

PARTS MANUAL



Mikasa SERIES

MODELS

MVH502DSB (CRANK HANDLE)

MVH502DSB2 (ELECTRIC START)

REVERSIBLE PLATE COMPACTORS

(HATZ 1D81S DIESEL ENGINE)

Revision #6 (07/10/20)

THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

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MIKASA MVH502DSB/DSB2 PLATE COMPACTOR

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NOTICE

Specification and part number are subject to change without notice

HATZ 1D81S DIESEL ENGINE DRAWINGS

NOTICE

Drawings and Parts Lists of Hatz1D81S Engine is only for Tier 1 engines (MVH502DSB units). If you have a Tier 2 engine (MVH502DSB2 units), contact Hatz engine manufacturer for parts information.

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SUGGESTED SPARE PARTS

MQ MIKASA MVH502DSB/DSB2 REVERSIBLE PLATE
COMPACTOR W/HATZ 1D81S DIESEL ENGINE

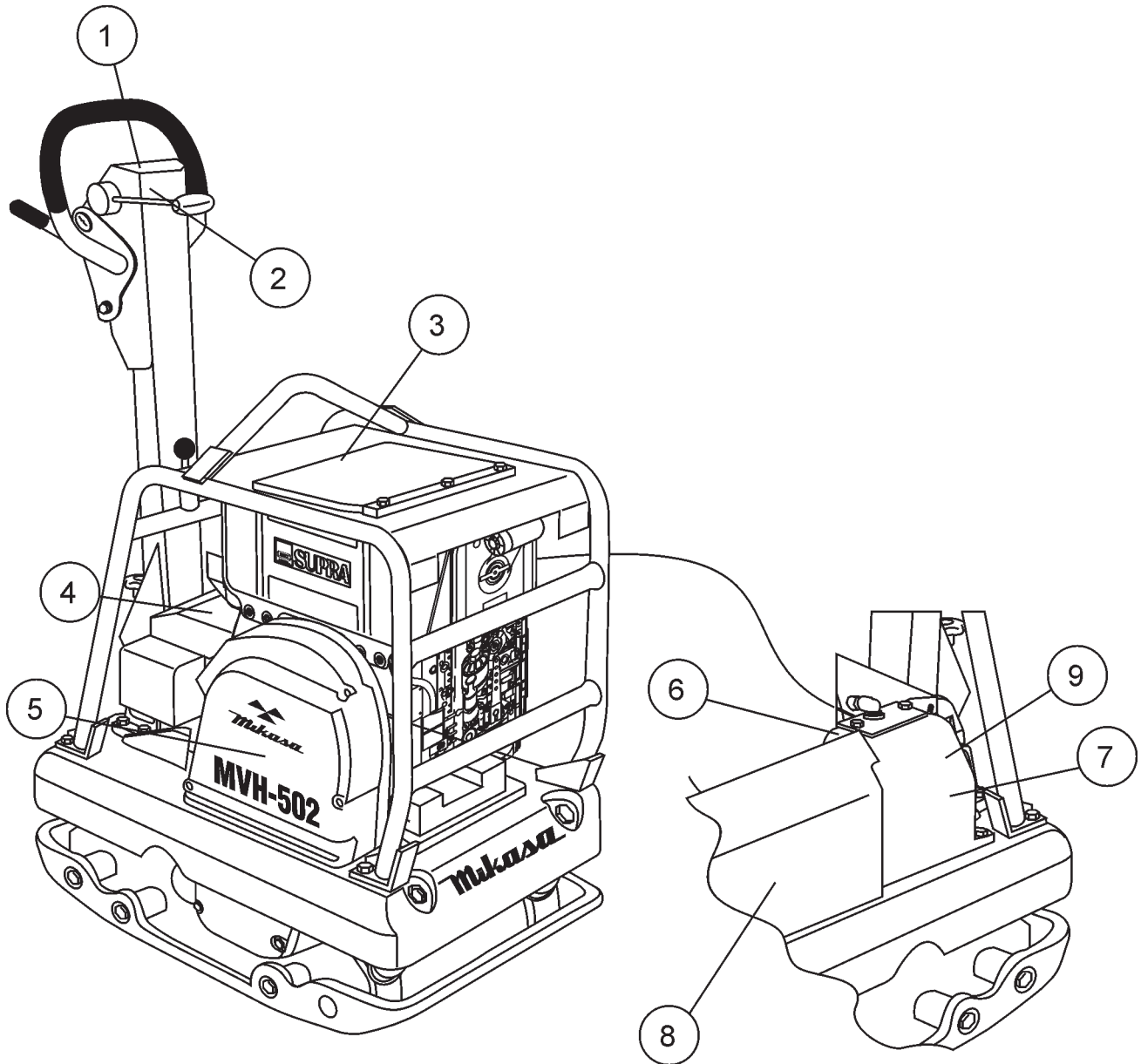
1 to 3 Units

<u>Qty.</u>	<u>P/N</u>	<u>Description</u>
6	070200453	V-BELT-45 GREEN
3	456499280	FILTER, HYDRAULIC OIL TANK
1	457333760	THROTTLE CABLE ASSY.
6	01480000	OIL FILTER, ENGINE
1	50397300	SEIVE, FUEL TANK
6	50478800	FUEL FILTER
1	50385800	CAP, FUEL TANK
6	01493000	AIR FILTER
3	50345300	KEY, IGNITION

NOTICE

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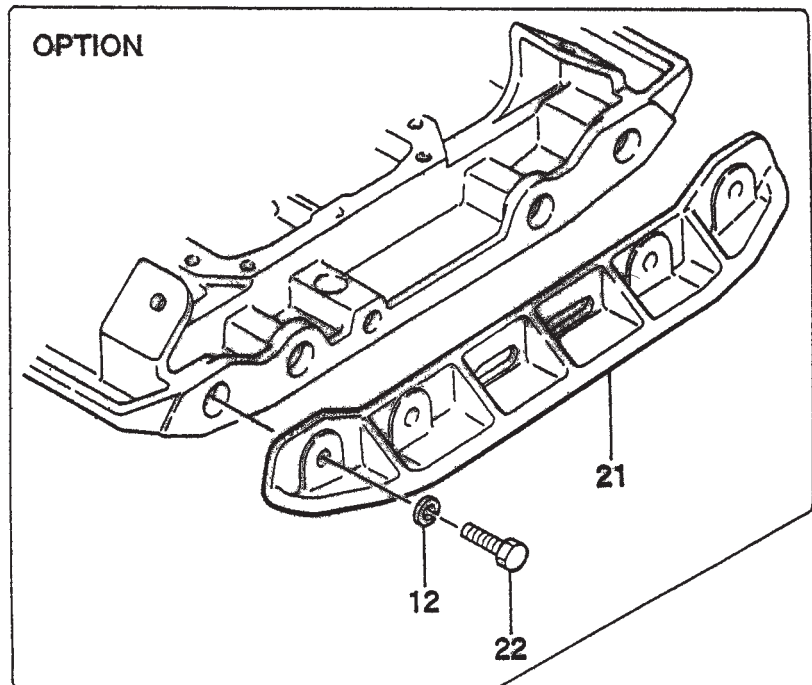
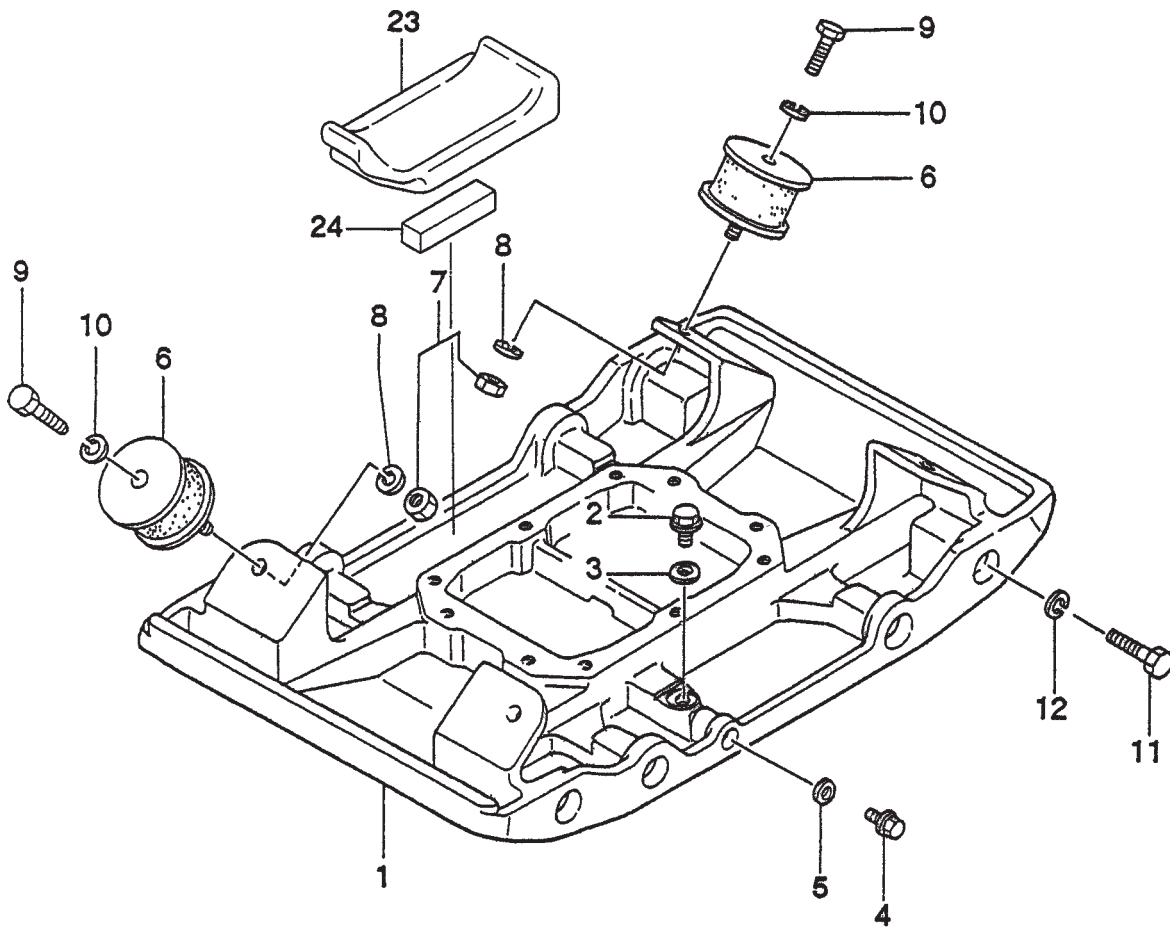
NAMEPLATE AND DECALS



NAMEPATE AND DECALS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	920204580	FULL THROTTLE DECAL	1	NPA-458
2	920202220	FORWARD/REVERSE DECAL	1	NPA-222
3	920206370	OPERATIONAL CAUTION DECAL	1	NPA-538
4	920203330	HEARING PROTECTION DECAL	1	NPA-333
5	920201580	MULTIQUIP LOGO DECAL	1	
6	920103670	OIL LEVEL INDICATOR DECAL	1	NPA-367
7	920207480	SHELL OIL #46DECAL	1	NPA-748
8	920205000	MVH-502 DECAL	1	
9	920203260	OIL TANK DECAL	1	NPA-326

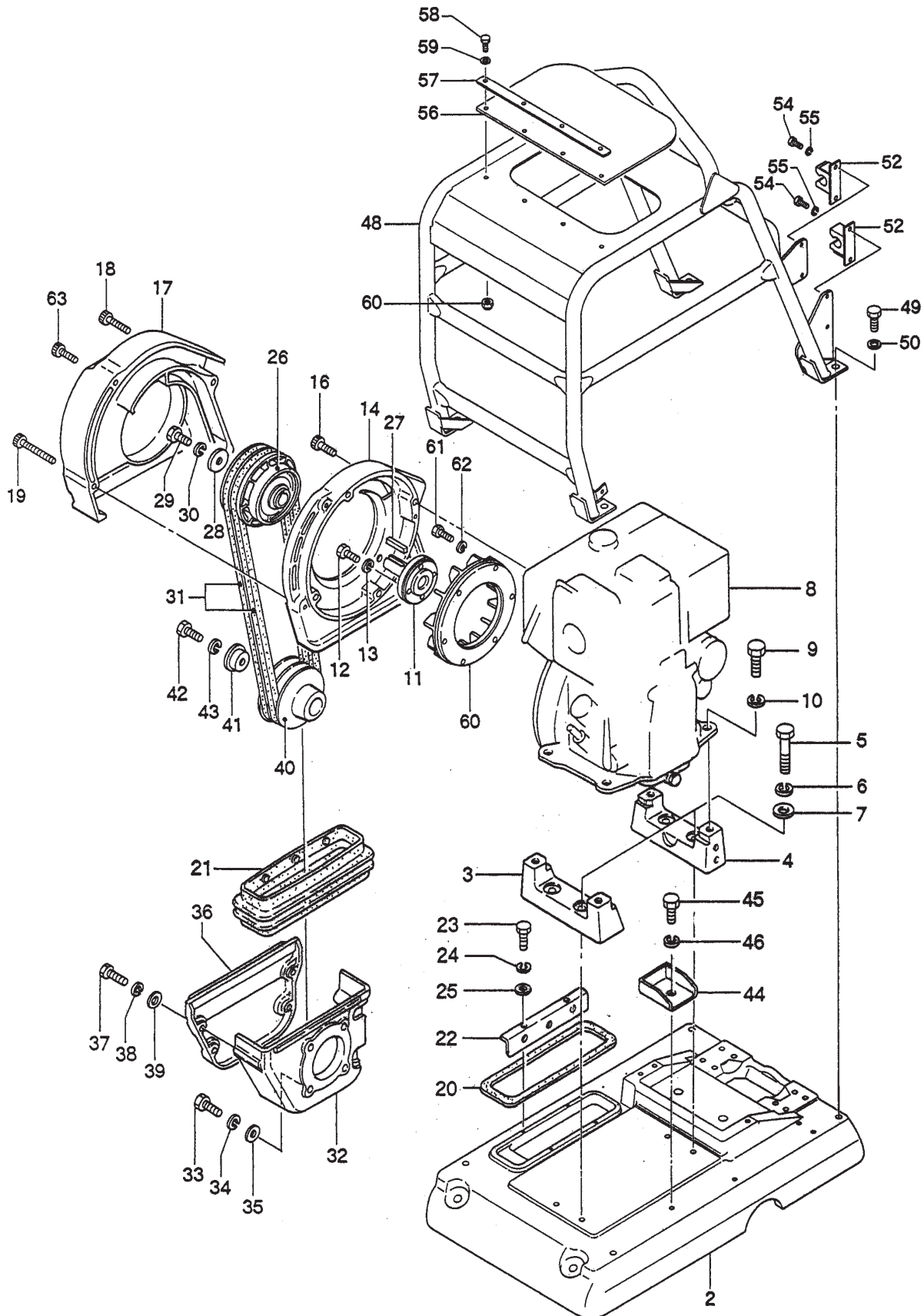
VIBRATING PLATE ASSY.



VIBRATING PLATE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	457112370	VIBRATING PLATE 550B	1	
2	953405840	DRAIN PLUG M 18 (R)	1	
3	953402930	COPPER PACKING 19X30X1	1	
4	953400270	PLUG 1/4X14 10L	1	
5	953405260	PACKING 1/4 (CU)	1	
6	939010070	SHOCK ABSORBER 100	4	
7	020316130	NUT M16	4	
8	030216400	WASHER, LOCK M16	4	
9	001221655	BOLT 16X75 T	4	
10	030216400	WASHER, LOCK M16	4	
11	001201830	BOLT 18X30	8	
12	030218460	WASHER, LOCK M18	8	
21	456210690	EXTENSION PLATE	2	OPTION
22	001221850	BOLT 18X50 T	8	OPTION
23	457215350	BELT COVER GUARD	1	G1185-
24	457454090	CUSHION, BELT COVER GUARD	1	G1185-

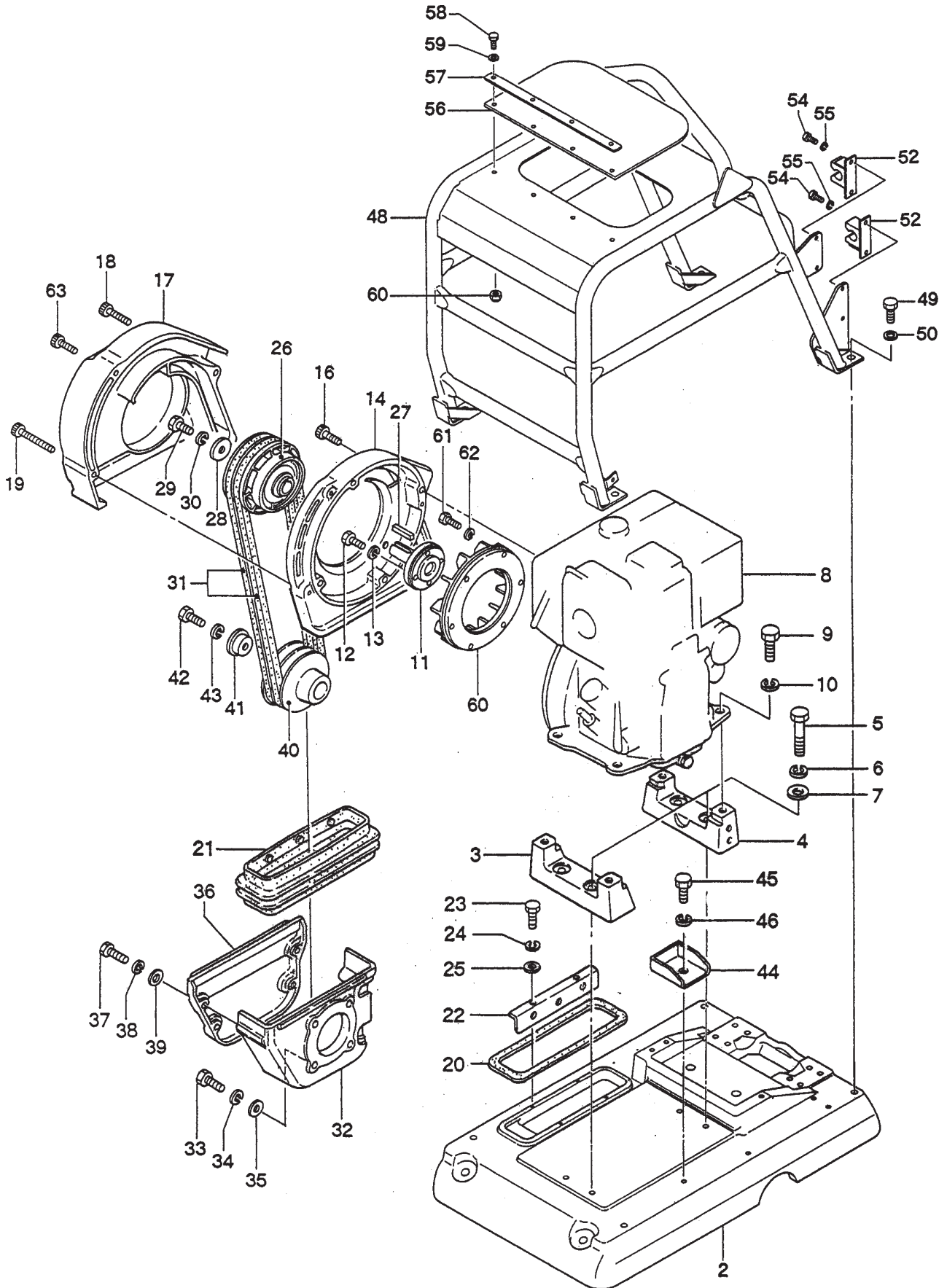
BASE AND ENGINE ASSY.



