



## Dingo<sup>®</sup> 320-D

### Compact Utility Loader

Model No. 22303—200000001 to 200000500

## Parts Catalog

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### Ordering Replacement Parts

To order replacement parts, please supply: the part number, the quantity, and the description of each part desired.

### Understanding Reference Numbers

Each identified part in an illustration has a reference number. The reference number for a part also appears in the parts list, along with other information about the part.

This catalog uses two special reference number formats, one to indicate parts in a service assembly and another to indicate the quantity of a given part in an illustration.

### Service Assembly Reference Numbers

Parts in service assemblies have reference numbers in the form **a:b**. The **a** represents the reference number of the entire service assembly and the **b** represents a sequential number unique to each part within the service assembly.

For example, a wheel assembly might be identified by reference number **6**, the tire by **6:1**, the valve by **6:2**, and the wheel by **6:3**. When you order the assembly identified by reference number **6**, you receive all parts identified by reference numbers **6:1**, **6:2**, and **6:3**. However, you may also order any part individually.

Reference numbers of this type appear in illustrations and in part lists.

### Reference Numbers Indicating Quantity

In an illustration, if a reference number indicates more than one part, the reference number has the form **nX y**. The **n** represents the quantity of the part, the **X** is the multiplication symbol, and the **y** represents the reference number.

For example, in an illustration, the reference number **2X 37** means that two of the parts identified by reference number **37** are indicated.

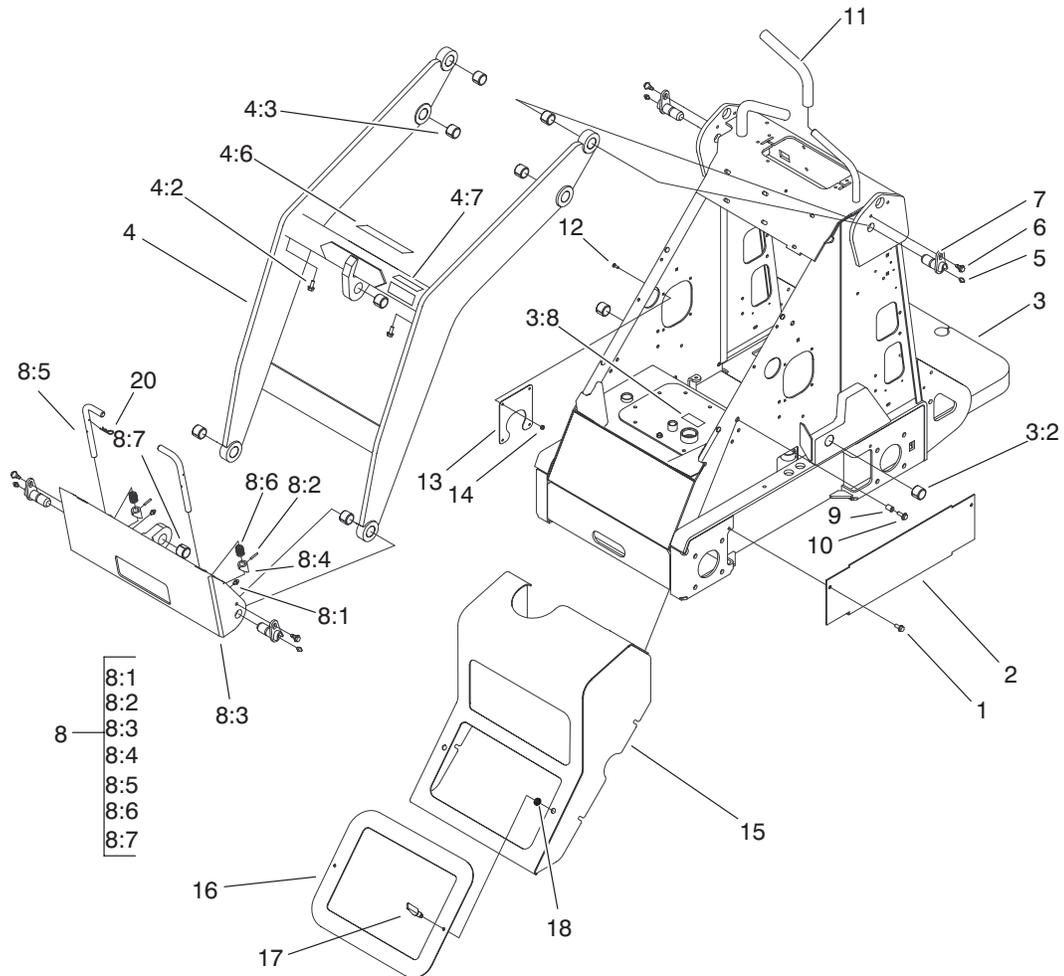
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## Part Description Abbreviations

Part descriptions in this catalog may include the following abbreviations.

<b>Abbreviation</b>	<b>Meaning</b>	<b>Abbreviation</b>	<b>Meaning</b>
AR .....	as required	INC .....	incorporated
ASM .....	assembly	LH .....	left hand
CARR .....	carriage	NI .....	nylon insert
DEG .....	degrees	PPH .....	Phillips pan head
FH .....	flat head	PTH .....	Phillips truss head
GA .....	gauge	PTO .....	power take off
HF .....	hex flange	RH .....	right hand
HH .....	hex head	SFH .....	slotted fillister head
HHF .....	hex head flange	SHH .....	slotted hex head
HLH .....	hex lag head	SQH .....	square head
HJ .....	hex jam	SHWH .....	slotted hex washer head
HOC .....	height-of-cut	SPH .....	slotted pan head
HS .....	hex socket	SRH .....	slotted round head
HSBH .....	hex socket button head	STD .....	standard
HSFH .....	hex socket flat head	TAP .....	self tapping
HSH .....	hex socket head	TTH .....	Torx truss head
HWH .....	hex washer head	WH .....	wing head
HWHTF .....	hex washer head thread forming		



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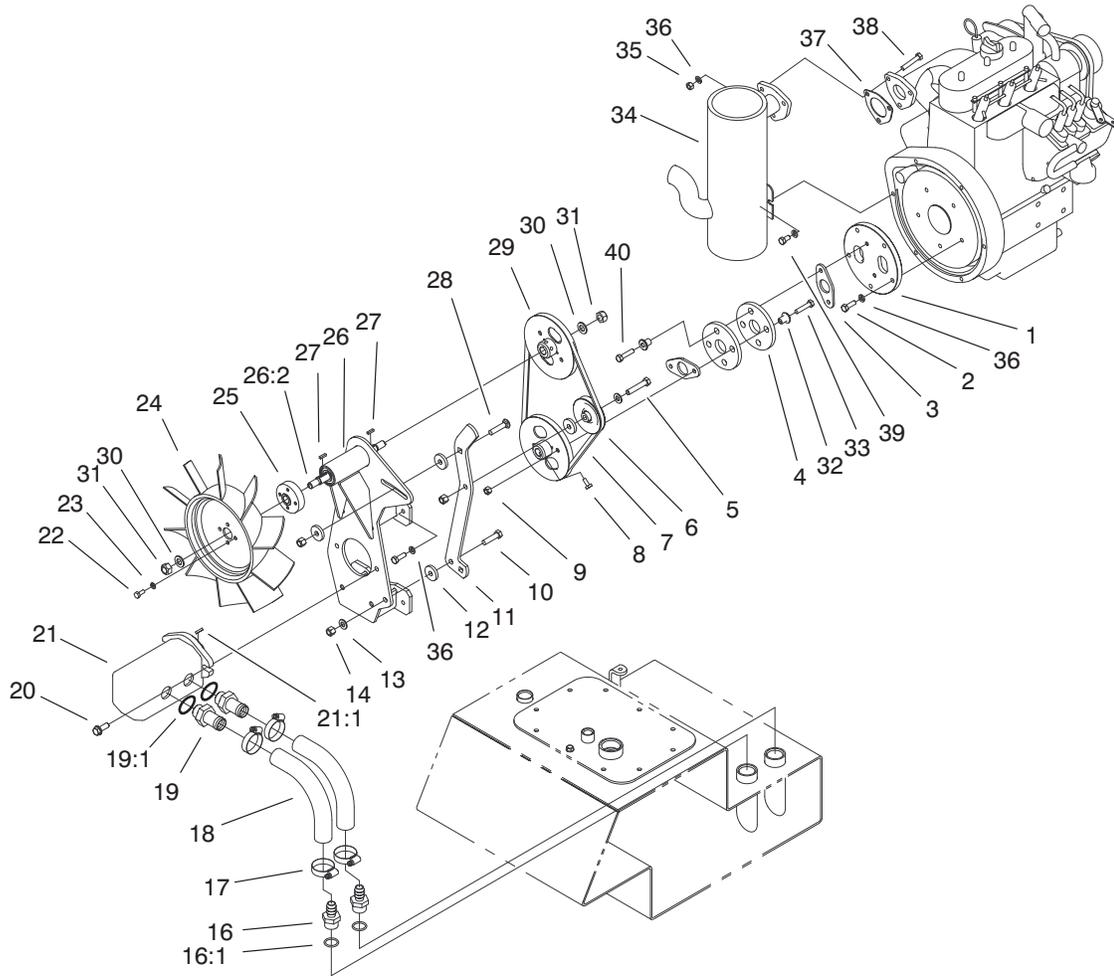
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## Frame and Loader Arm Assembly

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	32144-70	6	Screw-HH	8:2	32121-94	2	Pin-Special
2	99-3020-01	2	Cover-Hose	8:3	98-4691-03	1	Mount-Attach, Quick
3	99-3154	1	Frame & Decal ASM	8:4	98-4692	2	Cam-Attach, Quick
3:2	98-4871	2	Bushing-Tension	8:5	100-3373	2	Pin-Qtach
3:8	93-6686	1	Decal-Oil, Hydraulic	8:6	98-4694	2	Spring-Compression
4	100-8814	1	Loader ASM	8:7	98-4871	1	Bushing-Tension
4:2	32144-70	2	Screw-HH	9	32148-7	4	Nut-Insert
4:3	98-4871	7	Bushing-Tension	10	3234-29	4	Screw-HHF
4:4	93-9367	4	Decal-Warning	11	98-4845	2	Grip-Cushion
*4:5	100-1701	1	Decal-Danger	12	3229-34	4	Bolt-CARR
4:6	98-4862	1	Decal-Caution	13	99-1427-03	1	Guard-Muffler
4:7	100-8822	2	Decal-No Riders	14	3296-2	4	Nut-Lock
5	302-5	4	Fitting-Lube	15	99-3120-03	1	Hood ASM
6	99-5105	4	Screw-Shoulder	16	99-3118-03	1	Cover ASM
7	99-1414	4	Pin-Pivot	17	74-5950	2	Latch-Swell
8	98-4690	1	Quick Attach ASM	18	99-3058	4	Washer
8:1	302-5	2	Fitting-Lube				

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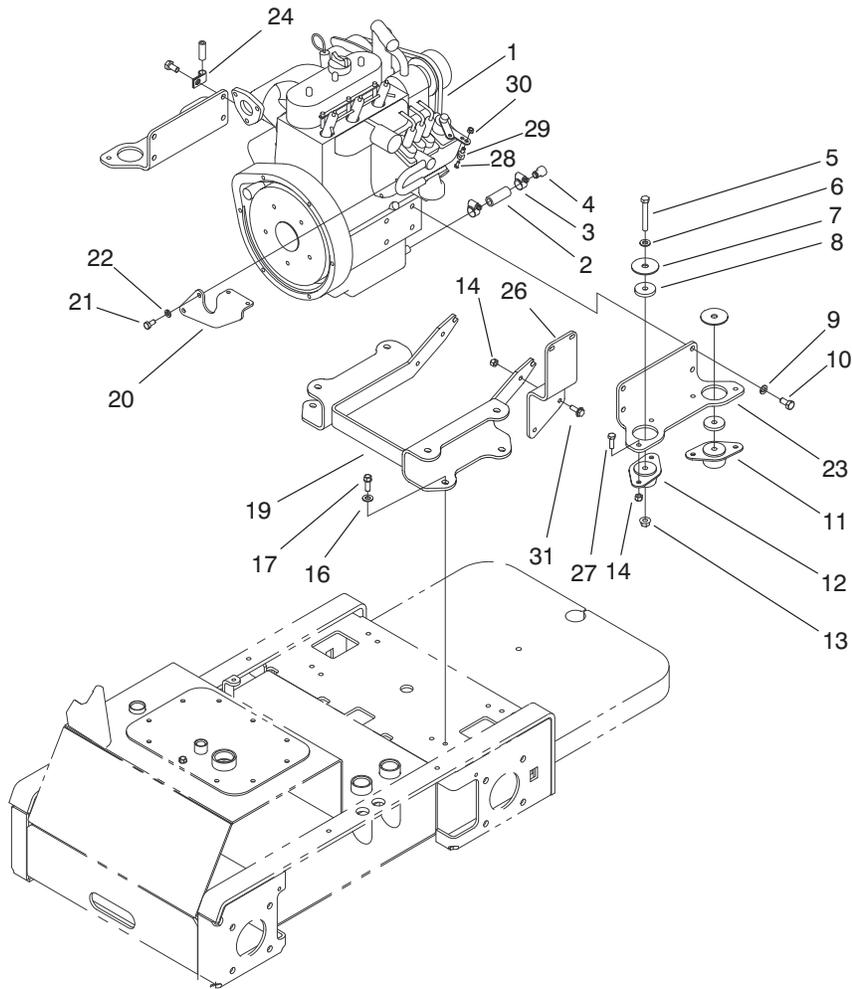
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## Pump and Fan Mount Assembly

Ref. No.	Part No.	Qty.	Description
1	99-1431	1	Adapter-Flywheel
2	99-5131	9	Bolt
3	99-1430	2	Spacer-Coupler
4	44-2230	2	Coupling-Rubber
5	323-10	1	Screw-HH
6	63-8140	1	Pulley-Idler
7	92-8876	1	V-Belt
8	3241-5	2	Screw-Set
9	3296-29	2	Nut-Lock
10	323-8	1	Screw-HH
11	100-1727-01	1	Mount-Tensioner
12	99-5121	4	Spacer
13	3256-24	2	Washer-Flat
14	3296-39	3	Nut-Lock Ni
16	354-78	2	Connector-Hose
16:1	237-146	1	O-Ring
17	2412-111	4	Clamp
18	99-3046	2	Hose-Suction, Formed
19	99-3017	2	Fitting
19:1	237-81	1	O-Ring
20	66-9300	2	Screw-Flange
21	98-4702	1	Pump - Gear, Tandem
21:1	98-4700	1	Key-Square
*21:2	99-1353	1	Kit-Seal, Pump
22	321-3	4	Screw-HH

