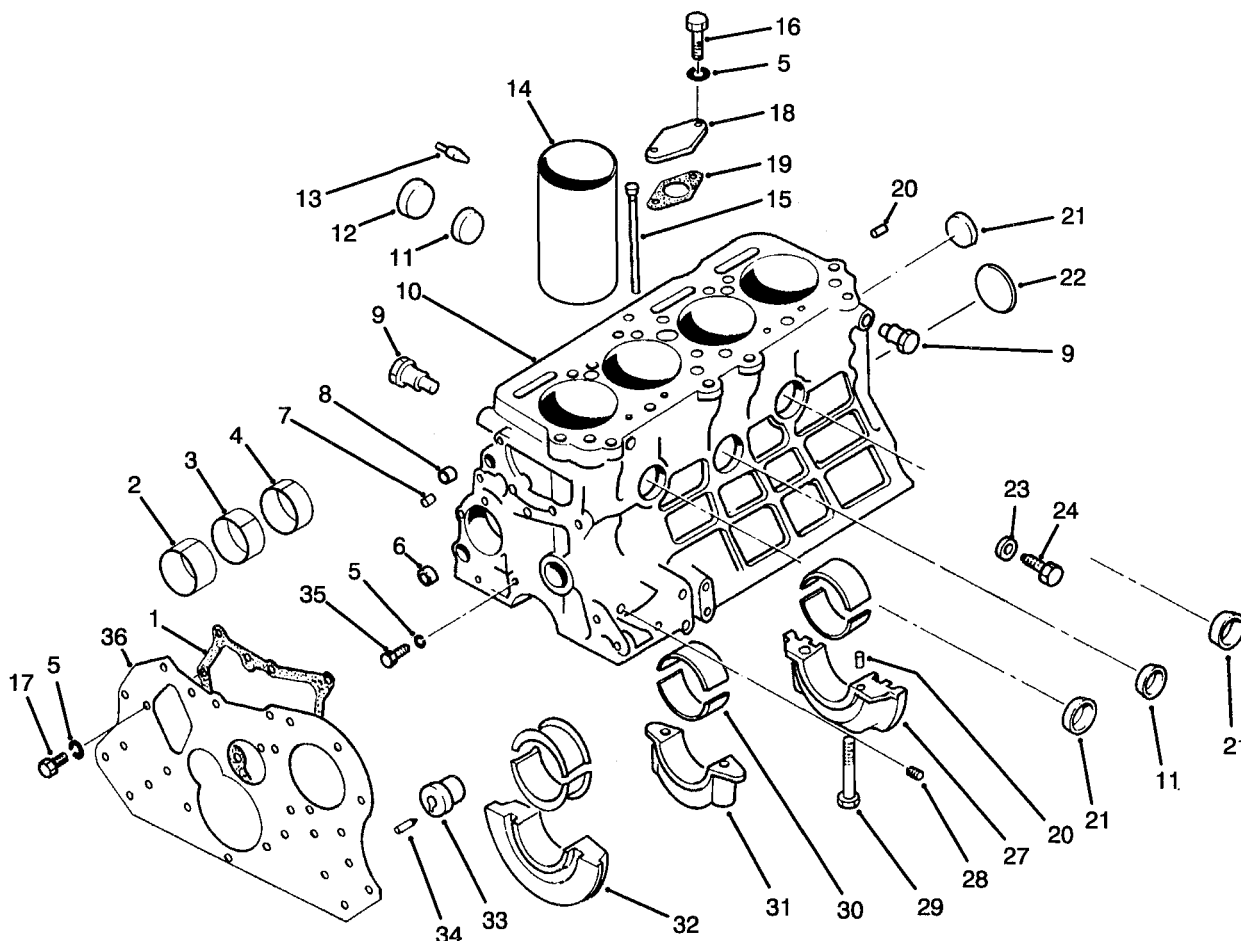


TORO®

MODEL NO. 03700-70001 & UP
MODEL NO. 03701-00001 & UP

PARTS CATALOG

ENGINE ASSEMBLY For All Reelmaster 450D Traction Units



T-0143

CRANKCASE ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	51-5730	Gasket	1
2	51-5500	Bushing - Camshaft No. 1	1
3	51-5510	Bushing - Camshaft No. 2	1
4	51-5520	Bushing - Camshaft No. 3	1
5	51-7250	Washer	5
6	51-5530	Cap - Sealing	2
7	51-5540	Pin - Dowel, Gear Case	2
8	51-5690	Cap	1
9	51-5580	Hanger	2
†10		Crankcase	1
11	51-5600	Cap - Sealing	3
12	51-5670	Cap - Sealing	2
13	51-8260	Switch - Indicator, Oil Pressure	1
14	51-5550	Sleeve - Cylinder Std.	4
*	51-8090	Sleeve - Cylinder O.S.	4
15	51-5560	Pipe - Oil	1

Ref. No.	Part No.	Description	No. Used
16	60-7280	Bolt	2
17	60-7110	Bolt	2
18	51-6480	Cover	1
‡19	51-6490	Gasket	1
20	51-5610	Pin - Dowel	8
21	51-5590	Cap - Sealing	3
22	51-5660	Plug - Expansion	1
23	51-8270	Washer - Sealing	1
24	51-8280	Bolt	1
†27		Cap - Bearing No. 3	1
28	51-7180	Plug - Tapered (Used On Engine Serial No. 148923-157205 Only)	3
*	86-6240	Plug - Tapered (Used On Engine Serial No. 157206 & Up)	3

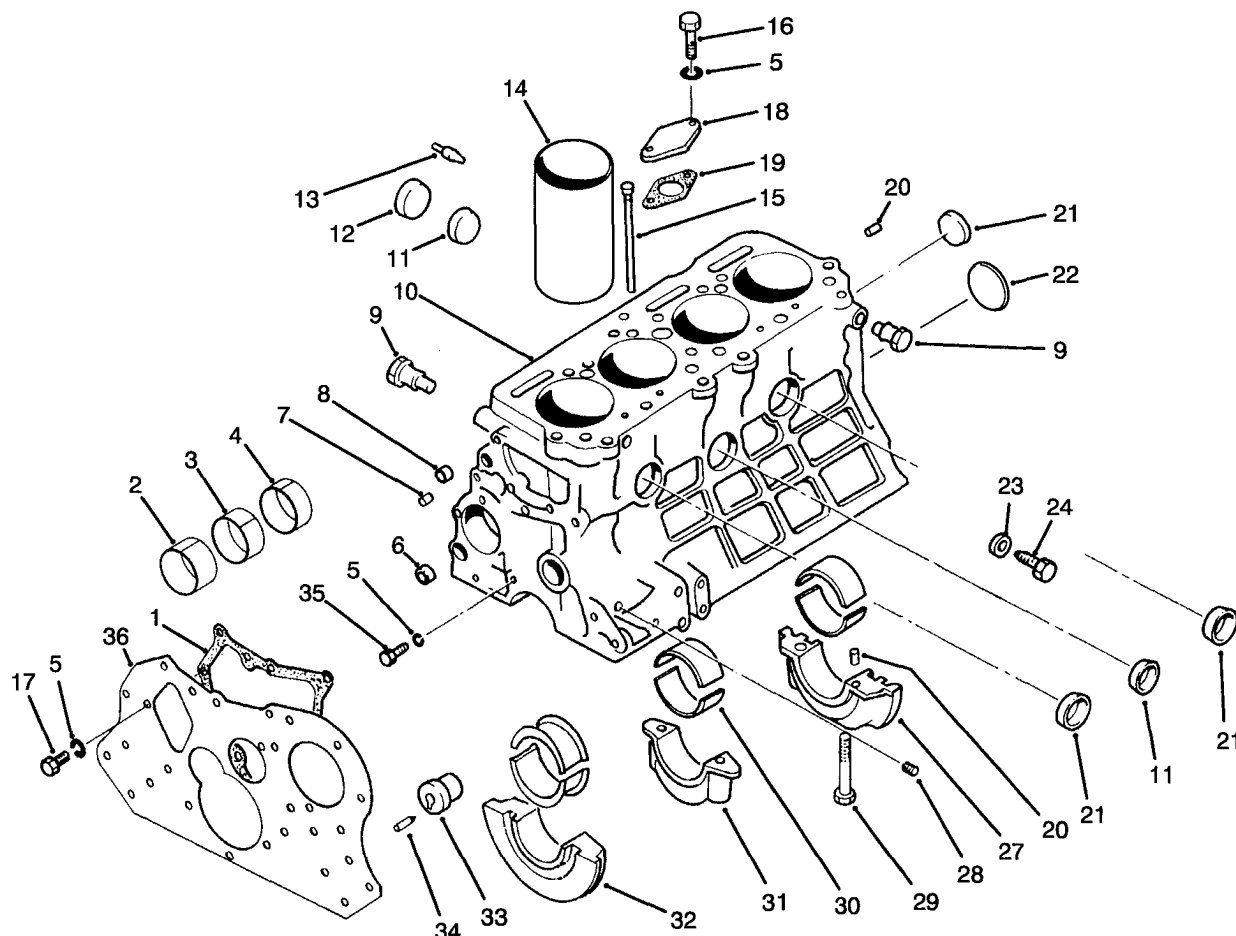
*Not Illustrated

†Not Serviceable Separately

‡Included in Engine Gasket Kit

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TPS



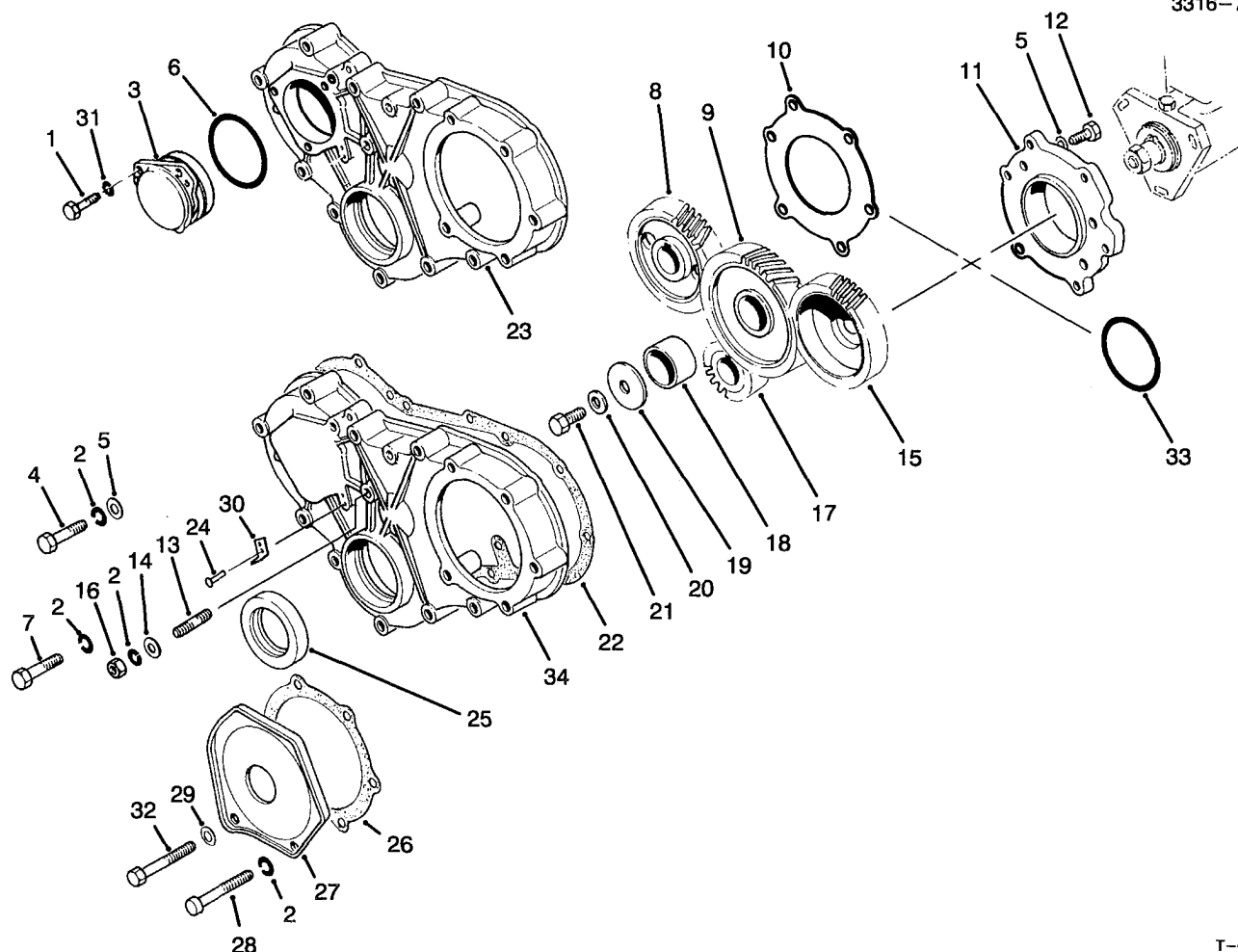
T-0143

CRANKCASE ASSEMBLY (Continued)

Ref. No.	Part No.	Description	No. Used	Ref. No.	Part No.	Description	No. Used
29	51-5620	Bolt (Used On Engine Serial No. 148923-156017 Only)	6	33	51-5640	Idler Gear Shaft Assembly (Incl. Ref. #34)	1
*	86-6230	Bolt (Used On Engine Serial No. 156018 & Up)	6	34	51-5650	Pin - Spring	1
30	51-5770	Bearing Set Std.	1	35	60-7310	Bolt	1
*	51-8100	Bearing Set 0.25mm U.S.	1	36	51-5720	Plate - Front (Used On Engine Serial No. 148923-156231 Only)	1
*	51-8110	Bearing Set 0.50mm U.S.	1	*	86-6250	Plate - Front (Used On Engine Serial No. 156232 & Up)	1
*	51-8120	Bearing Set 0.75mm U.S.	1	*	82-2950	Engine Gasket Kit	1
†31		Cap - Bearing No. 2	1				
†32		Cap - Bearing No. 1	1				

*Not Illustrated

†Not Serviced Separately



T-0146

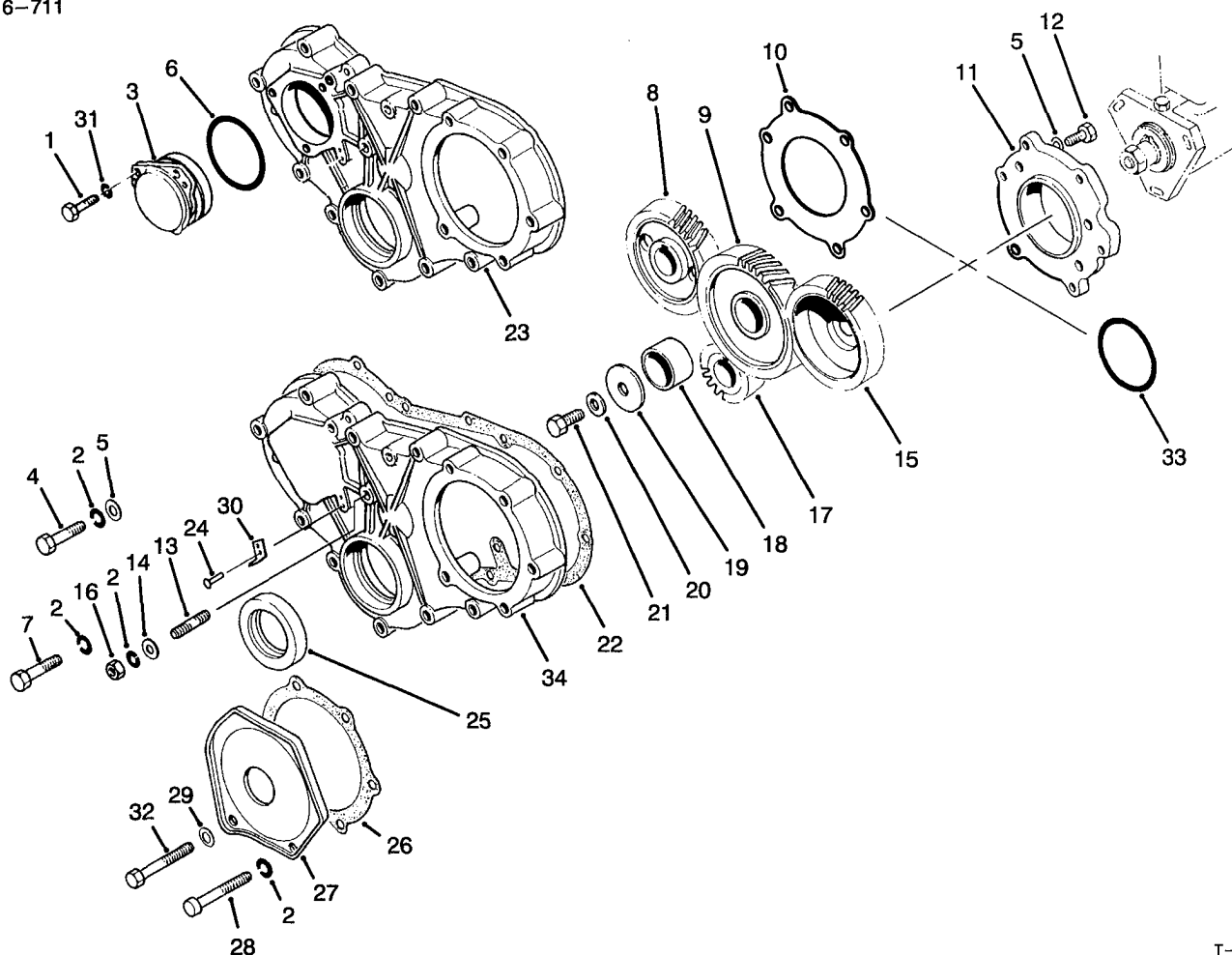
TIMING GEAR & CASE COMPONENTS

Ref. No.	Part No.	Description	No. Used
1	60-7110	Bolt (Used On Engine Serial No. 148923-159664 Only)	3
2	51-7250	Washer - Spring	17
3	60-7080	Case (Used On Engine Serial No. 148923-159664 Only)	1
4	60-7040	Bolt	1
5	51-5160	Washer	2
‡6	60-7060	O-Ring (Used On Engine Serial No. 148923-159664 Only)	1
7	60-7050	Bolt	8
8	51-6410	Gear - Camshaft	1
9	51-6420	Idler Gear Assembly (Incl. Ref. #18) (Used On Engine Serial No. 148923-169737)	1
*	86-6290	Idler Gear Assembly (Incl. Ref. #18) (Used On Engine Serial No. 169738 & Up)	1
‡10	60-5050	Gasket - Flange Plate (Used On Engine Serial No. 148923-159664 Only)	1
11	60-7200	Plate - Flange	1

