



Dingo[®] 220-D Traction Unit

Model No. 22302 - 990001 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

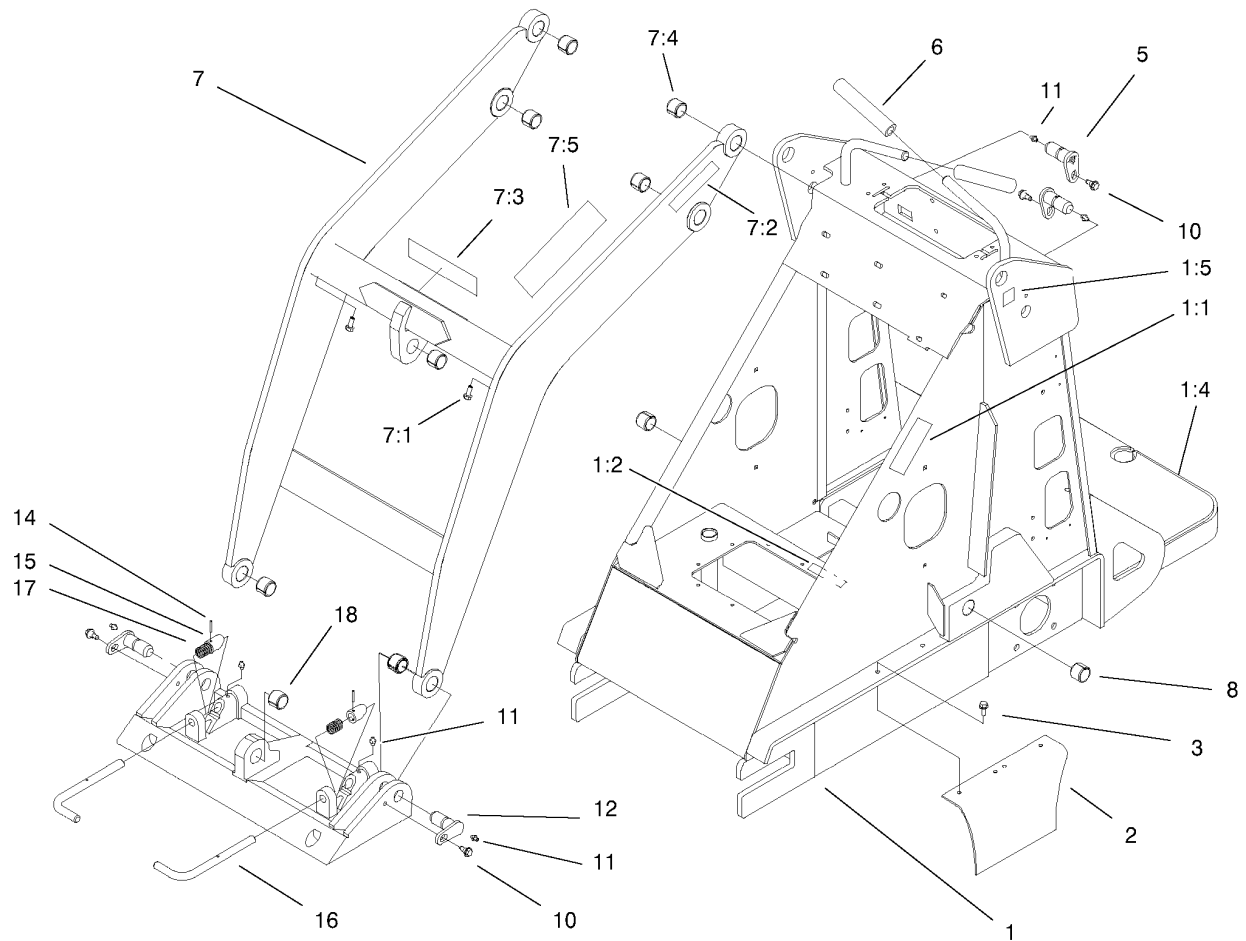
Part descriptions in this catalog may include the following abbreviations.

AR. as required	HYD. hydraulic
ASM. assembly	LH. left hand
BBC. blade brake clutch	NI. nylon insert
CARR. carriage	NPTF. national pipe thread fine
DEG. degrees	PFH. phillips flat head
EXT. external	PPH. phillips pan head
FH. flat head	PPHTF. phillips pan head thread forming
GA. gauge	PRH. phillips round head
HD. heavy-duty	PTH. phillips truss head
HF. hex flange	PTO. power-take-off
HH. hex head	RH. right hand
HHF. hex head flange	ROPS. roll-over protection system
HHFTF. hex head flange thread forming	SFH. slotted fillister head
HJ. hex jam	SHH. slotted hex head
HLH. hex lag head	SHWH. slotted hex washer head
HOC. height-of-cut	SPH. slotted pan head
HSBH. hex socket button head	SQH. square head
HSFH. hex socket flat head	SRH. slotted round head
HSH. hex socket head	STD. standard
HWH. hex washer head	TAP. self tapping
HWHTF. hex washer head thread forming	TTH. torx truss head

Footnotes

- ❶ Not illustrated
- ❸ Not Serviced Separately

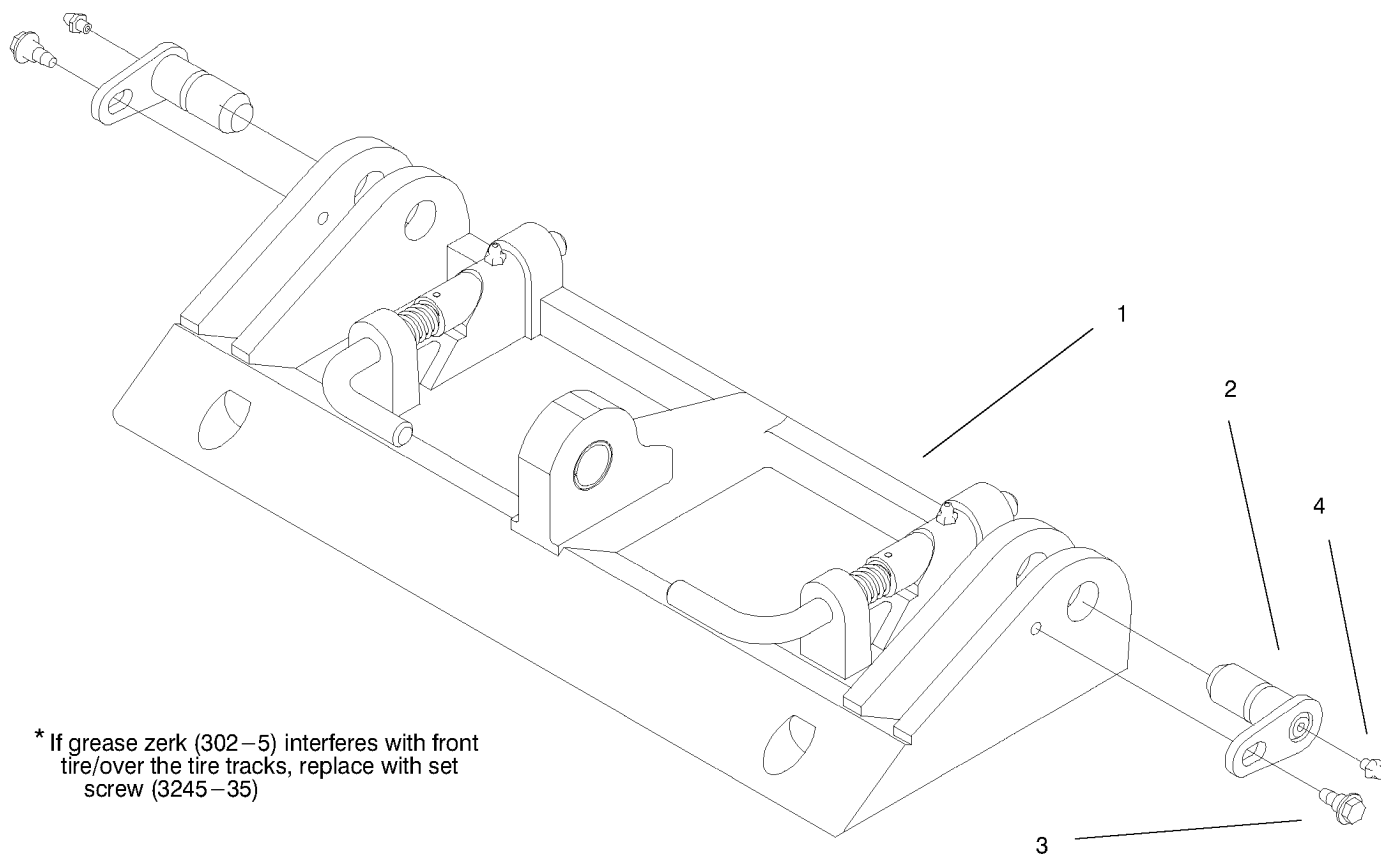
- ❷ Obtain Locally



Frame And Loader Arm Assembly

Ref	Part No.	Qty.	Description
1	99-3039	1	Frame ASM
1:1	93-9367	2	Decal-Warning
1:2	93-7272	1	Decal-Warning
1:4	98-9947	2	Tread-Foot
1:5	93-9084	4	Decal-Point, Lift
2	98-4669	2	Cover-Chain
3	32144-70	4	Screw-HWHTF
5	98-4716	2	Pin-Pivot
6	99-3251	2	Grip-Cushion
7	99-1354	1	Loader ASM
7:1	32144-70	2	Screw-HWHTF
7:2	80-8010	2	Decal-Warning, Keep Hands Away
7:3	98-4682	1	Decal-Caution
7:4	98-4871	2	Bushing-Tension
7:5	98-9051	1	Decal-Danger
8	98-4871	9	Bushing-Tension
10	99-5105	10	Bolt-Shoulder
11	302-5	12	Fitting-Grease
12	98-4714	2	Pin-Pivot
14	32121-94	2	Pin-Special
15	98-4692	2	Cam-Attach, Quick
16	100-3373	2	Pin
17	98-4694	2	Spring-Compression

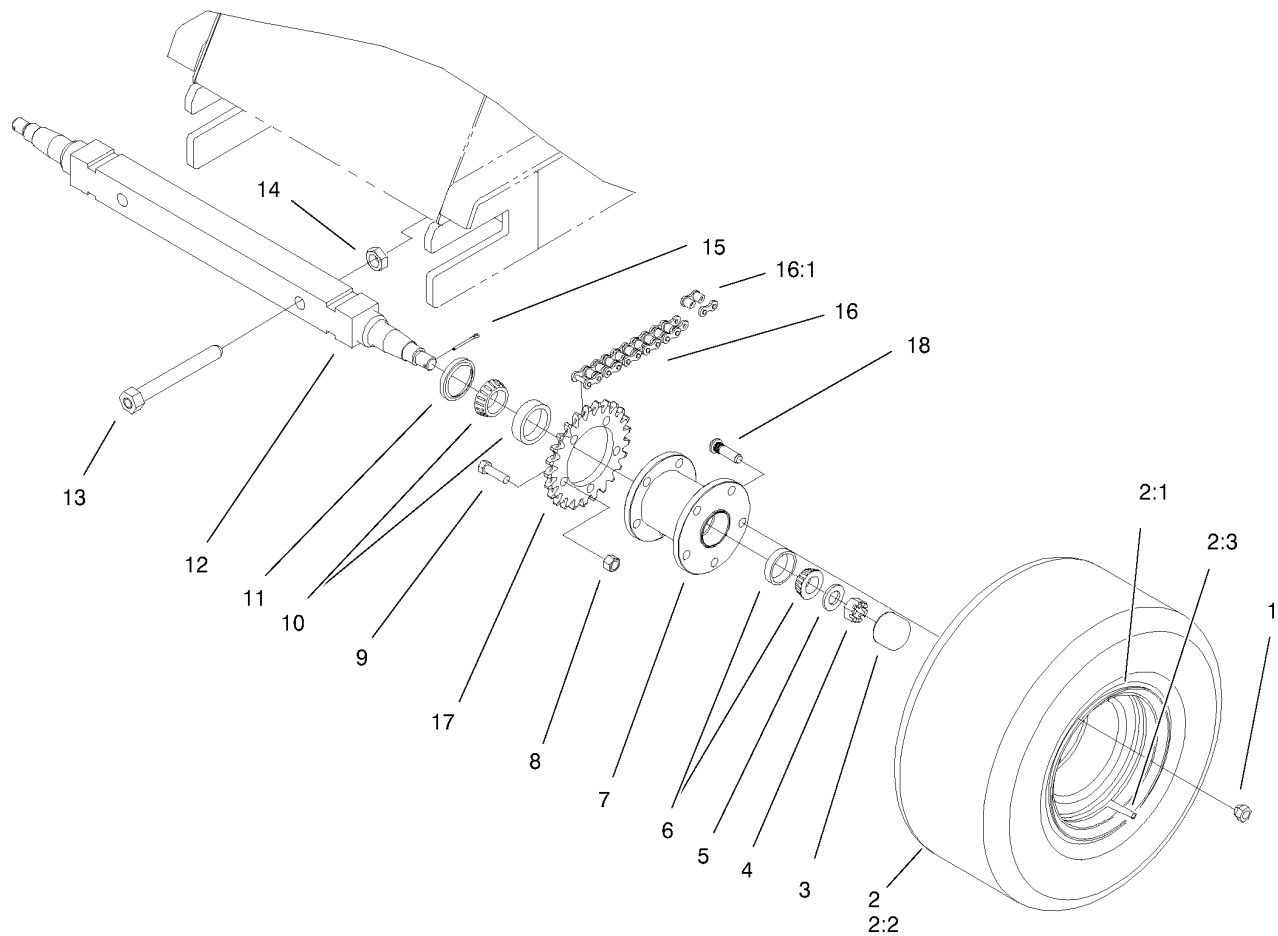
Ref	Part No.	Qty.	Description
18	98-4871	1	Bushing-Tension
	98-2656	1	Quick Attach Service ASM



* If grease zerk (302-5) interferes with front tire/over the tire tracks, replace with set screw (3245-35)

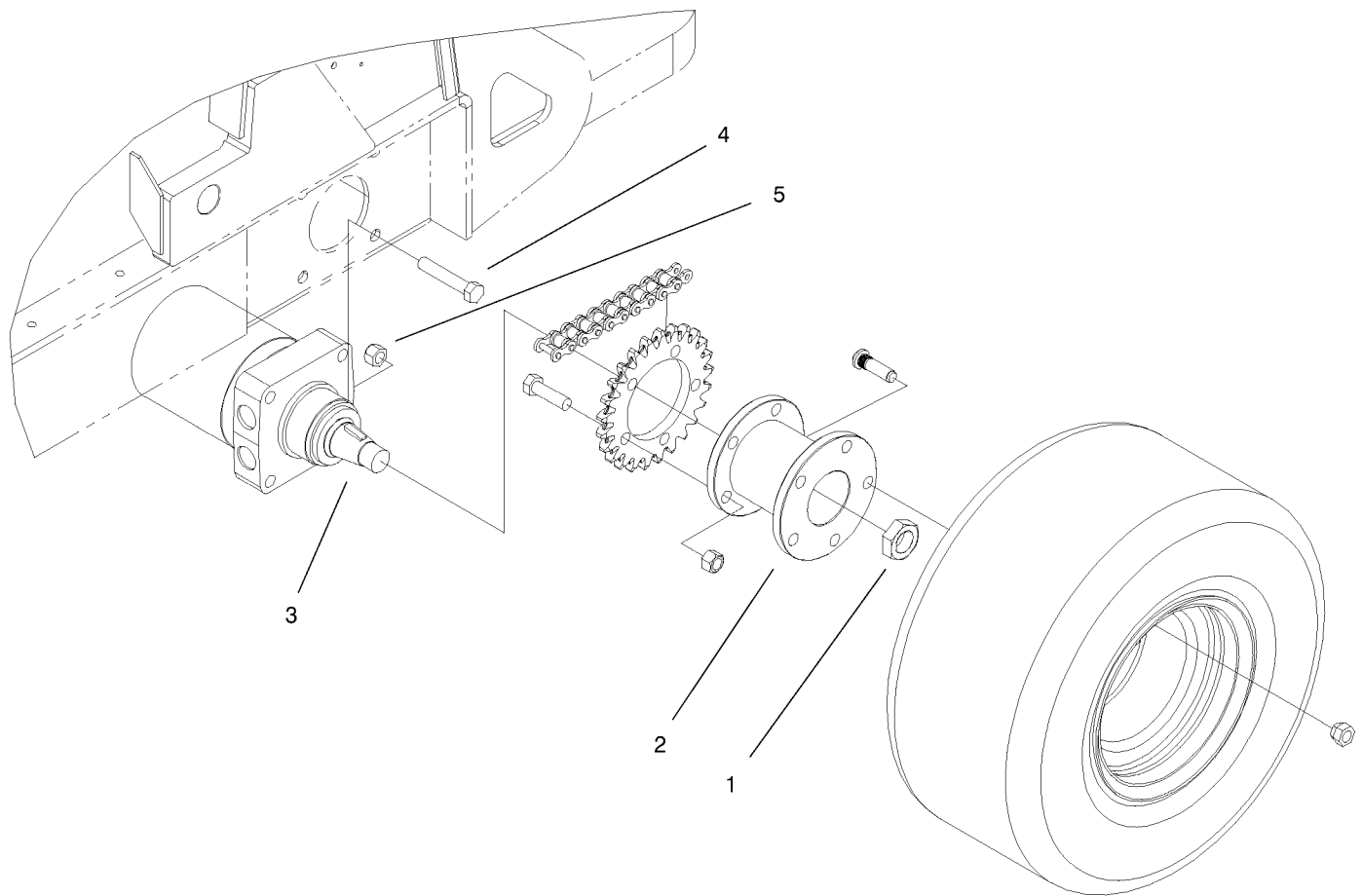
Quick Attach Service Assembly No. 98-2656

Ref	Part No.	Qty.	Description
1	98-4690	1	Quick Attach ASM
2	98-2654	2	Pivot Pin ASM
3	99-5105	2	Bolt-Shoulder
4	302-5	2	Fitting-Grease
①	3245-35	2	Screw-Set



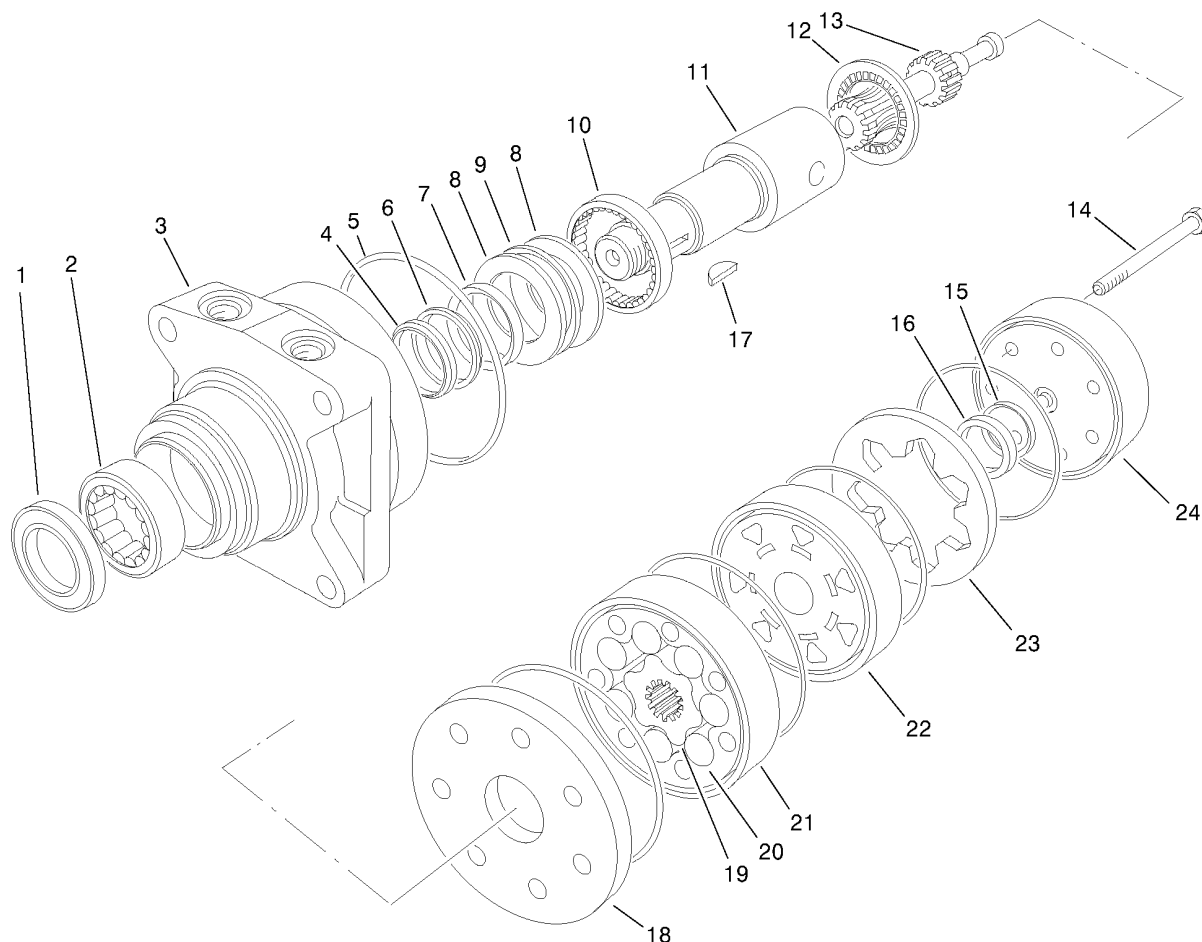
Front Wheel Assembly

Ref	Part No.	Qty.	Description				
1	242-35	20	Nut-Wheel				
2	99-3257	4	Tire And Wheel ASM				
2:1	99-3063	1	Wheel				
2:2	99-3062	1	Tire				
2:3	106396	1	Tube-Tire				
3	99-3258	2	Dust Cap				
4	32146-14	2	Locknut				
5	3256-28	2	Washer-Flat				
6	99-3260	2	Bearing-Roller Tapered				
7	99-3261	2	Hub-Front				
8	3219-4	20	Nut-Hex				
9	324-6	20	Screw-HH				
10	99-3262	2	Bearing-Cup And Cone				
11	106-8184	2	Seal-Bearing, Wheel				
12	99-3264	1	Axle-Front				
13	98-4706	2	Bolt-Tension				
14	3218-7	4	Nut-Jam				
15	3272-12	2	Pin-Cotter				
16	98-4906	2	Chain-Roller				
16:1	98-9089	1	Link-Connecting				
17	98-9937	4	Sprocket-25T				
18	242-34	20	Stud-Drive				



