



Groundsmaster® 3500-D

Model No. 30821 - 210000001 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

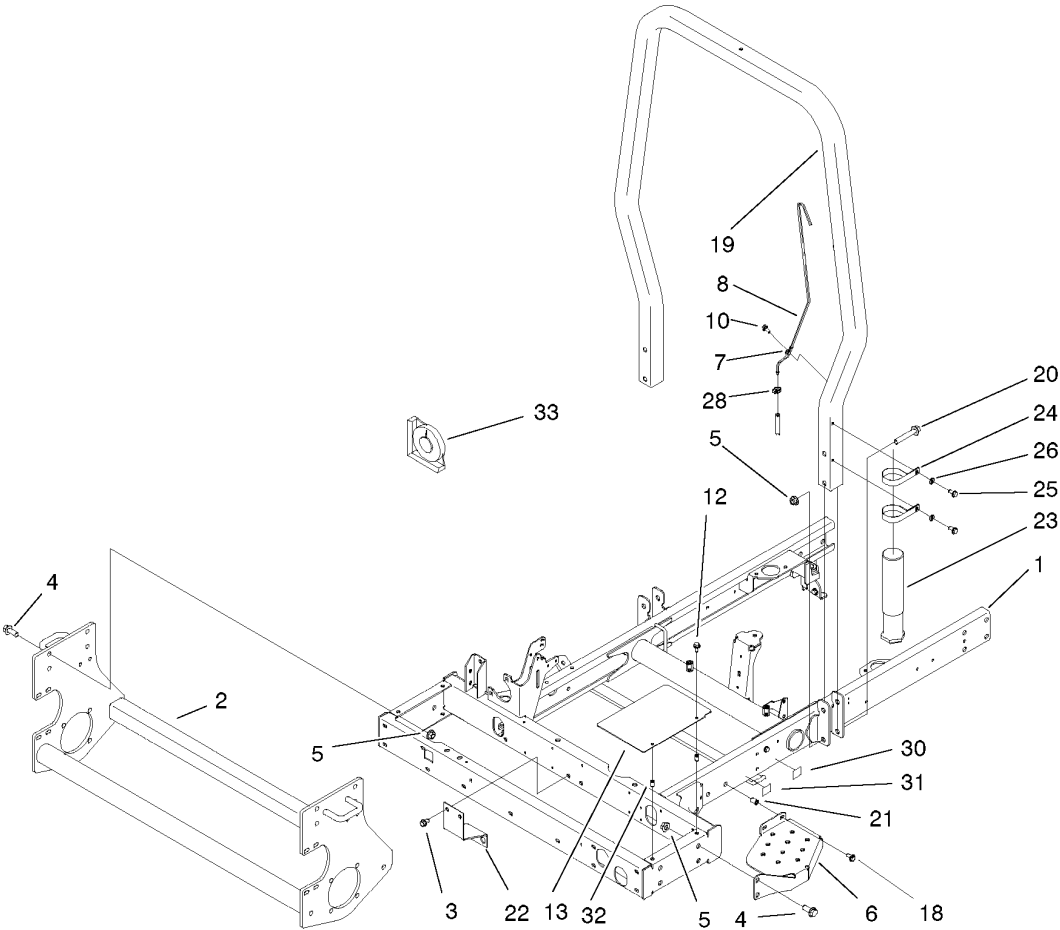
Footnotes

- ❶

Not serviced
- ❷

Not serviced separately
- ❸

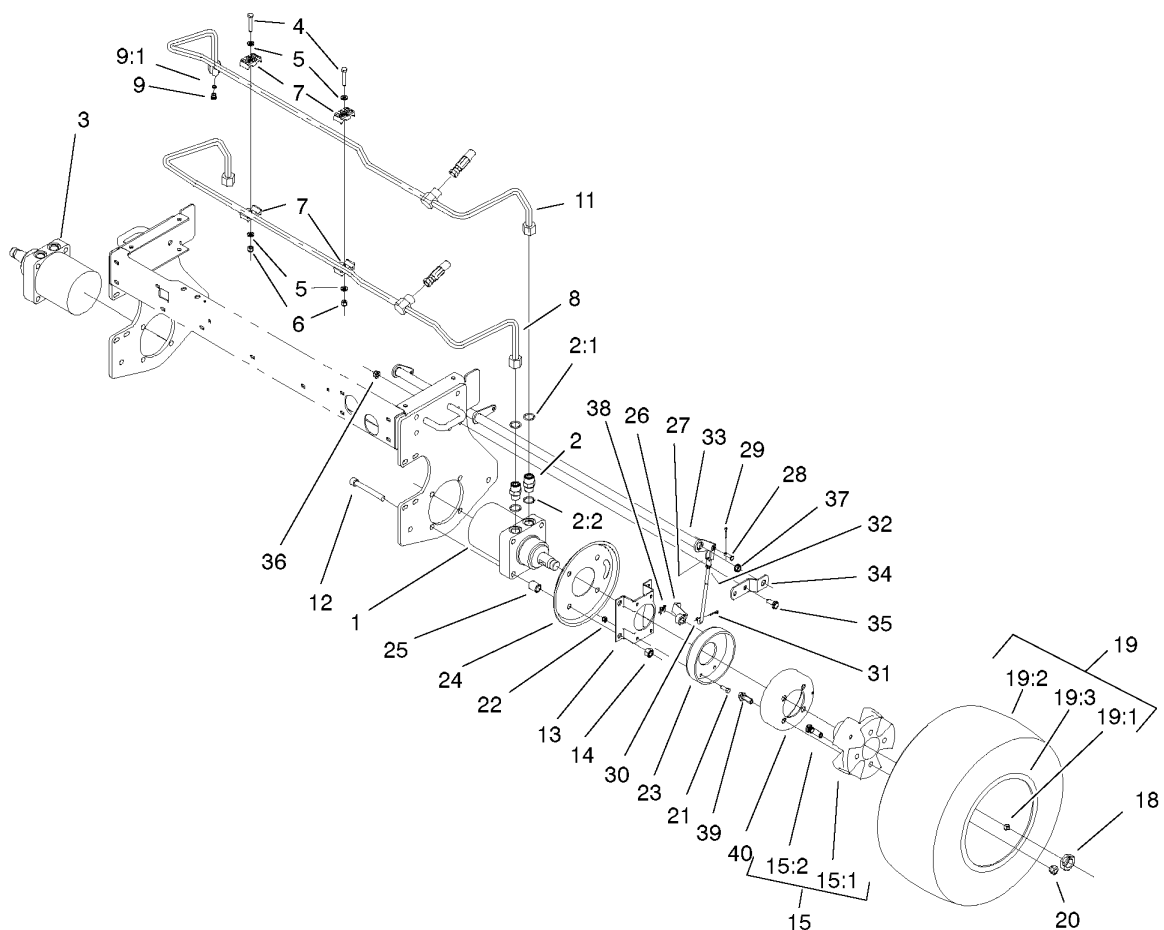
* Not Illustrated



Frame And Platform Assembly

Ref	Part No.	Qty.	Description
1	99-3610-03	1	Frame
2	95-8568-03	1	Frame-Lower
3	3274-80	2	Screw-HH
4	3234-38	8	Screw-Hfh
5	32128-49	12	Nut-HHF
6	99-3375-03	1	Step
7	2412-72	3	Clip-Closed, Insulated
8	95-8615	1	Tube-Breather
10	32144-10	8	Screw-HWH
12	3234-4	2	Screw-HHF
13	104-0468-01	1	Cover-Frame
18	3234-5	2	Screw-HHF
19	99-3350-03	1	Tube-ROPS
20	3234-40	4	Screw-Hfh
21	32148-8	2	Insert-Threaded
22	95-8598-03	1	Bracket-Bulkhead, Scissor
23	74-0720	1	Tube-Manual
24	2412-133	2	R-Clamp
25	32144-70	2	Screw-HH
26	3256-23	2	Washer-Flat
28	2412-108	1	Clamp-Worm
30	63-9920	1	Decal-Level, Noise
31	85-6930	1	Decal-Noise Rating
32	32148-6	2	Nut-Insert

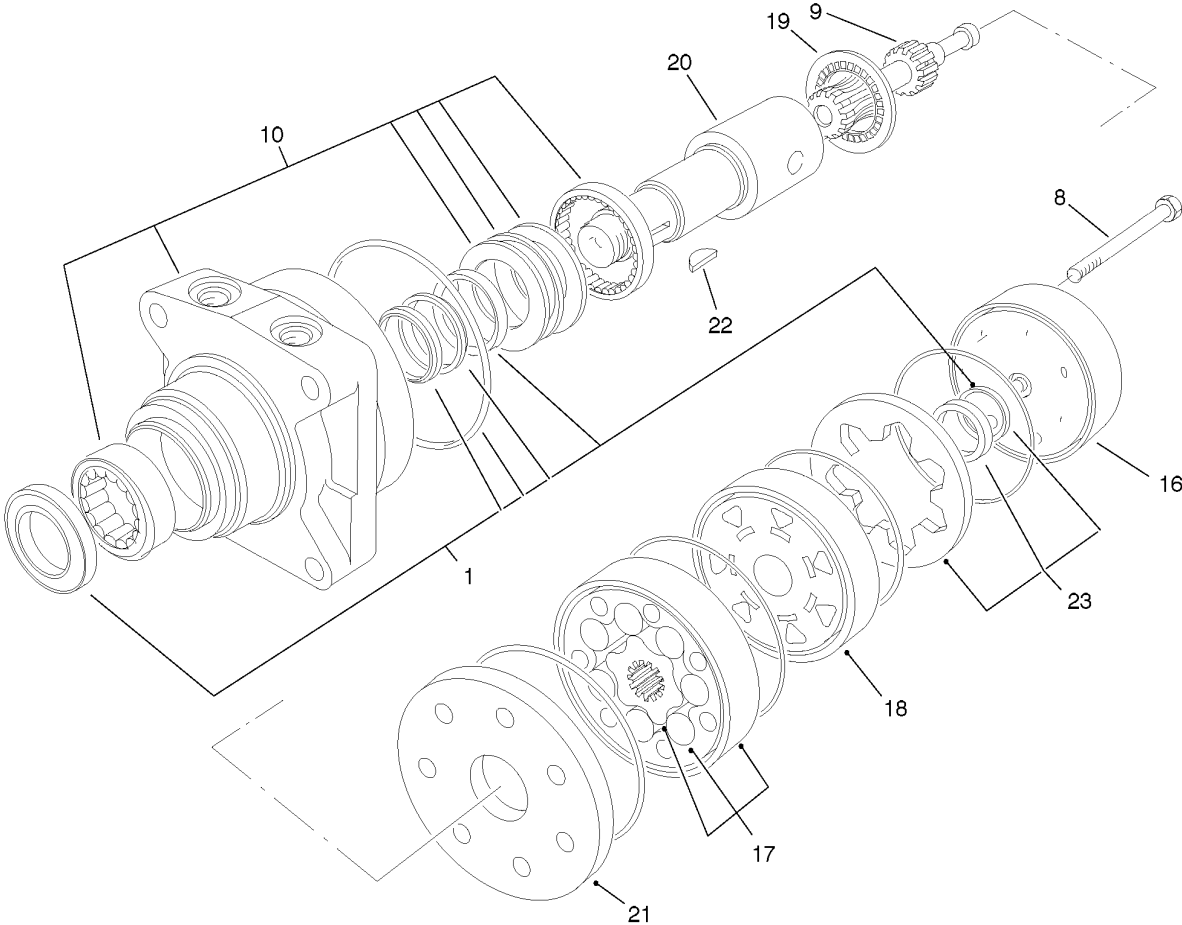
Ref	Part No.	Qty.	Description
33	99-3503	1	Indicator-Angle



Front Wheel And Brake Assembly

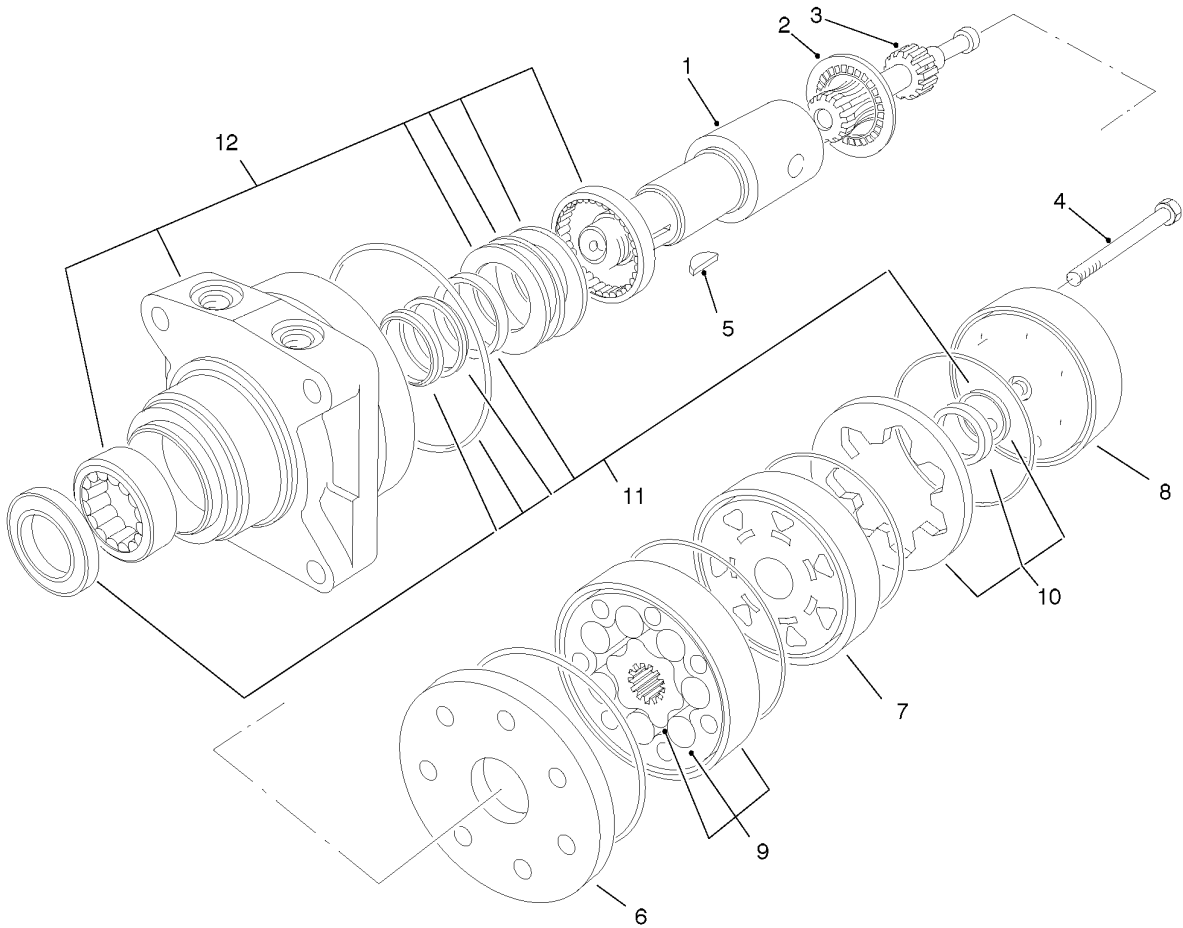
Ref	Part No.	Qty.	Description
1	75-9990	1	Hydraulic Motor ASM
2	340-7	4	Adapter
2:1	237-65	1	O-Ring
2:2	237-80	1	O-Ring
3	95-8693	1	Hydraulic Motor ASM
4	322-9	2	Screw-HH
5	3256-23	4	Washer-Flat
6	3296-29	2	Nut-Lock
7	56-7971	4	Clamp-Tube
8	95-8783	1	Tube ASM
9	353-990	1	Plug
9:1	237-78	1	O-Ring
11	95-8784	1	Tube ASM
12	3274-99	8	Screw-HSH
13	84-2000-03	2	Bracket-Brake
14	3296-23	8	Nut-Lock, NI
15		2	Wheel Hub / Stud ASM
15:1	104-0462-03	1	Hub-Wheel
15:2	10-6830	4	Stud-Type, Drive
18	26-3790	2	Nut-Lock
19		2	Tire & Wheel ASM
19:1	232-27	1	Stem-Valve
19:2	104-0451	1	Tire
19:3	104-0452	1	Rim-Wheel

Ref	Part No.	Qty.	Description
20	242-50	8	Nut-Lug
21	321-5	8	Screw-HH
22	3296-42	8	Nut-Lock, NI
23	71-1500	2	Brake ASM
24	104-0485-03	2	Shield-Wheel
25	92-1715	8	Spacer
26	93-6850	2	Lever-Brake
27	282-2	2	Yoke
28	283-1	2	Pin-Yoke
29	3272-10	2	Pin-Cotter
30	104-4627	2	Rod-Adjusting
31	3272-6	2	Pin-Cotter
32	3220-2	2	Nut
33	104-4625-03	1	Brake Pivot Shaft ASM
34	95-8683	2	Bracket-Pivot, Brake
35	3234-11	4	Screw-HHF
36	32128-43	4	Nut-Flange
37	256-156	2	Bushing-Flange
38	70-9850	2	Clip-Retaining
39	3274-105	8	Screw-HSBH
40	104-4809	2	Drum-Brake



Hydraulic Wheel Motor Assembly No. 75-9990

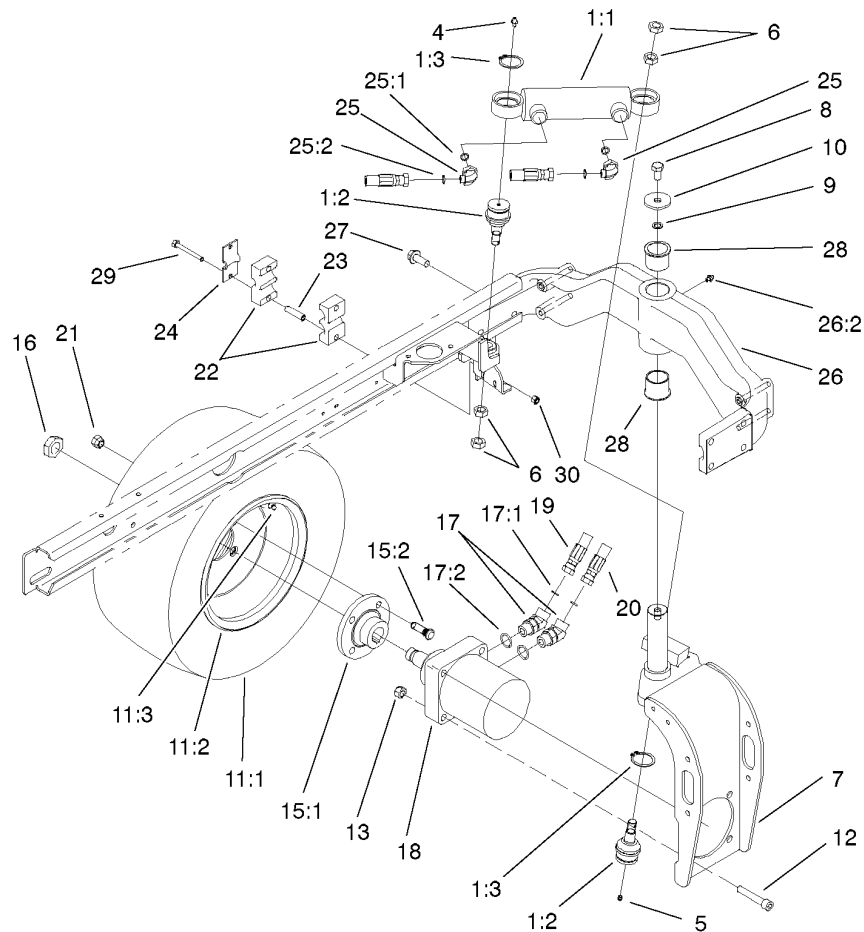
Ref	Part No.	Qty.	Description				
1	76-0800	1	Kit-Seal				
8	76-1010	7	Screw				
9	76-0960	1	Link-Drive				
10	76-0810	1	Wheel Motor Housing ASM				
16	76-0940	1	End Cover ASM				
17	76-0970	1	Set-Rotor				
18	76-0840	1	Manifold				
19	76-0850	1	Bearing-Thrust				
20	76-0860	1	Shaft-Coupling				
21	76-0870	1	Plate-Wear				
22	3257-42	1	Key-Woodruff				
23	76-0880	1	Commutator ASM				



Hydraulic Motor Assembly No. 95-8693

Ref	Part No.	Qty.	Description				
1	76-0860	1	Shaft-Coupling				
2	76-0850	1	Bearing-Thrust				
3	76-0960	1	Link-Drive				
4	76-1010	7	Screw				
5	3257-42	1	Key-Woodruff				
6	76-0870	1	Plate-Wear				
7	99-3535	1	Manifold				
8	76-0940	1	End Cover ASM				
9	76-0970	1	Set-Rotor				
10	76-0880	1	Commutator ASM				
11	76-0800	1	Kit-Seal				
12	76-0810	1	Wheel Motor Housing ASM				

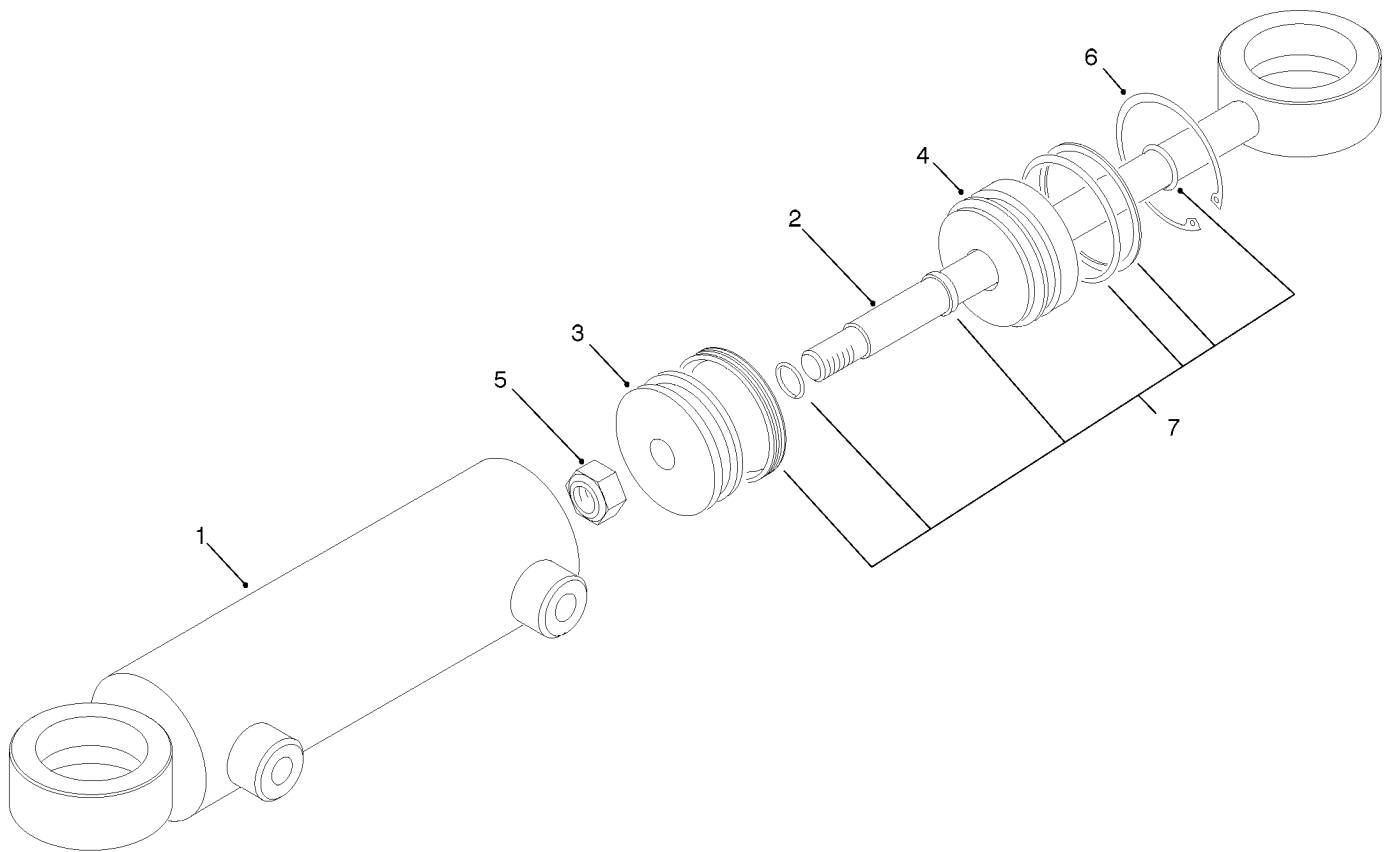
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Rear Fork And Tire Assembly

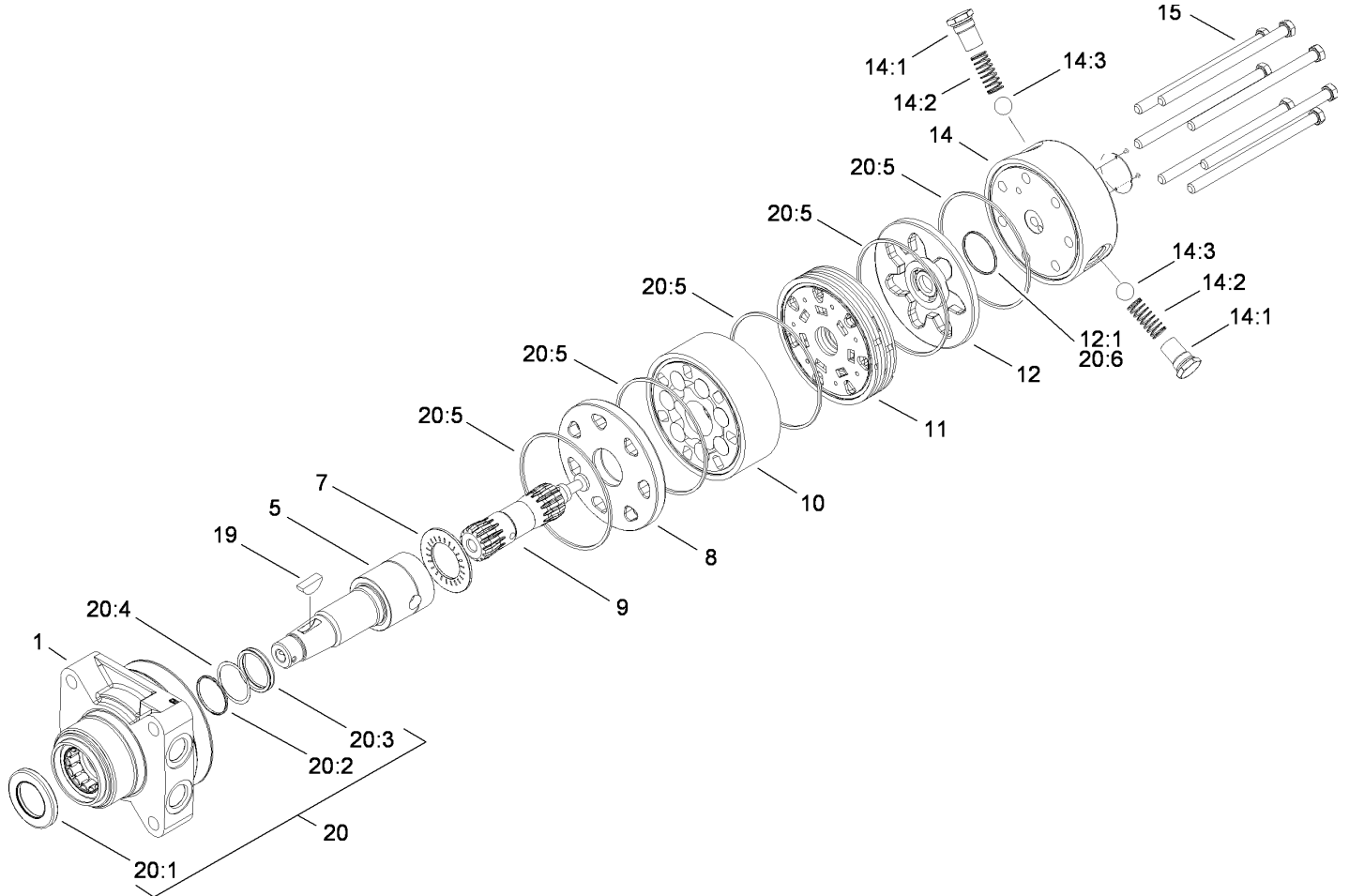
Ref	Part No.	Qty.	Description
❶ 1		1	Steering Cylinder/Balljoint ASM
1:1	94-8141	1	Hydraulic Cylinder ASM
1:2	92-5838	2	Joint-Ball
1:3	32151-104	2	Ring-Retaining, External
4	302-5	1	Fitting-Grease
5	302-59	1	Plug-Threaded
6	3220-6	4	Nut-Jam
7	95-8905-01	1	Fork-Rear
8	325-3	1	Screw-HH
9	3255-2	1	Washer-Lock/EXT
10	75-7730	1	Washer-Thrust
❶ 11		1	Tire & Wheel ASM
11:1	95-8656	1	Tire
11:2	95-8657	1	Rim-Wheel
11:3	232-27	1	Stem-Valve
12	3274-93	4	Screw-HSH
13	3296-23	4	Nut-Lock, NI
❶ 15		1	Wheel Hub / Stud ASM
15:1	10-6870-03	1	Hub-Wheel
15:2	10-6830	4	Stud-Type, Drive
16	26-3790	1	Nut-Lock
17	340-14	2	Fitting-HYD., 45 DEG
17:1	237-65	1	O-Ring
17:2	237-80	1	O-Ring

Ref	Part No.	Qty.	Description
18	95-8694	1	Hydraulic Motor ASM
19	100-4878	1	Hose ASM
20	100-4877	1	Hose ASM
21	242-50	4	Nut-Lug
22	82-8170	2	Clamp
23	93-7960	2	Spacer
24	93-7961	1	Clamp-Drain, Case
25	340-132	2	Fitting-HYD, 90
25:1	237-78	1	O-Ring
25:2	237-21	1	O-Ring
26	18-3979-03	1	Rear Casting ASM
26:2	302-5	1	Fitting-Grease
27	3234-38	8	Screw-HHF
28	95-8805	2	Bushing
29	322-13	2	Screw-HH
30	3296-29	2	Nut-Lock



