	1	Screw, Brush Lead, Rd. Hd. #10-32x3/8
SB-42	2	Bolt, Thru
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
GAL-40C	1	Cover, Bearing, C. E.
ML-2140	1	Head Assy., Comm. End
ML-155	1	Wick, Felt
ML-1140	1	Head Assy., Partial, Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-1142	1	Plate Assy., Brush
MZ-19	4	Spring, Brush
12X-196	4	Lockwasher, Brush Plate Screw, #10
8X-898	4	Screw, Brush Plate, Fill. Hd. #10-32x1
X-3172	1	Oiler
12X-196	6	Lockwasher, C. E. Head Screw, #10
8X-2994	6	Screw, C. E. Head, Fill. Hd. #10-32x9/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C. E.
ML-128	*	Washer, Thrust, C. E., 1/32" Thick
ML-128A	*	Washer, Thrust, C. E., .015" Thick
ML-128B	*	Washer, Thrust, C. E., .045" Thick
ML-2133	1	ARMATURE

Miscellaneous Parts

GCE-1024Q	1	Band, Cover
ML-149	1	Head, Drive End
X-367	1	BEARING, BALL, SEALED, S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012ES.

* Use as required.

UNIT	APPLICATION
ML-4341	J. S. Barnes

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4342, A MOTOR PARTS LIST

ML-4342, A
(Issued 3-6-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
ML-2143B	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	2	Bushing, Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-119	1	Washer, Ins., Term. Stud, Outer
ML-144	1	Insulation, Term. Stud, Inner
ML-145	1	Stud, Terminal
ML-146	1	Stud, Terminal
ML-147	1	Connector, Terminal
ML-148	1	Connector, Term. Stud
ML-152	1	Insulation, Field Connection
ML-153	1	Ins., Fld. Conn., 6 3/4" Long
ML-157	1	Insulation, Field Conn., D. E.
ML-1007C	1	COIL, FIELD, U. L.
ML-1008C	1	COIL, FIELD, L. R.
ML-1009K	1	COIL, FIELD, L. L.
ML-1010C	1	COIL, FIELD, U. R.
ML-2012DS	1	BRUSH SET
MN-21	1	Pin, Dowel
8X-179	4	Nut, Term. Stud, Hex. 3/8-16
12X-196	2	Lockwasher, Brush Lead Sc., #10
12X-201	4	Lockwasher, Term. Stud, 3/8
8X-309	1	Screw, Brush Lead, Rd. Hd. #10-32x1/2
8X-311	1	Screw, Brush Lead, Rd. Hd. #10-32x3/8
SB-42	2	Bolt, Thru
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

GAL-40C	1	Cover, Bearing, C. E.
ML-2156	1	Head Assy., Comm. End
ML-155	1	Wick, Felt
ML-1154	1	Plate Assy., Brush Spring, Brush
MZ-19	4	
ML-1156	1	Head Assy., Partial, Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Brush Plate Sc., #10
8X-898	4	Screw, Brush Plate, Fill. Hd. #10-32x1

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
X-3172	1	Oiler
12X-196	6	Lockwasher, C. E. Head Sc., #10
8X-2994	6	Screw, C. E. Head, Fill. Hd. #10-32x9/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C. E.
ML-128	*	Washer, Thrust, C. E., 1/32" Thick
ML-128A	*	Washer, Thrust, C. E., .015" Thick
ML-128B	*	Washer, Thrust, C. E., .045" Thick
ML-2133	1	ARMATURE

Miscellaneous Parts

ML-132A	1	Head, Drive End
ML-1158	1	Band, Cover
X-367	1	BEARING, BALL, SEALED, S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required

UNIT	APPLICATION
ML-4342	Yale & Towne
ML-4342A	J. S. Barnes

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-3125	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-3002AS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABSORBENT BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

MG-61	2	Washer, Arm. Thrust, Intermediate
ML-2126	1	ARMATURE
X-261	2	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-40	1	Connector
SSW-4001	1	Solenoid Switch
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBB-33	1	Bendix Drive Assembly
EB-108	2	Lockwasher
EB-4503	1	Head
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-5219S	1	Sleeve, Compression
EBB-3305	1	SPRING, DRIVE
EBB-3311	1	Shaft & Pinion
GCE-24	1	Band, Cover
ML-95	1	Ring, Lock, Intermediate Bearing
ML-1094	1	Bearing Assy., Intermediate
ML-21A	1	BEARING, ABSORBENT BRONZE
PS-1272B	1	Housing Assy., Pinion
ML-18A	1	BEARING, ABSORBENT BRONZE
MN-21	1	Pin, Dowel
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4343	National Supply

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4344 STARTING MOTOR PARTS LIST

ML-4344
(Issued 2-5-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
ML-2150	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	2	Bushing, Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud, Outer
ML-144	1	Insulation, Term. Stud, Inner
ML-145	1	Stud, Terminal, C. E.
ML-146	1	Stud, Terminal, D. E.
ML-147	1	Connector, Terminal
ML-148	1	Connector, Term. Stud
ML-152	1	Insulation, Field Connection
ML-153	1	Insulation, Field Connection, 6 3/4'' Long
ML-1007C	1	COIL, FIELD, U. L.
ML-1008C	1	COIL, FIELD, L. R.
ML-1009K	1	COIL, FIELD, L. L.
ML-1010C	1	COIL, FIELD, U. R.
ML-1012E†	2	Brush
MN-21	1	Pin, Dowel
8X-179	4	Nut, Term. Stud, Hex. 3/8-16
12X-196	2	Lockwasher, Brush Lead Sc., #10
12X-201	4	Lockwasher, Term. Stud, 3/8
8X-309	1	Screw, Brush Lead, Rd. Hd. #10-32x1/2
8X-311	1	Screw, Brush Lead, Rd. Hd. #10-32x3/8
SB-42	2	Bolt, Thru
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

GAL-40C	1	Cover, Bearing, C. E.
ML-2156	1	Head Assy., Comm. End
ML-155	1	Wick, Felt
ML-1154	1	Plate Assy., Brush
MZ-19	4	Spring, Brush
ML-1156	1	Head Assy., Partial, Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Brush Plate Sc., #10

Comm. End Head Assembly (Cont.)

Part No.	No. Used	Name of Part
8X-898	4	Screw, Brush Plate, Fill. Hd. #10-32x1
X-3172	1	Oiler
12X-196	6	Lockwasher, C. E. Head Sc., #10
8X-2994	6	Screw, C. E. Head, Fill. Hd. #10-32x9/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C. E.
ML-128	*	Washer, Thrust, C. E., 1/32'' Thick
ML-128A	*	Washer, Thrust, C. E., .015'' Thick
ML-128B	*	Washer, Thrust, C. E., .045'' Thick
ML-2133	1	ARMATURE

Miscellaneous Parts

GCE-1024Q	1	Band, Cover
ML-149	1	Head, Drive End
X-367	1	BEARING, BALL; SEALED, S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012ES.

* Use as required.

UNIT	APPLICATION
ML-4344	J. S. Barnes

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2125	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U.L.
ML-1008	1	Coil, Field, L.R.
ML-1009	1	Coil, Field, L.L.
ML-1010	1	Coil, Field, U.R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABSORBENT BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C.E.
MG-61	1	Washer, Arm. Thrust, Intermediate
ML-2035A	1	ARMATURE
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-40	1	Connector
SST-4004	1	Solenoid Starting Switch
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBA-2	1	Bendix Drive Assembly
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
GCE-24	1	Band, Cover
ML-2027A	1	Bearing Assembly, Intermediate
ML-21A	1	BEARING, ABSORBENT BRONZE
PS-1059G	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABSORBENT BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4345	Chris Craft

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4346 STARTING MOTOR PARTS LIST

ML-4346
(Issued 8-26-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-3125	1	Frame & Field Assembly
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-3002AS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C. E.
MG-61	1	Washer, Arm. Thrust, Intermediate
ML-2035A	1	ARMATURE
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-40	1	Connector
SST-4004	1	Solenoid Switch
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Mtg., Screw, Skpf. #10

Miscellaneous Parts

EB-99	1	Bendix Drive Assembly
EB-108	2	Lockwasher
EB-7805	1	SPRING, DRIVE
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8734	1	Ring, Take-Up
EB-9911	1	Shaft & Pinion
GCE-24	1	Band, Cover
ML-2027A	1	Bearing Assembly, Intermediate
ML-21A	1	BEARING, ABSORBENT BRONZE
PS-1059G	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABSORBENT BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4346	Chris Craft

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

ML-4347 STARTING MOTOR PARTS LIST

ML-4347
(Issued 2-5-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
ML-2143A	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	2	Bushing, Ins., Term. Stud
MAX-44	2	Washer, Plain, Term. Stud, Outer
MBD-119	2	Washer, Ins., Term. Stud, Outer
ML-144	1	Insulation, Term. Stud, Inner
ML-145	1	Stud, Terminal
ML-146	1	Stud, Terminal
ML-147	1	Connector, Terminal
ML-148	1	Connector, Term. Stud
ML-152	1	Insulation, Field Connection
ML-153	1	Insulation, Field Connection, 6 3/4'' Long
ML-157	1	Insulation, Field Connection, D. E.
ML-1007C	1	COIL, FIELD, U. L.
ML-1008C	1	COIL, FIELD, L. R.
ML-1009K	1	COIL, FIELD, L. L.
ML-1010C	1	COIL, FIELD, U. R.
ML-1012E†	2	Brush
MN-21	1	Pin, Dowel
8X-179	4	Nut, Term. Stud, Hex. 3/8-16
12X-196	2	Lockwasher, Brush Lead Sc., #10
12X-201	4	Lockwasher, Term. Stud, 3/8
8X-309	1	Screw, Brush Lead, Rd. Hd. #10-32x1/2
8X-311	1	Screw, Brush Lead, Rd. Hd. #10-32x3/8
SB-42	2	Bolt, Thru
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

Part No.	No. Used	Name of Part
GAL-40C	1	Cover, Bearing, C. E.
ML-2156	1	Head Assy., Comm. End
ML-155	1	Wick, Felt
ML-1154	1	Plate Assy., Brush
MZ-19	4	Spring, Brush
ML-1156	1	Head Assy., Partial, Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Brush Plate Sc., #10

Comm. End Head Assy. (Cont.)

Part No.	No. Used	Name of Part
8X-898	4	Screw, Brush Plate, Fill. Hd. #10-32x1
X-3172	1	Oiler
12X-196	6	Lockwasher, C. E. Head Sc., #10
8X-2994	6	Screw, C. E. Head, Fill. Hd. #10-32x9/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Arm. Shaft, C. E.
ML-128	1	Washer, Thrust, C. E., 1/32'' Thick
ML-2133	1	ARMATURE

Miscellaneous Parts

GCE-1024P	1	Band, Cover
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012ES.

UNIT	APPLICATION
ML-4347	Moto-Truc

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4348 STARTING MOTOR PARTS LIST

ML-4348
(Issued 10-3-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2117	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012 †	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S †	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, C. E. Head Screw, #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Thrust, C. E.
MG-61	1	Washer, Thrust, Int.
ML-128	*	Washer, Thrust, C. E. & Int., 1/32" Thick
ML-128A	*	Washer, Thrust, C. E. & Int., .015" Thick
ML-128B	*	Washer, Thrust, C. E. & Int., .045" Thick
ML-129	*	Washer, Thrust, C. E. & Int., 1/32" Thick
ML-129A	*	Washer, Thrust, C. E. & Int., .015" Thick
ML-129B	*	Washer, Thrust, C. E. & Int., .045" Thick
ML-2115	1	ARMATURE
X-261	2	Key, Woodruff, D. E., #6

Miscellaneous Parts

EBB-42	1	BENDIX DRIVE ASSY.
GCE-24	1	Band, Cover
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	BEARING, ABSORBENT BRONZE
PS-1243A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MZ-46A	1	BEARING, ABSORBENT BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

* Use as required.

UNIT	APPLICATION
ML-4348	Kohler

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ML-4349 MOTOR PARTS LIST

ML-4349
(Issued 11-11-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2117	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012 †	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S †	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, C.E. Head Screw, #10
8X-709	6	Screw, C.E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Thrust, C.E.
ML-128	*	Washer, Thrust, C.E., 1/32" Thick
ML-128A	*	Washer, Thrust, C.E., .015" Thick
ML-128B	*	Washer, Thrust, C.E., .045" Thick
ML-2133	1	ARMATURE

Miscellaneous Parts

GCE-1024J	1	Band, Cover
ML-149	1	Head, Drive End
X-367	1	BEARING, BALL, SEALED, S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

* Use as required.

UNIT	APPLICATION
ML-4349	J.S. Barnes

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4350 STARTING MOTOR PARTS LIST

ML-4350
(Issued 3-27-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2117	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins. Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner.
MH-28	1	Connector
ML-1012‡	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S‡	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Screw, #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Thrust, C. E.
MG-61	1	Washer, Thrust, Intermediate
ML-2115	1	ARMATURE
X-261	2	Key, Woodruff, D. E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-10A	1	BENDIX DRIVE ASSY.
EBA-4833	1	Ring, Retaining
EBA-7225	1	Spring, Meshing
EBA-9913A	1	Spring, Anti-Drift
EBA-9932A	1	Pinion
EBB-1006A	1	Screw, Shaft
EBB-1031A	1	Shaft & Drive Spring
GCE-24	1	Band, Cover
ML-2027A	1	Bearing Assy., Intermediate
ML-21A	1	BEARING, ABS. BRONZE
PS-1231B	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MZ-46A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

‡ BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4350	Tractomotive Corp.

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4351 STARTING MOTOR PARTS LIST

ML-4351
(Issued 1-17-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2117	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012 †	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S †	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, C. E. Head Screw, #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Thrust, C. E.
MG-61	1	Washer, Thrust, Int.
ML-128	*	Washer, Thrust, C. E. & Int., 1/32" Thick
ML-128A	*	Washer, Thrust, C. E. & Int., .015" Thick
ML-128B	*	Washer, Thrust, C. E. & Int., .045" Thick
ML-129	*	Washer, Thrust, C. E. & Int., 1/32" Thick
ML-129A	*	Washer, Thrust, C. E. & Int., .015" Thick
ML-129B	*	Washer, Thrust, C. E. & Int., .045" Thick
ML-2115	1	ARMATURE
X-261	2	Key, Woodruff, D. E., #6

Miscellaneous Parts

EBB-42	1	BENDIX DRIVE
GCE-1024J	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Absorbent Bronze
PS-1243C	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MZ-46A	1	BEARING, ABSORBENT BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

* Use as required.

UNIT	APPLICATION
ML-4351	Massey-Harris

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4352 STARTING MOTOR PARTS LIST

ML-4352
(Issued 1-18-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2125	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012 †	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Terminal Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S †	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, C. E.
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Hd. Sc., #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

MG-61	2	Washer, Thrust, Int.
ML-2126	1	ARMATURE
X-261	2	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-40L	1	Connector
SSW-4001	1	SOLENOID STARTING SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Sc., Skpf. #10

Miscellaneous Parts

EBA-95	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-4503	1	Head, Drive
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-5219S	1	Sleeve, Compression
EBA-5005	1	SPRING, DRIVE
EBA-5411	1	Shaft & Pinion
GCE-1024J	1	Band, Cover
ML-95	1	Ring, Lock, Intermediate Brg.
ML-1094	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Absorbent Bronze
PS-1272	1	Housing Assy., Pinion
ML-18A	1	BEARING, ABS. BRONZE
MN-21	1	Pin, Dowel
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4352	J. I. Case

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis the are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4353 STARTING MOTOR PARTS LIST

ML-4353
(Issued 10-29-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2125	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush
ML-3005S	1	Field Coil Package
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	1	Stud, Terminal, 3/8-16
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connection
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Sc., #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Thrust, C. E.
MG-61	1	Washer, Thrust, Int.
ML-2115	1	ARMATURE
X-261	2	Key, Woodruff. D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-40	1	Connector
SSW-4001	1	SOLENIOD STARTING SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., RD. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBB-9	1	Bendix Drive Assy.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-7632	1	Pinion
EBB-906	1	Screw, Shaft
EBB-931	1	Shaft & Drive Spring
GCE-1024J	1	Band, Cover
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
PS-1231C	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MZ-46A	1	Bearing, Abs. Bronze
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

UNIT	APPLICATION
ML-4353	J. I. CASE

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4354 STARTING MOTOR PARTS LIST

ML-4354
(Issued 4-10-57)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt, Thru
ML-2117	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term. Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud Inner
MH-28	1	Connector
ML-1012†	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connect.
8X-179	2	Nut, Term. Stud, Hex. 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, C. E. Head Screw, #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Thrust, C. E.
MG-61	1	Washer, Thrust, Int.
ML-128	*	Washer, Thrust, C. E. & Int., 1/32" Thick
ML-128A	*	Washer, Thrust, C. E. &Int., .015"Thick
ML-128B	*	Washer, Thrust, C. E. & Int., .045" Thick
ML-129	*	Washer, Thrust, C. E. &Int., 1/32"Thick
ML-129A	*	Washer, Thrust, C. E. & Int., .015"Thick
ML-129B	*	Washer, Thrust, C. E. & Int., .045"Thick
ML-2115	1	ARMATURE
X-261	2	Key, Woodruff, D. E., #6

Miscellaneous Parts

EBB-10	1	BENDIX DRIVE ASSY.
EBA-1233	2	Ring, Retaining
EBA-1225	1	Spring, Meshing
EBA-4713	3	Spring, Anti-Drift
EBB-1032	5	Pinion
EBB-906	4	Screw Shaft
EBB-1231	6	Shaft & Drive Spring
GCE-1024J	1	Band Cover
ML-2027	1	Bearing, Assy., Intermediate
ML-2027A	1	BEARING, ABS. BRONZE
PS-1243D	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MZ-46A	1	BEARING, ABS. BRONZE
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE ML-2012S.

* Use as required

UNIT	APPLICATION
ML-4354	J. I. Case

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4355 MOTOR PARTS LIST

ML-4355
(Issued 4-10-57)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
DK-23C	2	Bolt Thru
ML-2161	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MBD-119	2	Washer, Ins., Term Stud, Outer
MDR-37	2	Bushing, Ins., Term. Stud
ML-144	1	Insulation, Term. Stud, Inner
ML-145	1	Stud, Terminal, C. E.
ML-146	1	Stud, Terminal, D. E.
ML-147	1	Connector, Terminal
ML-148	1	Connector, Term. Stud
ML-152A	1	Insulation, Field Connect.
ML-153A	1	Insulation, Field Connect. 6 3/4" Long
ML-007D	1	COIL, FIELD, L. R.
ML-008C	1	COIL, FIELD, L. R.
ML-009K	1	COIL, FIELD, L. L.
ML-1010D	1	COIL, FIELD, U. R.
ML-2012DS	1	BRUSH SET
MN-21	1	Pin, Dowel
MN-47C	2	Washer, Plain, Term. Stu Outer
12X-196	2	Lockwasher, Brush Lead Sc., #10
8X-309	1	Screw, Brush Lead, Rd. Hd. #10-32x1/2
8X-311	1	Screw, Brush Lead, Rd. Hd. #10-32x3/8
X-1064	2	Nut, Term. Stud, Hex 3/8-16
X-3338	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

GAL-40C	1	Cover, Bearing, C. E.
ML-2156	1	Head Assy., Comm. End
ML-155	1	Wick, Felt
ML-1154	1	Plate Assy., Brush
MZ-19	4	Spring, Brush
ML-1156	1	Head Assy., Partial, Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Brush Plate Sc,. #10
8X-898	4	Screw, Brush Plate, Fill. Hd. #10-32x1

Comm. End Head Assembly (Continued)

Part No.	No. Used	Name of Part
X-3172	1	Oiler
12X-196	6	Lockwasher, C. E. Head Sc., #10
8X-2994	6	Screw, C. E. Head, Fill. Hd. #10-32x9/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Thrust, C. E.
ML-128	*	Washer, Thrust, C. E., 1/32" Thick
ML-128A	*	Washer, Thrust, C. E., .015" Thick
ML-128B	1	Washer, Thrust, C. E., .045" Thick
ML-2133A	1	ARMATURE

Miscellaneous Parts

GCE-1024Q	1	Band, Cover
ML-160	1	Head, Drive End
X-367	1	BEARING, BALL, SEALED S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band Square 10-32

* Use as required.

Unit	Application
ML-4355	J. S. Barnes

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

ML-4356 STARTING MOTOR PARTS LIST

ML-4356
(Issued 4-10-57)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MH-20	2	Bolt Thru
ML-2125	1	Frame & Field Assy.
GK-38	4	Screw, Pole Shoe
MAW-37	1	Bushing, Ins., Term. Stud
MAX-35	2	Washer, Ins., Term, Stud
MAX-44	1	Washer, Plain, Term. Stud, Outer
MG-22	1	Washer, Plain, Term. Stud, Inner
MH-28	1	Connector
ML-1012†	1	Brush
ML-3005S	1	FIELD COIL PACKAGE
ML-1007	1	Coil, Field, U. L.
ML-1008	1	Coil, Field, L. R.
ML-1009	1	Coil, Field, L. L.
ML-1010	1	Coil, Field, U. R.
MLA-28	1	Stud, Terminal
MN-21	1	Pin, Dowel
MR-32	1	Insulation, Field Connect.
8X-179	2	Nut, Term. Stud, Hex 3/8-16
12X-201	2	Lockwasher, Term. Stud, 3/8
12X-1014	2	Lockwasher, Thru Bolt, 5/16

Comm. End Head Assembly & Parts Used With

ML-2002CS	1	Head Assy., Comm. End
MAL-40A	1	BEARING, ABS. BRONZE
ML-122	1	Felt
ML-1034S†	2	Brush, Grounded
MR-1062A	1	Cover, Bearing, Comm. End
MZ-19	4	Spring, Brush
12X-196	6	Lockwasher, Head Sc., #10
8X-709	6	Screw, C. E. Head, Fill. Hd. #10-32x7/16

Armature Assembly & Parts Used With

GK-174A	1	Washer, Thrust, C. E.
ML-134	1	Washer, Thrust, Int.
ML-2115	1	ARMATURE
X-261	2	Key, Woodruff, D. E. #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MBR-40	1	Connector
SSW-4001	1	Solenoid Starting Switch
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBB-9	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-7632	1	Pinion
EBB-906	1	Screw, Shaft
EBB-931	1	Shaft & Drive Spring
GCE-1024J	1	Band, Cover
ML-82	1	Gasket, Int. Bearing
ML-2135	1	Bearing Assy., Intermediate
GEG-49	1	Retainer, Felt Washer
GT-78A	1	Washer, Felt
ML-92A	1	BEARING, ABS. BRONZE
PS-1231D	1	Housing Assy., Pinion
MZ-46A	1	BEARING, ABS. BRONZE
12X-195	4	Lockwasher, Int. Bearing Sc., #8
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-878	4	Screw, Int. Bearing, Fill. Hd. #8-32x7/16

† BRUSH SET, SERVICE ML-2012S

UNIT	APPLICATION
ML-4356	Tractomotive Corp.

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MR-2001)	1	Frame & Field Assy.
GK-38	8	Pole Piece Screw
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-20	2	Comm. Head Bolt
MR-29	4	Pole Piece
MR-32	1	Field Connection Ins.
MR-1007	1	Field Coil - U.L.
MR-1008	1	Field Coil - L.R.
MR-1009	1	Field Coil - L.L.
MR-1010	1	Field Coil - U.R.

Terminal Post Assembly & Parts Used With

MR-1028	1	Terminal Post Assy.
MG-22	1	Plain Steel Washer
MG-68	2	Insulating Washer
MG-70	1	Term. Post Frame Ins.
MR-22	1	Term. Post Washer
MR-27	1	Terminal Post
MR-28	1	Term. Post Connector
MR-31	1	Term. Post Cover Ins.
SA-34	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover With Oiler
(MR-2005)	1	Comm. End Head Assy.
GK-162	2	Brush Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
MR-37	2	5/16 Lock Washer - Spe
MR-1005B	1	Comm. End Head Part Assy.
MG-1036	1	Comm. End Cap & Brg. Assembly
MR-3	1	Absorbent Bronze Bearing
8X-245	4	1/8x3/8 Oval Head Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
8X-147	2	5/16-18 Hex. Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
MR-34	1	Lead Slug
MR-2006	1	Armature Assembly
X-261	1	#6 Woodruff Key

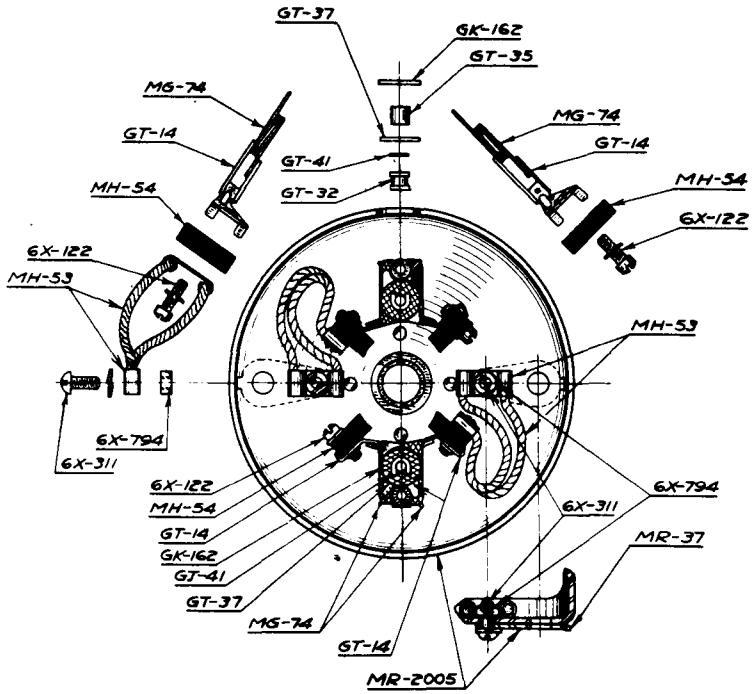
Miscellaneous Parts

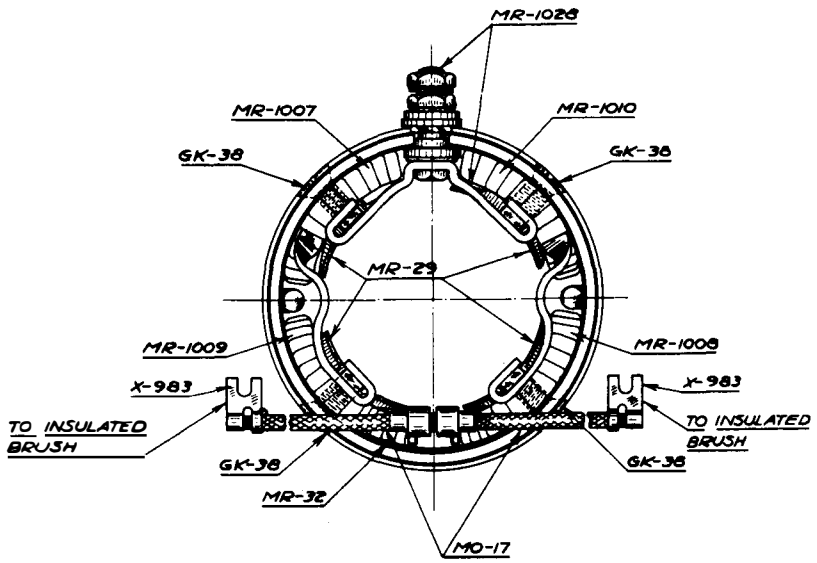
EB-33	1	Bendix Drive Assy.
GX-1024	1	Head Band Assembly
HS-1086	1	Pinion Housing Assy.
MR-18A	1	Absorbent Bronze Brg.
MR-19A	1	Absorbent Bronze Brg.
MR-16	8	#10-40x3/4 Fill. Hd. Sc.
MR-33	1	Plug
X-196	8	#10 Lock Washer
X-489	1	1/4 Oiler - Press in Type
8X-1010A	1	#8-32x1 1/4 Rd. Hd. Screw - Hardened
8X-1410	1	#8-32 Square Nut
		1 2 3 4 5

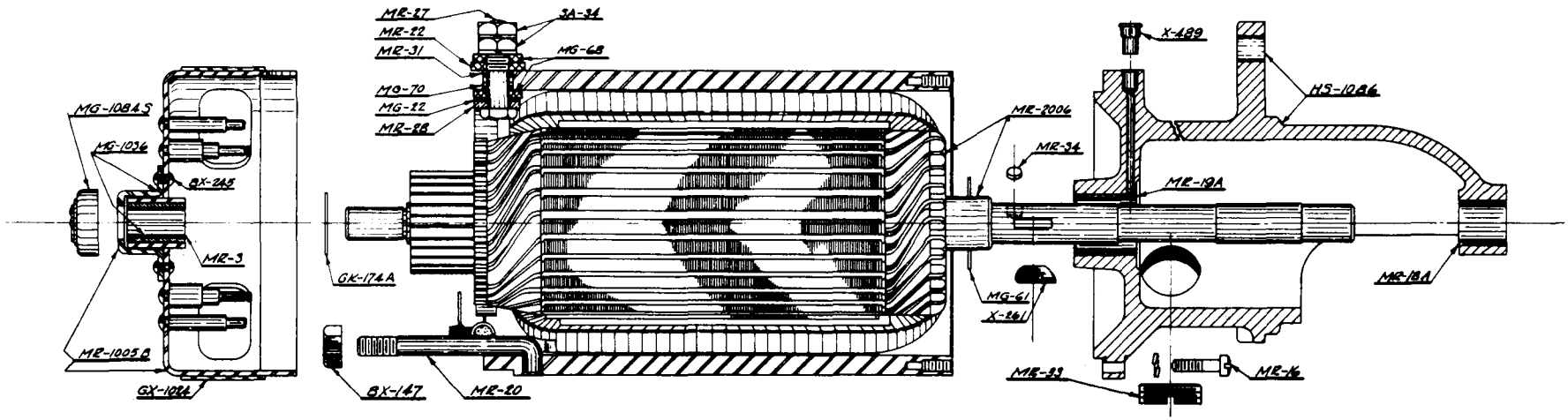
(Issued 7-19-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MR-4104 STARTING MOTOR ILLUSTRATION







Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MR-2001)	1	Frame & Field Assembly
GK-38	8	Pole Piece Screw
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-20	2	Comm. Head Bolt
MR-29	4	Pole Piece
MR-32	1	Field Connection Ins.
MR-10C7	1	Field Coil - U.L.
MR-10C8	1	Field Coil - L.R.
MR-1009	1	Field Coil - L.L.
MR-1010	1	Field Coil - U.R.

Terminal Post Assembly & Parts Used With

MR-1028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-68	2	Insulating Washer
MG-70	1	Term. Post Frame Ins.
MR-22	1	Term. Post Washer
MR-27	1	Terminal Post
MR-28	1	Term. Post Connector
MR-31	1	Term. Post Cover Ins.
SA-34	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-61	1	7/8 Plain Washer
MG-1084S	1	Bearing Cover with Oiler
(MR-2005)	1	Comm. End Head Assembly
GK-162	2	Brush Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	Brush
MR-37	2	5/16 Lock Washer - Spe.
MR-1005B	1	Comm. End Hd. Part Assy.
MG-1036	1	Comm. End Cap & Brg. Assembly
MAL-40A	1	Absorbent Bronze Bearing
8X-245	4	1/8x3/8 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Sc.
8X-794	2	#10-32 Square Nut
8X-147	2	5/16-18 Hex. Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MR-2047	1	Armature Assembly
X-261	2	#6 Woodruff Key

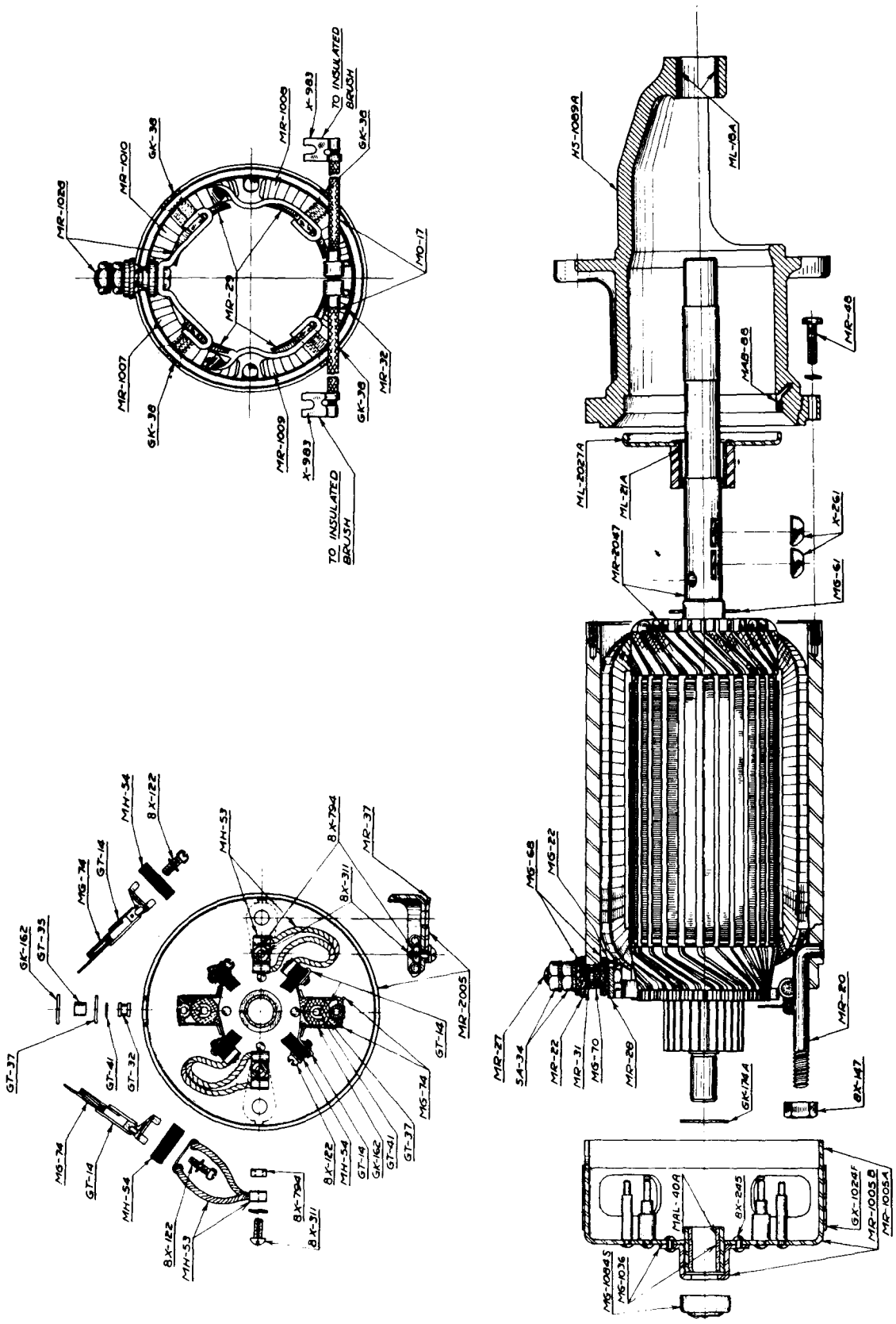
Miscellaneous Parts

EB-45A	1	Bendix Drive Assembly
GX-1024F	1	Head Band Assembly
HS-1089A	1	Pinion Housing Assy.
MAB-88	1	Dowel Pin
ML-18A	1	Absorbent Bronze Brg.
ML-2027A	1	Intermediate Brg. Assy.
ML-21A	1	Absorbent Bronze Brg.
MR-48	8	#10-40x7/8 Hex. Hd. Screw
X-196	8	#10 Lock Washer
X-489	1	1/4 Oiler - Press in Type
8X-715	1	#10-32x1 1/4 Rd. Hd. Sc.
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 11-1-37)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MR-4108 STARTING MOTOR ILLUSTRATION



ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MR-4109 STARTING MOTOR PARTS LIST MR-4109

PRELIMINARY

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MR-3001)	1	Frame & Field Assembly
GK-38	8	Pole Piece Screw
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-30	2	Comm. End Head Bolt
MR-29	4	Pole Piece
MR-32	1	Field Connection Ins.
MR-1007	1	Field Coil - U.L.
MR-1008	1	Field Coil - L.R.
MR-1009	1	Field Coil - L.L.
MR-1010	1	Field Coil - U.R.

