



Groundsmaster[®] 3500-D

Model No. 30821 - 220001032 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

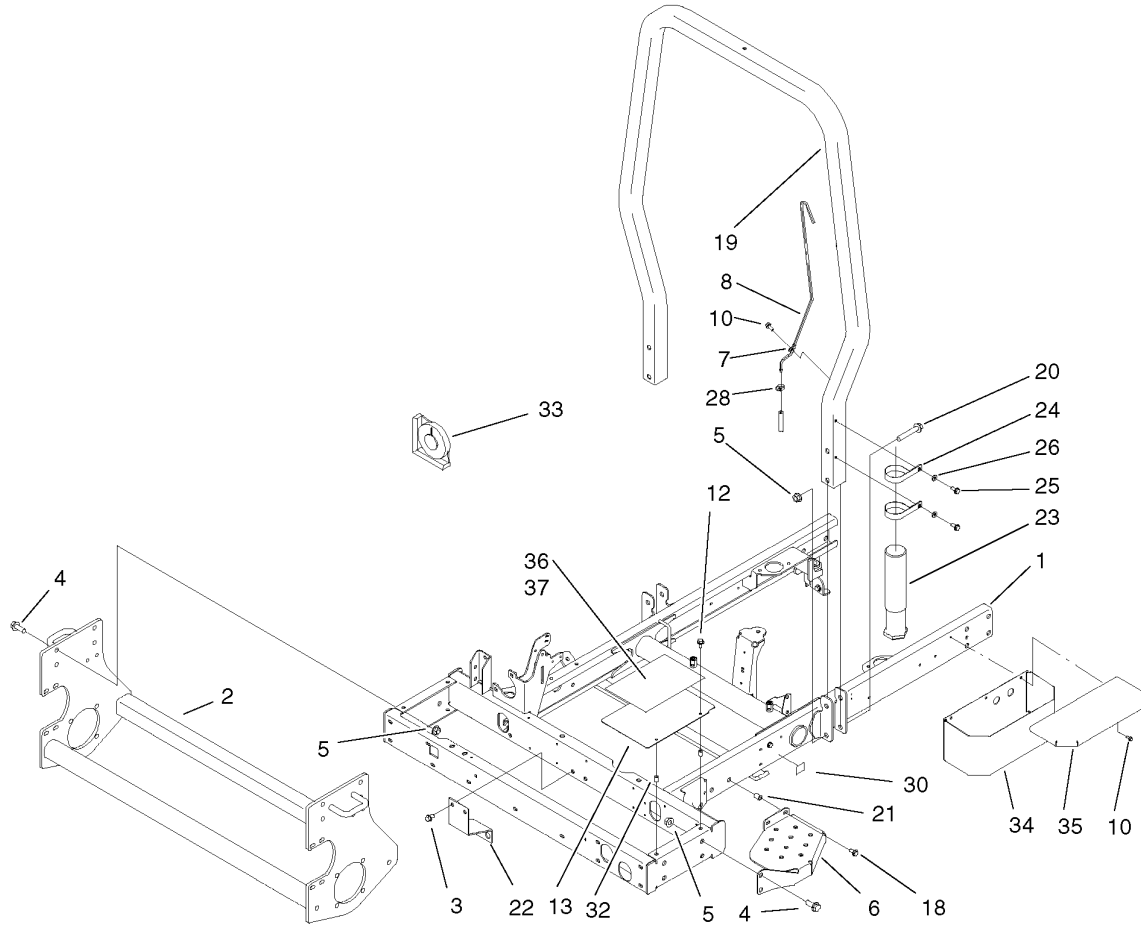
Part descriptions in this catalog may include the following abbreviations.

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 separately

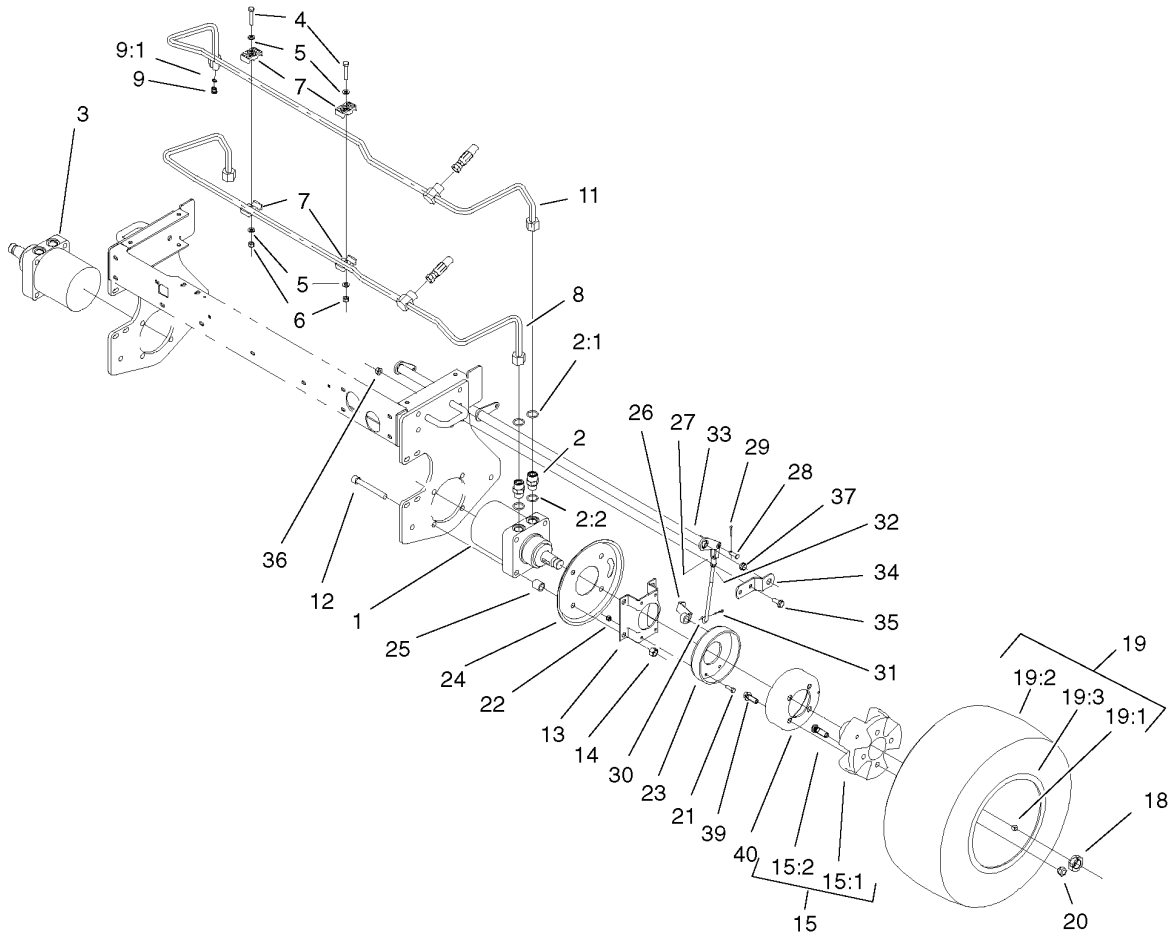
❷ * Not Illustrated



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-HHF
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	11	Screw-HWH
12	3234-4	2	Screw-HHF
13	104-0468-01	1	Cover-Frame
18	3234-5	2	Screw
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	105-4674	1	Decal-Noise, Ce
32	32148-6	2	Insert-Nut
33	99-3503	1	Indicator-Angle

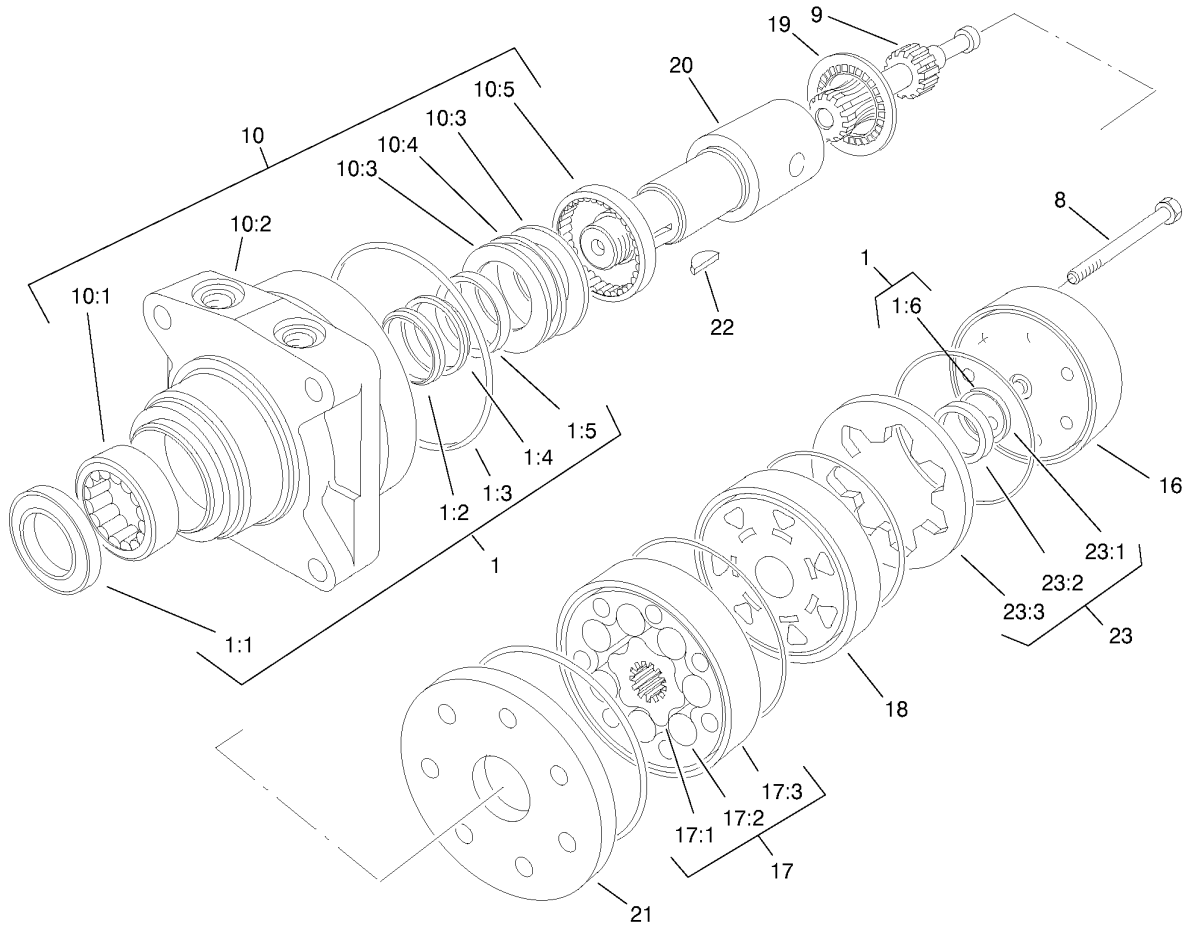
Ref	Part No.	Qty.	Description
34	104-4634-03	1	Toolbox ASM
35	104-4633-03	1	Toolbox Cover ASM
36	104-0484	1	Decal
37	99-3560	1	Decal-Danger, Ce



Front Wheel and Brake Assembly

Ref	Part No.	Qty.	Description
1	75-9990	1	HYD 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	HYD Motor ASM
4	322-9	2	Screw-HH
5	3256-23	4	Washer-Flat
6	3296-29	2	Nut-Lock, NI
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

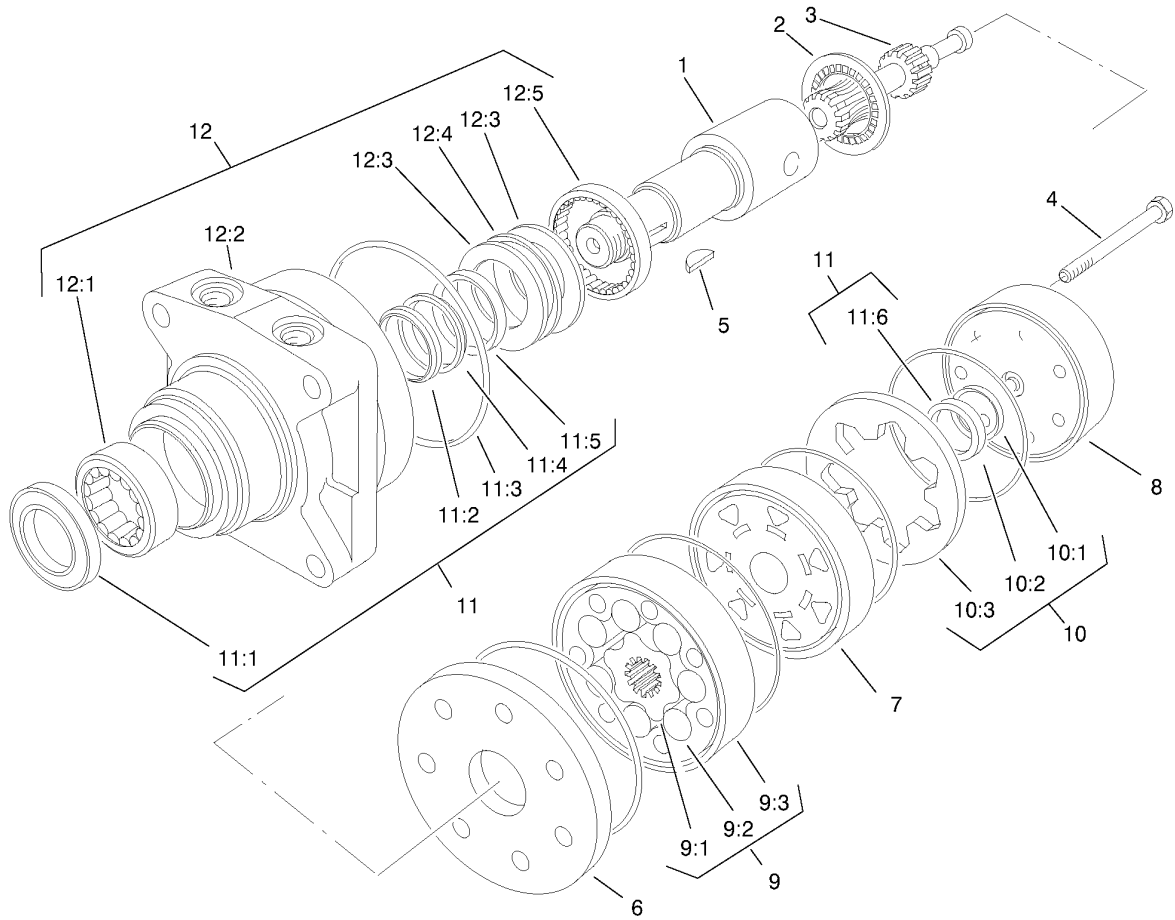
Ref	Part No.	Qty.	Description
20	242-50	8	Nut-Lug
21	321-5	8	Screw-HH
22	3296-42	8	Nut-Lock, NI
23	104-7705	2	Brake ASM
24	104-0485-03	2	Shield-Wheel
25	92-1715	8	Spacer
26	93-6850	2	Lever-Brake
27	282-2	2	Yoke
28	283-1	2	Pin-Yoke
29	3272-10	2	Pin-Cotter
30	104-4627	2	Rod-Adjusting
31	3272-6	2	Pin-Cotter
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
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	Seal Kit
●1:1		1	Seal-Dirt & Water
●1:2		1	Washer-Back-Up
●1:3		5	Ring-Seal
●1:4		1	Washer-Back-Up
●1:5		1	Seal-Inner
●1:6		1	Seal-Commutator
8	76-1010	7	Screw
9	76-0960	1	Link-Drive
10	76-0810	1	Housing ASM
●10:1		1	Bearing
●10:2		1	Housing
●10:3		2	Washer-Thrust
●10:4		1	Bearing-Thrust
●10:5		1	Bearing
16	76-0940	1	End Cover ASM
17	76-0970	1	Set-Rotor
●17:1		1	Rotor
●17:2		7	Vane
●17:3		1	Stator
18	76-0840	1	Manifold
19	76-0850	1	Bearing-Thrust
20	76-0860	1	Shaft-Coupling
21	76-0870	1	Plate-Wear

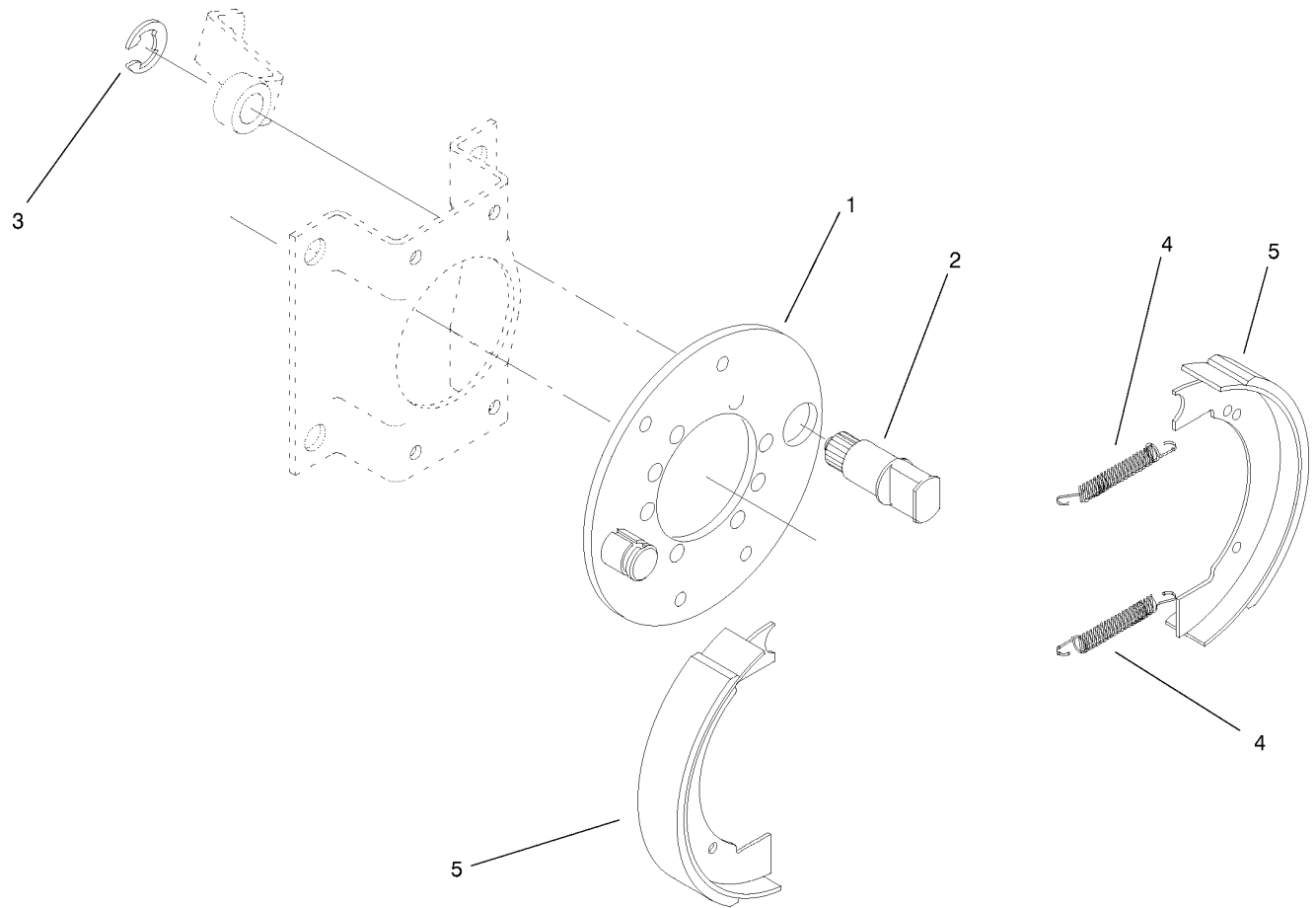
Ref	Part No.	Qty.	Description
22	3257-42	1	Key-Woodruff
23	76-0880	1	Commutator ASM
●23:1		1	Seal-Commutator
●23:2		1	Commutator
●23:3		1	Ring-Commutator



Hydraulic Motor Assembly No. 95-8693

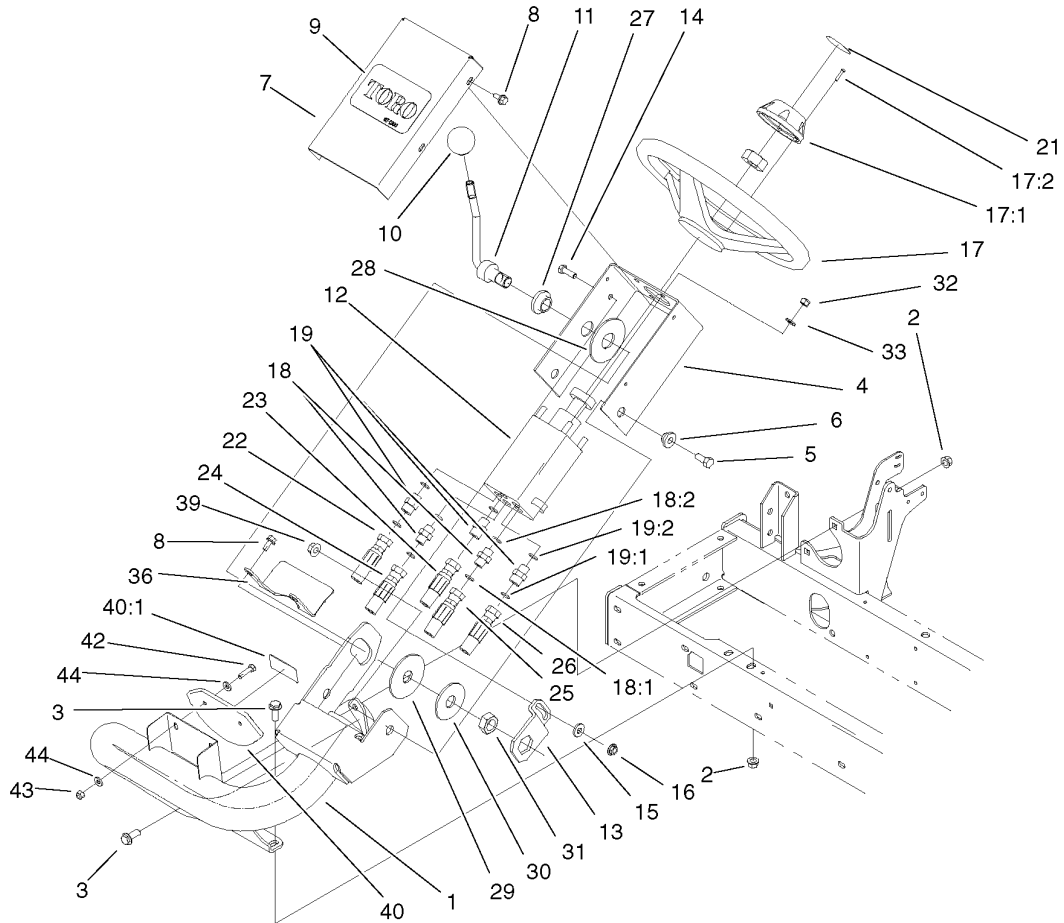
Ref	Part No.	Qty.	Description
1	76-0860	1	Shaft-Coupling
2	76-0850	1	Bearing-Thrust
3	76-0960	1	Link-Drive
4	76-1010	7	Screw
5	3257-42	1	Key-Woodruff
6	76-0870	1	Plate-Wear
7	99-3535	1	Manifold
8	76-0940	1	End Cover ASM
9	76-0970	1	Set-Rotor
●9:1		1	Rotor
●9:2		7	Vane
●9:3		1	Stator
10	76-0880	1	Commutator ASM
●10:1		1	Seal-Commutator
●10:2		1	Commutator
●10:3		1	Ring-Commutator
11	76-0800	1	Seal Kit
●11:1		1	Seal-Dirt & Water
●11:2		1	Washer-Back-Up
●11:3		5	Ring-Seal
●11:4		1	Washer-Back-Up
●11:5		1	Seal-Inner
●11:6		1	Seal-Commutator
12	76-0810	1	Housing ASM