BASE AND ENGINE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	457116080	BASE	1	
3	457333670	ENGINE PLATE (F)	1	
4	457333680	ENGINE PLATE (R)	1	
5	001221252	BOLT 12X60 T	4	
6	030212300	WASHER, LOCK M12	4	
7	031112230	WASHER, FLAT M12	4	
8	918400600	ENGINE AY 1D81S	1	
9	001221225	BOLT 12X25 T	4	
10	030212300	WASHER, LOCK M12	4	
11	457336260	STUB SHAFT (1D81)	1	
11	457339570	STUB SHAFT (1D- 81)	1	G1195-
12	001220830	BOLT 8X30 T	4	
12	001221025	BOLT 10X25 T	1	G1195-
13	030208200	WASHER, LOCK M8	4	
14	457114280	BELT COVER (IN)	1	
16	001521040	SOCKET HEAD BOLT 10X40 T	4	
17	457114290	BELT COVER (OUT)	1	
18	001521055	SOCKET HEAD BOLT 10X75 T	1	
19	001521058	SOCKET HEAD BOLT 10X90 T	2	
20	457445880	DUST PACKING	1	
21	457112431	DUST COVER	1	
22	457335980	HOLDER, DUST COVER	2	
23	001220615	BOLT 6X15 T	4	
24	030206150	WASHER, LOCK M6	4	
25	031106100	WASHER, FLAT M6	4	
26	457336370	CLUTCH AY B2- 175	1	
27	951400360	KEY 7X7X49	1	
28	952401390	WASHER 11X40X6	1	
29	001221035	BOLT 10X35 T	1	
30	030210250	WASHER, LOCK M10	1	
31	070200453	V- BELT - 45 GREEN	2	
32	457112440	BELT COVER (LOWER- IN)	1	

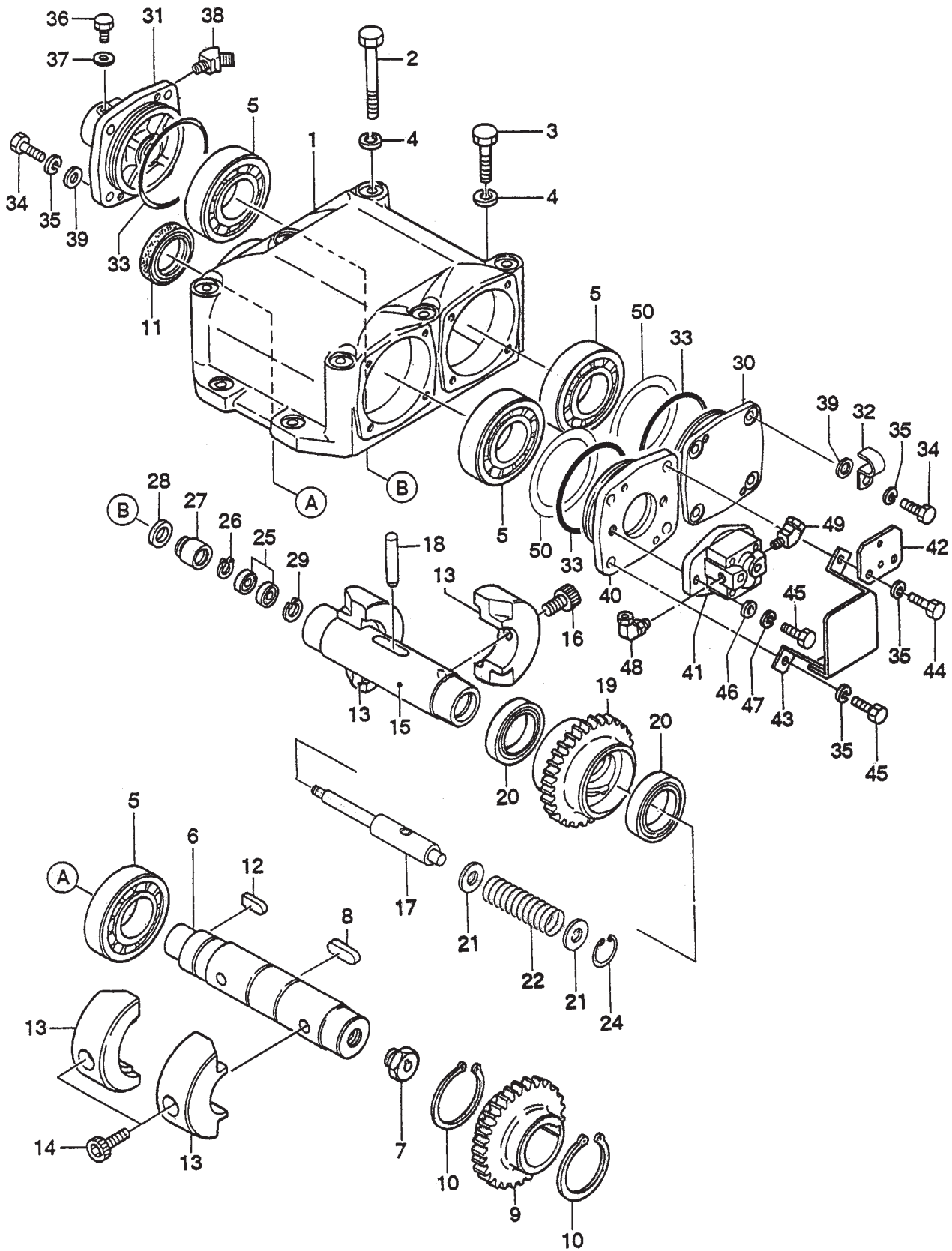
BASE AND ENGINE ASSY.



BASE AND ENGINE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
33	001221025	BOLT 10X25 T	4	
34	030210250	WASHER, LOCK M10	4	
35	031110160	WASHER, FLAT M10	4	
36	457212400	BELT COVER (LOWER- OUT)	1	
37	001220835	BOLT 8X35 T	4	
38	030208200	WASHER, LOCK M8	4	
39	031108160	WASHER, FLAT M8	4	
40	457332401	PULLEY B2- 125 / 131- 68	1	
41	456437920	WASHER, PULLEY	1	
42	001221235	BOLT 12X35 T	1	
43	030212300	WASHER, LOCK M12	1	
44	457333710	DRAIN GUIDE	1	
45	001221015	BOLT 10X15 T	1	
46	030210250	WASHER, LOCK M10	1	
48	457116020	GUARD FRAME	1	
49	001221430	BOLT 14X30 T	4	
50	030214350	WASHER, LOCK M14	4	
52	452312020	STOPPER, CRANK HANDLE	2	
54	001220812	BOLT 8X12 T	4	
55	030208200	WASHER, LOCK M8	4	
56	457452690	RUBBER COVER, GUARD FRAME	1	
57	457452710	PLATE, COVER	1	
58	001220825	BOLT 8X25 T	4	
59	031108160	WASHER, FLAT M8	4	
60	457336380	FAN	1	
61	001220820	BOLT 8X20 T	6	
62	030208200	WASHER, LOCK M8	6	
63	001521052	SOCKET HEAD BOLT 10X60 T	1	

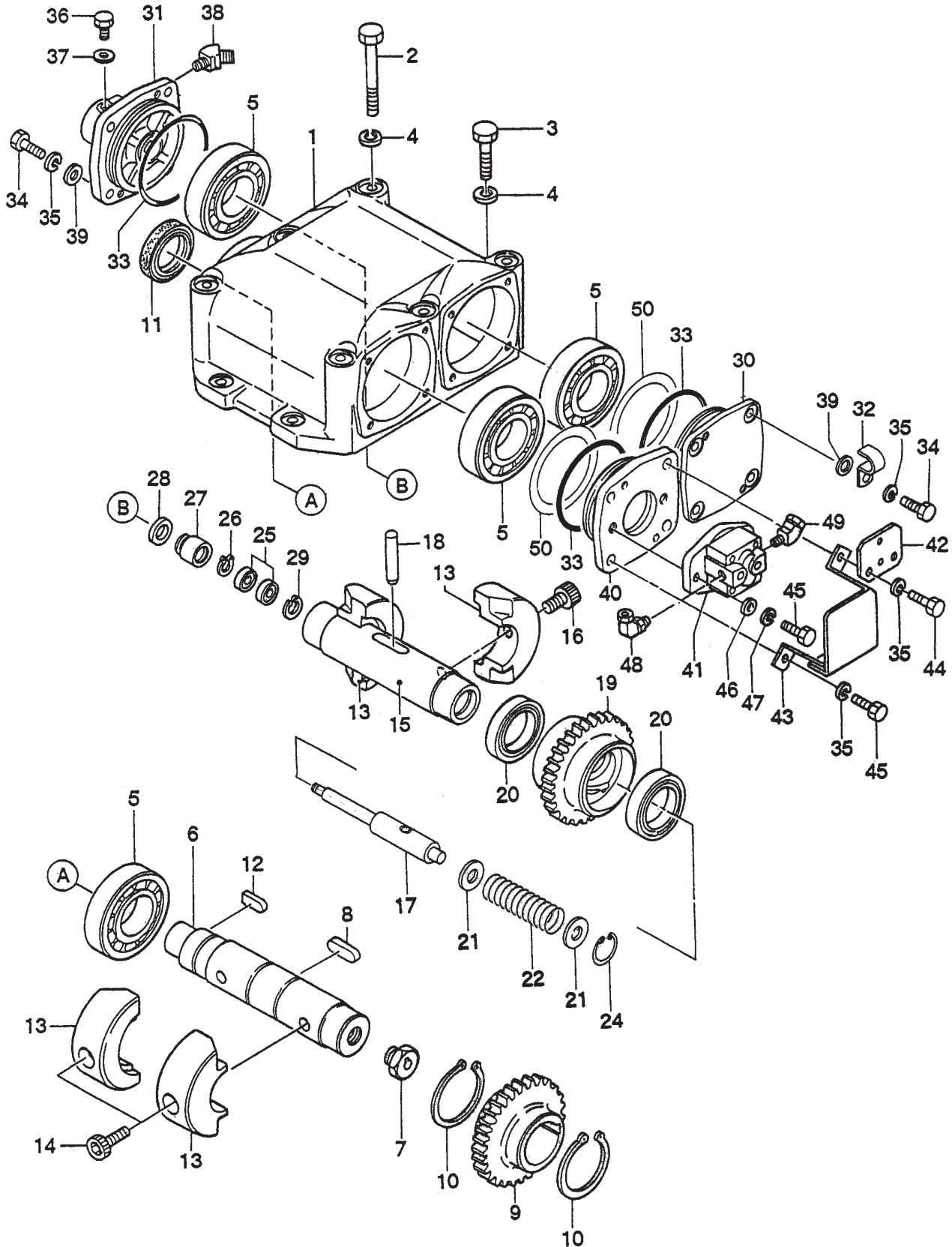
VIBRATOR ASSY.



VIBRATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	457112460	VIBRATING CASE	1	
2	001221470	BOLT 14X150 T	6	
3	001221450	BOLT 14X50 T	4	
4	030214350	WASHER, LOCK M14	10	
5	047920060	ROLLER BEARING NJ310MC4	4	
6	457212410	ROTARY SHAFT, DRIVE	1	
7	457445831	ADAPTER, PUMP (30L)	1	
8	951405370	KEY 15X10X39 RR	1	
9	456327150	GEAR, DRIVE	1	
10	080200550	STOP RING S- 55	2	
11	060105030	OIL SEAL SB- 50729	1	
12	951404970	KEY 12X8X30 R	1	
13	457333720	ECCENTRIC ROTOR	4	
14	009120301	SOCKET HEAD BOLT 16X40 T	2	
15	456337670	ROTARY SHAFT, DRIVEN	1	
16	009120302	SOCKET HEAD BOLT 16X30 T	2	
17	456337380	PISTON ROD	1	
18	456010010	KNOCK PIN 10X70	1	
19	456327120	GEAR, DRIVEN	1	
20	040006911	BEARING 6911	2	
21	455435020	COLLAR 17X30X3	2	
22	456451280	SPRING 3.2- 26.3- 102L	1	
24	080100300	STOP RING R- 30	1	
25	042506000	BEARING 6000ZZSG	2	

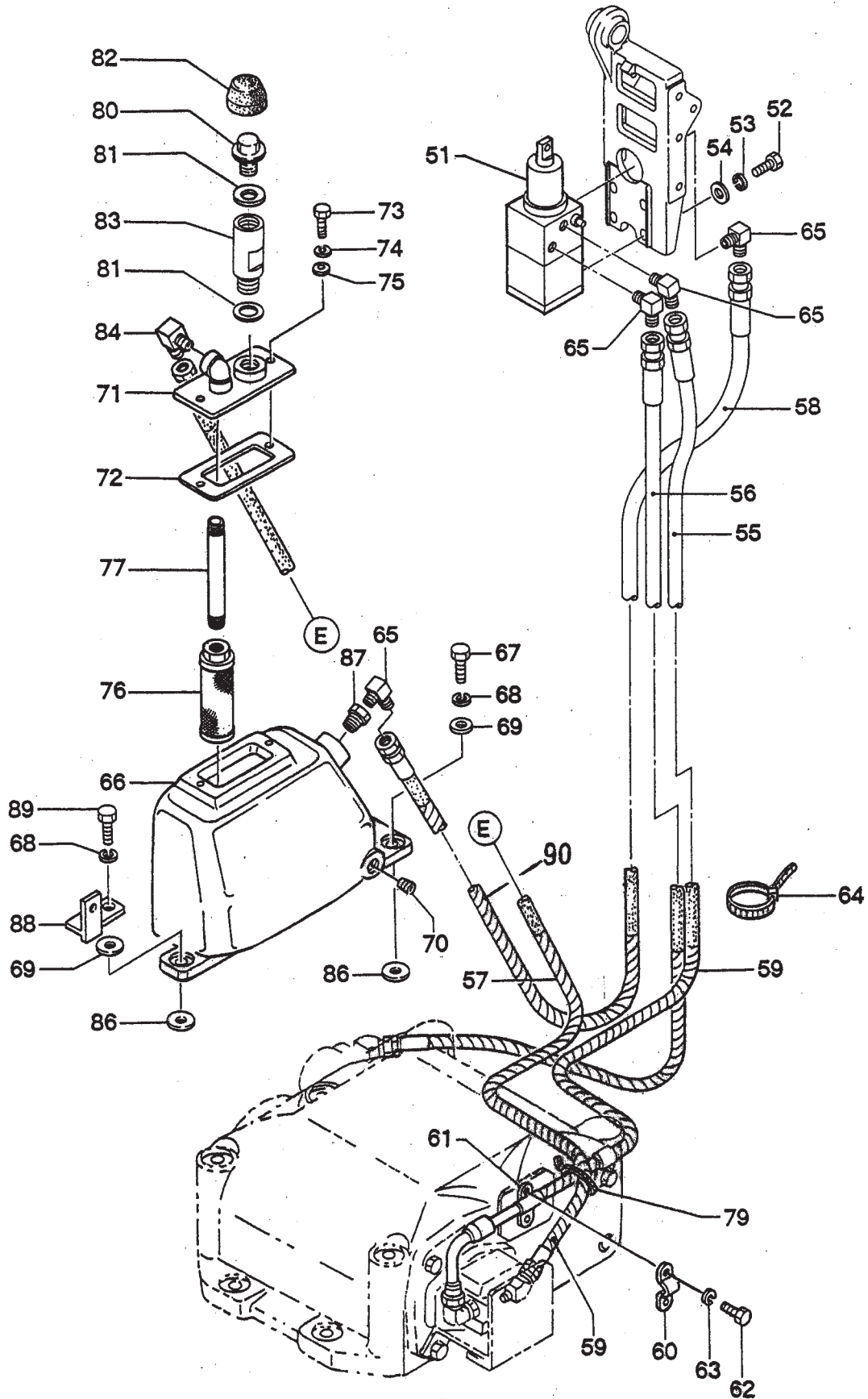
VIBRATOR ASSY.



VIBRATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
26	080200100	STOP RING S- 10	1	
27	455435051	PISTON, 22.4D	1	
28	455010070	PACKING USH- 22.4X30X5	1	
29	080100260	STOP RING R-26	1	
30	456327130	BEARING COVER	1	
31	456210646	CYLINDER (R) (AC)	1	
32	954405550	CLAMP 15 R	1	
33	050101050	O- RING G- 105	3	
34	001221025	BOLT 10X25 T	7	
35	030210250	WASHER, LOCK M10	12	
36	001220812	BOLT 8X12 T	1	
37	953404600	COPPER PACKING 8X16X2	1	
38	455010020	ELBOW 45 15- 0404	1	
39	031110160	WASHER, FLAT M10	7	
40	457332430	FLANGE, PUMP	1	
41	457010010	PUMP FBL	1	
42	457445840	BRACKET, CLAMP	1	
43	457212420	PUMP COVER	1	
44	001221035	BOLT 10X35 T	2	
45	001221030	BOLT 10X30 T	5	
46	952405540	WASHER 10.5- 22- 3	2	
47	030210250	WASHER, LOCK M10	2	
48	954010140	ELBOW 90 UES90G02G02	1	
49	954001780	ELBOW 45 PF3/8- PF1/4	1	
50	952405470	SHIM 90X110X0.5	2	

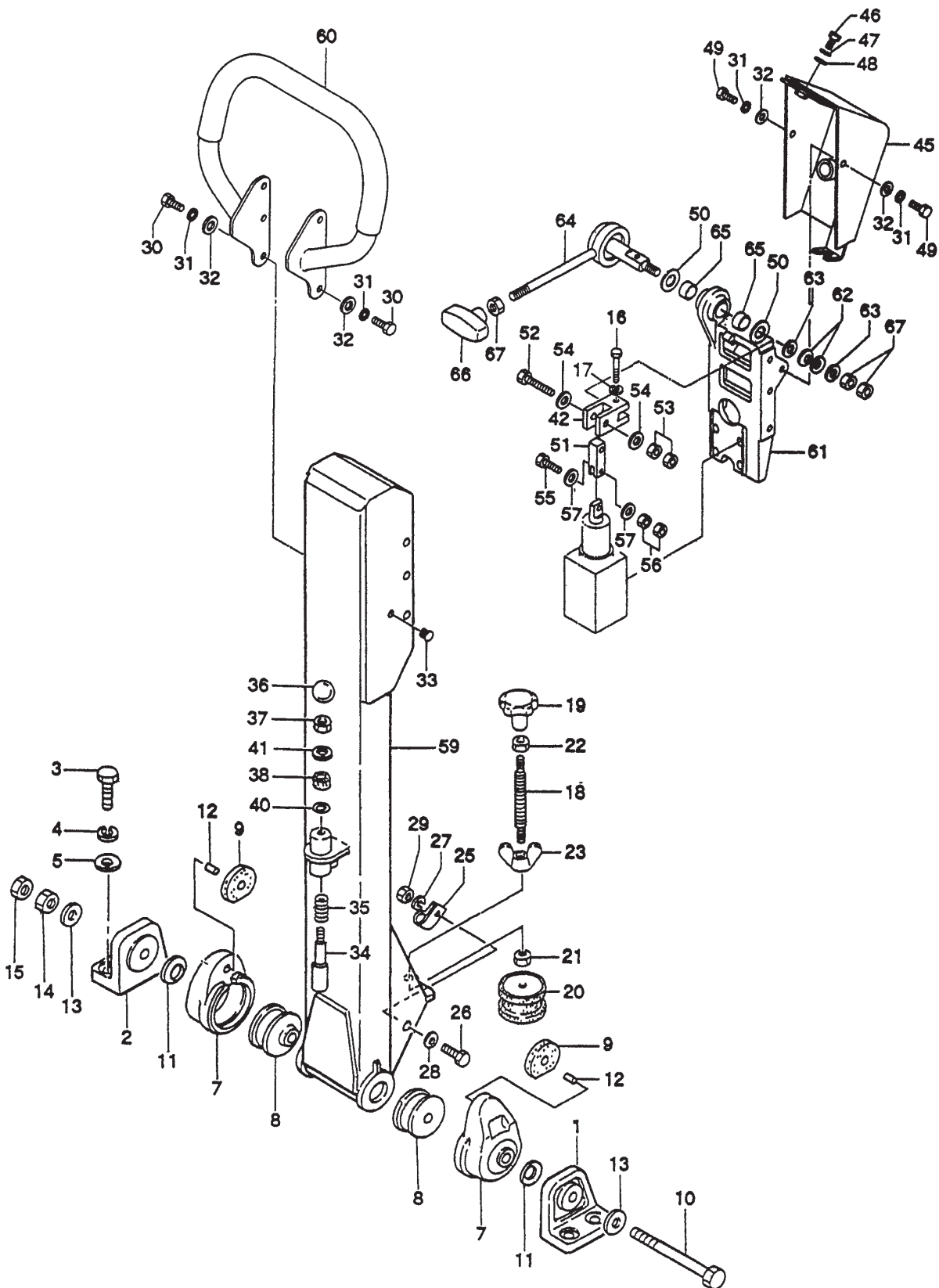
HYDRAULIC SYSTEM ASSY.