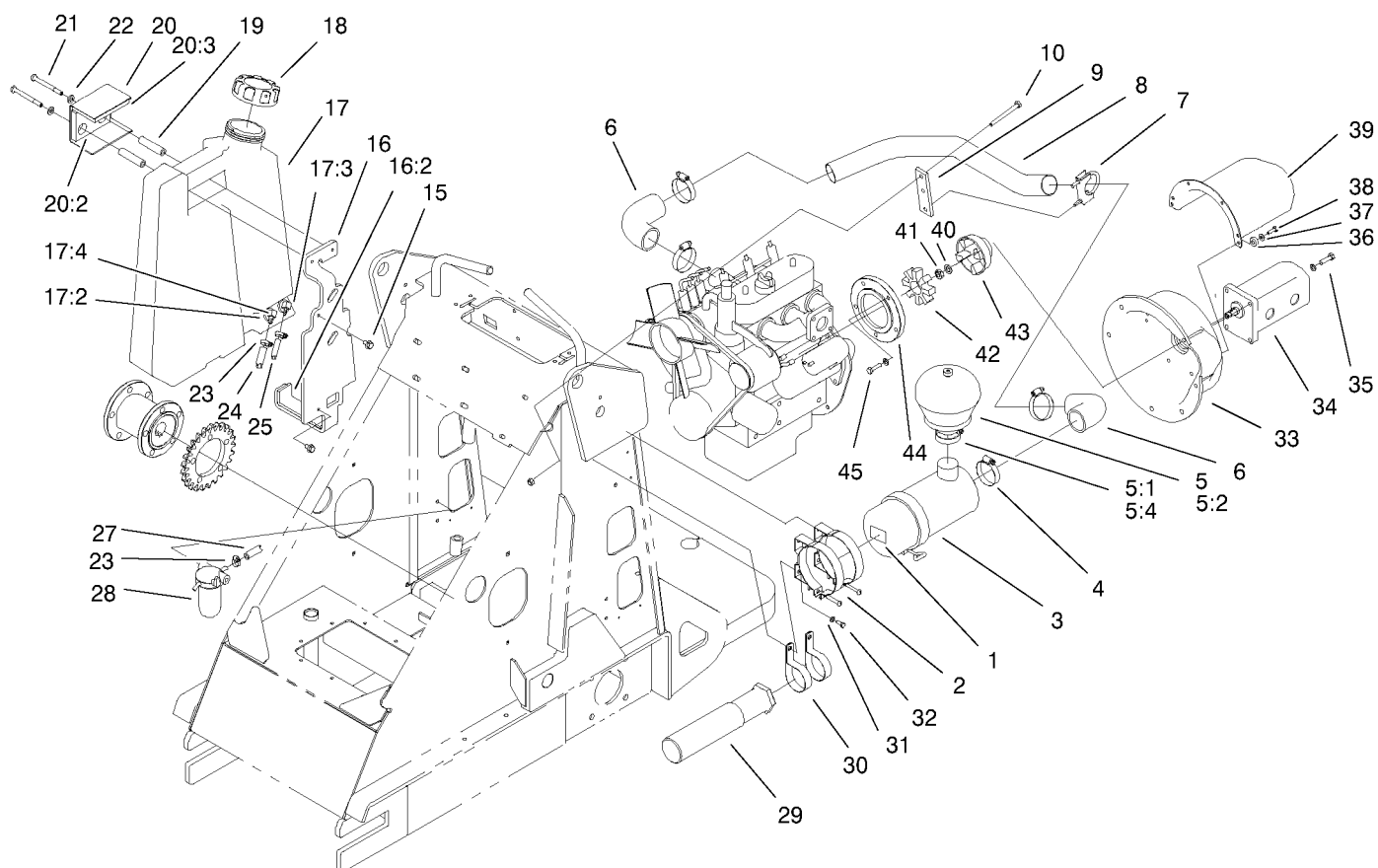
Rear Wheel Assembly

Ref	Part No.	Qty.	Description				
1	26-3790	2	Nut-Lock				
2	99-3255	2	Hub - Rear				
3	98-4704	2	Hydraulic Motor ASM				
①3:1	94-8178	1	Seal Kit				
4	48-9450	8	Bolt				
5	48-9540	8	Nut-Lock, Hex NI				



Hydraulic Motor Assembly No. 98-4704

Ref	Part No.	Qty.	Description
③4		1	Screw
11	99-3090	1	Shaft-Coupling
③13		7	Link-Drive
③14	99-3091	1	Screw-Cap, HH
③17	3257-42	1	Key-Woodruff
③18		1	Plate-Wear
③22		1	Manifold
③24		1	End Cover Assembly
①	94-8178	1	Seal Kit (Incl. Ref. #1, 4-7 & 15)

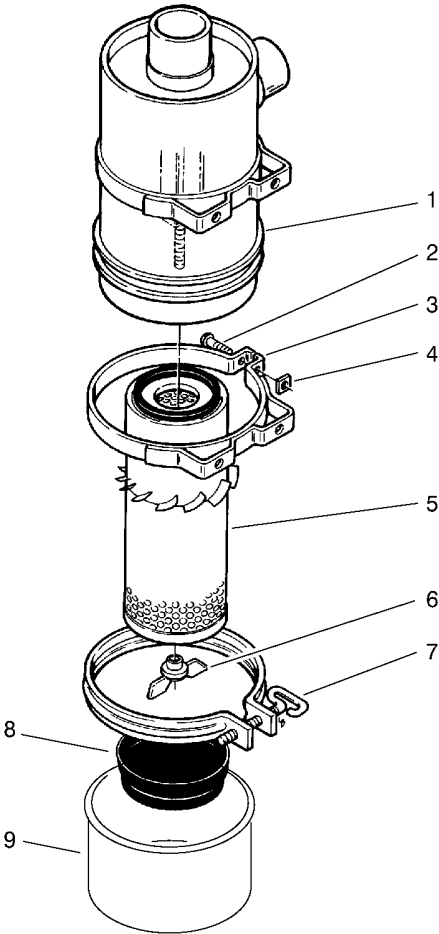


Fuel Tank And Engine Assembly

Ref	Part No.	Qty.	Description
1	93-7275	1	Decal-Fluid, Starting
2	33-1350	2	Mtg Band ASM
3	85-4910	1	Air Cleaner ASM
4	2412-92	4	Clamp-Hose
5	100-2138	1	Pre Cleaner
5:1	33-1260	1	Cover ASM
5:2	33-1270	1	Bowl-Clear
●5:3	100-2139	1	Clamp
5:4	94-6873	1	Clamp
6	100-2103	2	Hose-Air Filter
7	100-2141	1	U-Bolt
8	100-2104	1	Tube-Air Filter
8:1	100-4165	1	Kit-Seal
9	100-2128	1	Mount-Tube
10	322-20	1	Screw-HH
15	100-1719	2	Screw-Flange
16	100-2540	1	Mount ASM
16:2	100-2194	1	Pad-Foam
●16:3	100-2196	2	Pad-Foam
17	100-1594	1	Fuel Tank ASM, Diesel
17:2	104047	2	Bushing
17:3	100-1596	1	Fitting-90 DEG
17:4	100-1597	1	Fitting-90 Degree
18	98-2710	1	Diesel Fuel Cap ASM

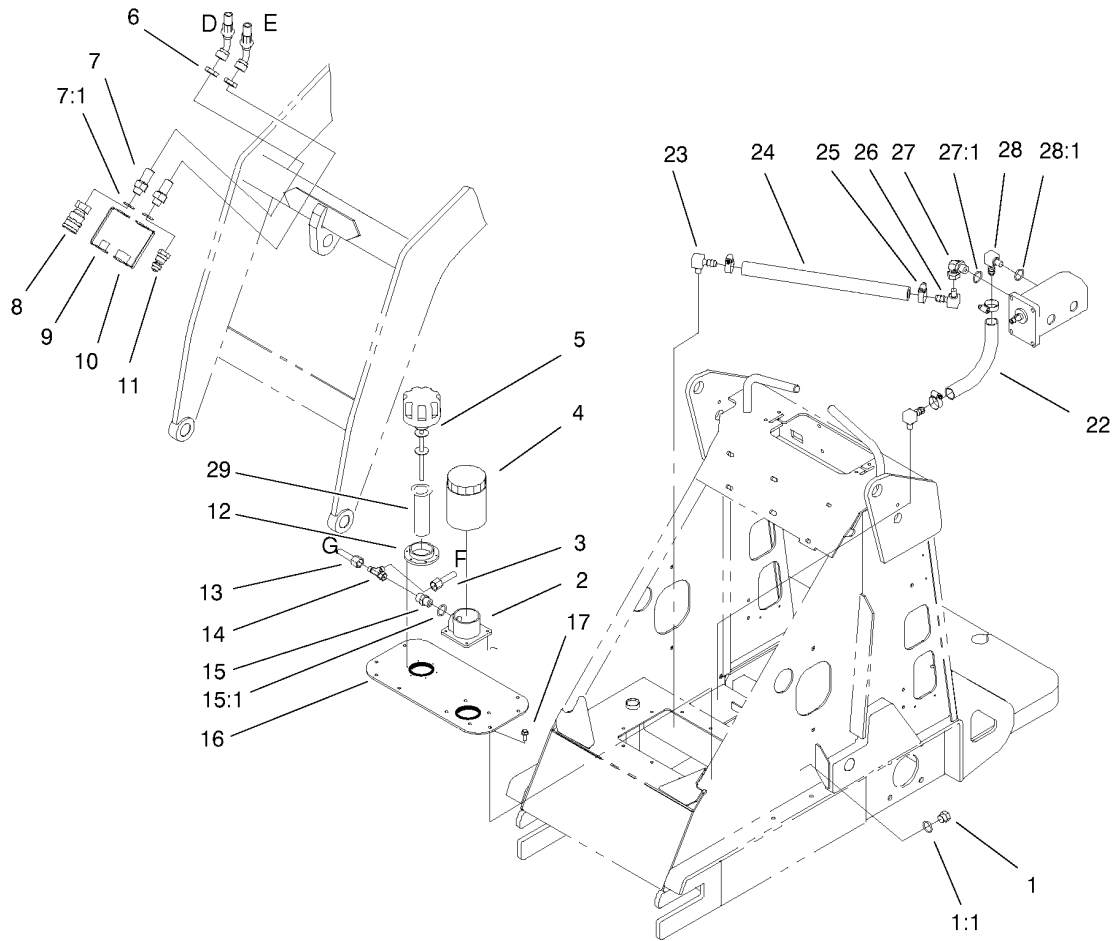
Ref	Part No.	Qty.	Description
19	100-1718	2	Spacer
20	100-2541	1	Plate ASM
20:2	100-2195	1	Pad-Foam
20:3	100-2196	1	Pad-Foam
21	100-1720	2	Screw-HH
22	3256-23	2	Washer-Flat
23	2412-108	3	Clamp-Worm
24	63-7621	1	Hose-Fuel
25	75-4701	1	Hose-Fuel
27	71-3370	1	Hose
28	100-1855	1	Fuel Filter ASM
29	74-0720	1	Tube-Manual
30	2412-133	2	R-Clamp
31	3253-3	2	Washer-Lock
32	48-7620	2	Screw-HH
33	100-2106	1	Mount-Pump, Diesel
34	99-3270	1	Pump-Gear, Tandem
●34:2	99-5004	1	Seal Kit - Pump
●34:3	48-8070	1	Washer-Lock
●34:4	100-2112	1	Nut-Jam
35	48-7730	4	Screw-HH
36	100-2100	6	Washer-Rubber
37	3256-3	6	Washer-Flat
38	48-7630	6	Screw

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Air Filter Assembly No. 85-4910

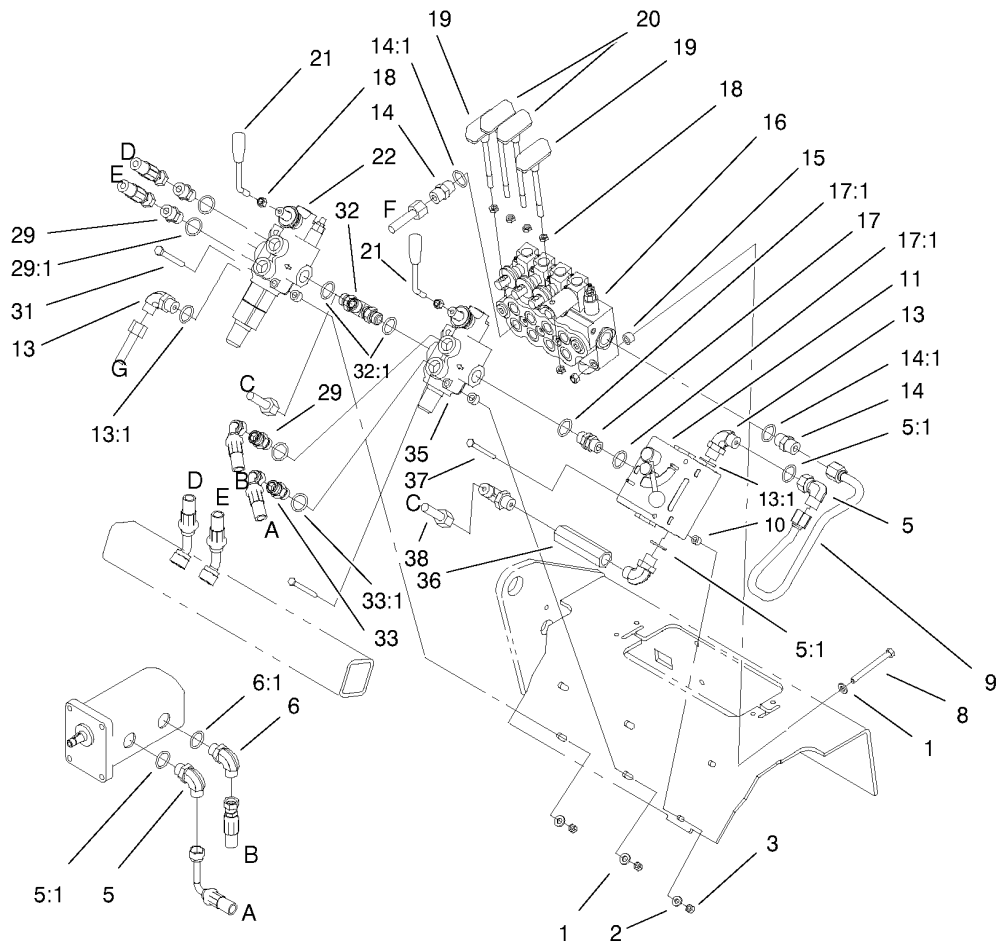
Ref	Part No.	Qty.	Description				
2	3258-19	2	Screw				
3	33-1350	2	Band Assembly (Incl. Ref. #2 & 4)				
4	32107-11	2	Nut-Square				
5	33-1300	1	Element ASM				
6	33-1330	1	Nut ASM				
7	33-1340	1	Clamp ASM				
8	33-1310	1	Baffle				
9	33-1320	1	Cup ASM				
	85-4910	1	Air Cleaner ASM (Incl. Ref. 1 & 5-9)				



Hydraulic Cover And Hose Assembly

Ref	Part No.	Qty.	Description
1	353-988	1	Plug-Hex
1:1	237-79	1	O-Ring
2	99-3289	1	Filter-Mount
3	99-5061	1	Tube-HYD
4	99-5084	1	Filter-Element
5	99-3287	1	Cap-HYD
6	99-5070	2	Nut-Bulkhead
7	99-5071	2	Union-Bulkhead
7:1	99-5078	2	O-Ring
8	99-1394	1	Quick Coupler-Female
9	98-9913	1	Dust Plug
10	98-9912	1	Cap-Dust
11	99-1393	1	Quick Coupler - Male
12	99-3288	1	Cap-Mount
13	99-5060	1	Tube-HYD
14	94-7022	1	Tee
15	99-5083	1	Fitting-Straight
15:1	99-5085	1	O-Ring
16	100-2135	1	Cover-Tank, Top
17	33113-020	16	Screw-HH
22	100-2130	1	Hose-Suction
23	99-5088	2	Fitting-Barbed 90 DEG
24	100-2129	1	Hose-Suction
25	2412-129	4	Clamp-Hose

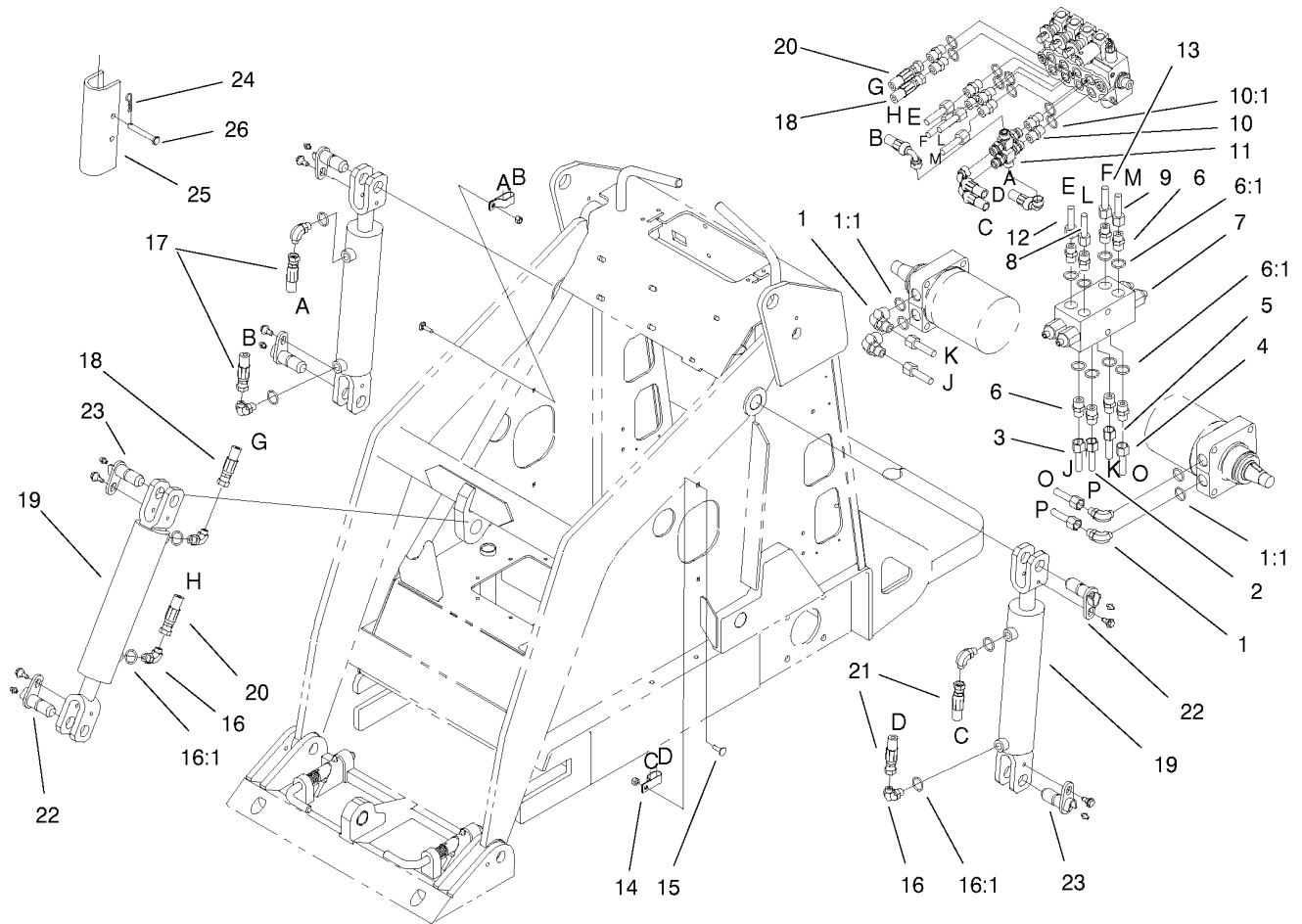
Ref	Part No.	Qty.	Description
26	99-5086	1	Fitting-Barbed 90 DEG
27	99-3096	1	Fitting
27:1	99-5078	1	O-Ring
28	99-5087	1	Fitting-Barbed 90 DEG
28:1	99-5075	1	O-Ring
29	61-2790	1	Filter-Screen



Hydraulic Assembly

Ref	Part No.	Qty.	Description
1	3256-23	7	Washer-Flat
2	3256-22	3	Washer-Flat
3	3296-42	6	Nut-Lock, NI
5	99-3291	1	Adapter
5:1	99-5078	1	O-Ring
6	99-5072	1	Adaptor - 90 DEG
6:1	99-5075	1	O-Ring
8	322-20	2	Screw-HH
9	99-5059	1	Tube-HYD
10	98-4799	2	Tube-Spacer
11	99-3277	1	Valve - HYD, Flow
●11:1	99-3298	1	Seal Kit - Valve
●11:2	98-9098	1	Handle Hardware Kit
13	99-5079	1	Adaptor - 90 DEG
13:1	99-5078	1	O-Ring
14	99-5081	2	Fitting-Straight
14:1	99-5078	2	O-Ring
15	98-4695	7	Spacer
16	99-3275	1	Valve - HYD, 4-Spool
●16:1	98-4720	1	Seal Kit
17	99-5080	1	Connector-Straight Adj.
17:1	99-5078	2	O-Ring
18	42-9580	10	Nut-Hex
19	98-4671	2	Cylinder Handle ASM