Terminal Post Assembly & Parts Used With

MR-1028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-68	2	Insulating Washer
MG-70	1	Term. Post Frame Ins.
MR-22	1	Terminal Post Washer
MR-27	1	Terminal Post
MR-28	1	Term. Post Connector
MR-31	1	Term. Post Cover Ins.
SA-34	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(MR-3005)	1	Comm. End Head Assembly
GK-162	2	Brush Holder Spacing Ins.
GT-17	4	Brush Holder
GT-32	2	Spring Insulation
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-73	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
MR-37	2	5/16 Lock Washer-Special
MR-1005	1	C. E. Head Part Assy.
MG-1036	1	C. E. Cap & Bearing Assembly
MAL-40A	1	Absorbent Bronze Bearing
8X-245	4	1/8x3/8 Oval Hd. Rivet
X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
8X-147	2	5/16-18 Hex. Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MR-52	1	Thrust Washer
MR-2049	1	ARMATURE ASSEMBLY
SB-18	1	Thrust Washer
X-261	2	#6 Woodruff Key
X-405	1	3/32x1 1/8 Cotter Pin
X-1056	1	5/8-18 Castellated Nut

Miscellaneous Parts

GX-1024G	1	Head Band Assembly
MR-16	8	#10-40x3/4 Fill. Hd. Screw
MR-1050	1	Drive End Head Assembly
MR-51	1	ABSORBENT BRONZE BRG.
X-196	8	#10 Lock Washer
8X-1010A	1	#8-32x1 1/4 Rd. Hd. Screw-Hardened
8X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 1-20-42)

UNIT	APPLICATION
MR-4109	Minneapolis-Moline

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MR-4110 STARTING MOTOR PARTS LIST MR-4110

PRELIMINARY

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MR-2001)	1	Frame & Field Assembly
GK-38	8	Pole Piece Screw
MO-17	1	Field Coil Lead Assy.
X-983	2	Side Open Terminal
MR-20	2	Comm. Head Bolt
MR-29	4	Pole Piece
MR-32	1	Field Connection Ins.
MR-1007	1	Field Coil - U.L.
MR-1008	1	Field Coil - L.R.
MR-1009	1	Field Coil - L.L.
MR-1010	1	Field Coil - U.R.

Terminal Post Assembly & Parts Used With

MR-1028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-68	2	Insulating Washer
MG-70	1	Terminal Post Frame Ins.
MR-22	1	Terminal Post Washer
MR-27	1	Terminal Post
MR-28	1	Terminal Post Connector
MR-31	1	Terminal Post Cover Ins.
SA-34	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Plate Assembly & Parts Used With

MG-1084S	1	Bearing Cover With Oiler
(MR-2005)	1	Comm. End Head Assembly
GK-162	2	Brush Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
MR-37	2	5/16 Lock Washer - Spe.
MR-1005	1	Comm. End Head Part Assy.
MG-1036	1	Comm. End Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Brg.
8X-245	4	1/8x3/8 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
8X-147	2	5/16-18 Hex. Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MR-52	1	Thrust Washer
MR-2049	1	ARMATURE ASSEMBLY
SB-18	1	Thrust Washer
X-261	2	#6 Woodruff Key
X-405	1	3/32x1 1/8 Cotter Pin
X-1056	1	5/8-18 Castellated Nut

Miscellaneous Parts

GX-1024G	1	Head Band Assembly
MR-16	8	#10-40x3/4 Fill. Hd. Screw
MR-1050	1	Drive End Head Assembly
MR-51	1	ABSORBENT BRONZE BRG.
X-196	8	#10 Lock Washer
8X-1010A	1	#8-32x1 1/4 Rd. Hd. Screw - Hardened
8X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 5-21-41)

UNIT	APPLICATION
MR-4110	Minneapolis Moline

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MR-4111 STARTING MOTOR PARTS LIST MR-4111

PRELIMINARY

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MR-2053)	1	Frame & Field Assembly
GK-38	8	Pole Piece Screw
MO-17	1	Field Coil Lead Assy.
X-983	2	Side Open Terminal
MR-20	2	Comm. Head Bolt
MR-29	4	Pole Piece
MR-32	1	Field Connection Ins.
MR-1007	1	Field Coil - U.L.
MR-1008	1	Field Coil - L.R.
MR-1009	1	Field Coil - L.L.
MR-1010	1	Field Coil - U.R.

Terminal Post Assembly & Parts Used With

MR-1028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-68	2	Insulating Washer
MG-70	1	Terminal Post Frame Assy.
MR-22	1	Terminal Post Washer
MR-27	1	Terminal Post
MR-28	1	Terminal Post Connector
MR-31	1	Terminal Post Cover Ins.
SA-34	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Plate Assembly & Parts Used With

MG-1084S	1	Bearing Cover With Oiler
(MR-2005)	1	Comm. End Head Assy.
GK-162	2	Brush Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
MR-37	2	5/16 Lock Washer - Spe.
MR-1005	1	Comm. End Hd. Part Assy.
MG-1036	1	Comm. End Cap & Brg. Assembly
MAL-40A	1	Absorbent Bronze Bearing
SX-245	4	1/8x3/8 Oval Hd.Rivet
SX-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
SX-311	2	#10-32x3/8 Rd. Hd. Screw
SX-794	2	#10-32 Square Nut
SX-147	2	5/16-18 Hex. Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MR-54	1	Felt Retainer
MR-55	1	Felt Washer
MR-58	1	Thrust Washer
MR-59	1	Thrust Bearing
MR-2047	1	ARMATURE ASSEMBLY
X-261	2	#6 Woodruff Key

Switch Assembly & Parts Used With

SS-111R	1	Connector
SS-4301	1	SOLENOID STARTING SWITCH
X-196	1	#10 Lock Washer
SX-832	2	5/16-24 Hex. Nut
X-1014	2	5/16 Lock Washer
SX-1372	1	#10-32 Hex. Nut
SX-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EB-45A	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-4503	1	Driving Head
EB-4505	1	DRIVE SPRING
EB-4506	1	Head Spring Screw
EB-4507	1	Shaft Spring Screw
EB-4511A	1	S - A Assembly
EB-4515	1	Pinion Back Stop
EB-4516	1	Pinion Back Stop Screw
EB-4519S	1	Compression Sleeve
GX-1024F	1	Head Band Assembly
HS-1090	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
ML-18A	1	Absorbent Bronze Brg.
ML-2027C	1	INTERMEDIATE BRG. ASSY.
ML-21A	1	Absorbent Bronze Brg.
MR-48	8	#10-40x7/8 Hex. Hd. Screw
X-196	9	#10 Lock Washer
X-489	1	1/4 Oiler - Press in Type
SX-715	1	#10-32x1 1/4 Rd. Hd. Screw
SX-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 5-22-41)

UNIT	APPLICATION
MR-4111	Rich Mfg., Witte Engine

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MR-2001)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Piece
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-20	2	Bolt, C.E. Attaching
MR-29	4	Pole Piece
MR-32	1	Insulation, Field Conn.
MR-1007	1	Coil, Field, U.L.
MR-1008	1	Coil, Field, L.R.
MR-1009	1	Coil, Field, L.L.
MR-1010	1	Coil, Field, U.R.

Terminal Post Assembly & Parts Used With

MR-1028	1	Post Assy., Terminal
MG-22	1	Washer, Plain
MG-68	2	Washer, Insulating
MG-70	1	Insulation, Frame
MR-22	1	Washer, Cork
MR-27	1	Post, Terminal, 3/8-16
MR-28	1	Connector
MR-31	1	Insulation, Cover
SA-34	2	Nut, Hex., 3/8-16
X-201	2	Washer, Lock, 3/8

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Cover, Bearing
(MR-2005)	1	Head Assy., Comm. End
GK-162	2	Insulation, Spacing, B.H.
GT-14	4	Holder, Brush
GT-32	2	Insulator, Brush Spring
GT-35	2	Bushing, Insulating, Brush Holder
GT-37	2	Washer, Insulating, Brush Holder,
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	Brush
MR-37	2	Washer, Lock, C.E. Bolt
MR-1005	1	Head Assy., Partial, Comm. End
MG-1036	1	Cap & Bearing Assy., Comm. End
MAL-40A	1	Bearing, Abs. Bronze
8X-245	4	Rivet, Oval Hd., 1/8x3/8
8X-122	4	Screw, Brush, Fil. Hd., #8-32x1/2
X-195	4	Washer, Lock, Brush Sc., #8
X-196	2	Washer, Lock, Ground Sc., #10
8X-311	2	Screw, Ground, Rd. Hd., #10-32x3/8
8X-794	2	Nut, Ground Screw, Square, #10-32
8X-147	2	Nut, Comm. End Bolt, 5/16-18
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Plain, 1/2
MG-61	1	Washer, Thrust, Arm. Shaft, Int.
MR-34	1	Slug, Lead
MR-2006	1	Armature
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EB-33	1	Bendix Drive Assy.
EB-508	2	Washer, Lock
EB-2303	1	Head, Drive
EB-2319S	1	Sleeve, Compression
EB-2322	2	Clip, Spring Support
EB-2406	1	Screw, Spring, Head
EB-2407	1	Screw, Spring, Shaft
EB-3105	1	Spring, Drive
EB-3311	1	Shaft & Pinion
GX-1024	1	Band, Head
HS-1092	1	Housing Assy., Pinion
MR-18A	1	Bearing Abs. Bronze, D.E.
MR-19A	1	Bearing Abs. Bronze, Int.
MR-16	8	Screw, Pinion Housing, Fil. Hd., #10-40x3/4
MR-33	1	Plug, Pinion Housing
X-196	8	Washer, Lock, Attaching, Housing #10
X-715	1	Screw, Head Band, Rd. Hd., #10-32x1 1/4
8X-794	1	Nut, Head Band, Square, #10-32
		1 2 3 4 5

(Issued 6-17-43)

NOTE:- The MR-4113A starting motor uses EBA-11 Bendix Drive with sub parts as noted below.

EBA-11	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take-Up
EBA-1111	1	Shaft & Pinion

NOTE:- Part numbers shown in parenthesis are not recommended for service.

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MR-4113,A STARTING MOTOR ILLUSTRATION

2229

UNIT	A	B	C	D	E	F	G	H	J	K
MR-4113	EB-2322	EB-2303	EB-2319S	EB-33	EB-3105	NONE	EB-3311	EB-2407	EB-508	EB-2406
MR-4113A	NONE	EB-8503	EB-7819S	EBA-11	EB-8705	EB-8734	EBA-1111	EB-7807	EB-108	EB-7806

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MR-4114 STARTING MOTOR PARTS LIST MR-4114

PRELIMINARY

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MR-2001)	1	Frame & Field Assembly
GK-38	8	Pole Piece Screw
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-20	2	Comm. Head Bolt
MR-29	4	Pole Piece
MR-32	1	Field Connection Ins.
MR-1007	1	Field Coil - U.L.
MR-1008	1	Field Coil - L.R.
MR-1009	1	Field Coil - L.L.
MR-1010	1	Field Coil - U.R.

Terminal Post Assembly & Parts Used With

MR-1028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-68	2	Insulating Washer
MG-70	1	Term. Post Frame Ins.
MR-22	1	Term. Post Washer
MR-27	1	Terminal Post
MR-28	1	Term. Post Connector
MR-31	1	Term. Post Cover Ins.
SA-34	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(MR-2005)	1	Comm. End Head Assembly
GK-162	2	Brush Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
MR-37	2	5/16 Lock Washer - Spec.
MR-1005	1	C. E. Head Part Assy.
MG-1036	1	C. E. Cap & Bearing Assembly
MAL-40A	1	Absorbent Bronze Bearing
8X-245	4	1/8x3/8 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MR-54	1	Felt Retainer
MR-55	1	Felt Washer
MR-58	1	Thrust Washer
MR-59	1	Thrust Bearing
MR-2047	1	ARMATURE ASSEMBLY
X-261	2	#6 Woodruff Key

Miscellaneous Parts

EB-45A	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-4503	1	Driving Head
EB-4505	1	DRIVE SPRING
EB-4506	1	Head Spring Screw
EB-4507	1	Shaft Spring Screw
EB-4511A	1	S-A Assembly
EB-4515	1	Pinion Back Stop
EB-4516	1	Pinion Back Stop Screw
EB-4519S	1	Compression Sleeve
GX-1024F	1	Head Band Assembly
HS-1089	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
ML-18A	1	Absorbent Bronze Brg.
ML-2027C	1	INTERMEDIATE BEARING ASSY.
ML-21A	1	Absorbent Bronze Brg.
MR-48	8	#10-40x7/8 Hex. Hd. Screw
8X-147	2	5/16-18 Hex. Nut
X-196	8	#10 Lock Washer
X-489	1	1/4 Oiler - Press in Type
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 1-20-42)

UNIT	APPLICATION
MR-4114	Your Engine

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MR-2053)	1	Frame & Field Assembly
GK-38	8	Pole Piece Screw
MO-17	1	Field Coil Lead Assembly
X-983	2	Terminal
MR-20	2	Comm. Head Bolt
MR-29	4	Pole Piece
MR-32	1	Field Connection Ins.
MR-1007	1	Field Coil - U.L.
MR-1008	1	Field Coil - L.R.
MR-1009	1	Field Coil - L.L.
MR-1010	1	Field Coil - U.R.

Terminal Post Assembly & Parts Used With

MR-1028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-68	2	Insulating Washer
MG-70	1	Term. Post Frame Ins.
MR-22	1	Terminal Post Washer
MR-27	1	Terminal Post
MR-28	1	Terminal Post Connector
MR-31	1	Term. Post Cover Ins.
SA-34	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(MR-2005)	1	Comm. End Head Assembly
GK-162	2	Br. Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
MR-37	2	5/16 Lock Washer - Spe.
MR-1005	1	C. E. Head Part Assy.
MG-1036	1	C.E. Cap & Brg. Assy.
MAL-40A	1	Absorbent Bronze Bearing
8X-245	4	1/8x3/8 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Sc.
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Sc.
8X-794	2	#10-32 Square Nut
8X-147	2	5/16-18 Hex. Nut

Armature Assembly & Parts Used With

GK-174A	1	1/2 Plain Washer
MG-61	1	7/8 Plain Washer
MR-34	1	Lead Slug
MR-2006	1	ARMATURE ASSEMBLY
X-261	1	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6LA	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
12X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
12X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EB-33	1	BENDIX DRIVE ASSEMBLY
EB-508	2	5/16 Spe. Lock Washer
EB-2303	1	Driving Head
EB-2319S	1	Compression Sleeve
EB-2322	2	Spring Support Clip
EB-2406	1	Hd. Spr. Bolt or Screw
EB-2407	1	Shaft Spring Screw
EB-3105	1	DRIVE SPRING
EB-3311	1	S-A Assembly
GX-1024	1	Head Band Assembly
HS-1086	1	Pinion Housing Assembly
MR-18A	1	ABSORBENT BRONZE BEARING
MR-19A	1	ABSORBENT BRONZE BEARING
MR-16	8	#10-40x3/4 Fill. Hd. Screw
MR-33	1	Plug
X-196	9	#10 Lock Washer
X-489	1	1/4 Oiler - Press in Type
8X-1010A	1	#8-32x1 1/4 Rd. Hd. Screw-Hardened
8X-1410	1	#8-32 Square Nut
		1 2 3 4 5

(Issued 10-9-41)

UNIT	APPLICATION
MR-4115	Diamond T, Worthington

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
(MR-2001)	1	Frame & Field Assembly
GK-38	8	Pole Piece Screw
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-20	2	Comm. Head Bolt
MR-29	4	Pole Piece
MR-32	1	Field Connection Ins.
MR-1007	1	Field Coil - U.L.
MR-1008	1	Field Coil - L.R.
MR-1009	1	Field Coil - L.L.
MR-1010	1	Field Coil - U.R.

Terminal Post Assembly & Parts Used With

MR-1028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-68	2	Insulating Washer
MG-70	1	Terminal Post Frame Ins.
MR-22	1	Terminal Post Washer
MR-27	1	Terminal Post
MR-28	1	Terminal Post Connector
MR-31	1	Terminal Post Cover Ins.
SA-34	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Plate Assembly & Parts Used With

(MR-2005)	1	Comm. End Head Assembly
GK-162	2	Brush Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
MR-37	2	5/16 Lock Washer - Spe.
MR-1005	1	Comm. End Hd. Part Assy.
MG-1036	1	Comm. End Cap & Brg. Assembly
MAL-40A	1	Absorbent Bronze Bearing
SX-245	4	1/8x3/8 Oval Hd.Rivet
SX-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
SX-311	2	#10-32x3/8 Rd. Hd. Screw
SX-794	2	#10-32 Square Nut
SX-147	2	5/16-18 Hex. Nut
	1 2 3 4 5	

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
GK-174A	1	1/2 Plain Washer
MR-54	1	Felt Retainer
MR-55	1	Felt Washer
MR-58	1	Thrust Washer
MR-59	1	Thrust Bearing
MR-2060	1	ARMATURE ASSEMBLY
X-261	2	#6 Woodruff Key

Miscellaneous Parts

EB-45A	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-4503	1	Driving Head
EB-4505	1	DRIVE SPRING
EB-4506	1	Head Spring Screw
EB-4507	1	Shaft Spring Screw
EB-4511A	1	S - A Assembly
EB-4515	1	Pinion Back Stop
EB-4516	1	Pinion Back Stop Screw
EB-4519S	1	Compression Sleeve
GX-1024F	1	Head Band Assembly
HS-1093	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
ML-18A	1	Absorbent Bronze Brg.
ML-2027C	1	INTERMEDIATE BRG. ASSY.
ML-21A	1	Absorbent Bronze Brg.
MR-48	8	#10-40x7/8 Hex. Hd. Screw
SX-141	1	#8-32 Hex. Nut
X-196	8	#10 Lock Washer
X-489	1	1/4 Oiler - Press in Type
SX-1010A	1	#8-32x1 1/4 Rd. Hd. Screw - Hardened
	1 2 3 4 5	

(Issued 5-23-41)

UNIT	APPLICATION
MR-4116	Climax

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
(MR-3001)	1	Frame & Field Assembly
GK-38	8	Pole Piece Screw
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-20	2	Comm. Head Bolt
MR-29	4	Pole Piece
MR-32	1	Field Connection Ins.
MR-1007	1	Field Coil - U.L.
MR-1008	1	Field Coil - L.R.
MR-1009	1	Field Coil - L.L.
MR-1010	1	Field Coil - U.R.

Terminal Post Assembly & Parts Used With

MR-1028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-68	2	Insulating Washer
MG-70	1	Terminal Post Frame Ins.
MR-22	1	Terminal Post Washer
MR-27	1	Terminal Post
MR-28	1	Terminal Post Connector
MR-31	1	Terminal Post Cover Ins.
SA-34	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Plate Assembly & Parts Used With

MG-1084S	1	Bearing Cover With Oiler
(MR-3005)	1	Comm. End Head Assembly
GK-162	2	Brush Holder Spacing Ins.
GT-17	4	Brush Holder
GT-32	2	Spring Ins.
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-73	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
MR-37	2	5/16 Lock Washer-Spiral
MR-1005	1	Comm. End Hd. Part Assy.
MG-1036	1	Comm. End Cap & Brg. Assembly
MAL-40A	1	Absorbent Bronze Brg.
8X-245	4	1/8x3/8 Oval Hd.Rivet
8X-122	4	#8-32x1/2 Fill. Hd.Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
8X-147	2	5/16-18 Hex. Nut 1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part 1 2 3 4 5
GK-174A	1	1/2 Plain Washer
MR-54	1	Felt Retainer
MR-55	1	Felt Washer
MR-58	1	Thrust Washer
MR-59	1	Thrust Bearing
MR-2047	1	ARMATURE ASSEMBLY
X-261	2	#6 Woodruff Key

Miscellaneous Parts

EB-47A	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-4503	1	Driving Head
EB-4506	1	Hd. Spring Screw
EB-4507	1	Shaft Spring Screw
EB-4515	1	Pinion Back Stop
EB-4516	1	Pinion Back Stop Screw
EB-4519S	1	Compression Sleeve
EB-4705	1	DRIVE SPRING
EB-4711A	1	S - A Assembly
GX-1024F	1	Head Band Assembly
HS-1087	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
ML-18A	1	Absorbent Bronze Brg.
ML-2027C	1	INTERMEDIATE BRG. ASSY.
ML-21A	1	Absorbent Bronze Brg.
MR-48	8	#10-40x7/8 Hex. Hd. Screw
X-196	8	#10 Lock Washer
X-489	1	1/4 Oiler - Press in Type
X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut 1 2 3 4 5

(Issued 5-23-41)

UNIT	APPLICATION
MR-4117	Northwest

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MR-2001)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud
MG-68	2	Washer, Ins., Term. Stud
MG-70	1	Insulation, Term. Stud
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-20	2	Bolt, Comm. End
MR-22	1	Washer, Term. Stud
MR-27	1	Stud, Terminal
MR-28	1	Connector, Term. Stud
MR-31	1	Insulation, Term. Stud
MR-32	1	Insulation, Field Connection
MR-1007	1	Coil, Field, U.L.
MR-1008	1	Coil, Field, L.R.
MR-1009	1	Coil, Field, L.L.
MR-1010	1	Coil, Field, U.R.
SA-34	2	Nut, Term. Stud, Hex. 3/8-16
X-201	2	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

MR-1062A	1	Cover, Bearing, Comm. End
MR-2005	1	Head Assy., Comm. End
GK-162	2	Insulation, Spring, B.H.
GT-14	4	Holder, Brush
GT-32	2	Insulation, Brush Spring
GT-35	2	Bushing, Insulation, Brush Holder
GT-37	2	Washer, Insulating, Brush Holder
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54	4	BRUSH
MR-37	2	Lockwasher, C.E. Bolt
MR-1005	1	Head Assy., Partial, Comm. End
MAL-40A	1	BEARING, ABSORBENT BRONZE
8X-122	4	Screw, Brush, Fil. Hd., #8-32x1/2
X-195	4	Lockwasher, Brush Sc., #8
X-196	2	Lockwasher, Ground Sc., #10
8X-311	2	Screw, Ground, Rd. Hd., #10-32x3/8
8X-794	2	Nut, Ground Sc., Square, #10-32
8X-147	2	Nut, Comm. End Bolt, Hex. 5/16-18
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
GK-174A	1	Washer, Armature Thrust, C.E.
MR-54	1	Retainer, Felt Washer
MR-55	1	Washer, Felt
MR-58	1	Washer, Arm. Thrust, Intermediate
MR-59	1	Washer, Arm. Thrust, Intermediate
MR-2047	1	ARMATURE
X-261	2	Key, Woodruff, #6

Miscellaneous Parts

EB-45A	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-4503	1	Head, Driving
EB-4505	1	SPRING, DRIVE
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4511A	1	Shaft & Pinion
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve, Compression
GX-1024F	1	Band, Cover
HS-1089A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	Bearing, Absorbent Bronze
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Absorbent Bronze
MR-48	8	Screw, Pinion Housing, Hex. Hd, #10-40x7/8
X-196	8	Lockwasher, Housing Screw,#10
X-489	1	Oiler, Hinge Top, Press in, 1/4
8X-714	1	Screw, Cover, Band, Rd. Hd., #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

UNIT	APPLICATION
MR-4118	Hercules

(Issued 11-26-47)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MR-2053)	1	Frame & Field Assembly
GK-38	8	Pole Piece Screw
MO-17	1	Field Coil Lead Assy.
X-983	2	Terminal
MR-20	2	Comm. Head Bolt
MR-29	4	Pole Piece
MR-32	1	Field Connection Ins.
MR-1007	1	Field Coil - U.L.
MR-1008	1	Field Coil - L.R.
MR-1009	1	Field Coil - L.L.
MR-1010	1	Field Coil - U.R.

Terminal Post Assembly & Parts Used With

MR-1028	1	Terminal Post Assembly
MG-22	1	Plain Steel Washer
MG-68	2	Insulating Washer
MG-70	1	Term. Post Frame Ins.
MR-22	1	Term. Post Washer
MR-27	1	Terminal Post
MR-28	1	Term. Post Connector
MR-31	1	Term. Post Cover Ins.
SA-34	2	3/8-16 Hex. Nut
X-201	2	3/8 Lock Washer

Comm. End Head Assembly & Parts Used With

MG-1084S	1	Bearing Cover with Oiler
(MR-2005)	1	Comm. End Head Assembly
GK-162	2	Brush Holder Spacing Ins.
GT-14	4	Brush Holder
GT-32	2	Spring Insulator
GT-35	2	Insulating Bushing
GT-37	2	Insulating Washer
GT-41	2	Brush Holder Post Clip
MG-74	4	Brush Spring
MH-53	2	Ground Connector
MH-54	4	BRUSH
MR-37	2	5/16 Lock Washer - Spec.
MR-1005	1	C. E. Head Part Assy.
MG-1036	1	C. E. Cap & Bearing Assembly
MAL-40A	1	Absorbent Bronze Bearing
8X-245	4	1/8x3/8 Oval Hd. Rivet
8X-122	4	#8-32x1/2 Fill. Hd. Screw
X-195	4	#8 Lock Washer
X-196	2	#10 Lock Washer
8X-311	2	#10-32x3/8 Rd. Hd. Screw
8X-794	2	#10-32 Square Nut
8X-147	2	5/16-18 Hex. Nut

Armature Assembly & Parts Used With

GK-174A	1	1/2 Plain Washer
MR-54	1	Felt Retainer
MR-55	1	Felt Washer
MR-58	1	Thrust Washer
MR-59	1	Thrust Bearing
MR-2047	1	ARMATURE ASSEMBLY
X-261	2	#6 Woodruff Key
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6LA	1	Connector
SS-4301	1	SOLENOID STARTING SWITCH
X-196	1	#10 Lock Washer
8X-832	2	5/16-24 Hex. Nut
X-1014	2	5/16 Lock Washer
8X-1372	1	#10-32 Hex. Nut
8X-321	2	#10-32x5/16 Rd. Hd. Screw
X-1270	2	#10 Skpf. Washer

Miscellaneous Parts

EB-45A	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lock Washer
EB-4503	1	Driving Head
EB-4505	1	DRIVE SPRING
EB-4506	1	Head Spring Screw
EB-4507	1	Shaft Spring Screw
EB-4511A	1	S-A Assembly
EB-4515	1	Pinion Back Stop
EB-4516	1	Pinion Back Stop Screw
EB-4519S	1	Compression Sleeve
GX-1024F	1	Head Band Assembly
HS-1094	1	Pinion Housing Assembly
MAB-88	1	Dowel Pin
ML-18A	1	Absorbent Bronze Brg.
ML-2027C	1	INTERMEDIATE BEARING ASSY.
ML-21A	1	Absorbent Bronze Brg.
MR-48	8	#10-40x7/8 Hex. Hd. Screw
X-196	9	#10 Lock Washer
X-489	1	1/4 Oiler - Press in Type
8X-715	1	#10-32x1 1/4 Rd. Hd. Screw
8X-794	1	#10-32 Square Nut
		1 2 3 4 5

(Issued 1-20-42)

UNIT	APPLICATION
MR-4119	Biederman

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MR-2001)	1	Frame & Field Assy.
GK-38	8	Screw, Pole Shoe
MG-22	1	Washer, Plain, Term. Stud
MG-68	2	Washer, Ins., Term. Stud
MG-70	1	Bushing, Ins. Term. Stud
MO-17	1	Lead Assy., Field Coil
X-983	2	Terminal
MR-20	2	Bolt, Comm. End
MR-22	1	Washer, Ins., Term. Stud
MR-27	1	Stud, Terminal
MR-28	1	Connector, Term. Stud
MR-31	1	Insulation, Term. Stud
MR-32	1	Insulation, Field Connection
MR-3005S	1	FIELD COIL PACKAGE
MR-1007	1	Coil, Field, U.L.
MR-1008	1	Coil, Field, L.R.
MR-1009	1	Coil, Field, L.L.
MR-1010	1	Coil, Field, U.R.
SA-34	2	Nut, Term. Stud, Hex. 3/8-16
X-201	2	Lockwasher, Term. Stud, 3/8

Comm. End Head Assembly & Parts Used With

MR-1062A	1	Cover, Bearing, Comm. End
MR-2005	1	Head Assy., Comm. End
GK-162	2	Insulation, Brush Holder
GT-14	4	Holder, Brush
GT-32	2	Insulator, Brush Spring
GT-35	2	Bushing, Ins., Brush Holder
GT-37	2	Washer, Ins., Brush Holder
GT-41	2	Clip, Brush Post
MG-74	4	Spring, Brush
MH-53	2	Connector, Ground
MH-54†	4	Brush
MR-37	2	Lockwasher, C.E. Bolt
MR-1005	1	Head Assy., Partial, C.E.
MAL-40A	1	Bearing, Abs. Bronze
8X-122	4	Lockwasher, Brush #8-32x1/2
X-195	4	Lockwasher, Brush Sc., #8
X-196	2	Lockwasher, Ground Sc., #10
6X-311	2	Screw, Ground, Rd. Hd. #10-32x3/8
8X-794	2	Nut, Ground Sc., Square #10-32
8X-147	2	Nut, Comm. End Bolt, Hex. 5/16-18

Armature Assy., & Parts Used With

Part No.	No. Used	Name of Part
GK-174A	1	Washer, Arm. Shaft, C.E.
MR-54	1	Retainer, Felt Washer
MR-55	1	Washer, Felt
MR-58	1	Washer, Thrust, Intermediate
MR-59	1	Washer, Thrust, Intermediate
MR-2047	1	Armature
X-261	2	Key, Woodruff, #6

Miscellaneous Parts

EB-45A	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-4503	1	Head, Driving
EB-4505	1	SPRING, DRIVE
EB-4506	1	Screw, Spring, Head
EB-4507	1	Screw, Spring, Shaft
EB-4511A	1	Shaft & Pinion
EB-4515	1	Stop, Pinion
EB-4516	1	Screw, Pinion Stop
EB-4519S	1	Sleeve, Compression
GX-1024F	1	Band, Cover
HS-1087A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
ML-18A	1	BEARING, ABS. BRONZE
ML-2027A	1	BEARING ASSY., INTERMEDIATE
ML-21A	1	Bearing, Abs. Bronze
MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
X-196	8	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MH-1054S.

UNIT	APPLICATION
MR-4122	Palmer Bros.
	Duplex Tr.

(Issued 4-24-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ TYPE STARTING MOTORS

Name of Part	MZ-4008	MZ-4019	MZ-4020	MZ-4022	MZ-4023
Illustration	Fig. 1	Fig. 1	Fig. 1	Fig. 1	Fig. 1
ARMATURE ASSEMBLY	MZ-2049	MZ-2049	MZ-2049	MZ-2049	MZ-2049
Bearing Thrust Spacer	MZ-51	MZ-51	MZ-51	MZ-51	MZ-51
BENDIX DRIVE ASSEMBLY *	EB-27	EB-27	EB-31	EB-28	EB-28
DRIVING SPRING	EB-2305	EB-2305	EB-3105	EB-2805	EB-2805
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2002B	MZ-2002B	MZ-2002B	MZ-2002B	MZ-2002B
Frame & Field Assembly †	(MZ-2001)	(MZ-2001)	(MZ-2001)	(MZ-2001)	(MZ-2001)
Head Band Assembly	MZ-1024	MZ-1024	MZ-1024	MZ-1024	MZ-1024
INTERMEDIATE BEARING ASSY.	MAB-2040	MAB-2040	MAB-2040	MAB-2040	MAB-2040
Absorbent Bronze Brg.	MG-77A	MG-77A	MG-77A	MG-77A	MG-77A
Lock Washer - Comm. End Plate	X-544	X-544	X-544	X-544	X-544
Lock Washer - Pinion Housing		X-196	X-196	X-196	
Lock Washer - Terminal Post	X-1014	X-1014	X-1014	X-1014	X-1014
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Terminal Post	5X-1376	5X-1376	5X-1376	5X-1376	5X-1376
Oiler - 1/4 Press in Type	X-489	X-489	X-489	X-489	X-489
Pinion Housing Assembly	PS-1006	PS-1008	PS-1038	PS-1008	PS-1006
Absorbent Bronze Brg.	MG-77A	MG-77A	MG-77A	MG-77A	MG-77A
Dowel Pin	MAB-88	MAB-88	MAB-88	MAB-88	MAB-88
Screw - Comm. End Plate	X-902	X-902	X-902	X-902	X-902
Screw - Head Band	X-308	X-308	X-308	X-308	X-308
Screw - Pinion Housing	X-342	MZ-52	MZ-52	MZ-52	X-342
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - D.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Woodruff Key	X-261	X-261	X-261	X-261	X-261

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4008	Palmer Bros.
MZ-4019	Universal, Waukesha
MZ-4020	LaFrance Republic, LeRoi
MZ-4022	Niagara, Universal
MZ-4023	Palmer Bros.