Ref. No.	Part No.	Description	No. Used
12	51-8310	Bolt	1
13	60-7150	Stud	3
14	60-5060	Washer (Used On Engine Serial No. 148923-159664 Only)	3
*	86-6380	Retainer (Used On Engine Serial No. 159665 & Up)	3
15	60-7230	Gear - Injector Pump (Used On Engine Serial No. 148923-155844 Only)	1
15	86-6310	Gear - Injector Pump (Used On Engine Serial No. 155845 & Up)	1
16	60-7120	Nut	3
17	51-6450	Gear - Crankshaft	1
18	51-6430	Bushing (Used On Engine Serial No. 148923-169737)	1
*	86-6300	Bushing (Used On Engine Serial No. 169738 & Up)	1
19	51-6400	Plate - Thrust	1
20	51-6390	Washer	1
21	60-7210	Bolt	1
‡22	51-5820	Gasket	1

*Not Illustrated

‡Included in Engine Gasket Kit



T-0146

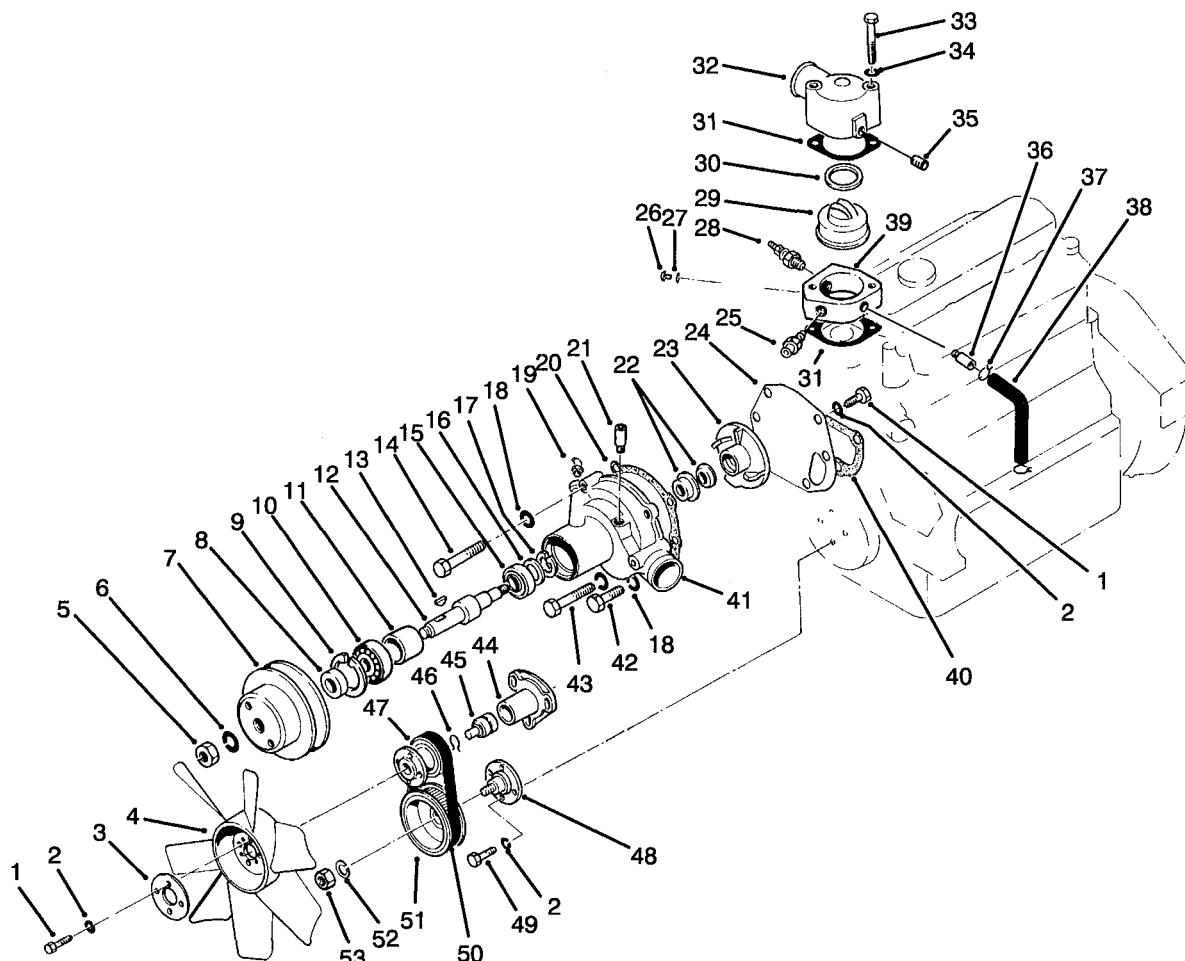
TIMING GEAR & CASE COMPONENTS (Continued)

Ref. No.	Part No.	Description	No. Used
23	60-7100	Case - Timing Gear (Used On Engine Serial No. 148923-159664 Only)	1
24	60-7160	Rivet	2
25	51-5870	Seal	1
‡26	51-5860	Gasket	1
27	51-5850	Cover	1
28	60-7180	Bolt (Used On Engine Serial No. 148923-159664 Only)	5
*	60-7180	Bolt (Used On Engine Serial No. 159665 & Up)	1
‡29	51-5840	Washer - Sealing	1

Ref. No.	Part No.	Description	No. Used
30	60-7170	Pointer	1
31	51-7250	Washer (Used On Engine Serial No. 148923-159664 Only)	3
32	60-6780	Bolt (Used On Engine Serial No. 159665 & Up)	4
‡33	60-7060	O-Ring (Used On Engine Serial No. 159665 & Up)	1
34	86-6260	Case - Timing Gear (Used On Engine Serial No. 159665 & Up)	1

*Not Illustrated

‡Included in Engine Gasket Kit



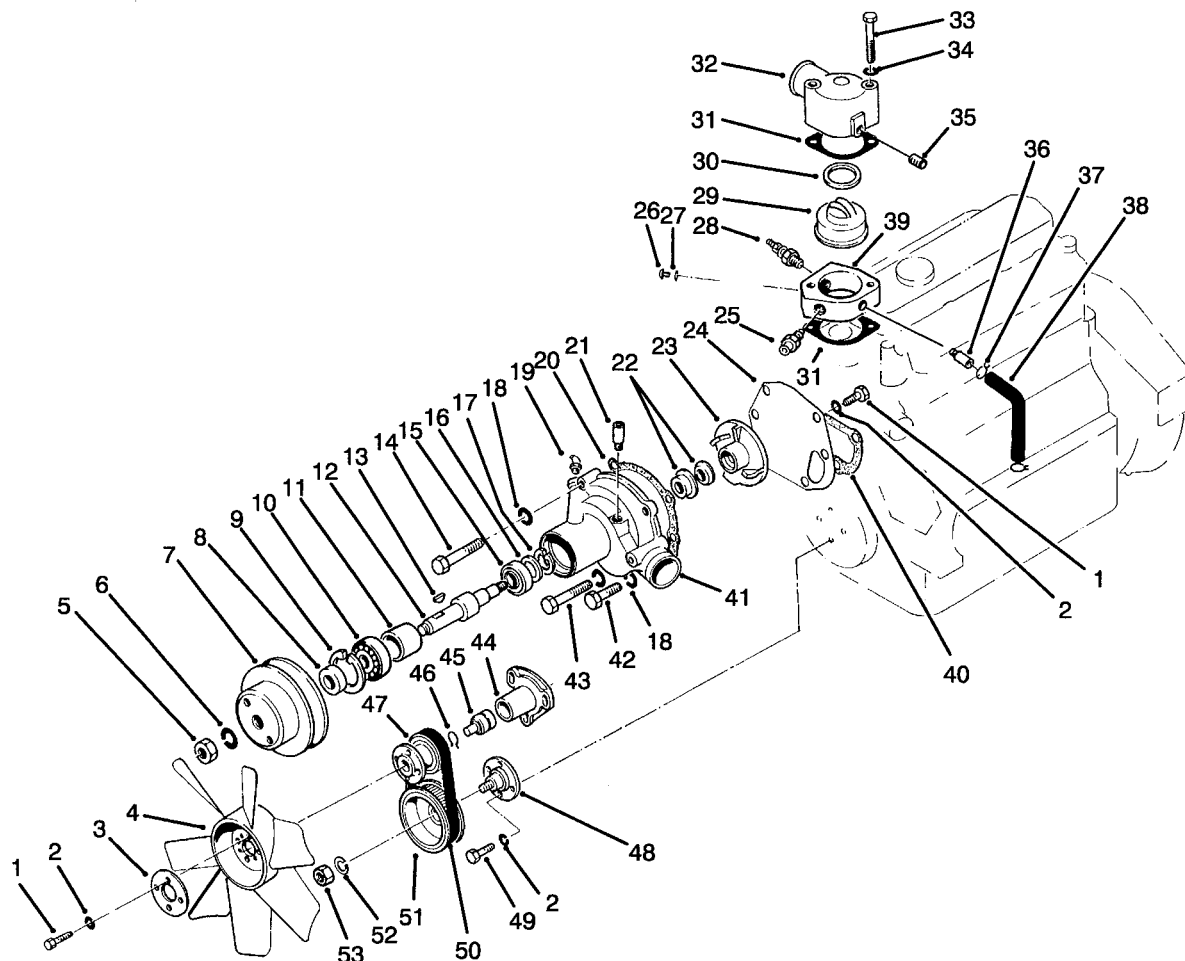
T-0148

WATER PUMP & THERMOSTAT HOUSING ASSEMBLY

Ref. No.	Part No.	Description	No. Used	Ref. No.	Part No.	Description	No. Used
1	60-7010	Screw - Cap Hex. Hd.	6	17	86-6350	Ring - Retaining (Used On Engine Serial No. 156017 & Up)	1
2	51-7250	Washer - Spring	10	18	51-6390	Washer - Spring	4
3	51-7270	Plate - Washer	1	19	51-7020	Fitting - Grease	1
4	49-0130	Fan	1	‡20	51-7010	Gasket	1
5	51-6910	Nut - Jam	1	21	51-6990	Pipe (Used On Engine Serial No. 148923-156016 Only)	1
6	51-6920	Washer - Spring	1	*	86-6330	Pipe (Used On Engine Serial No. 156017 & Up)	1
7	51-7130	Pulley - Water Pump	1	22	51-7030	Seal Unit	1
8	51-6930	Spacer - Water Pump	2	23	51-7040	Impeller (Used On Engine Serial No. 148923-156016 Only)	1
9	51-6940	Ring - Retaining	1	*	86-6340	Impeller (Used On Engine Serial No. 156017 & Up)	1
10	51-6950	Bearing - Ball	1	24	51-7050	Cover	1
11	86-6370	Spacer (Used On Engine Serial No. 156017 & Up)	1	25	60-5590	Switch - Temp.	1
12	51-6970	Shaft (Used On Engine Serial No. 148923-156016 Only)	1	26	62-6320	Screw - Brass	1
*	86-6320	Shaft (Used On Engine Serial No. 156017 & Up)	1	27	3255-5	Washer - Lock	1
13	51-6960	Key - Woodruff	1	28	82-3110	Sender - Temp.	1
14	51-4930	Bolt	1	29	51-7230	Thermostat	1
15	51-6980	Bearing - Ball	1	‡30	51-7220	Gasket	1
16	86-6360	Washer (Used On Engine Serial No. 156017 & Up)	1				

*Not Illustrated

‡Included in Engine Gasket Kit



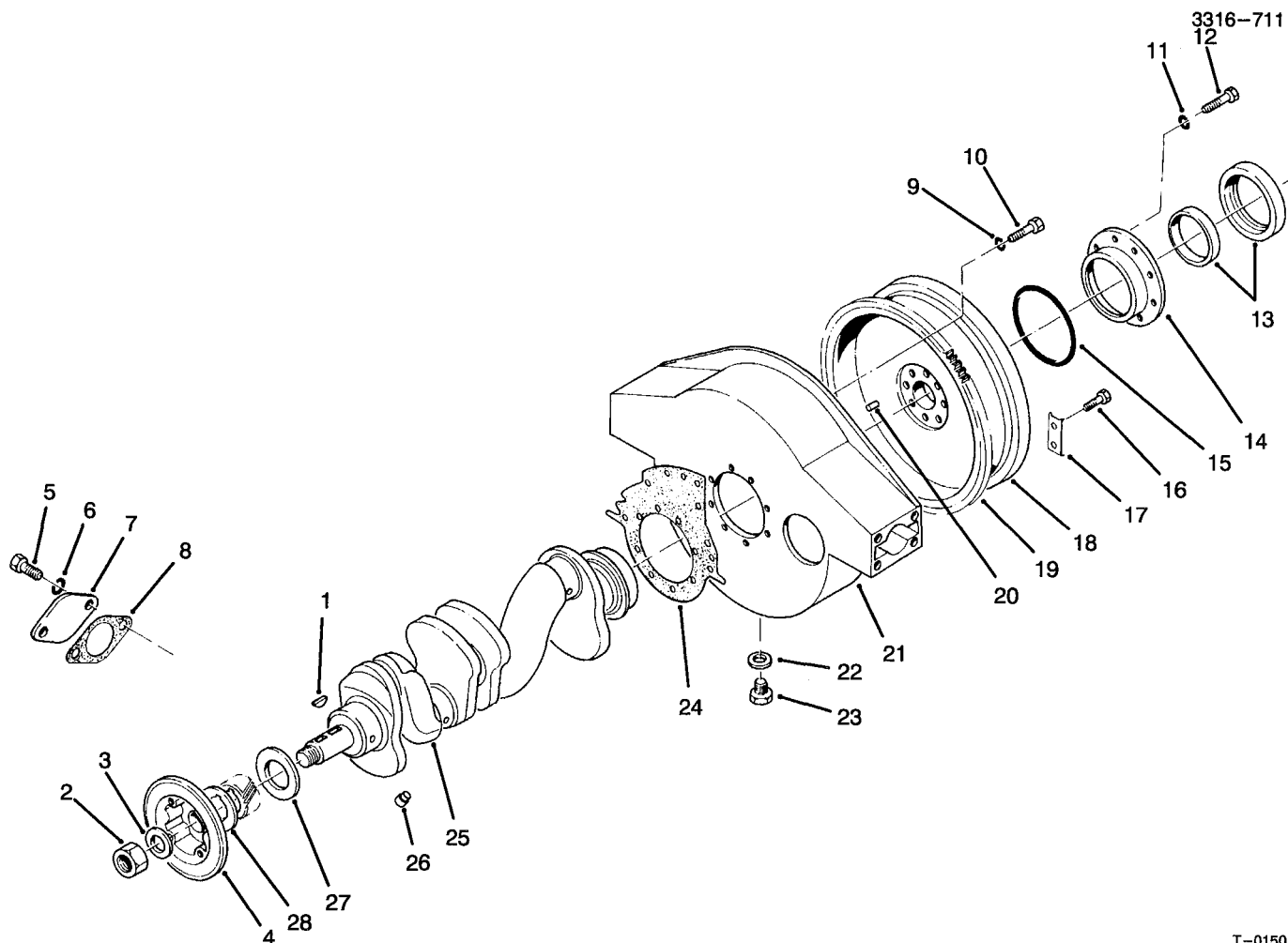
T-0148

WATER PUMP & THERMOSTAT HOUSING ASSEMBLY (Continued)

Ref. No.	Part No.	Description	No. Used
‡31	51-7210	Gasket	2
32	51-7160	Elbow Assembly (Incl. Ref. #28)	1
33	68-6030	Bolt	2
34	3253-4	Washer - Lock	10
35	281-7	Plug	1
36	51-7170	Pipe	1
37	51-7200	Clamp - Hose	2
38	51-7190	Hose - By-Pass	1
39	58-2110	Housing - Thermostat	1
‡40	51-7080	Gasket	1
41	51-8240	Water Pump Assembly (Incl. Ref. #1, 2, 5-13, 15-20, 34-38 & 51-53)	1

Ref. No.	Part No.	Description	No. Used
42	51-4910	Bolt	2
43	51-4920	Bolt	1
44	60-5280	Housing - Support	1
45	60-5290	Bearing & Shaft Assembly	1
46	60-5310	Wire - Retaining	1
47	60-5300	Pulley - Driver	1
48	60-5320	Shaft - Drive	1
49	60-7280	Bolt	4
50	62-6390	Belt	1
51	60-5200	Pulley - Drive	1
52	60-5230	Washer - Spring	1
53	60-5220	Nut	1

‡Included in Engine Gasket Kit



T-0150

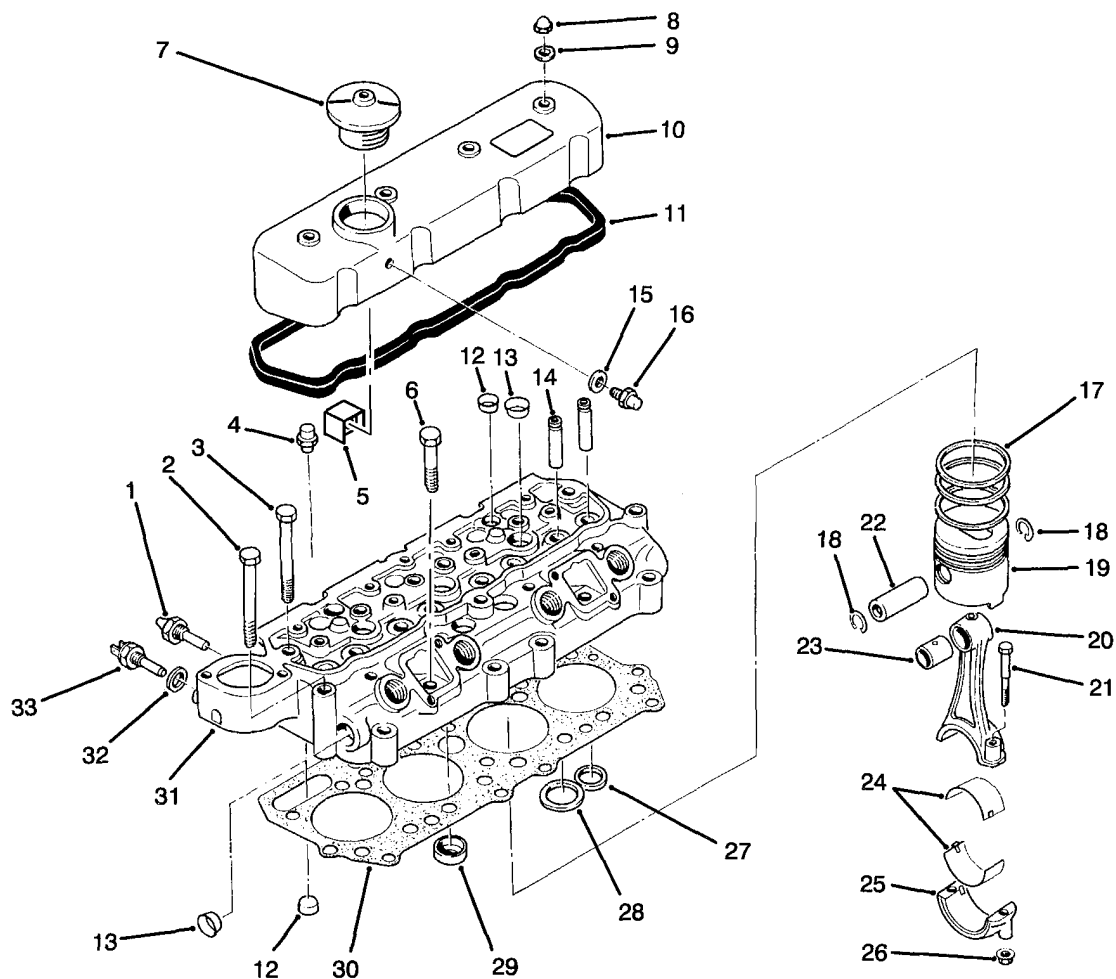
CRANKSHAFT & FLYWHEEL HOUSING COMPONENTS

