



Greensmaster[®] 3250-D

Traction Unit

Model No. 04383-210000505 and Up

Parts Catalog

Ordering Replacement Parts

To order replacement parts, please supply: the part number, the quantity, and the description of each part desired.

Understanding Reference Numbers

Each identified part in an illustration has a reference number. The reference number for a part also appears in the parts list, along with other information about the part.

This catalog uses two special reference number formats, one to indicate parts in a service assembly and another to indicate the quantity of a given part in an illustration.

Service Assembly Reference Numbers

Parts in service assemblies have reference numbers in the form **a:b**. The **a** represents the reference number of the entire service assembly and the **b** represents a sequential number unique to each part within the service assembly.

For example, a wheel assembly might be identified by reference number **6**, the tire by **6:1**, the valve by **6:2**, and the wheel by **6:3**. When you order the assembly identified by reference number **6**, you receive all parts identified by reference numbers **6:1**, **6:2**, and **6:3**. However, you may also order any part individually.

Reference numbers of this type appear in illustrations and in part lists.

Reference Numbers Indicating Quantity

In an illustration, if a reference number indicates more than one part, the reference number has the form **nX y**. The **n** represents the quantity of the part, the **X** is the multiplication symbol, and the **y** represents the reference number.

For example, in an illustration, the reference number **2X 37** means that two of the parts identified by reference number **37** are indicated.

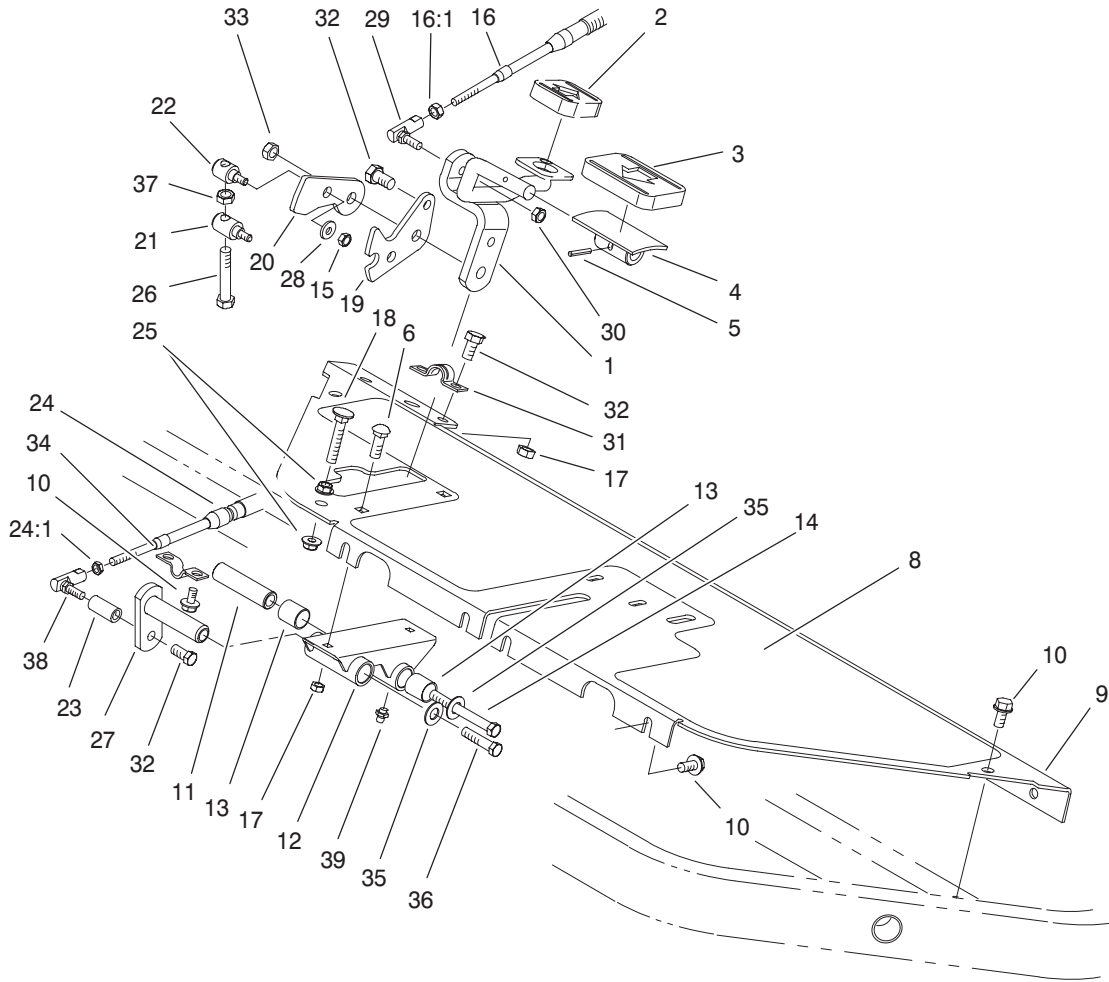
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Part Description Abbreviations

Part descriptions in this catalog may include the following abbreviations.

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

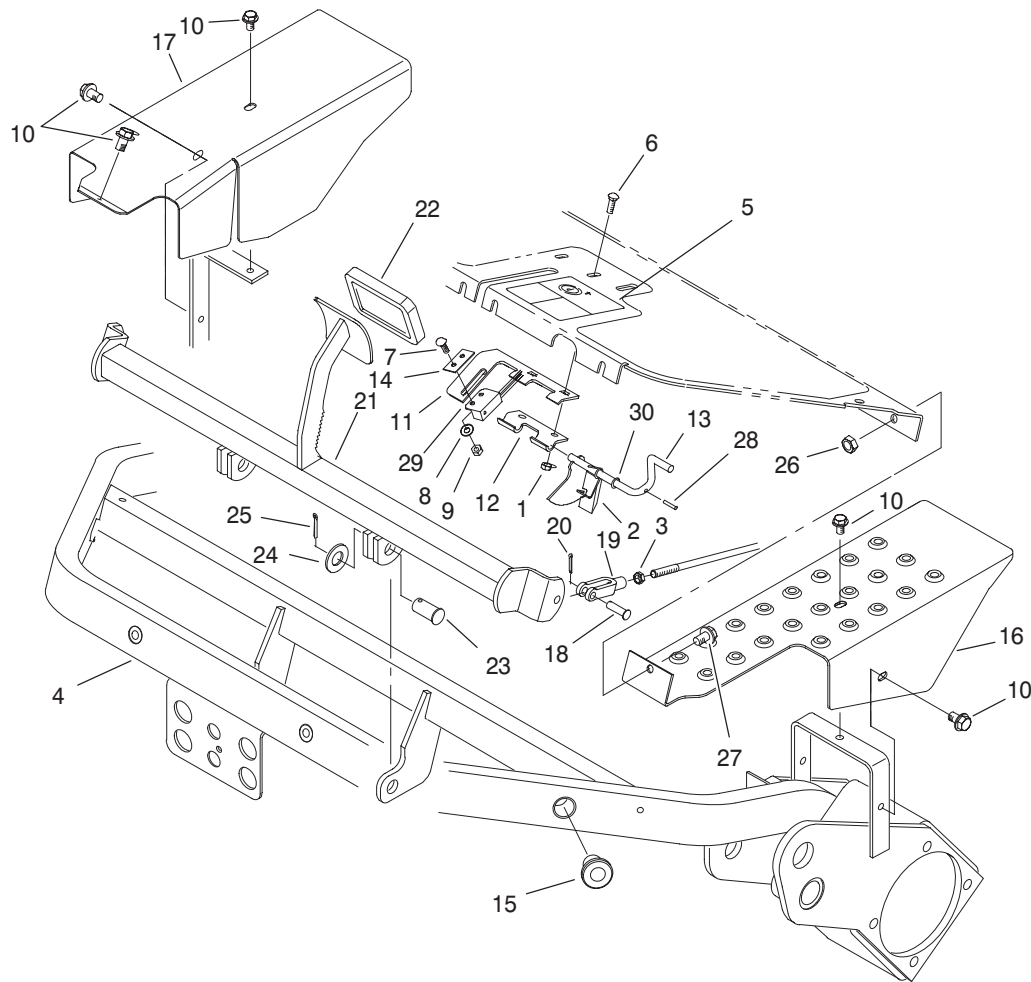


Sheet No.:2

Traction Control Assembly

Ref. No.	Part No.	Qty.	Description
1	93-2085-01	1	Rod
2	74-9110	1	Pad-Pedal, Reverse
3	74-9100	1	Pad-Pedal, Forward
4	49-6440-03	1	Pedal-Forward
5	32121-45	1	Pin-Spring
6	33124-020	2	Screw-CARR
8	93-2142	1	Pad-Plate, Floor
9	94-6399-01	1	Plate-Floor
10	32144-14	8	Screw-HWH
11	94-1371	1	Spacer
12	94-1383	1	Pedal-Pivot
13	256-311	4	Bushing-Split
14	33115-090	1	Screw-HH
15	33023-00	2	Nut-Lock
16	93-2099	1	Cable-Control, Traction
16:1	3220-1	2	Nut-Jam
17	33024-00	4	Nut-Lock
18	17-9420	1	Screw-Handle
19	94-1373	1	Bracket-Lock
20	94-1372	1	Bracket-Mow
21	94-1375	1	Trunnion-Bracket, Lock
22	94-1374	1	Trunnion-Bracket, Mow
23	94-1386	1	Shaft-Pedal, Pivot

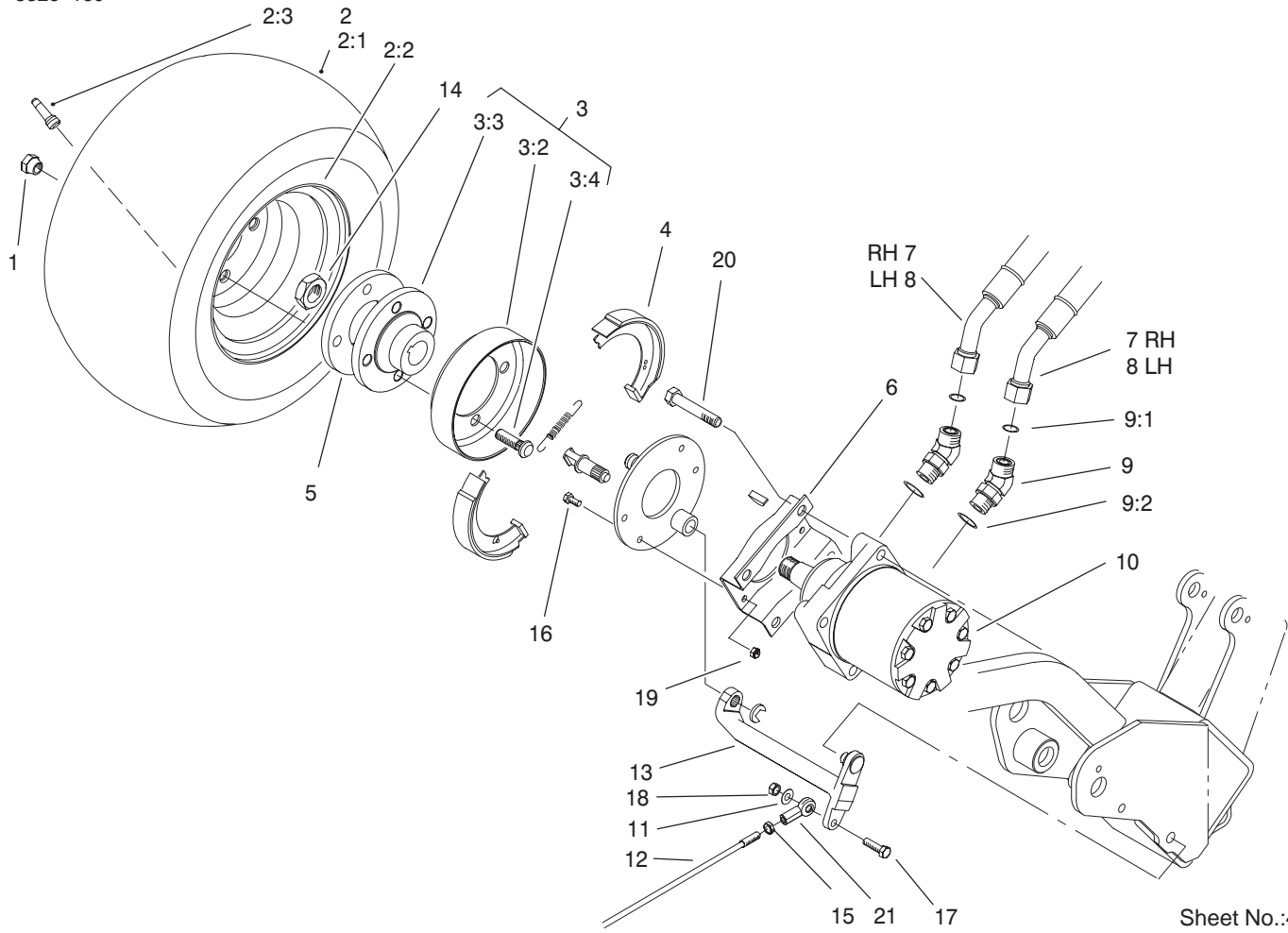
Ref. No.	Part No.	Qty.	Description
24	94-1304	1	Cable-Lock, Neutral
24:1	3219-14	2	Nut-Hex
25	32128-20	2	Nut-HF
26	94-3489	1	Capscrew-HH
27	94-1300	1	Lock-Neutral
28	3256-1	2	Washer-Flat
29	2411-34	1	Joint-Ball
30	3296-13	1	Nut-Lock NI
31	93-2092	1	Clamp-Cable
32	33114-016	2	Screw-HH
33	33025-00	1	Nut-Lock
34	93-2279	1	Clamp-Cable
35	3256-24	2	Washer-Flat
36	33115-016	1	Screw-HH
37	33014-00	1	Nut-Hex
38	2411-38	1	Joint-Ball
39	302-5	1	Fitting-Grease



Sheet No.:3

Brake Pedal Assembly

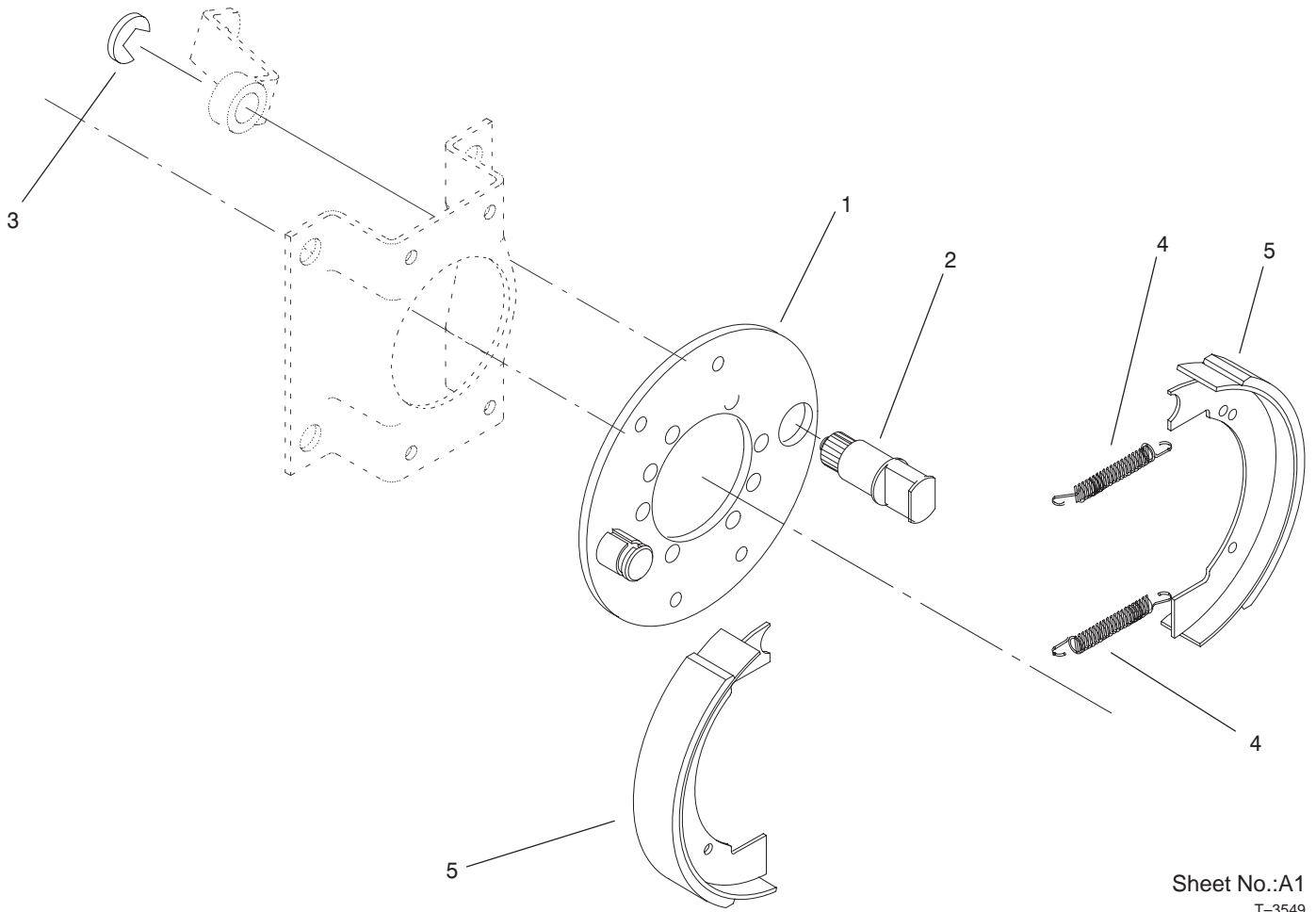
Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	33023-00	2	Nut-Lock	27	33114-020	1	Screw-HH
2	104-7704	1	Spring-Brake Latch	28	32121-50	1	Pin-Spring
3	3220-2	2	Nut	29	104-2057	1	Sensor
4	93-2010-01	1	Frame	30	75-5470	1	Spacer-Bearing
5	93-8062	1	Decal-Brake, Parking				
6	33123-016	2	Screw-CARR				
7	33123-016	1	Screw-CARR				
8	48-8010	1	Washer				
9	49-7810	1	Nut-Lock				
10	32144-14	5	Screw-HWH				
11	104-2096	1	Bracket-Switch				
12	104-7703	1	Hinge-Lower				
13	104-2094	1	Brake-Latch				
14	104-7702	1	Plate-Switch				
15	83-1700	3	Bushing-Flange				
16	93-2073-01	1	Shield-Wheel, LH				
17	93-2072-01	1	Shield-Wheel, RH				
18	283-61	2	Pin-Yoke				
19	282-2	2	Yoke				
20	3272-6	2	Pin-Cotter				
21	93-2075-01	1	Pedal-Brake				
22	93-7629	1	Pad-Foot, Brake				
23	283-87	2	Pin-Clevis				
24	3256-27	2	Washer-Flat				
25	3272-11	2	Pin-Cotter				
26	33024-00	1	Nut-Lock				



Front Wheel and Brake Assembly

Ref. No.	Part No.	Qty.	Description
1	242-50	8	Nut-Lug
2	99-8186	2	Tire ASM
2:1	70-8500	1	Tire
2:2	94-6116	1	Wheel-Rear
2:3	232-27	1	Stem-Valve
3	10-6821	2	Brake Drum ASM
3:2	10-6850	1	Drum-Brake
3:3	10-6870-03	1	Hub-Wheel
3:4	85-6540	4	Stud-Drive
4	104-7705	2	Brake ASM
5	92-9154-03	2	Plate-Bearing
6	84-2000-03	2	Bracket-Brake
7	94-5357	2	Hose ASM
8	94-5358	2	Hose ASM
9	340-14	4	Fitting-Hyd, 45°
9:1	237-65	1	O-Ring
9:2	237-80	1	O-Ring
10	92-9199	2	Motor-Hyd, Wheel
11	3256-23	2	Washer-Flat
12	93-2069	2	Rod-Brake
13	93-2096	2	Lever-Brake
14	26-3790	2	Nut-Lock
15	3220-20	2	Nut-Jam
16	33113-020	8	Screw-HH
17	33114-030	2	Screw-HH
18	33024-00	2	Nut-Lock

Ref. No.	Part No.	Qty.	Description
19	33023-00	8	Nut-Lock
20	33116-060	8	Screw-HH
21	93-2070	2	Clevis-Swivel

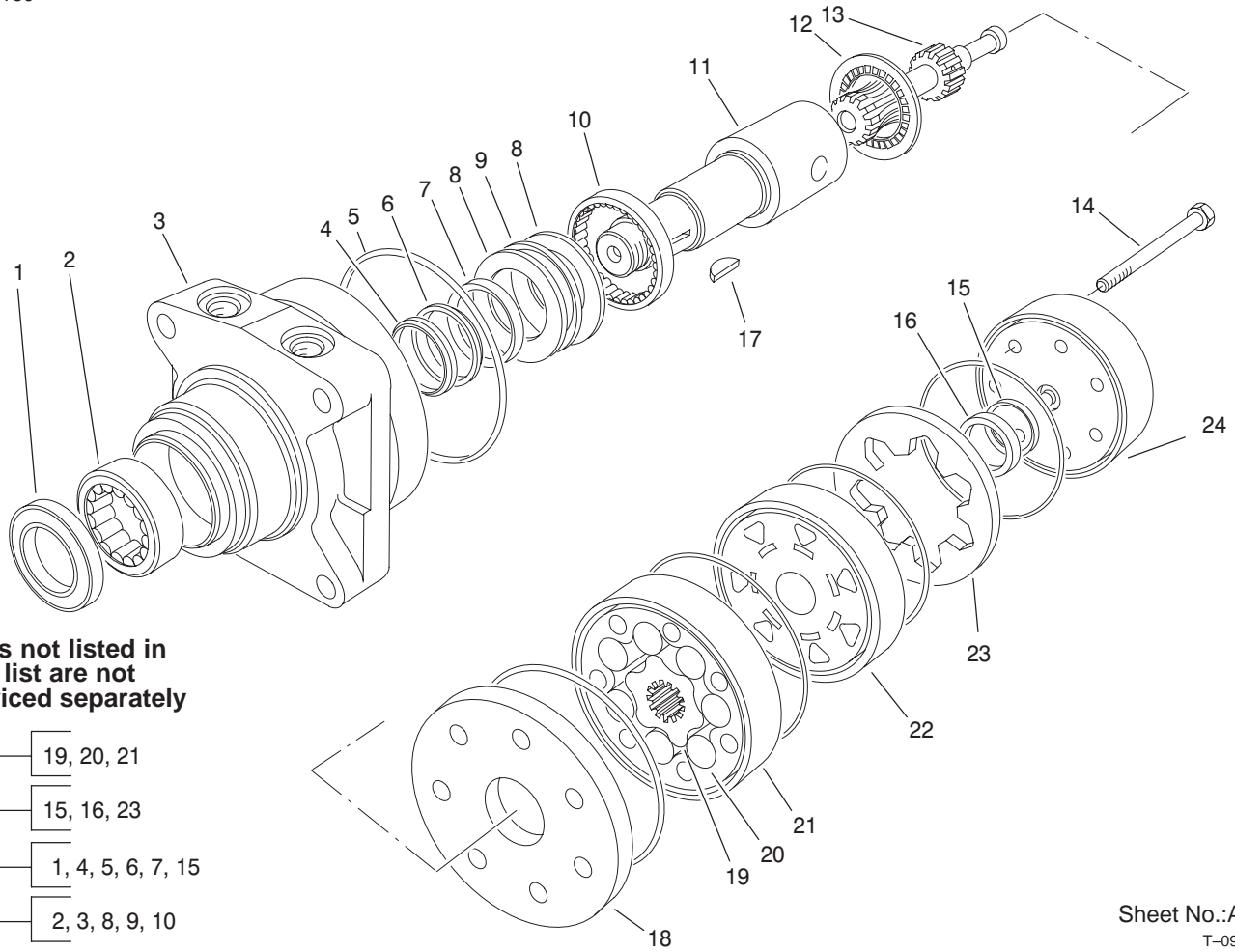


Sheet No.:A1
T-3549

Brake Assembly No. 104-7705

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

Ref. No.	Part No.	Qty.	Description



Parts not listed in part list are not serviced separately

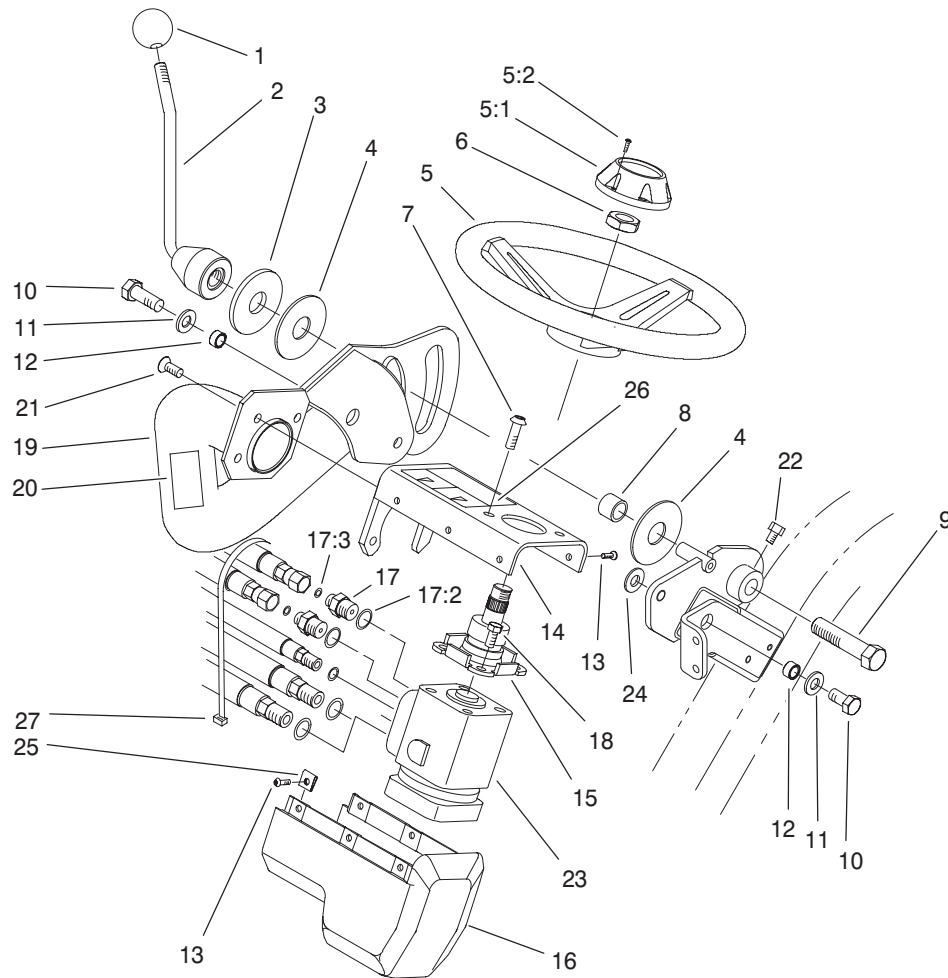
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- 26 — 15, 16, 23
- 27 — 1, 4, 5, 6, 7, 15
- 28 — 2, 3, 8, 9, 10

Sheet No.:A2
T-0983

Hydraulic Motor Assembly No. 92-9199

Ref. No.	Part No.	Qty.	Description
11	76-0860	1	Shaft-Coupling
12	76-0850	1	Bearing-Thrust
13	92-9761	1	Link-Drive
14	92-9762	7	Screw-HH
17	3257-42	1	Key-Woodruff
18	76-0870	1	Plate-Wear
22	76-0840	1	Manifold
24	76-0940	1	End Cover ASM
25	92-9763	1	Set-Rotor
26	76-0880	1	Commutator ASM
27	94-8178	1	Kit-Seal
28	76-0810	1	Wheel Motor Housing ASM

