



Dingo[®] 320-D

Compact Utility Loader

Model No. 22303—220000001 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.

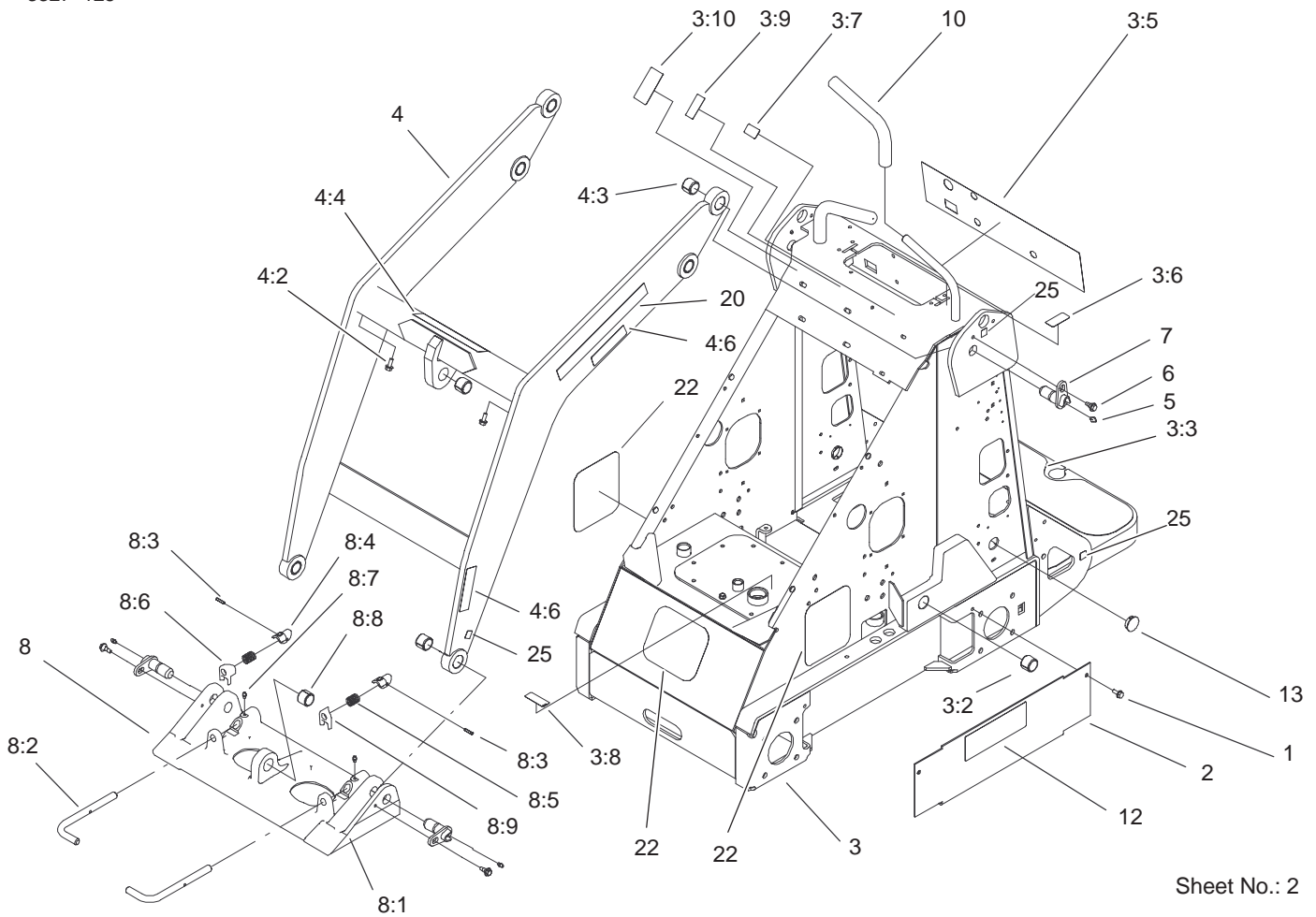
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Part Description Abbreviations

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

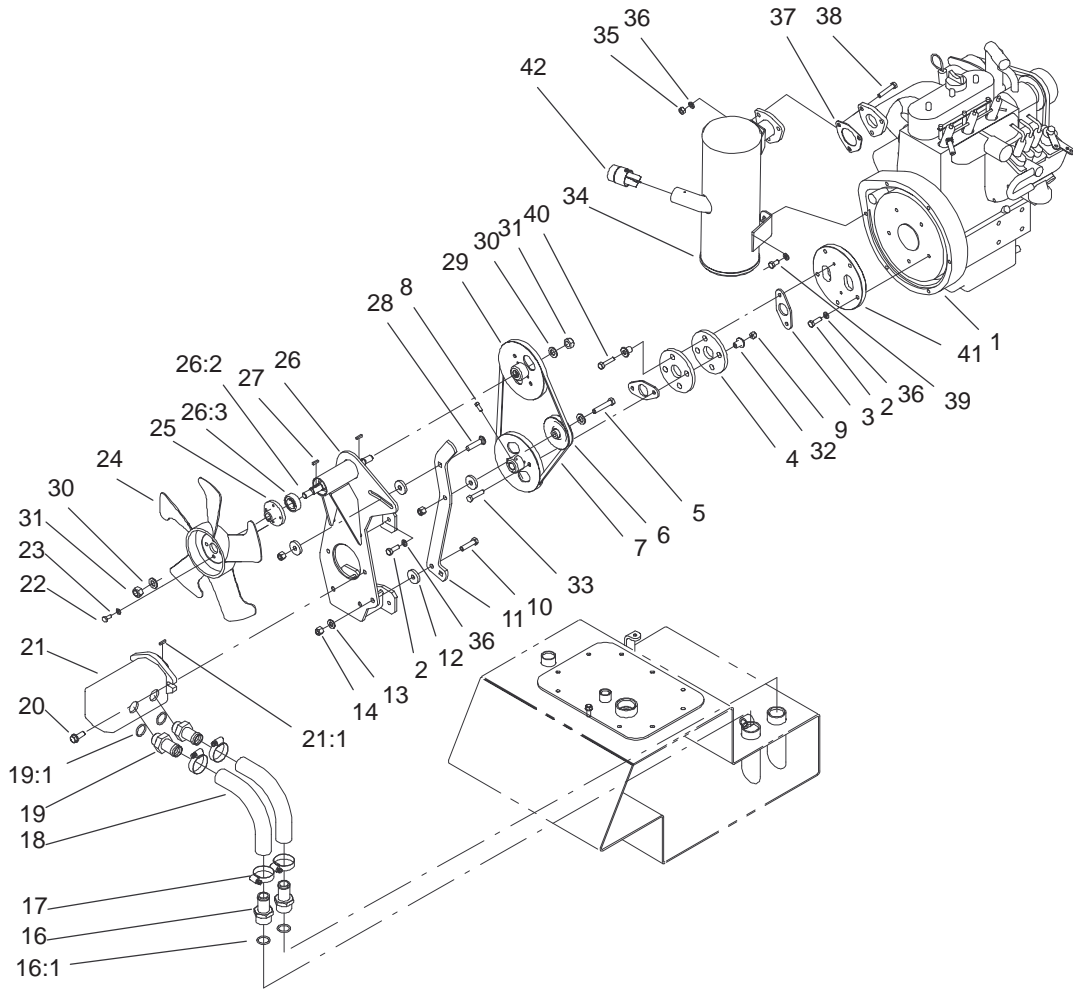


Sheet No.: 2

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	105-8375	1	Frame ASM
3:2	98-4871	2	Bushing-Tension
3:3	98-9947	2	Tread-Foot
3:5	99-3157	1	Decal-Panel, Control
3:6	98-8219	1	Decal-Throttle
3:7	98-8220	1	Decal-Limiter, Speed
3:8	105-8404	1	Decal - Hydraulic Oil, 10w30
3:9	98-8235	1	Decal-Selector
3:10	98-4677	1	Decal-Power, Auxiliary
4	105-8366	1	Loader ASM
4:2	32144-70	2	Screw-HH
4:3	98-4871	7	Bushing-Tension
4:4	98-4682	1	Decal-Caution
4:6	100-6141	4	Decal-Pinch
5	302-5	4	Fitting-Grease
6	99-5105	4	Bolt-Shoulder
7	99-1414	4	Pin-Pivot
8	105-8364	1	Quick Attach ASM
8:1	105-0245-03	1	Mount-Attach, Quick
8:2	105-8367	2	Pin-Locking
8:3	3285-1	2	Pin-Grooved
8:4	105-0246	2	Cam

Ref. No.	Part No.	Qty.	Description
8:5	98-4694	2	Spring-Compression
8:6	104-5909	1	Stop-RH
8:7	302-5	2	Fitting-Grease
8:8	98-4871	1	Bushing-Tension
8:9	104-5903	1	Stop-LH
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
20	105-8382	2	Decal - Dingo 320d
22	62-5550	3	Decal-Toro
25	93-9084	6	Decal-Point, Lift



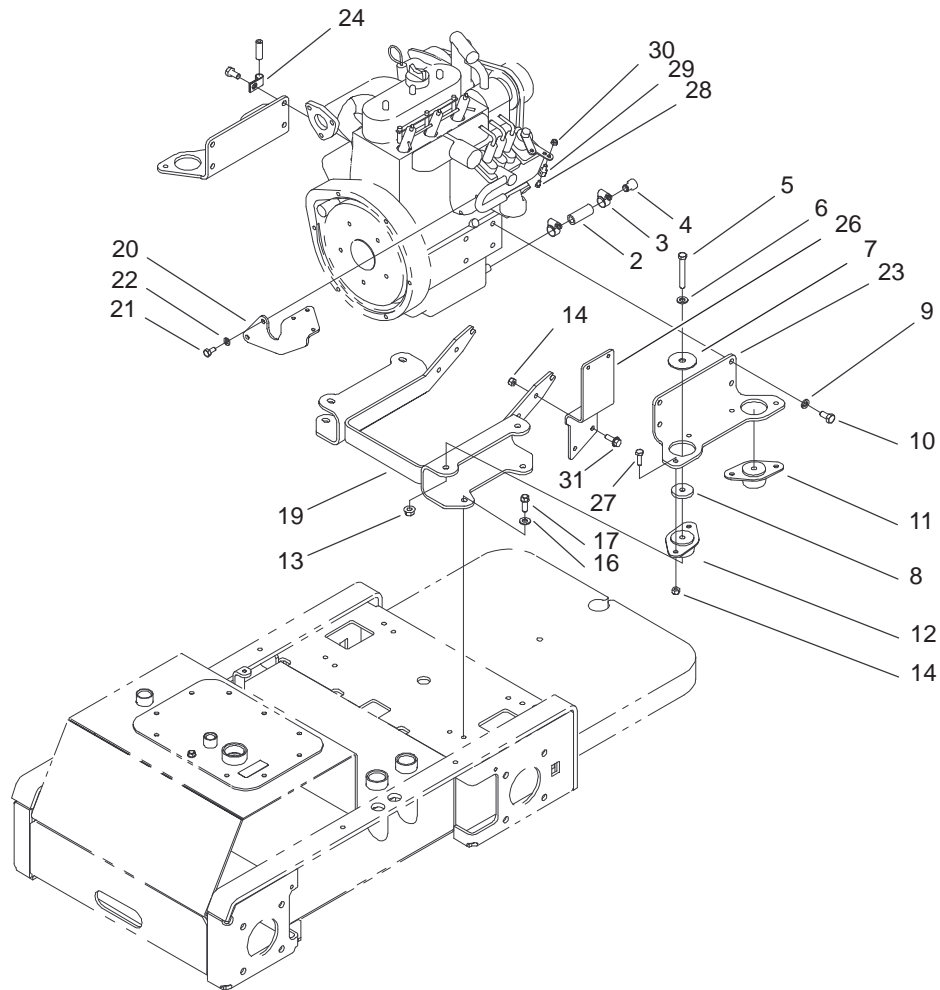
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Engine Assembly

Ref. No.	Part No.	Qty.	Description
1	98-4661	1	Engine-Kubota, D722-E
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	321-2	4	Screw-HH
23	3253-3	4	Washer-Lock
24	43-1911	1	Fan
25	105-8383	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	105-8390	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
42	75-6880	1	Screen-Arrester, Spark

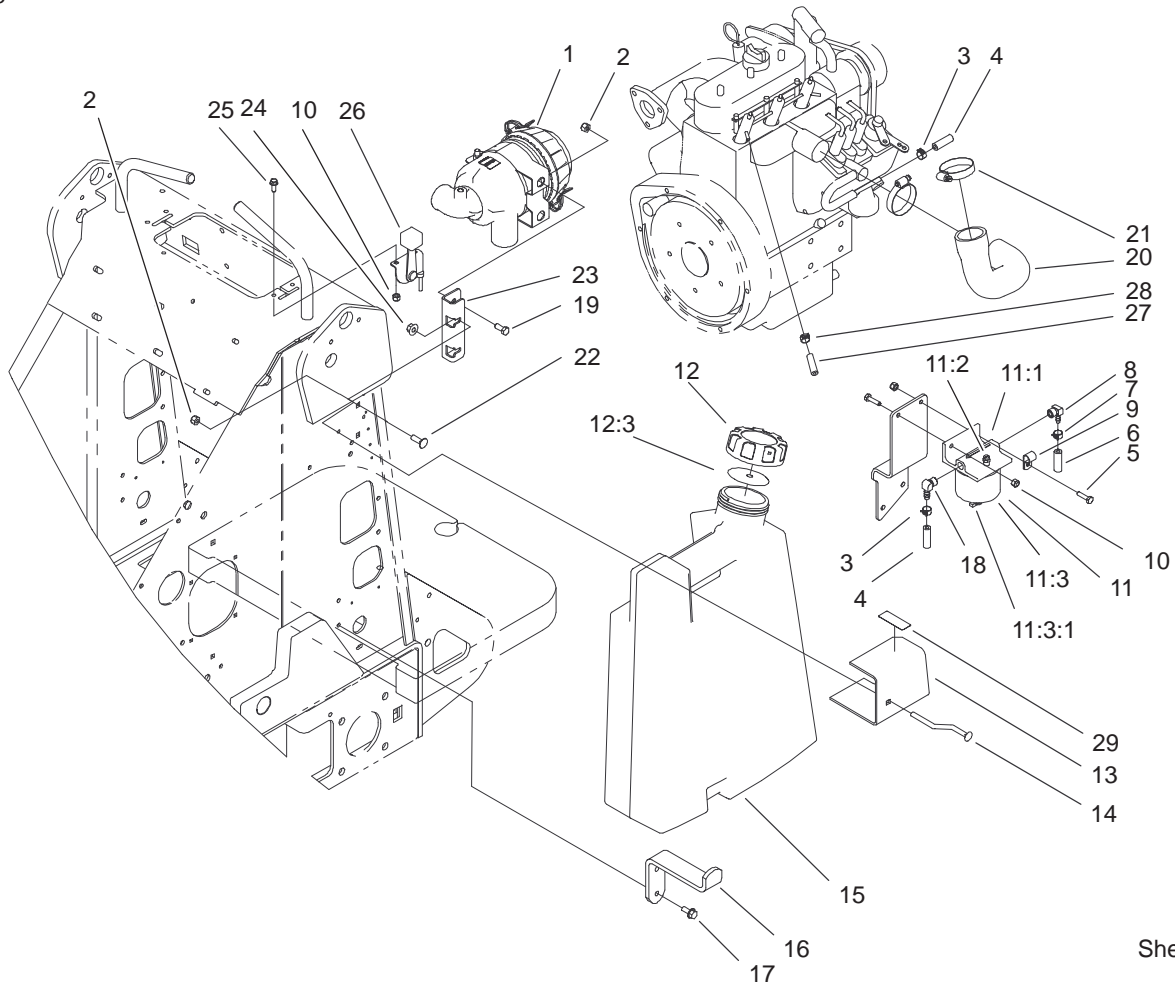
* Not illustrated



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, NI				
16	3256-80	4	Washer-Flat				
17	95-1726	4	Screw-Taptite W/Patch				
19	98-0066-01	1	Engine Mount Wa				
20	105-4054-01	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				