(Issued 12-15-41)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

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MZ TYPE STARTING MOTORS

Name of Part	MZ-4023A	MZ-4024	MZ-4025	MZ-4027	MZ-4028
Illustration	Fig. 1	Fig. 2	Fig. 3	Fig. 4	Fig. 3
ARMATURE ASSEMBLY	MZ-2049	MZ-2082	MZ-2085	MZ-2049	MZ-2085
Bearing Thrust Spacer	MZ-51			MZ-51	
BENDIX DRIVE ASSEMBLY *		EB-22	EB-65	EB-27	EB-79
DRIVING SPRING		EB-2805	EB-6505	EB-2305	EB-6505
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2002B	MZ-2002B	MZ-2002B	MZ-2002B	MZ-2002B
Drive End Head Assembly		MZ-1079A	MZ-1079B		MZ-1079B
ABSORBENT BRONZE BRG.		MG-46A	MAK-39		MAK-39
Frame & Field Assembly †	(MZ-2001)	(MZ-2084)	(MZ-2001)	(MZ-2001)	(MZ-2001)
Head Band Assembly	MZ-1024	MZ-1024	MZ-1024	MZ-1024	MZ-1024
INTERMEDIATE BEARING ASSY.	MAB-2040			MAB-2040	
Absorbent Bronze Brg.	MG-77A			MG-77A	
Lock Washer - Comm. End Plate	X-544	X-544	X-544	X-544	X-544
Lock Washer - Pinion Housing				X-196	
Lock Washer - Terminal Post	X-1014	X-1014	X-1014	X-1014	X-1014
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Terminal Post	5X-1376	5X-1376	5X-1376	5X-1376	5X-1376
Oiler - 1/4 Press in Type	X-489	X-489			
Pinion Housing Assembly	PS-1006			PS-1064	
Absorbent Bronze Brg.	MG-77A			MG-77A	
Dowel Pin	MAB-88			MAB-88	
Screw - Comm. End Plate	X-902	X-902	X-902	X-902	X-902
Screw - Drive End Head		X-62	X-62		X-62
Screw - Head Band	X-308	X-308	X-308	X-308	X-308
Screw - Pinion Housing	X-342			MZ-52	
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - D.E.	MU-54	MU-54	MAK-54	MU-54	MAK-54
Woodruff Key	X-261	X-258		X-261	

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4023A	Palmer Bros.
MZ-4024	Willys Overland, International
MZ-4025	Lycoming, Kermath, Lathrop
MZ-4027	Novo, LeRoi
MZ-4028	Gray Marine, Chris Craft

(Issued 12-15-41)

"NOTE: Where par numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

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Name of Part	MZ-4031	MZ-4031A	MZ-4033	MZ-4035	MZ-4036
Illustration	Fig. 3	Fig. 3	Fig. 5	Fig. 6	Fig. 7
ARMATURE ASSEMBLY	MZ-2085	MZ-2085	MZ-2089	MZ-2053	MZ-2085
Bearing Thrust Spacer			MZ-51	MZ-35	
BENDIX DRIVE ASSEMBLY *	EB-65	EBA-6	EB-85	EBA-4	EB-79
DRIVING SPRING	EB-6505	EB-6505	EB-8505	EBA-405	EB-6505
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2002B	MZ-2002B	MZ-2088	MZ-2002B	MZ-2002B
Connector					SS-6L
Drive End Head Assembly	MZ-1079C	MZ-1079C		MZ-1090	MZ-1079B
ABSORBENT BRONZE BRG.	MAK-39	MAK-39		MZ-44A	MAK-39
Frame & Field Assembly †	(MZ-2001)	(MZ-2001)	(MZ-2001)	(MZ-2001)	(MZ-2093)
Head Band Assembly	MZ-1024	MZ-1024	MZ-1024	MZ-1024	MZ-1024
INTERMEDIATE BEARING ASSY.			MAB-2040		
Absorbent Bronze Brg.			MG-77A		
Lock Washer - Comm. End Plate	X-544	X-544	X-544	X-544	X-544
Lock Washer - Drive End Head				X-196	
Lock Washer - Pinion Housing			X-196		
Lock Washer - Switch Mtg.					X-1270
Lock Washer - Terminal Post	X-1014	X-1014	X-1014	X-1014	X-1014
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Terminal Post	5X-1376	5X-1376	5X-1376	5X-1376	5X-1376
Pinion Housing Assembly			PS-1079		
Dowel Pin			MAB-88		
Screw - Comm. End Plate	X-902	X-902	X-902	X-902	X-902
Screw - Drive End Head	X-62	X-62		8X-119	X-62
Screw - Head Band	X-308	X-308	X-714	X-308	X-308
Screw - Pinion Housing			MZ-52		
Screw - Switch Mtg.					8X-321
STARTING SWITCH					SS-4001
Lock Washer - #10					X-196
Lock Washer - 5/16					X-1014
Nut - #10-32					8X-1372
Nut - 5/16					8X-832
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - D.E.	MAK-54	MAK-54	MU-54	MU-54	MAK-54
Woodruff Key			X-261	X-261	

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4031	Hercules
MZ-4031A	Hercules, Climax
MZ-4033	Willys Overland
MZ-4035	Continental
MZ-4036	Gray Marine, Chris Craft

(Issued 12-15-41)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ TYPE STARTING MOTORS

Name of Part	MZ-4037	MZ-4038	MZ-4039	MZ-4040	MZ-4042
Illustration	Fig. 3	Fig. 6	Fig. 3	Fig. 7	Fig. 1
ARMATURE ASSEMBLY	MZ-2085	MZ-2095	MZ-2085	MZ-2085	MZ-2049
Bearing Thrust Spacer		MZ-35			MZ-51
BENDIX DRIVE ASSEMBLY *	EB-79		EBA-10	EB-65	EBA-4
DRIVING SPRING	EB-6505		EB-6505	EB-6505	EBA-405
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2002B	MZ-2097	MZ-2002B	MZ-2002B	MZ-2002B
Connector			SS-6R	SS-6R	SS-6R
Drive End Head Assembly	MZ-1079B	MZ-1096	MZ-1079B	MZ-1079B	
ABSORBENT BRONZE BRG.	MAK-39	MZ-44A	MAK-39	MAK-39	
Frame & Field Assembly †	(MZ-2093)	(MZ-2094)	(MZ-2093)	(MZ-2093)	(MZ-2093)
Head Band Assembly	MZ-1024	MZ-1024	MZ-1024	MZ-1024	MZ-1024
INTERMEDIATE BEARING ASSY.					MAB-2040
Absorbent Bronze Brg.					MG-77A
Lock Washer - Comm. End Plate	X-544	X-544	X-544	X-544	X-544
Lock Washer - Drive End Head		X-196			
Lock Washer - Siwtch Mtg.	X-196		X-1270	X-1270	X-1274
Lock Washer - Terminal Post	X-1014	X-1014	X-1014	X-1014	X-1014
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Terminal Post	5X-1376	5X-1376	5X-1376	5X-1376	5X-1376
Oiler - 1/4 Press in Type					X-489
Pinion Housing Assembly					PS-1150
Absorbent Bronze Brg.					MG-77A
Dowel Pin					MAB-88
Screw - Comm. End Plate	X-902	X-902	X-902	X-902	X-902
Screw - Drive End Head	X-62	8X-119	X-62	X-62	
Screw - Head Band	X-308	X-308	X-308	X-308	X-308
Screw - Pinion Housing					X-342
Screw - Switch Mtg.	8X-321		8X-321	8X-321	8X-321
STARTING SWITCH			SS-4001	SS-4001	SS-4001
Lock Washer - #10			X-196	X-196	X-196
Lock Washer - 5/16			X-1014	X-1014	X-1014
Nut - #10-32			8X-1372	8X-1372	8X-1372
Nut - 5/16			8X-832	8X-832	8X-832
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - D.E.	MAK-54	MU-54	MAK-54	MAK-54	MU-54
Woodruff Key					X-261

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4037	Chris Craft
MZ-4038	Gifford Wood
MZ-4039	Gray Marine
MZ-4040	Kermath, Scripps
MZ-4042	Centaur

(Issued 12-15-41)

"NOTE: Where part n mbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

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MZ TYPE STARTING MOTORS

Name of Part	MZ-4044	MZ-4045	MZ-4046	MZ-4047	MZ-4048
Illustration	Fig. 1	Fig. 7	Fig. 4	Fig. 8	Fig. 9
ARMATURE ASSEMBLY	MZ-2049	MZ-2085	MZ-2089	MZ-2049	MZ-2085
Bearing Thrust Spacer	MZ-51		MZ-51	MZ-51	
BENDIX DRIVE ASSEMBLY *	EB-82	EB-79	EBA-19	EB-27	EB-79
DRIVING SPRING	EB-7805	EB-6505	EBA-1405	EB-2305	EB-6505
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2002B	MZ-2002B	MZ-2002B	MZ-2002B	MZ-2002B
Connector		SS-6L			SS-6R
Drive End Head Assembly		PS-1120			PS-1120
ABSORBENT BRONZE BRG.		MAK-39			MAK-39
Frame & Field Assembly †	(MZ-2001)	(MZ-2093)	(MZ-2001)	(MZ-2054)	(MZ-2093A)
Head Band Assembly	MZ-1024	MZ-1024	MZ-1024	MZ-1024	MZ-1024A
INTERMEDIATE BEARING ASSY.	MAB-2040		MAB-2040	MAB-2040	
Absorbent Bronze Brg.	MG-77A		MG-77A	MG-77A	
Lock Washer - Comm. End Plate	X-544	X-544	X-544	X-544	X-544
Lock Washer - Drive End Head		X-196			X-196
Lock Washer - Pinion Housing			X-196	X-196	
Lock Washer - Switch Mtg.		X-1270		X-196	X-1270
Lock Washer - Terminal Post	X-1014	X-1014	X-1014	X-1014	X-1014
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Terminal Post	5X-1376	5X-1376	5X-1376	5X-1376	5X-1376
Oiler - 1/4 Press in Type	X-489				
Pinion Housing Assembly	PS-1006		PS-1121	PS-1064	
Absorbent Bronze Brg.	MG-77A		MP-41A	MG-77A	
Dowel Pin	MAB-88		MAB-88	MAB-88	
Screw - Comm. End Plate	X-902	X-902	X-902	X-902	X-902
Screw - Drive End Head		MZ-101			MZ-101
Screw - Head Band	X-308	X-308	X-308	X-308	X-308
Screw - Pinion Housing	X-342		MZ-52	MZ-52	
Screw - Switch Mtg.		8X-321		8X-321	8X-321
STARTING SWITCH		SS-4001		SW-3737S	SS-4003
Lock Washer - #10		X-196			12X-196
Lock Washer - 5/16		X-1014			12X-1014
Nut - #10-32		8X-1372			8X-1372
Nut - 5/16		8X-832			8X-832
Starting Switch Bracket Assy.				SW-1735	
Bracket - L.H.				SW-736	
Bracket - R.H.				SW-735	
Lock Washer - #10				X-196	
Nut - #10-32				8X-794	
Screw - #10-32x1/2				8X-119	
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - D.E.	MU-54	MAK-54	MU-54	MU-54	MAK-54
Woodruff Key	X-261		X-261	X-261	

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4044	Palmer Bros.
MZ-4045	Gray Marine
MZ-4046	Towmotor
MZ-4047	Duplex
MZ-4048	Gray Marine

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ TYPE STARTING MOTORS

Name of Part	MZ-4049	MZ-4050	MZ-4051	MZ-4055	MZ-4056
Illustration	Fig. 5	Fig. 7	Fig. 4	Fig. 7	Fig. 10
ARMATURE ASSEMBLY	MZ-2089	MZ-2085	MZ-2089	MZ-2085	MZ-2108
Bearing Thrust Spacer	MZ-51		MZ-51		MAW-31
BENDIX DRIVE ASSEMBLY *	EB-85	EB-65A	EBA-19	EBA-10	
DRIVING SPRING	EB-8505		EBA-1405	EB-6505	
Bracket					MAX-45A
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2088	MZ-2002B	MZ-2002B	MZ-2002B	MZ-2105
Connector	SS-6L	SS-6L	SS-6R	SS-6L	
Drive End Head Assembly		MZ-1079B		PS-1120	
ABSORBENT BRONZE BRG.		MAK-39		MAK-39	
Frame & Field Assembly †	(MZ-2093)	(MZ-2093)	(MZ-2093)	(MZ-2093)	(MZ-2103)
Head Band Assembly	MZ-1024	MZ-1024	MZ-1024	MZ-1024	MZ-24A
INTERMEDIATE BEARING ASSY.	MAB-2040		MAB-2040		
Absorbent Bronze Brg.	MG-77A		MG-77A		
Lock Washer - Bracket Mtg.					X-1272
Lock Washer - Comm. End Plate	X-544	X-544	X-544	X-544	12X-544
Lock Washer - Drive End Head				X-196	
Lock Washer - Pivot Screw					12X-201
Lock Washer - Pinion Housing	X-196		X-196		12X-544
Lock Washer - Switch Mtg.	X-1274	X-1270	X-1274	X-1270	X-1270
Lock Washer - Terminal Post	X-1014	X-1014	X-1014	X-1014	
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Pivot Screw					8X-179
Nut - Terminal Post	5X-1376	5X-1376	5X-1376	5X-1376	
Pinion Housing Assembly	PS-1079		PS-1121		PS-1140
Absorbent Bronze Brg.			MP-41A		MP-41A
Dowel Pin	MAB-88		MAB-88		
Screw - Bracket Mtg.					8X-467
Screw - Comm. End Plate	X-902	X-902	X-902	X-902	8X-902
Screw - Drive End Head		X-62			
Screw - Head Band	X-714	X-308	X-308	X-308	8X-715
Screw - Pinion Housing	MZ-52		MZ-52	MZ-101	8X-118
Screw - Pivot					MAW-33
Screw - Switch Mtg.	8X-321	8X-321	8X-321	8X-321	8X-321
STARTER CLUTCH ASSEMBLY					MAW-3132
STARTING SWITCH	SS-4001	SS-4001	SS-4001	SS-4001	SW-2677A
Lock Washer - #10	X-196	X-196	X-196	X-196	
Lock Washer	X-1014	X-1014	X-1014	X-1014	12X-201
Nut - #10-32	8X-1372	8X-1372	8X-1372	8X-1372	
Nut	8X-832	8X-832	8X-832	8X-832	8X-830
Thrust Washer - C.E.					MAD-96
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - C.E.					MU-54A
Thrust Washer - C.E.					MU-54B
Thrust Washer - D.E.	MU-54	MA -54	MU-54	MAK-54	MN-18
Woodruff Key	X-261		X-261		
Yoke Assembly					MZ-2104

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4049	Willys Overland
MZ-4050	Lycoming
MZ-4051	Continental
MZ-4055	Gray Marine
MZ-4056	Plymouth

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MZ TYPE STARTING MOTORS

Name of Part	MZ-4057	MZ-4059	MZ-4059A	MZ-4060	MZ-4062
Illustration	Fig. 2	Fig. 10	Fig. 10	Fig. 9	Fig. 11
ARMATURE ASSEMBLY	MZ-2066	MZ-2108	MZ-2108	MZ-2113	MZ-2108
Bearing Thrust Spacer	MZ-35	MAW-31	MAW-31		MAW-31
BENDIX DRIVE ASSEMBLY *	EB-28			EBA-30	
DRIVING SPRING	EB-2805			EBA-3005	
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2002B	MZ-2105	MZ-2105	MZ-2002B	MZ-2105
Drive End Head Assembly	MZ-2067			MZ-1114	
ABSORBENT BRONZE BRG.	MZ-44A			MAK-39	
Frame & Field Assembly †	(MZ-2110)	(MZ-2112)	(MZ-2112)	(MZ-2001A)	(MZ-2112A)
Head Band Assembly	MZ-1024	MZ-24A	MZ-24A	MZ-1024A	MZ-24A
Lock Washer - Comm. End Plate	X-544	12X-544	12X-544	X-544	12X-544
Lock Washer - Drive End Head	X-544			X-196	
Lock Washer - Pivot Screw		12X-201	12X-201		12X-201
Lock Washer - Pinion Housing		12X-544	12X-544		12X-544
Lock Washer - Switch Mtg.		X-1270	X-1270		X-1270
Lock Washer - Switch Terminal					12X-196
Lock Washer - Terminal Post	X-1014			X-1014	
Lock Washer - Yoke Pin					12X-199
Nut - Head Band Screw	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Pivot Screw		8X-179	8X-179		8X-179
Nut - Terminal Post	5X-1376			5X-1376	
Nut - Yoke Pin					8X-146
Pinion Housing Assembly		PS-1140	PS-1140		PS-1154
Absorbent Bronze Brg.		MP-41A	MP-41A		MP-41A
Retainer - Yoke Spring					MAD-95
Screw - Comm. End Plate	X-902	8X-902	8X-902	8X-902	8X-902
Screw - Drive End Head	X-902			8X-119	
Screw - Head Band	X-308	8X-715	8X-715	X-308	8X-715
Screw - Pinion Housing					8X-118
Screw - Pinion Housing		8X-900	8X-900		8X-900
Screw - Pivot		MAW-33	MAW-33		MAX-52
Screw - Switch Mtg.		8X-321	8X-321		8X-321
Screw - Switch Terminal					8X-1368
Spring - Yoke					MAD-93
STARTER CLUTCH ASSEMBLY		MAD-3099	MAW-3132		MAW-3132
STARTING SWITCH		SW-2677A	SW-2677A		SW-2813
Lock Washer - 3/8		12X-201	12X-201		12X-201
Nut - 3/8-16		8X-830	8X-830		8X-830
Thrust Washer - C.E.		MAD-96	MAD-96		MAD-96
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - C.E.		MU-54A	MU-54A		MU-54A
Thrust Washer - C.E.		MU-54B	MU-54B		MU-54B
Thrust Washer - D.E.	MU-54	MN-18	MN-18	MAK-54	MN-18
Woodruff Key	X-261				
Yoke Assembly		MZ-2111	MZ-2111		MZ-2015
Yoke Pin					MZ-116

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4057	Kermath
MZ-4059	Dodge Truck
MZ-4059A	Dodge Truck
MZ-4060	Hercules
MZ-4062	Plymouth, Dodge

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assemble as needed."

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MZ TYPE STARTING MOTORS

Name of Part	MZ-4062A	MZ-4063	MZ-4064	MZ-4065	MZ-4066
Illustration	Fig. 11	Fig. 12	Fig. 13	Fig. 4	Fig. 14
ARMATURE ASSEMBLY	MZ-2108	MZ-2113	MZ-2089	MZ-2089	MZ-2120
Bearing Thrust Spacer	MAW-31		MZ-51	MZ-51	
BENDIX DRIVE ASSEMBLY *		EBA-6	EB-85	EBA-19	EBA-35
DRIVING SPRING		EB-6505	EB-8505	EBA-1405	EBA-3505
Bendix Drive Pin					MZ-124
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2105	MZ-2002B	MZ-2088	MZ-2002B	MZ-2002A
Drive End Head Assembly		MZ-1114			**
ABSORBENT BRONZE BRG.		MAK-39			MAB-124
Frame & Field Assembly †	(MZ-2112A)	(MZ-2001)	(MZ-2117)	(MZ-2001)	(MZ-2119)
Head Band Assembly	MZ-24A	MZ-1024	MZ-1024	MZ-1024	MZ-1024
INTERMEDIATE BEARING ASSY.			MAB-2040	MAB-2040	
Absorbent Bronze Brg.			MG-77A	MG-77A	
Lock Washer - Comm. End Plate	12X-544	X-544	X-544	X-544	X-544
Lock Washer - Drive End Head		X-196			
Lock Washer - Pivot Screw	12X-201				
Lock Washer - Pinion Housing	12X-544		X-196	X-196	
Lock Washer - Switch Mtg.	X-1270		X-196		
Lock Washer - Switch Term.	12X-196				
Lock Washer - Terminal Post		X-1014	X-1014	X-1014	X-1014
Lock Washer - Yoke Pin	12X-199				
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Pivot Screw	8X-179				
Nut - Terminal Post		5X-1376	5X-1376	5X-1376	5X-1376
Nut - Yoke Pin	8X-146				
Pinion Housing Assembly	PS-1154		PS-1079	PS-1158	
Absorbent Bronze Brg.	MP-41A			MP-41A	
Dowel Pin			MAB-88	MAB-88	
Retainer - Yoke Spring	MAD-95				
Screw - Comm. End Plate	8X-902	8X-902	X-902	X-902	X-902
Screw - Drive End Head		8X-119			
Screw - Head Band	8X-715	X-308	X-714	X-308	X-308
Screw - Pinion Housing	8X-118				
Screw - Pinion Housing	8X-900		MZ-52	MZ-52	
Screw - Pivot	MAX-52				
Screw - Switch Mtg.	8X-321		8X-321		
Screw - Switch Terminal	8X-1368				
Spring - Yoke	MZ-142				
STARTER CLUTCH ASSEMBLY	MAD-3099				
STARTING SWITCH	SW-2813		SW-3737S		
Lock Washer - 3/8	12X-201				
Nut - 3/8-16	8X-830				
Thrust Washer - C.E.	MAD-96				
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - C.E.	MU-54A				
Thrust Washer - C.E.	MU-54B				
Thrust Washer - D.E.	MN-18	MAK-54	MU-54	MU-54	MU-54
Woodruff Key			X-261	X-261	
Yoke Assembly	MZ-2015				
Yoke Pin	MZ-116				

** Drive End Head welded to frame.

* See separate list for sub parts.

‡ See page 17 of this section for complete list of Comm. End Head sub parts.

† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4062A	Plymouth, Dodge
MZ-4063	Hercules, Hobart, John Bean
MZ-4064	Willys Overland
MZ-4065	Auburn Auto Co.
MZ-4066	Studebaker

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MZ TYPE STARTING MOTORS

Name of Part	MZ-4067	MZ-4068	MZ-4069	MZ-4071	MZ-4072
Illustration	Fig. 12	Fig. 1	Fig. 1	Fig. 15	Fig. 6
ARMATURE ASSEMBLY	MZ-2085	MZ-2049	MZ-2089	MZ-2049	MZ-2053
Bearing Thrust Spacer		MZ-51	MZ-51	MZ-51	MZ-35
BENDIX DRIVE ASSEMBLY *	EB-79	EBA-14	EBA-36	EBA-2	EBA-4
DRIVING SPRING	EB-6505	EBA-1405	EBA-405	EB-8705	EBA-405
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2002B	MZ-2002B	MZ-2002B	MZ-2002B	MZ-2002B
Drive End Head Assembly	PS-1120				MZ-1129
ABSORBENT BRONZE BRG.	MAK-39				MZ-44A
Felt Washer - Int. Plate				MZ-127	
Frame & Field Assembly †	(MZ-2123)	(MZ-2001)	(MZ-2001)	(MZ-2001)	(MZ-2001)
Gasket - Int. Plate				MZ-128	
Head Band Assembly	MZ-1024	MZ-1024	MZ-1024G	MZ-1024J	MZ-1024G
INTERMEDIATE BEARING ASSY.		MAB-2040	MAB-2040	MZ-1125	
Absorbent Bronze Brg.		MG-77A	MG-77A	MZ-44A	
Lock Washer - Comm. End Plate	X-544	X-544	X-544	X-544	X-544
Lock Washer - Drive End Head	X-196				X-196
Lock Washer - Int. Brg. Plate				X-195	
Lock Washer - Pinion Housing		X-196	X-196		
Lock Washer - Terminal Post	X-1014	X-1014	X-1014	X-1014	X-1014
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Terminal Post	5X-1376	5X-1376	5X-1376	5X-1376	5X-1376
Oiler - 1/4 Press in Type		X-489	X-489		
Pinion Housing Assembly		PS-1008	PS-1096A	PS-1163	
Absorbent Bronze Brg.		MG-77A	MP-41A	MG-77A	
Dowel Pin		MAB-88	MAB-88		
Screw - Comm. End Plate	X-902	X-902	X-902	X-902	X-902
Screw - Drive End Head	MZ-101				8X-119
Screw - Head Band	X-308	X-308	X-308	X-308	X-308
Screw - Int. Brg. Plate				8X-878	
Screw - Pinion Housing		MZ-52	MZ-52	X-342	
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - D.E.	MAK-54	MU-54	MU-54	MU-54	MU-54
Washer - Felt Protector				MZ-126	
Woodruff Key		X-261	X-261	X-261	X-261

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4067	Novo
MZ-4068	Universal
MZ-4069	White
MZ-4071	J. I. Case
MZ-4072	Massey Harris, J. I. Case, Continental

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MZ TYPE STARTING MOTORS

Name of Part	MZ-4073	MZ-4074	MZ-4076	MZ-4077	MZ-4078
Illustration	Fig. 12	Fig. 6	Fig. 8	Fig. 3	Fig. 16
ARMATURE ASSEMBLY	MZ-2113	MZ-2130	MZ-2134	MZ-2085	MZ-2134
BENDIX DRIVE ASSEMBLY *	EBA-6	EBA-35	EBA-33	EB-81	EBA-33
DRIVING SPRING	EB-6505	EBA-3505	EBA-2105	EB-6505	EBA-2105
Bendix Drive Pin		MZ-124			
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2002B	MZ-2002A	MZ-2002B	MZ-2002B	MZ-2002B
Connector					SS-6R
Drive End Head Assembly	MZ-1114	MZ-1131		MZ-1136	
ABSORBENT BRONZE BRG.	MAK-39	MAB-124		MAK-39	
Frame & Field Assembly †	(MZ-2001)	(MZ-2119B)	(MZ-2054)	(MZ-2135)	(MZ-2093B)
Head Band Assembly	MZ-1024	MZ-1024	MZ-1024	MZ-1024	MZ-1024D
Lock Washer - Comm. End Plate	X-544	X-544	X-544	X-544	12X-544
Lock Washer - Drive End Head	X-196	X-196		X-544	
Lock Washer - Pinion Housing			X-196		12X-544
Lock Washer - Switch Mtg.			X-196		X-1270
Lock Washer - Terminal Post	X-1014	X-1014		X-1014	12X-1014
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Terminal Post	5X-1376	5X-1376		5X-1376	8X-1376
Pinion Housing Assembly			PS-1164		PS-1166
Absorbent Bronze Brg.			MP-41A		MP-41A
Screw - Comm. End Plate	8X-902	X-902	X-902	X-902	
Screw - Drive End Head	8X-119	8X-119		X-902	8X-902
Screw - Head Band	X-308	X-308	X-308	X-308	8X-308
Screw - Pinion Housing			8X-118		8X-118
Screw - Switch Mtg.			8X-321		8X-321
STARTING SWITCH			SW-3737S		SS-4001
Lock Washer - #10					X-196
Lock Washer - 5/16					X-1014
Nut - #10-32					8X-1372
Nut - 5/16					8X-832
Starting Switch Bracket Assy.			SW-1735		
Bracket - L.H.			SW-736		
Bracket - R.H.			SW-735		
Lock Washer - #10			X-196		
Nut - #10-32			8X-794		
Screw - #10-32x1/2			8X-119		
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - D.E.	MAK-54	MU-54	MN-18	MAK-54	MN-18
Woodruff Key			X-261		X-261

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4073	Fate-Root-Heath
MZ-4074	Studebaker
MZ-4076	Hupp Motor
MZ-4077	Crosley
MZ-4078	Packard

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MZ TYPE STARTING MOTORS

Name of Part	MZ-4079	MZ-4079A	MZ-4082	MZ-4084	MZ-4085
Illustration	Fig. 6	Fig. 17	Fig. 13	Fig. 12	Fig. 4
ARMATURE ASSEMBLY	MZ-2138	MZ-2138	MZ-2089	MZ-2085	MZ-2049
Bearing Thrust Spacer	MZ-35	MZ-35	MZ-51		MZ-51
BENDIX DRIVE ASSEMBLY *	EBA-29	EBA-29	EBA-41		EBA-49
DRIVING SPRING	EBA-2905	EBA-2905	EB-8505		EBA-1405
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2002B	MZ-2002B	MZ-2088	MZ-2002B	MZ-2002B
Connector		XA-555			SS-6L
Drive End Head Assembly	MZ-1139	MZ-1139		PS-1120	
ABSORBENT BRONZE BRG.	MAB-124	MAB-124		MAK-39	
Oiler - 1/4 Press in Type	X-489	X-489			
Frame & Field Assembly	(MZ-2140)	(MZ-2140)	(MZ-2117)	(MZ-2001)	(MZ-2093)
Head Band Assembly	MZ-1024F	MZ-1024F	MZ-1024	MZ-1024	MZ-1024
INTERMEDIATE BEARING ASSY.			MAB-2040		MAB-2040
Absorbent Bronze Brg.			MG-77A		MG-77A
Lock Washer - Comm. End Plate	X-544	X-544	X-544	X-544	X-544
Lock Washer - Drive End Head	X-196	X-196		X-196	
Lock Washer - Pinion Housing			X-196		X-196
Lock Washer - Switch Mtg.		X-1274	X-196		X-1274
Lock Washer - Switch Term. #10		12X-196			
Lock Washer-Switch Term. 5/16		12X-1014			
Lock Washer - Terminal Post	X-1014	12X-1014		X-1014	X-1014
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Switch Term. #10-32		8X-1372			
Nut - Switch Term. - 5/16-24		8X-832			
Nut - Terminal Post	5X-1376	5X-1376		5X-1376	5X-1376
Pinion Housing Assembly			PS-1079		PS-1172
Absorbent Bronze Brg.					MG-77A
Dowel Pin			MAB-88		MAB-88
Screw - Comm. End Plate	X-902	X-902	X-902	X-902	X-902
Screw - Drive End Head	8X-119	8X-119		MZ-101	
Screw - Head Band	X-308	X-308	X-714	X-308	X-308
Screw - Pinion Housing			MZ-52		MZ-52
Screw - Switch Mtg.		8X-1555	8X-321		8X-321
STARTING SWITCH		XA-554	SW-3737S		SS-4001
Lock Washer - #10					X-196
Lock Washer - 5/16					X-1014
Nut - #10-32					8X-1372
Nut - 5/16					8X-832
Terminal		X-949			
Terminal		X-999			
Terminal		X-1461			
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - D.E.	MU-54	MU-54	MU-54	MAK-54	MU-54
Washer - Switch Terminal		MU-37			
Woodruff Key	X-261	X-261	X-261		X-261

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4079	Hudson
MZ-4079A	Hudson
MZ-4082	Willys Overland
MZ-4084	Gorman Rupp
MZ-4085	Kermath

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

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MZ TYPE STARTING MOTORS

Name of Part	MZ-4086	MZ-4087	MZ-4089	MZ-4089A	MZ-4090
Illustration	Fig. 4	Fig. 18	Fig. 11	Fig. 11	Fig. 6
ARMATURE ASSEMBLY	MZ-2049	MZ-2180	MZ-2108	MZ-2108	MZ-2130
Bearing Thrust Spacer	MZ-51	MAB-35	MAW-31	MAW-31	
BENDIX DRIVE ASSEMBLY *	EBA-4	EBA-48			EBA-35
DRIVING SPRING	EBA-405	EBA-4805			EBA-3505
Bendix Drive Pin		MZ-124			MZ-124
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2002B	MZ-2002B	MZ-2105	MZ-2105	MZ-2002A
Connector		MZ-144			
Drive End Head Assembly		MZ-1147			MZ-1131
ABSORBENT BRONZE BRG.		MAB-124			MAB-124
Oil Seal		XA-560			
Frame & Field Assembly †	(MZ-2001)	(MZ-2146)	(MZ-2112A)	(MZ-2112A)	(MZ-2152)
Head Band Assembly	MZ-1024	MZ-1024	MZ-24A	MZ-24A	MZ-1024
INTERMEDIATE BEARING ASSY.	MAB-2040				
Absorbent Bronze Brg.	MG-77A				
Lock Washer - Comm. End Plate	X-544	X-196	12X-544	12X-544	X-544
Lock Washer - Drive End Head		X-1274			X-196
Lock Washer - Pivot Screw			12X-201	12X-201	
Lock Washer - Pinion Housing	X-196		12X-544	12X-544	
Lock Washer - Switch Mtg.		X-1274	X-1270	X-1270	
Lock Washer - Switch Term.			12X-196	12X-196	
Lock Washer - Terminal Post	X-1014	X-1014			X-1014
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Pivot Screw			8X-179	8X-179	
Nut - Terminal Post	5X-1376	5X-1376			5X-1376
Pinion Housing Assembly	PS-1064		PS-1173	PS-1173	
Absorbent Bronze Brg.	MG-77A		MP-41A	MP-41A	
Dowel Pin	MAB-88				
Retainer - Yoke Spring			MAD-95	MAD-95	
Screw - Comm. End Plate	X-902	X-902	8X-902	8X-902	X-902
Screw - Drive End Head		8X-119			8X-119
Screw - Head Band	X-308	X-308	8X-715	8X-715	X-308
Screw - Pinion Housing	MZ-52		8X-900	8X-900	
Screw - Pinion Housing			8X-118	8X-118	
Screw - Pivot			MAX-52	MAX-52	
Screw - Switch Mtg.		8X-321	8X-321	8X-321	
Screw - Switch Terminal			8X-1368	8X-1368	
Spring - Yoke			MZ-142	MZ-142	
STARTER CLUTCH ASSEMBLY			MAD-3099	MAW-3132	
STARTING SWITCH		SS-4001	SW-2813	SW-2813	
Lock Washer - #10		X-196			
Lock Washer		X-1014	12X-201	12X-201	
Nut - #10-32		8X-1372			
Nut		8X-832	8X-830	8X-830	
Thrust Washer - C.E.			MAD-96	MAD-96	
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - C.E.			MU-54A	MU-54A	
Thrust Washer - C.E.			MU-54B	MU-54B	
Thrust Washer - D.E.	MU-54	MU-54	MN-18	MN-18	MU-54
Thrust Washer - D.E.		MZ-148			
Woodruff Key	X-261				
Yoke Assembly			MZ-2500	MZ-2500	

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4086	LeRoi
MZ-4087	Aircooled Motors
MZ-4089	Dodge, Plymouth
MZ-4089A	Dodge, Plymouth
MZ-4090	Studebaker

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"NOTE: Where par numbers are shown in parenthesis they are for reference only. By stocking sub-parts he complete part can be assembled as needed."

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MZ TYPE STARTING MOTORS

Name of Part	MZ-4092	MZ-4092A	MZ-4093	MZ-4094	MZ-4095
Illustration	Fig. 17	Fig. 17	Fig. 13	Fig. 18	Fig. 15
ARMATURE ASSEMBLY	MZ-2138	MZ-2138	MZ-2089	MZ-2113	MZ-2049
Bearing Thrust Spacer	MZ-35	MZ-35	MZ-51		MZ-51
BENDIX DRIVE ASSEMBLY *	EBA-29		EB-85	EBA-6	EBA-2
DRIVING SPRING	EBA-2905		EB-8505	EB-6505	EB-8705
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2002B	MZ-2002B	MZ-2156	MZ-2002B	MZ-2002B
Connector	SS-6R	SS-6R		SS-182	
Drive End Head Assembly	MZ-1139	MZ-1139		MZ-1114	
ABSORBENT BRONZE BRG.	MAB-124	MAB-124		MAK-39	
Oiler - 1/4 Press in Type	X-489	X-489			
Felt Washer - Int. Plate					MZ-127
Frame & Field Assembly †	(MZ-2093)	(MZ-2093)	(MZ-2117)	(MZ-2155)	(MZ-2001)
Gasket - Int. Plate					MZ-128
Gasket - Starting Switch			MAB-136		
Gasket - Starting Switch			MAB-137		
Head Band Assembly	MZ-1024F	MZ-1024	MZ-1024	MZ-1024	MZ-1024J
INTERMEDIATE BEARING ASSY.			MAB-2040		MZ-1125
Absorbent Bronze Brg.			MG-77A		MZ-44A
Lock Washer - Comm. End Plate	X-544	X-544	X-544	X-544	X-544
Lock Washer - Drive End Head	X-196	X-196		X-196	
Lock Washer - Int. Brg. Plate					X-195
Lock Washer - Pinion Housing			X-196		X-1621
Lock Washer - Switch Mtg.	X-1274	X-1274	X-196	X-1274	
Lock Washer - Terminal Post	12X-1014	12X-1014	X-1014	X-1014	X-1014
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Terminal Post	5X-1376	5X-1376	5X-1376	5X-1376	5X-1376
Pinion Housing Assembly			PS-1079		PS-1163A
Absorbent Bronze Brg.					MG-77A
Dowel Pin			MAB-88		
Screw - Comm. End Plate	X-902	X-902	X-902	X-902	X-902
Screw - Drive End Head	8X-119	8X-119		8X-119	
Screw - Head Band	X-308	X-308	X-714	X-308	X-308
Screw - Int. Brg. Plate					8X-878
Screw - Pinion Housing			MZ-52		X-342
Screw - Switch Mtg.	8X-1555	8X-1555	8X-321	8X-321	
STARTING SWITCH	SS-4001	SS-4001	SW-3737S	SS-4001	
Lock Washer - #10	X-196	X-196		X-196	
Lock Washer - 5/16	X-1014	X-1014		X-1014	
Nut - #10-32	8X-1372	8X-1372		8X-1372	
Nut - 5/16	8X-832	8X-832		8X-832	
Terminal	X-949	X-949			
Terminal	X-999	X-999			
Terminal	X-1461	X-1461			
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - D.E.	MU-54	MU-54	MU-54	MAK-54	MU-54
Thrust Washer-Int. Plate Felt.					MZ-126
Washer - Switch Terminal	MU-37	MU-37			
Woodruff Key	X-261	X-261	X-261		X-261

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4092	Hudson
MZ-4092A	Wise Foundry
MZ-4093	Willys Overland
MZ-4094	Hobart Bros.
MZ-4095	J. I. Case

(Issued 12-15-41)

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MZ TYPE STARTING MOTORS

Name of Part	MZ-4096	MZ-4098	MZ-4099	MZ-4100	MZ-4101
Illustration	Fig. 18	Fig. 12	Fig. 13	Fig. 5	Fig. 19
ARMATURE ASSEMBLY	MZ-2113	MZ-2113	MZ-2089	MZ-2089	MZ-2165
Bearing Thrust Spacer			MZ-51	MZ-51	MZ-35
BENDIX DRIVE ASSEMBLY *	EBA-6	EBA-6	EBA-46	EBA-46	
DRIVING SPRING	EB-6505	EB-6505	EB-8505	EB-8505	
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Bushing - Term. Ins.					SW-915
Comm. End Plate Assembly ‡	MZ-2002B	MZ-2002B	MZ-2156	MZ-2156	MZ-2002B
Connector	SS-187			SS-6L	MZ-167
Cotter Pin - Switch Lever					X-1531
Drive End Head Assembly	MZ-1114	MZ-1114			
ABSORBENT BRONZE BRG.	MAK-39	MAK-39			
Frame & Field Assembly †	(MZ-2157)	(MZ-2001)	(MZ-2117)	(MZ-2093)	(MZ-2135A)
Gasket - Starting Switch			MAB-136		
Gasket - Starting Switch			MAB-137		
Head Band Assembly	MZ-1024	MZ-1024J	MZ-1024	MZ-1024	MZ-1024D
Insulating Washer					MAK-80
Insulation Block					MAW-39A
INTERMEDIATE BEARING ASSY.			MAB-2040	MAB-2040	
Absorbent Bronze Brg.			MG-77A	MG-77A	
Lever - Switch					MZ-164
Link Pin - Large					MZ-168
Link Pin - Small					MZ-170
Lock Washer - Comm. End Plate	X-544	X-544	X-544	X-544	X-544
Lock Washer - Drive End Head	X-196	X-196			
Lock Washer - Pivot Sc.					X-201
Lock Washer - Pinion Housing			X-196	X-196	X-544
Lock Washer - Switch Mtg.	X-1274		X-196	X-1274	X-1270
Lock Washer - Switch Term.					X-201
Lock Washer - Terminal Post	X-1014	X-1014	X-1014	X-1014	X-1014
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Pivot Screw					8X-179
Nut - Switch Terminal					8X-830
Nut - Terminal Post	5X-1376	5X-1376	5X-1376	5X-1376	8X-1376
Pinion Housing Assembly			PS-1079	PS-1079	PS-1183
Absorbent Bronze Brg.					MAK-40
Absorbent Bronze Brg.					MG-77A
Dowel Pin			MAB-88	MAB-88	
Retainer - Yoke Spring					MAD-95
Screw - Comm. End Plate	8X-902	8X-902	X-902	X-902	8X-902
Screw - Drive End Head	8X-119	8X-119			
Screw - Head Band	X-308	X-308	X-714	X-714	8X-308
Screw - Pinion Housing			MZ-52	MZ-52	8X-119
Screw - Pivot					MAX-52
Screw - Switch Contact					8X-113
Screw - Switch Mtg.					8X-311
Screw - Switch Mtg.	8X-321		8X-321	8X-321	8X-309
Spring - Yoke					MZ-169
STARTER CLUTCH ASSEMBLY					MZ-3158
STARTING SWITCH	SS-4021		SW-3737S	SS-4001	SW-3911
Lock Washer - #10	12X-196			X-196	
Lock Washer - 5/16	12X-1014			X-1014	
Nut - #10-32	8X-1372			8X-1372	
Nut - 5/16	8X-832			8X-832	
Switch Contact - Lower					SW-913
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - D.E.	MAK-54	MAK-54	MU-54	MU-54	MU-54
Washer - Leather - D.E.					MZ-161
Washer - Plain Large					8X-354
Washer - Plain Small					EW-200
Woodruff Key			X-261	X-261	
Yoke Assembly					MZ-2162

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4096	American Bantam
MZ-4098	Cleveland Tractor
MZ-4099	Willys Overland
MZ-4100	Willys Overland
MZ-4101	Crosley

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Name of Part	MZ-4102	MZ-4104	MZ-4105	MZ-4106	MZ-4107
Illustration	Fig. 18	Fig. 1	Fig. 11	Fig. 16	Fig. 16
ARMATURE ASSEMBLY	MZ-2113	MZ-2089	MZ-2108	MZ-2134	MZ-2134
Bearing Thrust Spacer		MZ-51	MAW-31		
BENDIX DRIVE ASSEMBLY *	EBA-6	EBA-36		EBA-53	EBA-47
DRIVING SPRING	EB-6505	EBA-405		EBA-4505	EBA-4505
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2002B	MZ-2002B	MZ-2105	MZ-2002B	MZ-2002B
Connector	SS-191			SS-6L	
Drive End Head Assembly	MZ-1114				
ABSORBENT BRONZE BRG.	MAK-39				
Frame & Field Assembly †	(MZ-2171)	(MZ-2001)	(MZ-2176)	(MZ-2093)	(MZ-2001)
Head Band Assembly	MZ-1024	MZ-1024G	MZ-24A	MZ-1024	MZ-1024
INTERMEDIATE BEARING ASSY.		MAB-2040			
Absorbent Bronze Brg.		MG-77A			
Lock Washer - Comm. End Plate	X-544	X-544	12X-544	X-544	X-544
Lock Washer - Drive End Head	X-196				
Lock Washer - Pivot Screw			12X-201		
Lock Washer - Pinion Housing		X-196	12X-544	X-196	X-196
Lock Washer - Switch Mtg.	X-1274		X-1270	X-1274	
Lock Washer - Terminal Post	X-1014	X-1014		X-1014	X-1014
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Pivot Screw			8X-179		
Nut - Terminal Post	5X-1376	5X-1376		5X-1376	5X-1376
Oiler - 1/4 Press in Type		X-489			
Pinion Housing Assembly		PS-1184	PS-1185	PS-1189	PS-1192
Absorbent Bronze Brg.		MP-41A	MP-41A	MP-41A	MP-41A
Dowel Pin		MAB-88			
Screw - Comm. End Plate	8X-902	X-902	8X-902	X-902	X-902
Screw - Drive End Head	8X-119				
Screw - Head Band	X-308	X-308	8X-715	X-308	X-308
Screw - Pinion Housing		MZ-52	8X-900	MZ-177	8X-118
Screw - Pivot			MZ-175		
Screw - Switch Mtg.	8X-321		8X-321	8X-321	
STARTER CLUTCH ASSEMBLY			MAW-3132		
STARTING SWITCH	SS-4021		SW-2813	SS-4001	
Lock Washer - #10	12X-196			X-196	
Lock Washer	12X-1014		12X-201	X-1014	
Nut - #10-32	8X-1372			8X-1372	
Nut	8X-832		8X-830	8X-832	
Thrust Washer - C.E.			MAD-96		
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - C.E.			MU-54A		
Thrust Washer - C.E.			MU-54B		
Thrust Washer - D.E.	MAK-54	MU-54	MN-18	MN-18	MN-18
Woodruff Key		X-261		X-261	X-261
Yoke Assembly			MZ-2174		

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4102	American Bantam
MZ-4104	White Motor
MZ-4105	Dodge, Plymouth
MZ-4106	Chris Craft
MZ-4107	Ready Power

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MZ TYPE STARTING MOTORS

Name of Part	MZ-4108	MZ-4109	MZ-4112	MZ-4113	MZ-4114
Illustration	Fig. 5	Fig. 13	Fig. 12	Fig. 5	Fig. 6
ARMATURE ASSEMBLY	MZ-2089	MZ-2089	MZ-2113	MZ-2089	MZ-2053
Bearing Thrust Spacer	MZ-51	MZ-51		MZ-51	MZ-35
BENDIX DRIVE ASSEMBLY *	EBA-46	EBA-46	EBA-6	EBA-46	EBA-4
DRIVING SPRING	EB-8505	EB-8505	EB-6505	EB-8505	EBA-405
BRUSH SET	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S	MZ-2012S
Comm. End Plate Assembly ‡	MZ-2156	MZ-2156	MZ-2002B	MZ-2156	MZ-2002B
Connector	SS-6L				
Drive End Head Assembly			MZ-1186		MZ-1129
ABSORBENT BRONZE BRG.			MAK-39		MZ-44A
Frame & Field Assembly †	(MZ-2093)	(MZ-2117)	(MZ-2185)	(MZ-2001)	(MZ-2001)
Gasket - Starting Switch		MAB-136			
Gasket - Starting Switch		MAB-137			
Head Band Assembly	MZ-1024	MZ-1024	MZ-1024	MZ-1024	MZ-1024G
INTERMEDIATE BEARING ASSY.	MAB-2040	MAB-2040		MAB-2040	
Absorbent Bronze Brg.	MG-77A	MG-77A		MG-77A	
Lock Washer - Comm. End Plate	X-544	X-544	X-544	X-544	X-544
Lock Washer - Drive End Head			X-196		X-196
Lock Washer - Pinion Housing	X-196	X-196		X-196	
Lock Washer - Switch Mtg.	X-1274	X-196			
Lock Washer - Terminal Post	X-1014	X-1014	X-1014	X-1014	X-1014
Nut - Head Band	8X-794	8X-794	8X-794	8X-794	8X-794
Nut - Terminal Post	5X-1376	5X-1376	5X-1376	5X-1376	5X-1376
Pinion Housing Assembly	PS-1079A	PS-1079A		PS-1079A	
Dowel Pin	MAB-88	MAB-88		MAB-88	
Screw - Comm. End Plate	X-902	X-902	8X-902	X-902	X-902
Screw - Drive End Head			8X-119		8X-119
Screw - Head Band	X-714	X-714	X-308	X-714	X-308
Screw - Pinion Housing	MZ-52	MZ-52		MZ-52	
Screw - Switch Mtg.	8X-321	8X-321			
STARTING SWITCH	SS-4001	SW-3737S			
Lock Washer - #10	X-196				
Lock Washer - 5/16	X-1014				
Nut - #10-32	8X-1372				
Nut - 5/16	8X-832				
Thrust Washer - C.E.	MU-54	MU-54	MU-54	MU-54	MU-54
Thrust Washer - D.E.	MU-54	MU-54	MAK-54	MU-54	MU-54
Woodruff Key	X-261	X-261		X-261	X-261

* See separate list for sub parts.
‡ See page 17 of this section for complete list of Comm. End Head sub parts.
† See pages 18 to 20 of this section for complete list of Frame & Field sub parts.