Ref. No.	Part No.	Description	No. Used
1	51-5460	Key - Woodruff	2
2	60-5220	Nut	1
3	51-6270	Washer	1
4	51-6310	Pulley - Crankshaft	1
5	60-7110	Bolt	2
6	51-7250	Washer - Spring	2
7	51-6010	Cover	1
‡8	51-6020	Gasket	1
9	51-6390	Washer - Spring	7
10	60-7480	Bolt	7
11	51-7400	Washer - Spring	8
12	60-7490	Bolt	8
13	60-7430	Oil Seal Assembly	1
14	51-5900	Case - Seal, Oil	1
‡15	51-5910	O-Ring	1
16	51-6370	Bolt - Seal	4
17	51-6360	Washer - Lock	2
18	51-6340	Flywheel Assembly (Incl. Ref. #19)	1
19	51-6350	Gear - Ring	1
20	51-6300	Pin - Dowel	2

Ref. No.	Part No.	Description	No. Used
21	51-5940	Housing - Flywheel	1
‡22	51-6100	Gasket - Housing, Flywheel	1
23	51-6030	Plug	1
‡24	51-5980	Gasket (Used On Engine Serial No. 148923-159664 Only)	1
‡*	86-6270	Gasket (Used On Engine Serial No. 159665 & Up)	1
25	51-6250	Crankshaft Assembly (Incl. Ref. #1-3, & 20) (Used On Engine Serial No. 148923-155844 Only)	1
*	86-6280	Crankshaft Assembly (Incl. Ref. #1-3, & 20) (Used On Engine Serial No. 155845 & Up)	1
26	60-7470	Plug	4
27	51-6330	Plate - Thrust	1
28	51-6320	Plate - Baffle	1

*Not Illustrated

‡Included in Engine Gasket Kit



T-0151

CYLINDER HEAD & PISTON COMPONENTS

Ref. No.	Part No.	Description	No. Used
1	51-7050	Switch - Temp. Warning	1
2	63-4740	Bolt - Cylinder Head	2
3	51-5040	Bolt - Cylinder Head	10
4	51-5050	Connector - Fitting	1
5	51-5410	Cover	1
6	51-5030	Bolt - Cylinder Head	5
7	51-5350	Cap - Oil Fill	1
8	51-5360	Nut - Cap	4
†9	51-5370	Gasket	4
10	51-5380	Rocker Cover Assembly (Incl. Ref. #5,15-16)	1
‡11	51-5420	Gasket - Rocker Cover	1
12	51-5530	Cap - Sealing	6
13	51-4940	Cap - Sealing	10

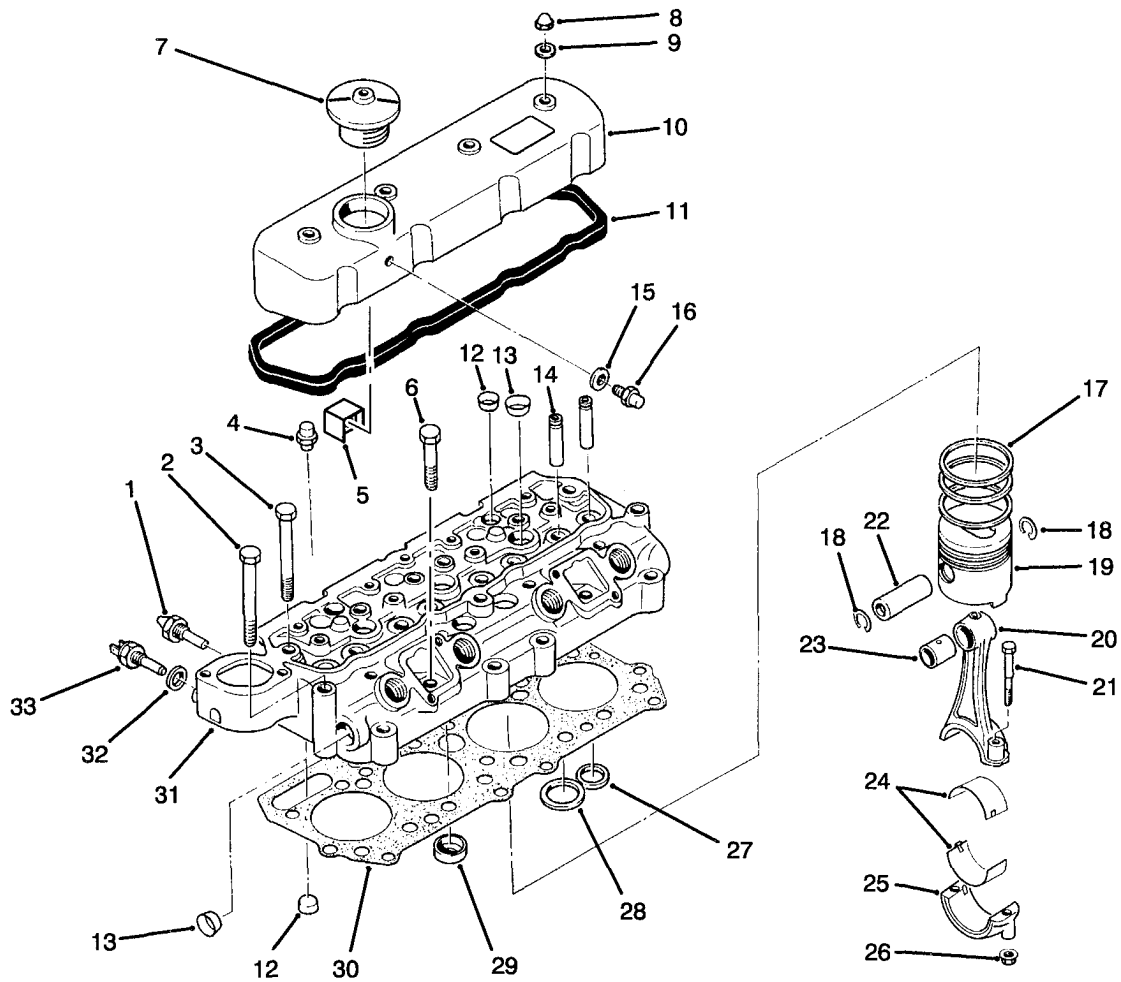
Ref. No.	Part No.	Description	No. Used
14	51-4950	Guide - Valve (Used On Engine Serial No. 148923-152578 Only)	8
*	86-6200	Guide - Valve (Used On Engine Serial No. 152579 & Up)	8
‡15	51-5390	Washer - Sealing	1
16	51-5400	Connector	1
17	51-6160	Piston Ring Set Std. (O.S. 0.25 mm)	1
*	51-8130	Piston Ring Set (O.S. 0.50 mm)	1
*	51-8140	Piston Ring Set (O.S. 0.75 mm)	1
*	51-8150	Piston Ring Set (O.S. 0.75 mm)	1
18	51-6190	Ring - Snap	8

*Not Illustrated

†Not Serviceable Separately

‡Included in Engine Gasket Kit

Note: Dimensions listed in millimeters to convert to inches; divide mm by 25.4.



T-0151

CYLINDER HEAD & PISTON COMPONENTS (Continued)

Ref. No.	Part No.	Description	No. Used
19	86-6150	Piston Std. (Used On Engine Serial No. 148923-159664 Only)	4
*	72-0240	Piston Std. (Used On Engine Serial No. 159665 & Up)	4
*	86-6160	Piston O.S. 0.25 mm (Used On Engine Serial No. 148923-159664 Only)	4
*	82-2920	Piston O.S. 0.25 mm (Used On Engine Serial No. 159665 & Up)	4
*	86-6170	Piston O.S. 0.50 mm (Used On Engine Serial No. 148923-159664 Only)	4
*	82-2930	Piston O.S. 0.50 mm (Used On Engine Serial No. 159665 & Up)	4
*	86-6180	Piston O.S. 0.75 mm (Used On Engine Serial No. 148923-159664 Only)	4
*	82-2940	Piston O.S. 0.75 mm (Used On Engine Serial No. 159665 & Up)	4

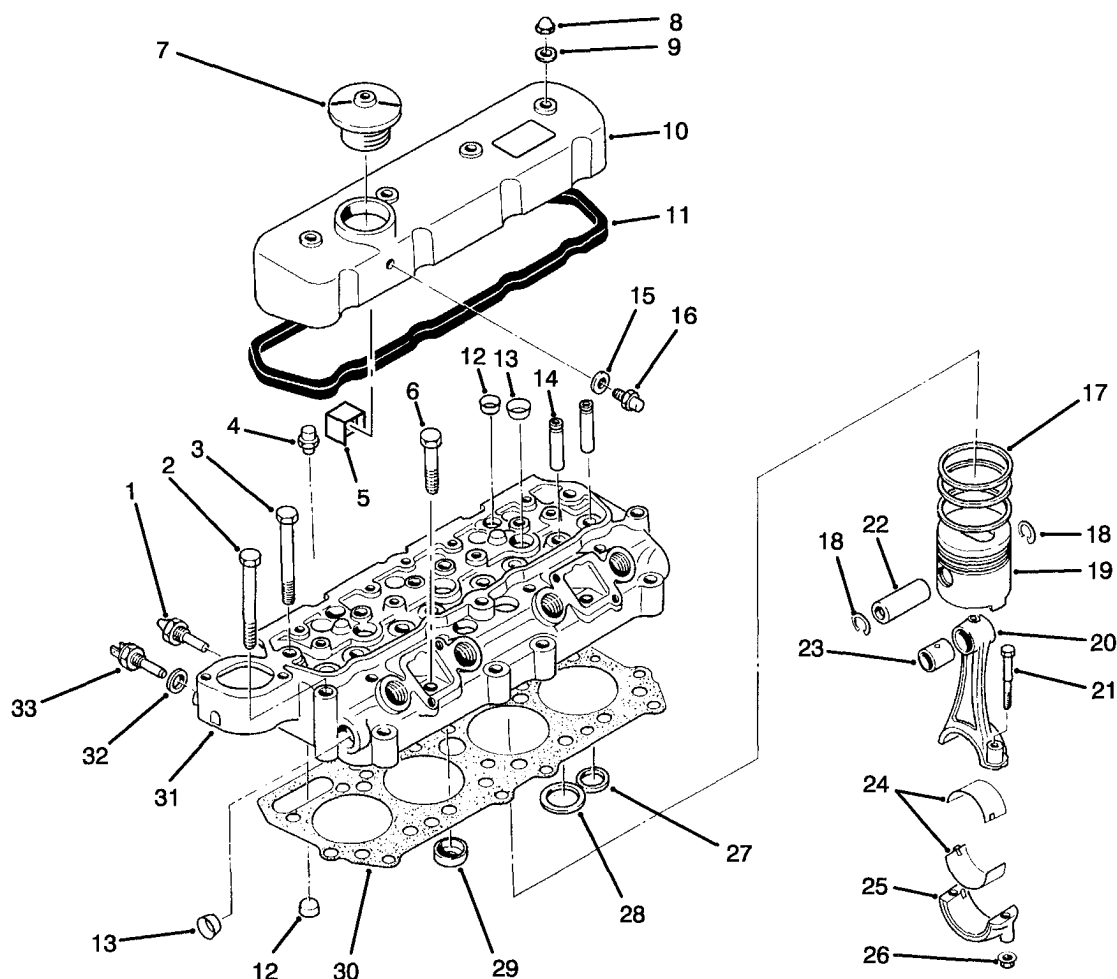
Ref. No.	Part No.	Description	No. Used
20	51-6200	Connecting Rod Assembly (Incl. Ref. #21, 23, 25 & 26)	4
21	51-6220	Bolt	8
22	51-6180	Pin - Piston	4
23	51-6210	Bushing	4
24	51-6240	Bearing - Connecting Rod (Std.)	8
*	51-8190	Bearing - Connecting Rod U.S. 0.25mm	8
*	51-8200	Bearing - Connecting Rod U.S. 0.50mm	8
*	51-8210	Bearing - Connecting Rod U.S. 0.75mm	8
†25		Cap - Connecting Rod	4
26	51-6230	Nut	8
27	51-4970	Insert - Valve Seat, Exhaust	4
28	51-4980	Insert - Valve Seat, Inlet	4

*Not Illustrated

†Not Serviceable Separately

‡Included in Engine Gasket Kit

Note: Dimensions listed in millimeters to convert to inches; divide mm by 25.4.



T-0151

CYLINDER HEAD & PISTON COMPONENTS (Continued)

Ref. No.	Part No.	Description	No. Used
29	51-4990	Jet - Combustion Std. (Used On Engine Serial No. 148923-159664 Only)	4
*	72-0230	Jet - Combustion Std. (Used On Engine Serial No. 159665 & Up)	4
*	51-8080	Jet - Combustion O.S. (Used On Engine Serial No. 148923-159664 Only)	4
‡30	51-5000	Gasket - Cylinder Head (Used On Engine Serial No. 148923-158612 Only)	1
‡*	86-6190	Gasket - Cylinder Head (Used On Engine Serial No. 158613 & Up)	1

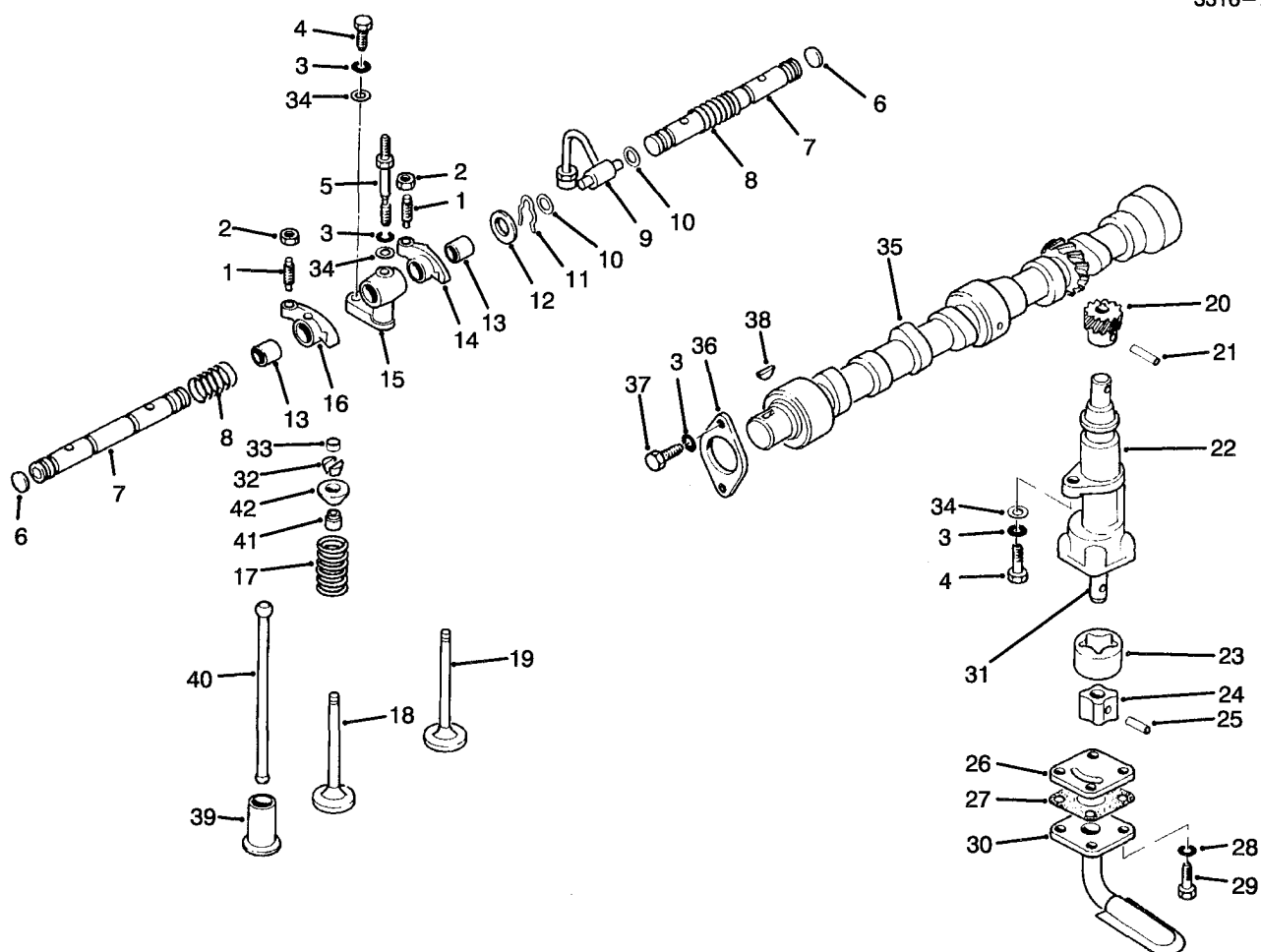
Ref. No.	Part No.	Description	No. Used
31	51-4900	Cylinder Head Assembly (Incl. Ref. #12-14 & 27-29) (Used On Engine Serial No. 148923-159664 Only)	1
*	72-0220	Cylinder Head Assembly (Incl. Ref. #12-14 & 27-29) (Used On Engine Serial No. 159665 & Up)	1
32	51-6890	Gasket	1
33	59-7950	Switch - Cold Start	1

*Not Illustrated

†Not Serviceable Separately

‡Included in Engine Gasket Kit

Note: Dimensions listed in millimeters to convert to inches; divide mm by 25.4.