HYDRAULIC SYSTEM ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
51	456337780	SELECTOR VALVE	1	
52	001220615	BOLT 6X15 T	4	
53	030206150	WASHER, LOCK M6	4	
54	031106100	WASHER, FLAT M6	4	
55	457446180	OIL HOSE 1370L	1	
56	457446190	OIL HOSE 1150L	1	
57	457451750	OIL HOSE IB105- L820	1	
58	457446210	OIL HOSE 1100L	1	
59	955404271	SPIRAL TUBE, SR15- 850L	2	
60	954403060	CLAMP HC- 40	1	
61	954403070	CLAMP SPACER HC- 40	1	
62	001220612	BOLT 6X12 T	2	
63	030206150	WASHER, LOCK M6	2	
64	506010070	CLAMP TC-150	1	
65	954001160	ELBOW 90 PT1/4- PF1/4	4	
66	457112910	OIL TANK	1	
67	001221030	BOLT 10X30 T	2	
68	030210250	WASHER, LOCK M10	3	
69	031110160	WASHER, FLAT M10	3	
70	505015380	PLUG PT 1/4	1	
71	457332440	COVER, OIL TANK	1	
72	457445870	PACKING, OIL TANK	1	
73	001220820	BOLT 8X20 T	2	
74	030208200	WASHER, LOCK M8	2	
75	031108160	WASHER, FLAT M8	2	
76	456449280	FILTER OIL TANK	1	
77	457445861	JOINT 80L	1	
79	506010060	CLAMP TC- 350	2	
80	457448680	BREATHER PLUG	1	
81	05340020	PACKING 19302	2	
82	457448380	BREATHER CAP	1	
83	457451740	BREATHER JOINT	1	
84	551010630	ELBOW PT1/4- PF3/8 1034- 06	1	
86	953405260	PACKING 1/4 (CU)	3	
87	605010360	BUSHING 3/8X1/4	1	
88	457446820	COVER BRACKET	1	
89	001221035	BOLT 10X35 T	1	
90	955404276	SPIRAL TUBE 11D- 250L	1	G1185-

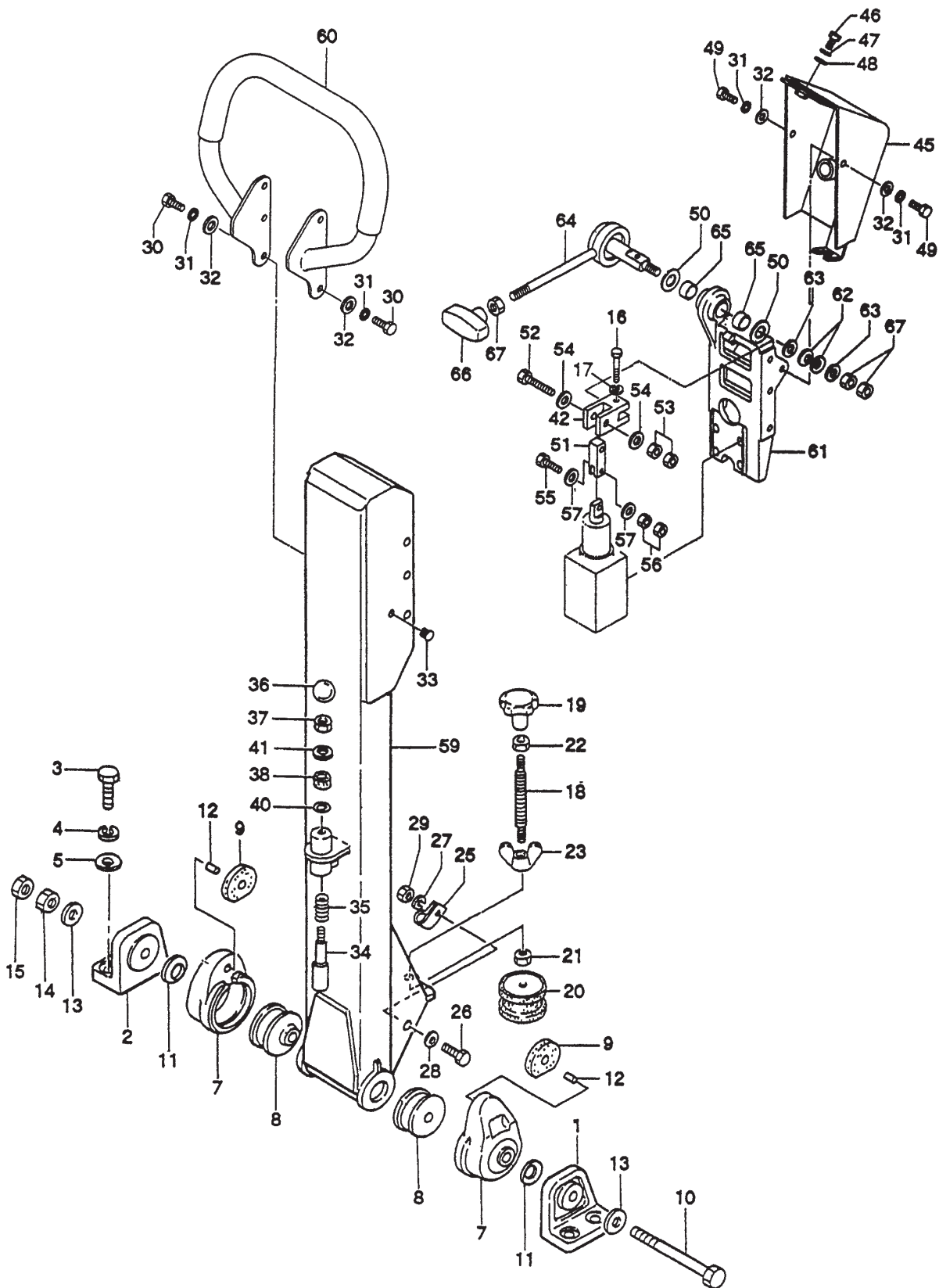
CONTROL ASSY.



CONTROL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	456336410	HANDLE BRACKET (L)	1	
2	456336420	HANDLE BRACKET (R)	1	
3	001221235	BOLT 12X35 T	4	
4	030212300	WASHER, LOCK M12	4	
5	031112230	WASHER, FLAT M12	4	
7	456336400	RUBBER COUPLING	2	
8	456449940	SHOCK ABSORBER	2	
9	456449930	RUBBER PLATE	2	
10	001221681	BOLT 16X250 T	1	
11	032124400	CONICAL SPRING WASHER M24	2	
12	025406016	SPRING PIN 6X16	2	
13	031116260	WASHER, FLAT M16	2	
14	020316130	NUT M16	1	
15	030416100	NUT M16, H=10	1	
16	001220640	BOLT 6X40 T	1	
17	020306050	NUT M6	1	
18	455434950	SPINDLE	1	
19	455010030	KNOB	1	
20	939010060	SHOCK ABSORBER 60	1	
21	020410060	NUT M10, H=6	1	
22	020412070	NUT M12, H=7	1	
23	022411635	WING NUT M16	1	
25	954404230	CLAMP SA120- 18	1	
26	001220620	BOLT 6X20 T	1	
27	030206150	WASHER, LOCK M6	1	
28	031106100	WASHER, FLAT M6	1	
29	020306050	NUT M6	1	
30	001220825	BOLT 8X25 T	6	
31	030208200	WASHER, LOCK M8	8	
32	031108160	WASHER, FLAT M8	8	
33	953401580	PLUG	1	
34	501402870	HANDLE STOPPER	1	

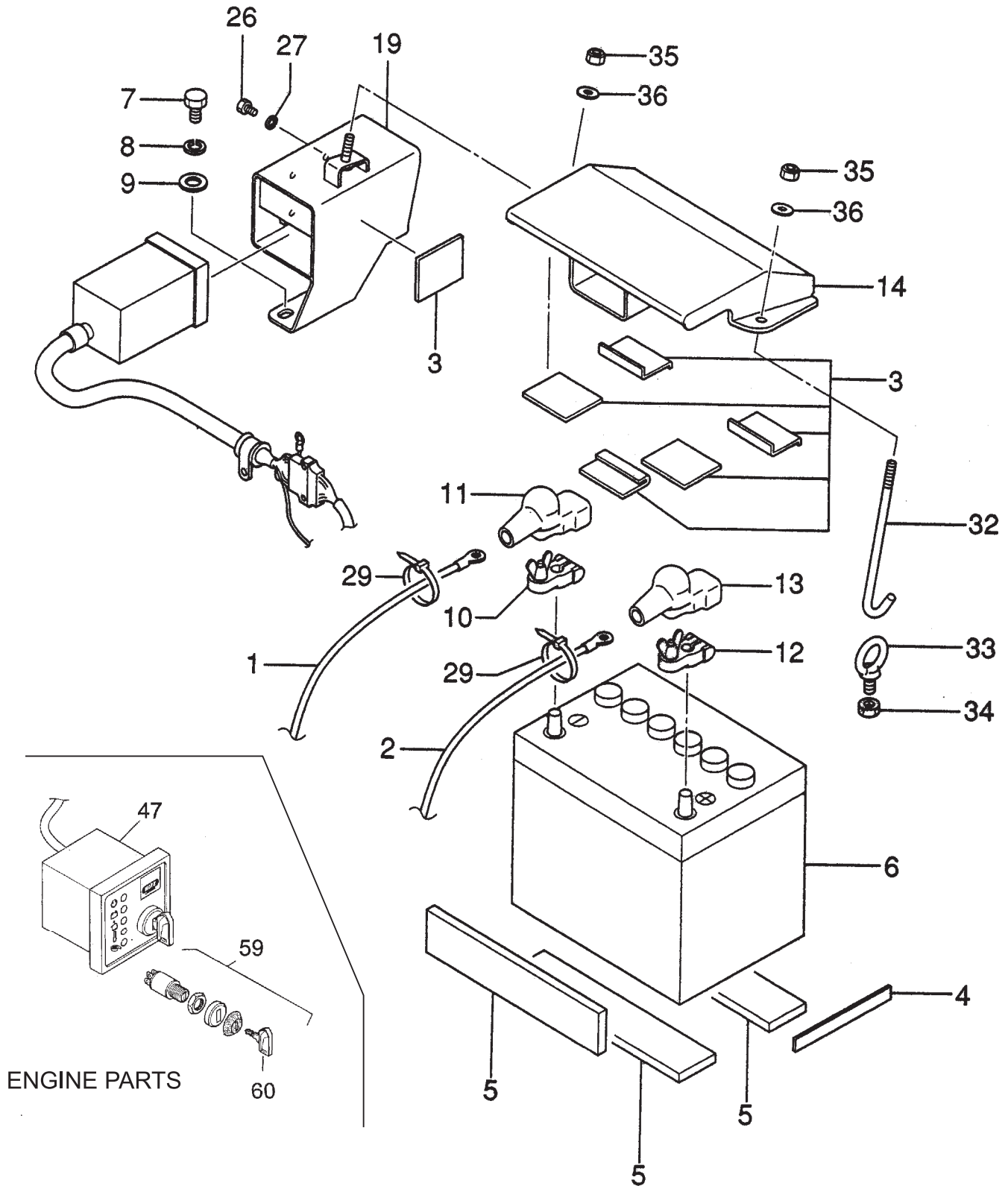
CONTROL ASSY.



CONTROL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
35	501402880	SPRING/ HANDLE (1.4X18X44)	1	
36	959403460	BALL GRIP 32D- M10	1	
37	020410060	NUT M10, H=6	1	
38	456449980	RUBBER PACKING 9D- 20D- 5T	1	
40	953405260	PACKING 1/4 (CU)	1	
41	031110160	WASHER, FLAT M10	1	
42	456450760	JOINT	1	
45	457214910	LEVER BRACKET	1	
46	001220820	BOLT 8X20 T	1	
47	030208200	WASHER, LOCK M8	1	
48	031108160	WASHER, FLAT M8	1	
49	001220815	BOLT 8X15 T	2	
50	033910020	THRUST WASHER 20- 36- 1.5T	2	
51	457445910	CLEVIS	1	
52	001220850	BOLT 8X50 T	1	
53	020308060	NUT M8	2	
54	031108160	WASHER, FLAT M8	2	
55	001220630	BOLT 6X30 T	1	
56	020306050	NUT M6	2	
57	031106100	WASHER, FLAT M6	2	
59	457116030	HANDLE	1	
60	456214220	HANDLE GRIP	1	
60	456214222	HANDLE GRIP	1	
61	456214210	VALVE BRACKET	1	
62	032112220	CONICAL SPRING WASHER M12	2	
63	456451400	WASHER 12.2- 27- 0.6T	2	
64	456337400	TRAVEL LEVER	1	
65	608010090	BUSHING MB2015DU	2	
66	457332480	GRIP, TRAVEL LEVER 00	1	
67	020412070	NUT M12, H=7	3	

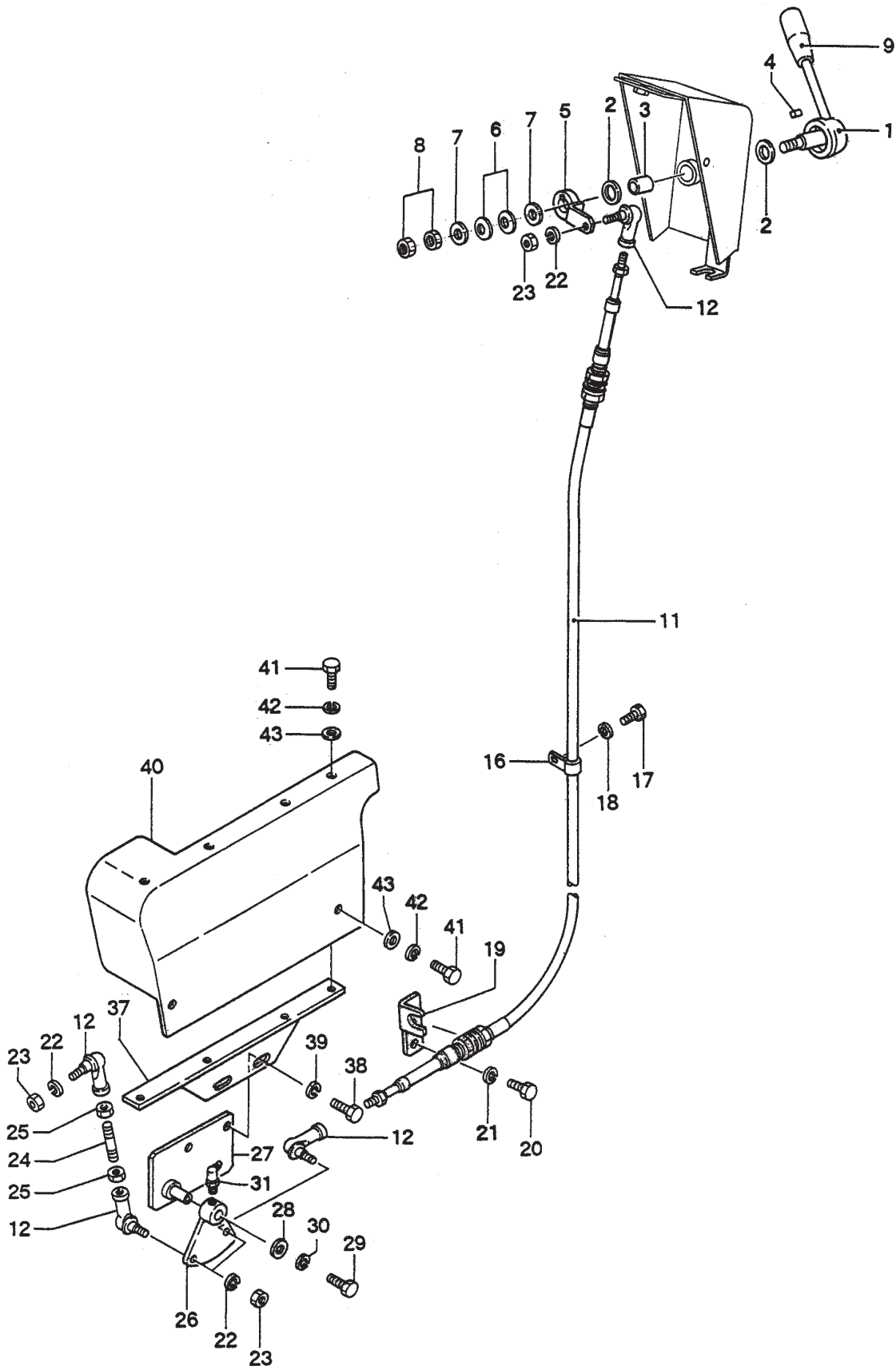
BATTERY ASSY.



CONTROL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	456438080	BATTERY CORD () 370L	1	
2	456438090	BATTERY CORD (+) 200L	1	
3	959406070	RUBBER PLATE 3- 50- 60	6	
4	456447580	RUBBER PLATE (D) 15X130X3	1	
5	456447600	RUBBER PLATE 50X240X10	3	
6	955010070	BATTERY (DC22-NF)	1	
7	001221020	BOLT 10X20 T	2	
8	030210250	WASHER, LOCK M10	2	
9	031110160	WASHER, FLAT M10	2	
10	955404130	BATTERY TERMINAL , BE511	1	
11	955300220	TERMINAL COVER (BLACK)	1	
12	955404140	BATTERY TERMINAL + , BE513	1	
13	955300210	TERMINAL COVER (RED)	1	
14	457115960	BATTERY COVER	1	
19	457214900	SWITCH BOX	1	
26	001220625	BOLT 6X25 T	3	
27	030206150	WASHER, LOCK M6	3	
29	454010020	CLAMP TC- 100	2	
32	457452700	BATTERY BOLT	1	
33	959403830	EYE BOLT M10X18	1	
34	020310080	NUT M10	1	
35	022710809	NYLON NUT M8	2	
36	031108160	WASHER, FLAT M8	2	
47	01551802	INSTRUMENT BOX 12V	1	
59	50384401	SWITCH, KEY A, Y/ID81	1	
60	50404900	IGNITION SWITCH KEY	1	

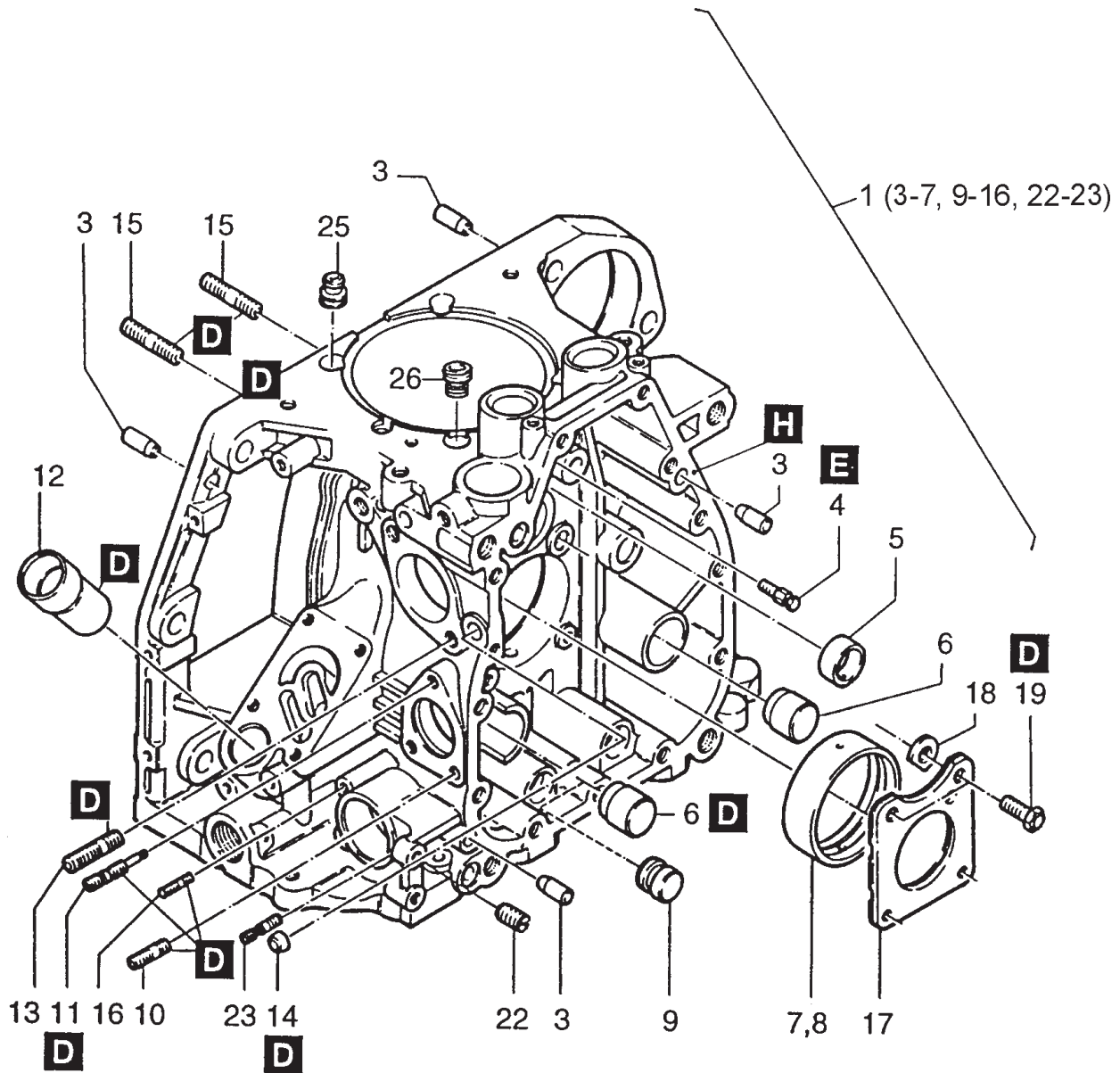
THROTTLE ASSY.



