

STARTER MOTOR ASSEMBLIES

REFERENCE AND SERIAL NUMBER CHART:

STARTER MOTOR NO.	MODELS USED ON	SERIAL NUMBERS
A-50-60315 <i>See Page 21E</i>	Merc 650 (3 cyl)	3293184 and up
A-50-58788 <i>See Page 21E</i>	Merc 800 (4 cyl) Merc 650 E	2986444 and up 2997339 and up
A-50-57867A1 <i>See Page 21E</i>	Merc 800 (4 cyl) Merc 650E-SS	2783253 thru 2886331 2803822 thru 2997338
A-50-57465A1 <i>See Page 21E</i>	Merc 1400E-SS Merc 1350E-SS Merc 1150E-SS	3293234 and up 2839369 and up 2836019 and up
A-50-55601 <i>See Page 22E</i>	Merc 402 Merc 400 (2 cyl) Merc 500 E	3219678 and up 2876554 and up 3091051 and up
A-50-48643A1 <i>See Page 21E</i>	Merc 1250E-SS	2314956 and up
A-50-45822A1 <i>See Page 21E</i>	Merc 1100E-SS Merc 1000E-SS Merc 950E-SS Merc 800 (4 cyl) Merc 650E-SS Merc 650S	2113898 and up 2318586 and up 2111588 and up 2559001 thru 2670574 2120434 thru 2803821 2119749 thru 2452709
A-50-38890A1 <i>See Page 18E</i>	Merc 500E Merc 500S Merc 350S	1857030 thru 3015353 1857189 and up 1900116 and up
A-50-37345A1 <i>See Page 18E</i>	Merc 500E Merc 500S Merc 350S	1772629 thru 1857029 1771454 thru 1844048 1814054 thru 1900115
A-50-37274A1 <i>See Page 21E</i>	Merc 1100E Merc 1000E Merc 950E Merc 900E Merc 650E Merc 650S	1935101 thru 2103722 1768404 thru 1895200 1932826 thru 2101742 1766824 thru 1893700 1765044 thru 2111569 1765794 thru 2111087
A-50-31976 <i>See Page 17E</i>	Merc 1000E Merc 850E Merc 650E Merc 650S	1464949 thru 1758688 1566240 thru 1757938 1542745 thru 1761648 1572323 thru 1763993
A-50-30955 <i>See Page 14E</i>	Merc 700E (shift)	1482212 thru 1534183 1413611 thru 1436114
A-50-30842 <i>See Page 14E</i>	Merc 850E Merc 800E (shift) Merc 850EL (shift)	1460999 thru 1464848 1402898 thru 1460998 1404767 thru 1460998
A-50-30829 <i>See Page 17E</i>	Merc 500E Merc 500E Merc 500S Merc 450S Merc 350S	1480225 thru 1765043 1480088 thru 1480159 1552610 thru 1764343 1480810 thru 1521913 1571404 thru 1763753
A-50-30575 <i>See Page 13E</i>	Merc 800E (shift) Merc 800EL (shift)	1400361 thru 1402897 1398630 thru 1404766

(See Page 24E for A-50-47216 Starter Motor for Merc 200 - Serial #2296267 and up)

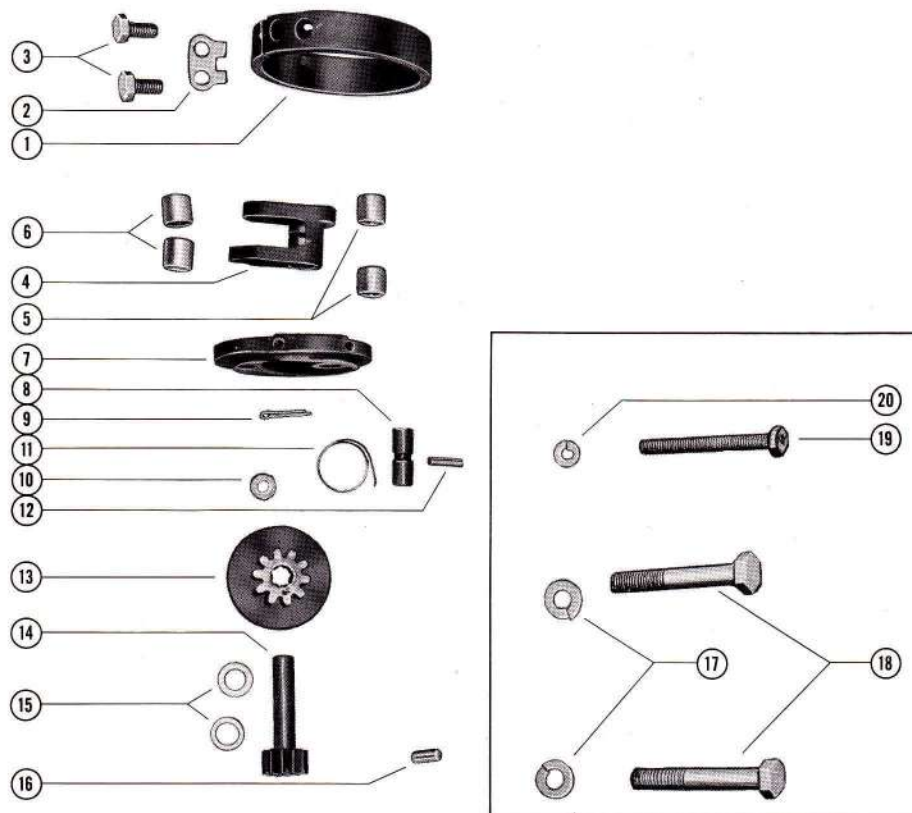
(continued)

REFERENCE AND SERIAL NUMBER CHART: (Continued)

A-50-30418 <i>See Page 10E</i>	Merc 800E	1335465 thru 1376849
A-50-29105 <i>See Page 6E</i>	Merc 500E Merc 500E Merc 500S Merc 450S Merc 400E Merc 400S Merc 350E Merc 300E Mark 58AE Mark 55AE	1480160 thru 1480224 1421613 thru 1480087 1426113 thru 1460498 1477210 thru 1479359 1280685 thru 1392680 1279685 thru 1391805 1355448 thru 1448139 1271885 thru 1356947 1226547 thru 1269884 1224481 thru 1279684
A-50-29037 <i>See Page 10E</i>	Merc 700E Merc 600E Mark 78AE Mark 75AE	1296411 thru 1384805 1303411 thru 1339922 1194070 thru 1261032 1113105 thru 1212110
A-50-28317 <i>See Page 10E</i>	Mark 75AE Mark 78E	1110600 thru 1113104 1143038 thru 1194069
A-50-27063 <i>See Page 10E</i>	Mark 75E	1099027 thru 1110599
A-50-26461 <i>See Page 10E</i>	Mark 75E	1072997 thru 1099026
A-25942 <i>See Page 6E</i>	Mark 58AE Mark 58E Mark 55E Mark 35AE Mark 30E	1195070 thru 1226546 1139538 thru 1195069 977518 thru 1224480 1218472 thru 1271884 1024987 thru 1166470
A-25444 <i>See Page 9E</i>	Mark 55E Mark 30E Mark 25E	906752 thru 977517 950251 thru 1024986 956420 thru 1036986
A-23713A1 <i>See Page 5E</i>	Mark 55E Mark 30E Mark 25E	831021 thru 899949 944250 thru 950250 860979 thru 956419
A-22623A1 <i>See Page 2E</i>	Mark 50E	all engines

NOTE: All serial numbers listed in chart refer to starter motors used in original production of these engines. Refer to Page 1E for Starter Mechanism to be used with Starter Motor Assemblies A-23713A1 and A-22623A1.

