



Dingo[®] 320-D
Compact Utility Loader
Model No. 22303-21000001 and Up

Parts Catalog

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.

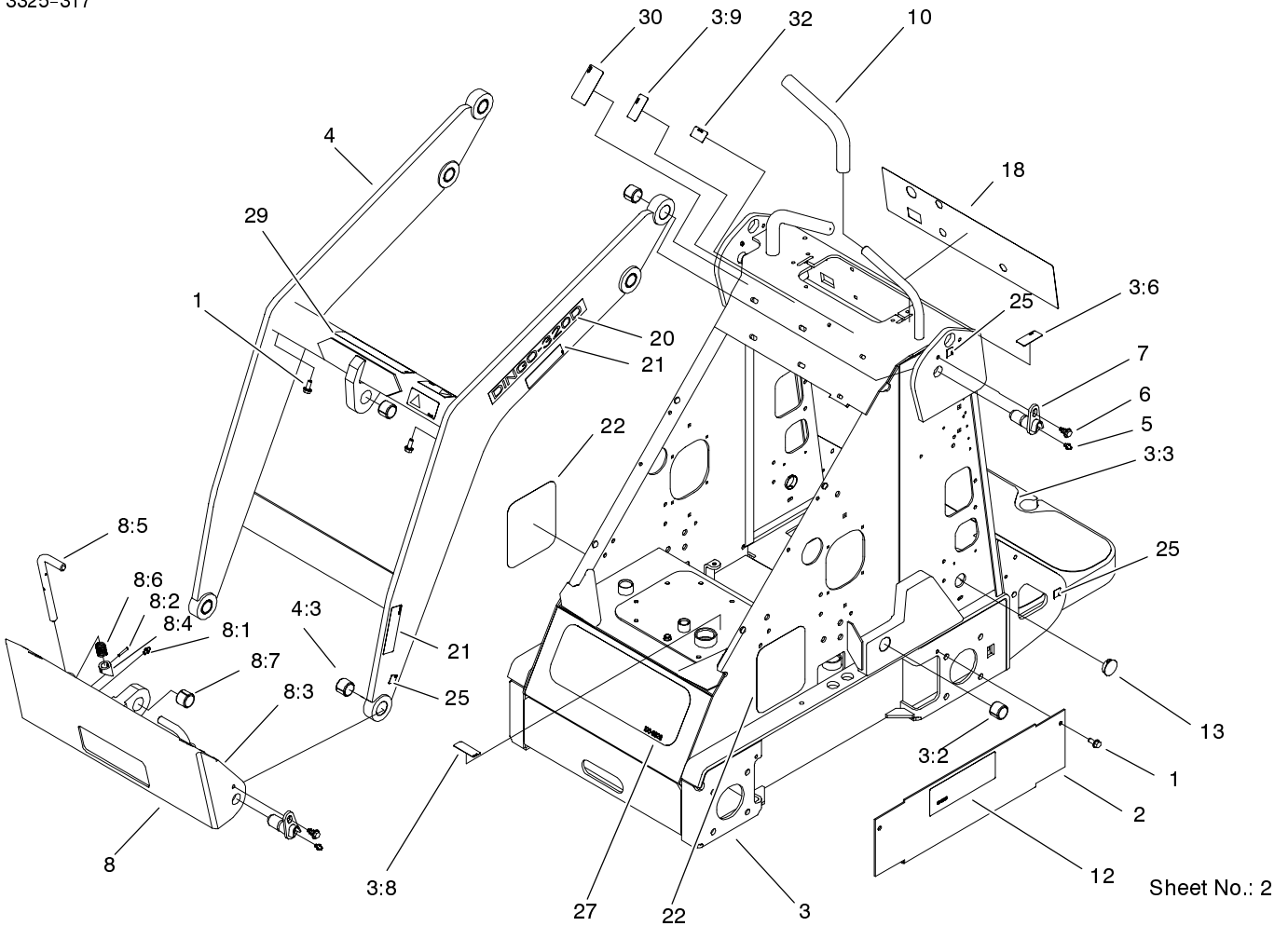
Contents

Description	Page	Description	Page
Frame and Loader Arm Assembly	4	Gear Case Assembly	32
Hood and Screen Assembly	5	Head Cover Assembly	33
Wheel and Motor Assembly	6	Dipstick and Guide Assembly	34
Hydraulic Motor Assembly No. 99-3052	7	Main Bearing Case Assembly	35
Engine Assembly	8	Camshaft Assembly	36
Engine Mount Assembly	9	Piston and Crankshaft Assembly	37
Fuel Tank and Air Filter Assembly	10	Flywheel Assembly	38
Radiator Mount Assembly	11	Fuel Camshaft Assembly	39
Hydraulic Tank and Filter Assembly	12	Engine Stop Lever Assembly	40
Auxiliary Control Lever Assembly	13	Injection Pump Assembly	41
Hydraulic Valve Assembly	14	Injection Pump (Complete Parts)	42
Hydraulic Valve Assembly No. 99-3077	15	Governor Assembly	43
Hydraulic Valve Assembly No. 99-3073	16	Speed Control Plate Assembly	44
Hydraulic Valve Assembly No. 99-3072	17	Nozzle Holder and Glow Plugs Assembly	45
4-Spool Valve Assembly	18	Nozzle Holder (Complete Parts)	46
Hydraulic Valve Assembly No. 99-3070	19	Fuel Pump (Mechanical)	48
Hydraulic Motor Assembly	20	Dynamo and Pulley Assembly	49
Counterbalance Valve Assembly No. 99-3040 ..	21	Dynamo (Complete Parts)	50
Hydraulic Cylinder Assembly	22	Starter Assembly	51
Hydraulic Cylinder Assembly No. 100-4163 ...	23	Starter (Complete Parts)	52
Rear Cover Assembly	24	Oil Switch and Thermoswitch Assembly	53
Battery Mount Assembly	25	Water Flange and Thermostat Assembly	54
Electrical Components Assembly	26	Water Pump Assembly	55
Electrical Schematic	27	Water Pipe Assembly	56
Hydraulic Schematic	28	Valve and Rocker Arm Assembly	57
Crankcase Assembly	29	Inlet Manifold Assembly	58
Oil Pan Assembly	30	Exhaust Manifold Assembly	59
Cylinder Head Assembly	31	Gasket Kit	60

Part Description Abbreviations

Part descriptions in this catalog may include the following abbreviations.

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

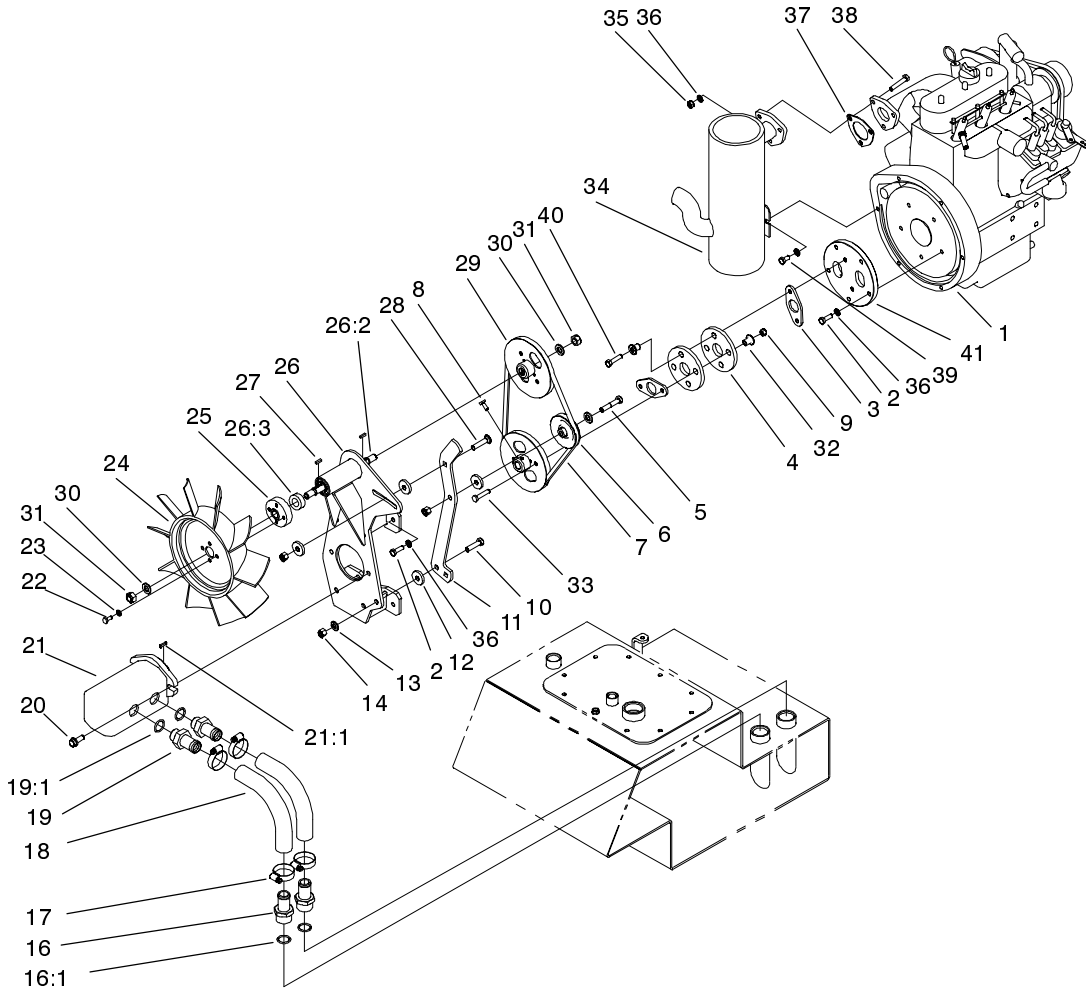


Sheet No.: 2

Frame and Loader Arm Assembly

Ref. No.	Part No.	Qty.	Description
1	32144-70	6	Screw-HH
2	99-3020-01	2	Cover-Hose
3	104-7416	1	Frame ASM
3:2	98-4871	2	Bushing-Tension
3:3	98-9947	2	Tread-Foot
3:6	98-8219	1	Decal-Throttle
3:8	93-6686	1	Decal-Oil, Hydraulic
3:9	98-8235	1	Decal-Selector
4	100-8814	1	Loader ASM
4:2	32144-70	2	Screw-HH
4:3	98-4871	7	Bushing-Tension
5	302-5	4	Fitting-Grease
6	99-5105	4	Bolt-Shoulder
7	99-1414	4	Pin-Pivot
8	98-4690	1	Quick Attach ASM
8:1	302-5	2	Fitting-Grease
8:2	32121-94	2	Pin-Special
8:3	98-4691-03	1	Mount-Attach, Quick
8:4	98-4692	2	Cam-Attach, Quick
8:5	100-3373	2	Pin
8:6	98-4694	2	Spring-Compression
8:7	98-4871	1	Bushing-Tension
10	98-4845	2	Grip-Cushion
12	99-3068	2	Decal-4-Paw
13	94-1402	2	Plug - Hole
18	99-3157	1	Decal-Panel, Control

Ref. No.	Part No.	Qty.	Description
20	99-3167	2	Decal-Dingo 320d
21	100-6141	4	Decal-Pinch
22	100-8827	2	Decal-Dingo, Side
25	93-9084	6	Decal-Point, Lift
27	100-8828	1	Decal-Dingo, Front
29	98-4682	1	Decal - Caution
30	98-4677	1	Decal-Power, Auxiliary
32	98-8220	1	Decal-Limiter, Speed



Sheet No.: 5

Engine Assembly

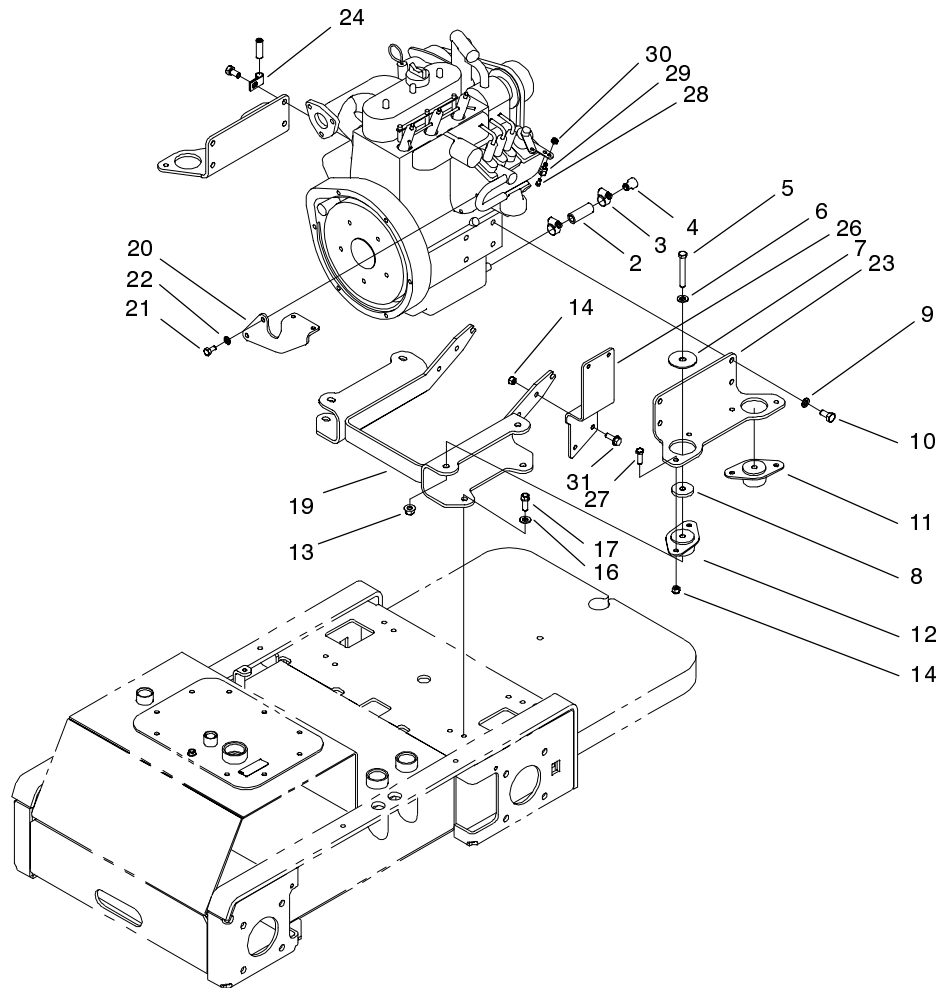
Ref. No.	Part No.	Qty.	Description
1	98-4661	1	Engine-D722-E, Kubota
2	99-5131	9	Bolt
3	99-1430	2	Spacer-Coupler
4	44-2230	2	Coupling-Rubber
5	323-10	1	Screw-HH
6	63-8140	1	Pulley-Idler
7	92-8876	1	V-Belt
8	3241-5	2	Screw-Set
9	104-9469	2	Nut-Lock
10	323-8	1	Screw-HH
11	100-1727-01	1	Mount-Tensioner
12	99-5121	4	Spacer
13	3256-24	2	Washer-Flat
14	3296-39	3	Nut-Lock, NI
15	98-4700	1	Key-Square
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-HF
21	98-4702	1	Pump - Gear, Tandem
21:1	98-4700	1	Key-Square

Ref. No.	Part No.	Qty.	Description
*21:2	99-1353	1	Kit-Seal, Pump
22	321-3	4	Screw-HH
23	3253-3	4	Washer-Lock
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	98-8089	2	Nut-Lock
32	71-4411	4	Spacer
33	5-1470	2	Capscrew
□34	98-2655	1	Muffler-Arrester, Spark
◇34	104-2548	1	Muffler-Diesel
35	3217-6	3	Nut-Hex
36	3253-4	13	Washer-Lock
37	100-2238	1	Gasket-Muffler
38	322-9	3	Screw-HH
39	99-5132	1	Bolt
40	99-5133	2	Bolt
41	99-1431	1	Adapter-Flywheel

