

PARTS AND OPERATION MANUAL



Bullfloat — HAL 150 & 300

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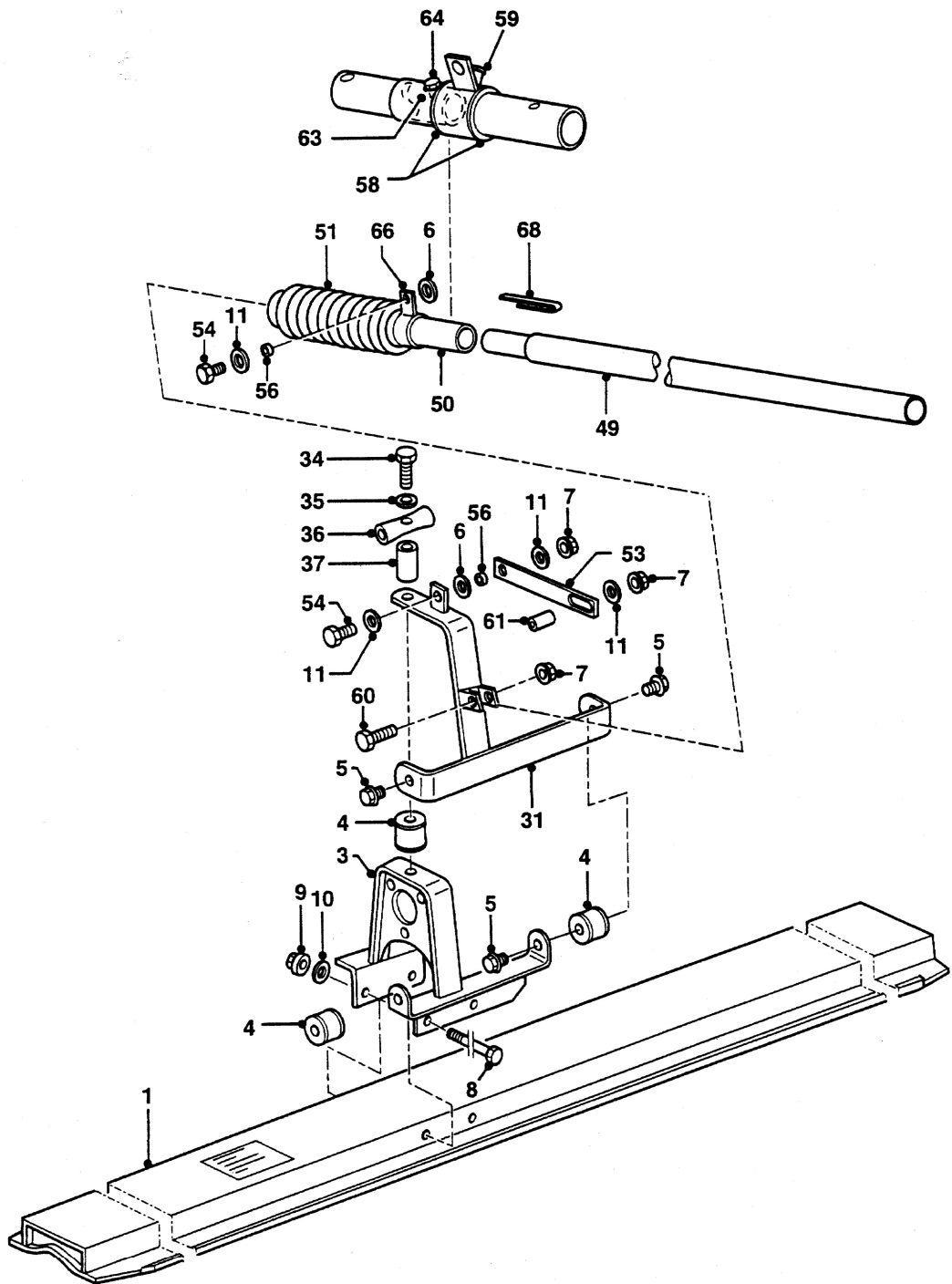
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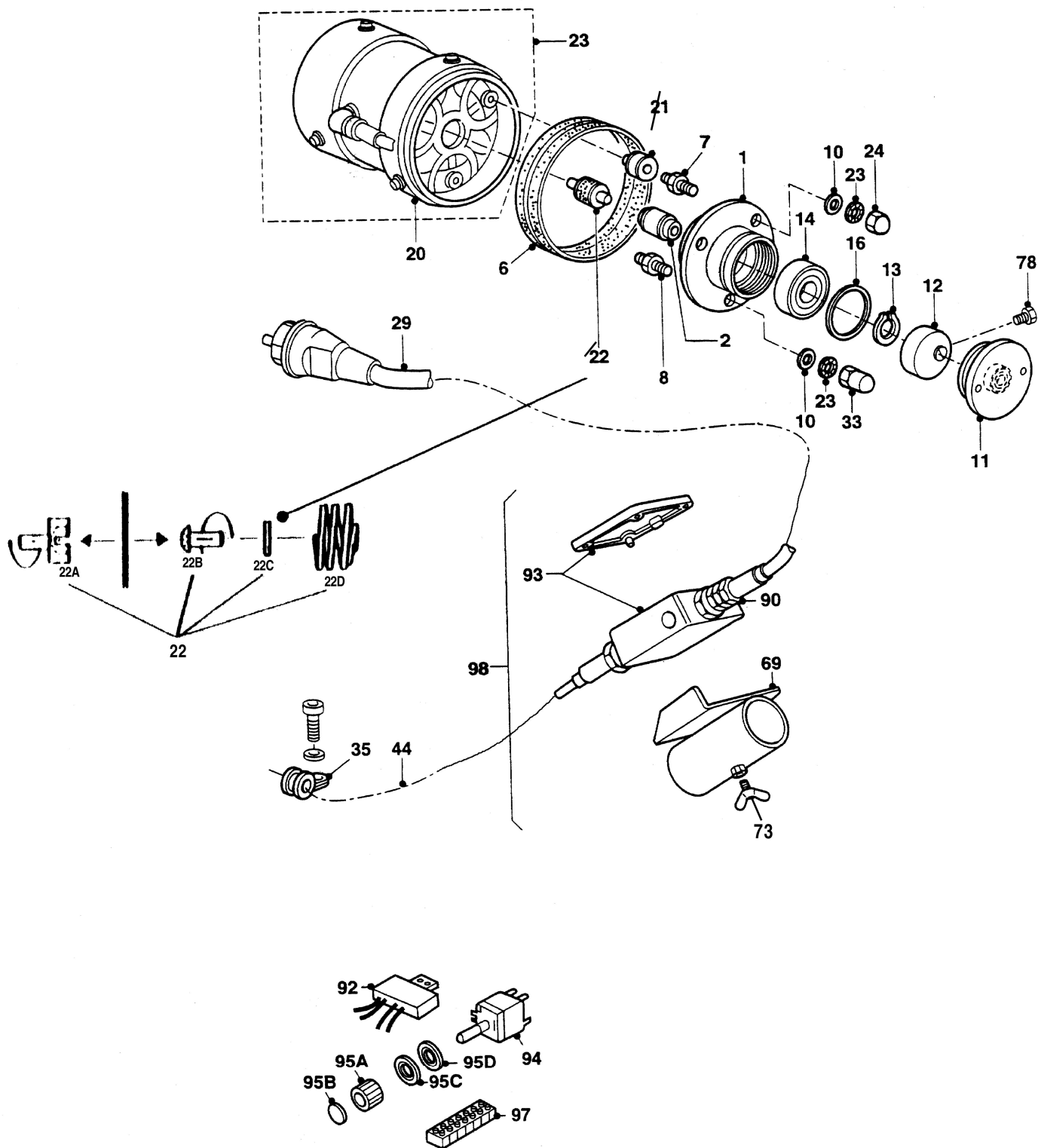