STARTER MECHANISM

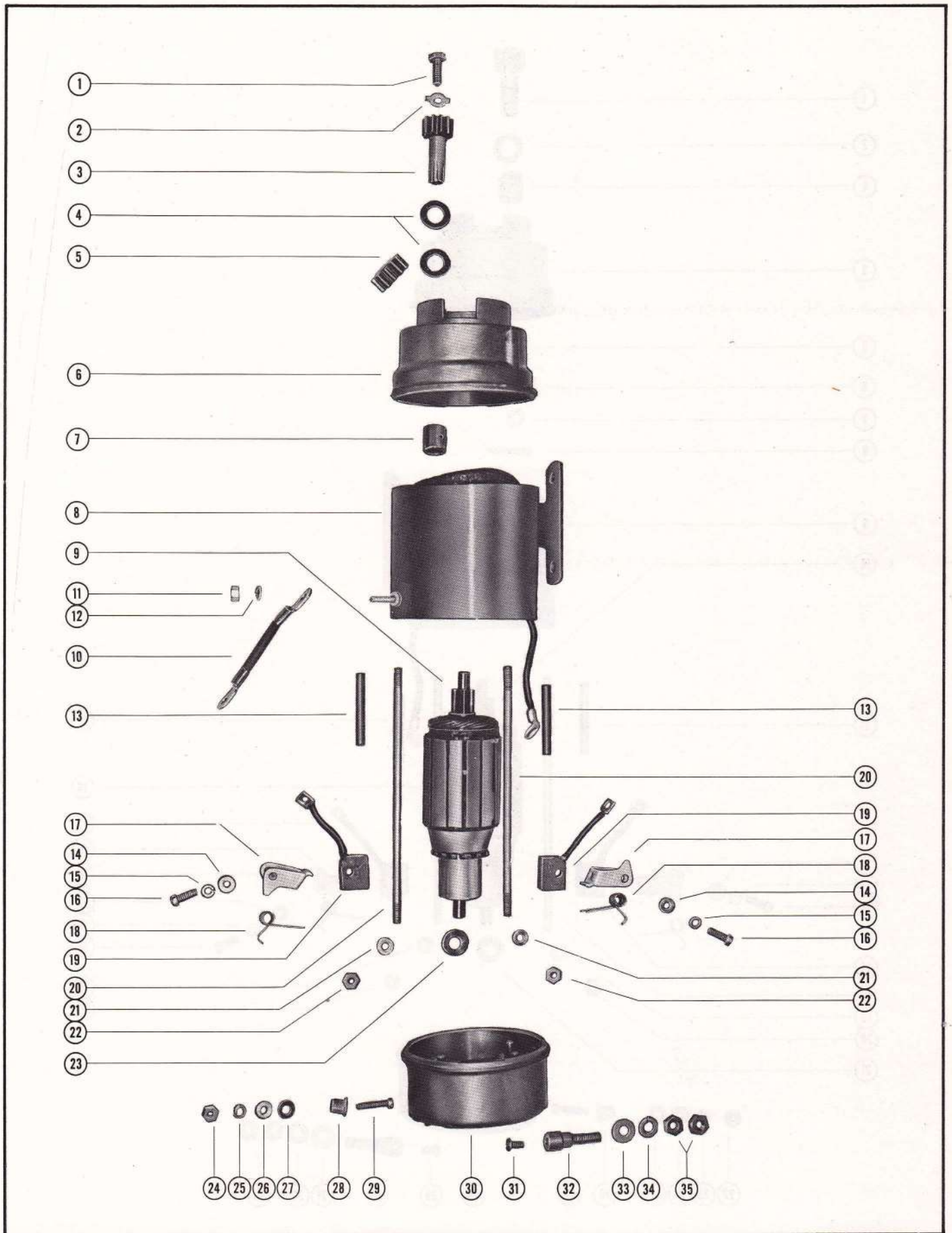


PART NO.	REF. NO.	DESCRIPTION	MK25E	MK50E	MK30E MK55E
A-24-23883	1	Spring, overload	1	1	1
C-14-22528	2	Tab Washer, overload spring screw	1	1	1
C-10-20776	3	Screw, overload spring to plate	2	2	2
A-22422A1	4	Starter Arm Assembly	-	1	1
A-23881A1	4	Starter Arm Assembly	1	-	-
A-23-22530	5	Bushing, starter arm (5/16)	2	2	2
A-23-22602	6	Bushing, starter arm (1/4)	2	2	2
A-22423	7	Plate, starter	1	1	1
A-17-22529	8	Pin, starter arm	1	1	1
C-18-20180	9	Cotter Pin, pinion gear and shaft	1	-	1
C-12-24812	10	Washer, pinion gear and shaft	1	-	1
C-14-22527	--	Tab Washer	-	1	-
C-10-23070	--	Screw	-	1	-
A-24-22604	11	Spring, starter arm	1	1	1
C-17-22531	12	Roll Pin, starter arm pin to plate	1	1	1
A-43-22418A1	13	Drive Pinion Assembly	1	1	1
A-43-24859	14	Gear and Shaft, pinion	-	-	1
A-43-22417	14	Gear and Shaft, pinion	-	1	-
A-43-24809	14	Gear and Shaft, pinion	1	-	-
C-12-22532	15	Washer, thrust - pinion gear and shaft	2	2	2
C-12-25226	15	Washer, thrust - pinion gear and shaft	2	-	-
C-17-20032	16	Dowel Pin, starter plate to crankcase	-	1	1
C-17-24873	16	Roll Pin, starter plate to crankcase	1	-	-
C-13-26992	17	Lockwasher, starter plate screw	2	2	2
C-10-24623	18	Screw, starter plate to starter motor	-	-	2
C-10-22524	18	Screw, starter plate to starter motor	2	2	-
C-10-25158	19	Screw, starter plate to starter motor	1	-	1
C-10-22601	19	Screw, starter plate to starter motor	-	1	-
C-13-26996	20	Lockwasher, starter plate screw	1	1	1

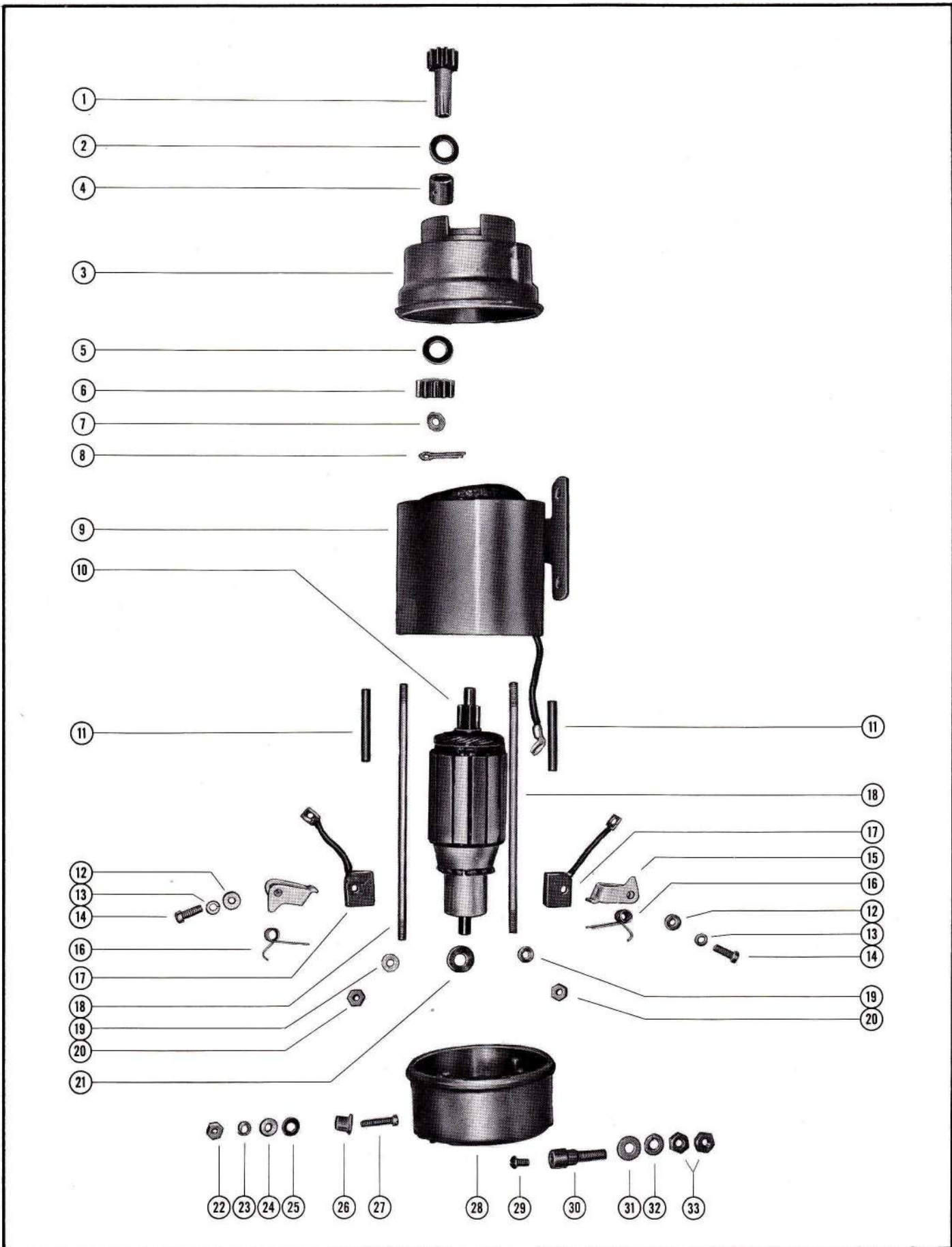
STARTER MOTOR ASSEMBLY

PART NO.	REF. NO.	DESCRIPTION	QUAN.
A-22623A1	-	Starter Motor Assembly, Complete	1
C-10-23070	1	Screw, output gear and shaft	1
C-14-22527	2	Tab Washer, output gear and shaft	1
A-43-22420	3	Gear and Shaft, output	1
C-12-23099	4	Washer, output gear and shaft	2
A-43-22419	5	Gear, reduction	1
A-1117-346A1	6	Upper End Cap Assembly	1
A-31-23101	7	Bearing, needle	1
A-22623	8	Body and Field	1
A-22622	9	Armature	1
A-22613	10	Jumper, starter to starter solenoid	1
C-11-20890	11	Nut, jumper fastening	1
C-13-26992	12	Lockwasher, jumper fastening	1
A-22691	13	Sleeve, stud insulating	2
C-12-20192	14	Washer, brush fastening screw	2
C-13-26995	15	Lockwasher, brush fastening screw	2
C-10-22625	16	Screw, brush to holder	2
A-22620	17	Holder, brush	2
A-24-22598	18	Spring, brush holder	2
A-22616	19	Brush, starter	2
A-16-22600	20	Stud, end cap to body and field	2
C-12-26014	21	Washer, starter stud	2
C-11-20645	22	Nut, starter stud	2
C-12-22618	23	Washer, thrust-armature	1
C-11-21923	24	Nut, starter terminal (#8)	1
C-13-26995	25	Lockwasher, starter terminal (#8)	1
C-12-20192	26	Washer, starter terminal (#8)	1
C-12-23749	27	Washer, insulating - starter terminal	1
A-23-22597	28	Bushing, insulating	1
C-10-22649	29	Screw, starter terminal (#8)	1
A-1118-347A3	30	Lower End Cap Assembly	1
C-10-22648	31	Screw, ground post	1
C-13-26995	--	Lockwasher, ground post screw	1
A-22695	32	Post, ground	1
C-12-20028	33	Washer, ground post	1
C-13-26992	34	Lockwasher, ground post	1
C-11-20890	35	Nut, ground post	2
A-22632	--	Post, brush holder	2
A-22633	--	Post, spring holder	2
A-23-22597	--	Bushing, insulating	4

STARTER MOTOR ASSEMBLY



STARTER MOTOR ASSEMBLY



STARTER MOTOR ASSEMBLY

PART NO.	REF. NO.	DESCRIPTION	QUAN.
A-23713A1	-	Starter Motor Assembly, Complete	1
A-43-24860	1	Gear and Shaft, output	1
C-12-23099	2	Washer, output gear and shaft	1
A-1117-346A1	3	Upper End Cap Assembly	1
A-31-23101	4	Bearing, needle	1
A-22619	-	Plate, thrust	1
C-12-23099	5	Washer, output gear and shaft	1
A-43-22419	6	Gear, reduction	1
C-12-24812	7	Washer, reduction gear	1
C-18-20180	8	Cotter Pin, reduction gear to output shaft	1
A-23713	9	Body and Field	1
A-22622	10	Armature	1
A-22691	11	Sleeve, stud insulating	2
C-12-20192	12	Washer, brush fastening screw	2
C-13-26995	13	Lockwasher, brush fastening screw	2
C-10-22625	14	Screw, brush to holder	2
A-22620	15	Holder, brush	2
A-24-22598	16	Spring, brush holder	2
A-22616	17	Brush	2
A-16-22600	18	Stud, end cap to body and field	2
C-13-26996	--	Lockwasher, starter stud	2
C-12-26014	19	Washer, starter stud	2
C-11-20645	20	Nut, starter stud	2
C-12-22618	21	Washer, thrust - armature	1
C-11-21923	22	Nut, starter terminal (#8)	1
C-13-26995	23	Lockwasher, starter terminal (#8)	1
C-12-20192	24	Washer, starter terminal (#8)	1
C-12-23749	25	Washer, insulating - starter terminal	1
A-23-22597	26	Bushing, insulating	1
C-10-22649	27	Screw, terminal (#8)	1
A-1118-347A3	28	Lower End Cap Assembly	1
A-22632	--	Post, brush holder	2
A-22633	--	Post, brush spring	2
A-23-22597	--	Bushing, insulating - brush holder and spring post	4
C-10-22648	29	Screw, ground post	1
C-13-26995	--	Lockwasher, ground post screw	1
A-22695	30	Post, ground	1
C-12-23243	31	Washer, ground post and positive terminal	2
C-13-26992	32	Lockwasher, ground post and positive terminals	3
C-11-23868	33	Nut, ground post and positive terminal	4
C-12-23923	--	Washer, insulating - positive terminal	1
A-23-23922	--	Tube, insulating - positive terminal	1