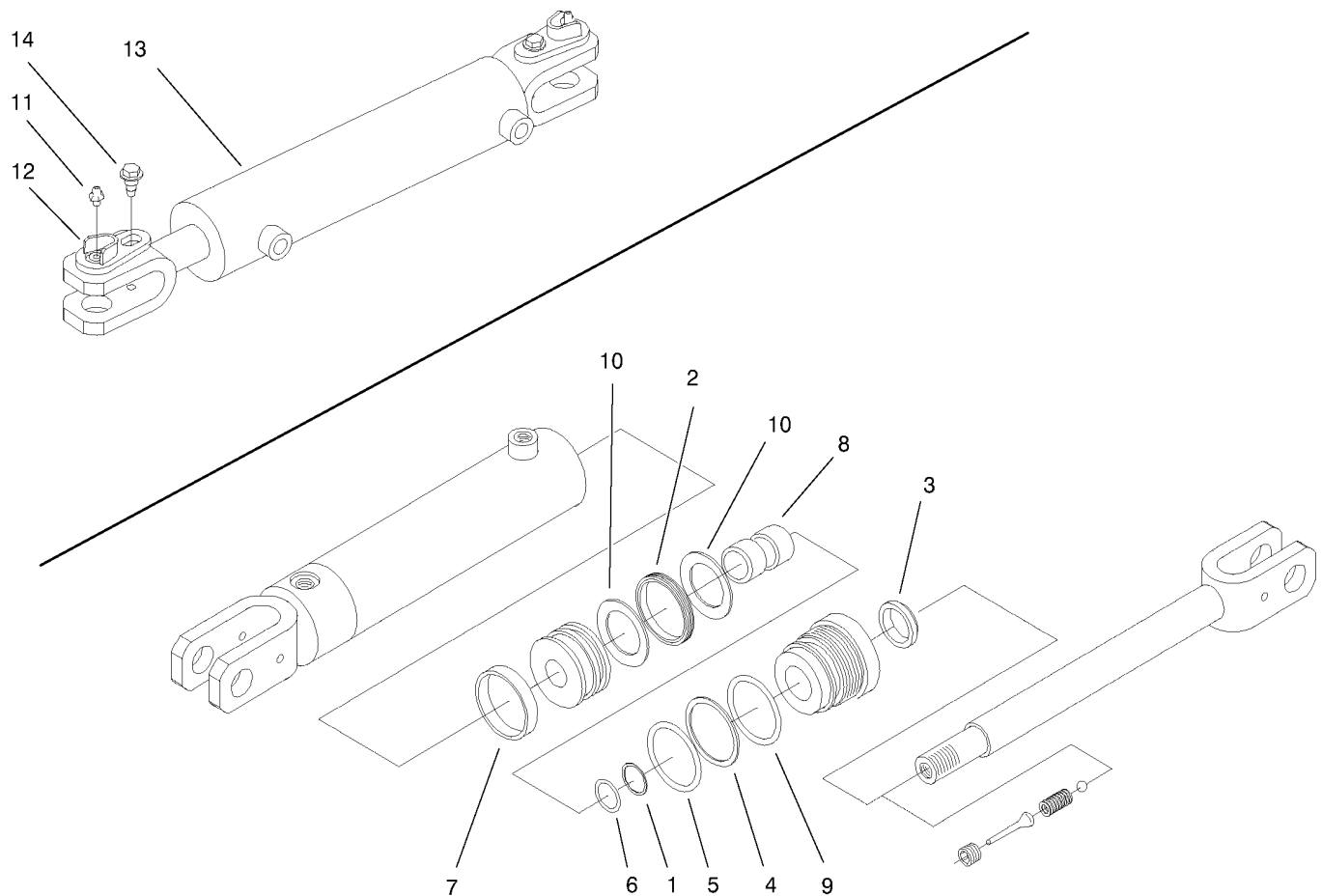
Ref	Part No.	Qty.	Description
●19	98-4722	2	Lever - Valve
20	98-4670	2	Drive Handle ASM
●20	98-4723	2	Lever - Valve
21	98-4729	2	Lever-Valve
22	99-3274	1	Valve-HYD, Aux.
●22:1	98-4721	1	Seal Kit
29	99-5082	7	Fitting-Straight
29:1	99-5075	14	O-Ring
30	99-3098	1	Bracket-Aux.
31	322-13	4	Screw-HH
32	99-5090	1	Adapter-Tee Adjustable
32:1	99-5078	2	O-Ring
33	99-5073	1	Fitting
33:1	99-5075	1	O-Ring
35	99-3276	1	Valve - HYD, Selector
●35:1	98-4721	1	Seal Kit
36	99-5077	1	Valve-Inline Check
37	321-14	2	Screw-HH
38	99-5058	1	Tube-HYD



Hydraulic Cylinder Assembly

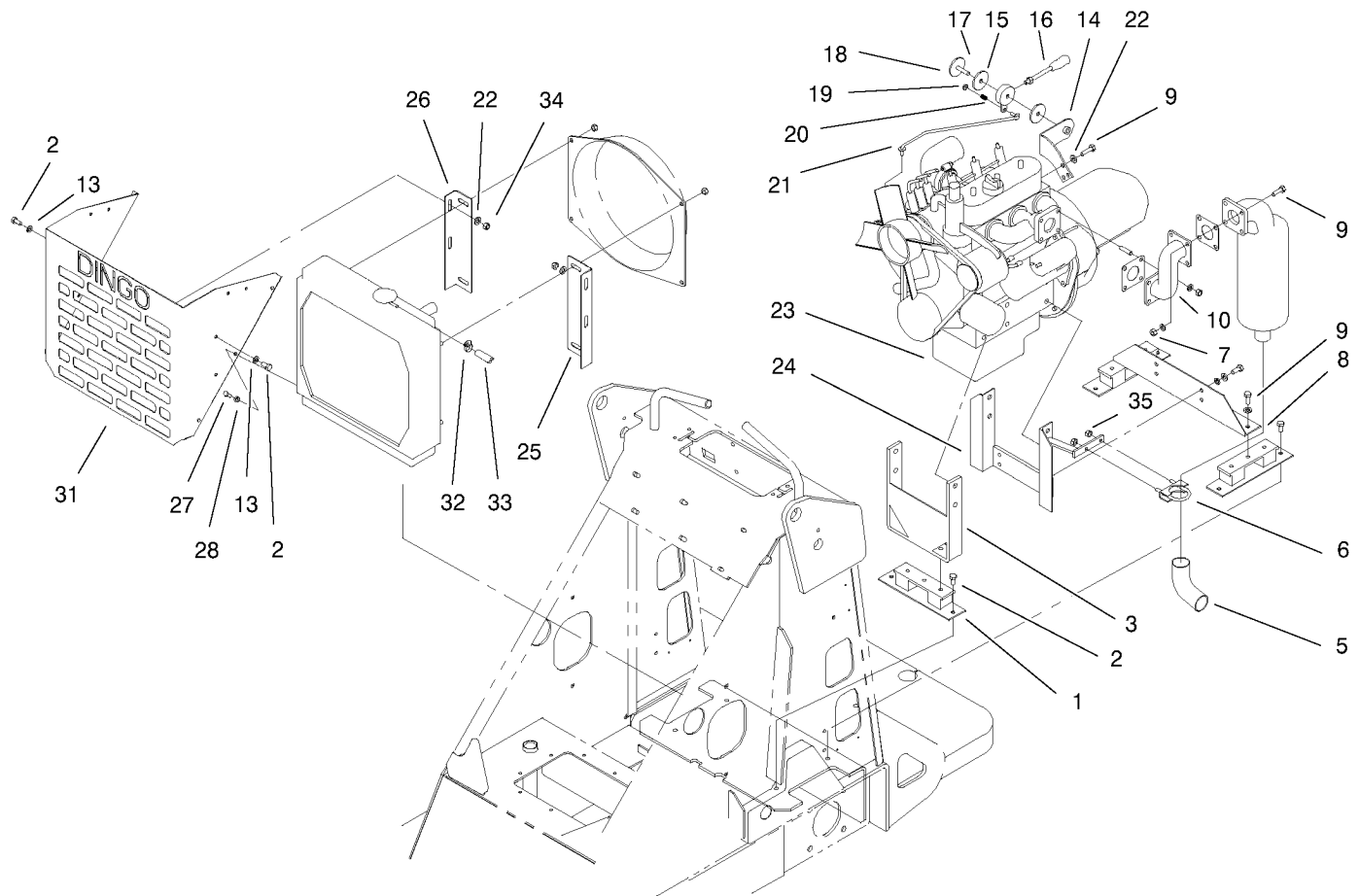
Ref	Part No.	Qty.	Description
1	353-370	4	Elbow-90 DEG
1:1	237-80	1	O-Ring
2	99-3047	1	Tube-HYD
3	99-3048	1	Tube-HYD.
4	99-3049	1	Tube-HYD.
5	99-3004	1	Tube-HYD.
6	353-388	8	Fitting-Straight
6:1	237-80	1	O-Ring
7	99-3279	1	Valve-Counterbalance
17:1	98-2712	1	Seal Kit
8	100-2151	1	Tube-HYD
9	100-2152	1	Tube-HYD.
10	99-5074	4	Fitting
10:1	99-5075	1	O-Ring
11	99-5076	2	Connector-Swivel
12	100-2153	1	Tube-HYD
13	100-2154	1	Tube-HYD
14	2412-137	2	Clamp-R, Double
15	3230-2	2	Bolt-CARR
16	353-374	6	Elbow-90 DEG
16:1	237-42	1	O-Ring
17	99-5062	2	Hose-HYD
18	99-5063	1	Hose-HYD
19		3	Hydraulic Cylinder

Ref	Part No.	Qty.	Description
19:1	99-3181	1	Seal Kit-Cylinder
20	99-5064	1	Hose-HYD
21	99-5065	2	Hose-HYD
24	3290-467	2	Pin-Hair
22	99-3045	3	ASM - Pivot Pin, Au
23	99-3044	3	ASM - Pivot Pin, Au
25	98-4675	2	Lock-Cylinder
26	283-52	2	Pin-Clevis
1	99-3278	1	Hydraulic Cylinder ASM



Hydraulic Cylinder Assembly No. 99-3278

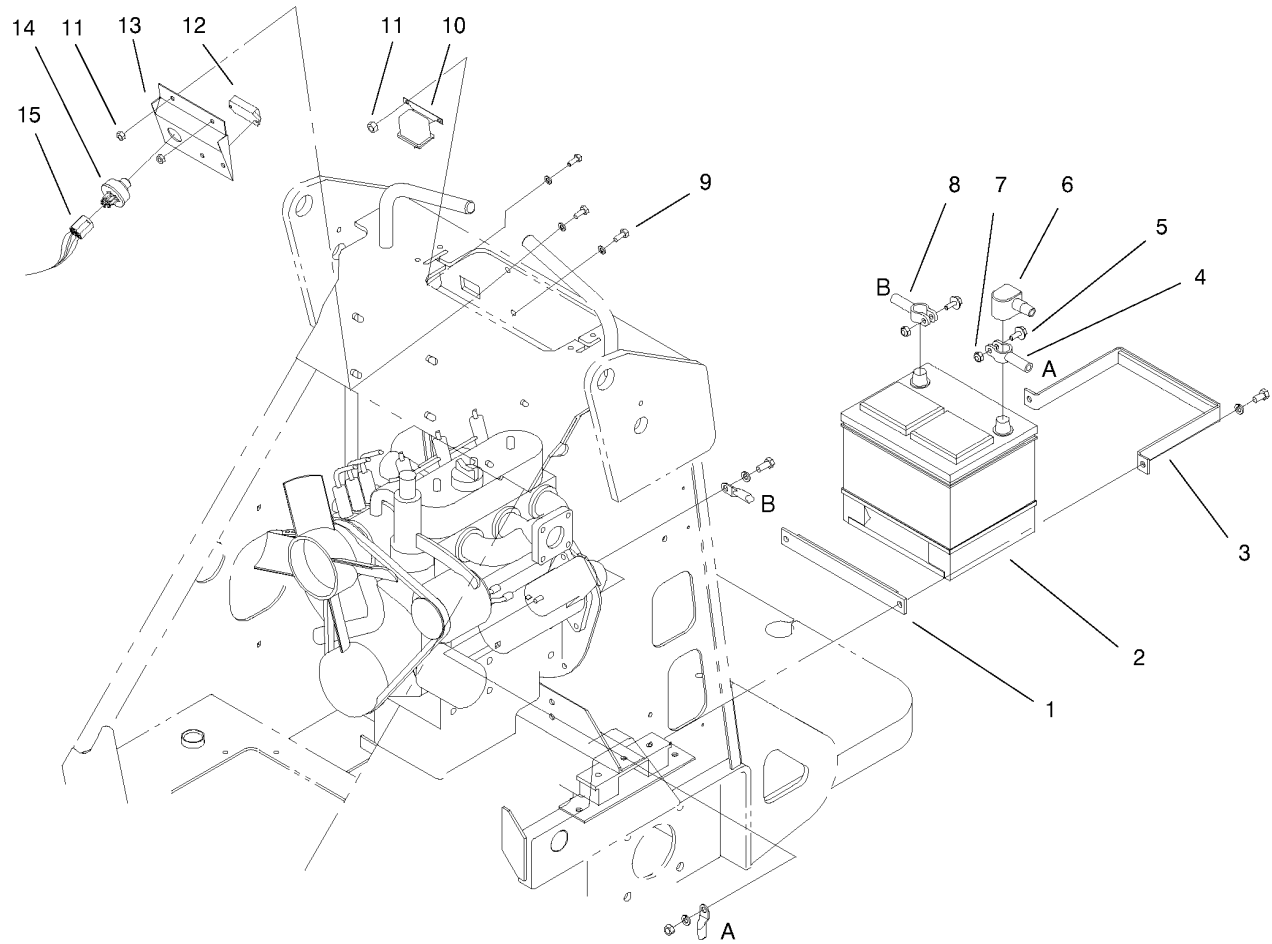
Ref	Part No.	Qty.	Description				
2		1	Psp Seal				
3		1	Rod-Wiper				
6		1	Polypak				
7		1	Ring-Wear				
8		2	Ring-Wear				
11	302-5	2	Fitting-Grease				
12	99-1414	2	Pin-Pivot				
13	99-3051	1	Cylinder-Hydraulic				
14	99-5105	2	Bolt-Shoulder				
	99-3065	1	Seal Kit (Incl. Ref. #1-10)				



Engine Mounting Assembly

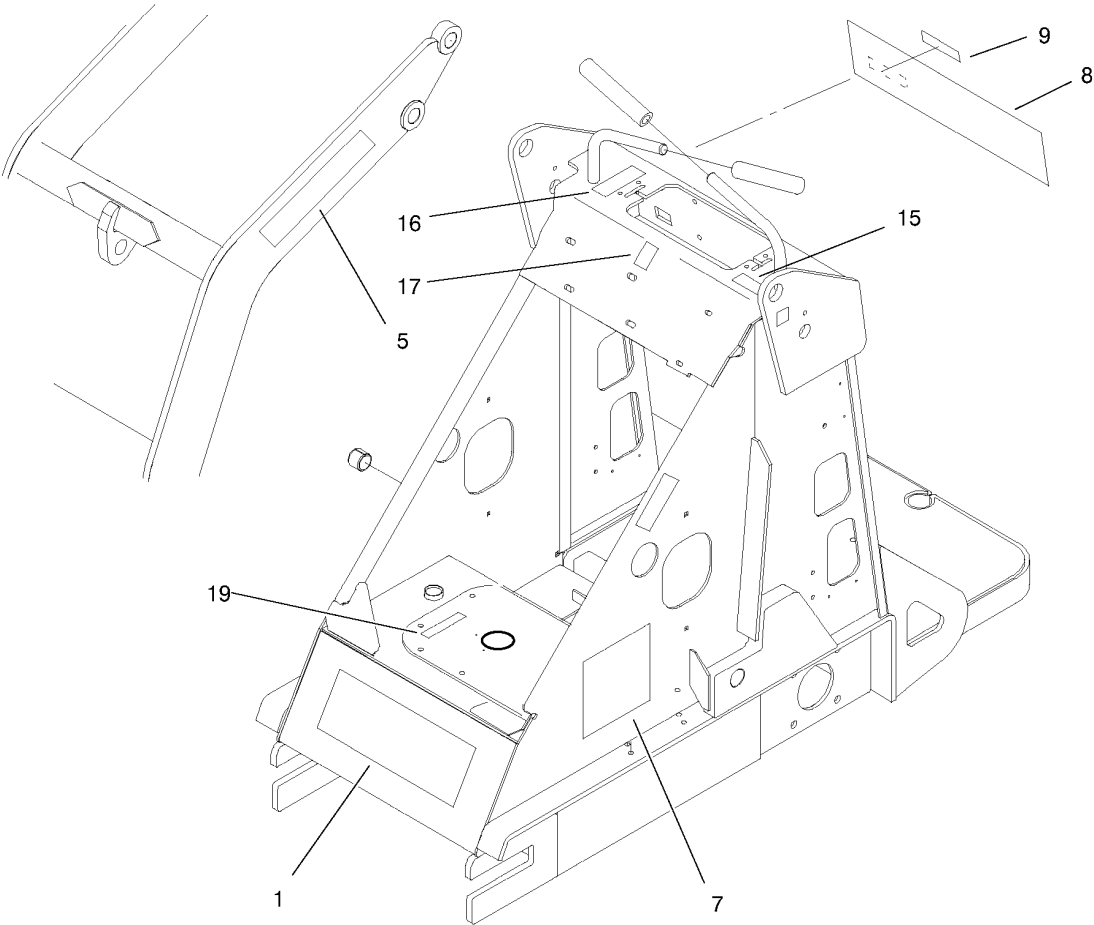
Ref	Part No.	Qty.	Description
1	100-2108	3	Mount-Engine, Rubber
2	48-7700	11	Screw-HH
3	100-2109	1	Mount-Engine, Front
5	100-2102	1	Tailpipe-Muffler
6	100-2140	1	U-Bolt
7	48-7930	4	Nut
8	100-2111	1	Support-Engine
9	48-7710	10	Bolt
10	100-2105	1	Tube-Mount, Muffler
13	3253-4	18	Washer-Lock
14	100-2121	1	Bracket-Throttle
15	100-2123	1	Control-Throttle
16	98-4722	1	Lever - Valve
17	100-2122	2	Spacer-Throttle
18	100-2124	1	Retainer-Throttle
19	32146-17	2	Nut-Lock
20	100-2127	1	Spring-Throttle
21	100-2126	1	Linkage-Throttle
22	3256-23	5	Washer-Flat
23		1	Engine ASM-Kubota
24	100-2110	1	Mount-Engine, Rear
25	100-2116	1	Radiator Mount, Brkt-LH
26	100-2142	1	Radiator Mount, Brkt-RH
27	48-7620	10	Screw-HH

Ref	Part No.	Qty.	Description
28	3253-3	10	Washer-Lock
31	100-2136	1	Shroud-Radiator
32	2412-108	1	Clamp-Worm
33	63-7621	1	Hose-Fuel
34	33024-00	4	Nut-Lock
35	3296-29	2	Nut-Lock, NI



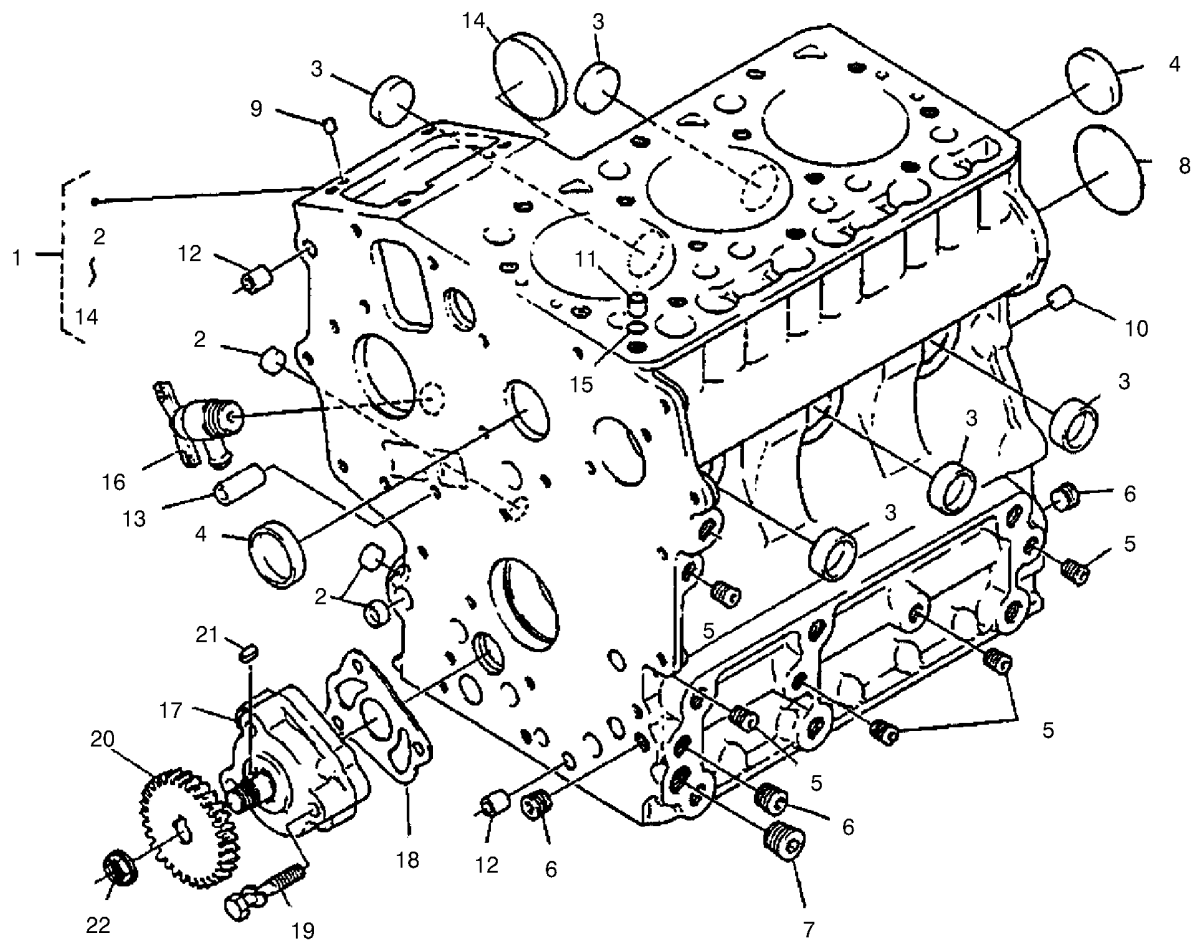
Electrical Assembly

Ref	Part No.	Qty.	Description				
1	99-3153	1	Plate-Battery Mount				
2		1	Battery				
3	99-3159	1	Bracket-Battery				
4	100-2081	1	Cable-Pos				
5	3234-4	2	Screw-HHF				
6	77-0981	1	Boot-Terminal, Red				
7	3296-16	2	Nut-Lock, NI				
8	100-2082	1	Cable-Neg				
9	48-7630	4	Screw				
10	100-2078	1	Buzzer				
11	48-7890	4	Nut				
12	99-3143	1	Tachometer				
13	99-3142	1	Bracket				
14	100-1985	1	Assy Switch, Starter				
15	100-4698	1	Harness-Electrical				