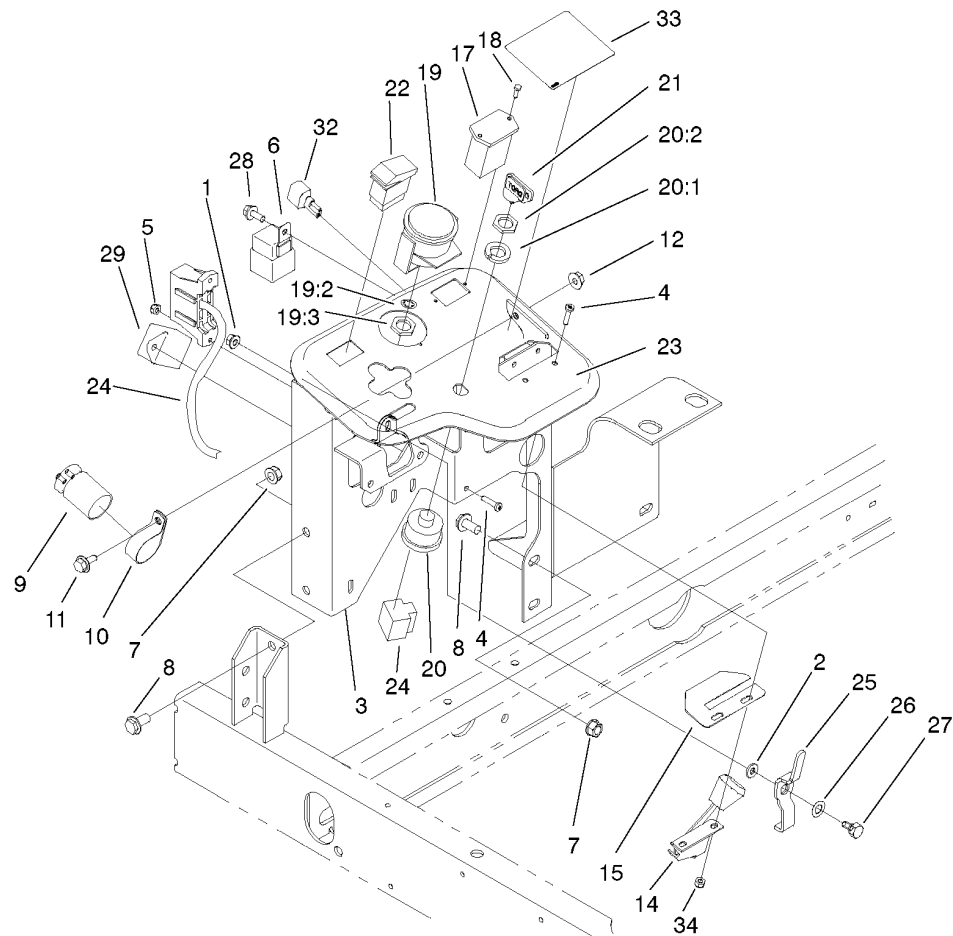
Hydraulic Cylinder Assembly No. 94-8141

Ref	Part No.	Qty.	Description				
1	94-9955	1	Barrel ASM				
2	94-9956	1	Piston Rod ASM				
3	94-9957	1	Piston				
4	94-9958	1	Gland-Cylinder				
5	32152-10	1	Locknut-Deform, Top				
6	32120-8	1	Ring-Snap				
7	86-5390	1	Kit-Seal Repair, 2" Cylinder				



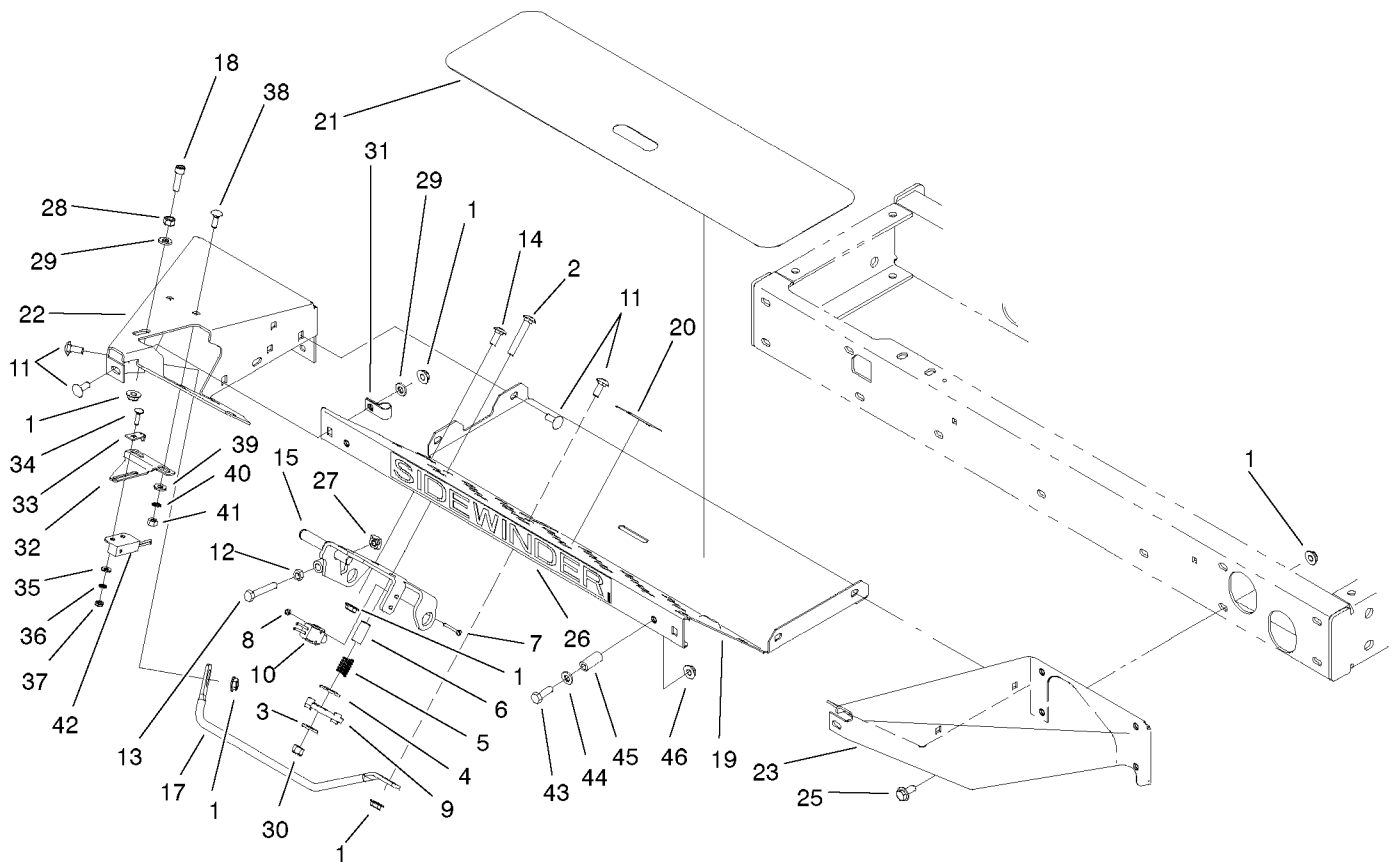
Hydraulic Motor Assembly No. 95-8694

Ref	Part No.	Qty.	Description				
1	76-0810	1	Housing ASM				
5	99-3090	1	Shaft-Coupling				
7	76-0850	1	Bearing-Thrust				
8	76-0870	1	Plate-Wear				
9	99-3537	1	Link-Drive				
10	99-3539	1	Set-Rotor				
11	99-3535	1	Manifold				
12	76-0880	1	Commutator ASM				
②12:1		1	Seal-Commutator				
14	99-3538	1	End Cover ASM				
②14:1		1	Spring Cap And O-Ring ASM				
14:2	99-3541	1	Spring				
14:3	99-3540	1	Ball				
15	99-3536	7	Screw-HH				
19	3257-42	1	Key-Woodruff				
20	94-8178	1	Seal Kit				
②20:1		1	Seal-Dirt And Water				
②20:2		1	Backup-Ring				
②20:3		1	Seal-Shaft				
②20:4		1	Washer-Back Up				
②20:5		5	Seal-Square, Ring (Inner)				
②20:6		1	Seal-Commutator				



Control Panel Assembly

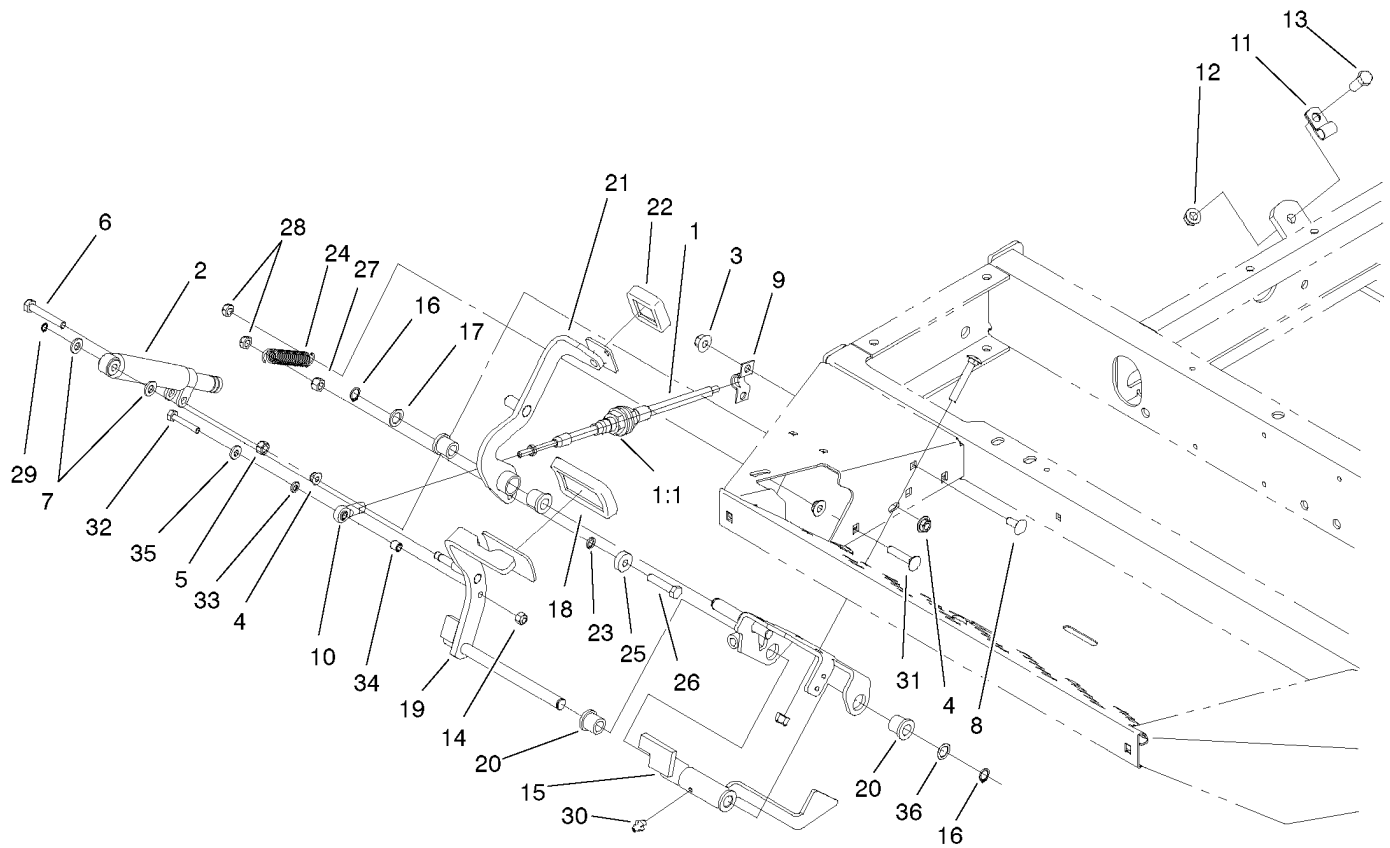
Ref	Part No.	Qty.	Description	Ref	Part No.	Qty.	Description
1	32128-32	1	Nut-HHF	22	95-8999	1	Switch
2	3256-22	1	Washer-Flat	23	100-4834	1	Decal-Console
3	95-8712-03	1	Panel-Control	24	100-4823	1	Harness-Wire
4	3250-27	4	Screw-PPH	25	99-3401-03	1	Lever-Valve, Lock
5	3296-2	2	Nut-Lock	26	3290-477	1	Washer-Curved
6	70-1480	4	Relay	27	63-3410	1	Screw-Shoulder
7	32128-43	5	Nut-Flange	28	32144-10	5	Screw-HWH
8	3234-1	5	Screw-HHF	29	99-3463	1	Controller-Glow
9	37-2690	1	Capacitor	32	100-4918	4	Diode
10	2412-74	1	Clamp	33	99-3558	1	Decal-Console, Ce
11	3234-4	1	Screw-HHF	34	3290-148	2	Nut-Hex, W/Washer
12	32128-33	1	Nut-HF				
14	95-8855	1	Control-Throttle				
15	104-0421	1	Plate-Stop, Throttle				
17	75-6820	1	Hourmeter				
18	32144-18	2	Screw-HH				
19	93-7053	1	Cluster-Lamp, Warning				
19:1	219-17	4	Bulb				
19:2	3254-1	1	Washer-Lock/Int				
19:3	3217-26	1	Nut-Hex				
20	88-9830	1	Switch-Ignition				
20:1	3254-5	1	Washer-Lock, Internal				
20:2	218-461	1	Nut-HH				
21	63-8360	2	Key-Ignition				



Front Platform Assembly

Ref	Part No.	Qty.	Description
1	32128-44	22	Nut
2	3230-6	1	Screw-CARR
3	3256-3	1	Washer-Flat
4	3256-40	1	Washer-Flat
5	65-9940	1	Spring
6	95-8866	1	Tube-Arm, Rocker
7	32105-9	2	Screw
8	3296-9	2	Nut-Lock NI
9	99-3593	1	Arm-Rocker
10	95-8900	1	Switch
11	3230-1	9	Screw-CARR
12	3218-2	1	Nut-Jam
13	322-41	1	Screw-HH
14	3230-23	2	Screw-CARR
15	95-8869-03	1	Bracket-Pedal, Traction
17	95-8893	1	Bar-Deflector
18	3274-22	1	Screw-HSH
19	95-8610-01	1	Plate-Floor
20	99-3444	1	Decal-Mow/Transport
21	99-3478	1	Tread-Foot
22	100-4884-01	1	Support-Floor, RH
23	95-8612-01	1	Bracket-Floor Plate, LH
25	3234-5	10	Screw-HHF
26	99-3388	1	Decal-Sidewinder

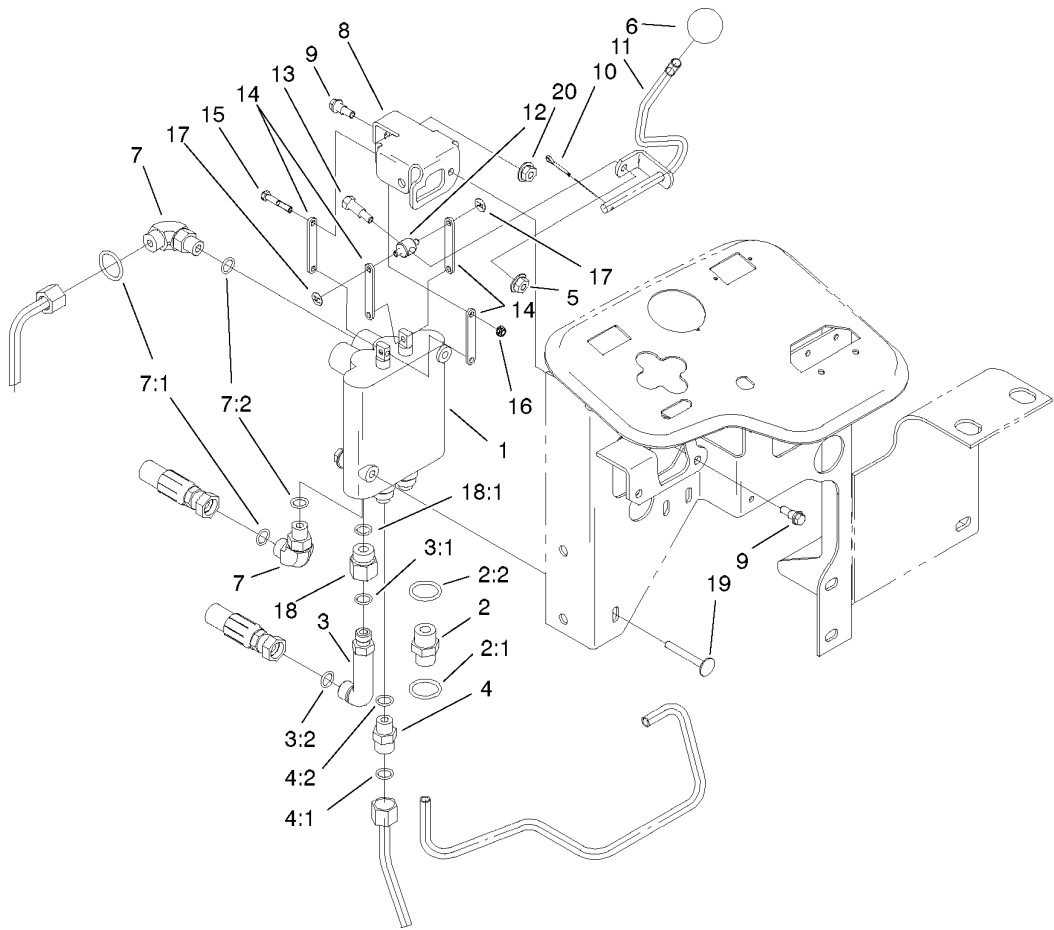
Ref	Part No.	Qty.	Description
27	99-3565	1	Nut-Square
28	3217-6	1	Nut-Hex
29	3256-23	2	Washer-Flat
30	3296-29	1	Nut-Lock
31	2412-103	1	Clamp
32	100-4871	1	Bracket-Switch, Neutral
33	100-4872	1	Plate-Switch, Neutral
34	3229-20	1	Screw-CARR
35	3256-14	1	Washer-Flat
36	3255-17	1	Washer-Lock/EXT
37	3296-2	1	Nut-Lock
38	3229-1	2	Screw-CARR
39	3256-22	2	Washer-Flat
40	3255-7	2	Washer-Lock/EXT
41	3217-5	2	Nut-Hex
42	100-1270	1	Switch-Proximity
43	323-9	2	Screw-HH
44	3256-4	2	Washer-Flat
45	104-4613	2	Tube-Latch
46	32128-43	2	Nut-Flange



Traction Pedal Assembly

Ref	Part No.	Qty.	Description
1	100-4815	1	Cable-Control, Traction
1:1	3220-1	2	Nut-Jam
2	76-8870	1	Damper ASM-Lever
3	32128-20	2	Nut-HF
4	32128-44	3	Nut
5	3217-6	1	Nut-Hex
6	322-10	1	Screw-HH
7	3256-23	2	Washer-Flat
8	3230-23	2	Screw-CARR
9	93-2092	1	Clamp-Cable
10	2411-41	1	Joint-Ball, Superior
11	2412-10	1	R-Clamp
12	32128-43	1	Nut-Flange
13	323-6	1	Screw-HH
14	3296-42	1	Nut-Lock, NI
15	95-8861	1	Slide
16	32151-84	2	Ring-Shaft, EXT
17	41-8440	1	Washer
18	74-9100	1	Pad-Pedal, Forward
19	100-4875-03	1	Traction Pedal ASM
20	256-243	2	Bearing-Flange
21	99-3379	1	Pedal-Reverse
22	74-9110	1	Pad-Pedal, Reverse
23	75-5470	1	Spacer-Bearing

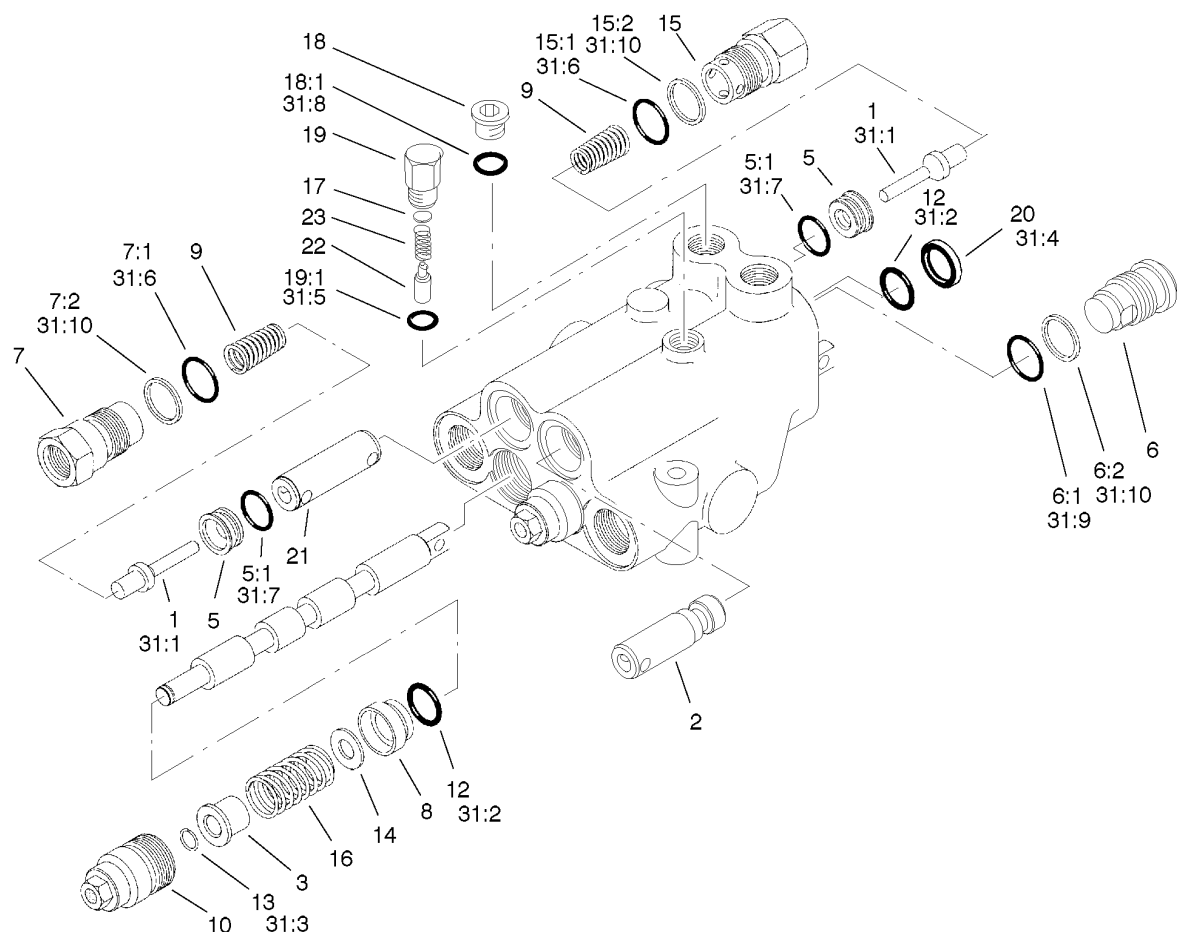
Ref	Part No.	Qty.	Description
24	99-3476	1	Spring-Extension
25	251-259	1	Bearing
26	322-7	1	Screw-HH
27	3296-29	1	Nut-Lock
28	3296-47	2	Nut-Lock, NI
29	32151-3	1	Ring-Grip, Ex
30	302-5	1	Fitting-Grease
31	3230-27	1	Screw-CARR
32	321-9	1	Screw-HH
33	33093-00	1	Washer-Flat
34	99-3545	1	Spacer
35	3256-22	1	Washer-Flat
36	73-0040	4	Washer-Thrust



Control Valve Installation Assembly

Ref	Part No.	Qty.	Description
1	95-8581	1	Valve-2 Spool
2	340-3	1	Adapter
2:1	237-22	1	O-Ring
2:2	237-79	1	O-Ring
3	69-4320	1	Fitting-90 DEG
3:1	237-22	1	O-Ring
3:2	237-42	1	O-Ring
4	340-2	1	Adapter
4:1	237-22	1	O-Ring
4:2	237-42	1	O-Ring
5	32128-33	3	Nut-HF
6	233-42	1	Knob
7	340-77	2	Fitting-90 DEG
7:1	237-22	1	O-Ring
7:2	237-42	1	O-Ring
8	95-8633	1	Bracket-Valve, Actuator
9	42-3560	2	Bolt-Shoulder
10	3272-6	1	Pin-Cotter
11	95-8635	1	Lever-Valve
12	95-8638	1	Trunnion-Valve, Actuator
13	92-8916	1	Bolt-Shoulder
14	95-8634	4	Link
15	87-5150	3	Bolt
16	87-5140	3	Nut-Lock

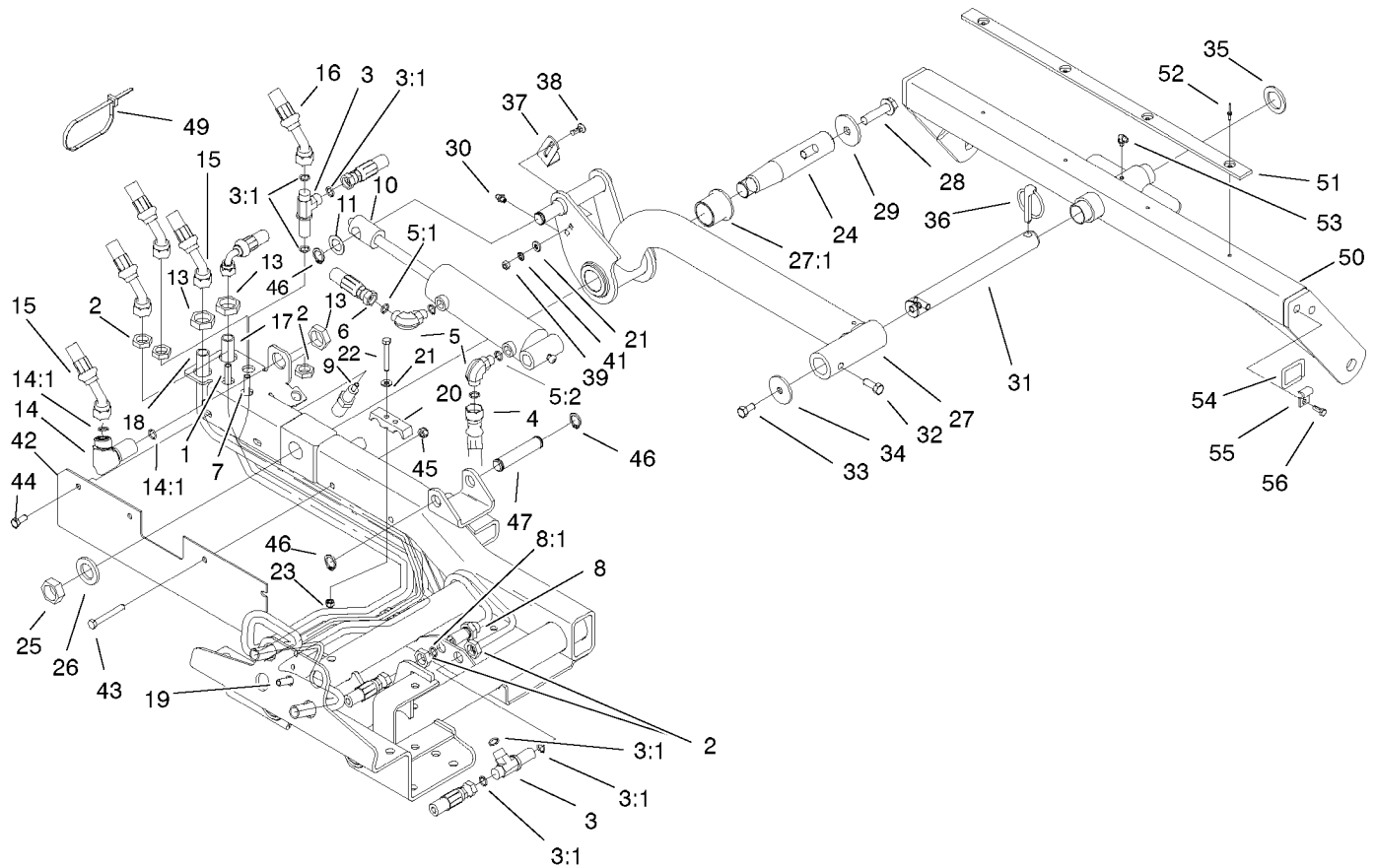
Ref	Part No.	Qty.	Description
17	93-3988	2	Pushnut-Tinnerman
18	353-397	1	Reducer-Adapter
18:1	237-79	1	O-Ring
19	3230-33	2	Screw-CARR
20	32128-32	2	Nut-HHF



Control Valve Assembly No. 95-8581

Ref	Part No.	Qty.	Description
1	58-6290	3	Poppet
2	69-1840	1	Plunger
3	58-6310	2	Spacer
5	58-6330	3	Seat
5:1	58-6340	1	O-Ring
6	58-6350	1	Plug
6:1	60-5720	1	Ring
6:2	58-6370	1	Washer
7	99-3527	2	Plug ASM
7:1	60-5720	1	Ring
7:2	59-7730	1	Washer-Backup
8	58-6400	2	Bushing
9	69-1810	3	Spring
10	58-6420	2	Cap
12	58-6450	4	O-Ring
13	58-6460	2	Ring
14	65-2770	2	Washer
15	99-3526	1	Plug ASM
15:1	60-5720	1	Ring
15:2	59-7730	1	Washer-Backup
16	99-3531	2	Spring
17	60-6450	1	Disc
18	353-989	1	Plug-Hex, Hollow
18:1	237-42	1	O-Ring

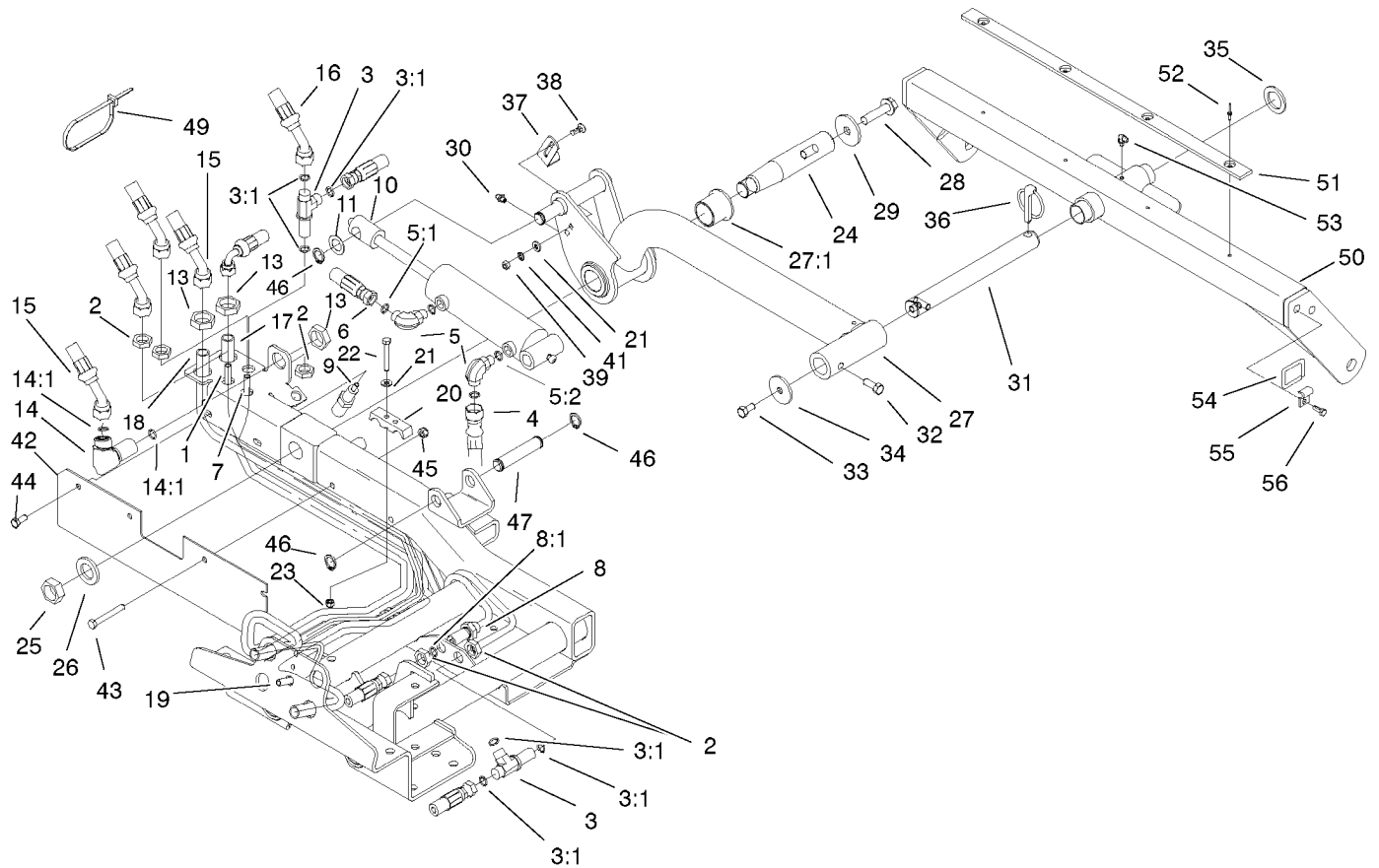
Ref	Part No.	Qty.	Description
19	58-6780	1	Plug
19:1	58-6790	1	O-Ring
20	58-6320	2	Wiper
21	99-3528	1	Plunger
22	58-6770	1	Plunger
23	58-6760	1	Spring
31	99-3530	1	Kit-Seal
31:1	58-6290	3	Poppet
31:2	58-6450	4	O-Ring
31:3	58-6460	2	Ring
31:4	58-6320	2	Wiper
31:5	58-6790	1	O-Ring
31:6	60-5720	2	Ring
31:7	58-6340	2	O-Ring
31:8	237-42	1	O-Ring
31:9	60-5720	2	Ring
31:10	59-7730	2	Washer-Backup