Ref. No.	Part No.	Qty.	Description

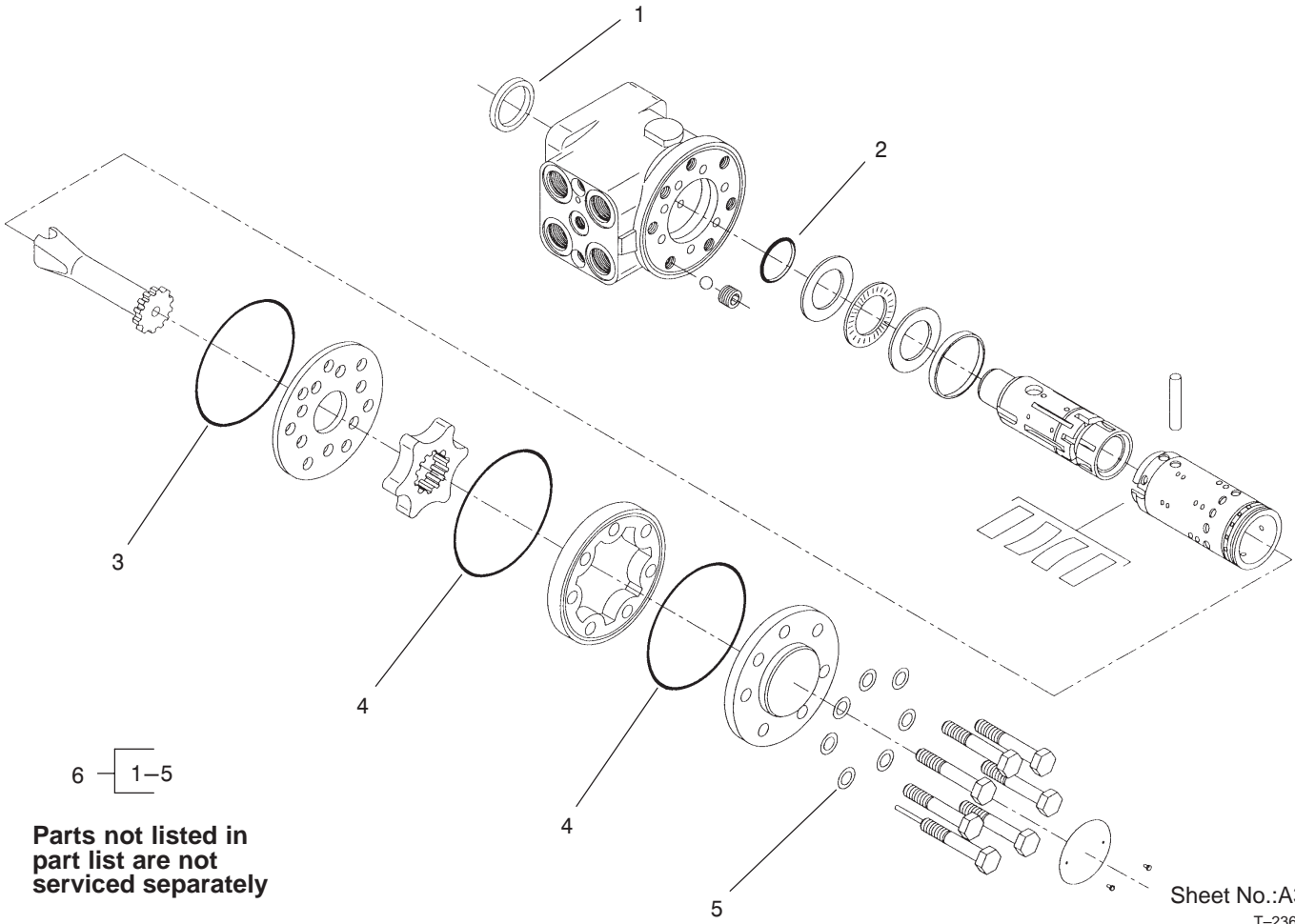


Sheet No.:5

Steering Arm Assembly

Ref. No.	Part No.	Qty.	Description
1	233-48	1	Knob
2	93-2400-03	1	Handle-Lockup
3	83-0760	1	Spacer-Plate, Lockup
4	83-0740	2	Disc-Friction
5	68-5130	1	Wheel-Steering
5:1	68-5140	1	Cap-Wheel, Steering
5:2	32144-21	1	Screw
6	47-6990	1	Nut
7	3274-63	2	Screw-HSH
8	83-0730	1	Spacer-Lockup
9	93-2199	1	Screw-HH, RH
10	325-4	2	Screw-HH
11	3256-26	2	Washer-Flat
12	47-2890	2	Bushing
13	3274-39	6	Screw-HSBH
14	94-3461-03	1	Cover-Steering
15	83-1420	1	Column-Steering
16	94-6366	1	Cover-Valve, Steering
17	340-133	2	Adapter
17:2	237-79	1	O-Ring
17:3	237-21	1	O-Ring
18	323-4	2	Screw-HH
19	93-2115-01	1	Arm-Steering
20	93-8068	1	Decal-Arm, Steering
21	3274-80	3	Screw-HH
22	3242-2	1	Screw-SQH

Ref. No.	Part No.	Qty.	Description
23	93-2120	1	Valve-Control, Steering
24	65-6390	1	Washer-Thrust, Plain
25	3290-277	6	Nut-Speed
26	93-8063	1	Decal-Warning (Europe)
26	104-2053	1	Decal-Warning
27	3290-379	1	Tie-Cable



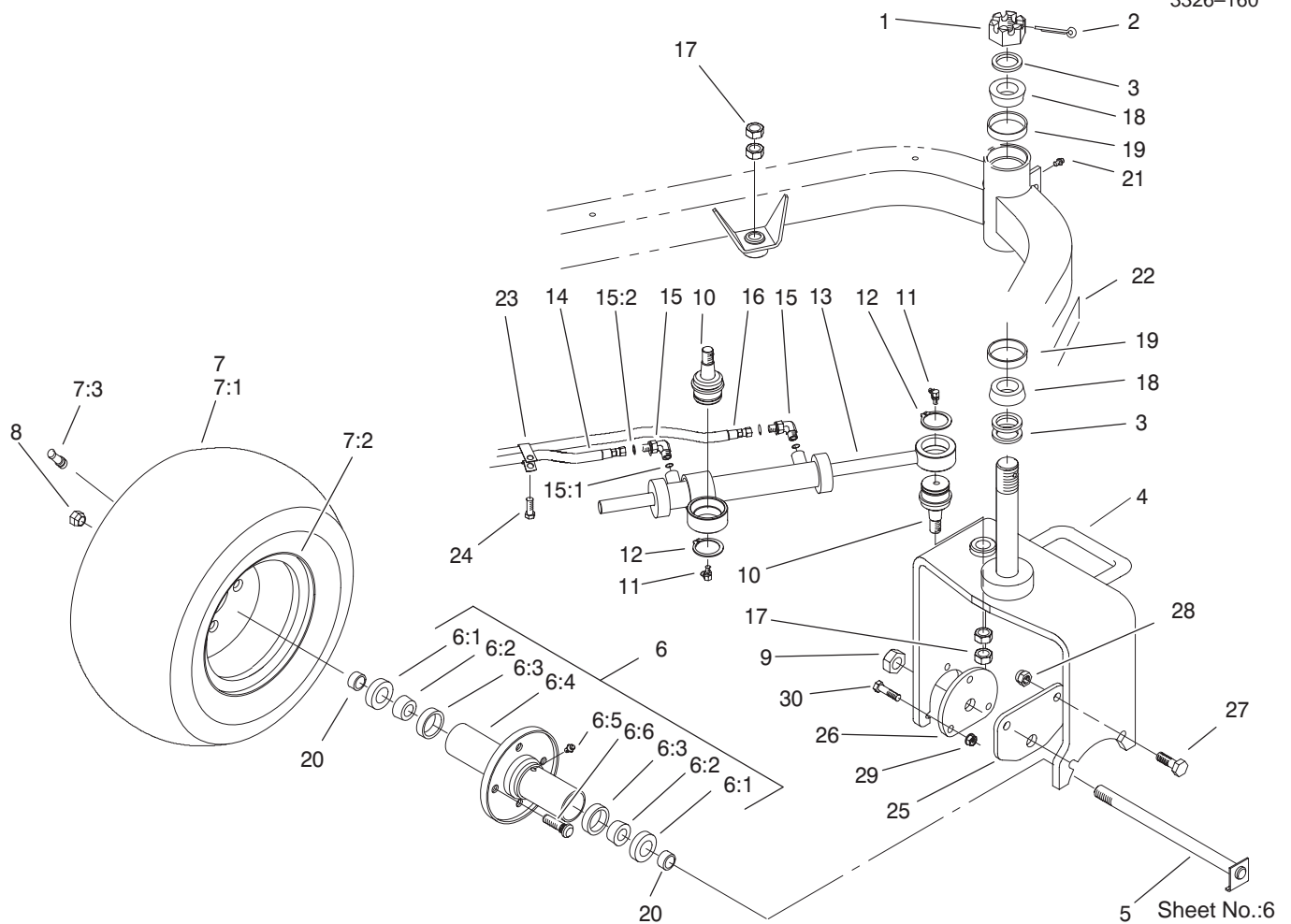
Parts not listed in part list are not serviced separately

Sheet No.:A3
T-2362

Steering Control Valve Assembly No. 93-2120

Ref. No.	Part No.	Qty.	Description
6	94-4929	1	Kit-Seal

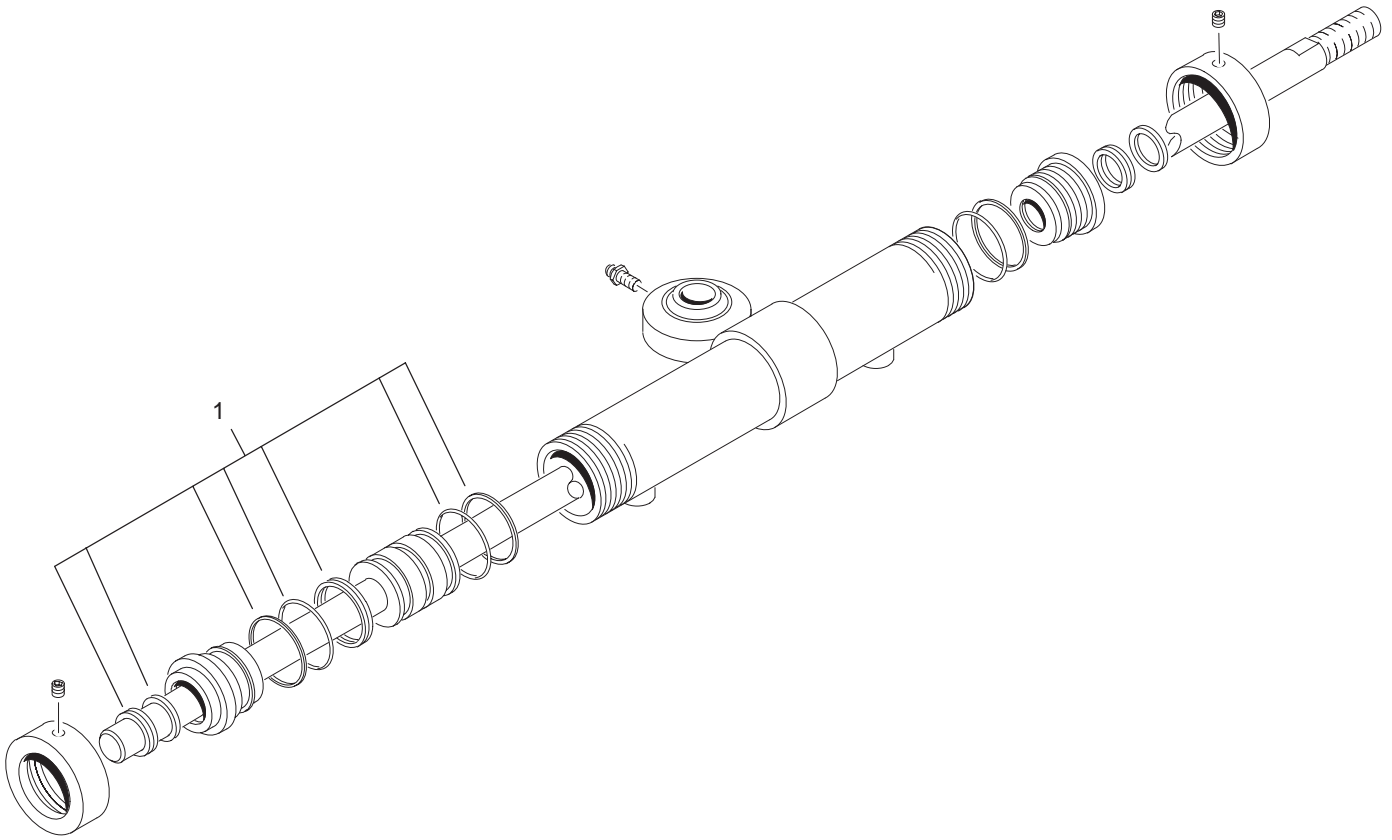
Ref. No.	Part No.	Qty.	Description
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Rear Wheel Assembly

Ref. No.	Part No.	Qty.	Description
1	32136-9	1	Nut-Hex, Slot
2	3272-37	1	Pin-Cotter
3	18-6320	3	Washer-Steering
4	99-1492-01	1	Castor Fork ASM
5	70-8370	1	Bolt
6	72-9710	1	Hub-Tire, Sulky
6:1	253-111	2	Seal-Oil
6:2	254-78	2	Bearing-Cone
6:3	254-79	2	Bearing-Roller, Cup
6:4	75-9440	1	Hub ASM
6:5	302-55	1	Zerk
6:6	10-6830	4	Stud-Type, Drive
7	99-8186	1	Tire ASM
7:1	70-8500	1	Tire
7:2	94-6116	1	Wheel-Rear
7:3	232-27	1	Stem-Valve
8	242-50	4	Nut-Lug
9	3296-67	1	Nut-Lock NI
10	92-5838	2	Joint-Ball
11	302-60	2	Fitting-Lube
12	32151-104	2	Ring-Retaining, Ext
13	93-2122	1	Steering Cylinder ASM
14	93-2270	1	Hydraulic Hose ASM
15	340-132	2	Fitting-Hyd, 90°
15:1	237-78	1	O-Ring
15:2	237-21	1	O-Ring

Ref. No.	Part No.	Qty.	Description
16	93-2269	1	Hydraulic Hose ASM
17	3220-6	4	Nut-Jam
18	254-70	2	Bearing-Cone
19	254-61	2	Bearing-Cup
20	70-8490	2	Spacer-Spindle, Rear
21	302-5	1	Fitting-Grease
22	99-1493	1	Decal
23	92-5753	1	Clamp-Hose
24	32144-14	1	Screw-HWH
25	99-1485-01	1	Plate-Adapter, Motor
26	99-1486-01	1	Plate-Adapter
27	325-6	2	Screw-HH
28	3296-23	2	Nut-Lock, NI
29	3296-39	3	Nut-Lock, NI
30	323-8	3	Screw-HH

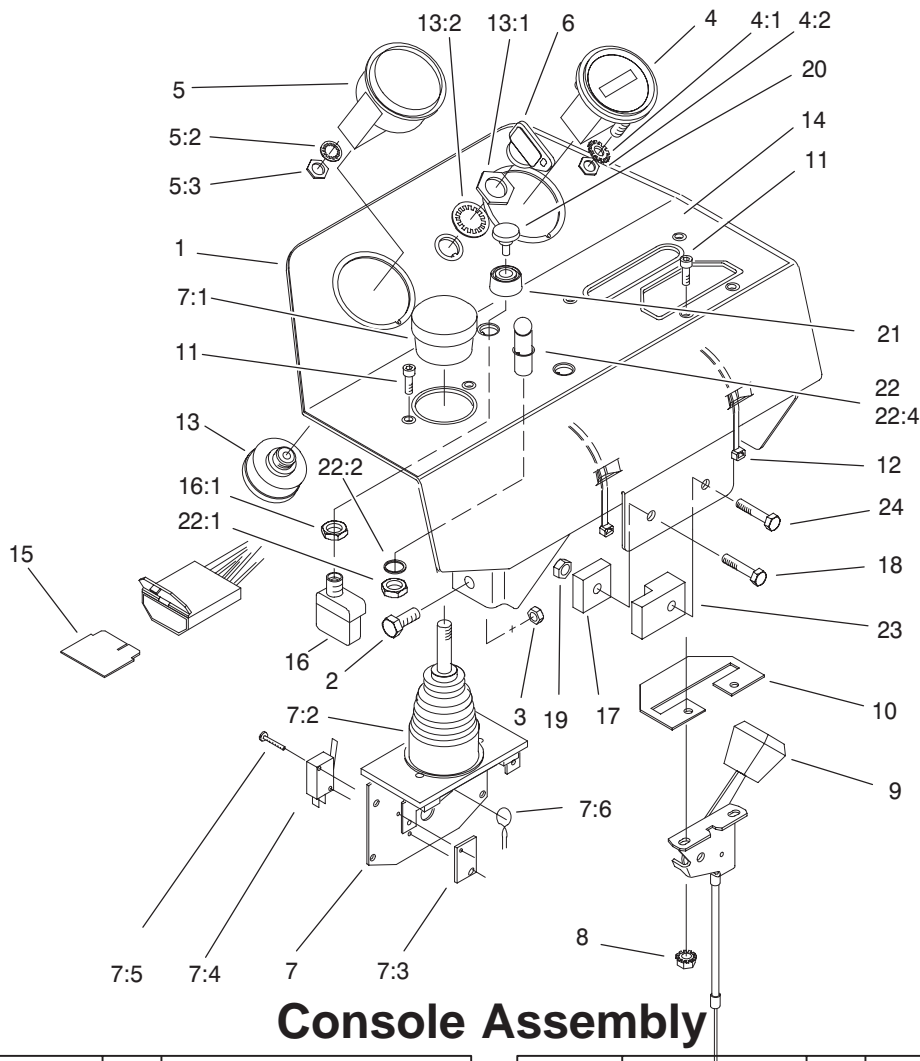


Sheet No.:A4
T-3721

Steering Cylinder Assembly No. 93-2122

Ref. No.	Part No.	Qty.	Description
1	94-4398	1	Kit-Repair, Seal

Ref. No.	Part No.	Qty.	Description



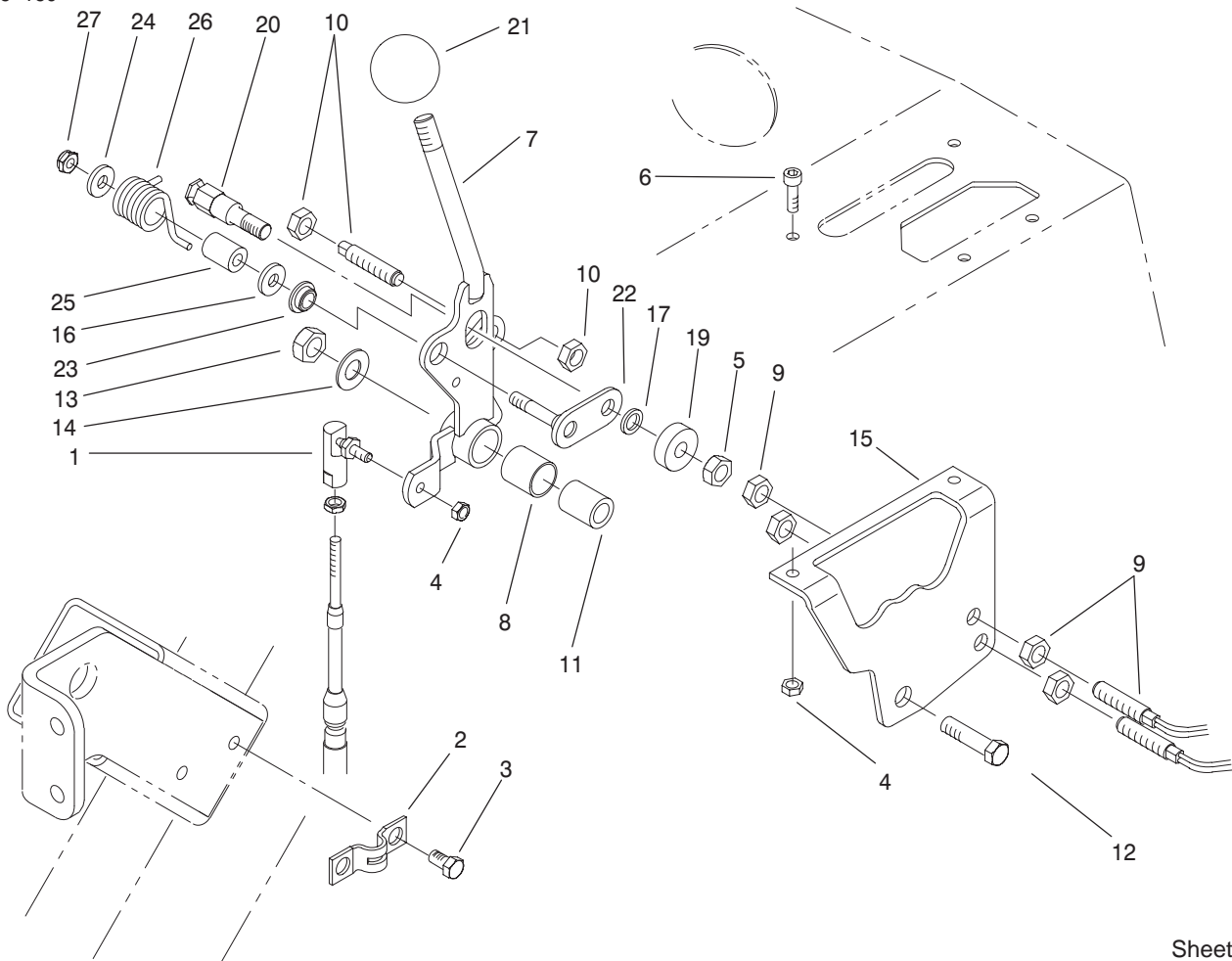
Sheet No.:7

Console Assembly

Ref. No.	Part No.	Qty.	Description
1	100-3185-03	1	Console ASM
2	33114-020	4	Screw-HH
3	33024-00	4	Nut-Lock
4	66-2950	1	Gauge-Hourmeter
4:1	3255-20	2	Washer-Lock
4:2	3217-25	2	Nut-Hex
5	93-7053	1	Cluster-Lamp, Warning
*5:1	219-17	4	Bulb
5:2	3254-1	1	Washer-Lock, Internal
5:3	3217-26	1	Nut-Hex
6	63-8360	1	Key-Ignition
7	98-2195	1	Joystick
7:1	3290-489	1	Knob
7:2	3290-488	1	Boot
7:3	3290-354	2	Nut-Speed
7:4	218-590	2	Switch
7:5	3290-93	4	Screw-Head, Pan
7:6	93-3625	1	Spring-Return
8	32149-8	2	Nut-Keps
9	99-8150	1	Control-Throttle (Diesel)
10	99-8195-03	1	Plate-Cover
11	3273-26	4	Screw-HSH
12	3290-378	2	Tie-Cable
13	27-2360	1	Switch-Key

Ref. No.	Part No.	Qty.	Description
13:1	218-446	1	Nut-Hex
13:2	218-447	1	Washer-Lock
14	100-3183	1	Decal-Panel, Control
15	92-3188	1	Diode-Board, Circuit
16	72-9760	1	Switch
16:1	218-498	1	Locknut-Hex
17	92-2538	1	Timer-Plug, Glow
18	33113-030	1	Screw-HH
19	33023-00	2	Nut-Lock
20	43-6280	1	Button-Push
21	43-6420	1	Bezel
22	44-2212	1	Amber Indicator Light ASM
22:1	218-535	1	Nut-Hex
22:2	218-536	1	Washer-Lock
22:4	218-562	1	Lens
23	99-9666	1	Module
24	33113-020	1	Screw-HH

* Not illustrated

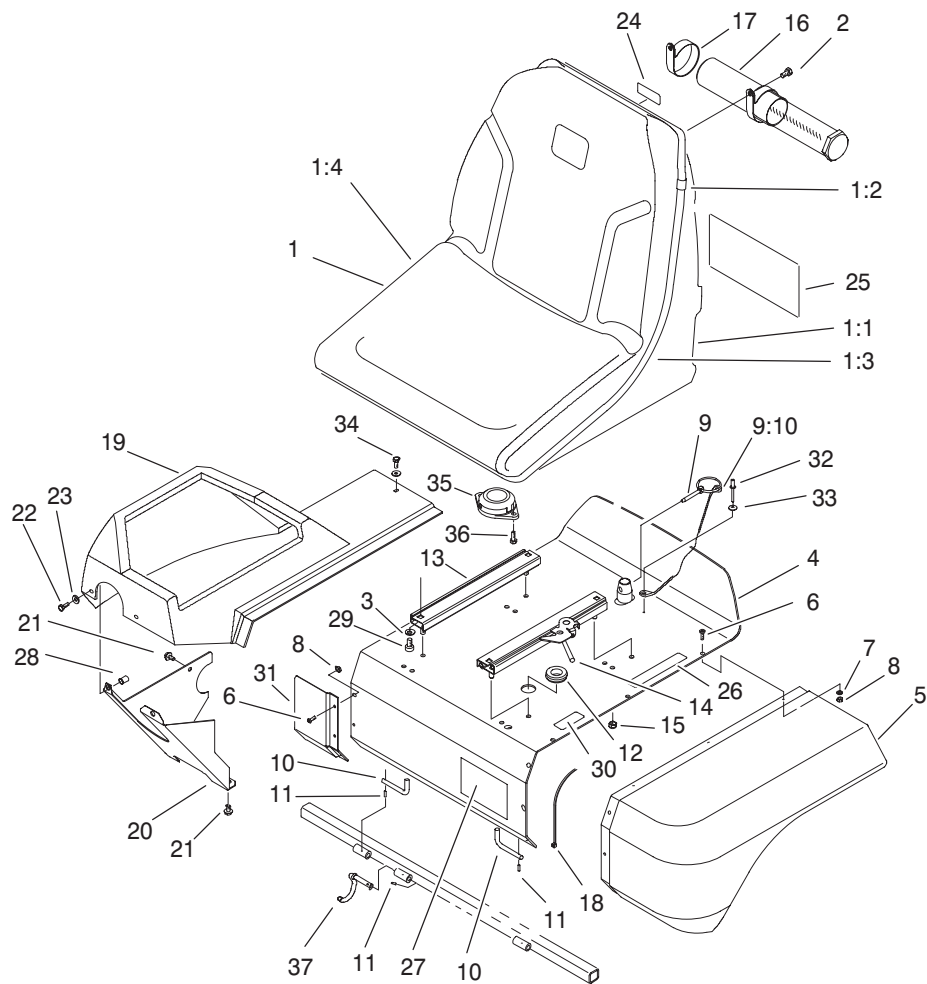


Sheet No.:8

Functional Control Lever Assembly

Ref. No.	Part No.	Qty.	Description
1	2411-38	1	Joint-Ball
2	93-2279	1	Clamp-Cable
3	32144-14	2	Screw-HWH
4	3296-27	2	Nut-Lock NI
5	33024-00	1	Nut-Lock
6	3273-26	2	Screw-HSH
7	94-9611	1	Handle
8	256-311	1	Bushing-Split
9	93-2055	2	Sensor-Switch, Reed
10	93-2056	1	Actuator-Switch, Reed
11	94-1378	1	Tube-Pivot, Handle
12	33115-040	1	Screw-HH
13	33025-00	1	Nut-Lock
14	3256-24	1	Washer-Flat
15	94-6398	1	Bracket-Traction
16	3256-23	1	Washer-Flat
17	75-5470	1	Spacer-Bearing
19	251-259	1	Bearing
20	94-9617	1	Pin-Spring
21	233-42	1	Knob
22	94-9614	1	Pivot-Roller
23	94-9619	1	Bushing
24	3256-1	1	Washer-Flat
25	94-9618	1	Spacer-Spring
26	94-9620	1	Spring-Torsion
27	33023-00	1	Nut-Lock

Ref. No.	Part No.	Qty.	Description

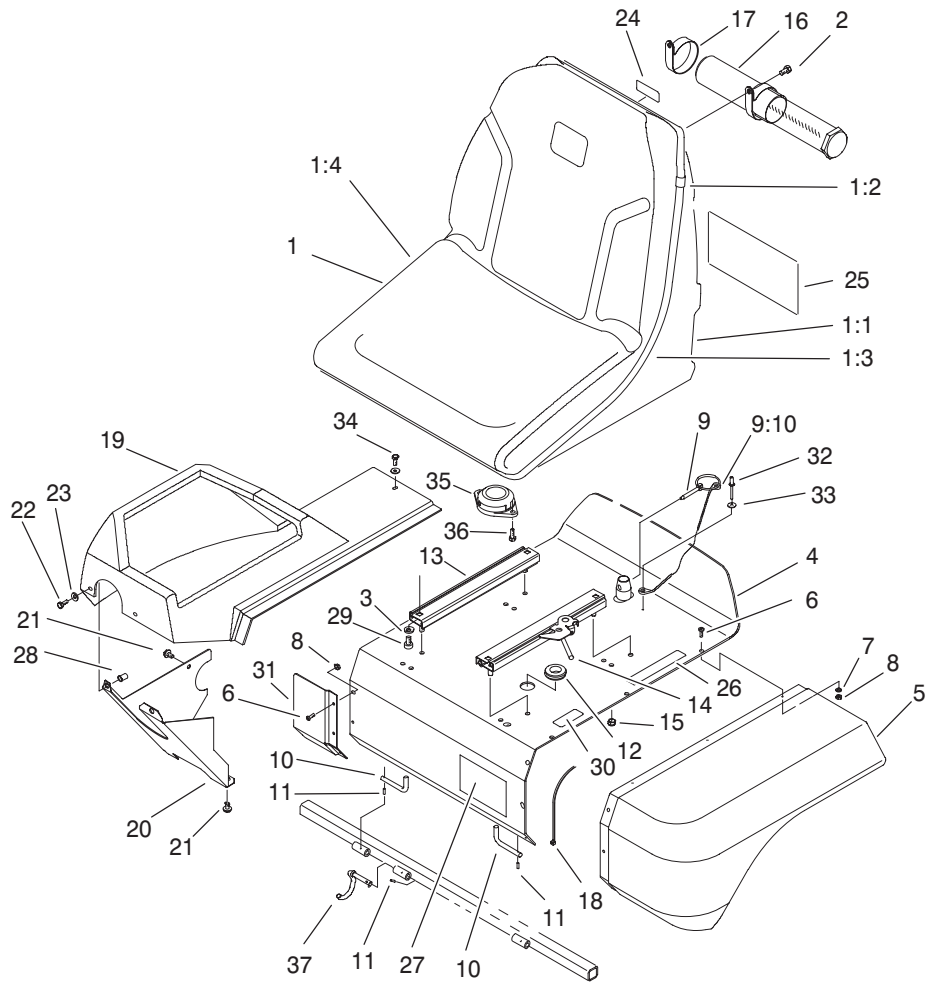


Sheet No.:9

Seat Assembly

Ref. No.	Part No.	Qty.	Description
1	100-3187	1	Seat ASM
1:1	92-6534	1	Shell
1:2	351-80	1	Clip
1:3	351-78	1	Edging
1:4	100-6411	1	Cushion-Replacement
2	322-2	2	Screw-HH
3	3256-23	4	Washer-Flat
4	93-2135-03	1	Seat Support
5	93-2128	1	Panel-Base, Seat
6	3274-39	9	Screw-HSBH
7	3256-77	6	Washer-Flat
8	3296-12	9	Nut-Lock
9	77-3780	1	Pin ASM
9:10	28-8070	1	Lanyard
10	93-2422	2	Rod-Pivot, Seat
11	32121-7	3	Pin-Spring
12	237-100	1	Grommet
13	92-8990	1	Adjuster - 7"
14	92-8991	1	Adjuster W/Latch
15	3296-29	4	Nut-Lock
16	74-0720	1	Tube-Manual
17	2412-133	2	R-Clamp
18	3290-378	1	Tie-Cable
19	99-4208	1	Shroud-Console
20	94-4547-01	1	Panel-Lower, RH
21	32144-14	2	Screw-HWH