T-0152

VALVE, CAMSHAFT & PUMP COMPONENTS

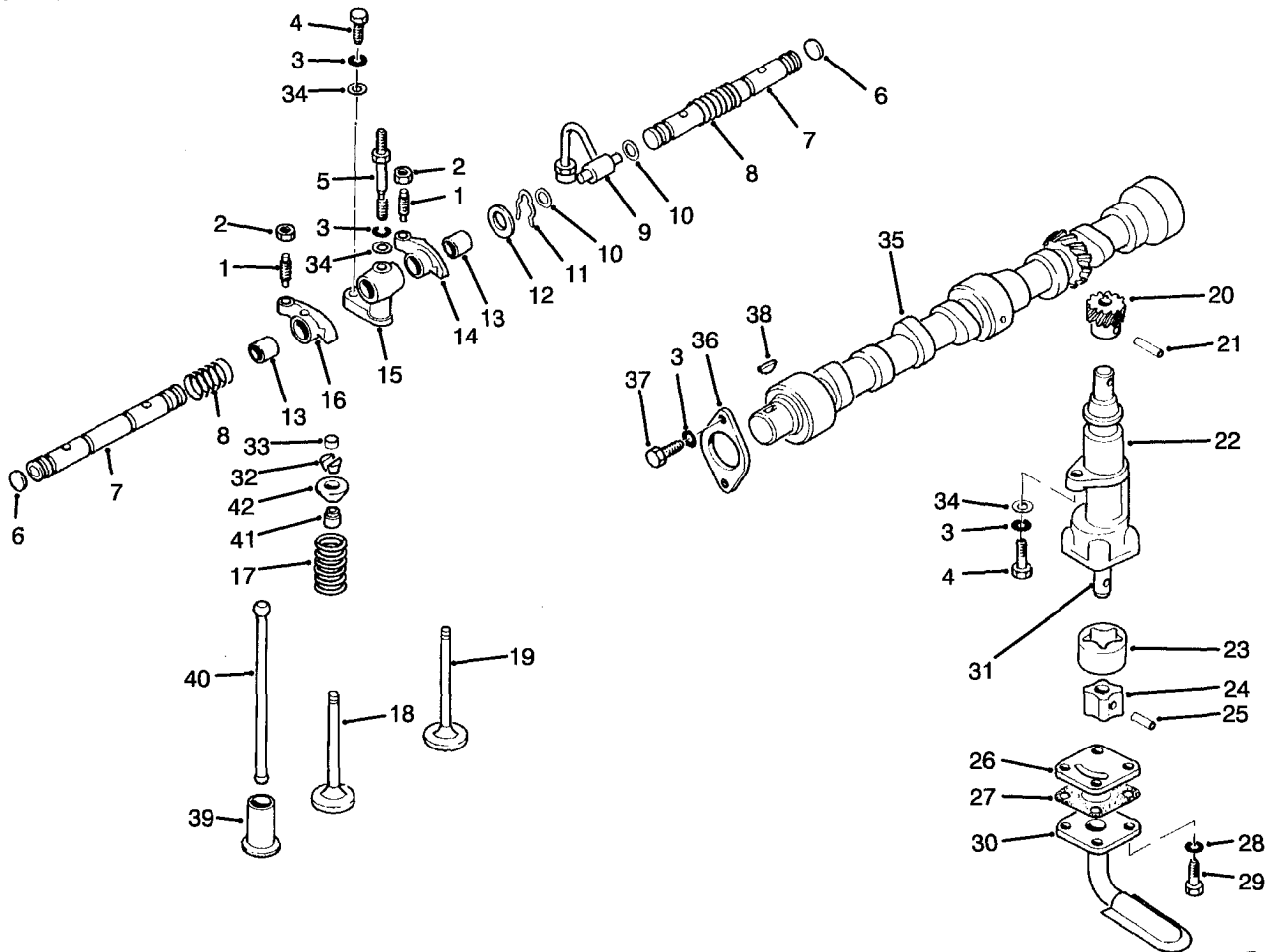
Ref. No.	Part No.	Description	No. Used
1	51-5130	Screw - Adjusting	8
2	51-5210	Nut - Jam	8
3	51-7250	Washer - Spring	11
4	60-7370	Bolt	5
5	51-5190	Bolt	4
6	51-5090	Plug - Expansion	2
7	51-5080	Rocker Shaft Assembly (Incl. Ref. #6)	2
8	51-5100	Spring - Rocker Shaft	2
9	51-5250	Pipe - Oil	1
†10	51-5240	Seal - O-Ring	2
11	51-5260	Ring - Snap	4
12	51-5270	Washer	4
13	51-5120	Bushing - Rocker	8
14	51-5200	Rocker Assembly (Incl. Ref. #1, 2 & 13)	4
15	51-5150	Bracket - Rocker Shaft	4
16	51-5110	Rocker Assembly (Incl. Ref. #1, 2 & 13)	4
17	51-5320	Spring - Valve	8
18	51-5340	Valve - Intake	4
19	51-5330	Valve - Exhaust	4
20	51-6680	Gear - Pump Drive	1
21	51-6690	Pin	1

Ref. No.	Part No.	Description	No. Used
22	51-6670	Oil Pump Assembly (Incl. Ref. #20, 21, 23-26, 28-29 & 31)	1
23	51-6700	Oil Pump Rotor Assembly (Incl. Ref. #24-25 & 31)	1
†24		Rotor - Inner	1
†25		Pin	1
26	51-6720	Cover - Oil Pump Case	1
†27	51-6760	Gasket	1
28	51-7400	Washer - Spring	4
29	60-7290	Bolt	4
30	51-6750	Strainer - Oil	1
†31		Shaft - Pump Main	1
32	51-5290	Keeper - Valve	16
33	51-5280	Cap	8
34	51-5160	Washer - Flat	9
35	51-5450	Camshaft	1
36	51-5470	Plate - Thrust	1
37	60-7110	Bolt	2
38	51-5460	Key - Woodruff	1
39	51-5440	Tappet (Used On Engine Serial No. 148923-159073 Only)	8
*	86-6220	Tappet (Used On Engine Serial No. 159074 & Up)	8

*Not Illustrated

†Not Serviceable Separately

‡Included in Engine Gasket Kit



T-0152

VALVE, CAMSHAFT & PUMP COMPONENTS (Continued)

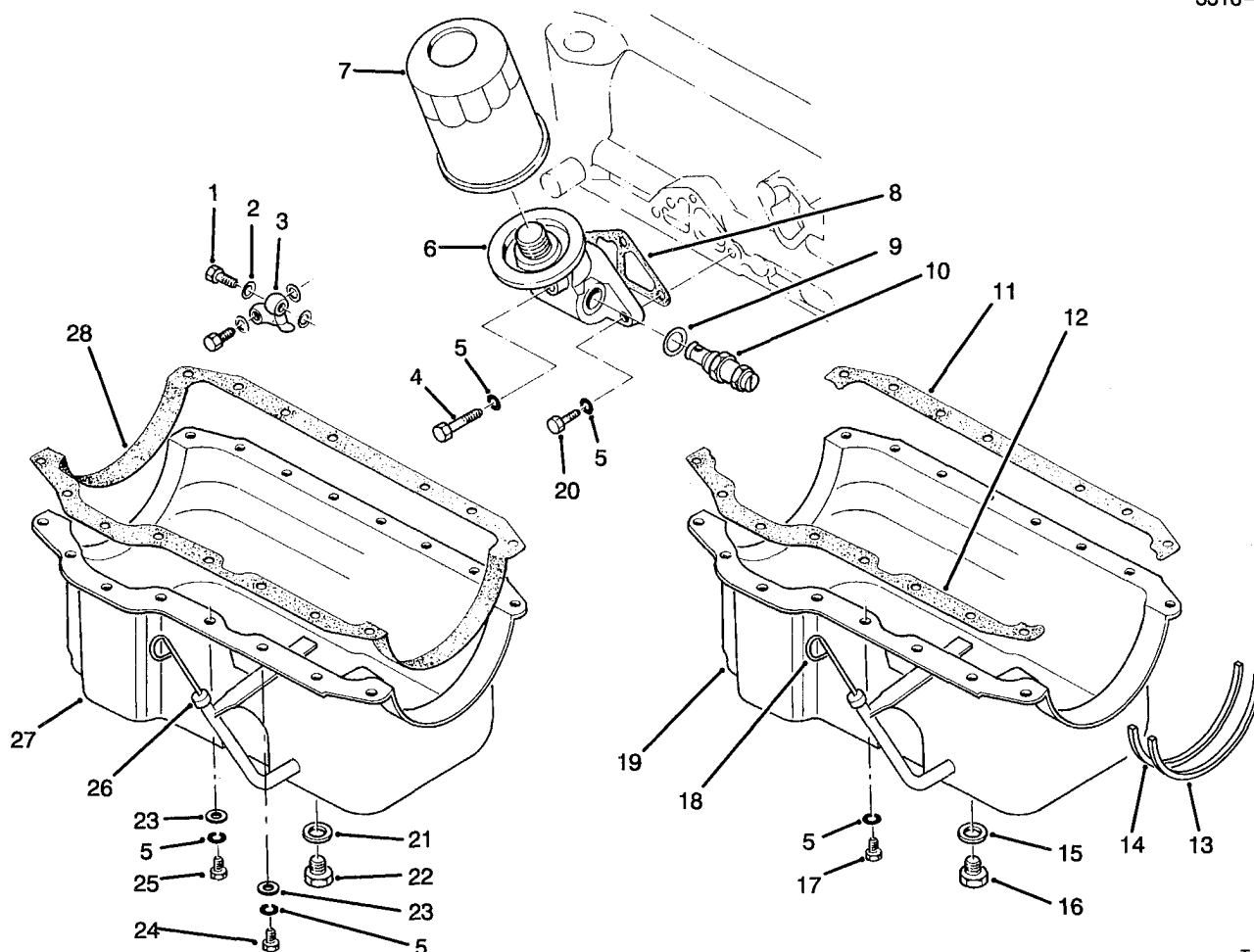
Ref. No.	Part No.	Description	No. Used
40	51-5430	Pushrod	8
41	51-5310	Seal - Valve Stem	8

Ref. No.	Part No.	Description	No. Used
42	51-5300	Retainer - Upper (Used On Engine Serial No. 148923-162410 Only)	8
*	86-6210	Retainer - Upper (Used On Engine Serial No. 162411 & Up)	8

*Not Illustrated

†Not Serviceable Separately

‡Included in Engine Gasket Kit



T-0153

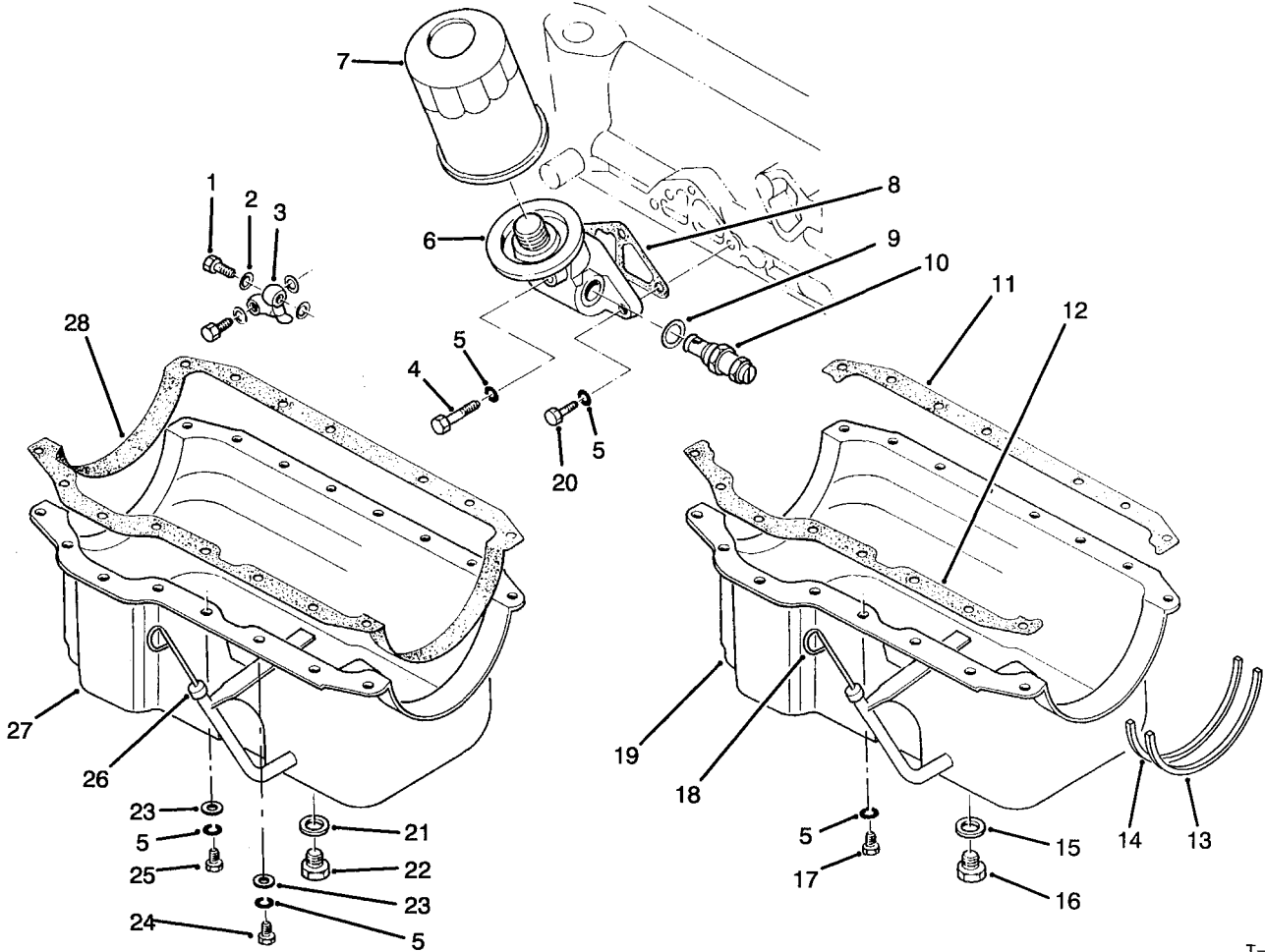
OIL PAN & OIL FILTER

Ref. No.	Part No.	Description	No. Used
1	51-6880	Bolt - Joint	2
‡2	51-6890	Gasket	4
3	51-6900	Pipe - Oil	1
4	60-7360	Bolt	1
5	51-7250	Washer - Spring	19
6	51-6800	Oil Filter Assembly (Incl. Ref. #7 & 9-10)	1
7	49-2500	Element - Filter	1
‡8	51-6870	Gasket	1
‡9	51-6820	Washer - Gasket	1
10	51-6830	Relief Valve Assembly	1
‡11	51-6080	Gasket (Used On Engine Serial No. 148923-157971 Only)	1
‡12	51-6070	Gasket (Used On Engine Serial No. 148923-157971 Only)	1
‡13	51-5750	Gasket (Used On Engine Serial No. 148923-157971 Only)	2
14	51-5760	Retainer (Used On Engine Serial No. 148923-157971 Only)	2
‡15	51-6100	Gasket (Used On Engine Serial No. 148923-158876 Only)	1

Ref. No.	Part No.	Description	No. Used
16	51-6110	Plug (Used On Engine Serial No. 148923-158876 Only)	1
17	60-7110	Bolt (Used On Engine Serial No. 148923-159073 Only)	16
18	51-6150	Dipstick (Used On Engine Serial No. 148923-158876 Only)	1
19	51-6090	Oil Pan Assembly (Incl. Ref. #15 & 16) (Used On Engine Serial No. 148923-157971 Only)	1
20	60-7370	Bolt	2
‡21	68-6430	Gasket (Used On Engine Serial No. 158877 & Up)	1
22	68-6420	Plug (Used On Engine Serial No. 158877 & Up)	1
23	51-5150	Washer (Used On Engine Serial No. 159074 & Up)	16

*Not Illustrated

‡Included in Engine Gasket Kit



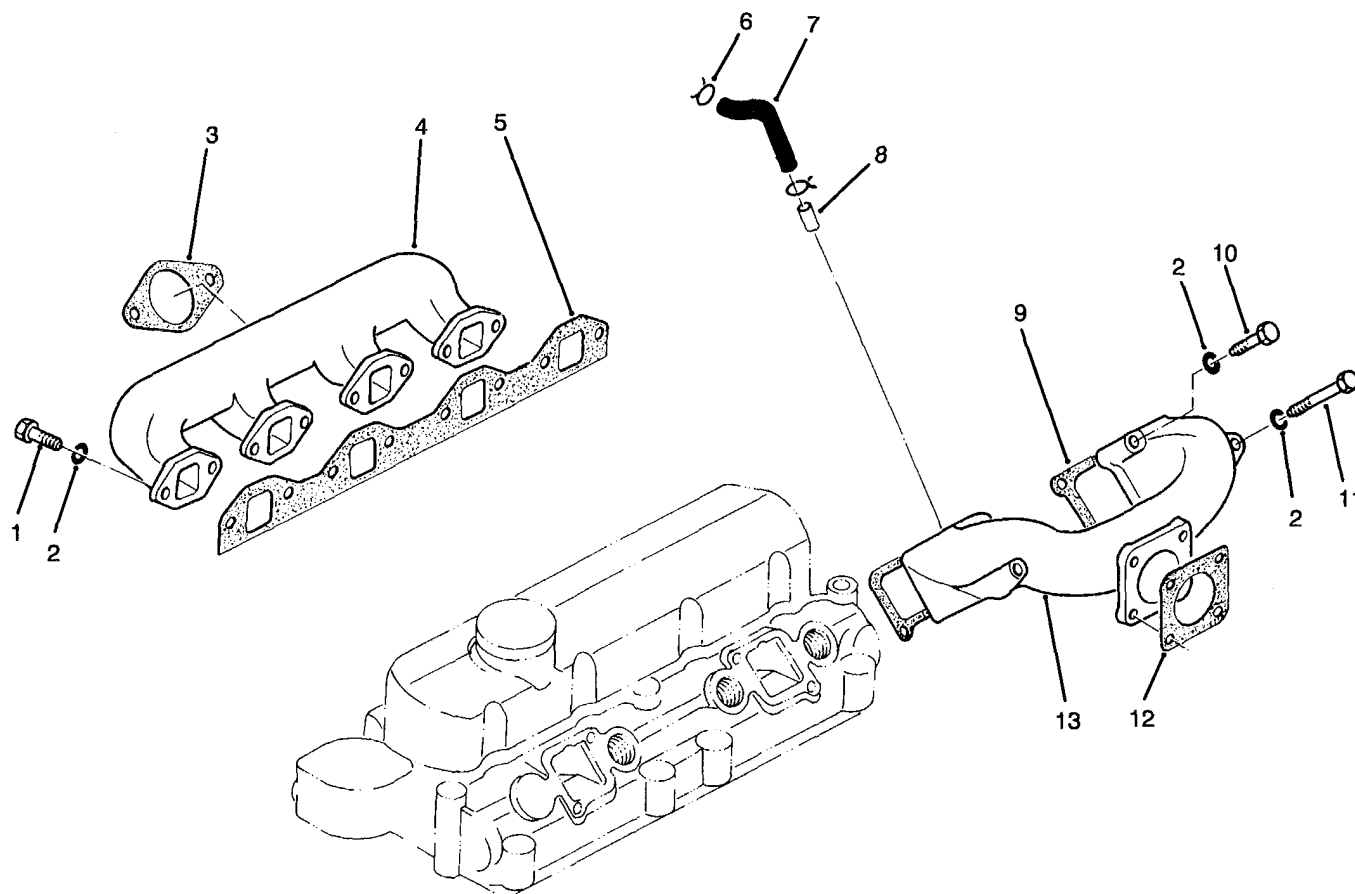
T-0153

OIL PAN & OIL FILTER (Continued)

