

PARTS MANUAL



Mikasa **SERIES**
MODEL MVH308DZ
REVERSIBLE PLATE COMPACTOR
(HATZ 1B30 DIESEL ENGINE)

Revision #12 (04/01/21)

THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

TABLE OF CONTENTS

MVH308DZ Reversible Plate Compactor

Explanation Of Code In Remarks Column.....	4
Suggested Spare Parts	5

Component Drawings

Nameplate And Decals Assembly	6-7
Vibrating Plate Assembly.....	8-9
Vibrator Assembly	10-11
Base And Engine Assembly	12-15
Electric Device Assembly	16-19
Control Assembly	20-23
Hydraulic Hand Pump Assembly	24-25

Hatz 1B30 Engine Component Drawings

Spare Parts Kit Assembly.....	26-27
Accessories Assembly.....	28-29
Crankcase Assembly.....	30-31
Crankshaft Assembly.....	32-33
Camshaft Assembly.....	34-35
Piston, Connecting Rod, Cylinder Assembly	36-37
Cylinder Head Assembly	38-41
Oil Pump, Governor Assembly.....	42-43
Timing Cover Assembly	44-47
Blower, Flywheel Assembly	48-49
Injection Equipment Assembly	50-53
Recoil Starter Assembly	54-55
Air Ducting Assembly	56-59
Crankcase Breathing System Assembly	60-61
Fuel Assembly	62-65
Air Filter Assembly.....	66-67
Exhaust Silencer Assembly	68-69
Starter, Alternator Assembly.....	70-71
Speed Control Assembly	72-73
Spec. Equipment EPA Assembly	74-75
Electric Equipment, Wiring Assembly.....	76-77

NOTICE

Specifications and part numbers are subject to change without notice.

EXPLANATION OF CODE IN REMARKS COLUMN

The following section explains the different symbols and remarks used in the Parts section of this manual. Use the help numbers found on the back page of the manual if there are any questions.

NOTICE

The contents and part numbers listed in the parts section are subject to change **without notice**. Multiquip does not guarantee the availability of the parts listed.

SAMPLE PARTS LIST

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	12345	BOLT	1	INCLUDES ITEMS W/%
2%		WASHER, 1/4 IN.		NOT SOLD SEPARATELY
2%	12347	WASHER, 3/8 IN. ...	1	MQ-45T ONLY
3	12348	HOSE	A/R	MAKE LOCALLY
4	12349	BEARING	1	S/N 2345B AND ABOVE

NO. Column

Unique Symbols — All items with same unique symbol (@, #, +, %, or >) in the number column belong to the same assembly or kit, which is indicated by a note in the “Remarks” column.

Duplicate Item Numbers — Duplicate numbers indicate multiple part numbers, which are in effect for the same general item, such as different size saw blade guards in use or a part that has been updated on newer versions of the same machine.

NOTICE

When ordering a part that has more than one item number listed, check the remarks column for help in determining the proper part to order.

PART NO. Column

Numbers Used — Part numbers can be indicated by a number, a blank entry, or TBD.

TBD (To Be Determined) is generally used to show a part that has not been assigned a formal part number at the time of publication.

A blank entry generally indicates that the item is not sold separately or is not sold by Multiquip. Other entries will be clarified in the “Remarks” Column.

QTY. Column

Numbers Used — Item quantity can be indicated by a number, a blank entry, or A/R.

A/R (As Required) is generally used for hoses or other parts that are sold in bulk and cut to length.

A blank entry generally indicates that the item is not sold separately. Other entries will be clarified in the “Remarks” Column.

REMARKS Column

Some of the most common notes found in the “Remarks” Column are listed below. Other additional notes needed to describe the item can also be shown.

Assembly/Kit — All items on the parts list with the same unique symbol will be included when this item is purchased.

Indicated by:

“INCLUDES ITEMS W/(unique symbol)”

Serial Number Break — Used to list an effective serial number range where a particular part is used.

Indicated by:

“S/N XXXXX AND BELOW”

“S/N XXXX AND ABOVE”

“S/N XXXX TO S/N XXX”

Specific Model Number Use — Indicates that the part is used only with the specific model number or model number variant listed. It can also be used to show a part is NOT used on a specific model or model number variant.

Indicated by:

“XXXXX ONLY”

“NOT USED ON XXXX”

“Make/Obtain Locally” — Indicates that the part can be purchased at any hardware shop or made out of available items. Examples include battery cables, shims, and certain washers and nuts.

“Not Sold Separately” — Indicates that an item cannot be purchased as a separate item and is either part of an assembly/kit that can be purchased, or is not available for sale through Multiquip.

SUGGESTED SPARE PARTS

MVH308DZ PLATE COMPACTOR WITH 1B30 DIESEL ENGINE

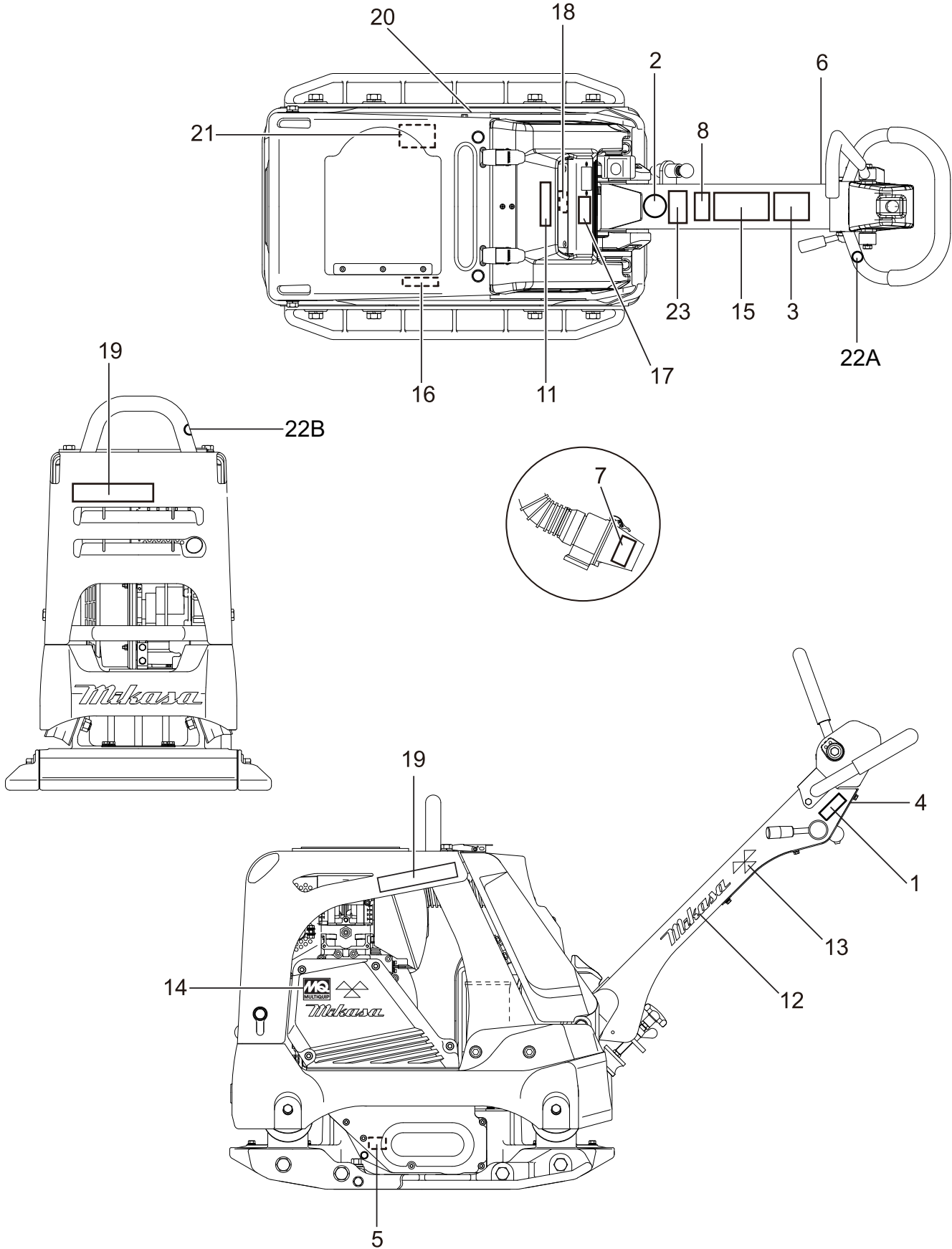
1 to 3 units

Qty.	P/N	Description
4.....	939010260.....	SHOCK ABSORBER
4.....	939010010.....	SHOCK ABSORBER, STOPPER
2.....	070200433.....	V-BELT HDPF-5460
1.....	50384401.....	IGNITION SWITCH W/KEYS
3.....	50404900.....	KEY, IGNITION SWITCH
3.....	01542704.....	OIL, SUCTION FILTER
3.....	01635210.....	FUEL FILTER
3.....	50426000.....	ELEMENT, AIR CLEANER
1.....	01919702.....	FUEL FILTER, EXTENSION MTG.
1.....	01535302.....	CAP, FUEL TANK
1.....	956100070.....	THROTTLE WIRE

NOTICE

Part numbers on this Suggested Spare Parts list may supersede/replace the part numbers shown in the following parts lists.

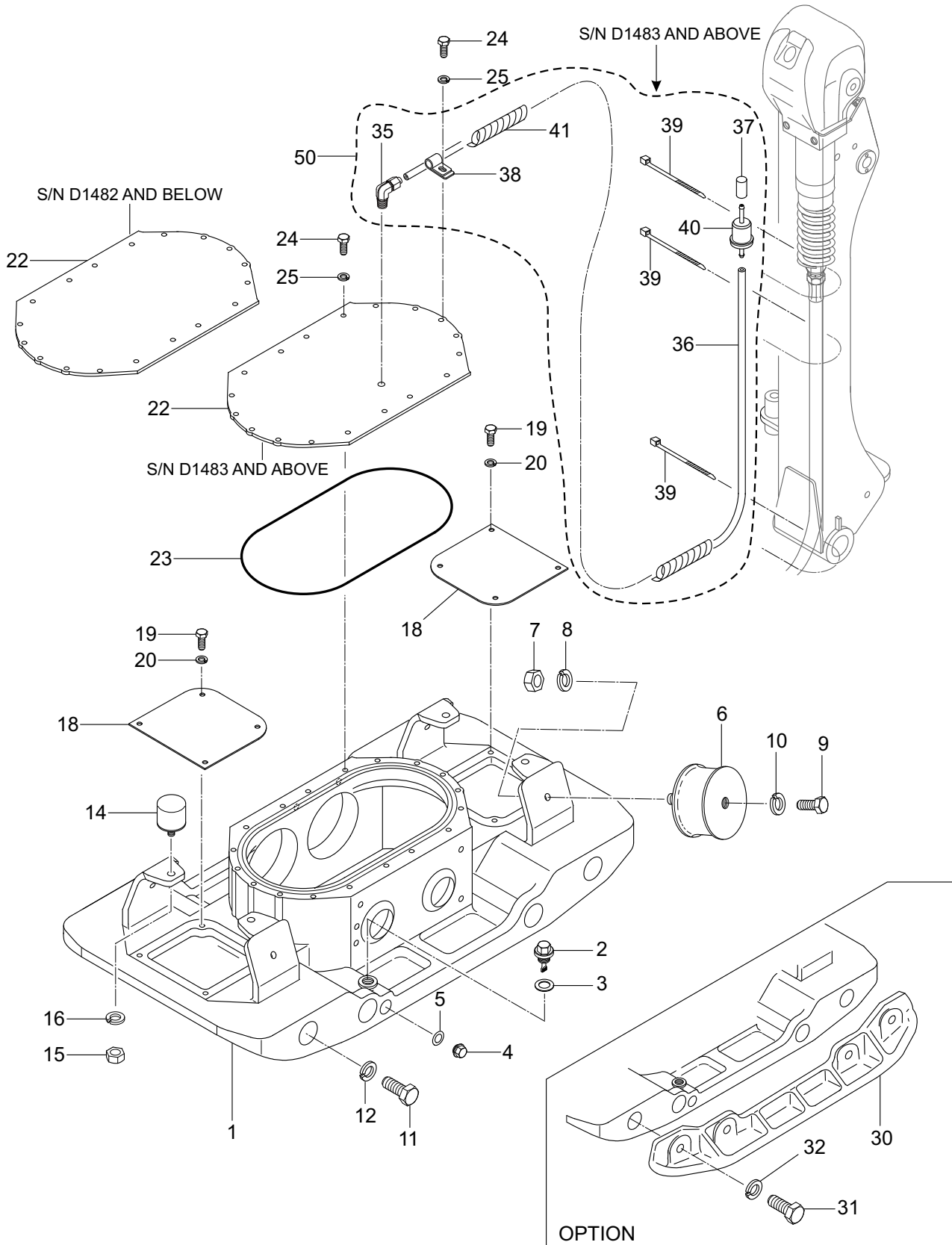
NAMEPLATE AND DECALS ASSY.



NAMEPLATE AND DECALS ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	920204580	DECAL, FULL THROTTLE	1	
2	920203330	DECAL, EAR PROTECTION LABEL	1	
3	920211060	DECAL, CAUTION (LEVER)	1	
4	920211090	DECAL, SHELL TELLUS OIL 32	1	
5	920201950	DECAL, OIL SAE 10W-30	1	
6	920106760	DECAL, STOP-RUN-START	1	
7	920214200	DECAL, CAUTION CYCLONE	1	
8	920214100	DECAL, E/G FIRE WARNING	1	
11	920216610	DECAL, CAUTION (FOR WASHING)	1	
12	920217130	DECAL, MIKASA MARK (W) 200L	2	
13	920217110	DECAL, MIKASA MARK 35X70	2	
14	920201580	DECAL, MQ MARK 71X55	1	
15	920218390	DECAL, CAUTION	1	
16	920217670	DECAL, V-BELT HDPF-5430	1	
17	920218140	DECAL, E/G RPM 3400	1	
18	920217870	DECAL, MODEL MVH-308	1	
19	920217730	DECAL, MODEL MVH-308 R	2	
20	920217740	DECAL, MODEL MVH-308 L	1	
21		PLATE, SERIAL NO.	1CONTACT MQ PARTS DEPT.
22A	920900090	DECAL, SET, DO NOT LIFT	1	
22B	920900090	DECAL, SET, LIFTING POSITION	1	
23	920222240	DECAL, WARNING PROPOSITION 65	1	

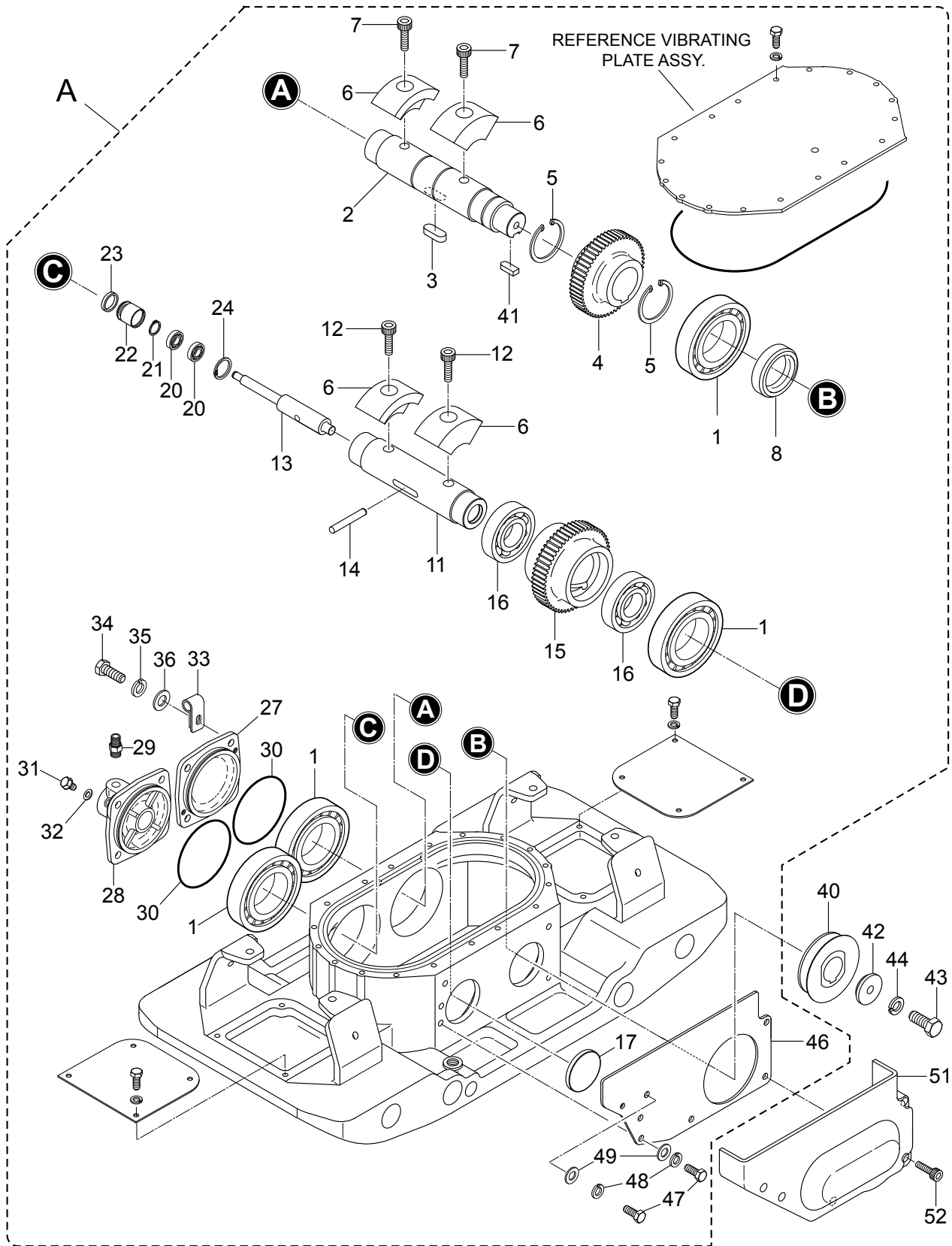
VIBRATING PLATE ASSY.



VIBRATING PLATE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	467121091	VIBRATING PLATE	1	
2	465460670	OIL GAUGE	1	
3	953402930	COPPER PACKING	1	
4	953400270	PLUG	1	
5	953405260	PACKING	1	
6	939010380	SHOCK ABSORBER	4	
7	020316130	NUT	4	
8	030216400	WASHER, LOCK	4	
9	001221635	BOLT	4	
10	030216400	WASHER, LOCK	4	
11	001221830	BOLT	8	
12	58407	WASHER, LOCK	8.....	REPLACES P/N 030218460
14	939010010	SHOCK ABSORBER, STOPPER	4	
15	020310080	NUT	4	
16	030210250	WASHER, LOCK	4	
18	467351780	COVER, VIBRATING PLATE	2	
19	014208020	BOLT	8.....	REPLACES P/N 001220820
20	030208200	WASHER, LOCK	8	
22	467351790	COVER, VIBRATOR	1.....	S/N 1482 AND BELOW
22	467355940	COVER, VIBRATOR, BREATHER	1.....	S/N 1483 AND ABOVE
23	050103250	O-RING	1	
24	014208020	BOLT	18.....	REPLACES P/N 001220820
25	030208200	WASHER, LOCK	18	
30	467219050	EXTENSION PLATE	2	
31	012218050	BOLT	8.....	REPLACES P/N 001221850
32	58407	WASHER, LOCK	8.....	REPLACES P/N 030218460
35#	954410070	90° ELBOW.....	1.....	S/N 1483 AND ABOVE
36#	959029209	TUBE, NYLON.....	1.....	S/N 1483 AND ABOVE
37#	467471710	ELEMENT, BREATHER	1.....	S/N 1483 AND ABOVE
38#	959408920	CLIP, M8.....	1.....	S/N 1483 AND ABOVE
39#	507010110	CLAMP.....	3.....	S/N 1483 AND ABOVE
40#	16910GB2005	FUEL FILTER, IN-LINE	1.....	S/N 1483 AND ABOVE
41#	959021818	SPRIAL TUBE.....	1.....	S/N 1483 AND ABOVE
50	467910040	AIR BREATHER TUBE	1.....	INCLUDES ITEMS W/#

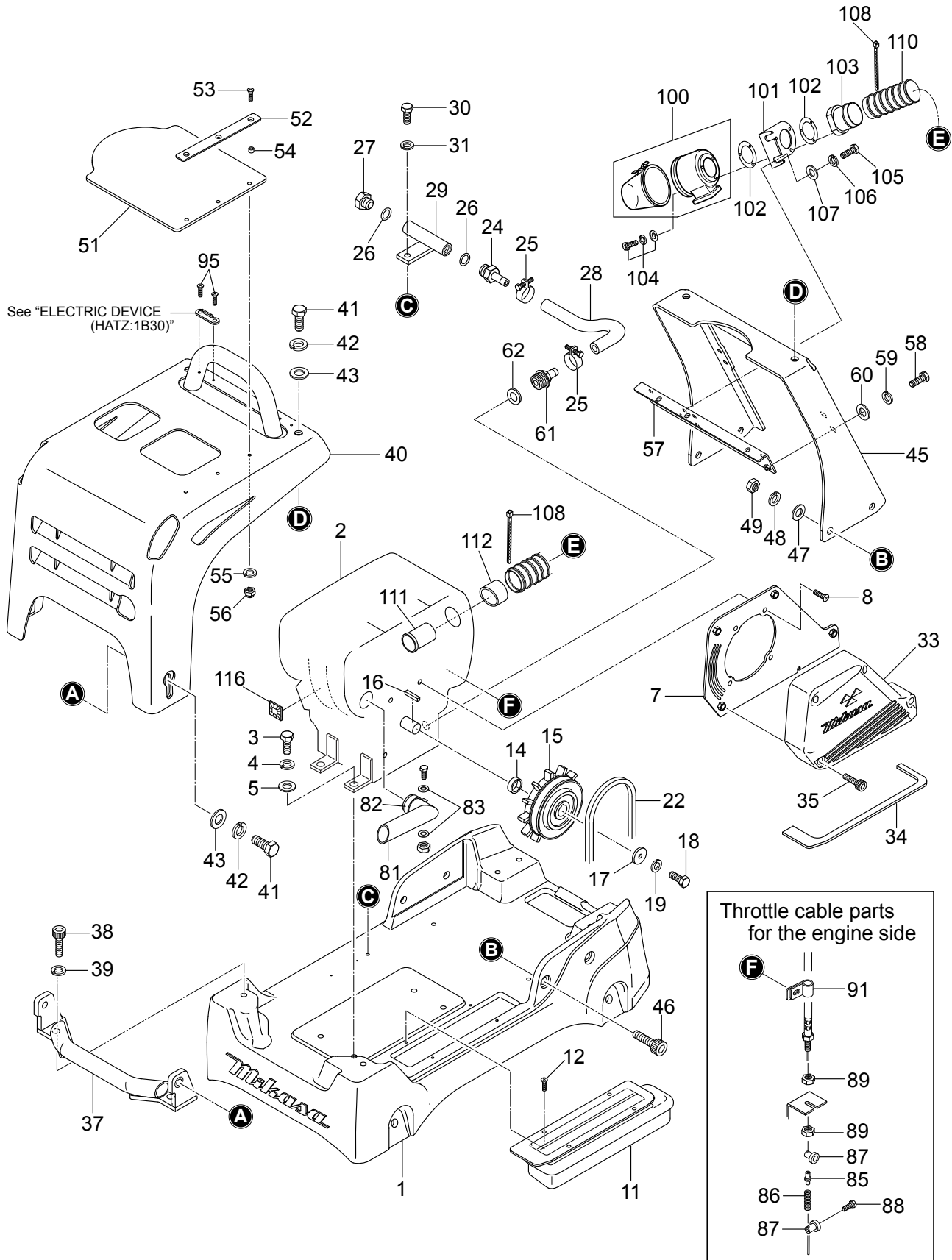
VIBRATOR ASSY.



VIBRATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
A	467910030	VIBRATING PLATE ASSY. (OLD)	1.....	S/N D1482 AND BELOW INCLUDES ITEMS W/#
A	467910031	VIBRATING PLATE ASSY. (NEW)	1.....	S/N D1483 AND ABOVE INCLUDES ITEMS W/%
1#%	047920120	ROLLER BEARING	4	
2#	456331060	ROTARY SHAFT, DRIVE	1.....	S/N D1482 AND BELOW
2%	467355910	ROTARY SHAFT, DRIVE	1.....	S/N D1483 AND ABOVE
3#%	951405370	KEY	1	
4#%	456327150	GEAR, DRIVE	1	
5#%	080200550	STOP RING	2	
6#%	464343700	ECCENTRIC ROTATOR	4	
7#%	009120301	SOCKET HEAD BOLT	2	
8#	060105030	OIL SEAL	1.....	S/N D1482 AND BELOW
8%	060405040	OIL SEAL	1.....	S/N D1483 AND ABOVE
11#%	456337670	ROTARY SHAFT, DRIVEN	1	
12#%	009120302	SOCKET HEAD BOLT	2	
13#%	456337380	PISTON ROD	1	
14#%	456010010	KNOCK PIN	1	
15#%	467351910	GEAR (DRIVEN)	1	
16#%	040006911	BEARING	2	
17#%	953010030	SEAL CAP	1	
20#%	042506000	BEARING	2	
21#%	0080000010	STOP RING	1.....	REPLACES P/N 080200100
22#%	455435051	PISTON	1	
23#%	455010070	PACKING	1	
24#%	080100260	STOP RING	1	
27#%	467352540	BEARING COVER	1	
28#%	467219070	CYLINDER (R)	1	
29#%	954010020	CONNECTOR PT	1	
30#%	050101050	O-RING	2	
31#%	001720812	FLANGE BOLT	1	
32#%	953404600	COPPER PACKING	1	
33#%	959408880	CLIP 15 (M10)	1	
34#%	0105091025	BOLT	8.....	REPLACES P/N 001221025
35#%	030210250	WASHER, LOCK	8	
36#%	031110160	WASHER, FLAT	8	
40	467351930	VIBRATING PULLEY	1	
41#%	951404970	KEY	1	
42	464457370	WASHER	1	
43	012012030	BOLT	1.....	REPLACES P/N 001221230
44	030212300	WASHER, LOCK	1	
46#%	467351920	GUIDE, BELT COVER	1	
47#%	014208020	BOLT	2.....	REPLACES P/N 001220820
48#%	030208200	WASHER, LOCK	2	
49#%	0401450080	WASHER, FLAT	2.....	REPLACES P/N 031108160
51	467218890	BELT COVER, LOWER	1	
52	001520852	SOCKET HEAD BOLT	5	

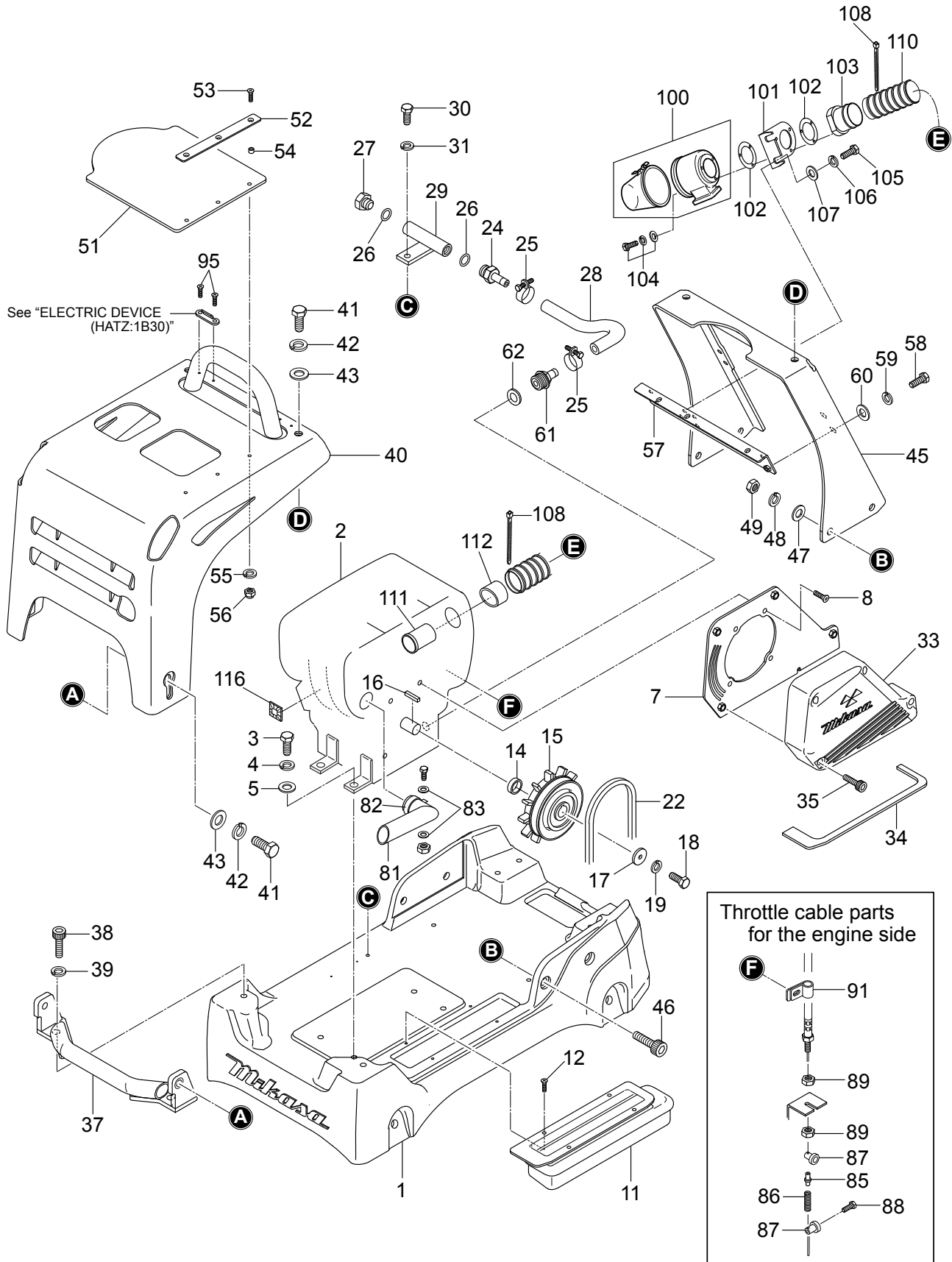
BASE AND ENGINE ASSY.



BASE AND ENGINE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	467121150	BASE 1B30	1	
2	918401000	ENGINE ASSY. 1B30	1	
3	011208030	BOLT	4	REPLACES P/N 001220830
4	030208200	WASHER, LOCK	4	
5	040145008	WASHER, FLAT	4	REPLACES P/N 031108160
7	467351830	BELT COVER, IN	1	
8	009120416	SUNK HEAD BOLT	4	
11	467218860	DUST COVER	1	
12	092006010	FLAT HEAD SCREW	4	
14	952408810	SPACER	1	
15	456343340	CLUTCH ASSY.	1	
16	951400110	KEY	1	
17	952403450	WASHER	1	
18	01201003	BOLT	1	REPLACES P/N 001221030
19	030210250	WASHER, LOCK	1	
22	070200433	V-BELT, HDPF-5460	1	
24	954407310	UNION, DRAIN	1	
25	0091720000	HOSE CLAMP	2	
26	0211140020	GASKET	2	
27	0401140030	PLUG	1	
28	465459390	DRAIN HOSE	1	
29	464457380	DRAIN JOINT	1	
30	014208020	BOLT	1	REPLACES P/N 001220820
31	030208200	WASHER, LOCK	1	
33	467121100	BELT COVER (OUT)	1	
34	467351800	DUST SPONGE (OUT)	1	
35	001521053	SOCKET HEAD BOLT	4	
37	467351810	FRONT BUMPER	1	
38	001521435	SOCKET HEAD BOLT	2	
39	030214350	WASHER, LOCK	2	
40	467121110	FRONT COVER	1	
41	001221445	BOLT	4	
42	030214350	WASHER, LOCK	4	
43	031114260	WASHER, FLAT	4	
45	467218870	CENTER COVER	1	
46	001521435	SOCKET HEAD BOLT	4	
47	031114260	WASHER, FLAT	4	
48	030214350	WASHER, LOCK	4	
49	020314110	NUT	4	
51	467466750	RUBBER COVER, UPPER	1	

BASE AND ENGINE ASSY. (CONT'D.)



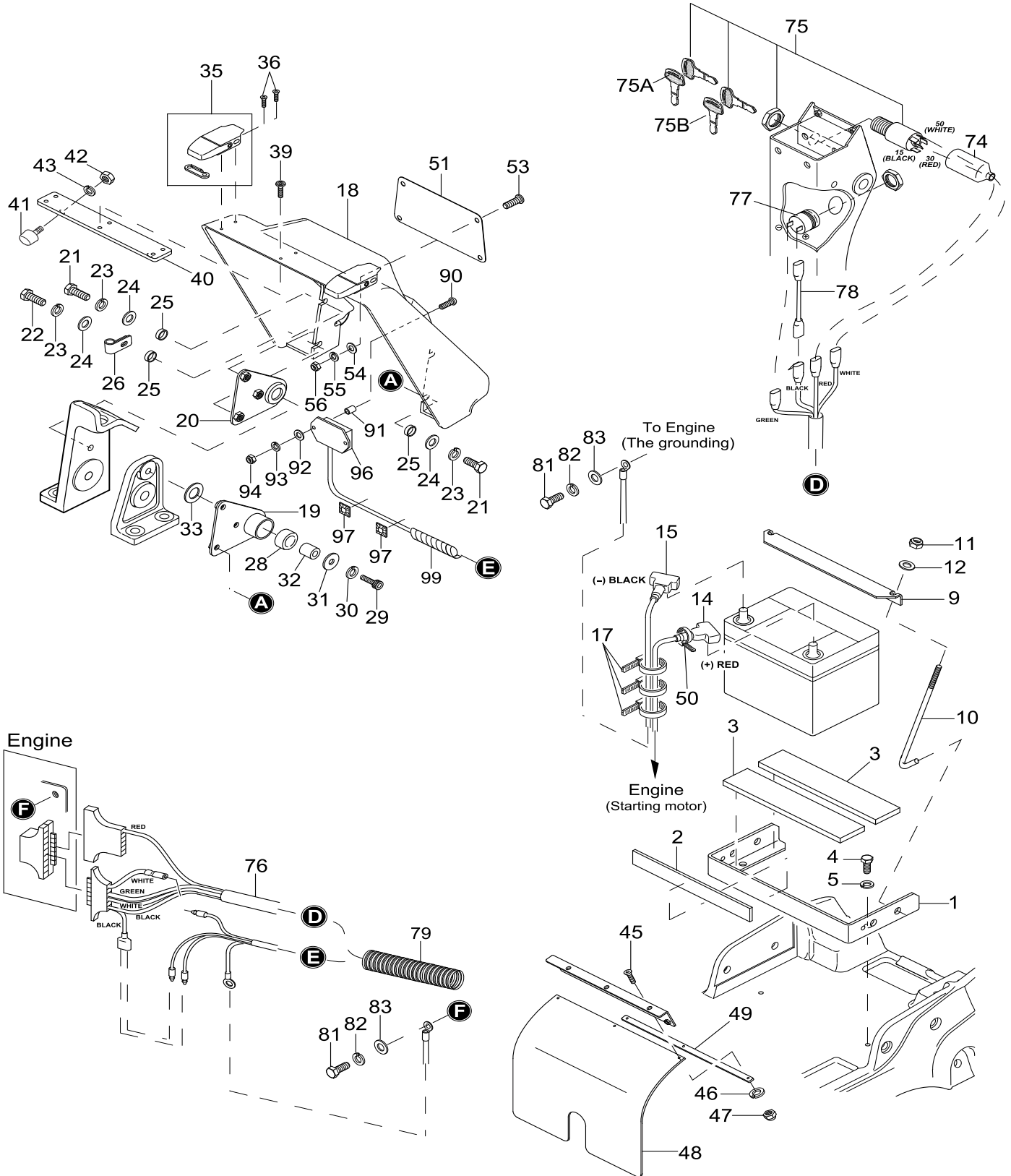
BASE AND ENGINE ASSY. (CONT'D.)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
52	467466760	STOPPER, COVER	1	
53	009120424	SOCKET HEAD BOLT	3	
54	617465130	COLLAR	3	
55	030206150	WASHER, LOCK	3	
56	022710607	NYLON NUT	3	
57	467351820	CLEANER STAY	1	
58	014208020	BOLT	4	REPLACES P/N 01220820
59	030208200	WASHER, LOCK	4	
60	040145008	WASHER, FLAT	4	REPLACES P/N 031108160
61	465459670	OIL DRAIN	1	
62	50001600	JOINT A	1	
81	467466780	EX. PIPE	1	
82	506397-00	PIPE CLIP	1	
83	040145008	WASHER, FLAT	2	REPLACES P/N 031108160
85	05165000	GUIDE BUSH	1	
86	50484600	PRESSURE SPRING	1	
87	01647300	CABLE CLAMP	2	
88	50025000	HEX SCREW	1	
89	020106050	NUT.....	2	REPLACES P/N 020306050
91	2067550101	CLAMP COMPL.	1	
95	009120420	SOCKET HEAD BOLT	4	
100	466218080	CLEANER, CYCLONE	1	
101	467351890	CYCLONE STAY	1	
102	466462850	GASKET, AIR INTAKE	2	
103	467466840	JOINT, C-CLEANER	1	
104	009110057	SOCKET HEAD BOLT	3	
105	014208020	BOLT	2	REPLACES P/N 001220820
106	030208200	WASHER, LOCK	2	
107	040145008	WASHER, FLAT	2	REPLACES P/N 031108160
108	506010060	CLAMP TC-350	2	
110	465348910	DUCT HOSE	1	
111	467466850	INTAKE PIPE	1	
112	467466860	GROMMET, CLEANER	1	
116	955407970	WIRING, FIXED BASE	1	

ELECTRIC DEVICE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	467218920	BATTERY HOLDER	1	
2	456447590	RUBBER PLATE (E)	1	
3	456447600	RUBBER PLATE	2	
4	012210020	BOLT.....	2.....	REPLACES P/N 001221020
5	030210250	WASHER, LOCK	2	
9	464343740	HOLDER, BATTERY	1	
10	469467170	BOLT, BATTERY	2	
11	022710809	NYLON NUT	2	
12	0401450080	WASHER, FLAT.....	2.....	REPLACES P/N 031108160
14	955301030	BATTERY CABLE (+) 1050L	1	
15	955301040	BATTERY CABLE (-) 450L	1	
17	506010070	CLAMP	5	
18	467121190	REAR COVER	1	
19	467352020	BRACKET, REAR COVER (L)	1	
20	467352030	BRACKET, REAR COVER (R)	1	
21	014208020	BOLT.....	5.....	REPLACES P/N 001220820
22	011208025	BOLT.....	1.....	REPLACES P/N 001220825
23	030208200	WASHER, LOCK	6	
24	0401450080	WASHER, FLAT.....	6.....	REPLACES P/N 031108160
25	952408780	COLLAR	6	
26	959408920	CLIP 8 (M8)	1	
28	416459340	RUBBER, VAS HANDLE	2	
29	014210040	SOCKET HEAD BOLT.....	2.....	REPLACES P/N 001521040
30	030210250	WASHER, LOCK	2	
31	952408740	WASHER	2	
32	952408790	COLLAR	2	
33	467467250	RUBBER WASHER	2	
35	467467090	CATCH CLIP	2	
36	009120421	SOCKET HEAD BOLT	4	
39	009110073	SOCKET HEAD SCREW	2	
40	467352060	BRACKET, STOPPER	1	
41	939010360	STOPPER RUBBER	2	
42	020108060	NUT.....	2.....	REPLACES P/N 020308060
43	030208200	WASHER, LOCK	2	
45	009120422	SOCKET HEAD BOLT	3	
46	030205130	WASHER, LOCK	3	
47	022710506	NYLON NUT	3	
48	467466930	RUBBER PLATE, BATTERY	1	
49	467466920	STOPPER, RUB-PLATE	1	
50	454010020	CLAMP	9	
51	467352050	PANEL, REAR COVER	1	

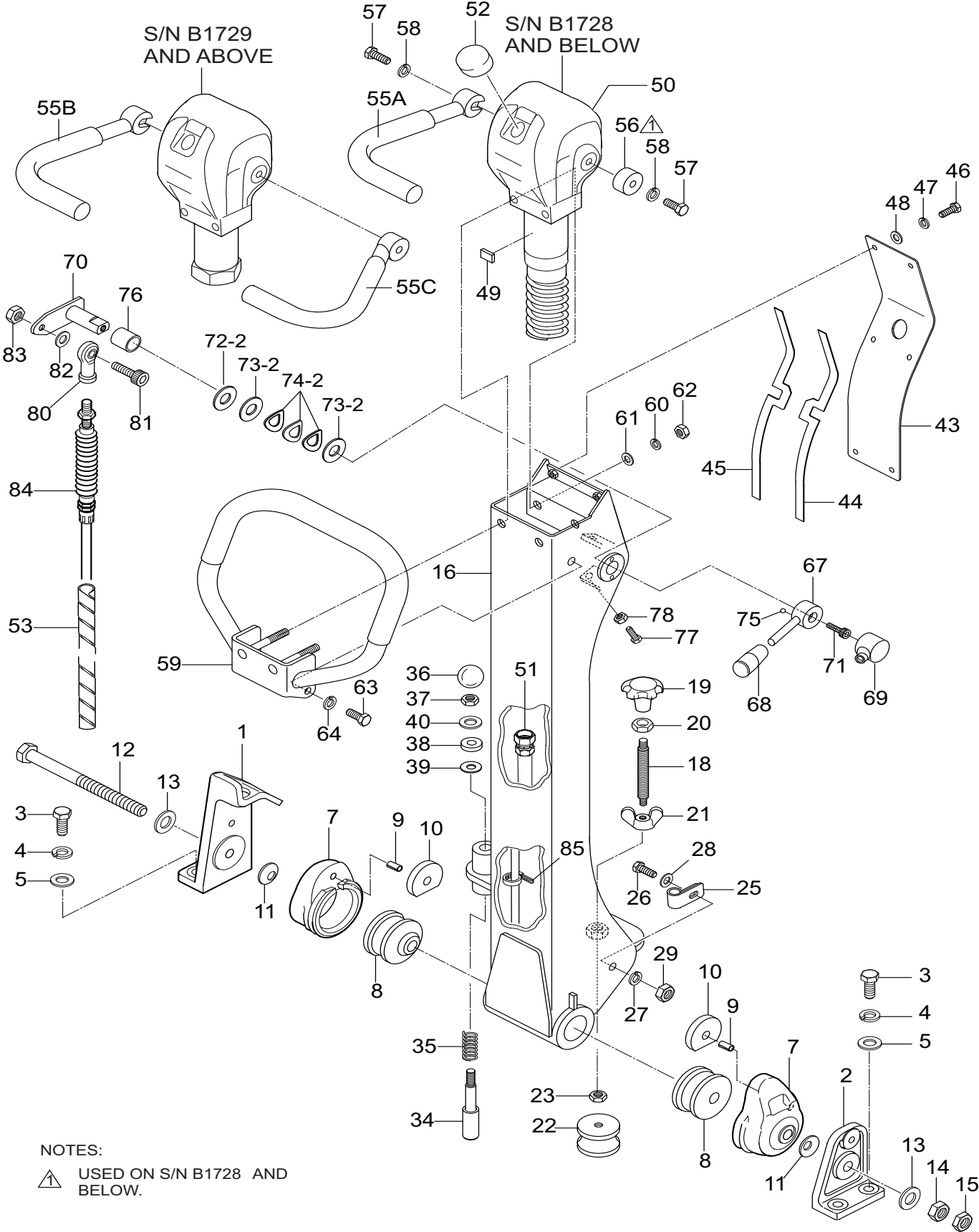
ELECTRIC DEVICE ASSY. (CONT'D.)



ELECTRIC DEVICE ASSY. (CONT'D.)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
53	009110062	SOCKET HEAD SCREW	4	
54	952404470	WASHER, FLAT	4	REPLACES P/N 031106100
55	030206150	WASHER, LOCK	4	
56	022710607	NYLON NUT	4	
74	470468770	PROTECTIVE COVER, IGNITION SWITCH	1	S/N E1939 AND ABOVE
75	50599500	IGNITION SWITCH ASSY. W/ KEY (OLD).....	1	INCLUDES ITEM W/# S/N Z1061 AND BELOW
75	50384401	IGNITION SWITCH ASSY. W/ KEY	1	INCLUDES ITEM W/\$ S/N Z1062 AND ABOVE
75A#	50600800	KEY, IGNITION (OLD)	1	S/N Z1061 AND BELOW
75B\$	50404900	KEY, IGNITION (NEW)	1	S/N Z1062 AND ABOVE
76	467352070	WIRE HARNESS	1	
77	50465100	BUZZER	1	
78	465459680	RELAY CABLE/BUZZER	1	
79	959026022	CORRUGATE TUBE	1	
81	001220612	BOLT	2	
82	030206150	WASHER, LOCK	2	
83	952404470	WASHER, FLAT	2	REPLACES P/N 031106100
90	009110072	PAN HEAD SCREW	2	
91	952407930	COLLAR	2	
92	58151	WASHER, FLAT	2	REPLACES P/N 031105080
93	030205130	WASHER, LOCK	2	
94	022710506	NYLON NUT	2	
96	955301020	TACHOMETER/HOUR METER	1	
97	955407970	WIRING, FIXED BASE	2	
99	959021813	SPIRAL TUBE	1	

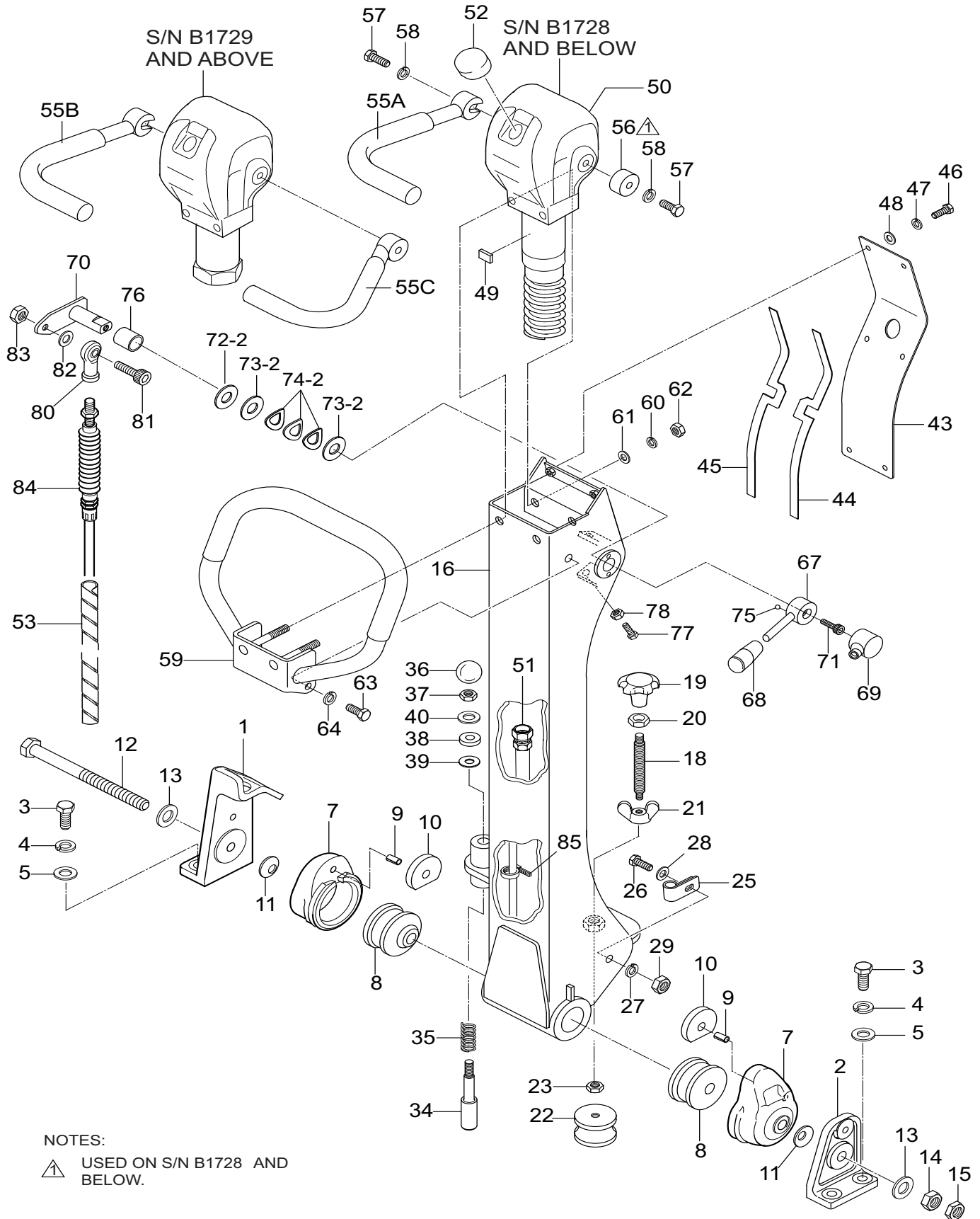
CONTROL ASSY.