* Not illustrated

◇ Used on Serial Numbers: 210000251 & Up

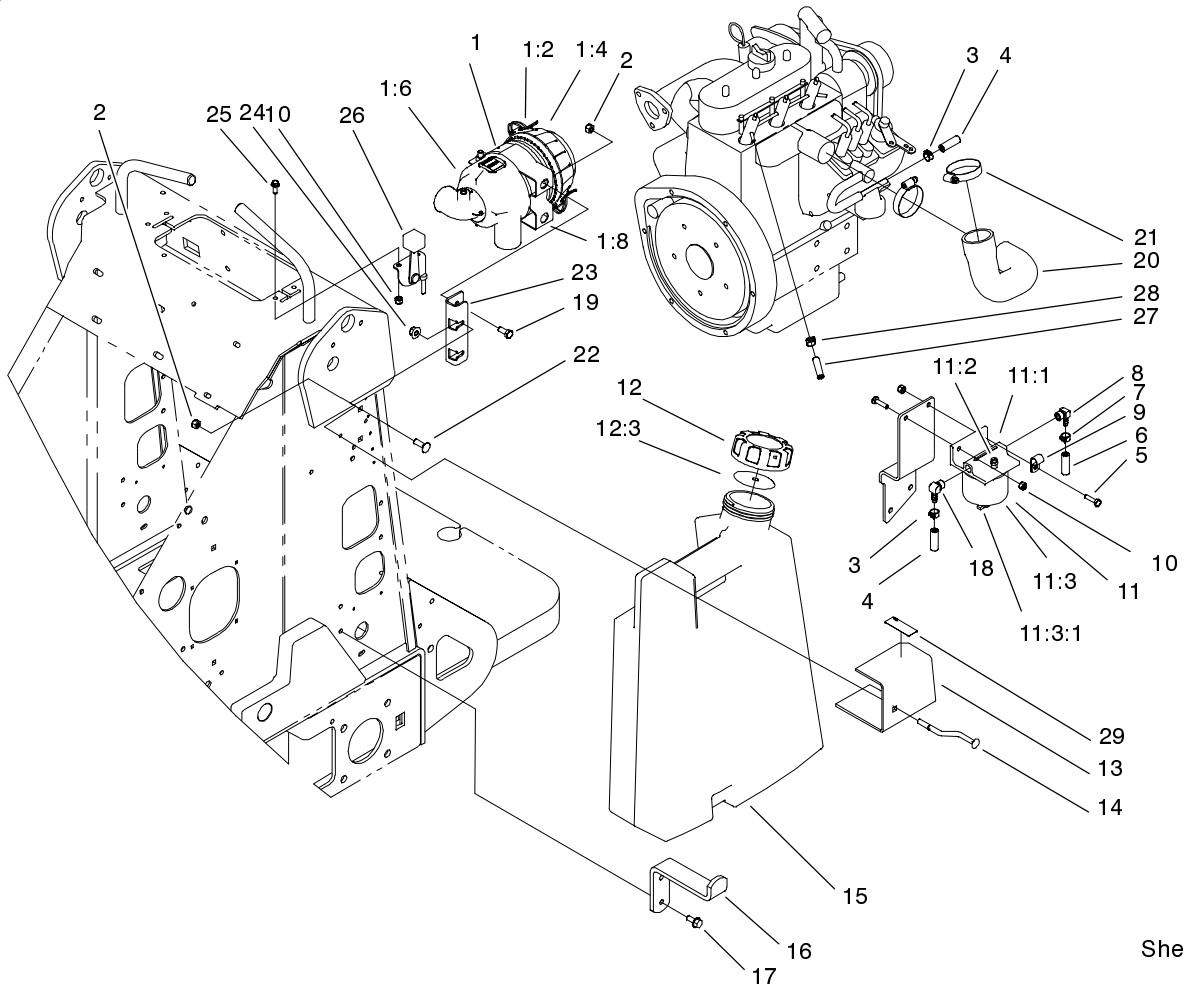
□ Used on Serial Numbers: 210000101-210000250



Sheet No.: 6

Engine Mount Assembly

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
2	56-2230	1	Hose-Fuel	29	93-0021	1	Swivel-Cable, Throttle
3	2412-36	2	Clamp-Hose	30	3296-13	1	Nut-Lock NI
4	99-1445	1	Plug-Oil, Diesel	31	3234-29	2	Screw-HHF
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				
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	10	Nut-Lock				
16	3256-80	4	Washer-Flat				
17	95-1726	4	Screw-Taptite W/Patch				
19	98-0066-01	1	Engine Mount Wa				
20	99-5007-01	1	Mount-Solenoid				
21	99-5132	2	Bolt				
22	3253-4	2	Washer-Lock				
23	98-0055-01	2	Plate-Mount, Engine				
24	2412-138	1	R-Clamp				
26	98-0059-01	1	Mount-Filter, Fuel				
27	322-5	8	Screw-HH				
28	25-8640	1	Screw-HH				



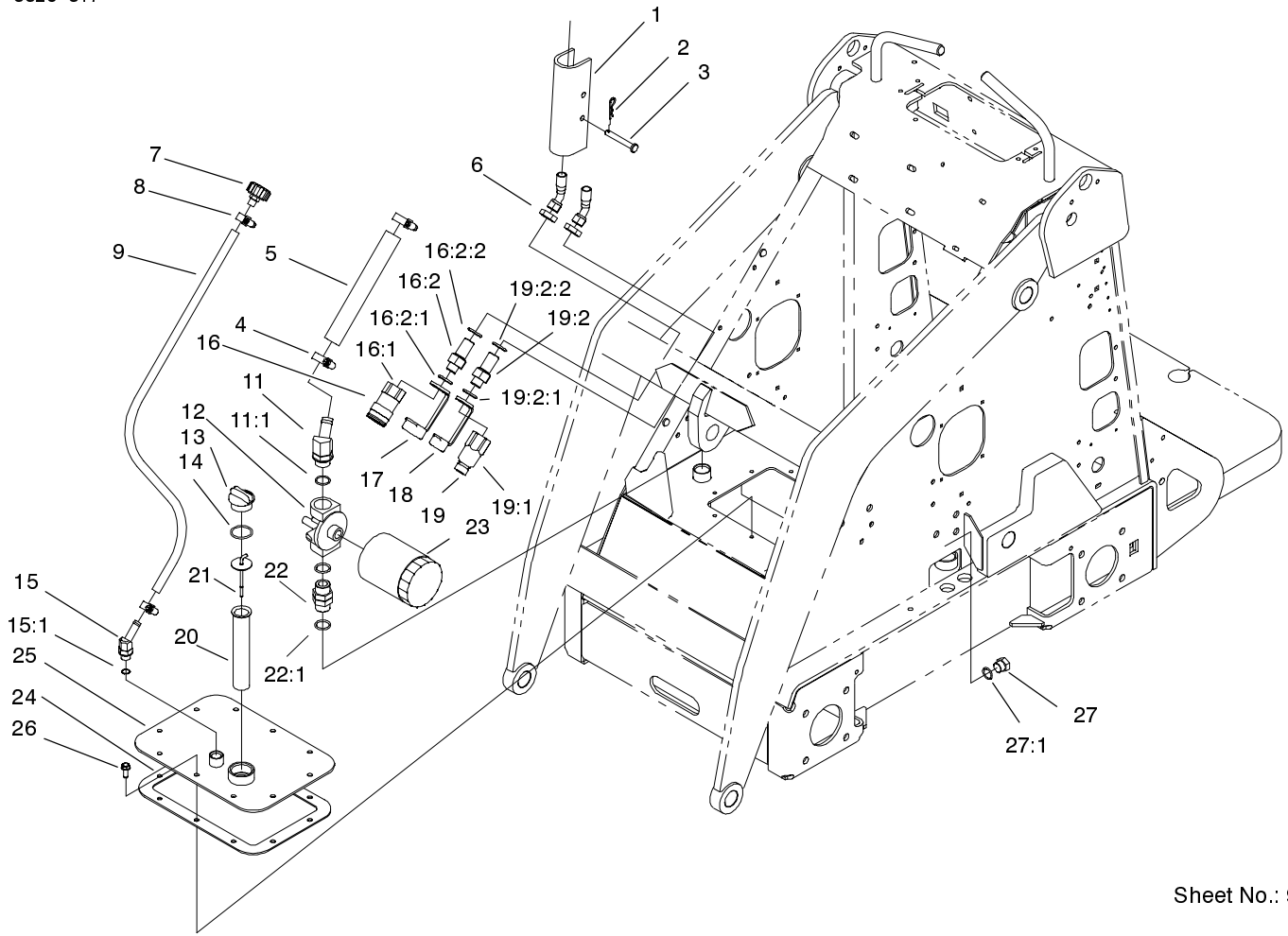
Sheet No.: 7

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 NI
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
11:3:1	63-8310	1	Valve-Drain
12	104-7419	1	Cap-Fuel, Diesel
12:3	104-7420	1	Gasket-Vented

Ref. No.	Part No.	Qty.	Description
13	99-1444-03	1	Plate-Mount, Left
14	98-4657	1	Bolt-Mount
15	99-1425	1	Fuel Tank ASM
*15:3	100-1596	1	Fitting-90 DEG
*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	2412-80	2	Fuel Line Clamp
29	93-6680	1	Decal-Diesel Only

* Not illustrated

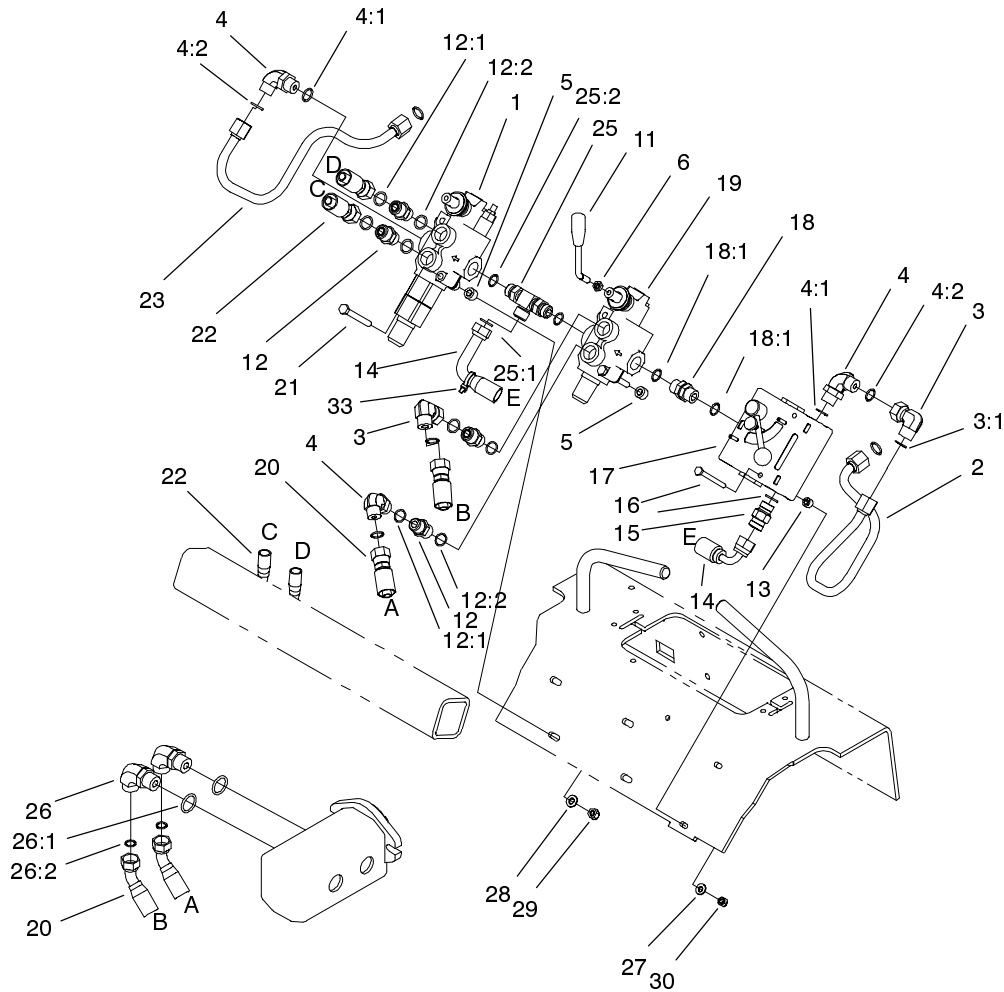


Sheet No.: 9

Hydraulic Tank and Filter Assembly

Ref. No.	Part No.	Qty.	Description
1	98-4675-01	2	Lock-Cylinder
2	3290-467	2	Pin-Hair
3	283-52	2	Pin-Clevis
4	2412-129	2	Clamp-Hose
5	98-2713	1	Hose-Suction, Hydraulic
6	340-74	2	Locknut-Bulkhead
7	68-6150	1	Breather-Air
8	2412-36	2	Clamp-Hose
9	100-1748	1	Hose-Vent
11	354-127	1	Elbow-45 DEG
11:1	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-HYD, 45 DEG
15:1	237-79	1	O-Ring
16	100-4747	1	Bulkhead Coupler ASM
16:1	96-1275	1	Coupler-Face, Flush
16:2	100-4236	1	Fitting-Adapter, Bulkhead
16:2:1	237-65	1	O-Ring
16:2:2	237-80	1	O-Ring
17	100-8815	1	Cap-Dust, Nipple
18	100-8816	1	Cap-Dust, Coupler

Ref. No.	Part No.	Qty.	Description
19	100-4748	1	Bulkhead Nipple ASM
19:1	96-1276	1	Nipple-Face, Flush
19:2	100-4236	1	Fitting-Adapter, Bulkhead
19:2:1	237-65	1	O-Ring
19:2:2	237-80	1	O-Ring
20	61-2790	1	Filter-Screen
21	100-2097	1	Dipstick-Oil
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
27:1	237-79	1	O-Ring



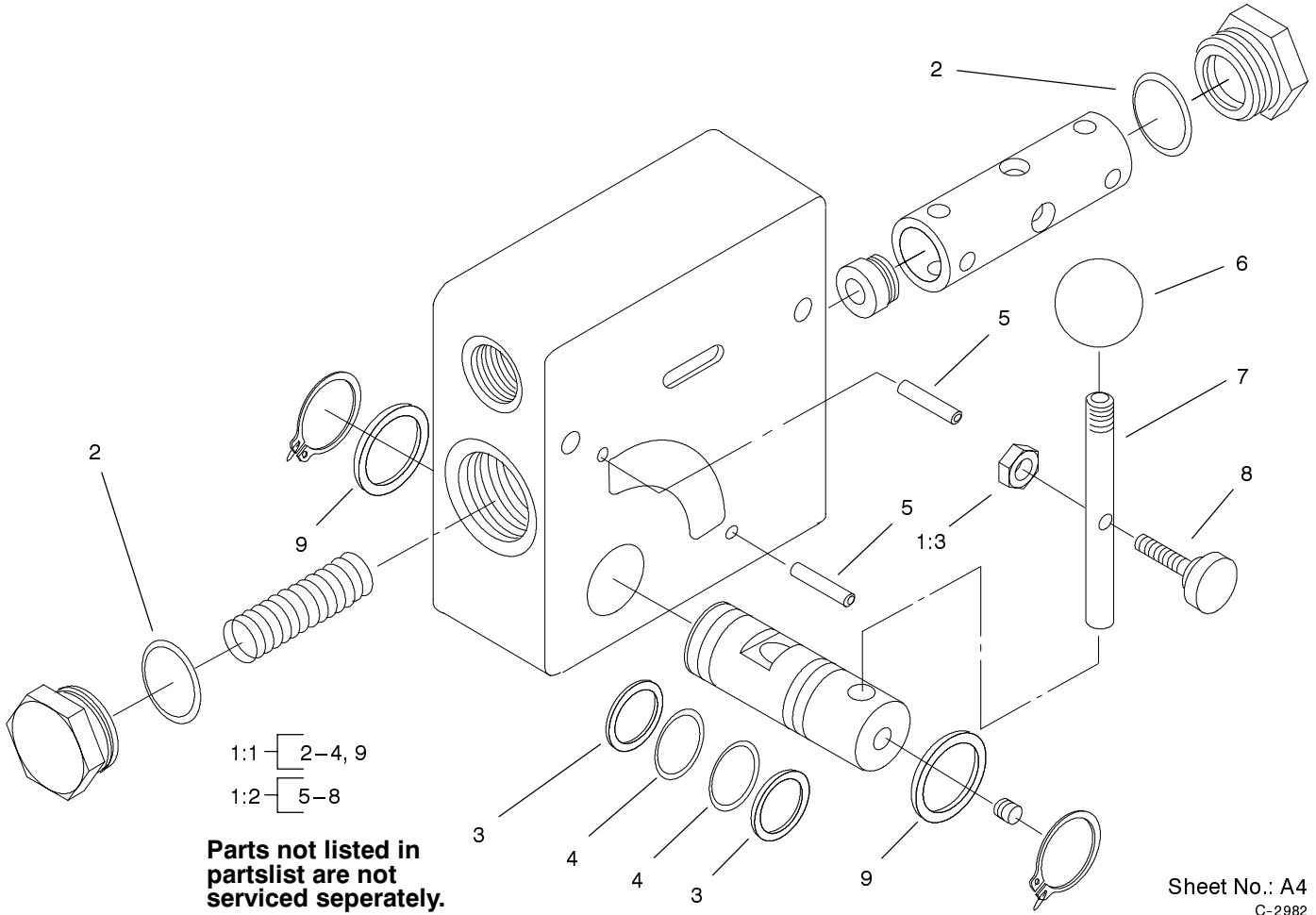
Sheet No.: 11

Hydraulic Valve Assembly

Ref. No.	Part No.	Qty.	Description
1	99-3077	1	Valve-Aux, Hydraulic
2	99-3030	1	Line-Hydraulic, Cf
3	94-6031	2	Fitting-HYD
3:1	237-30	1	O-Ring
4	340-98	3	Fitting-HYD, 90
4:1	237-79	1	O-Ring
4:2	237-30	1	O-Ring
5	98-4695	4	Tube-Spacer
6	42-9580	1	Nut-Hex
11	98-4729	1	Lever-Valve
12	340-4	3	Adapter
12:1	237-30	1	O-Ring
12:2	237-79	1	O-Ring
13	98-4799	2	Tube-Spacer
14	100-2245	1	Hose ASM
15	98-4735	1	Valve-Check, HYD
15:1	237-30	1	O-Ring
15:2	237-79	1	O-Ring
16	321-14	2	Screw-HH
17	104-4221	1	Kit-Valve, Hydraulic
☆17:1		1	Valve-Flow, Hydraulic
17:1:1	104-4231	1	Kit-Seal, Valve
17:1:2	98-9098	1	Kit-Hardware, Handle
17:3	3296-27	1	Nut-Lock NI
18	95-3209	1	Fitting-Thread, Straight