Ref. No.	Part No.	Qty.	Description
22	33113-016	2	Screw-HH
23	3256-1	3	Washer-Flat
24	93-8067	1	Decal-Oil, Hyd
25	100-3150	1	Decal-Service
25	100-3151	1	Decal-Spanish
25	100-3152	1	Decal-French
25	100-3153	1	Decal-German
25	100-3154	1	Decal-Swedish
25	100-3155	1	Decal-Italian
25	100-3156	1	Decal-Portuguese
25	100-3157	1	Decal-Norwegian
25	100-3158	1	Decal-Finnish
25	100-3159	1	Decal-Danish
25	100-3160	1	Decal-Dutch
25	100-3161	1	Decal-Japan
26	93-6689	1	Decal-No Riders
27	94-2579	1	Decal-Toro
28	93-5447	2	Nut-Clinch
29	3274-12	4	Screw-HSH
30	93-7252	1	Decal-International
31	94-4546-01	1	Panel-Extension
32	3290-282	1	Rivet-Pop, Steel
33	3256-49	1	Washer-Flat
34	33113-012	1	Screw-HH
35	92-6282	1	Switch-Seat
36	32144-10	2	Screw-HWH

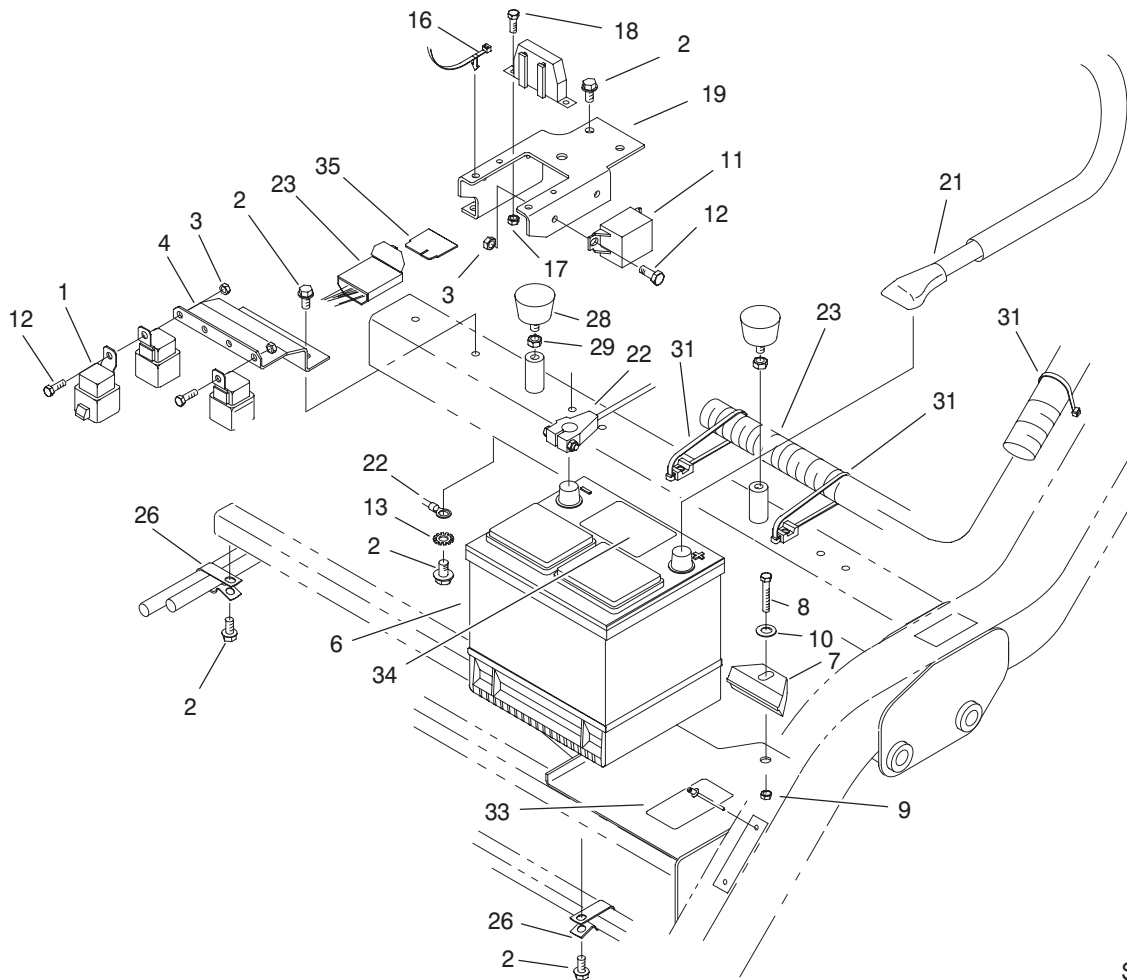


Sheet No.:9

Seat Assembly (Continued)

Ref. No.	Part No.	Qty.	Description
37	99-4247	1	Wire-Hook

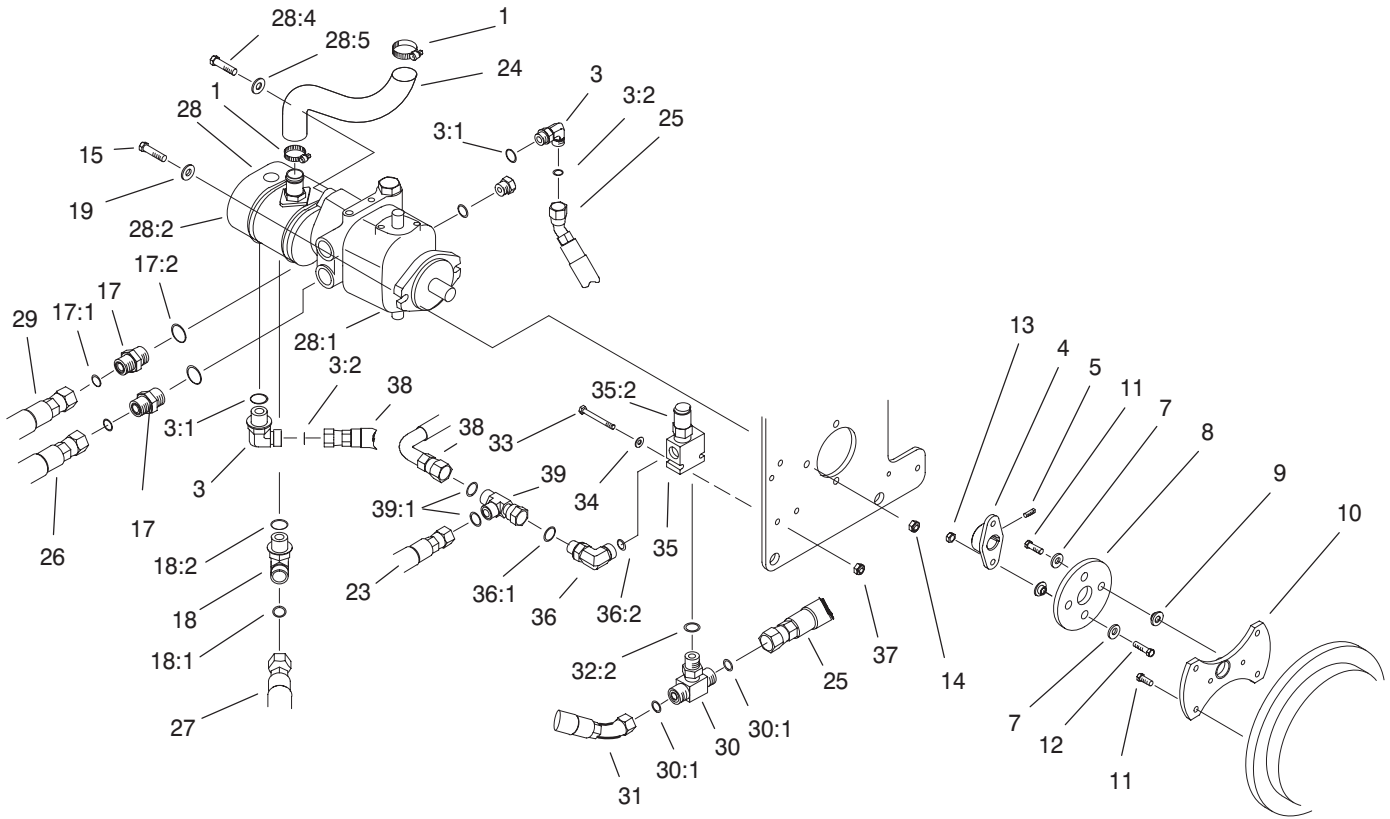
Ref. No.	Part No.	Qty.	Description
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Sheet No.:10

Electronics Installation Assembly

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	70-1480	8	Relay	34	93-7276	1	Decal-Danger
2	32144-11	7	Screw-TAP	35	92-3188	1	Diode-Board, Circuit
3	33023-00	6	Nut-Lock				
4	93-2169-01	1	Bracket-Relay				
6	66-2750	1	Battery				
7	66-2490	1	Retainer-Battery				
8	33115-040	1	Screw-HH				
9	33025-00	1	Nut-Lock				
10	3256-24	1	Washer-Flat				
11	66-8800	1	Relay				
12	33113-016	6	Screw-HH				
13	3254-2	1	Washer-Lock, Internal				
16	94-1325	2	Tie-Mount, Push				
17	3296-2	2	Nut-Lock				
18	32105-13	2	Screw-Shh				
19	100-3186-03	1	Bracket-Holder, Fuse				
21	95-8853	1	Cable-Battery, Positive				
22	99-8167	1	Cable-Battery, Negative				
23	104-7700	1	Wire Harness-Main				
26	92-5753	2	Clamp-Hose				
28	68-3270	2	Bumper-Rubber				
29	3218-2	2	Nut-Jam				
31	3290-378	6	Tie-Cable				
33	93-6668	1	Decal-Battery				



Sheet No.:11

Hydrostat and Gear Pump Drive Assembly

Ref. No.	Part No.	Qty.	Description
1	2412-34	2	Clamp-Hose
3	340-18	2	Fitting-Hyd, 90°
3:1	237-79	1	O-Ring
3:2	237-22	1	O-Ring
4	93-2589	1	Hub-Pump
5	3241-6	2	Screw-SQH
7	3256-3	2	Washer-Flat
8	80-8650	1	Coupling-Drive
9	27-6600	4	Spacer-Coupling
10	93-2220-03	1	Adapter-Pump
11	33114-020	6	Screw-HH
12	33114-030	1	Screw-HH
13	33024-00	2	Nut-Lock
14	33025-00	2	Nut-Lock
15	33115-040	2	Screw-HH
17	340-8	2	Adapter
17:1	237-65	1	O-Ring
17:2	237-81	1	O-Ring
18	340-17	1	Adapter
18:1	237-65	1	O-Ring
18:2	237-80	1	O-Ring
19	100-4852	2	Washer-Hardened
23	99-4218	1	Hose ASM
24	99-1905	1	Hose-Inlet, Pump
25	94-6384	1	Hose ASM
26	99-4220	1	Hose ASM

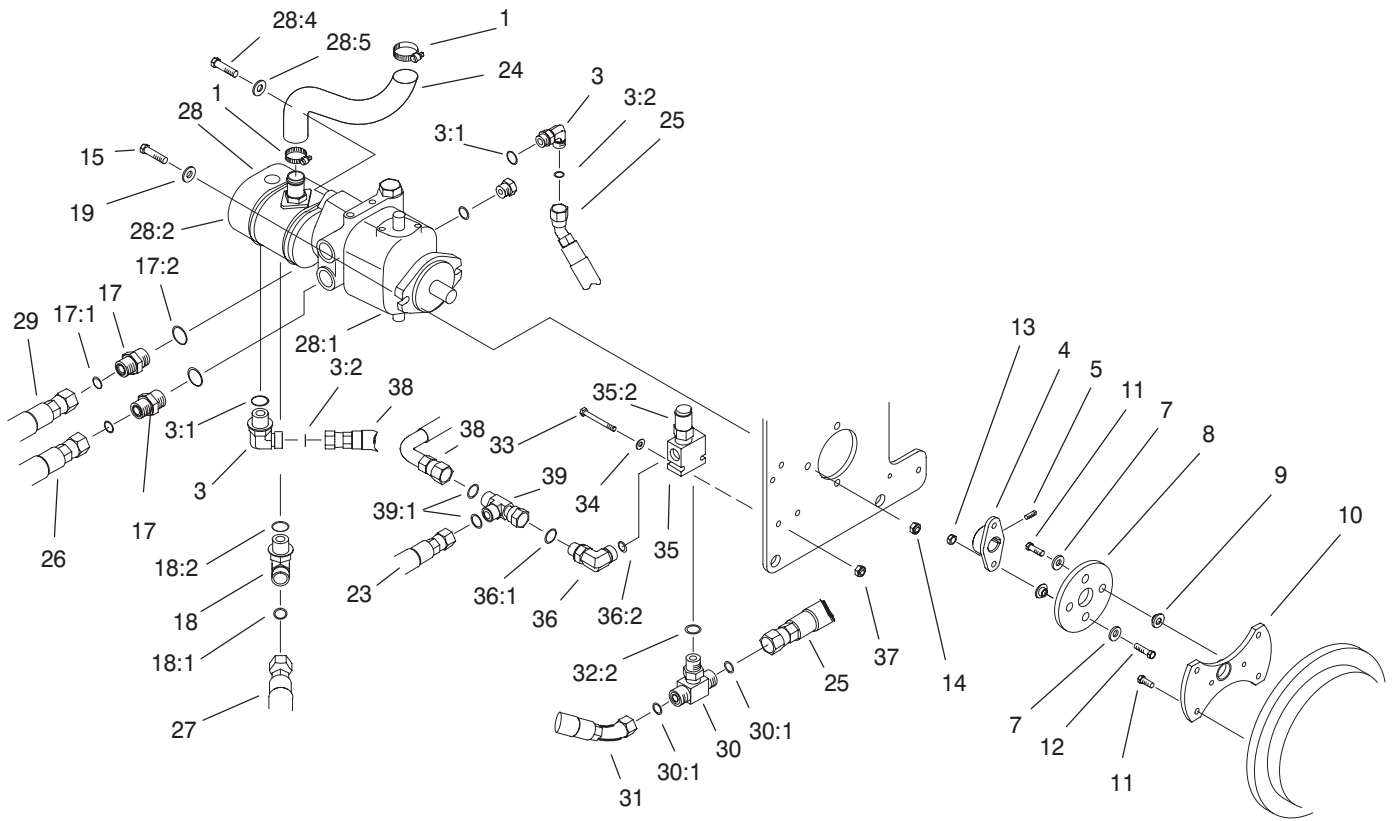
Ref. No.	Part No.	Qty.	Description
27	99-4216	1	Hose ASM
☆†28		1	Pump-Gear, Hydro ASM
‡28:1	105-0494	1	Hydrostat ASM
‡28:2	104-7737	1	Gear Pump
*28:3	60-3520	1	O-Ring
28:4	3274-1	2	Screw-HSH
28:5	3256-24	2	Washer-Flat
☆†28		1	Pump-Gear, Hydro
†28:1	100-3174	1	Hydrostat ASM
†28:2	94-6390	1	Pump-Gear
*28:3	60-3520	1	O-Ring
28:4	3274-1	2	Screw-HSH
28:5	3256-24	2	Washer-Flat
29	99-4217	1	Hose ASM
30	340-94	1	Adapter
30:1	237-22	2	O-Ring
30:2	237-42	1	O-Ring
31	99-4215	1	Hose ASM
33	33113-050	2	Screw-HH
34	3256-22	2	Washer-Flat
35	94-6385	1	Valve-Relief
35:2	94-6386	1	Cartridge-Valve, Relief
36	340-77	1	Fitting-Hyd, 90°
36:1	237-22	1	O-Ring
36:2	237-42	1	O-Ring

‡ Used from serial range 21000001 to 210000513

† Used from serial range 210000514 and Up

* Not illustrated

☆ Not serviced



Sheet No.:11

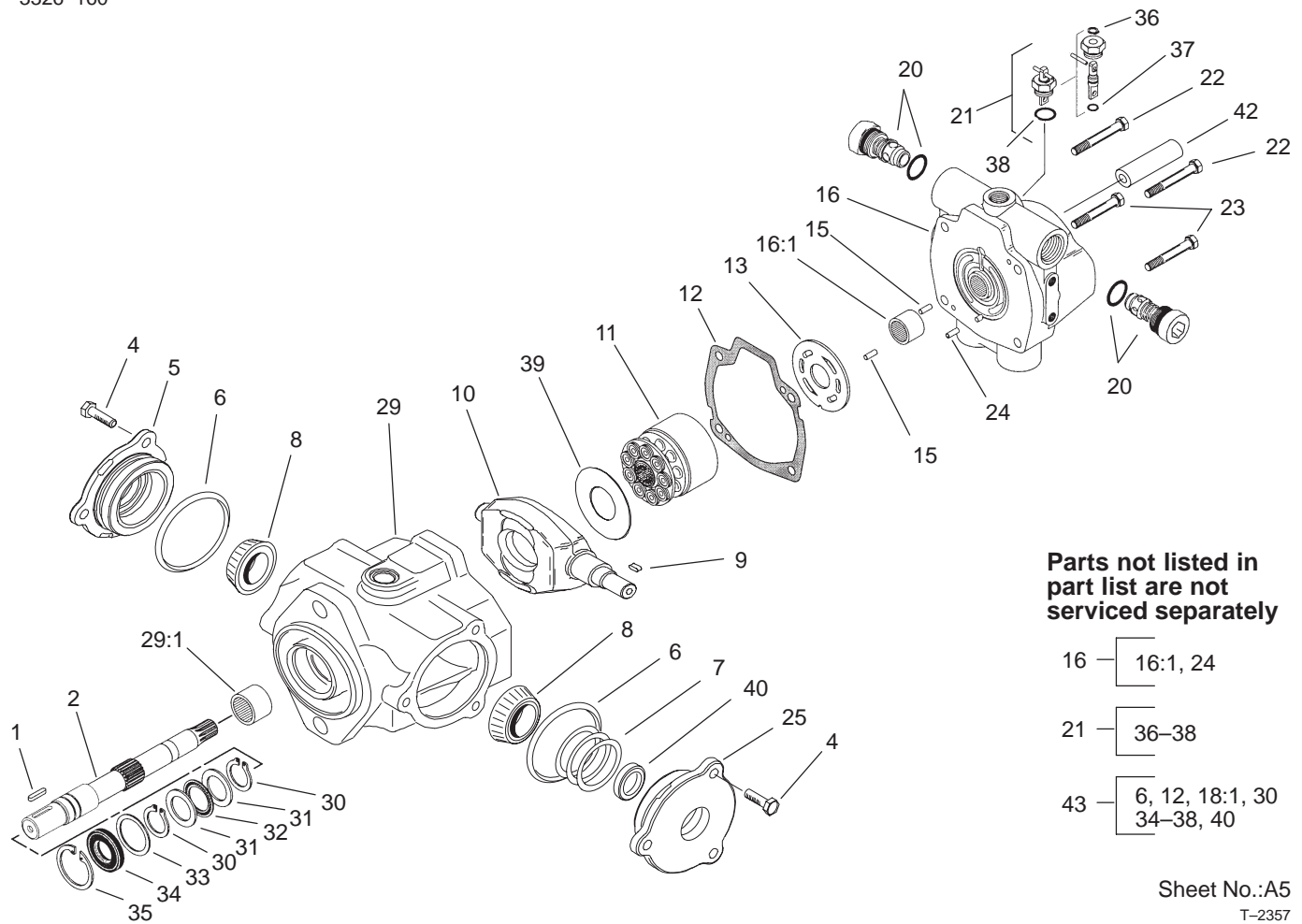
Hydrostat and Gear Pump Drive Assembly (Continued)

Ref. No.	Part No.	Qty.	Description
37	33023-00	2	Nut-Lock
38	99-4219	1	Hose ASM
39	340-115	1	Fitting-Tee
39:1	237-22	2	O-Ring

Ref. No.	Part No.	Qty.	Description

‡ Used from serial range 210000001 to 210000513

† Used from serial range 210000514 and Up



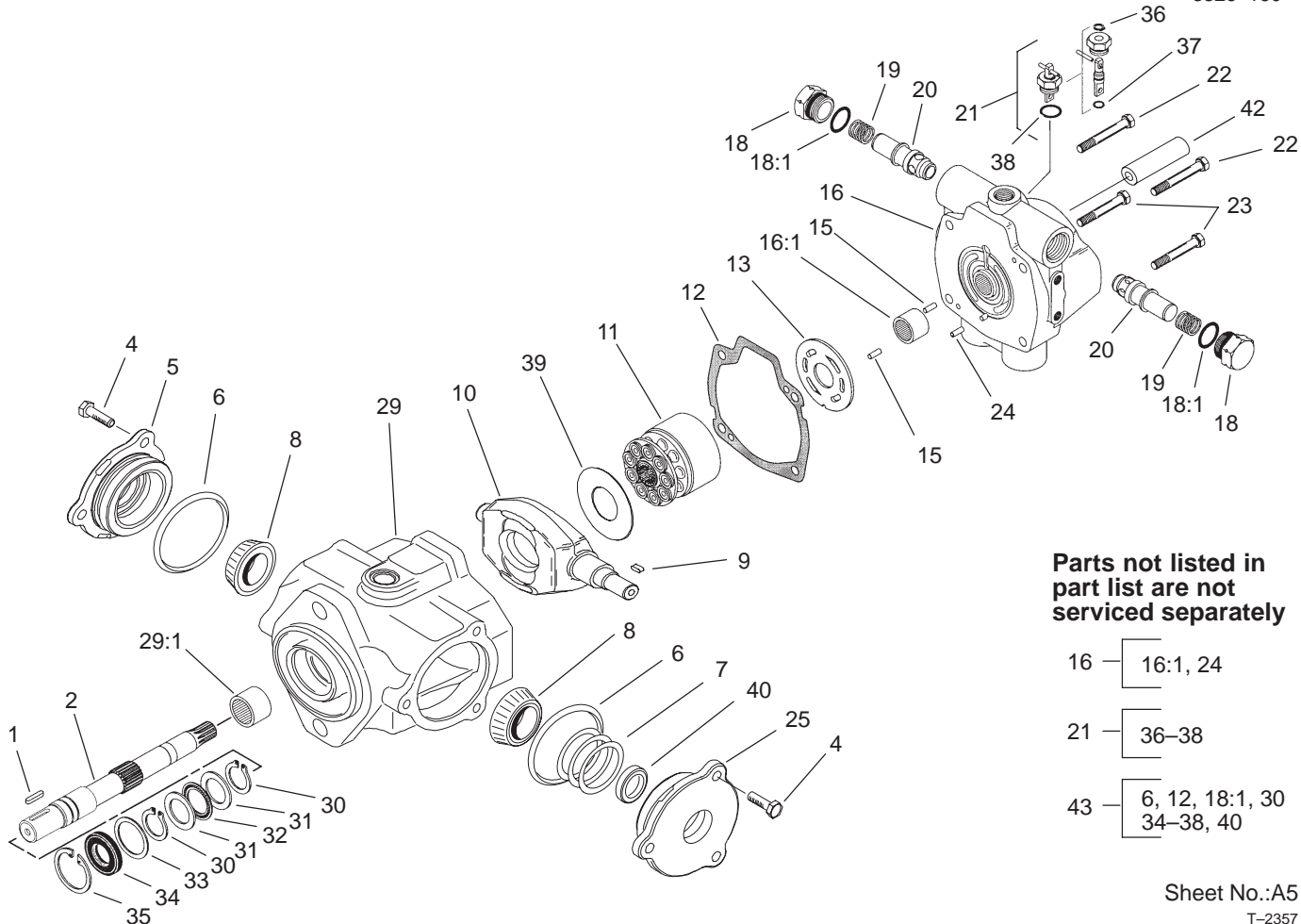
Sheet No.:A5
T-2357

Hydrostat Assembly No. 105-0494†

Ref. No.	Part No.	Qty.	Description
1	94-3645	1	Key
2	94-6359	1	Shaft-Drive
4	98-4640	6	Screw-Cap
5	98-4644	1	Cover Plate ASM
6	100-3179	2	O-Ring
7	100-3182	2	Kit-Shim
8	98-4639	2	Bearing-Cone
9	94-3646	1	Key
10	100-3175	1	Camplate
11	76-6070	1	Kit-Rotating
12	33-4930	1	Gasket-Housing
13	100-3180	1	Valve-Plate
15	76-6150	2	Pin-Dowel
16	105-3813	1	Endcover Sub ASM
20	105-3812	2	Check Valve Sub ASM
21	105-3811	1	Valve-Bypass
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
30	32151-29	2	Ring-Snap, External
31	252-71	2	Bearing-Thrust
32	252-66	1	Bearing-Thrust
33	33-3720	1	Washer
34	42-2720	1	Seal-External

Ref. No.	Part No.	Qty.	Description
35	32151-13	1	Ring-Snap, Internal
39	98-4635	1	Insert-Plate, Cam
42	74-9040	1	Coupler
43	98-4643	1	Seal Repair Kit

† Used from serial range 210000514 and Up

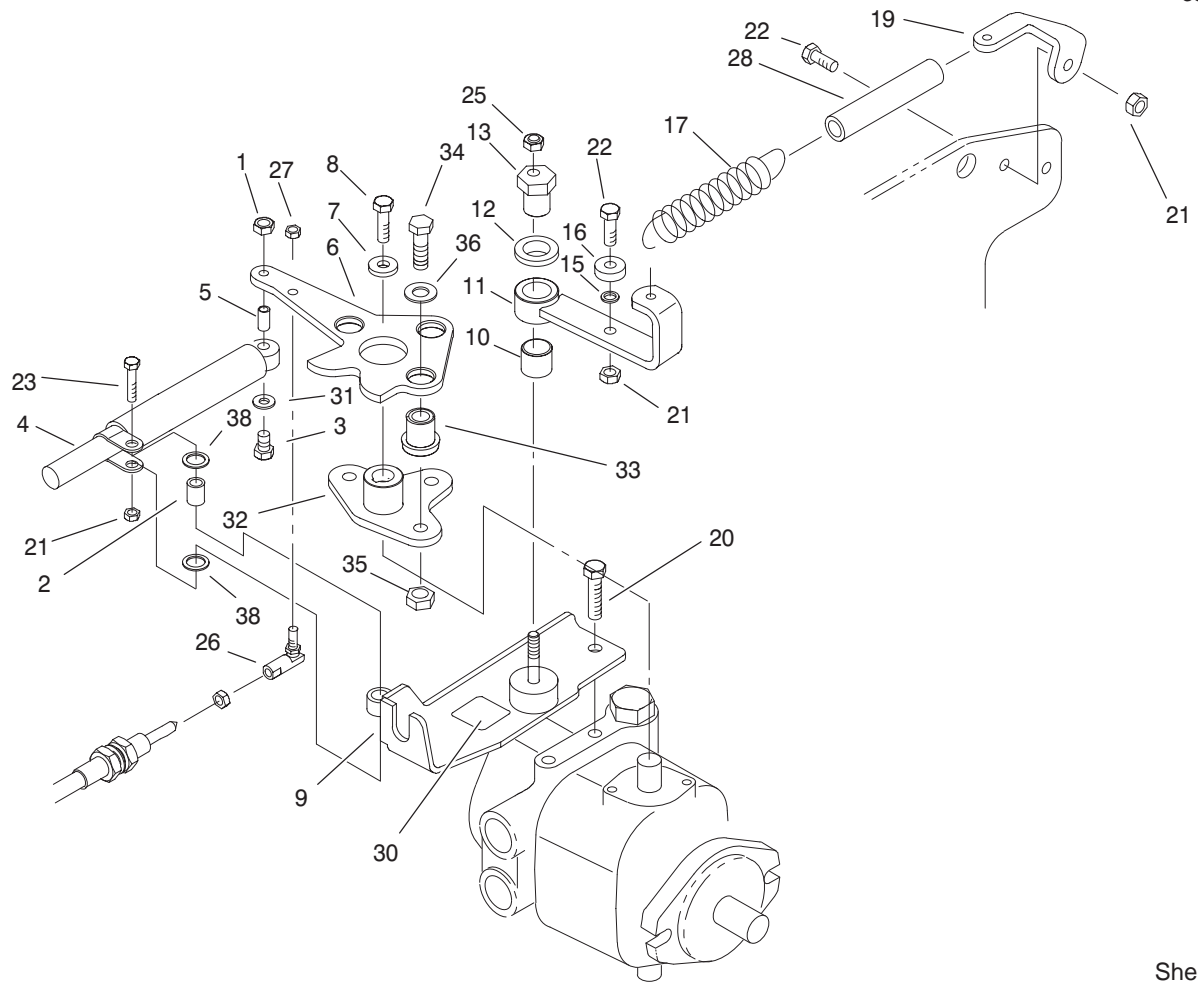


Hydrostat Assembly No. 100-3174‡

Ref. No.	Part No.	Qty.	Description
1	94-3645	1	Key
2	94-6359	1	Shaft – Drive
4	98-4640	6	Screw – Cap
5	98-4644	1	Cover Plate ASM
6	100-3179	2	O-Ring
7	100-3182	2	Kit-Shim
8	98-4639	2	Bearing-Cone
9	94-3646	1	Key
10	100-3175	1	Camplate
11	76-6070	1	Rotating Kit
12	33-4930	1	Gasket-Housing
13	100-3180	1	Valve-Plate
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	100-3178	2	Spring
20	94-3644	2	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
30	32151-29	2	Ring-Snap, External