HAL 150 AND 300 FRAME

HAL 150 & 300 type E, ER and B frame

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	BF230010	BLADE, ALUM. 1.0 m — 3 ft.	1	
	BF230015	BLADE, ALUM. 1.5 m — 5 ft.	1	
	BF230020	BLADE, ALUM. 2.0 m — 6½ ft.	1	
	BF230025	BLADE, ALUM. 2.5 m — 8 ft.	1	
	BF230030	BLADE, ALUM. 3.0 m — 10 ft.	1	
3	BF23003	MOTOR ASSEMBLY BRACKET	1	
4	BF0060	RUBBER BUFFER	3	
5	BF0124	BOLT M8 X 10	5	
6	BF0173	UNDULATED RING	2	
7	BF0093	NUT M10	3	
8	BF0115	BOLT M8 X 150	2	
9	BF0107	NUT M8	2	
10	BF0172	RETAINING RING	2	
11	BF0156	WASHER M 10	4	
31	BF230031	ASSEMBLY BRACKET	1	
34	BF0140	BOLT	1	
35	BF0212	RETAINING RING	1	
36	BF23036	GRIP	1	
37	BF23037	SPACER	1	
49	BF2348	OPERATING HANDLE 150 CM	3	
50	BF2350	PITCH CONTROL	1	
51	BF23051	RUBBER SLEEVE	1	
53	BF23053	ADJUSTABLE STRIP	1	
54	BF0131	BOLT M10 X 25	2	
56	BF23056	SPACER 4,2 mm	2	
58	BF0203	LOCK-RING	2	
59	BF23059	LUBRICATING NIPPLE & CAP	1	
60	BF0133	BOLT M10 X 50	1	
61	BF23061	SPACER 32 mm	1	
63	BF23063	BRASS NUT M8	1	
64	BF0125	BOLT M8	1	
66	BF23066	PLASTIC CLAMP	1	
68	BF23068	LOCKING CLIP	1	