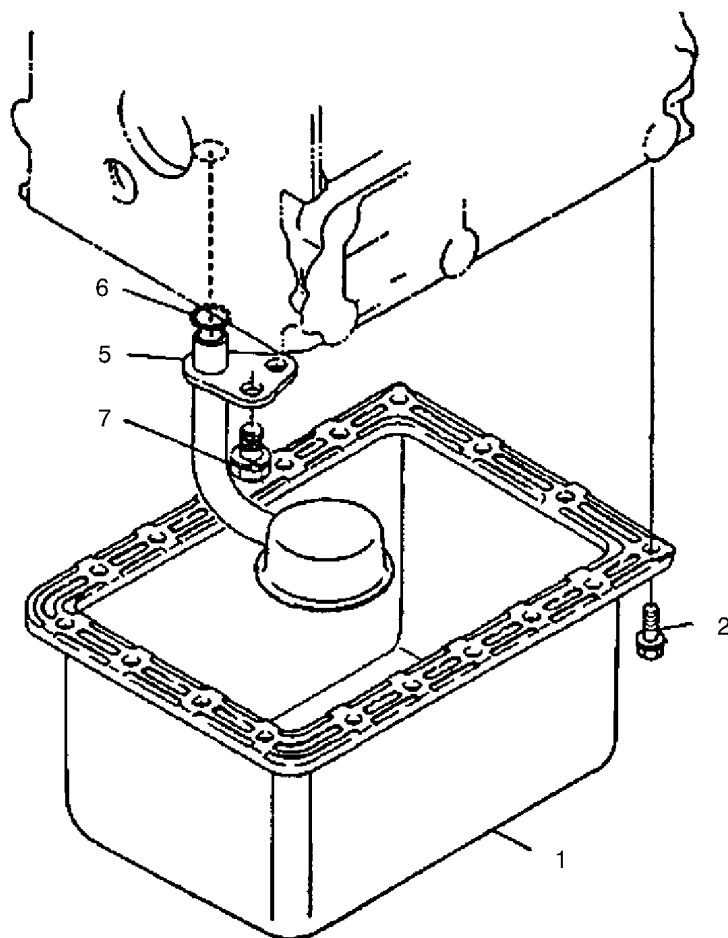
Decal Assembly

Ref	Part No.	Qty.	Description				
1	98-4679	1	Decal - Front				
5	98-8218	2	Decal - Dingo 220D				
7	98-4680	2	Decal - Side				
8	98-4676	1	Decal - Control Panel				
9	52-1320	1	Decal-Diesel Fuel				
15	98-8220	1	Decal-Limiter, Speed				
16	98-4677	1	Decal-Power, Auxiliary				
17	98-8235	1	Decal-Selector				
19	85-4730	1	Decal-Only, HYD Oil				
20	98-8219	1	Decal-Throttle				



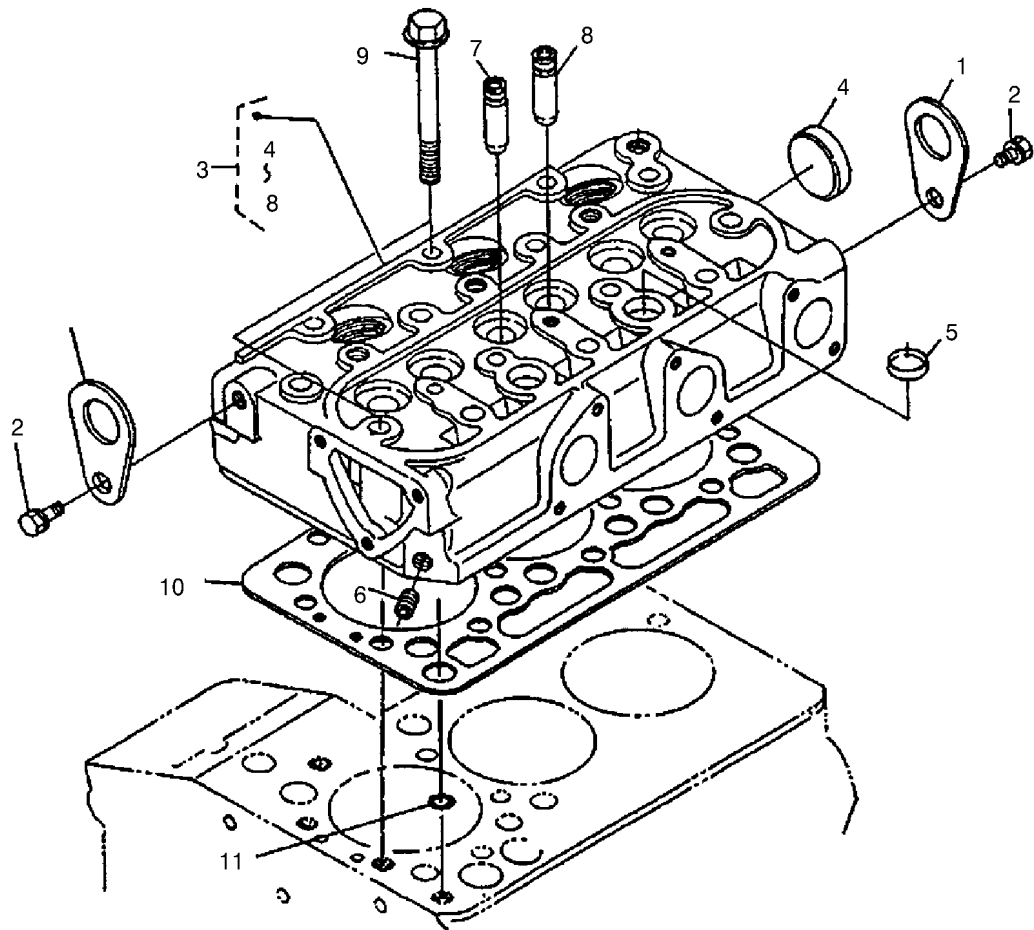
Crankcase Assembly

Ref	Part No.	Qty.	Description				
1	100-2045	1	Comp. Crankcase				
2	100-2019	3	Cap-Sealing				
3	100-2020	5	Cap-Sealing				
4	98-9398	2	Cap-Sealing				
5	98-7540	5	Plug				
6	98-7487	3	Plug				
7	98-7488	1	Plug				
8	100-1851	1	Plug				
9	98-9375	2	Pin-Straight				
10	98-9377	2	Pin-Straight				
11	98-7506	1	Pin-Pipe				
12	98-9387	2	Pin-Pipe				
13	100-2051	2	Pin-Pipe				
14	100-1991	1	Cover-Fuel, Camshaft				
15	98-7509	1	O-Ring				
16	98-9436	1	Drain Cock ASM				
17	100-2002	1	Oil Pump ASM				
18	100-1958	1	Gasket-Pump, Oil				
18	100-2003	1	Gasket-Pump, Oil				
19	100-1923	3	Bolt				
20	100-1893	1	Gear-Drive, Oil Pump				
21	98-7658	1	Key-Feather				
22	100-1779	1	Nut-Flange				



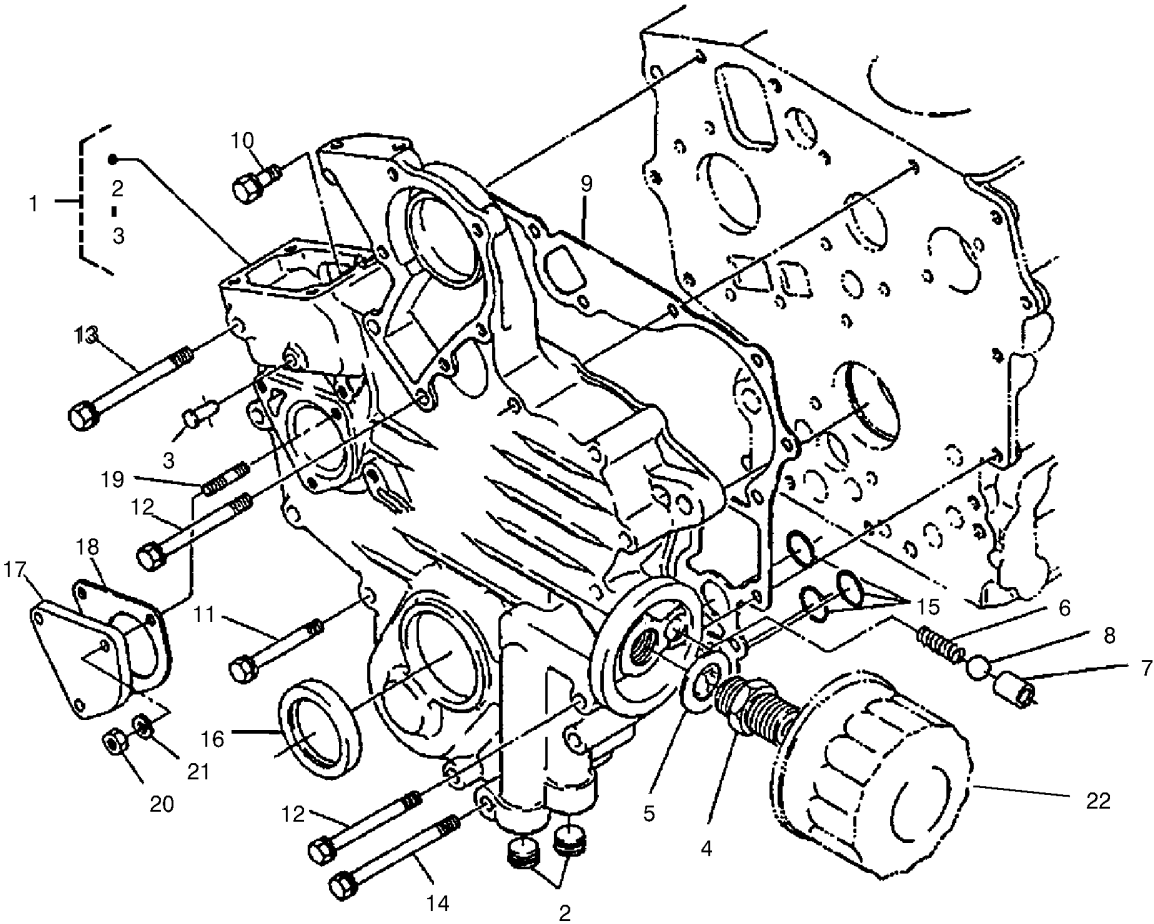
Oil Pan Assembly

Ref	Part No.	Qty.	Description
1	100-2041	1	Comp, Oil Pan
2	98-9350	18	Bolt
5	100-2001	1	Strainer-Oil, Pick-Up
6	98-7527	1	O-Ring
7	98-7585	1	Bolt



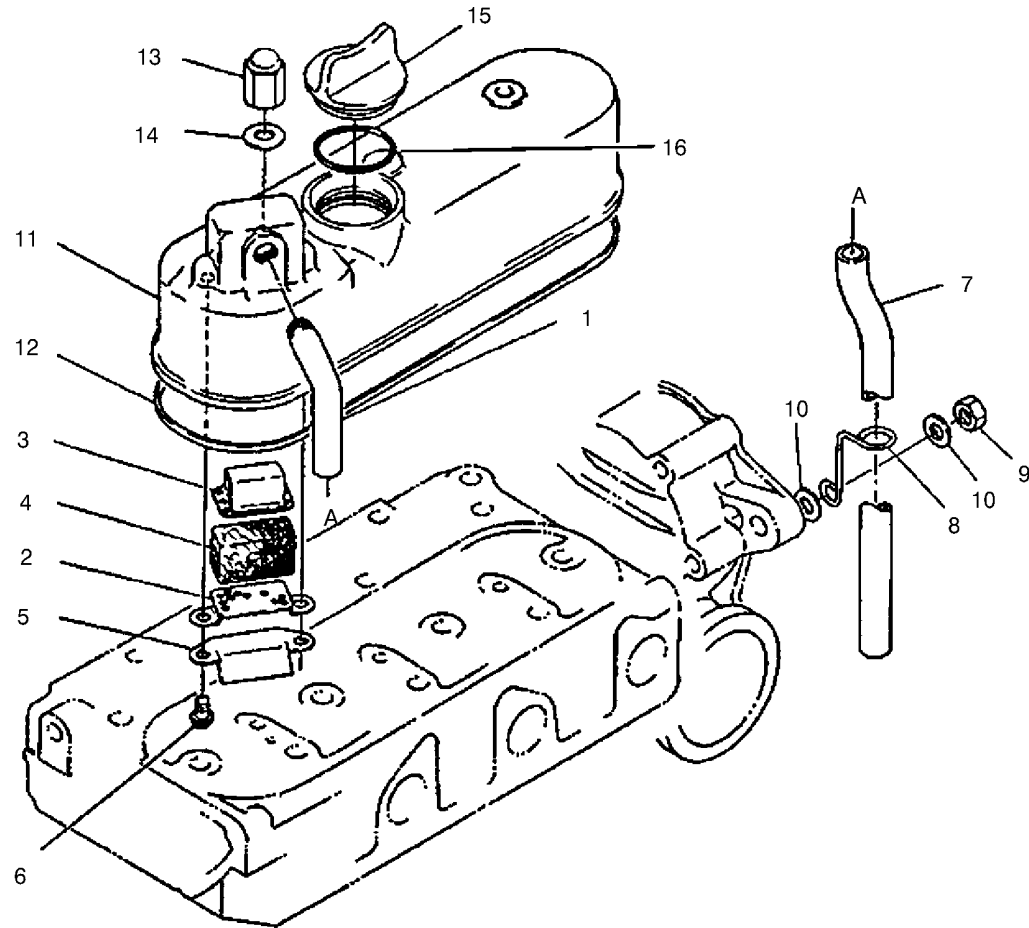
Cylinder Head Assembly

Ref	Part No.	Qty.	Description				
1	100-1872	2	Hook, Engine				
2	98-7585	2	Bolt				
3	100-2046	1	Comp, Cylinder Head (S/N < 489915)				
3	100-2047	1	Comp, Cylinder Head (S/N > 489916)				
4	98-9395	1	Cap-Sealing				
5	98-9389	2	Cap-Sealing				
6	98-7540	1	Plug				
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				



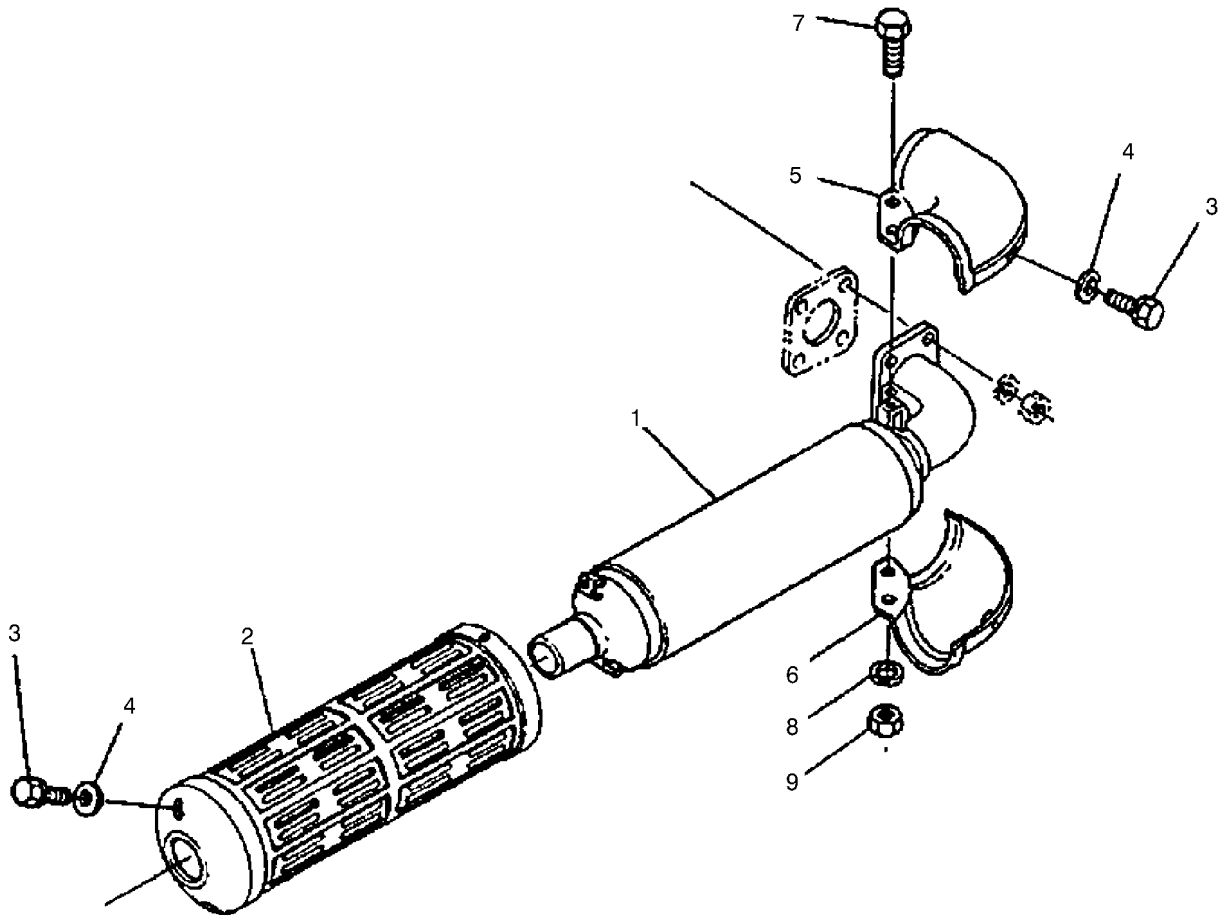
Gear Case Assembly

Ref	Part No.	Qty.	Description	Ref	Part No.	Qty.	Description
1	100-2048	1	Case-Gear, Comp.	21	98-9367	3	Washer-Spring
2	98-7546	2	Plug	22	100-1892	1	Cartridge-Filter, Oil
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				
9	100-1955	1	Gasket, Gear Case (From Sept. 1994)				
10	98-7605	1	Bolt				
11	98-9355	8	Bolt				
12	100-1922	5	Bolt				
13	100-1766	1	Bolt				
14	100-1767	1	Bolt				
15	100-1785	3	O-Ring				
16	100-1971	1	Seal-Oil				
17	100-2060	1	Cover				
18	100-2061	1	Gasket-Gearcase				
18	100-2062	1	Gasket, H/M Gearcase (From Sept. 1994)				
19	98-7571	3	Stud				
20	98-7572	3	Nut				



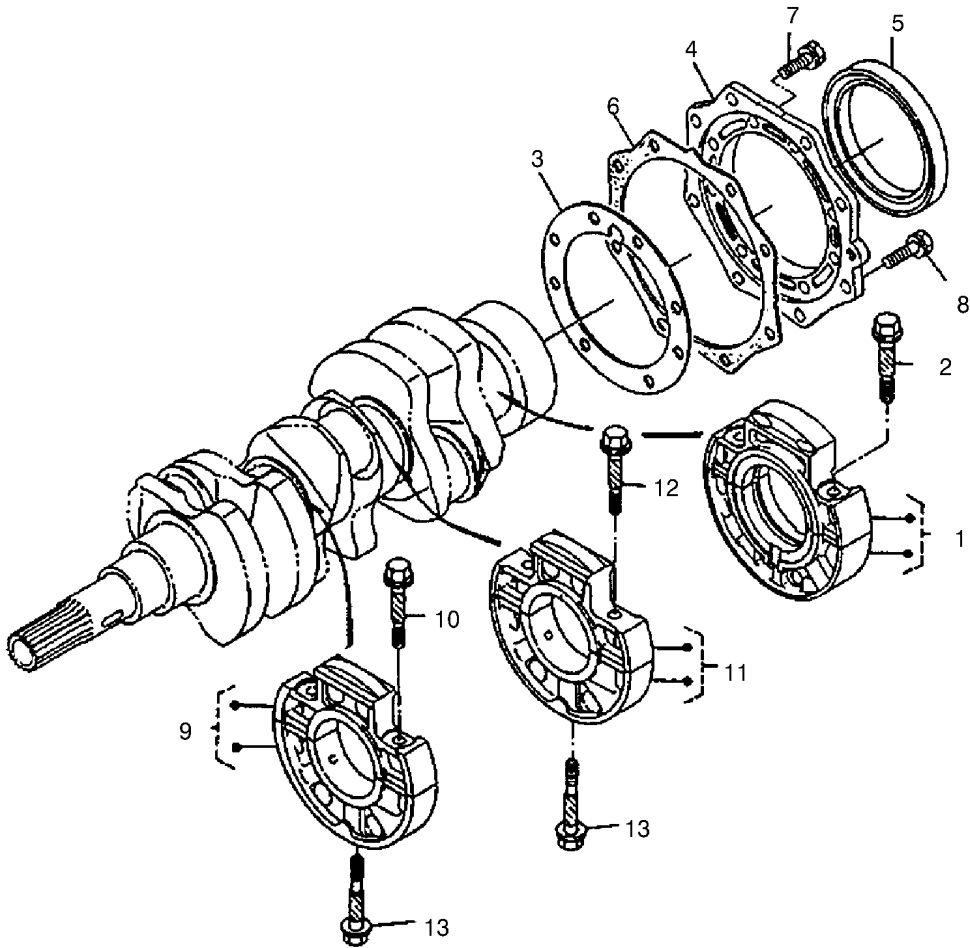
Head Cover Assembly

Ref	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				
6	98-9364	2	Screw (W/Washer)				
7	100-1880	1	Pipe-Breather				
8	100-1973	1	Clamp-Pipe				
9	98-7739	1	Nut				
10	98-7660	2	Washer-Plain				
11	100-2028	1	Cover, Cyl. Head (S/N < 384779)				
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	98-7430	1	O-Ring				