THROTTLE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	456337690	THROTTLE LEVER	1	
2	953402930	COPPER PACKING 19X30X1	2	
3	509010130	BUSHING MB1825DU	1	
4	951401431	KEY 5X5X8	1	
5	457446840	THROTTLE LEVER	1	
6	032112220	CONICAL SPRING WASHER M12	2	
7	031112230	WASHER, FLAT M12	2	
8	020412070	NUT M12, H= 7	2	
9	959403840	BAR GRIP, I.D. 12MM	1	
11	457333760	CABLE AY 33075E1400	1	
12	457010070	ROD END PBL- 6	4	
16	954404100	CLAMP CLA0	1	
17	001220610	BOLT 6X10 T	1	
18	030206150	WASHER, LOCK M6	1	
19	457333730	CABLE SUPPORT (E/G) 502	1	
20	001220820	BOLT 8X20 T	2	
21	030208200	WASHER, LOCK M8	2	
22	030206150	WASHER, LOCK M6	4	
23	020306050	NUT M6	4	
24	457446860	LINK ARM	1	
25	020306050	NUT M6	2	
26	457333740	LINK LEVER	1	
27	457333750	LINK BRACELET	1	
28	952402610	WASHER 8.5X25X3	1	
29	001220825	BOLT 8X25 T	1	
30	030208200	WASHER, LOCK M8	1	
31	301010090	GREASE FITTING - PT1/8	1	
37	457212920	COVER BRACKET	1	
38	001220820	BOLT 8X20 T	2	
39	030208200	WASHER, LOCK M8	2	
40	457112930	SIDE COVER	1	
41	001220815	BOLT 8X15 T	6	
42	030208200	WASHER, LOCK M8	6	
43	031108160	WASHER, FLAT M8	6	

HATZ 1D81S ENGINE — CRANKCASE ASSY.



LETTERS IN BOLD INDICATE TYPE OF BONDING ADHESIVE TO BE USED.

D= LOCTITE 221 H= SILICON E= LOCTITE 648

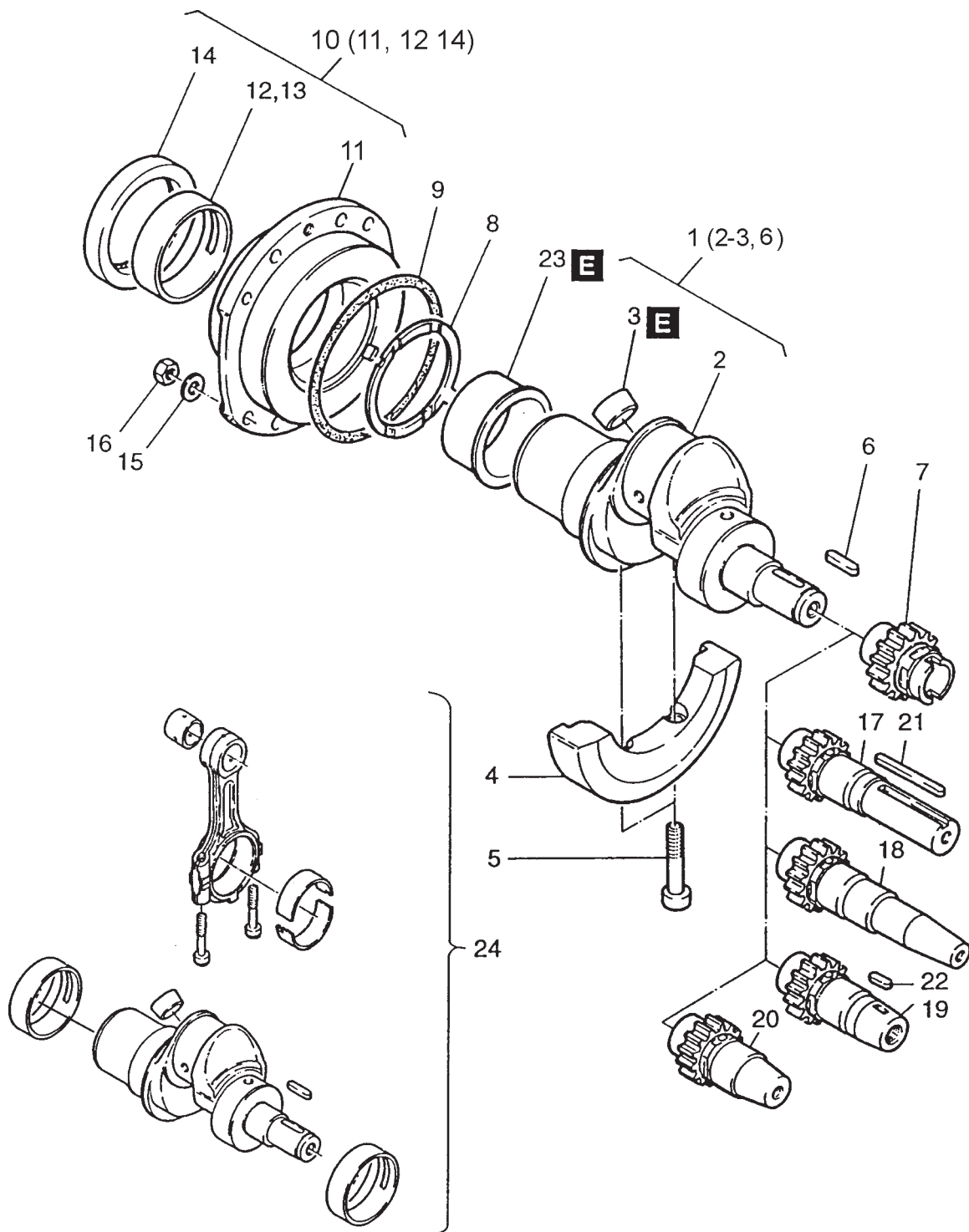
HATZ 1D81S ENGINE — CRANKCASE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01249051	CRANKCASE	1	INCLUDES ITEMS W/*
3*	50249101	CYL. PIN 6/20	4	
4*	03793900	NOZZLE	1	
5*	03793800	BEARING BUSH	1	
6*	03794000	PLUG	1..2	
7*	03793700	MAIN BEARING	1	
8	04033700	MAIN BEARING -0.5	1	
9*	04000800	PLUG	1	
10*	50144300	STUD M 6X16	2	
11*	03794510	STUD	1	
12*	03794800	INTERMEDIATE PIECE	1	
13*	50098300	STUD 8 X 20	2	
14*	50325500	COVER 10	1	
15*	50037800	STUD M 8 X 22	8	
16*	50328200	STUD M 16 X 22	2	
17	04011650	THRUST PLATE	1	
18	04069500	SHIM 1.05	0..4	
19	04062010	HEX SCREW M 9 X 28	4	
22*	50357700	GRUB SCREW M 8 X 10	1	
23*	04087400	STUD M 6 X 22	1	
25	04084500	SEALING RING	2	
26	04084500	SEALING RING	2	

HATZ 1D81S ENGINE — CRANKCASE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	03794100	WASHER	2	
2	03794300	CAM FOLLOWER	2	
3	93794201	CAM FOLLOW SPINDLE	2	
4	50051000	ALLEN SCREW M 6 X 30	2	
5	03795800	O-RING 12 X 18, 3 X 7.3	2	
6	50329000	O-RING 9.5 X 2.5	3	
7	03795100	O-RING 265 X 269, 4 X 3.6	1	
8	01248810	PLATE	1	
10	50417600	ALL. SCREW. M 8 X 25 Z4	22	
11	03794900	HOUSING	1	
12	03795000	SUCTION SIEVE	1	
13	50327100	ALLEN SCREW M 6 X 50	2	
14	01241700	OIL SUMP	1	
15	50170900	LOCK WASHER 6	12	
16	50329100	ALLEN SCREW M 6 X 10	12	
17	50001600	JOINT A22X27	2	
18	50373100	DRAIN PLUG M 22 X 1.5	0..2	
18	50140400	DRAIN PLUG	0..2	
20	03794700	COVER	1	
21	50328300	HEXAGON NUT M6	3	
22	01321200	CLOS. SCREW + SIEVE	1	
23	50286400	JOINT A 24 X 29	1	
24	01321100	OIL RELIEF VALVE ASSY.	1	INCLUDES ITEMS W/#
25#		OIL RELIEF VALVE	1	CANNOT BE PURCHASED SEPARATELY
26#	50412900	O-RING 18 X 2	1	
27	50062400	JOINT A10 X 13.5	2	
28	50062300	CLOSING SCREW M10 X 1	2	
29	01241500	DIPSTICK ASSY	1	INCLUDES ITEMS W/
30*		DIPSTICK	1	CANNOT BE PURCHASED SEPARATELY
31*	50359700	O-RING 20.29 X 2.62	2	
32	50329200	O-RING 50X55X3	2	
33	05068800	LUB. OIL FILT. HOUS.	1	
34	50081200	LOCK WASHER A6	4	
35	50170600	ALLEN SCREW M 6 X 20	4	
36	01480000	SUPRA OIL FILTER	1	
37	01248900	COVER	1	
38	04033401	COVER	1	
39	04053210	SET SCREW M9	1	
41	04024220	CAM FOLLOWER BRACK.	1	
42	04062110	BOLT	1	
43	04024301	CAM FOLLOWER T/U	1	
44	50170800	ALLEN SCREW M 6 X 25	1	
45	04045800	OIL SUMP	1	
46	04046300	DRAIN EXTENSION	1	
47	50001400	JOINT A 18 X 22	1	
48	50044200	CLOS. SCREW M 18 X 1.5	1	
49	50434300	STUD M 8 X 18	2	
50	50050700	ALLEN SCREW M 6 X 16	8	
52	50140400	DRAIN PLUG	1	
53	04069500	SHIM 1.05	0..3	
53	04069600	SHIM 1.2	0..3	
54	04069800	SHIM 1.05	0..1	
54	04069900	SHIM 1.20	0..1	
55	04065400	CYLINDER HEAD BOLT	1	
56	04084000	LIFTING SPRING	1	
58	50139200	STUD M 6 X 16	2	
59	05068900	GASKET	1	

HATZ 1D81S ENGINE — CRANKSHAFT ASSY.



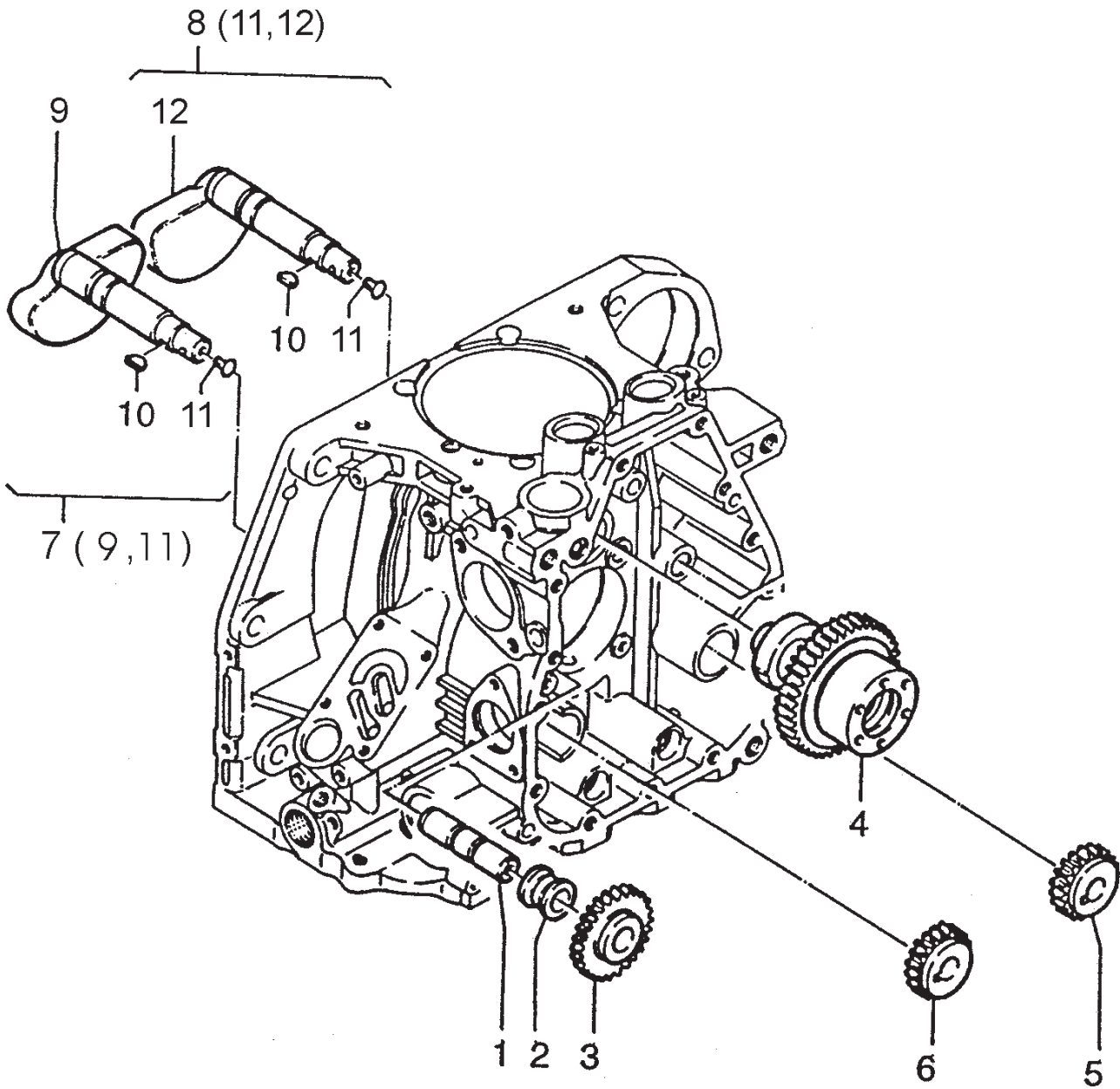
LETTERS IN BOLD INDICATE TYPE OF BONDING ADHESIVE TO BE USED.

D= LOCTITE 221 H= SILICON E= LOCTITE 648

HATZ 1D81S ENGINE — CRANKSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01269810	CRANKSHAFT ASSY.	1	INCLUDES ITEMS W/*
2*		CRANKSHAFT	1	CANNOT BE PURCHASED SEPARATELY
3*	50087200	COVER 28	1	
4	03796000	COUNTER WEIGHT	1	
5	50055000	ALLEN SCREW M 10 X 50	2	
6*	50362600	FITTING KEY A 6 X 4 X 32	1	
7	03796120	GEARWHEEL F. CRANKS	1	
8	04000600	BUFFER RING	1	
9	50224900	O-RING 123 X 2.5	1	
10	01292100	BEARING FLANGE ASSY.	1	INCLUDES ITEMS W/#
11#		BEARING FLANGE	1	CANNOT BE PURCHASED SEPARATELY
12#	04006800	MAIN BEARING		
13	04036100	MAIN BEARING -0.5	1	
14#	50362700	OIL SEAL 62 X 90 X 10	1	
15	50413600	WASHER	8	
16	50364300	HEXAGON NUT M8	8	
17	04023110	STUBSHAFT SAE W/KEY	1	
18	01485500	STUBSHAFT SAE TAPER	1	
19	04022910	STUBSHAFT ITALIA	1	
20	05033200	STUBSHAFT ITALIA 23	1	
21	03962700	FITTING KEY A6.35 X 63	1	
22	50017800	WOODRUFF KEY 4 X 6.5	1	
23	50414400	WEAR SLEEVE 62 X 12.7	0..1	
24	01512001	KIT, CRANKSHAFT REPLACEMENT60-81	1	

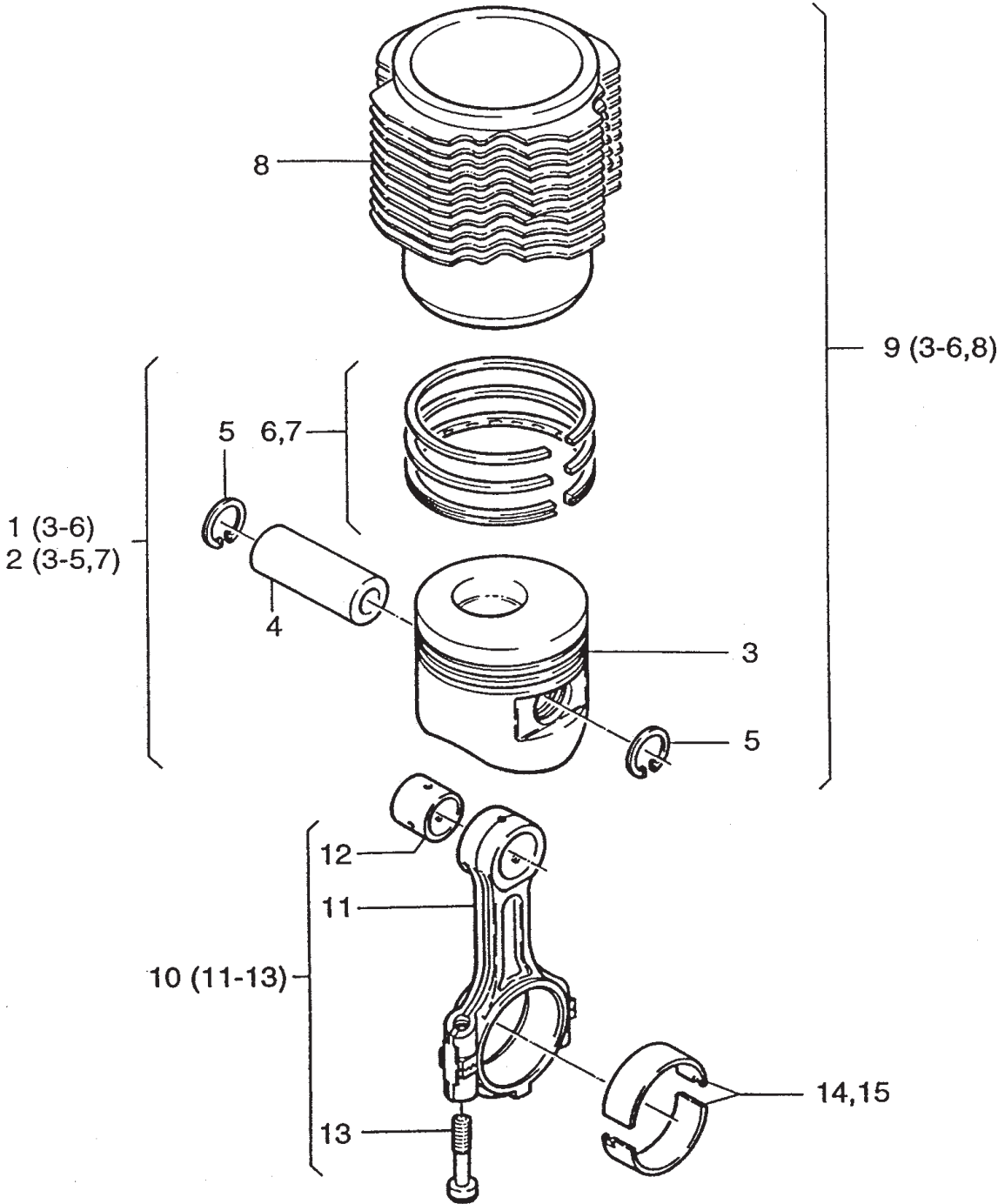
HATZ 1D81S ENGINE — CAMSHAFT ASSY.