HAL 150 AND 300 ELECTRIC DRIVE-UNIT AND SWITCH

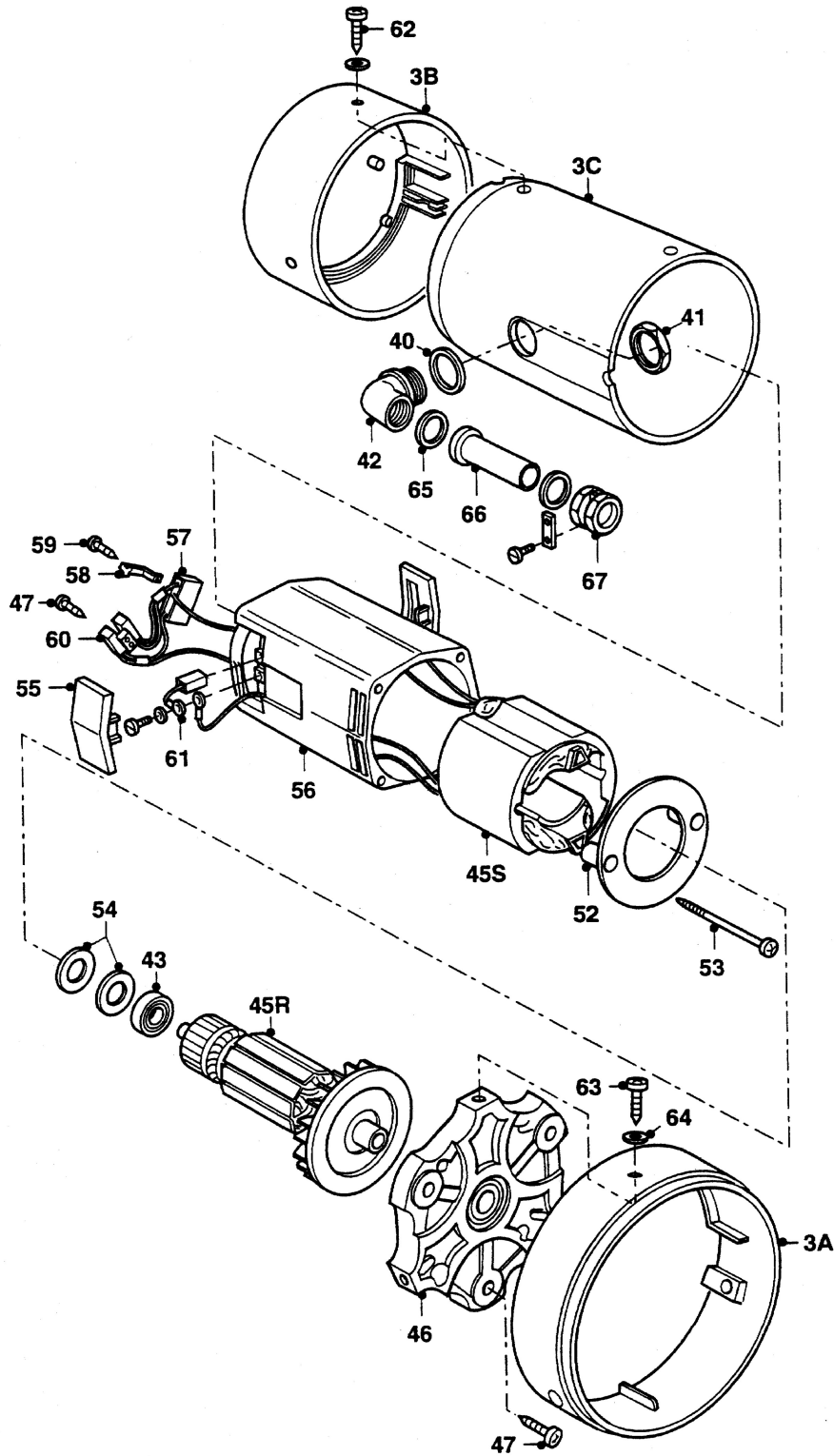


HAL 150 AND 300 ELECTRIC DRIVE-UNIT AND SWITCH

HAL 150 & 300 type-E-,ER drive-unit and switch

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	BF2301 N	EXCENTER-HOUSING	1	
2	BF2302N	EXCENTER-SHAFT	1	
6	BF2306B	RUBBERSEAL	1	
7	BF2307	ADAPTOR - BOLT (SHORT)	2	
8	BF2308	ADAPTOR - BOLT (LARGE)	1	
10	BF0155	WASHER	3	
11	BF2311N	COVER&BEARING, EXCENTER	1	
12	BF231213	EXCENTER 1.0 - 1.5 m.	1	
	BF231217	EXCENTER 2.0 - 2.5 m.	1	
13	BF0201	LOCKRING	1	
14	BF2314	EXCENTER-BEARING	1	
16	BF2316	O-RING	1	
20	BF2320	DRIVE-UNIT	1	
21	BF0051	RUBBERBUFFER	3	
22	BF2325	COUPLING- SET	1	INCLS. ALL ITEMS W/*
22A*	BF2323	CATCH, DRIVESHAFT	1	
22B*	BF0273	SCREW	1	
22C*	BF0154	WASHER	1	
22D*	BF2322	SPRING	1	
23	BF0172	RETAINING RING M8	3	
24	BF0088	CAPNUT	2	
29	BF0017	CABLE 2 X1,5 mm2 + PLUG 220V	10	
33	BF0086	CAPNUT (HIGH)	1	
35	BF2335	CABLE-CLAMP	1	
44	BF0004	CABLE	1	
69	BF2369ER	SWITCH ASSEMBLY BRACKET (ER)	1	
73	BF0325	WING-SCREW	1	
74	BF23074	SWITCH COMPLETE	1	
78	BF0122	SCREW	1	
90	BF0420	PACKING BOX	2	
91	BF0421	NUT	2	
92	BF2392	SPEED-REGULATOR (ONLY)	1	
93	BF2393	SWFTCH-BOX (SPEED-REGULATOR)	1	
94	BF2394	POTENTIOMETER & SWITCH	1	
95A	BF2395A	KNOB (POTENTIOMETER)	1	
95B	BF2395B	KNOB-CAP	1	
95C	BF2395C	FIGURE DIAL	1	
95D	BF2395D	STATOR	1	
97	BF2397	TERMINAL-BLOC	1	
98	BF2398	SPEED-REGULATOR COMPL. (INCL. BRACKET)	1	
99	BF2399	SPEED-REGULATOR COMPL. (EXCL. BRACKET)	1	