Ref. No.	Part No.	Qty.	Description
31	252-71	2	Bearing-Thrust
32	252-66	1	Bearing-Thrust
33	33-3720	1	Washer
34	42-2720	1	Seal-External
35	32151-13	1	Ring-Snap, Internal
39	98-4635	1	Insert-Plate, Cam
42	74-9040	1	Coupler
43	98-4643	1	Seal Repair Kit

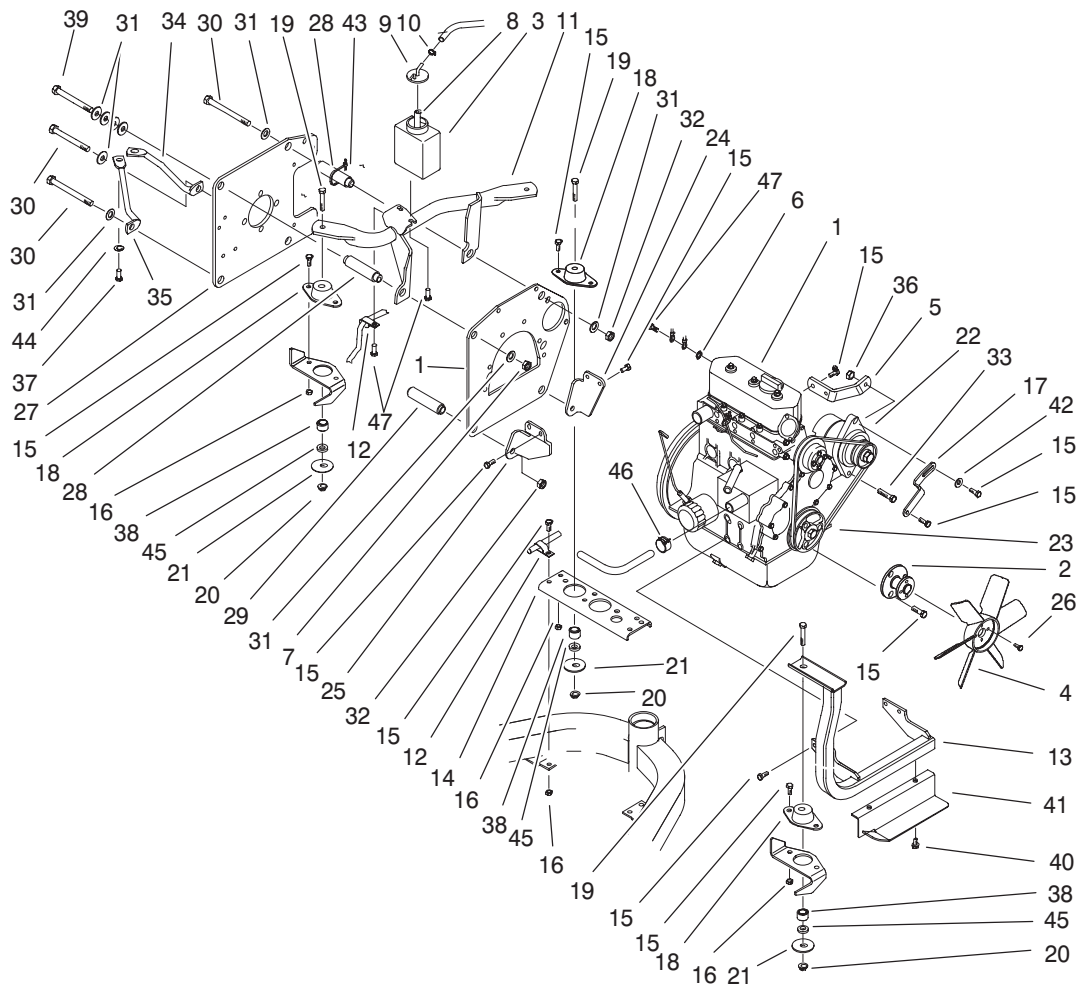
‡ Used from serial range 21000001 to 210000513



Sheet No.:12

Neutral System Assembly

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	33023-00	1	Nut-Lock	31	3256-22	1	Washer-Flat
2	94-8197	1	Tube-Pivot	32	94-3486	1	Plate
3	33113-030	1	Screw-HH	33	63-9750	3	Mount
4	76-8870	1	Lever Damper ASM	34	33115-035	3	Screw-HH
5	94-1312	1	Spacer-Pivot	35	33025-00	3	Nut-Lock
6	94-3488-03	1	Lever-Pump	36	2844	3	Washer
7	88-7200	1	Washer-Flat	38	94-8196	2	Washer-Nylon
8	3210-6	1	Screw-HH				
9	100-9846	1	Support-Cable				
10	94-9609	1	Bushing-Straight				
11	94-4527	1	Arm-Neutral				
12	3-6498	1	Washer-Thrust				
13	93-2111	1	Stud-Traction				
15	75-5470	1	Spacer-Bearing				
16	251-259	1	Bearing				
17	99-4254	1	Spring-Extension				
19	99-4276	1	Bracket-Spring				
20	323-4	2	Screw-HH				
21	33024-00	3	Nut-Lock				
22	33114-025	2	Screw-HH				
23	33114-030	1	Screw-HH				
25	3296-29	1	Nut-Lock				
26	2411-34	1	Joint-Ball				
27	3296-13	1	Nut-Lock NI				
28	99-4251	1	Hose-Dampener				
30	93-9051	1	Decal-Bolt, Eccentric				

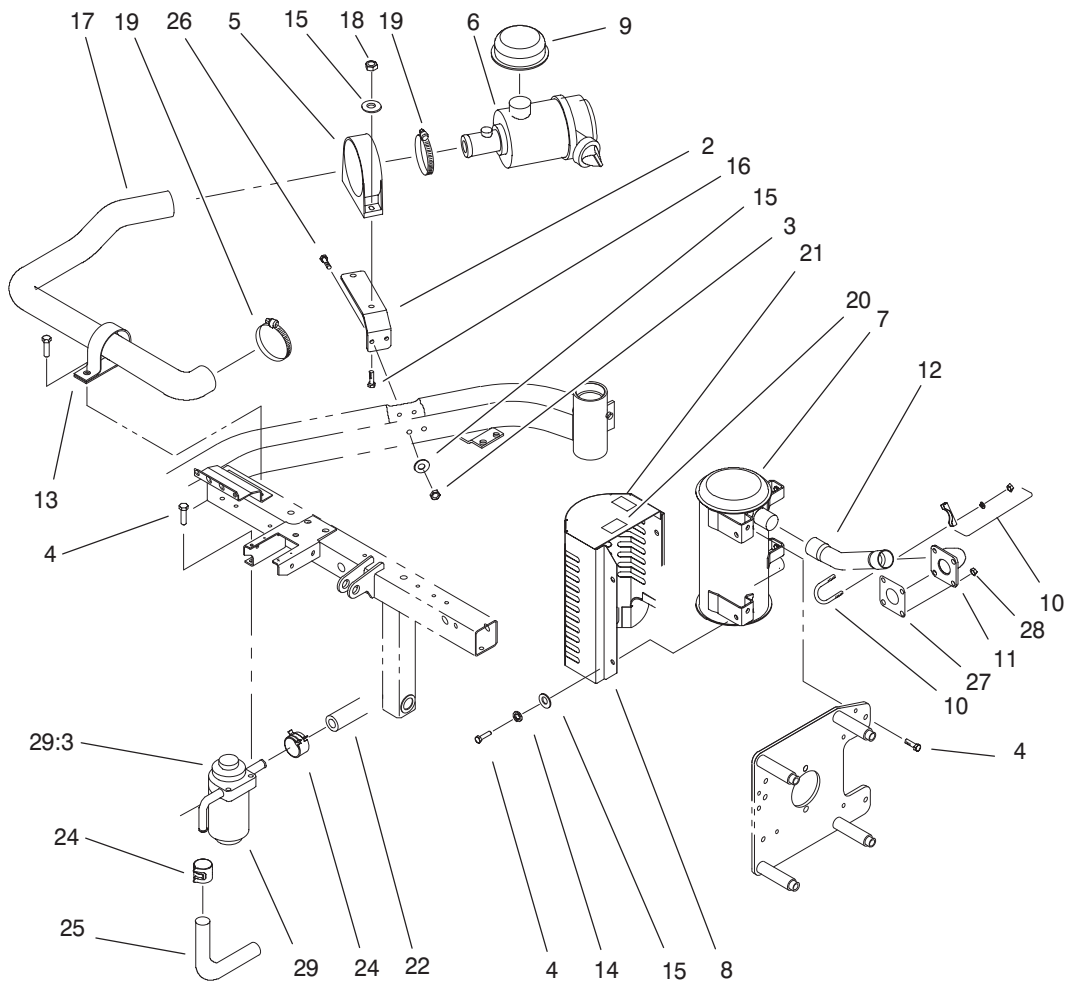


Sheet No.:13

Engine Installation Assembly

Ref. No.	Part No.	Qty.	Description
1	99-1481	1	Engine
2	99-1495	1	Adapter-Fan
3	93-2049	1	Tank-Overflow
4	93-2090	1	Fan-Engine
5	93-2445	1	Bracket-Alternator, Upper
6	3254-2	1	Washer-Lock, Internal
7	51-2070	1	Nut
8	94-1348	1	Hose-Tank
9	93-2048	1	Cap-Tank, Overflow
10	2412-108	1	Clamp-Worm
11	100-3190-03	1	Engine Mount ASM
12	92-5753	2	Clamp-Hose
13	99-1473-03	1	Mount-Engine, Front
14	93-2020-01	1	Bracket-Support
15	33114-020	26	Screw-HH
16	33024-00	4	Nut-Lock
17	93-2446	1	Bracket-Alternator, Lower
18	83-1030	3	Mount-Engine
19	323-11	3	Screw-HH
20	3290-357	3	Nut-Flange, Lock
21	83-1040	3	Washer-Flat
22	99-9209	1	Alternator
23	99-8153	1	Belt-V
24	99-4189-03	1	Bracket-Engine, LH

Ref. No.	Part No.	Qty.	Description
25	99-4188-03	1	Bracket-Engine, RH
26	33113-016	4	Screw-HH
27	99-4190-03	1	Plate-Pump
28	93-2588	2	Spacer-Upper
29	93-2174	2	Spacer
30	33116-130	3	Screw-HH
31	87-7270	9	Washer-Thrust
32	33026-00	3	Nut-Lock
33	33115-050	1	Screw-HH
34	99-4240	1	Brace-Wireform, LH
35	99-4238	1	Brace-Wireform, RH
36	33025-00	1	Nut-Lock
37	323-4	2	Screw-HH
38	94-4538	3	Spacer-Mount
39	33116-120	1	Screw-HH
40	32144-14	2	Screw-HWH
41	94-8156-03	1	Deflector-Fan
42	3256-3	1	Washer-Flat
43	3290-378	2	Tie-Cable
44	3256-24	2	Washer-Flat
45	66-6480	3	Washer
46	92-2379	2	Clamp-Hose
47	33114-016	3	Screw-HH

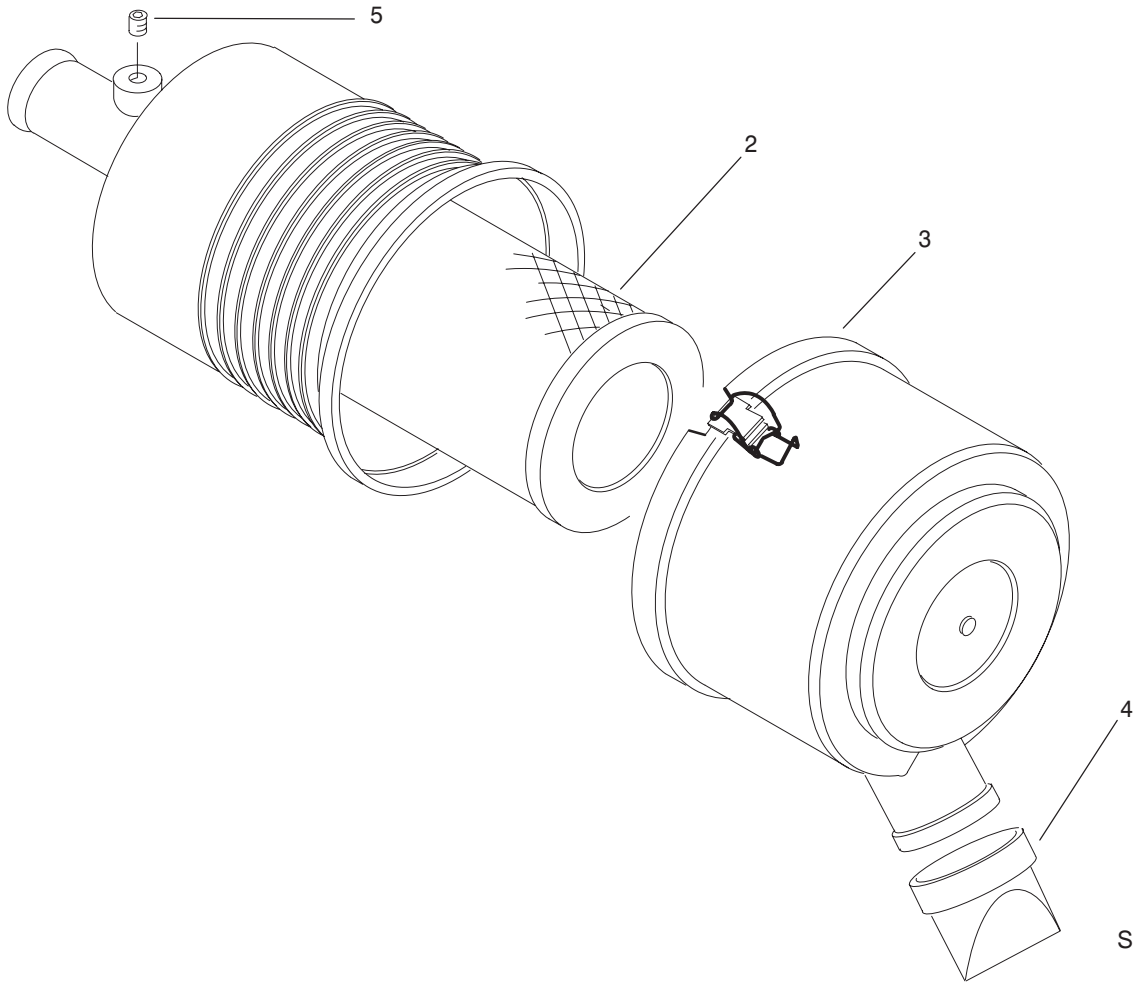


Sheet No.:14

Air Cleaner and Exhaust Assembly

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
2	99-4203	1	Bracket-Cleaner, Air	29	100-3191	1	Separator-Fuel
3	33024-00	2	Nut-Lock	*29:1	100-3192	1	Element-Filter, Fuel
4	33114-020	8	Screw-HH	*29:2	100-6409	1	Sensor-Filter, Fuel
5	95-5806	1	Bracket-Mounting	29:3	100-6408	1	Cover-Filter
6	95-5805	1	Air Cleaner ASM				
7	94-8153	1	Muffler				
8	94-8182-03	1	Shield-Muffler				
9	46-7510	1	Hood-Inlet, Air				
10	2112-9	2	Clamp				
11	99-1472	1	Plate-Exhaust				
12	99-1494	1	Pipe-Exhaust				
13	2412-107	1	Clamp-R				
14	3253-4	4	Washer-Lock				
15	3256-23	4	Washer-Flat				
16	322-16	2	Screw-HH				
17	99-4204	1	Hose-Cleaner, Air				
18	3296-29	2	Nut-Lock				
19	2412-92	2	Clamp-Hose				
20	93-8069	1	Decal-Surface, Hot				
21	93-7275	1	Decal-Fluid, Starting				
22	92-9283	1	Hose-Vent, Fuel				
24	92-2379	2	Clamp-Hose				
25	93-5553	1	Hose-Fuel				
26	33114-080	2	Screw-HH				
27	99-9179	1	Gasket-Exhaust				
28	99-9176	4	Nut-Hex				

* Not illustrated

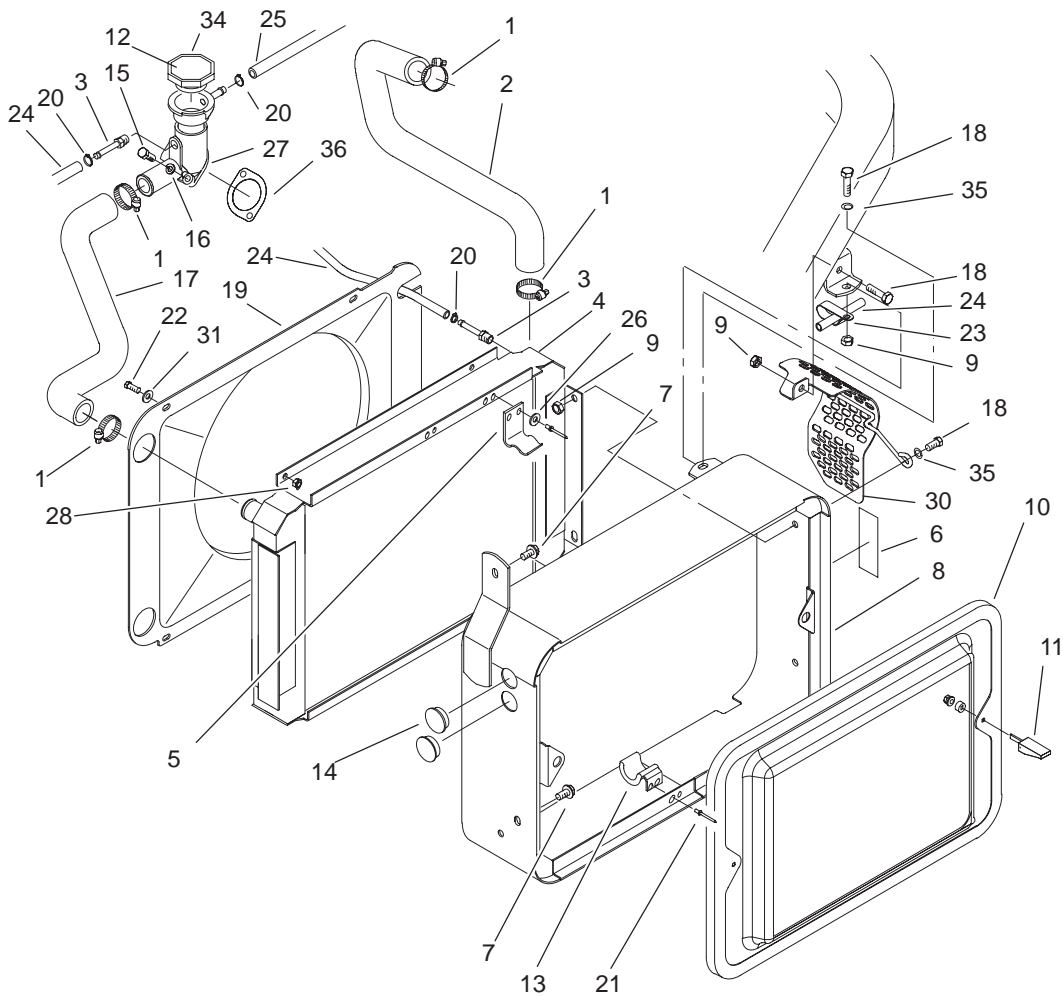


Sheet No.:A8
T-2607

Air Cleaner Assembly No. 95-5805

Ref. No.	Part No.	Qty.	Description
2	93-2195	1	Filter
3	94-3652	1	Cover ASM
4	94-1414	1	Valve-Vacuator
5	285-17	1	Plug-Pipe

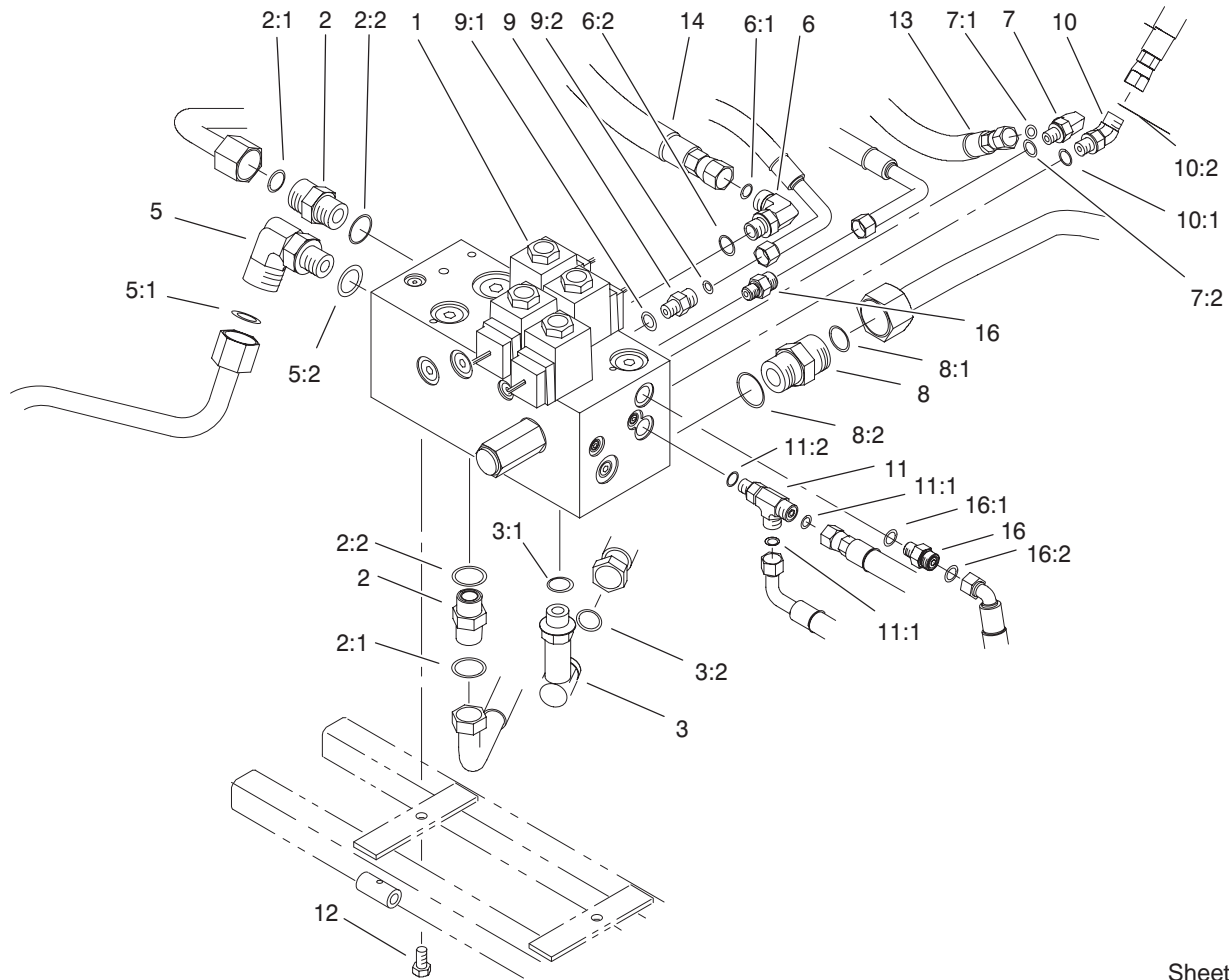
Ref. No.	Part No.	Qty.	Description



Sheet No.:15

Radiator Assembly

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	2412-34	4	Clamp-Hose	27	93-2448	1	Thermostat Housing ASM
2	99-1469	1	Hose-Radiator	28	33023-00	4	Nut-Lock
3	304-73	2	Connector-Hose	30	100-3164-03	1	Guard-Alternator
4	99-8193	1	Radiator	31	3256-22	4	Washer-Flat
5	104-7736	1	Bracket-Cooler, Upper	34	66-3240	1	Cap-Radiator
6	93-6681	1	Decal-Warning, Fan	35	3256-23	2	Washer-Flat
7	32144-14	2	Screw-HWH	36	99-9163	1	Gasket-Outlet
8	100-3163-01	1	Radiator Support ASM				
9	33024-00	6	Nut-Lock				
10	100-3172-03	1	Screen ASM				
11	74-5950	2	Latch-Swell				
12	93-7840	1	Decal-Cap, Radiator				
13	93-2424	2	Bracket-Cooler, Lower				
14	94-4528	2	Plug				
15	33113-025	2	Screw-HH				
16	3253-3	2	Washer-Lock				
17	93-2018	1	Hose-Radiator				
18	33114-020	6	Screw-HH				
19	93-2320	1	Shroud-Fan				
20	2412-108	3	Clamp-Worm				
21	3269-15	6	Rivet				
22	33113-016	4	Screw-HH				
23	92-5753	1	Clamp-Hose				
24	27-4480	1	Hose				
25	92-9283	1	Hose-Vent, Fuel				
26	3269-6	2	Washer				

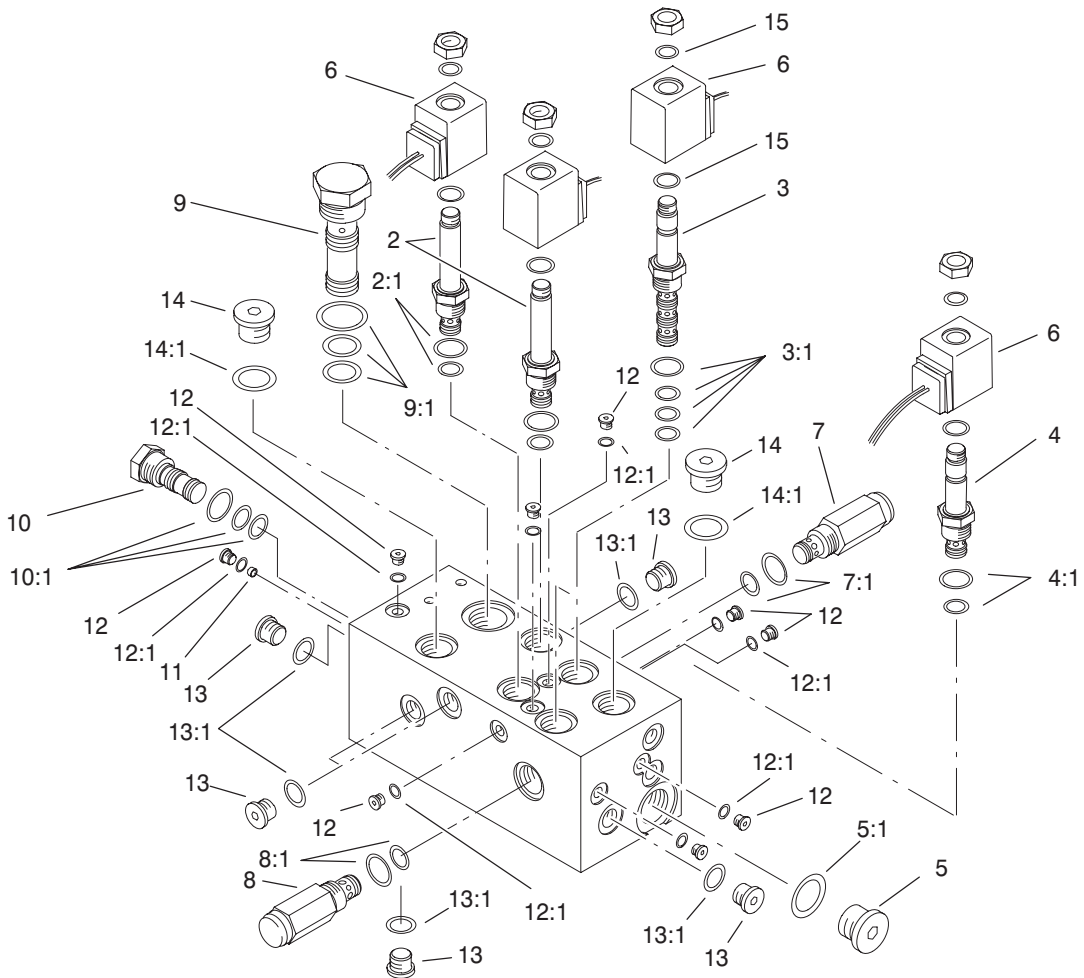


Sheet No.:16

Manifold Block Installation Assembly

Ref. No.	Part No.	Qty.	Description
1	93-2240	1	Manifold-Mow/Lift, Basic
2	340-7	2	Adapter
2:1	237-65	1	O-Ring
2:2	237-80	1	O-Ring
3	99-4214	1	Fitting-Hydraulic
3:1	237-79	1	O-Ring
3:2	237-30	1	O-Ring
5	340-17	1	Adapter
5:1	237-65	1	O-Ring
5:2	237-80	1	O-Ring
6	340-77	1	Fitting-Hyd, 90°
6:1	237-22	1	O-Ring
6:2	237-42	1	O-Ring
7	340-132	1	Fitting-Hyd, 90°
7:1	237-78	1	O-Ring
7:2	237-21	1	O-Ring
8	340-9	1	Fitting-Straight
8:1	237-58	1	O-Ring
8:2	237-81	1	O-Ring
9	340-92	1	Fitting-Straight, Hyd
9:1	237-78	1	O-Ring
9:2	237-21	1	O-Ring
10	340-103	1	Fitting-Hyd, 45°
10:1	237-78	1	O-Ring
10:2	237-21	1	O-Ring