HATZ 1D81S ENGINE — CAMSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	03796400	SHAFT	2	
2	03796500	BUSH	2	
3	01242000	GEARWHEEL	2	
4	04099900	CAMSHAFT	1	
5	03796800	GEARWHEEL	1	
6	03796900	GEARWHEEL	1	
7	01267300	SHAFT, PUMP SIDE	1	INCLUDES ITEMS W/*
8	01267200	SHAFT STARTER SIDE	1	INCLUDES ITEMS W/#
9*		COUNTER BALANCE	1	CANNOT BE PURCHASED SEPARATELY
10	50324900	WOODRUFF KEY 3 X 3.7	2	
11*#		PIN	2	CANNOT BE PURCHASED SEPARATELY
12#		COUNTERBALANCE	1	CANNOT BE PURCHASED SEPARATELY

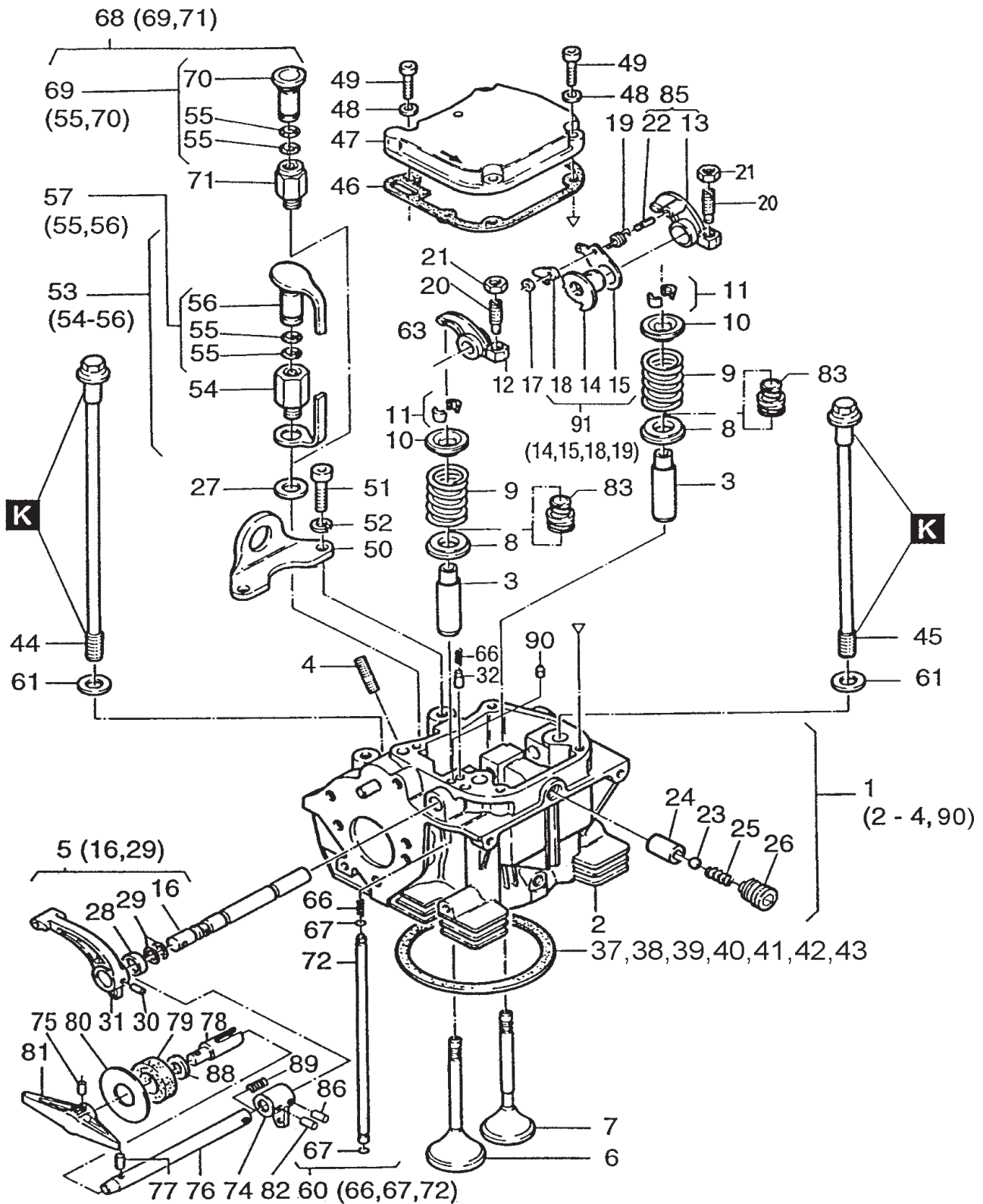
HATZ 1D81S ENGINE — PISTON/RINGS ASSY.



HATZ 1D81S ENGINE — PISTON/RINGS ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01243901	PISTON ASSY. STD.	1	INCLUDES ITEMS W/*
1	01313510	PISTON ASSY. OVERSIZED	1	INCLUDES ITEMS W/*
2	01265101	PISTON ASSY. 100+0.5	1	INCLUDES ITEMS W/#
2	01265201	PISTON ASSY. 100+1.0	1	INCLUDES ITEMS W/#
2	01314610	PISTON ASSY. 100+0.5	1	INCLUDES ITEMS W/#
2	01314710	PISTON ASSY. 100+1.0	1	INCLUDES ITEMS W/#
3*#+		PISTON	1	CANNOT BE PURCHASED SEPARATELY
4*#+	50353600	WRIST PIN	1	
5*#+	50020800	CIRCLIP 30 X 1.2	2	
6*+	01247300	PISTON RING SET 100	1	
7#	01264500	PISTON RING SET +0.5	1	
7#	01265000	PISTON RING SET +1.0	1	
8+		CYLINDER	1	CANNOT BE PURCHASED SEPARATELY
9	01508301	CYLINDER ASSY. W/ PISTON	1	INCLUDES ITEMS W/+
10	01244001	CONROD ASSY.	1	INCLUDES ITEMS W/%
11%		CONROD	1	CANNOT BE PURCHASED SEPARATELY
12%	04032200	BUSH FOR CONROD	1	
13%	04001800	CONROD SCREW	2	
14	04001900	BIG END BEARING	1	
15	04033100	ROD BEARING -0.5	1	

HATZ 1D81S ENGINE — CYLINDER HEAD ASSY.

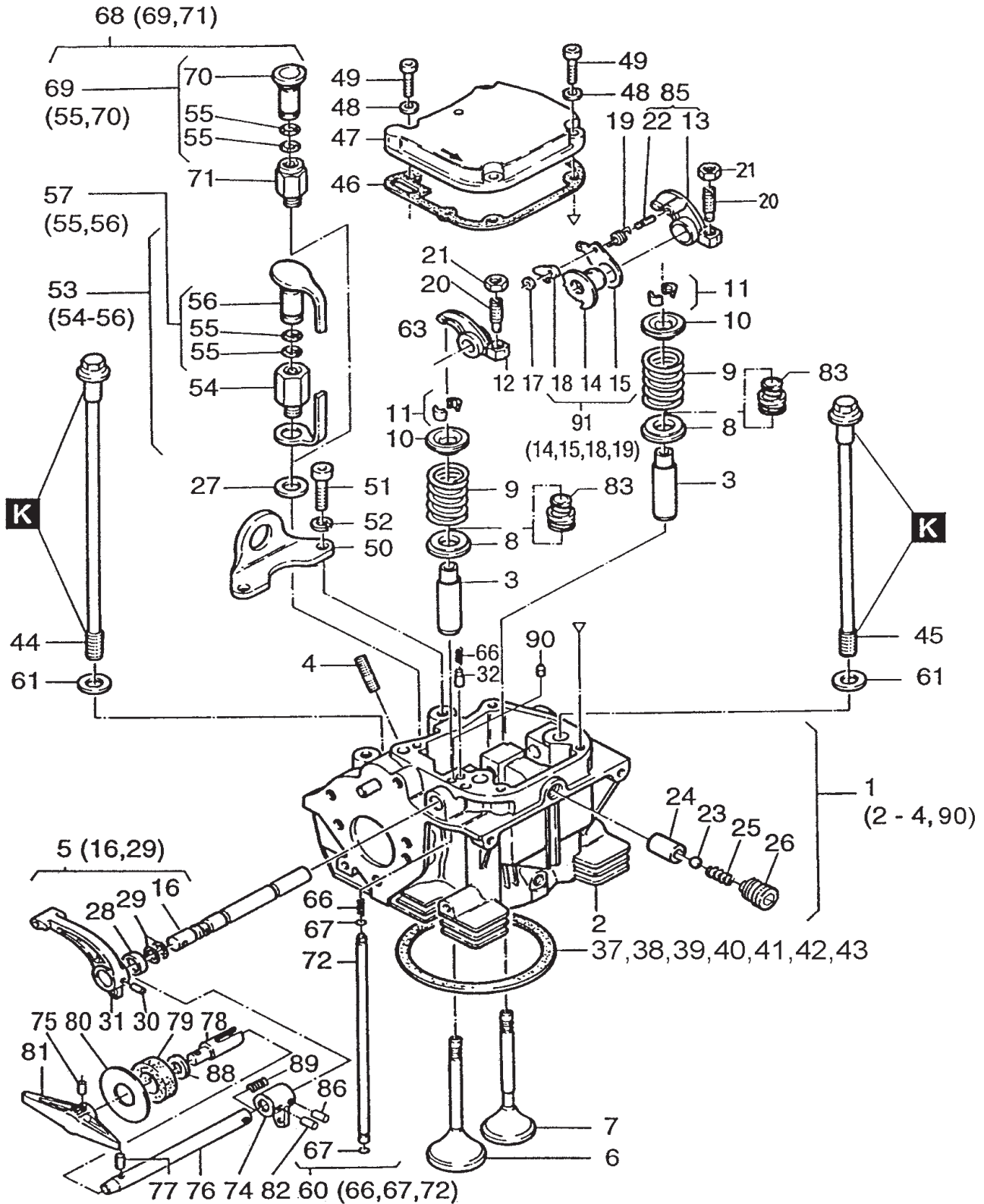


K= HOT TEMPERATURE FELT 100g

HATZ 1D81S ENGINE — CYLINDER HEAD ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	01264810	CYLINDER HEAD ASSY.	1	INCLUDES ITEMS W/*
1	01499610	CYLINDER HEAD ASSY.	1	INCLUDES ITEMS W/*
2*		CYLINDER HEAD	1	CANNOT BE PURCHASED SEPARATELY
3*	04008710	VALVE GUIDE	2	
4*	50038400	STUD M 8 X 35	1	
5	04068910	ROCKER SHAFT ASSY. "C"	1	INCLUDES ITEMS W/+
5	04068920	ROCKER SHAFT ASSY.	1	INCLUDES ITEMS W/+
6	04005001	VALVE INLET	1	
6	04091001	VALVE INLET	1	
7	04005101	VALVE EXHAUST	1	
7	04091100	VALVE EXHAUST	1	
8	04005201	WASHER	2	
9	04005300	VALVE SPRING	2	
10	04005401	CUP	2	
11	03786300	VALVE COLLET	2	
12	04003710	ROCKER INLET	1	
13#		ROCKER INLET	1	CANNOT BE PURCHASED SEPARATELY
14%		RATCHET WHEEL	1	CANNOT BE PURCHASED SEPARATELY
15%	03778401	SPRING SHEET	1	
16+		ROCKER SHAFT	1	CANNOT BE PURCHASED SEPARATELY
17	50117200	CIRCLIP	1	
18%	03365710	RATCHET F. DECOMPR.	1	
19	03366001	SPRING	1	
20	03783000	ADJUSTING SCREW	2	
21	03173100	HEXAGON NUT	2	
22#		DOWEL PIN	1	CANNOT BE PURCHASED SEPARATELY
23	50123800	BALL 7MM III	1	
24	04004700	BUSH	1	
25	04004800	PRESSURE SPRING	1	
26	01245200	ADJUSTING SCREW	1	
27	50001100	JOINT A 12 X 15.5	1	
28	04048900	RUBBER RING	1	
29+	40022401	O-RING 8 X 2 GRAY	1..2	
30	50034700	PIN 4 X 22	1	
31	04009810	HANDLE	1	
32	04004100	PIN	1	
35	04068800	GASK. F. CYL. HEAD 0.5	0..1	
36	04036800	GASK. F. CYL. HEAD 0.6	0..1	
37	04036500	GASK. F. CYL. HEAD 0.7	0..1	
38	04036600	GASK. F. CYL. HEAD 0.8	0..1	
39	04002700	GASK. F. CYL. HEAD 0.9	0..1	
40	04002800	GASK. F. CYL. HEAD 1.0	0..1	
41	04002900	GASK. F. CYL. HEAD 1.1	0..1	
42	04003000	GASK. F. CYL. HEAD 1.2	0..1	
43	04003100	GASK. F. CYL. HEAD 1.3	0..1	
44	04003200	CYL. HEAD SCREW 305 MM	2	
45	04003300	CYL. HEAD SCREW 258 MM	2	
46	04006111	VALVE COVER GASKET 16>	1	
47	01245410	VALVE COVER	1	
48	50081200	LOCK WASHER A6	4	
49	50170800	ALLEN SCREW M 6 X 25	4	
50	04008100	LIFTING BRACKET	1	

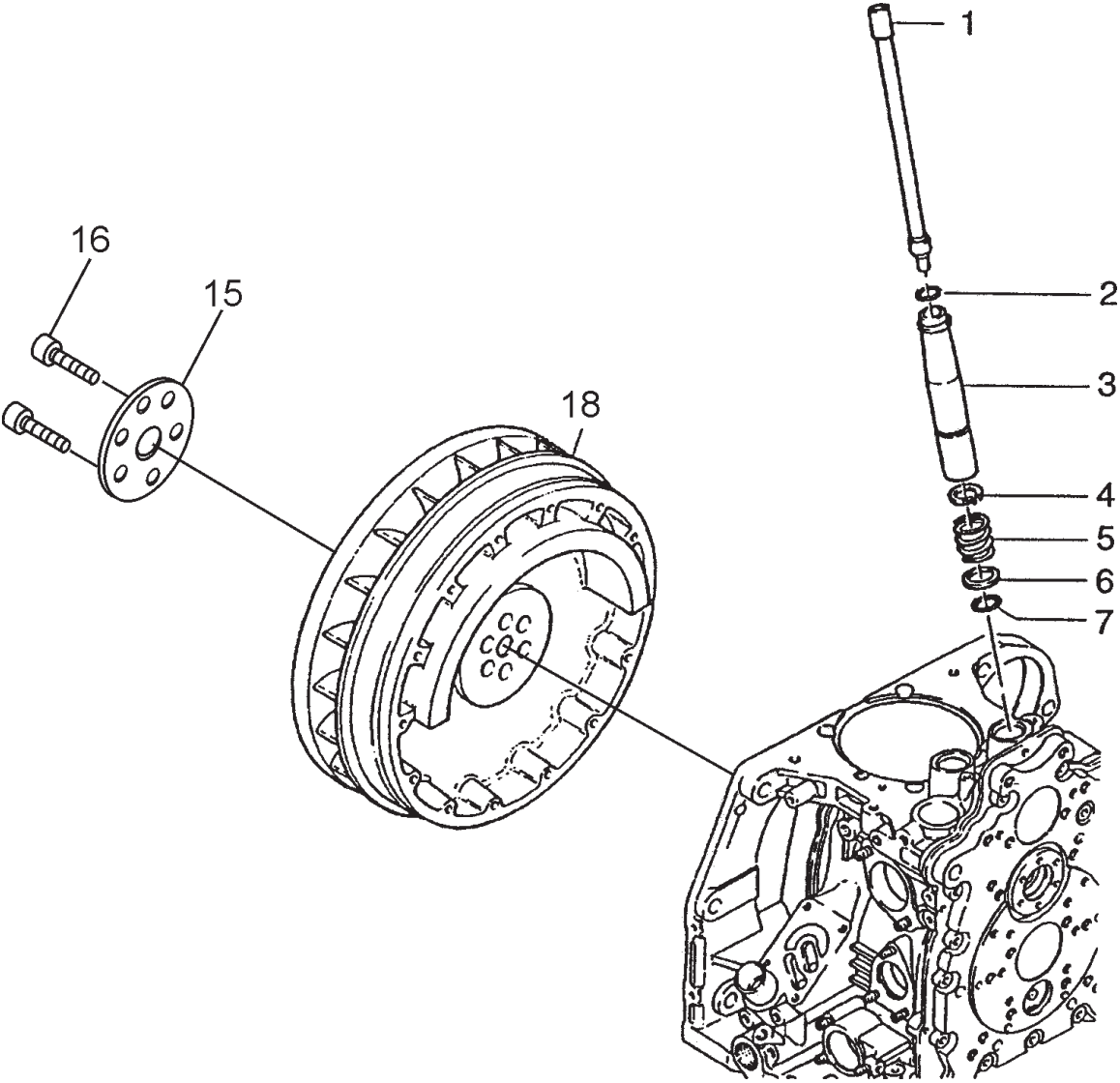
HATZ 1D81S ENGINE — CYLINDER HEAD ASSY.



HATZ 1D81S ENGINE — CYLINDER HEAD ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
51	50366300	ALLEN SCREW M 8X 20	2	
52	50208500	LOCK WASHER 8	2	
53	01493200	DEVICE HOUSING	1	INCLUDES ITEMS W/■
54■		HOUSING DEVICE BASE	1	CANNOT BE PURCHASED SEPARATELY
55■✓+	40081700	O-RING 12 X 16 X2	2	
56■✓		CAP	1	CANNOT BE PURCHASED SEPARATELY
57	01308300	CLOSING PLUG	1	INCLUDES ITEMS W/✓
60	01269700	OIL PRESSURE PIPE	1	INCLUDES ITEMS W/⊗
61	03457500	DISC F. STUD	4	
66⊗	04004200	PRESSURE SPRING	1	
67⊗	50330100	O-RING 4 X 1.2	2	
68	01280600	OIL FILTER DEVICE	1	INCLUDES ITEMS W/⊗
69⊗	01275610	CLOSING PLUG ASSY 46MM.....	1	INCLUDES ITEMS W/
70+		CLOSING PLUG	1	CANNOT BE PURCHASED SEPARATELY
71⊗		TUBE	1	CANNOT BE PURCHASED SEPARATELY
72⊗		ROD	1	CANNOT BE PURCHASED SEPARATELY
74	04047920	INTERM. PIECE DECOMP.	1	
75	50132000	ROLL PIN 4 X 16	1	
76	04048220	DECOMPRESSION SHAFT "C"	1	
77	50034500	ROLL PIN 4 X 14	1	
78	04048110	INTERMEDIATE PIECE	1	
79	03579800	RUBBER WASHER	1	
80	04048000	WASHER 10.5 X 50 X 0.8	1	
81	03778200	HANDLE 6 X 18	1	
82	50132000	ROLL PIN 4 X 16	1	
83	50405200	VALVE STEM SEAL CAP	2	
85	01285010	ROCKER EXHAUST	1	INCLUDES ITEMS W/#
86	50034600	ROLL PIN 4 X 18	1	
88	03787300	SHIM 0.2	1	
89	04097200	PRES. SPRING DECOMPR.	1	
90*	04038500	OIL RESTRICTOR VALVE ASSY.	1	
90*	04104300	OIL RESTRICTOR VAVE	1	
91	01557600	GEARWHEEL F. DECOMPR.....	1	INCLUDES ITEMS W/%

HATZ 1D81S ENGINE — FLYWHEEL ASSY.