Rear Liftarm Assembly

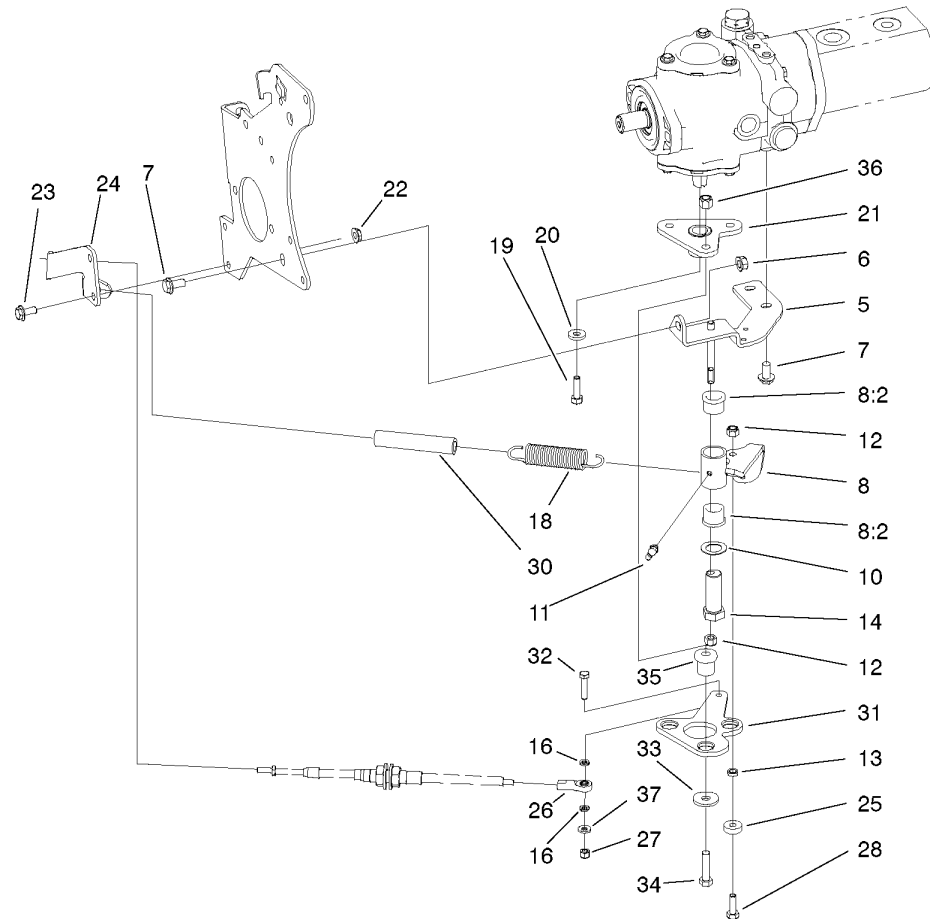
Ref	Part No.	Qty.	Description
1	104-0402	1	Tube ASM
2	340-70	5	Locknut-Bulkhead
3	340-68	2	Fitting-Tee, Bulkhead
3:1	237-22	6	O-Ring
4	104-0407	1	Hose ASM
5	340-77	2	Fitting-90 DEG
5:1	237-22	1	O-Ring
5:2	237-42	1	O-Ring
6	100-4891	1	Hose ASM
7	104-0403	1	Tube ASM
8	340-71	1	Fitting-Straight, Bulkhead
8:1	237-22	2	O-Ring
9	93-6762	1	Switch-Ball
10	95-8978	1	Cylinder-Hydraulic
11	3-6498	1	Washer-Thrust
13	340-74	3	Locknut-Bulkhead
14	340-72	1	Elbow-Bulkhead Union, 90 DEG
14:1	237-65	2	O-Ring
15	100-4879	2	Hose ASM
16	95-8825	1	Hose ASM
17	104-0401	1	Tube ASM
18	104-0400	1	Tube-ASM
19	104-0404	1	Tube ASM
20	99-3641	2	Clamp-Tube

Ref	Part No.	Qty.	Description
21	3256-22	6	Washer-Flat
22	321-11	2	Screw-HH
23	3296-42	2	Nut-Lock, NI
24	95-8990	1	Shaft-Pivot, Rear
25	3220-9	1	Nut-Jam
26	86-1480	1	Washer
27	100-4938	1	Rear Lift Arm ASM
27:1	69-6470	2	Bushing-Castor
28	3234-27	1	Screw-Flange
29	75-7730	1	Washer-Thrust
30	302-5	1	Fitting-Grease
31	100-4944	1	Shaft-C.U., Pivot
32	323-6	1	Screw-HH
33	323-4	1	Screw-HH
34	63-7400	1	Washer-Rebound
35	3-6781	1	Washer-Thrust
36	283-71	1	Pin-Lynch
37	95-8613	1	Bracket-Switch
38	3229-1	2	Screw-CARR
39	3217-5	2	Nut-Hex
41	3253-3	2	Washer-Lock
42	104-0453-03	1	Guard
43	322-12	2	Screw-HH
44	322-3	2	Screw-HH



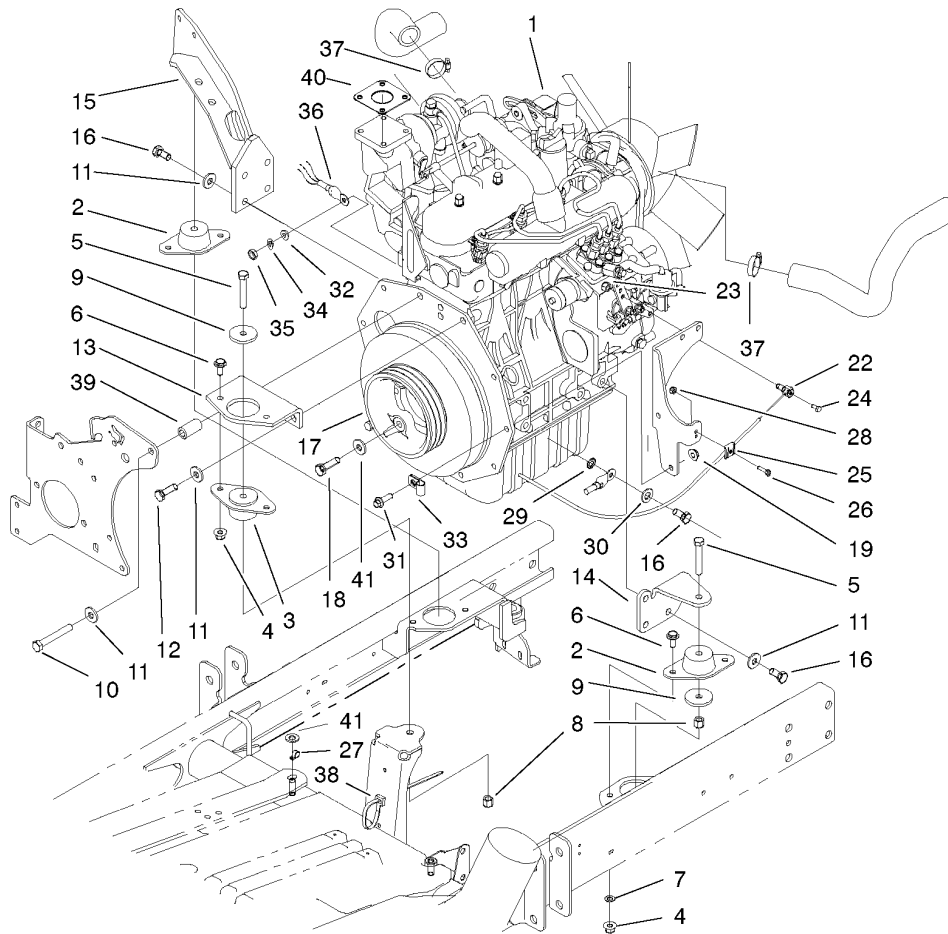
Rear Liftarm Assembly (continued)

Ref	Part No.	Qty.	Description				
45	32128-20	4	Nut-HF				
46	32120-93	3	Ring-Retaining				
47	95-8575	1	Pin				
49	3334-945	1	Tie-Cable				
50	104-4229	1	Rear Carrier Frame ASM				
51	95-8936	1	Strip-Wear				
52	3269-18	4	Rivet-Pop, Steel				
53	302-60	1	Fitting-Lube				
54	104-4240	1	Link-Rear				
55	3-6657	1	Clip-Skid				
56	32144-14	1	Screw-HWH				



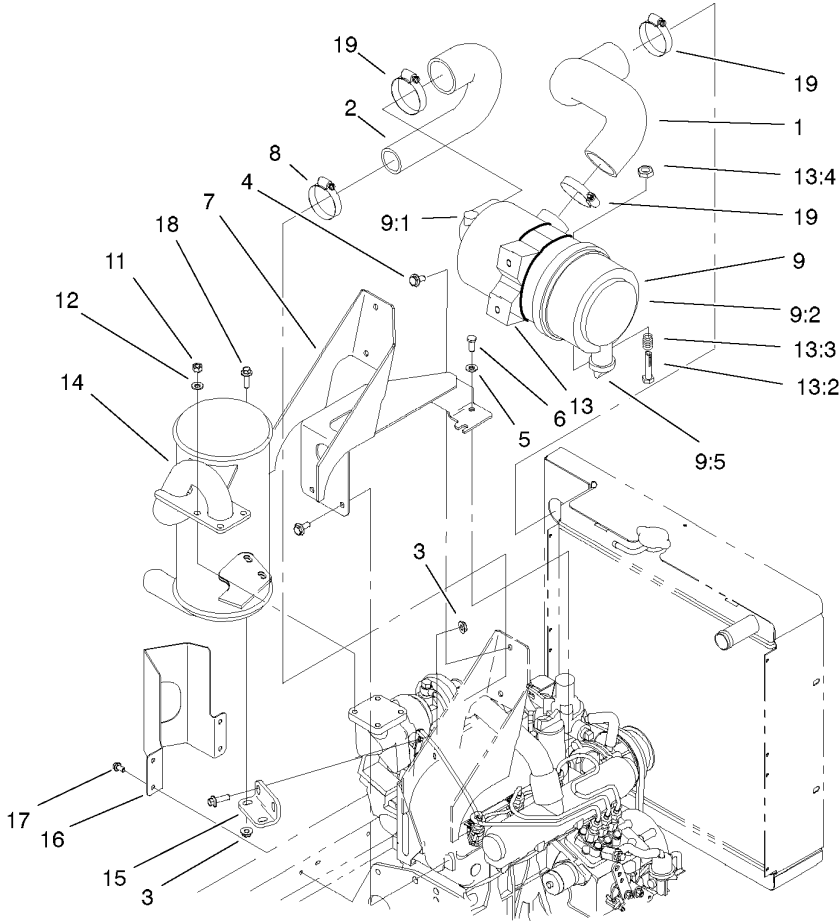
Neutral Arm Assembly

Ref	Part No.	Qty.	Description	Ref	Part No.	Qty.	Description
5	95-8960-03	1	Bracket-Neutral	32	321-8	1	Screw-HH
6	32128-43	1	Nut-Flange	33	2844	3	Washer
7	3234-1	3	Screw-HHF	34	95-3857	3	Screw-Head, Button
8	104-0422	1	Neutral Arm ASM	35	63-9750	3	Mount
8:2	256-113	2	Bushing-Flange	36	3296-39	3	Nut-Lock, NI
10	3-6498	1	Washer-Thrust	37	3256-22	1	Washer-Flat
11	302-60	1	Fitting-Lube				
12	3296-29	2	Nut-Lock				
13	100-4817	1	Spacer-Bearing				
14	76-8640	1	Stud-Traction				
16	33093-00	2	Washer-Flat				
18	94-1369	1	Spring-Extension				
19	3210-6	1	Screw-HH				
20	88-7200	1	Washer-Flat				
21	99-3598-03	1	Hub ASM				
22	32128-44	2	Nut				
23	3234-5	2	Screw-HHF				
24	104-0464-03	1	Bracket-Support, Cable				
25	251-259	1	Bearing				
26	2411-41	1	Joint-Ball, Superior				
27	3296-42	1	Nut-Lock, NI				
28	3274-104	1	Screw-HSBH				
30	99-3556	1	Hose				
31	99-3594-03	1	Lever-Pump				



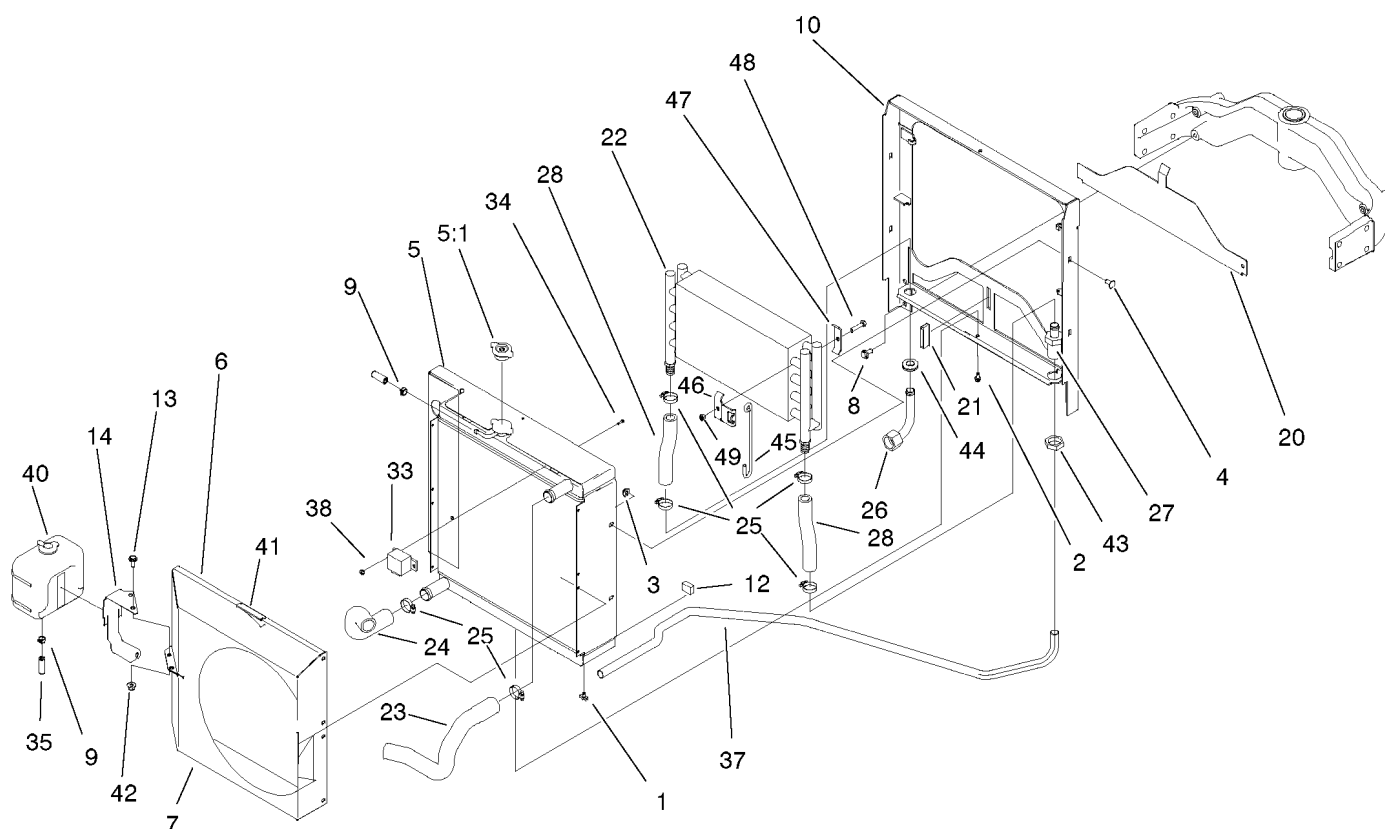
Engine Assembly

Ref	Part No.	Qty.	Description	Ref	Part No.	Qty.	Description
1	100-4901	1	Engine-Kubota, D1105-T-Eb-Toro-2-S1	26	32105-13	1	Screw-SHH
2	83-1030	2	Mount-Engine	27	2412-112	1	Clamp
3	93-5265	1	Mount-Engine	28	3296-2	1	Nut-Lock
4	32128-20	6	Nut-HF	29	3255-9	1	Washer-Lock/EXT
5	323-11	3	Screw-HH	30	3256-25	1	Washer-Flat
6	3234-5	6	Screw-HHF	31	3234-17	2	Screw-HHF
7	3255-8	1	Washer-Lock/EXT	32	3256-78	1	Washer-Flat
8	3296-39	3	Nut-Lock, NI	33	2412-10	1	R-Clamp
9	80-8560	3	Washer-Hardened	34	43-5930	1	Washer-Spring
10	42-9370	1	Bolt/Washer	35	48-7890	1	Nut
11	80-6990	9	Washer-Hardened	36	99-3441	1	Harness-Wire, Fusible Link
12	95-8812	1	Screw-Hhc	37	2412-34	2	Clamp-Hose
13	99-3618-03	1	Mount-Engine, Front	38	3290-378	1	Tie-Cable
14	95-8937-03	1	Mount-Engine, LH	39	95-8736	1	Spacer
15	100-4838-03	1	Mount-Engine	40	98-9611	1	Gasket
16	63-7790	8	Screw-Cap	41	3256-24	4	Washer-Flat
17	99-3626-03	1	Pulley-3V, Engine				
18	56-2140	3	Bolt				
19	32128-44	2	Nut				
22	98-9311	1	Swivel-Throttle				
23	3296-20	1	Nut-Lock NI				
24	25-8640	1	Screw-HH				
25	81-1690	1	Clamp-Cable				



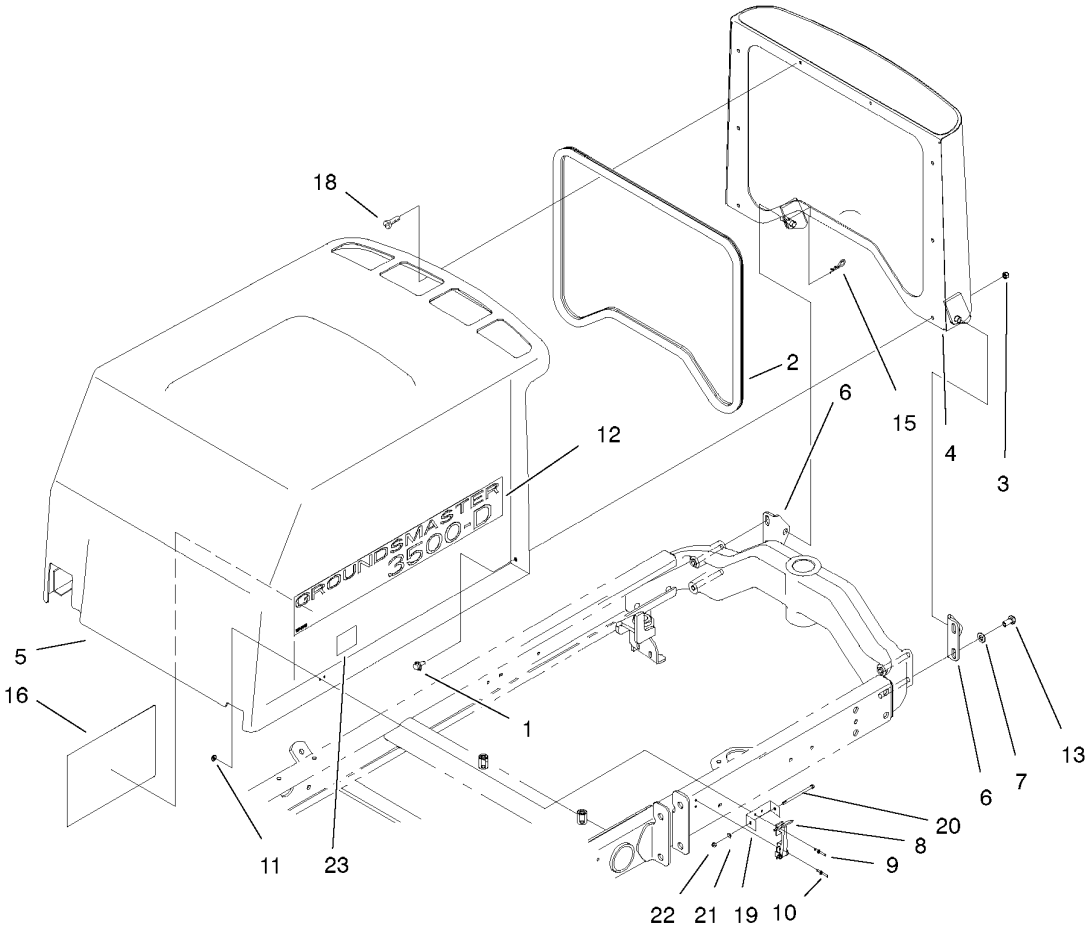
Air Cleaner And Muffler Assembly

Ref	Part No.	Qty.	Description	Ref	Part No.	Qty.	Description
1	104-0420	1	Hose-Air Intake, Upper	19	2412-130	3	Hose Clamp
2	99-3643	1	Hose-Air Intake, Lower				
3	32128-44	6	Nut				
4	3234-5	3	Screw-HHF				
5	3256-23	4	Washer-Flat				
6	33114-016	4	Screw-HH				
7	99-3648-03	1	Mount-Filter, Air				
8	2412-92	1	Clamp-Hose				
9	100-4824	1	Air Cleaner ASM				
9:1	285-17	1	Plug-Pipe				
9:2	104-0497	1	Cover ASM				
9:5	104-0498	1	Valve-Vacuator				
9:6	98-9763	1	Element ASM				
11	33014-00	4	Nut-Hex				
12	42-9850	4	Washer-Lock, Spring				
13	100-4825	1	Band-Mouning, Air Cleaner				
13:2	94-3653	1	Bolt				
13:3	94-3654	1	Spring				
13:4	48-9510	1	Nut				
14	100-4810	1	Muffler				
15	95-8943-03	1	Bracket-Muffler				
16	99-3425-03	1	Guard-Exhaust				
17	32144-4	4	Screw-HH				
18	3234-17	3	Screw-HHF				



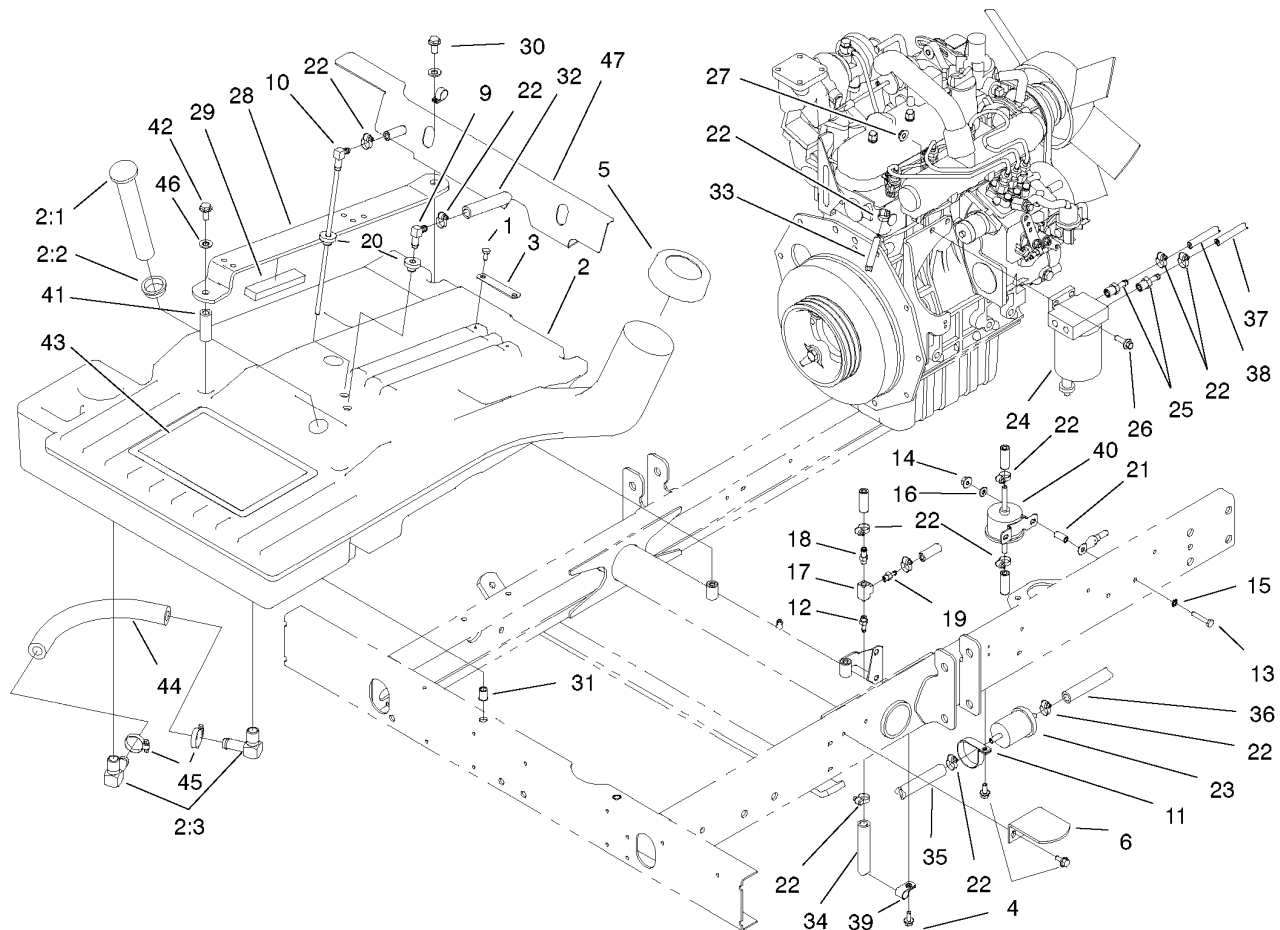
Radiator Assembly

Ref	Part No.	Qty.	Description	Ref	Part No.	Qty.	Description
1	304-46	1	Draincock	34	32105-13	2	Screw-SHH
2	32104-116	12	Screw	35	63-7623	1	Hose-Fuel
3	32128-44	4	Nut	37	100-4924	1	Tube ASM
4	3230-1	4	Screw-CARR	38	32128-17	2	Nut-Lock, Flange
5	99-3637	1	Radiator	40	98-9323	1	Bottle-Overflow, Water
5:1	93-5957	1	Cap-Radiator	41	93-6681	1	Decal-Warning, Fan
6	100-4885-03	1	Shroud-Fan, Top	42	32128-20	2	Nut-HF
7	100-4898-03	1	Shroud-Fan, Bottom	43	340-126	1	Nut-Bulkhead
8	3234-1	4	Screw-HHF	44	100-4866	1	Grommet
9	92-2379	2	Clamp-Hose	45	100-4858	2	Form-Wire
10	100-4802-03	1	Frame-Radiator	46	100-4859	2	Bracket-Cooler, Keeper
12	95-8962	2	Seal-Foam, Radiator	47	100-4860	2	Bracket-Clamp
13	3234-5	2	Screw-HHF	48	322-17	2	Screw-HH
14	100-4899-03	1	Bracket-Reservoir	49	3296-47	2	Nut-Lock, NI
20	95-8702-03	1	Shield-Radiator, Lower				
21	99-3497	1	Magnet				
22	100-4869	1	Cooler-Oil				
23	104-0454	1	Hose-Radiator, Upper				
24	100-4809	1	Hose-Radiator, Lower				
25	2412-34	6	Clamp-Hose				
26	99-3644	1	Filter Head Tube ASM				
27	100-4925	1	Fitting-Bulkhead				
28	99-3646	2	Hose-Cooler, Oil				
33	66-8800	1	Relay				