CONTROL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	467351950	HANDLE BRACKET (R)	1	
2	467351960	HANDLE BRACKET (L)	1	
3	012212035	BOLT	4	REPLACES P/N 001221235
4	030212300	WASHER, LOCK	4	
5	031112230	WASHER, FLAT	4	
7	456336400	RUBBER COUPLING	2	
8	456449940	SHOCK ABSORBER	2	
9	025306016	SPRING PIN	2	REPLACES P/N 025406016
10	456449930	RUBBER PLATE	2	
11	032124400	CONICAL WASHER, LOCK	2	
12	001221681	BOLT	1	
13	0401450160	WASHER, FLAT	2	REPLACES P/N 031116260
14	020316130	NUT	1	
15	020416100	NUT	1	
16	467121170	COLUMN, HANDLE BAR	1	
18	455434950	SPINDLE	1	
19	455010030	KNOB	1	
20	020412070	NUT	1	
21	022411635	WING NUT	1	
22	939010060	SHOCK ABSORBER	1	
23	020310080	NUT	1	REPLACES P/N 020410060
25	959408930	CLIP	1	
26	011206020	BOLT	1	REPLACES P/N 001220620
27	030206150	WASHER, LOCK	1	
28	952404470	WASHER, FLAT	1	REPLACES P/N 031106100
29	020106050	NUT	1	REPLACES P/N 020306050
34	501402870	HANDLE STOPPER	1	
35	501402880	SPRING/HANDLE	1	
36	959403460	BALL GRIP	1	
37	020310080	NUT	1	REPLACES P/N 020410060
38	456449980	RUBBER PACKING	1	
39	953405260	PACKING 1/4	1	
40	031110160	WASHER, FLAT	1	
43	467351970	HANDLE COVER	1	
44	467467340	PACKING (L), HANDLE	1	
45	467467350	PACKING (R), HANDLE	1	
46	0105050616	BOLT	6	REPLACES P/N 001220615
47	030206150	WASHER, LOCK	6	
48	952404470	WASHER, FLAT	6	REPLACES P/N 031106100
49	464457930	RUBBER PIECE	1	
50	467219140	HYDRAULIC PUMP	1	

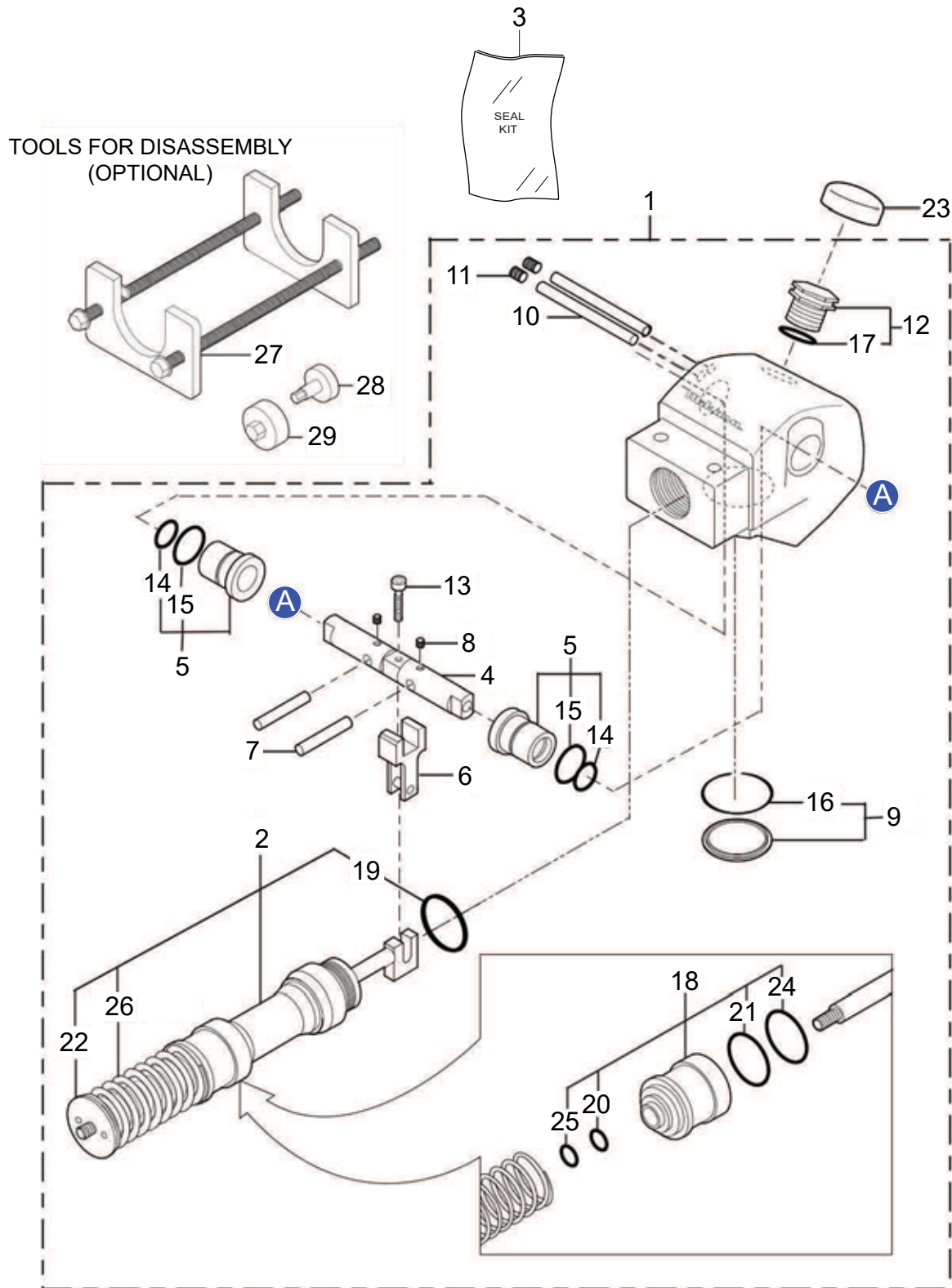
CONTROL ASSY. (CONT'D.)



CONTROL ASSY. (CONT'D.)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
51	954003110	OIL HOSE	1	
52	458451630	BREATHER CAP	1	
53	959021813	SPIRAL TUBE	1	
55A	464216630	TRAVEL LEVER, RIGHT	1.....	S/N B1728 AND BELOW
55B	464216820	TRAVEL LEVER, RIGHT	1.....	S/N B1729 AND ABOVE
55C	464216830	TRAVEL LEVER, LEFT	1.....	S/N B1729 AND ABOVE
56	464457400	HANDLE BOSS	1.....	S/N B1728 AND BELOW
57	012010030	BOLT	2.....	REPLACES P/N 001221030
58	030210250	WASHER, LOCK	2	
59	467218900	HANDLE W/ RUBBER GRIP	1	
60	030210250	WASHER, LOCK	2	
61	031110160	WASHER, FLAT	2	
62	020310080	NUT	2	
63	0105091025	BOLT	2.....	REPLACES P/N 001221025
64	030210250	WASHER, LOCK	2	
67	467466960	LEVER, THROTTLE	1	
68	959403840	BAR GRIP	1	
69	464457420	COVER, THROTTLE LEVER	1	
70	464457350	ARM, THROTTLE	1	
71	014208020	SOCKET HEAD BOLT	1.....	REPLACES P/N 001520820
72-1	952408950	WASHER	1	
73-1	458450660	WASHER	1	
74-1	033910080	CONICAL WASHER, LOCK	3	
75	464457440	STEEL BALL	1	
76	464010010	DRY BUSHING	1	
77	011606025	BOLT	2.....	REPLACES P/N 001220625
78	020106050	NUT	2.....	REPLACES P/N 020306050
80	464010020	ROD END	1	
81	001520520	SOCKET HEAD BOLT	1	
82	58151	WASHER, FLAT	1.....	REPLACES P/N 031105080
83	020305040	NUT	1	
84	956100069	THROTTLE WIRE	1	
85	454010020	CLAMP	1	

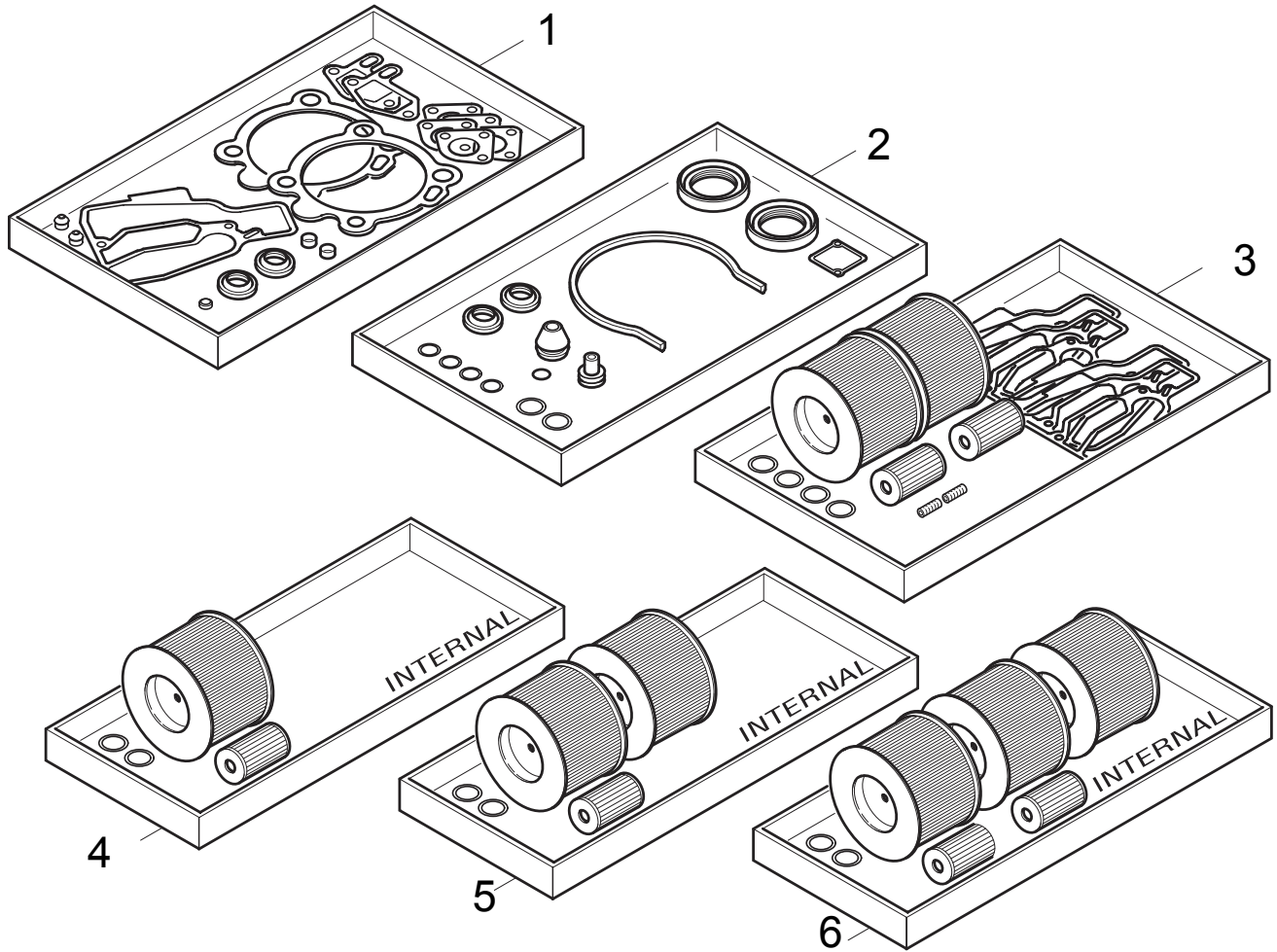
HYDRAULIC HAND PUMP ASSY.



HYDRAULIC HAND PUMP ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	467219140	HAND PUMP	1.....	INCLUDES ITEMS W/#
2#	467910020	ACCUMULATOR.....	1.....	INCLUDES ITEMS W/\$ NOT SOLD SEPARATELY
3	464910080	SEAL KIT	1.....	INCLUDES ITEMS W/%
4#	464010040	CONTROL SHAFT	1	
5#	467010020	BUSH.....	2.....	INCLUDES ITEMS W/@
6#	464010060	CAM	1	
7#	464010070	STOPPER	2	
8#	099205005	SCREW, SOCKET HEAD	2	
9#	464010080	PLUG	1.....	INCLUDES ITEMS W/*
10#	464010090	PIN, STOPPER	2	
11#	464010100	PLUG	2	
12#	458010080	BREATHER.....	1.....	INCLUDES ITEMS W/^
13#	001520620	BOLT, SOCKET HEAD.....	1.....	REPLACES P/N 001520620
14@%#	050200200	O-RING, P-20	2	
15@%#	050210220	O-RING, P-22	2.....	REPLACES P/N 050200220
16*%#	050300380	O-RING, S-38	1	
17^%#	050200180	O-RING, P-18	1	
18\$#	464010111	CASE, ACCUMULATOR	1.....	INCLUDES ITEMS W/&
19\$%#	050300400	O-RING, S-40	1	
20\$&%#	050200150	O-RING, P-15	1	
21\$&%#	050100400	O-RING, G-40	1	
22\$#	464010120	PLUG, SPRING	1	
23#	458451630	CAP, BREATHER	1	
24\$&%#	069904010	SEAL, SER-40	1	
25\$&%#	069901010	SEAL, SER-15	1	
26\$#	465910080	SPRING, ACCUMULATOR	1	
27	984010060	SPRING COMPRESSION, TOOL	1	
28	984010040	TOOL A, DISASSEMBLING	1	
29	984010050	TOOL B, DISASSEMBLING	1	

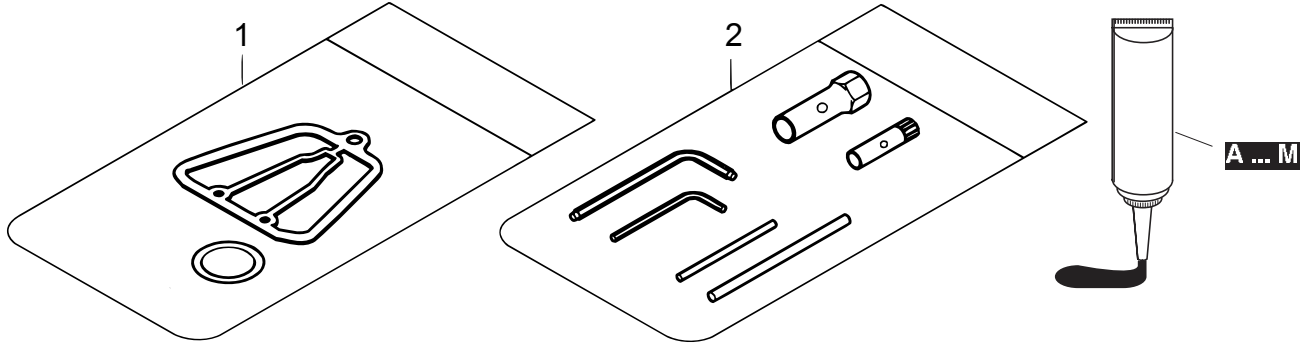
HATZ 1B30 ENGINE — SPARE PARTS KIT ASSY.



HATZ 1B30 ENGINE — SPARE PARTS KIT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01582211	GASKET SET, CYLINDER HEAD	1	
2	01582305	GASKET SET, CRANKCASE	1	
3	01582420	MAINTENANCE KIT	1	
4	02265400	FILTER KIT 1B30/INT. LIGHT	1	
5	02267900	FILTER KIT 1B30/INT./MED.	1	
6	02269000	FILTER KIT 1B30/INT. IHEA.	1	

HATZ 1B30 ENGINE — ACCESSORIES ASSY.



HATZ
DIESEL

WARTUNG - MAINTENANCE
ENTRETIEN - MANTENIMIENTO
MANUTENZIONE

8-15 250

STUNDEN - HOURS - HEURES
HORAS - ORE

500

BEI BEDARF
IF NECESSARY
SI NECESSAIRE
EN CASO DE
NECESSIDAD
SE NECESARIO

IN
0.1 mm
0.004 "

max OIL

3

1B..

4

COMPR.

1

2

3

START

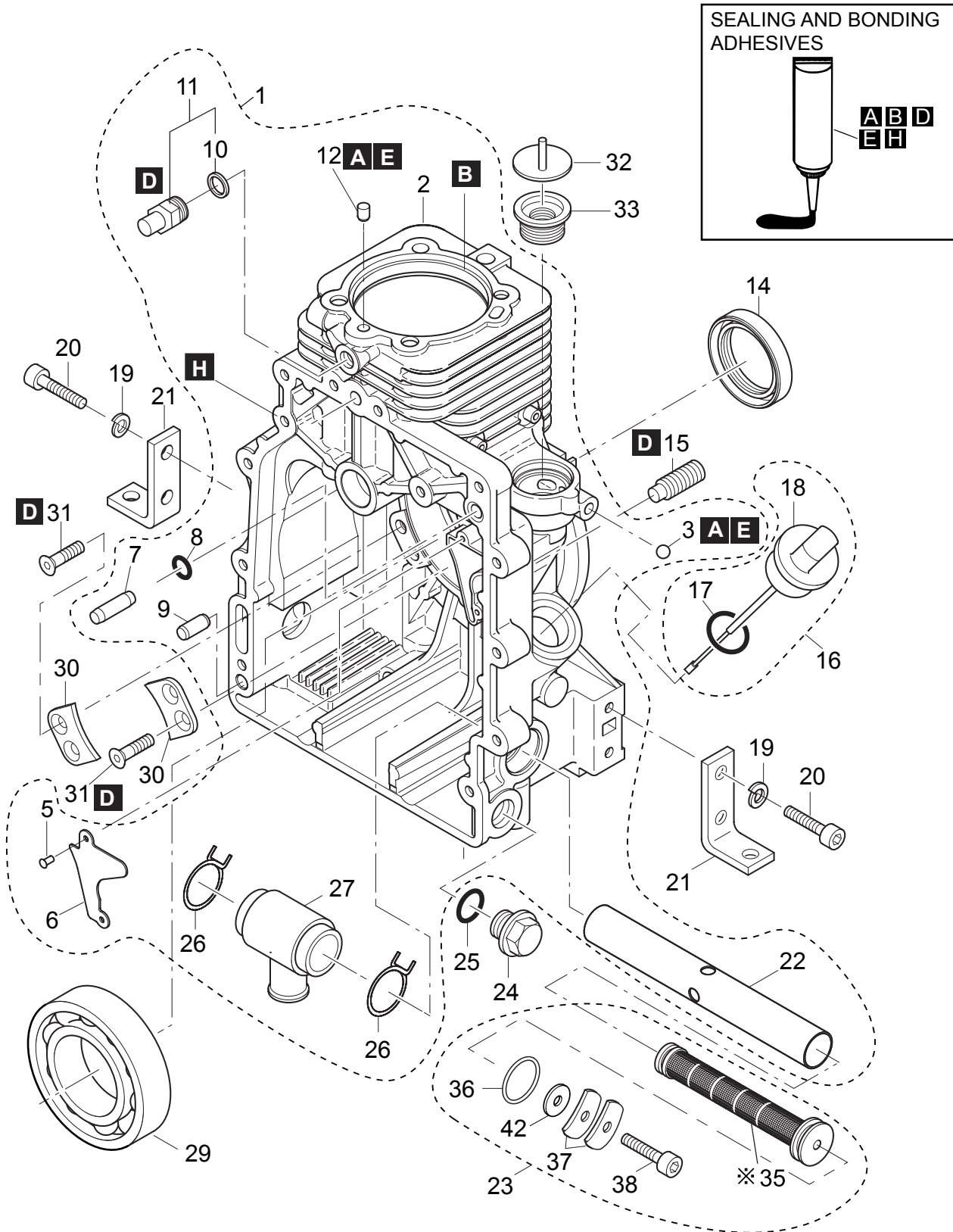
051 300 00

- (A)
LOCTITE
ACTIVATOR N
- (B)
LOCTITE 574
- (C)
LOCTITE 601
- (D)
LOCTITE 221
- (E)
LOCTITE 648
- (F)
TECHNICAL
ADHESIVE 8058
- (FA)
TECHNICAL
CLEANER
- (G)
LOCTITE 407
- (H)
TEROSON
TEROSTAT 63
- (J)
HIGH TEMP.
PASTE
- (K)
HIGHT TEMP
FETT 400G
- (L)
SILICON
SEALER
- (M)
GRINDING
PASTE 80 ML

HATZ 1B30 ENGINE — ACCESSORIES ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
A	50223001	LOCTITE ACTIVATOR N, 500 ML	1	
B	50223101	LOCTITE 574, 50 ML	1	
C	50223200	LOCTITE 601, 50 ML	1	
D	70018918	LOCTITE 243, 50 ML	1	
E	50223400	LOCTITE 648, 10 ML	1	
F	50223800	TECHNICAL ADHESIVE 8058, 750 GRAM	1	
FA	50223900	TECHNICAL CLEANER, 750 GRAM	1	
G	50256501	LOCTITE IS 407, 20 GRAM	1	
H	70018944	TEROSON TEROSTAT 63, 310 ML	1	
J	50283004	HIGH TEMPERATURE PASTE, 100 ML	1	
K	50342601	HIGH TEMP. FETT 400 GRAM	1	
L	50256600	SILICON SEALER, 100 GRAM	1	
M	50485100	GRINDING PASTE 80ML/GRAM	1	
1	01578710	ACCESSORIES KIT	1	
2	01330901	TOOLS	1	
3	05110406	STICKER LABEL	1	
4	05130002	STICKER LABEL "START"	1	

HATZ 1B30 ENGINE — CRANKCASE ASSY.