STARTER MOTOR ASSEMBLY

PART NO.	REF. NO.	DESCRIPTION	QUANTITY			
			▲1	-	-	-
A-25942	-	Starter Motor Assembly, Complete (Delco-Remy #1113553)	▲1	-	-	-
A-50-32403	-	Starter Motor Assembly, Complete (Delco-Remy #1113510)	-	1	-	-
A-50-29105	-	Starter Motor Assembly, Complete (Delco-Remy #1113569)	-	-	■1	-
A-50-32411	-	Starter Motor Assembly, Complete (Delco-Remy #1113518)	-	-	-	1
A-18-25621	1	Cotter Pin, fastening nut	1	-	-	-
C-11-25622	2	Nut, fastening } <i>early models</i>	1	-	-	-
C-11-20220	2	Nut, fastening- <i>late models</i>	1	1	1	1
A-26058	3	Stop, pinion	1	1	1	1
A-24-26057	4	Spring, anti-drift	1	1	1	1
A-12-26056	5	Washer, pinion	1	1	1	1
A-23-26055	6	Sleeve, anti-drift	1	1	1	1
A-43-26054A1	7&8	Pinion Gear and Screw Shaft Assembly (11 tooth)	1	1	-	-
A-43-29263A1	7&8	Pinion Gear and Screw Shaft Assembly (10 tooth)	-	-	1	1
A-12-26052	9	Washer, thrust - cushion cup	1	1	1	1
A-26049	10	Cup, cushion	1	1	1	1
A-26050	11	Cushion, rubber - recoil	1	1	1	1
A-23-26051	12	Spacer, cushion	1	1	1	1
A-12-26048	13	Washer, thrust - cushion cup	1	1	1	1
A-31193	14	Frame, drive end - upper	1	1	1	1
A-23-26044	15	Bushing, drive end frame	1	1	1	1
A-26026	16	Armature	1	-	1	-
A-32408	16	Armature	-	1	-	1
A-12-26042	17	Washer, thrust - armature	1	-	1	-
A-12-31184	17	Washer, thrust - armature	-	1	-	1
A-17-26045	18	Dowel Pin, drive end	1	1	1	1
A-26027	19	Frame and Field Assembly	1	-	1	-
A-26030	20	Shoe, pole - frame and field	4	-	4	-
A-32412	20	Shoe, pole - frame and field	-	4	-	4
C-10-29269	21	Screw, pole shoe to frame	4	-	4	-
C-10-31178	21	Screw, pole shoe to frame	-	4	-	4
A-26028	22	Field Coil Assembly	1	1	1	1
A-26029	23	Terminal Lead, field coil	1	1	1	1
A-12-31177	24	Washer, insulating - terminal lead (inside frame)	-	1	-	1
A-12-26033	24	Washer, terminal lead - bushing (inside frame)	1	1	1	1
A-12-26037	25	Washer, rubber - terminal lead (frame hole)	1	1	1	1
A-12-26032	26	Washer, insulating - terminal lead (outside frame)	2	2	2	1
C-12-23243	27	Washer, terminal lead (outside frame)	1	1	1	1
C-13-26035	28	Lockwasher, terminal lead	2	-	2	-
C-13-26992	28	Lockwasher, terminal lead	-	2	-	2
C-11-23868	29	Nut, terminal lead	2	2	2	2
A-26039	30	Package, brush holder replacement	1	-	1	-
A-32409	30	Package, brush holder replacement	-	1	-	1
A-26041	31	Package, brush replacement	1	-	1	-
A-32410	31	Package, brush replacement	-	1	-	1
A-24-26040	32	Spring, starter brush	2	-	2	-
A-24-31170	32	Spring, starter brush	-	2	-	2
A-26038	33	Frame, commutator end - lower	1	-	1	-
A-32405	33	Frame, commutator end - lower	-	1	-	1
C-13-26992	34	Lockwasher, thru bolt	2	2	2	2
C-10-26046	35	Bolt, thru - frame to frame	2	2	2	2

NOTE: Due to vendor change, individual pinion gear (A-43-26054 or A-43-29263) and screw shaft (A-26052 or A-29262) are no longer sold separately.

- ▲ A-25942 Starter Motor is no longer available and is superseded by A-50-32403 Starter Motor.
- A-50-29105 Starter Motor is no longer available and is superseded by A-50-32411 Starter Motor.

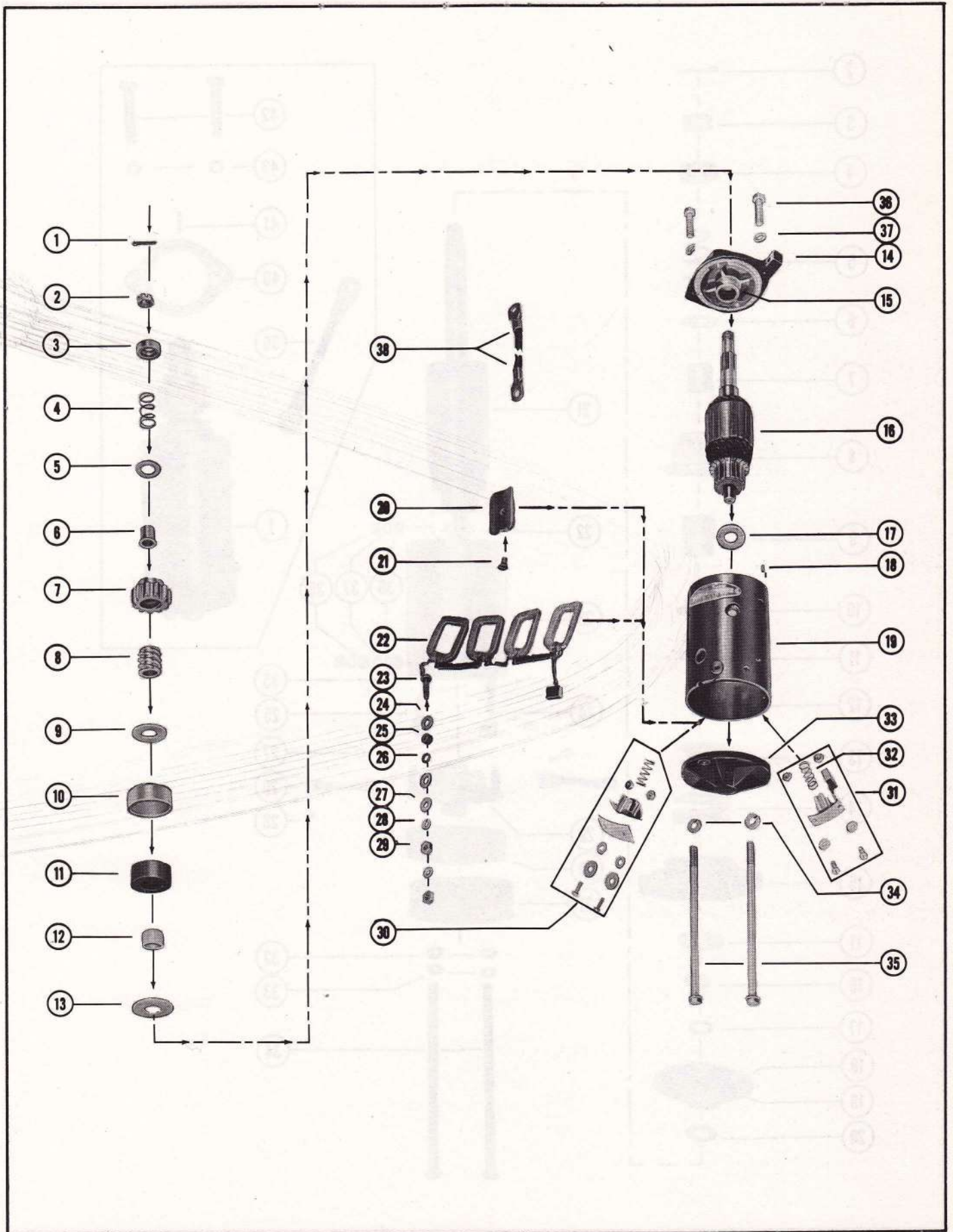
When replacement parts are needed for any above listed starter motors, please check vendor number on plate attached to starter housing frame to insure ordering correct component parts.

STARTER MOTOR ATTACHING PARTS: (see note below)

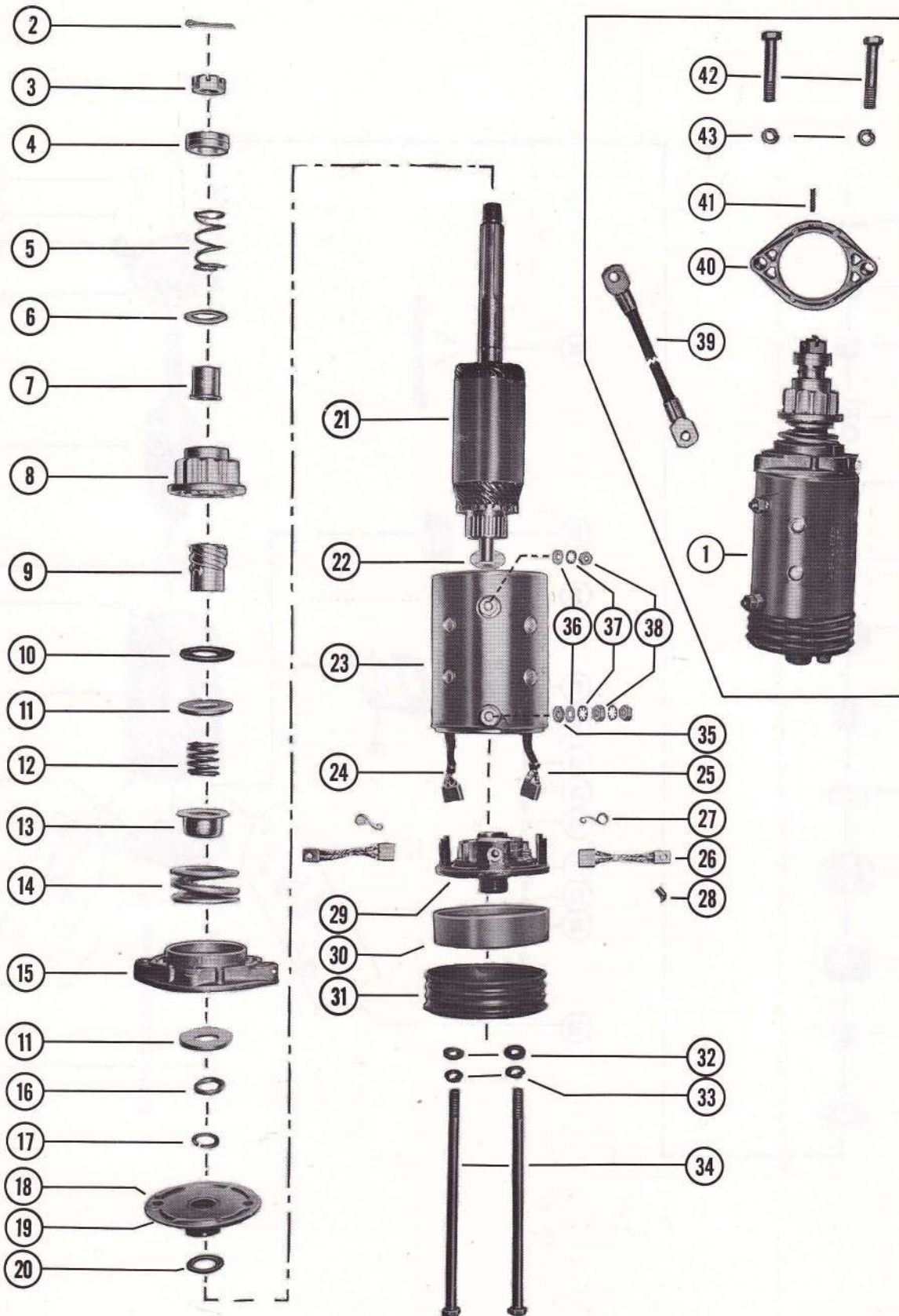
PART NO.	REF. NO.	DESCRIPTION	MARK	MARK	MARK	MARK	MARK
			25E	30E	35A	55&55A	58&58A
C-10-28635	--	Screw, lead wire to starter	1	1	1	1	1
C-13-26992	--	Lockwasher, lead wire to starter screw	1	1	1	1	1
C-10-22698	36	Screw, starter motor to crankcase flange	2	2	2	2	2
C-13-26993	37	Lockwasher, starter motor screw	2	2	2	2	2
A-25469	38	Wire, starter to starter solenoid	-	1	-	-	-
A-25596	38	Wire, starter to starter solenoid	-	-	1	1	1

NOTE: On older engines, where crankcase flange does not have bosses added for mounting starter motor, A-25474 upper plate must also be used.