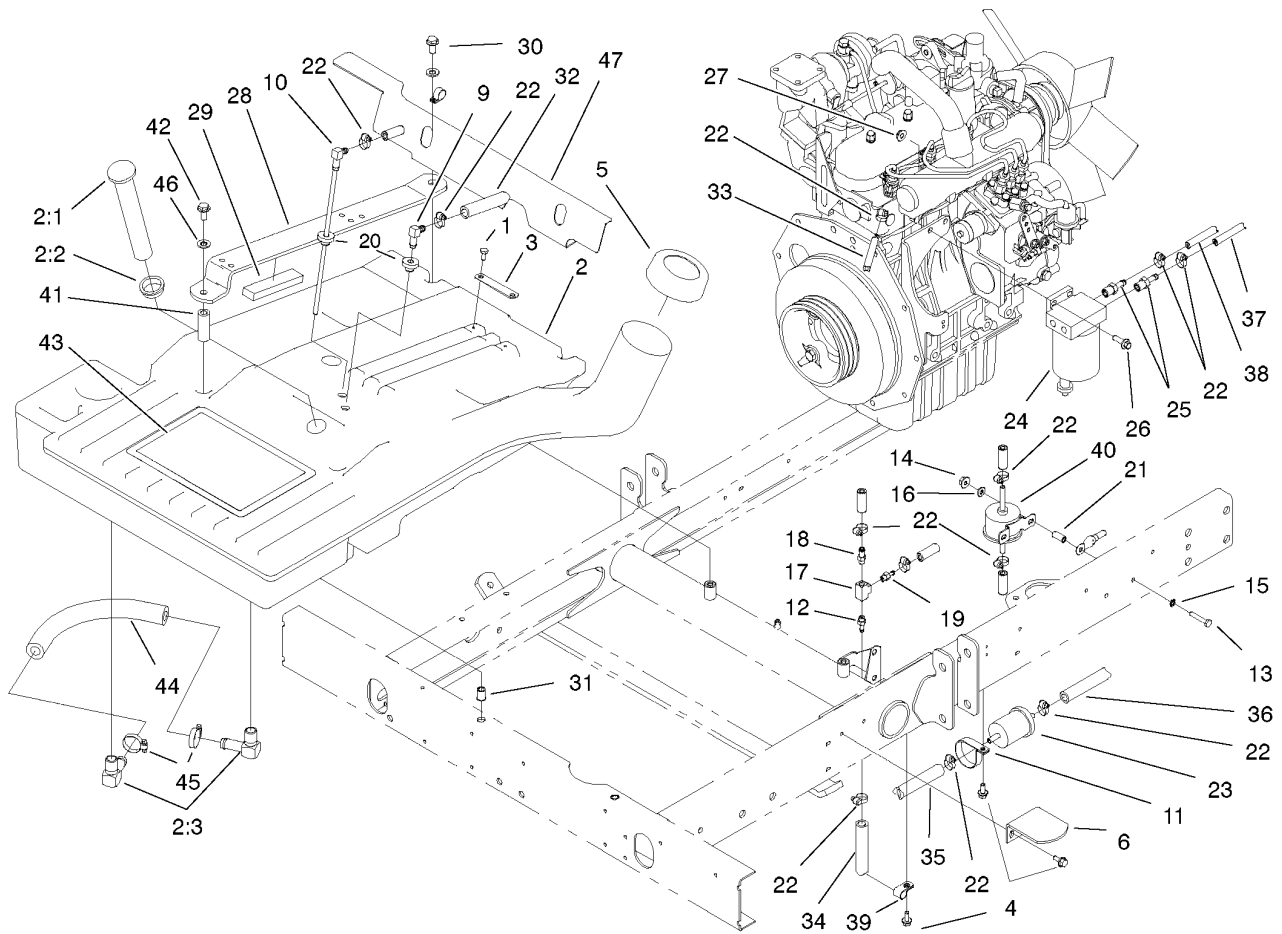
Hood-Screen Assembly

Ref	Part No.	Qty.	Description				
1	3234-4	6	Screw-HHF				
2	100-4932	1	Trim-Seal				
3	3296-42	6	Nut-Lock, NI				
4	100-4847-03	1	Screen-Hood				
5	100-4855	1	Hood				
6	95-8728	2	Bracket-Pivot, Hood				
7	3256-24	4	Washer-Flat				
8	59-9740	2	Flex Draw Latch ASM				
9	98-7310	4	Rivet				
10	3290-55	4	Rivet-Pop				
11	3269-10	4	Washer-Back				
12	104-0446	2	Decal				
13	323-4	4	Screw-HH				
15	3290-467	1	Pin-Hair				
16	104-0483	1	Decal-Instructions, Service				
18	3269-21	2	Rivet-Pop				
19	99-3568	1	Bracket-Lock,Ce				
20	321-9	1	Screw-HH				
21	3256-22	1	Washer-Flat				
22	3296-42	1	Nut-Lock, NI				
23	100-6574	1	Decal-Warning				



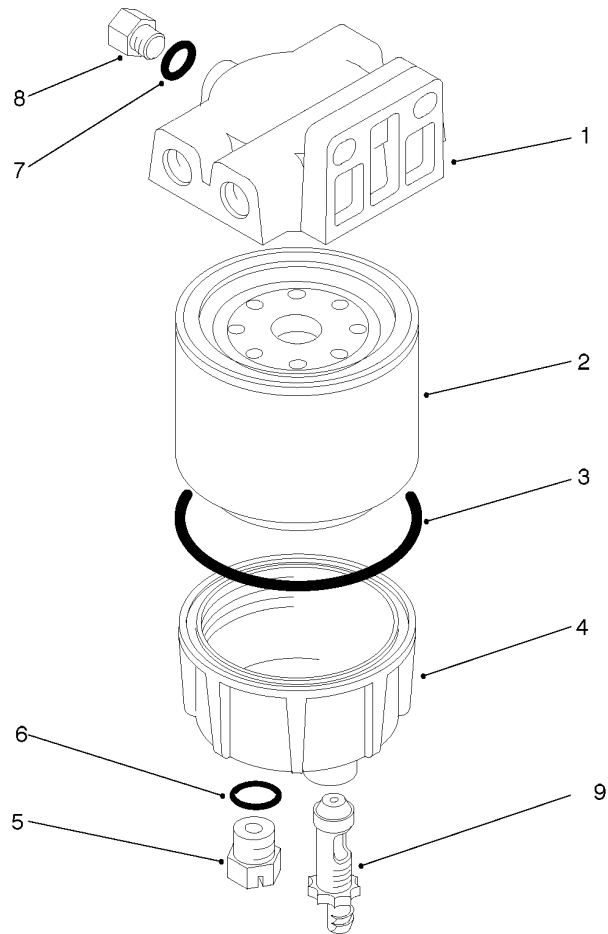
Fuel System Assembly

Ref	Part No.	Qty.	Description	Ref	Part No.	Qty.	Description
1	321-2	2	Screw-HH	24	98-9305	1	Filter-Water/Fuel
2	104-0408	1	Tank-Fuel	25	353-783	2	Fitting-Pump
2:1	95-8971	1	Guage-Fuel	26	3234-17	2	Screw-HHF
2:2	95-8972	1	Grommet	27	32128-44	2	Nut
2:3	353-377	2	Stem-Hose	28	104-0467-03	2	Strap-Support, Seat
3	95-8881	1	Strap-Line, Fuel	29	95-8896	2	Foam
4	32144-10	4	Screw-HWH	30	3234-1	2	Screw-HHF
5	95-4193	1	Diesel Gas Cap ASM	31	32148-9	2	Nut-Insert
6	95-8968-03	1	Support-Tank, Fuel	32	71-3380	1	Hose-Fuel
9	46-6550	1	Fitting-HYD, 90	33	99-3498	1	Return-Line, Fuel
10	66-8121	1	Standpipe	34	99-3185	1	Line-Fuel
11	2412-148	1	Clamp-R	35	71-3383	1	Hose-Fuel
12	304-73	1	Connector-Hose	36	19-3250	1	Hose-Line, Fuel
13	321-9	2	Screw-HH	37	63-9640	1	Hose
14	32128-33	2	Nut-HF	38	27-2120	1	Hose-Line, Gas
15	3255-7	1	Washer-Lock/EXT	39	2412-73	1	Clamp-R
16	3256-22	2	Washer-Flat	40	99-3464	1	Pump-Fuel
17	354-20	1	Fitting-Tee	41	104-0466	2	Spacer-Tube
18	354-21	1	Fitting-Barb	42	323-14	2	Screw-HH
19	354-22	1	Fitting-Barb	43	99-3560	1	Decal-Danger, Ce
20	46-6560	2	Bushing	43	104-0484	1	Decal
21	87-4710	2	Spacer-Brake, Parking	44	104-0465	1	Hose
22	2412-108	13	Clamp-Worm	45	2412-129	2	Clamp-Hose
23	98-7612	1	Filter-Fuel	46	3256-24	2	Washer-Flat



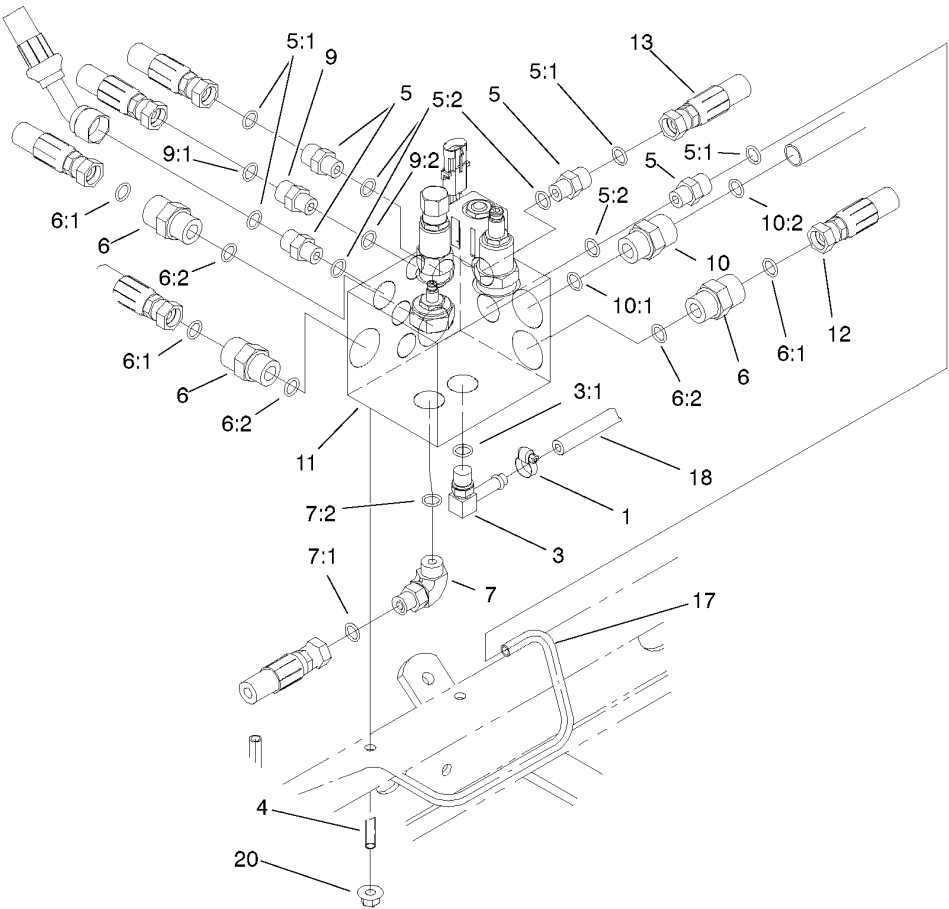
Fuel System Assembly (continued)

Ref	Part No.	Qty.	Description
47	104-4833-03	1	Shield-Heat



Water/fuel Filter Assembly No. 98-9305

Ref	Part No.	Qty.	Description				
1	98-9772	1	Head-Filter				
2	98-9764	1	Element-On, Spin				
3	98-9774	1	O-Ring-Base, Filter				
4	98-9775	1	Base-Filter				
5	98-9773	1	Plug-Base, Filter				
6	237-42	1	O-Ring				
7	237-78	1	O-Ring				
8	98-9776	1	Plug-Filter, Head				
9	98-9777	1	Drain Valve ASM				

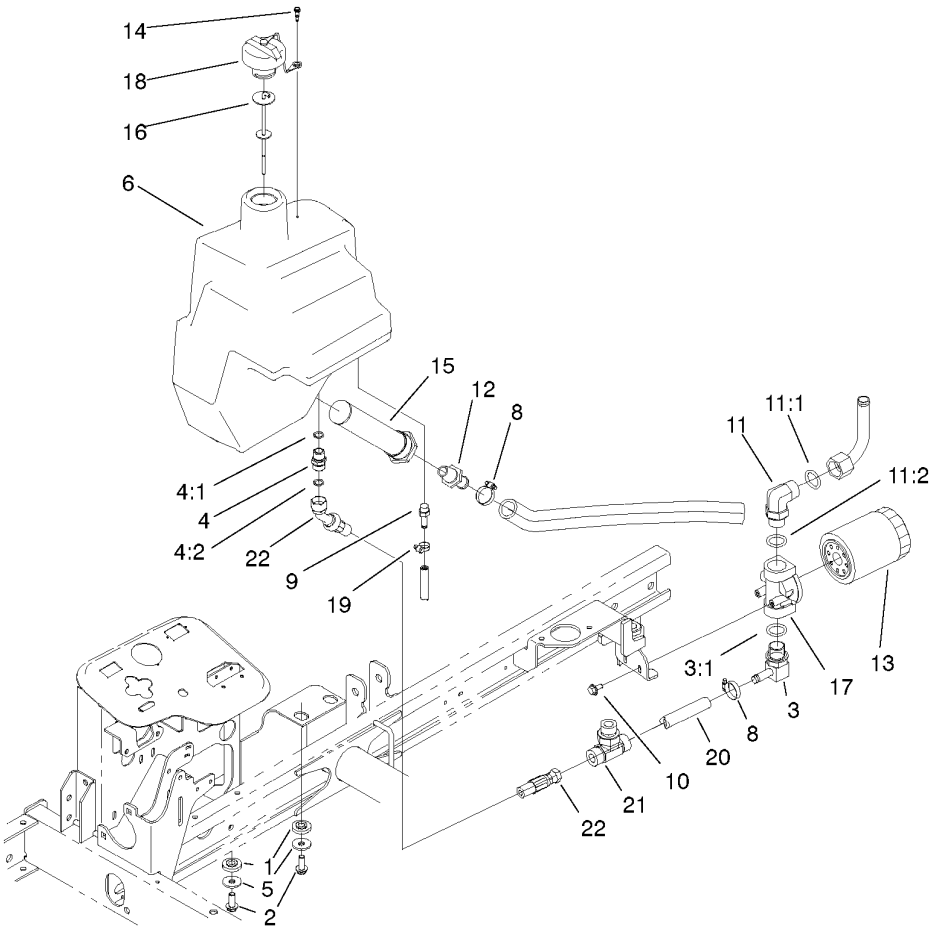


Manifold Block Installation Assembly

Ref	Part No.	Qty.	Description
1	2412-36	1	Clamp-Hose
3	100-4887	1	Fitting-Barb
3:1	237-42	1	O-Ring
4	104-0430	2	Stud
5	340-2	4	Adapter
5:1	237-22	1	O-Ring
5:2	237-42	1	O-Ring
6	340-7	3	Adapter
6:1	237-65	1	O-Ring
6:2	237-80	1	O-Ring
7	340-77	1	Fitting-90 DEG
7:1	237-22	1	O-Ring
7:2	237-42	1	O-Ring
9	340-88	1	Adapter
9:1	237-22	1	O-Ring
9:2	237-78	1	O-Ring
10	340-66	1	Fitting-Hydraulic
10:1	237-80	1	O-Ring
10:2	237-58	1	O-Ring
11	100-4826	1	Manifold Block ASM
12	104-0488	1	Hose ASM
13	100-4889	1	Hose ASM
17	100-4827	1	Tube ASM
18	80-7342	1	Hose ASM

Ref	Part No.	Qty.	Description
20	32128-20	2	Nut-HF

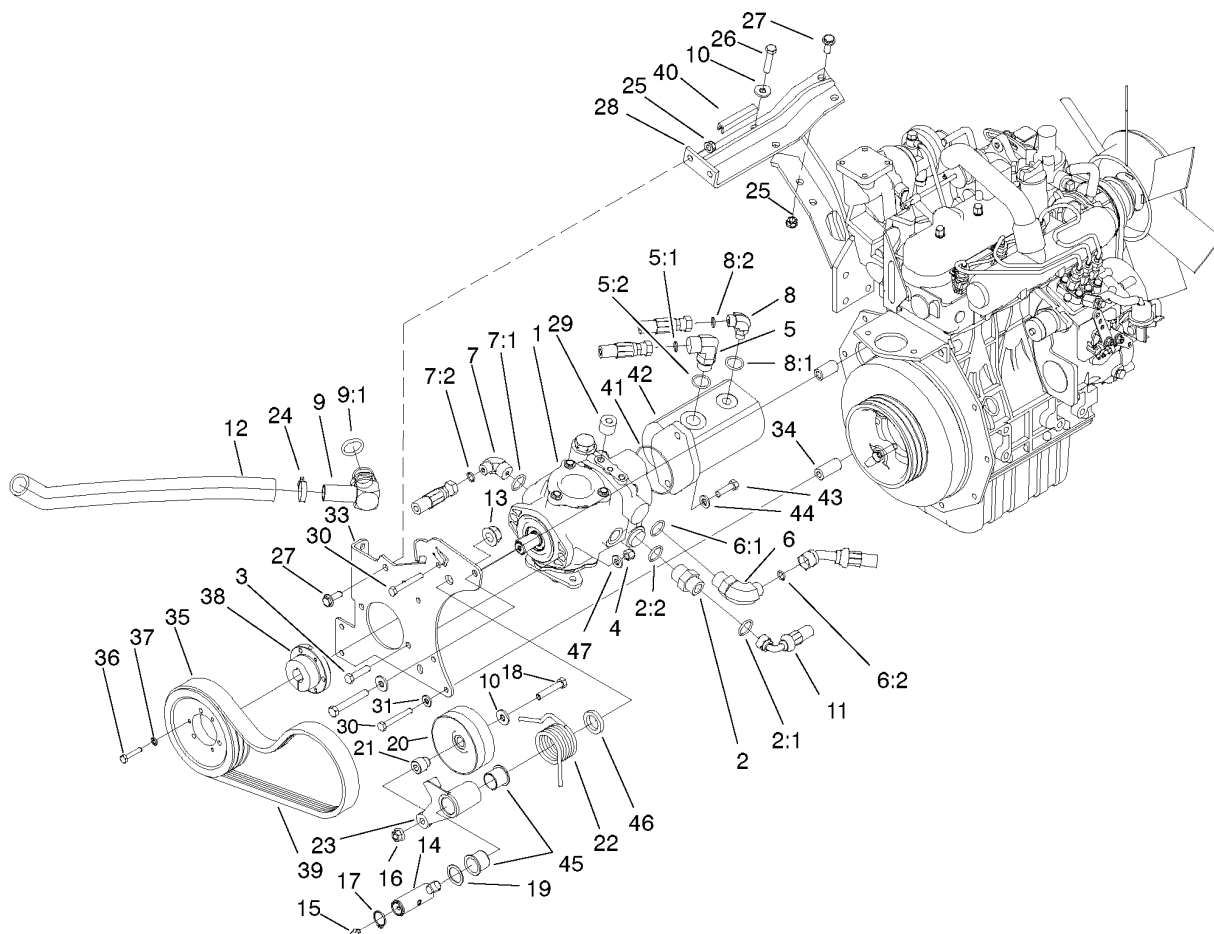
31



Hydraulic Tank Assembly

Ref	Part No.	Qty.	Description
1	240-11	4	Grommet-Mount, Tank
2	3234-11	4	Screw-HHF
3	353-987	1	Fitting-HYD. Barb, 90 DEG
3:1	237-81	1	O-Ring
4	100-4890	1	Fitting-Check
4:1	237-79	1	O-Ring
4:2	237-30	1	O-Ring
5	63-8410	4	Washer
6	100-4814	1	Tank-Hydraulic
8	2412-34	2	Clamp-Hose
9	353-979	1	Fitting-Barb, Straight
10	3234-13	2	Screw-HHF
11	340-142	1	Elbow-90 DEG
11:1	237-58	1	O-Ring
11:2	237-81	1	O-Ring
12	100-4835	1	Fitting-Barb
13	54-0110	1	Filter-Oil, Transmission
14	57-5420	1	Screw-Shoulder
15	75-0550	1	Suction-Strainer
16	75-3710	1	Dipstick
17	92-5821	1	Filter Head ASM
18	93-7160	1	Cap-Oil, Hydraulic
19	2412-36	1	Clamp-Hose
20	104-0486	1	Hose ASM

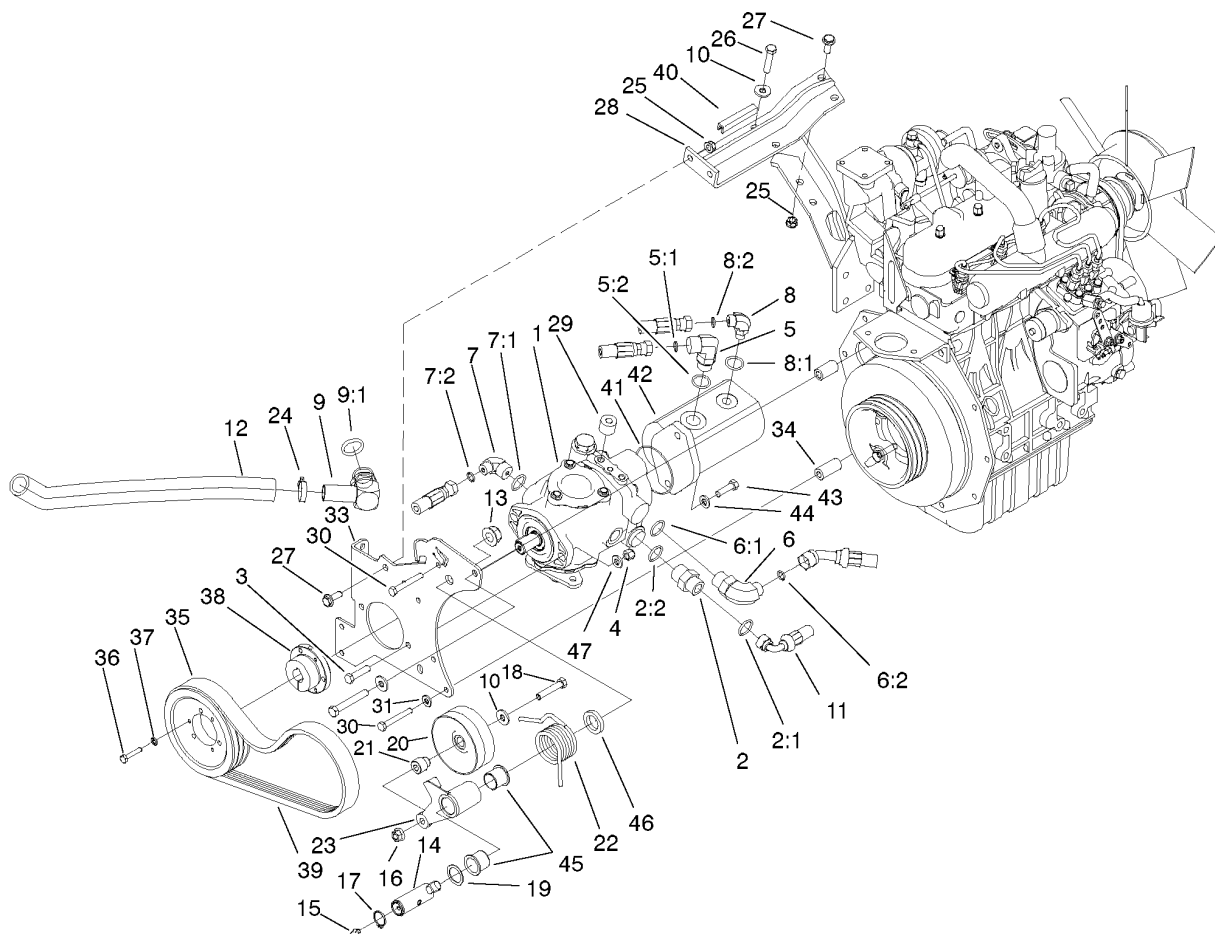
Ref	Part No.	Qty.	Description
21	100-4836	1	Fitting-Tee
22	104-0487	1	Hose ASM



Hydrostat Assembly

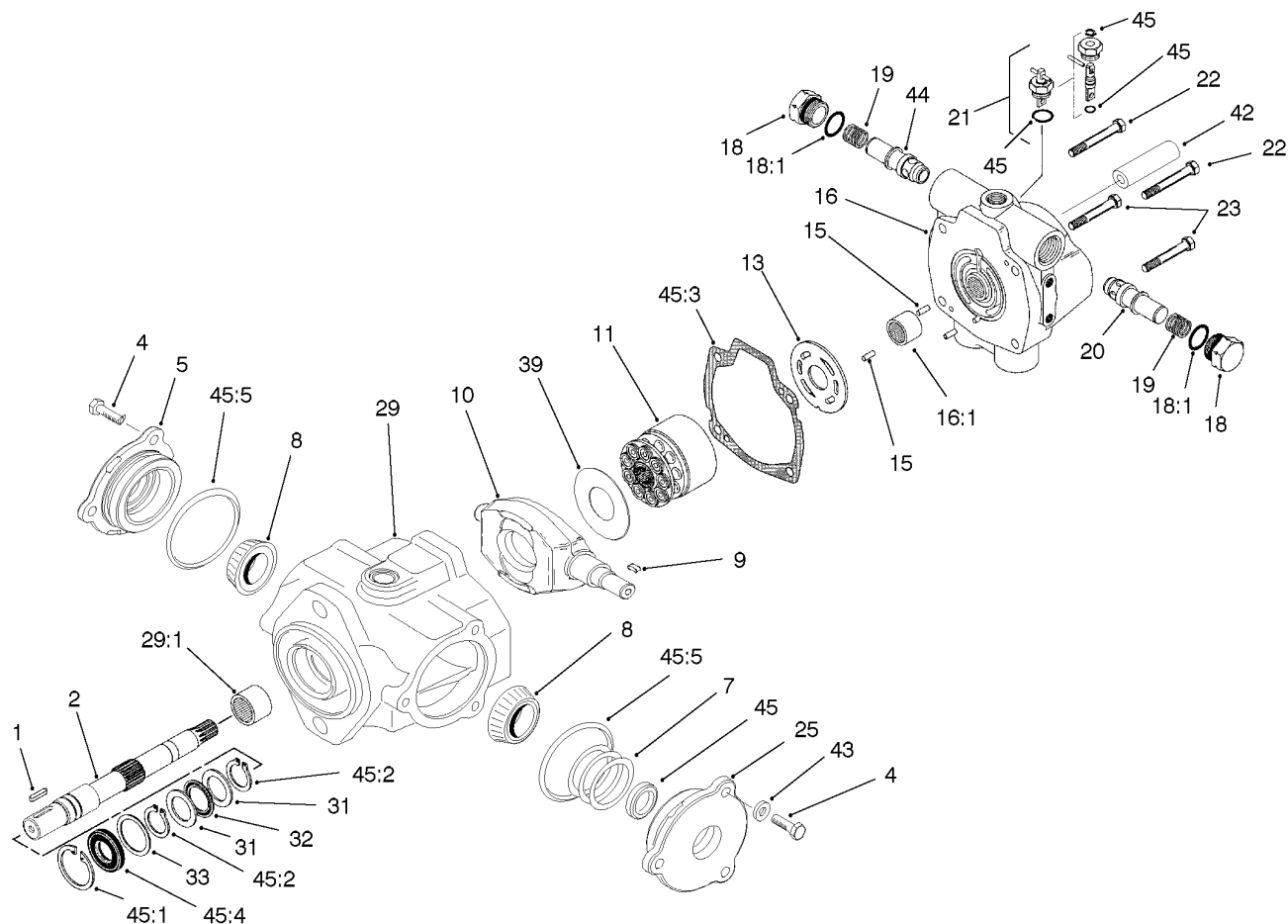
Ref	Part No.	Qty.	Description
1	104-0428	1	Pump-Piston
2	340-8	1	Adapter
2:1	237-65	1	O-Ring
2:2	237-81	1	O-Ring
3	323-8	2	Screw-HH
4	3296-39	2	Nut-Lock, NI
5	340-17	1	Adapter
5:1	237-65	1	O-Ring
5:2	237-80	1	O-Ring
6	340-139	1	Fitting-HYD,
6:1	237-81	1	O-Ring
6:2	237-65	1	O-Ring
7	340-18	1	Fitting-HYD, 90 DEG
7:1	237-79	1	O-Ring
7:2	237-22	1	O-Ring
8	340-77	1	Fitting-90 DEG
8:1	237-22	1	O-Ring
8:2	237-42	1	O-Ring
9	353-987	1	Fitting-HYD. Barb, 90 DEG
9:1	237-81	1	O-Ring
10	80-6990	3	Washer-Hardened
11	95-8834	1	Hose ASM
12	104-0489	1	Hose
13	32128-54	1	Nut-Flange

Ref	Part No.	Qty.	Description
14	99-3624	1	Shaft-Pivot, Idler
15	302-5	1	Fitting-Grease
16	32128-21	1	Nut-HF
17	32151-36	1	Ring-Retaining
18	323-10	1	Screw-HH
19	74-1810	1	Washer
20	99-3621	1	Pulley-Idler
21	99-3622	1	Spacer-Idler
22	100-4844	1	Spring-Torsion
23	99-3623-03	1	Arm-Idler
24	2412-34	1	Clamp-Hose
25	32128-43	4	Nut-Flange
26	323-19	2	Screw-HH
27	3234-11	4	Screw-HHF
28	99-3436-03	1	Support-Pump
29	99-3440	2	Spacer
30	33114-060	4	Screw-HH
31	87-8640	3	Washer-Flat
33	95-8933-03	1	Plate-Mount, Pump
34	95-8941	4	Spacer-Mount, Pump
35	99-3620	1	Pulley-3V, Pump
36	321-13	3	Screw-HH
37	3253-3	3	Washer-Lock
38	100-4813	1	Bushing-Lock, Taper



Hydrostat Assembly (continued)

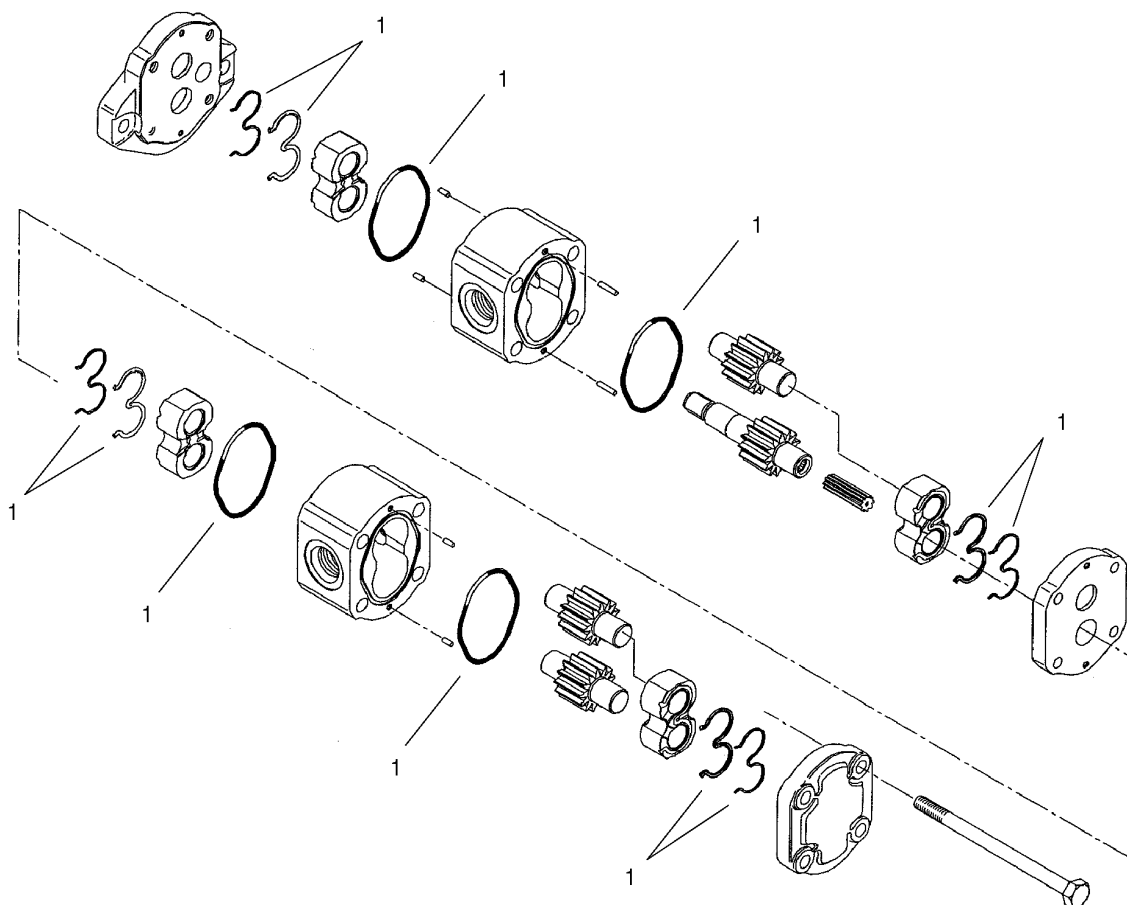
Ref	Part No.	Qty.	Description
39	99-3619	1	Belt-3V
40	70-2041	1	Trim
41	353-949	1	O-Ring
42	100-1646	1	Hydraulic Pump ASM
43	323-7	2	Screw-HH
44	3256-24	2	Washer-Flat
45	99-3631	2	Bushing-Flange
46	99-3625	1	Spacer-Arm, Idler
47	100-4852	2	Washer-Hardened



