Form No. 3351-542 Rev A

TORO®

Count on it.

Parts Catalog

Groundsmaster® 228-D

Model No. 30241—Serial No. 240000115 and Up

Register at www.Toro.com.
Original Instructions (EN)

3351-542 A

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 illustration and in parts 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.

List of Abbreviations

AR: as required

ASM: assembly

BBC: blade brake control

BHTF: button head thread forming

CARR: carriage

CCW: counter clockwise

CW: clockwise

DEG: degrees

DPA: Dual Point Adjustment

ECM: electronic control module

EXT: external

FH: flat head

GA: gauge

HD: heavy-duty

HF: hex flange

HH: hex head

HHF: hex head flange

HHFTF: hex head flange thread forming

HJ: hex jam

HLH: hex lag head

HOC: height-of-cut

HP: high pressure

HSBH: hex socket button head

HSFH: hex socket flat head

HSH: hex socket head

HWH: hex washer head

HWHTF: hex washer head thread forming

HYD: hydraulic

LH: left hand

LP: low pressure

LPG: Liquefied Petroleum Gas

NI: nylon insert

NPTF: national pipe thread fine

PFH: phillips flat head

PPH: phillips pan head

PPHTF: phillips pan head thread forming

PRH: phillips round head

PTH: phillips truss head

PTO: power-take-off

RH: right hand

ROPS: roll-over protection system

RRB: rear roller brush

SFH: slotted fillister head

SHH: slotted hex head

SHWH: slotted hex washer head

SPH: slotted pan head

SQH: square head

SRH: slotted round head

STD: standard

TAP: self tapping

TTH: torx truss head

Contents

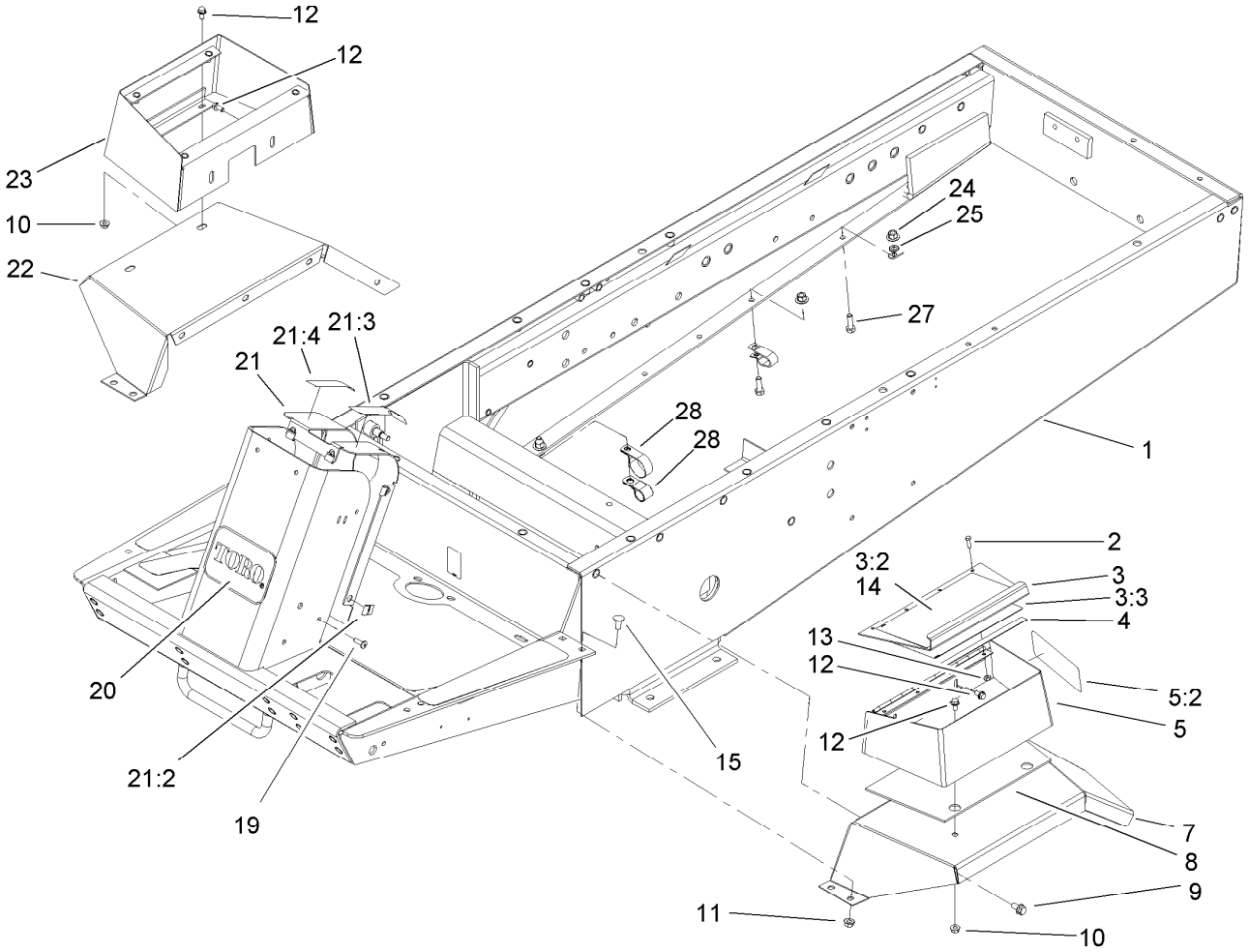
Frame and Fender Assembly 5
Frame Assembly No. 107-2913 6
Control Panel Assembly 7
Power Steering and Brake Pedal Assembly 8
Power Steering Unit Assembly No. 92-7308 9
Traction Pedal Assembly 10
Battery and Engine Mount Assembly 11
PTO Shaft and Assembly 12
Hydraulic Cylinder and Lift Valve Assembly 13
Lift Valve Assembly No. 63-7960 14
Radiator Assembly 15
Fuel Tank Assembly 16
Water and Fuel Filter Assembly No. 98-9305 17
Transmission and Drive Coupling Assembly 18
Transmission Assembly No. 92-5513 19
Transmission Interlock Assembly 21
Seat Frame Assembly 22
2 WD Rear Axle Assembly 23
Axle Assembly 24
Steering Cylinder Assembly No. 76-2070 25
Engine Installation and Drive Coupling Assembly 26
Air Cleaner Assembly No. 104-3427 27
Throttle and Lift Lever Assembly 28
Hood Assembly 29
Brake Pedal Assembly 30
Front Axle Assembly 31
Differential Assembly 32
Differential Carrier Assembly No. 92-4909 33
Brake Assembly 35
Engine Mounting and Component Assembly 36
Engine and Clutch Hub Assembly 37
Electric Clutch / Brake Assembly No. 100-6565 38
Crankcase Assembly 39
Oil Pan Assembly 40
Cylinder Head Assembly 41
Gear Case Assembly 42
Head Cover Assembly 43
Dipstick and Guide Assembly 44
Main Bearing Case Assembly 45
Camshaft And Idle Gear Shaft Assembly 46
Piston and Crankshaft Assembly 47
Flywheel Assembly 48
Fuel Camshaft and Governor Shaft Assembly 49
Idle Apparatus Assembly 50
Injection Pump Assembly 51
Governor Assembly 52
Speed Control Plate Assembly 53
Nozzle Holder and Glow Plug Assembly 54
Nozzle Holder (Component Parts) Assembly 55
Alternator and Pulley Assembly 56
Alternator (Component Parts) Assembly 57
Starter Assembly 58
Starter (Component Parts) Assembly 59
Water Flange and Thermostat Assembly 60

© 2014—The Toro® Company
8111 Lyndale Avenue South
Bloomington, MN 55420

Contact us at www.Toro.com.
Printed in the USA.
All Rights Reserved

Contents (continued)

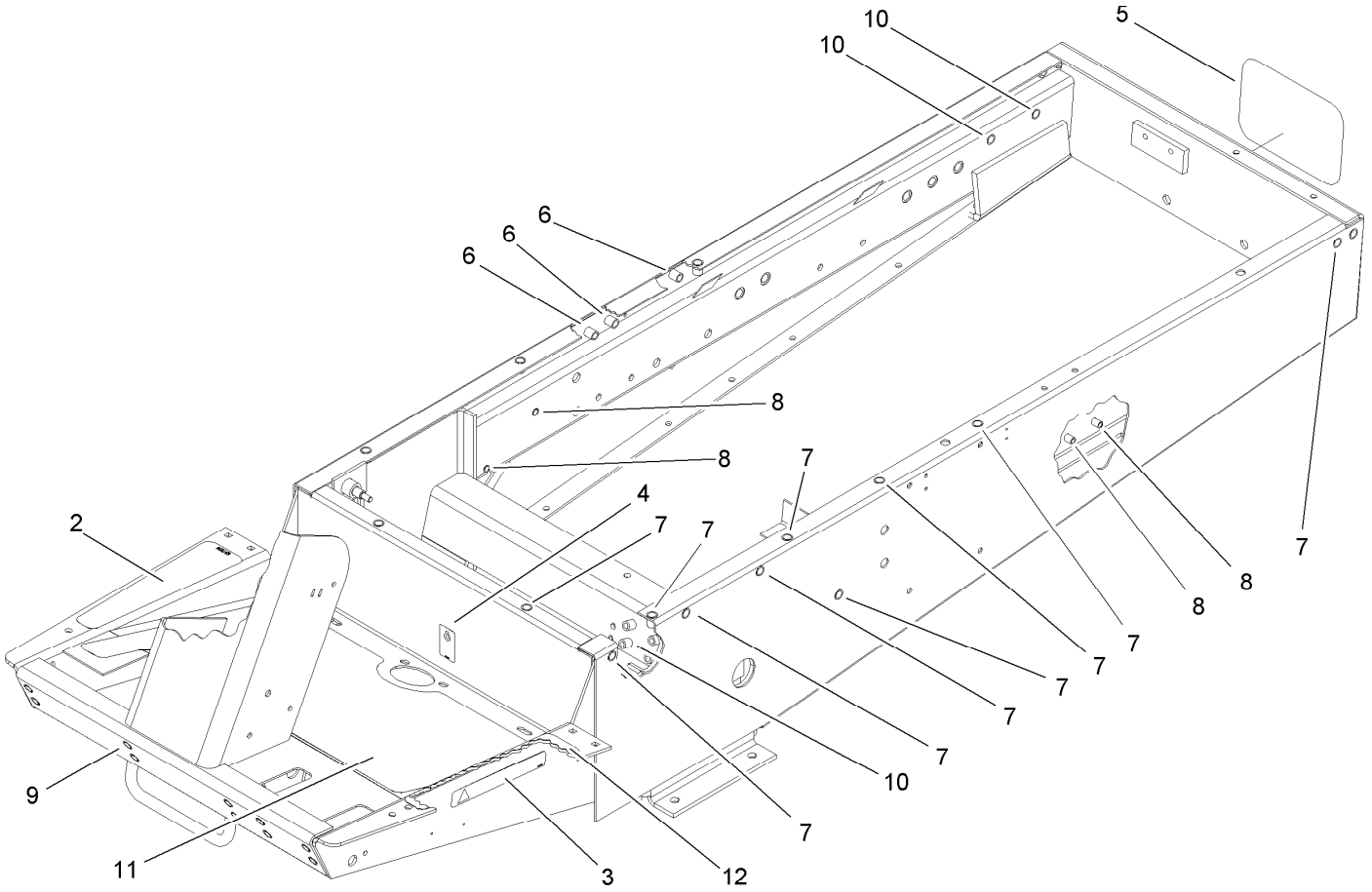
Water Pump Assembly 61
Valve and Rocker Arm Assembly 62
Inlet Manifold Assembly 63
Fuel Filter and Pump, Muffler Gasket and Operator Manual 64
Gasket Kit 65



Frame and Fender Assembly

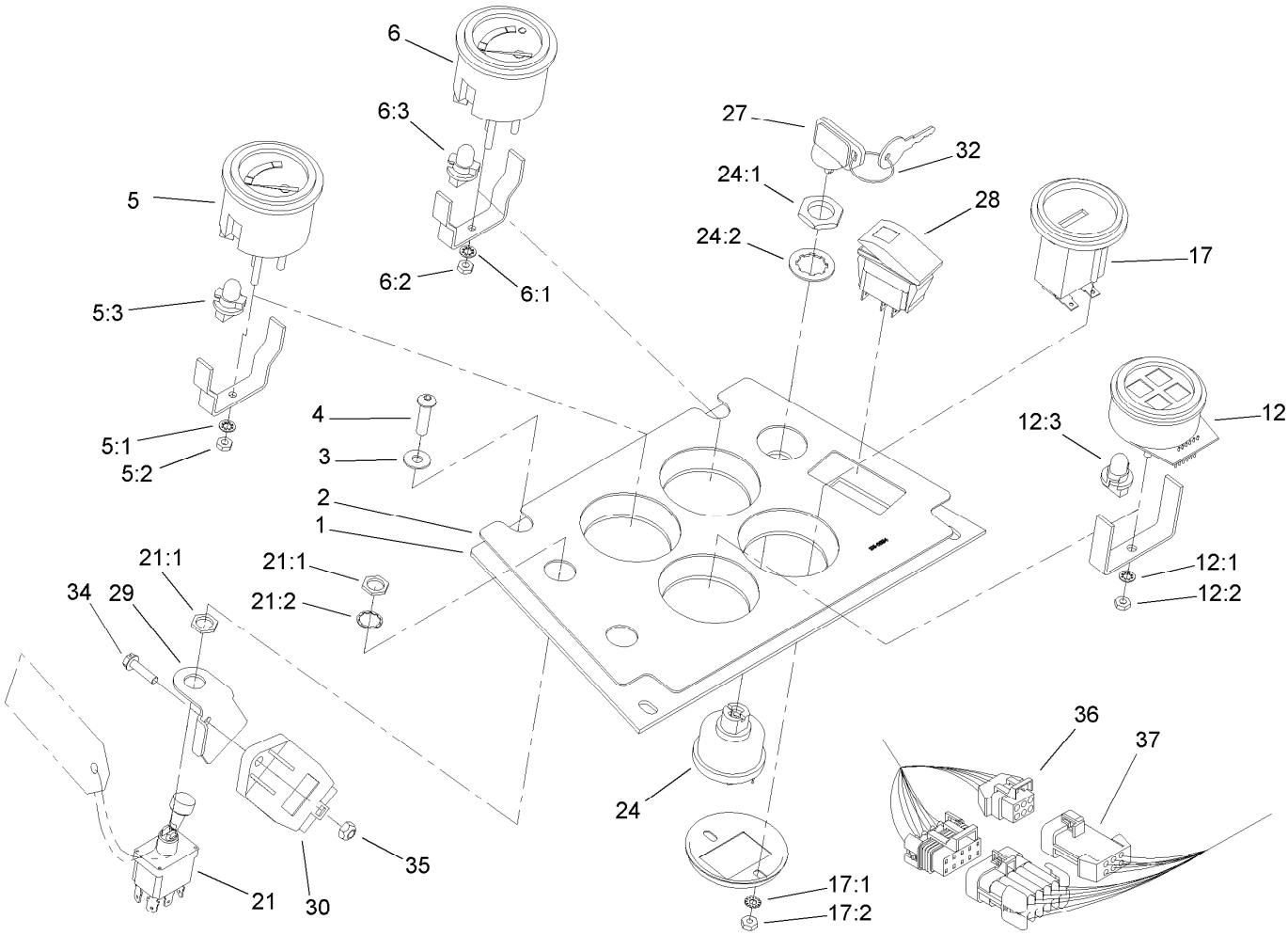
Ref.	Part Number	Qty.	Description
1	107-2913	1	Frame ASM
2	3290-359	4	Screw-HWH
3	107-2921	1	Toolbox Cover ASM
3:2	92-5774	1	Decal-Danger
3:3	107-2920	1	Decal-Service
4	66-3050	1	Latch-Box, Tool
5	92-6501	1	Tool Box ASM
5:2	93-7822	1	Decal-Refueling
7	63-7310-01	1	Fender-LH
8	76-4790	1	Pad-Rubber
9	3234-14	8	Screw-HHF
10	32128-33	4	Nut-HF
11	32128-20	4	Nut-HF
12	3234-13	8	Screw-HHF
13	3296-12	4	Nut-Lock, NI

Ref.	Part Number	Qty.	Description
14	107-2925	1	Decal-Danger
15	3230-23	4	Screw-CARR
19	3250-32	6	Screw-PPH
20	104-3989	1	Decal
21	105-7180	1	Tower Panel ASM
21:2	105-7170	6	Nut-Retainer
21:3	105-7179	1	Decal-Brake, Parking
21:4	82-8940	1	Decal-Steering, Tilt
22	63-7300-01	1	Fender-RH
23	63-8050	1	Box-Control
24	32128-44	1	Nut
25	3255-8	1	Washer-Lock
27	322-5	2	Screw-HH
28	2412-4	1	Clamp



Frame Assembly No. 107-2913

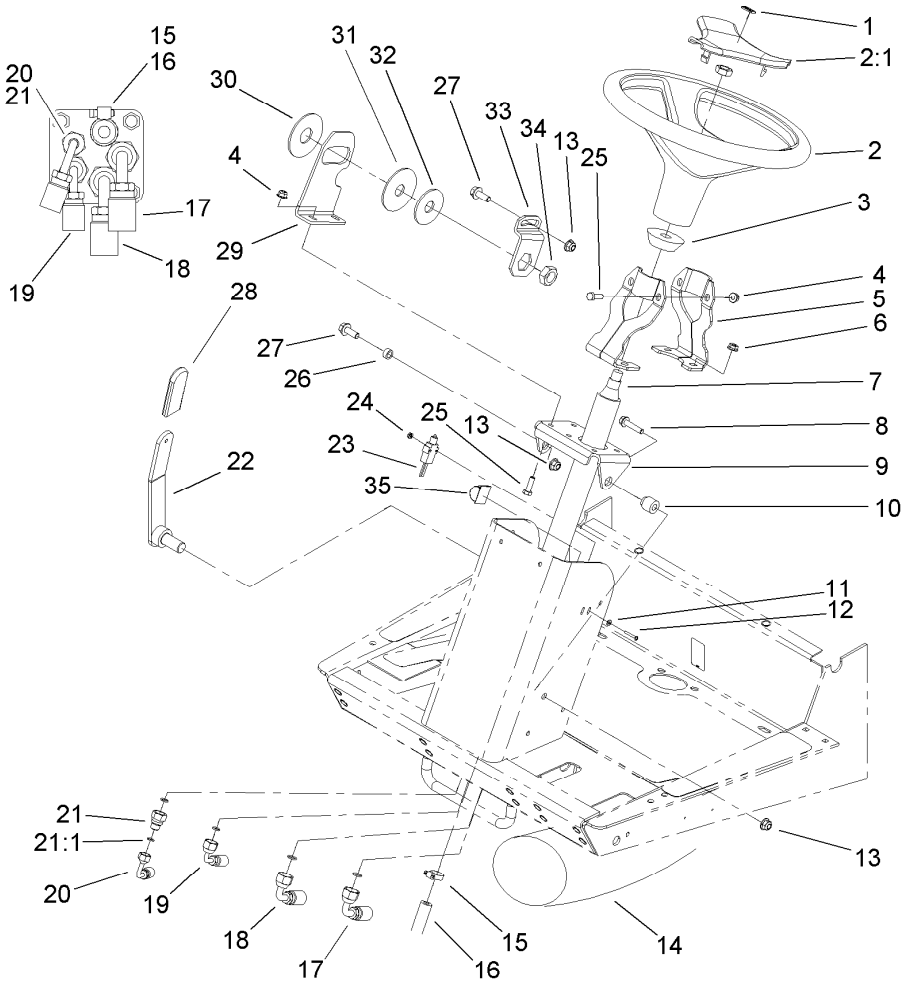
Ref.	*Part Number*	*Qty.*	*Description*
2	93-7834	1	Decal-Footrest, RH
3	93-7830	2	Decal-Torque
4	93-6686	1	Decal-Oil, HYD
5	62-7400	1	Decal
6	32148-9	3	Insert-Nut
7	32148-7	22	Nut-Insert
8	32148-11	4	Insert-Threaded
9	32148-10	10	Insert-Nut
10	32148-8	6	Insert-Threaded
11	105-7160	1	Pad-Floor
12	66-3200	1	Tread-Footrest, LH



Control Panel Assembly

Ref.	Part Number	Qty.	Description
1	104-3436-03	1	Plate-Control
2	105-0054	1	Decal-Panel, Control
3	3256-1	4	Washer-Flat
4	3274-65	4	Screw-HSBH
5	98-9308	1	Gauge-Temperature
5:1	3254-1	3	Washer-Lock, Int
5:2	3217-27	3	Nut-Hex
5:3	105-9265	1	Bulb And Lamp ASM
6	98-9339	1	Gauge-Fuel
6:1	3254-1	3	Washer-Lock, Int
6:2	3217-27	3	Nut-Hex
6:3	105-9265	1	Bulb And Lamp ASM
12	98-9306	1	Light-Warning
12:1	3254-1	1	Washer-Lock, Int
12:2	3217-27	1	Nut-Hex
12:3	105-9264	4	Bulb And Lamp ASM
17	66-2950	1	Gauge-Hourmeter

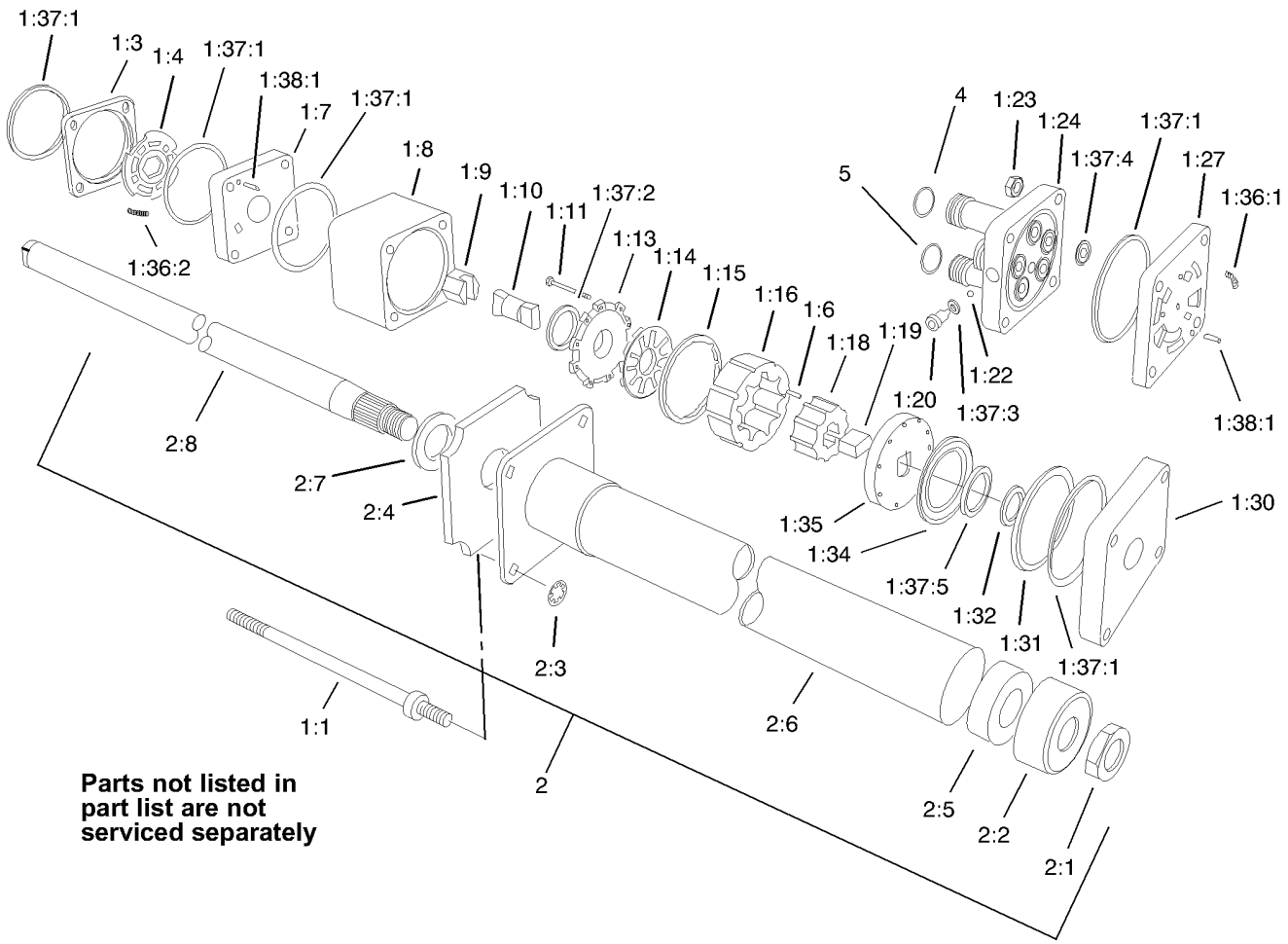
Ref.	Part Number	Qty.	Description
17:1	3255-20	2	Washer-Lock
17:2	3217-25	2	Nut-Hex
21	85-4980	1	Switch-PTO
21:1	3218-19	2	Nut-HJ
21:2	3254-20	1	Washer-Lock, Int
24	104-2541	1	Switch ASM
24:1	218-461	1	Nut-HH
24:2	3254-5	1	Washer-Tooth, Internal
27	63-8360	1	Key-Ignition
28	100-8072	1	Switch
29	105-0029	1	Bracket-Controller
30	98-7611	1	Controller-Glow
32	98-9321	1	Ring-Key
34	32105-13	1	Screw-HWH
35	3296-12	1	Nut-Lock, NI
36	105-0024	1	Harness-Wire, Gauges
37	106-4194	1	Wire Harness-Main



Power Steering and Brake Pedal Assembly

Ref.	Part Number	Qty.	Description
1	98-1459	1	Decal
2	98-1471	1	Wheel-Steering
2:1	98-1468	1	Cover-Wheel, Steering
3	93-5429	1	Collar-Foam
4	104-8300	4	Nut-Flange, NI
5	105-7191-03	2	Support-Column
6	32128-16	4	Nut-HHF
7	92-7308	1	Power Steering Unit ASM
8	3234-18	1	Screw-HHF
9	105-7155-03	1	Bracket-Pivot
10	105-7166	1	Spacer
11	3256-53	2	Washer-Flat
12	3250-35	2	Screw-PPH
13	104-8301	3	Nut-Flange, NI
14	44-8530	1	Protector-Sleeve
15	2412-36	1	Clamp-Hose
16	66-8140	1	Hose-Hydraulic
17	105-7173	1	HYD Hose ASM
18	105-7174	1	HYD Hose ASM

Ref.	Part Number	Qty.	Description
19	105-7176	1	HYD Hose ASM
20	105-7175	1	HYD Hose ASM
21	340-145	1	Fitting-Reducer
21:1	237-21	1	O-Ring
22	93-1353-03	1	Lever-Steering, Tilt
23	99-3410	1	Switch
24	32149-6	2	Nut-Keps
25	322-5	4	Screw-HH
26	80-2960	1	Spacer-Tower
27	3234-42	2	Screw-HHF
28	21-1880	1	Grip-Handle
29	105-7181-03	1	Plate-Pivot
30	31-0390	1	Disc-Friction
31	82-9010	1	Disc-Friction
32	80-2930	1	Washer-Flat
33	80-2880	1	Bracket-Tilt
34	3218-7	1	Nut-Jam
35	105-7188	2	Clamp-Adhesive

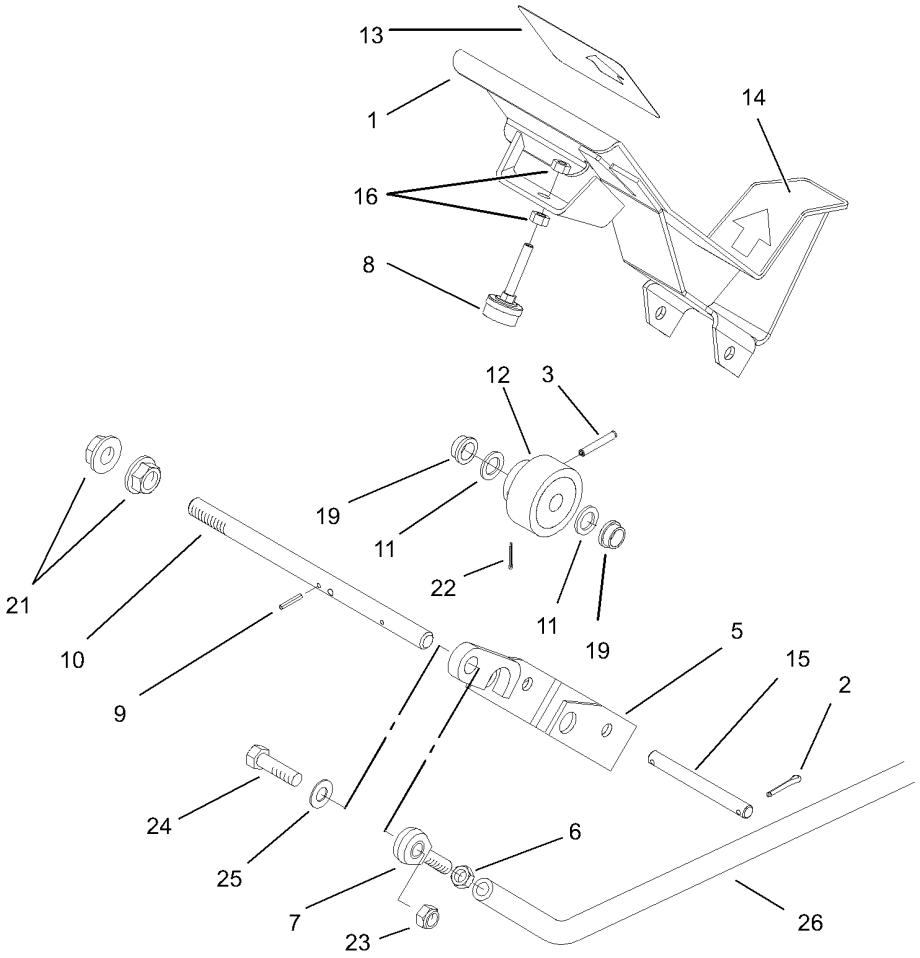


Power Steering Unit Assembly No. 92-7308

Ref.	Part Number	Qty.	Description
1:1	92-7310	4	Bolt-Special
1:3		1	Ring-Valve ■
1:4		1	Plate-Valve ■
1:6		9	Pin-Alignment ■
1:7		1	Manifold-Isolation ■
1:8		1	Ring-Metering ■
1:9		1	Hex Drive ASM ■
1:10		1	Link-Drive ■
1:11		11	Screw-HSH ■
1:13		1	Cover-Commutator ■
1:14		1	Commutator ■
1:15		1	Ring-Commutator ■
1:16		1	Stator ■
1:18		1	Rotor ■
1:19		1	Spacer-Link, Drive ■
1:20		1	Plug ■
1:22		1	Ball ■
1:23		4	Nut-Hex ■
1:24		1	Cover-Port ■
1:27		1	Manifold-Port ■
1:30		1	Plate-Cover, Upper ■
1:31		1	Spacer-Bearing, Thrust ■
1:32		1	Spacer-Seal ■
1:34		1	Bearing-Thrust ■
1:35		1	Plate-Drive ■
1:36	66-9970	1	Spring Kit ●
1:36:1		3	Spring ■
1:36:2		3	Spring ■
1:37	66-9980	1	Seal Kit ●
1:37:1		5	Ring-Seal ■
1:37:2		1	Seal-Commutator ■
1:37:3		1	Seal-Dust ■
1:37:4		5	Seal-Dust ■
1:37:5		1	Seal-Face ■
1:38	66-9990	1	Needle Roller Kit ●
1:38:1		9	Pin-Alignment ■
2	92-7314	1	Column ASM
2:1	3220-6	1	Nut-Jam
2:2	92-7315	1	Seal-Upper
2:3	92-7316	4	Nut-Push On
2:4	92-7317	1	Seal-Foam, Upper Cover
2:5		1	Bearing ■
2:6		1	Cover-Upper ■
2:7		1	Washer-Retaining ■
2:8		1	Shaft-Input ■
4	237-30	2	O-Ring
5	237-22	2	O-Ring