STARTER MOTOR ASSEMBLY



STARTER MOTOR ASSEMBLY



STARTER MOTOR ASSEMBLY

PART NO.	REF. NO.	DESCRIPTION	QUAN.
A-25444	1	Starter Motor Assembly, Complete (Bosch)	1
A-18-25621	2	Cotter Pin, fastening nut	1
C-11-25622	3	Nut, fastening	1
A-23-25623	4	Collar, spacing	1
A-24-25624	5	Spring, anti-drift	1
A-12-25625	6	Washer, anti-drift spring	1
A-23-25626	7	Sleeve, anti-drift spring	1
A-43-25627	8	Gear, pinion - drive	1
A-25628	9	Shaft, screw	1
A-12-25629	10	Washer, rubber - recoil cushioning	1
A-12-25630	11	Washer, thrust	2
A-24-25631	12	Spring, re-entry	1
A-25632	13	Support, drive spring	1
A-24-25633	14	Spring, drive	1
A-25473	15	Adaptor, top cap	1
A-53-25634	16	Ring, retaining - spring	1
A-53-25635	17	Ring, spring	1
A-25636	18	Plate, drive end	1
A-23-25637	19	Bushing, drive end plate	1
A-15-25638005	20	Shim, plate to armature	AR
A-15-25639010	20	Shim, plate to armature	AR
A-15-25640015	20	Shim, plate to armature	AR
A-25641	21	Armature	1
A-12-25642	22	Washer, shimming	1
A-25643	23	Housing Assembly, starter	1
A-25652	24	Brush, housing assembly	1
A-25653	25	Brush, housing assembly	1
A-25654	26	Brush, end plate	2
A-24-25655	27	Spring, brush	4
C-10-25656	28	Screw, fastening - brush (ground)	2
A-25657	29	End Plate, commutator	1
A-23-29461	--	Bushing, commutator end plate	1
A-25659	30	Strip, insulation - end plate	1
A-25660	31	Cover, end plate	1
C-12-23243	32	Washer, thru bolt	2
C-13-26992	33	Lockwasher, thru bolt	2
A-10-25646	34	Bolt, thru - cover to adaptor	2
A-12-25647	35	Washer, insulation - housing terminal	1
A-12-25648	36	Washer, housing terminals	2
A-13-21272	37	Lockwasher, housing terminals	3
A-11-25650	38	Nut, housing terminals	3

A-25444 Starter Motor
No Longer Available.
Order A-25942 Starter
Motor as shown on
Page 6E.

All component parts for
A-25444 Starter Motor (Ref.
#2 thru 38) are still avail-
able. Order your replace-
ment parts accordingly.

STARTER MOTOR ATTACHING PARTS:

PART NO.	REF. NO.	DESCRIPTION	MARK 25E	MARK 30E	MARK 55E
A-25469	39	Wire, starter to starter solenoid	-	1	1
A-25474	40	#Plate, upper - starter motor fastening	1	1	1
C-17-20032	41	Dowel Pin, upper plate	1	1	1
C-10-25503	42	Screw, upper plate to adaptor	2	2	2
C-13-26993	43	Lockwasher	2	2	2

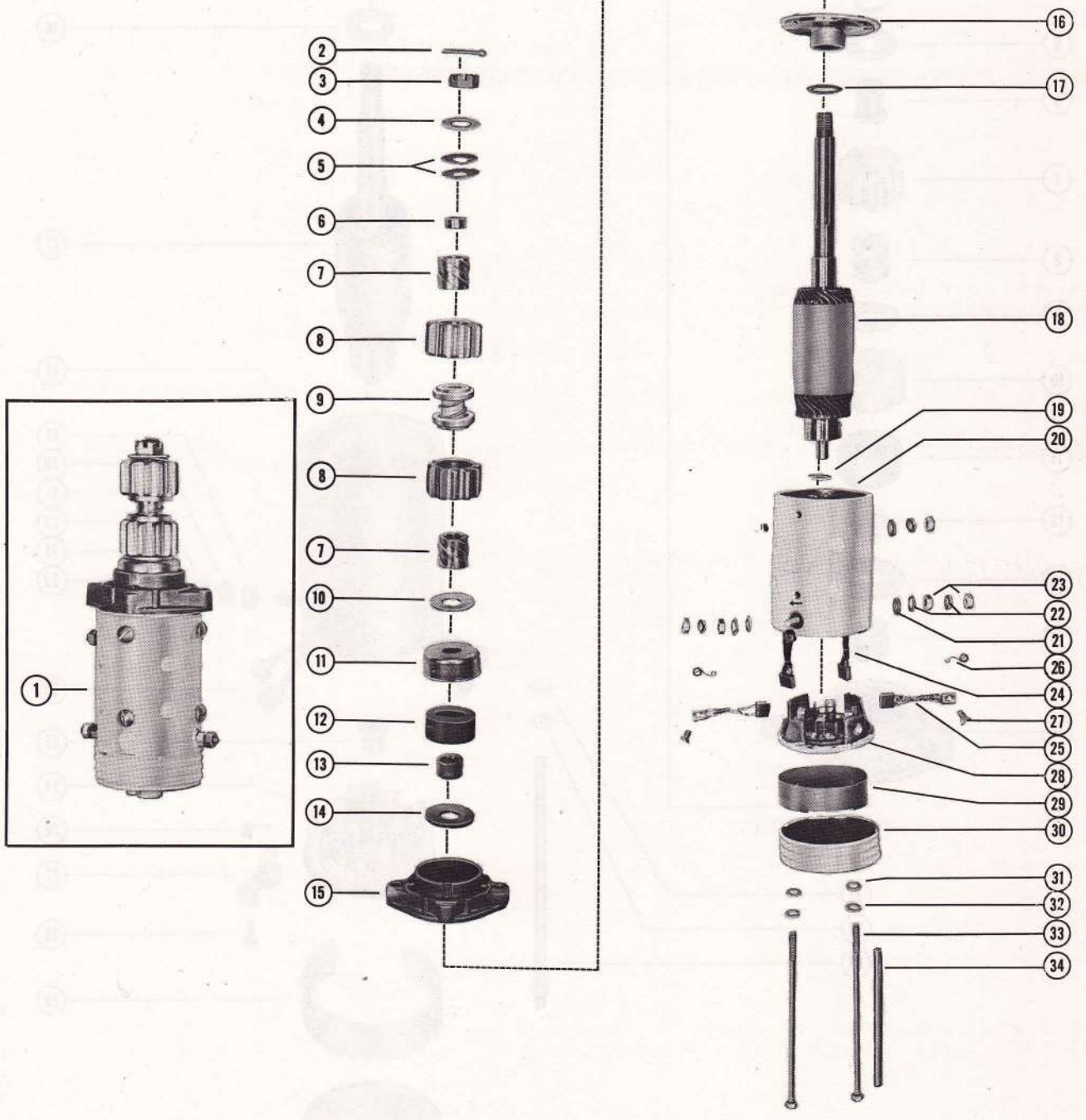
Not required where starter mounting bosses have been added to crankcase flange.

STARTER MOTOR ASSEMBLY (Direct Reversing Models)

PART NO.	REF. NO.	DESCRIPTION	QUANTITY				
A-50-26461	1	Starter Motor Assembly, Complete (Bosch SMA 12B 60)	1	-	-	-	-
A-50-27063	1	Starter Motor Assembly, Complete (Bosch SMA 12B 70)	-	1	-	-	-
A-50-28317	1	Starter Motor Assembly, Complete (Bosch SMA 12B 78)	-	-	1	-	-
A-50-29037	1	Starter Motor Assembly, Complete (Bosch SMA 12B 80)	-	-	-	1	-
A-50-30418	1	Starter Motor Assembly, Complete (Bosch SMA 12B 81)	-	-	-	-	1
A-18-25621	2	Cotter Pin, fastening nut	1	1	1	1	1
A-11-25622	3	Nut, fastening	1	1	1	1	1
A-12-27110	4	Washer, fastening nut	1	1	1	1	1
A-13-27111	5	Washer, wave - tension	2	2	2	2	2
A-23-27112	6	Spacer, screw shaft	1	1	1	1	1
A-27113	7	Shaft, screw	2	2	2	-	2
A-29257	7	Shaft, screw	-	-	-	2	-
A-43-27114	8	Gear and Screw Shaft Kit, pinion (11 tooth set)	2	2	-	-	-
A-43-28536	8	Gear and Screw Shaft Kit, pinion (10 tooth set)	-	-	2	-	2
A-43-29258A1	8	Gear and Screw Shaft Kit, pinion (9 tooth set)	-	-	-	2	-
A-23-27115A1	9	Sleeve Assembly (with anti-drift spring)	1	1	-	-	-
A-23-28595A1	9	Sleeve Assembly (with anti-drift spring)	-	-	1	-	1
A-23-29259A1	9	Sleeve Assembly (with anti-drift spring)	-	-	-	1	-
A-12-26052	10	Washer, thrust	1	1	1	1	1
A-26049	11	Cup, cushion	1	1	1	1	1
A-26050	12	Cushion, rubber - recoil	1	1	1	1	1
A-23-26051	13	Spacer, cushion	1	1	1	1	1
A-12-26048	14	Washer, thrust - cushion cup	1	1	1	1	1
A-26328	15	Adaptor, top cap	1	-	-	-	-
A-27097	16	Plate, drive end	1	-	-	-	-
A-27032	16	Plate, drive end	-	1	1	1	1
A-23-27098	--	Bushing, drive end plate	1	-	-	-	-
A-23-29460	--	Bushing, drive end plate	-	1	1	1	1
A-15-27099	17	Shim, plate to armature	AR	AR	AR	AR	AR
A-27100	18	Armature	1	-	-	-	-
A-27690	18	Armature	-	1	1	1	1
A-12-25642	19	Washer, thrust	1	-	-	-	-
A-27101	20	Housing and Field, starter	1	-	-	-	-
A-27691	20	Housing and Field, starter	-	1	-	-	-
A-28537	20	Housing and Field, starter	-	-	1	-	1
A-29260	20	Housing and Field, starter	-	-	-	1	-
A-27102	--	Strip, insulation - field coil windings	1	-	-	-	-
A-27103	--	Strip, insulation - thru bolt (drive end)	1	-	-	-	-
A-27104	--	Strip, insulation - thru bolt (comm. end)	1	-	-	-	-
C-12-23243	21	Washer, input and ground terminal	5	4	4	4	4
C-13-27692	22	Lockwasher, input and ground terminal	7	6	6	6	6
C-11-25650	23	Nut, input and ground terminal	5	4	4	4	4
A-12-25647	--	Washer, insulating - input terminal	2	2	2	2	2
A-25653	24	Brush, housing and field	2	-	-	-	-
A-27695	24	Brush, housing and field (double brush on single lead)	-	2	2	2	2
A-27689	--	Strip, insulation - brush shunt clip	4	8	8	8	8
A-25654	25	Brush, commutator end plate	2	-	-	-	-
A-27696	25	Brush, commutator end plate (double brush on single lead)	-	2	-	-	-
A-28538	25	Brush, commutator end plate (double brush on single lead)	-	-	2	2	2
A-24-25655	26	Spring, starter brush tension	4	8	8	8	8
C-10-25656	27	Screw, brush fastening	2	4	4	4	4
A-25657	28	End Plate, commutator	1	-	-	-	-
A-27033A1	28	End Plate, commutator	-	1	1	1	1
A-23-29461	--	Bushing, commutator end plate	1	1	1	1	1
A-25659	29	Strip, insulation - end plate	1	-	-	-	-
A-27698	29	Strip, insulation - end plate	-	1	1	1	1
A-25660	30	Cover, end plate	1	-	-	-	-
A-27699	30	Cover, end plate	-	1	1	1	1
C-12-23243	31	Washer, thru bolt	2	2	2	2	2
A-13-27692	32	Lockwasher, thru bolt	2	2	2	2	2
A-10-27105	33	Bolt, thru - commutator end plate to adaptor	2	-	-	-	-
A-10-27693	33	Bolt, thru - commutator end plate to drive end plate	-	2	2	2	2
A-32-27106	34	Tube, insulation - thru bolt	2	-	-	-	-
A-32-27694	34	Tube, insulation - thru bolt	-	2	2	2	2