Ref. No.	Part No.	Qty.	Description
23	3253-3	4	Washer-Lock/Sp
24	99-5119	1	Fan
25	99-1439	1	Adapter-Fan
26	99-1449	1	Pump Mount ASM
26:2	98-0068	1	Shaft-Fan
*26:3	38-7820	2	Bearing-Ball
27	100-1715	2	Key-Square
28	3231-5	1	Screw-CARR
29	99-5111	2	Pulley-Keyed
30	33096-00	2	Washer-Flat
31	3296-19	2	Nut-Lock Ni
32	71-4411	4	Spacer
33	322-7	2	Screw-HH
34	99-1442	1	Muffler-Kubota
35	3217-6	3	Nut-Hex
36	3253-4	13	Washer-Lock/Sp
37	100-2238	1	Gasket-Muffler
38	322-9	3	Screw-HH
39	99-5132	1	Bolt
40	99-5133	2	Bolt

\* Not illustrated

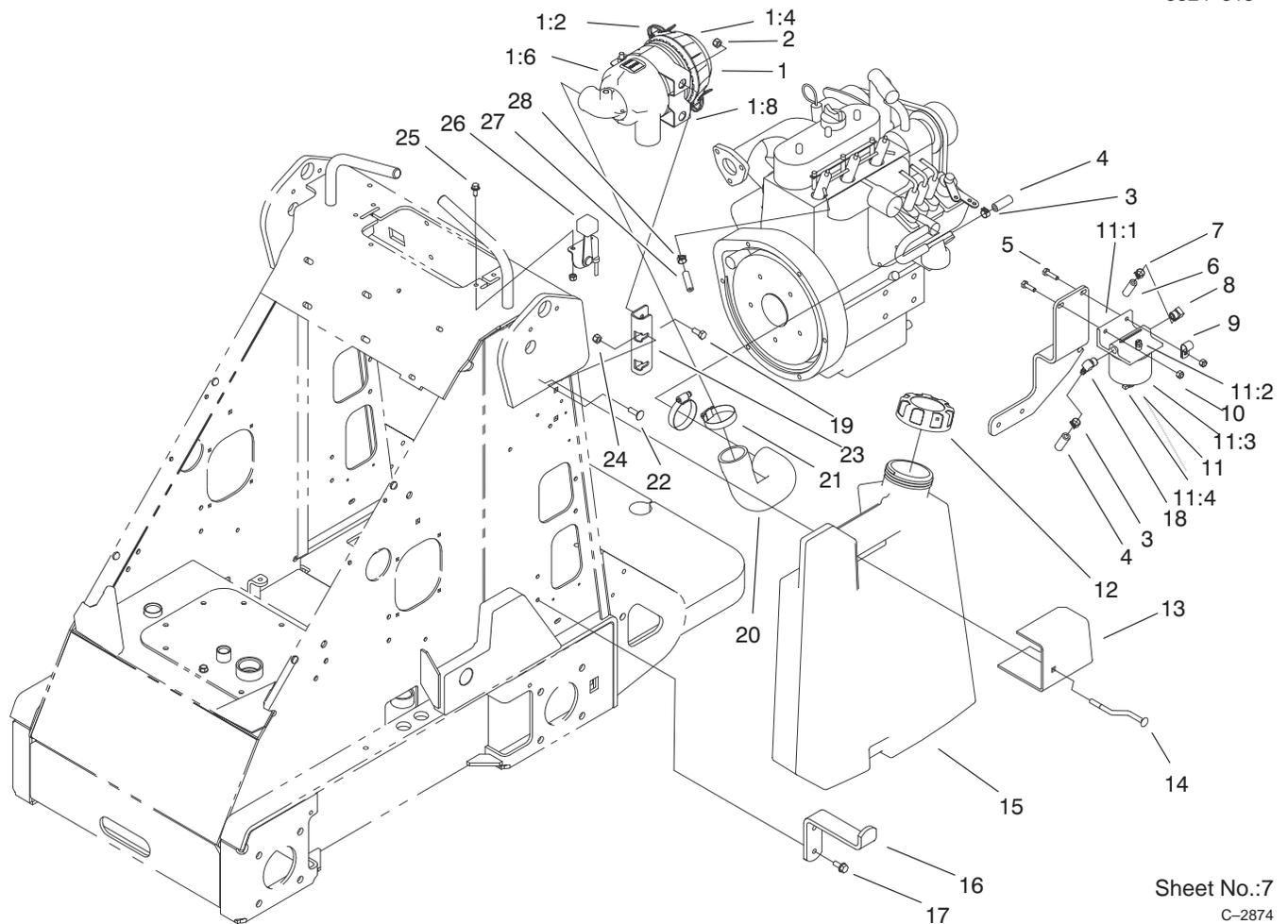


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## Engine Assembly

Ref. No.	Part No.	Qty.	Description
1	100-2200	1	Engine-Kubota
2	56-2230	1	Hose-Gas
3	2412-36	2	Clamp-Hose
4	99-1445	1	Plug-Oil, Diesel
5	323-13	4	Screw-HH
6	3256-24	4	Washer-Flat
7	87-5100	4	Washer - Snubbing
8	98-4596	4	Washer-Mount, Engine
9	42-9600	6	Lockwasher-Spring, Mid
10	99-5130	8	Bolt
11	83-1030	2	Mount-Engine
12	93-5265	2	Mount-Engine
13	32128-29	4	Locknut-Flange
14	3296-29	6	Nut-Lock
16	3256-80	4	Washer-Flat
17	95-1726	4	Screw-Taptite w/Patch
19	98-0066-01	1	Bar-Brace, Mount
20	99-5007-01	1	Mount-Solenoid
21	99-5132	2	Bolt
22	3253-4	2	Washer-Lock/Sp
23	98-0055-01	2	Mount-Engine
24	2412-138	1	Clamp-R
26	98-0059-01	1	Support-Cover

Ref. No.	Part No.	Qty.	Description
27	322-5	8	Screw-HH
28	25-8640	1	Screw-Machine, HH
29	93-0021	1	Swivel-Cable, Throttle
30	3296-13	1	Nut-Lock Ni
31	3234-29	2	Screw-HHF



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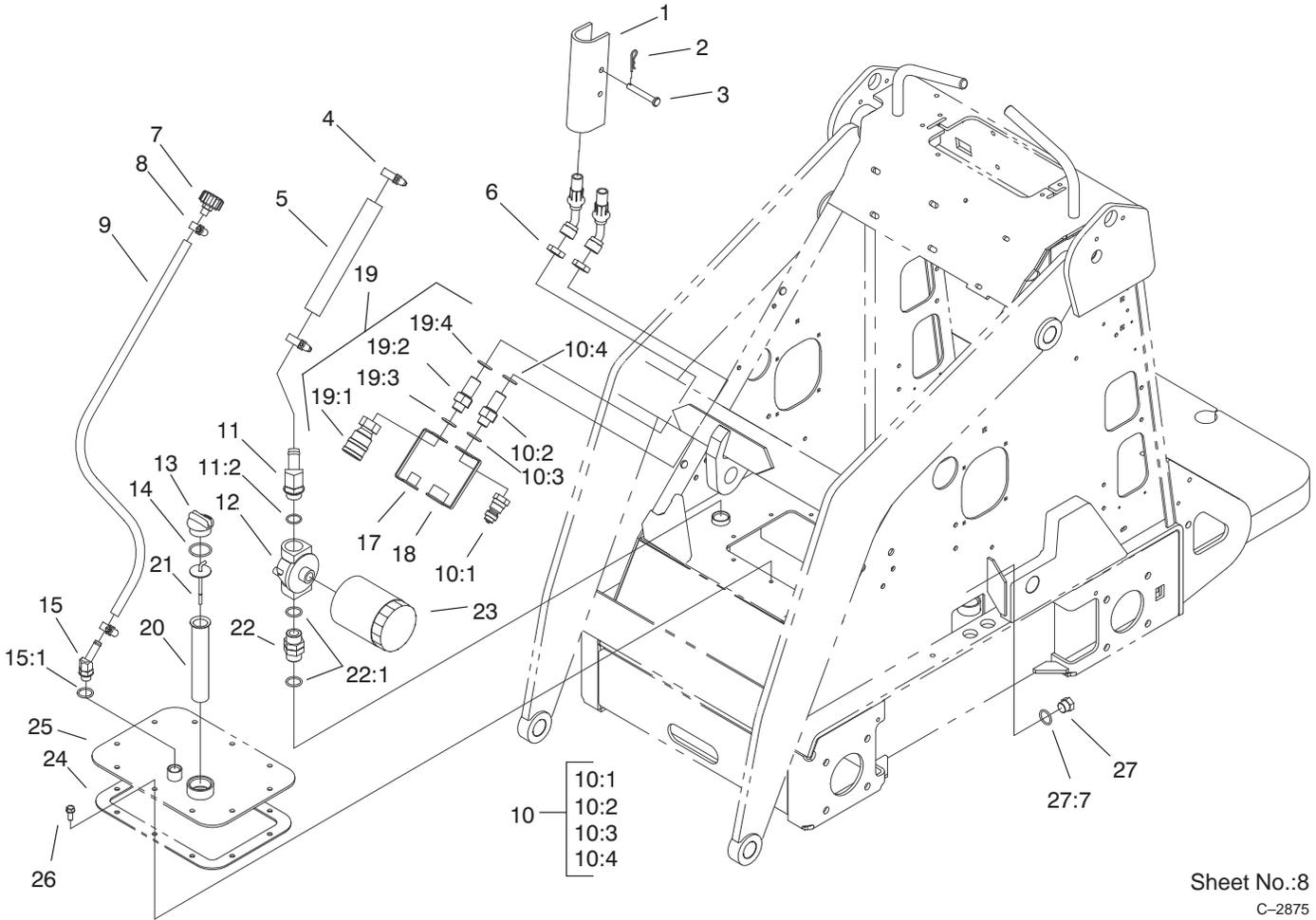
C-2874

## Fuel Tank and Air Filter Assembly

Ref. No.	Part No.	Qty.	Description
1	99-3160	1	Air Cleaner ASM
*1:1	99-3173	1	Element-Filter, Air
1:2	99-3174	2	Clip-Cleaner, Air
*1:3	99-3175	1	Valve-Ejector, Dust
1:4	99-3176	1	Cover-Cleaner, Air
*1:5	99-3183	1	Tube ASM
1:6	99-3184	1	Housing-Cleaner, Air
*1:7	99-3198	1	Filter-Safety
1:8	99-3197	1	Filter Mount Bracket ASM
2	3296-29	3	Nut-Lock
3	92-2379	2	Clamp-Hose
4	63-7627	1	Hose-Fuel
5	321-6	2	Screw-HH
6	99-1438	1	Hose-Fuel
7	2412-98	2	Clamp
8	304-96	1	Elbow
9	2412-73	1	Clamp-R
10	3296-42	4	Nut-Lock
11	63-7650	1	Separator-Filter/Water
11:1	63-8280	1	Head ASM
11:2	63-8290	1	Vent-Air
11:3	63-8300	1	Element-Spin-On
11:4	63-8310	1	Valve-Drain
12	98-2710	1	Diesel Fuel Cap ASM
13	99-1444-03	1	Plate-Mount, Left

Ref. No.	Part No.	Qty.	Description
14	98-4657	1	Bolt-Mount
15	99-1425	1	Fuel Tank ASM
*15:3	100-1596	1	Fitting-90°
*15:4	104048	1	Valve-Fuel
16	98-4656-03	1	Mount-Bottom, Tank
17	32144-70	2	Screw-HH
18	353-781	1	Fitting
19	322-3	2	Screw-HH
20	99-5041	1	Hose-Cleaner, Air
21	2412-92	2	Clamp-Hose
22	3230-2	2	Screw-CARR
23	99-3080-03	1	Mount-Cleaner, Air
24	32128-20	2	Nut-HF
25	3234-33	2	Screw-HHF
26	99-1422	1	Control-Throttle
27	76-4420	1	Hose-Line, Fuel
28	2412-146	2	Clamp-Hose

\* Not illustrated

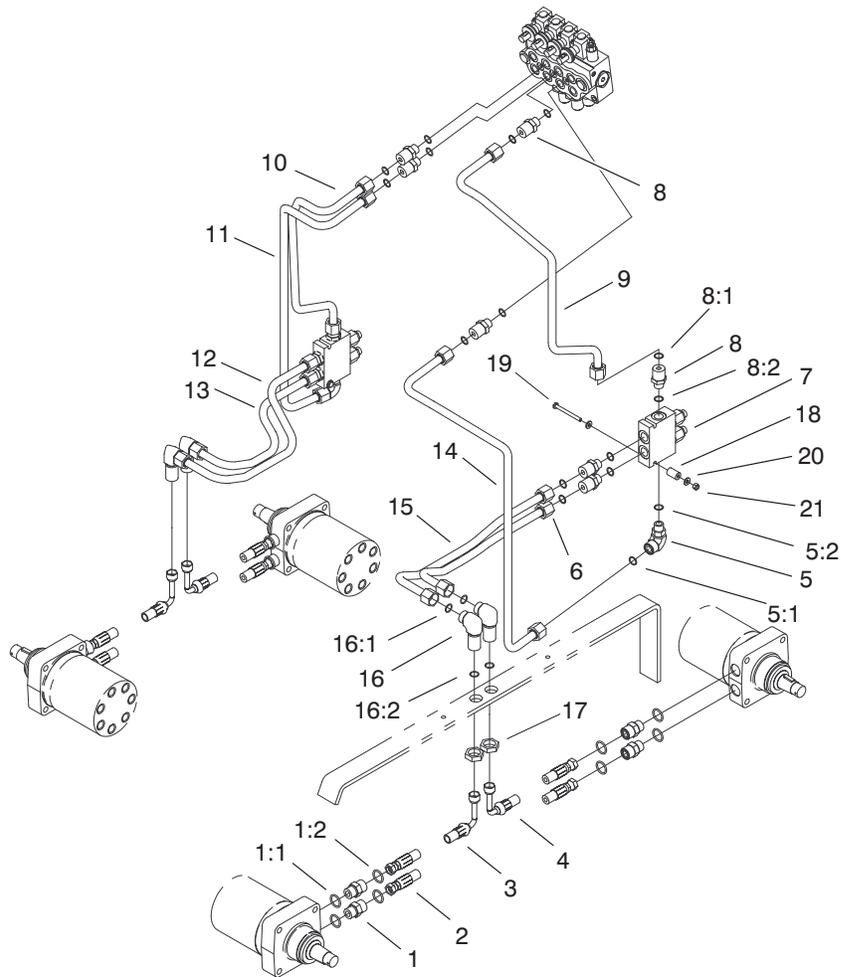


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## Hydraulic Tank Assembly

Ref. No.	Part No.	Qty.	Description
1	98-4675-01	2	Lock-Cylinder
2	3290-467	2	Pin-Cotter, Hair
3	283-52	2	Pin-Clevis
4	2412-129	2	Clamp-Hose
5	98-2713	1	Hose-Suction, Hyd
6	340-74	2	Nut-Bulkhead
7	68-6150	1	Breather-Air
8	2412-36	2	Clamp-Hose
9	100-1748	1	Hose-Vent
10	100-4748	1	Nipple ASM-Bulkhead
10:1	100-4235	1	Nipple-Flush Face
10:2	100-4236	1	Fitting-Adapter, Bulkhead
10:3	237-65	1	O-Ring
10:4	237-80	1	O-Ring
11	99-3016	1	Fitting-45°
11:2	237-81	1	O-Ring
12	92-5821	1	Filter Head ASM
13	93-7498	1	Plug-Plastic
14	237-123	1	O-Ring
15	354-126	1	Fitting-Hydraulic, 45
15:1	237-79	1	O-Ring
17	100-8815	1	Cap-Dust, Nipple
18	100-8816	1	Cap-Dust, Coupler
19	100-4747	1	Coupler ASM-Bulkhead