UNIT	USED ON
MZ-4108	Willys Overland
MZ-4109	Willys Overland
MZ-4112	Hercules
MZ-4113	Willys (U.S. Gov't.)
MZ-4114	J. I. Case

(Issued 12-15-41)

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Comm. End Head Assys.

Name of Part	MZ-2002A	MZ-2002B	MZ-2088	MZ-2097	MZ-2105
Brush Assembly - Grounded	MZ-1034	MZ-1034	MZ-1034	MZ-1034	MZ-1034
Brush Holder	MZ-16	MZ-16	MZ-16	MZ-16	MZ-16
Brush Spring	MZ-19	MZ-19	MZ-19	MZ-19	MZ-19
Rivet - Brush Holder	X-532	X-532	X-532	X-532	X-532
Felt Pad					MAD-110
Oiler - Press in Type					X-390

Name of Part	MZ-2156
Brush Assembly - Grounded	MZ-1034
Brush Holder	MZ-16
Brush Spring	MZ-19
Rivet - Brush Holder	X-532

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FRAME & FIELD ASSEMBLY

Name of Part	MZ-2001	MZ-2001A	MZ-2054	MZ-2084	MZ-2093
Connector & Brush Assy.		MZ-1102			
Brush		MZ-12			
Connector - Field Coil	MZ-32	MZ-32	MZ-32	MZ-32	MZ-32
Bushing Ins.- Terminal Post	MU-31	MU-31	MU-31	MU-31	MU-31
Field Coil - U.L.	MZ-1007	MZ-1007	MZ-1007	MZ-1007	MZ-1007
Field Coil - U.R.	MZ-1010	MZ-1010B	MZ-1010	MZ-1010	MZ-1010
Field Coil Assy.- L.L.	MZ-1009B	MZ-1009C	MZ-1009B	MZ-1009B	MZ-1009B
Brush	MZ-12		MZ-12	MZ-12	MZ-12
Field Coil Assy.- L.R.	MZ-1008A	MZ-1008B	MZ-1008A	MZ-1008A	MZ-1008A
Brush	MZ-12		MZ-12	MZ-12	MZ-12
Insulation Field Connection	MZ-30A	MAB-30	MZ-30A	MZ-30A	MZ-30A
Lock Washer-5/16 Term. Post	X-1014	X-1014	X-1014	X-1014	X-1014
Nut - 5/16-24 Term. Post	5X-1376	5X-1376	X-180	5X-1376	5X-1376
Pole Piece	MZ-29	MZ-29	MZ-29	MZ-29	MZ-29
Pole Piece Screw	MZ-38A	MZ-38A	MZ-38A	MZ-38A	MZ-38A
Terminal - Terminal Post	MU-14	MAU-14	MU-14	MU-14	MU-14
Terminal Post	MU-28	MU-28	MZ-28	MU-28	MU-28
Washer - 5/16 Plain	MU-37	MU-37	MU-37	MU-37	MU-37
Washer Ins. - Inner	MU-39	MU-39	MU-39	MU-39	MU-39
Washer Ins.- Term. Post Outer	MAB-31	MAB-31	MU-32	MAB-31	MAB-31

Name of Part	MZ-2093A	MZ-2093B	MZ-2094	MZ-2103	MZ-2110
Connector & Brush Assy.	MZ-1102				
Brush	MZ-12				
Connector - Field Coil	MZ-32	MZ-32	MZ-32	MZ-32	MZ-32
Bushing Ins.- Terminal Post	MU-31	MU-31	MU-31	MU-31	MU-31
Field Coil - U.L.	MZ-1007	MZ-1007	MZ-1007	MZ-1007D	MZ-1007
Field Coil - U.R.	MZ-1010B	MZ-1010	MZ-1010	MZ-1010D	MZ-1010
Field Coil Assy.- L.L.	MZ-1009C	MZ-1009B	MZ-1009B	MZ-1009B	MZ-1009B
Brush		MZ-12	MZ-12	MZ-12	MZ-12
Field Coil Assy.- L.R.	MZ-1008B	MZ-1008A	MZ-1008A	MZ-1008A	MZ-1008A
Brush		MZ-12	MZ-12	MZ-12	MZ-12
Insulating Block				MAW-39A	
Insulation Field Connection	MAB-30	MZ-30A	MZ-30A	MZ-30A	MZ-30A
Lock Washer - 5/16 Term. Post	X-1014	12X-1014	X-1014		X-1014
Nut - 5/16-24 Term. Post	5X-1376	8X-1376	5X-1376	8X-1376	5X-1376
Pole Piece	MZ-29	MZ-29	MZ-29	MZ-29	MZ-29
Pole Piece Screw	MZ-38A	MZ-38A	MZ-38A	MZ-38A	MZ-38A
Switch Contact - Lower				SW-763A	
Terminal - Terminal Post	MAU-14	MU-14	MU-14		MU-14
Terminal Post	MU-28	MU-28	MU-28	MZ-109	MU-28
Washer - 5/16 Plain	MU-37	MU-37	MU-37		MU-37
Washer Ins. - Inner	MU-39	MU-39	MU-39	MAK-80	MU-39
Washer Ins.-Term. Post Outer	MAB-31	MAB-31	MAB-31		MAB-31

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FRAME & FIELD ASSEMBLY

Name of Part	MZ-2112	MZ-2112A	MZ-2117	MZ-2119	MZ-2119B
Connector - Field Coil	MZ-32	MZ-32	MZ-32	MZ-32	MZ-32
Bushing Ins.- Terminal Post	MU-31	MU-31	MU-31	MU-31	MU-31
Dowel Pin					MN-21
Field Coil - U.L.	MZ-1007D	MZ-1007D	MZ-1007D	MZ-1007	MZ-1007
Field Coil - U.R.	MZ-1010D	MZ-1010D	MZ-1010D	MZ-1010	MZ-1010
Field Coil Assy.- L.L.	MZ-1009B	MZ-1009B	MZ-1009B	MZ-1009B	MZ-1009B
Brush	MZ-12	MZ-12	MZ-12	MZ-12	M -12
Field Coil Assy.- L.R.	MZ-1008A	MZ-1008A	MZ-1008A	MZ-1008A	MZ-1008A
Brush	MZ-12	MZ-12	MZ-12	MZ-12	MZ-12
Insulating Block	MAW-39A	MAW-39A			
Insulation Field Connection	MZ-30A	MZ-30A	MZ-30A	MZ-30A	MZ-30A
Lock Washer- 5/16 Term. Post			X-1014	X-1014	X-1014
Nut - 5/16-24 Term. Post	8X-1376	8X-1376	X-180	5X-1376	5X-1376
Pole Piece	M -29	MZ-29	MZ-29	MZ-29	MZ-29
Pole Piece Screw	MZ-38A	MZ-38A	MZ-38A	MZ-38A	MZ-38A
Switch Contact - Lower	SW-763A	SW-764A			
Terminal - Terminal Post				MU-14	MU-14
Terminal Post	MZ-109	MZ-109	MZ-118	MU-28	MU-28
Washer - 5/16 Plain			MU-37	MU-37	MU-37
Washer Ins. - Inner	MAK-80	MAK-80	MAK-80	MU-39	MU-39
Washer Ins.-Term. Post Outer			MU-32	MAB-31	MAB-31

Name of Part	MZ-2123	MZ-2135	MZ-2135A	MZ-2140	MZ-2146
Connector - Field Coil	MZ-32	MZ-32	MZ-32	MZ-32	MZ-32
Bushing Ins.- Term. Post	MU-31	MU-31	MU-31	MU-31	MU-31
Field Coil - U.L.	MZ-1007	MZ-1007	MZ-1007	MZ-1007	MZ-1007
Field Coil - U.R.	MZ-1010	MZ-1010	MZ-1010	MZ-1010	MZ-1010
Field Coil Assy.- L.L.	MZ-1009B	MZ-1009B	MZ-1009B	MZ-1009B	MZ-1009B
Brush	MZ-12	MZ-12	MZ-12	MZ-12	MZ-12
Field Coil Assy.- L.R.	MZ-1008A	MZ-1008A	MZ-1008A	MZ-1008A	MZ-1008A
Brush	MZ-12	MZ-12	MZ-12	MZ-12	MZ-12
Insulation Field Connection	MZ-30A	MZ-30A	MZ-30A	MZ-30A	MZ-30A
Lock Washer - 5/16 Term. Post	X-1014	X-1014	X-1014	X-1014	X-1014
Nut - 5/16-24 Term. Post	5X-1376	5X-1376	5X-1376	5X-1376	5X-1376
Pole Piece	MZ-29	MZ-29	MZ-29	MZ-29	MZ-29
Pole Piece Screw	MZ-38A	MZ-38A	MZ-38A	MZ-38A	MZ-38A
Terminal - Terminal Post	MU-14	MU-14	MU-14	MU-14	MU-14
Terminal Post	MU-28	MU-28	MU-28	MU-28	MU-28
Washer - 5/16 Plain	MU-37	MU-37	MU-37	MU-37	MU-37
Washer Ins. - Inner	MU-39	MU-39	MU-39	MU-39	MU-39
Washer Ins.-Term. Post Outer	MAB-31	MAB-31	MAB-31	MAB-31	MAB-31

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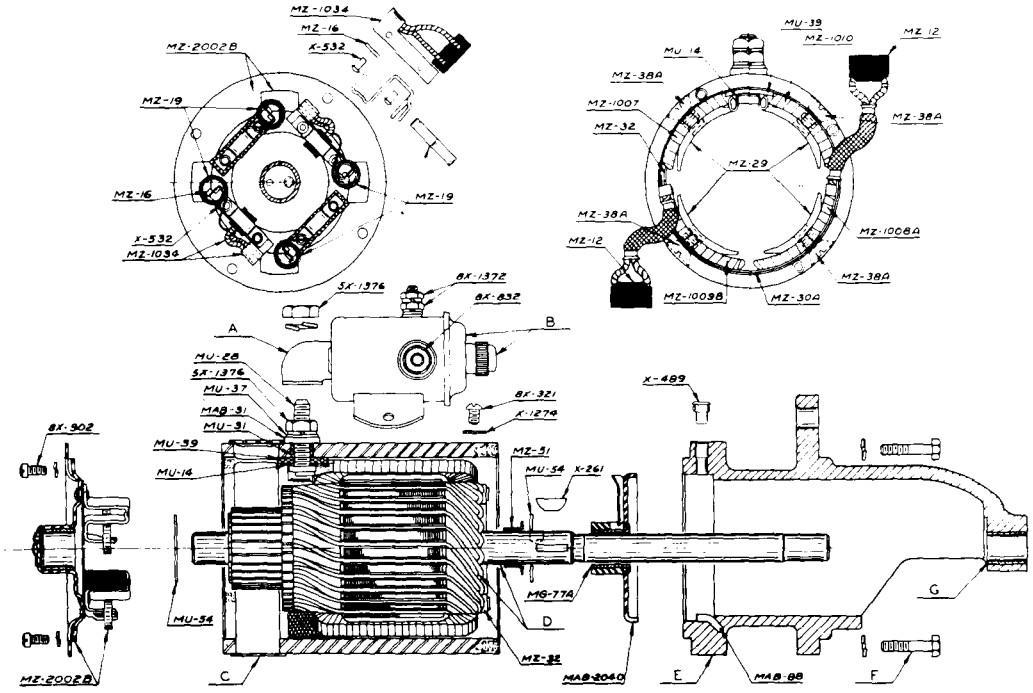
FRAME & FIELD ASSEMBLY

Name of Part	MZ-2152	MZ-2155	MZ-2157	MZ-2171	MZ-2176
Connector - Field Coil	MZ-32	MZ-32	MZ-32	MZ-32	MZ-32
Bushing Ins.- Terminal Post	MU-31	MU-31	MU-31	MU-31	MU-31
Dowel Pin	MN-21				
Field Coil - U.L.	MZ-1007	MZ-1007	MZ-1007	MZ-1007	MZ-1007D
Field Coil - U.R.	MZ-1010	MZ-1010	MZ-1010	MZ-1010	MZ-1010D
Field Coil Assy.- L.L.	MZ-1009B	MZ-1009B	MZ-1009B	MZ-1009B	MZ-1009B
Brush	MZ-12	MZ-12	MZ-12	MZ-12	MZ-12
Field Coil Assy.- L.R.	MZ-1008A	MZ-1008A	MZ-1008A	MZ-1008A	MZ-1008A
Brush	MZ-12	MZ-12	MZ-12	MZ-12	MZ-12
Insulating Block					MAW-39A
Insulation Field Connection	MZ-30A	MZ-30A	MZ-30A	MZ-30A	MZ-30A
Lock Washer - 5/16 Term. Post	X-1014	X-1014	X-1014	X-1014	
Nut - 5/16-24 Term. Post	5X-1376	5X-1376	5X-1376	5X-1376	8X-1376
Pole Piece	MZ-29	MZ-29	MZ-29	MZ-29	MZ-29
Pole Piece Screw	MZ-38A	MZ-38A	MZ-38A	MZ-38A	MZ-38A
Switch Contact - Lower					SW-764A
Terminal - Terminal Post	MU-14	MU-14	MU-14	MU-14	
Terminal Post	MU-28	MU-28	MU-28	MU-28	MZ-109
Washer - 5/16 Plain	MU-37	MU-37	MU-37	MU-37	
Washer Ins. - Inner	MU-39	MU-39	MU-39	MU-39	MAK-80
Washer Ins.-Term. Post Outer	MAB-31	MAB-31	MAB-31	MAB-31	

Name of Part	MZ-2185
Connector	MZ-32
Bushing Ins.- Term. Post	MU-31
Field Coil - U.L.	MZ-1007D
Field Coil - U.R.	MZ-1010D
Field Coil Assy.- L.L.	MZ-1009B
Brush	MZ-12
Field Coil Assy.- L.R.	MZ-1008A
Brush	MZ-12
Insulation Field Connection	MZ-30A
Lock Washer - 5/16 Term. Post	X-1014
Nut - 5/16-24 Term. Post	5X-1376
Pole Piece	MZ-29
Pole Piece Screw	MZ-38A
Terminal Post	MZ-60
Washer - 5/16 Plain	MU-37
Washer Ins.- Inner	MAK-80
Washer Ins.-Term. Post Outer	MAB-31

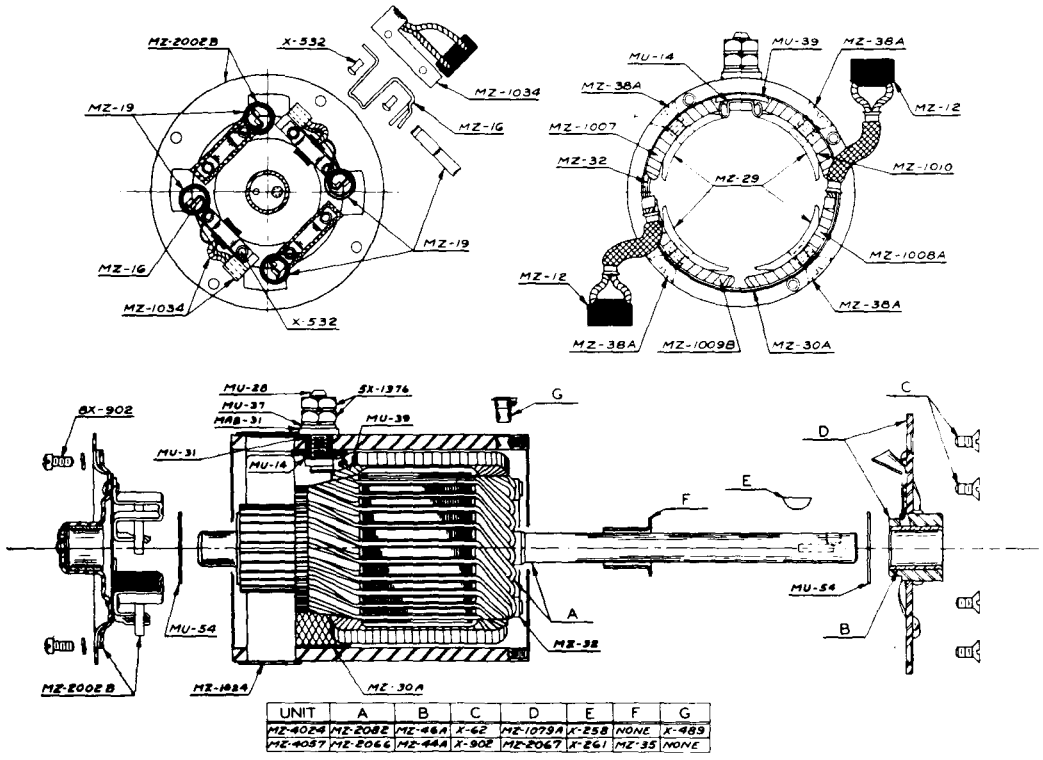
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UNIT	A	B	C	D	E	F	G
MZ-4008	NONE	NONE	MZ-1026	MZ-2049	PS-1006	X-342	MG-77A
MZ-4019	NONE	NONE	MZ-1026	MZ-2049	PS-1008	MZ-52	MG-77A
MZ-4020	NONE	NONE	MZ-1026	MZ-2049	PS-1038	MZ-52	MG-77A
MZ-4022	NONE	NONE	MZ-1026	MZ-2049	PS-1008	MZ-52	MG-77A
MZ-4023	NONE	NONE	MZ-1026	MZ-2049	PS-1006	X-342	MG-77A
MZ-4023A	NONE	NONE	MZ-1026	MZ-2049	PS-1006	X-342	MG-77A
MZ-4042	35-6R	35-4001	MZ-1026	MZ-2049	PS-1150	X-342	MG-77A
MZ-4044	NONE	NONE	MZ-1026	MZ-2049	PS-1006	X-342	MG-77A
MZ-4068	NONE	NONE	MZ-1026	MZ-2049	PS-1008	MZ-52	MG-77A
MZ-4069	NONE	NONE	MZ-1026G	MZ-2049	PS-1038A	MZ-52	MP-41A
MZ-4104	NONE	NONE	MZ-1026G	MZ-2049	PS-1104	MZ-52	MP-41A

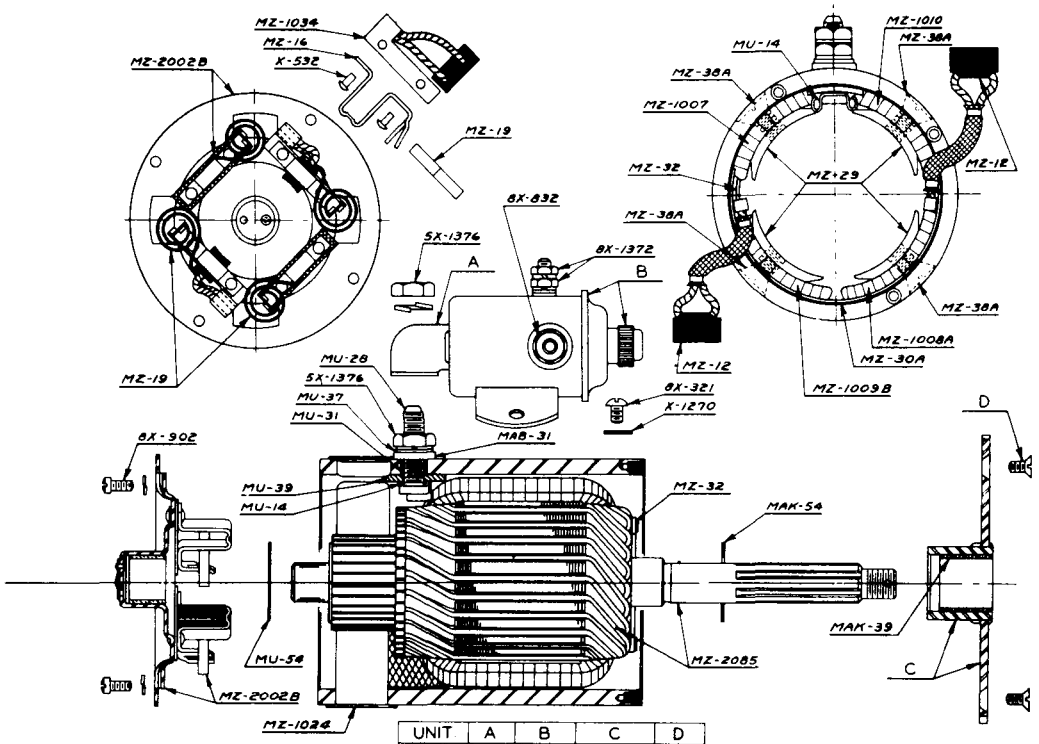
Figure 1



UNIT	A	B	C	D	E	F	G
MZ-4024	MZ-2082	MZ-46A	X-62	MZ-1079A	X-258	NONE	X-489
MZ-4057	MZ-2066	MZ-44A	X-902	MZ-2067	X-261	MZ-35	NONE

MZ-2

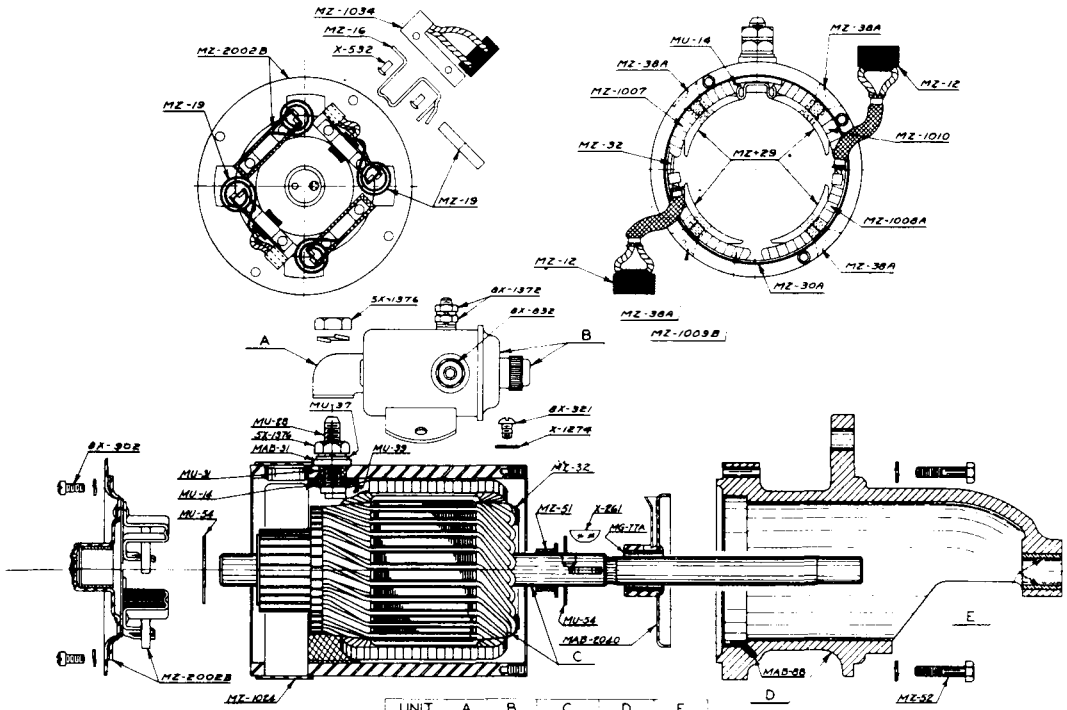
Figure 2



UNIT	A	B	C	D
MZ-4025	NONE	NONE	MZ-1079B	X-62
MZ-4028	NONE	NONE	MZ-1079B	X-62
MZ-4031	NONE	NONE	MZ-1079C	X-62
MZ-4031A	NONE	NONE	MZ-1079C	X-62
MZ-4037	NONE	NONE	MZ-1079B	X-62
MZ-4039	SS-6R	SS-4001	MZ-1079B	X-62
MZ-4077	NONE	NONE	MZ-1136	X-902

MZ-3

Figure 3



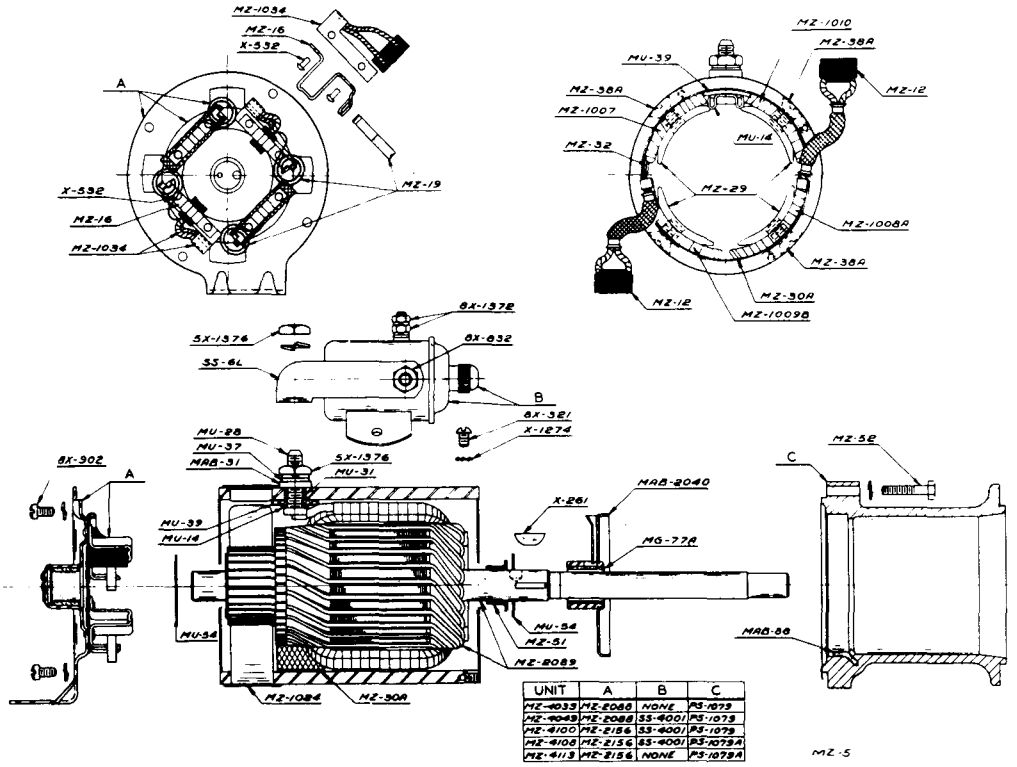
UNIT	A	B	C	D	E
MZ-4027	NONE	NONE	MZ-2049	PS-1064	MG-77A
MZ-4046	NONE	NONE	MZ-2089	PS-1181	MP-41A
MZ-4051	SS-6R	SS-4001	MZ-2089	PS-1181	MP-41A
MZ-4065	NONE	NONE	MZ-2089	PS-1158	MP-41A
MZ-4085	SS-6L	SS-4001	MZ-2049	PS-1172	MG-77A
MZ-4086	NONE	NONE	MZ-2049	PS-1064	MG-77A

Figure 4

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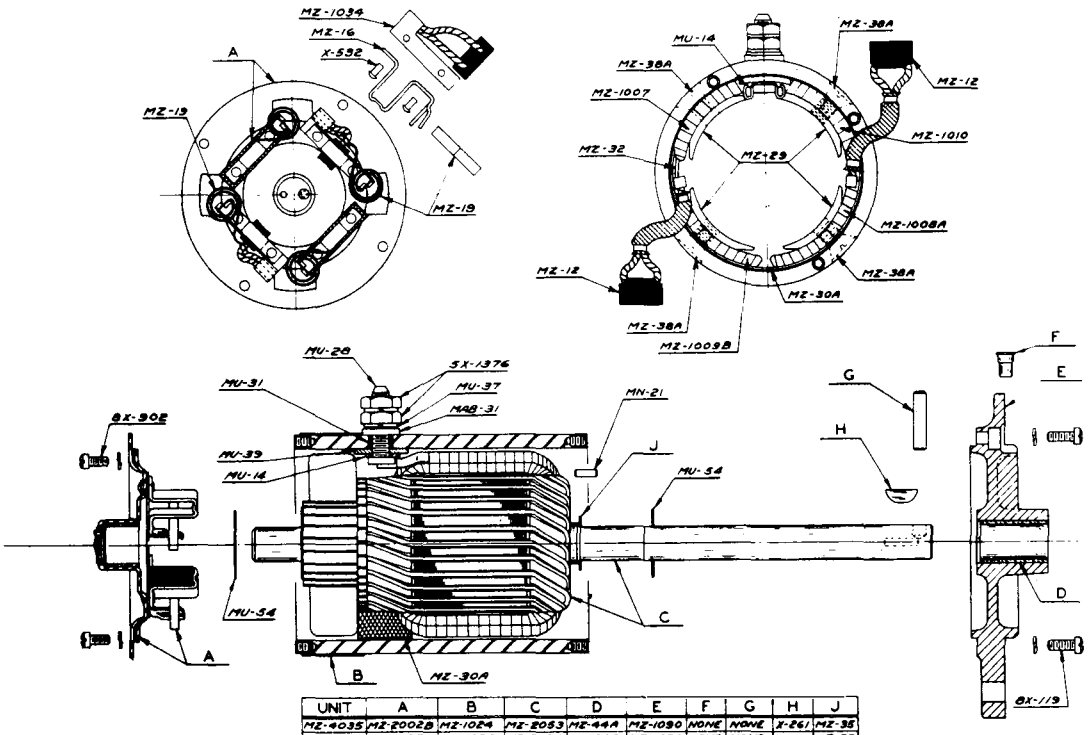
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UNIT	A	B	C
MZ-4033	MZ-2088	NONE	PS-1079
MZ-4049	MZ-2088	SS-4001	PS-1079
MZ-4100	MZ-2156	SS-4001	PS-1079
MZ-4108	MZ-2156	SS-4001	PS-1079A
MZ-4113	MZ-2156	NONE	PS-1079A

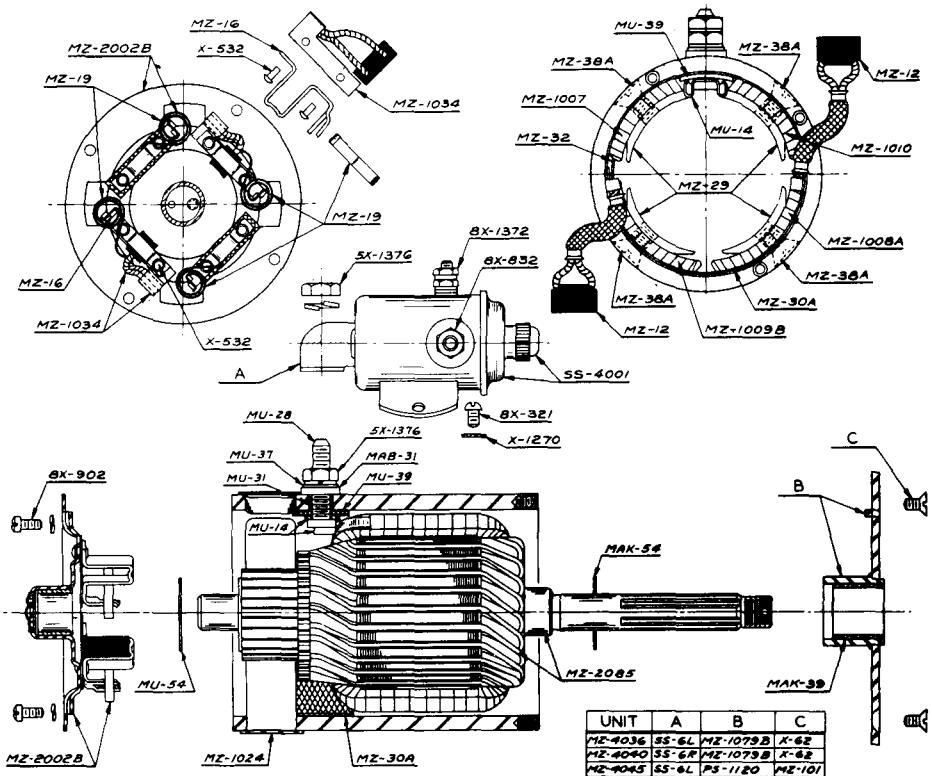
Figure 5



UNIT	A	B	C	D	E	F	G	H	J
MZ-4035	MZ-2002B	MZ-1024	MZ-2053	MZ-44A	MZ-1090	NONE	NONE	X-261	MZ-35
MZ-4036	MZ-2097	MZ-1024	MZ-2095	MZ-44A	MZ-1096	NONE	NONE	NONE	MZ-35
MZ-4072	MZ-2002B	MZ-1024G	MZ-2053	MZ-44A	MZ-1129	NONE	NONE	X-261	MZ-35
MZ-4074	MZ-2002A	MZ-1024	MZ-2130	MAB-124	MZ-1131	NONE	MZ-126	NONE	NONE
MZ-4079	MZ-2002B	MZ-1024F	MZ-2138	MAB-124	MZ-1139	X-489	NONE	X-261	MZ-35
MZ-4090	MZ-2002A	MZ-1024	MZ-2130	MAB-129	MZ-1131	NONE	MZ-126	NONE	NONE
MZ-4114	MZ-2002B	MZ-1024G	MZ-2053	MZ-44A	MZ-1129	NONE	NONE	X-261	MZ-35