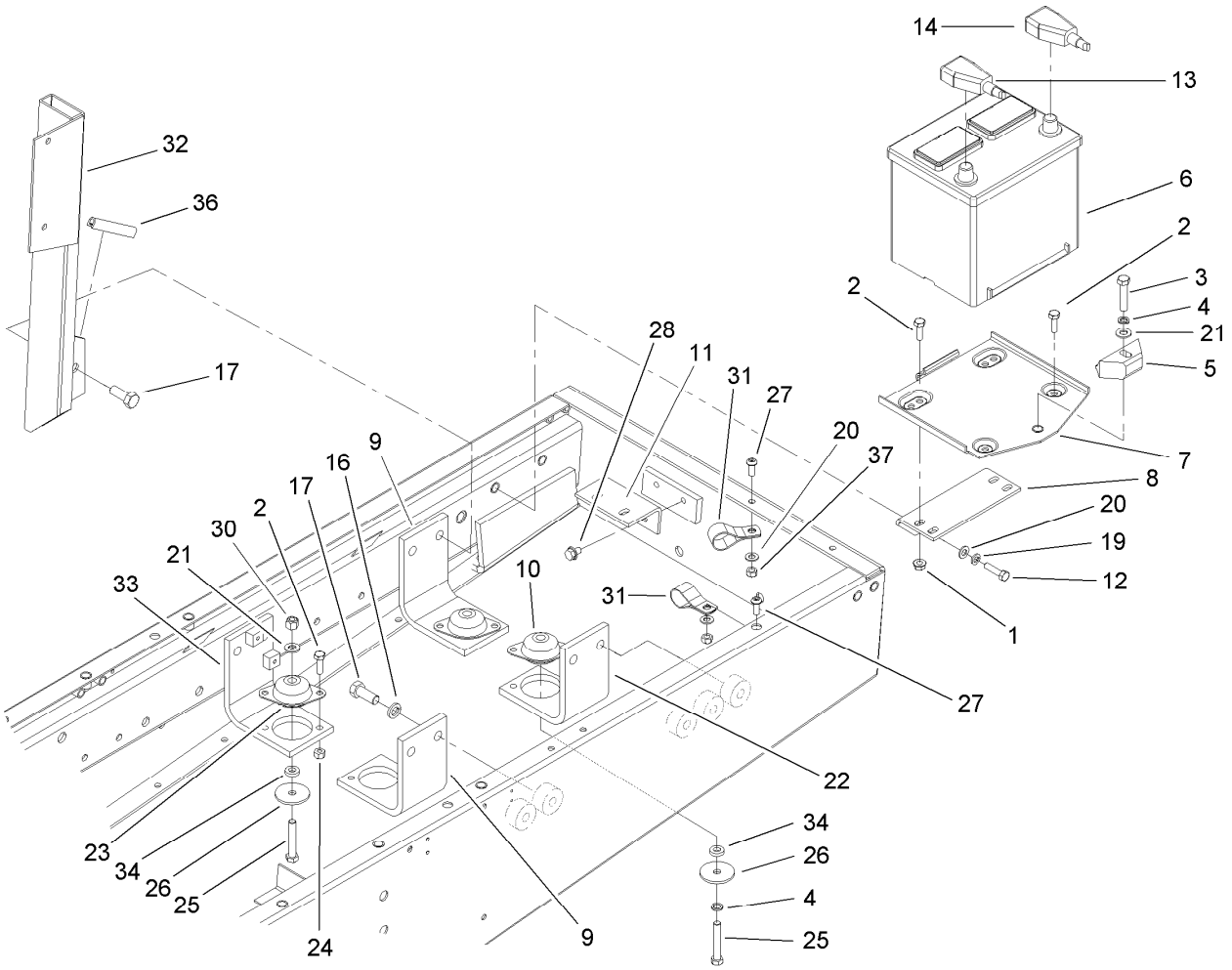
● Not illustrated

■ Not serviced separately



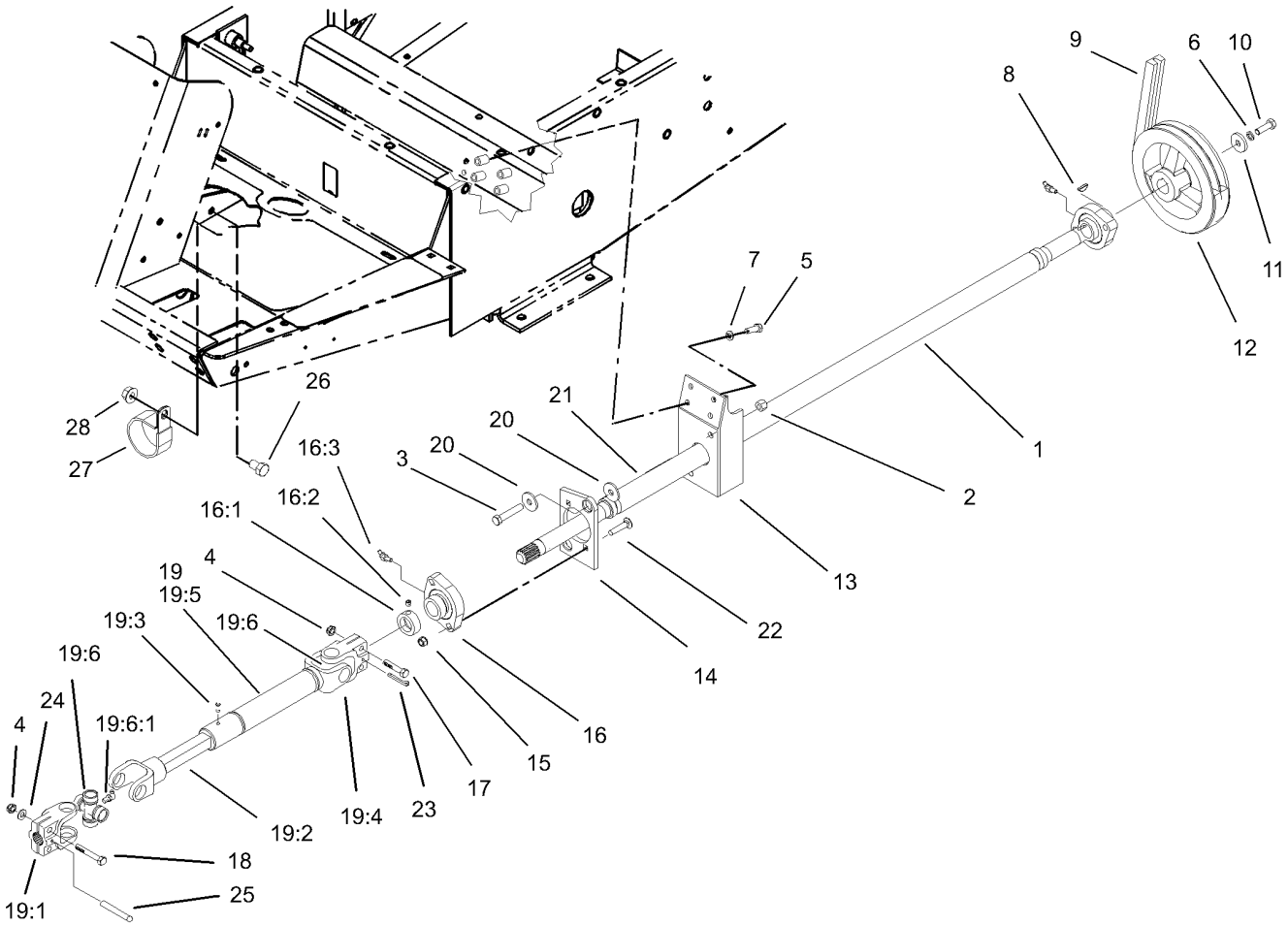
Traction Pedal Assembly

Ref.	*Part Number*	*Qty.*	*Description*
1	105-7150-03	1	Pedal ASM
2	3272-10	2	Pin-Cotter
3	32121-6	1	Pin-Roll, Slotted
5	92-8854-03	1	Pivot Bracket ASM
6	3220-3	1	Nut-HJ
7	2411-36	1	Bearing-End, Rod
8	32141-36	1	Screw-Adjustment, Level
9	32121-50	1	Pin-Spring
10	92-5534	1	Shaft-Pedal, Traction
11	5-7570	2	Washer-Flat
12	28-5220	1	Friction Wheel ASM
13	94-3307	1	Pad-Pedal, Traction
14	94-3308	1	Pad-Pedal, Traction
15	92-5537	1	Pin-Pedal, Traction
16	3217-6	2	Nut-Hex
19	256-156	2	Bushing-Flange
21	32128-56	2	Nut-HF
22	3272-6	1	Pin-Cotter
23	3296-39	1	Nut-Lock, NI
24	323-29	1	Screw-HH
25	3256-24	1	Washer-Flat
26	63-6410-03	1	Tube-Pump, Control



Battery and Engine Mount Assembly

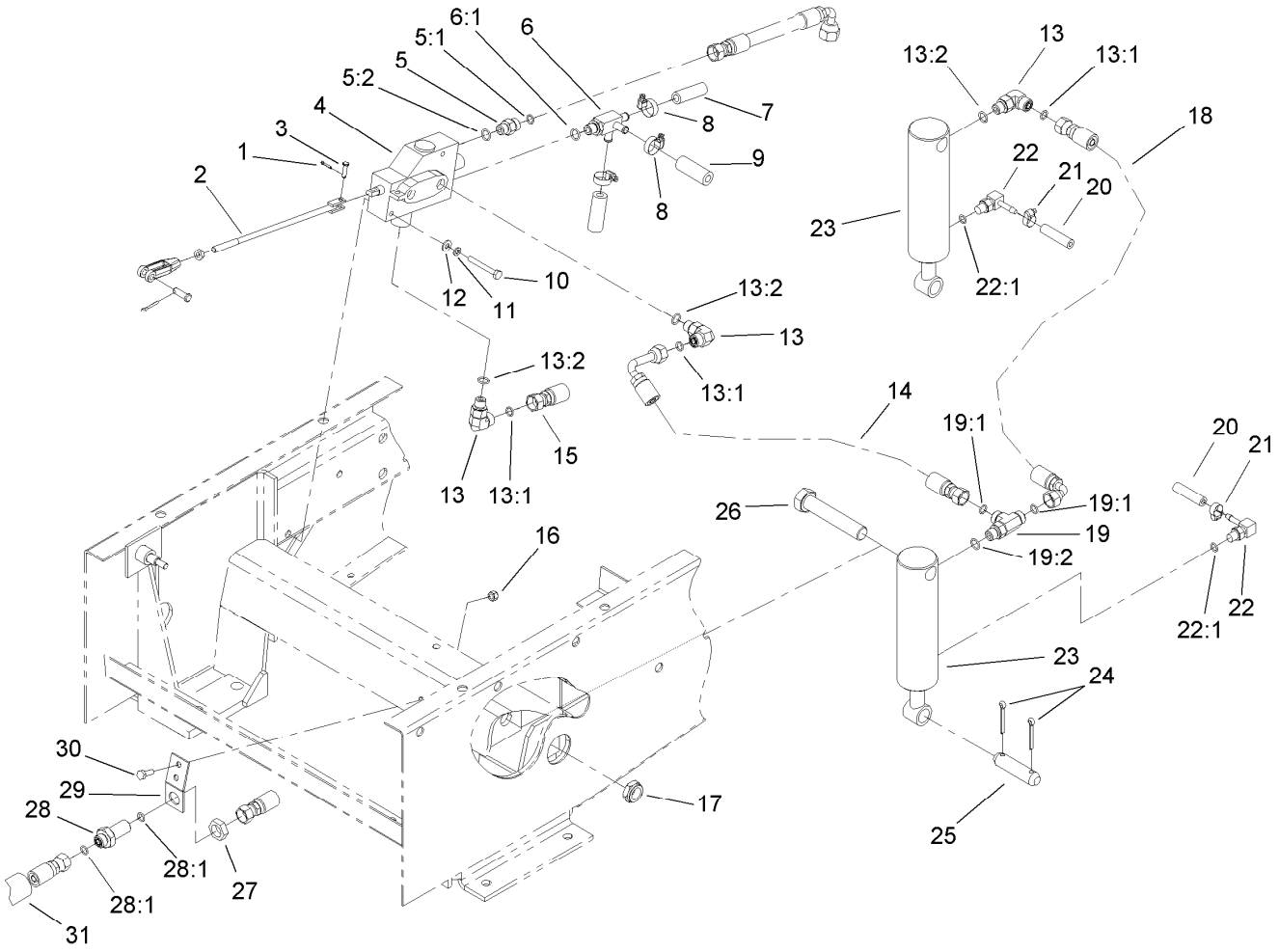
Ref.	Part Number	Qty.	Description
1	32128-20	3	Nut-HF
2	322-5	11	Screw-HH
3	323-9	1	Screw-HH
4	3253-21	2	Washer-Lock
5	66-2490	1	Retainer-Battery
6	106-5187	1	Battery-Dry
7	94-7343	1	Battery Base ASM
8	95-1592-03	1	Bracket-Base, Battery
9	95-6270-03	2	Bracket-Mount, Engine
10	63-7141	1	Mount-Shock, Engine
11	95-1599-03	1	Bracket-Base, Battery
12	322-6	2	Screw-HH
13	104-0086	1	Cable-Battery, Positive
14	105-0040	1	Cable-Battery, Negative
16	3253-7	8	Washer-Lock
17	3213-2	8	Screw-HH
19	3253-4	2	Washer-Lock
20	3256-23	5	Washer-Flat
21	3256-24	4	Washer-Flat
22	95-6271-03	1	Bracket-Mount, Engine
23	63-7142	3	Mount-Shock, Engine
24	3296-29	8	Nut-Lock, NI
25	323-11	4	Screw-HH
26	63-7400	4	Washer-Rebound
27	3274-96	3	Screw-HSBH
28	3234-30	2	Screw-HHF
30	3296-39	3	Nut-Lock, NI
31	98-3883	3	Clamp-Wire
32	105-2513-03	1	Air Cleaner Mount ASM
33	105-7848-03	1	Bracket-Mount, Engine
34	80-7730	4	Spacer
36	43-4300	1	Trim-Frame, Rear
37	33024-00	3	Nut-Lock, NI



PTO Shaft and Assembly

Ref.	Part Number	Qty.	Description
1	92-8855-03	1	Shaft-PTO
2	3296-39	2	Nut-Lock, NI
3	323-10	2	Screw-HH
4	3296-29	5	Nut-Lock, NI
5	322-5	4	Screw-HH
6	3253-21	1	Washer-Lock
7	3253-4	4	Washer-Lock
8	3257-5	1	Key-Woodruff
9	63-6240	1	V-Belt
10	323-18	1	Screw-HH
11	29-4730	1	Washer-Flat
12	43-5320-03	1	Pulley-PTO
13	92-8751-03	1	PTO Bearing Bracket ASM
14	84-7580	1	Plate-Support, Bushing
15	32149-1	2	Nut-Keps
16	92-8799	1	Bearing-Flange
16:1	251-77	1	Collar-Lock, Bearing
16:2	3246-1	1	Screw-Set
16:3	302-40	1	Fitting-Grease, 90 DEG

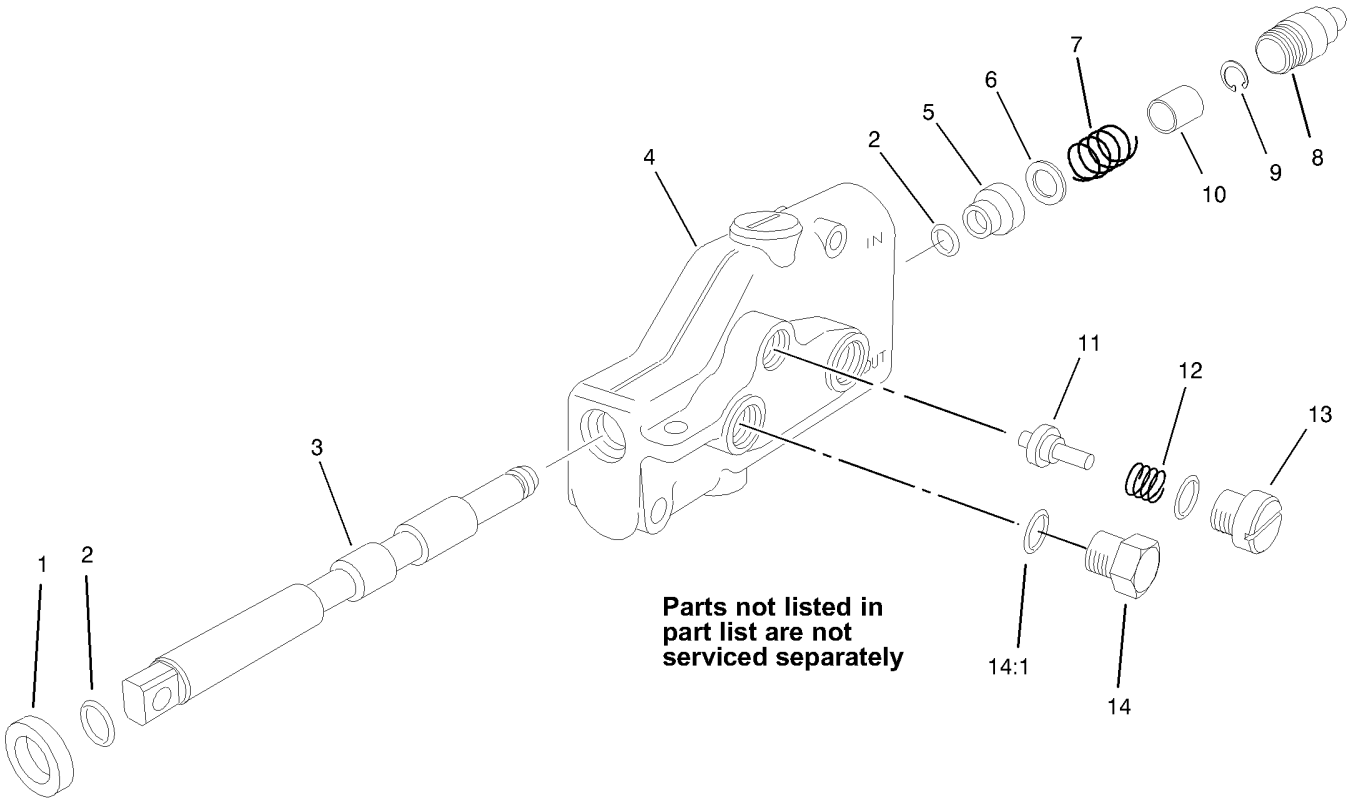
Ref.	Part Number	Qty.	Description
17	322-9	4	Screw-HH
18	322-14	1	Screw-HH
19	54-7950	1	PTO Drive Shaft ASM
19:1	54-9040	1	Yoke-End
19:2	54-9050	1	Shaft-Slip Yoke
19:3	302-58	1	Fitting-Straight
19:4	54-9090	1	Yoke-End
19:5	54-9170-01	1	Tube-Yoke, Slip
19:6	54-9180	2	U-Joint Kit
19:6:1	62-3820	1	Fitting-Grease
20	63-8410	4	Washer
21	63-9750	2	Mount
22	3230-4	2	Screw-CARR
23	3272-15	1	Pin-Cotter
24	3256-23	1	Washer-Flat
25	32121-34	1	Pin-Roll
26	46-3380	1	Bolt-Shoulder
27	2412-102	1	Clamp-R
28	3296-39	1	Nut-Lock, NI



Hydraulic Cylinder and Lift Valve Assembly

Ref.	Part Number	Qty.	Description
1	3272-5	1	Pin-Cotter
2	76-4830-03	1	Valve Rod ASM
3	283-16	1	Pin-Clevis
4	63-7960	1	Valve-Lift
5	340-2	1	Fitting-HYD, Straight
5:1	237-22	1	O-Ring
5:2	237-42	1	O-Ring
6	66-3130	1	Fitting-Special
6:1	237-42	1	O-Ring
7	100-5641	1	Hose ASM
8	2412-36	3	Clamp-Hose
9	66-8150	1	Hose-Hydraulic
10	321-11	2	Screw-HH
11	3253-3	2	Washer-Lock
12	3256-22	2	Washer-Flat
13	340-77	3	Fitting-HYD, 90 DEG
13:1	237-22	1	O-Ring
13:2	237-42	1	O-Ring
14	66-8640	1	Hydraulic Hose ASM
15	105-0018	1	HYD Hose ASM

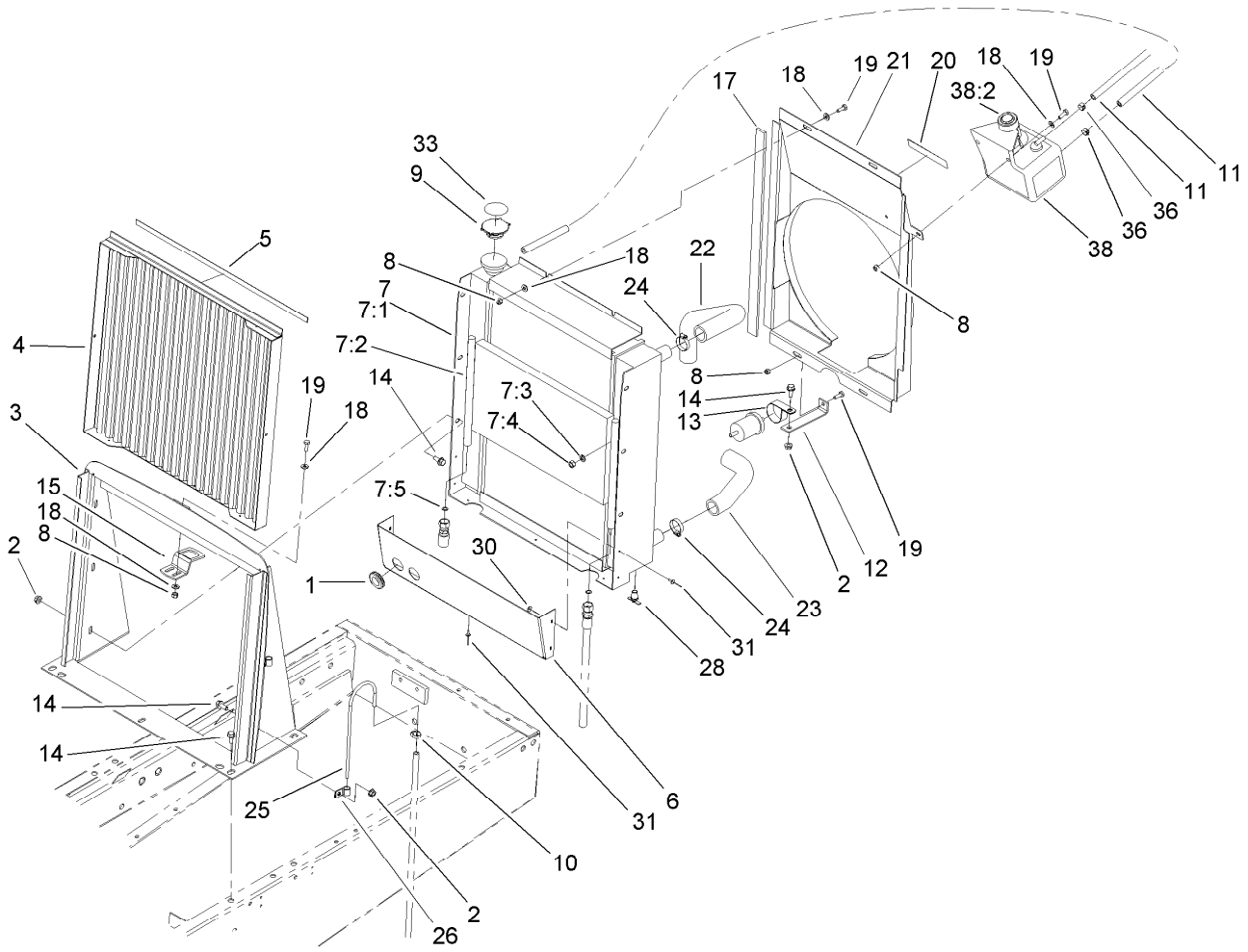
Ref.	Part Number	Qty.	Description
16	3296-42	2	Nut-Lock, NI
17	3296-15	2	Nut-Lock, NI
18	66-8190	1	Hydraulic Hose ASM
19	340-86	1	Fitting-Tee
19:1	237-22	2	O-Ring
19:2	237-42	1	O-Ring
20	92-5082	2	Hose-HYD
21	2412-108	2	Clamp-Worm
22	304-99	2	Stem-Hose
22:1	237-78	1	O-Ring
23	63-6630	2	Cylinder-HYD
24	3272-23	4	Pin-Cotter
25	27-4240	2	Pin-Cylinder
26	3216-3	2	Screw-HH
27	340-70	1	Nut-Lock
28	340-71	1	Fitting-Straight, Bulkhead
28:1	237-22	2	O-Ring
29	63-7410	1	Bracket-Bulkhead
30	321-4	2	Screw-HH
31	56-7984	1	Protective Sleeve



Lift Valve Assembly No. 63-7960

Ref.	*Part Number*	*Qty.*	*Description*
1	58-6320	1	Wiper
2	58-6450	2	O-Ring
3		1	Spool ●
4		1	Body ●
5	58-6400	1	Bushing
6	65-2770	1	Washer
7	65-2950	1	Spring
8	58-6420	1	Cap
9	58-6460	1	Ring-Retaining
10	65-2740	1	Spacer
11	65-2750	1	Plunger
12	65-2760	1	Spring
13	65-2930	1	Plug ASM
14	353-508	1	Plug-HH
14:1	237-42	1	O-Ring

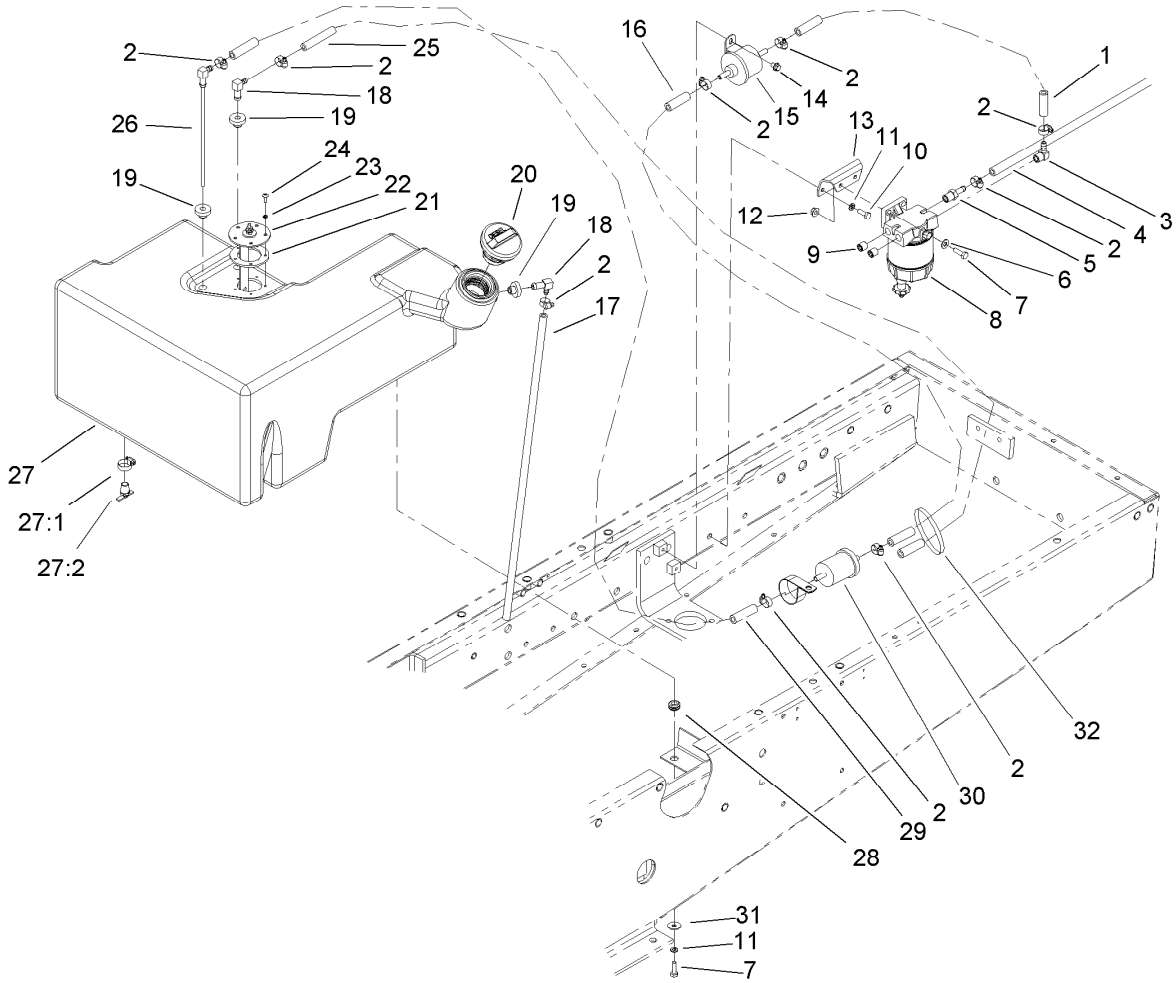
● Not serviced separately



Radiator Assembly

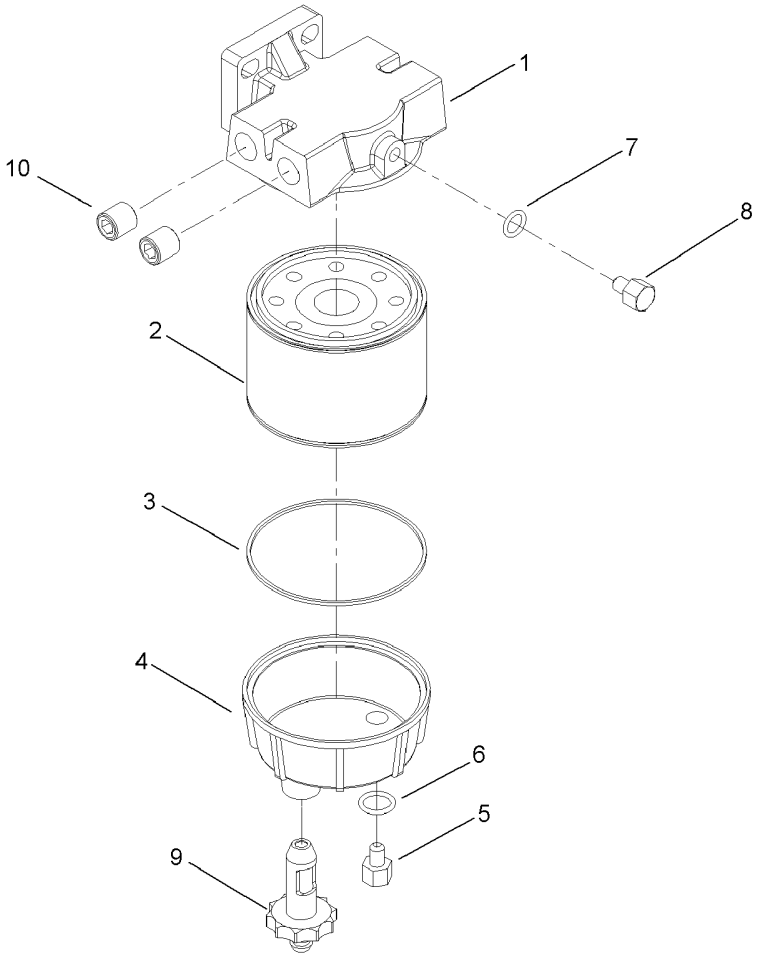
Ref.	Part Number	Qty.	Description
1	240-4	2	Grommet-Rubber
2	32128-20	7	Nut-HF
3	104-3489-03	1	Radiator Support ASM
4	104-1727-03	1	Screen ASM
5	63-7710	1	Strip-Magnetic
6	105-0041-03	1	Shield-Radiator, Bottom
7		1	Radiator/Oil Cooler ASM
7:1	105-4289	1	Radiator
7:2	105-4290	1	Cooler-Oil
7:3	3253-4	4	Washer-Lock
7:4	3217-6	4	Nut-Hex
7:5	237-22	2	O-Ring
8	3296-42	8	Nut-Lock, NI
9	66-3240	1	Cap-Radiator
10	2412-108	1	Clamp-Worm
11	93-5484	2	Hose-Fuel
12	105-7847-03	1	Bracket-Filter
13	2412-147	1	Clamp
14	3234-5	9	Screw-HHF

Ref.	Part Number	Qty.	Description
15	98-9316	1	Latch-Hood
17	106-4356	2	Strip-Foam
18	3256-22	13	Washer-Flat
19	321-4	8	Screw-HH
20	93-7272	1	Decal-Warning
21	105-4261-03	1	Fan Shroud ASM
22	104-3443	1	Hose-Radiator, Upper
23	104-3442	1	Hose-Radiator, Lower
24	2412-34	4	Clamp-Hose
25	66-3180	1	Tube-Vent
26	2412-103	2	Clamp
28	304-46	1	Draincock
30	3269-10	2	Washer-Back
31	3269-13	5	Rivet-Pop
33	106-5976	1	Decal-Warning
36	92-2379	2	Clamp-Hose
38	93-5975	1	Coolant Reservior ASM
38:2	93-5960	1	Cap-Reservoir



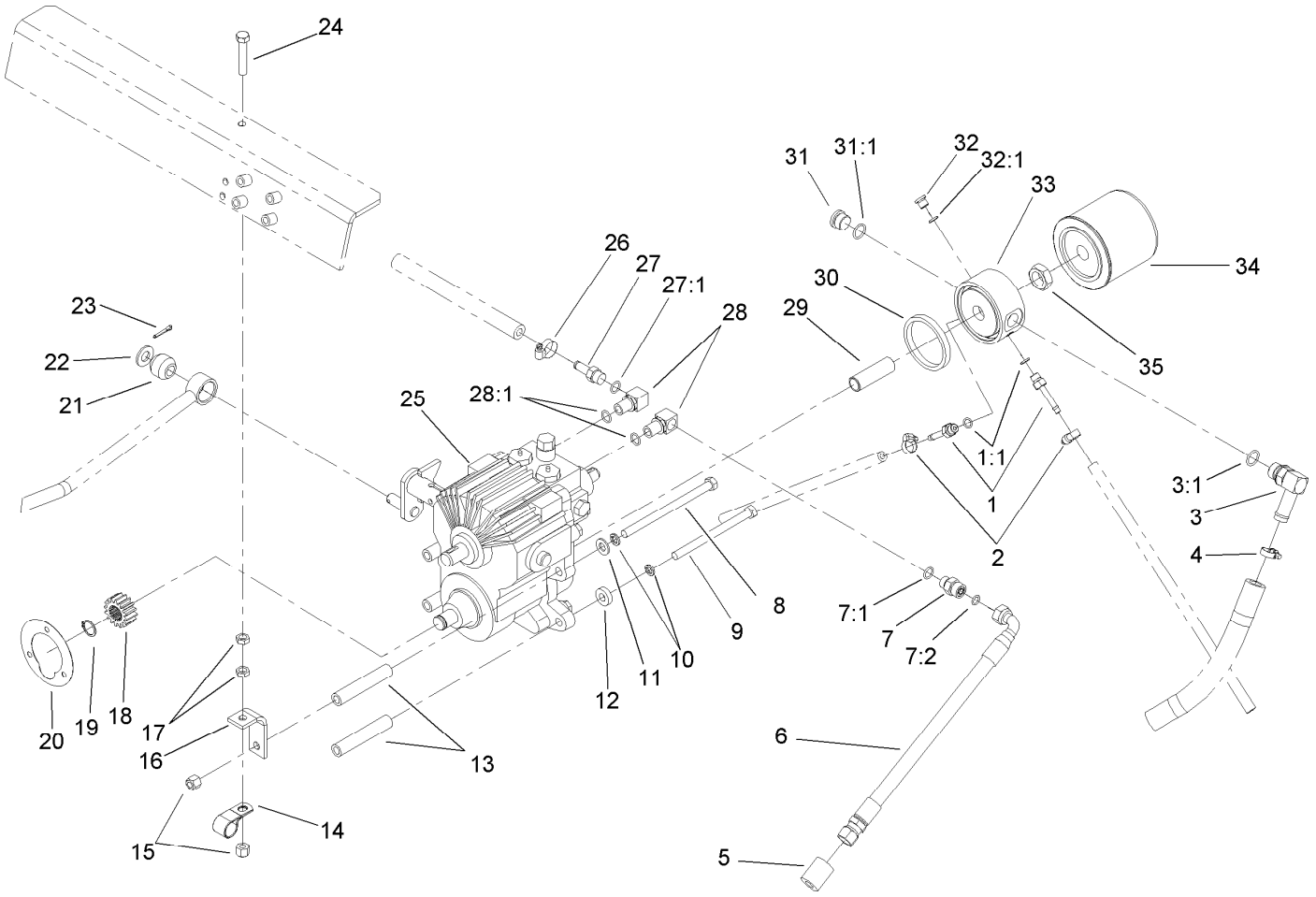
Fuel Tank Assembly

Ref.	Part Number	Qty.	Description
1	27-5360	1	Hose-Fuel
2	2412-108	11	Clamp-Worm
3	353-781	1	Fitting-Elbow
4	63-7627	1	Hose-Fuel
5	353-783	1	Fitting-Straight
6	3256-22	2	Washer-Flat
7	321-5	5	Screw-HH
8	98-9305	1	Water / Fuel Filter ASM
9	285-22	2	Plug-Pipe
10	321-4	2	Screw-HH
11	3253-3	5	Washer-Lock
12	32128-33	2	Nut-HF
13	104-3409-03	1	Bracket-Filter
14	3234-26	2	Screw-HHF
15	104-5215	1	Pump-Fuel, Electric
16	63-7622	1	Hose-Fuel
17	94-4522	1	Hose-Fuel
18	94-6765	2	Fitting-Barbed, 90 DEG
19	46-6560	3	Bushing
20	93-3102	1	Cap-Fuel
21	62-7650	1	Gasket
22	63-7640	1	Sender-Fuel
23	3253-15	5	Washer-Lock
24	32122-24	5	Screw-PTH
25	105-0020	1	Hose-Fuel
26	66-8120	1	Pipe-Stand
27	98-5001	1	Tank-Fuel
27:1	2412-36	1	Clamp-Hose
27:2	304-46	1	Draincock
28	237-136	3	Grommet
29	63-7630	1	Hose-Fuel
30	98-7612	1	Filter-Fuel
31	3256-67	3	Washer-Flat
32	3290-378	1	Tie-Cable