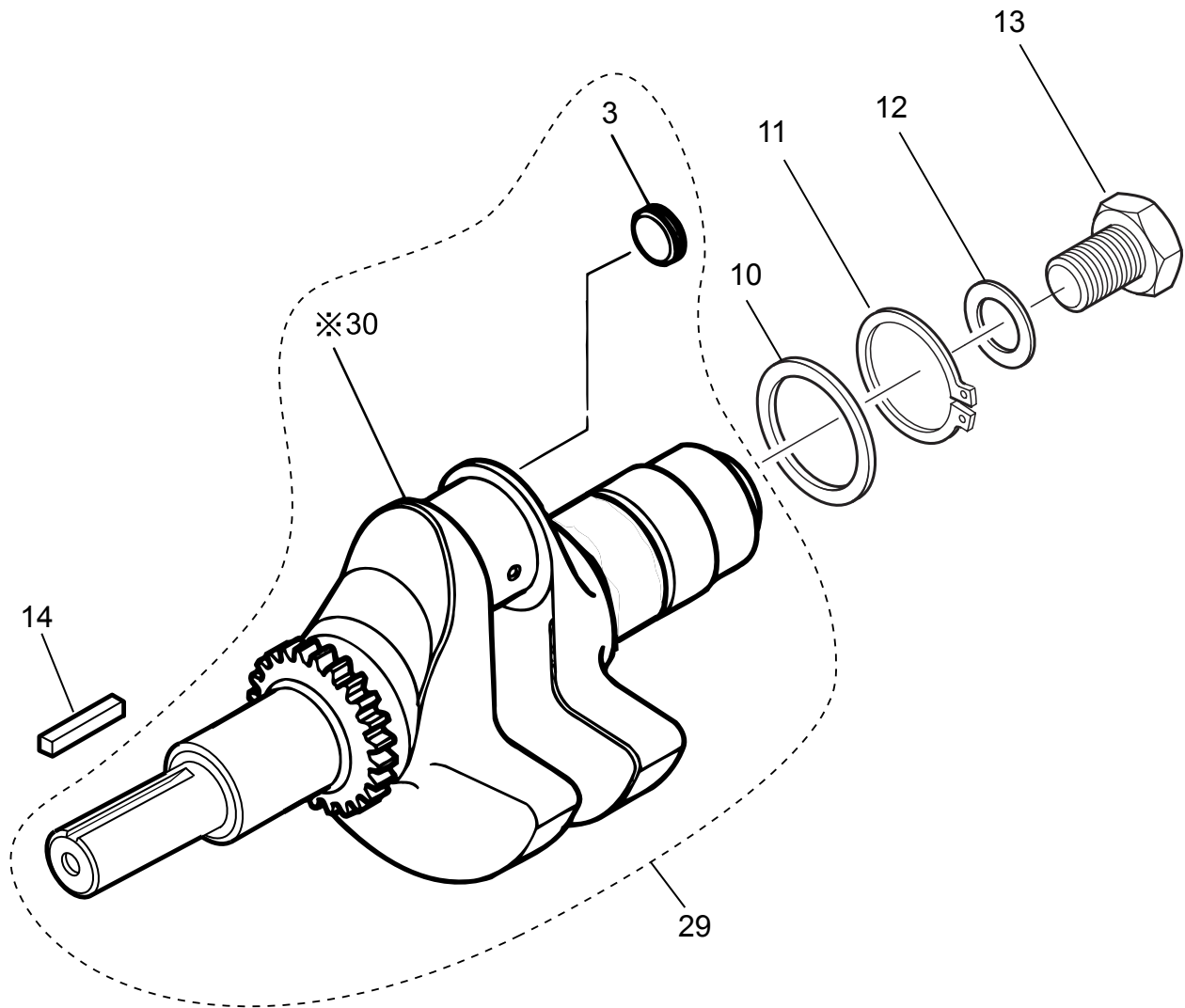


※ NOT SOLD SEPARATELY

HATZ 1B30 ENGINE — CRANKCASE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
A	50223001	LOCTITE ACTIVATOR N, 500 ML	1	
B	50223101	LOCTITE 574, 50 ML	1	
D	70018918	LOCTITE 243, 50 ML	1	
E	50223400	LOCTITE 648	1	
H	70018944	TEROSON TEROSTAT 63	1	
1	01582720	CRANKCASE ASSY.	1	INCLUDES ITEMS W/\$
2\$		CRANKCASE.....	1	NOT SOLD SEPARATELY
3\$		PLUG	1	NOT SOLD SEPARATELY
5\$	40002600	BLIND RIVET	1	
6\$	01333111	COVER SHEET	1	
7\$	50502801	CYLINDER PIN	1	
8\$	50440300	O-RING	1	
9\$	50249102	Z CYLINDER PIN	1	
10\$	50062400	JOINT A	1	
11\$	50469101	OIL PRESSURE SWITCH	1	
12\$		PLUG	1	NOT SOLD SEPARATELY
14	50449800	OIL SEAL	1	
15	04198700	GRUB SCREW CARB/EPA	1	
16	01316000	DIPSTICK ASSY.	1	INCLUDES ITEMS W/@
17@	04125000	SEALING RING, DIPSTICK	1	
18@		DIPSTICK	1	NOT SOLD SEPARATELY
19	50208500	WASHER, LOCK	1	
20	04121900	ALLEN SCREW	1	
21	04099302	ENGINE BRACKET	1	
22\$	04105710	TUBE F. OIL FILTER	1	
23	01542704	OIL SUCTION FILTER ASSY.....	1	INCLUDES ITEMS W/#
24	50373100	DRAIN PLG. MAGNT. M22	1	
25	50001600	GASKET	1	
26\$	05036900	HOSE CLIP	1	
27\$	04163000	T-PIECE	1	
29	50449700	GROOVE BALLBEARING	1	
30	04094400	PLATE	1	
31	50564300	COUNTERSUNK SCREW	1	
32	01555800	COVER	1	
33	03568701	OIL SUPPLEMENT PLUG	1	
35#		OIL SUCTION FILTER.....	1	NOT SOLD SEPARATELY
36#	50475901	O-RING	1	
37#	05148200	PLATE SPRING	1	
38#	50170700	ALLEN SCREW	1	
42#	04042000	WASHER	1	

HATZ 1B30 ENGINE — CRANKSHAFT ASSY.

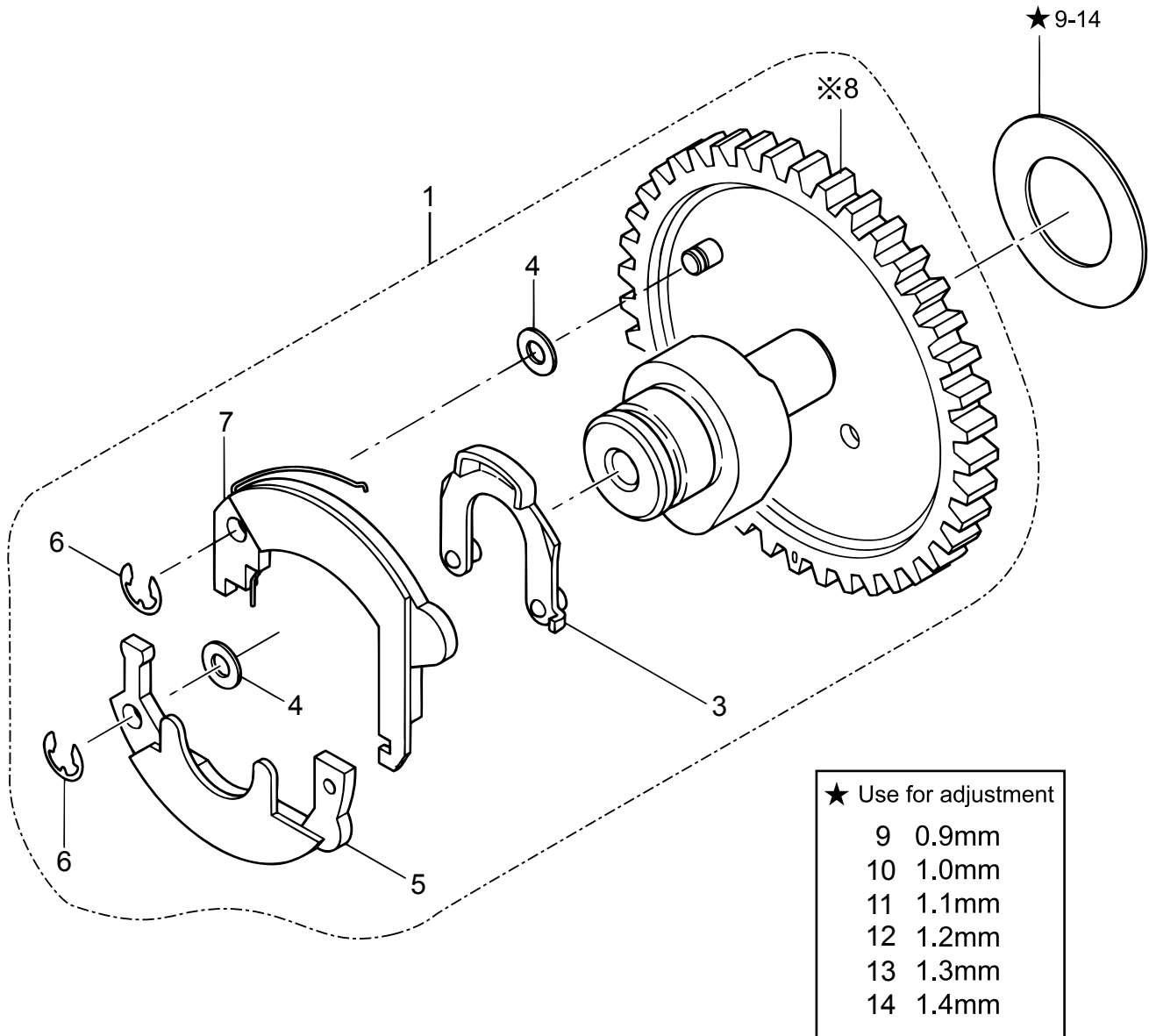


※ NOT SOLD SEPARATELY

HATZ 1B30 ENGINE — CRANKSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
3\$	04287600	COVER 12	1	
10	40065600	SUPPORTING DISC SS	1	
11	50021600	CIRCLIP	1	
12	04114201	DISC 18	1	
13	50443600	HEXAGON SCREW	1	
14	952406810	KEY 7X7X35	1	
29	01856000	CRANKSHAFT ASSY.....	1.....	INCLUDES ITEMS W/\$
30\$		CRANKSHAFT.....	1.....	NOT SOLD SEPARATELY

HATZ 1B30 ENGINE — CAMSHAFT ASSY.

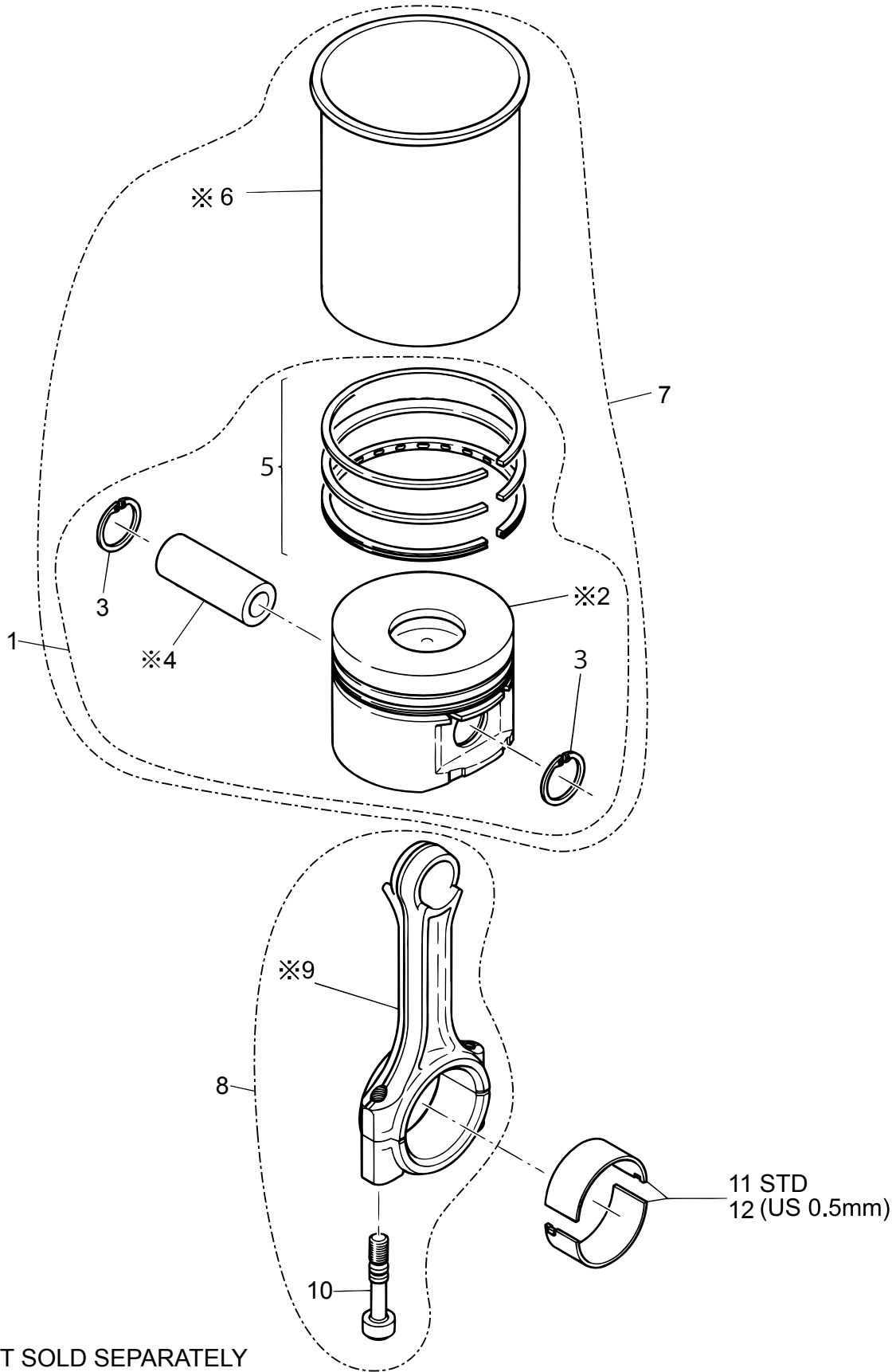


※ NOT SOLD SEPARATELY

HATZ 1B30 ENGINE — CAMSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01503523	CAMSHAFT ASSY.	1.....	INCLUDES ITEMS W/\$
3\$	01326401	CAM LEVER	1	
4\$	50123200	SHIM	2	
5\$	01326600	FLYWEIGHT	1	
6\$	50255300	LOCKING WASHER	2	
7\$	01326501	FLYWEIGHT HAND-START	1	
8\$		CAMSHAFT	1.....	NOT SOLD SEPARATELY
9	04121700	SHIM 23X38X0.9	1.....	SELECT 0-1
10	04112100	SHIM 23X38X1.0	1.....	SELECT 0-1
11	04112200	SHIM 23X38X1.1	1.....	SELECT 0-1
12	04112300	SHIM 23X38X1.2	1.....	SELECT 0-1
13	04125100	SHIM 23X38X1.3	1.....	SELECT 0-1
14	04125200	SHIM 23X38X1.4	1.....	SELECT 0-1

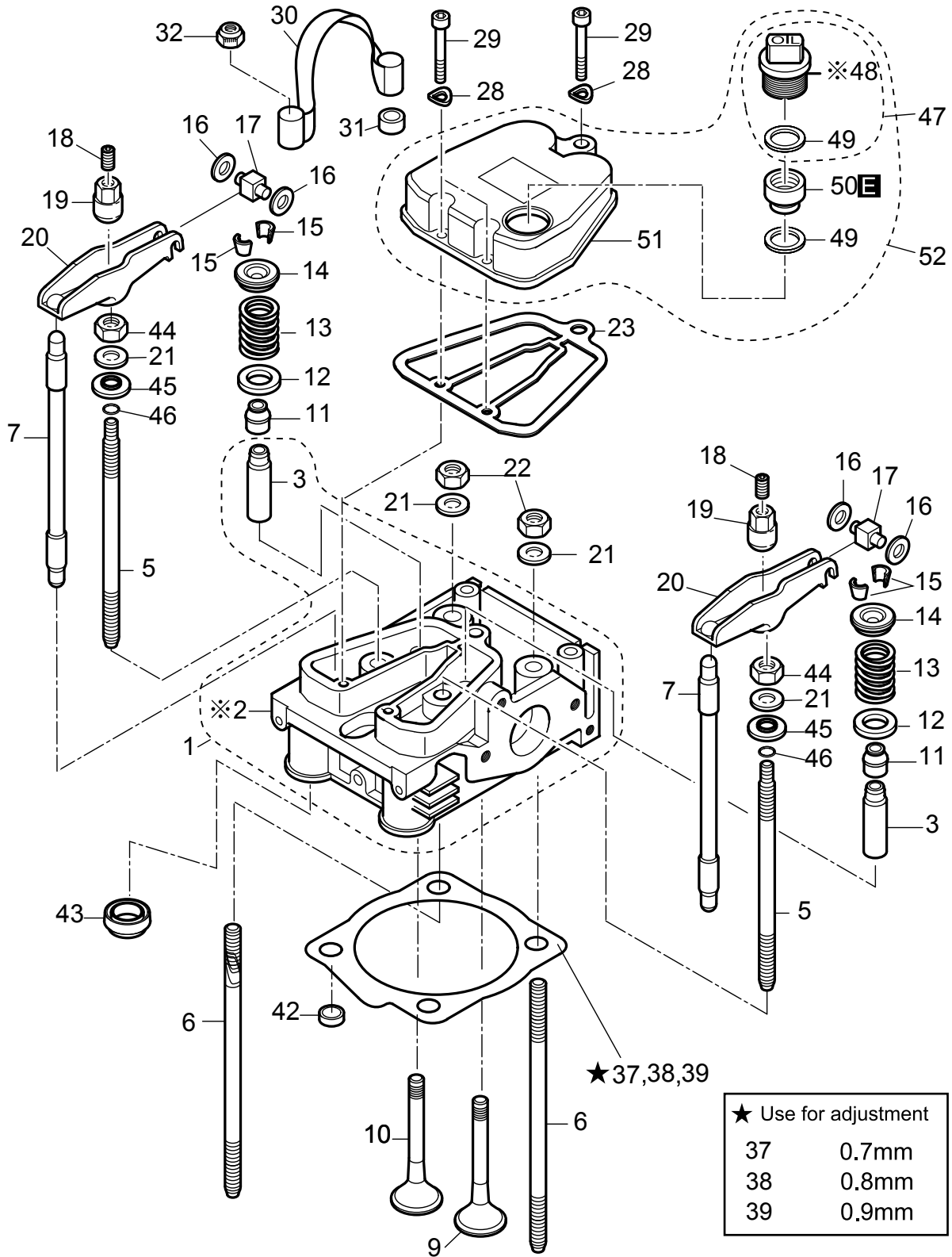
HATZ 1B30 ENGINE — PISTON, CONROD, CYLINDER ASSY.



HATZ 1B30 ENGINE — PISTON, CONROD, CYLINDER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01390621	PISTON AND RINGS ASSY.	1.....	INCLUDES ITEMS W/\$
2\$@		PISTON.....	1.....	NOT SOLD SEPARATELY
3\$@	50464000	CIRCLIP	2	
4\$@		PIN, PISTON.....	1.....	NOT SOLD SEPARATELY
5\$@	01390700	PISTON RING SET	1	
6@		CYLINDER.....	1.....	NOT SOLD SEPARATELY
7	01582620	CYLINDER ASSY. W/PISTON & RINGS	1.....	INCLUDES ITEMS W/@
8	01329201	CONROD ASSY.	1.....	INCLUDES ITEMS W/#
9#		CONROD	1.....	NOT SOLD SEPARATELY
10#	04113100	CONROD SCREW	2	
11	01582100	BIG END BEARING, STANDARD	1	
12	01582000	BIG END BEARING US 0.5MM	1	

HATZ 1B30 ENGINE — CYLINDER HEAD ASSY.

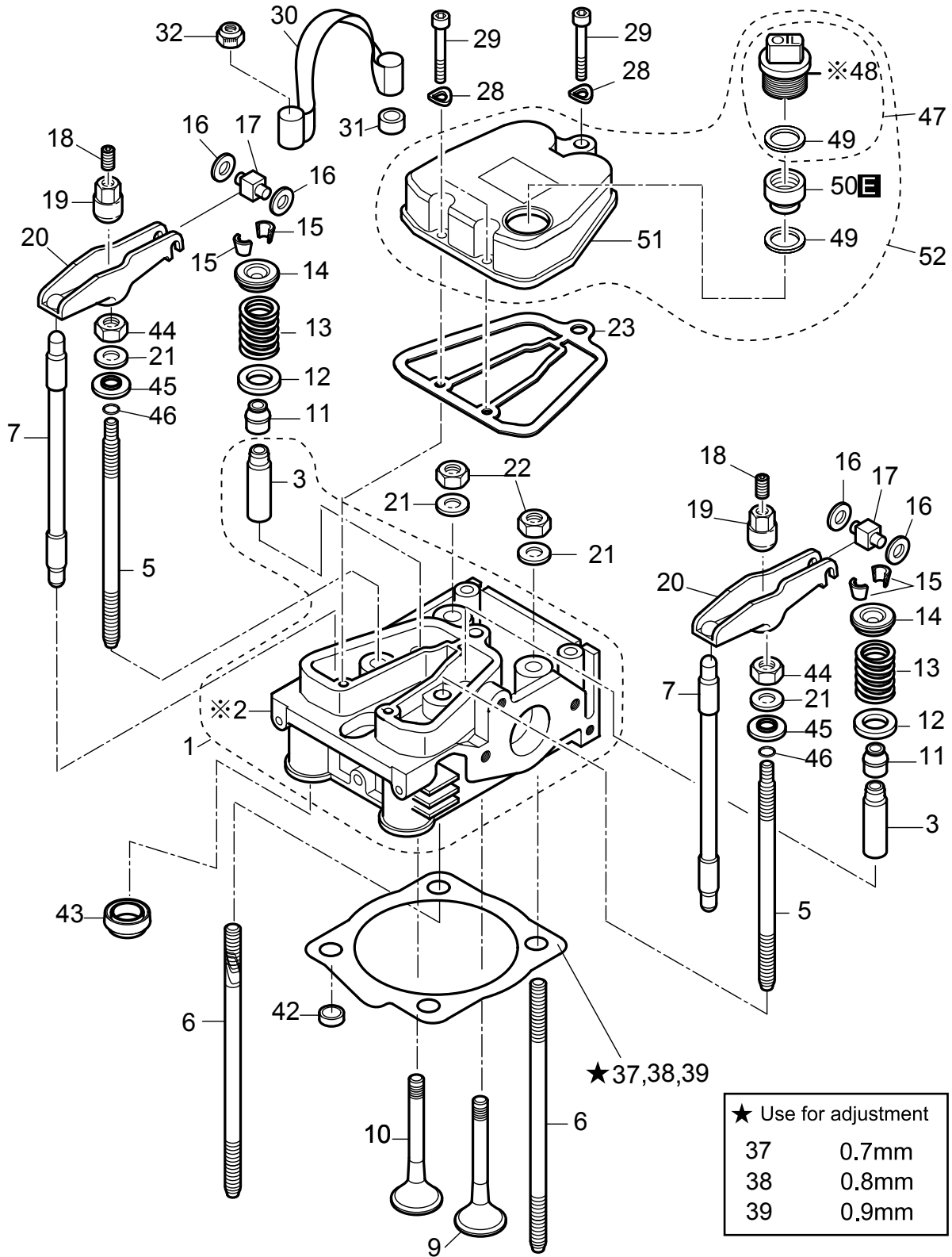


※ NOT SOLD SEPARATELY

HATZ 1B30 ENGINE — CYLINDER HEAD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
D	70018918	LOCTITE 243, 50 ML	1	
E	50223400	LOCTITE 648, 50 ML	1	
1	01393610	CYLINDER HEAD ASSY.....	1.....	INCLUDES ITEMS W/\$
2\$		CYLINDER HEAD.....	1.....	NOT SOLD SEPARATELY
3\$	05129500	VALVE GUIDE	2	
5	05097500	STUD, CYLINDER HEAD	2	
6	05097400	STUD, CYLINDER HEAD	2	
7	05098900	PUSHROD	2	
9	05093000	VALVE INLET	1	
10	05093100	VALVE EXHAUST	1	
11	50631000	VALVE STEM SEAL CAP	2	
12	04093700	WASHER	2	
13	04113500	VALVE SPRING	2	
14	04093800	SPRING PLATE/RETAINER	2	
15	02252500	COLLET (COTTER)	2	
16	05240700	SUPPORT. DISC 6X12X1.35	1.....	SELECT 0-4
16	50445100	SUPPORT. DISC 6X12X1.2	1.....	SELECT 0-4
17	05091101	SLIDER	2	
18	50513100	GRUB SCREW	2	
19	05054700	NUT, F. ROCKER ARM	2	
20	05098202	ROCKER ARM	2	
21	05099300	WASHER	4	
22	50396600	HEXAGON NUT M10	2	
23	05093310	GASKET, CYLINDER HEAD COVER	1	
28	50081200	WASHER, LOCK A6	2	
29	50374900	ALLEN SCREW	2	
30	04117701	LIFTING STRAP	1	
32	50023800	HEXAGON NUT B	2	
33	05096301	GASKET F. CYLINDER HEAD 0.3	1.....	SELECT 0-1
34	05096401	GASKET, CYLINDER HEAD 0.4	1.....	SELECT 0-1
35-1	05096501	GASKET, CYLINDER HEAD 0.5	1.....	SELECT 0-1
35	04248800	GASKET, CYLINDER HEAD 0.55.....	1.....	SELECT 0-1

HATZ 1B30 ENGINE — CYLINDER HEAD ASSY (CONT'D.)