HAL 150 AND 300 ELETRIC DRIVE-UNIT COMPONENTS

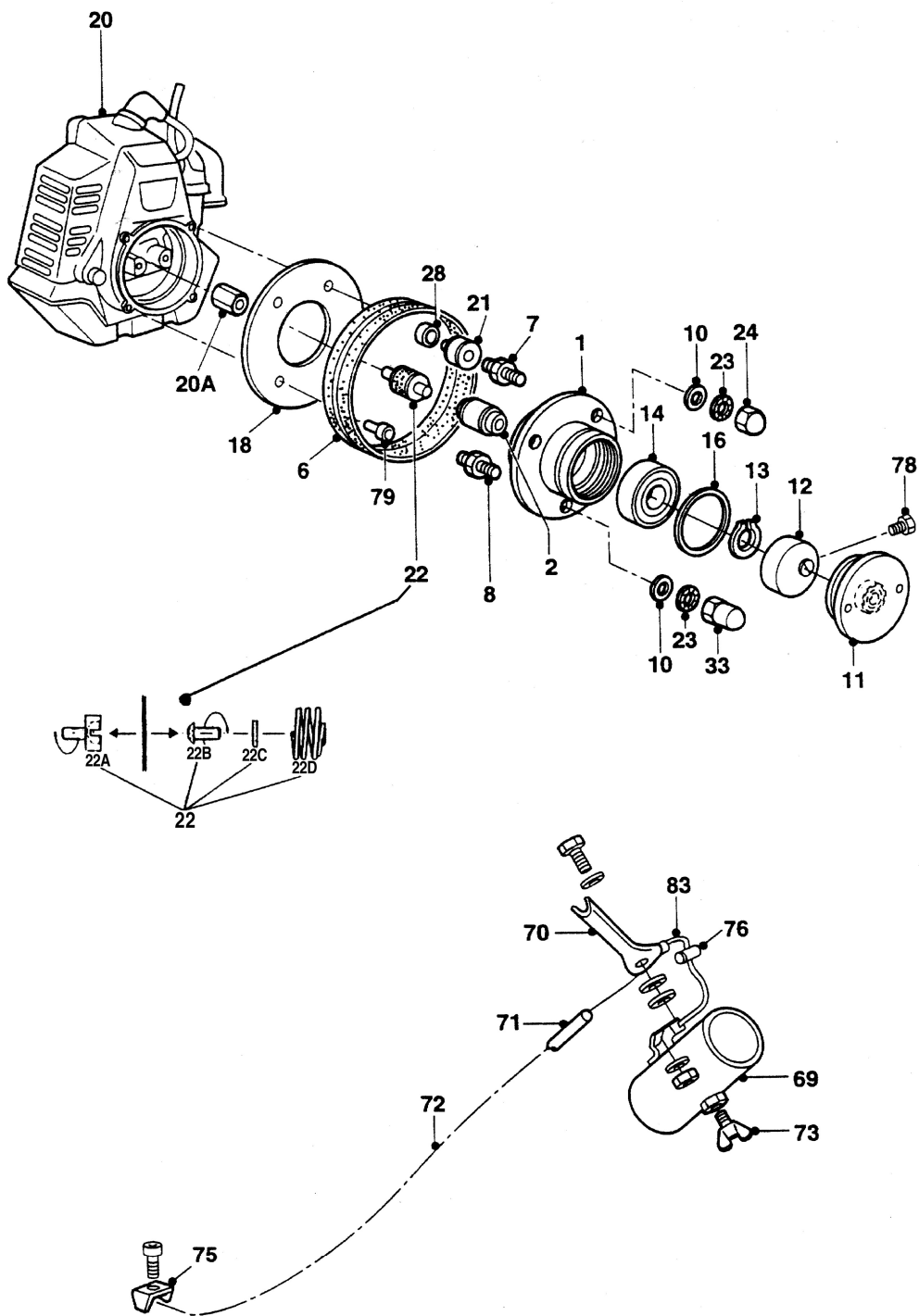


HAL 150 AND 300 ELETRIC DRIVE-UNIT COMPONENTS

HAL 150 & 300 type- E, ER drive-unit

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
3A	BF2303A	VENTILATION RING (SMALL)	1	
3B	BF2303B	VENTILATION RING (LARGE)	1	
3C	BF2303C	VENTILATION HOUSING	1	
40	BF0428	RUBBERING	1	
41	BF0421	PLASTIC NUT	1	
42	BF0430	PACKING BOX	1	
43	BF1101220240	REAR-BEARING	1	
45S	BF2345S	STATOR	1	
45R	BF2345R	ROTOR	1	
46	BF2346	FRONT SHIELD	1	
47	BF0249	SELF TAPPING SCREW	5	
52	BF1101220170	VENTILATOR-COVER	1	
53	BF1101220200	SCREW	2	
54	BF1101220250	SPRING SOURCER	2	
55	BF1101220220	BRUSH-COVER	2	
56	BF1101220180	MOTOR-HOUSING	1	
57	BF2357	CAPACITOR	1	
58	BF2358	CAPACITOR-CLAMP	1	
59	BF0248	SELF TAPPING SCREW	3	
60	BF2360	TERMINAL-BLOC	1	
61	BF1101220230'	SET OF BRUSHES	1	
62	BF0230	SELF TAPPING SCREW	3	
63	BF0231	SELF TAPPING SCREW	3	
64	BF0154	WASHER	3	
65	BF0417	PRESSING RING	2	
66	BF0415	CABLE-SLEEVE	1	
67	BF0416	CABLE-PACKING-BOX	1	

HAL 150 AND 300 GAS DRIVE-UNIT AND GAS THROTTLE



HAL 150 AND 300 GAS DRIVE-UNIT AND GAS THROTTLE

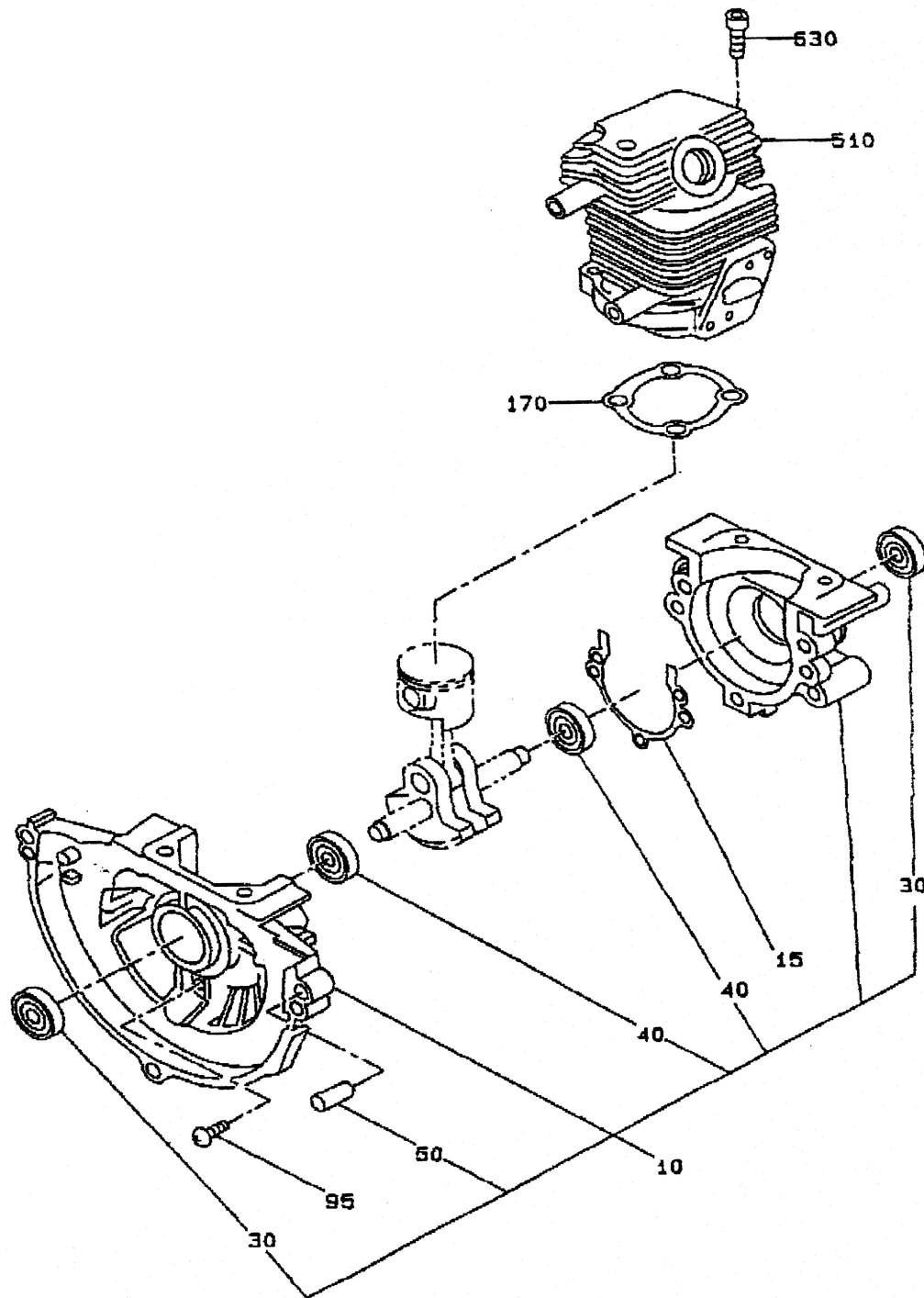
HAL 150 & 300 type- B drive-unit and gasthrottle