Water and Fuel Filter Assembly No. 98-9305

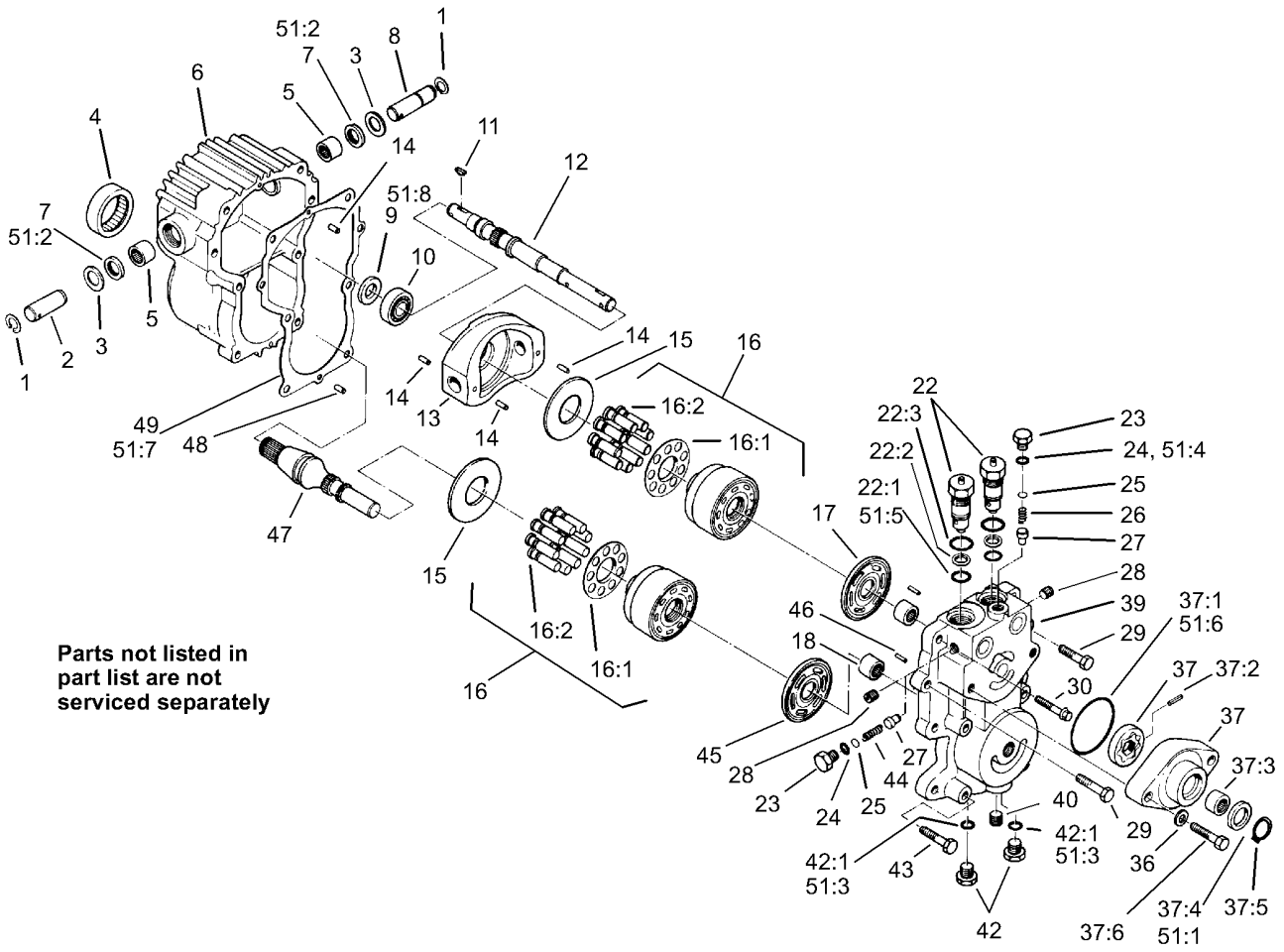
Ref.	*Part Number*	*Qty.*	*Description*
1	98-9772	1	Head-Filter
2	98-9764	1	Element
3	98-9774	1	O-Ring
4	98-9775	1	Base-Filter
5	98-9773	1	Plug-Base, Filter
6	237-42	1	O-Ring
7	237-78	1	O-Ring
8	98-9776	1	Plug-Head, Filter
9	98-9777	1	Drain Valve ASM
10	285-22	2	Plug-Pipe



Transmission and Drive Coupling Assembly

Ref.	Part Number	Qty.	Description
1	92-5512	2	Fitting-Hose, Barbed
1:1	237-78	1	O-Ring
2	2412-108	2	Clamp-Worm
3	92-5086	1	Fitting-Elbow, 90 DEG
3:1	237-79	1	O-Ring
4	2412-34	1	Clamp-Hose
5	38-3400	1	Guard-Rubber
6	66-8490	1	Hose-HYD
7	82-8530	1	Fitting-Straight
7:1	237-42	1	O-Ring
7:2	237-22	1	O-Ring
8	27-9620	1	Screw-HH
9	323-39	3	Screw-HH
10	3253-21	4	Washer-Lock
11	3256-24	1	Washer-Flat
12	5-0652	1	Spacer
13	27-3680	4	Spacer-Mounting
14	2412-4	1	Clamp
15	3296-39	2	Nut-Lock, NI
16	63-7170	1	Anchor-Transmission
17	3218-3	2	Nut-Jam
18	86-7220	1	Gear-Pinion

Ref.	Part Number	Qty.	Description
19	32120-72	1	Ring-Snap
20	27-3690	1	Gasket-Transmission
21	23-2270	1	Bushing-Rubber
22	3256-26	1	Washer-Flat
23	3272-10	1	Pin-Cotter
24	911424	1	Screw-HH
25	92-5513	1	Transmission
26	2412-36	1	Clamp-Hose
27	353-979	1	Fitting-Straight
27:1	237-42	1	O-Ring
28	66-3110	2	Fitting-HYD, 90 DEG
28:1	237-42	1	O-Ring
29	92-5085	1	Union-Filter
30	92-5087	1	Seal-Adaptor, Filter
31	353-988	1	Plug-Hex
31:1	237-79	1	O-Ring
32	353-990	1	Plug ASM
32:1	237-78	1	O-Ring
33	92-5076	1	Adapter-Filter
34	23-2300	1	Filter-Oil, Transmission
35	3220-7	1	Nut-Jam



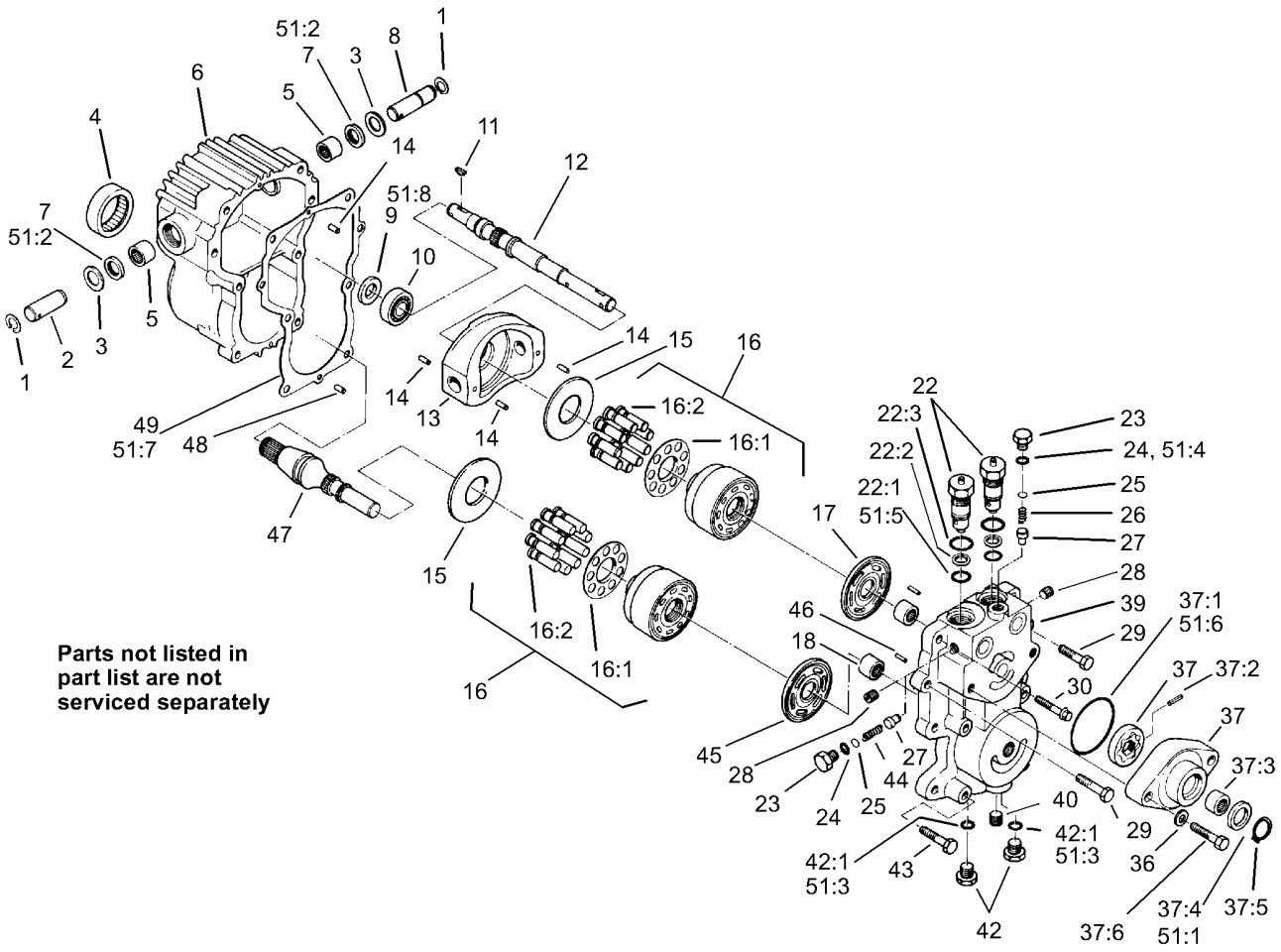
Transmission Assembly No. 92-5513

Ref.	Part Number	Qty.	Description
1	32151-46	2	Ring-Retaining
2	25-2500	1	Shaft-Trunnion
3	25-2510	2	Washer-Flat
4	28-3300	1	Bearing-Roller
5	252-82	2	Bearing-Needle
6	92-5709	1	Housing-Transmission
7	25-3210	2	Seal-Lip
8	28-3670	1	Shaft-Trunnion
9	93-4133	1	Seal-Lip
10	28-3650	1	Bearing-Ball
11	3257-5	2	Key-Woodruff
12	28-3640	1	Shaft-Pump
13	49-7820	1	Swashplate-Variable
14	32121-91	3	Pin-Spring
15	25-2380	2	Plate-Thrust
16	48-1800	2	Cylinder Block Kit
16:1		1	Retainer-Slipper ■
16:2		9	Piston ASM ■
17	46-7320	1	Plate-Valve, Pump
18	25-3300	2	Bearing-Needle
22	49-7830	2	Check Valve Kit
22:1	28-3590	2	O-Ring
22:2	28-3580	2	Ring-Back Up
22:3	28-3570	2	O-Ring
23	25-2460	2	Plug-HH

Ref.	Part Number	Qty.	Description
24	28-3400	2	O-Ring
25	25-2470	1	Pack-Shim
26	46-7310	1	Spring
27	83-7260	2	Cone-Relief, Charge
28	285-17	4	Plug-Pipe
29	323-8	2	Screw-HH
30	28-3530	2	Capscrew
36	28-3450	2	Washer
37	38-2670	1	Charge Pump Kit
37:1	28-3520	1	O-Ring
37:2	38-2680	1	Pin
37:3	28-3480	1	Bearing
37:4	94-2975	1	Seal-Shaft
37:5	94-2976	1	Ring-Retaining
37:6	324-23	2	Screw-HH
39	92-5716	1	Section-Center
40	92-5717	1	Plug-Pipe
42	28-3440	2	Plug-Threaded
42:1	75-0240	1	O-Ring
43	323-10	4	Screw-HH
44	25-2480	1	Spring-Valve
45	28-3380	1	Plate-Valve, Motor
46	25-2430	2	Pin-Dowel
47	49-8200	1	Shaft-Motor
48	353-599	2	Pin-Dowel

● Not illustrated

■ Not serviced separately



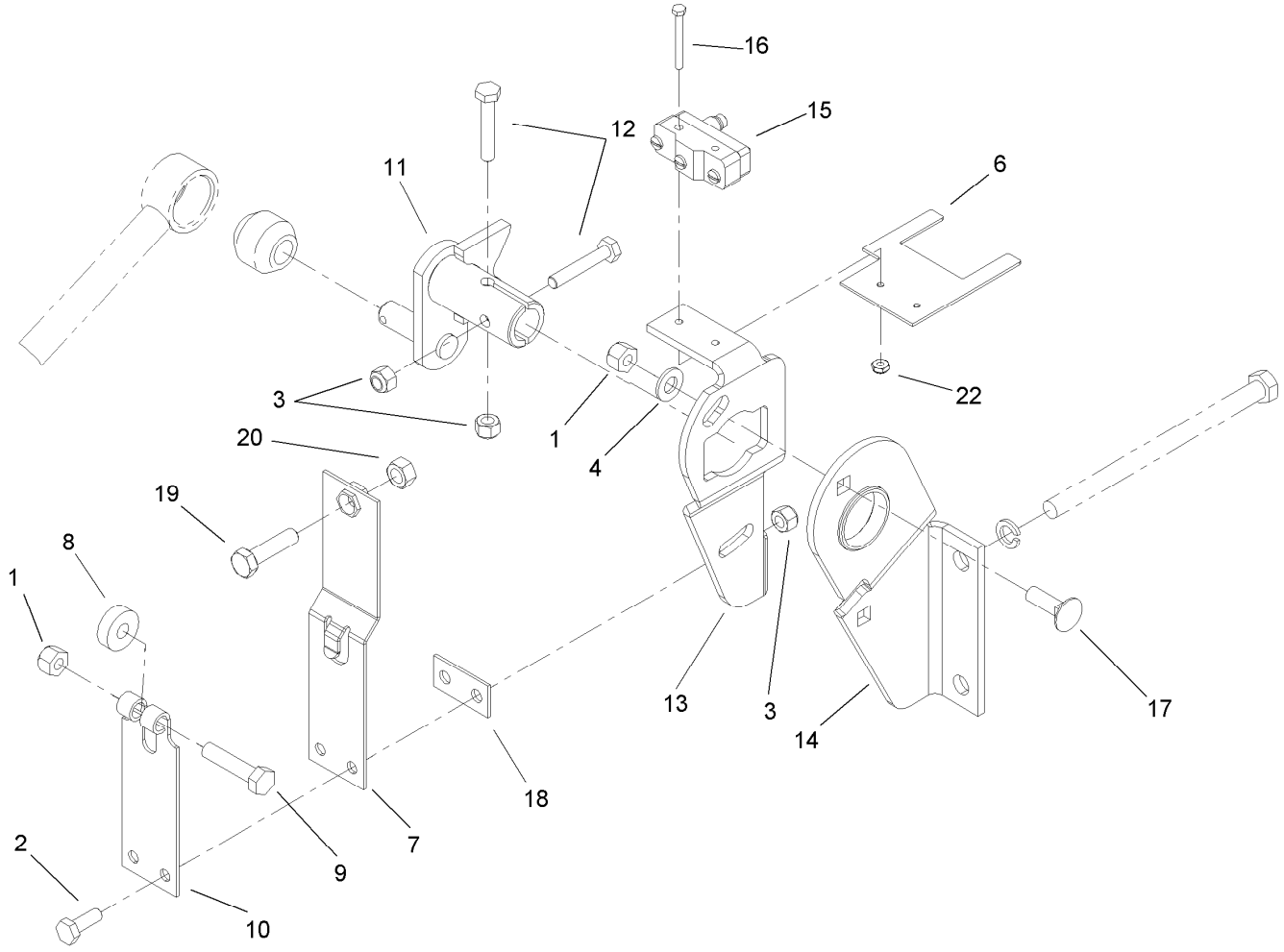
Transmission Assembly No. 92-5513 (continued)

Ref.	Part Number	Qty.	Description
49	28-3340	1	Gasket
51	106-4384	1	Seal Kit (15 Series) ●
51:1	94-2975	2	Seal-Shaft
51:2	25-3210	2	Seal-Lip
51:3	75-0240	2	O-Ring

Ref.	Part Number	Qty.	Description
51:4	28-3400	2	O-Ring
51:5	28-3590	2	O-Ring
51:6	28-3520	1	O-Ring
51:7	28-3340	1	Gasket
51:8	93-4133	1	Seal-Lip

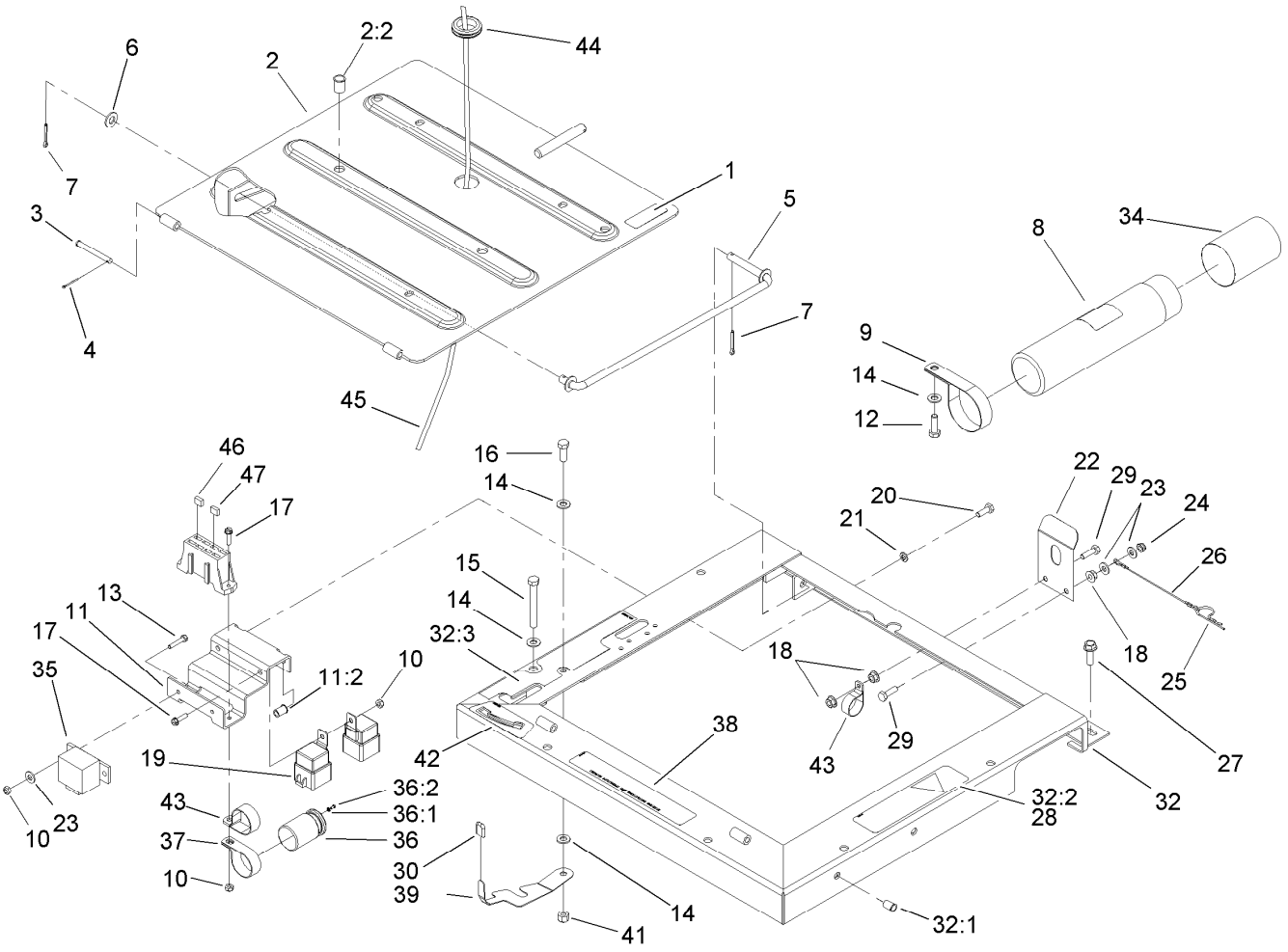
● Not illustrated

■ Not serviced separately



Transmission Interlock Assembly

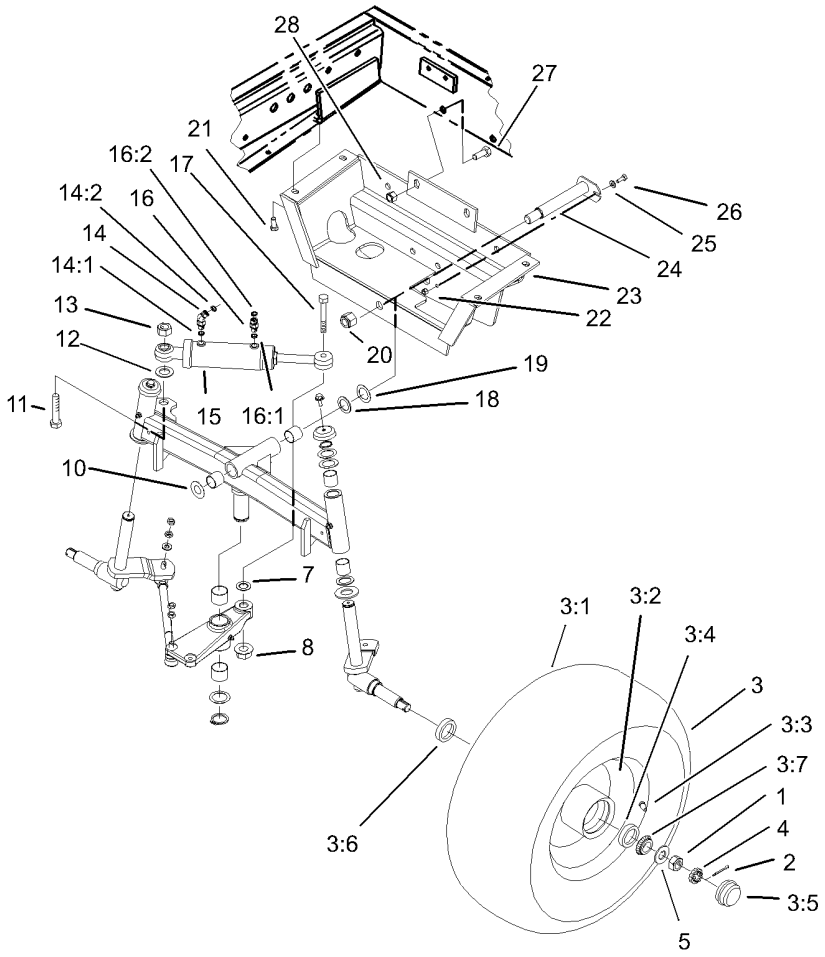
Ref.	*Part Number*	*Qty.*	*Description*
1	3296-29	3	Nut-Lock, NI
2	321-4	2	Screw-HH
3	3296-42	4	Nut-Lock, NI
4	3256-23	2	Washer-Flat
6	46-8810	1	Stop-Spring, Leaf
7	29-6170	1	Extended Leaf Spring ASM
8	251-259	1	Bearing-Ball
9	322-17	1	Screw-HH
10	29-6150	1	Spring-Leaf
11	29-9790-03	1	Pump Lever ASM
12	321-9	2	Screw-HH
13	52-9070	1	Plate-Pump
14	52-8890-03	1	Mounting Bracket ASM
15	29-6163	1	Switch-Micro
16	32105-21	2	Screw-HH
17	3230-2	2	Bolt-CARR
18	51-3150	1	Shim-Arm, Spring
19	3210-7	1	Screw-HH
20	3219-2	1	Nut-Hex
22	3296-9	2	Nut-Lock



Seat Frame Assembly

Ref.	Part Number	Qty.	Description
1	93-6680	1	Decal-Diesel
2	92-5759	1	Plate-Seat
2:2	32148-9	2	Insert-Nut
3	283-49	2	Pin-Clevis
4	3272-4	2	Pin-Cotter
5	66-2800-03	1	Rod-Support ASM
6	3256-24	1	Washer-Flat
7	3272-11	2	Pin-Cotter
8	104-7050	1	Tube-Manual
9	2412-133	2	R-Clamp
10	3296-12	6	Nut-Lock, NI
11	105-0036	1	Fuse Block Bracket ASM
11:2	32148-6	2	Insert-Nut
12	322-5	2	Screw-HH
13	32105-12	2	Screw
14	3256-23	10	Washer-Flat
15	322-13	6	Screw-HH
16	322-4	1	Screw-HH
17	32105-13	4	Screw-HWH
18	32128-33	3	Nut-HF
19	70-1480	4	Relay
20	321-4	2	Screw-HH
21	3253-3	2	Washer-Lock
22	66-2630	1	Latch-Seat
23	3256-22	3	Washer-Flat
24	3296-56	1	Nut-Lock, NI
25	3290-255	1	Pin-Cotter, Hair
26	28-8070	1	Lanyard

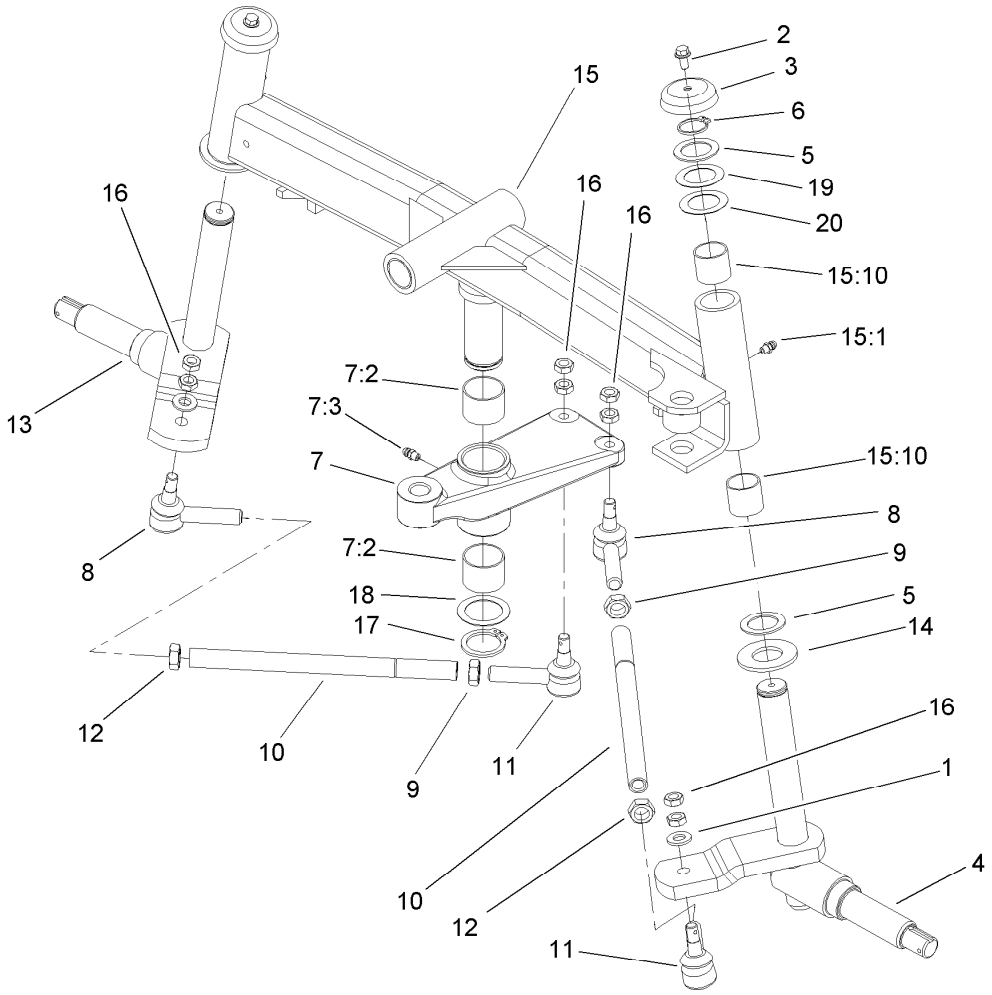
Ref.	Part Number	Qty.	Description
27	3234-17	2	Screw-HHF
28	93-7841	1	Decal-Warning
28	67-1710	1	Decal-Warning
29	321-5	2	Screw-HH
30	100-6576	1	Grip-Handle
32	92-8877	1	Seat Frame ASM
32:1	32148-6	4	Insert-Nut
32:2	67-1710	1	Decal-Warning
32:3	93-7833	1	Decal-Throttle And Lift Control
34	104-7048	1	Cap-Housing
35	66-8800	1	Relay
36	37-2690	1	Capacitor
36:1	3252-18	2	Screw
36:2	3254-1	2	Washer-Lock, Int
37	2412-74	1	R-Clamp
38	105-2511	1	Decal-Instructions, Starting
38	105-2509	1	Decal-Instructions, Starting
39	100-6551	1	Latch-Spring
41	3296-29	1	Nut-Lock, NI
42	100-6577	1	Decal-Lock, Lift
43	2412-106	2	Clamp-R
44	240-5	1	Grommet
45	105-0025	1	Harness-Wire, Seat
46	218-581	2	Fuse-15 Amp
47	218-574	2	Fuse-7.5 Amp



2 WD Rear Axle Assembly

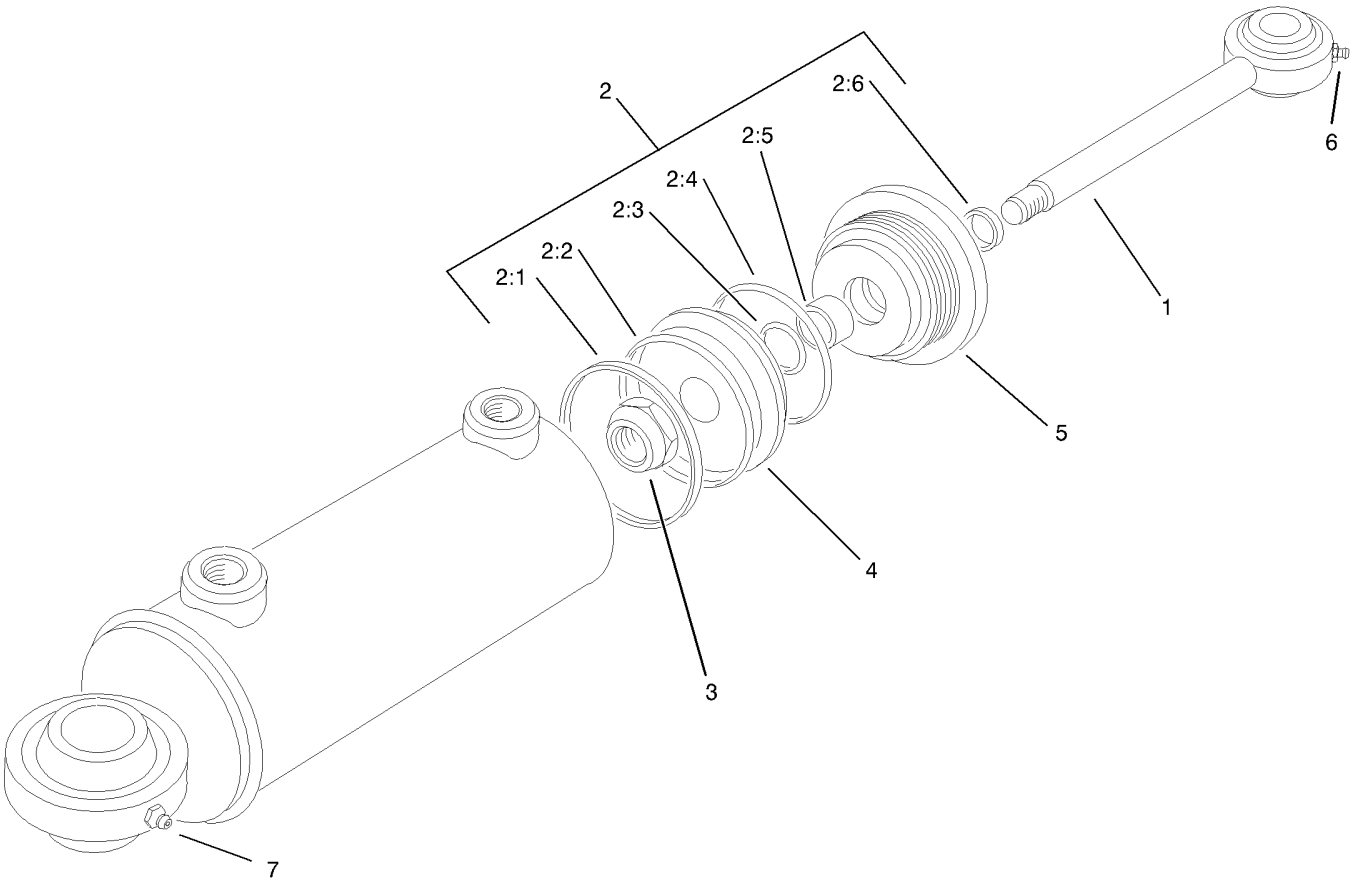
Ref.	Part Number	Qty.	Description
1	3220-7	2	Nut-Jam
2	3272-13	2	Pin-Cotter
3		2	Tire And Wheel ASM ●
3:1	231-105	1	Tire-Ribbed
3:2	217-118	1	Wheel
3:3	232-35	1	Valve Stem And Cap ASM
3:4	254-72	2	Bearing-Cup, Tapered
3:5	241-119	1	Cap-Dust
3:6	253-129	1	Seal
3:7	254-94	2	Bearing-Cone, Tapered
4	93-0307	2	Nut-Lock, Retainer
5	93-0309	2	Washer-Tab
7	67-9410	1	Washer
8	32128-45	1	Locknut-Flange
10	71-4540	1	Washer-Thrust
11	67-7300	1	Screw-HH
12	67-7250	1	Spacer-Ring
13	32153-6	1	Nut-Lock
14	340-103	1	Fitting-HYD, 45 DEG
14:1	237-78	1	O-Ring
14:2	237-21	1	O-Ring
15	76-2070	1	Cylinder-Steering
16	340-92	1	Fitting-HYD, Straight
16:1	237-78	1	O-Ring
16:2	237-21	1	O-Ring
17	328-25	1	Screw-HH
18	10-8110	1	Washer-Thrust
19	56-2460	2	Washer-Flat
20	3296-51	1	Nut-Lock, NI
21	3234-25	4	Screw-HHF
22	3296-42	1	Nut-Lock, NI
23	63-6430-03	1	Frame-Rear
24	63-6770-03	1	Pin-Masked
25	3256-22	1	Washer-Flat
26	321-4	1	Screw-HH
27	325-5	2	Screw-HH
28	3296-25	2	Nut-Lock, NI