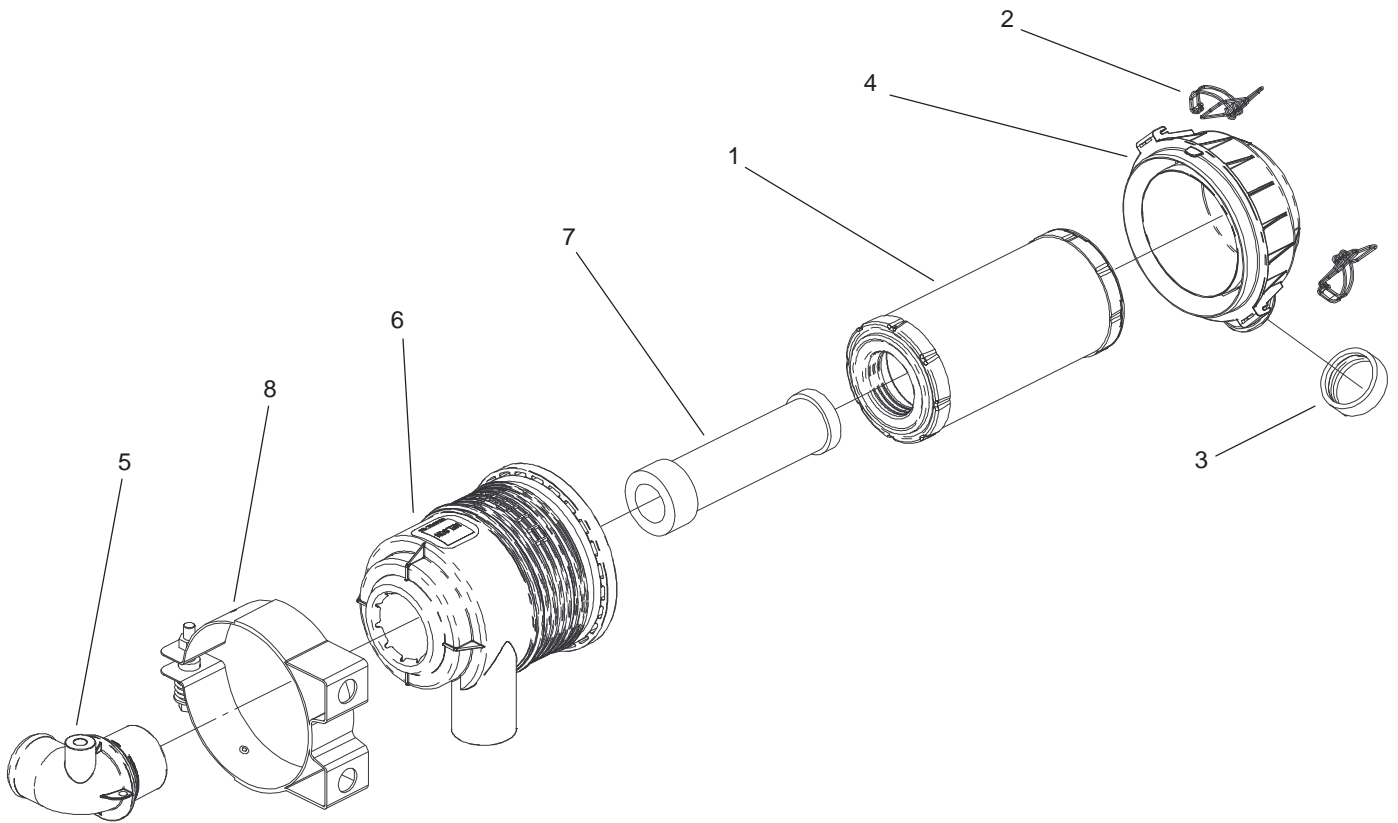
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Fuel Tank and Air Filter Assembly

Ref. No.	Part No.	Qty.	Description
1	99-3160	1	Air Cleaner ASM
2	3296-29	3	Nut-Lock, NI
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
13	99-1444-03	1	Plate-Mount, Left
14	98-4657	1	Bolt-Mount
15	105-4050	1	Fuel Tank ASM, Diesel LH
*15:1	46-6560	2	Bushing
*15:2	100-1596	1	Fitting-90°
*15:3	104048	1	Valve-Fuel
16	98-4656-03	1	Mount-Bottom, Tank
17	32144-70	2	Screw-HH

Ref. No.	Part No.	Qty.	Description
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	Clamp-Line, Fuel
29	93-6680	1	Decal-Diesel

* Not illustrated

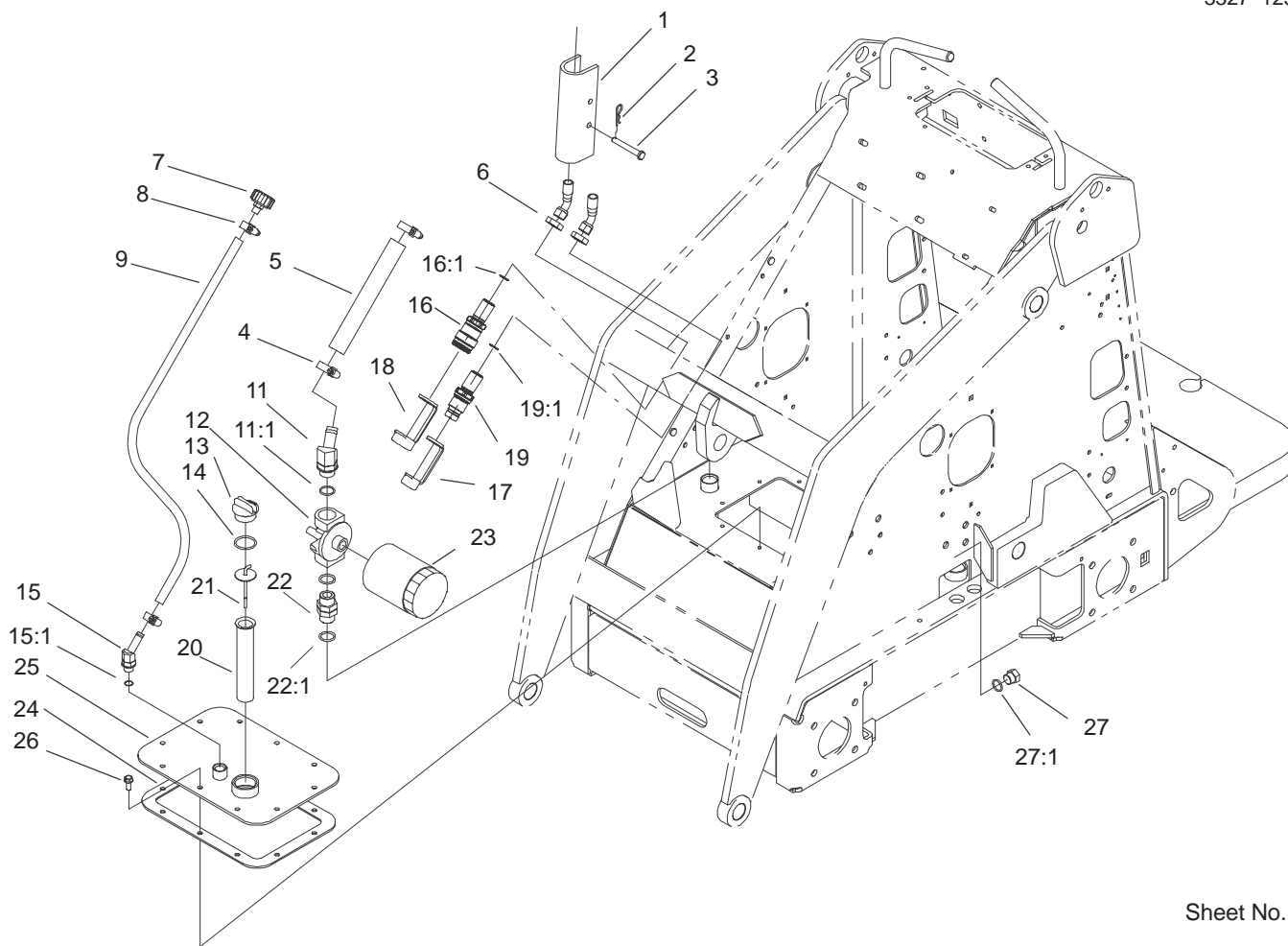


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C-3006

Air Cleaner Assembly No. 99-3160

Ref. No.	Part No.	Qty.	Description
1	99-3173	1	Element-Filter, Air
2	99-3174	2	Clip-Cleaner, Air
3	99-3175	1	Valve-Ejector, Dust
4	99-3176	1	Cover-Air Cleaner
5	99-3183	1	Tube ASM
6	99-3184	1	Housing-Air Cleaner
7	99-3198	1	Filter-Safety
8	99-3197	1	Filter Mount Bracket ASM

Ref. No.	Part No.	Qty.	Description



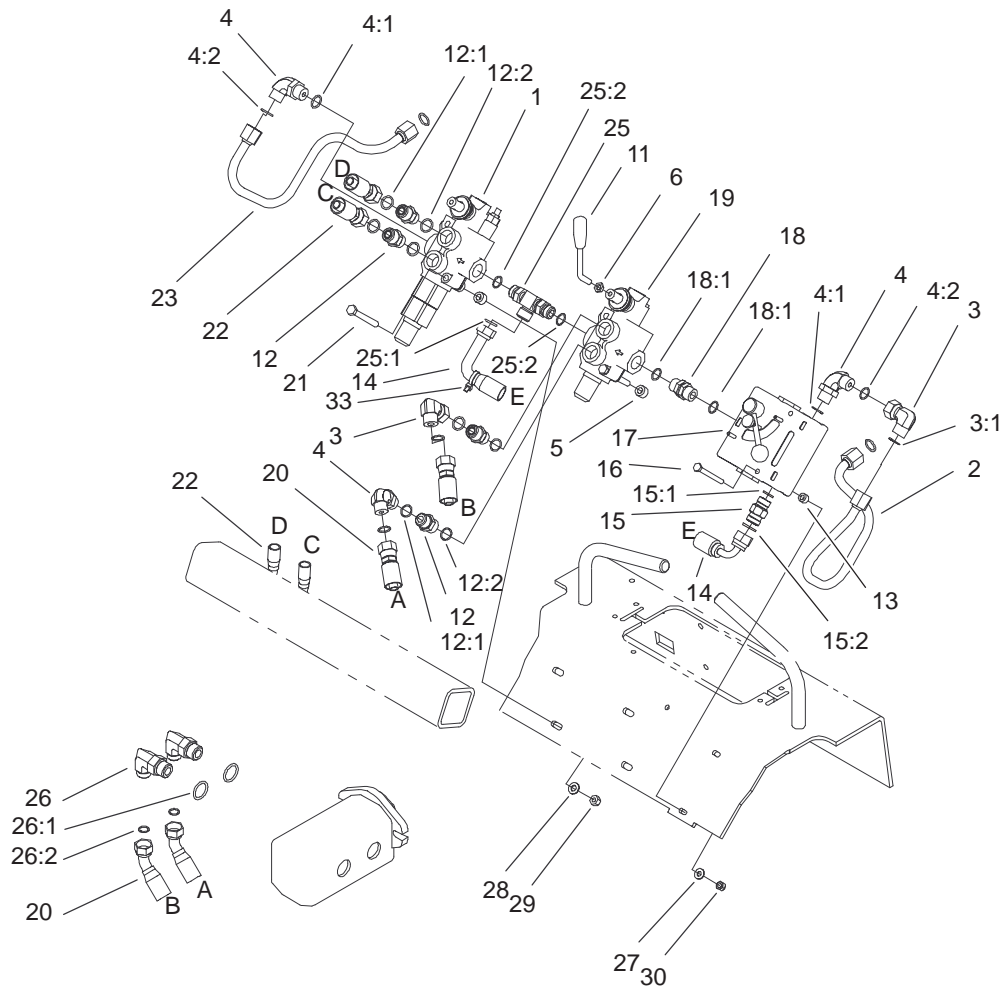
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Hydraulic Tank and Filter Assembly

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, HYD
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°
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°
15:1	237-79	1	O-Ring
16	105-8394	1	Coupler ASM, Bulkhead
16:1	237-65	1	O-Ring
*16:2	105-8396	1	Kit - Seal
17	100-8815	1	Cap-Dust, Nipple
18	100-8816	1	Cap-Dust, Coupler
19	105-8395	1	Nipple ASM, Bulkhead
19:1	237-65	1	O-Ring
*19:2	100-6120	1	Kit-Seal
20	61-2790	1	Filter-Screen

Ref. No.	Part No.	Qty.	Description
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

* Not illustrated

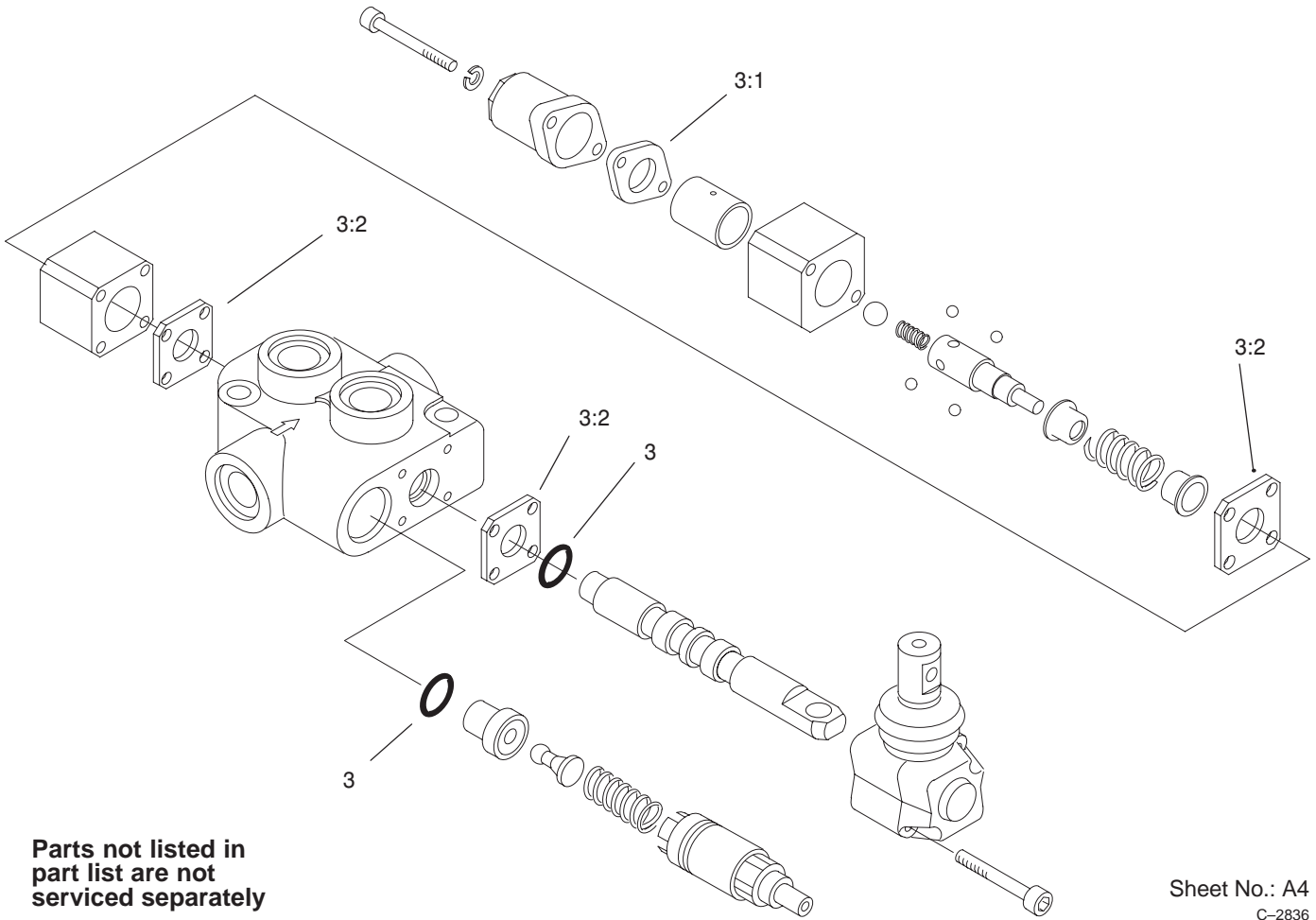


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Hydraulic Valve Assembly

Ref. No.	Part No.	Qty.	Description
1	99-3077	1	Valve-HYD, Auxiliary
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	4	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, HYD
18	95-3209	1	Fitting-Thread, Straight
18:1	237-79	2	O-Ring
19	99-3072	1	Valve-Selector
20	100-1730	2	Hose-Pump, HYD
21	322-13	4	Screw-HH