Ref	Part No.	Qty.	Description
●12:1		1	Bearing
●12:2		1	Housing
●12:3		2	Washer-Thrust
●12:4		1	Bearing-Thrust
●12:5		1	Bearing



Brake Assembly No. 104-7705

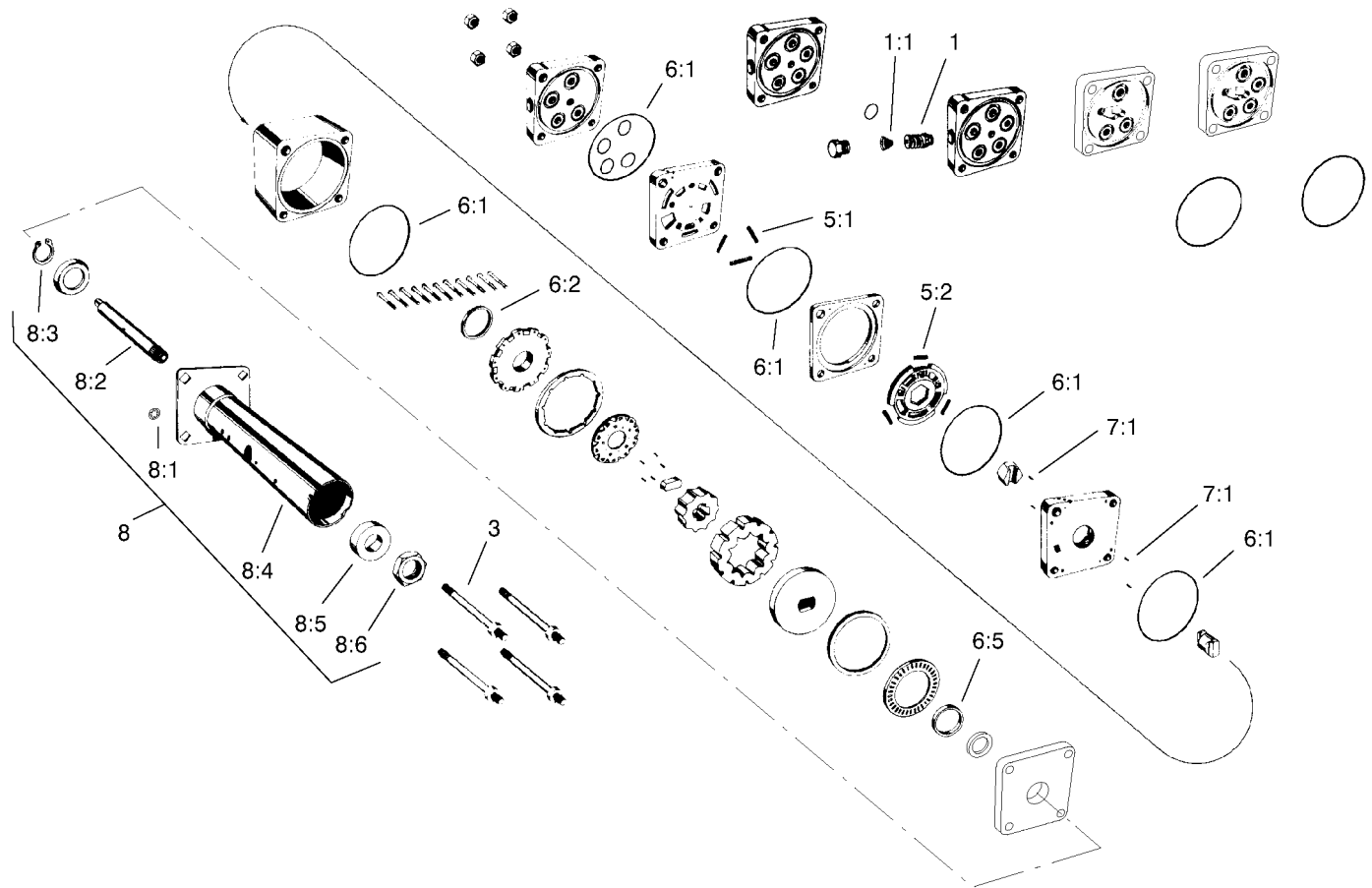
Ref	Part No.	Qty.	Description
1	70-9870	1	Plate-Backing
2	104-7707	1	Shaft-Cam, Brake
3	104-7706	1	E-Ring-Bowed
4	70-9880	2	Spring-Return
5	70-9840	2	Shoe-Brake



Steering Column Assembly

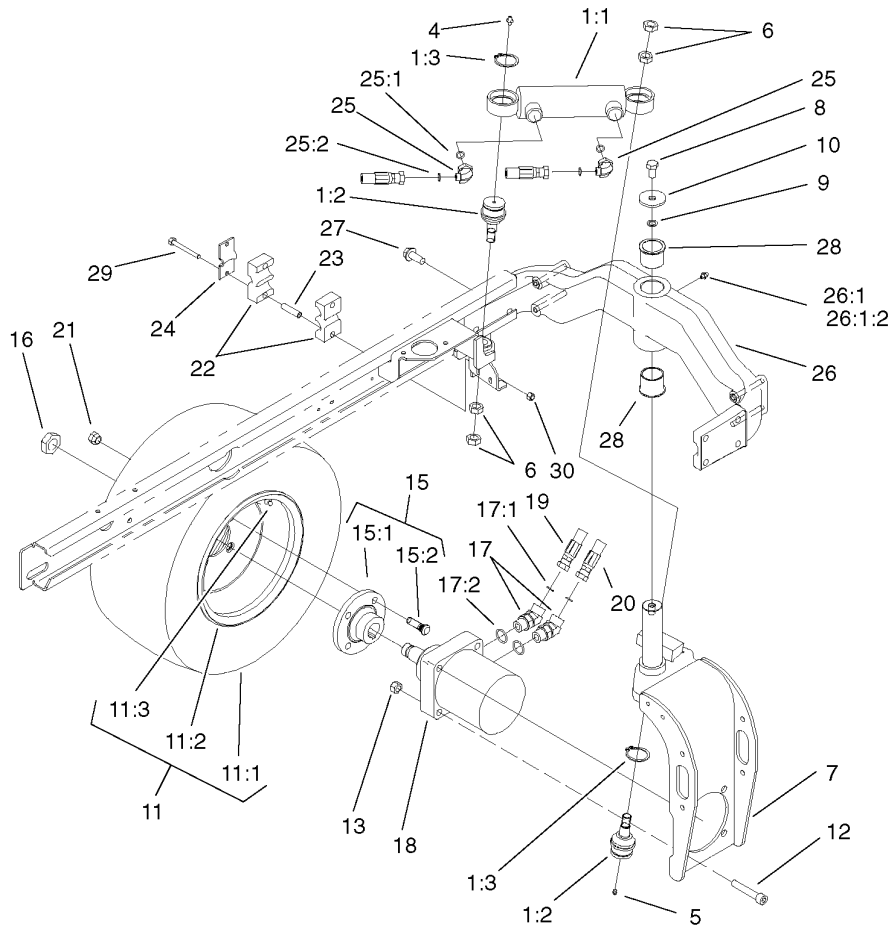
Ref	Part No.	Qty.	Description
1	105-8536-01	1	Arm-Steering
2	32128-43	4	Nut-Flange
3	3234-11	4	Screw-HHF
4	95-8793-01	1	Bracket-Valve, Steering
5	323-5	2	Screw-HH
6	93-5988	2	Hub-Pivot
7	95-8794-01	1	Cover-Valve, Steering
8	32144-10	5	Screw-HWH
9	67-1300	1	Decal-Toro Logo
10	233-48	1	Knob
11	95-8798-03	1	Lever-Steering
12	104-0474	1	Control-Steering
13	80-2880	1	Bracket-Tilt
14	322-5	1	Screw-HH
15	3256-3	1	Washer-Flat
16	32128-44	1	Nut
17	68-5130	1	Wheel-Steering
17:1	68-5140	1	Cap-Wheel, Steering
17:2	32144-21	1	Screw
18	340-1	2	Adapter
18:1	237-35	1	O-Ring
18:2	237-42	1	O-Ring
19	340-2	3	Fitting-HYD, Straight
19:1	237-22	1	O-Ring

Ref	Part No.	Qty.	Description
19:2	237-42	1	O-Ring
21	68-5370	1	Decal-Toro
22	95-8842	1	Hose ASM
23	95-8843	1	Hose ASM
24	100-4892	1	Hose ASM
25	100-4893	1	Hose ASM
26	95-8846	1	Hose ASM
27	99-3502	1	Boss
28	31-0390	1	Disc-Friction
29	82-9010	1	Disc-Friction
30	80-2930	1	Washer-Flat
31	3218-7	1	Nut-Jam
32	3296-4	4	Nut-Lock, NI
33	3256-23	4	Washer-Flat
36	99-3405-01	1	Shield-Steering
39	32128-21	2	Nut-HF
40	100-4929	1	Slope Indicator ASM
40:1	100-4933	1	Decal-Danger
40:1	100-4837	1	Decal-Danger
42	321-7	2	Screw-HH
43	3296-42	2	Nut-Lock, NI
44	3256-22	4	Washer-Flat



Steering Control Assembly No. 104-0474

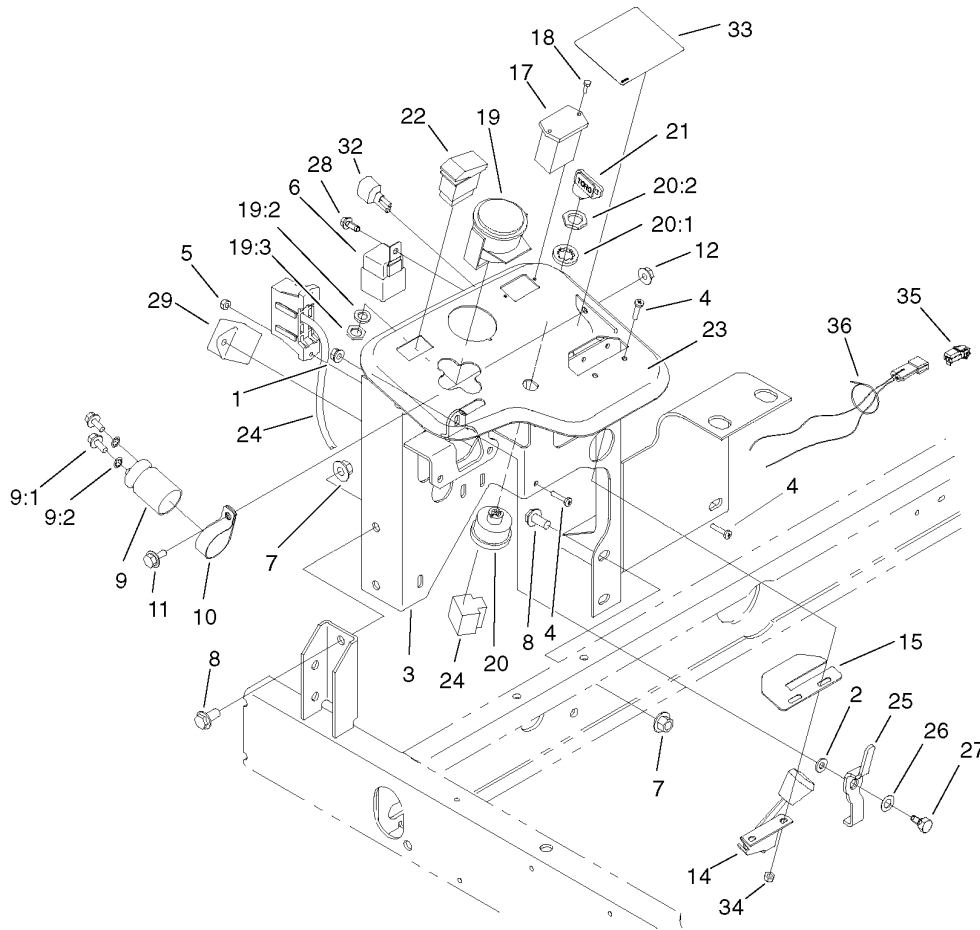
Ref	Part No.	Qty.	Description
1	99-3523	1	Cartridge-Valve, Relief
●1:1		1	Spring-Coil
3	99-3524	4	Bolt-Special
5	66-9970	1	Kit-Spring
●5:1		3	Spring
●5:2		3	Spring
6	66-9980	1	Kit-Seal
●6:1		5	Ring-Seal
●6:2		1	Seal-Commutator
●6:3		1	O-Ring
●6:4		5	O-Ring
●6:5		1	Seal-Face
7	66-9990	1	Kit-Roller, Needle
●7:1		9	Pin-Alignment
8	104-0475	1	Column ASM
8:1	92-7316	4	Nut-Push On
●8:2		1	Shaft-Input
●8:3		1	Ring-Retaining
●8:4		1	Upper Cover & Jacket
●8:5		1	Bushing
8:6	47-6990	1	Nut



Rear Fork and Tire Assembly

Ref	Part No.	Qty.	Description
1		1	Steering Cylinder/Balljoint ASM
1:1	94-8141	1	HYD Cylinder ASM
1:2	92-5838	2	Joint-Ball
1:3	32151-104	2	Ring-Retaining, EXT
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
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
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, 45Ø
17:1	237-65	1	O-Ring
17:2	237-80	1	O-Ring

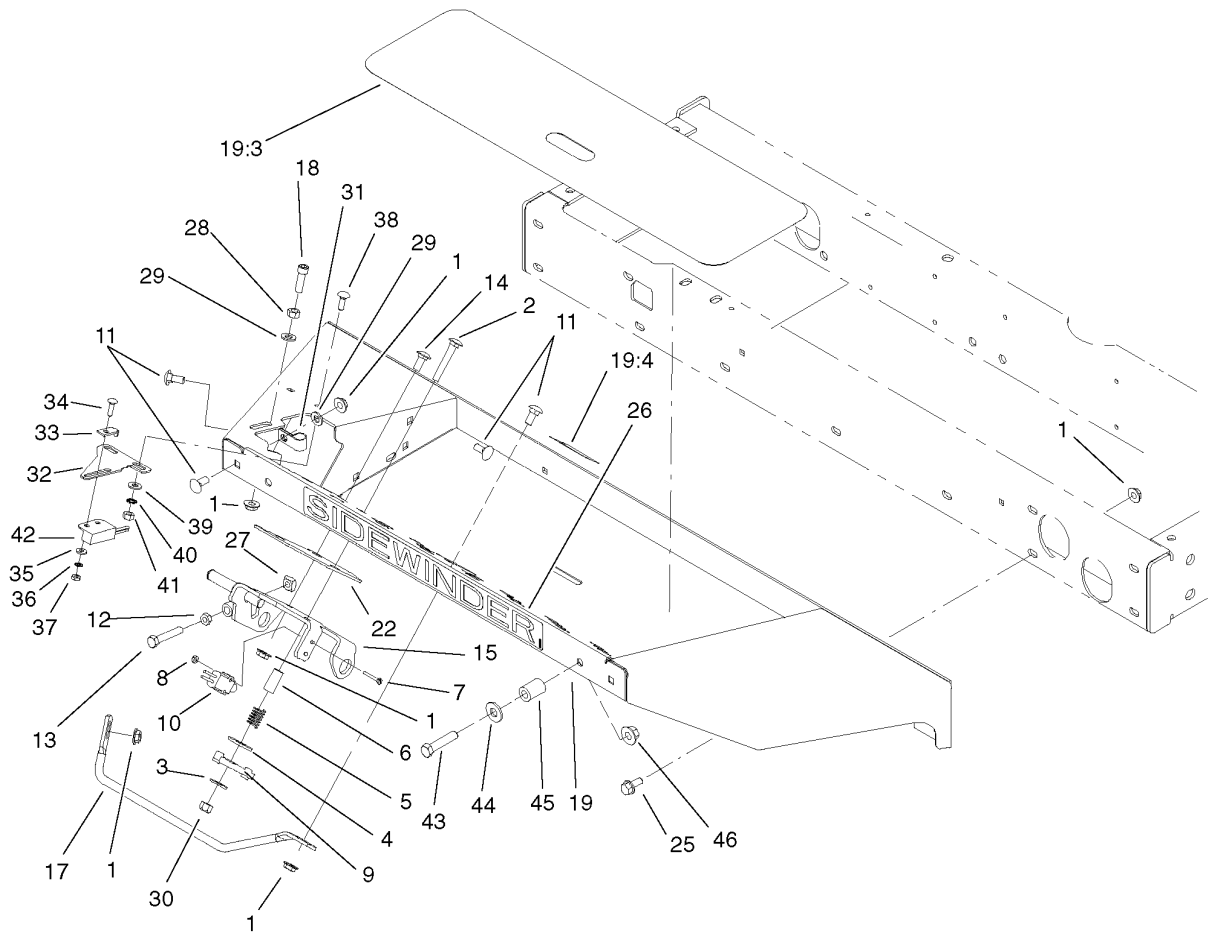
Ref	Part No.	Qty.	Description
18	95-8694	1	HYD Motor ASM
19	105-1213	1	Hose ASM
20	105-1212	1	Hose ASM
21	242-50	4	Nut-Lug
22	82-8170	2	Clamp
23	93-7960	2	Spacer
24	93-7961	1	Clamp-Drain, Case
25	340-132	2	Fitting-HYD, 90Ø
25:1	237-78	1	O-Ring
25:2	237-21	1	O-Ring
26	18-3979-03	1	Rear Casting ASM
26:1		1	Rear Casting ASM
26:1:2	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, NI



Control Panel Assembly

Ref	Part No.	Qty.	Description
1	32128-32	1	Nut-HHF
2	3256-22	1	Washer-Flat
3	95-8712-03	1	Panel-Control
4	3250-27	4	Screw-PPH
5	3296-2	2	Nut-Lock
6	70-1480	4	Relay
7	32128-43	5	Nut-Flange
8	3234-1	5	Screw-HHF
9	37-2690	1	Capacitor
9:1	3252-18	2	Screw
9:2	3254-1	2	Washer-Lock, Internal
10	2412-74	1	R-Clamp
11	3234-4	1	Screw-HHF
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, Internal
19:3	3217-26	1	Nut-Hex
20	88-9830	1	Key Switch ASM
20:1	3254-5	1	Washer-Lock, Internal

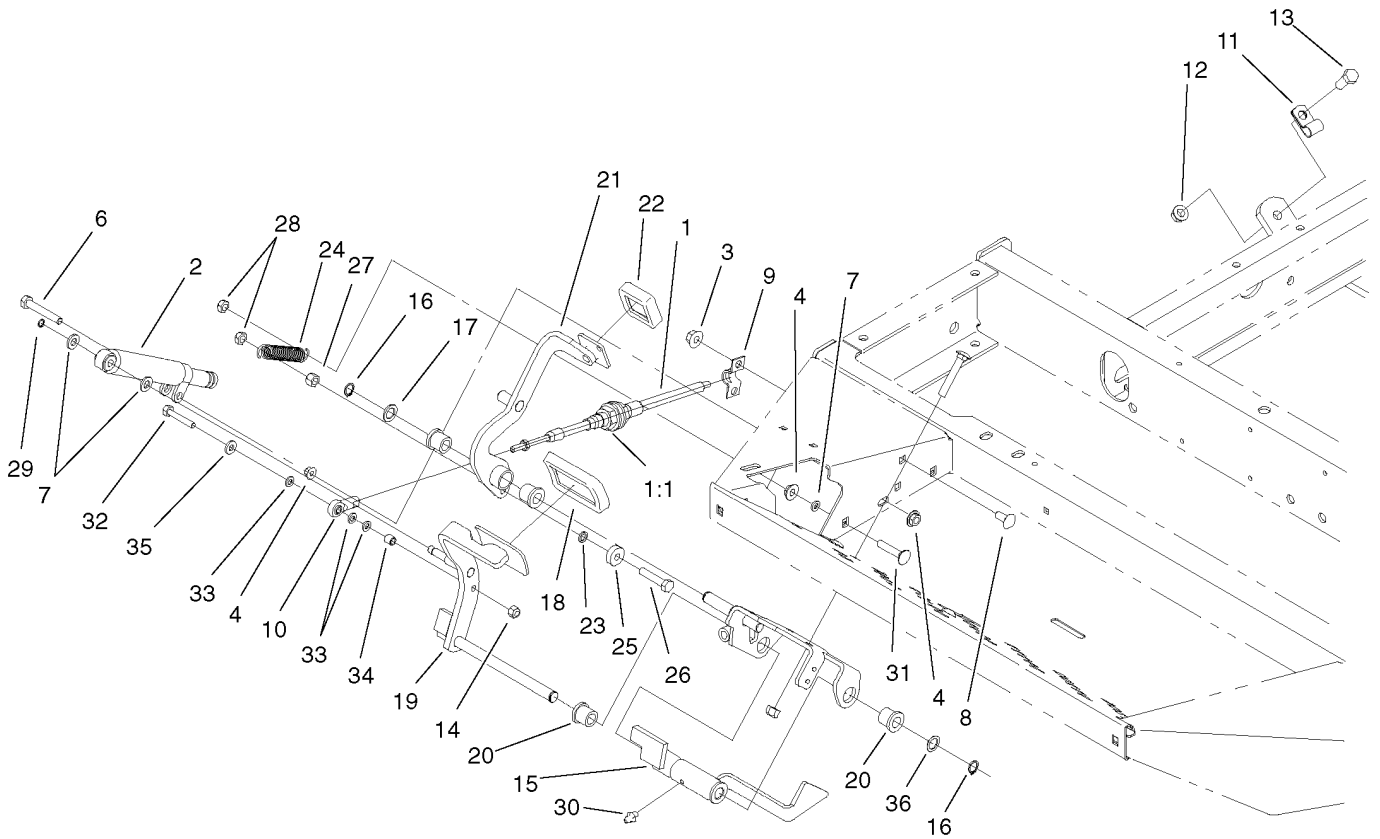
Ref	Part No.	Qty.	Description
20:2	218-461	1	Nut-HH
21	63-8360	2	Key-Ignition
22	95-8999	1	Switch
23	100-4834	1	Decal-Console
24	100-4823	1	Harness-Wire
25	99-3401-03	1	Lever-Valve, Lock
26	3290-477	1	Washer-Curved
27	63-3410	1	Screw-Shoulder
28	32144-10	5	Screw-HWH
29	99-3463	1	Controller-Glow
32	100-4918	4	Diode
33	99-3558	1	Decal-Console, Ce
34	3290-148	2	Nut-HF
35	104-4875	1	Harness-Wire, Jumper
36	3290-378	1	Tie-Cable



Front Platform Assembly

Ref	Part No.	Qty.	Description
1	32128-44	18	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	5	Bolt-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	106-4154	1	Floorplate ASM
19:3	99-3478	1	Tread-Foot
19:4	99-3444	1	Decal-Mow/Transport
20	99-3444	1	Decal-Mow/Transport
21	99-3478	1	Tread-Foot
22	106-2661-01	1	Plate-Support, Red
25	3234-5	10	Screw