● Not serviced separately



Axle Assembly

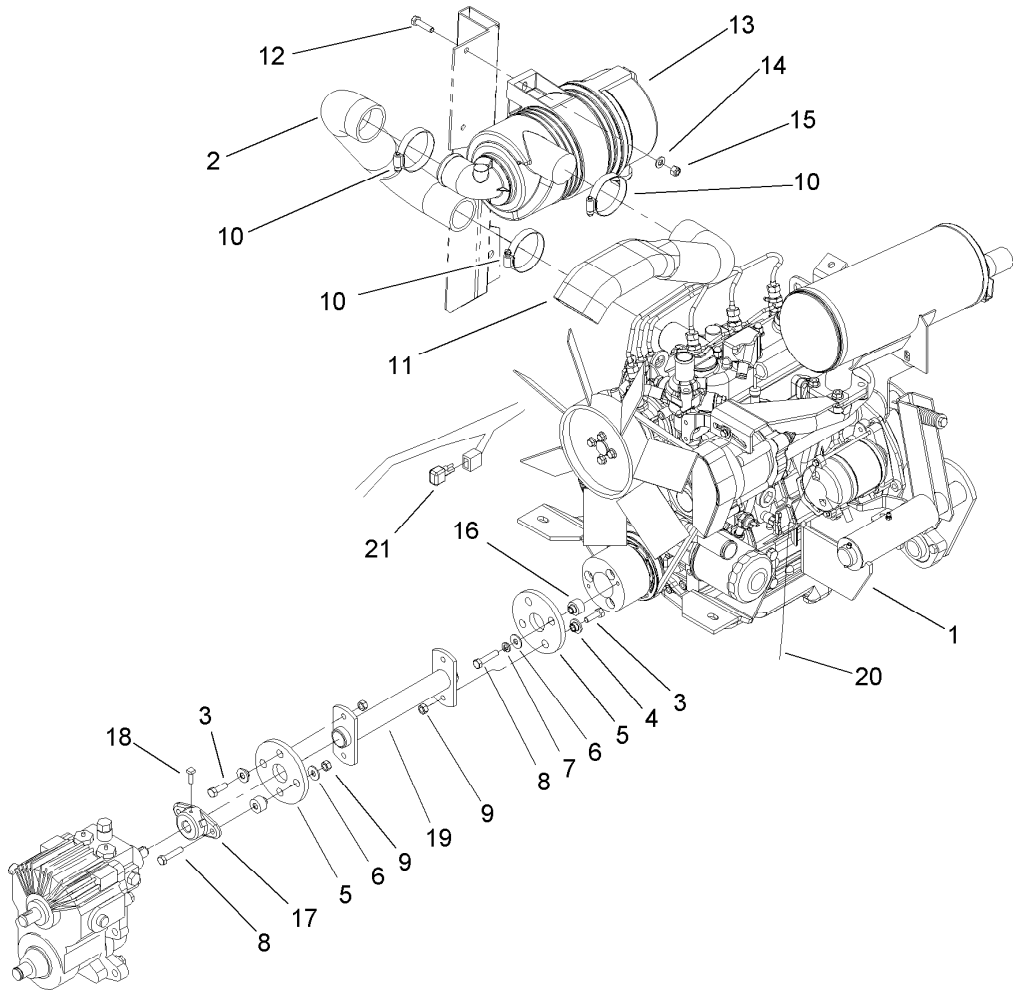
Ref.	*Part Number*	*Qty.*	*Description*
1	3256-24	2	Washer-Flat
2	3234-13	2	Screw-HHF
3	66-2990	2	Cap-Spindle
4	93-3196	1	RH Spindle ASM
5	10-8110	4	Washer-Thrust
6	32151-36	2	Ring-Retaining
7	100-6598	1	Steering Pivot ASM
7:2	76-2970	2	Bushing-Straight
7:3	302-5	1	Fitting-Grease
8	21-0151	2	LH Ball Joint ASM
9	3220-12	2	Nut-HJ (LH Thread)
10	63-6880	2	Tie Rod-Steering
11	21-0141	2	RH Ball Joint ASM
12	3220-5	2	Nut-Jam
13	93-3195	1	LH Spindle ASM
14	256-121	2	Washer-Thrust
15	76-3000	1	Axle-Rear
15:1	302-5	3	Fitting-Grease
15:10	67-1750	6	Bushing
16	3220-3	8	Nut-HJ
17	32151-77	1	Ring-Retaining, External
18	76-2980	1	Washer-Thrust
19	56-2460	2	Washer-Flat
20	5-1226	2	Washer



Steering Cylinder Assembly No. 76-2070

Ref.	*Part Number*	*Qty.*	*Description*
1		1	Rod-Piston ●
2	76-2090	1	Seal Kit
2:1		1	Seal ASM ●
2:2		1	Seal-Dust ●
2:3		1	Seal-Dust ●
2:4		1	Seal-Dust ●
2:5		1	U-Cup ●
2:6		1	Wiper ●
3		1	Nut-Lock ●
4		1	Piston ●
5		1	Gland ●
6	302-40	1	Fitting-Grease, 90 DEG
7	302-5	1	Fitting-Grease

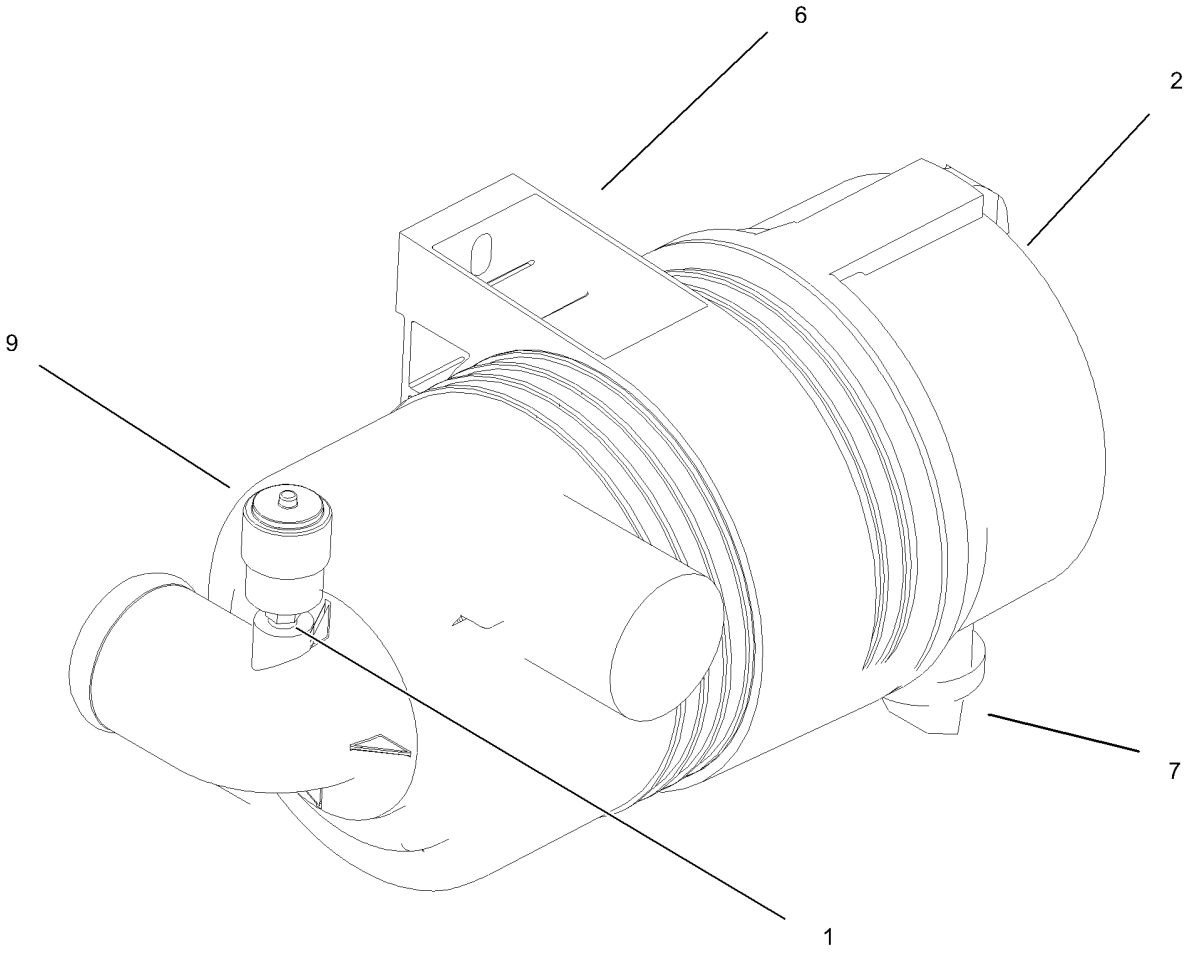
● Not serviced separately



Engine Installation and Drive Coupling Assembly

Ref.	*Part Number*	*Qty.*	*Description*
1		1	Engine ASM ●
2	104-3446	1	Hose-Outlet, Air
3	3210-5	4	Screw-HH
4	27-6600	4	Spacer-Coupling
5	44-2230	2	Coupling-Rubber
6	3256-71	4	Washer-Flat
7	3253-4	2	Washer-Lock
8	3210-8	4	Screw-HH
9	32152-5	6	Nut-Hex
10	2412-42	3	Clamp-Hose
11	104-3444	1	Hose-Inlet, Air
12	322-6	2	Screw-HH
13	104-3427	1	Air Cleaner ASM
14	3256-23	2	Washer-Flat
15	3296-29	2	Nut-Lock, NI
16	27-6590	4	Spacer-Coupling, Rubber
17	27-4370	1	Hub-Pump
18	3241-6	2	Screw-SQH
19	104-3401-03	1	Drive Shaft ASM
20	99-3441	1	Harness-Wire, Fusible Link
21	100-4918	3	Diode-Over Molded

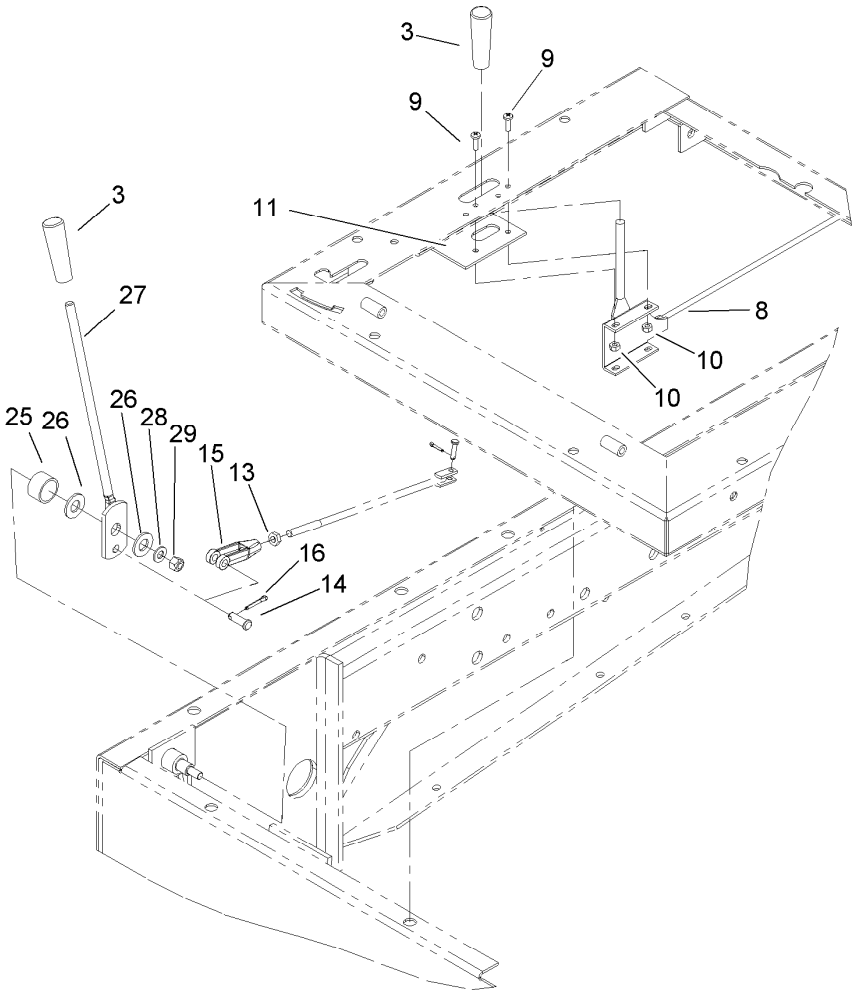
● Not serviced separately



Air Cleaner Assembly No. 104-3427

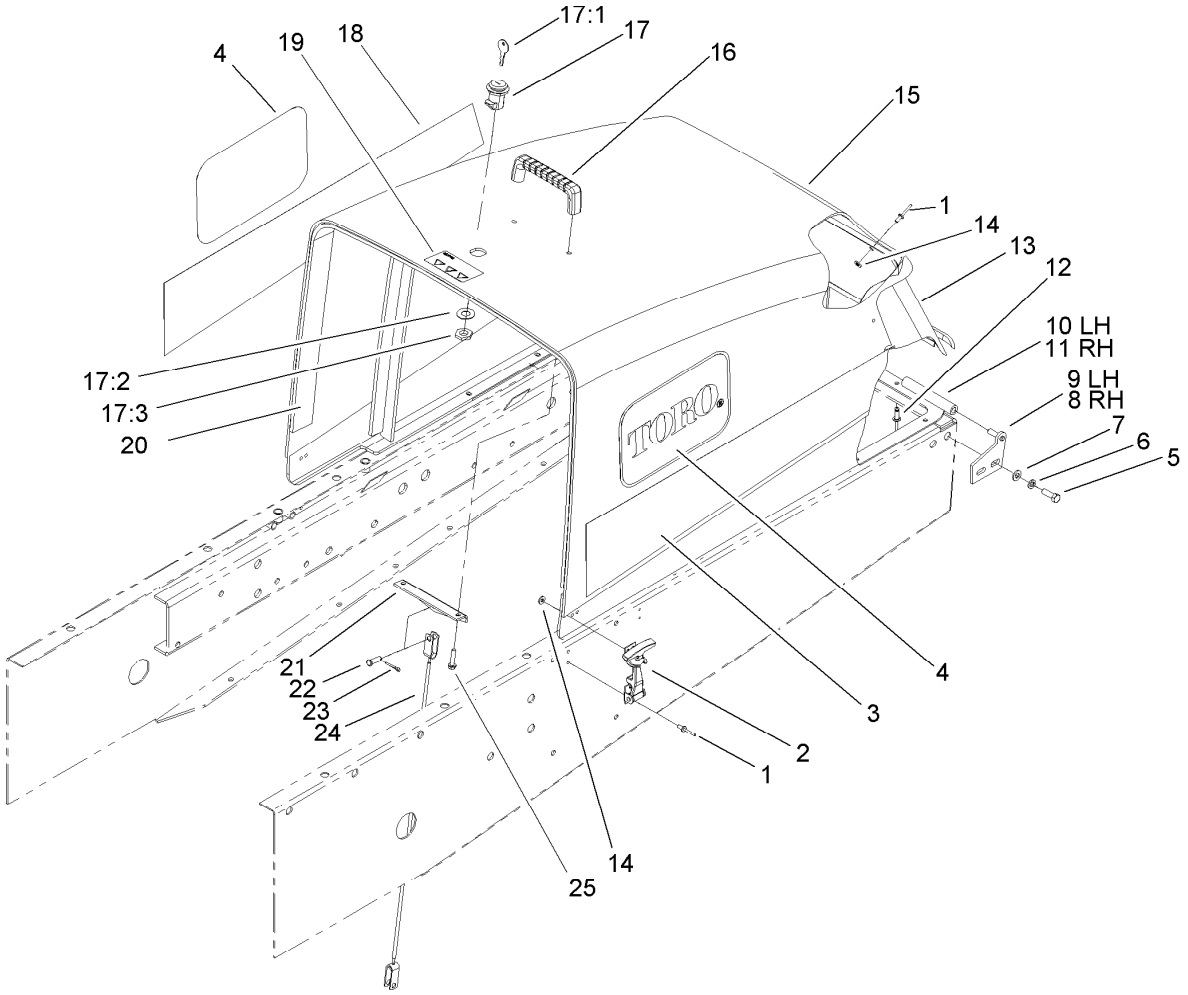
Ref.	*Part Number*	*Qty.*	*Description*
1	105-4292	1	Nipple-Pipe
2	104-0497	1	Cover
6	98-4525	1	Bracket-Cleaner, Air
7	104-0498	1	Valve-Vacuator
8	98-9763	1	Element ASM ●
9	93-9164	1	Indicator-Mini

● Not illustrated



Throttle and Lift Lever Assembly

Ref.	*Part Number*	*Qty.*	*Description*
3	233-39	2	Knob-Control
8	107-2906	1	Cable-Throttle
9	3290-500	2	Screw-PPH
10	3296-2	2	Nut-Lock, NI
11	107-9058-03	1	Plate-Throttle Lever
13	3220-2	1	Nut-Jam
14	283-58	1	Pin-Clevis
15	282-27	1	Clevis-Adj
16	3272-10	1	Pin-Cotter
25	70-7530	1	Spring-Compression
26	3256-26	2	Washer-Flat
27	66-2720-03	1	Valve Lever ASM
28	3256-23	1	Washer-Flat
29	3296-29	1	Nut-Lock, NI

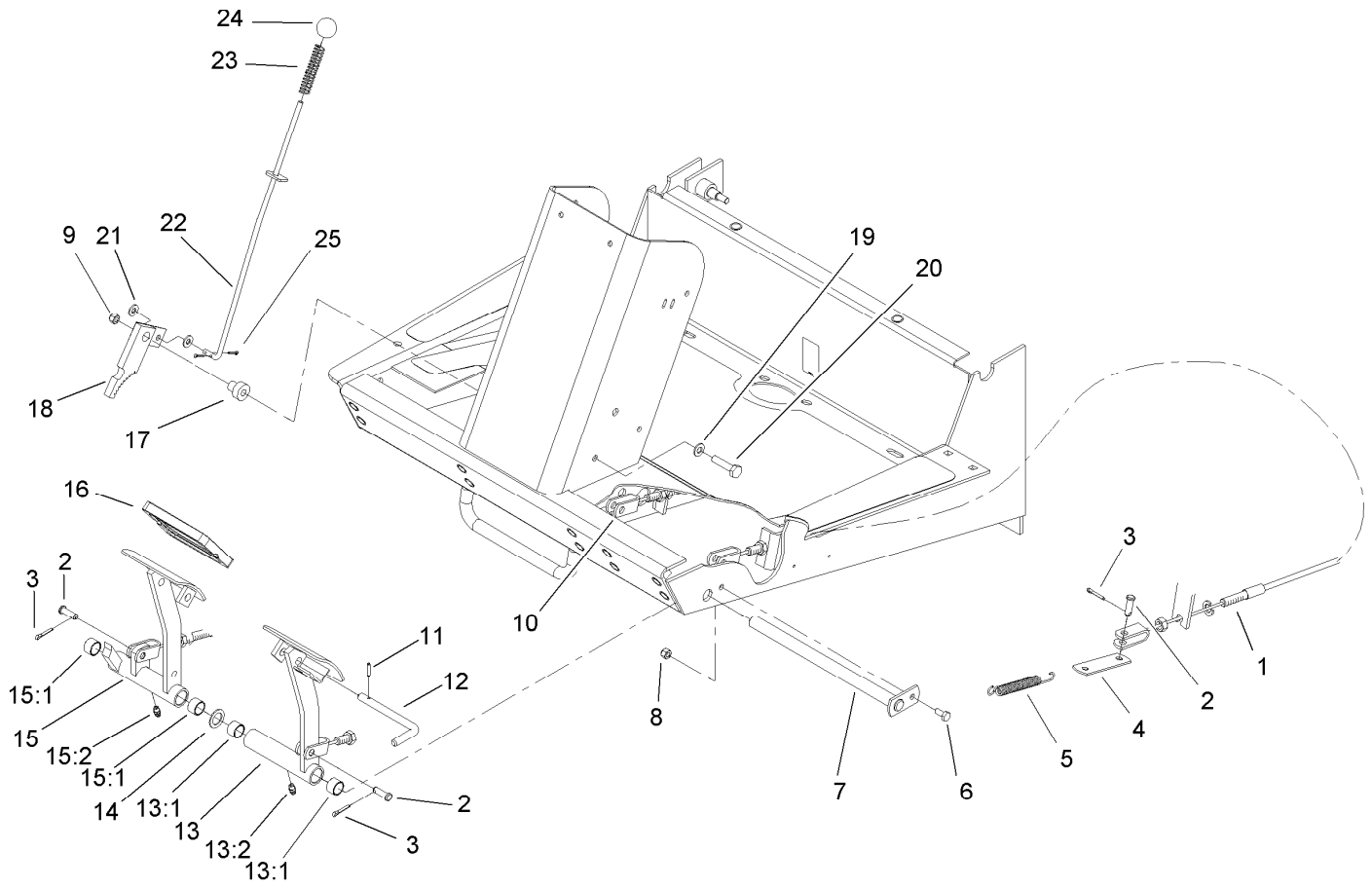


Hood Assembly

Ref.	Part Number	Qty.	Description
1	3269-4	18	Rivet-Pop
2	95-6339	2	Latch
3	106-4393	1	Decal-LH
4	66-6140	2	Decal
5	322-5	4	Screw-HH
6	3253-4	4	Washer-Lock
7	3256-23	4	Washer-Flat
8	105-0003-01	1	RH Hinge Pin ASM
9	105-0004-01	1	LH Hinge Pin ASM
10	105-4278-03	1	LH Hood Hinge ASM
11	105-4277-03	1	RH Hood Hinge ASM
12	3290-412	12	Rivet
13	105-0006-03	1	Screen-Hood
14	3256-14	14	Washer-Flat

Ref.	Part Number	Qty.	Description
15	104-3485	1	Hood
16	65-5100	1	Handle-Door
17	98-9315	1	Latch-Locking
17:1	99-8350	2	Key-Latch, Locking
17:2		1	Washer-Switch ●
17:3		1	Nut-Switch ●
18	106-4392	1	Decal-RH
19	106-6754	1	Decal-Danger
20	105-3651	1	Strip-Foam
21	105-0088-03	1	Bracket-Cable, Hood
22	283-58	2	Pin-Clevis
23	3272-10	2	Pin-Cotter
24	105-3650	1	Cable-Hood
25	46-8092	2	Screw-Plastite

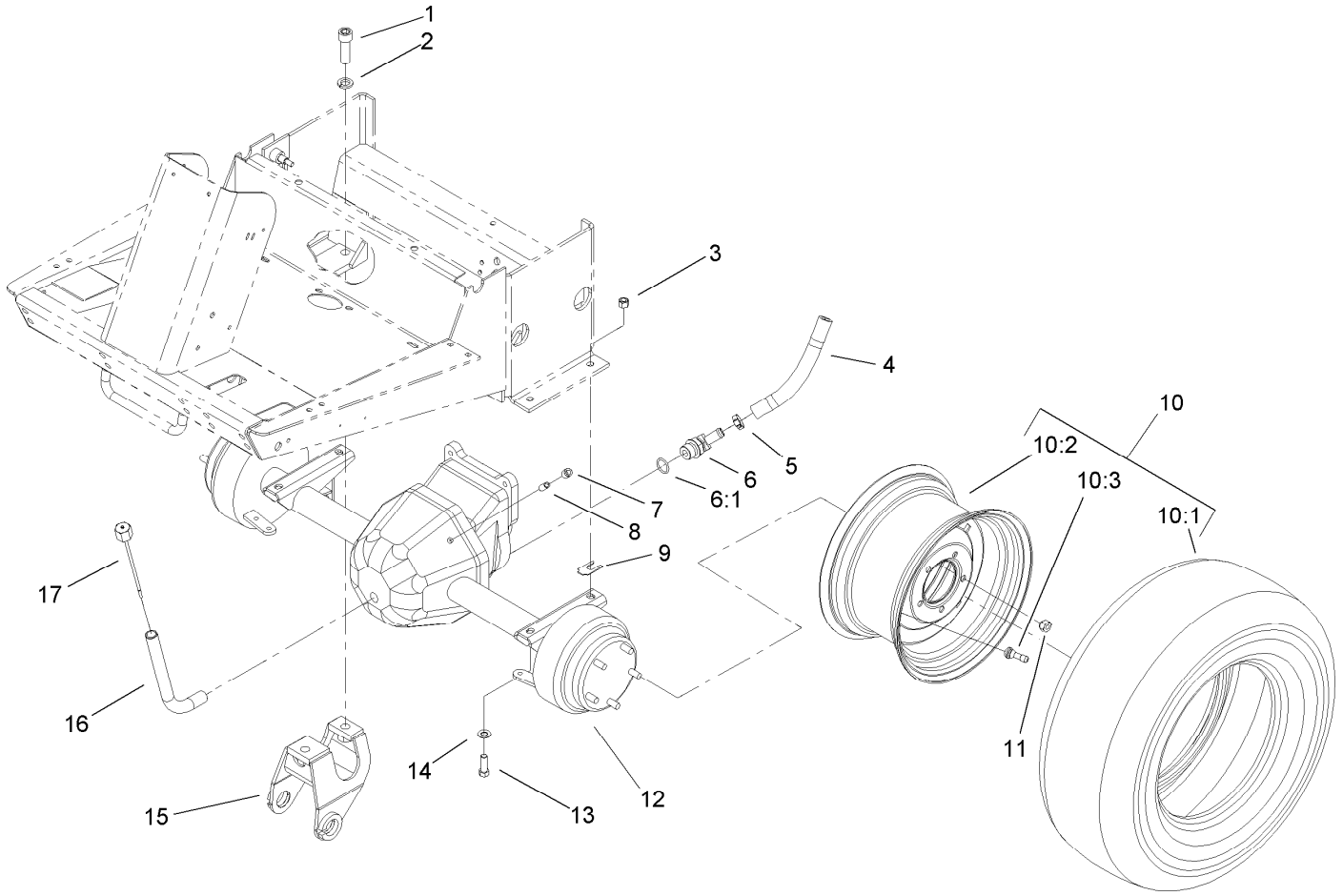
● Not serviced separately



Brake Pedal Assembly

Ref.	Part Number	Qty.	Description
1	63-7731	1	Cable-Brake
2	283-58	4	Pin-Clevis
3	3272-10	4	Pin-Cotter
4	63-6750	2	Link-Cable, Brake
5	3-7243	2	Spring-Extension
6	321-3	1	Screw-HH
7	63-6210-03	1	Pin-Brake
8	3296-42	1	Nut-Lock, NI
9	104-8300	1	Nut-Flange, NI
10	63-7730	1	Cable-Brake
11	32121-50	1	Pin-Spring
12	63-7880	1	Pin-Latch, Brake
13	63-6180	1	Pedal-Brake, LH
13:1	256-42	2	Bushing
13:2	302-5	1	Fitting-Grease

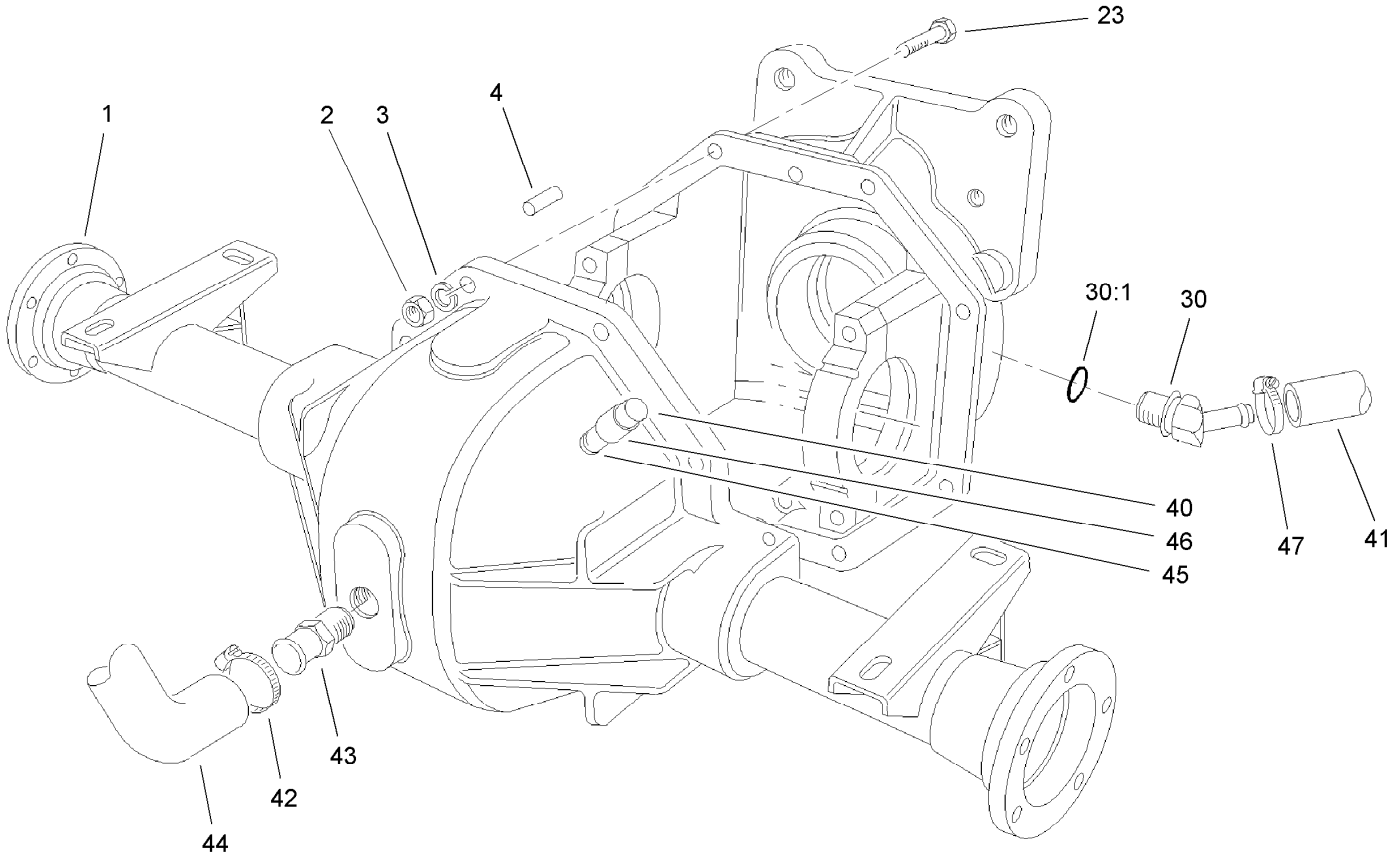
Ref.	Part Number	Qty.	Description
14	3256-69	2	Washer-Flat
15	63-6190	1	Pedal-Brake, RH
15:1	256-42	2	Bushing
15:2	302-5	1	Fitting-Grease
16	93-8742	2	Footpad-Brake
17	105-7156	1	Spacer
18	63-7900-03	1	Rack
19	3256-23	1	Washer-Flat
20	322-7	1	Screw-HH
21	3256-22	2	Washer-Flat
22	105-7168	1	Rod ASM
23	71-8310	1	Spring-Compression
24	233-17	1	Knob
25	3272-5	2	Pin-Cotter



Front Axle Assembly

Ref.	*Part Number*	*Qty.*	*Description*
1	3273-38	4	Screw-HSH
2	3253-8	4	Washer-Lock
3	3296-48	4	Nut-Lock, NI
4	92-5083	1	Hose-HYD
5	2412-34	1	Clamp-Hose
6	92-5088	1	Fitting-Elbow, 45 DEG
6:1	237-81	1	O-Ring
7	2810-1	1	Coupling-Pipe
8	289-6	1	Nipple-Pipe
9	42-6080	1	Shim-Axle
10		2	Wheel And Tire ASM ●
10:1	95-3348	1	Tire
10:2	217-117	1	Wheel
10:3	232-27	1	Stem-Valve
11	23-7270	10	Nut-Wheel
12	86-9640-03	1	Front Axle ASM
13	324-5	4	Screw-HH
14	3256-25	4	Washer-Flat
15	98-2328-03	2	Bracket-Carrier ASM
16	105-7169	1	Tube-Fill, Oil
17	105-7172	1	Dipstick ASM