Ref. No.	Part No.	Qty.	Description
19:1	100-4234	1	Coupler-Flush Face
19:2	100-4236	1	Fitting-Adapter, Bulkhead
19:3	237-65	1	O-Ring
19:4	237-80	1	O-Ring
20	61-2790	1	Filter-Screen
21	100-2097	1	Dipstick
22	98-9906	1	Fitting-Thread, Straight
22:1	237-81	2	O-Ring
23	54-0110	1	Filter-Oil, Transmission
24	98-9927	1	Gasket-Cover
25	100-1713-01	1	Cover ASM
26	98-9940	10	Screw
27	353-988	1	Plug-Hex, Hollow
27:7	237-79	1	O-Ring



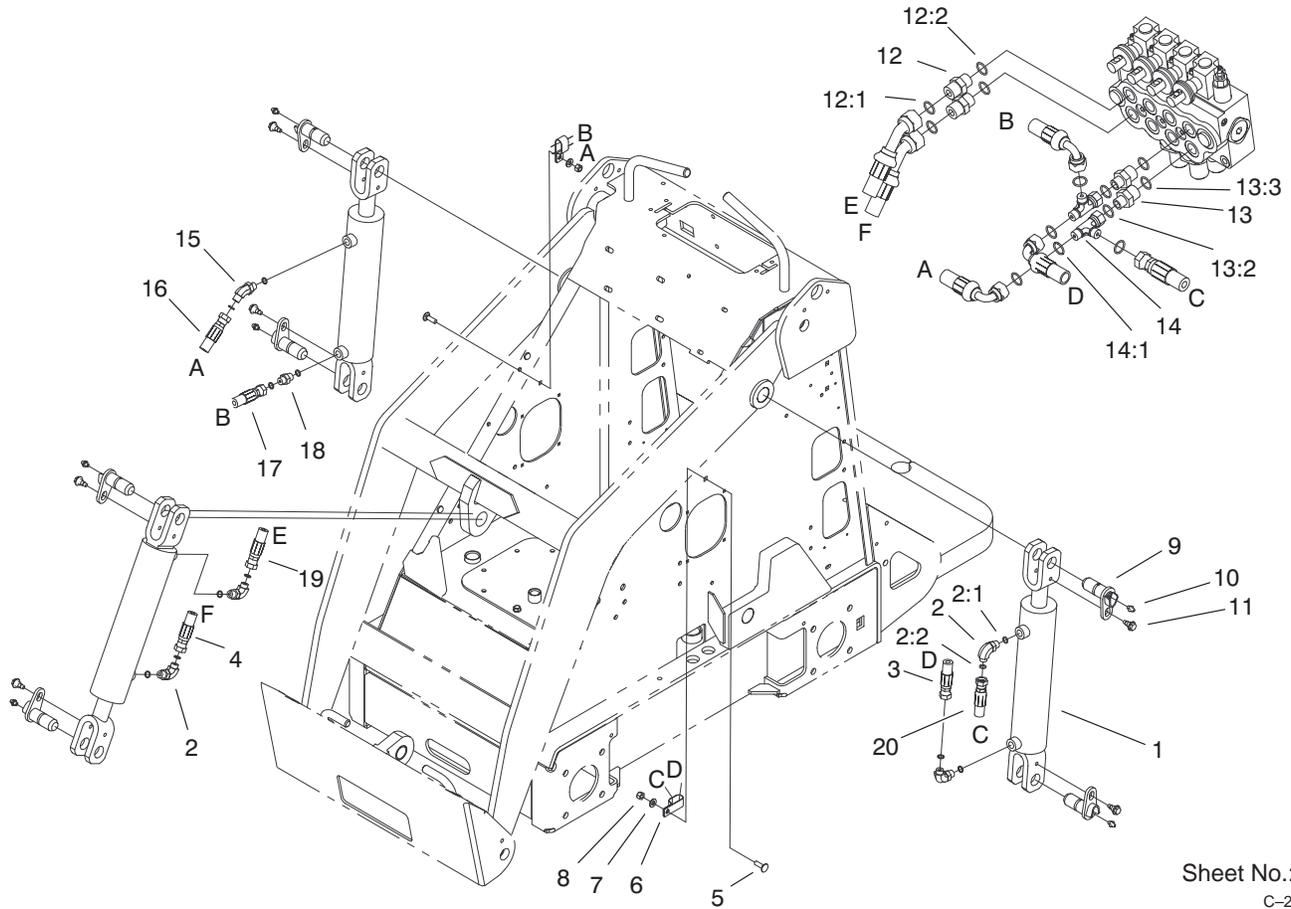
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## Hydraulic Motor Assembly

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	340-7	8	Adapter	17	340-74	4	Locknut-Bulkhead
1:1	237-65	1	O-Ring	18	99-3057	2	Spacer-Valve
1:2	237-80	1	O-Ring	19	321-23	2	Screw-HH
2	99-3012	2	Hose-Motor, Hyd	20	3256-22	4	Washer-Flat
3	99-3010	2	Hose-Motor, Front Hyd	21	3296-42	2	Nut-Lock
4	99-3011	2	Hose-Motor, Rear Hyd				
5	340-153	2	Fitting-Hyd				
5:1	237-79	1	O-Ring				
5:2	237-151	1	O-Ring				
6	99-3022	1	Line-Hyd, Left A1				
7	98-9050	2	Valve-Counterbalance				
*7:1	98-2712	1	Kit-Seal, Valve				
8	340-155	10	Fitting - Hyd				
8:1	237-79	1	O-Ring				
8:2	237-151	1	O-Ring				
9	99-3027	1	Line-Hyd, Left B				
10	99-3024	1	Line-Hyd, Right B				
11	99-3029	1	Line-Hyd, Left A1				
12	99-3025	1	Line-Hyd, Right B1				
13	99-3028	1	Line-Hyd, Right A1				
14	99-3023	1	Line-Hyd, Left A				
15	99-3026	1	Line-Hyd, Left B1				
16	340-72	4	Elbow-Bulkhead Union, 90°				
16:1	237-65	2	O-Ring				

\* Not illustrated



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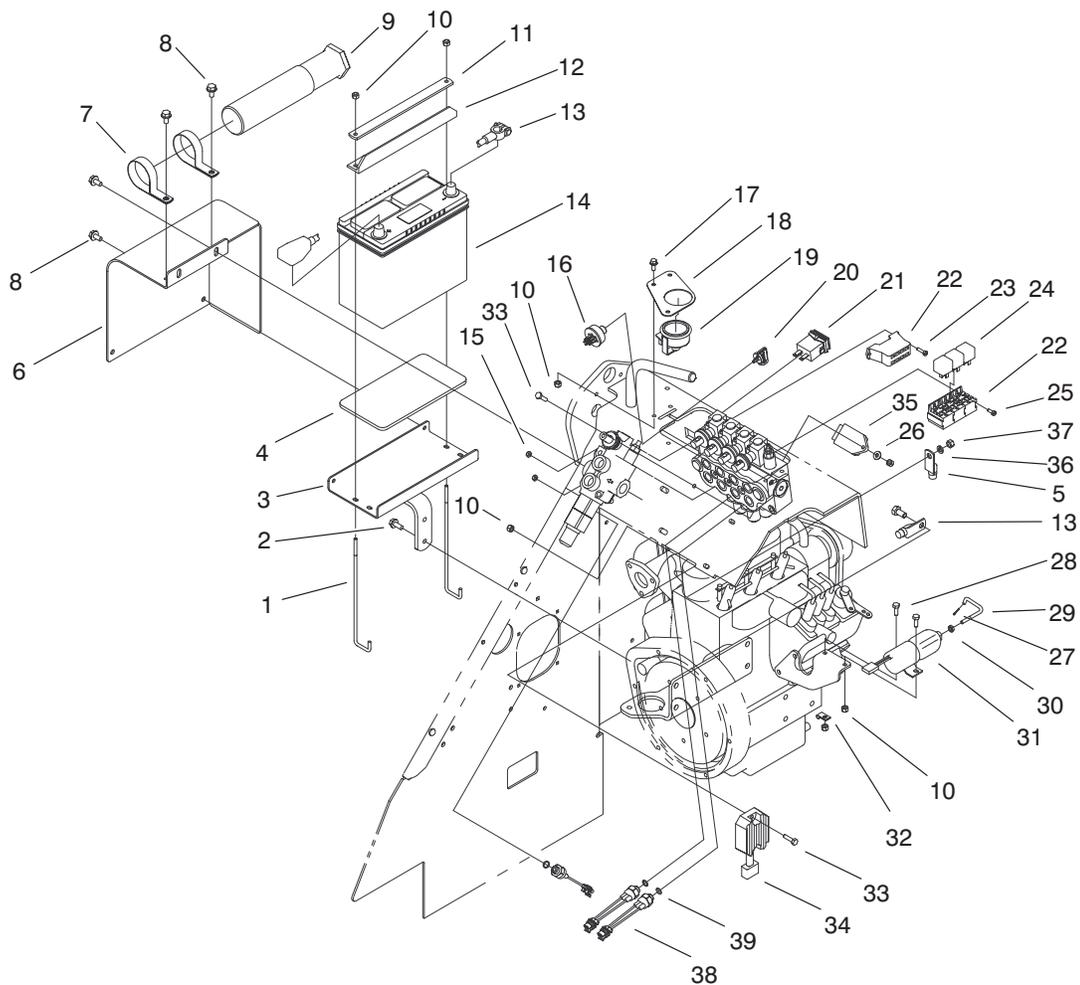
## Hydraulic Cylinder Assembly

Ref. No.	Part No.	Qty.	Description
1	100-4163	3	Cylinder-Hydraulic
2		4	Adapter
2:1	237-42	1	O-Ring
2:2	237-35	1	O-Ring
3	98-4748	1	Hose-Hyd, Pressure Lo
4	98-4726	1	Hose-Hyd, Center Long
5	3230-2	2	Screw-CARR
6	2412-137	2	Clamp-Tube
7	3256-23	2	Washer-Flat
8	3296-29	2	Nut-Lock
9	99-1414	6	Pin-Pivot
10	302-5	6	Fitting-Lube
11	99-5105	6	Screw-Shoulder
12	340-3	2	Adapter
12:1	237-22	1	O-Ring
12:2	237-79	1	O-Ring
13	340-133	2	Adapter
13:2	237-78	1	O-Ring
13:3	237-35	1	O-Ring
14	340-151	2	Fitting
14:1	237-75	3	O-Ring
15	340-137	1	Fitting
16	98-4725	1	Hose-Loader, Hyd
17	100-1731	1	Hose-Hyd, Right

Ref. No.	Part No.	Qty.	Description
18	340-1	1	Adapter
19	98-4727	1	Hose-Hyd, Center Straight
20	99-3109	1	Hose-Loader, Hyd.







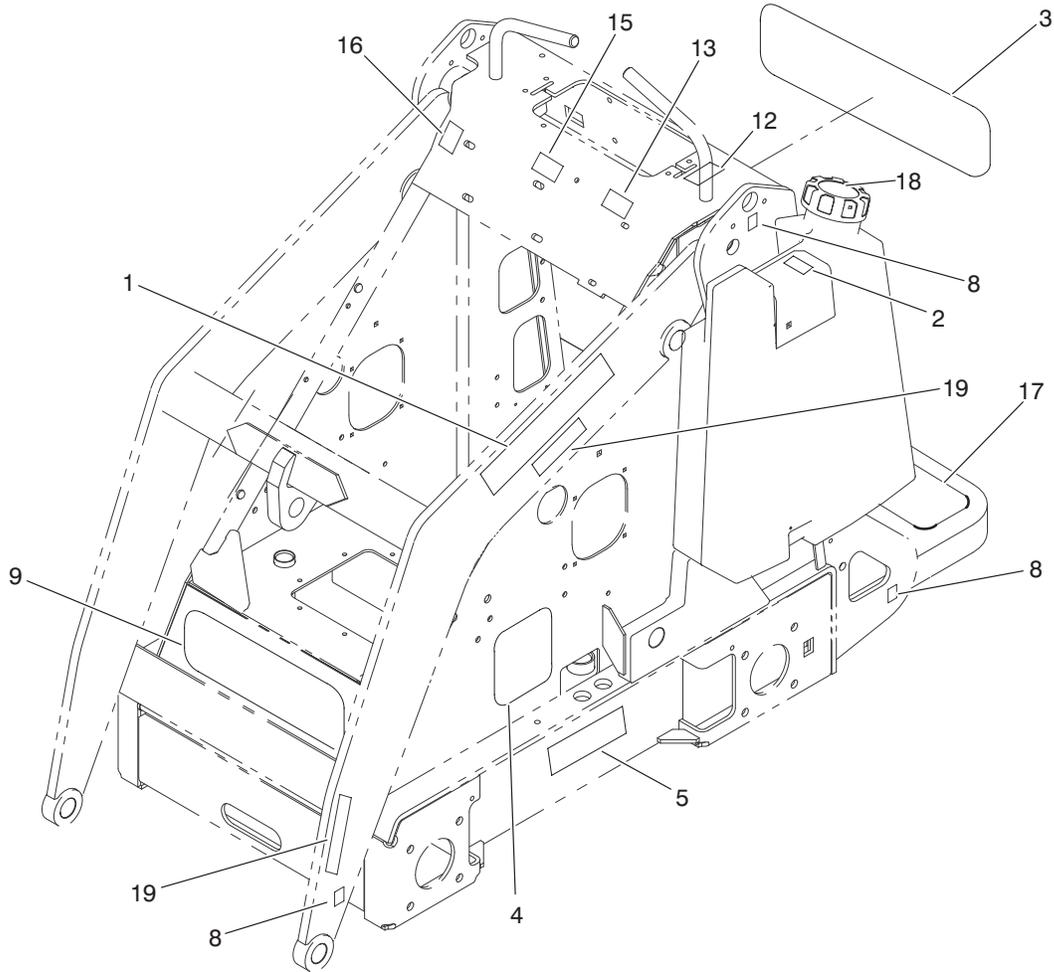
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## Electrical Components Assembly