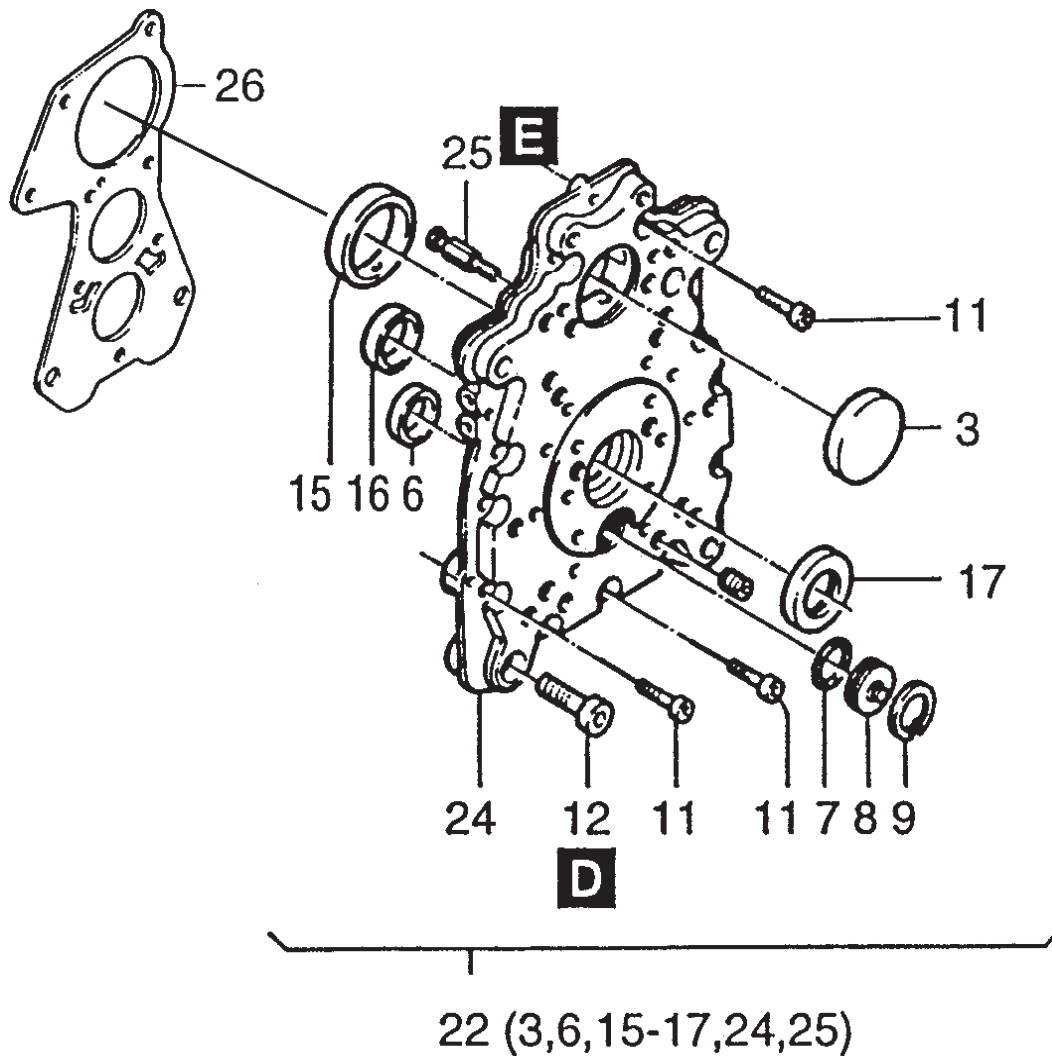
HATZ 1D81S ENGINE — FLYWHEEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01244310	PUSHROD	2	
2	50330200	O-RING 19 X 3N	2	
3	04002500	PROTECTION TUBE	2	
4	50347000	CIRCLIP AS 24 X 1.75	2	
5	04002000	PRESSURE SPRING	2	
6	04002000	PRESSURE RING	2	
7	50330300	O-RING 23 X 3	2	
15	04007410	PLATE	1	
16	50363100	ALLEN SCREW M 10 X 40	6	
18	04007131	FLYWHEEL , ELECTRIC START	1	

HATZ 1D81S ENGINE — FLYWHEEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	50328000	CTR. SUNK SCR.AM 6 X 16	5	
2	03797412	COVER F. OIL PUMP	1	
3	01242401	SPRING CAPSULE+BUSH	1	
4	03797310	GEARWHEEL	1	
6	04063400	GOVERNOR SPRING 2.9	1	
7	03798600	CUP	1	
8	50334700	CIRCLIP5	1	
9	03797600	BEARING BUSH	1	
10	03797510	HOUSING	1	
11	03797701	PLATE CENTRIF. WEIGHT	1	
12	03798002	CENTRIFUGAL WEIGHT	1	
13	03798102	CENTRIFUGAL WEIGHT	1	
14	03797900	WASHER	1	
15	03797801	PIN	1	
16	50081200	LOCK WASHER A6	5	
17	50170800	ALLEN SCREW M 6 X 25	3	
18	50051000	ALLEN SCREW M 6 X 30	2	
19	50084901	PIN 8 X 12	2	
20	03798720	GEARWHEEL	1	
21	50260501	ROLL PIN 2 X 10	2	
22	04046000	CIRCLIP	0.3	

HATZ 1D81S ENGINE — TIMING COVER ASSY.



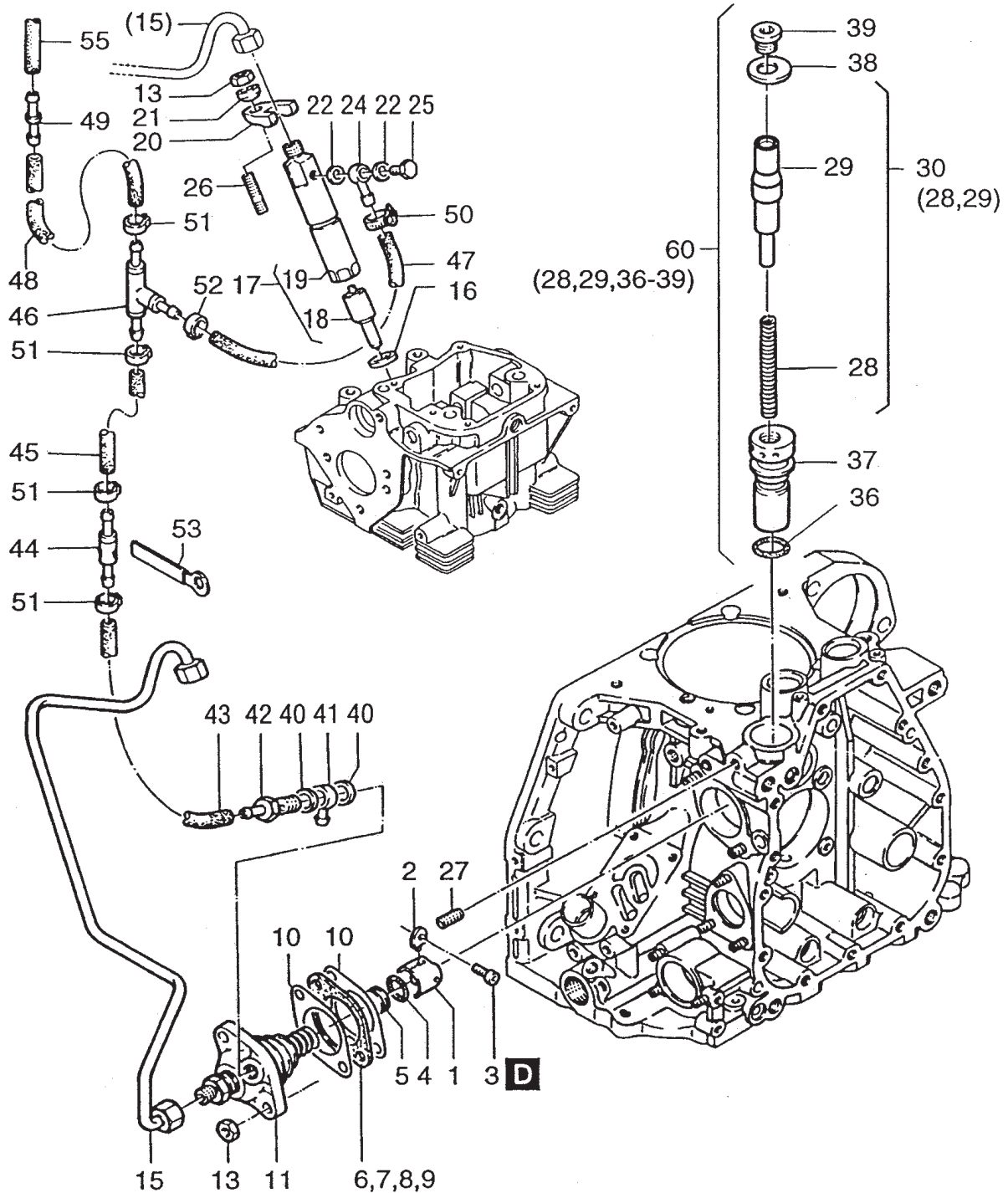
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D= LOCTITE 221 H= SILICON E= LOCTITE 648

HATZ 1D81S ENGINE — FLYWHEEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
3#	05325600	COVER 50	1	
6#	03797600	BEARING BUSH	1	
7	50330400	O-RING 27 X 2N	1	
8	04000400	COVER	1	
9	50399000	CIRCLIP 32 X 1.2	1	
11	50417400	ALLEN SCREW M 8 X 30 Z3	13	
12	50329500	ALLEN SCREW M 12 X 40	1	
15#	04000310	BEARING BUSH	1	
16#	04023210	BEARING BUSH	1	
17#	50364700	OIL SEAL 32 X 52 X 7	1	
22	01281001	TIMING COVER ASSY. NO. 3	1	INCLUDES ITEMS W/#
24#		TIMING COVER	1	CANNOT BE PURCHASED SEPARATELY
25#	04052400	NOZZLE	1	
26	03797412	COVER F. OIL PUMP	1	

HATZ 1D81S ENGINE — FUEL DEVICE ASSY.



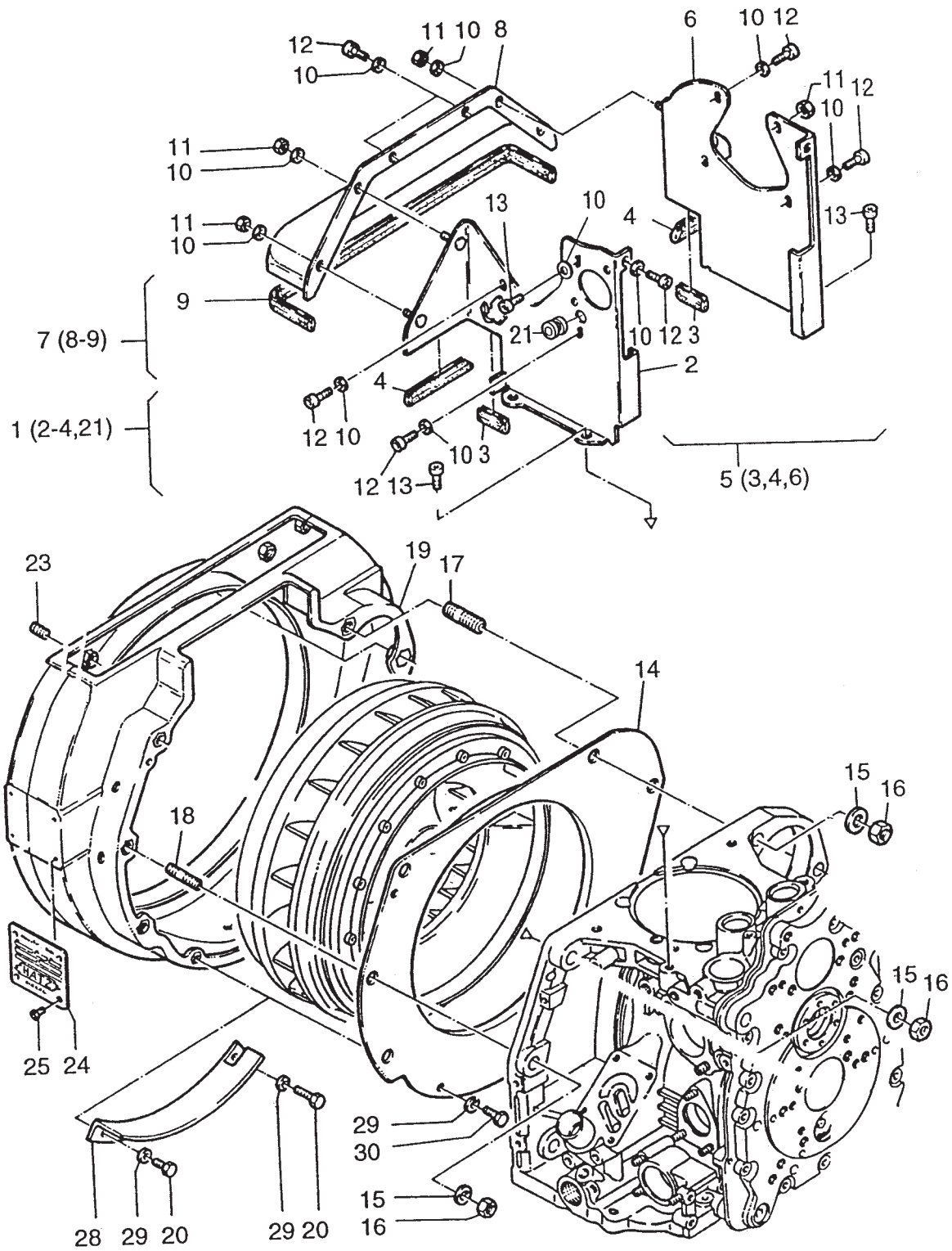
LETTERS IN BOLD INDICATE TYPE OF BONDING ADHESIVE TO BE USED.

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HATZ 1D81S ENGINE — FUEL DEVICE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	50331500	ROLLER TAPPET CPL.	1	
2	04000901	GUIDE	1	
3	50050700	ALLEN SCREW M 6 X 16	1	
4	50390200	O-RING 17 X 1.1	0..1	
4	50363400	O-RING 17 X 1.2	0..1	
5	04011700	PLATE	1	
6	03209700	SHIM 0.3	0..1	
7	04102400	SHIM 0.60/42.2	0..1	
8	04102500	SHIM 0.90/42.2	0..1	
9	04102600	SHIM 1.20/42.2	0..1	
10	04071300	GASKET	0.2	
10	04102200	GASKET INJECTION PUMP 0.2	0..2	
10	04102300	GASKET INJECTION PUMP 0.3	0..2	
11	50416200	INJECTION PUMP	1	
13	50148000	HEXAGON NUT M8	3	
15	01313600	FUEL PRESSURE PIPE	1	
16	04025800	JOINT WASHER	1	
16	40085001	INJECTOR SEAL	1	
17	50415101	INJECTOR	1	INCLUDES ITEMS W/%
18%	50415200	NOZZLE DLLA 154PV3	1	
19%		INJECTOR	1	CANNOT BE PURCHASED SEPARATELY
20	03792400	FLANGE	1	
21	04035700	WASHER	1	
22	50000800	COPPER WASHER	2	
24	50333400	BANJO UNION	1	
25	50313000	BANJO BOLT M6	1	
26	50038400	STUD M 8 X 35	1	
27	50004600	SET SCREW AM 8 X 16	1	
28*#	05035200	PRESSURE SPRING	1	
29*#		PIN	1	CANNOT BE PURCHASED SEPARATELY
30	01519500	PIST. + SPRG. EXT. FUEL	1	INCLUDES ITEMS W/*
36#	50328900	O-RING 22 X 1.6	1	
37#	04001410	CYL. F. EXTR. FUEL DEV.	1	
38#	04001600	DISC.	1	
39#	50330800	CLOS. SCREW M 16 X 1.5	1	
40	50001100	JOINT A12 X 15.5	2	
41	50015800	RING PIECE NW6	1	
42	03662300	PIPE NIPPLE	1	
43	04060400	FUEL HOSE 4.5 X 100	1	
44	00805500	VENT VALVE	1	
45	03807100	FUEL HOSE 4.5/150	1	
45	04060200	FUEL HOSE 4.5 X 55	1	
46	50157800	T-CONNECTION NW3	1	
47	03902000	FUEL PIPE 390	1	
48	05029600	FUEL HOSE 4.5/850	1	
49	50279600	CONNECTING NIPPLE	1	
50	50357200	HOSE CLIP 5SKZ	2	
51	50399801	CLAMP 11.3	4	
52	50399900	CLAMP 9.5	1	
53	01459700	CLIP	1	
60	01498902	PIST. + CYL. EXTR. FUEL	1	INCLUDES ITEMS W/#

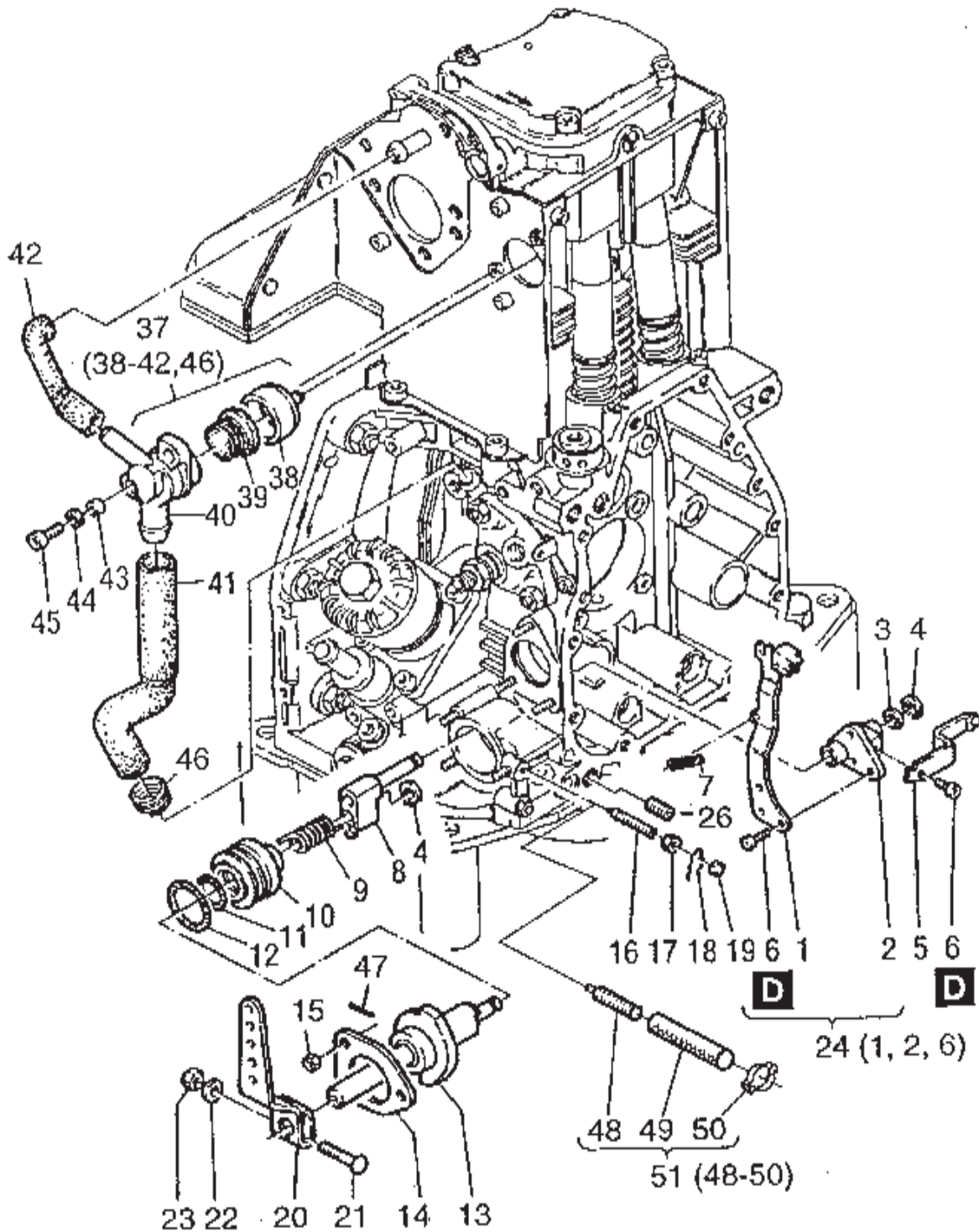
HATZ 1D81S ENGINE — AIR DUCTING ASSY.