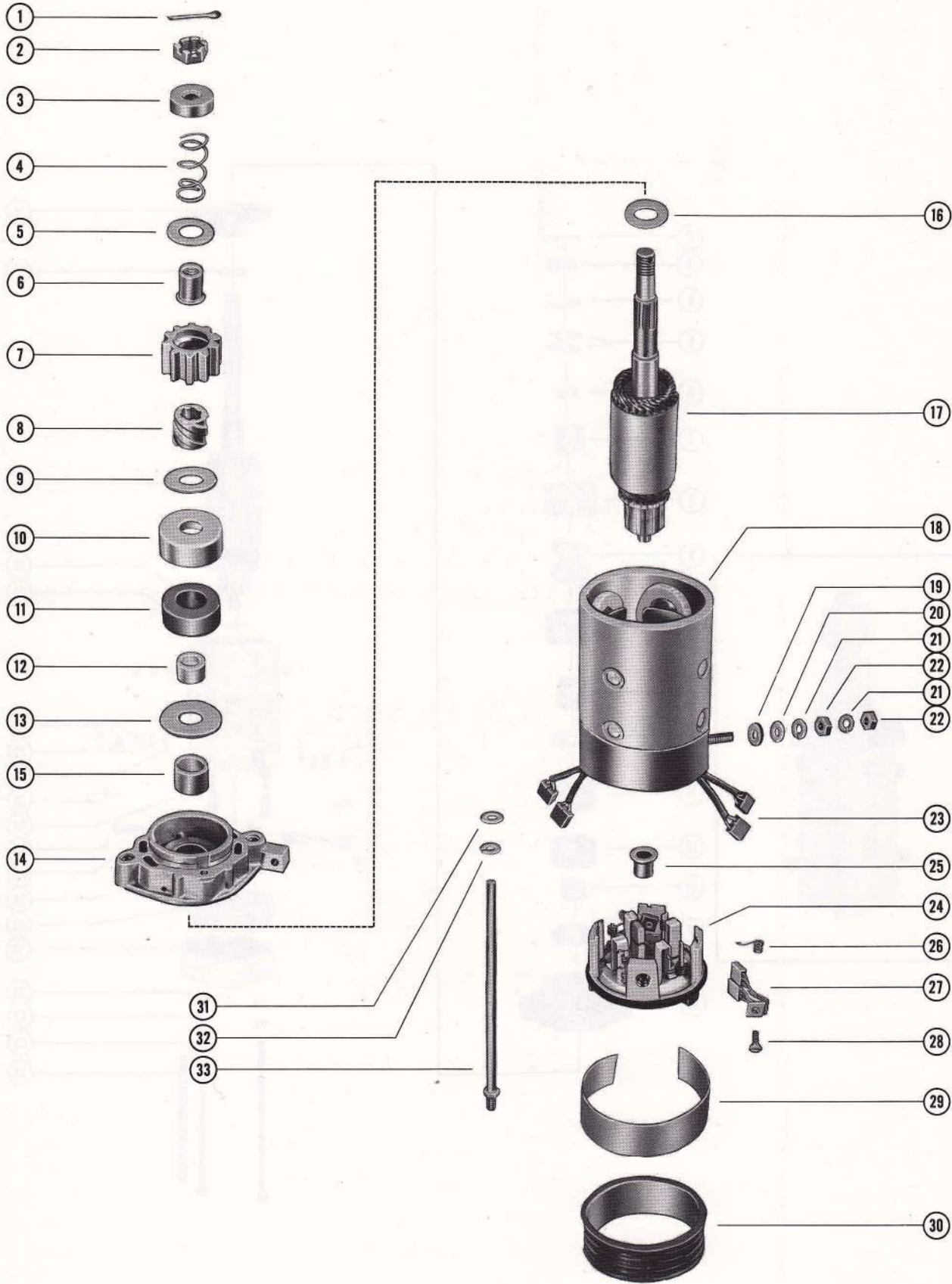
Order shims as shown:
A-15-27099005
A-15-27099010
A-15-27099015

STARTER MOTOR ASSEMBLY



(Direct Reversing Models)

STARTER MOTOR ASSEMBLY



(Gear Shift Models)

STARTER MOTOR ASSEMBLY (Gear Shift Models)

PART NO.	REF. NO.	DESCRIPTION	QUAN.
A-50-30575	-	Starter Motor Assembly, Complete <i>(Bosch SMA 12C 102)</i>	1
C-18-20209	1	Cotter Pin, fastening nut	1
C-11-25622	2	Nut, fastening	1
A-26058	3	Stop, pinion	1
A-24-26057	4	Spring, anti-drift	1
A-12-26056	5	Washer, anti-drift spring sleeve	1
A-23-26055	6	Sleeve, anti-drift spring	1
A-43-28536	7	Gear, pinion - drive <i>(10 tooth)</i>	1
A-27113	8	Shaft, screw	1
A-12-26052	9	Washer, thrust - cushion cup	1
A-26049	10	Cup, cushion	1
A-26050	11	Cushion, rubber - recoil	1
A-23-26051	12	Spacer, cushion	1
A-12-26048	13	Washer, thrust - cushion cup	1
A-27032	14	Plate, drive end	1
A-23-29460	15	Bushing, drive end plate	1
A-15-27099	16	Shim, drive end plate to armature	AR
A-31230	17	Armature	1
A-31231	18	Housing and Field, starter	1
A-12-25647	19	Washer, insulating - input terminal	1
C-12-23243	20	Washer, input terminal	1
A-13-27692	21	Lockwasher, input terminal	2
C-11-25650	22	Nut, input terminal	2
A-27695	23	Brush, housing and field <i>(double brush)</i>	2
A-27033A1	24	End Plate Assembly, commutator	1
A-23-29461	25	Bushing, commutator end plate	1
A-24-25655	26	Spring, tension - starter brush	8
A-28538	27	Brush, commutator end plate <i>(double brush)</i>	2
C-10-25656	28	Screw, brush to end plate	2
A-27698	29	Strip, insulation - commutator end plate	1
A-27699	30	Cover, rubber - commutator end plate	1
C-12-23243	31	Washer, thru bolt	2
A-13-27692	32	Lockwasher, thru bolt	2
A-10-27693	33	Bolt, thru - commutator end plate to drive end plate	2

Order shims as shown:
 A-15-27099005
 A-15-27099010
 A-15-27099015

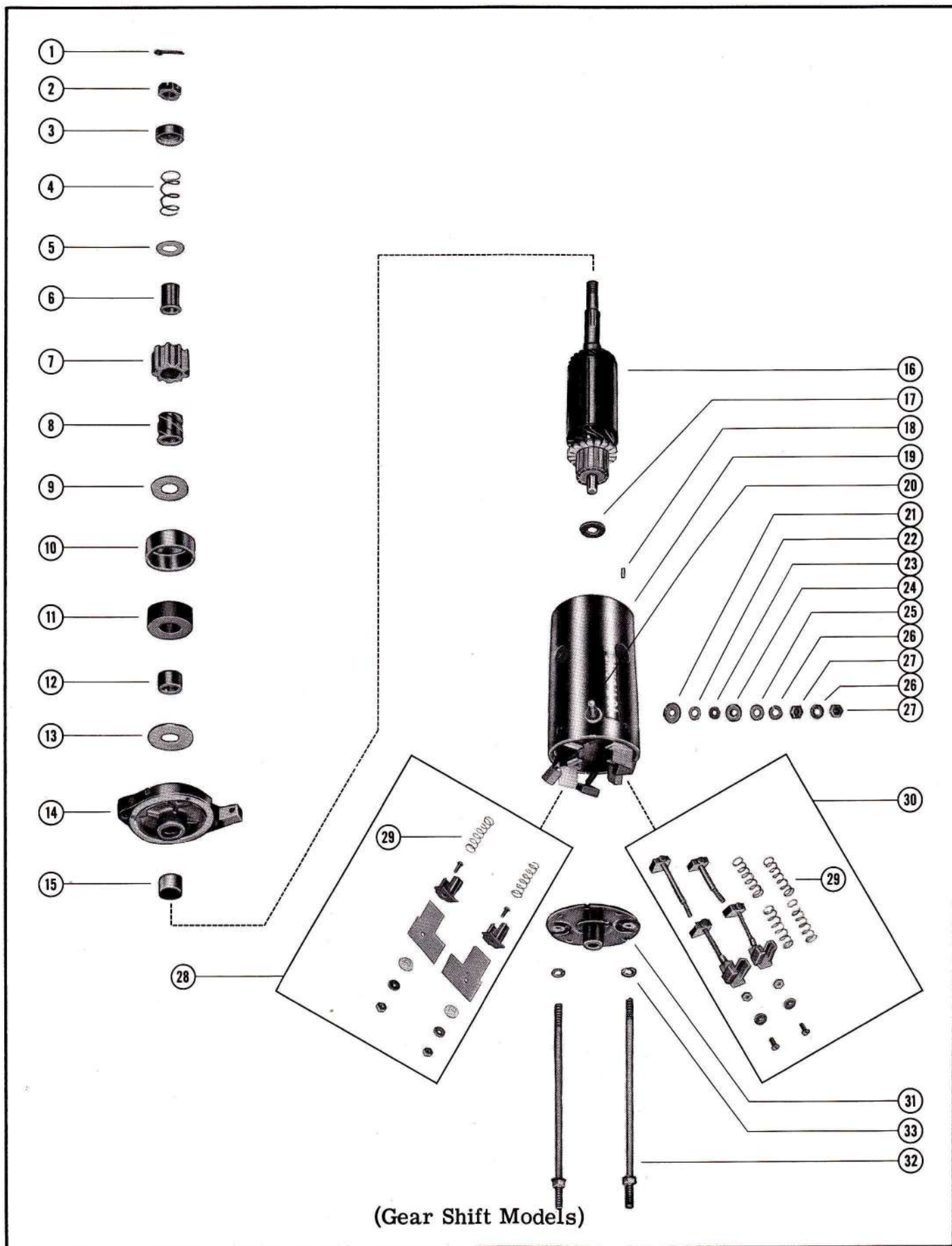
NOTE: The A-50-30575 Starter Motor used on early Merc 800 production of gear shift engines is no longer available, for replacement as a complete unit, order A-50-30842 Starter Motor. Component parts are still stocked, so order replacement parts accordingly.