Ref. No.	Part No.	Qty.	Description
18:1	237-79	2	O-Ring
19	99-3072	1	Valve-Selector, Hydraulic
20	100-1730	2	Hose-Pump, HYD
21	322-13	4	Screw-HH
22	100-8817	2	Hose-Aux
23	98-4724	1	Line-Aux, Hydraulic
25	98-9079	1	Adapter - Tee, Adjustable
25:1	237-30	1	O-Ring
25:2	237-79	2	O-Ring
26	340-105	2	Fitting-90 DEG
26:1	237-80	1	O-Ring
26:2	237-30	1	O-Ring
27	3256-22	2	Washer-Flat
28	3256-23	4	Washer-Flat
29	3296-29	4	Nut-Lock
30	3296-42	2	Nut-Lock NI
33	3290-379	18	Tie-Cable

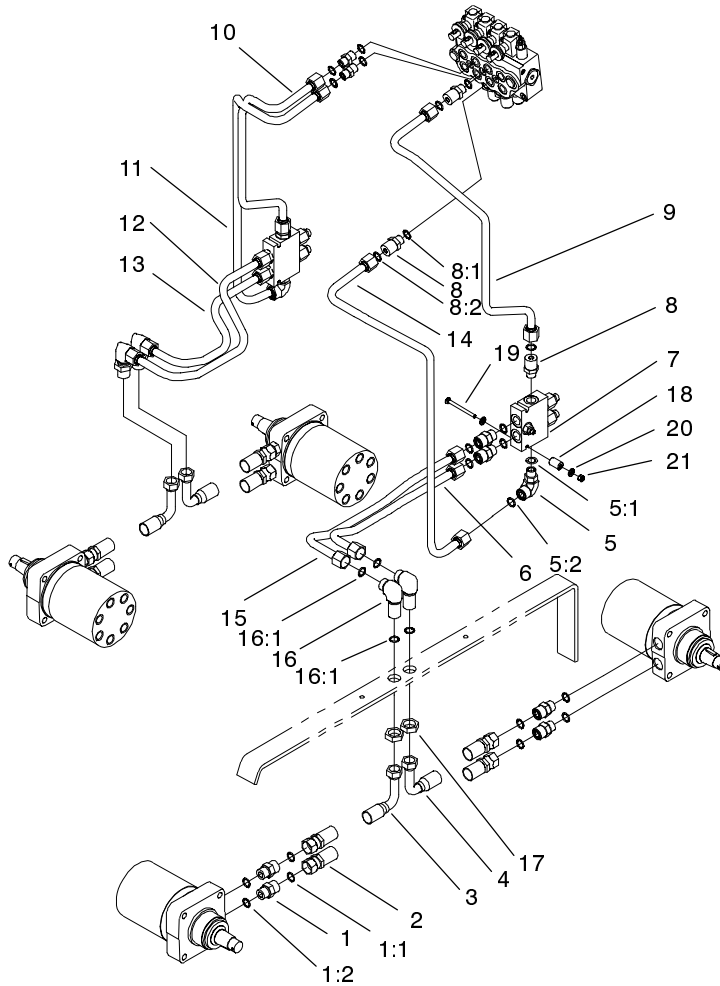
☆ Not serviced



Hydraulic Valve Assembly No. 104-4221

Ref. No.	Part No.	Qty.	Description
1	104-4231	1	Kit-Seal, Valve
2	98-9098	1	Kit-Hardware, Handle

Ref. No.	Part No.	Qty.	Description
----------	----------	------	-------------

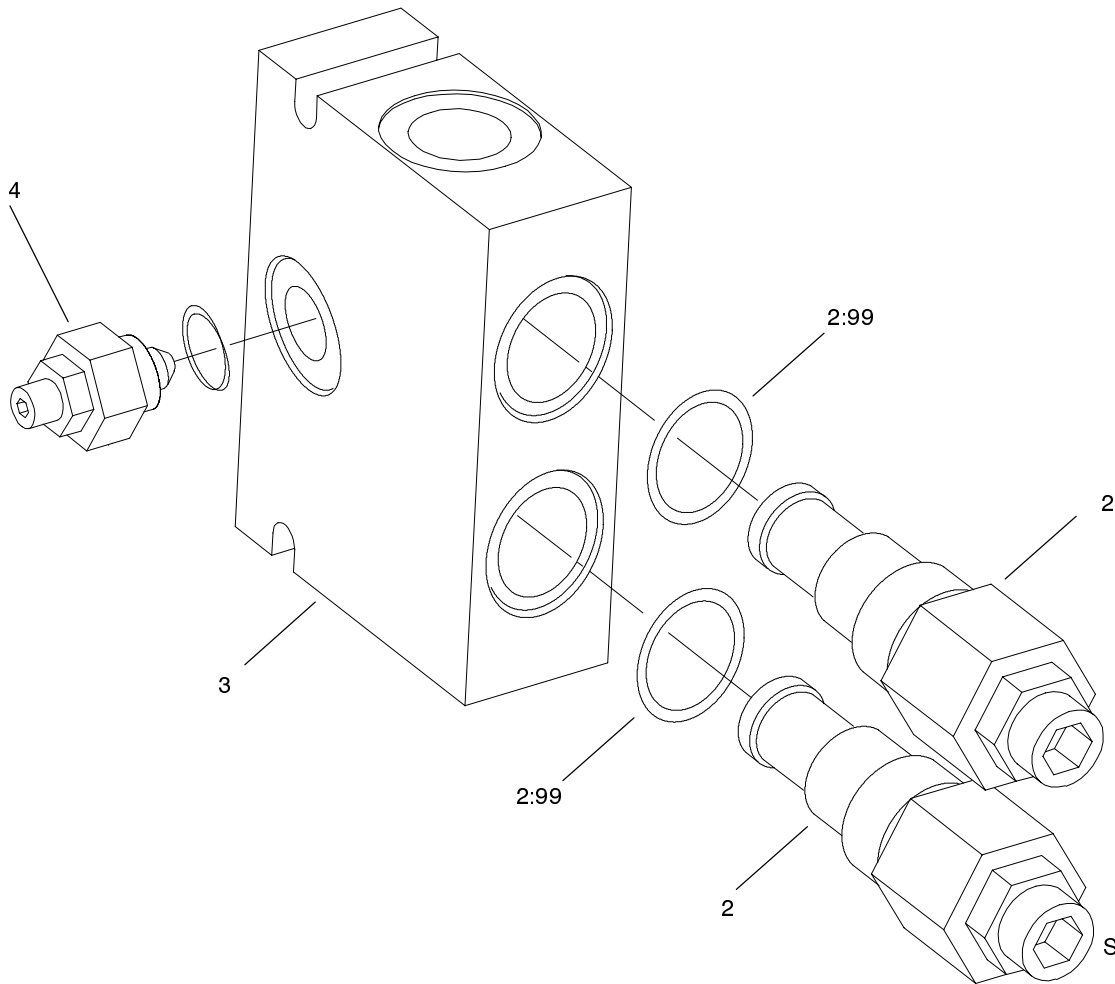


Sheet No.: 14

Hydraulic Motor Assembly

Ref. No.	Part No.	Qty.	Description
1	340-7	8	Adapter
1:1	237-65	1	O-Ring
1:2	237-80	1	O-Ring
2	99-3012	2	Hose-Motor, HYD
3	99-3010	2	Hose-Motor, Front HYD
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-Hydraulic
7	99-3040	2	Valve-Counterbalance
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-Hydraulic
10	99-3024	1	Line-Hydraulic
11	99-3029	1	Line-Hydraulic
12	99-3025	1	Line-Hydraulic
13	99-3028	1	Line-Hydraulic
14	99-3023	1	Line-Hydraulic
15	99-3026	1	Line-Hydraulic
16	340-72	4	Elbow-Bulkhead Union, 90 DEG
16:1	237-65	2	O-Ring

Ref. No.	Part No.	Qty.	Description
17	340-74	4	Locknut-Bulkhead
18	99-3057	2	Spacer-Valve
19	321-23	2	Screw-HH
20	3256-22	4	Washer-Flat
21	3296-42	2	Nut-Lock NI

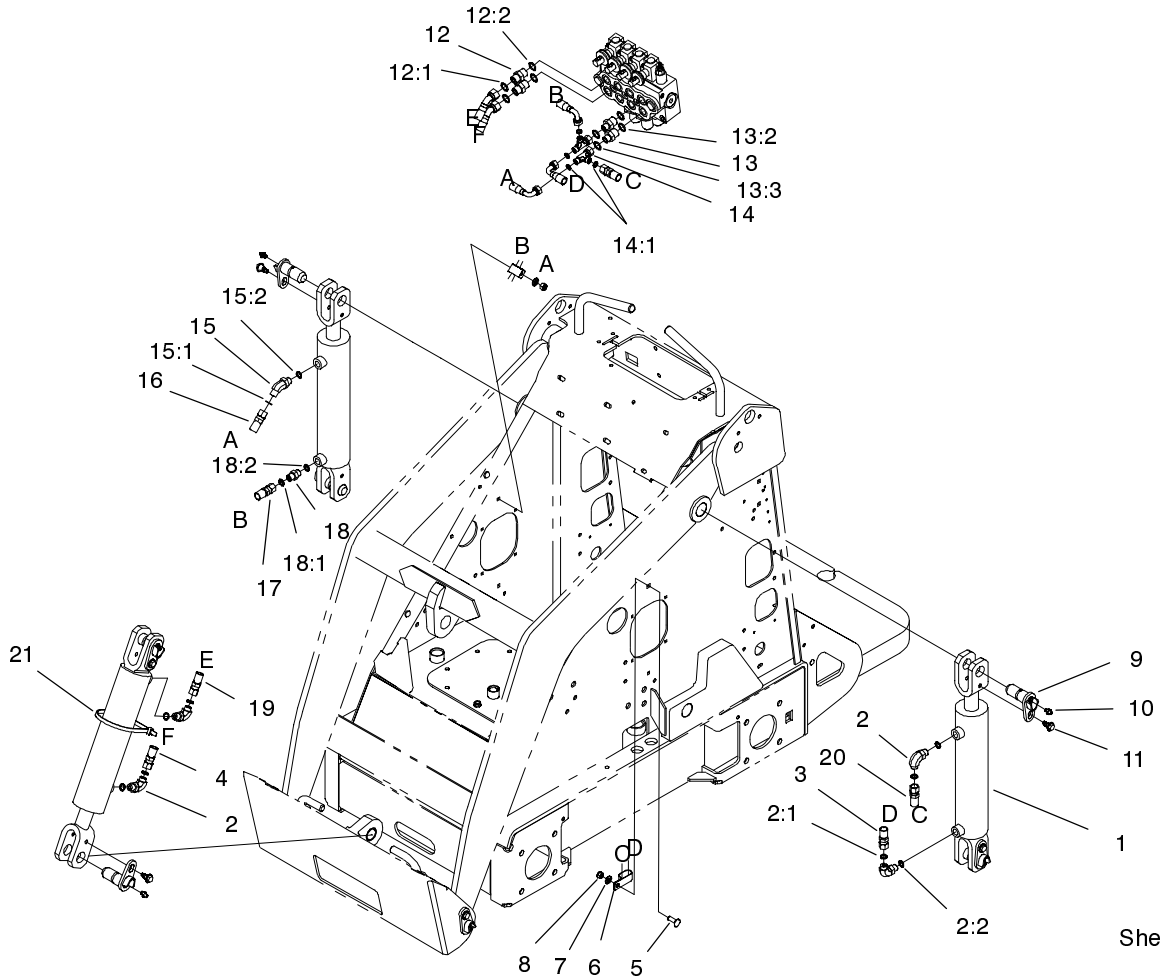


Sheet No.: A7
C-3005

Counterbalance Valve Assembly No. 99-3040

Ref. No.	Part No.	Qty.	Description
2	99-3271	2	Valve - Cartridge
2:99	98-2712	1	Kit-Seal, Valve
3	100-8864	1	Manifold ASM
4	100-8865	1	Needle Valve ASM

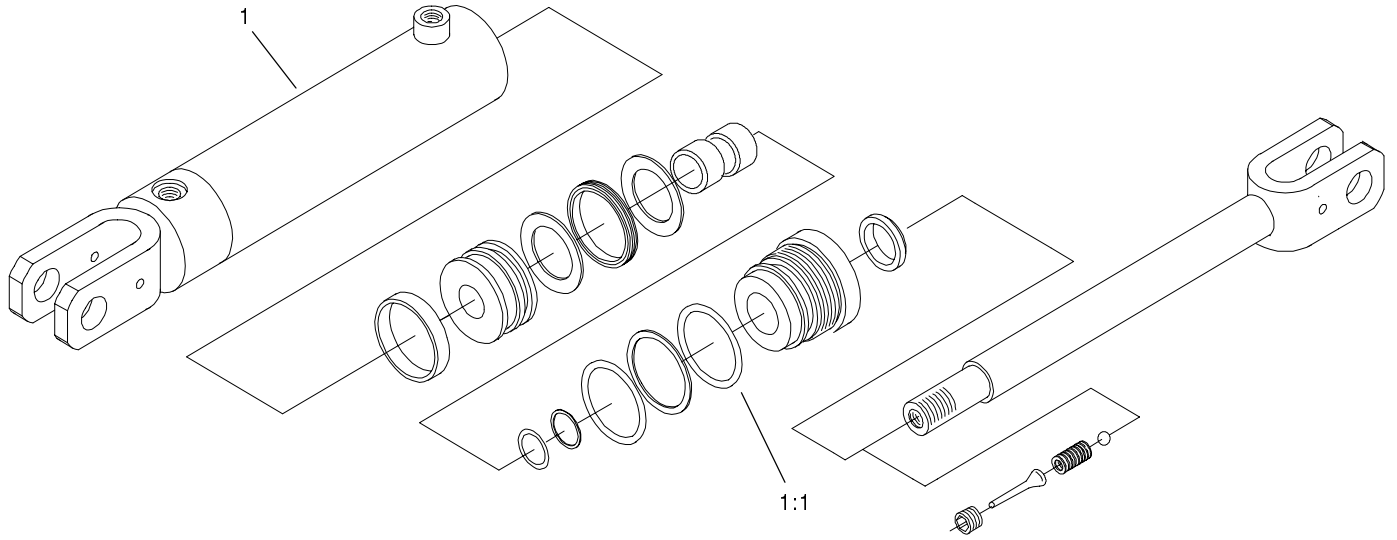
Ref. No.	Part No.	Qty.	Description



Hydraulic Cylinder Assembly

Ref. No.	Part No.	Qty.	Description
1	100-4163	3	Kit-Cylinder, Hydraulic
2	340-82	4	Adapter
2:1	237-42	1	O-Ring
2:2	237-21	1	O-Ring
3	98-4748	1	Hose-HYD, Lo Pressure
4	98-4726	1	Hose-HYD
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-Grease
11	99-5105	6	Bolt-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	237-79	1	O-Ring
13:3	237-21	1	O-Ring
14	340-151	2	Fitting
14:1	237-75	3	O-Ring
15	340-137	1	Fitting
15:1	237-21	1	O-Ring
15:2	237-42	1	O-Ring

Ref. No.	Part No.	Qty.	Description
16	98-4725	1	Hose-Loader, Hydraulic
17	100-1731	1	Hose-HYD, Right
18	340-1	1	Adapter
18:1	237-35	1	O-Ring
18:2	237-42	1	O-Ring
19	98-4727	1	Hose-HYD
20	99-3109	1	Hose-Loader, HYD
21	3334-945	1	Tie-Cable