Figure 6

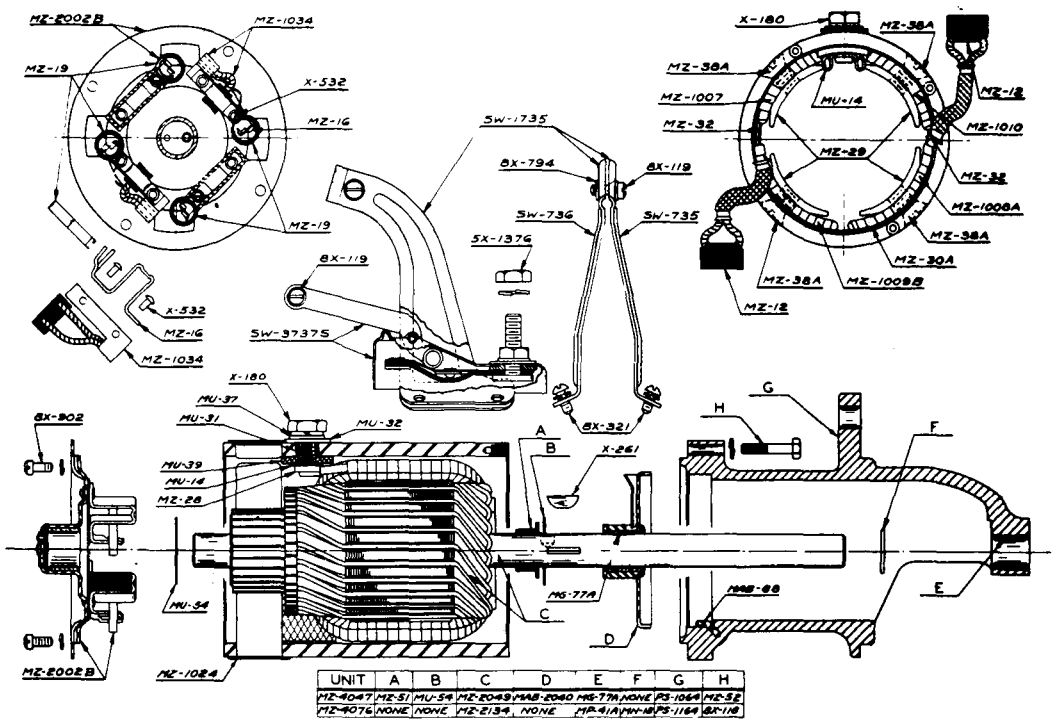
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UNIT	A	B	C
MZ-4036	SS-6L	MZ-1079B	X-62
MZ-4040	SS-6R	MZ-1079B	X-62
MZ-4045	SS-6L	PS-1120	MZ-101
MZ-4050	SS-6L	MZ-1079B	X-62
MZ-4055	SS-6L	PS-1120	MZ-101

MZ-7

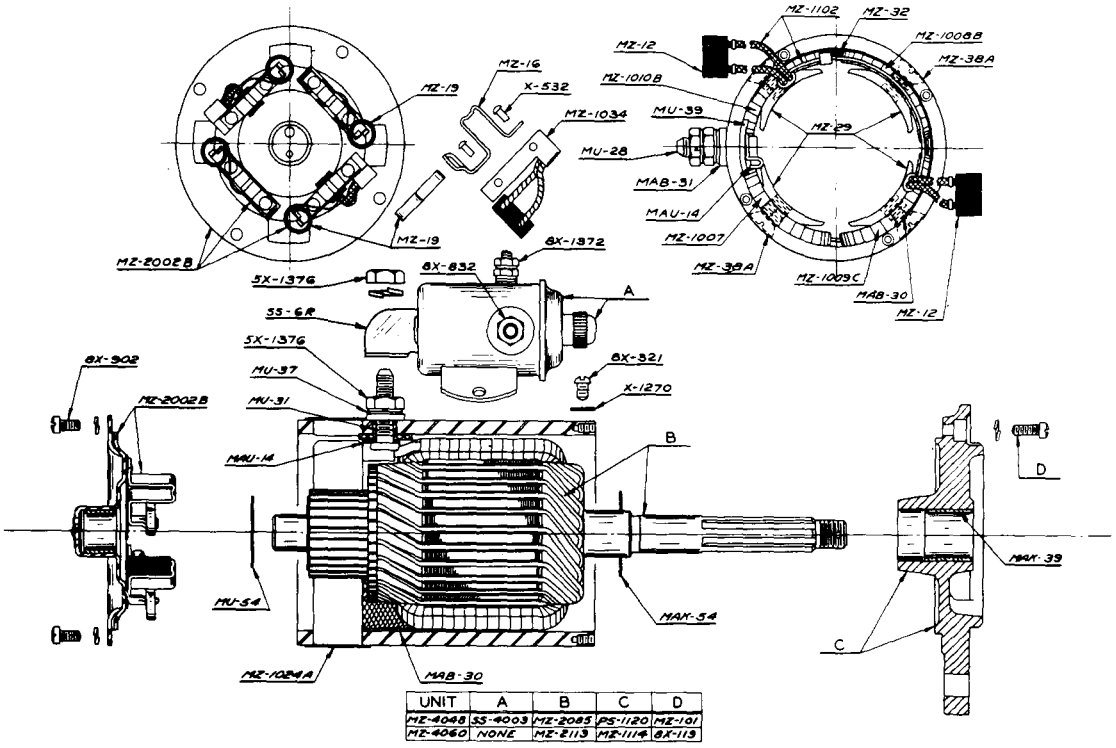
Figure 7



UNIT	A	B	C	D	E	F	G	H
MZ-4047	MZ-51	MU-54	MZ-2049	MAB-2040	MG-77A	NONE	PS-1064	MZ-52
MZ-4076	NONE	NONE	MZ-2134	NONE	MP-41A	MH-18	PS-1164	BX-118

MZ-8

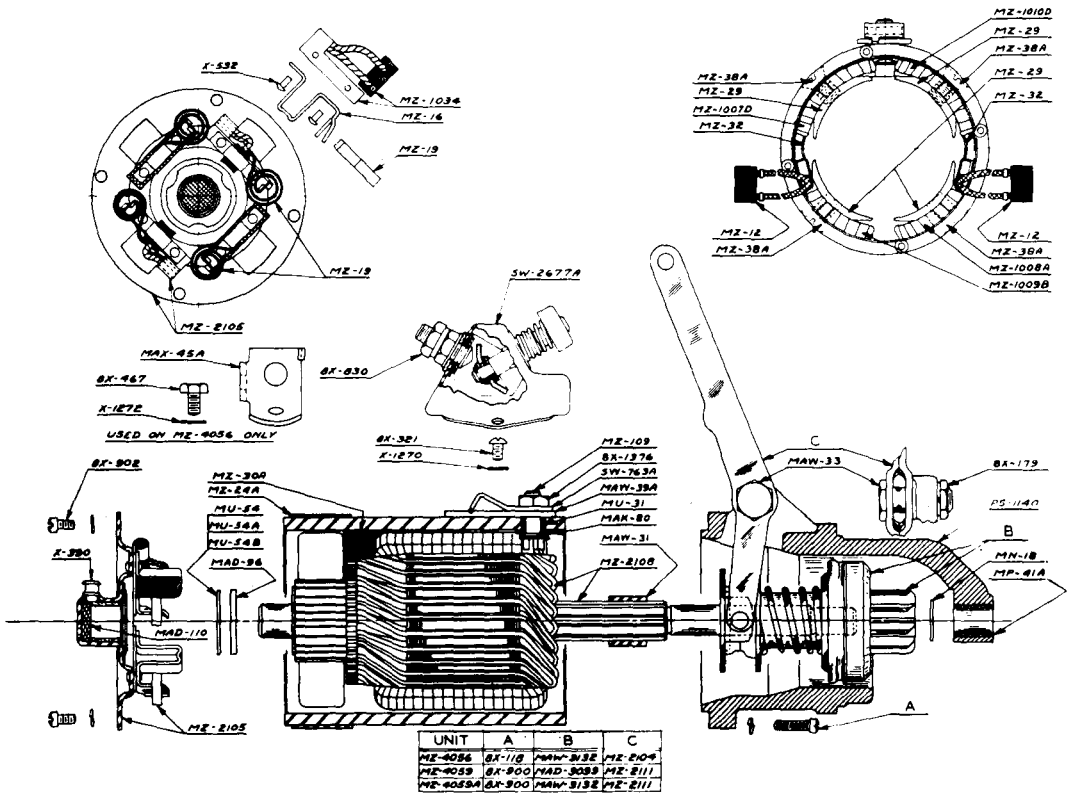
Figure 8



UNIT	A	B	C	D
MZ-4048	SS-4003	MZ-2085	PS-1120	MZ-101
MZ-4060	NONE	MZ-2113	MZ-1114	SX-119

MZ-9

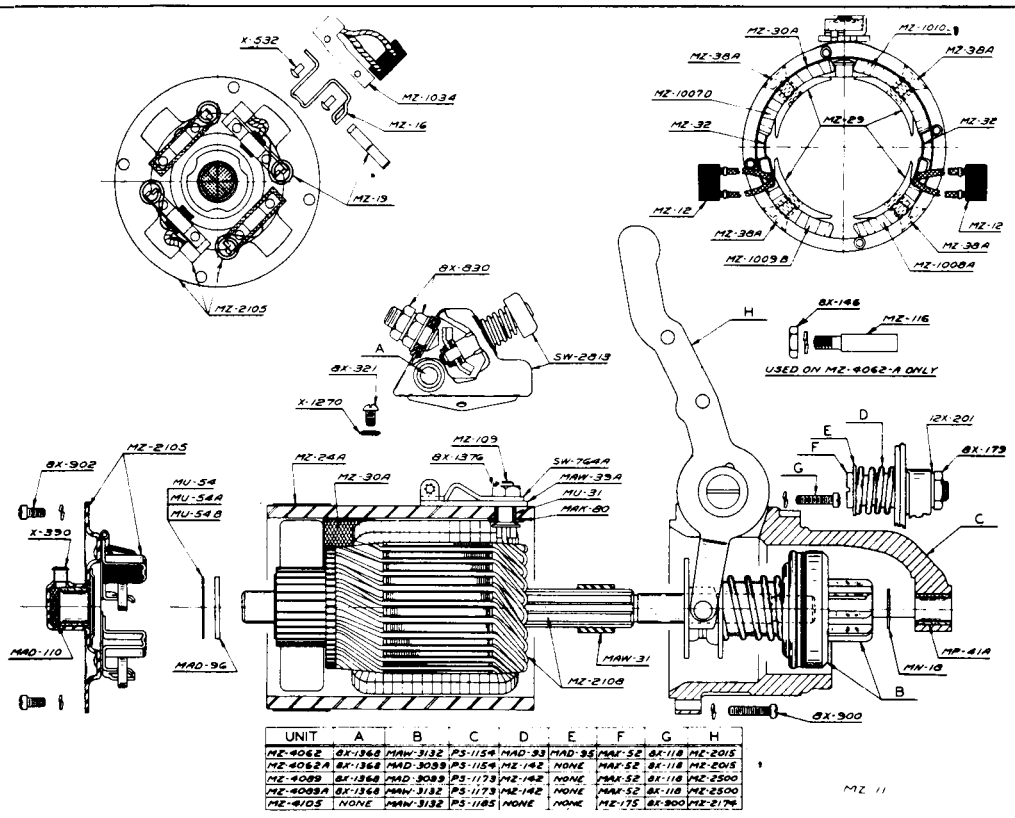
Figure 9



UNIT	A	B	C
MZ-4056	SX-118	MAW-3132	MZ-2104
MZ-4059	SX-900	MAD-3089	MZ-2111
MZ-4059A	SX-900	MAW-3132	MZ-2111

MZ-10

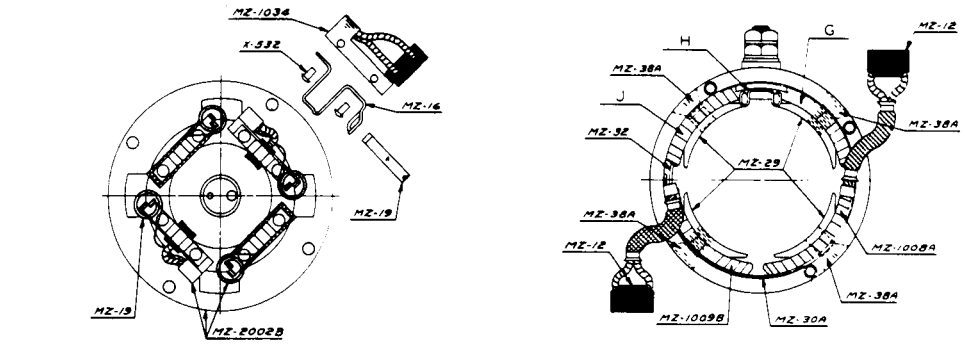
Figure 10

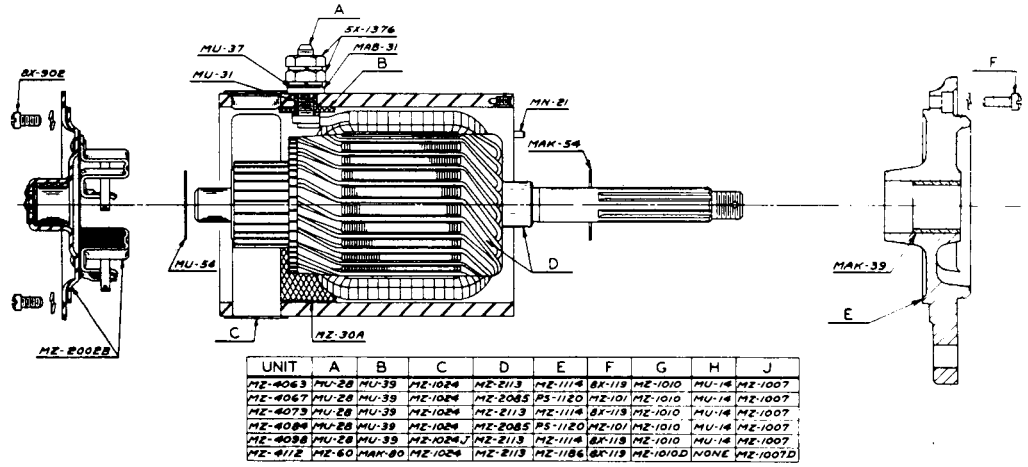


UNIT	A	B	C	D	E	F	G	H
MZ-4062	8X-1368	MAW-3132	PS-1154	MAD-93	MAD-95	MAK-52	8X-118	MZ-2015
MZ-4062A	8X-1368	MAD-3099	PS-1154	MZ-142	NONE	MAK-52	8X-118	MZ-2015
MZ-4089	8X-1368	MAD-3089	PS-1173	MZ-142	NONE	MAK-52	8X-118	MZ-2500
MZ-4089A	8X-1368	MAW-3132	PS-1173	MZ-142	NONE	MAK-52	8X-118	MZ-2500
MZ-4105	NONE	MAW-3132	PS-1185	NONE	NONE	MZ-175	8X-900	MZ-2174

MZ 11

Figure 11

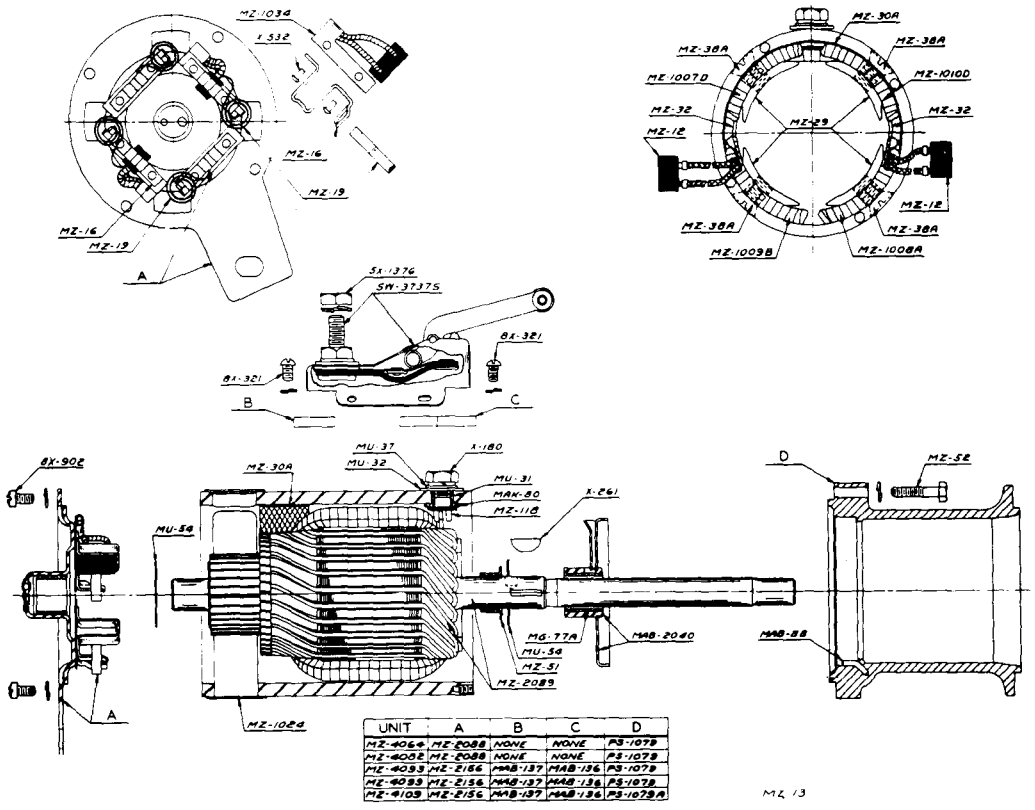




UNIT	A	B	C	D	E	F	G	H	J
MZ-4063	MU-28	MU-39	MZ-1024	MZ-2113	MZ-1114	8X-119	MZ-1010	MU-14	MZ-1007
MZ-4067	MU-28	MU-39	MZ-1024	MZ-2085	PS-1120	MZ-101	MZ-1010	MU-14	MZ-1007
MZ-4073	MU-28	MU-39	MZ-1024	MZ-2113	MZ-1114	8X-119	MZ-1010	MU-14	MZ-1007
MZ-4084	MU-28	MU-39	MZ-1024	MZ-2085	PS-1120	MZ-101	MZ-1010	MU-14	MZ-1007
MZ-4088	MU-28	MU-39	MZ-1024J	MZ-2113	MZ-1114	8X-119	MZ-1010	MU-14	MZ-1007
MZ-4112	MZ-60	MAK-80	MZ-1024	MZ-2113	MZ-1186	8X-119	MZ-1010D	NONE	MZ-1007D

Figure 12

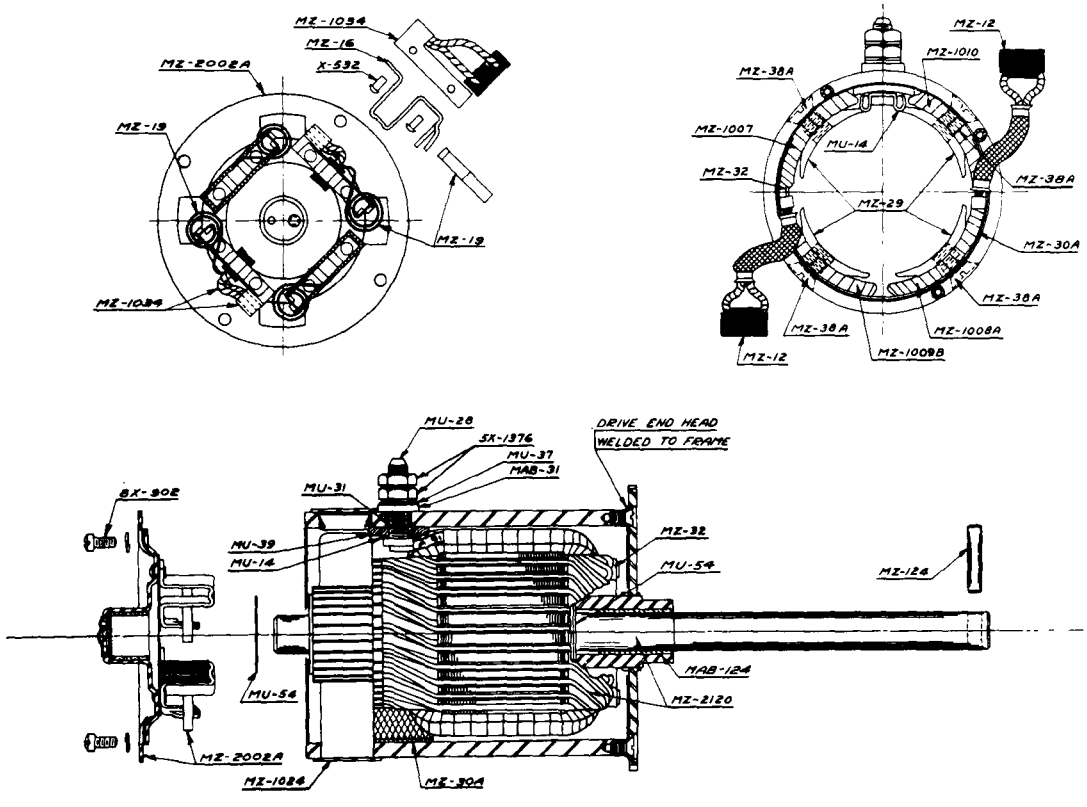
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UNIT	A	B	C	D
MZ-4064	MZ-2088	NONE	NONE	PS-1079
MZ-4068	MZ-2088	NONE	NONE	PS-1079
MZ-4093	MZ-2156	MAB-137	MAB-136	PS-1079
MZ-4099	MZ-2156	MAB-137	MAB-136	PS-1079
MZ-4109	MZ-2156	MAB-137	MAB-136	PS-1079A

MZ-13

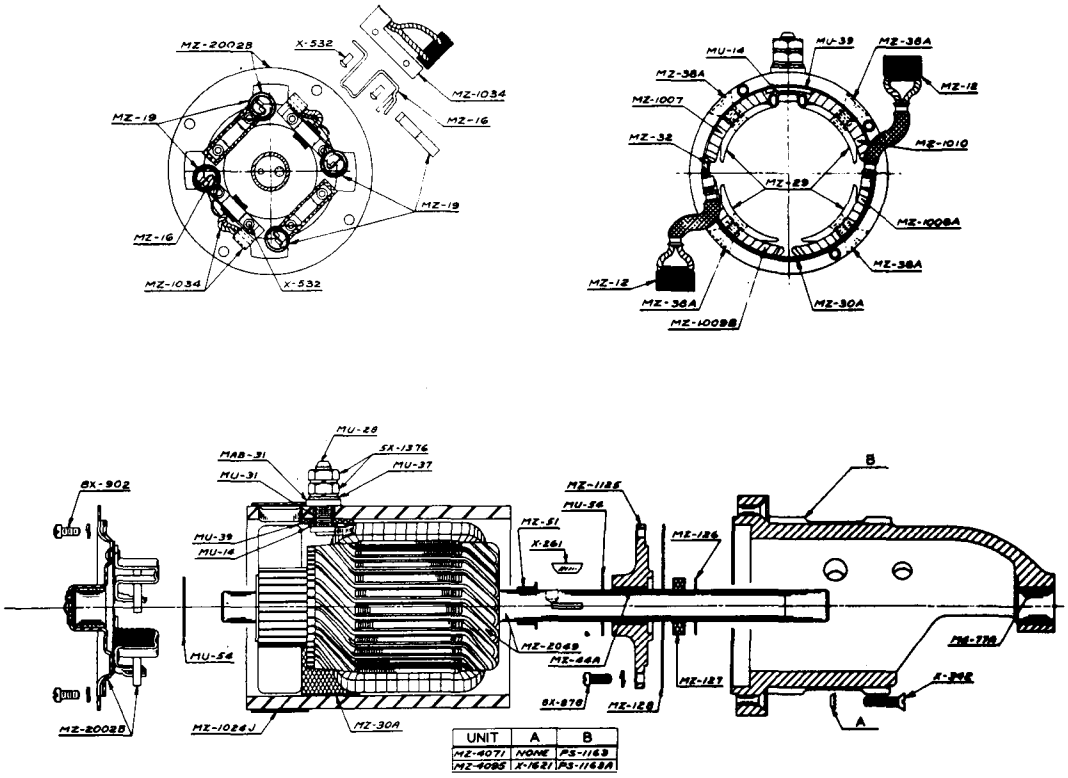
Figure 13



MZ-14

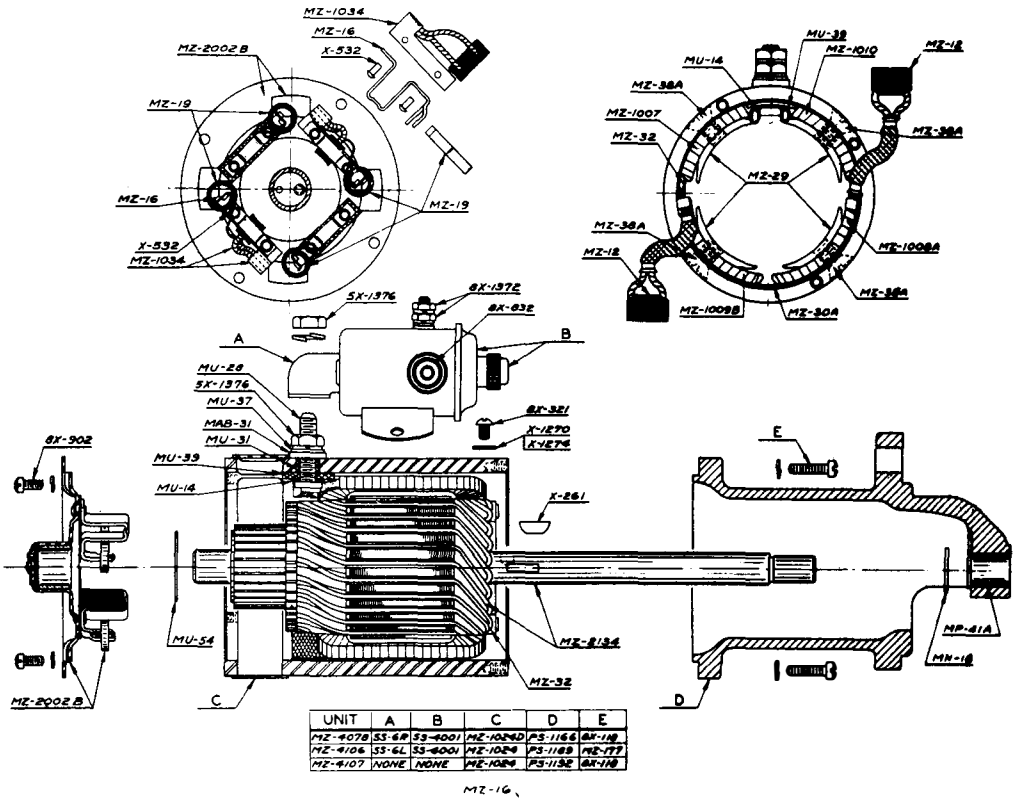
Figure 14

(Issued 12-15-41)



UNIT	A	B
MZ-4071	NONE	PS-1163
MZ-4085	X-1621	PS-1163A

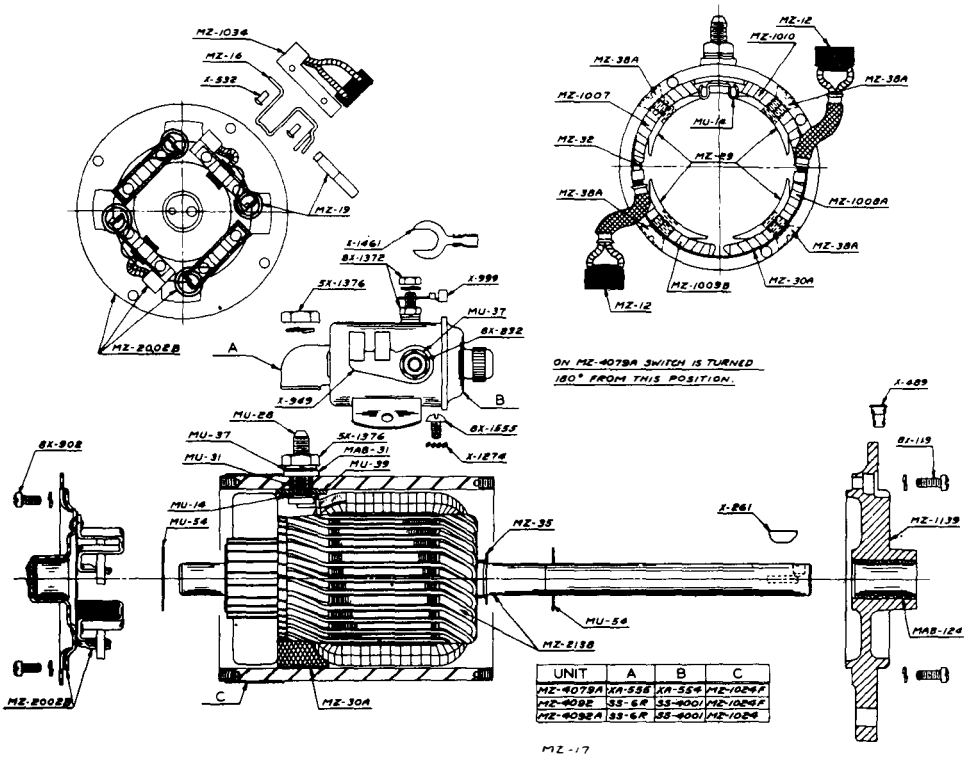
Figure 15 MZ-15



UNIT	A	B	C	D	E
MZ-4078	53-6A	53-6001	MZ-1024D	PS-1166	SX-118
MZ-4106	53-6L	53-6001	MZ-1024	PS-1169	MZ-177
MZ-4107	NONE	NONE	MZ-1024	PS-1132	SX-118

MZ-16

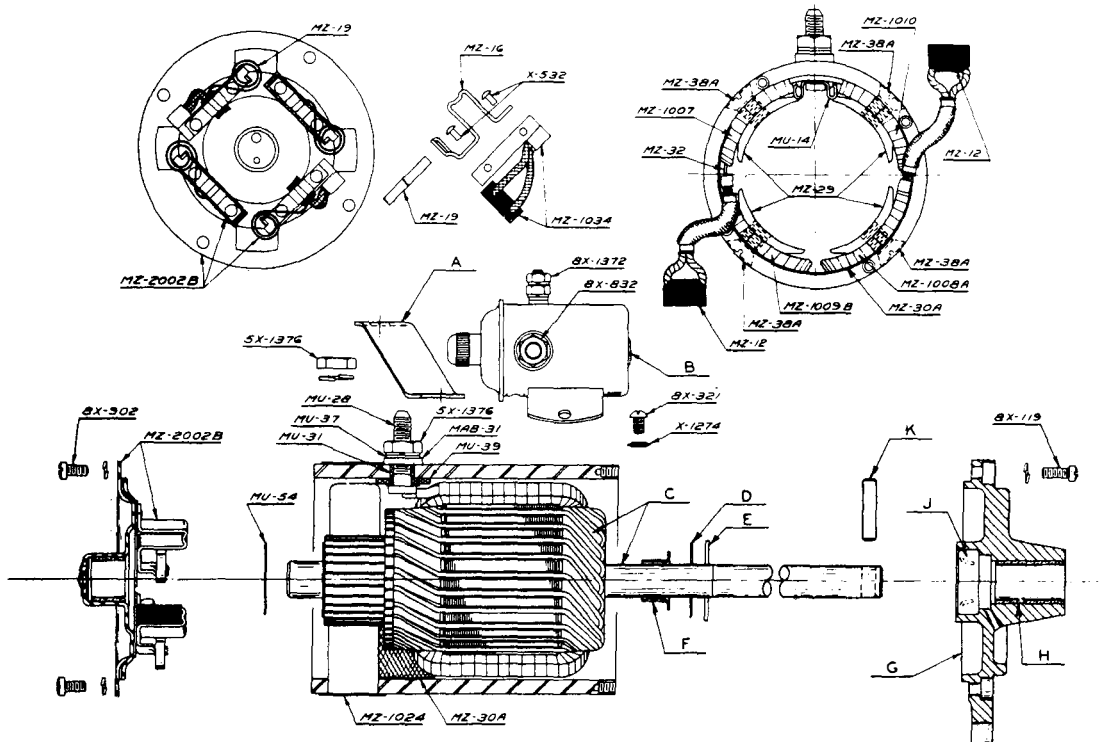
Figure 16



UNIT	A	B	C
MZ-4079A	XA-556	XA-554	MZ-1024F
MZ-4092	55-6R	55-4001	MZ-1024F
MZ-4092A	55-6R	55-4001	MZ-1024

MZ-17

Figure 17



UNIT	A	B	C	D	E	F	G	H	J	K
MZ-4087	MZ-144	55-4001	MZ-2180	MU-54	MZ-148	MAB-35	MZ-1167	MAB-124	XA-560	MZ-124
MZ-4094	55-182	55-4001	MZ-2113	MAK-54	NONE	NONE	MZ-1114	MAK-39	NONE	NONE
MZ-4096	55-187	55-4021	MZ-2113	MAK-54	NONE	NONE	MZ-1114	MAK-39	NONE	NONE
MZ-4102	55-191	55-4021	MZ-2113	MAK-54	NONE	NONE	MZ-1114	MAK-39	NONE	NONE

MZ-18

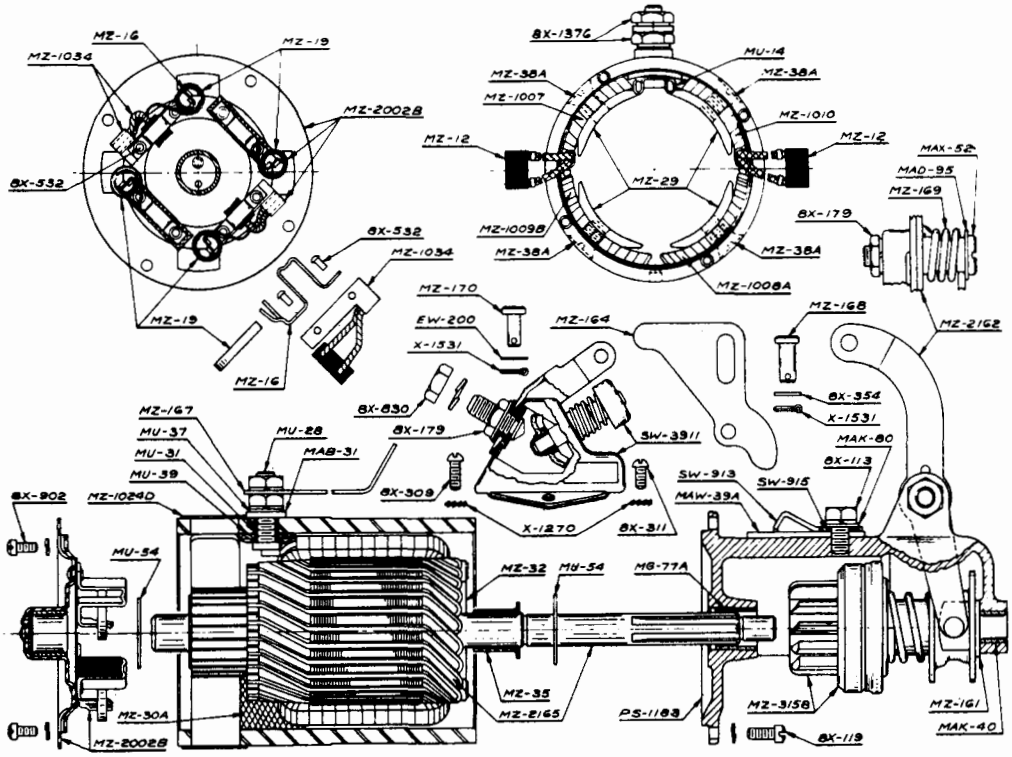
Figure 18

(Issued 12-15-41)

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Equipment & Parts Lists Binder

MZ TYPE STARTING MOTORS



MZ-19

Figure 19

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2001)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12*	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-1014	1	Washer, Lock, Terminal Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034*	2	Brush, Grounded
8X-532	4	Rivet, Brush Holder
X-544	4	Washer, Lock, Attaching, C.E. Head, #10
X-902	4	Screw, Attaching, C.E. Head, Fil. hd., #10-32x3/8

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust
MU-54	1	Washer, Thrust
MZ-2085	1	Armature
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EB-65	1	Bendix Drive Assy.
EB-6501	1	Shaft
EB-6502	1	Stop
EB-6504S	1	Pinion
EB-6505	1	Spring, Drive
EB-6513	1	Spring, Anti-Drift
EB-6526	1	Sleeve, Anti-Drift Spring
EB-6529	1	Collar, Spacing
EB-6823	2	Washer, Thrust
EB-6824	1	Support, Drive Spring
EB-6825	1	Spring, Meshing
EB-6827	1	Washer, Pinion
EB-6828	1	Nut, Hex., Castellated
MZ-1024	1	Band, Cover
MZ-1079C	1	Head Assy., Drive End
MAK-39	1	Bearing, Absorbent Bronze
X-62	4	Screw, Attaching, Drive End Head, Flat hd., #10-32x3/8
X-308	1	Screw, Cover Band, Rd. hd., #10-32x1 3/8
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 4-26-44)

NOTE:- The MZ-4031A starting motor uses EBA-6 Bendix Drive with sub parts as noted below.

