

# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAY-4302 STARTING MOTOR PARTS LIST

MAY-4302  
(Issued 3-29-51)

Frame & Field Assembly & Parts Used With			Switch Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru	SS-6R	1	Connector, Switch to Motor
(MAY-2161)	1	Frame & Field Assy.	SS-4029	1	SOLENOID STARTING SWITCH
GK-38	4	Screw, Pole Shoe	8X-173	2	Nut, Hex. #10-32
MAB-31	2	Washer, Ins., Term. Stud, Outer	12X-196	2	Lockwasher, #10
MAB-32	1	Insulation, Field Connection	8X-832	1	Nut, Hex. 5/16-24
MAB-85	2	Bushing, Ins., Term. Stud	12X-1014	1	Lockwasher, 5/16
MAB-118	1	Terminal	8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MAB-119	1	Insulation, Term. Stud	X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10
MAK-80	1	Washer, Ins., Term. Stud, Inner			<u>Miscellaneous Parts</u>
MAX-67	1	Insulation, Field Connection, D.E.	MAC-1058B	1	Head Assy., Drive End
MAY-12D†	3	Brush	MAB-49A	1	BEARING, ABS. BRONZE
MAY-12F†	1	Brush	MAW-24	1	Band, Cover
MAY-33	1	Connector	X-489	1	Oiler
MAY-34	1	Stud, Terminal	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MAY-3005BS	1	FIELD COIL PACKAGE	8X-794	1	Nut, Cover Band, Square #10-32
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			
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
MAX-2002J	1	Head Assy., Comm. End			
MAD-110	1	Felt			
MZ-19	4	Spring, Brush			
X-390	1	Oiler			
<u>Armature Assembly &amp; Parts Used With</u>					
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			

† 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."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MAY-4303 MOTOR PARTS LIST

MAY-4303  
(Issued 5-20-54)

Frame & Field Assembly & Parts Used With			Comm. End Head Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
GJ-20	2	Bolt, Thru	MAX-2002J	1	Head Assy., Comm. End
MAY-2165	1	Frame & Field Assembly	MAD-110	1	Felt
GK-38	4	Screw, Pole Shoe	MZ-19	4	Spring, Brush
MAB-31	2	Washer, Ins., Term. Stud, Outer	X-390	1	Oiler
MAB-32	1	Insultaion, Field Connection	<u>Armature Assembly &amp; Parts Used With</u>		
MAB-85	2	Bushing, Ins., Term. Stud	MAK-61	1	Washer, Thrust, Comm. End
MAB-118	1	Terminal	MAY-2216	1	ARMATURE
MAB-119	1	Insulation, Term. Stud	MU-54	2	Washer, Thrust, C. E. & D. E., 1/32 inch Thick
MAK-80	1	Washer, Ins., Term. Stud, Inner	<u>Miscellaneous Parts</u>		
MAX-67	1	Insulation, Field Connection, D. E.	MAC-1058B	1	Head Assy., Drive End
MAY-12D †	3	Brush	MAB-49A	1	BEARING, ABSORBENT BRONZE
MAY-12F †	1	Brush	MAW-24	1	Band, Cover
MAY-33	1	Connector, Brush	X-489	1	Oiler
MAY-34	1	Stud, Terminal	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MAY-3005BS	1	FIELD COIL PACKAGE	8X-794	1	Nut, Cover Band, Square #10-32
MAX-64	2	Connector, Field Coil	† BRUSH SET, SERVICE MAY-2012CS.		
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			

UNIT	APPLICATION
MAY-4303	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

MBA-4001 STARTING MOTOR PARTS LIST

MBA-4001

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
<u>Miscellaneous Parts</u>		
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

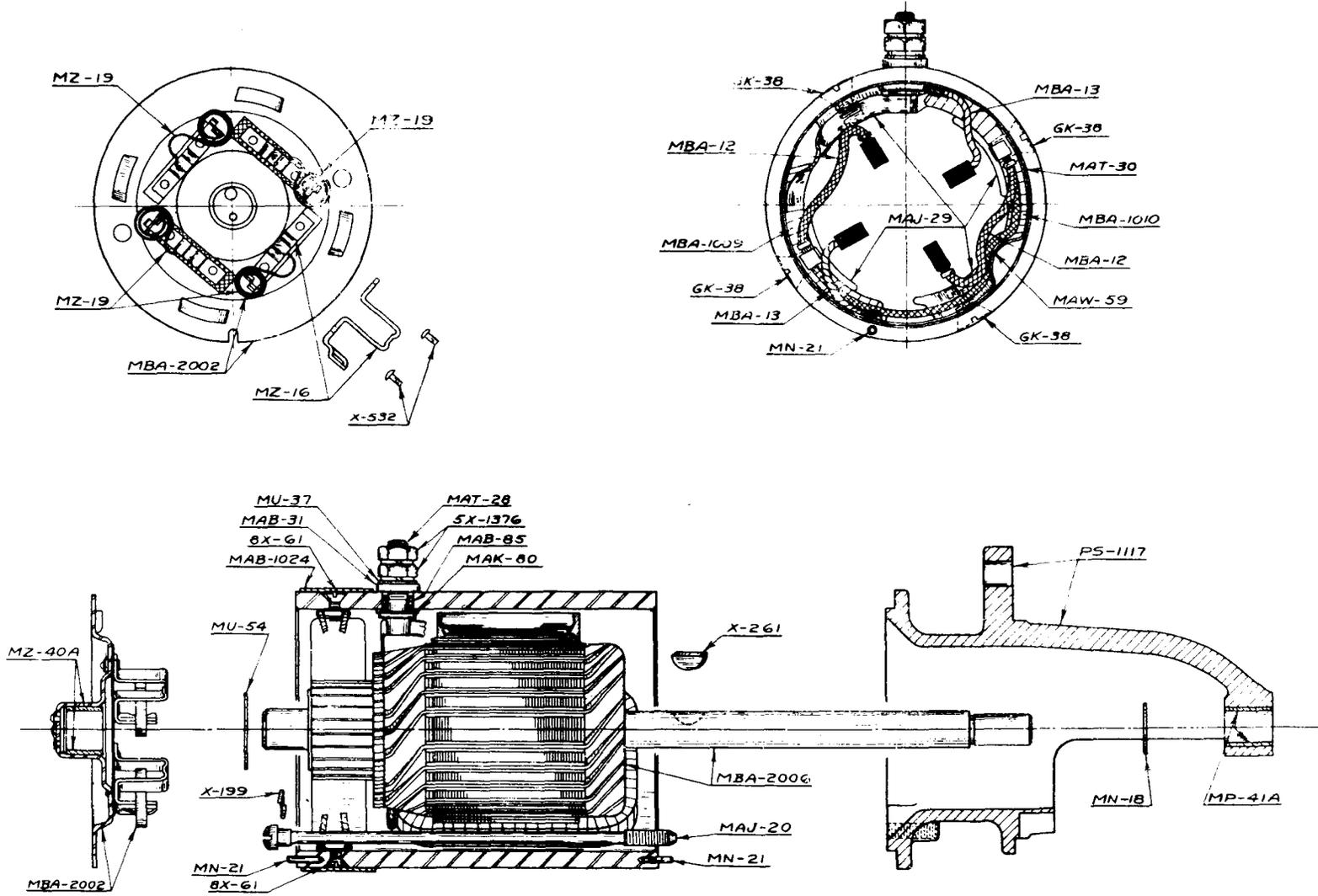
(Issued 5-29-36)

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 assembled as needed."

MBA-4001 STARTING MOTOR ILLUSTRATION



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

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				
<u>Miscellaneous Parts</u>						
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.				
9X-794	1	#10-32 Square Nut				
		1	2	3	4	5

(Issued 11-30-37)

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-4003 STARTING MOTOR PARTS LIST

MBD-4003

Frame & Field Assembly with Terminal Stud & Parts Used With						Switch Assembly & Parts Used With							
Part No.	No. Used	Name of Part					Part No.	No. Used	Name of Part				
		1	2	3	4	5			1	2	3	4	5
MBD-2122	1	Frame & Field Assy.					MBD-91	1	Stud, Terminal, Battery, 3/8-16				
GAR-21	2	Dowel, Aligning					MBD-93	1	Lead Assembly, 5" Long				
MAW-37	1	Bushing, Ins., Term. Stud					X-767	1	Terminal				
MAX-44	2	Washer, Plain, Term. Stud, Outer, 3/8					X-976	1	Terminal				
MBD-12†	2	Brush					MBD-94	1	Connector, Switch to Motor				
MBD-12A†	2	Brush					MBD-96	1	Grommet, Rubber, Battery Term.				
MBD-13†	2	Brush					MBD-108	2	Bushing, Rubber, Term. Stud, #10				
MBD-13A†	2	Brush					MBD-109	2	Stud, Terminal, #10-32				
MBD-34	1	Terminal					MBD-116	1	Plate, Switch Cover				
MBD-119	2	Washer, Ins., Term. Stud					MBD-117	1	Lead Assembly, 2" Long				
MBD-121	1	Stud, Terminal					X-767	1	Terminal				
MBD-233	1	Stud, Terminal					X-976	1	Terminal				
MC-51A	1	Washer, Plain, Term. Stud, Inner, 3/8					MBD-128	1	Washer, Battery Term., Plain				
12X-201	1	Washer, Lock, Term. Stud, 3/8					MBD-134	1	Spring, Switch Plunger				
8X-830	2	Nut, Term. Stud, Hex., 3/8-16					MBD-135	1	Spring Seat, Switch Plunger				
12X-201	1	Washer, Lock, Term. Stud, 3/8					MBD-147	1	Connector, Sw. Term. to Resistor				
8X-830	1	Nut, Term. Stud, Hex., 3/8-16					MBD-148	1	Connector, Sw. Term. to Resistor				
<u>Comm. End Head Assembly &amp; Parts Used With</u>						MBD-1107	1	Connector & Terminal Assy.					
GAL-40A	1	Cover, Brg., Comm. End					MBD-97	1	Lead Assy., 3 1/16" Long				
MAD-110	1	Felt, C.E. Head					X-976	1	Terminal				
MBD-2078	1	Head Assy., Comm. End					MBD-98	1	Lead Assy., 2 5/16" Long				
MBD-150	1	Wick, Felt					X-976	1	Terminal				
MBD-1078	1	Head Assy., Partial, C.E.					MBD-1126	1	Cover, Switch				
GBF-79	1	Bearing, Absorbent Bronze					MBD-1127	1	Base, Switch Mounting				
MBD-2079	1	Plate Assy., Brush					MBD-2144	1	Resistance				
GG-81	4	Clip, Brush Holder					ML-17	1	Nut, Switch Term. Stud & Connector, Hex., 3/8-16				
MBD-19	8	Spring, Brush					MU-37	2	Washer, Plain, 5/16				
MBD-47	4	Spacer, Spring					SS-60B	2	Washer, Switch Term., Plain, 3/8				
8X-120	4	Screw, Brush Plate, Fil. Hd., #10-32x5/8					SS-4503	2	Solenoid Starting Switch				
X-196	4	Lock Washer, Brush Plate Screw, #10					12X-196	1	Lock Washer, #10				
X-1573	1	Oiler, Press in Type, 3/8					12X-201	2	Lock Washer, 3/8				
8X-120	4	Screw, Attaching, C.E. Head, Fil. Hd., #10-32x5/8					8X-830	2	Nut, Hex., 3/8-16				
12X-544	4	Washer, Lock, Attaching, C.E. Head, #10					8X-1372	1	Nut, #10-32				
<u>Armature Assembly &amp; Parts Used With</u>						8X-173	4	Nut, Term. Stud & Cover Attaching, Hex., #10-32					
MAD-96	1	Washer, Arm. Thrust, C.E.					12X-195	4	Washer, Lock, Lead Screw, #8				
MBD-71	*	Washer, Arm. Thrust, .095" Thick					12X-196	15	Lock Washer, #10				
MBD-72	*	Washer, Arm. Thrust, .065" Thick					12X-199	2	Lock Washer, Resistor Term. Screw, 1/4				
MBD-73	*	Washer, Arm. Thrust, .032" Thick					12X-201	3	Lock Washer, Switch Term., 3/8				
MBD-76	2	Washer, Arm. Thrust, Int.					8X-305	4	Screw, Lead Connection, Rd. Hd., #8-32x1/4				
MBD-2087	1	Armature					8X-312	9	Screw, Switch Mtg., Resistor Mtg. & Sw. Cover Plate, Rd. Hd., #10-32x1/4				
MU-54	*	Washer, Thrust, 1/32" Thick					8X-321	4	Screw, Mtg., Switch, Rd. Hd., #10-32x5/16				
MU-54A	*	Washer, Thrust, 1/64" Thick					8X-830	1	Nut, Switch Term., Hex., 3/8-16				
MU-54B	*	Washer, Thrust, 3/64" Thick					8X-1002	2	Screw, Resistor Term., Rd. Hd., 1/4-20x1/2				
		1	2	3	4	5	X-1270	4	Washer, Skpf., Switch Mtg. Sc., #10				
							XA-539	1	Switch, Starting				
									1	2	3	4	5

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-4003 STARTING MOTOR PARTS LIST (Con't.)

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	

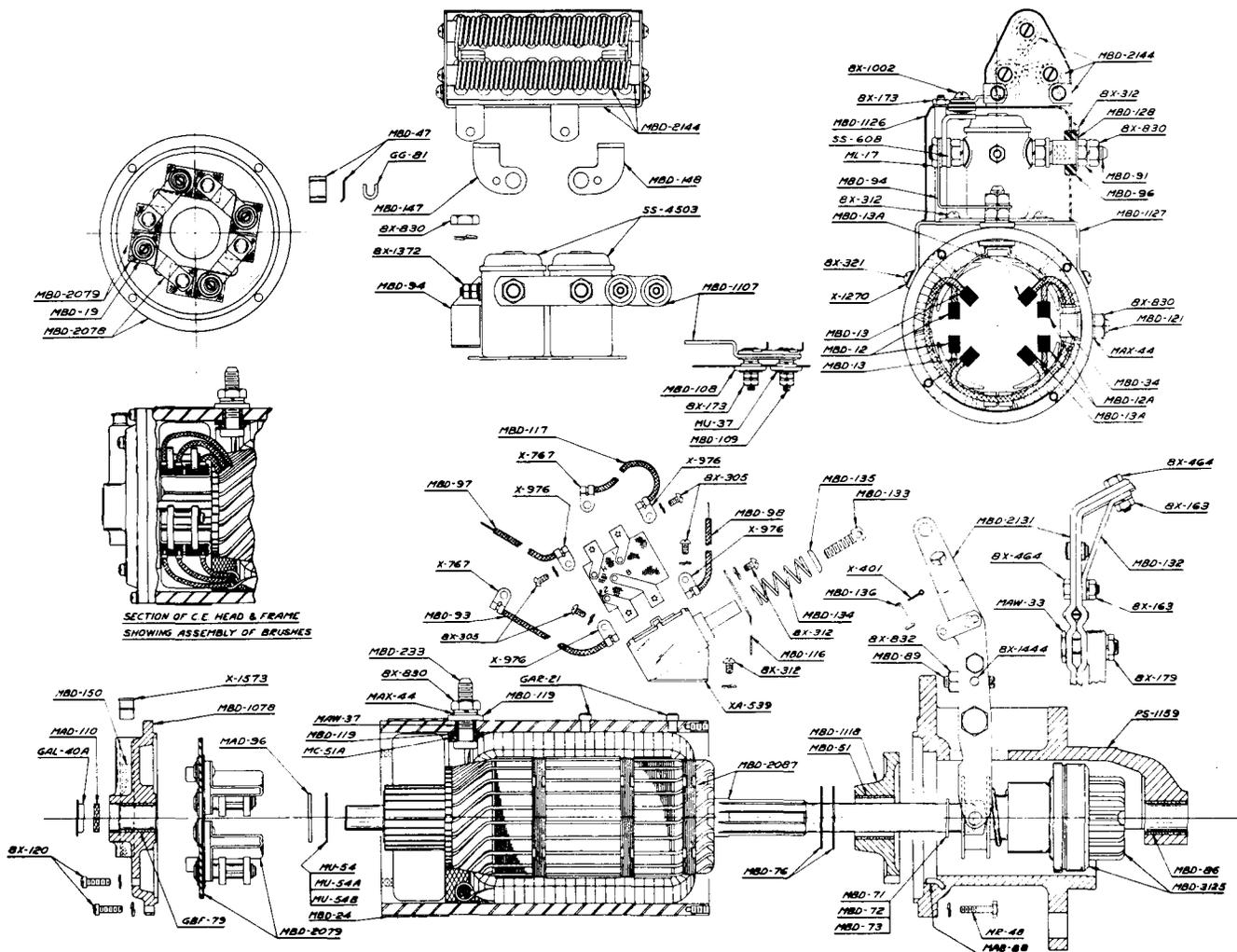
Miscellaneous Parts

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.



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBD-4004 STARTING MOTOR PARTS LIST

MBD-4004

Frame & Field Assembly & Parts Used With					Switch Assembly (Continued)								
Part No.	No. Used	Name of Part				Part No.	No. Used	Name of Part					
		1	2	3	4	5			1	2	3	4	5
MBD-2170	1	Frame & Field Assy.				MBD-169	2	Lead Assy., 2 1/4"					
MBD-12†	2	Brush				X-767	2	Terminal					
MBD-12A†	2	Brush				X-976	2	Terminal					
MBD-13†	2	Brush				MBD-171	1	Lead Assy., 4 3/4"					
MBD-13A†	2	Brush				X-767	2	Terminal					
MN-47A	1	Washer, Steel, Plain, 3/8				MBD-1102	1	Resistance					
X-201	2	Washer, Lock, 3/8				MBD-1155	1	Base, Switch, Mounting					
8X-830	2	Nut, Hex., 3/8-16				MBD-1160	1	Connector Assy.					
<u>Comm. End Head Assembly &amp; Parts Used With</u>					MBD-157	1	Lead Assy., 4 1/2"						
GAL-40A	1	Cover, Bearing, Comm. End				X-767	1	Terminal					
MAD-110	1	Felt (3/4 dia. x 5/32)				MBD-159	2	Lead Assy., 2 1/4"					
MBD-2078A	1	Head Assy., Comm. End				X-770	2	Terminal					
MBD-150	1	Wick, Felt				MBD-1166	1	Cover, Switch					
MBD-1078	1	Head Assy., Partial, C.E.				MU-37	3	Washer, Plain (5/16)					
GBF-79	1	Bearing, Abs. Bronze				SS-4504	2	Switch Assy., Solenoid					
MBD-2079	1	Plate Assy., Brush				X-196	4	Washer, Lock, #10					
GG-81	4	Clip, Brush Holder				X-201	4	Washer, Lock, 3/8					
MBD-19	8	Spring, Brush				8X-830	4	Nut, Hex., 3/8-16					
MBD-47	4	Spacer				8X-1372	4	Nut, Hex., #10-32					
GFM-4F	4	Screw, Fill. Hd., #10-32x5/8				TC-51N	1	Resistance, Carbon, Marked 80					
X-196	4	Washer, Lock, #10				8X-54	2	Screw, Rd. Hd., #8-32x1/2					
X-1573	1	Oiler, Press in Type, 3/8				8X-173	5	Nut, Hex., #10-32					
8X-120	4	Screw, Fill. Hd., #10-32x5/8				X-195	2	Washer, Lock, #8					
X-544	4	Washer, Lock, #10				X-196	12	Washer, Lock, #10					
<u>Armature Assembly &amp; Parts Used With</u>					X-201	1	Washer, Lock, 3/8						
MAK-61	1	Washer, Steel				8X-311	2	Screw, Rd. Hd., #10-32x3/8					
MBD-76	2	Washer, Thrust				8X-312	2	Screw, Rd. Hd., #10-32x1/4					
MBD-2154	1	Armature				8X-321	4	Screw, Rd. Hd., #10-32x5/16					
MU-54	*	Washer, Thrust, 1/32" Thick				8X-348	2	Washer, Special, #8					
MU-54A	*	Washer, Thrust, 1/64" Thick				X-544	2	Washer, Lock, #10					
MU-54B	*	Washer, Thrust, 3/64" Thick				8X-706	2	Screw, Bdg. Hd., #10-32x5/16					
X-261	2	Key, Woodruff, #6				8X-830	1	Nut, Hex., 3/8-16					
<u>Switch Assembly &amp; Parts Used With</u>					X-1270	4	Washer, Skpf., #10						
HRG-4001	1	Relay, Time Delay				8X-1375	2	Nut, Hex., #8-32					
X-196	4	Washer, Lock, #10				<u>Miscellaneous Parts</u>							
8X-312	4	Screw, Rd. Hd., #10-32x1/4				EBA-43	1	Bendix Drive Assy.					
MBD-91	1	Post, Terminal, 3/8-16				EB-108	2	Washer, Lock					
MBD-92	1	Clamp				EB-4503	1	Head					
MBD-94	1	Connector, Terminal				EB-4515	1	Stop, Pinion					
MBD-95	1	Insulation, Connector				EB-4516	1	Screw, Pinion Stop					
MBD-96	1	Bushing, Insulating				EB-4519S	1	Sleeve					
MBD-108	3	Bushing, Rubber				EBA-1811	1	Shaft & Pinion					
MBD-109	3	Post, Terminal, #10-32				EBA-4305	1	Spring, Drive					
MBD-128	1	Washer, Plain				EBA-4306	1	Screw, Spring, Head					
MBD-164	1	Lead Assy., 1 15/16"				EBA-4307	1	Screw, Spring, Shaft					
X-767	1	Terminal				MBD-1024	1	Band, Head					
X-770	1	Terminal				MBD-1118	1	Bearing Assy., Intermediate					
MBD-165	1	Lead Assy., 4 1/2"				MBD-51	1	Bearing, Absorbent Bronze					
X-770	1	Terminal				MR-48	8	Screw, Hex. Hd., #10-40x7/8					
X-1461	1	Terminal				PS-1180	1	Housing Assy., Pinion					
MBD-167	1	Support, Resistor, Ins.				MAB-88	1	Pin, Dowel					
MBD-168	1	Lead Assy., 7"				MBD-152	1	Bearing, Absorbent Bronze					
EC-41	1	Grommet				X-196	8	Washer, Lock, #10					
X-767	1	Terminal				8X-715	1	Screw, Rd. Hd., #10-32x1 1/4					
X-1461	1	Terminal				8X-794	1	Nut, Square, #10-32					
		1	2	3	4	5			1	2	3	4	5

† Brush Set, Service MBD-1012S.  
\* Use as required.

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."