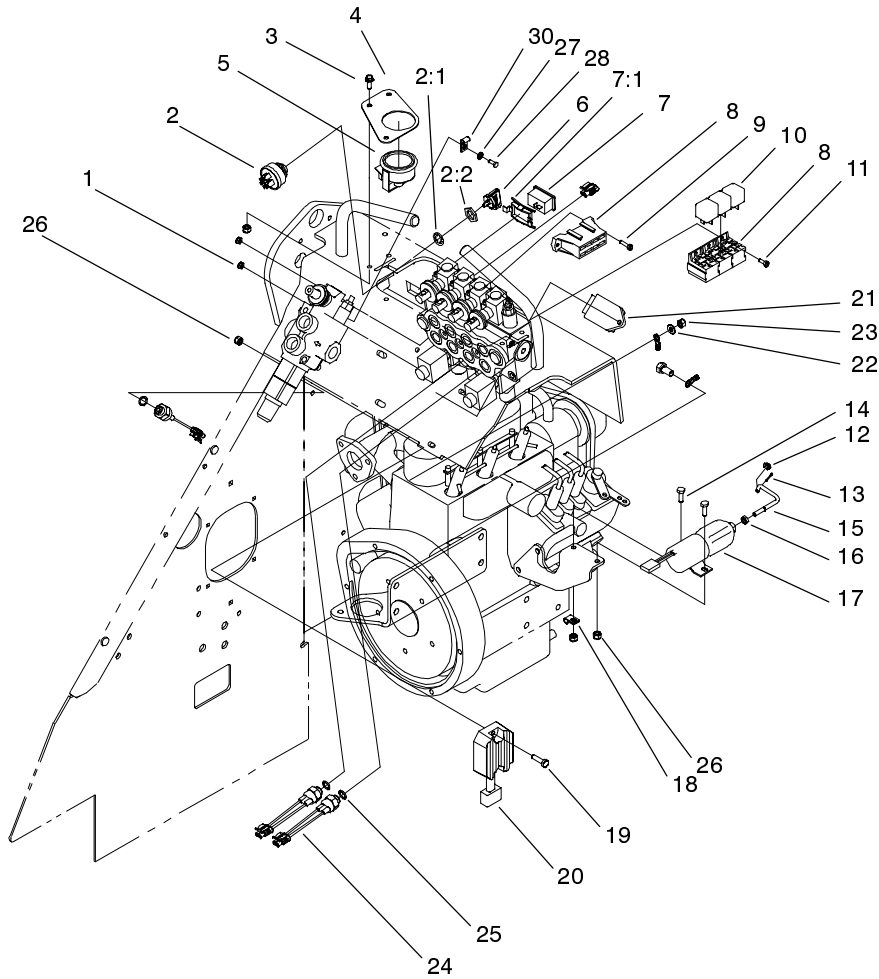
Parts not listed in
part list are not
serviced separately

Sheet No.: A8
C-2824

Hydraulic Cylinder Assembly No. 100-4163

Ref. No.	Part No.	Qty.	Description
1		1	Cylinder-Hydraulic
1:1	99-3065	1	Kit-Seal, Hydraulic Cylinder

Ref. No.	Part No.	Qty.	Description



Sheet No.: 20

Electrical Components Assembly

Ref. No.	Part No.	Qty.	Description
1	3296-12	4	Nut-Lock
2	111216	1	Ignition Switch ASM
2:1	9201604	1	Lockwasher
2:2	101884	1	Nut
3	3234-33	3	Screw-HHF
4	100-1707-01	1	Mount-Lamp, Warning
5	100-1732	1	Cluster-Lamp
6	63-8360	2	Key-Ignition
7	104-7429	1	Hour Meter-Dc, Mini
7:1	104-4234	1	Clip-Mounting, Hourmeter
8	104-7410	1	Wire Harness, Dingo Kubota
9	32105-13	2	Screw-SHH
10	98-7249	3	Relay
11	32105-8	2	Screw
12	52-5910	1	Ring-Retaining
13	3272-1	1	Pin-Cotter
14	321-4	2	Screw-HH
15	99-1423	1	Rod-Linkage, Threaded
16	3220-1	1	Nut-Jam
17	99-5006	1	Solenoid-Kubota
18	2412-31	1	Clamp-Boden
19	321-6	3	Screw-HH
20	100-2057	1	Regulator ASM

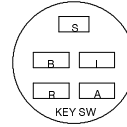
Ref. No.	Part No.	Qty.	Description
21	98-7611	1	Controller-Glow
22	100-2215	1	Washer-Spring
23	100-2171	1	Nut-Hexagon
24	72-4310	3	Switch
25	237-42	3	O-Ring
26	3296-42	8	Nut-Lock NI
27	3256-21	1	Washer-Flat
28	32144-87	1	Screw-Forming, Thread
30	2412-72	1	Clip-Closed, Insulated

Electrical Schematic

KUBOTADINGO SCHEMATIC

KEY SWITCH P/N 111216

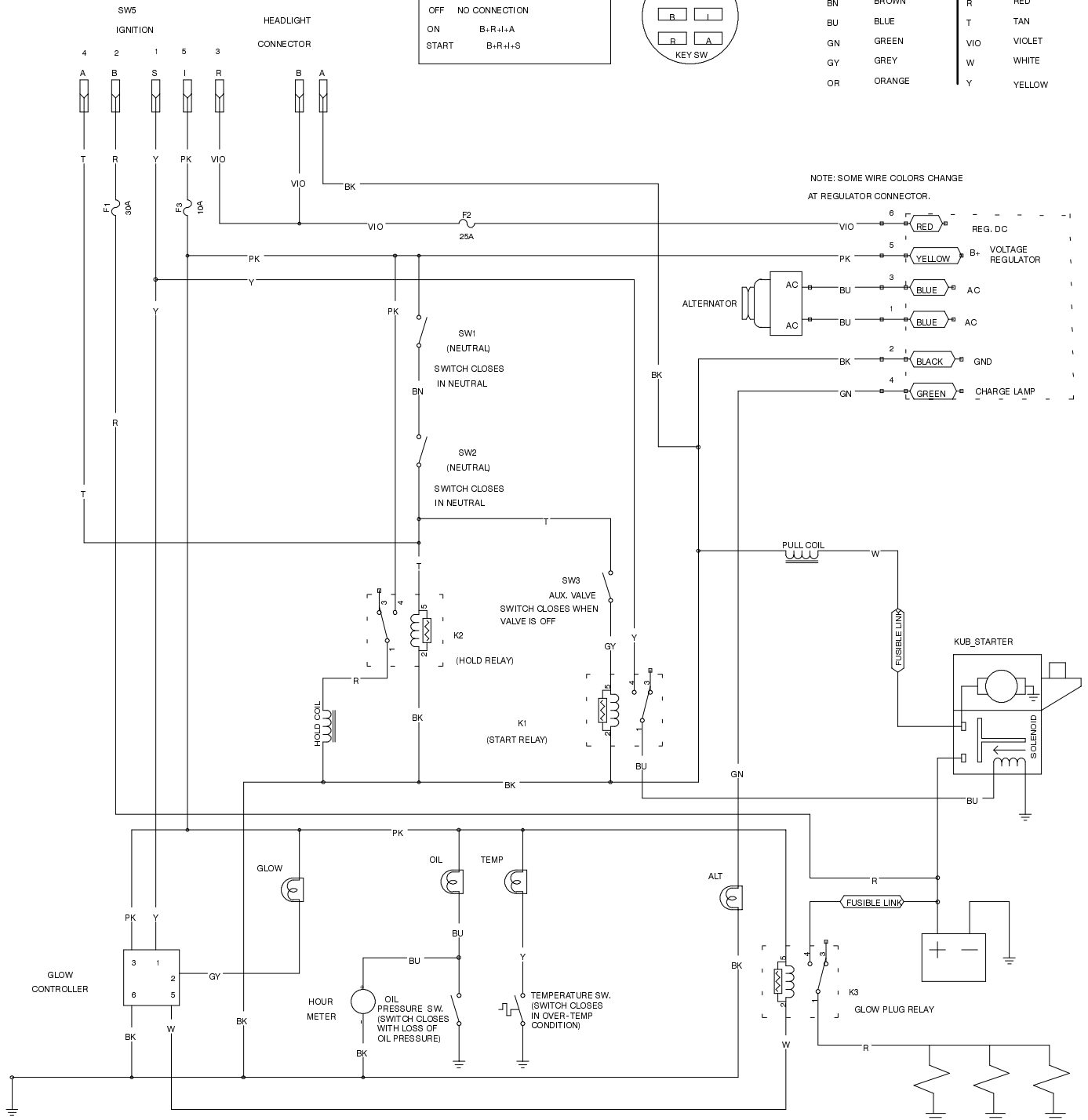
OFF	NO CONNECTION
ON	B-R-I-A
START	B-R-I-S



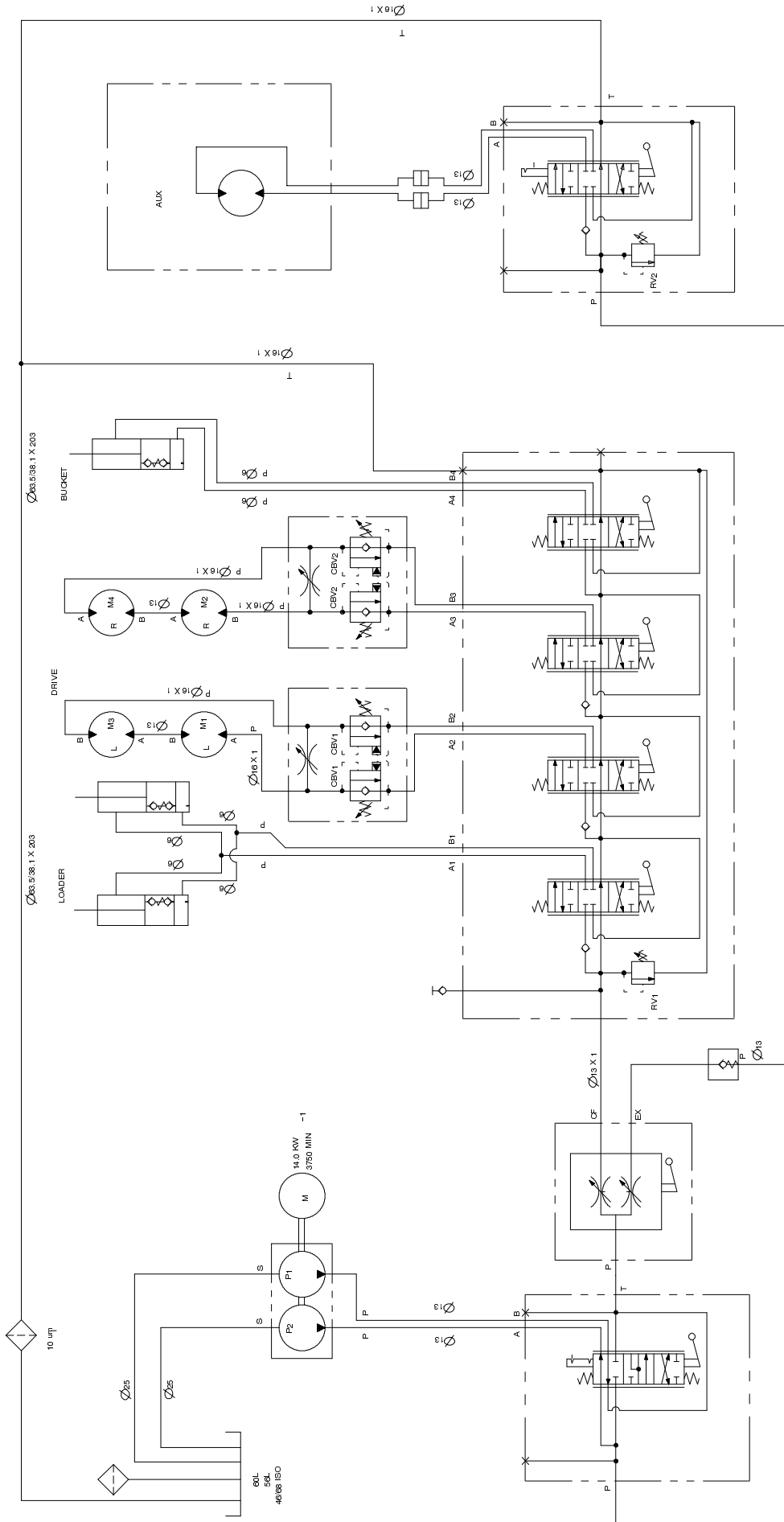
WIRE COLOR CODES

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

NOTE: SOME WIRE COLORS CHANGE AT REGULATOR CONNECTOR.

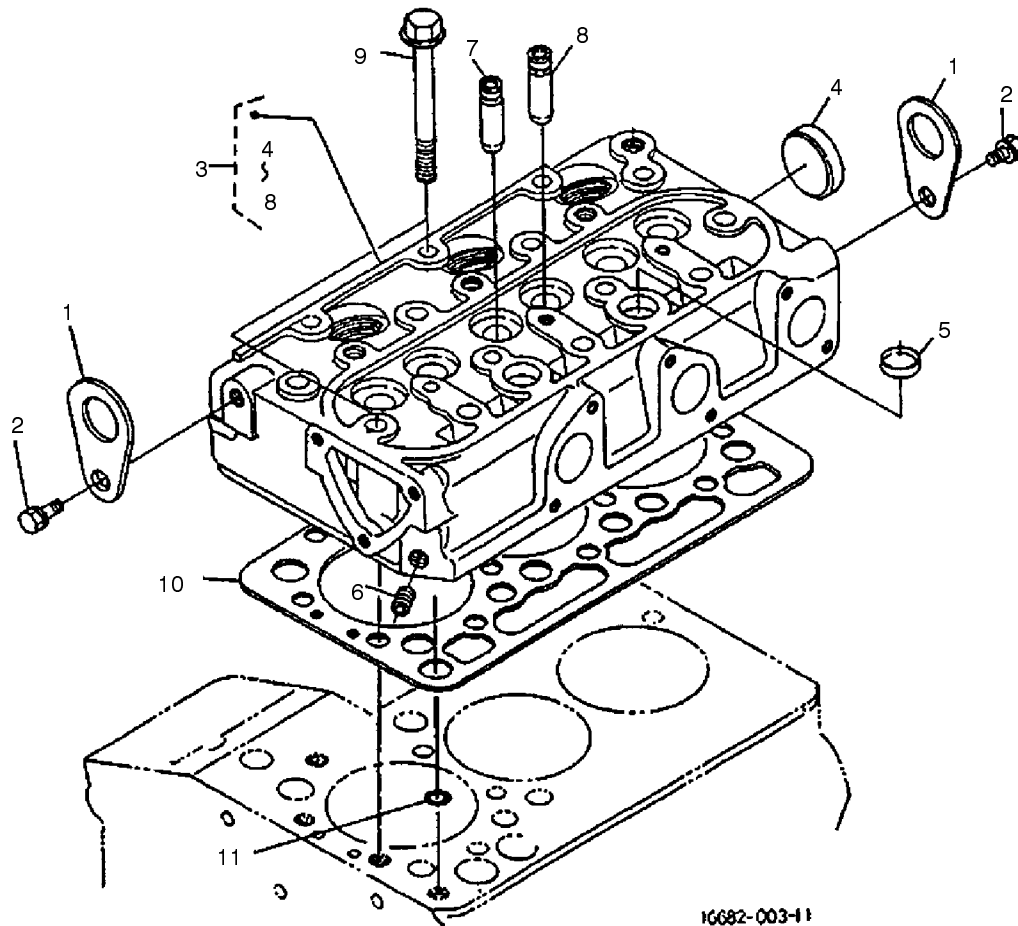


Hydraulic Schematic



DISPLACEMENT A		NO PRESSURE CHART	
COMPONENT	DISPLACEMENT	PRESSURE	FLOWRATE*
COMPONENT	CU IN/REV	PSI	GPM
P1	0.55 CU/IN		8.5
P2	0.24 CU/IN		3.7
M1, M3	20.1 CU/IN		
M2, M4	20.1 CU/IN		
RV1		3225 PSI	
RV2		3000 PSI	
CBV1		1000 PSI	
CBV2		1000 PSI	
		222 BARS	
		207 BARS	
		69 BARS	
		69 BARS	

* FLOWRATE CALCULATED AT 3750 RPM AND 90% EFFICIENCY.