Ref. No.	Part No.	Description	No. Used
24	60-7370	Bolt (Used On Engine Serial No. 159074 & Up)	2
25	60-7280	Bolt (Used On Engine Serial No. 159074 & Up)	14
26	68-6440	Dipstick (Used On Engine Serial No. 158877 & Up)	1

Ref. No.	Part No.	Description	No. Used
27	68-6400	Oil Pan Assembly (Incl. Ref. #21 & 22) (Used On Engine Serial No. 157972 & Up)	1
‡28	68-6410	Gasket (Used On Engine Serial No. 157972 & Up)	1

*Not Illustrated
‡Included in Engine Gasket Kit



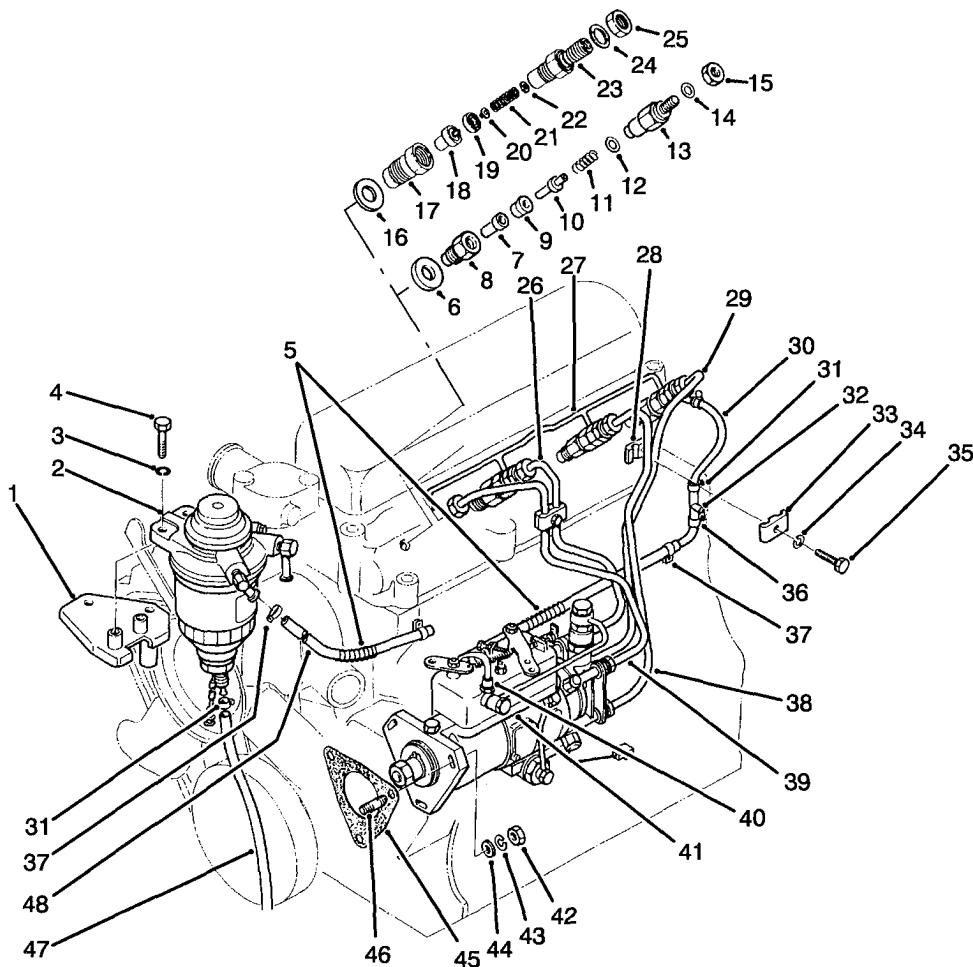
T-0154

INTAKE & EXHAUST MANIFOLD

Ref. No.	Part No.	Description	No. Used
1	60-7280	Bolt	8
2	51-7250	Washer - Spring	12
‡3	51-6630	Gasket - Exhaust Pipe	1
4	51-6620	Manifold - Exhaust	1
‡5	51-6660	Gasket - Exhaust Manifold	1
6	51-6600	Clamp	2
7	51-7190	Hose - Rubber	1

Ref. No.	Part No.	Description	No. Used
8	51-7170	Pipe	1
‡9	51-6500	Gasket - Intake Manifold	2
10	60-7040	Bolt	2
11	60-7300	Bolt	2
‡12	51-6550	Gasket - Intake Pipe	1
13	51-6540	Manifold - Inlet	1

‡Included in Engine Gasket Kit



T-0155

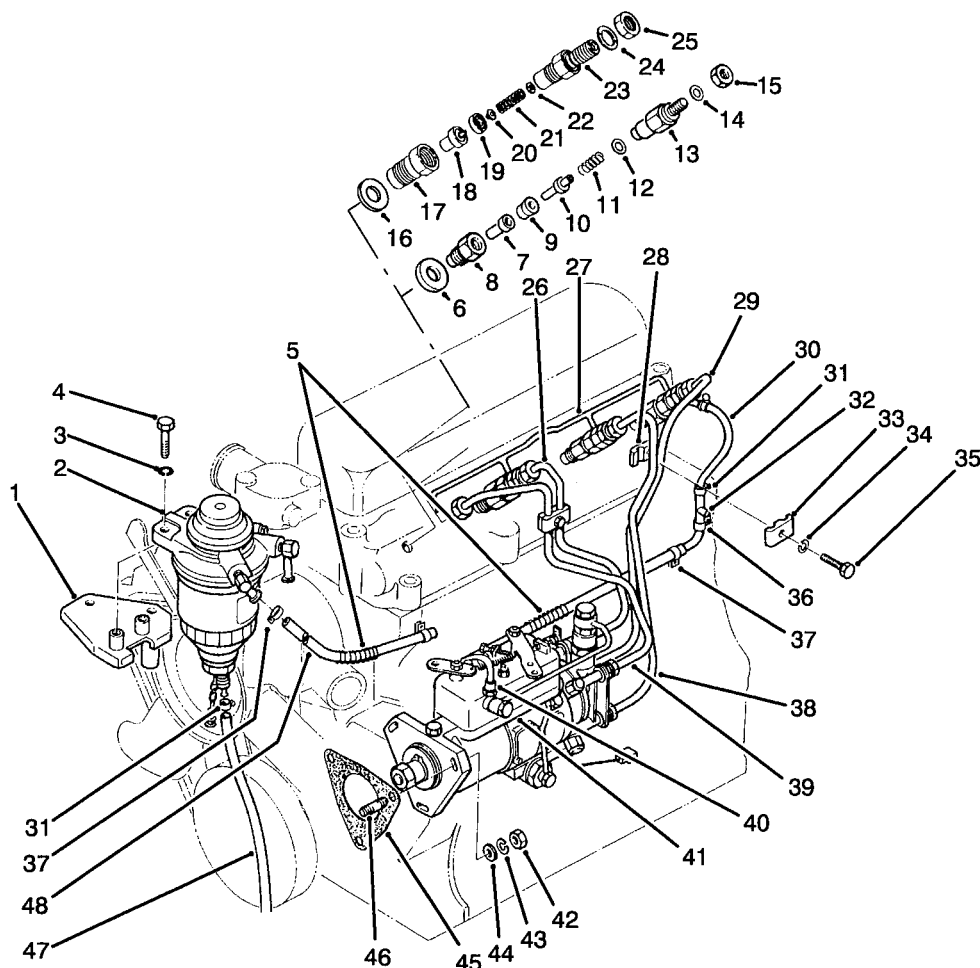
INJECTION PUMP & NOZZLE COMPONENTS

Ref. No.	Part No.	Description	No. Used
1	60-5000	Bracket	1
2	60-5010	Fuel Filter Assembly	1
3	51-7250	Washer	2
4	60-7050	Bolt	2
5	60-5030	Wrap - Spiral	2
‡6	51-7320	Gasket (Used On Engine Serial No. 148923-159664 Only)	4
7	63-4750	Nozzle Tip Assembly (Used On Engine Serial No. 148923-159664 Only)	4
8	51-7530	Nut - Retaining (Used On Engine Serial No. 148923-159664 Only)	4
9	51-7520	Spacer (Used On Engine Serial No. 148923-159664 Only)	4
10	51-7510	Pin - Pressure (Used On Engine Serial No. 148923-159664 Only)	4
11	51-7500	Spring - Pressure (Used On Engine Serial No. 148923-159664 Only)	4

Ref. No.	Part No.	Description	No. Used
12	68-6470	Injector Shim Kit (Includes Shims From 1.0 mm - 1.95 mm in .05 mm increments) (Used On Engine Serial No. 148923-159664 Only)	A/R
13	51-7480	Nozzle - Body (Used On Engine Serial No. 148923-159664 Only)	4
14	51-7470	Packing (Used On Engine Serial No. 148923-159664 Only)	4
15	51-7460	Nut (Used On Engine Serial No. 148923-159664 Only)	4
‡16	72-0140	Gasket (Used On Engine Serial No. 159665 & Up)	4
17	72-0160	Nozzle Tip Assembly (Used On Engine Serial No. 159665 & Up)	4
18	72-0270	Nut - Retaining (Used On Engine Serial No. 159665 & Up)	4

*Not Illustrated

‡Included in Engine Gasket Kit



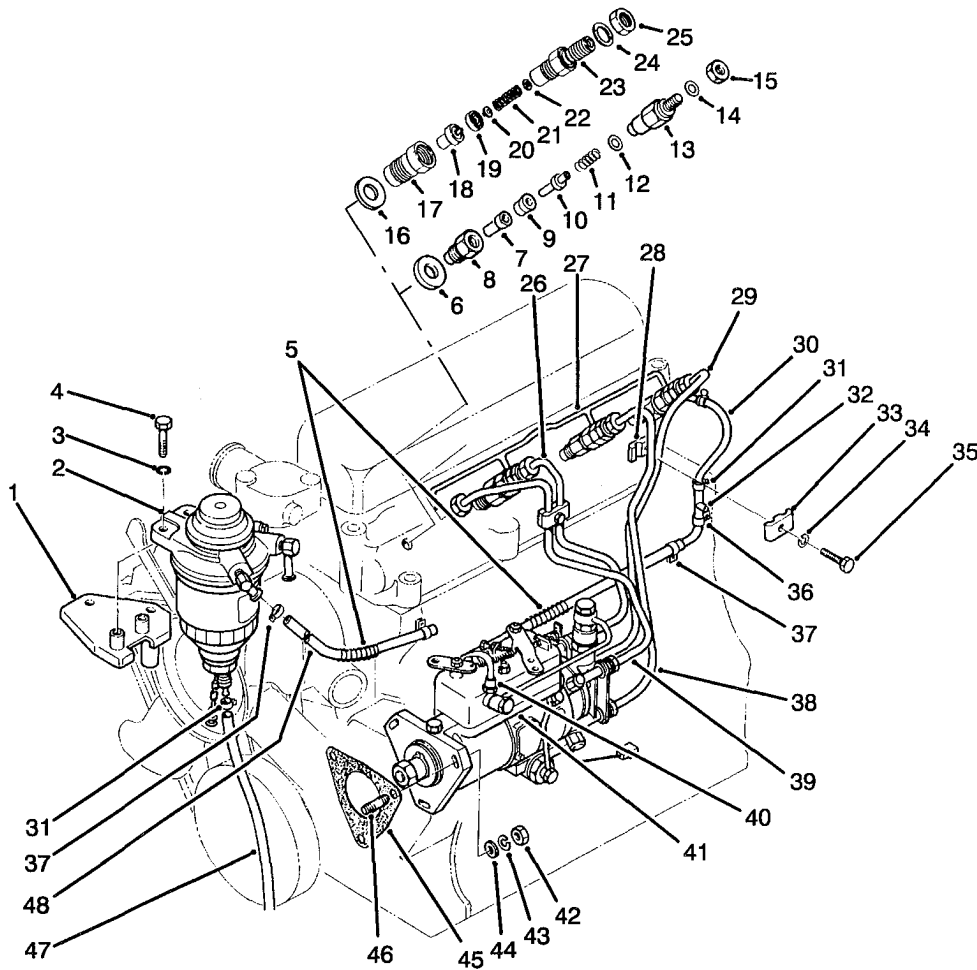
T-0155

INJECTION PUMP & NOZZLE COMPONENTS (Continued)

Ref. No.	Part No.	Description	No. Used	Ref. No.	Part No.	Description	No. Used
19	72-0280	Spacer (Used On Engine Serial No. 159665 & Up)	4	26	60-5130	Pipe – Injector No. 2 (Used On Engine Serial No. 148923–159664 Only)	1
20	72-0290	Pin – Pressure (Used On Engine Serial No. 159665 & Up)	4	*	72-0180	Pipe – Injector No. 2 (Used On Engine Serial No. 159665 & Up)	1
21	72-0300	Spring – Pressure (Used On Engine Serial No. 159665 & Up)	4	27	51-7380	Pipe – Fuel Leak–Off (Used On Engine Serial No. 148923–159664 Only)	1
22	72-0340	Injector Shim Kit (Includes Shims From 1.0 mm – 1.95 mm in .05 mm increments) (Used On Engine Serial No. 159665 & Up)	A/R	*	72-0210	Pipe – Fuel Leak–Off (Used On Engine Serial No. 159665 & Up)	1
23	72-0320	Nozzle – Body (Used On Engine Serial No. 159665 & Up)	4	28	60-5090	Clamp – Lower	2
24	72-0330	Packing (Used On Engine Serial No. 159665 & Up)	4	29	60-5140	Pipe – Injector No. 4 (Used On Engine Serial No. 148923–159664 Only)	1
25	72-0310	Nut (Used On Engine Serial No. 159665 & Up)	4	*	72-0200	Pipe – Injector No. 4 (Used On Engine Serial No. 159665 & Up)	1
				30	60-5150	Hose – Rubber	1
				31	60-5160	Clip	3
				32	60-5170	Connector	1
				33	60-5210	Clamp – Upper	2
				34	51-7400	Washer – Spring	2
				35	60-7290	Bolt	2
				36	60-5180	Clip	1

*Not Illustrated

‡Included in Engine Gasket Kit



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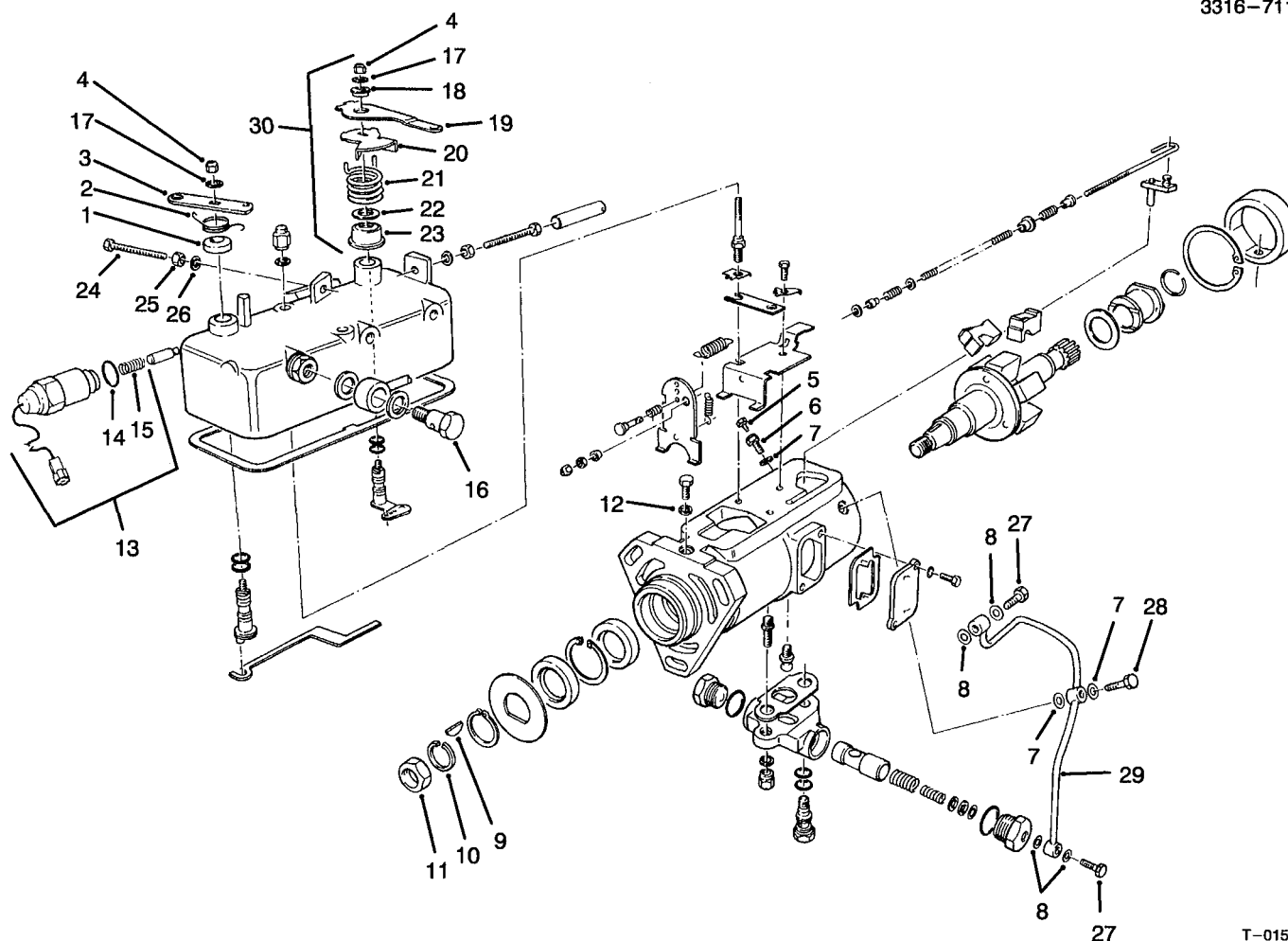
INJECTION PUMP & NOZZLE COMPONENTS (Continued)