Ref. No.	Part No.	Qty.	Description
22	100-8817	2	Hose-Aux
23	98-4724	1	Tube-HYD
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°
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, NI
30	3296-42	2	Nut-Lock, NI
33	3290-379	18	Tie-Cable

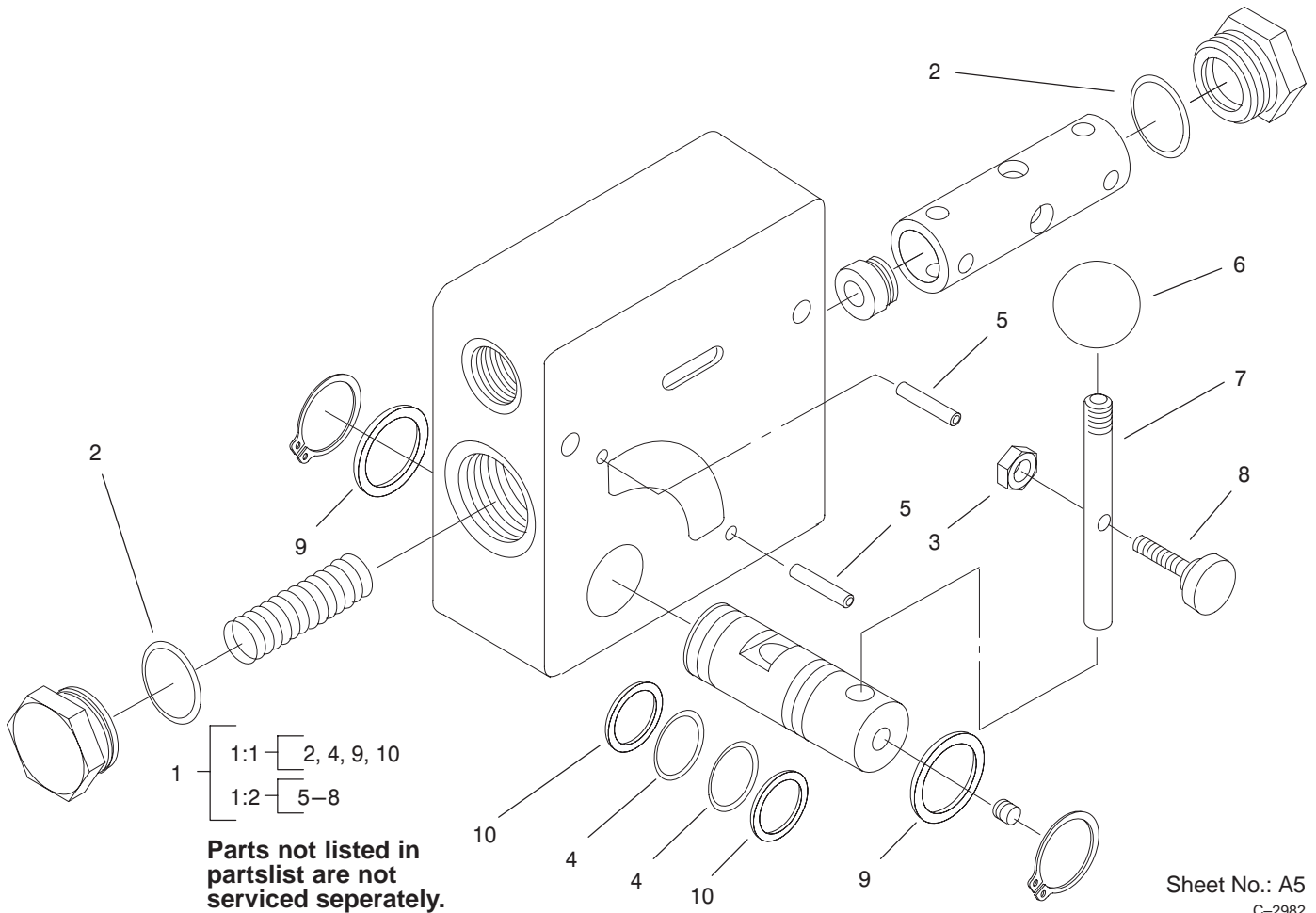


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Hydraulic Valve Assembly No. 99-3077

Ref. No.	Part No.	Qty.	Description
3	99-4391	1	Kit-Seal
3:1	99-3074	1	Gasket
3:2	99-3075	3	Gasket

Ref. No.	Part No.	Qty.	Description
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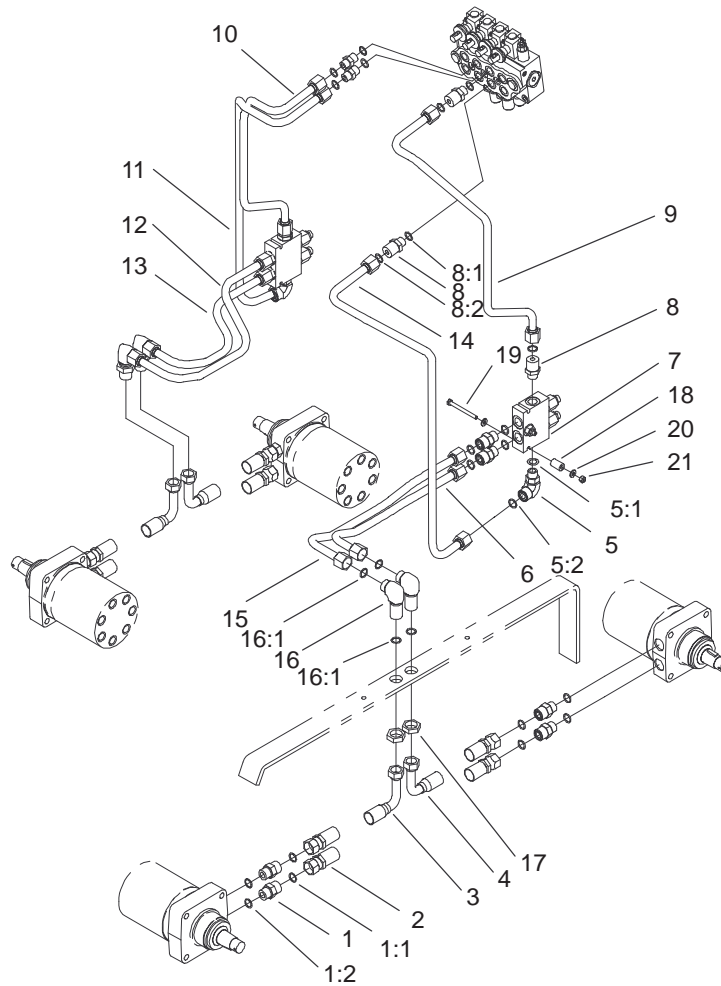
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Hydraulic Valve Assembly No. 104-4221

Ref. No.	Part No.	Qty.	Description
☆1		1	Valve-Flow, Hydraulic
1:1	104-4231	1	Kit-Seal, Valve
1:2	98-9098	1	Kit-Hardware, Handle
3	3296-27	1	Nut-Lock NI

Ref. No.	Part No.	Qty.	Description

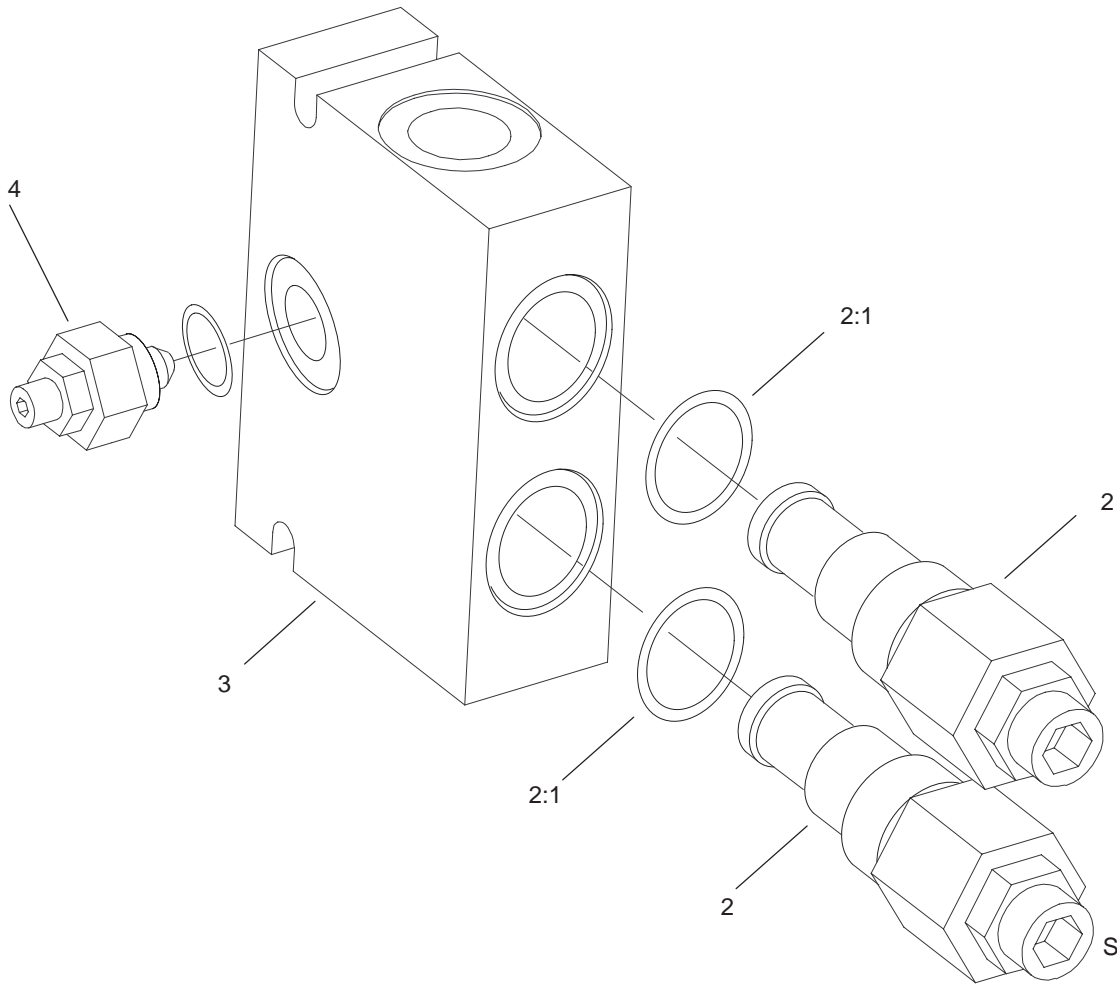
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Hydraulic Motor Assembly

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	340-7	8	Adapter	16:1	237-65	2	O-Ring
1:1	237-65	1	O-Ring	17	340-74	4	Locknut-Bulkhead
1:2	237-80	1	O-Ring	18	99-3057	2	Spacer-Valve
2	99-3012	2	Hose-Motor, HYD	19	321-23	2	Screw-HH
3	99-3010	2	Hose-Motor, Front HYD	20	3256-22	4	Washer-Flat
4	99-3011	2	Hose-Motor, Rear HYD	21	3296-42	2	Nut-Lock, NI
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-HYD				
10	99-3024	1	Line-HYD				
11	99-3029	1	Line-Hydraulic, Right A				
12	99-3025	1	Line-HYD				
13	99-3028	1	Line-HYD				
14	99-3023	1	Line-HYD				
15	99-3026	1	Line-HYD				
16	340-72	4	Union-Elbow Bulkhead, 90°				



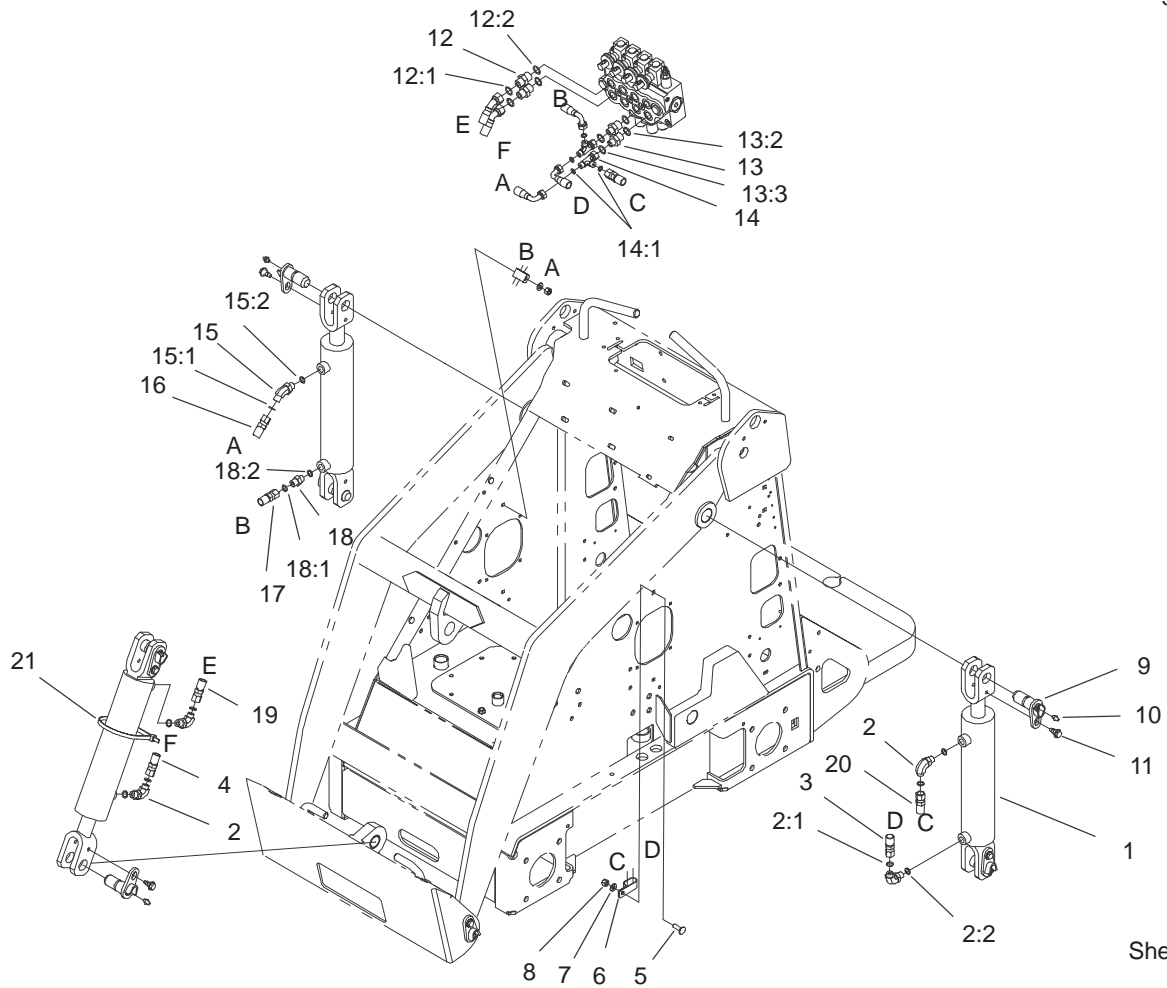
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C-3005