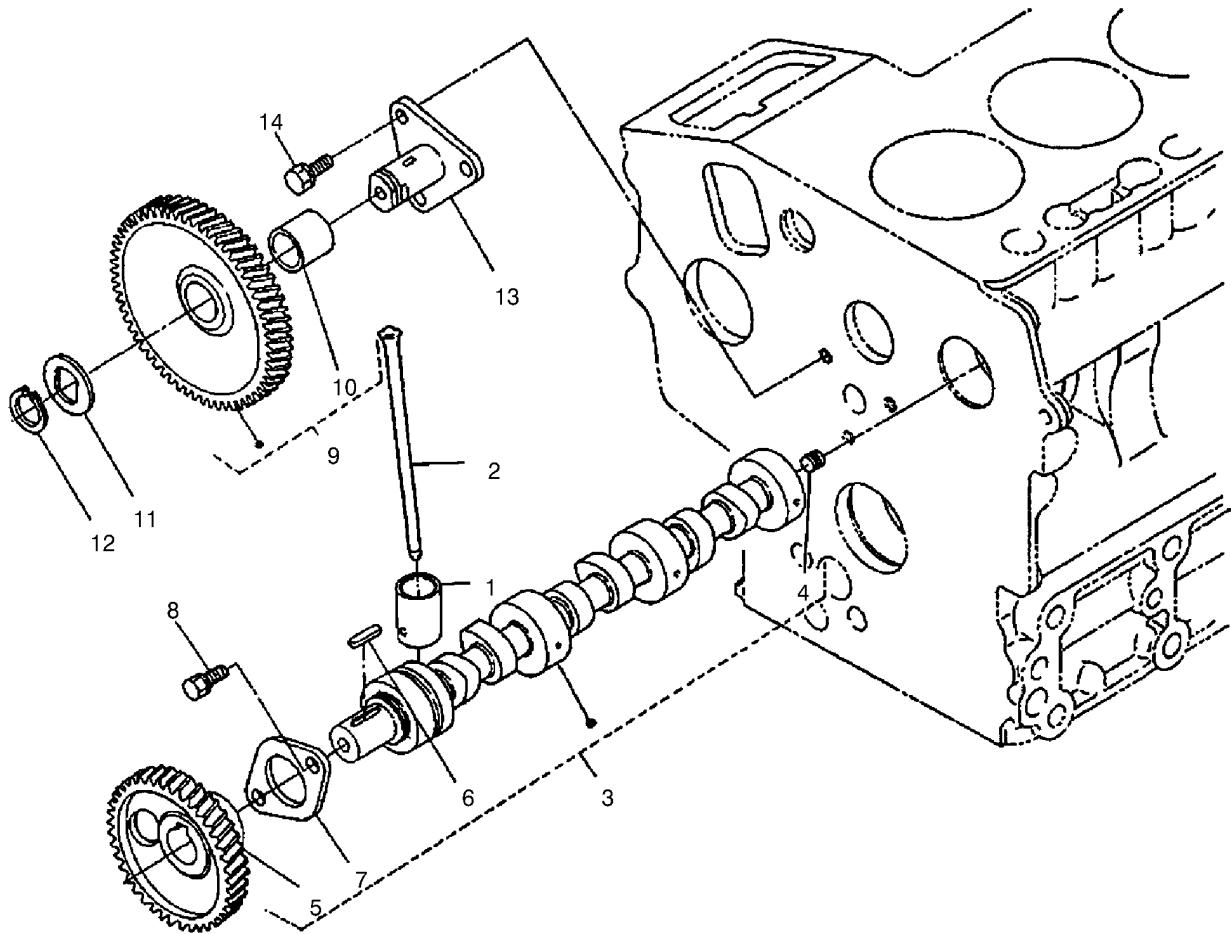
Muffler Assembly

Ref	Part No.	Qty.	Description				
1	100-1852	1	Muffler				
2	100-2073	1	Cover, Muffler				
3	100-1772	4	Bolt				
4	100-1781	4	Washer, Plain				
5	100-2071	1	Cover, Muffler Flange				
6	100-2072	1	Cover, Muffler Flange				
7	100-1768	2	Bolt				
8	98-9367	2	Washer-Spring				
9	100-1776	2	Nut				



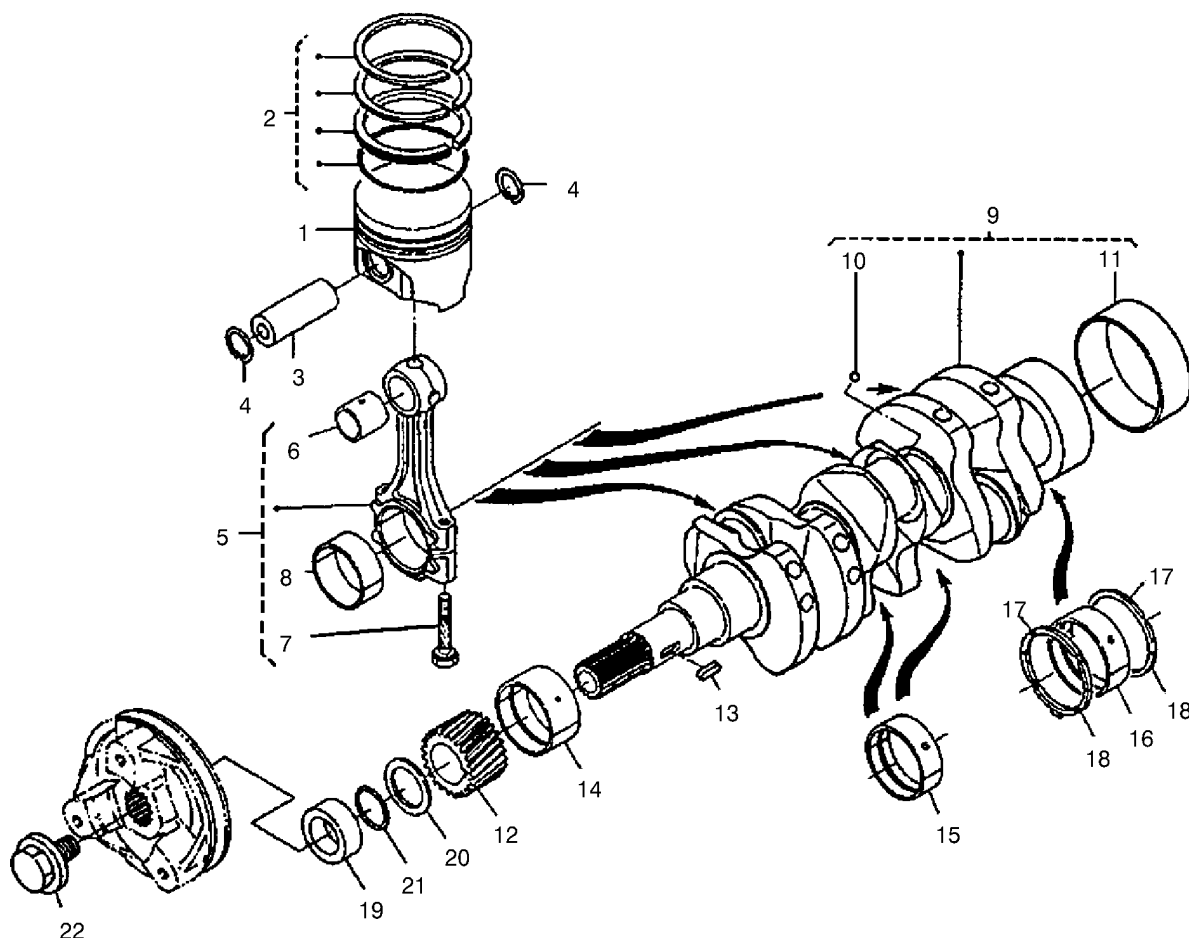
Main Bearing Case Assembly

Ref	Part No.	Qty.	Description				
1	100-1988	1	Main Bearing Case ASM				
2	100-1757	2	Bolt-Case, Bearing				
3	100-1873	1	Gasket-Case, Bearing				
3	100-1929	1	Gasket-Case, Bearing				
4	100-1875	1	Cover-Case, Bearing				
5	100-2055	1	Seal-Oil				
6	100-1876	1	Gasket-Case, Bearing				
6	100-1956	1	Gasket, Brg. Case (From Sept. 1994)				
7	98-7568	8	Bolt				
8	100-1750	8	Bolt				
9	100-1987	1	Main Bearing Case ASM				
10	100-1757	2	Bolt-Case, Bearing				
11	100-2027	1	Main Bearing Case ASM				
12	100-1757	2	Bolt-Case, Bearing				
13	100-1874	2	Bolt-Case, Bearing				



Camshaft Assembly

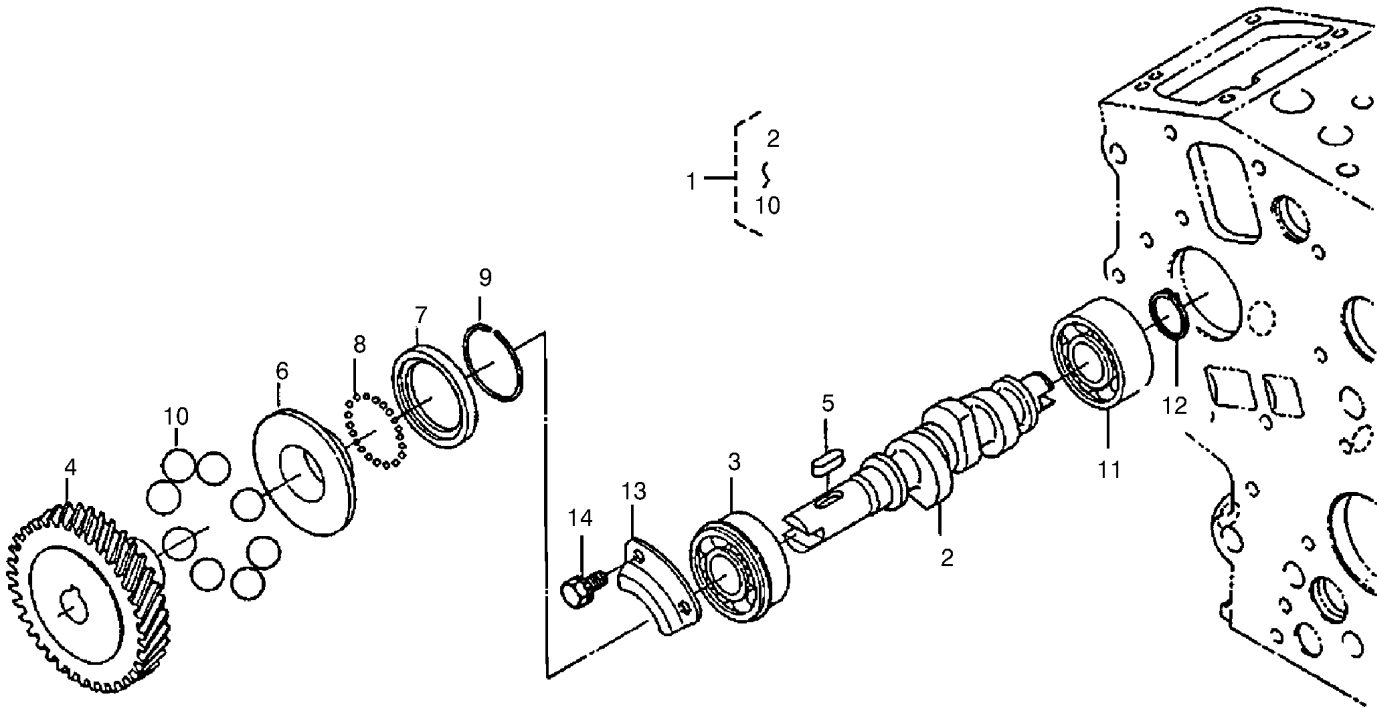
Ref	Part No.	Qty.	Description				
1	100-1990	6	Tappet				
2	100-1989	6	Rod-Push				
3	100-1941	1	Assy Camshaft				
4	98-7449	1	Screw-Set				
5	100-1889	1	Gear, Camshaft				
6	98-9378	1	Key-Feather				
7	100-1887	1	Camshaft-Stopper				
8	98-9350	2	Bolt				
9	100-1966	1	Gear-Idle				
10	100-1968	1	Bushing				
11	100-1970	1	Collar-Gear, Idle				
12	100-1969	1	Ring-Snap				
13	100-1967	1	Shaft-Gear, Idle				
14	98-9351	3	Bolt				



Piston And Crankshaft Assembly

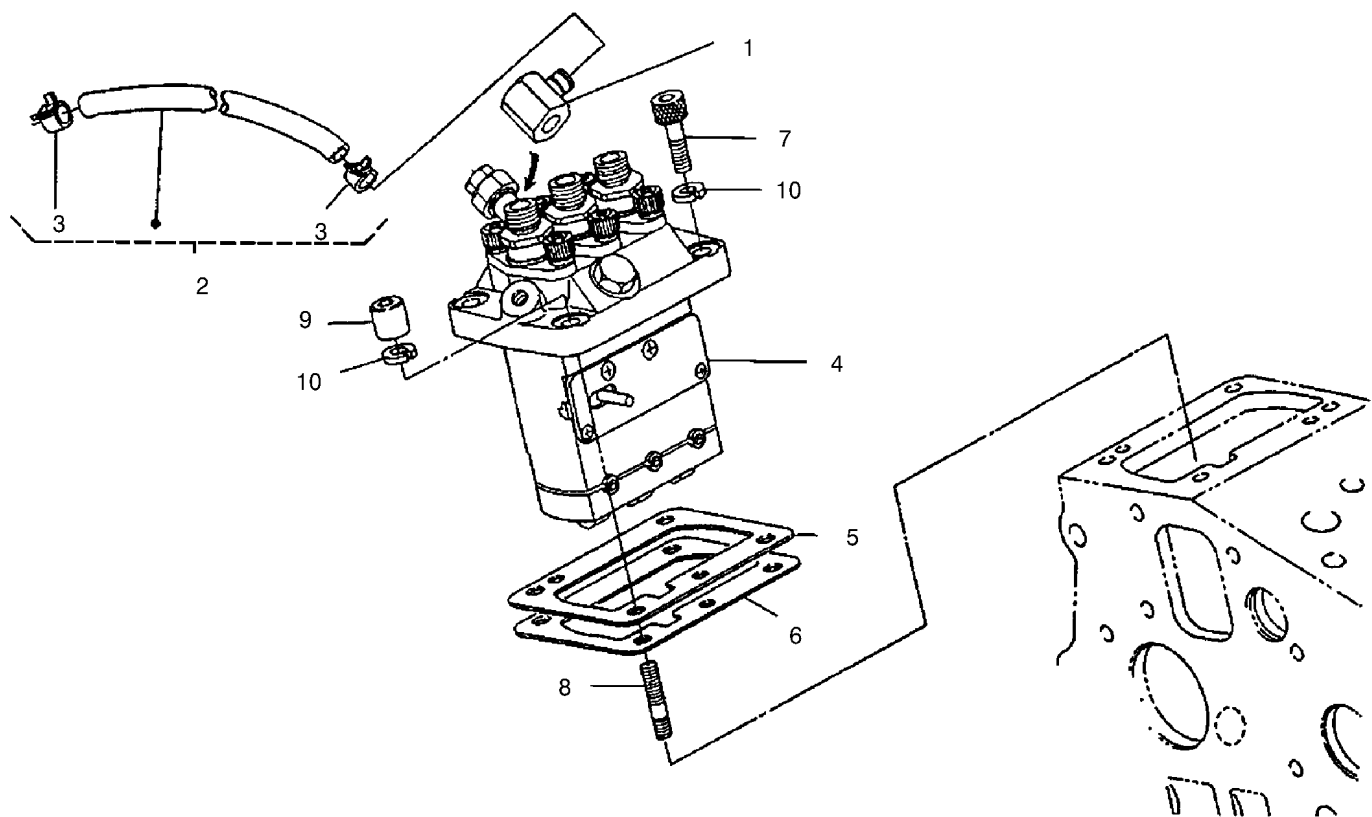
Ref	Part No.	Qty.	Description
1	100-1994	3	Piston (STD)
1	100-1996	3	Piston (+0.25Mm)
2	100-1992	3	Assy Piston Ring (STD.)
2	100-1993	3	Assy Piston Ring (+0.25 Mm)
3	100-1995	3	Pin-Piston
4	100-1835	6	Clip-Pin, Piston
5	100-1998	3	Connecting Rod ASM
6	100-1997	3	Bush-Pin, Piston
7	100-1999	6	Bolt-Rod, Connecting
8	100-1942	3	Crankpin-Metal (-0.2Mm)
8	100-1943	3	Crankpin-Metal (-0.4Mm)
8	100-2000	3	Metal-Crankpin (STD)
9	100-2042	1	Comp. Crankshaft
10	100-1791	3	Ball
11	100-2054	1	Sleeve-Crankshaft
12	100-1891	1	Gear-Crankshaft
13	100-1752	1	Key-Feather
14	100-1944	1	Crankshaft-Metal (STD)
14	100-1947	1	Crankshaft-Metal (-0.2Mm)
14	100-1948	1	Crankshaft-Metal (-0.4Mm)
15	100-1870	1	Crankshaft-Metal (-0.2Mm Set)
15	100-1871	1	Crankshaft-Metal (-0.4Mm Set)
15	100-2032	1	Crankshaft-Metal (STD Set)
16	100-1945	2	Crankshaft-Metal (-0.2Mm Set)

Ref	Part No.	Qty.	Description
16	100-1946	2	Crankshaft-Metal (-0.4Mm Set)
16	100-2033	2	Crankshaft-Metal (STD Set)
17	100-1836	2	Metal-Side (STD)
17	100-1838	2	Metal-Side (+0.2Mm)
17	100-1839	2	Metal-Side (+0.4Mm)
18	100-1837	2	Metal-Side (STD)
18	100-1840	2	Metal-Side (+0.2Mm)
18	100-1841	2	Metal-Side (+0.4Mm)
19	100-1890	1	Collar-Crankshaft
20	100-1974	1	Slinger-Oil
21	100-1788	1	O-Ring
22	100-1978	1	Bolt



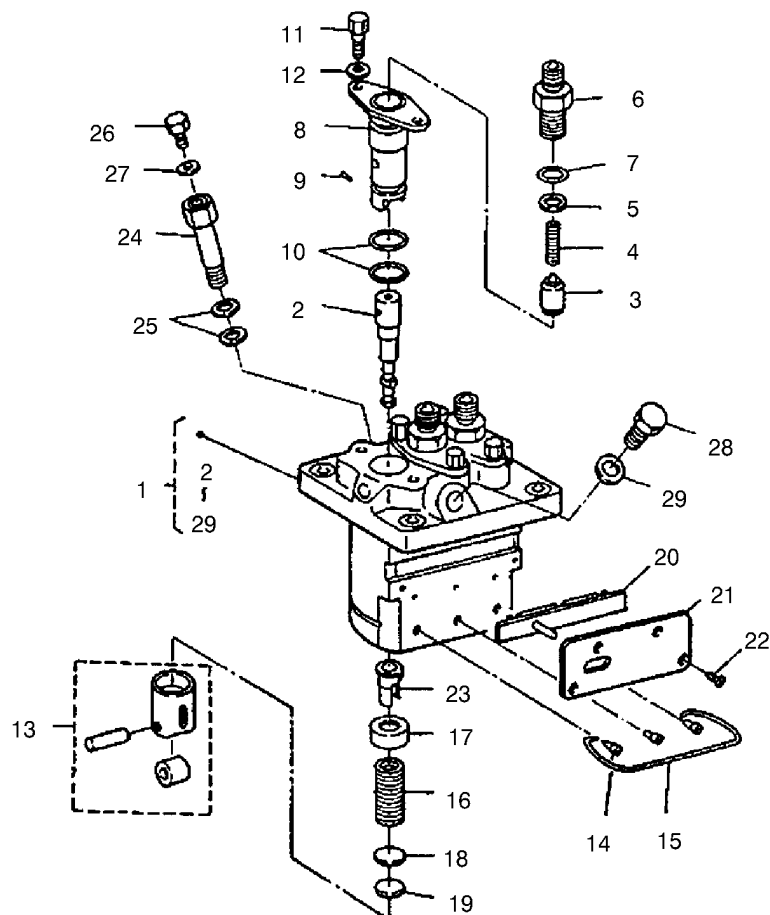
Fuel Camshaft Assembly

Ref	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	Clip-Sleeve, Governor				
10	100-1793	8	Ball				
11	100-1794	1	Bearing-Ball				
12	100-1784	1	Clip-External				
13	100-1888	1	Stopper-Fuel, Camshaft				
14	98-9350	2	Bolt				



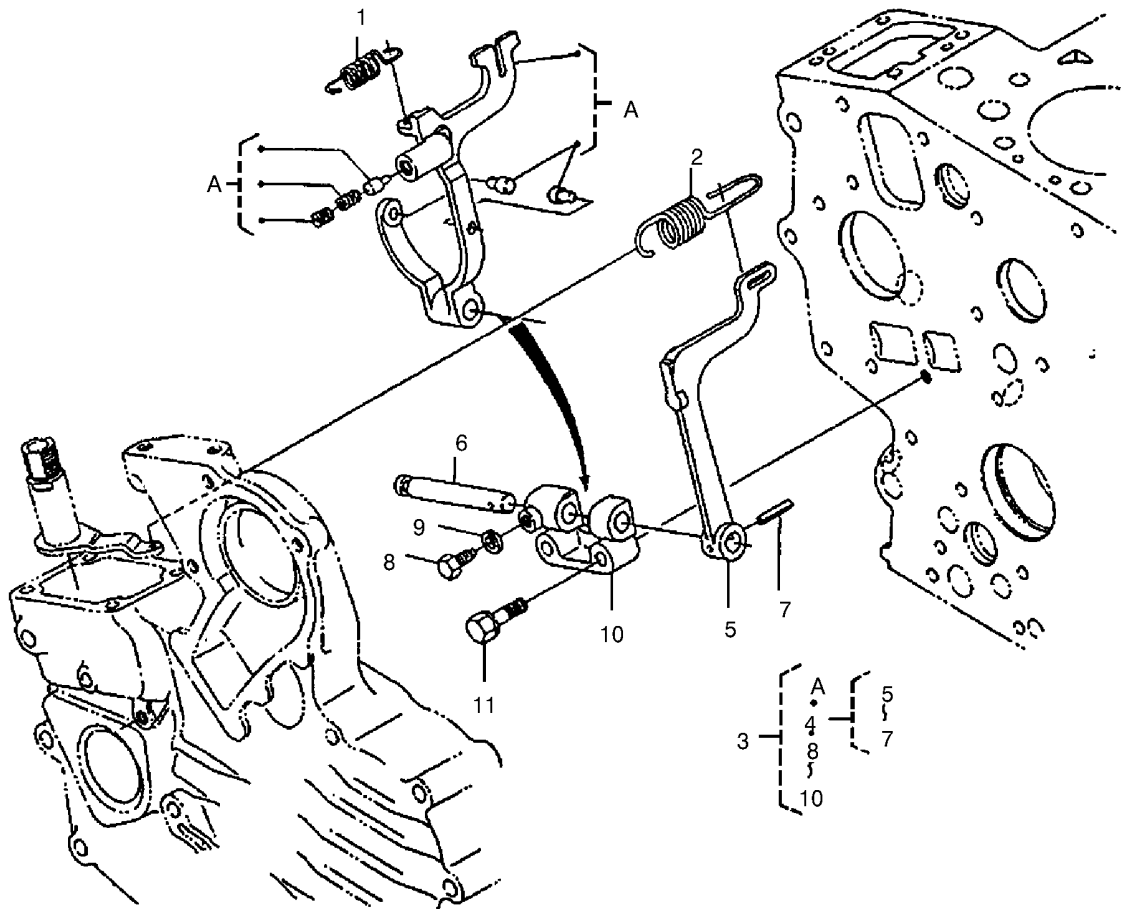
Injection Pump Assembly

Ref	Part No.	Qty.	Description				
1	100-1928	1	Joint-Eye				
2	100-1842	1	Fuel Pipe ASM				
3	98-9545	2	Band-Pipe				
4	100-1759	1	Injection Pump ASM				
4	100-1761	1	Assy Pump, Inj. (S/N < 489915)				
5	100-1951	2	Shim-Pump, Injection				
5	98-9456	1	Shim (0.2Mm)				
6	100-1952	1	Shim-Pump, Injection				
6	98-9457	1	Shim-Injection (0.25Mm)				
6	98-9458	1	Shim-Injection (0.30Mm)				
7	98-9361	2	Bolt-HSH				
8	98-9438	2	Stud				
9	98-9440	2	Nut-Cap				
10	98-9367	4	Washer-Spring				