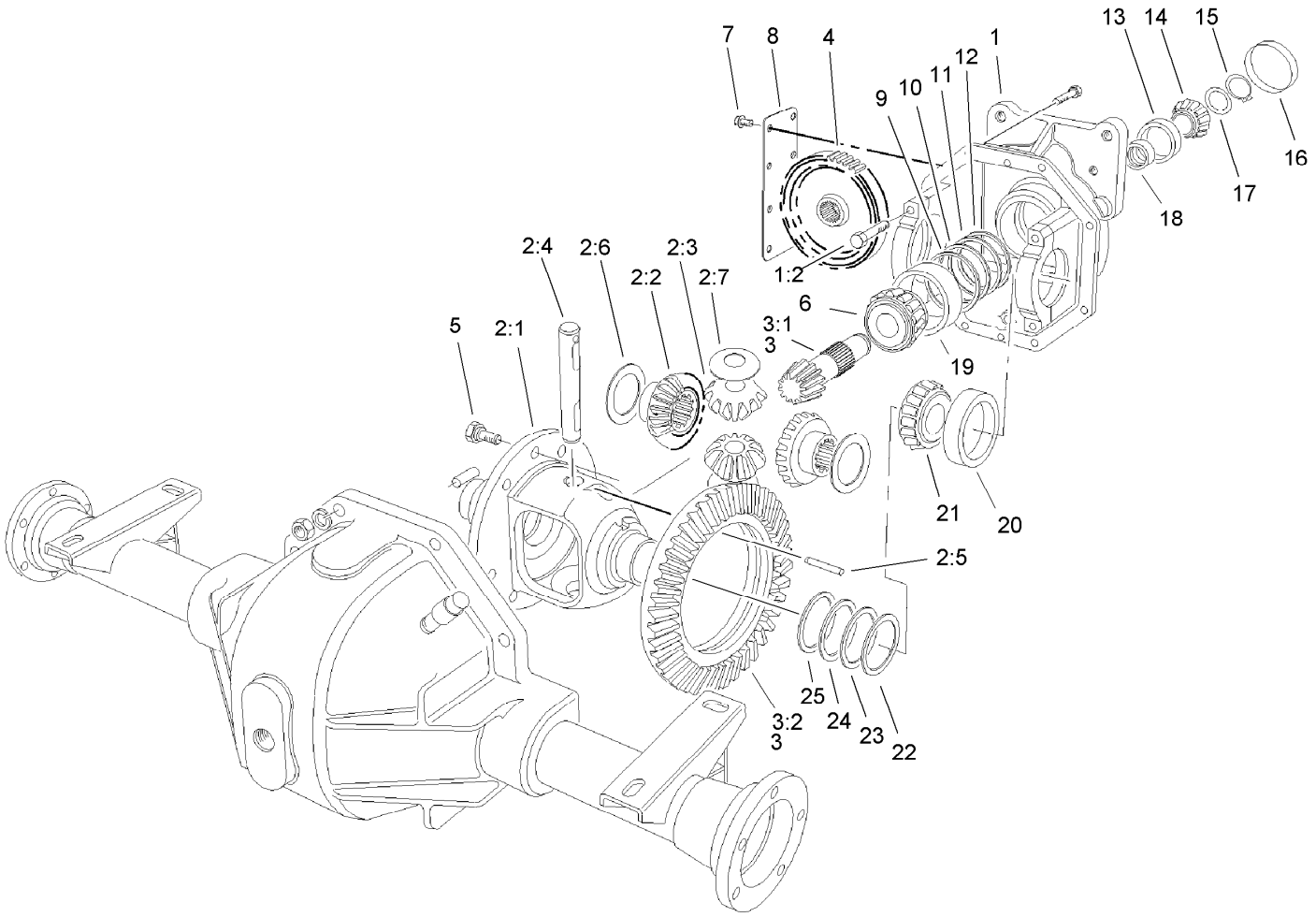
● Not serviced separately



Differential Assembly

Ref.	*Part Number*	*Qty.*	*Description*
1	63-8090-03	1	Lower Housing ASM
2	3219-2	8	Nut-Hex
3	3255-8	8	Washer-Lock
4	21-8270	2	Pin-Dowel
23	3210-7	8	Screw-HH
30	92-5088	1	Fitting-Elbow, 45 DEG
30:1	237-81	1	O-Ring
40	72-9420	1	Vent
41	92-5083	1	Hose-HYD
42	2412-34	2	Clamp-Hose
43	354-71	1	Fitting-HYD, Barbed
44	77-0550	1	Hose-Fill, Differential
45	289-6	1	Nipple-Pipe
46	2810-1	1	Coupling-Pipe
47	2412-119	1	Clamp-Hose, Worm Drive
49	92-4909	1	Differential Carrier ASM ●

● Not illustrated



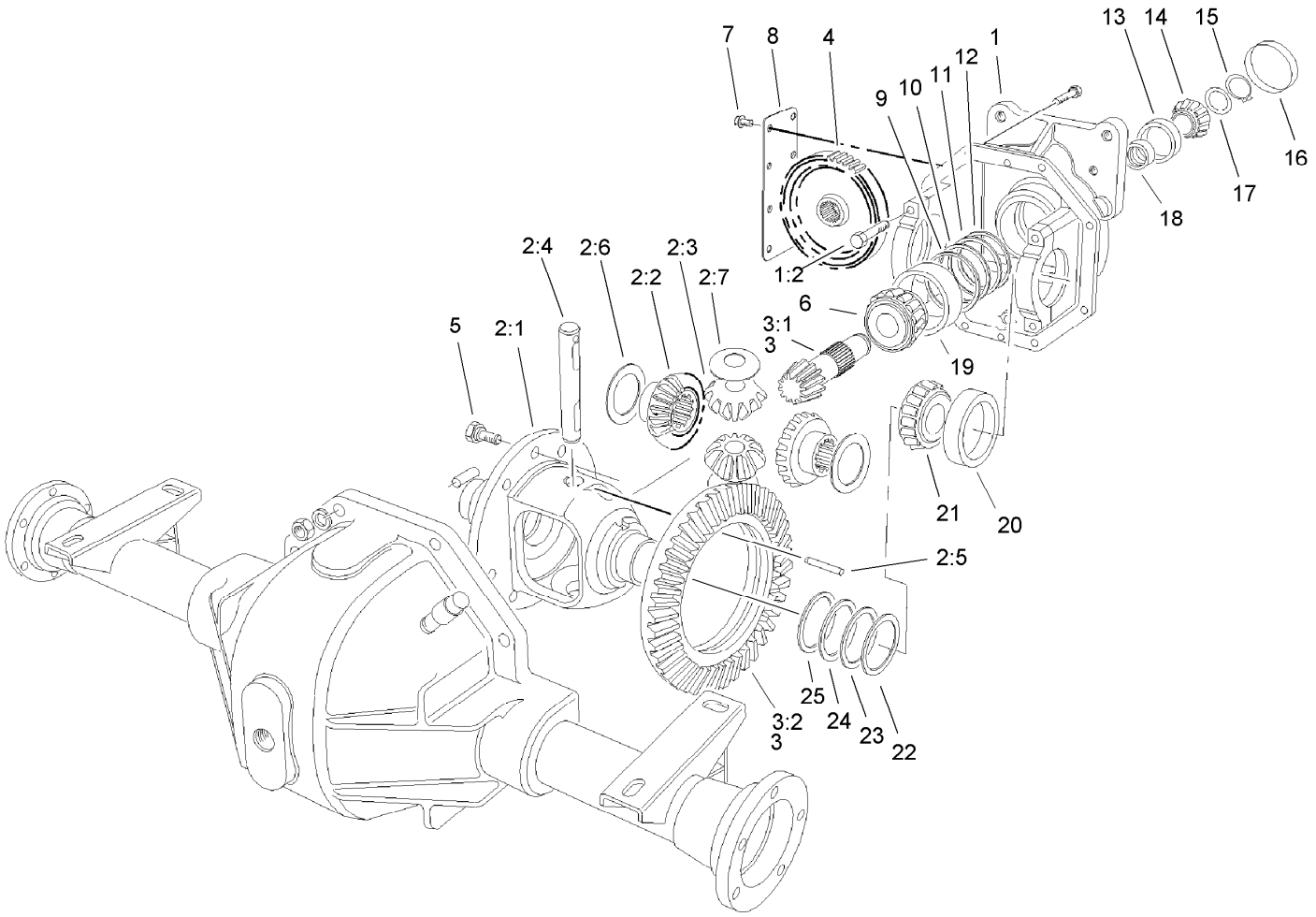
Differential Carrier Assembly No. 92-4909

Ref.	Part Number	Qty.	Description
1	86-7930	1	Upper Housing ASM
1:2	92-1773	4	Screw-HHF
2	24-8780	1	Differential Case ASM ●
2:1	21-7670	1	Case-Differential
2:2	24-8790	2	Gear-Differential
2:3	21-7690	2	Pinion-Differential
2:4	21-7700	1	Shaft-Mate, Pinion
2:5	32121-15	1	Pin-Roll
2:6	21-7720	2	Washer-Thrust
2:7	21-7730	2	Washer-Thrust, Pinion
3	92-4848	1	Gear And Pinion ASM
3:1		1	Drive Pinion ■
3:2		1	Ring Gear ■
4	86-7230	1	Gear-Input, Transmission
5	21-7770	5	Screw-Gear, Drive
6	43-6760	1	Bearing-Roller, Cone Taper
7	12-5450	8	Screw
8	21-7830	1	Cover-Gear
9	43-6710	1	Shim-Pinion (.003)
10	43-6711	1	Shim-Pinion (.005)
11	43-6712	1	Shim-Pinion (.010)
12	43-6713	1	Shim-Pinion (.030)
13	254-90	1	Bearing-Cup
14	254-91	1	Cone-Bearing
15	43-6550	1	Ring-Snap

Ref.	Part Number	Qty.	Description
16	21-7850	1	Plug-Cup
17	46-2210	1	Shim-Bearing, Front
17	46-2211	1	Shim-Front Bearing, .033
17	46-2212	1	Shim-Front Bearing, .035
17	46-2213	1	Shim-Front Bearing, .037
17	46-2214	1	Shim-Front Bearing, .039
17	46-2215	1	Shim-Front Bearing, .041
17	46-2216	1	Shim-Front Bearing, .043
17	46-2220	1	Shim-Front Bearing, .045
17	46-2221	1	Shim-Front Bearing, .047
17	46-2222	1	Shim-Front Bearing, .049
17	46-2223	1	Shim-Front Bearing, .051
17	46-2224	1	Shim-Front Bearing, .053
17	46-2225	1	Shim-Front Bearing, .055
17	46-2226	1	Shim-Front Bearing, .057
18	21-8020	1	Spacer-Bearing
19	43-6750	1	Bearing-Taper, Cup
20	254-66	2	Cup-Bearing, Roller
21	254-65	2	Bearing-Roller, Cone
22	21-8090	1	Shim-Bearing, Differential (.003)
23	21-8100	1	Shim-Bearing, Differential (.005)

● Not illustrated

■ Not serviced separately

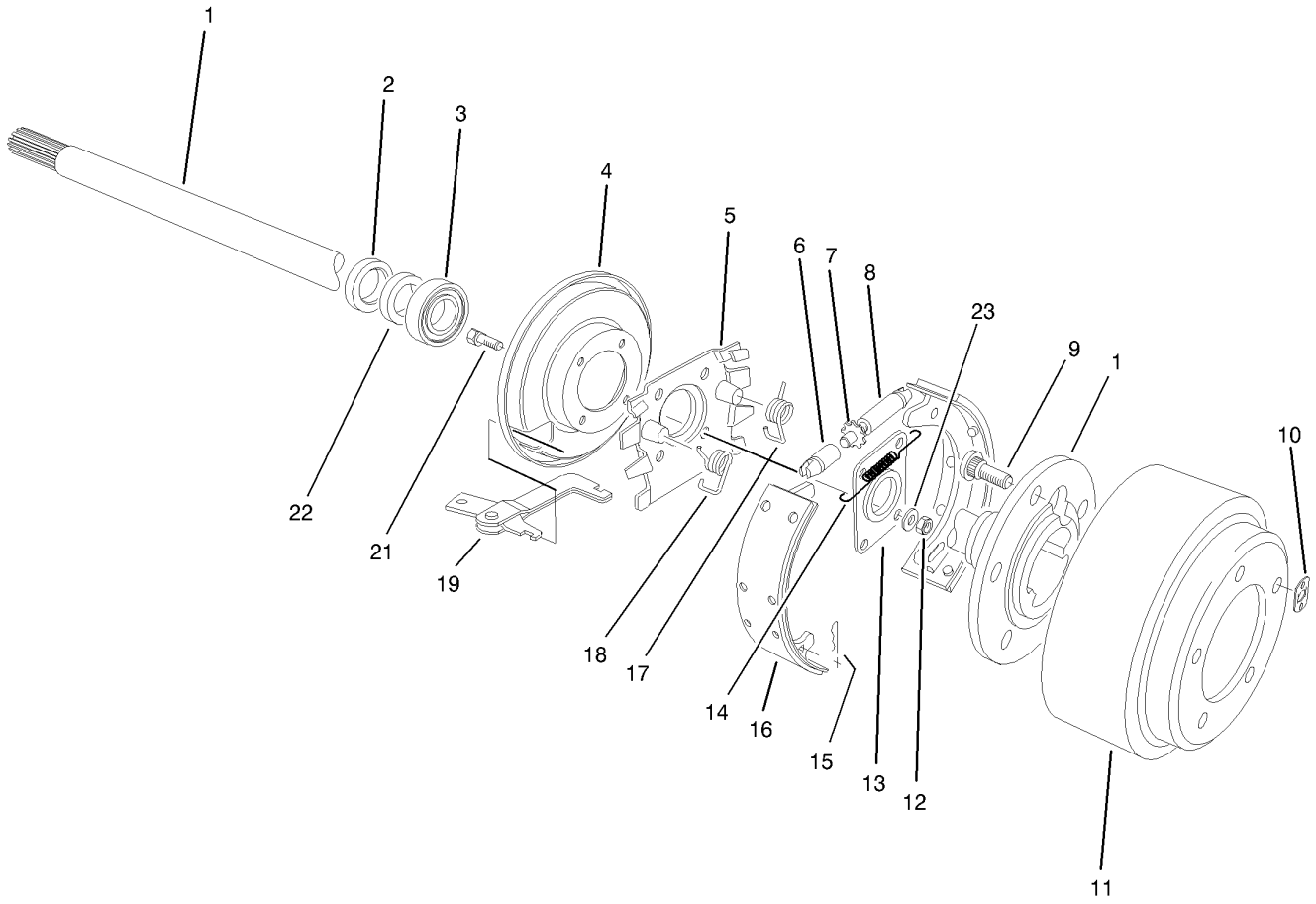


Differential Carrier Assembly No. 92-4909 (continued)

Ref.	*Part Number*	*Qty.*	*Description*
24	21-8110	1	Shim-Bearing, Differential (.010)
25	21-8120	1	Shim-Bearing, Differential (.030)

● Not illustrated

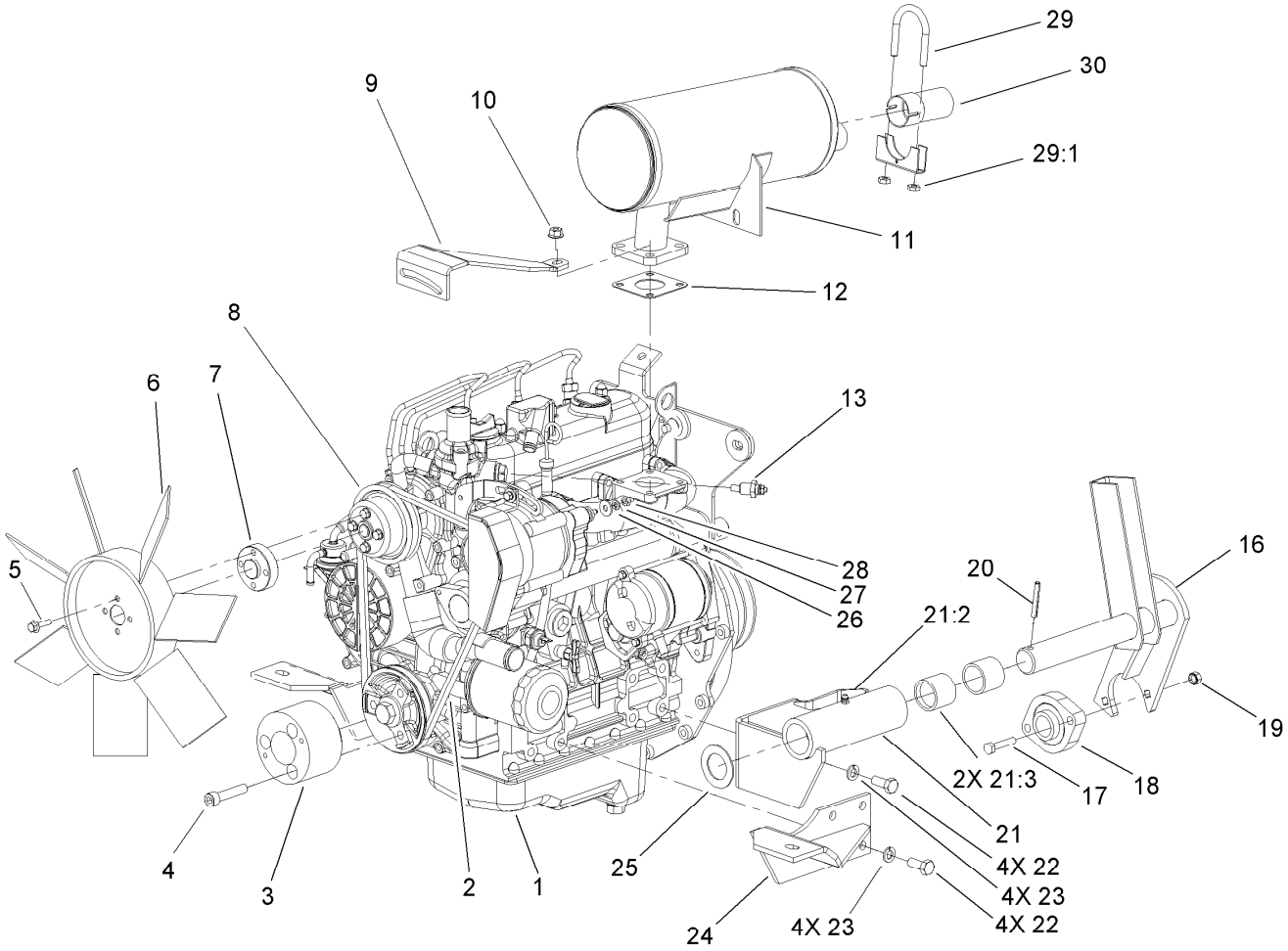
■ Not serviced separately



Brake Assembly

Ref.	*Part Number*	*Qty.*	*Description*
1	27-6851	1	Shaft-Flanged Axle, RH ●
1	27-6861	1	Shaft-Flanged Axle, LH
2	92-1774	2	Seal-Oil
3	21-8180	2	Bearing ASM
4	21-9450	2	Shield-Dust
5	43-6810	2	Spider-Torque
6	21-9390	2	Socket-Screw, Adjusting
7	21-9370	2	Screw-Adjusting
8	21-9380	2	Nut-Pivot
9	242-34	10	Stud-Drive
10	21-8360	2	Clip-Retaining
11	28-0680	2	Drum-Brake
12	94-6935	8	Locknut
13	28-0670	2	Seal-Grease
14	21-9440	2	Spring-Screw, Adjusting
15	21-9460	4	Retainer-Lever, Brake
16	84-8600	1	Set-Shoes, Lined
17	21-9430	2	Spring-Return, RH
18	21-9420	2	Spring-Return, LH
19	24-9180	2	Strut And Lever ASM
21	94-6934	8	Screw-HH
22	24-8840	2	Ring-Retaining, Wheel Bearing
23	94-6936	8	Washer-Hardened
24	92-8775	1	Liquid Gasket Kit ●

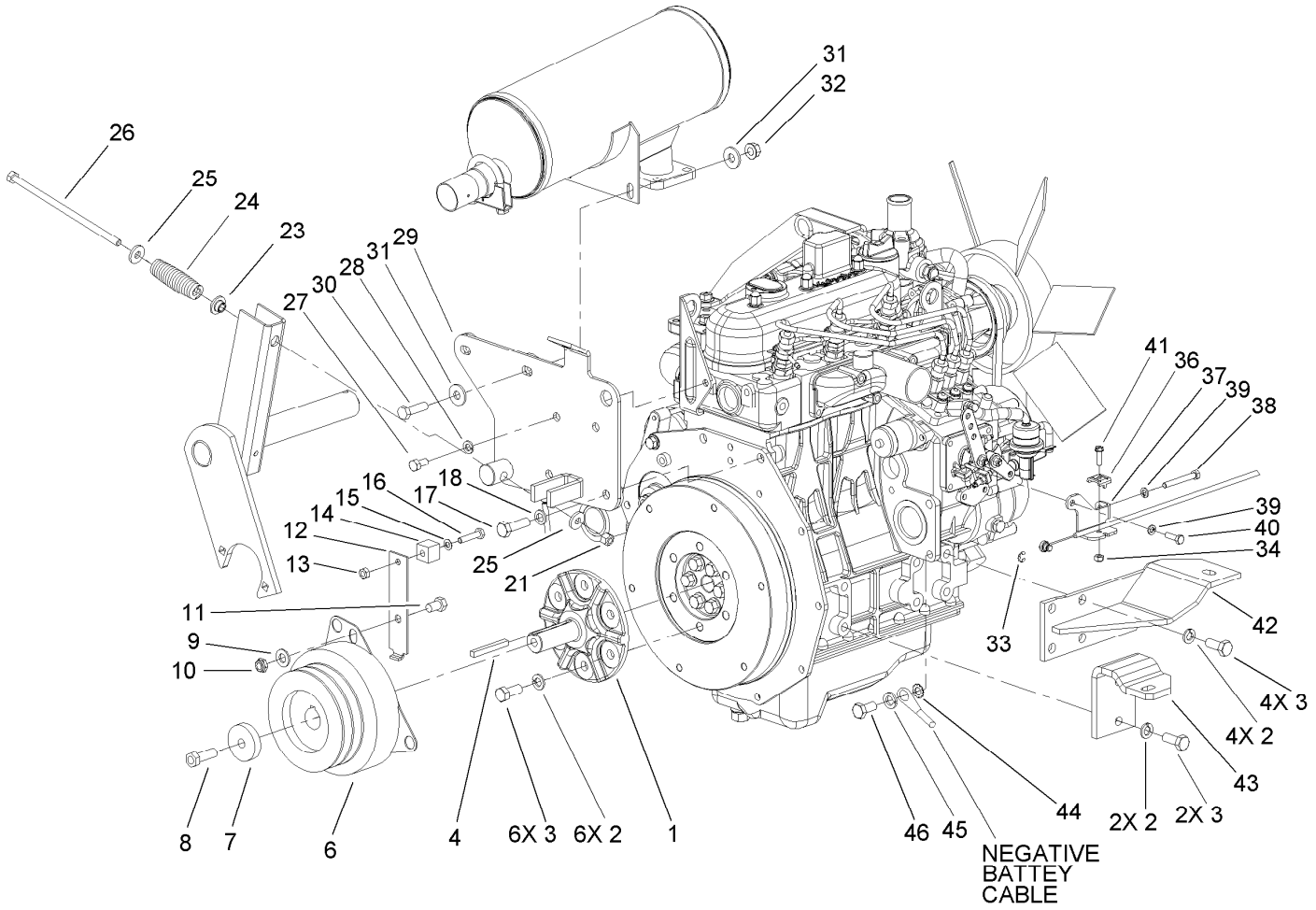
● Not illustrated



Engine Mounting and Component Assembly

Ref.	Part Number	Qty.	Description
1	106-7777	1	Engine ASM
2	104-3494	1	Belt-V
3	104-1723	1	Adapter-Front Drive
4	3274-106	3	Screw-HSH
5	33103-025	4	Screw-HHF
6	104-4246	1	Fan-Engine
7	105-0000	1	Spacer-Fan
8	104-3497	1	Pulley-Fan
9	105-2556-03	1	Brace-Alternator, Upper
10	33004-00	4	Nut-HF
11	106-8069	1	Muffler-Exhaust
12	98-9611	1	Gasket
13	98-9346	1	Sender-Temperature
16	106-4381-03	1	PTO Tension Shaft ASM
17	3230-4	2	Screw-CARR
18	92-8799	1	Bearing-Flange
18:1	251-77	1	Collar-Lock, Bearing ●
18:2	3246-1	1	Screw-Set ●
18:3	302-40	1	Fitting-Grease, 90 DEG ●
19	32149-1	2	Nut-Keps
20	32121-32	1	Pin-Roll
21	104-3417	1	LH Engine Mount ASM
21:2	302-5	1	Fitting-Grease
21:3	256-299	2	Bushing-Straight
22	43-0090	8	Screw-HH
23	42-9600	8	Washer-Lock, Spring
24	104-1702-03	1	Engine Mount ASM
25	3-4324	1	Washer-Flat
26	3256-78	1	Washer-Flat
27	43-5930	1	Washer-Lock, Spring
28	48-7890	1	Nut-Hex
29	2112-9	1	Clamp
29:1	32128-20	2	Nut-HF
30	105-4269	1	Extension-Tailpipe

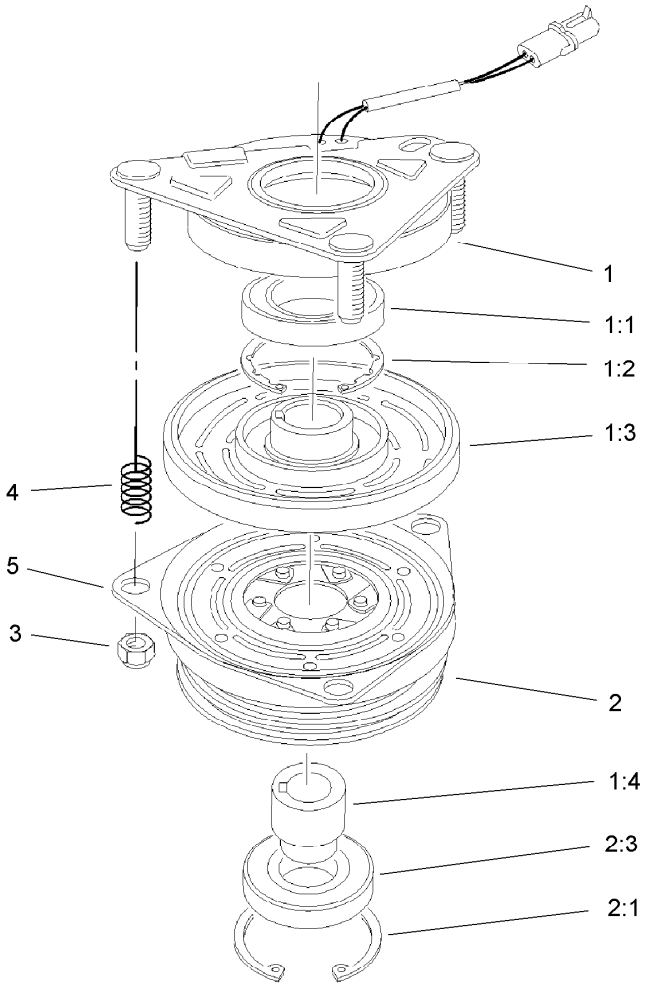
● Not illustrated



Engine and Clutch Hub Assembly

Ref.	Part Number	Qty.	Description
1	104-1715	1	Hub-Clutch
2	42-9600	12	Washer-Lock, Spring
3	43-0090	12	Screw-HH
4	18-6430	1	Key-Square
6	100-6565	1	Electric Clutch/Brake ASM
7	105-3698	1	Spacer
8	3212-5	1	Screw-HH
9	3256-24	1	Washer-Flat
10	3296-59	1	Nut-Lock, NI
11	323-34	1	Screw-HH
12	94-7438	1	Lever-Clutch Anchor
13	32153-4	1	Nut-Hex, Side Deform
14	95-6328	1	Bumper-Electric Clutch
15	3256-60	1	Washer-Flat
16	321-8	1	Screw-HH
17	56-2140	2	Screw-HH
18	48-9590	2	Washer-Lock
21	3296-29	1	Nut-Lock, NI
23	27-6600	1	Spacer-Coupling
24	21-0400-01	1	Spring-Compression
25	4-2390	2	Washer-Flat

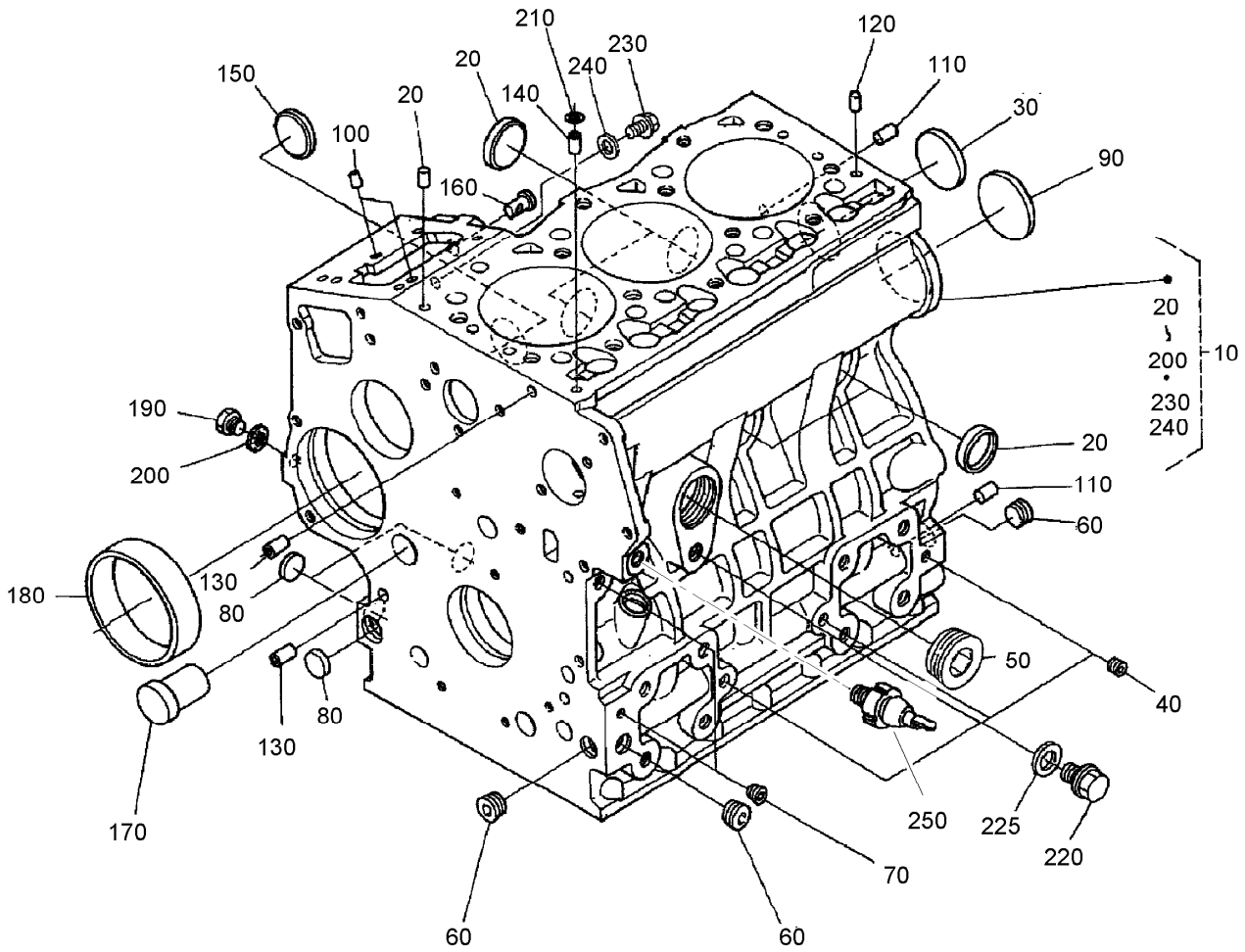
Ref.	Part Number	Qty.	Description
26	94-7431	1	Bolt-HH
27	33114-016	2	Screw-HH
28	3253-4	2	Washer-Lock
29	106-4379-03	1	Muffler Mount ASM
30	323-44	2	Screw-HH
31	80-6990	4	Washer-Hardened
32	32128-21	2	Nut-HF
33	701197	1	E-Ring
34	3296-2	1	Nut-Lock, NI
36	81-1690	1	Clamp-Cable
37	106-8097-03	1	Bracket-Throttle
38	33113-050	1	Screw-HH
39	48-8020	2	Washer-Spring
40	48-7630	1	Screw
41	32105-13	1	Screw-HWH
42	104-1710-03	1	Engine Mount ASM
43	104-1713-03	1	Mount-Engine, RH Rear
44	3255-9	1	Washer-Lock
45	3253-6	1	Washer-Lock
46	63-7790	1	Screw-Cap



Electric Clutch / Brake Assembly No. 100-6565

Ref.	*Part Number*	*Qty.*	*Description*
1	100-6563	1	Field And Rotor
1:1		1	Bearing-Field ●
1:2		1	Ring-Retaining ●
1:3		1	Field Coil ASM ●
1:4		1	Collar-Bearing ●
2	67-7070	1	Armature And Pulley ASM
2:1	67-7060	1	Ring-Retaining
2:3	67-7090	1	Bearing-Armature
3	3296-6	3	Nut-Lock
4	44-8320	3	Spring
5	67-7100	1	Plate-Brake