(Issued 1-12-43)  
File in  
Equipment & Parts List Binder

)

)

)

)

# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBD-4005 STARTING MOTOR PARTS LIST

MBD-4005

PRELIMINARY

## 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."

MBD-4005 STARTING MOTOR PARTS LIST Con't

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)

# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBD-4013 STARTING MOTOR PARTS LIST

MBD-4013

Frame & Field Assembly with Terminal Post & Parts Used With					Armature Assembly & Parts Used With									
Part No.	No. Used	Name of Part					Part No.	No. Used	Name of Part					
		1	2	3	4	5			1	2	3	4	5	
MBD-2239	1	Frame & Field Assy.					MAK-61	1	Washer, Steel					
MAW-37	2	Bushing, Ins., Term. Post					MBD-76	2	Washer, Thrust					
MAX-44	2	Washer, Plain, 3/8					MBD-2212	1	Armature					
MBD-12†	2	Brush					MU-54	*	Washer, Thrust					
MBD-12A†	2	Brush					MU-54A	*	Washer, Thrust					
MBD-13†	2	Brush					MU-54B	*	Washer, Thrust					
MBD-13A†	2	Brush					<u>Miscellaneous Parts</u>							
MBD-15	1	Insulation, Terminal					EBA-70	1	Bendix Drive					
MBD-34	1	Terminal					GFM-4	1	Screw, Head Band, Fill. Hd., #10-32x1 1/4					
MBD-119	3	Washer, Insulating					MBD-181	6	Screw, Pinion Housing, Hex. Hd., #10-32x7/8					
MBD-233	1	Post, Terminal					MBD-1118	1	Bearing Assy., Intermediate					
MC-51A	1	Washer, Plain, 3/8					MBD-51	1	Bearing, Absorbent Bronze					
SS-119	1	Post, Terminal					MBD-1024B	1	Band, Head					
X-201	2	Washer, Lock, 3/8					PS-1206	1	Housing Assy., Pinion					
8X-830	2	Nut, Hex., 3/8-16					MAB-88	1	Pin, Dowel					
MN-47A	1	Washer, Plain, 3/8					MBD-220	1	Bearing, Absorbent Bronze					
X-201	2	Washer, Lock, 3/8					X-196	8	Washer, Lock, #10					
8X-830	2	Nut, Hex., 3/8-16					8X-794	1	Nut, Square, #10-32					
<u>Comm. End Head Assembly &amp; Parts Used With</u>								1	2	3	4	5		
GAL-40A	1	Cover, Bearing, Comm. End					(Issued 3-1-43)							
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								

† Service Brush Set MBD-1012S.

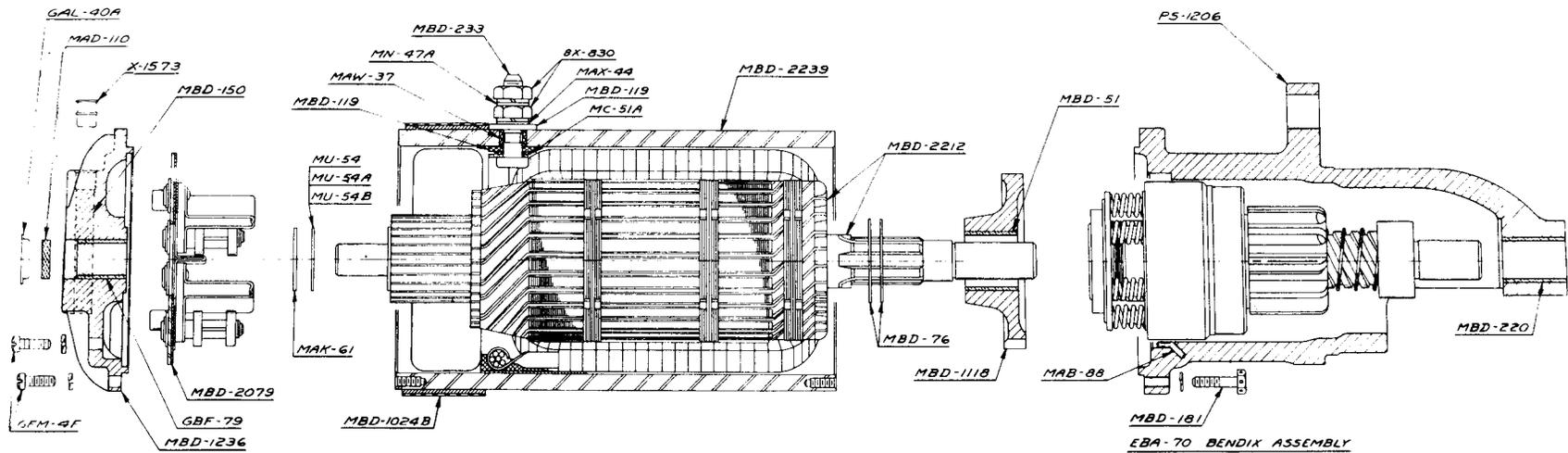
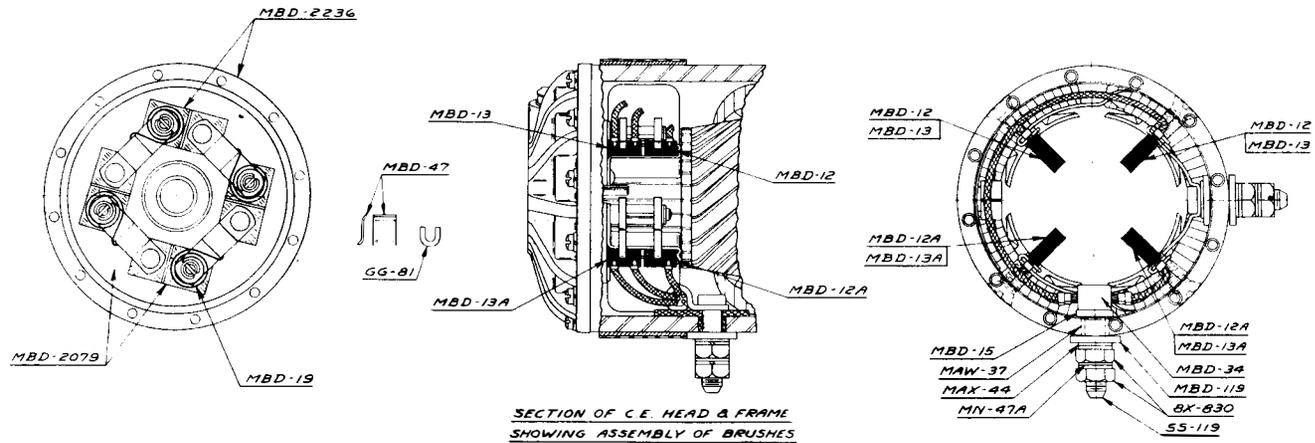
\* Use as required.

UNIT	APPLICATION
MBD-4013	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 sub-parts the complete part can be assembled as needed."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBD-4016 STARTING MOTOR PARTS LIST

MBD-4016

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBD-2239)	1	Frame & Field Assy.	MAK-61	1	Washer, Arm. Thrust, C.E.
GK-38	8	Screw, Pole Shoe	MBD-76	2	Washer, Arm. Thrust, Int.
MAW-37	2	Bushing, Ins., Term. Stud	MBD-2212	1	Armature
MAX-44	2	Washer, Plain, Term. Stud, Outer	MU-54	*	Washer, Thrust, 1/32" Thick
MBD-12†	2	Brush	MU-54A	*	Washer, Thrust, 1/64" Thick
MBD-12A†	2	Brush	MU-54B	*	Washer, Thrust, 3/64" Thick
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			Miscellaneous Parts		
GAL-40A	1	Cover, Bearing, C.E.	EBA-75	1	Bendix Drive
MAD-110	1	Felt	MBD-24	1	Band, Cover
MBD-2236C	1	Head Assy., Comm. End	MBD-254	8	Screw, Housing, Hex. Hd. #10-32x7/8
GFM-4F	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8	MBD-1118	1	Bearing Assy., Intermediate
MBD-150	1	Wick, Felt	MBD-285	1	Bearing, Abs. Bronze
MBD-1236	1	Head Assy., Partial, C.E.	PS-1228	1	Housing Assy., Pinion
GBF-79	1	Bearing, Absorbent Bronze	MAB-88	1	Pin, Dowel
MBD-2079	1	Plate Assy., Brush	MBD-257	1	Bearing, Abs. Bronze
GG-81	4	Clip, Brush Holder	X-196	8	Lockwasher, Housing Sc., #10
MBD-19	8	Spring, Brush	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MBD-47	4	Spacer, Spring	8X-794	1	Nut, Cover Band, Square #10-32
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			

\* 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."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBD-4018 STARTING MOTOR PARTS LIST

MBD-4018

<u>Frame &amp; Field Assembly With Terminal Post &amp; Parts Used With</u>					
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			
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
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			
<u>Armature Assembly &amp; Parts Used With</u>					
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

<u>Switch Assembly &amp; Parts Used With</u>					
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			
<u>Miscellaneous Parts</u>					
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)

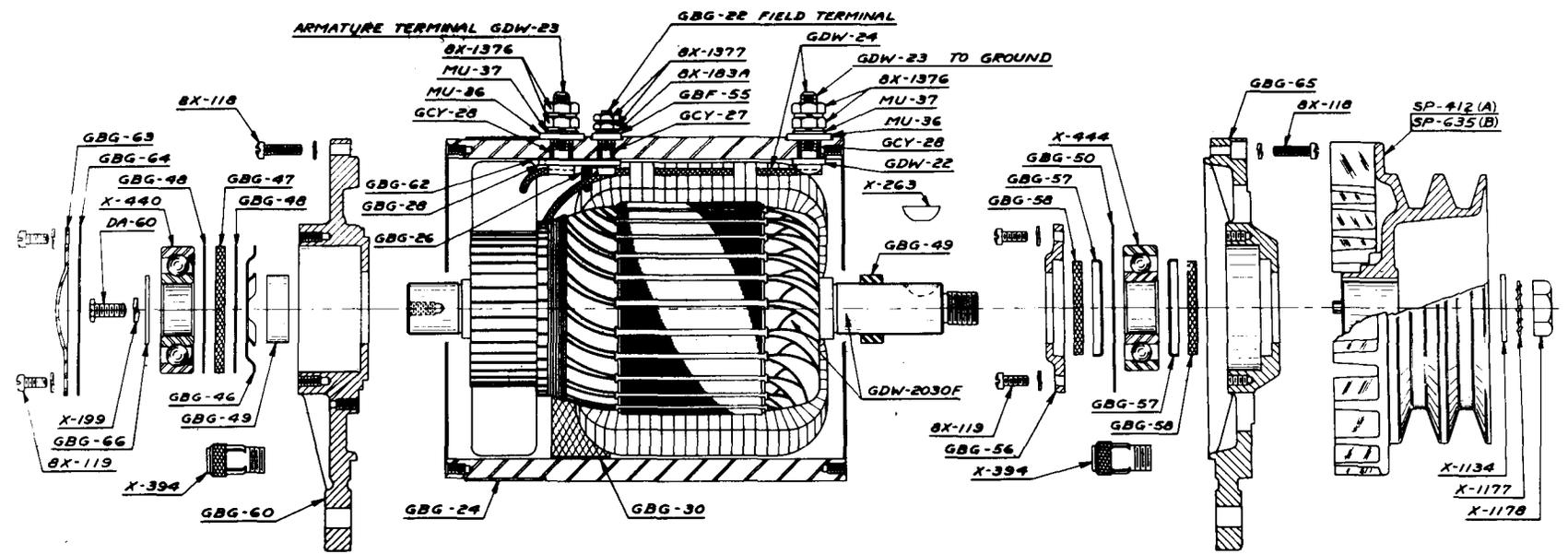
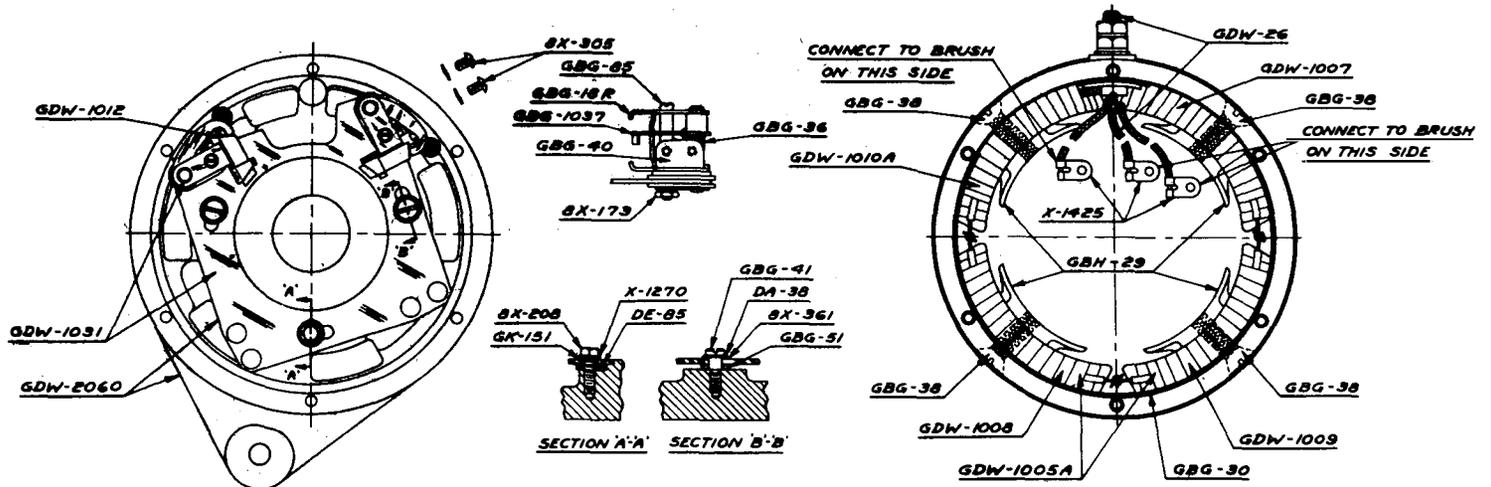
† Brush Set, Service, MBD-1012S.

\* Use as required.

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."



1731 (GDW-4604B)

# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBD-4024 STARTING MOTOR PARTS LIST

MBD-4024

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBD-2239)	1	Frame & Field Assy.	MAK-61	1	Washer, Arm. Thrust, C.E.
GK-38	8	Screw, Pole Shoe	MBD-76	2	Washer, Arm. Thrust, Int.
MAW-37	2	Bushing, Insulating, Term. Stud	MBD-2212	1	ARMATURE
MAX-44	2	Washer, Plain, Term. Stud, Outer, 3/8	MU-54	*	Washer, Thrust, 1/32" Thick
MBD-12 †	2	Brush	MU-54A	*	Washer, Thrust, 1/64" Thick
MBD-12A †	2	Brush	MU-54B	*	Washer, Thrust, 3/64" Thick
MBD-13 †	2	Brush			
MBD-13A †	2	Brush			
MBD-15	1	Insulation, Term. Stud, Inner Terminal			
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			Miscellaneous Parts		
GAL-40A	1	Cover, Bearing, Comm. End	EBA-75	1	BENDIX DRIVE
MAD-110	1	Felt	MBD-24	1	Band, Cover
MBD-2236C	1	Head Assy., Comm. End	MBD-254	8	Screw, Pinion Housing, Hex. Hd. #10-32x7/8
GFM-4F	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8	MBD-1118	1	Bearing Assy., Intermediate
MBD-150	1	Wick, Felt	MBD-285	1	BEARING, ABS. BRONZE
MBD-1236	1	Head Assy., Partial, C.E.	PS-1228	1	Housing Assy., Pinion
GBF-79	1	BEARING, ABS. BRONZE	MAB-88	1	Pin, Dowel
MBD-2079	1	Plate Assy., Brush	MBD-257	1	BEARING, ABS. BRONZE
GG-81	4	Clip, Brush Holder	X-196	8	Lockwasher, Housing Screw, #10
MBD-19	8	Spring, Brush	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MBD-47	4	Spacer, Spring	8X-794	1	Nut, Cover Band, Square #10-32
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			

† BRUSH SET, SERVICE MBD-1012S.

\* Use As Required.

UNIT	APPLICATION
MBD-4024	Buda

(Issued 6-16-48)

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-4026 STARTING MOTOR PARTS LIST

MBD-4026

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts (Continued)		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBD-2267A)	1	Frame & Field Assy.	MU-54	*	Washer, Thrust, 1/32" Thick
MAW-37	2	Bushing, Ins., Term. Stud	MU-54A	*	Washer, Thrust, 1/64" Thick
MAX-44	2	Washer, Plain, Term. Stud, Outer, 3/8	MU-54B	*	Washer, Thrust, 3/64" Thick
MBD-12	† 2	Brush	<u>Switch Assembly &amp; Parts Used With</u>		
MBD-12A	† 2	Brush	MBD-1252A	1	Switch & Bracket Assy.
MBD-13	† 2	Brush	MBD-252A	1	Bracket, Switch
MBD-13A	† 2	Brush	MBD-268	1	Connector, Switch to Motor
MBD-15	1	Insulation, Term. Stud, Inner Terminal	WSE-4101	1	SWITCH, SOLENOID (See separate list for parts)
MBD-34	1	Terminal	19X-343	2	Screw, Switch Mtg., Hex. Hd. 1/4-28x5/8
MBD-119	3	Washer, Term. Stud Ins. Stud, Terminal	XA-595	2	Nut, Switch Mtg., Hex. 1/4-28
MBD-233A	1	Stud, Terminal	12X-199	4	Lockwasher, Brkt. Sc., 1/4
MBD-3005S	1	FIELD COIL PACKAGE	8X-905	4	Screw, Mtg. Brkt., Fill. Hd. 1/4-20x7/16
MBD-1007S	1	Coil, Field, U.L.	<u>Miscellaneous Parts</u>		
MBD-1008S	1	Coil, Field, L.L.	EBA-74	1	BENDIX DRIVE ASSY.
MBD-1009S	1	Coil, Field, U.R.	MBD-254	8	Screw, Pinion Housing, Hex. Hd. #10-32x7/8
MBD-1010S	1	Coil, Field, L.R.	MBD-256	1	Lead Assy., Control Term. to Motor
MC-51A	1	Washer, Plain, Term. Stud, Inner, 3/8	X-767	1	Terminal
SS-119	1	Stud, Terminal	X-1461	1	Terminal
12X-201	4	Lockwasher, Term. Stud, 3/8	MBD-1024J	1	Band, Cover
8X-830	4	Nut, Term. Stud, Hex. 3/8-16	MBD-1118	1	BEARING ASSY., INTERMEDIATE
MN-47A	1	Washer, Plain, Term. Stud, 3/8	MBD-285	1	Bearing, Abs, Bronze
 			PS-1206D	1	Housing Assy., Pinion
<u>Comm. End Head Assembly &amp; Parts Used With</u>			MAB-88	1	Pin, Dowel
GAL-40A	1	Cover, Bearing, C.E.	MBD-220	1	BEARING, ABS. BRONZE
MAD-110	1	Felt	12X-196	8	Lockwasher, Housing Screw, #10
MBD-2236C	1	Head Assy., Comm. End	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
GFM-4F	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8	8X-794	1	Nut, Cover Band, Square #10-32
MBD-150	1	Wick, Felt	† BRUSH SET, SERVICE MBD-1012S.		
MBD-1236	1	Head Assy., Partial, C.E.	* Use as required.		
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			
<u>Armature Assembly &amp; Parts Used With</u>					
MAK-61	1	Washer, Arm. Thrust, C.E.			
MBD-76	2	Washer, Arm. Thrust, Intermediate			
MBD-2212	1	ARMATURE			

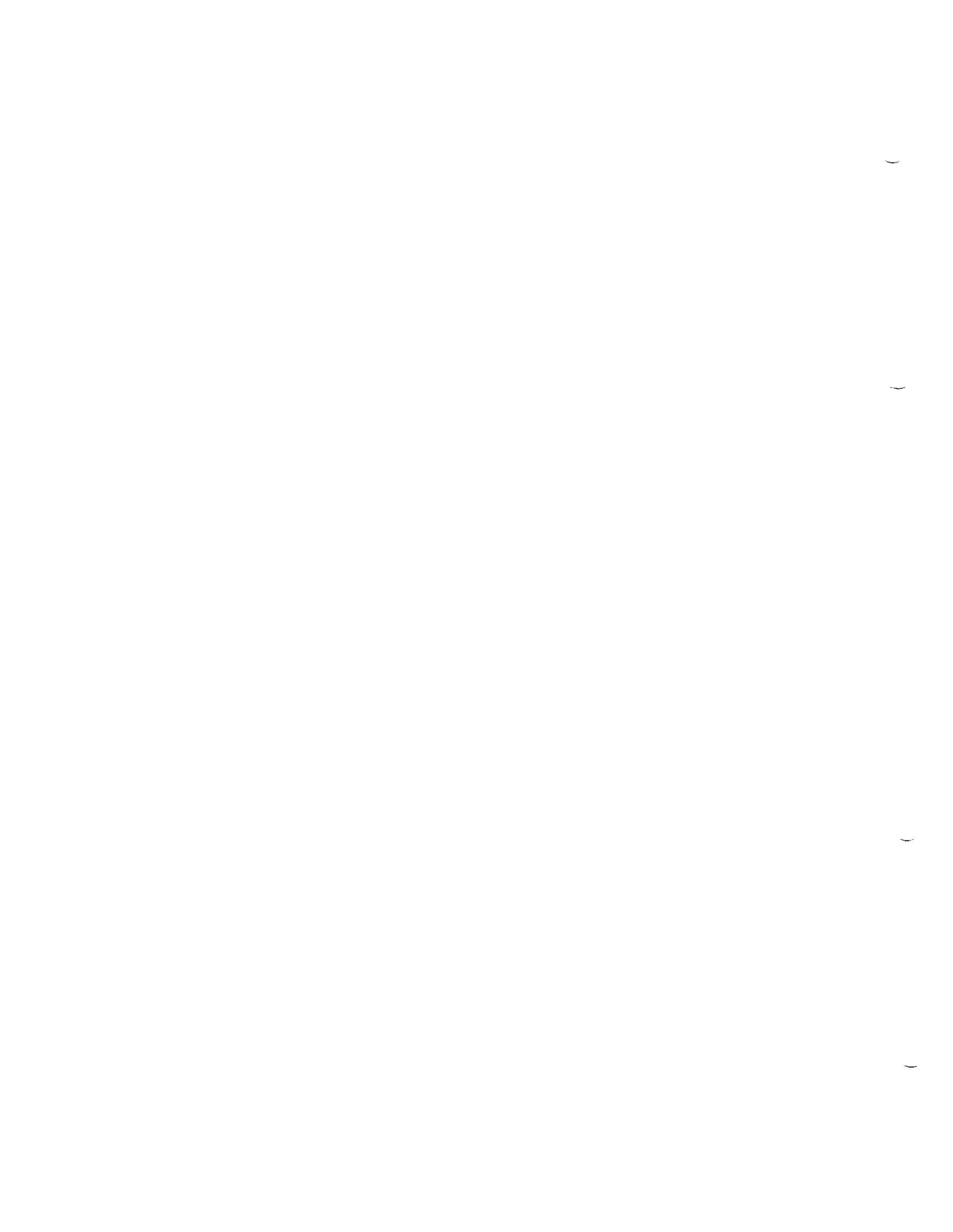
UNIT	APPLICATION
MBD-4026	Hill Diesel

(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."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBD-4028,A STARTING MOTOR PARTS LIST