Piston Pump Assembly No. 104-0428

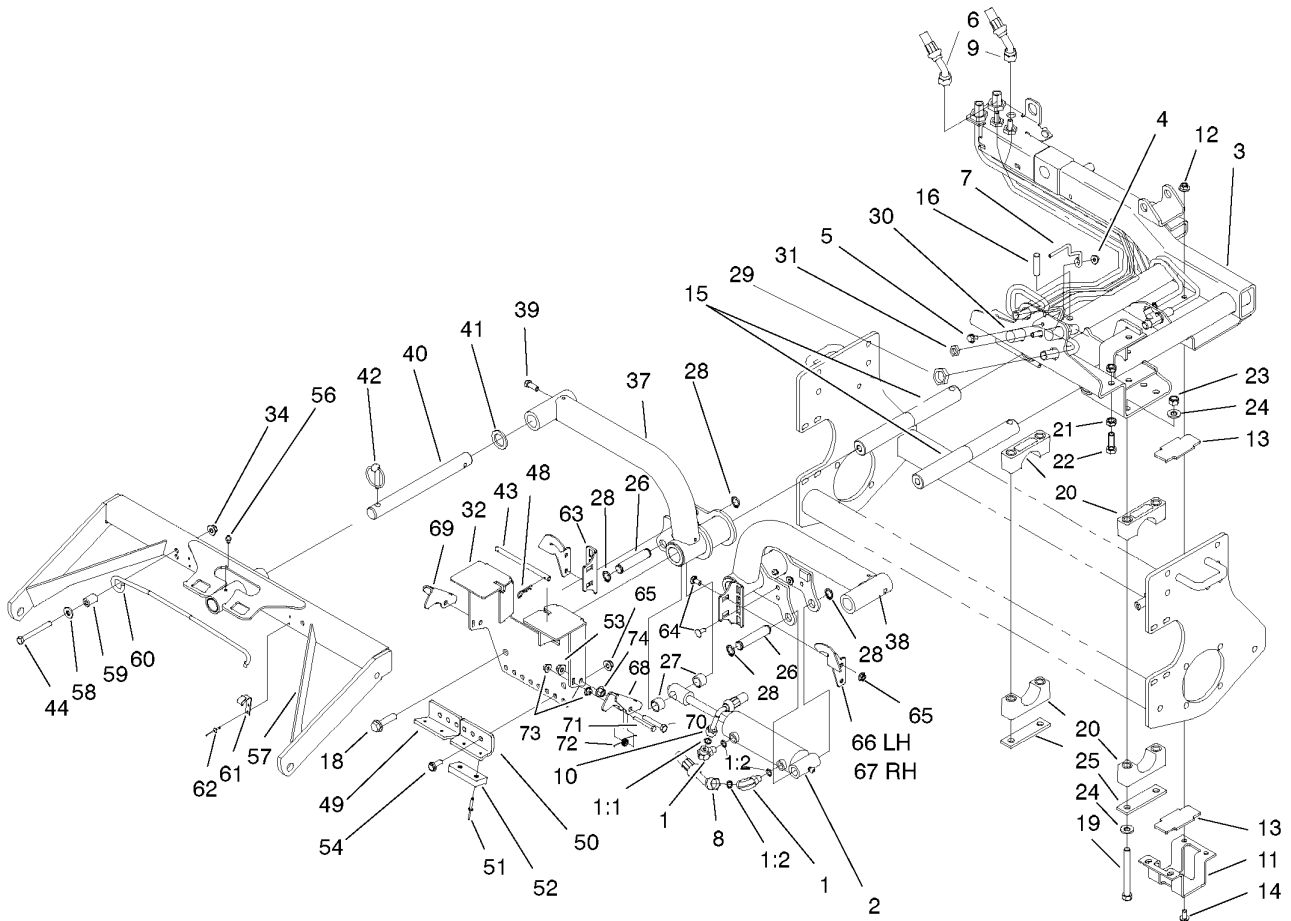
Ref	Part No.	Qty.	Description
1	94-3645	1	Key
2	94-6359	1	Shaft-Drive
4	98-4640	6	Screw-Cap
5	98-4633	1	Cover Plate ASM
7	100-3182	1	Kit-Shim
8	98-4639	2	Bearing-Cone
9	94-3646	1	Key
10	99-3520	1	Plate-Cam
11	76-6070	1	Rotating Kit ASM
13	104-0429	1	Plate-Cam
15	76-6150	2	Pin-Dowel
16	100-3177	1	Back Plate ASM
16:1	94-6368	1	Bearing
18	70-1240	2	Plug ASM
18:1	60-5980	1	O-Ring
19	76-6200	2	Spring
20	94-3644	1	Seat
21	100-3181	1	Dump Valve ASM
22	76-6170	2	Capscrew
23	76-6160	2	Capscrew
25	98-4645	1	Cover Plate ASM
29	100-3176	1	Housing ASM
29:1	94-6363	1	Bearing
31	252-71	2	Bearing-Thrust

Ref	Part No.	Qty.	Description
32	252-66	1	Bearing-Thrust
33	33-3720	1	Washer
39	98-4635	1	Insert-Plate, Cam
42	74-9040	1	Coupler
43	95-6055	6	Washer
44	99-3521	1	Relief Valve ASM
45	98-4636	1	Kit-Repair, Seal
45:1	32151-13	1	Ring-Snap, Internal
45:2	32151-29	1	Ring-Snap, External
45:3	33-4930	1	Gasket-Housing
45:4	42-2720	1	Seal-External
45:5	100-3179	1	O-Ring



Hydraulic Pump Assembly No. 100-1646

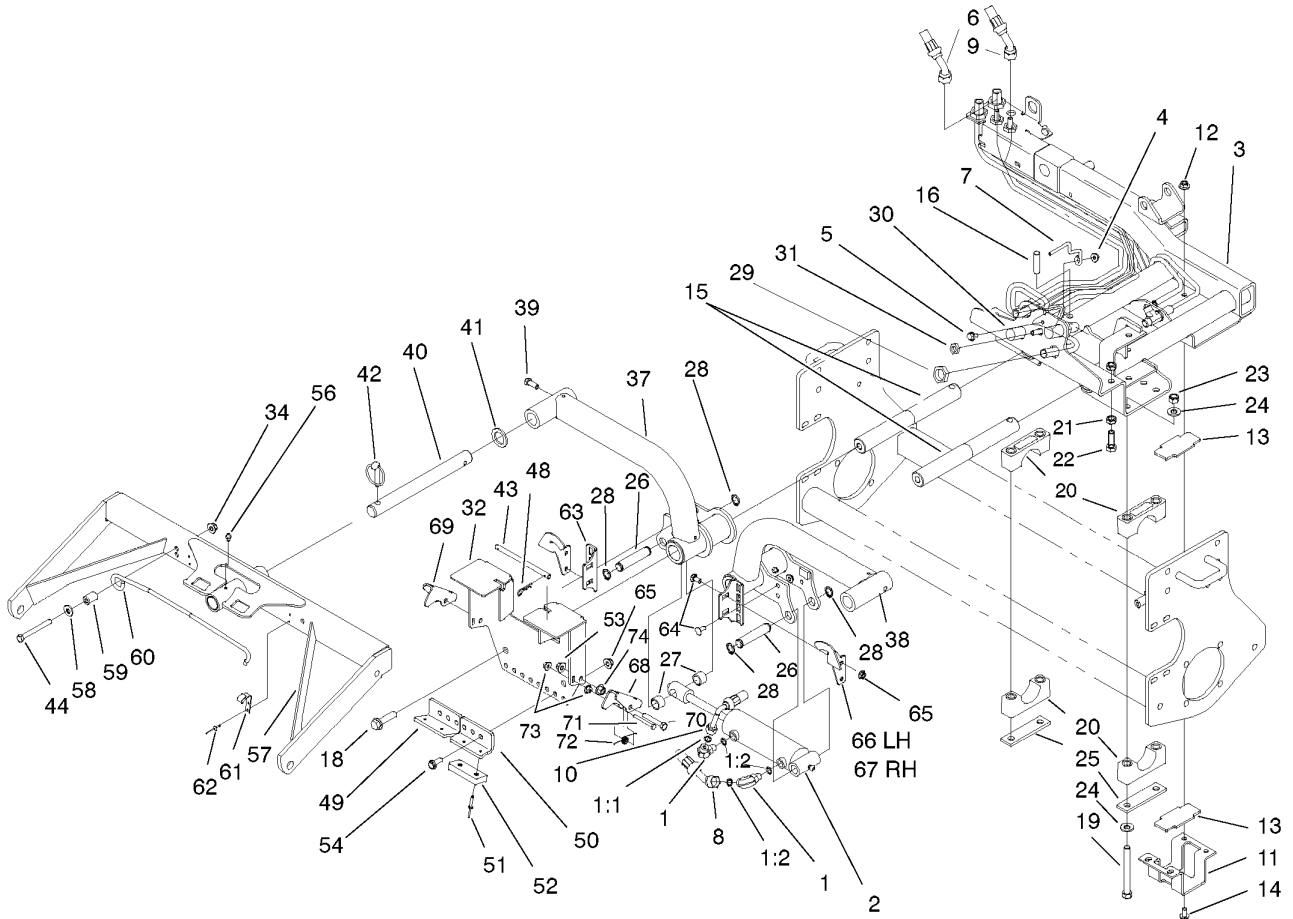
Ref	Part No.	Qty.	Description
1	104-4226	1	Kit-Seal



Carrier Assembly

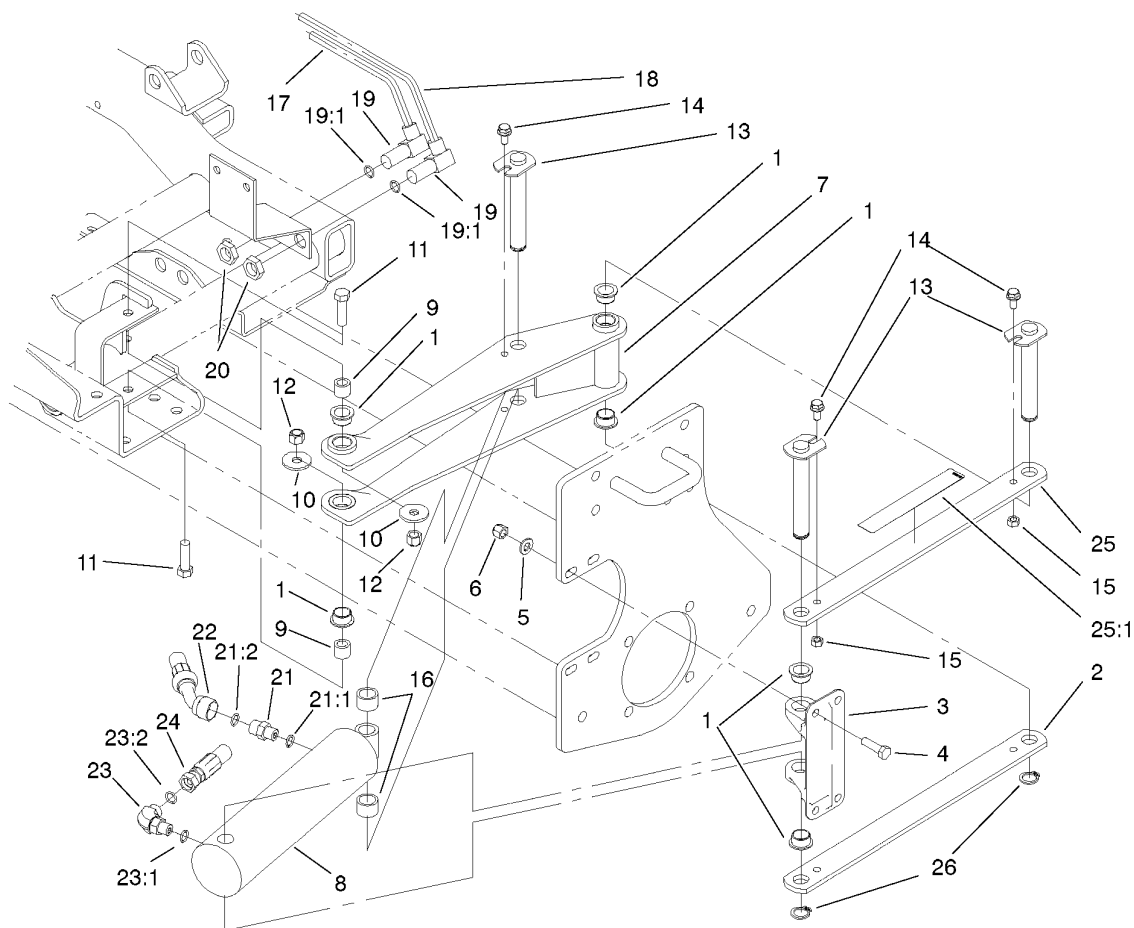
Ref	Part No.	Qty.	Description
1	340-77	2	Fitting-90 DEG
1:1	237-22	1	O-Ring
1:2	237-42	1	O-Ring
2	95-8978	1	Cylinder-Hydraulic
3	100-4939-03	1	Sidewinder Carrier ASM
4	32128-33	1	Nut-HF
5	3234-4	1	Screw-HHF
6	95-8822	1	Hose ASM
7	99-3433	1	Wire-Center
8	104-0405	1	Hose ASM
9	95-8821	1	Hose ASM
10	104-0406	1	Hose ASM
11	104-0416-03	1	Bracket-Slide
12	32128-43	4	Nut-Flange
13	104-0417	2	Slide-Plastic
14	3234-1	4	Screw-HHF
15	95-8531	2	Shaft-Pivot, Liftarm
16	32121-122	2	Pin-Roll
18	3234-27	2	Screw-Flange
19	325-38	8	Screw-HH
20	95-8609	8	Cap-Bearing
21	3218-5	4	Nut-Jam
22	325-6	2	Screw-HH
23	3296-23	8	Nut-Lock, NI

Ref	Part No.	Qty.	Description
24	87-7270	16	Washer-Thrust
25	99-3373	4	Bar-Support, Slide
26	95-8575	2	Pin
27	75-9590	2	Spacer-Cylinder
28	32120-93	4	Ring-Retaining
29	340-74	4	Locknut-Bulkhead
30	99-3640	1	Tube ASM
31	340-78	1	Locknut-Bulkhead
32	104-4820-03	1	Bracket-Carrier Stop
34	32128-43	2	Nut-Flange
37	104-0481	1	RH Liftarm ASM
38	104-0482	1	LH Liftarm ASM
39	323-6	2	Screw-HH
40	95-8979	2	Shaft
41	3-6781	2	Washer-Thrust
42	283-71	2	Pin-Lynch
43	104-0472	1	Rod
44	323-15	2	Screw-HH
48	3290-467	2	Pin-Hair
49	104-4639-03	1	Stop-Deck, LH
50	104-4640-03	1	Stop-Deck, RH
51	3269-11	4	Rivet
52	86-5350	2	Bumper-Rubber
53	32128-43	4	Nut-Flange



Carrier Assembly (continued)

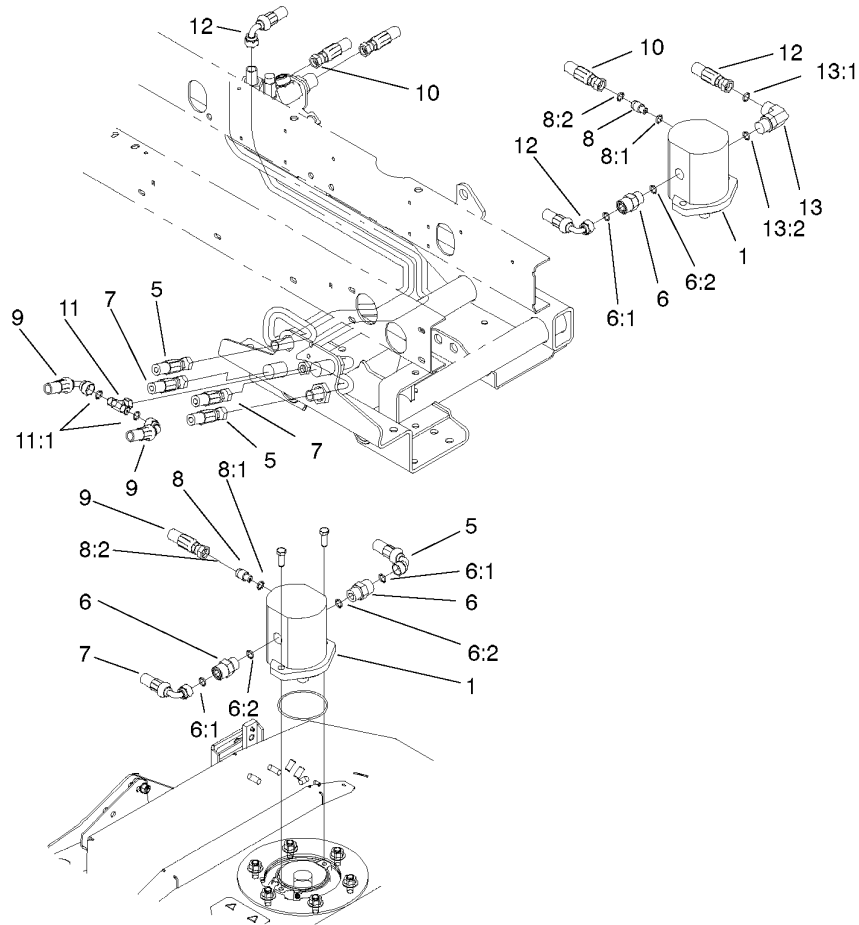
Ref	Part No.	Qty.	Description				
54	3234-11	4	Screw-HHF				
56	302-5	2	Fitting-Grease				
57	104-4230	2	Front Carrier Frame				
58	3256-4	2	Washer-Flat				
59	104-4613	2	Tube-Latch				
60	104-4612	2	Rod-Latch				
61	104-4237	4	Clip-Rod				
62	3290-271	4	Rivet-Pop				
63	104-4828-03	2	Bracket-Actuator				
64	3230-23	8	Screw-CARR				
65	32128-44	8	Nut				
66	104-4826-03	1	Actuator, RH				
67	104-4827-03	1	Actuator, LH				
68	104-4819-03	1	Bracket-Pivot, LH				
69	104-4825-03	1	Bracket-Pivot, RH				
70	323-11	2	Screw-HH				
71	321-18	2	Screw-HH				
72	104-4821	2	Spring-Torsion				
73	32128-33	4	Nut-HF				
74	32128-43	4	Nut				



Scissor Assembly

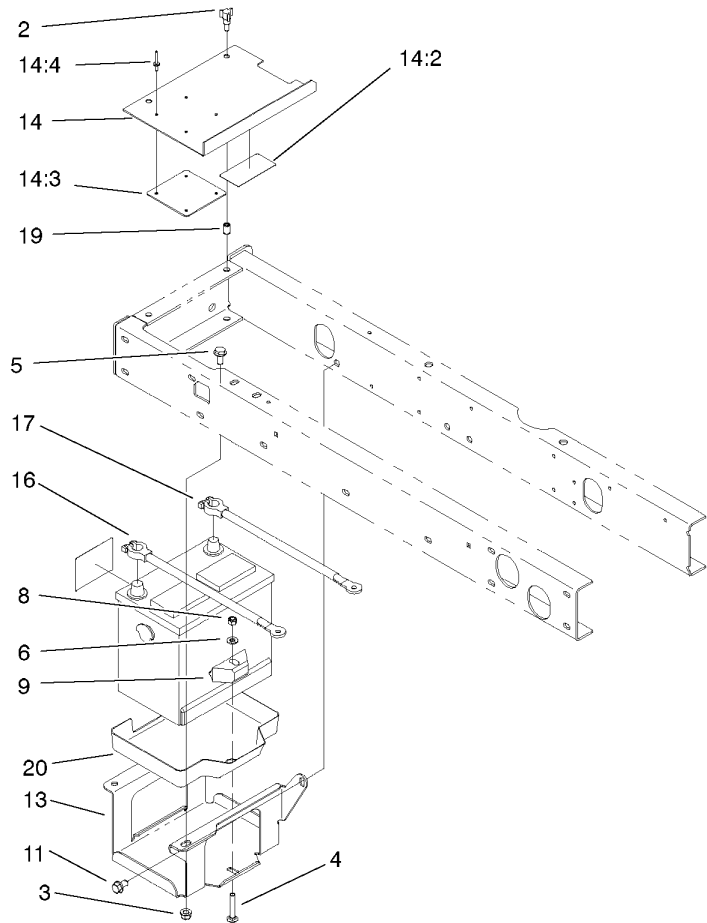
Ref	Part No.	Qty.	Description
1	95-8526	6	Bushing-Plastic
2	95-8527-03	1	Link-Scissor
3	95-8883	1	Mount-Scissor
4	323-7	4	Screw-HH
5	3256-24	4	Washer-Flat
6	3296-39	4	Nut-Lock, NI
7	95-8521-03	1	Frame-Scissor
8	95-8512	1	Cylinder-Hydraulic
9	95-8603	2	Spacer
10	87-5330	2	Washer
11	324-6	2	Screw-HH
12	3296-48	2	Nut-Lock NI
13	95-8529	3	Pin
14	3234-14	3	Screw-HHF
15	32152-1	3	Nut-Lock, NI
16	46-6350	2	Spacer
17	95-8790	1	Tube ASM
18	95-8791	1	Tube ASM
19	340-154	2	Union-Bulkhead
19:1	237-22	2	O-Ring
20	340-70	2	Locknut-Bulkhead
21	85-9720	1	Fitting-Orificed
21:1	237-78	1	O-Ring
21:2	237-21	1	O-Ring

Ref	Part No.	Qty.	Description
22	95-8838	1	Hose ASM
23	340-132	1	Fitting-HYD, 90
23:1	237-78	1	O-Ring
23:2	237-21	1	O-Ring
24	95-8839	1	Hose ASM
25	99-3505	1	Link ASM-Scissors
25:1	94-3353	1	Decal-Point, Pinch
26	32120-93	2	Ring-Retaining



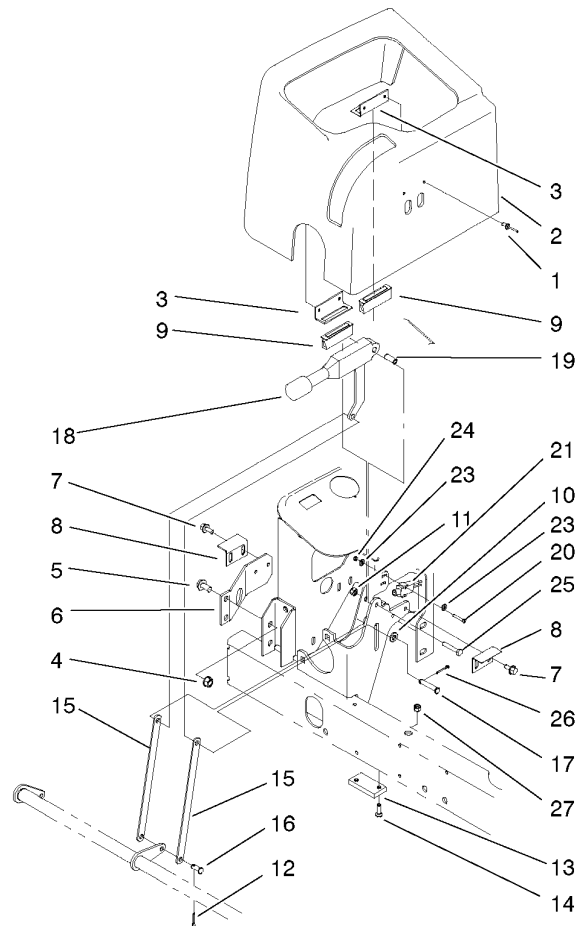
Reel Motor Assembly

Ref	Part No.	Qty.	Description				
1	99-6104	3	Motor-Hydraulic				
③*1:2	99-6105	1	Kit-Seal				
③*1:3	98-5185	1	Bit-Flange/Valve, Back				
③*1:4	98-5191	1	Kit-Valve, Relief				
5	100-4882	2	Hose ASM				
6	340-7	5	Adapter				
6:1	237-65	1	O-Ring				
6:2	237-80	1	O-Ring				
7	100-4883	2	Hose ASM				
8	340-92	3	Fitting				
8:1	237-78	1	O-Ring				
8:2	237-21	1	O-Ring				
9	104-1080	2	Hose ASM				
10	100-4876	1	Hose ASM				
11	99-3477	1	Fitting-Tee				
11:1	237-42	2	O-Ring				
12	100-4880	2	Hose ASM				
13	340-17	1	Adapter				
13:1	237-65	1	O-Ring				
13:2	237-80	1	O-Ring				



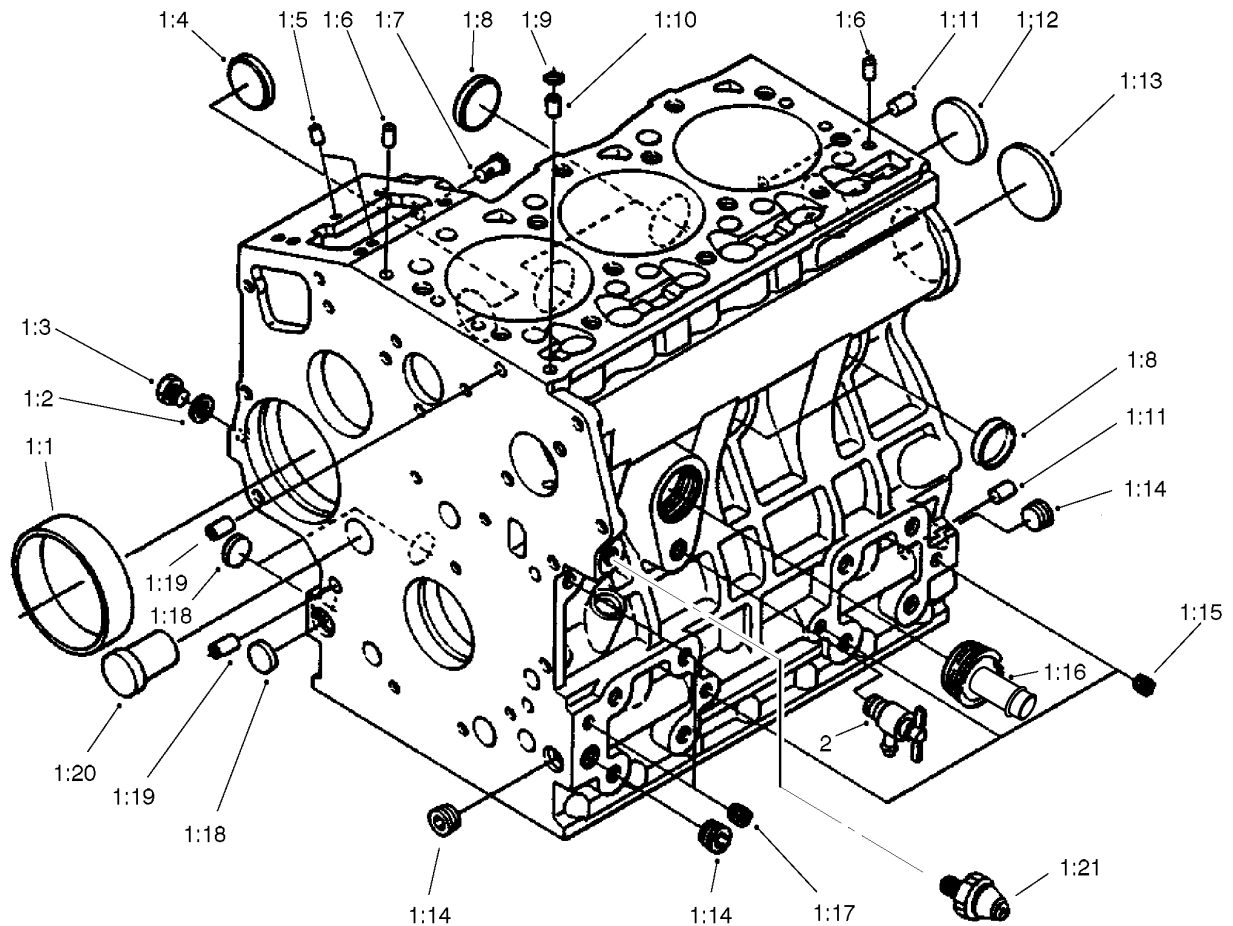
Battery Assembly

Ref	Part No.	Qty.	Description				
2	233-70	2	Knob-3 Star				
3	32128-43	3	Nut-Flange				
4	3230-6	1	Screw-CARR				
5	3234-1	3	Screw-HHF				
6	3256-23	1	Washer-Flat				
8	3296-29	1	Nut-Lock				
9	66-2490	1	Retainer-Battery				
11	32144-15	1	Screw				
13	95-8796-03	1	Support-Battery				
14	99-3602	1	Cover-Battery				
14:2	93-7276	1	Decal-Danger				
14:3	87-7620	1	Shield-Terminal, Battery				
14:4	3269-27	4	Rivet-Snap				
16	95-8853	1	Cable-Battery, Positive				
17	95-8854	1	Cable-Battery, Negative				
19	32148-6	2	Nut-Insert				
20	99-3513	1	Tray-Battery				