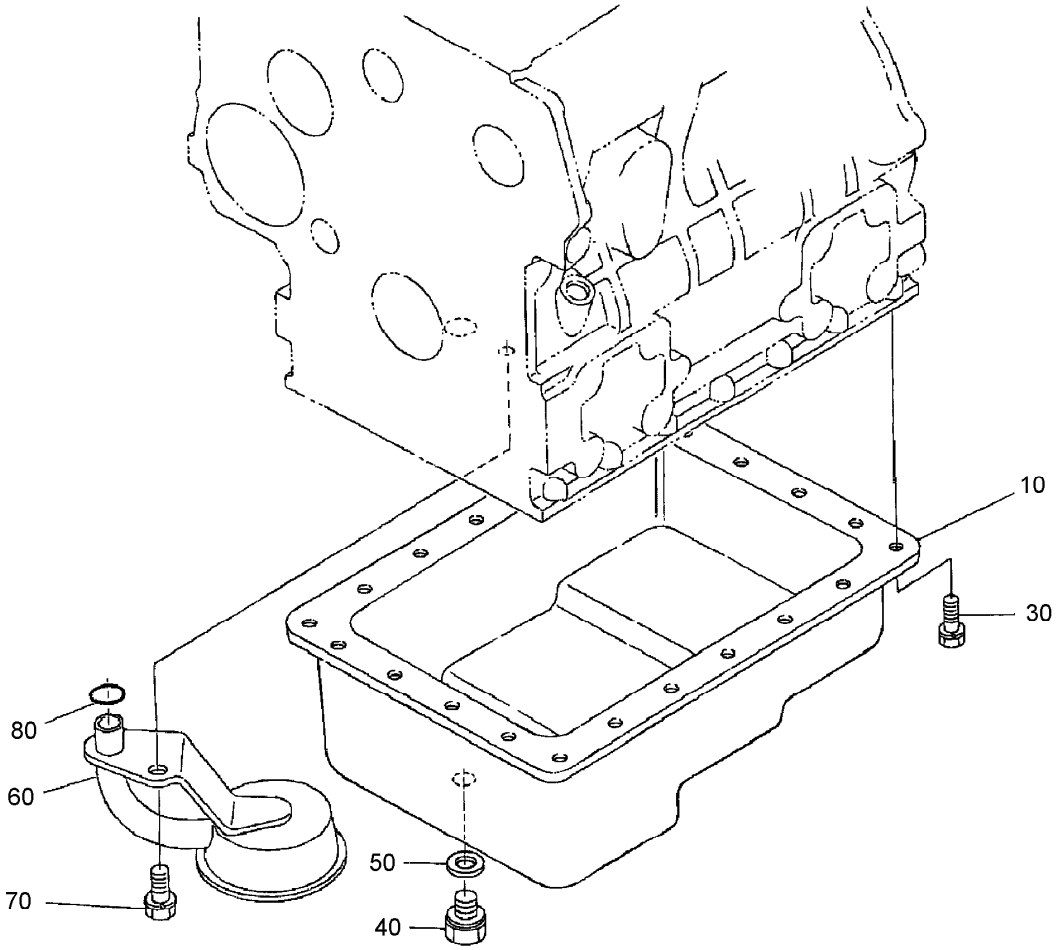
● Not serviced separately



Crankcase Assembly

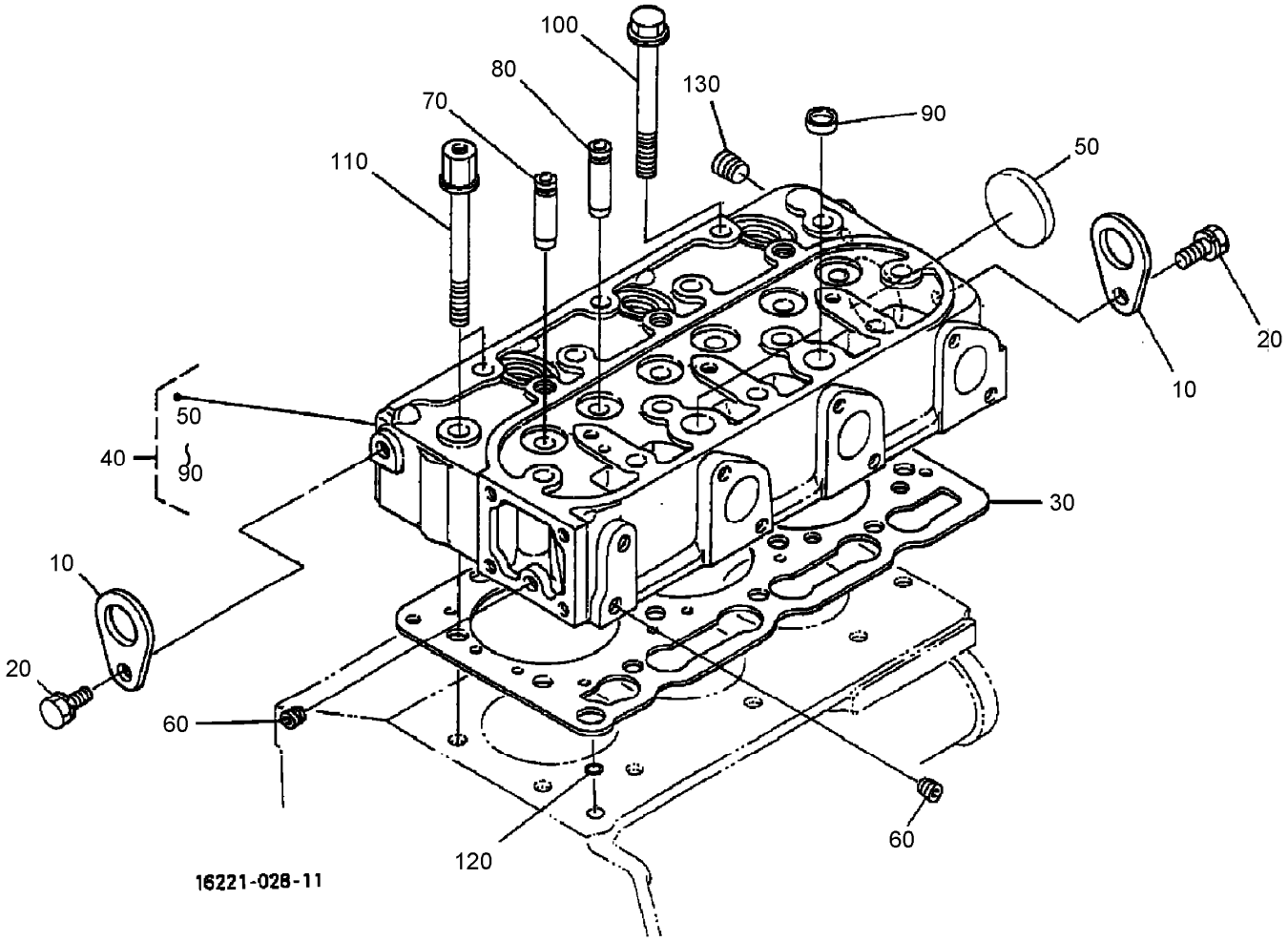
Ref.	Part Number	Qty.	Description
10	107-9064	1	Crankcase ASM
20	98-9398	4	Cap-Sealing
30	98-7539	1	Cap-Sealing
40	98-7540	3	Plug
50	105-3779	1	Plug
60	98-9597	3	Plug
70	98-7487	2	Plug
80	98-7489	3	Plug
90	98-9668	1	Plug-Expansion
100	98-9375	2	Pin-Straight
110	98-9377	2	Pin-Straight
120	105-3795	2	Pin-Straight
130	98-9387	2	Pin-Pipe

Ref.	Part Number	Qty.	Description
140	98-9539	1	Pin-Pipe
150	98-9599	1	Plug
160	98-9630	1	Pin-Spring, Start
170	98-9675	1	Plug
180	98-9656	1	Bushing-Governor, Gear
190	98-7507	1	Plug
200	98-7428	1	Gasket
210	98-7509	1	O-Ring
220	99-3447	1	Plug
225	106-7056	1	Gasket
230	99-8363	1	Bolt-Flange
240	98-7654	1	Gasket
250	98-9416	1	Switch-Oil



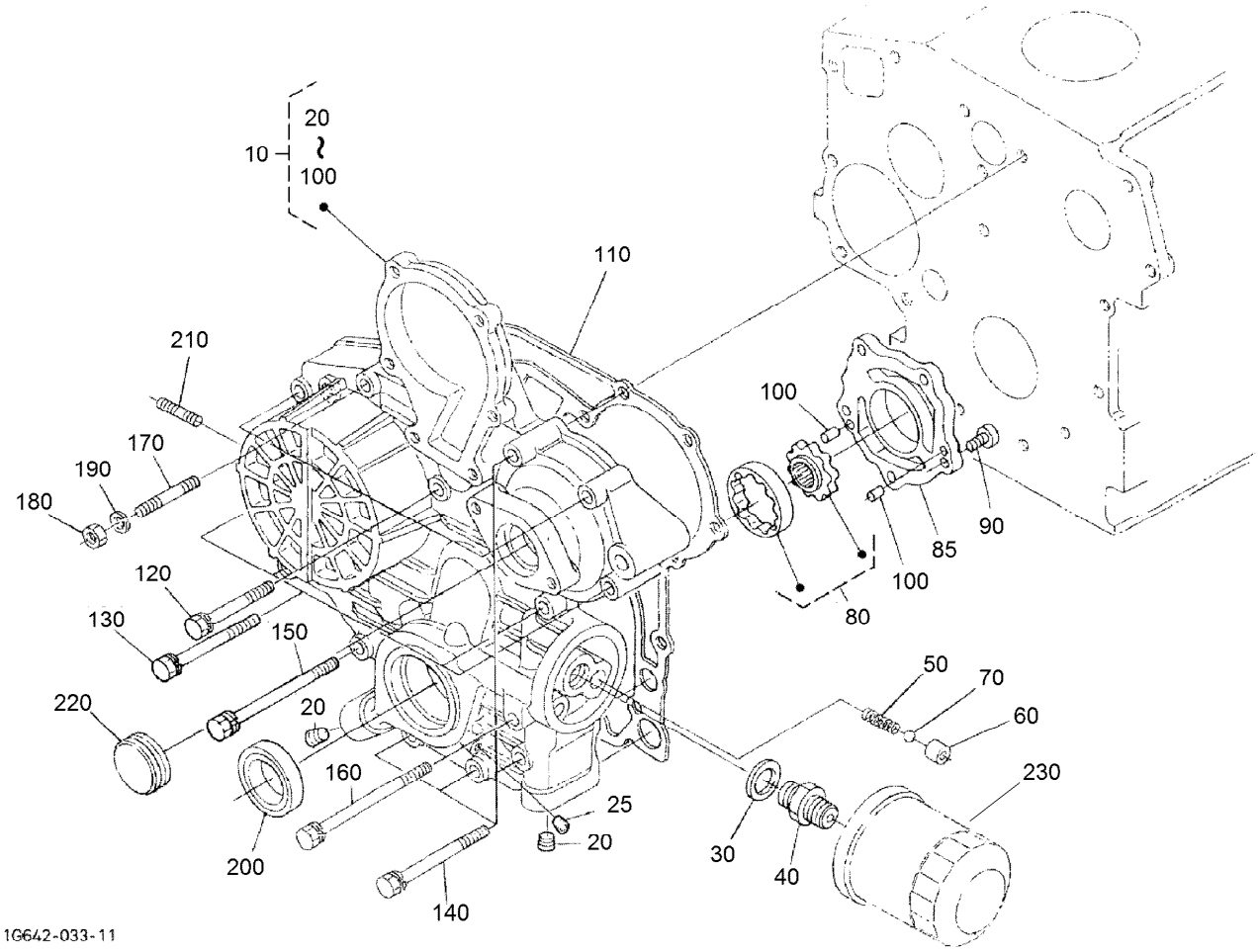
Oil Pan Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	104-3495	1	Pan-Oil
30	107-9065	22	Bolt
40	98-9386	1	Plug
50	98-7524	1	Gasket
60	104-3496	1	Filter-Pickup, Oil
70	98-7526	1	Bolt
80	105-3776	1	O-Ring



Cylinder Head Assembly

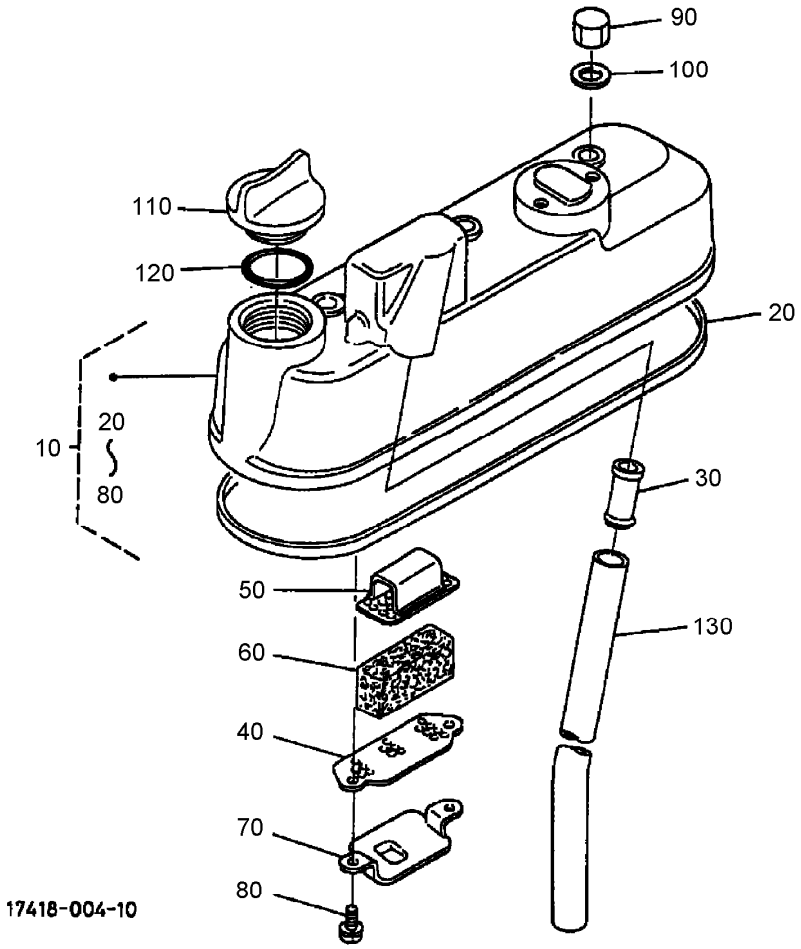
Ref.	*Part Number*	*Qty.*	*Description*
10	98-7531	2	Hook-Engine
20	100-9195	2	Bolt
30	105-3780	1	Gasket-Head, Cylinder
40	98-9460	1	Cylinder Head ASM
50	98-9395	1	Cap-Sealing
60	98-7540	2	Plug
70	107-9066	3	Guide-Valve, Inlet
80	107-9067	3	Guide-Valve, Exhaust
90	98-9389	2	Cap-Sealing
100	98-9479	1	Bolt-Head, Cylinder
110	98-9647	2	Bolt-Head, Cylinder
120	98-7509	1	O-Ring
130	98-9444	1	Plug



Gear Case Assembly

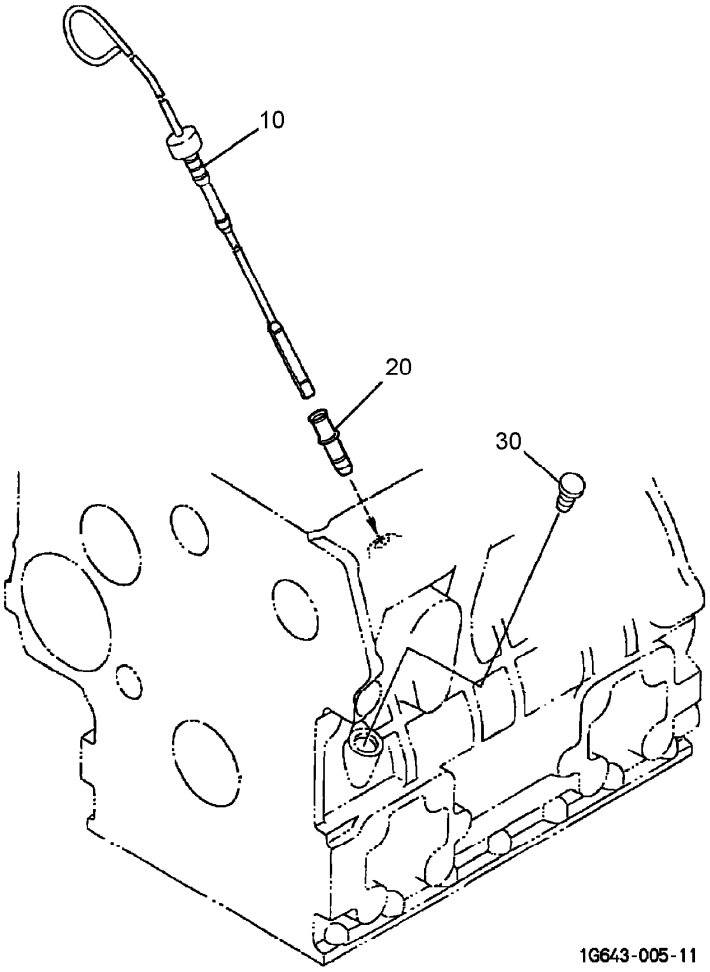
Ref.	Part Number	Qty.	Description
10	107-9068	1	Gear Case ASM
20	98-9598	2	Plug
25	98-7487	1	Plug
30	98-7562	1	Washer-Plain
40	98-9388	1	Joint-Pipe
50	98-9544	1	Spring
60	98-9543	1	Seat-Valve
70	98-9380	1	Ball
80	98-9540	1	Oil Pump Rotor ASM
85	107-9069	1	Cover-Pump, Oil
90	107-9071	5	Screw
100	107-9072	2	Pin-Straight
110	98-9633	1	Gasket-Case, Gear

Ref.	Part Number	Qty.	Description
120	107-9073	3	Bolt
130	105-3797	4	Bolt
140	98-9356	4	Bolt
150	107-9074	1	Bolt
160	98-9586	1	Bolt
170	105-3709	1	Stud
180	98-7572	1	Nut
190	98-7699	1	Washer-Spring
200	98-9482	1	Seal-Oil
210	105-3710	2	Stud
220	98-9641	1	Cover-Case, Gear
230	104-5167	1	Filter-Oil



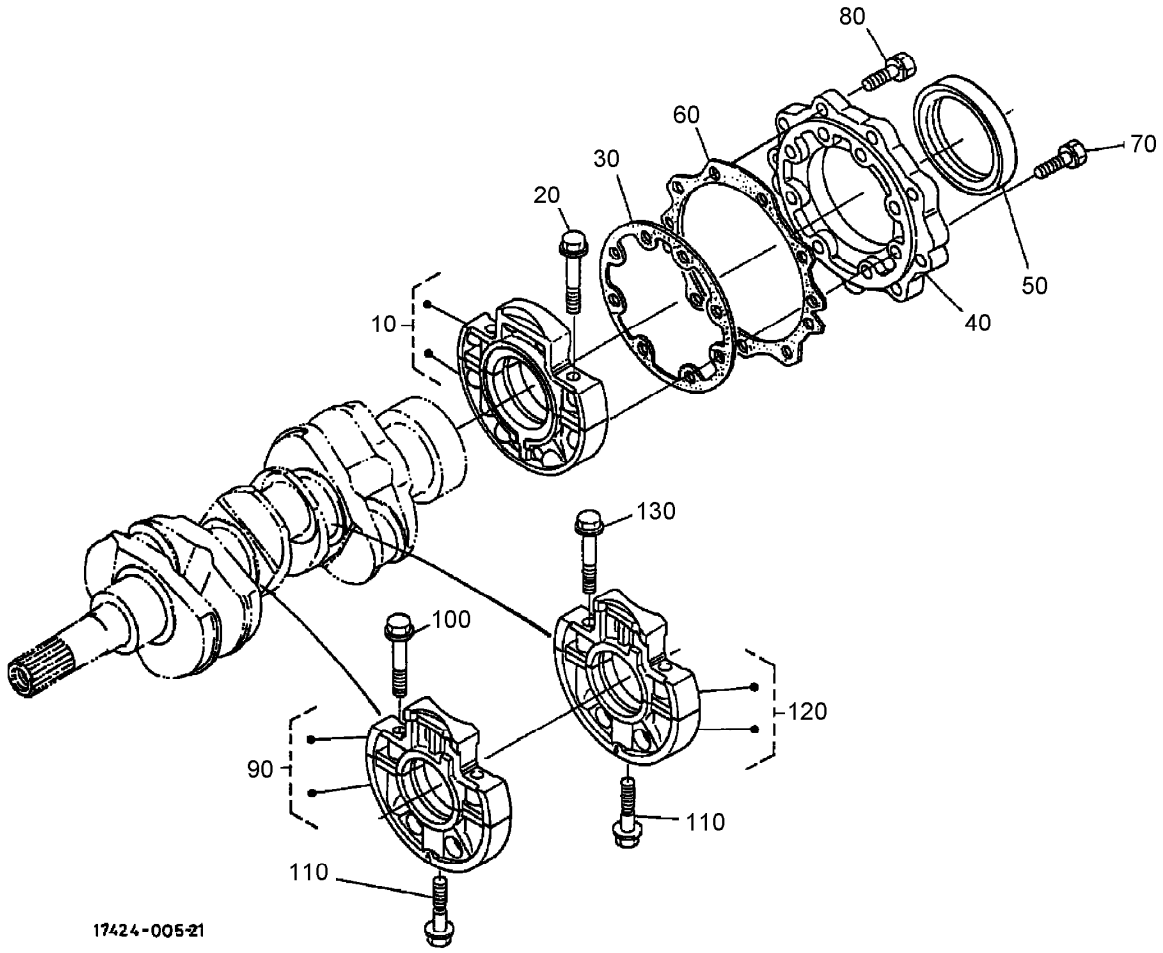
Head Cover Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	98-9614	1	Cylinder Head Cover ASM
20	98-9615	1	Gasket-Cover, Head
30	98-9492	1	Joint-Pipe, Breather
40	98-9488	1	Plate-Element, Breather
50	98-9489	1	Plate-Element, Breather
60	98-9493	1	Element-Breather
70	98-9490	1	Shield-Oil, Breather
80	98-9364	2	Screw (With Washer)
90	98-9455	3	Nut-Cap
100	98-9454	3	Gasket
110	107-9075	1	Plug-Filler, Oil
120	99-3446	1	O-Ring
130	98-9491	1	Pipe-Breather



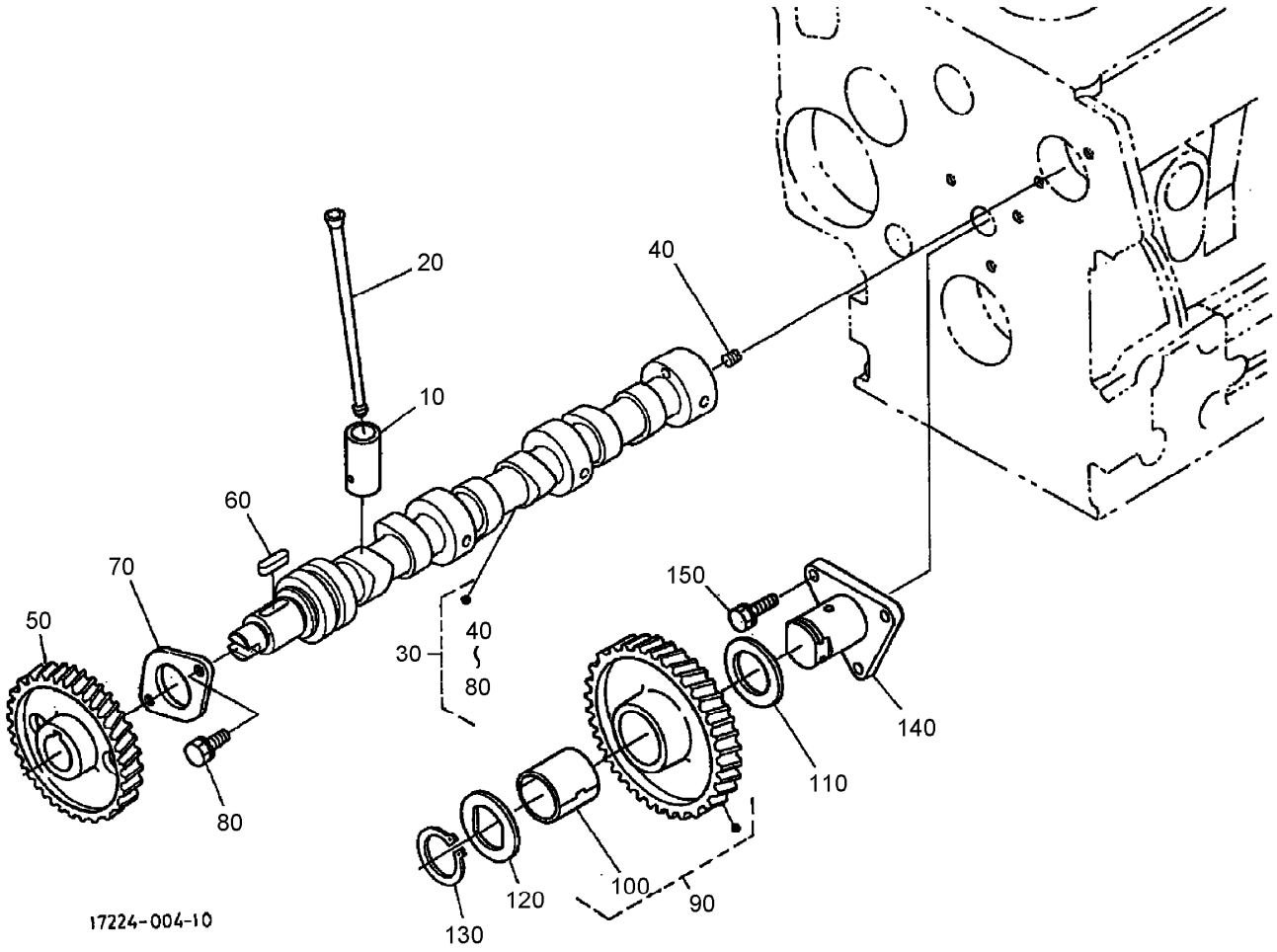
Dipstick and Guide Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	107-9076	1	Gauge-Oil
20	105-3713	1	Guide-Gauge, Oil
30	105-3715	1	Plug-Gauge, Oil



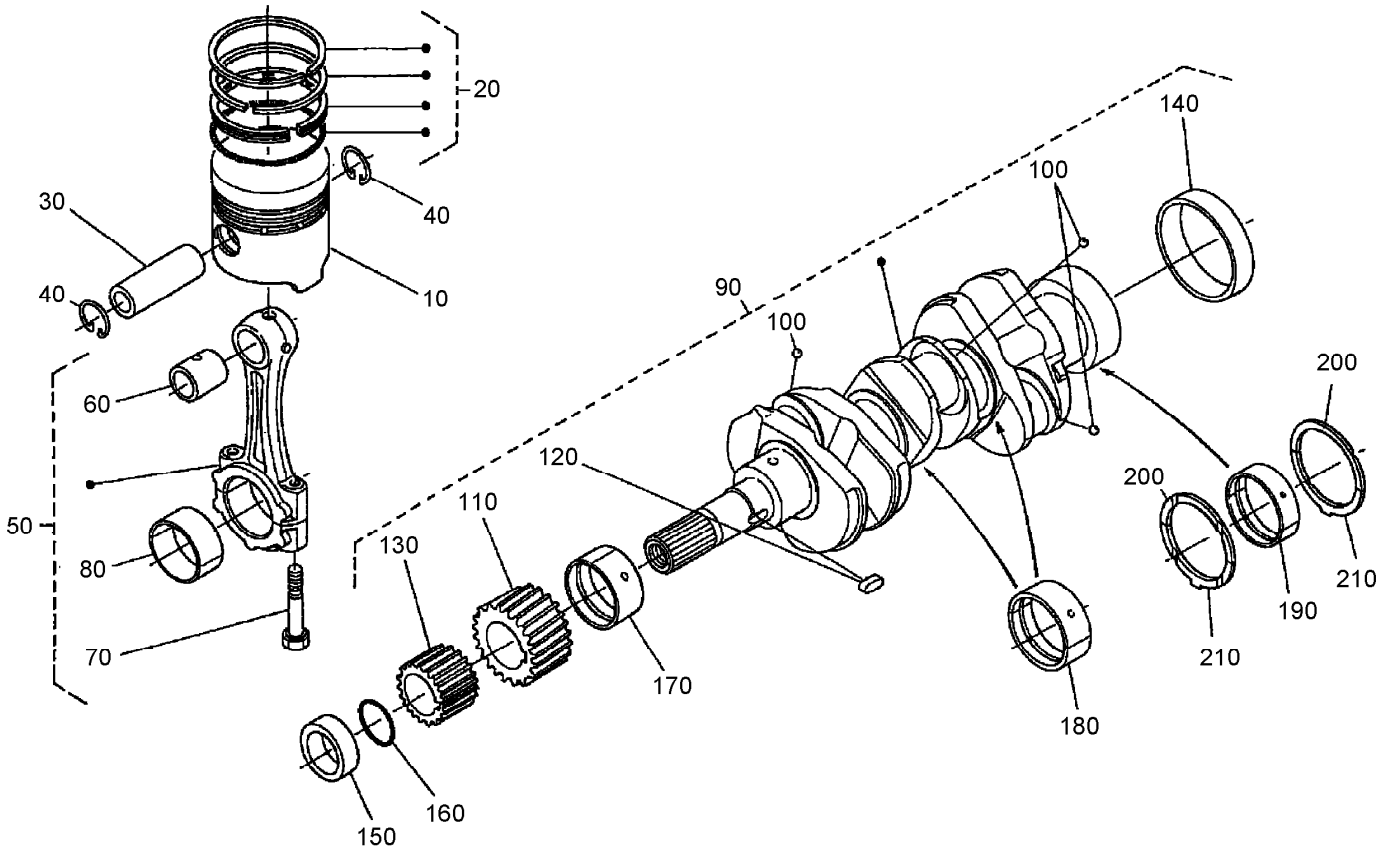
Main Bearing Case Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	98-9480	1	Main Bearing Case ASM
20	98-9484	6	Bolt-Case, Bearing
30	98-9634	1	Gasket-Case, Bearing
40	98-9487	1	Cover-Case, Bearing
50	98-9483	1	Seal-Oil
60	98-9635	1	Gasket-Cover, Bearing Case
70	98-9352	8	Bolt
80	98-7568	9	Bolt
90	98-9606	1	Main Bearing Case ASM
100	98-9484	2	Bolt-Case, Bearing
110	98-9485	2	Bolt-Case, Bearing
120	98-9607	1	Main Bearing Case ASM
130	98-9484	2	Bolt-Case, Bearing



Camshaft And Idle Gear Shaft Assembly

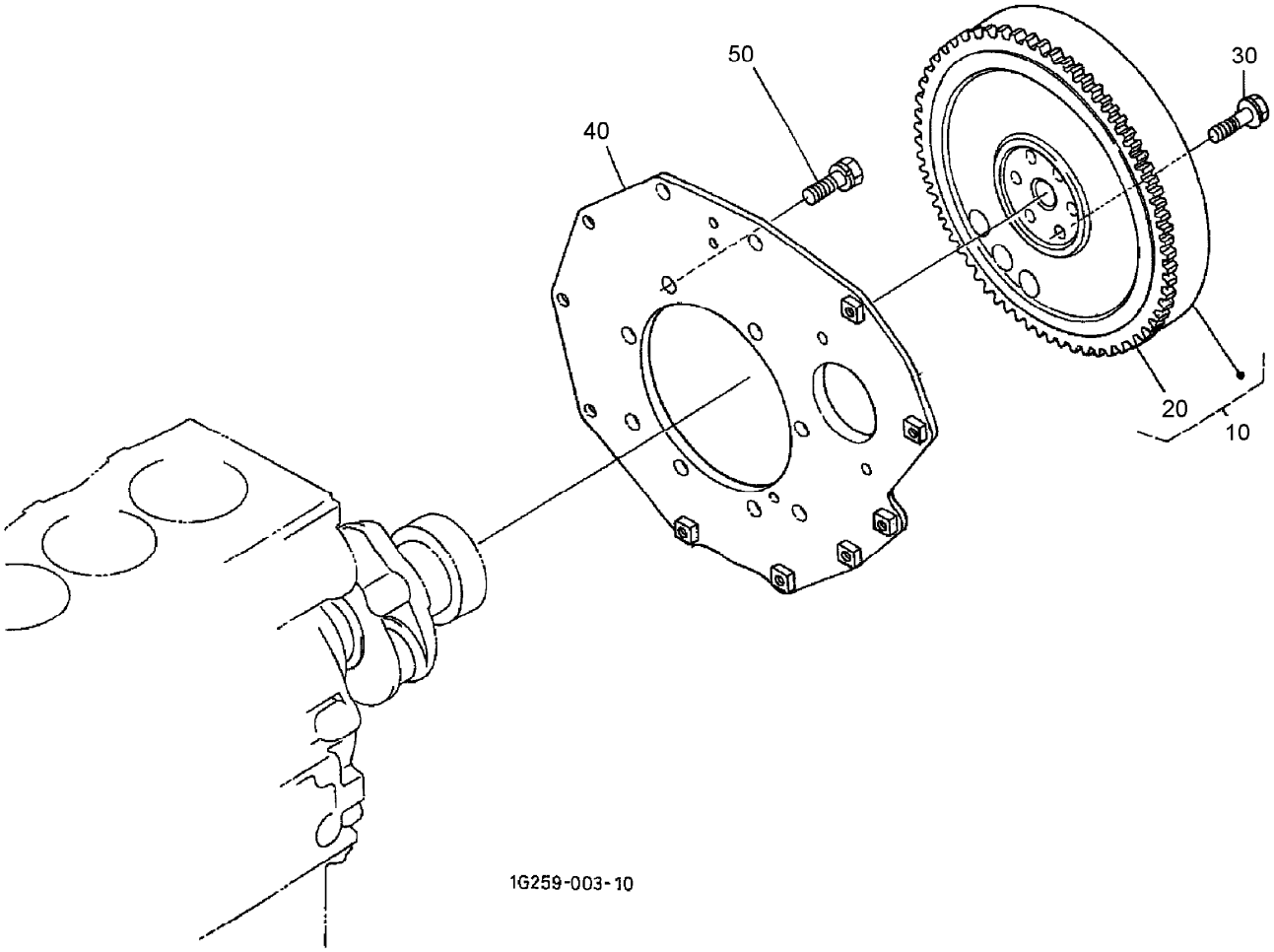
Ref.	*Part Number*	*Qty.*	*Description*
10	98-9616	6	Tappet
20	98-9509	6	Rod-Push
30	98-9617	1	Camshaft ASM
40	98-7449	1	Screw-Set
50	98-9512	1	Gear-Cam
60	98-9378	1	Key-Feather
70	98-9510	1	Stopper-Camshaft
80	98-9351	2	Bolt
90	98-9649	1	Idle Gear ASM
100	98-9650	1	Bushing-Gear, Idle
110	98-9535	1	Collar-Gear, Idle
120	98-9536	1	Collar-Gear, Idle
130	98-9534	1	Circlip-Gear, Idle
140	98-9533	1	Shaft-Gear, Idle
150	98-7692	3	Bolt



Piston and Crankshaft Assembly

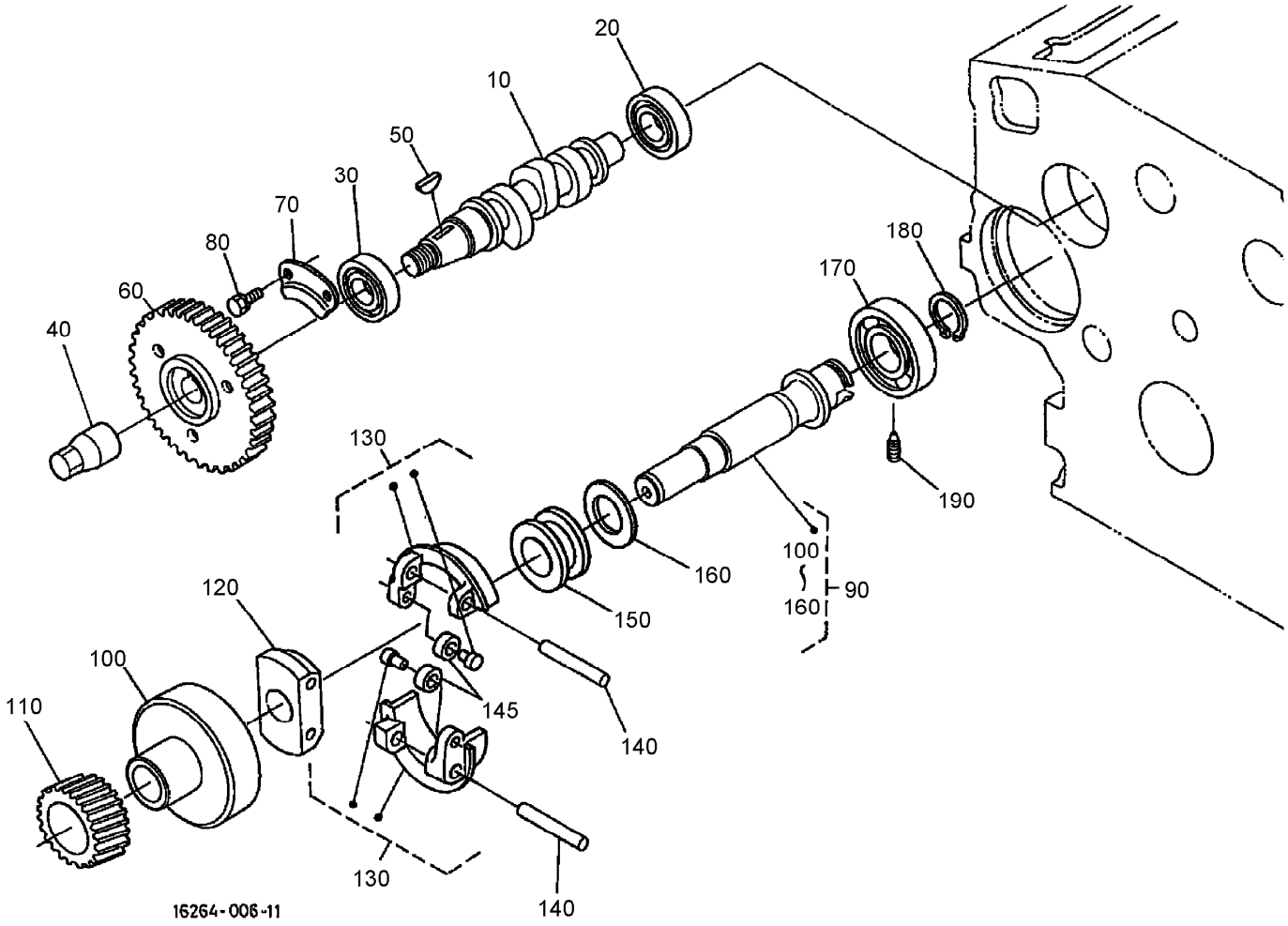
Ref.	Part Number	Qty.	Description
10	98-9470	3	Piston (0.5Mm)
10	98-9469	3	*obs* Piston (STD)
20	98-9619	3	Piston Ring ASM (0.5Mm)
20	98-9618	3	Piston Ring ASM (STD)
30	98-9513	3	Pin-Piston
40	98-9514	6	Circlip-Pin, Piston
50	98-9516	3	Connecting Rod ASM
60	98-9515	3	Bushing-Pin, Piston
70	98-9517	6	Bolt-Rod, Connecting
80	98-9520	3	Bearing-Rod (0.4Mm)
80	98-9519	3	Bearing-Rod (0.2Mm)
80	98-9518	3	Metal-Crankpin (STD)
90	98-9642	1	Crankshaft ASM
100	98-7473	3	Ball
110	98-9532	1	Gear-Crankshaft
120	98-9666	1	Key
130	98-9542	1	Gear-Drive, Oil Pump
140	98-9522	1	Sleeve-Crankshaft