MBD-4028,A

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBD-3293)	1	Frame & Field Assy.	MAK-61	1	Washer, Arm. Thrust C.E.
GK-38	8	Screw, Pole Shoe	MBD-76	2	Washer, Arm. Thrust, Intermediate
MAW-37	1	Bushing, Ins., Term. Stud	MBD-2212	1	Armature
MAX-44	2	Washer, Plain, Term. Stud, Outer	MU-54	*	Washer, Thrust, 1/32 Thick
MBD-12 †	2	Brush	MU-54A	*	Washer, Thrust, 1/64" Thick
MBD-12A†	2	Brush	MU-54B	*	Washer, Thrust, 3/64" Thick
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			Miscellaneous Parts		
GAL -40A	1	Cover, Bearing, Comm. End	EBB-1	1	Bendix Drive
MAD-110	1	Felt	MBD-254	8	Screw, Housing Hex. Hd. #10-32x7/8
MBD-2236C	1	Head Assy., Comm. End	MBD-1024J	1	Band, Cover
GFM-4F	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8	MBD-1118	1	Bearing Assy., Intermediate
MBD-150	1	Wick, Felt	MBD-285	1	Bearing, Abs. Bronze
MBD-1236	1	Head Assy., Partial, C.E.	PS-1206	1	Housing Assy., Pinion
GBF-79	1	Bearing, Absorbent Bronze	MAB-88	1	Pin, Dowel
MBD-2079	1	Plate Assy., Brush	MBD-220	1	Bearing, Abs. Bronze
GG-81	4	Clip, Brush Holder	12X-196	8	Lockwasher, Housing Sc., #10
MBD-19	8	Spring, Brush	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MBD-47	4	Spacer	8X-794	1	Nut, Cover Band, Square #10-32
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			

† 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 sub-parts the complete part can be assembled as needed."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBD-4031 STARTING MOTOR PARTS LIST

MBD-4031

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBD-2276)	1	Frame & Field Assy.	MAK-61	1	Washer, Arm. Thrust, C.E.
GK-38	8	Screw, Pole Shoe	MBD-76	2	Washer, Arm. Thrust, Intermediate
MAW-37	1	Bushing, Ins., Term. Stud	MBD-247A	1	Washer, Arm. Thrust, Intermediate
MAX-44	2	Washer, Plain, Term. Stud, Outer 3/8	MBD-2286	1	ARMATURE
MBD-12	† 2	Brush	MU-54	*	Washer, Thrust, 1/32" Thick
MBD-12A	† 2	Brush	MU-54A	*	Washer, Thrust, 1/64" Thick
MBD-13	† 2	Brush	MU-54B	*	Washer, Thrust, 3/64" Thick
MBD-13A	† 2	Brush			
MBD-34	1	Terminal			<u>Miscellaneous Parts</u>
MBD-119	2	Washer, Ins., Term. Stud	EBA-74	1	BENDIX DRIVE ASSY.
MBD-121	1	Stud, Terminal	MBD-254	8	Screw, Pinion Housing, Hex. Hd. #10-32x7/8
MBD-231	1	Connector, Term. Stud	MBD-1024K	1	Band, Cover
MBD-233A	1	Stud, Terminal	MBD-1118	1	Brg. Assy., Intermediate
MBD-3005S	1	FIELD COIL PACKAGE	MBD-285	1	BRG., ABS. BRONZE
MBD-1007S	1	Coil, Field, U.L.	PS-1206	1	Housing Assy., Pinion
MBD-1008S	1	Coil, Field, L.L.	MAB-88	1	Pin, Dov
MBD-1009S	1	Coil, Field, U.R.	MBD-220	1	BEARING, ABS. BRONZE
MBD-1010S	1	Coil, Field, L.R.	12X-196	8	Lockwasher, Housing Sc., #10
MC-51A	1	Washer, Plain, Term. Stud Inner, 3/8	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MR-32	1	Insulation, Field Conn.	8X-794	1	Nut, Cover Band, Square #10-32
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			
<u>Comm. End Head Assembly &amp; Parts Used With</u>			<u>† BRUSH SET, SERVICE MBD-1012S.</u>		
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			

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			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBD-2276)	1	Frame & Field Assy.	MAK-61	1	Washer, Arm. Thrust, C.E.
GK-38	8	Screw, Pole Shoe	MBD-76	2	Washer, Arm. Thrust, Intermediate
MAW-37	1	Bushing, Ins., Term. Stud	MBD-2212	1	Armature
MAX-44	2	Washer, Plain, Term. Stud, Outer	MU-54	*	Washer, Thrust, 1/32" Thick
MBD-12	† 2	Brush	MU-54A	*	Washer, Thrust, 1/64" Thick
MBD-12A	† 2	Brush	MU-54B	*	Washer, Thrust, 3/64" Thick
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			Miscellaneous Parts		
GAL-40A	1	Cover, Bearing, Comm. End	EBA-75	1	Bendix Drive
MAD-110	1	Felt	MBD-24	1	Band, Cover
MBD-2236C	1	Head Assy., Comm. End	MBD-254	8	Screw, Housing, Hex. Hd. #10-32x7/8
GFM-4F	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8	MBD-1118	1	Bearing Assy., Intermediate
MBD-150	1	Wick, Felt	MBD-285	1	Bearing, Absorbent Bronze
MBD-1236	1	Head Assy., Partial, C.E.	PS-1228	1	Housing Assy., Pinion
GBF-79	1	Bearing, Absorbent Bronze	MAB-88	1	Pin, Dowel
MBD-2079	1	Plate Assy., Brush	MBD-257	1	Bearing, Absorbent Bronze
GG-81	4	Clip, Brush Holder	12X-196	8	Lockwasher, Housing Sc., #10
MBD-19	8	Spring, Brush	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MBD-47	4	Spacer, Spring	8X-794	1	Nut, Cover Band, Square #10-32
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			

\* 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."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBD-4033 STARTING MOTOR PARTS LIST

MBD-4033

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBD-2239)	1	Frame & Field Assy.	MAK-61	1	Washer, Thrust, Comm. End
GK-38	8	Screw, Pole Shoe	MBD-311	2	Washer, Thrust, Intermediate
MAW-37	2	Bushing, Insulating, Term. Stud	MBD-2212	1	ARMATURE
MAX-44	2	Washer, Plain, Term. Stud, Outer	MU-54	*	Washer, Thrust 1/32" Thick
MBD-12 †	2	Brush	MU-54A	*	Washer, Thrust 1/64" Thick
MBD-12A †	2	Brush	MU-54B	*	Washer, Thrust 3/64" Thick
MBD-13 †	2	Brush	<u>Miscellaneous Parts</u>		
MBD-13A †	2	Brush	EBA-70	1	BENDIX, DRIVE
MBD-15	1	Insulation, Term. Stud, Inner	MBD-254	8	Screw, Pinion Housing, Hex. Hd. #10-32x7/8
MBD-34	1	Terminal	MBD-1024K	1	Band, Cover
MBD-119	3	Washer, Insulating, Term. Stud	MBD-1118	1	BRG. ASSY., INTERMEDIATE
MBD-231	1	Connector, Term. Stud	MBD-285	1	Brg., Absorbent Bronze
MBD-233A	1	Stud, Terminal	PS-1282	1	Housing Assy., Pinion
MBD-3005S	1	FIELD COIL PACKAGE	MAB-88	1	Pin, Dowel
MBD-1007S	1	Coil, Field, U.L.	MBD-220	1	BEARING, ABS. BRONZE
MBD-1008S	1	Coil, Field, L.L.	12X-196	8	Lockwasher, Housing Screw, #10
MBD-1009S	1	Coil, Field, U.R.	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MBD-1010S	1	Coil, Field, L.R.	8X-794	1	Nut, Cover Band, Square #10-32
MC-51A	1	Washer, Plain, Term. Stud, Inner	† BRUSH SET, SERVICE MBD-1012S.		
MR-32	1	Insulation, Field Conn.	* Use as required.		
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			
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
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			

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."







# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBD-4037 MOTOR PARTS LIST

MBD-4037  
(Issued 4-1-55)

<u>Frame &amp; Field Assembly &amp; Parts Used With</u>		
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
<u>Comm. End Head Assembly &amp; Parts Used With</u>		
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.

UNTT	APPLICATION
MBD-4037	J. S. Barnes, Lewis-Sheppard, 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

MBD-4039 MOTOR PARTS LIST

MBD-4039  
(Issued 4-1-55)

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MBD-2325	1	Frame & Field Assembly	MBD-389	1	Key
GK-38	8	Screw, Pole Shoe	MBD-391	*	Washer, Thrust, C. E., .032" Thick
MAW-37	2	Bushing, Ins., Term. Stud	MBD-391A	*	Washer, Thrust, C. E., .015" Thick
MAX-44	2	Washer, Plain, Term. Stud, Outer	MBD-2393	1	ARMATURE
MBD-115	1	Washer, Term. Stud, Inner	<u>Miscellaneous Parts</u>		
MBD-119	3	Washer, Ins., Term. Stud	MBD-24	1	Band, Cover
MBD-231	1	Connector, Term. Stud	MBD-258	8	Screw, Drive End Head, Fill. Hd. #10-32x5/8
MBD-233A	1	Stud, Terminal	12X-196	8	Lockwasher, D. E. Head Screw, #10
MBD-322	1	Terminal, Brush	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MBD-324	1	Terminal, Brush	8X-794	1	Nut, Cover Band Square #10-32
MBD-1007S	1	COIL, FIELD, U. L.	X-3213	1	BEARING, BALL, SEALED
MBD-1008CS	1	COIL, FIELD, L. L.	* Use as required.		
MBD-1009S	1	COIL, FIELD, U. R.	† BRUSH SET, SERVICE MBD-1323S.		
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			
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
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			
12X-196	12	Lockwasher, C. E. Head			
X-3212	1	Screw, #10			
XA-811	1	BEARING, BALL, SEALED Retainer, Bearing			

UNIT	APPLICATION
MBD-4039	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."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBD- 4041 MOTOR PARTS LIST

MBD- 4041  
(Issued 10-9-56)

## 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

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

MBE-4001 STARTING MOTOR PARTS LIST

MBE-4001

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				
<u>Miscellaneous Parts</u>						
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	#10-32x1 1/2 Rd. Hd. Sc.				
8X-794	1	#10-32 Square Nut				
		1	2	3	4	5

(Issued 2-4-41)

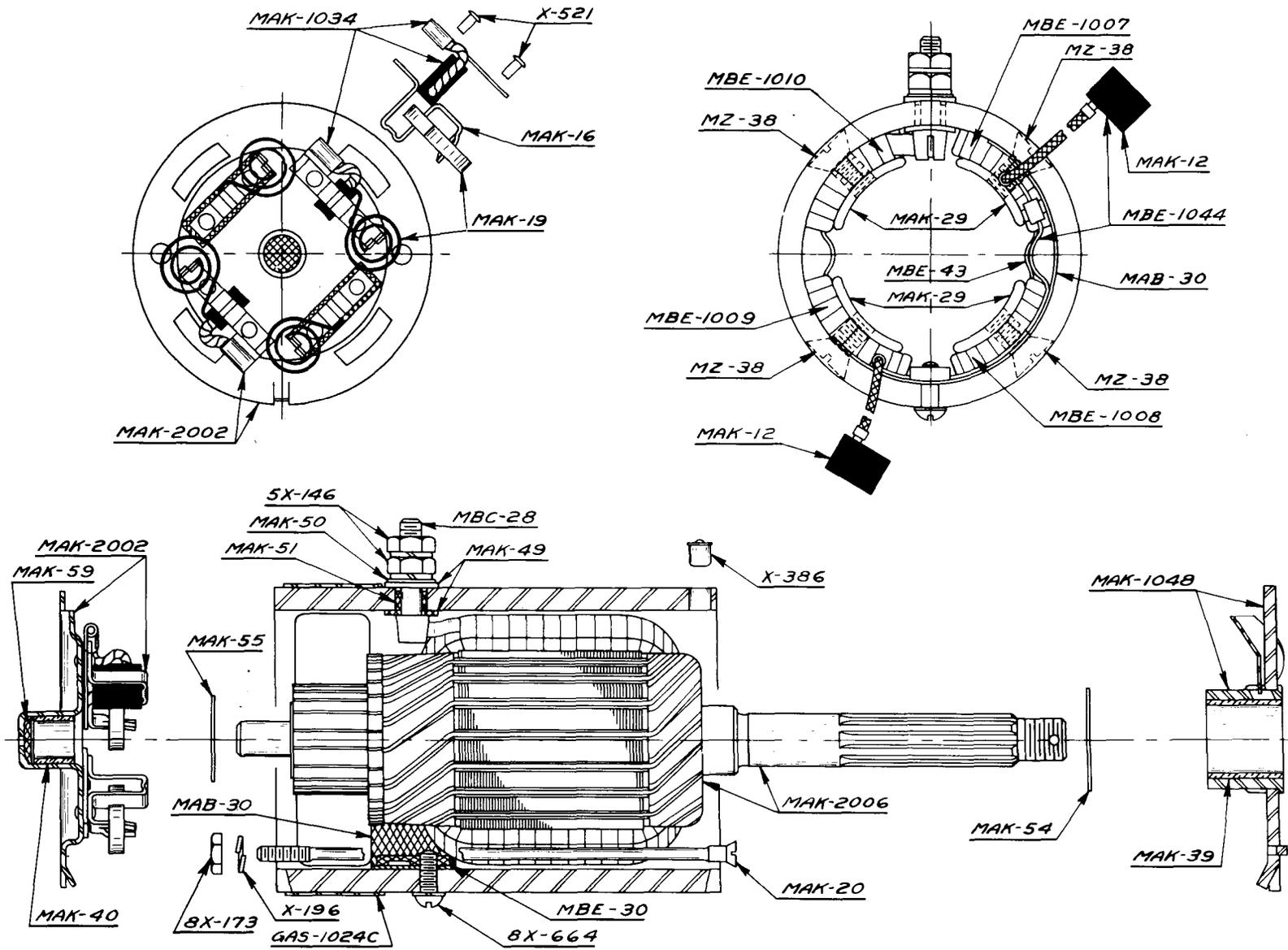
UNIT	APPLICATION
MBE-4001	Climax, Waukesha

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."

MBE - 4001 STARTING MOTOR ILLUSTRATION



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBE-4003,A STARTING MOTOR PARTS LIST

MBE-4003,A  
(Issued 6-27-51)

Frame & Field Assembly & Parts Used With			Miscellaneous Parts		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MAK-79	2	Screw, Frame	EB-56	1	BENDIX DRIVE ASSY.
(MBE-2095)	1	Frame & Field Assy.	EB-508	2	Lockwasher
MAK-12†	2	Brush	EB-2303	1	Driving Head
MAK-49	2	Washer, Insulating, Term. Post	EB-2319S	1	Sleeve, Compression
MAK-51	1	Bushing, Insulating, Term. Post.	EB-2405	1	SPRING, DRIVE
MBC-28	1	Post, Terminal, 1/4-20	EB-2406	1	Screw, Spring, Head
MBE-30	1	Clamp	EB-2407	1	Screw, Spring, Shaft
MBE-31	1	Insulation, Field Connection	EB-2622	2	Clip, Spring Support
MBE-44	1	Connector, Brush	EB-5611	1	Shaft & Pinion
MBE-3005S	1	FIELD COIL PACKAGE	GAS-1024C	1	Band, Head
MBE-43	1	Connector, Field Coil	MAK-2092	1	BEARING ASSY., INTERMEDIATE
MBE-1007	1	Coil, Field, U.R.	MZ-44A	1	Bearing, Abs. Bronze
MBE-1008	1	Coil, Field, L.R.	PS-1153A	1	Housing Assy., Pinion
MBE-1009	1	Coil, Field, L.L.	GBF-95	1	Pin, Dowel
MBE-1010	1	Coil, Field, U.L.	MAB-88	1	Pin, Dowel
MZ-38	4	Screw, Pole Piece	MP-41A	1	BEARING, ABS. BRONZE
SSA-43	2	Washer, Plain	X-714	1	Screw, Head Band, Rd. Hd. #10-32x1 1/2
5X-146	1	Nut, Terminal, Hex., 1/4-20	8X-794	1	Nut, Head Band, Square #10-32
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			NOTE: MBE-4003A Starting Motor uses EBA-56 Bendix Drive Assy. with sub parts as noted below:		
MAK-3002	1	Head Assy., Comm. End	EBA-56	1	BENDIX DRIVE ASSY.
MAK-19	4	Spring, Brush	EB-108	2	Lockwasher
MAK-59	1	Felt	EB-7805	1	SPRING, DRIVE
MAK-1034S†	2	Brush, Grounded	EB-7806	1	Screw, Spring, Head
Armature Assembly & Parts Used With			EB-7807	1	Screw, Spring, Shaft
MAK-55	1	Washer, Thrust, Arm. Shaft, C.E.	EB-7819S	1	Sleeve, Compression
MAK-2088	1	ARMATURE	EB-8503	1	Head, Drive
MU-54	1	Washer, Thrust	EB-8734	1	Ring, Take-Up
X-261	1	Key, Woodruff, #6	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.”

,

,

,

,

# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBE-4004 STARTING MOTOR PARTS LIST

MBE-4004

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)

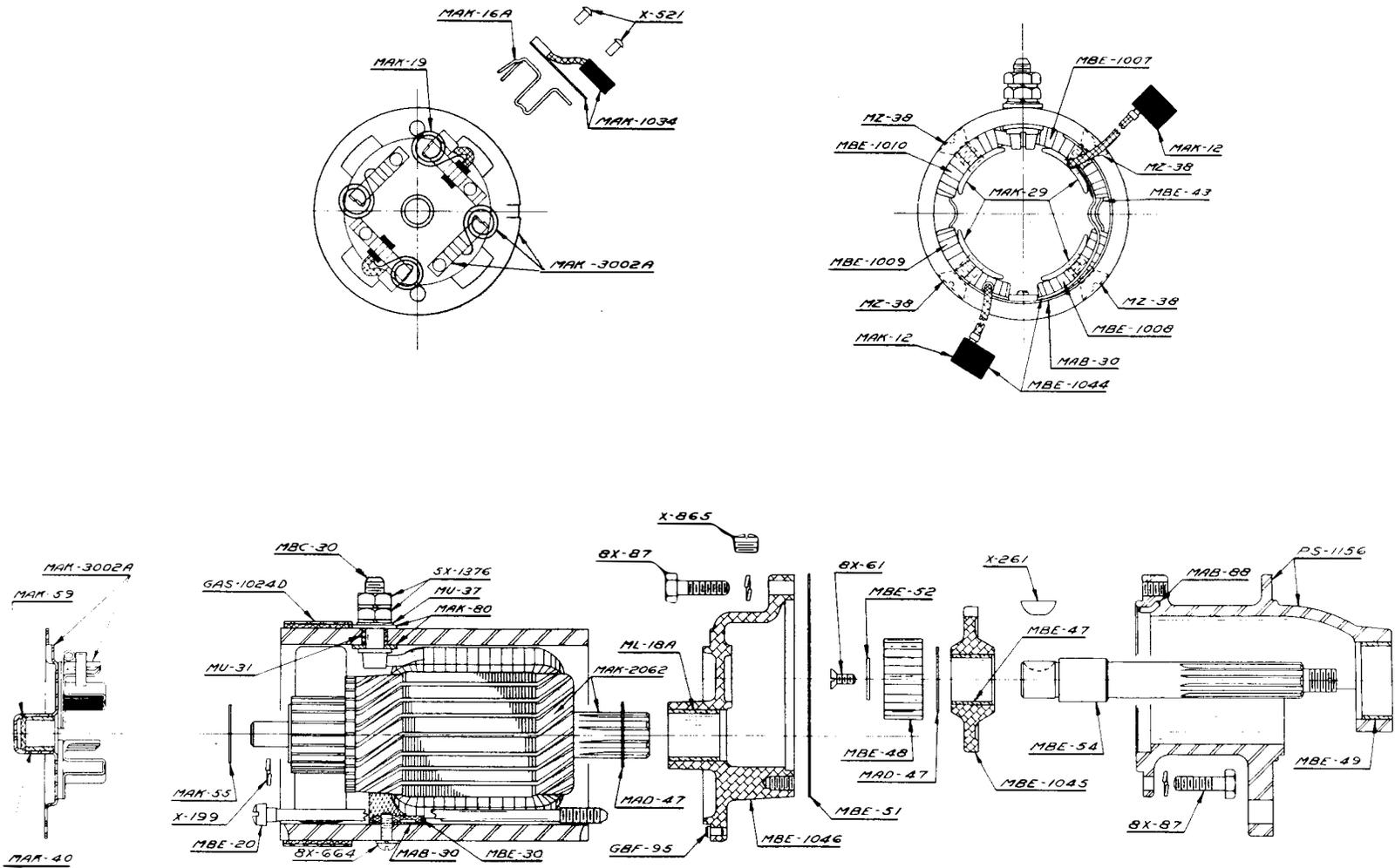
UNIT	APPLICATION
MBE-4004	Waukesha Motor

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."

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			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MAK-20	2	Bolt, Thru	MAK-54	1	Washer, Thrust, D. E., 1/32" Thick
MBE-2094	1	Frame & Field Assy.	MAK-55	1	Washer, Thrust, C. E., 1/32" Thick
MAK-12 †	2	BRUSH	MAK-2006	1	ARMATURE
MAK-49	2	Washer, Ins., Term. Stud	<u>Miscellaneous Parts</u>		
MAK-51	1	Bushing, Ins., Term. Stud	EBA-10	1	BENDIX DRIVE ASSY.
MBC-28	1	Stud, Terminal	EB-6504S	1	Pinion
MBE-30	1	Clamp, Connector	EB-6505	1	SPRING, DRIVE
MBE-31	1	Insulation, Field Connection	EB-6513	1	Spring, Anti-Drift
MBE-44	1	Connector, Brush	EB-6823	2	Washer, Thrust
MBE-3005S	1	FIELD COIL PACKAGE	EB-6824	1	Support, Drive Spring
MBE-43	1	Connector, Field Coil	EB-6825	1	Spring, Meshing
MBE-1007	1	Coil, Field, U. R.	EB-6826	1	Sleeve, Anti-Drift Spring
MBE-1008	1	Coil, Field, L. R.	EB-6827	1	Washer, Pinion
MBE-1009	1	Coil, Field, L. L.	EB-6828	1	Nut, Castellated
MBE-1010	1	Coil, Field, U. L.	EB-7101	1	Shaft
MZ-38A	4	Screw, Pole Shoe	EB-7902	1	Drive Stop
SSA-43	2	Washer, Plain, Term. Stud	X-404	1	Pin, Cotter
8X-146	2	Nut, Term. Stud, Hex. 1/4-20	GAS-1024C	1	Band, Cover
12X-196	1	Lockwasher, Connector Clamp Sc., 10	MAK-1048	1	Head Assy., Drive End
12X-199	2	Lockwasher, Term. Stud, 1/4	MAK-39	1	BEARING, ABS. BRONZE
8X-664	1	Screw, Br. Connector Clamp, Rd. Hd. 10-32x9/16	X-386	1	Oiler
8X-173	2	Nut, Thru Bolt, Hex. 10-32	8X-714	1	Screw, Cover Band, Rd. Hd. 10-32x1 1/2
12X-196	2	Lockwasher, Thru Bolt, 10	8X-794	1	Nut, Cover Band, Square 10-32
<u>Comm. End Head Assembly &amp; Parts Used With</u>			† BRUSH SET, SERVICE MAK-2012AS.		
MAK-3002	1	Head Assy., Comm. End			
MAK-19	4	Spring, Brush			
MAK-59	1	Felt			
MAK-1034S †	2	BRUSH, GROUNDED			

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."