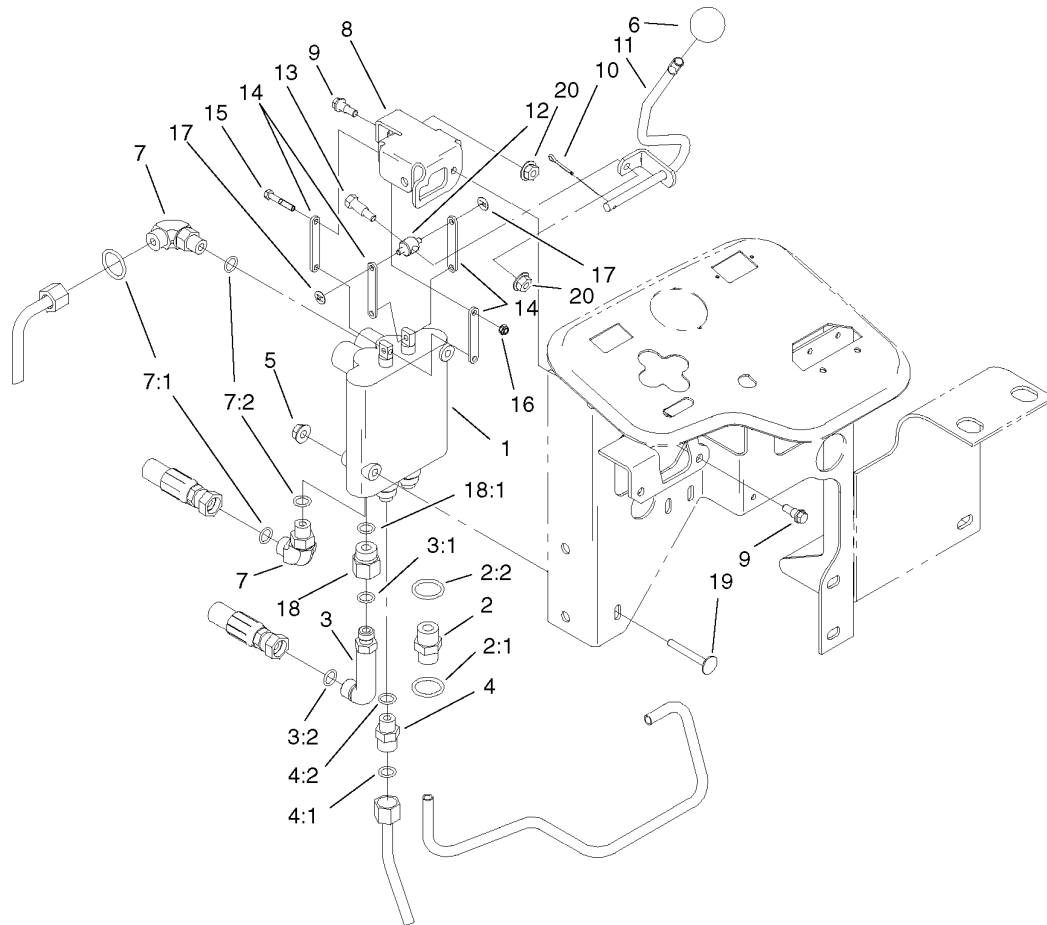
Ref	Part No.	Qty.	Description
26	99-3388	1	Decal-Sidewinder
27	99-3565	1	Nut-Square
28	3217-6	1	Nut-Hex
29	3256-23	2	Washer-Flat
30	3296-29	1	Nut-Lock, NI
31	2412-103	1	Clamp
32	100-4871	1	Bracket-Switch, Neutral
33	100-4872	1	Plate-Switch, Neutral
34	3229-20	1	Screw-CARR
35	3256-14	1	Washer-Flat
36	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

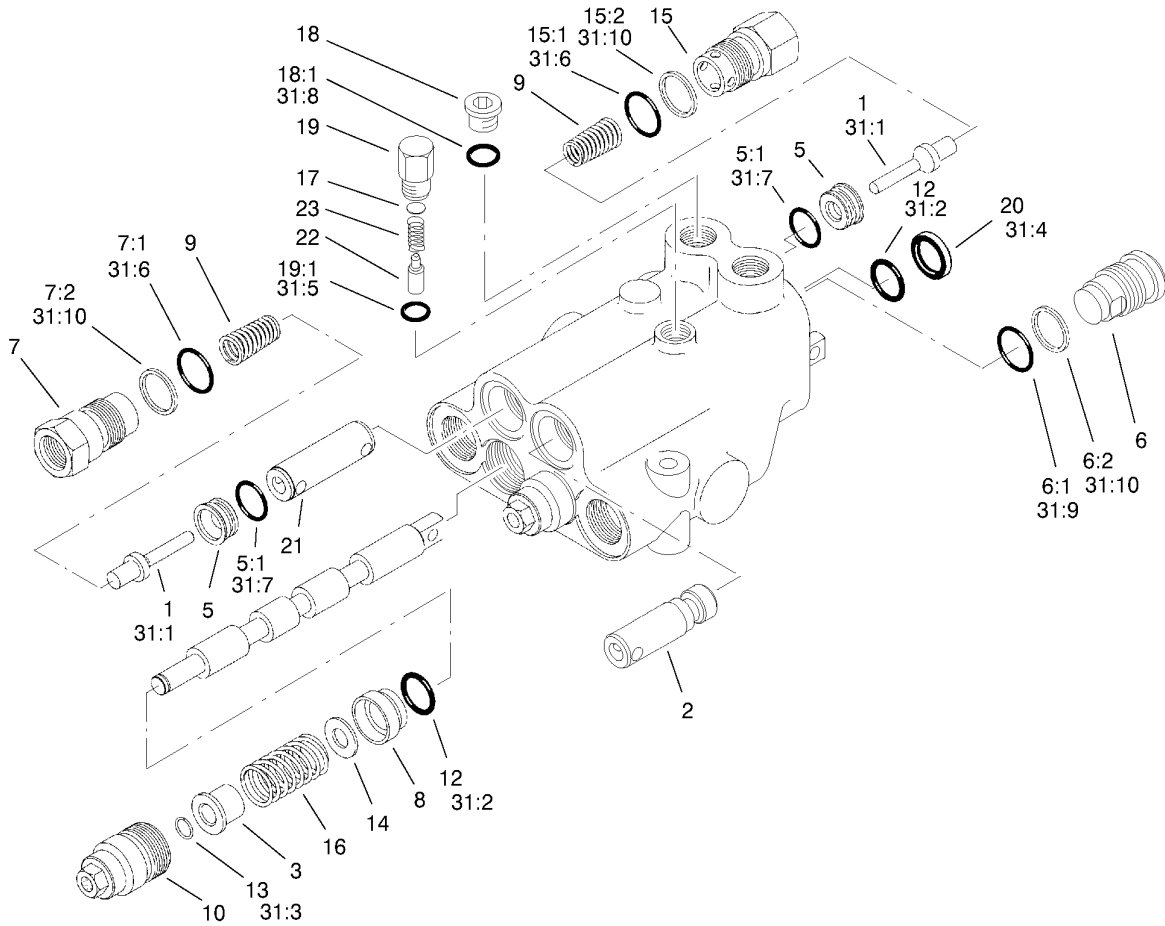
Ref	Part No.	Qty.	Description
1	100-4815	1	Cable-Control, Traction
1:1	3220-1	2	Nut-Jam
2	76-8870	1	Lever Damper ASM
3	32128-20	2	Nut-HF
4	32128-44	3	Nut
6	322-10	1	Screw-HH
7	3256-23	3	Washer-Flat
8	3230-23	2	Screw-CARR
9	93-2092	1	Clamp-Cable
10	2411-41	1	Joint-Ball, Superior
11	2412-10	1	R-Clamp
12	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	104-4852-03	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
24	99-3476	1	Spring-Extension

Ref	Part No.	Qty.	Description
25	251-259	1	Bearing
26	322-7	1	Screw-HH
27	3296-29	1	Nut-Lock, NI
28	3296-47	2	Nut-Lock, NI
29	32151-3	1	Ring-Grip, EXT
30	302-5	1	Fitting-Grease
31	3230-27	1	Screw-CARR
32	321-10	1	Screw-HH
33	33093-00	3	Washer-Flat
34	99-3545	1	Spacer
35	3256-22	1	Washer-Flat
36	73-0040	4	Washer-Thrust



Control Valve Installation Assembly

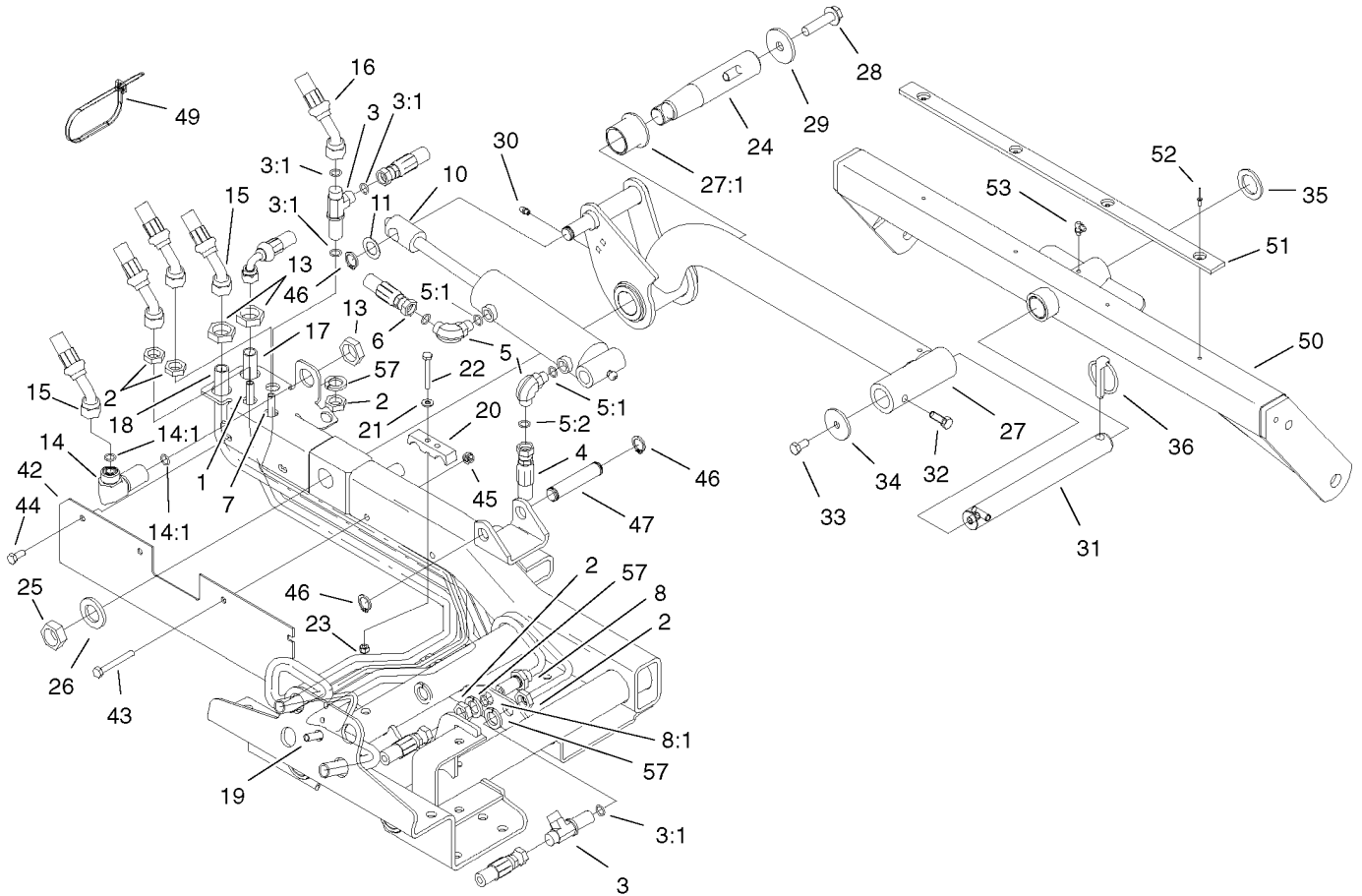
Ref	Part No.	Qty.	Description	Ref	Part No.	Qty.	Description
1	95-8581	1	Valve-2 Spool	17	93-3988	2	Pushnut-Tinnerman
2	340-3	1	Adapter	18	353-397	1	Reducer-Adapter
2:1	237-22	1	O-Ring	18:1	237-79	1	O-Ring
2:2	237-79	1	O-Ring	19	3230-33	2	Screw-CARR
3	69-4320	1	Fitting-90Ø	20	32128-32	3	Nut-HHF
3:1	237-22	1	O-Ring				
3:2	237-42	1	O-Ring				
4	340-2	1	Fitting-HYD, Straight				
4:1	237-22	1	O-Ring				
4:2	237-42	1	O-Ring				
5	32128-33	2	Nut-HF				
6	233-42	1	Knob				
7	340-77	2	Fitting-HYD, 90Ø				
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				



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	O-Ring
6:2	58-6370	1	Washer
7	99-3527	2	Plug ASM
7:1	60-5720	1	O-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	O-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

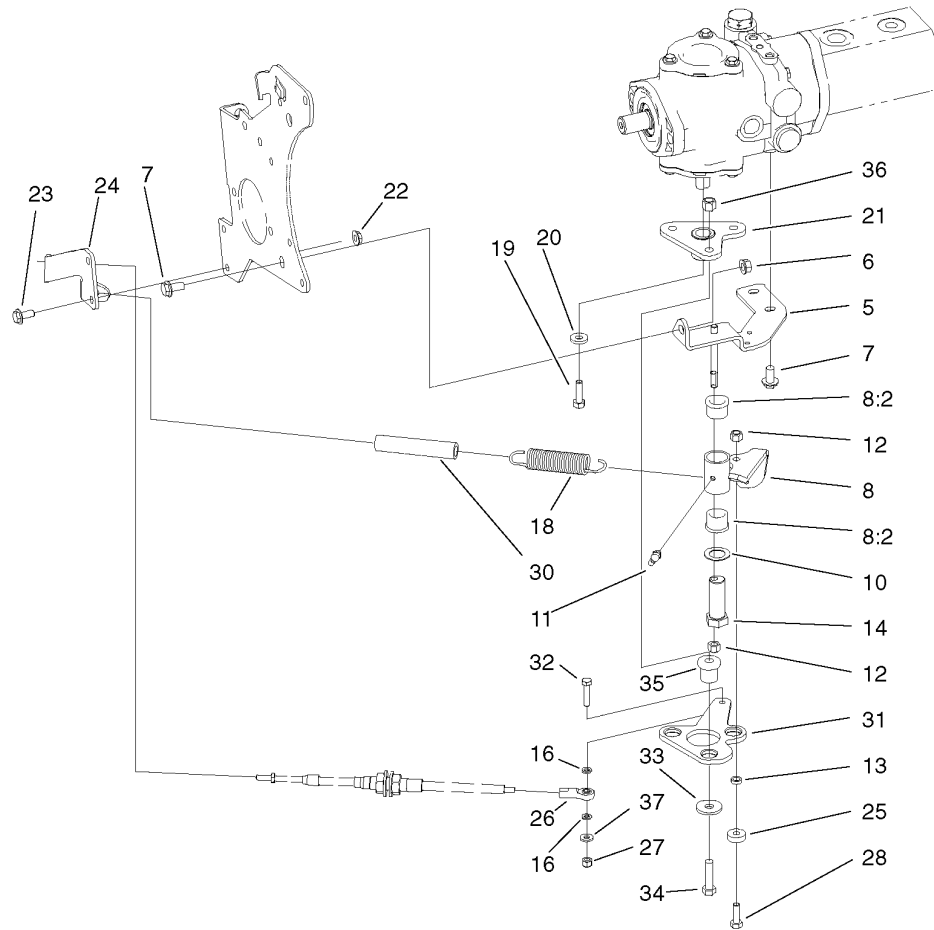
Ref	Part No.	Qty.	Description
19	58-6780	1	Plug
19:1	58-6790	1	O-Ring
20	58-6320	2	Wiper
21	99-3528	1	Plunger
22	58-6770	1	Plunger
23	58-6760	1	Spring
31	99-3530	1	Seal Kit
31:1	58-6290	3	Poppet
31:2	58-6450	4	O-Ring
31:3	58-6460	2	Ring
31:4	58-6320	2	Wiper
31:5	58-6790	1	O-Ring
31:6	60-5720	2	O-Ring
31:7	58-6340	2	O-Ring
31:8	237-42	1	O-Ring
31:9	60-5720	2	O-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	Nut-Lock
3	340-68	2	Fitting-Tee, Bulkhead
3:1	237-22	3	O-Ring
4	104-0407	1	Hose ASM
5	340-77	2	Fitting-HYD, 90°
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
10	95-8978	1	Cylinder-HYD
11	3-6498	1	Washer-Thrust
13	340-74	3	Locknut-Bulkhead
14	340-72	1	Fitting-HYD, Bulkhead, 90°
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
21	3256-22	4	Washer-Flat

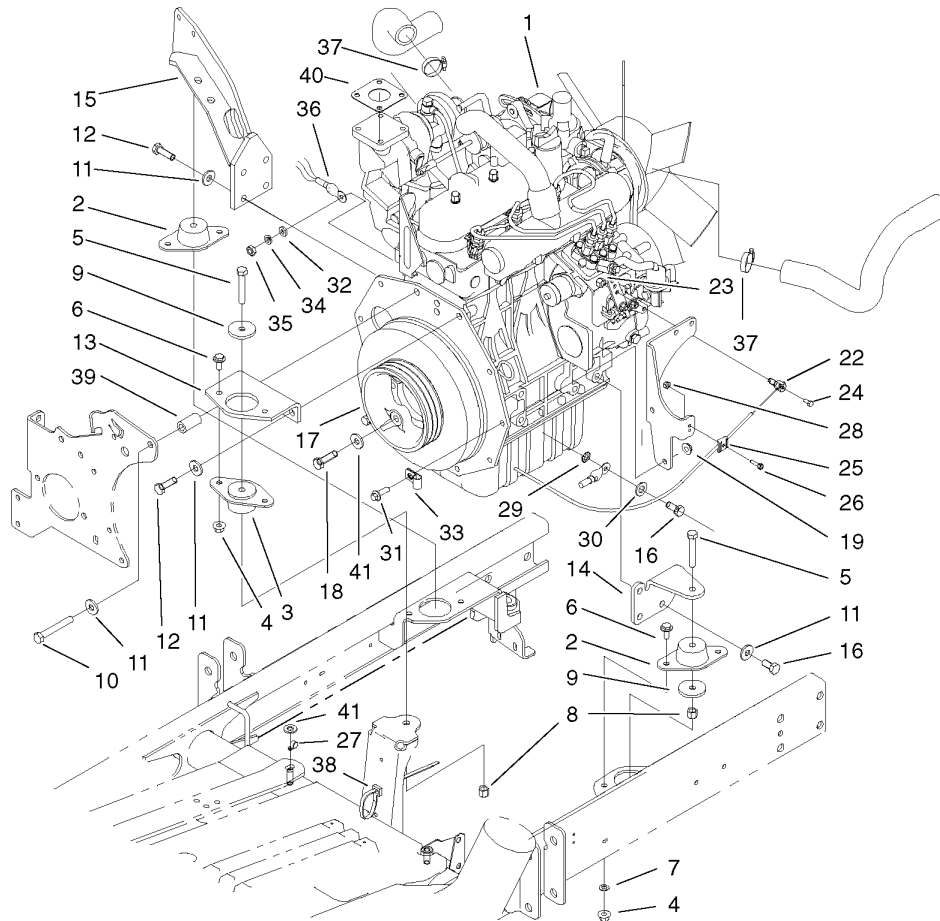
Ref	Part No.	Qty.	Description
22	321-11	2	Screw-HH
23	3296-42	2	Nut-Lock, NI
24	95-8990	1	Shaft-Pivot, Rear
25	3220-9	1	Nut-Jam
26	86-1480	1	Washer
27	100-4938	1	Rear Lift Arm ASM
27:1	69-6470	2	Bushing-Castor
28	3234-27	1	Screw-Flange
29	75-7730	1	Washer-Thrust
30	302-5	1	Fitting-Grease
31	100-4944	1	Shaft-Pivot, Cutting Unit
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
42	104-0453-03	1	Guard
43	322-12	2	Screw-HH
44	322-3	2	Screw-HH
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



Neutral Arm Assembly

Ref	Part No.	Qty.	Description
5	95-8960-03	1	Bracket-Neutral
6	32128-43	1	Nut-Flange
7	3234-1	3	Screw-HHF
8	104-0422	1	Neutral Arm ASM
8:2	256-113	2	Bushing-Flange
10	3-6498	1	Washer-Thrust
11	302-60	1	Fitting-Grease
12	3296-29	2	Nut-Lock, NI
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
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

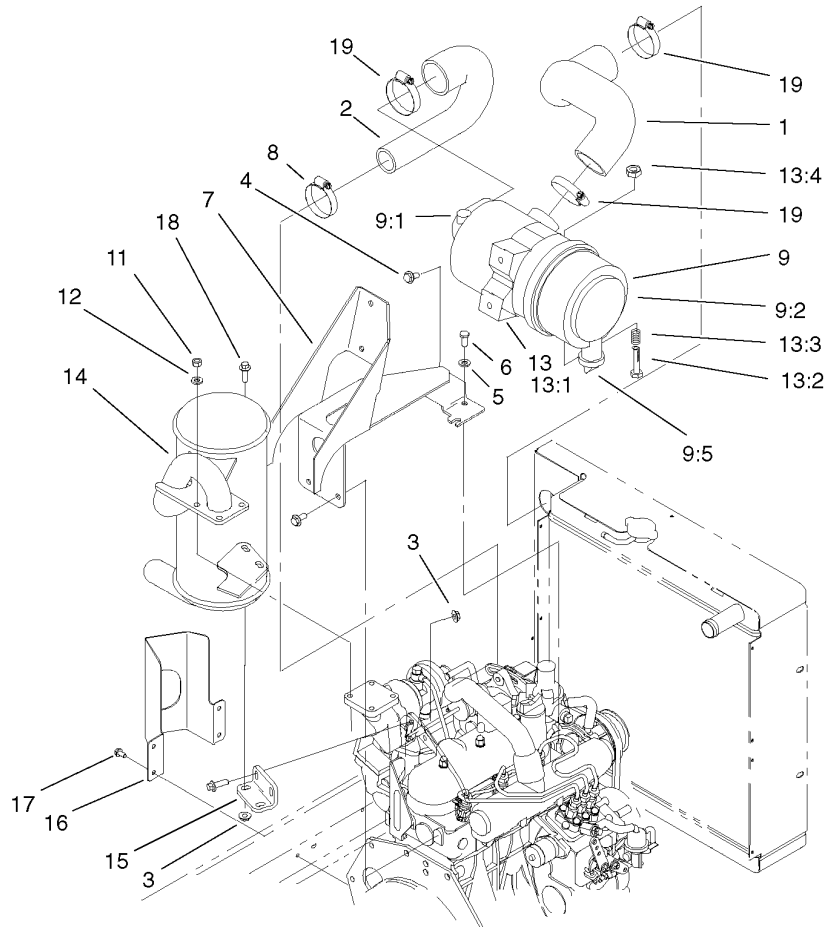
Ref	Part No.	Qty.	Description
32	321-8	1	Screw-HH
33	2844	3	Washer
34	95-3857	3	Screw-Head, Button
35	63-9750	3	Mount
36	3296-39	3	Nut-Lock, NI
37	3256-22	1	Washer-Flat



Engine Assembly

Ref	Part No.	Qty.	Description
1	100-4901	1	Engine-Kubota
2	83-1030	2	Mount-Engine
3	93-5265	1	Mount-Engine
4	32128-20	6	Nut-HF
5	323-11	3	Screw-HH
6	3234-5	6	Screw
7	3255-8	1	Washer-Lock
8	3296-39	3	Nut-Lock, NI
9	80-8560	3	Washer-Hardened
10	42-9370	1	Bolt/Washer
11	80-6990	9	Washer-Hardened
12	95-8812	5	Screw-HH
13	99-3618-03	1	Mount-Engine, Front
14	95-8937-03	1	Mount-Engine, LH
15	100-4838-03	1	Mount-Engine
16	63-7790	4	Screw-Cap
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
26	32105-13	1	Screw-SHH