Ref. No.	Part No.	Qty.	Description
1	99-5035	2	Retainer-Battery
2	32144-70	2	Screw-HH
3	99-5034-03	1	Mount-Battery
4	99-5030	1	Pad-Battery
5	100-1708	1	Cable-Battery, Positive
6	100-1721-03	1	Cover-Battery
7	2412-133	2	R-Clamp
8	32144-14	6	Screw-HWH
9	74-0720	1	Tube-Manual
10	3296-42	10	Nut-Lock Ni
11	99-5008-01	1	Retainer-Battery
12	99-5039	1	Retainer-Battery
13	100-1709	1	Cable-Battery, Negative
14	99-1441	1	Battery
15	3296-12	4	Nut-Lock
16	111216	1	Ignition Switch ASM
17	3234-33	3	Screw-HHF
18	100-1707-01	1	Mount-Lamp, Warning
19	100-1732	1	Cluster-Lamp
20	63-8360	2	Key-Ignition w/Shield
21	94-4208	1	Hourmeter
22	99-5134	1	Harness-Wire, Dingo Kubota
23	32105-13	2	Screw-Shh

Ref. No.	Part No.	Qty.	Description
24	98-7249	3	Relay-Spdt
25	32105-8	2	Screw
26	3256-22	1	Washer-Flat
27	3272-1	1	Pin-Cotter
28	321-4	2	Screw-HH
29	99-1423	1	Rod-Linkage, Threaded
30	3220-1	1	Nut-Jam
31	99-5006	1	Solenoid-Kubota
32	2412-31	1	Clamp-Boden
33	321-6	3	Screw-HH
34	100-2057	1	Regulator ASM
35	98-7611	1	Controller-Glow, F/W
36	100-2215	1	Washer-Spring
37	100-2171	1	Nut-Hexagon
38	72-4310	3	Switch
39	237-42	3	O-Ring



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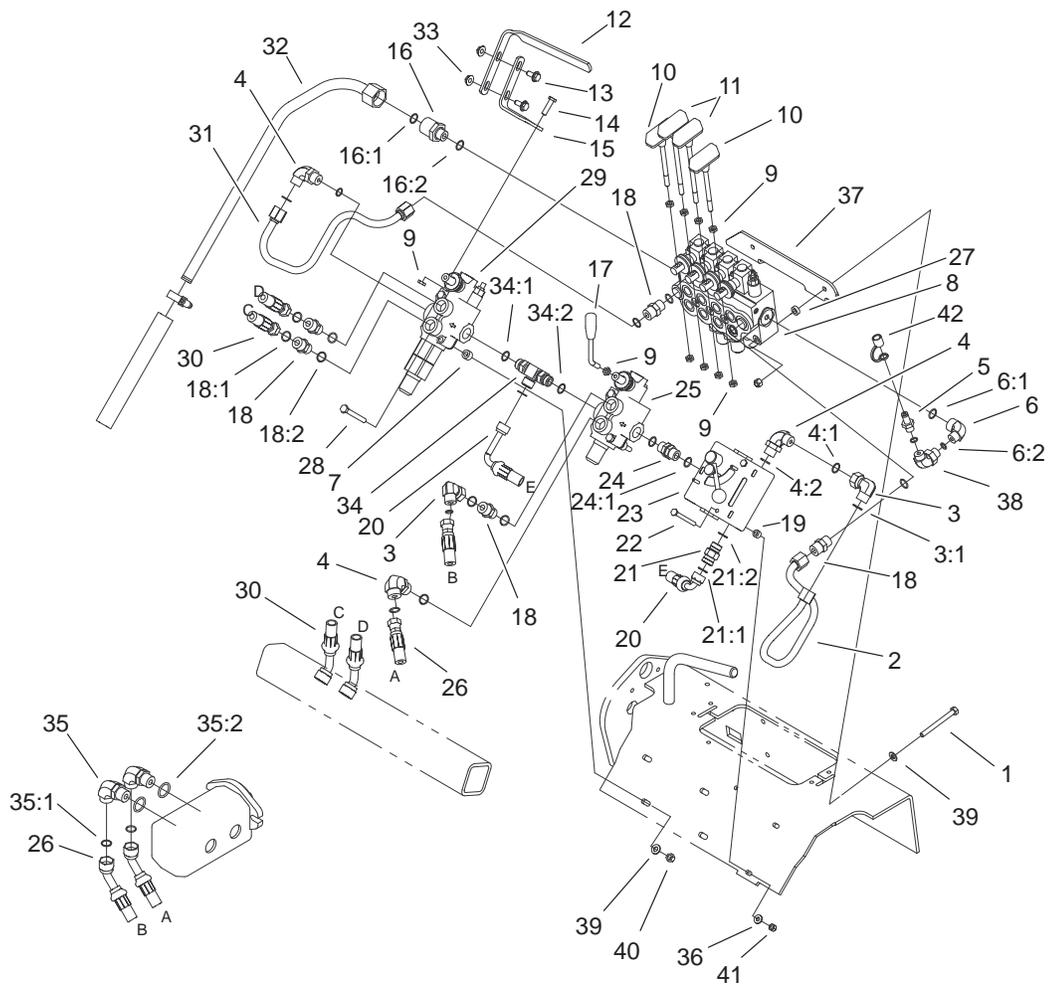
### Decal Assembly

Ref. No.	Part No.	Qty.	Description
1	99-3167	2	Decal-Dingo 320d
2	93-6680	1	Decal - Diesel Only
3	99-3157	1	Decal-Control Panel
4	100-8827	2	Decal-Side
5	99-3068	2	Decal-4-Paw
8	93-9084	6	Decal - Lift Point
9	100-8828	2	Decal - Front
12	98-8219	1	Decal-Throttle
13	98-8220	1	Decal-Speed Limiter
14	85-4730	1	Decal-Hydraulic Oil
15	98-8235	1	Decal-Selector
16	98-4677	1	Decal-Aux. Power
17	98-9947	2	Decal-Tread, Foot
18	100-1701	1	Decal-Danger
19	100-6141	4	Decal-Danger, Pinch

Ref. No.	Part No.	Qty.	Description







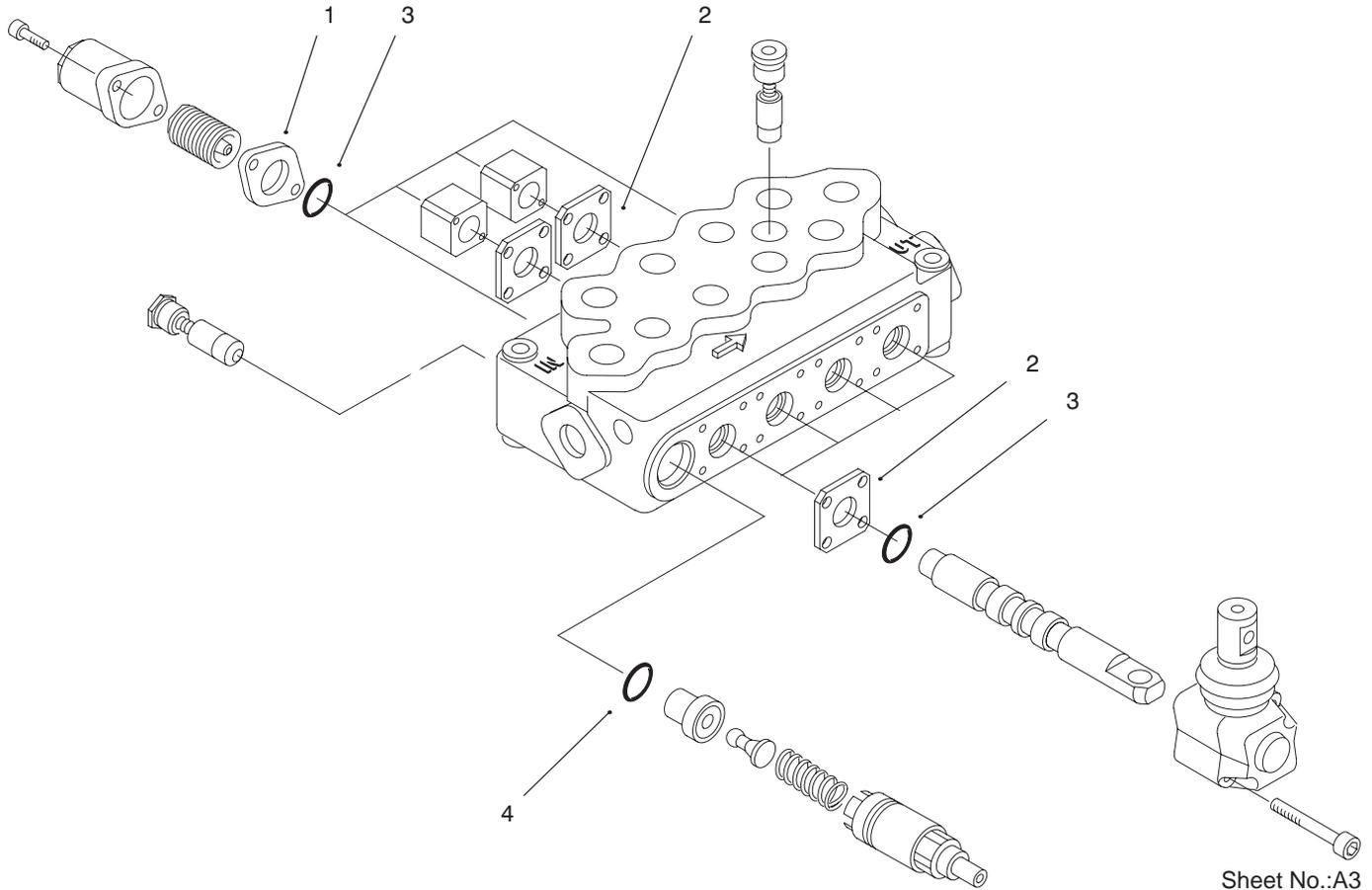
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## Hydraulic Valve Assembly

Ref. No.	Part No.	Qty.	Description
1	322-20	3	Screw-HH
2	99-3030	1	Line-Hyd, Cf
3	94-6031	2	Fitting-Hyd
3:1	237-30	1	O-Ring
4	340-98	3	Fitting-90°
4:1	237-30	1	O-Ring
4:2	237-79	1	O-Ring
5	86-5480	1	Nipple-Test
6	340-18	1	Fitting
6:1	237-79	1	O-Ring
6:2	237-22	1	O-Ring
7	98-4695	5	Tube-Spacer
8	99-3070	1	Valve-Hydraulic, 4-Spool
9	42-9580	9	Nut-Hex
10	98-4671	2	Cylinder Handle ASM
11	98-4670	2	Drive Handle ASM
12	98-9090	1	Grip-Control
13	3234-5	1	Screw-HHF
14	33104-030	1	Screw-HHF
15	99-1376	1	Mount-Control
16	98-9921	1	Fitting-Thread, Straight
16:1	237-145	1	O-Ring
16:2	237-79	1	O-Ring
17	98-4729	1	Lever-Valve
18	340-4	5	Adapter

Ref. No.	Part No.	Qty.	Description
18:1	237-30	3	O-Ring
18:2	237-79	3	O-Ring
19	98-4799	2	Tube-Spacer
20	100-2245	1	Hose ASM
21	98-4735	1	Valve-Check, Hyd
21:1	237-30	1	O-Ring
21:2	237-79	1	O-Ring
22	321-14	2	Screw-HH
23	99-3073	1	Valve-Flow, Hydraulic
24	95-3209	1	Fitting-Thread, Straight
24:1	237-79	2	O-Ring
25	99-3072	1	Valve-Select, Hyd
26	100-1730	2	Hose-Pump, Hyd
27	99-3078	2	Spacer
28	322-13	4	Screw-HH
29	99-3077	1	Valve-Aux, Hydraulic
30	100-8817	2	Hose-Aux, Hyd
31	98-4724	1	Line-Aux, Hydraulic
32	99-3021	1	Line-Tank, Hydraulic
33	32128-44	1	Nut
34	98-9079	1	Adapter - Tee, Adjustable
34:1	237-30	1	O-Ring
34:2	237-79	2	O-Ring
35	340-105	2	Fitting-Hyd., 90°
35:1	237-30	1	O-Ring





Sheet No.:A3

C-2834

## Hydraulic Valve Assembly No. 99-3070

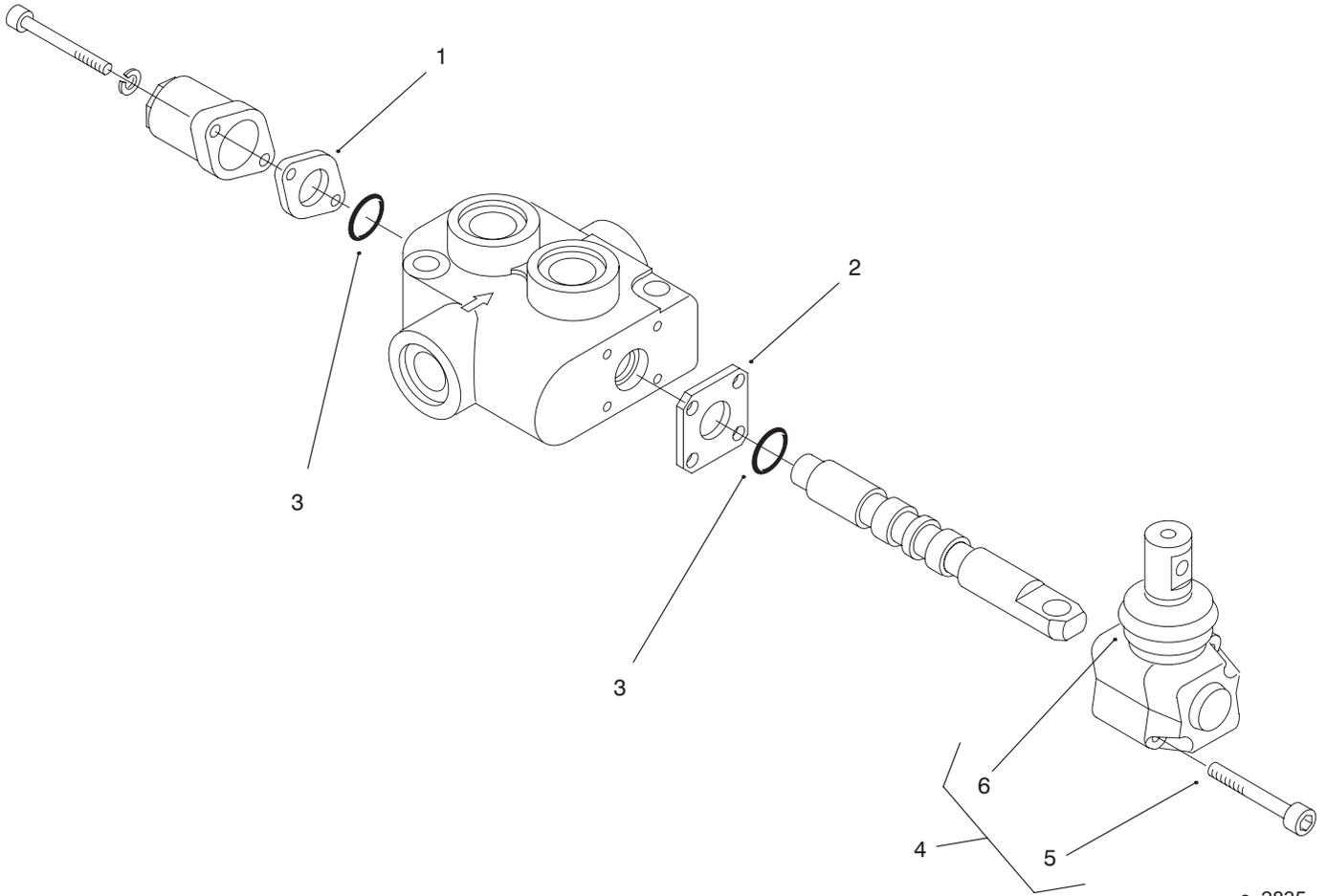
Ref. No.	Part No.	Qty.	Description
1	99-3074	4	Gasket
2	99-3075	6	Gasket
†3		8	O-Ring
†4		1	O-Ring
*	99-4390	1	Seal Kit (Incl. Ref.# 3 & 4)