1

2

3

4

# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBE-4006 STARTING MOTOR PARTS LIST

MBE-4006  
(Issued 10-6-55)

## 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

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

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-4004 STARTING MOTOR PARTS LIST

MBG-4004  
(Issued 10-17-50)

Frame & Field Assembly & Parts Used With			Miscellaneous Parts		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBG-2001)	1	Frame & Field Assy.	EBA-30	1	BENDIX DRIVE ASSEMBLY
MAB-30A	1	Insulation, Field Connection	EB-6501	1	Screw Sleeve
MAB-31	1	Washer, Ins., Term. Stud, Outer	EB-6513	1	Spring, Anti-Drift
MAK-80	1	Washer, Ins. Term. Stud, Inner	EB-6529	1	Collar, Spacing
MAX-67	1	Insulation, Field Connection, Drive End	EBA-604S	1	Pinion
MBG-28	1	Stud, Terminal	EBA-635	1	Sleeve, Anti-Drift Spring
MBG-30	1	Clamp, Connector	EBA-3002	1	Cup, Spring, Pinion
MBG-37	1	Connector	EBA-3005	1	SPRING, DRIVE
MBG-3005S	1	FIELD COIL PACKAGE	EBA-3023	1	Washer, Thrust
MBG-1007	1	Coil, Field, U.L.	EBA-3024	1	Support, Spring, Drive
MBG-1008	1	Coil, Field, L.R.	EBA-3025	1	Spring, Meshing
MBG-1009	1	Coil, Field, L.L.	EBA-3028	1	Nut, Castellated
MZ-32	2	Connector, Field Coil	X-528	1	Pin, Cotter
MZ-1010B	1	Coil, Field, U.R.	MZ-1024A	1	Band, Cover
MU-31	1	Bushing, Ins., Term. Stud	MZ-1114	1	Head Assy., Drive End
MU-37	1	Washer, Plain, Term. Stud, 5/16	MAK-39	1	BRG., ABS. BRONZE
MZ-12 †	2	Brush	8X-119	4	Screw, D.E. Head, Fill. Hd. #10-32x1/2
MZ-38A	4	Screw, Pole Shoe	12X-196	4	Lockwasher, Head Screw, #10
X-196	1	Lockwasher, Connector Clamp Sc., #10	X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-664	1	Screw, Connector Clamp, Rd. Hd. #10-32x9/16	8X-794	1	Nut, Cover Band, Square #10-32
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			

† 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."

)

)

)

)

# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

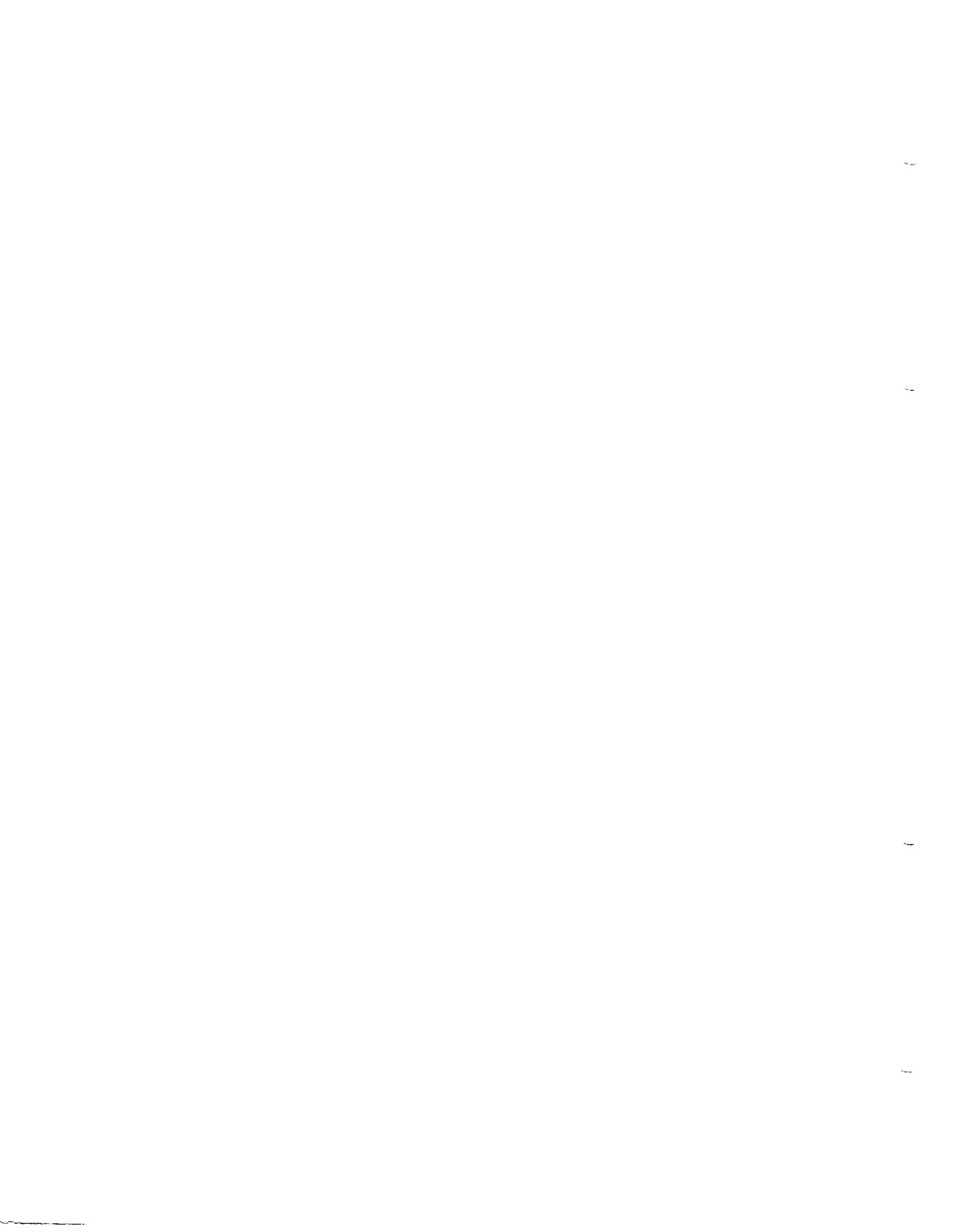
MBG-4006 STARTING MOTOR PARTS LIST

MBG-4006  
(Issued 1-16-56)

Frame & Field Assembly & Parts Used With			Switch Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MBG-2032	1	Frame & Field Assy.	SS-6L	1	Connector
MAB-30E	1	Insulation, Field Connection	SS-4003	1	SOLENOID STARTING SWITCH
MAB-31	1	Washer, Ins., Term. Stud, Outer	8X-173	1	Nut, Hex. #10-32
MAK-80	1	Washer, Ins., Term. Stud, Inner	12X-196	1	Lockwasher, #10
MBG-28	1	Stud, Terminal	8X-832	2	Nut, Hex. 5/16-24
MBG-30	1	Clamp, Connector	12X-1014	2	Lockwasher, 5/16
MBG-37	1	Connector	8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MBG-50	1	Insulation, Field Connection, D. E.	X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10
MBG-3005S	1	FIELD COIL PACKAGE	<u>Miscellaneous Parts</u>		
MBG-1007	1	Coil, Field, U. L.	EBA-14	1	BENDIX DRIVE ASSY.
MBG-1008	1	Coil, Field, L. R.	EB-108	2	Lockwasher
MBG-1009	1	Coil, Field, L. L.	EB-7819S	1	Sleeve, Compression
MZ-32	2	Connector, Field Coil	EB-8503	1	Head, Drive
MZ-1010B	1	Coil, Field, U. R.	EB-8506	1	Screw, Spring, Head
MU-31	1	Bushing, Ins., Term. Stud	EB-8507	1	Screw, Spring, Shaft
MU-37	1	Washer, Plain, Term. Stud, 5/16	EBA-211	1	Shaft & Pinion
MZ-12†	2	Brush	EBA-1405	1	Spring, Drive
MZ-38A	4	Screw, Pole Shoe	MAB-2040	1	BEARING ASSY., INTERMEDIATE
12X-196	1	Lockwasher, Clamp Sc., #10	MG-77A	1	Bearing, Abs. Bronze
8X-664	1	Screw, Clamp, Rd. Hd. #10-32x9/16	MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
12X-1014	2	Lockwasher, Term. Stud, 5/16	MZ-1024A	1	Band, Cover
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24	PS-1064	1	Housing Assy., Pinion
<u>Comm. End Head Assembly &amp; Parts Used With</u>			MAB-88	1	Pin, Dowel
MZ-2002B	1	Head Assy., Comm. End	MG-77A	1	BEARING, ABS. BRONZE
MAD-110	1	Felt	12X-196	4	Lockwasher, Housing Screw, #10
MZ-19	4	Spring, Brush	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MZ-1034S†	2	Brush, Grounded	8X-794	1	Nut, Cover Band, Square #10-32
12X-196	4	Lockwasher, Head Screw, #10	† BRUSH SET, SERVICE      MZ-2012AS		
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8			
<u>Armature Assembly &amp; Parts Used With</u>					
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			

UNIT	APPLICATION
MBG-4006	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

MBG-4007 STARTING MOTOR PARTS LIST

MBG-4007  
(Issued 8-22-51)

Frame & Field Assembly & Parts Used With			Switch Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBG-2032)	1	Frame & Field Assy.	SS-6L	1	Connector
MAB-30A	1	Insulation, Field Connection	SS-4003	1	Switch, Solenoid
MAB-31	1	Washer, Ins., Term. Stud, Outer	8X-173	1	Nut, Hex. #10-32
MAK-80	1	Washer, Ins., Term. Stud, Inner	12X-196	1	Lockwasher, #10
MAX-67	1	Insulation, Field Connection, D. E.	8X-832	2	Nut, Hex. 5/16-24
MBG-28	1	Stud, Terminal	12X-1014	2	Lockwasher, 5/16
MBG-30	1	Clamp	8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MBG-37	1	Connector	X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10
MBG-3005S	1	Field Coil Package			
MBG-1007	1	Coil, Field, U. L.			<u>Miscellaneous Parts</u>
MBG-1008	1	Coil, Field, L. R.	EBA-4	1	Bendix Drive Assembly
MBG-1009	1	Coil, Field, L. L.	EB-108	2	Lockwasher
MZ-32	2	Connector, Field Coil	EB-7819S	1	Sleeve, Compression
MZ-1010B	1	Coil, Field, U. R.	EB-8503	1	Head, Driving
MU-31	1	Bushing, Ins., Term. Stud	EB-8506	1	Screw, Spring, Head
MU-37	1	Washer, Plain, Term. Stud, 5/16	EB-8507	1	Screw, Spring, Shaft
MZ-12†	2	Brush	EB-8734	1	Ring, Take-Up
MZ-38A	4	Screw, Pole Shoe	EB-9911	1	Shaft & Pinion
X-196	1	Lockwasher, Clamp Sc., #10	EBA-405	1	Spring, Drive
8X-664	1	Screw, Clamp, Rd. Hd. #10-32x9/16	MAB-2040	1	Bearing Assy., Intermediate
12X-1014	2	Lockwasher, Term. Stud, 5/16	MG-77A	1	Bearing, Abs. Bronze
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24	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.
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
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			
<u>Armature Assembly &amp; Parts Used With</u>					
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			

UNIT	APPLICATION
MBG-4007	Hallett

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-4008 STARTING MOTOR PARTS LIST

MBG-4008

Frame & Field Assembly & Parts Used With			Switch Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBG-2032)	1	Frame & Field Assy.	SS-6L	1	Connector
MAB-30A	1	Insulation, Field Conn.	SS-4003	1	SWITCH, SOLENOID
MAB-31	1	Washer, Ins., Term. Stud, Outer	8X-173	1	Nut, Hex. #10-32
MAK-80	1	Washer, Ins., Term. Stud, Inner	12X-196	1	Lockwasher, #10
MAX-67	1	Insulation, Field Conn., D.E.	8X-832	2	Nut, Hex. 5/16-24
MBG-28	1	Stud, Terminal	12X-1014	2	Lockwasher, 5/16
MBG-30	1	Clamp	8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MBG-37	1	Connector	X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10
MBG-3005S	1	FIELD COIL PACKAGE			
MBG-1007	1	Coil, Field, U.L.			<u>Miscellaneous Parts</u>
MBG-1008	1	Coil, Field, L.R.	EBA-2	1	BENDIX DRIVE ASSY.
MBG-1009	1	Coil, Field, L.L.	EB-108	2	Lockwasher
MZ-32	2	Connector, Field Coil	EB-7806	1	Screw, Spring, Head
MZ-1010B	1	Coil, Field, U.R.	EB-7807	1	Screw, Spring, Shaft
MU-31	1	Bushing, Ins., Term. Stud	EB-7819S	1	Sleeve, Compression
MU-37	1	Washer, Plain, Term. Stud, 5/16	EB-8503	1	Head, Drive
MZ-12†	2	Brush	EB-8705	1	SPRING, DRIVE
MZ-38A	4	Screw, Pole Shoe	EB-8734	1	Ring, Take-Up
X-196	1	Lockwasher, Clamp Sc., #10	EBA-211	1	Shaft & Pinion
8X-664	1	Screw, Clamp, Rd. Hd., #10-32x9/16	MZ-1024A	1	Band, Cover
12X-1014	2	Lockwasher, Term. Stud, 5/16	PS-1171	1	Housing Assy., Pinion
8X-1376	2	Nut, Term. Stud, Hex., 5/16-24	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
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
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			
<u>Armature Assembly &amp; Parts Used With</u>					
MN-18	1	Washer, Thrust, D.E.			
MU-54	1	Washer, Thrust, C.E.			
MZ-2141	1	ARMATURE			
X-261	1	Key, Woodruff, #6			

† BRUSH SET, SERVICE MZ-2012AS

UNIT	APPLICATION
MBG-4008	Gray Marine

(Issued 10-25-49)

Printed in U. S. A.

File in  
Equipment & Parts List Binder

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



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBG-4009 STARTING MOTOR PARTS LIST

MBG-4009

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 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				
EX-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				
EX-832	2	5/16-24 Hex. Nut				
12X-1014	2	5/16 Lock Washer				
EX-1372	1	#10-32 Hex. Nut				
EX-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				
EX-119	4	#10-32x1/2 Fill. Hd. Screw				
X-196	4	#10 Lock Washer				
X-308	1	#10-32x1 3/8 Rd. Hd. Screw				
EX-794	1	#10-32 Square Nut				
		1	2	3	4	5

(Issued 5-20-41)

UNIT	APPLICATION
MBG-4009	Aircooled 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



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBG-4011 STARTING MOTOR PARTS LIST

MBG-4011

PRELIMINARY

<u>Frame &amp; Field Assembly With Terminal Post &amp; Parts Used With</u>						<u>Switch Assembly &amp; Parts Used With</u>									
Part No.	No. Used	Name of Part						Part No.	No. Used	Name of Part					
			1	2	3	4	5				1	2	3	4	5
(MBG-2033)	1	Frame & Field Assembly						MZ-144	1	Connector					
MAB-30	1	Field Connection Insulator						SS-4003	1	SOLENOID STARTING SWITCH					
MAB-31	1	Insulating Washer						12X-196	1	#10 Lock Washer					
MAK-80	1	Insulating Washer						8X-832	2	5/16-24 Hex. Nut					
MAX-67	1	Insulation						12X-1014	2	5/16 Lock Washer					
MBG-28	1	Terminal Post						8X-1372	1	#10-32 Hex. Nut					
MBG-30	1	Clamp						8X-321	2	#10-32x5/16 Rd. Hd. Screw					
MBG-1007	1	Field Coil - U.L.						X-1274	2	#10 Skpf. Washer					
MBG-1008	1	Field Coil - L.R.						<u>Miscellaneous Parts</u>							
MBG-1009	1	Field Coil - L.L.						EBA-48	1	BENDIX DRIVE ASSEMBLY					
MBG-1010	1	Field Coil Assembly						EBA-4805	1	DRIVE SPRING					
MZ-1010B	1	Field Coil - U.R.						EBA-4807	2	Spring Anchor Plate					
MZ-1102	1	Connector & Brush Assy						EBA-4808	1	Lock Ring					
MZ-121	2	Brush						EBA-4813	1	Anti-Drift Spring					
MU-31	1	Insulating Bushing						EBA-4825	1	Meshing Spring					
MU-37	1	5/16 Plain Washer						EBA-4831	1	Screw Shaft Assembly					
MZ-29	4	Pole Piece						EBA-4832	1	Pinion Assembly					
MZ-32	2	Field Coil Connector						EBA-4833	1	Retaining Ring					
MZ-38A	4	Pole Piece Screw						MZ-124	1	Bendix Drive Pin					
X-196	1	#10 Lock Washer						MZ-1024A	1	Head Band Assembly					
8X-664	1	#10-32x9/16 Rd. Hd. Screw						MZ-1147	1	Drive End Head Assembly					
X-1014	1	5/16 Lock Washer						MAB-124	1	ABSORBENT BRONZE BRG.					
5X-1376	1	5/16-24 Hex. Nut						XA-560	1	Oil Seal					
X-1014	1	5/16 Lock Washer						8X-119	4	#10-32x1/2 Fill. Hd. Screw					
5X-1376	1	5/16-24 Hex. Nut						X-196	4	#10 Lock Washer					
<u>Comm. End Plate Assembly &amp; Parts Used With</u>						<u>Miscellaneous Parts</u>									
MZ-2002	1	Comm. End Plate Assembly						X-308	1	#10-32x1 3/8 Rd. Hd. Screw					
MZ-16	2	Brush Holder						8X-794	1	#10-32 Square Nut					
MZ-19	4	Brush Spring									1	2	3	4	5
MZ-1034†	2	Brush Assy.- Grounded						(Issued 10-8-41)							
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													
<u>Armature Assembly &amp; Parts Used With</u>						<u>Miscellaneous Parts</u>									
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								

† SERVICE BRUSH SET MZ-2012S.

UNIT	APPLICATION
MBG-4011	Aircooled 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."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBG-4015 STARTING MOTOR PARTS LIST

MBG-4015  
(Issued 1-16-56)

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MBG-2001	1	Frame & Field Assy.	MU-54	2	Washer, Thrust, C. E. & Int., 1/32" Thick
MAB-30E	1	Insulation, Field Connection	MZ-2089	1	ARMATURE ASSY.
MAB-31	1	Washer, Ins., Term. Stud, Outer	MZ-51	1	Spacers Bearing Thrust
MAK-80	1	Washer, Ins., Term. Stud, Inner	X-261	1	Key, Woodruff, D. E., #6
MBG-28	1	Stud, Terminal	<u>Miscellaneous Parts</u>		
MBG-30	1	Clamp, Connector	EB-87	1	BENDIX DRIVE ASSY.
MBG-37	1	Connector	EB-108	2	Lockwasher
MBG-50	1	Insulation, Field Connection, D. E.	EB-7806	1	Screw, Spring, Head
MBG-3005S	1	FIELD COIL PACKAGE	EB-7807	1	Screw, Spring, Shaft
MBG-1007	1	Coil, Field, U. L.	EB-7819S	1	Sleeve, Compression
MBG-1008	1	Coil, Field, L. R.	EB-8503	1	Head, Drive
MBG-1009	1	Coil, Field, L. L.	EB-8705	1	Spring, Drive
MZ-32	2	Connector, Field Coil	EB-8711	1	Shaft & Pinion
MZ-1010B	1	Coil, Field, U. R.	MAB-2040	1	BEARING ASSY., INTERMEDIATE
MU-31	1	Bushing, Ins., Term. Stud	MG-77A	1	Bearing, Abs. Bronze
MU-37	1	Washer, Plain, Term. Stud, 5/16	MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
MZ-12†	2	Brush	MZ-1024A	1	Band, Cover
MZ-38A	4	Screw, Pole Shoe	PS-1121	1	Housing Assy., Pinion
12X-196	1	Lockwasher, Clamp Sc., #10	MAB-88	1	Pin, Dowel
8X-664	1	Screw, Clamp, Rd. Hd. #10-32x9/16	MP-41A	1	BEARING, ABS. BRONZE
12X-1014	2	Lockwasher, Term. Stud, 5/16	12X-196	4	Lockwasher, Housing Screw, #10
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
			8X-794	1	Nut, Cover Band, Square #10-32
<u>Comm. End Head Assembly &amp; Parts Used With</u>			† BRUSH SET, SERVICE MZ-2012AS		
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			

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."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBG-4017 STARTING MOTOR PARTS LIST

MBG-4017

Frame & Field Assembly With Terminal Stud & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBG-2042)	1	Frame and Field Assy.	MU-54	2	Washer, Thrust, 1/32" Thick
MAB-30A	1	Insulation, Field Connection, C.E.	MZ-2089	1	ARMATURE ASSY.
MAB-31	1	Washer, Ins., Term. Stud, Outer	MZ-51	1	Spacer, Bearing Thrust
MAK-80	1	Washer, Ins., Term. Stud, Inner	X-261	1	Key, Woodruff, #6
MAX-67	1	Insulation, Field Connection, D.E.	<u>Miscellaneous Parts</u>		
MBG-28	1	Stud, Terminal	EBA-92	1	BENDIX DRIVE ASSY.
MBG-30	1	Clamp, Connector	EB-108	2	Lockwasher
MBG-37	1	Connector	EB-7805	1	SPRING, DRIVE
MBG-3005S	1	FIELD COIL PACKAGE	EB-7806	1	Screw, Spring, Head
MBG-1007	1	Coil, Field, U.L.	EB-7807	1	Screw, Spring, Shaft
MBG-1008	1	Coil, Field, L.R.	EB-7819S	1	Sleeve, Compression
MBG-1009	1	Coil, Field, L.L.	EB-8503	1	Head, Drive
MZ-32	2	Connector, Field Coil	EB-8734	1	Ring, Take-Up
MZ-1010B	1	Coil, Field, U.R.	EBA-9211	1	Shaft & Pinion
MU-31	1	Bushing, Ins., Term. Stud	MAB-2040	1	BEARING ASSY., INTERMEDIATE
MU-37	1	Washer, Plain, Term. Stud, 5/16	MG-77A	1	Bearing, Absorbent Bronze
MZ-12 †	2	Brush	MZ-24A	1	Band, Cover
MZ-38A	4	Screw, Pole Shoe	MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
12X-196	1	Lockwasher, Clamp Sc. #10	PS-1121	1	Housing Assy., Pinion
8X-664	1	Screw, Connector Clamp	MAB-88	1	Pin, Dowel
12X-1014	2	Lockwasher, Term. Stud, 5/16	MP-41A	1	BEARING, ABS., BRONZE
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24	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
<u>Comm. End Head Assembly &amp; Parts Used With</u>			† BRUSH SET, SERVICE MZ-2012AS.		
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			