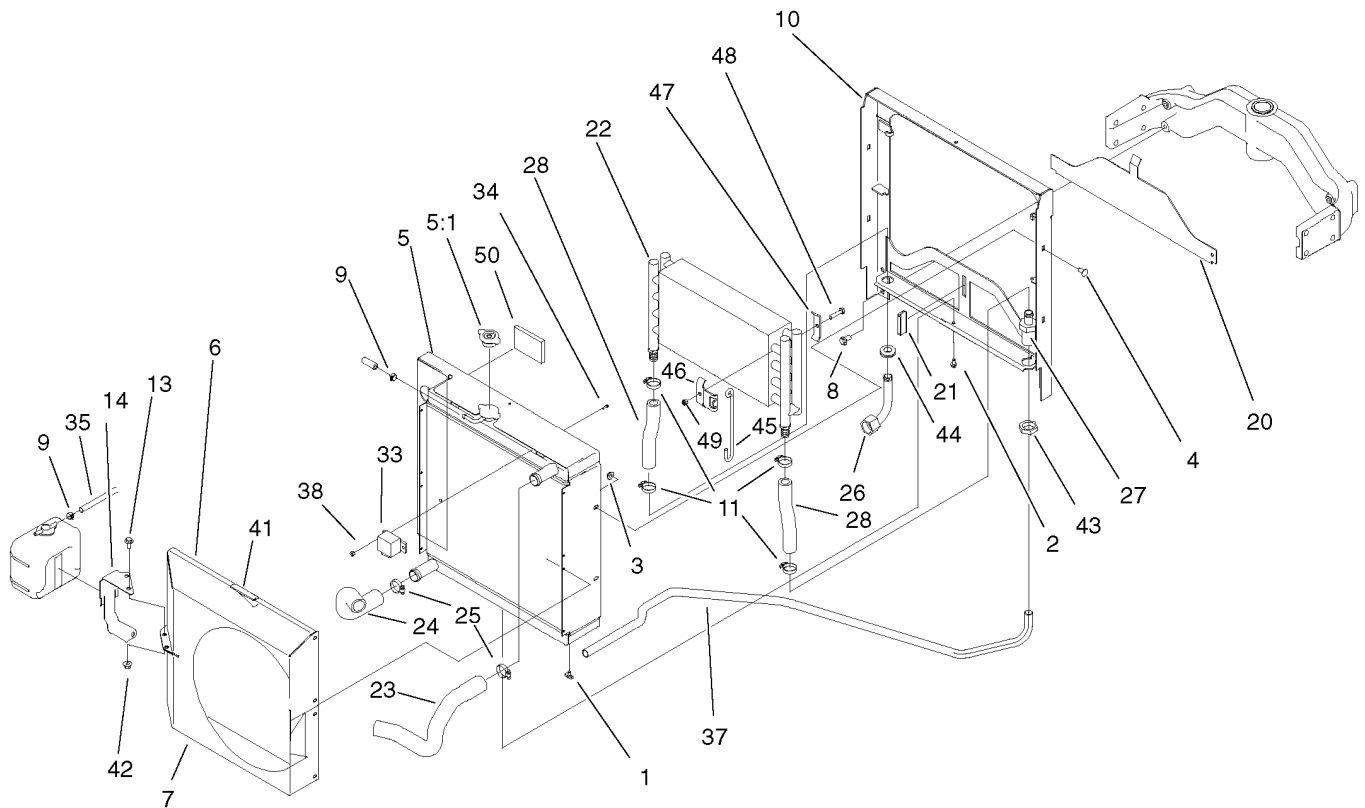
Ref	Part No.	Qty.	Description
27	2412-112	1	Clamp
28	3296-2	1	Nut-Lock
29	3255-9	1	Washer-Lock/EXT
30	3256-25	1	Washer-Flat
31	3234-17	2	Screw-HHF
32	3256-78	1	Washer-Flat
33	2412-10	1	R-Clamp
34	43-5930	1	Washer-Spring
35	48-7890	1	Nut
36	99-3441	1	Harness-Wire, Fusible Link
37	2412-34	2	Clamp-Hose
38	3290-378	14	Tie-Cable
39	95-8736	1	Spacer
40	98-9611	1	Gasket
41	3256-24	4	Washer-Flat



Air Cleaner and Muffler Assembly

Ref	Part No.	Qty.	Description
1	104-0420	1	Hose-Air Intake, Upper
2	99-3643	1	Hose-Air Intake, Lower
3	32128-44	6	Nut
4	3234-5	3	Screw
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
②*9:6	98-9763	1	Element ASM
9:7	104-4897	1	Gasket
11	33014-00	4	Nut-Hex
12	42-9850	4	Washer-Lock, Spring
13	100-4825	1	Band-Mounting, Air Cleaner
①13:1		1	Clamp ASM
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

Ref	Part No.	Qty.	Description
17	32144-4	4	Screw-HWH
18	3234-17	3	Screw-HHF
19	2412-130	3	Clamp-Hose

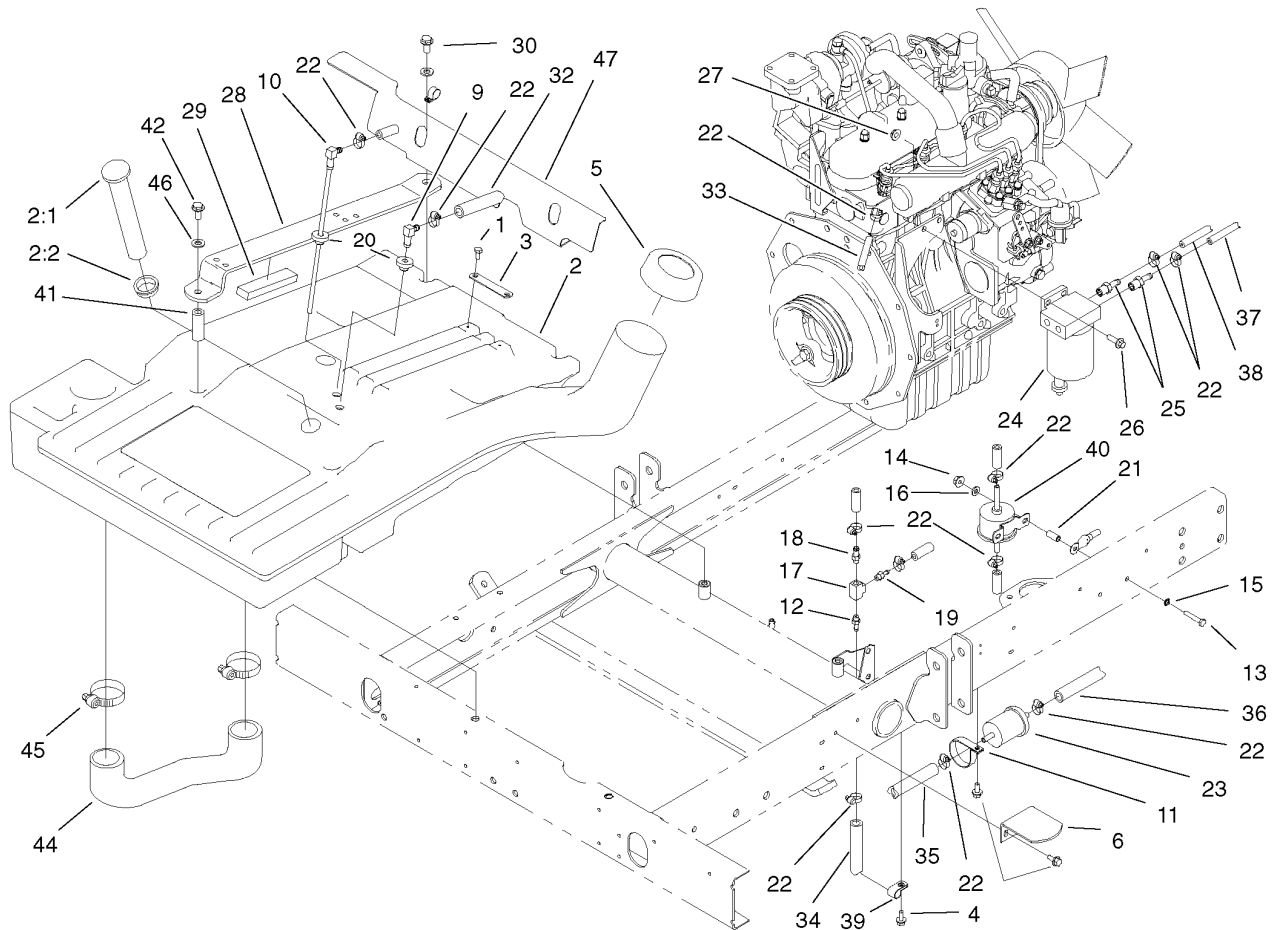


**Water Overflow Bottle
is furnished with engine**

Radiator Assembly

Ref	Part No.	Qty.	Description
1	304-46	1	Draincock
2	32104-116	11	Screw
3	32128-44	4	Nut
4	3230-1	4	Bolt-CARR
5	99-3637	1	Radiator
5:1	93-5957	1	Cap-Radiator
6	100-4885-03	1	Shroud-Fan, Top
7	100-4898-03	1	Shroud-Fan, Bottom
8	3234-1	4	Screw-HHF
9	92-2379	2	Clamp-Hose
10	104-4855-03	1	Radiator Frame ASM
11	2412-129	4	Clamp-Hose
13	3234-5	2	Screw
14	100-4899-03	1	Bracket-Reservoir
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	2	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

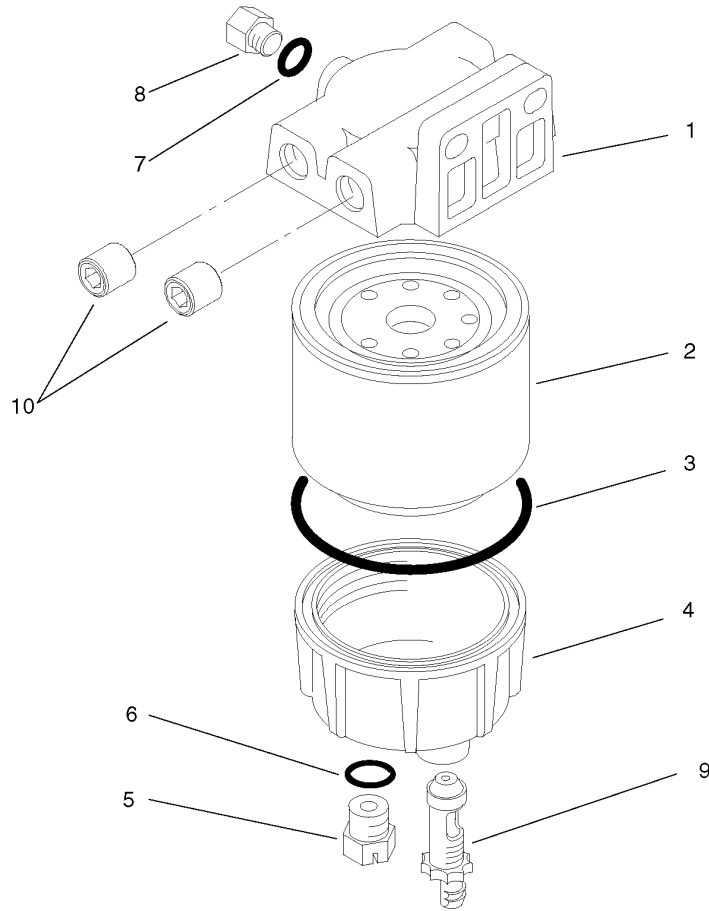
Ref	Part No.	Qty.	Description
34	32105-13	2	Screw-SHH
35	63-9640	1	Hose-Fuel
37	100-4924	1	Tube ASM
38	32128-17	2	Nut-Lock, Flange
41	93-6681	1	Decal-Warning, Fan
42	32128-20	2	Nut-HF
43	340-126	1	Nut-Bulkhead
44	100-4866	1	Grommet
45	100-4858	2	Form-Wire
46	100-4859	2	Bracket-Cooler, Keeper
47	100-4860	2	Bracket-Clamp
48	322-17	2	Screw-HH
49	3296-47	2	Nut-Lock, NI
50	104-9459	4	Seal-Foam



Fuel System Assembly

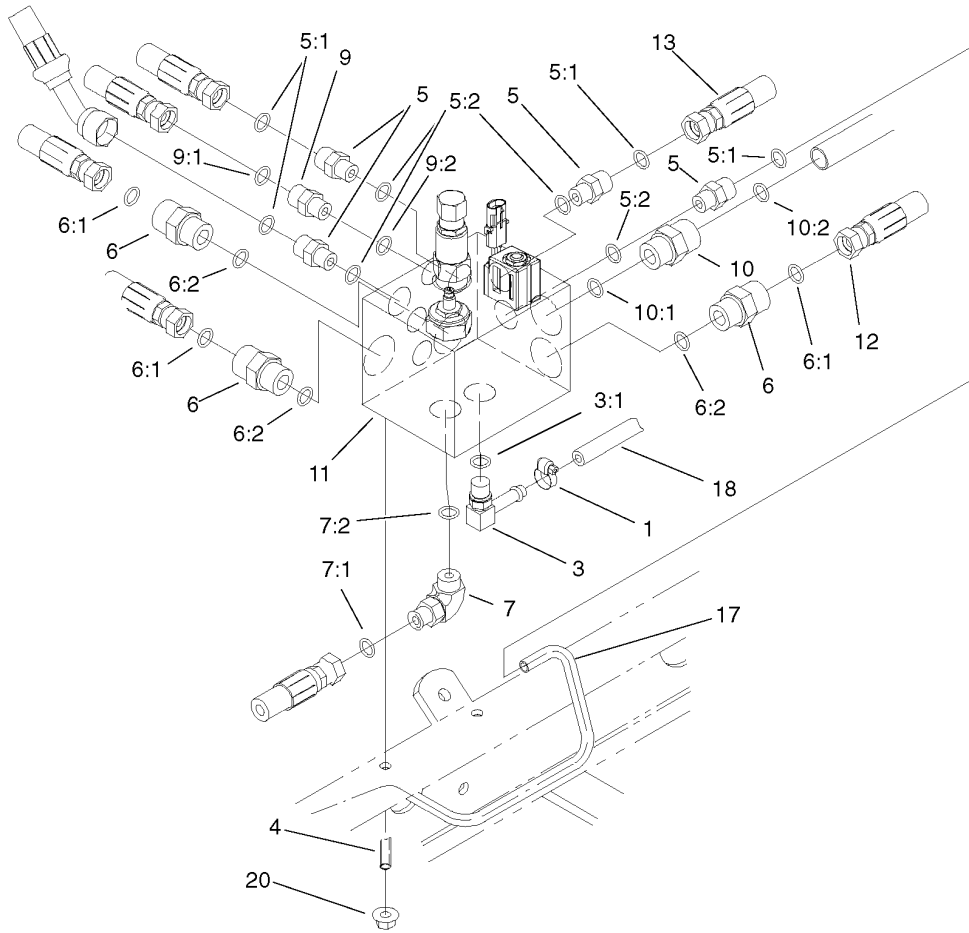
Ref	Part No.	Qty.	Description
1	321-2	2	Screw-HH
2	105-7865	1	Tank-Fuel
2:1	95-8971	1	Guage-Fuel
2:2	95-8972	1	Grommet
3	95-8881	1	Strap-Line, Fuel
4	32144-10	4	Screw-HWH
5	95-4193	1	Diesel Gas Cap ASM
6	95-8968-03	1	Support-Tank, Fuel
9	46-6550	1	Fitting-HYD, 90Ø
10	66-8121	1	Standpipe
11	2412-148	1	Clamp-R
12	304-73	1	Connector-Hose
13	321-9	2	Screw-HH
14	32128-33	2	Nut-HF
15	3255-7	1	Washer-Lock/EXT
16	3256-22	2	Washer-Flat
17	354-20	1	Fitting-Tee
18	354-21	1	Fitting-Barb
19	354-22	1	Fitting-Barb
20	46-6560	2	Bushing
21	87-4710	2	Spacer-Brake, Parking
22	2412-108	13	Clamp-Worm
23	98-7612	1	Filter-Fuel
24	98-9305	1	Filter-Water/Fuel

Ref	Part No.	Qty.	Description
25	353-783	2	Fitting
26	3234-17	2	Screw-HHF
27	32128-44	2	Nut
28	104-0467-03	2	Strap-Support, Seat
29	95-8896	2	Foam
30	3234-11	2	Screw-HHF
32	71-3380	1	Hose-Fuel
33	99-3498	1	Return-Line, Fuel
34	99-3185	1	Hose-Fuel
35	71-3383	1	Hose-Fuel
36	19-3250	1	Hose-Fuel
37	63-9640	1	Hose-Fuel
38	104-4857	1	Hose-Fuel
39	2412-73	1	Clamp-R
40	99-3464	1	Pump-Fuel
41	104-0466	2	Spacer-Tube
42	323-14	2	Screw-HH
44	105-4094	1	Hose-Formed
45	2412-129	2	Clamp-Hose
46	3256-24	2	Washer-Flat
47	104-4833-03	1	Shield-Heat



Water / Fuel Filter Assembly No. 98-9305

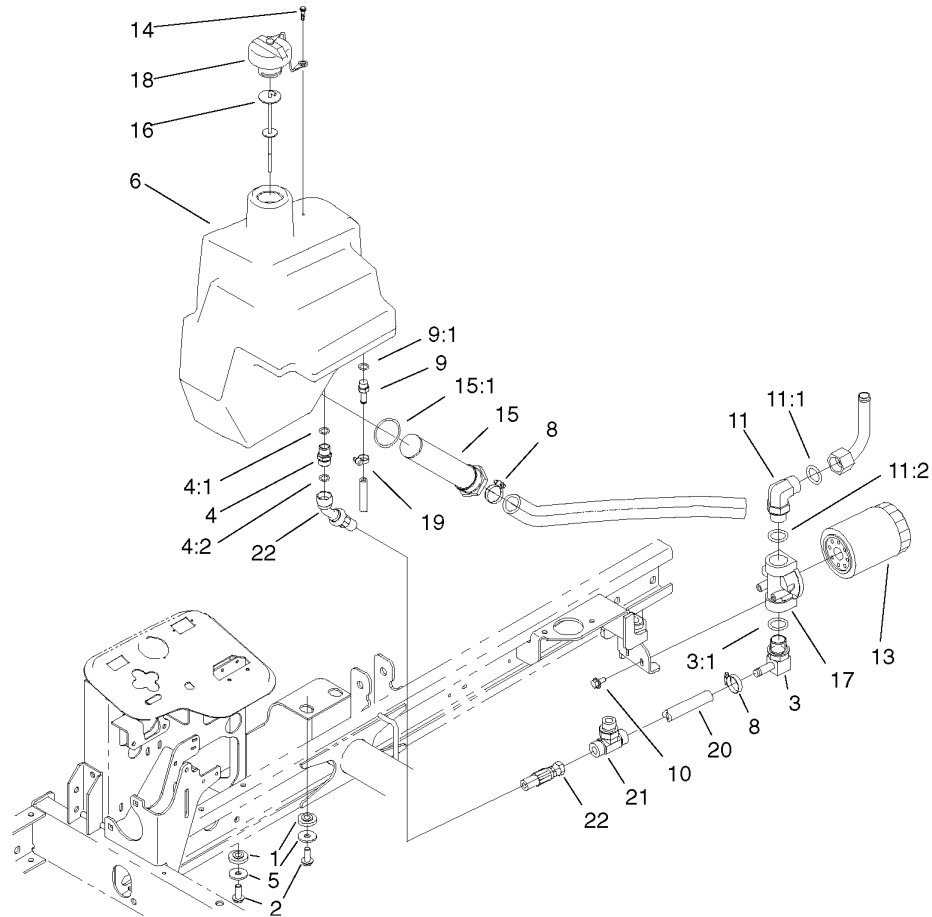
Ref	Part No.	Qty.	Description
1	98-9772	1	Head-Filter
2	98-9764	1	Element
3	98-9774	1	O-Ring-Base, Filter
4	98-9775	1	Base-Filter
5	98-9773	1	Plug-Base, Filter
6	237-42	1	O-Ring
7	237-78	1	O-Ring
8	98-9776	1	Plug-Head, Filter
9	98-9777	1	Drain Valve ASM
10	285-22	2	Plug-Pipe



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	Fitting-HYD, Straight
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-HYD, 90°
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-HYD
10:1	237-80	1	O-Ring
10:2	237-58	1	O-Ring
11	104-4876	1	Manifold ASM
12	104-0488	1	Hose ASM
13	92-7595	1	Hose ASM
17	100-4827	1	Tube ASM
18	80-7342	1	Hose ASM

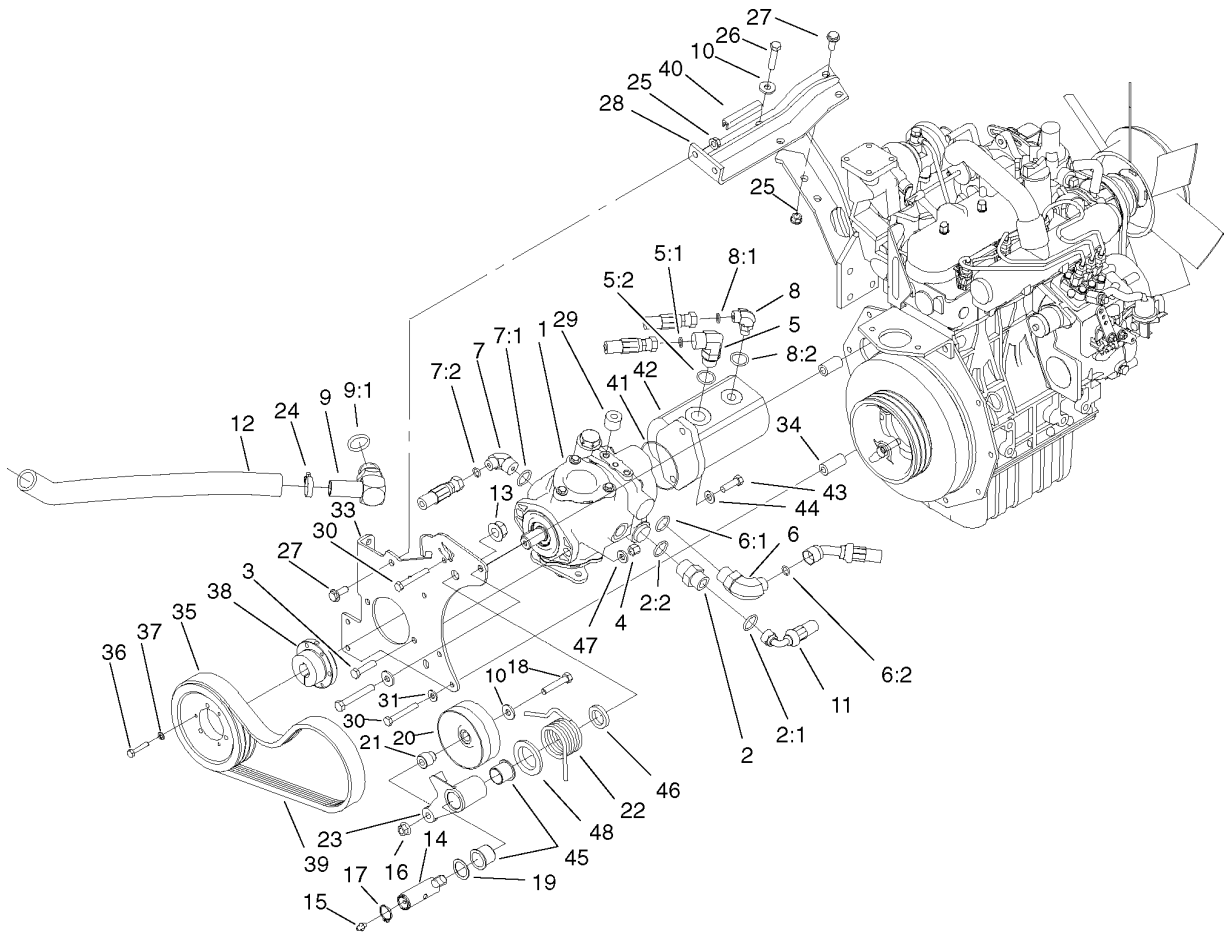
Ref	Part No.	Qty.	Description
20	32128-20	2	Nut-HF



