

Service Parts

Marine Generator Sets



Models:

40-180EOZD
33-150EFOZD

KOHLER[®]
POWER SYSTEMS

9001
KOHLER
POWER SYSTEMS
NATIONALLY REGISTERED

TP-6443 4/07c

Table of Contents

Introduction	3	Group 23B: Thermostat Housing	76
Numbering System Significance	3	Group 23C: Thermostat	77
Illustrations	3	Group 24: Engine Oil Cooler	78
How to Find Part Numbers	3	Group 25A: Primary Fuel Filter	82
Hardware References	3	Group 25B: Secondary Fuel Filter	83
Specification Number Index	4	Group 25A/25B: Primary and Secondary Fuel Filter	86
Group 1: Crankshaft	14	Group 26: Fuel Transfer Pump	88
Group 2: Camshaft	16	Group 27: Starting Motor	89
Group 3: Valve Train	17	Group 28A: Fan Belt	92
Group 4: Front Plate	19	Group 28B: Crankshaft Pulley	94
Group 5: Timing Gear Cover	20	Group 28C: Belt Tensioner	95
Group 6: Rocker Arm Cover	22	Group 29A: Flywheel Housing	96
Group 7: Piston and Connecting Rod	24	Group 29B: Flywheel	98
Group 8: Cylinder Block	25	Group 30: Cylinder Head Gasket Set	99
Group 9: Short Block Assembly	29	Group 31: Overhaul Gasket Set	101
Group 10A: Oil Dipstick	31	Group 32: Auxiliary Drive Gears	104
Group 10B: Oil Filter	32	Group 33: Seawater Pump	107
Group 11: Oil Pan	34	Group 34: Alternator Brackets	109
Group 12: Engine Oil Pump	37	Group 35: Alternator	112
Group 13: Vent Tube	39	Group 36A: Wiring Harness	114
Group 14: Cylinder Head	41	Group 36B: Sensors	116
Group 15A: Exhaust Elbow	44	Group 101: Air Intake	117
Group 15B: Exhaust Manifold	45	Group 105: Engine	118
Group 16: Heat Exchanger	47	Group 107: Nameplate and Decals	124
Group 18A: Fuel Injection System	50	Group 109: Skid and Plant Mounting	125
Group 18B: Fuel Injection Nozzle	56	Group 201: Alternator and Mounting	126
Group 18C: Fuel Injection Sensor	58	Group 301: Control and Harness	130
Group 18D: Injection Pump Parts	60	Group 301: Controller and Mounting	134
Group 18F: Fuel Lines	61	Group 701: Literature	146
Group 19: Engine Air Intake	63	Parts List: Accessories	147
Group 20: Engine Balancer Shafts	66	Appendix A Abbreviations	171
Group 21A: Turbocharger	67	Appendix B Common Hardware Application Guidelines	173
Group 21B: Turbocharger Adapter	70	Appendix C General Torque Specifications	174
Group 22A: Water Pump	71	Appendix D Common Hardware Identification ...	175
Group 22B: Water Pump Pulley	72	Appendix E Common Hardware List	176
Group 22C: Water Pump Inlet	73	Index	179
Group 23A: Thermostat Cover	75		

Introduction

This manual lists service replacement parts for generator sets listed on the front cover.

Information in this publication represents data available at the time of print. Kohler Co. reserves the right to change this publication and the products represented without notice and without any obligation or liability whatsoever.

This manual includes the following main sections:

Table of Contents. Lists the sections of the manual.

Introduction (and other information sections).

Contains introductory material about part numbers, illustrations, and hardware.

Specification Number Index. Lists the generator set specs and groups.

Group Parts Lists. List the part numbers of parts in the groups.

Kit Sections. List modules and accessories and their parts.

Appendices. Include Abbreviations, Common Hardware Application Guidelines, General Torque Specifications, Common Hardware Identification, and Common Hardware List.

Numbering System Significance

This manual uses the following numbering systems:

Specification Number. The product identification number located on the generator set nameplate. Spec numbers break down into groups.

Group Number. A unique number representing a parts group needed to assemble a generator set function. For example, Group 101 is the Air Intake group.

Variation or Module Number. A group might have several variations. Each variation performs the same function with different parts lists. For example, a 50 Hz generator alternator and a 60 Hz generator alternator both perform the same function; however, with different parts. Each difference requires a group variation or module number.

Part Number. The part number identifies an individual assembly, subassembly, component, or accessory kit.

Illustrations

Illustrations (or exploded-view drawings) best representing the widest range of variations accompany most groups in this manual. Illustrations do not depict all details and may not show all parts. Do not use illustrations for assembly or disassembly instructions.

How to Find Part Numbers

Use the following steps to locate a service replacement part.

1. Locate the generator set nameplate to **identify the generator set spec number**.
2. Locate a second generator set nameplate listing accessories to **identify installed modules**. On some models the accessory nameplate is mounted inside the generator junction box.
3. **Turn to the Specification Number Index.** The first column lists the generator set spec numbers. The headings identify the groups of parts that make up the generator set.
4. **Identify the group** most likely to include the service part number.
5. **Find the group variation number** at the intersection of the spec number row and the group column. Note the variation number.
6. **Page forward to locate the group** identified in step 4 or find the appropriate page in the Table of Contents.
7. **Find the part on the illustration** and note the item number of the part or **find the part description in the parts list**.
8. Select **the part number that corresponds to your group variation**. The first column lists the illustration item number. Find the variation identified in the Specification Number Index or the module number found on the generator set nameplate in the appropriate column on the right side of the parts list table. Find the quantity used at the intersection of the item number row and the variation column. A blank space at the intersection means the variation/module does not use that part number.

Hardware References

Many common hardware items do not appear in parts manuals or will appear as common hardware entries. A common hardware entry lists the size of the hardware. For example, an item that appears as "Hardware, 3/8-16" in the text means that the piece is 3/8-16 size. Obtain common hardware locally or, if contacting the factory, use the Common Hardware List in the appendix to identify the common hardware part number and specifications. See Common Hardware Application Guidelines in the appendix for mating hardware instructions.

Some hardware items require a specific size or some other characteristic. In that case, use the part number listed in the text.

When replacing hardware, do not substitute inferior grade hardware. Replacement hardware grade should be equal to or better than the grade of the manufacturer's original hardware. Use the Common Hardware List in the appendix to identify the common hardware hardness.

Specification Number Index

Group Title	<i>Crankshaft</i>	<i>Camshaft</i>	<i>Valve Train</i>	<i>Front Plate</i>	<i>Timing Gear Cover</i>	<i>Rocker Arm Cover</i>	<i>Piston & Connecting Rod</i>	<i>Cylinder Block</i>	<i>Short Block Assembly</i>	<i>Oil Dipstick</i>	<i>Oil Filter</i>	<i>Oil Pan</i>	<i>Engine Oil Pump</i>	<i>Vent Tube</i>
Group No.	1	2	3	4	5	6	7	8	9	10A	10B	11	12	13
Spec No.	Variation Number													
33EFOZD														
GM47466-GA3	4715	4601	4901	3602	4412	1150	4833	4601	1	4002	8843	1902	5001	2952
GM47466-GA4	4715	4601	4901	3602	4412	1150	4833	4601	1	4002	8843	1902	5001	2952
GM47466-GA7	4715	4601	4901	3602	4412	1150	4833	4601	1	4002	8843	1902	5001	2952
GM47466-GA8	4715	4601	4901	3602	4412	1150	4833	4601	1	4002	8843	1902	5001	2952
40EOZD														
GM47466-GA1	4715	4601	4901	3602	4412	1150	4833	4601	1	4002	8843	1902	5001	2952
GM47466-GA2	4715	4601	4901	3602	4412	1150	4833	4601	1	4002	8843	1902	5001	2952
GM47466-GA5	4715	4601	4901	3602	4412	1150	4833	4601	1	4002	8843	1902	5001	2952
GM47466-GA6	4715	4601	4901	3602	4412	1150	4833	4601	1	4002	8843	1902	5001	2952
40/50EFOZD														
GM47467-GA3	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
GM47467-GA6	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
GM47467-GA7	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
GM47467-GA8	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
GM47467-GA11	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
GM47467-GA14	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
GM47467-GA15	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
GM47467-GA16	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
55/65EOZD														
GM47467-GA1	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
GM47467-GA2	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
GM47467-GA4	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
GM47467-GA5	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
GM47467-GA9	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
GM47467-GA10	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
GM47467-GA12	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915
GM47467-GA13	4715	4614	4901	3602	4412	1150	4822	4614	2	4002	8843	1954	5001	2915

Specification Number Index

Group Title	<i>Crankshaft</i>	<i>Camshaft</i>	<i>Valve Train</i>	<i>Front Plate</i>	<i>Timing Gear Cover</i>	<i>Rocker Arm Cover</i>	<i>Piston & Connecting Rod</i>	<i>Cylinder Block</i>	<i>Short Block Assembly</i>	<i>Oil Dipstick</i>	<i>Oil Filter</i>	<i>Oil Pan</i>	<i>Engine Oil Pump</i>	<i>Vent Tube</i>
Group No.	1	2	3	4	5	6	7	8	9	10A	10B	11	12	13
Spec No.	Variation Number													
80/99EOZD & 70/80EFOZD														
GM47468-GA1	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA2	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA3	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA4	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA5	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA6	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA7	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA8	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA9	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA10	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA11	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA12	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA13	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA14	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA15	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
GM47468-GA16	4712	4613	4902	3602	4412	1152	4820	4613	3	4002	8843	1945	5001	2915
125EOZD & 100EFOZD														
GM47469-GA1	4705	4601b	4902	-	7701	1101	4806	4601	4	4021	5943	1924	5002	2912
GM47469-GA2	4705	4601b	4902	-	7701	1101	4806	4601	4	4021	5943	1924	5002	2912
GM47469-GA3	4705	4601b	4902	-	7701	1101	4806	4601	4	4021	5943	1924	5002	2912
GM47469-GA4	4705	4601b	4902	-	7701	1101	4806	4601	4	4021	5943	1924	5002	2912
150EOZD & 125EFOZD														
GM47469-GA5	4705	4601b	4902	-	7701	1101	4806	4601b	4	4021	5943	1924	5002	2912
GM47469-GA6	4705	4601b	4902	-	7701	1101	4806	4601b	4	4021	5943	1924	5002	2912
GM47469-GA7	4705	4601b	4902	-	7701	1101	4806	4601b	4	4021	5943	1924	5002	2912
GM47469-GA8	4705	4601b	4902	-	7701	1101	4806	4601b	4	4021	5943	1924	5002	2912
180EOZD & 150EFOZD														
GM47703-GA1	4705	4601b	4902	-	7701	1101	4806	4601b	4	4021	5943	1924	5002	2912
GM47703-GA2	4705	4601b	4902	-	7701	1101	4806	4601b	4	4021	5943	1924	5002	2912
GM47703-GA3	4705	4601b	4902	-	7701	1101	4806	4601b	4	4021	5943	1924	5002	2912
GM47703-GA4	4705	4601b	4902	-	7701	1101	4806	4601b	4	4021	5943	1924	5002	2912

Specification Number Index

Group Title	Cylinder Head Exhaust Elbow Exhaust Manifold Heat Exchanger Fuel Injection System Fuel Injection Nozzle Fuel Injection Sensor Injection Pump Parts Fuel Lines Engine Air Intake Engine Balancer Shafts Turbocharger Turbocharger Adapter												
	Group No.	14	15A	15B	16	18A	18B	18C	18D	18F	19	20	21A
Spec No.	Variation Number												
33EFOZD													
GM47466-GA3	5102	6414	2843	2703	167K	167K	-	167K	6356	1783	4502	-	-
GM47466-GA4	5102	6414	2843	2703	167J	167J	-	167J	6356	1783	4502	-	-
GM47466-GA7	5102	6414	2843	2703	167K	167K	-	167K	6356	1783	4502	-	-
GM47466-GA8	5102	6414	2843	2703	167J	167J	-	167J	6356	1783	4502	-	-
40EOZD													
GM47466-GA1	5102	6414	2843	2703	167G	167G	167G	167G	6356	1783	4502	-	-
GM47466-GA2	5102	6414	2843	2703	167H	167H	167H	167H	6356	1783	4502	-	-
GM47466-GA5	5102	6414	2843	2703	167G	167G	167G	167G	6356	1783	4502	-	-
GM47466-GA6	5102	6414	2843	2703	167H	167H	167H	167H	6356	1783	4502	-	-
40/50EFOZD													
GM47467-GA3	5102	-	2843	2703	168H	168H	168H	-	6351	1785	4501	65LV	1838
GM47467-GA6	5102	-	2843	2703	168H	168H	168H	-	6351	1785	4501	65LV	1838
GM47467-GA7	5102	-	2843	2703	168G	168G	168G	-	6351	1785	4501	65LV	1838
GM47467-GA8	5102	-	2843	2703	168G	168G	168G	-	6351	1785	4501	65LV	1838
GM47467-GA11	5102	-	2843	2703	168H	168H	168H	-	6351	1785	4501	65LV	1838
GM47467-GA14	5102	-	2843	2703	168H	168H	168H	-	6351	1785	4501	65LV	1838
GM47467-GA15	5102	-	2843	2703	168G	168G	168G	-	6351	1785	4501	65LV	1838
GM47467-GA16	5102	-	2843	2703	168G	168G	168G	-	6351	1785	4501	65LV	1838
55/65EOZD													
GM47467-GA1	5102	-	2843	2703	168J	168J	168J	-	6351	1785	4501	65LV	1838
GM47467-GA2	5102	-	2843	2703	168K	168K	168K	-	6351	1785	4501	65LV	1838
GM47467-GA4	5102	-	2843	2703	168J	168J	168J	-	6351	1785	4501	65LV	1838
GM47467-GA5	5102	-	2843	2703	168K	168K	168K	-	6351	1785	4501	65LV	1838
GM47467-GA9	5102	-	2843	2703	168J	168J	168J	-	6351	1785	4501	65LV	1838
GM47467-GA10	5102	-	2843	2703	168K	168K	168K	-	6351	1785	4501	65LV	1838
GM47467-GA12	5102	-	2843	2703	168J	168J	168J	-	6351	1785	4501	65LV	1838
GM47467-GA13	5102	-	2843	2703	168K	168K	168K	-	6351	1785	4501	65LV	1838

Specification Number Index

Group Title	Cylinder Head	Exhaust Elbow	Exhaust Manifold	Heat Exchanger	Fuel Injection System	Fuel Injection Nozzle	Fuel Injection Sensor	Injection Pump Parts	Injection Pump Parts	Fuel Lines	Engine Air Intake	Engine Balancer Shafts	Turbocharger	Turbocharger Adapter
Group No.	14	15A	15B	16	18A	18B	18C	18D	18E	18F	19	20	21A	21B
Spec No.	Variation Number													
80/99EOZD & 70/80EFOZD														
GM47468-GA1	5107	-	2839	2702	167L	167L	167L	-	-	6357	17BH	-	65LU	1839
GM47468-GA2	5107	-	2839	2702	167M	167M	167M	-	-	6357	17BH	-	65LU	1839
GM47468-GA3	5107	-	2839	2702	167S	167S	167S	-	-	6357	17BH	-	65LX	1838
GM47468-GA4	5107	-	2839	2702	167T	167T	167T	-	-	6357	17BH	-	65LX	1838
GM47468-GA5	5107	-	2839	2702	167L	167L	167L	-	-	6357	17BH	-	65LU	1839
GM47468-GA6	5107	-	2839	2702	167M	167M	167M	-	-	6357	17BH	-	65LU	1839
GM47468-GA7	5107	-	2839	2702	167S	167S	167S	-	-	6357	17BH	-	65LX	1839
GM47468-GA8	5107	-	2839	2702	167T	167T	167T	-	-	6357	17BH	-	65LX	1839
GM47468-GA9	5107	-	2839	2702	167L	167L	167L	-	-	6357	17BH	-	65LU	1839
GM47468-GA10	5107	-	2839	2702	167M	167M	167M	-	-	6357	17BH	-	65LU	1839
GM47468-GA11	5107	-	2839	2702	167S	167S	167S	-	-	6357	17BH	-	65LX	1838
GM47468-GA12	5107	-	2839	2702	167T	167T	167T	-	-	6357	17BH	-	65LX	1838
GM47468-GA13	5107	-	2839	2702	167L	167L	167L	-	-	6357	17BH	-	65LU	1839
GM47468-GA14	5107	-	2839	2702	167M	167M	167M	-	-	6357	17BH	-	65LU	1839
GM47468-GA18	5107	-	2839	2702	167S	167S	167S	-	-	6357	17BH	-	65LX	1839
GM47468-GA16	5107	-	2839	2702	167T	167T	167T	-	-	6357	17BH	-	65LX	1839
125EOZD & 100EFOZD														
GM47469-GA1	5104	-	2801	2701	164C	-	-	-	-	-	1772	-	6575	-
GM47469-GA2	5104	-	2801	2701	164D	-	-	-	-	-	1772	-	6575	-
GM47469-GA3	5104	-	2801	2701	164C	-	-	-	-	-	1772	-	6575	-
GM47469-GA4	5104	-	2801	2701	164D	-	-	-	-	-	1772	-	6575	-
150EOZD & 125EFOZD														
GM47469-GA5	5104	-	2801	2701	164C	-	-	-	-	-	1772	-	6575	-
GM47469-GA6	5104	-	2801	2701	164D	-	-	-	-	-	1772	-	6575	-
GM47469-GA7	5104	-	2801	2701	164C	-	-	-	-	-	1772	-	6575	-
GM47469-GA8	5104	-	2801	2701	164D	-	-	-	-	-	1772	-	6575	-
180EOZD & 150EFOZD														
GM47703-GA1	5104	-	2801	2701	164C	-	-	-	-	-	1772	-	6575	-
GM47703-GA2	5104	-	2801	2701	164D	-	-	-	-	-	1772	-	6575	-
GM47703-GA3	5104	-	2801	2701	164C	-	-	-	-	-	1772	-	6575	-
GM47703-GA4	5104	-	2801	2701	164D	-	-	-	-	-	1772	-	6575	-

Specification Number Index

Group Title	<i>Water Pump</i>	<i>Water Pump Pulley</i>	<i>Water Pump Inlet</i>	<i>Thermostat Cover</i>	<i>Thermostat Housing</i>	<i>Thermostat</i>	<i>Engine Oil Cooler</i>	<i>Engine Oil Cooler</i>	<i>Primary Fuel Filter</i>	<i>Final Fuel Filter</i>	<i>Fuel Transfer Pump</i>	<i>Starting Motor</i>	<i>Fan Belt</i>	<i>Crankshaft Pulley</i>
Group No.	22A	22B	22C	23A	23B	23C	24A	24B	25A	25B	26	27	28A	28B
Spec No.	Variation Number													
33EFOZD														
GM47466-GA3	4412	2001	5726	2150	-	2206	5904	5904	8154	35DH	3701	3090	24BN	1333
GM47466-GA4	4412	2001	5726	2150	-	2206	5904	5904	8150	35DH	3701	3006	24BN	1333
GM47466-GA7	4412	2001	5726	2150	-	2206	5904	5904	8154	35DH	3701	3090	24BN	1333
GM47466-GA8	4412	2001	5726	2150	-	2206	5904	5904	8150	35DH	3701	3006	24BN	1333
40EOZD														
GM47466-GA1	4412	2001	5726	2150	-	2206	5904	5904	8150	35DH	3701	3006	24BN	1333
GM47466-GA2	4412	2001	5726	2150	-	2206	5904	5904	8154	35DH	3701	3090	24BN	1333
GM47466-GA5	4412	2001	5726	2150	-	2206	5904	5904	8150	35DH	3701	3006	24BN	1333
GM47466-GA6	4412	2001	5726	2150	-	2206	5904	5904	8154	35DH	3701	3090	24BN	1333
40/50EFOZD														
GM47467-GA3	4412	2002	5726	2150	-	2206	5901	5901	8154	35DH	3701	3090	24BN	1333
GM47467-GA6	4412	2002	5726	2150	-	2206	5901	5901	8154	35DH	3701	3090	24BN	1333
GM47467-GA7	4412	2002	5726	2150	-	2206	5901	5901	8150	35DH	3701	3006	24BN	1333
GM47467-GA8	4412	2002	5726	2150	-	2206	5901	5901	8150	35DH	3701	3006	24BN	1333
GM47467-GA11	4412	2002	5726	2150	-	2206	5901	5901	8154	35DH	3701	3090	24BN	1333
GM47467-GA14	4412	2002	5726	2150	-	2206	5901	5901	8154	35DH	3701	3090	24BN	1333
GM47467-GA15	4412	2002	5726	2150	-	2206	5901	5901	8150	35DH	3701	3006	24BN	1333
GM47467-GA16	4412	2002	5726	2150	-	2206	5901	5901	8150	35DH	3701	3006	24BN	1333
55/65EOZD														
GM47467-GA1	4412	2002	5726	2150	-	2206	5901	5901	8150	35DH	3701	3006	24BN	1333
GM47467-GA2	4412	2002	5726	2150	-	2206	5901	5901	8154	35DH	3701	3090	24BN	1333
GM47467-GA4	4412	2002	5726	2150	-	2206	5901	5901	8150	35DH	3701	3006	24BN	1333
GM47467-GA5	4412	2002	5726	2150	-	2206	5901	5901	8154	35DH	3701	3090	24BN	1333
GM47467-GA9	4412	2002	5726	2150	-	2206	5901	5901	8150	35DH	3701	3006	24BN	1333
GM47467-GA10	4412	2002	5726	2150	-	2206	5901	5901	8154	35DH	3701	3090	24BN	1333
GM47467-GA12	4412	2002	5726	2150	-	2206	5901	5901	8150	35DH	3701	3006	24BN	1333
GM47467-GA13	4412	2002	5726	2150	-	2206	5901	5901	8154	35DH	3701	3090	24BN	1333

Specification Number Index

Group Title	<i>Water Pump</i>	<i>Water Pump Pulley</i>	<i>Water Pump Inlet</i>	<i>Thermostat Cover</i>	<i>Thermostat Housing</i>	<i>Thermostat</i>	<i>Engine Oil Cooler</i>	<i>Engine Oil Cooler</i>	<i>Primary Fuel Filter</i>	<i>Final Fuel Filter</i>	<i>Fuel Transfer Pump</i>	<i>Starting Motor</i>	<i>Fan Belt</i>	<i>Crankshaft Pulley</i>
Group No.	22A	22B	22C	23A	23B	23C	24A	24B	25A	25B	26	27	28A	28B
Spec No.	Variation Number													
80/99EOZD & 70/80EFOZD														
GM47468-GA1	4412	2001	5726	2150	-	2206	5902	5902	8157	35DP	3701	3006	24BN	1323
GM47468-GA2	4412	2001	5726	2150	-	2206	5902	5902	8158	35DP	3701	3090	24BN	1323
GM47468-GA3	4412	2001	5726	2150	-	2206	5902	5902	8157	35DP	3701	3006	24BN	1323
GM47468-GA4	4412	2001	5726	2150	-	2206	5902	5902	8158	35DP	3701	3090	24BN	1323
GM47468-GA5	4412	2001	5726	2150	-	2206	5902	5902	8157	35DP	3701	3006	24BN	1323
GM47468-GA6	4412	2001	5726	2150	-	2206	5902	5902	8158	35DP	3701	3090	24BN	1323
GM47468-GA7	4412	2001	5726	2150	-	2206	5902	5902	8157	35DP	3701	3006	24BN	1323
GM47468-GA8	4412	2001	5726	2150	-	2206	5902	5902	8158	35DP	3701	3090	24BN	1323
GM47468-GA9	4412	2001	5726	2150	-	2206	5902	5902	8157	35DP	3701	3006	24BN	1323
GM47468-GA10	4412	2001	5726	2150	-	2206	5902	5902	8158	35DP	3701	3090	24BN	1323
GM47468-GA11	4412	2001	5726	2150	-	2206	5902	5902	8157	35DP	3701	3006	24BN	1323
GM47468-GA12	4412	2001	5726	2150	-	2206	5902	5902	8158	35DP	3701	3090	24BN	1323
GM47468-GA13	4412	2001	5726	2150	-	2206	5902	5902	8157	35DP	3701	3006	24BN	1323
GM47468-GA14	4412	2001	5726	2150	-	2206	5902	5902	8158	35DP	3701	3090	24BN	1323
GM47468-GA15	4412	2001	5726	2150	-	2206	5902	5902	8157	35DP	3701	3006	24BN	1323
GM47468-GA16	4412	2001	5726	2150	-	2206	5902	5902	8158	35DP	3701	3090	24BN	1323
125EOZD & 100EFOZD														
GM47469-GA1	2003	-	5703	2113	3913	2205	5943	5943	3545	3545	-	3004	2463	1306
GM47469-GA2	2003	-	5703	2113	3913	2205	5943	5943	3545	3545	-	3003	2463	1306
GM47469-GA3	2003	-	5703	2113	3913	2205	5943	5943	3545	3545	-	3004	2452	1345
GM47469-GA4	2003	-	5703	2113	3913	2205	5943	5943	3545	3545	-	3003	2452	1345
150EOZD & 125EFOZD														
GM47469-GA5	2003	-	5703	2113	3913	2205	5943	5943	3545	3545	-	3004	2463	1306
GM47469-GA6	2003	-	5703	2113	3913	2205	5943	5943	3545	3545	-	3003	2463	1306
GM47469-GA7	2003	-	5703	2113	3913	2205	5943	5943	3545	3545	-	3004	2452	1345
GM47469-GA8	2003	-	5703	2113	3913	2205	5943	5943	3545	3545	-	3003	2452	1345
180EOZD & 150EFOZD														
GM47703-GA1	2003	-	5703	2113	3913	2205	5943	5943	3545	3545	-	3004	2463	1306
GM47703-GA2	2003	-	5703	2113	3913	2205	5943	5943	3545	3545	-	3003	2463	1306
GM47703-GA3	2003	-	5703	2113	3913	2205	5943	5943	3545	3545	-	3004	2452	1345
GM47703-GA4	2003	-	5703	2113	3913	2205	5943	5943	3545	3545	-	3003	2452	1345

Specification Number Index

Group Title															
	Belt Tensioner	Flywheel Housing	Flywheel	Cylinder Head Gasket Set	Overhaul Gasket Set	Auxiliary Drive Gears	Sea Water Pump	Alternator Brackets	Alternator	Wiring Harness	Sensors				
Group No.	28C	29A	29B	30	31	32	33	34	35	36A	36B				
Spec No.	Variation Number														
33EFOZD															
GM47466-GA3	8712	1406	1503	1	1	5202	8020	6202	3104	-	-				
GM47466-GA4	8712	1406	1503	1	1	5202	8020	6202	3109	-	-				
GM47466-GA7	8712	1406	1503	1	1	5202	8020	6202	3149	-	-				
GM47466-GA8	8712	1406	1503	1	1	5202	8020	6202	3148	-	-				
40EOZD															
GM47466-GA1	8712	1406	1503	1	1	5202	8020	6202	3109	-	-				
GM47466-GA2	8712	1406	1503	1	1	5202	8020	6202	3104	-	-				
GM47466-GA5	8712	1406	1503	1	1	5202	8020	6202	3148	-	-				
GM47466-GA6	8712	1406	1503	1	1	5202	8020	6202	3149	-	-				
40/50EFOZD															
GM47467-GA3	8712	1406	1503	1	1	5202	8020	6202	3142	8442	6716				
GM47467-GA6	8712	1406	1503	1	1	5202	8020	6202	3142	8442	6716				
GM47467-GA7	8712	1406	1503	1	1	5202	8020	6202	3138	8442	6716				
GM47467-GA8	8712	1406	1503	1	1	5202	8020	6202	3138	8442	6716				
GM47467-GA11	8712	1406	1503	1	1	5202	8020	6202	3149	8442	6716				
GM47467-GA14	8712	1406	1503	1	1	5202	8020	6202	3149	8442	6716				
GM47467-GA15	8712	1406	1503	1	1	5202	8020	6202	3148	8442	6716				
GM47467-GA16	8712	1406	1503	1	1	5202	8020	6202	3148	8442	6716				
55/65EOZD															
GM47467-GA1	8712	1406	1503	1	1	5202	8020	6202	3138	8442	6716				
GM47467-GA2	8712	1406	1503	1	1	5202	8020	6202	3142	8442	6716				
GM47467-GA4	8712	1406	1503	1	1	5202	8020	6202	3138	8442	6716				
GM47467-GA5	8712	1406	1503	1	1	5202	8020	6202	3142	8442	6716				
GM47467-GA9	8712	1406	1503	1	1	5202	8020	6202	3148	8442	6716				
GM47467-GA10	8712	1406	1503	1	1	5202	8020	6202	3149	8442	6716				
GM47467-GA12	8712	1406	1503	1	1	5202	8020	6202	3148	8442	6716				
GM47467-GA13	8712	1406	1503	1	1	5202	8020	6202	3149	8442	6716				

Specification Number Index

Group Title															
	<i>Belt Tensioner</i>	<i>Flywheel Housing</i>	<i>Flywheel</i>	<i>Cylinder Head Gasket Set</i>	<i>Overhaul Gasket Set</i>	<i>Auxiliary Drive Gears</i>	<i>Sea Water Pump</i>	<i>Alternator Brackets</i>	<i>Alternator</i>	<i>Wiring Harness</i>	<i>Sensors</i>	<i>Sensors</i>			
Group No.	28C	29A	29B	30	31	32	33	34	35	36A	36B	36B			
Spec No.	Variation Number														
80/99EOZD & 70/80EFOZD															
GM47468-GA1	8712	1406	1503	2	2	5202	8020	6202	3138	8443	6716	-			
GM47468-GA2	8712	1406	1503	2	2	5202	8020	6202	3142	8443	6716	-			
GM47468-GA3	8712	1406	1503	2	2	5202	8020	6202	3138	8443	6716	-			
GM47468-GA4	8712	1406	1503	2	2	5202	8020	6202	3142	8443	6716	-			
GM47468-GA5	8712	1406	1503	2	2	5202	8020	6202	3138	8443	6716	-			
GM47468-GA6	8712	1406	1503	2	2	5202	8020	6202	3142	8443	6716	-			
GM47468-GA7	8712	1406	1503	2	2	5202	8020	6202	3138	8443	6716	-			
GM47468-GA8	8712	1406	1503	2	2	5202	8020	6202	3142	8443	6716	-			
GM47468-GA9	8712	1406	1503	2	2	5202	8020	6202	3148	8443	6716	-			
GM47468-GA10	8712	1406	1503	2	2	5202	8020	6202	3149	8443	6716	-			
GM47468-GA11	8712	1406	1503	2	2	5202	8020	6202	3148	8443	6716	-			
GM47468-GA12	8712	1406	1503	2	2	5202	8020	6202	3149	8443	6716	-			
GM47468-GA13	8712	1406	1503	2	2	5202	8020	6202	3148	8443	6716	-			
GM47468-GA14	8712	1406	1503	2	2	5202	8020	6202	3149	8443	6716	-			
GM47468-GA15	8712	1406	1503	2	2	5202	8020	6202	3148	8443	6716	-			
GM47468-GA16	8712	1406	1503	2	2	5202	8020	6202	3149	8443	6716	-			
125EOZD & 100EFOZD															
GM47469-GA1	-	1424	1505	3	3	5223	8001	6201	3115	9619	7601	4401			
GM47469-GA2	-	1424	1505	3	3	5223	8001	6201	3111	9619	7601	4401			
GM47469-GA3	-	1424	1505	3	3	5223	8001	6201	3115	9619	7601	4401			
GM47469-GA4	-	1424	1505	3	3	5223	8001	6201	3111	9619	7601	4401			
150EOZD & 125EFOZD															
GM47469-GA5	-	1424	1505	3	3	5223	8001	6201	3115	9619	7601	4401			
GM47469-GA6	-	1424	1505	3	3	5223	8001	6201	3111	9619	7601	4401			
GM47469-GA7	-	1424	1505	3	3	5223	8001	6201	3115	9619	7601	4401			
GM47469-GA8	-	1424	1505	3	3	5223	8001	6201	3111	9619	7601	4401			
180EOZD & 150EFOZD															
GM47703-GA1	-	1405	1505	3	3	5223	8001	6201	3115	9619	7601	4401			
GM47703-GA2	-	1405	1505	3	3	5223	8001	6201	3111	9619	7601	4401			
GM47703-GA3	-	1405	1505	3	3	5223	8001	6201	3115	9619	7601	4401			
GM47703-GA4	-	1405	1505	3	3	5223	8001	6201	3111	9619	7601	4401			

Specification Number Index

Group Title	Air Intake	Engine	Nameplates and Decals	Skid and Plant Mounting	Generator and Mounting	Controller and Mounting	Literature
Group No.	101	105	107	109	201	301	701
Spec No.	Variation Number						

33EFOZD							
GM47466-GA3	1	1	63	1	MA1	*	300
GM47466-GA4	1	2	63	1	MA1	*	300
GM47466-GA7	1	17	63	1	MA1	*	300
GM47466-GA8	1	18	63	1	MA1	*	300
40EOZD							
GM47466-GA1	1	3	63	1	MA1	*	300
GM47466-GA2	1	4	63	1	MA1	*	300
GM47466-GA5	1	19	63	1	MA1	*	300
GM47466-GA6	1	20	63	1	MA1	*	300
40/50EFOZD							
GM47467-GA3	2	5	63	2	MA2	*	301
GM47467-GA6	2	5	63	2	MA2	*	302
GM47467-GA7	2	6	63	2	MA2	*	301
GM47467-GA8	2	6	63	2	MA2	*	302
GM47467-GA11	2	21	63	2	MA2	*	301
GM47467-GA14	2	21	63	2	MA2	*	302
GM47467-GA15	2	22	63	2	MA2	*	301
GM47467-GA16	2	22	63	2	MA2	*	302
55/65EOZD							
GM47467-GA1	2	7	63	2	MA2	*	301
GM47467-GA2	2	8	63	2	MA2	*	301
GM47467-GA4	2	7	63	2	MA2	*	302
GM47467-GA5	2	8	63	2	MA2	*	302
GM47467-GA9	2	23	63	2	MA2	*	301
GM47467-GA10	2	24	63	2	MA2	*	301
GM47467-GA12	2	23	63	2	MA2	*	302
GM47467-GA13	2	24	63	2	MA2	*	302

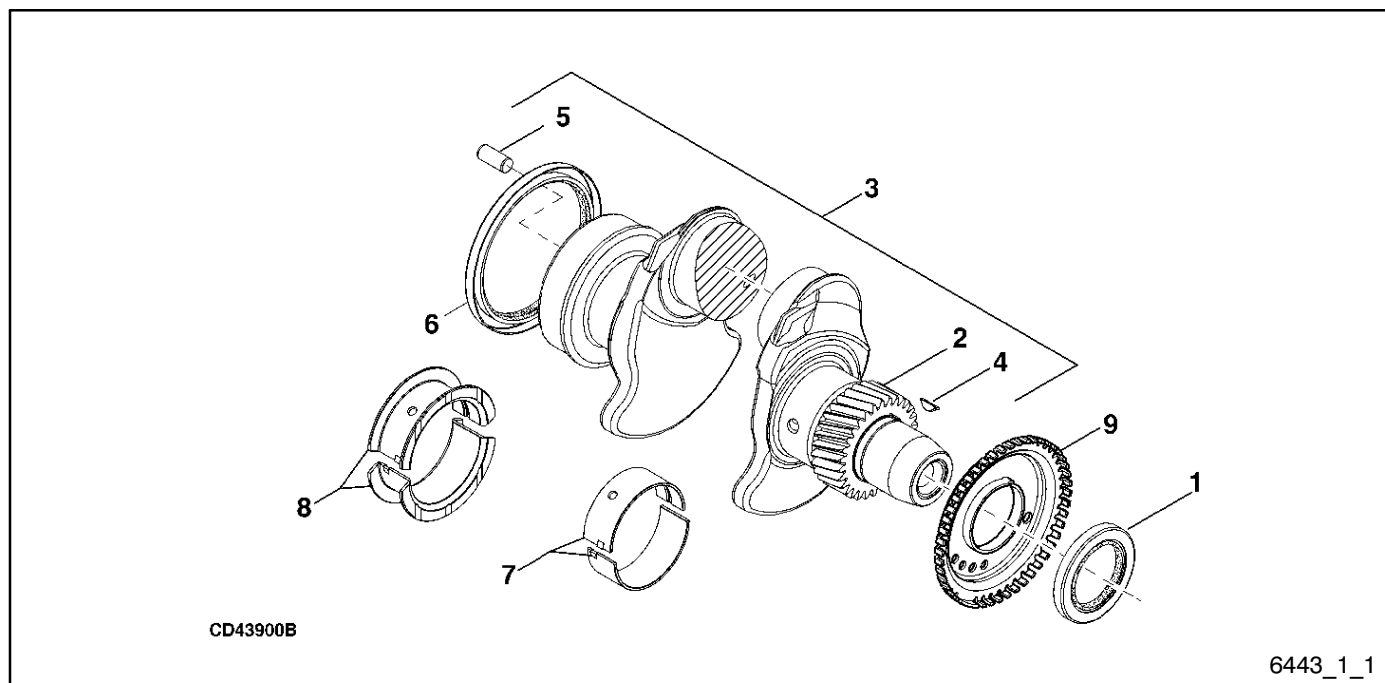
* Configured group. Refer to the generator set nameplate for the module number.
Turn to the respective group on the following pages for parts breakdowns.

Specification Number Index

Group Title							
	Air Intake	Engine	Nameplates and Decals	Skid and Plant Mounting	Generator and Mounting	Controller and Mounting	Literature
Group No.	101	105	107	109	201	301	701
Spec No.	Variation Number						
80/99EOZD & 70/80EFOZD							
GM47468-GA1	3	9	64	3	MA3	*	303
GM47468-GA2	3	10	64	3	MA3	*	303
GM47468-GA3	4	11	64	3	MA3	*	303
GM47468-GA4	4	12	64	3	MA3	*	303
GM47468-GA5	3	9	64	4	MA4	*	304
GM47468-GA6	3	10	64	4	MA4	*	304
GM47468-GA7	4	11	64	4	MA4	*	304
GM47468-GA8	4	12	64	4	MA4	*	304
GM47468-GA9	3	25	64	3	MA3	*	303
GM47468-GA10	3	26	64	3	MA3	*	303
GM47468-GA11	4	27	64	3	MA3	*	303
GM47468-GA12	4	28	64	3	MA3	*	303
GM47468-GA13	3	25	64	4	MA4	*	304
GM47468-GA14	3	26	64	4	MA4	*	304
GM47468-GA15	4	27	64	4	MA4	*	304
GM47468-GA16	4	28	64	4	MA4	*	304
125EOZD & 100EFOZD							
GM47469-GA1	5	13	65	5	MA5	*	305
GM47469-GA2	5	14	65	5	MA5	*	305
GM47469-GA3	5	15	65	5	MA5	*	305
GM47469-GA4	5	16	65	5	MA5	*	305
150EOZD & 125EFOZD							
GM47469-GA5	5	13	65	6	MA6	*	306
GM47469-GA6	5	14	65	6	MA6	*	306
GM47469-GA7	5	15	65	6	MA6	*	306
GM47469-GA8	5	16	65	6	MA6	*	306
180EOZD & 150EFOZD							
GM47703-GA1	6	29	66	7	MA7	*	307
GM47703-GA2	6	30	66	7	MA7	*	307
GM47703-GA3	6	31	66	7	MA7	*	307
GM47703-GA4	6	32	66	7	MA7	*	307

* Configured group. Refer to the generator set nameplate for the module number. Turn to the respective group on the following pages for parts breakdowns.

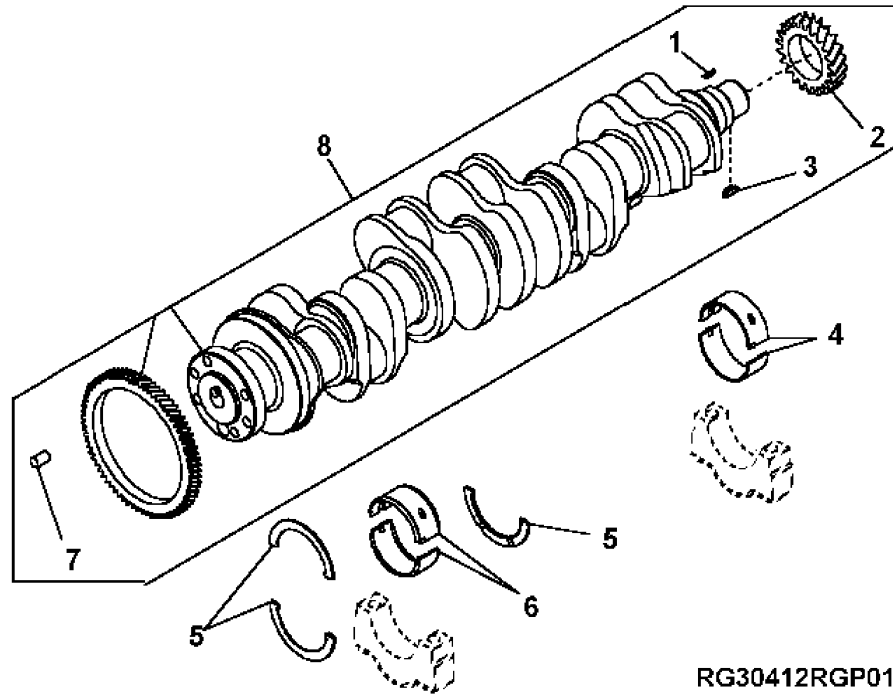
Group 1: Crankshaft



Item	Part Number	Description	Quantity	
			Variation	
			4715	4712
1	360181	Seal kit, front	1	1
2	360099	Gear, 30 teeth	1	1
3	GM32811	Crankshaft	1	
3	GM34543	Crankshaft		1
4	GM50610	Shaft key	1	1
5	223472	Dowel pin	1	1
6	223583	Seal, rear	1	1
7	360049	Bearing, standard	4	4
7	360055	Bearing, undersize, 0.254 mm	AR	AR
8	360050	Bearing, standard	1	1
8	360056	Bearing, undersize, 0.254 mm	AR	AR
9	GM32909	Wheel	1	
9	GM49838	Wheel		1

AR As Required

Group 1: Crankshaft



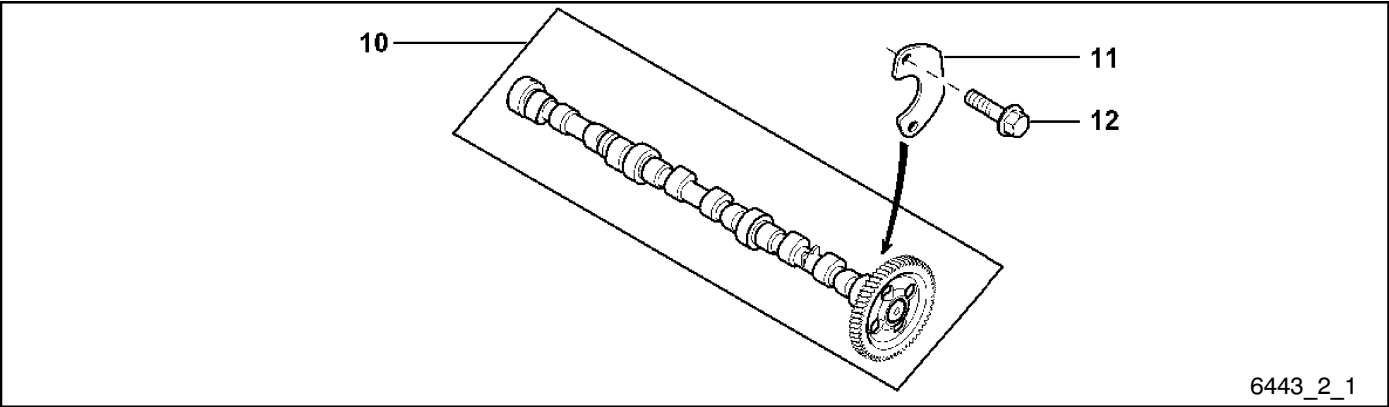
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6443_1_2

Item	Part Number	Description	Quantity
			Variation 4705
1	352746	Key	1
2	352715	Gear	1
3	—	Key	1
4	352853	Bearing	AR
4	GM18825	Thrust bearing, 0.292 mm	AR
4	GM18859	Bearing, US, 0.552 mm, 0.022 in.	AR
5	352864	Thrust washer	1
5	GM18864	Thrust washer, 0.18 mm	1
6	352854	Thrust bearing	1
6	GM18826	Thrust bearing, 0.292 mm	1
6	GM18827	Thrust bearing, 0.552 mm	1
7	223754	Dowel pin	1
8	GM52753	Crankshaft	1
—	GM18714	Sleeve	1

AR As Required

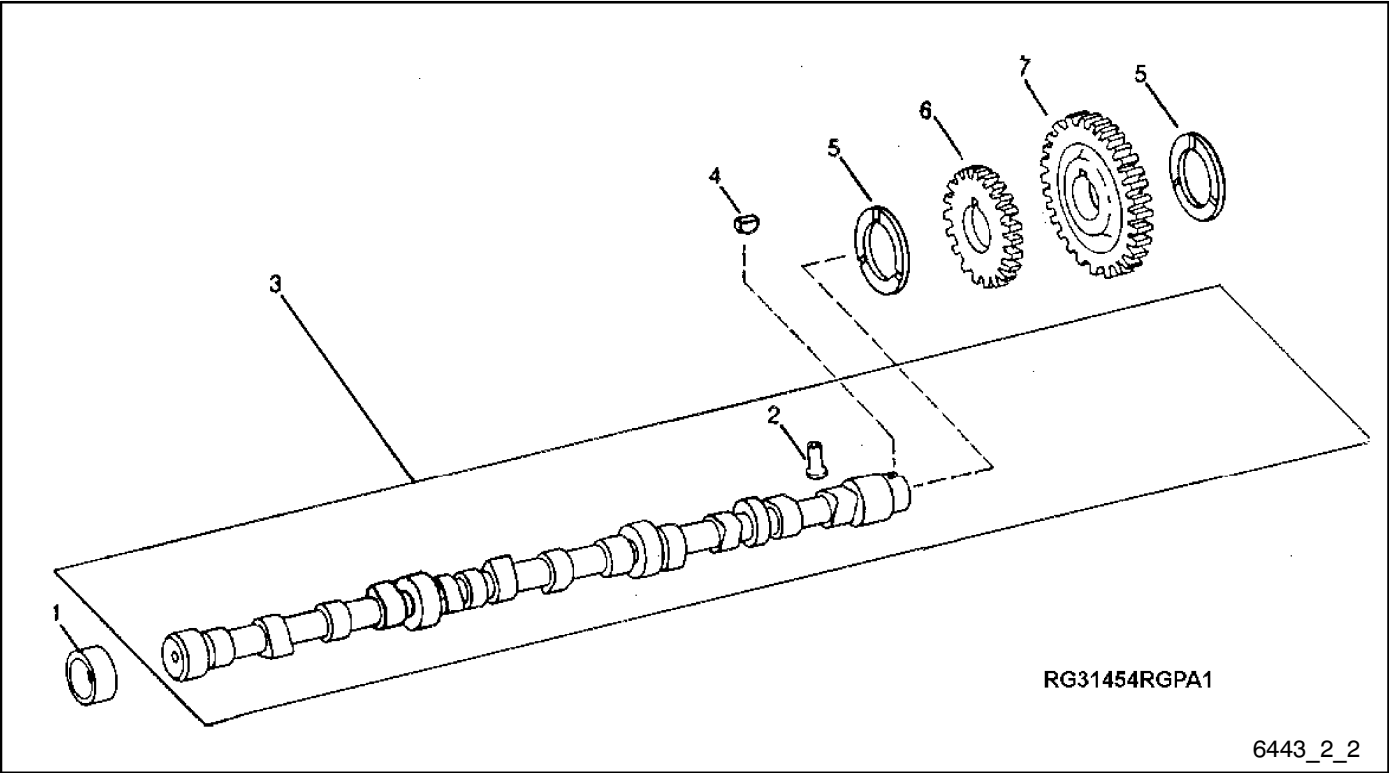
Group 2: Camshaft



6443_2_1

Item	Part Number	Description	Quantity		
			4601	4613	4614
10	GM32813	Camshaft			1
10	GM17530	Camshaft	1		
10	GM32931	Camshaft		1	
11	360154	Plate, thrust	1	1	1
12	#	Screw, M8 X 25	2	2	2

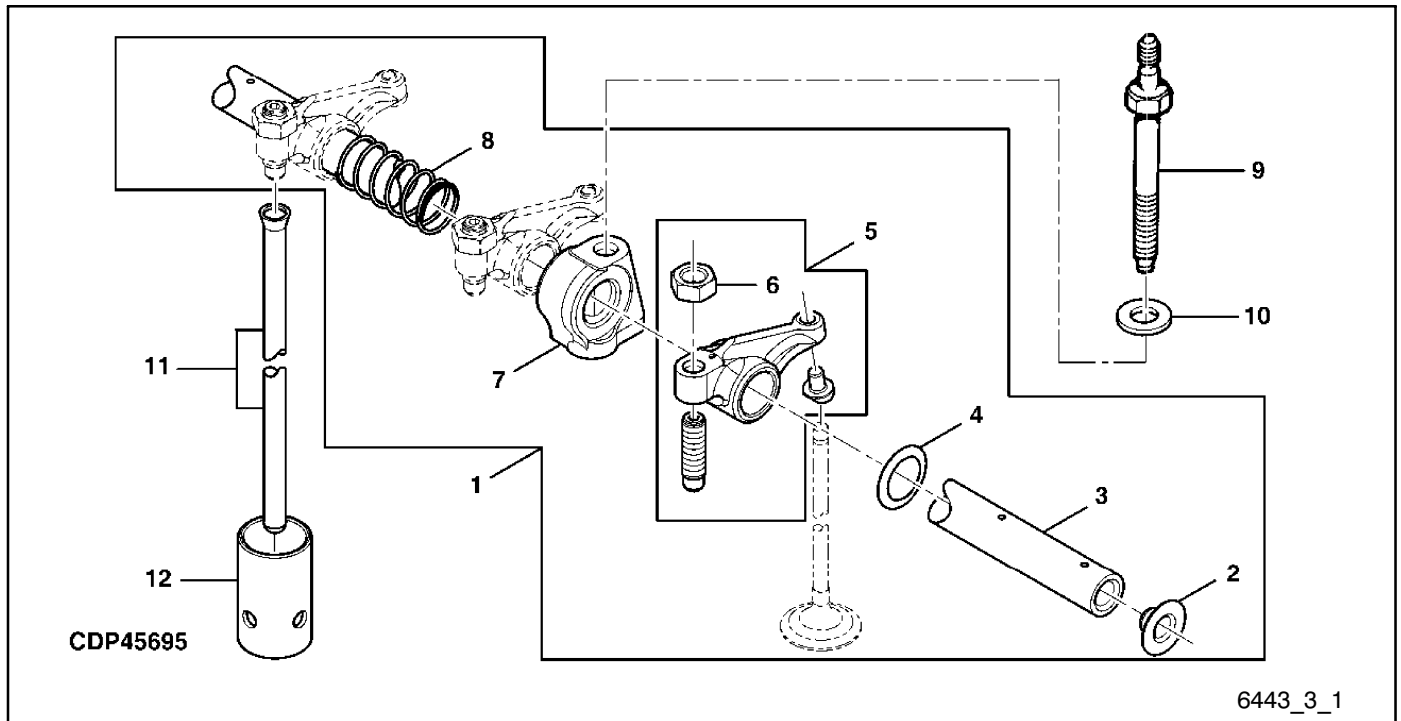
Common hardware; procure locally.



6443_2_2

Item	Part Number	Description	Quantity
			Variation 4601b
1	223889	Bushing	4
2	352725	Cam follower	12
3	352844	Camshaft	1
4	352700	Shaft key	1
5	GM50132	Washer	2
6	352716	Gear	1
7	352727	Gear	1

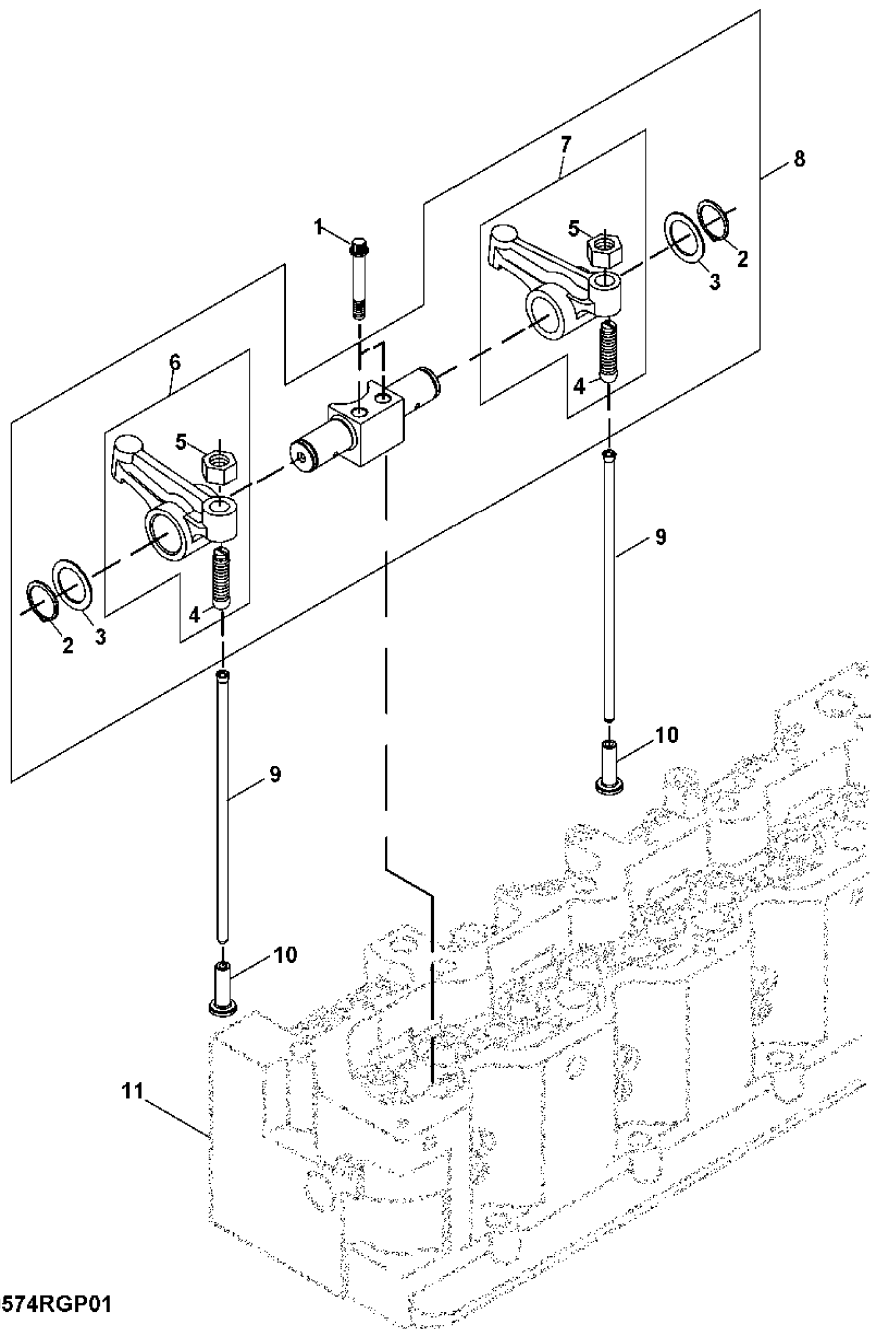
Group 3: Valve Train



Item	Part Number	Description	Quantity	
			Variation	
			4901	4902
1	223481	Rocker arm shaft	1	
1	GM50935	Rocker arm shaft		1
2	223480	Plug	2	2
3	360509	Rocker arm shaft	1	
3	360132	Rocker arm shaft		1
4	223634	Washer, 20.650 x 29.460 x 0.500 mm	2	2
5	GM50611	Rocker arm	8	12
6	#	Nut, M10	1	1
7	360112	Support	4	6
8	223632	Spring	3	5
9	360118	Stud	4	6
10	#	Washer, 11 x 20 x 2 mm	4	6
11	352026	Push rod	8	12
12	360135	Tappet	8	12

Common hardware; procure locally.

Group 3: Valve Train, continued



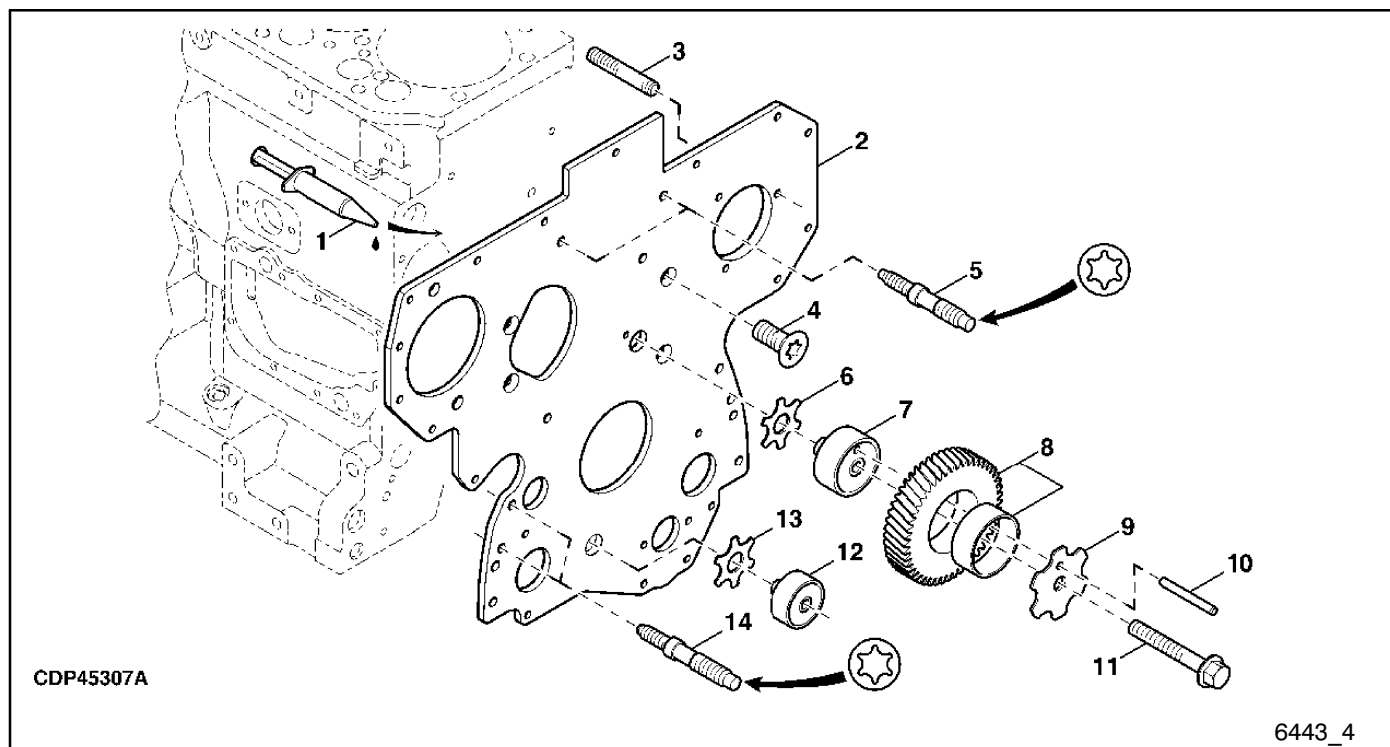
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6443_3_2

Item	Part Number	Description	Quantity Variation 4902
1	#	Screw	12
2	—	Snap ring	2
3	—	Washer	2
4	223749	Screw, set	2
5	#	Nut, 3/8 in.	2
6	223937	Rocker arm	1
7	223936	Rocker arm	1
8	GM52754	Kit, rocker arm	6
9	223877	Push rod	12
10	352725	Cam follower	12
11	—	Cylinder head	1
	223617	Cap	12

Common hardware; procure locally.

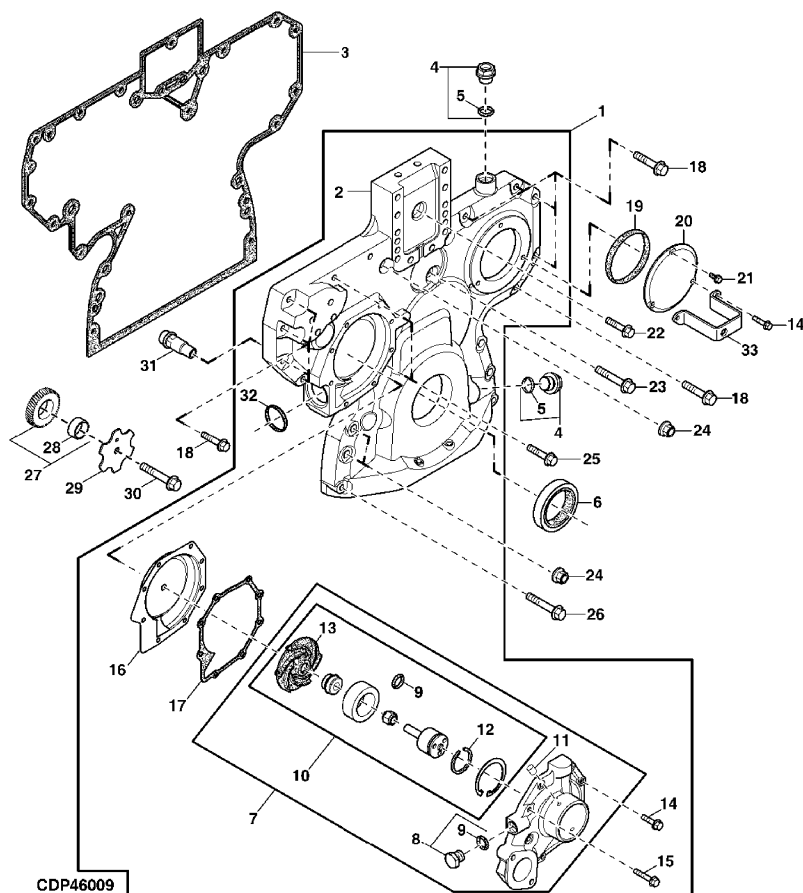
Group 4: Front Plate



Item	Part Number	Description	Quantity
			Variation 3602
1	GM50612	Kit, liquid gasket	1
2	GM17461	Plate	1
3	360092	Stud	3
4	360516	Screw	4
5	360514	Stud	2
6	360113	Washer, lock	1
7	360101	Shaft	1
8	GM50613	Helical gear	1
9	360147	Thrust washer	1
10	360179	Spring pin, 3/16 x 1 3/4 in.	1
10	#	Spring pin, 5 x 45 mm	1
11	#	Screw, M10 x 65	1
12	360083	Shaft	1
13	336446	Thrust washer	1
14	360140	Stud	4

Common hardware; procure locally.

Group 5: Timing Gear Cover



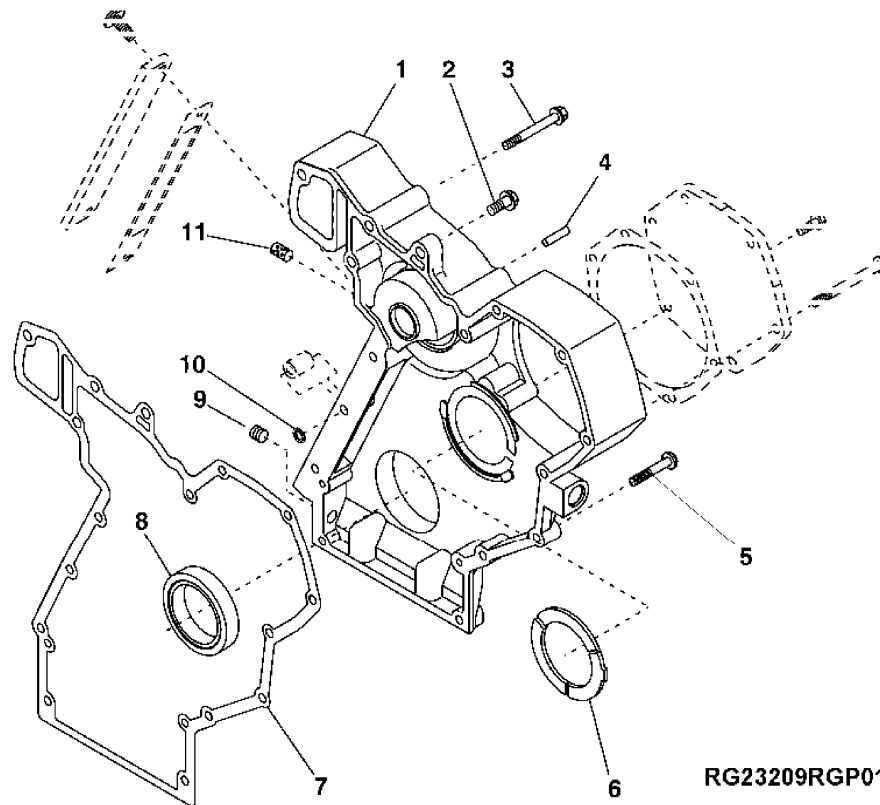
6443_5_1

Item	Part Number	Description	Quantity Variation 4412
1	GM50614	Cover kit	1
2	GM50615	Cover	AR
3	GM17467	Gasket	1
4	360078	Plug, drain	2
5	360180	O-ring, 17.3 x 2.2 mm	1
6	360181	Seal kit	1
7	—	See Group 22	—
8	—	See Group 22	—
9	—	See Group 22	—
10	—	See Group 22	—
11	—	See Group 22	—
12	—	See Group 22	—
13	—	See Group 22	—
14	—	See Group 22	—
15	—	See Group 22	—
16	—	See Group 22	—
17	—	See Group 22	—
18	#	Screw, M8 x 40	10
19	360107	O-ring	1
20	360105	Cover	1
21	#	Screw, M6 x 16	1
22	#	Screw, M8 x 35	1
23	360512	Screw, M8 x 45	1
24	#	Flange nut, M10	6
25	#	Screw, M8 x 60	2
26	#	Screw, M8 x 55	4
27	360021	Gear	1
28	360082	Bushing	1
29	360148	Thrust washer	1
30	#	Screw, M10 x 50	1
31	GM32810	Valve	1
32	GM24543	O-ring	1
33	GM17552	Bracket	1

AR As Required

Common hardware; procure locally.

Group 5: Timing Gear Cover



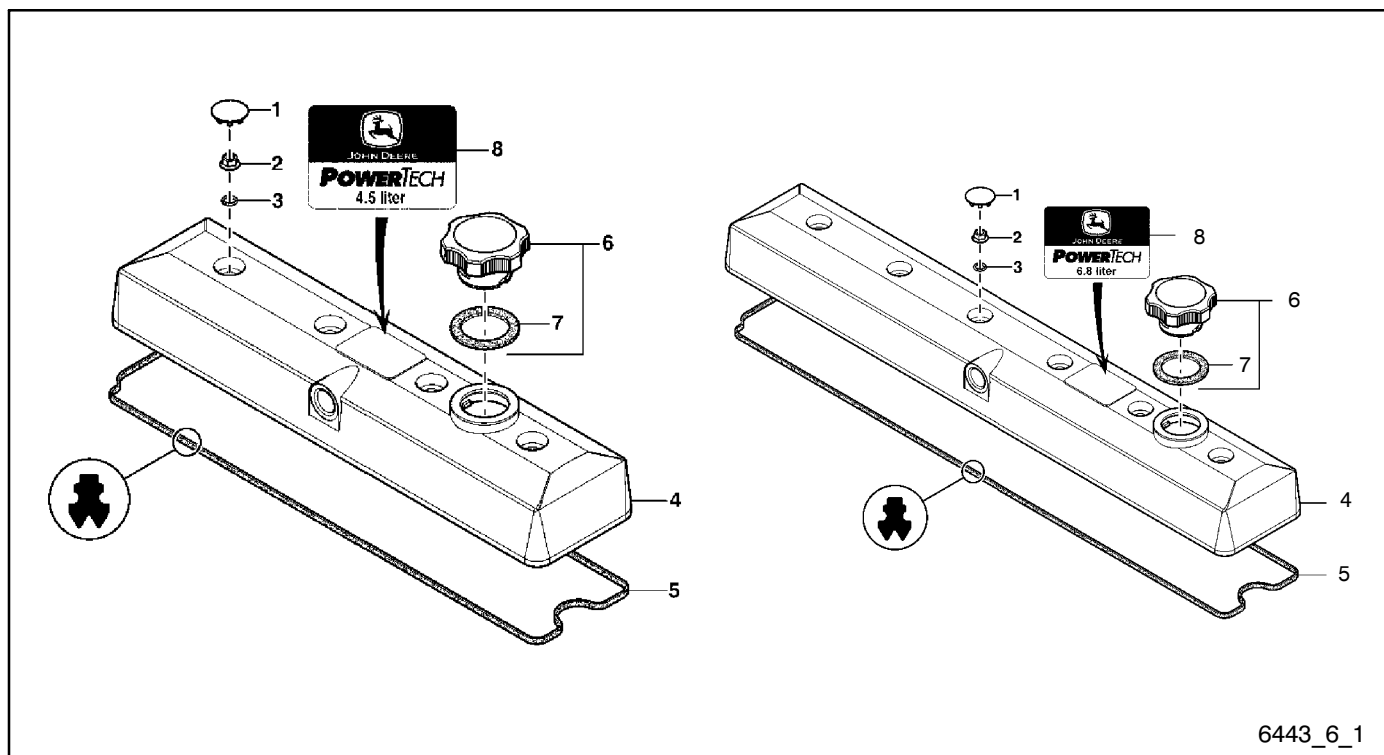
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6443_5_2

Item	Part Number	Description	Quantity
			Variation 7701
1	352759	Cover	1
2	#	Screw, 3/8 in. x 1 1/4 in.	1
3	GM52755	Washer	1
4	GM18664	Screw	3
5	352726	Dowel pin	2
6	GM18678	Screw	3
7	GM50132	Washer	1
8	352738	Gasket	1
9	223677	Seal	1
10	#	Pipe plug, 3/8 in.	1
11	GM18681	Seal	1
	352812	Filter	1
	GM18714	Sleeve	1

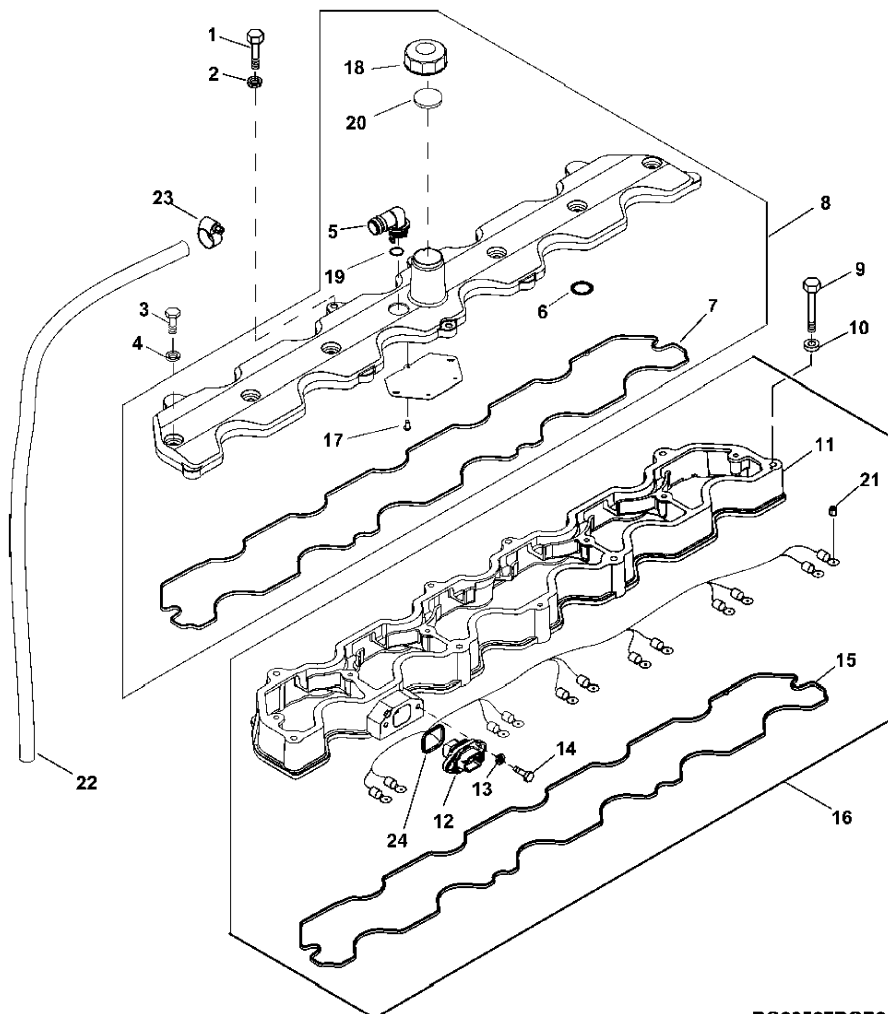
Common hardware; procure locally.

Group 6: Rocker Arm Cover



Item	Part Number	Description	Quantity	
			Variation	
			1150	1152
1	360004	Plug	4	6
2	360138	Nut	4	6
3	360139	O-ring	4	6
4	360507	Rocker arm cover	1	
4	GM18817	Rocker arm cover		1
5	GM50616	Gasket	1	
5	GM50936	Gasket kit		1
6	360018	Cap, oil filler (includes packing)	1	1
7	GM17493	Packing	1	1
8	—	Medallion	1	1

Group 6: Rocker Arm Cover



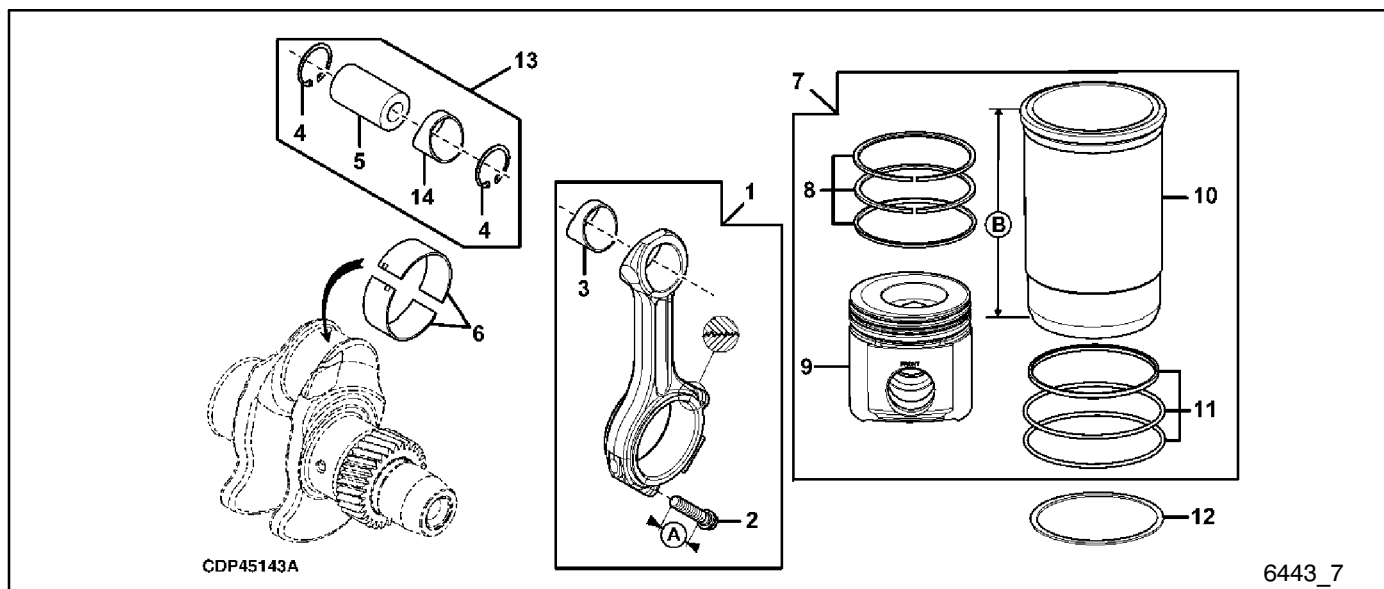
RG29567RGP01

6443_6_2

Item	Part Number	Description	Quantity
			Variation 1101
1	#	Cap screw, 1/4 in. x 3 in.	2
2	#	Washer	2
3	#	Cap screw, 1/4 in. x 1 in.	6
4	#	Washer	6
5	360098	Fitting, elbow	1
6	GM52756	Seal	4
7	GM52757	Gasket	1
8	GM52758	Valve cover	1
9	#	Cap screw, 1/4 in. x 2 1/2 in.	6
10	#	Washer	6
11	GM52759	Housing	1
12	GM52760	Wiring harness	1
13	#	Washer	2
14	#	Cap screw, 1/4 in. x 7/8 in.	2
15	GM52761	Seal	1
16	GM52762	Housing	1
17	#	Screw, 0.116 in. x 1/4 in.	5
18	223630	Cap	1
19	223851	O-ring	1
20	223636	Gasket	1
21	GM46621	Nut	12
22	224237	Hose, 0.75-0.76 in. x 120 in. vent	1
23	336705	Clamp, hose	1
24	GM52763	Seal	1

Common hardware; procure locally.