UNIT	APPLICATION
MBG-4017	Continental

(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

MBG-4018 STARTING MOTOR PARTS LIST

MBG-4018

Frame & Field Assembly With Terminal Stud & Parts Used With			Switch Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBG-2043)	1	Frame & Field Assy.	SS-6LA	1	Connector
MAB-30A	1	Insulation, Field Connection	SS-4311	1	SOLENOID SWITCH
MAB-31	1	Washer, Ins., Term. Stud, Outer	8X-173	2	Nut, Hex. #10-32
MAK-80	1	Washer, Ins., Term. Stud, Inner	12X-196	2	Lockwasher, #10
MAX-67	1	Insulation, Field Connection, D.E.	8X-832	2	Nut, Hex. 5/16-24
MBG-28	1	Stud, Terminal	12X-1014	2	Lockwasher, 5/16
MBG-30	1	Clamp, Connector	8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MBG-37	1	Connector	X-1270	2	Washer, Switch Mtg., Sc. Skpf. #10
MBG-3005S	1	FIELD COIL PACKAGE	<u>Miscellaneous Parts</u>		
MBG-1007	1	Coil, Field, U.L.	EBA-92	1	BENDIX DRIVE ASSY.
MBG-1008	1	Coil, Field, L.R.	EB-108	2	Lockwasher
MBG-1009	1	Coil, Field, L.L.	EB-7805	1	SPRING, DRIVE
MZ-32	2	Connector, Field Coil	EB-7806	1	Screw, Spring, Head
MZ-1010B	1	Coil, Field, U.R.	EB-7807	1	Screw, Spring, Shaft
MU-31	1	Bushing, Ins., Term. Stud	EB-7819S	1	Sleeve, Compression
MU-37	1	Washer, Plain, Term. Stud, 5/16	EB-8503	1	Head, Drive
MZ-12 †	2	Brush	EB-8734	1	Ring, Take-Up
MZ-38A	4	Screw, Pole Shoe	EBA-9211	1	Shaft & Pinion
12X-196	1	Lockwasher, Clamp Sc., #10	MAB-2040	1	BEARING ASSY., INTERMEDIATE
8X-664	1	Screw, Clamp, #10-32x9/16	MG-77A	1	Bearing, Abs. Bronze
12X-1014	2	Lockwasher, Term. Stud, 5/16	MZ-24A	1	Band, Cover
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24	MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
<u>Comm. End Head Assembly &amp; Parts Used With</u>			PS-1121A	1	Housing Assy. Pinion
MZ-2002B	1	Head Assy., Comm. End	MAB-88	1	Pin, Dowel
MAD-110	1	Felt	MP-41A	1	BEARING, ABS. BRONZE
MZ-19	4	Spring, Brush	12X-196	4	Lockwasher, Housing Sc., #10
MZ-1034S †	2	Brush, Grounded	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
12X-544	4	Lockwasher, C.E. Head Sc., #10	8X-794	1	Nut, Cover Band, Square #10-32
8X-902	4	Screw, C.E. Head, Fill. Hd. #10-32x3/8	† BRUSH SET, SERVICE MZ-2012AS.		
<u>Armature Assembly &amp; Parts Used With</u>					
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			

UNIT	APPLICATION
MBG-4018	Continental

(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

MBG-4021 STARTING MOTOR PARTS LIST

MBG-4021

( Issued 7-8-52 )

## 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.

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 such parts the complete part can be assembled as needed."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBG-4022 STARTING MOTOR PARTS LIST

MBG-4022  
(Issued 4-2-53)

Frame & Field Assembly & Parts Used With			Miscellaneous Parts		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MBG-3051	1	Frame & Field Assy.	MBG-56	1	Head, Drive End
MAB-31	3	Washer, Ins., Term. Stud	MZ-24A	1	Band, Cover
MBG-28	1	Stud, Terminal	12X-196	4	Lockwasher, D.E. Head, #10
MBG-50	1	Insulation, Field Connection D. E.	X-367	1	BEARING, BALL, SEALED, S.A.E. #202
MBG-52	1	Insulation, Term. Stud, Inner	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1/2
MBG-53	1	Stud, Terminal	8X-794	1	Nut, Cover Band, Square #10-32
MBG-54	1	Connector, Terminal	8X-1151	4	Screw, D.E. Head, Rd. Hd. #10-32x13/16
MBG-55	1	Insulation, Field 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			

\* Use as required.

† BRUSH SET, SERVICE MZ-2012HS.

UNIT	APPLICATION
MBG-4022	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

MBG-4023 STARTING MOTOR PARTS LIST

MBG-4023  
(Issued 9-13-54)

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.

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-4024 STARTING MOTOR PARTS LIST

MBG-4024  
(Issued 10-3-55)

<u>Frame &amp; Field Assembly &amp; Parts Used With</u>			<u>Armature Assembly &amp; Parts Used With</u>		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MBG-2042	1	Frame & Field Assy.	MU-54	2	Washer, Thrust, C. E. & Int., 1/32" Thick
MAB-30E	1	Insulation, Field Connection	MZ-357	2	Washer, Thrust, Int.
MAB-31	1	Washer, Ins., Term. Stud, Outer	MZ-365	1	Washer, Spring, Int.
MAK-80	1	Washer, Ins., Term. Stud, Inner	MZ-2366	1	ARMATURE
MBG-28	1	Stud, Terminal	X-261	1	Key, Woodruff, D. E., #6
MBG-30	1	Clamp, Connector	<u>Miscellaneous Parts</u>		
MBG-37	1	Connector	EBB-44A	1	BENDIX DRIVE
MBG-50	1	Insulation, Field Connection, D. E.	MZ-52	4	Screw, Pinion Housing, Hex. Hd. #10-32x31/32
MBG-3005S	1	FIELD COIL PACKAGE	MZ-359	1	Gasket, Int. Bearing
MBG-1007	1	Coil, Field, U. L.	MZ-1024U	1	Band, Cover
MBG-1008	1	Coil, Field, L. R.	MZ-1360	1	BEARING ASSY., INTERMEDIATE
MBG-1009	1	Coil, Field, L. L.	PS-1330	1	Housing Assy., Pinion
MZ-32	2	Connector, Field Coil	MZ-358	1	Bearing Cap
MZ-1010B	1	Coil, Field, U. R.	MZ-364	1	BEARING, ABS. BRONZE
MU-31	1	Bushing, Ins., Term. Stud	XA-832	1	Oil Seal
MU-37	1	Washer, Plain, Term. Stud, 5/16	8X-63	4	Screw, Int. Bearing, Flat Hd. #8-32x3/8
MZ-12 †	2	Brush	12X-196	4	Lockwasher, Pinion Housing Screw, #10
MZ-38A	4	Screw, Pole Shoe	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
12X-196	1	Lockwasher, Clamp Sc., #10	8X-794	1	Nut, Cover Band, Square #10-32
8X-664	1	Screw, Connector Clamp, Rd. Hd. #10-32x9/16	† BRUSH SET, SERVICE MZ-2012AS.		
12X-1014	2	Lockwasher, Term. Stud, 5/16			
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24			
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
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			

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."







# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

## MBG-4101 STARTING MOTOR PARTS LIST

MBG-4101  
(Issued 8-31-55)

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MBG-2341	1	Frame & Field Assy.	MU-54	1	Washer, Thrust, D. E. 1/32" Thick
MAB-31	1	Washer, Ins., Term. Stud, Outer	MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MAK-80	1	Washer, Ins., Term. Stud, Inner	MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MBG-12 †	2	Brush	MZ-2312A	1	ARMATURE
MBG-14	1	Connector	<u>Miscellaneous Parts</u>		
MBG-23	1	Stud, Terminal	EBB-7	1	BENDIX DRIVE ASSY.
MBG-50	1	Insulation, Field Connection, D. E.	EBA-513	1	Spring, Anti-Drift
MBG-3005S	1	FIELD COIL PACKAGE	EBA-525	1	Spring, Meshing
MBG-1007	1	Coil, Field, U. L.	EBA-1233	1	Ring, Retaining
MBG-1008	1	Coil, Field, L. R.	EBA-2008	1	Ring, Lock
MBG-1009	1	Coil, Field, L. L.	EBA-3307	2	Plate, Spring Anchor
MZ-32	2	Connector, Field Coil	EBA-3505	1	SPRING, DRIVE
MZ-1010B	1	Coil, Field, U. R.	EBA-3531	1	Shaft
MU-31	1	Bushing, Ins., Term. Stud	EBB-732	1	Pinion
MU-37	1	Washer, Plain, Term. Stud	MZ-24A	1	Band, Cover
MZ-30A	1	Insulation, Field Connection	MZ-124	1	Pin, Bendix
MZ-38A	4	Screw, Pole Shoe	MZ-1003A	1	Head Assy., Drive End
8X-164	1	Nut, Term. Stud, Hex. 5/16-18	MG-77A	1	BEARING, ABS. BRONZE
12X-1014	1	Lockwasher, Term. Stud, 5/16	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
<u>Comm. End Head Assembly &amp; Parts Used With</u>			* Use as required.		
MZ-2002Q	1	Head Assy., Comm. End	† MBG-2012S BRUSH SET, SERVICE		
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			

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)

<u>Frame &amp; Field Assembly &amp; Parts Used With</u>			<u>Miscellaneous Parts</u>		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MBG-2022	1	Frame & Field Assy.	EBA-33	1	BENDIX DRIVE ASSY.
MAB-31	1	Washer, Ins., Term. Stud, Outer	EBA-1213	1	Spring, Anti-Drift
MAK-80	1	Washer, Ins., Term. Stud, Inner	EBA-1225	1	Spring, Meshing
MBG-12 †	2	Brush	EBA-1232	1	Pinion
MBG-14	1	Connector	EBA-1233	1	Ring, Retaining
MBG-23	1	Stud, Terminal	EBA-2006	1	Pin, Locating
MBG-50	1	Insulation, Field Connection, D. E.	EBA-2008	1	Ring, Lock
MBG-3005S	1	FIELD COIL PACKAGE	EBA-2031	1	Shaft
MBG-1007	1	Coil, Field, U. L.	EBA-2105	1	SPRING, DRIVE
MBG-1008	1	Coil, Field, L. R.	EBA-3307	2	Plate, Spring Anchor
MBG-1009	1	Coil, Field, L. L.	MZ-24A	1	Band, Cover
MZ-32	2	Connector, Field Coil	MZ-177	1	Screw, Pinion Housing, Hex. Hd. #10-32x3/4
MZ-1010B	1	Coil, Field, U. R.	MZ-1236	1	BEARING ASSY., INTERMEDIATE
MU-31	1	Bushing, Ins., Term. Stud	MZ-339	1	BEARING, ABS. BRONZE
MU-37	1	Washer, Plain, Term. Stud	PS-1318	1	HOUSING ASSY., PINION
MZ-30A	1	Insulation, Field Connection	MG-77A	1	BEARING, ABS. BRONZE
MZ-38A	4	Screw, Pole Shoe	12X-196	4	Lockwasher, Housing Sc., #10
8X-164	1	Nut, Term. Stud, Hex. 5/16-18	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
12X-1014	1	Lockwasher, Term. Stud, 5/16	8X-794	1	Nut, Cover Band, Square #10-32
<u>Comm. End Head Assembly &amp; Parts Used With</u>			X-1274	2	Washer, Int. Bearing Sc., Skpf. #10
MZ-2002Q	1	Head Assy., Comm. End	8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
MAD-110	1	Felt	* Use as required.		
MBG-1021S †	2	Brush, Grounded	† MBG-2012S BRUSH SET, SERVICE.		
MZ-19	4	Spring, Brush			
12X-196	4	Lockwasher, Head Sc., #10			
8X-902	4	Screw, C. E. Head, Fill. Hd. #10-32x3/8			
<u>Armature Assembly &amp; Parts Used With</u>					
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			

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			Miscellaneous Parts		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MBG-2368	1	Frame & Field Assy.	EBB-48	1	BENDIX DRIVE
MAB-30E	1	Insulation, Field Connection	EBA-1213	1	Spring, Anti-Drift
MAB-31	1	Washer, Ins., Term. Stud, Outer	EBA-1225	1	Spring, Meshing
MAK-80	1	Washer, Ins., Term. Stud, Inner	EBA-1233	1	Ring, Retaining
MBG-12 †	2	Brush	EBA-2006	1	Pin, Locating
MBG-14	1	Connector	EBA-2008	1	Ring, Lock
MBG-28	1	Stud, Terminal	EBA-2031	1	Shaft, Screw
MBG-50	1	Insulation, Field Connection, D. E.	EBA-2105	1	SPRING, DRIVE
MBG-3005S	1	FIELD COIL PACKAGE	EBA-3307	2	Plate, Spring Anchor
MBG-1007	1	Coil, Field, U. L.	EBB-4832	1	Pinion Assy.
MBG-1008	1	Coil, Field, L. R.	MZ-24A	1	Band, Cover
MBG-1009	1	Coil, Field, L. L.	MZ-1236	1	BEARING ASSY., INTERMEDIATE
MZ-32	2	Connector, Field Coil	MZ-339	1	BEARING, ABS. BRONZE
MZ-1010B	1	Coil, Field, U. R.	PS-1290A	1	HOUSING ASSY., PINION
MU-31	1	Bushing, Ins., Term. Stud	MDD-34	1	BEARING, ABS. BRONZE
MU-37	1	Washer, Plain, Term. Stud, 5/16	12X-196	4	Lockwasher, Housing Sc., #10
MZ-38A	4	Screw, Pole Shoe	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
12X-1014	2	Lockwasher, Term. Stud, 5/16	8X-794	1	Nut, Cover Band, Square #10-32
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24	X-1274	2	Washer, Int. Bearing Sc., Skpf. #10
<b>Comm. End Head Assembly &amp; Parts Used With</b>			8X-1368	2	Screw, Int. Bearing, Rd. Hd. #10-32x7/16
MZ-2002Q	1	Head Assy., Comm. End	8X-2987	4	Screw, Pinion Housing, Hex. Hd. #10-32x7/8
MAD-110	1	Felt	* Use as required.		
MBG-1021S †	2	Brush, Grounded	† BRUSH SET. SERVICE MBG-2012S.		
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			
<b>Armature Assembly &amp; Parts Used With</b>					
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			

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 sub-parts the complete part can be assembled as needed."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBJ-4101 STARTING MOTOR PARTS LIST

MBJ-4101  
(Issued 2-24-55)

Frame & Field Assembly & Parts Used With			Switch Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MAY-2117B	1	Frame & Field Assembly	SS-6R	1	Connector
GK-38	4	Screw, Pole Shoe	SS-4003	1	SOLENOID STARTING SWITCH
MAB-30	1	Insulation, Field Connection	8X-173	1	Nut, Hex. #10-32
MAB-31	1	Washer, Ins., Term. Stud, Outer	12X-196	1	Lockwasher, #10
MAB-85	1	Bushing, Ins., Term. Stud	8X-832	2	Nut, Hex. 5/16-24
MAK-80	1	Washer, Ins., Term. Stud, Inner	12X-1014	2	Lockwasher, 5/16
MAW-13†	2	Brush, Grounded	8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MAX-67	1	Insulation, Field Conn., D. E.	X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10
MAY-12A†	2	Brush	<u>Miscellaneous Parts</u>		
MAY-33	1	Connector, Brush	EBA-2	1	BENDIX DRIVE ASSEMBLY
MAY-34	1	Stud, Terminal	EB-108	2	Lockwasher
MAY-3005BS	1	FIELD COIL PACKAGE	EB-7806	1	Screw, Spring, Head
MAX-64	2	Connector, Field Coil	EB-7807	1	Screw, Spring, Shaft
MAY-1007F	1	Coil, Field, U. L.	EB-7819S	1	Sleeve, Compression
MAY-1008A	1	Coil, Field, L. R.	EB-8503	1	Head, Drive
MAY-1009A	1	Coil, Field, L. L.	EB-8705	1	SPRING, DRIVE
MAY-1010	1	Coil, Field, U. R.	EB-8734	1	Ring, Take-up
MN-21	2	Pin, Dowel	EBA-211	1	Shaft & Pinion
MU-37	1	Washer, Plain, Term. Stud, 5/16	MAB-2040	1	Bearing Assy., Intermediate
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16	MG-77A	1	BEARING, ABS. BRONZE
12X-1014	2	Lockwasher, Term. Stud, 5/16	MAU-1024	1	Band, Cover
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24	PS-1169	1	Housing Assy., Pinion
MW-20A	2	Bolt, Thru	MAB-88	1	Pin, Dowel
12X-199	2	Lockwasher, Thru Bolt, 1/4	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
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
MAX-2002CS	1	Head Assy., Comm. End	† BRUSH SET, SERVICE MAY-2012AS.		
MAD-110	1	Felt			
MZ-19	4	Spring, Brush			
X-390	1	Oiler			
<u>Armature Assembly &amp; Parts Used With</u>					
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			

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."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBJ-4103 STARTING MOTOR PARTS LIST

MBJ-4103

Frame & Field Assembly & Parts Used With			Switch Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MAY-2117B)	1	Frame & Field Assy.	SS-6R	1	Connector.
GK-38	4	Screw, Pole Shoe	SS-4301	1	SWITCH, STARTING, SOLENOID
MAB-30	1	Insulation, Field Conn.	8X-173	1	Nut, Hex. #10-32
MAB-31	1	Washer, Ins., Term. Stud	X-196	1	Lockwasher, #10
MAB-85	1	Bushing, Ins., Term. Stud	8X-832	2	Nut, Hex. 5/16-24
MAK-80	1	Washer, Ins. Term. Stud, Inner	X-1014	2	Lockwasher, 5/16
MAW-13†	2	Brush, Grounded	8X-321	2	Screw, Switch, Mtg., Rd. Hd. #10-32x5/16
MAX-67	1	Insulation, Field Conn., D.E.	X-1270	2	Washer, Switch Mtg. Screw, Skpf., #10
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			Miscellaneous Parts		
MAX-2002	1	Head Assy., Comm. End	EBA-2	1	BENDIX DRIVE ASSY.
MAD-110	1	Felt	EB-108	2	Lockwasher
MZ-19	4	Spring, Brush	EB-7806	1	Screw, Spring, Head
Armature Assembly & Parts Used With			EB-7807	1	Screw, Spring, Shaft
MAK-61	1	Washer, Arm. Thrust, C.E.	EB-7819S	1	Sleeve, Compression
MAW-2105	1	ARMATURE ASSEMBLY	EB-8503	1	Head, Drive
MAB-35	1	Spacer, Bearing Thrust	EB-8705	1	SPRING, DRIVE
MU-54	2	Washer, Arm. Thrust, C.E. & Intermediate	EB-8734	1	Ring, Take-Up
X-261	1	Key, Woodruff, #6	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)

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

MBJ-4105 STARTING MOTOR PARTS LIST

MBJ-4105

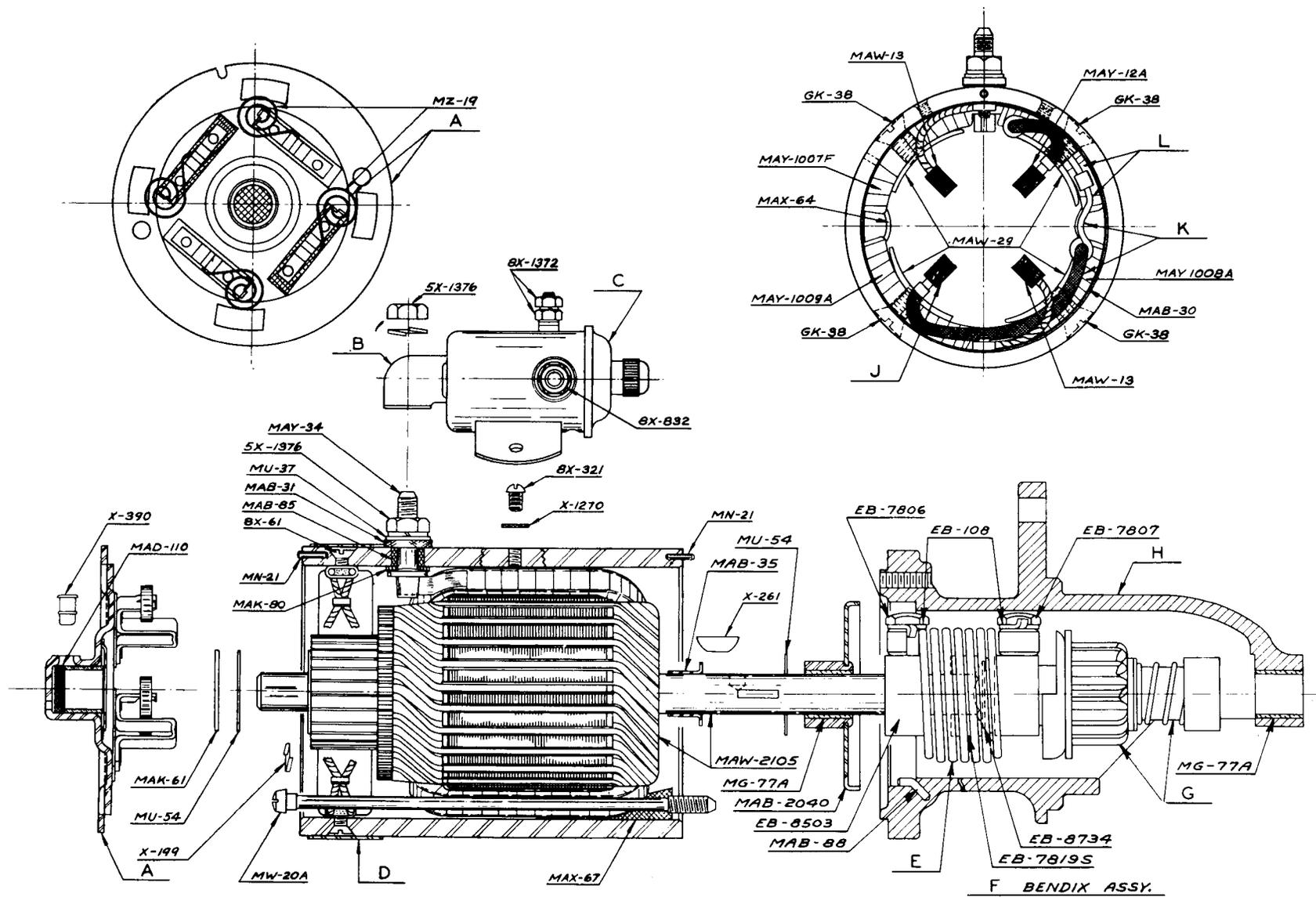
Frame & Field Assembly with Terminal Post & Parts Used With			Switch Assembly & Parts Used With						
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part				
					1	2	3	4	5
(MAY-2117B)	1	Frame & Field Assy.	SS-6L	1	Connector				
GK-38	4	Pole Piece Screw	SS-4003	1	Solenoid Starting Switch				
MAB-30	1	Field Connection Ins.	12X-196	1	#10 Lock Washer				
MAB-31	1	Insulating Washer	8X-832	2	5/16-24 Hex. Nut				
MAB-85	1	Insulating Bushing	12X-1014	2	5/16 Lock Washer				
MAK-80	1	Insulating Washer	8X-1372	1	#10-32 Hex. Nut				
MAW-13	2	Brush Assy.-Grounded	8X-321	2	#10-32x5/16 Rd. Hd. Sc.				
MAW-29	4	Pole Piece	X-1270	2	#10 Skpf. Washer				
MAX-64	2	Field Coil Connector	Miscellaneous Parts						
MAX-67	1	Insulation	EBA-11	1	Bendix Drive Assy.				
MAY-34	1	Terminal Post	EB-108	2	Lock Washer				
MAY-1007F	1	Field Coil - U.L.	EB-7806	1	Hd. Spring Screw				
MAY-1008A	1	Field Coil - L.R.	EB-7807	1	Shaft Spring Screw				
MAY-1009A	1	Field Coil - L.L.	EB-7819S	1	Compression Sleeve				
MAY-1010A	1	Field Coil & Brush Assy.- U.R.	EB-8503	1	Driving Head				
MAY-1033	1	Connector & Brush Assy.	EB-8705	1	Drive Spring				
MAY-12A	2	Brush-Long Pigtail	EB-8734	1	Take-up Ring				
MN-21	2	Dowel Pin	EBA-1111	1	S-A Assembly				
MU-37	1	5/16 Plain Washer	MAB-1024F	1	Head Band Assy.				
8X-61	2	#10-32x7/16 Flat Hd. Sc.	MAB-2040	1	Intermediate Brg. Assy.				
12X-1014	1	5/16 Lock Washer	MG-77A	1	Absorbent Bronze Brg.				
8X-1376	1	5/16-24 Hex. Nut	PS-1116	1	Pinion Housing Assy.				
MW-20A	2	Frame Screw	MAB-88	1	Dowel Pin				
X-199	2	1/4 Lock Washer	MG-77A	1	Absorbent Bronze Brg.				
X-1014	1	5/16 Lock Washer	X-715	1	#10-32x1 1/4 Rd. Hd. Sc.				
5X-1376	1	5/16-24 Hex. Nut	8X-794	1	#10-32 Square Nut				
Comm. End Head Assembly & Parts Used With			1 2 3 4 5						
MAX-2002	1	Comm. End Head Assy.	(Issued 9-25-42)						
MAD-110	1	Felt Pad							
MZ-19	4	Brush Spring							
X-390	1	Oiler-1/4 Hinged Top							
Armature Assembly & Parts Used With			† Service BRUSH SET MAY-2012AS.						
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						