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, 90°
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	104-4840	1	Tank-HYD
8	2412-34	2	Clamp-Hose
9	353-979	1	Fitting-Barb, Straight
9:1	237-42	1	O-Ring
10	3234-13	2	Screw-HHF
11	340-142	1	Elbow-90°
11:1	237-58	1	O-Ring
11:2	237-81	1	O-Ring
13	86-3010	1	Filter-Oil, Transmission
14	57-5420	1	Screw-Shoulder
15	104-7546	1	Strainer-Tank
15:1	340-136	1	O-Ring
16	75-3710	1	Dipstick
17	92-5821	1	Filter Head ASM
18	93-7160	1	Cap-Oil, HYD
19	2412-36	1	Clamp-Hose

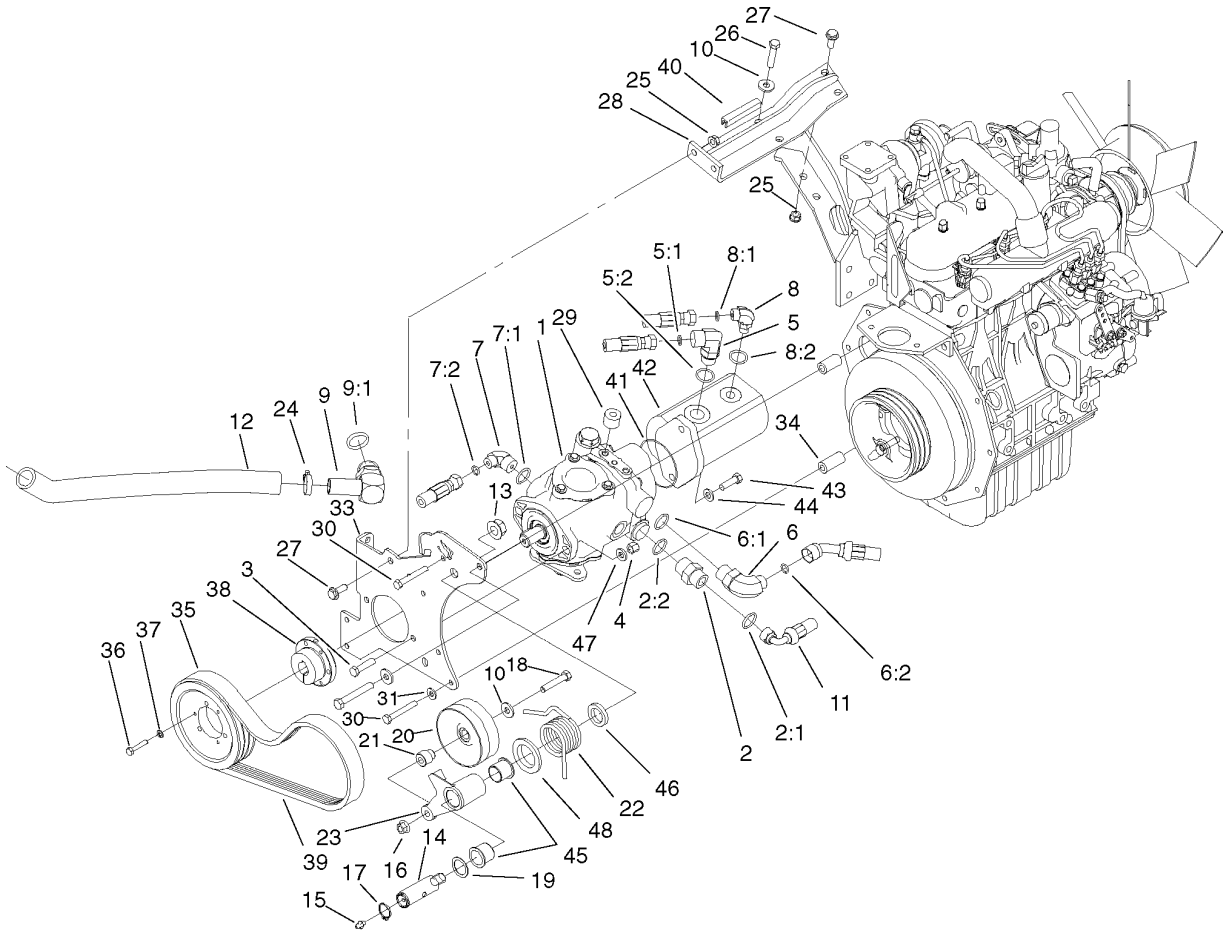
Ref	Part No.	Qty.	Description
20	104-0486	1	Hose ASM
21	104-4836	1	Fitting-Tee
22	104-0487	1	Hose ASM



Hydrostat Assembly

Ref	Part No.	Qty.	Description
1	104-4890	1	Pump-Piston, 1.44 Cid
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	Fitting-HYD, 90Ø
5:1	237-65	1	O-Ring
5:2	237-80	1	O-Ring
6	340-139	1	Fitting-HYD, 90Ø
6:1	237-81	1	O-Ring
6:2	237-65	1	O-Ring
7	340-18	1	Fitting-HYD, 90Ø
7:1	237-79	1	O-Ring
7:2	237-22	1	O-Ring
8	340-77	1	Fitting-HYD, 90Ø
8:1	237-22	1	O-Ring
8:2	237-42	1	O-Ring
9	95-3502	1	Fitting-Elbow
9:1	237-81	1	O-Ring
10	80-6990	3	Washer-Hardened
11	105-1214	1	Hose ASM
12	104-5486	1	Hose
13	32128-54	1	Nut-Flange

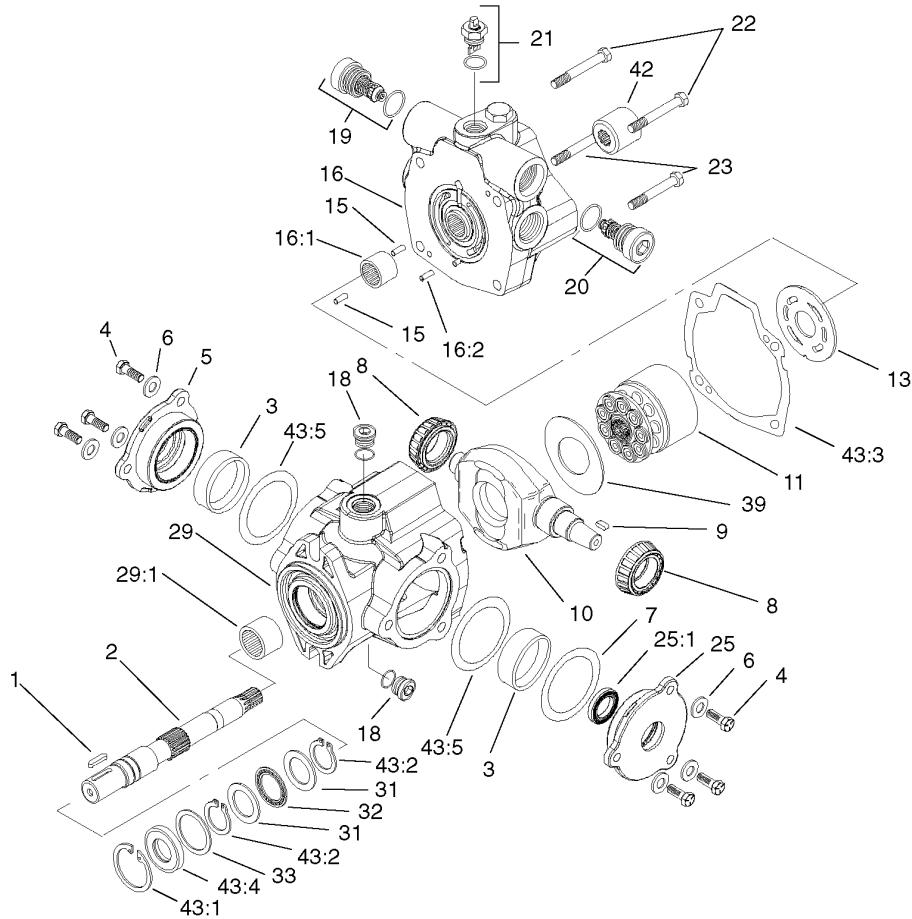
Ref	Part No.	Qty.	Description
14	99-3624	1	Shaft-Pivot, Idler
15	302-5	1	Fitting-Grease
16	32128-21	1	Nut-HF
17	32151-36	1	Ring-Retaining
18	323-10	1	Screw-HH
19	74-1810	1	Washer
20	99-3621	1	Pulley-Idler
21	99-3622	1	Spacer-Idler
22	100-4844	1	Spring-Torsion
23	99-3623-03	1	Arm-Idler
24	2412-34	1	Clamp-Hose
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	HYD 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
48	72-4170	1	Washer

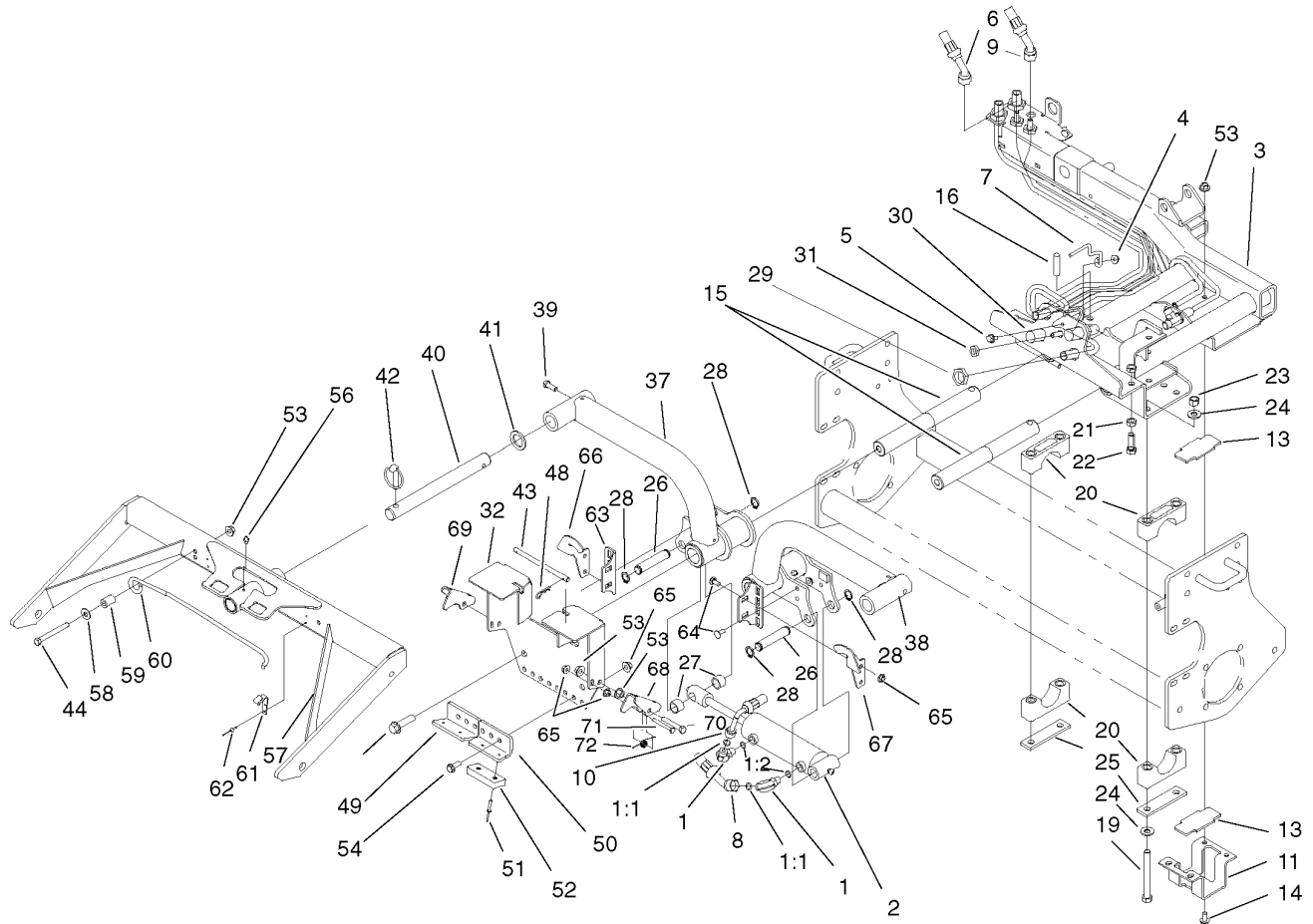
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Piston Pump Assembly No. 104-4890

Ref	Part No.	Qty.	Description
1	94-3645	1	Key
2	94-6359	1	Shaft-Drive
3	104-4046	2	Bearing-Cup
4	98-4640	6	Screw-Cap
5	98-4644	1	Plate-Cover
6	105-9762	6	Washer
7	100-3182	2	Shim Kit
8	98-4639	2	Bearing-Cone
9	94-3646	1	Key
10	104-4888	1	Swashplate
11	76-6070	1	Rotating Kit
13	104-0429	1	Plate-Cam
15	76-6150	2	Pin-Dowel
16	105-3813	1	Endcover Sub ASM
16:1	94-6368	1	Bearing
●16:2		1	Pin-Roll
18	74-9280	2	Plug ASM
19	104-4889	1	Relief Valve ASM
20	105-3812	1	Valve-Check
21	105-3811	1	Valve-Bypass
22	76-6170	2	Capscrew
23	76-6160	2	Capscrew
25	98-4645	1	Plate-Cover
●25:1		1	Seal-Shaft

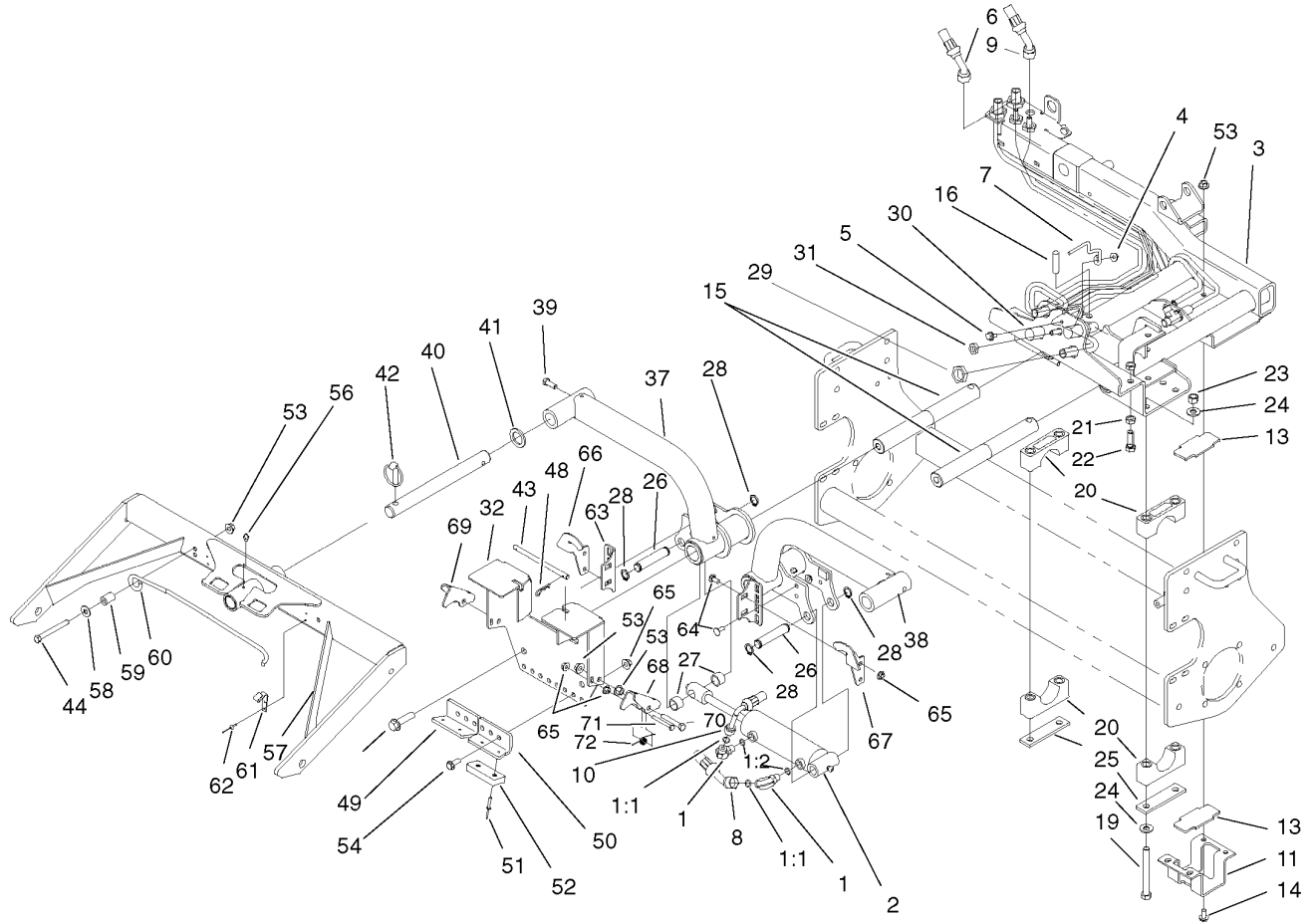
Ref	Part No.	Qty.	Description
29	100-3176	1	Housing ASM
29:1	94-6363	1	Bearing
31	252-71	2	Washer-Thrust
32	252-66	1	Bearing-Thrust
33	33-3720	1	Washer
39	98-4635	1	Insert-Plate, Cam
42	74-9040	1	Coupler
43	104-4868	1	Seal Repair Kit
43:1	32151-13	1	Ring-Retaining
43:2	32151-29	2	Ring-Retaining
43:3	33-4930	1	Gasket-Housing
43:4	104-4861	1	Seal-Shaft
43:5	100-3179	2	O-Ring



Carrier Assembly

Ref	Part No.	Qty.	Description
1	340-77	2	Fitting-HYD, 90°
1:1	237-22	1	O-Ring
1:2	237-42	1	O-Ring
2	95-8978	1	Cylinder-HYD
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
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	104-4865	8	Cap-Bearing
21	3218-5	4	Nut-Jam
22	325-6	2	Screw-HH
23	3296-23	8	Nut-Lock, NI
24	87-7270	16	Washer-Thrust

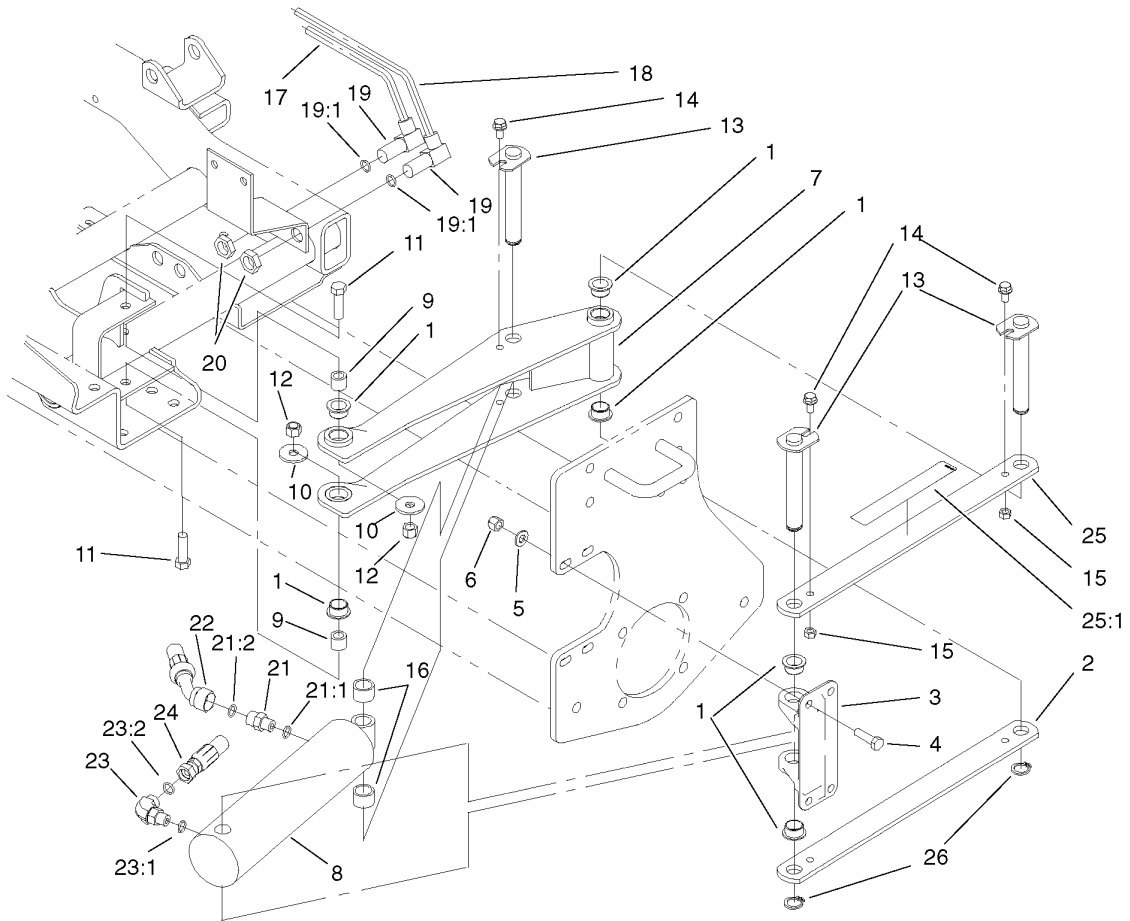
Ref	Part No.	Qty.	Description
25	99-3373	4	Bar-Support, Slide
26	95-8575	2	Pin
27	75-9590	2	Spacer-Cylinder
28	32120-93	4	Ring-Retaining
29	340-74	4	Locknut-Bulkhead
30	99-3640	1	Tube ASM
31	340-78	1	Locknut-Bulkhead
32	104-4820-03	1	Bracket-Stop, Carrier
37	104-0481	1	RH Liftarm ASM
38	104-0482	1	LH 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	14	Nut-Flange
54	3234-11	4	Screw-HHF
56	302-5	2	Fitting-Grease



Carrier Assembly (continued)

Ref	Part No.	Qty.	Description
57	106-4198	2	Front Carrier Frame ASM
58	3256-4	2	Washer-Flat
59	104-4613	2	Tube-Latch
60	104-4612	2	Rod-Latch
61	104-4237	2	Clip-Rod
62	3290-271	4	Rivet-Pop
63	104-4828-03	2	Bracket-Actuator
64	3230-23	8	Screw-CARR
65	32128-44	12	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	322-11	2	Screw-HH
72	104-4821	2	Spring-Torsion