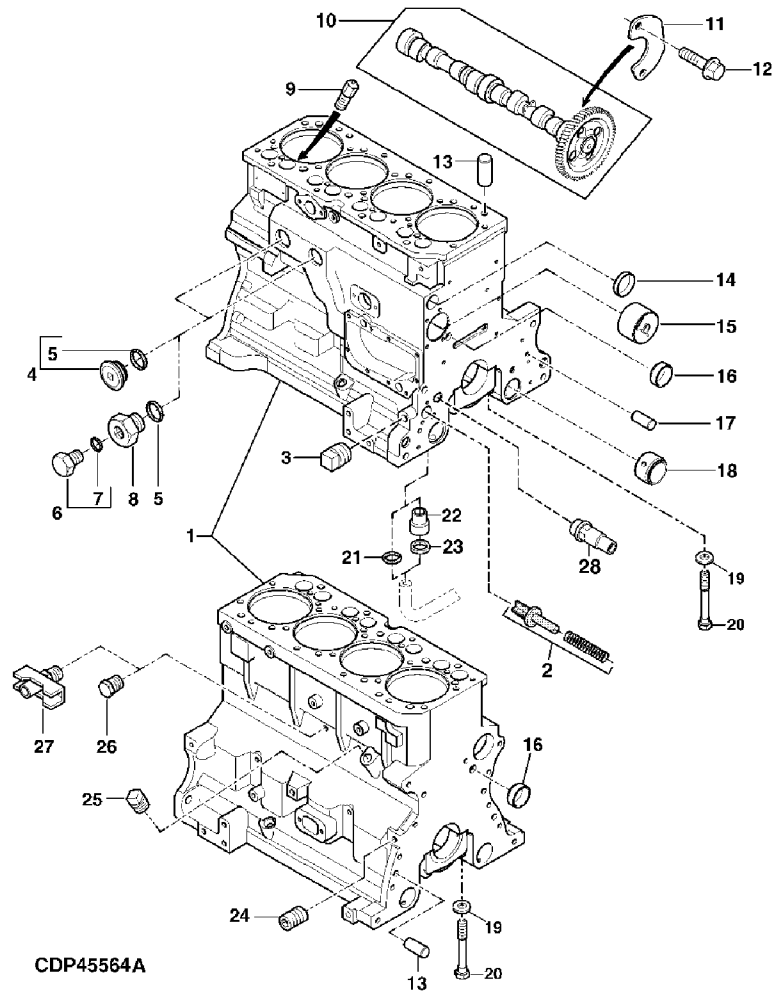
Group 7: Piston and Connecting Rod



Item	Part Number	Description	Quantity			
			Variation			
			4822	4833	4820	4806
1	GM17610	Connecting rod	4		6	
1	GM17499	Connecting rod		4		
1	GM18804	Connecting rod				6
2	GM17477	Screw	2	2	2	
2	GM18728	Screw				2
3	GM17446	Bushing	1		1	
3	GM17451	Bushing		1		
3	223853	Bushing				1
4	223479	Snap ring	8		12	
4	223452	Snap ring		8		
4	223730	Snap ring				12
5	GM17450	Piston pin	4		6	
5	360114	Piston pin		4		
5	223806	Piston pin				6
6	360053	Bearing, standard	4	4	6	
6	360054	Bearing, 0.25 mm undersize	AR	AR	AR	
6	352852-S	Bearing, standard				6
6	GM18858	Bearing, 0.292 mm undersize				6
7	GM32820	Piston/liner kit	4		6	
7	GM50617	Piston/liner kit		4		
7	GM52764	Piston/liner kit				6
8	GM32821	Piston ring kit	1		1	
8	360066	Piston ring kit		1		
8	352857	Piston ring kit				1
9	—	Piston (not sold separately)	1	1	1	1
10	—	Cylinder liner (not sold separately)	1	1	1	1
11	223419	O-ring kit	1	1	1	
11	223716	O-ring kit				1
12	GM21474	Shim, 0.05mm	AR	AR	AR	
12	GM21475	Shim, 0.1mm	AR	AR	AR	
12	352810	Shim				2
13	GM21468	Piston pin kit	AR			
14	—	Bushing (not sold separately)	1			

AR As Required

Group 8: Cylinder Block

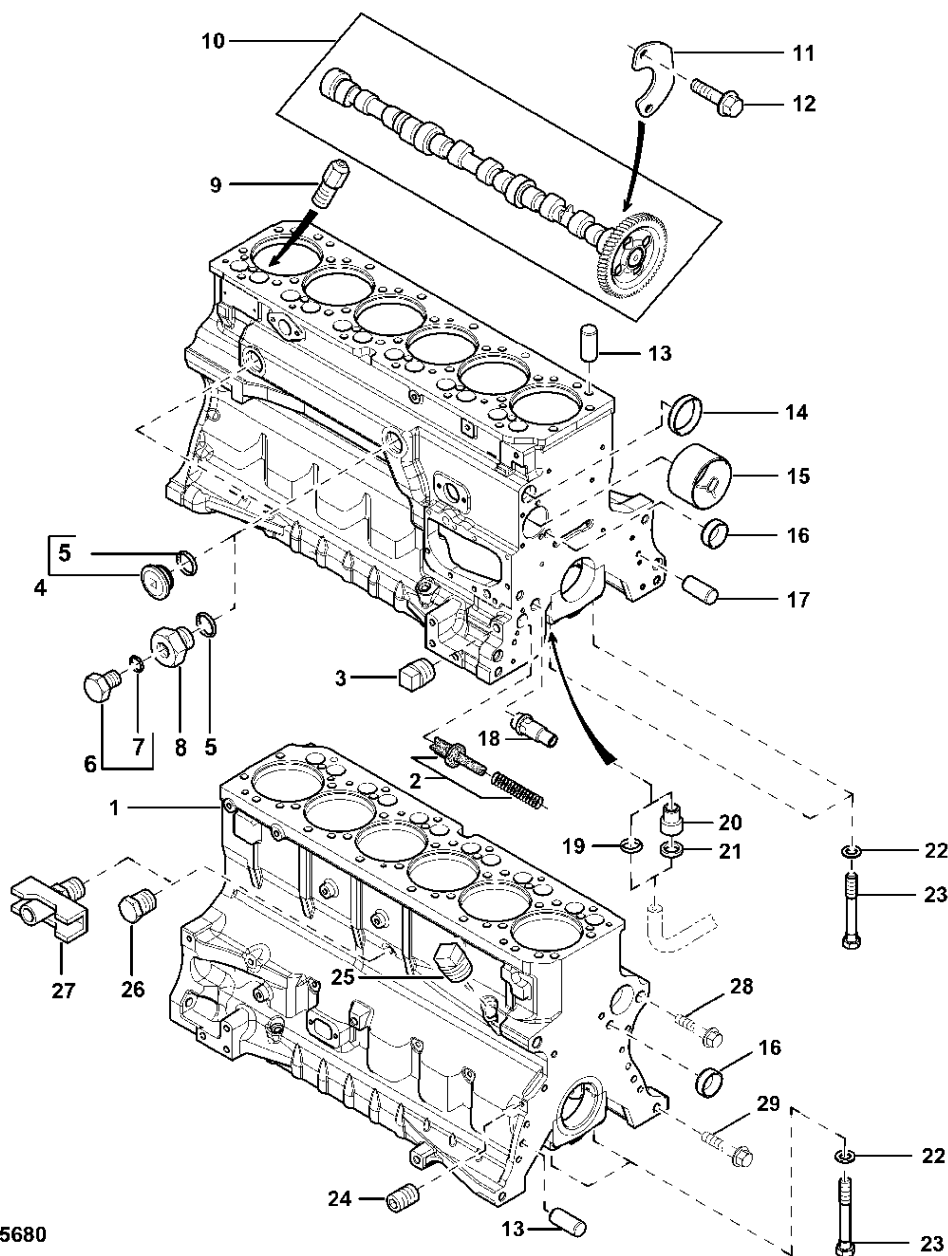


Item	Part Number	Description	Quantity	
			Variation	
			4614	4601
1	—	Cylinder block (order short block assy)	1	1
2	GM21420	Valve kit	1	1
3	#	Plug, pipe 3/8 in.	1	1
4	GM32824	Drain plug	2	AR
5	223988	O-ring	1	1
6	360014	Plug	AR	AR
7	360176	O-ring	1	1
8	GM50618	Plug, 1 5/8 in.-12 UN x M18 x 1.5	AR	AR
9	360146	Jet	4	4
10	—	See Group 2	1	1
11	—	See Group 2	1	1
12	—	See Group 2	2	2
13	223472	Dowel pin	4	4
14	360093	Plug	1	1
15	352246	Bushing	1	1
16	360517	Cap	2	2
17	352064	Dowel pin	2	2
18	360519	Bushing	6	6
19	224089	Washer	10	10
20	223639	Cap screw	10	10
21	336458	O-ring	1	1
22	360087	Bushing	1	1
23	223512	O-ring	1	1
24	224268	Pipe plug	4	4
25	#	Pipe plug, 1/2 in.-14 NPT	AR	AR
26	#	Pipe plug, 1/4 in.-18 NPT	AR	AR
27	223435	Drain valve	AR	AR
28	GM32810	Valve	1	1

AR As Required

Common hardware; procure locally.

Group 8: Cylinder Block, continued



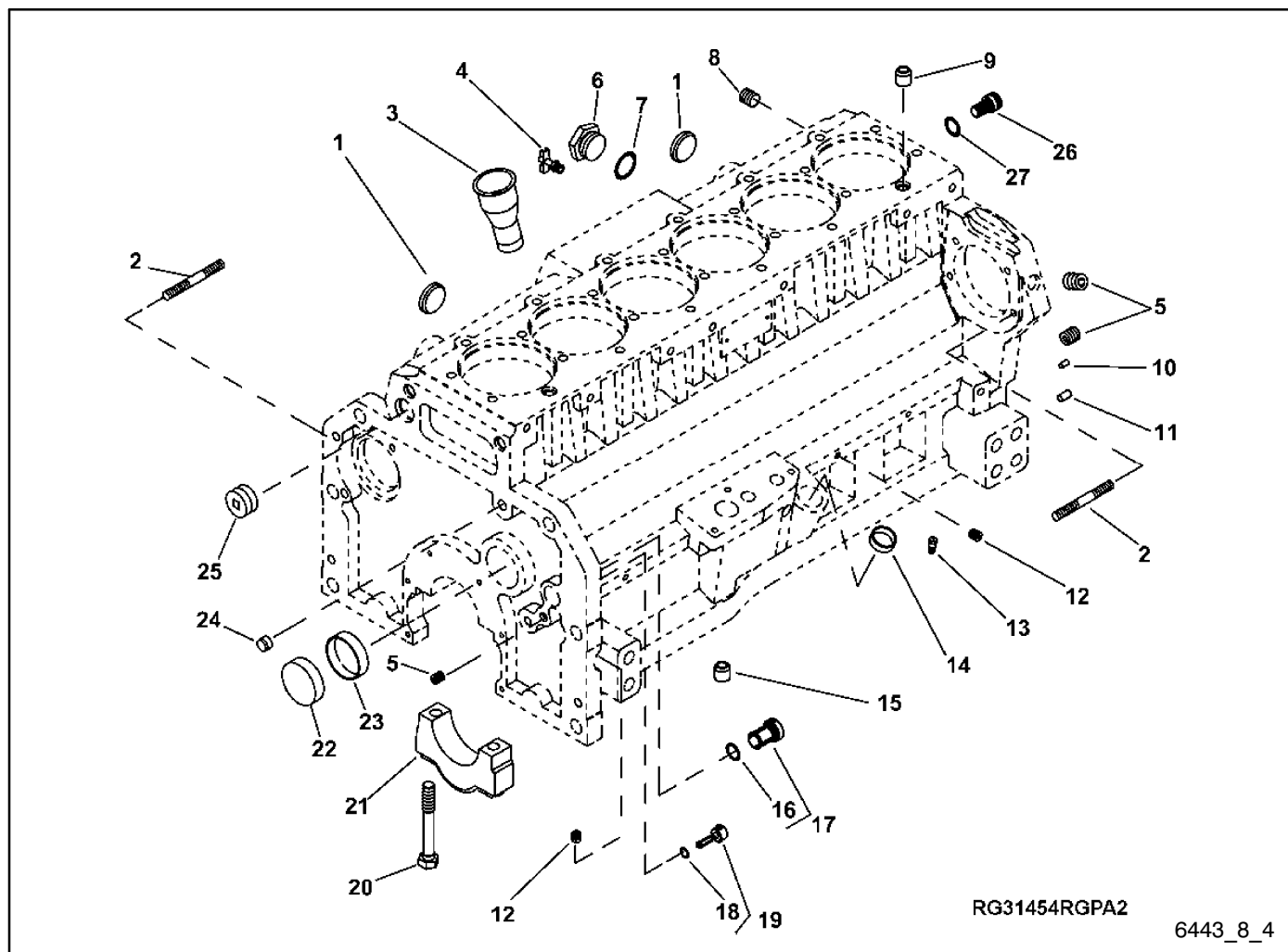
Item	Part Number	Description	Quantity Variation 4613
1	—	Cylinder block (order short block assy.)	1
2	GM21420	Valve kit	1
3	#	Pipe plug, 3/8 in.	1
4	GM32824	Plug	AR
5	223988	O-ring	1
6	360014	Plug	AR
7	360176	O-ring	1
8	GM50616	Plug, 1 5/8 in.-12 UN x M18 x 1.5	AR
9	360146	Jet	6
13	223472	Dowel pin	4
14	360093	Plug	1
15	352246	Bushing	1
16	360517	Cap	2

AR As Required

Common hardware; procure locally.

Item	Part Number	Description	Quantity Variation 4613
17	352064	Dowel pin	2
18	GM32810	Valve	1
19	336458	O-ring	1
20	360087	Bushing	1
21	223512	O-ring	1
22	224089	Washer	14
23	223639	Cap screw	14
24	224268	Pipe plug	7
25	#	Pipe plug, 1/2 in.-14 NPT	AR
26	#	Pipe plug, 1/4 in.-18 NPT	1
27	223435	Drain valve	AR
28	—	Screw, M12	AR
29	—	Screw, M12	AR

Group 8: Cylinder Block, continued

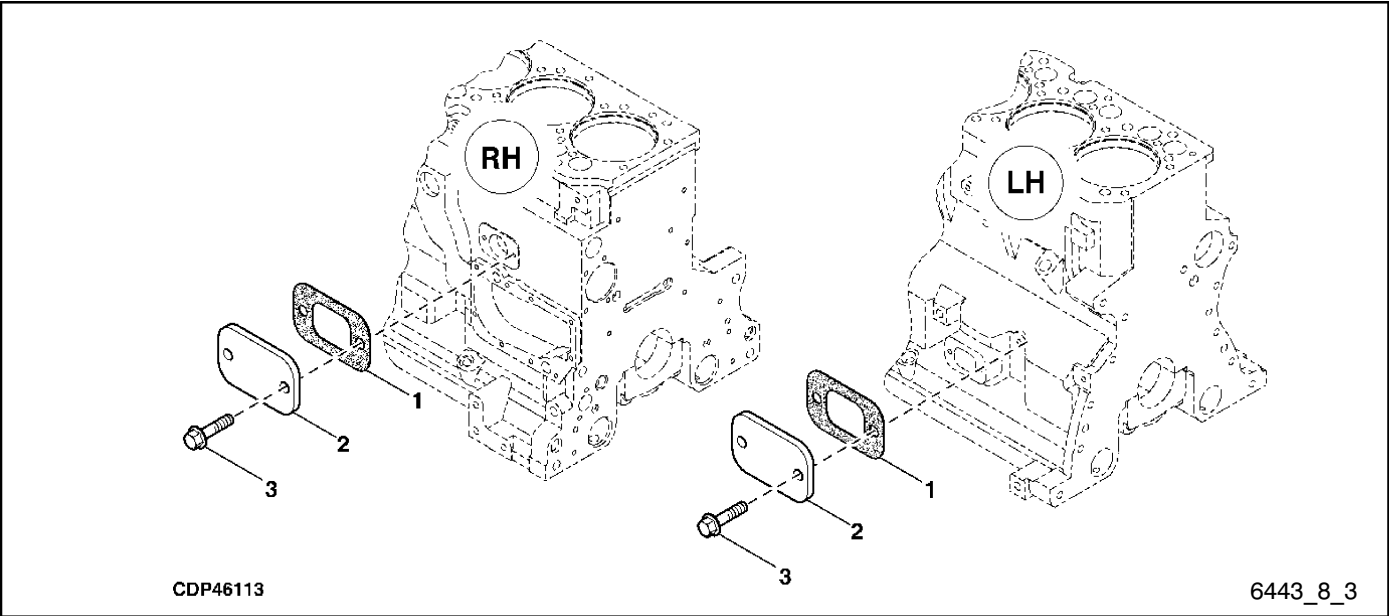


Item	Part Number	Description	Quantity Variation 4601b
1	224157	Cap	2
2	GM52765	Stud	4
3	352758	Dipstick tube	1
4	223435	Drain valve	1
5	352796	Cap	3
5	GM18862	Pipe plug, 1/2 in.	1
6	223462	Drain plug	1
8	#	Pipe plug, 3/4 in.	1
8	GM18873	Pipe plug	1
9	223755	Bushing	2
10	223737	Dowel pin	2
11	223731	Dowel pin	2
12	GM18873	Pipe plug	6
12	GM18873	Pipe plug	1
13	GM18717	Orifice	6
14	GM18877	Cap, oil fill hole	1
15	GM18727	Bushing	2
16	223747	O-ring	1
17	GM18691	Plug	1
18	223665	O-ring	1
19	223684	Plug	1
20	352760	Bolt	14
21	352748	Bearing cap	6
21	352813	Bearing cap, thrust	1
22	223866	Cap	1
23	223889	Bushing	4
24	223814	Dowel pin	1
25	#	Pipe plug, 1 in.	1
26	GM18729	Plug	1
27	GM18659	O-ring	1
—	223850	O-ring	1
—	224268	Pipe plug	1
—	—	Cylinder block	NA
—	#	Pipe plug, 1 in.	1
—	GM18877	Cap, oil fill hole	AR

AR As Required

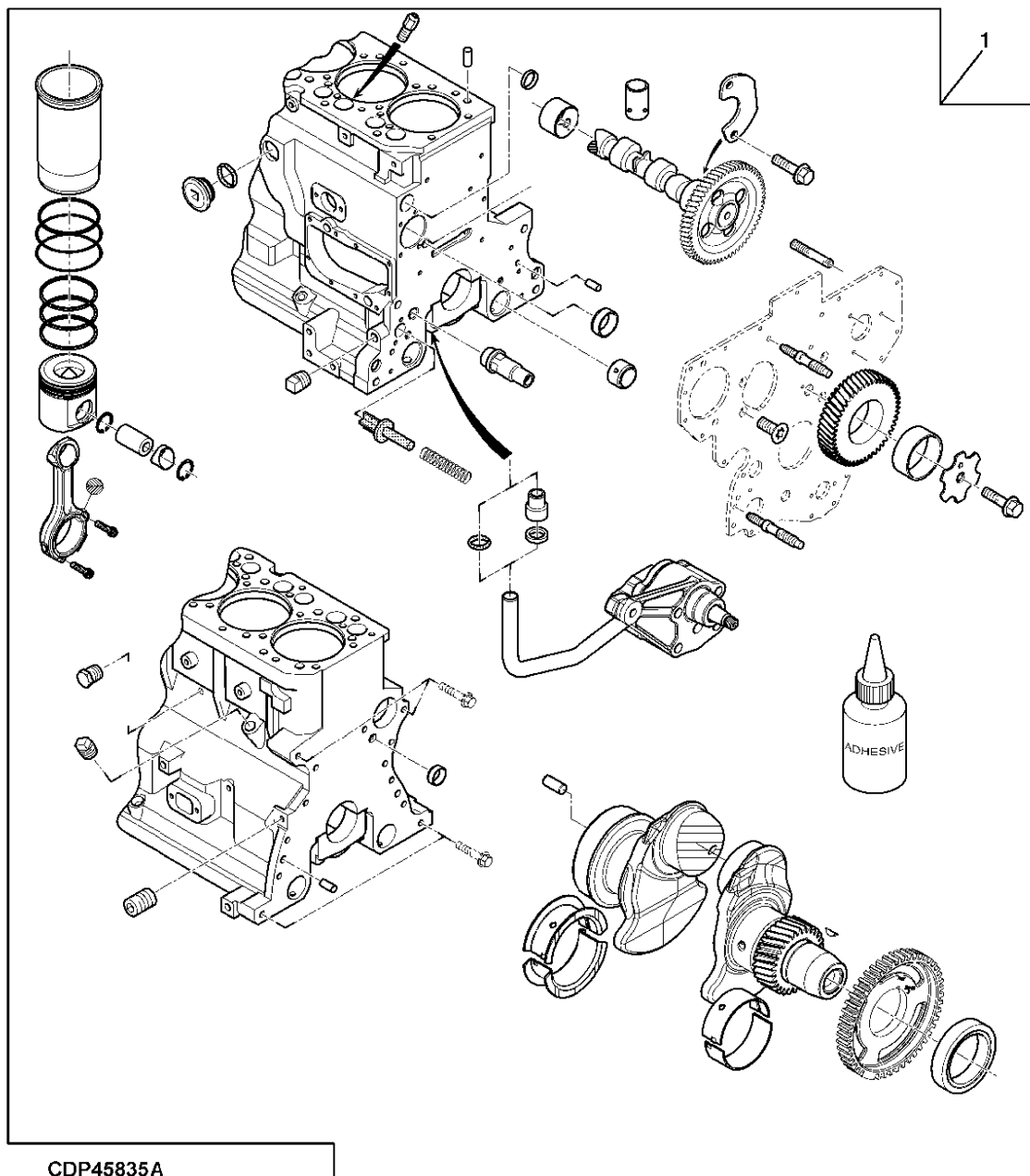
Common hardware; procure locally.

Group 8: Cylinder Block, continued



Item	Part Number	Description	Quantity
			Variation 1299
1	GM17466	Gasket	2
2	360089	Cover	2
3	GM24536	Screw	2

Group 9: Short Block Assembly



6443_9_1

Item	Part Number	Description	Quantity		
			Variation		
			1	2	3
1	GM50619	Short block assembly (also order gasket kit 360587 and liquid gasket GM50612)	1		
1	GM50620	Short block assembly (also order gasket kit 360587 and liquid gasket GM50612)		1	
1	GM50937	Short block assembly (also order gasket kit GM24544 and liquid gasket GM50612)			1

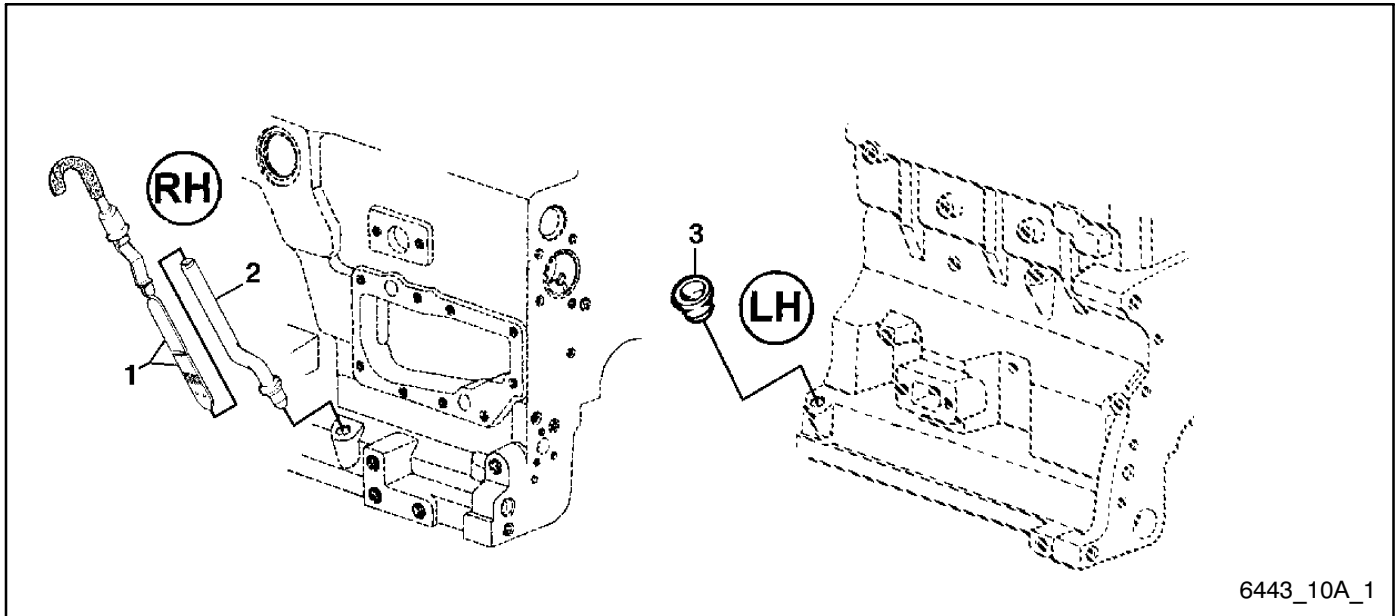
Group 9: Short Block Assembly, continued



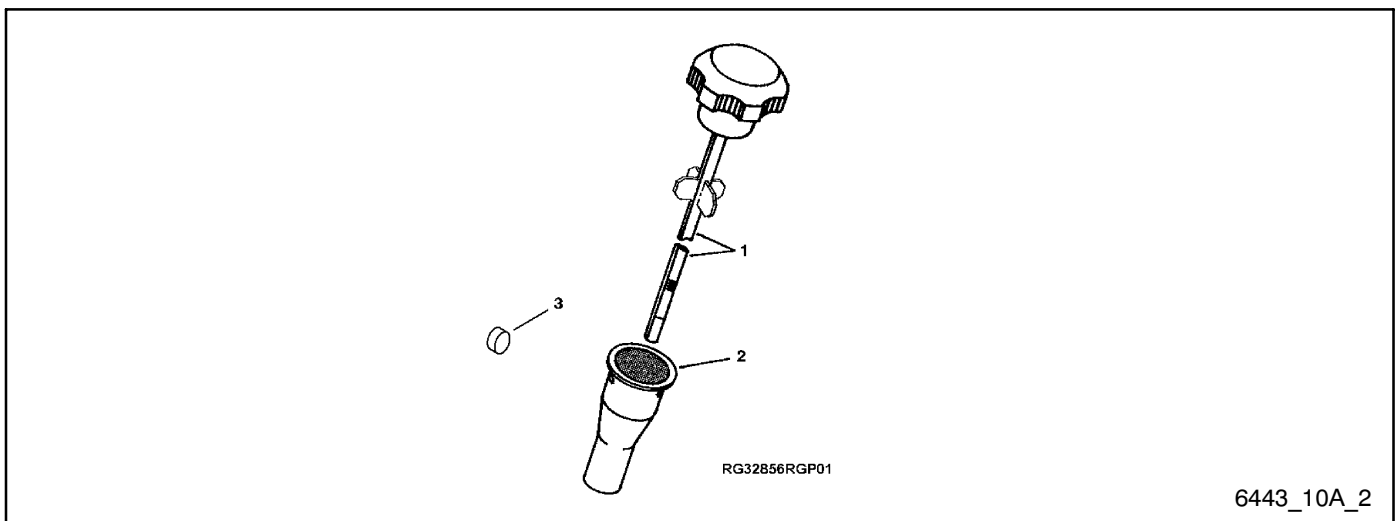
6443_9_2

Item	Part Number	Description	Quantity
			Variation 4
1	GM52766	Short block assembly	1

Group 10A: Oil Dipstick

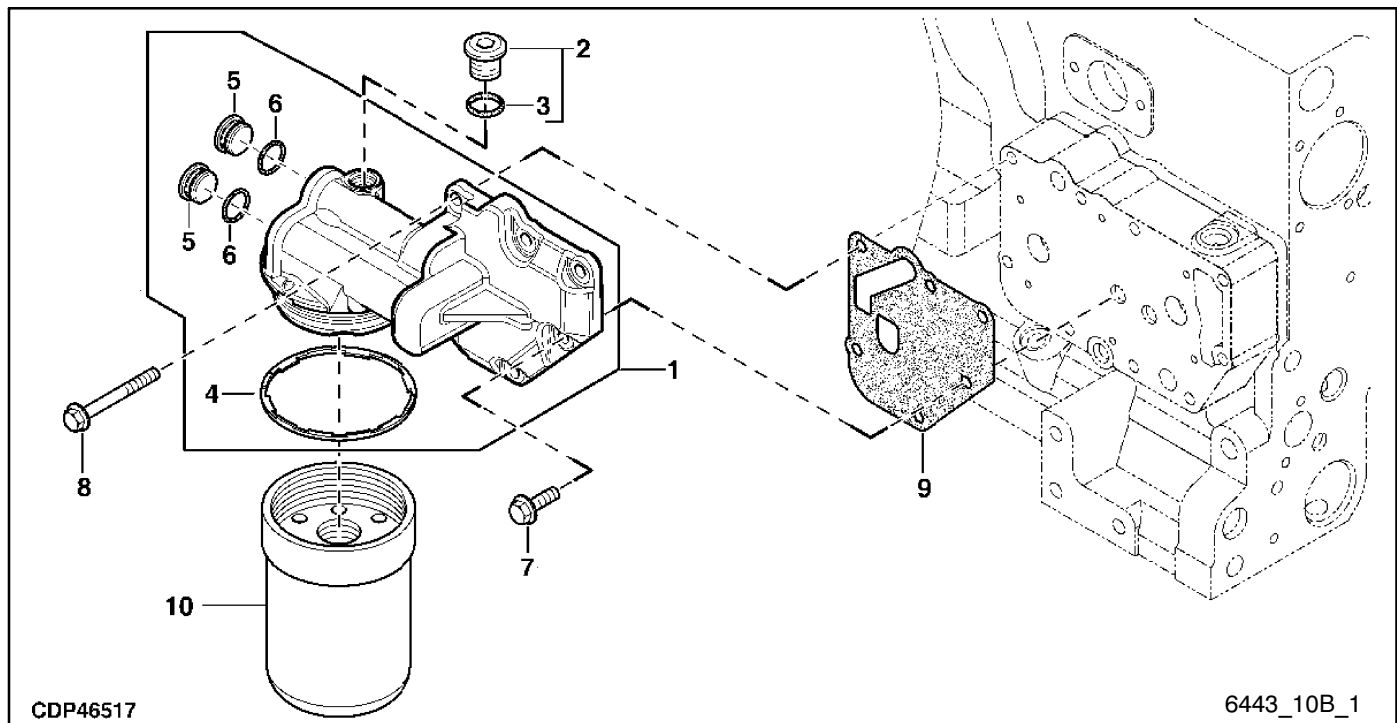


Item	Part Number	Description	Quantity
			Variation 4002
1	360073	Dipstick	1
2	GM32788	Tube, dipstick	1
3	GM32789	Plug	1



Item	Part Number	Description	Quantity
			Variation 4021
1	GM50196	Dipstick	1
2	GM50126	Dipstick tube	1
3	GM18877	Cap, oil fill hole	1

Group 10B: Oil Filter

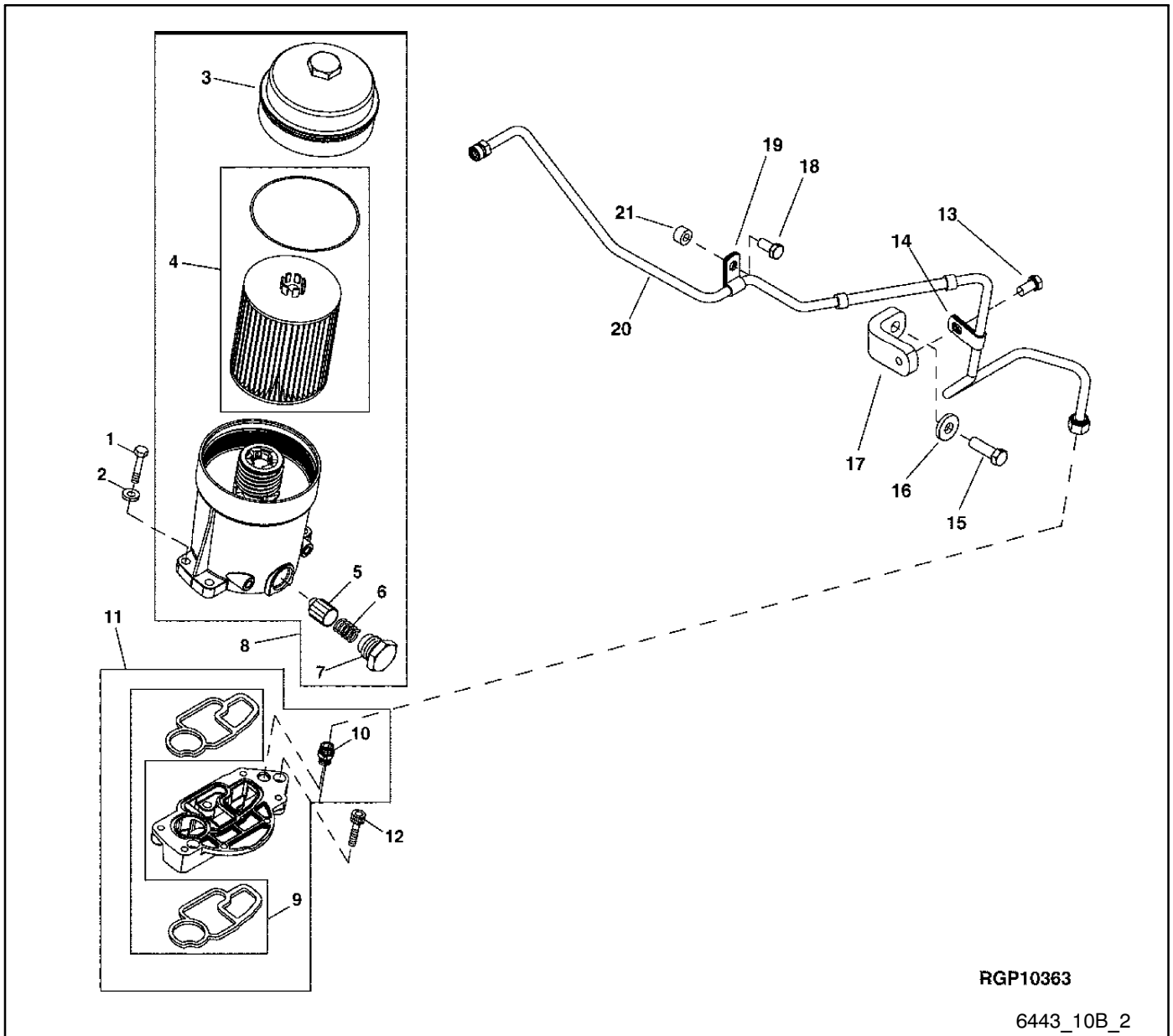


Item	Part Number	Description	Quantity
			Variation 8843
1	GM46686	Filter head	1
2	GM24535	Plug	AR
3	360557	O-ring	AR
4	GM32787	Seal	1
5	GM17447	Fitting	2
6	GM17437	O-ring	2
7	GM24536	Screw	1
8	#	Screw, M8 x 65	5
9	GM17472	Gasket	1
10	GM32809	Filter, oil	1

AR As Required

Common hardware; procure locally.

Group 10B: Oil Filter

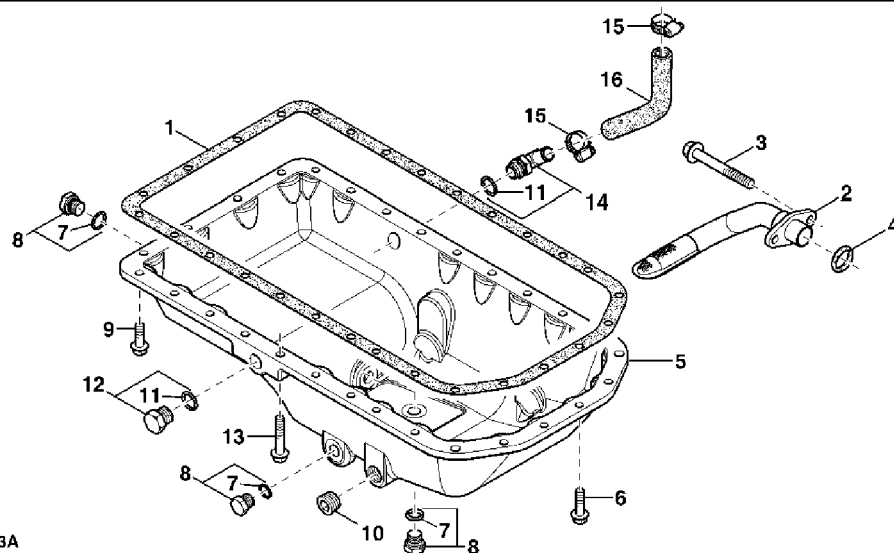


Item	Part Number	Description	Quantity Variation 5943
1	#	Cap screw, 3/8 x 1 1/2 in.	4
2	#	Washer, 13/32 x 7/8 x 0.120 in.	4
3	GM52862	Cap	1
4	GM48731	Element, oil filter	1
5	GM52863	Pressure relief valve	1
6	GM52864	Compression spring	1
7	GM52865	Fitting plug	1
8	GM50200	Filter	1
9	GM50207	Seal kit	1
10	352861	Connector	1
11	GM52866	Adapter	1

Common hardware; procure locally.

Item	Part Number	Description	Quantity Variation 5943
12	#	Cap screw, 3/8 x 1 1/4 in.	3
13	#	Cap screw, 3/8 x 3/4 in.	1
14	GM52867	Clamp	1
15	#	Cap screw, 7/16 x 1 3/8 in.	1
16	#	Washer, 13/32 x 7/8 x 0.120 in.	1
17	GM52868	Bracket	1
18	#	Screw, 3/8 x 1 1/4 in.	1
19	GM32961	Support	1
20	GM52869	Oil line	1
21	352780	Spacer	1

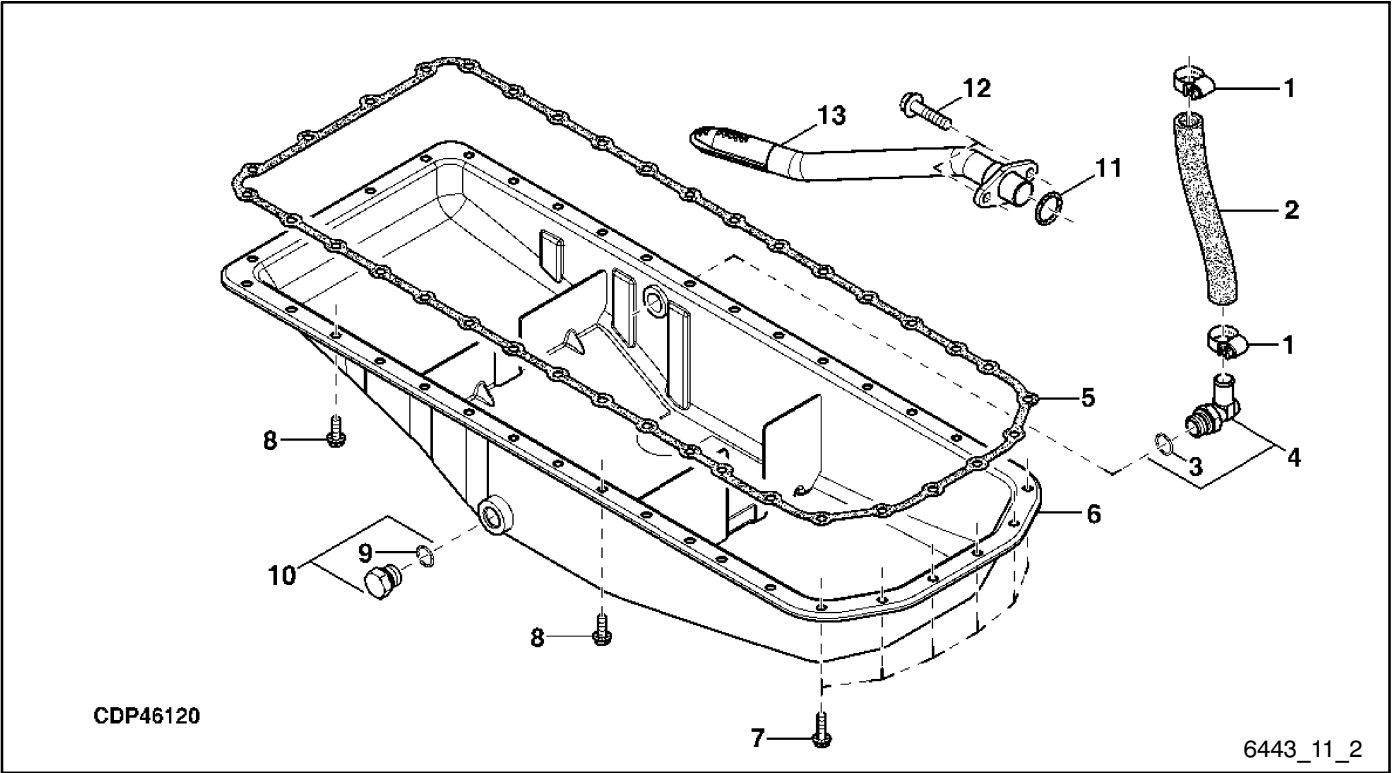
Group 11: Oil Pan



Item	Part Number	Description	Quantity	
			Variation	
			1954	1902
1	360527	Gasket, oil pan	1	
1	GM50621	Gasket		1
2	360523	Oil pump intake	1	
2	GM17542	Oil pump intake		1
3	#	Screw, M8 x 100	2	2
4	224035	O-ring	1	1
5	360529	Oil pan	1	
5	GM17532	Oil pan		1
6	#	Screw, M8 x 30	6	
6	#	Screw, M8 x 20		6
7	360176	O-ring	1	1
8	360014	Plug	3	2
9	#	Screw, M8 x 25	18	
9	#	Screw, M8 x 16		22
10	#	Pipe plug, 3/4 in.	1	1
11	GM17437	O-ring	1	
12	GM17498	Fitting	1	
13	#	Screw, M8 x 45	4	
14	GM17512	Elbow fitting	1	
15	360062	Clamp	2	
16	224055	Hose	1	

Common hardware; procure locally.

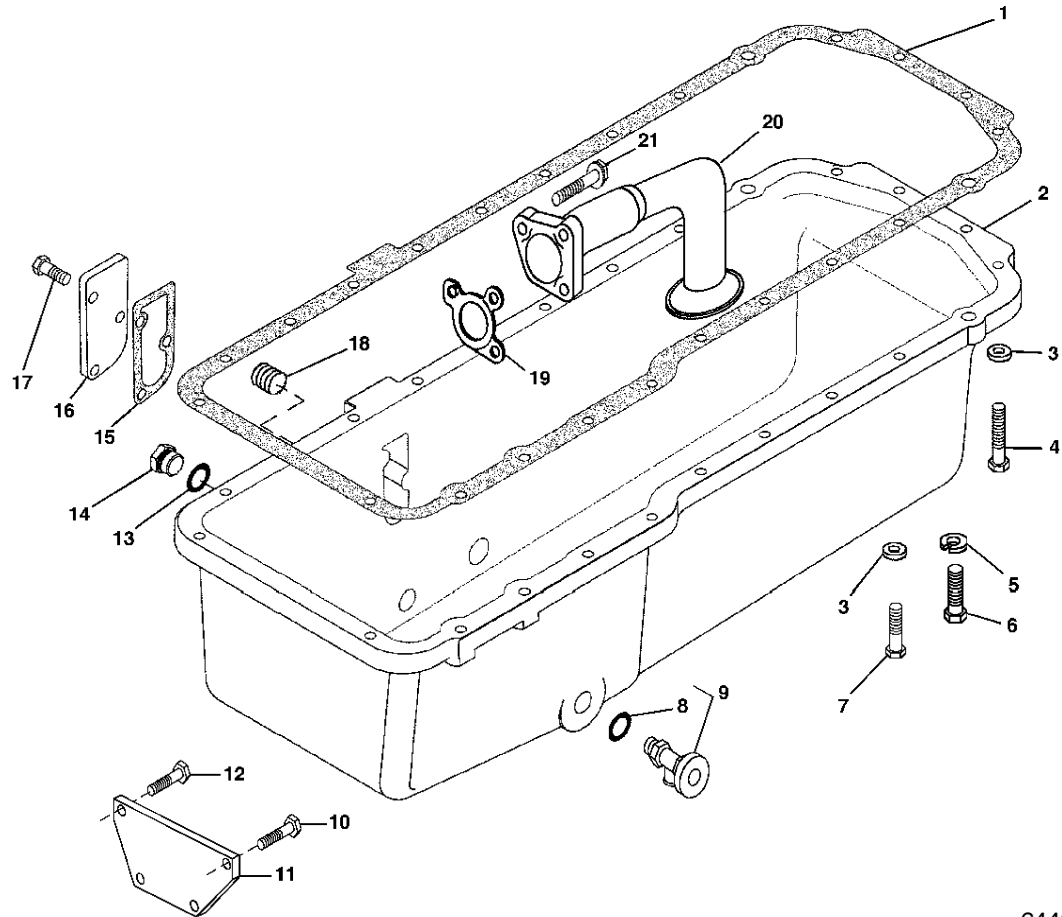
Group 11: Oil Pan



Item	Part Number	Description	Quantity
			Variation 1945
1	360062	Clamp	2
2	223450	Hose	1
3	GM17437	O-ring	1
4	GM17512	Elbow fitting	1
5	GM18724	Gasket	1
6	GM18816	Oil pan	1
7	#	Screw, M8 x 20	6
8	#	Cap screw, M8 x 16	30
9	GM17437	O-ring	1
10	GM17498	Fitting	1
11	224035	O-ring	1
12	#	Screw, M8 x 100	2
13	GM18872	Oil pump intake	1

Common hardware; procure locally.

Group 11: Oil Pan, continued

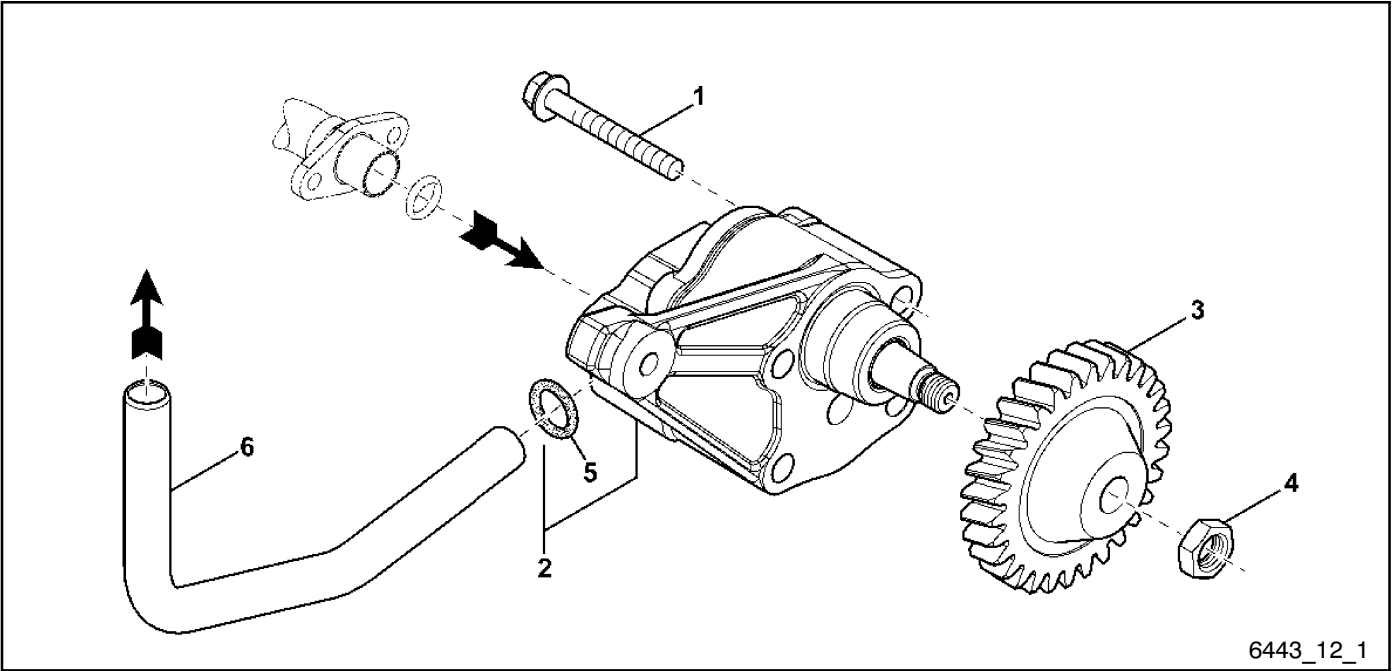


6443_11_3

Item	Part Number	Description	Quantity Variation 1924
1	223767	Gasket	1
2	GM18725	Oil pan	1
3	222767	Washer, hardened	22
4	#	Cap screw, 3/8 in. x 2 in.	4
5	GM18708	Washer	2
6	#	Cap screw, 1/2 x 1 3/4 in.	2
7	#	Cap screw, 3/8 in. x 1 1/2 in.	18
8	223466	O-ring	1
9	GM18856	Valve, shutoff	1
10	#	Cap screw, 3/8 in. x 5/8 in.	2
11	223803	Cover	1
12	#	Cap screw, 1/2 in. x 7/8 in.	2
13	223466	O-ring	1
14	223458	Drain plug	1
14	223458	Drain plug	1
15	352875	Gasket	1
16	352790	Cover	1
17	#	Cap screw, 3/8 in. x 1 in.	3
18	#	Pipe plug, 3/4 in.	1
19	352709	Gasket	1
20	GM50220	Oil pump intake	1
21	352719	Cap screw	3

Common hardware; procure locally.

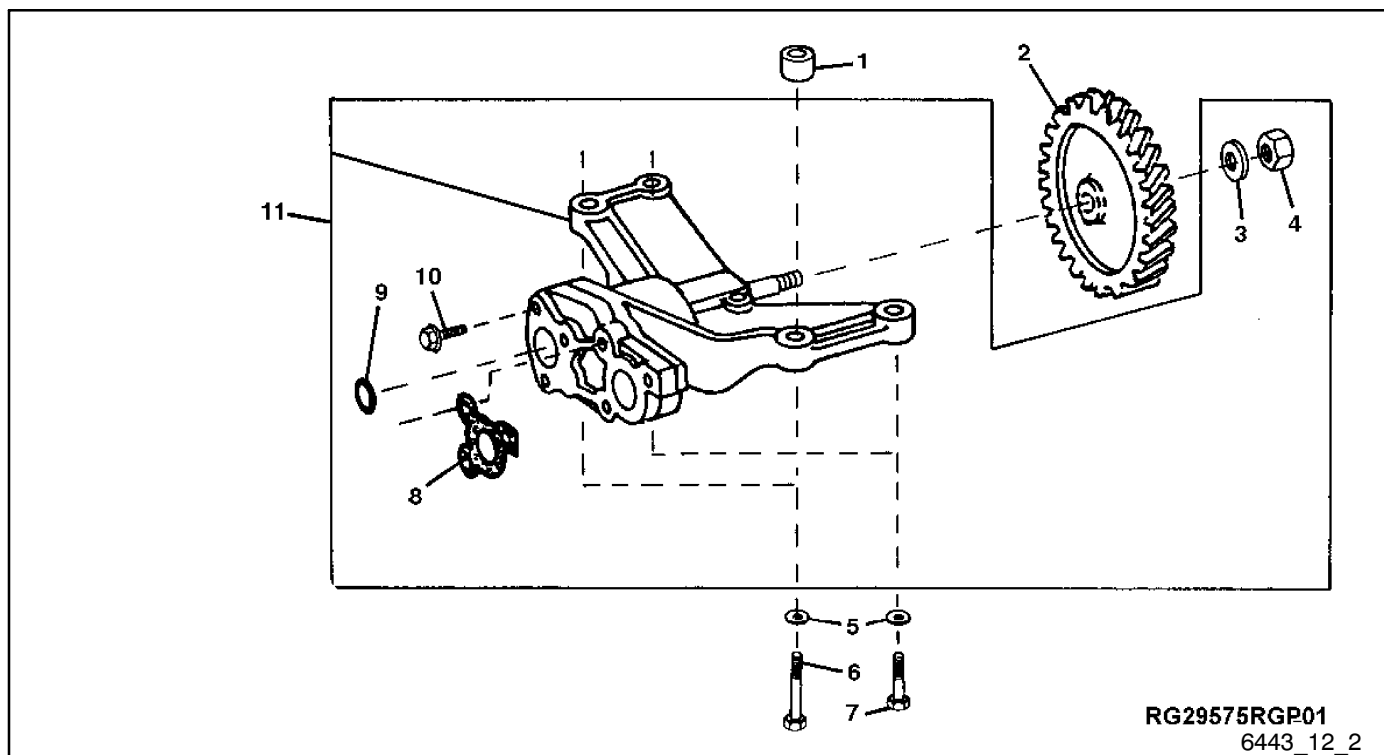
Group 12: Engine Oil Pump



Item	Part Number	Description	Quantity
			Variation 5001
1	#	Screw, M8 x 65	2
2	360028	Pump, oil	1
3	360524	Gear, 30 teeth	1
4	#	Nut, M12	1
5	336458	O-ring	1
6	360104	Tube	1

Common hardware; procure locally.

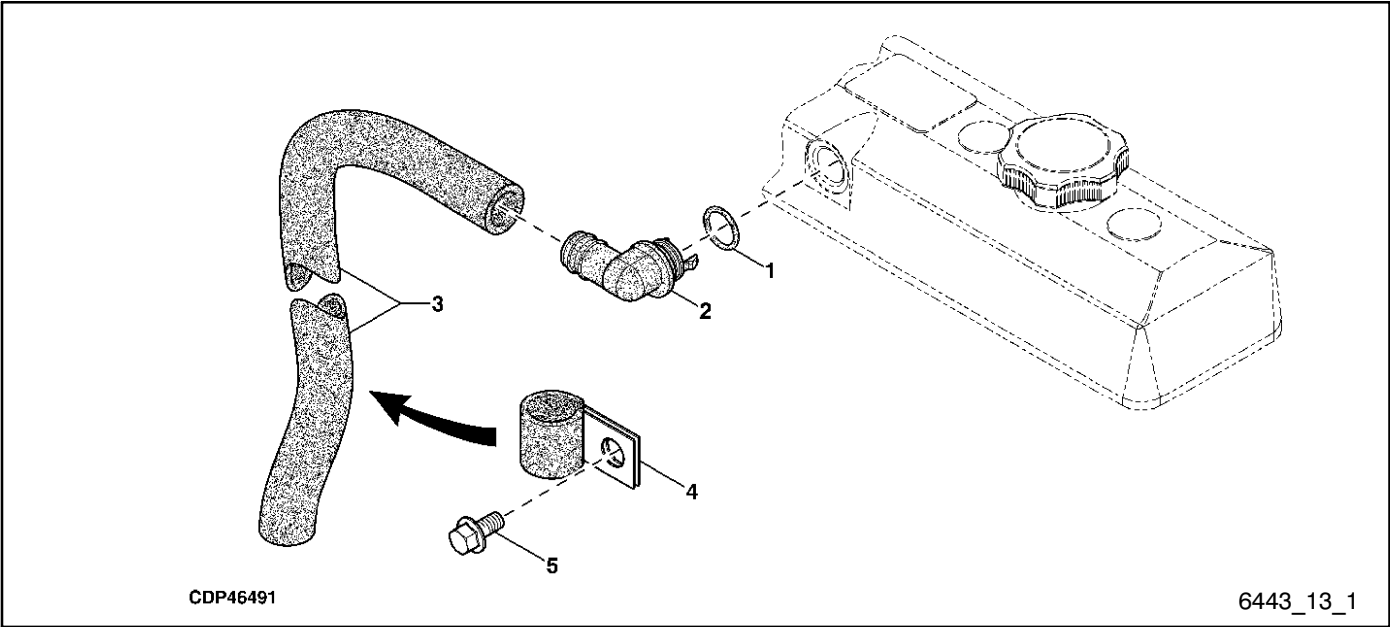
Group 12: Engine Oil Pump, continued



Item	Part Number	Description	Quantity
			Variation 5002
1	GM18727	Bushing	2
2	GM50125	Gear	1
3	223982	Washer	1
4	#	Nut, 1/2 in.	1
5	GM52767	Washer	4
6	#	Cap screw, 3/8 in. x 1 7/8 in.	2
7	#	Screw, 3/8 in. x 1 3/8 in.	2
8	352709	Gasket	1
9	223850	O-ring	1
10	352719	Cap screw	2
10	352719	Cap screw	3
10	#	Washer, 13/32 in. x 7/8 in. x 0.120 in.	6
11	GM52768	Oil pump	1

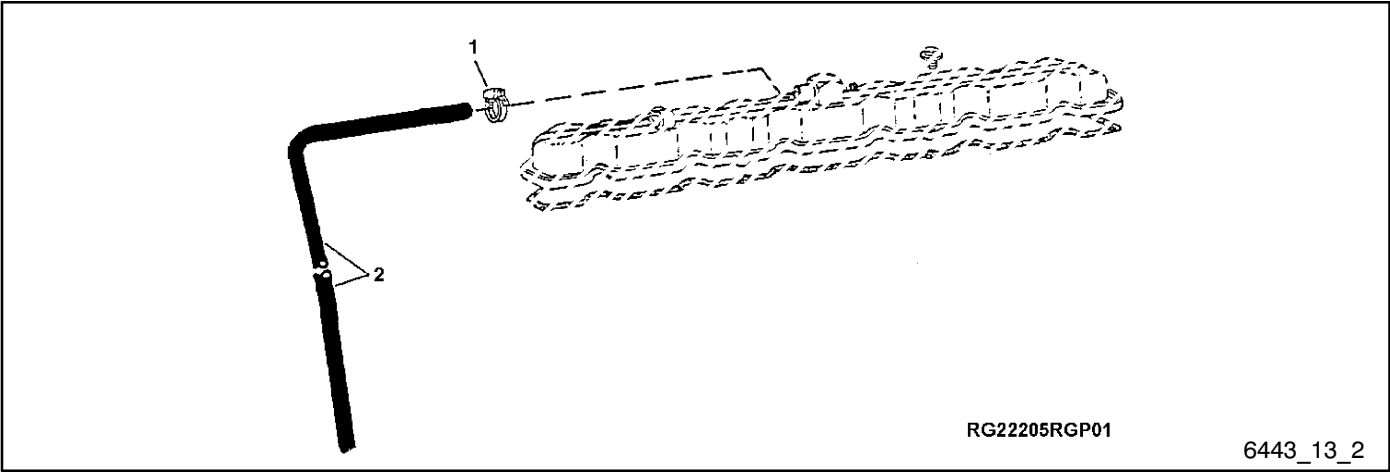
Common hardware; procure locally.

Group 13: Vent Tube



Item	Part Number	Description	Quantity
			Variation 2915
1	223851	O-ring	1
2	360098	Fitting, elbow	1
3	GM32723	Tube	1
4	360530	Clamp	1
5	#	Bolt, M8 x 20	1

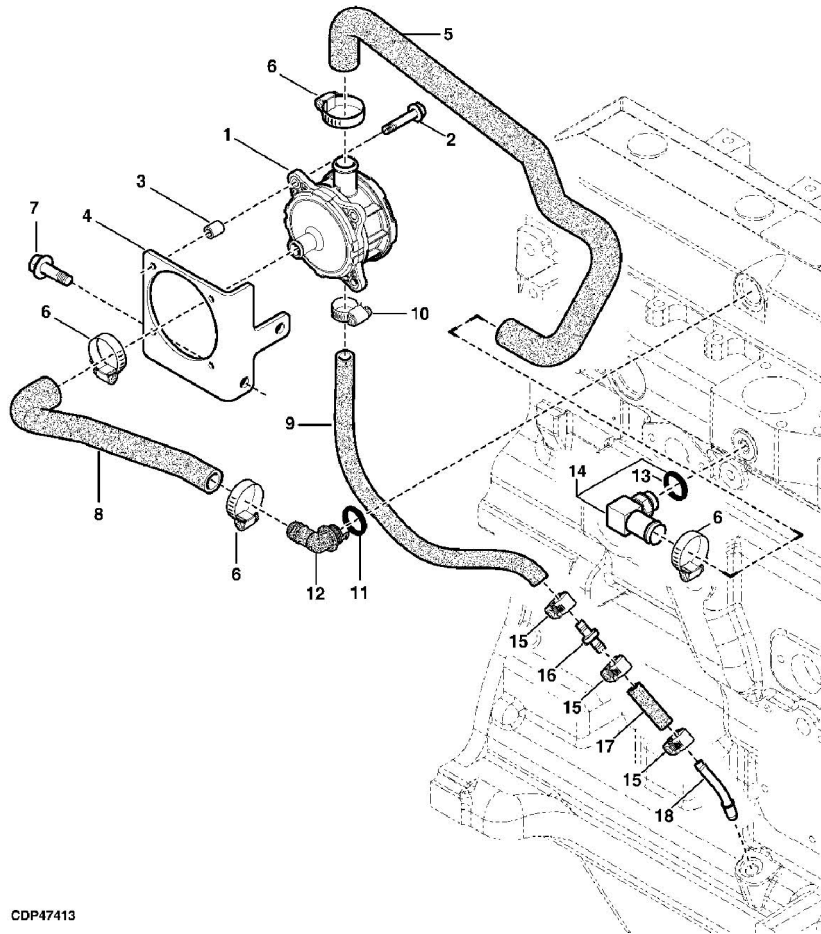
Common hardware; procure locally.



Item	Part Number	Description	Quantity
			Variation 2912
1	GM18881	Clamp	1
2	224237	Hose, 0.75-0.76 in. x 120 in. vent	AR

AR As Required

Group 13: Vent Tube, continued



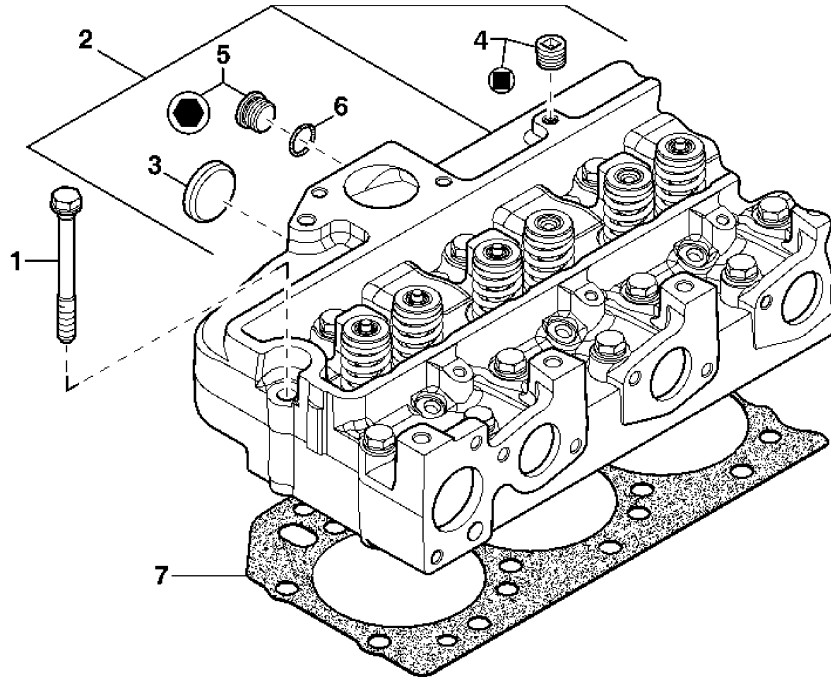
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6443_13_3

Item	Part Number	Description	Quantity
			Variation 2952
1	GM50622	Impactor	1
2	M931-08055-60	Screw, hex cap	3
2	M6923-08-80	Nut, hex, 8mm (not shown)	3
3	X-400-258	Spacer	3
4	-	Bracket, lifting eye (see Group 105)	1
5	GM50624	Hose	1
6	GM50633	Clamp	4
7	#	Screw, M10 x 20	2
8	GM50625	Hose	1
9	GM50626	Hose	1
10	360062	Clamp	1
11	223851	O-ring, 18.720 x 2.616 mm	1
12	360098	Elbow fitting	1
13	223746	O-ring, 19.177 x 2.464 mm	1
14	GM50627	Elbow fitting	1
15	GM50628	Clamp	3
16	GM50629	Check valve	1
17	GM50630	Hose	1
18	GM50631	Tube	1

Common hardware; procure locally.

Group 14: Cylinder Head

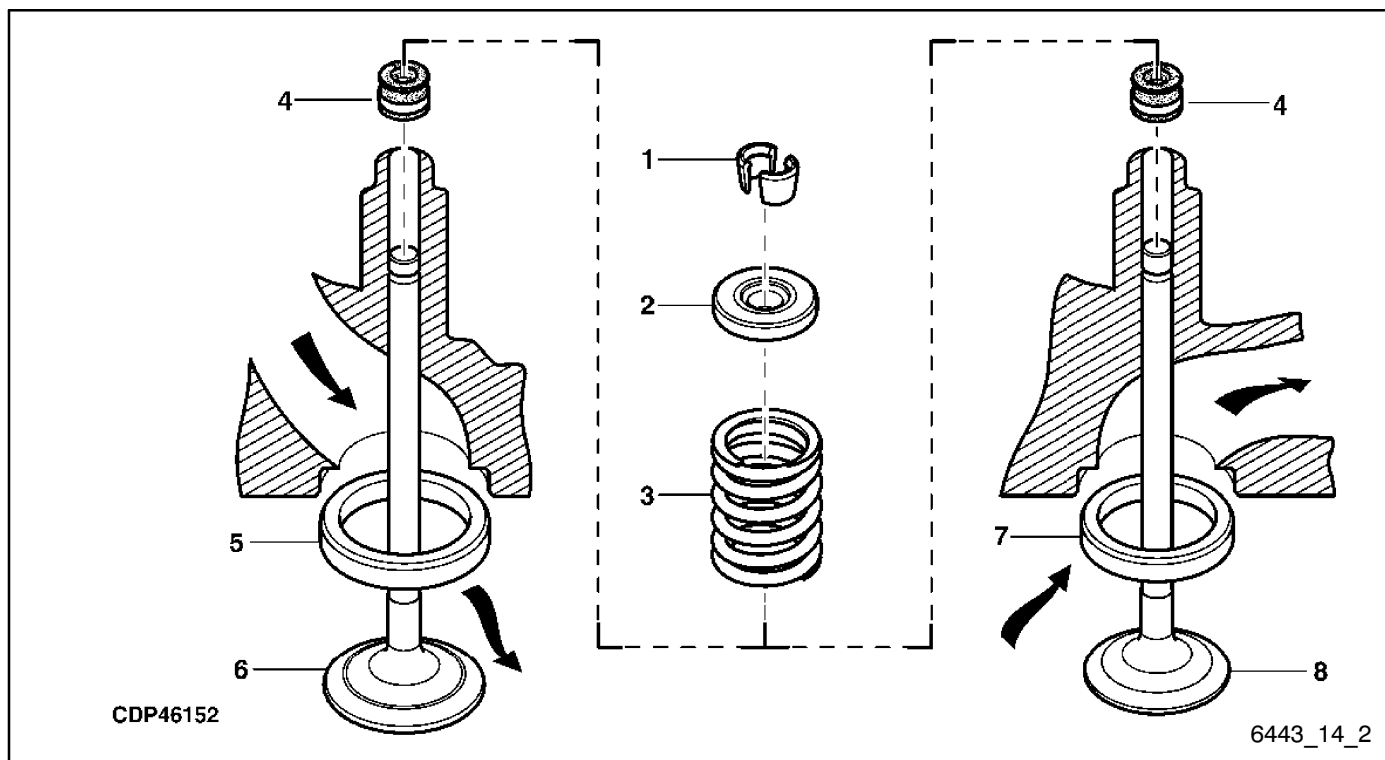


6443_14_1

Item	Part Number	Description	Quantity	
			Variation	
			5102	5107
1	224164	Cap screw	18	26
2	360532	Cylinder head	1	
2	360022	Cylinder head		1
3	223448	Cap, OD = 32.6 mm, rear	1	1
3	224157	Cap, OD = 43.3 mm	2	3
4	224268	Pipe plug	AR	AR
5	360174	Fitting	1	1
6	223746	O-ring	AR	AR
7	360531	Gasket, cylinder head	1	
7	360094	Gasket, cylinder head		1

AR As Required

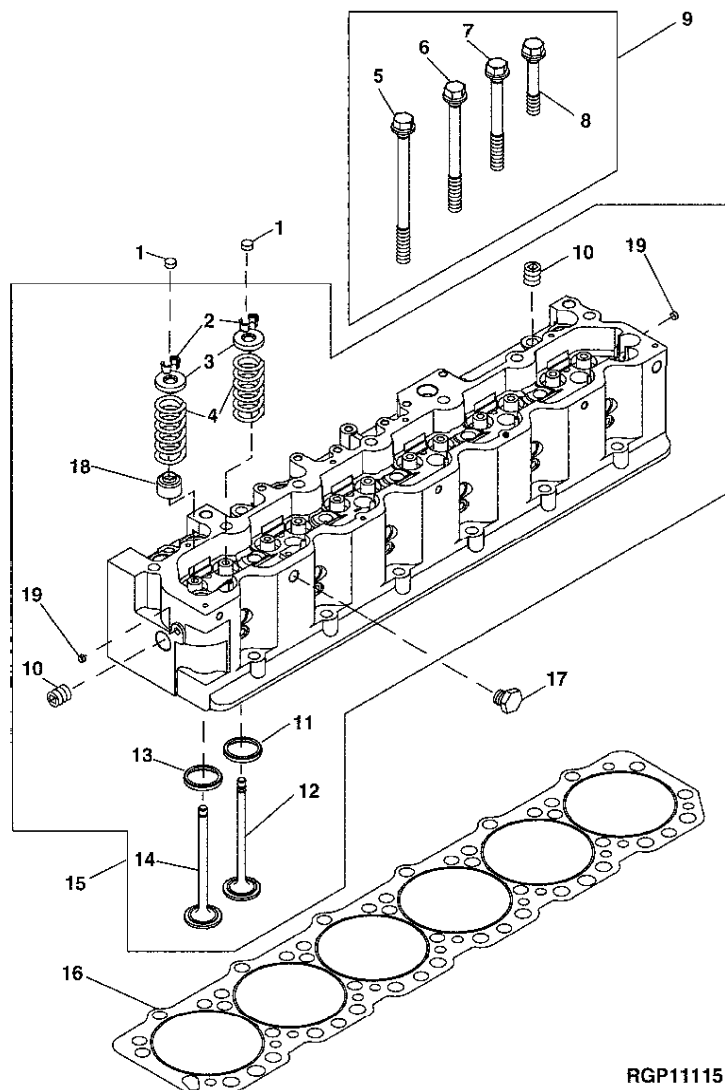
Group 14: Cylinder Head, continued



Item	Part Number	Description	Quantity Variation	
			5102	5107
1	224184	Lock	16	24
2	224176	Rotator	8	12
3	223455	Spring	8	12
4	224243	Seal	8	12
5	GM21433	Insert, valve	4	6
6	224168	Intake valve, standard	4	6
6	224193	Intake valve, OD = +0.381 mm	AR	AR
6	224197	Intake valve, OD = +0.762 mm	AR	AR
7	GM21434	Insert, valve, OD = 43.1 mm	4	6
8	224156	Exhaust valve, standard	4	6
8	224153	Exhaust valve, OD = +0.381 mm	AR	AR
8	224151	Exhaust valve, OD = +0.762 mm	AR	AR

AR As Required

Group 14: Cylinder Head, continued



RGP11115

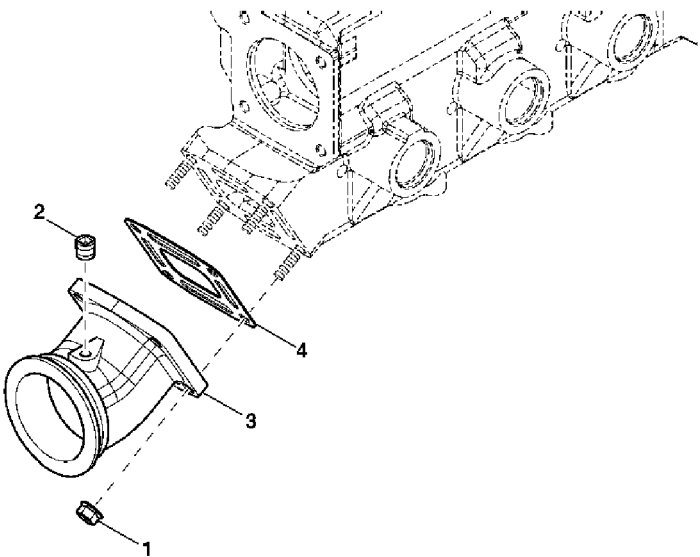
6443_14_3

Item	Part No.	Description	Quantity Variation 5104	Item	Part No.	Description	Quantity Variation 5104
1	223617	Cap	12	12	224136	Intake valve, .08 mm (.003 in.) OS	AR
2	223612	Retainer	24	12	224142	Intake valve, .76 mm (.030 in.) OS	AR
2	GM52769	Strap	1	12	224149	Intake valve, .38 mm (.015 in.) OS	AR
3	#	Cap screw, 5/8 x 1 1/2 in.	2	13	352735	Valve seat insert, exhaust valve	6
3	GM52770	Cap	12	14	223870	Exhaust valve, standard	6
4	GM52771	Spring	12	14	224134	Exhaust valve, .08 mm (.003 in.) OS	AR
5	352755	Cap screw	7	14	224135	Exhaust valve, .76 mm (.03 in.) OS	AR
6	352754	Cap screw	8	14	224139	Valve seat insert, .25mm (.01 in.) OS	6
7	GM52772	Cap screw	6	14	224143	Exhaust valve, .38 mm (.015) OS	AR
8	GM52773	Cap screw	5	15	GM52775	Cylinder head	1
9	GM52774	Kit, special head bolts	1	16	352840	Gasket	1
10	#	Pipe plug, 3/4 in.	11	17	#	Cap screw	1
11	352751	Valve seat insert, intake valve	6	18	GM52776	Shield	6
12	223869	Intake valve, standard	6	19	GM52777	Plug	2
12	224133	Valve seat insert, .25mm (.01 in.) OS	6				

AR As Required

Common hardware; procure locally.