UNIT	APPLICATION
MBJ-4105	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 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-1035	MAY-1010A

# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBJ-4106 STARTING MOTOR PARTS LIST

MBJ-4106

Frame & Field Assembly & Parts Used With			Switch Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MAY-2117B)	1	Frame & Field Assy.	SS-6L	1	Connector
GK-38	4	Screw, Pole Shoe	SS-4301	1	Switch, Solenoid
MAB-30	1	Insulation, Field Connection	8X-173	1	Nut, Hex. #10-32
MAB-31	1	Washer, Ins., Term. Stud, Outer	X-196	1	Lockwasher, #10
MAB-85	1	Bushing, Ins., Term. Stud	8X-832	2	Nut, Hex. 5/16-24
MAK-80	1	Washer, Ins. Term. Stud, Inner	X-1014	2	Lockwasher, 5/16
MAW-13†	2	Brush, Grounded	8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MAX-67	1	Insulation	X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10
MAY-12A†	2	Brush, Insulated			
MAY-33	1	Connector, Brush			<u>Miscellaneous Parts</u>
MAY-34	1	Stud, Terminal	EBA-8	1	Bendix Drive Assy.
MAY-3005BS	1	Field Coil Package	EB-108	2	Lockwasher
MAX-64	2	Connector, Field Coil	EB-7819S	1	Sleeve, Compression
MAY-1007F	1	Coil, Field, U.L.	EB-8734	1	Ring, Take-Up
MAY-1008A	1	Coil, Field, L.R.	EB-8803	1	Head, Driving
MAY-1009A	1	Coil, Field, L.L.	EB-8805	1	Spring, Drive
MAY-1010	1	Coil, Field, U.R.	EB-8806	1	Screw, Spring, Head
MN-21	2	Pin, Dowel	EB-8807	1	Screw, Spring, Shaft
MU-37	1	Washer, Plain, Term. Stud, 5/16	EBA-211	1	Shaft & Pinion
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16	MAB-1024F	1	Band, Cover
12X-1014	2	Lockwasher, Term. Stud, 5/16	MAB-2040	1	Bearing Assy., Intermediate
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24	MG-77A	1	Bearing, Abs. Bronze
MW-20A	2	Bolt, Thru	PS-1143D	1	Housing Assy., Pinion
X-199	2	Lockwasher, Thru Bolt, 1/4	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
<u>Comm. End Head Assembly &amp; Parts Used With</u>			<u>Miscellaneous Parts</u>		
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			
<u>Armature Assembly &amp; Parts Used With</u>			<u>Miscellaneous Parts</u>		
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			

† 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.”



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBJ-4107 STARTING MOTOR PARTS LIST

MBJ-4107

Frame & Field Assembly & Parts Used With			Switch Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MAY-3117)	1	Frame & Field Assy.	SS-6R	1	Connector
GK-38	4	Screw, Pole Piece	SS-4301	1	SWITCH, STARTING, SOLENOID
MAB-30	1	Insulation, Field Conn.	8X-173	1	Nut, Hex. #10-32
MAB-31	1	Washer, Ins. Term. Stud, Outer	X-196	1	Lockwasher, #10
MAB-85	1	Bushing, Insulating	8X-832	2	Nut, Hex. 5/16-24
MAK-80	1	Washer, Ins. Term. Stud, Inner	X-1014	2	Lockwasher, 5/16
MAW-13†	2	Brush, Grounded	8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MAX-67	1	Insulation, Field Connection, D.E.	X-1270	2	Washer, Switch Mtg., Skpf. #10
MAY-12A†	1	Brush	<u>Miscellaneous Parts</u>		
MAY-12B†	1	Brush	EB-99	1	BENDIX DRIVE ASSY.
MAY-33	1	Connector	EB-108	2	Lockwasher
MAY-34	1	Stud, Terminal	EB-7805	1	SPRING, DRIVE
MAY-3005BS	1	FIELD COIL PACKAGE	EB-7806	1	Screw, Spring, Head
MAX-64	2	Connector, Field Coil	EB-7807	1	Screw, Spring, Shaft
MAY-1007F	1	Coil, Field, U.L.	EB-7819S	1	Sleeve, Compression
MAY-1008A	1	Coil, Field, L.R.	EB-8503	1	Head, Driving
MAY-1009A	1	Coil, Field, L.L.	EB-8734	1	Ring, Take-Up
MAY-1010	1	Coil, Field, U.R.	EB-9911	1	Shaft & Pinion
MN-21	2	Pin, Dowel	MAB-1024F	1	Band, Head
MU-37	1	Washer, Plain, Term. Stud, 5/16	MAB-2040	1	BEARING ASSY., INTERMEDIATE
8X-61	2	Screw, Ground, Flat Hd. #10-32x7/16	MG-77A	1	Brg. Abs. Bronze
12X-1014	2	Washer, Lock, 5/16	PS-1057	1	Housing Assy., Pinion
8X-1376	2	Nut, Hex., 5/16-24	MAB-88	1	Pin, Dowel
MW-20A	2	Bolt, Thru	MG-77A	1	BRG., ABS. BRONZE
12X-199	2	Lockwasher, 1/4	X-714	1	Screw, Cover Band Rd. Hd. #10-32x 1 1/2
<u>Comm. End Head Assembly &amp; Parts Used With</u>			8X-794	1	Nut, Cover Band Square #10-32
MAX-3059	1	Head Assy., Comm. End	† SERVICE BRUSH SET MAY-1012AS.		
MAD-110	1	Felt			
MZ-19	4	Spring, Brush			
<u>Armature Assembly &amp; Parts Used With</u>					
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			

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."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBJ-4110 STARTING MOTOR PARTS LIST

MBJ-4110

Frame & Field Assembly & Parts Used With			Switch Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MAY-2117B)	1	Frame & Field Assy.	SS-6L	1	Connector
GK-38	4	Screw, Pole Shoe	SS-4301	1	SOLENOID STARTING SWITCH
MAB-30	1	Insulation, Field Connection	8X-173	1	Nut, Hex. #10-32
MAB-31	1	Washer, Ins., Term. Stud, Outer	X-196	1	Lockwasher, #10
MAB-85	1	Bushing, Ins., Term. Stud	8X-832	2	Nut, Hex. 5/16-24
MAK-80	1	Washer, Ins., Term. Stud, Inner	X-1014	2	Lockwasher, 5/16
MAW-13 †	2	Brush, Grounded	8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MAX-67	1	Insulation, Field Conn., D.E.	X-1270	2	Washer, Switch Mtg. Sc. Skpf. #10
MAY-12A †	2	Brush, Insulated			
MAY-33	1	Connector, Brush			<u>Miscellaneous Parts</u>
MAY-34	1	Stud, Terminal	EBA-2	1	BENDIX DRIVE ASSEMBLY
MAY-3005BS	1	FIELD COIL PACKAGE	EB-108	2	Lockwasher
MAX-64	2	Connector, Field Coil	EB-7806	1	Screw, Spring, Head
MAY-1007F	1	Coil, Field, U.L.	EB-7807	1	Screw, Spring, Shaft
MAY-1008A	1	Coil, Field, L.R.	EB-7819S	1	Sleeve, Compression
MAY-1009A	1	Coil, Field, L.L.	EB-8503	1	Head, Driving
MAY-1010	1	Coil, Field, U.R.	EB-8705	1	SPRING, DRIVE
MN-21	2	Pin, Dowel	EB-8734	1	Ring, Take-Up
MU-37	1	Washer, Plain, Term. Stud, 5/16	EBA-211	1	Shaft & Pinion
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16	MAB-1024F	1	Band, Cover
12X-1014	2	Lockwasher, Term. Stud, 5/16	MAW-2129	1	BEARING ASSY., INTERMEDIATE
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24	MAW-130	1	Bearing, Abs. Bronze
MW-20A	2	Bolt, Thru	PS-1211	1	Housing Assy., Pinion
12X-199	2	Lockwasher, Thru Bolt, 1/4	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.
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
MAX-2002	1	Head Assy., Comm. End			
MAD-110	1	Felt			
MZ-19	4	Spring, Brush			
<u>Armature Assembly &amp; Parts Used With</u>					
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			

UNIT	APPLICATION
MBJ-4110	Duplex, U.S. Motors

(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

MBJ-4112 STARTING MOTOR PARTS LIST

MBJ-4112

Frame & Field Assembly With Terminal Stud & Parts Used With					Miscellaneous Parts									
Part No.	No. Used	Name of Part					Part No.	No. Used	Name of Part					
		1	2	3	4	5			1	2	3	4	5	
(MAY-3118A)	1	Frame & Field Assy.					EBA-72	1	Bendix Drive Assy.					
DK-45	1	Washer, Ins., Term. Stud, Inner					EB-108A	2	Washer, Lock					
GK-38	4	Screw, Pole Shoe					EB-7806A	1	Screw, Spring, Head					
MAB-30	1	Insulation, Field Connection, C.E.					EBA-507A	1	Screw, Spring, Shaft					
MAW-13†	2	Brush, Grounded					EBA-4833	1	Ring, Retaining					
MAW-37	1	Bushing, Ins., Term. Stud					EBA-7205	1	Spring, Drive					
MAX-35	1	Washer, Ins., Term. Stud, Outer					EBA-7213	1	Spring, Anti-Drift					
MAX-44	1	Washer, Plain, Term. Stud, 3/8					EBA-7225	1	Spring, Meshing					
MAX-64	2	Connector, Field Coil					EBA-7231	1	Shaft					
MAX-67	1	Insulation, Field Connection D.E.					EBA-7232	1	Pinion					
MAY-12A†	1	Brush, Insulated					MAB-1024J	1	Band, Head					
MAY-12B†	1	Brush, Insulated					MAW-70	1	Washer, Felt, Int. Plate					
MAY-28	1	Stud, Terminal, 3/8-16					MAW-71	1	Retainer, Felt Washer, Int. Plate					
MAY-33	1	Connector, Brush					MAW-72	1	Guard, Felt Washer, Int. Plate					
MAY-1007F	1	Coil, Field, U.L.					MAW-74	1	Gear					
MAY-1008A	1	Coil, Field, L.R.					MAW-154	1	Washer, Thrust, Bendix Shaft					
MAY-1009A	1	Coil, Field, L.L.					MAW-168	1	Gasket, Int. Brg. to Housing					
MAY-1010	1	Coil, Field, U.R.					MAW-169	1	Shaft, Bendix Drive					
MN-21	2	Pin, Dowel, Locating					MAW-1078	1	Bearing Assy., Intermediate					
8X-61	2	Screw, Brush Ground, Flat Hd., #10-32x7/16					MAW-77	1	Bearing, Absorbent Bronze					
12X-201	2	Lockwasher, Term. Stud, 3/8					MG-77A	1	Bearing, Absorbent Bronze					
8X-830	2	Nut, Term. Stud, Hex., 3/8-16					X-489	1	Oiler, Press in Type, 1/4					
MW-20A	2	Bolt, Thru					PS-1222	1	Housing Assy., Pinion					
Comm. End Head Assembly & Parts Used With						MN-21	1	Pin, Dowel						
MAX-3059B	1	Head Assy., Comm. End					8X-89	3	Screw, Housing Attaching, Hex. Hd. 1/4-20x1					
MAD-110	1	Felt					12X-196	3	Lockwasher, Retainer Sc., #10					
MZ-19	4	Spring, Brush					12X-199	5	Lockwasher, Housing Sc., 1/4					
X-390	1	Oiler, Hinged Top, 1/4					X-261	2	Key, Woodruff, #6					
Armature Assembly & Parts Used With						8X-311	3	Screw, Retainer, Rd. Hd. #10-32x3/8						
MAK-61	1	Washer, Steel					8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2					
MAW-75	1	Washer, Thrust, Intermediate					8X-794	1	Nut, Cover Band, Square #10-32					
MAW-76	1	Washer, Thrust, Intermediate					8X-865	1	Plug, Pipe, 1/8					
MAW-2069	1	Armature							1	2	3	4	5	
MU-54	1	Washer, Thrust 1/32" thick												
		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

MBJ-4114 STARTING MOTOR PARTS LIST

MBJ-4114

## 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 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, 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."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBJ-4115 STARTING MOTOR PARTS LIST

MBJ-4115  
(Issued 10-9-50)

Frame & Field Assembly & Parts Used With			Switch Assembly & Parts Used With						
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part				
(MAY-2157)	1	Frame & Field Assy.	SS-116L	1	Connector				
DK-45	1	Washer, Ins., Term. Stud, Inner	SS-1128	1	Core Assy.				
GK-38	4	Screw, Pole Shoe	SS-59	1	Screw, Link				
MAB-30	1	Insulation, Field Connection	SS-61	1	Spring				
MAW-13	2	Brush, Grounded	SS-128	1	Core				
MAW-37	1	Bushing, Ins., Term. Stud	SS-4204	1	SOLENOID STARTING SWITCH (See Separate List for Parts.)				
MAX-35	1	Washer, Ins., Term. Stud, Outer	12X-201	2	Lockwasher, Switch Term., 3/8				
MAX-44	1	Washer, Plain, Term. Stud, 3/8	8X-830	2	Nut, Switch Term., Hex. 3/8-16				
MAX-67	1	Insulation, Field Conn., D.E.	X-3002	4	Screw, Switch Mtg., Hex. Hd. 1/4-20x3/8				
MAY-12A†	2	Brush	<u>Clutch Assembly &amp; Parts Used With</u>						
MAY-28	1	Stud, Terminal	MAD-2087	1	Yoke				
MAY-33	1	Connector	MAX-37	1	Gasket, Dust Cover				
MAY-3005BS	1	FIELD COIL PACKAGE	MAX-38	1	Cover, Dust				
MAX-64	2	Connector, Field Coil	MAX-39	1	Plate, Dust				
MAY-1007F	1	Coil, Field, U.L.	MAX-41	1	Bushing, Yoke Pivot				
MAY-1008A	1	Coil, Field, L.R.	MAX-42	1	Bushing, Yoke Pivot				
MAY-1009A	1	Coil, Field, L.L.	MAX-46	1	Spring, Yoke				
MAY-1010	1	Coil, Field, U.R.	MAY-3048	1	STARTER CLUTCH				
MN-21	2	Pin, Dowel	MCH-76	1	Pin, Link				
8X-61	2	Screw, Brush Ground Flat Hd. #10-32x7/16	8X-97	1	Screw, Yoke Pivot, Hex. Hd. 5/16-18x3 1/4				
12X-201	2	Lockwasher, Term. Stud, 3/8	8X-147	1	Nut, Yoke Pivot, Hex. 5/16-18				
8X-830	2	Nut, Term. Stud, Hex. 3/8-16	8X-311	4	Screw, Dust Cover, Rd. Hd. #10-32x3/8				
MW-20A	2	Bolt, Thru	X-401	1	Pin, Cotter, Link Pin, 1/16x3/8				
12X-199	2	Lockwasher, Thru Bolt, 1/4	12X-1014	1	Lockwasher, Yoke Pivot, 5/16				
<u>.Comm. End Head Assembly &amp; Parts Used With</u>			X-1270	4	Washer, Dust Cover, Skpf. #10				
MAX-2002	1	Head Assy., Comm. End	<u>Miscellaneous Parts</u>						
MAD-110	1	Felt	MAW-24	1	Band, Cover				
MZ-19	4	Spring, Brush	MN-18	1	Washer, Thrust, D.E.				
<u>Armature Assembly &amp; Parts Used With</u>			PS-1094B	1	Housing Assy., Pinion				
MAD-96	1	Washer, Arm. Thrust, Comm. End	MP-41A	1	BEARING, ABS. BRONZE				
MAW-2030	1	ARMATURE ASSY.	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2				
MAW-31	1	Spacer, Armature Shaft	8X-794	1	Nut, Cover Band, Square #10-32				
MU-54	*	Washer, Thrust, C.E., 1/32" Thick	† BRUSH SET, SERVICE MAY-2012AS.						
MU-54A	*	Washer, Thrust, C.E., 1/64" Thick	* Use as required.						
MU-54B	*	Washer, Thrust, C.E., 3/64" Thick	<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 2px;">UNIT</th> <th style="padding: 2px;">APPLICATION</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">MBJ-4115</td> <td style="padding: 2px;">D.W. Onan</td> </tr> </tbody> </table>			UNIT	APPLICATION	MBJ-4115	D.W. Onan
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."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBJ-4116 STARTING MOTOR PARTS LIST

MBJ-4116  
(Issued 1-25-52)

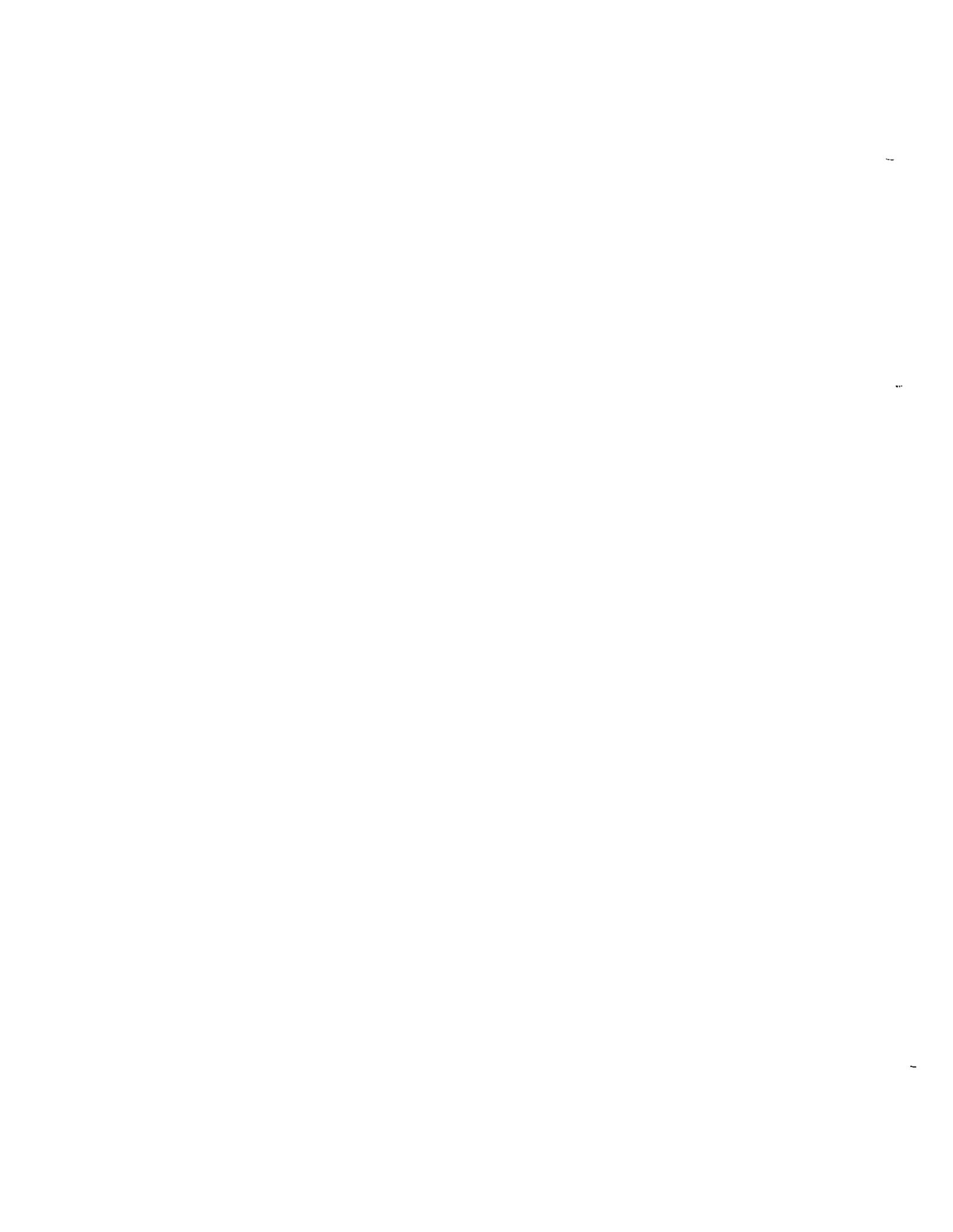
Frame & Field Assembly & Parts Used With			Switch Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MAY-2156A	1	Frame & Field Assy.	SS-6R	1	Connector
GK-38	4	Screw, Pole Shoe	SSW-4001	1	SWITCH, SOLENOID
MAB-30	1	Insulation, Field Connection	8X-164	2	Nut, Hex. 5/16-18
MAB-31	1	Washer, Ins., Term. Stud, Outer	8X-173	1	Nut, Hex. #10-32
MAB-85	1	Bushing, Ins., Term. Stud	12X-196	1	Lockwasher, #10
MAK-80	1	Washer, Ins., Term. Stud, Inner	12X-1014	2	Lockwasher, 5/16
MAW-13†	2	Brush, Grounded	8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MAX-67	1	Insulation, Field Conn., D. E.	X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10
MAY-12A†	2	Brush			<u>Miscellaneous Parts</u>
MAY-33	1	Connector, Brush	EBB-12	1	BENDIX DRIVE ASSEMBLY
MAY-34	1	Stud, Terminal	EBA-1225	1	Spring, Meshing
MAY-3005BS	1	FIELD COIL PACKAGE	EBA-1233	1	Ring, Retaining
MAX-64	2	Connector, Field Coil	EBA-4713	1	Spring, Anti-Drift
MAY-1007F	1	Coil, Field, U. L.	EBB-906	1	Screw, Shaft
MAY-1008A	1	Coil, Field, L. R.	EBB-1231	1	SHAFT & DRIVE SPRING
MAY-1009A	1	Coil, Field, L. L.	EBB-1232	1	Pinion
MAY-1010	1	Coil, Field, U. R.	MAB-2040	1	BEARING ASSY., INTERMEDIATE
MN-21	2	Pin, Dowel	MG-77A	1	Bearing, Abs. Bronze
MU-37	1	Washer, Plain, Term. Stud, 5/16	MAW-24	1	Band, Cover
8X-61	2	Screw, Brush Ground, Flat Hd. #10-32x7/16	PS-1265	1	Housing Assy., Pinion
12X-1014	2	Lockwasher, Term. Stud, 5/16	MAB-88	1	Pin, Dowel
8X-1376	2	Nut, Term. Stud, Hex. 5/16-24	MG-77A	1	BEARING, ABS. BRONZE
MW-20A	2	Bolt, Thru	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
12X-199	2	Lockwasher, Thru Bolt, 1/4	8X-794	1	Nut, Cover Band, Square #10-32
					* Use as required.
					† BRUSH SET, SERVICE MAY-2012AS.
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., #6			