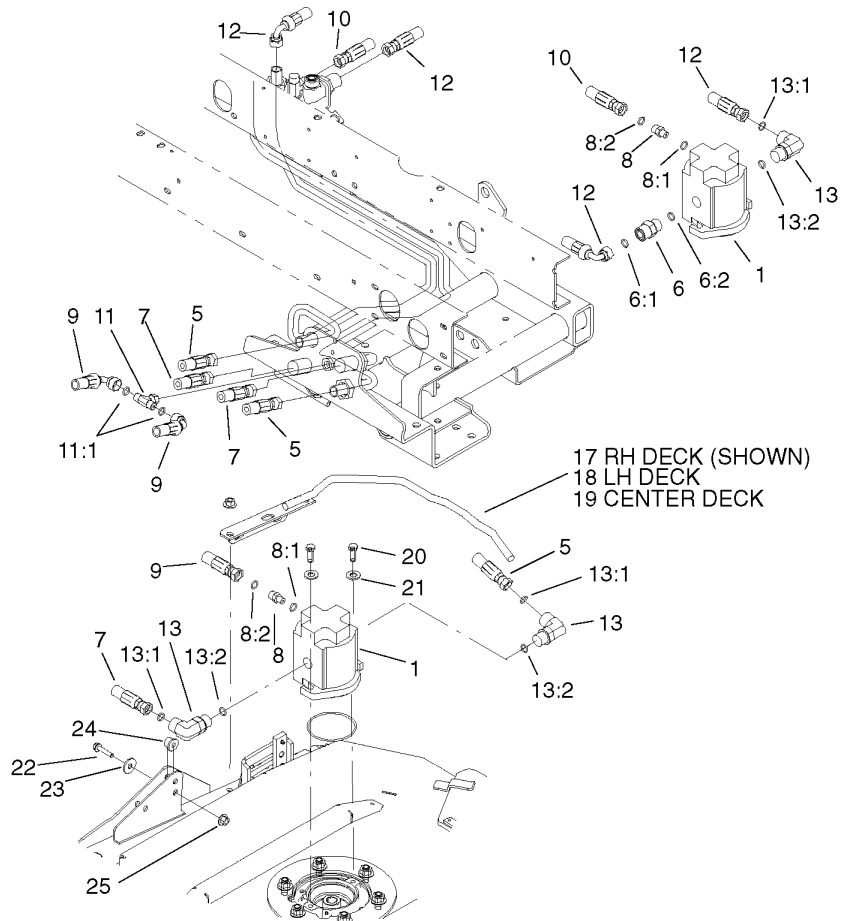
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Scissor Assembly

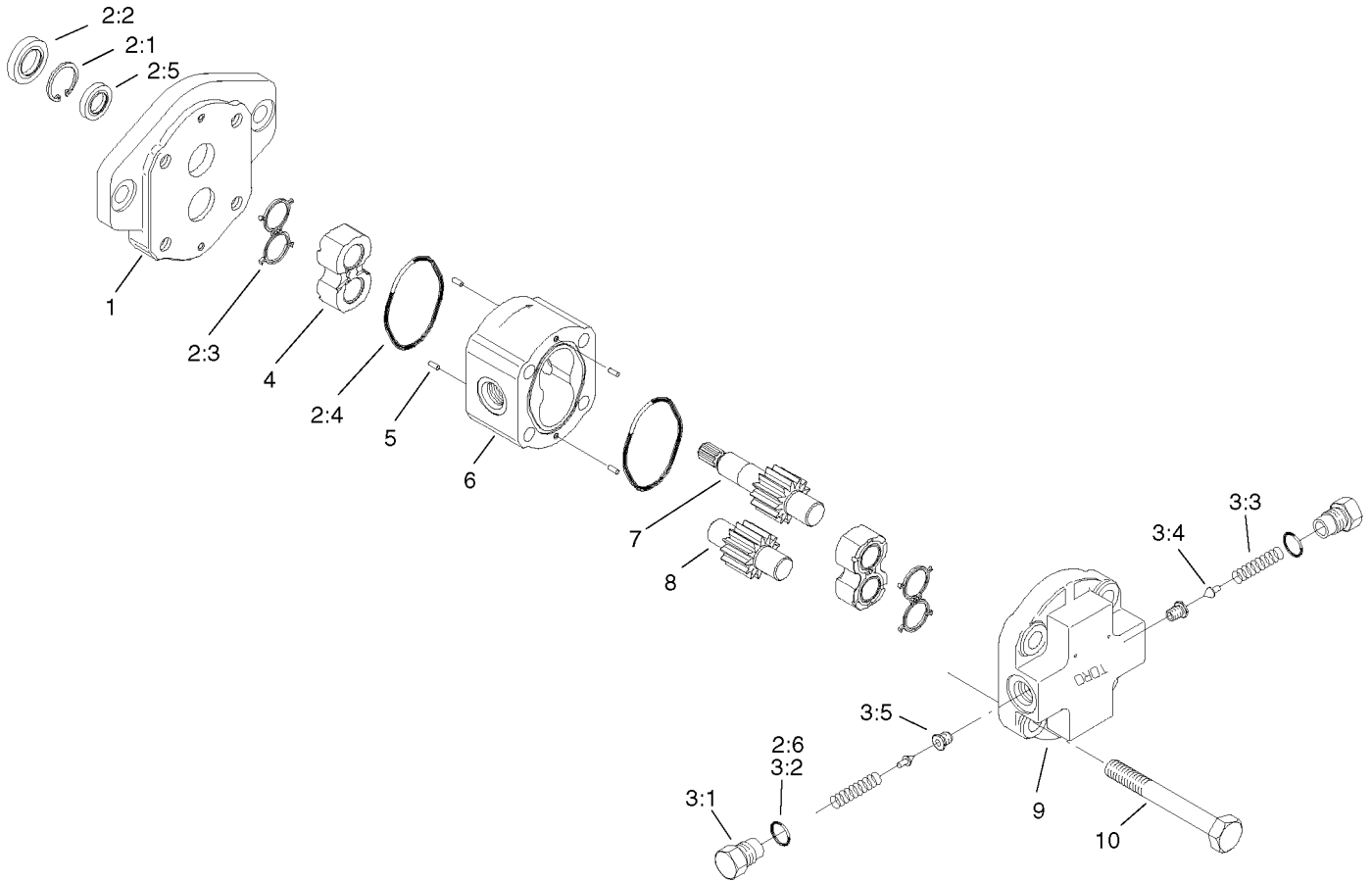
Ref	Part No.	Qty.	Description
1	95-8526	6	Bushing-Plastic
2	95-8527-03	1	Link-Scissor
3	95-8883	1	Mount-Scissor
4	323-7	4	Screw-HH
5	3256-24	4	Washer-Flat
6	3296-39	4	Nut-Lock, NI
7	95-8521-03	1	Frame-Scissor
8	95-8512	1	Cylinder-HYD
9	95-8603	2	Spacer
10	87-5330	2	Washer
11	324-6	2	Screw-HH
12	3296-48	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	Nut-Lock
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	Scissors Link ASM
25:1	94-3353	1	Decal-Point, Pinch
26	32120-93	2	Ring-Retaining



Deck Motor Assembly

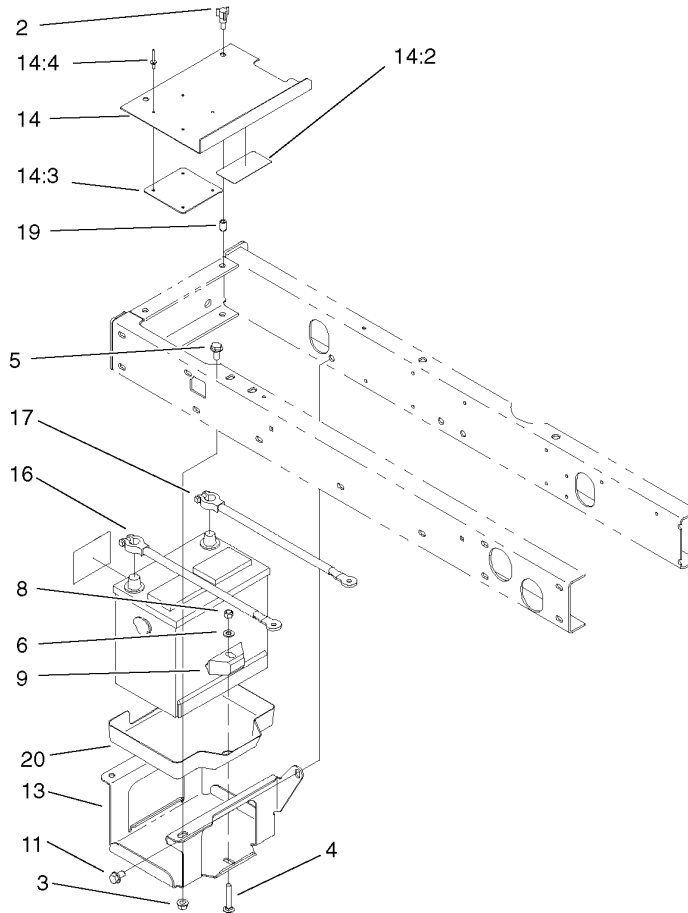
Ref	Part No.	Qty.	Description	Ref	Part No.	Qty.	Description
1	105-9820	3	Motor-HYD	24	95-8803	6	Bushing-Flange
5	105-1216	2	Hose ASM	25	32128-43	6	Nut-Flange
6	340-7	1	Adapter				
6:1	237-65	1	O-Ring				
6:2	237-80	1	O-Ring				
7	105-1215	2	Hose ASM				
8	340-92	3	Fitting-HYD, Straight				
8:1	237-78	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	5	Fitting-HYD, 90°				
13:1	237-65	1	O-Ring				
13:2	237-80	1	O-Ring				
17	106-2677-01	1	RH Foot Guard ASM				
18	106-2679-01	1	LH Foot Guard ASM				
19	106-2653-01	1	Foot Guard ASM				
20	3274-7	6	Screw-HSH				
21	3256-24	6	Washer-Flat				
22	3234-18	6	Screw-HHF				
23	93-8806	6	Washer-Hardened				



Hydraulic Motor Assembly No. 105-9820

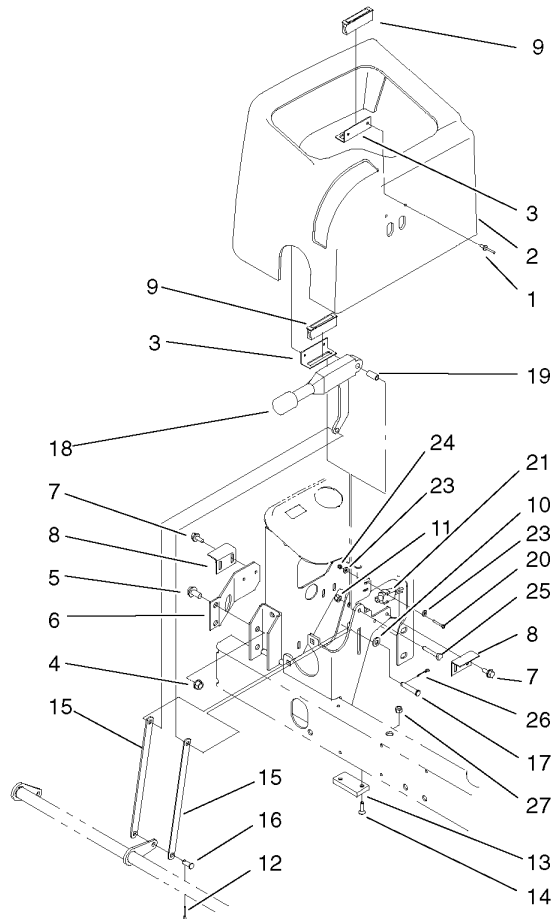
Ref	Part No.	Qty.	Description
1		1	Flange
2	105-9191	1	Seal Kit
2:1		1	Ring-Retaining
2:2		1	Seal-Shaft
2:3		2	Seal
2:4		2	O-Ring
2:5		1	Seal-Shaft
2:6		2	O-Ring
3	105-9192	2	Relief Valve Kit
3:1		1	Cap-Rv
3:2		1	O-Ring
3:3		1	Spring
3:4		1	Poppet
3:5		1	Seat-Rv
4		2	Block-Bushing
5		4	Pin-Dowel
6		1	Housing
7		1	Gear-Drive
8		1	Gear-Idler
9		1	Block-Valve
10		4	Bolt

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Battery Assembly

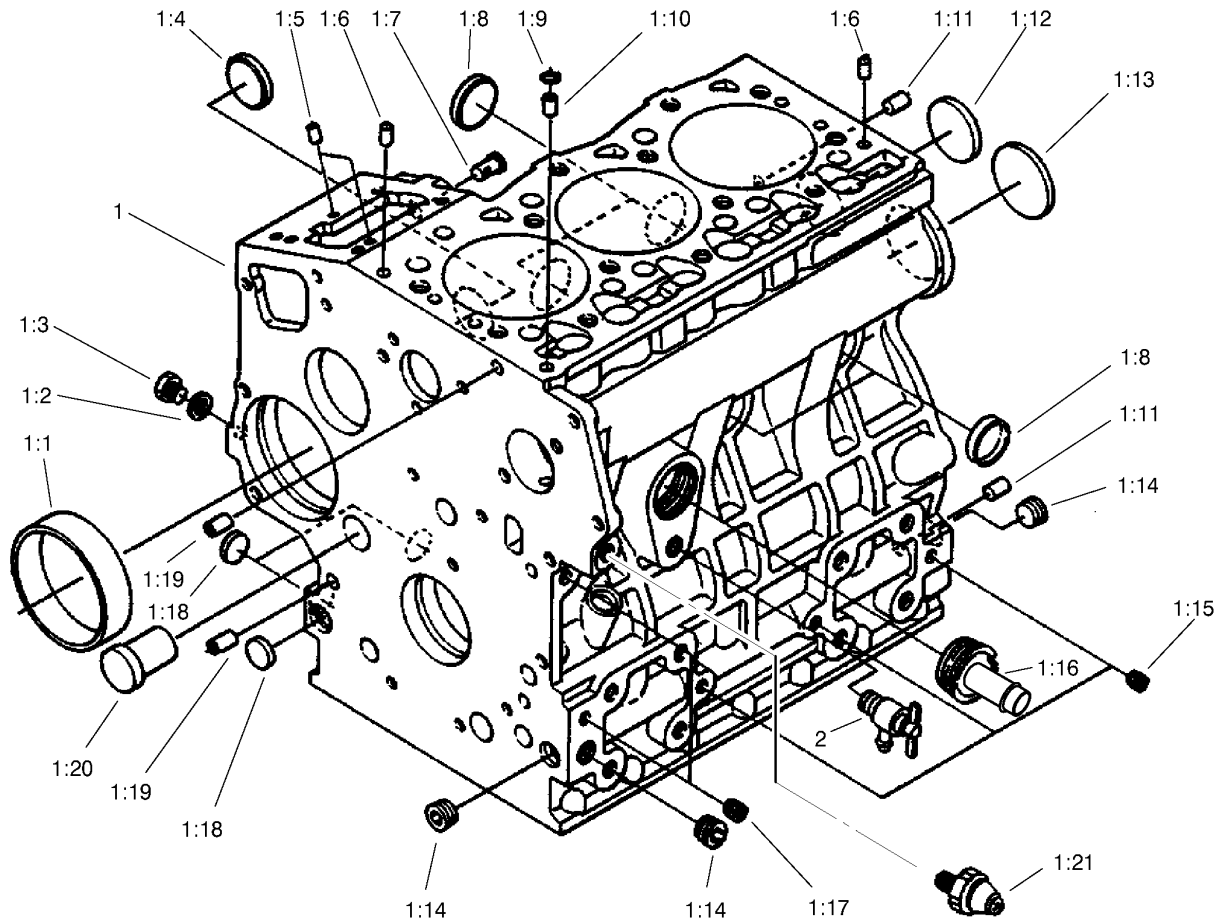
Ref	Part No.	Qty.	Description				
2	233-70	2	Knob-3 Star				
3	32128-43	3	Nut-Flange				
4	3230-6	1	Screw-CARR				
5	3234-1	3	Screw-HHF				
6	3256-23	1	Washer-Flat				
8	3296-29	1	Nut-Lock, NI				
9	66-2490	1	Retainer-Battery				
11	32144-15	1	Screw				
13	95-8796-03	1	Support-Battery				
14	99-3602	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	Insert-Nut				
20	99-3513	1	Tray-Battery				



Parking Brake Assembly

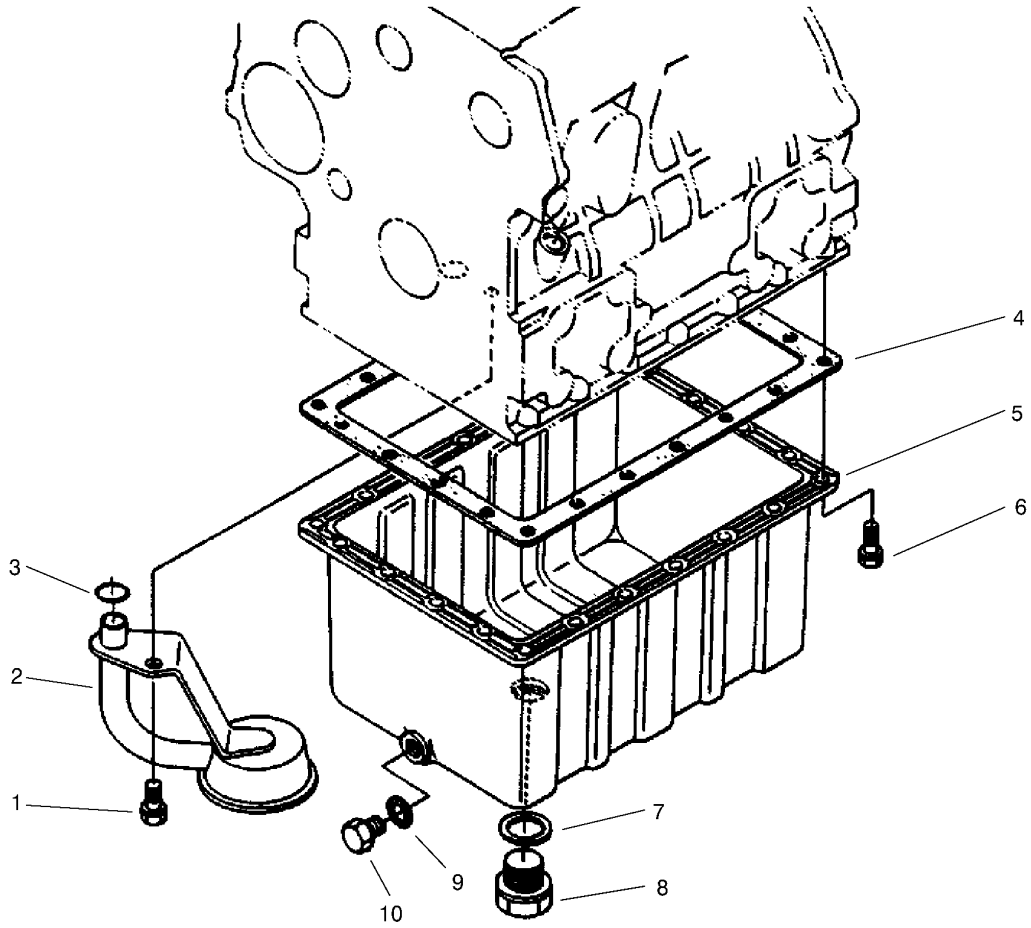
Ref	Part No.	Qty.	Description
1	3269-5	4	Rivet
2	95-8707	1	Cover-Dash
3	95-8763	2	Bracket-Hold Down, Cover
4	32128-43	2	Nut-Flange
5	3234-1	2	Screw-HHF
6	95-8764-03	1	Support-Magnet
7	32144-10	4	Screw-HWH
8	95-8765	2	Bracket-Strike, Magnet
9	58-4250	2	Catch-Magnetic
10	3256-23	1	Washer-Flat
11	3296-42	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	321-10	1	Screw-HH

Ref	Part No.	Qty.	Description
26	3272-6	1	Pin-Cotter
27	32128-32	2	Nut-HHF



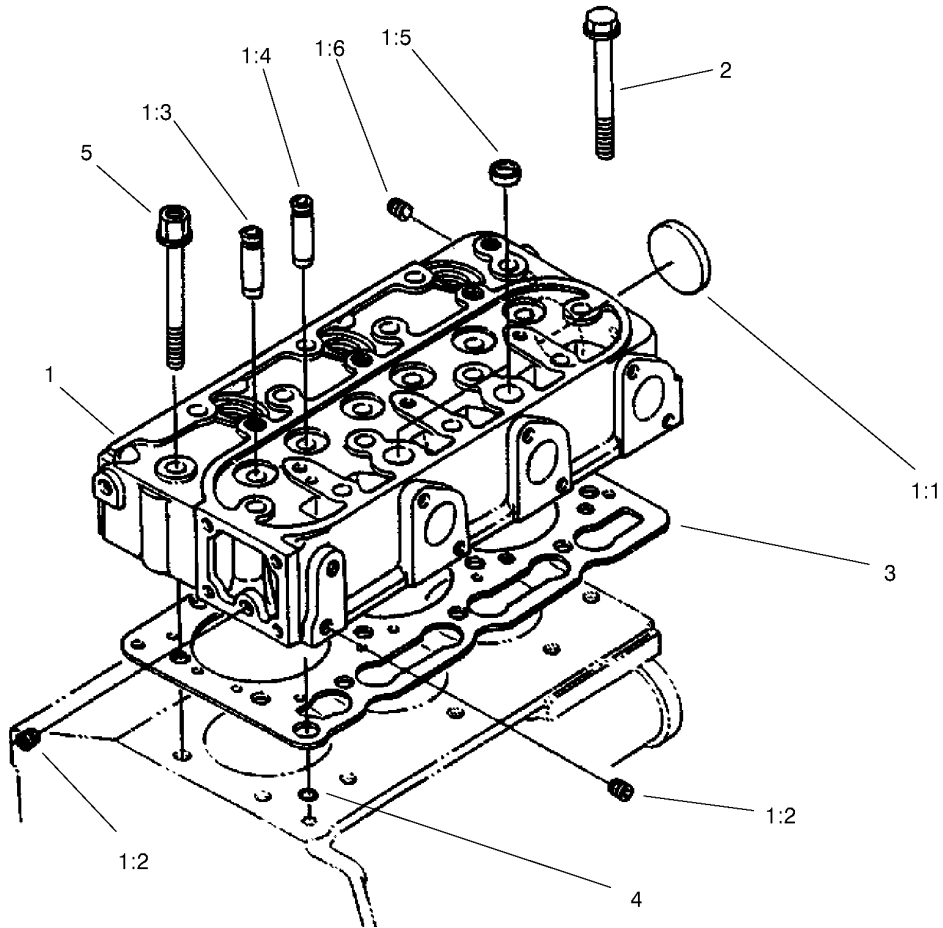
Crankcase Assembly

Ref	Part No.	Qty.	Description
1	99-8300	1	Crankcase ASM
1:1	98-9656	1	Bushing-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