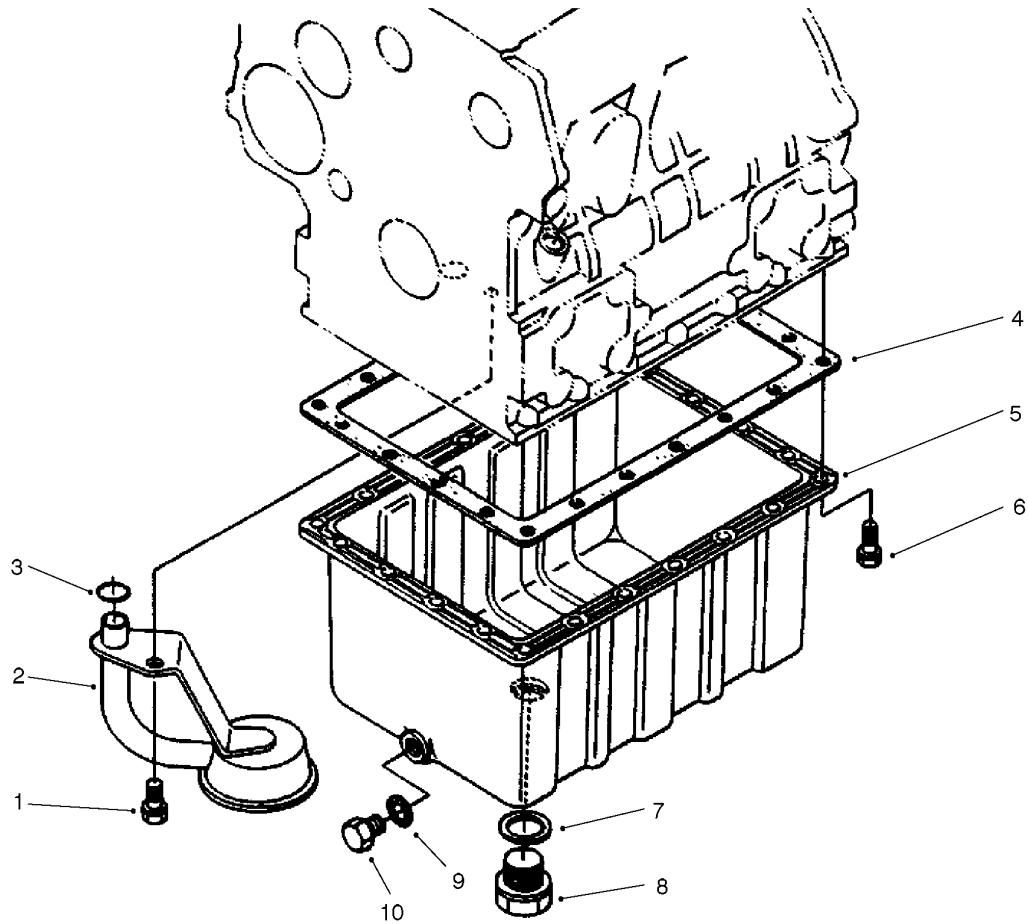
Parking Brake Assembly

Ref	Part No.	Qty.	Description	Ref	Part No.	Qty.	Description
1	3269-5	4	Rivet	26	3272-6	1	Pin-Cotter
2	95-8707	1	Cover-Dash	27	32128-32	2	Nut-HHF
3	95-8763	2	Bracket-Hold Down, Cover				
4	32128-43	2	Nut-Flange				
5	3234-1	2	Screw-HHF				
6	95-8764-03	1	Support-Magnet				
7	32144-10	4	Screw-HWH				
8	95-8765	2	Bracket-Strike, Magnet				
9	58-4250	2	Catch-Magnetic				
10	3256-23	1	Washer-Flat				
11	3296-42	1	Nut-Lock, NI				
12	3272-10	1	Pin-Cotter				
13	95-8684	1	Pad-Bumper				
14	3289-4	2	Screw-FH				
15	104-4628-03	2	Link-Brake, Parking				
16	283-62	1	Pin-Clevis				
17	94-3829	1	Pin-Clevis				
18	104-4817	1	Lever-Brake				
19	87-4710	1	Spacer-Brake, Parking				
20	32105-9	2	Screw				
21	95-8900	1	Switch				
23	3256-21	4	Washer-Flat				
24	3296-9	2	Nut-Lock NI				
25	321-9	1	Screw-HH				



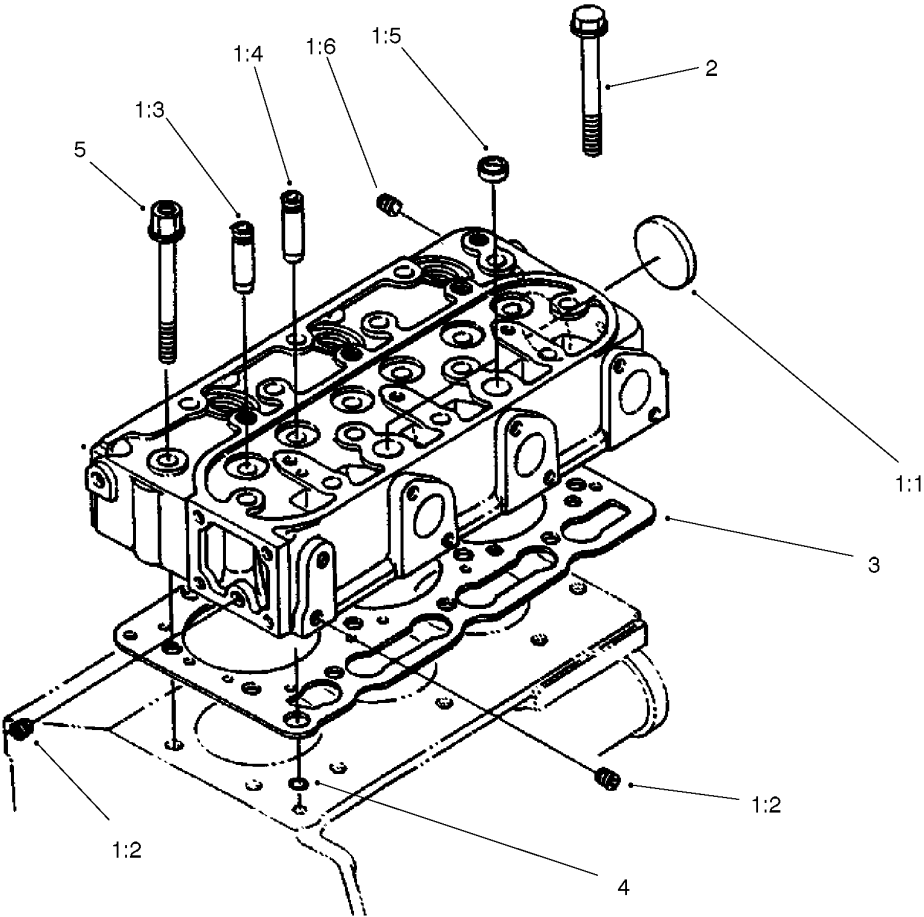
Crankcase Assembly

Ref	Part No.	Qty.	Description				
1	99-8300	1	Crankcase ASM				
1:1	98-9656	1	Bush-Governor, Gear				
1:2	98-7428	1	Gasket				
1:3	98-7507	1	Plug				
1:4	98-9599	1	Plug				
1:5	98-9375	2	Pin-Straight				
1:6	98-9376	2	Pin-Straight				
1:7	98-9630	1	Pin-Spring, Start				
1:8	98-9398	4	Cap-Sealing				
1:9	98-7509	1	O-Ring				
1:10	98-9539	1	Pin-Pipe				
1:11	98-9377	2	Pin-Straight				
1:12	98-7539	1	Cap-Sealing				
1:13	98-9668	1	Plug				
1:14	98-9597	3	Plug				
1:15	98-7540	3	Cap-Sealing				
1:16	99-8347	1	Joint-Pipe, Drain				
1:17	98-7487	2	Plug				
1:18	98-9379	3	Plug				
1:19	98-9387	2	Pin-Pipe				
1:20	98-9675	1	Plug				
1:21	98-9416	1	Switch-Oil				
2	98-9436	1	Drain Cock ASM				



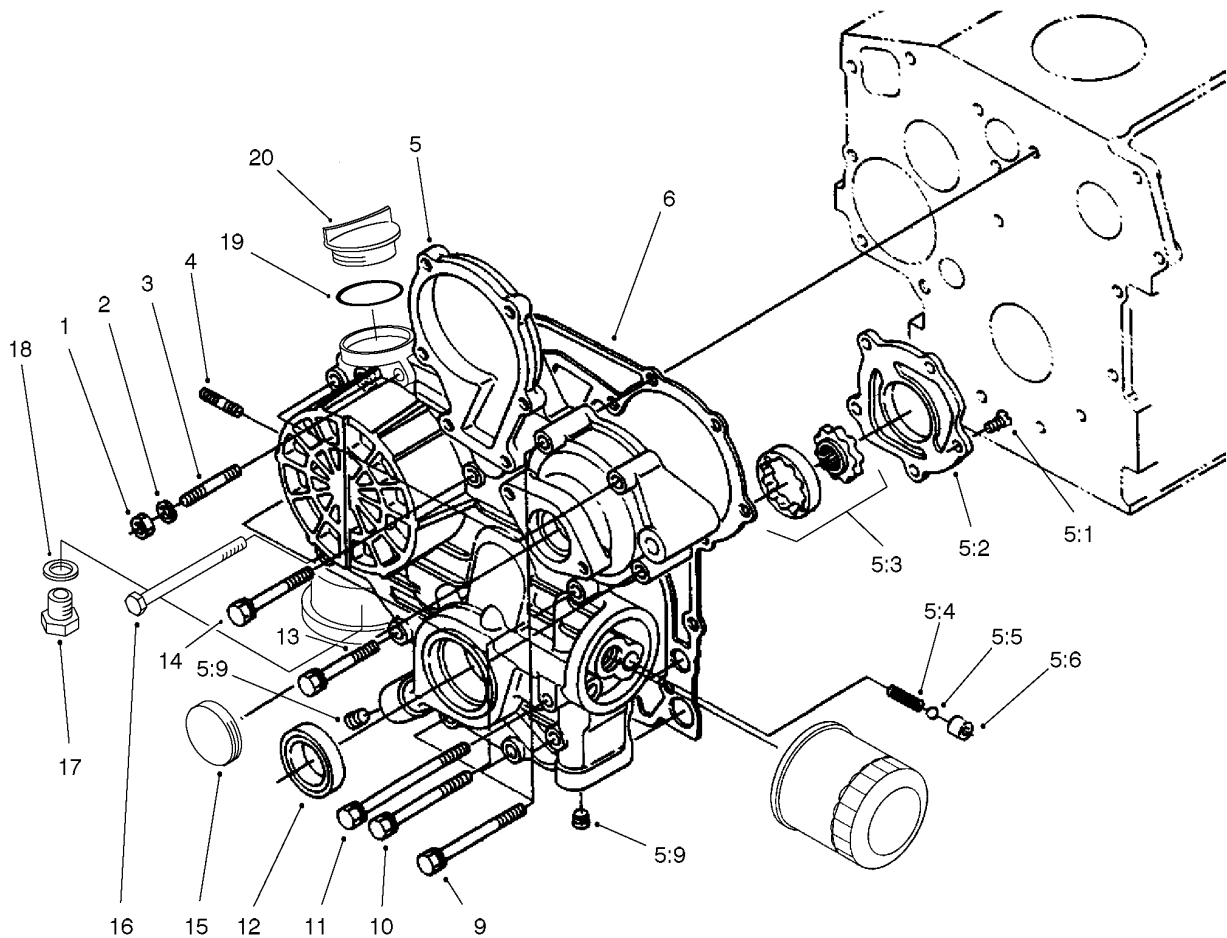
Oil Pan Assembly

Ref	Part No.	Qty.	Description				
1	98-9358	1	Bolt				
2	98-9538	1	Filter-Oil				
3	98-7527	1	O-Ring				
4	98-9646	1	Gasket-Pan, Oil				
5	98-9685	1	Drain-Oil				
6	98-9350	22	Bolt				
7	98-9399	1	Gasket				
8	98-7523	1	Plug-Drain				
9	98-7524	1	Gasket				
10	98-9386	1	Plug				



Cylinder Head Assembly

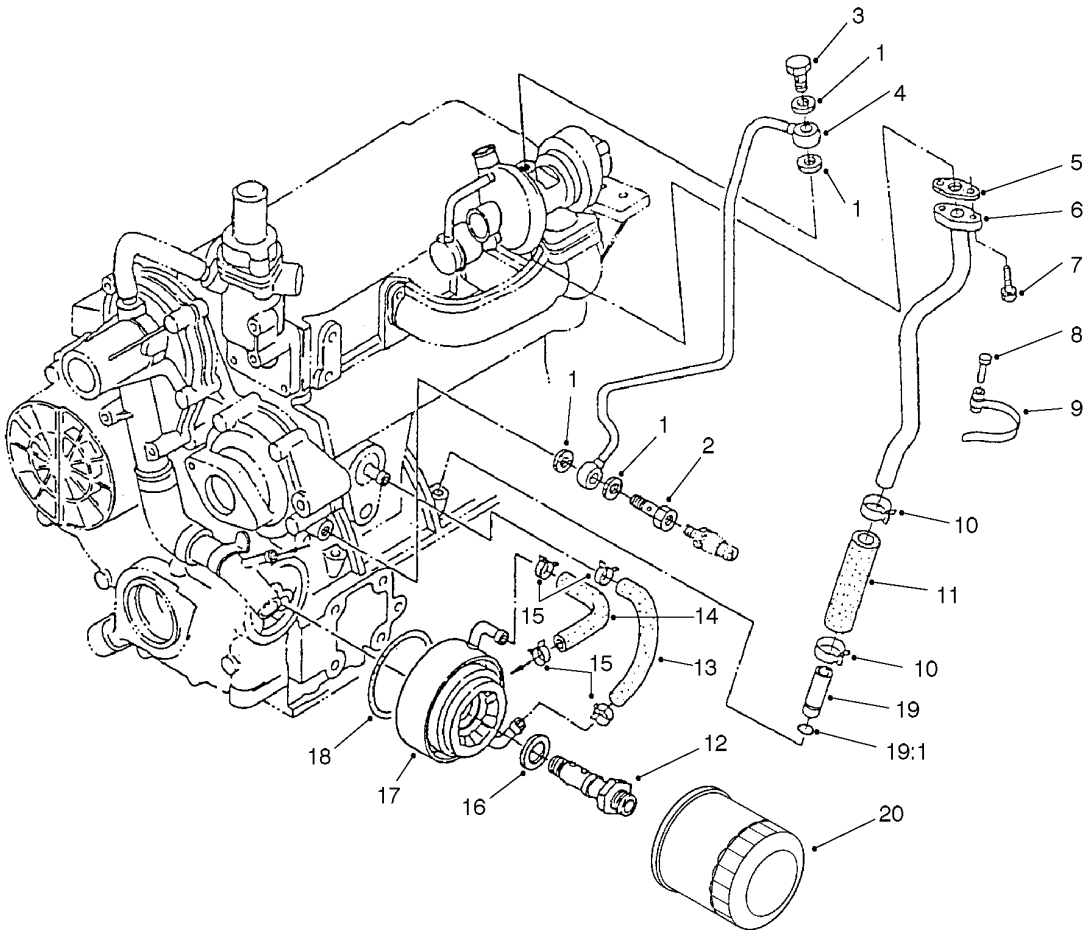
Ref	Part No.	Qty.	Description				
1	99-8344	1	Cylinder Head ASM				
1:1	98-9395	1	Cap-Sealing				
1:2	98-7540	2	Cap-Sealing				
1:3	98-9499	3	Guide-Valve, Inlet				
1:4	98-9500	3	Guide-Valve, Exhaust				
1:5	98-9389	2	Cap-Sealing				
1:6	98-9444	1	Plug				
2	98-9479	12	Bolt-Head, Cylinder				
3	98-9613	1	Gasket-Head,Cylinder				
4	98-7509	1	O-Ring				
5	98-9647	2	Bolt-Head, Cylinder				



Grease and Oil Filter Assembly

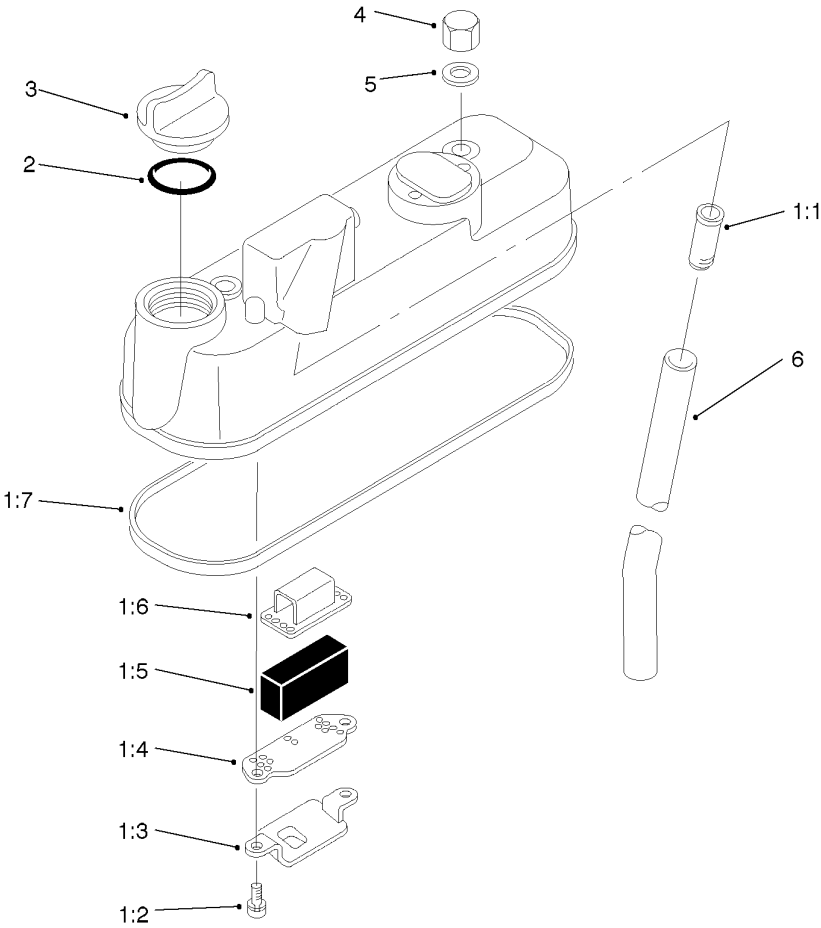
Ref	Part No.	Qty.	Description
1	98-7572	1	Nut
2	98-9367	1	Washer-Spring
3	98-9363	1	Stud
4	98-9362	2	Stud
5	99-3462	1	Gear Case ASM
5:1	98-9592	5	Screw
5:2	98-9541	1	Cover-Pump, Oil
5:3	98-9540	1	Oil Pump Rotor ASM
5:4	98-9544	1	Spring
5:5	98-9380	1	Ball
5:6	98-9543	1	Seat-Valve
5:9	98-9598	2	Plug
6	98-9633	1	Gasket-Case, Gear
7	98-9372	2	O-Ring
8	98-7547	2	O-Ring
9	98-9356	2	Bolt
10	98-9355	6	Bolt
11	99-3510	2	Bolt
12	98-9482	1	Seal-Oil
13	98-9437	1	Bolt
14	98-7496	3	Bolt
15	99-3515	1	Plug-Gearcase
16	99-3511	1	Bolt
17	99-3450	2	Plug

Ref	Part No.	Qty.	Description
18	99-3451	1	Plug-Packing
19	98-7430	1	O-Ring
20	98-9449	1	Plug-Filler, Oil



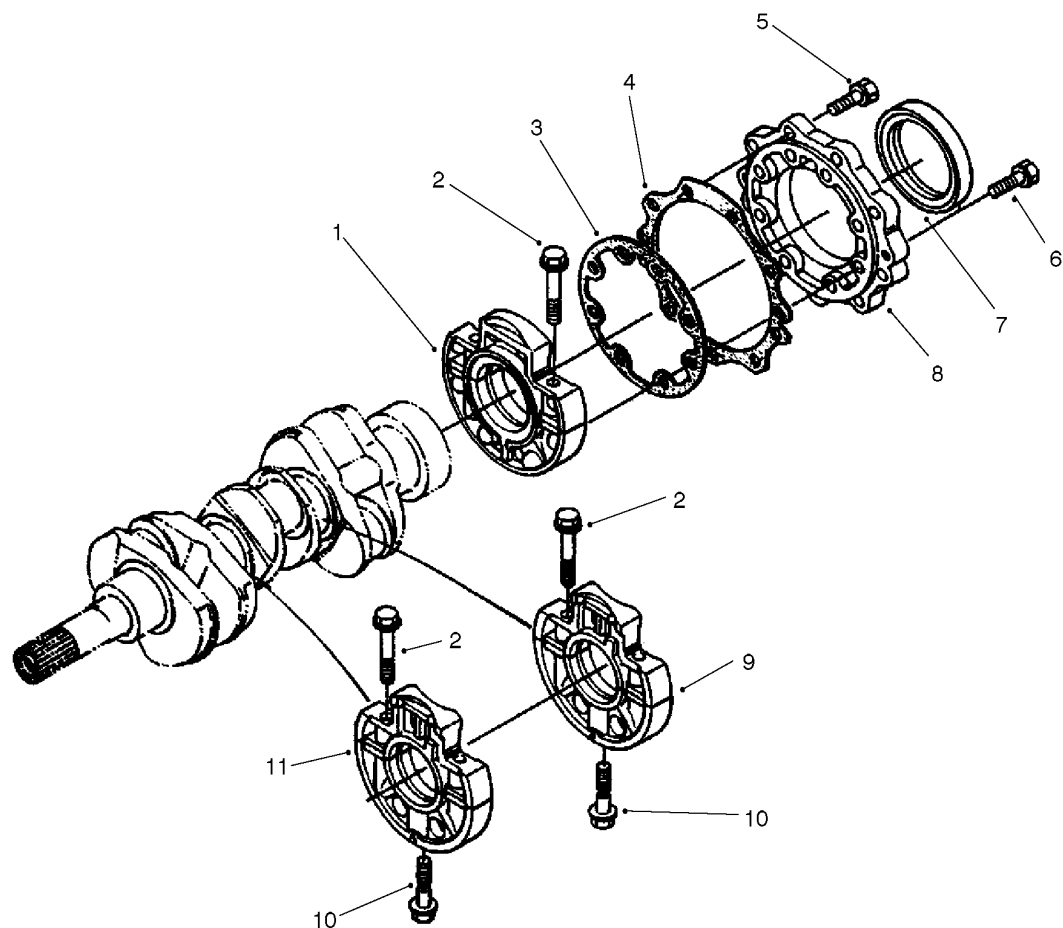
Filter, Oil Cooler, and Pipe Assembly

Ref	Part No.	Qty.	Description				
1	99-8346	4	Gasket				
2	98-9417	1	Bolt-Joint, Eye				
3	98-9418	1	Bolt-Joint, Eye				
4	98-9419	1	Oil Pipe ASM				
5	98-9435	1	Gasket-Oil Return,Turbo				
6	98-9461	1	Pipe Line ASM				
7	98-7568	2	Bolt				
8	98-9591	1	Pin-Band				
9	98-9601	1	Clamp-Pipe				
10	98-9714	2	Clamp-Hose				
11	98-9721	1	Pipe-Oil				
12	98-9723	1	Holder ASM				
13	98-9724	1	Pipe-Cooler, Oil				
14	98-9578	1	Pipe-Return, Water				
15	98-9579	4	Band-Pipe				
16	98-9727	1	Collar				
17	98-9728	1	Oil Cooler ASM				
18	98-9729	1	O-Ring				
19	99-8383	1	Oil Pipe ASM				
19:1	98-9722	1	O-Ring				
20	99-8384	1	Filter-Oil				



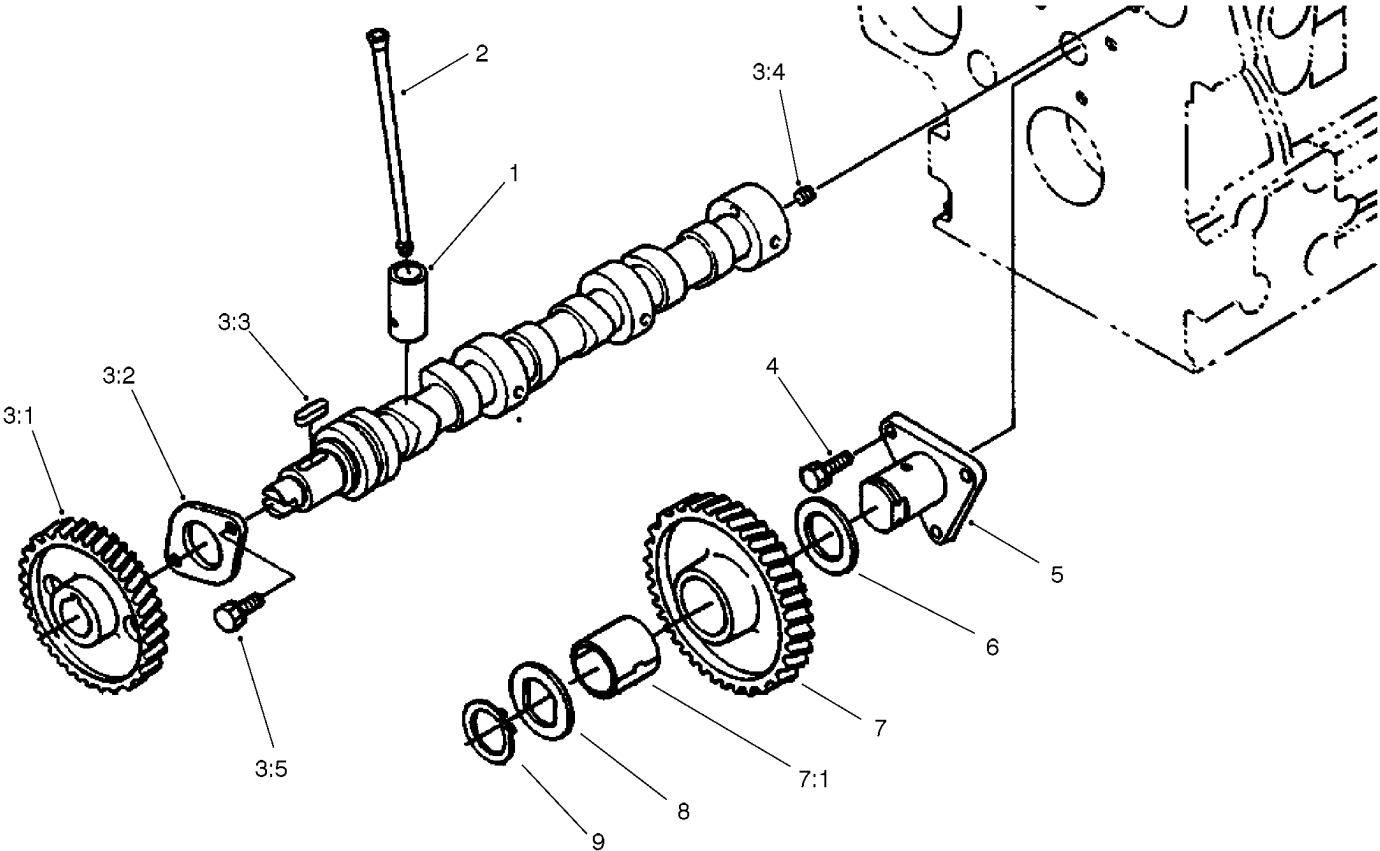
Head Cover Assembly

Ref	Part No.	Qty.	Description				
1	98-9614	1	Cylinder Head Coverasm				
1:1	98-9492	1	Joint-Pipe, Breather				
1:2	98-9364	2	Screw W/Washer				
1:3	98-9490	1	Shield-Oil, Breather				
1:4	98-9488	1	Plate-Element,Breather				
1:5	98-9493	1	Element-Breather				
1:6	98-9489	1	Plate-Element,Breather				
1:7	98-9615	1	Gasket-Cover, Head				
2	98-7430	1	O-Ring				
3	98-9449	1	Plug-Filler, Oil				
4	98-9455	3	Nut-Cap				
5	98-9454	3	Gasket				
6	98-9491	1	Pipe-Breather				



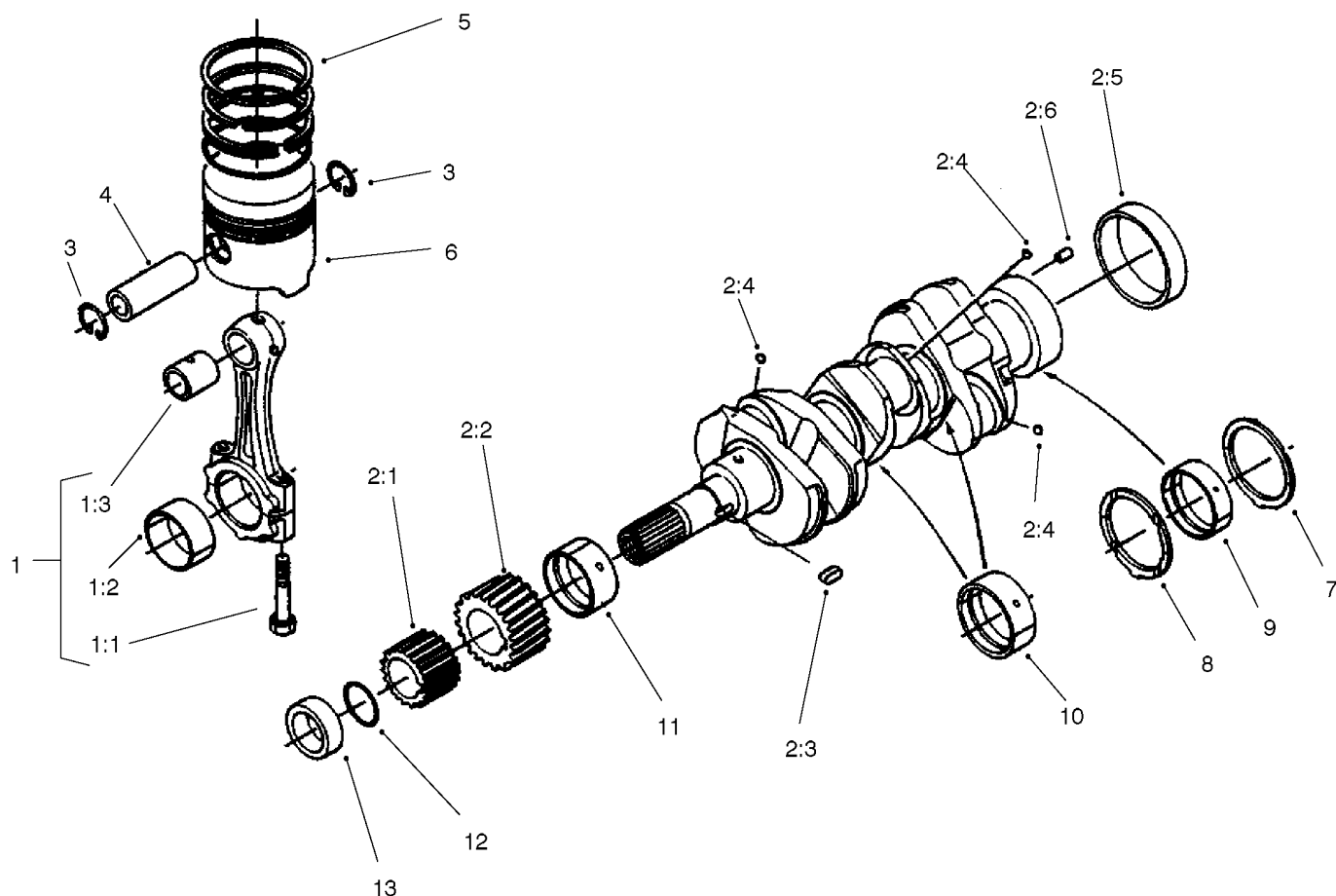
Main Bearing Case Assembly

Ref	Part No.	Qty.	Description
1	98-9480	1	Main Bearing Caseasm
2	98-9484	6	Bolt-Case, Bearing
3	98-9634	1	Gasket-Case, Bearing
4	98-9635	1	Gasket-Cover,Bearing Case
5	98-7568	9	Bolt
6	98-9352	8	Bolt
7	98-9483	1	Seal-Oil
8	98-9487	1	Cover-Case, Bearing
9	99-8360	1	Case-Bearing, Main
10	98-9485	2	Bolt-Case, Bearing
11	99-8361	1	Case-Bearing, Main