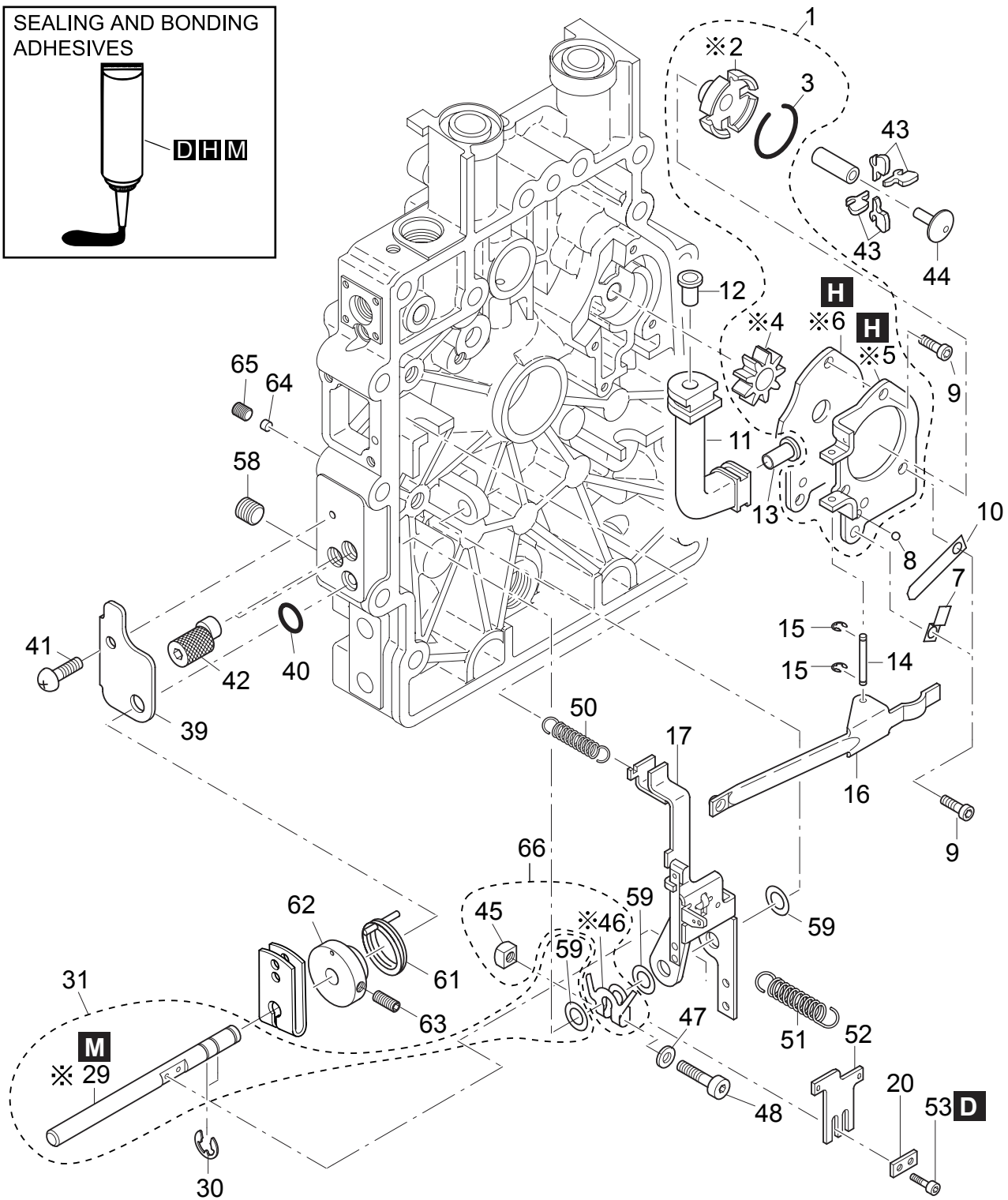
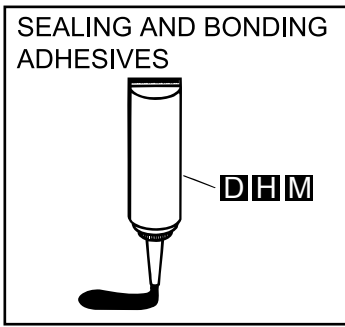


※ NOT SOLD SEPARATELY

HATZ 1B30 ENGINE — CYLINDER HEAD ASSY (CONT'D.)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
36-1	05096601	GASKET, CYLINDER HEAD 0.6	1.....	SELECT 0-1
36	04248900	GASKET, CYLINDER HEAD 0.65	1.....	SELECT 0-1
37-1	05096701	GASKET, CYLINDER HEAD 0.7	1.....	SELECT 0-1
37	04249000	GASKET, CYLINDER HEAD 0.75	1.....	SELECT 0-1
38	05096801	GASKET, CYLINDER HEAD 0.8	1.....	SELECT 0-1
39	05096901	GASKET, CYLINDER HEAD 0.9	1.....	SELECT 0-1
40	05097001	GASKET, CYLINDER HEAD 1.0	1.....	SELECT 0-1
42	04229000	CENTER BUSH	2	
43	04126100	PROTECTION HOSE	2	
44	50396600	HEXAGON NUT M10	2	
45	04243700	DISC	2	
46	50563900	O-RING	2	
47	01936500	CAP SCREW, CYL. HEAD COVER ASSY.	1.....	INCLUDES ITEMS W/@
48@ #		CAP SCREW, CYL. HEAD COVER	1.....	NOT SOLD SEPARATELY
49@#	05278401	SEALING RING	2	
50#	05321100	CONNECTING PIECE	1	
51#	05321210	COVER, CYLINDER HEAD	1	
52	01911201	COVER, CYLINDER HEAD ASSY.	1.....	INCLUDES ITEMS W/#

HATZ 1B30 ENGINE — OIL PUMP, GOVERNOR ASSY.

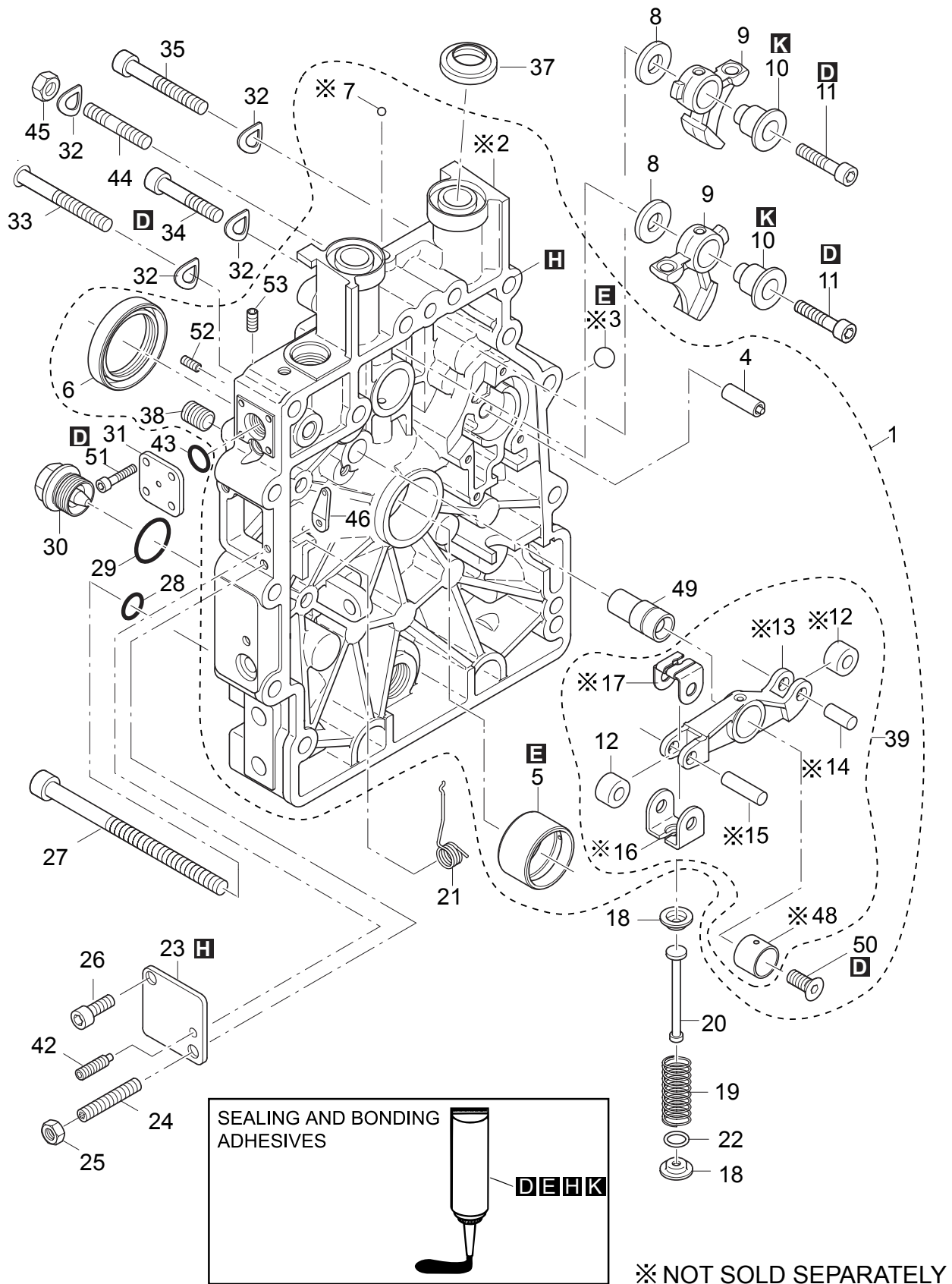


※ NOT SOLD SEPARATELY

HATZ 1B30 ENGINE — OIL PUMP, GOVERNOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
D	70018918	LOCTITE 243, 50 ML	1	
H	70018944	TEROSON TEROSTAT 63	1	
M	50485100	GRINDING PASTE 80ML	1	
1	01530220	COVER F. OIL PUMP ASSY.....	1	INCLUDES ITEMS W/\$
2\$		COVER PUMP	1	NOT SOLD SEPARATELY
3\$	04210910	CIRCLIP	1	
4\$		GEAR.....	1	NOT SOLD SEPARATELY
5\$		COVER F.....	1	NOT SOLD SEPARATELY
6\$		INNER PLATE.....	1	NOT SOLD SEPARATELY
7	05097100	RETAINING STRAP	1	
8	50447900	BALL	1	
9	50429400	ALLEN SCREW	4	
10	05097300	FLAT SPRING	1	
11	04102900	TUBE OIL SUCTION	1	
12	50447400	TUBE RIVET	1	
13	50447500	TUBE RIVET	1	
14	05078600	SHAFT	1	
15	50434800	CIRCLIP	2	
16	05079401	LEVER	1	
17	01530404	GOVERNOR LEVER	1	
29#		SHAFT	1	NOT SOLD SEPARATELY
30	50092700	CIRCLIP	2	
31	01981000	SHAFT AND SHIM ASSY.	1	INCLUDES ITEMS W/#
39	05178400	PLATE	1	
40	40022401	O-RING	1	
41	50492300	FILLISTER HEAD SCREW	1	
42	05178810	ECCENTRIC SCREW	2	
43	05079611	CENTRIFUGAL WEIGHT	4	
44	05078502	GOVERNOR SLEEVE	1	
45@	50094300	HEXAGON NUT	1	
46@		STOP	1	NOT SOLD SEPARATELY
47	50216300	WASHER	1	
48	50492200	ALLEN SCREW	1	
50	50563400	TENSION SPRING	1	
51	04290000	GOVERNOR SPRING	1	
52	05130800	STOP	1	
53	50465300	ALLEN SCREW	2	
58	50475700	GRUB SCREW	1	
59#	50422400	SHIM	3	
61	05154010	SPRING	1	
62	05179000	BUSH	1	
63	50400600	GRUB SCREW	1	
64	05307300	PLUG	1	
65	50574600	THREADED PIN	1	
66	02340300	STOP AND NUT ASSY.	1	INCLUDES ITEMS W/@

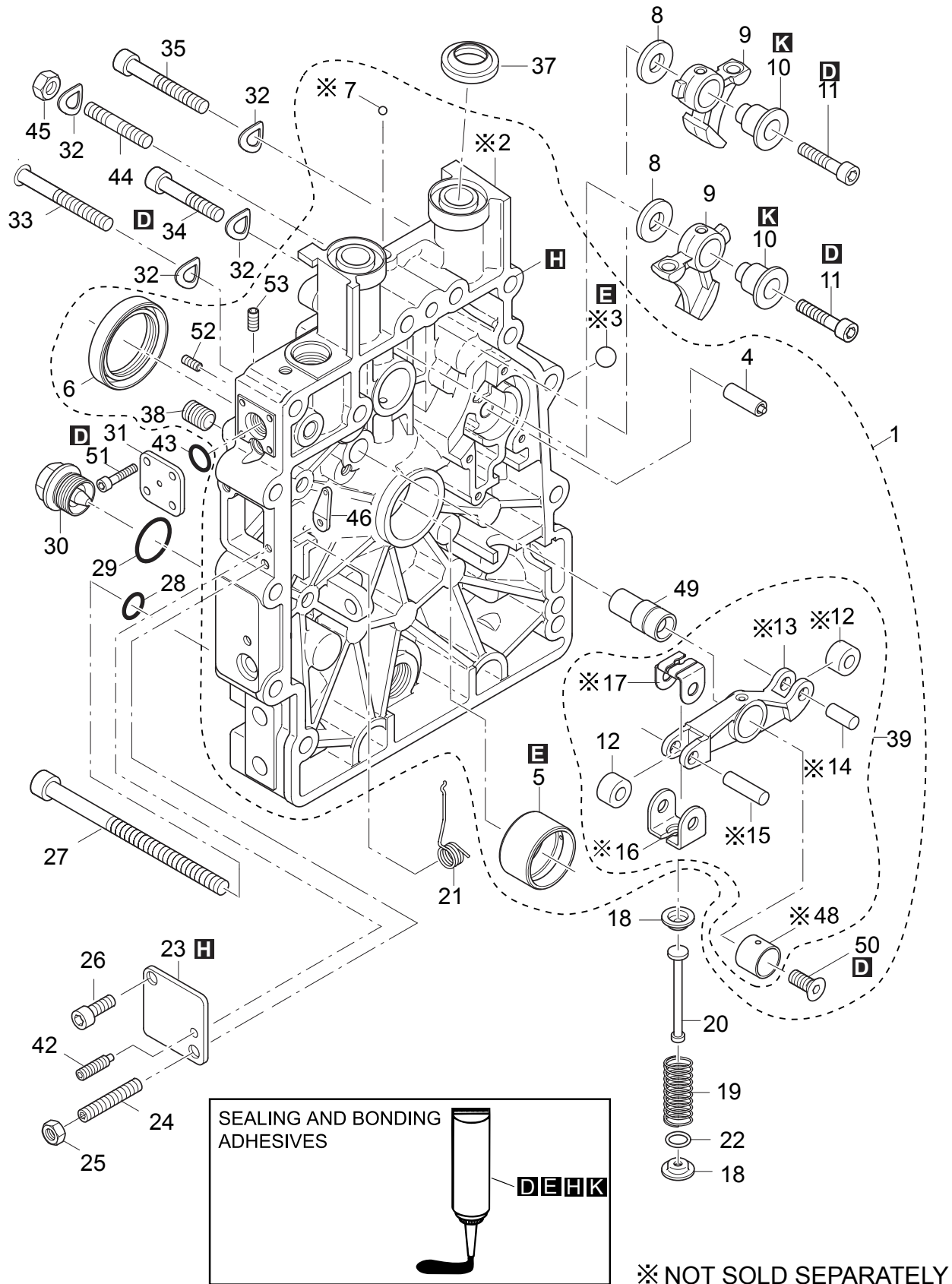
HATZ 1B30 ENGINE — TIMING COVER ASSY.



HATZ 1B30 ENGINE — TIMING COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
D	70018918	LOCTITE 243, 50 ML	1	
E	50223400	LOCTITE 648, 50 ML	1	
H	70018944	TEROSON TEROSTAT 63	1	
K	50342601	HIGH TEMP. FETT 400G	1	
1	01319541	TIMING COVER ASSY.....	1	INCLUDES ITEMS W/\$
2\$		TIMING COVER.....	1	NOT SOLD SEPARATELY
3\$		PLUG	1	NOT SOLD SEPARATELY
4\$	01533900	BOLT, GOVERNOR HOUSING	1	
5\$	05053101	MAIN BEARING, STD	1	
5	04124801	MAIN BEARING, US -0.5	1	
6\$	40033701	OIL SEAL	1	
7\$		PLUG	1	NOT SOLD SEPARATELY
8	03794100	WASHER	1	
9	05053400	CAM FOLLOWER	1	
10	03794201	CAM FOLLOW SPINDLE	1	
11	50457900	ALLEN SCREW	1	
12%		BUSHING.....	2	NOT SOLD SEPARATELY
13%		ROCKER LEVER.....	1	NOT SOLD SEPARATELY
14%		PIN.....	1	NOT SOLD SEPARATELY
15%		PIN.....	1	NOT SOLD SEPARATELY
16%		CLAMP, LOWER.....	1	NOT SOLD SEPARATELY
17%		CLAMP, UPPER.....	1	NOT SOLD SEPARATELY
18	04094802	CUP	1	
19	04095700	PRESSURE SPRING	1	
20	04094700	DRAW ROD	1	
21	05095210	SPRING, GOVERNOR	1	
22	04133900	DISC	1	
23	04095210	COVER	1	
24	50448901	GRUB SCREW	1	
25	020106050	HEXAGON NUT	1	REPLACES P/N 50144400
26	50384200	ALLEN SCREW	1	
27	50463000	ALLEN SCREW	1	
28	50162900	JOINT A	1	
29	50001600	GASKET	1	
30	50373100	DRAIN PLG. MAGNETIC M22	1	
31	01351700	COVER	1	
32	50095100	WASHER, LOCK	1	
33	50248800	ALLEN SCREW	1	
34	50453401	ALLEN SCREW	1	
35	50392900	ALLEN SCREW	1	
37	04106501	SEALING RING, TIMING COVER	1	

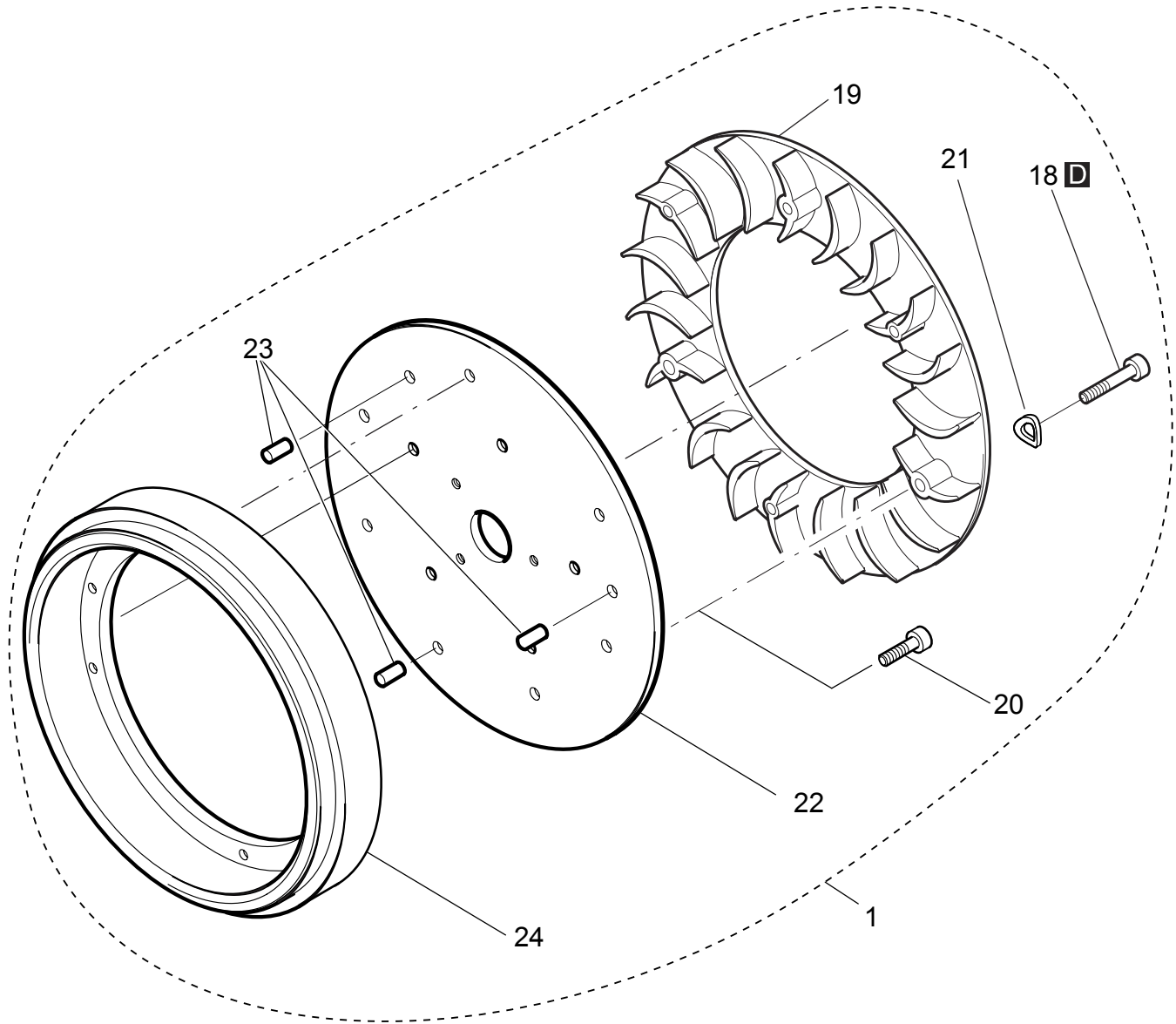
HATZ 1B30 ENGINE — TIMING COVER ASSY. (CONT'D.)