Counterbalance Valve Assembly No. 99-3040

Ref. No.	Part No.	Qty.	Description
*1	105-4099	1	Seal Kit - Valve
2	99-3271	2	Valve-Cartridge
2:1	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

* Not illustrated

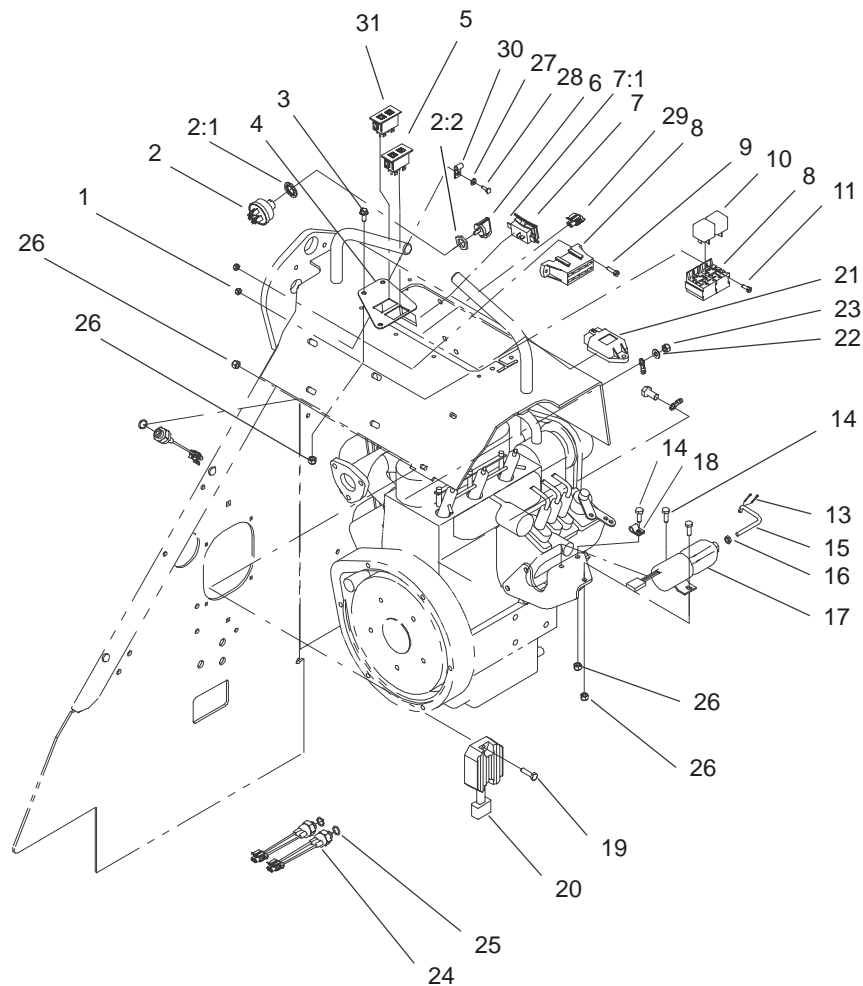


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Hydraulic Cylinder Assembly

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-Pressure, Low
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, NI
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
16	98-4725	1	Hose-HYD
17	100-1731	1	Hose-HYD, Right

Ref. No.	Part No.	Qty.	Description
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



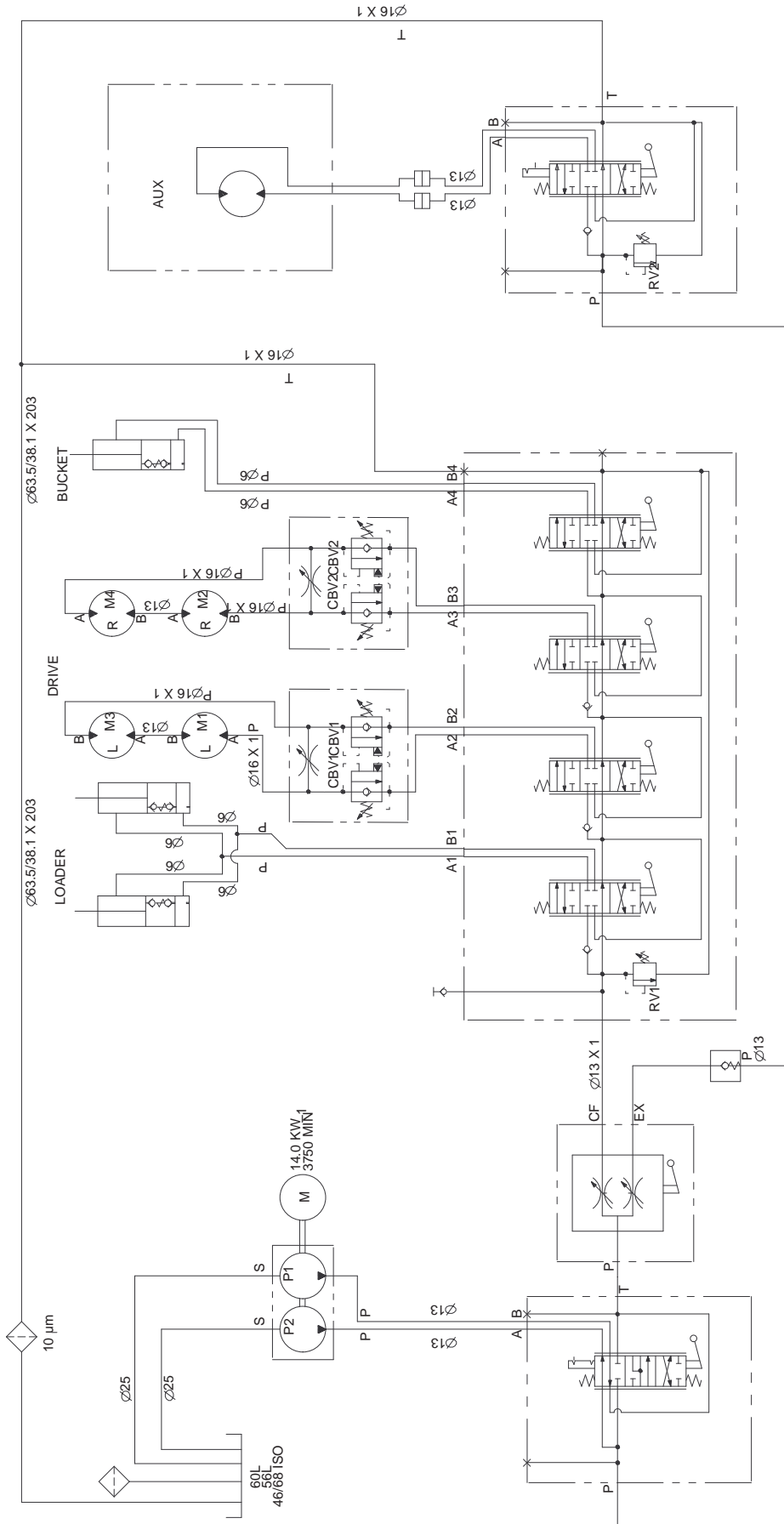
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Electrical Components Assembly

Ref. No.	Part No.	Qty.	Description
1	3296-12	4	Nut-Lock
2	88-9830	1	Key Switch ASM
2:1	3254-5	1	Washer-Lock, Internal
2:2	218-461	1	Nut-HH
3	3234-33	3	Screw-HHF
4	105-1249-01	1	Mount-Lamp, Warning
5	100-8070	1	Lamp-Warning
6	63-8360	2	Key-Ignition
7	104-7429	1	Hour Meter-Dc, Mini
7:1	104-4234	1	Clip-Mounting
8	105-4069	1	Wire Harness, Dingo 320d
9	32105-13	2	Screw-SHH
10	98-7249	2	Relay
11	32105-8	1	Screw
13	3272-1	2	Pin-Cotter
14	321-4	3	Screw-HH
15	105-6243	1	Rod - Linkage
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
21	98-7611	1	Controller-Glow
22	100-2215	1	Washer-Spring
23	100-2171	1	Nut-Hexagon

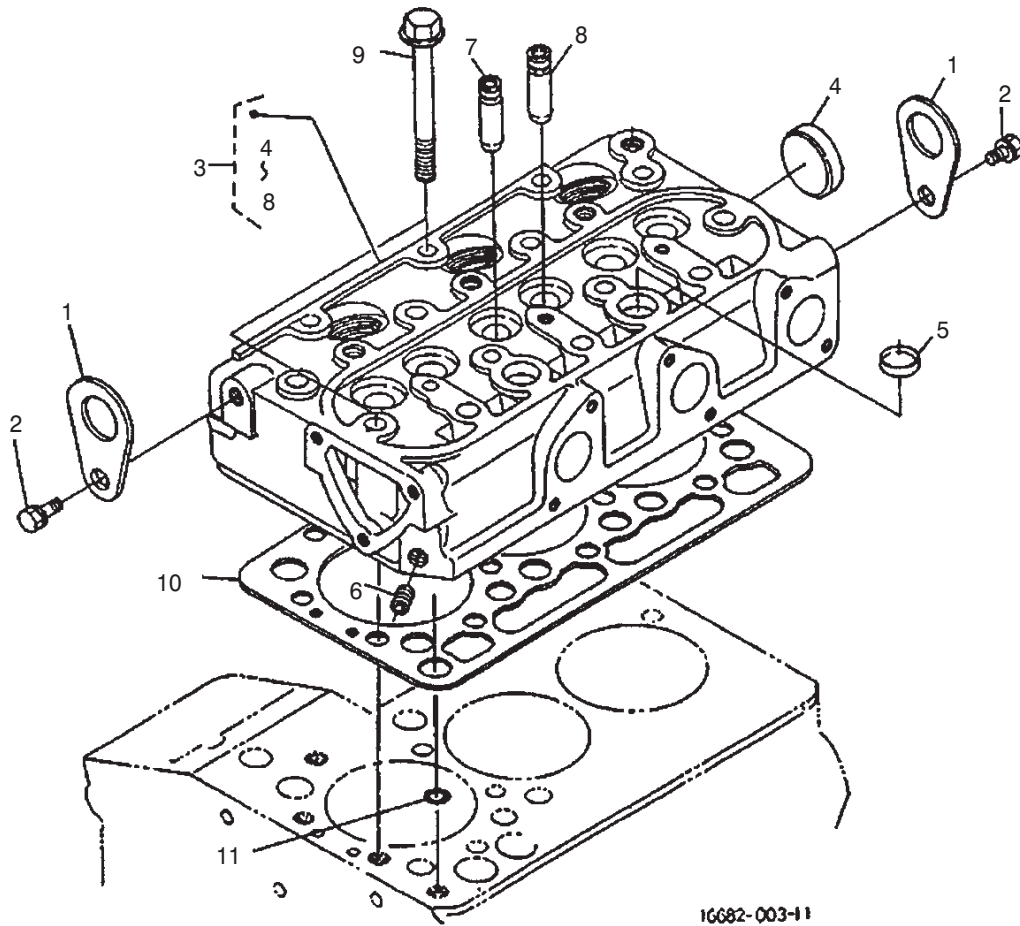
Ref. No.	Part No.	Qty.	Description
24	72-4310	3	Switch
25	237-42	3	O-Ring
26	3296-42	9	Nut-Lock, NI
27	3256-21	1	Washer-Flat
28	32144-87	1	Screw-Forming, Thread
29	99-1433	2	Connector-Female
30	2412-72	1	Clip-Closed, Insulated
31	100-8071	1	Lamp-Warning

Hydraulic Schematic



DISPLACEMENT A		ND PRESSURE CHART		FLOWRATE*	
COMPONENT	DISPLACEMENT	PRESSURE	FLOWRATE*	COMPONENT	DISPLACEMENT
	CU IN/REV	PSI	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	25.1 CU IN	476 CC			
M2, M4	25.1 CU IN	476 CC			
RV1		3225 PSI			
RV2		3000 PSI			
CBV1		1000 PSI			
CBV2		1000 PSI			