Ref. No.	Part No.	Qty.	Description

\* Not Illustrated

† Not Serviced Separately





c-2835

## Hydraulic Valve Assembly No. 99-3072

Ref. No.	Part No.	Qty.	Description
1	99-3074	1	Gasket
2	99-3075	2	Gasket
†3		2	O-Ring
4	100-8807	1	Operator ASM
5	100-8806	2	Screw-Operator
6	100-8829	1	Boot-Operator
*	99-4391	1	Seal Kit (Incl. Ref.#3)

Ref. No.	Part No.	Qty.	Description

\* Not illustrated

† Not Serviced Separately

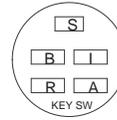


# Electrical Schematic

## KUBOTA DINGO SCHEMATIC

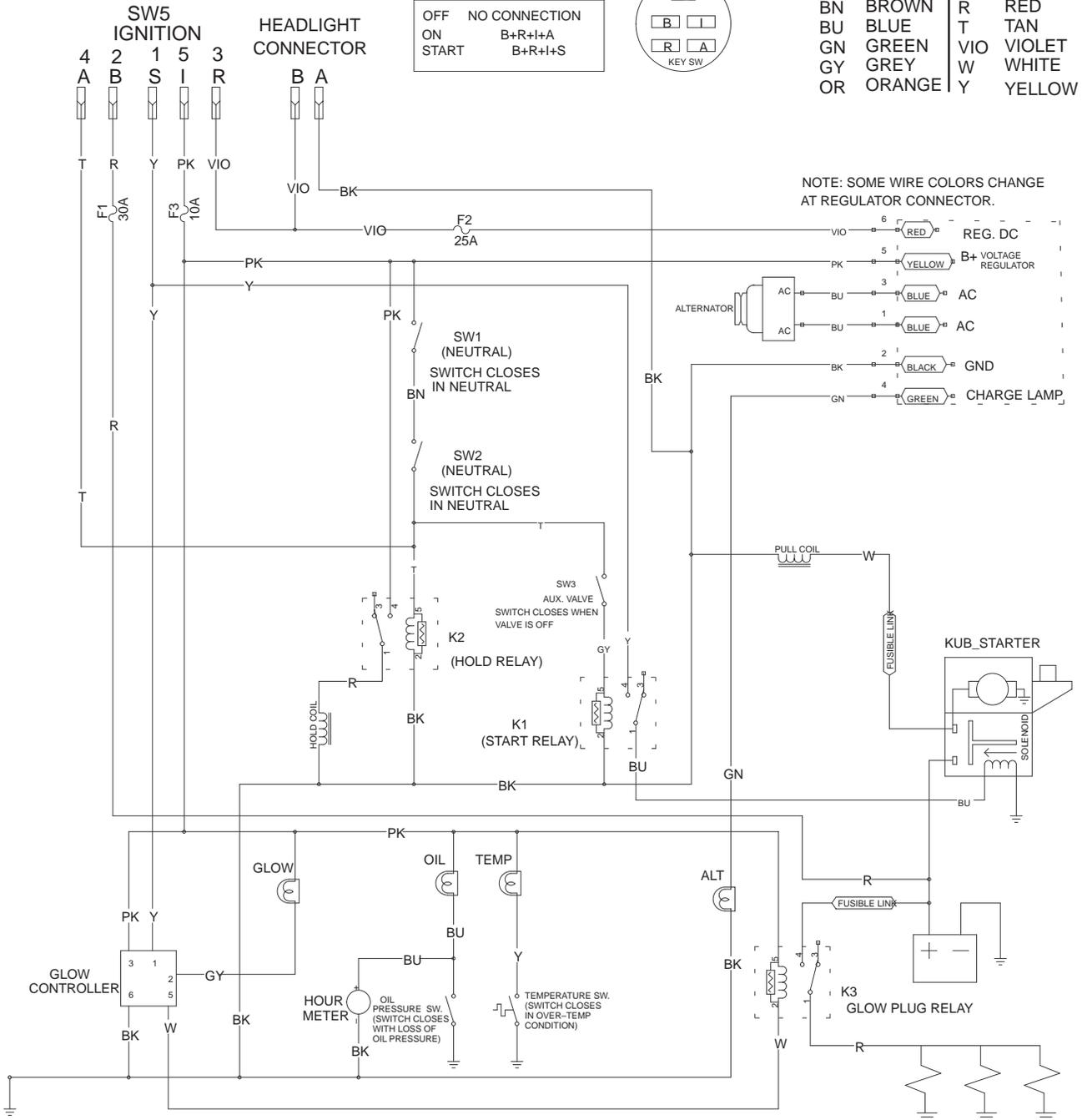
KEY SWITCH P/N 111216

OFF	NO CONNECTION
ON	B+R+I+A
START	B+R+I+S

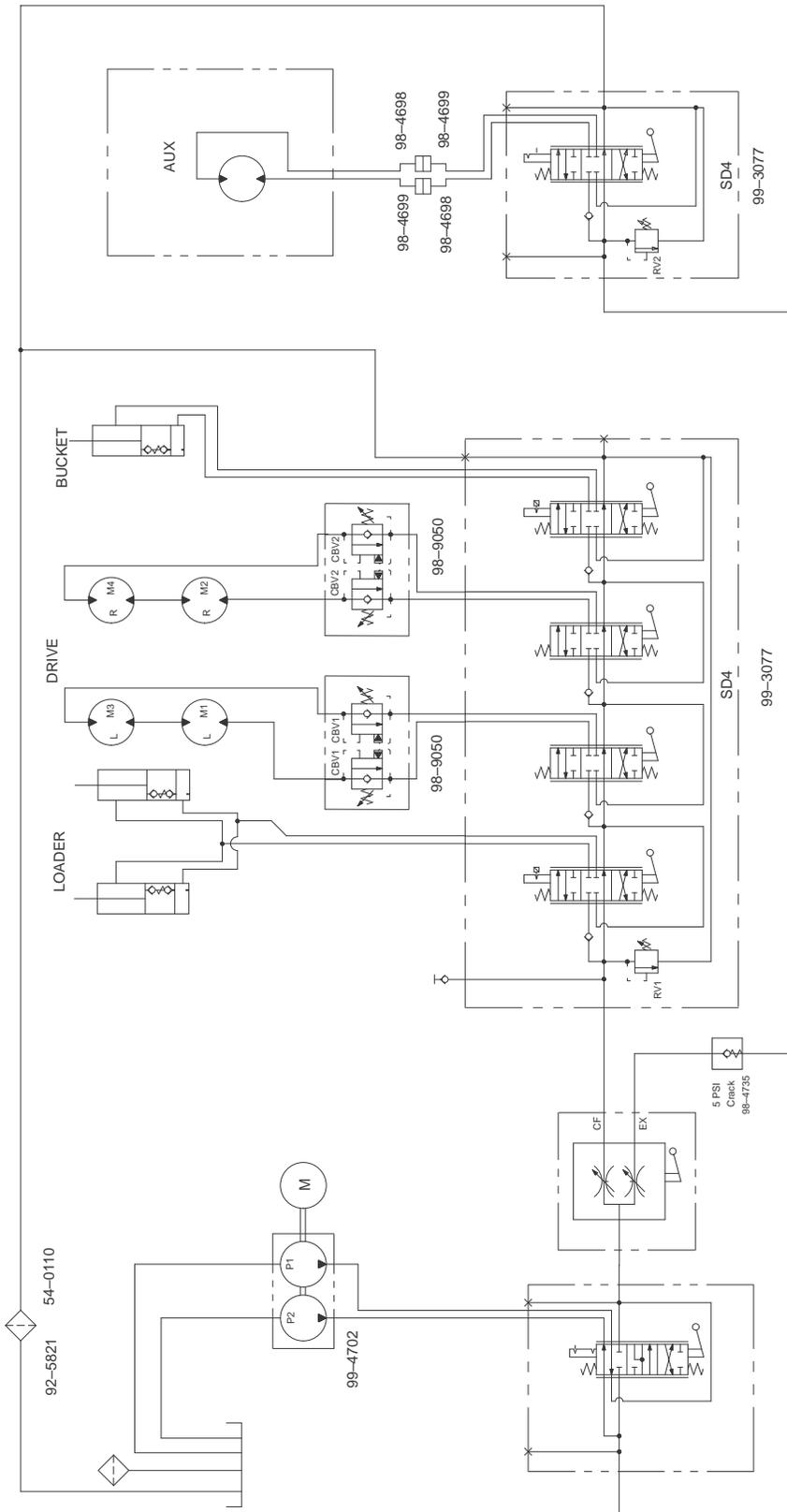


### WIRE COLOR CODES

BK	BLACK	PK	PINK
BN	BROWN	R	RED
BU	BLUE	T	TAN
GN	GREEN	VIO	VIOLET
GY	GREY	W	WHITE
OR	ORANGE	Y	YELLOW



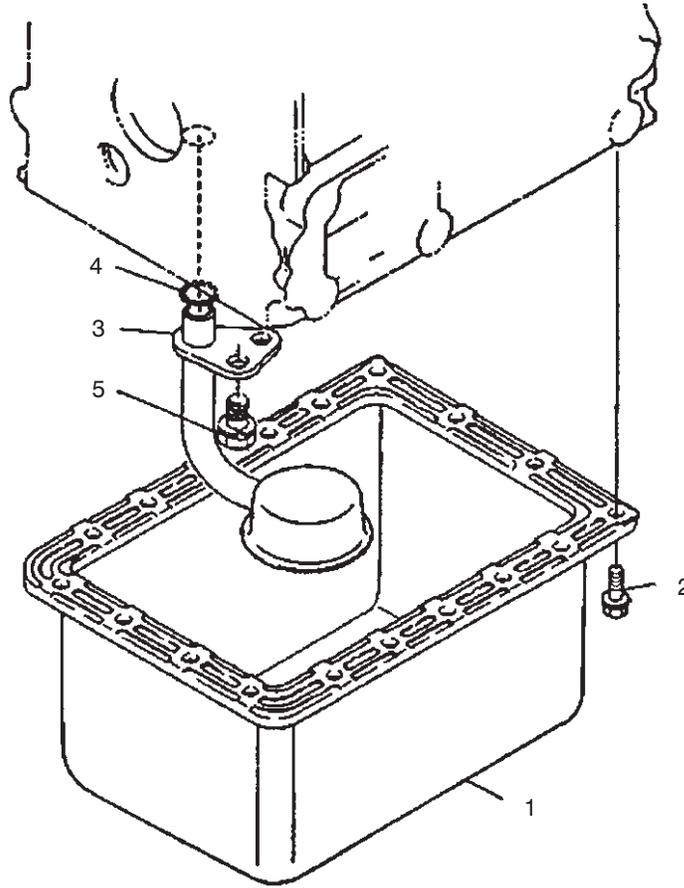
# Hydraulic Schematic



DISPLACEMENT AND PRESSURE CHART						
COMPONENT	DISPLACEMENT		PRESSURE		FLOWRATE*	
COMPONENT	CU IN/REV	CU CM/REV	PSI	BARS	GPM	LPM
P1	0.55 CU IN	9 CC			8.5	32.1
P2	0.24 CU IN	4 CC			3.7	14.0
M1, M3	29.1 CU IN	476 CC				
M2, M4	29.1 CU IN	476 CC				
RV1			3000 PSI	207 BARS		
RV2			3000 PSI	207 BARS		
CBV1			1000 PSI	69 BARS		
CBV2			1000 PSI	69 BARS		

\* FLOWRATE CALCULATED AT 3750 RPM AND 95% EFFICIENCY.