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	BF2301 N	EXCENTER-HOUSING	1	
2	BF2302N	EXCENTER-SHAFT	1	
6	BF2306 B	SEAL, RUBBER	1	
7	BF2307	ADAPTOR-BOLT (SHORT)	2	
8	BF2308	ADAPTOR-BOLT (LARGE)	1	
10	BF0155	WASHER	3	
11	BF2311N	COVER&BEARING (EXCENTER HS.)	1	
12	BF231213	EXCENTER 1.0 - 1.5 m.	1	
	BF231217	EXCENTER 2.0 - 2.5 m.	1	
13	BF0201	LOCK RING	1	
14	BF2314	EXCENTER-BEARING	1	
16	BF2316	O-RING	1	
18	BF2318N	ENGINE BRACKET	1	
20	BF2302666020	GAS ENGINE, KAWASKI	1	
20A	BF2320A	ENGINE ADAPTOR	1	
21	BF0055	RUBBER BUFFER	3	
22	BF2325	COUPLING - SET	1	INCLS. ALL ITEMS W/*
22A*	BF2323	CATCH, DRIVESHAFT	1	
22B*	BF0273	SCREW	1	
22C*	BF0154	WASHER	1	
22D*	BF2322	SPRING	1	
23	BF0172	RETAINING RING M8	3	
24	BF0088	CAPNUT	2	
28	BF2328	SPACER	3	
33	BF0086	CAPNUT (HIGH)	1	
69	BF2369B	LEVER, GAS & BRACKET	1	
70	BF2302666700	LEVER, GAS (ONLY)	1	
71	BF2371	THROTTLE-CABLE (OUTER)	1	
72	BF2372	THROTTLE-CABLE (INNER)	1	
73	BF0325	WING-SCREW	1	
75	BF2375	ASSEMBLY-BRACKET	1	
76	BF2376	THROTTLE-CABLE STOPPER	1	
78	BF0122	SCREW	1	
79	BF0123	NUT	4	
83	BF2383	SPRING	1	
84	BF2384	DRIVE-SHAFT ASSY	1	
	BF23510	UNIT ASSY (ENGINE & COMPONENTS), KAWASAKI	1	
	KWAAIR	ELEMENT, AIR FILTER KAWASAKI ENGINE	1	
	0650140460	SPARK PLUG, KAWASAKI ENGINE	1	

NOTE:

For the balance of the Kawaski Engine Parts, call your local Kawaski Engine distributor referring to engine model TGO 18D-CA 51
For the Robin Engine spare parts, refer to the engine section of this book.

ROBIN EC0250G6004 — CRANKCASE & CYLINDER

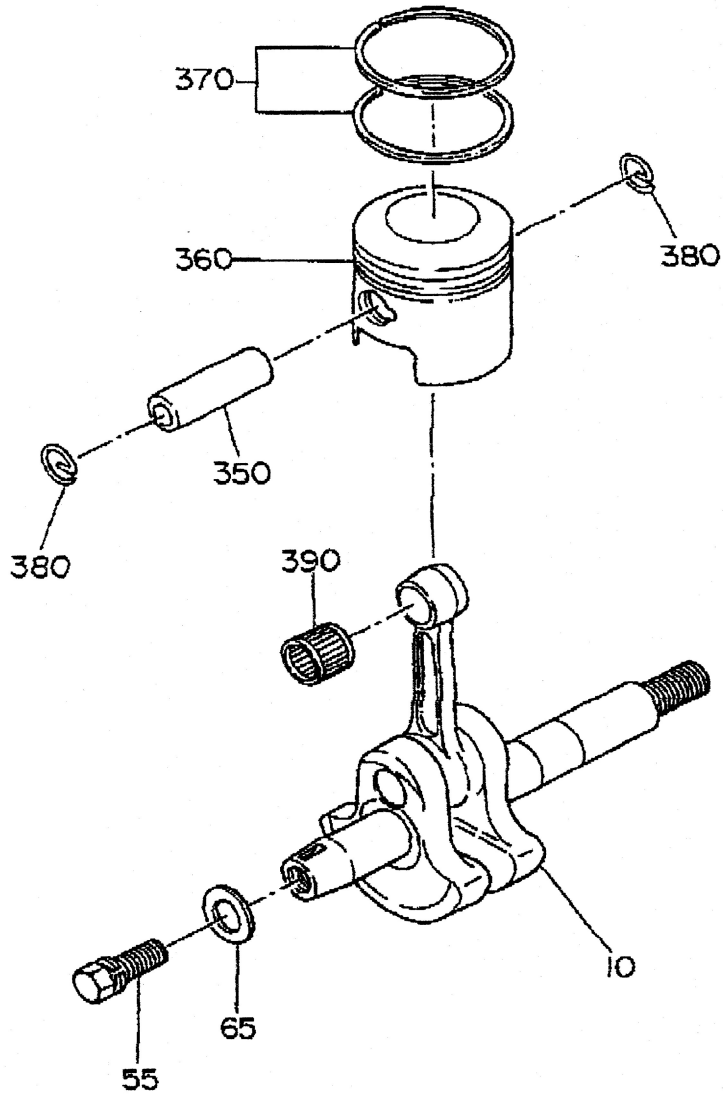


ROBIN EC0250G6004 — CRANKCASE & CYLINDER

CRANKCASE & CYLINDER

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	525100300	CRANKCASE ASSY	1	INCLS. ITEMS W/*
15	5231502202	GASKET	1	
30*	0440129970	OIL SEAL	2	
40*	0600129920	BALL BEARING	2	
95	0140059520	SCREW	3	
170	5231502304	GASKET	1	
510	5251500200	CYLINDER	1	
630	0119059730	SOCKET HEAD BOLT	2	