Group 15A: Exhaust Elbow

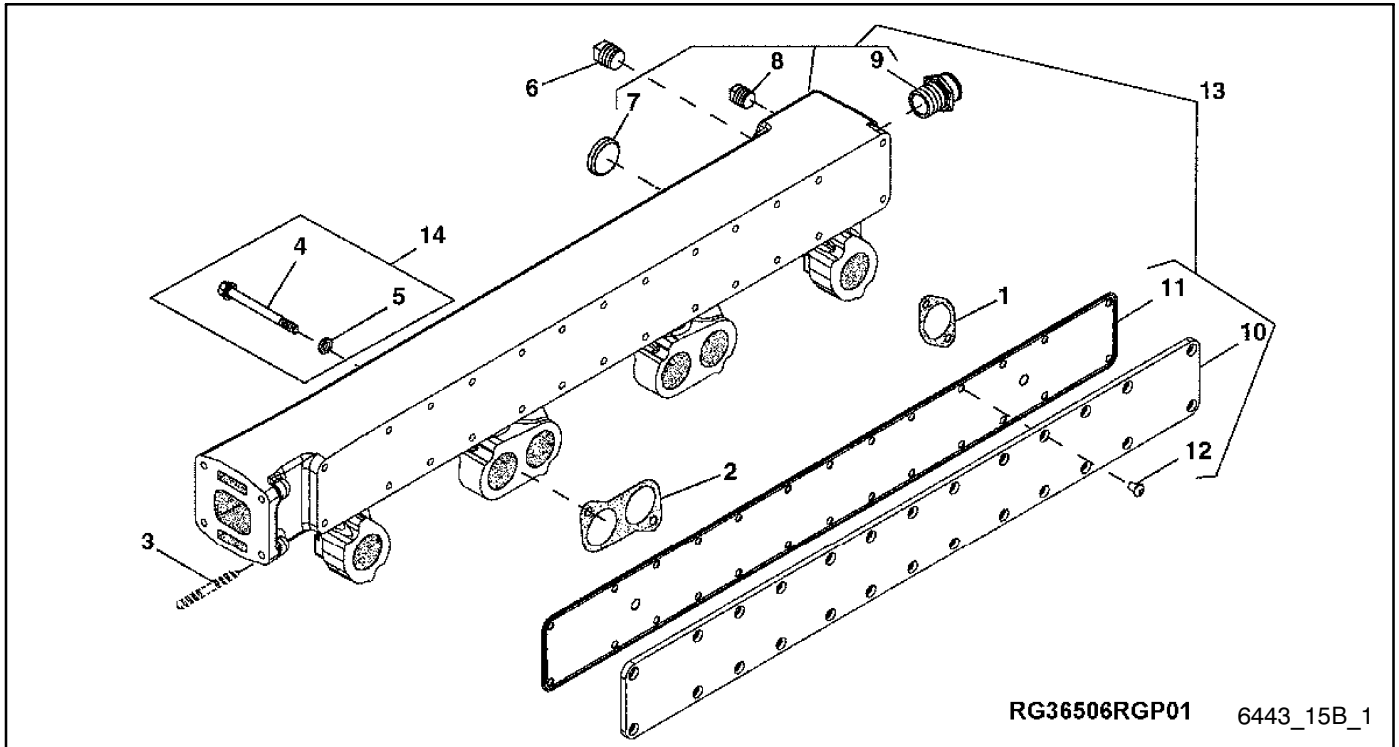


6443_15A

Item	Part Number	Description	Quantity
			Variation 6414
1	#	Flange nut, M10	4
2	224268	Pipe plug	1
3	352059	Adapter	1
4	352029	Gasket	1

Common hardware; procure locally.

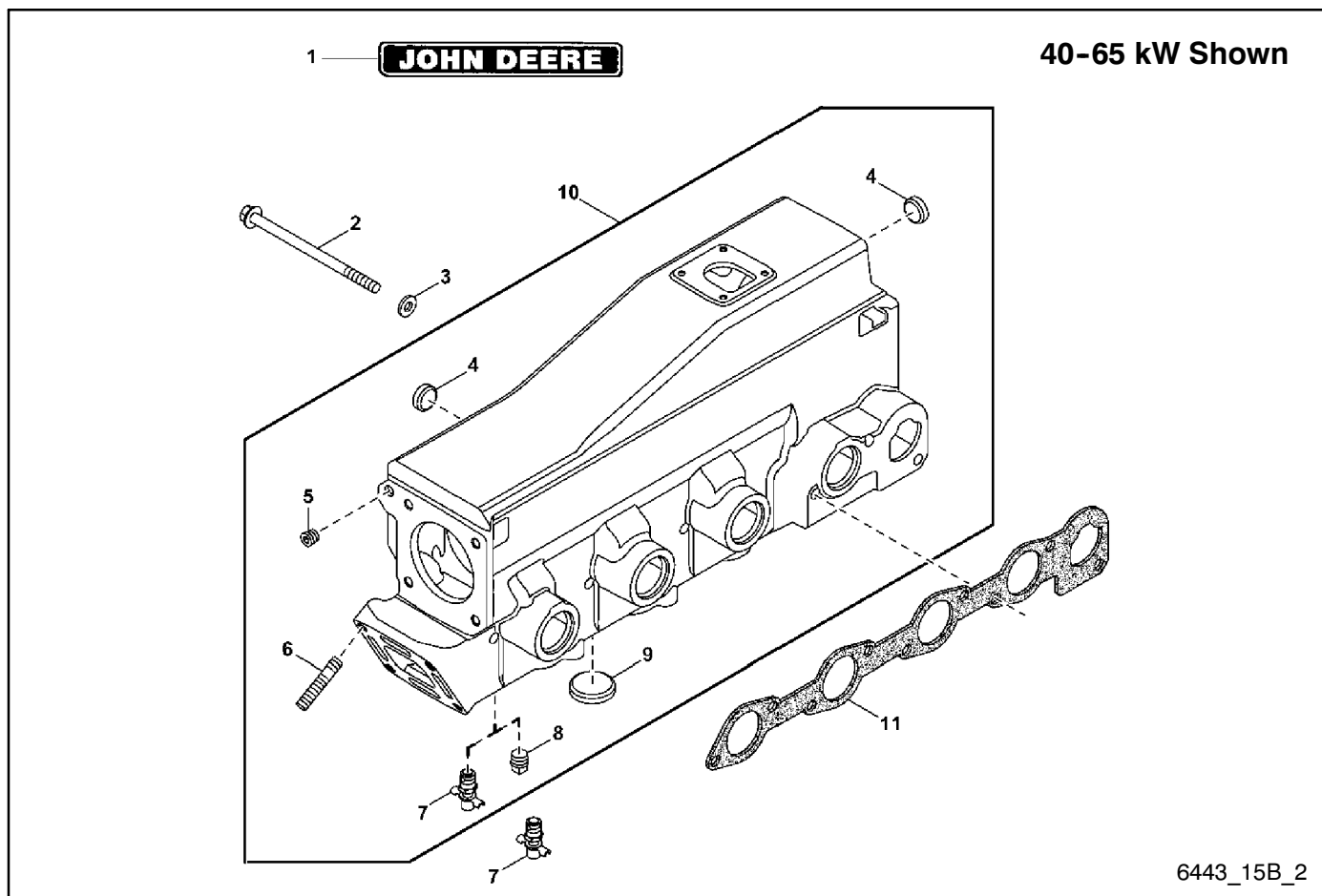
Group 15B: Exhaust Manifold



Item	Part Number	Description	Quantity
			Variation 2801
1	352869	Gasket	2
2	352870	Gasket	2
3	—	Stud (see Group 21A)	4
4	GM52870	Screw	8
5	223821	Washer	8
6	#	Pipe plug, 3/4 in.	1
7	224157	Cap	3
8	#	Pipe plug, 1/2 in.	2
9	GM18734	Adapter	1
10	—	Cover (not sold separately)	1
11	GM52871	Gasket	1
12	GM52872	Sealing washer	26
12	GM52873	Screw	26
13	GM52874	Exhaust manifold	1
14	GM18849	Kit, screw	1

Common hardware; procure locally.

Group 15B: Exhaust Manifold, continued

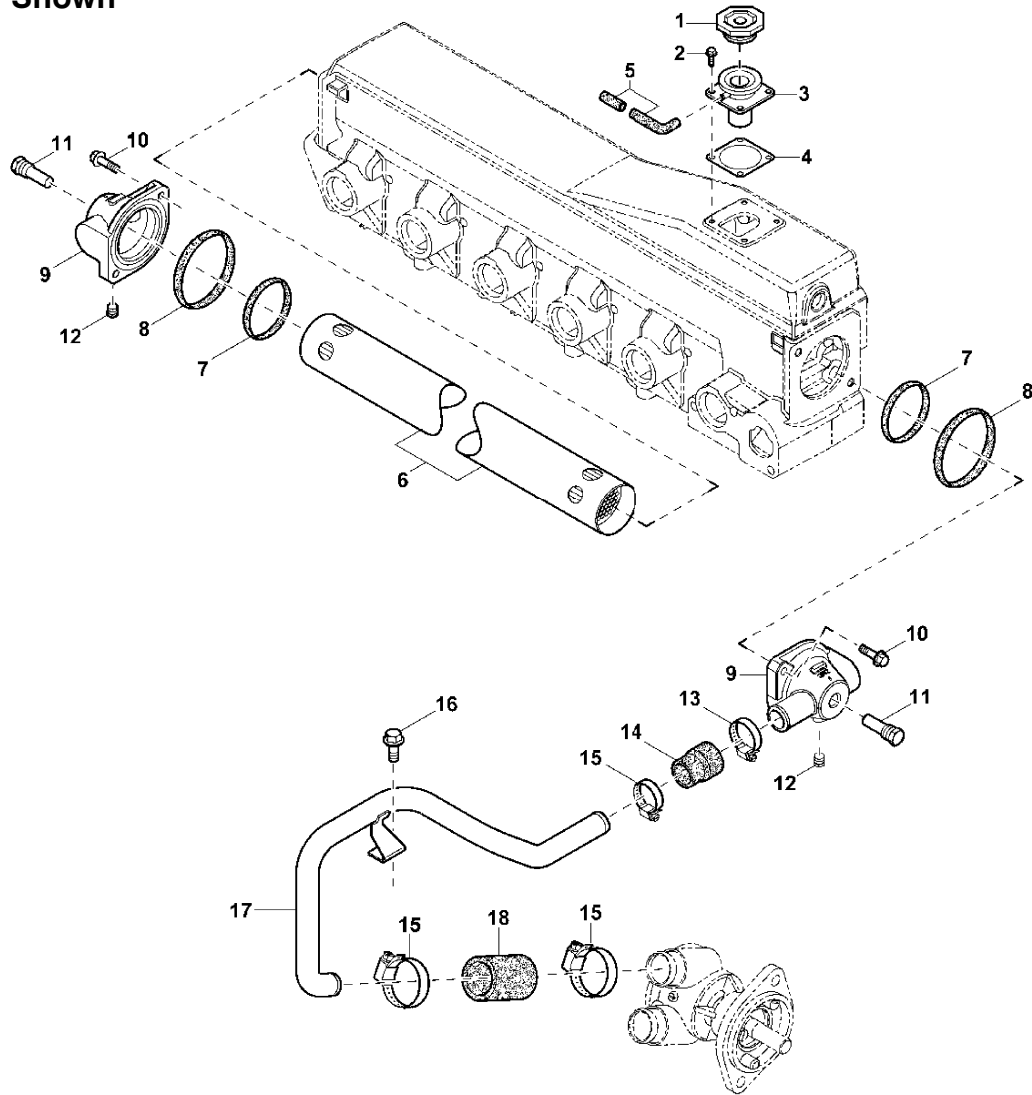


Item	Part Number	Description	Quantity	
			Variation	
			2843	2839
1	—	Label	1	1
2	#	Screw, M10 x 165	9	9
3	#	Washer, 13/32 in. x 7/8 in. x 0.120 in.	9	
4	#	Plug, OD = 25.7 mm	4	4
5	#	Pipe plug, 1/4 in.	1	
5	224268	Pipe plug, 1/8 in.		1
6	GM17480	Stud	4	4
7	223435	Drain valve	1	1
8	#	Pipe plug, 1/4 in.	3	3
9	224157	Cap	3	3
10	GM17522	Housing	1	
10	GM18820	Housing		1
11	GM17486	Gasket	1	
11	GM18732	Gasket		1

Common hardware; procure locally.

Group 16: Heat Exchanger

40-65 kW Shown

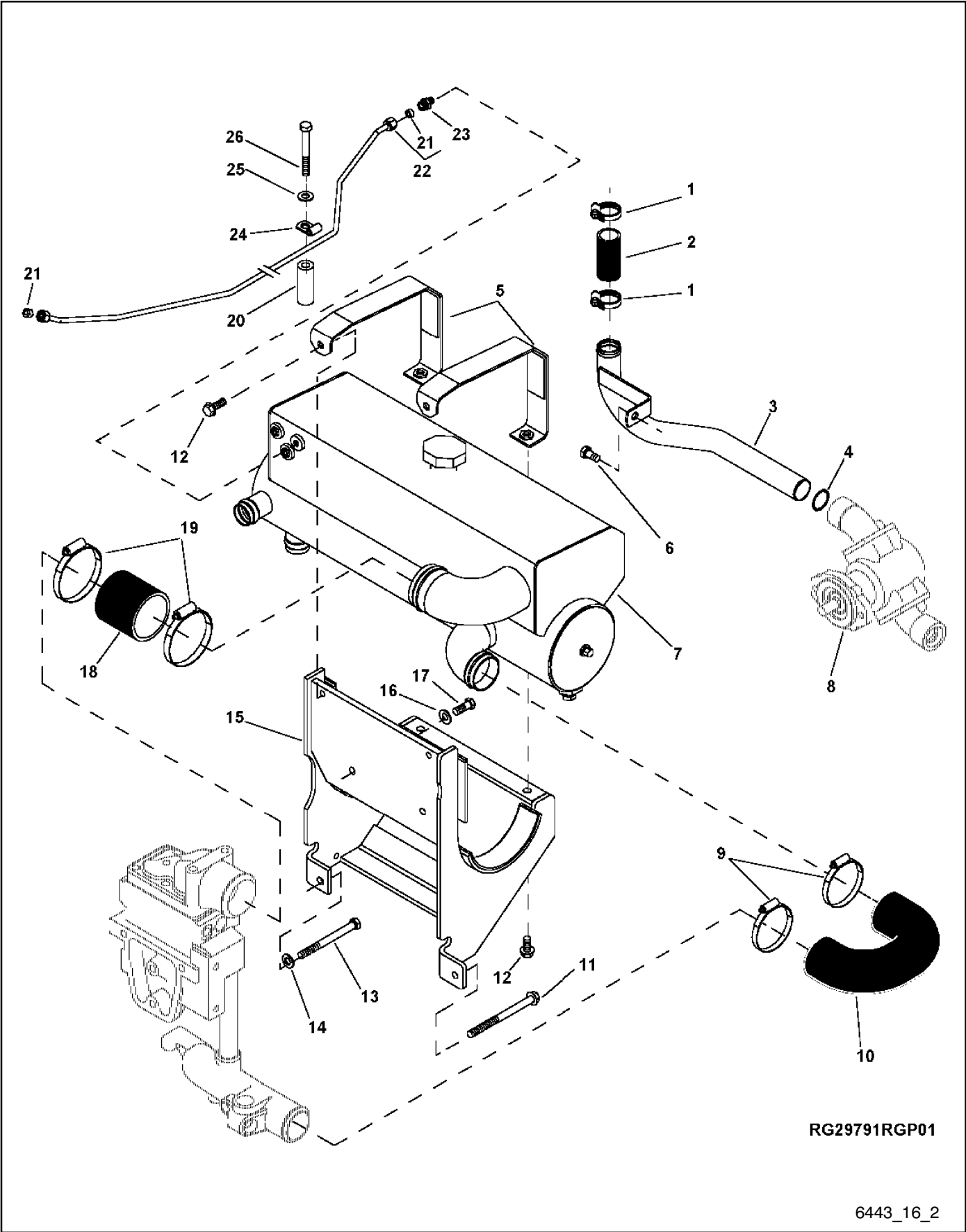


6443_16_1

Item	Part Number	Description	Quantity	
			Variation	
			2703	2702
1	GM17497	Filler cap	1	1
2	#	Screw, M6 x 16	4	4
3	352112	Filler neck	1	1
4	352033	Gasket	1	1
5	352081	Hose, 2100 mm	1	1
6	GM17526	Heat exchanger	1	
6	GM18832	Heat exchanger		1
7	352021	O-ring	2	2
8	352022	O-ring	2	2
9	GM26367	Cover, heat exchanger	2	2
10	#	Screw, M10 x 35	4	4
11	352142	Zinc anode	2	2
12	352023	Drain plug	2	2
13	GM18882	Clamp	1	1
14	GM50632	Hose, ID 38 x 32 mm	1	1
15	GM50633	Clamp	1	1
16	GM32765	Screw	1	1
17	GM49146	Tube	1	
17	GM50938	Tube		1
18	GM17492	Hose	1	1

Common hardware; procure locally.

Group 16: Heat Exchanger, continued

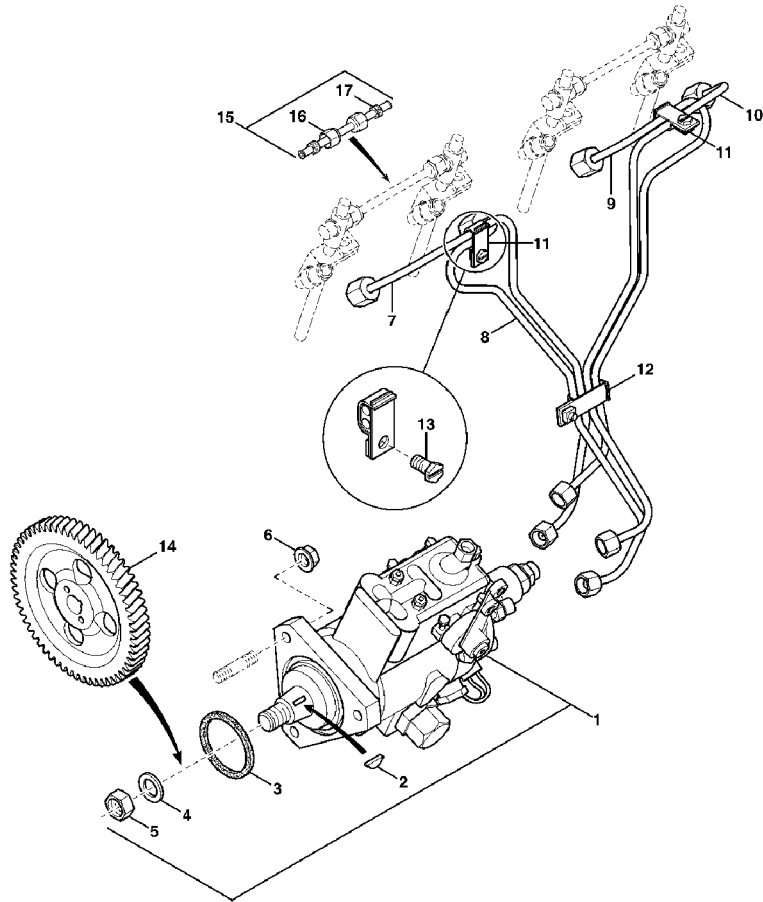


Group 16: Heat Exchanger, continued

Item	Part Number	Description	Quantity
			Variation 2701
1	GM18881	Clamp	2
2	GM18742	Hose	1
3	GM18845	Tube	1
4	—	O-ring (see Group 33)	1
5	GM18837	Retainer	2
6	#	Cap screw, 3/8 in. x 3/4 in.	1
7	GM18829	Tank	1
8	—	Water pump (see Group 33)	1
9	GM18882	Clamp	2
10	GM18740	Hose	1
11	#	Cap screw, 5/16 in. x 3 3/4 in.	1
11	#	Washer, 11/32 in. x 11/16 in. x 0.065 in.	1
12	#	Screw, 3/8 in. x 1 in.	4
13	#	Cap screw, 3/8 in. x 4 in.	1
14	#	Washer, 10.500 x 18 x 1.600 mm	1
15	GM18835	Bracket	1
16	#	Washer, 13/32 in. x 13/16 in. x 0.065 in.	2
17	#	Cap screw, 3/8 in. x 1 in.	2
18	GM18741	Hose	1
19	GM18883	Clamp	2
20	GM18673	Spacer	1
21	223476	Packing	2
22	GM18846	Line	1
23	223820	Fitting	1
24	GM18754	Clip	1
25	#	Washer, 13/32 in. x 13/16 in. x 0.065 in.	1
26	#	Cap screw, 3/8 in. x 3 in.	1
—	352142	Zinc anode	2
—	GM18685	Rod	1

Common hardware; procure locally.

Group 18A: Fuel Injection System



CDP45971

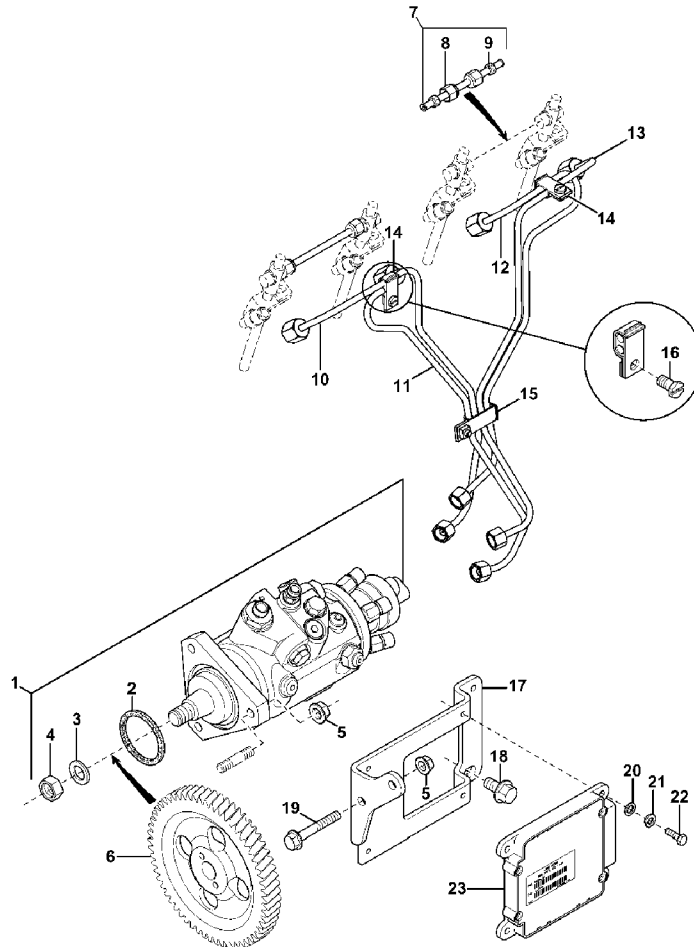
6443_18A_1

Item	Part Number	Description	Quantity Variation			
			167K	167J	167G	167H
1	GM50651	Fuel injection pump	1			
1	GM50652	Fuel injection pump		1		
1	GM50649	Fuel injection pump			1	
1	GM50650	Fuel injection pump				1
2	GM21499	Shaft key	1	1	1	1
3	224172	O-ring	1	1		
3	GM17487	O-ring			1	1
4	GM17456	Washer	1	1	1	1
5	224161	Nut, M14	1	1	1	1
6	#	Flange nut, M8	3	3	3	3
7	360536	Fuel line, no. 1	1	1	1	1
8	360537	Fuel line, no. 2	1	1	1	1
9	360538	Fuel line, no. 3	1	1	1	1
10	360539	Fuel line, no. 4	1	1	1	1
11	223572	Clamp	2	2	2	2
12	223573	Clamp	1	1	1	1
13	#	Cap screw, M6 x 12	1	1	1	1
14	360153	Gear, 60 teeth	1	1	1	1
15	223504	Tube	2	2	2	2
16	360141	Nut	AR	AR	AR	AR
17	223476	Packing	AR	AR	AR	AR

AR As Required

Common hardware; procure locally.

Group 18A Fuel Injection System

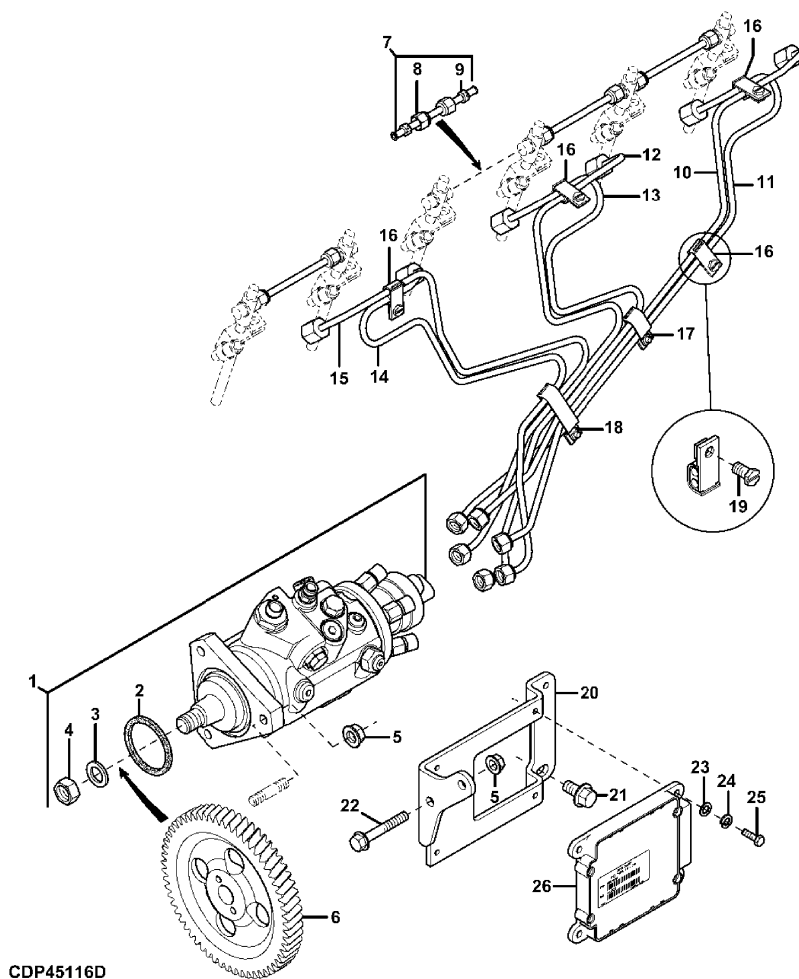


6443_18A_2

Item	Part Number	Description	Quantity Variation			
			168G	168H	168J	168K
1	GM32839	Pump, fuel injection	1	1	1	1
2	GM17487	O-ring	1	1	1	1
3	GM17456	Washer	1	1	1	1
4	224161	Nut	1	1	1	1
5	#	Flange nut, M8	5	5	5	5
6	GM32798	Gear	1	1	1	1
7	223504	Tube	3	3	3	3
8	360141	Nut	2	2	2	2
9	223476	Packing	2	2	2	2
10	GM32815	Line, fuel	1	1	1	1
11	GM32816	Line, fuel	1	1	1	1
12	GM32817	Line, fuel	1	1	1	1
13	GM32818	Line, fuel	1	1	1	1
14	223572	Clamp	2	2	2	2
15	223573	Clamp	1	1	1	1
16	#	Cap screw, M6 x 12	1	1	1	1
17	GM32793	Bracket	1	1	1	1
18	GM32765	Screw	1	1	1	1
19	#	Screw, M8 x 55	2	2	2	2
20	#	Washer, 5.300 x 10 x 1 mm	4	4	4	4
21	#	Lock washer, 0.216 in.	4	4	4	4
22	#	Cap screw, M5 x 12	4	4	4	4
23	GM47030	Engine controller		1		1
23	GM32844	Engine controller	1		1	

Common hardware; procure locally.

Group 18A Fuel Injection System, continued



CDP45116D

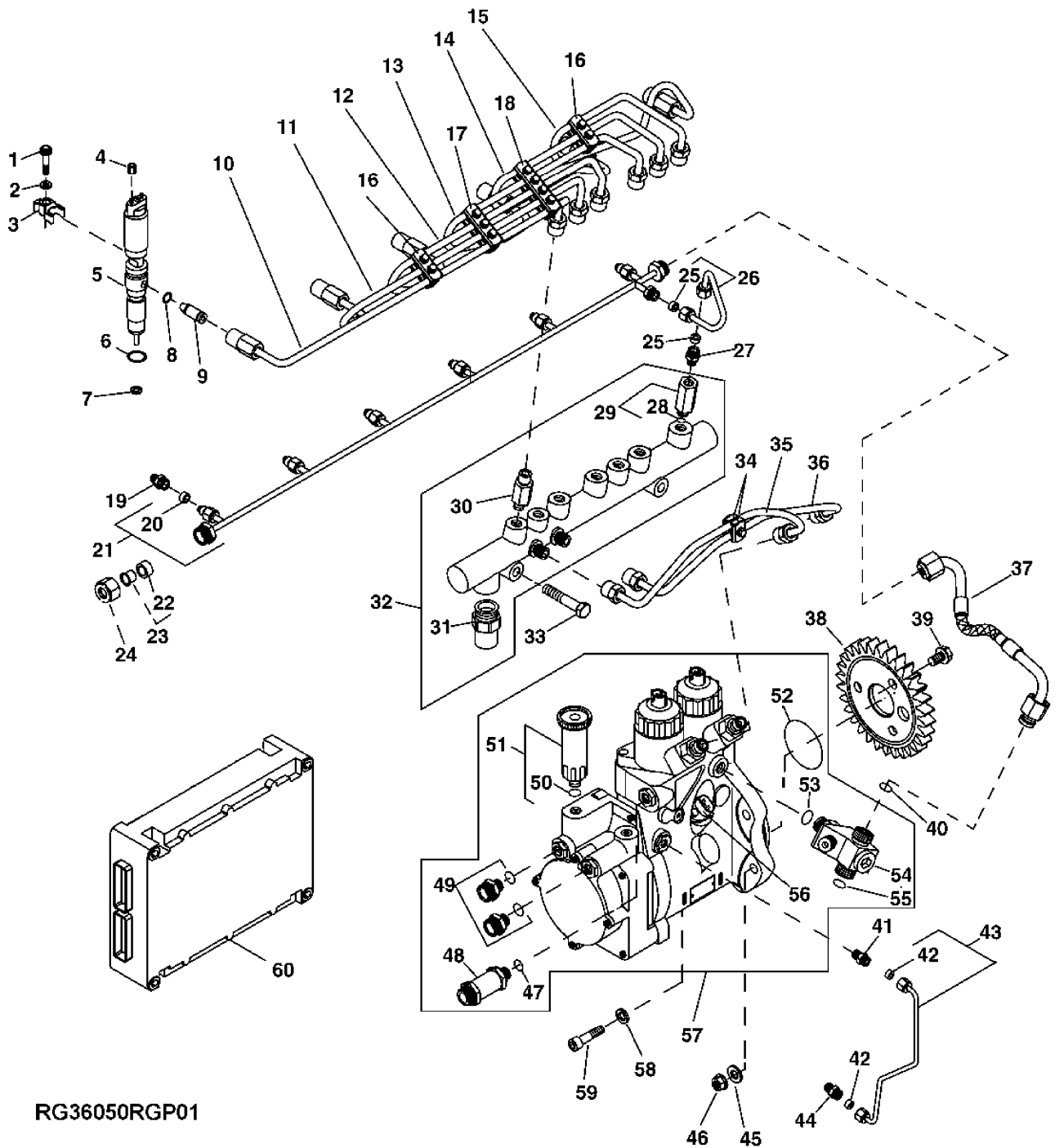
6443_18A_3

Group 18A Fuel Injection System, continued

Item	Part Number	Description	Quantity Variation			
			167L	167M	167S	167T
1	GM50942	Pump, fuel injection	1	1		
1	GM34523	Pump, fuel injection			1	1
2	GM17487	O-ring	1	1	1	1
3	GM17456	Washer	1	1	1	1
4	224161	Nut	1	1	1	1
5	#	Flange nut, M8	5	5	5	5
6	GM32798	Gear	1	1	1	1
7	223504	Tube	4	4	4	4
8	360141	Nut	2	2	2	2
9	223476	Packing	2	2	2	2
10	GM34517	Line, fuel (no. 6)	1	1	1	1
11	GM34518	Line, fuel (no. 5)	1	1	1	1
12	GM34519	Line, fuel (no. 4)	1	1	1	1
13	GM34520	Line, fuel (no. 3)	1	1	1	1
14	GM34521	Line, fuel (no. 2)	1	1	1	1
15	GM34522	Line, fuel (no. 1)	1	1	1	1
16	223572	Clamp	4	4	4	4
17	224071	Clamp	1	1	1	1
18	224070	Clamp	1	1	1	1
19	#	Cap screw, M6 x 12	1	1	1	1
20	GM32793	Bracket	1	1	1	1
21	GM32765	Screw	1	1	1	1
22	#	Screw, M8 x 55	2	2	2	2
23	#	Washer, 5.300 x 10 x 1 mm	4	4	4	4
24	#	Lock washer, 0.216 in.	4	4	4	4
25	#	Cap screw, M5 x 12	4	4	4	4
26	GM50549	Engine controller		1		1
26	GM32844	Engine controller	1		1	

Common hardware; procure locally.

Group 18A Fuel Injection System, continued



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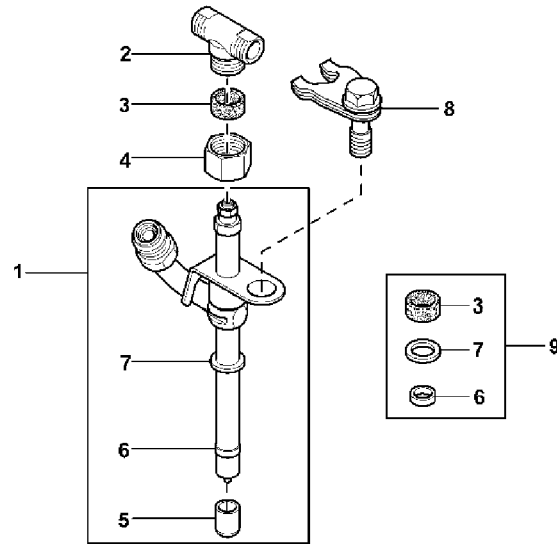
6443_18A_4

Group 18A Fuel Injection System, continued

Item	Part Number	Description	Quantity	
			Variation	
			164C	164D
1	#	Cap screw	6	6
2	223821	Washer	6	6
3	GM52778	Clamp	6	6
4	GM46621	Nut	12	12
5	GM52779	Injection nozzle	6	6
6	GM52780	Packing	6	6
7	GM50119	Washer	6	6
8	GM52781	O-ring	6	6
9	GM52782	Fitting	6	6
10	GM52783	Fuel line, no. 6	1	1
11	GM52784	Fuel line, no. 5	1	1
12	GM52785	Fuel line, no. 4	1	1
13	GM52786	Fuel line, no. 3	1	1
14	GM52787	Fuel line, no. 2	1	1
15	GM52788	Fuel line, no. 1	1	1
16	GM52789	Clamp	2	2
17	GM52790	Clamp	1	1
18	GM52791	Clamp	1	1
19	223820	Fitting	6	6
20	GM52792	Washer	6	6
21	GM52793	Fuel line	1	1
22	360165	O-ring	2	2
23	GM52794	Plug	2	2
24	GM52795	Tube nut	2	2
25	223476	Packing	2	2
26	GM52796	Line	1	1
27	GM50202	Fitting, adapter	1	1
28	GM49835	Shim	1	1
29	GM49936	Pressure relief valve	1	1
30	GM46637	Restrictor	6	6
31	GM46637	Restrictor	1	1
32	GM52797	Rail	1	1
33	#	Cap screw	2	2
34	GM52798	Clamp	1	1
35	GM52799	Fuel line	1	1
36	GM52800	Fuel line	1	1
37	GM52801	Fuel line	1	1
38	GM52802	Bevel gear drive	1	1
39	#	Screw, M10 x 16	3	3
40	GM52803	O-ring	1	1
41	GM52804	Adapter	1	1
42	223836	Packing	2	2
43	GM52805	Oil line	1	1
44	223857	Fitting	1	1
45	222767	Washer, hardened	3	3
46	#	Nut	3	3
47	GM50114	O-ring	1	1
48	GM52806	Check valve	1	1
49	GM52807	Fitting	2	2
50	GM52808	Washer	1	1
51	GM52809	Hand primer	1	1
52	GM52810	O-ring	1	1
53	GM52811	O-ring	1	1
54	GM52812	Valve	1	1
55	360165	O-ring	1	1
56	GM52813	Sensor	1	1
57	GM52814	Fuel injection pump	1	
57	GM52815	Fuel injection pump		1
58	#	Washer	1	1
59	#	Screw, 3/8 in. x 1 1/2 in.	1	1
60	GM52816	Engine controller	1	1

Common hardware; procure locally.

Group 18B: Fuel Injection Nozzle

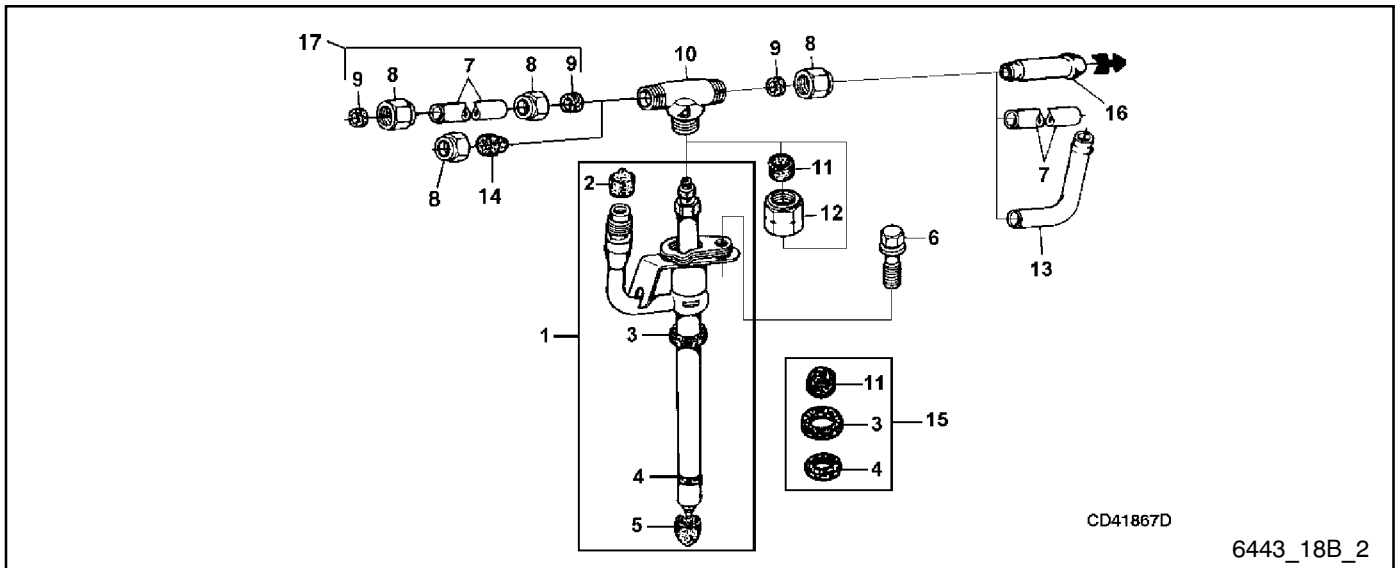


6443_18B_1

Item	Part Number	Description	Quantity							
			Variation							
168H	168G	168J	168K	167L	167M	167S	167T			
1	GM50655	Injection nozzle	4	4						
1	GM50656	Injection nozzle			4	4				
1	360017	Injection nozzle					6	6	6	6
2	360167	Tee fitting	1	1	1	1	1	1	1	1
3	—	Packing	1	1	1	1	1	1	1	1
4	223517	Tube nut	1	1	1	1	1	1	1	1
5	—	Plug	1	1	1	1	1	1	1	1
6	—	Seal	1	1	1	1	1	1	1	1
7	—	Packing	1	1	1	1	1	1	1	1
8	GM32825	Clamp	4	4	4	4				
8	360091	Screw					6	6	6	6
9	GM21516	O-ring kit	AR	AR	AR	AR	AR	AR	AR	AR

AR As Required

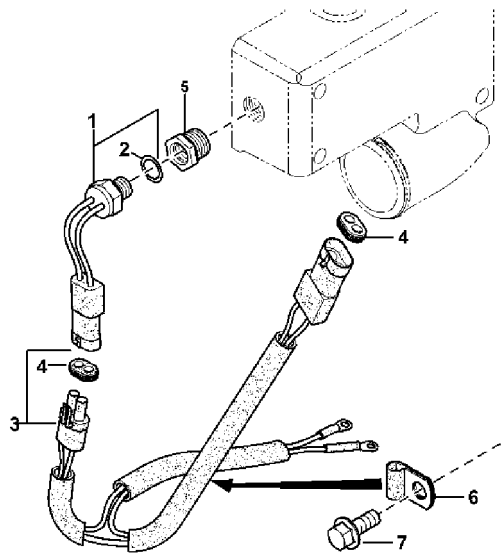
Group 18B: Fuel Injection Nozzle



Item	Part Number	Description	Quantity Variation			
			167K	167J	167G	167H
1	GM17535	Injection nozzle	4	4		
1	GM50653	Injection nozzle			4	4
2	—	Not used	NA	NA		
3	—	Packing (not sold separately, order item 15)	1	1	1	1
4	—	Seal (not sold separately, order item 15)	1	1	1	1
5	—	Not used	NA	NA	NA	NA
6	360091	Screw	6	6	6	6
7	223504	Tube	5	5		
8	360141	Nut	12	12		
9	223476	Packing	12	12		
10	360167	Tee fitting	AR	AR	AR	AR
11	—	Sleeve (not sold separately, order item 15)	1	1	1	1
12	223517	Tube nut	AR	AR	AR	AR
13	—	Not used	NA	NA		
14	223710	Plug	AR	AR		
15	GM21515	O-ring kit	AR	AR		
15	GM21516	O-ring kit			AR	AR
16	GM50654	Hose fitting	1	1		
17	223504	Tube	5	5		

AR As Required
NA Not Available

Group 18C: Fuel Injection Sensor

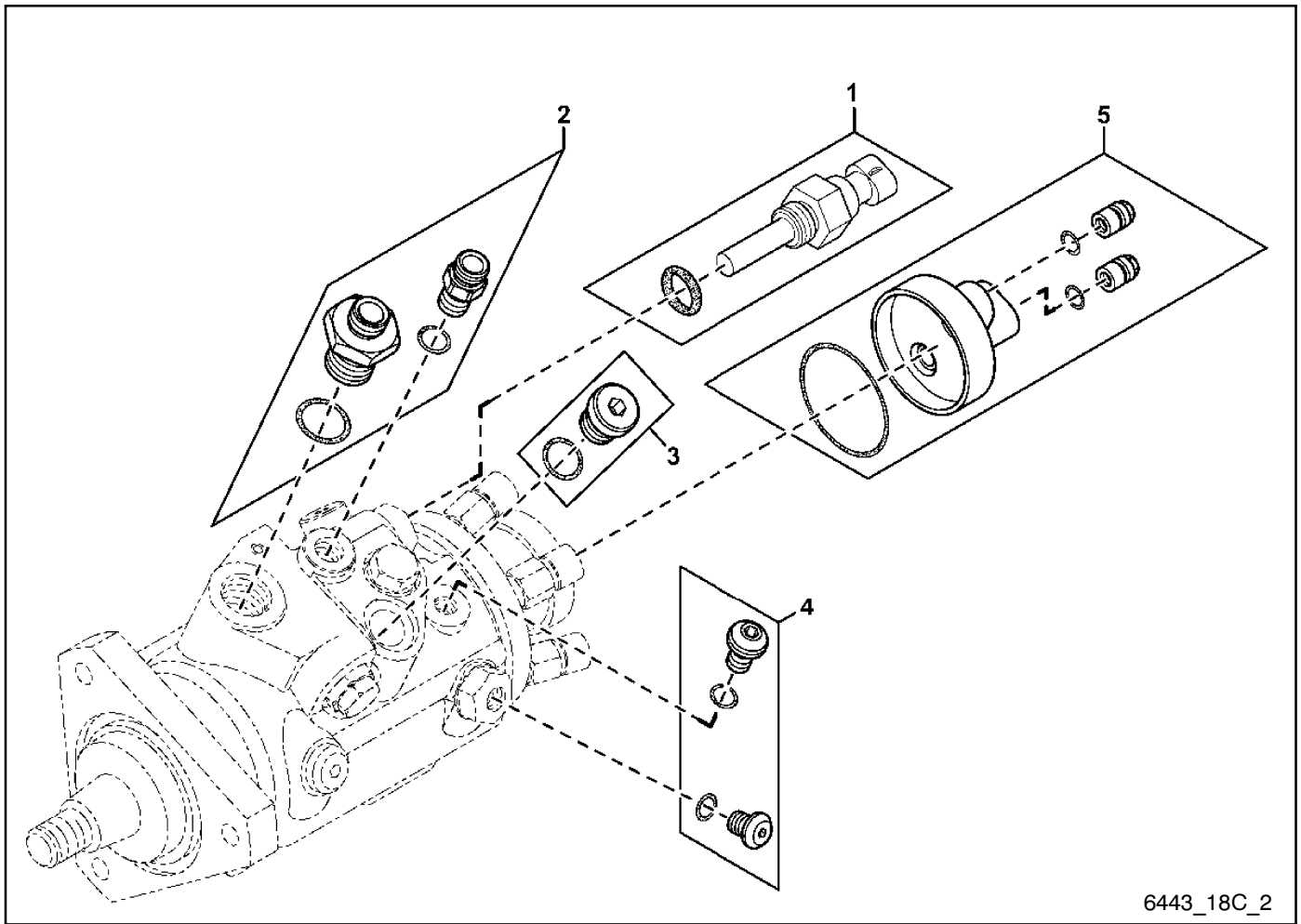


6443_18C_1

Item	Part Number	Description	Quantity	
			Variation	
			167G	167H
1	GM21509	Switch, temperature	1	1
2	GM21508	O-ring	1	1
3	GM21510	Wiring harness	1	1
4	GM50657	Elec. connector accessory	AR	AR
5	GM50658	Adapter fitting	1	1
6	GM50659	Clamp	1	1
7	#	Screw, M10 x 16	1	1

AR As Required
Common hardware; procure locally.

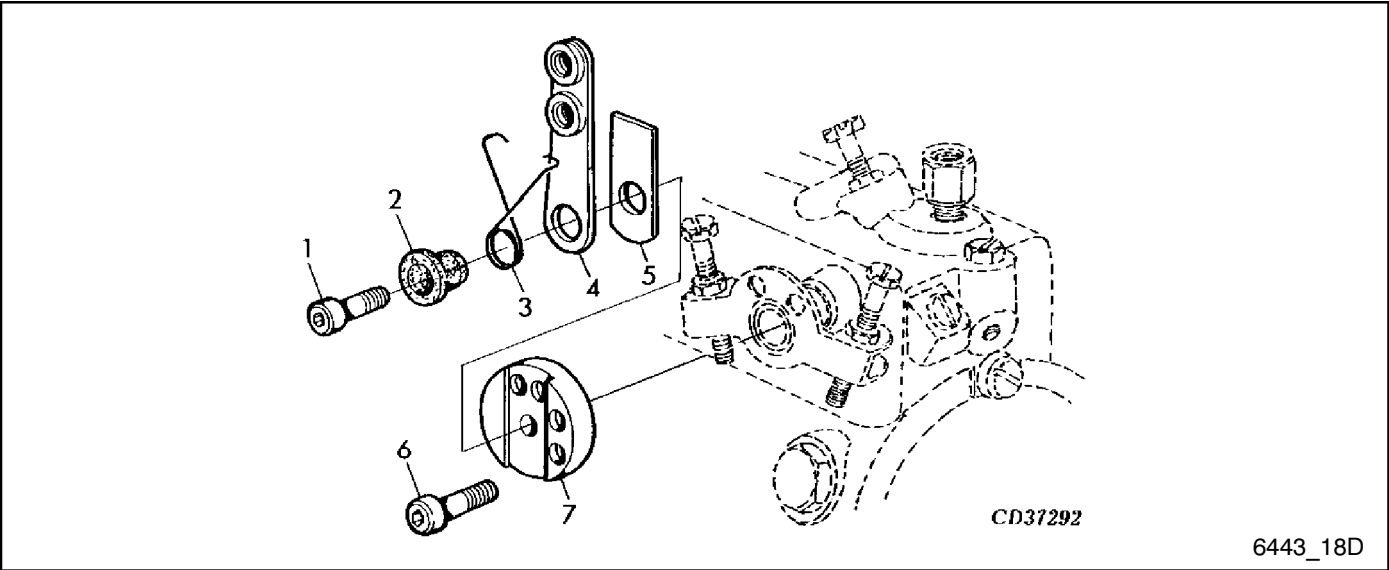
Group 18C: Fuel Injection Sensor



6443_18C_2

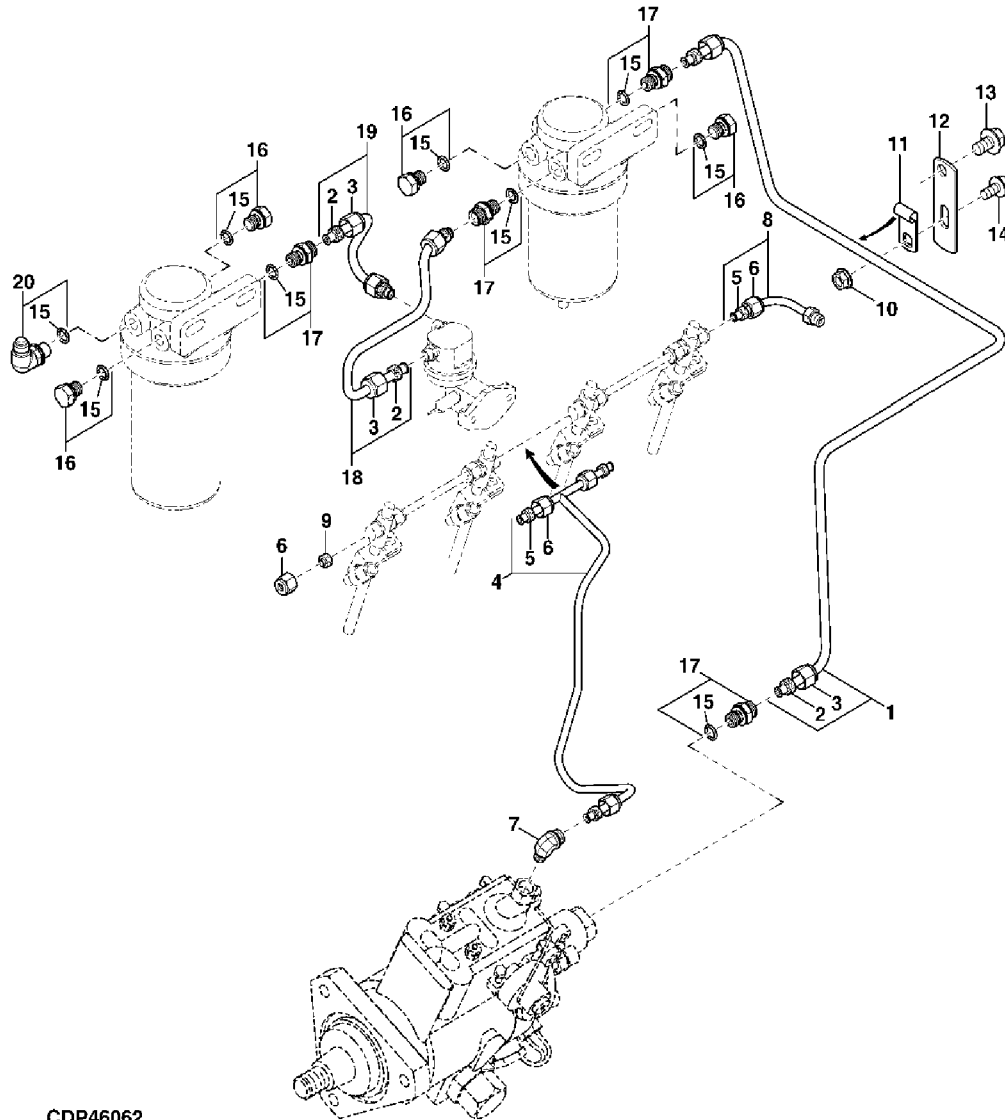
Item	Part Number	Description	Quantity							
			Variation							
			168G	168H	168J	168K	167L	167M	167S	167T
1	GM50660	Kit, fuel temperature sensor	1	1	1	1	1	1	1	1
2	GM50661	Kit, inlet connector	1	1	1	1	1	1	1	1
3	GM50662	Kit, timing pin hole plug	1	1	1	1	1	1	1	1
4	GM50663	Kit, transfer pump tap screw	1	1	1	1	1	1	1	1
5	GM50664	Kit, solenoid connector assembly	1	1	1	1	1	1	1	1

Group 18D: Injection Pump Parts



Item	Part Number	Description	Quantity			
			Variation			
			167G	167H	167J	167K
1	GM50666	Screw	1	1	1	1
2	GM50667	Retainer	1	1	1	1
3	GM50668	Spring	1	1	1	1
4	GM50669	Lever	1	1	1	1
5	GM50670	Strap	1	1	1	1
6	GM50671	Screw	1	1	1	1
7	GM50672	Spacer	1	1	1	1

Group 18F: Fuel Lines



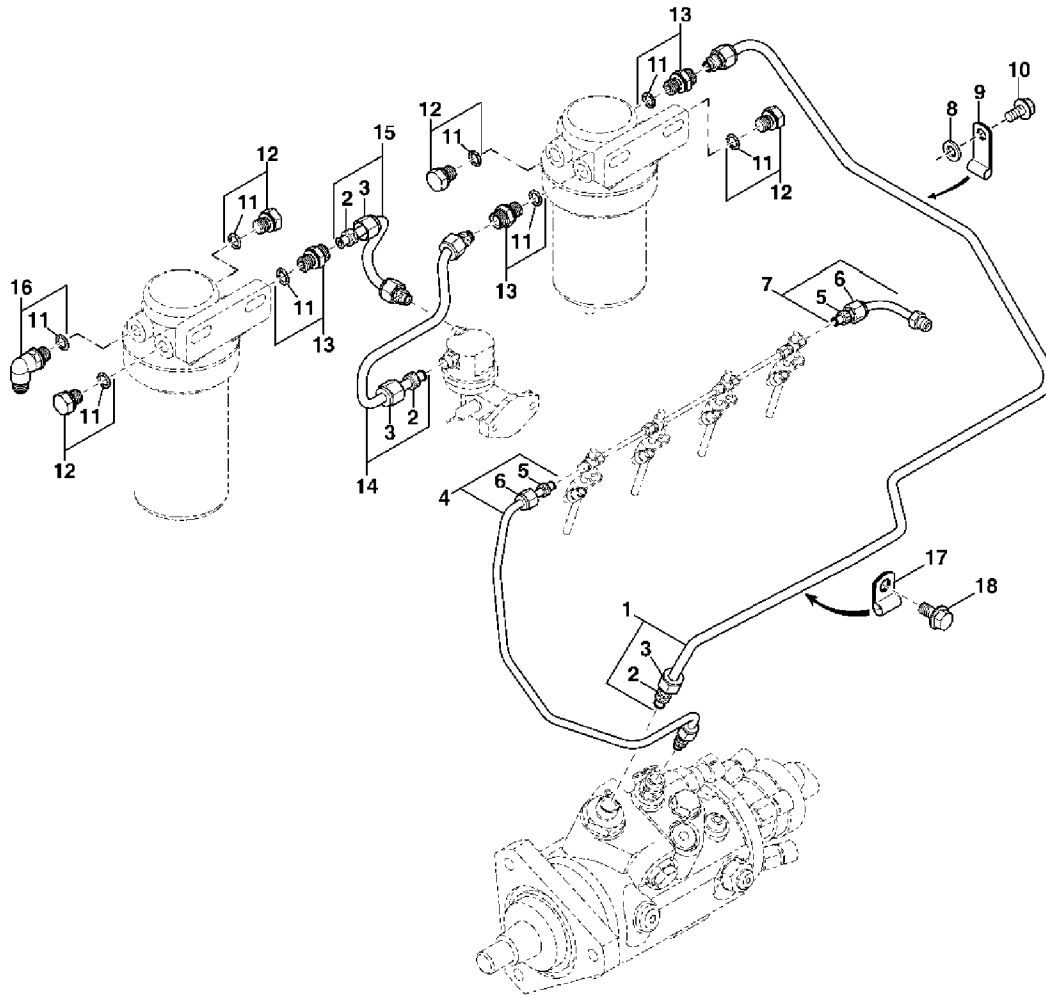
CDP46062

6443_18F_1

Item	Part Number	Description	Quantity
			Variation 6356
1	GM50677	Fuel line	1
2	GM17494	Sealing washer	6
3	GM21453	Nut	6
4	GM17549	Fuel line	1
5	223476	Packing	2
6	360141	Nut	4
7	223837	Elbow fitting	1
8	352126	Line, leakoff	1
9	223710	Plug	1
10	#	Flange nut, M8	1
11	336749	Clamp	1
12	223492	Strap	1
13	#	Screw, M10 x 16	1
14	#	Screw, M8 x 16	1
15	360178	O-ring	8
16	360015	Plug	4
17	360037	Fitting	3
18	GM32830	Line, fuel	1
19	GM50675	Fuel line	1
20	GM50677	Elbow fitting, M12 x 1.5 x 1/2 in. -20 UNF	1

Common hardware; procure locally.

Group 18F: Fuel Lines, continued

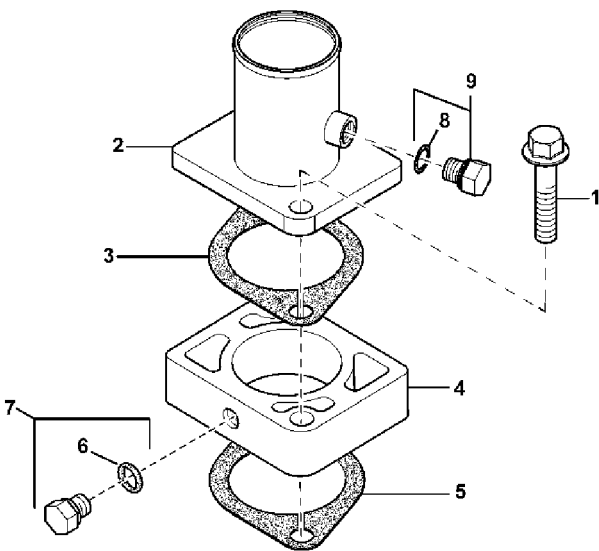


6443_18F_2

Item	Part Number	Description	Quantity	
			Variation	
			6351	6357
1	GM50673	Fuel line	1	
1	GM32947	Fuel line		1
2	GM17494	Sealing washer	6	6
3	GM21453	Nut	6	6
4	GM50674	Fuel line	1	1
5	223476	Packing	3	3
6	360141	Nut	3	3
7	352126	Line, leakoff	1	1
8	#	Washer, 10 x 18 x 2.500 mm	1	1
9	336749	Clamp	1	1
10	#	Screw, M10 x 16	1	1
11	360178	O-ring	8	8
12	360015	Plug	4	4
13	360037	Fitting	3	3
14	GM32830	Line, fuel	1	1
15	GM50675	Fuel line	1	
15	GM50943	Fuel line		1
16	GM50676	Elbow fitting	1	1
17	360171	Clip	1	1
18	#	Screw, M10 x 16	1	1

Common hardware; procure locally.

Group 19: Engine Air Intake

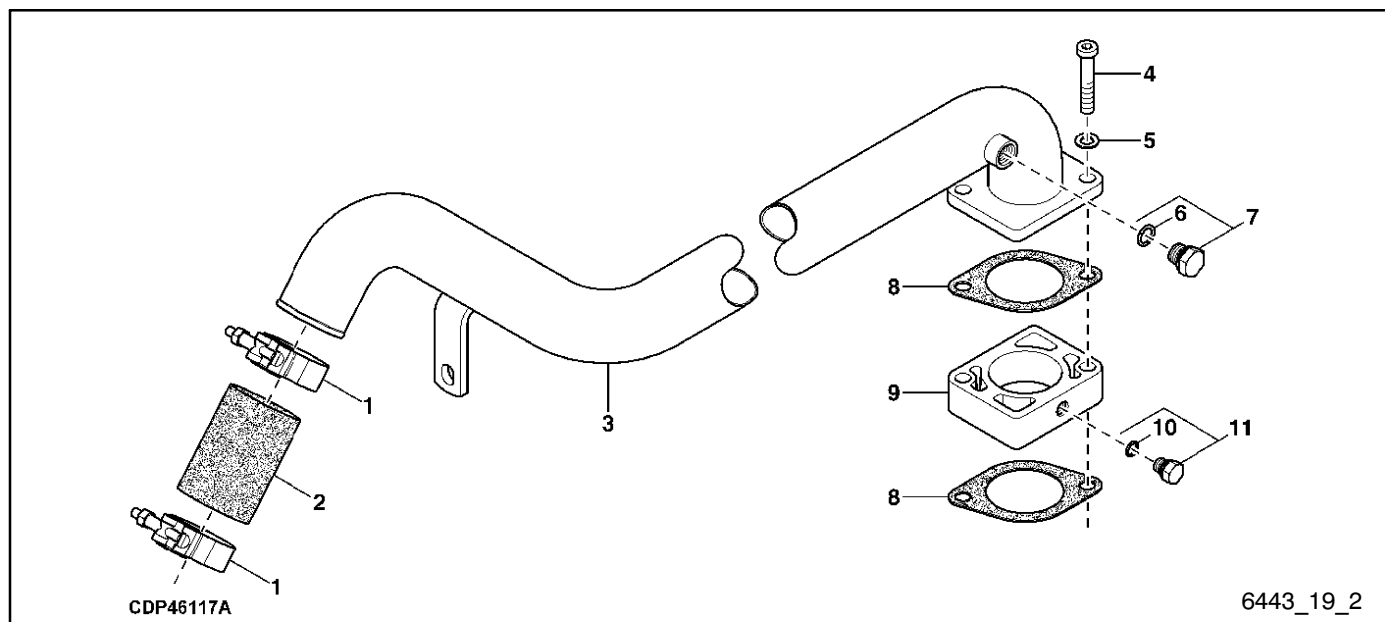


6443_19_1

Item	Part Number	Description	Quantity
			Variation 1783
1	#	Screw, M10 x 50	2
2	GM32940	Tube	1
3	223532	Gasket	1
4	GM17483	Spacer	1
5	223532	Gasket	1
6	GM32896	O-ring	1
7	GM24516	Fitting	1
8	GM21508	O-ring	1
9	360013	Plug	1

Common hardware; procure locally.

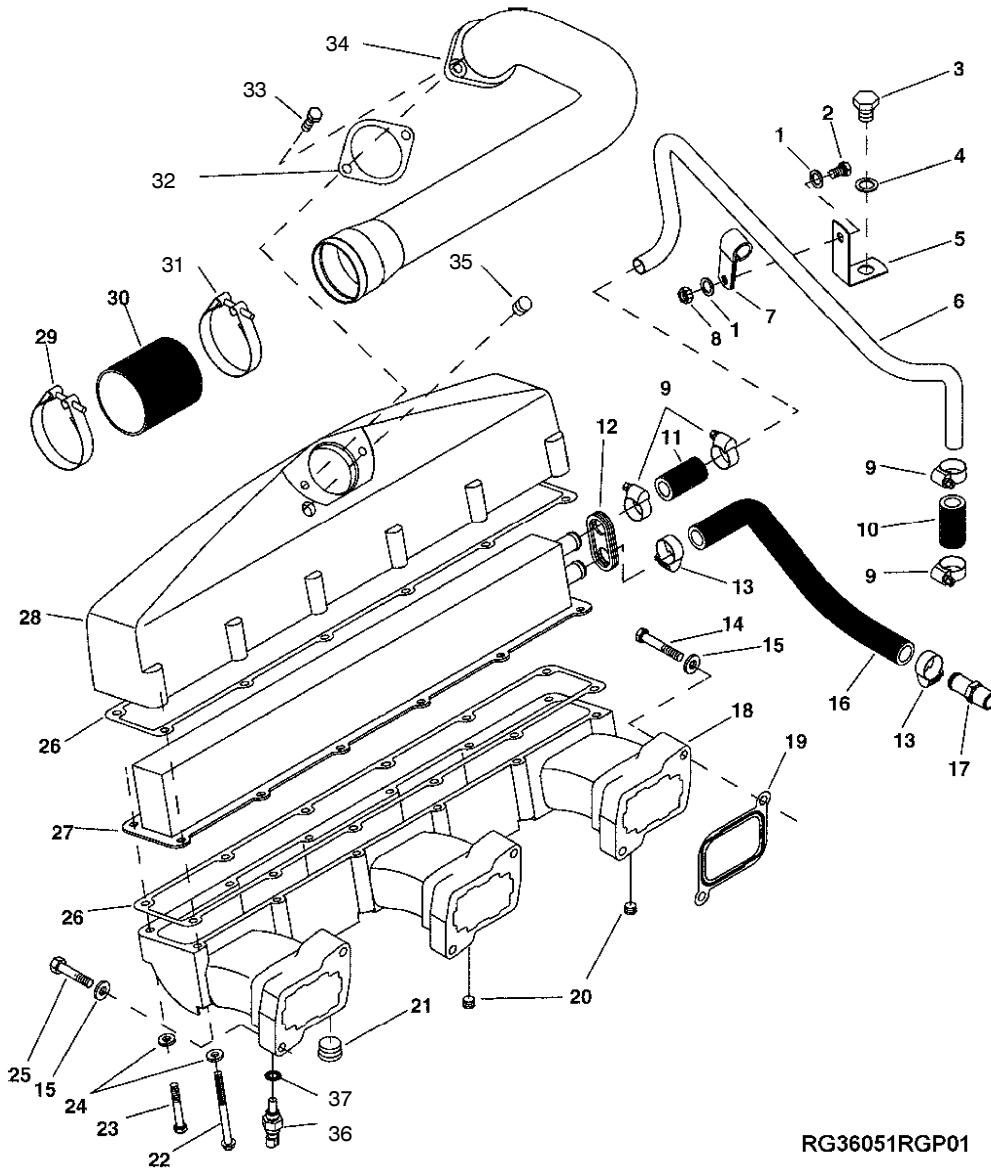
Group 19: Engine Air Intake, continued



Item	Part Number	Description	Quantity	
			Variation	
			1785	17BH
1	GM18669	Clamp	1	2
2	GM50939	Hose		1
2	GM21400	Hose	1	
3	GM50940	Air intake		1
3	GM52601	Air intake	1	
4	#	Screw, M10 x 55	2	2
5	GM30377	Washer, 10.500 x 18 x 1.600 mm	2	2
6	GM21508	O-ring	1	1
7	360013	Plug	1	1
8	223532	Gasket	2	2
9	GM17483	Spacer	1	1
10	GM32896	O-ring	1	1
11	GM24516	Fitting	1	1

Common hardware; procure locally.

Group 19: Engine Air Intake, continued



RG36051RGP01

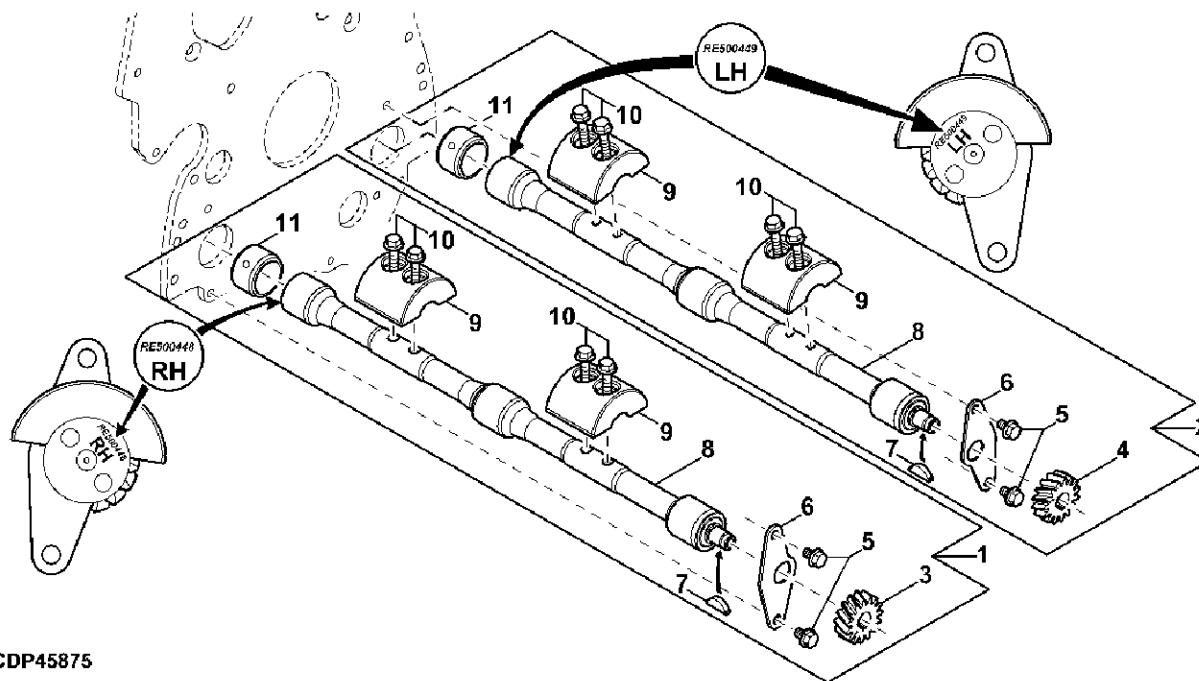
6443_19_3

Item	Part Number	Description	Quantity Variation 1772
1	#	Washer, 13/32 x 13/16 x .065 in.	2
2	#	Cap screw, 3/8 x 5/8 in.	1
3	#	Cap screw, 5/8 x 3/4 in.	1
4	#	Washer, 21/32 x 1 x 0.060 in.	1
5	GM18745	Bracket	1
6	GM18746	Hose	1
7	GM18876	Clamp	1
8	336726	Nut, hex 3/8 in.	1
9	GM18881	Clamp	4
10	GM18747	Hose	1
11	GM52817	Hose	1
12	223736	Seal	1
13	GM18881	Clamp	2
14	#	Cap screw, 3/8 x 2 1/4 in.	3
15	#	Washer, 13/32 x 7/8 x 0.120 in.	6
16	352710	Hose	1
17	223461	Hose fitting	2
18	GM52818	Intake manifold	1
19	GM18700	Gasket	3

Item	Part Number	Description	Quantity Variation 1772
20	GM18873	Pipe plug	2
21	#	Pipe plug	1
22	#	Cap screw, 5/16 x 3 3/4 in.	6
23	#	Cap screw, 5/16 x 2 1/4 in.	6
24	#	Washer, 11/32 x 11/16 x .065 in.	12
25	222766	Screw, cap	3
26	GM52819	Gasket	2
27	223967	Aftercooler	1
28	GM18675	Cover	1
29	GM52820	Hose clamp	1
30	224152	Hose	1
31	GM18669	Clamp	1
32	GM52821	Gasket	1
33	#	Cap screw, 3/8 x 1 in.	2
34	GM52822	Tube	1
35	#	Pipe plug, 3/4 in.	1
36	GM32958	Sensor, air temperature	1
37	GM21508	O-ring	1

Common hardware; procure locally.

Group 20: Engine Balancer Shafts



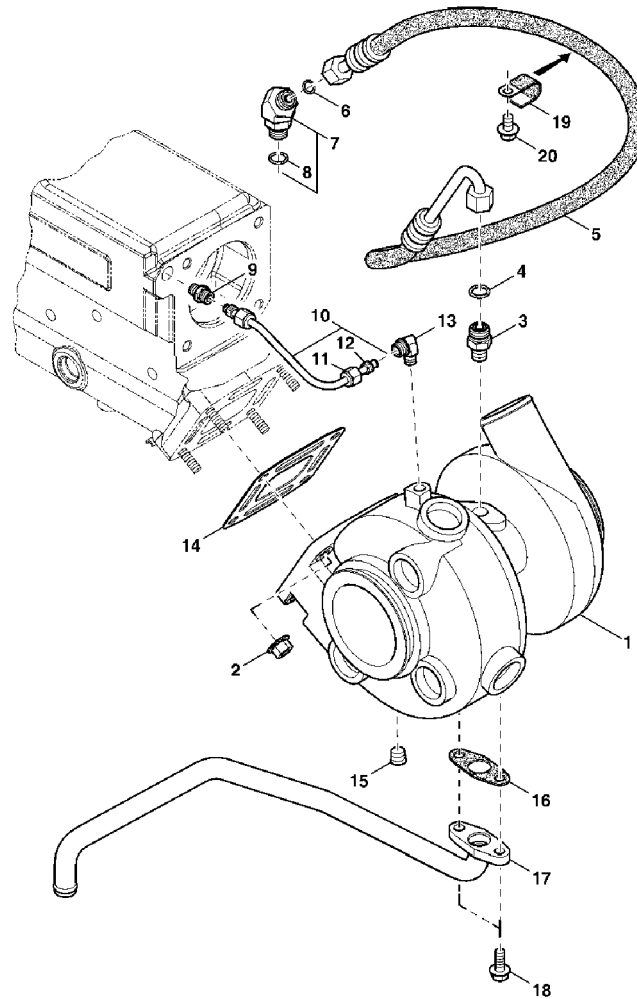
CDP45875

6443_20

Item	Part Number	Description	Quantity	
			Variation	
			4501	4502
1	GM50634	Balancer shaft, right hand	1	
1	GM50637	Balancer shaft, right hand		1
2	GM50635	Balancer shaft, left hand	1	
2	GM50638	Balancer shaft, left hand		1
3	360549	Gear, 15 teeth	1	1
4	360100	Gear, 30 teeth	1	1
5	#	Screw, M8 x 12	1	1
6	360547	Plate	1	1
7	360158	Key, shaft	1	1
8	—	Balancer shaft (order item 1)	1	1
8	—	Balancer shaft (order item 2)	1	1
9	GM50636	Weight	2	
9	GM17469	Weight		2
10	#	Screw, M8 x 40	4	4
11	360519	Bushing	3	3

Common hardware; procure locally.

Group 21A: Turbocharger

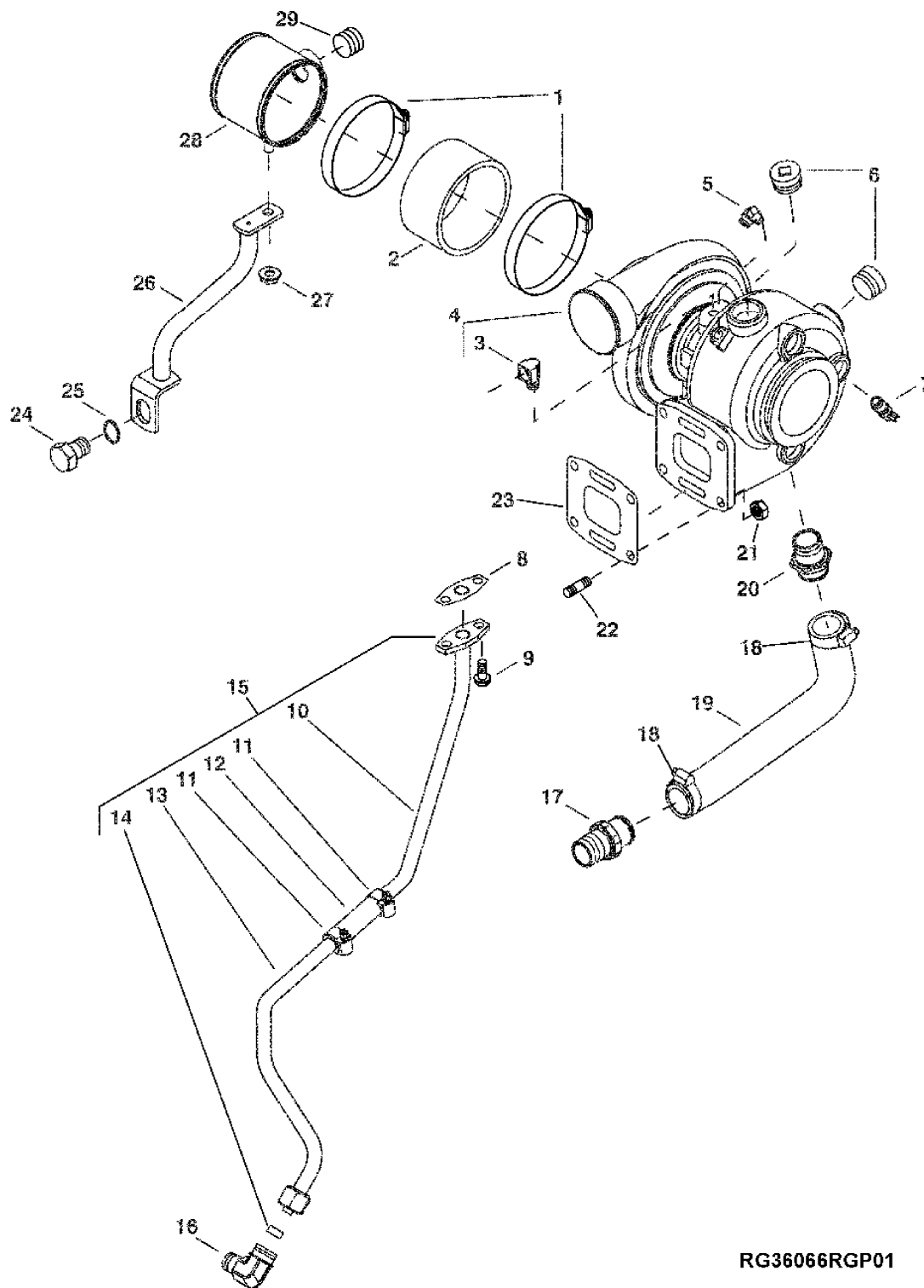


6443_21A_1

Item	Part Number	Description	Quantity		
			Variation		
			65LV	65LU	65LX
1	GM50678	Turbocharger	1		
1	GM50944	Turbocharger		1	
1	GM50945	Turbocharger			1
2	#	Flange nut, M8	4		
2	#	Flange nut, M10		4	4
3	360006	Adapter	1	1	1
4	360165	O-ring	1	1	1
5	GM17521	Oil line	1	1	1
6	360555	O-ring	1		
6	360165	O-ring		1	1
7	360556	Elbow fitting, 45 deg.	1		
7	GM50946	Elbow fitting		1	1
7	GM50947	Adapter, 1/8 in.-27 NPT		1	1
8	360557	O-ring	1		
9	GM50679	Fitting	1	1	1
10	GM17511	Tube	1	1	1
11	223477	Tube nut	2	2	2
12	223476	Packing	2	2	2
13	223837	Elbow fitting	1	1	1
14	352029	Gasket	1	1	1
15	#	Pipe plug, 3/8 in.	1		
15	#	Pipe Plug, 1/4 in.		1	1
16	360136	Gasket, turbo oil outlet tube	1	1	1
17	GM17527	Line	1	1	1
18	#	Bolt, M8 x 20	2	2	2
19	336721	Clamp	1	1	1
20	#	Screw, M10 x 16	1	1	1

Common hardware; procure locally.