HATZ 1B30 ENGINE — TIMING COVER ASSY. (CONT'D.)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
38	50530600	GRUB SCREW	1	
39	01319620	ROCKER LEVER ASSY.....	1.....	INCLUDES ITEMS W/%
42	50274901	GRUB SCREW	1	
43	50329000	O-RING	1	
44	50038700	STUD	1	
45	020108060	HEXAGON NUT	1.....	REPLACES P/N 50148000
46	05127100	LEVER	1	
48%		BUSHING.....	1.....	NOT SOLD SEPARATELY
49	04096830	CAM FOLLOW SPINDLE	1	
50	50445000	COUNTERSUNK SCREW	1	
51	50397100	ALLEN SCREW	1	
52	50400600	GRUB SCREW	1	
53	50262400	THREADED PIN	1	

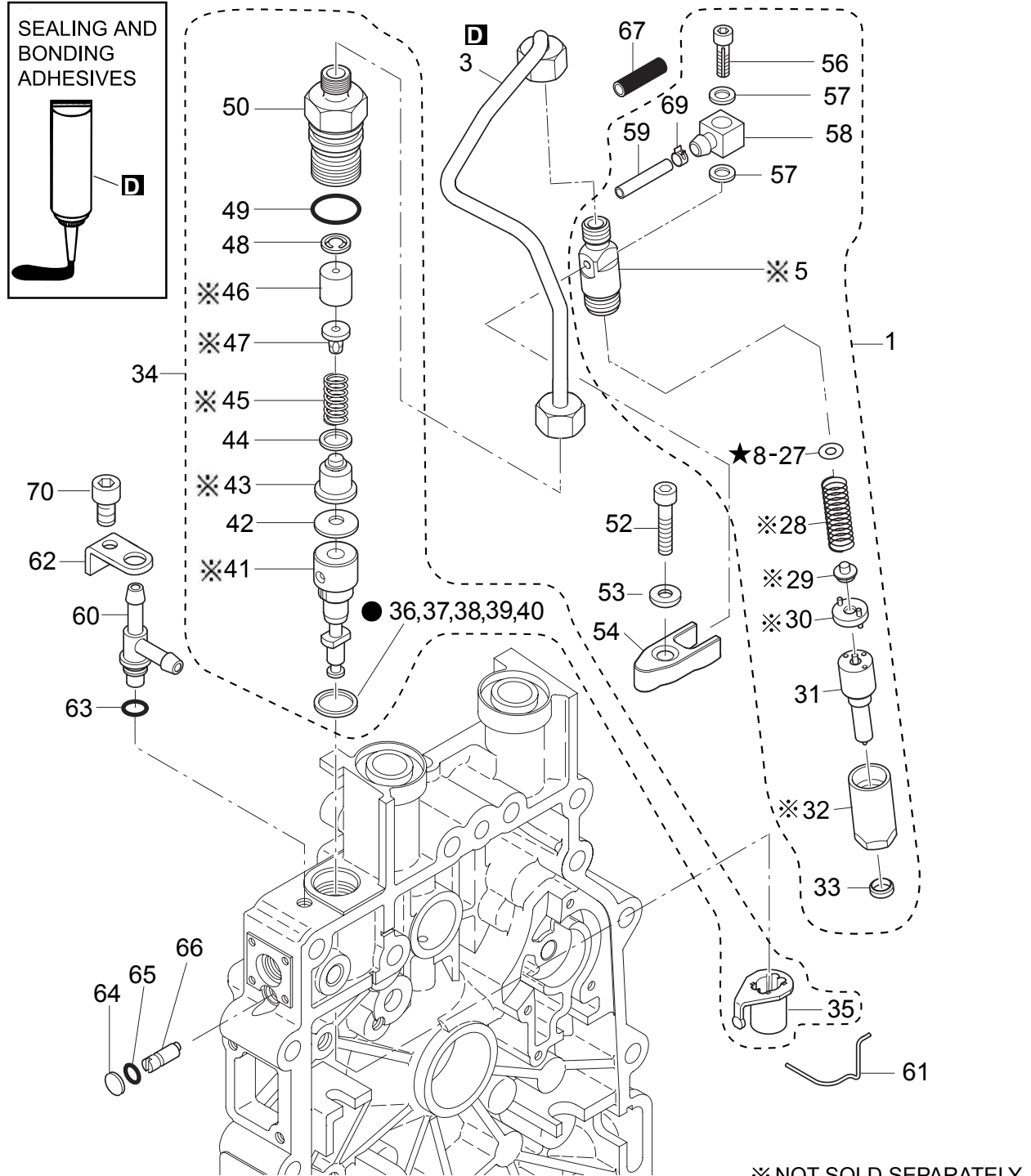
HATZ 1B30 ENGINE — BLOWER, FLYWHEEL ASSY.



HATZ 1B30 ENGINE — BLOWER, FLYWHEEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01330104	FLYWHEEL ASSY., ELECTRIC START	1.....	INCLUDES ITEMS W/\$
18\$	50327300	ALLEN SCREW	6	
19\$	04193600	BLOWER RING	1	
20\$	50416800	ALLEN SCREW	3	
21\$	50003400	WASHER, LOCK	6	
22\$	04098720	FLANGE	1	
23\$	50035200	PIN	3	
24\$	04110120	ADD. FLYWHEEL	1	

HATZ 1B30 ENGINE — INJECTION EQUIPMENT ASSY.



※ NOT SOLD SEPARATELY

● Use for adjustment

36	0.2mm
37	0.3mm
38	0.4mm
39	0.5mm
40	0.6mm

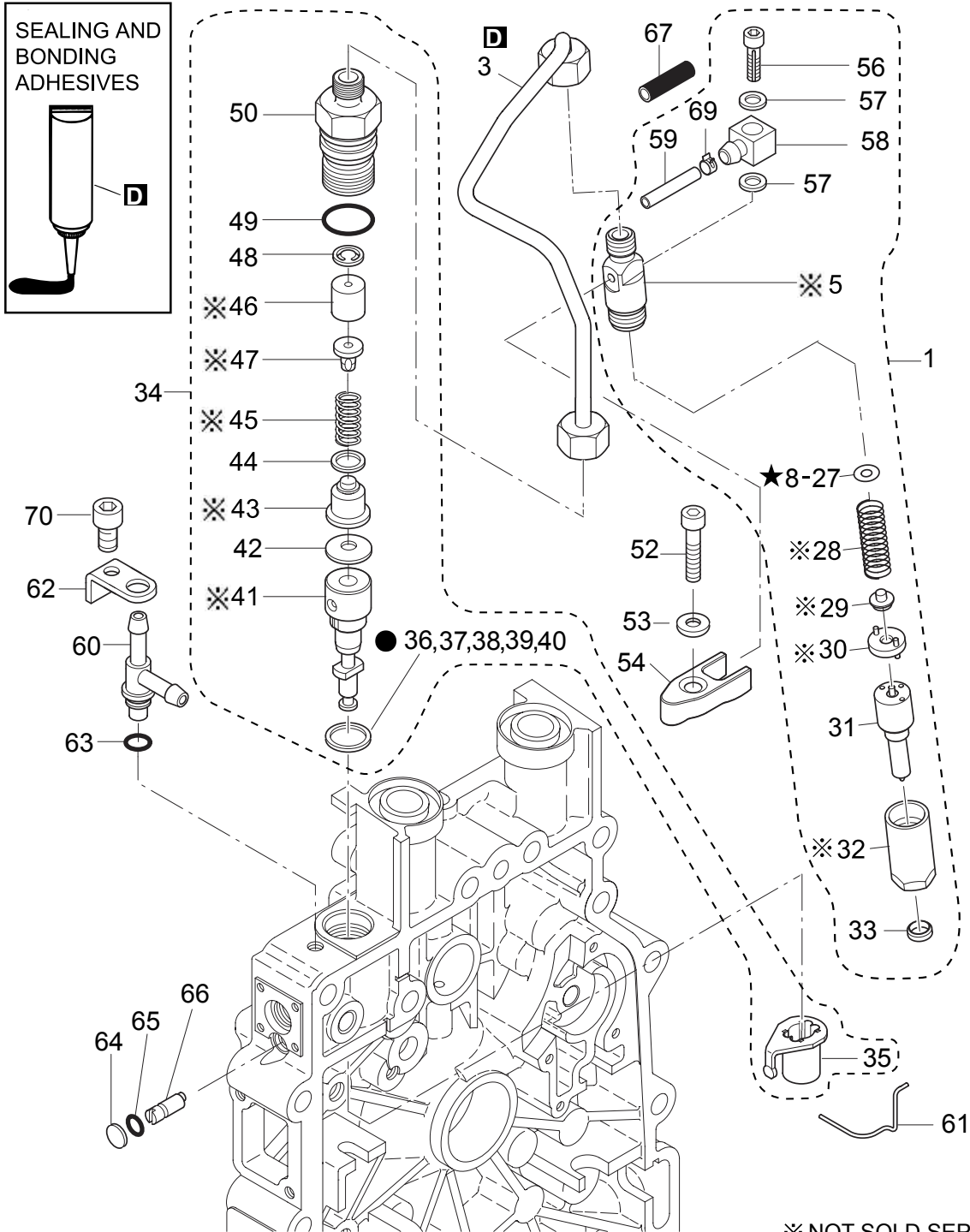
★ Use for adjustment

8	1.00mm	13	1.24mm	18	1.50mm	23	1.74mm
9	1.04mm	14	1.30mm	19	1.54mm	24	1.80mm
10	1.10mm	15	1.34mm	20	1.60mm	25	1.84mm
11	1.14mm	16	1.40mm	21	1.64mm	26	1.90mm
12	1.20mm	17	1.44mm	22	1.70mm	27	1.94mm

HATZ 1B30 ENGINE — INJECTION EQUIPMENT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
D	70018918	LOCTITE 243, 50 ML	1	
1	01389610	INJECTOR ASSY.	1	INCLUDES ITEMS W/\$
3	02024400	FUEL PRESSURE PIPE	1	
5\$		HOUSING, INJECTOR	1	NOT SOLD SEPARATELY
8\$	50436400	SHIM 1.0	1	SELECT 0-1, ITEMS W/@
9@	50436500	SHIM 1.04	1	
10@	50436600	SHIM 1.10	1	
11@	50436700	SHIM 1.14	1	
12@	50436800	SHIM 1.20	1	
13@	50436900	SHIM 1.24	1	
14@	50437000	SHIM 1.30	1	
15@	50437100	SHIM 1.34	1	
16@	50437200	SHIM 1.40	1	
17@	50437300	SHIM 1.44	1	
18@	50437400	SHIM 1.50	1	
19@	50437500	SHIM 1.54	1	
20@	50437600	SHIM 1.60	1	
21@	50437700	SHIM 1.64	1	
22@	50437800	SHIM 1.70	1	
23@	50437900	SHIM 1.74	1	
24@	50438000	SHIM 1.80	1	
25@	50438100	SHIM 1.84	1	
26@	50438200	SHIM 1.90	1	
27@	50438300	SHIM 1.94	1	
28\$		HOUSING, INJECTOR	1	NOT SOLD SEPARATELY
29\$		SPRING	1	NOT SOLD SEPARATELY
30\$		GUIDE, INJECTOR SPRING	1	NOT SOLD SEPARATELY
31\$	50566710	NOZZLE	1	
32\$		BODY, INJECTOR.....	1	NOT SOLD SEPARATELY
33\$	05070500	JOINT WASHER INJECTOR	1	
34	01582920	INJECTION PUMP	1	
35	01330801	CONTROL SLEEVE	1	
36@	04096300	SHIM 14X18X0.2	1	
37@	04096400	SHIM 14X18X0.3	1	
38@	04096500	SHIM 14X18X0.4	1	
39@	04096600	SHIM 14X18X0.5	1	
40@	04096700	SHIM 14X18X0.6	1	
41%		VALVE, INJECTION PUMP	1	NOT SOLD SEPARATELY

HATZ 1B30 ENGINE — INJECTION EQUIP. ASSY (CONT'D.)



※ NOT SOLD SEPARATELY

● Use for adjustment	
36	0.2mm
37	0.3mm
38	0.4mm
39	0.5mm
40	0.6mm

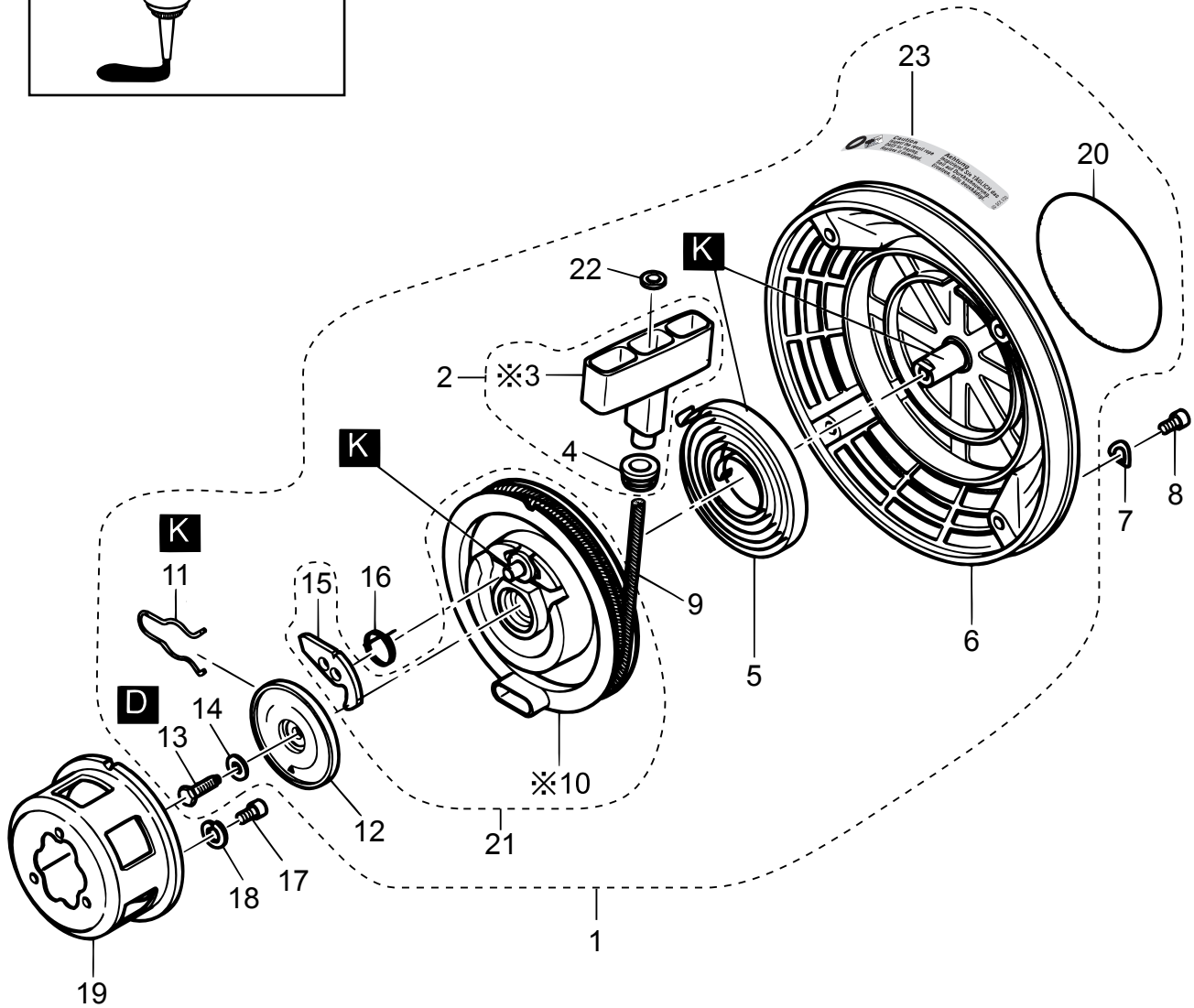
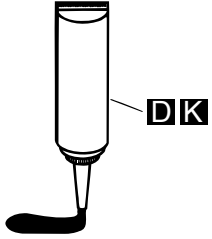
★ Use for adjustment							
8	1.00mm	13	1.24mm	18	1.50mm	23	1.74mm
9	1.04mm	14	1.30mm	19	1.54mm	24	1.80mm
10	1.10mm	15	1.34mm	20	1.60mm	25	1.84mm
11	1.14mm	16	1.40mm	21	1.64mm	26	1.90mm
12	1.20mm	17	1.44mm	22	1.70mm	27	1.94mm

HATZ 1B30 ENGINE — INJECTION EQUIP. ASSY (CONT'D.)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
42%	04165200	SEALING WASHER	1	
43%		VALVE COMPONENTS	1.....	NOT SOLD SEPARATELY
44%	50476900	JOINT WASHER	1	
45%		SPRING	1.....	NOT SOLD SEPARATELY
46%		SPACER.....	1.....	NOT SOLD SEPARATELY
47%		GUIDE, SPRING.....	1.....	NOT SOLD SEPARATELY
48%	05180800	VALVE PLATE	1	
49%	50489200	O-RING	1	
50%	05181100	HOLDER, DELIVERY VALVE	1	
52	50323900	ALLEN SCREW	1	
53	50596500	BALL DISC C	1	
54	04281801	FORK INJECTOR	1	
56\$	04281900	ALLEN SCREW	1	
57\$	50110800	JOINT A	2	
58\$	05129000	CONNECTING NIPPLE	1	
59\$	04282000	HOSE	1	
60	01756800	NIPPLE	1	
61	04161800	HOLDING SPRING	1	
62	05390700	SUPPORT	1	
63	50154300	O-RING	1	
64	50476000	DISC	1	
65	50330100	O-RING	1	
66	04097710	ECCENTRIC PIN	1	
67	05267901	INSULATION HOSE	1	
69\$	50577900	CLAMP 6	1	
70	50547000	ALLEN SCREW	1	

HATZ 1B30 ENGINE — RECOIL STARTER ASSY.

SEALING AND BONDING
ADHESIVES

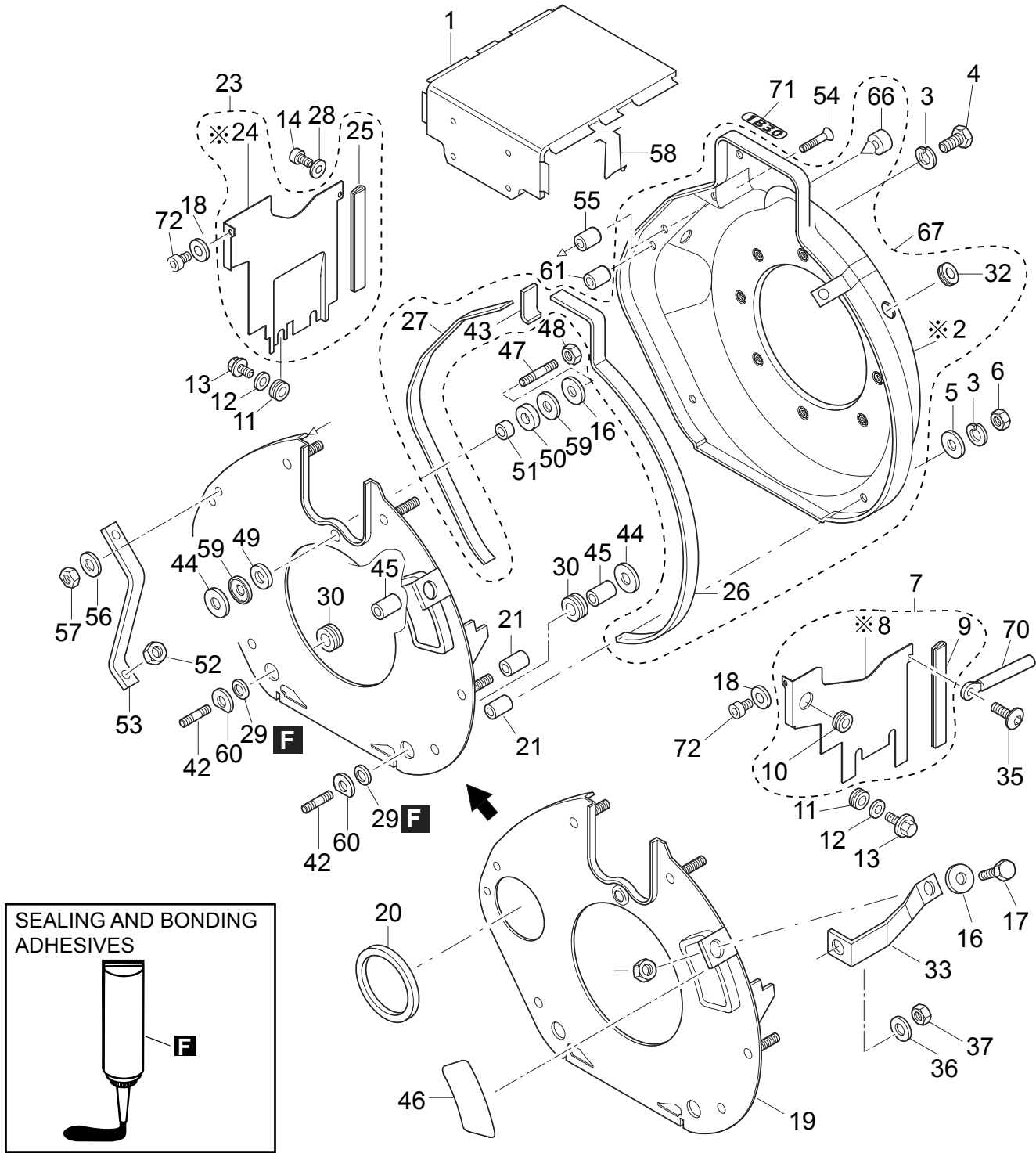


※ NOT SOLD SEPARATELY

HATZ 1B30 ENGINE — RECOIL STARTER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
D	70018918	LOCTITE 243, 50 ML	1	
K	50342601	HIGH TEMP. FETT 400G	1	
1	01865501	RECOIL-STARTER ASSY.....	1	INCLUDES ITEMS W/\$
2\$	01497800	STARTER KNOB ASSY.	1	INCLUDES ITEMS W/%
3\$%		KNOB, STARTER.....	1	NOT SOLD SEPARATELY
4\$%	03665200	RUBBER SLEEVE	1	
5\$	05045202	SPIRAL SPRING	1	
6\$	02308100	CASE, RECOIL-STARTER	1	
7	50081200	WASHER, LOCK	4	
8	50062700	ALLEN SCREW	4	
9\$	01929000	ROPE RECOIL.	1	
10\$@		REEL.....	1	NOT SOLD SEPARATELY
11\$	05044901	BRAKE SPRING	1	
12\$	05045001	BRAKE DISC	1	
13\$	50146300	HEXAGON SCREW	1	
14\$	50390701	CON. WASHER, LOCK	1	
15\$@	05044800	RATCHET, RECOIL STARTER	1	
16\$	05061300	RETURN SPRING	1	
17	50062700	ALLEN SCREW	3	
18	50170900	WASHER, LOCK	3	
19	04155000	STARTER PULLEY	1	
20\$	05109103	STICKER LABEL	1	
21\$	01548800	REEL WITH RATCHET, RECOIL	1	INCLUDES ITEMS W/@
22\$	50514600	WASHER	1	
23\$	05333801	STICKER	1	

HATZ 1B30 ENGINE — AIR DUCTING ASSY.