Camshaft Assembly

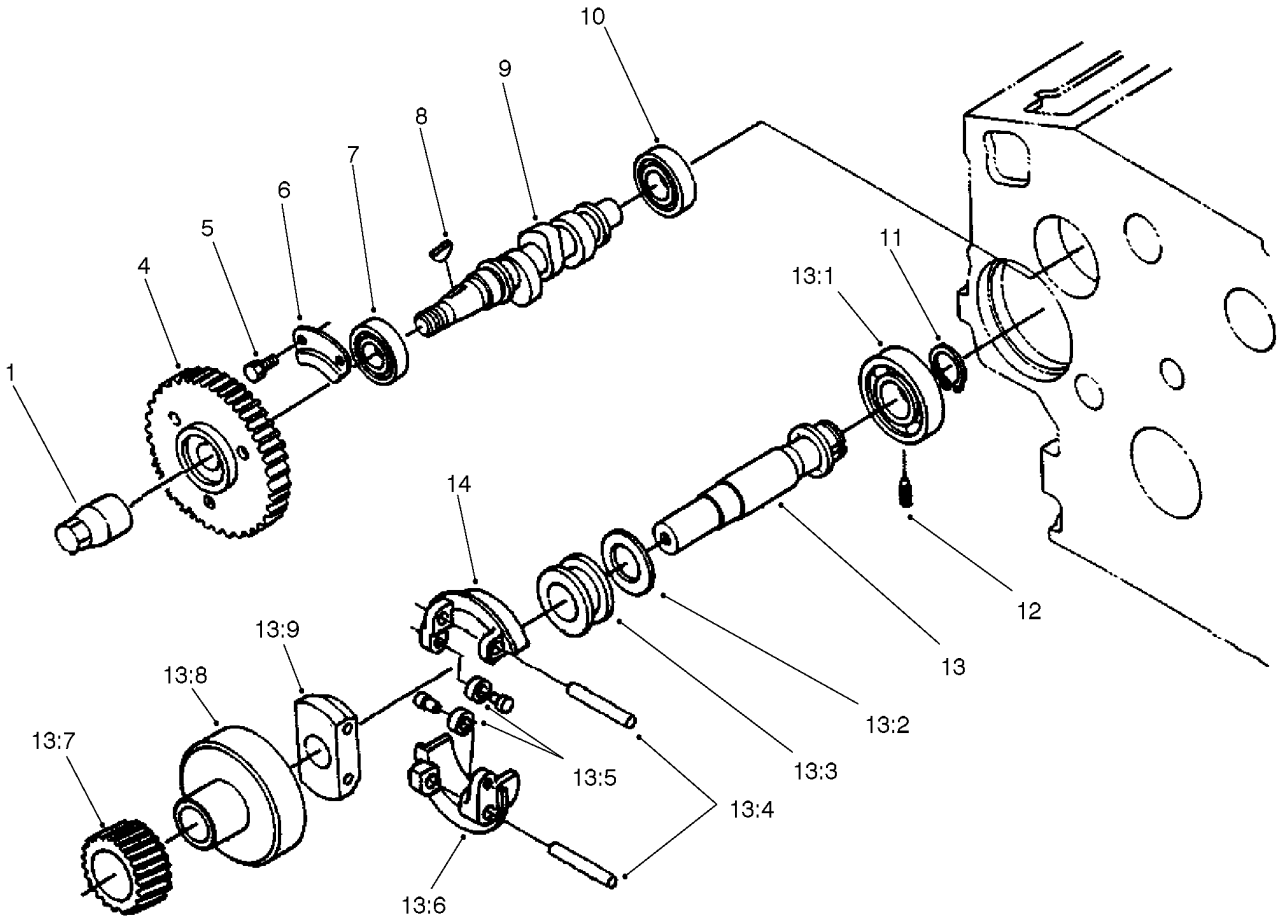
Ref	Part No.	Qty.	Description				
1	98-9616	6	Tappet				
2	98-9509	6	Rod-Push				
3	99-8362	1	Camshaft ASM				
3:1	98-9512	1	Gear-Cam				
3:2	98-9510	1	Stopper-Camshaft				
3:3	98-9378	1	Key-Feather				
3:4	98-7449	1	Screw-Set				
3:5	98-9351	2	Bolt				
4	98-7692	3	Bolt				
5	98-9533	1	Shaft-Gear, Idle				
6	98-9535	1	Collar-Gear, Idle				
7	98-9649	1	Idle Gear ASM				
7:1	98-9650	1	Bushing-Gear, Idle				
8	98-9536	1	Collar-Gear, Idle				
9	98-9534	1	Clip-Circular, Idlegear				



Piston and Crankshaft Assembly

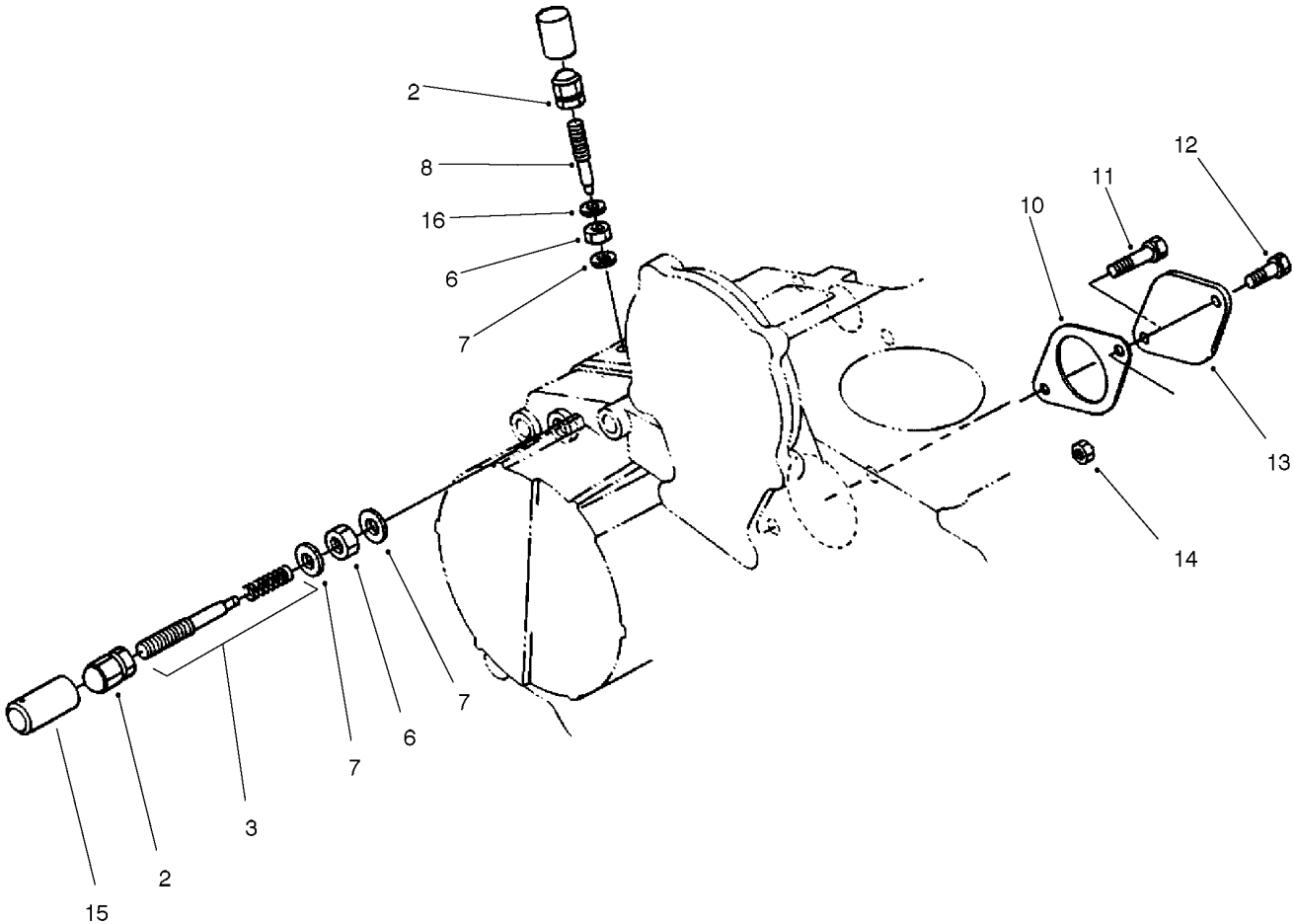
Ref	Part No.	Qty.	Description
1	98-9552	3	Connecting Rod ASM
1:1	98-9517	6	Bolt-Rod, Connecting
1:2	98-9519	3	Bearing-Rod(-0.2Mm)
1:2	98-9520	3	Bearing-Rod(-0.4Mm)
1:2	98-9553	3	Bearing-Rod (STD)
1:3	98-9515	3	Bushing-Pin, Piston
2	98-9642	1	Crankshaft ASM
2:1	98-9542	1	Gear-Drive, Oil Pump
2:2	98-9532	1	Gear-Crankshaft
2:3	98-9666	1	Key
2:4	98-7473	3	Ball
2:5	98-9522	1	Sleeve-Crankshaft
2:6	98-9375	1	Pin-Straight
3	98-9514	6	Clip-Circular, Pistonpin
4	98-9513	3	Pin-Piston
5	98-9551	3	Piston Ring ASM(STD)
5	98-9619	3	Piston Ring ASM(+0.5Mm)
6	98-9470	3	Piston (+0.5Mm)
6	98-9550	3	Piston-STD
7	98-9413	2	Bearing-Thrust (STD)
7	98-9414	2	Bearing-Thrust(+0.2Mm)
7	98-9415	2	Bearing-Thrust(+0.4Mm)
8	98-9688	2	Bearing-Thrust (STD)
8	98-9689	2	Bearing-Thrust(+0.2Mm)

Ref	Part No.	Qty.	Description
8	98-9690	2	Bearing-Thrust(+0.4Mm)
9	98-9526	1	Bearing-Main(-0.2Mm)
9	98-9527	1	Bearing-Main(-0.4Mm)
9	98-9556	1	Bearing-Main (STD)
10	98-9530	2	Bearing-Main(-0.2Mm)
10	98-9531	2	Bearing-Main(-0.4Mm)
10	98-9555	2	Bearing-Main (STD)
11	98-9528	1	Bearing-Main(-0.2Mm)
11	98-9529	1	Bearing-Main(-0.4Mm)
11	98-9554	1	Bearing-Main (STD)
12	98-9373	1	O-Ring
13	98-9521	1	Collar-Crankshaft



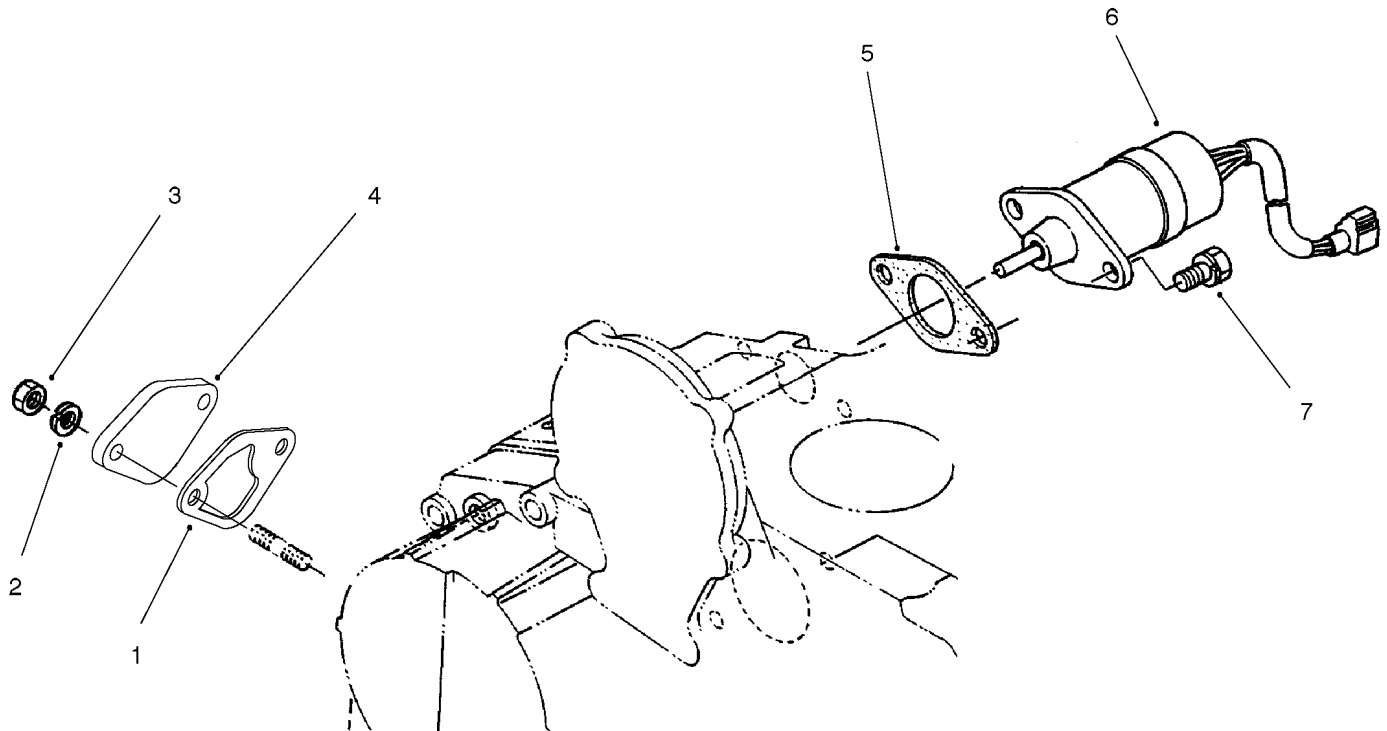
Fuel Camshaft Assembly

Ref	Part No.	Qty.	Description				
1	98-9590	1	Nut-Cap				
4	98-9669	1	Gear-Pump, Injection				
5	98-9350	2	Bolt				
6	98-9511	1	Stopper-Fuel,Camshaft				
7	98-9383	1	Bearing-Ball				
8	98-9595	1	Key-Woodruff				
9	98-9459	1	Camshaft-Fuel				
10	98-9382	1	Bearing-Ball				
11	98-9657	1	Clip-Circular,Governor Shaft				
12	98-9565	1	Screw-Set				
13	98-9644	1	Governor Shaft ASM				
13:1	98-9381	1	Bearing-Ball				
13:2	98-9564	1	Washer-Thrust				
13:3	98-9563	1	Sleeve-Governor				
13:4	98-9560	2	Shaft-Weight,Governor				
13:5	98-9692	2	Roller				
13:6	98-9559	2	Governor Weight ASM				
13:7	98-9673	1	Gear-Governor				
13:8	98-9562	1	Holder-Gear,Governor				
13:9	98-9561	1	Holder-Weight,Governor				
14	98-9559	2	Governor Weight ASM				



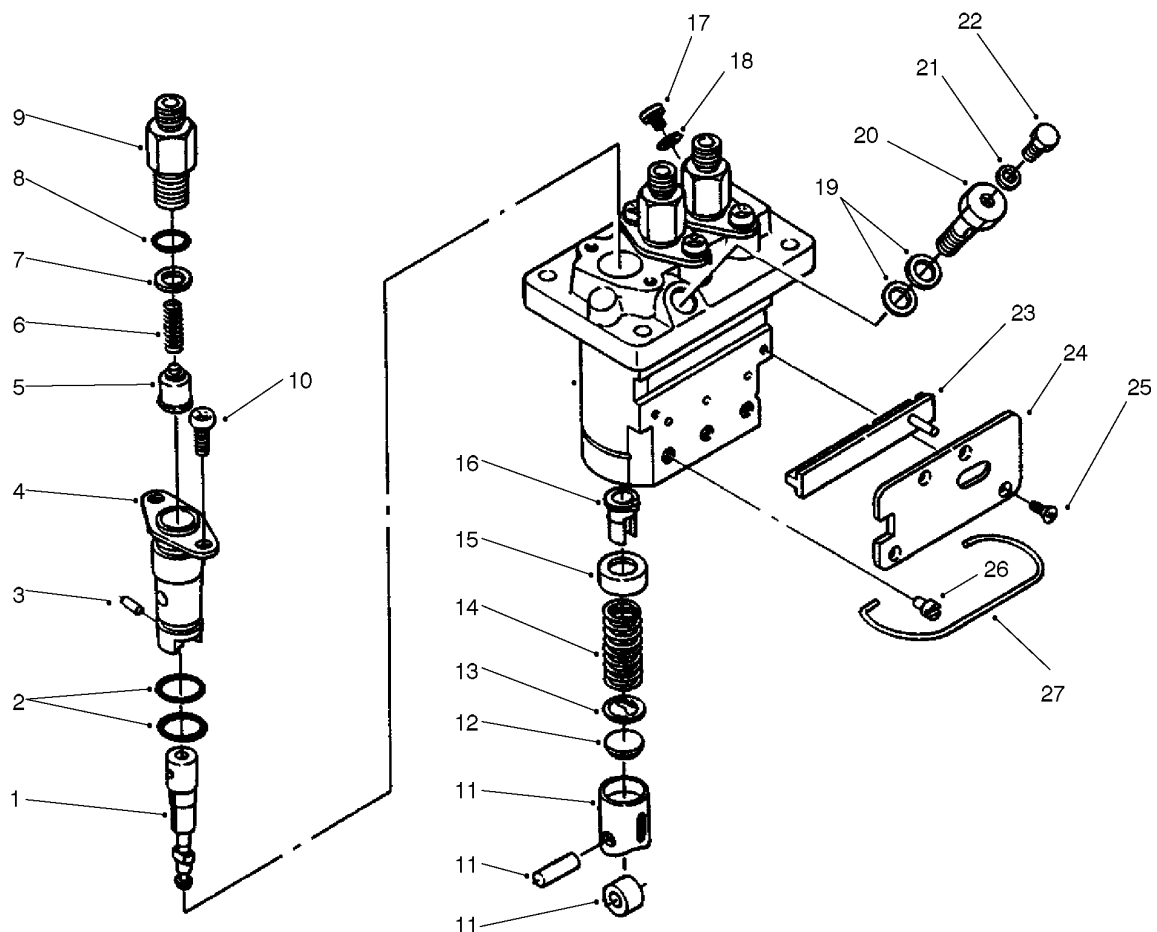
Engine Stop Lever Assembly

Ref	Part No.	Qty.	Description				
2	98-9441	2	Nut-Cap				
3	104-4802	1	Adjusting Bolt ASM				
4	99-8389	1	Gasket				
6	98-9439	2	Nut				
7	98-7654	1	Gasket				
8	98-9557	1	Bolt-Adjusting				
10	98-9674	1	Packing				
11	98-7645	1	Bolt				
12	98-9359	1	Bolt				
13	98-9640	1	Cover-Pump				
14	98-7534	1	Nut				
15	98-9558	1	Cap				
16	99-8388	1	Gasket				



Stop Solenoid and Fuel Pump Assembly

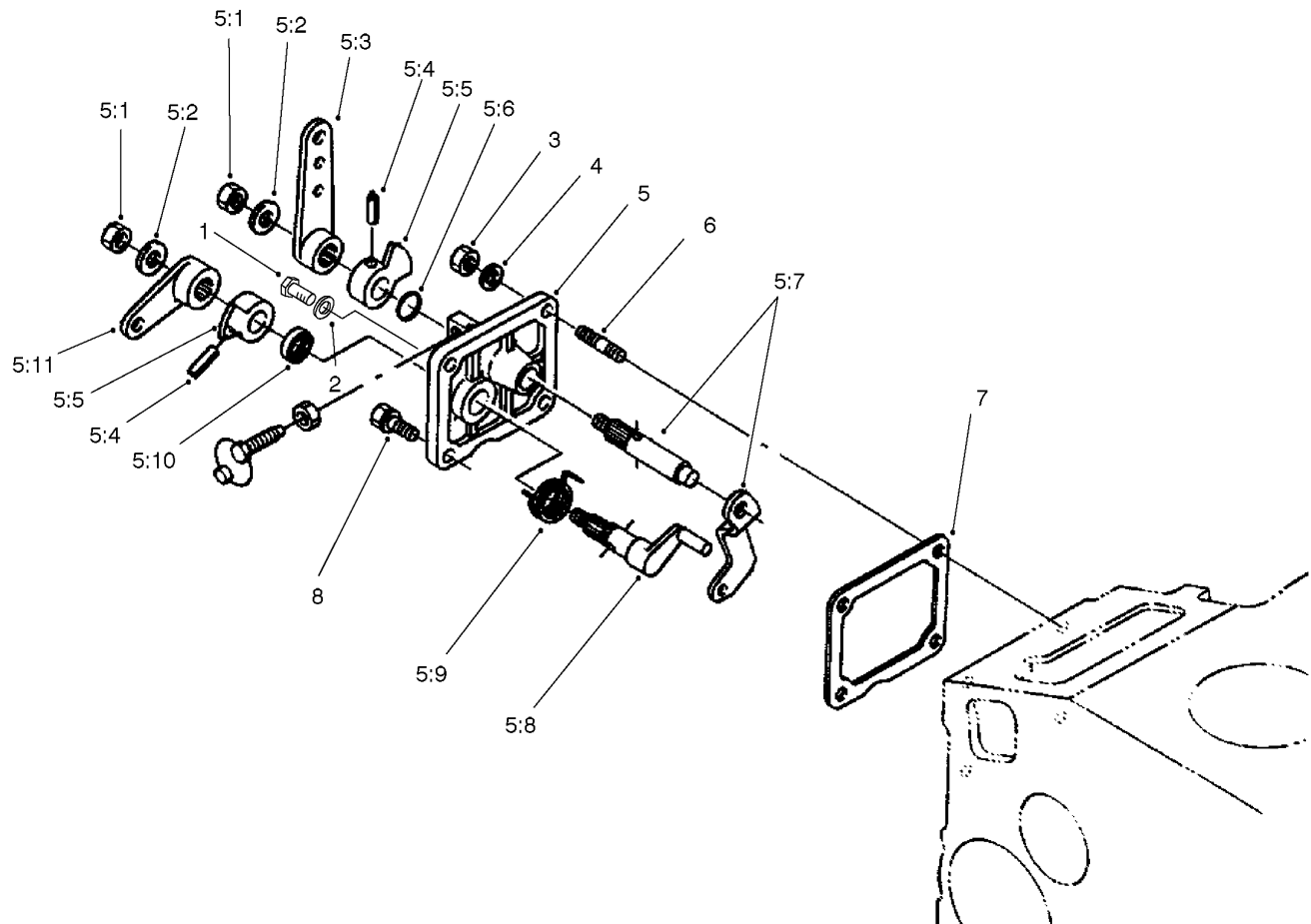
Ref	Part No.	Qty.	Description				
1	98-9636	1	Gasket-Pump, Fuel				
2	98-9367	2	Washer-Spring				
3	98-7572	2	Nut				
4	99-3514	1	Cover				
5	98-9683	1	Gasket-Cover,Solenoid				
6	98-9693	1	Solenoid-Stop				
7	98-9351	2	Bolt				



Injection Pump Assembly No. 98-9643

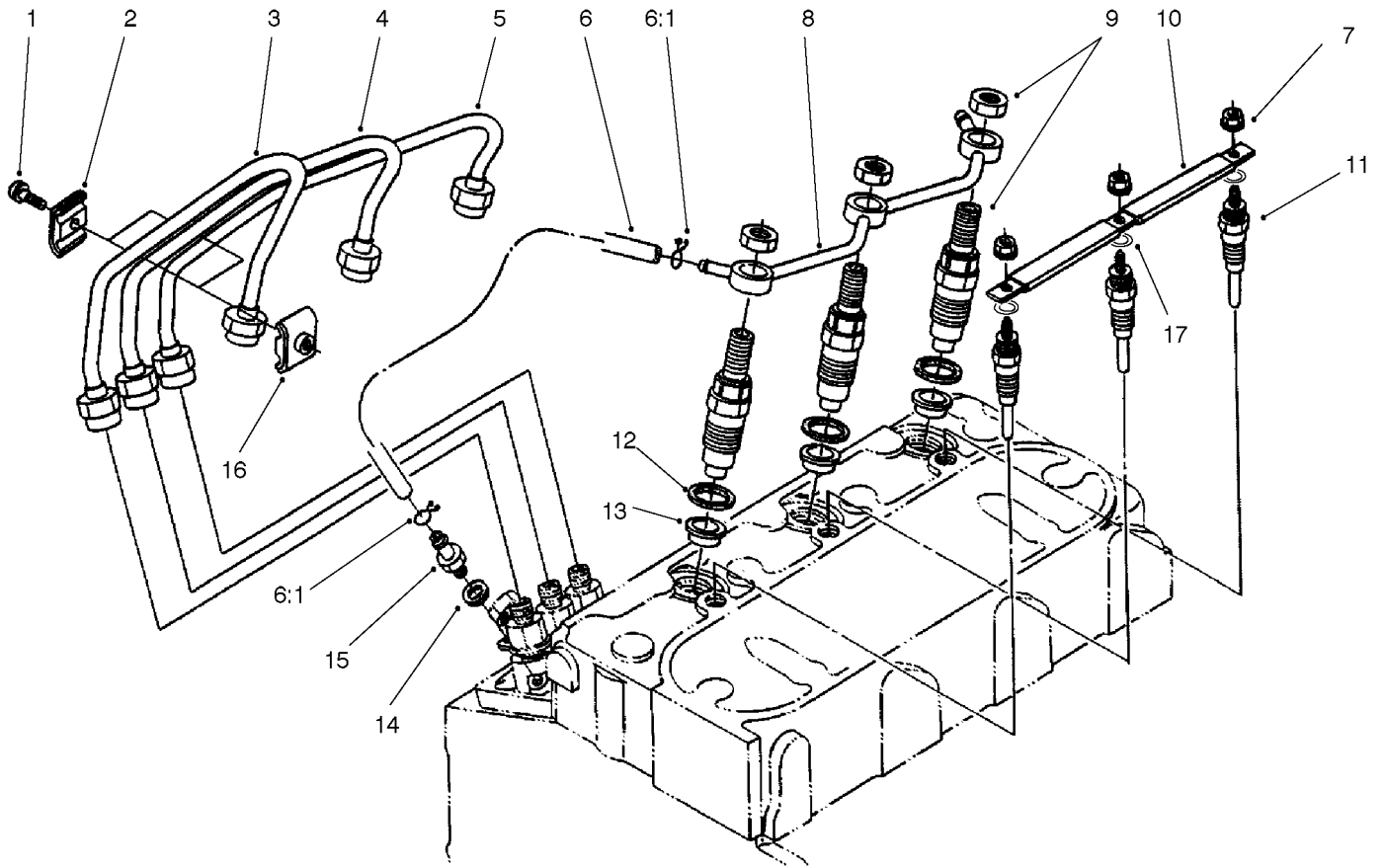
Ref	Part No.	Qty.	Description
1	98-9462	3	Element-Pump
2	98-9423	6	O-Ring
3	98-9443	3	Pin-Joint
4	98-9434	3	Flange-Sleeve
5	98-9421	3	Valve-Delivery
6	98-9424	3	Spring-Valve, Delivery
7	98-9425	3	Gasket-Valve, Delivery
8	98-9447	3	O-Ring
9	98-9652	3	Holder-Valve, Delivery
10	98-9452	6	Screw
11	98-9422	3	Tappet ASM
12	98-9433	3	Shim
13	98-9429	3	Seat-Spring, Lower
14	98-9428	3	Spring-Plunger
15	98-9427	3	Seat-Spring, Upper
16	98-9432	3	Sleeve-Control
17	98-9466	1	Plug
18	98-9451	1	Gasket
19	98-9445	1	Gasket
20	98-9464	1	Bolt-Joint
21	98-9446	1	Gasket
22	98-9430	1	Screw
23	98-9463	1	Control-Rack
24	98-9465	1	Plate

Ref	Part No.	Qty.	Description
25	98-9442	4	Screw
26	98-9426	3	Pin-Guide, Tappet
27	98-9450	1	Pin-Clamp



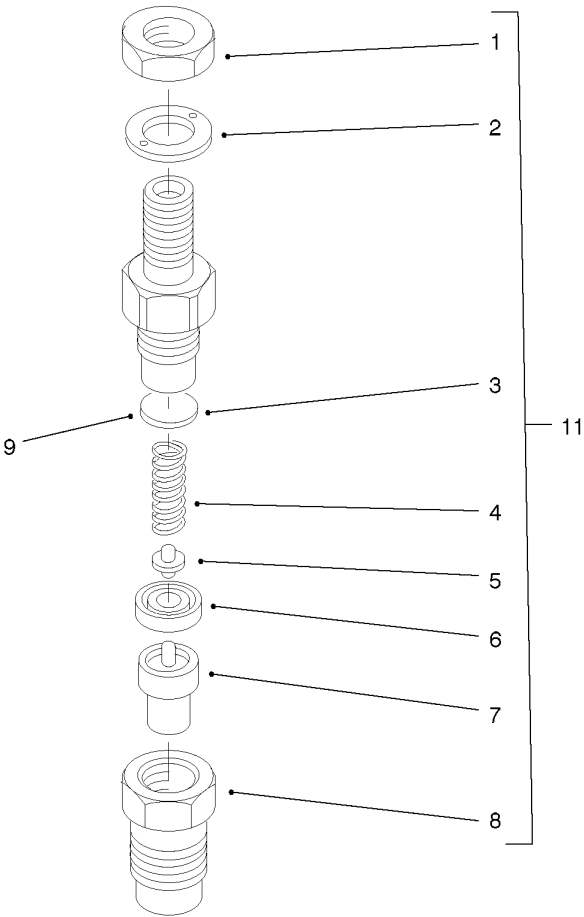
Speed Control Plate Assembly

Ref	Part No.	Qty.	Description				
1	99-8348	1	Bolt				
2	98-7654	1	Gasket				
3	98-7572	2	Nut				
4	98-9367	2	Washer-Spring				
5	98-9661	1	Control Plate ASM				
5:1	98-9589	2	Nut				
5:2	98-9594	2	Washer-Plain				
5:3	98-9662	1	Lever-Control, Speed				
5:4	98-7602	2	Pin-Spring				
5:5	98-9572	2	Lever-Control, Speed				
5:6	98-9371	1	O-Ring				
5:7	98-9658	1	Governor Lever ASM				
5:8	98-9664	1	Shaft-Lever, Stop				
5:9	98-9472	1	Spring-Return				
5:10	98-7601	1	Seal-Oil				
5:11	98-9663	1	Lever-Stop, Engine				
6	98-9362	2	Stud				
7	98-9637	1	Gasket				
8	98-7692	1	Bolt				