ROBIN EC0250G6004 — CRANKSHAFT & PISTON

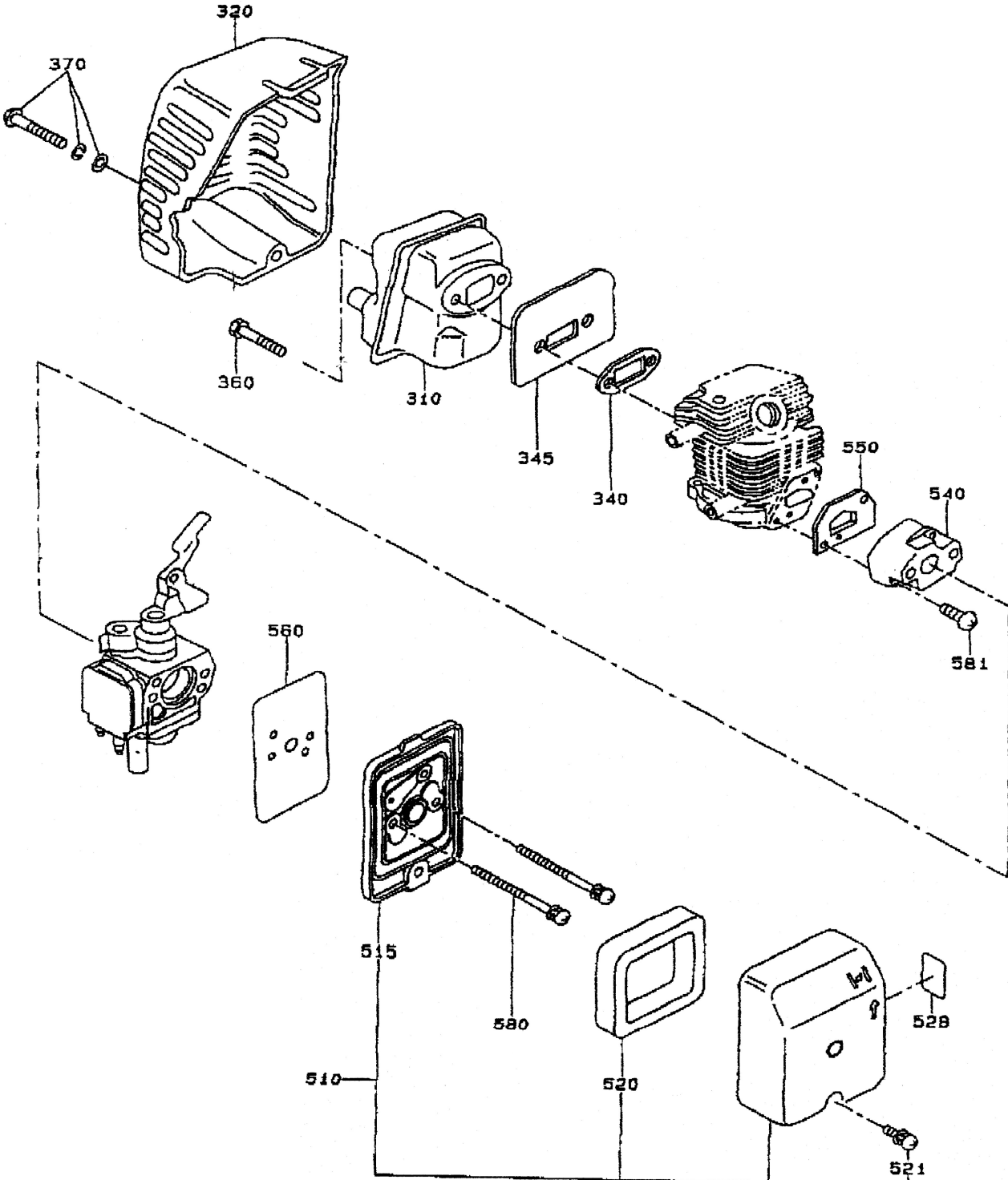


ROBIN EC0250G6004 — CRANKSHAFT & PISTON

CRANKCASE & PISTON

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	5252001001	CRANKSHAFT	1	
55	0011306160	BOLT & WASHER ASSY	1	
65	0031206000	WASHER	1	
350	5232502600	PISTON PIN	1	
360	5232501902	PISTON	1	
370	5242500701	PISTON RING	1	
380	0565089970	CLIP	2	
390	0610089990	NEEDLE BEARINGS	1	