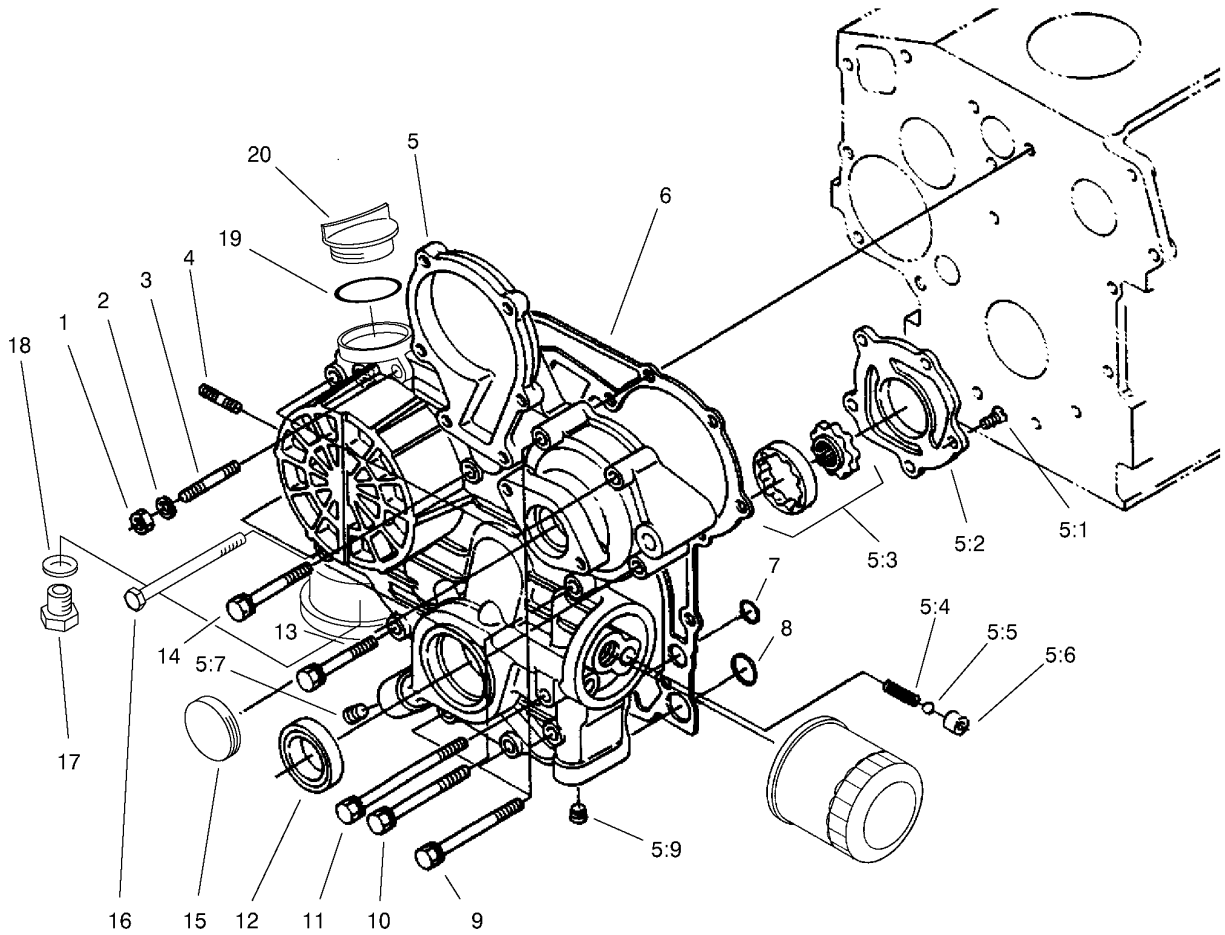
Oil Pan Assembly

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

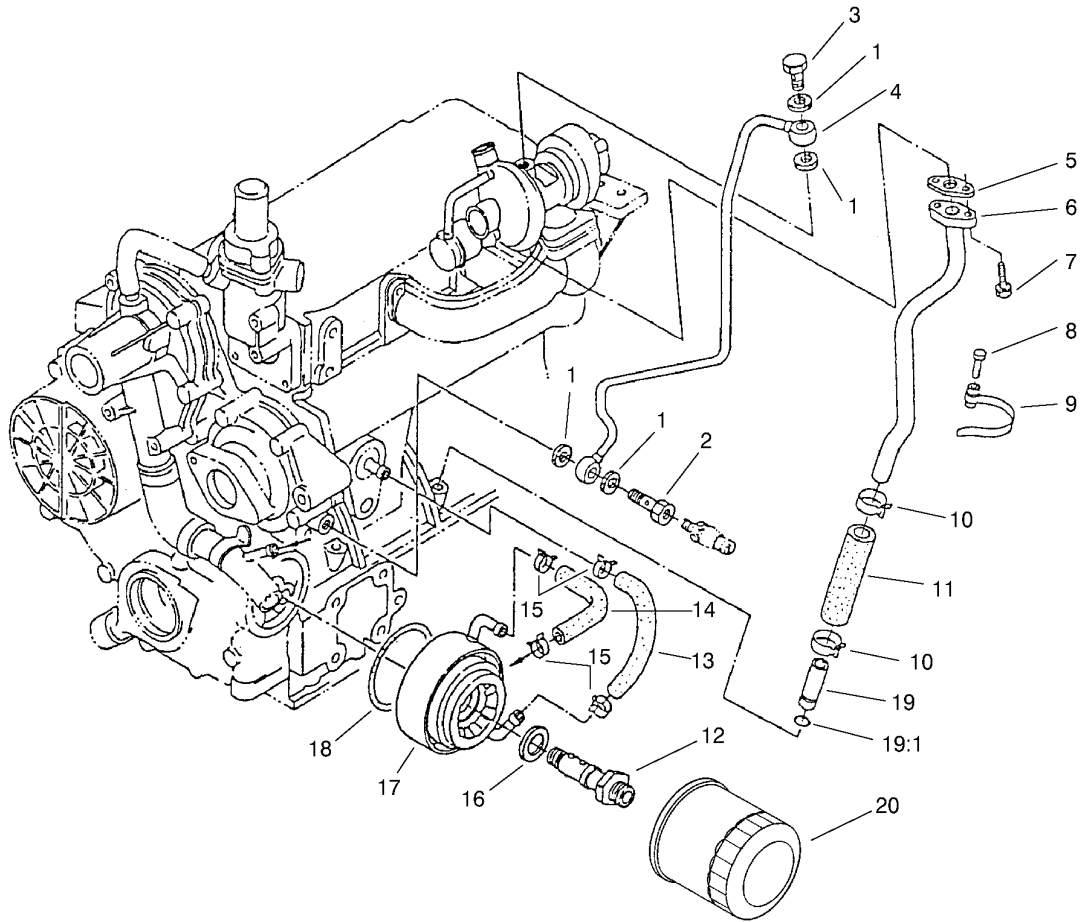
Ref	Part No.	Qty.	Description
1	99-8344	1	Cylinder Head ASM
1:1	98-9395	1	Cap-Sealing
1:2	98-7540	2	Cap-Sealing
1:3	98-9499	3	Guide-Valve, Inlet
1:4	98-9500	3	Guide-Valve, Exhaust
1:5	98-9389	2	Cap-Sealing
1:6	98-9444	1	Plug
2	98-9479	12	Bolt-Head, Cylinder
3	98-9613	1	Gasket-Head, Cylinder
4	98-7509	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		1	Gear Case ASM
5:1	98-9592	5	Screw
5:2	105-3708	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
5:7	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

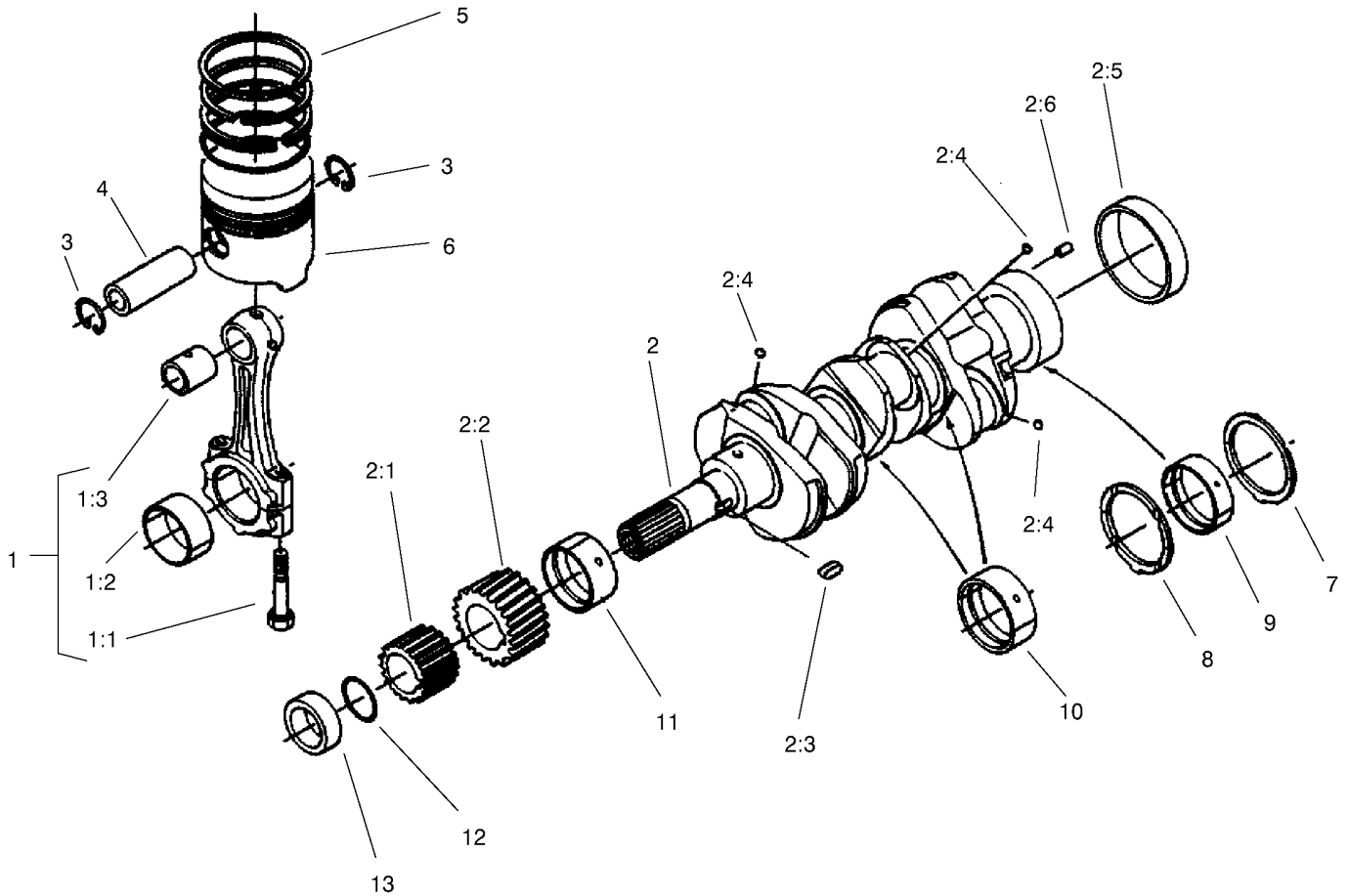
Ref	Part No.	Qty.	Description
18	99-3451	1	Plug-Packing
19	98-7430	1	O-Ring
20	98-9449	1	Plug-Filler, Oil



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	104-5159	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	104-5158	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

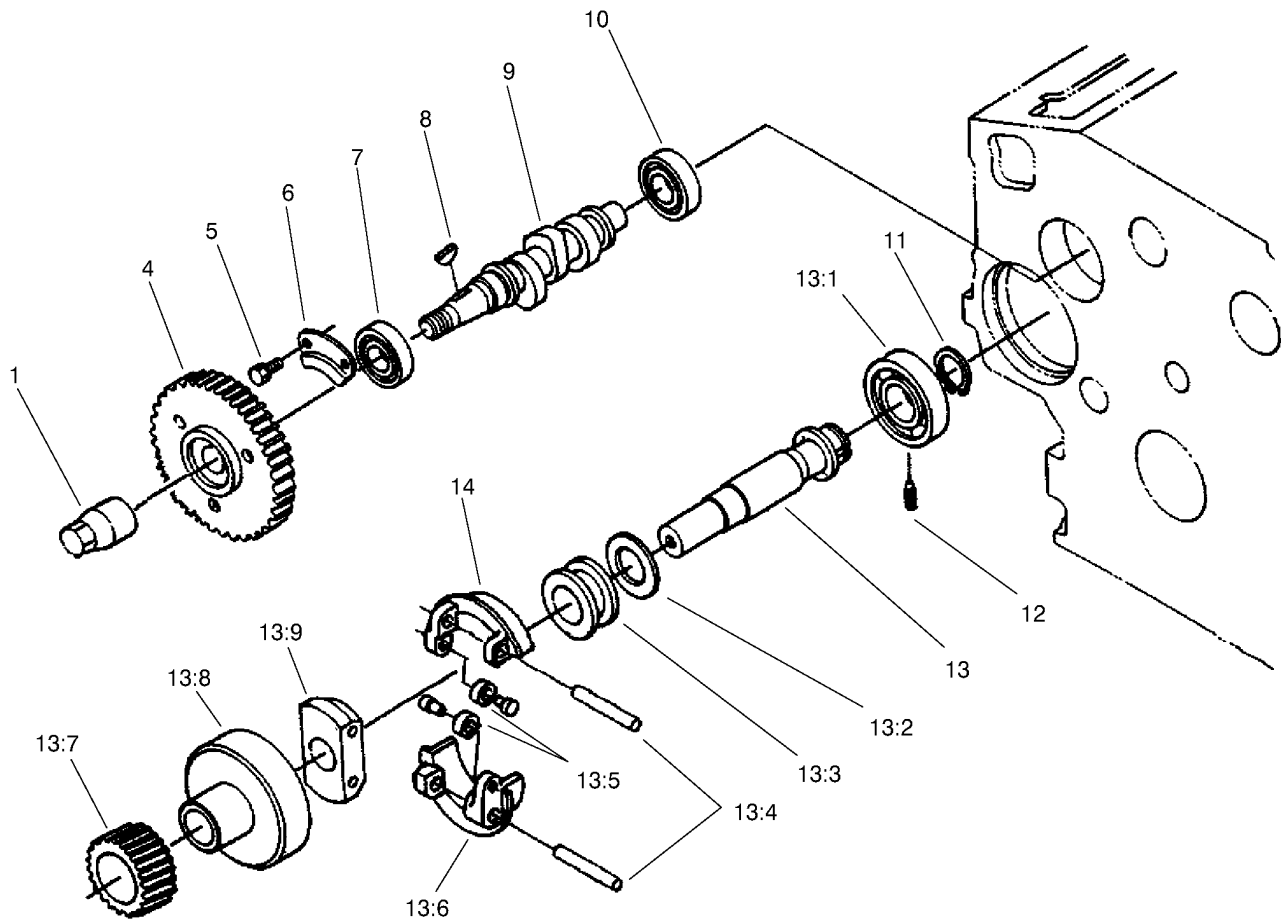
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Piston and Crankshaft Assembly

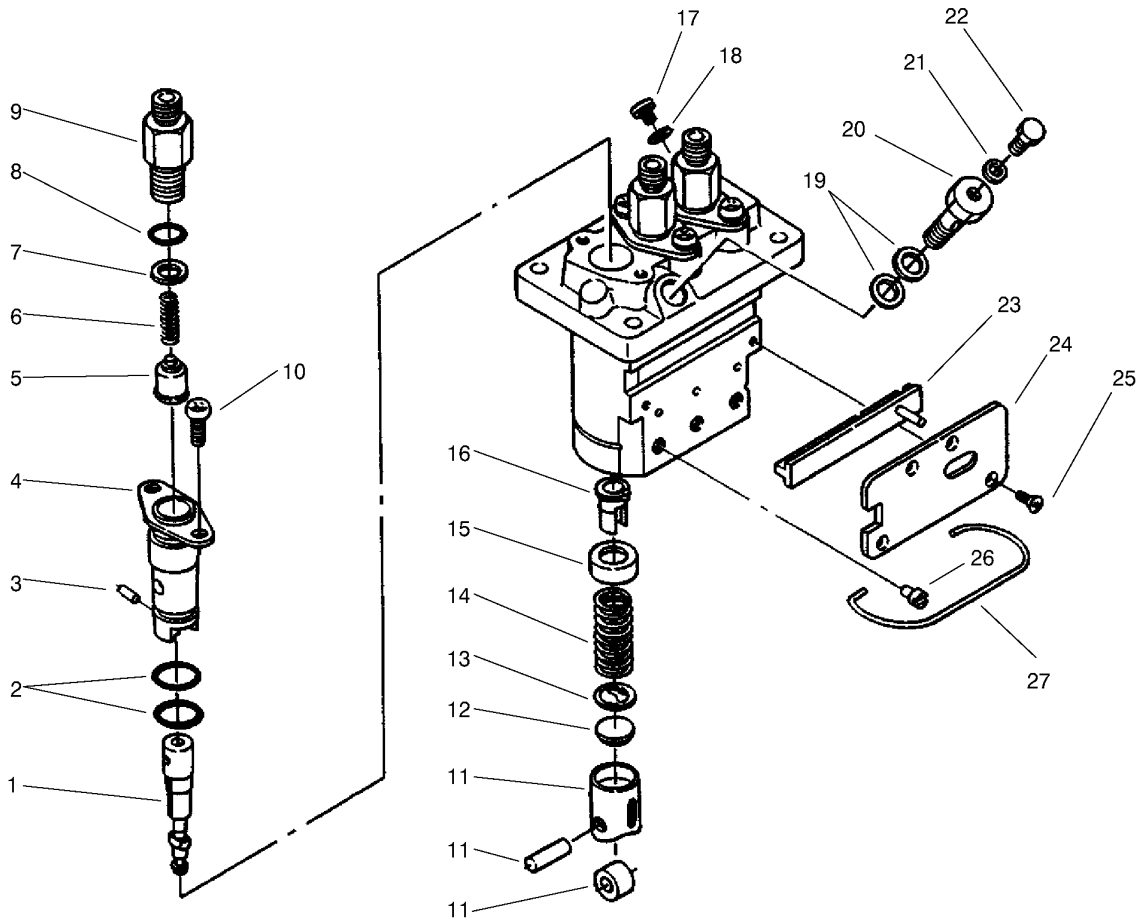
Ref	Part No.	Qty.	Description
1	98-9552	3	Connecting Rod ASM
1:1	98-9517	6	Bolt-Rod, Connecting
1:2	98-9519	3	Bearing-Rod (0.2Mm)
1:2	98-9520	3	Bearing-Rod (0.4Mm)
1:2	98-9553	3	Bearing-Rod (STD)
1:3	98-9515	3	Bushing-Pin, Piston
2	98-9642	1	Crankshaft ASM
2:1	98-9542	1	Gear-Drive, Oil Pump
2:2	98-9532	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, Piston Pin
4	98-9513	3	Pin-Piston
5	98-9619	3	Piston Ring ASM (0.5Mm)
5	98-9551	3	Piston Ring ASM (STD)
6	98-9550	3	Piston (STD)
6	98-9470	3	Piston (0.5Mm)
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

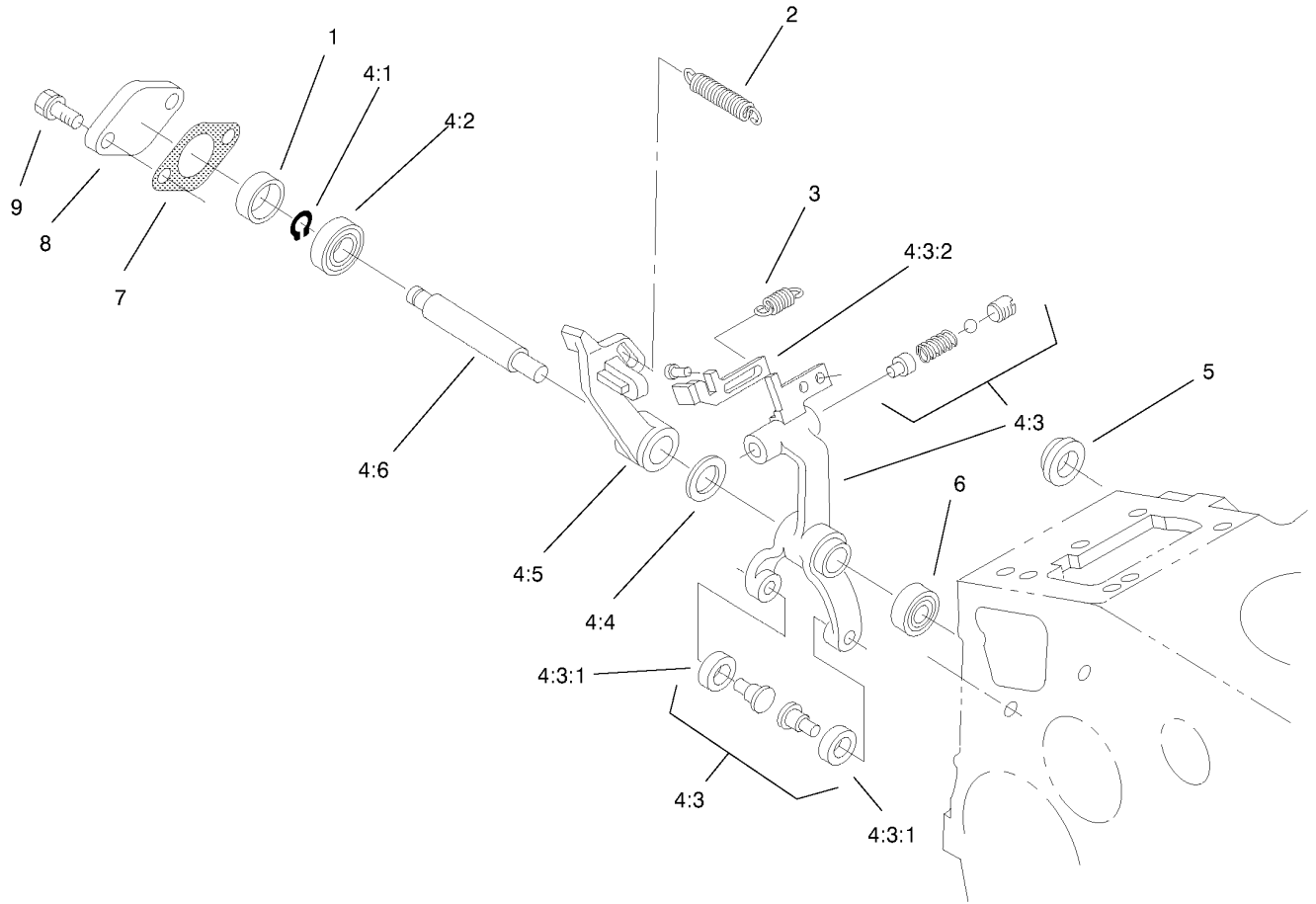
Ref	Part No.	Qty.	Description
1	98-9590	1	Nut-Cap
4	98-9669	1	Gear-Pump, Injection
5	98-9350	2	Bolt
6	98-9511	1	Stopper-Fuel, Camshaft
7	98-9383	1	Bearing-Ball
8	98-9595	1	Key-Woodruff
9	98-9459	1	Camshaft-Fuel
10	98-9382	1	Bearing-Ball
11	98-9657	1	Clip-Circular, Governor Shaft
12	98-9565	1	Screw-Set
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



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

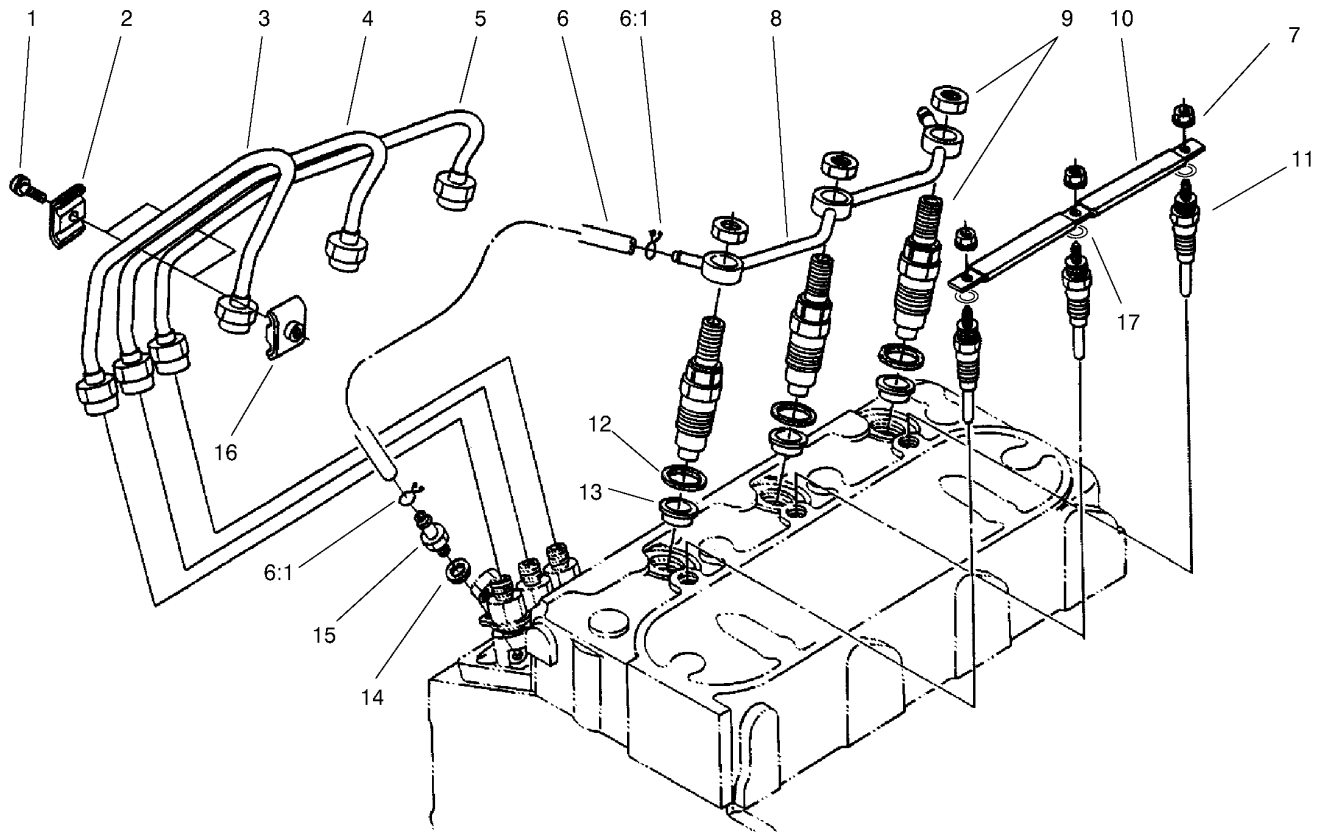
Ref	Part No.	Qty.	Description
25	98-9442	4	Screw
26	98-9426	3	Pin-Guide, Tappet
27	98-9450	1	Pin-Clamp