Ref.	Part Number	Qty.	Description
150	98-9521	1	Collar-Crankshaft
160	105-3783	1	O-Ring
170	98-9523	1	Metal Crankshaft (STD)
170	98-9528	1	Bearing-Main (-0.2Mm)
170	98-9529	1	Bearing-Main (0.4Mm)
180	98-9524	2	Metal-Crankshaft (STD Set)
180	98-9530	2	Bearing-Main (0.2Mm)
180	98-9531	2	Bearing-Main (0.4Mm)
190	98-9556	1	Bearing-Main (STD)
190	105-3719	1	Metal-Crankshaft (.2Mm)
190	105-3720	1	Metal-Crankshaft (.4Mm)
200	98-9413	2	Bearing-Thrust (STD)
200	98-9414	2	Bearing-Thrust (0.2Mm)
200	98-9415	2	Bearing-Thrust (0.4Mm)
210	98-9688	2	Bearing-Thrust (STD)
210	98-9689	2	Bearing-Thrust (0.2Mm)
210	98-9690	2	Bearing-Thrust (0.4Mm)



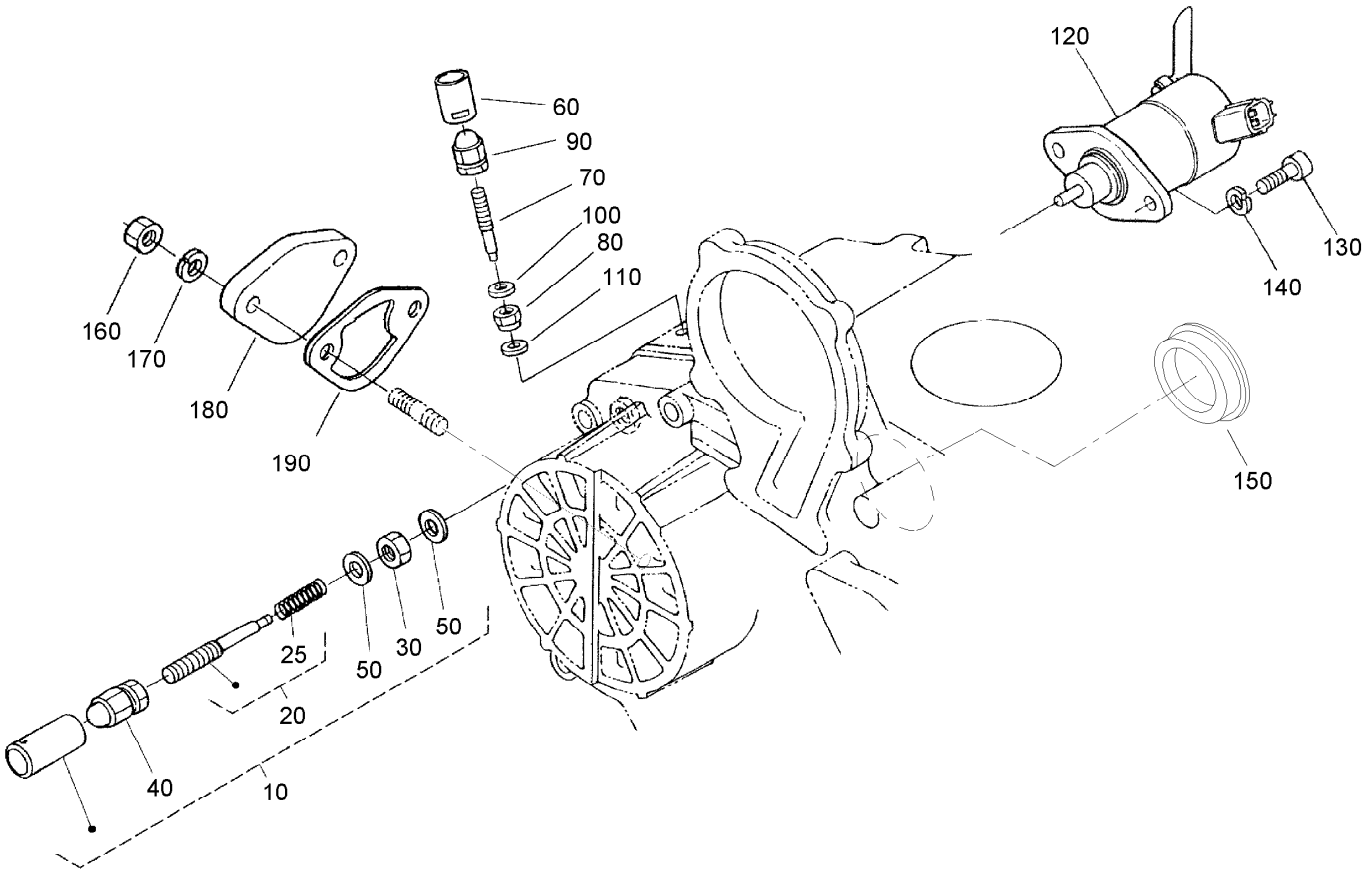
Flywheel Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	105-3784	1	Flywheel ASM
20	105-3722	1	Gear-Ring
30	98-9537	6	Bolt-Flywheel
40	98-9486	1	Plate-End, Rear
50	98-9392	8	Bolt



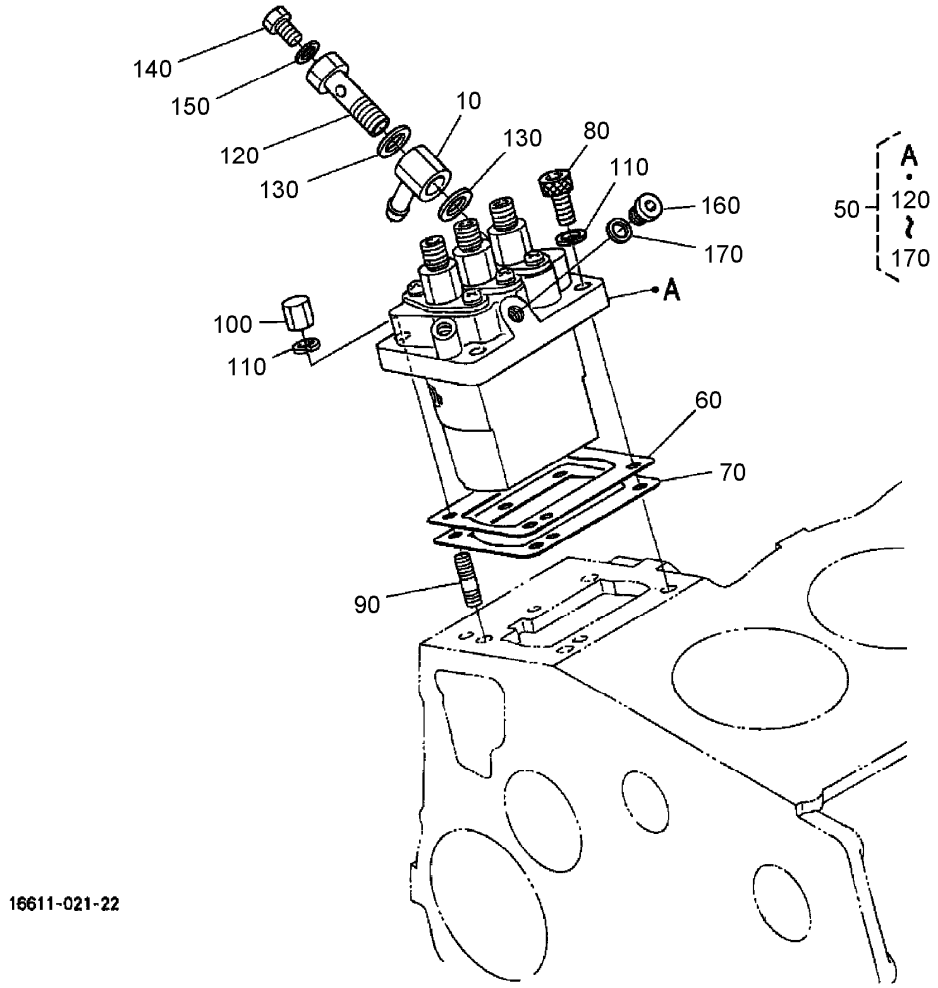
Fuel Camshaft and Governor Shaft Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	98-9459	1	Camshaft-Fuel
20	107-9077	1	Bearing-Ball
30	107-9078	1	Bearing-Ball
40	98-9590	1	Nut-Cap
50	98-9595	1	Key-Woodruff
60	98-9669	1	Gear-Pump, Injection
70	98-9511	1	Stopper-Fuel, Camshaft
80	98-9350	2	Bolt
90	98-9644	1	Governor Shaft ASM
100	98-9562	1	Holder-Gear, Governor
110	98-9673	1	Gear-Governor
120	98-9561	1	Holder-Weight, Governor
130	98-9559	2	Governor Weight ASM
140	98-9560	2	Shaft-Weight, Governor
145	98-9692	2	Roller
150	98-9563	1	Sleeve-Governor
160	98-9564	1	Washer-Thrust
170	107-9079	1	Bearing-Ball
180	98-9657	1	Circlip-Shaft, Governor
190	98-9565	1	Screw-Set



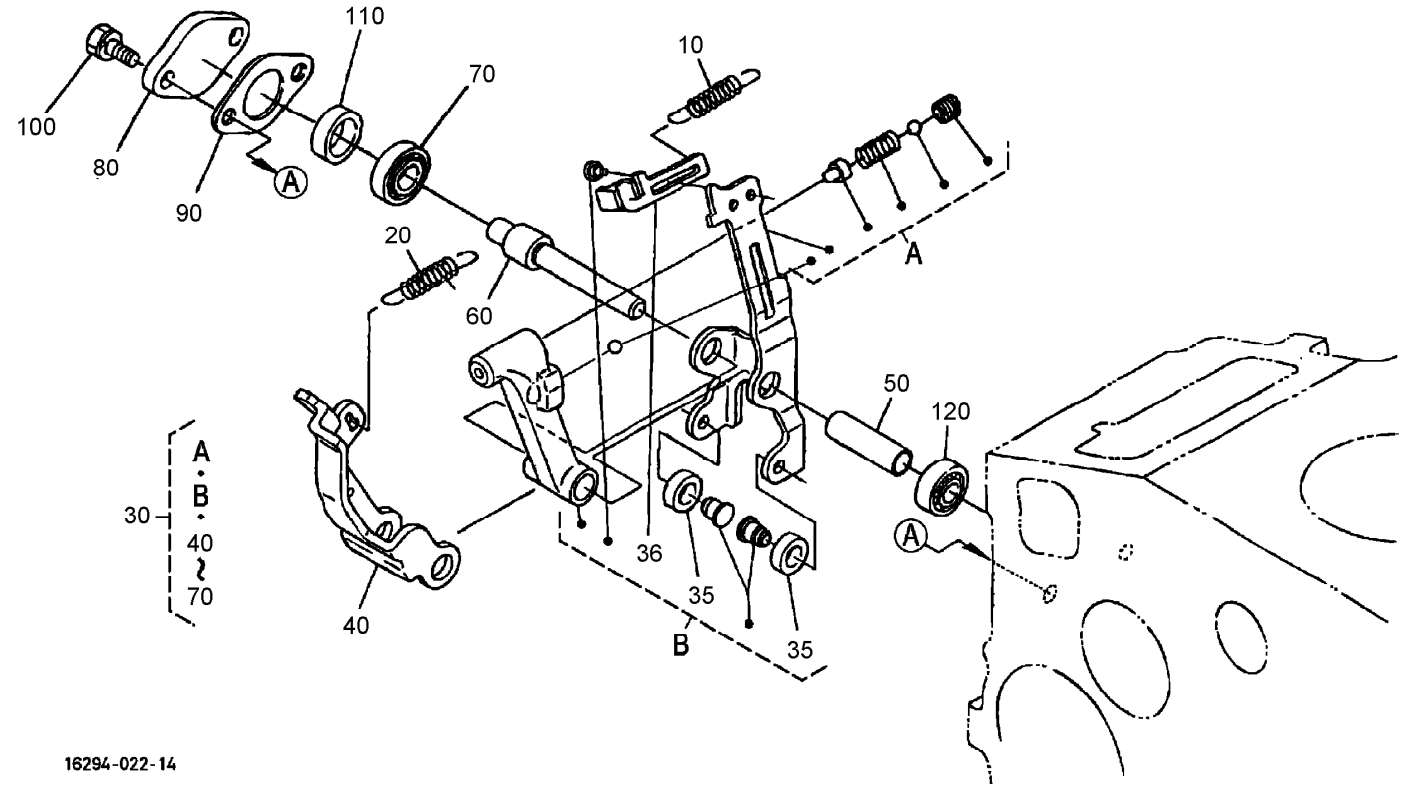
Idle Apparatus Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	98-9678	1	Idle Apparatus ASM
20	98-9679	1	Adjusting Bolt ASM
25	107-9080	1	Spring
30	98-9439	1	Nut
40	99-8387	1	Nut-Cap
50	98-7654	2	Gasket
60	98-7656	1	Cap
70	98-9557	1	Bolt-Adjusting
80	99-3512	1	Nut
90	99-8387	1	Nut-Cap
100	98-7654	1	Gasket
110	107-9081	1	Gasket
120	104-5155	1	Solenoid-Stop
130	105-3799	2	Bolt-HSH
140	98-7699	2	Washer-Spring
150	98-9640	1	Cover-Pump
160	98-7572	2	Nut
170	98-7699	2	Washer-Spring
180	99-3514	1	Cover
190	98-9636	1	Gasket-Pump, Fuel



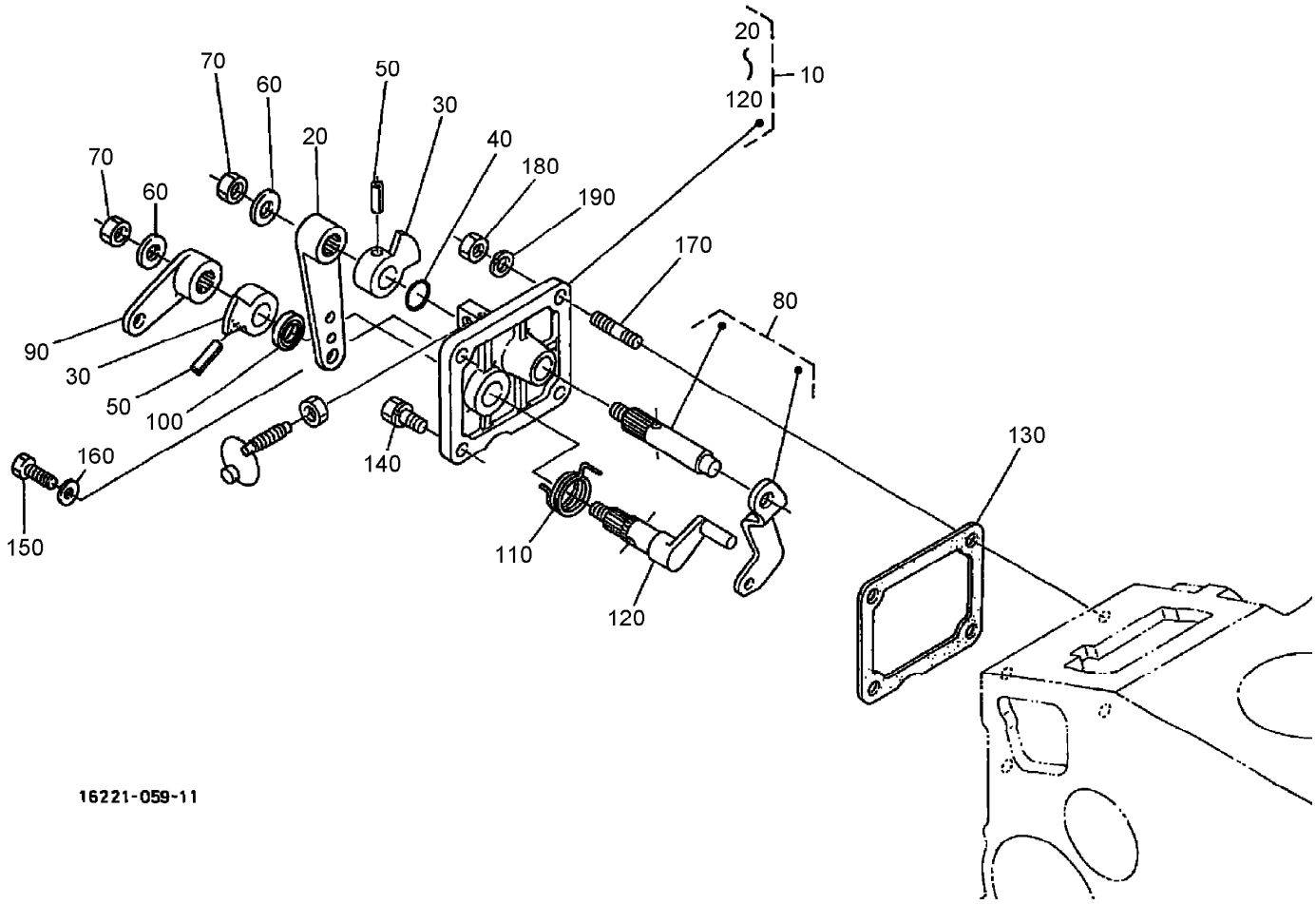
Injection Pump Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	98-9596	1	Joint-Eye
50	98-9643	1	Injection Pump ASM
60	98-9457	1	Shim-Injection (0.25Mm)
60	98-9456	1	Shim-Injection (0.20Mm)
70	98-9458	1	Shim-Injection (0.30Mm)
80	98-9361	2	Bolt-HSH
90	98-9438	2	Stud
100	98-9440	2	Nut-Cap
110	98-7699	4	Washer-Spring
120	98-9464	1	Bolt-Joint
130	98-9445	2	Gasket
140	98-9430	1	Screw
150	98-9446	1	Gasket
160	98-9466	1	Plug
170	98-9451	1	Gasket



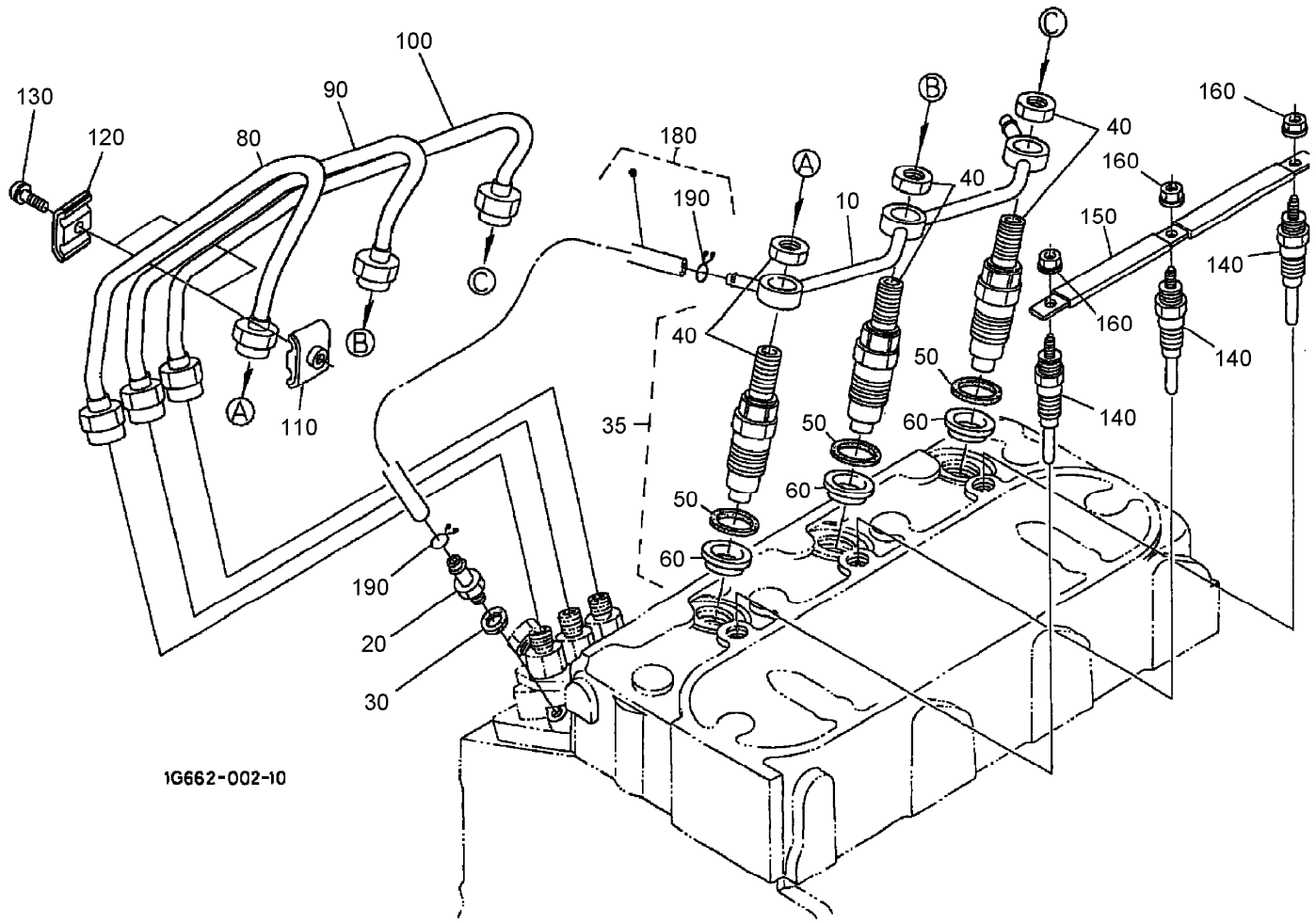
Governor Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	105-3786	1	Spring-Start
20	98-9681	1	Spring-Governor
30	107-9082	1	Fork Lever ASM
35	98-9692	2	Roller
36	107-9083	1	Lever-Thrust
40	107-9084	1	Lever-Fork
50	107-9085	1	Shaft-Lever, Fork
60	107-9086	1	Shaft-Lever, Fork
70	98-9570	1	Bearing-Miniaturize
80	98-9569	1	Cover-Shaft, Fork Lever
90	98-9682	1	Gasket
100	98-9351	2	Bolt
110	98-9567	1	Collar
120	98-9571	1	Bearing-Miniaturize



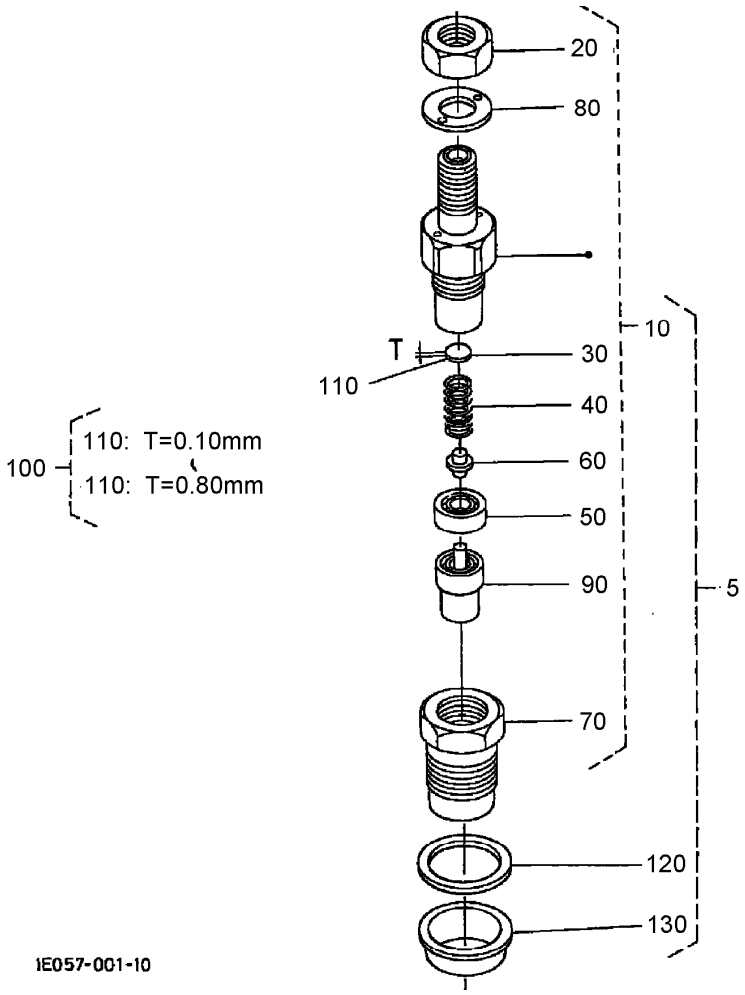
Speed Control Plate Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	105-3735	1	Control Plate ASM
20	98-9662	1	Lever-Control, Speed
30	98-9572	2	Lever-Control, Speed
40	105-3788	1	O-Ring
50	98-7602	2	Pin-Spring
60	98-9594	2	Washer-Plain
70	98-9589	2	Nut
80	98-9658	1	Governor Lever ASM
90	98-9663	1	Lever-Stop, Engine
100	98-7601	1	Seal-Oil
110	98-9472	1	Spring-Return
120	98-9664	1	Shaft-Lever, Stop
130	98-9637	1	Gasket
140	98-7692	1	Bolt
150	99-8348	1	Bolt
160	98-7654	2	Gasket
170	105-3710	2	Stud
180	98-7572	2	Nut
190	98-7699	2	Washer-Spring



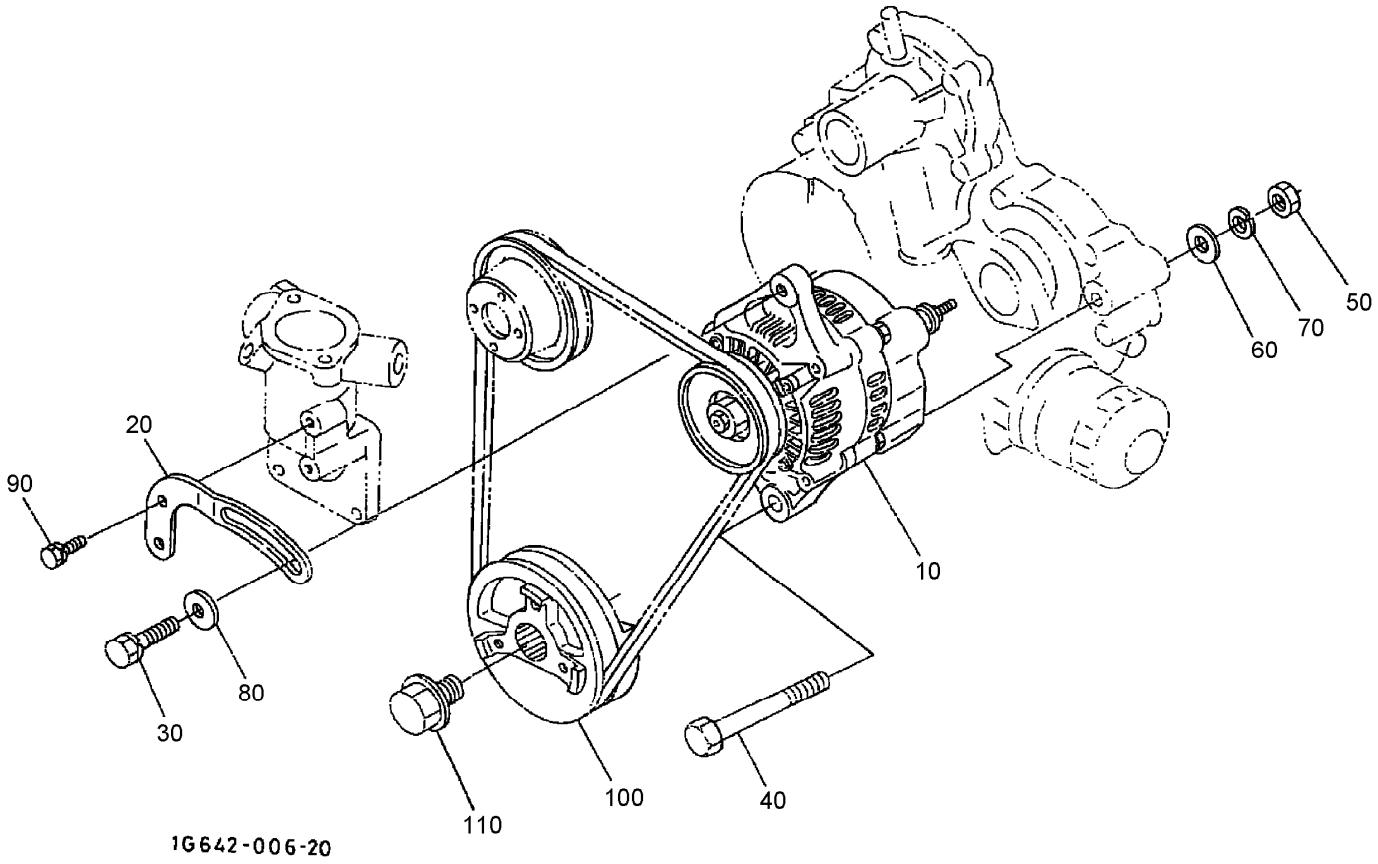
Nozzle Holder and Glow Plug Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	98-9620	1	Overflow Pipe ASM
20	98-9431	1	Screw-Bleeder, Air
30	98-7654	1	Gasket
35	105-3740	3	Nozzle Holder Kit
40	98-9468	3	Nozzle Holder ASM
50	98-7676	3	Gasket
60	98-7677	3	Seal-Heat
80	98-9653	1	Pipe-Injection
90	98-9654	1	Pipe-Injection
100	98-9655	1	Pipe-Injection
110	98-7682	2	Clamp-Pipe
120	98-7683	2	Clamp-Pipe
130	98-7684	2	Screw (W/Washer)
140	98-9695	3	Plug-Glow
150	98-9631	3	Cord-Plug, Glow
160	99-8377	3	Nut-Flange
180	98-9420	1	Overflow Pipe ASM
190	98-7671	2	Clip-Pipe



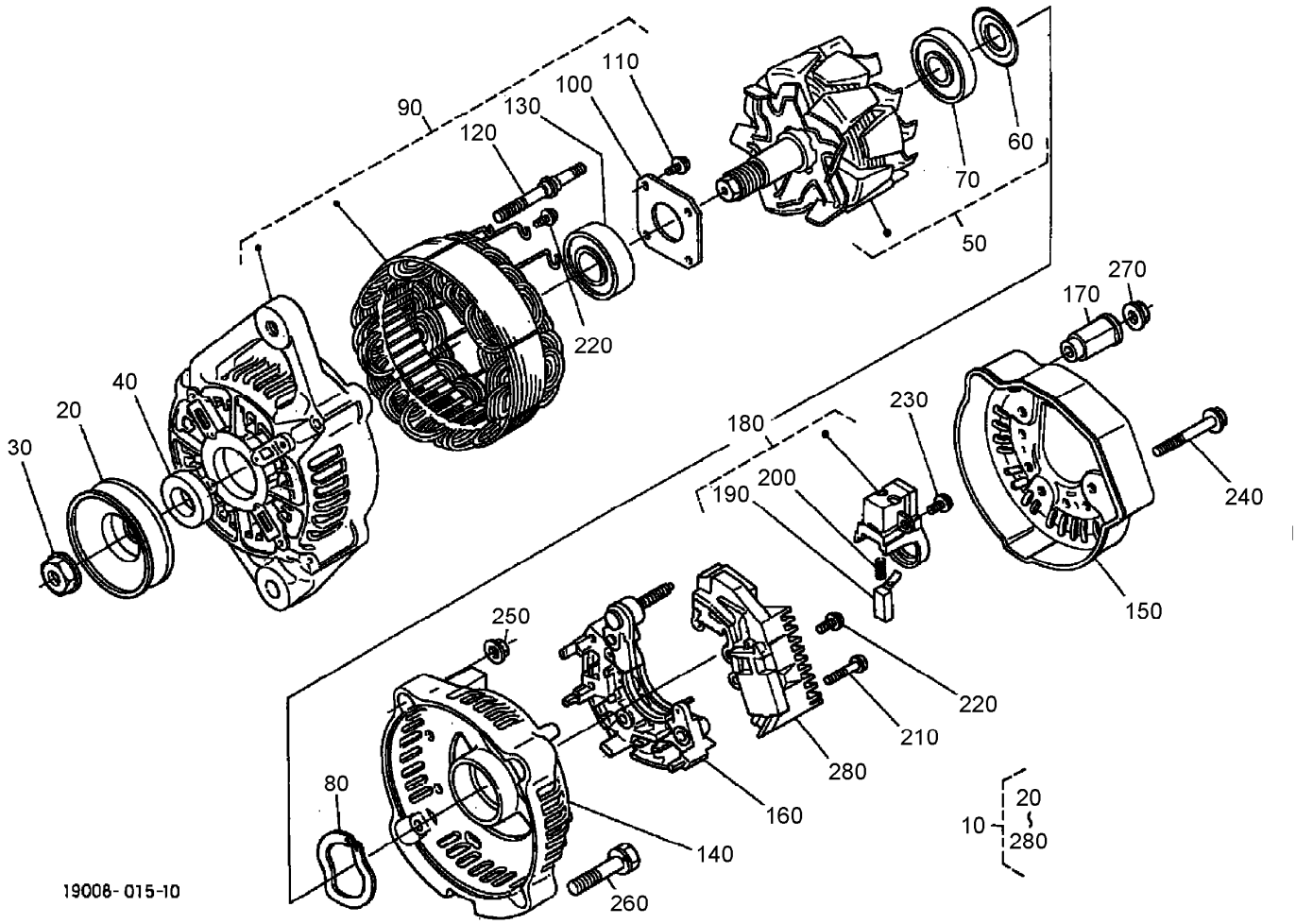
Nozzle Holder (Component Parts) Assembly