ROBIN EC0250G6004 — MUFFLER, AIR CLEANER

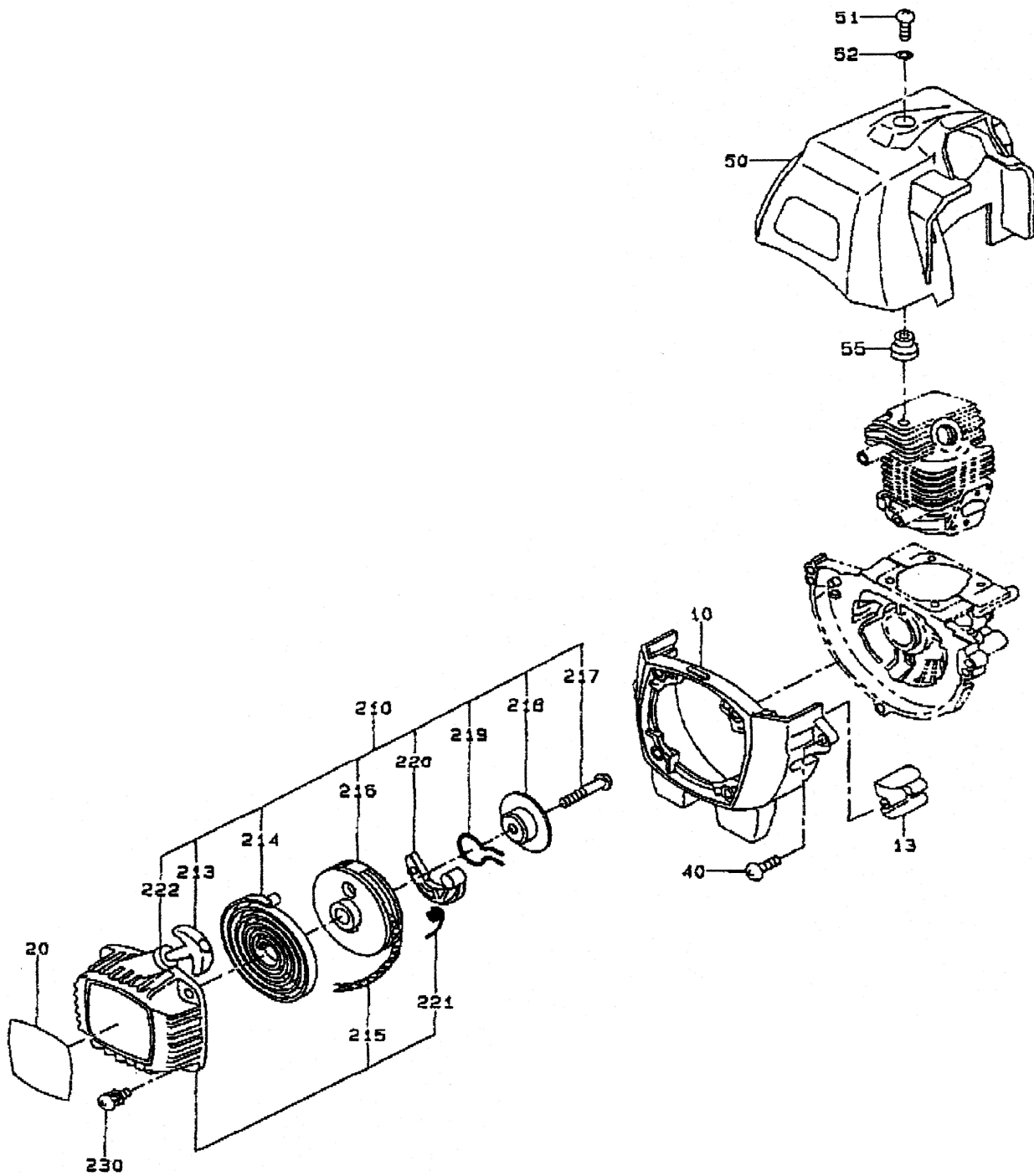


ROBIN EC0250G6004 — MUFFLER, AIR CLEANER

MUFFLER, AIR CLEANER

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
310	5253015000	MUFFLER	1	
320	5253500000	MUFFLER COVER	1	
340	5233504302	GASKET	1	
345	5253500101	GASKET	1	
360	0119059660	SOCKET HEAD BOLT	2	
370	0043705160	SCREW ASSY	1	
510	5203004030	AIR CLEANER ASSY	1	INCLS. ITEMS W/*
515*	5253004010	CLEANER BODY ASSY	1	
520*	5203004010	ELEMENT, AIR CLEANER	1	
540	5233014000	INSULATOR CAP	1	
550	5253500200	GASKET	1	
560	5103502800	GASKET	1	
562	5256501200	GASKET	1	
563	5256501100	O'RING	1	
580	0043305650	SCREW ASSY	2	
581	0140059500	SCREW ASSY	2	

ROBIN EC0250G6004 — RECOIL STARTER & HOUSING

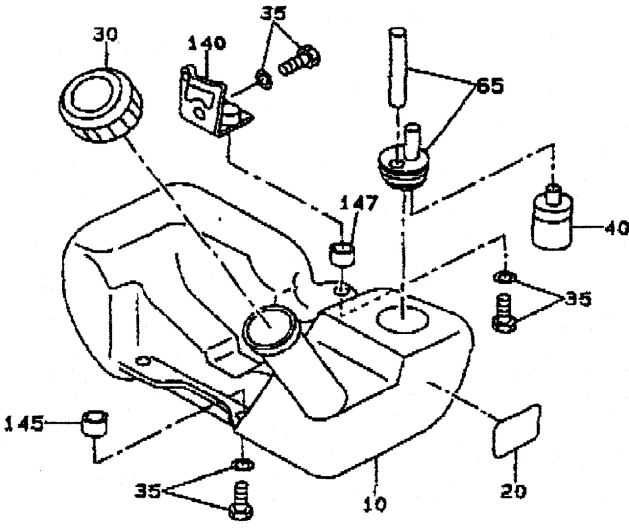
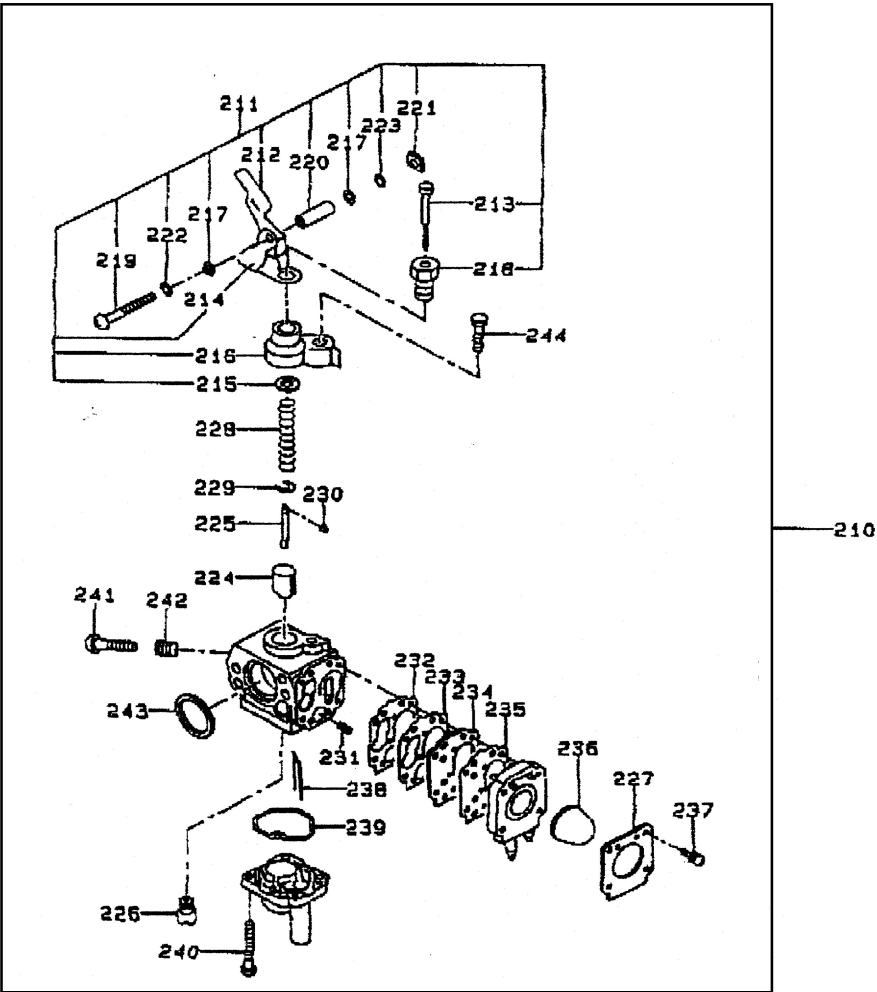