Ref. No.	Part No.	Qty.	Description
11	340-140	1	Adapter-Tee
11:1	237-21	2	O-Ring
11:2	237-78	1	O-Ring
12	33114-016	2	Screw-HH
13	93-2271	1	Hydraulic Hose ASM
14	93-2272	1	Hydraulic Hose ASM
16	95-1639	2	Fitting-Orificed
16:1	237-78	1	O-Ring
16:2	237-21	1	O-Ring

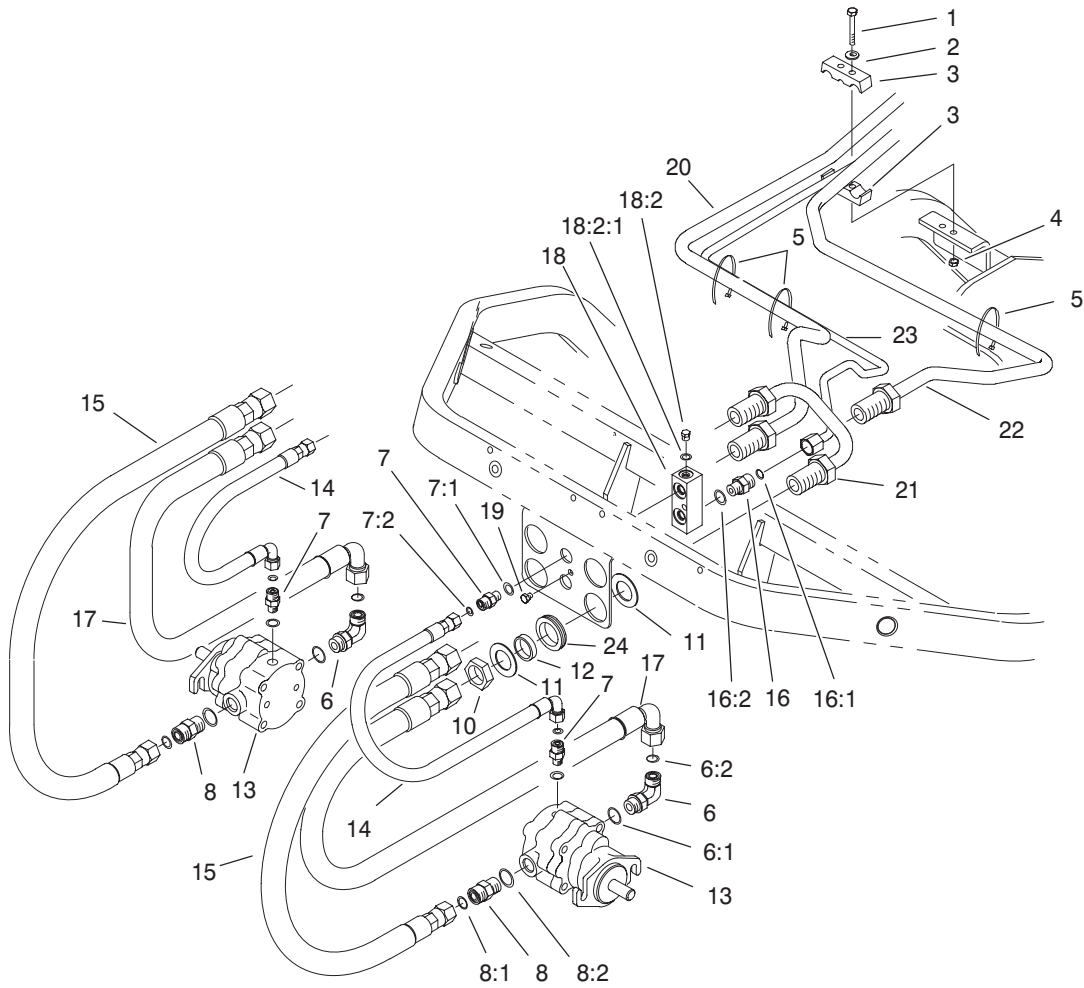


Sheet No.:A9

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Basic Mow/Lift Manifold Assembly No. 93-2240

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
2	93-7494	2	Cartridge				
2:1	75-2080	1	Kit-Seal				
3	94-2627	1	Cartridge				
3:1	75-2090	1	Kit-Seal				
4	92-6315	1	Cartridge-N.c., Poppet				
4:1	69-4230	1	Kit-Seal				
5	353-988	1	Plug-Hex, Hollow				
5:1	237-79	1	O-Ring				
6	88-9190	4	Kit-Coil, Solenoid				
7	95-1601	1	Cartridge-Relief D.a.				
7:1	69-4230	1	Kit-Seal				
8	94-6351	1	Cartridge-Relief D.a.				
8:1	69-4230	1	Kit-Seal				
9	94-6352	1	Plug-Cavity				
9:1	104-7730	1	Kit-Repair, Seal				
10	94-6353	1	Plug-Cavity				
10:1	69-4240	1	Kit-Seal				
11	95-5999	1	Plug-Orifice				
12	353-991	9	Plug-Hex, Hollow				
12:1	237-156	1	O-Ring				
13	353-989	6	Plug-Hex, Hollow				
13:1	237-42	1	O-Ring				
14	354-70	2	Plug-Hex, Hollow				
14:1	237-80	1	O-Ring				
15	94-5438	8	Seal-Solenoid				

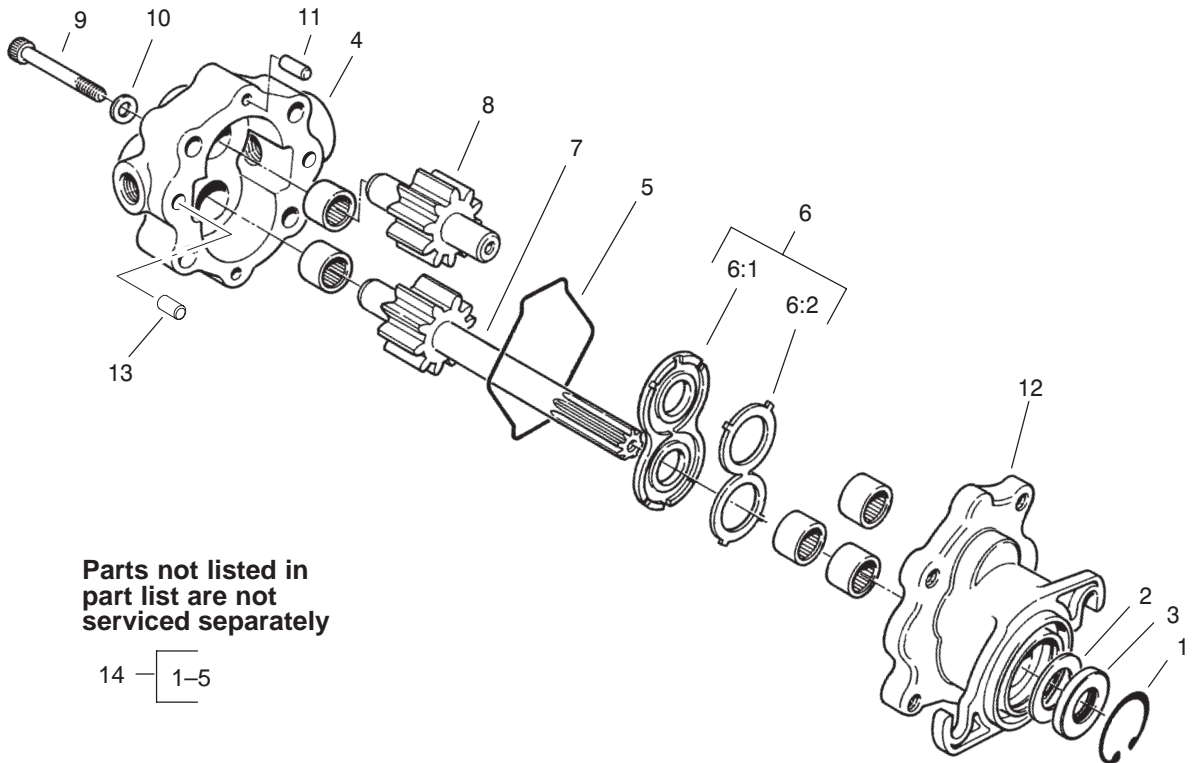


Sheet No.:17

Front Bulkhead and Reel Motor Assembly

Ref. No.	Part No.	Qty.	Description
1	33113-050	2	Screw-HH
2	3256-1	2	Washer-Flat
3	93-2509	2	Clamp-Tube
4	33023-00	2	Nut-Lock
5	3290-378	3	Tie-Cable
6	340-98	2	Fitting-Hyd, 90°
6:1	237-79	1	O-Ring
6:2	237-30	1	O-Ring
7	340-92	4	Fitting-Straight, Hyd
7:1	237-78	2	O-Ring
7:2	237-21	2	O-Ring
8	340-4	2	Adapter
8:1	237-30	1	O-Ring
8:2	237-79	1	O-Ring
10	340-74	2	Locknut-Bulkhead
11	69-9010	4	Washer
12	69-9000	2	Spacer
13	93-1375	2	Motor-Reel
14	93-2264	2	Hydraulic Hose ASM
15	95-2908	2	Hose ASM
16	340-2	1	Adapter-Straight, Hyd
16:1	237-22	1	O-Ring
16:2	237-42	1	O-Ring
17	95-2909	2	Hose ASM
18	93-2238	1	T-Block
18:2	353-991	1	Plug-Hex, Hollow

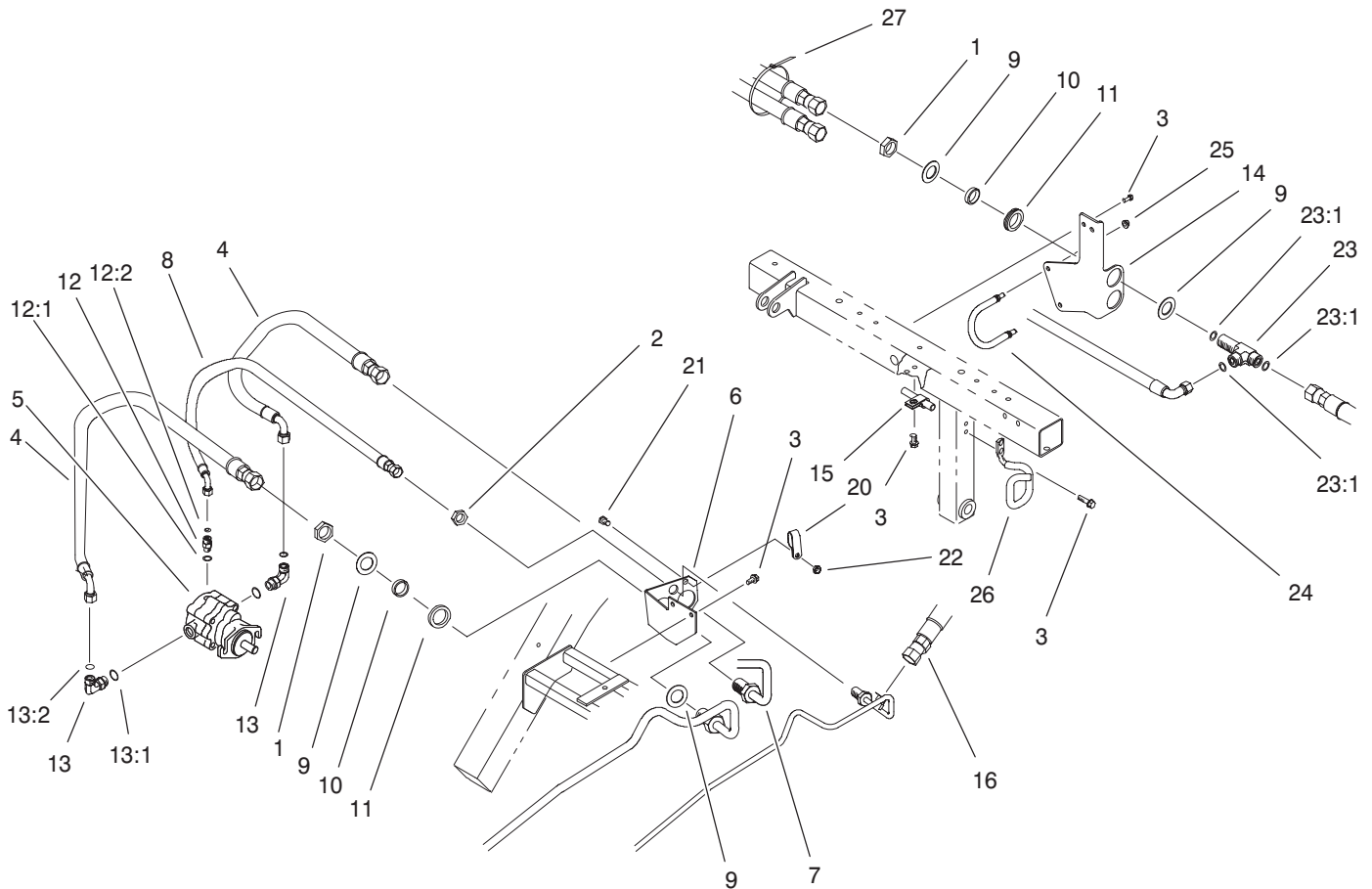
Ref. No.	Part No.	Qty.	Description
18:2:1	237-156	1	O-Ring
19	33113-008	1	Screw-HH
20	94-1318	1	Tube-Hydraulic
21	94-1319	1	Tube-Hyd
22	94-1320	1	Tube-Hydraulic
23	94-1321	1	Tube-Hydraulic
24	240-3	2	Grommet-Rubber



Sheet No.:B1
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Reel Motor Assembly No. 93-1375

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	32151-41	1	Ring-Snap				
2	92-8864	1	Seal-Oil				
3	353-590	1	Spacer				
4	93-3614	1	Cover ASM				
5	354-46	1	Ring-Seal				
6	104-7712	1	Load Plate ASM				
6:1	104-7713	1	Plate-Load				
6:2	104-7714	1	Seal-Load				
7	93-3615	1	Drive Shaft & Gear ASM				
8	93-3616	1	Idler Shaft & Gear ASM				
9	354-50	4	Screw-HSH				
10	354-51	4	Washer				
11	353-599	2	Pin-Dowel				
12	92-8795	1	Body ASM				
13	92-8796	2	Pin-Dowel				
14	92-8863	1	Kit-Repair				

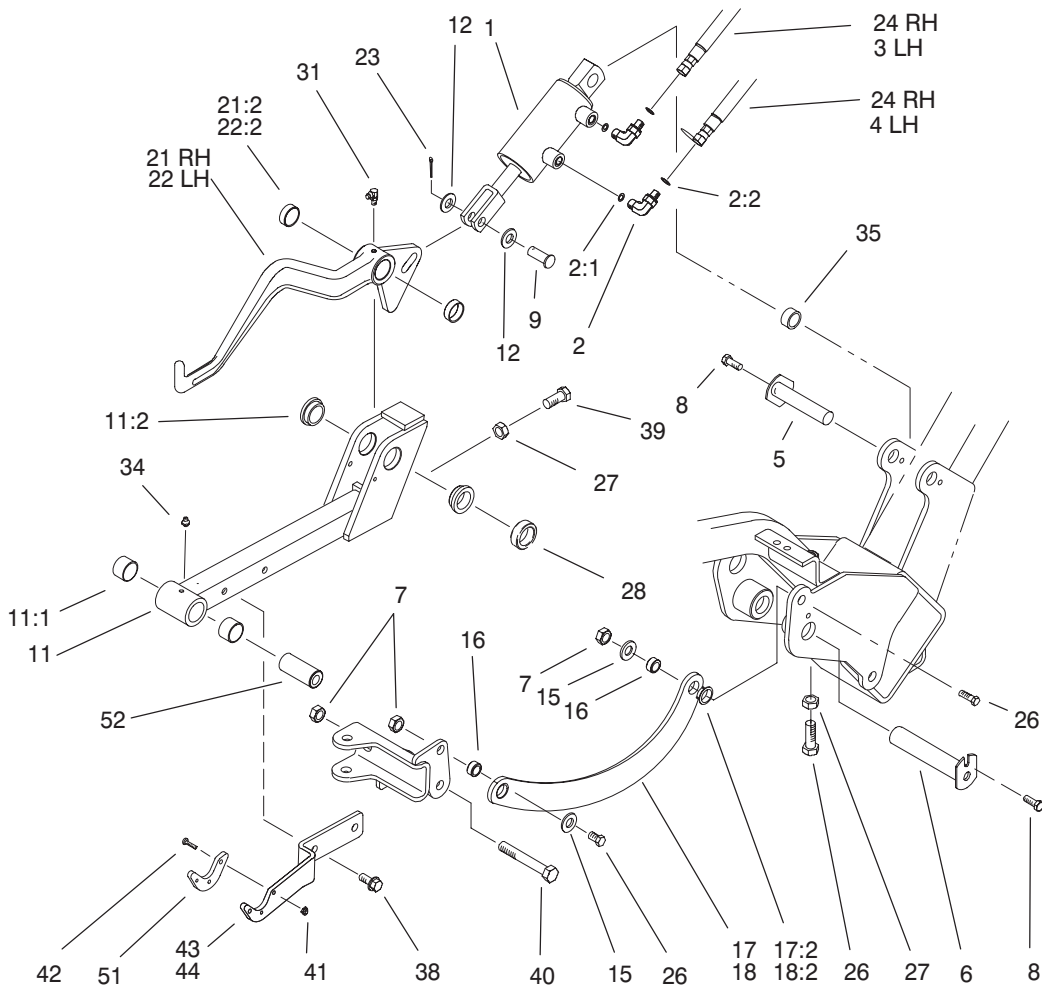


Sheet No.:18

Rear Bulkhead and Reel Motor Assembly

Ref. No.	Part No.	Qty.	Description
1	340-74	4	Locknut-Bulkhead
2	340-70	1	Locknut-Bulkhead
3	32144-14	7	Screw-HWH
4	95-2907	2	Hose ASM
5	93-1375	1	Motor-Reel
6	94-1316	1	Bracket-Bulkhead
7	94-1317	1	Tube-Hydraulic
8	94-1328	1	Hose ASM
9	69-9010	8	Washer
10	69-9000	4	Spacer
11	240-3	4	Grommet-Rubber
12	340-92	1	Fitting-Straight, Hyd
12:1	237-78	1	O-Ring
12:2	237-21	1	O-Ring
13	340-98	2	Fitting-Hyd, 90°
13:1	237-79	1	O-Ring
13:2	237-30	1	O-Ring
14	99-4222-03	1	Bracket-Hose
15	2412-4	1	Clamp
16	94-4539	1	Hose ASM
20	2412-137	1	Clamp-Tube
21	33114-020	1	Screw-HH
22	33024-00	1	Nut-Lock
23	94-5350	2	Tee-Bulkhead
23:1	237-65	3	O-Ring
24	99-4221	1	Retainer-Hose

Ref. No.	Part No.	Qty.	Description
25	3296-29	2	Nut-Lock
26	94-5352	1	Retainer-Hose
27	3290-378	1	Tie-Cable

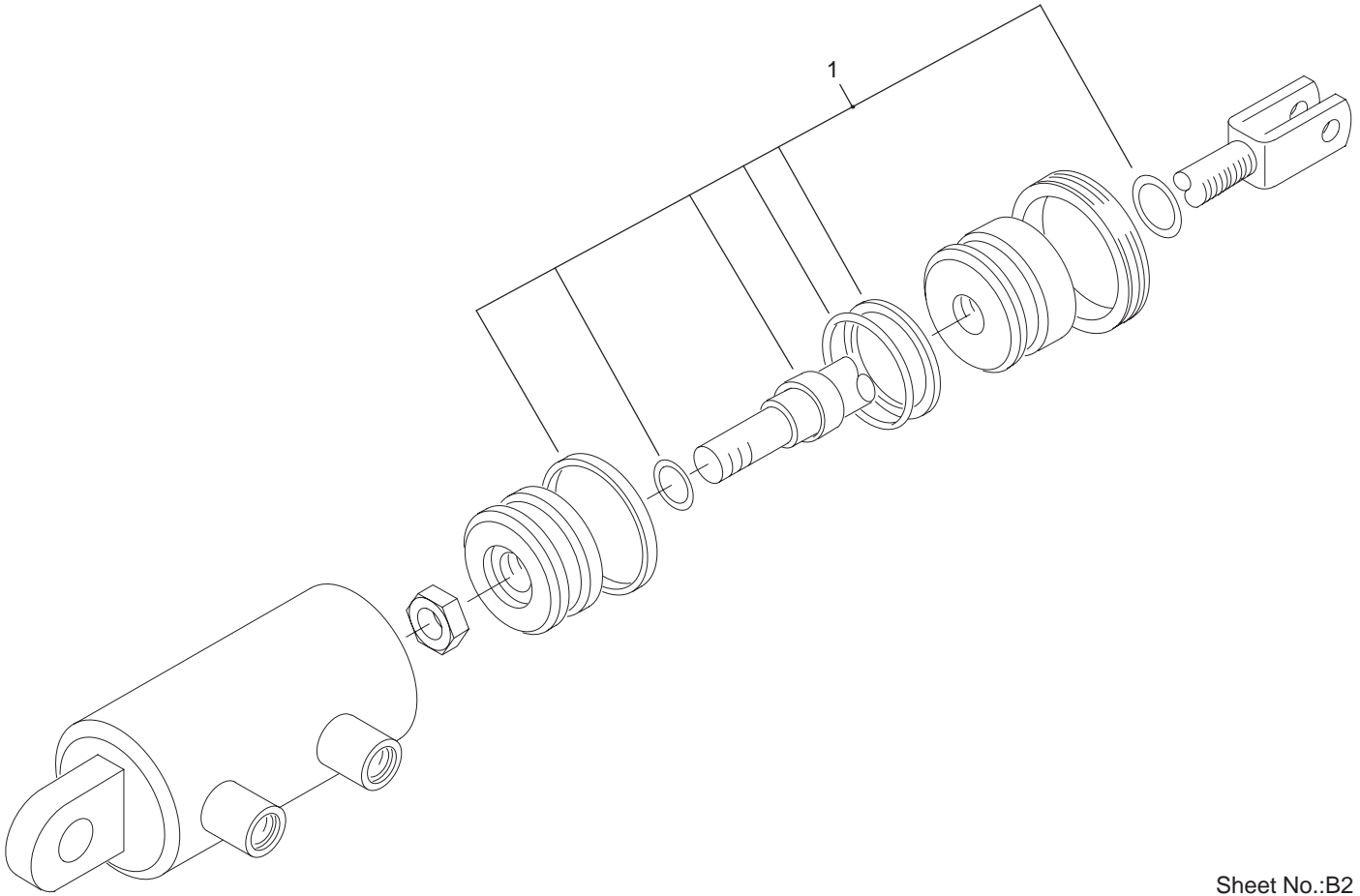


Sheet No.:19

LH and RH Lift Arm Assembly

Ref. No.	Part No.	Qty.	Description
1	99-4263	2	Hydraulic Cylinder ASM
2	340-132	4	Fitting-Hyd, 90°
2:1	237-78	1	O-Ring
2:2	237-21	1	O-Ring
3	93-2255	1	Hydraulic Hose ASM
4	93-2256	1	Hydraulic Hose ASM
5	10-6060	2	Pin-Pivot, Ram
6	94-8198	2	Pin
7	3296-25	6	Nut-Lock NI
8	32144-14	4	Screw-HWH
9	283-68	2	Pin-Clevis
11	99-4115	2	Front Lift Frame ASM
11:1	98-4166	2	Bushing
11:2	94-9610	2	Bushing-Flange
12	33096-00	4	Washer-Flat
15	3256-26	4	Washer-Flat
16	99-4201	4	Tube-Spacer
17	99-4258	1	RH Link Bracket ASM
17:2	99-4243	2	Bushing-Flange
18	99-4260	1	LH Link Bracket ASM
18:2	99-4243	2	Bushing-Flange
21	99-4213	1	RH Lift Arm ASM
21:2	92-8995	2	Bushing
22	99-4212	1	LH Lift Arm ASM
22:2	92-8995	2	Bushing

Ref. No.	Part No.	Qty.	Description
23	3272-11	2	Pin-Cotter
24	93-2254	2	Hydraulic Hose ASM
26	325-6	5	Screw-HH
27	3218-5	3	Nut-Jam
28	93-2384	2	Spacer-Carrier
31	302-60	2	Fitting-Lube
34	302-5	2	Fitting-Grease
35	74-3730	2	Spacer-Spindle, Rear
38	32144-69	4	Screw-HH
39	325-4	2	Screw-HH
40	325-14	2	Screw-HH
41	3296-54	6	Nut-Lock NI
42	3250-17	6	Screw-PPH
43	99-4111-01	1	Plate-Transport, #1 & #3
44	99-4112-01	1	Plate-Transport, #2
51	99-4225	2	Pad-Wear
52	99-4072	2	Spacer-Frame, Pull

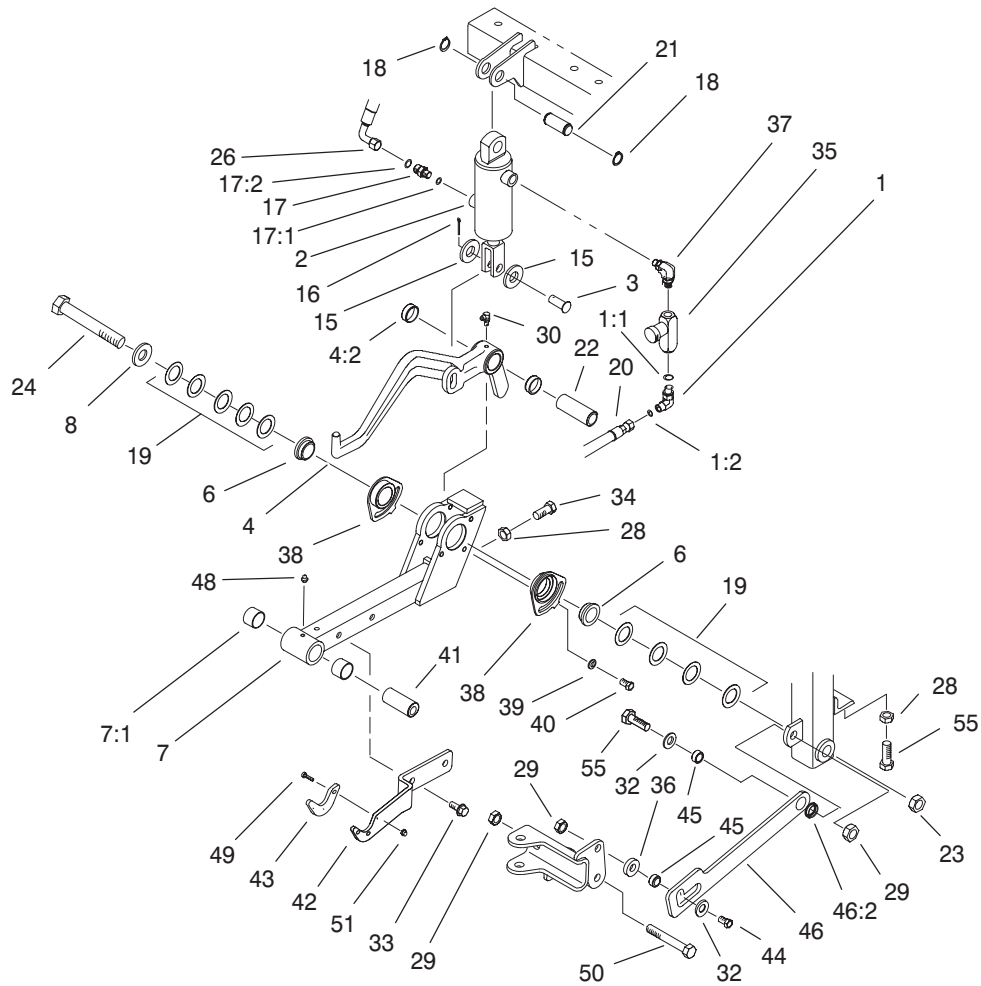


Sheet No.:B2
T-3724

Hydraulic Cylinder Assembly No. 99-4263

Ref. No.	Part No.	Qty.	Description
1	99-8163	1	Kit-Repair, Seal

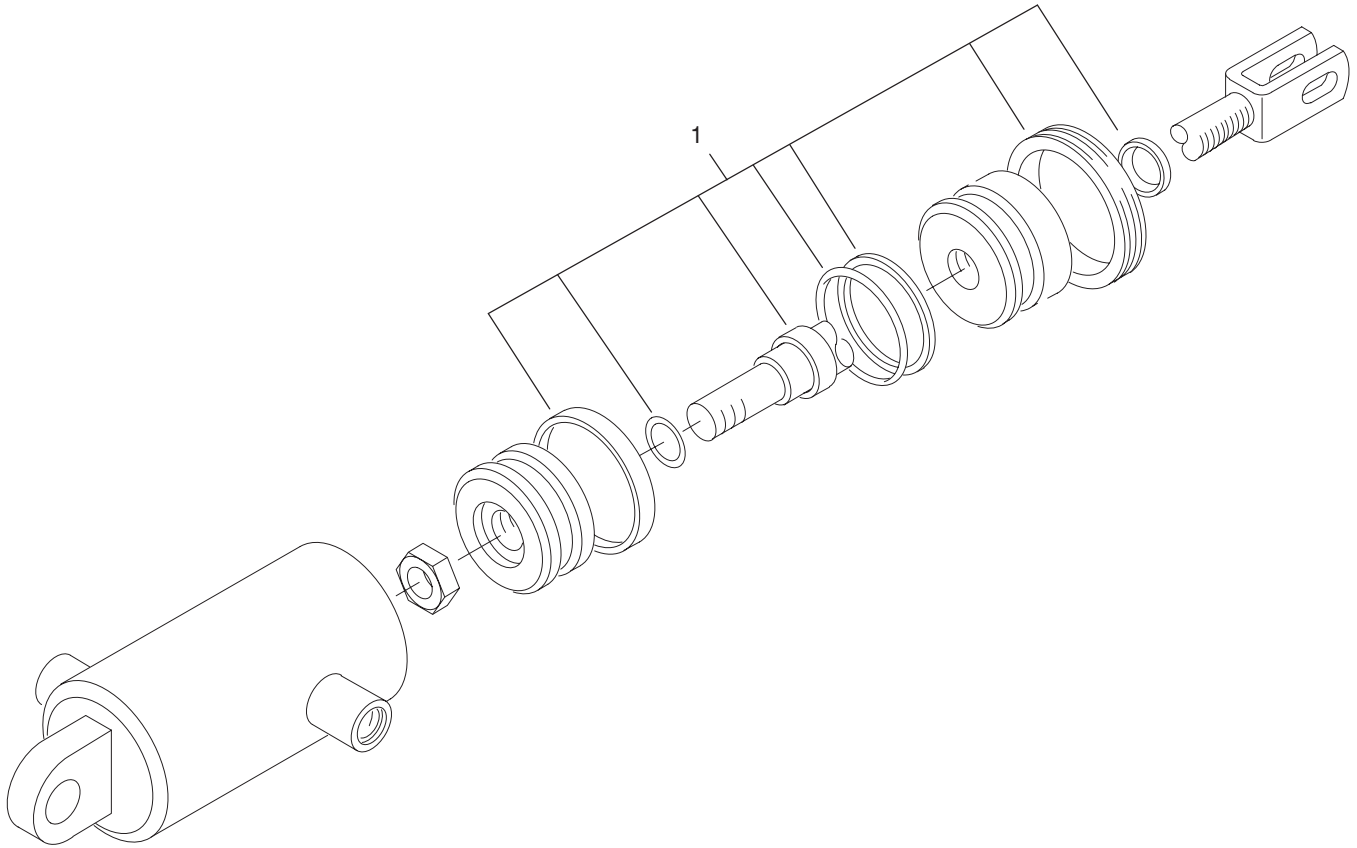
Ref. No.	Part No.	Qty.	Description
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Sheet No.:20