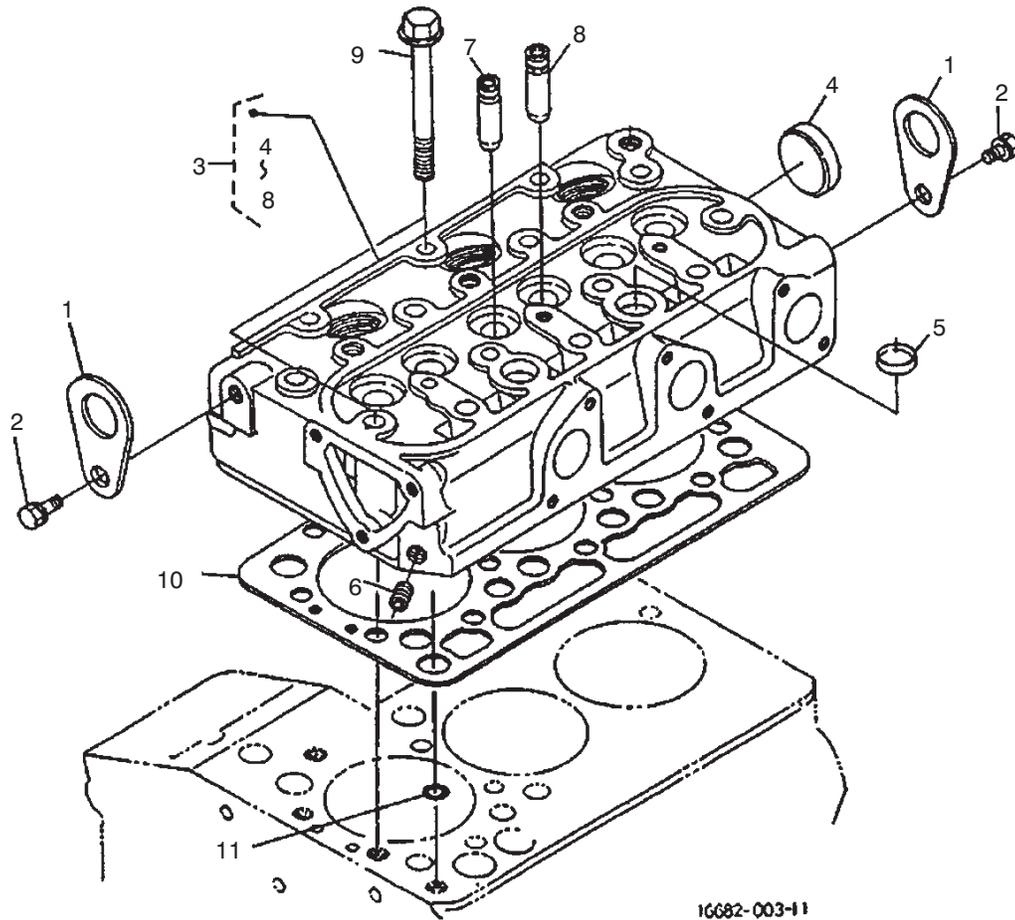
16602-002-10

Sheet No.:3

### Oil Pan Assembly

Ref. No.	Part No.	Qty.	Description
1	100-2239	1	Pan-Oil, Comp,
2	98-9350	18	Bolt
3	100-2001	1	Strainer-Oil Internal
4	100-2205	1	O-Ring
5	98-7585	1	Bolt

Ref. No.	Part No.	Qty.	Description



16682-003-11

Sheet No.:4

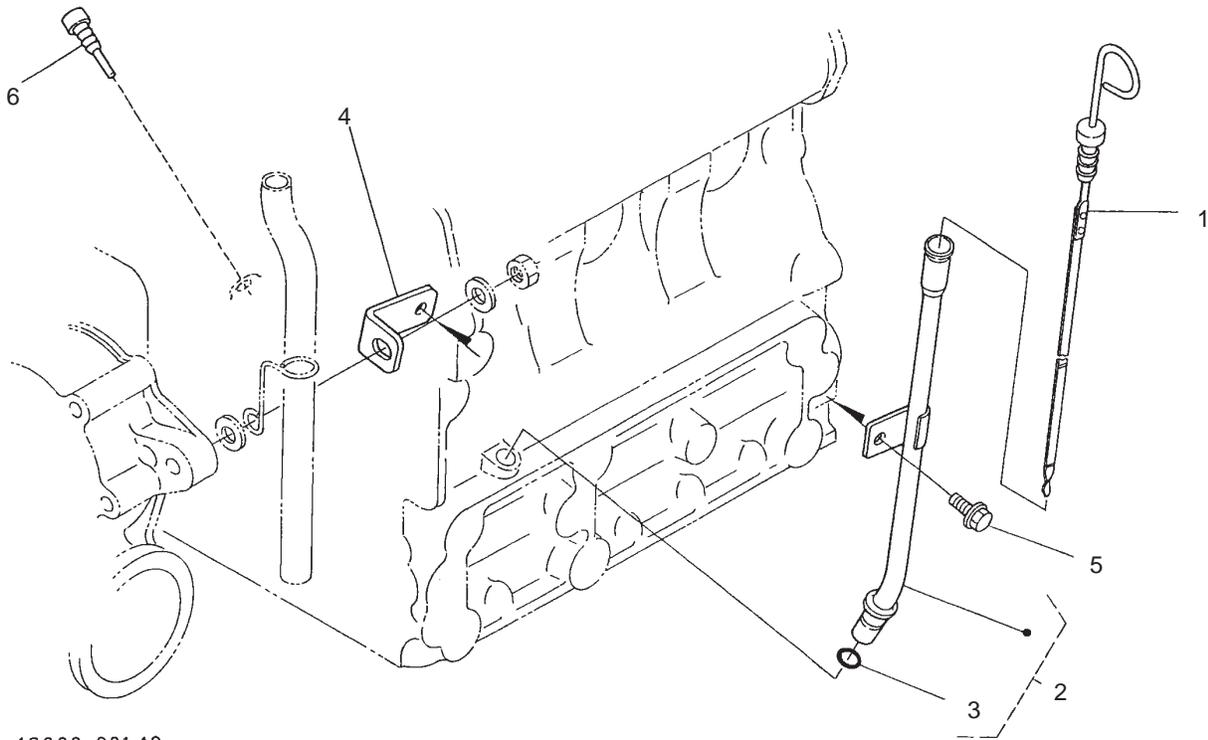
## Cylinder Head Assembly

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	98-7531	2	Engine-Hook				
2	98-7526	2	Bolt				
3	100-2246	1	Head-Cylinder, Comp.				
4	98-9395	1	Cap-Sealing				
5	98-9389	2	Cap-Sealing				
6	98-7540	1	Cap-Sealing				
7	100-1882	3	Guide-Valve, Inlet				
8	100-1883	3	Guide-Valve, Exhaust				
9	100-1820	14	Bolt-Head, Cylinder				
10	100-2043	1	Gasket-Head, Cylinder				
11	98-7509	1	O-Ring				
*12	98-2651	1	Heater-Cylinder Head (Optional)				

\*Not Illustrated







1G299-081-10

Sheet No.:7

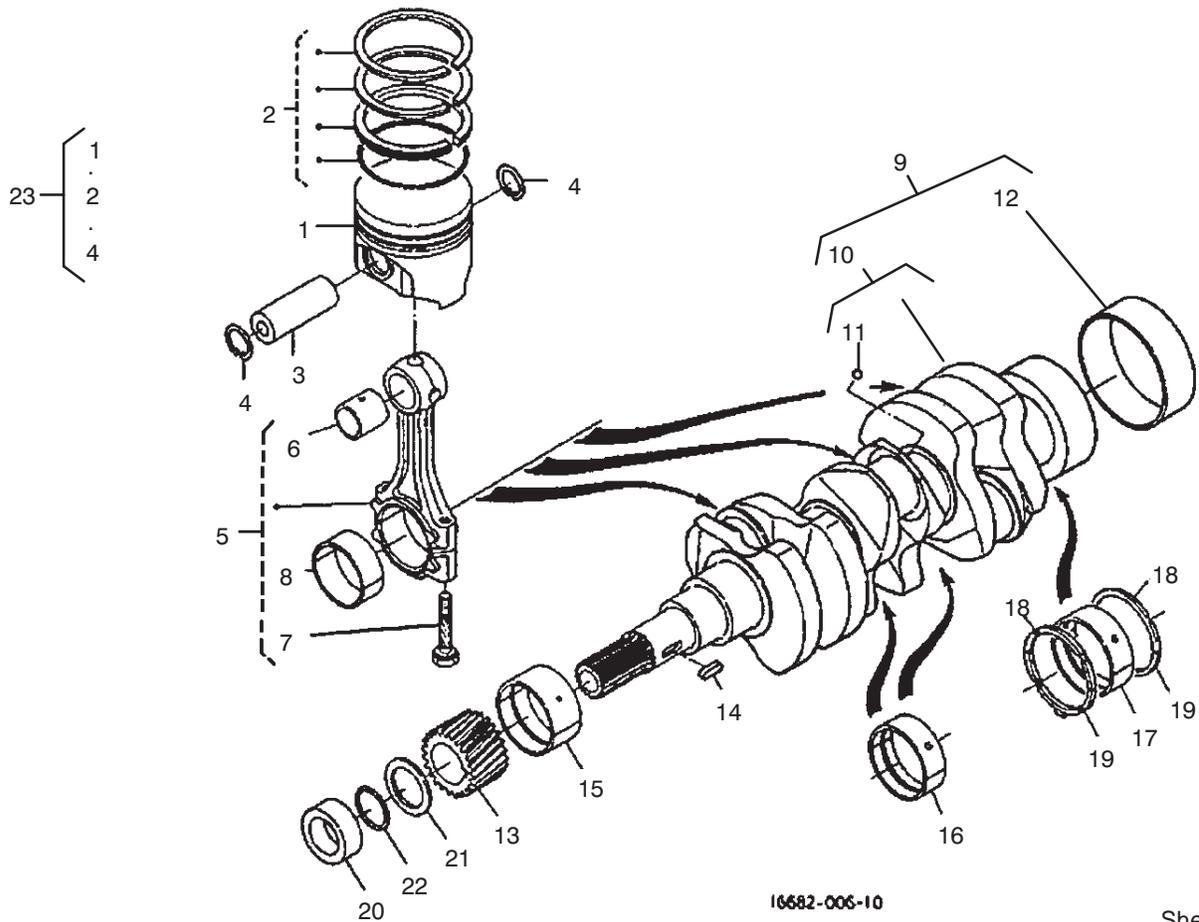
### Dipstick and Guide Assembly

Ref. No.	Part No.	Qty.	Description
1	100-2247	1	Gauge-Oil
2	100-2241	1	Oil Gauge Guide ASM
3	98-9374	1	O-Ring
4	100-2248	1	Support-Guide, Gauge
5	100-1774	1	Bolt-Flange
6	100-2229	1	Plug-Rubber

Ref. No.	Part No.	Qty.	Description







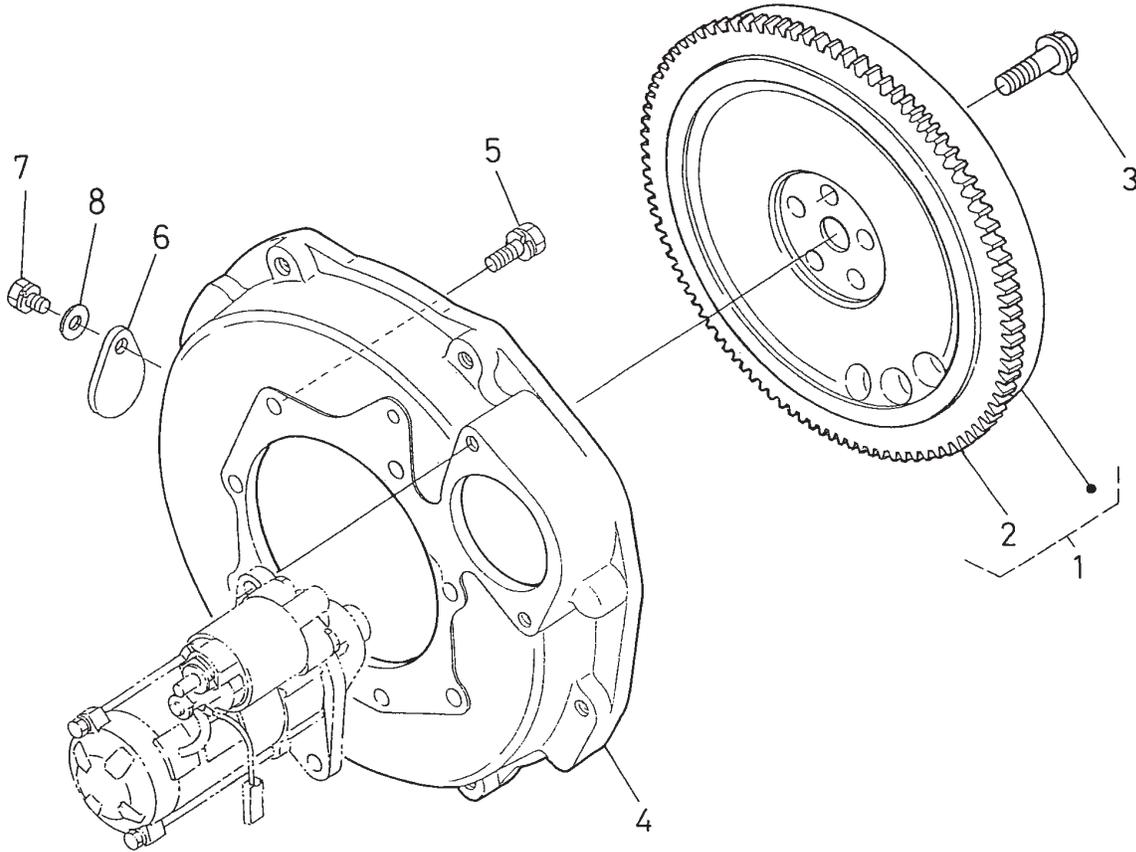
I6682-006-10

Sheet No.:10

## Piston and Crankshaft Assembly

Ref. No.	Part No.	Qty.	Description
1	100-1994	3	Piston (STD.)
1	100-1996	3	Piston (+0.25 Mm)
2	100-2158	3	Piston Ring ASM
2	100-2159	3	Piston Ring ASM
3	100-1995	3	Pin-Piston
4	100-1835	6	Cir-Cup, Piston Pin
5	100-1998	3	Connecting Rod ASM
6	100-1997	3	Bush-Pin, Piston
7	100-1999	6	Bolt-Rod, Connecting
8	100-1942	3	Crankpin-Metal (-0.2 Mm)
8	100-1943	3	Crankpin-Metal (-0.4 Mm)
8	100-2000	3	Crankpin-Metal (STD.)
9	100-2161	1	Crankshaft ASM
10	100-2160	1	Crankshaft-Comp.
11	100-1791	3	Ball
12	100-2054	1	Sleeve-Crankshaft
13	100-1891	1	Gear-Crankshaft
14	100-1752	1	Key-Feather
15	100-1944	1	Crankshaft-Metal (STD.)
15	100-1947	1	Crankshaft-Metal (-0.2 Mm)
15	100-1948	1	Crankshaft-Metal (-0.4 Mm)

Ref. No.	Part No.	Qty.	Description
16	100-1945	2	Crankshaft-Metal (-0.2 Mm Set)
16	100-1946	2	Crankshaft-Metal (-0.4 Mm Set)
16	100-2033	2	Crankshaft-Metal (STD. Set)
17	100-1870	2	Crankshaft-Metal (-0.2 Mm)
17	100-1871	2	Crankshaft-Metal (-0.4 Mm)
17	100-2032	2	Crankshaft-Metal (STD.)
18	100-1836	2	Metal-Side (STD.)
18	100-1838	2	Metal-Side (+0.2 Mm)
18	100-1839	2	Metal-Side (+0.4 Mm)
19	100-1837	2	Metal-Side (STD.)
19	100-1840	2	Metal-Side (+2.0 Mm)
19	100-1841	2	Metal-Side (+4.0 Mm)
20	100-1890	1	Collar-Crankshaft
21	100-1974	1	Slinger-Oil
22	100-2209	1	O-Ring
23	100-2164	1	Kit-Piston