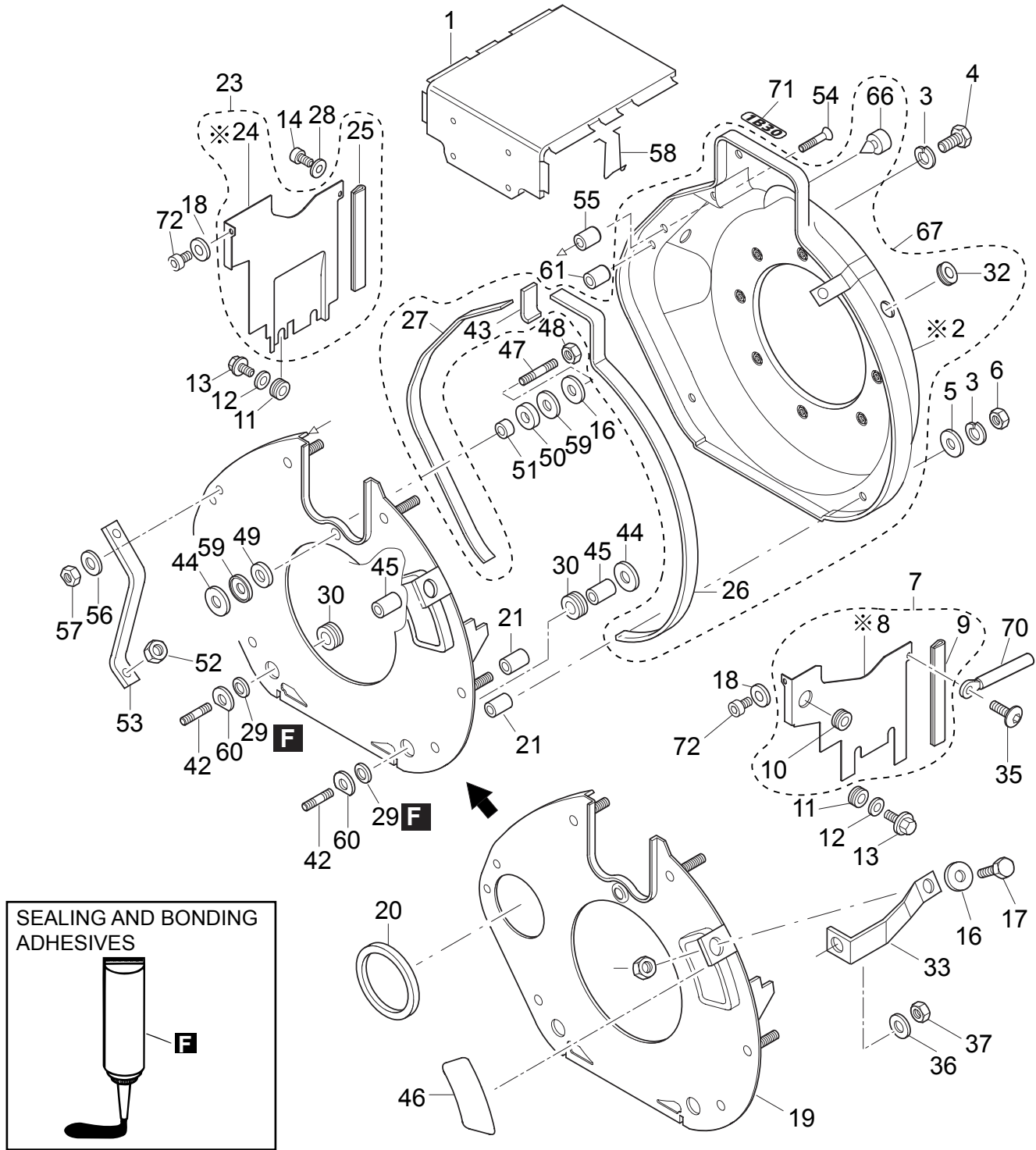


※ NOT SOLD SEPARATELY

HATZ 1B30 ENGINE — AIR DUCTING ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
F	50223900	TECHNICOLL CLEANER	1	
1	01910900	HOOD	1	
2#		DUCTING, COVER.....	1.....	NOT SOLD SEPARATELY
3	50170900	WASHER, LOCK	7	
4	50146300	HEXAGON SCREW	1	
5	50120000	DISC A	2	
6	020106050	HEXAGON NUT	6.....	REPLACES P/N 50144400
7	01326300	COOLING AIR DUCTING ASSY.....	1.....	INCLUDES ITEMS W/\$
8\$		DUCTING.....	1.....	NOT SOLD SEPARATELY
9\$	05128900	SEALING STRIP	1	
10\$	50334800	RUBBER SLEEVE	1	
11	50163801	RUBBER SLEEVE	3	
12	50441600	WASHER	3	
13	50445401	FILLISTER HEAD SCREW	3	
14	50528100	ALLEN SCREW	1	
15	020106050	HEXAGON NUT	1.....	REPLACES P/N 50144400
16	50114300	DISC	2	
17	50177100	HEXAGON SCREW	1	
18	50144500	WASHER, FLAT	2	
19	01326810	PARTING SHEET	1	
20	04099500	SEALING RING	1	
21	05197500	BUSH	4	
23	01326200	COOLING AIR DUCTING ASSY.	1.....	INCLUDES ITEMS W/%
24%		DUCTING.....	1.....	NOT SOLD SEPARATELY
25%	04111500	SEALING STRIP 119MM	1	
26#	05108101	SEALING STRIP 530MM	1	
27#	04124601	SEALING STRIP 443MM	1	
28	04060600	WASHER	1	
29	03575500	RUBBER SEAL RING	2	
30	01378300	SPACER BUSH	2	
32#	50453300	RUBBER SLEEVE	1	
33	01599610	SUPPORT	1	
35	50495000	SCREW	1	
36	50095100	WASHER, LOCK	1	
37	50344700	HEXAGON NUT	1	
42	50458100	STUD	2	
43#	05198200	SEALING STRIP 48	1	
44	04042000	WASHER	3	
45	04098400	SPACER TUBE	2	

HATZ 1B30 ENGINE — AIR DUCTING ASSY. (CONT'D.)

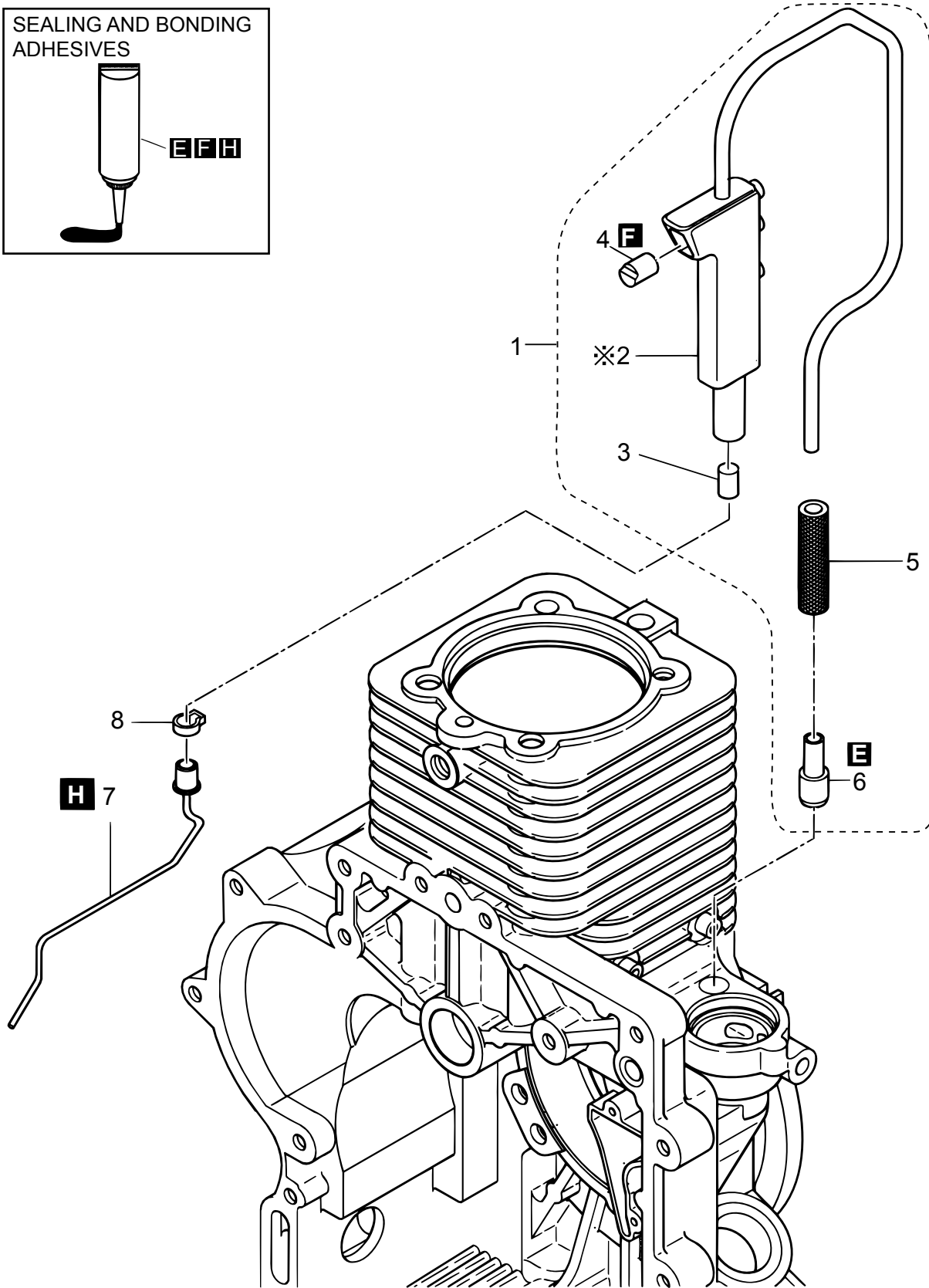
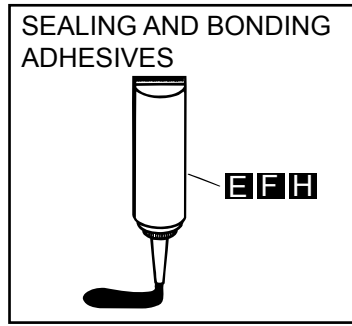


※ NOT SOLD SEPARATELY

HATZ 1B30 ENGINE — AIR DUCTING ASSY. (CONT'D.)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
46	04215000	CLOSING COVER	1	
47	50464401	STUD	1	
48	50328300	HEXAGON NUT	1	
49	05133800	RUBBER SEAL RING	1	
50	05133900	RUBBER SEAL RING	1	
51	05132700	BUSH	1	
52	020108060	HEXAGON NUT	1.....	REPLACES P/N 50148000
53	05133001	SUPPORT, FUEL TANK	1	
54	50445000	COUNTERSUNK SCREW	1	
55	05132810	SPACER TUBE	1	
56	50170900	WASHER, LOCK	1	
57	020106050	HEXAGON NUT	1.....	REPLACES P/N 50144400
58	05145800	SPRING CLIP	1	
59	05097600	WASHER	2	
60	04145300	DISC	2	
61	05132810	SPACER TUBE	1	
66#	50392610	RUBBER BUSH	1.....	SELECT 0-4
67	01831201	BLOWER DUCTING ASSY.....	1.....	INCLUDES ITEMS W/#
70	05001200	CLIP	1	
71	05314101	STICKER 1 1B30	1	
72	50474200	ALLEN SCREW	2	

HATZ 1B30 ENGINE — CRANKCASE BREATHING SYSTEM ASSY.

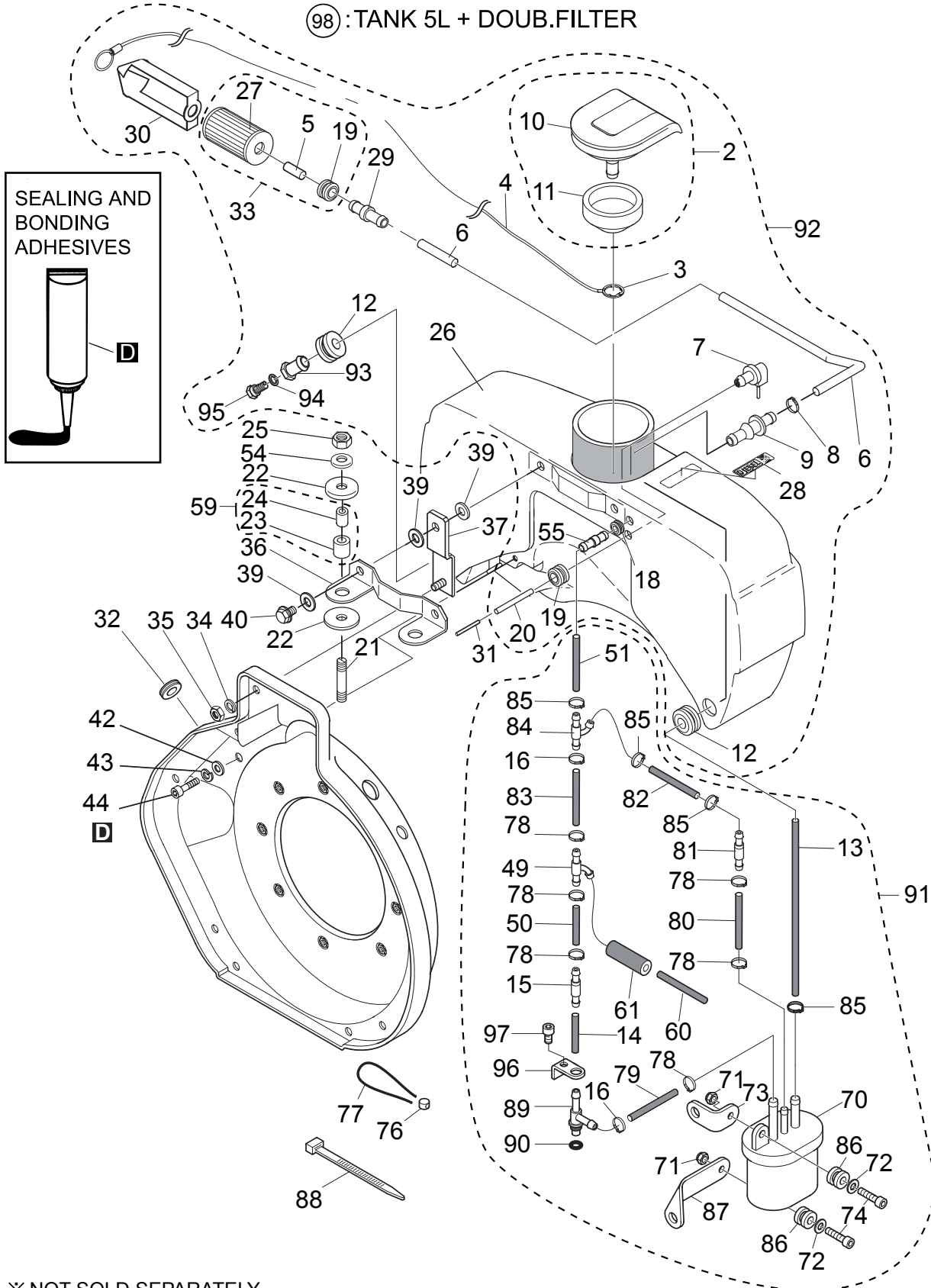


※ NOT SOLD SEPARATELY

HATZ 1B30 ENGINE — CRANKCASE BREATHING SYSTEM ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
E	50223400	LOCTITE 648	1	
G	50256501	LOCTITE IS 407	1	
H	70018944	TEROSON TEROSTAT 63	1	
1	01885700	CRANKCASE BREATHER ASSY.	1	INCLUDES ITEMS W/%
2%		HOUSING, CRANKCASE BREATHER.....	1	NOT SOLD SEPARATELY
3%	05102900	FILTER BREATHING SYSTEM	1	
4%	05098100	PLUG	1	
5%	05156200	FUEL PIPE LW 6X35	1	
6%	05306500	NIPPLE	1	
7	01551600	SUCTION PIPE	1	
8	50456800	CLAMP	1	

HATZ 1B30 ENGINE — FUEL ASSY.

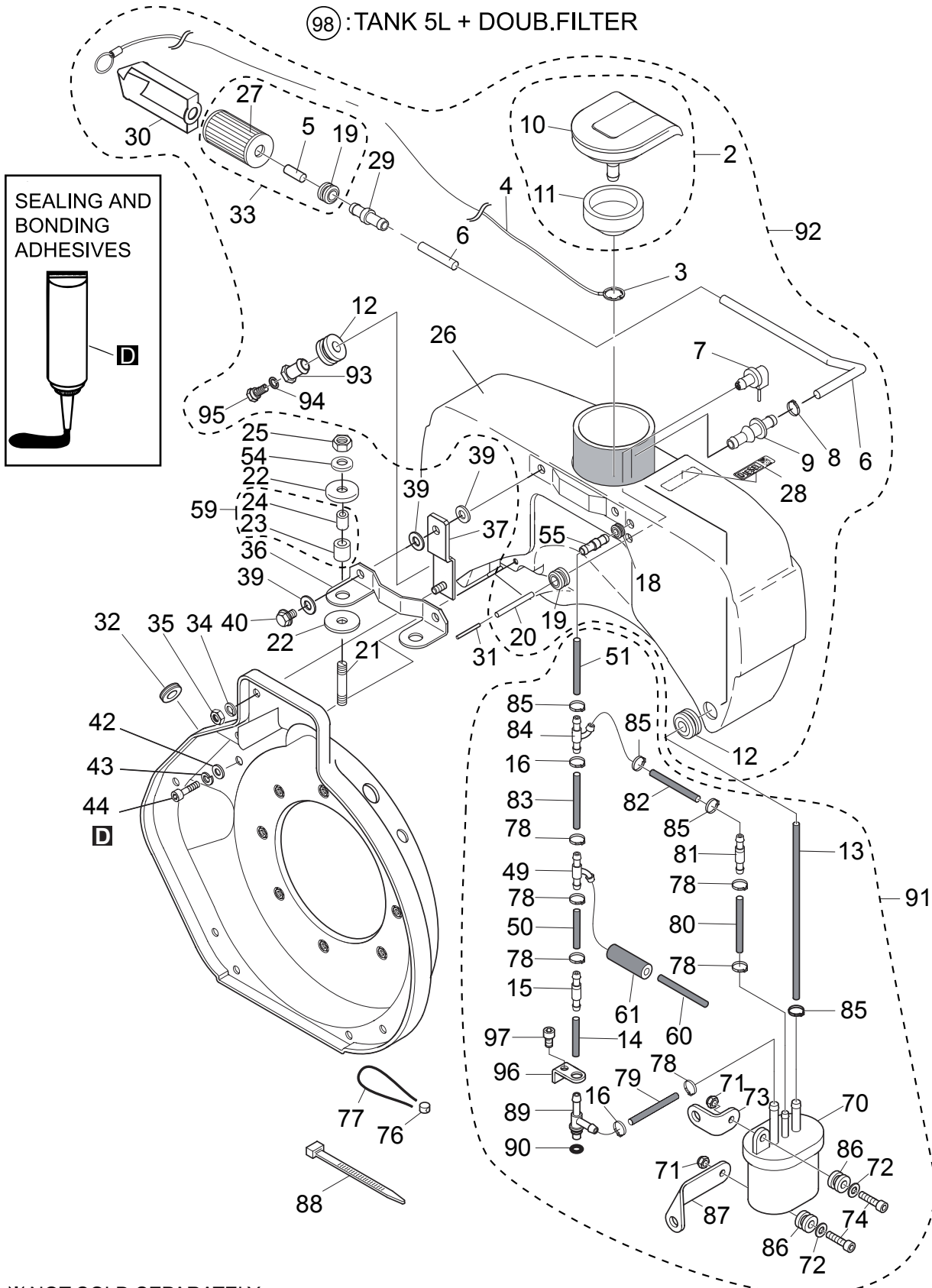


※ NOT SOLD SEPARATELY

HATZ 1B30 ENGINE — FUEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
D	70018918	LOCTITE 243, 50 ML	1	
2^	01535302	CAP, FUEL TANK ASSY.....	1	INCLUDES ITEMS W/\$
3^	50500800	CIRCLIP 8	1	
4^	01628900	ROPE	1	
5% [^]		TUBE	1	NOT SOLD SEPARATELY
6^	05311000	FUEL HOSE	1	
7^	01534900	FUEL VENTING VALVE	1	
8^	50399801	CLAMP	1	
9^	05084010	CONNECTING NIPPLE	1	
10\$ [^]		FUEL CAP	1	NOT SOLD SEPARATELY
11\$ [^]	05086401	GASKET, FUEL CAP	1	
12^	50440800	RUBBER SLEEVE	2	
13#	05347600	FUEL HOSE	1	
14#	05366400	FUEL PIPE	1	
15#	01534601	FUEL VENTING VALVE	1	
16#	50590000	CLAMP	2	
18^	05130400	RUBBER SLEEVE	1	
19% [^]	50440901	RUBBER SLEEVE	2	
20^	05085601	BREATHER HOSE	1	
21	50231900	STUD	2	
22	05109810	DISC	4	
23@		TUBE, INSULATING	1	NOT SOLD SEPARATELY
24@	05122800	INSULATING SLEEVE	2	
25	020108060	HEXAGON NUT	2	REPLACES P/N 40028400
26^		FUEL TANK.....	1	NOT SOLD SEPARATELY
27% [^]		FILTER, FUEL.....	1	NOT SOLD SEPARATELY
28^	05235602	STICKER DIESEL	1	
29^	05189001	CONNECTING NIPPLE	1	
30^	05253400	SUPPORT FUEL FILTER	1	
31	05085500	TUBE	1	
33	01635210	FUEL FILTER ASSY.....	1	INCLUDES ITEMS W/%
34	50170900	WASHER, LOCK	2	
35	020106050	HEXAGON NUT	2	REPLACES P/N 50144400
36	05122300	SUPPORT	1	
37	01331300	SUPPORT	2	
39	05110010	DISC	4	
40	01677100	HEXAGON SCREW	2	
42	50144500	WASHER, FLAT	4	
43	50170900	WASHER, LOCK	4	
44	50149100	ALLEN SCREW	4	
49#	05175602	HOSE NIPPLE T	1	
50#	03807110	FUEL HOSE	1	

HATZ 1B30 ENGINE — FUEL ASSY. (CONT'D.)



※ NOT SOLD SEPARATELY

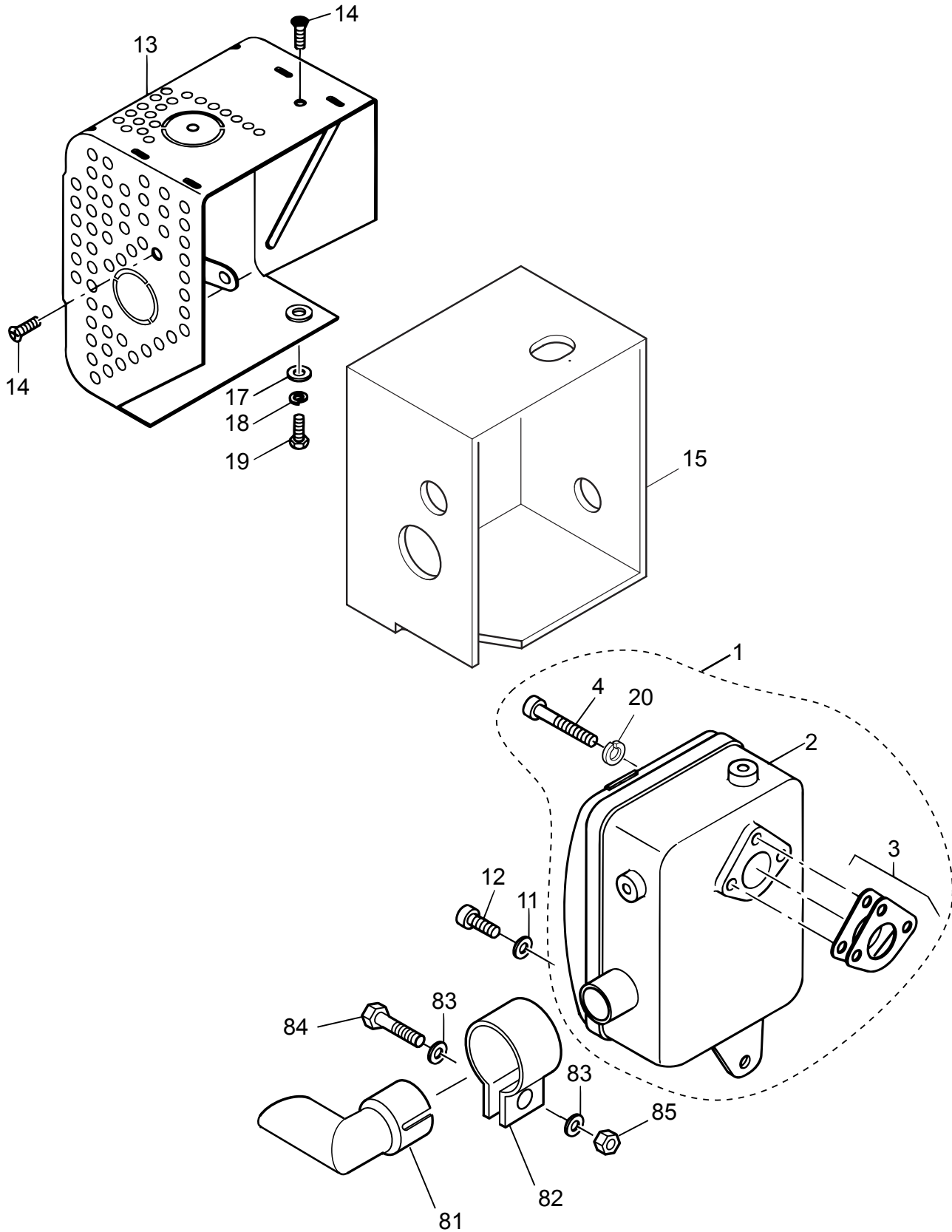
HATZ 1B30 ENGINE — FUEL ASSY. (CONT'D.)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
51#	05306900	FUEL HOSE	1	
54	50148100	FLAT WASHER	2	
55^	05184400	CONNECTING NIPPLE	1	
59	01655800	INSULATING TUBE ASSY.	2.....	INCLUDES ITEMS W/@
60	04282000	HOSE	1	
61	05213010	INSULATION HOSE	1	
70#	01919702	FUEL FILTER EXTENSION MOUNT	1	
71#	50501600	HEXAGON NUT	2	
72#	50441600	WASHER	2	
73#	05279500	SUPPORT	1	
74#	50446900	ALLEN SCREW	2	
76#	40021400	LEAD SEAL	1	
77#	40021500	SEAL WIRE	1	
78#	50570900	CLAMP	6	
79#	05283910	FUEL PIPE	1	
80#	05283910	FUEL PIPE	1	
81#	00805502	VENT VALVE	1	
82#	03663710	FUEL HOSE	1	
83#	03663810	FUEL HOSE	1	
84#	05122701	HOSE NIPPLE T	1	
85#	50399801	CLAMP	4	
86#	50556600	RUBBER SLEEVE	2	
87#	05279400	SUPPORT	1	
88	50358400	STRAP	2	
89#	01756800	NIPPLE	1	
90#	50154300	O-RING	1	
91	02299300	FUEL PIPE ASSY.	1.....	INCLUDES ITEMS W/#
92	01790500	FUEL TANK ASSY. 5L	1.....	INCLUDES ITEMS W/^
93^	05188200	CONNECTING NIPPLE	1	
94^	50313100	JOINT A	1	
95^	03613600	VENT SCREW	1	
96#	05390700	SUPPORT	1	
97#	50547000	ALLEN SCREW	1	
98	01832704	TANK 5L + DOUB. FILTER	1.....	INCLUDES ALL ITEMS OF ASSY ITEMS 91 AND 92

HATZ 1B30 ENGINE — AIR FILTER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
G	50256501	LOCTITE IS 407	1	
1	01713601	AIR FILTER INTAK. ASSY. TOP	1.....	INCLUDES ITEMS W/#
2#	05056400	WASHER	1	
3#	50171500	ALLEN SCREW	3	
4#	50426000	AIR FILTER ELEMENT	1	
5#	50454300	KNURLED NUT	1	
7#	50435800	RUBBER SLEEVE	1	
8#	01607911	AIR FILTER HOUSING	1.....	INCLUDES ITEMS W/\$
9#	50452200	WING NUT	1	
12#	05216100	SEALING STRIP 545MM	1	
13#	50095100	WASHER, LOCK	2	
14#		HOUSING, AIR FILTER	1.....	NOT SOLD SEPARATELY
15#	05056300	GASKET AIR FILTER	2	
16#	05088301	INSULATING FLANGE	1	
17#	05098100	PLUG	1	
36#	04215000	CLOSING COVER	1	
37#	05166200	RUBBER SHELL 32MM	1	
39#	05056500	CLOSING COVER	1	
41#	50591500	SHIM	1	
42#	50591600	TUBE RIVET	1	
44#	01720201	COVER AIR FILTER	1	

HATZ 1B30 ENGINE — EXHAUST SILENCER ASSY.