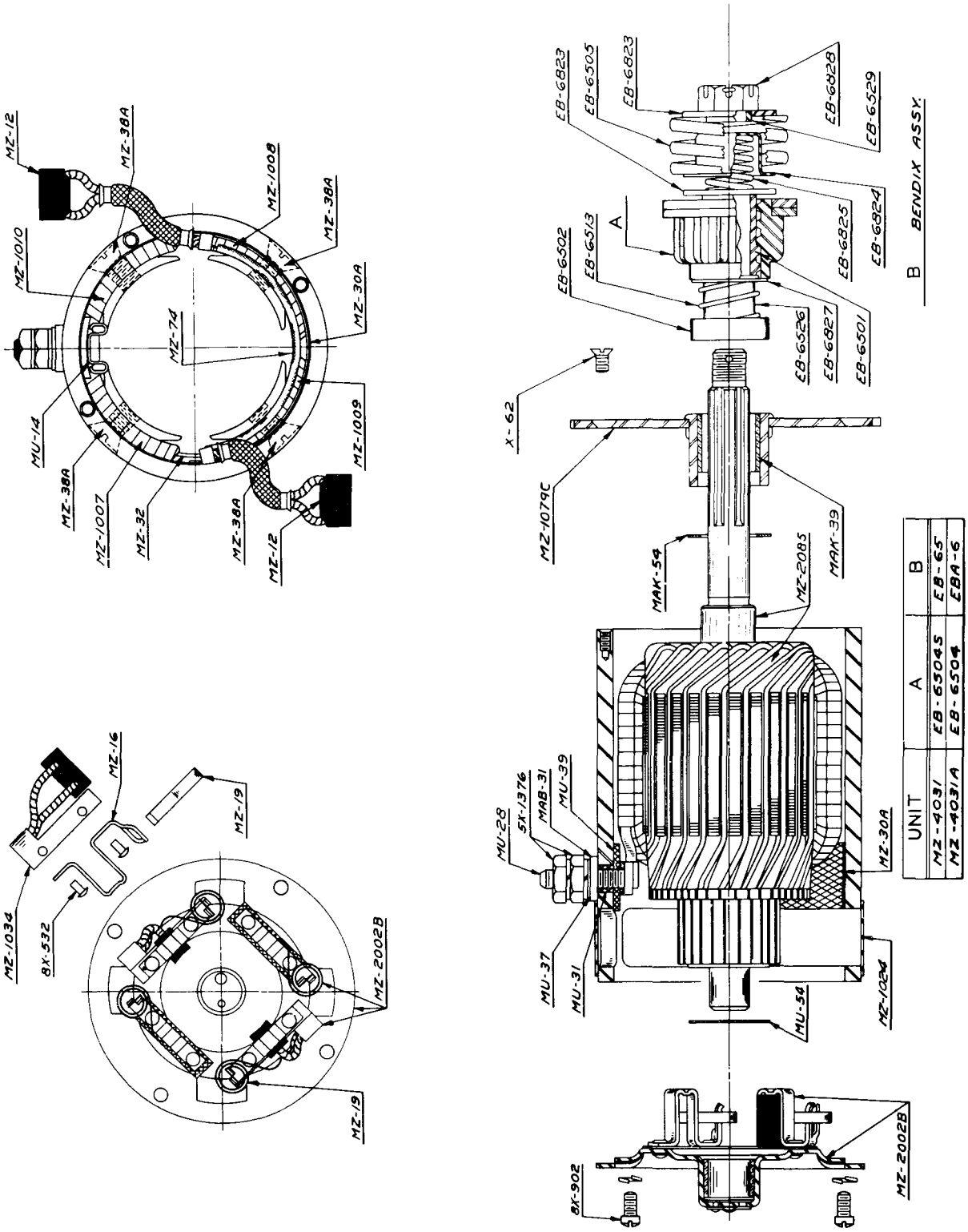
EBA-6	1	Bendix Drive Assy.
EB-6501	1	Shaft
EB-6502	1	Stop
EB-6504	1	Pinion
EB-6505	1	Spring, Drive
EB-6513	1	Spring, Anti-Drift
EB-6526	1	Sleeve, Anti-Drift Spring
EB-6529	1	Collar, Spacing
EB-6823	2	Washer, Thrust
EB-6824	1	Support, Drive Spring
EB-6825	1	Spring, Meshing
EB-6827	1	Washer, Pinion
EB-6828	1	Nut, Hex., Castellated

* Brush Set, Service, MZ-2012S.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

MZ-4031,A STARTING MOTOR ILLUSTRATION



UNIT	A	B
MZ-4031	E8-6504S	E8-6S
MZ-4031A	E8-6504	E8A-6

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2093)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12‡	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-1014	1	Washer, Lock, Terminal Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034‡	2	Brush, Grounded
8X-532	4	Rivet, Brush Holder, Oval hd. Tub., 1/8x1/4
X-544	4	Washer, Lock, Attaching, C.E. Head, #10
X-902	4	Screw, Attaching, C.E. Head, Fil. hd., #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
MZ-2049	1	Armature Assy.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6R	1	Connector
SS-4001	1	Solenoid Starting Switch
12X-196	1	Washer, Lock, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Washer, Lock, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Mtg. Switch, Rd. hd., #10-32x5/16
X-1274	2	Washer, Skpf. Switch Mtg., #10

Miscellaneous Parts

EBA-4	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8734	1	Ring, Take up
EB-9911	1	Shaft & Pinion
EBA-405	1	Spring, Drive
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
MZ-1024	1	Band, Cover
PS-1150	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
X-308	1	Screw, Cover Band, Rd. hd., #10-32x1 3/8
X-342	4	Screw, Attaching, Housing, Flat hd., #10-32x7/8
X-489	1	Oiler, Hinge Top, Press in, 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 3-7-44)

‡ Brush Set, Service, MZ-2012S.

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2001)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12*	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-1014	1	Washer, Lock, Terminal Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034*	2	Brush, Grounded
8X-532	4	Rivet, Brush Holder
X-544	4	Washer, Lock, Attaching, C.E. Head, #10
8X-902	4	Screw, Attaching, C.E. Head, Fil. hd., #10-32x3/8

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust
MU-54	1	Washer, Thrust
MZ-2113	1	Armature
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-6	1	Bendix Drive Assy.
EB-6501	1	Shaft
EB-6502	1	Stop
EB-6504	1	Pinion
EB-6505	1	Spring, Drive
EB-6513	1	Spring, Anti-Drift
EB-6526	1	Sleeve, Anti-Drift Spring
EB-6529	1	Collar, Spacing
EB-6823	2	Washer, Thrust
EB-6824	1	Support, Drive Spring
EB-6825	1	Spring, Meshing
EB-6827	1	Washer, Pinion
EB-6828	1	Nut, Hex., Castellated
MZ-1024	1	Band, Cover
MZ-1114	1	Head Assy., Drive End
MAK-39	1	Bearing, Absorbent Bronze
8X-119	4	Screw, Attaching, Drive End Head, Fil. hd., #10-32x1/2
X-196	4	Washer, Lock, D.E. Head Sc., #10
X-308	1	Screw, Cover Band, Rd. hd., #10-32x1 3/8
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 4-26-44)

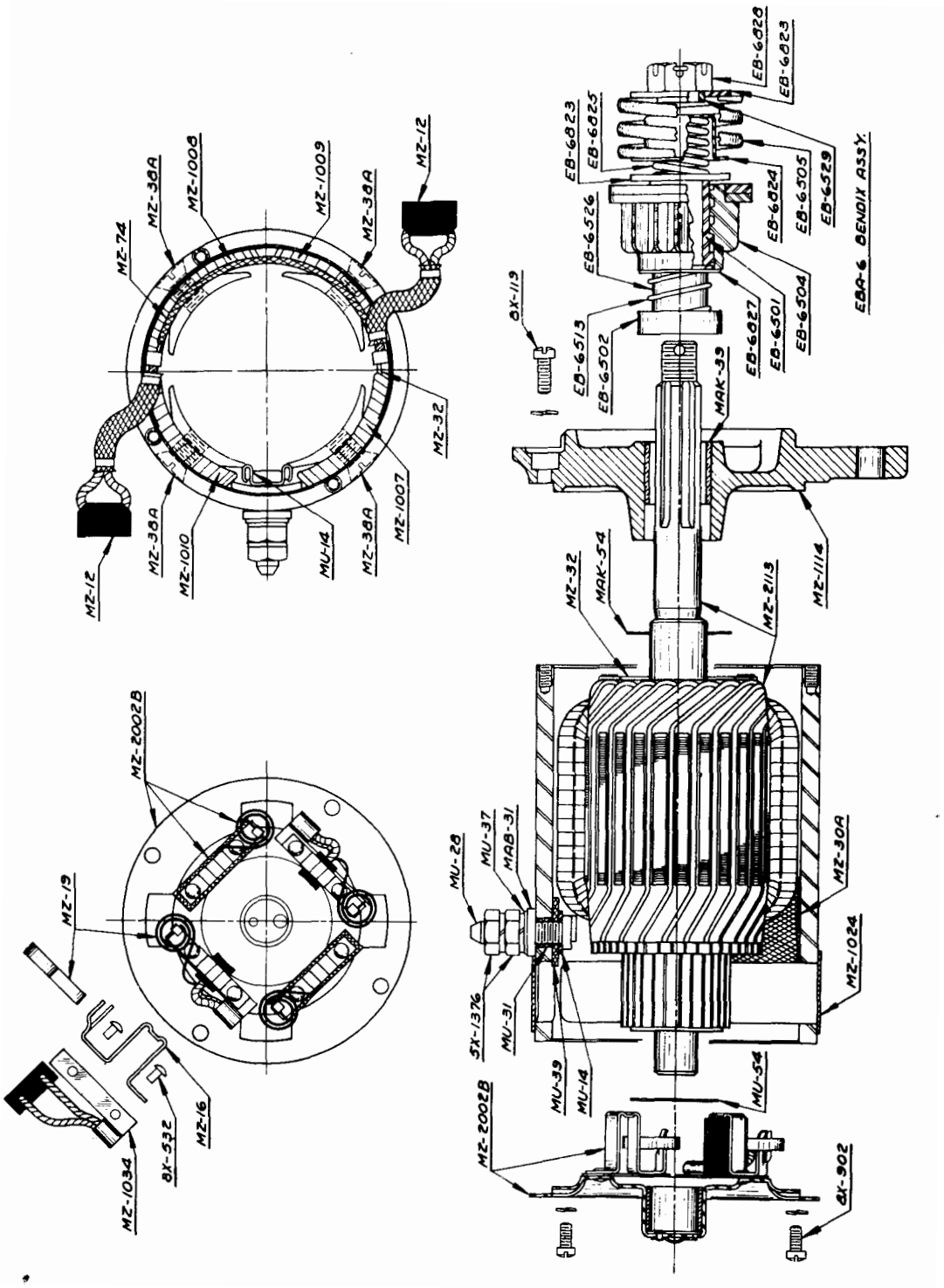
* Brush Set, Service, MZ-2012S.

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

MZ-4063 STARTING MOTOR ILLUSTRATION



MZ-4071 STARTING MOTOR PARTS LIST

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2001)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud. 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12‡	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034‡	2	Brush, Grounded
8X-532	4	Rivet, Brush Holder, Oval hd., Tub., 1/8x1/4
X-544	4	Washer, Lock, Attaching, C.E. Head, #10
X-902	4	Screw, Attaching, C.E. Head, Fil. hd., #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
MZ-2049	1	Armature Assy.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-2	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	Spring, Drive
EB-8734	1	Ring, Take up
EBA-211	1	Shaft & Pinion
MZ-126	1	Washer, Thrust
MZ-127	1	Washer, Felt
MZ-128	1	Gasket, Int. Bearing
MZ-1024J	1	Band, Cover
MZ-1125	1	Bearing Assy., Intermediate
MZ-44A	1	Bearing, Absorbent Bronze
PS-1163	1	Housing Assy., Pinion
MG-77A	1	Bearing, Absorbent Bronze
X-195	4	Washer, Lock, Int. Bearing Sc., #8
X-308	1	Screw, Cover Band, Rd. hd., #10-32x1 3/8
X-342	4	Screw, Attaching, Housing, Flat hd., #10-32x7/8
8X-794	1	Nut, Cover Band, Square, #10-32
8X-878	4	Screw, Attaching, Int. Bearing, Fil. hd., #8-32x7/16
		1 2 3 4 5

(Issued 3-8-44)

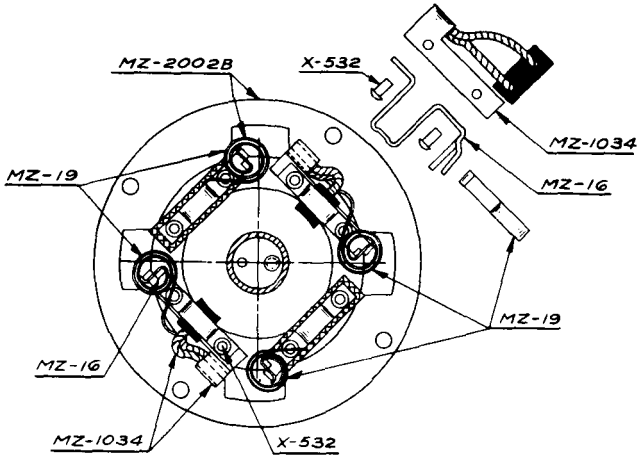
‡ Brush Set, Service, MZ-2012S.

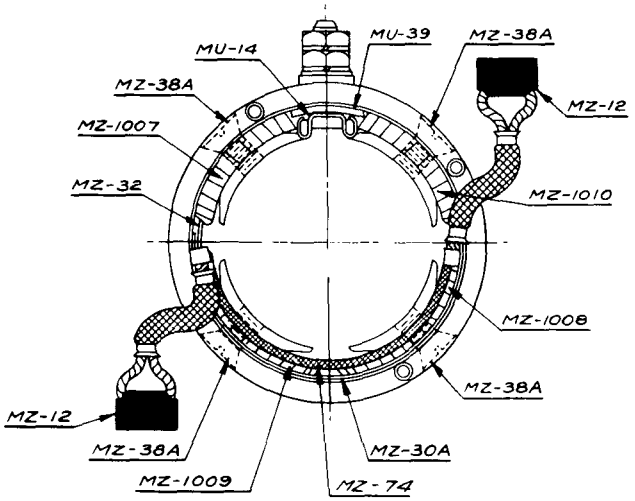
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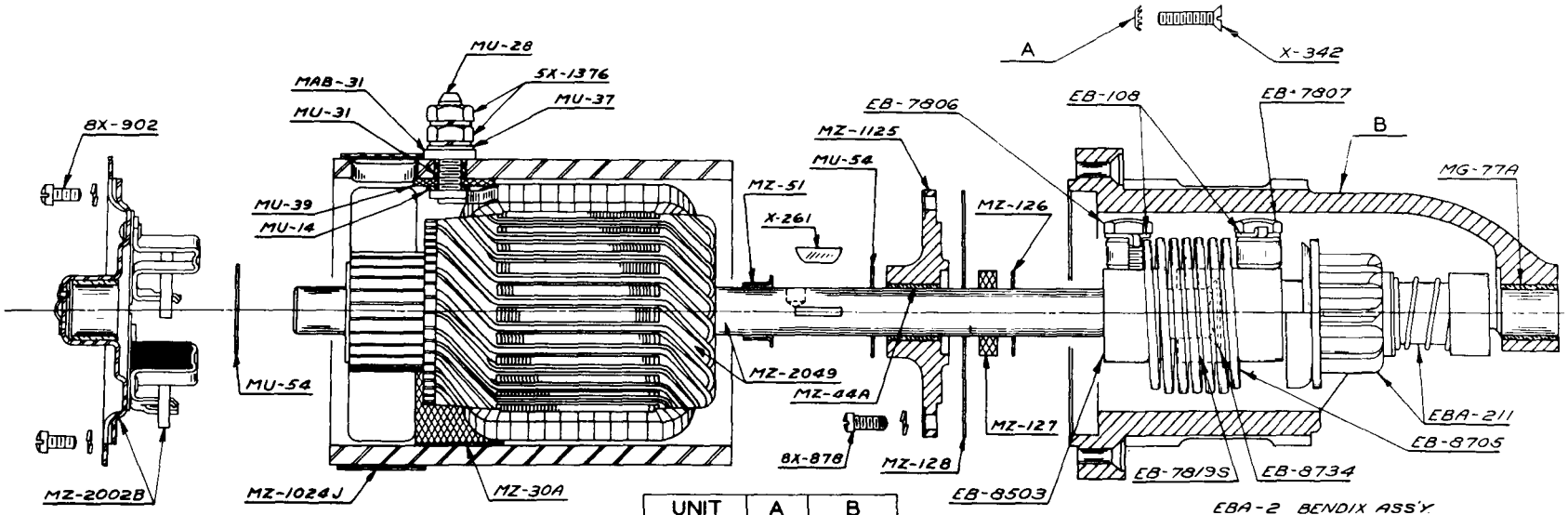
"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

MZ-4071 STARTING MOTOR ILLUSTRATION







UNIT	A	B
MZ-4071	NONE	PS-1163

MZ-4072 STARTING MOTOR PARTS LIST

MZ-4072

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2001)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12‡	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034‡	2	Brush, Grounded
8X-532	4	Rivet, Brush Holder, Oval hd., Tub., 1/8x1/4
X-544	4	Washer, Lock, Attaching, C.E. Head, #10
X-902	4	Screw, Attaching, C.E. Head, Fil. hd., #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
MZ-2053	1	Armature Assy.
MZ-35	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-4	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8734	1	Ring, Take up
EB-9911	1	Shaft & Pinion
EBA-405	1	Spring, Drive
MZ-1024G	1	Band, Cover
MZ-1129	1	Head Assy., Drive End
MZ-44A	1	Bearing, Absorbent Bronze
8X-119	4	Screw, Attaching, Drive End Head, Fil. hd., #10-32x1/2
X-196	4	Washer, Lock, D.E. Head Sc., #10
X-308	1	Screw, Cover Band, Rd. hd., #10-32x1 3/8
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 3-8-44)

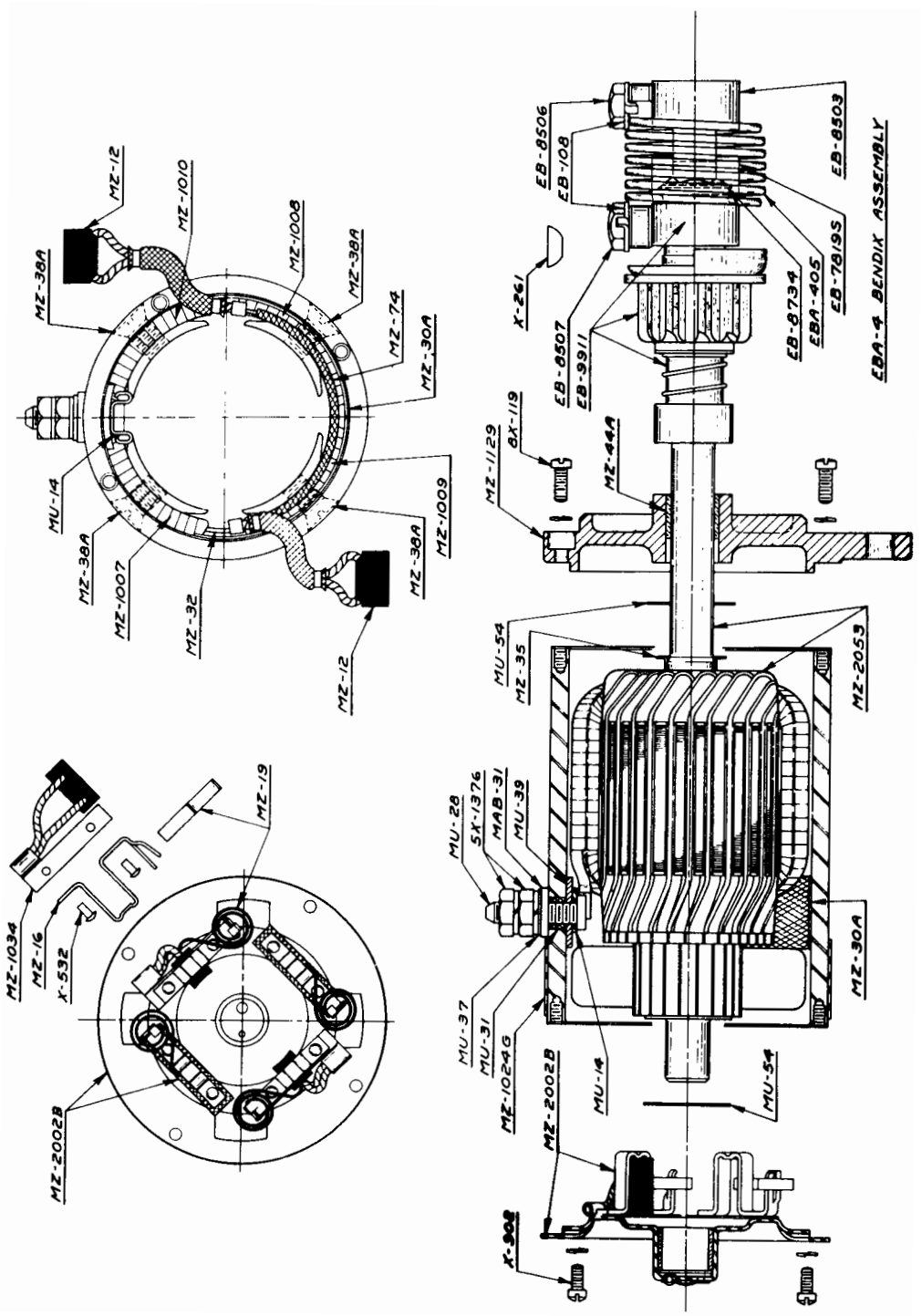
‡ Brush Set, Service, MZ-2012S.

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

MZ-4072 STARTING MOTOR ILLUSTRATION



MZ-4073 STARTING MOTOR PARTS LIST MZ-4073

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2001)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12*	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-1014	1	Washer, Lock, Terminal Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034*	2	Brush, Grounded
8X-532	4	Rivet, Brush Holder
X-544	4	Washer, Lock, Attaching, C.E. Head, #10
8X-902	4	Screw, Attaching, C.E. Head, Fil. hd., #10-32x3/8

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust
MU-54	1	Washer, Thrust
MZ-2113	1	Armature
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-6	1	Bendix Drive Assy.
EB-6501	1	Shaft
EB-6502	1	Stop
EB-6504	1	Pinion
EB-6505	1	Spring, Drive
EB-6513	1	Spring, Anti-Drift
EB-6526	1	Sleeve, Anti-Drift Spring
EB-6529	1	Collar, Spacing
EB-6823	2	Washer, Thrust
EB-6824	1	Support, Drive Spring
EB-6825	1	Spring, Meshing
EB-6827	1	Washer, Pinion
EB-6828	1	Nut, Hex., Castellated
MZ-1024	1	Band, Cover
MZ-1114	1	Head Assy., Drive End
MAK-39	1	Bearing, Absorbent Bronze
X-119	4	Screw, Attaching, Drive End Head, Fil. hd., #10-32x1/2
X-196	4	Washer, Lock, D.E. Head Sc., #10
X-308	1	Screw, Cover Band, Rd. hd., #10-32x1 3/8
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 4-26-44)

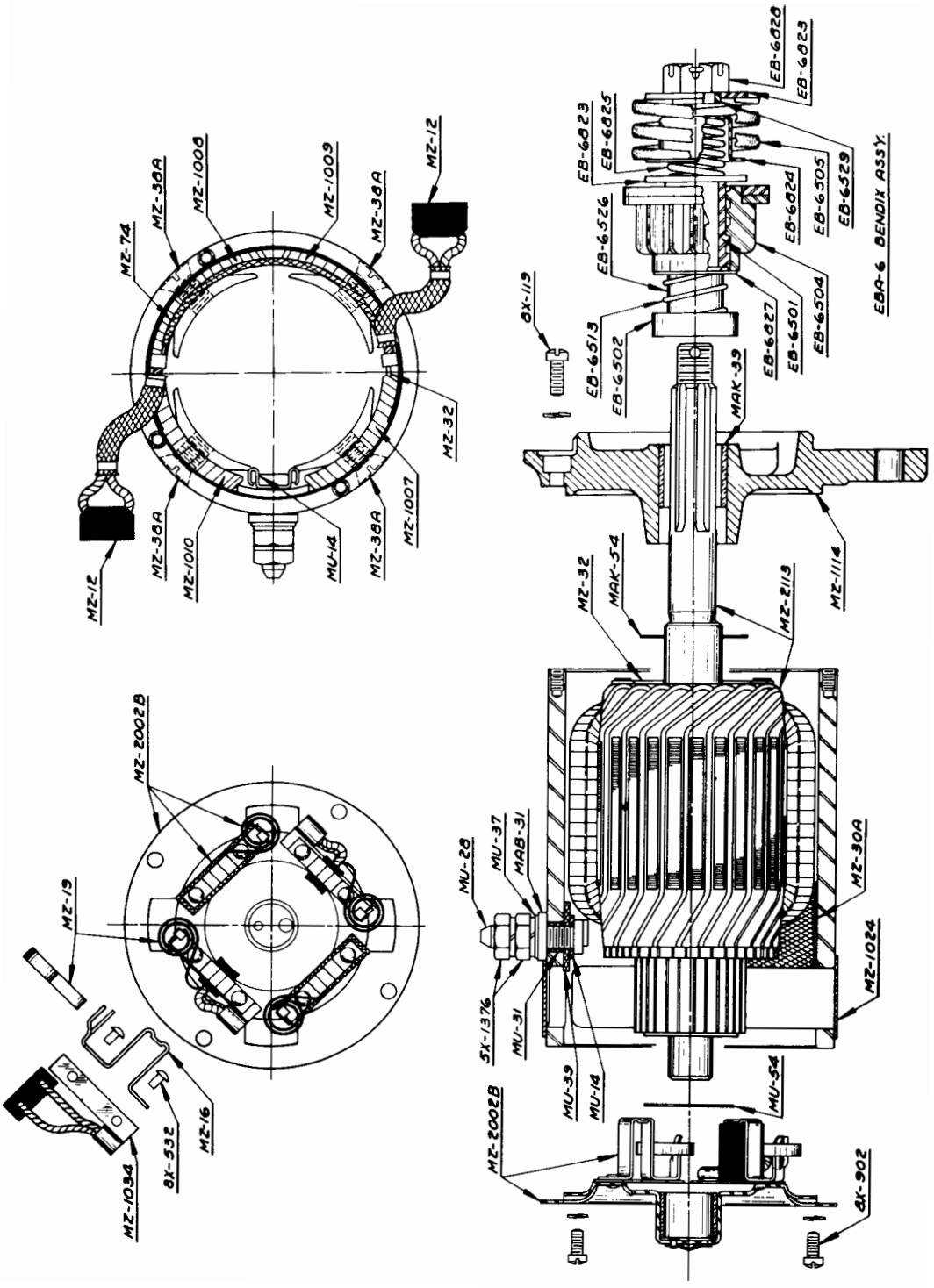
* Brush Set, Service, MZ-2012S.

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

MZ-4073 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2112A)	1	Frame & Field Assy.
MAK-80	1	Washer, Insulating
MAW-39A	1	Insulating Block
MU-31	1	Bushing, Insulating
MZ-12‡	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-109	1	Stud, Terminal
MZ-1007D	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010D	1	Coil, Field, U.R.
SW-764A	1	Contact, Switch, Lower
8X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034‡	2	Brush, Grounded
X-390	1	Oiler
8X-532	4	Rivet
12X-544	4	Washer, Lock, C.E. Head Screw, #10
8X-902	4	Screw, Attaching, C.E. Head, Fil. hd., #10-32x3/8

Armature Assembly & Parts Used With

MAD-96	1	Washer, Arm. Thrust, C.E.
MU-54	*	Washer, Thrust, 1/32'' thick
MU-54A	*	Washer, Thrust, 1/64'' thick
MU-54B	*	Washer, Thrust, 3/64'' thick
MZ-2108	1	Armature Assy.
MAW-31	1	Spacer, Armature Shaft

Switch Assembly & Parts Used With

SW-2813	1	Switch, Starter
12X-201	1	Washer, Lock, 3/8
8X-830	1	Nut, Hex., 3/8-16
12X-196	1	Washer, Lock, #10
8X-321	2	Screw, Mtg. Switch, Rd. hd., #10-32x5/16
X-1270	2	Washer, Skpf., Switch Mtg. Sc., #10
8X-1368	1	Screw, Rd. hd., #10-32x7/16
		1 2 3 4 5

Starter Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAD-95	1	Retainer, Yoke Spring
**	1	Starter Clutch
MAX-52	1	Pin, Yoke
MZ-142	1	Spring, Yoke
MZ-2500	1	Yoke
8X-179	1	Nut, Yoke Pin, Hex., 3/8-16
12X-201	1	Washer, Lock, Yoke Pin, 3/8

Miscellaneous Parts

MN-18	1	Washer, Thrust, D.E.
MZ-24A	1	Band, Cover
PS-1173	1	Housing Assy., Pinion
MP-41A	1	Bearing, Absorbent Bronze
8X-118	1	Screw, Attaching, Pinion Housing, Fil. hd., #10-32x3/4
12X-544	4	Washer, Lock, #10
8X-715	1	Screw, Cover Band, Rd. hd., #10-32x1 1/4
8X-794	1	Nut, Cover Band, Square, #10-32
8X-900	3	Screw, Attaching, Pinion Housing, Fil. hd., #10-32x7/8
		1 2 3 4 5

(Issued 3-8-44)

Assembly No.	Starter Clutch
MZ-4089	MAD-3099
MZ-4089A	MAW-3132

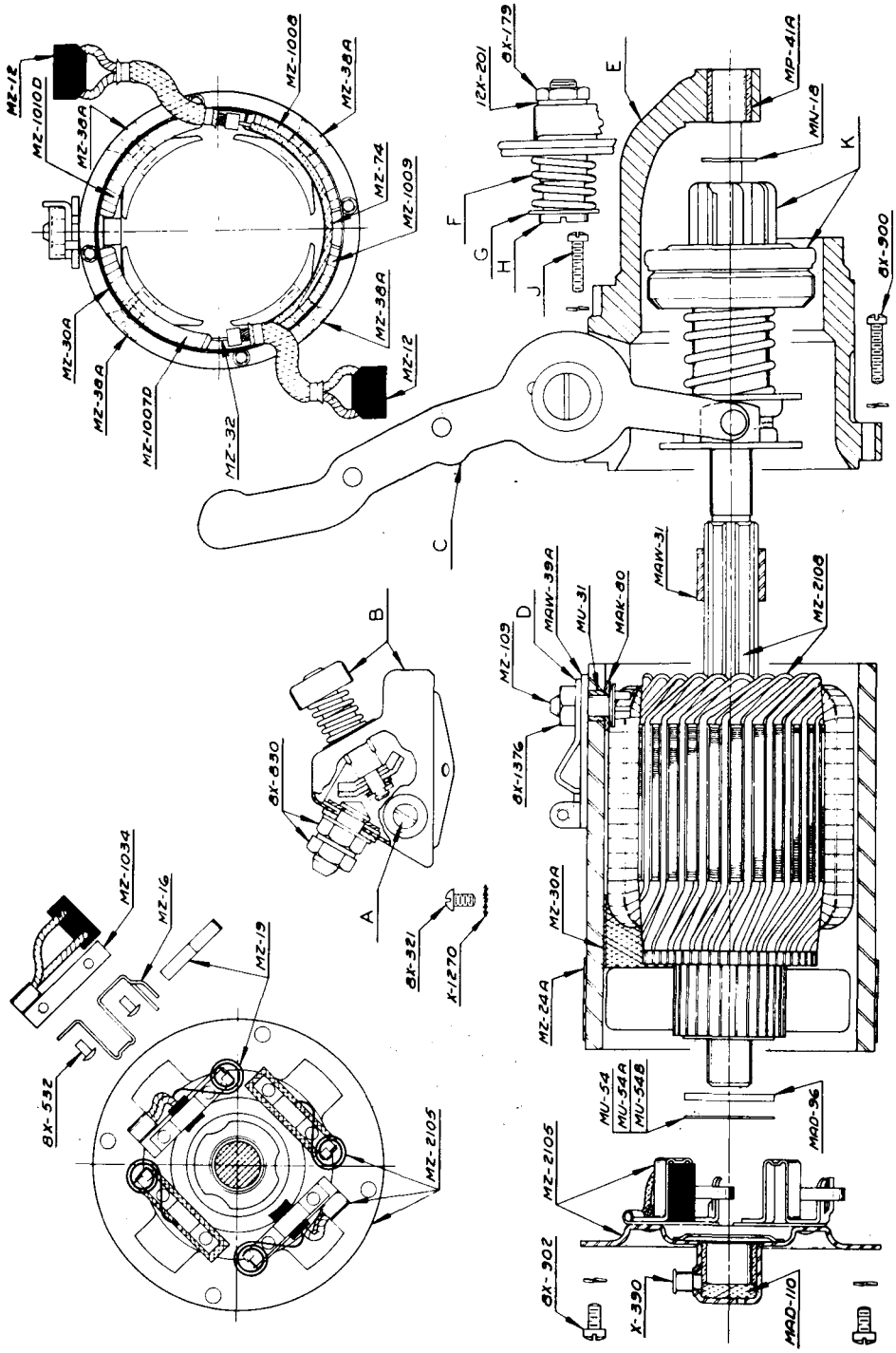
‡ Brush Set, Service, MZ-2012S.

* Use as required.

** See table following parts list for part number applying to assembly wanted.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ-4089,A STARTING MOTOR ILLUSTRATION



UNIT	A	B	C	D	E	F	G	H	J	K
MZ-4089	8X-1368	SW-2813	MZ-2500	SW-7644A	PS-1173	MZ-142	MAD-95	MAX-52	8X-118	MAD-3099
MZ-4089A	8X-1368	SW-2813	MZ-2500	SW-7644A	PS-1173	MZ-142	MAD-95	MAX-52	8X-118	MAW-3192

MZ-4095 STARTING MOTOR PARTS LIST

MZ-4095
(Issued 6-21-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2001	1	Frame & Field Assembly
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12‡	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S‡	2	Brush, Grounded
X-196	4	Lockwasher, Head Screw, #10
X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	1	Washer, Arm. Thrust, Intermediate, 1/32"
MU-54	*	Washer, Arm. Thrust, C.E., 1/32"
MU-54B	*	Washer, Arm. Thrust, C.E., 3/64"
MZ-2049	1	ARMATURE ASSEMBLY
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-2	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7806	1	Screw, Spring, Head
EB-7807	1	Screw, Spring, Shaft
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8705	1	SPRING, DRIVE
EB-8734	1	Ring, Take Up
EBA-211	1	Shaft & Pinion
MZ-126	1	Washer, Thrust
MZ-127	1	Washer, Felt
MZ-128	1	Gasket, Int. Bearing
MZ-1024J	1	Band, Cover
MZ-1125	1	Bearing Assy., Intermediate
MZ-44A	1	BEARING, ABSORBENT BRONZE
PS-1163A	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABSORBENT BRONZE
X-195	4	Lockwasher, Bearing Screw, #8
X-342	4	Screw, Housing, Flat Hd. #10-32x7/8
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32
8X-878	4	Screw, Int. Bearing, Fill. Hd. #8-32x7/16
X-1621	4	Washer, Skpf., Housing Screw, #10

‡ BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4095	Case (Tractor)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2001)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12‡	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034‡	2	Brush, Grounded
8X-532	4	Rivet, Brush Holder
X-544	4	Washer, Lock, Attaching, C.E. Head, #10
8X-902	4	Screw, Attaching, C.E. Head, Fil. hd., #10-32x3/8

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust
MU-54	1	Washer, Thrust
MZ-2113	1	Armature
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-6	1	Bendix Drive Assy.
EB-6501	1	Shaft
EB-6502	1	Stop
EB-6504	1	Pinion
EB-6505	1	Spring, Drive
EB-6513	1	Spring, Anti-Drift
EB-6526	1	Sleeve, Anti-Drift Spring
EB-6529	1	Collar, Spacing
EB-6823	2	Washer, Thrust
EB-6824	1	Support, Drive Spring
EB-6825	1	Spring, Meshing
EB-6827	1	Washer, Pinion
EB-6828	1	Nut, Hex., Castellated
MZ-1024J	1	Band, Cover
MZ-1114	1	Head Assy., Drive End
MAK-39	1	Bearing, Absorbent Bronze
8X-119	4	Screw, Attaching, Drive End Head, Fil. hd., #10-32x1/2
X-196	4	Washer, Lock, D.E. Head Screw, #10
X-308	1	Screw, Cover Band, Rd. hd., #10-32x1 3/8
8X-794	1	Nut, Cover Band, Square, # 10-32
		1 2 3 4 5

(Issued 3-8-44)

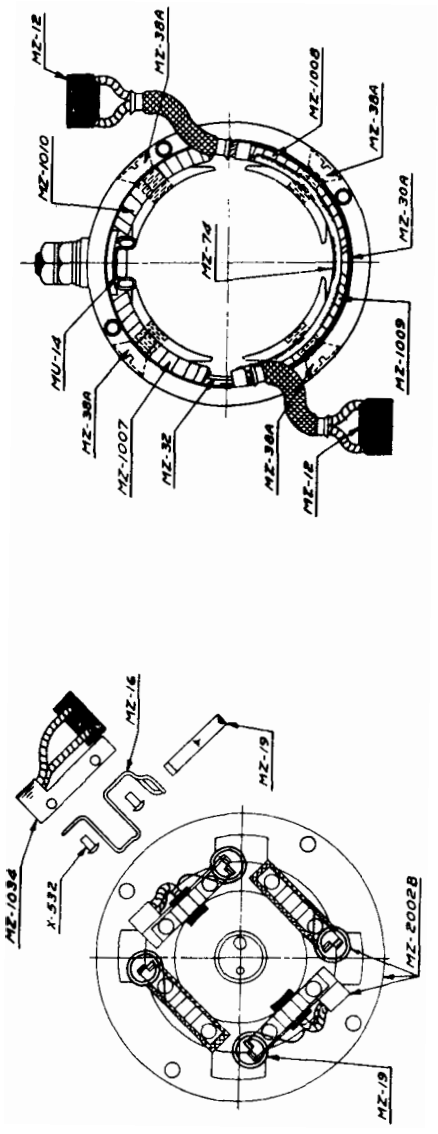
‡ Brush Set, Service, MZ-2012S.