* FLOWRATE CALCULATED AT 3750 RPM/AN D 95% EFFICIENCY



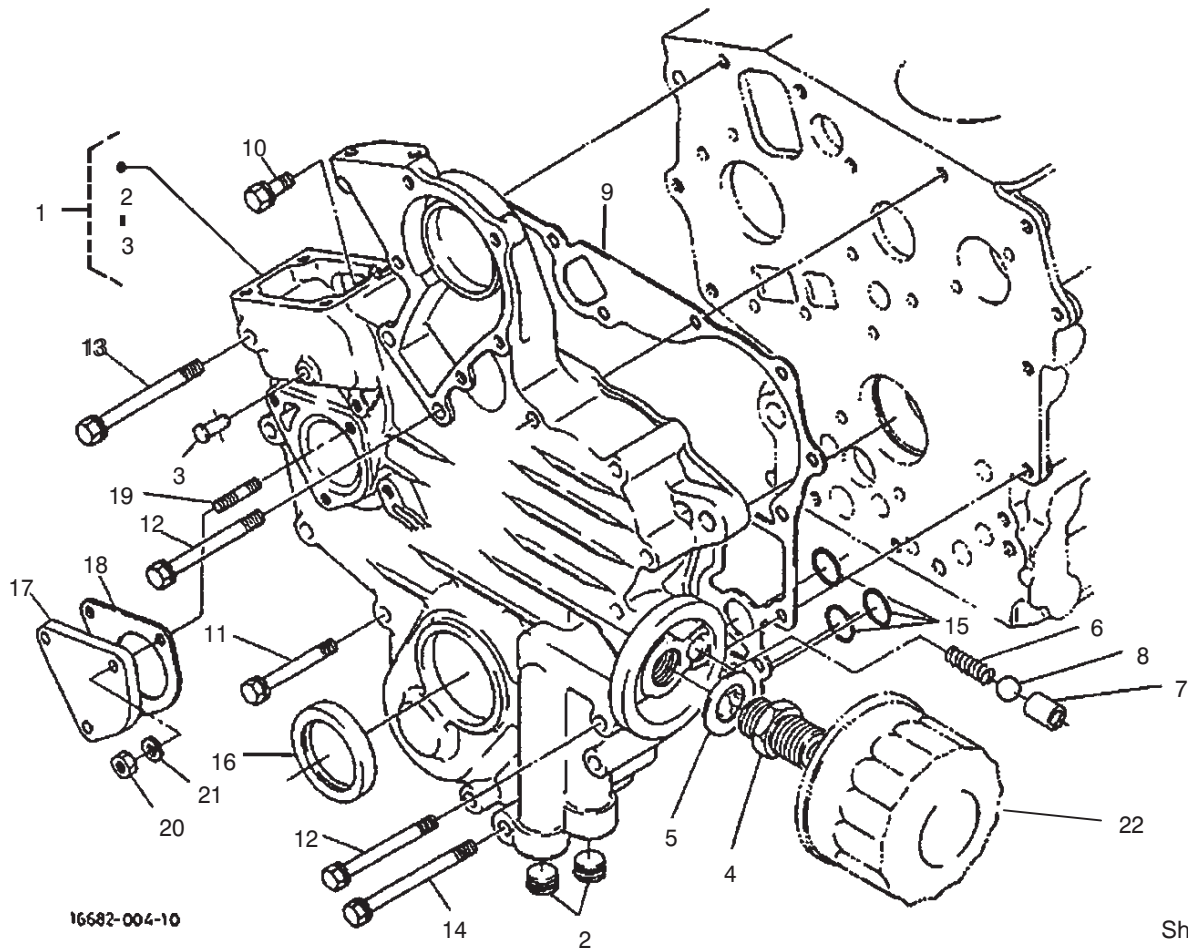
16682-003-11

Sheet No.:4

Cylinder Head Assembly

Ref. No.	Part No.	Qty.	Description
1	98-7531	2	Hook-Engine
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

Ref. No.	Part No.	Qty.	Description

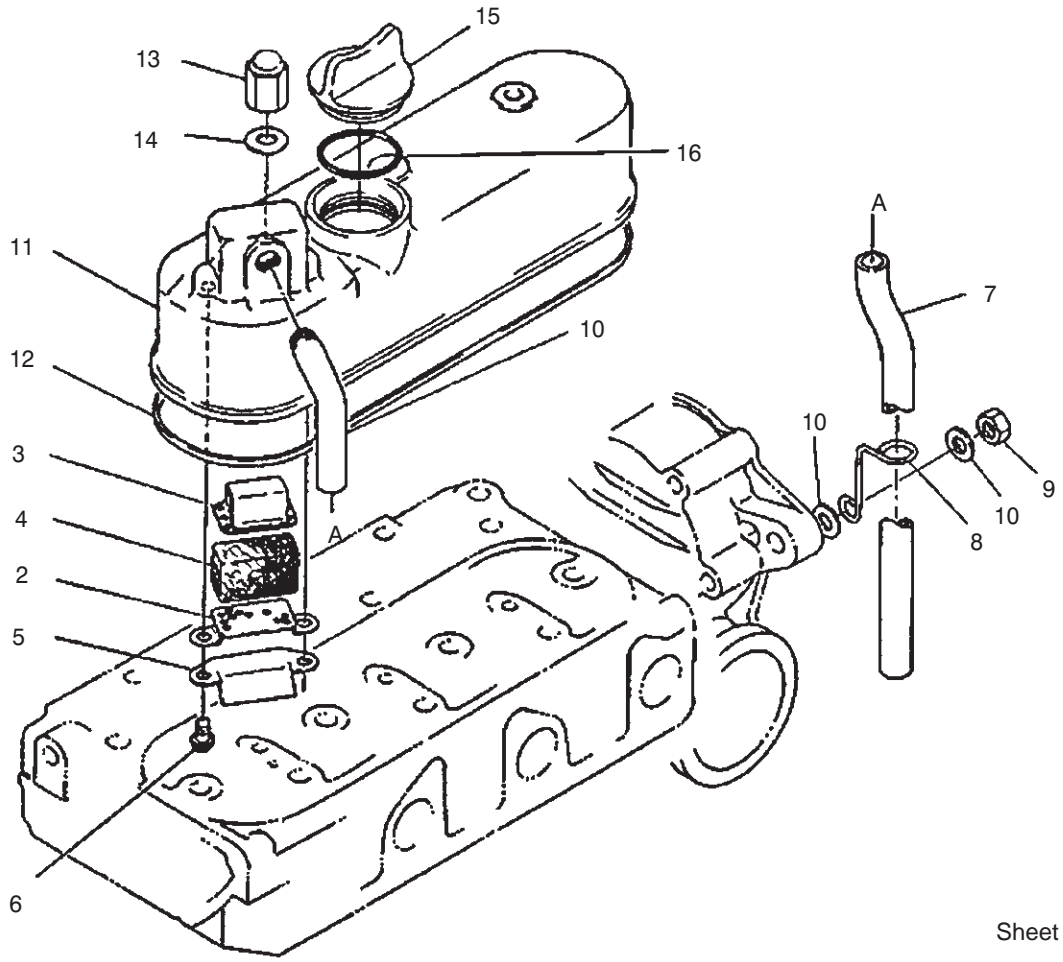


16682-004-10

Sheet No.:5

Gear Case Assembly

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	100-2048	1	Case-Gear, Comp.				
2	98-7546	2	Plug				
3	100-1910	1	Pin-Spring, Start				
4	98-9388	1	Joint-Pipe				
5	100-1926	1	Washer-Plain				
6	100-2004	1	Spring				
7	100-1894	1	Seat-Valve				
8	100-1792	1	Ball				
9	100-1954	1	Gasket-Case, Gear				
10	98-7605	1	Bolt				
11	100-2201	8	Bolt				
12	100-1922	5	Bolt				
13	100-1766	1	Bolt				
14	100-1767	1	Bolt				
15	100-2206	3	O-Ring				
16	100-1971	1	Seal-Oil				
17	100-2060	1	Cover				
18	100-2061	1	Gasket-Gearcase, H/M				
19	98-7571	3	Stud				
20	98-7572	3	Nut				
21	98-9367	3	Washer-Spring				
22	100-1892	1	Cartridge-Filter, Oil				



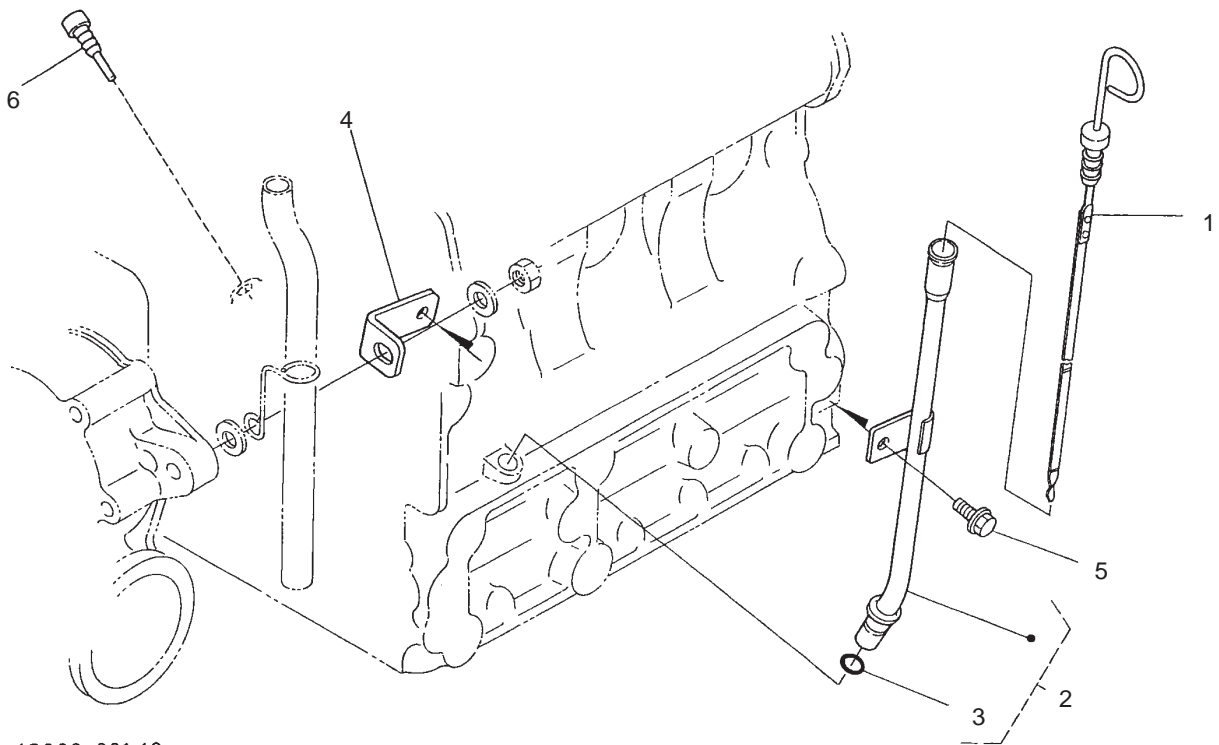
16871-009-10

Sheet No.:6

Head Cover Assembly

Ref. No.	Part No.	Qty.	Description
1	100-1972	1	Joint-Pipe, Breather
2	100-1877	1	Plate-Element
3	100-1878	1	Plate-Element
4	100-1881	1	Element-Breather
5	100-1879	1	Breather-Shield, Oil
6	100-2040	2	Screw
7	100-1880	1	Pipe-Breather
8	100-1973	1	Clamp-Pipe
9	98-7739	1	Nut
10	98-7660	2	Washer-Plain
11	100-2029	1	Cover-Head, Cylinder
12	100-2030	1	Gasket-Cover, Head
13	98-7655	3	Nut-Cap
14	98-7654	3	Gasket
15	98-9449	1	Plug-Filler, Oil
16	99-3446	1	O-Ring

Ref. No.	Part No.	Qty.	Description



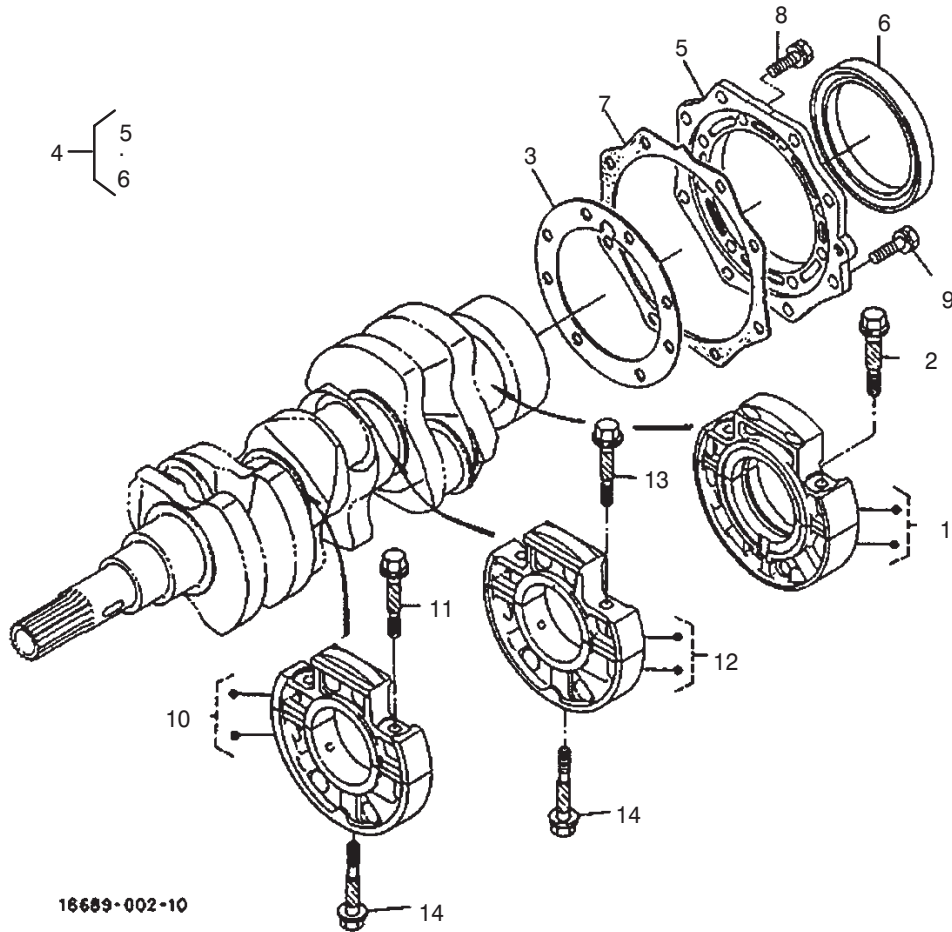
1G299-081-10

Sheet No.:7

Dipstick and Guide Assembly

Ref. No.	Part No.	Qty.	Description
1	100-2247	1	Gauge-Oil
2	100-2249	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

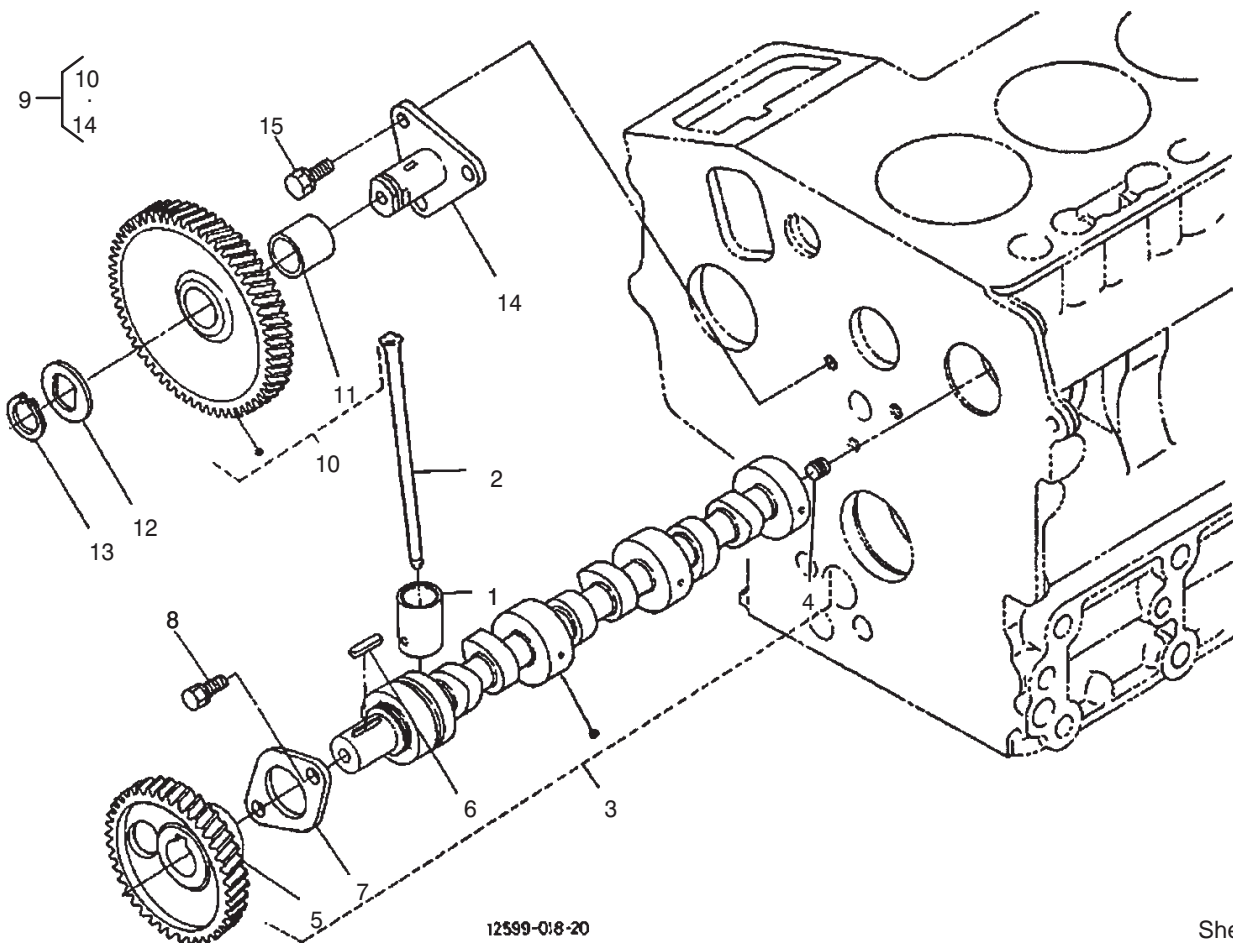


Sheet No.:8

Main Bearing Case Assembly

Ref. No.	Part No.	Qty.	Description
1	100-1988	1	Main Brg. Case ASM
2	100-1757	2	Bolt-Case, Bearing
3	100-1929	1	Gasket-Case, Bearing
4	100-2233	1	Bearing Case Cover ASM
5	100-1875	1	Cover-Case, Bearing
6	100-2055	1	Seal-Oil
7	100-1876	1	Gasket-Case, Bearing
8	98-7568	8	Bolt
9	100-1750	8	Bolt
10	100-1987	1	Main Bearing Case ASM
11	100-1757	2	Bolt-Case, Bearing
12	100-2027	1	Main Bearing Case ASM
13	100-1757	2	Bolt-Case, Bearing
14	100-1874	2	Bolt-Case, Bearing