ROBIN EC0250G6004 — RECOIL STARTER & HOUSING

RECOIL STARTER & HOUSING

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	5255500001	BLOWER HOUSING	1	
13	5215500300	BUFFLE PLATE	1	
20	5259500000	DECAL	1	
40	0043505160	SCREW AND WASHER ASSY	3	
50	5255500401	CYLINDER COVER	1	
51	0140059490	SCREW	1	
52	0200070010	WASHER	1	
55	5503503001	SPACER	1	
210	5255001000	RECOIL STARTER ASSY	1	INCLS. ITEMS W/*
213*	5225004020	STARTER KNOB	1	
214*	5025001020	SPIRAL SPRING	1	
215*	5235024022	STARTER ROPE	1	
216*	5025001010	REEL	1	
217*	5255001020	SET SCREW	1	
218*	5215002040	FRICTION PLATE	1	
219*	5105015050	FRICTION SPRING	1	
220*	5105015020	RATCHET	1	
221*	5105015060	RETURN SPRING	1	
222*	5255001040	DAMPER	1	
230	0140059480	SCREW	1	

ROBIN EC0250G6004 — CARBURETOR & FUEL TANK

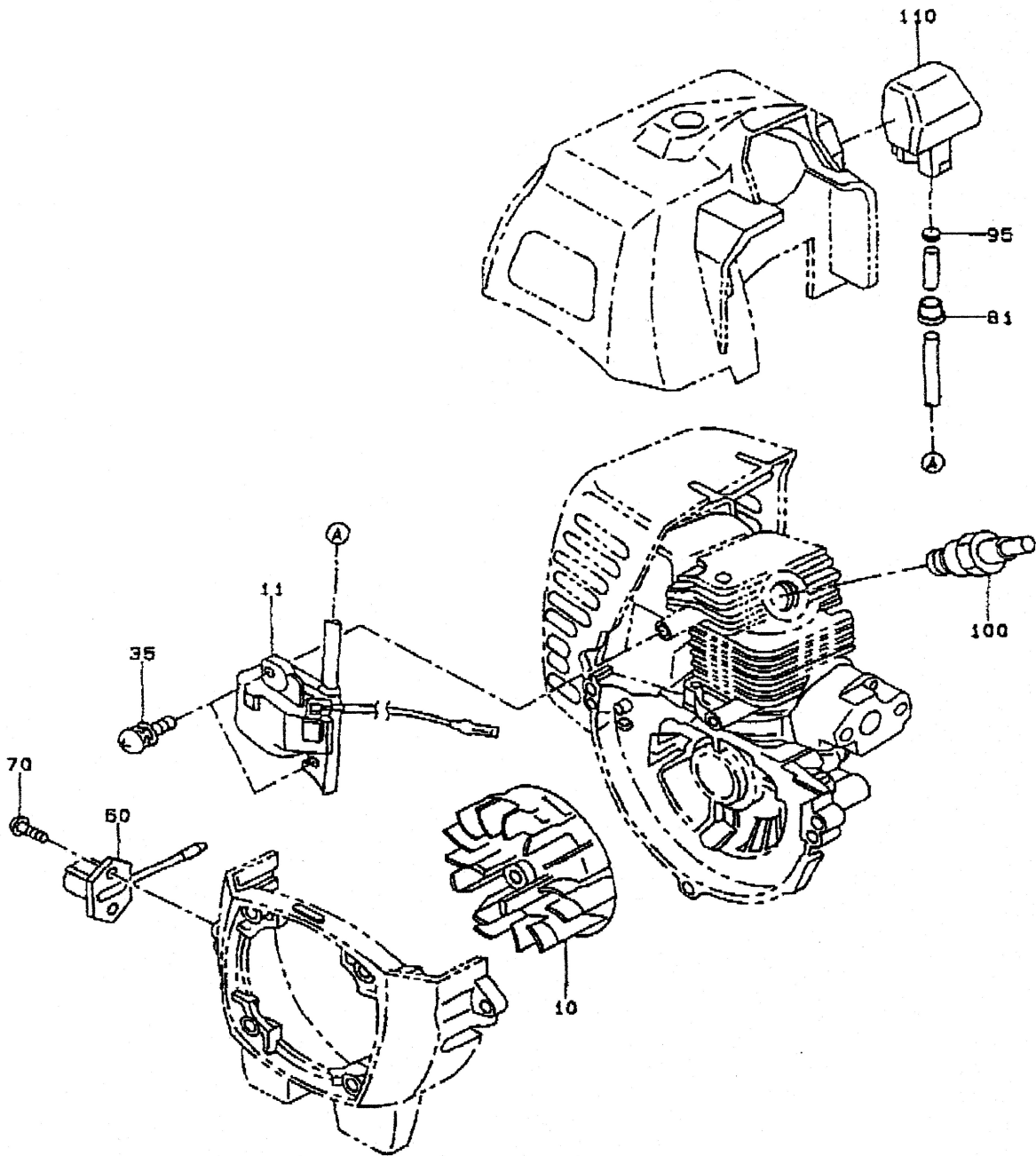


ROBIN EC0250G6004 — CARBURETOR & FUEL TANK

FUEL TANK, CARBURETOR

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	5256500502	FUEL TANK	1	
20	5259503500	LABEL, MODEL	1	
30	5216004003	CAP	1	
35	0043705160	SCREW ASSY	4	
40	5236503900	FILTER	1	
65	5256012001	TUBE ASSY	1	
140	5256002000	PLATE	1	
145	0230059970	SPACER	2	
147	0230059950	SPACER	1	
210	5256007000	CARBURETOR ASSY	1	INCLS. ITEMS W/*
227*	5236046050	SPACER	1	
232*	5246001030	COVER	1	
233*	5246001040	DIAPHRAGM	1	
234*	5316005250	DIAPHRAGM ASSY	1	
235*	5236046040	GASKET	1	
236*	5246001150	PUMP	1	
237*	5236046010	SCREW	4	
246*	5256007010	BODY ASSY	1	
247*	5016004010	SCREEN	1	
253*	5236046060	BODY ASSY	1	
254*	5316005120	RING	1	
255*	5236018040	SWIVEL	1	
256*	5206008030	SCREW	2	
350*	5256500100	CABLE BRACKET	1	
355*	5216008010	ADJUSTER SCREW	1	
357*	5316005150	NUT	1	
360*	5219500000	HOLDER	1	

ROBIN EC0250G6004 — COIL & SPARK PLUG



ROBIN EC0250G6004 — COIL & SPARK PLUG

COIL & SPARK PLUG

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	5257001010	FLYWHEEL	1	
11	5257001020	IGNITION COIL	1	
35	0140049920	SCREW	2	
60	0660000371	SWITCH ASSY	1	
70	0043304100	SCREW & WASHER ASSY	2	
81	5257500300	GROMMET	1	
95	0654009931	SPRING, PLUG CAP	1	
100	0650149721	SPARK PLUG	1	
110	5237503301	SPARK PLUG CAP	1	