Group 21A: Turbocharger, continued



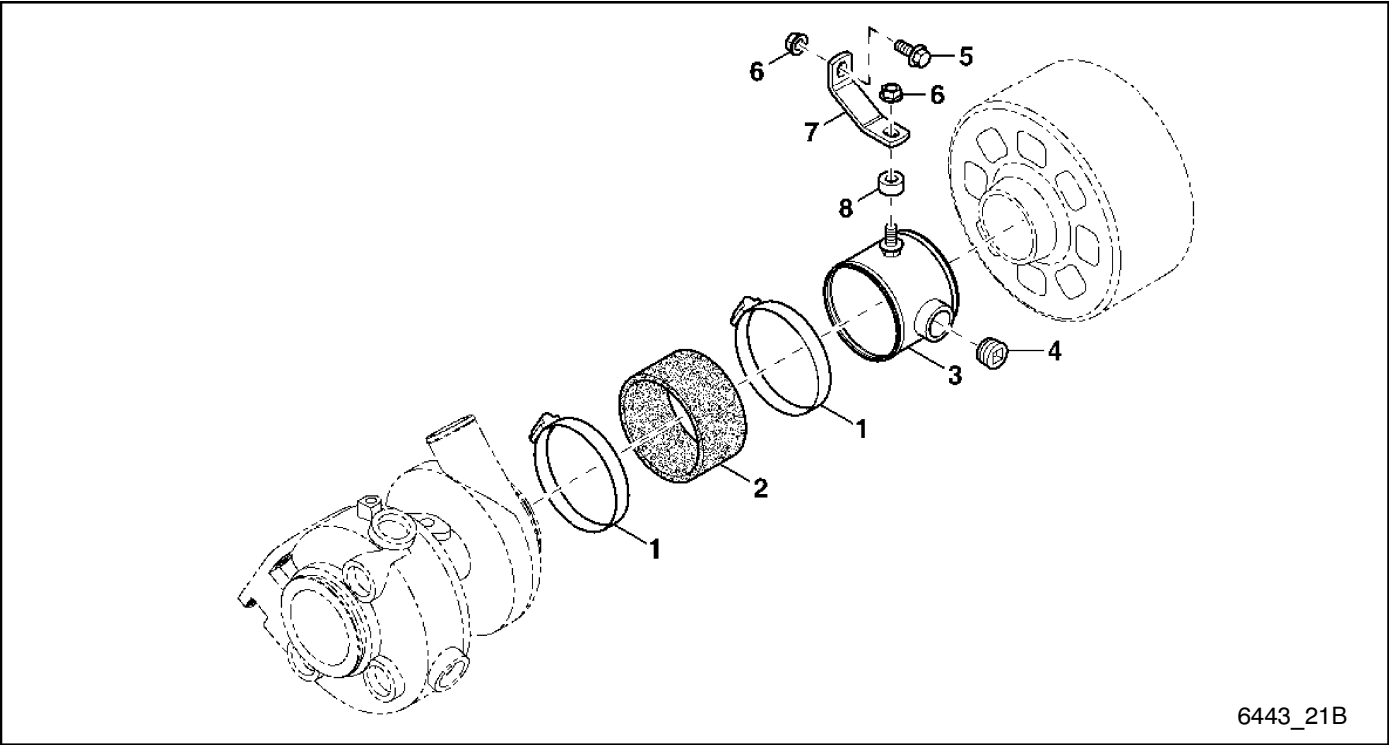
6443_21A_2

Group 21A: Turbocharger, continued

Item	Part Number	Description	Quantity
			Variation 6575
1	GM32524	Clamp, hose	2
2	GM52823	Suction hose	1
3	223602	Elbow fitting	1
4	GM32525	Turbocharger	1
5	223837	Elbow fitting	1
6	#	Pipe plug, 1 in.	2
7	223435	Drain valve	1
8	223757	Gasket	1
9	GM32526	Screw	2
10	GM52824	Oil line	1
11	336705	Clamp, hose	2
12	GM32528	Hose	1
13	GM32529	Line, oil	1
14	GM32530	Sleeve	1
15	GM32531	Fuel line	1
16	GM32532	Fitting, elbow	1
17	GM32533	Adapter	1
18	336705	Clamp, hose	2
19	GM32534	Hose	1
20	GM18734	Adapter	1
21	#	Flange nut, 3/8 in.	4
22	352072	Stud	4
23	352029	Gasket	1
24	#	Cap screw, 3/4 in. x 1 in.	1
25	#	Washer, 20 x 34 x 3 mm	1
26	GM32538	Support	1
27	#	Flange nut, M10	1
28	GM17510	Adapter	1
29	#	Pipe plug, 3/4 in.	1
30	GM52825	Bushing	1

Common hardware; procure locally.

Group 21B: Turbocharger Adapter

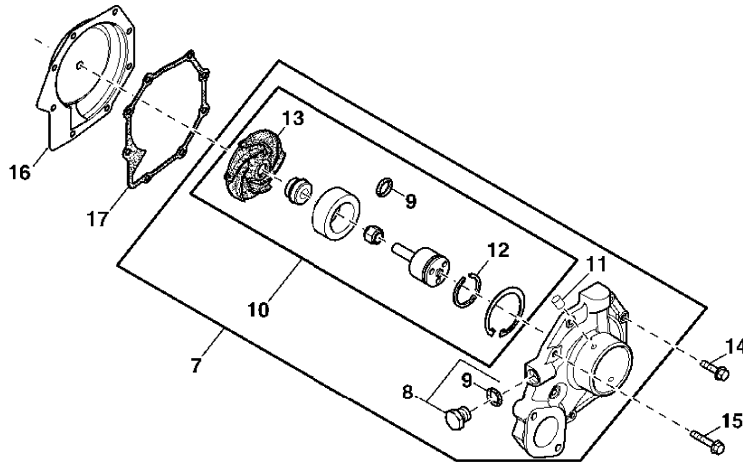


6443_21B

Item	Part Number	Description	Quantity	
			Variation	
			1838	1839
1	GM32524	Clamp, hose	2	2
2	GM50680	Hose	1	1
3	GM50681	Adapter fitting	1	
3	GM17510	Adapter		1
4	#	Pipe plug, 3/4 in.	1	1
5	#	Screw, M10 x 25	1	1
6	#	Flange nut, M10	2	2
7	352039	Bracket	1	1
8	GM50948	Spacer		1

Common hardware; procure locally.

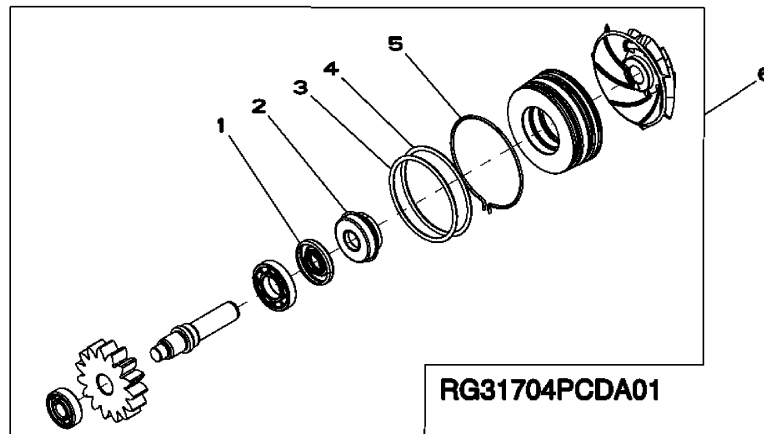
Group 22A: Water Pump



6443_22A_1

Item	Part Number	Description	Quantity
			Variation 4412
7	GM17513	Water pump	1
8	360014	Plug	1
9	360176	O-ring	1
10	GM32944	Kit, water pump	1
11	GM17443	Filter	2
12	360003	Snap ring	1
13	—	Impeller (not sold separately)	1
14	#	Screw, M6 x 25	7
15	#	Screw, M6 x 30	3
16	360029	Kit, stainless steel insert	1
17	360124	Gasket, water pump	1

Common hardware; procure locally.

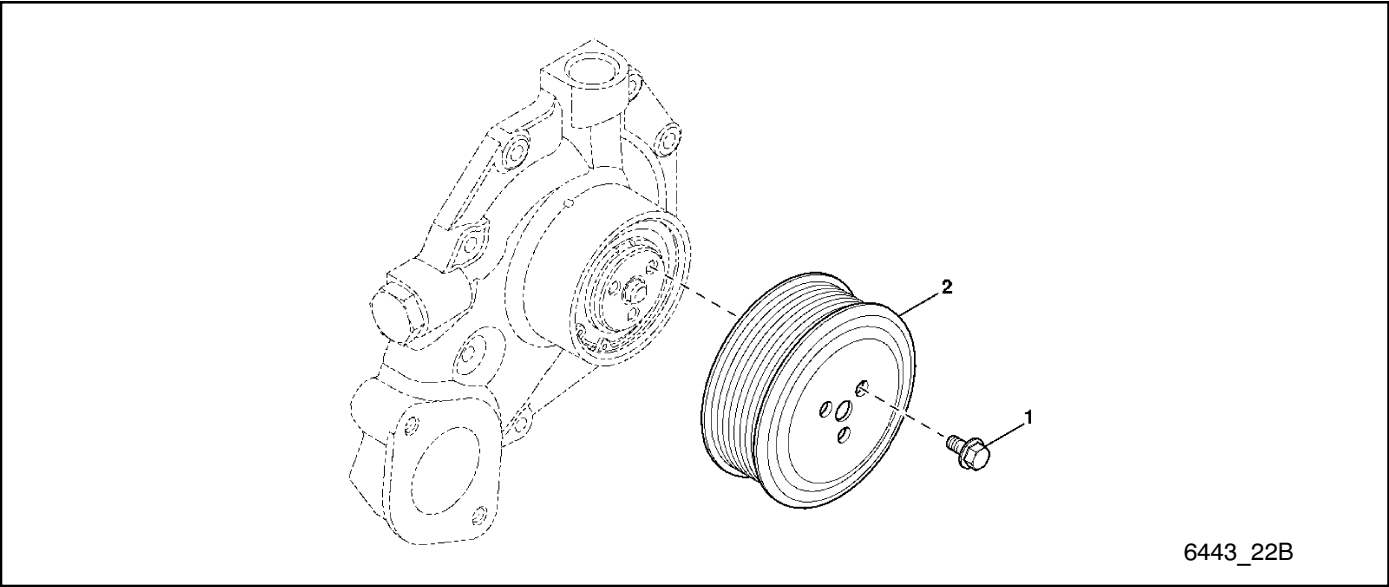


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6443_22A_2

Item	Part Number	Description	Quantity
			Variation 2003
1	352816	Seal	1
2	GM52875	Seal kit	1
3	—	O-ring (order O-ring kit GM50205)	1
4	—	O-ring (order O-ring kit GM50205)	1
5	352752	Ring	1
	GM52876	O-ring	1
6	GM18799	Water pump	1

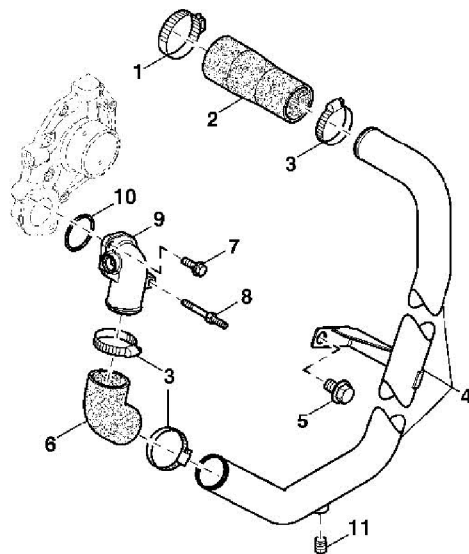
Group 22B: Water Pump Pulley



Item	Part Number	Description	Quantity	
			Variation	
			2002	2001
1	#	Screw, M6 x 12	3	3
2	360559	Pulley	1	
2	360085	Pulley		1

Common hardware; procure locally.

Group 22C: Water Pump Inlet



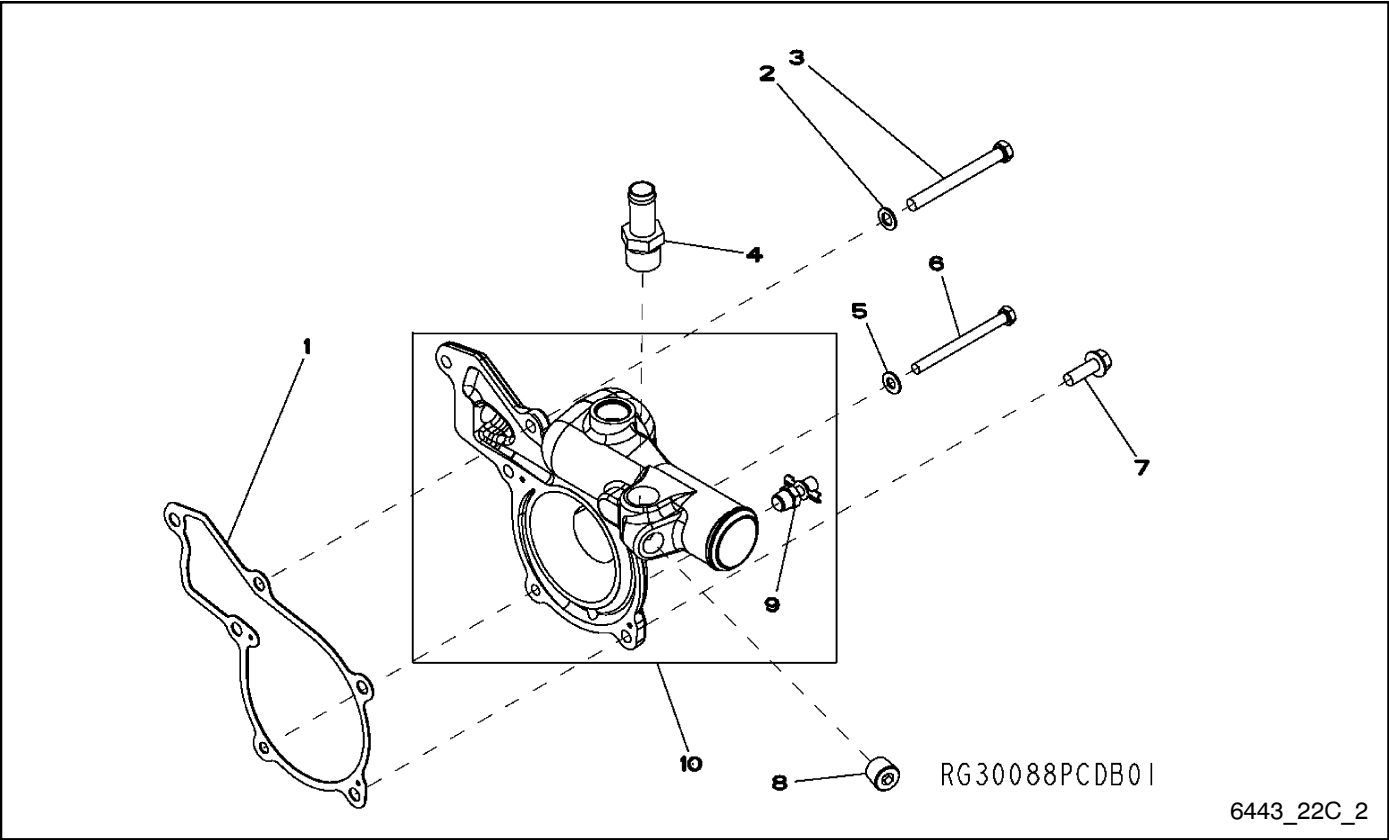
CDP47316

6443_22C_1

Item	Part Number	Description	Quantity
			Variation 5726
1	352108	Clamp	1
2	GM17556	Hose	1
3	GM18882	Clamp	3
4	GM17524	Tube	1
5	#	Screw, M10 x 25	2
6	GM50682	Hose	1
7	#	Screw, M8 x 65	1
8	#	Stud, M8 x 58	1
9	360109	Water pump adapter	1
10	224172	O-ring	1
11	#	Pipe plug, 1/4 in.-18 NPT	1

Common hardware; procure locally.

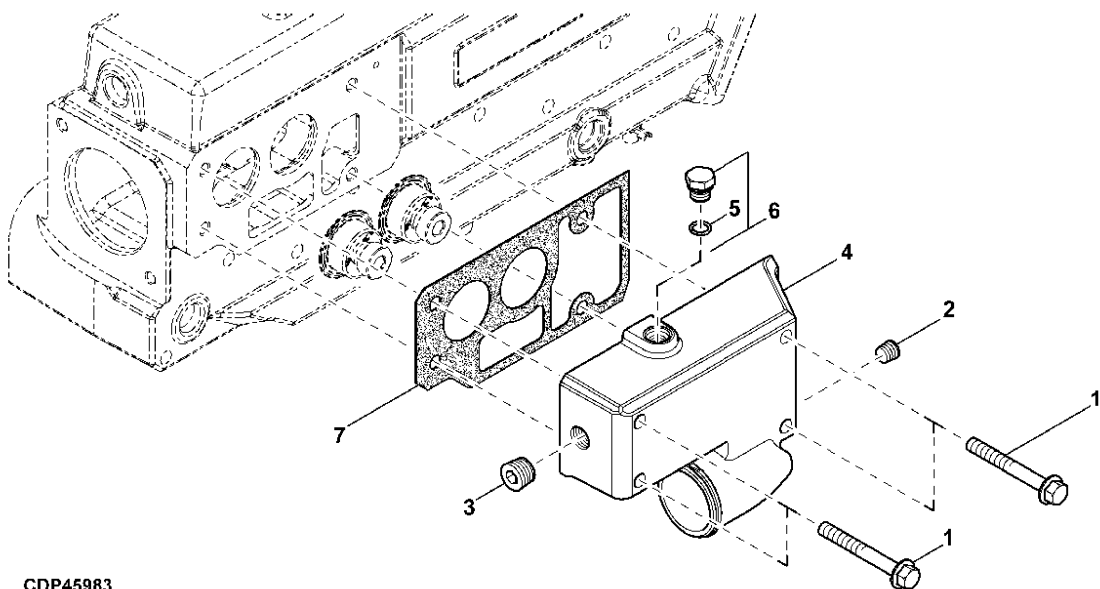
Group 22C: Water Pump Inlet, continued



Item	Part Number	Description	Quantity Variation 5703
1	352737	Gasket	1
2	#	Washer, 10.500 x 18 x 1.600 mm	2
3	#	Cap screw, 3/8 in. x 3 3/4 in.	2
4	223733	Hose fitting	1
5	#	Washer, 11/32 in. x 11/16 in. x 0.065 in.	1
6	#	Cap screw	1
7	#	Screw, 3/8 in. x 1 1/8 in.	2
8	GM18862	Pipe plug, 1/2 in.	1
9	223435	Drain valve	1
10	352770	Cover	1

Common hardware; procure locally.

Group 23A: Thermostat Cover

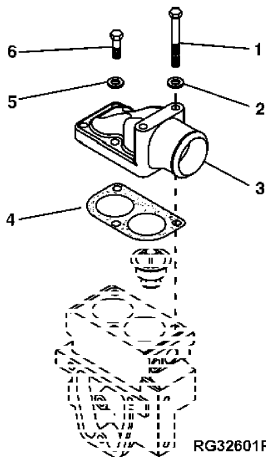


CDP45983

6443_23A_1

Item	Part Number	Description	Quantity
			Variation 2150
1	#	Screw, M10 x 80	4
2	#	Pipe plug, 3/8 in.	1
3	GM18862	Pipe plug, 1/2 in.	1
4	GM50683	Cover	1
5	GM21508	O-ring	1
6	360013	Plug	1
7	352031	Gasket	1

Common hardware; procure locally.



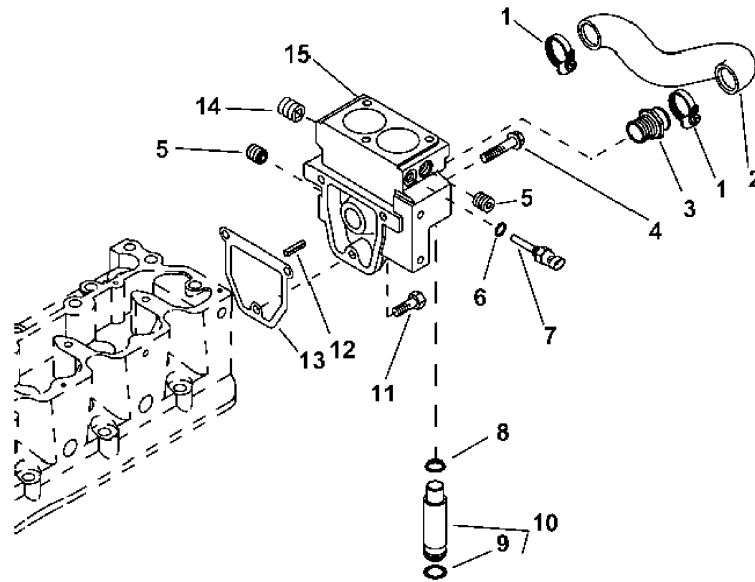
RG32601RGP01

6443_23A_2

Item	Part Number	Description	Quantity
			Variation 2113
1	#	Cap screw, 3/8 in. x 3 in.	1
2	—	Washer	NA
3	GM18782	Cover	1
4	223762	Gasket	1
5	—	Lock washer	NA
6	#	Screw, 3/8 in. x 1 1/4 in.	2

Common hardware; procure locally.

Group 23B: Thermostat Housing



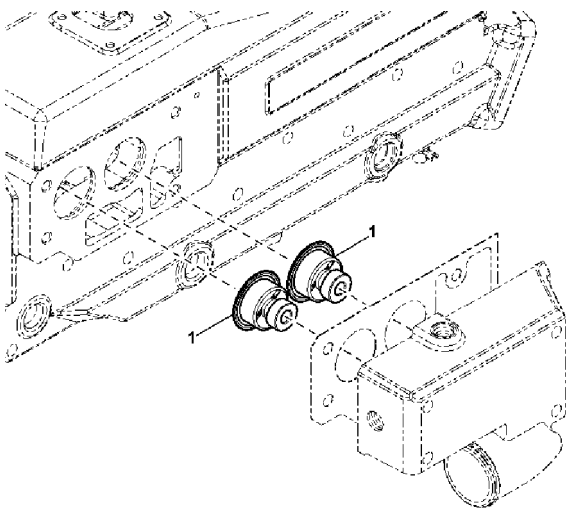
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6443_23B

Item	Part Number	Description	Quantity
			Variation 3913
1	336705	Clamp, hose	2
2	GM18733	Hose	1
3	GM18734	Adapter	1
4	GM18705	Cap screw	2
5	GM18862	Pipe plug, 1/2 in.	2
6	GM18757	O-ring	1
7	GM18785	Sensor, coolant temperature	1
8	223851	O-ring	1
9	GM50131	O-ring	1
10	GM52877	Tube	1
11	#	Screw, 3/8 in. x 1 3/4 in.	1
12	GM16629	Spring pin	1
12	GM29322	Pin, spring	1
13	223882	Gasket	1
14	#	Pipe plug, 3/4 in.	1
15	GM52878	Manifold	1

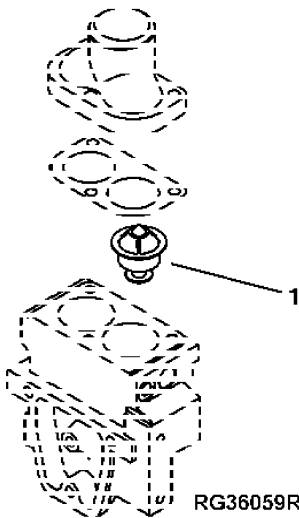
Common hardware; procure locally.

Group 23C: Thermostat



6443_23C_1

Item	Part Number	Description	Quantity
			Variation 2206
1	223676	Thermostat	2

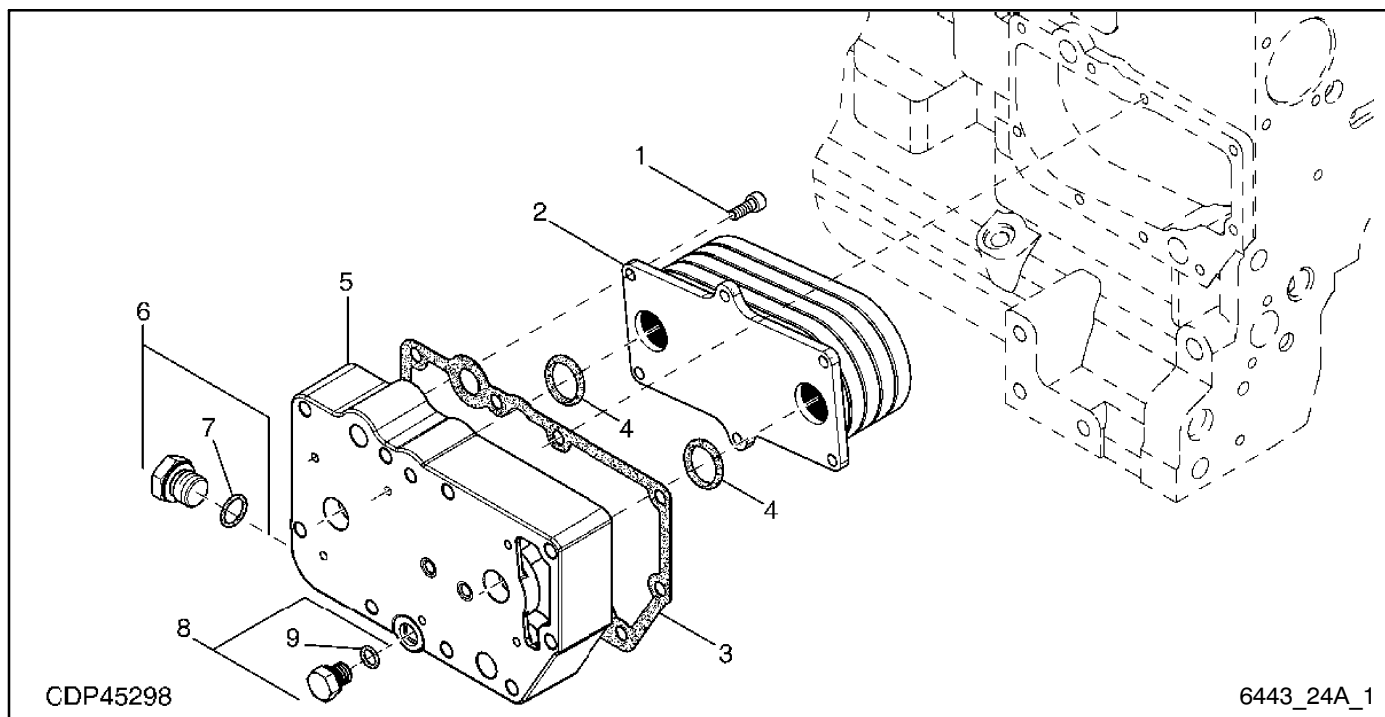


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6443_23C_2

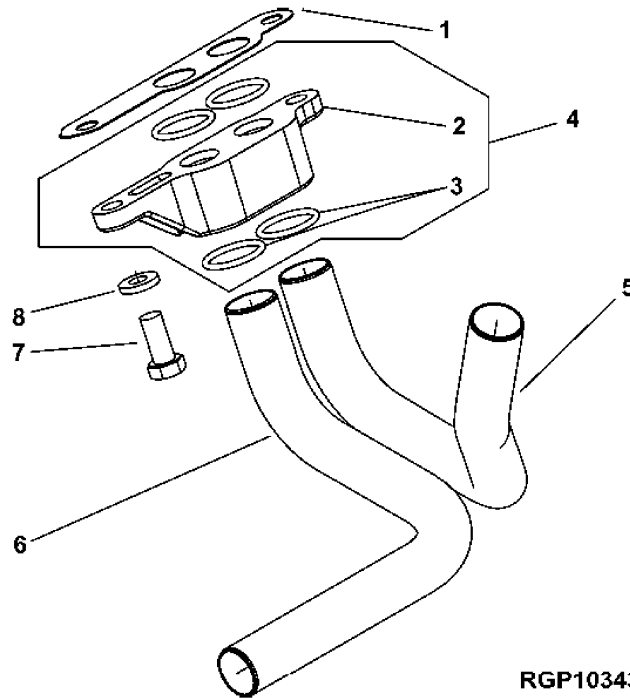
Item	Part Number	Description	Quantity
			Variation 2205
1	GM52879	Thermostat	2

Group 24A: Engine Oil Cooler



Item	Part Number	Description	Quantity		
			Variation		
			5901	5902	5904
1	GM50684	Screw, M6 x 16	6	6	6
2	GM17531	Oil cooler	1		
2	360130	Oil cooler		1	
2	GM17533	Oil cooler			1
3	360130	Gasket, oil cooler housing	1	1	1
4	360170	O-ring	2	2	2
5	360127	Housing	1	1	1
6	360014	Plug	1	1	1
7	360176	O-ring	1	1	1
8	360015	Plug	1	1	1
9	360178	O-ring	1	1	1

Group 24A: Engine Oil Cooler



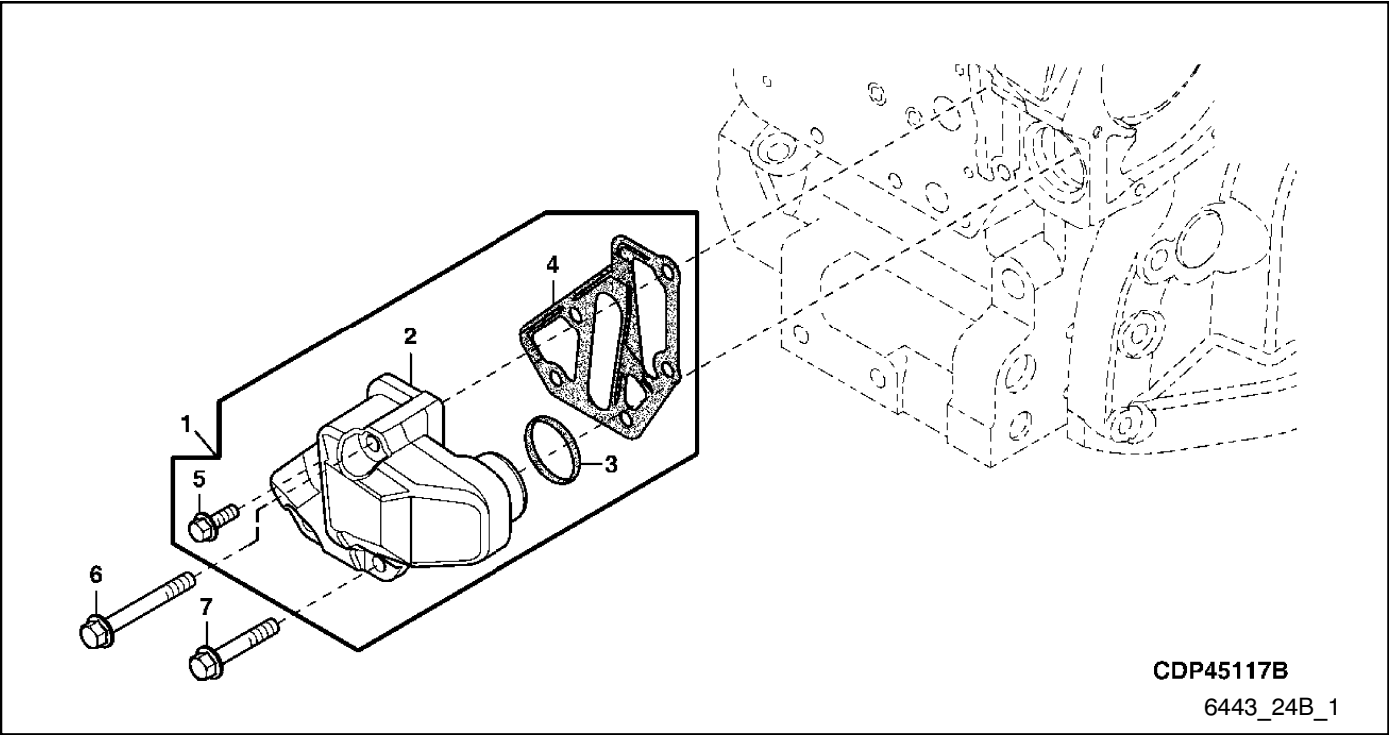
RGP10343

6443_24A_2

Item	Part Number	Description	Quantity
			Variation 5943
1	352723	Gasket	1
2	GM50129	Seal	2
3	223850	O-ring	2
4	GM50247	Adapter	1
5	352784	Oil tube	1
6	352732	Oil tube	1
7	#	Cap screw, 7/16 x 1.120 in.	2
8	#	Washer	2

Common hardware; procure locally.

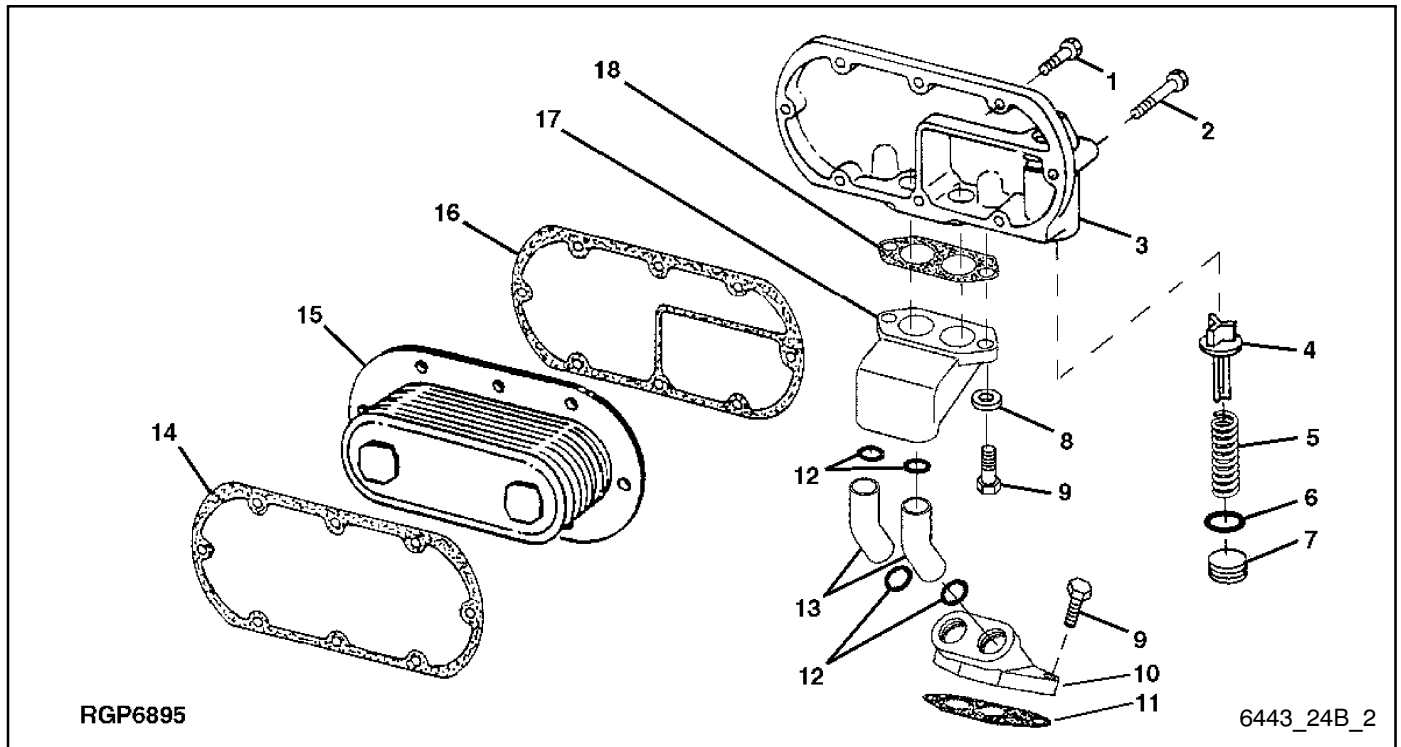
Group 24B: Engine Oil Cooler, continued



Item	Part Number	Description	Quantity		
			Variation		
			5901	5902	5904
1	GM50685	Adapter fitting (includes items 2-5)	1		1
1	GM49933	Adapter fitting (includes items 2-5)		1	
2	—	Intermediate housing (order item 1)	1	1	1
3	GM24543	O-ring	1	1	1
4	GM17479	Gasket	1	1	1
5	GM24536	Screw, M8 x 20	1	1	1
6	#	Screw, M8 x 100	2	2	2
7	#	Screw, M8 x 65	2	2	2

Common hardware; procure locally.

Group 24B: Engine Oil Cooler, continued

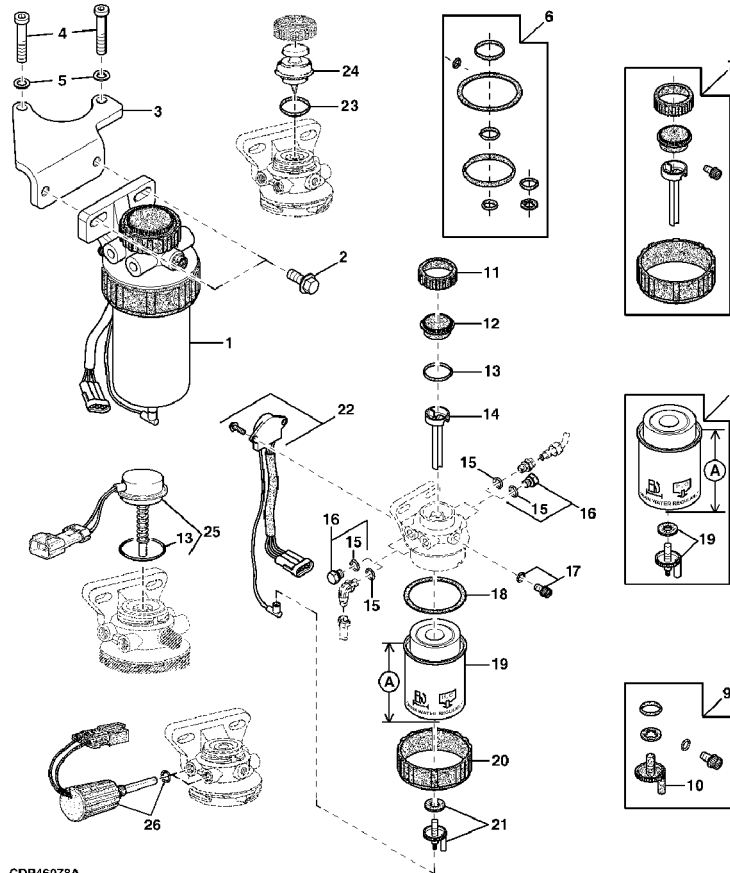


Item	Part Number	Description	Quantity
			Variation 5943
1	#	Screw, 5/16 in. x 1 3/8 in.	5
2	GM32294	Screw	3
3	GM18706	Cover	1
4	352722	Valve	1
5	352811	Spring, bypass	1
6	223989	O-ring	1
7	352749	Fitting plug	1
8	—	Washer	NA
9	#	Screw, 3/8 in. x 1 1/8 in.	4
10	352763	Adapter	1
11	GM52880	Gasket	2
12	223763	O-ring	4
12	352797	O-ring	4
13	352766	Oil tube	2
14	GM50249	Gasket	1
15	223680	Oil cooler	1
16	GM18703	Gasket	1
17	352764	Adapter	1
18	352765	Gasket	1

Common hardware; procure locally.

Group 25A: Primary Fuel Filter

40-65 kW Shown



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6443_25A_1

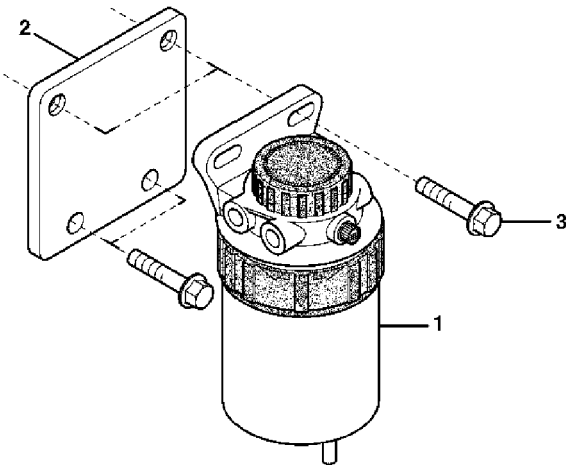
Item	Part Number	Description	Quantity			
			Variation			
			8154	8150	8157	8158
1	GM50686	Fuel filter assembly	1			
1	GM50689	Fuel filter assembly		1		
1	GM50949	Fuel filter assembly			1	
1	GM50950	Fuel filter assembly				1
2	#	Screw, M10 x 25	2	2	2	2
3	GM50687	Bracket	1	1		
3	GM50951	Bracket			1	1
4	#	Screw, M10 x 55	2	2		
4	#	Screw, M10 x 25			2	2
5	#	Washer, 10.500 x 18 x 1.600 mm	2	2		
6	222772	Seal kit	AR	AR	AR	AR
7	222773	Seal kit	AR	AR	AR	AR
8	GM48727	Filter element	1	1		
8	GM48729	Filter element			1	1
9	360048	Kit, bleed plug & drain valve	AR	AR	AR	AR
10	—	Drain valve	NA	NA	NA	NA
11	—	Retainer (order item 7)	1	1	1	1
12	—	Retainer (order item 7)	1	1	1	1
13	GM32836	Ring kit	1	1	1	1
14	—	Retainer (order item 7)	1	1	1	1
15	360178	O-ring	AR	AR	AR	AR
16	360015	Plug	AR	AR	AR	AR
17	—	Drain plug (order item 7 or 9)	1	1	1	1
18	GM17445	O-ring	1	1	1	1
19	—	Filter element (order item 8)	1	1	1	1
20	—	Retainer (order item 9)	1	1	1	1
21	352141	Drain valve	1	1	1	1
22	GM50690	Wiring harness, 24 V	1			
22	GM50688	Wiring harness, 12 V		1	1	
23	—	Not used				
24	—	Not used				
25	—	Not used				
26	—	Not used				

AR As Required

Common hardware; procure locally.

NA Not Available

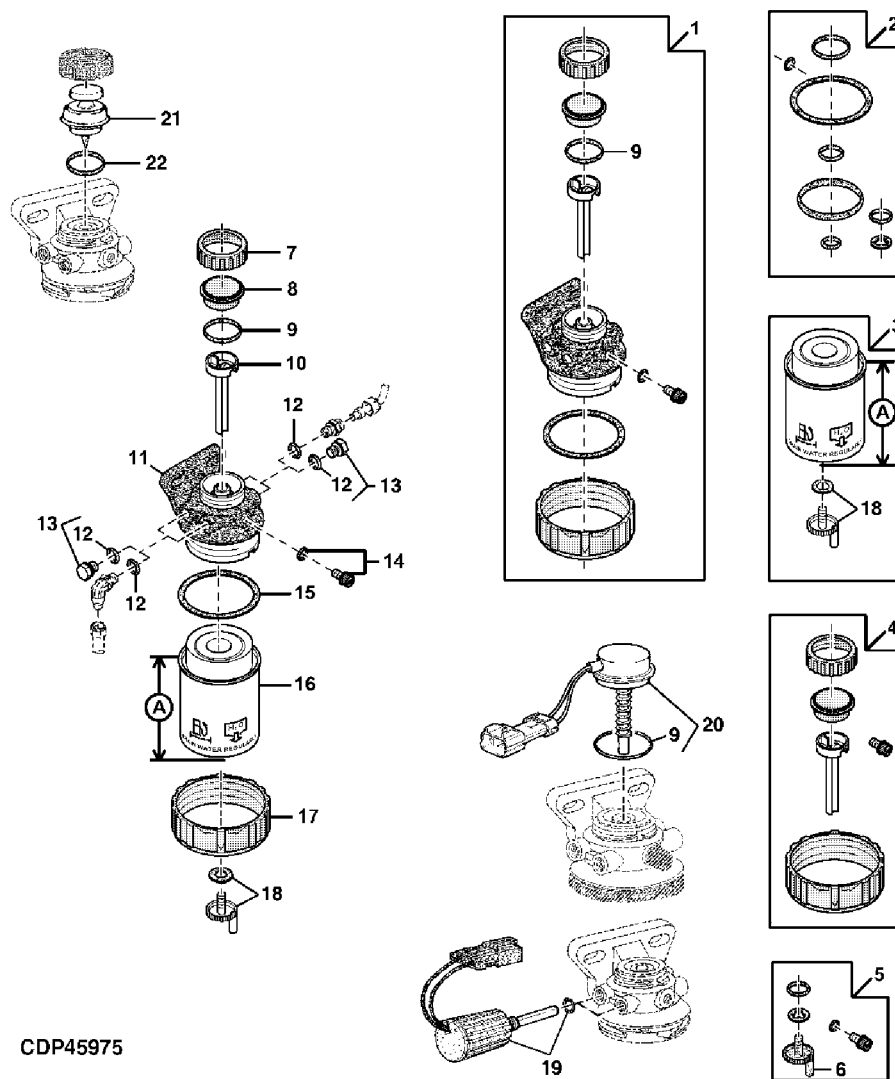
Group 25B: Secondary Fuel Filter



6443_25B_1

Item	Part Number	Description	Quantity	
			Variation	
			35DH	35DP
1	—	Fuel filter (see next section for components)	1	
1	GM50952	Fuel filter		1
2	GM32800	Bracket	1	1
3	GM32765	Screw, M10 x 20	4	4

Group 25B: Secondary Fuel Filter, continued



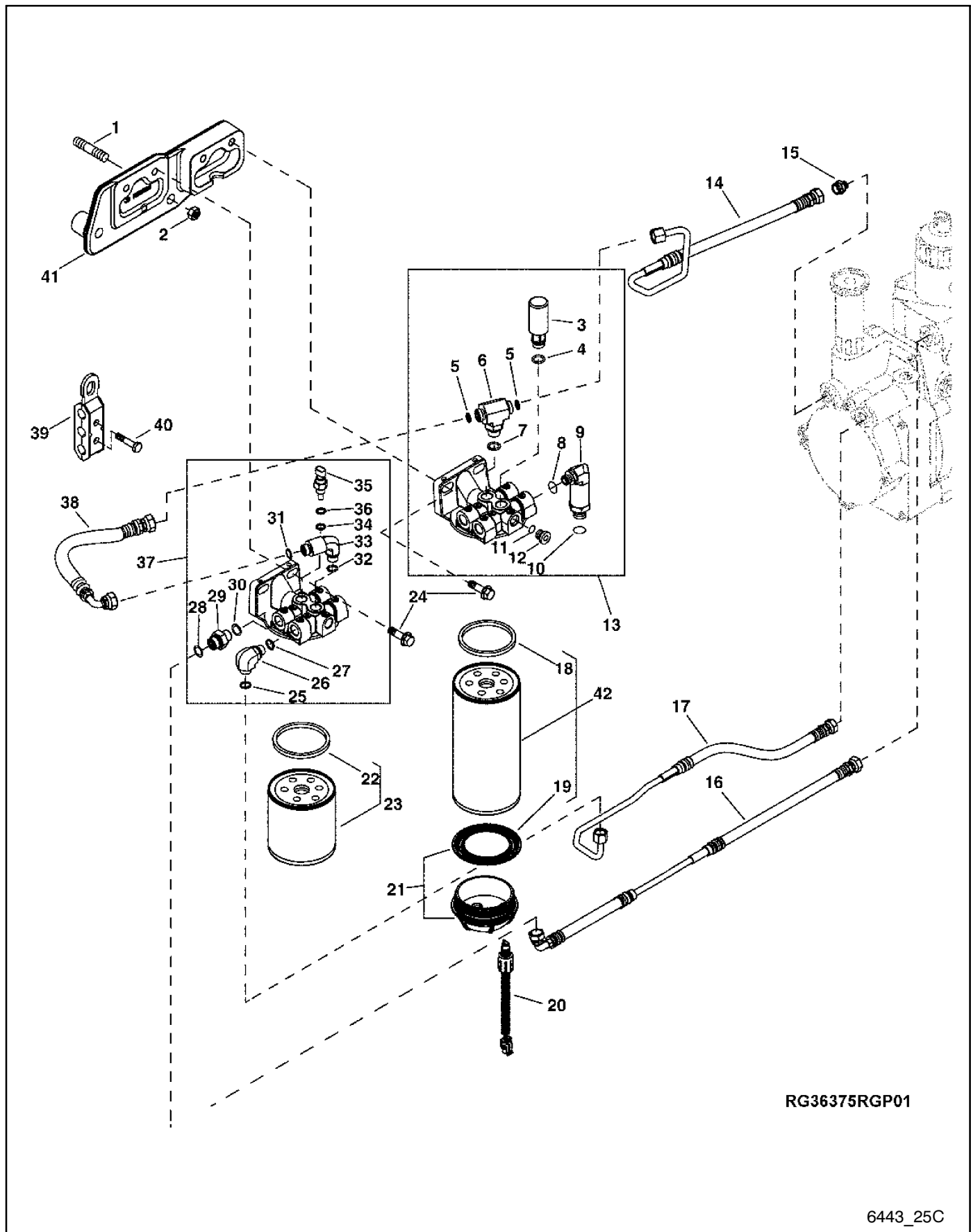
Group 25B: Secondary Fuel Filter, continued

Item	Part Number	Description	Quantity	
			Variation	
			35DH	35DP
1	GM32828	Kit, header, final fuel	1	
2	222772	Seal Kit	AR	AR
3	GM48728	Filter element	1	
3	GM48730	Filter element		1
4	222773	Seal kit	AR	AR
5	360048	Kit, bleed plug and drain valve	AR	AR
6	—	Drain valve	NA	NA
7	—	Retainer (order item 1 or 4)	1	1
8	—	Retainer (order item 1 or 4)	1	1
9	GM32836	Ring kit	1	1
10	—	Retainer (order item 1 or 4)	1	1
11	—	Filter head (order item 1 or 4)	1	1
12	360178	O-ring	AR	AR
13	360015	Plug	2	2
14	—	Drain plug (order item 1 or 4 or 5)	1	1
15	GM17445	O-ring	1	1
16	—	Filter element (order item 3)	1	1
17	—	Retainer (order item 1 or 4)	1	1
18	GM17448	Drain valve	1	
18	352141	Drain valve		1
19	—	Not used		
20	—	Not used		
21	—	Not used		

AR As Required

NA Not Available

Group 25A/25B: Primary and Secondary Fuel Filter



RG36375RGP01

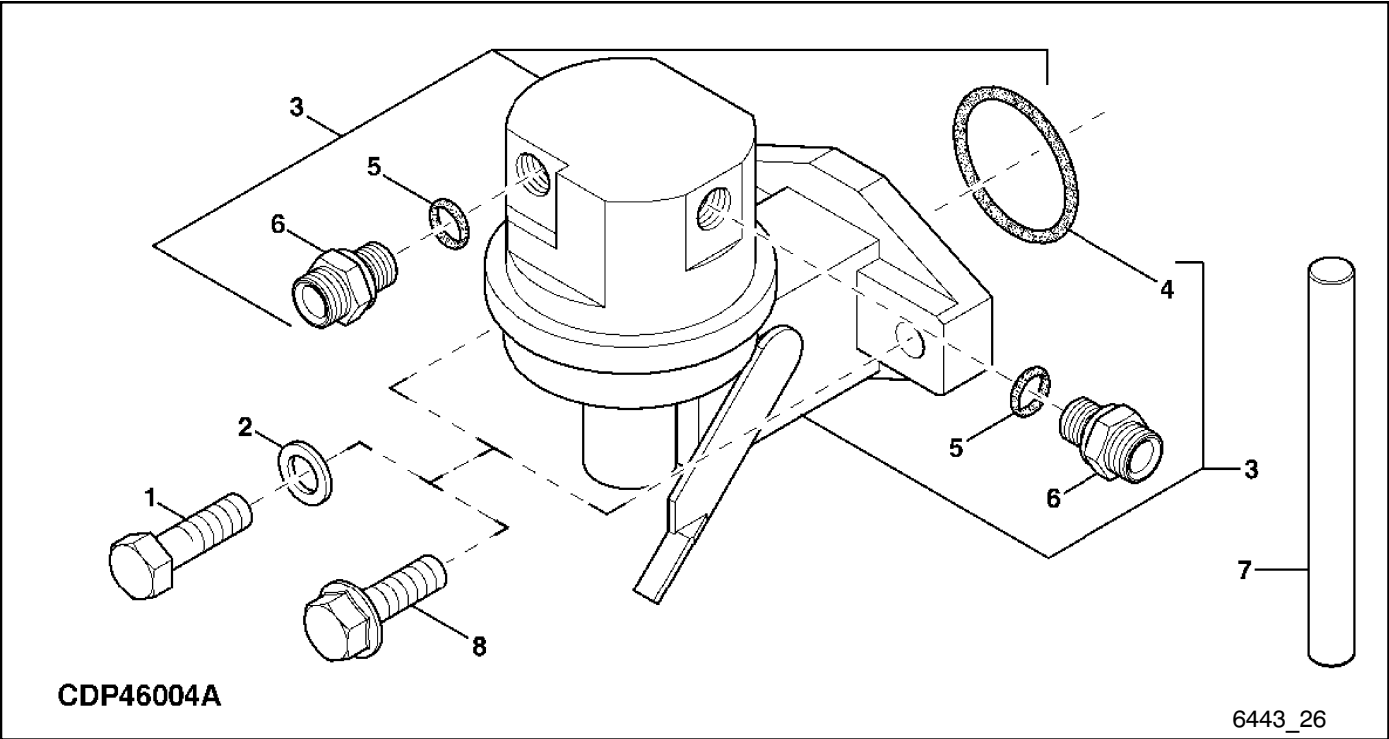
6443_25C

Group 25A/25B: Primary and Secondary Fuel Filter

Item	Part Number	Description	Quantity
			Variation 3545
1	GM52826	Stud	1
2	#	Nut	1
3	GM52827	Diagnostic coupling	1
4	GM50114	O-ring	1
5	GM50115	O-ring	2
6	GM52828	Adapter	1
7	360165	O-ring	1
8	360165	O-ring	1
9	GM52829	Check valve	1
10	GM50115	O-ring	1
11	GM50115	O-ring	1
12	GM52830	Drain plug	1
13	GM52831	Filter head	1
14	GM52832	Fuel line	1
15	GM52833	Sleeve	1
16	GM52834	Fuel line	1
17	GM52835	Fuel line	1
18	GM18730	Packing	1
19	GM52836	Packing	1
20	GM18848	Sensor, water in fuel	1
21	GM52837	Sediment bowl	1
22	GM18730	Packing	1
23	GM18808	Filter element, secondary	1
24	#	Screw, 3/8 in. x 1 1/4 in.	4
25	360165	O-ring	1
26	GM52838	Adapter	1
27	GM50115	O-ring	1
28	360165	O-ring	1
29	GM52839	Fitting	1
30	GM50115	O-ring	1
31	360165	O-ring	1
32	GM50115	O-ring	1
33	GM52840	Control valve	1
34	GM21508	O-ring	1
35	GM50195	Sensor	1
36	GM50114	O-ring	1
37	GM52841	Filter head	1
38	GM52842	Fuel line	1
39	TBD	Clamp	1
40	#	Cap screw, 1/4 x 1 1/4 in.	2
41	GM52843	Bracket	1
42	GM18821	Filter element, primary	1

Common hardware; procure locally.

Group 26: Fuel Transfer Pump



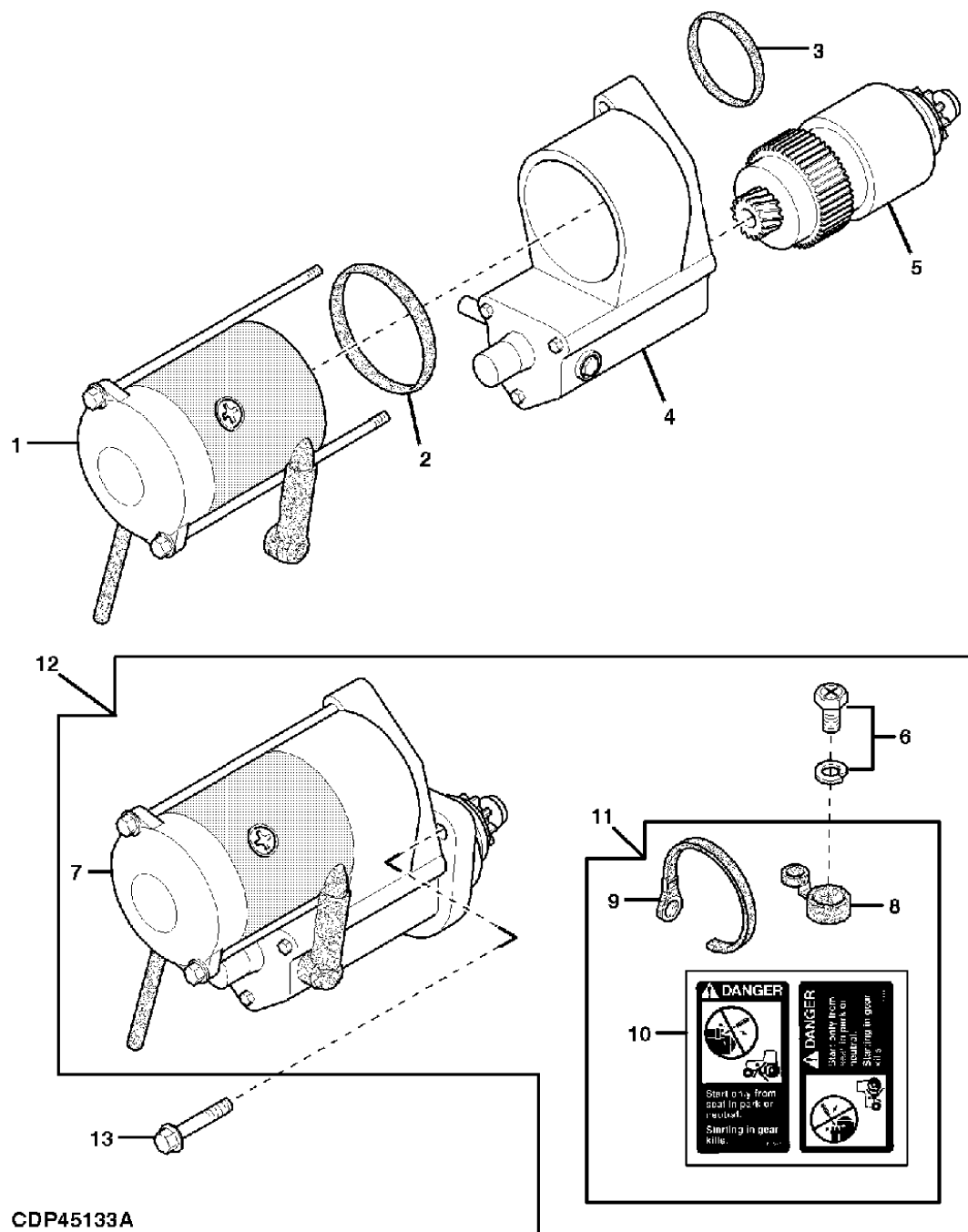
CDP46004A

6443_26

Item	Part Number	Description	Quantity
			Variation 3701
1	#	Cap screw, M8 x 30	2
2	#	Washer, 8.400 x 16 x 1.600 mm	2
3	GM17540	Fuel pump	1
4	360119	O-ring	1
5	GM17471	O-ring	2
6	GM17470	Fitting	2
7	360159	Push rod	1

Common hardware; procure locally.

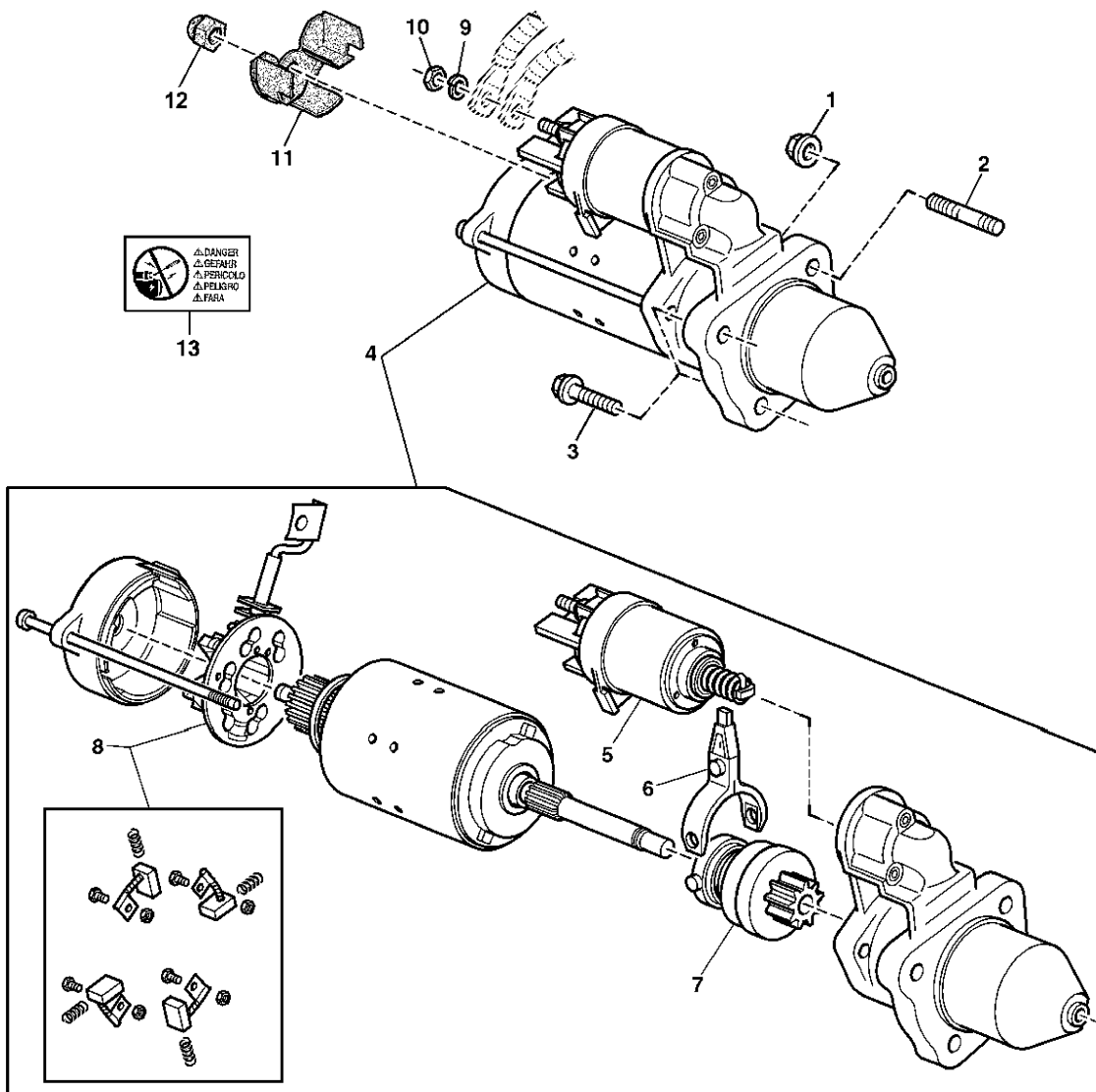
Group 27: Starting Motor



Item	Part Number	Description	Quantity
			Variation 3006
1	—	Motor	1
2	GM17463	Seal	1
3	GM17464	O-ring	1
4	GM17544	Switch	1
5	GM17545	Clutch	1
6	GM18874	Screw, with washer M5 x 0.8	1
7	—	Starter motor	1
8	—	Cover	1
9	GM17495	Tie band	1
10	GM17554	Label	1
11	GM17548	Kit	1
12	224369	Starter, kit	1
13	#	Screw, M10 x 30	3

Common hardware; procure locally.

Group 27: Starting Motor, continued

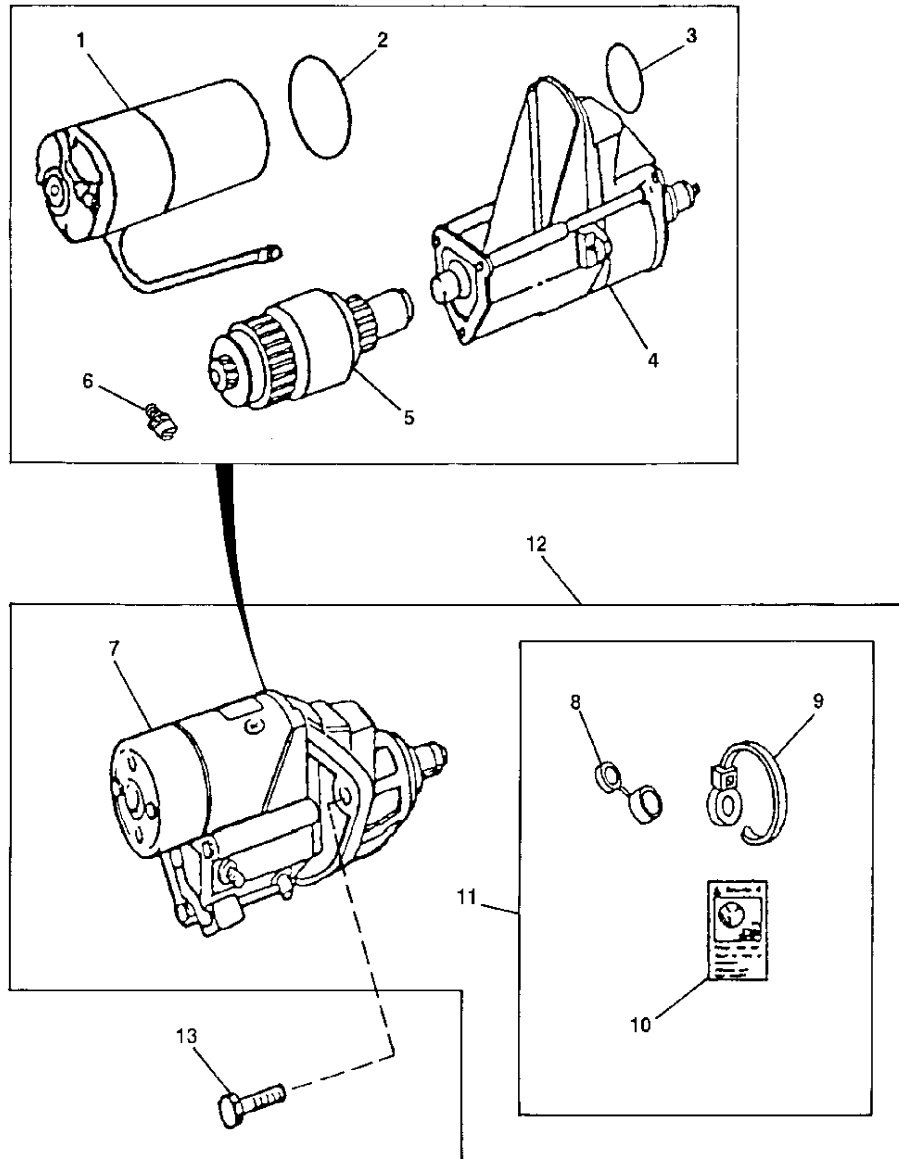


6443_27_2

Item	Part Number	Description	Quantity Variation 3090
1	#	Flange nut, M10	1
2	#	Stud, M10 x 42 mm	1
3	#	Screw, M10 x 30	2
4	GM50639	Starter motor	1
5	GM50640	Solenoid	1
6	—	Shifter	1
7	GM50641	Starter motor drive	1
8	—	Carbon brush conductor	1
9	#	Lock washer, 5 mm	1
10	#	Nut	1
11	GM50642	Cover	1
12	#	Nut, M10	1
13	—	Label	1

Common hardware; procure locally.

Group 27: Starting Motor, continued



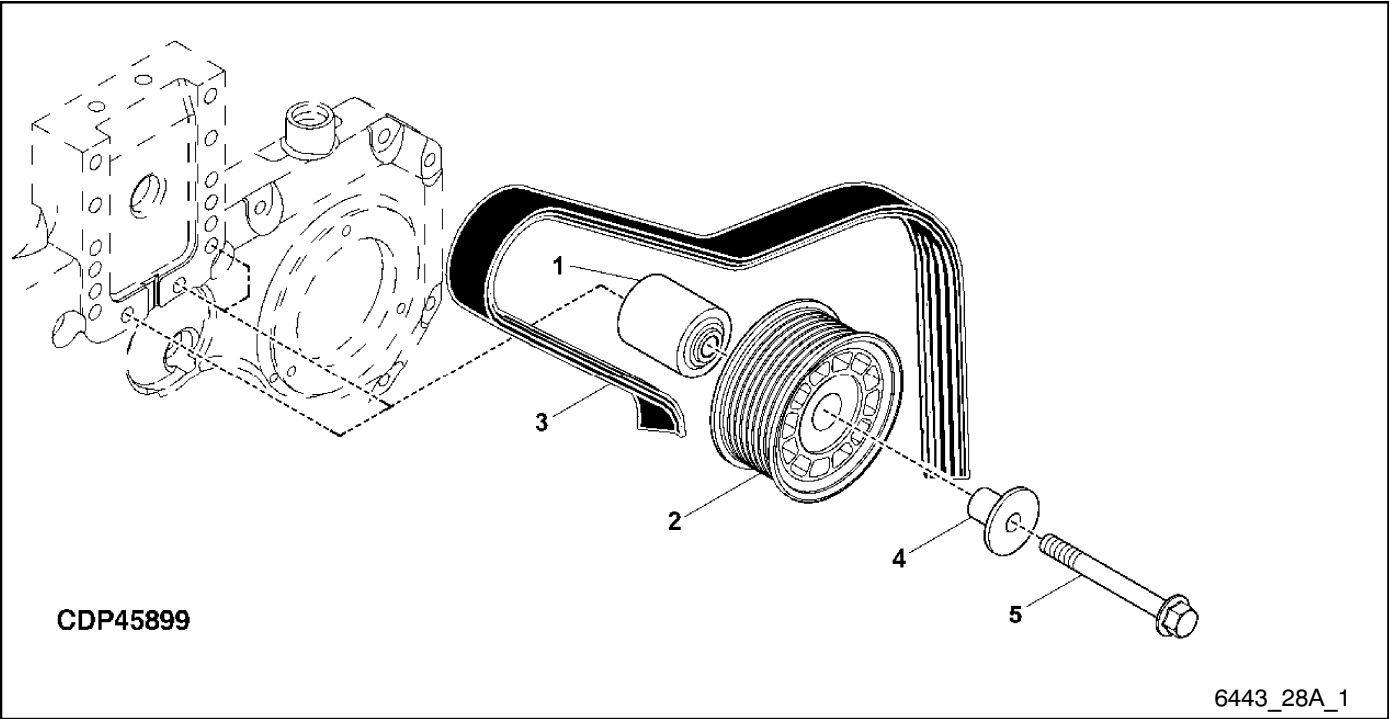
TP50833

6443_27_3

Item	Part Number	Description	Quantity	
			Variation	
3003	3004			
1	—	Motor (order item 12)	1	1
2	GM17463	Seal	1	1
3	GM17464	O-ring	1	1
4	GM17544	Switch		1
4	GM17546	Switch	1	
5	GM17545	Clutch		1
5	GM17547	Clutch	1	
6	GM18874	Screw, with washer M5 x 0.8	1	1
7	—	Starter motor (order item 12)	1	1
8	—	Cover (order item 11)	1	1
9	GM17495	Tie band	1	1
10	GM17554	Label	1	1
11	GM17548	Kit	1	1
12	224369	Starter, 12 V		1
12	GM16801	Starter, 24 V	1	
13	#	Screw, 3/8 in. x 1 3/8 in.	2	2
	#	Washer, 10.500 x 18 x 1.600 mm	2	2
—	223791	Gasket		1
—	#	Flange nut, 3/8 in.	1	1

Common hardware; procure locally.

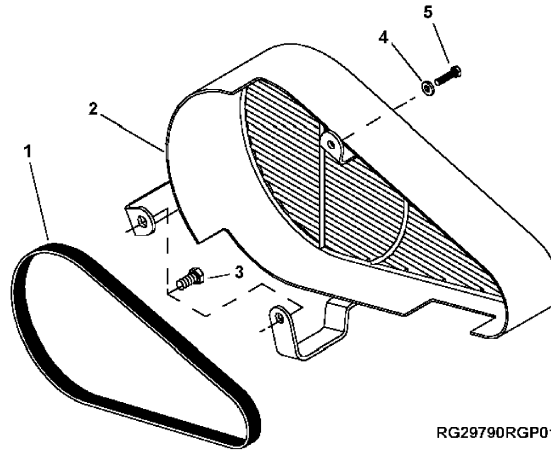
Group 28A: Fan Belt



Item	Part Number	Description	Quantity
			Variation 24BN
1	GM17457	Spacer	1
2	GM17441	Pulley	1
3	GM15402	V-belt	1
4	GM17488	Sleeve	1
5	#	Screw, M10 x 90	1

Common hardware; procure locally.

Group 28A: Fan Belt



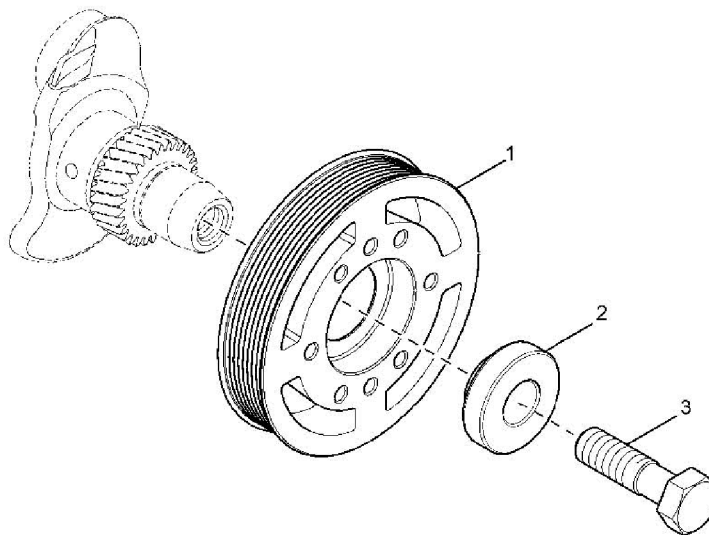
RG29790RGP01

6443_28A_2

Item	Part Number	Description	Quantity	
			Variation	
			2452	2463
1	GM18704	Belt, 65.9 in.	1	1
2	GM18830	Guard	1	
2	GM52881	Guard		1
3	#	Cap screw, 1/2 in. x 1 in.	2	2
4	#	Washer, 11/32 in. x 3/4 in. x 0.120 in.	1	1
5	#	Cap screw, 5/16 in. x 1 1/4 in.	1	1

Common hardware; procure locally.