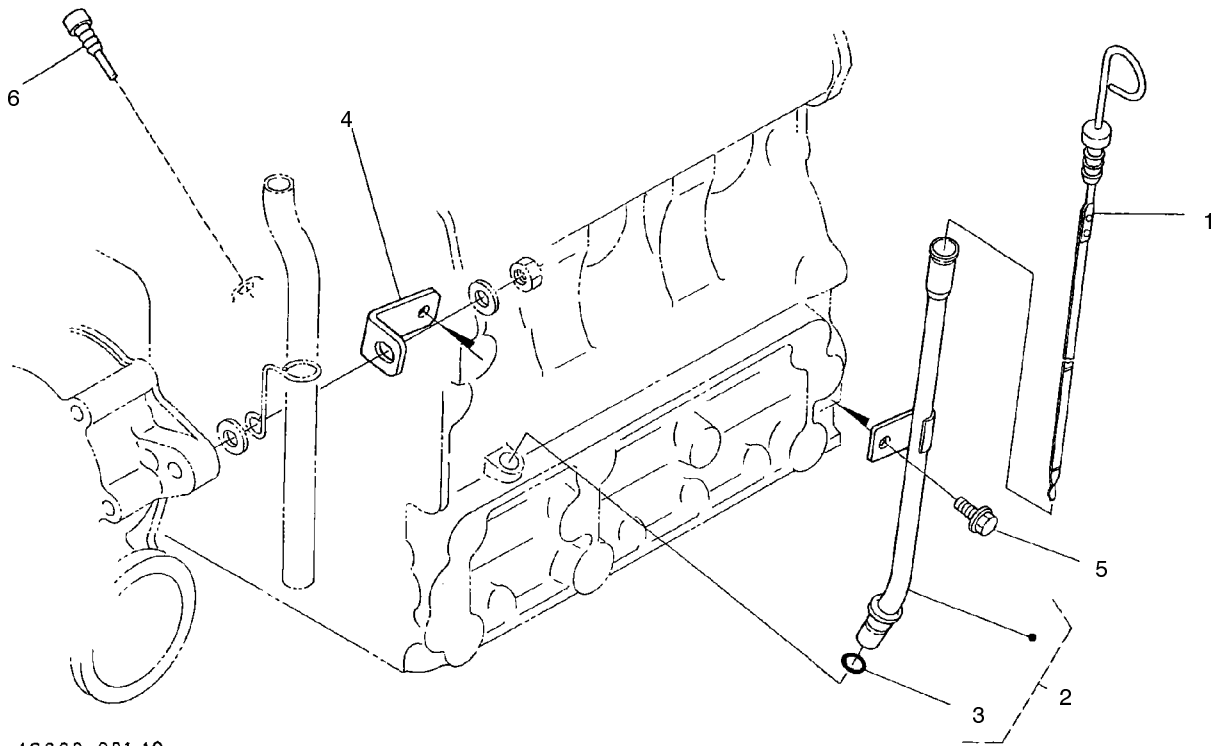
16682-003-11

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



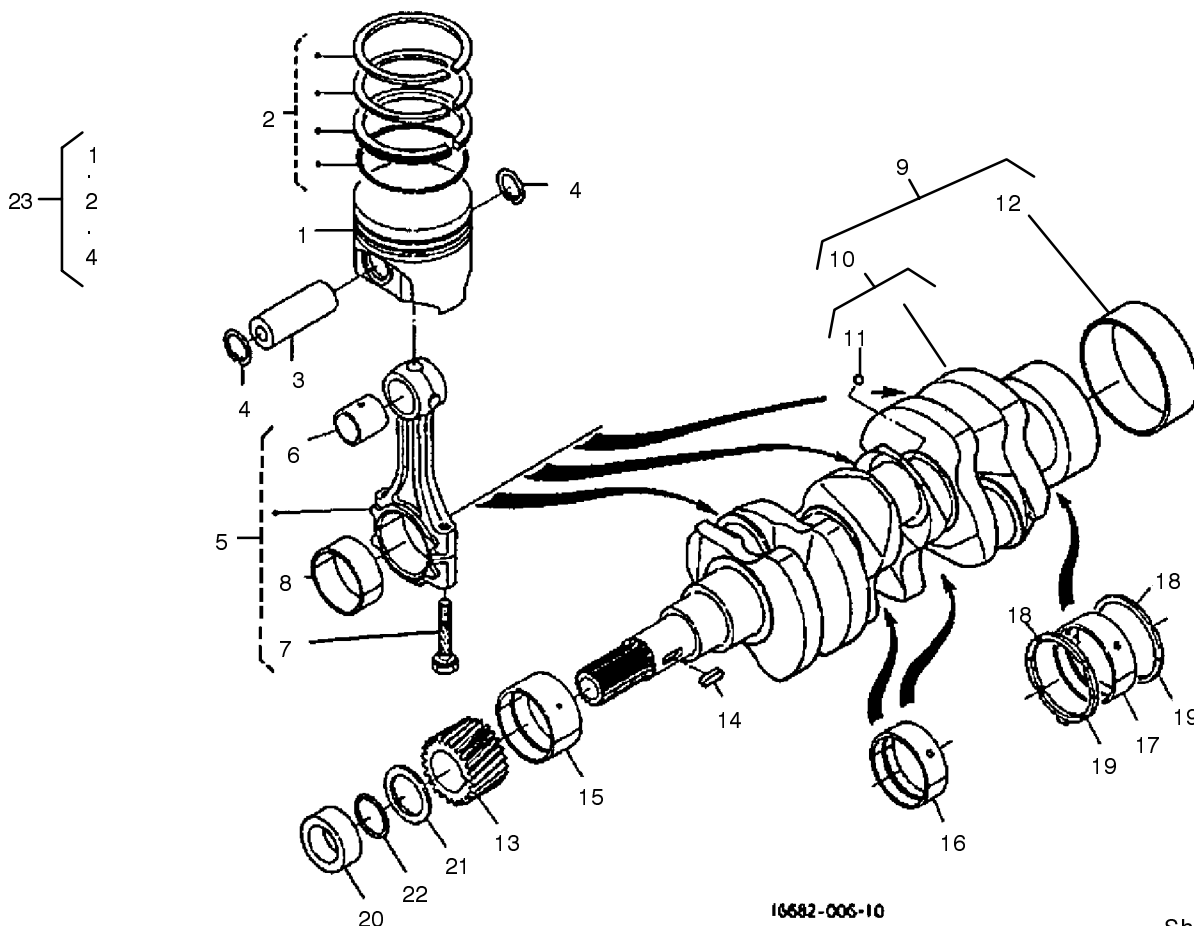
1G299-081-10

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



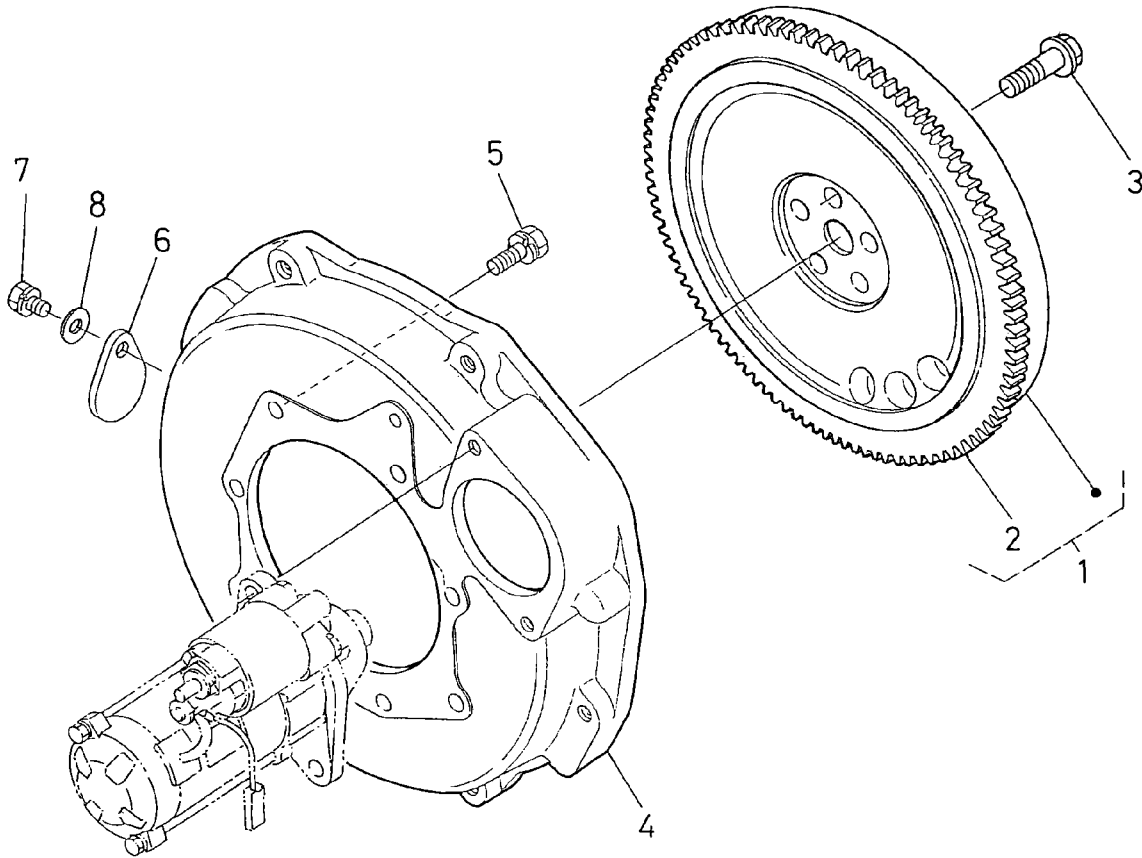
16682-006-10

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



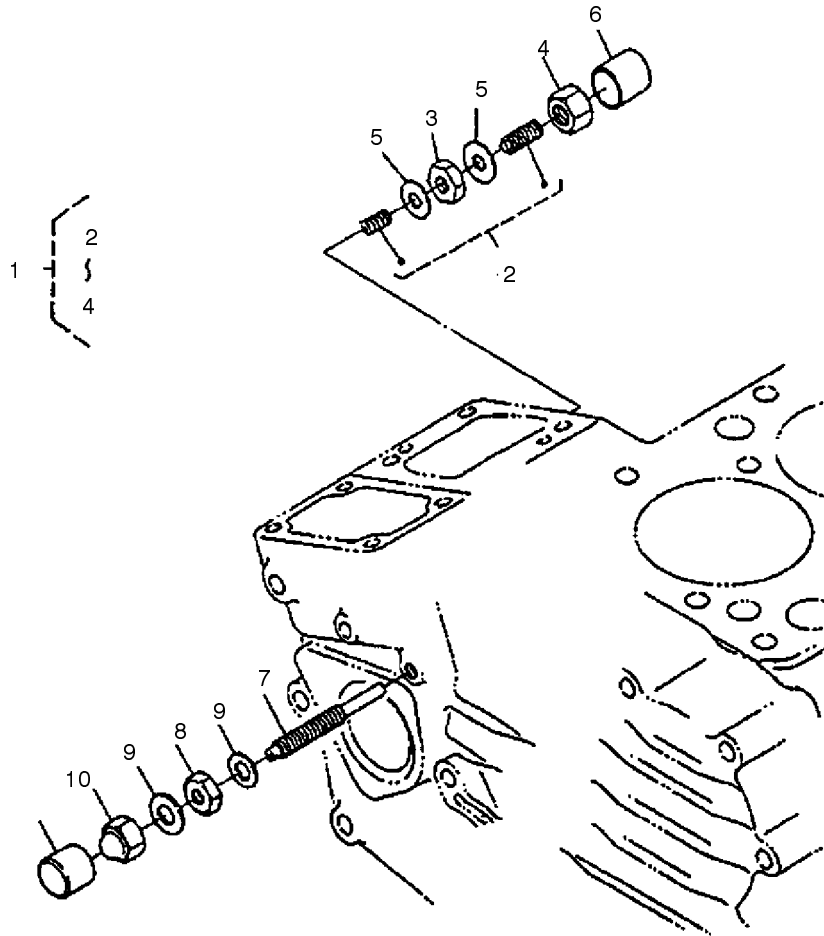
1G299-080-10

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

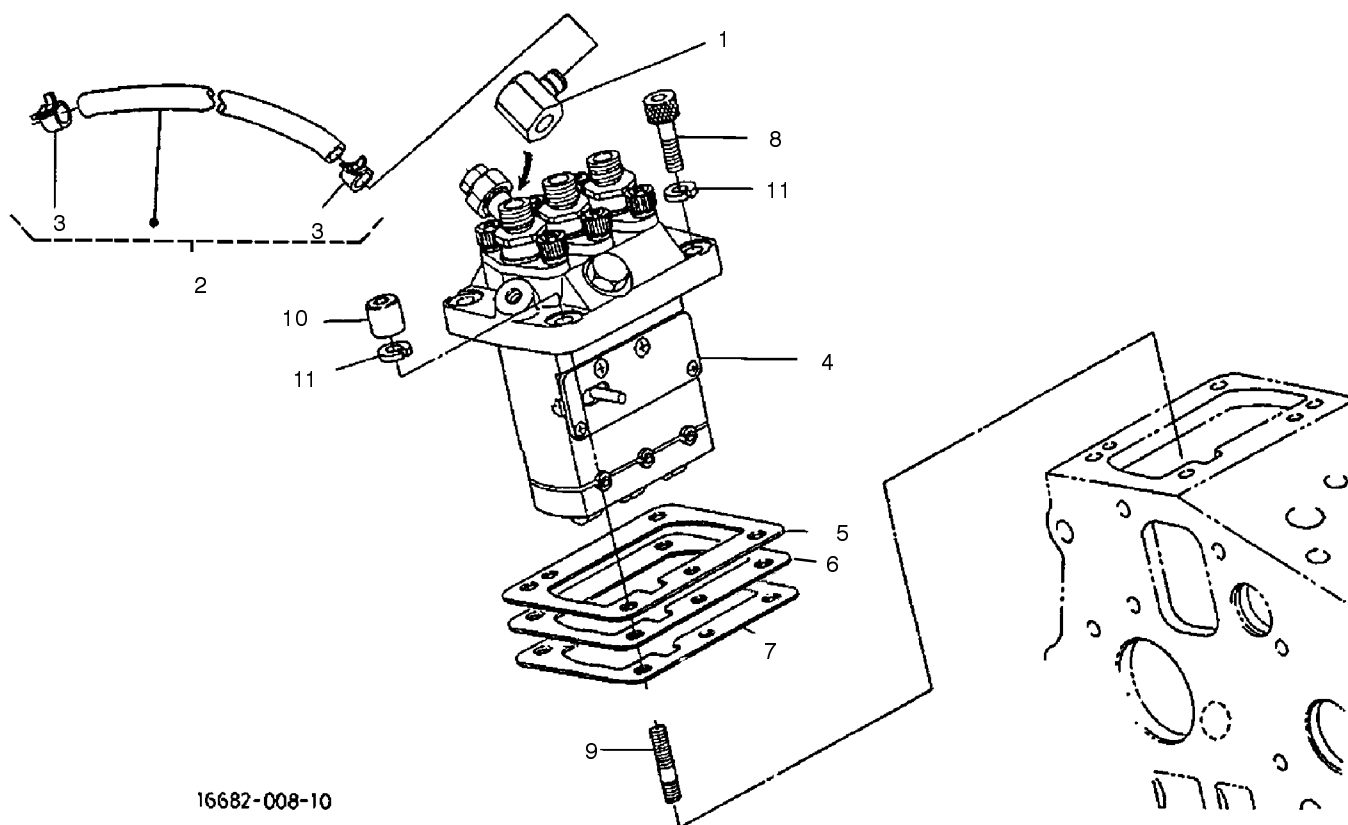


Sheet No.:13

Engine Stop Lever Assembly

Ref. No.	Part No.	Qty.	Description
1	100-1898	1	Idle Apparatus ASM
2	100-1899	1	Adj. Bolt ASM
3	100-1846	1	Nut
4	100-1901	1	Nut-Cap
5	98-7428	2	Gasket
6	100-1902	1	Cap
7	100-1900	1	Bolt-Adjusting
8	100-2175	1	Nut-Lock
9	98-7654	2	Gasket
10	98-9441	1	Nut-Cap

Ref. No.	Part No.	Qty.	Description

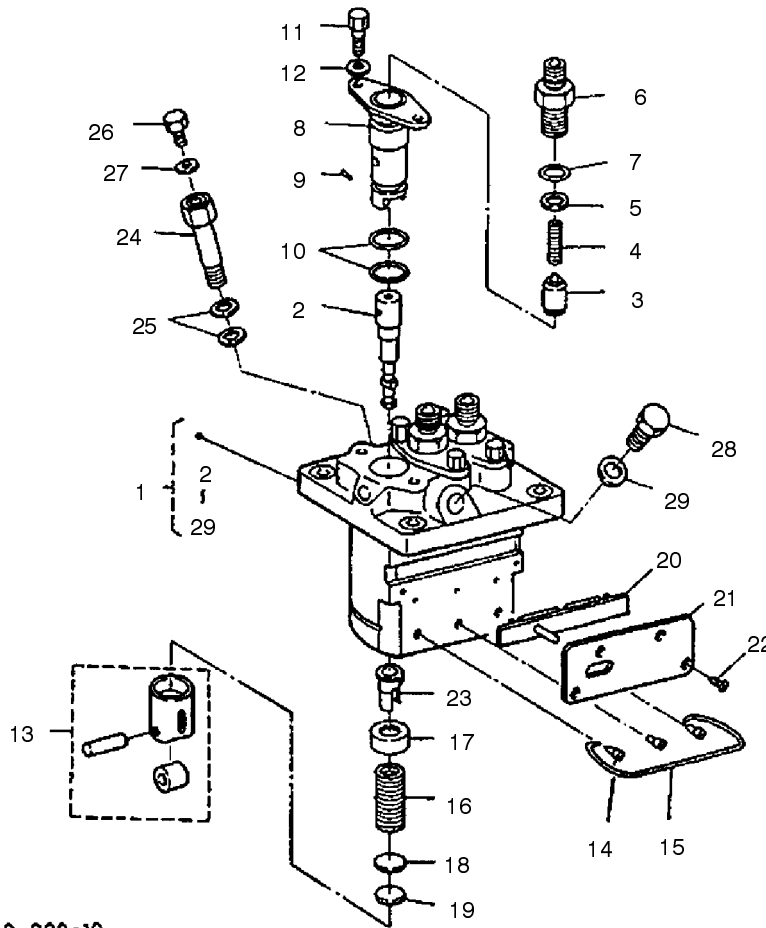


16682-008-10

Sheet No.:14

Injection Pump Assembly

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	100-1928	1	Joint-Eye				
2	100-1842	1	Fuel Pipe ASM				
3	100-2217	2	Clip-Pipe				
4	100-1759	1	Inj. Pump ASM				
5	98-9456	1	Shim				
6	98-9457	1	Shim-Injection (0.25mm)				
7	98-9458	1	Shim-Injection (0.30mm)				
8	98-9361	2	Bolt-HSH				
9	98-9438	2	Stud				
10	98-9440	2	Nut,-Cap				
11	98-9367	4	Washer-Spring				