Ref. No.	Part No.	Qty.	Description



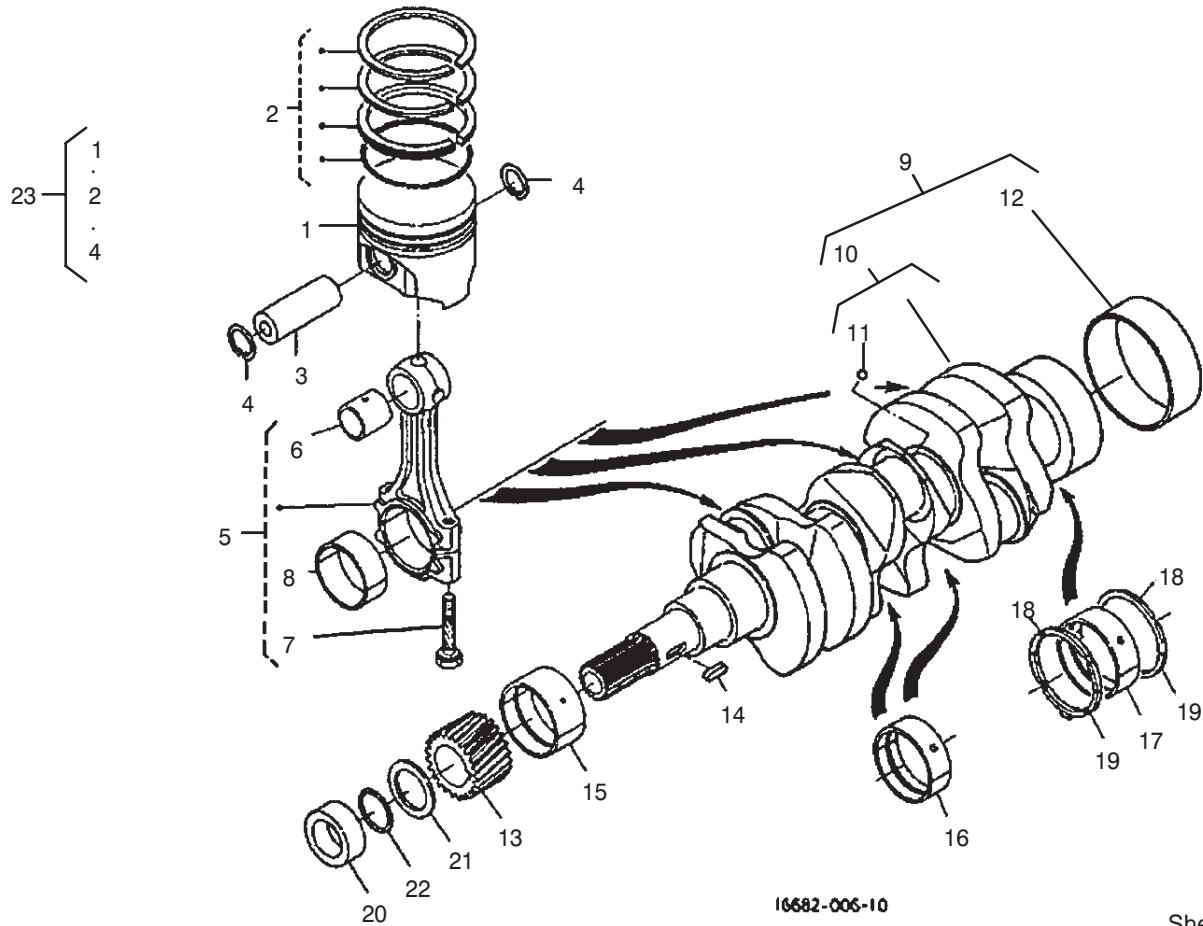
12599-018-20

Sheet No.:9

Camshaft Assembly

Ref. No.	Part No.	Qty.	Description
1	100-1990	6	Tappet
2	100-1989	6	Rod-Push
3	100-2162	1	Camshaft ASM
4	98-7449	1	Screw-Set
5	100-2163	1	Gear-Cam
6	98-9378	1	Key-Feather
7	100-1887	1	Camshaft-Stopper
8	98-9350	2	Bolt
9	100-2240	1	Ser/V Idle Gear ASM
10	100-1966	1	Gear-Idle, Comp.
11	100-1968	1	Bush
12	100-1970	1	Collar-Gear, Idle
13	100-1969	1	Ring-Snap
14	100-1967	1	Shaft-Gear, Idle
15	98-9351	3	Bolt

Ref. No.	Part No.	Qty.	Description



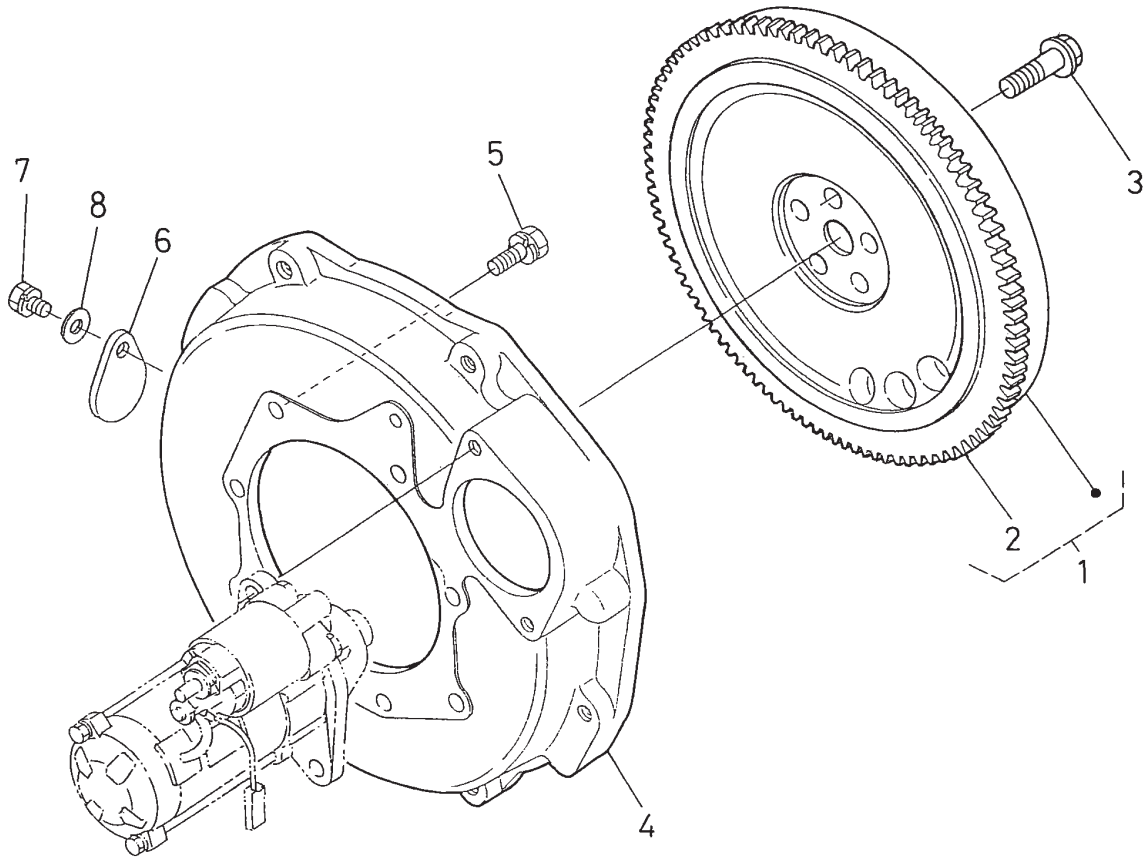
16682-006-10

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	1	Crankshaft-Metal (-0.2 Mm Set)
17	100-1871	1	Crankshaft-Metal (-0.4 Mm Set)
17	100-2032	1	Crankshaft-Metal (STD. Set)
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 (+0.2 Mm)
19	100-1841	2	Metal-Side (+0.4 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



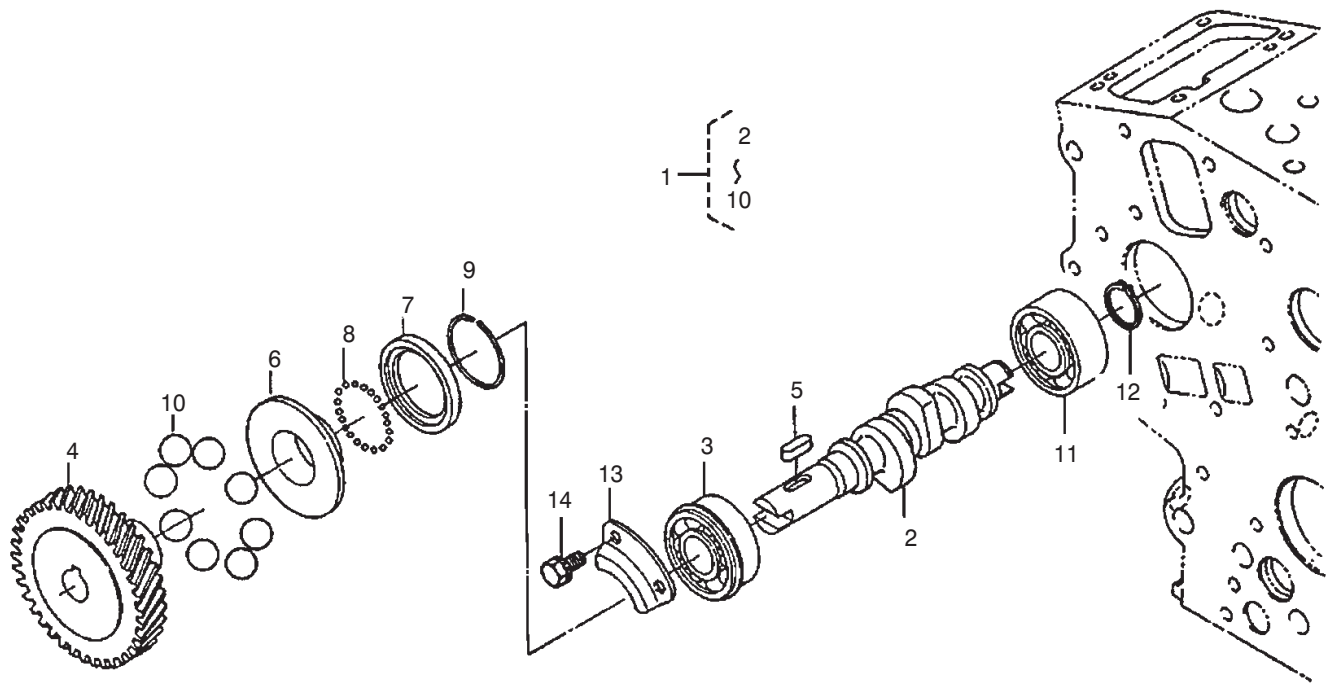
1G299-080-10

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	1	Bolt-Flywheel
4	100-2234	1	Housing-Flywheel
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



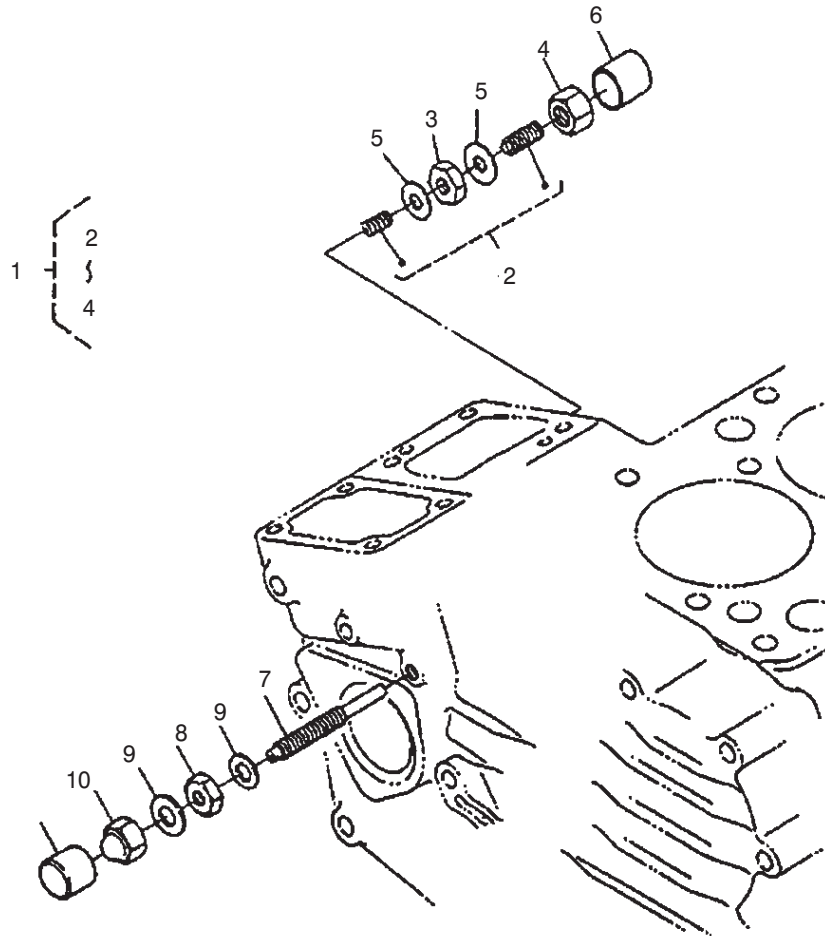
16582-007-10

Sheet No.:12

Fuel Camshaft Assembly

Ref. No.	Part No.	Qty.	Description
1	100-2031	1	Fuel Camshaft ASM
2	100-1965	1	Camshaft
3	100-1795	1	Bearing-Ball
4	100-2006	1	Gear-Pump, Injection
5	100-1752	1	Key-Feather
6	100-1903	1	Sleeve-Governor
7	100-1904	1	Case-Ball, Governor
8	100-1790	32	Ball
9	100-1843	1	Cir-Clip, Gov. Sleeve
10	100-1793	8	Ball
11	100-1794	1	Bearing-Ball
12	100-1784	1	Cir-Clip, External
13	100-1888	1	Stopper-Fuel, C/Shaft
14	98-9350	2	Bolt