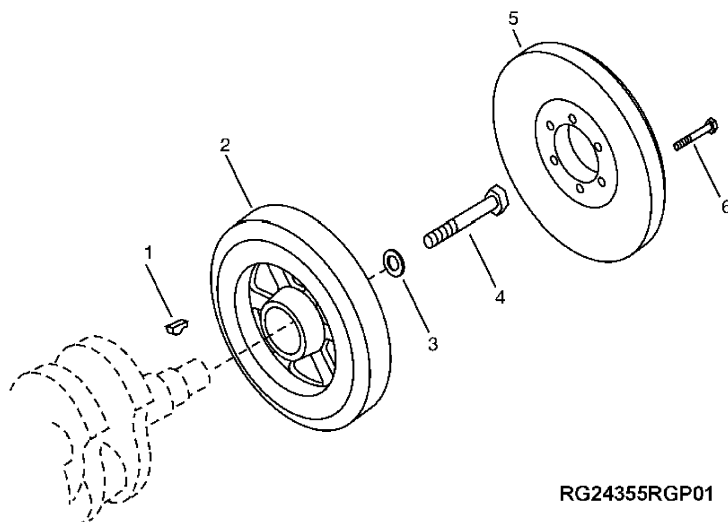
Group 28B: Crankshaft Pulley



CDP45963

6443_28B_1

Item	Part Number	Description	Quantity Variation	
			1333	1323
1	GM50691	Pulley	1	
1	GM50953	Pulley with dampener		1
2	GM47474	Bushing	1	1
3	GM47472	Screw, cap	1	1



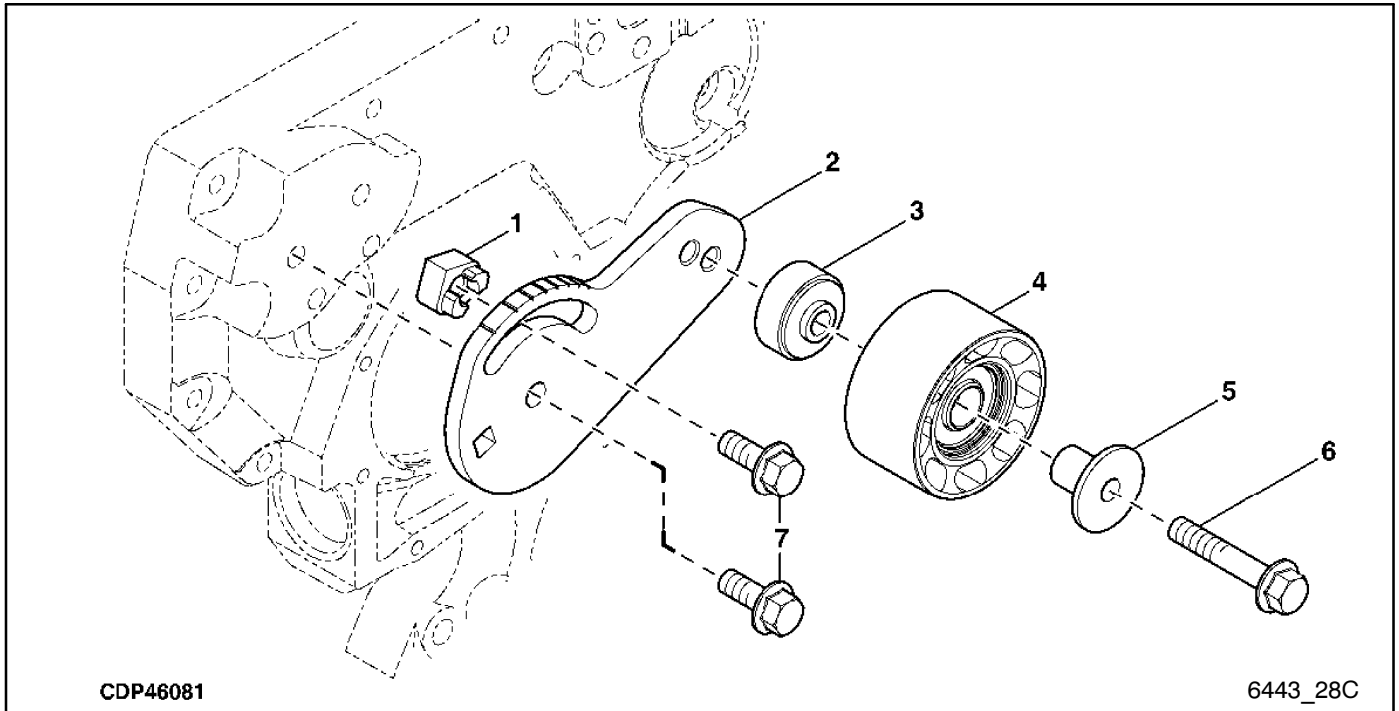
RG24355RGP01

6443_28B_2

Item	Part Number	Description	Quantity Variation	
			1306	1345
1	352731	Key	1	1
2	352389	Damper, torsional		1
2	GM52882	Torsional damper	1	
3	GM18712	Washer	1	1
4	GM18758	Cap screw	1	1
5	352721	Pulley, crankshaft		1
5	352882	Absorber	1	
6	#	Screw, 3/8 in. x 1 3/8 in.		6
6	#	Screw, 3/8 in. x 1 1/4 in.	6	

Common hardware; procure locally.

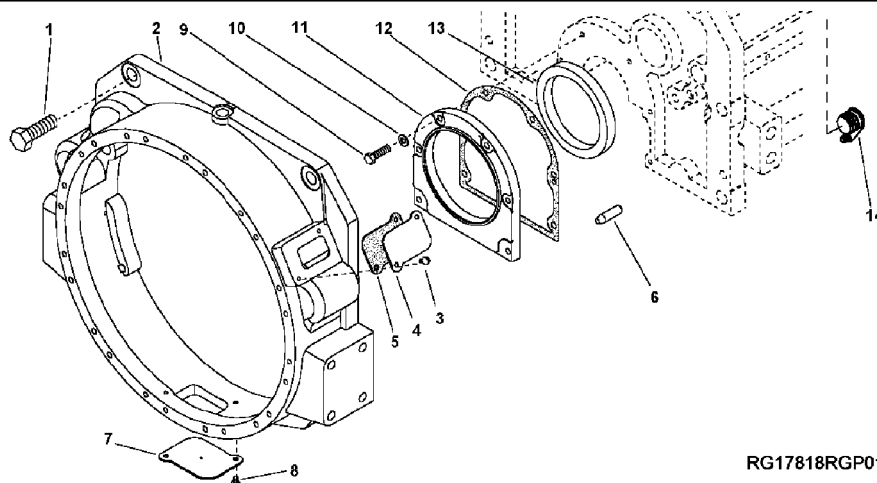
Group 28C: Belt Tensioner



Item	Part Number	Description	Quantity
			Variation 8712
1	GM17476	Nut	1
2	GM17475	Bracket	1
3	GM17481	Spacer	1
4	GM17529	Pulley	1
5	GM17488	Sleeve	1
6	#	Screw, M10 x 55	1
7	#	Screw, M10 x 25	2

Common hardware; procure locally.

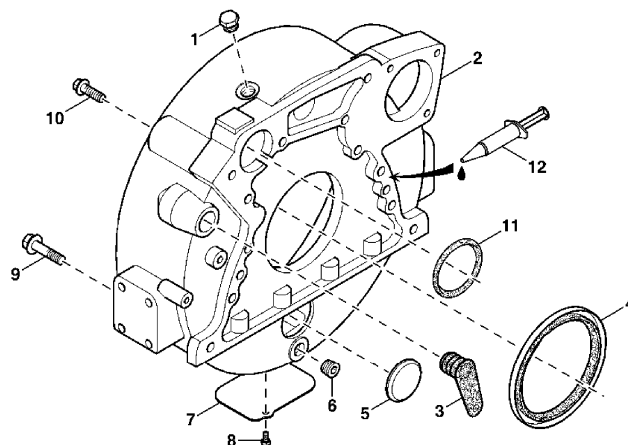
Group 29A: Flywheel Housing



RG17818RGP01

6443_29A_1

Item	Part Number	Description	Quantity Variation 1405
1	#	Screw, 3/4 x 2 1/4 in.	6
2	GM52591	Housing	1
3	#	Screw, 0.216 x 1/2 in.	2
4	GM52592	Cover	1
5	GM52593	Gasket	1
6	352707	Dowel pin	2
7	GM52594	Plate	1
8	#	Screw, 1/4 x 1/2 in.	2
9	#	Screw, 5/16 x 1 1/8 in.	6
10	224338	Washer	6
11	352772	Housing	1
12	223738	Gasket	1
13	223933	Seal	1
14	GM18691	Plug	1

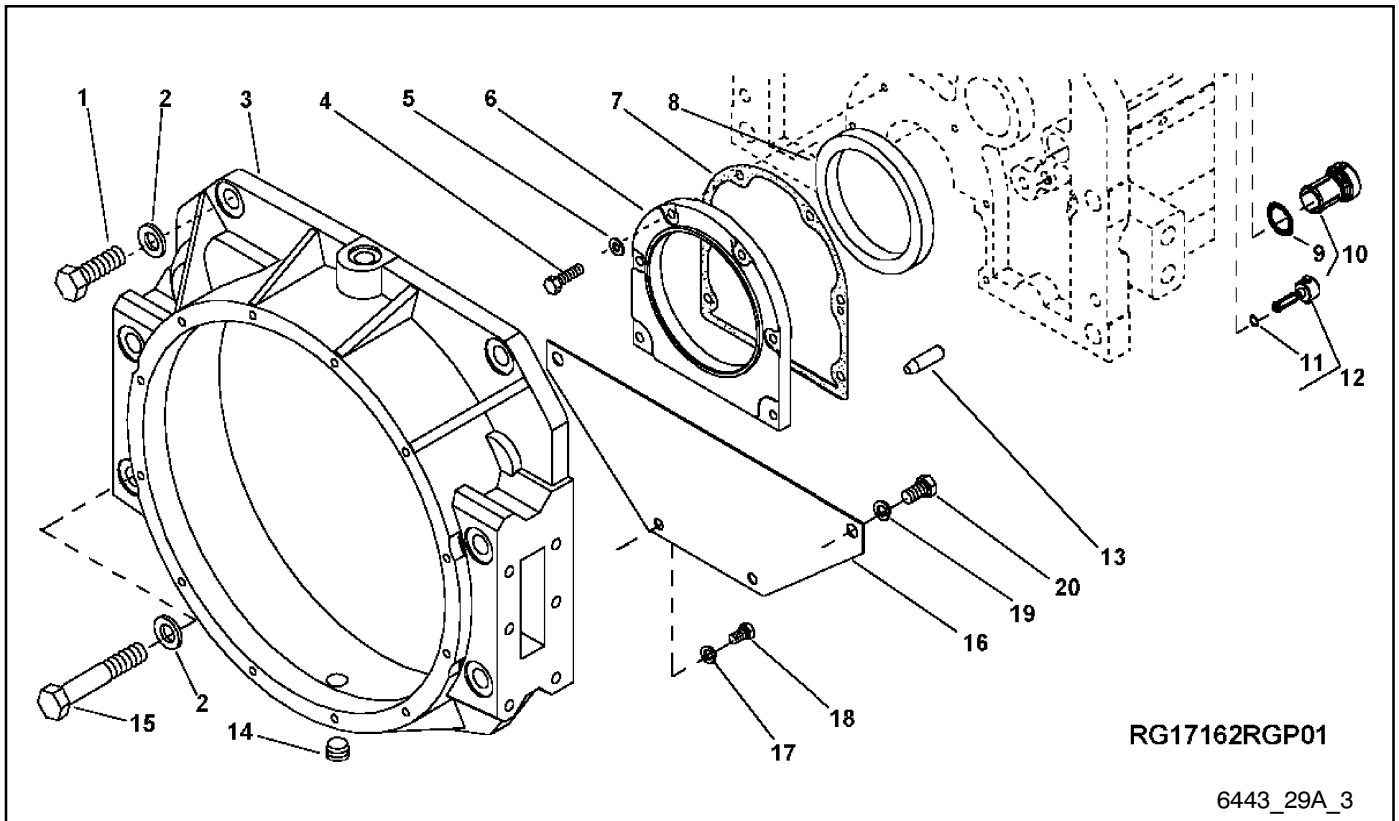


6443_29A_2

Item	Part Number	Description	Quantity Variation 1406	Item	Part Number	Description	Quantity Variation 1406
1	GM17468	Fitting	1	7	GM17449	Plate	1
2	GM24539	Housing, flywheel	1	8	#	Cap screw, M6 x 12	2
3	GM17453	Plug	1	9	#	Screw, M12 x 50	4
4	223583	Seal	1	10	360581	Bolt	8
5	GM17553	Cap	1	11	GM24540	O-ring	1
6	GM18862	Pipe plug, 1/2 in.	1	12	GM50612	Kit, liquid gasket	1

Common hardware; procure locally.

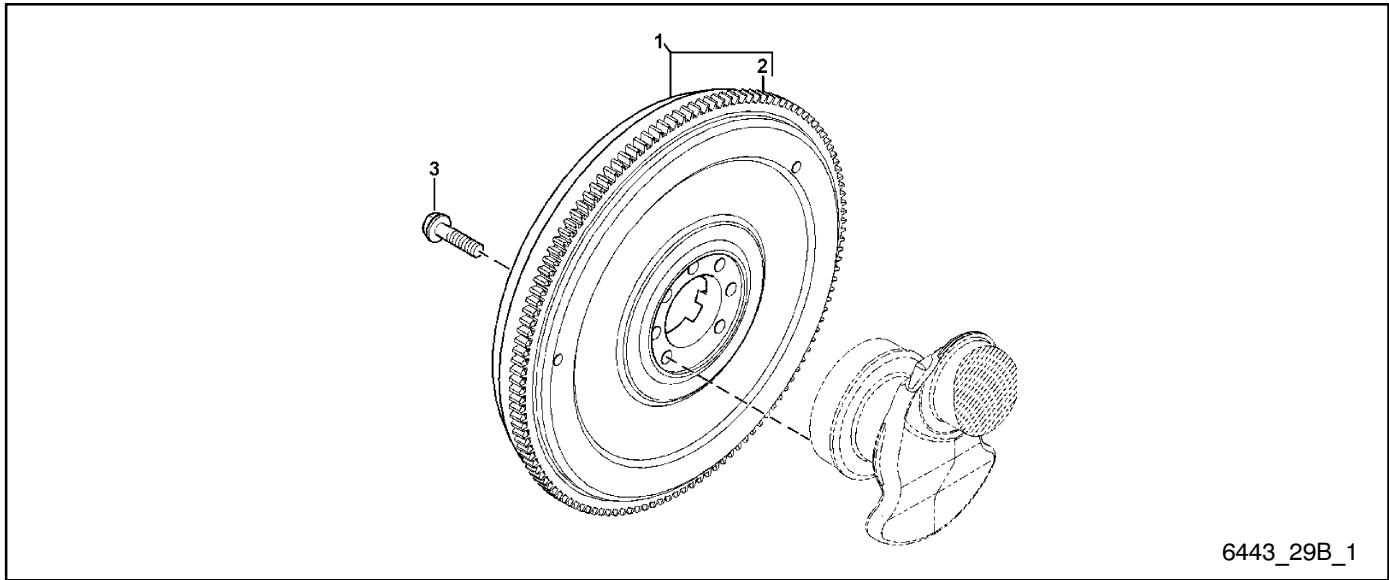
Group 29A: Flywheel Housing



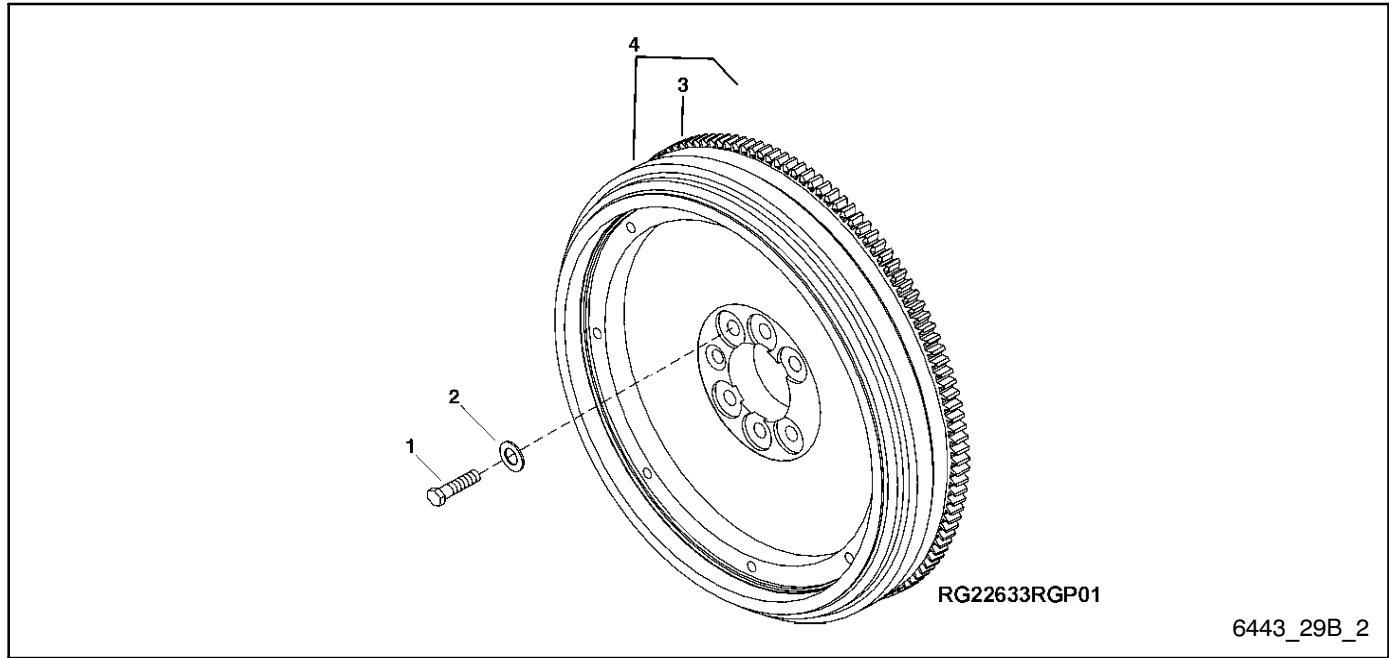
Item	Part Number	Description	Quantity
			Variation 1424
1	#	Cap screw, 3/4 in. x 2 1/2 in.	2
2	#	Washer, 20 x 34 x 3 mm	6
3	352757	Housing	1
4	#	Cap screw, 5/16 x 1 1/8 in.	6
5	224338	Washer	6
6	352773	Housing	1
7	223738	Gasket	1
8	223933	Seal	1
9	223747	O-ring	1
10	223683	Plug	1
11	#	Rivet	1
12	223684	Plug	1
13	352707	Dowel pin	2
14	GM18862	Pipe plug, 1/2 in.	1
15	#	Cap screw, 3/4 in. x 5 1/2 in.	4
16	223803	Cover	1
17	#	Lock washer	2
18	#	Cap screw	2
19	#	Lock washer	2
20	#	Cap screw, 1/2 in. x 7/8 in.	2

Common hardware; procure locally.

Group 29B: Flywheel

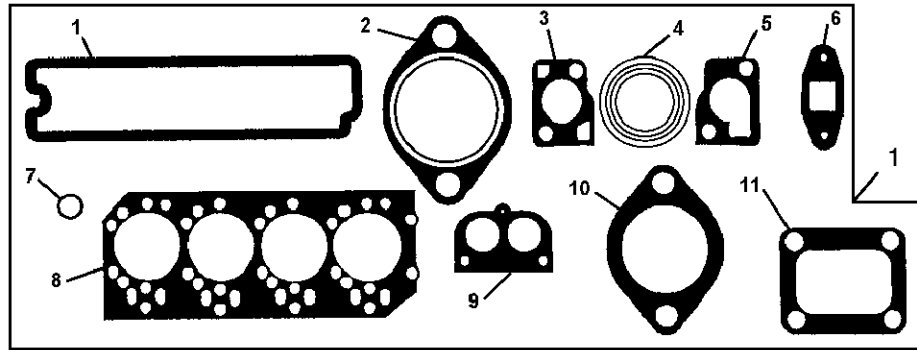


Item	Part Number	Description	Quantity
			Variation 1503
1	GM17501	Flywheel	1
2	223750	Gear	1
3	360581	Bolt	4

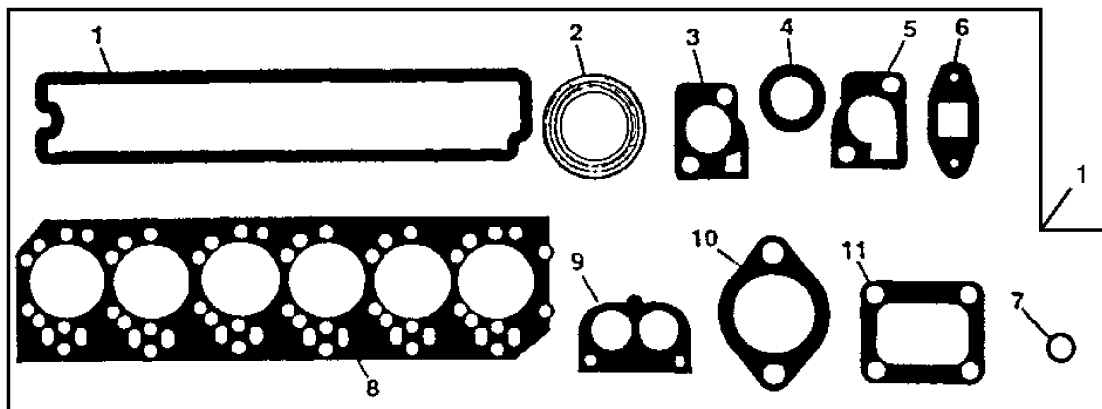


Item	Part Number	Description	Quantity
			Variation 1505
1	223864	Cap screw	6
2	223983	Washer	6
3	223750	Gear	1
4	352865	Flywheel	1

Group 30: Cylinder Head Gasket Set



33-65 kW

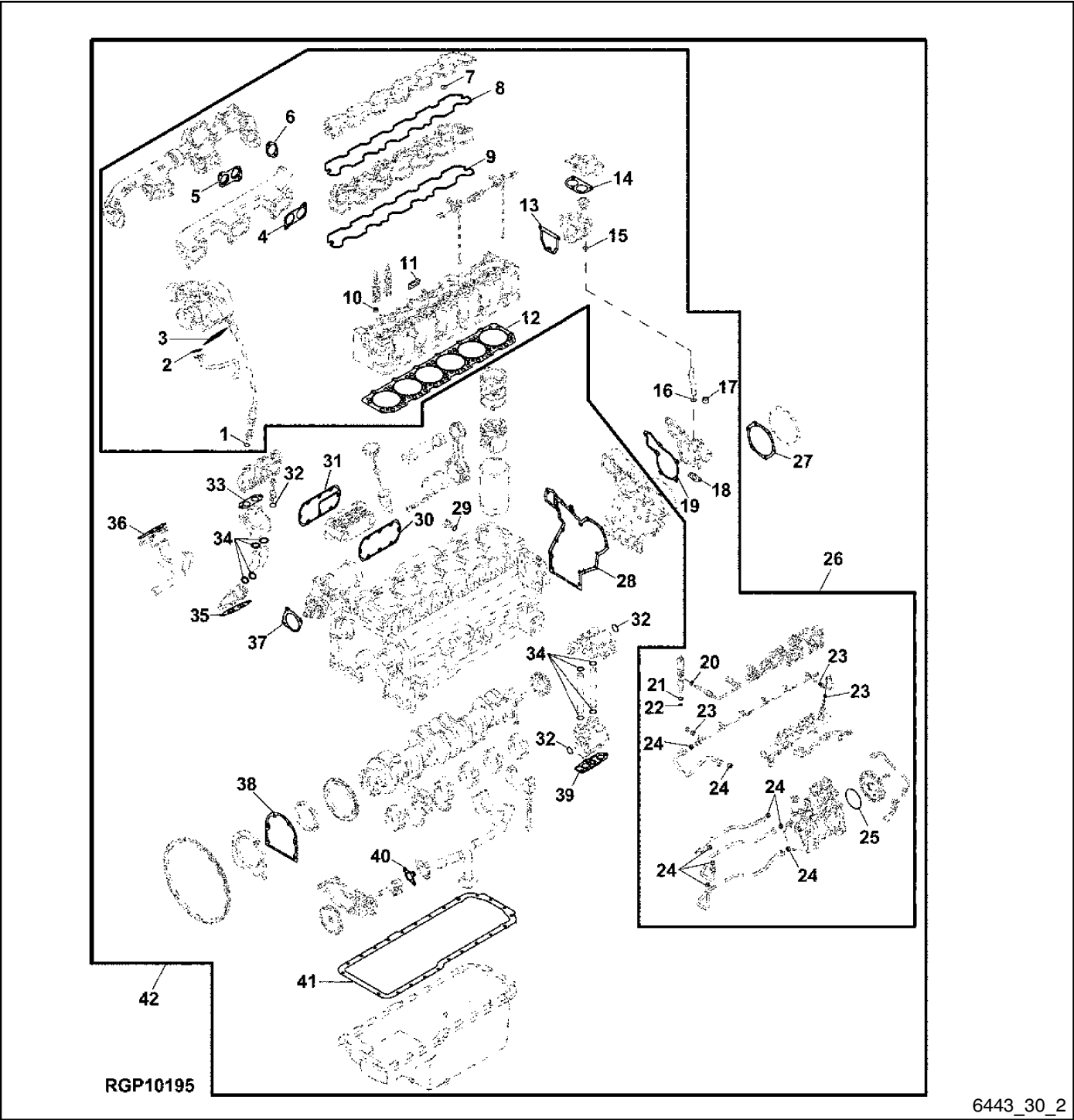


80/99 kW

6443_30_1

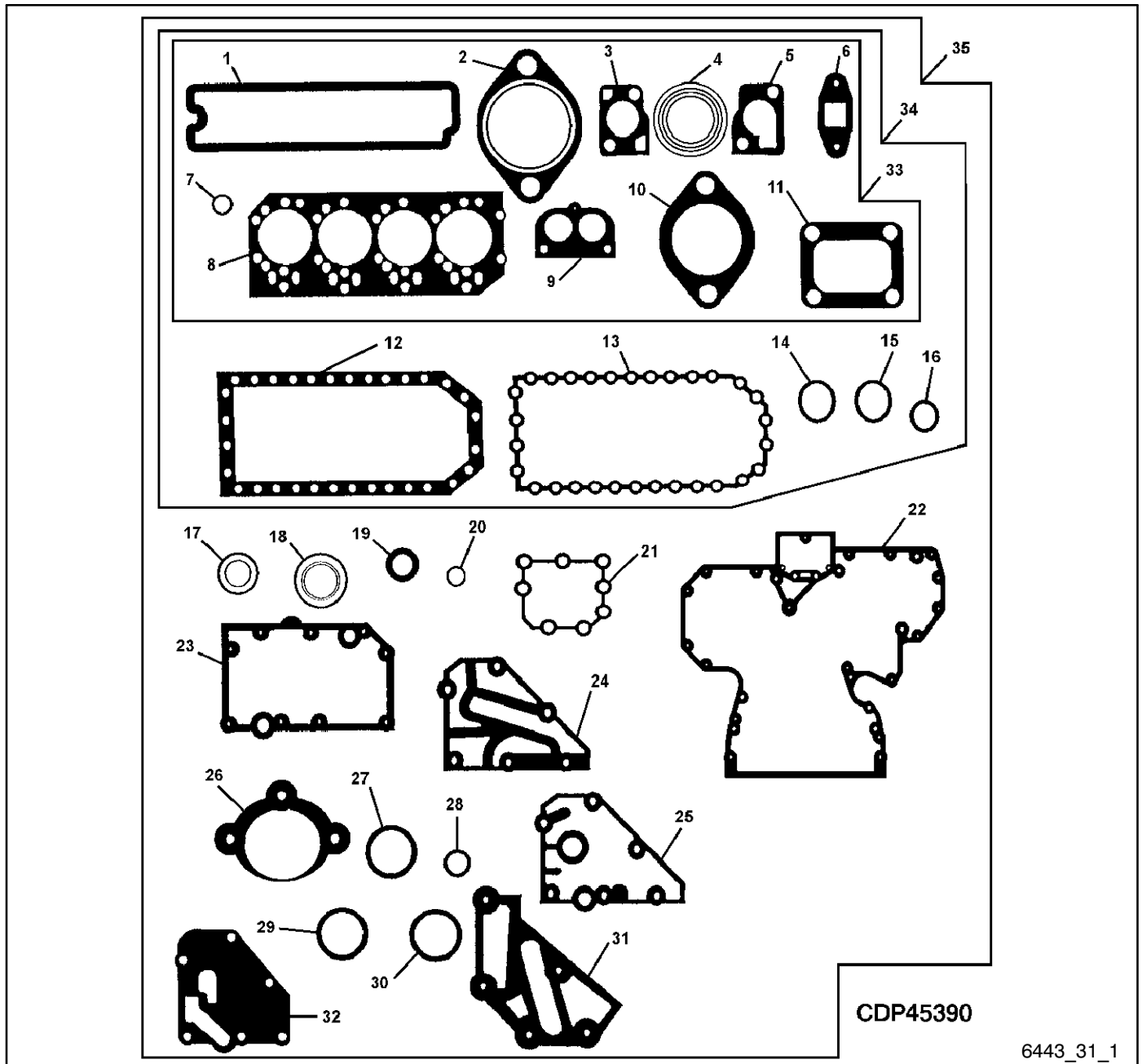
Item	Part Number	Description	Quantity	
			Variation 1	Variation 2
1	360586	Gasket kit, cylinder head (includes item 1-11)	1	
1	GM50941	Gasket kit, cylinder head (includes item 1-11)		1

Group 30: Cylinder Head Gasket Set, continued



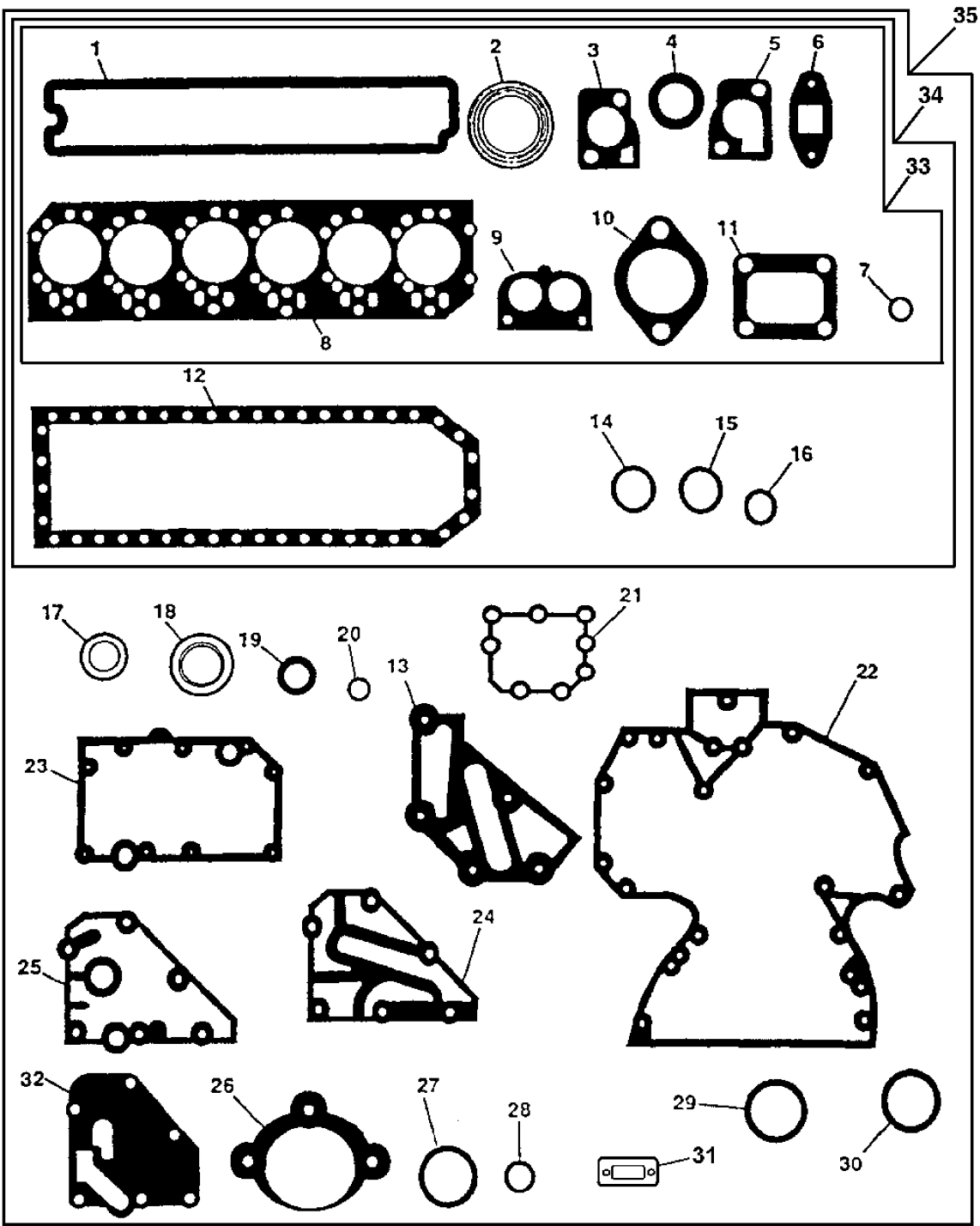
Item	Part Number	Description	Quantity Variation 3
26	GM52844	Gasket kit, cylinder head (includes items 1-25)	1
42	-	See Group 31 (includes items 1-41)	1

Group 31: Overhaul Gasket Set



Item	Part Number	Description	Quantity
			Variation 1
35	360587	Gasket kit, overhaul (includes item 1-34)	1

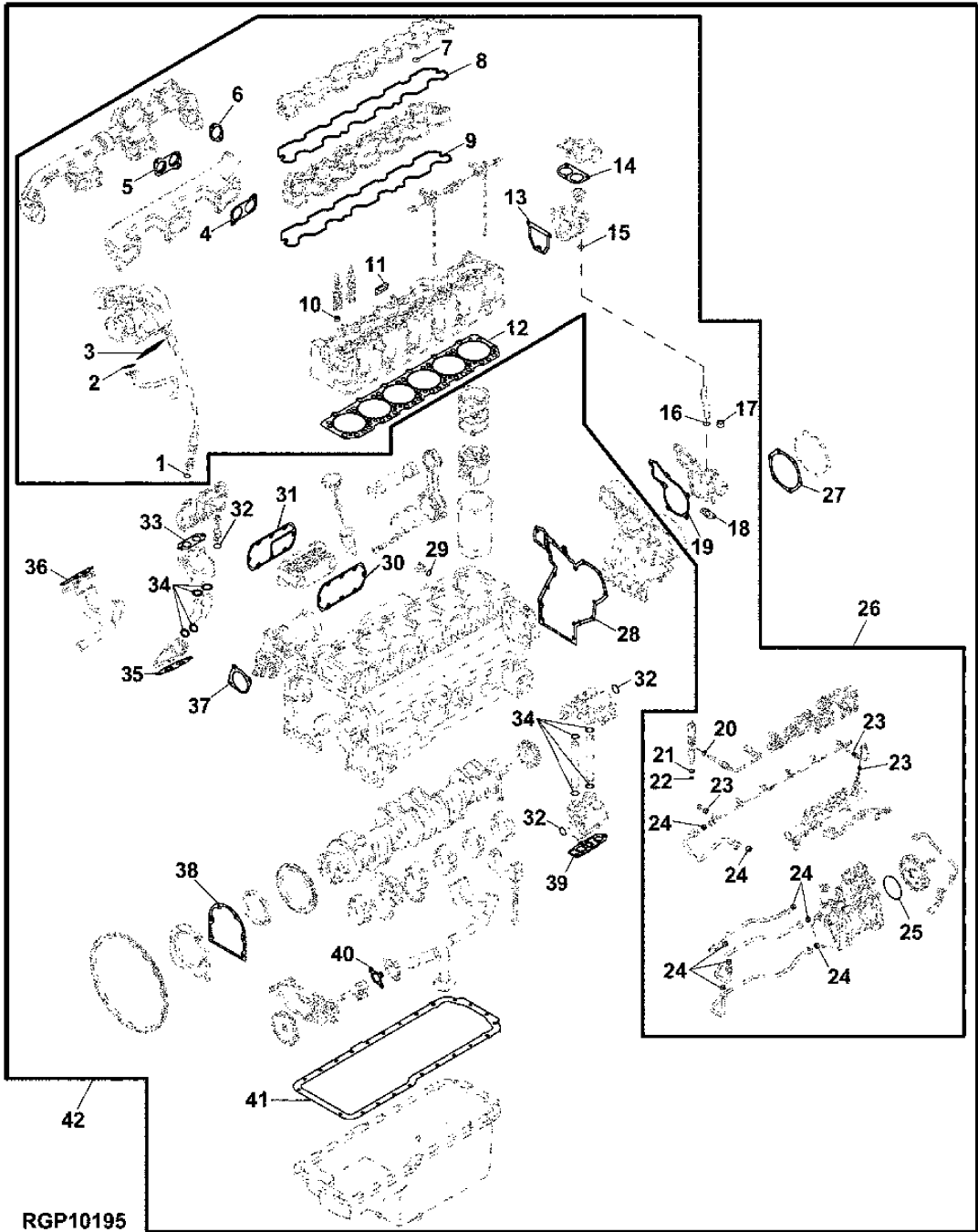
Group 31: Overhaul Gasket Set, continued



6443_31_2

Item	Part Number	Description	Quantity Variation 2
35	GM24544	Gasket kit, overhaul (includes item 1-34)	1

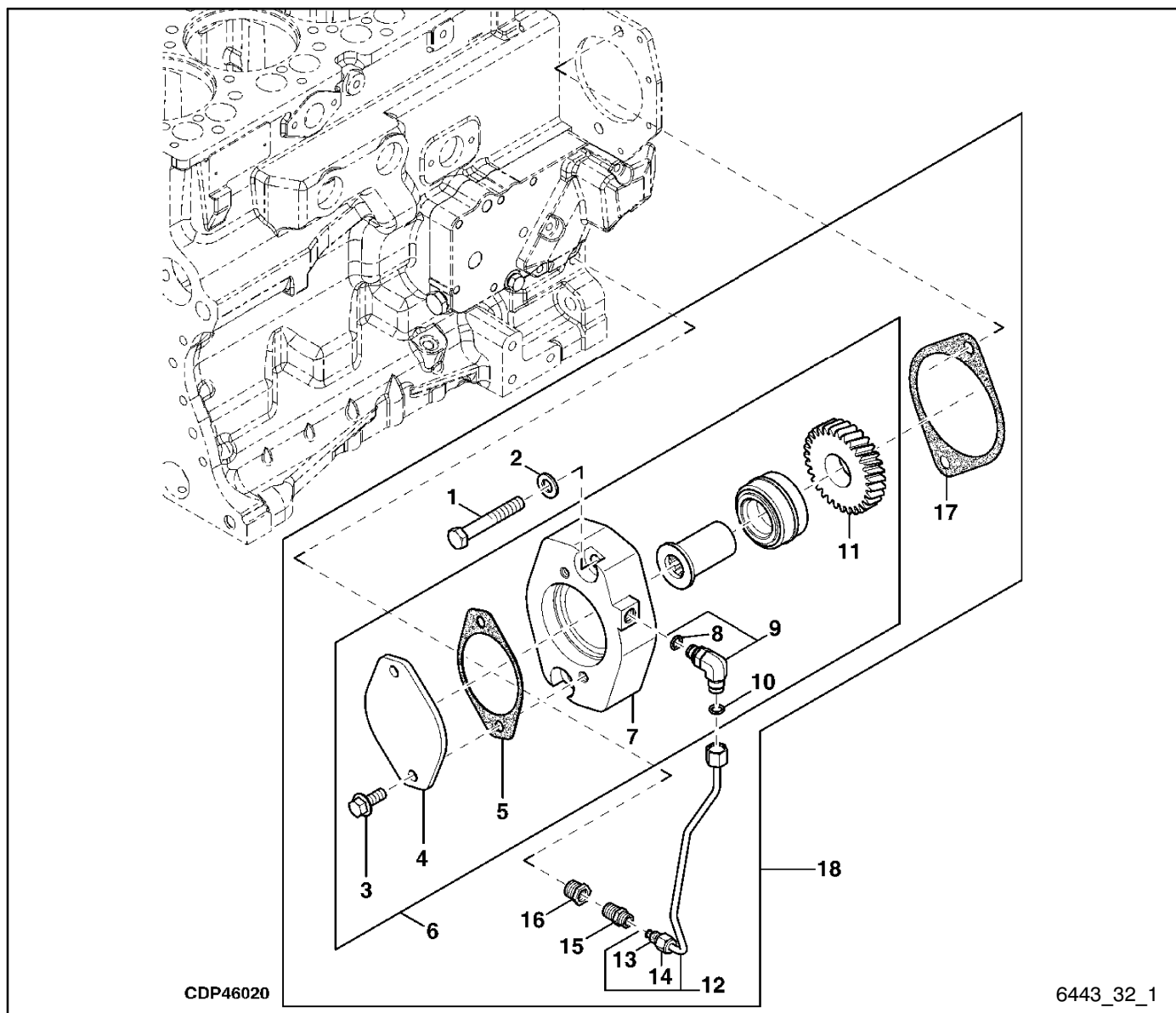
Group 31: Overhaul Gasket Set, continued



6443_31_3

Item	Part Number	Description	Quantity
			Variation 3
42	GM52845	Gasket kit, overhaul (includes items 1-41) also order seal kit GM50207	1

Group 32: Auxiliary Drive Gears



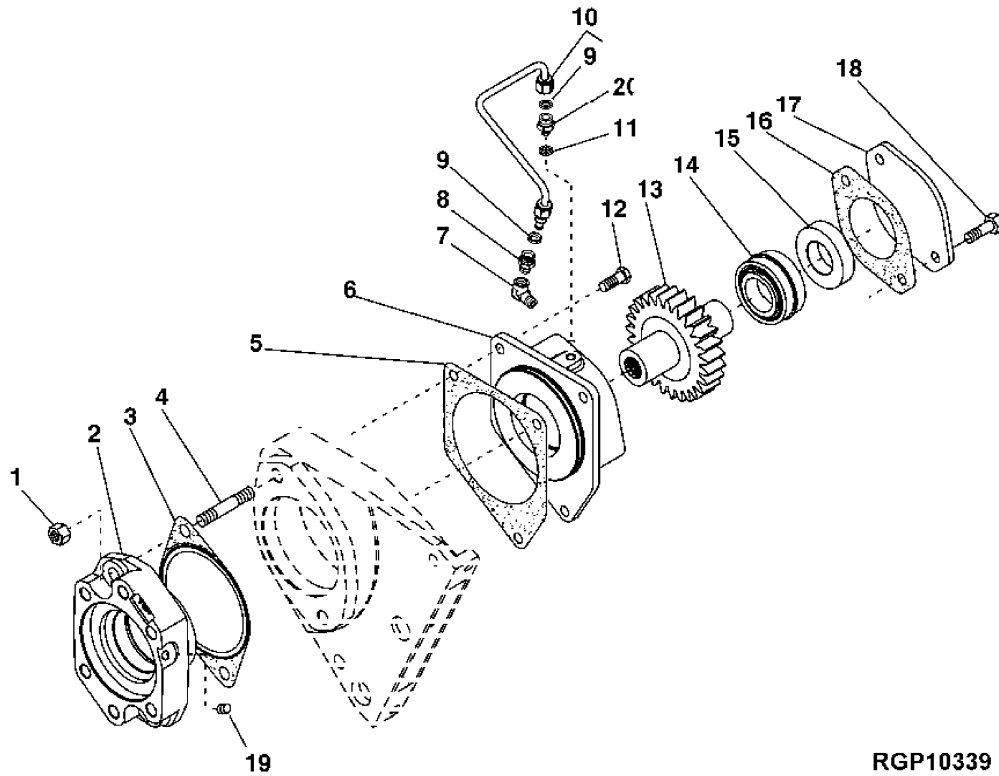
CDP46020

6443_32_1

Item	Part Number	Description	Quantity Variation 5202
1	#	Cap screw, M12 x 70	2
2	#	Washer, 13 x 24 x 2.500 mm	2
3	#	Screw, M10 x 25	2
4	352091	Cover	1
5	352092	Gasket	1
5	352093	Gasket	1
6	GM17506	Adapter	1
7	—	Housing	1
8	360178	O-ring	1
9	GM17436	Elbow fitting	1
10	GM17557	O-ring	1
11	—	Gear	1
12	GM50643	Oil line	1
13	223476	Packing	1
14	360141	Nut	1
15	352049	Coupling	1
16	#	Pipe bushing, 3/8 in.-18 NPT x 1/4 in.-18 NPT	1
17	GM17460	Gasket	1
18	GM17507	Adapter kit	1

Common hardware; procure locally.

Group 32: Auxiliary Drive Gears



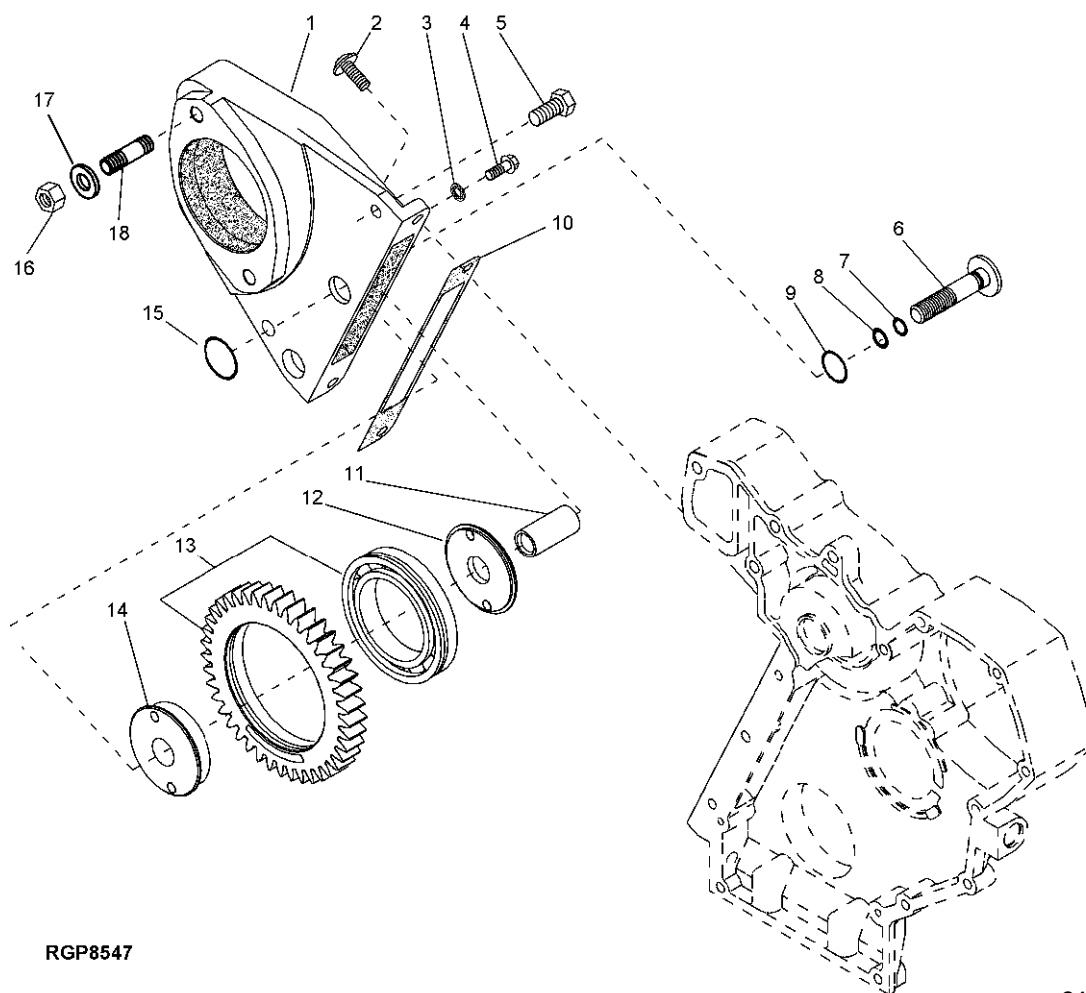
RGP10339

6443_32_2

Item	Part Number	Description	Quantity
			Variation 5223
1	#	Nut, 1/2 in.	2
2	GM18676	Housing	1
3	GM18693	Gasket	1
4	GM18755	Stud	1
5	GM18680	Gasket	1
6	GM18679	Housing	1
7	GM18875	Fitting, elbow	1
8	GM18684	Fitting	1
9	223476	Packing	2
10	GM18865	Oil line	1
11	GM18718	Washer	1
12	#	Cap screw	3
13	GM18855	Gear	1
14	GM18786	Roller bearing	1
15	GM18671	Bushing	1
16	352092	Gasket	2
17	352091	Cover	1
18	#	Cap screw	2
19	GM18880	Fitting plug	1
20	GM18684	Fitting	1

Common hardware; procure locally.

Group 32: Auxiliary Drive Gears, continued



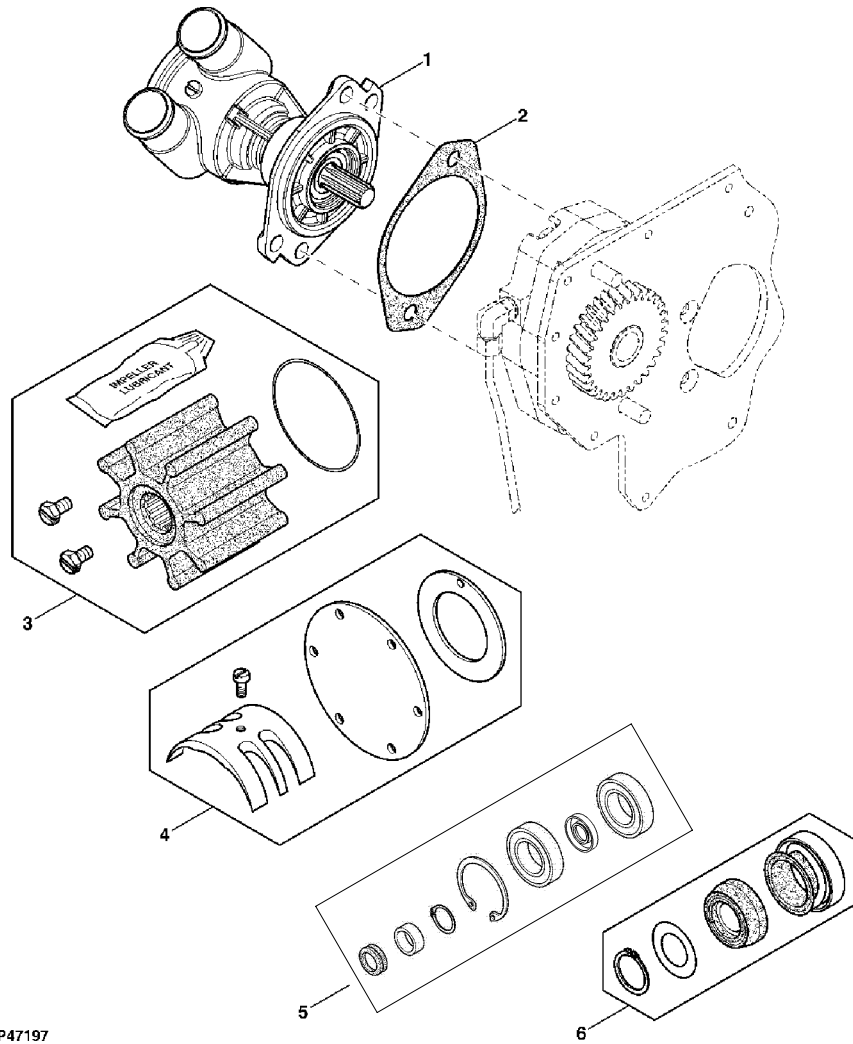
RGP8547

6443_32_3

Item	Part Number	Description	Quantity Variation 5223
1	GM52846	Housing	1
2	GM52847	Screw	2
3	GM18681	Seal	1
4	GM52848	Screw	1
5	#	Screw, 1/2 x 1 1/8 in. in.	1
6	GM52849	Bolt	1
7	GM52850	O-ring	1
8	GM52851	O-ring	2
9	GM52852	O-ring	1
10	GM52853	Gasket	1
11	GM52854	Shaft	1
12	GM52855	Support	1
13	GM52856	Spur gear	1
14	GM52857	Support	1
15	GM52858	Seal kit	1
16	#	Nut, 5/8 in.	2
17	GM18708	Washer	2
18	GM52859	Stud	2

Common hardware; procure locally.

Group 33: Seawater Pump

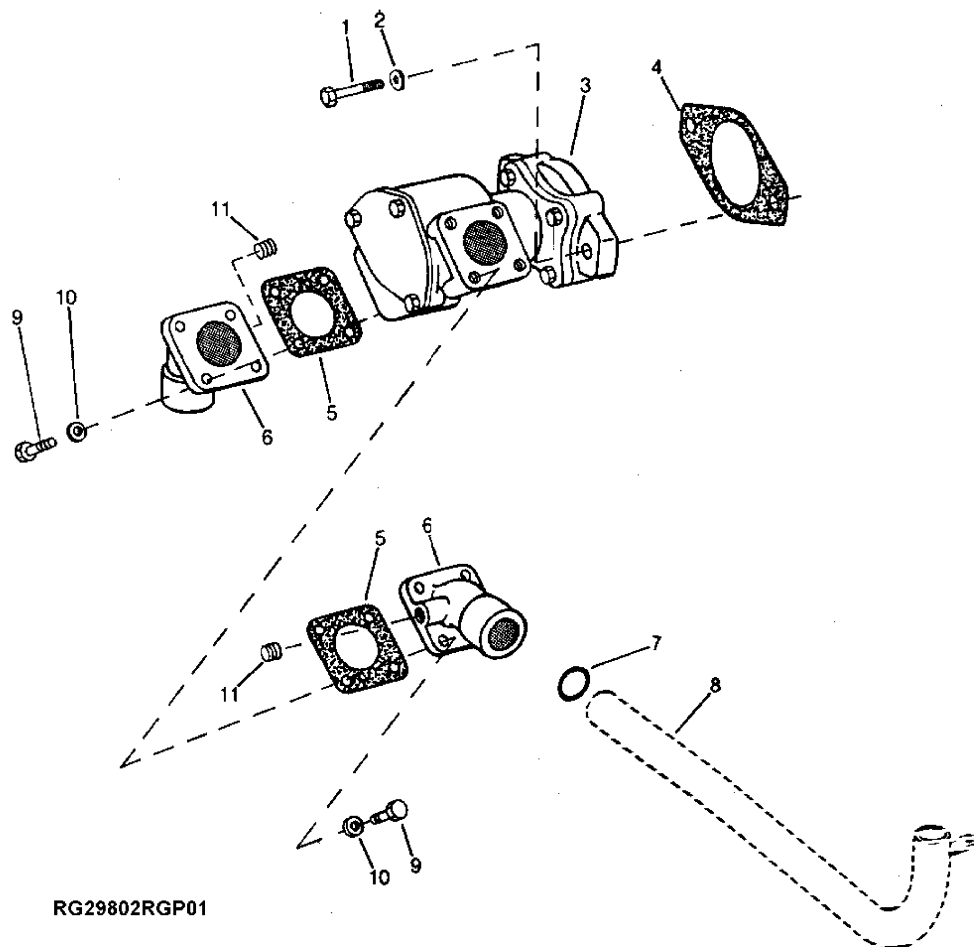


P47197

6443_33_1a

Item	Part Number	Description	Quantity
			Variation 8020
1	GM57562	Pump	1
2	352092	Gasket	1
3	GM50644	Kit, impeller	1
4	GM50645	Kit, end plate	1
5	GM50646	Kit, bearing	1
6	GM50647	Kit, seal	1

Group 33: Seawater Pump, continued

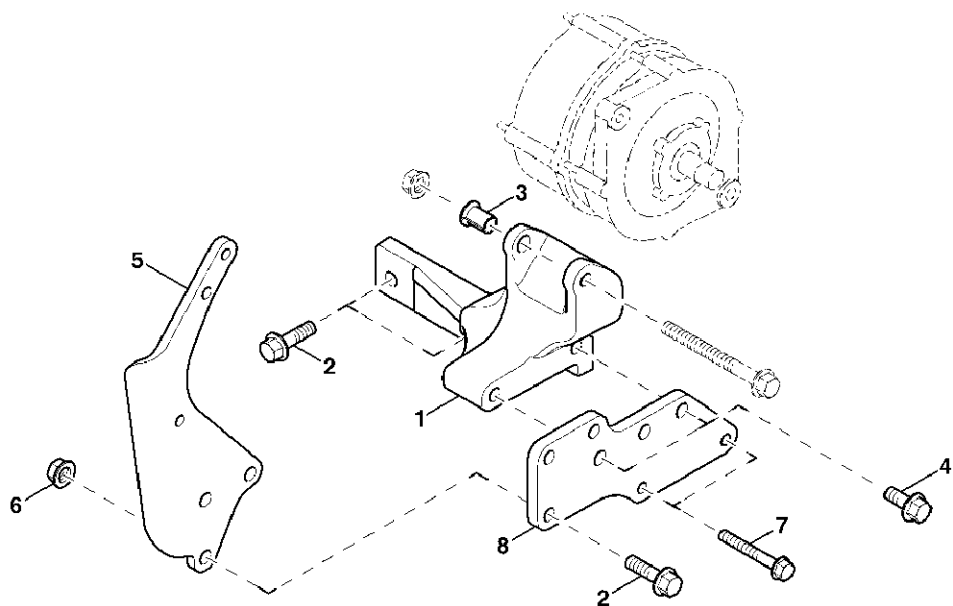


6443_33_2

Item	Part Number	Description	Quantity
			Variation 8001
1	#	Screw, 3/8 in. x 1 1/4 in.	2
2	#	Washer, 13/32 in. x 13/16 in. x 0.065 in.	2
3	GM18787	Pump, water	1
4	352092	Gasket	1
4	352093	Gasket	1
5	352033	Gasket	2
6	GM18690	Housing	2
7	223850	O-ring	1
8	—	Tube (see Group 16)	1
9	#	Cap screw, M8 x 22	8
10	#	Washer, 11/32 in. x 11/16 in. x 0.065 in.	8
11	GM18661	Pipe plug	2
—	GM18793	Impeller kit	1
—	GM18794	Repair kit, water pump	1

Common hardware; procure locally.

Group 34: Alternator Brackets

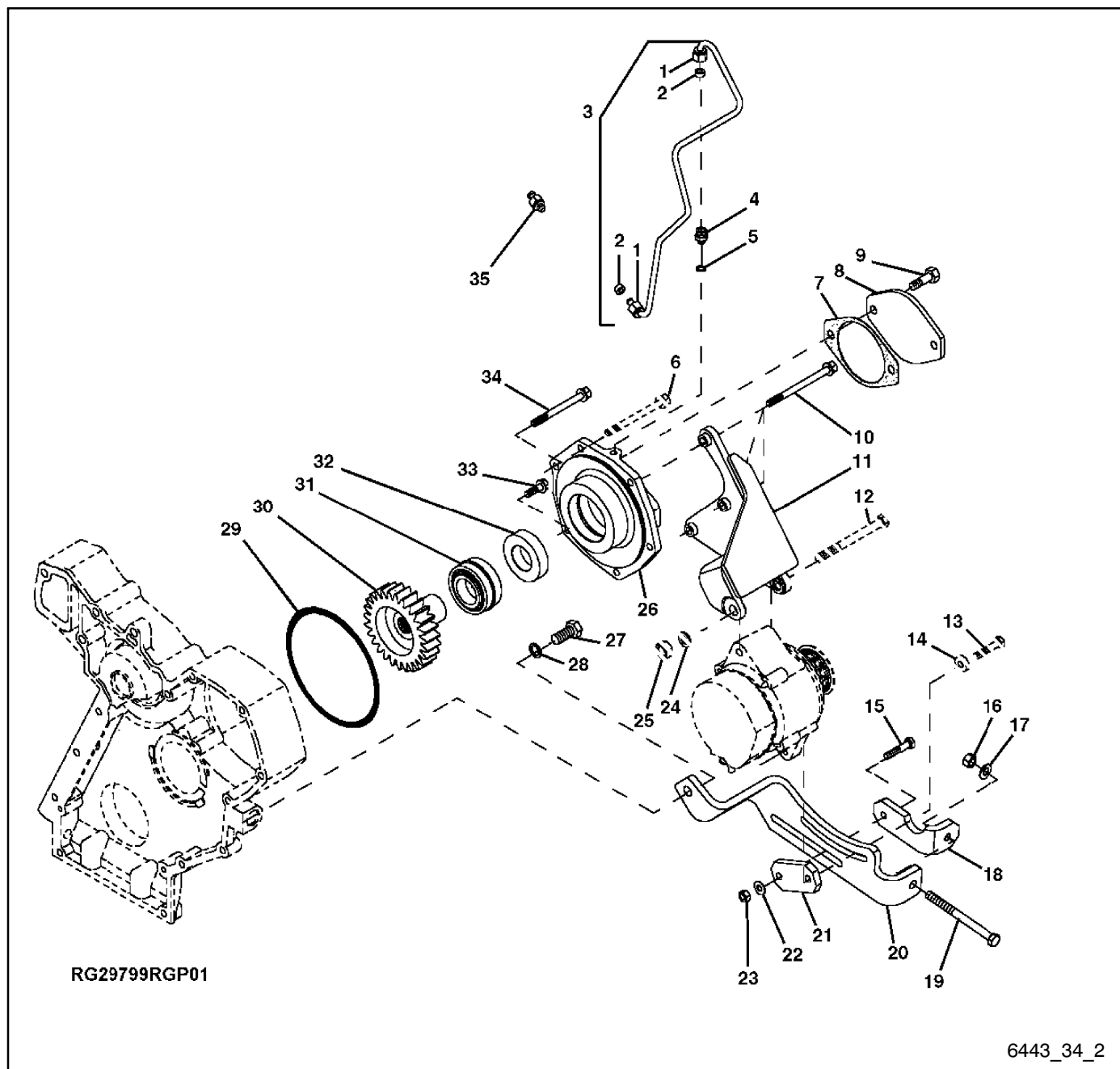


6443_34_1

Item	Part Number	Description	Quantity
			Variation 6202
1	360150	Bracket, alternator mounting	1
2	#	Screw, M10 x 30	5
3	360076	Bushing	1
4	#	Screw, M10 x 25	2
5	GM17455	Strap	1
6	#	Flange nut, M10	1
7	#	Screw, M8 x 60	2
8	360155	Bracket, alternator mounting	1

Common hardware; procure locally.

Group 34: Alternator Brackets, continued

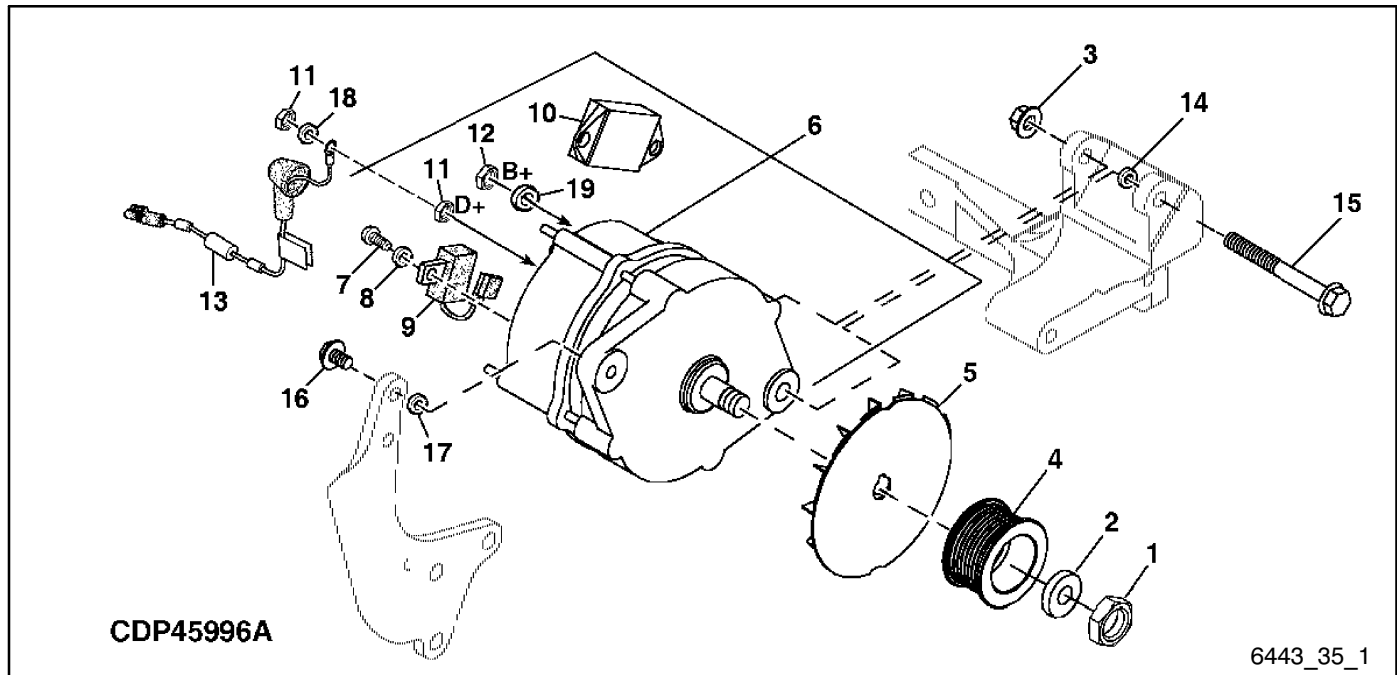


Group 34: Alternator Brackets, continued

Item	Part Number	Description	Quantity
			Variation 6201
1	223476	Packing	2
2	223477	Tube nut	2
3	GM18806	Oil line	1
4	GM18684	Fitting	1
5	GM18718	Washer	1
6	—	Cap screw (see Group 16)	1
7	352092	Gasket	1
7	352093	Gasket	1
8	352091	Cover	1
9	#	Cap screw, 3/8 in. x 7/8 in.	2
10	GM18672	Screw	3
11	GM18833	Bracket	1
12	—	Cap screw (see Group 35)	1
13	—	Cap screw (see Group 35)	1
14	—	Washer (see Group 35)	1
15	#	Cap screw, 5/16 in. x 1 1/2 in.	1
16	336726	Nut, hex 3/8 in.	1
17	#	Washer, 13/32 in. x 13/16 in. x 0.065 in.	1
18	GM18736	Tightener	1
19	#	Cap screw, 3/8 in. x 4 1/2 in.	1
20	GM18735	Bracket	1
21	GM18737	Plate	1
22	#	Washer, 21/64 in. x 3/4 in. x 0.035 in.	1
23	#	Nut, 5/16 in.	1
24	—	Washer (see Group 35)	2
25	—	Nut (see Group 35)	1
26	GM18743	Housing	1
27	#	Screw, 1/2 x 1 1/8 in. in.	1
28	#	Washer, 13/32 in. x 7/8 in. x 0.120 in.	1
29	GM18879	O-ring	1
30	GM18670	Gear	1
31	GM18786	Roller bearing	1
32	GM18671	Bushing	1
33	#	Screw, 5/16 in. x 1 in.	1
34	GM18665	Screw	1
35	223820	Fitting	1

Common hardware; procure locally.

Group 35: Alternator

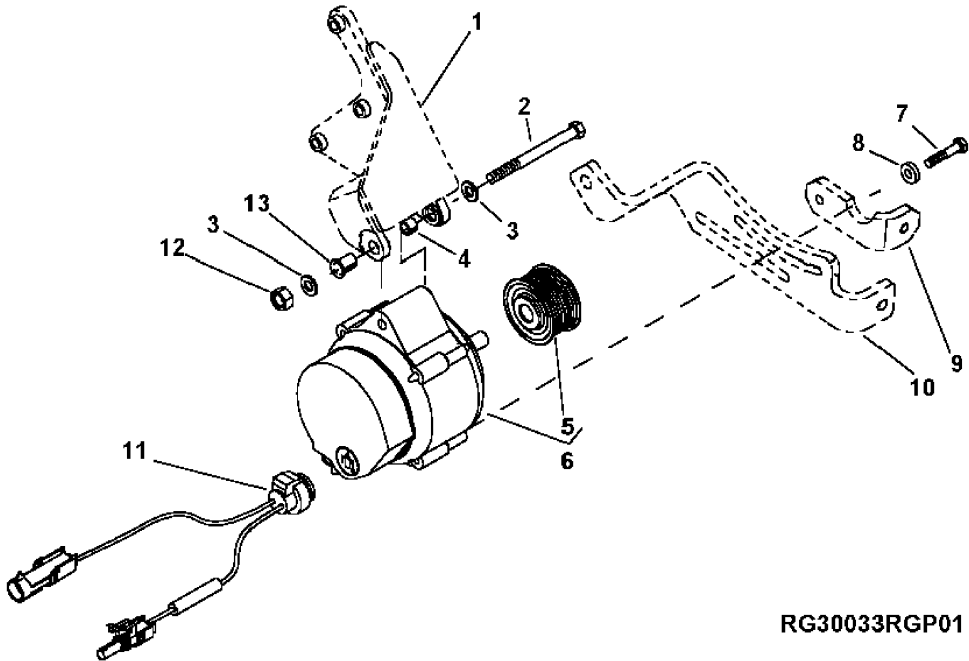


Item	Part Number	Description	Quantity					
			Variation					
			3104	3109	3138	3142	3148	3149
1	#	Nut, M16	1	1	1	1		
2	224331	Washer	1	1	1	1		
3	#	Flange nut, M10	1	1	1	1	1	1
4	GM17485	Pulley	1	1	1	1		
4	GM52597	Pulley					1	1
5	360588	Fan	1	1	1	1		
5	GM52596	Fan					1	1
6	360002	Alternator, 24 V	1			1		
6	360001	Alternator, 12 V		1	1			
6	GM52595	Alternator, 12 V					1	
6	GM52600	Alternator, 24 V						1
7	#	Screw, M5 x 8	1	1	1	1		
8	#	Washer, 5.300 x 11 x 0.500 mm	1	1	1	1		
8	#	Washer, lock 5 mm					2	2
9	360589	Capacitor	1	1	1	1		
9	GM52599	Capacitor					1	1
10	360590	Regulator	1			1		
10	GM52598	Regulator					1	1
10	360591	Regulator		1	1			
11	#	Nut, M5	1	1	1	1	1	1
12	#	Nut, M8	1	1	1	1		
12	#	Nut, M5					1	1
13	GM50648	Harness, wiring	1					
13	GM32923	Harness, wiring			1	1	1	1
13	GM17528	Connector assembly		1				
14	360166	Thrust washer	1	AR	AR	AR		
14	#	Washer, 10.500 x 20 x 2 mm		AR				
15	#	Screw, M10 x 100	1	1	1	1	1	1
16	#	Screw, M8 x 30	1	1	1	1		
16	#	Screw, M8 x 35					1	1
17	GM18719	Washer	1	1	1	1		
17	GM32782	Washer, 8.750 x 20 x 3.140 mm					1	1
17	#	Lock washer, 8mm (not shown)					2	2
17	#	Nut, M8 (not shown)					1	1
18	#	Lock washer, 5 mm	1	1	1	1	2	2
19	#	Lock washer, 8 mm	1	1	1	1		

AR As Required

Common hardware; procure locally.

Group 35: Alternator



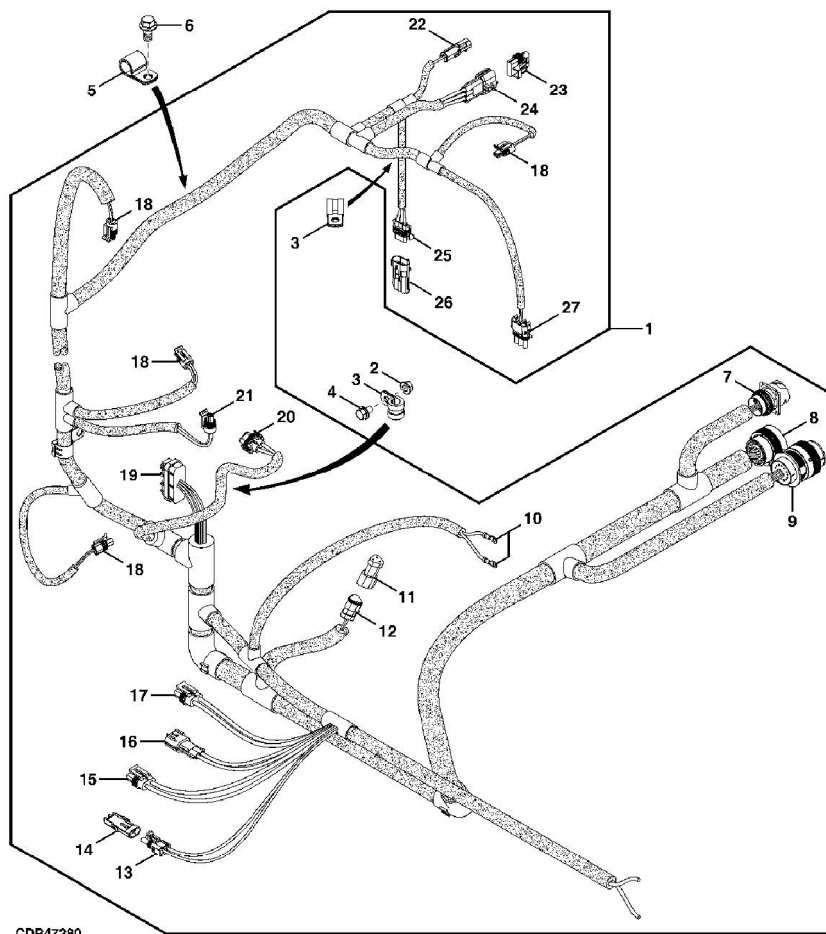
RG30033RGP01

6443_35_2

Item	Part Number	Description	Quantity	
			Variation	
			3111	3115
1	—	Bracket (see Group 34)	1	1
2	#	Screw, M10 x 120	1	1
3	#	Washer, 10.500 x 20 x 2 mm		NA
4	GM18707	Bushing, front	1	1
5	GM18677	Pulley	1	1
6	GM18868	Alternator	1	
6	GM18798	Alternator		1
6	GM52861	Voltage regulator		1
7	#	Cap screw, M8 x 40	1	1
8	GM18750	Washer	1	1
9	—	Tightener (see Group 34)	1	1
10	—	Bracket (see Group 34)	1	1
11	GM18840	Harness, wiring	1	1
12	#	Flange nut, M10	1	1
13	360076	Bushing, rear	1	1

Common hardware; procure locally.