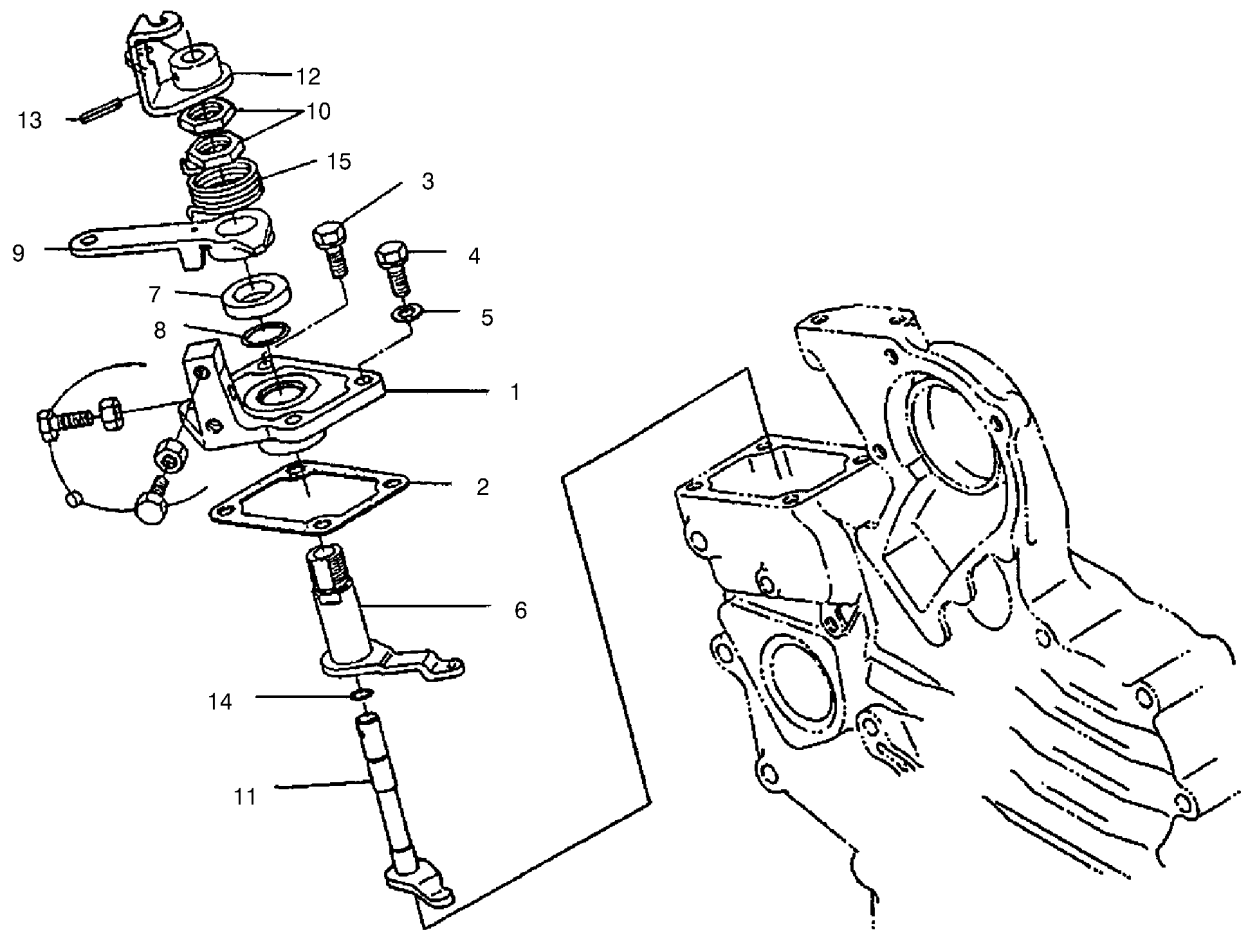
Injection Pump (Component Part) Assembly

Ref	Part No.	Qty.	Description	Ref	Part No.	Qty.	Description
1	100-1759	1	Injection Pump ASM	24	100-1896	1	Screw-Hollow
1	100-1761	1	Assy Pump, Inj. (S/N < 489915)	25	98-9445	2	Gasket
2	100-2005	3	Plunger-Pump	26	98-9430	1	Screw
3	98-9421	3	Valve-Delivery	27	98-9446	1	Gasket
4	98-9424	3	Spring-Valve, Delivery	28	100-1953	1	Bolt
5	98-9425	3	Gasket-Valve, Delivery	29	98-9451	1	Gasket
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	100-1935	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				
23	98-9432	3	Sleeve-Control				



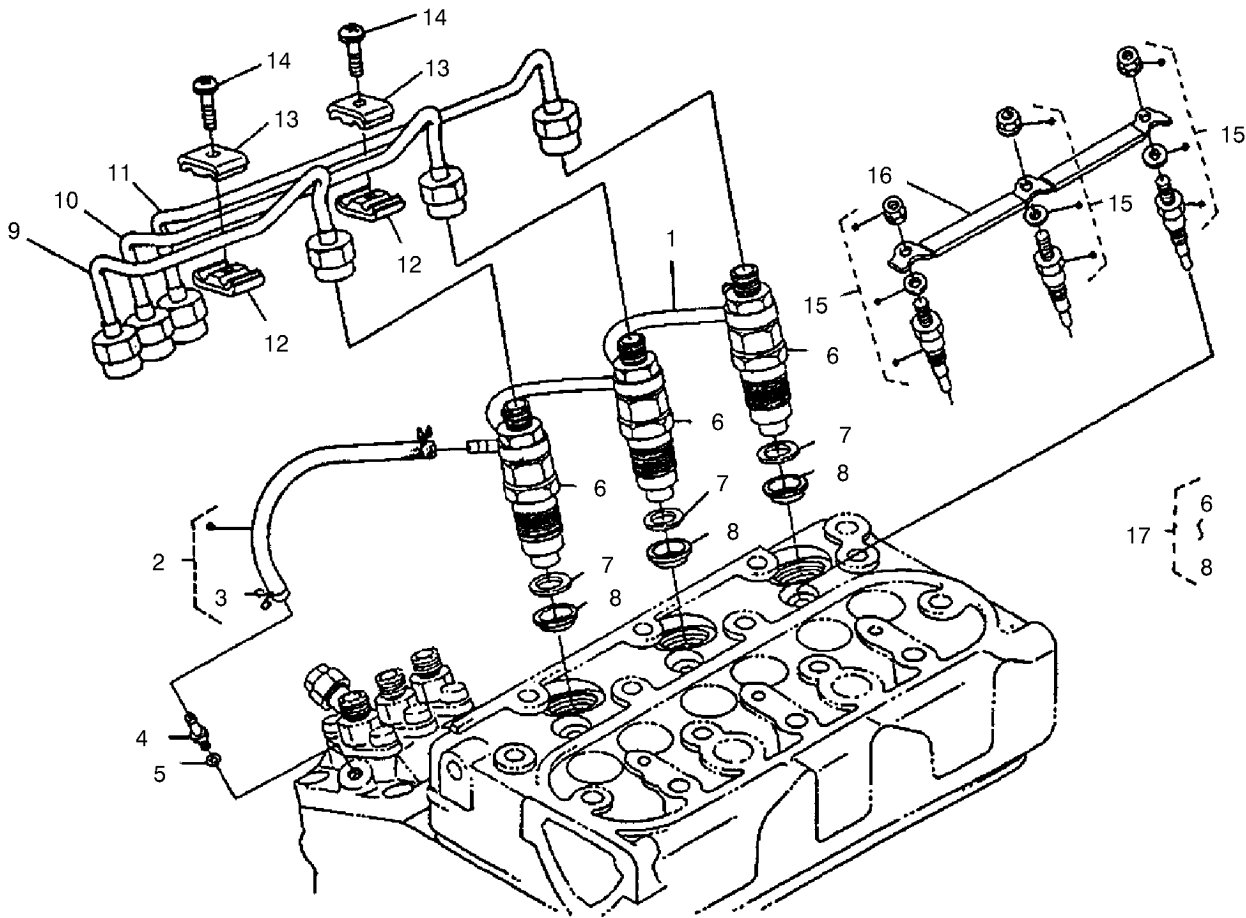
Governor Assembly

Ref	Part No.	Qty.	Description				
1	100-1911	1	Spring-Start				
2	100-2059	1	Spring-Governor				
3	100-1981	1	Fork Lever ASM				
3	100-2022	1	Assy Lever, Fork (S/N < 489915)				
4	100-1905	1	Fork Lever ASM				
5	100-1907	1	Lever-Fork				
6	100-1908	1	Shaft-Lever, Fork				
7	100-1751	1	Pin-Spring				
8	100-1845	1	Bolt				
9	100-1783	1	Washer-Spring				
10	100-1909	1	Holder-Lever, Fork				
11	100-1763	2	Bolt				



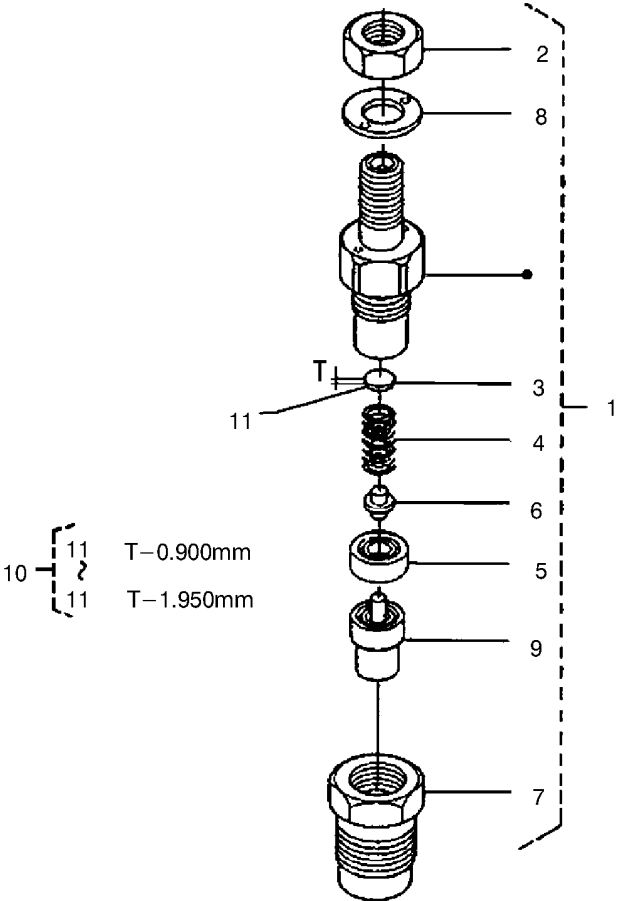
Speed Control Plate Assembly

Ref	Part No.	Qty.	Description				
1	100-1912	1	Plate-Speed, Cont.				
2	100-1914	1	Gasket				
2	100-1962	1	Gasket				
3	98-7605	2	Bolt				
4	100-1769	2	Bolt				
5	98-7654	2	Gasket				
6	100-1906	1	Lever, Governor				
7	100-1915	1	Collar				
8	100-1787	1	O-Ring				
9	100-1913	1	Lever, Speed Cont. (S/N < 468068)				
9	100-1986	1	Lever-Cont., Speed				
10	100-1925	2	Nut				
11	100-2050	1	Shaft-Lever				
11	100-2063	1	Shaft, Lever (S/N < 445506)				
12	100-2014	1	Lever, Engine Stop				
13	100-1751	1	Pin-Spring				
14	100-1786	1	O-Ring				
15	100-1916	1	Spring, Return				



Nozzle Holder And Glow Plug Assembly

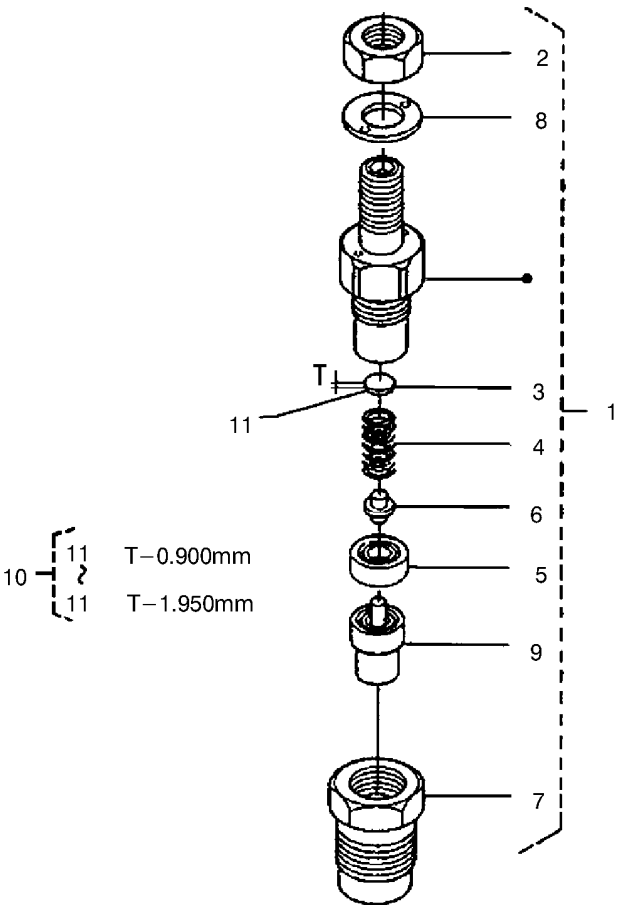
Ref	Part No.	Qty.	Description				
1	100-1959	1	Assy Pipe, Over Flow (S/N < 497380)				
1	100-1960	1	Over Flow Pipe ASM				
2	98-9420	1	Over Flow Pipe ASM				
3	98-7671	2	Clip-Pipe				
4	98-9431	1	Screw-Bleeder				
5	98-7654	1	Gasket				
6	100-1758	3	Nozzle Holder ASM				
6	100-1760	3	Nozzle Holder ASM				
7	98-7676	3	Gasket				
8	98-7677	3	Seal				
9	100-2010	1	Pipe, Injection (S/N < 512877)				
9	100-2011	1	Pipe-Injection				
10	100-2012	1	Pipe, Injection (S/N < 512877)				
10	100-2013	1	Pipe-Injection				
11	100-2035	1	Pipe, Injection (S/N < 512877)				
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				
17	100-1982	1	Nozzle Holder Kit				



Nozzle Holder (Component Part) Assembly

Ref	Part No.	Qty.	Description
1	100-1758	3	Nozzle Holder ASM
1	100-1760	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	Spacer-Distance
6	98-7666	3	Rod-Push
7	100-2008	3	Nut, Nozzle
8	98-7668	3	Washer
9	100-2009	3	Piece-Nozzle
10	98-9448	1	Adjusting Washer ASM
11	98-7642	1	Washer-Adjusting
11	98-7841	1	Washer-Adjusting
11	98-7842	1	Washer-Adjusting
11	98-7843	1	Washer-Adjusting
11	98-7844	1	Washer-Adjusting
11	98-7845	1	Washer-Adjusting
11	98-7846	1	Washer-Adjusting
11	98-7847	1	Washer-Adjusting
11	98-7848	1	Washer-Adjusting
11	98-7849	1	Washer-Adjusting
11	98-7850	1	Washer-Adjusting
11	98-7851	1	Washer-Adjusting
11	98-7852	1	Washer-Adjusting

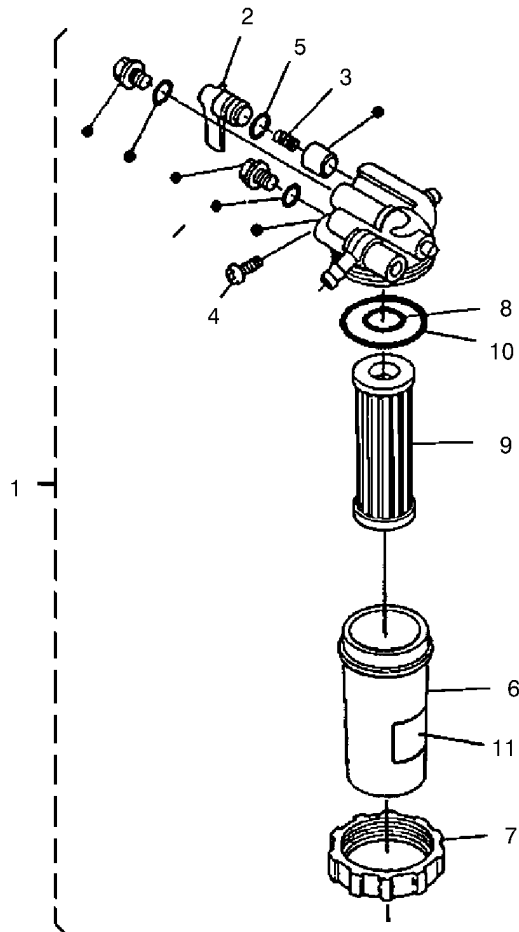
Ref	Part No.	Qty.	Description
11	98-7853	1	Washer-Adjusting
11	98-7854	1	Washer-Adjusting
11	98-7855	1	Washer-Adjusting
11	98-7856	1	Washer-Adjusting
11	98-7857	1	Washer-Adjusting
11	98-7858	1	Washer-Adjusting
11	98-7859	1	Washer-Adjusting
11	98-7860	1	Washer-Adjusting
11	98-7861	1	Washer-Adjusting
11	98-7862	1	Washer-Adjusting
11	98-7863	1	Washer-Adjusting
11	98-7864	1	Washer-Adjusting
11	98-7865	1	Washer-Adjusting
11	98-7866	1	Washer-Adjusting
11	98-7867	1	Washer-Adjusting
11	98-7868	1	Washer-Adjusting
11	98-7869	1	Washer-Adjusting
11	98-7870	1	Washer-Adjusting
11	98-7871	1	Washer-Adjusting
11	98-7872	1	Washer-Adjusting
11	98-7873	1	Washer-Adjusting
11	98-7874	1	Washer-Adjusting
11	98-7875	1	Washer-Adjusting
11	98-7876	1	Washer-Adjusting



Nozzle Holder (Component Part) Assembly (continued)

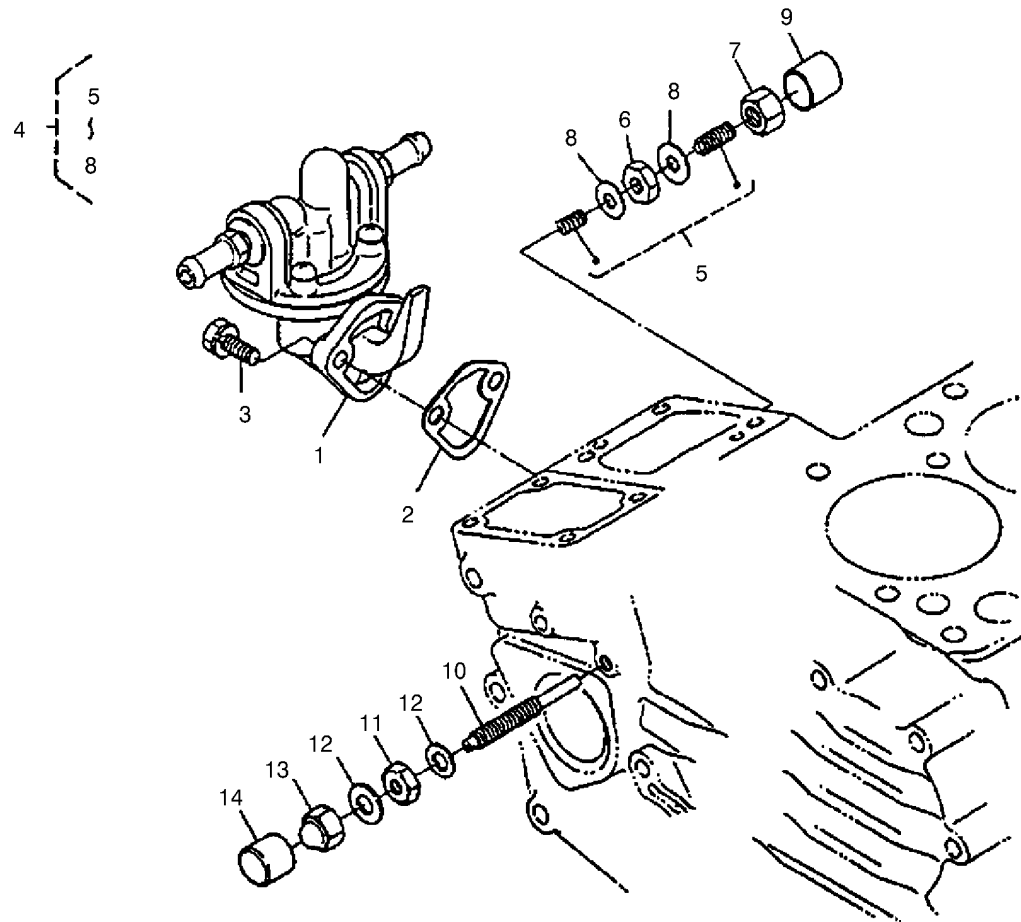
Ref	Part No.	Qty.	Description
11	98-7877	1	Washer-Adjusting
11	98-7878	1	Washer-Adjusting
11	98-7879	1	Washer-Adjusting
11	98-7880	1	Washer-Adjusting
11	98-7881	1	Washer-Adjusting
11	98-7882	1	Washer-Adjusting