HATZ 1D81S ENGINE — AIR DUCTING ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01246220	COOLING AIR DUCT ASSY	1	INCLUDES ITEMS W/*
2*		COOLING AIR DUCT	1	CANNOT BE PURCHASED SEPARATELY
3*%	04007601	SEALING STRIP 32.2MM	2	
4*%	04007720	SEALING STRIP 76MM	2	
5	01246411	COOLING AIR DUCT	1	INCLUDES ITEMS W/%
6%		SIDE SHROUD	1	CANNOT BE PURCHASED SEPARATELY
7	01246600	COOLING AIR DUCT ASSY.....	1	INCLUDES ITEMS W/#
8#		COOLING AIR DUCT	1	CANNOT BE PURCHASED SEPARATELY
9#	04007901	SEALING STRIP 413MM	1	
10	50081200	LOCK WASHER A6	15	
11	50144400	HEXAGON NUT M6	4	
12	50149100	ALLEN SCREW M6 X 12	12	
13	50206300	ALLEN SCREW M8 X 18	4	
14	04008500	PARTING SHEET	1	
15	50093700	FLAT WASHER A13	6	
16	50093600	HEXAGON NUT M12	6	
17	50364900	STUD M12 X 40	2	
18	50331400	STUD M12 X 35	4	
19	04008211	INTERMED. HOUSING	1	
20	50333500	HEXSCREW M 6 X 8	2	
21*	50334800	RUBBER SLEEVE	1	
23	50226000	GRUB SCREW M 8 X 6	4	
24	03225504	NAME PLATE	1	
25	40002500	POP RIVET 2.4 MM	4	
28	04080400	COVER F. BLOW DUCTING	1	
29	50170900	LOCK WASHER 6	4	
30	50177100	HEXSCREW M 6 X 16	2	

HATZ 1D81S ENGINE — BREATHER ASSY.



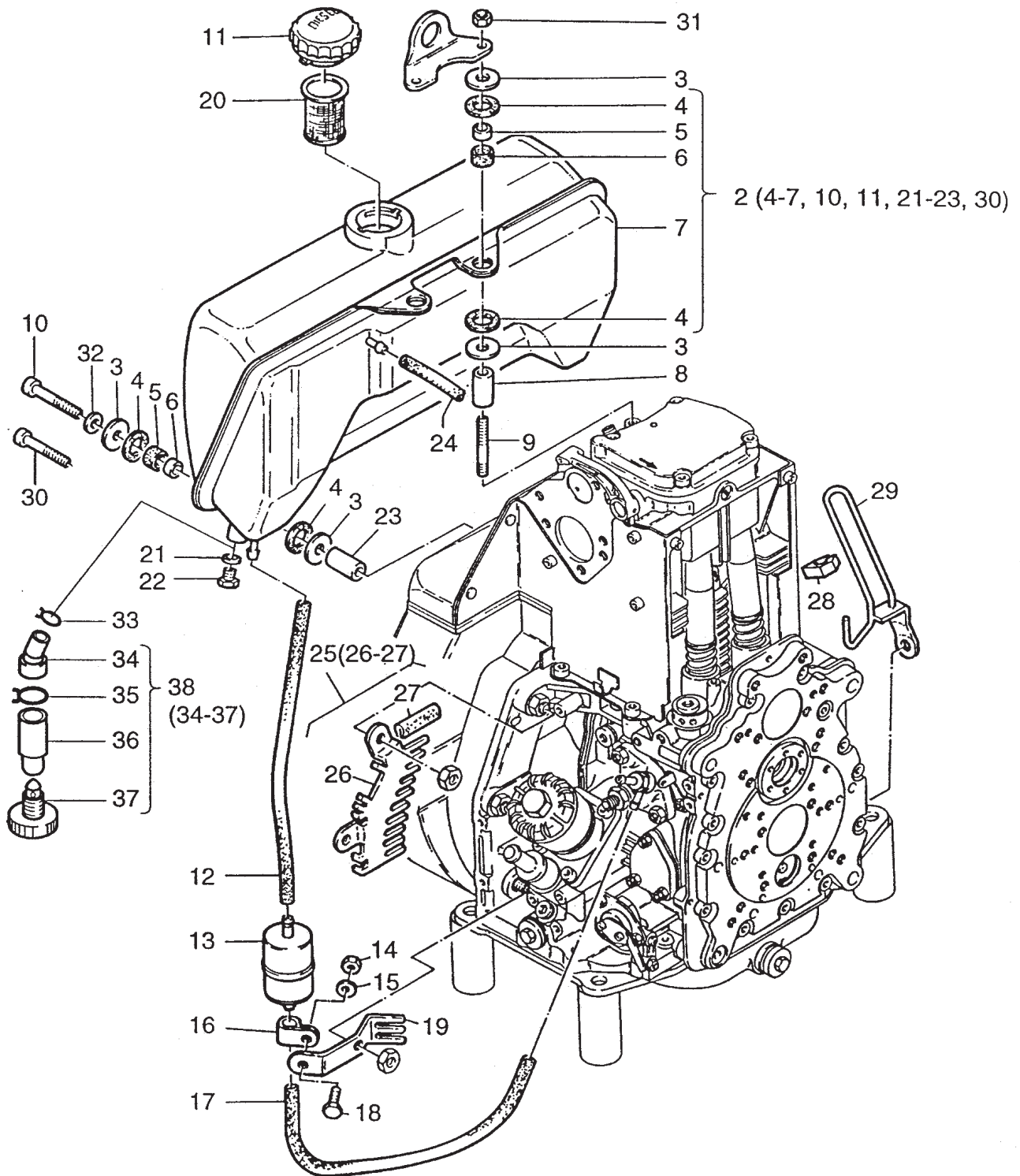
LETTERS IN BOLD INDICATE TYPE OF BONDING ADHESIVE TO BE USED.

D= LOCTITE 221 H= SILICON E= LOCTITE 648

HATZ 1D81S ENGINE — BREATHER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1#		THROTTLE ARM	1	CANNOT BE PURCHASED SEPARATELY
2#		THROTTLE LINKAGE	1	CANNOT BE PURCHASED SEPARATELY
3	04000100	SHIM	1	
4	50266100	CIRCLIP 6	2	
5	04037500	LEVER	1	
6#	50328701	ALLEN SCREW M 5 X 8	4	
7	04000200	TENSION SPRING	1	
8	01242810	GUIDE	1	
9	03799010	THIGH SPRING	1	
10	04052700	SPACER RING	1	
11	50386100	O-RING 21 X 2	1	
12	50129900	O-RING 32 X 37 X 2.5	1	
13	01279210	STOP RING SPD. CONT. S	1	
13	01302910	STOP RING SPD. CONT. C	1	
14	03799210	FRICTION PLATE	1	
15	50328300	HEXAGON NUT M6	3	
16	03799400	GRUB SCREW	2	
17	50144400	HEXAGON NUT M6	2	
18	40021500	SEAL WIRE 0.5-0.3	2	
19	40021400	LEAD SEAL 8MM	2	
20	03888300	THROTTLE LEVER	1	
21	03927300	SCREW M 6 X 32	1	
22	50144500	FLAT WASHER 6.4	1	
23	50144400	HEXAGON NUT M6	1	
24	01246801	GOVERNOR LEVER ASSY.	1	INCLUDES ITEMS W/#
26	50403500	GRUB SCREW M 8 X 20	1	
37	01317000	BREATHER VALVE ASSY.	1	INCLUDES ITEMS W/%
38%	04080300	BREATHER CUP	1	
39%	03568700	RUBBER DIAPHRAM	1	
40%		BREATHER	1	CANNOT BE PURCHASED SEPARATELY
41%	04074700	BREATHER HOSE	1	
42%	04074800	BREATHER HOSE	1	
43	04080500	BUSH	2	
44	50081200	LOCK WASHER A6	2	
45	50170700	ALLEN SCREW M 6 X 16	2	
46%	04090500	CLIP	1	
47	50411500	SET PIN	1	
48*	50405301	GRUB SCREW M 6 X 45	1	
49*	05038000	HOSE 7 X 12 X 120	1	
50*	50388300	HOSE CLAMP	1	
51	01475600	ADJUST. SCREW ID 1D81	1	INCLUDES ITEMS W/*

HATZ 1D81S ENGINE — FUEL TANK ASSY.



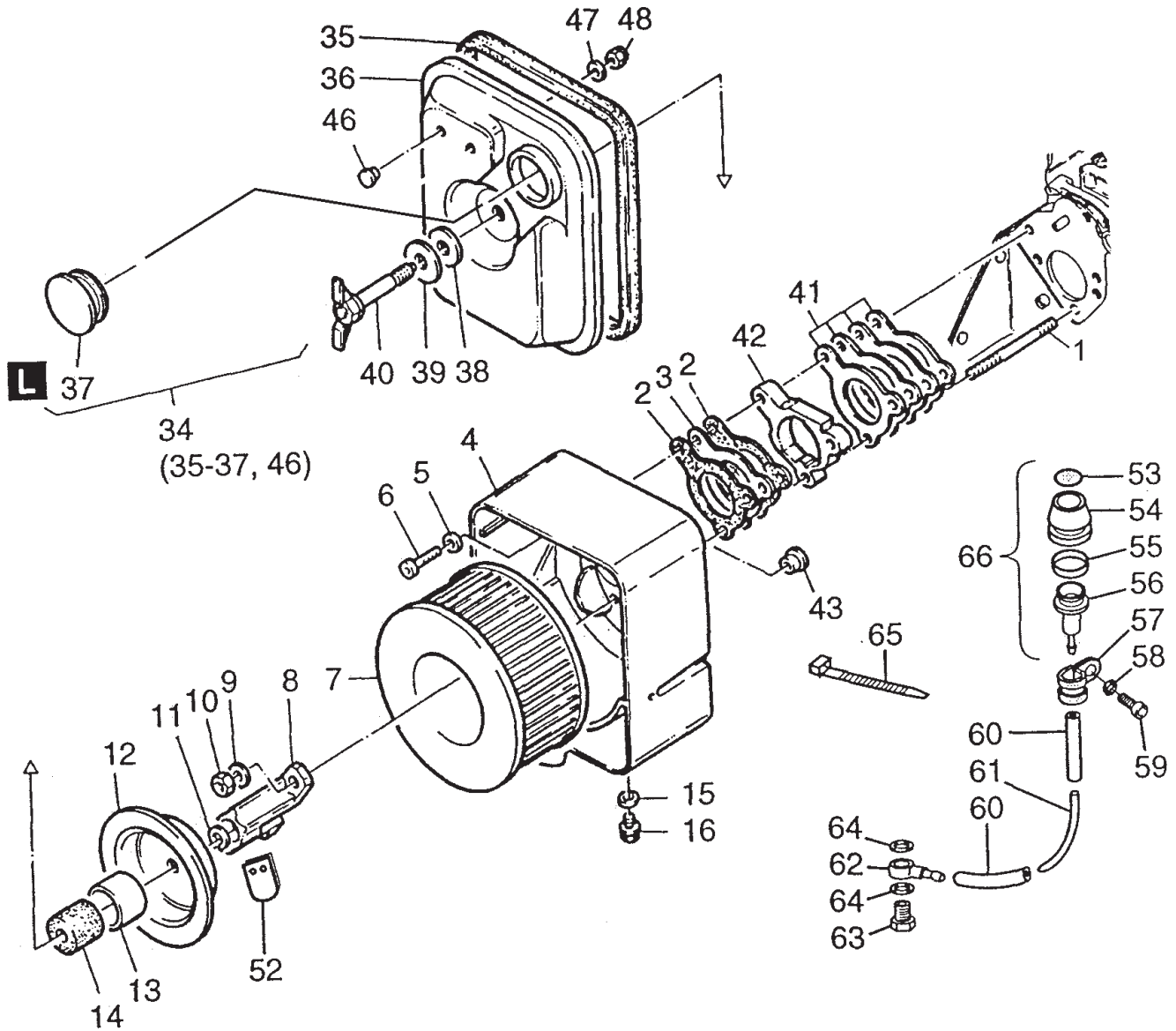
HATZ 1D81S ENGINE — FUEL TANK ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	01494200	FUEL TANK ASSY (7 LTRS.)	1	INCLUDES ITEMS W/#
3	05097600	WASHER	12	
4#	03981802	RUBBER WASHER	12	
5#	03981701	BUSH 8.4 X 13 X 7.5	6	
6#	03981900	RUBBER SHELL	6	
7#		FUEL TANK	1	CANNOT BE PURCHASED SEPARATELY
8	03989800	BUSH 8.5 X 20 X 49	2	
9	50377001	STUD M 8 X 75	2	
10#	50177500	ALLEN SCREW M 8 X 40	4	
11#	50385800	CAP, FUEL TANK	1	
12	03801200	FUEL HOSE 7/220	1	
13	50478800	FUEL FILTER	1	REPLACES 40089401
14	50144400	HEXAGON NUT M6	1	
15	50144500	FLAT WASHER 6.4	1	
16	03165500	PIPE CLIP	1	
17	03493600	FUEL HOSE 7/330	1	
18	50165500	HEXSCREW M 6 X 12	1	
19	05031900	GUARD	1	
20	50387300	SIEVE	1	
21#	50001000	JOINT A 10 X 16	1	
22#	50359800	HEXSCREW M 10 X 12	1	
23#	05029200	BUSH 9 X 18 X 8	4	
24	03663700	FUEL PIPE L W 4.5 X 50	1	
25	01490300	PROTEC. GUARD TOP	1	INCLUDES ITEMS W/%
26%		FINGER GUARD	1	CANNOT BE PURCHASED SEPARATELY
27%	04030901	SEALING STRIP 29 MM	1	
28	03150900	CLAMP	1	
29	01402200	GUARD	1	
30#	50183000	ALLEN SCREW M 8 X 35	4	
31	50148000	HEXAGON NUT M8	2	
32	50208500	LOCK WASHER 8	4	
33	05045300	CLAMP 21 MM	1	
34*	05044001	HOSE 10/12 MM	1	
35*	05036900	HOSE CLIP	1	
36*	05043900	WATER SEPARATOR	1	
37*	50414800	CLOS. SCREW M 10	1	
38	01519401	WATER SEPARATOR	1	INCLUDES ITEMS W/*

HATZ 1D81S ENGINE — FUEL PUMP ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	04011900	BUSH	1	
2	03796400	SHAFT	1	
3	04011801	LEVER F. FEED PUMP	1	
4	04000800	PLUG	1	
5	50331800	O-RING	1	
6	50332301	FUEL FEED PUMP	1	
7	50328300	HEXAGON NUT M6	3	
8	50001200	JOINT A 14 X 18	4	
9	50006400	BANJO BOLT A8	2	
10	50015900	RING PIECE N W 8	1	
11	01468801	FUEL PIPE	1	
12	49062501	DIAPHRAM	1	

HATZ 1D81S ENGINE — AIR FILTER ASSY.

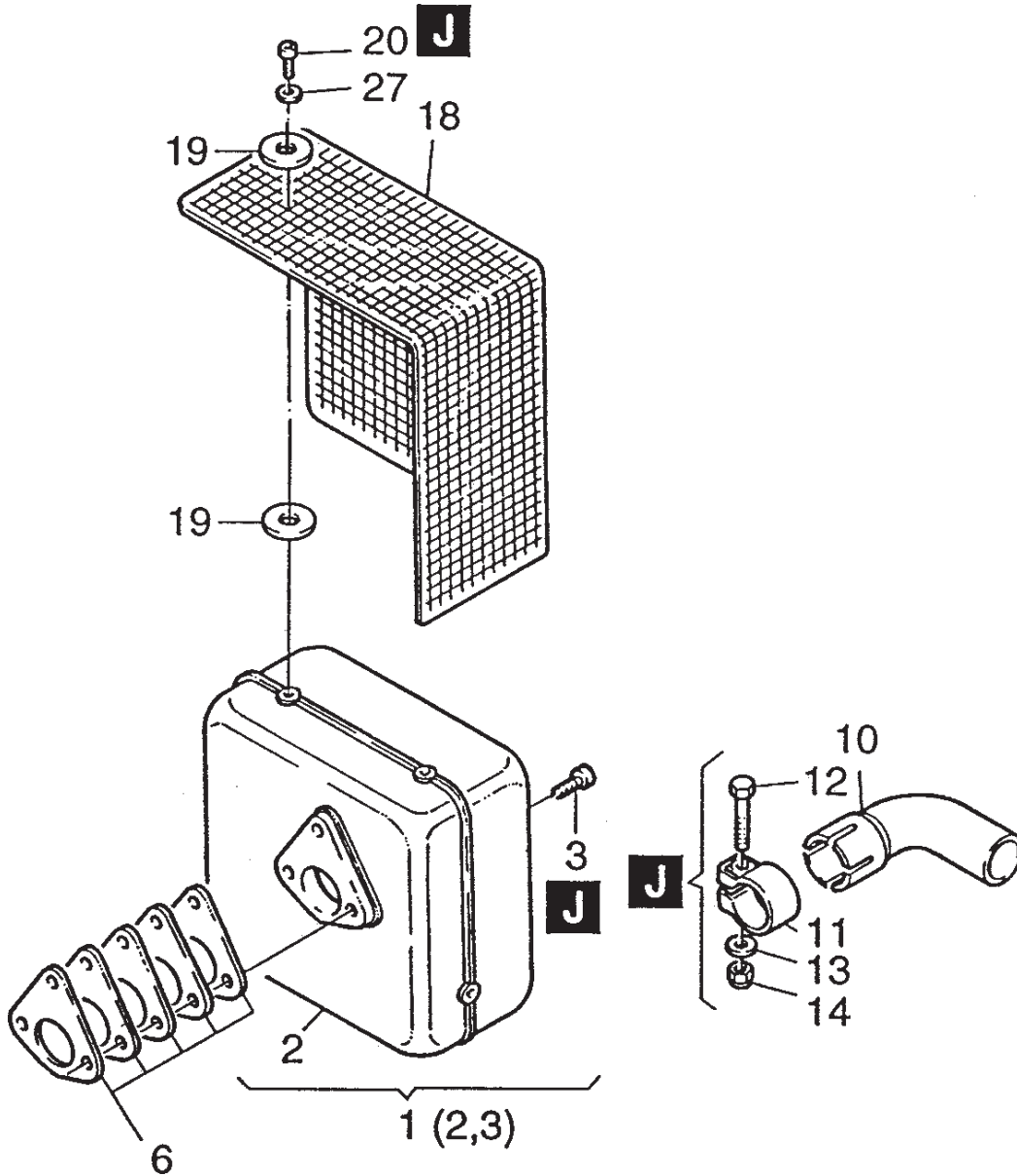


L= SILICON SEALER

HATZ 1D81S ENGINE — AIR FILTER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	50038900	STUD M 8 X 60	2	
2	04006300	GASKET	2	
3	04006200	INSULATING FLANGE	1	
4	04004312	AIRFILTER HOUSING	1	
5	50095100	LOCK WASHER A8	1	
6	50398400	CYLINDER HEAD BOLT	1	
7	01493000	AIR FILTER	1	
8	01483400	RETAINING STRAP	1	
9	50148100	FLAT WASHER 8.4	2	
10	50129500	HEXAGON NUT M8	2	
11	50412000	CIRCLIP 10 X 1	1	
12	05036400	CENTERING COVER	1	
13	05039300	BUSH 33 X 35 X 23.5	1	
14	03579400	SEALING RING	1	
15	50062400	JOINT A 10 X 13.5	1	
16	50062300	CLOSING SCREW M 10 X 1	1	
34	01496800	COVER AIRFILTER.....	1	INCLUDES ITEMS W/*
35*	04047701	SEALING STRIP LG 704	1	
37*	05039401	CLOSING CAP	1	
36*		CLOSING COVER.....	1	CANNOT BE PURCHASED SEPARATELY
38	03814100	INSULATING DISC	1	
39	05038700	WASHER 11 X 36 X 3	1	
40	01490800	WING SCREW	1	
41	01287900	GASKET AIRFILTER	1	
42	04047300	INTERMEDIATE FLANGE	1	
43	50395700	COVER 15	1	
46*	50411900	CLOSING PLUG 7	2	
47	50120000	DISC A 6.4	2	
48	40028300	HEXAGON NUT M 6	2	
52	05033500	VALVE PLATE	1	
53#	05044501	INDIC. PLATE	1	
54#	05043601	RUBBER CAP	1	
55#	05045600	SIGNAL RING	1	
56#	05043700	ADAPTER	1	
57	50173500	PIPE CLIP	1	
58	50170900	LOCK WASHER 6	1	
59	50170600	ALLEN SCREW M 6 X 20	1	
60	03961400	FUEL HOSE 3.51-50	2	
61	05043800	HOSE 2 X 4 X 170	1	
62	50159500	RING PIECE N W 4	4	
63	50006200	BANJO BOLT A 4	1	
64	50062400	JOINT A 10 X 13.5	2	
65	50358400	STRAP	1	
66	01499800	MAINT. INDICATOR.....	1	INCLUDES ITEMS W/#

HATZ 1D81S ENGINE — EXHAUST SILENCER ASSY.