1G299-080-10

Sheet No.:11

## Flywheel Assembly

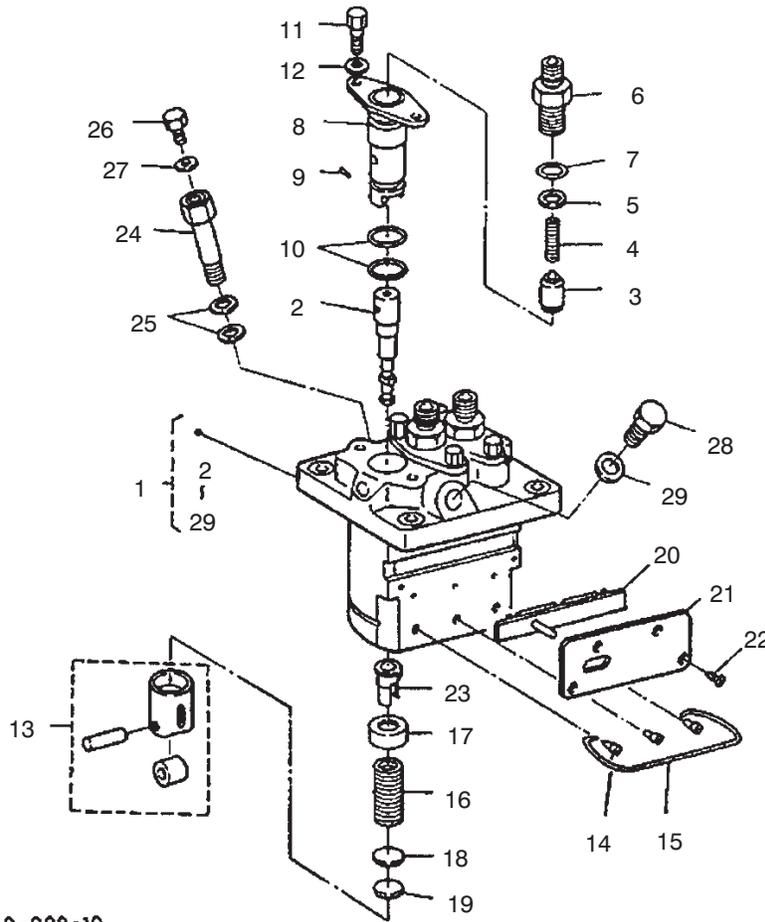
Ref. No.	Part No.	Qty.	Description
1	100-2034	1	Flywheel-Comp.
2	100-2156	1	Gear-Ring
3	100-1930	5	Bolt-Flywheel
4	100-2234	1	Plate-End, Rear
5	98-9359	10	Bolt
6	100-2177	1	Cover
7	98-7585	1	Bolt
8	98-7660	1	Washer-Plain

Ref. No.	Part No.	Qty.	Description









16689-009-10

Sheet No.:15

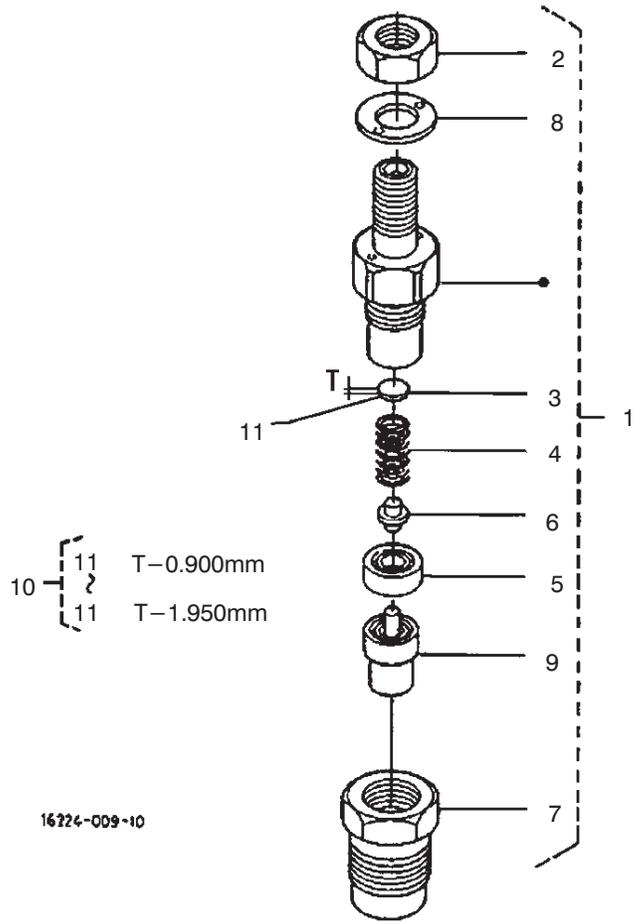
### Injection Pump (Complete Parts)

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	100-1759	1	Inj. Pump ASM	27	98-9446	1	Gasket
2	100-2005	3	Plunger-Pump	28	100-1953	1	Bolt
3	98-9421	3	Valve-Delivery	29	98-9451	1	Gasket
4	98-9424	3	Spring-Valve, Delev.				
5	98-9425	3	Gasket-Valve, Deliv.				
6	100-2007	3	Holder-Valve, Deliv.				
7	98-9447	3	O-Ring				
8	98-9434	3	Flange-Sleeve				
9	98-9443	3	Pin-Joint				
10	100-1895	6	O-Ring				
11	98-9452	6	Screw				
12	100-1931	6	Washer				
13	98-9422	3	Tappet ASM				
14	98-9426	3	Pin-Guide, Tappet				
15	98-9450	1	Pin-Clamp				
16	98-9428	3	Spring-Plunger				
17	98-9427	3	Seat-Spring, Upper				
18	98-9429	3	Seat-Spring, Lower				
19	98-9433	1	Shim				
20	100-1949	1	Rack-Control				
21	100-1950	1	Plate				
22	98-9442	4	Screw-Head, CSK				
23	98-9432	3	Sleeve-Control				
24	100-1896	1	Screw-Hollow				
25	98-9445	2	Gasket				
26	98-9430	1	Screw				







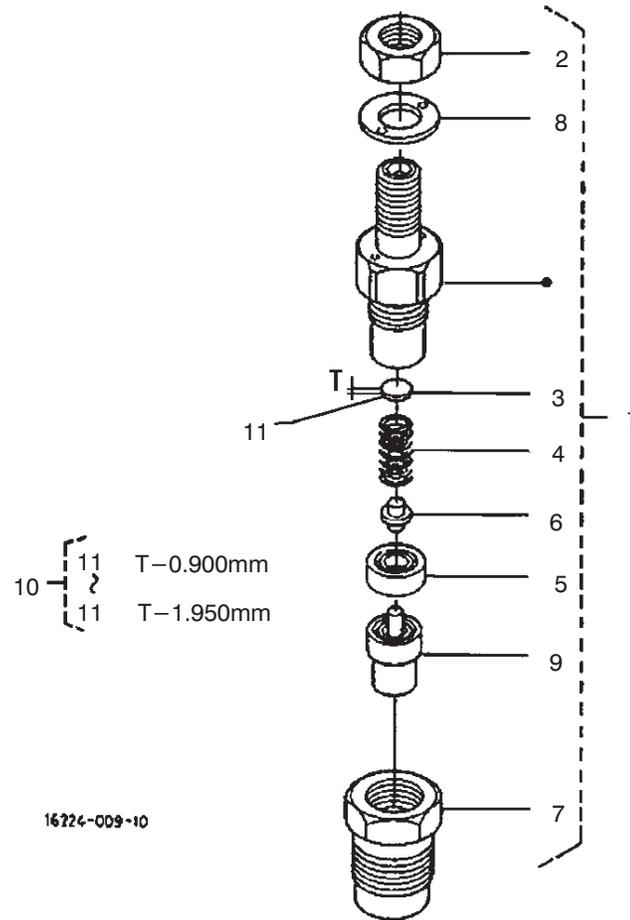


Sheet No.:19

### Nozzle Holder (Complete Parts)

Ref. No.	Part No.	Qty.	Description
1	100-1758	3	Nozzle Holder ASM
2	98-7613	3	Nut
3	98-7642	3	Washer-Adjusting
4	98-7647	3	Spring-Nozzle
5	98-7665	3	Piece-Distant
6	98-7666	3	Rod-Push
7	100-2242	3	Nut-Nozzle
8	98-7668	3	Washer
9	100-2009	3	Piece-Nozzle
10	98-9448	1	Adj Washer ASM
11	98-7642	1	Washer - Adj. (.900)
11	98-7841	1	Washer - Adj. (.925)
11	98-7842	1	Washer - Adj. (.950)
11	98-7843	1	Washer - Adj. (.975)
11	98-7844	1	Washer - Adj. (1.000)
11	98-7845	1	Washer - Adj. (1.025)
11	98-7846	1	Washer - Adj. (1.050)
11	98-7847	1	Washer - Adj. (1.075)
11	98-7848	1	Washer - Adj. (1.100)
11	98-7849	1	Washer - Adj. (1.125)
11	98-7850	1	Washer - Adj. (1.150)
11	98-7851	1	Washer - Adj. (1.175)
11	98-7852	1	Washer - Adj. (1.200)
11	98-7853	1	Washer - Adj. (1.225)
11	98-7854	1	Washer - Adj. (1.250)
11	98-7855	1	Washer - Adj. (1.275)

Ref. No.	Part No.	Qty.	Description
11	98-7856	1	Washer - Adj. (1.300)
11	98-7857	1	Washer - Adj. (1.325)
11	98-7858	1	Washer - Adj. (1.350)
11	98-7859	1	Washer - Adj. (1.375)
11	98-7860	1	Washer - Adj. (1.400)
11	98-7861	1	Washer - Adj. (1.425)
11	98-7862	1	Washer - Adj. (1.450)
11	98-7863	1	Washer - Adj. (1.475)
11	98-7864	1	Washer - Adj. (1.500)
11	98-7865	1	Washer - Adj. (1.525)
11	98-7866	1	Washer - Adj. (1.550)
11	98-7867	1	Washer - Adj. (1.575)
11	98-7868	1	Washer - Adj. (1.600)
11	98-7869	1	Washer - Adj. (1.625)
11	98-7870	1	Washer - Adj. (1.650)
11	98-7871	1	Washer - Adj. (1.675)
11	98-7872	1	Washer - Adj. (1.700)
11	98-7873	1	Washer - Adj. (1.725)
11	98-7874	1	Washer - Adj. (1.750)
11	98-7875	1	Washer - Adj. (1.775)
11	98-7876	1	Washer - Adj. (1.800)



Sheet No.:19

### Nozzle Holder (Complete Parts Continued)

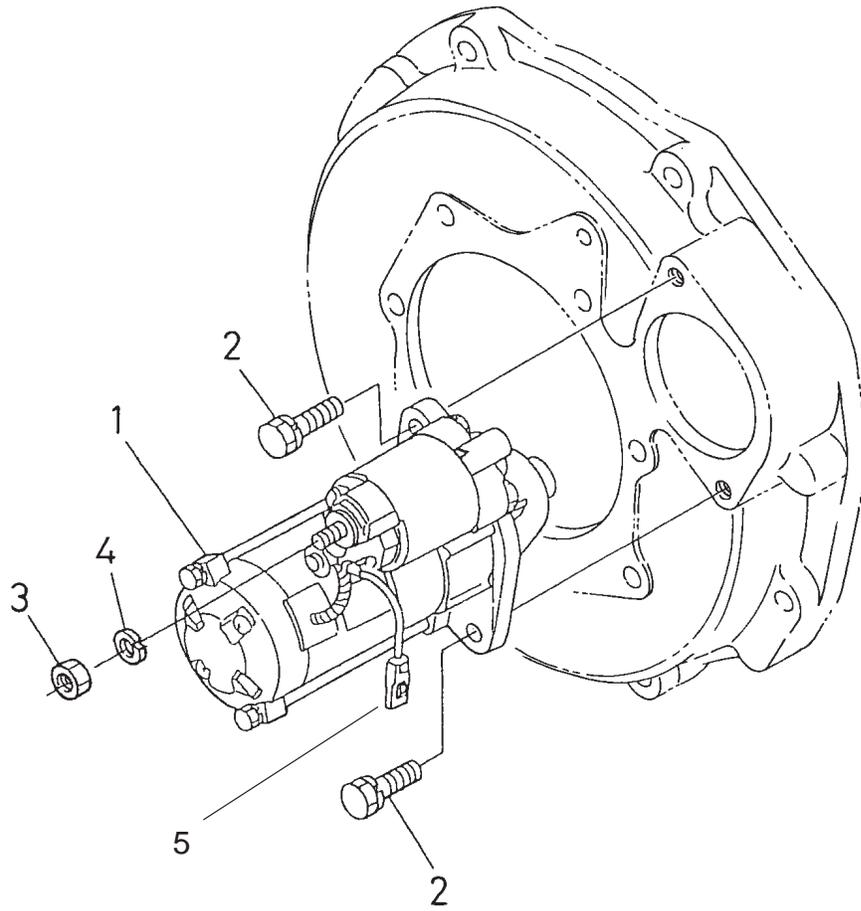
Ref. No.	Part No.	Qty.	Description
11	98-7877	1	Washer - Adj. (1.825)
11	98-7878	1	Washer - Adj. (1.850)
11	98-7879	1	Washer - Adj. (1.875)
11	98-7880	1	Washer - Adj. (1.900)
11	98-7881	1	Washer - Adj. (1.925)
11	98-7882	1	Washer - Adj. (1.950)