Governor Assembly

Ref	Part No.	Qty.	Description
1	98-9567	1	Collar
2	98-9681	1	Spring-Governor
3	98-9645	1	Spring-Start
4	98-9680	1	Fork Lever ASM
4:1	98-9369	1	Clip-Circular, External
4:2	98-9570	1	Bearing-Miniaturize
4:3	99-8380	1	Fork Lever ASM
4:3:1	98-9692	2	Roller
4:3:2	98-9660	1	Lever-Thrust
4:4	98-9593	1	Washer-Plain
4:5	98-9659	1	Lever-Fork
4:6	98-9566	1	Shaft-Lever, Fork
5	98-9568	1	Collar
6	98-9571	1	Bearing-Miniaturize
7	98-9682	1	Gasket
8	98-9569	1	Cover-Shaft, Fork Lever
9	98-9351	2	Bolt

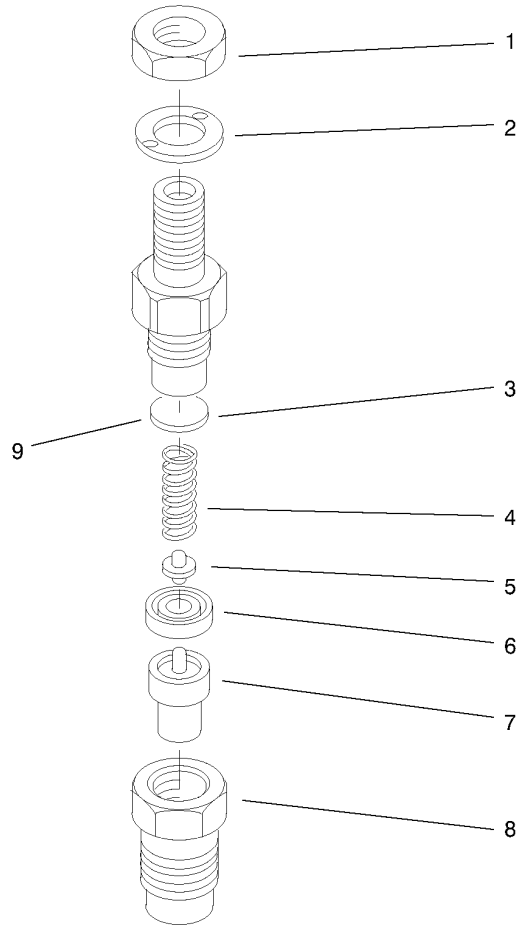
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Nozzle Holder and Glow Plug Assembly

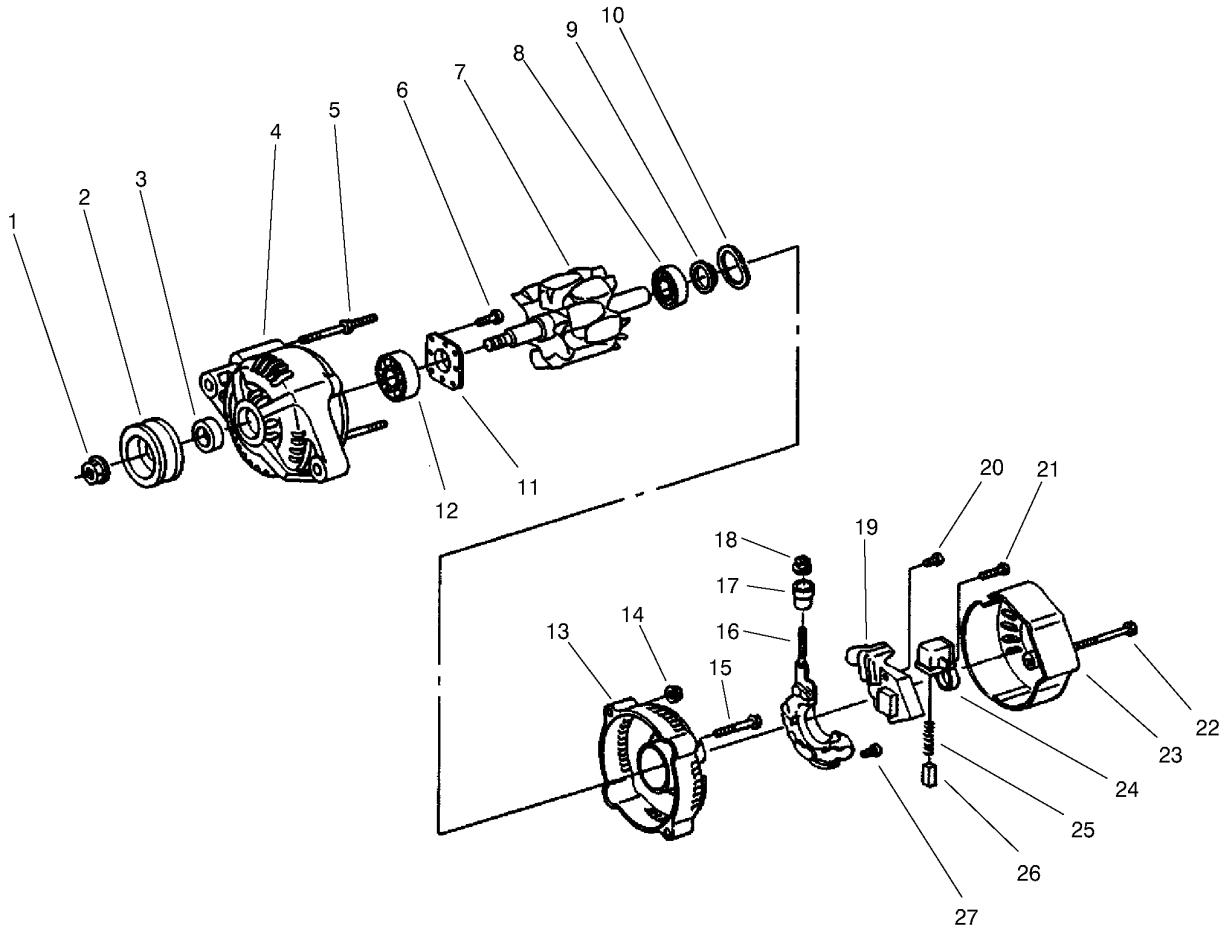
Ref	Part No.	Qty.	Description
1	98-7684	2	Screw W/Washer
2	98-7683	2	Clamp-Pipe
3	98-9622	1	Pipe-Injection
4	98-9654	1	Pipe-Injection
5	98-9655	1	Pipe-Injection
6	98-9624	1	Overflow Pipe ASM
6:1	98-7671	2	Clip-Pipe
7	99-8377	3	Nut-Flange
8	98-9621	1	Overflow Pipe ASM
9	98-9468	3	Nozzle Holder ASM
10	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

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Nozzle Holder Assembly No. 98-9468

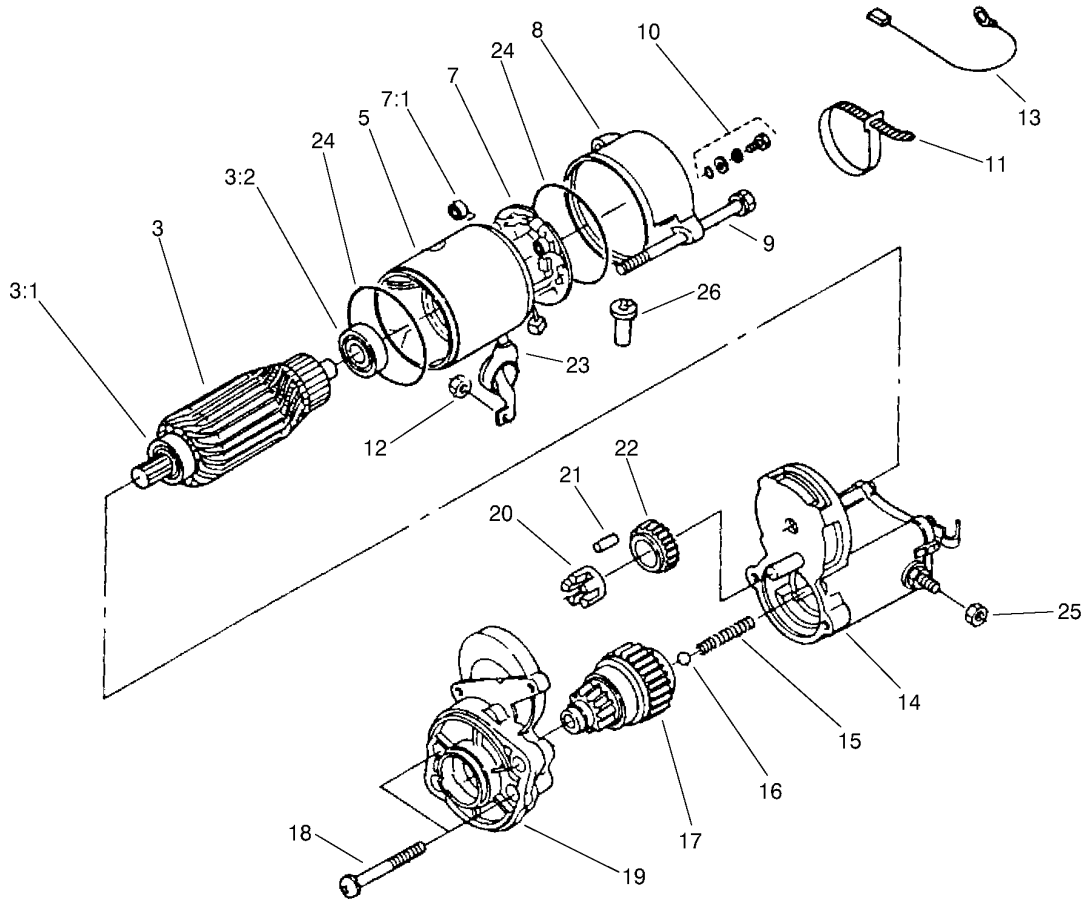
Ref	Part No.	Qty.	Description				
1	99-8301	3	Nut				
2	99-8307	3	Washer-Plain				
3	99-8302	3	Washer-Adjusting				
4	99-8303	3	Spring-Nozzle				
5	99-8305	3	Rod-Push				
6	99-8304	3	Spacer-Distance				
7	99-8308	3	Piece-Nozzle				
8	99-8306	3	Nut-Nozzle				
9	99-8316	3	Washer-Adjust (0.54Mm)				
9	99-8317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



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

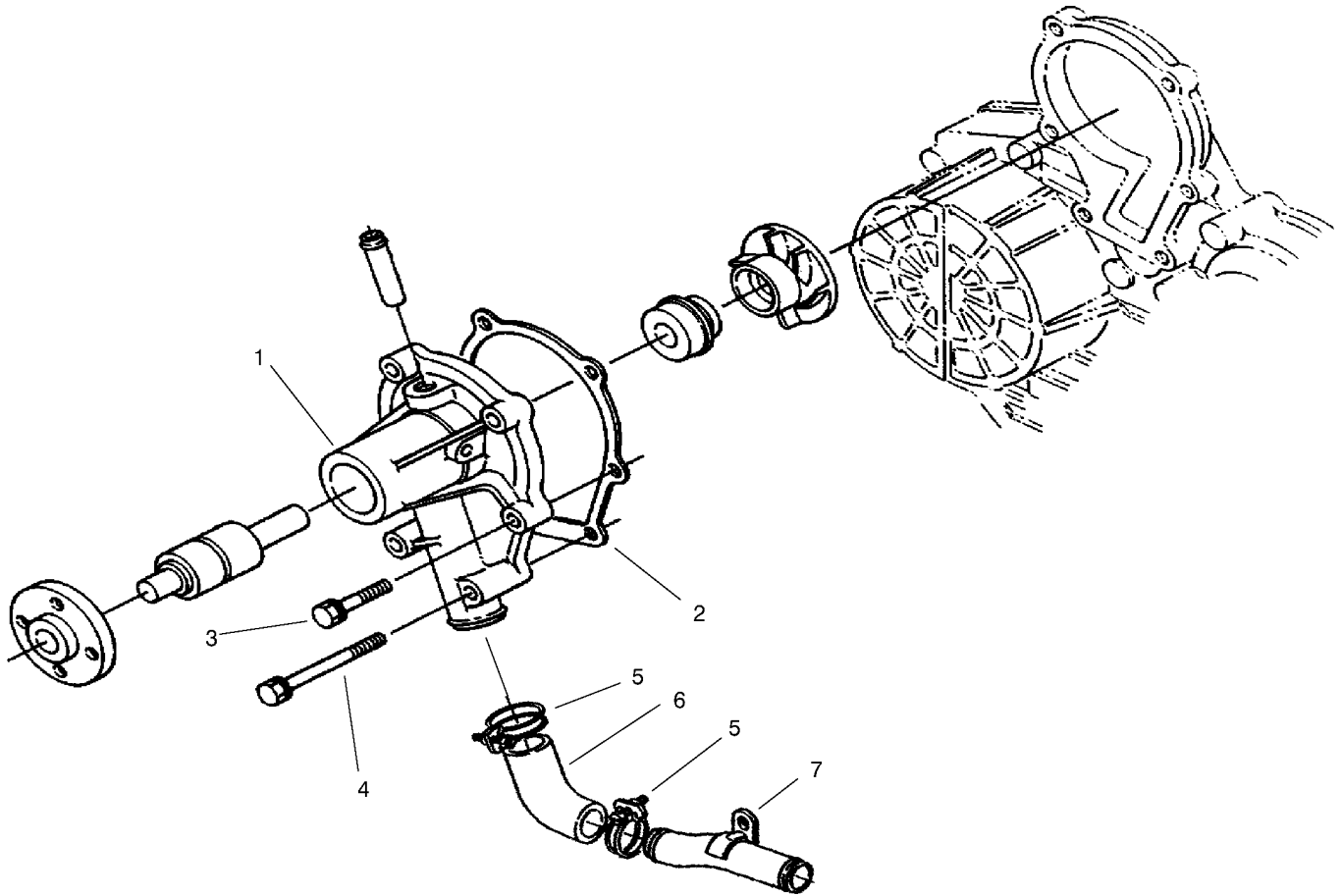
Ref	Part No.	Qty.	Description
25	98-7725	2	Spring-Brush
26	98-7724	2	Brush
27	98-7727	6	Screw-Head, Round



Starter Assembly No. 98-9705

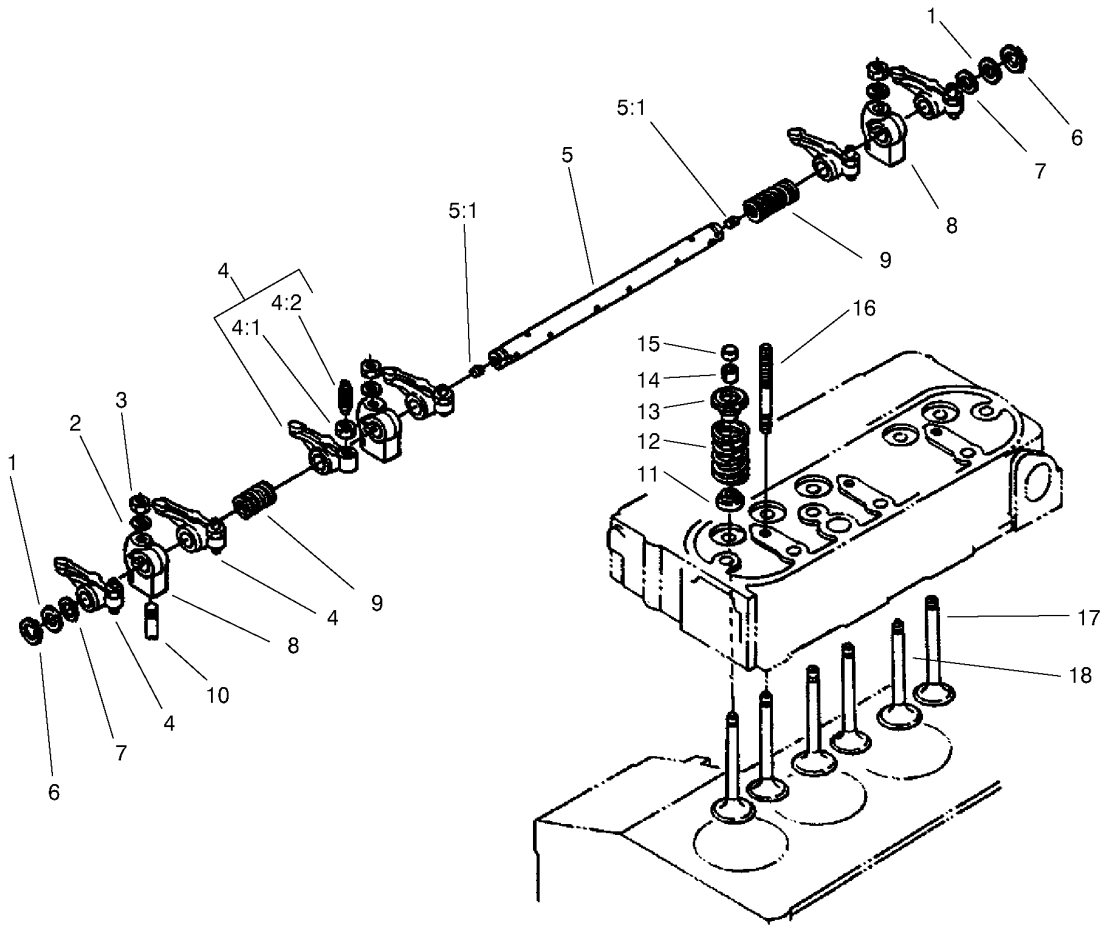
Ref	Part No.	Qty.	Description
3	98-7742	1	Armature ASM
3:1	98-7743	1	Bearing
3:2	98-7744	1	Bearing
5	98-7741	1	Yoke ASM
7	98-7749	1	Brush Holder ASM
7:1	98-7750	4	Spring-Brush
8	99-8370	1	Frame-End
9	98-9549	2	Bolt
10	98-7758	2	Bolt ASM
11	98-9712	1	Band-Cover
12	99-8371	1	Nut-Hex
13	98-9711	1	Cord-Solenoid, 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

Ref	Part No.	Qty.	Description
26	98-7759	1	Pipe-Drain



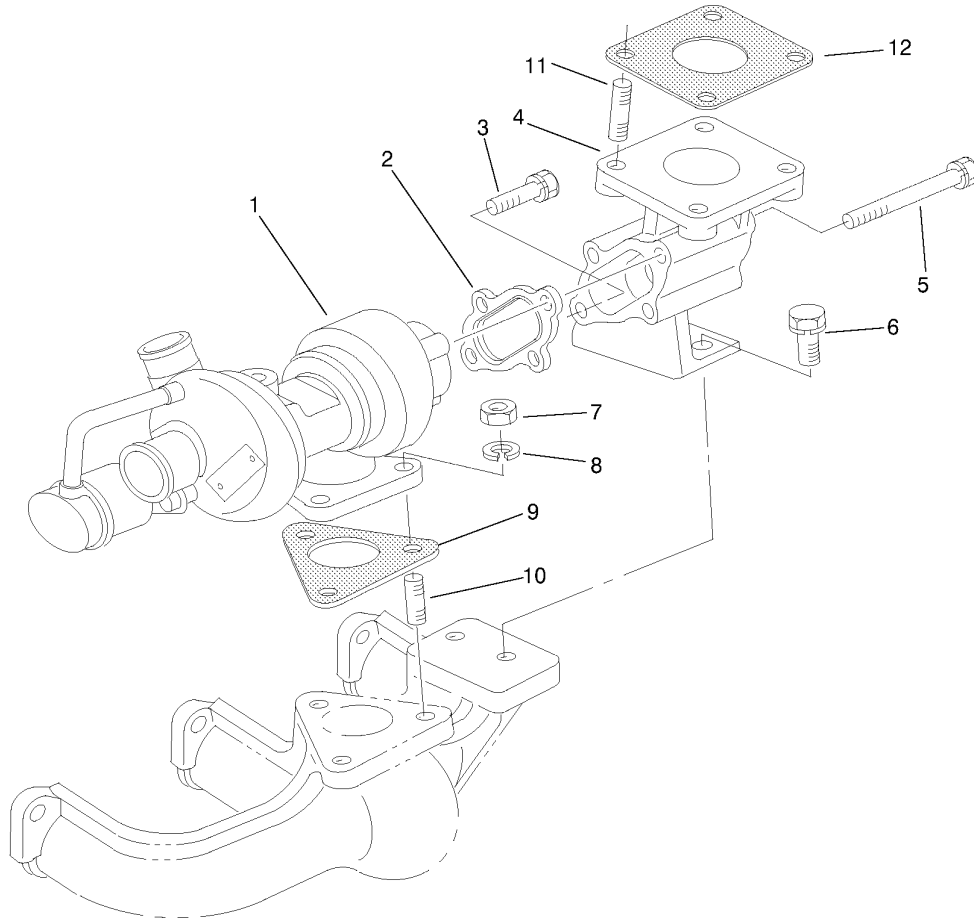
Water Pump Assembly

Ref	Part No.	Qty.	Description
1	104-4885	1	ASM-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



Valve and Rocker Arm Assembly

Ref	Part No.	Qty.	Description
1	98-9508	2	Washer-Shaft, R-Arm
2	98-9385	3	Washer-Flat
3	98-9393	3	Nut
4	98-9501	6	Rocker Arm ASM
4:1	98-9503	6	Nut
4:2	98-9502	6	Screw-Adjusting
5	98-9612	1	R-Arm Shaft ASM
5:1	98-9365	2	Screw-Set
6	98-9370	2	Clip-Circular, External
7	98-9507	2	Washer-Shaft, R-Arm
8	98-9505	3	Bracket-Arm, Rocker
9	98-9504	2	Spring-Arm, Rocker
10	98-9391	1	Screw-Set, Rocker Arm
11	98-9496	6	Seat-Valve Stem
12	98-9626	6	Spring-Valve
13	98-9498	6	Retainer-Valve
14	98-9390	6	Collet-Set, Valve Spring
15	98-9497	6	Cap-Valve
16	98-9506	3	Stud
17	98-9625	3	Valve-Exhaust
18	98-9494	3	Valve-Inlet



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				