Center Lift Arm Assembly

Ref. No.	Part No.	Qty.	Description	Ref. No.	Part No.	Qty.	Description
1	340-132	1	Fitting-Hyd, 90°	29	3296-25	3	Nut-Lock NI
1:1	237-78	1	O-Ring	30	302-60	1	Fitting-Lube
1:2	237-21	1	O-Ring	32	3256-26	2	Washer-Flat
2	99-4262	1	Hydraulic Cylinder ASM	33	32144-69	2	Screw-HH
3	283-68	1	Pin-Clevis	34	325-5	1	Screw-HH
4	99-4126	1	Center Lift Arm ASM	35	93-7489	1	Orifice Valve ASM
4:2	92-8995	2	Bushing	36	99-4248	1	Spacer
6	98-2197	2	Bushing-Flange	37	95-2927	1	Fitting-Elbow
7	99-4116	1	Rear Lift Frame ASM	38	98-4618	2	Bushing-Eccentric
7:1	98-4166	2	Bushing	39	3256-74	2	Washer-Flat
8	69-8940	1	Washer	40	33114-016	2	Screw-HH
15	33096-00	2	Washer-Flat	41	99-4072	1	Spacer-Frame, Pull
16	3272-11	1	Pin-Cotter	42	99-4111-01	1	Plate-Transport, #1 & #3
17	95-1639	1	Fitting-Orificed	43	99-4225	1	Pad-Wear
17:1	237-78	1	O-Ring	44	325-7	1	Screw-HH
17:2	237-21	1	O-Ring	45	99-4201	2	Tube-Spacer
18	32120-25	2	Ring-Snap	46	99-4246	1	Link Bracket ASM
19	63-2290	9	Washer-Thrust	46:2	99-4243	1	Bushing-Flange
20	93-2258	1	Hydraulic Hose ASM	48	302-5	1	Fitting-Grease
21	94-3452	1	Pin	49	3250-17	3	Screw-PPH
22	94-8199	1	Tube-Pivot	50	325-14	1	Screw-HH
23	3296-53	1	Nut-Lock, NI	51	3296-54	3	Nut-Lock NI
24	327-19	1	Screw-HH	55	325-6	2	Screw-HH
26	94-3477	1	Hydraulic Hose ASM				
28	3218-5	2	Nut-Jam				

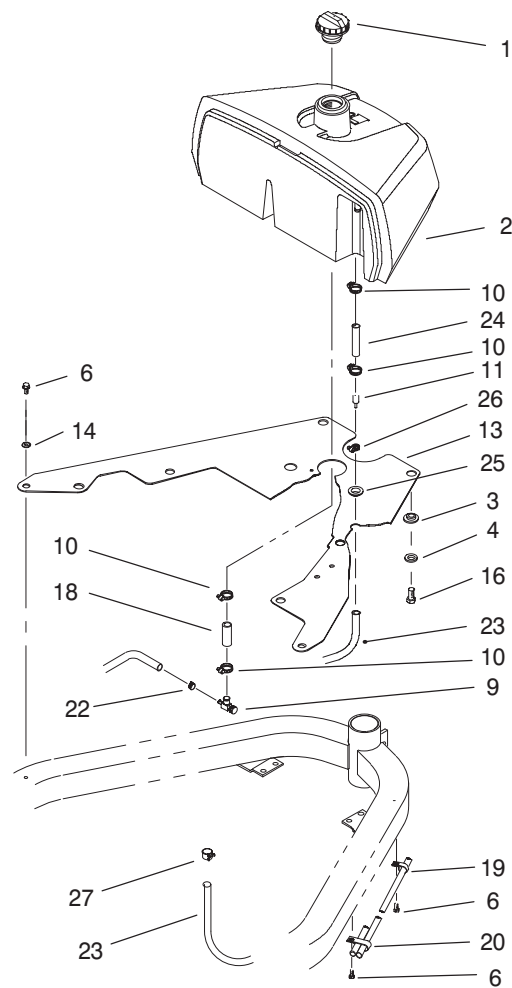


Sheet No.:B3
T-3727

Hydraulic Cylinder Assembly No. 99-4262

Ref. No.	Part No.	Qty.	Description
1	99-8163	1	Kit-Repair, Seal

Ref. No.	Part No.	Qty.	Description
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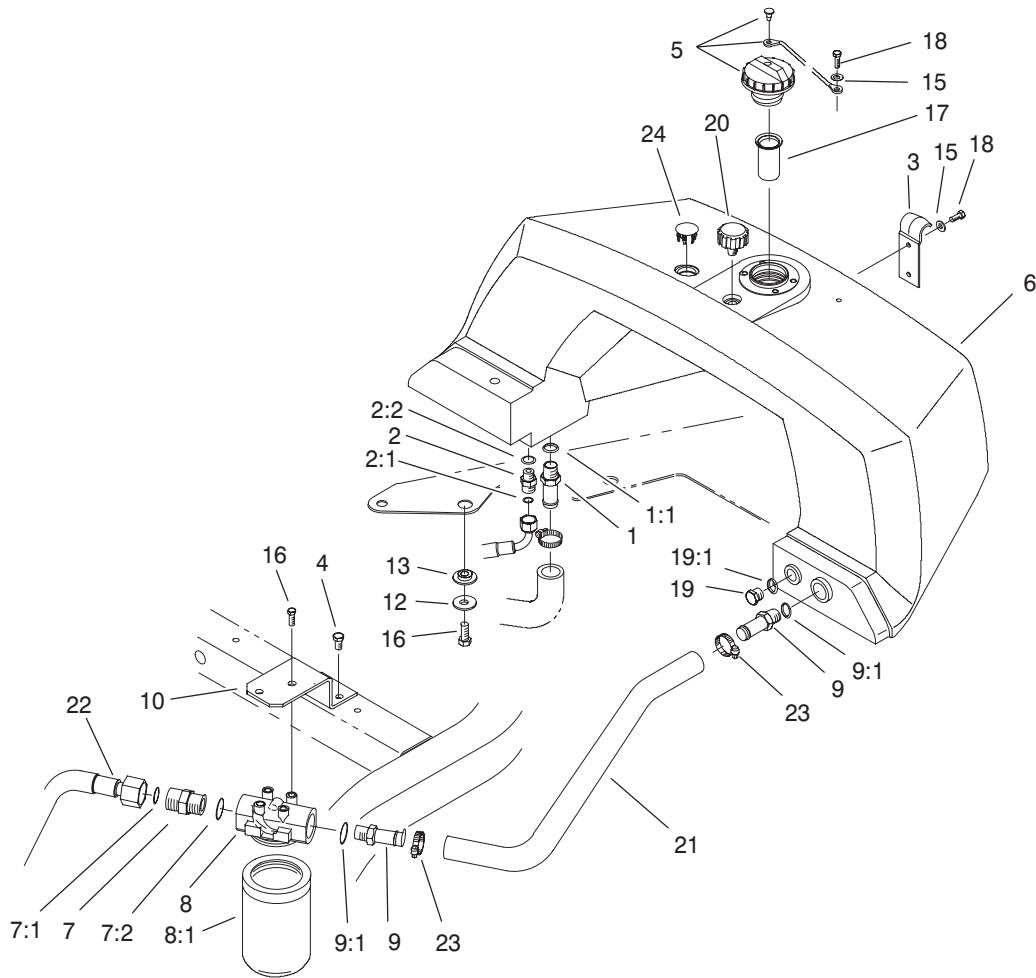


Sheet No.:21

Fuel System Assembly

Ref. No.	Part No.	Qty.	Description
1	93-3102	1	Cap-Fuel
2	93-2225	1	Tank-Fuel
3	240-11	3	Grommet-Mount, Tank
4	93-4637	3	Washer-Flat
6	32144-14	5	Screw-HWH
9	56-2520	1	Fitting-Shut Off, Fuel
10	2412-36	4	Clamp-Hose
11	93-2299	1	Fitting-Fuel
13	94-1364-03	1	Plate
14	3256-23	2	Washer-Flat
16	33115-020	3	Screw-HH
18	94-4353	1	Hose-Line, Fuel
19	2412-41	1	Clamp
20	92-5753	1	Clamp-Hose
22	92-2379	1	Clamp-Hose
23	93-2298	1	Hose-Fuel
24	56-2230	1	Hose-Fuel
25	237-124	1	Grommet
26	2412-108	1	Clamp-Worm
27	94-8189	1	Clamp-Hose

Ref. No.	Part No.	Qty.	Description



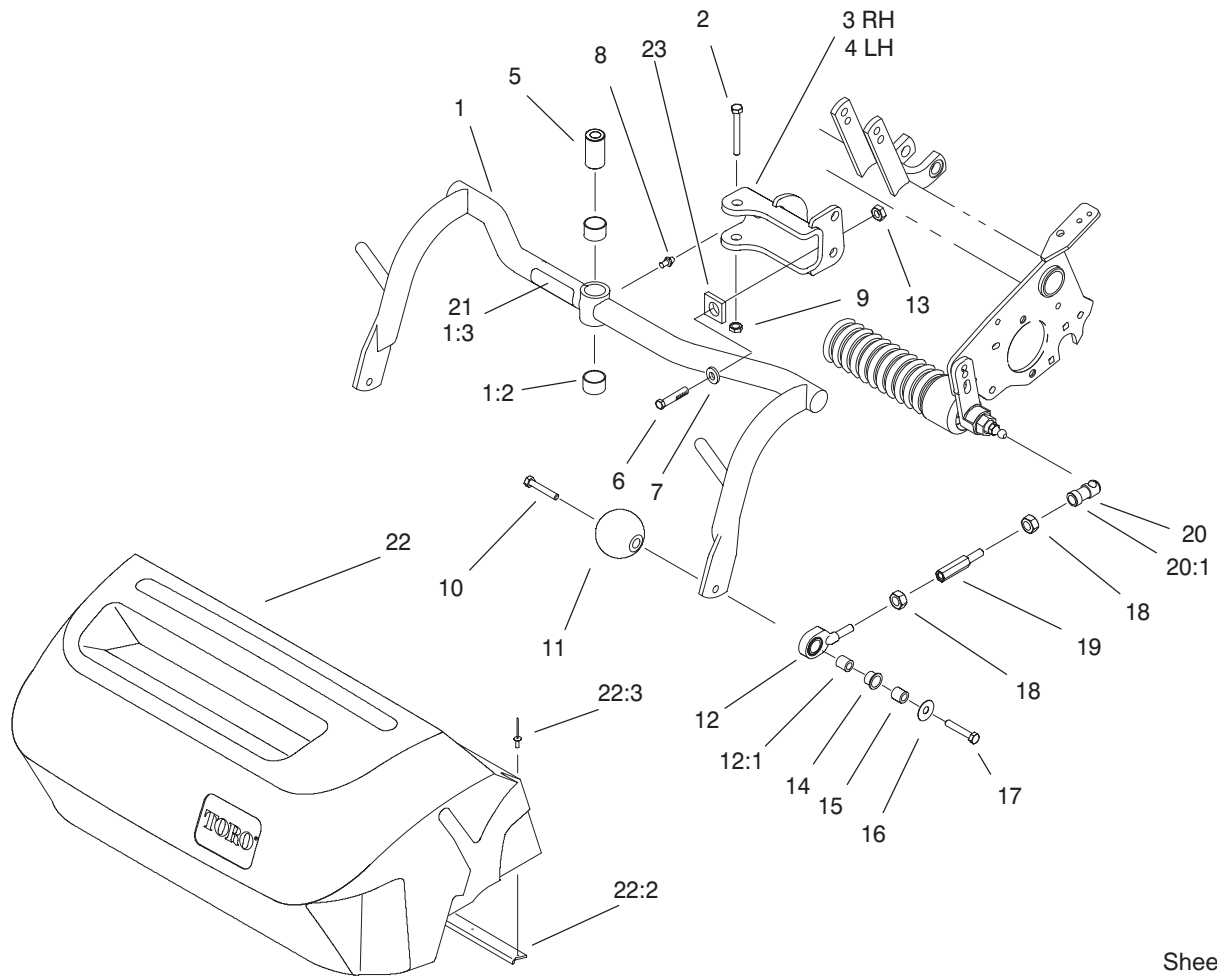
Sheet No.:22

Hydraulic Tank and Filter Assembly

Ref. No.	Part No.	Qty.	Description
1	354-78	1	Connector-Hose
1:1	237-146	1	O-Ring
2	340-2	1	Adapter-Straight, Hyd
2:1	237-22	1	O-Ring
2:2	237-42	1	O-Ring
3	93-2438	1	Clamp-Tank, Fuel
4	32144-14	2	Screw-HWH
5	93-7160	1	Cap-Oil, Hyd
6	93-2235	1	Tank-Hydraulic
7	340-9	1	Fitting-Straight
7:1	237-58	1	O-Ring
7:2	237-81	1	O-Ring
8	93-2242	1	Oil Filter ASM
*8:1	75-1310	1	Element-Filter
9	354-73	2	Fitting
9:1	237-81	2	O-Ring
10	93-2236-03	1	Mount-Filter, Oil
12	93-4637	4	Washer-Flat
13	240-11	4	Grommet-Mount, Tank
15	3256-1	3	Washer-Flat
16	33115-020	4	Screw-HH
17	93-2275	1	Screen-Filler
18	33113-016	3	Screw-HH
19	353-988	1	Plug-Hex, Hollow
19:1	237-79	1	O-Ring

Ref. No.	Part No.	Qty.	Description
20	68-6150	1	Breather-Air
21	94-9607	1	Hose-Return
22	94-4518	1	Tube ASM
23	2412-129	2	Clamp-Hose
24	93-2437	1	Plug-Serrated

* Not illustrated



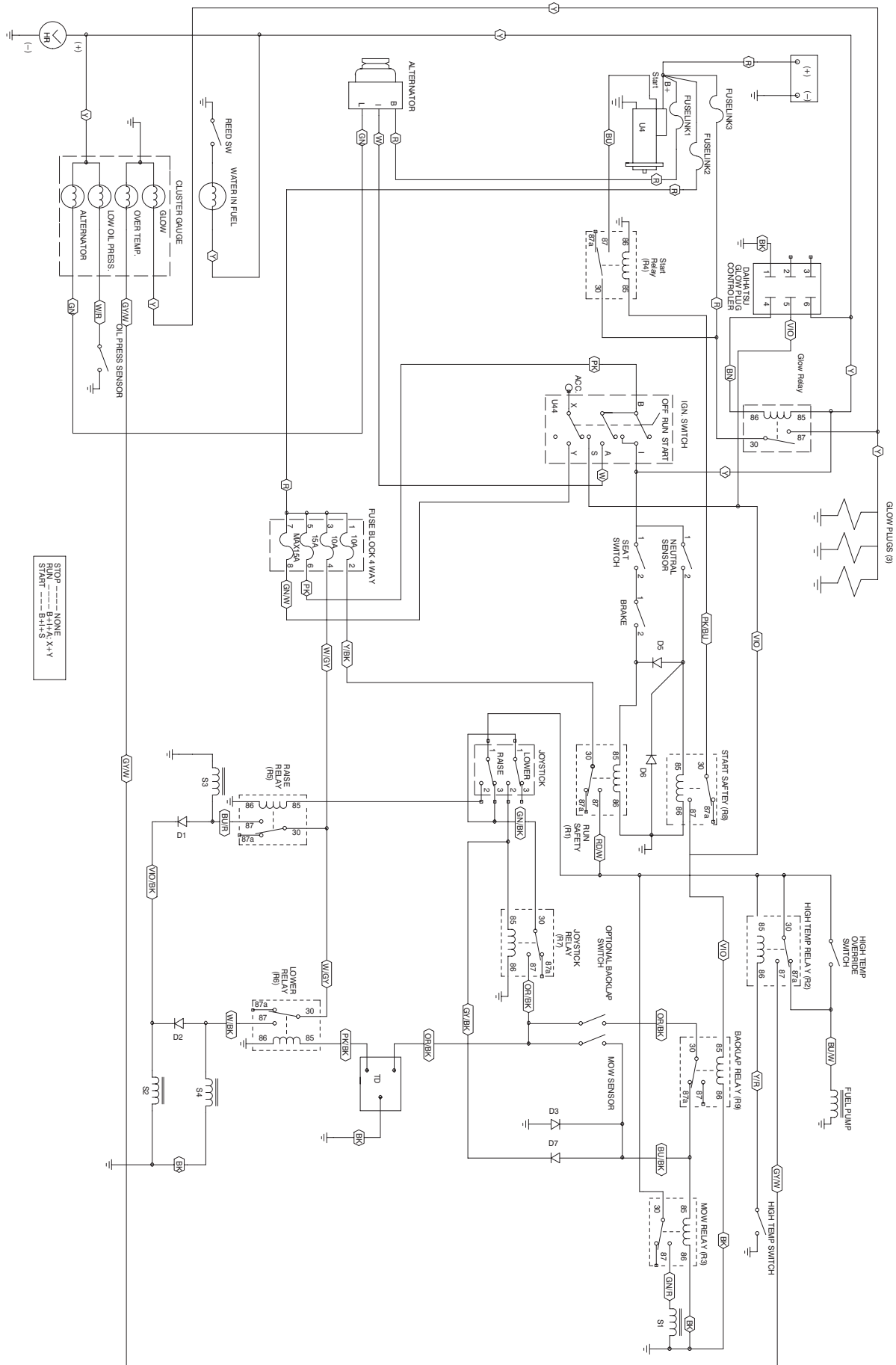
Sheet No.:30

Center Pull Frame Assembly

Ref. No.	Part No.	Qty.	Description
1	99-4114	3	Pull Frame ASM
1:2	98-4166	2	Bushing
1:3	104-7728	1	Decal-Danger
2	325-13	3	Screw-HH
3	99-4183-01	2	RH Clevis ASM
4	99-4182-01	1	LH Clevis ASM
5	99-4109	3	Spacer-Pivot
6	78-8710	3	Screw
7	3256-77	3	Washer-Flat
8	302-5	3	Fitting-Grease
9	3296-25	3	Nut-Lock NI
10	99-4209	6	Shaft-Roller
11	99-4210	6	Roller-Anti Scalp
12	100-6440	6	Pull Link And Bushing ASM
12:1	95-0532	1	Rubber Bushing ASM
13	3296-12	3	Nut-Lock
14	256-292	6	Bushing-Flange, NI
15	75-5270	6	Spacer-Knob, Seat
16	80-6990	6	Washer-Hardened
17	323-8	6	Screw-HH
18	3220-3	12	Nut-Jam
19	88-6870	6	Extension-Arm, Pull
20	99-1460	6	Ball Joint Receiver ASM
20:1	99-1461	1	Sleeve-Joint, Ball

Ref. No.	Part No.	Qty.	Description
21	104-7729	3	Decal-Danger, (Europe)
22	104-2071	3	Basket ASM
22:2	104-2607	1	Strip-Basket
22:3	3290-382	8	Rivet-Pop
23	94-1392	3	Pad-Rubber

Electrical Schematic

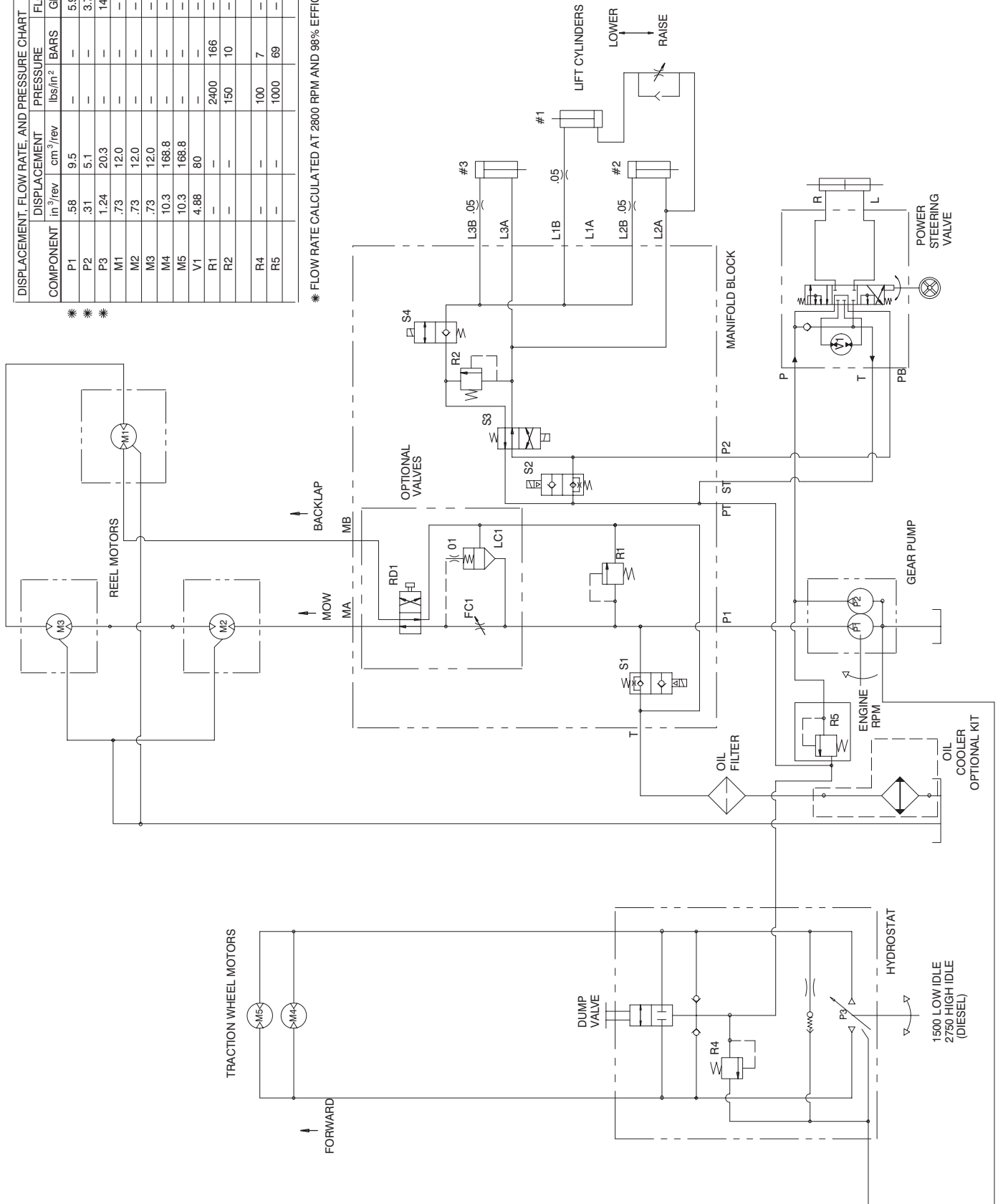


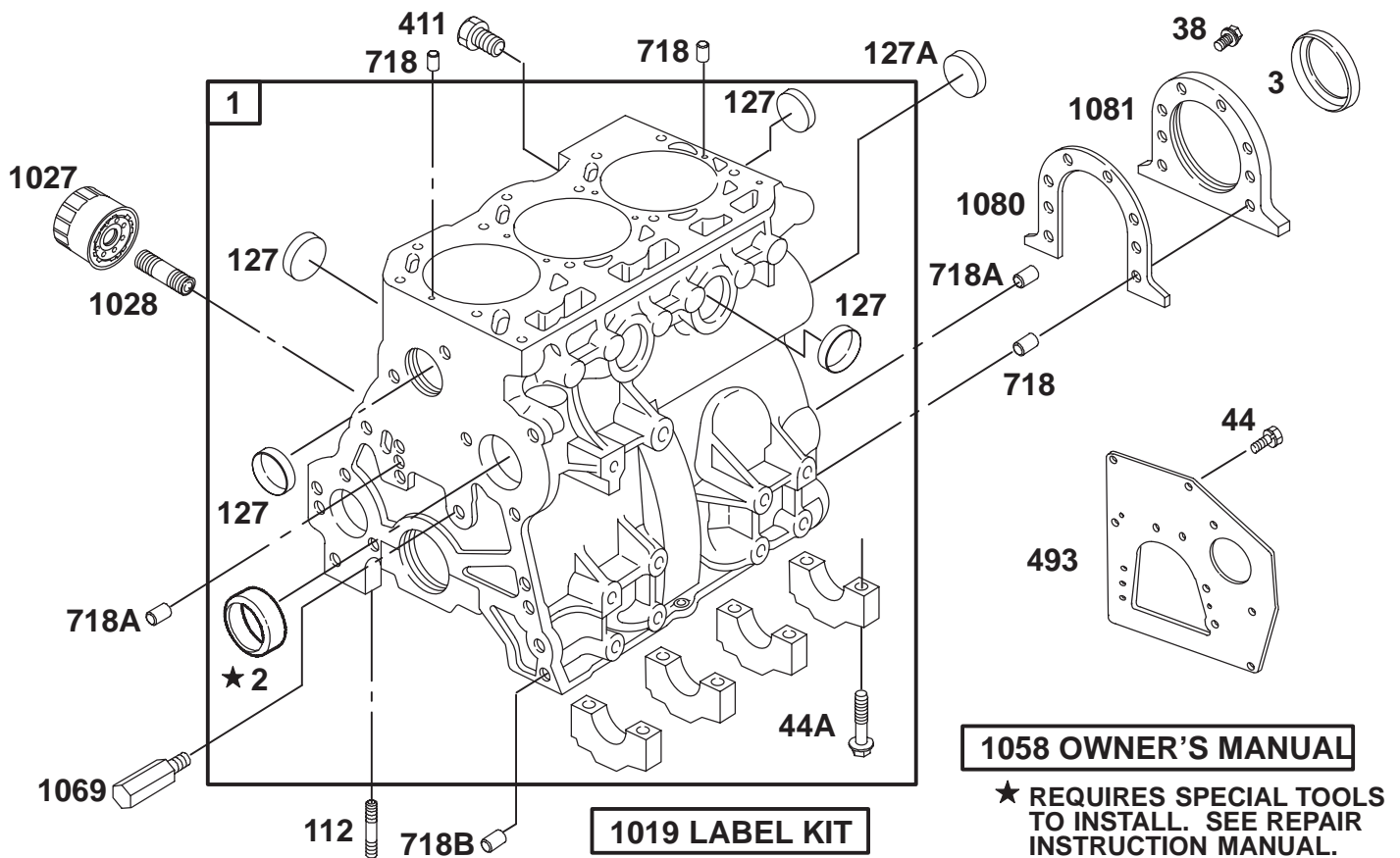
Hydraulic Schematic

DISPLACEMENT, FLOW RATE, AND PRESSURE CHART						
COMPONENT	DISPLACEMENT		PRESSURE		FLOW RATE	
	in ³ /rev	cm ³ /rev	lbs/in ²	BARS	GPM	LPM
P1	.58	9.5	—	—	5.9	22.4
P2	.31	5.1	—	—	3.7	13.9
P3	1.24	20.3	—	—	14.8	55.8
M1	.73	12.0	—	—	—	—
M2	.73	12.0	—	—	—	—
M3	.73	12.0	—	—	—	—
M4	10.3	168.8	—	—	—	—
M5	10.3	168.8	—	—	—	—
V1	4.88	80	—	—	—	—
R1	—	—	2400	166	—	—
R2	—	—	150	10	—	—
R4	—	—	100	7	—	—
R5	—	—	1000	69	—	—