Ref. No.	Part No.	Qty.	Description









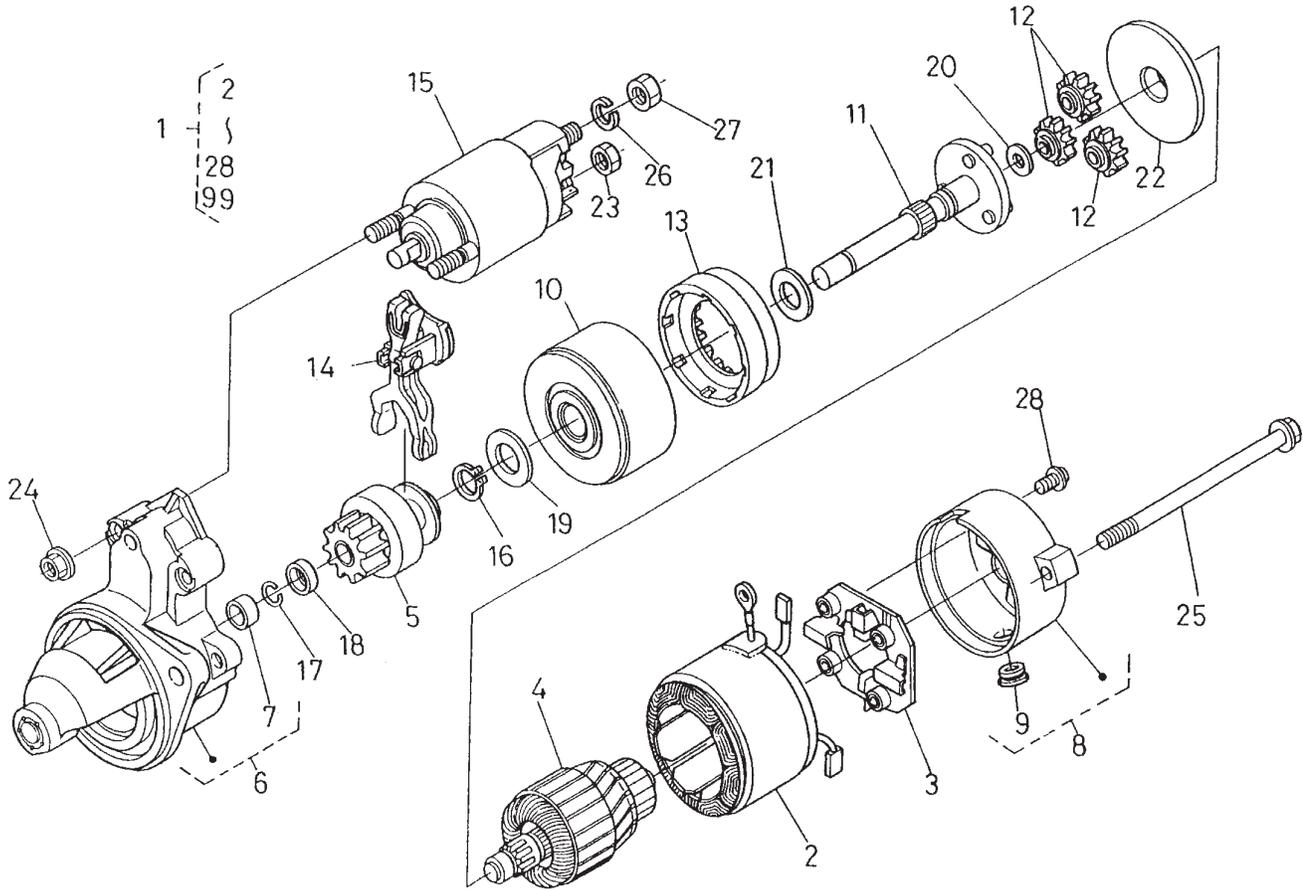
1G299-085-10

Sheet No.:23

### Starter Assembly

Ref. No.	Part No.	Qty.	Description
1	100-2179	1	Starter ASM
2	100-7438	2	Bolt
3	98-7739	1	Nut
4	98-7535	1	Washer-Spring
5	99-1434	1	Wire-Lead

Ref. No.	Part No.	Qty.	Description



67992-001-10

Sheet No.:24

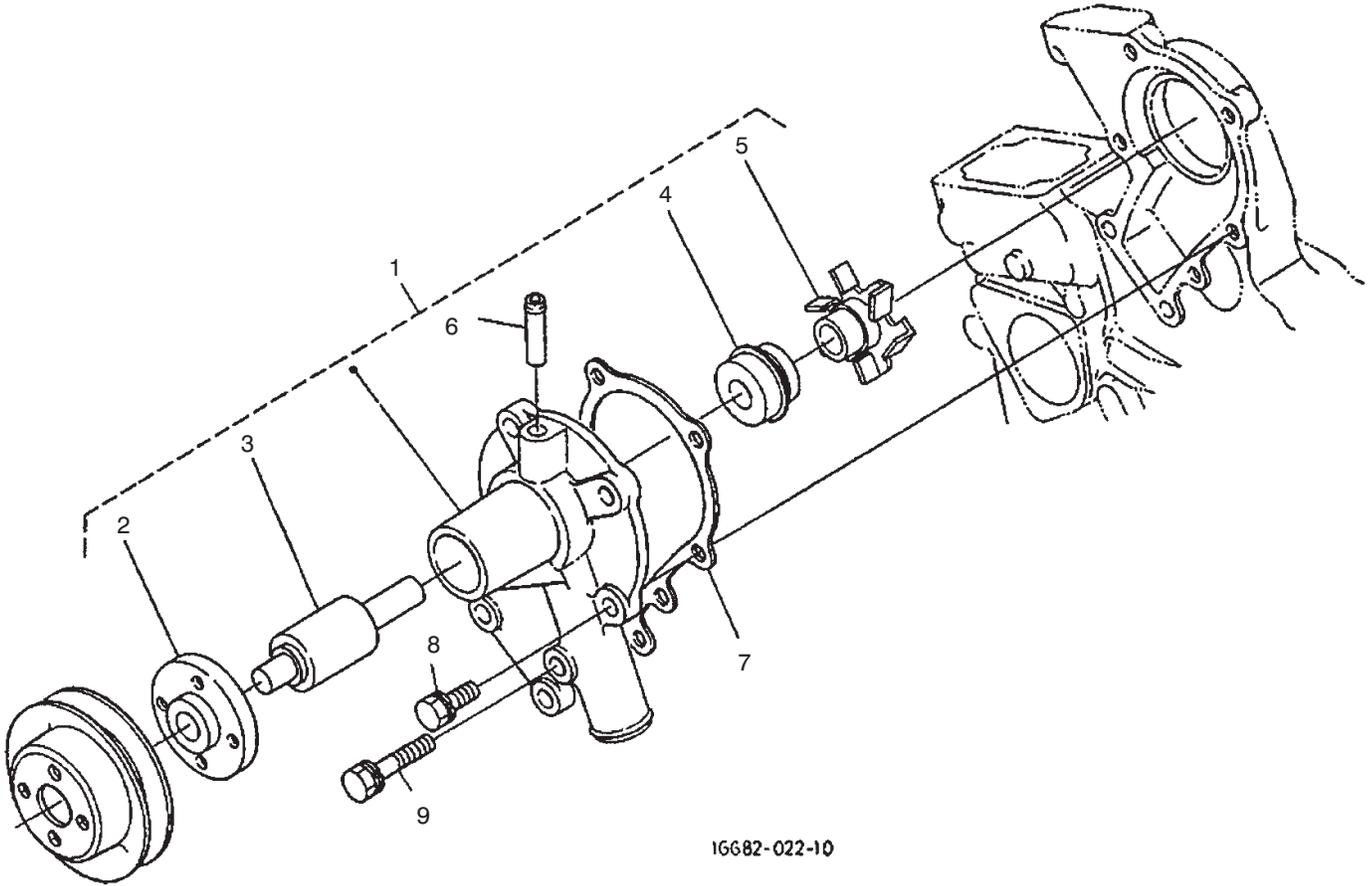
### Starter (Complete Parts)

Ref. No.	Part No.	Qty.	Description
1	100-2179	1	Starter ASM
2	100-2181	1	Starter Yoke ASM
3	100-2222	1	Holder ASM
4	100-2182	1	Armature ASM
5	100-2185	1	Starter Clutch ASM
6	100-2180	1	Starter Housing ASM
7	100-2183	1	Bearing
8	100-2186	1	Frame ASM
9	100-2213	1	Cover
10	100-2223	1	Bearing ASM
11	100-2187	1	Starter Shaft ASM
12	100-2220	3	Gear
13	100-2221	1	Gear
14	100-2218	1	Lever
15	100-2211	1	Magnetic Switch ASM
16	100-2219	1	Ring-Snap
17	100-2212	1	Ring-Snap
18	100-2216	1	Collar
19	100-2224	1	Washer-Plain
20	100-2225	1	Washer-Plain
21	100-2226	1	Washer-Plain
22	100-2227	1	Plate
23	100-2243	1	Nut-Hex
24	100-1813	2	Nut
25	100-2210	2	Bolt-Through
26	100-2215	1	Washer-Spring

Ref. No.	Part No.	Qty.	Description
27	100-2171	1	Nut-Hex
28	100-2188	2	Screw
99	99-1434	1	Wire-Lead







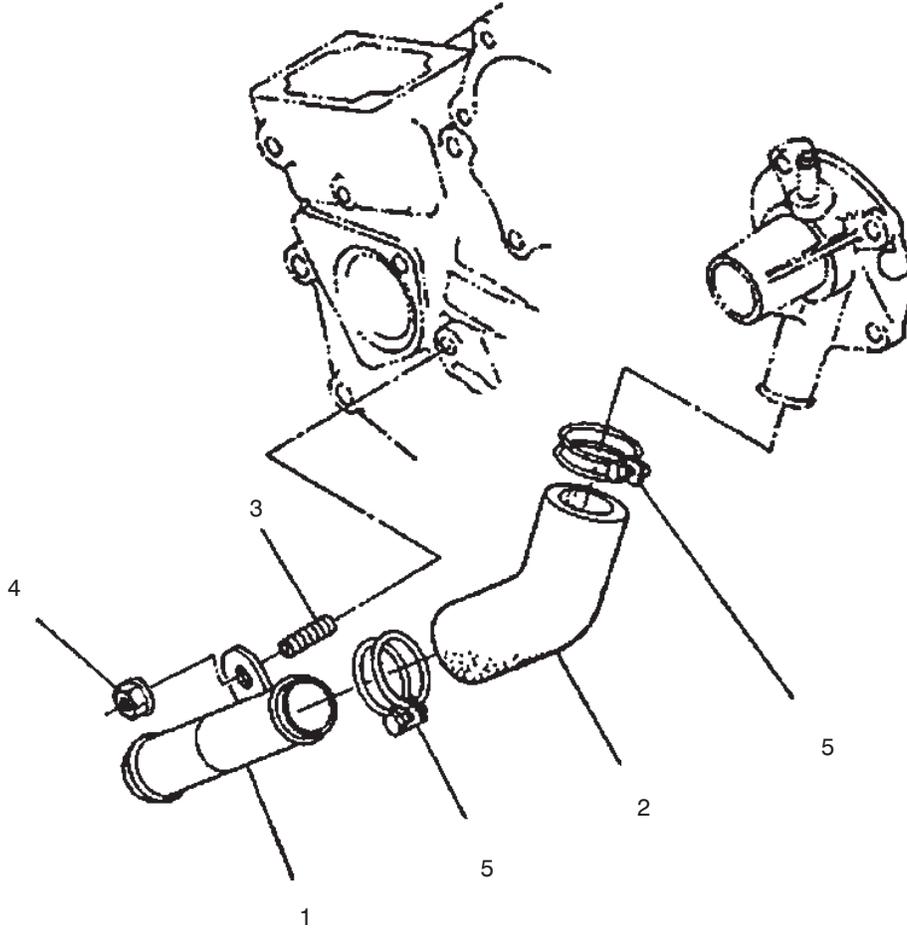
1G682-022-10

Sheet No.:27

### Water Pump Assembly

Ref. No.	Part No.	Qty.	Description
1	100-2065	1	Water Pump ASM
2	100-1933	1	Flange, Water Pump
3	100-1934	1	Bearing, Ball
4	99-3518	1	Seal ASM, Water Pump
5	100-2067	1	Impeller, Water Pump
6	100-1932	1	Pipe, Water Return
7	100-1976	1	Gasket, Water Pump
8	100-1750	4	Bolt
9	100-1764	1	Bolt

Ref. No.	Part No.	Qty.	Description



Sheet No.:28

### Water Pipe Assembly

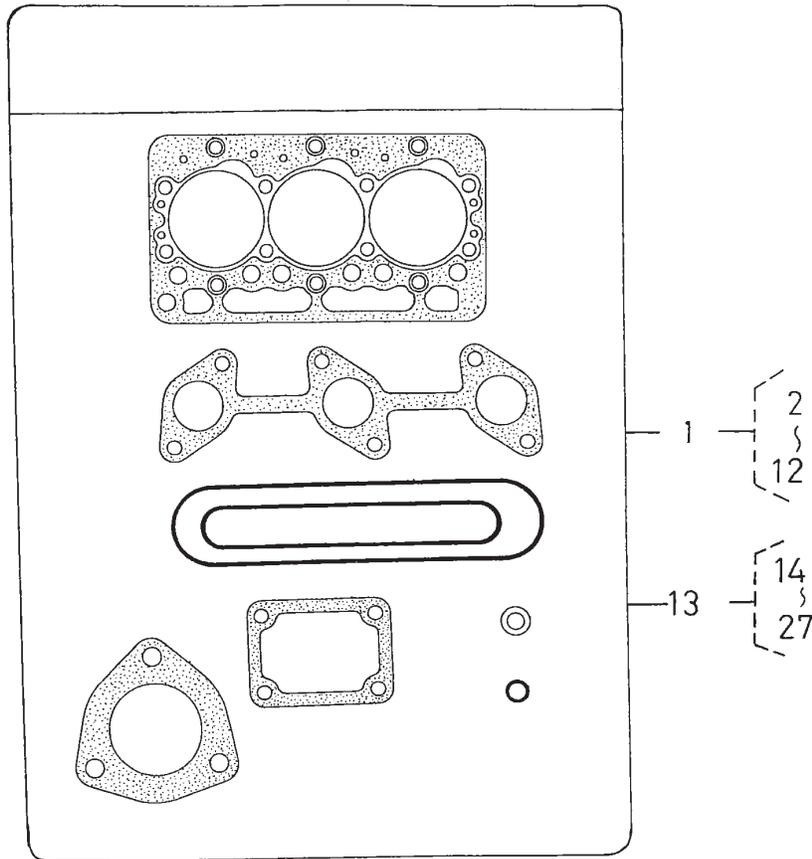
Ref. No.	Part No.	Qty.	Description
1	100-1918	1	Pipe, Water
2	100-1975	1	Pipe, Water
3	100-1924	1	Stud
4	100-2203	1	Nut-Flange
5	100-1753	2	Clamp, Hose

Ref. No.	Part No.	Qty.	Description









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Sheet No.:32

### Gasket Kit

Ref. No.	Part No.	Qty.	Description
1	100-2176	1	Kit-Gasket, Upper
2	98-7509	1	O-Ring
3	100-2043	1	Gasket-Head, Cylinder
4	100-1937	1	Gasket-In-Manifold
5	100-1957	1	Gasket
6	100-1797	6	Seal-Stem, Valve
7	100-2030	1	Gasket-Cover, Head
8	98-7654	3	Gasket
9	99-3446	1	O-Ring
10	100-1919	1	Gasket-Flange, Water
11	100-2157	1	Gasket-Thermostat
12	100-2238	1	Gasket-Muffler
13	100-2174	1	Kit-Gasket, Lower
14	100-1976	1	Gasket-Pump, Water
15	100-1954	1	Gasket-Case, Gear
16	100-2206	3	O-Ring
17	100-1929	1	Gasket-Case, Bearing
18	100-1876	1	Gasket-Case, Bearing
19	100-2209	1	O-Ring
20	100-2205	1	O-Ring
21	100-2003	1	Gasket-Pump, Oil
22	98-9636	1	Gasket-Pump, Fuel
23	100-2061	1	Gasket-Gearcase, H/M
24	100-1914	1	Gasket
25	98-7428	2	Gasket

Ref. No.	Part No.	Qty.	Description
26	100-2208	1	O-Ring
27	100-2207	1	O-Ring