Ref. No.	Part No.	Description	No. Used
37	60-5020	Clip	4
38	60-5120	Pipe - Injector No. 3 (Used On Engine Serial No. 148923-159664 Only)	1
*	72-0190	Pipe - Injector No. 3 (Used On Engine Serial No. 159665 & Up)	1
39	60-5110	Pipe - Injector No. 1 (Used On Engine Serial No. 148923-159664 Only)	1
*	72-0170	Pipe - Injector No. 1 (Used On Engine Serial No. 159665 & Up)	1
40	60-5070	Pipe - Fuel (Used On Engine Serial No. 148923-159664 Only)	1
41	60-5100	Injection Pump Assembly (Complete)	1
42	60-7120	Nut	3
43	51-7250	Washer - Spring	3
44	60-5060	Washer (Used On Engine Serial No. 148923-157787 Only)	3
*	86-6380	Washer (Used On Engine Serial No. 157788 & Up)	3

Ref. No.	Part No.	Description	No. Used
‡45	60-7190	Gasket	1
46	60-7150	Stud (Used On Engine Serial No. 148923-157787 Only)	3
*	86-6390	Stud (Used On Engine Serial No. 157788 & Up)	3
47	60-2780	Tube - Drain	1
48	60-5040	Hose - Fuel Feed	1
*	51-7440	Nozzle Assembly (Complete) (Incl. Ref. #7-15) (Used On Engine Serial No. 148923-159664 Only)	4
*	72-0150	Nozzle Assembly (Complete) (Incl. Ref. #17-25) (Used On Engine Serial No. 159665 & Up)	4
*	51-7440	Nozzle Holder Assembly (Incl. Ref. #8-15) (Used On Engine Serial No. 148923-159664 Only)	4

*Not Illustrated

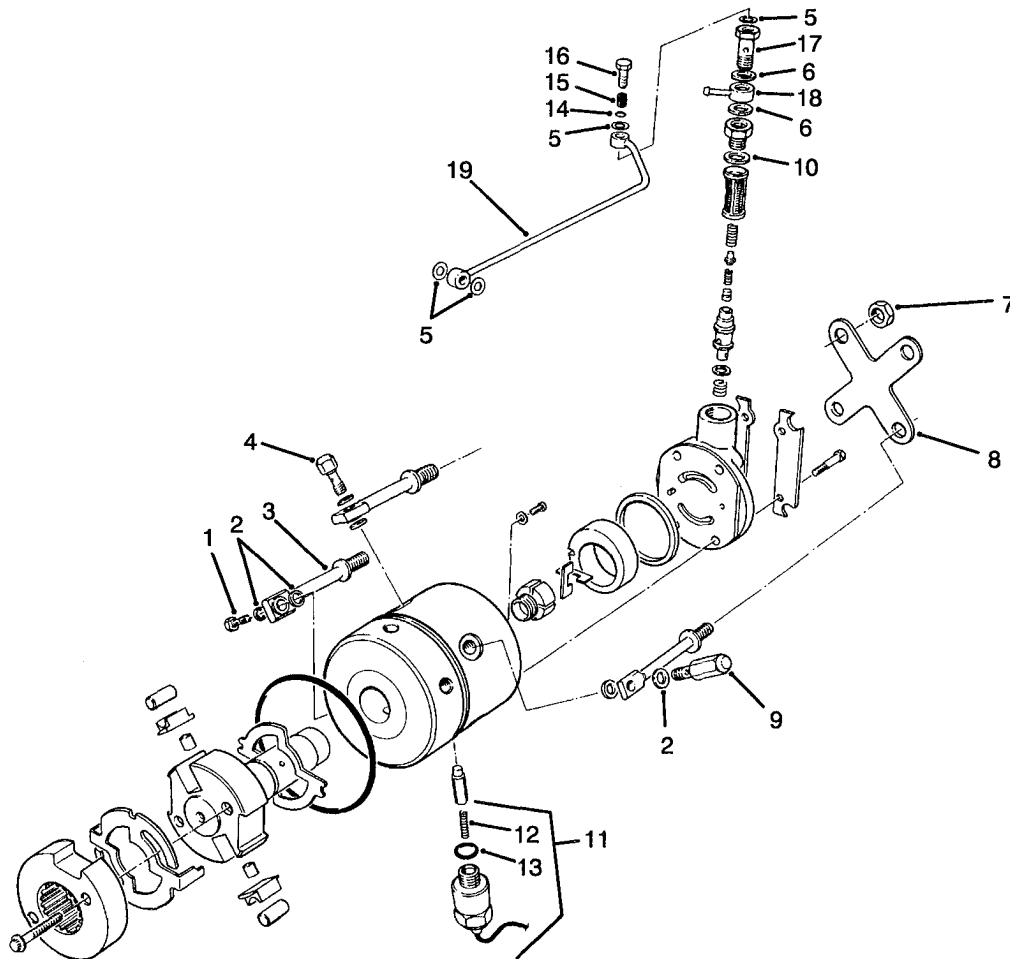
‡Included in Engine Gasket Kit



T-0156

FUEL INJECTION PUMP NO. 60-5100

Ref. No.	Part No.	Description	No. Used	Ref. No.	Part No.	Description	No. Used
1	86-6760	Guide	1	16	86-6650	Bolt - Outlet	1
2	63-4560	Spring	1	17	86-6750	Washer	2
3	63-4570	Lever	1	18	86-6700	Bushing	1
4	63-4580	Nut	2	19	86-6690	Lever	1
5	63-4590	Screw - Vent	1	20	86-6710	Arm	1
6	63-4600	Body - Screw Vent	1	21	86-6730	Spring	1
7	63-4610	Washer	3	22	86-6720	Washer	1
8	63-4620	Washer	4	23	86-6740	Guide	1
9	63-4630	Key	1	24	86-6770	Screw	1
10	63-4640	Washer - Lock	1	25	86-6780	Nut	1
11	60-7260	Nut - Hex	1	26	86-6790	Washer	1
12	60-3060	Washer	1	27	86-6820	Bolt	2
13	60-3160	Solenoid	1	28	86-6800	Bolt	1
		(Incl. Ref. #14 & 15)	1	29	86-6810	Pipe Assembly	1
14	60-3150	Sealing Ring	1	30	86-6680	Lever Assembly	1
15	60-3140	Spring	1			(Incl. Ref. #4 & 17-23)	1



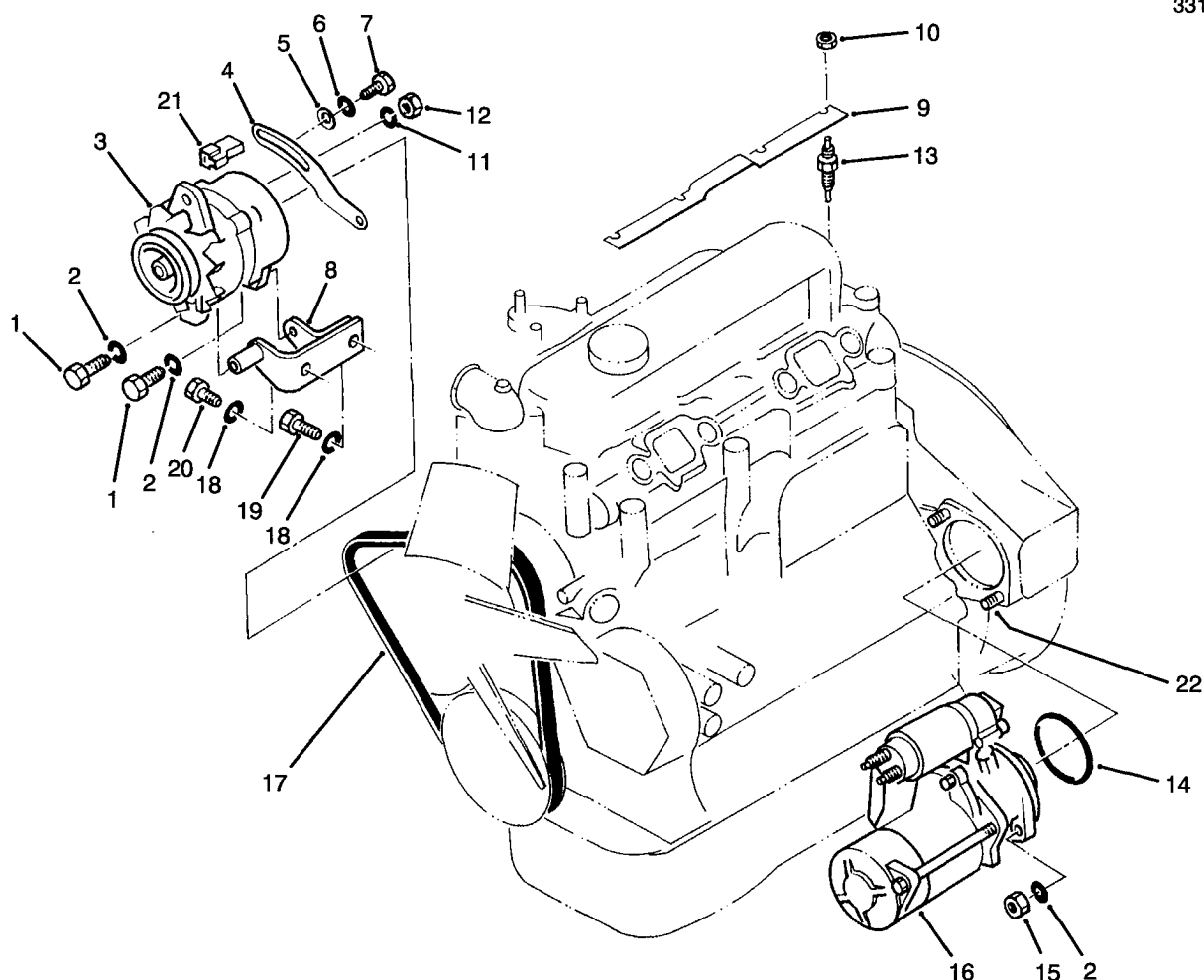
T-0157

FUEL INJECTION PUMP NO. 60-5100 (Continued)

Ref. No.	Part No.	Description	No. Used
1	60-3070	Valve - Pressure	1
2	60-3060	Washer	8
3	60-3090	Banjo	4
4	63-4670	Valve - Pressure	2
5	63-4660	Washer	4
6	63-4650	Washer	2
7	60-3120	Nut	4
8	60-3130	Plate - Clamping	1
9	60-3100	Valve - Pressure	1
10	60-3110	Washer	1
11	60-3160	Solenoid (Incl. Ref. #12 & 13)	1

Ref. No.	Part No.	Description	No. Used
12	60-3140	Spring	1
13	60-3150	Ring - Sealing	1
14	86-6640	Seal O-Ring	1
15	86-6630	Seal - Rubber	1
16	86-6620	Bolt	1
17	86-6610	Bolt - Inlet	1
18	86-6660	Joint	1
19	86-6670	Tube - Fuel	1
*	86-6600	Check Valve Kit (Incl. Ref. #5, 6 & 14-17)	1

*Not Illustrated



T-0159

ELECTRICAL COMPONENT PARTS

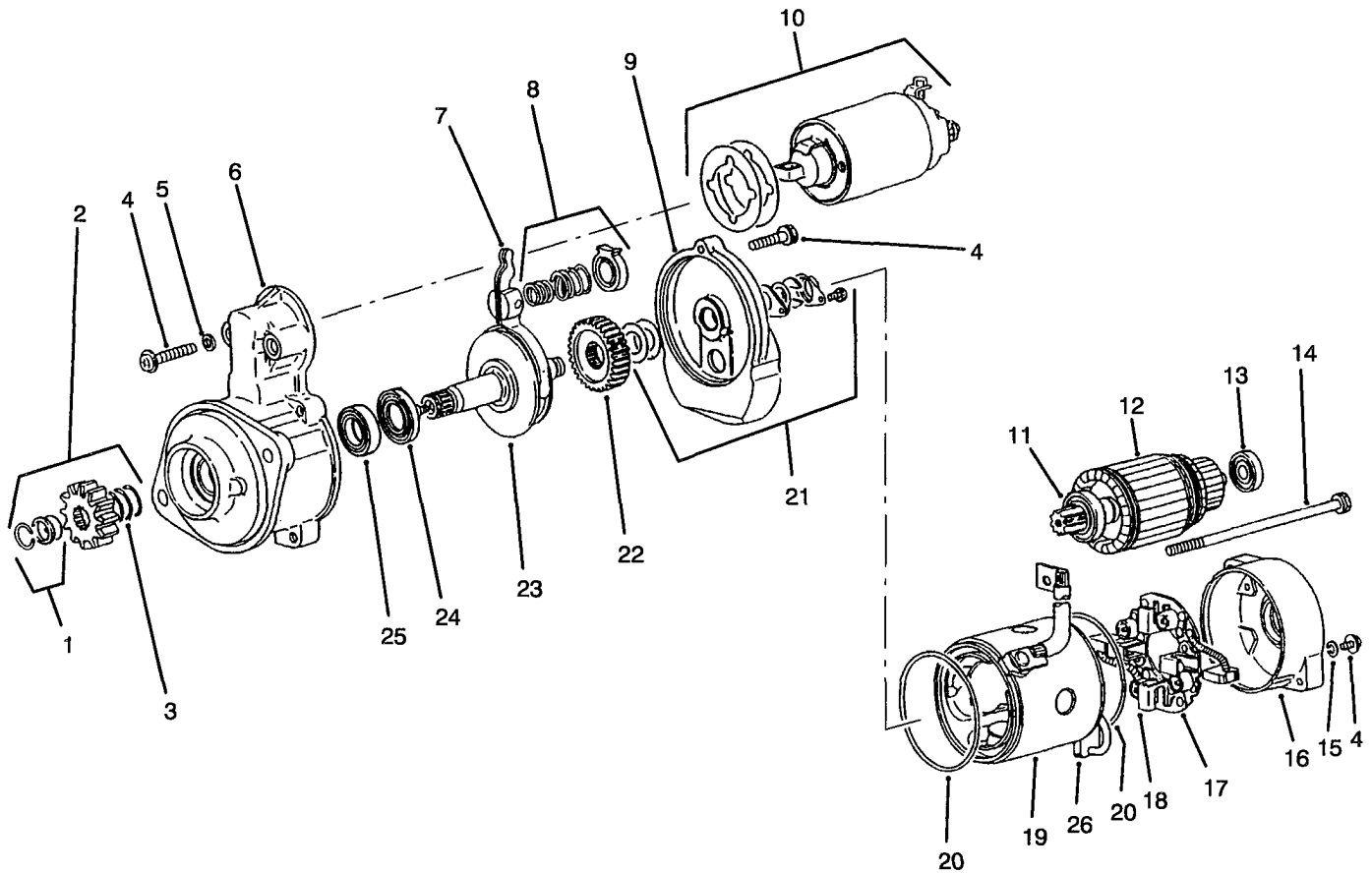
Ref. No.	Part No.	Description	No. Used
1	51-8640	Bolt	2
2	51-6390	Washer - Spring	4
3	60-5420	Alternator (Used On Engine Serial No. 148923-159073 Only)	1
*	86-6400	Alternator (Used On Engine Serial No. 159074 & Up)	1
4	51-8580	Plate - Adjusting	1
5	51-8590	Washer - Flat	1
6	51-7250	Washer - Spring	1
7	60-7370	Bolt	1
8	51-8600	Bracket - Alternator	1
9	51-8650	Plate - Connection	1

Ref. No.	Part No.	Description	No. Used
†10		Nut	4
11	48-8000	Washer - Spring	1
12	48-7880	Nut	1
13	51-8660	Plug - Glow (Incl. Ref. #10)	4
‡14	60-5430	O-Ring	1
15	51-5970	Nut	2
16	51-7590	Motor - Starter	1
17	49-2520	Belt	1
18	51-8610	Washer - Spring	2
19	51-8620	Bolt	1
20	51-8630	Bolt	1
21	58-6970	Diode	1
22	51-5950	Stud	2

*Not Illustrated

†Not Serviceable Separately

‡Included in Engine Gasket Kit



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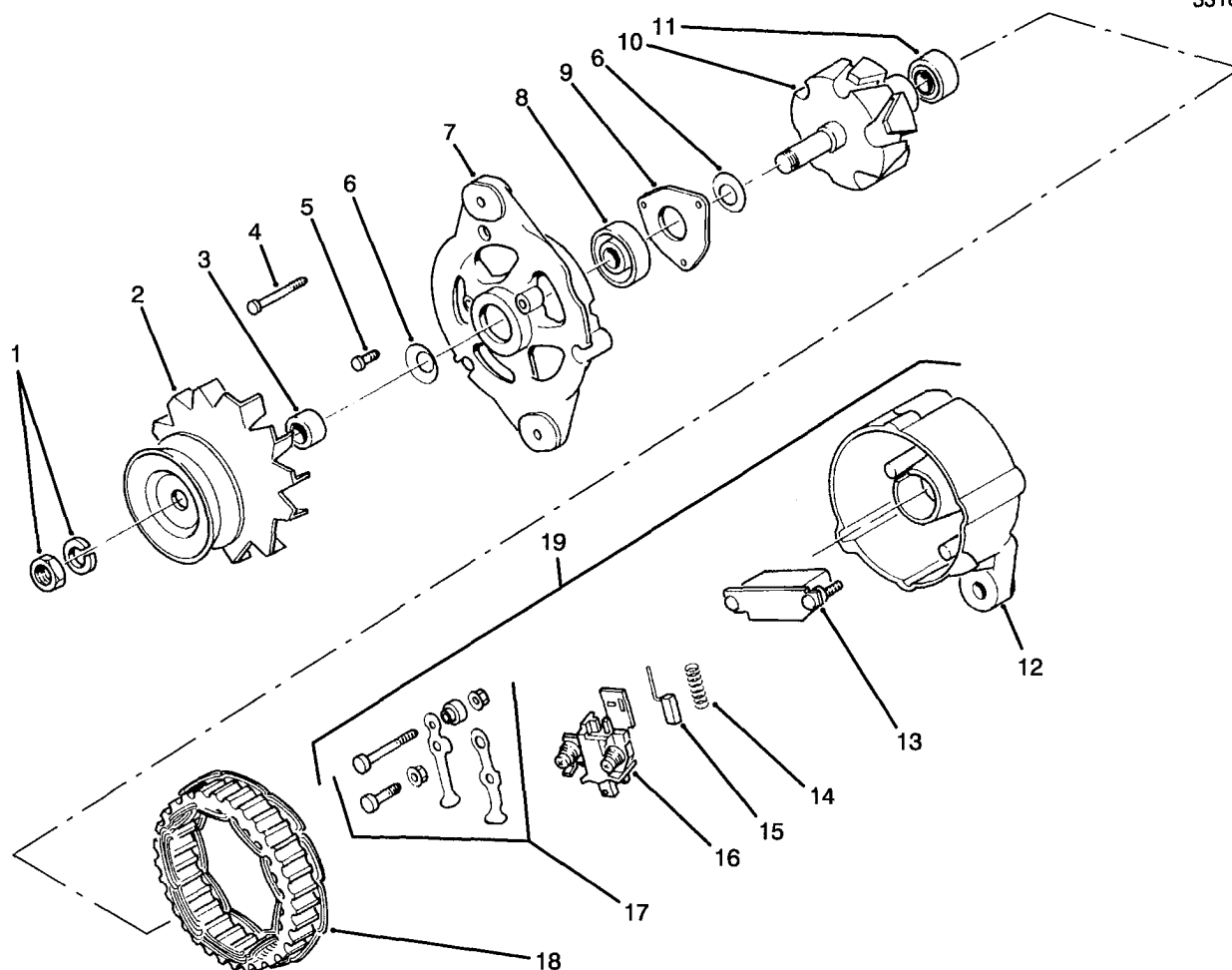
STARTER MOTOR ASSEMBLY NO. 51-7590