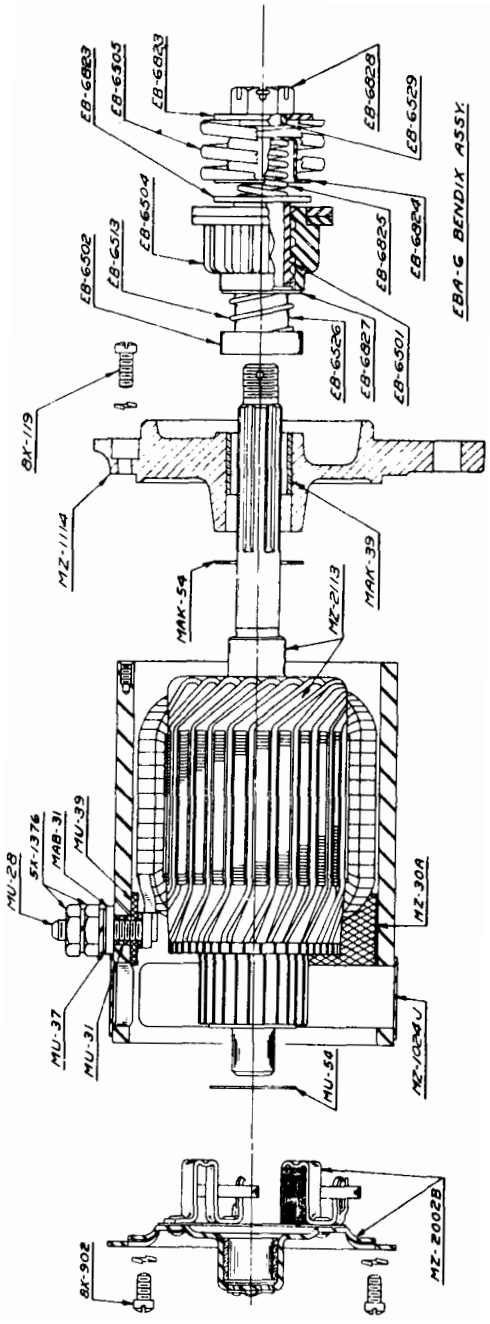
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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

MZ-4098 STARTING MOTOR ILLUSTRATION





Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2001)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12‡	2	Brush, Insulated
MZ-30A	1	Ins., Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-1014	2	Lockwasher, Term. Stud, 5/16
5X-1376	2	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034‡	2	Brush, Grounded
8X-532	4	Rivet, Brush Holder
X-544	4	Lockwasher, Attaching, C.E. Head, #10
X-902	4	Screw, Attaching, C.E. Head, Fil. Hd., #10-32x3/8
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MU-54	2	Washer, Arm Thrust, Comm. End & Intermediate
MZ-2154	1	Armature Assy.
MZ-35	1	Spacer, Bearing Thrust

Miscellaneous Parts

EBA-35	1	Bendix Drive Assembly
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2008	1	Ring, Lock
EBA-3505	1	Spring, Drive
EBA-3507	2	Plate, Spring Anchor
EBA-3531	1	Shaft
EBA-3532	1	Pinion
MZ-124	1	Pin, Bendix
MZ-1024	1	Band, Cover
MZ-1153	1	Head Assy., Drive End
MZ-46A	1	Bearing, Absorbent Bronze
8X-119	4	Screw, Attaching, Drive End Head, Fil. Hd., #10-32x1/2
X-196	4	Lockwasher, D.E. Head Screw, #10
X-308	1	Screw, Cover Band, Rd. Hd., #10-32x1 3/8
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

‡ Brush Set, Service, MZ-2012S.

(Issued 2-12-46)

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File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2093	1	Frame & Field Assy.
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, C.E. Head Screw #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	1	Washer, Thrust, C.E., 1/32" Thick
MZ-2134	1	ARMATURE
X-261	1	Key, Woodruff, D.E. #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
**	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1274	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-53	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft, Screw
EBA-3307	2	Plate, Spring Anchor
EBA-4505	1	SPRING, DRIVE
EBA-5332	1	Pinion
MN-18	1	Washer, Thrust, D.E.
MZ-177	4	Screw, Pinion Housing, Hex. Hd. #10-32x3/4
MZ-1024	1	Band, Cover
PS-1189	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABSORBENT BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

** See table following parts list for part number applying to assembly wanted.

Assembly No.	Connector, Switch to Motor
MZ-4106	SS-6L
MZ-4106A	SS-6R

UNIT	APPLICATION
MZ-4106	Chris Craft, Owens Yacht
MZ-4106A	Chris Craft

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ-4111 STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2093)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
X-196	4	Lockwasher, C.E. Head Sc., #10
X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-54	1	Washer, Thrust, D.E.
MU-54	1	Washer, Thrust, C.E., 1/32"
MZ-2085	1	ARMATURE

Miscellaneous Parts

EB-79	1	BENDIX DRIVE ASSEMBLY
EB-6505	1	SPRING, DRIVE
EB-6813	1	Spring, Anti-Drift
EB-6823	2	Washer, Thrust
EB-6824	1	Support, Drive Spring
EB-6825	1	Spring, Meshing
EB-6826	1	Sleeve, Anti-Drift Spring
EB-6827	1	Washer, Pinion
EB-6828	1	Nut
EB-7901	1	Shaft
EB-7902	1	Drive Stop
EB-8104S	1	Pinion
X-528	1	Cotter Pin
MZ-1024	1	Band, Cover
MZ-1136	1	Head Assy., Drive End
MAK-39	1	BEARING ABS. BRONZE
X-196	2	Lockwasher, Switch Mtg., #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-196	4	Lockwasher, D.E. Head Sc., #10
8X-794	1	Nut, Cover Band, Square #10-32
X-902	4	Screw, D.E. Head, Fill. Hd. #10-32x3/8

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4111	Miniature Train

(Issued 4-19-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ-4114 STARTING MOTOR PARTS LIST

MZ-4114
(Issued 6-21-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2001F	1	Frame & Field Assembly
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12‡	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002E	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S‡	2	Brush, Grounded
12X-196	4	Lockwasher, Head Sc., #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
MZ-2053	1	ARMATURE ASSEMBLY
MZ-35	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-4	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8734	1	Ring, Take up
EB-9911	1	Shaft & Pinion
EBA-405	1	SPRING, DRIVE
MZ-1024Y	1	Band, Cover
MZ-1129A	1	Head Assy., Drive End
MZ-44A	1	BEARING, ABSORBENT BRONZE
8X-119	4	Screw, D. E. Head, Fill. Hd. #10-32x1/2
12X-196	4	Lockwasher, Head Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

‡ BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4114	Case (Tractor)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2176A)	1	Frame & Field Assy.
MAK-80	1	Washer, Ins., Term. Stud
MAW-39A	1	Ins. Block
MU-31	1	Bushing, Ins., Term. Stud
MZ-12†	2	BRUSH
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-109	1	Stud, Terminal
MZ-1007D	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010D	1	Coil, Field, U.R.
SW-763A	1	Contact, Switch, Lower
8X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034†	2	BRUSH, GROUNDED
8X-532	4	Rivet, Brush Holder
12X-544	4	Lockwasher, C.E. Head Sc., #10
8X-902	4	Screw, C.E. Head, Fil. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAD-96	1	Washer, Thrust
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick
MZ-2108	1	ARMATURE ASSEMBLY
MAW-31	1	Spacer, Armature Shaft
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2677A	1	STARTING SWITCH
12X-201	1	Washer, Lock, 3/8
8X-830	1	Nut, Hex., 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Starter Clutch Assembly & Parts Used With

MAW-3132	1	STARTER CLUTCH
MZ-175	1	Screw, Pivot
MZ-2188	1	Yoke
8X-179	1	Nut, Yoke Pivot, Hex. 3/8-16
12X-201	1	Lockwasher, Yoke Pivot, 3/8

Miscellaneous Parts

MN-18	1	Washer, Thrust
MZ-24A	1	Band, Cover
PS-1197	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-544	4	Lockwasher, Housing Sc. #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-900	4	Screw, Pinion Housing, Fil. Hd. #10-32x7/8
		1 2 3 4 5

* Use as required.

† BRUSH SET, Service MZ-2012S.

Unit	Application
MZ-4115	Dodge Truck

(Issued 2-19-47)

File in Equipment & Parts List Binder

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
(MZ-2001)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud 5/16
MU-39	1	Washer, Ins., Term. Stud Inner
MZ-12†	2	Brush, Insulated
MZ-30A	1	Insulation, Field Conn.
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-1014	2	Lockwasher, Term. Stud., 5/16
5X-1376	2	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
X-544	4	Lockwasher, C.E. Head Screw,#10
8X-902	4	Screw, C.E. Head, Fil. Hd., #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Thrust 1/32" thick
MZ-2089	1	ARMATURE ASSY.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, C.E. #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
	1 2 3 4 5	
EBA-36	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8506	1	Screw, Head Spring
EB-8507	1	Screw, Spring Shaft
EB-8734	1	Ring, Take-Up
EBA-405	1	SPRING, DRIVE
EBA-3611	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Absorbent Bronze
MZ-52	4	Screw, Pinion Housing Hex. Hd., #10-32x31/32
MZ-1024	1	Band, Cover
PS-1214	1	Housing Assy., Pinion
MAB-88	1	Pin Dowel
MP-41A	1	Bearing, Absorbent Bronze
X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd., #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32
	1 2 3 4 5	

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4118	Mobilift

(Issued 10-3-47)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ-4118M STARTING MOTOR PARTS LIST

MZ-4118M
(Issued 4-12-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2001G)	1	Frame & Field Assy.
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31A	1	Bushing, Ins., Term. Stud, Inner
MU-37G	1	Washer, Plain, Term. Stud, 5/16
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38C	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
19X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54F	2	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
MZ-2089M	1	ARMATURE
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-36A	1	BENDIX DRIVE ASSEMBLY
EB-108A	2	Lockwasher
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Driving
EB-8506A	1	Screw, Spring, Head
EB-8507A	1	Screw, Spring, Shaft
EB-8734A	1	Ring, Take-Up
EBA-405A	1	SPRING, DRIVE
EBA-3611A	1	Shaft & Pinion
MAB-2040C	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MZ-52A	4	Screw, Housing, Hex. Hd. #10-32x31/32
MZ-1024Z	1	Band, Cover
PS-1214A	1	Housing Assy., Pinion
MAB-88A	1	Pin, Dowel
MP-41A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2882	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4118M	Wisconsin

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2001)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
X-196	4	Lockwasher, Head Screw, #10
X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32'' Thick
MZ-2049	1	ARMATURE ASSY.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBA-65	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8734	1	Ring, Take-Up
EB-9211	1	Shaft & Pinion
EBA-1405	1	SPRING, DRIVE
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MZ-1024	1	Band, Cover
PS-1006	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
X-342	4	Screw, Housing, Flat Hd. #10-32x7/8
X-489	1	Oiler
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4121	Palmer Bros.

(Issued 4-25-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ-4123 STARTING MOTOR PARTS LIST MZ-4123

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2001)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush, Insulated
MZ-30A	1	Insulation, Field Conn.
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-1014	1	Washer, Lock, Term. Stud, 5/16
5X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034†	2	Brush, Grounded
8X-532	4	Rivet, Brush Holder
X-544	4	Washer, Lock, Attaching, C.E. Head, #10
X-902	4	Washer, Lock, Cover Holding Screw, #10

Armature Assembly & Parts Used With

MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
MZ-2089	1	Armature Assy.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-19	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7819S	1	Sleeve Compression
EB-8503	1	Head, Driving
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8711	1	Shaft & Pinion
EB-8734	1	Ring, Take Up
EBA-1405	1	Spring, Drive
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
MZ-52	4	Screw, Pinion Housing, Hex. hd., #10-32x31/32
MZ-1024	1	Band, Cover
PS-1172A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	Bearing, Absorbent Bronze
X-196	4	Washer, Lock, Pinion Housing Screw, #10
X-308	1	Screw, Cover Band, Rd. hd., #10-32x1 3/8
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 4-25-44)

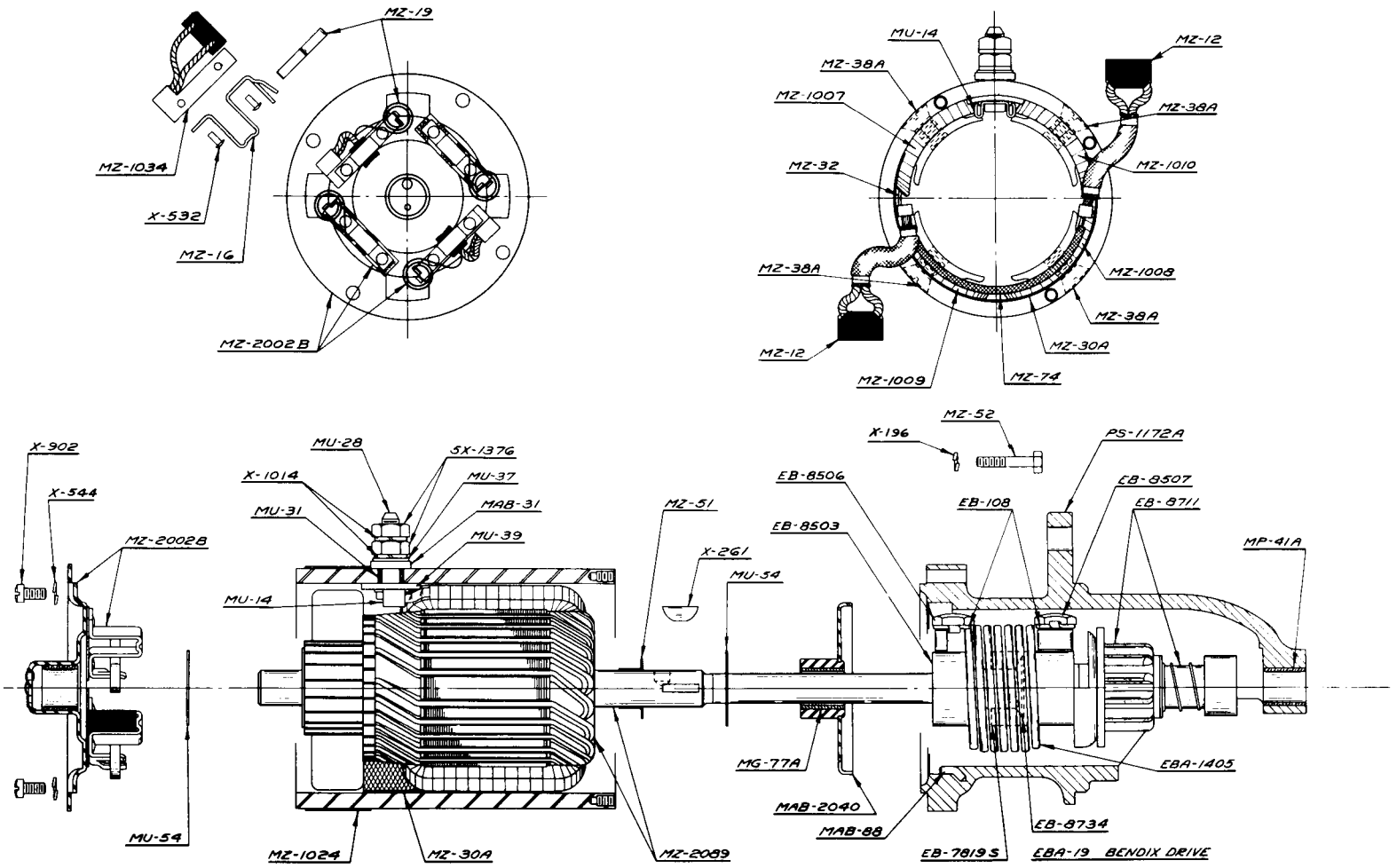
† Brush Set, Service, MZ-2012S.

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"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

MZ-4123 STARTING MOTOR ILLUSTRATION



MZ-4127 STARTING MOTOR PARTS LIST MZ-4127

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2202)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12‡	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-1014	1	Washer, Lock, Term. Stud, 5/16
8X-1376	1	Nut, Term. Stud, Hex., 5/16-24
X-1014	1	Washer, Lock, Term. Stud, 5/16
8X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034‡	2	Brush, Grounded
8X-532	4	Rivet, Brush Holder
X-544	4	Washer, Lock, Attaching, C.E. Head, #10
X-902	4	Screw, Attaching, C.E. Head, Fil. hd., #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
MZ-2089	1	Armature Assy.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SS-6L	1	Connector
SS-4014	1	Switch, Starting
12X-196	1	Washer, Lock, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Washer, Lock, 5/16
8X-1372	1	Nut, Hex., #10-32
8X-321	2	Screw, Mtg. Switch, Rd. hd., #10-32x5/16
X-1274	2	Washer, Skpf. Switch Mtg., #10

Miscellaneous Parts

EBA-19	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8711	1	Shaft & Pinion
EB-8734	1	Ring, Take up
EBA-1405	1	Spring, Drive
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
MZ-24A	1	Band, Cover
MZ-52	4	Screw, Pinion Housing, Hex. hd., #10-32x31/32
PS-1121	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	Bearing, Absorbent Bronze
X-308	1	Screw, Cover Band, Rd. hd., #10-32x1 3/8
8X-794	1	Nut, Cover Band, Square, #10-32
		1 2 3 4 5

(Issued 3-8-44)

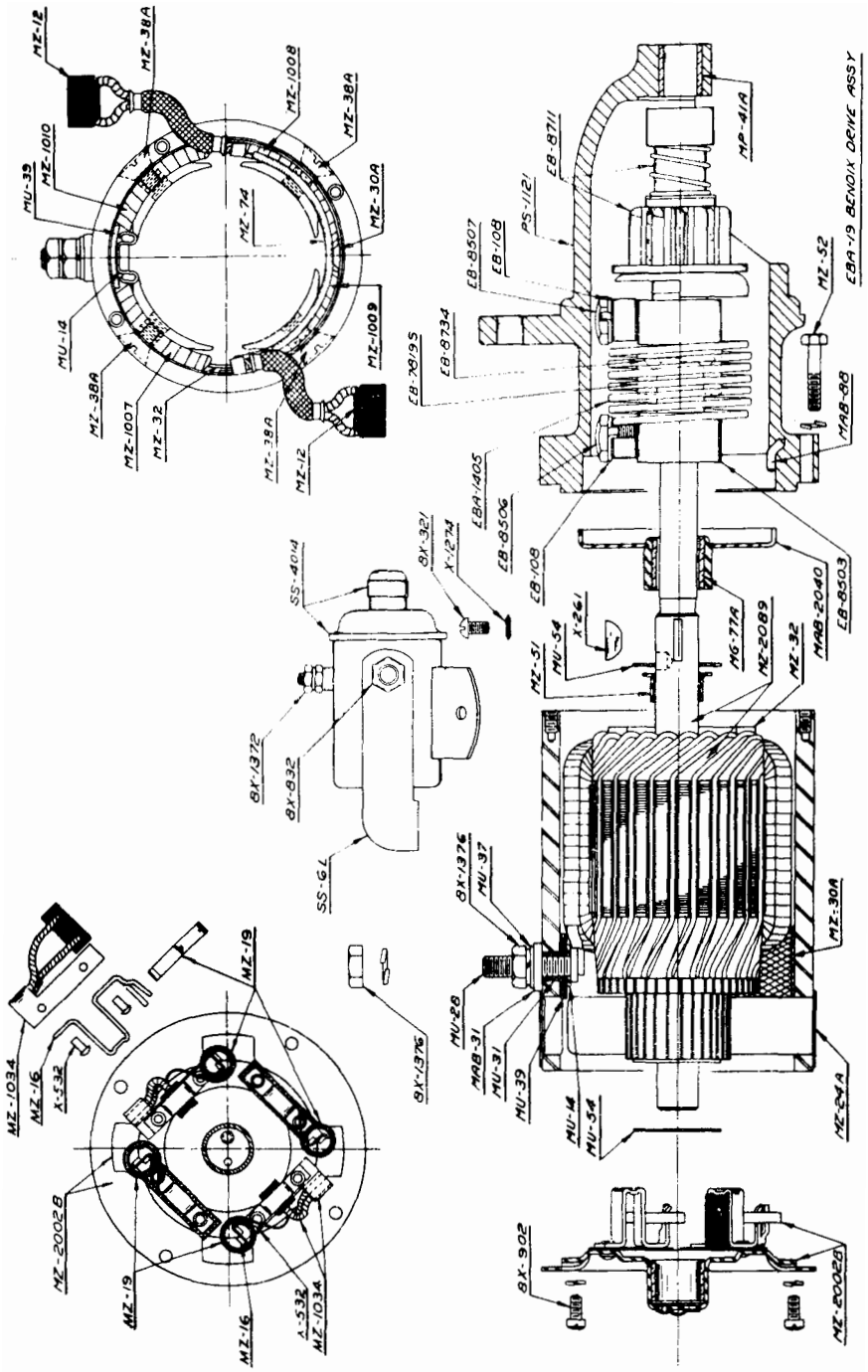
‡ Brush Set, Service, MZ-2012S.

Printed in U. S. A.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

File in Equipment & Parts List Binder

MZ-4127 STARTING MOTOR ILLUSTRATION



Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2001E)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, Arm. Shaft, D.E.
MU-54	1	Washer, Thrust, C.E., 1/32'' Thick
MZ-2113	1	ARMATURE

Switch Assembly & Parts Used With

SS-6R	1	Connector, Switch to Motor
SS-4020	1	SOLENOID SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1274	2	Washer, Switch Mtg., Skpf., #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-6	1	BENDIX DRIVE ASSY.
EB-6501	1	Shaft
EB-6502	1	Stop
EB-6505	1	SPRING, DRIVE
EB-6513	1	Spring, Anti-Drift
EB-6529	1	Collar, Spacing
EB-6823	2	Washer, Thrust
EB-6824	1	Support, Drive Spring
EB-6825	1	Spring, Meshing
EB-6828	1	Nut, Castellated
EBA-604S	1	Pinion
EBA-635	1	Sleeve, Anti-Drift Spring
X-528	1	Pin, Cotter
MZ-1024U	1	Band, Cover
MZ-1114	1	Head Assy., Drive End
MAK-39	1	BRG. ABS. BRONZE
8X-119	4	Screw, D.E. Head, Fill. Hd. #10-32x1/2
12X-196	4	Lockwasher, Head Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

(Issued 8-2-49)

UNIT	APPLICATION
MZ-4130	B.F. Avery, Atlas Diesel
MZ-4130A	Hercules

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2203)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Conn.
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-196	4	Lockwasher, C.E. Head, #10
X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Thrust, C.E. & Inter., 1/32'' Thick
MZ-2053	1	ARMATURE ASSY.
MZ-35	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-224	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Mtg., Switch, Rd. Hd. #10-32x5/16
X-1274	2	Lockwasher, Skpf. Switch Mtg., #10

Miscellaneous Parts

EBA-4	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8734	1	Ring, Take-Up
EB-9911	1	Shaft & Pinion
EBA-405	1	SPRING, DRIVE
MZ-1024U	1	Band, Cover
MZ-1129A	1	Head Assy., Drive End
MZ-44A	1	BEARING, ABS. BRONZE
8X-119	4	Screw, D.E. Head, Fill. Hd. #10-32x1/2
12X-196	4	Lockwasher, D.E. Head Screw, #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square, #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4131	Massey Harris

(Issued 6-3-49)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2210)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12‡	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-209	1	Stud, Terminal
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S‡	2	Brush, Grounded
12X-196	4	Lockwasher, C.E. Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MU-54	*	Washer, Thrust, C.E. & D.E., 1/32'' Thick
MU-54A	*	Washer, Thrust, C.E. & D.E., 1/64'' Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64'' Thick
MZ-2211	1	ARMATURE
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBB-8	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
EBB-832	1	Pinion
MAW-2129	1	BRG. ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
MZ-24A	1	Band, Cover
PS-1253	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-2944	4	Screw, Housing, Hex. Hd. #10-32x5/8

* Used as Required.

‡ BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4133	Dodge; Plymouth

(Issued 4-17-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ-4134 STARTING MOTOR PARTS LIST

MZ-4134
(Issued 1-22-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2212)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
X-196	3	Lockwasher, C.E. Head Screw, #10
X-902	3	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MU-54	1	Washer, Thrust, 1/32" Thick
MZ-2213	1	ARMATURE

Miscellaneous Parts

MZ-24A	1	Band, Cover
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4134	Dura Co.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2001E)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, C.E. Head Screw, #10
X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
MZ-2049	1	ARMATURE ASSEMBLY
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6R	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1274	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-14	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
EBA-1405	1	SPRING, DRIVE
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MZ-24A	1	Band, Cover
MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
PS-1172	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4135	Universal

(Issued 4-19-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2210A)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins. Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud 5/16
8X-1376	2	Nut, Term. Stud Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105C	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034†	2	Brush, Grounded
X-532	4	Rivet, Brush Holder
12X-544	4	Lockwasher, C.E. Head Screw, #10
X-902	4	Screw, C.E. Head, Fil. Hd. #10-32x3/8
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MAK-61	1	Washer, Arm. Thrust, Comm. End
MU-54	2	Washer, Arm. Thrust, Comm. End & Intermediate
MZ-2211	1	Armature
X-261	1	Key, Woodruff, #6
		Miscellaneous Parts
EBA-33	1	Bendix Drive Assembly
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Locating Pin
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Lock Ring
EBA-2031	1	Shaft
EBA-2105	1	Spring, Drive
MAW-2129	1	Bearing Assy., Intermediate
MAW-130	1	Bearing, Absorbent Bronze
MZ-24A	1	Band, Cover
PS-1257	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
12X-196	4	Lockwasher, Housing Screw, #10
8X-308	1	Screw, Cover Band, Rd. Hd. #10-32x1 3/8
8X-794	1	Nut, Cover Band, Square #10-32
X-2944	4	Screw, Pinion Housing, Hex. Hd. #10-32x5/8
		1 2 3 4 5

† Brush Set, Service MZ-2012S.

(Issued 9-18-46)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2215)	1	Frame & Field Assembly
MAK-80	1	Washer, Ins., Term. Stud
MAW-39A	1	Insulating Block
MU-31	1	Bushing, Ins., Term. Stud
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-109	1	Stud, Terminal
MZ-1007D	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010D	1	Coil, Field, U.R.
SW-763A	1	Contact, Switch, Lower
8X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2216	1	Head Assembly., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034†	2	Brush, Grounded
X-532	4	Rivet, Brush Holder
12X-544	4	Lockwasher, C.E. Head Screw, #10
X-902	4	Screw, C.E. Head, Fil. Hd., #10-32x3/8

Armature Assembly & Parts Used With

MAD-96	1	Washer, Armature Thrust, C.E.
MU-54	*	Washer, Thrust 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick
MZ-2214	1	Armature
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2677A	1	Starting Switch
12X-201	1	Washer, Lock, 3/8
8X-830	1	Nut, Hex., 3/8-16
12X-196	2	Lockwasher, Switch Mtg., #10
X-321	2	Screw, Switch Mtg., Rd. Hd., #10-32x5/16

Starter Clutch Assembly & Parts Used With

MAW-3132	1	Starter Clutch
MZ-175	1	Screw, Pivot
MZ-2217	1	Yoke
8X-179	1	Nut, Yoke Pivot, Hex., 3/8-16
12X-201	1	Lockwasher, Yoke Pivot, 3/8

Miscellaneous Parts

MZ-24A	1	Band, Cover
MZ-52	4	Screw, Pinion Housing, Hex. Hd., #10-32x31/32
MZ-2223	1	Bearing Assembly., Intermediate
ML-92A	1	Bearing, Absorbent Bronze
PS-1256	1	Housing Assembly Pinion
MAB-88	1	Pin, Dowel
12X-196	4	Lockwasher, Housing Screw, #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

* Use as required.

† Brush Set, Service MZ-2012S.

Printed in U. S. A.

(Issued 4-25-46)
File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2001)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush, Insulated
MZ-30A	1	Ins., Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-1014	2	Lockwasher, Term. Stud, 5/16
5X-1376	2	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034†	2	Brush, Grounded
8X-532	4	Rivet, Brush Holder
12X-544	4	Lockwasher, C.E. Hd. Sc., #10
X-902	4	Screw, C.E. Hd., Fil. Hd. #10-32x3/8
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MU-54	2	Washer, Thrust 1/32" thick
MZ-2049	1	Armature Assy.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBA-65	1	Bendix Drive Assy.
EB-108	2	Washer, Lock
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8734	1	Ring, Take Up
EBA-1405	1	Spring, Drive
EBA-6411	1	Shaft & Pinion
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Abs. Bronze
MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
MZ-1024	1	Band, Cover
PS-1064	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
12X-196	4	Lockwasher, Housing Sc., #10
X-308	1	Screw, Cover Band, Rd. Hd. #10-32x1 3/8
8X-794	1	Nut, Cover, Band, Square #10-32
		1 2 3 4 5

† Brush Set, Service MZ-2012S.

Unit	Application
MZ-4138	LeRoi

(Issued 1-14-47)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used

Part No.	No. Used	Name of Part
(MZ-2225)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Ins., Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
MZ-2089	1	ARMATURE ASSY.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-19	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8711	1	Shaft & Pinion
EB-8734	1	Ring, Take-Up
EBA-1405	1	SPRING, DRIVE
MZ-24A	1	Band, Cover
MZ-52	4	Screw, Pinion Housing, Rd. Rd. #10-32x31/32
MZ-126	1	Washer, Thrust
MZ-127	1	Washer, Felt
MZ-128	1	Gasket, Int. Bearing
MZ-1125	1	BEARING ASSY., INTERMEDIATE
MZ-44A	1	Bearing, Abs. Bronze
PS-1261	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-195	4	Lockwasher, Int. Bearing Sc., #8
12X-196	4	Lockwasher, Housing Screw, #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x 1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-878	4	Screw, Int. Bearing, Fill. Hd. #8-32x7/16

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4140	Continental

(Issued 6-25-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2176A)	1	Frame & Field Assy.
MAK-80	1	Washer, Ins., Term. Stud
MAW-39A	1	Insulating Block
MAW-205	1	Insulation, Sw. Contact
MU-31	1	Bushing, Ins., Term. Stud
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-109	1	Stud, Terminal
MZ-1007D	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010D	1	Coil, Field, U.R.
SW-763A	1	Contact, Switch, Lower
8X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-544	4	Lockwasher, C.E. Head Sc., #10
8X-902	4	Screw, C.E. Head, Fil. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAD-96	1	Washer, Arm. Thrust, C.E.
MU-54	*	Washer, Thrust, 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick
MZ-2108	1	Armature Assy.
MAW-31	1	Spacer, Armature Shaft
		1 2 3 4 5

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
SW-2677A	1	Starting Switch
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex., 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10

Starter Clutch Assembly & Parts Used With

MAD-95	1	Retainer, Yoke Spring
MAW-161	1	Spring, Yoke
MAW-3132	1	Starter Clutch
MAX-52	1	Pin, Yoke
MZ-2233	1	Yoke
8X-179	1	Nut, Yoke Pivot, Hex. 3/8-16
12X-201	1	Lockwasher, Yoke Pivot, 3/8

Miscellaneous Parts

MN-18	1	Washer, Thrust, D.E.
MZ-24A	1	Band, Cover
PS-1197A	1	Housing Assembly, Pinion
MP-41A	1	Bearing, Absobent Bronze
12X-544	4	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd., #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-900	4	Screw, Pinion Housing, Fil. Hd. #10-32x7/8
		1 2 3 4 5

† Brush Set, Service MZ-2012AS

* Use as required.

UNIT	APPLICATION
MZ-4143	Dodge (Truck)

(Issued 11-5-47)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2210)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-209	1	Stud, Terminal, 5/16-18
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
8X-164	2	Nut, Term. Stud, Hex., 5/16-18
12X-1014	2	Washer, Lock, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-544	4	Lockwasher, C.E. Head Screw, #10
X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, Comm. End
MU-54	*	Washer, Arm, Thrust, C.E., 1/32'' Thick
MU-54A	*	Washer, Arm. Thrust, C.E., 1/64'' Thick
MU-54B	*	Washer, Arm. Thrust, C.E., 3/64'' Thick
MZ-2211	1	ARMATURE
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-52	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Screw Shaft
EBA-2105	1	SPRING, DRIVE
EBA-7632	1	Pinion
MAW-2129	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Absorbent Bronze
MZ-24A	1	Band, Cover
PS-1253C	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
12X-196	4	Lockwasher, Housing Screw, #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
X-2944	4	Screw, Pinion Housing, Hex. Hd. #10-32x5/8

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4144	Buda, Toolcraft

Printed in U. S. A. (Issued 6-15-48) File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MZ-4144M STARTING MOTOR PARTS LIST MZ-4144M
(Issued 4-13-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2210D)	1	Frame & Field Assy.
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31A	1	Bushing, Ins., Term. Stud
MU-37G	1	Washer, Plain, Term. Stud, 5/16
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38C	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
X-180	2	Nut, Term. Stud, Hex. 5/16-24
12X-1014	2	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MZ-2105F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19A	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
19X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-61A	1	Washer, Arm. Thrust, C.E.
MU-54F	*	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
MU-54G	*	Washer, Thrust, C.E. & Intermediate, 1/64" Thick
MU-54J	*	Washer, Thrust, C.E. & Intermediate, .046" Thick
MZ-2211M	1	ARMATURE
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-52A	1	BENDIX DRIVE ASSY.
EBA-4808	1	Ring, Lock
EBA-4833	1	Ring, Retaining
EBA-7213	1	Spring, Anti-Drift
EBA-7225	1	Spring, Meshing
EBA-7232	1	Pinion
EBA-7905	1	SPRING, DRIVE
EBA-7906	1	Pin, Locating
EBA-7907	2	Plate, Spring Anchor
EBA-7931	1	Shaft, Screw
MAW-2129A	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
MZ-1024T	1	Band, Cover
PS-1253E	1	Housing Assy., Pinion
MAW-131A	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
X-2875	1	Nut, Cover Band, Square #10-32
X-2882	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
19X-2944	4	Screw, Housing, Hex. Hd. #10-32x5/8

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4144M	Silent Hoist & Crane

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
(MZ-2001F)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002E	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-544	4	Lockwasher, C.E. Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
MZ-2049	1	ARMATURE ASSY.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6
	1 2 3 4 5	

Miscellaneous Parts

Part No.	No. Part	Name of Part
	1 2 3 4 5	
EBA-4	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8734	1	Ring, Take Up
EB-9911	1	Shaft & Pinion
EBA-405	1	SPRING, DRIVE
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Absorbent Bronze
MZ-52A	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
MZ-1024Y	1	Band, Cover
PS-1064A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABSORBENT BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
	1 2 3 4 5	

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4145	Aerco Corp.