Ref.	*Part Number*	*Qty.*	*Description*
5	105-3740	3	Nozzle Holder Kit
10	98-9468	3	Nozzle Holder ASM
20	99-8301	3	Nut
30	99-8302	3	Washer-Adjusting
40	99-8303	3	Spring-Nozzle
50	99-8304	3	Spacer-Distance
60	99-8305	3	Rod-Push
70	99-8306	3	Nut-Nozzle
80	99-8307	3	Washer-Plain
90	99-8308	3	Piece-Nozzle
100	99-8309	3	Adjusting Washer ASM
110	99-8310	3	Washer-Adjust (0.10Mm)
110	99-8311	3	Washer-Adjust (0.20Mm)
110	99-8312	3	Washer-Adjust (0.30Mm)
110	99-8313	3	Washer-Adjust (0.40Mm)
110	99-8314	3	Washer-Adjust (0.50Mm)
110	99-8315	3	Washer-Adjust (0.52Mm)
110	99-8316	3	Washer-Adjust (0.54Mm)
110	99-8317	3	Washer-Adjust (0.56Mm)
110	99-8318	3	Washer-Adjust (0.58Mm)
110	99-8319	3	Washer-Adjust (0.80Mm)
120	98-7676	3	Gasket
130	98-7677	3	Seal-Heat



Alternator and Pulley Assembly

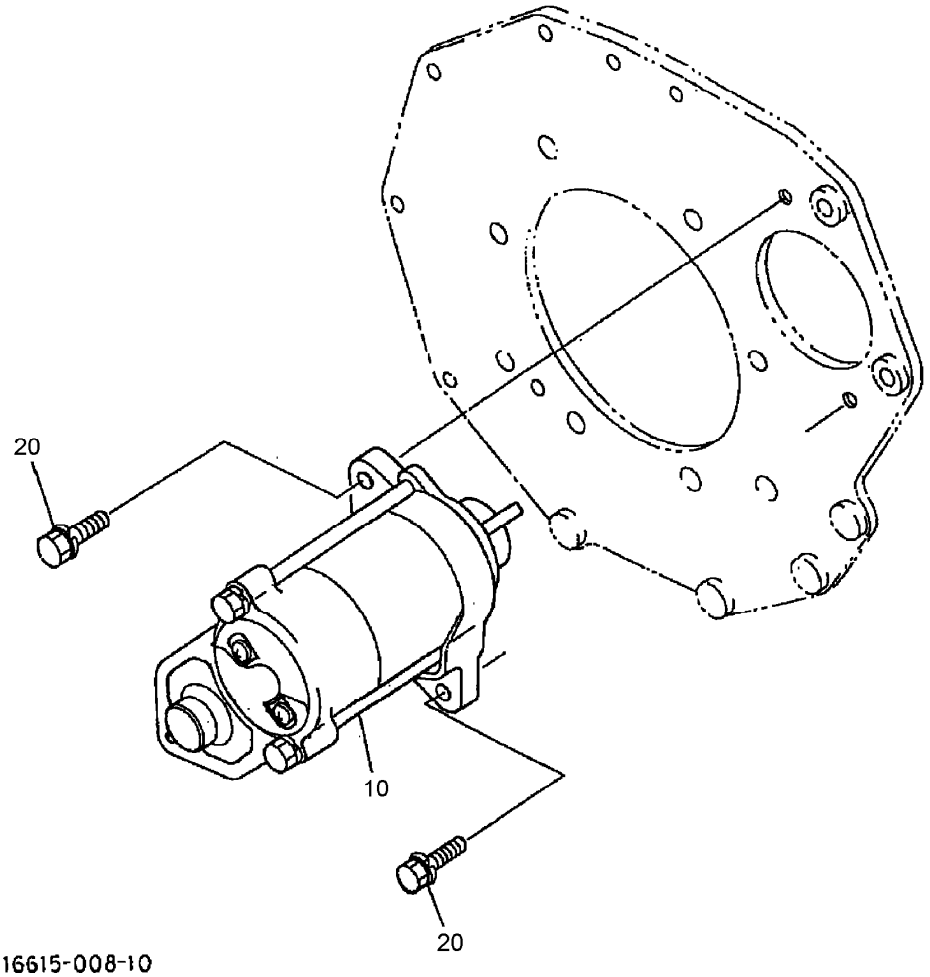
Ref.	*Part Number*	*Qty.*	*Description*
10	98-9474	1	Alternator ASM
20	98-9573	1	Stay-Dynamo
30	98-7697	1	Bolt
40	98-9360	1	Bolt
50	98-7737	1	Nut
60	3256-24	1	Washer-Flat
70	98-7738	1	Washer-Spring
80	100-9233	1	Washer-Plain
90	98-7692	1	Bolt
100	98-9473	1	Pulley-Drive, Fan
110	98-9585	1	Bolt



Alternator (Component Parts) Assembly

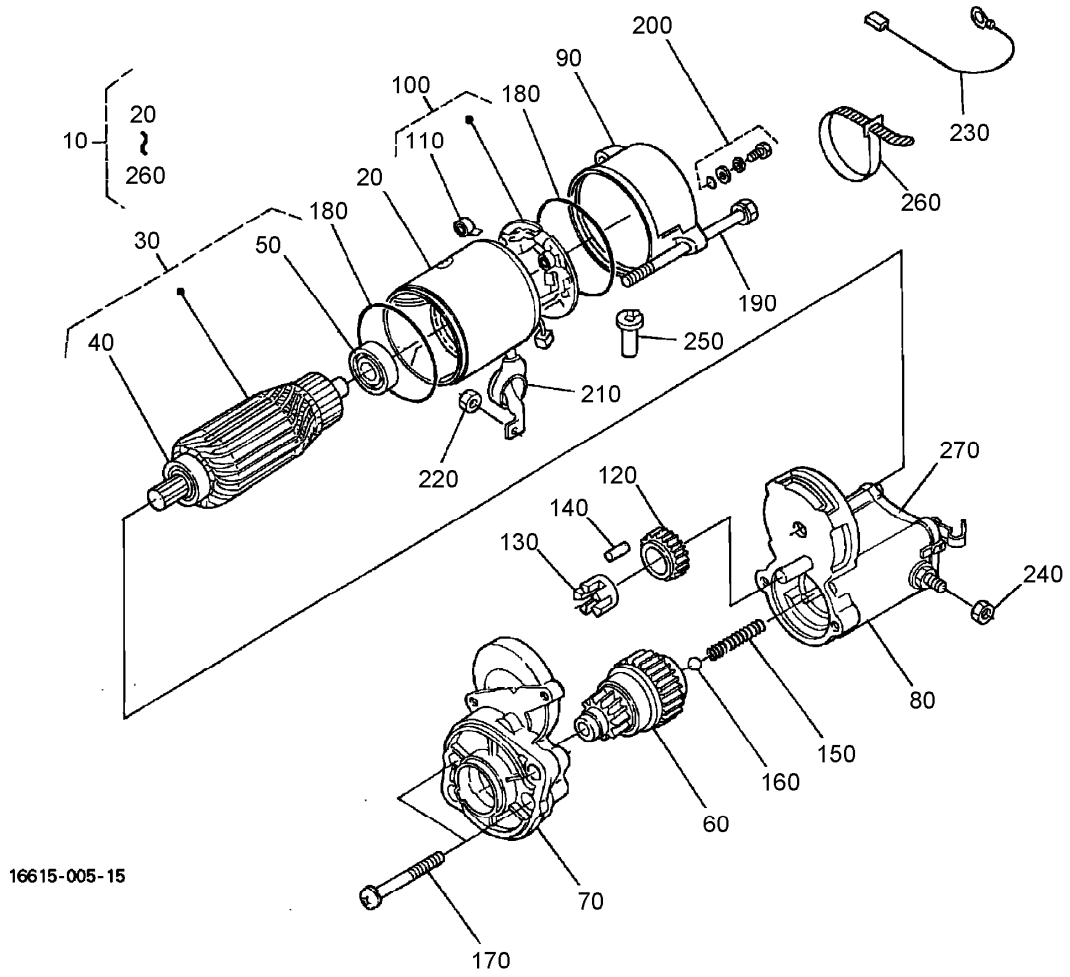
Ref.	Part Number	Qty.	Description
10	98-9474	1	Alternator ASM
20	98-9453	1	Pulley-Dynamo
30	98-7708	1	Nut
40	98-7709	1	Collar
50	107-0136	1	Rotor ASM
60	98-7711	1	Cover-Bearing
70	107-0138	1	Bearing-Ball
80	98-7713	1	Washer-Thrust
90	107-0139	1	Drive End Frame ASM
100	98-7715	1	Plate-Retainer
110	98-7716	4	Screw-Head, Round
120	98-7717	2	Bolt-Through
130	107-0137	1	Bearing-Ball
140	107-9087	1	Frame-End

Ref.	Part Number	Qty.	Description
150	107-0140	1	Cover-End
160	98-9476	1	Rectifier ASM
170	98-7722	1	Bushing-Insulation
180	107-0141	1	Brush Holder ASM
190	98-7724	2	Brush
200	98-7725	2	Spring-Brush
210	98-7726	2	Screw-Head, Round
220	98-7727	6	Screw-Head, Round
230	98-7728	1	Screw-Head, Round
240	98-7729	3	Bolt
250	98-7730	2	Nut
260	98-7731	2	Bolt
270	98-7732	1	Nut
280	107-9088	1	Regulator ASM



Starter Assembly

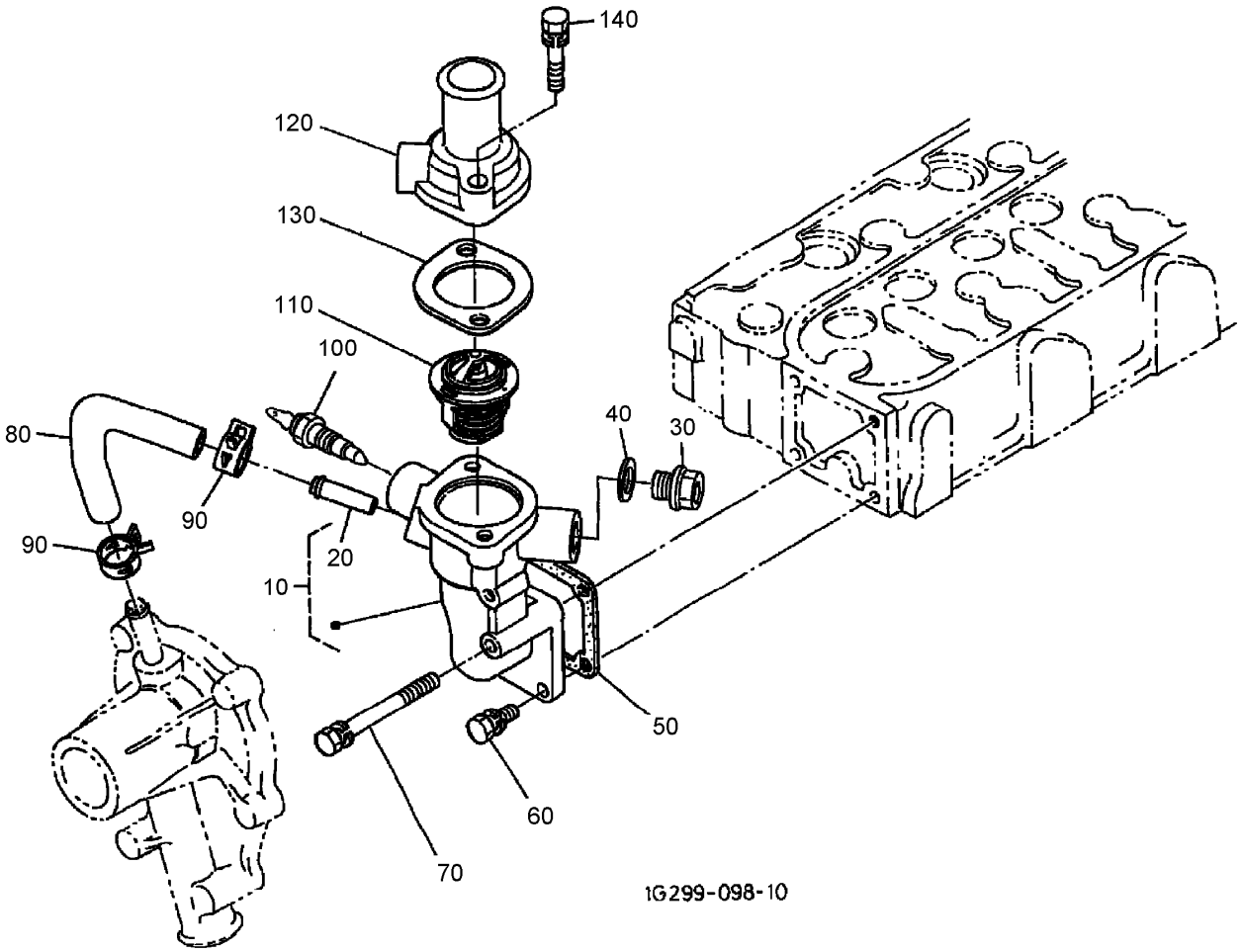
Ref.	*Part Number*	*Qty.*	*Description*
10	98-9705	1	Starter ASM
20	98-7697	2	Bolt



Starter (Component Parts) Assembly

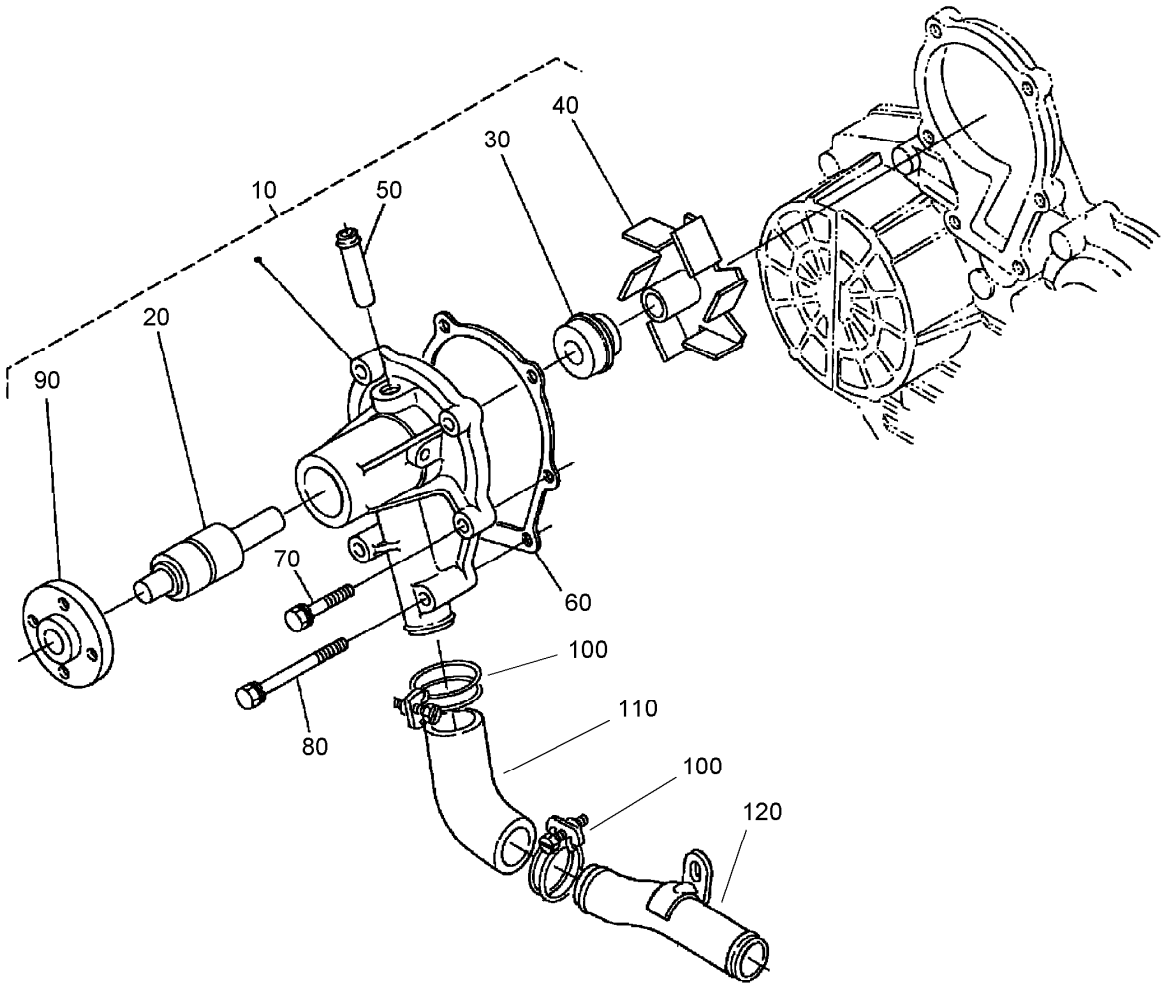
Ref.	Part Number	Qty.	Description
10	98-9705	1	Starter ASM
20	104-8608	1	Yoke ASM
30	98-7742	1	Armature ASM
40	98-7744	1	Bearing
50	98-7743	1	Bearing
60	99-8373	1	Clutch-Running, Over
70	99-8374	1	Frame-End, Drive
80	105-3746	1	Magnetic Switch ASM
90	98-7748	1	Frame-End
100	98-7749	1	Brush Holder ASM
110	98-7750	4	Spring-Brush
120	98-7751	1	Gear
130	98-7752	1	Retainer
140	98-7753	5	Roller

Ref.	Part Number	Qty.	Description
150	98-7754	1	Spring
160	98-7755	1	Ball
170	98-7756	2	Bolt
180	98-7757	2	O-Ring
190	100-9240	2	Bolt
200	98-7758	2	Bolt ASM
210	99-8375	1	Cover
220	99-8371	1	Nut-Hex
230	98-9711	1	Cord-Solenoid, Stop
240	99-8376	1	Nut-Hex
250	98-7759	1	Pipe-Drain
260	98-9712	1	Band-Cover
270	105-2886	1	Cover ASM



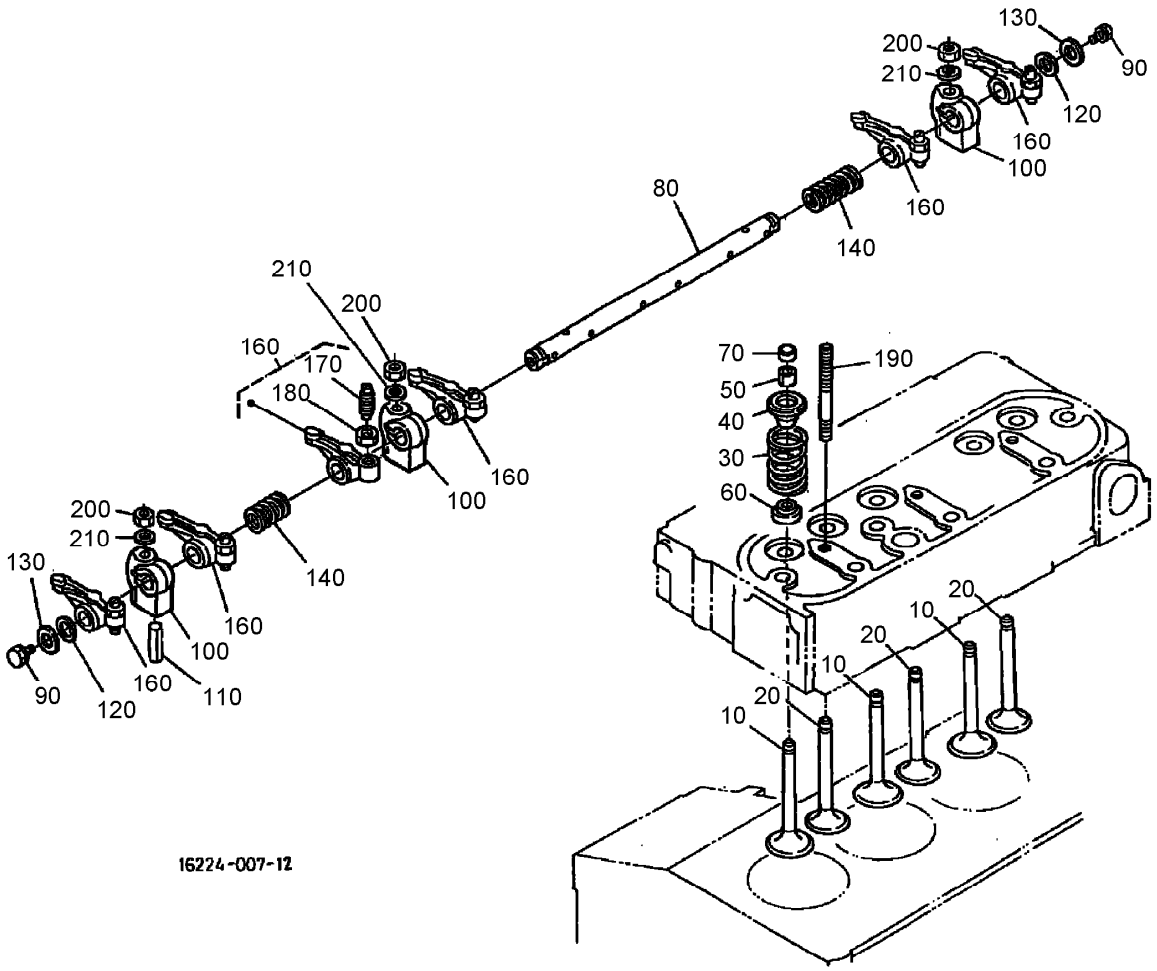
Water Flange and Thermostat Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	98-9713	1	Water Flange ASM
20	98-9580	1	Pipe-Return, Water
30	105-3747	1	Plug
40	99-3583	1	Gasket
50	98-9638	1	Gasket-Flange, Water
60	98-7692	3	Bolt
70	98-9356	1	Bolt
80	98-9578	1	Pipe-Return, Water
90	98-9579	2	Band-Pipe
100	98-9719	1	Thermoswitch
110	98-7778	1	Thermostat ASM
120	98-9471	1	Cover-Thermostat
130	105-3748	1	Gasket-Thermostat
140	98-7777	2	Bolt



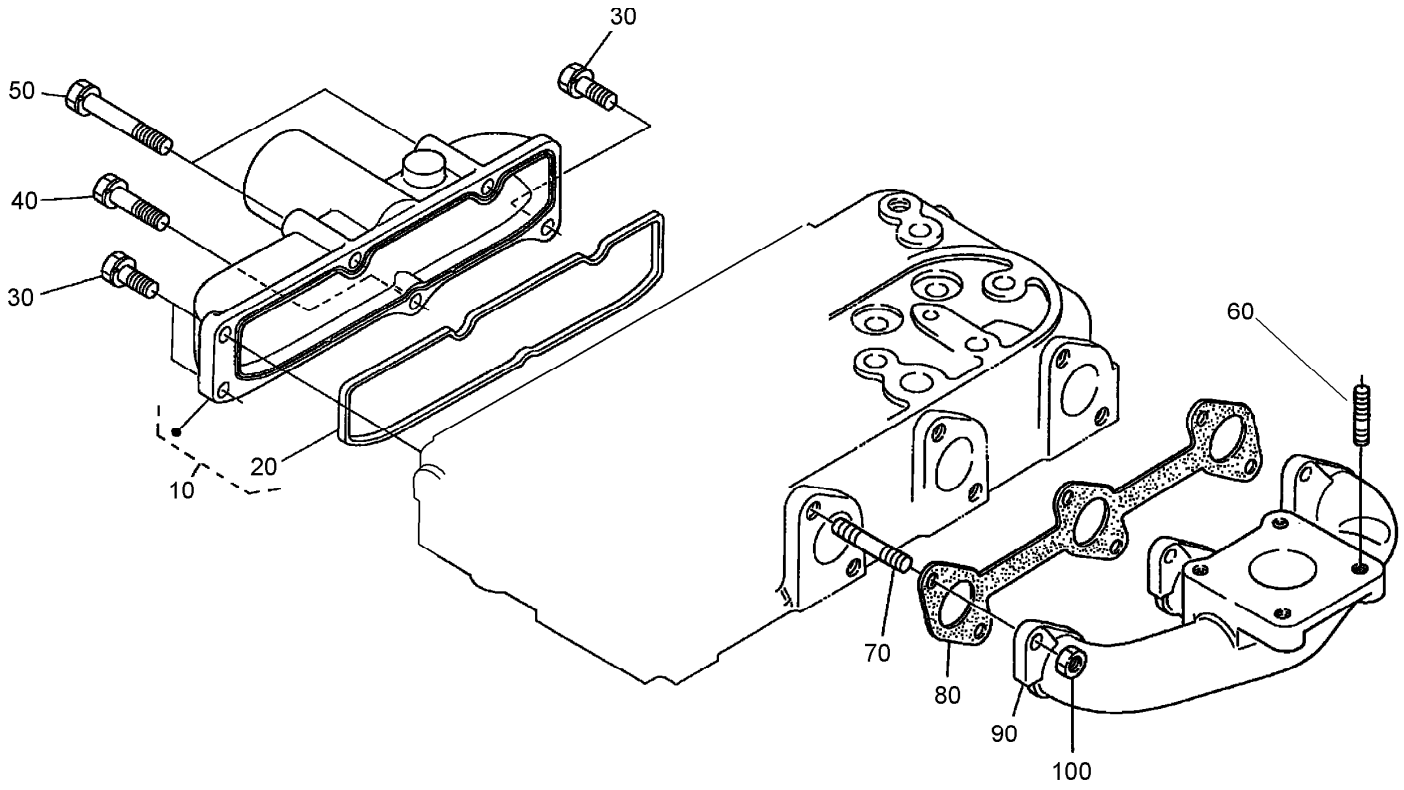
Water Pump Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	107-9089	1	Water Pump ASM
20	99-3517	1	Bearing-Pump, Water
30	105-3750	1	Mechanical Seal ASM
40	99-3519	1	Impeller-Pump, Water
50	98-9577	1	Pipe-Return, Water
60	99-3454	1	Gasket-Pump, Water
70	98-9353	4	Bolt
80	107-9090	2	Bolt
90	99-3516	4	Flange-Pump, Water
100	98-9717	2	Clamp
110	107-9091	1	Pipe-Water
120	98-9716	1	Pipe-Water



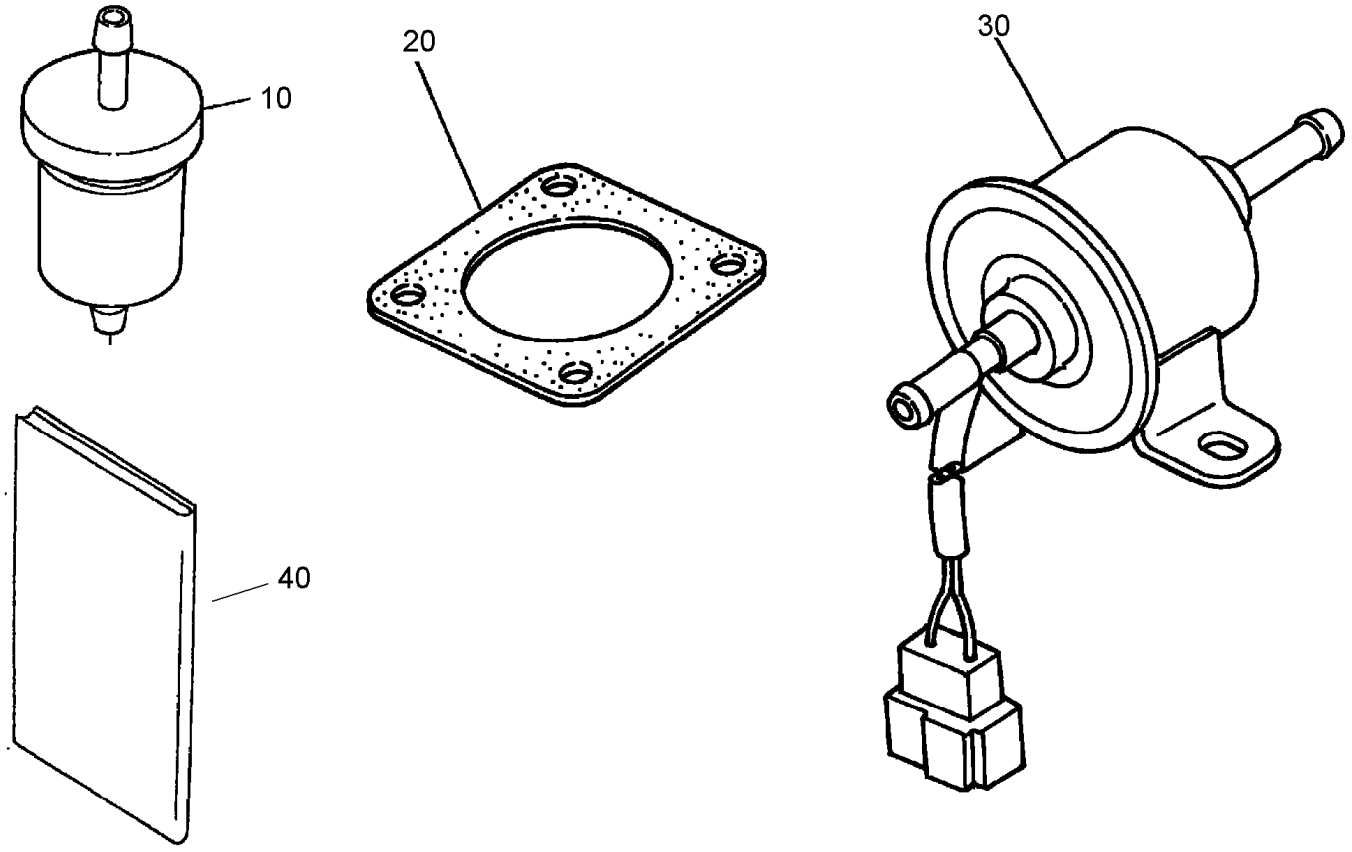
Valve and Rocker Arm Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	98-9494	3	Valve-Inlet
20	98-9495	3	Valve-Exhaust
30	98-9648	6	Spring-Valve
40	107-9092	6	Retainer-Spring
50	98-9390	6	Collet-Spring, Valve
60	99-8385	6	Seal-Stem, Valve
70	98-9497	6	Cap-Valve
80	105-3790	1	R-Arm Shaft ASM
90	100-9265	2	Bolt
100	98-9505	3	Bracket-Arm, Rocker
110	105-3758	1	Pin-Spring
120	98-9507	2	Washer-Shaft, R-Arm
130	3256-1	2	Washer-Flat
140	98-9504	2	Spring-Arm, Rocker
160	98-9501	6	Rocker Arm ASM
170	98-9502	6	Screw-Adjusting
180	98-9503	6	Nut
190	98-9506	3	Stud
200	98-9393	3	Nut
210	98-9385	3	Washer-Flat



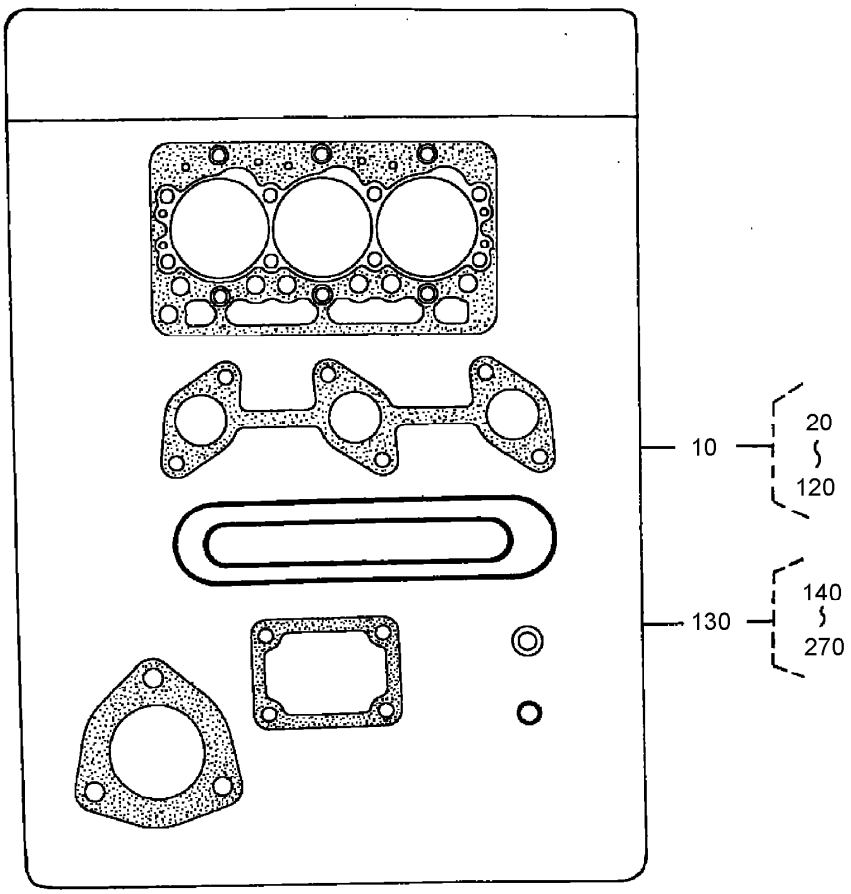
Inlet Manifold Assembly

Ref.	*Part Number*	*Qty.*	*Description*
10	105-3791	1	Inlet Manifold ASM
20	98-9609	1	Gasket-Manifold, Inlet
30	98-7605	3	Bolt
40	98-9353	1	Bolt
50	105-3797	2	Bolt
60	98-7769	4	Stud
70	98-9588	6	Stud
80	98-9610	1	Gasket
90	107-9093	1	Manifold-Exhaust
100	98-9665	6	Nut



Fuel Filter and Pump, Muffler Gasket and Operator Manual

Ref.	*Part Number*	*Qty.*	*Description*
10	98-7612	1	Filter-Fuel
20	99-8343	1	Gasket-Muffler
30	107-0122	1	Pump-Fuel, Electric
40	99-8954	1	Manual-Kubota



19449-018-10

Gasket Kit

Ref.	*Part Number*	*Qty.*	*Description*
10	107-9094	1	Upper Gasket Kit
130	107-9095	1	Lower Gasket Kit

Notes:

Notes:



Count on it.