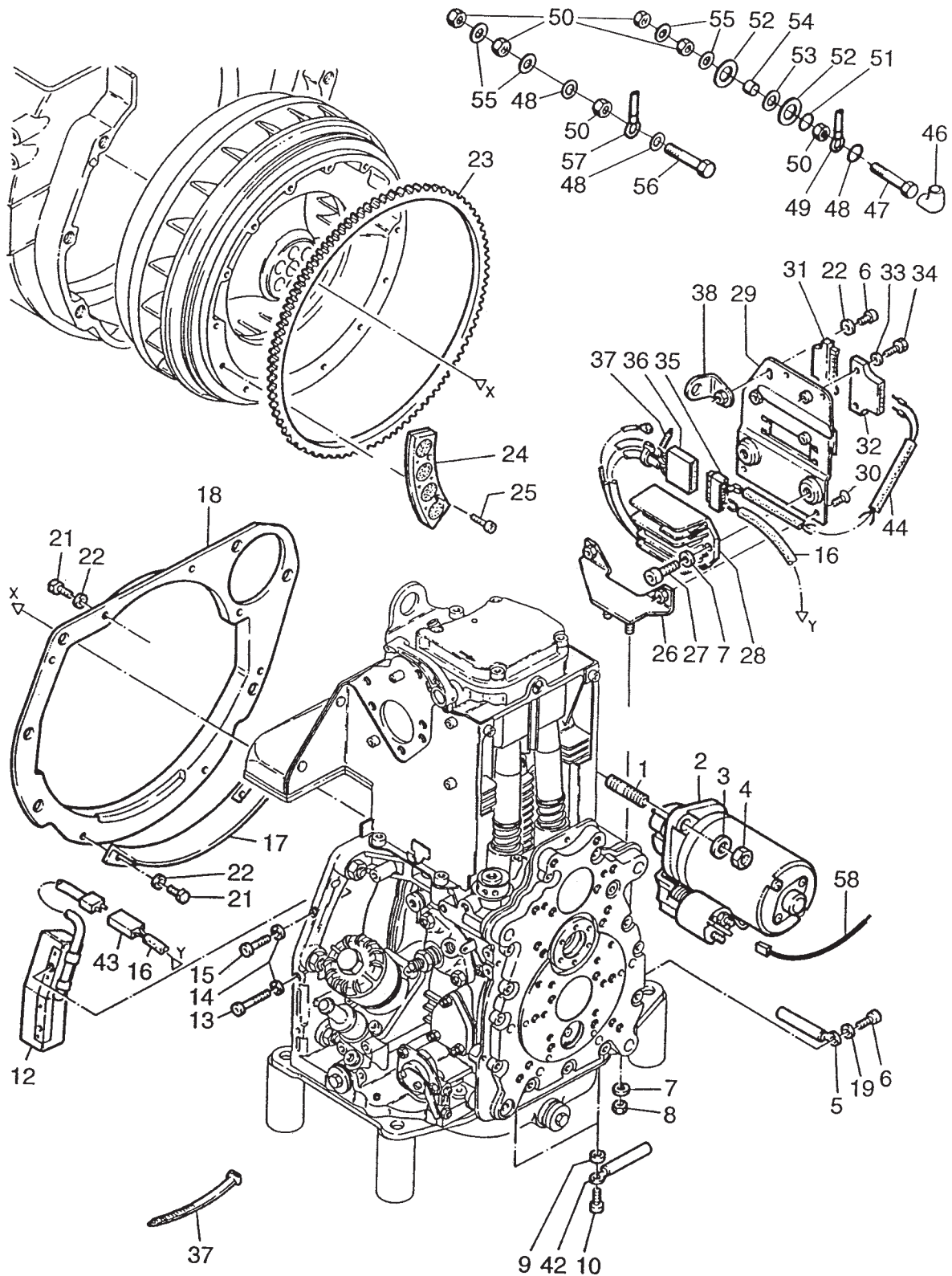


J= HOT TEMPERATURE PASTE

HATZ 1D81S ENGINE — EXHAUST SILENCER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01498800	EXHAUST SILENCER S ASSY.	1	INCLUDES ITEMS W/*
2*		EXHAUST SILENCER	1	CANNOT BE PURCHASED SEPARATELY
3*	50404000	ALLEN SCREW M 8 X 30	3	
6	01471110	GASKET SET EXHAUST SIL.	1	
10	03877300	ELBOW	1	
11	03877700	PIPE CLIP 52.5	1	
12	50249500	HEX SCREW M 10 X 50	1	
13	50145900	FLAT WASHER 10.5	1	
14	40028600	HEX NUT M 10	1	
16	03997100	EXHAUST TUBE	1	
18	01191901	MUFFLER GUARD ID	1	
19	05034200	LOCK WASHER	10	
20	50255700	ALLEN SCREW M 6 X 12	5	

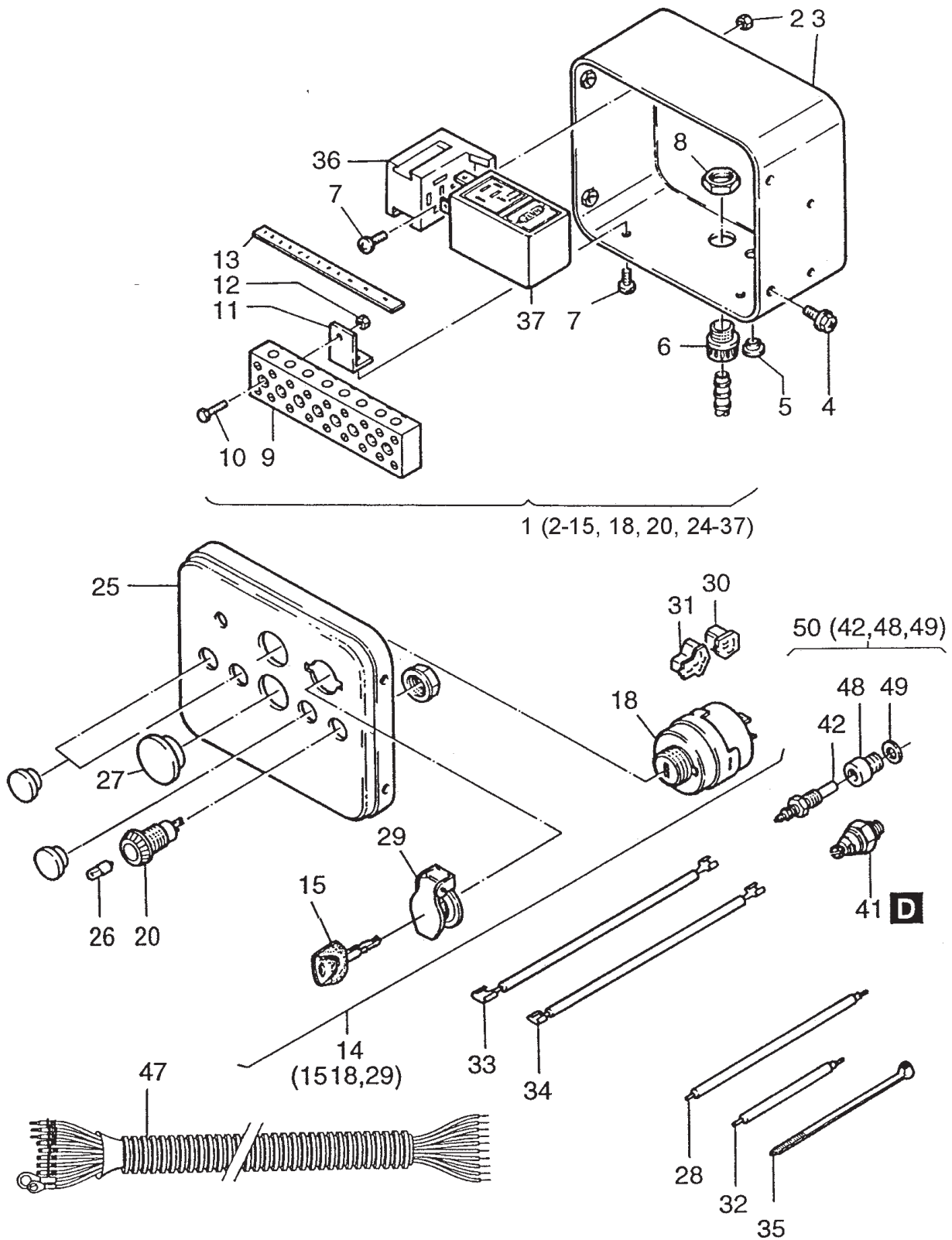
HATZ 1D81S ENGINE — STARTER/ALTERNATOR ASSY.



HATZ 1D81S ENGINE — STARTER/ALTERNATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	50201200	STUD M 12 X 50	2	
2	50353420	STARTER 12 V 10 TOOTH	1	
3	50093700	FLAT WASHER A 13	2	
4	50380600	HEXAGON NUT M 12	2	
5	01459700	CLIP	2	
6	50149100	ALLEN SCREW M 6 X 12	2	
7	50208500	LOCK WASHER 8	4	
8	50148000	HEXAGON NUT M 8	2	
9	04021000	BUSH 6.3 X 12.15 X 5	2	
10	50170700	ALLEN SCREW M 6 X 16	2	
12	01439000	COIL WITH WIRE 12 V	1	
13	50401200	ALLEN SCREW M 6 X 35	1	
14	50165600	LOCK WASHER	2	
15	50236600	ALLEN SCREW M 6 X 25	1	
16	01462800	ELECTRIC WIRE	1	
17	04021100	PROTECT. ALTERNATOR	1	
18	04009920	PARTING SHEET	1	
19	50144500	FLAT WASHER 6.4	1	
21	50165500	HEXSCREW M 6 X 12	5	
22	50170900	LOCK WASHER 6	6	
23	04021210	GEAR RING 123 TEETH	1	
24	04020421	MAGNET SEGMENT	7	
25	50397100	ALLEN SCREW M 4 X 10	14	
26	01440300	SUPPORT	1	
27	50165400	ALLEN SCREW M 8 X 16	2	
28	01248121	REGULATOR 12 V	1	
28	01425021	REGULATOR 24 V	1	
29	01440100	FASTENING PLATE	1	
30	50380800	CTR. SUNK SCREW M 6 X 10	2	
31	50373700	PLUG SLEEVE HOUSING	1	
32	50373600	PIN TERM. HOUSING 6 WAY	1	
33	50216300	WASHER 5.3	2	
34	50335700	HEXSCREW M 5 X 25	2	
35	50402100	PLUG SLEEVE HOUSING	1	
36	50402000	PLUG SLEEVE HOUSING	1	
37	50358400	STRAP	4	
38	01440200	SUPPORT	1	
42	01470200	CLIP	2	
43	50379700	PLUG SLEEVE HOUSING	1	
44	01439400	WIRING HARNESS	1	
46	40026600	PROTECTION CAP. RUBBER	1	
47	50400300	HEXSCREW M 8 X 40	1	
48	50179900	STAR WASHER	1..2	
49	01430800	BATTERY CABLE PLUS	1	
50	50023000	HEXAGON NUT M 8	3	
51	50426900	SERRATED WASH. A 8.4	1	
52	03814100	INSULATING DISC	2	
53	50426800	TOOTH LOCK J 10.5	1	
54	03814200	INSULATING TUBE	1	
55	50016800	DISC 8.4	2	
56	50275300	HEXSCREW M 8 X 35	1	
57	01430900	BATTERY CABLE MINUS	1	
58	01193401	ELECTRIC WIRE	1	

HATZ 1D81S ENGINE — INSTRUMENT BOX ASSY.



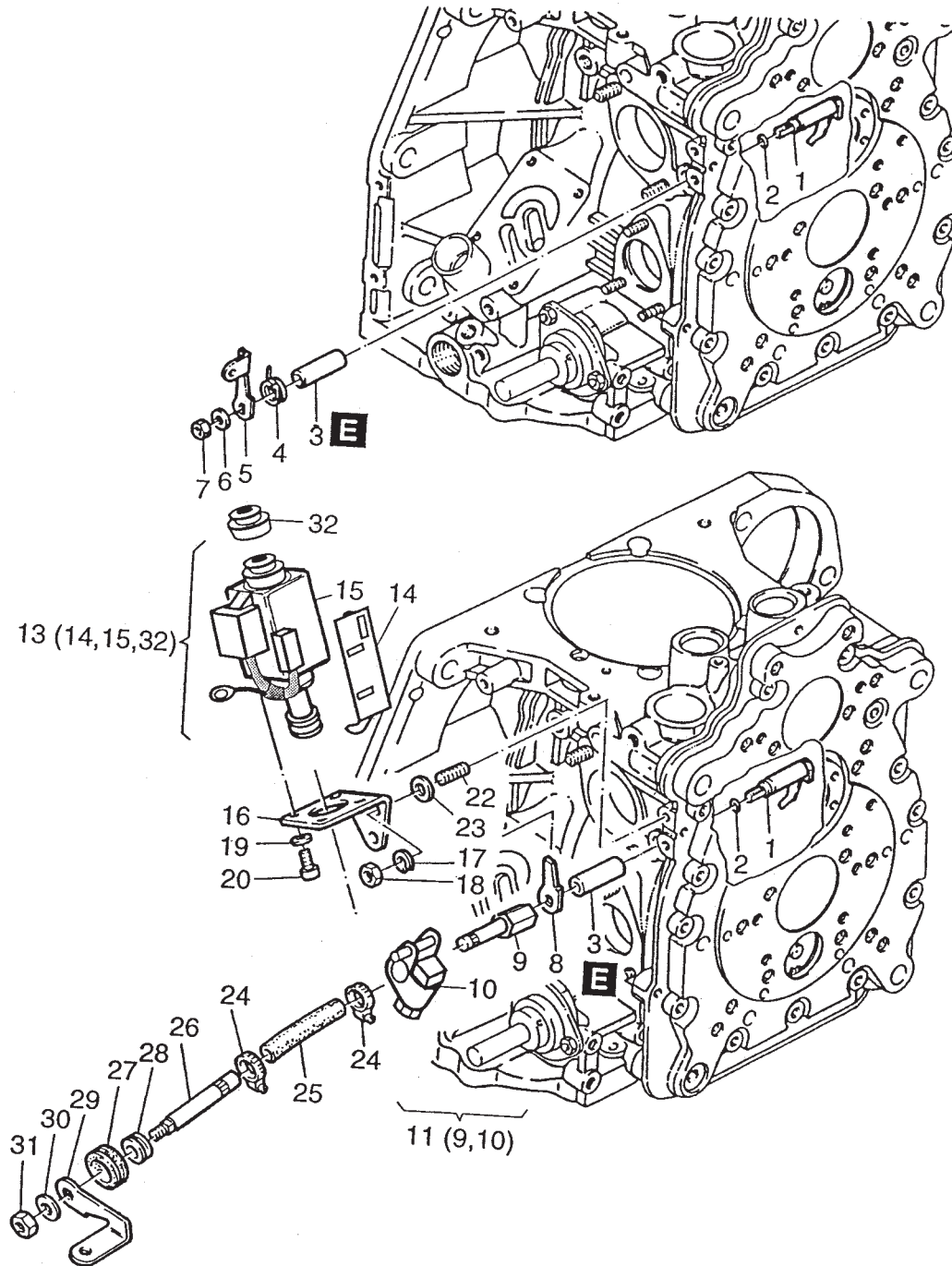
LETTERS IN BOLD INDICATE TYPE OF BONDING ADHESIVE TO BE USED.

D= LOCTITE 221 H= SILICON E= LOCTITE 648

HATZ 1D81S ENGINE — INSTRUMENT BOX ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01407000	INSTRUMENT BOX 12 V	1	INCLUDES ITEMS W/*
1	01457700	INSTRUMENT BOX 24 V	1	INCLUDES ITEMS W/*
2*	40028200	HEX. NUT M5	1	
3*	00716311	INSRTUMENT BOX, ENCL.	1	
4*	50289200	HEXSCREW M 6 X 12	4	
5*	50160800	CLOSING PLUG, PLASTIC	1	
6*	50159010	MALE CABLE COUPLING	1	
7*	50049300	ALLEN SCREW M 5 X 10	3	
8*	50159100	HEXAGON NUT, PLASTIC	1	
9*	50160700	CONNECTING BLOCK	1	
10*	50158800	ALLEN SCREW M 4 X 20	2	
11*	03666700	BRACKET	2	
12*	50147100	HEXAGON NUT M 4	2	
13*	05004300	DECAL F. INST. BOX	1	
14*	50276502	GLOW START. SWITCH	1	INCLUDES ITEMS W/%
14	50384401	GLOW STARTSWITCH	1	S/N G-1185 AND ABOVE
15*%	50345300	IGN. KEY DS 14603	1	S/N G-1184 AND BELOW
15	50404900	IGN. KEY	1	S/N G-1185 AND ABOVE
18%*		KEY SWITCH (S/N G-1184).....	1	CANNOT BE PURCHASED SEPARATELY
20*	50176501	INDICATOR LAMP, BATTERY	1	
21	50176600	INDICATOR LAMP, OIL	1	
22	50176400	INDICATOR LAMP, TEMP.	1	
24*	40096000	CLOSING PLUG	0.3	
25*	03509211	INSTRU. BOX FRONT	1	
26*	40009700	BULB 12 V 2 W	0.4	
26*	40009800	BULB 24 V 2 W	0.4	
27*	40091400	CLOSING PLUG, PLASTIC	0.2	
28*	01150101	DIODE ASSY.	1	
29*%	49050900	FLAP FOR SWITCHBOX	1	
30*	50276600	PLUG SLEEVE HOUSING	1	
31*	50276700	PLUG SLEEVE HOUSING	1	
32*	01090201	DIODE ASSY.	2	
33*	01089801	DIODE ASSY.	1	
34*	01089901	DIODE ASSY.	1	
35*	50358400	STRAP	1	
36*	50276000	RELAY SOCKET	1	
37*	50275802	MOTOR START RELAY	1	
37*	50275902	RELAY ENG. PROT. 24 V	1	
41	40021300	OIL PRESSURE SWITCH	1	
42#	50268600	TEMP. SWITCH	1	
47	01433601	WIRING HARNESS	1	
48#	05027800	INTERMED. PIECE. TEMP	1	
49#	50001000	JOINT A 10 X 16	1	
50	01475200	TEMP. SWITCH 12 V "C"	1	INCLUDES ITEMS W/#

HATZ 1D81S ENGINE — LIFTING MAGNET/STOP DEVICE ASSY.



LETTERS IN BOLD INDICATE TYPE OF BONDING ADHESIVE TO BE USED.

D= LOCTITE 221 H= SILICON E= LOCTITE 648

HATZ 1D81S ENGINE — LIFTING MAGNET/STOP DEVICE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01254602	LEVER CPL.	1	
2	50343300	O-RING 4.6 X 1.85	1	
3	04021400	BUSH	1	
4	04021800	SPRING	1	
5	04021700	LEVER	1	
6	50144500	FLAT WASHER 6.4	1	
7	50328300	HEXAGON NUT M 6	1	
8	05015100	SUPPORT SOLENOID	1	
9#		BUSHING	1	CANNOT BE PURCHASED SEPARATELY
10#		LINKAGE	1	CANNOT BE PURCHASED SEPARATELY
11	01515300	SHAFT + LEVER STOPMAG	1	INCLUDES ITEMS W/#
13	01515500	LIFTING MAGNET 12 V	1	INCLUDES ITEMS W/*
14*	05058400	CABLE HOLDER	1	
15*		STOP MAGNET	1	CANNOT BE PURCHASED SEPARATELY
16	05023501	CONSOLE	1	
17	50170900	LOCK WASHER 6	2	
18	50144400	HEXAGON NUT M 6	2	
19	50216300	WASHER 5.3	3	
20	50112600	ALLEN SCREW M 5 X 10	4	
22	50366800	STUD M 6 X 12	2	
23	50114300	DISC 6.4	2	
24	40037300	CLAMP 8-12	2	
25	03999001	FUEL HOSE 7/70	1	
26	03996600	SHAFT	1	
27	03565400	RUBBER SLEEVE	1	
28	05069200	BUSH F. BELT TENSION	1	
29	04021700	LEVER	1	
30	50144500	WASHER	1	
31	50328300	HEXAGON NUT M6	1	
32*	50248900	BELLOWS	1	