Ref. No.	Part No.	Description	No. Used
1	51-7740	Retaining Ring Assembly	1
2	51-7730	Pinion Gear Assembly	
		(Incl. Ref. #1 & 3)	1
†3		Spring	1
4	51-7600	Screw - Set	1
5	51-7610	Packing	2
6	51-7620	Front Cover Assembly	
		(Incl. Ref. #24 & 25)	1
7	51-7640	Lever Assembly	1
8	51-7650	Spring Assembly	1
9	51-7660	Center Bracket Assembly	1
10	51-7670	Solenoid	1
11	51-7690	Bearing	1
12	51-7680	Armature Assembly	
		(Incl. Ref. #11 & 13)	1
13	51-7700	Bearing	1
14	51-7710	Bolt Set	1
15	51-7840	Ring - Rubber	2

Ref. No.	Part No.	Description	No. Used
16	51-7830	Cover - Rear	1
17	51-7810	Brush Holder Assembly	
		(Incl. Ref. #18)	1
18	51-7820	Spring - Brush	4
19	51-7800	Yoke Assembly	
		(Incl. Ref. #26)	1
20	51-7790	Packing	2
21	51-7780	Cover Set	1
22	51-7770	Gear - Pinion	1
23	51-7760	Shaft Assembly	1
24	51-7630	Seal - Oil	1
25	86-6410	Bearing	1
26	86-6420	Brush	2
*	51-7750	Gear Assembly	
		(Incl. Ref. #22 & 23)	1
*	51-7720	Clutch Shaft Assembly	
		(Incl. Ref. #1-3 & 21-23)	1

*Not Illustrated

†Not Serviceable Separately

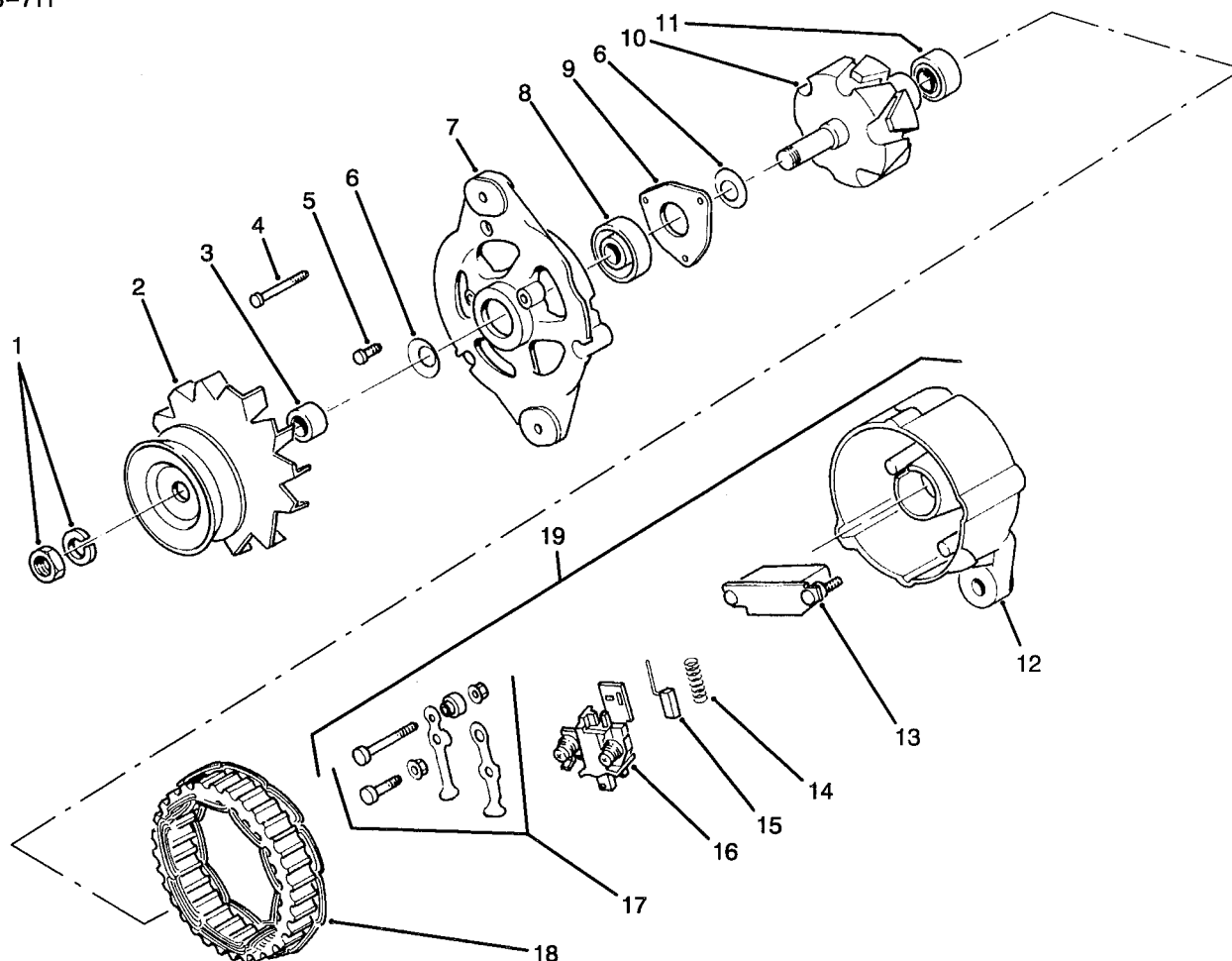


T-0161

ALTERNATOR ASSEMBLY NO. 60-5420 (Used On Engine Serial No. 148923-159073 Only)

Ref. No.	Part No.	Description	No. Used	Ref. No.	Part No.	Description	No. Used
1	51-7850	Nut Assembly	1	11	60-5360	Bearing	1
2	60-5330	Pulley Assembly (Incl. Ref. #3)	1	†12		Cover - Rear	1
†3		Collar - Shaft	1	13	60-5370	Rectifier Assembly	1
4	51-7870	Screw Set	1	14	51-7980	Spring - Return	2
5	51-7890	Screw Set	1	15	51-7970	Brush	2
†6		Spring Washer	2	16	51-7960	Regulator Assembly (Incl. Ref. #14 & 15)	1
7	60-5340	Front Bracket Assembly (Incl. Ref. #5, 6, 8 & 9)	1	17	51-7950	Terminal Assembly	1
8	60-5350	Bearing	1	18	51-7930	Stator	1
†9		Plate - Bearing Retainer	1	19	60-5380	Rear Cover Assembly (Incl. Ref. #12-17)	1
10	51-7910	Rotor Assembly (Incl. Ref. #11)	1				

†Not Serviceable Separately



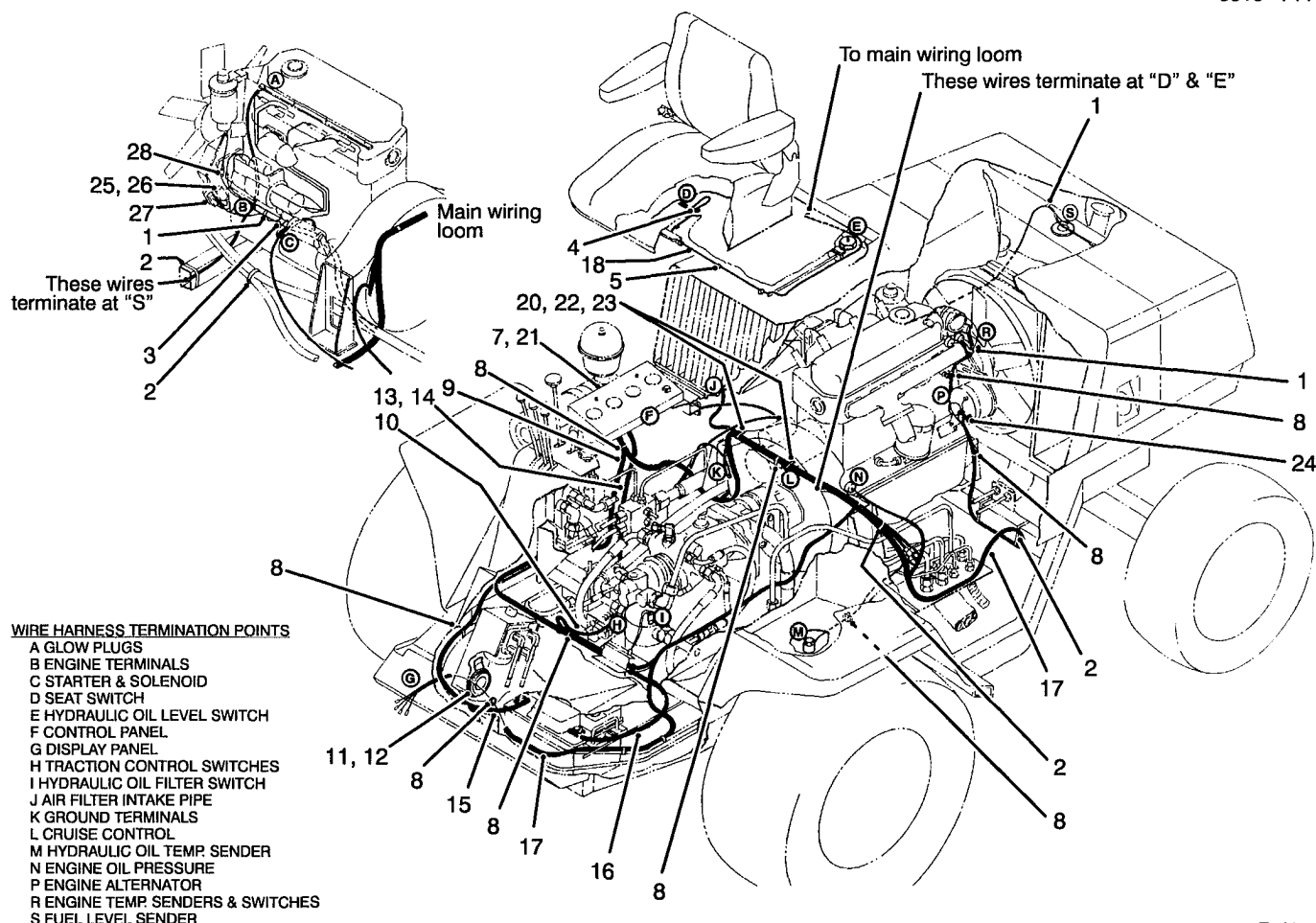
T-0161

ALTERNATOR ASSEMBLY NO. 86-6400 (Used On Engine Serial No. 159074 & Up)

Ref. No.	Part No.	Description	No. Used
1	51-7850	Nut Assembly	1
2	60-5330	Pulley Assembly (Incl. Ref. #3)	1
†3		Collar - Shaft	1
4	51-7870	Screw Set	1
5	51-7890	Screw Set	1
†6		Spring Washer	2
7	60-5340	Front Bracket Assembly (Incl. Ref. #5, 6, 8 & 9)	1
8	60-5350	Bearing	1
†9		Plate - Bearing Retainer	1
10	51-7910	Rotor Assembly (Incl. Ref. #11)	1

Ref. No.	Part No.	Description	No. Used
11	60-5360	Bearing	1
†12		Cover - Rear	1
13	86-6440	Rectifier Assembly	1
14	51-7980	Spring - Return	2
15	51-7970	Brush	2
16	51-7960	Regulator Assembly (Incl. Ref. #14 & 15)	1
17	51-7950	Terminal Assembly	1
18	51-7930	Stator	1
19	86-6430	Rear Cover Assembly (Incl. Ref. #12-17)	1

†Not Serviceable Separately



T-0173

ELECTRICAL SYSTEM DIAGRAM

Ref. No.	Part No.	Description	No. Used	Ref. No.	Part No.	Description	No. Used
1	3290-381	Tie - Cable	7	17	82-9830	Harness - Wiring Main	1
2	250-1	Tie - Cable	4	18	82-9750	Jumper Assembly	1
3	2412-109	Clip	1	20	63-4790	Clip	2
4	237-100	Grommet	1	21	2412-131	Clamp-R	3
5	60-0930	Clip	3	22	48-8000	Washer - Lock	2
7	82-9760	Harness - Wiring Gauges	1	23	48-7880	Nut - Hex.	2
8	3290-378	Tie - Cable	12	24	58-6970	Diode	
9	82-9790	Harness - Wiring Valve	1			(Used On Engine Serial No. 148923-159073 Only)	1
10	82-9810	Harness - Wiring Traction Control Switches	1	*	86-6400	Diode	
11	48-4590	Horn - Disc	1			(Used On Engine Serial No. 159074 & Up)	1
12	82-9940	Harness - Wire Horn	1	25	2412-74	Clamp-R	1
13	75-6700	Sensor - Magnetic	1	26	37-2690	Capacitor	1
14	82-9800	Harness - Wire Speedometer	1	27	38-2860	Resistor - 5 Ohm	1
15	58-3850	Cable - Neg. Battery	1	28	58-6860	Connector	1
16	58-3840	Cable - Pos. Battery	1				

TORO PART NUMBER INDEX

37-2690	Capacitor	25	26	1	51-5550	Sleeve - Cylinder Std.	1	14	4
38-2860	Resistor - 5 Ohm	25	27	1	51-5560	Pipe - Oil	1	15	1
48-4590	Horn - Disc	25	11	1	51-5580	Hanger	1	9	2
48-7880	Nut	21	12	1	51-5590	Cap - Sealing	1	21	3
48-7880	Nut - Hex.	25	23	2	51-5600	Cap - Sealing	1	11	3
48-8000	Washer - Lock	25	22	2	51-5610	Pin - Dowel	1	20	8
48-8000	Washer - Spring	21	11	1	51-5620	Bolt	2	29	6
49-0130	Fan	5	4	1	51-5640	Idler Gear Shaft Assembly	2	33	1
49-2500	Element - Filter	13	7	1	51-5650	Pin - Spring	2	34	1
49-2520	Belt	21	17	1	51-5660	Plug - Expansion	1	22	1
51-4900	Cylinder Head Assembly	10	31	1	51-5670	Cap - Sealing	1	12	2
51-4910	Bolt	6	42	2	51-5690	Cap	1	8	1
51-4920	Bolt	6	43	1	51-5720	Plate - Front	2	36	1
51-4930	Bolt	5	14	1	51-5730	Gasket	1	1	1
51-4940	Cap - Sealing	8	13	10	51-5750	Gasket	13	13	2
51-4950	Guide - Valve	8	14	8	51-5760	Retainer	13	14	2
51-4970	Insert - Valve Seat, Exhaust	9	27	4	51-5770	Bearing Set Std.	2	30	1
51-4980	Insert - Valve Seat, Inlet	9	28	4	51-5820	Gasket	3	22	1
51-4990	Jet - Combustion Std.	10	29	4	51-5840	Washer - Sealing	4	29	1
51-5000	Gasket - Cylinder Head	10	30	1	51-5850	Cover	4	27	1
51-5030	Bolt - Cylinder Head	8	6	5	51-5860	Gasket	4	26	1
51-5040	Bolt - Cylinder Head	8	3	10	51-5870	Seal	4	25	1
51-5050	Connector - Fitting	8	4	1	51-5900	Case - Seal, Oil	7	14	1
51-5080	Rocker Shaft Assembly	11	7	2	51-5910	O-Ring	7	15	1
51-5090	Plug - Expansion	11	6	2	51-5940	Housing - Flywheel	7	21	1
51-5100	Spring - Rocker Shaft	11	8	2	51-5950	Stud	21	22	2
51-5110	Rocker Assembly	11	16	4	51-5970	Nut	21	15	2
51-5120	Bushing - Rocker	11	13	8	51-5980	Gasket	7	24	1
51-5130	Screw - Adjusting	11	1	8	51-6010	Cover	7	7	1
51-5150	Bracket - Rocker Shaft	11	15	4	51-6020	Gasket	7	8	1
51-5150	Washer	13	23	16	51-6030	Plug	7	23	1
51-5160	Washer	3	5	2	51-6070	Gasket	13	12	1
51-5160	Washer - Flat	11	34	9	51-6080	Gasket	13	11	1
51-5190	Bolt	11	5	4	51-6090	Oil Pan Assembly	13	19	1
51-5200	Rocker Assembly	11	14	4	51-6100	Gasket	13	15	1
51-5210	Nut - Jam	11	2	8	51-6100	Gasket - Housing, Flywheel	7	22	1
51-5240	Seal - O-Ring	11	10	2	51-6110	Plug	13	16	1
51-5250	Pipe - Oil	11	9	1	51-6150	Dipstick	13	18	1
51-5260	Ring - Snap	11	11	4	51-6160	Piston Ring Set Std.	8	17	1
51-5270	Washer	11	12	4	51-6180	Pin - Piston	9	22	4
51-5280	Cap	11	33	8	51-6190	Ring - Snap	8	18	8
51-5290	Keeper - Valve	11	32	16	51-6200	Connecting Rod Assembly	9	20	4
51-5300	Retainer - Upper	12	42	8	51-6210	Bushing	9	23	4
51-5310	Seal - Valve Stem	12	41	8	51-6220	Bolt	9	21	8
51-5320	Spring - Valve	11	17	8	51-6230	Nut	9	26	8
51-5330	Valve - Exhaust	11	19	4	51-6240	Bearing - Connecting Rod	9	24	8
51-5340	Valve - Intake	11	18	4	51-6250	Crankshaft Assembly	7	25	1
51-5350	Cap - Oil Fill	8	7	1	51-6270	Washer	7	3	1
51-5360	Nut - Cap	8	8	4	51-6300	Pin - Dowel	7	20	2
51-5370	Gasket	8	9	4	51-6310	Pulley - Crankshaft	7	4	1
51-5380	Rocker Cover Assembly	8	10	1	51-6320	Plate - Baffle	7	28	1
51-5390	Washer - Sealing	8	15	1	51-6330	Plate - Thrust	7	27	1
51-5400	Connector	8	16	1	51-6340	Flywheel Assembly	7	18	1
51-5410	Cover	8	5	1	51-6350	Gear - Ring	7	19	1
51-5420	Gasket - Rocker Cover	8	11	1	51-6360	Washer - Lock	7	17	2
51-5430	Pushrod	12	40	8	51-6370	Bolt - Seal	7	16	4
51-5440	Tappet	11	39	8	51-6390	Washer	3	20	1
51-5450	Camshaft	11	35	1	51-6390	Washer - Spring	21	2	4
51-5460	Key - Woodruff	7	1	2	51-6390	Washer - Spring	7	9	7
51-5460	Key - Woodruff	11	38	1	51-6390	Washer - Spring	5	18	4
51-5470	Plate - Thrust	11	36	1	51-6400	Plate - Thrust	3	19	1
51-5500	Bushing - Camshaft No. 1	1	2	1	51-6410	Gear - Camshaft	3	8	1
51-5510	Bushing - Camshaft No. 2	1	3	1	51-6420	Idler Gear Assembly	3	9	1
51-5520	Bushing - Camshaft No. 3	1	4	1	51-6430	Bushing	3	18	1
51-5530	Cap - Sealing	1	6	2	51-6450	Gear - Crankshaft	3	17	1
51-5530	Cap - Sealing	8	12	6	51-6480	Cover	1	18	1
51-5540	Pin - Dowel, Gear Case	1	7	2	51-6490	Gasket	1	19	1