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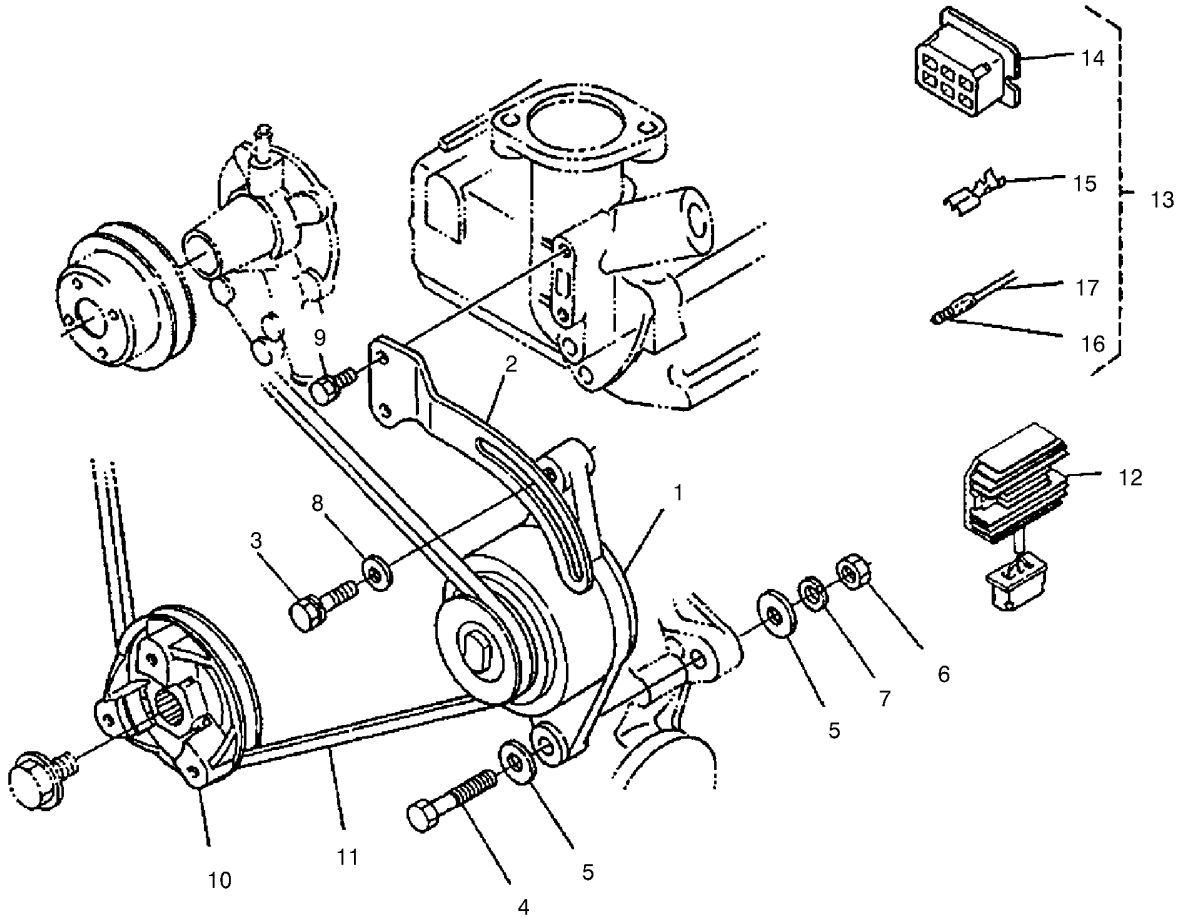
Fuel Filter Assembly

Ref	Part No.	Qty.	Description				
1	100-1855	1	Fuel Filter ASM				
2	100-1814	1	Lever, Cock				
3	100-1817	1	Spring, Valve				
4	100-1818	1	Screw				
5	100-1819	1	O-Ring, Lever				
6	100-1856	1	Cup, Filter				
7	100-1815	1	Ring, Retaining				
8	100-1816	1	O-Ring, Filter				
9	100-1832	1	Assy Element				
10	98-9371	1	O-Ring				
11	100-1857	1	Label, Fuel Filter				



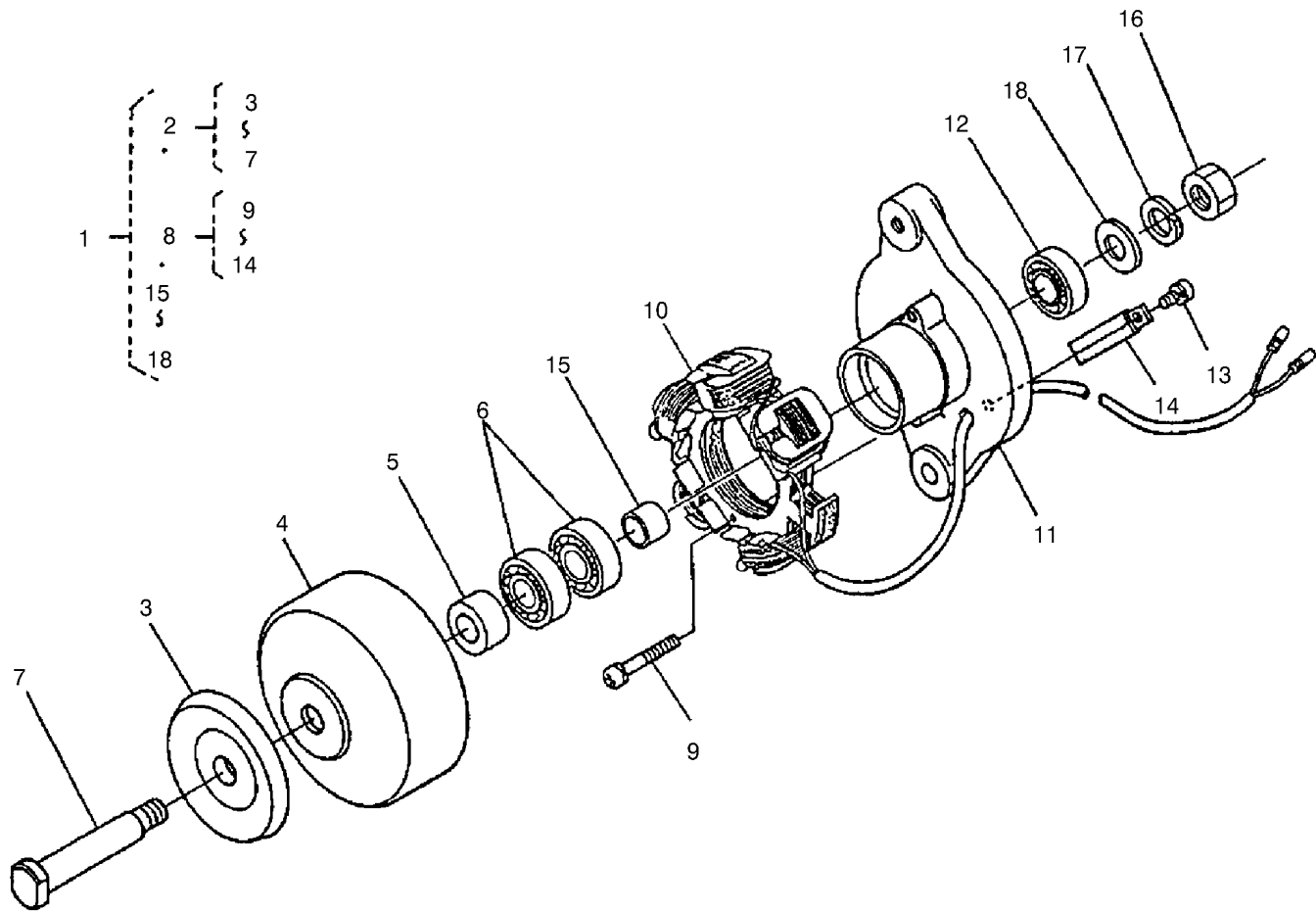
Fuel Pump Assembly

Ref	Part No.	Qty.	Description				
1	100-1897	1	Assy Pump, Fuel (Thru Aug. 1994)				
1	100-2052	1	Assy Pump, Fuel (From Sept. 1994)				
2	100-1961	1	Gasket-Pump, Fuel				
2	98-9636	1	Gasket-Pump, Fuel				
3	98-7692	2	Bolt				
4	100-1898	1	Idle Apparatus ASM				
5	100-1899	1	Adjusting Bolt ASM				
6	100-1846	1	Nut				
7	100-1901	1	Nut-Cap				
8	98-7428	2	Gasket				
9	100-1902	1	Cap				
10	100-1900	1	Bolt-Adjusting				
11	98-9439	1	Nut				
12	98-7654	2	Gasket				
13	98-9441	1	Nut-Cap				
14	98-9558	1	Cap				



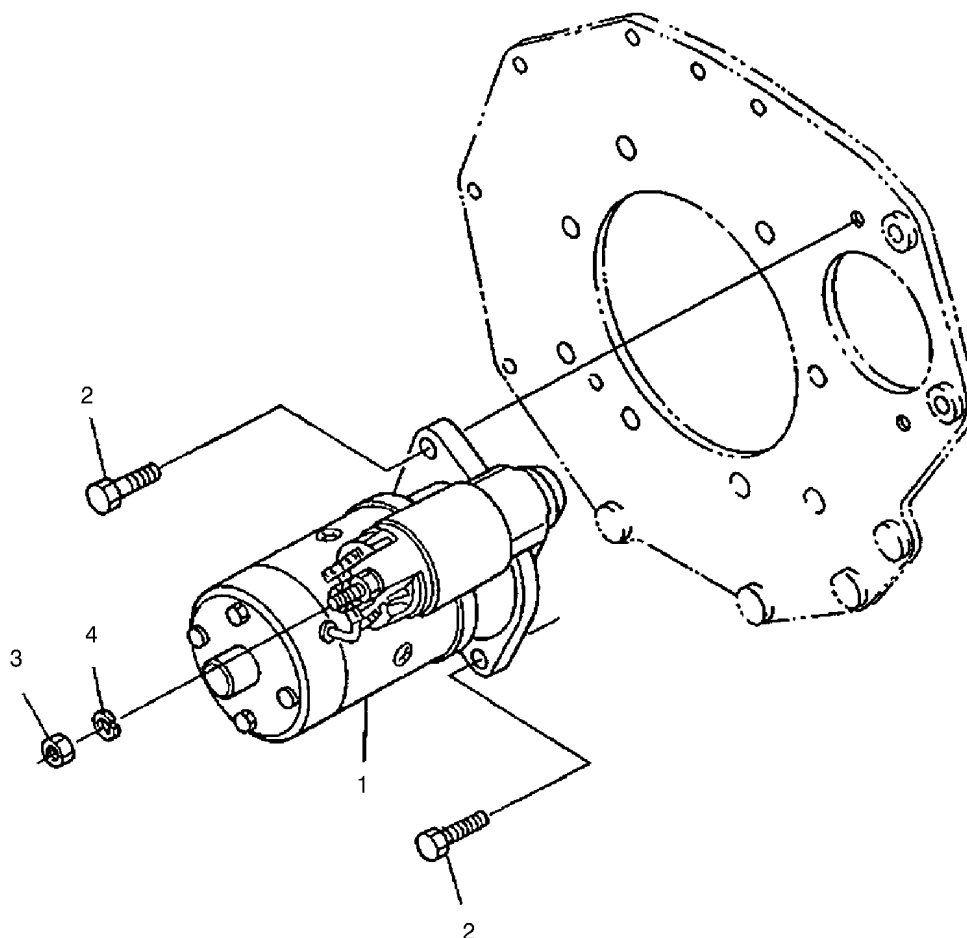
Dynamo And Pulley Assembly

Ref	Part No.	Qty.	Description				
1	100-1755	1	Assy Dynamo				
2	100-1964	1	Stay, Dynamo				
3	98-7438	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	100-2039	1	Pulley-Drive, Fan				
11	100-1979	1	V-Belt				
12	100-2057	1	Regulator ASM				
13	100-2058	1	Coupler ASM				
14	100-2056	1	Connector				
15	98-9699	6	Terminal				
16	98-9701	2	Terminal				
17	98-9702	2	Sleeve				



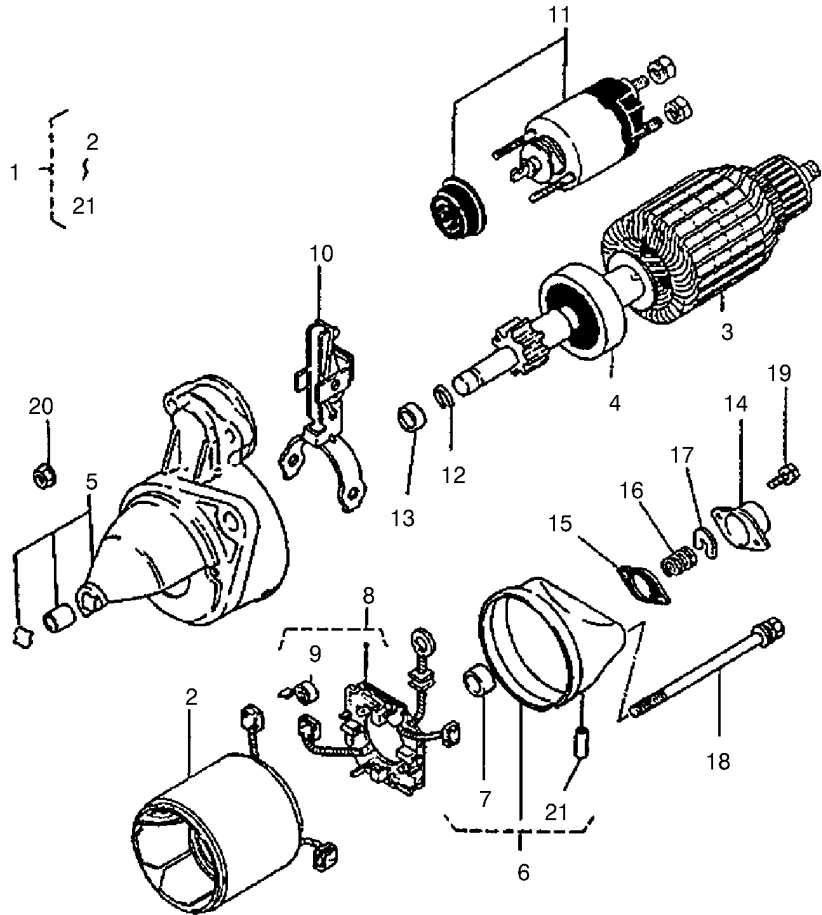
Dynamo (Component Part) Assembly

Ref	Part No.	Qty.	Description				
1	100-1755	1	Assy Dynamo				
2	100-1862	1	Rotor ASM				
3	100-1859	1	Pulley				
4	100-1860	1	Rotor				
5	100-1863	1	Collar				
6	100-1756	2	Bearing-Ball				
7	100-1867	1	Shaft-Fan				
8	100-1866	1	Stator ASM				
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				



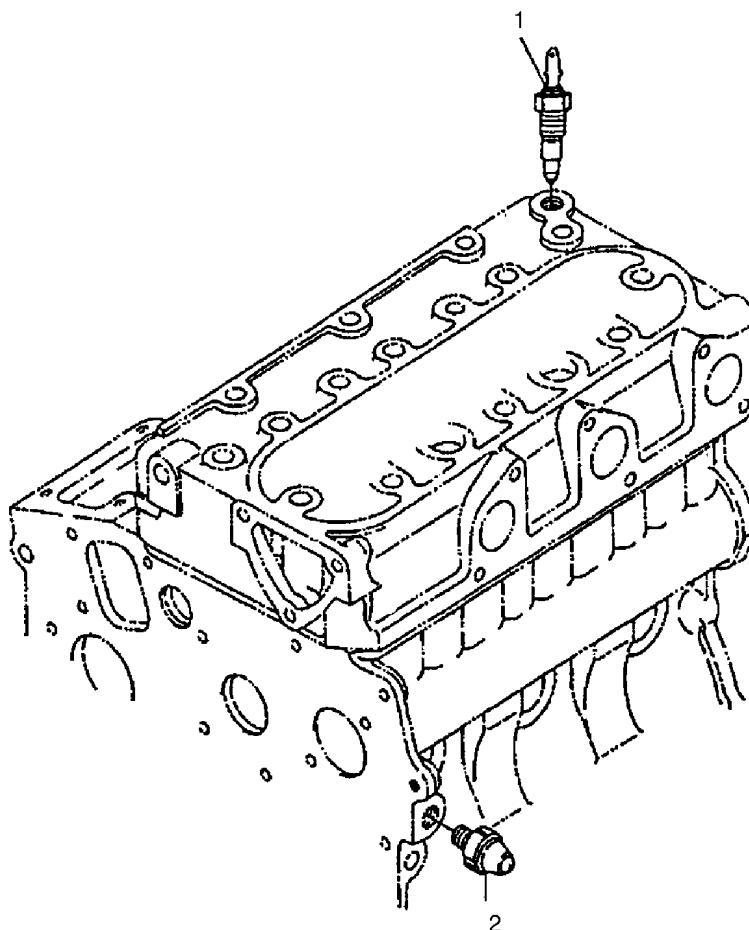
Starter Assembly

Ref	Part No.	Qty.	Description
1	100-1754	1	Assy Starter
2	100-1770	2	Bolt
3	98-7739	1	Nut
4	98-7535	1	Washer-Spring



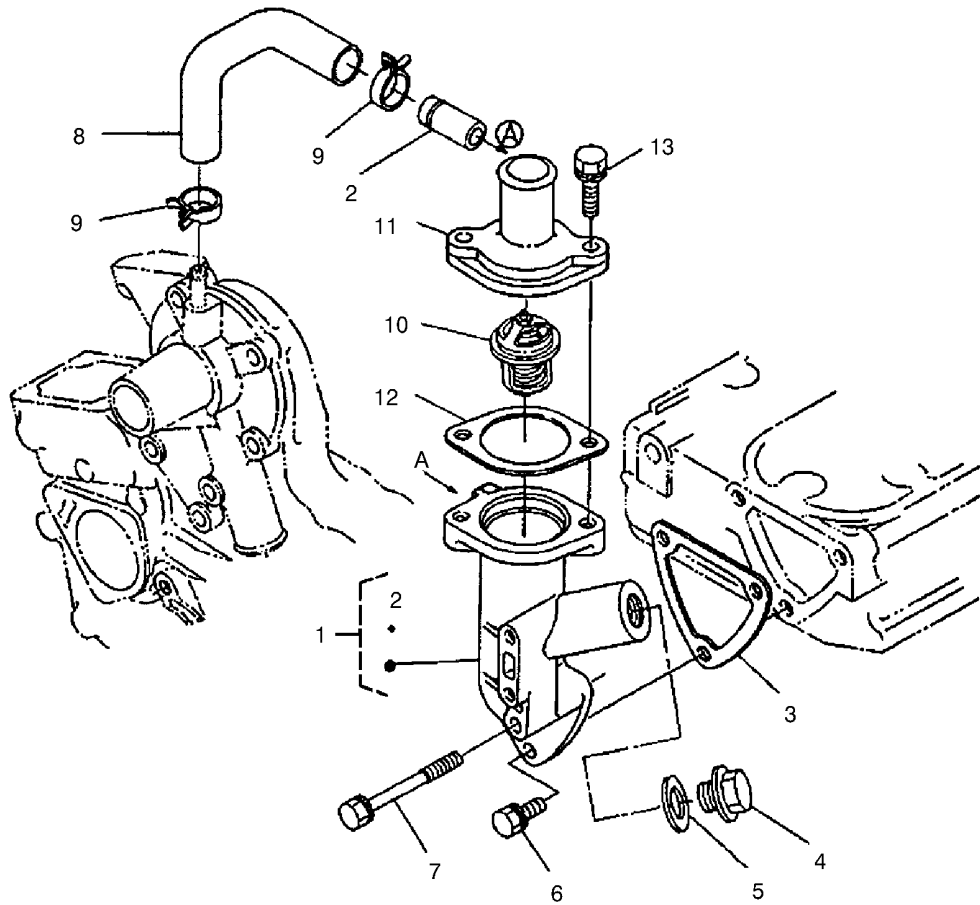
Starter (Component Part) Assembly

Ref	Part No.	Qty.	Description				
1	100-1754	1	Assy Starter				
2	100-1802	1	Yoke				
3	100-1801	1	Armature				
4	100-1799	1	Clutch, Over Running				
5	100-1834	1	Assy Housing				
6	100-1805	1	Assy Frame, End				
7	100-1806	1	Bush				
8	100-1808	1	Assy Holder, Brush				
9	100-1809	4	Spring, Brush				
10	100-1800	1	Lever, Drive				
11	100-1833	1	Switch, Magnetic				
12	100-1831	1	Pin, Snap				
13	100-1853	1	Nut, Pinion Stop				
14	100-1810	1	Cap, End Frame				
15	100-1811	1	Gasket				
16	100-1804	1	Spring, Brake				
17	100-1803	1	Shoe, Brake				
18	100-1807	2	Bolt, Through				
19	100-1780	2	Screw, With Washer				
20	100-1813	2	Nut				
21	100-1812	1	Pipe, Breather				