Group 36A: Wiring Harness



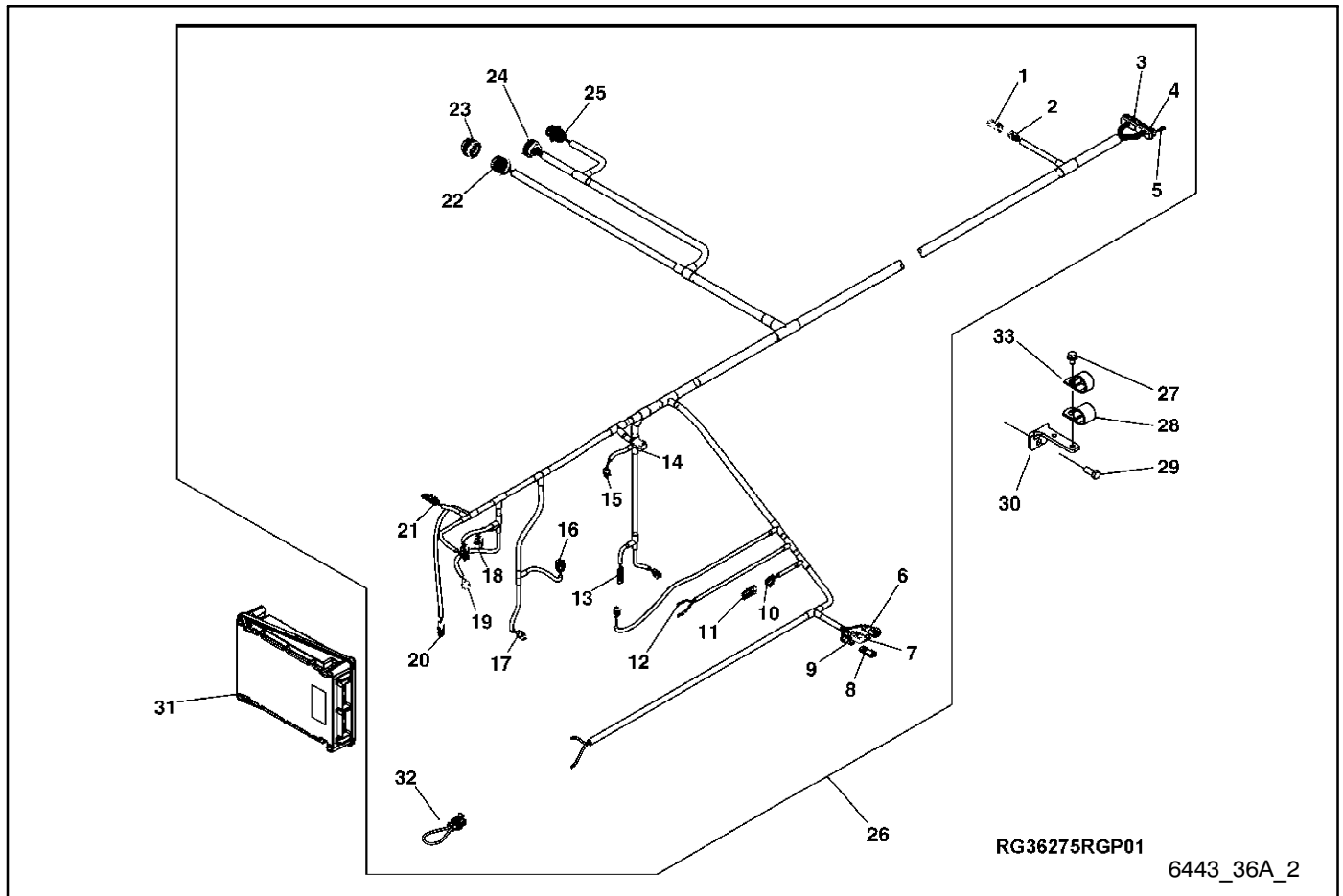
CDP47280

6443_36A_1

Item	Part Number	Description	Quantity	
			Variation	
			8442	8443
1	GM50692	Wiring harness	1	
1	GM50954	Wiring harness		1
2	#	Flange nut, M8	1	1
3	GM50693	Clamp	2	2
4	#	Screw, M8 x 12	1	1
5	GM50694	Clamp	1	1
6	#	Screw, M10 x 25	1	1
7	GM32775	Connector	1	1
8	GM32776	Connector	1	1
9	GM50695	Connector	1	1
10	GM32772	Connector	1	1
11	GM50696	Connector	1	1
12	GM50697	Connector housing	1	1
13	GM32806	Connector	1	1
14	GM50698	Connector	1	1
15	GM50699	Connector	1	1
16	GM32769	Connector	1	1
17	GM32778	Connector	1	1
18	GM32768	Connector	4	4
19	GM32767	Connector	1	1
20	GM32771	Connector	1	1
21	GM32774	Connector	1	1
22	GM32804	Connector	1	1
23	GM50700	Connector	1	1
24	GM32770	Connector	1	1
25	GM50701	Connector	1	1
26	GM50702	Connector	1	1
27	GM50703	Connector	1	1

Common hardware; procure locally.

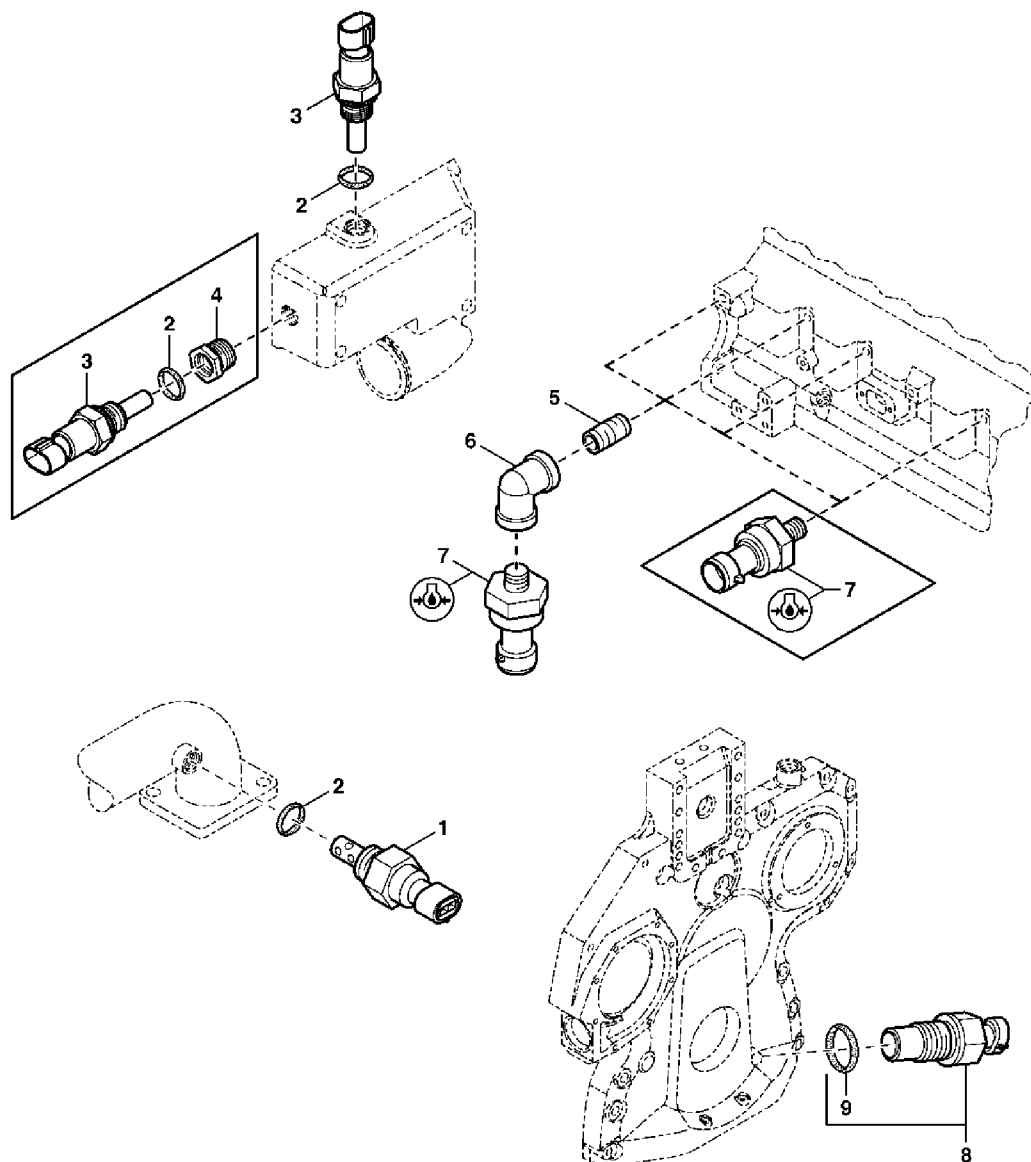
Group 36A: Wiring Harness



Item	Part Number	Description	Quantity Variation 9619
1	GM50696	Connector	1
2	GM32773	Connector	1
3	#	Electrical connector assembly	1
4	GM32767	Connector	1
5	#	Electrical connector terminal	1
6	GM32769	Connector	1
7	GM52883	Electrical connector assembly	1
8	GM50698	Connector	1
9	GM32806	Connector	1
10	GM50701	Connector	1
11	GM50702	Connector	1
12	GM32772	Connector	2
13	#	Electrical connector assembly	2
14	#	Electrical connector assembly	1
15	GM32768	Connector	4
16	#	Electrical connector terminal	1
17	GM32774	Connector	1
18	#	Elec. Connector terminal	2
19	#	Electrical connector assembly	1
20	GM32804	Connector	1
21	#	Electrical connector assembly	1
22	GM50695	Connector	1
23	#	Electrical connector assembly	1
24	GM32776	Connector	1
25	GM32775	Connector	1
26	GM52884	Wiring harness	1
27	GM18692	Cap screw	3
28	360530	Clamp	1
29	#	Screw	3
30	GM52885	Bracket	3
31	GM52816	Engine controller	1
32	GM52886	Glow plug	1
33	GM52887	Clamp	1

Common hardware; procure locally.

Group 36B: Sensors



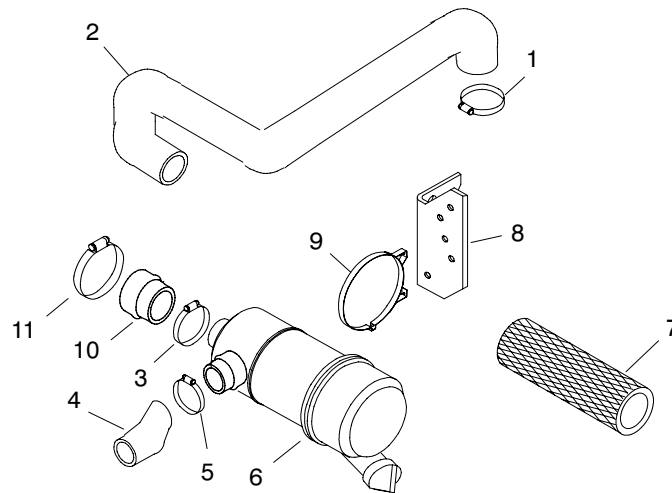
CDP46074A

6443_36B

Item	Part Number	Description	Quantity		
			Variation		
			6716	7601	4401
1	GM32958	Sensor, air temperature	1		
2	GM21508	O-ring	1		
3	GM32955	Sensor, coolant temperature	1		
4	GM50658	Adapter fitting, 1/2 in.-14 NPT x M14 x 1.5	1		
5	#	Threaded nipple	1		
6	#	Elbow fitting	1		
7	GM32919	Sensor, pressure	1	1	
8	GM50704	Sensor, engine speed	1		1
9	360180	O-ring, 17.3 x 2.2 mm	1		1

Common hardware; procure locally.

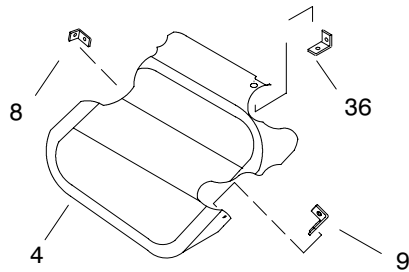
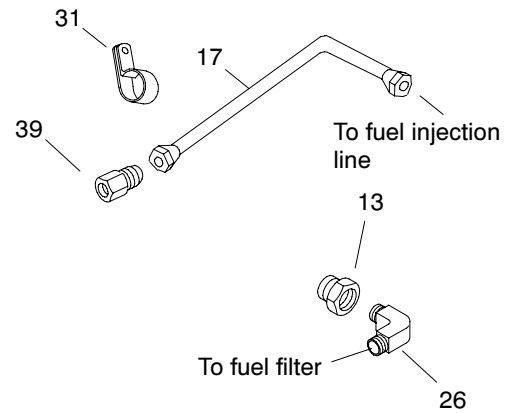
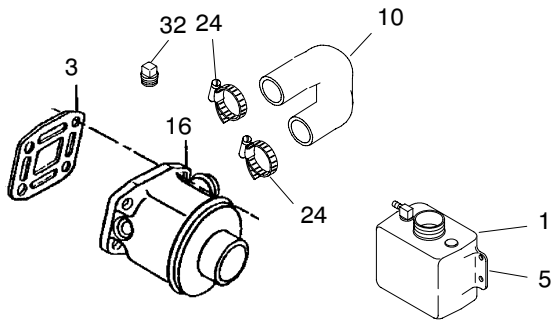
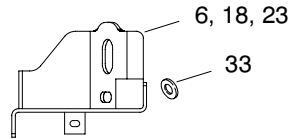
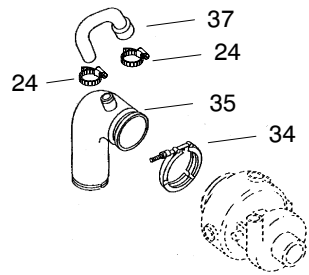
Group 101: Air Intake



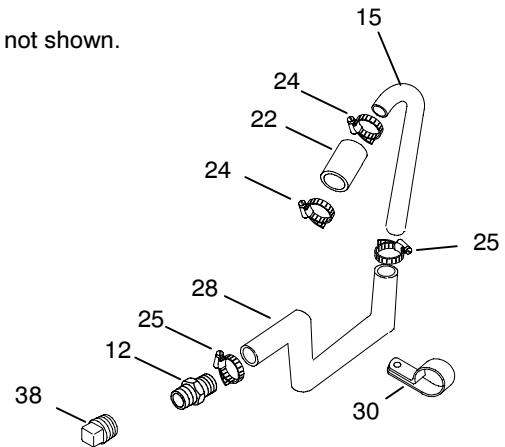
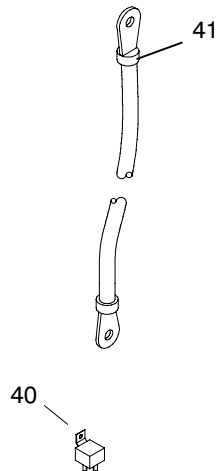
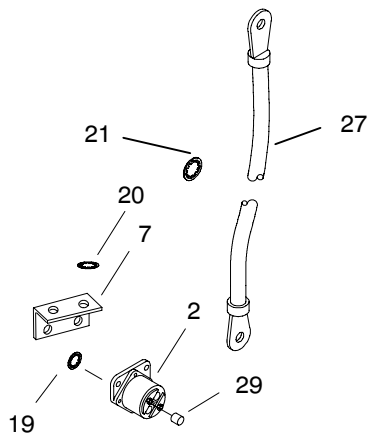
6443_101

Item	Part Number	Description	Quantity					
			Variation					
1	2	3	4	5	6			
1	276320	Clamp, hose, 2.38/3.69 in.	1					
2	GM40739	Hose, air intake	1					
3	275527	Clamp, hose, 2.81/3.12 in.	1	1				
3	274545	Clamp, hose, 4.31/4.62 in.			1	1	2	2
4	GM47458	Hose, elbow	1					
4	GM47491	Hose, elbow		1				
5	X-426-6	Clamp, hose, 1.56/2.5 in.	1					
5	X-426-2	Clamp, hose, 2.31/3.25 in.		1				
6	GM14199	Air cleaner assembly	1	1				
6	GM50092	Air cleaner assembly			1	1	1	1
7	GM15397	Element, air cleaner	1	1				
7	GM51271	Element, air cleaner			1	1	1	1
8	GM14202	Bracket, air cleaner mounting	1	1				
8	GM50367	Bracket, air cleaner			1	1		
9	GM14200	Mount, air cleaner	1	1				
10	344105	Hose, reducer, 4.00 to 2.5 In. ID		1				
10	253481	Hose, hump reducer, 4.00 to 3.00 in. ID			1			
10	255516	Hose, hump, 4.00 in. ID				1		
10	GM48928	Hose, elbow					1	1
11	274545	Clamp, hose, 4.31/4.62 in.		1		1		
11	291542	Clamp, hose			1			

Group 105: Engine



Items 11, 14, 23 are not shown.

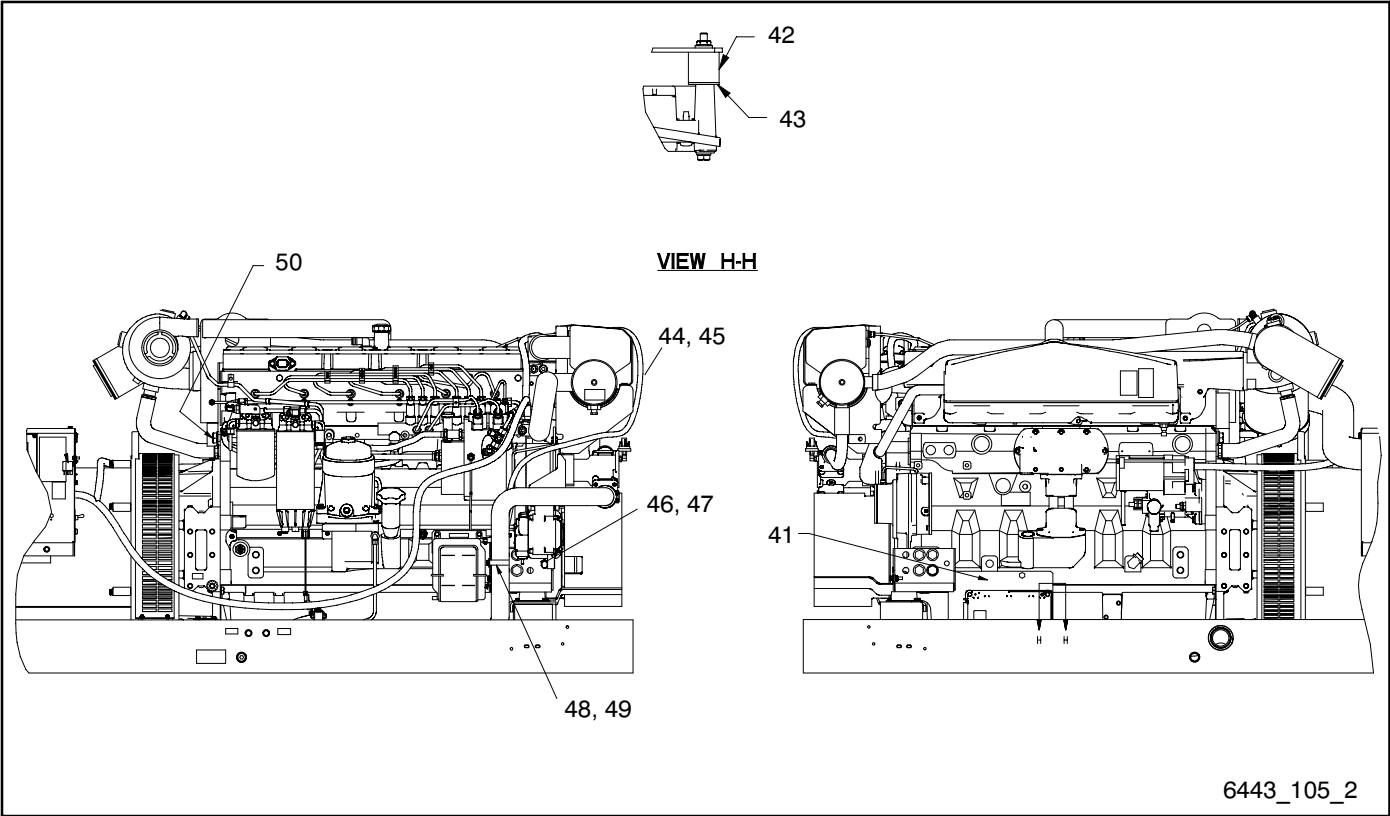


6443_105_1

Group 105: Engine

Item	Part Number	Description	Quantity Variation															
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	256971	Bottle, overflow	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	GM47692	Bottle, overflow	1			1	1			1	1	1	1	1	1	1	1	1
2	268371	Relay, 24V	1							1		1						
2	291891	Relay, 12V		1	1			1	1		1		1		1		1	
3	352029	Gasket	1	1	1	1												
4	GM14015	Guard, belt	1	1	1	1	1	1	1	1	1	1	1	1				
5	GM14198	Bracket, water bottle	1	1	1	1	1	1	1	1		1	1	1				
5	GM17048	Bracket, water bottle									1	1	1	1				
5	GM41019	Bracket, water bottle													1	1	1	1
6	GM14216	Eye, lifting	1	1	1	1	1	1	1	1	1	1	1	1				
6	GM40922	Eye, lifting													1	1	1	1
7	GM14320	Bracket, relay mounting	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	GM49942	Bracket, belt guard	1	1	1	1	1	1	1	1	1	1	1	1				
9	GM49941	Bracket, belt guard	1	1	1	1	1	1	1	1	1	1	1	1				
10	GM25430	Hose, seawater, 1.25 in. ID	1	1	1	1												
11	GM28971	Decal, battery connection	1	1	1	1									1	1	1	1
12	X-751-3	Connector, hose	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1
12	GM16625	Connector, hose																
13	GM42525	Adapter bushing	1	1	1	1					1	1	1	1				
14	GM46993	Engine, JD4045DFM70, 50 Hz, 24V	1															
14	GM47492	Engine, JD4045DFM70, 50 Hz, 12V		1														
14	GM46991	Engine, JD4045DFM70, 60 Hz, 12V			1													
14	GM46992	Engine, JD4045DFM70, 60 Hz, 24V				1												
14	GM46996	Engine, JD4045TFM75, 50 Hz, 24V					1											
14	GM47493	Engine, JD4045TFM75, 50 Hz, 12V						1										
14	GM46994	Engine, JD4045TFM75, 60 Hz, 12V							1									
14	GM46995	Engine, JD4045TFM75, 60 Hz, 24V								1								
14	GM46997	Engine, JD6068TFM76, 60 Hz, 12V									1							
14	GM46998	Engine, JD6068TFM76, 60 Hz, 24V										1						
14	GM47494	Engine, JD6068TFM76, 50 Hz, 12V											1					
14	GM46999	Engine, JD6068TFM76, 50 Hz, 24V												1				
14	GM47000	Engine, JD6081AFM75, 60 Hz, 12V													1			
14	GM47001	Engine, JD6081AFM75, 60 Hz, 24V														1		
14	GM47495	Engine, JD6081AFM75, 50 Hz, 12V															1	
14	GM47002	Engine, JD6081AFM75, 50 Hz, 24V																1
15	GM47453	Tube, water inlet	1	1	1	1	1	1	1	1	1	1	1	1				
15	GM49707	Tube, water inlet													1	1	1	1
16	GM47702	Elbow, wet exhaust	1	1	1	1												
17	GM48024	Line, fuel					1	1	1	1								
17	GM48028	Line, fuel	1	1	1	1					1	1	1	1	1	1	1	1
18	M933-10025-82	Screw, hex cap	3	3	3	3	3	3	3	3	3	3	3	3				
18	X-6021-15	Screw, hex cap machine													1	1	1	1
19	X-22-12	Washer, lock, .0262 ID x 0.743 in. OD	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
20	X-22-16	Washer, lock, 0.326 ID x 0.883 in. OD	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
21	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	X-272-2	Hose, radiator, straight, 1.25 in. ID	1	1	1	1	1	1	1	1	1	1	1	1				
22	X-281-4	Hose, radiator, straight, 2 in. ID													1	1	1	1
23	X-400-52	Spacer (crankcase canister, not shown)	3	3	3	3												
23	X-400-248	Spacer (lifting eye, not shown)														2	2	2
24	X-426-4	Clamp, hose, 1.31/2.25 in.	4	4	4	4	4	4	4	4	4	4	4	4		2	2	2
24	X-426-8	Clamp, hose, 0.81/1.75 in.														2	2	2
25	X-426-8	Clamp, hose, 0.81/1.75 in.	2	2	2	2	2	2	2	2	2	2	2	2				
25	250081	Clamp, hose, 2.06/3 in.														2	2	2
26	X-447-23	Elbow, male tube 90 deg. + vibra seal	1	1	1	1					1	1	1	1				
27	X-545-200	Cable, battery	1	1	1	1	1	1	1	1	1	1	1	1				
28	X-6014-124	Hose, radiator wire insert	1	1	1	1	1	1	1	1	1	1	1	1				
28	X-6014-126	Hose, radiator wire insert													1	1	1	1
29	X-6214-2	Cap		1	1			1	1		1	1	1	1	1		1	
30	X-672-21	Clamp, insulated, 1.68 in.	1	1	1	1	1	1	1	1								
30	X-672-22	Clamp, insulated, 2.62 in.														1	1	1
31	X-672-31	Clamp, insulated, 0.75 in.	1	1	1	1												
32	X-75-4	Plug, pipe, 1/8 in. NPT	1	1	1	1					1	1	1	1				
33	X-801-3	Washer, hardened, 0.406 ID x .812 in. OD	3	3	3	3	3	3	3	3	3	3	3	3				
33	X-801-5	Washer, hardened, 0.656 ID x 1.06 in. OD													1	1	1	1
34	324245	Clamp, exhaust, 4.25 in.					1	1	1	1	1	1	1	1	1	1	1	1
35	GM47704	Elbow, wet exhaust					1	1	1	1	1	1	1	1				
35	GM47706	Elbow, wet exhaust													1	1	1	1
36	GM49943	Bracket, belt guard	1	1	1	1	1	1	1	1	1	1	1	1				
37	GM25435	Hose, seawater, 1.25 in. ID					1	1	1	1	1	1	1	1				
37	X-272-23	Hose													1	1	1	1
38	X-75-57	Plug, pipe	1	1	1	1	1	1	1	1	1	1	1	1				
39	X-514-6	Fitting, fuel, straight									1	1	1	1				
40	259391	Relay, 12 V									1		1					
40	272684	Relay, 24 V										1		1				
41	X-545-165	Cable, battery (ground starter to engine)	1			1	1			1		1		1				

Group 105: Engine, continued

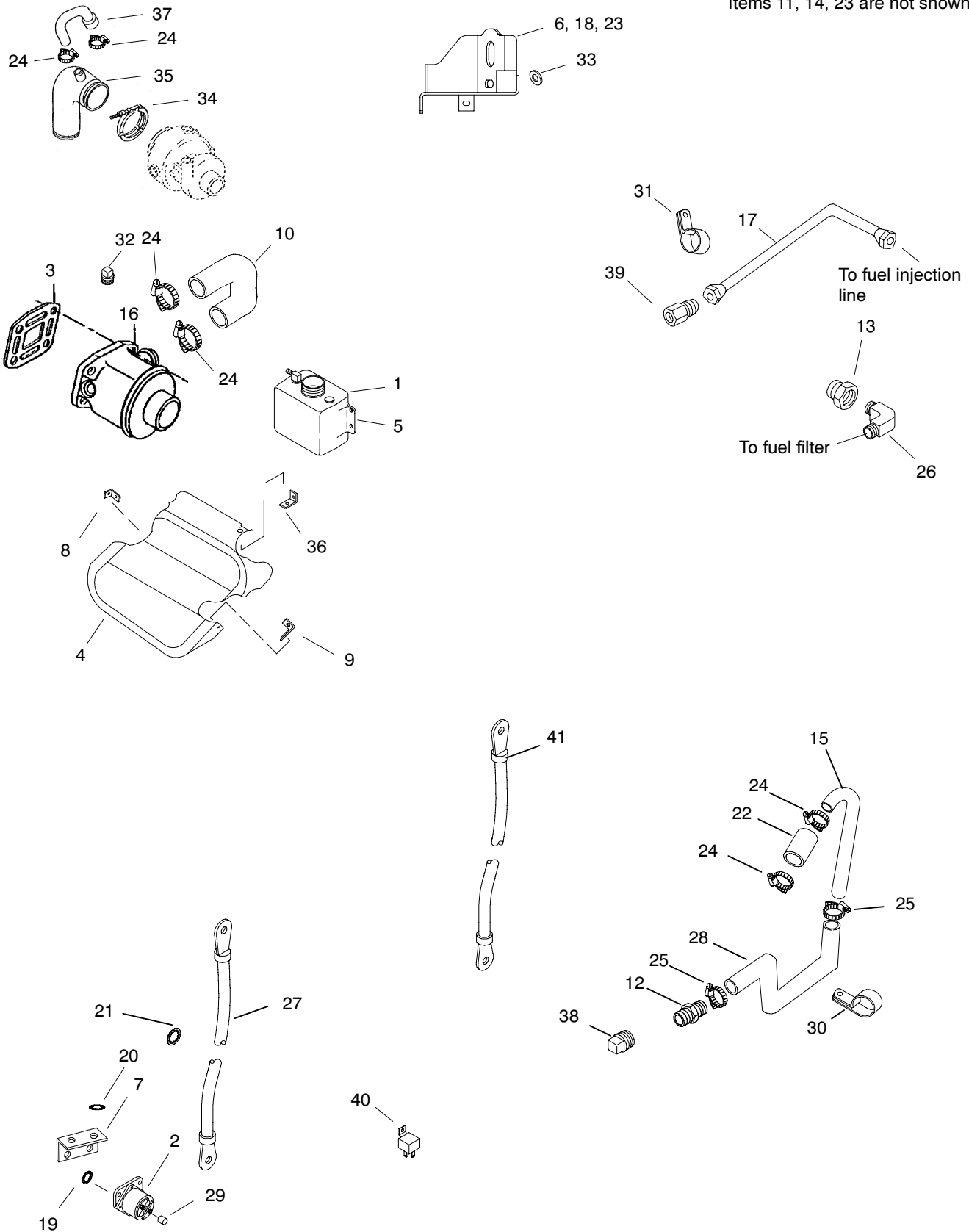


Group 105: Engine, continued

Item	Part Number	Description	Quantity Variation							
			13	14	15	16	29	30	31	32
41	GM49109	Bracket, ECM mounting	1	1	1	1	1	1	1	1
42	GM38784-3	Vibromount, controller	4	4	4	4	4	4	4	4
43	X-25-124	Washer, plain, 0.266 ID x 1 in. OD	4	4	4	4	4	4	4	4
44	X-386-132	Line, flex	1	1	1	1	1	1	1	1
45	X-426-9	Clamp, hose, 0.25/0.70 in.	1	1	1	1	1	1	1	1
46	326316	Rod, adjusting	1	1	1	1	1	1	1	1
47	X-70-10	Nut, hex, 1/2-13	2	2	2	2	2	2	2	2
48	GM49113	Bracket, support	1	1	1	1	1	1	1	1
49	X-672-40	Clamp, insulated	1	1	1	1	1	1	1	1
50	X-6239-11	Bolt, hex cap	2	2	2	2	2	2	2	2

Group 105: Engine, continued

Items 11, 14, 23 are not shown.



6443_105_1

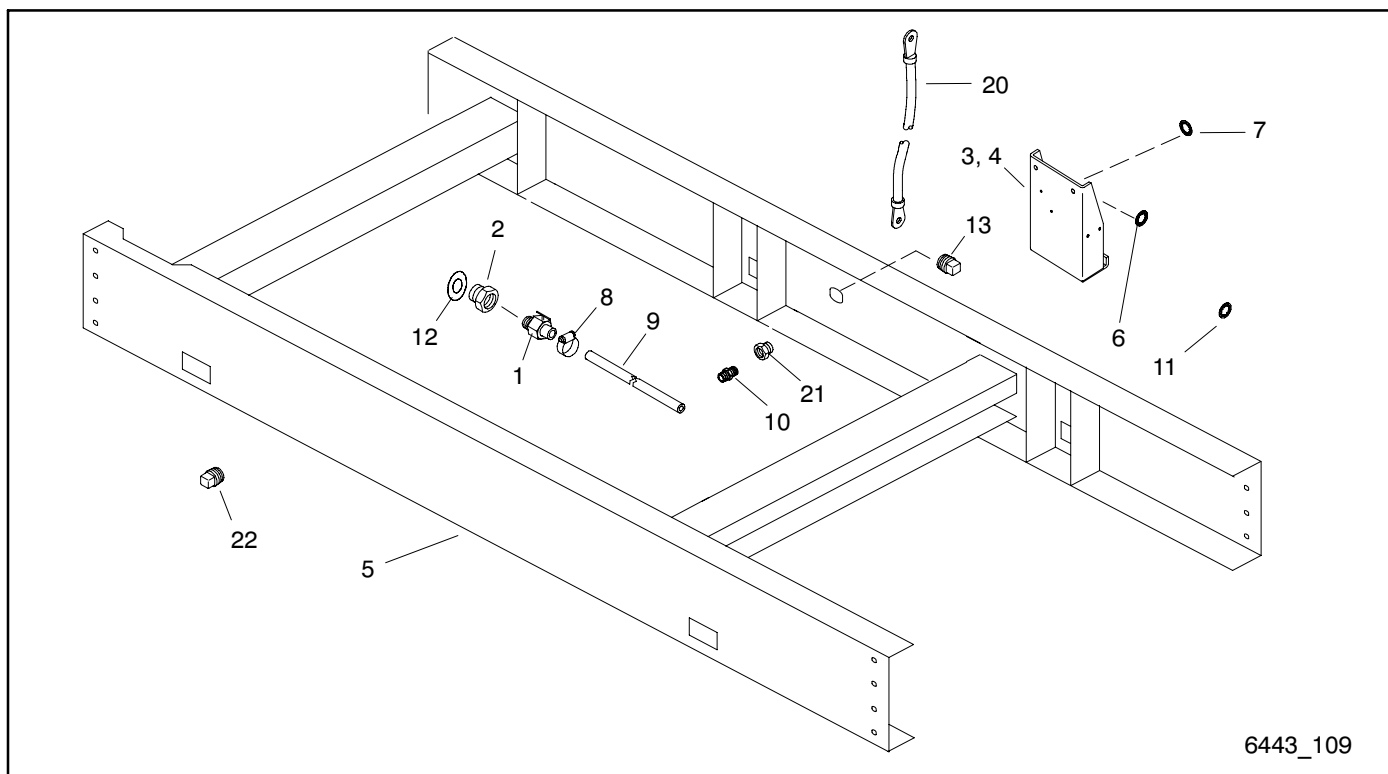
Group 105: Engine, continued

Item	Part Number	Description	Quantity Variation															
			17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	256971	Bottle, overflow	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	GM47692	Bottle, overflow	1			1	1			1	1	1	1	1	1	1	1	1
2	268371	Relay, 24V	1			1	1			1	1	1	1	1	1	1	1	1
2	291891	Relay, 12V		1	1			1	1		1		1		1		1	
3	352029	Gasket	1	1	1	1												
4	GM14015	Guard, belt	1	1	1	1	1	1	1	1	1	1	1	1				
5	GM14198	Bracket, water bottle	1	1	1	1	1	1	1	1	1	1	1	1				
5	GM17048	Bracket, water bottle								1	1	1	1					
5	GM41019	Bracket, water bottle													1	1	1	1
6	GM14216	Eye, lifting	1	1	1	1	1	1	1	1	1	1	1	1				
6	GM40922	Eye, lifting													1	1	1	1
7	GM14320	Bracket, relay mounting	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	GM49942	Bracket, belt guard	1	1	1	1	1	1	1	1	1	1	1	1				
9	GM49941	Bracket, belt guard	1	1	1	1	1	1	1	1	1	1	1	1				
10	GM25430	Hose, seawater, 1.25 in. ID	1	1	1	1												
11	GM28971	Decal, battery connection	1	1	1	1												
12	X-751-3	Connector, hose	1	1	1	1	1	1	1	1	1	1	1	1				
12	GM16625	Connector, hose													1	1	1	1
13	GM42525	Adapter bushing	1	1	1	1					1	1	1	1				
14	GM51614	Engine, JD4045DFM70, 50 Hz, 24V	1															
14	GM51621	Engine, JD4045DFM70, 50 Hz, 12V		1														
14	GM51612	Engine, JD4045DFM70, 60 Hz, 12V			1													
14	GM51613	Engine, JD4045DFM70, 60 Hz, 24V				1												
14	GM51617	Engine, JD4045TFM75, 50 Hz, 24V					1											
14	GM51622	Engine, JD4045TFM75, 50 Hz, 12V						1										
14	GM51615	Engine, JD4045TFM75, 60 Hz, 12V							1									
14	GM51616	Engine, JD4045TFM75, 60 Hz, 24V								1								
14	GM51618	Engine, JD6068TFM76, 60 Hz, 12V									1							
14	GM51619	Engine, JD6068TFM76, 60 Hz, 24V										1						
14	GM51623	Engine, JD6068TFM76, 50 Hz, 12V											1					
14	GM51620	Engine, JD6068TFM76, 50 Hz, 24V												1				
14	GM47496	Engine, JD6081AFM75, 60 Hz, 12 V													1			
14	GM47497	Engine, JD6081AFM75, 60 Hz, 24 V														1		
14	GM47498	Engine, JD6081AFM75, 50 Hz, 12 V															1	
14	GM47499	Engine, JD6081AFM75, 50 Hz, 24 V																1
15	GM47453	Tube, water inlet	1	1	1	1	1	1	1	1	1	1	1	1				
15	GM49112	Tube, water inlet													1	1	1	1
16	GM47702	Elbow, wet exhaust	1	1	1	1									1	1	1	1
17	GM48024	Line, fuel					1	1	1	1					1	1	1	1
17	GM48028	Line, fuel	1	1	1	1					1	1	1	1				
18	M933-10025-82	Screw, hex cap	3	3	3	3	3	3	3	3	3	3	3	3				
18	X-6021-15	Screw, hex cap machine													1	1	1	1
19	X-22-12	Washer, lock, 0.262 ID x 0.743 in. OD	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
20	X-22-16	Washer, lock, 0.326 ID x 0.883 in. OD	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
21	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD	1	1	1	1	1	1	1	1	1	1	1	1				
22	X-272-2	Hose, radiator, straight, 1.25 in. ID	1	1	1	1	1	1	1	1	1	1	1	1				
22	X-281-4	Hose, radiator, straight, 2 in. ID													1	1	1	1
23	X-400-52	Spacer (crankcase canister, not shown)	3	3	3	3												
23	X-400-248	Spacer (lifting eye, not shown)													2	2	2	2
24	X-426-4	Clamp, hose, 1.31/12.25 in.	4	4	4	4	4	4	4	4	4	4	4	4				
24	X-426-8	Clamp, hose, 0.81/1.75 in.													2	2	2	2
25	X-426-8	Clamp, hose, 0.81/1.75 in.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
25	250081	Clamp, hose, 2.06/3 in.													4	4	4	4
26	X-447-23	Elbow, male tube 90 deg. + vibra seal	1	1	1	1					1	1	1	1				
27	X-545-200	Cable, battery	1	1	1	1	1	1	1	1	1	1	1	1				
28	X-6014-124	Hose, radiator wire insert	1	1	1	1	1	1	1	1	1	1	1	1				
28	X-6014-125	Hose, radiator wire insert													1	1	1	1
29	X-6214-2	Cap		1	1			1	1		1	1	1	1	1	1	1	1
30	X-672-21	Clamp, insulated, 1.68 in.	1	1	1	1	1	1	1	1								
30	X-672-22	Clamp, insulated, 2.62 in.													1	1	1	1
31	X-672-31	Clamp, insulated, 0.75 in.	1	1	1	1												
32	X-75-4	Plug, pipe, 1/8 in. NPT	1	1	1	1					1	1	1	1				
33	X-801-3	Washer, hardened, 0.406 ID x .812 in. OD	3	3	3	3	3	3	3	3	3	3	3	3				
33	X-801-5	Washer, hardened, 0.656 ID x 1.06 in. OD													1	1	1	1
34	324245	Clamp, exhaust, 4.25 in.					1	1	1	1	1	1	1	1	1	1	1	1
35	GM47704	Elbow, wet exhaust					1	1	1	1	1	1	1	1				
35	GM47705	Elbow, wet exhaust													1	1	1	1
36	GM49943	Bracket, belt guard	1	1	1	1	1	1	1	1	1	1	1	1				
37	GM25435	Hose, seawater, 1.25 in. ID					1	1	1	1	1	1	1	1				
37	X-272-23	Hose													1	1	1	1
38	X-75-57	Plug, pipe	1	1	1	1	1	1	1	1	1	1	1	1				
39	X-514-6	Fitting, fuel, straight									1	1	1	1				
40	259391	Relay, 12 V									1		1		1		1	
40	272684	Relay, 24 V										1		1		1		1
41	X-545-165	Cable, battery (ground starter to engine)	1			1	1			1		1		1				

Group 107: Nameplate and Decals

Item	Part Number	Description	Quantity Variation			
			63	64	65	66
1	224233	Decal, 1-800 number	1	1	1	1
2	226917	Decal, negative battery connection	1	1	1	1
3	238162	Decal, pos. battery connection	1	1	1	1
4	239796	Decal, warning carbon monoxide	1	1	1	1
5	249808	Decal, warning rotating parts	1	1	1	1
6	249809	Decal, Caution Hot Engine	1	1	1	1
7	249810	Decal, warning hot coolant	1	1	1	1
8	253259	Tag, instruction voltage checked	1	1	1	1
9	257438	Decal, danger hazardous voltage	1	1	1	1
10	259365	Decal, warning voltage backfeed	1	1	1	1
12	344282	Decal, notice zinc anode	1	1	1	1
13	344295	Decal, Equipment Ground	1	1	1	1
14	344486	Decal, CE	1	1	1	1
15	GM14167	Decal, drain	2	2	2	2
16	X-6348-3	Decal, Kohler Power Systems	1			
16	X-6348-8	Decal, Kohler Power Systems		1		
16	X-6348-2	Decal, Kohler Power Systems			1	1
17	359278	Decal, fuel inlet	1	1	1	1
18	359279	Decal, fuel return	1	1	1	1
19	GM28971	Decal, battery connection	1	1	1	
20	GM50576	Decal, air cleaner		1	1	1

Group 109: Skid and Plant Mounting

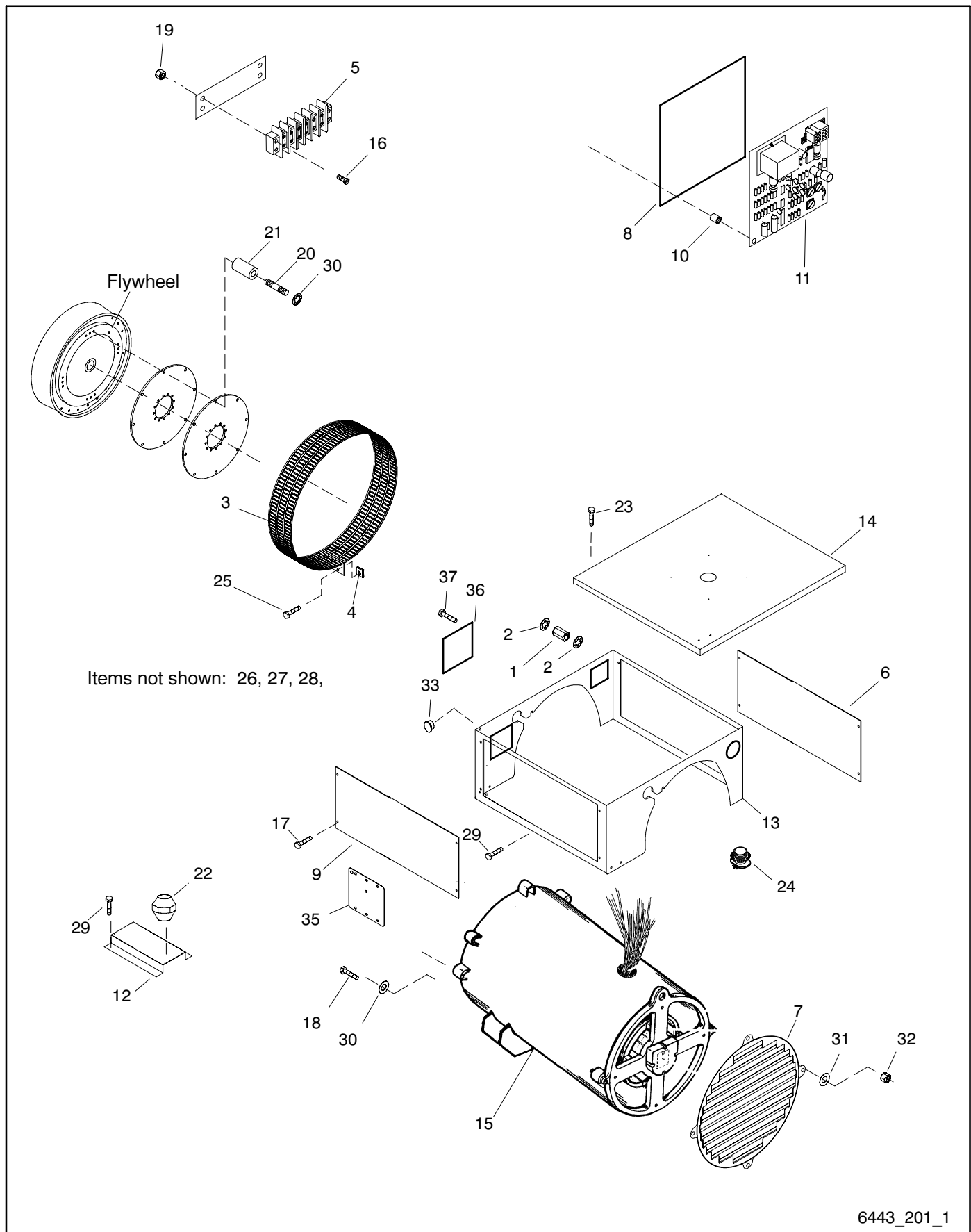


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Item	Part Number	Description	Quantity						
			Variation						
			1	2	3	4	5	6	7
1	272701	Valve, oil drain	1	1			1	1	1
1	359653	Valve, oil drain, 3/8-18 NPT			1	1			
2	GM22991	Adapter, bushing	1	1					
2	249959	Adapter, bushing			1	1			
2	276550	Adapter, bushing					1	1	1
3	GM14204	Support, engine, right hand	1	1	1	1			
3	GM16618	Support, engine					1	1	
3	GM48912	Support, engine							1
4	GM14205	Support, engine, left hand	1	1	1	1			
4	GM16618	Support, engine					1	1	
4	GM48912	Support, engine							1
5	GM47370	Skid	1						
5	GM14385	Skid		1					
5	GM17050	Skid			1				
5	GM48033	Skid				1			
5	GM49796	Skid					1		
5	GM40838	Skid						1	
5	GM48911	Skid							1
6	X-22-16	Washer, lock, 0.326 ID x 0.883 in. OD	1	1	1	1	2	2	2
7	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD	1	1	1	1			
8	X-426-10	Clamp, hose, 0.5/1 in.	2	2			2	2	2
8	X-426-9	Clamp, hose, 0.25/.70 in.			2	2			
9	X-577-48	Hose, rubber, straight, 0.62 in. ID	1	1					
9	X-651-32	Hose, rubber, straight, 0.375 in. OD			1	1			
9	X-577-5	Hose, rubber, straight, 0.62 in. ID					1	1	
9	X-577-28	Hose, rubber, straight, 0.62 in. ID							1
10	X-582-1	Connector, hose + vibra seal	1	1			1	1	1
10	X-582-9	Connector, hose + vibra seal			1	1			
11	X-22-30	Washer, lock, 0.652 ID x 0.58 in. OD	2	2	2	2	1	1	1
12	GM11694	O-ring, ISO 6149, 15.3 mm ID	1	1					
12	365615	O-ring, ISO 6149, 19.3 mm ID			1	1			1
12	276552	Washer, nylon, 0.878 ID x 1.132 in. OD					1	1	
13	X-75-54	Plug, pipe, 1/2 in. NPT, brass	2	2	2	2	2	2	2
20	X-545-200	Cable, battery	1	1	1	1			
20	X-545-201	Cable, battery					1	1	1
21	X-202-28	Bushing, reducing, 3/8 x 1/2 in. NPT			1	1			
22	X-75-57	Plug, pipe, 1 1/4 in. NPT			1	1			

See Accessories section for optional installed mounts

Group 201: Alternator and Mounting



6443_201_1

Group 201: Alternator and Mounting

Item	Part Number	Description	Quantity Module						
			GM48871-MA1	GM48871-MA2	GM48871-MA3	GM48871-MA4	GM48871-MA5	GM48871-MA6	GM48871-MA7
1	X-6128-30	Standoff insulator, 1/4-20 x 1	3	3	3	3	3	3	
1	233568	Insulator							3
2	X-22-12	Washer, lock, 0.262 ID x 0.743 in. OD	6	6	6	6	6	6	
2	X-22-14	Washer, lock, .391 ID x .975 in. OD							6
3	257046	Guard, generator fan	1						
3	257179	Guard, generator fan		1	1	1	1	1	
3	347268	Guard, generator fan							2
4	257442	Clip, speed	2	2	2	2	2	2	2
5	—	See Control and Harness group							
6	344082	Panel, junction box, right hand	1	1	1	1	1	1	1
7	344153	Cover, end bracket	1						
7	344154	Cover, end bracket		1	1	1	1	1	
7	GM37621	Cover, end bracket							1
8	GM24359	Cover, voltage regulator	1						
8	GM24357	Cover, voltage regulator		1					
8	GM24358	Cover, voltage regulator			1	1			
8	GM52247	Cover, voltage regulator					1	1	1
9	344177	Panel, junction box, left hand	1						
9	344421	Panel, junction box, left hand		1	1	1	1	1	1
10	—	See Control and Harness group							
11	—	See Control and Harness group							
12	GM14210	Bracket, lead connection	1	1	1	1	1	1	1
13	GM47381	Box, junction	1						
13	GM47502	Box, junction		1					
13	GM48722	Box, junction			1	1			
13	GM40754	Box, junction					1	1	
13	GM41081	Box, junction							1
14	GM47385	Cover, junction box	1						
14	GM14451	Cover, junction box		1					
14	GM17052	Cover, junction box			1	1			
14	GM16616	Cover, junction box					1	1	
14	GM41082	Cover, junction box							1
15	GM46767	Alternator assembly (4P7B)	1						
15	GC14453	Alternator assembly (4S7)		1					
15	A-359178	Alternator assembly (4S9)			1				
15	GM16612	Alternator assembly (4S11)				1			
15	GM24417	Alternator assembly (4S11)					1		
15	GM46871	Alternator assembly (4S15)						1	
15	GM41075	Alternator assembly (4UA9)							1
16	—	See Control and Harness group							
17	M7985A-05010-20	Screw, pan head, M5 x 10	12	12	12	12	12	12	12
18	M933-10030-82	Bolt, hex cap	6						
18	M931-10040-82	Bolt, hex cap		6	6	6			
18	270158	Bolt, hex cap					6	6	12
19	—	See Control and Harness group							
20	X-352-121	Stud, 3/8-16 x 3.62 in.	8	8	8	8			
20	X-352-63	Stud, 3/8-16 x 4 in.					8	8	8
21	X-400-219	Spacer, 0.406 ID x 0.625 OD x 2.156 in.	8	8	8	8			
21	X-400-132	Spacer, 0.406 ID x 0.625 OD x 2.531 in.					8	8	8
22	X-6128-3	Standoff insulator, 1/4-20 x 1.5 in.	4	4	4	4	4	4	4
23	X-6216-1	Screw, Phillips hex crimp	10	10	10	10	10	10	10
24	X-6266-2	Connector, cable	1	1					
24	X-6266-3	Connector, cable			1	1	1	1	1
25	X-67-125	Screw, hex washer, thread-forming	2	2	2	2	2	2	2
26	X-750-14	Marker, wire (not shown)	1	1	1	1	1	1	1
27	X-750-15	Marker, wire (not shown)	1	1	1	1	1	1	1
28	X-750-16	Marker, wire (not shown)	1	1	1	1	1	1	1
29	X-794-4	Screw, hex seal washer head, drill	10	10	10	10	10	10	10
30	X-801-3	Washer, hardened, 0.406 ID x 0.812 in. OD	14	14	14	14	14	14	14
31	X-25-169	Washer, plain	4	4	4	4	4	4	4
32	X-6234-7	Nut, hex, 3/8-16	4	4	4	4	4	4	
32	X-6234-9	Nut, hex							4
33	X-301-36	Plug, button	1				1	1	1
34	362323	Cap, stud (not shown)					6	6	
35	246434	Plate, cover	1	1	1	1	1	1	1
36	GM50592	Cover, terminal block		1	1	1	1	1	1
37	X-6216-1	Screw, Phillips hex crimp		2	2	2	2	2	2

This exploded view diagram illustrates the assembly of a mechanical component, likely a motor or actuator. The parts are numbered 1 through 33. The diagram shows the following components and their assembly sequence:

- Base and Housing:** Part 1 is the main base plate. Part 2 is the motor housing. Part 3 is a mounting bracket. Part 4 is a mounting plate. Part 5 is a mounting plate. Part 6 is a mounting plate. Part 7 is a mounting plate. Part 8 is a mounting plate. Part 9 is a mounting plate. Part 10 is a mounting plate. Part 11 is a mounting plate. Part 12 is a mounting plate. Part 13 is a mounting plate. Part 14 is a mounting plate. Part 15 is a mounting plate. Part 16 is a mounting plate. Part 17 is a mounting plate. Part 18 is a mounting plate. Part 19 is a mounting plate. Part 20 is a mounting plate. Part 21 is a mounting plate. Part 22 is a mounting plate. Part 23 is a mounting plate. Part 24 is a mounting plate. Part 25 is a mounting plate. Part 26 is a mounting plate. Part 27 is a mounting plate. Part 28 is a mounting plate. Part 29 is a mounting plate. Part 30 is a mounting plate. Part 31 is a mounting plate. Part 32 is a mounting plate. Part 33 is a mounting plate.
- Fasteners:** Various screws and bolts are used to secure the components, including parts 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, and 33.
- Assembly Sequence:** The diagram shows the assembly sequence from the base (1) and motor housing (2) up to the final mounting plate (33).

Group 201: Alternator and Mounting, continued

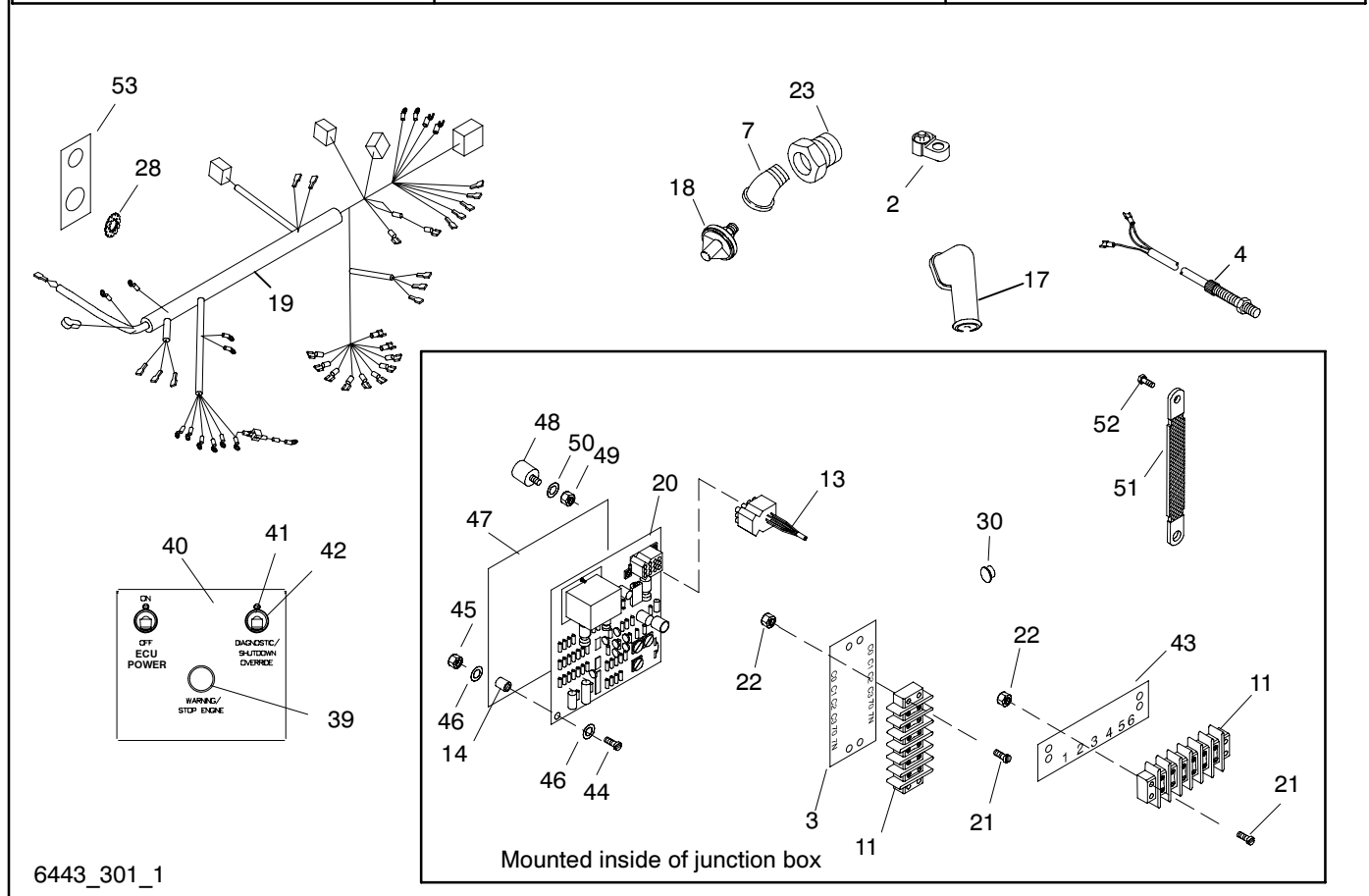
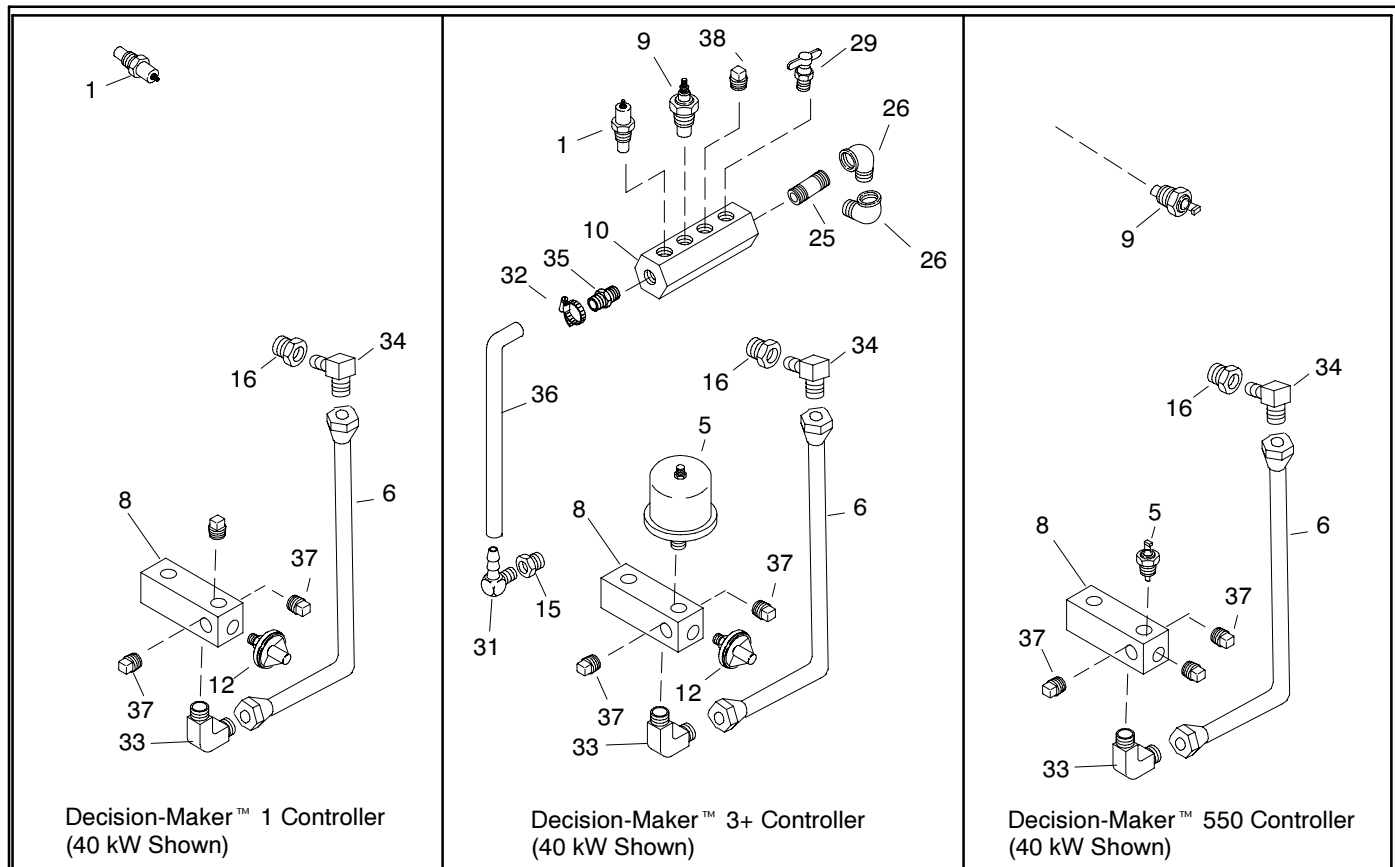
Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.
1	B-257099	PCB assembly, LED, FRII	1	20	X-791-6	Screw, hex head machine (4U alternators)	1
2	See chart below	Rotor assembly	1	21	X-801-3	Washer, hardened, .406 ID x .812 in.	8/12
3	B-258545	Heatsink (4P, 4Q alternators)	1	22	See chart below	Stator assembly	1
3	B-258549	Heatsink (4S alternators)	1	23	257850	Insulator	1
3	B-354299	Heatsink (4UA9 alternator)	1	24	257984	Bracket, end (4P, 4Q alternators)	1
4	X-758-2	Bearing, ball (4P, 4Q alternators)	1	24	257983	Bracket, end (4S alternators)	1
4	X-758-6	Bearing, ball (4S alternators)	1	24	347236	Bracket, end (4UA alternators)	1
4	X-758-9	Bearing, ball (4UA9 alternators)	1	25	257986	Connector, lead (4P, 4Q alternators)	1
5	GM34505	PCB assembly, photo receiver	1	25	257978	Connector, lead (4UA alternators)	1
6	X-101-24	Nut, hex elastic stop, 6-32 (4P, 4Q, 4S alternators)	5	25	257985	Connector, lead (4S alternators)	1
7	X-117-5	Screw, hex head machine	2	26	270956	Screw, cylinder head 3/8-16 x 1 1/4	8/12
8	X-22-44	Washer, lock, .262 ID x .743 in. OD (4P, 4Q alternators)	2	26	270158	Bolt, hex cap (4UA alternators)	12
8	X-22-45	Washer, lock, .338 ID x .884 in. OD (4S alt)	2	27	347697	Fan, alternator (4P, 4Q alternators)	1
8	X-22-46	Washer, lock, .391 ID x .975 in. OD (4U alt)	2	27	257173	Fan, alternator (4S alternators)	1
9	X-22-9	Washer, lock, .20 ID x .373 in. OD	2	27	257855	Fan, alternator (4UA alternators)	1
10	X-25-93	Washer, plain, .406 ID x .75 in. OD (4P, 4S)	4	28	X-465-8	Screw, HC (4P, 4Q alternators)	3
10	X-25-93	Washer, plain, .406 ID x .75 in. OD (4UA)	8	28	X-125-24	Screw, HC (4S alternators)	3
11	X-283-7	Terminal, ring, male, 22-16 AWG (4P, 4S)	4	28	X-6238-5	Screw, HC (4UA alternators)	3
11	X-431-25	Terminal, fast-on, 18-22 AWG (4UA)	4	29	X-456-16	Screw, HC (4P, 4Q alternators)	1
12	X-6071-1	Screw, Phillips pan head	4	29	X-125-31	Screw, HC (4S alternators)	1
13	X-67-133	Screw, hex washer, thread-forming	3	29	X-6238-11	Screw, HC (4UA alternators)	1
14	243321	Washer, insulating, .195 ID x .5 in.	2	30	X-125-34	Screw, HC (4P, 4S)	4
15	257016	Disc, armature drive (4P, 4Q alt.)	2	30	X-6238-9	Screw, HC (4UA)	1
15	257103	Disc, armature drive (4S alternators)	3	30	X-6238-17	Screw, HC (4UA)	3
15	222881	Disc, armature drive (4UA9 alternator)	4	30	X-801-3	Washer, hardened (not shown) (4UA)	4
16	257018	Adapter, generator (4P, 4Q alternators)	1	31	X-6238-11	Screw, HC	4
16	257175	Adapter, generator (4S alternators)	1	32	X-6238-6	Screw, HC (4P, 4Q alternators)	6
16	347241	Adapter, generator (4UA9 alternator)	1	32	X-6238-9	Screw, HC (4S alternators)	5
17	257077	Actuator, magnetic cup	1	32	X-6238-6	Screw, HC (4S alternators)	1
18	See chart below	Exciter field assembly	1	32	X-129-25	Screw, HC (4UA alternators)	8
19	257258	Cover, FR LED circuit board	1	33	273736	Screw, HC, special thread (4P, 4Q alt.)	4
20	X-791-5	Screw, hex head machine (4P, 4Q alt.)	1	33	352415	Screw, HC, special thread (4S alternators)	4
20	X-791-7	Screw, hex head machine (4S alternators)	1	33	273738	Screw, HC (4UA alternators)	4
				34	X-25-93	Washer, plain, .406 ID x .75 in. OD (4P,4S)	10
				34	290945	Washer, hardened (under head of bolt) 4UA	12
				34	257951	Washer, spec., (4UA)	12

Generator and Mounting Parts

Use this table to identify the part numbers of items 2, 18, and 22.