Printed in U. S. A. (Issued 4-22-48) File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MZ-4146,A STARTING MOTOR PARTS LIST

MZ-4146,A
(Issued 6-27-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2202A)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002E	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, C.E. Head Sc., #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MZ-2049	1	ARMATURE ASSY.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L**	1	Connector
SST-4002**	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-24
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321**	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270**	2	Washer, Switch Mtg. Sc. Skpf. #10

Miscellaneous Parts

EBA-4	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8734	1	Ring, Take-Up
EB-9911	1	Shaft & Pinion
EBA-405	1	SPRING, DRIVE
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Absorbent Bronze
MZ-52A	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
MZ-1024AA	1	Band, Cover
PS-1172B	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	BEARING, ABSORBENT BRONZE
12X-196	4	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.
* Used as Required.
** These parts used on MZ-4146 only.

UNIT	APPLICATION
MZ-4146,A	Massey Harris

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2001F)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term., Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002E	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-544	4	Lockwasher, C.E. Head Sc.,#10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8
		1 2 3 4 5

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate
MZ-2053	1	ARMATURE ASSY.
MZ-35	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

EBA-97	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8734	1	Ring, Take-Up
EBA-405	1	SPRING, DRIVE
EBA-9711	1	Shaft, & Pinion
MZ-24A	1	Band, Cover
MZ-1129A	1	Head Assy., Drive End
MZ-44A	1	BEARINGS, ABS. BRONZE
8X-119	4	Screw, D.E. Head, Fill. Hd. #10-32x1/2
12X-196	4	Lockwasher, D.E. Hd. Sc. #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
		1 2 3 4 5

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4147	Crosley

(Issued 4-21-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly With Terminal Stud & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
(MZ-2176A)	1	Frame & Field Assy.
MAK-80	1	Washer, Ins., Term. Stud
MAW-39A	1	Insulating Block
MAW-205	1	Insulation, Switch Contact
MU-31	1	Bushing, Ins., Term. Stud
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-109	1	Stud, Terminal
MZ-1007D	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010D	1	Coil, Field, U.R.
SW-764A	1	Contact, Switch, Lower
8X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-16	2	Holder, Brush
MZ-19	4	Spring, Brush
MZ-1034†	2	Brush, Grounded
8X-532	4	Rivet, Brush Holder
12X-544	4	Lockwasher, C.E. Head Sc.,#10
8X-902	4	Screw, C.E. Head, Fil Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAD-96	1	Washer, Arm. Thrust, C.E.
MZ-2108	1	ARMATURE ASSY.
MAW-31	1	Spacer, Armature Shaft
MU-54	*	Washer, Thrust, 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick

Switch Assembly & Parts Used With

SW-2813	1	STARTING SWITCH
12X-201	1	Washer, Lock 3/8
8X-830	1	Nut, Hex., 3/8-16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg., Skpf. #10
	1 2 3 4 5	

Starter Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
	1 2 3 4 5	
MAD-95	1	Retainer, Yoke Spring
MAW-161	1	Spring, Yoke
MAW-3132	1	STARTER CLUTCH
MAX-52	1	Pin, Yoke
MZ-2235	1	Yoke Assembly
8X-179	1	Nut, Yoke Pivot, Hex. 3/8-16
12X-201	1	Lockwasher, Yoke Pivot, 3/8

Miscellaneous Parts

MN-18	1	Washer, Thrust D.E.
MZ-24A	1	Band, Cover
PS-1197A	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
12X-544	4	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-900	4	Screw, Pinion Housing, Fil. Hd. #10-32x7/8
	1 2 3 4 5	

† BRUSH SET, SERVICE MZ-2012S.

* Use as Required.

UNIT	APPLICATION
MZ-4148	Dodge Truck

(Issued 2-24-48)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2224)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	Field Coil Package
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-544	4	Lockwasher, C.E. Head Sc., #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-61	1	Washer Arm. Thrust, C.E.
MU-54	*	Washer, Thrust 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick
MZ-2211	1	Armature
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6RA	1	Connector
SST-4004	1	Solenoid Switch
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1274	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBB-5	1	Bendix Drive Assy.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	Spring, Drive
EBB-532	1	Pinion
MAW-2129	1	Bearing Assy., Intermediate
MAW-130	1	Bearing, Absorbent Bronze
MZ-24A	1	Band, Cover
PS-1253D	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	Bearing, Abs. Bronze
12X-196	4	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-2944	4	Screw, Housing, Hex. Hd. #10-32x5/8

† Brush Set, Service MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4149	Towmotor

Printed in U. S. A. (Issued 7-15-48) File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ-4150 STARTING MOTOR PARTS LIST

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2001E)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush, Insulated
MZ-30A	1	Insulation, Field Conn.
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	Field Coil Package
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002E	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-544	4	Lockwasher, C.E. Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Thrust, 1/32'' Thick
MZ-2049	1	Armature Assy.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

SS-6RA	1	Connector
SST-4004	1	Solenoid Switch
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-14	1	Bendix Drive Assembly
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Driving
EB-8506	1	Screw, Head Spring
EB-8507	1	Screw, Spring Shaft
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
EBA-1405	1	Spring, Drive
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	Bearing, Absorbent Bronze
MZ-52A	4	Screw, Housing Hex. Hd. #10-32x31/32
MZ-1024Y	1	Band, Cover
PS-1172B	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MG-77A	1	Bearing, Absorbent Bronze
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† Brush Set, Service MZ-2012AS.

UNIT	APPLICATION
MZ-4150	Continental

(Issued 7-15-48)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
		1 2 3 4 5
(MZ-2210B)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105E	1	Head Assy., Comm. End
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-544	4	Lockwasher, C.E. Head Screw, #10
8X-902	4	Screw, C.E. Head, Fil. Hd., #10-32x3/8

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm Thrust, Comm. End
MU-54	*	Washer, Thrust, 1/32" thick
MU-54A	*	Washer, Thrust, 1/64" thick
MU-54B	*	Washer, Thrust, 3/64" thick
MZ-2211	1	ARMATURE
X-261	1	Key, Woodruff, D.E., #6
		1 2 3 4 5

Miscellaneous Parts

Part No.	No. Used	Name of Part
		1 2 3 4 5
EBA-33	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
MZ-24A	1	Band, Cover
MZ-1236	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
PS-1290	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	6	Lockwasher, Housing Sc. & Int. Bearing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Sq. #10-32
8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
8X-2987	4	Screw, Pinion Housing, Hex. Hd. #10-32x7/8
		1 2 3 4 5

* Use As Required.

† BRUSH SET, SERVICE MZ-2012AS.

NOTE: - Part number shown in parenthesis are not recommended for service.

UNIT	APPLICATION
MZ-4151	Studebaker

(Issued 12-4-47)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2224)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-544	4	Lockwasher, C.E. Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MU-54	*	Washer, Thrust, 1/32'' Thick
MU-54A	*	Washer, Thrust, 1/64'' Thick
MU-54B	*	Washer, Thrust, 3/64'' Thick
MZ-2211	1	ARMATURE
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6LB	1	Connector
SST-4004	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1274	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBB-5	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
EBA-532	1	Pinion
MAW-2129	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
MZ-1024Y	1	Band, Cover
PS-1253D	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-2944	4	Screw, Housing, Hex. Hd. #10-32x5/8

† BRUSH SET, SERVICE MZ-2012AS.
* Used as required.

UNIT	APPLICATION
MZ-4152	Lincoln Electric, Federal Mach.

(Issued 1-4-49)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2202A)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-54	1	Washer, Thrust, Arm. Shaft, D.E.
MU-54	1	Washer, Thrust, C.E., 1/32'' Thick
MZ-2085	1	ARMATURE

Switch Assembly & Parts Used With

SS-6LB	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EB-79	1	BENDIX DRIVE ASSEMBLY
EB-6505	1	SPRING, DRIVE
EB-6813	1	Spring, Anti-Drift
EB-6823	2	Washer, Thrust
EB-6824	1	Support, Drive Spring
EB-6825	1	Spring, Meshing
EB-6826	1	Sleeve, Anti-Drift Spring
EB-6827	1	Washer, Pinion
EB-6828	1	Nut
EB-7901	1	Shaft
EB-7902	1	Drive Stop
EB-8104S	1	Pinion
X-528	1	Cotter Pin
MZ-101A	4	Screw, D.E. Head, Hex. Hd. #10-32x9/16
MZ-1024Y	1	Band, Cover
MZ-1237	1	Head Assy., Drive End
MAK-39	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Head Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4153	Universal Motor

(Issued 6-3-49)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MZ-4154 STARTING MOTOR PARTS LIST

MZ-4154
(Issued 11-29-51

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2112A)	1	Frame & Field Assy.
MAK-80	1	Washer, Ins., Term. Stud
MAW-39A	1	Insulation, Switch Contact
MU-31	1	Bushing, Ins., Term. Stud
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-109	1	Stud, Terminal
MZ-3005BS	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007D	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010D	1	Coil, Field, U.R.
SW-764A	1	Contact, Switch, Lower
8X-1376	1	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, C.E. Head Sc., #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAD-96	1	Washer, Thrust, Comm. End
MN-18	1	Washer, Thrust, D.E.
MZ-2108	1	ARMATURE ASSY.
MAW-31	1	Spacer
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick

Switch Assembly & Parts Used With

SW-2813	1	SWITCH, STARTER
12X-201	1	Lockwasher, 3/8
8X-830	1	Nut, Hex. 3/8-16
12X-196	1	Lockwasher, Term. Sc., #10
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10
8X-1368	1	Screw, Switch Terminal, Rd. Hd. #10-32x7/16

Starter Clutch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAD-95	1	Retainer, Yoke Spring
MAX-52	1	Pin, Yoke
MAX-3160	1	STARTER CLUTCH
MZ-142	1	Spring, Yoke
MZ-2500	1	Yoke
8X-179	1	Nut, Yoke Pin, Hex. 3/8-16
12X-201	1	Lockwasher, Yoke Pin, 3/8

Miscellaneous Parts

MZ-24A	1	Band, Cover
PS-1173	1	Housing Assy., Pinion
MP-41A	1	BEARING, ABS. BRONZE
8X-118	1	Screw, Pinion Housing, Fill. Hd. #10-32x3/4
12X-196	4	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-900	3	Screw, Pinion Housing, Fill. Hd. #10-32x7/8

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4154	Indian Motocycle Tri-Wheel Motor

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ-4155 STARTING MOTOR PARTS LIST

MZ-4155
(Issued 3-9-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2001F)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush, Insulated
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002E	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Thrust, 1/32" Thick
MZ-2053	1	ARMATURE ASSY.
MZ-35	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-14	1	BENDIX DRIVE ASSEMBLY
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head Driving
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8734	1	Ring, Take-Up
EBA-211	1	Shaft & Pinion
EBA-1405	1	SPRING, DRIVE
MZ-1024Y	1	Band, Cover
MZ-1129A	1	Head Assy., Drive End
MZ-44A	1	BEARING, ABS. BRONZE
8X-119	4	Screw, D.E. Head, Fill. Hd. #10-32x1/2
12X-196	4	Lockwasher, Head Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4155	Gladden Products

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2224)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MU-54	*	Washer, Thrust, 1/32" Thick
MU-54A	*	Washer, Thrust, 1/64" Thick
MU-54B	*	Washer, Thrust, 3/64" Thick
MZ-2211	1	ARMATURE
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

SS-6LB	1	Connector
SST-4004	1	SOLENOID SWITCH
8X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1274	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-5	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
EBB-532	1	Pinion
MAW-2129	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
MZ-1024Y	1	Band, Cover
PS-1253D	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-2944	4	Screw, Housing, Hex. Hd. #10-32x5/8

† BRUSH SET, SERVICE MZ-2012AS.
* Use as required.

(Issued 1-4-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2210C)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	Field Coil Package
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105E	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MU-54	*	Washer, Thrust, C.E. & Int., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & Int., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & Int., 3/64" Thick
MZ-2211	1	Armature
X-261	1	Key, Woodruff, #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-33	1	Bendix Drive Assembly
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	Spring, Drive
MZ-24A	1	Band, Cover
MZ-1236	1	Bearing Assy., Intermediate
MAW-130	1	Bearing, Abs. Bronze
PS-1290	1	Housing Assy., Pinion
MG-77A	1	Bearing, Abs. Bronze
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
X-1274	2	Lockwasher, Skfp., #10
8X-1368	2	Screw, Rd. Hd. #10-32x7/16
8X-2987	4	Screw, Pinion Housing, Hex. Hd. #10-32x7/8

* Use as required.

† Brush Set, Service MZ-2012AS.

UNIT	APPLICATION
MZ-4157	Studebaker

(Issued 8-22-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2313)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Conn.
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & D.E., 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick
MZ-2312	1	ARMATURE
MZ-309	1	Spacer

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-319	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1737	2	Washer, Switch Mtg., Sc., Skpf. #10

Miscellaneous Parts

EBB-7	1	BENDIX DRIVE ASSY.
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2008	1	Ring, Lock
EBA-3505	1	SPRING, DRIVE
EBA-3507	2	Plate, Spring Anchor
EBA-3531	1	Shaft
EBB-732	1	Pinion
MZ-24A	1	Band, Cover
MZ-124	1	Pin, Bendix
MZ-1003	1	Head Assy., Drive End
MCL-27	1	BEARING, ABS. BRONZE
X-3048	4	Screw, Drive End Head, Flat Hd. #10-32x3/8
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4159	Hudson

(Issued 10-10-49)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2225)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Ground
12X-196	4	Lockwasher, C.E. Head Screw, #10
X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAD-47	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MZ-99	1	Washer, Thrust, D.E.
MZ-2327	1	ARMATURE

Miscellaneous Parts

MZ-24A	1	Band, Cover
MZ-1325	1	Head Assy., Drive End
MBD-257	1	BEARING, ABS. BRONZE
X-119	4	Screw, D.E. Head, Fill. Hd. #10-32x1/2
12X-196	4	Lockwasher, D.E. Head Screw, #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4160	Nash (Canada)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2210E)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-209	1	Stud, Terminal, 5/16-18
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-61	1	Washer, Arm. Thrust, C.E.
MU-54	*	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & Intermediate, 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & Intermediate, 3/64" Thick
MZ-2211	1	ARMATURE
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6RA	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1274	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-52	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Screw, Shaft
EBA-2105	1	SPRING, DRIVE
EBA-7632	1	Pinion
MAW-2129	1	Bearing Assy., Intermediate
MAW-130	1	Bearing, Abs. Bronze
MZ-24A	1	Band, Cover
PS-1253C	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-2944	4	Screw, Housing, Hex. Hd. #10-32x5/8

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4161	Kohler Co.

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2215)	1	Frame & Field Assembly
MAK-80	1	Washer, Ins., Term. Stud
MAW-39A	1	Insulation, Switch Contact
MU-31	1	Bushing, Ins., Term. Stud
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-109	1	Stud, Terminal
MZ-3005BS	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007D	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010D	1	Coil, Field, U.R.
SW-763A	1	Contact, Switch Lower
8X-1376	1	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2328	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	*	Washer, Thrust, C.E., 1/32'' Thick
MU-54B	*	Washer, Thrust, C.E., 3/64'' Thick
MZ-334	1	Washer, Thrust, Intermediate, 1/32'' Thick
MZ-2330	1	ARMATURE

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SW-2813	1	SWITCH, STARTER
12X-201	1	Lockwasher, 3/8
8X-830	2	Nut, Hex. 3/8-16
12X-196	2	Lockwasher, Switch Mtg. Sc., #10
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16

Starter Clutch Assembly & Parts Used With

MCH-77	1	Pin, Yoke
MCL-3098	1	CLUTCH, STARTER
MZ-2329	1	Yoke
X-406	1	Pin, Cotter, Yoke Pin, 3/32x1/2

Miscellaneous Parts

MZ-24A	1	Band, Cover
MZ-1332	1	BEARING, ASSY., INTERMEDIATE
MZ-333	1	Bearing, Abs. Bronze
PS-303	1	Housing, Pinion
12X-196	6	Lockwasher, Housing Screw & Int. Brg. Sc., #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
X-2994	4	Screw, Pinion Housing, Fill. Hd. #10-32x9/16

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

NOTE: Part numbers shown in parenthesis are not recommended for service.

UNIT	APPLICATION
MZ-4162	Willys

(Issued 7-19-50)

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2336)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term.. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2328	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick
MZ-2337	1	ARMATURE
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAX-89L	1	Connector
SS-4014	1	STARTING SWITCH
8X-173	1	Nut, Hex., #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex., 5/16-24
12X-1014	2	Lockwasher, 5/16
X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1274	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBA-39	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-2031	1	Screw Shaft
EBA-2032	1	Pinion
EBA-2105	1	SPRING, DRIVE
EBA-3307	2	Plate, Spring Anchor
MZ-24A	1	Band, Cover
MZ-1236	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
PS-304	1	Housing, Pinion
12X-196	4	Lockwasher, Housing Screw, #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
X-1274	2	Washer, Int. Brg. Screw, Skpf. #10
X-1368	2	Screw, Int. Bearing Rd. Hd. #10-32x7/16
X-2994	4	Screw, Pinion Housing, Fill. Hd. #10-32x9/16

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4163	Henry J.

(Issued 9-29-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2341)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	1	Lockwasher, Term. Stud, 5/16
8X-1376	1	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	*	Washer, Thrust, C.E. & D.E., 1/32'' Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64'' Thick
MZ-2312	1	ARMATURE
MZ-309	1	Spacer

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-7	1	BENDIX DRIVE ASSY.
EBA-513	1	Spring, Anti-Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2008	1	Ring, Lock
EBA-3505	1	SPRING, DRIVE
EBA-3507	2	Plate, Spring Anchor
EBA-3531	1	Shaft
EBB-732	1	Pinion
MZ-24A	1	Band, Cover
MZ-124	1	Pin, Bendix
MZ-1003A	1	Head Assy., Drive End
MG-77A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
X-3048	4	Screw, Drive End Head, Flat Hd. #10-32x3/8

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4164	Hudson

(Issued 10-17-50)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ-4165 STARTING MOTOR PARTS LIST

MZ-4165
(Issued 11-27-50)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2225)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Ins., Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
X-902	4	Screw, D.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAD-47	1	Washer, Thrust, D.E.
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MZ-99	1	Washer, Thrust, D.E.
MZ-2342	1	ARMATURE

Miscellaneous Parts

MZ-24A	1	Band, Cover
MZ-1325	1	Head Assy., Drive End
MBD-257	1	BEARING, ABS. BRONZE
X-119	4	Screw, D.E. Head, Fill. Hd. #10-32x1/2
12X-196	4	Lockwasher, Head Screw #10
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

* Use as required.

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4165	Nash (Canada)

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MZ-4166 STARTING MOTOR PARTS LIST

MZ-4166
(Issued 6-27-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2224)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MU-54	*	Washer, Thrust, C.E. & Intermediate 1/32" Thick
MU-54A	*	Washer, Thrust, C.E. & Intermediate 1/64" Thick
MU-54B	*	Washer, Thrust, C.E. & Intermediate 3/64" Thick
MZ-2211X	1	ARMATURE
X-261	1	Key, Woodruff, #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6RA	1	Connector
SS-4020	1	SOLENOID SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1274	2	Washer, Switch Mtg., Skpf. #10

Miscellaneous Parts

EBB-5	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2007	2	Plate, Spring Anchor
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft
EBA-2105	1	SPRING, DRIVE
EBB-532	1	Pinion
MAW-2129	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
MZ-24A	1	Band, Cover
PS-1253F	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Hsg. Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-2944	4	Screw, Housing, Hex. Hd. #10-32x5/8

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4166	Towmotor

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ-4167 STARTING MOTOR PARTS LIST

MZ-4167
(Issued 3-9-51)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
(MZ-2341A)	1	Frame & Field Assy.
MAB-31	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-209	1	Stud, Terminal, 5/16-18
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U.L.
MZ-1008	1	Coil, Field, L.R.
MZ-1009	1	Coil, Field, L.L.
MZ-1010	1	Coil, Field, U.R.
8X-164	1	Nut, Term. Stud, Hex. 5/16-18
12X-1014	1	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MZ-2002F	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	*	Washer, Thrust, C.E. & D.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E. & D.E., 3/64" Thick
MZ-2312	1	ARMATURE
MZ-309	1	Spacer

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-7	1	BENDIX DRIVE ASSY.
EBA-513	1	Spring, Anti- Drift
EBA-525	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2008	1	Ring, Lock
EBA-3505	1	SPRING, DRIVE
EBA-3507	2	Plate, Spring Anchor
EBA-3531	1	Shaft
EBB-732	1	Pinion
MZ-24A	1	Band, Cover
MZ-124	1	Pin, Bendix
MZ-1003A	1	Head Assy., Drive End
MG-77A	1	BEARING, ABS. BRONZE
X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
X-3048	4	Screw, D.E. Head, Flat Hd. #10-32x3/8

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4167	Hudson (6)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ-4170 STARTING MOTOR PARTS LIST

MZ-4170
(Issued 3-1-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2210E	1	Frame & Field Assembly
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-209	1	Stud, Terminal
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, C. E. Head Screw, #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MU-54K	*	Washer, Thrust, C. E., .080" Thick
MU-54L	*	Washer, Thrust, C. E., 1/16" Thick
MZ-2211	1	ARMATURE
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6RA	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1274	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBB-23	1	BENDIX DRIVE
MAW-2129	1	Bearing Assy., Intermediate
MAW-130	1	BEARING, ABS. BRONZE
MZ-24A	1	Band, Cover
PS-1253C	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-2944	4	Screw, Pinion Housing, Hex. Hd. #10-32x5/8

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4170	Lycoming-Spencer

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2210F	1	Frame & Field Assy.
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, C. E. Head Screw, #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	*	Washer, Thrust, C. E. & Interm., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E. & Interm., 3/64" Thick
MZ-2211	1	ARMATURE
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-33	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-2031	1	Screw Shaft
EBA-2105	1	SPRING; DRIVE
EBA-3307	2	Plate, Spring Anchor
MZ-24A	1	Band, Cover
MZ-177	4	Screw, Pinion Housing, Hex. Hd. #10-32x3/4
MZ-1236	1	BEARING ASSY., INTERMEDIATE
MZ-339	1	Bearing, Abs. Bronze
PS-1318	1	Housing Assy., Pinion
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Sc. #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
X-1274	2	Washer, Interm. Bearing Sc., Skpf. #10
8X-1368	2	Screw, Interm. Bearing, Rd. Hd. #10-32x7/16

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4172	Hudson (6)

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MZ-4174 STARTING MOTOR PARTS LIST

MZ-4174
(Issued 2-8-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2354	1	Frame & Field Assy.
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, Head Screw, #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54A	*	Washer, Thrust, C. E., 1/64" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MZ-2211X	1	ARMATURE
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-5	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft, Screw
EBA-2105	1	SPRING, DRIVE
EBA-3307	2	Plate, Spring Anchor
EBB-532	1	Pinion
MAW-2129	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
MZ-24A	1	Band, Cover
PS-1322	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Head Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-2944	4	Screw, Housing, Hex. Hd. #10-32x5/8

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4174	Towmotor

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2001M	1	Frame & Field Assy.
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, C.E. Head Sc., #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Thrust, C.E. & Int., 1/32'' Thick
MZ-2089	1	ARMATURE ASSY.
MZ-51	1	Spacer, Bearing Thrust
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-36A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8506A	1	Screw, Spring, Head
EB-8507A	1	Screw, Spring, Shaft
EB-8734A	1	Ring, Take-Up
EBA-405A	1	SPRING, DRIVE
EBB-3611A	1	Shaft & Pinion
MAB-2040	1	BEARING ASSY., INTERMEDIATE
MG-77A	1	Bearing, Abs. Bronze
MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
MZ-1024U	1	Band, Cover
PS-1214	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Pinion Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4175	Wisconsin

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

MZ-4176 STARTING MOTOR PARTS LIST

MZ-4176
(Issued 2-8-54)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2210	1	Frame & Field Assy.
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-209	1	Stud, Terminal
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, C. E. Head Sc., #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MU-54	*	Washer, Thrust, C. E. & Int., 1/32" Thick
MU-54A	*	Washer, Thrust, C. E. & Int., 1/64" Thick
MU-54B	*	Washer, Thrust, C. E. & Int., 3/64" Thick
MZ-2211	1	ARMATURE
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-52	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-2031	1	Screw Shaft
EBA-2105	1	SPRING, DRIVE
EBA-3307	2	Plate, Spring Anchor
EBA-7632	1	Pinion
MAW-2129	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
MZ-24A	1	Band, Cover
PS-1253C	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-2944	4	Screw, Pinion Housing, Hex. Hd. #10-32x5/8

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4176	Case Engine

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MZ-4177 MOTOR PARTS LIST

MZ-4177
(Issued 10-3-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2355	1	Frame & Field Assy.
MAB-31A	2	Washer, Ins., Term. Stud
MBG-50	1	Insulation, Field Connection, C. E.
MBG-52	1	Insulation, Term. Stud, Inner
MBG-53	1	Stud, Terminal
MBG-55	1	Insulation, Field Connection, 8" Long
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	2	Bushing, Ins., Term. Stud
MU-37	2	Washer, Plain, Term. Stud
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-32	2	Connector, Field Coil
MZ-38A	4	Screw, Pole Shoe
MZ-356	1	Terminal, Field Coil
MZ-1007	1	COIL, FIELD, U. L.
MZ-1008D	1	COIL, FIELD, L. R.
MZ-1009E	1	COIL, FIELD, L. L.
MZ-1010	1	COIL, FIELD, U. R.
MZ-1012A	2 †	Brush
8X-55	1	Screw, Brush Lead, Rd. Hd. #8-32x3/8
12X-195	2	Lockwasher, Brush Lead Sc., #8
8X-304	1	Screw, Brush Lead, Rd. Hd. #8-32x5/16
12X-1014	4	Lockwasher, Term. Stud, 5/16
8X-1376	4	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002L	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
12X-196	4	Lockwasher, C. E. Head Sc., #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2352	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Miscellaneous Parts

MBG-56	1	Head, D. E.
MZ-24A	1	Band, Cover
12X-196	4	Lockwasher, D. E. Head Sc., #10
X-367	1	BEARING, BALL, SEALED, S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1151	4	Screw, D. E. Head, Rd. Hd. #10-32x13/16

† BRUSH SET, SERVICE MZ-2012HS.

* Use as required.

UNIT	APPLICATION
MZ-4177	J.S. Barnes

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking su -parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2210E	1	Frame & Field Assembly
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-209	1	Stud, Terminal
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, C.E. Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, C.E.
MU-54	1	Washer, Thrust, Int., 1/32" Thick
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MU-54K	*	Washer, Thrust, C.E., .080" Thick
MU-54L	*	Washer, Thrust, C.E., 1/16" Thick
MZ-2211	1	ARMATURE
X-261	1	Key, Woodruff, D.E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6LB	1	Connector
SS-4001	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1274	2	Washer, Switch Mtg. Screw, Skpf. #10

Miscellaneous Parts

EBB-40	1	BENDIX DRIVE
MAW-2129	1	Bearing Assy., Intermediate
MAW-130	1	BEARING, ABS. BRONZE
MZ-24A	1	Band, Cover
PS-1253C	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-2944	4	Screw, Housing, Hex. Hd. #10-32x5/8

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4179	Lycoming-Spencer

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2354	1	Frame & Field Assembly
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector,. Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, C.E. Head Screw, #10
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MAK-61	1	Washer, Thrust, Comm. End
MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
MZ-2211	1	ARMATURE
X-261	1	Key, Woodruff, D.E., #6

Miscellaneous Parts

EBA-52	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-2031	1	Screw Shaft
EBA-2105	1	SPRING, DRIVE
EBA-3307	2	Plate, Spring Anchor
EBA-7632	1	Pinion
MAW-2129	1	Bearing Assy., Intermediate
MAW-130	1	BEARING, ABS. BRONZE
MZ-1024AA	1	Band, Cover
PS-1253C	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-2944	4	Screw, Pinion Housing, Hex. Hd. #10-32x5/8

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4180	J. I. Case

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MZ-4183 STARTING MOTOR PARTS LIST

MZ-4183

(Issued 10-3-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2202	1	Frame & Field Assy.
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Conn.
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-196	4	Lockwasher, C. E. Head, #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Thrust, C. E. & Int., 1/32" Thick
MZ-2089	1	ARMATURE ASSY.
MZ-51	1	Spacer, Brg. Thrust
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6L	1	Connector
SS-4014	1	SOLENOID STARTING SWITCH
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
8X-832	2	Nut, Hex. 5/16-24
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1274	2	Washer, Switch Mtg., #10

Miscellaneous Parts

EBA-19	1	BENDIX DRIVE ASSY.
EB-108	2	Lockwasher
EB-7819S	1	Sleeve, Compression
EB-8503	1	Head, Drive
EB-8506	1	Screw, Spring, Head
EB-8507	1	Screw, Spring, Shaft
EB-8711	1	Shaft & Pinion
EB-8734	1	Ring, Take-Up
EBA-1405	1	SPRING, DRIVE
MAB-2040	1	Bearing Assy., Intermediate
MG-77A	1	BEARING, ABS. BRONZE
MZ-24A	1	Band, Cover
MZ-52	4	Screw, Pinion Housing, Hex. Hd., #10-32x31/32
PS-1172A	1	Housing Assy., Pinion
MAB-88	1	Pin, Dowel
MP-41A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4183	Continental

Printed in U. S. A.

File in Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MZ-4184 STARTING MOTOR PARTS LIST

MZ-4184
(Issued 10-3-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2001M	1	Frame & Field Assy.
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal, 5/16-24
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, C. E. Head Screw, #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	1	Washer, Thrust, C. E., 1/32" Thick
MZ-357	2	Washer, Thrust, Int.
MZ-365	1	Washer, Spring, Int.
MZ-2366	1	ARMATURE ASSY.
X-261	1	Key, Woodruff, D. E., #6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBB-45A	1	BENDIX DRIVE ASSY.
EB-108A	2	Lockwasher
EB-7819SA	1	Sleeve, Compression
EB-8503A	1	Head, Drive
EB-8506A	1	Screw, Spring, Head
EB-8507A	1	Screw, Spring, Shaft
EBA-405A	1	Spring, Drive
EBB-4511A	1	Shaft & Pinion
MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
MZ-359	1	Gasket, Int. Bearing
MZ-1024U	1	Band, Cover
MZ-1360	1	BEARING ASSY., INTERMEDIATE
PS-1330	1	Housing Assy., Pinion
MZ-358	1	Bearing Cap
MZ-364	1	BEARING, ABS. BRONZE
XA-832	1	Oil Seal
8X-63	4	Screw, Int. Bearing, Flat Hd. #8-32x3/8
12X-196	4	Lockwasher, Pinion Housing Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4184	Wisconsin

Printed in U. S. A.

File in
Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ-4185 STARTING MOTOR PARTS LIST

MZ-4185
(Issued 10-3-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2001F	1	Frame & Field Assy.
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002E	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-196	4	Lockwasher, C. E. Head Screw, #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MU-54	2	Washer, Thrust, C. E. & D. E., 1/32" Thick
MZ-2053	1	ARMATURE ASSY.
MZ-35	1	Spacer, Bearing Thrust

Miscellaneous Parts

Part No.	No. Used	Name of Part
MZ-24A	1	Band, Cover
MZ-1129A	1	Head Assy., Drive End
MZ-44A	1	BEARING, ABS. BRONZE
8X-119	4	Screw, D. E. Head, Fill. Hd. #10-32x1/2
12X-196	4	Lockwasher, D. E. Head Screw, #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32

† BRUSH SET, SERVICE MZ-2012AS.

UNIT	APPLICATION
MZ-4185	Chief Industries

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ-4186 MOTOR PARTS LIST

MZ-4186
(Issued 11-11-55)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2001F	1	Frame & Field Assy.
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2002E	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	Brush, Grounded
12X-196	4	Lockwasher, C. E. Head Sc., #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2352	1	ARMATURE
MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MU-54B	*	Washer, Thrust, C. E., 3/64" Thick

Miscellaneous Parts

MBG-56	1	Head, D. E.
MZ-24A	1	Band, Cover
12X-196	4	Lockwasher, D. E. Head Sc., #10
X-367	1	BEARING, BALL, SEALED, S. A. E. #202
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-1151	4	Screw, D. E. Head, Rd. Hd. #10-32x13/16

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4186	J. S. Barnes

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

MZ-4187 STARTING MOTOR PARTS LIST MZ-4187
(Issued 10-29-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2224	1	Frame & Field Assy.
MAB-31A	1	Washer, Ins., Term, Stud, Outer
MU-14	1	Terminal
MU-28	1	Stud, Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud
MU-39A	1	Washer, Ins., Term. Stud Inner
MZ-12†	2	Brush
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
12X-1014	2	Lockwasher, Term. Stud, 5/16
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S†	2	Brush, Grounded
12X-196	4	Lockwasher, C. E. Head Sc., #10
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MZ-2211X	1	ARMATURE
MU-54	*	Washer, Thrust, C. E. & Int., 1/32'' Thick
MU-54B	*	Washer, Thrust, C. E. & Int., 3/64'' Thick
X-261	1	Key, Woodruff, D. E., #6

Switch Assembly & Parts Used With

Part No.	No. Used	Name of Part
SS-6RA	1	Connector
SST-4010	1	SOLENOID STARTING SWITCH
3X-164	2	Nut, Hex. 5/16-18
8X-173	1	Nut, Hex. #10-32
12X-196	1	Lockwasher, #10
12X-1014	2	Lockwasher, 5/16
8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
X-1274	2	Washer, Switch Mtg. Sc., Skpf. #10

Miscellaneous Parts

EBB-5	1	BENDIX DRIVE ASSY.
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-2031	1	Shaft, Screw
EBA-2105	1	SPRING DRIVE
EBA-3307	2	Plate, Spring Anchor
EBB-532	1	Pinion
MAW-2129	1	BEARING ASSY., INTERMEDIATE
MAW-130	1	Bearing, Abs. Bronze
MZ-24A	1	Band, Cover
PS-1322	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Sc., #10
8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-794	1	Nut, Cover Band, Square #10-32
8X-2944	4	Screw, Housing Hex. Hd. #10-32x5/8

† BRUSH SET, SERVICE MZ-2012AS.

* Use as Required.

UNIT	APPLICATION
MZ-4187	TOWMOTOR

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."

ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MZ-4189 STARTING MOTOR PARTS LIST

MZ-4189
(Issued 6-29-56)

Frame & Field Assembly & Parts Used With

Part No.	No. Used	Name of Part
MZ-2210	1	Frame & Field Assy.
MAB-31A	1	Washer, Ins., Term. Stud, Outer
MU-14	1	Terminal
MU-31	1	Bushing, Ins., Term. Stud
MU-37	1	Washer, Plain, Term. Stud, 5/16
MU-39A	1	Washer, Ins., Term. Stud, Inner
MZ-12 †	2	BRUSH
MZ-30A	1	Insulation, Field Connection
MZ-38A	4	Screw, Pole Shoe
MZ-74	1	Equalizer
MZ-209	1	Stud, Terminal
MZ-3005S	1	FIELD COIL PACKAGE
MZ-32	2	Connector, Field Coil
MZ-1007	1	Coil, Field, U. L.
MZ-1008	1	Coil, Field, L. R.
MZ-1009	1	Coil, Field, L. L.
MZ-1010	1	Coil, Field, U. R.
8X-164	2	Nut, Term. Stud, Hex. 5/16-18
12X-1014	2	Lockwasher, Term. Stud, 5/16

Comm. End Head Assembly & Parts Used With

MZ-2105B	1	Head Assy., Comm. End
MAD-110	1	Felt
MZ-19	4	Spring, Brush
MZ-1034S †	2	BRUSH, GROUNDED
12X-196	4	Lockwasher, C. E. Head Sc., 10
8X-902	4	Screw, C. E. Head, Fill. Hd. 10-32x3/8

Armature Assembly & Parts Used With

MAK-61	1	Washer, Thrust, Comm. End
MU-54	*	Washer, Thrust, C. E. & Int., 1/32'' Thick
MU-54B	*	Washer, Thrust, C. E. & Int., 3/64'' Thick
MZ-2211	1	ARMATURE
X-261	1	Key, Woodruff, D. E., 6

Miscellaneous Parts

Part No.	No. Used	Name of Part
EBA-33	1	BENDIX DRIVE ASSEMBLY
EBA-1213	1	Spring, Anti-Drift
EBA-1225	1	Spring, Meshing
EBA-1232	1	Pinion
EBA-1233	1	Ring, Retaining
EBA-2006	1	Pin, Locating
EBA-2008	1	Ring, Lock
EBA-2031	1	Screw Shaft
EBA-2105	1	SPRING, DRIVE
EBA-3307	2	Plate, Spring Anchor
MAW-2129	1	Bearing Assy., Intermediate
MAW-130	1	BEARING, ABS. BRONZE
MZ-1024AA	1	Band, Cover
PS-1253C	1	Housing Assy., Pinion
MAW-131	1	Pin, Dowel
MG-77A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Housing Screw, 10
8X-714	1	Screw, Cover Band, Rd. Hd. 10-32x1 1/2
8X-794	1	Nut, Cover Band, Square 10-32
8X-2944	4	Screw, Pinion Housing, Hex. Hd. 10-32x5/8

† BRUSH SET, SERVICE MZ-2012AS.

* Use as required.

UNIT	APPLICATION
MZ-4189	J. I. Case

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Equipment & Parts List Binder

"NOTE: Where part numbers are shown in parenthesis they are for reference only. By stocking sub-parts the complete part can be assembled as needed."