UNIT	APPLICATION
MBJ-4116	Buda

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

MBJ-4118 STARTING MOTOR PARTS LIST

MBJ-4118

( Issued 7-8-52 )

<u>Frame &amp; Field Assembly &amp; Parts Used With</u>			<u>Armature Assembly &amp; Parts Used With</u>		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MAY-3150	1	Frame & Field Assy.	MAD-47	1	Washer, Thrust, D. E.
GK-38	4	Screw, Pole Shoe	MAK-61	1	Washer, Thrust, C. E.
MAB-30	1	Insulation, Field Connection	MAW-2152	1	ARMATURE ASSEMBLY
MAB-31	1	Washer, Ins. , Term. Stud, Outer	MU-54	1	Washer, Thrust, C. E. , 1/32" Thick
MAB-85	1	Bushing, Ins. , Term. Stud	<u>Miscellaneous Parts</u>		
MAK-80	1	Washer, Ins. , Term. Stud, Inner	MAW-24	1	Band, Cover
MAY-13†	2	Brush, Grounded	MAY-2148C	1	Head Assy. , Drive End
MAX-67	1	Insulation, Field Conn. , D. E.	MAY-149	3	Stud
MAY-12A†	1	Brush	MAY-1148	1	Head Assy. , Partial, Drive End
MAY-12B†	1	Brush	ML-18A	1	BEARING, ABS. BRONZE
MAY-33	1	Connector, Brush	X-489	1	OILER
MAY-34	1	Stud, Terminal	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MAY-3005BS	1	FIELD COIL PACKAGE	8X-794	1	Nut, Cover Band, Square #10-32
MAX-64	2	Connector, Field Coil	† BRUSH SET, SERVICE MAY-1012AS.		
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			
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
MAX-3059	1	Head Assy. , Comm. End			
MAD-110	1	Felt			
MZ-19	4	Spring, Brush			

UNIT	APPLICATION
MBJ-4118	Fairbanks Morse

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

## 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 sub-parts the complete part can be assembled as needed."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBJ-4201 STARTING MOTOR PARTS LIST

MBJ-4201

<u>Frame &amp; Field Assembly &amp; Parts Used With</u>			<u>Armature Assembly &amp; Parts Used With</u>		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MAY-2147)	1	Frame & Field Assy.	MAD-47	1	Washer, Thrust, D.E.
CB-157	1	Insulation, Term. Stud, Inner	MAK-61	1	Washer, Thrust, C.E.
GK-38	4	Screw, Pole Shoe	MAW-2152	1	Armature
MAB-31	3	Washer, Ins., Term. Stud, Outer	MU-54	1	Washer, Thrust, C.E.
MAB-85	1	Bushing, Ins., Term. Stud Terminal	<u>Miscellaneous Parts</u>		
MAB-118	1	Insulation, Term. Stud	MAB-1024F	1	Band, Cover
MAK-80	2	Washer, Ins., Term. Stud, Inner	MAY-2148	1	Head Assy., Drive End
MAW-13 †	2	Brush, Grounded	MAY-149	4	Stud
MAX-67	1	Insulation, Field Conn., D.E.	MAY-1148	1	Head Assy., Partial, D.E.
MAY-12A†	1	Brush	ML-18A	1	Bearing, Abs. Bronze
MAY-12C†	1	Brush	X-489	1	Oiler, Press in Type, 1/4
MAY-34	2	Stud, Terminal	X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MAY-3005ES	1	Field Coil Package	8X-794	1	Nut, Cover Band, Square #10-32
MAX-64	2	Connector, Field Coil	† Brush Set, Service MAY-1012BS.		
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			
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
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			

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."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBJ-4202 STARTING MOTOR PARTS LIST

MBJ-4202

Frame & Field Assembly & Parts Used With			Comm. End Head Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MAY-2147)	1	Frame & Field Assy.	MAX-2002G	1	Head Assy., Comm. End
CB-157	1	Washer, Ins., Term. Stud, Inner	MAD-110	1	Felt
GK-38	4	Screw, Pole Shoe	MZ-19	4	Spring, Brush
MAB-31	3	Washer, Ins., Term. Stud	X-390	1	Oiler
MAB-85	1	Bushing, Ins., Term. Stud	<b>Armature Assembly &amp; Parts Used With</b>		
MAB-118	1	Terminal	MAK-61	1	Washer, Thrust, Comm. End
MAB-119	1	Insulation, Term. Stud	MAW-2203	1	ARMATURE
MAK-80	2	Washer, Ins., Term. Stud	MU-54	2	Washer, Thrust, C.E. & Intermediate, 1/32" Thick
MAW-13†	2	Brush, Grounded	<b>Miscellaneous Parts</b>		
MAX-67	1	Insulation, Field Connection, D.E.	MAB-1024J	1	Band, Cover
MAY-12A†	1	Brush	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MAY-12C†	1	Brush	8X-794	1	Nut, Cover Band, Square #10-32
MAY-34	2	Stud, Terminal	† BRUSH SET, SERVICE MAY-1012BS.		
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			

UNIT	APPLICATION
MBJ-4202	Baldwin Ward

(Issued 10-26-49)

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

MBJ-4203 STARTING MOTOR PARTS LIST

MBJ-4203

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
GJ-20A	2	Bolt, Thru	GDY-28B	1	Washer, Plain, Arm. Shaft, 7/16
(MAY-2147)	1	Frame & Field Assy.	MAK-61	1	Washer, Thrust, Comm. End
CB-157	1	Insulation, Term. Stud. Inner	MAW-2209	1	ARMATURE
GK-38	4	Screw, Pole Shoe	MAX-54	1	Spacer, Arm. Shaft
MAB-31	3	Washer, Ins., Term. Stud	MU-54	1	Washer, Thrust, 1/32" Thick
MAB-85	1	Bushing, Ins., Term. Stud	X-407	1	Pin. Cotter, 3/32x3/4
MAB-118	1	Terminal	X-1581	1	Nut, Shaft, Castel. 7/16-20
MAB-119	1	Insulation, Term. Stud	<u>Miscellaneous Parts</u>		
MAK-80	2	Washer, Ins., Term. Stud	MAU-1024	1	Band, Cover
MAW-13 †	2	Brush, Grounded	MAX-1081	1	Head Assy., Drive End
MAX-67	1	Insulation, Field Connection, D.E.	MAX-53	1	Spacer, Bearing
MAY-12A†	1	Brush	MAX-81	1	Head
MAY-12C†	1	Brush	X-1499	1	BEARING, BALL, S.A.E. #203
MAY-34	2	Stud, Terminal	XA-741	1	Ring, Brg. Retaining
MAY-3005ES	1	FIELD COIL PACKAGE	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MAX-64	2	Connector, Field Coil	8X-794	1	Nut, Cover Band, Square #10-32
MAY-1007N	1	Coil, Field, U.L.	† BRUSH SET, SERVICE MAY-1012BS.		
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			
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
MAX-2002	1	Head Assy., Comm. End			
MAD-110	1	Felt			
MZ-19	4	Spring, Brush			

(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

MBL-4001 MOTOR PARTS LIST

MBL-4001  
(Issued 12-26-50)

Frame & Field Assembly & Parts Used With			Switch Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBL-2093)	1	Frame & Field Assy.	SS-6R	1	Connector
MAB-31	1	Washer, Ins., Term. Stud, Outer	SS-4001	1	SOLENOID STARTING SWITCH
MBL-30	1	Insulation, Field Connection	8X-173	1	Nut, Hex. #10-32
MBL-1005	1	COIL ASSY., FIELD, COMPLETE	12X-196	1	Lockwasher, #10
MBL-12	1	Brush	8X-832	2	Nut, Hex. 5/16-24
MBM-33	1	Connector, Field Coil	12X-1014	2	Lockwasher, 5/16
MU-14	1	Terminal	8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MZ-1007	1	Coil, Field, U.L.	X-1274	2	Washer, Switch Mtg., Skpf. #10
MZ-1008	1	Coil, Field, L.R.			<u>Miscellaneous Parts</u>
MU-28	1	Stud, Terminal	MZ-1024D	1	Band, Cover
MU-31	1	Bushing, Ins., Term. Stud	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MU-37	1	Washer, Plain, Term. Stud, 5/16	8X-794	1	Nut, Cover Band, Square #10-32
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			
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
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			
<u>Armature Assembly &amp; Parts Used With</u>					
MZ-2151	1	ARMATURE ASSY.			
MBL-35	1	Spacer, Bearing Thrust			
MU-54	1	Washer, Thrust, 1/32" Thick			

UNIT	APPLICATION
MBL-4001	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-4002 MOTOR PARTS LIST

MBL-4002  
(Issued 12-26-50)

Frame & Field Assembly & Parts Used With			Miscellaneous Parts		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBL-2189)	1	Frame & Field Assy.	MBU-1003	1	Head Assy., Drive End
MAB-31	1	Washer, Ins., Term. Stud, Outer	XA-597	1	Oil Seal
MBL-30	1	Insulation, Field Connection	MZ-1024D	1	Band, Cover
MBL-1005	1	COIL ASSY., FIELD, COMPLETE	X-119	4	Screw, D.E. Head, Fill. Hd. #10-32x1/2
MBL-12	1	Brush	X-196	4	Lockwasher, Head Sc., #10
MBM-33	1	Connector, Field Coil	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MU-14	1	Terminal	8X-794	1	Nut, Cover Band, Square #10-32
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			
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
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			
<u>Armature Assembly &amp; Parts Used With</u>					
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			

UNIT	APPLICATION
MBL-4002	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-4003 MOTOR PARTS LIST

MBL-4003  
(Issued 12-26-50)

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBL-2212)	1	Frame & Field Assy.	MZ-2213	1	ARMATURE
MAB-31	1	Washer, Ins., Term. Stud, Outer	<u>Miscellaneous Parts</u>		
MBL-30	1	Insulation, Field Connection	MZ-24A	1	Band, Cover
MBL-1005	1	COIL ASSY., FIELD, COMPLETE	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MBL-12	1	Brush	8X-794	1	Nut, Cover Band, Square #10-32
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			
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
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			

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)

<u>Frame &amp; Field Assembly &amp; Parts Used With</u>			<u>Armature Assembly &amp; Parts Used With</u>		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBL-2230)	1	Frame & Field Assy.	MZ-2213	1	ARMATURE
MAB-31	1	Washer, Ins., Term. Stud, Outer			<u>Miscellaneous Parts</u>
MBL-30	1	Insulation, Field Connection	MZ-24A	1	Band, Cover
MBL-32	1	Stud, Terminal, Grounded	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MBL-1005	1	COIL ASSY., FIELD, COMPLETE	8X-794	1	Nut, Cover Band, Square #10-32
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	4	Lockwasher, Term. Stud, 5/16			
8X-1376	3	Nut, Term. Stud, Hex., 5/16-24			
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
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			

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."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBM-4001 MOTOR PARTS LIST

MBM-4001

PRELIMINARY

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				
<u>Miscellaneous Parts</u>						
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)

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

MBO-4002 MOTOR PARTS LIST

MBO-4002  
(Issued 12-26-50)

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBO-2036)	1	Frame & Field Assy.	MU-54	1	Washer, Thrust, 1/32" Thick
MAK-80	4	Washer, Ins., Term. Stud	MZ-2151	1	ARMATURE ASSY.
MBC-30	2	Stud, Terminal	MBL-35	1	Spacer, Bearing Thrust
MBO-1005	1	COIL ASSY., FIELD, COMPLETE			<u>Miscellaneous Parts</u>
MBL-12	1	Brush	MZ-1024D	1	Band, Cover
MBO-17	2	Connector, Field Coil	8X-714	1	Screw, Cover, Rd. Hd. #10-32x1 1/2
MBO-18	1	Connector, Field Coil	8X-794	1	Nut, Cover Band, Square #10-32
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			
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
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			

UNIT	APPLICATION
MBO-4002	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

MBO-4003 MOTOR PARTS LIST

MBO-4003  
(Issued 12-26-50)

Frame & Field Assembly & Parts Used With			Miscellaneous Parts		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBO-2036)	1	Frame & Field Assy.	MBU-1003	1	Head Assy. Drive End
MAK-80	4	Washer, Ins., Term. Stud	XA-597	1	Oil Seal
MBC-30	2	Stud, Terminal	MZ-1024D	1	Band, Cover
MBO-1005	1	COIL ASSY., FIELD, COMPLETE	X-119	4	Screw, D.E. Head, Fill. Hd. #10-32x1/2
MBL-12	1	Brush	X-196	4	Lockwasher, D.E. Head Screw, #10
MBO-17	2	Connector, Field Coil	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MBO-18	1	Connector, Field Coil	8X-794	1	Nut, Cover Band, Square #10-32
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			

UNIT	APPLICATION
MBO-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

MBR-4004 STARTING MOTOR PARTS LIST

MBR-4004

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBR-2030)	1	Frame & Field Assy.	MAK-61	1	Washer, Arm. Thrust, Comm. End
GK-38	8	Screw, Pole Shoe	MBD-76	2	Washer, Arm. Thrust, Intermediate
MAW-37	1	Bushing, Ins., Term. Stud	MBR-2215	1	ARMATURE
MAX-44	1	Washer, Plain, Term. Stud, Outer	MU-54	*	Washer, Arm. Thrust, C.E., 1/32" Thick
MBD-119	2	Washer, Ins., Term. Stud	MU-54A	*	Washer, Arm. Thrust, C.E., 1/64" Thick
MBD-231	1	Terminal	MU-54B	*	Washer, Arm. Thrust, C.E., 3/64" Thick
MBD-233A	1	Stud, Terminal	X-261	2	Key, Woodruff, #6
MBR-12 †	2	Brush	<u>Miscellaneous Parts</u>		
MBR-12A †	2	Brush	EBA-50	1	BENDIX DRIVE ASSY.
MBR-13 †	2	Brush	EB-108	2	Lockwasher
MBR-13A †	2	Brush	EB-4503	1	Head, Drive
MBR-34	1	Connector	EB-4506	1	Screw, Spring, Head
MBR-3005S	1	FIELD COIL PACKAGE	EB-4507	1	Screw, Spring, Shaft
MBR-1007	1	Coil, Field, U.L.	EB-4515	1	Stop, Pinion
MBR-1008	1	Coil, Field, L.R.	EB-4516	1	Screw, Pinion Stop
MBR-1009	1	Coil, Field, U.R.	EB-5219S	1	Sleeve, Compression
MBR-1010	1	Coil, Field, L.L.	EBA-5005	1	SPRING, DRIVE
MC-51A	1	Washer, Term. Stud, Inner	EBA-5011	1	Shaft & Pinion
MR-32	2	Insulation, Field Connection	MBD-1118	1	Brg. Assy., Intermediate
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2	MBD-285	1	BRG., ABSORBENT BRONZE
X-201	2	Lockwasher, Term. Stud, 3/8	MBR-1024A	1	Band, Cover
8X-830	2	Nut, Term. Stud, Hex. 3/8-16	MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
<u>Comm. End Head Assembly &amp; Parts Used With</u>			PS-1207	1	Housing Assy., Pinion
GAL-40A	1	Cover, Bearing, Comm. End	MAB-88	1	Pin, Dowel
MAD-110	1	Felt	MBD-213	1	BEARING, ABSORBENT BRONZE
MBR-2078	1	Head Assy., Comm. End	X-196	8	Lockwasher, Housing Screw, #10
MBD-150	1	Wick, Felt	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MBD-1078	1	Head Assy., Partial, Comm. End	8X-794	1	Nut, Cover Band, Square #10-32
GBF-79	1	BEARING, ABSORBENT BRONZE	† BRUSH SET, SERVICE MBR-1012S.		
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			

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."

1

2

3

4

# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBR-4006 STARTING MOTOR PARTS LIST

MBR-4006

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBR-2032)	1	Frame & Field Assy.	MAK-61	1	Washer, Arm. Thrust, C.E.
GK-38	8	Screw, Pole Shoe	MBD-76	2	Washer, Arm. Thrust, Int.
MAW-37	1	Bushing, Ins., Term. Stud	MBR-2215	1	ARMATURE
MAX-44	1	Washer, Plain, Term. Stud, Outer	MU-54	*	Washer, Thrust, 1/32" Thick
MBD-119	2	Washer, Ins., Term. Stud	MU-54A	*	Washer, Thrust, 1/64" Thick
MBD-231	1	Terminal	MU-54B	*	Washer, Thrust, 3/64" Thick
MBD-233A	1	Stud, Terminal	X-261	2	Key, Woodruff, #6
MBR-12 †	2	Brush	<u>Switch Assembly &amp; Parts Used With</u>		
MBR-12A †	2	Brush	SS-6LA	1	Connector
MBR-13 †	2	Brush	SS-4301	1	SWITCH, STARTING SOLENOID
MBR-13A †	2	Brush	8X-173	1	Nut, Hex. #10-32
MBR-34	1	Connector	X-196	1	Lockwasher, #10
MBR-3005S	1	FIELD COIL PACKAGE	8X-832	2	Nut, Hex. 5/16-24
MBR-1007	1	Coil, Field, U.L.	X-1014	2	Lockwasher, 5/16
MBR-1008	1	Coil, Field, L.R.	8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MBR-1009	1	Coil, Field, U.R.	X-1270	2	Washer, Switch Mtg. Sc., Skpf. #10
MBR-1010	1	Coil, Field, L.L.	<u>Miscellaneous Parts</u>		
MC-51A	1	Washer, Term. Stud, Inner	EBA-50	1	BENDIX DRIVE ASSY.
MR-32	2	Insulation, Field Connection	EB-108	2	Lockwasher
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2	EB-4503	1	Head, Drive
X-201	2	Lockwasher, Term. Stud, 3/8	EB-4506	1	Screw, Spring, Head
8X-830	2	Nut, Term. Stud, Hex. 3/8-16	EB-4507	1	Screw, Spring, Shaft
<u>Comm. End Head Assembly &amp; Parts Used With</u>			EB-4515	1	Stop, Pinion
GAL-40A	1	Cover, Bearing, Comm. End	EB-4516	1	Screw, Pinion Stop
MAD-110	1	Felt	EB-5219S	1	Sleeve, Compression
MBR-2236	1	Head Assy., Comm. End	EBA-5005	1	SPRING, DRIVE
MBD-150	1	Wick, Felt	EBA-5011	1	Shaft & Pinion
MBD-1236	1	Head Assy., Partial, C.E.	MBD-24	1	Band, Cover
GBF-79	1	BEARING, ABS. BRONZE	MBD-1118	1	BEARING ASSY., INTERMEDIATE
MBR-2079	1	Plate Assy., Brush	MBD-285	1	Bearing, Abs. Bronze
GG-81	4	Clip, Brush Holder	MR-48	8	Screw, Pinion Housing, Hex. Hd., #10-40x7/8
MBD-19	8	Spring, Brush	PS-1207B	1	Housing Assy., Pinion
MBD-47	4	Spacer	MAB-88	1	Pin, Dowel
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8	ML-18A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Brush Plate Sc., #10	12X-196	8	Lockwasher, Housing Screw, #10
X-1573	1	Oiler	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8	8X-794	1	Nut, Cover Band, Square #10-32
12X-544	12	Lockwasher, Head Sc., #10	† BRUSH SET, SERVICE MBR-1012S.		

\* Use as Required.

UNIT	APPLICATION
MBR-4006	Buda, Climax

Printed in U. S. A.

(Issued 10-20-48)

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

MBR-4007 STARTING MOTOR PARTS LIST

MBR-4007

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBR-2032)	1	Frame & Field Assy.	MAK-61	1	Washer, Arm. Thrust, C.E.
GK-38	8	Screw, Pole Shoe	MBD-76	2	Washer, Arm. Thrust, Int.
MAW-37	1	Bushing, Ins., Term. Stud	MBR-2215	1	ARMATURE
MAX-44	1	Washer, Plain, Term. Stud, Outer	MU-54	*	Washer, Thrust, 1/32" Thick
MBD-119	2	Washer, Ins., Term. Stud	MU-54A	*	Washer, Thrust, 1/64" Thick
MBD-231	1	Terminal	MU-54B	*	Washer, Thrust, 3/64" Thick
MBD-233A	1	Stud, Terminal	X-261	2	Key, Woodruff, #6
MBR-12 †	2	Brush	<b>Switch Assembly &amp; Parts Used With</b>		
MBR-12A†	2	Brush	SS-6LA	1	Connector
MBR-13 †	2	Brush	SS-4301	1	SWITCH, STARTING SOLENOID
MBR-13A†	2	Brush	8X-173	1	Nut, Hex. #10-32
MBR-34	1	Connector	X-196	1	Lockwasher, #10
MBR-3005S	1	FIELD COIL PACKAGE	8X-832	2	Nut, Hex. 5/16-24
MBR-1007	1	Coil, Field, U.L.	X-1014	2	Lockwasher, 5/16
MBR-1008	1	Coil, Field, L.R.	8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MBR-1009	1	Coil, Field, U.R.	X-1270	2	Washer, Switch Mtg. Sc., Skfp. #10
MBR-1010	1	Coil, Field, L.L.	<b>Miscellaneous Parts</b>		
MC-51A	1	Washer, Term. Stud, Inner	EBA-50	1	BENDIX DRIVE ASSY.
MR-32	2	Insulation, Field Connection	EB-108	2	Lockwasher
8X-66	4	Screw, Brush Lead, Flat Hd. #10-32x1/2	EB-4503	1	Head, Drive
X-201	2	Lockwasher, Term. Stud, 3/8	EB-4506	1	Screw, Spring, Head
8X-830	2	Nut, Term. Stud, Hex. 3/8-16	EB-4507	1	Screw, Spring, Shaft
<b>Comm. End Head Assembly &amp; Parts Used With</b>			EB-4515	1	Stop, Pinion
GAL-40A	1	Cover, Bearing, Comm. End	EB-4516	1	Screw, Pinion Stop
MAD-110	1	Felt	EB-5219S	1	Sleeve, Compression
MBR-2236	1	Head Assy., Comm. End	EBA-5005	1	SPRING, DRIVE
MBD-150	1	Wick, Felt	EBA-5011	1	Shaft & Pinion
MBD-1236	1	Head Assy., Partial, C.E.	MBD-24	1	Band, Cover
GBF-79	1	BEARING, ABS. BRONZE	MBD-1118	1	BEARING ASSY., INTERMEDIATE
MBR-2079	1	Plate Assy., Brush	MBD-285	1	Bearing, Abs. Bronze
GG-81	4	Clip, Brush Holder	MR-48	8	Screw, Pinion Housing, Hex. Hd., #10-40x7/8
MBD-19	8	Spring, Brush	PS-1207C	1	Housing Assy., Pinion
MBD-47	4	Spacer	MAB-88	1	Pin, Dowel
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8	ML-18A	1	BEARING, ABS. BRONZE
12X-196	4	Lockwasher, Brush Plate Sc., #10	12X-196	8	Lockwasher, Housing Screw, #10
X-1573	1	Oiler	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8	8X-794	1	Nut, Cover Band, Square #10-32
12X-544	12	Lockwasher, Head Sc., #10	† BRUSH SET, SERVICE MBR-1012S. * Use as Required.		