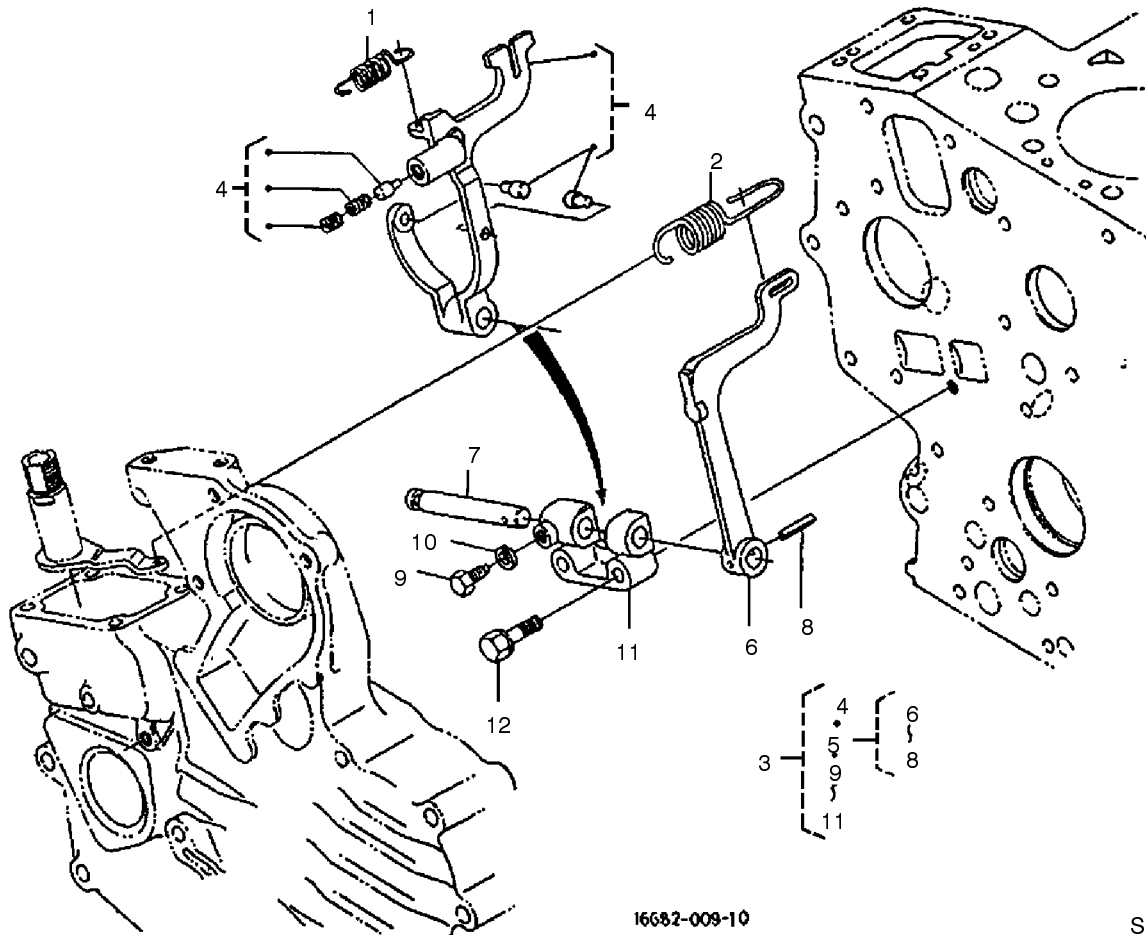


16689-009-10

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				



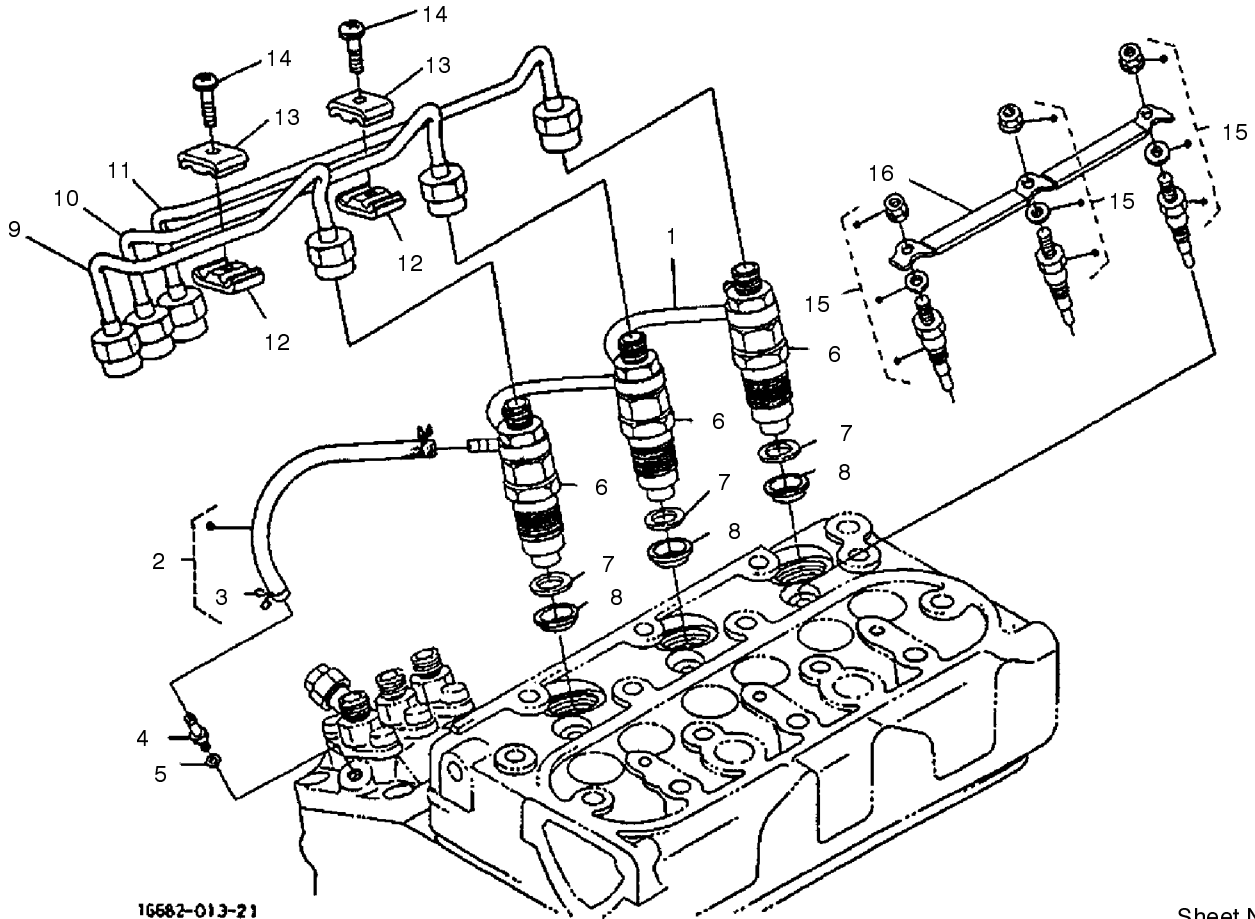
16682-009-10

Sheet No.:16

Governor Assembly

Ref. No.	Part No.	Qty.	Description
1	100-1911	1	Spring-Start
2	100-2059	1	Spring, Governor
3	100-1981	1	Assy Lever, Fork
4	100-2241	1	Lever-Fork, Comp.
5	100-1905	1	Fork Lever ASM
6	100-1907	1	Lever, Fork
7	100-1908	1	Shaft, Fork Lever
8	100-1751	1	Pin, Spring
9	100-1845	1	Bolt
10	100-2204	1	Washer-Spring
11	100-1909	1	Holder, Fork Lever
12	100-1763	2	Bolt

Ref. No.	Part No.	Qty.	Description



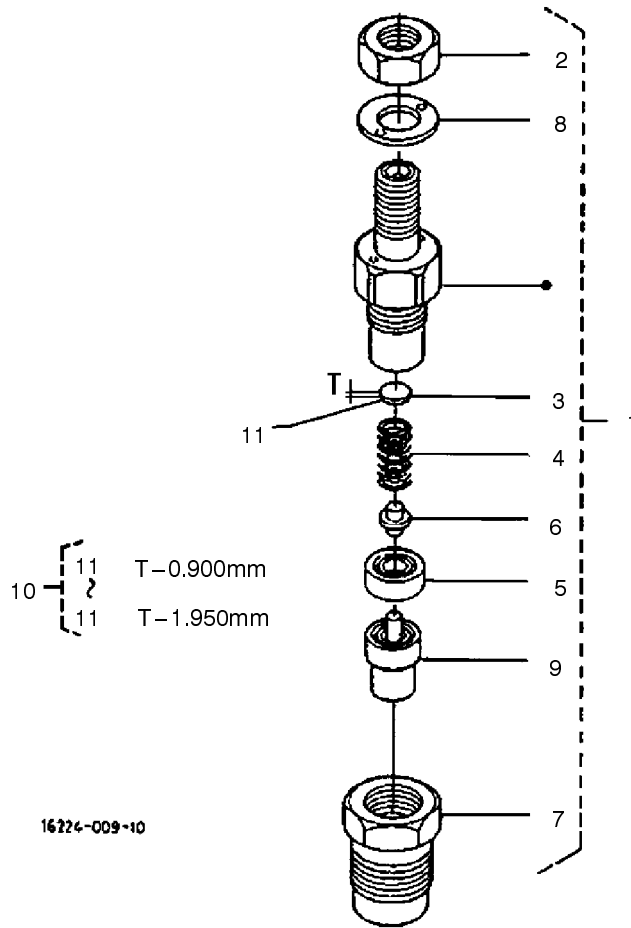
16582-013-21

Sheet No.:18

Nozzle Holder and Glow Plugs Assembly

Ref. No.	Part No.	Qty.	Description
1	100-1960	1	Over Flow Pipe ASM
2	98-9420	1	Over Flow Pipe ASM
3	98-7671	2	Clip-Pipe
4	98-9431	1	Screw-Bleeder, Air
5	98-7654	1	Gasket
6	100-1758	3	Nozzle Holder ASM
7	98-7676	3	Gasket
8	98-7677	3	Seal
9	100-2011	1	Pipe-Injection
10	100-2013	1	Pipe-Injection
11	100-2036	1	Pipe-Injection
12	98-7682	2	Clamp-Pipe
13	98-7683	2	Clamp-Pipe
14	98-7684	2	Screw,w/Washer
15	100-1854	3	Plug-Glow
16	100-2037	1	Cord-Plug, Glow

Ref. No.	Part No.	Qty.	Description

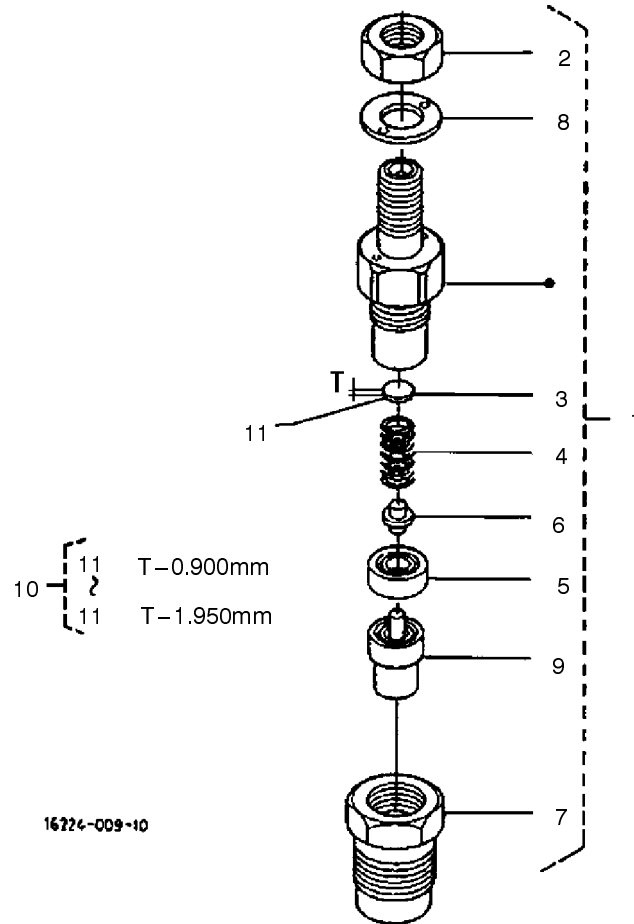


Sheet No.:19

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)