* * *

* FLOW RATE CALCULATED AT 2800 RPM AND 98% EFFICIENCY





Cylinder Assembly

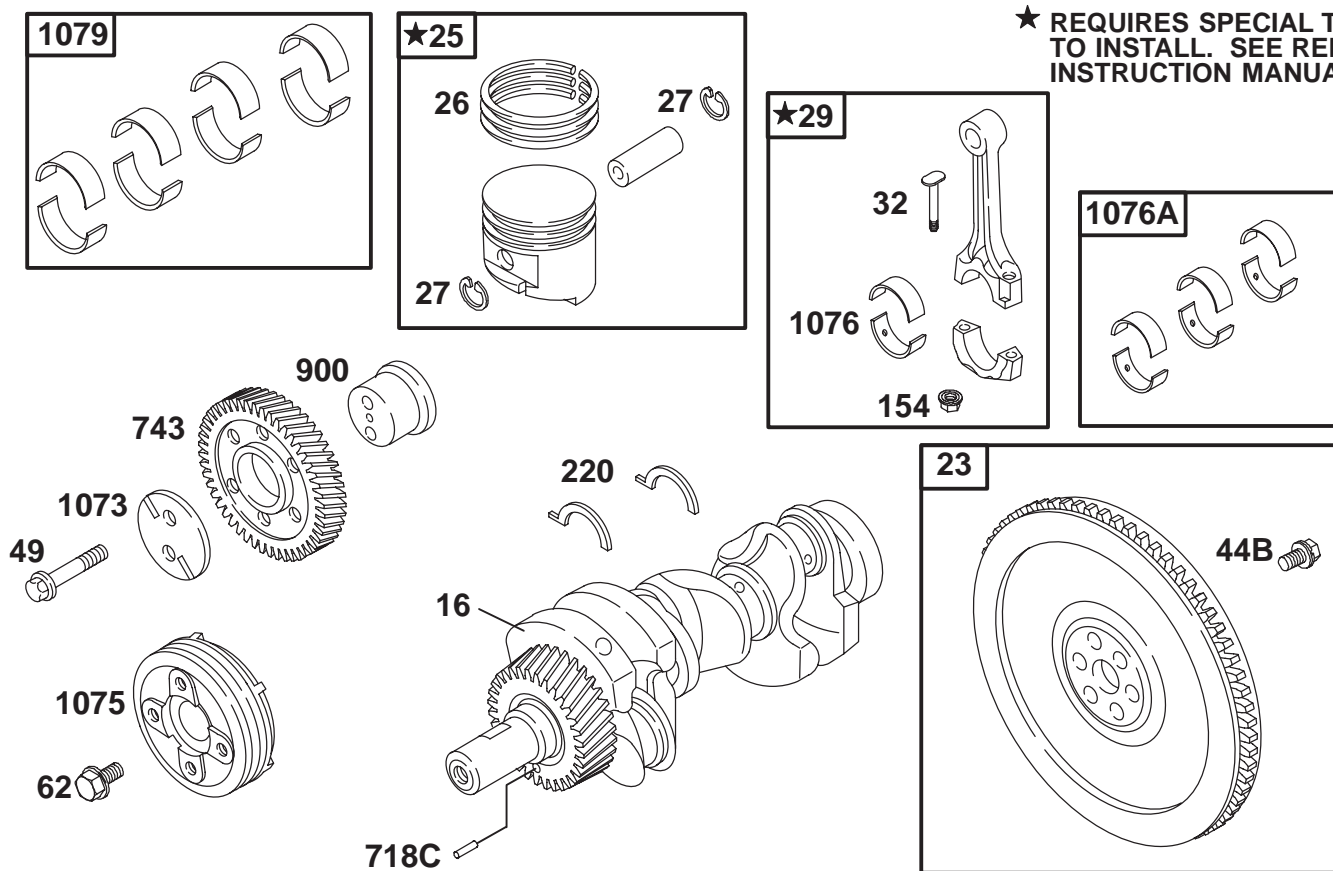
Ref. No.	Part No.	Qty.	Description
∇01	100-6401	1	Cylinder Assembly
∇02	99-9002	1	Bushing
★03	99-9003	1	Seal-Oil
1019	99-9015	1	Label Kit
1058	99-9602	1	Owner's Manual
∇1069	99-9020	1	Nozzle-Oil
★1080	99-9021	1	Gasket-Retainer
∇1081	99-9022	1	Retainer-Seal
112	99-9007	1	Stud-Metric
1027	99-9017	1	Filter-Oil
127	99-9008	7	Plug-Welch
∇127A	99-9010	1	Plug-Welch (Camshaft)
1028	99-9018	1	Adapter-Oil Filter
38	99-9004	6	Screw-Hex
∇411	99-9601	1	Plug (Cylinder Block)
44	99-9005	3	Screw-Hex
44A	99-9006	8	Screw-Hex
∇493	100-3195	1	Bracket-Mounting
718	99-9012	4	Pin-Locating
718A	99-9013	3	Pin-Locating
718B	99-9014	2	Pin-Locating

Ref. No.	Part No.	Qty.	Description

∇ Refer To Repair Manual MS 1055 For Assembly and/or Torque Requirements.

★ Included in Gasket Set – Part Number 99-9667

△ Included in Valve Overhaul Kit – Part Number 99-9668



Crankshaft Assembly

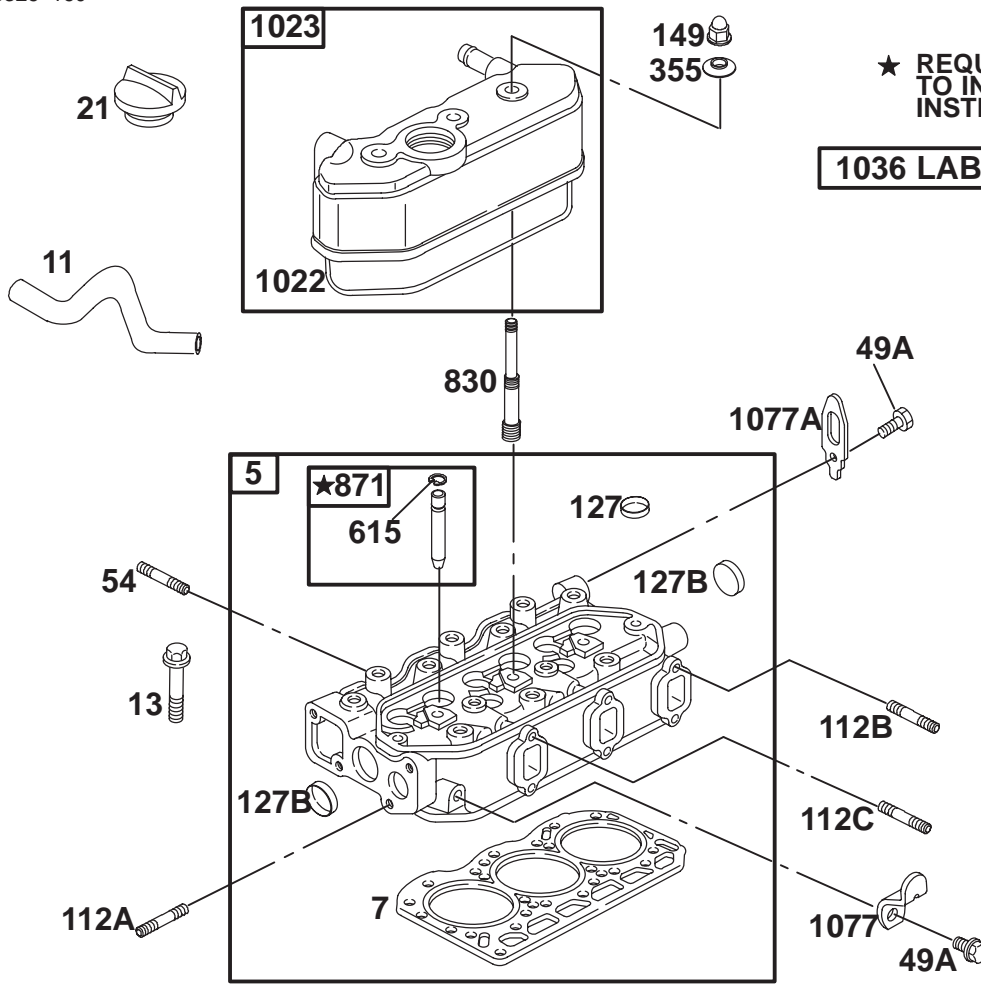
Ref. No.	Part No.	Qty.	Description
1073	99-9040	1	Plate-Idler Gear
1075	99-9692	1	Pully-Crankshaft
▽1076	99-9042	1	Bearing-Rod
▽1076A	99-9043	3	Bearing Set-Rod
▽1076A	99-9044	3	Bearing Set-Rod, .010 Undersize
▽1079	99-9045	1	Bearing Set-Main
▽1079	99-9046	1	Bearing Set-Main, .010 Under
154	99-9034	6	Nut-Hex
▽16	99-9252	1	Crankshaft
▽220	99-9035	1	Washer-Thrust
▽220	99-9036	1	Washer-Thrust .005" Oversize
▽23	99-9267	1	Flywheel
▽25	99-9605	3	Piston Assembly
▽25	99-9268	3	Piston ASM .010
▽26	99-9606	3	Ring Set
▽26	99-9269	3	Ring Set
27	99-9607	6	Lock-Piston Pin
▽29	99-9608	3	Rod-Connecting
▽32	99-9030	6	Screw-Connecting Rod

Ref. No.	Part No.	Qty.	Description
44B	99-9031	6	Screw-10mm Hex
49	99-9032	2	Screw-8mm Hex
62	99-9033	1	Screw-Hex
718C	99-9037	1	Pin-Locating
▽743	99-9609	1	Gear-Drive
▽900	99-9039	1	Shaft-Gear

▽ Refer To Repair Manual MS 1055 For Assembly and/or Torque Requirements.

★ Included in Gasket Set - Part Number 99-9667

△ Included in Valve Overhaul Kit - Part Number 99-9668



★ REQUIRES SPECIAL TOOLS TO INSTALL. SEE REPAIR INSTRUCTION MANUAL.

1036 LABEL KIT-EMISSION

Cylinder Head Assembly

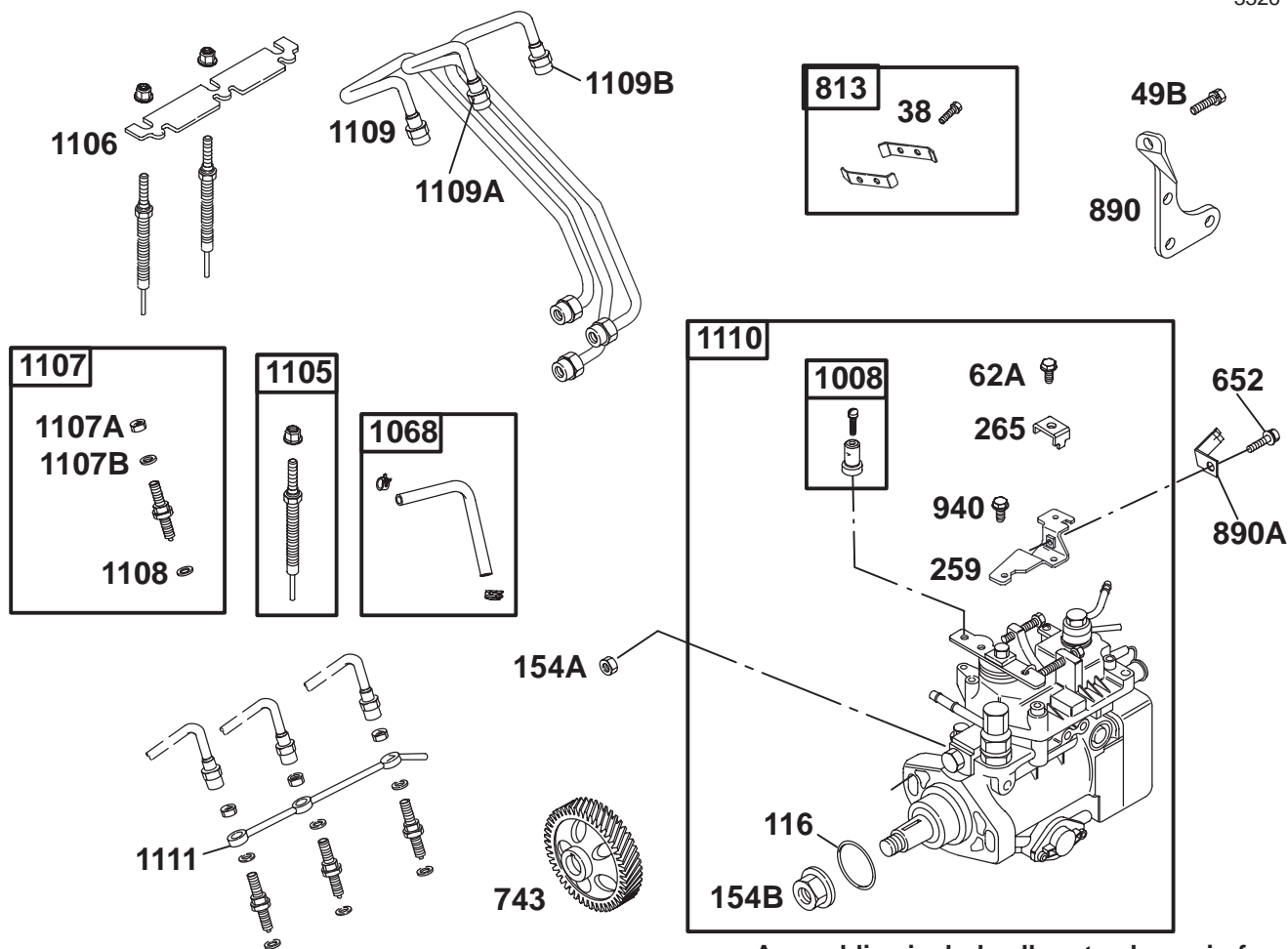
Ref. No.	Part No.	Qty.	Description
∇05	99-9611	1	Head-Cylinder
★Δ07	99-9612	1	Gasket-Cylinder Head
★Δ1022	99-9073	1	Gasket-Rocker Cover
1023	100-6402	1	Cover-Rocker
1036	99-9615	1	Label Kit-Emission
1077	99-9076	1	Bracket-Lifting
1077A	99-9077	1	Bracket-Lifting
11	104-7743	1	Tube-Breather
112A	99-9057	2	Stud-Metric
112C	99-9059	1	Stud-Metric
112B	99-9058	5	Stud-Metric
127	99-9008	2	Plug-Welch
127B	99-9060	2	Plug-Welch
13	99-9614	14	Screw-Metric
149	99-9061	3	Nut-Metric Hex
21	99-9052	1	Cap-Oil Fill
★Δ355	99-9063	3	Washer-Seal
49A	99-9054	2	Screw-8mm Hex
54	99-9055	2	Stud-Metric
615	99-9067	6	Retainer
830	99-9101	3	Stud-Rocker Arm
∇871	99-9070	6	Bushing-Guide

Ref. No.	Part No.	Qty.	Description

∇ Refer To Repair Manual MS 1055 For Assembly and/or Torque Requirements.

★ Included in Gasket Set - Part Number 99-9667

Δ Included in Valve Overhaul Kit - Part Number 99-9668



Assemblies include all parts shown in frames.

Injection Assembly

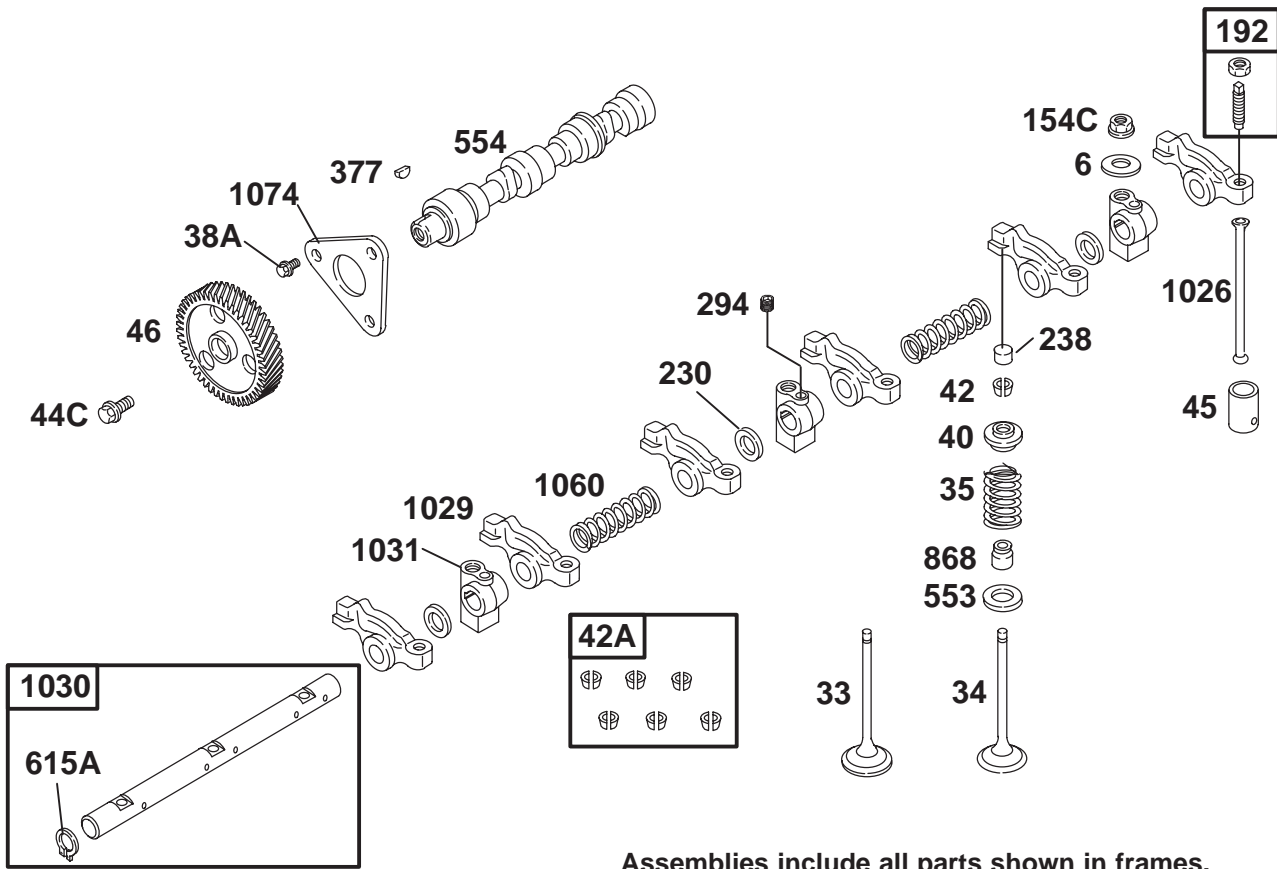
Ref. No.	Part No.	Qty.	Description
1008	99-9628	1	Clamp-Swivel
1068	99-9629	1	Hose/Clamp Assembly
1105	99-9630	3	Plug-Glow
1106	99-9631	1	Strap-Glow Plug
1107	99-9632	3	Nozzle-Injector
1107A	100-5149	3	Nut
1107B	100-5148	3	Washer
1108	99-9633	3	Seat-Injector
1109	99-9690	1	Pipe-Injector #1
1109A	99-9634	1	Pipe-Injector #2
1109B	99-9635	1	Pipe-Injector #3
1110	100-6404	1	Pump-Injection
1111	99-9637	1	Pipe-Fuel Return
116	99-9618	1	Seal-O-Ring
154A	99-9619	2	Nut-Metric Hex
154B	99-9620	1	Nut-Metric Hex
259	99-9621	1	Bracket-Casing Clamp
265	99-9622	1	Clamp-Casing
38	99-9004	2	Screw-Hex
49B	99-9616	4	Screw-8mm Hex
62A	100-6403	1	Screw-Metric
743	99-9624	1	Gear-Drive
813		1	Clamp

Ref. No.	Part No.	Qty.	Description
890	99-9626	1	Bracket-Support
940	100-6410	2	Screw-Hex

▽ Refer To Repair Manual MS 1055 For Assembly and/or Torque Requirements.

★ Included in Gasket Set - Part Number 99-9667

△ Included in Valve Overhaul Kit - Part Number 99-9668



Assemblies include all parts shown in frames.

Rocker Arm Assembly

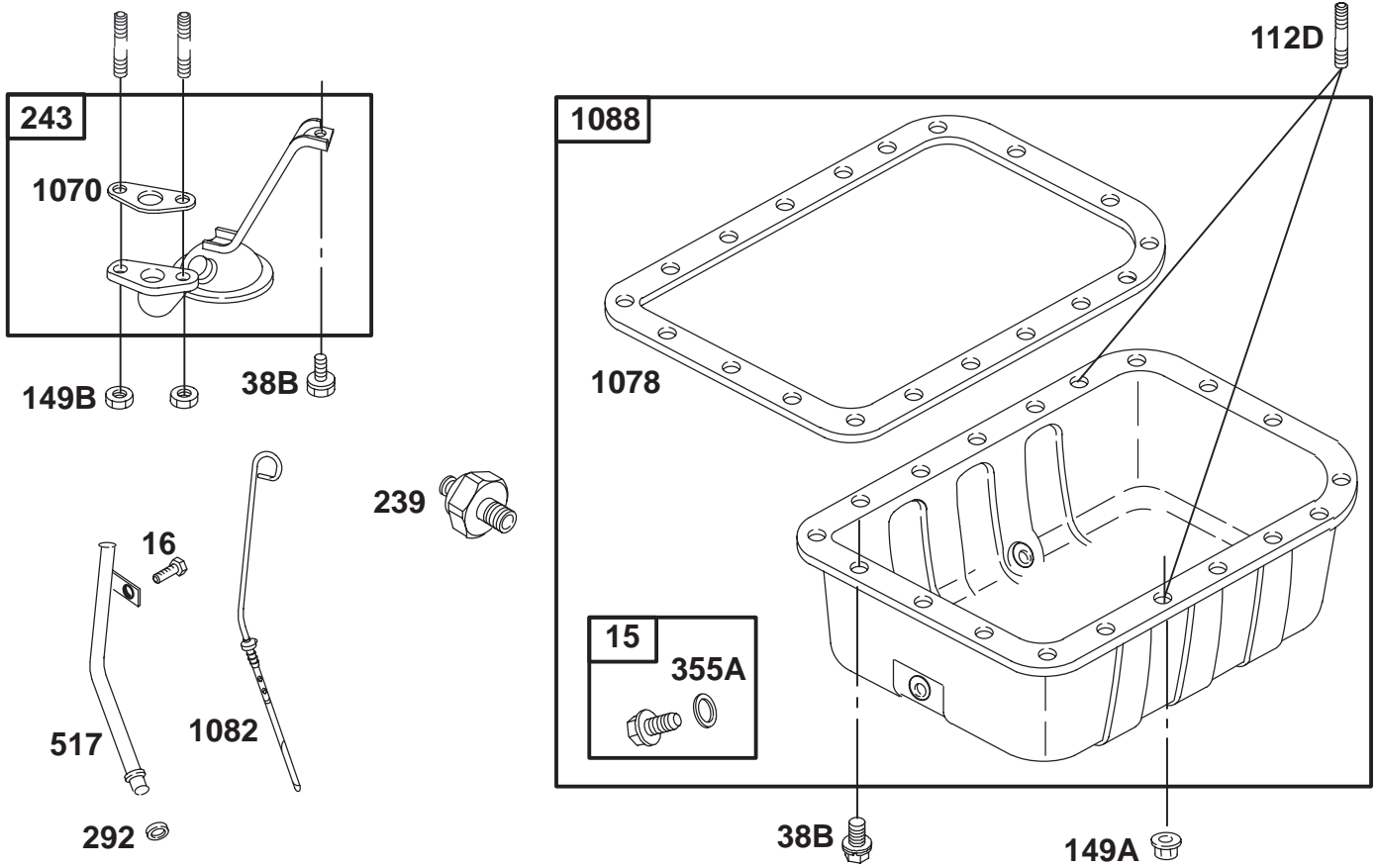
Ref. No.	Part No.	Qty.	Description
06	99-9079	3	Washer-Flat
1026	99-9103	6	Rod-Push
∇1029	99-9104	1	Arm-Rocker
∇1030	99-9106	1	Shaft-Rocker Arm
∇1031	99-9107	3	Support-Rocker Arm
∇1060	99-9108	2	Spring-Rocker Shaft
1074	99-9109	1	Retainer-Camshaft
154C	99-9091	3	Nut-Metric Hex
192	99-9092	6	Adjuster-Rocker Arm
∇230	99-9093	3	Washer-Spacer
238	99-9094	6	Cap-Valve
294	99-9090	1	Screw-Metric
33	99-9638	3	Valve-Exhaust
34	99-9639	3	Valve-Intake
35	99-9640	6	Spring-Valve
377	99-9642	1	Key-Timing
38A	99-9083	3	Screw-6mm Hex
40	99-9084	6	Retainer-Valve
42	99-9086	1	Keeper-Valve
42A	99-9087	6	Keeper-Valve (Set Of 6)
44C	99-9085	1	Screw-Metric
45	99-9088	6	Tappet-Valve
∇46	99-9641	1	Gear-Cam

Ref. No.	Part No.	Qty.	Description
553	99-9096	6	Seat-Valve Spring
554	99-9097	1	Shaft-Cam
615A	99-9099	2	Retainer
★△868	99-9643	6	Seal-Valve

∇ Refer To Repair Manual MS 1055 For Assembly and/or Torque Requirements.

★ Included in Gasket Set - Part Number 99-9667

△ Included in Valve Overhaul Kit - Part Number 99-9668



Oil Pan Assembly

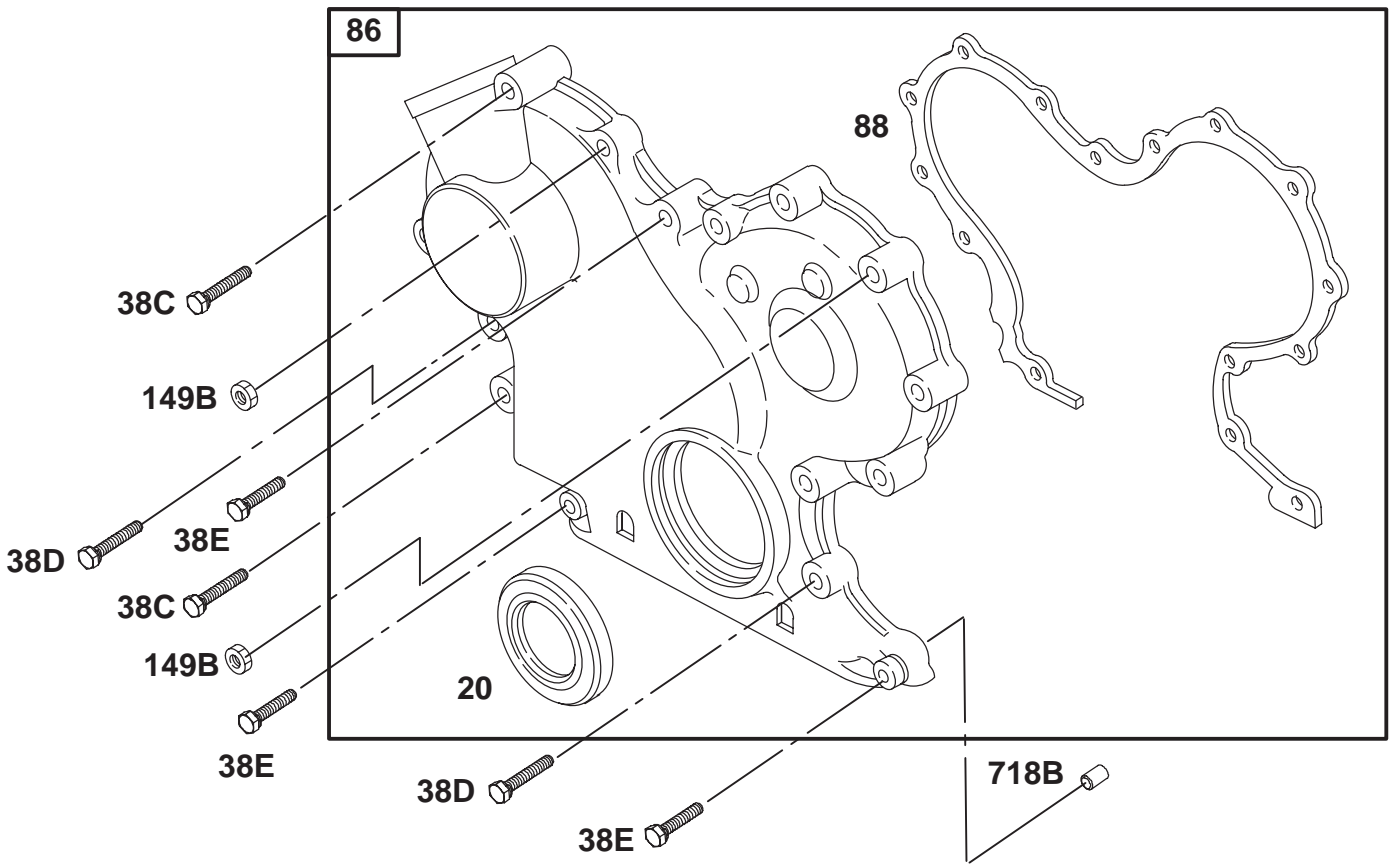
Ref. No.	Part No.	Qty.	Description
★1070	99-9120	1	Gasket—Oil Strainer
★1078	99-9121	1	Gasket—Oil Pan
1082	100-6405	1	Dipstick
▽1088	99-9649	1	Pan—Oil
112D	99-9112	2	Stud—Metric
149A	99-9113	2	Nut—Metric Hex
149B	99-9114	2	Nut—Metric Hex
15	99-9644	1	Plug—Oil Drain
16	99-9256	1	Screw—HH
239	99-9115	1	Switch—Oil Pressure
▽243	99-9116	1	Screen—Oil Pump
292	99-9265	1	O—Ring Seal (Dipstick)
★355A	99-9645	1	Washer—Seal
38B	99-9111	18	Screw—6mm Hex
517	100-6406	1	Tube—Dipstick

Ref. No.	Part No.	Qty.	Description

▽ Refer To Repair Manual MS 1055 For Assembly and/or Torque Requirements.