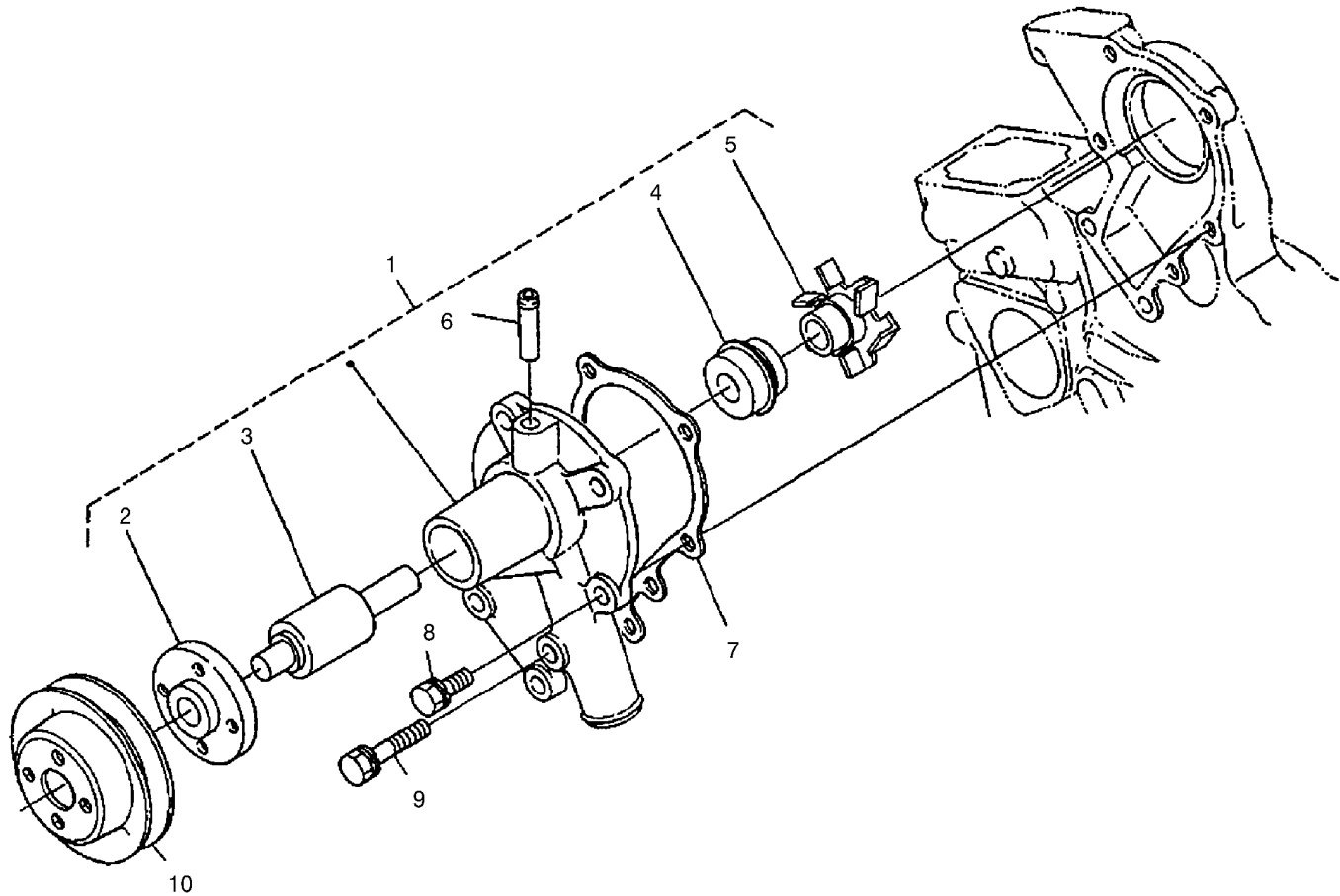
Oil Switch And Thermoswitch Assembly

Ref	Part No.	Qty.	Description
1	100-1983	1	Thermo-Switch
2	98-7764	1	Switch-Oil



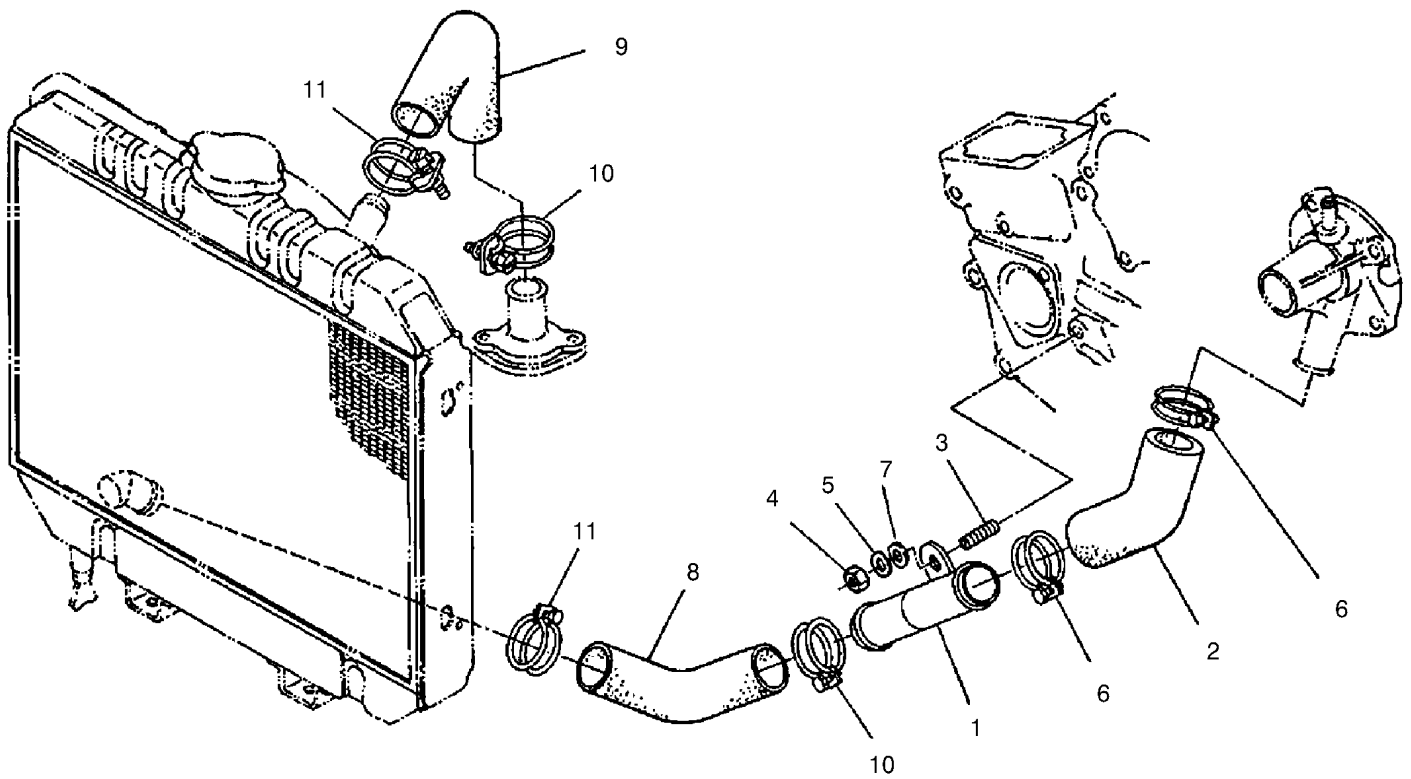
Water Flange And Thermostat Assembly

Ref	Part No.	Qty.	Description				
1	100-2049	1	Comp. Flange, Water				
2	98-9580	1	Pipe-Return, Water				
3	100-1919	1	Gasket-Flange, Water				
3	100-1963	1	Gasket, Water Flange (From Sept. 1994)				
4	100-1789	1	Plug				
5	99-3583	1	Packing				
6	98-7692	2	Bolt				
7	100-1977	1	Bolt				
8	100-2017	1	Pipe-Return, Water				
9	98-9579	2	Band-Pipe				
10	100-2053	1	Thermostat ASM				
11	100-1920	1	Cover, Thermostat				
12	100-1869	1	Gasket, Thermostat (Thru Aug. 1994)				
12	98-9639	1	Gasket Thermostat				
13	100-1750	2	Bolt				



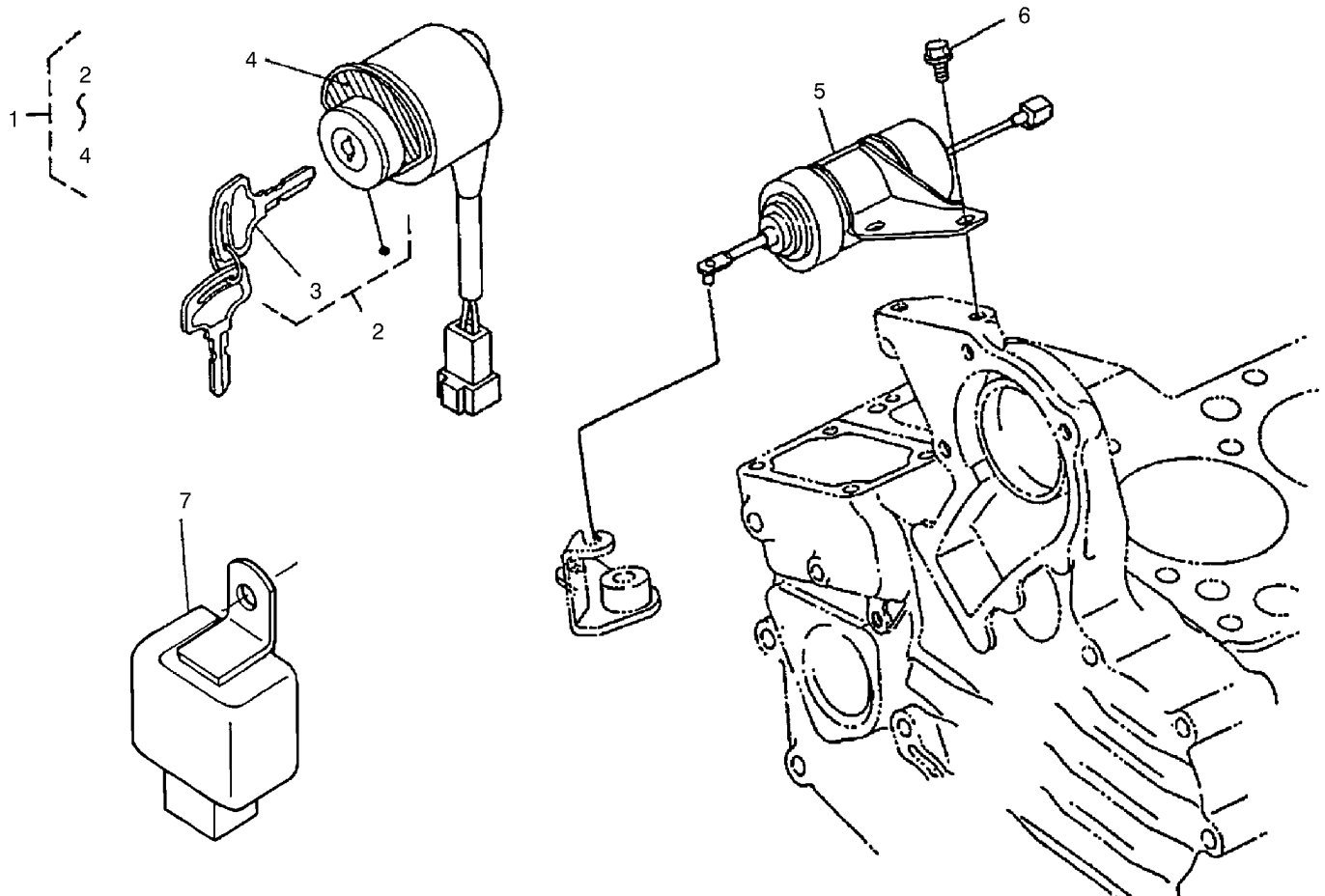
Water Pump Assembly

Ref	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				
7	100-2066	1	Gasket-Pump, Water				
8	100-1750	4	Bolt				
9	100-1764	1	Bolt				
10	100-1921	1	Pulley-Fan				



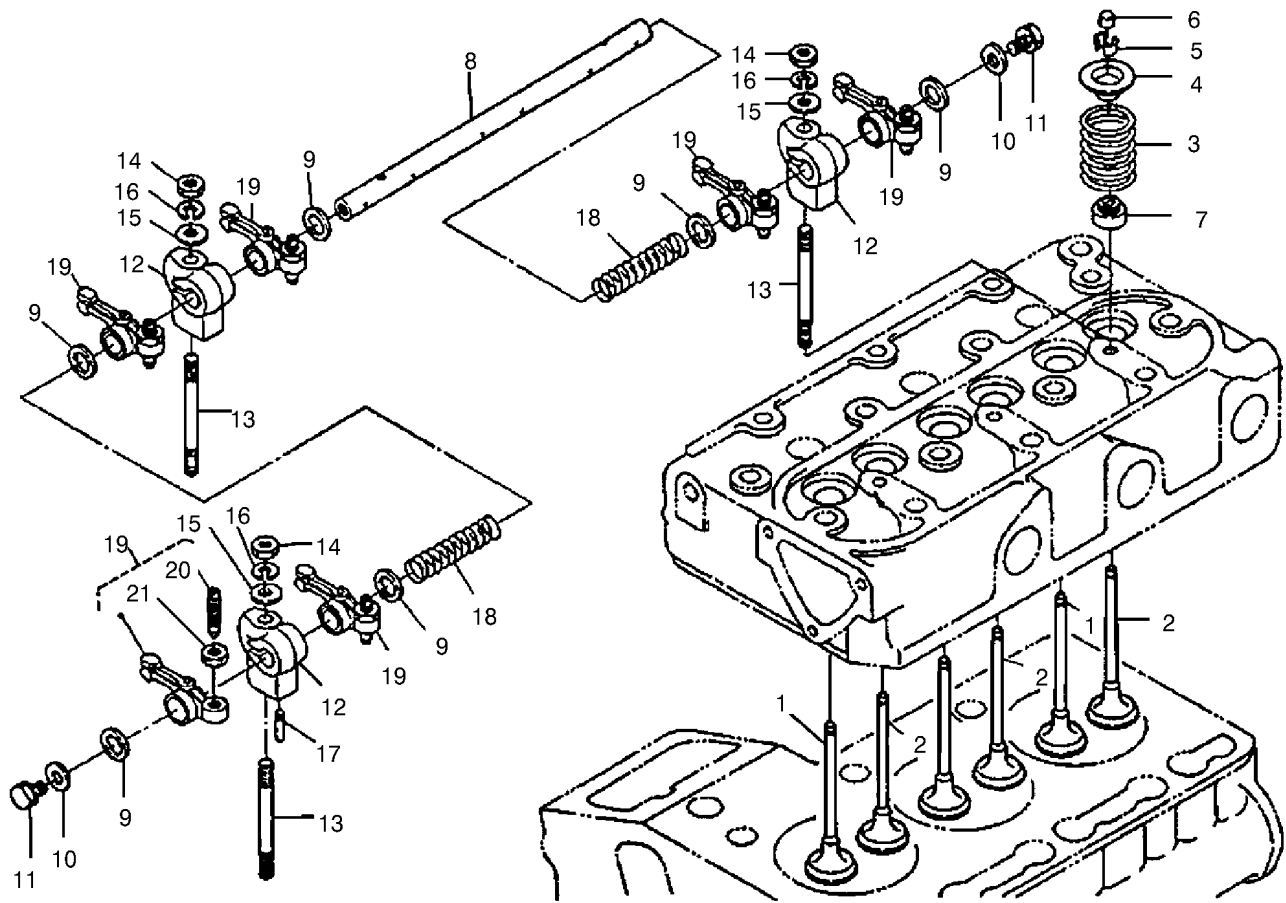
Water Pipe Assembly

Ref	Part No.	Qty.	Description
1	100-1918	1	Pipe-Water
2	100-1975	1	Pipe-Water
3	100-1924	1	Stud
4	98-7572	1	Nut
5	98-9367	1	Washer-Spring
6	100-1753	2	Clamp-Hose
7	98-7648	1	Washer-Plain
8	100-2025	1	Pipe, Water
9	100-2026	1	Pipe, Water
10	100-1753	2	Clamp-Hose
11	100-1796	2	Clamp, Hose



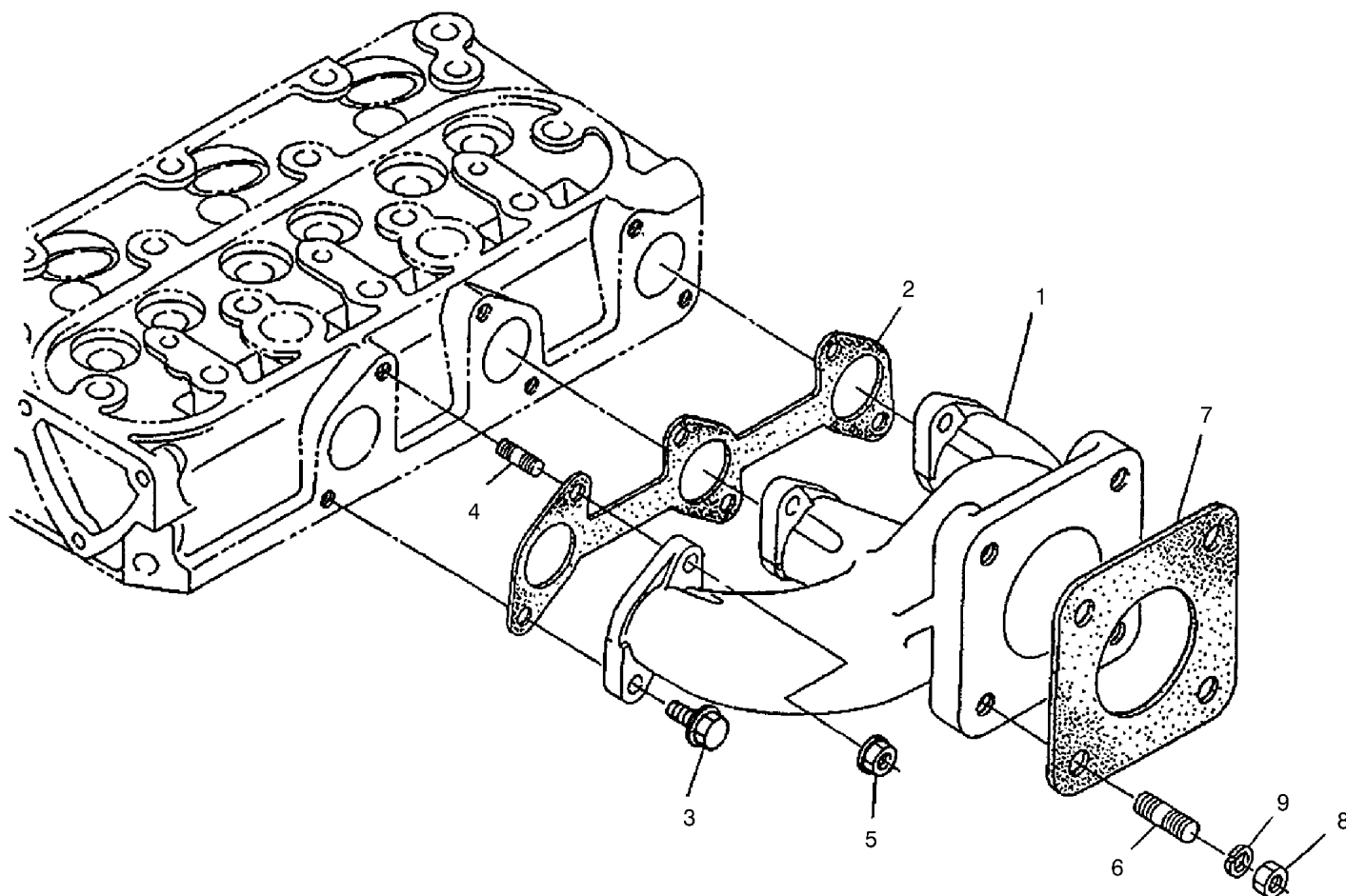
Stop Solenoid Assembly

Ref	Part No.	Qty.	Description				
1	100-1985	1	Assy Switch, Starter				
2	100-2070	1	Assy Switch, Starter				
3	100-2069	2	Key, Starter				
4	100-1798	1	Label, Starter Switch				
5	100-2015	1	Solenoid, Stop				
6	100-1774	2	Bolt-Flange				
7	100-2068	1	Timer (S/N < 534271)				
7	100-2074	1	Timer (S/N > 534272)				



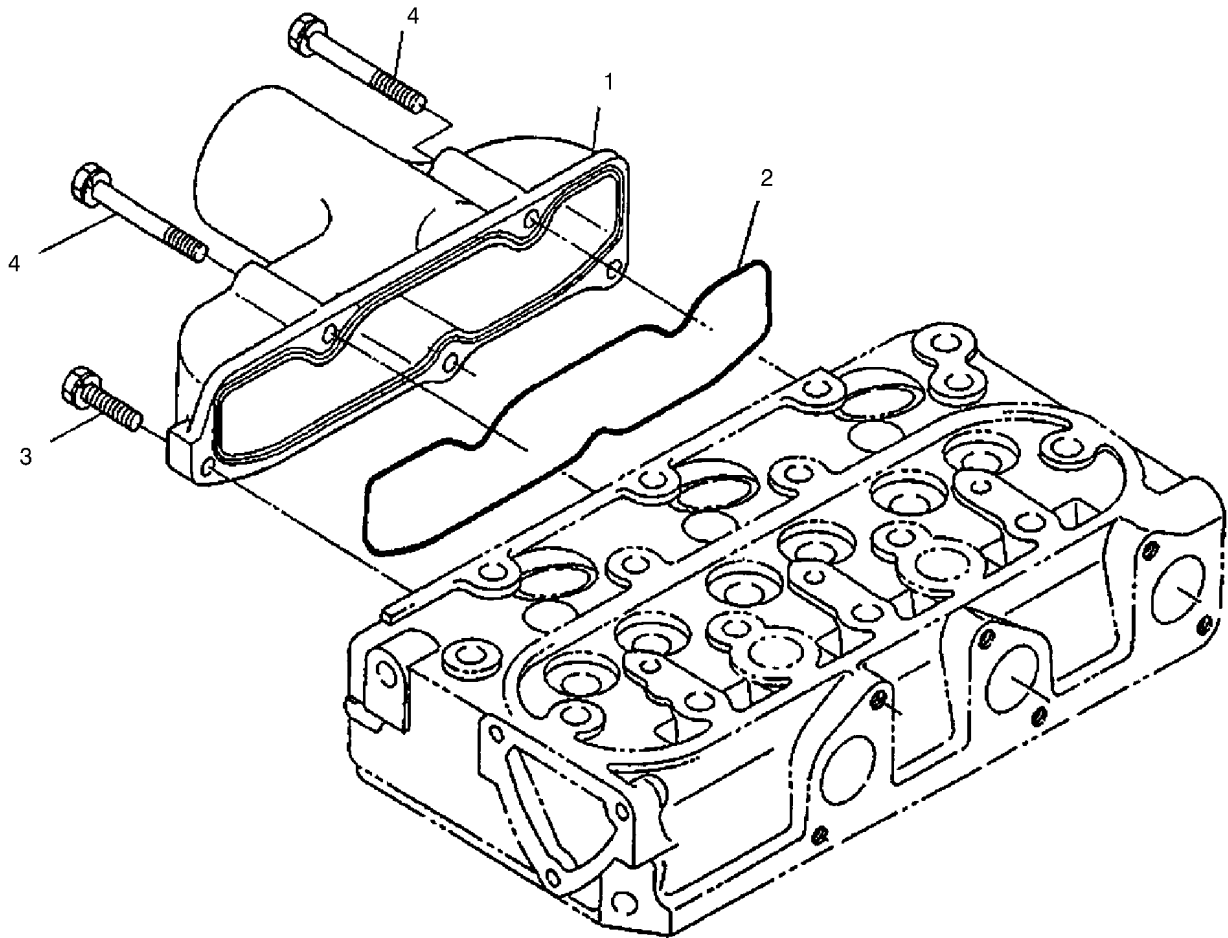
Valve And Rocker Arm Assembly

Ref	Part No.	Qty.	Description				
1	100-1821	3	Valve-Inlet				
2	100-1822	3	Valve-Exhaust				
3	100-1823	6	Spring-Valve				
4	100-1825	6	Retainer-Spring, Valve				
5	100-1826	6	Collet-Spring, Valve				
6	100-1824	6	Cap-Valve				
7	100-1797	6	Seal-Stem, Valve				
8	100-1940	1	Shaft, Rocker Arm				
9	100-2044	6	Washer				
10	100-1927	2	Washer-Plain				
11	100-1762	2	Bolt				
12	100-1886	3	Bracket-Arm, Rocker				
13	100-1829	3	Stud				
14	98-7572	3	Nut				
15	98-7648	3	Washer-Plain				
16	98-9367	3	Washer-Spring				
17	100-1830	1	Screw, Set				
18	100-1828	2	Spring-Arm, Rocker				
19	100-1884	6	Rocker Arm ASM				
20	100-1885	6	Screw-Adjusting				
21	100-1827	6	Nut				



Exhaust Manifold Assembly

Ref	Part No.	Qty.	Description				
1	100-1938	1	Manifold, Exhaust				
2	100-1939	1	Gasket (Thru Aug. 1994)				
2	100-1957	1	Gasket				
3	100-1775	3	Bolt				
4	100-2018	3	Stud				
5	100-1778	3	Nut				
6	98-7769	4	Stud				
7	100-1984	1	Gasket-Muffler				
8	98-7739	4	Nut				
9	98-7535	4	Washer-Spring				



Inlet Manifold Assembly

Ref	Part No.	Qty.	Description
1	100-1936	1	Manifold, Inlet
2	100-1937	1	Gasket-In-Manifold
3	98-7605	2	Bolt
4	100-1765	3	Bolt