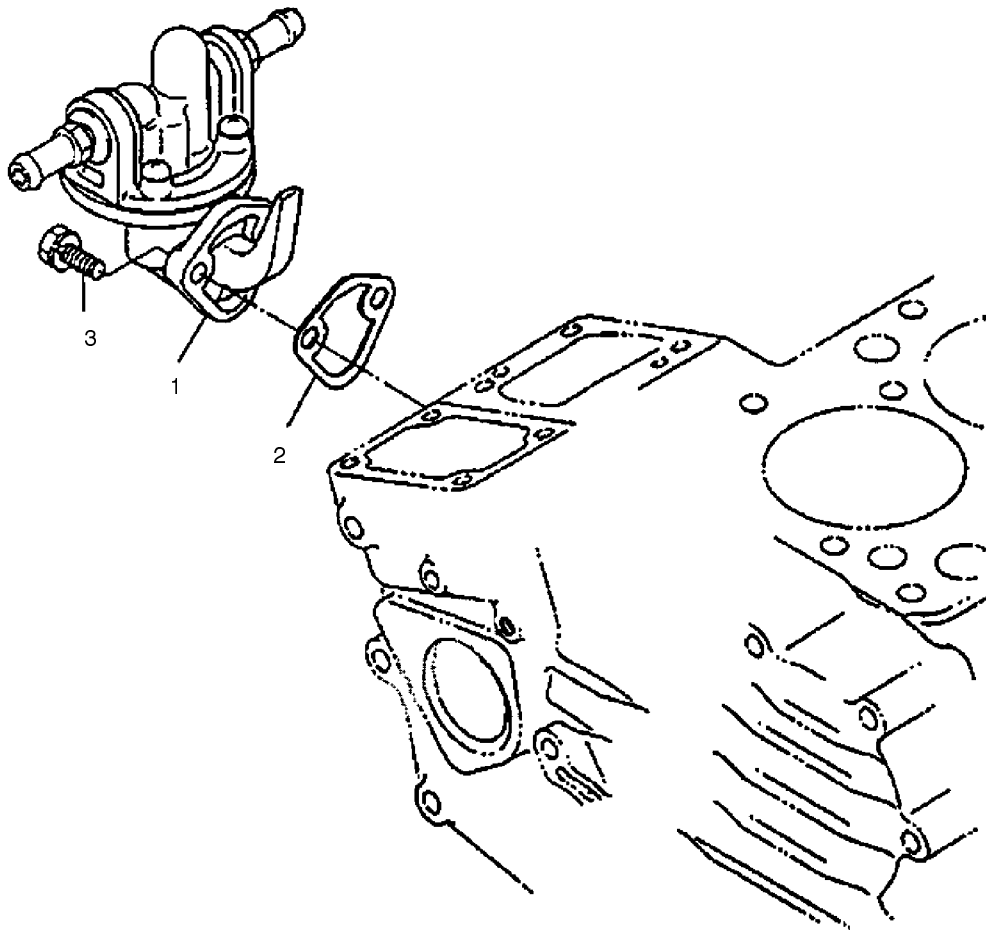


Sheet No.:19

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

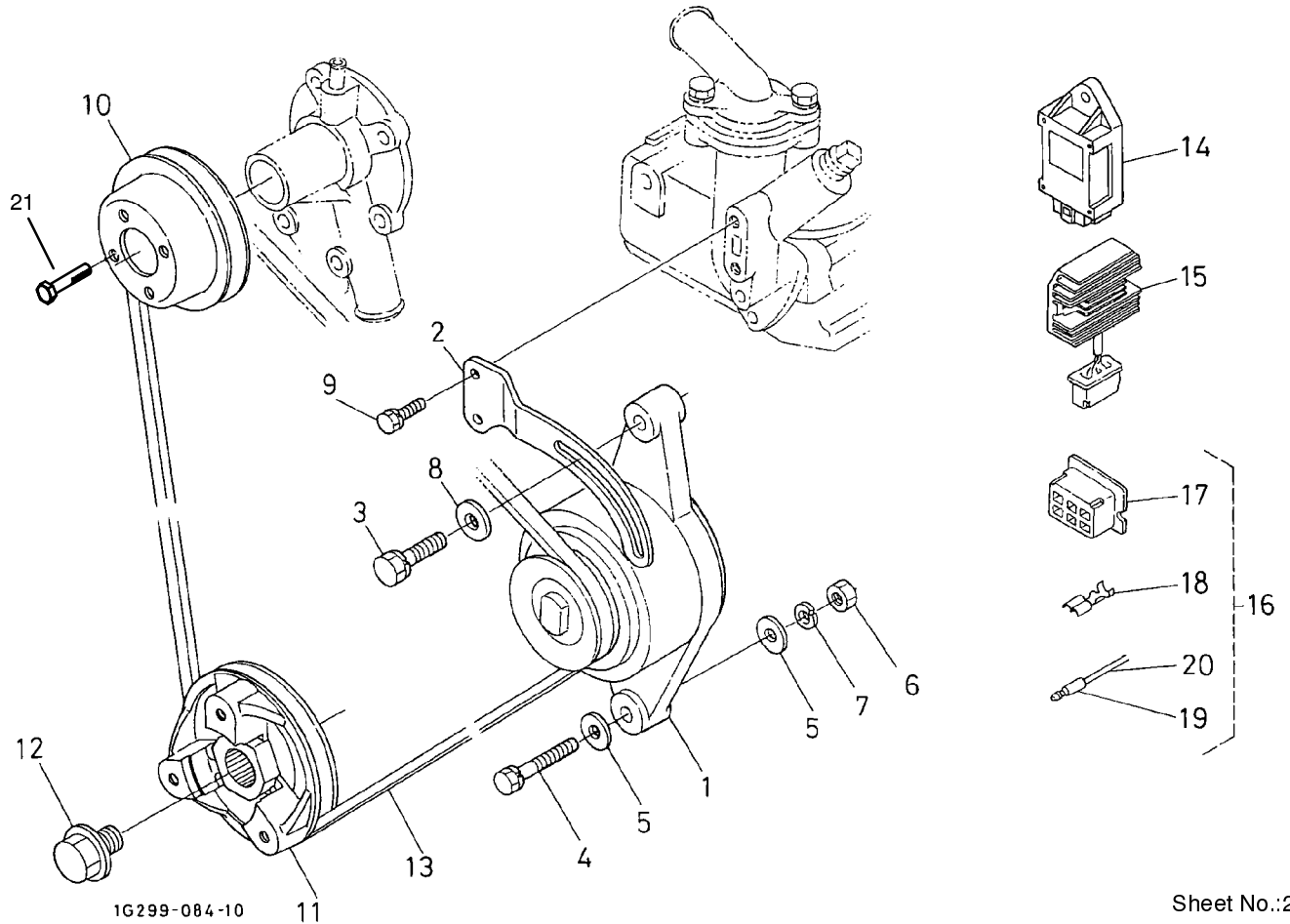


Sheet No.:20

Fuel Pump (Mechanical)

Ref. No.	Part No.	Qty.	Description
1	100-2232	1	Fuel Pump ASM
2	98-9636	1	Gasket-Pump, Fuel
3	98-7692	2	Bolt

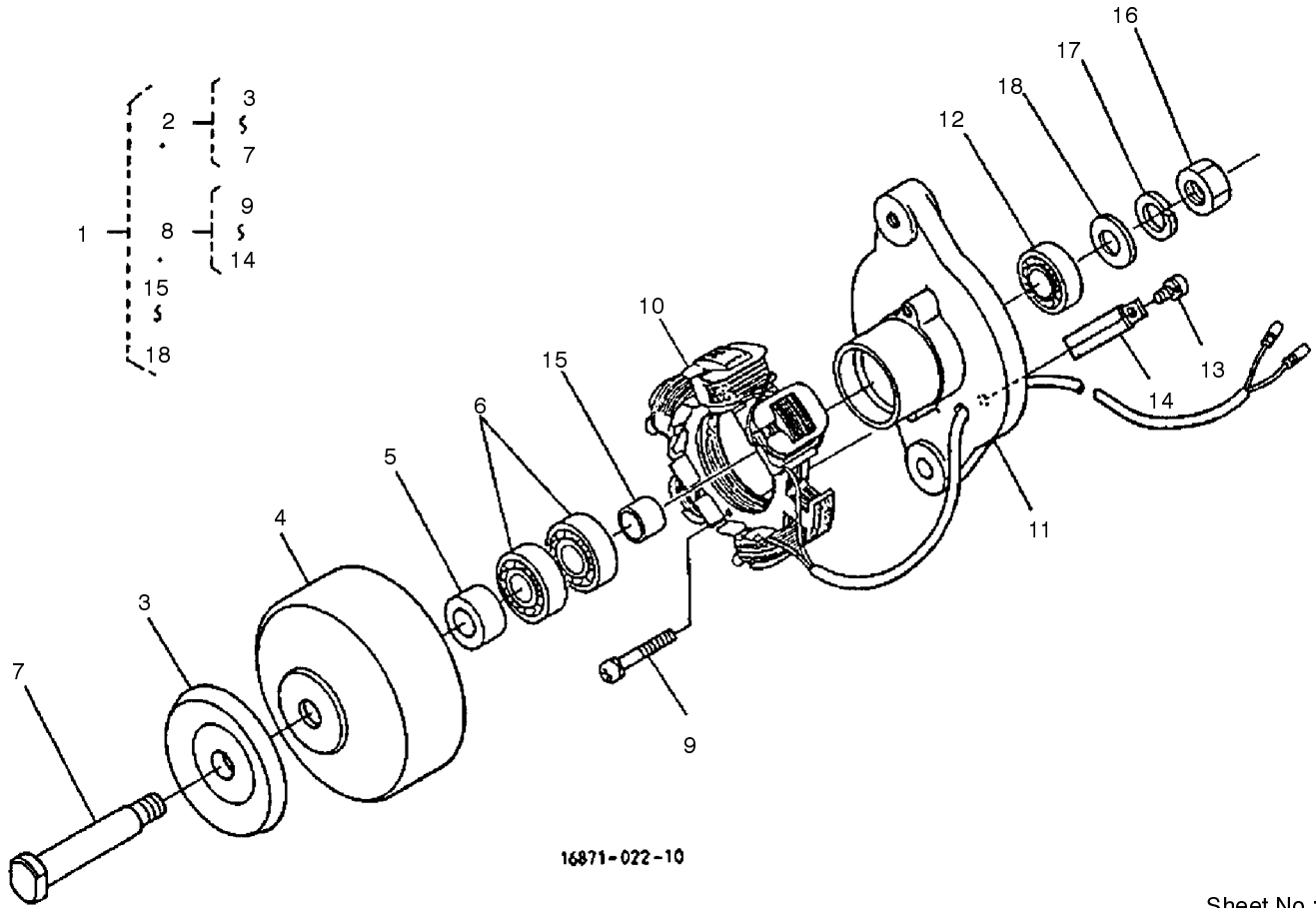
Ref. No.	Part No.	Qty.	Description



Sheet No.:21

Dynamo and Pulley Assembly

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	100-2168	1	Dynamo ASM				
2	100-2214	1	Stay-Dynamo				
3	98-7697	1	Bolt				
4	100-1771	1	Bolt				
5	98-7660	2	Washer-Plain				
6	98-7739	1	Nut				
7	98-7535	1	Washer-Spring				
8	100-1782	1	Washer-Plain				
9	98-7692	2	Bolt				
10	100-1921	1	Pulley-Fan				
11	100-2039	1	Pulley-Drive, Fan				
12	100-1978	1	Bolt				
13	100-1979	1	V-Belt				
14	98-7611	1	Controller-Glow, F/W				
15	100-2057	1	Regulator ASM				
16	100-2058	1	Coupler ASM				
17	100-2056	1	Connector				
18	98-9699	6	Terminal				
19	98-9701	2	Terminal				
20	98-9702	2	Sleeve				
21	100-1773	4	Bolt-Flange				



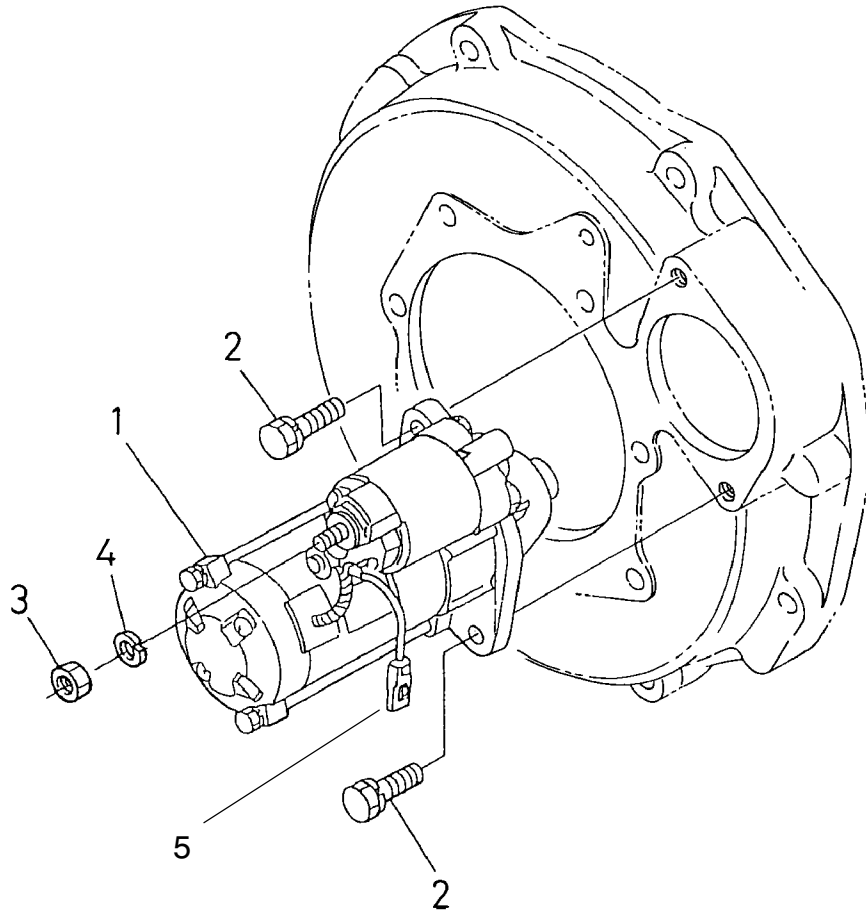
16871-022-10

Sheet No.:22

Dynamo (Complete Parts)

Ref. No.	Part No.	Qty.	Description
1	100-2168	1	Dynamo ASM
2	100-1862	1	Rotor-Comp.
3	100-2228	1	Pulley
4	100-1860	1	Rotor
5	100-2184	1	Collar
6	100-1756	2	Bearing-Ball
7	100-1867	1	Shaft-Fan
8	100-1866	1	Stator-Comp.
9	100-1848	2	Screw-Head, Round
10	100-1865	1	Stator
11	100-1861	1	Plate
12	100-1756	1	Bearing-Ball
13	100-1868	1	Screw-Head, Round
14	100-1864	1	Clamp-Cord
15	100-1844	1	Collar
16	100-1847	1	Nut
17	100-1850	1	Washer-Spring
18	100-1849	1	Washer-Plain