STARTER MOTOR ASSEMBLY (Gear Shift Models)

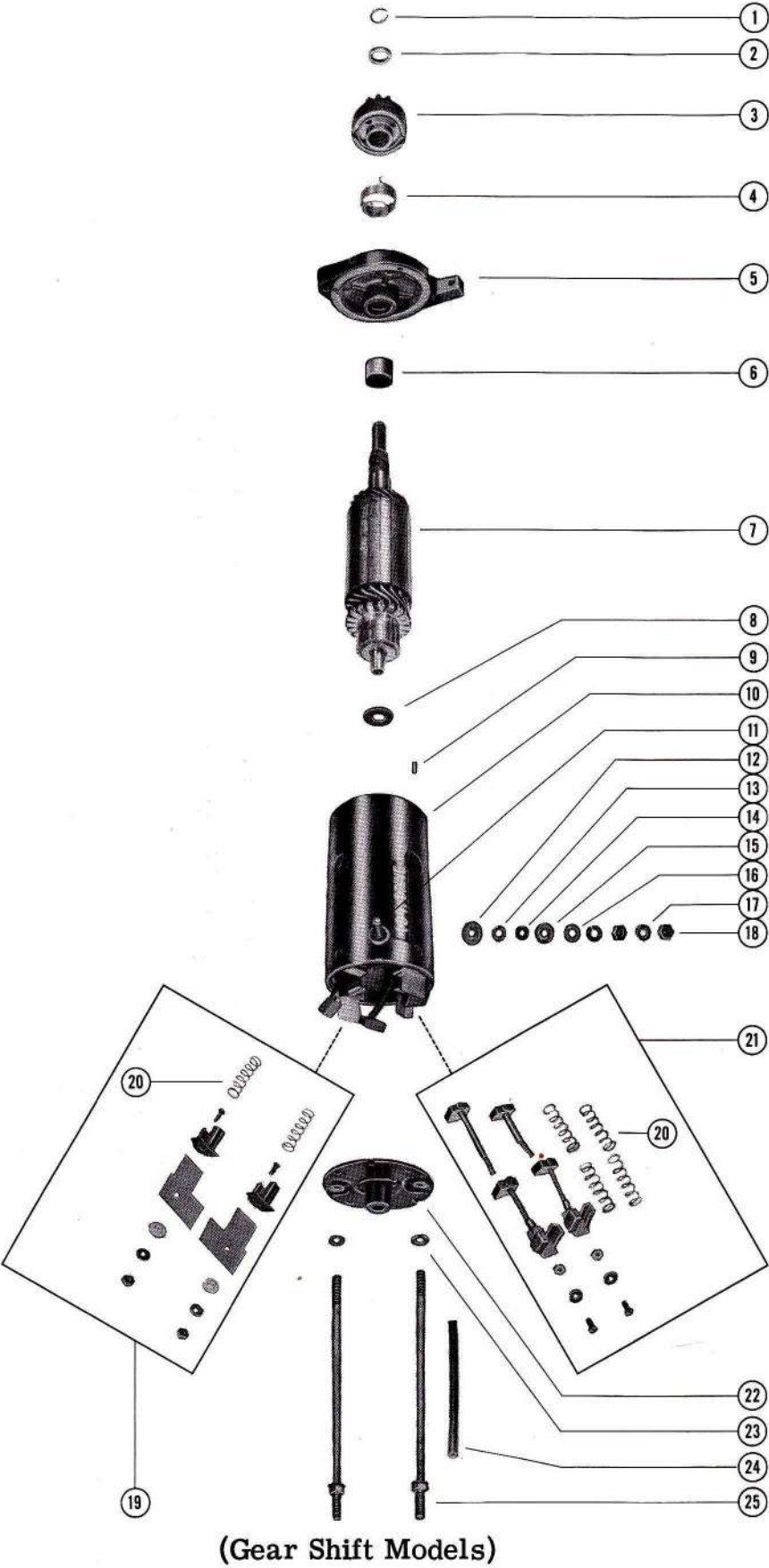
PART NO.	REF. NO.	DESCRIPTION	MERC 700	MERC 800
A-50-30955	-	Starter Motor Assembly, Complete (Delco-Remy #1113579)	1	-
A-50-30842	-	Starter Motor Assembly, Complete (Delco-Remy #1113578)	-	1
C-18-20209	1	Cotter Pin, fastening nut	1	1
C-11-20220	2	Nut, fastening	1	1
A-26058	3	Stop, pinion	1	1
A-24-26057	4	Spring, anti-drift	1	1
A-12-26056	5	Washer, anti-drift spring sleeve	1	1
A-23-26055	6	Sleeve, anti-drift spring	1	1
A-43-29258	7	Gear, pinion - drive (9 tooth)	1	-
A-29257	8	Shaft, screw - pinion gear	1	-
A-43-28536	7	Gear, pinion - drive (10 tooth)	-	1
A-27113	8	Shaft, screw - pinion gear	-	1
A-12-26052	9	Washer, thrust - cushion cup	1	1
A-26049	10	Cup, cushion	1	1
A-26050	11	Cushion,, rubber - recoil	1	1
A-23-26051	12	Spacer, cushion	1	1
A-12-26048	13	Washer, thrust - cushion cup	1	1
A-31193	14	Frame, drive end - upper	1	1
A-23-26044	15	Bushing, drive end frame	1	1
A-31186	16	Armature	1	1
A-12-31184	17	Washer, thrust - armature	1	1
A-17-26045	18	Dowel Pin, drive end plate	1	1
A-31190	19	Frame and Field Assembly	1	1
A-31189	20	Terminal Lead, field coil	1	1
A-12-31177	21	Washer, insulating - terminal lead (inside frame)	1	1
A-12-26033	22	Washer, terminal lead - bushing (inside frame)	1	1
A-12-26037	23	Washer, rubber - terminal lead (frame hole)	1	1
A-12-26032	24	Washer, insulating - terminal lead (outside frame)	1	1
C-12-23243	25	Washer, terminal lead (outside frame)	1	1
C-13-26992	26	Lockwasher, terminal lead	2	2
C-11-23868	27	Nut, terminal lead	2	2
A-31196	28	# Package, brusher holder replacement (insulated)	1	1
A-24-31170	29	Spring, starter brush	2	2
A-31197	30	# Package, brush replacement	1	1
A-24-31170	29	Spring, starter brush	4	4
A-31183	31	Frame, commutator end - lower	1	1
C-10-31191	32	Bolt, thru - frame to frame	2	2
C-13-26992	33	Lockwasher, thru bolt	2	2

One each of A-31196 or A-31197 replacement package required per starter motor.

STARTER MOTOR ASSEMBLY



STARTER MOTOR ASSEMBLY



STARTER MOTOR ASSEMBLY (Gear Shift Models)

PART NO.	REF. NO.	DESCRIPTION	QUANTITY	
A-50-30829	-	Starter Motor Assembly, Complete (Delco-Remy #1113577)	1	-
A-50-31976	-	Starter Motor Assembly, Complete (Delco-Remy #1113517)	-	1
A-31175	1	Lockwire, pinion stop collar	1	1
A-31176	2	Collar, pinion stop	1	1
A-32418	3	Motor Drive	1	-
A-32406	3	Motor Drive	-	1
A-24-32407	4	Spring, tension - motor drive	1	1
A-31181	5	Frame, drive end - upper	1	-
A-31193	5	Frame, drive end - upper	-	1
A-23-31167	6	Bushing, drive end frame	1	-
A-23-26044	6	Bushing, drive end frame	-	1
A-31180	7	Armature	1	-
A-32404	7	Armature	-	1
A-12-31168	8	Washer, thrust - armature	1	-
A-12-31184	8	Washer, thrust - armature	-	1
A-17-26045	9	Dowel Pin, drive end frame locating	1	1
A-31192	10	Frame and Field Assembly	1	-
A-31190	10	Frame and Field Assembly	-	1
A-31169	11	Terminal Lead, field coil	1	-
A-31189	11	Terminal Lead, field coil	-	1
A-12-31177	12	Washer, insulating - terminal lead (inside frame)	1	1
A-12-26033	13	Washer, terminal lead - bushing (inside frame)	1	1
A-12-26037	14	Washer, rubber - terminal lead (frame hole)	2	2
A-12-26032	15	Washer, insulating - terminal lead (outside frame)	2	2
C-12-23243	16	Washer, terminal lead (outside frame)	1	1
C-13-26992	17	Lockwasher, terminal lead	2	2
C-11-23868	18	Nut, terminal lead	2	2
A-31171	19	#Package, brush holder replacement (insulated)	1	-
A-31196	19	#Package, brush holder replacement (insulated)	-	1
A-24-31170	20	Spring, starter brush	2	2
A-31172	21	#Package, brush replacement	2	-
A-31197	21	#Package, brush replacement	-	1
A-24-31170	20	Spring, starter brush	4	4
A-31179	22	Frame, commutator end - lower	1	-
A-32405	22	Frame, commutator end - lower	-	1
C-13-26992	23	Lockwasher, thru bolt	2	2
A-32-32663	24	Tube, insulation - thru bolt	-	2
C-10-26046	25	Bolt, thru - frame to frame	2	-
C-10-31191	25	Bolt, thru - frame to frame	-	2

One each of A-31171 or A-31196 and A-31172 or A-31197 replacement package required per starter motor.