Module	Alternator Model	Part Number			
		Alternator Assembly	Item 2, Rotor Assembly	Item 18, Exciter Assembly	Item 22, Stator Assembly
GM48871-MA1	4P7B	GM46767	GM47566	257081	GM46758
GM48871-MA2	4S7	GC14453	GCA-276664	GC276657	GC14452
GM48871-MA3	4S9	A-359178	A-276665	276657	359177
GM48871-MA4	4S11	GM16612	A-343443	276657	GM16610
GM48871-MA5	4S11	GM24417	GM24415	276657	GM24416
GM48871-MA6	4S15	GM46871	GM48961	276657	GM46870
GM48871-MA7	4UA9	GM41075	GM41078	347707	GM41076-1

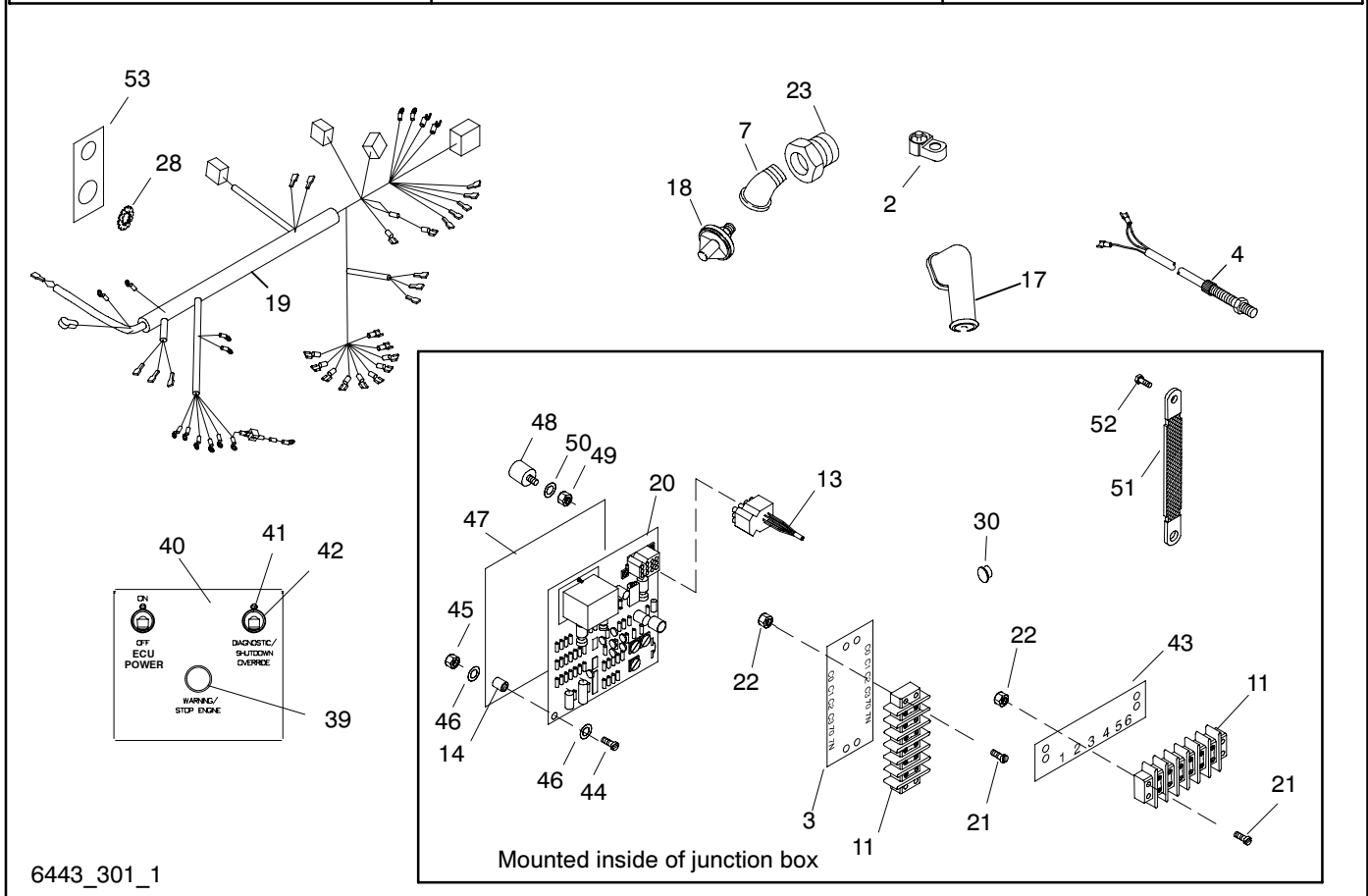
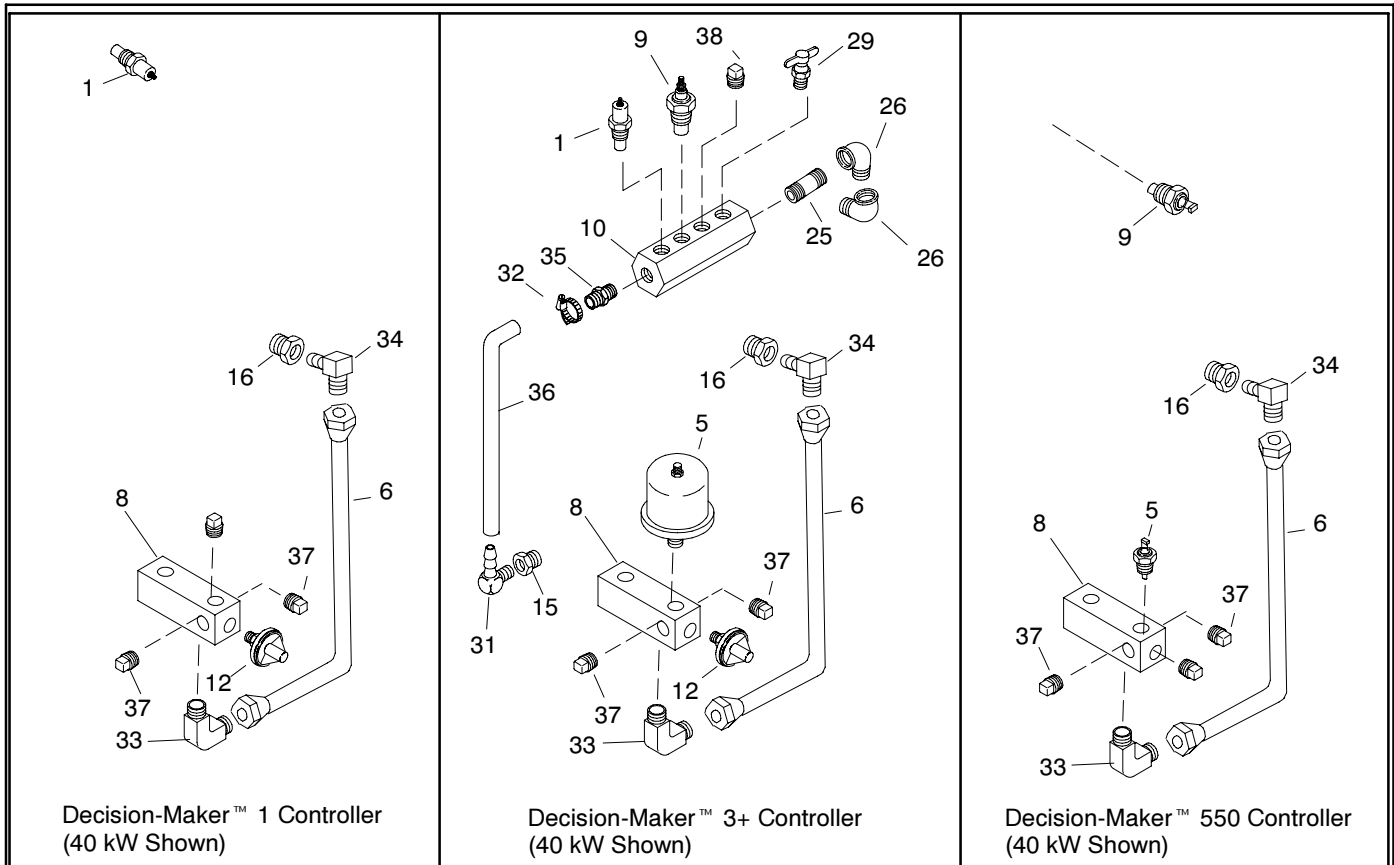
Group 301: Control and Harness



Group 301: Control and Harness

Item	Part Number	Description	Quantity Module											
			GM48845-MA1	GM48845-MA2	GM48845-MA3	GM48845-MA4	GM48845-MA5	GM48845-MA6	GM40823-MA1	GM40823-MA2	GM40823-MA3	GM40823-MA4	GM40823-MA5	GM40823-MA6
1	241481	Switch, high temperature shutoff	1			1		1	1		1	1	1	
2	249872	Switch, high temperature shutoff	1	1	1	1	1	1	1	1	1	1	1	1
3	255080	Marker, strip	1	1	1	1	1	1	1	1	1	1	1	1
7	267428	Fitting, 45 deg. street elbow	1	1		1	1							
7	X-555-2	Elbow, street, 90 deg x 1/8 in. NPTF							1	1	1	1	1	1
11	295314	Terminal block	2	2	2	2	2	2	2	2	2	2	2	2
12	328309	Switch assembly, oil pressure	1			1			1			1		
12	267428	Fitting, 45 deg. street elbow (not shown)	1			1								
13	354118	Wiring harness, CT harness FRII	1	1		1	1		1	1		1	1	
14	X-712-13	Spacer, 0.25 OD, 0.375 in.	4	4		4	4		4	4		4	4	
17	GM22350	Boot, starter terminal	1	1	1	1	1	1	1	1	1	1	1	1
18	GM30263	Switch, pressure assembly	1	1	1	1	1	1	1	1	1	1	1	1
19	GM49659	Harness, engine 50-99 kW JD Marine	1											
19	GM47819	Harness, engine		1										
19	GM40558	Harness, engine 55-99 kW JD Marine			1									
19	GM51632	Harness, engine 55-99 kW JD Marine				1								
19	GM51633	Harness, engine 55-99 kW JD Marine					1							
19	GM51634	Harness, engine 55-99 kW JD Marine						1						
19	GM47807	Harness, engine 40 kW JD Marine												
19	GM49371	Harness, engine 40 kW JD Marine												
19	GM49200	Harness, engine 125-180 kw Marine							1			1		
19	GM48026	Harness, engine 125								1			1	
19	GM49108	Harness, engine 125-180 kW Marine									1			1
20	GM47955	PCB assy., FRII regulator with bias adj.	1	1		1	1		1	1		1	1	
21	M7985A-04020-20	Screw, pan head machine	4	4	4	4	4	4	4	4	4	4	4	4
22	M934-04-50	Nut, hex, 4mm	4	4	4	4	4	4	4	4	4	4	4	4
23	X-202-27	Bushing, reducing, 1/8 x 1/4 in. NPT +vibra	1	1	1	1	1	1	1	1	1	1	1	1
28	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD	1	1	1	1	1	1	1	1	1	1	1	1
28	X-22-30	Washer, lock, .652 ID x 1.058 in. OD										1	1	1
39	343684	Lamp assy., 28VDC yellow/amber LED	1	1	1	1	1	1	1	1	1	1	1	1
40	GM48805	Decal, light box	1	1	1	1	1	1	1	1	1	1	1	1
41	295030	Switch, toggle, 1-pole	2	2	2	2	2	2	2	2	2	2	2	2
42	151511	Ring, lock switch	2	2	2	2	2	2	2	2	2	2	2	2
43	299090	Marker, strip	1	1	1	1	1	1	1	1	1	1	1	1
44	X-51-4	Screw, machine	4	4		4	4		4	4		4	4	
45	X-72-4	Nut, hex machine screw, 8-32	4	4		4	4		4	4		4	4	
46	X-22-7	Washer, lock, 0.172 ID x 0.333 in. OD	8	8		8	8		8	8		8	8	
47	GM51445	Plate, mounting	1	1		1	1		1	1		1	1	
48	282829	Vibromount	3	3		3	3		3	3		3	3	
49	X-6210-4	Nut, flange whiz, 8-32	6	6		6	6		6	6		6	6	
50	X-22-18	Washer, lock, 0.172 ID x 0.595 in. OD	6	6		6	6		6	6		6	6	
51	X-6046-12	Strap, ground				1	1		1	1		1	1	
51	X-696-8	Tubing, vinyl (not shown)				1	1		1	1		1	1	
52	M7985A-05012-20	Screw, pan head machine				1	1		1	1		1	1	
53	GM51891	Bus, ground										1	1	1

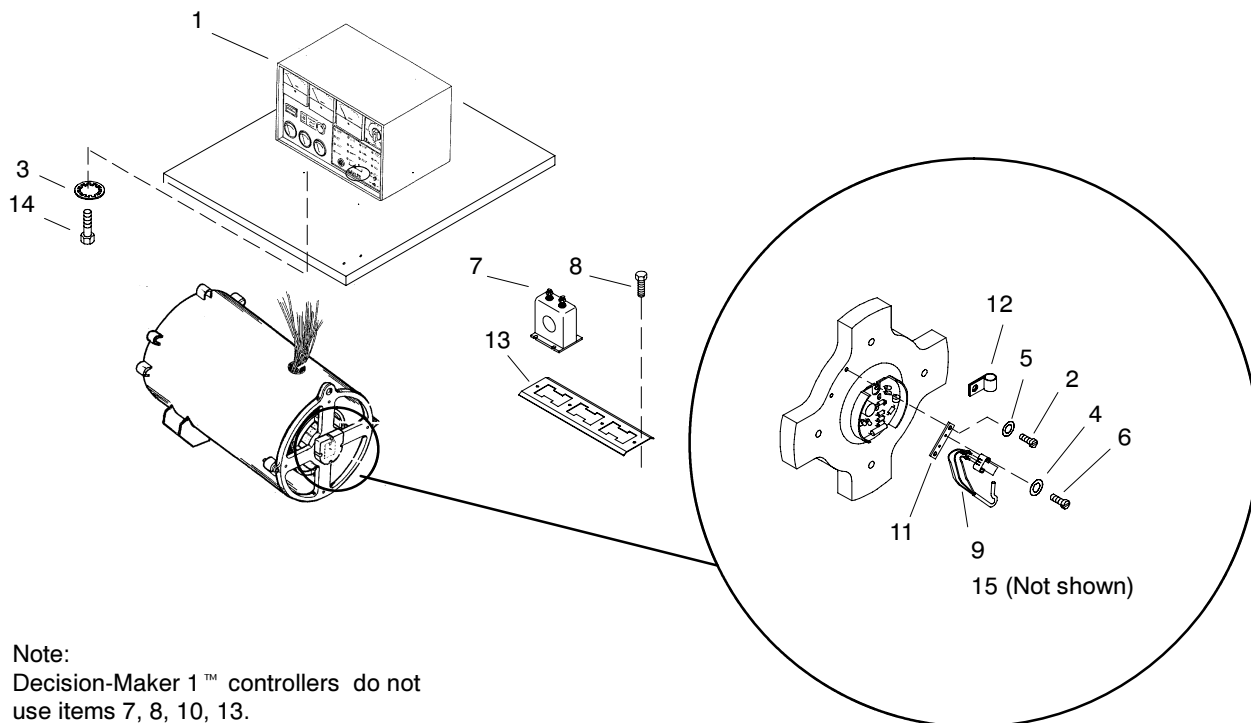
Group 301: Control and Harness, continued



Group 301: Control and Harness, continued

Item	Part Number	Description	Quantity					
			Module					
			GM49128-MA1	GM49128-MA2	GM49128-MA3	GM49128-MA4	GM49128-MA5	GM49128-MA6
1	241481	Switch, high temperature shutoff	1	1		1	1	
2	249872	Switch, high temperature shutoff	1	1	1	1	1	1
3	255080	Marker, strip	1	1	1	1	1	1
4	255750	Pickup, magnetic		1	1	1	1	1
5	264390	Sender, oil pressure		1			1	
5	GM16788	Sensor, pressure, 1/8-27 NPT			1			1
6	265461	Line, flexible	1	1	1	1	1	1
6	265462	Line, flexible						
7	267428	Fitting, 45 deg. street elbow	1	1	1	1	1	1
8	267548	Block, oil gauge	1	1	1	1	1	1
9	268298	Sender, water temperature		1			1	
9	GM31045-1	Sensor, temperature, 1/2-14 NPT			1			1
10	276659	Manifold, water temperature switch		1			1	
11	295314	Terminal block	1	1	1		1	1
12	328309	Switch assembly, oil pressure	1	1		1	1	
13	354118	Wiring harness, CT harness FRII	1	1		1	1	
14	X-712-13	Spacer, 0.25 OD, 0.375 in.	4	4		4	4	
15	364350	Adapter, bushing		1			1	
16	GM14191	Adapter, bushing	1	1		1	1	
17	GM22350	Boot, starter terminal	1	1	1	1	1	1
18	GM30263	Switch, pressure assembly	1	1	1	1	1	1
19	GM47807	Harness, engine 40 kW JD Marine	1	1				
19	GM49371	Harness, engine 40 kW JD Marine			1			
19	GM51626	Harness, engine 40 kW JD Marine				1	1	
19	GM51627	Harness, engine 40 kW JD Marine						1
20	GM47955	PCB assy., FRII regulator with bias adj.	1	1		1	1	
21	M7985A-04020-20	Screw, pan head machine	2	2	2	2	2	2
22	M934-04-50	Nut, hex, 4mm	2	2	2	2	2	2
23	X-202-27	Bushing, reducing, 1/8 x 1/4 in. NPT +vibra	1	1	1	1	1	1
25	X-209-11	Pipe, 1/2 in. NPT x 3.00 in.		1			1	
26	X-211-1	Elbow, street, 90 deg x 1/2 in. NPTF		2			2	
27	X-22-14	Washer, lock, 0.391 ID x 0.975 in. OD	1	1	1	1	1	1
28	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD	1	1	1	1	1	1
29	X-256-3	Valve, drain, 1/4 in. NPTF		1	1		1	1
30	X-301-36	Plug, button	1	1	1	1	1	1
31	X-391-1	Connector, 90 deg., 1/4 in. ID hose		1			1	
32	X-426-9	Clamp, hose, 0.25/0.70 in.		2			2	
33	X-447-10	Elbow, male tube, 90 deg + vibra seal	1	1	1	1	1	1
34	X-555-2	Elbow, street, 90 deg x 1/8 in. NPTF	1	1	1	1	1	1
35	X-582-25	Connector, hose + vibra seal		1			1	
36	X-6359-1	Hose, rubber, straight, 0.25 in. ID		1			1	
37	X-75-1	Plug, pipe, 1/8 in. NPTF	3	3	1	3	3	1
38	X-75-54	Plug, pipe, 1/2 in. NPTF brass		2	2		2	2
44	X-51-4	Screw, machine	4	4		4	4	
45	X-72-4	Nut, hex machine screw, 8-32	4	4		4	4	
46	X-22-7	Washer, lock, 0.172 ID x 0.333 in. OD	8	8		8	8	
47	GM51445	Plate, mounting	1	1		1	1	
48	282829	Vibromount	3	3		3	3	
49	X-6210-4	Nut, flange whiz, 8-32	6	6		6	6	
50	X-22-18	Washer, lock, 0.172 ID x 0.595 in. OD	6	6		6	6	
51	X-6046-12	Strap, ground				1	1	
51	X-696-8	Tubing, vinyl (not shown)				1	1	
52	M7985A-05012-20	Screw, pan head machine				1	1	

Group 301: Controller and Mounting

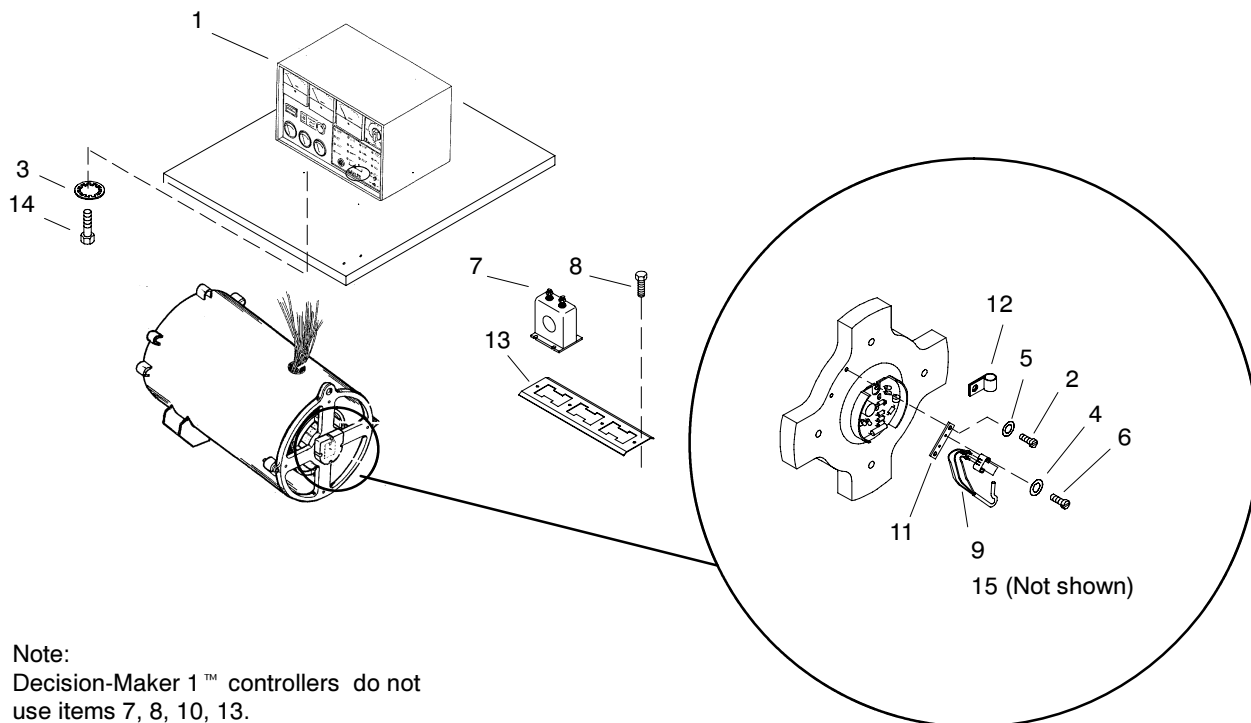


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Group 301: Controller and Mounting

Item	Part Number	Description	Quantity															
			Module Number															
			GM40397-MA1	GM40397-MA2	GM40397-MA5	GM40397-MA6	GM40397-MA9	GM40397-MA10	GM40397-MA13	GM40397-MA14	GM40397-MA17	GM40397-MA18	GM40397-MA21	GM40397-MA22	GM40397-MA23	GM40397-MA24	GM40397-MA25	GM40397-MA26
1	A-336597	Controller assy., Decision-Maker 1, 12 V	1														1	
1	A-359098	Controller assy., Decision-Maker 1, 24 V		1														1
1	364451-315	Controller assy., 16-light, standard, 12 V			1													
1	364451-316	Controller assy., 16-light, standard, 24 V				1												
1	364451-317	Controller assy., 16-light, standard, 12 V					1											
1	364451-318	Controller assy., 16-light, standard , 24 V						1										
1	364451-319	Controller assy., 16-light, standard, 12 V							1									
1	364451-320	Controller assy., 16-light, standard, 24 V								1								
1	364451-321	Controller assy., 16-light, standard, 12 V									1							
1	364451-322	Controller assy., 16-light, standard, 24 V										1						
1	364451-323	Controller assy., 16-light, standard, 12 V											1					
1	364451-324	Controller assy., 16-light, standard, 24 V												1				
1	364451-325	Controller assy., 16-light, standard, 12 V													1			
1	364451-326	Controller assy., 16-light, standard, 24 V														1		
2	X-117-5	Screw, hex head, 10-24 x 5/8	4	4	4	4	3	3	3	3	3	3	3	3	3	3	4	4
3	X-22-16	Washer, lock, 5/16, internal/external tooth	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
4	X-22-24	Washer, lock, #4, internal tooth	2	2	2	2											2	2
5	X-22-9	Washer, lock, #10, internal tooth	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2
6	X-49-35	Screw, round head slotted	2	2	2	2											2	2
7	259414	Current transformer, 200:5, 2VA square			3	3												
7	253502	Current transformer, 250:5, 2VA square					3	3										
7	253503	Current transformer, 400:5, 2VA square							3	3								
7	273257	Current transformer, 500:5, 25VA square									3	3						
7	253610	Current transformer, 600:5, 2VA square											3	3				
7	GM11472	Current transformer														3	3	
8	X-794-1	Screw, hex washer head, drill, 1/4-14 x 5/8			4	4	4	4	4	4	4	4	4	4	4	4		
9	241623	Sensor, ferromagnetic	1	1	1	1											1	1
11	257070	Bracket, sensor mounting	1	1	1	1											1	1
12	X-672-15	Clamp, insulated, .25 in.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	276417	Bracket, CT mounting			1	1	1	1	1	1								
13	299966	Bracket, CT mounting									1	1	1	1	1	1		
14	X-125-23	Bolt, hex head, 5/16-18 x .62	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
15	X-6003-107	Conduit (not shown)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Group 301: Controller and Mounting

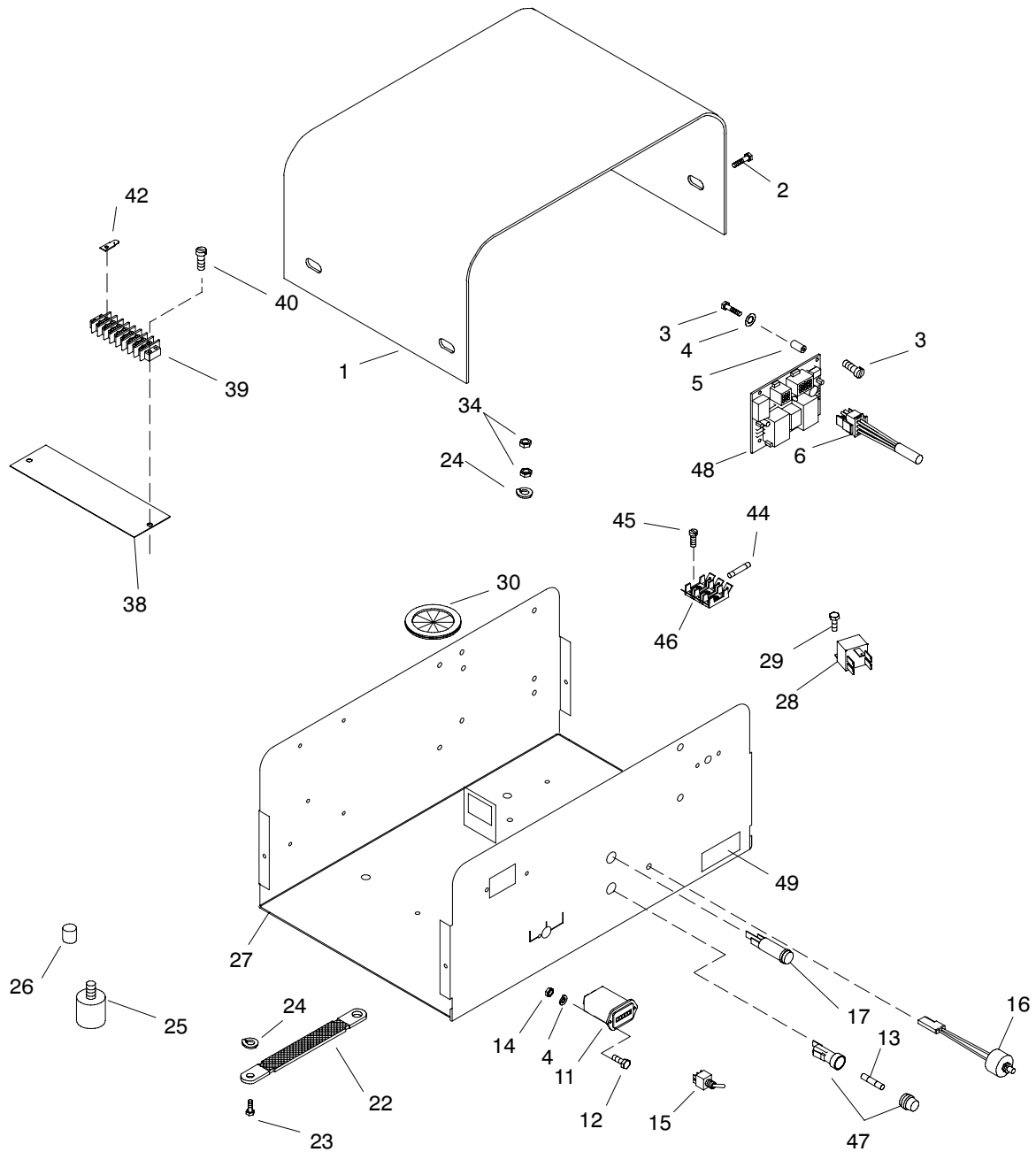


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Group 301: Controller and Mounting

Item	Part Number	Description	Quantity									
			Module Number									
			GM40397-MA27	GM40397-MA28	GM40397-MA29	GM40397-MA30	GM40397-MA31	GM40397-MA32	GM40397-MA33	GM40397-MA34	GM40397-MA35	GM40397-MA36
1	A-336597	Controller assembly, Decision-Maker 1, 12 V	1				1					
1	A-359098	Controller assembly, Decision-Maker 1, 24 V		1				1				
1	364451-315	Controller assembly, 16-light, standard, 12 V			1							
1	364451-316	Controller assembly, 16-light, standard, 24 V				1						
1	364451-317	Controller assembly, 16-light, standard, 12 V							1			
1	364451-318	Controller assembly, 16-light, standard, 24 V								1		
1	364451-319	Controller assembly, 16-light, standard, 12 V									1	
1	364451-320	Controller assembly, 16-light, standard, 24 V										1
2	X-117-5	Screw, hex head, 10-24 x 5/8	4	4	4	4	4	4	3	3	3	3
3	X-22-16	Washer, lock, 5/16, internal/external tooth	4	4	4	4	4	4	4	4	4	4
4	X-22-24	Washer, lock, #4, internal tooth	2	2	2	2	2	2				
5	X-22-9	Washer, lock, #10, internal tooth	2	2	2	2	2	2	1	1	1	1
6	X-49-35	Screw, round head slotted	2	2	2	2	2	2				
7	259414	Current transformer, 200:5, 2VA square			3	3						
7	253502	Current transformer, 250:5, 2VA square							3	3		
7	253503	Current transformer, 400:5, 2VA square									3	3
8	X-794-1	Screw, hex washer head, drill, 1/4-14 x 5/8			4	4			4	4	4	4
9	241623	Sensor, ferromagnetic	1	1	1	1	1	1				
11	257070	Bracket, sensor mounting	1	1	1	1	1	1				
12	X-672-15	Clamp, insulated, 0.25 in.	1	1	1	1	1	1	1	1	1	1
13	276417	Bracket, CT mounting			1	1			1	1	1	1
14	X-125-23	Bolt, hex head, 5/16-18 x 0.62	4	4	4	4	4	4	4	4	4	4
15	X-6003-107	Conduit (not shown)	1	1	1	1	1	1	1	1	1	1

Group 301: Controller and Mounting, continued

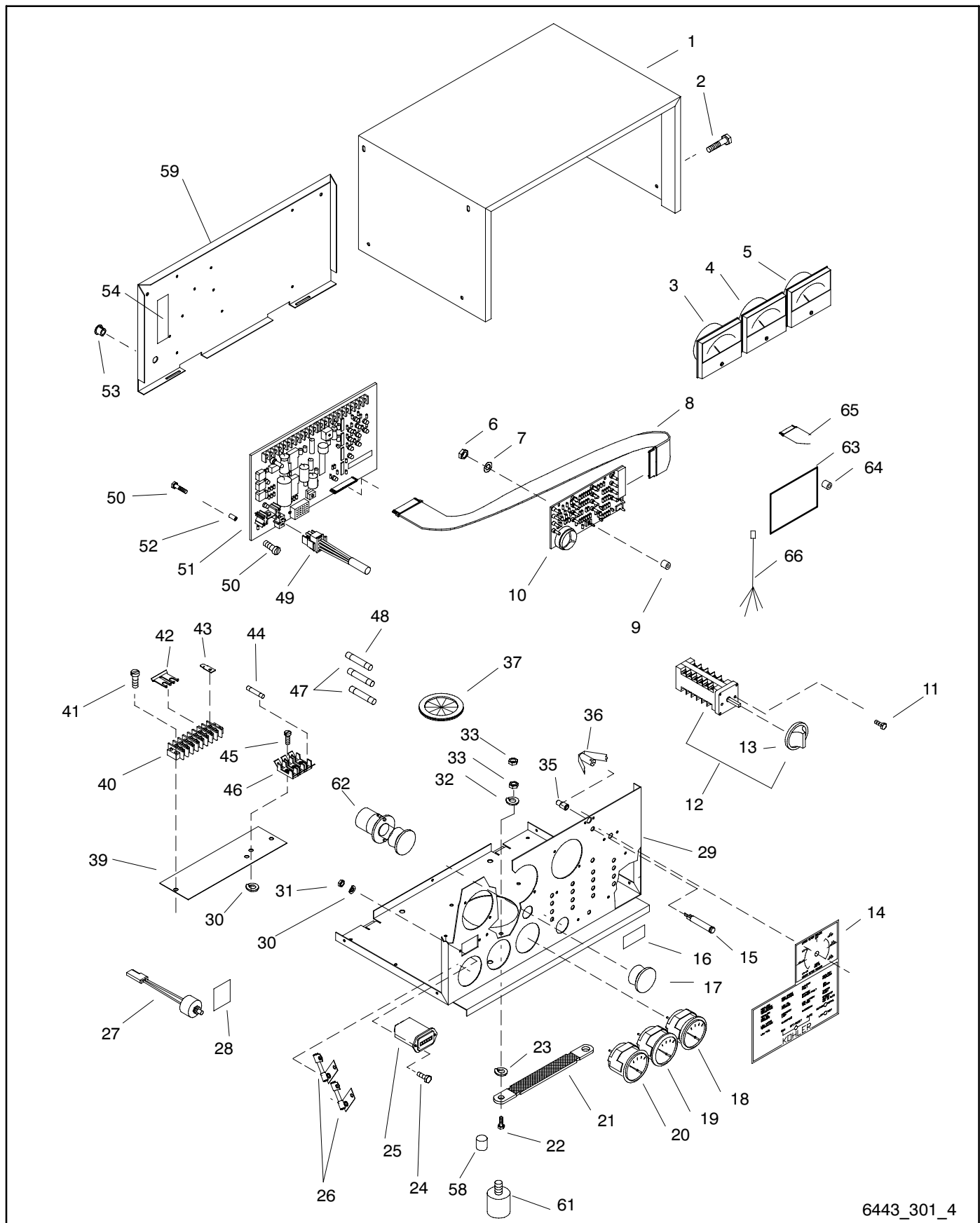


6443_301_3

Group 301: Controller and Mounting, continued

Item	Part Number	Description	Quantity							
			Module Number							
			GM40397-MA1	GM40397-MA2	GM40397-MA25	GM40397-MA26	GM40397-MA27	GM40397-MA28	GM40397-MA31	GM40397-MA32
1	336601	Cover, controller	1	1	1	1	1	1	1	1
2	X-6216-1	Screw, Phillips hex crimpite	4	4	4	4	4	4	4	4
3	X-49-25	Screw, slotted pan head machine	10	10	10	10	10	10	10	10
4	X-22-6	Washer, lock, 0.146 ID x 0.285 in. OD	9	9	9	9	9	9	9	9
5	287948	Spacer	5	5	5	5	5	5	5	5
6	336642	Harness, wiring	1	1	1	1	1	1	1	1
11	238736	Meter, run time, 10000 hour	1	1	1	1	1	1	1	1
12	X-49-39	Screw, slotted pan head machine	2	2	2	2	2	2	2	2
13	223316	Fuse, 10 A, 250 V	1	1	1	1	1	1	1	1
14	X-71-2	Nut, hex machine screw, 6-32	2	2	2	2	2	2	2	2
15	287812	Switch, toggle, 2 pole	1	1	1	1	1	1	1	1
16	A-255041	Potentiometer assembly	1	1	1	1	1	1	1	1
17	269373	Lamp, 14 V, .33 W	1		1		1		1	
17	359108	Lamp, 24 V, 1.2 W		1		1		1		1
22	X-6046-2	Strap, ground	1	1	1	1	1	1	1	1
22	X-696-5	Sleeve (not shown)	1	1	1	1	1	1	1	1
23	X-50-70	Screw, slotted pan head machine	1	1	1	1	1	1	1	1
24	X-22-50	Washer, lock, 0.20 ID x 0.595 in. OD	2	2	2	2	2	2	2	2
25	292834	Vibromount	4	4	4	4	4	4	4	4
26	X-519-1	Plug, cap 1/8	4	4	4	4	4	4	4	4
27	336604	Box, silkscreened	1	1	1	1	1	1	1	1
28	259391	Relay, 12 VDC, .20 A	1		1		1		1	
28	272684	Relay, 24 VDC,		1		1		1		1
29	X-50-13	Screw, slotted pan head machine	1	1	1	1	1	1	1	1
30	X-284-31	Grommet, round	1	1	1	1	1	1	1	1
34	X-6234-6	Nut, hex machine screw	2	2	2	2	2	2	2	2
38	336606	Strip, marker, 6.69 in.	1	1	1	1	1	1	1	1
39	246115	Terminal block	1	1	1	1	1	1	1	1
40	X-51-53	Screw, slotted round head machine	2	2	2	2	2	2	2	2
42	238898	Terminal, fast-on, male	4	4	4	4	4	4	4	4
44	283645	Fuse, 15 A, 250 V	1	1	1	1	1	1	1	1
45	X-49-2	Screw, cross recess pan head machine	2	2	2	2	2	2	2	2
46	336634	Fuse holder, 1-fuse	1	1	1	1	1	1	1	1
47	238426	Fuse holder, 0.25 x 1.25 in.	1	1	1	1	1	1	1	1
48	F-254717	PCB assembly	1		1		1		1	
48	A-352207	PCB assembly, 24 V		1		1		1		1
49	X-6276-9	Decal	1	1	1	1	1	1	1	1

Group 301: Controller and Mounting, continued

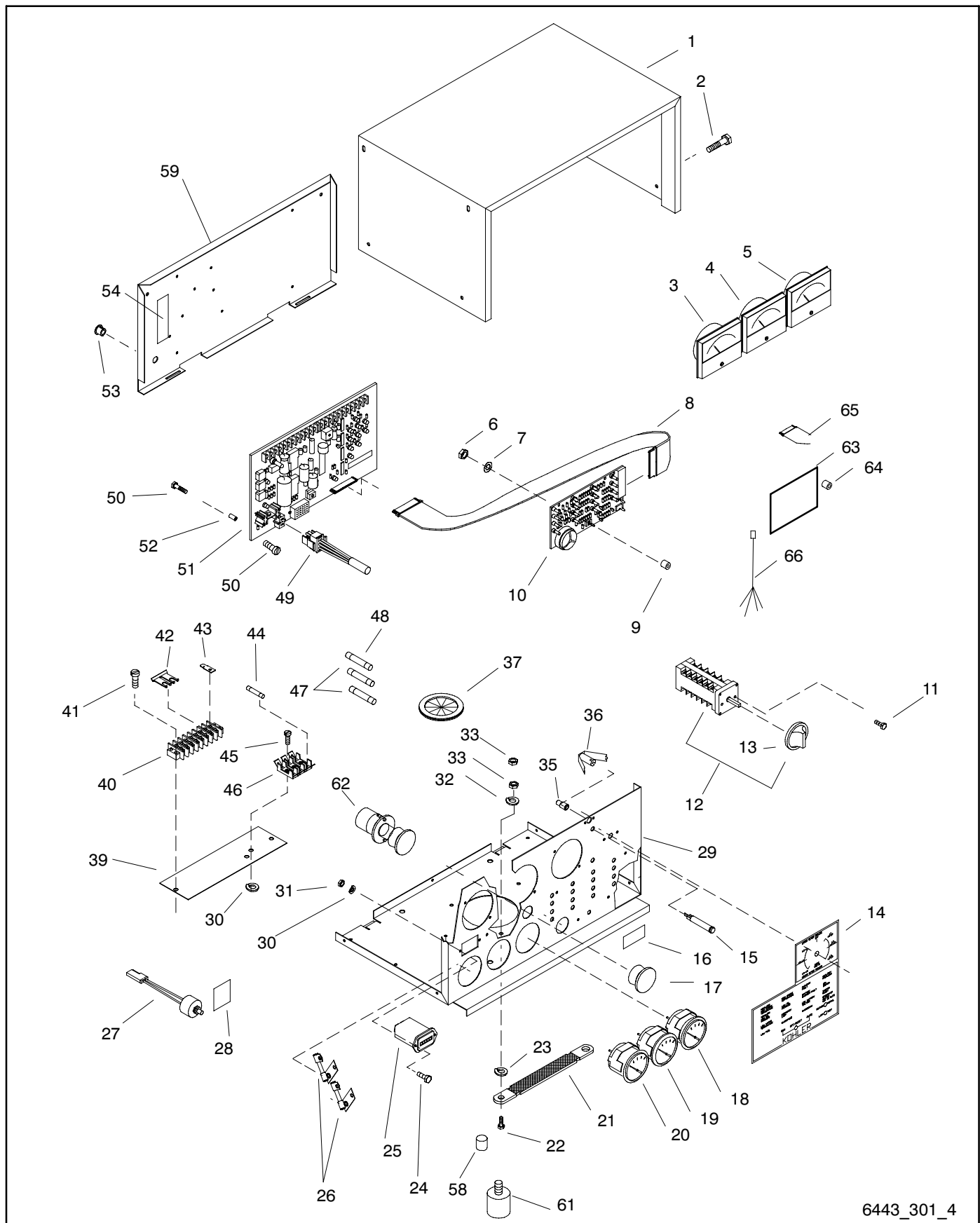


6443_301_4

Group 301: Controller and Mounting, continued

Item	Part Number	Description	Quantity											
			Module Number											
			GM40397-MA5	GM40397-MA6	GM40397-MA9	GM40397-MA10	GM40397-MA13	GM40397-MA14	GM40397-MA17	GM40397-MA18	GM40397-MA21	GM40397-MA22	GM40397-MA23	GM40397-MA24
1	325003	Cover, controller (standard meterbox)	1	1	1	1	1	1	1	1	1	1	1	1
2	X-6216-1	Screw, #10-24 x 0.50, crimpfit	10	10	10	10	10	10	10	10	10	10	10	10
3	282818	Meter, frequency	1	1	1	1	1	1	1	1	1	1	1	1
4	282816	Voltmeter, AC, 0-300 scale	1	1	1	1	1	1	1	1	1	1	1	1
5	282802	Ammeter, AC	1	1										
5	282803	Ammeter, AC			1	1								
5	282805	Ammeter, AC					1	1						
5	282806	Ammeter, AC							1	1				
5	282807	Ammeter, AC									1	1		
5	282808	Ammeter, AC											1	1
6	X-72-4	Nut, hex, 8-32, zinc plated	4	4	4	4	4	4	4	4	4	4	4	4
7	X-22-7	Washer, lock, #8 internal tooth	3	3	3	3	3	3	3	3	3	3	3	3
7	X-22-20	Washer, lock, #8 external tooth	1	1	1	1	1	1	1	1	1	1	1	1
8	336428	Cable assembly	1	1	1	1	1	1	1	1	1	1	1	1
9	X-712-9	Spacer	4	4	4	4	4	4	4	4	4	4	4	4
10	A-336432	PCB assembly, indicator, 16-light	1	1	1	1	1	1	1	1	1	1	1	1
11	X-67-127	Screw, thread-forming	2	2	2	2	2	2	2	2	2	2	2	2
12	292373	Switch, selector	1	1	1	1	1	1	1	1	1	1	1	1
13	296291	Knob, selector switch	1	1	1	1	1	1	1	1	1	1	1	1
14	354385	Decal	1	1	1	1	1	1	1	1	1	1	1	1
15	291740	Lamp	2	2	2	2	2	2	2	2	2	2	2	2
16	292467	Decal, emergency stop	1	1	1	1	1	1	1	1	1	1	1	1
17	X-301-29	Plug, button	1	1	1	1	1	1	1	1	1	1	1	1
18	253329	Gauge, DC voltmeter, 12 V	1		1		1		1		1		1	
18	255224	Gauge, DC voltmeter, 24 V		1		1		1		1		1		1
19	282898	Gauge, water temp, 100-250 deg. scale			1	1	1	1	1	1	1	1		
19	226716	Gauge, water temp	1	1									1	1
20	282897	Gauge, oil pressure, 0-100 psi scale	1	1	1	1	1	1	1	1	1	1	1	1
21	X-6046-2	Strap, ground	1	1	1	1	1	1	1	1	1	1	1	1
22	X-50-70	Screw, PHM	1	1	1	1	1	1	1	1	1	1	1	1
23	X-22-50	Washer, #10 internal/external tooth	1	1	1	1	1	1	1	1	1	1	1	1
24	X-49-39	Screw, PHM, 6-32 x 0.50	2	2	2	2	2	2	2	2	2	2	2	2
25	238736	Hourmeter	1	1	1	1	1	1	1	1	1	1	1	1
26	268297	Adapter, oil and water, 24 V only		2		2		2		2		2		2
27	A-255041	Potentiometer assembly, voltage adjustment	1	1	1	1	1	1	1	1	1	1	1	1
28	292361	Decal, voltage adjustment	1	1	1	1	1	1	1	1	1	1	1	1
29	292375	Box, controller	1	1	1	1	1	1	1	1	1	1	1	1
30	X-22-6	Washer, lock, #6 internal star	2	2	2	2	2	2	2	2	2	2	2	2
31	X-71-2	Nut, hex, 6-32 zinc	2	2	2	2	2	2	2	2	2	2	2	2
32	X-22-50	Washer, #10 internal/external tooth	1	1	1	1	1	1	1	1	1	1	1	1
33	X-6234-6	Nut, hex	1	1	1	1	1	1	1	1	1	1	1	1
35	255126	Lamp, 12 V	1		1		1		1		1		1	
35	283420	Lamp, 24 V		1		1		1		1		1		1
36	284990	Socket, lamp					1	1	1	1	1	1	1	1
37	X-284-31	Grommet	1	1	1	1	1	1	1	1	1	1	1	1
39	292823	Marker, strip	1	1	1	1	1	1	1	1	1	1	1	1
40	246115	Block, terminal	1	1	1	1	1	1	1	1	1	1	1	1
41	X-51-53	Screw, RHM	2	2	2	2	2	2	2	2	2	2	2	2
42	X-6048-2	Jumper, terminal block	1	1	1	1	1	1	1	1	1	1	1	1
43	238898	Terminal	1	1	1	1	1	1	1	1	1	1	1	1
44	291207	Fuse, 1.5 A, 250 V	3	3	3	3	3	3	3	3	3	3	3	3
45	X-49-2	Screw, PHM, 6-32 x 0.375	2	2	2	2	2	2	2	2	2	2	2	2
46	292821	Holder, fuse	1	1	1	1	1	1	1	1	1	1	1	1
47	243273	Fuse, 3 A	2	2	2	2	2	2	2	2	2	2	2	2
48	283645	Fuse, 15 A	1	1	1	1	1	1	1	1	1	1	1	1
49	GM13709	Harness, controller	1	1	1	1	1	1	1	1	1	1	1	1
50	X-49-25	Screw, PHM, 6-32 x 0.50	18	18	18	18	18	18	18	18	18	18	18	18
51	GM28725	PCB assembly, main controller	1	1	1	1	1	1	1	1	1	1	1	1
52	287948	Spacer	9	9	9	9	9	9	9	9	9	9	9	9
53	X-301-34	Plug, button	1	1	1	1	1	1	1	1	1	1	1	1
54	292347	Decal	1	1	1	1	1	1	1	1	1	1	1	1
58	X-519-1	Plug, cap, 1/8 in.	2	2	2	2	2	2	2	2	2	2	2	2
59	292908	Plate, hinge	1	1	1	1	1	1	1	1	1	1	1	1
61	292834	Bumper	4	4	4	4	4	4	4	4	4	4	4	4
62	292364	Switch, pushbutton	1	1	1	1	1	1	1	1	1	1	1	1
63	GM49791-2	PCB assembly, communication interface			1	1	1	1	1	1	1	1	1	1
64	GM32633	Spacer, 8-32 x 0.625, male-female			3	3	3	3	3	3	3	3	3	3
65	GM21340	Ribbon cable assembly			1	1	1	1	1	1	1	1	1	1
66	GM49817	Harness, gauge driver			1	1	1	1	1	1	1	1	1	1

Group 301: Controller and Mounting, continued

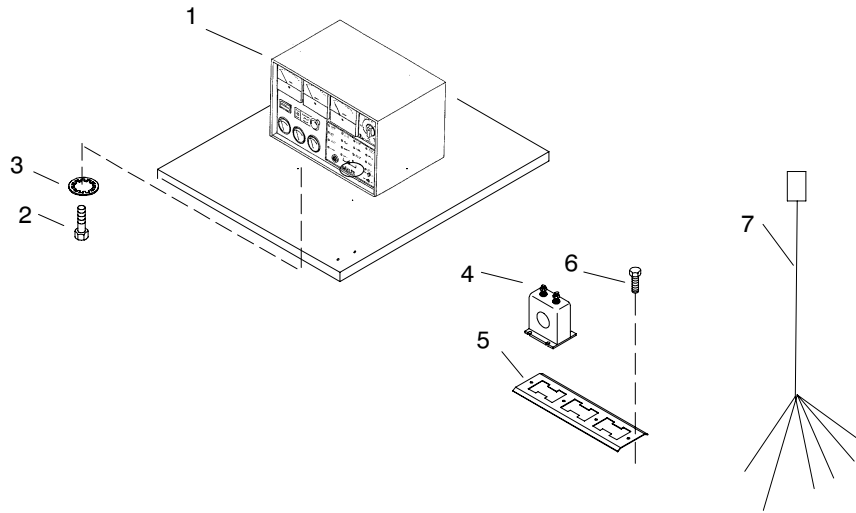


6443_301_4

Group 301: Controller and Mounting, continued

Item	Part Number	Description	Quantity					
			Module Number					
			GM40397-MA29	GM40397-MA30	GM40397-MA33	GM40397-MA34	GM40397-MA35	GM40397-MA36
1	325003	Cover, controller (standard meterbox)	1	1	1	1	1	1
2	X-6216-1	Screw, #10-24 x 0.50, crimpite	10	10	10	10	10	10
3	282818	Meter, frequency	1	1	1	1	1	1
4	282816	Voltmeter, AC, 0-300 scale	1	1	1	1	1	1
5	282802	Ammeter, AC	1	1				
5	282804	Ammeter, AC			1	1		
5	282805	Ammeter, AC					1	1
6	X-72-4	Nut, hex, 8-32, zinc plated	4	4	4	4	4	4
7	X-22-7	Washer, lock, #8 internal tooth	3	3	3	3	3	3
7	X-22-20	Washer, lock, #8 external tooth	1	1	1	1	1	1
8	336428	Cable assembly	1	1	1	1	1	1
9	X-712-9	Spacer	4	4	4	4	4	4
10	A-336432	PCB assembly, indicator, 16-light	1	1	1	1	1	1
11	X-67-127	Screw, thread-forming	2	2	2	2	2	2
12	292373	Switch, selector	1	1	1	1	1	1
13	296291	Knob, selector switch	1	1	1	1	1	1
14	354385	Decal	1	1	1	1	1	1
15	291740	Lamp	2	2	2	2	2	2
16	292467	Decal, emergency stop	1	1	1	1	1	1
17	X-301-29	Plug, button	1	1	1	1	1	1
18	253329	Gauge, DC voltmeter, 12 V	1		1		1	
18	255224	Gauge, DC voltmeter, 24 V		1		1		1
19	282898	Gauge, water temp, 100-250 deg. scale	1	1				
19	226716	Gauge, water temp, 100-250 deg. scale			1	1	1	1
20	282897	Gauge, oil pressure, 0-100 psi scale	1	1	1	1	1	1
21	X-6046-2	Strap, ground	1	1	1	1	1	1
22	X-50-70	Screw, PHM	1	1	1	1	1	1
23	X-22-50	Washer, #10 internal/external tooth	1	1	1	1	1	1
24	X-49-39	Screw, PHM, 6-32 x 0.50	2	2	2	2	2	2
25	238736	Hourmeter	1	1	1	1	1	1
26	268297	Adapter, oil and water, 24 V only		2		2		2
27	A-255041	Potentiometer assembly, voltage adj.	1	1	1	1	1	1
28	292361	Decal, voltage adjustment	1	1	1	1	1	1
29	292375	Box, controller	1	1	1	1	1	1
30	X-22-6	Washer, lock, #6 internal star	2	2	2	2	2	2
31	X-71-2	Nut, hex, 6-32 zinc	2	2	2	2	2	2
32	X-22-50	Washer, #10 internal/external tooth	1	1	1	1	1	1
33	X-6234-6	Nut, hex	1	1	1	1	1	1
35	255126	Lamp, 12 V	1		1		1	
35	283420	Lamp, 24 V		1		1		1
36	284990	Socket, lamp					1	1
37	X-284-31	Grommet	1	1	1	1	1	1
39	292823	Marker, strip	1	1	1	1	1	1
40	246115	Block, terminal	1	1	1	1	1	1
41	X-51-53	Screw, RHM	2	2	2	2	2	2
42	X-6048-2	Jumper, terminal block	1	1	1	1	1	1
43	238898	Terminal	1	1	1	1	1	1
44	291207	Fuse, 1.5 A, 250 V	3	3	3	3	3	3
45	X-49-2	Screw, PHM, 6-32 x 0.375	2	2	2	2	2	2
46	292821	Holder, fuse	1	1	1	1	1	1
47	243273	Fuse, 3 A	2	2	2	2	2	2
48	283645	Fuse, 15 A	1	1	1	1	1	1
49	GM13709	Harness, controller	1	1	1	1	1	1
50	X-49-25	Screw, PHM, 6-32 x 0.50	18	18	18	18	18	18
51	GM28725	PCB assembly, main controller	1	1	1	1	1	1
52	287948	Spacer	9	9	9	9	9	9
53	X-301-34	Plug, button	1	1	1	1	1	1
54	292347	Decal	1	1	1	1	1	1
58	X-519-1	Plug, cap, 1/8 in.	2	2	2	2	2	2
59	292908	Plate, hinge	1	1	1	1	1	1
61	292834	Bumper	4	4	4	4	4	4
62	292364	Switch, pushbutton	1	1	1	1	1	1
63	GM49791-2	PCB assembly, communication interface			1	1	1	1
64	GM32633	Spacer, 8-32 x 0.625, male-female			3	3	3	3
65	GM21340	Ribbon cable assembly			1	1	1	1
66	GM49817	Harness, gauge driver			1	1	1	1

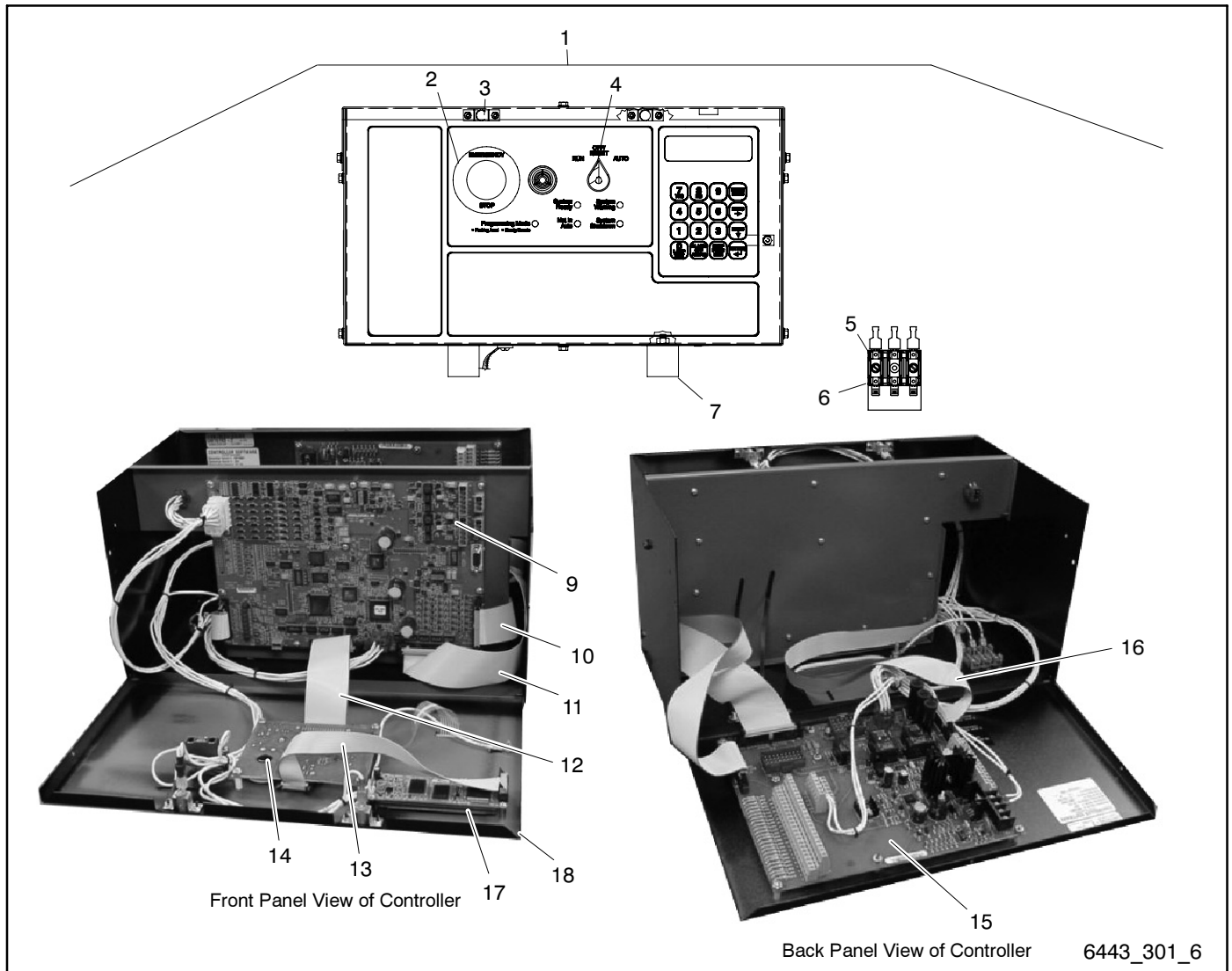
Group 301: Controller and Mounting, continued



6443_301_5

Item	Part Number	Description	Quantity											
			Module Number											
			GM40720-MA1	GM40720-MA2	GM40720-MA3	GM40720-MA4	GM40720-MA5	GM40720-MA6	GM40720-MA7	GM40720-MA8	GM40720-MA9	GM40720-MA10	GM40720-MA11	GM40720-MA12
1	GM10193-2	Controller assembly, Decision-Maker 550, 24 V	1			1		1		1		1		
1	GM10193-1	Controller assembly, Decision-Maker 550, 12 V		1	1		1		1		1		1	1
2	X-125-23	Bolt, hex head, 5/16-18 x 0.62	4	4	4	4	4	4	4	4	4	4	4	4
3	X-22-16	Washer, lock, 5/16, internal/external tooth	4	4	4	4	4	4	4	4	4	4	4	4
4	GM16257	Transformer, current 400A:3 VAC	3	3										
4	GM16252	Transformer, current 200A:3 VAC			3	3								
4	GM16254	Transformer, current 250A:3 VAC					3	3						
4	GM16258	Transformer, current 500A:3 VAC							3	3				
4	GM16259	Transformer, current 600A:3 VAC									3	3		
4	GM24898	Transformer, current 800A:3 VAC											3	3
5	276417	Bracket, CT mounting	1	1	1	1	1	1						
5	299966	Bracket, CT mounting							1	1	1	1	1	1
6	X-794-1	Screw, hex washer head, drill, 1/4-14 x 5/8	4	4	4	4	4	4	4	4	4	4	4	4
7	GM17424	Harness, wiring current transformer	1	1	1	1	1	1	1	1	1	1	1	1

Group 301: Controller and Mounting, continued



Item	Part Number		Description
	12 V	24 V	
1	GM20722-1	GM20722-1	Service kit (includes 12 V controller assembly, two 24 V lamps, and literature)
2	292364	292634	Switch, emergency stop pushbutton
3	225126	283420	Lamp, panel (2)
4	GM10125	GM10125	Knob, rotary switch
5	292821	292821	Holder, fuse
6	291207	291207	Fuse, 1.5 A, 250 V (3)
7	292834	292834	Bumper (4)
9	NA	NA	Circuit board, main logic
10	GM10120	GM10120	Cable, ribbon, 34-position (P17 on main logic to P5 on interconnection)
11	GM10119	GM10119	Cable, ribbon, 40-position (P16 on main logic to P4 on interconnection)
12	GM10123	GM10123	Cable, ribbon, 34-position (display board to P14 on main logic board)
13	GM10124	GM10124	Cable, ribbon, 16-position (CN1 on display panel to display board)
14	A-365485	A-365485	Circuit board, display (board with alarm horn)
15	B-365487	B-365487	Circuit board, interconnection
16	GM10118	GM10118	Cable, ribbon, 24-position (P12 on main logic to P2 on interconnection)
17	GM13616	GM13616	Panel, display (kit-service only)
18	GM28610-1	GM28610-1	Panel assembly, front

NA Not available. If the main logic board needs replacement, replace the entire controller.

Group 701: Literature

Item	Part Number	Description	Quantity							
			Variation Number							
			300	301	302	303	304	305	306	307
1	TP-5375	Warranty, Marine	1	1	1	1	1	1	1	1
2	TP-5620	Safety Precautions, Marine	1	1	1	1	1	1	1	1
3	TP-5854	S/M John Deere 4045/6068	1	1	1	1	1			
3	TP-5825	S/M John Deere 6081						1	1	1
4	TP-6513	I/M 40-180EOZD/33-150EFOZD, Marine	1	1	1	1	1	1	1	1
5	TP-6441	O/M 40-180EOZD, Marine	1	1	1	1	1	1	1	1
6	TP-6442	S/M 40-180EOZD, Marine	1	1	1	1	1	1	1	1
7	TP-6443	P/C 40-180EOZD, Marine	1	1	1	1	1	1	1	1
8	TP-6444	O/M John Deere JD4045/6068TFM75, Marine	1	1	1	1	1			
8	TP-6445	O/S/M John Deere 6081AFM75, Marine						1	1	1
9	TP-6140	O/I/M Controller Setup & Appl., Decision-Maker 550								

Parts List: Accessories

Qty.	Description	Part No.
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Circuit Breaker Kits

Line Circuit Breaker, 80 A

GM15276-KA1

4	Screw, machine	X-49-2
1	Circuit breaker, 80 A, 480 V, 3-pole	253225
1	Panel, circuit breaker mounting	344083
1	Decal, Power Breaker	GM15301

Line Cir. Breaker, 90 A

GM15277-KP1

1	TT Circuit Breaker, 33-125EFOZ, 40-150EOZ	TT-1296
4	Washer, plain, 0.156 ID x 0.375 in. OD	X-25-9
4	Screw, machine	X-49-2
1	Circuit breaker, 90 A, 480 V, 3-pole	344905
1	Panel, circuit breaker mounting	344083

Line Circuit Breaker, 100 A, UL1077

GM15278-KA1

4	Screw, machine	X-49-2
1	Breaker, circuit, E-frame, 100 A, 480 V	GM23366-10
1	Panel, circuit breaker mounting	344083
1	Decal, Power Breaker	GM15301

Line Circuit Breaker, 125 A, UL

GM15279-KP1

1	TT Circuit Breaker, 33-125EFOZ, 40-150EOZ	TT-1296
3	Washer, plain	M125A-06-80
2	Spacer, 0.209 ID x 0.375 OD x 1.062 in.	X-400-247
3	Screw, hex cap	M933-06025-60
2	Screw, pan head machine	M7985A-05100-20
3	Nut, hex, 6 mm	M6923-06-80
2	Nut, hex, 5 mm	M934-05-50
4	Screw, Phillips hex crimpitite	X-6216-1
1	Breaker, circuit, 125 A	X-6305-130
1	Panel, circuit breaker mtg.	344650
1	Panel, load lead access	344651
1	Bus, load	GM14266
1	Bus, load	GM14267
1	Bus, load	GM14268
2	Washer, plain	M125A-05-80
2	Bus, line	GM17427
1	Bus, line	GM17431
1	Decal, Notice	246242

Line Circuit Breaker, 150 A, UL

GM15281-KP1

1	TT Circuit Breaker, 33-125EFOZ, 40-150EOZ	TT-1296
3	Washer, plain	M125A-06-80
2	Spacer, 0.209 ID x 0.375 OD x 1.062 in.	X-400-247
3	Screw, hex cap	M933-06025-60
2	Screw, pan head machine	M7985A-05100-20
3	Nut, hex, 6 mm	M6923-06-80
2	Nut, hex, 5 mm	M934-05-50
4	Screw, Phillips hex crimpitite	X-6216-1
1	Breaker, circuit, 150 A	X-6305-131
1	Panel, circuit breaker mtg.	344650
1	Panel, load lead access	344651
1	Bus, load	GM14266
1	Bus, load	GM14267
1	Bus, load	GM14268
2	Washer, plain	M125A-05-80
2	Bus, line	GM17427
1	Bus, line	GM17431
1	Decal, Notice	246242

Qty.	Description	Part No.
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Line Circuit Breaker, 200 A, UL

GM15283-KP1

1	TT Circuit Breaker, 33-125EFOZ, 40-150EOZ	TT-1296
3	Washer, plain	M125A-06-80
2	Spacer, 0.209 ID x 0.375 OD x 1.062 in.	X-400-247
3	Screw, hex cap	M933-06025-60
2	Screw, pan head machine	M7985A-05100-20
3	Nut, hex, 6 mm	M6923-06-80
2	Nut, hex, 5 mm	M934-05-50
4	Screw, Phillips hex crimpitite	X-6216-1
1	Breaker, circuit, 200 A	X-6305-132
1	Panel, circuit breaker mtg.	344650
1	Panel, load lead access	344651
2	Bus, load	GM14266
2	Bus, load	GM14267
2	Bus, load	GM14268
2	Washer, plain	M125A-05-80
6	Screw, socket head cap	M912-08025-60
2	Bus, line	GM17427
2	Bus, line	GM17430
1	Bus, line	GM17431
1	Bus, line	GM17432
1	Decal, Notice	246242

Line Circuit Breaker, 250 A, UL

GM15284-KP1

1	TT Circuit Breaker, 33-125EFOZ, 40-150EOZ	TT-1296
3	Washer, plain	M125A-06-80
2	Spacer, 0.209 ID x 0.375 OD x 1.062 in.	X-400-247
3	Screw, hex cap	M933-06025-60
2	Screw, pan head machine	M7985A-05100-20
3	Nut, hex, 6 mm	M6923-06-80
2	Nut, hex, 5 mm	M934-05-50
4	Screw, Phillips hex crimpitite	X-6216-1
1	Breaker, circuit, 250 A	X-6305-133
1	Panel, circuit breaker mtg.	344650
1	Panel, load lead access	344651
2	Bus, load	GM14266
2	Bus, load	GM14267
2	Bus, load	GM14268
2	Washer, plain	M125A-05-80
6	Screw, socket head cap	M912-08025-60
2	Bus, line	GM17427
2	Bus, line	GM17430
1	Bus, line	GM17431
1	Bus, line	GM17432
1	Decal, Notice	246242

Line Circuit Breaker, 160-400 A, UL

GM15286-KP1

1	Panel, circuit breaker mounting	GM16954
4	Bus, load	GM16956
4	Bus, load	GM16957
4	Bus, load	GM16958
4	Washer, plain	M125A-05-80
3	Washer, plain	M125A-06-80
3	Nut, hex, 6 mm	M6923-06-80
3	Screw, hex cap	M933-06025-60
1	TT Circuit Breaker, 33-125EFOZ, 40-150EOZ	TT-1296
4	Spacer	X-400-249
1	Breaker, circuit	X-6305-128
6	Screw, hex cap	M931-10040-60
4	Screw, machine	X-50-59
4	Nut, flange whiz, 10-24	X-6210-5
1	Decal, Notice	246242

Parts List: Accessories, continued

Qty.	Description	Part No.
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Line Circuit Breaker, 240-600 A, UL		GM15288-KP1
1	Panel, circuit breaker mounting	GM16954
4	Bus, load	GM16956
4	Bus, load	GM16957
4	Bus, load	GM16958
4	Washer, plain	M125A-05-80
3	Washer, plain	M125A-06-80
3	Nut, hex, 6 mm	M6923-06-80
3	Screw, hex cap	M933-06025-60
1	TT Circuit Breaker, 33-125EFOZ, 40-150EOZ	TT-1296
4	Spacer	X-400-249
1	Breaker, circuit	X-6305-129
6	Screw, hex cap	M931-10040-60
4	Screw, machine	X-50-59
4	Nut, flange whiz, 10-24	X-6210-5
1	Decal, Notice	246242

Line Circuit Breaker, 175 A, UL		GM28847-KP1
1	TT Circuit Breaker, 33-125EFOZ, 40-150EOZ	TT-1296
3	Washer, plain	M125A-06-80
2	Spacer, 0.209 ID x 0.375 OD x 1.062 in.	X-400-247
3	Screw, hex cap	M933-06025-60
2	Screw, pan head machine	M7985A-05100-20
3	Nut, hex, 6 mm	M6923-06-80
2	Nut, hex, 5 mm	M934-05-50
4	Screw, Phillips hex crimpptite	X-6216-1
1	Breaker, circuit, 175 A	X-6305-147
1	Panel, circuit breaker mtg.	344650
1	Panel, load lead access	344651
2	Bus, load	GM14266
2	Bus, load	GM14267
2	Bus, load	GM14268
2	Washer, plain	M125A-05-80
6	Screw, socket head cap	M912-08025-60
2	Bus, line	GM17427
2	Bus, line	GM17430
1	Bus, line	GM17431
1	Bus, line	GM17432
1	Decal, Notice	246242

Line Circuit Breaker		PA-334369
1	TT Circuit Breaker, 33-125EFOZ, 40-150EOZ	TT-1296
4	Washer, plain, 0.156 ID x 0.375 in. OD	X-25-9
4	Screw, machine	X-49-2
1	Circuit breaker, 60 A, 600 V, 3-pole	253224
1	Panel, circuit breaker mounting	344083
1	Decal, Notice	246242

Line Circuit Breaker		PA-334372
1	TT Circuit Breaker, 33-125EFOZ, 40-150EOZ	TT-1296
4	Washer, plain, 0.156 ID x 0.375 in. OD	X-25-9
4	Screw, machine	X-49-2
1	Circuit breaker, 70 A, 600 V, 3-pole	258381
1	Panel, circuit breaker mounting	344083
1	Decal, Notice	246242

Circuit Breaker Kits, Safeguard

Safeguard Breaker		PA-344352
1	TT Safeguard Crate Breaker, 30-65COZ/CFOZ	TT-1123
4	Washer, plain, 0.156 ID x 0.375 in. OD	X-25-9
4	Screw, machine	X-49-2
1	Circuit breaker, 4 A, 240 V, 3-pole	X-796-1
1	Wiring harness, Y-connector	344351

Safeguard Breaker		PA-344353
1	TT Safeguard Circuit Breaker, 30-65COZ/CFOZ	TT-1123
4	Washer, plain, 0.156 ID x 0.375 in. OD	X-25-9
4	Screw, machine	X-49-2
1	Circuit breaker, 3 A, 240 V, 3-pole	X-796-4
1	Wiring harness, Y-connector	344351

Qty.	Description	Part No.
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Safeguard Breaker		PA-344354
1	TT Safeguard Circuit Breaker, 30-65COZ/CFOZ	TT-1123
4	Washer, plain, 0.156 ID x 0.375 in. OD	X-25-9
4	Screw, machine	X-49-2
1	Circuit breaker, 5 A, 240 V, 3-pole	X-796-6
1	Wiring harness, Y-connector	344351

Safeguard Breaker		PA-344355
1	TT Safeguard Circuit Breaker, 30-65COZ/CFOZ	TT-1123
4	Washer, plain, 0.156 ID x 0.375 in. OD	X-25-9
4	Screw, machine	X-49-2
1	Circuit breaker, 4.5 A, 240 V, 3-pole	X-796-2
1	Wiring harness, Y-connector	344351

Safeguard Breaker		PA-344356
1	TT Safeguard Circuit Breaker, 30-65COZ/CFOZ	TT-1123
4	Washer, plain, 0.156 ID x 0.375 in. OD	X-25-9
4	Screw, machine	X-49-2
1	Circuit breaker, 3.5 A, 240 V, 3-pole	X-796-3
1	Wiring harness, Y-connector	344351

Crankcase Emissions Canister Kits

Crankcase Emission Canister		GM49691-KP1
1	Crankvent filter assembly	GM16234
1	Element, air emissions filter	GM32404
1	Decal, Filter Element	GM51694
1	Connector, hose	GM16246
1	Bracket, filter mounting	GM16285
1	Bushing, reducing, 1/4 x 1/2 in. NPT	X-202-47
1	Tee, pipe, 1/2 x 1/2 x 1/2 NPT	X-203-13
1	Pipe, 1/2 in. NPT x 1.19 in.	X-209-2
1	Clamp, hose, 0.69/1.25 in.	X-426-12
1	Hose, radiator, straight, 1 in. ID	X-356-22
2	Clamp, hose, 0.75/1.5 in.	X-426-15
2	Screw, hex cap	M933-10035-60
2	Washer, plain, 10.5 ID x 20.0 OD	M125A-10-80
2	Nut, hex, 10 mm	M6923-10-80
2	Screw, hex cap	M933-12030-60
2	Washer, plain	M125A-12-80
1	TT Emission Canister, 33-150EOZ/EFOZ	TT-1312

Crankcase Emission Canister		GM49691-KP2
1	Crankvent filter assembly	GM16234
1	Element, air emissions filter	GM32404
1	Decal, Filter Element	GM51694
1	Connector, hose	GM16246
1	Bracket, filter mounting	GM16285
1	Bushing, reducing, 1/4 x 3/8 in. NPT + vibra	X-202-30
1	Tee, pipe, 3/8 x 3/8 x 3/8 NPT	X-203-15
1	Pipe, 3/8 in. NPT x 1.00 in.	X-204-9
1	Clamp, hose, 0.69/1.25 in.	X-426-12
1	Hose, radiator, straight, 1 in. ID	X-356-22
2	Clamp, hose, 0.75/1.5 in.	X-426-15
2	Screw, hex cap	M933-10035-60
2	Washer, plain, 10.5 ID x 20.0 OD	M125A-10-80
2	Nut, hex, 10 mm	M6923-10-80
2	Screw, hex cap	M933-12030-60
2	Washer, plain	M125A-12-80
1	TT Emission Canister, 33-150EOZ/EFOZ	TT-1312
1	Elbow, street, 90 deg x 3/8 in. NPTF + vibra	S-404
1	Connector, hose	GM30635

Parts List: Accessories, continued

Qty.	Description	Part No.
Crankcase Emission Canister GM49691-KP3		
1	Crankvent filter assembly	GM16234
1	Element, air emissions filter	GM32404
1	Decal, Filter Element	GM51694
1	Connector, hose	GM16246
1	Bracket, filter mounting	GM16937
2	Washer, plain, 10.5 ID x 20.0 OD	M125A-10-80
2	Washer, plain, 0.656 ID x 1.312 in. OD	X-25-15
2	Nut, hex, 10 mm	M6923-10-80
2	Screw, hex cap (metric)	M933-10050-60
2	Screw, hex head machine	X-6021-5
1	Elbow, street, 90 deg x 1/2 in. NPTF	X-211-1
1	TT Emission Canister, 33-150EOZ/EFOZ	TT-1312
1	Bushing, reducing, 1/4 x 1/2 in. NPT	X-202-47
1	Tee, pipe, 1/2 x 1/2 x 1/2 NPT	X-203-13
1	Pipe, 1/2 in. NPT x 1.19 in.	X-209-2
1	Hose, radiator, straight, 1 in. ID	X-356-31
1	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Clamp, hose, 0.75/1.5 in.	X-426-15
1	Connector, hose	GM30635
2	Spacer, 0.406 ID x 0.625 OD x 0.375 in.	X-400-89

Current Transformers Kits

Current Transformer GM19945-KP1		
1	TT Remote Start Panel, 7-20CCO	TT-872
4	Screw, hex washer head, drill, 1/4-14 x 5/8	X-794-1
3	Transformer, current	GM11472
1	Bracket, CT mounting	299966

Current Transformer PA-324179		
1	TT Current Transformer, 30-65COZ/CFOZ	TT-1124
4	Screw, hex washer head, drill, 1/4-14 x 5/8	X-794-1
3	Current transformer, 150:5, 2 VA, square	259360
1	Bracket, CT mounting	276417

Current Transformer PA-324181		
1	TT Current Transformer, 30-65COZ/CFOZ	TT-1124
4	Screw, hex washer head, drill, 1/4-14 x 5/8	X-794-1
3	Current transformer, 300:5, 2 VA, square	255860
1	Bracket, CT mounting	276417

Current Transformer, 50/60HZ Reconn. PA-324187		
1	TT Current Transformer, 20-150 kW	TT-842
4	Screw, hex washer head, drill, 1/4-14 x 5/8	X-794-1
3	Current transformer, 400:5, 2 VA, square	253503
1	Bracket, CT mounting	276417

Current Transformer, 50/60 Hz Reconn. PA-324188		
1	TT Current Transformer, 20-150 kW	TT-842
4	Screw, hex washer head, drill, 1/4-14 x 5/8	X-794-1
3	Current transformer, 500:5, 25 VA, square	273257
1	Bracket, CT mounting	299966

Current Transformer PA-324189		
1	TT Current Transformer, 20-150 kW	TT-842
4	Screw, hex washer head, drill, 1/4-14 x 5/8	X-794-1
3	Current transformer, 600:5, 2 VA, square	253610
1	Bracket, CT mounting	299966

Qty.	Description	Part No.
Droop Compensator Kits		
Reactive Droop Compensator GM39328-KP1		
1	TT Reactive Droop Compensator, 20-300 kW	TT-1417
3	Washer, plain, 0.188 x 0.438 in. OD	X-25-48
3	Nut, flange whiz, 8-32	X-6210-4
1	Transformer, current	GM30616
3	Protective cap, masking	353393
1	Nameplate, engraved, rheostat	283869
1	Rheostat (Includes rheo. & knob)	X-467-4
3	Screw, machine	X-51-5
3	Nut, hex, machine screw, 8-32	X-72-4
3	Washer, plain, 0.188 x 0.438 in. OD	X-25-48
4	Vibromount, controller	GM38784-3
2	Channel, Insulating	GM47571
4	Nut, hex, elastic stop, 6 mm	M982-06-80
4	Washer, lock, 0.262 ID x 0.743 in. OD	X-22-12
4	Screw, hex cap, M6 x 16 mm, JS500 full thrd	M933-06016-60
4	Washer, plain	M125A-06-80

Reactive Droop Compensator GM39328-KP12		
1	Transformer, current	GM30619
1	TT Reactive Droop Compensator, 20-300 kW	TT-1417
3	Washer, plain, 0.188 x 0.438 in. OD	X-25-48
3	Nut, flange whiz, 8-32	X-6210-4
1	Nameplate, engraved, rheostat	283869
1	Rheostat (Includes rheo. & knob)	X-467-4
3	Screw, machine	X-51-5
3	Nut, hex, machine screw, 8-32	X-72-4
3	Washer, plain, 0.188 x 0.438 in. OD	X-25-48
3	Protective cap, masking	353393

Reactive Droop Compensator GM39328-KP14		
1	Transformer, current	GM30620
1	TT Reactive Droop Compensator, 20-300 kW	TT-1417
3	Washer, plain, 0.188 x 0.438 in. OD	X-25-48
3	Nut, flange whiz, 8-32	X-6210-4
1	Nameplate, engraved, rheostat	283869
1	Rheostat (Includes rheo. & knob)	X-467-4
3	Screw, machine	X-51-5
3	Nut, hex, machine screw, 8-32	X-72-4
3	Washer, plain, 0.188 x 0.438 in. OD	X-25-48
3	Protective cap, masking	353393

Reactive Droop Compensator GM39328-KP16		
1	Transformer, current	GM30621
1	TT Reactive Droop Compensator, 20-300 kW	TT-1417
3	Washer, plain, 0.188 x 0.438 in. OD	X-25-48
3	Nut, flange whiz, 8-32	X-6210-4
1	Nameplate, engraved, rheostat	283869
1	Rheostat (Includes rheo. & knob)	X-467-4
3	Screw, machine	X-51-5
3	Nut, hex, machine screw, 8-32	X-72-4
3	Washer, plain, 0.188 x 0.438 in. OD	X-25-48
3	Protective cap, masking	353393

Reactive Droop Compensator GM39328-KP18		
1	Transformer, current	GM30622
1	TT Reactive Droop Compensator, 20-300 kW	TT-1417
3	Washer, plain, 0.188 x 0.438 in. OD	X-25-48
3	Nut, flange whiz, 8-32	X-6210-4
1	Nameplate, engraved, rheostat	283869
1	Rheostat (Includes rheo. & knob)	X-467-4
3	Screw, machine	X-51-5
3	Nut, hex, machine screw, 8-32	X-72-4
3	Washer, plain, 0.188 x 0.438 in. OD	X-25-48
3	Protective cap, masking	353393

Parts List: Accessories, continued

Qty.	Description	Part No.
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Reactive Droop Compensator GM39328-KP22

1	Transformer, current	GM30624
1	TT Reactive Droop Compensator, 20-300 kW	TT-1417
3	Washer, plain, 0.188 x 0.438 in. OD	X-25-48
3	Nut, flange whiz, 8-32	X-6210-4
1	Nameplate, engraved, rheostat	283869
1	Rheostat (Includes rheo. & knob)	X-467-4
3	Screw, machine	X-51-5
3	Nut, hex, machine screw, 8-32	X-72-4
3	Washer, plain, 0.188 x 0.438 in. OD	X-25-48
3	Protective cap, masking	353393

Droop Compensator, 3-Phase GM39328-KP26

1	TT Reactive Droop Compensator, 20-300 kW	TT-1417
3	Washer, plain, 0.188 x 0.438 in. OD	X-25-48
3	Nut, flange whiz, 8-32	X-6210-4
1	Current transformer, 600:5, round	233953
1	Nameplate, engraved, rheostat	283869
1	Rheostat (Includes rheo. & knob)	X-467-4
3	Screw, machine	X-51-5
3	Nut, hex, machine screw, 8-32	X-72-4
3	Washer, plain, 0.188 x 0.438 in. OD	X-25-48
4	Vibromount, controller	GM38784-3
2	Channel, Insulating	GM47571
4	Nut, hex, elastic stop, 6 mm	M982-06-80
4	Washer, lock, 0.262 ID x 0.743 in. OD	X-22-12
4	Screw, hex cap, M6x16 mm, JS500 full thrd	M933-06016-60
4	Washer, plain	M125A-06-80

Dry Contact Kits

Contact Assy, 10-Relay GM41603-KP1

1	PCB assembly, 10-relay dry contact	D-294303
1	Harness, wiring, 10-relay dry contact	GM49116
1	Decal, Warning	344556
6	Nut, hex, machine screw, 8-32	X-70-12
6	Spacer, 0.25 OD, 0.5 in.	X-712-9

14-Relay Dry Contact GM41603-KP2

1	PCB assembly, 14-relay, dry contact	A-320639
1	Harness, wiring dry contacts	GM49800
1	Decal, Warning	344556
6	Nut, hex, machine screw, 8-32	X-70-12
6	Spacer, 0.25 OD, 0.5 in.	X-712-9

Fuel System Kits

Flexible Fuel Lines, USCG #46 GM15292-KP1

1	Fuel line, flexible	344205
1	Fuel line, flexible	344206
2	Fitting, half union	X-296-11
1	Fitting, straight union	X-695-2
1	TT Flexible Fuel Line, 33-150EOZ/EFOZ	TT-1311

Duplex Fuel Filter GM49664-KP1

1	Filter, fuel/water separator	GM49227
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Duplex Fuel Filter GM49665-KP1

1	Filter, fuel/water separator	GM49226
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Flexible Fuel Lines, USCG #46 GM50479-KP1

1	Fuel line, flexible	344205
1	Fuel line, flexible	GM48025
1	TT Flexible Fuel Line, 33-150EOZ/EFOZ	TT-1311
1	Fitting, half union	X-296-11
1	Fitting, half union	X-296-6

Qty.	Description	Part No.
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Fuel Boost Pump, 24 V GM52065-KP1

1	Bracket, mounting	229050
1	Pump, fuel	344740
1	Lead assembly	229168
3	Nut, hex, elastic stop, M6-1	X-101-25
1	Bushing, reducing, 1/8 x 1/4 in. NPT + vibra	X-202-27
6	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
3	Grommet, round	X-284-39
1	Connector, 90 deg., 1/4 in. ID hose	X-391-20
1	Elbow, street, 90 deg x 1/4 in. NPTF	X-555-1

Fuel Boost Pump, 12 V PA-229172

3	Nut, hex, elastic stop, M6-1	X-101-25
1	Bushing, reducing, 1/8 x 1/4 in. NPT + vibra	X-202-27
6	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
3	Grommet, round	X-284-39
1	Elbow, street, 90 deg x 1/4 in. NPTF	X-555-1
1	Bracket, mounting	229050
1	Pump, fuel	229051
1	Lead assembly	229168
1	Connector, 90 deg., 1/4 in. ID hose	X-391-20

Governor Kits

Isochronous Governor, NonLoadShare, 12 V GM17725-KP5

1	Pickup, magnetic	255750
1	Starter relay, 12 VDC, 20 A	259391
1	Controller, governor (Digital, NLS)	GM17644-4
1	Actuator, governor	324516
4	Screw, pan head machine	M7985A-05025-20
5	Nut, hex, 5 mm	M934-05-50
1	Screw, pan head machine	M7985A-05020-20
1	Bushing, 1.312 x 1.50 in. NPT	X-634-16
4	Spacer, 0.209 ID x 0.375 OD x 0.234 in.	X-400-145
1	Harness, wiring shielded power cable	GM17767
1	Harness, wiring shielded cable	GM17768-1
1	Harness, wiring shielded cable	GM17768-4
4	Washer, lock, 0.20 ID x 0.373 in. OD	X-22-9
1	Washer, plain	M125A-05-80
1	TT Governor, 125-150EOZ/100-125EFOZ	TT-1420
1	TT Digital Isochronous Governor, 20-230 kW	TT-1399