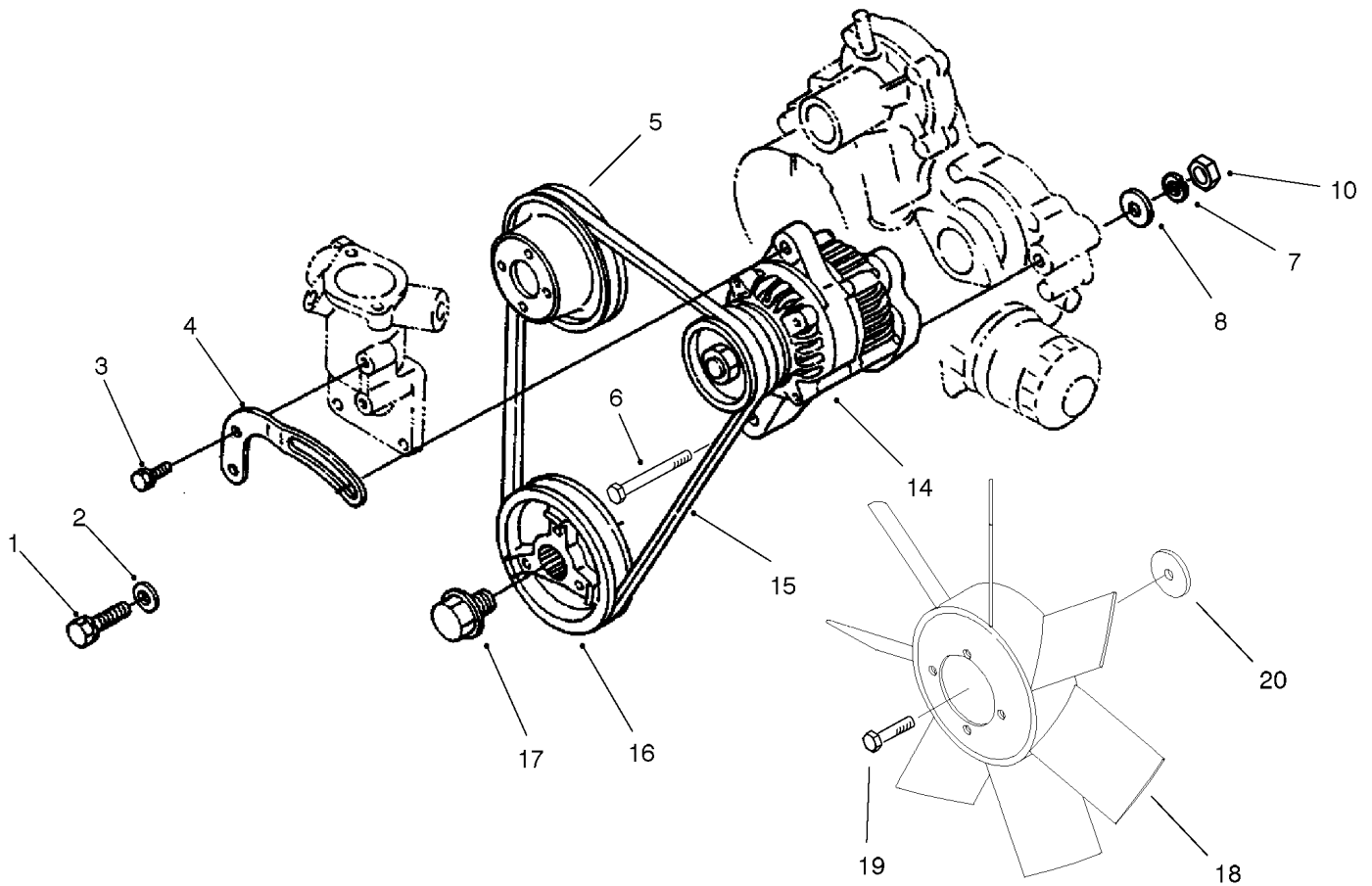
Nozzle Holder and Glow Plug Assembly

Ref	Part No.	Qty.	Description
1	98-7684	2	Screw W/Washer
2	98-7683	2	Clamp-Pipe
3	98-9622	1	Pipe Injection
4	98-9654	1	Pipe-Injection
5	98-9655	1	Pipe-Injection
6	98-9624	1	Overflow Pipe ASM
6:1	98-7671	2	Clip-Pipe
7	99-8377	3	Nut-Flange
8	98-9621	1	Overflow Pipe ASM
9	98-9468	3	Nozzle Holder ASM
10	98-9631	1	Cord-Plug, Glow
11	98-9623	3	Plug-Glow
12	98-7676	3	Gasket
13	98-7677	3	Seal
14	98-7654	1	Gasket
15	98-9431	1	Screw-Bleeder
16	98-7682	2	Clamp-Pipe
17	99-8378	3	Washer-Plain



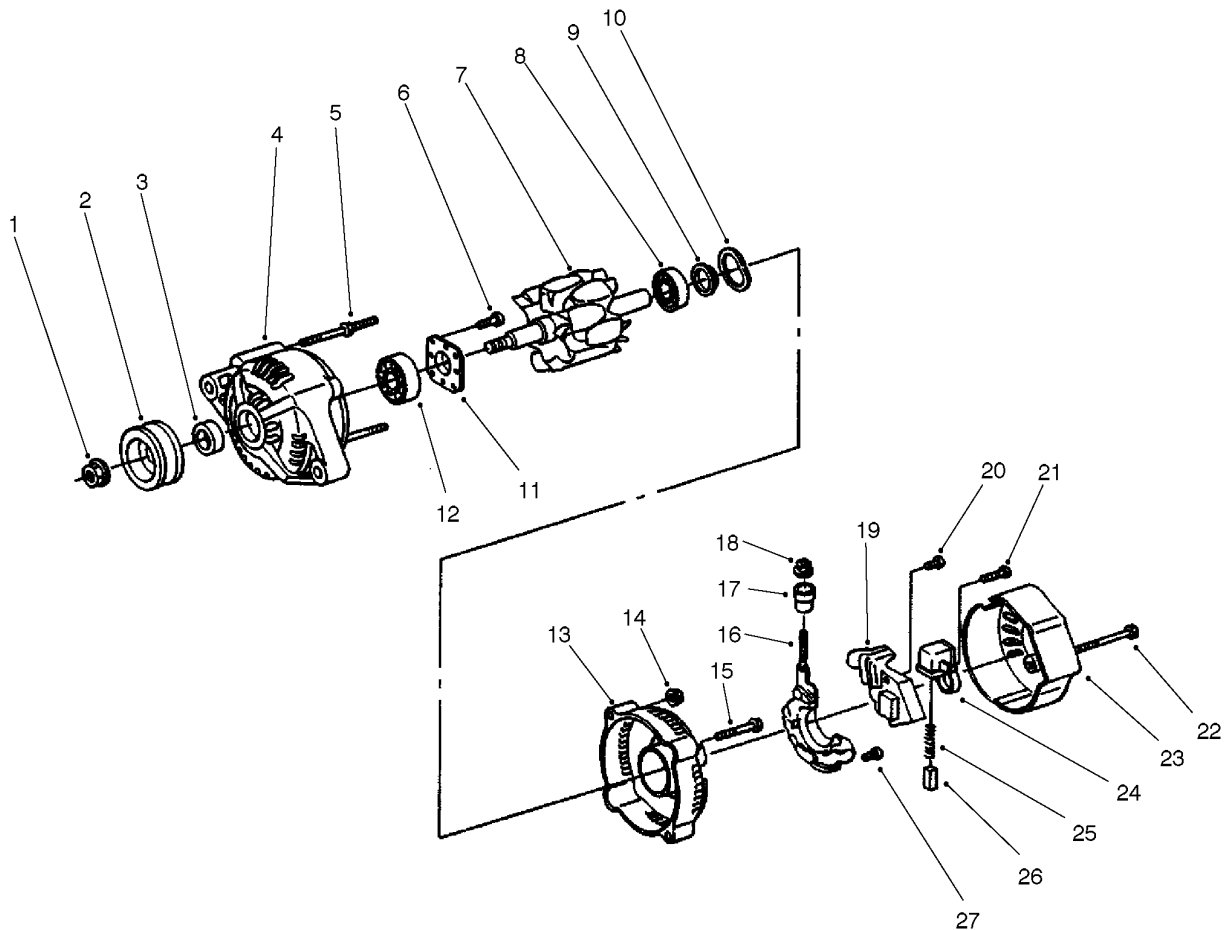
Nozzle Holder Assembly No. 98-9468

Ref	Part No.	Qty.	Description				
1	99-8301	3	Nut				
2	99-8307	3	Washer-Plain				
3	99-8302	3	Washer-Adjusting				
4	99-8303	3	Spring-Nozzle				
5	99-8305	3	Rod-Push				
6	99-8304	3	Spacer-Distance				
7	99-8308	3	Piece-Nozzle				
8	99-8306	3	Nut-Nozzle				
9	99-8313	3	Washer-Adjust (0.40Mm)				
9	99-8314	3	Washer-Adjust (0.50Mm)				
9	99-8315	3	Washer-Adjust (0.52Mm)				
9	99-8316	3	Washer-Adjust (0.54Mm)				
9	99-8317	3	Washer-Adjust (0.56Mm)				
9	99-8312	3	Washer-Adjust (0.30Mm)				
9	99-8319	3	Washer-Adjust (0.80Mm)				
9	99-8318	3	Washer-Adjust (0.58Mm)				
9	99-8309	3	Adjusting Washer ASM				
9	99-8310	3	Washer-Adjust (0.10Mm)				
9	99-8311	3	Washer-Adjust (0.20Mm)				



Alternator and Pulley Assembly

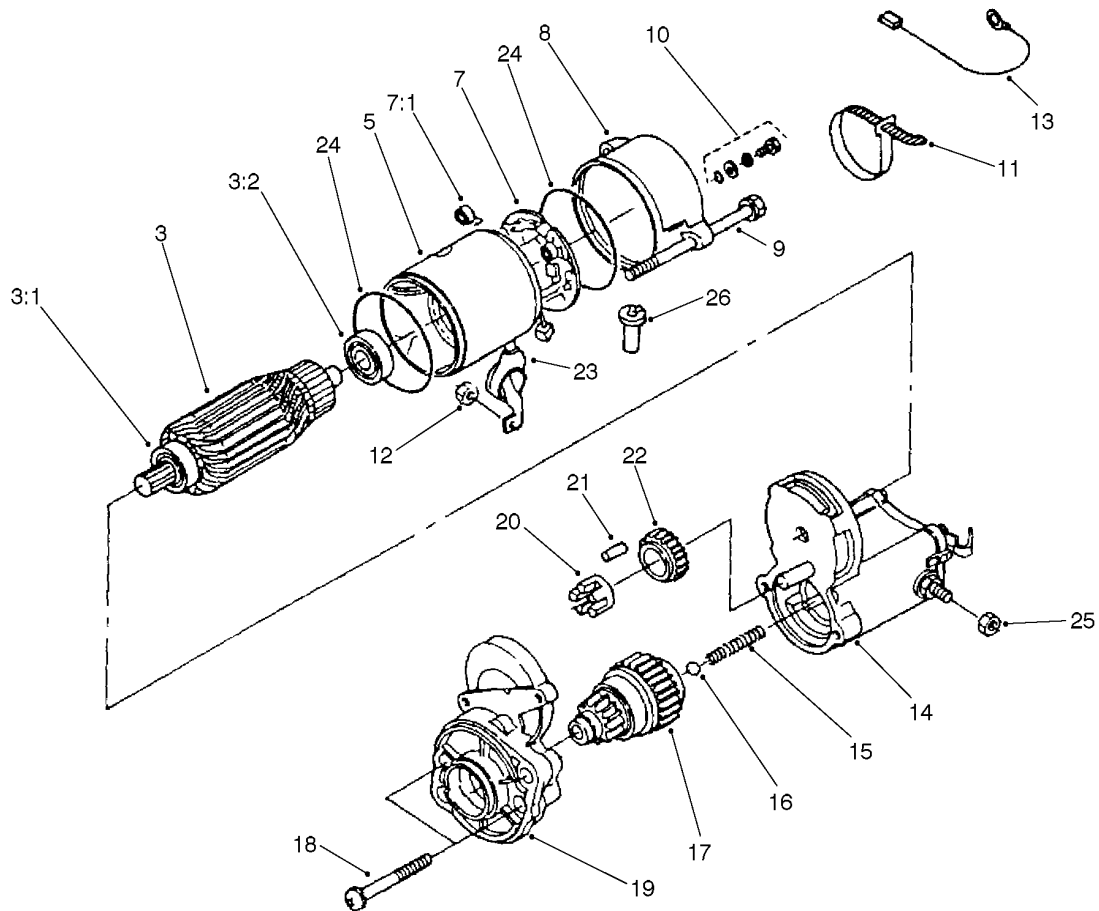
Ref	Part No.	Qty.	Description				
1	98-7697	1	Bolt				
2	98-7698	1	Washer-Plain				
3	98-7692	1	Bolt				
4	98-9573	1	Stay-Dynamo				
5	98-9584	1	Pulley-Fan				
6	98-9360	1	Bolt				
7	98-9368	1	Washer-Spring				
8	98-9366	1	Washer-Plain				
10	98-7737	1	Nut				
14	98-9474	1	Alternator ASM				
15	98-9676	1	V-Belt				
16	99-3456	1	Pulley-Drive, Fan				
17	98-9585	1	Bolt				
18	104-4246	1	Fan				
19	33103-020	4	Screw				
20	104-4247	1	Spacer				



Alternator Assembly No. 98-9474

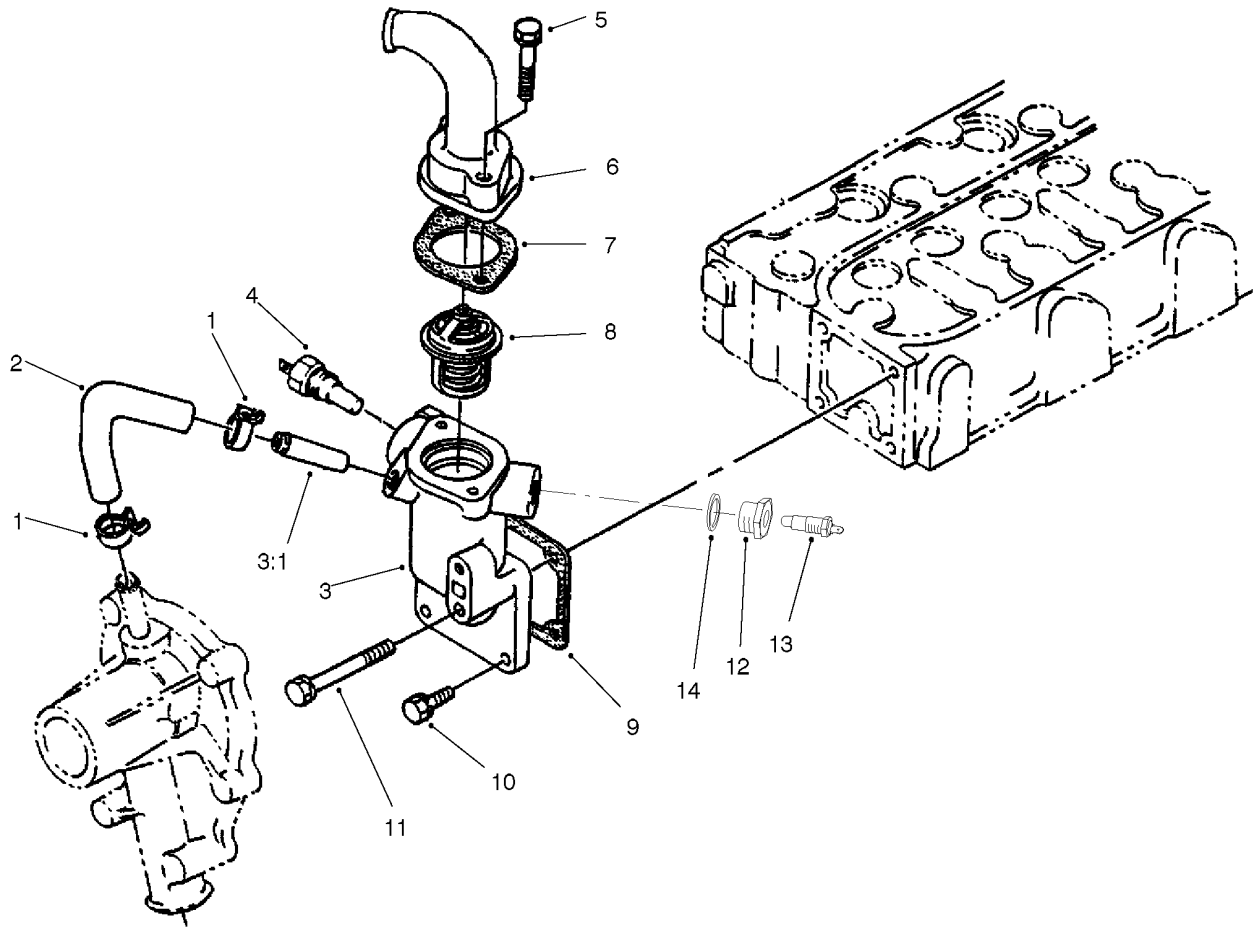
Ref	Part No.	Qty.	Description
1	98-7708	1	Nut
2	98-9453	1	Pulley-Dynamo
3	98-7709	1	Collar
4	98-7714	1	Frame-End, Drive
5	98-7717	2	Bolt-Through
6	98-7716	4	Screw-Head, Round
7	98-7710	1	Rotor
8	98-7712	1	Bearing-Ball
9	98-7711	1	Cover-Bearing
10	98-7713	1	Washer-Thrust
11	98-7715	1	Plate-Retainer
12	98-7718	1	Bearing-Ball
13	98-7719	1	Frame-End
14	98-7730	2	Nut
15	98-7731	2	Bolt
16	98-7721	1	Rectifier ASM
17	98-7722	1	Bushing-Insulation
18	98-7732	1	Nut
19	98-7733	1	Regulator ASM
20	98-7726	2	Screw-Head, Round
21	98-7728	1	Screw-Head, Round
22	98-7729	3	Bolt
23	98-7720	1	Cover-End
24	98-7723	1	Holder-Brush

Ref	Part No.	Qty.	Description
25	98-7725	2	Spring-Brush
26	98-7724	2	Brush
27	98-7727	6	Screw-Head, Round



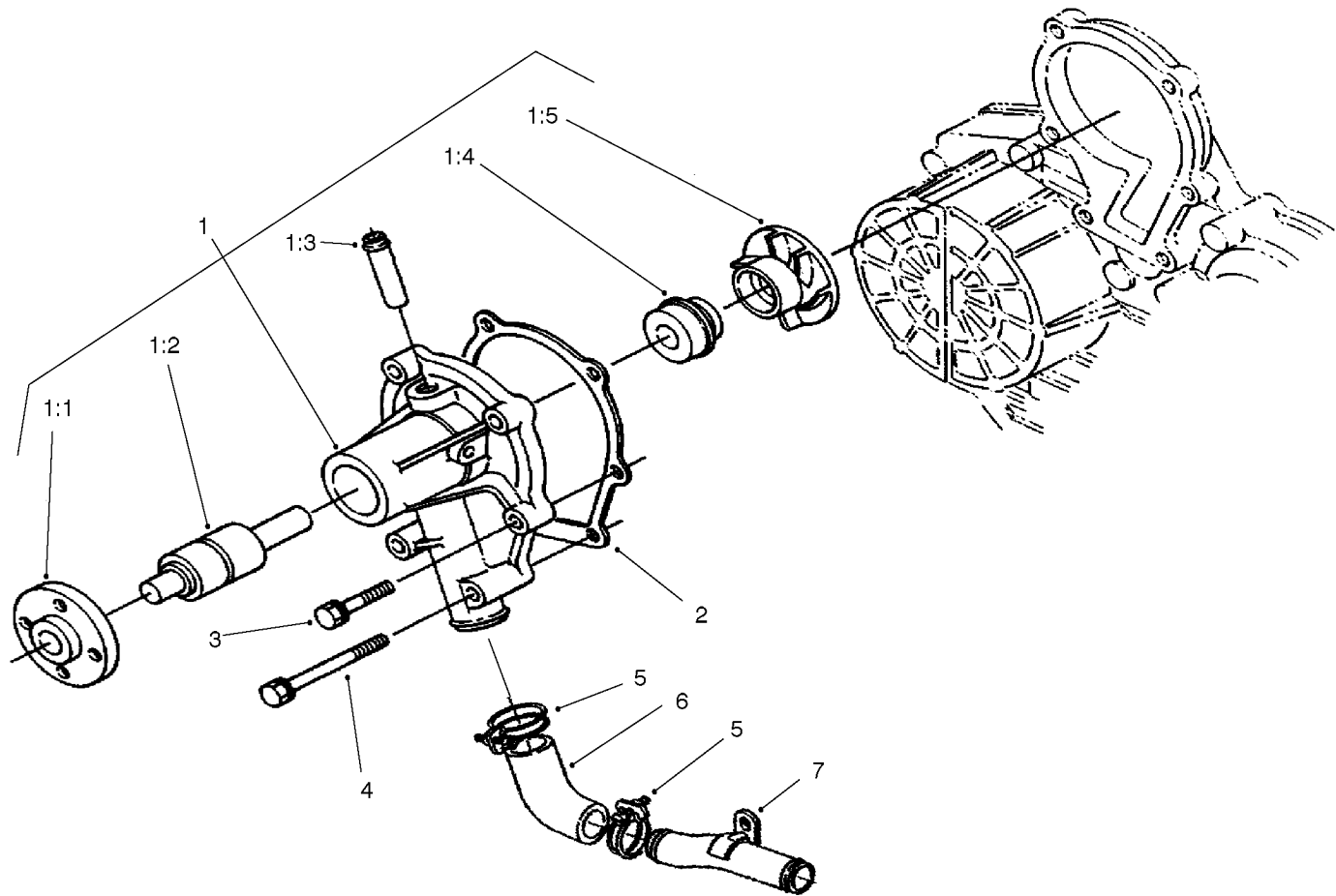
Starter Assembly No. 98-9705

Ref	Part No.	Qty.	Description	Ref	Part No.	Qty.	Description
3	98-7742	1	Armature ASM	26	98-7759	1	Pipe-Drain
3:1	98-7743	1	Bearing				
3:2	98-7744	1	Bearing				
5	98-7741	1	Yoke ASM				
7	98-7749	1	Brush Holder ASM				
7:1	98-7750	4	Spring-Brush				
8	99-8370	1	Frame-End				
9	98-9549	2	Bolt				
10	98-7758	2	Bolt ASM				
11	98-9712	1	Band-Cover				
12	99-8371	1	Nut-Hex				
13	98-9711	1	Cord-Solenoid, Stop				
14	99-8372	1	Magnetic Switch ASM				
15	98-7754	1	Spring				
16	98-7755	1	Ball				
17	99-8373	1	Clutch-Running, Over				
18	98-7756	2	Bolt				
19	99-8374	1	Frame-End, Drive				
20	98-7752	1	Retainer				
21	98-7753	5	Roller				
22	98-7751	1	Gear				
23	99-8375	1	Cover				
24	98-7757	2	O-Ring				
25	99-8376	1	Nut-Hex				



Water Flange and Thermostat Assembly

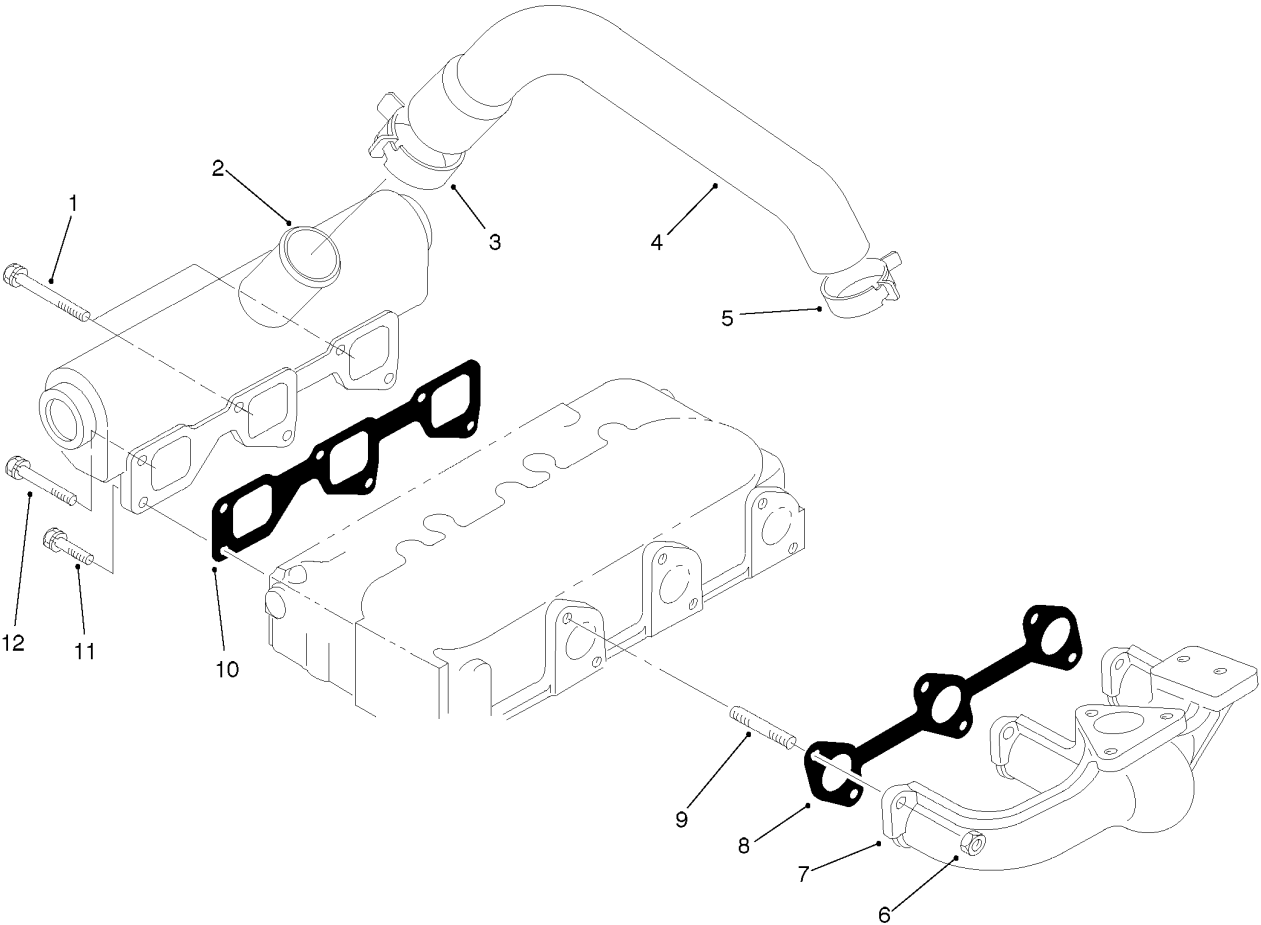
Ref	Part No.	Qty.	Description				
1	98-9579	2	Band-Pipe				
2	98-9578	1	Pipe-Return, Water				
3	98-9713	1	Water Flange ASM				
3:1	98-9580	1	Pipe-Return, Water				
4	98-9719	1	Thermoswitch				
5	98-7777	2	Bolt				
6	104-4804	1	Outlet-Water				
7	98-7776	1	Gasket				
8	98-7778	1	Thermostat ASM				
9	98-9638	1	Gasket-Flange, Water				
10	98-7692	3	Bolt				
11	98-9356	1	Bolt				
12	99-3581	1	Adapter				
13	99-3582	1	Thermoswitch				
14	99-3583	1	Packing				



Water Pump Assembly

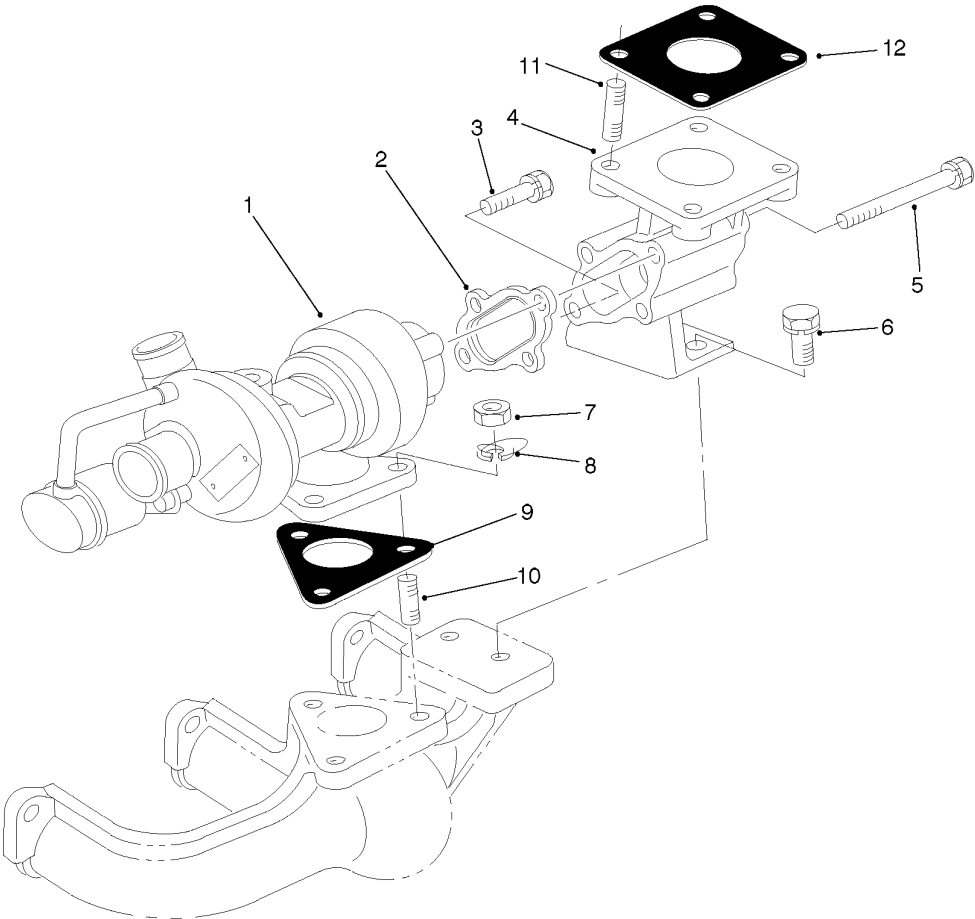
Ref	Part No.	Qty.	Description				
1	99-3455	1	Water Pump ASM				
1:1	99-3516	1	Flange-Pump, Water				
1:2	99-3517	1	Bearing-Pump, Water				
1:3	98-9577	1	Pipe-Return, Water				
1:4	99-3518	1	Water Pump Seal ASM				
1:5	99-3519	1	Impeller-Pump, Water				
2	99-3454	1	Gasket-Pump, Water				
3	33103-030	1	Screw-HHF				
4	98-9357	4	Bolt				
5	98-9717	2	Clamp				
6	98-9574	1	Pipe-Water				
7	99-8379	1	Pipe-Water				

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Exhaust Manifold and Gasket Assembly

Ref	Part No.	Qty.	Description				
1	99-8320	2	Bolt				
2	99-8321	1	Manifold-Inlet				
3	99-8322	1	Band-Pipe				
4	99-8323	1	Hose-Inlet				
5	99-8324	1	Band-Pipe				
6	98-9665	6	Nut				
7	99-8326	1	Manifold-Exhaust				
8	99-8327	1	Gasket-Manifold,Exhaust				
9	98-9588	6	Stud				
10	99-8329	1	Gasket-Manifold,Intake				
11	98-7568	3	Bolt				
12	98-7496	1	Bolt				



Turbo Charge Assembly

Ref	Part No.	Qty.	Description				
1	99-8332	1	Turbo Charger ASM				
2	99-8333	1	Gasket				
3	99-8334	1	Bolt				
4	99-8335	1	Flange-Muffler				
5	99-8336	3	Bolt				
6	98-7610	2	Bolt				
7	98-7534	3	Nut				
8	99-8339	3	Washer-Spring				
9	99-8340	1	Gasket				
10	99-8341	3	Stud				
11	99-8342	4	Stud				
12	99-8343	1	Gasket-Muffler				