Ref. No.	Part No.	Qty.	Description

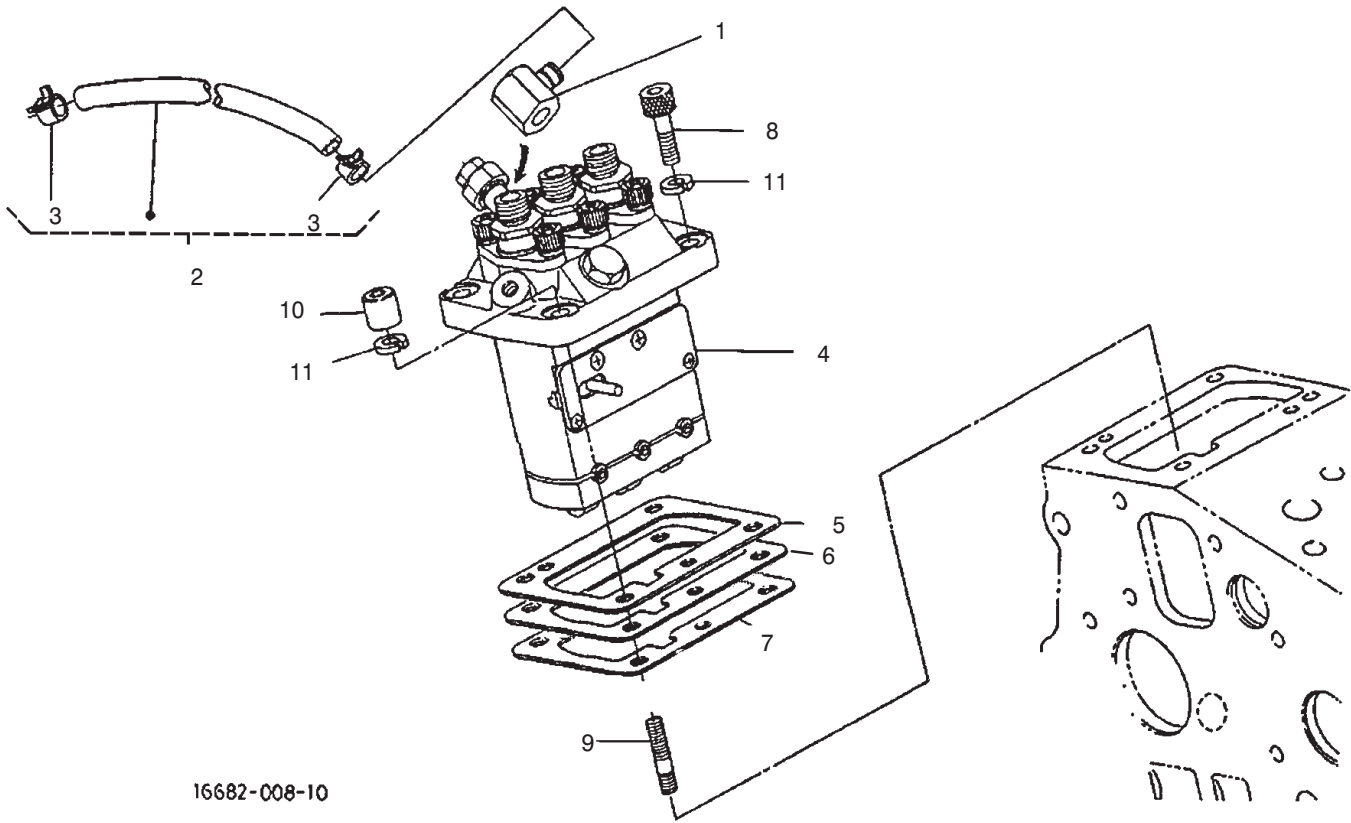


Sheet No.:13

Engine Stop Lever Assembly

Ref. No.	Part No.	Qty.	Description
1	100-1898	1	Idle Appartus ASM
2	100-1899	1	Adjusting 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



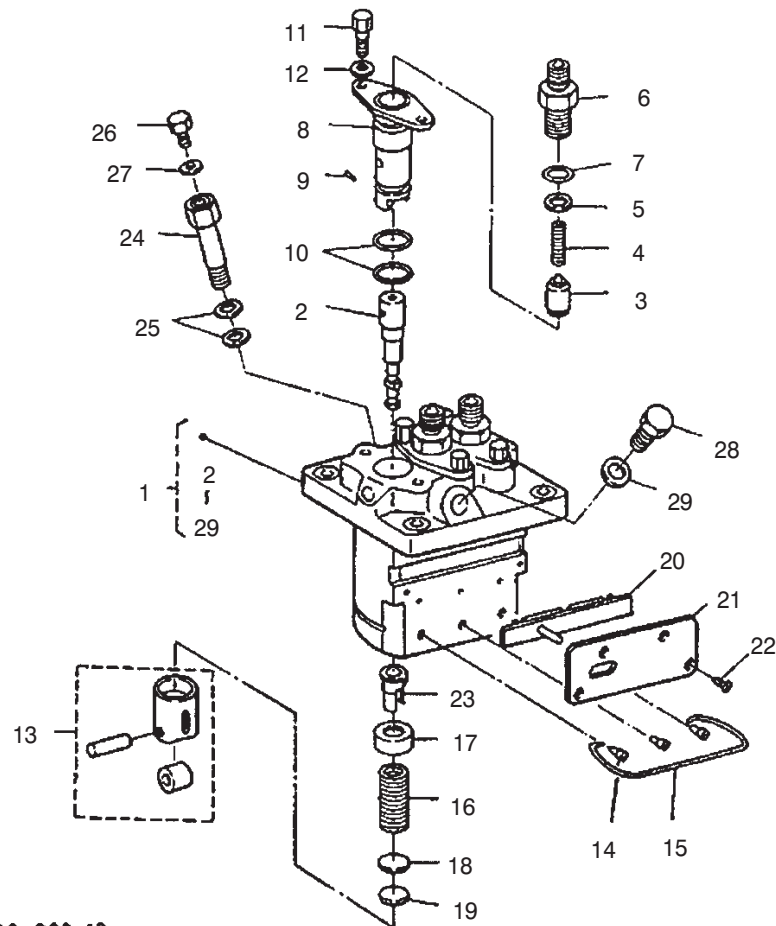
16682-008-10

Sheet No.:14

Injection Pump Assembly

Ref. No.	Part No.	Qty.	Description
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 (0.2mm)
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

Ref. No.	Part No.	Qty.	Description

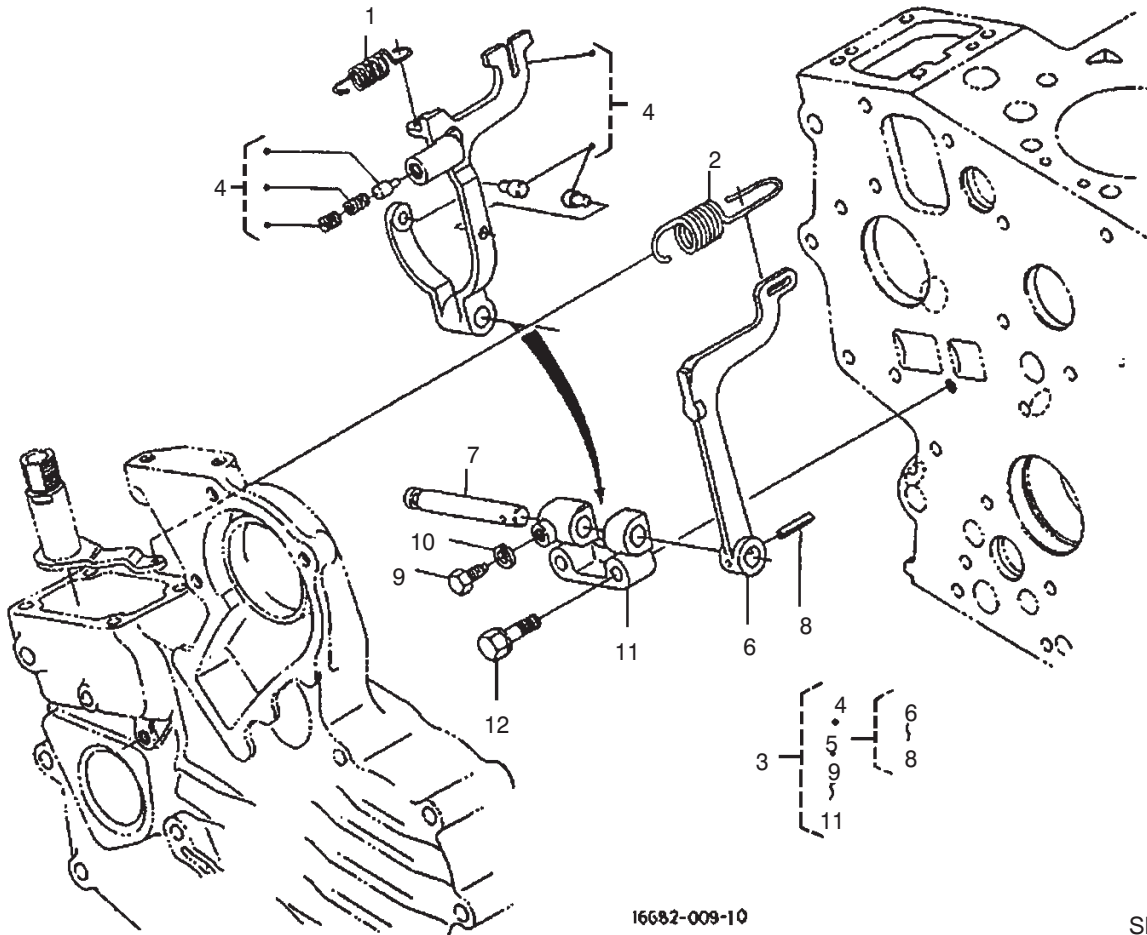


16689-009-10

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	26	98-9430	1	Screw
2	100-2005	3	Plunger-Pump	27	98-9446	1	Gasket
3	98-9421	3	Valve-Delivery	28	100-1953	1	Bolt
4	98-9424	3	Spring-Valve, Delivery	29	98-9451	1	Gasket
5	98-9425	3	Gasket-Valve, Delivery				
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	3	Shim				
20	100-1949	1	Rack-Control				
21	100-1950	1	Plate				
22	98-9442	4	Screw				
23	98-9432	3	Sleeve-Control				
24	100-1896	1	Screw-Hollow				
25	98-9445	2	Gasket				



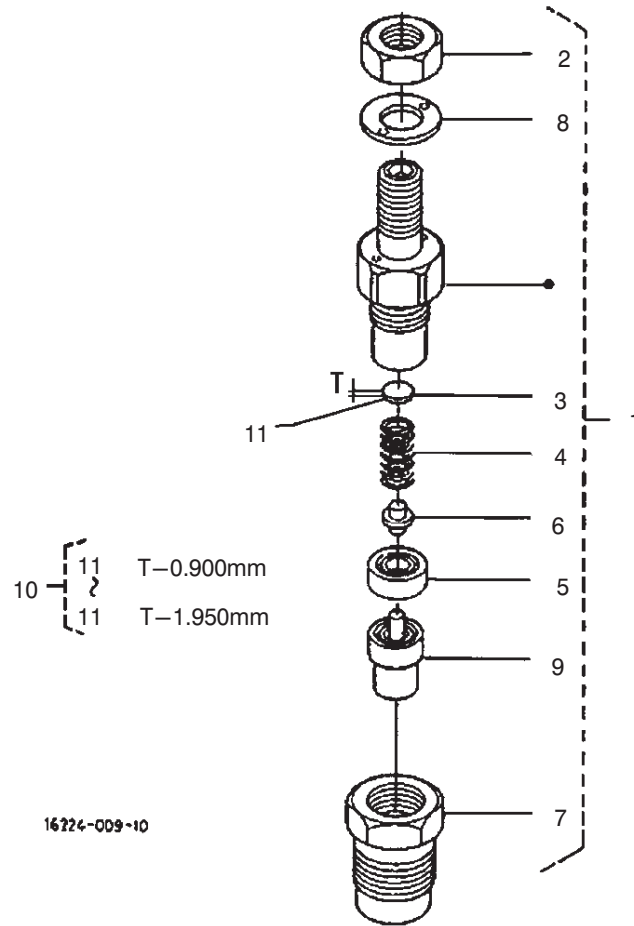
16682-009-10

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	Fork Lever ASM
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-Lever, Fork
8	100-1751	1	Pin-Spring
9	100-1845	1	Bolt
10	100-2204	1	Washer-Spring
11	100-1909	1	Holder-Lever, Fork
12	100-1763	2	Bolt

Ref. No.	Part No.	Qty.	Description

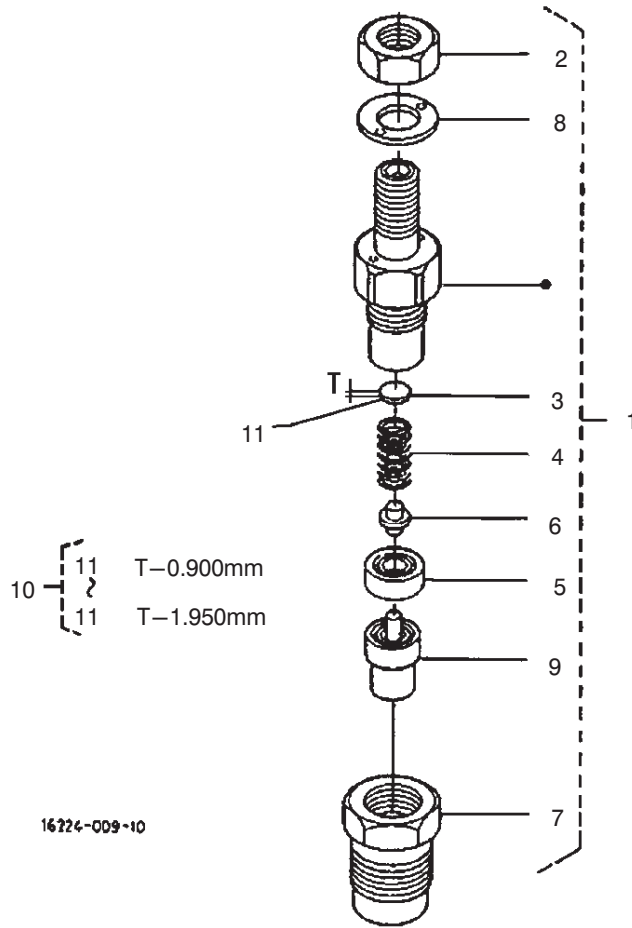


Sheet No.:19

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	3	Adj Washer ASM
11	98-7642	3	Washer-Adjusting
11	98-7841	3	Washer-Adjusting
11	98-7842	3	Washer-Adjusting
11	98-7843	3	Washer-Adjusting
11	98-7844	3	Washer-Adjusting
11	98-7845	3	Washer-Adjusting
11	98-7846	3	Washer-Adjusting
11	98-7847	3	Washer-Adjusting
11	98-7848	3	Washer-Adjusting
11	98-7849	3	Washer-Adjusting
11	98-7850	3	Washer-Adjusting
11	98-7851	3	Washer-Adjusting
11	98-7852	3	Washer-Adjusting
11	98-7853	3	Washer-Adjusting
11	98-7854	3	Washer-Adjusting
11	98-7855	3	Washer-Adjusting