STARTER MOTOR ASSEMBLY (Gear Shift Models)

PART NO.	REF. NO.	DESCRIPTION	QUAN.	QUAN.
A-50-37345A1	-	Starter Motor Assembly, Comp. (MO551014A)	1	-
A-50-38890A1	-	Starter Motor Assembly, Comp. (MO551017A)	-	1
A-31175	1	Lockwasher, pinion stop collar	1	1
A-31176	2	Collar, pinion stop	1	1
A-32418	3	Motor Drive	1	1
A-24-32407	4	Spring, tension - motor drive	1	1
A-38007	5	Plate Assembly, drive end	1	1
A-12-38008	6	Washer, shimming - armature	1	1
A-15-38009005	7	Shim, end plate to armature (.005)	AR	AR
A-15-38009010	7	Shim, end plate to armature (.010)	AR	AR
A-15-38009020	7	Shim, end plate to armature (.020)	AR	AR
A-38010	8	Armature	1	-
A-39102	8	Armature	-	1
A-12-38011	9	Washer, thrust - armature	1	-
A-12-38012	10	Washer, insulation - input stud	1	1
A-12-38013	11	Washer, input stud	1	1
C-13-26992	12	Lockwasher, input stud	1	1
C-11-20890	13	Nut, input stud	1	1
- - - - -	14	*Brush, commutator - starter housing <i>(see note below)</i>	1	1
A-38015	15	Disc, thrust - armature	1	1
A-38018	16	End Cap Assembly, commutator	1	-
A-39104	16	End Cap Assembly, commutator	-	1
A-24-25655	17	*Spring, brush	2	-
A-24-39103	17	*Spring, brush	-	2
- - - - -	18	*Brush, end cap <i>(see note below)</i>	1	1
A-10-38016	19	Screw, brush to end cap	1	1
A-13-38019	20	Lockwasher, thru bolt	2	2
A-10-38020	21	Bolt, thru - end cap to drive end plate	2	-
A-10-39105	21	Bolt, thru - end cap to drive end plate	-	2

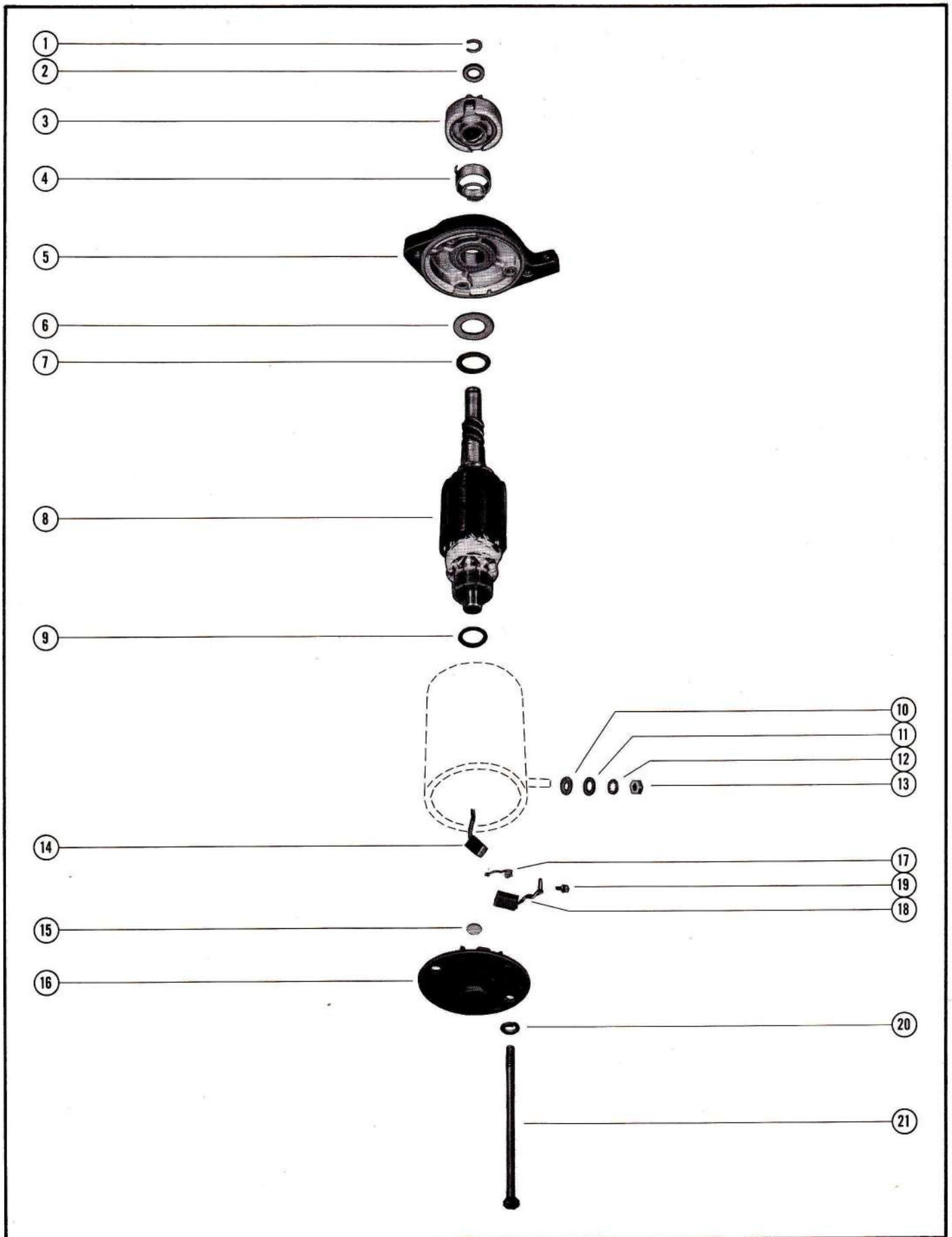
NOTE: When ordering replacement brushes on above starter motors, order one kit for each starter motor as listed below:

A-50-37345A1 Starter Motor A-39101 Brush/Spring Kit*

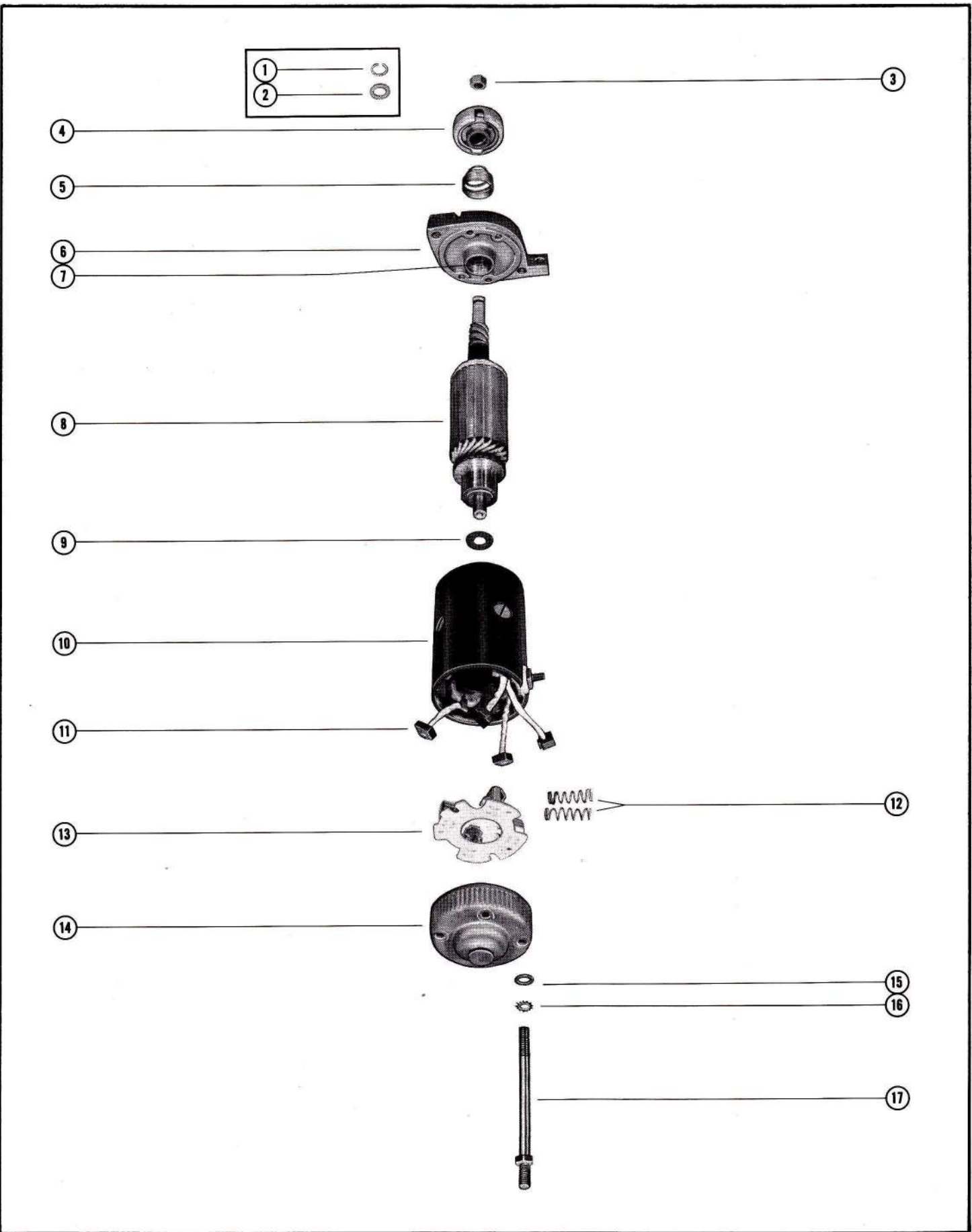
A-50-38890A1 Starter Motor A-39106 Brush/Spring Kit*

(*Each kit contains 2 brushes and 2 springs)

STARTER MOTOR ASSEMBLY (Gear Shift Models)



STARTER MOTOR ASSEMBLY (Gear Shift Models)



STARTER, MOTOR ASSEMBLY (Gear Shift Models)

PART NO.	REF. NO.	DESCRIPTION	A-50-37274A1	A-50-45822A1	A-50-48643A1	A-50-57465A1	A-50-57867A1	A-50-58788	A-50-60315
A-50-37274A1	-	Starter Motor Assembly, Complete	1	-	-	-	-	-	-
A-50-45822A1	-	Starter Motor Assembly, Complete	-	1	-	-	-	-	-
A-50-48643A1	-	Starter Motor Assembly, Complete	-	-	1	-	-	-	-
A-50-57465A1	-	Starter Motor Assembly, Complete	-	-	-	1	-	-	-
A-50-57867A1	-	Starter Motor Assembly, Complete	-	-	-	-	1	-	-
A-50-58788	-	Starter Motor Assembly, Complete	-	-	-	-	-	1	-
A-50-60315	-	Starter Motor Assembly, Complete	-	-	-	-	-	-	1
A-31175	1	Lockwire, pinion stop collar	1	1	1	-	-	-	-
A-31176	2	Collar, pinion stop	1	1	1	-	-	-	-
C-11-35053	3	Nut, pinion stop	-	-	-	1	1	-	-
A-32406	4	Motor Drive	1	1	1	1	1	-	-
A-392-4530	4	Motor Drive (includes nut, spring and collar)	-	-	-	-	-	1	1
A-24-32407	5	Spring, tension - motor drive	1	1	1	1	1	-	-
A-392-2517	6	Plate Assembly, drive end	1	-	-	-	-	-	-
A-392-3170	6	Plate Assembly, drive end	-	1	-	-	1	1	-
A-392-3409	6	Plate Assembly, drive end	-	-	1	-	-	-	-
A-392-4261	6	Plate Assembly, drive end	-	-	-	1	-	-	-
A-392-2518	7	Bushing, drive end plate	1	1	1	1	1	1	1
A-392-2522	8	Armature	1	1	-	-	-	-	-
A-392-3406	8	Armature	-	-	1	-	-	-	-
A-392-3906	8	Armature	-	-	-	1	-	-	-
A-392-4285	8	Armature	-	-	-	-	1	-	-
A-392-4529	8	Armature	-	-	-	-	-	1	-
A-392-4863	8	Armature	-	-	-	-	-	-	1
A-392-2523	9	Package, armature thrust washer	*1	*1	*1	*1	*1	*1	-
A-392-2520	10	Frame and Field Assembly	1	-	-	-	-	-	-
A-392-3169	10	Frame and Field Assembly	-	1	-	-	-	-	-
A-392-3407	10	Frame and Field Assembly	-	-	1	1	-	-	-
A-392-3782	10	Frame and Field Assembly	-	-	-	-	1	1	-
A-392-4865	10	Frame and Field Assembly	-	-	-	-	-	-	1
A-392-2521	11	Brush and Terminal Set	**1	**1	**1	**1	**1	**1	-
A-392-4866	11	Brush and Terminal Set	-	-	-	-	-	-	**1
A-392-2514	12	Spring Set, brush (2 springs per set)	2	2	2	2	2	2	2
A-392-2519	13	Brush Plate and Holder Assembly	1	1	1	1	1	1	-
A-392-4864	13	Brush Plate and Holder Assembly	-	-	-	-	-	-	1
A-392-2515	14	End Cap Assembly, commutator	1	1	-	-	1	1	-
A-392-3408	14	End Cap Assembly, commutator	-	-	1	-	-	-	-
A-392-4260	14	End Cap Assembly, commutator	-	-	-	1	-	-	1
A-392-2516	--	Bushing, commutator end cap	1	1	1	1	1	-	1
C-12-31760	15	Washer, thru bolt	2	2	-	-	-	-	-
C-13-26908	16	Lockwasher, thru bolt	2	2	-	2	2	-	-
C-13-26993	16	Lockwasher, thru bolt	-	-	3	-	-	-	-
A-392-2524	17	Bolt, thru - end cap to end plate (1/4 - 20)	2	-	-	-	-	-	-
A-392-3171	17	Bolt, thru - end cap to end plate (1/4 - 28)	-	2	-	-	2	2	-
A-392-3410	17	Bolt, thru - end cap to end plate (5/16 - 13)	-	-	3	-	-	-	-
A-392-4262	17	Bolt, thru - end cap to end plate (1/4 - 28)	-	-	-	2	-	-	-
A-392-4867	17	Bolt, thru - end cap to end plate	-	-	-	-	-	-	2