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51-6500	Gasket - Intake Manifold	15	9	2	51-7440	Nozzle Holder Assembly	18	*	4
51-6540	Manifold - Inlet	15	13	1	51-7460	Nut	16	15	4
51-6550	Gasket - Intake Pipe	15	12	1	51-7470	Packing	16	14	4
51-6600	Clamp	15	6	2	51-7480	Nozzle - Body	16	13	4
51-6620	Manifold - Exhaust	15	4	1	51-7500	Spring - Pressure	16	11	4
51-6630	Gasket - Exhaust Pipe	15	3	1	51-7510	Pin - Pressure	16	10	4
51-6660	Gasket - Exhaust Manifold	15	5	1	51-7520	Spacer	16	9	4
51-6670	Oil Pump Assembly	11	22	1	51-7530	Nut - Retaining	16	8	4
51-6680	Gear - Pump Drive	11	20	1	51-7590	Motor - Starter	21	16	1
51-6690	Pin	11	21	1	51-7600	Screw - Set	22	4	1
51-6700	Oil Pump Rotor Assembly	11	23	1	51-7610	Packing	22	5	2
51-6720	Cover - Oil Pump Case	11	26	1	51-7620	Front Cover Assembly	22	6	1
51-6750	Strainer - Oil	11	30	1	51-7630	Seal - Oil	22	24	1
51-6760	Gasket	11	27	1	51-7640	Lever Assembly	22	7	1
51-6800	Oil Filter Assembly	13	6	1	51-7650	Spring Assembly	22	8	1
51-6820	Washer - Gasket	13	9	1	51-7660	Center Bracket Assembly	22	9	1
51-6830	Relief Valve Assembly	13	10	1	51-7670	Solenoid	22	10	1
51-6870	Gasket	13	8	1	51-7680	Armature Assembly	22	12	1
51-6880	Bolt - Joint	13	1	2	51-7690	Bearing	22	11	1
51-6890	Gasket	13	2	4	51-7700	Bearing	22	13	1
51-6890	Gasket	10	32	1	51-7710	Bolt Set	22	14	1
51-6900	Pipe - Oil	13	3	1	51-7720	Clutch Shaft Assembly	22	*	1
51-6910	Nut - Jam	5	5	1	51-7730	Pinion Gear Assembly	22	2	1
51-6920	Washer - Spring	5	6	1	51-7740	Retaining Ring Assembly	22	1	1
51-6930	Spacer - Water Pump	5	8	2	51-7750	Gear Assembly	22	*	1
51-6940	Ring - Retaining	5	9	1	51-7760	Shaft Assembly	22	23	1
51-6950	Bearing - Ball	5	10	1	51-7770	Gear - Pinion	22	22	1
51-6960	Key - Woodruff	5	13	1	51-7780	Cover Set	22	21	1
51-6970	Shaft	5	12	1	51-7790	Packing	22	20	2
51-6980	Bearing - Ball	5	15	1	51-7800	Yoke Assembly	22	19	1
51-6990	Pipe	5	21	1	51-7810	Brush Holder Assembly	22	17	1
51-7010	Gasket	5	20	1	51-7820	Spring - Brush	22	18	4
51-7020	Fitting - Grease	5	19	1	51-7830	Cover - Rear	22	16	1
51-7030	Seal Unit	5	22	1	51-7840	Ring - Rubber	22	15	2
51-7040	Impeller	5	23	1	51-7850	Nut Assembly	23	1	1
51-7050	Cover	5	24	1	51-7850	Nut Assembly	24	1	1
51-7050	Switch - Temp. Warning	8	1	1	51-7870	Screw Set	23	4	1
51-7080	Gasket	6	40	1	51-7870	Screw Set	24	4	1
51-7130	Pulley - Water Pump	5	7	1	51-7890	Screw Set	23	5	1
51-7160	Elbow Assembly	6	32	1	51-7890	Screw Set	24	5	1
51-7170	Pipe	15	8	1	51-7910	Rotor Assembly	23	10	1
51-7170	Pipe	6	36	1	51-7910	Rotor Assembly	24	10	1
51-7180	Plug - Tapered	1	28	3	51-7930	Stator	23	18	1
51-7190	Hose - By-Pass	6	38	1	51-7930	Stator	24	18	1
51-7190	Hose - Rubber	15	7	1	51-7950	Terminal Assembly	23	17	1
51-7200	Clamp - Hose	6	37	2	51-7950	Terminal Assembly	24	17	1
51-7210	Gasket	6	31	2	51-7960	Regulator Assembly	23	16	1
51-7220	Gasket	5	30	1	51-7960	Regulator Assembly	24	16	1
51-7230	Thermostat	5	29	1	51-7970	Brush	23	15	2
51-7250	Washer	16	3	2	51-7970	Brush	24	15	2
51-7250	Washer	1	5	5	51-7980	Spring - Return	23	14	2
51-7250	Washer	4	31	3	51-7980	Spring - Return	24	14	2
51-7250	Washer - Spring	15	2	12	51-8080	Jet - Combustion O.S.	10	*	4
51-7250	Washer - Spring	3	2	17	51-8090	Sleeve - Cylinder O.S.	1	*	4
51-7250	Washer - Spring	5	2	10	51-8100	Bearing Set 0.25mm U.S.	2	*	1
51-7250	Washer - Spring	11	3	11	51-8110	Bearing Set 0.50mm U.S.	2	*	1
51-7250	Washer - Spring	13	5	19	51-8120	Bearing Set 0.75mm U.S.	2	*	1
51-7250	Washer - Spring	21	6	1	51-8130	Piston Ring Set	8	*	1
51-7250	Washer - Spring	7	6	2	51-8140	Piston Ring Set	8	*	1
51-7250	Washer - Spring	18	43	3	51-8150	Piston Ring Set	8	*	1
51-7270	Plate - Washer	5	3	1	51-8190	Bearing - Connecting Rod	9	*	8
51-7320	Gasket	16	6	4	51-8200	Bearing - Connecting Rod	9	*	8
51-7380	Pipe - Fuel Leak-Off	17	27	1	51-8210	Bearing - Connecting Rod	9	*	8
51-7400	Washer - Spring	7	11	8	51-8240	Water Pump Assembly	6	41	1
51-7400	Washer - Spring	11	28	4	51-8260	Switch - Indicator	1	13	1
51-7400	Washer - Spring	17	34	2	51-8270	Washer - Sealing	1	23	1
51-7440	Nozzle Assembly	18	*	4	51-8280	Bolt	1	24	1

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51-8310	Bolt	3	12	1	60-5350	Bearing	24	8	1
51-8580	Plate - Adjusting	21	4	1	60-5360	Bearing	23	11	1
51-8590	Washer - Flat	21	5	1	60-5360	Bearing	24	11	1
51-8600	Bracket - Alternator	21	8	1	60-5370	Rectifier Assembly	23	13	1
51-8610	Washer - Spring	21	18	2	60-5380	Rear Cover Assembly	23	19	1
51-8620	Bolt	21	19	1	60-5420	Alternator	21	3	1
51-8630	Bolt	21	20	1	60-5430	O-Ring	21	14	1
51-8640	Bolt	21	1	2	60-5590	Switch - Temp.	5	25	1
51-8650	Plate - Connection	21	9	1	60-6780	Bolt	4	32	4
51-8660	Plug - Glow	21	13	4	60-7010	Screw - Cap Hex. Hd.	5	1	6
58-2110	Housing - Thermostat	6	39	1	60-7040	Bolt	3	4	1
58-3840	Cable - Pos. Battery	25	16	1	60-7040	Bolt	15	10	2
58-3850	Cable - Neg. Battery	25	15	1	60-7050	Bolt	16	4	2
58-6860	Connector	25	28	1	60-7050	Bolt	3	7	8
58-6970	Diode	21	21	1	60-7060	O-Ring	3	6	1
58-6970	Diode	25	24	1	60-7060	O-Ring	4	33	1
59-7950	Switch - Cold Start	10	33	1	60-7080	Case	3	3	1
60-0930	Clip	25	5	3	60-7100	Case - Timing Gear	4	23	1
60-2780	Tube - Drain	18	47	1	60-7110	Bolt	3	1	3
60-3060	Washer	20	2	8	60-7110	Bolt	7	5	2
60-3060	Washer	19	12	1	60-7110	Bolt	1	17	2
60-3070	Valve - Pressure	20	1	1	60-7110	Bolt	13	17	16
60-3090	Banjo	20	3	4	60-7110	Bolt	11	37	2
60-3100	Valve - Pressure	20	9	1	60-7120	Nut	3	16	3
60-3110	Washer	20	10	1	60-7120	Nut	18	42	3
60-3120	Nut	20	7	4	60-7150	Stud	3	13	3
60-3130	Plate - Clamping	20	8	1	60-7150	Stud	18	46	3
60-3140	Spring	20	12	1	60-7160	Rivet	4	24	2
60-3140	Spring	19	15	1	60-7170	Pointer	4	30	1
60-3150	Ring - Sealing	20	13	1	60-7180	Bolt	4	*	1
60-3150	Sealing Ring	19	14	1	60-7180	Bolt	4	28	5
60-3160	Solenoid	20	11	1	60-7190	Gasket	18	45	1
60-3160	Solenoid	19	13	1	60-7200	Plate - Flange	3	11	1
60-5000	Bracket	16	1	1	60-7210	Bolt	3	21	1
60-5010	Fuel Filter Assembly	16	2	1	60-7230	Gear - Injector Pump	3	15	1
60-5020	Clip	18	37	4	60-7260	Nut - Hex	19	11	1
60-5030	Wrap - Spiral	16	5	2	60-7280	Bolt	15	1	8
60-5040	Hose - Fuel Feed	18	48	1	60-7280	Bolt	1	16	2
60-5050	Gasket - Flange Plate	3	10	1	60-7280	Bolt	14	25	14
60-5060	Washer	3	14	3	60-7280	Bolt	6	49	4
60-5060	Washer	18	44	3	60-7290	Bolt	11	29	4
60-5070	Pipe - Fuel	18	40	1	60-7290	Bolt	17	35	2
60-5090	Clamp - Lower	17	28	2	60-7300	Bolt	15	11	2
60-5100	Injection Pump Assembly	18	41	1	60-7310	Bolt	2	35	1
60-5110	Pipe - Injector No. 1	18	39	1	60-7360	Bolt	13	4	1
60-5120	Pipe - Injector No. 3	18	38	1	60-7370	Bolt	11	4	5
60-5130	Pipe - Injector No. 2	17	26	1	60-7370	Bolt	21	7	1
60-5140	Pipe - Injector No. 4	17	29	1	60-7370	Bolt	13	20	2
60-5150	Hose - Rubber	17	30	1	60-7370	Bolt	14	24	2
60-5160	Clip	17	31	3	60-7430	Oil Seal Assembly	7	13	1
60-5170	Connector	17	32	1	60-7470	Plug	7	26	4
60-5180	Clip	17	36	1	60-7480	Bolt	7	10	7
60-5200	Pulley - Drive	6	51	1	60-7490	Bolt	7	12	8
60-5210	Clamp - Upper	17	33	2	62-6320	Screw - Brass	5	26	1
60-5220	Nut	7	2	1	62-6390	Belt	6	50	1
60-5220	Nut	6	53	1	63-4560	Spring	19	2	1
60-5230	Washer - Spring	6	52	1	63-4570	Lever	19	3	1
60-5280	Housing - Support	6	44	1	63-4580	Nut	19	4	2
60-5290	Bearing & Shaft Assembly	6	45	1	63-4590	Screw - Vent	19	5	1
60-5300	Pulley - Driver	6	47	1	63-4600	Body - Screw Vent	19	6	1
60-5310	Wire - Retaining	6	46	1	63-4610	Washer	19	7	3
60-5320	Shaft - Drive	6	48	1	63-4620	Washer	19	8	4
60-5330	Pulley Assembly	23	2	1	63-4630	Key	19	9	1
60-5330	Pulley Assembly	24	2	1	63-4640	Washer - Lock	19	10	1
60-5340	Front Bracket Assembly	23	7	1	63-4650	Washer	20	6	2
60-5340	Front Bracket Assembly	24	7	1	63-4660	Washer	20	5	4
60-5350	Bearing	23	8	1	63-4670	Valve - Pressure	20	4	2

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63-4740	Bolt – Cylinder Head	8	2	2	86-6270	Gasket	7	*	1
63-4750	Nozzle Tip Assembly	16	7	4	86-6280	Crankshaft Assembly	7	*	1
63-4790	Clip	25	20	2	86-6290	Idle Gear Assembly	3	*	1
68-6030	Bolt	6	33	2	86-6300	Bushing	3	*	1
68-6400	Oil Pan Assembly	14	27	1	86-6310	Gear – Injector Pump	3	15	1
68-6410	Gasket	14	28	1	86-6320	Shaft	5	*	1
68-6420	Plug	13	22	1	86-6330	Pipe	5	*	1
68-6430	Gasket	13	21	1	86-6340	Impeller	5	*	1
68-6440	Dipstick	14	26	1	86-6350	Ring – Retaining	5	17	1
68-6470	Injector Shim Kit	16	12	A/R	86-6360	Washer	5	16	1
72-0140	Gasket	16	16	4	86-6370	Spacer	5	11	1
72-0150	Nozzle Assembly	18	*	4	86-6380	Retainer	3	*	3
72-0160	Nozzle Tip Assembly	16	17	4	86-6380	Washer	18	*	3
72-0170	Pipe – Injector No. 1	18	*	1	86-6390	Stud	18	*	3
72-0180	Pipe – Injector No. 2	17	*	1	86-6400	Alternator	21	*	1
72-0190	Pipe – Injector No. 3	18	*	1	86-6400	Diode	25	*	1
72-0200	Pipe – Injector No. 4	17	*	1	86-6410	Bearing	22	25	1
72-0210	Pipe – Fuel Leak–Off	17	*	1	86-6420	Brush	22	26	2
72-0220	Cylinder Head Assembly	10	*	1	86-6430	Rear Cover Assembly	24	19	1
72-0230	Jet – Combustion Std.	10	*	4	86-6440	Rectifier Assembly	24	13	1
72-0240	Piston Std.	9	*	4	86-6600	Check Valve Kit	20	*	1
72-0270	Nut – Retaining	16	18	4	86-6610	Bolt – Inlet	20	17	1
72-0280	Spacer	17	19	4	86-6620	Bolt	20	16	1
72-0290	Pin – Pressure	17	20	4	86-6630	Seal – Rubber	20	15	1
72-0300	Spring – Pressure	17	21	4	86-6640	Seal O–Ring	20	14	1
72-0310	Nut	17	25	4	86-6650	Bolt – Outlet	19	16	1
72-0320	Nozzle – Body	17	23	4	86-6660	Joint	20	18	1
72-0330	Packing	17	24	4	86-6670	Tube – Fuel	20	19	1
72-0340	Injector Shim Kit	17	22	A/R	86-6680	Lever Assembly	19	30	1
75-6700	Sensor – Magnetic	25	13	1	86-6690	Lever	19	19	1
82-2920	Piston O.S. 0.25 mm	9	*	4	86-6700	Bushing	19	18	1
82-2930	Piston O.S. 0.50 mm	9	*	4	86-6710	Arm	19	20	1
82-2940	Piston O.S. 0.75 mm	9	*	4	86-6720	Washer	19	22	1
82-2950	Engine Gasket Kit	2	*	1	86-6730	Spring	19	21	1
82-3110	Sender – Temp.	5	28	1	86-6740	Guide	19	23	1
82-9750	Jumper Assembly	25	18	1	86-6750	Washer	19	17	2
82-9760	Harness – Wiring Gauges	25	7	1	86-6760	Guide	19	1	1
82-9790	Harness – Wiring Valve	25	9	1	86-6770	Screw	19	24	1
82-9800	Harness – Wire	25	14	1	86-6780	Nut	19	25	1
82-9810	Harness – Wiring Traction	25	10	1	86-6790	Washer	19	26	1
82-9830	Harness – Wiring Main	25	17	1	86-6800	Bolt	19	28	1
82-9940	Harness – Wire Horn	25	12	1	86-6810	Pipe Assembly	19	29	1
86-6150	Piston Std.	9	19	4	86-6820	Bolt	19	27	2
86-6160	Piston O.S. 0.25 mm	9	*	4	237-100	Grommet	25	4	1
86-6170	Piston O.S. 0.50 mm	9	*	4	2412-74	Clamp–R	25	25	1
86-6180	Piston O.S. 0.75 mm	9	*	4	2412-109	Clip	25	3	1
86-6190	Gasket – Cylinder Head	10	*	1	2412-131	Clamp–R	25	21	3
86-6200	Guide – Valve	8	*	8	250-1	Tie – Cable	25	2	4
86-6210	Retainer – Upper	12	*	8	281-7	Plug	6	35	1
86-6220	Tappet	11	*	8	3253-4	Washer – Lock	6	34	10
86-6230	Bolt	2	*	6	3255-5	Washer – Lock	5	27	1
86-6240	Plug – Tapered	1	*	3	3290-378	Tie – Cable	25	8	12
86-6250	Plate – Front	2	*	1	3290-381	Tie – Cable	25	1	7
86-6260	Case – Timing Gear	4	34	1					

PRODUCT CHANGES

In an effort to make improvements available to TORO owners as quickly as possible, minor changes are incorporated into Toro's products from time to time that do not become immediately shown in the Parts Catalog. If such a change has been made in your unit, which is not reflected in your manual, see your TORO Distributor or his Authorized TORO Service Dealer for information and part numbers.

COUNTRIES OTHER THAN THE UNITED STATES OR CANADA

Customers who have purchased TORO products exported from the United States or Canada should contact their Toro Distributor (Dealer) to obtain guarantee policies for your country, province or state. If for any

reason you are dissatisfied with your Distributor's service or have difficulty obtaining guarantee information, contact the TORO importer. If all other remedies fail, you may contact us at The Toro Company.

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MAINTENANCE RECORD

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