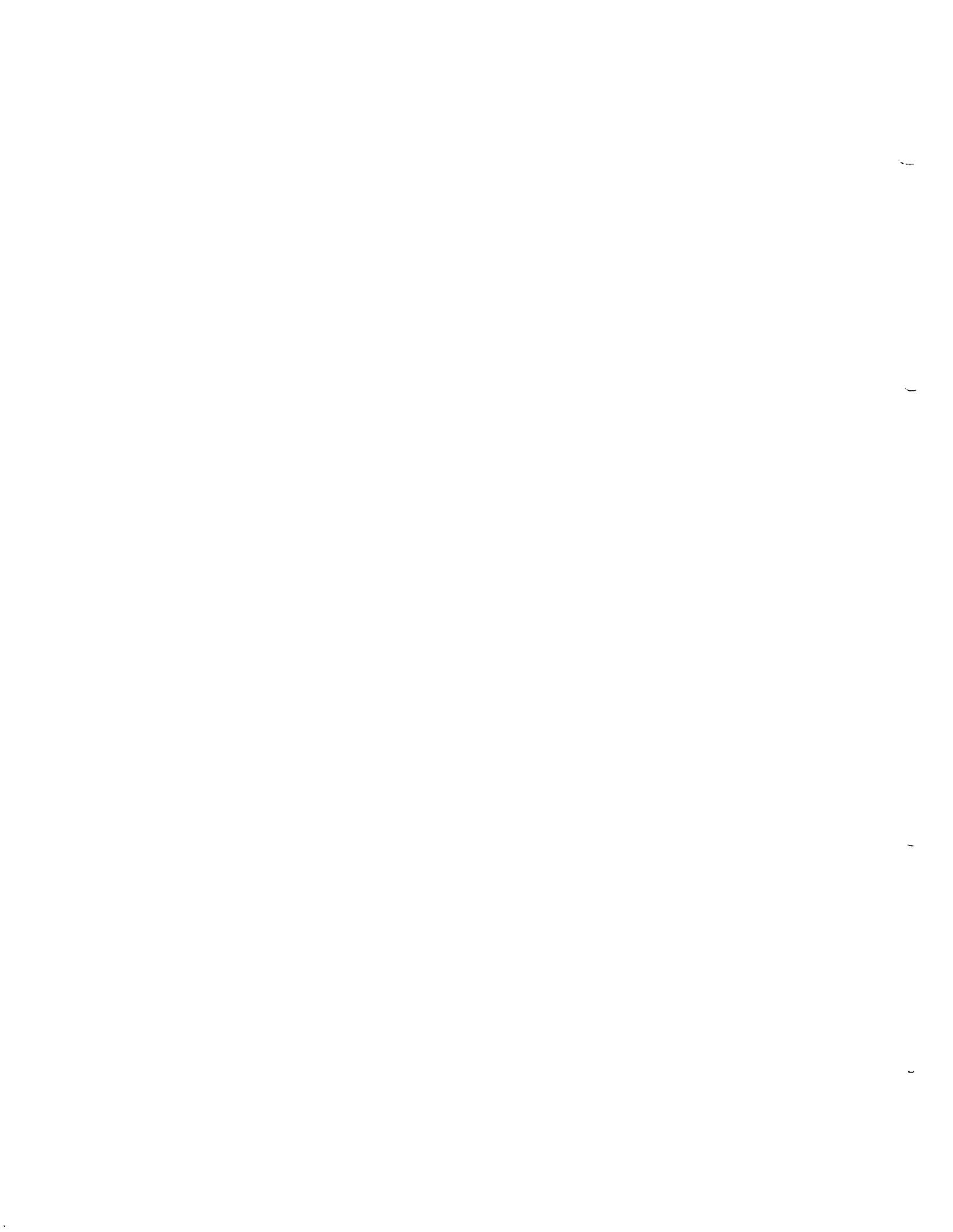
UNIT	APPLICATION
MBR-4007	Climax

Printed in U. S. A.

(Issued 10-20-48)

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

MBR-4010 STARTING MOTOR PARTS LIST

MBR-4010

## 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

Printed in U. S. A.

(Issued 10-19-48)

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

MBR-4012 STARTING MOTOR PARTS LIST

MBR-4012

### 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)

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-4014 STARTING MOTOR PARTS LIST

MBR-4014

## 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.					
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, Fil. 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, Fil. Hd., #10-32x5/8					
12X-544	12	Lockwasher, C.E. Head Sc., #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, 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."







# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBR-4018M STARTING MOTOR PARTS LIST

MBR-4018M

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBR-3056)	1	Frame & Field Assy.	MAK-61A	1	Washer, Arm. Thrust, Comm. End
GK-38C	8	Screw, Pole Shoe	MBD-76	2	Washer, Arm. Thrust, Int.
MAW-37A	1	Bushing, Ins., Term. Stud	MBR-2305M	1	ARMATURE
MBD-119	2	Washer, Ins., Term. Stud	MU-54	*	Washer, Thrust, 1/32" Thick
MBD-231	1	Connector, Term. Stud	MU-54A	*	Washer, Thrust, 1/64" Thick
MBD-233A	1	Stud, Terminal, 3/8-16	MU-54B	*	Washer, Thrust, 3/64" Thick
MBR-12 †	2	Brush	X-261	2	Key, Woodruff, #6
MBR-12A†	2	Brush	<u>Switch Assembly &amp; Parts Used With</u>		
MBR-13 †	2	Brush	MBR-40	1	Connector
MBR-13A†	2	Brush	SSR-4001M	1	SWITCH, SOLENOID
MBR-34	1	Connector	12X-196	1	Lockwasher, #10
MBR-3005S	1	FIELD COIL PACKAGE	12X-1014	2	Lockwasher, 5/16
MBR-1007	1	Coil, Field, U.L.	8X-2843	2	Nut, Hex., 5/16-24
MBR-1008	1	Coil, Field, L.R.	8X-2853	1	Nut, Hex., #10-32
MBR-1009	1	Coil, Field, U.R.	X-20	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MBR-1010	1	Coil, Field, L.L.	X-1270	2	Washer, Switch Mtg., Skpf. #10
MC-51B	1	Washer, Plain, Term. Stud, Inner	<u>Miscellaneous Parts</u>		
MN-47B	1	Washer, Plain, Term. Stud, Outer	EBA-98A	1	BENDIX DRIVE ASSEMBLY
MR-32	2	Insulation, Field Connection	MBD-254A	8	Screw, Housing, Hex. Hd. #10-32x7/8
12X-201	2	Lockwasher, Term. Stud, 3/8	MBD-1024F	1	Band, Cover
X-2845	2	Nut, Term. Stud, Hex. 3/8-16	MBD-1118A	1	Bearing Assy., Int.
X-2876	4	Screw, Brush Lead, Flat Hd. #10-32x1/2	MBD-285	1	BEARING, ABS. BRONZE
<u>Comm. End Head Assembly &amp; Parts Used With</u>			PS-1248A	1	Housing Assy., Pinion
GAL-40B	1	Cover, Bearing, C.E.	MAB-38A	1	Pin, Dowel
MAD-110	1	Felt	MBR-51	1	BEARING, ABS. BRONZE
MBD-258	12	Screw, C.E. Head, Fil. Hd. #10-32x5/8	12X-196	8	Lockwasher, Housing Screw, #10
MBR-2236C	1	Head Assy., Comm. End	X-2873	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/4
MBD-150	1	Wick, Felt	X-2875	1	Nut, Cover Band, Square #10-32
MBD-1236A	1	Head Assy., Partial, Comm. End	† BRUSH SET, SERVICE MBR-1012S.		
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			

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."



# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBR-4020 STARTING MOTOR PARTS LIST

MBR-4020

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBR-2033)	1	Frame & Field Assy.	MAK-61	1	Washer, Thrust, Comm. End
GK-38	8	Screw, Pole Shoe	MBD-311	2	Washer, Thrust, Intermediate
MAW-37	1	Bushing, Ins., Term. Stud	MBR-2212	1	ARMATURE
MBD-119	2	Washer, Ins., Term. Stud	MU-54	*	Washer, Thrust, C.E., 1/32'' Thick
MBD-231	1	Connector, Term. Stud	MU-54A	*	Washer, Thrust, C.E., 1/64'' Thick
MBD-233A	1	Stud, Terminal	MU-54B	*	Washer, Thrust, C.E., 3/64'' Thick
MBR-12 †	2	Brush	X-261	2	Key, Woodruff, #6
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			
<b>Comm. End Head Assembly &amp; Parts Used With</b>			<b>Miscellaneous Parts</b>		
GAL-40A	1	Cover, Bearing, Comm. End	EBB-3	1	BENDIX DRIVE ASSY.
MAD-110	1	Felt	MBD-24	1	Band, Cover
MBR-2236	1	Head Assy., Comm. End	MBD-1315	1	BEARING ASSY., INTERMEDIATE
MBD-150	1	Wick, Felt	MBD-312	1	Retainer, Felt
MBD-1236	1	Head Assy., Partial, C.E.	MBD-313	1	Felt Washer
GBF-79	1	BEARING, ABS. BRONZE	MBD-314	1	Bearing, Abs. Bronze
MBR-2079	1	Plate Assy., Brush	MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
GG-81	4	Clip, Brush Holder	PS-1228	1	Housing Assy., Pinion
MBD-19	8	Spring, Brush	MAB-88	1	Pin, Dowel
MBD-47	4	Spacer	MBD-257	1	BEARING, ABS. BRONZE
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8	12X-196	8	Lockwasher, Housing Screw, #10
12X-196	4	Lockwasher, Brush Plate Sc., #10	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
X-1573	1	Oiler	8X-794	1	Nut, Cover Band, Square #10-32
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8			
12X-196	12	Lockwasher, Head Screw, #10			

\* 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."







# ELECTRIC AUTO-LITE EQUIPMENT & PARTS LISTS

MBR-4022 STARTING MOTOR PARTS LIST

MBR-4022  
(Issued 6-20-55)

Frame & Field Assembly & Parts Used With			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MBR-3056A	1	Frame & Field Assembly	MAK-61	1	Washer, Thrust, Comm. End
GK-38	8	Screw, Pole Shoe	MBD-311	2	Washer, Thrust, Intermediate
MAW-37	1	Bushing, Ins., Term. Stud	MBR-2212	1	ARMATURE
MAX-44	1	Washer, Plain, Term. Stud, Outer	MU-54	*	Washer, Thrust, 1/32" Thick
MBD-119	2	Washer, Ins., Term. Stud	MU-54B	*	Washer, Thrust, 3/64" Thick
MBD-231	1	Connector, Term. Stud	<u>Switch Assembly &amp; Parts Used With</u>		
MBD-233A	1	Stud, Terminal	MBR-40	1	Connector
MBR-34	1	Connector, Brush	SSW-4001	1	SOLENOID SWITCH
MBR-1012S	1	BRUSH SET	8X-164	2	Nut, Hex. 5/16-18
MBR-3005S	1	FIELD COIL PACKAGE	8X-173	1	Nut, Hex. #10-32
MBR-1007	1	Coil, Field, U. L.	12X-196	1	Lockwasher, #10
MBR-1008	1	Coil, Field, L. R.	12X-1014	2	Lockwasher, 5/16
MBR-1009	1	Coil, Field, U. R.	8X-321	2	Screw, Switch Mtg., Rd. Hd. #10-32x5/16
MBR-1010	1	Coil, Field, L. L.	X-1270	2	Washer, Switch Mtg. Screw, Skpf. #10
MC-51A	1	Washer, Plain, Term. Stud Inner	<u>Miscellaneous Parts</u>		
MCK-32	2	Insulation, Field Connection	EBB-15	1	BENDIX DRIVE
8X-66	4	Screw, Brush Grd., Flat Hd. #10-32x1/2	MBD-1024K	1	Band, Cover
12X-201	1	Lockwasher, Term. Stud, 3/8	MBD-1315	1	BRG. ASSY., INTERMEDIATE
8X-830	1	Nut, Term. Stud, Hex. 3/8-16	MBD-312	1	Retainer, Felt Washer
8X-148	1	Nut, Term. Stud, Hex. 3/8-16	MBD-313	1	Washer, Felt
12X-201	1	Lockwasher, Term. Stud, 3/8	MBD-314	1	Brg., Absorbent Bronze
<u>Comm. End Head Assembly &amp; Parts Used With</u>			MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
GAL-40A	1	Cover, Bearing, Comm. End	PS-1228	1	Housing Assembly, Pinion
MAD-110	1	Felt	MAB-88	1	Pin, Dowel
MBD-258	12	Screw, C. E. Head, Fill. Hd. #10-32x5/8	MBD-257	1	BEARING, ABSORBENT BRONZE
MBR-2236	1	Head Assy., Comm. End	12X-196	8	Lockwasher, Housing Screw, #10
MBD-150	1	Wick, Felt	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
MBD-1236	1	Head Assy., Partial, C. E.	8X-794	1	Nut, Cover Band, Square #10-32
GBF-79	1	BEARING, ABSORBENT BRONZE	* Use as required.		
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			

UNIT	APPLICATION
MBR-4022	Cockshutt, Co-Op

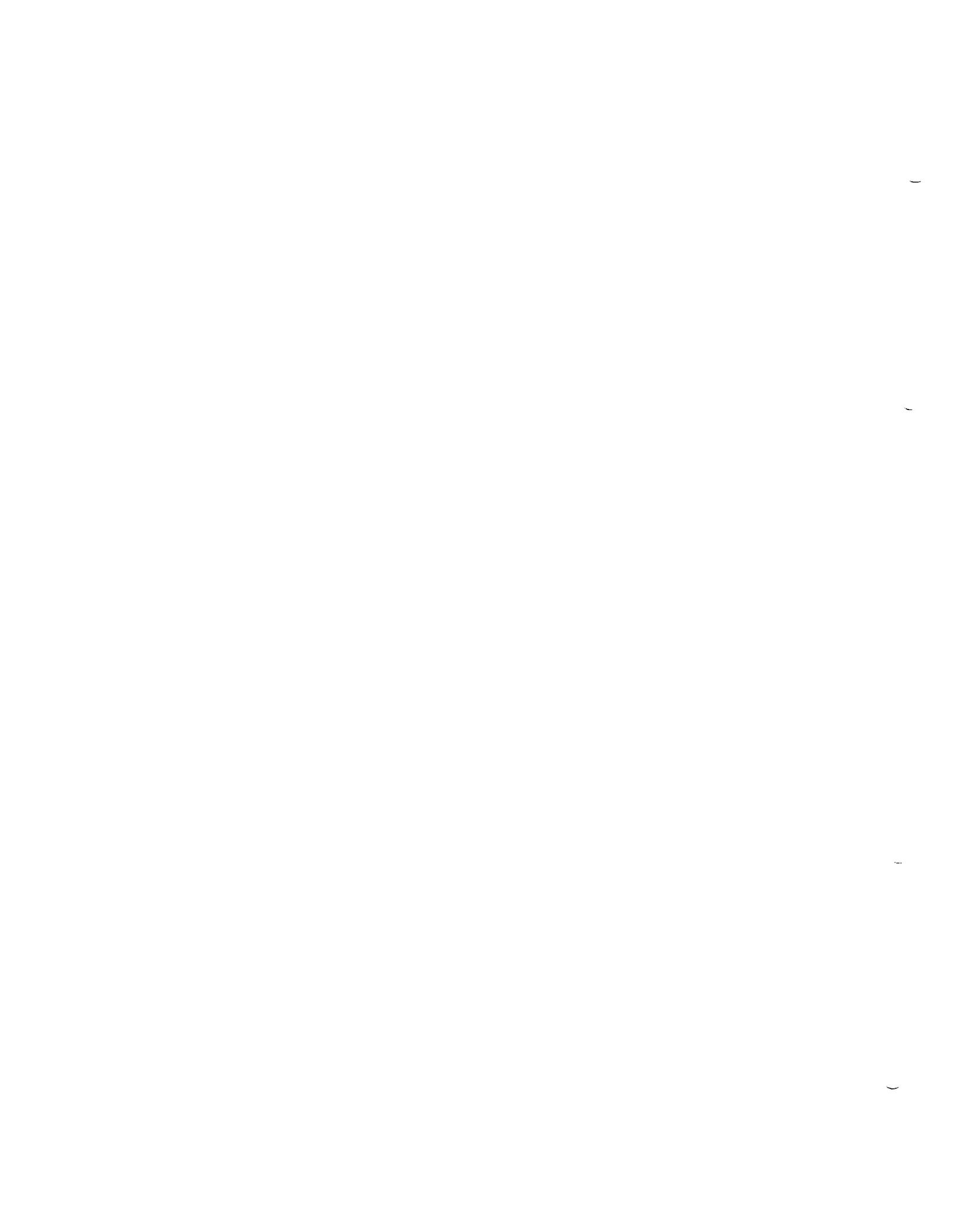
Printed in U. S. A.

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."







# 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			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
(MBR-2033)	1	Frame & Field Assy.	MAK-61	1	Washer, Thrust, Comm. End
GK-38	2	Screw, Pole Shoe	MBD-311	2	Washer, Thrust, Intermediate
MAW-37	1	Bushing, Ins., Term. Stud	MBR-2318	1	ARMATURE
MAX-44	1	Washer, Plain, Term. Stud, Outer	MU-54	*	Washer, Thrust, C.E., 1/32" Thick
MBD-119	2	Washer, Ins., Term. Stud	MU-54A	*	Washer, Thrust, C.E., 1/64" Thick
MBD-231	1	Connector, Term. Stud	MU-54B	*	Washer, Thrust, C.E., 3/64" Thick
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			Miscellaneous Parts		
GAL-40A	1	Cover, Bearing, Comm. End	EBB-18	1	BENDIX DRIVE
MAD-110	1	Felt	MBD-24	1	Band, Cover
MBR-2236	1	Head Assy., Comm. End	MBD-1315	1	BEARING ASSY., INTERMEDIATE
MBD-150	1	Wick, Felt	MBD-312	1	Retainer, Felt
MBD-1236	1	Head Assy., Partial, C.E.	MBD-313	1	Felt Washer
GBF-79	1	BEARING, ABS. BRONZE	MBD-314	1	Bearing, Abs. Bronze
MBR-2079	1	Plate Assy., Brush	MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
GG-81	4	Clip, Brush Holder	PS-1266	1	Housing Assy., Pinion
MBD-19	8	Spring, Brush	MAB-88	1	Pin, Dowel
MBD-47	4	Spacer	12X-196	8	Lockwasher, Housing Screw, #10
8X-120	4	Screw, Brush Plate, Fill. Hd. #10-32x5/8	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
12X-196	4	Lockwasher, Brush Plate Sc., #10	8X-794	1	Nut, Cover Band, Square #10-32
X-1573	1	Oiler			
8X-120	12	Screw, C.E. Head, Fill. Hd. #10-32x5/8			
12X-196	12	Lockwasher, Head Screw, #10			

† 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			Armature Assembly & Parts Used With		
Part No.	No. Used	Name of Part	Part No.	No. Used	Name of Part
MBR-2033	1	Frame & Field Assy.	MAK-61	1	Washer, Thrust, Comm. End
GK-38	8	Screw, Pole Shoe	MBD-311	1	Washer, Thrust, Intermediate
MAW-37	1	Bushing, Ins., Term. Stud	MBR-2305	1	ARMATURE
MAX-44	1	Washer, Plain, Term. Stud, Outer	MU-54	*	Washer, Thrust, C. E., 1/32" Thick
MBD-119	2	Washer, Ins., Term. Stud	MU-54A	*	Washer, Thrust, C. E., 1/64" Thick
MBD-231	1	Connector, Term. Stud	MU-54B	*	Washer, Thrust, C. E., 3/64" Thick
MBD-233A	1	Stud, Terminal	X-261	2	Key, Woodruff, D. E., #6
MBR-12†	2	Brush			<u>Miscellaneous Parts</u>
MBR-12A†	2	Brush	EBA-84A	1	BENDIX DRIVE
MBR-13†	2	Brush	MBD-1024K	1	Band, Cover
MBR-13A†	2	Brush	MBD-1315	1	BEARING ASSY., INTERMEDIATE
MBR-34	1	Connector, Brush	MBD-312	1	Retainer, Felt
MBR-3005S	1	FIELD COIL PACKAGE	MBD-313	1	Felt Washer
MBR-1007	1	Coil, Field, U. L.	MBD-314	1	Bearing, Abs. Bronze
MBR-1008	1	Coil, Field, L. R.	MR-48	8	Screw, Pinion Housing, Hex. Hd. #10-40x7/8
MBR-1009	1	Coil, Field, U. R.	PS-1248	1	Housing Assy., Pinion
MBR-1010	1	Coil, Field, L. L.	MAB-88	1	Pin, Dowel
MC-51A	1	Washer, Plain, Term. Stud, Inner	MBR-51	1	BEARING, ABS. BRONZE
MR-32	2	Insulation, Field Connection	12X-196	8	Lockwasher, Housing Screw, #10
8X-66	4	Screw, Brush Lead, Flat Hd., #10-32x1/2	8X-714	1	Screw, Cover Band, Rd. Hd. #10-32x1 1/2
12X-201	1	Lockwasher, Term. Stud, 3/8	8X-794	1	Nut, Cover Band, Square #10-32
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			
<u>Comm. End Head Assembly &amp; Parts Used With</u>					
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			

† 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."

,

,

,

,