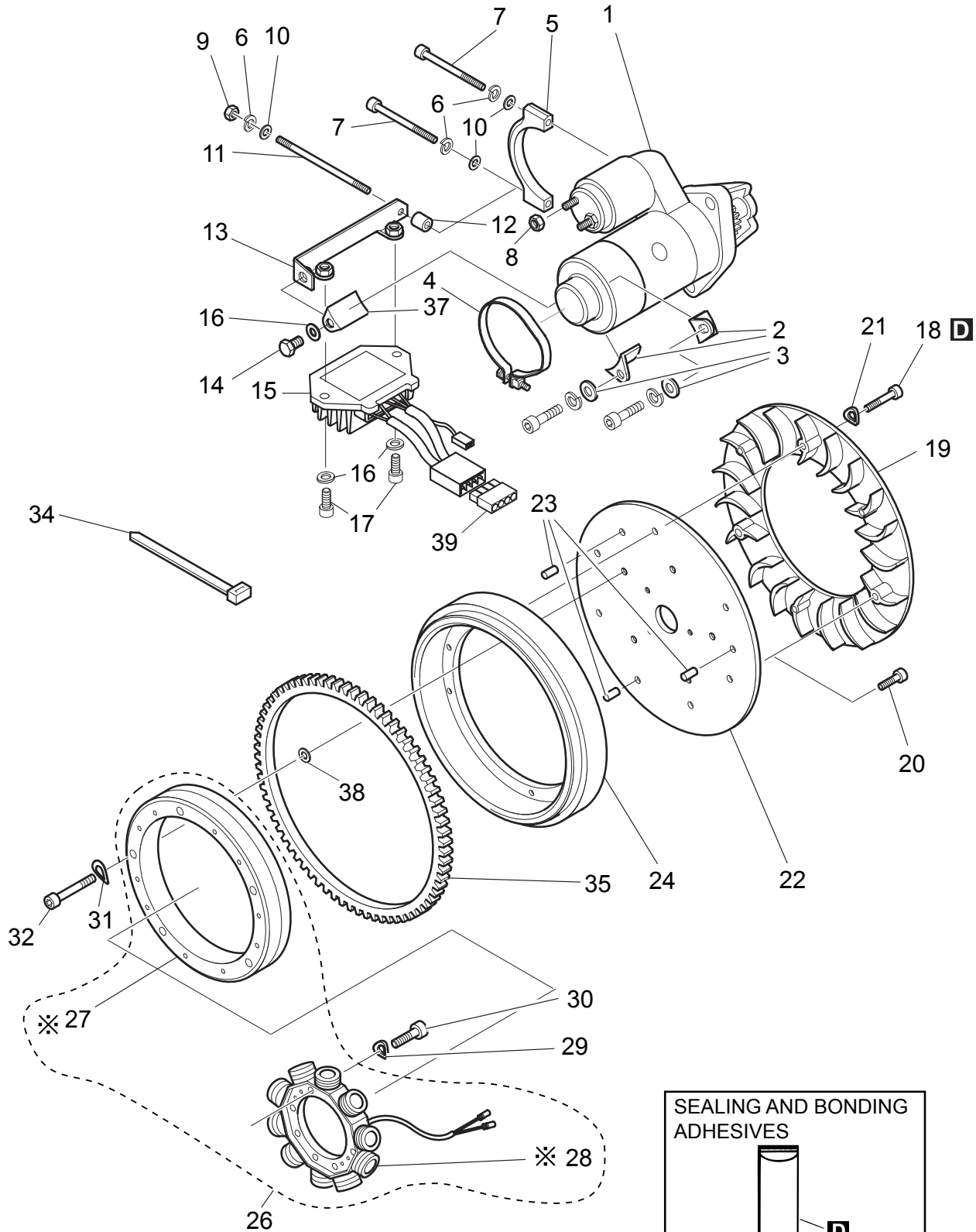


※ NOT SOLD SEPARATELY

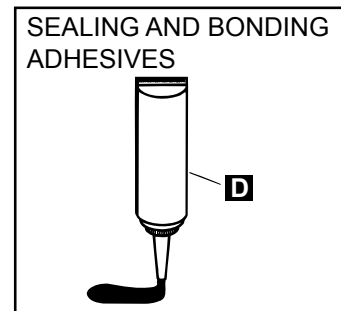
HATZ 1B30 ENGINE — EXHAUST SILENCER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01680902	EXHAUST SILENCER ASSY.....	1.....	INCLUDES ITEMS W/\$
2\$	01680420	EXHAUST SILENCER	1	
3\$	01732601	GASKET, EXHAUST SILENCER	1	
4\$	50403900	ALLEN SCREW	3	
11	50114300	DISC	1	
12	50474200	ALLEN SCREW	1	
13	01645720	PROTECTOR, GUARD EXHAUST	1	
14	50422501	COUNTERSUNK SCREW	2	
15	01981301	INSULATION, EXHAUST SILENCER	1	
17	50114300	DISC	1	
18	50170900	WASHER, LOCK	1	
19	50177100	HEXAGON SCREW	1	
20\$	50208500	WASHER, LOCK	3	
81	467466780	EXHAUST PIPE	1	
82	50639700	PIPE CLIP	1	
83	50148100	WASHER, FLAT	2	
84	50135400	HEXAGON SCREW	1	
85	020108060	HEXAGON NUT	1.....	REPLACES P/N 40028400

HATZ 1B30 ENGINE — STARTER, ALTERNATOR ASSY.



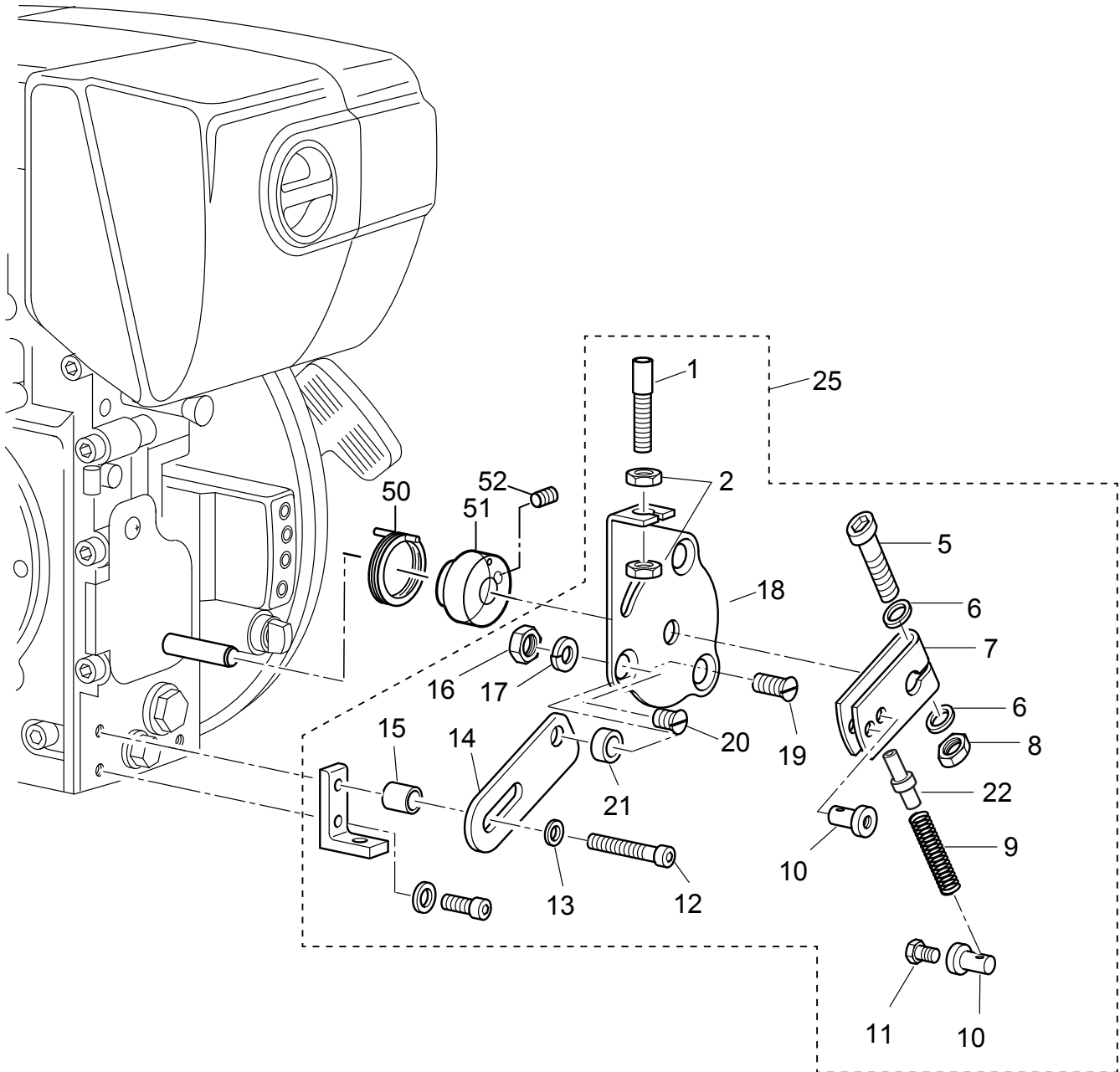
※ NOT SOLD SEPARATELY



HATZ 1B30 ENGINE — STARTER, ALTERNATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
D	70018918	LOCTITE 243 50ML	1	
1	01723400	ELECTRIC STARTER 12V 1.0KW	1	
2	04138400	SUPPORT	2	
3	50148100	FLAT WASHER	2	
4	50529800	HOSE CLIP	1	
5	04099100	RETAINING BRACKET	1	
6	50170900	WASHER, LOCK	2	
7	50444300	ALLEN SCREW	2	
8	50344700	HEXAGON NUT	1	
9	50144400	HEXAGON NUT	1	
10	50144500	WASHER, FLAT	2	
11	50455900	STUD MFS	1	
12	03671400	SPACER BUSH	1	
13	01560900	SUPPORT TENSION REGULATOR	1	
14	50096200	HEXAGON SCREW	1	
15	02270800	TENS. REGULATOR 12V	1	
16	50148100	WASHER, FLAT	3	
17	50183000	ALLEN SCREW	2	
18	50327300	ALLEN SCREW	6	
19	04193600	BLOWER RING	1	
20	50416800	ALLEN SCREW	3	
21	50003400	WASHER, LOCK	6	
22	04098720	FLANGE	1	
23	50035200	PIN	3	
24	04110120	ADD. FLYWHEEL	1	
26	01925900	ALTERNATOR ASSY. 12V 200W	1	INCLUDES ITEMS W/\$
27\$		INDUCTOR RING, ALTERNATOR.....	1	NOT SOLD SEPARATELY
28\$		STATOR	1	NOT SOLD SEPARATELY
29	50081900	WASHER, LOCK	4	
30	50547000	ALLEN SCREW	4	
31	50081200	WASHER, LOCK	5	
32	50448700	ALLEN SCREW	5	
34	50358400	STRAP	3	
35	04108000	GEAR RING	1	
37	04138400	SUPPORT	1	
38	50114300	DISC	5	
39	50402100	PLUG SLEEVE HOUSING	1	

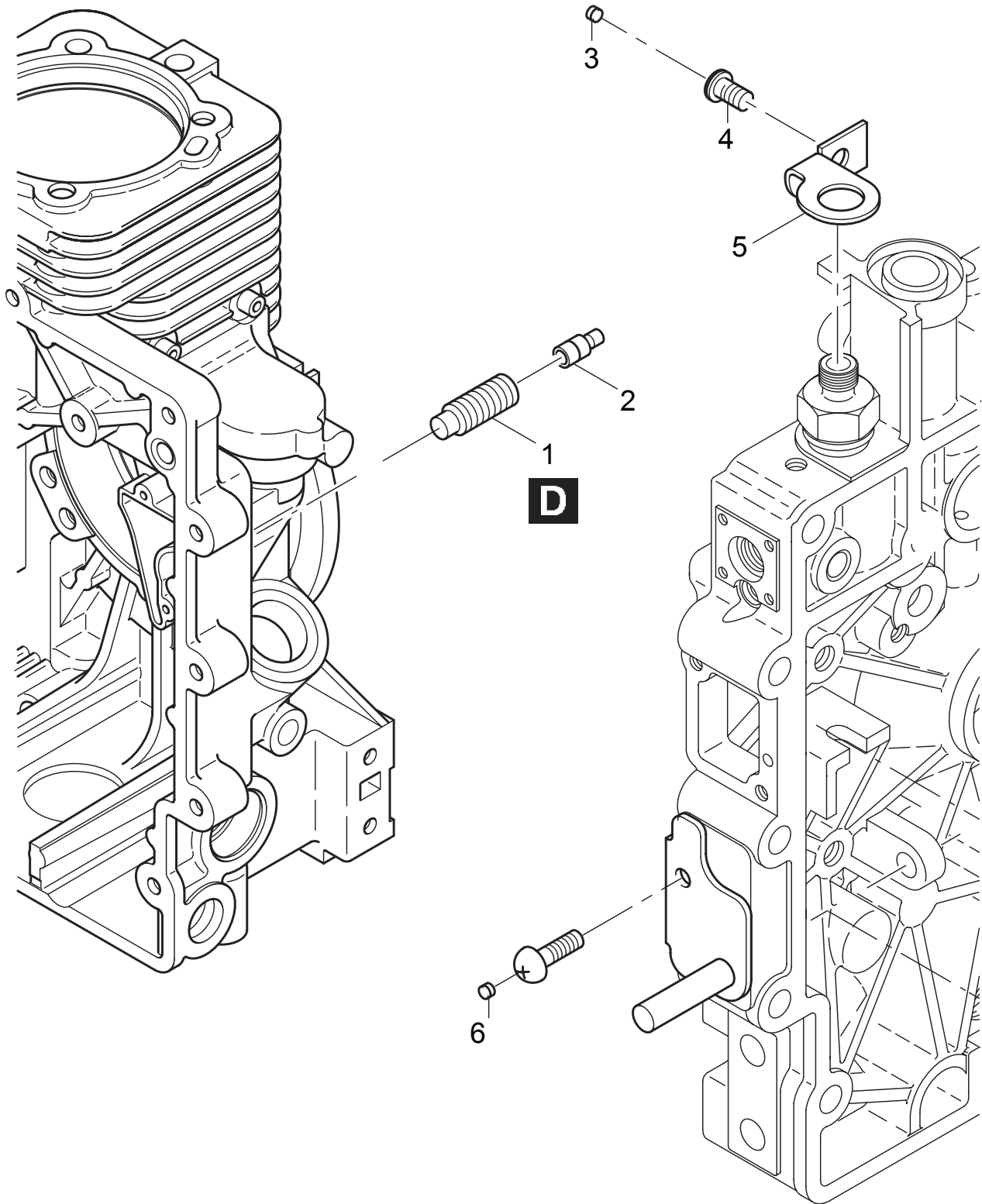
HATZ 1B30 ENGINE — SPEED CONTROL ASSY.



HATZ 1B30 ENGINE — SPEED CONTROL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1\$	05141200	ADJUSTING SCREW	1	
2\$	50144400	HEXAGON NUT	2	
5\$	50511900	ALLEN SCREW	1	
6\$	50216300	WASHER	2	
7\$	05117700	LEVER	1	
8\$	50094300	HEXAGON NUT	1	
9\$	50483200	PRESSURE SPRING	1	
10\$	50483100	CABLE CLAMPING	2	
11\$	50025000	HEXAGON SCREW	1	
12\$	50248800	ALLEN SCREW	1	
13\$	50148100	WASHER, FLAT	1	
14\$	05117500	PLATE	1	
15\$	03520600	SPACER TUBE	1	
16\$	50328300	HEXAGON NUT	1	
17\$	50208500	WASHER, LOCK	1	
18\$	05117610	CONSOLE	1	
19\$	50423900	COUNTERSUNK SCREW	1	
20\$	50380800	COUNTERSUNK SCREW	1	
21\$	03292900	SPACER TUBE	1	
22\$	05165000	GUIDE BUSH	1	
25	01563502	SPEED CONTROL	1	INCLUDES ITEMS W/\$
50	05154010	SPRING	1	
51	05179000	BUSH	1	
52	50400600	GRUB SCREW	1	

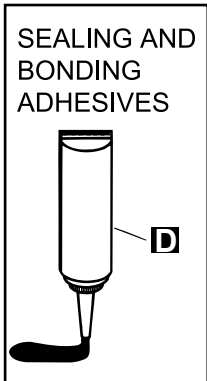
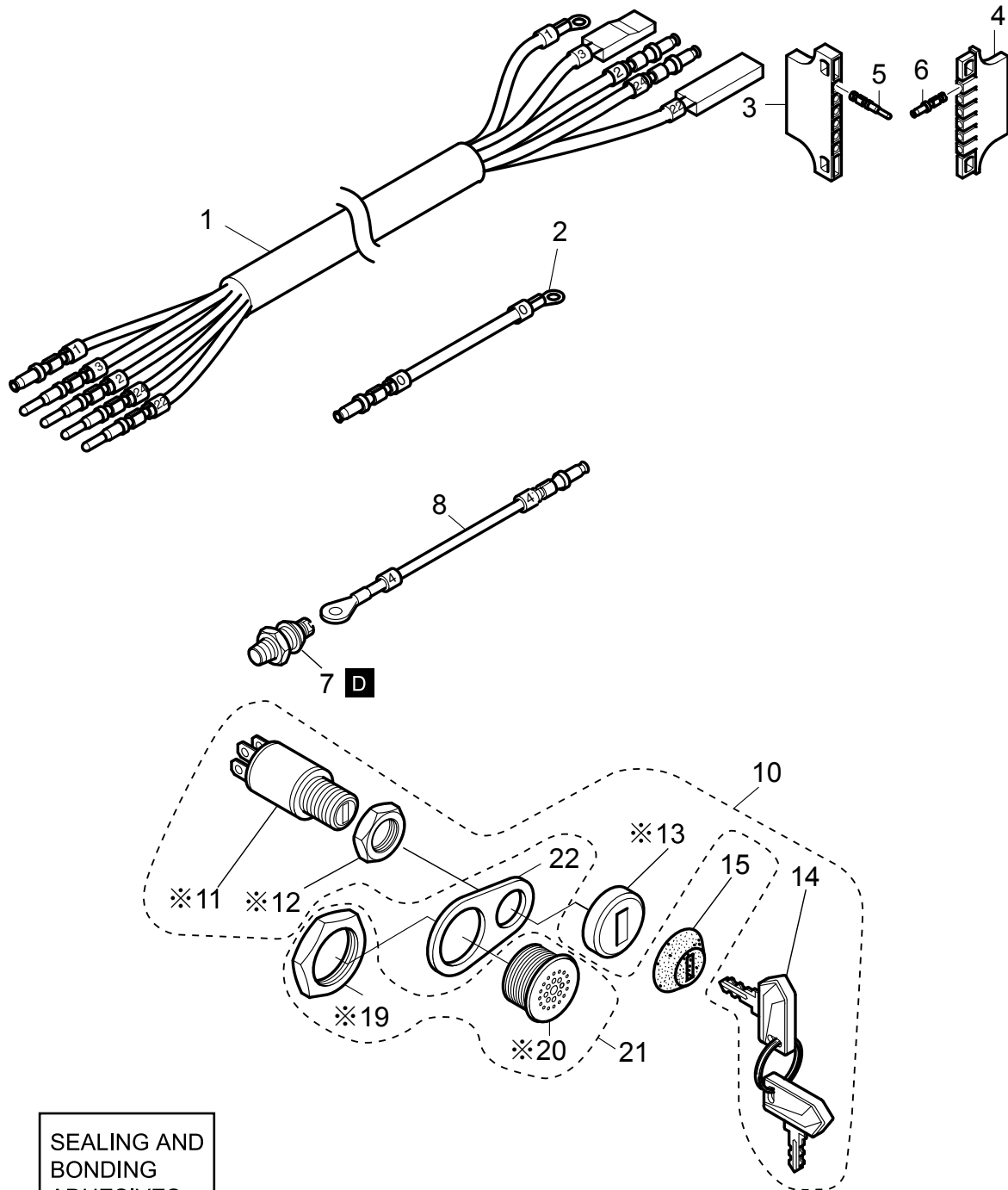
HATZ 1B30 ENGINE — SPEC. EQUIPMENT EPA ASSY.



HATZ 1B30 ENGINE — SPEC. EQUIPMENT EPA ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
D	70018918	LOCTITE 243, 50ML	1	
1	04198700	GRUB SCREW CARB/EPA	1	
2	04150500	CLOSING PLUG 6 CARB.	1	
3	04170600	PLUG	1	
4	50495000	SCREW	1	
5	04185301	GUARD	1	
6	05201500	CLOSING PLUG	1	

HATZ 1B30 ENGINE — ELECTRIC EQUIPMENT, WIRING ASSY.



※ NOT SOLD SEPARATELY

HATZ 1B30 ENGINE — ELECTRIC EQUIPMENT, WIRING ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01542200	WIRING HARNESS	1	
2	01548300	ELECTRIC WIRE 220MM	1	
3	50373600	PIN TERMINAL HOUSING 6-WAY	1	
4	50373700	PLUG SLEEVE HOUSING	1	
5	50374100	PIN TERMINAL	5	
6	50373900	SLEEVE	6	
7	50469101	OIL PRESSURE SWITCH	1	
8	01548000	ELECTRIC WIRE	1	
10	50384401	SWITCH, KEY ASSY.	1	
14	50404900	IGNITION SWITCH KEY	1	
15	05126402	PROTECTION CAP	1	
21	50465100	BUZZER 12/24V.	1	
22	05131801	FASTENING PLATE	1	