★ Included in Gasket Set – Part Number 99-9667

△ Included in Valve Overhaul Kit – Part Number 99-9668



Cover Assembly

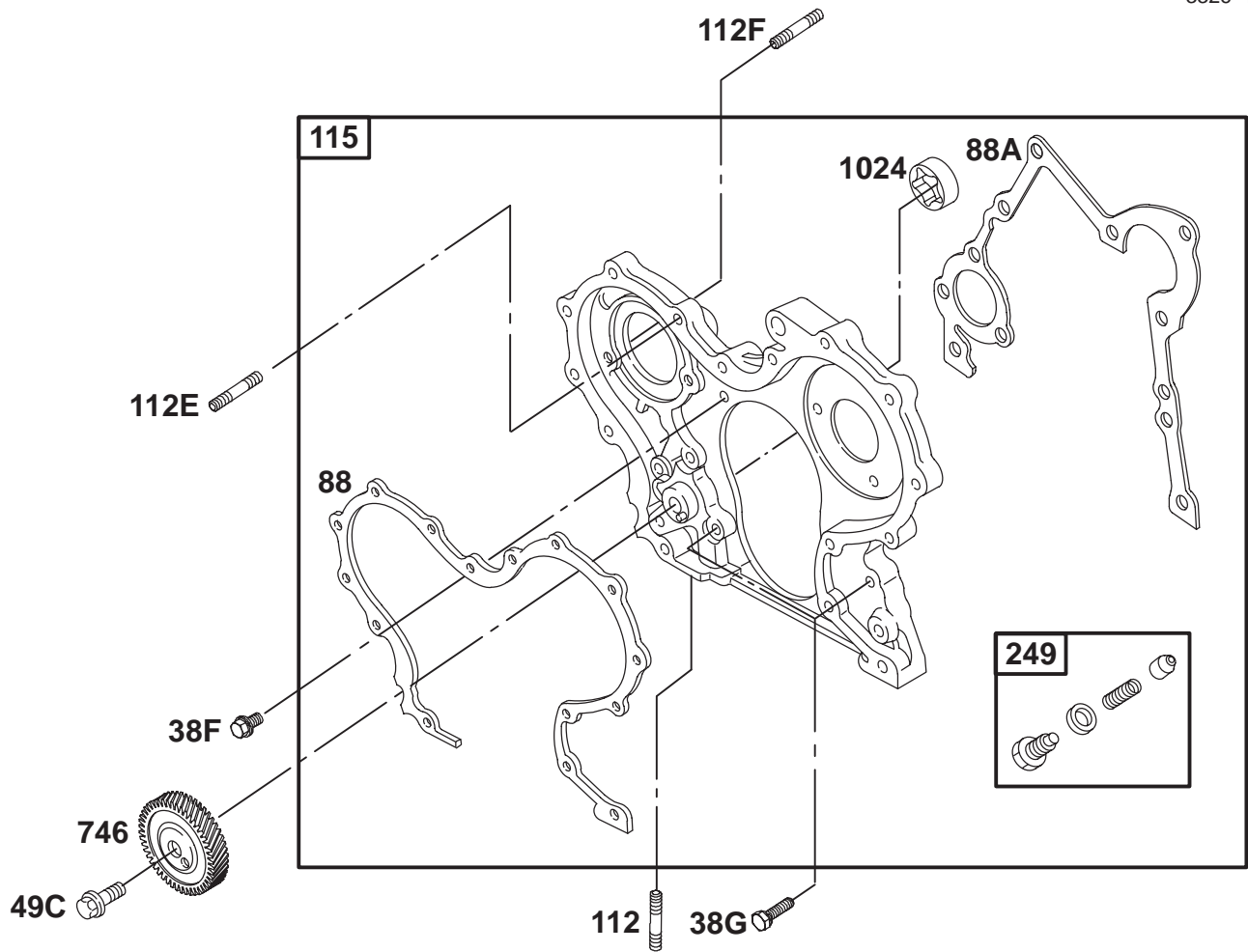
Ref. No.	Part No.	Qty.	Description
149B	99-9114	2	Nut-Metric Hex
★20	99-9126	1	Seal-Oil
38C	99-9651	2	Screw-6mm Hex
38D	99-9128	9	Screw-6mm Hex
38E	99-9129	3	Screw-6mm Hex
718B	99-9014	1	Pin-Locating
▽86	99-9652	1	Cover-Assembly Gear
★88	99-9653	1	Gasket-Gear Cover

Ref. No.	Part No.	Qty.	Description

▽ Refer To Repair Manual MS 1055 For Assembly and/or Torque Requirements.

★ Included in Gasket Set – Part Number 99-9667

△ Included in Valve Overhaul Kit – Part Number 99-9668



Gear Housing Assembly

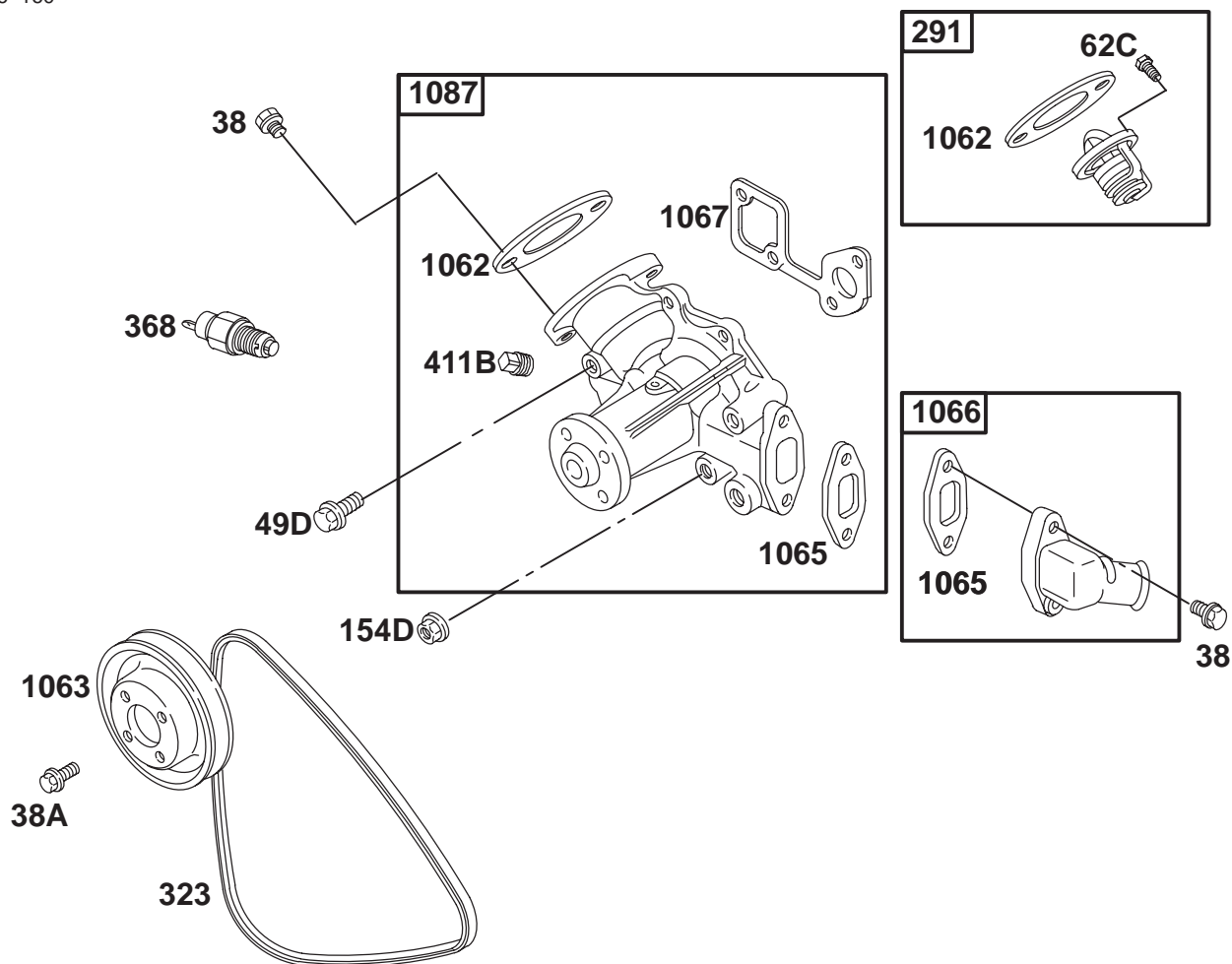
Ref. No.	Part No.	Qty.	Description
112	99-9007	1	Stud-Metric
112E	99-9137	2	Stud-Metric
112F	99-9654	2	Stud-Metric
∇115	99-9655	1	Housing-Gear
∇249	99-9142	1	Valve-Oil Relief
38F	99-9134	1	Screw-6mm Hex
38G	99-9133	4	Screw-6mm Hex
49C	99-9135	1	Screw-8mm Hex
∇746	99-9656	1	Gear-Drive
★88	99-9653	1	Gasket-Gear Cover
★88A	99-9136	1	Gasket-Gear Cover
1024			Gear-Drive Pump-Oil (Sold in Gear Housing Only, Ref. 115)

Ref. No.	Part No.	Qty.	Description

∇ Refer To Repair Manual MS 1055 For Assembly and/or Torque Requirements.

★ Included in Gasket Set - Part Number 99-9667

△ Included in Valve Overhaul Kit - Part Number 99-9668



Water Pump Assembly

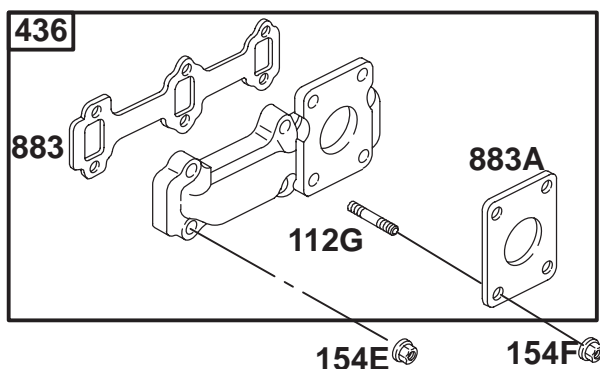
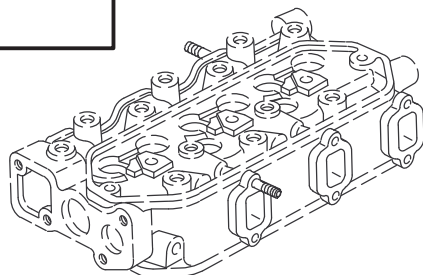
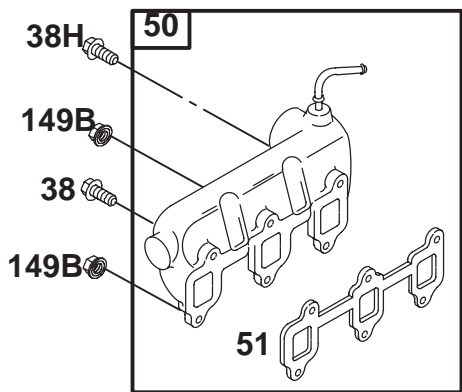
Ref. No.	Part No.	Qty.	Description
★1062	99-9163	1	Gasket-Outlet
1063	99-9164	1	Pulley-Pump
★1065	99-9166	1	Gasket-Inlet Housing
1066	99-9167	1	Housing-Inlet
★△1067	99-9168	1	Gasket-Water Pump
1087	99-9659	1	Pump-Water
154D	99-9153	1	Nut-Metric Hex
291	99-9155	1	Thermostat
∇323	99-8153	1	Belt-V
368	99-9157	1	Switch-Water Temp.
38	99-9004	2	Screw-Hex
38A	99-9111	4	Screw-6mm Hex
411B	99-9159	1	Plug
49D	99-9151	2	Screw-8mm Hex
62C	99-9152	1	Screw-Metric
839	93-2090	1	Fan - Engine, 280 Mm

Ref. No.	Part No.	Qty.	Description

∇ Refer To Repair Manual MS 1055 For Assembly and/or Torque Requirements.

★ Included in Gasket Set - Part Number 99-9667

△ Included in Valve Overhaul Kit - Part Number 99-9668



Manifold Assembly

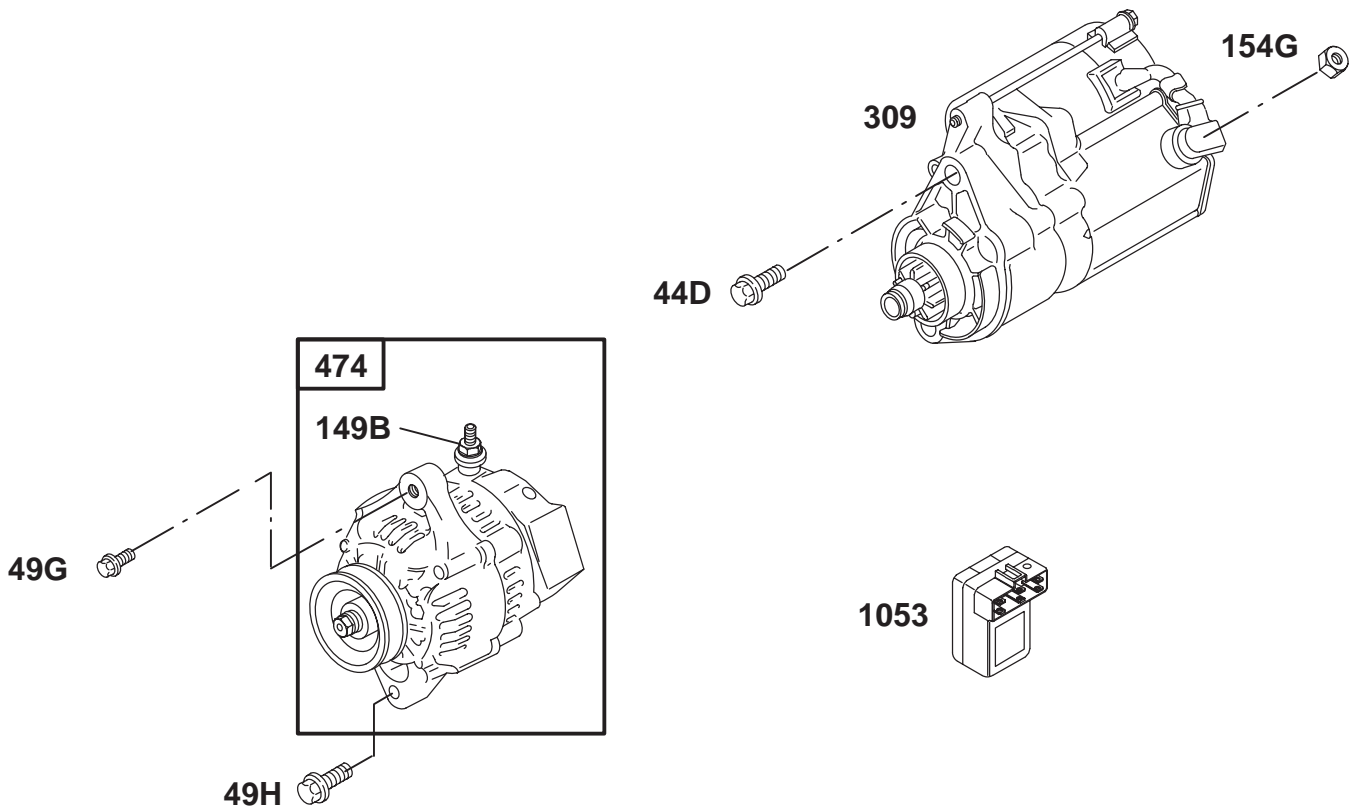
Ref. No.	Part No.	Qty.	Description
112G	100-6407	4	Stud-Exhaust Manifold
149B	99-9114	2	Nut-Metric Hex
154E	99-9175	6	Nut-Metric Hex
154F	99-9176	4	Nut-Metric Hex
38	99-9004	1	Screw-Hex
38H	99-9660	3	Screw-6mm Hex
▽436	99-9177	1	Manifold-Exhaust
▽50	99-9661	1	Manifold-Intake
★△51	99-9662	1	Gasket-Intake
★△883	99-9178	1	Gasket-Exhaust
★883A	99-9179	1	Gasket-Exhaust

Ref. No.	Part No.	Qty.	Description

▽ Refer To Repair Manual MS 1055 For Assembly and/or Torque Requirements.

★ Included in Gasket Set – Part Number 99-9667

△ Included in Valve Overhaul Kit – Part Number 99-9668



Alternator Assembly

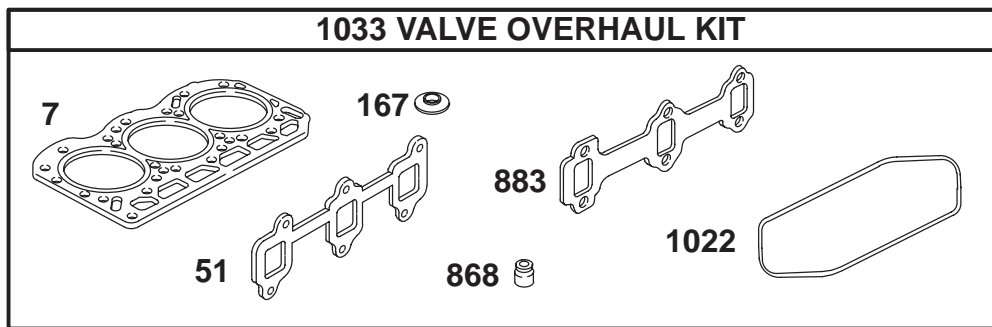
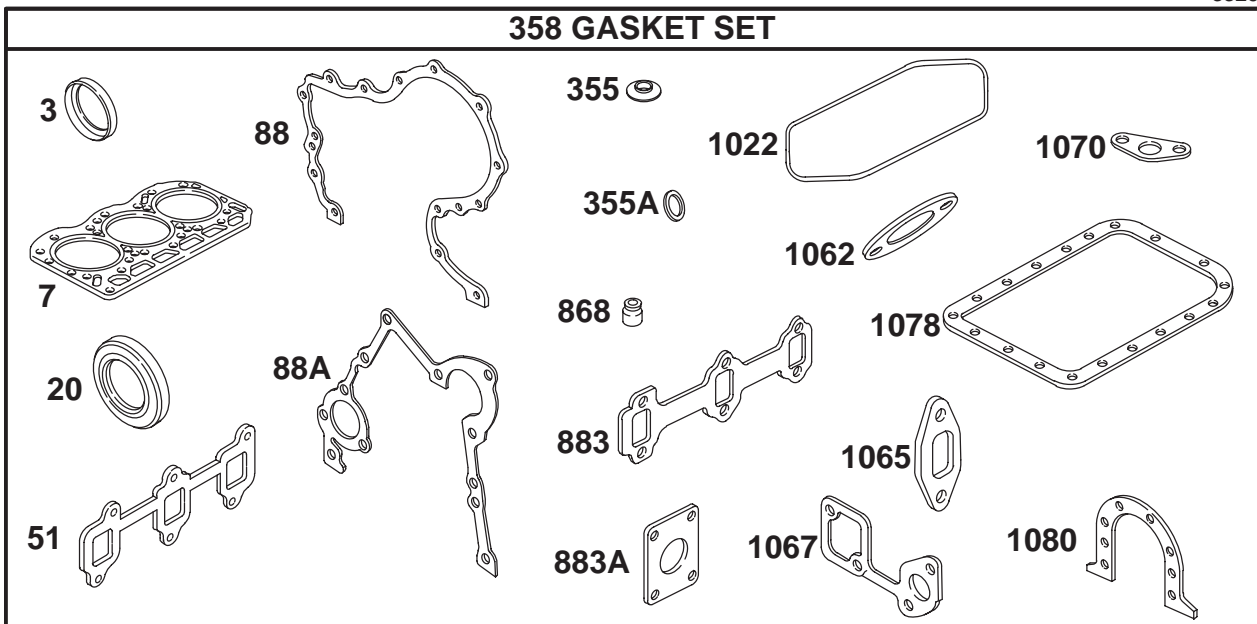
Ref. No.	Part No.	Qty.	Description
1053	99-9666	1	Module
149B	99-9114	1	Nut-Metric Hex
154G	99-9206	1	Nut-Metric Hex
▽309	99-9693	1	Motor-Starter
44D	99-9201	2	Screw-10mm Hex
474	99-9209	1	Alternator

Ref. No.	Part No.	Qty.	Description

▽ Refer To Repair Manual MS 1055 For Assembly and/or Torque Requirements.

★ Included in Gasket Set – Part Number 99-9667

△ Included in Valve Overhaul Kit – Part Number 99-9668



Gasket and Valve Overhaul Kit Assembly

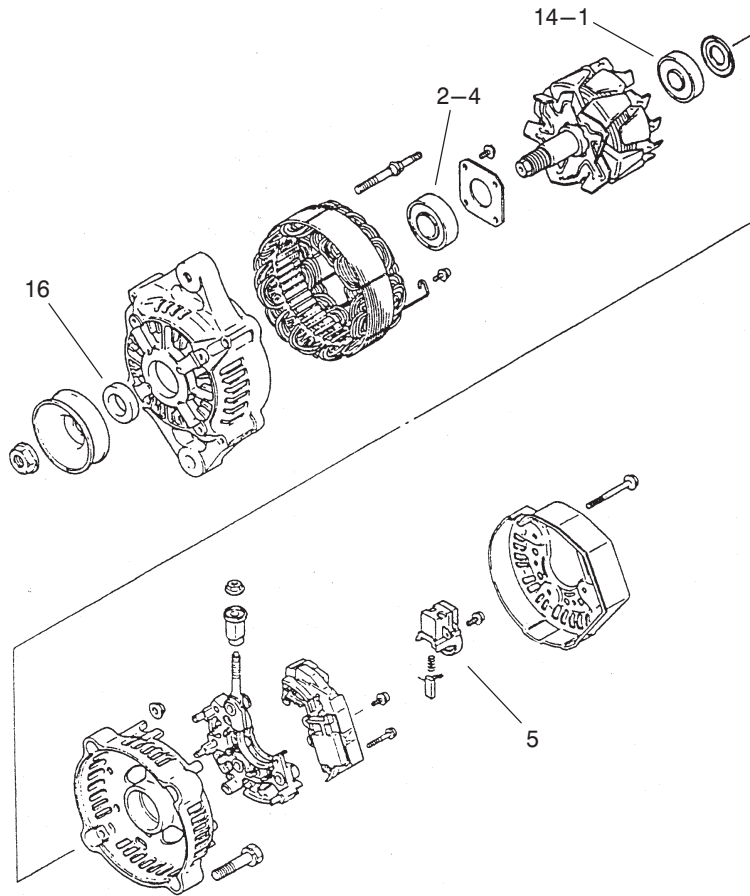
Ref. No.	Part No.	Qty.	Description
★03	99-9003	1	Seal-Oil
★Δ07	99-9612	1	Gasket-Cylinder Head
★Δ1022	99-9073	1	Gasket-Rocker Cover
1033	99-9668	1	Kit-Valve Overhaul
★1062	99-9163	1	Gasket-Outlet
★1065	99-9166	1	Gasket-Inlet Housing
★Δ1067	99-9168	1	Gasket-Water Pump
★1070	99-9120	1	Gasket-Oil Strainer
★1078	99-9121	1	Gasket-Oil Pan
★1080	99-9021	1	Gasket-Retainer
★20	99-9126	1	Seal-Oil
★Δ355	99-9063	1	Washer-Seal
★355A	99-9645	1	Washer-Seal
358	99-9667	1	Gasket-Set
★Δ51	99-9662	1	Gasket-Intake
★Δ868	99-9643	6	Seal-Valve
★88	99-9653	1	Gasket-Gear Cover
★Δ883	99-9178	1	Gasket-Exhaust
★883A	99-9179	1	Gasket-Exhaust
★88A	99-9136	1	Gasket-gear Cover

Ref. No.	Part No.	Qty.	Description

▽ Refer To Repair Manual MS 1055 For Assembly and/or Torque Requirements.

★ Included in Gasket Set – Part Number 99-9667

Δ Included in Valve Overhaul Kit – Part Number 99-9668

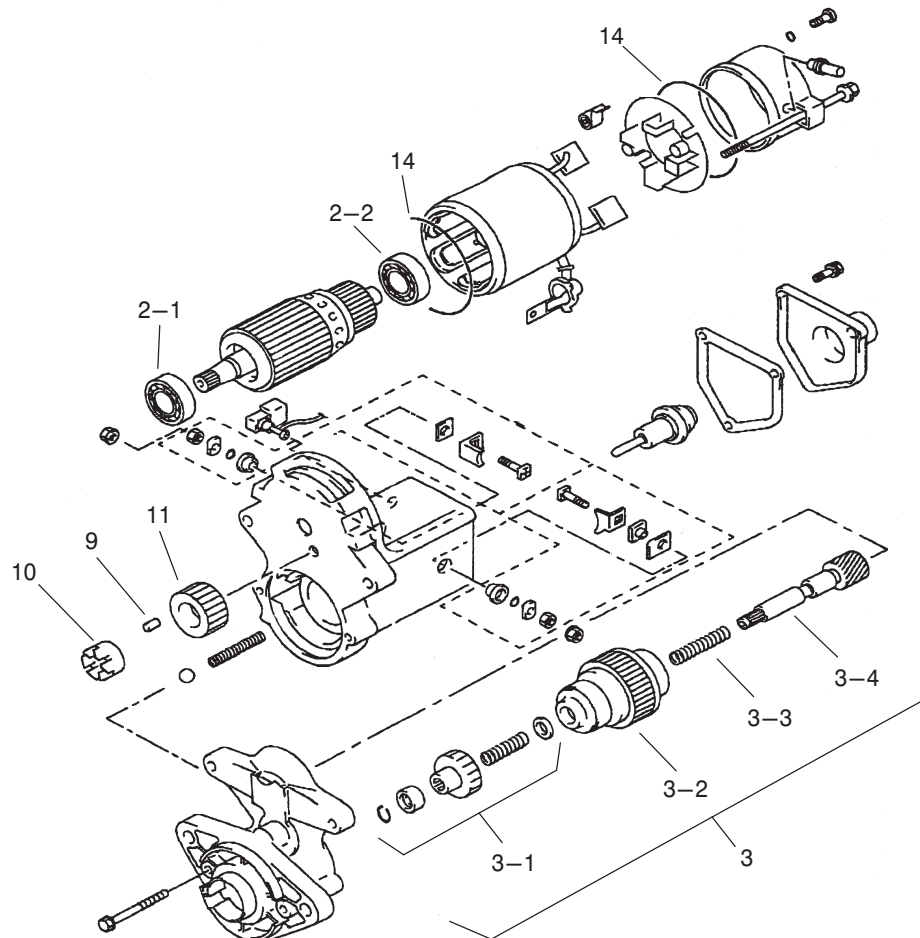


Sheet No.: 0
T-3540

Alternator Assembly No. 99-9209

Ref. No.	Part No.	Qty.	Description
14-1	100-5317	1	Bearing
16	100-5315	1	Collar
2-4	100-5316	1	Bearing
5	100-5318	1	Brush Holder ASM

Ref. No.	Part No.	Qty.	Description



Sheet No.: 0
T-3541

Starter Assembly No. 99-9693

Ref. No.	Part No.	Qty.	Description
10	100-5322	1	Retainer
11	100-5323	1	Pinion, Starter
14	100-5329	2	O-Ring
2-1	100-5319	1	Bearing
2-2	100-5320	1	Bearing
3	100-5324	1	Clutch Sub-ASM, Starter
3-1	100-5325	1	Starter Kit
3-2	100-5326	1	Clutch-Starter
3-3	100-5327	1	Spring
3-4	100-5328	1	Shaft
9	100-5321	5	Roller-clutch

Ref. No.	Part No.	Qty.	Description

Maintenance Record

Date								

Maintenance Record

Date								

Maintenance Record

Date								