Ref. No.	Part No.	Qty.	Description
11	98-7856	3	Washer-Adjusting
11	98-7857	3	Washer-Adjusting
11	98-7858	3	Washer-Adjusting
11	98-7859	3	Washer-Adjusting
11	98-7860	3	Washer-Adjusting
11	98-7861	3	Washer-Adjusting
11	98-7862	3	Washer-Adjusting
11	98-7863	3	Washer-Adjusting
11	98-7864	3	Washer-Adjusting
11	98-7865	3	Washer-Adjusting
11	98-7866	3	Washer-Adjusting
11	98-7867	3	Washer-Adjusting
11	98-7868	3	Washer-Adjusting
11	98-7869	3	Washer-Adjusting
11	98-7870	3	Washer-Adjusting
11	98-7871	3	Washer-Adjusting
11	98-7872	3	Washer-Adjusting
11	98-7873	3	Washer-Adjusting
11	98-7874	3	Washer-Adjusting
11	98-7875	3	Washer-Adjusting
11	98-7876	3	Washer-Adjusting
11	98-7877	3	Washer-Adjusting
11	98-7878	3	Washer-Adjusting
11	98-7879	3	Washer-Adjusting
11	98-7880	3	Washer-Adjusting
11	98-7881	3	Washer-Adjusting

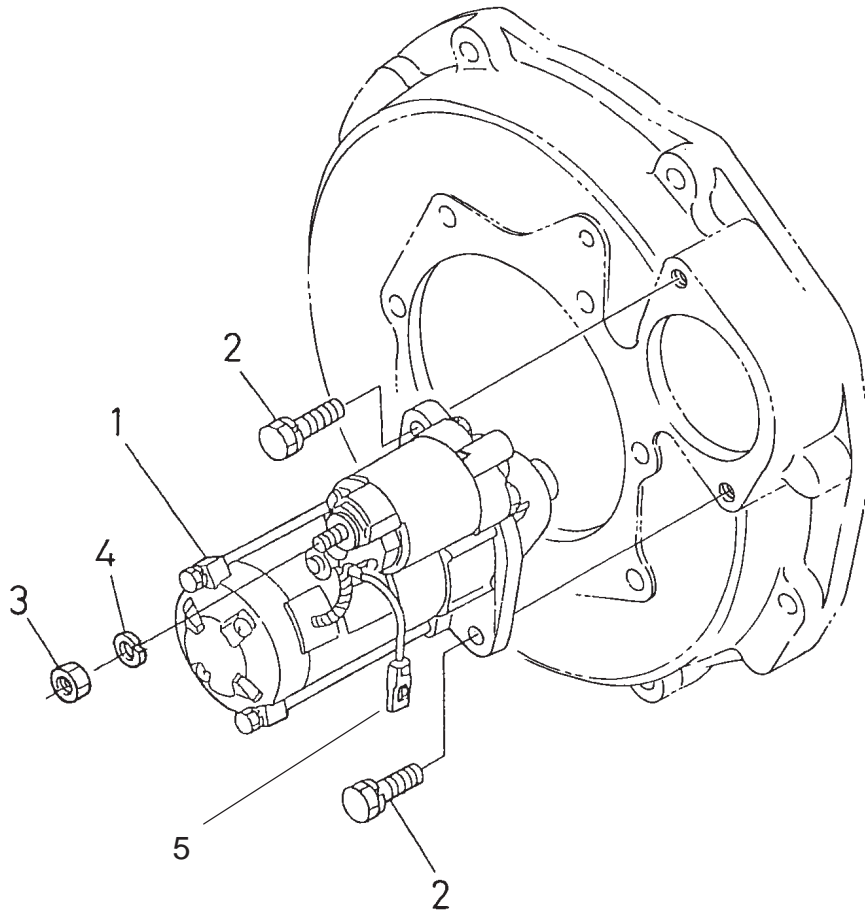


Sheet No.:19

Nozzle Holder (Complete Parts Continued)

Ref. No.	Part No.	Qty.	Description
11	98-7882	3	Washer-Adjusting

Ref. No.	Part No.	Qty.	Description



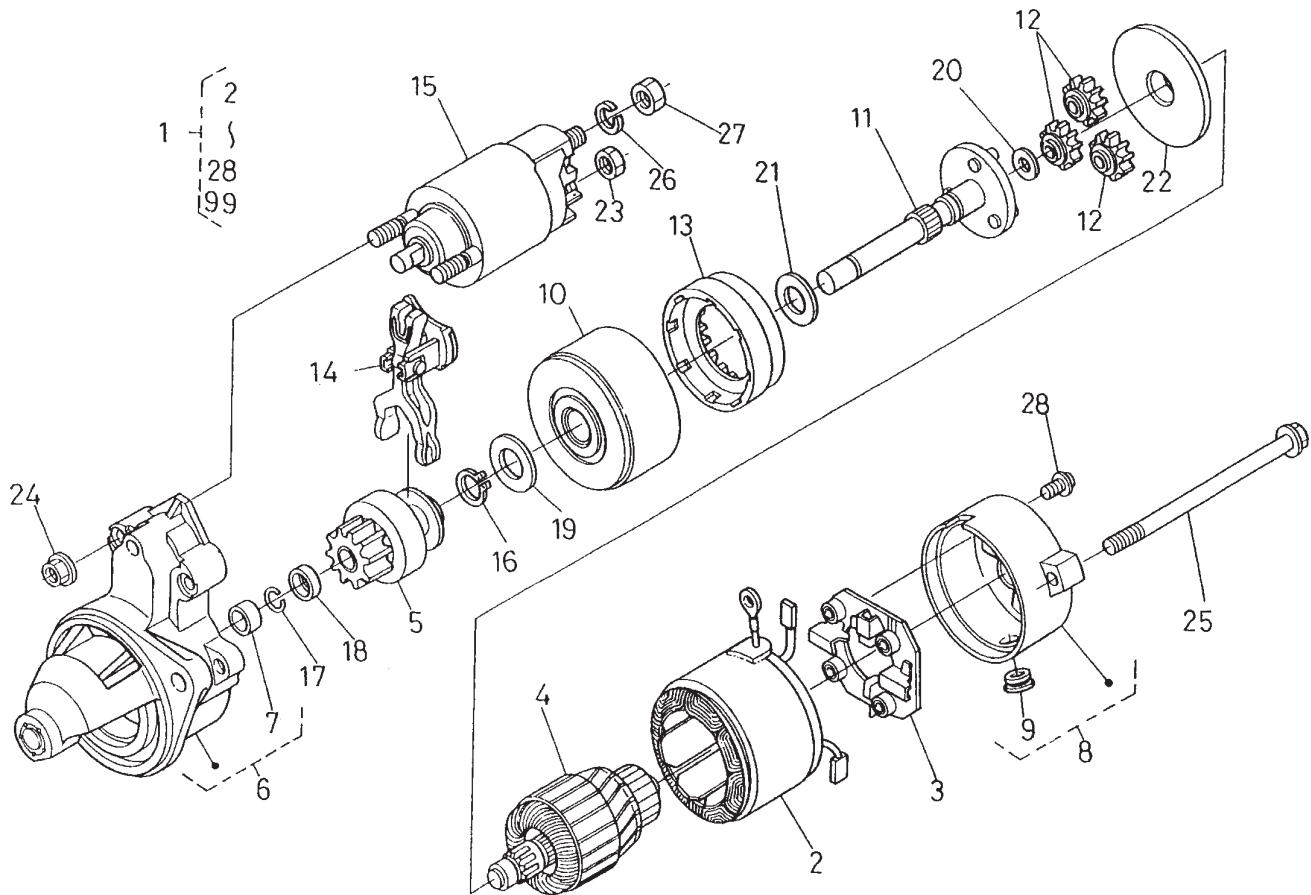
1G299-085-10

Sheet No.:23

Starter Assembly

Ref. No.	Part No.	Qty.	Description
1	100-2179	1	Starter ASM
2	98-7438	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

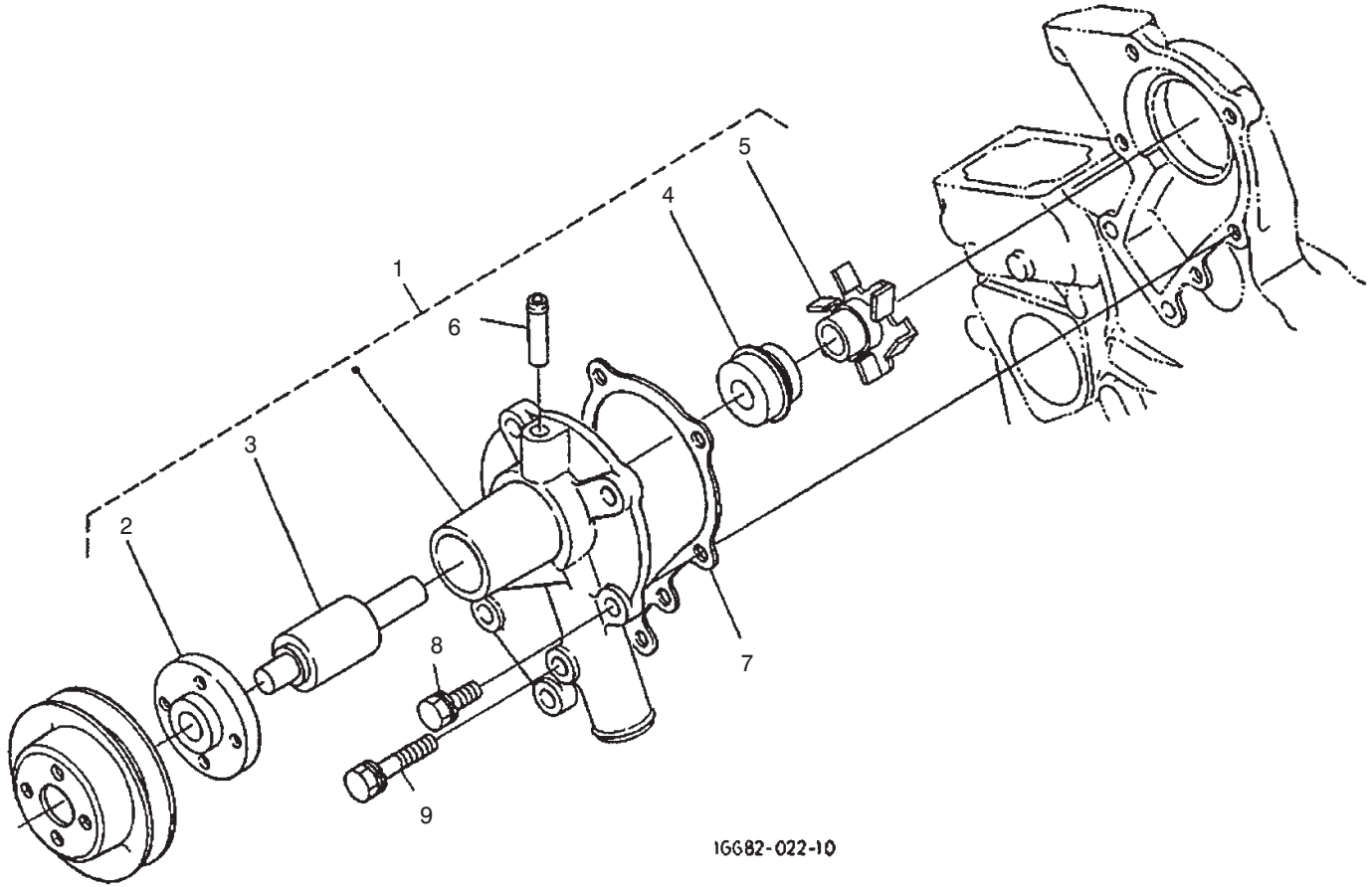


67992-001-10

Sheet No.:24

Starter (Complete Parts)

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	100-2179	1	Starter ASM	27	100-2171	1	Nut-Hexagon
2	100-2181	1	Starter Yoke ASM	28	100-2188	2	Screw
3	100-2222	1	Holder ASM	99	99-1434	1	Wire-Lead
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-Hexagon				
24	100-1813	2	Nut				
25	100-2210	2	Bolt-Through				
26	100-2215	1	Washer-Spring				



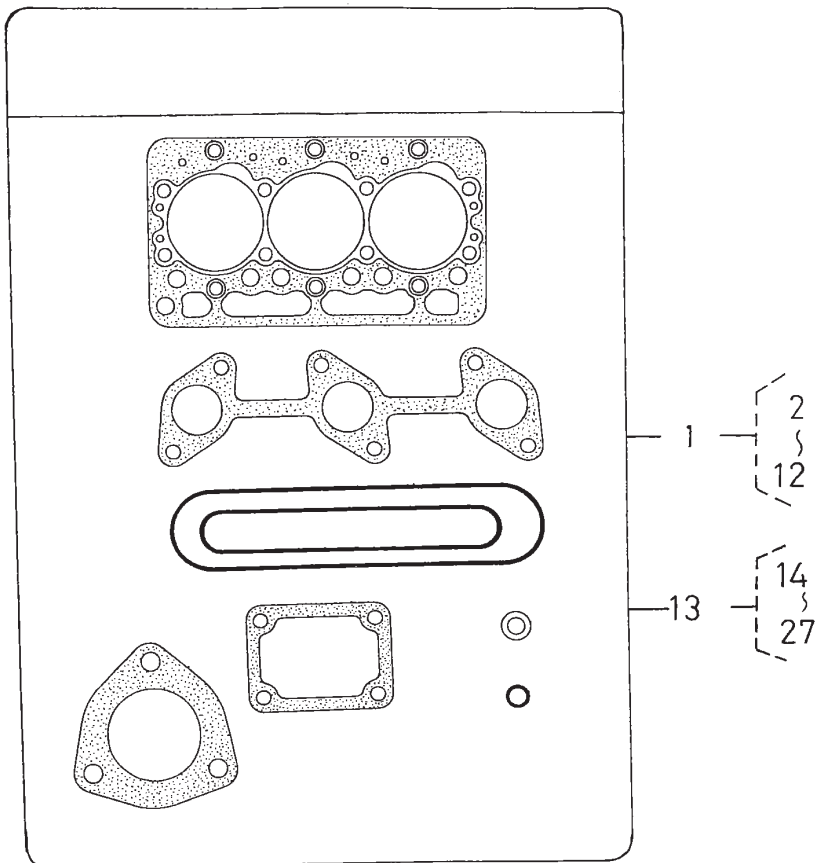
16682-022-10

Sheet No.:27

Water Pump Assembly

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

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

Ref. No.	Part No.	Qty.	Description
25	98-7428	2	Gasket
26	100-2208	1	O-Ring
27	100-2207	1	O-Ring