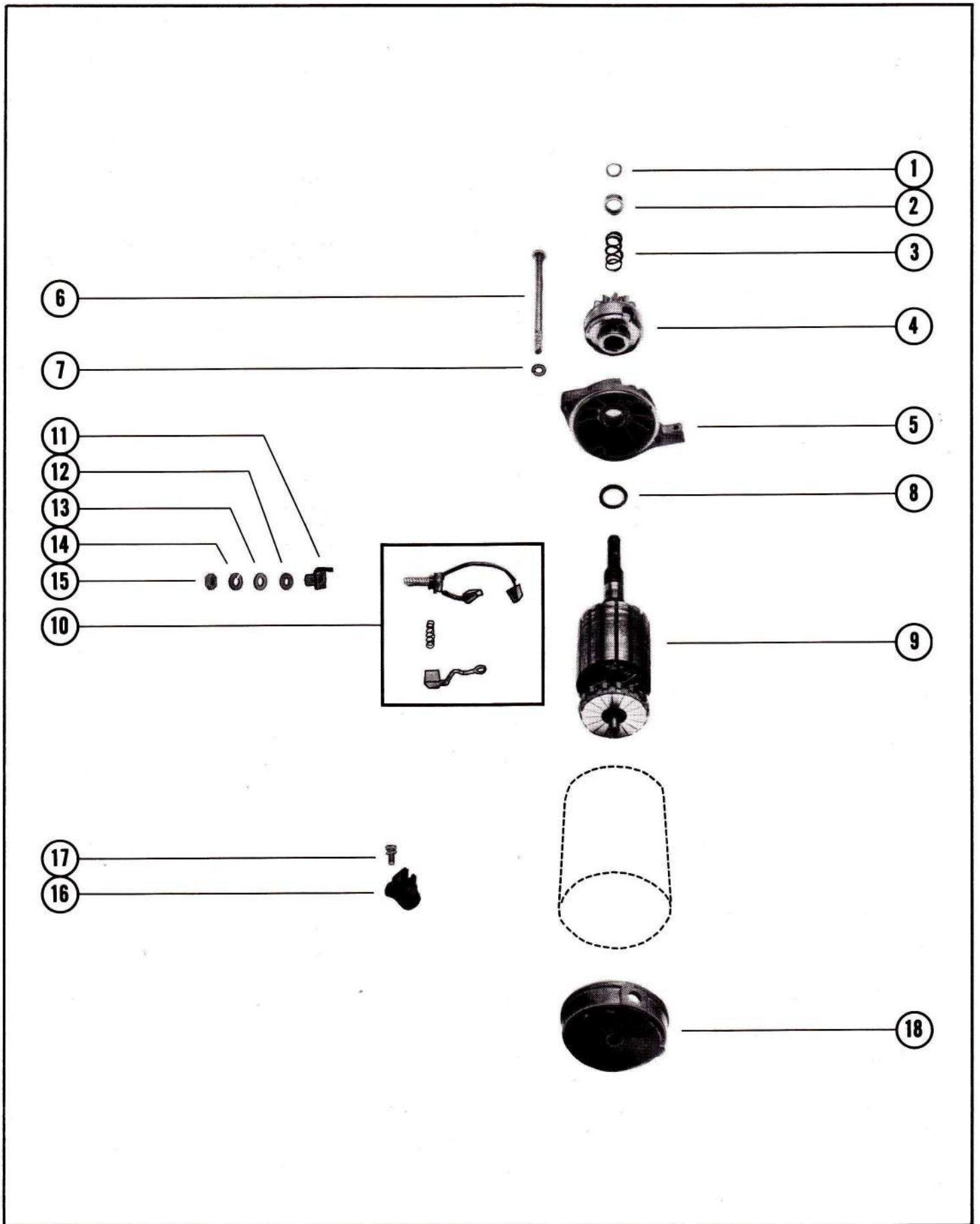
* Package contains various thickness washers for service replacement.

** Includes all 4 brushes plus terminal and lock nut.

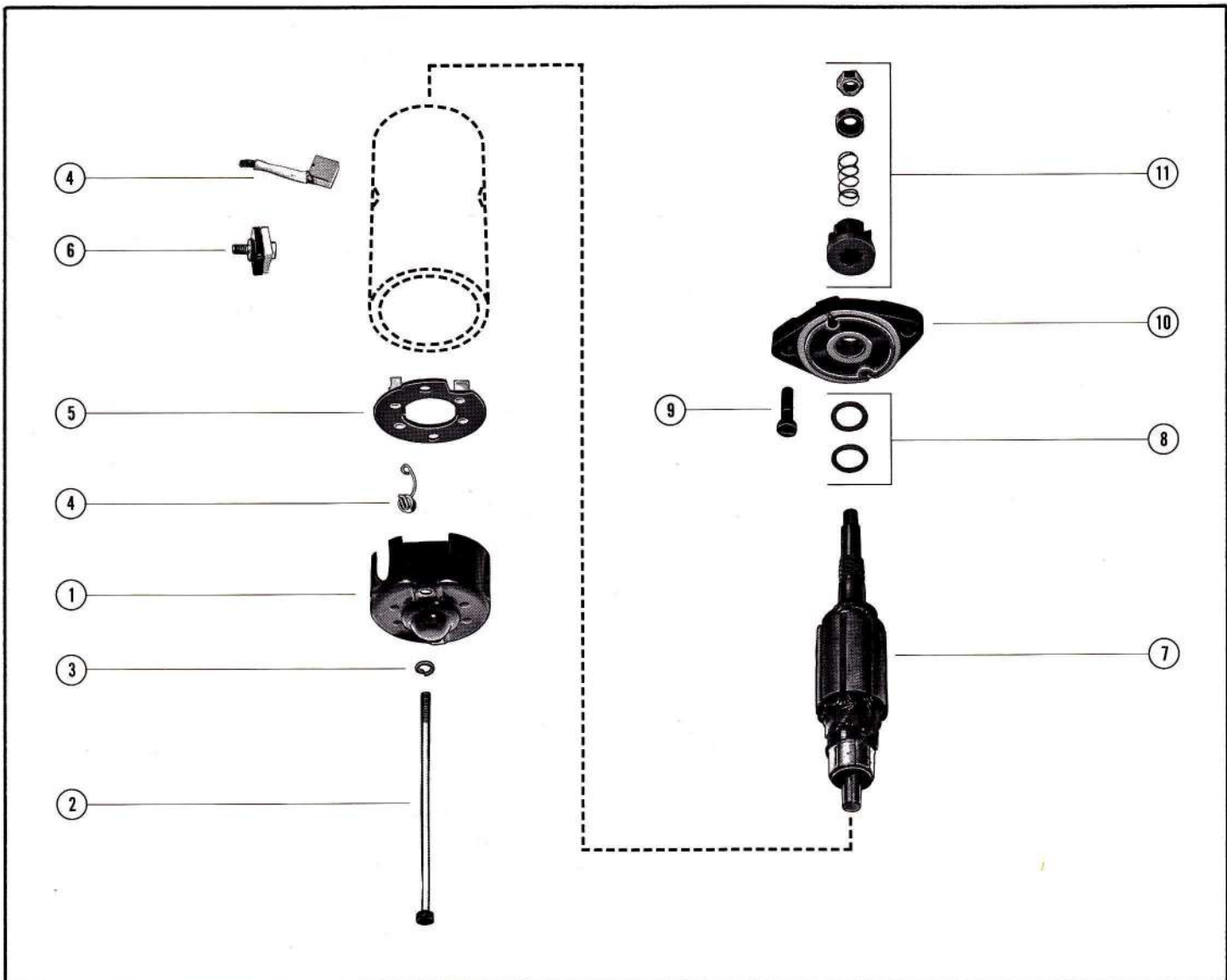
STARTER MOTOR ASSEMBLY, COMPLETE

PART NO.	REF. NO.	DESCRIPTION	QUAN.
●A-50-55601	-	Starter Motor Assembly, Complete	1
C-53-57377	1	Ring, retaining - drive assembly	1
C-23-57378	2	Spacer, drive assembly	1
C-24-57379	3	Spring, anti drift	1
●A-57380	4	Drive Assembly	1
D-57382	5	Plate Assembly, drive end	1
C-10-57381	6	Bolt, thru - plate to end cap	2
C-13-38019	7	Lockwasher, thru bolt	2
C-12-57383	8	Washer, thrust - armature	1
D-57384	9	Armature	1
D-57390	10	Brush Set	1
C-23-57387	11	Bushing, insulating - input stud	1
C-12-57388	12	Washer, insulating - input stud	1
C-12-38013	13	Washer, input stud	1
C-13-38019	14	Lockwasher, input stud	1
C-11-20890	15	Nut, input stud	1
D-57385	16	Holder, brush	2
C-10-57386	17	Screw, brush and holder to end cap	2
D-57389	18	End Cap Assembly, commutator	1

STARTER MOTOR ASSEMBLY, COMPLETE



STARTER MOTOR ASSEMBLY



PART NO.	REF. NO.	DESCRIPTION	QUAN.
●A-50-47216	-	Starter Motor Assembly, Complete (<i>Bosch SMF 12A 2</i>)	1
●A-48208	1	Cap Assembly, commutator end	1
●A-10-48205	2	Bolt, thru - cap to end plate	2
C-13-26996	3	Lockwasher, thru bolt	2
●A-48211	4	Spring and Brush Set (<i>2 per set</i>)	1
●A-48212	5	Plate and Holder Assembly, brush	1
●A-48213	6	Terminal Assembly, starter motor	1
●A-48207	7	Armature	1
●A-12-48468	8	Washer, spacing - armature	AR
●A-10-48206	9	Screw, starter motor mounting	2
●A-48209	10	End Plate Assembly, drive end	1
●A-48210	11	Drive Assembly, Complete	1