Ref. No.	Part No.	Qty.	Description



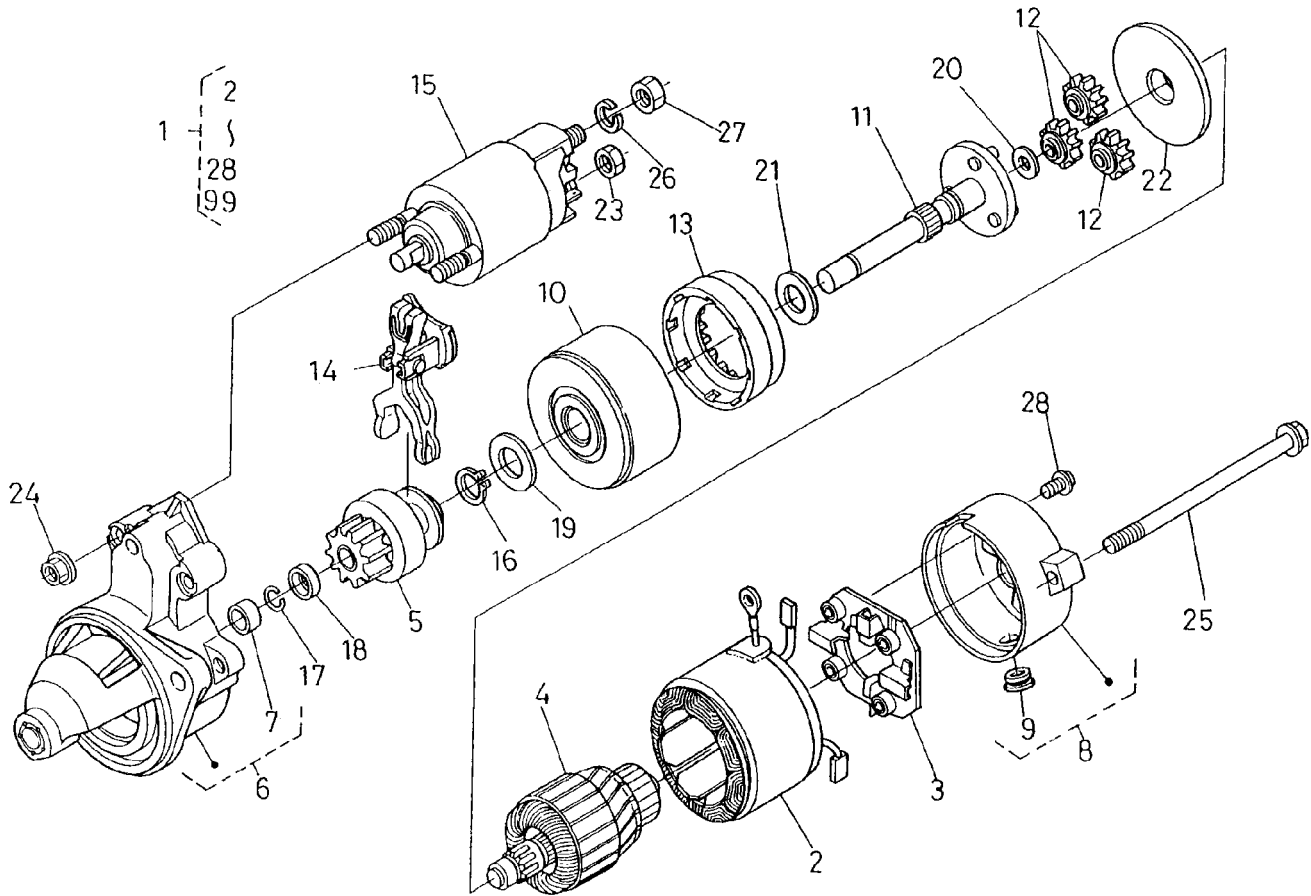
1G299-085-10

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



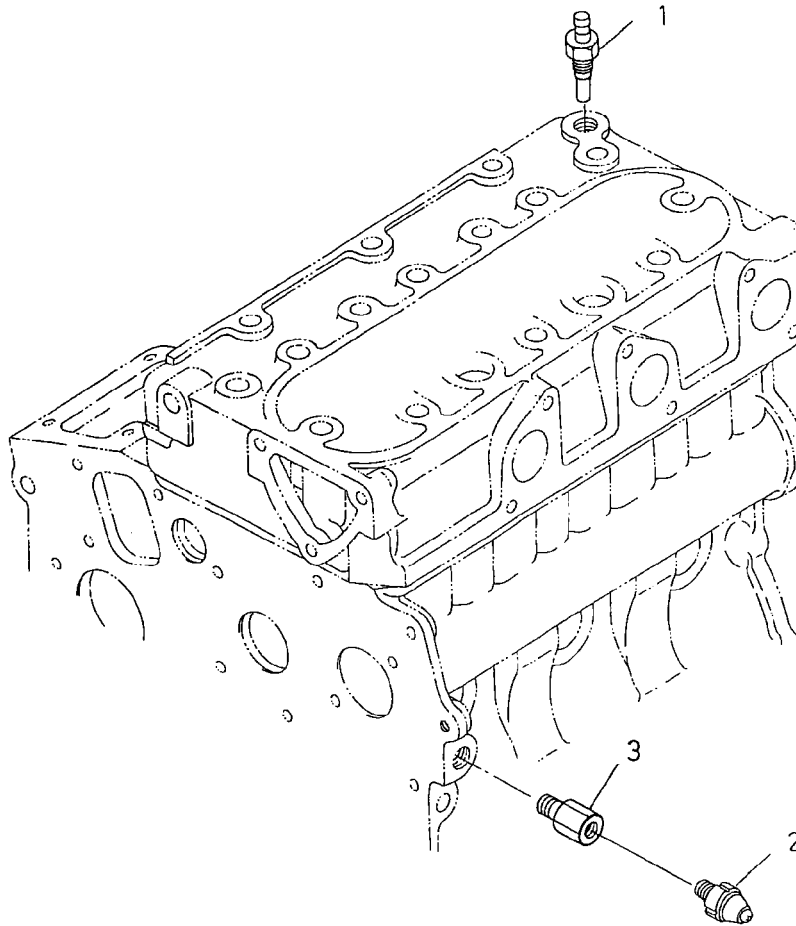
67992-001-10

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



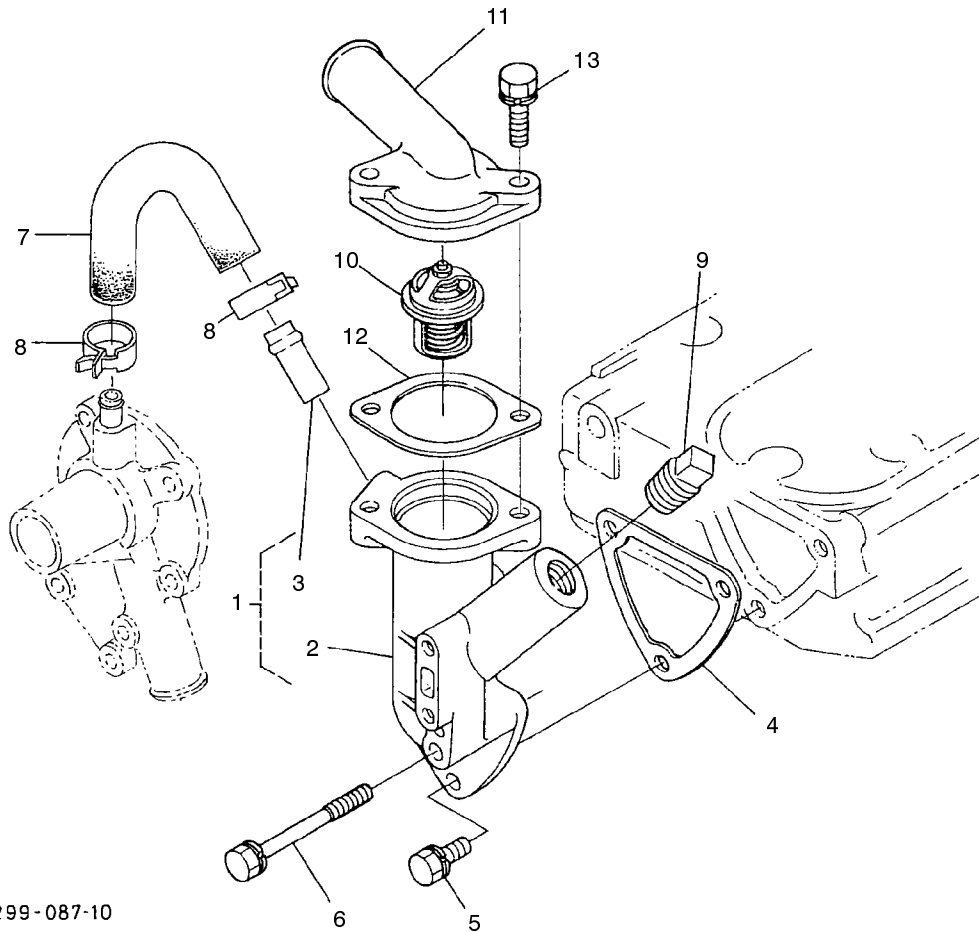
16299-086-10

Sheet No.:25

Oil Switch and Thermostat Assembly

Ref. No.	Part No.	Qty.	Description
1	99-3582	1	Thermo-Switch
2	98-7764	1	Switch-Oil
3	100-2170	1	Holder-Signal, Oil

Ref. No.	Part No.	Qty.	Description
----------	----------	------	-------------



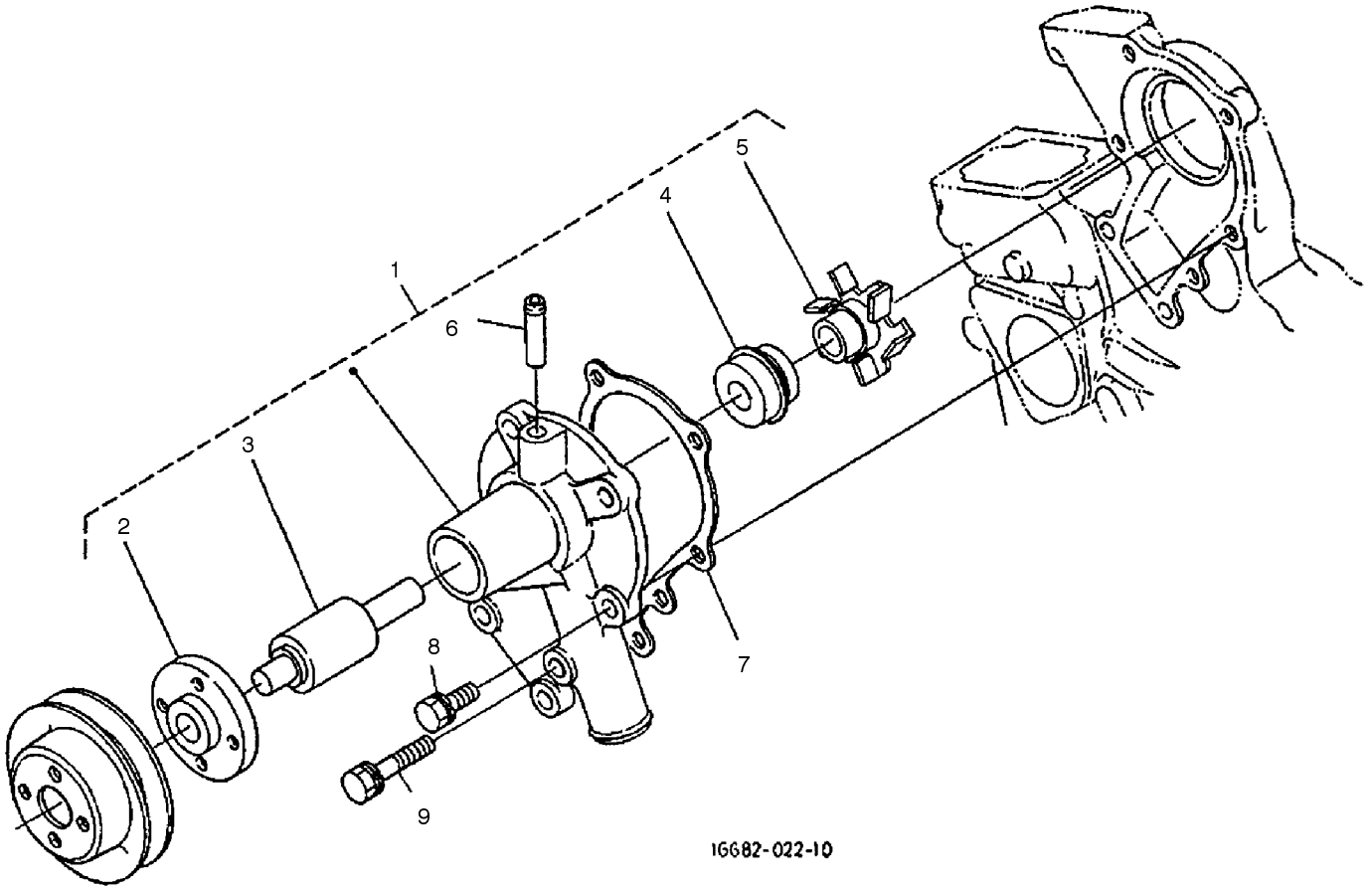
1G299-087-10

Sheet No.:26

Water Flange and Thermostat Assembly

Ref. No.	Part No.	Qty.	Description
1	100-2165	1	Flange-Water, Comp.
2	100-2166	1	Flange-Water
3	98-9580	1	Pipe-Return, Water
4	100-1919	1	Gasket-Flange, Water
5	98-7692	2	Bolt
6	100-1977	1	Bolt
7	100-2017	1	Pipe-Return, Water
8	98-9579	2	Band-Pipe
9	100-1789	1	Plug
10	100-2053	1	Thermostat ASM
11	100-1920	1	Cover-Thermostat
12	100-1869	1	Gasket-Thermostat
13	98-9353	2	Bolt

Ref. No.	Part No.	Qty.	Description



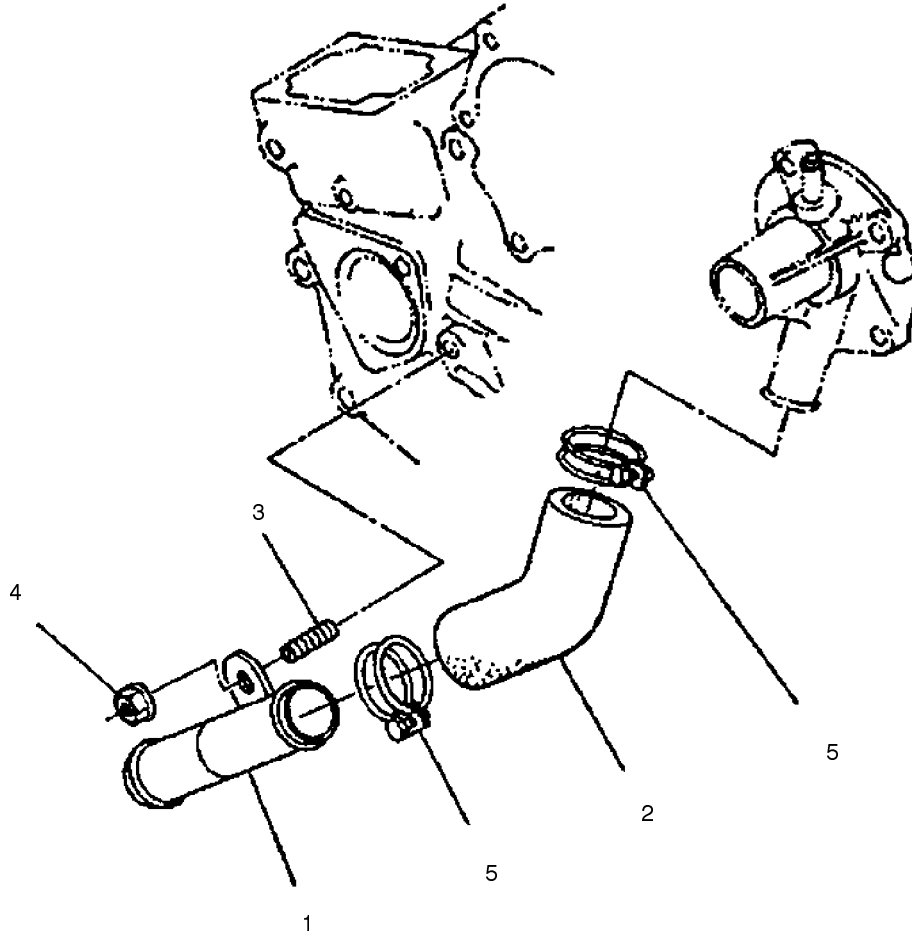
16682-022-10

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

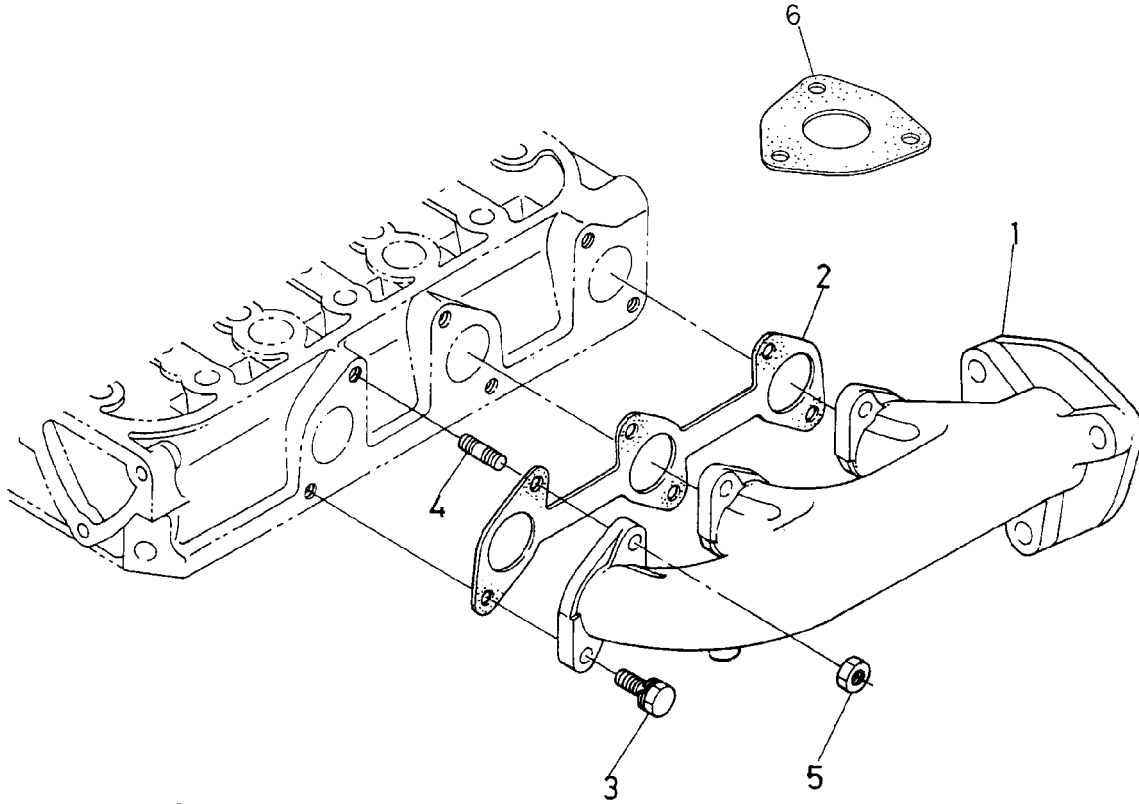


Sheet No.:28

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



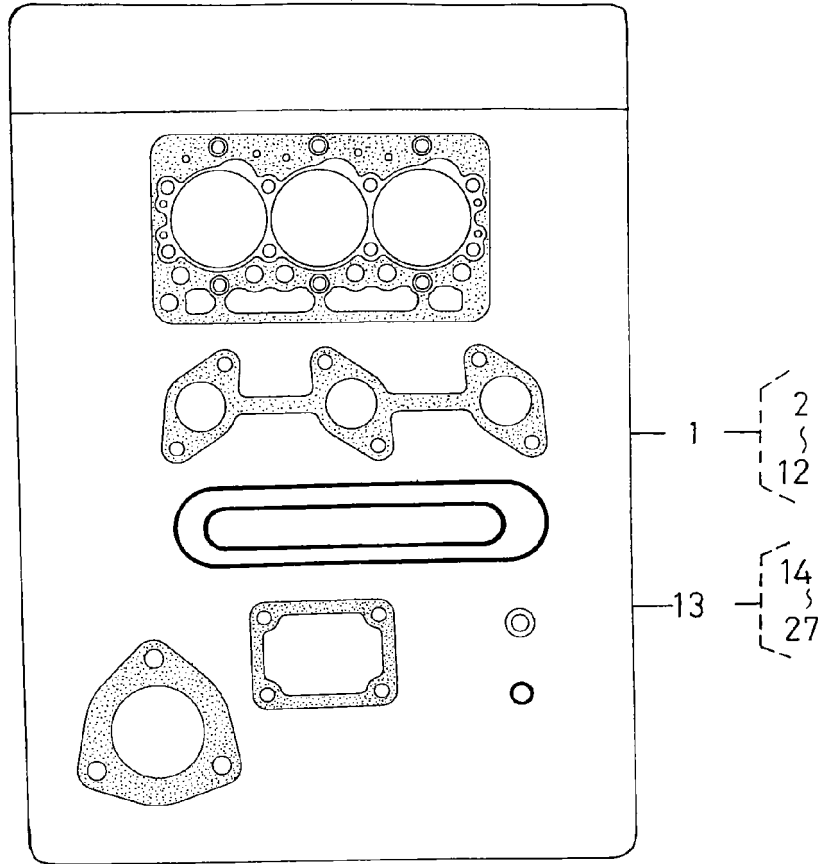
1G228-006-10

Sheet No.:31

Exhaust Manifold Assembly

Ref. No.	Part No.	Qty.	Description
1	100-2244	1	Manifold, Exhaust
2	100-1957	1	Gasket
3	100-1775	3	Bolt, Ubs
4	100-2202	3	Stud
5	100-1778	3	Nut, Ubs
6	100-2238	1	Gasket, Muffler

Ref. No.	Part No.	Qty.	Description



19449-018-10

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