Isochronous Governor, Load Share, 12 V GM17725-KP6

1	Pickup, magnetic	255750
1	Starter relay, 12 VDC, 20 A	259391
1	Controller, governor (Digital, LS)	GM17644-5
1	Actuator, governor	324516
4	Screw, pan head machine	M7985A-05025-20
5	Nut, hex, 5 mm	M934-05-50
1	Screw, pan head machine	M7985A-05020-20
1	Bushing, 1.312 x 1.50 in. NPT	X-634-16
4	Spacer, 0.209 ID x 0.375 OD x 0.234 in.	X-400-145
1	Harness, wiring shielded power cable	GM17767
1	Harness, wiring shielded cable	GM17768-1
1	Harness, wiring shielded cable	GM17768-4
4	Washer, lock, 0.20 ID x 0.373 in. OD	X-22-9
1	Washer, plain	M125A-05-80
1	TT Governor, 125-150EOZ/100-125EFOZ	TT-1420
1	TT Digital Isochronous Governor, 20-230 kW	TT-1399

Parts List: Accessories, continued

Qty.	Description	Part No.
Isochronous Governor, NonLoadShare, 24 V GM17725-KP7		
1	Pickup, magnetic	255750
1	Relay, 24 VDC	272684
1	Controller, governor (Digital, NLS)	GM17644-4
1	Actuator, governor	324703
4	Screw, pan head machine	M7985A-05025-20
5	Nut, hex, 5 mm	M934-05-50
1	Screw, pan head machine	M7985A-05020-20
1	Bushing, 1.312 x 1.50 in. NPT	X-634-16
4	Spacer, 0.209 ID x 0.375 OD x 0.234 in.	X-400-145
1	Harness, wiring shielded power cable	GM17767
1	Harness, wiring shielded cable	GM17768-1
1	Harness, wiring shielded cable	GM17768-4
4	Washer, lock, 0.20 ID x 0.373 in. OD	X-22-9
1	Washer, plain	M125A-05-80
1	TT Governor, 125-150EOZ/100-125EFOZ	TT-1420
1	TT Digital Isochronous Governor, 20-230 kW	TT-1399
Isochronous Governor, Load Share, 24 V GM17725-KP8		
1	Pickup, magnetic	255750
1	Relay, 24 VDC	272684
1	Controller, governor (Digital, LS)	GM17644-5
1	Actuator, governor	324703
4	Screw, pan head machine	M7985A-05025-20
5	Nut, hex, 5 mm	M934-05-50
1	Screw, pan head machine	M7985A-05020-20
1	Bushing, 1.312 x 1.50 in. NPT	X-634-16
4	Spacer, 0.209 ID x 0.375 OD x 0.234 in.	X-400-145
1	Harness, wiring shielded power cable	GM17767
1	Harness, wiring shielded cable	GM17768-1
1	Harness, wiring shielded cable	GM17768-4
4	Washer, lock, 0.20 ID x 0.373 in. OD	X-22-9
1	Washer, plain	M125A-05-80
1	TT Governor, 125-150EOZ/100-125EFOZ	TT-1420
1	TT Governor Service, 30-100 kW GM, Ind	TT-1388
Harness Kits		
Cable, 40 Ft. Remote Mounting GM17244-KP4		
1	Box assembly, 40 ft. remote mounting	GM17234-4
1	Harness, wiring 40 ft. extension	GM17242
1	Harness, wiring 40 ft. extension	GM17243
Control Wiring to Plug, 4-Meter, 100+ kW GM50958-KP2		
1	Harness, extension	GM51085
Control Wiring to Plug, Full Feat. GM51368-KP2		
1	Harness, extension	GM51265
Harness, 15 Ft. Remote Panel PA-249334		
1	Strap	X-526-3
1	Wiring harness, extension	249334
Harness, 25 Ft. Remote Panel PA-249336		
1	Strap	X-526-3
1	Wiring harness, 16/20 kW Yanmar marine	249336
Harness, 12 in. Pigtail PA-249941		
1	Harness, extension	249935
Harness, Y Connector, 4-Meter PA-344388		
1	Wiring harness, 35-65 kW John Deere marine	344388
Harness, 12 in. Pigtail, Full Feat. PA-344414		
1	Wiring harness, extension	344414
Harness, 15 Ft. Rem. Panel, Full Feat PA-344415		
1	Wiring harness, extension	344415
Harness, 25 Ft. Rem. Panel, Full Feat PA-344416		
1	Wiring harness, Y-connector	344416
Harness, Y Connector, Full Feat. PA-344417		
1	Wiring harness, John Deere marine	344417

Qty.	Description	Part No.
Harness, Y Connector, Annun. PA-344437		
1	Wiring harness, extension	344437
Control Wiring to Plug, 4-Meter PA-344491		
1	Harness, wiring	336929
Control Wiring to Plug, Annun. PA-344492		
1	Wiring harness, John Deere marine	336925
Cont. Wiring to Plug, Full Feat PA-344493		
1	Wiring harness, John Deere marine	336927
Harness, 15 Ft. Rem. Annunciator PA-344501		
1	Wiring harness, extension	344501
Harness, 25 Ft. Rem. Annunciator PA-344502		
1	Wiring harness, Dec 3+ controller, FRII	344502
Cable, 15 Ft. Remote Mounting PAA-344422		
1	Box, remote connection	A-344422
1	TT Remote Connection, 20-2000 kW	TT-1064
Cable, 25 Ft. Remote Mounting PAA-344423		
1	Box, remote connection	A-344423
1	TT Remote Connection, 20-2000 kW	TT-1064
Cable, 40 Ft. Remote Mounting PAA-344505		
1	Box, remote connection	A-344505
1	TT Remote Connection, 20-2000 kW	TT-1064
Isolated Ground System Kits		
Isolated Ground System, 12 V GM49688-KP1		
4	Insulator, panel	233269
1	Stud, 1/4-20 x 1 in.	237612
1	Switch assembly, pressure	253323
4	Vibromount	282829
1	Switch, high temp. shutoff	GM29288
1	Switch, high temp. cut-out	GM29289
1	Sender, oil pressure	GM29290
1	Sender, temperature	GM47208
1	Alternator, isolated ground, 12 VDC	GM29294
1	Solenoid, magnetic	GM30412
2	Screw, hex cap	M933-08020-60
1	Bolt, hex cap	X-125-33
1	Washer, lock, 0.323 ID x 0.586 in. OD	X-21-1
2	Washer, lock, 0.326 ID x 0.883 in. OD	X-22-16
7	Washer, lock, 0.521 ID x 1.24 in. OD	X-22-26
8	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
1	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-85
9	Bolt, hex cap	X-465-6
8	Nut, flange whiz, 8-32	X-6210-4
1	TT Isolated Ground, 40-150EOZ/33-125EFOZ	TT-1359
1	Bracket, solenoid mtg.	GM30266
2	Standoff insulator, 1/4-20 x 1.25 in.	X-6128-31
1	Bushing, face reducing	GM31186
2	Tubing, heat shrink	X-6079-2
1	Decal, Negative Battery Conn	226917
2	Screw, hex cap	M933-12030-60
4	Bolt, hex cap	X-129-15
2	Standoff insulator, 1/2-13 x 2 in.	X-6128-1
1	Plate, spacer	GM49727
1	Bus, starter negative	GM49728
1	Harness, engine 40 JD Dec 3+ Iso Gnd 12V	GM49694
1	Screw, hex cap	M933-12020-60
1	Nut, hex,	M6923-12-80
1	Gauge, oil pressure, 12V	GM52479
1	Gauge, engine temperature	GM30451

Parts List: Accessories, continued

Qty.	Description	Part No.
Isolated Ground System, 24 V		
1	Switch assembly, pressure	253323
4	Vibromount	282829
1	Switch, high temp. shutoff	GM29288
1	Switch, high temp. cut-out	GM29289
1	Sender, oil pressure	GM29290
1	Sender, temperature	GM47208
1	Alternator, isolated ground, 24 VDC	GM29295
1	Strap, alternator mounting	GM30488
2	Nut, hex, 6 mm	M6923-06-80
2	Screw, hex cap	M933-06020-60
2	Screw, hex cap	M933-08020-60
1	Bolt, hex cap	X-125-33
1	Washer, lock, 0.323 ID x 0.586 in. OD	X-21-1
8	Washer, lock, 0.521 ID x 1.24 in. OD	X-22-26
2	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
1	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-85
1	Bolt, hex cap	X-465-6
1	Nut, flange spirallock, 1/4-20	X-6210-2
8	Nut, flange whiz, 8-32	X-6210-4
1	TT Isolated Ground, 40-150EOZ/33-125EFOZ	TT-1359
2	Standoff insulator, 1/4-20 x 1.25 in.	X-6128-31
1	Spacer, 0.531 ID x 1 OD x 0.75 in.	X-400-161
1	Spacer	X-400-257
1	Pulley, alternator	GM30536
1	Spacer, alternator pulley	GM30537
1	Bolt, hex cap	X-125-24
1	Bushing, face reducing	GM31186
2	Screw, hex cap	M933-12020-60
1	Decal, Negative Battery Conn	226917
2	Screw, hex cap	M933-12030-60
4	Bolt, hex cap	X-129-15
2	Standoff insulator, 1/2-13 x 2 in.	X-6128-1
2	Plate, spacer	GM49727
1	Bus, starter negative	GM49728
1	Harness, engine 40 JD Dec 3+ Iso Gnd 24V	GM49695
2	Nut, hex,	M6923-12-80
2	Spacer, 0.531 ID x 1 OD x 0.25 in.	X-400-167
1	Spacer, 0.384 ID x 0.5 OD x 0.25 in.	X-400-191
1	Gauge, oil pressure 24V	GM52480
1	Gauge, water temperature, 24V	GM50533
Isolated Ground System, 12 V		
4	Insulator, panel	233269
1	Stud, 1/4-20 x 1 in.	237612
4	Vibromount	282829
1	Switch, high temp. cut-out	GM29289
1	Sender, oil pressure	GM29290
1	Sender, temperature	GM47208
1	Alternator, isolated ground, 12 VDC	GM29294
1	Solenoid, magnetic	GM30412
2	Screw, hex cap	M933-08020-60
3	Bolt, hex cap	X-125-33
1	Washer, lock, 0.323 ID x 0.586 in. OD	X-21-1
2	Washer, lock, 0.326 ID x 0.883 in. OD	X-22-16
7	Washer, lock, 0.521 ID x 1.24 in. OD	X-22-26
8	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
5	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-85
7	Bolt, hex cap	X-465-6
8	Nut, flange whiz, 8-32	X-6210-4
1	TT Isolated Ground, 40-150EOZ/33-125EFOZ	TT-1359
1	Bracket, solenoid mtg.	GM30266
2	Insulator, standoff	X-6128-34
1	Bushing, face reducing	GM31186
2	Tubing, heat shrink	X-6079-2
1	Decal, Negative Battery Conn	226917
2	Screw, hex cap	M933-12030-60
4	Bolt, hex cap	X-129-15
2	Standoff insulator, 1/2-13 x 2 in.	X-6128-1
1	Plate, spacer	GM49727
1	Bus, starter negative	GM49728
1	Harness, engine 55-99 kW JD Marine	GM40884
1	Screw, hex cap	M933-12020-60
1	Nut, hex	M6923-12-80

Qty.	Description	Part No.
Isolated Ground System, 24 V		
2	Insulator, panel	233269
4	Vibromount	282829
1	Switch, high temp. cut-out	GM29289
1	Sender, oil pressure	GM29290
1	Sender, temperature	GM47208
1	Alternator, isolated ground, 24 VDC	GM29295
2	Screw, hex cap	M933-08020-60
3	Bolt, hex cap	X-125-33
1	Washer, lock, 0.323 ID x 0.586 in. OD	X-21-1
2	Washer, lock, 0.326 ID x 0.883 in. OD	X-22-16
7	Washer, lock, 0.521 ID x 1.24 in. OD	X-22-26
4	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
5	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-85
3	Bolt, hex cap	X-465-6
8	Nut, flange whiz, 8-32	X-6210-4
1	TT Isolated Ground, 40-150EOZ/33-125EFOZ	TT-1359
2	Standoff insulator, 1/4-20 x 1.25 in.	X-6128-31
1	Bushing, face reducing	GM31186
2	Tubing, heat shrink	X-6079-2
1	Decal, Negative Battery Conn	226917
1	Screw, hex cap	M933-12020-60
4	Bolt, hex cap	X-129-15
2	Standoff insulator, 1/2-13 x 2 in.	X-6128-1
2	Plate, spacer	GM49727
1	Bus, starter negative	GM49728
1	Harness, engine 55-99 kW JD Marine	GM40885
2	Screw, hex cap	M933-06020-60
1	Nut, hex,	M6923-12-80
2	Screw, hex cap	M933-12030-60
1	Nut, flange spirallock, 1/4-20	X-6210-2
1	Strap, alternator mounting	GM30488
1	Pulley, alternator	GM30536
1	Spacer, alternator pulley	GM30537
2	Nut, hex, 6 mm	M6923-06-80
1	Spacer, 0.531 ID x 1 OD x 0.75 in.	X-400-161
1	Spacer	X-400-257
1	Bolt, hex cap	X-125-24
2	Spacer, 0.531 ID x 1 OD x 0.25 in.	X-400-167
1	Spacer, 0.384 ID x 0.5 OD x 0.25 in.	X-400-191
Isolated Ground System, 12 V		
4	Insulator, panel	233269
1	Switch, high temp. cut-out	GM29289
1	Sender, oil pressure	GM29290
1	Sender, temperature	GM47208
1	Alternator, isolated ground, 12 VDC	GM29294
1	Solenoid, magnetic	GM30412
2	Screw, hex cap	M933-08020-60
3	Bolt, hex cap	X-125-33
1	Washer, lock, 0.323 ID x 0.586 in. OD	X-21-1
2	Washer, lock, 0.326 ID x 0.883 in. OD	X-22-16
8	Washer, lock, 0.521 ID x 1.24 in. OD	X-22-26
8	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
3	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-85
8	Bolt, hex cap	X-465-6
1	Bracket, solenoid mtg.	GM30266
2	Insulator, standoff	X-6128-34
1	Bushing, face reducing	GM31186
1	Decal, Negative Battery Conn	226917
2	Screw, hex cap	M933-12030-60
4	Bolt, hex cap	X-129-15
2	Standoff insulator, 1/2-13 x 2 in.	X-6128-1
1	Plate, spacer	GM49727
1	Bus, starter negative	GM50383
1	Harness, engine Dec 3+ 125-180 ISO GND	GM49699
2	Screw, hex cap	M933-12020-60
1	Nut, hex	M6923-12-80
1	Hose, radiator wire insert	X-6014-132

Parts List: Accessories, continued

Qty.	Description	Part No.
Isolated Ground System, 24 V		
2	Insulator, panel	233269
1	Switch, high temp. cut-out	GM29289
1	Sender, oil pressure	GM29290
1	Sender, temperature	GM47208
1	Alternator, isolated ground, 24 VDC	GM29295
2	Screw, hex cap	M933-08020-60
3	Bolt, hex cap	X-125-33
1	Washer, lock, 0.323 ID x 0.586 in. OD	X-21-1
2	Washer, lock, 0.326 ID x 0.883 in. OD	X-22-16
8	Washer, lock, 0.521 ID x 1.24 in. OD	X-22-26
4	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
3	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-85
4	Bolt, hex cap	X-465-6
2	Insulator, standoff	X-6128-34
1	Bushing, face reducing	GM31186
1	Decal, Negative Battery Conn	226917
2	Screw, hex cap	M933-12020-60
4	Bolt, hex cap	X-129-15
2	Standoff insulator, 1/2-13 x 2 in.	X-6128-1
2	Plate, spacer	GM49727
1	Bus, starter negative	GM50383
1	Harness, engine Dec 3+ 125-180 ISO GND	GM49699
2	Screw, hex cap	M933-06020-60
1	Nut, hex	M6923-12-80
2	Screw, hex cap	M933-12030-60
1	Pulley, alternator	GM30536
2	Nut, hex, 6 mm	M6923-06-80
1	Spacer	X-400-259
2	Washer, lock, 0.262 ID x 0.743 in. OD	X-22-12
1	Solenoid, magnetic	GM30413
1	Bracket, solenoid mtg.	GM30266
1	Bolt, hex cap	X-125-24
2	Spacer, 0.531 ID x 1 OD x 0.25 in.	X-400-167
1	Spacer, 0.384 ID x 0.5 OD x 0.25 in.	X-400-191
1	Spacer, 0.531 ID x 1 OD x 0.75 in.	X-400-161
1	Hose, radiator wire insert	X-6014-132
Isolated Ground System, 12 V		
4	Insulator, panel	233269
1	Stud, 1/4-20 X 1 in.	237612
1	Switch assembly, pressure	253323
4	Vibromount	282829
1	Switch, high temp. shutoff	GM29288
1	Switch, high temp. cut-out	GM29289
1	Sender, oil pressure	GM29290
1	Sender, temperature	GM47208
1	Solenoid, magnetic	GM30412
2	Screw, hex cap	M933-08020-60
1	Bolt, hex cap	X-125-33
1	Washer, lock, 0.323 ID x 0.586 in. OD	X-21-1
2	Washer, lock, 0.326 ID x 0.883 in. OD	X-22-16
7	Washer, lock, 0.521 ID x 1.24 in. OD	X-22-26
8	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
1	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-85
9	Bolt, hex cap	X-465-6
8	Nut, flange whiz, 8-32	X-6210-4
1	TT Isolated Ground, 40-150EOZ/33-125EFOZ	TT-1359
1	Bracket, solenoid mtg.	GM30266
2	Standoff insulator, 1/4-20 x 1.25 in.	X-6128-31
1	Bushing, face reducing	GM31186
2	Tubing, heat shrink	X-6079-2
1	Decal, Negative Battery Conn	226917
2	Screw, hex cap	M933-12030-60
4	Bolt, hex cap	X-129-15
2	Standoff insulator, 1/2-13 x 2 in.	X-6128-1
1	Plate, spacer	GM49727
1	Bus, starter negative	GM49728
1	Harness, engine 40 kW JD Marine	GM51628
1	Screw, hex cap	M933-12020-60
1	Nut, hex	M6923-12-80

Qty.	Description	Part No.
Isolated Ground System, 24 V		
1	Switch assembly, pressure	253323
4	Vibromount	282829
1	Switch, high temp. shutoff	GM29288
1	Switch, high temp. cut-out	GM29289
1	Sender, oil pressure	GM29290
1	Sender, temperature	GM47208
2	Nut, hex, 6 mm	M6923-06-80
2	Screw, hex cap	M933-06020-60
1	Bolt, hex cap	M933-08020-60
1	Washer, lock, 0.323 ID x 0.586 in. OD	X-125-33
8	Washer, lock, 0.521 ID x 1.24 in. OD	X-21-1
2	Washer, plain, 0.281 ID x 0.625 in. OD	X-22-26
1	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-40
1	Bolt, hex cap	X-25-85
1	Nut, flange spirallock, 1/4-20	X-465-6
8	Nut, flange whiz, 8-32	X-6210-2
1	TT Isolated Ground, 40-150EOZ/33-125EFOZ	X-6210-4
2	Standoff insulator, 1/4-20 x 1.25 in.	TT-1359
1	Bolt, hex cap	X-6128-31
1	Bushing, face reducing	X-125-24
2	Screw, hex cap	GM31186
1	Decal, Negative Battery Conn	M933-12020-60
2	Screw, hex cap	226917
4	Bolt, hex cap	M933-12030-60
2	Standoff insulator, 1/2-13 x 2 in.	X-129-15
2	Plate, spacer	X-6128-1
1	Bus, starter negative	GM49727
1	Harness, engine 40 kW JD Marine	GM49728
2	Nut, hex	GM51629
Ground, Isolated (12 V) Dec 550		
4	Insulator, panel	M6923-12-80
1	Alternator, isolated ground, 12VDC	233269
1	Harness, engine 40 kW JD Marine	GM29294
7	Washer, lock, 0.521 ID x 1.24 in. OD	GM49633
1	Spacer, .531 ID x 1 OD x 1 in.	X-22-26
1	Spacer	X-400-230
2	Standoff insulator, 1/4-20 x 1.25 in.	X-400-257
1	Decal, Negative Battery Conn	X-6128-31
2	Plate, spacer	226917
1	Bus, starter negative	GM49727
2	Screw, hex cap	GM49728
4	Bolt, hex cap	M933-12030-60
2	Standoff insulator, 1/2-13 x 2 in.	X-129-15
1	Switch, high temp. cut-out	X-6128-1
1	Washer, lock, 0.323 ID x 0.586 in. OD	GM29289
1	Bracket, solenoid mtg.	X-21-1
2	Washer, lock, 0.326 ID x 0.883 in. OD	GM30266
1	Solenoid, magnetic	X-22-16
2	Tubing, heat shrink	GM30412
10	Bolt, hex cap	X-6079-2
10	Washer, plain, 0.281 ID x 0.625 in. OD	X-465-6
2	Screw, hex cap	X-25-40
1	Bolt, hex cap	M933-08020-60
1	Washer, plain, 0.344 ID x 0.687 in. OD	X-125-33
1	Screw, hex cap	X-25-85
1	Nut, hex	M933-12020-60
		M6923-12-80

Parts List: Accessories, continued

Qty.	Description	Part No.	Qty.	Description	Part No.
Ground, Isolated (24 V) Dec 550			Ground, Isolated (24 V) Dec 550		
1	Alternator, isolated ground, 24 VDC	GM29295	1	Alternator, isolated ground, 24 VDC	GM29295
1	Harness, engine 40 kW JD Marine	GM49634	1	Harness, engine 80-99 kW JD Marine	GM40749
8	Washer, lock, 0.521 ID x 1.24 in. OD	X-22-26	8	Washer, lock, 0.521 ID x 1.24 in. OD	X-22-26
1	Spacer, 0.531 ID x 1 OD x 0.75 in.	X-400-161	1	Spacer, 0.531 ID x 1 OD x 0.75 in.	X-400-161
1	Spacer	X-400-257	1	Spacer	X-400-257
2	Standoff insulator, 1/4-20 x 1.25 in.	X-6128-31	2	Insulator, standoff	X-6128-34
1	Decal, Negative Battery Conn	226917	1	Decal, Negative Battery Conn	226917
2	Plate, spacer	GM49727	2	Plate, spacer	GM49727
1	Bus, starter negative	GM49728	1	Bus, starter negative	GM49728
2	Screw, hex cap	M933-12030-60	2	Screw, hex cap	M933-12030-60
4	Bolt, hex cap	X-129-15	4	Bolt, hex cap	X-129-15
2	Standoff insulator, 1/2-13 x 2 in.	X-6128-1	2	Standoff insulator, 1/2-13 x 2 in.	X-6128-1
1	Switch, high temp. cut-out	GM29289	1	Switch, high temp. cut-out	GM29289
1	Washer, lock, 0.323 ID x 0.586 in. OD	X-21-1	1	Washer, lock, 0.323 ID x 0.586 in. OD	X-21-1
2	Bolt, hex cap	X-465-6	2	Bolt, hex cap	X-465-6
2	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40	2	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
1	Bolt, hex cap	X-125-33	1	Bolt, hex cap	X-125-33
1	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-85	1	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-85
2	Screw, hex cap	M933-12020-60	2	Screw, hex cap	M933-12020-60
2	Nut, hex	M6923-12-80	2	Nut, hex	M6923-12-80
1	Bolt, hex cap	X-125-24	1	Bolt, hex cap	X-125-24
1	Cable, battery	X-545-204	1	Cable, battery	X-545-204
1	Strap, alternator mounting	GM30488	1	Strap, alternator mounting	GM30488
1	Pulley, alternator	GM30536	1	Pulley, alternator	GM30536
1	Spacer, alternator pulley	GM30537	1	Spacer, alternator pulley	GM30537
1	Washer, plain, 0.656 ID x 1.312 in. OD	X-25-15	1	Washer, plain, 0.656 ID x 1.312 in. OD	X-25-15
2	Spacer, 0.531 ID x 1 OD x 0.25 in.	X-400-167	2	Spacer, 0.531 ID x 1 OD x 0.25 in.	X-400-167
1	Spacer, 0.384 ID x 0.5 OD x .25 in.	X-400-191	1	Spacer, 0.384 ID x 0.5 OD x .25 in.	X-400-191
Ground, Isolated (12 V) Dec 550			Ground, Isolated (12 V) Dec 550		
4	Insulator, panel	233269	4	Insulator, panel	233269
1	Alternator, isolated ground, 12VDC	GM29294	1	Alternator, isolated ground, 12VDC	GM29294
1	Harness, engine 55-99 kW JD Marine	GM40717	1	Harness, Wiring Dec 550 125-180 kW Marine	GM49199
7	Washer, lock, 0.521 ID x 1.24 in. OD	X-22-26	8	Washer, lock, 0.521 ID x 1.24 in. OD	X-22-26
1	Spacer, 0.531 ID x 1 OD x 1 in.	X-400-230	2	Insulator, standoff	X-6128-34
1	Spacer	X-400-257	1	Decal, Negative Battery Conn	226917
2	Insulator, standoff	X-6128-34	2	Plate, spacer	GM49727
1	Decal, Negative Battery Conn	226917	1	Bus, starter negative	GM50383
2	Plate, spacer	GM49727	2	Screw, hex cap	M933-12030-60
1	Bus, starter negative	GM49728	4	Bolt, hex cap	X-129-15
2	Screw, hex cap	M933-12030-60	2	Standoff insulator, 1/2-13 x 2 in.	X-6128-1
4	Bolt, hex cap	X-129-15	1	Switch, high temp. cut-out	GM29289
2	Standoff insulator, 1/2-13 x 2 in.	X-6128-1	1	Washer, lock, 0.323 ID x 0.586 in. OD	X-21-1
1	Switch, high temp. cut-out	GM29289	1	Bracket, solenoid mtg.	GM30266
1	Washer, lock, 0.323 ID x 0.586 in. OD	X-21-1	2	Washer, lock, 0.326 ID x 0.883 in. OD	X-22-16
1	Bracket, solenoid mtg.	GM30266	1	Solenoid, magnetic	GM30412
2	Washer, lock, 0.326 ID x 0.883 in. OD	X-22-16	10	Bolt, hex cap	X-465-6
1	Solenoid, magnetic	GM30412	10	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
2	Tubing, heat shrink	X-6079-2	2	Screw, hex cap	M933-08020-60
10	Bolt, hex cap	X-465-6	1	Bolt, hex cap	X-125-33
10	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40	1	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-85
2	Screw, hex cap	M933-08020-60	2	Screw, hex cap	M933-12020-60
1	Bolt, hex cap	X-125-33	1	Nut, hex	M6923-12-80
1	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-85	1	Hose, radiator wire insert	X-6014-132
1	Screw, hex cap	M933-12020-60			
1	Nut, hex	M6923-12-80			

Parts List: Accessories, continued

Qty.	Description	Part No.
Ground, Isolated (24 V) Dec 550 GM49732-KP6		
1	Alternator, isolated ground, 24 VDC	GM29295
1	Harness, Wiring Dec 550 125-180 kW Marine	GM49199
8	Washer, lock, 0.521 ID x 1.24 in. OD	X-22-26
2	Insulator, standoff	X-6128-34
1	Decal, Negative Battery Conn	226917
2	Plate, spacer	GM49727
1	Bus, starter negative	GM50383
2	Screw, hex cap	M933-12030-60
4	Bolt, hex cap	X-129-15
2	Standoff insulator, 1/2-13 x 2 in.	X-6128-1
1	Switch, high temp. cut-out	GM29289
1	Washer, lock, 0.323 ID x 0.586 in. OD	X-21-1
6	Bolt, hex cap	X-465-6
6	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
1	Bolt, hex cap	X-125-33
1	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-85
2	Screw, hex cap	M933-12020-60
1	Nut, hex	M6923-12-80
1	Bolt, hex cap	X-125-24
1	Pulley, alternator	GM30536
2	Insulator, panel	233269
1	Spacer	X-400-259
1	Solenoid, magnetic	GM30413
2	Washer, lock, 0.262 ID x 0.743 in. OD	X-22-12
1	Bracket, solenoid mtg.	GM30266
2	Screw, hex cap	M933-06020-60
2	Nut, hex, 6 mm	M6923-06-80
1	Spacer, 0.531 ID x 1 OD x 0.75 in.	X-400-161
2	Spacer, 0.531 ID x 1 OD x 0.25 in.	X-400-167
1	Spacer, 0.384 ID x 0.5 OD x .25 in.	X-400-191
1	Hose, radiator wire insert	X-6014-132

Isolated Ground, 12 V GM49732-KP7		
4	Insulator, panel	233269
1	Harness, engine 40 kW JD Marine	GM51630
7	Washer, lock, 0.521 ID x 1.24 in. OD	X-22-26
1	Spacer, .531 ID x 1 OD x 1 in.	X-400-230
1	Spacer	X-400-257
2	Standoff insulator, 1/4-20 x 1.25 in.	X-6128-31
1	Decal, Negative Battery Conn	226917
2	Plate, spacer	GM49727
1	Bus, starter negative	GM49728
2	Screw, hex cap	M933-12030-60
4	Bolt, hex cap	X-129-15
2	Standoff insulator, 1/2-13 x 2 in.	X-6128-1
1	Switch, high temp. cut-out	GM29289
1	Washer, lock, 0.323 ID x 0.586 in. OD	X-21-1
1	Bracket, solenoid mtg.	GM30266
2	Washer, lock, 0.326 ID x 0.883 in. OD	X-22-16
1	Solenoid, magnetic	GM30412
2	Tubing, heat shrink	X-6079-2
10	Bolt, hex cap	X-465-6
10	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
2	Screw, hex cap	M933-08020-60
1	Bolt, hex cap	X-125-33
1	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-85
1	Screw, hex cap	M933-12020-60
1	Nut, hex	M6923-12-80

Qty.	Description	Part No.
Isolated Ground, 24 V GM49732-KP8		
1	Harness, engine 40 kW JD Marine	GM51631
8	Washer, lock, 0.521 ID x 1.24 in. OD	X-22-26
2	Standoff insulator, 1/4-20 x 1.25 in.	X-6128-31
1	Decal, Negative Battery Conn	226917
2	Plate, spacer	GM49727
1	Bus, starter negative	GM49728
2	Screw, hex cap	M933-12030-60
4	Bolt, hex cap	X-129-15
2	Standoff insulator, 1/2-13 x 2 in.	X-6128-1
1	Switch, high temp. cut-out	GM29289
1	Washer, lock, 0.323 ID x 0.586 in. OD	X-21-1
2	Bolt, hex cap	X-465-6
2	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
1	Bolt, hex cap	X-125-33
1	Washer, plain, 0.344 ID x 0.687 in. OD	X-25-85
2	Screw, hex cap	M933-12020-60
2	Nut, hex	M6923-12-80
1	Bolt, hex cap	X-125-24
1	Cable, battery	X-545-204

Miscellaneous

Dry Exhaust Elbow GM17650-KP1		
1	Elbow, dry exhaust	GM17653

Keel Cooling/Dry Exhaust GM29561-KP3		
1	Elbow, dry exhaust	GM17653
1	Cover	352091
1	Gasket	352092
1	Tank	GM31752
1	Hose	GM31753
2	Connector, hose + vibra seal	X-582-7
2	Clamp, hose, 0.5/1 in.	X-426-10
1	TT Keel Cooling/Dry Exhst Conv, 40-150EOZ	TT-1360
1	TT Keel Cooling Guidelines, 40-150EOZ	TT-1361

Prealarm HWT and LOP Senders, Isolated GM30648-KP1		
1	Switch, pressure assembly	GM29293
1	Switch, pressure assembly	GM29292
1	TT Anticipatory Alarm, 30-65COZ	TT-1091

Communication Module, 16Light Contr. GM32644-KP1		
1	Ribbon cable assembly	GM21340
1	Cable assembly, ribbon, 24-position	GM32632
3	Spacer, 8-32 x 0.625, male-female	GM32633
3	Washer, lock, 0.172 ID x 0.333 in. OD	X-22-7
1	TT Remote Serial Annunciator	TT-1377
1	Connector, plug, 6-position	294619
1	PCB assy, communication interface	GM49791-1

Lloyd's Type Approval GM34880-KA1		
1	Decal (Lloyd's Approval)	GM34378
1	Nameplate, IEC For Lloyd's	GM24414
1	Nameplate, blank	GM40776

Low Coolant Level Indicator GM40921-KP1		
1	Switch, liquid level	GM15506
1	Bracket, water level switch	GM40920
1	Connector, 90 deg., 1/4 in. ID hose	X-391-20
1	Connector, hose + vibra seal	X-582-25
1	Hose, rubber	X-6359-18
2	Clamp, hose, 0.25/0.70 in.	X-426-9
1	Screw, hex cap	M933-10020-60
1	Washer, plain, 10.5 ID x 20.0 OD	M125A-10-80
2	Screw, hex cap	M933-06020-60
2	Nut, hex, 6 mm	M6923-06-80
1	TT Low Coolant Level, 33-150EOZ/EFOZ	TT-1299
1	Coupling, non-metallic	X-567-1

Parts List: Accessories, continued

Qty.	Description	Part No.
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Low Coolant Level Indicator

GM40921-KP2

1	Switch, liquid level	GM15506
1	Bracket, water level switch	GM40920
1	Connector, 90 deg., 1/4 in. ID hose	X-391-20
2	Connector, hose + vibra seal	X-582-25
1	Hose, rubber, straight, 0.25 in. ID	X-6359-1
2	Clamp, hose, 0.25/0.70 in.	X-426-9
1	Screw, hex cap	M933-10020-60
1	Washer, plain, 10.5 ID x 20.0 OD	M125A-10-80
1	Screw, hex cap	M933-12025-60
1	Washer, plain	M125A-12-80
2	Screw, hex cap	M933-06020-60
2	Nut, hex, 6 mm	M6923-06-80
1	TT Low Coolant Level, 33-150EOZ/EFOZ	TT-1299
1	Coupling, non-metallic	X-567-1
1	Pipe, 1/2 in. NPT x 1.50 in., brass	X-209-1
1	Tee, pipe, 1/2 x 1/2 x 1/2 NPT	K-1118
1	Hose, rubber, straight, 0.25 in. ID	X-6359-1
2	Clamp, hose, 0.25/0.70 in.	X-426-9
1	Adapter, bushing	364350
1	Connector, 90 deg., 1/4 in. ID hose	X-391-1

Low Coolant Level Indicator

GM40921-KP3

1	Switch, liquid level	GM15506
1	Bracket, water level switch	GM16653
1	Connector, 90 deg., 1/4 in. ID hose	X-391-20
2	Connector, hose + vibra seal	X-582-25
1	Hose, rubber	X-6359-11
4	Clamp, hose, 0.25/0.70 in.	X-426-9
2	Screw, hex cap	M933-06020-60
2	Nut, hex, 6 mm	M6923-06-80
1	TT Low Coolant Level, 33-150EOZ/EFOZ	TT-1299
1	Coupling, non-metallic	X-567-1
1	Hose, rubber	X-6359-15
1	Connector, hose + vibra seal	337553
2	Bolt, hex cap	X-6238-10
2	Washer, pl, 0.406 ID x 0.812 in. OD	X-25-37

Controller Connection, Dec 550

GM41605-KP1

1	Connection, assembly, customer	GM13984
1	Harness, wiring controller connection	GM49115
2	Connector, plug, 36-position	GM16752
5	Screw, machine	X-49-2
2	Spacer, 0.25 OD, 0.375 in.	X-712-13
1	Panel, connection kit mounting	GM48837
6	Washer, lock, 0.172 ID x 0.333 in. OD	X-22-7
6	Nut, hex machine screw, 8-32	X-70-12
4	Spacer, 0.25 OD, 0.25 in.	X-712-2
4	Spacer, 0.25 OD, 0.875 in.	X-712-15

Oil Level Indicator (Low/High)

GM49379-KP1

1	Bracket, oil level alarm	GM49236
1	Tee, pipe, 1/2 x 1/2 x 1/2 NPT	X-203-13
1	Pipe, 1/2 in. NPT x 1.19 in.	X-209-2
2	Clamp, hose, .5/1 in.	X-426-10
2	Connector, hose + vibra seal	X-582-5
1	Fuel line, flexible	X-422-6
1	Gauge, oil level	227257
4	Washer, lock, 0.262 ID x 0.743 in. OD	X-22-12
1	Coupling, non-metallic	X-567-1
2	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60
2	Nut, hex, 10 mm	M6923-10-80
4	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
4	Bolt, hex cap	X-465-6

Qty.	Description	Part No.
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Oil Level Indicator (Low/High)

GM49379-KP2

1	Bracket, oil level alarm	GM49236
1	Tee, pipe, 1/2 x 1/2 x 1/2 NPT	X-203-13
1	Pipe, 1/2 in. NPT x 1.19 in.	X-209-2
2	Clamp, hose, .5/1 in.	X-426-10
2	Connector, hose + vibra seal	X-582-5
1	Line, flex fuel	X-422-37
1	Gauge, oil level	227257
4	Washer, lock, 0.262 ID x 0.743 in. OD	X-22-12
1	Coupling, non-metallic	X-567-1
2	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60
2	Nut, hex, 10 mm	M6923-10-80
4	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
4	Bolt, hex cap	X-465-6

Oil Level Indicator (Low/High)

GM49379-KP3

1	Bracket, oil level alarm	GM49236
1	Tee, pipe, 1/2 x 1/2 x 1/2 NPT	X-203-13
1	Pipe, 1/2 in. NPT x 1.19 in.	X-209-2
2	Clamp, hose, .5/1 in.	X-426-10
2	Connector, 90 deg., 1/2 in. ID hose	X-391-21
1	Line, flex fuel	X-422-37
1	Gauge, oil level	227257
4	Washer, lock, 0.262 ID x 0.743 in. OD	X-22-12
1	Coupling, non-metallic	X-567-1
2	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60
2	Nut, hex, 10 mm	M6923-10-80
4	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
4	Bolt, hex cap	X-465-6

Dry Exhaust Elbow

GM49689-KP1

1	Elbow, dry exhaust	GM49739
1	Gasket	352029

Dry Exhaust Elbow

GM49689-KP2

1	Elbow, dry exhaust	GM49740
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Keel Cooling & Dry Exhaust

GM49690-KP1

1	Stud	352020
1	Plug	352043
1	Strap	352044
1	Washer, plain, 0.406 ID x 0.656 OD	X-25-28
2	Plug, pipe, 1/2 in. NPTF, brass	X-75-54
1	Cover	352091
1	Gasket	352092
1	Elbow, dry exhaust	GM49739
1	Gasket	352029
1	Nut, flange spirallock, 3/8-16	X-6210-9
2	Cap, plug	258892
1	Plate, cover	GM39785
4	Screw, slotted hex washer head, mach	X-794-3
1	TT Keel Cooling/Dry Exhst Conv, 40-150EOZ	TT-1360
1	TT Keel Cooling Guidelines, 40-150EOZ	TT-1361

Keel Cooling & Dry Exhaust

GM49690-KP2

1	Stud	352020
1	Plug	352043
1	Strap	352044
1	Washer, plain, 0.406 ID x 0.656 OD	X-25-28
2	Plug, pipe, 1/2 in. NPTF, brass	X-75-54
1	Cover	352091
1	Gasket	352092
1	Clamp, exhaust, 4.25 in.	324245
1	Elbow, dry exhaust	GM49740
1	Nut, flange spirallock, 3/8-16	X-6210-9
1	TT Keel Cooling/Dry Exhst Conv, 40-150EOZ	TT-1360
1	TT Keel Cooling Guidelines, 40-150EOZ	TT-1361

Lloyd's Approval, 100 kW>

GM52066-KA1

1	Bracket, relay mounting	GM14320
1	Nameplate, IEC For Lloyd's	GM24414
1	Decal (Lloyd's Approval)	GM34378
2	Washer, lock, 0.326 ID x 0.883 in. OD	X-22-16
1	Fuel lines, double wall 8081AFM75	GM50478

Parts List: Accessories, continued

Qty.	Description	Part No.
Generator Heater, 110/120-220/240 V, 200W		
1	TT Generator Strip Heater, 20-300 kW	TT-585
4	Nut, hex elastic stop, 1/4-20	X-101-8
8	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-40
4	Bolt hex cap	X-465-8
4	Nut, flange spiralock, 1/4-20	X-6210-2
2	Heater, strip	291269
Prealarm HWT and LOP Senders		
1	TT Anticipatory Alarm, 30-65COZ	TT-1091
1	Switch, high temperature shutoff	240976
1	Switch assembly, pressure	271425

Mounting Kits

Standard Vibromounts			GM47974-KP1
4	Mount, vibro	324390	
4	Nut, hex elastic stop	M982-12-80	
8	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60	
8	Screw, hex cap	M933-10030-60	
16	Nut, hex, 10 mm	M6923-10-80	
1	TT Standard & Hydrolastic Mount, Marine	TT-1315	
4	Washer, plain	M125A-12-80	
4	Support, vibromount	GM14454	
4	Washer, plain, 0.531 ID x 2.75 in. OD	X-25-103	
4	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	X-400-154	
4	Screw, hex cap	M931-12090-60	

Hydrolastic Vibromounts			GM47974-KP2
4	Mount, fluid	344091	
4	Washer, plain, 0.656 ID x 1.312 in. OD	X-25-15	
4	Screw, hex head machine	X-6021-14	
8	Nut, flange spiralock, 1/2-13	X-6210-12	
1	TT Standard & Hydrolastic Mount, Marine	TT-1315	

Standard Vibromounts			GM47974-MA1
4	Mount, vibro	324390	
4	Support, vibromount	GM14454	
4	Nut, hex elastic stop	M982-12-80	
4	Washer, plain, 0.531 ID x 2.75 in. OD	X-25-103	
4	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	X-400-154	
4	Screw, hex cap	M931-12090-60	

Hydrolastic Mounts			GM47974-MA2
4	Mount, fluid	344091	
4	Screw, hex head machine	X-6021-14	

Standard Vibromounts			GM47975-KP1
2	Mount, vibro	324390	
2	Vibromount	336813	
4	Support, vibromount	GM14454	
4	Nut, hex elastic stop	M982-12-80	
4	Washer, plain, 0.531 ID x 2.75 in. OD	X-25-103	
4	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	X-400-154	
4	Screw, hex cap	M931-12090-60	
1	TT Standard & Hydrolastic Mount, Marine	TT-1315	
8	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60	
16	Nut, hex, 10 mm	M6923-10-80	
8	Screw, hex cap	M933-10030-60	
4	Washer, plain	M125A-12-80	

Hydrolastic Mounts			GM47975-KP2
2	Mount, fluid	344091	
4	Washer, plain, 0.656 ID x 1.312 in. OD	X-25-15	
4	Screw, hex head machine	X-6021-14	
8	Nut, flange spiralock, 1/2-13	X-6210-12	
1	TT Standard & Hydrolastic Mount, Marine	TT-1315	
2	Mount, fluid vibro	GM49225	

Qty.	Description	Part No.
Standard Vibromounts		
2	Mount, vibro	324390
2	Vibromount	336813
4	Support, vibromount	GM14454
4	Nut, hex elastic stop	M982-12-80
4	Washer, plain, 0.531 ID x 2.75 in. OD	X-25-103
4	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	X-400-154
4	Screw, hex cap	M931-12090-60

Hydrolastic Mounts			GM47975-MA2
2	Mount, fluid	344091	
4	Screw, hex head machine	X-6021-14	
2	Mount, fluid vibro	GM49225	

Vibromounts, Standard			GM47976-KP1
2	Vibromount	324391	
2	Vibromount	336813	
4	Support, vibromount	GM14454	
4	Nut, hex elastic stop	M982-12-80	
4	Washer, plain, 0.531 ID x 2.75 in. OD	X-25-103	
4	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	X-400-154	
4	Screw, hex cap	M931-12090-60	
1	TT Standard & Hydrolastic Mount, Marine	TT-1315	
8	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60	
16	Nut, hex, 10 mm	M6923-10-80	
8	Screw, hex cap	M933-10030-60	
4	Washer, plain	M125A-12-80	

Mounts, Hydrolastic			GM47976-KP2
2	Mount, fluid	344091	
4	Washer, plain, 0.656 ID x 1.312 in. OD	X-25-15	
4	Screw, hex head machine	X-6021-14	
8	Nut, flange spiralock, 1/2-13	X-6210-12	
1	TT Standard & Hydrolastic Mount, Marine	TT-1315	
2	Mount, fluid	359180	

Vibromounts, Standard			GM47976-MA1
2	Vibromount	324391	
2	Vibromount	336813	
4	Support, vibromount	GM14454	
4	Nut, hex elastic stop	M982-12-80	
4	Washer, plain, 0.531 ID x 2.75 in. OD	X-25-103	
4	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	X-400-154	
4	Screw, hex cap	M931-12060-60	

Mounts, Hydrolastic			GM47976-MA2
2	Mount, fluid	344091	
4	Screw, hex head machine	X-6021-14	
2	Mount, fluid	359180	

Vibromounts, Standard			GM47977-KP1
4	Vibromount	324391	
4	Support, vibromount	GM14454	
4	Nut, hex elastic stop	M982-12-80	
4	Washer, plain, 0.531 ID x 2.75 in. OD	X-25-103	
4	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	X-400-154	
4	Screw, hex cap	M931-12090-60	
1	TT Standard & Hydrolastic Mount, Marine	TT-1315	
8	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60	
16	Nut, hex, 10 mm	M6923-10-80	
8	Screw, hex cap	M933-10030-60	
4	Washer, plain	M125A-12-80	

Mounts, Hydrolastic			GM47977-KP2
2	Mount, fluid	359180	
4	Washer, plain, 0.656 ID x 1.312 in. OD	X-25-15	
4	Screw, hex head machine	X-6021-14	
8	Nut, flange spiralock, 1/2-13	X-6210-12	
1	TT Standard & Hydrolastic Mount, Marine	TT-1315	
2	Mount, fluid vibro	GM49225	

Parts List: Accessories, continued

Qty.	Description	Part No.
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Vibromounts, Standard		
4	Vibromount	GM47977-MA1 324391
4	Support, vibromount	GM14454
4	Nut, hex elastic stop	M982-12-80
4	Washer, plain, 0.531 ID x 2.75 in. OD	X-25-103
4	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	X-400-154
4	Screw, hex cap	M931-12090-60

Mounts, Hydrolastic		
2	Mount, fluid	GM47977-MA2 359180
4	Screw, hex head machine	X-6021-14
2	Mount, fluid vibro	GM49225

Vibromounts, Standard		
2	Vibromount	GM47978-KP1 324391
2	Support, vibromount	GM14454
4	Nut, hex elastic stop	M982-12-80
4	Washer, plain, 0.531 ID x 2.75 in. OD	X-25-103
4	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	X-400-154
4	Screw, hex cap	M931-12090-60
1	TT Standard & Hydrolastic Mount, Marine	TT-1315
8	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60
16	Nut, hex, 10 mm	M6923-10-80
8	Screw, hex cap	M933-10030-60
4	Washer, plain	M125A-12-80
2	Vibromount	336024
2	Support, vibromount	GM16659

Mounts, Hydrolastic		
4	Mount, fluid	GM47978-KP2 359180
4	Washer, plain, 0.656 ID x 1.312 in. OD	X-25-15
4	Screw, hex head machine	X-6021-14
8	Nut, flange spiralock, 1/2-13	X-6210-12
1	TT Standard & Hydrolastic Mount, Marine	TT-1315

Standard Vibromounts		
2	Vibromount	GM47978-MA1 336024
2	Vibromount	324391
2	Support, vibromount	GM14454
4	Nut, hex elastic stop	M982-12-80
4	Washer, plain, 0.531 ID x 2.75 in. OD	X-25-103
4	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	X-400-154
2	Support, vibromount	GM16659

Hydrolastic Vibromounts		
4	Mount, fluid	GM47978-MA2 359180
4	Screw, hex head machine	X-6021-14

Vibromounts, Standard		
4	Vibromount	GM47979-KP1 336024
2	Support, vibromount	GM14454
4	Nut, hex elastic stop	M982-12-80
4	Washer, plain, 0.531 ID x 2.75 in. OD	X-25-103
4	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	X-400-154
4	Screw, hex cap	M931-12090-60
1	TT Standard & Hydrolastic Mount, Marine	TT-1315
8	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60
16	Nut, hex, 10 mm	M6923-10-80
8	Screw, hex cap	M933-10030-60
4	Washer, plain	M125A-12-80
2	Support, vibromount	GM16659

Standard Vibromounts		
4	Vibromount	GM47979-MA1 336024
2	Support, vibromount	GM14454
2	Support, vibromount	GM16659
4	Nut, hex elastic stop	M982-12-80
4	Washer, plain, 0.531 ID x 2.75 in. OD	X-25-103
4	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	X-400-154

Qty.	Description	Part No.
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Vibromounts, Standard		
4	Vibromount	GM47980-KP1 336024
2	Support, vibromount	GM49110
4	Nut, hex elastic stop	M982-12-80
4	Washer, plain, 0.531 ID x 2.75 in. OD	X-25-103
4	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	X-400-154
2	Support, vibromount	GM16659
4	Washer, plain	M125A-12-80
16	Nut, hex, 10 mm	M6923-10-80
4	Screw, hex cap	M931-12090-60
8	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60
8	Screw, hex cap	M933-10030-60
1	TT Standard & Hydrolastic Mount, Marine	TT-1315

Standard Vibromounts		
4	Vibromount	GM47980-MA1 336024
2	Support, vibromount	GM49110
4	Nut, hex elastic stop	M982-12-80
4	Washer, plain, 0.531 ID x 2.75 in. OD	X-25-103
4	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	X-400-154
2	Support, vibromount	GM16659

Power Takeoff Kits

PTO Adapter Panel		
1	TT Power Takeoff, 33-99EOZ/EFOZ, Marine	GM15267-KP1 TT-1308
1	Door subassembly sound shield, front	GM19858
4	Gusset, corner	344119
1	Latch, sound shield	344145
1	Insulation, acoustic foam	GM19835
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Channel, U	X-6047-25
1	Insulation, acoustic foam	GM25445
1	Rail, subassembly sound shield, front	GM19860
2	Clip, speed	297596
1	Foam, acoustic insulation (Powertech)	GM14414
1	Foam, acoustic insulation	GM25457

SAE B Clutch & Mounting, 12 V (40-65 kW)		
1	Housing, power take-off	GM19399
1	Hub, PTO drive	GM19415
1	Coupling, flexible	GM19416
1	Guard, belt	GM19430
1	Tube, coolant, 2.00 in. OD, steel	GM19431
1	Guard, power take-off	GM19448
12	Screw, hex socket head machine	X-55-29
1	Hose, radiator, straight, 2 in. ID	X-281-4
8	Washer, hardened, 0.406 ID x 0.812 in. OD	X-801-3
4	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
4	Washer, hardened, 0.469 ID x 0.922 in. OD	X-801-6
1	Stud (metric)	X-6054-20
1	Stud (metric)	X-6054-21
4	Nut, hex elastic stop	M982-16-80
4	Screw, hex cap	M931-16120-60
1	Decal, Equipment Grd	344295
1	Hub, PTO clutch drive	GM19417
1	Clutch, electric	344240
1	Plate, clutch mounting	344246
2	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
2	Screw, hex cap	M931-12090-60
2	Screw, hex head machine	X-6021-5
4	Bolt, hex cap	X-6024-9
5	Screw, hex cap	M933-06010-60
5	Washer, plain	M125A-06-80
8	Screw, hex cap	M933-10035-60
1	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60
1	Washer, plain, 10.5 ID x 20.0 OD	M125A-10-80
1	TT Power Takeoff, 33-99EOZ/EFOZ, Marine	TT-1308
1	Screw, hex cap	M933-12020-60
2	Vibromount	324391

Parts List: Accessories, continued

Qty.	Description	Part No.
SAE C Clutch & Mounting, 12 V (40-65 kW) GM19504-KP2		
1	Housing, power take-off	GM19399
1	Hub, PTO drive	GM19415
1	Coupling, flexible	GM19416
1	Guard, belt	GM19430
1	Tube, coolant, 2.00 in. OD, steel	GM19431
1	Guard, power take-off	GM19448
12	Screw, hex socket head machine	X-55-29
1	Hose, radiator, straight, 2 in. ID	X-281-4
8	Washer, hardened, 0.406 ID x 0.812 in. OD	X-801-3
4	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
4	Washer, hardened, 0.469 ID x 0.922 in. OD	X-801-6
1	Stud (metric)	X-6054-20
1	Stud (metric)	X-6054-21
4	Nut, hex elastic stop	M982-16-80
4	Screw, hex cap	M931-16120-60
1	Decal, Equipment Grd	344295
1	Hub, PTO clutch drive	GM19417
1	Clutch, electric	344241
1	Plate, clutch mounting	344247
2	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
2	Screw, hex cap	M931-12090-60
2	Screw, hex head machine	X-6021-5
4	Bolt, hex cap	X-6024-9
5	Screw, hex cap	M933-06010-60
5	Washer, plain	M125A-06-80
8	Screw, hex cap	M933-10035-60
1	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60
1	Washer, plain, 10.5 ID x 20.0 OD	M125A-10-80
1	TT Power Takeoff, 33-99EOZ/EFOZ, Marine	TT-1308
1	Screw, hex cap	M933-12020-60
2	Vibromount	324391
SAE B Clutch & Mounting, 24 V (40-65 kW) GM19504-KP3		
1	Housing, power take-off	GM19399
1	Hub, PTO drive	GM19415
1	Coupling, flexible	GM19416
1	Guard, belt	GM19430
1	Tube, coolant, 2.00 in. OD, steel	GM19431
1	Guard, power take-off	GM19448
12	Screw, hex socket head machine	X-55-29
1	Hose, radiator, straight, 2 in. ID	X-281-4
8	Washer, hardened, 0.406 ID x 0.812 in. OD	X-801-3
4	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
4	Washer, hardened, 0.469 ID x 0.922 in. OD	X-801-6
1	Stud (metric)	X-6054-20
1	Stud (metric)	X-6054-21
4	Nut, hex elastic stop	M982-16-80
4	Screw, hex cap	M931-16120-60
1	Decal, Equipment Grd	344295
1	Hub, PTO clutch drive	GM19417
1	Clutch, electric	344242
1	Plate, clutch mounting	344246
2	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
2	Screw, hex cap	M931-12090-60
2	Screw, hex head machine	X-6021-5
4	Bolt, hex cap	X-6024-9
5	Screw, hex cap	M933-06010-60
5	Washer, plain	M125A-06-80
8	Screw, hex cap	M933-10035-60
1	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60
1	Washer, plain, 10.5 ID x 20.0 OD	M125A-10-80
1	TT Power Takeoff, 33-99EOZ/EFOZ, Marine	TT-1308
1	Screw, hex cap	M933-12020-60
2	Vibromount	324391

Qty.	Description	Part No.
SAE C Clutch & Mounting, 24 V (40-65 kW) GM19504-KP4		
1	Housing, power take-off	GM19399
1	Hub, PTO drive	GM19415
1	Coupling, flexible	GM19416
1	Guard, belt	GM19430
1	Tube, coolant, 2.00 in. OD, steel	GM19431
1	Guard, power take-off	GM19448
12	Screw, hex socket head machine	X-55-29
1	Hose, radiator, straight, 2 in. ID	X-281-4
8	Washer, hardened, 0.406 ID x 0.812 in. OD	X-801-3
4	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
4	Washer, hardened, 0.469 ID x 0.922 in. OD	X-801-6
1	Stud (metric)	X-6054-20
1	Stud (metric)	X-6054-21
4	Nut, hex elastic stop	M982-16-80
4	Screw, hex cap	M931-16120-60
1	Decal, Equipment Grd	344295
1	Hub, PTO clutch drive	GM19417
1	Clutch, electric	344243
1	Plate, clutch mounting	344247
2	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
2	Screw, hex cap	M931-12090-60
2	Screw, hex head machine	X-6021-5
4	Bolt, hex cap	X-6024-9
5	Screw, hex cap	M933-06010-60
5	Washer, plain	M125A-06-80
8	Screw, hex cap	M933-10035-60
1	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60
1	Washer, plain, 10.5 ID x 20.0 OD	M125A-10-80
1	TT Power Takeoff, 33-99EOZ/EFOZ, Marine	TT-1308
1	Screw, hex cap	M933-12020-60
2	Vibromount	324391
SAE B Clutch & Mounting, 12 V (80-99 kW) GM19504-KP5		
1	Housing, power take-off	GM19399
1	Hub, PTO drive	GM19415
1	Coupling, flexible	GM19416
1	Guard, belt	GM19430
1	Tube, coolant, 2.00 in. OD, steel	GM19431
1	Guard, power take-off	GM19448
12	Screw, hex socket head machine	X-55-29
1	Hose, radiator, straight, 2 in. ID	X-281-4
8	Washer, hardened, 0.406 ID x 0.812 in. OD	X-801-3
4	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
4	Washer, hardened, 0.469 ID x 0.922 in. OD	X-801-6
1	Stud (metric)	X-6054-20
1	Stud (metric)	X-6054-21
4	Nut, hex elastic stop	M982-16-80
4	Screw, hex cap	M931-16120-60
1	Decal, Equipment Grd	344295
1	Hub, PTO clutch drive	GM19418
1	Clutch, electric	344240
1	Plate, clutch mounting	344246
2	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
2	Screw, hex head machine	X-6021-5
4	Bolt, hex cap	X-6024-9
5	Screw, hex cap	M933-06010-60
5	Washer, plain	M125A-06-80
8	Screw, hex cap	M933-10035-60
1	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60
1	Washer, plain, 10.5 ID x 20.0 OD	M125A-10-80
1	TT Power Takeoff, 33-99EOZ/EFOZ, Marine	TT-1308
1	Screw, hex cap	M933-12020-60
2	Vibromount	336024

Parts List: Accessories, continued

Qty.	Description	Part No.
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SAE C Clutch & Mounting, 12 V (80-99 kW) GM19504-KP6

1	Housing, power take-off	GM19399
1	Hub, PTO drive	GM19415
1	Coupling, flexible	GM19416
1	Guard, belt	GM19430
1	Tube, coolant, 2.00 in. OD, steel	GM19431
1	Guard, power take-off	GM19448
12	Screw, hex socket head machine	X-55-29
1	Hose, radiator, straight, 2 in. ID	X-281-4
8	Washer, hardened, 0.406 ID x 0.812 in. OD	X-801-3
4	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
4	Washer, hardened, 0.469 ID x 0.922 in. OD	X-801-6
1	Stud (metric)	X-6054-20
1	Stud (metric)	X-6054-21
4	Nut, hex elastic stop	M982-16-80
4	Screw, hex cap	M931-16120-60
1	Decal, Equipment Grd	344295
1	Hub, PTO clutch drive	GM19418
1	Clutch, electric	344241
1	Plate, clutch mounting	344247
2	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
2	Screw, hex head machine	X-6021-5
4	Bolt, hex cap	X-6024-9
5	Screw, hex cap	M933-06010-60
5	Washer, plain	M125A-06-80
8	Screw, hex cap	M933-10035-60
1	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60
1	Washer, plain, 10.5 ID x 20.0 OD	M125A-10-80
1	TT Power Takeoff, 33-99EOZ/EFOZ, Marine	TT-1308
1	Screw, hex cap	M933-12020-60
2	Vibromount	336024

SAE B Clutch & Mounting, 24 V (80-99 kW) GM19504-KP7

1	Housing, power take-off	GM19399
1	Hub, PTO drive	GM19415
1	Coupling, flexible	GM19416
1	Guard, belt	GM19430
1	Tube, coolant, 2.00 in. OD, steel	GM19431
1	Guard, power take-off	GM19448
12	Screw, hex socket head machine	X-55-29
1	Hose, radiator, straight, 2 in. ID	X-281-4
8	Washer, hardened, 0.406 ID x 0.812 in. OD	X-801-3
4	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
4	Washer, hardened, 0.469 ID x 0.922 in. OD	X-801-6
1	Stud (metric)	X-6054-20
1	Stud (metric)	X-6054-21
4	Nut, hex elastic stop	M982-16-80
4	Screw, hex cap	M931-16120-60
1	Decal, Equipment Grd	344295
1	Hub, PTO clutch drive	GM19418
1	Clutch, electric	344242
1	Plate, clutch mounting	344246
2	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
2	Screw, hex head machine	X-6021-5
4	Bolt, hex cap	X-6024-9
5	Screw, hex cap	M933-06010-60
5	Washer, plain	M125A-06-80
8	Screw, hex cap	M933-10035-60
1	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60
1	Washer, plain, 10.5 ID x 20.0 OD	M125A-10-80
1	TT Power Takeoff, 33-99EOZ/EFOZ, Marine	TT-1308
1	Screw, hex cap	M933-12020-60
2	Vibromount	336024

Qty.	Description	Part No.
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SAE C Clutch & Mounting, 24 V (80-99 kW) GM19504-KP8

1	Housing, power take-off	GM19399
1	Hub, PTO drive	GM19415
1	Coupling, flexible	GM19416
1	Guard, belt	GM19430
1	Tube, coolant, 2.00 in. OD, steel	GM19431
1	Guard, power take-off	GM19448
12	Screw, hex socket head machine	X-55-29
1	Hose, radiator, straight, 2 in. ID	X-281-4
8	Washer, hardened, 0.406 ID x 0.812 in. OD	X-801-3
4	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
4	Washer, hardened, 0.469 ID x 0.922 in. OD	X-801-6
1	Stud (metric)	X-6054-20
1	Stud (metric)	X-6054-21
4	Nut, hex elastic stop	M982-16-80
4	Screw, hex cap	M931-16120-60
1	Decal, Equipment Grd	344295
1	Hub, PTO clutch drive	GM19418
1	Clutch, electric	344243
1	Plate, clutch mounting	344247
2	Washer, hardened, 0.656 ID x 1.06 in. OD	X-801-5
2	Screw, hex head machine	X-6021-5
4	Bolt, hex cap	X-6024-9
5	Screw, hex cap	M933-06010-60
5	Washer, plain	M125A-06-80
8	Screw, hex cap	M933-10035-60
1	Screw, hex cap, fully thrd M10 x 25 mm	M933-10025-60
1	Washer, plain, 10.5 ID x 20.0 OD	M125A-10-80
1	TT Power Takeoff, 33-99EOZ/EFOZ, Marine	TT-1308
1	Screw, hex cap	M933-12020-60
2	Vibromount	336024

PTO Adapter Panel

1	TT Power Takeoff, 33-99EOZ/EFOZ, Marine	TT-1308
1	Door subassembly sound shield, front	GM19859
4	Gusset, corner	344119
1	Latch, sound shield	344145
1	Insulation, acoustic foam	GM19836
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Channel, U	X-6047-25
1	Rail subassembly, sound shield, front	GM19861
2	Clip, speed	297596
1	Foam, acoustic insulation (Powertech)	GM16860

Relay Kits

Run Relay, 12 V

1	TT Run Relay, 20-1600 kW	TT-700
2	Washer, plain, 0.156 ID x 0.375 in. OD	X-25-9
2	Screw, machine	X-49-26
2	Nut, flange whiz, 6-32	X-6210-3
1	Relay assembly, 3 PDT, 12 VDC	273705

Run Relay, 24 V

1	TT Run Relay, 20-1600 kW	TT-700
4	Washer, plain, 0.156 ID x 0.375 in. OD	X-25-9
2	Screw, machine	X-49-26
2	Nut, flange whiz, 6-32	X-6210-3
1	Relay assembly, 3 PDT, 24 VDC	273706

GM19857-KP1

PA-273743

PA-273744

Parts List: Accessories, continued

Qty.	Description	Part No.
Remote Panel Kits		
Annunciator, Remote Serial RSA1000 GM34474-KP1		
1	Annunciator, remote serial	GM34433-1
1	Annunciator, cover assembly	GM34434-1
1	Box, remote serial annunciator	GM31884
1	Decal, Equipment Grd	344295
2	Washer, lock, 0.20 ID x 0.595 in. OD	X-22-13
1	Nut, hex machine screw, 10-32	X-70-3
4	Screw, tapping	X-67-154
1	Nameplate, remote serial annunciator	GM34618
1	PCB assembly serial remote annunciator	GM31211
1	Bushing, 1.000 x 1.375 in. NPT	X-634-15
1	Plate, wall mounting	GM33031
1	TT Remote Serial Annunciator	TT-1377
1	Connector, plug, 6-position	294619
Annunciator, Remote Serial RSA1000 GM34474-KP2		
1	Annunciator, remote serial	GM34433-1
1	Annunciator, cover assembly	GM34434-1
1	Box, remote serial annunciator	GM31884
1	Decal, Equipment Grd	344295
2	Washer, lock, 0.20 ID x 0.595 in. OD	X-22-13
1	Nut, hex machine screw, 10-32	X-70-3
4	Screw, tapping	X-67-154
1	Nameplate, remote serial annunciator	GM34618
1	PCB assembly serial remote annunciator	GM31211
1	Bushing, 1.000 x 1.375 in. NPT	X-634-15
1	Plate, wall mounting	GM33031
1	TT Remote Serial Annunciator	TT-1377
1	Ribbon cable assembly	GM21340
1	Cable assembly, ribbon, 24-position	GM32632
3	Spacer, 8-32 x 0.625, male-female	GM32633
3	Washer, lock, 0.172 ID x 0.333 in. OD	X-22-7
1	Connector, plug, 6-position	294619
1	PCB assy, communication interface	GM49791-1
Plus Panel, 12 V GM50955-KP1		
1	Panel assembly, control	A-344394
1	Gauge, water temperature	344035
1	Gauge, oil pressure	344036
1	Gauge, volt	344037
1	Switch, rocker, 1-pole	344392
1	Panel, control	344537
1	Wiring harness, extension	344548
1	Gauge, engine hours	GM28392
1	Bulb, light	GM28394
2	Nut, hex	M934-04-B
1	TT Rmt Start/Plus Panel, 30-150 kW Marine	TT-1130
1	Sender, oil pressure	GM51459
1	Sender, water temperature	GM50536
1	Fitting, 45 deg. street elbow	267428
Plus Panel, 24 V GM50955-KP2		
1	Panel assembly, control	A-344400
1	Gauge, water temperature	344035
1	Gauge, oil pressure	344036
1	Voltmeter, 24 V	GM32617
1	Switch, rocker, 1-pole	344398
1	Panel, control	344537
1	Wiring harness, extension	344548
1	Gauge, engine hours	GM28392
1	Bezel, gauge	GM28393
2	Bulb, light	GM28602
2	Bulb, light	GM28614
2	Nut, hex	M934-04-B
1	TT Rmt Start/Plus Panel, 30-150 kW Marine	TT-1130
1	Sender, oil pressure	GM51459
1	Sender, water temperature	GM50536
1	Fitting, 45 deg. street elbow	267428

Qty.	Description	Part No.
Full Feature Panel, 12 V GM51369-KP11		
1	Panel assembly, control	GM51370-5
2	Screw, slotted panhead, thread-cutting	X-67-127
1	Switch, cam	292374
1	Knob, selector	296291
1	Voltmeter, 0-300/600 V, AC	282814
1	Ammeter, 0-400/800 A, AC	295340
2	Lamp, 125 V, 0.33 W	291740
1	Meter, frequency, 45-65 Hz, AC	295069
1	Gauge, water temperature	344035
1	Gauge, oil pressure	344036
1	Gauge, volt	344037
1	Switch, rocker, 1-pole	344392
1	Panel, control	GM49956
1	Wiring harness, extension	344409
1	Gauge, engine hours	GM28392
1	Bulb, light	GM28394
2	Nut, hex	M934-04-B
1	TT Rmt Start/Full Panel, 30-150 kW Marine	TT-1131
2	Screw, machine	X-51-11
2	Nut, flange whiz, 8-32	X-6210-4
3	Transformer, current 150:5, round	246886
1	Terminal block	266118
1	Sender, oil pressure	GM51459
1	Sender, water temperature	GM50536
1	Strip, marker	344553
1	Fitting, 45 deg. street elbow	267428
Full Feature Panel, 24 V GM51369-KP12		
1	Panel assembly, control	GM51370-6
2	Screw, slotted panhead, thread-cutting	X-67-127
1	Switch, cam	292374
1	Knob, selector	296291
1	Voltmeter, 0-300/600 V, AC	282814
1	Ammeter, 0-400/800 A, AC	295340
2	Lamp, 125 V, 0.33 W	291740
1	Meter, frequency, 45-65 Hz, AC	295069
1	Gauge, water temperature	344035
1	Gauge, oil pressure	344036
1	Voltmeter, 24 V	GM32617
1	Switch, rocker, 1-pole	344398
1	Panel, control	GM49956
1	Wiring harness, extension	344409
1	Gauge, engine hours	GM28392
1	Bezel, gauge	GM28393
2	Bulb, light	GM28602
2	Bulb, light	GM28614
2	Nut, hex	M934-04-B
1	TT Rmt Start/Full Panel, 30-150 kW Marine	TT-1131
2	Screw, machine	X-51-11
2	Nut, flange whiz, 8-32	X-6210-4
3	Transformer, current 150:5, round	246886
1	Terminal block	266118
1	Sender, oil pressure	GM51459
1	Sender, water temperature	GM50536
1	Strip, marker	344553
1	Fitting, 45 deg. street elbow	267428
Standard Panel, 12 V PA-344396		
1	Panel assembly, control	A-344393
1	Panel, control	344390
1	Wiring harness, remote panel	344391
1	Switch, rocker, 1-pole	344392
1	Gauge, engine hours	GM28392
1	Bulb, light	GM28394
2	Nut, hex	M934-04-B
1	TT Rmt Start/Stdnd Pnl, 30-150 kW Marine	TT-1128

Parts List: Accessories, continued

Qty.	Description	Part No.
Plus Panel, 12 V		
1	Panel assembly, control	A-344394
1	Gauge, water temperature	344035
1	Gauge, oil pressure	344036
1	Gauge, volt	344037
1	Switch, rocker, 1-pole	344392
1	Panel, control	344537
1	Wiring harness, extension	344548
1	Gauge, engine hours	GM28392
1	Bulb, light	GM28394
2	Nut, hex	M934-04-B
1	TT Rmt Start/Plus Panel, 30-150 kW Marine	TT-1130
1	Sender, oil pressure	344538
1	Sender, water temperature	344539
Standard Panel, 24 V		
1	Panel assembly, control	A-344399
1	Panel, control	344390
1	Wiring harness, remote panel	344391
1	Switch, rocker, 1-pole	344398
1	Gauge, engine hours	GM28392
1	Bulb, light	GM28602
2	Nut, hex	M934-04-B
1	TT Rmt Start/Stdnd Pnl, 30-150 kW Marine	TT-1128
Plus Panel, 24 V		
1	Panel assembly, control	A-344400
1	Gauge, water temperature	344035
1	Gauge, oil pressure	344036
1	Voltmeter, 24 V	GM32617
1	Switch, rocker, 1-pole	344398
1	Panel, control	344537
1	Wiring harness, extension	344548
1	Gauge, engine hours	GM28392
1	Bezel, gauge	GM28393
2	Bulb, light	GM28602
2	Bulb, light	GM28614
2	Nut, hex	M934-04-B
1	TT Rmt Start/Plus Panel, 30-150 kW Marine	TT-1130
1	Sender, oil pressure	344538
1	Sender, water temperature	344539
Full Feature Panel, 12 V		
1	Panel assembly, control	A-344404
2	Screw, slotted panhead, thread-cutting	X-67-127
1	Switch, cam	292374
1	Knob, selector	296291
1	Voltmeter, 0-300/600 V, AC	282814
2	Lamp, 125 V, 0.33 W	291740
1	Meter, frequency, 45-65 Hz, AC	295069
1	Ammeter, 0-75/150 A, AC	295337
1	Gauge, water temperature	344035
1	Gauge, oil pressure	344036
1	Gauge, volt	344037
1	Switch, rocker, 1-pole	344392
1	Panel, control	GM49956
1	Wiring harness, extension	344409
1	Gauge, engine hours	GM28392
1	Bulb, light	GM28394
2	Nut, hex	M934-04-B
1	TT Rmt Start/Full Panel, 30-150 kW Marine	TT-1131
2	Screw, machine	X-51-11
2	Nut, flange whiz, 8-32	X-6210-4
3	Transformer, current 150:5, round	246886
1	Terminal block	266118
1	Sender, oil pressure	344538
1	Sender, water temperature	344539
1	Strip, marker	344553

Qty.	Description	Part No.
Full Feature Panel, 24 V		
1	Panel assembly, control	A-344405
2	Screw, slotted panhead, thread-cutting	X-67-127
1	Switch, cam	292374
1	Knob, selector	296291
1	Voltmeter, 0-300/600 V, AC	282814
2	Lamp, 125 V, 0.33 W	291740
1	Meter, frequency, 45-65 Hz, AC	295069
1	Ammeter, 0-75/150 A, AC	295337
1	Gauge, water temperature	344035
1	Gauge, oil pressure	344036
1	Voltmeter, 24 V	GM32617
1	Switch, rocker, 1-pole	344398
1	Panel, control	GM49956
1	Wiring harness, extension	344409
1	Gauge, engine hours	GM28392
1	Bezel, gauge	GM28393
2	Bulb, light	GM28602
2	Bulb, light	GM28614
2	Nut, hex	M934-04-B
1	TT Rmt Start/Full Panel, 30-150 kW Marine	TT-1131
2	Screw, machine	X-51-11
2	Nut, flange whiz, 8-32	X-6210-4
3	Transformer, current 150:5, round	246886
1	Terminal block	266118
1	Sender, oil pressure	344538
1	Sender, water temperature	344539
1	Strip, marker	344553
Remote Annunciator Panel		
1	Panel assy, annunciator	A-344522
1	PCB assembly, 16-light annunciator	A-292885
2	Washer, lock, 0.145 ID x 0.285 in. OD	X-22-47
4	Washer, plain, 0.203 ID x 0.438 in. OD	X-25-115
1	Bushing, 1.000 x 1.375 in. NPT	X-634-15
4	Screw, slotted flat c'sunk machine	X-31-9
2	Screw, machine	X-49-48
4	Nut, hex machine screw, 8-32	X-6234-8
4	Screw, slotted hex washer, thr-cut	X-67-43
6	Screw, hex washer head, drill	X-794-2
1	Bracket, wall mounting	253346
1	Panel, front	253350
1	Decal, Marker	258832
1	Decal, 16-Light Controller, 4.25 x 7.81	258834
1	Wiring harness, annunciator panel	258890
1	Terminal block	258891
2	Bracket, mounting	293993
1	Wiring harness, John Deere marine	336926
1	Panel, annunciator	344521
1	TT Remote Annunciator, 30-150 kW, Marine	TT-1129
Siphon Break Kits		
Siphon Break Hose Connection		
1	Valve, siphon break, 1.50 in. hose	344160
2	Connector, hose, 90 deg elbow, nylon	GM15467
2	Grommet, round	X-284-4
1	Hose, seawater, 1.50 in. ID	GM26171
1	Hose, molded seawater, 31.8 mm ID	GM15499
2	Clamp, hose, 1.31/2.25 in.	X-426-4
1	TT Siphon Break, 5-150 kW, Marine	TT-1184
Siphon Break Hose Connection		
1	Valve, siphon break, 1.50 in. hose	344160
2	Connector, hose, 90 deg elbow, nylon	GM15467
2	Grommet, round	X-284-4
1	Hose, seawater, 1.50 in. ID	GM26170
1	Hose, molded seawater, 38.1 mm ID	GM15469
2	Clamp, hose, 1.31/2.25 in.	X-426-4
1	TT Siphon Break, 5-150 kW, Marine	TT-1184

Parts List: Accessories, continued

Qty.	Description	Part No.
Siphon Break Hose Connection GM16679-KP1		
1	Valve, siphon break, 1.50 in. hose	344160
2	Connector, hose, 90 deg elbow, PVC	344695
1	Hose, molded seawater, 31.8 mm ID	GM16994
1	Hose, radiator, straight, 1.25 in. ID	X-272-29
1	TT Siphon Break, 5-150 kW, Marine	TT-1184
2	Grommet, round	X-284-2
2	Clamp, hose, 0.81/1.75 in.	X-426-8
2	Connector, hose	GM17096
Siphon Break PA-344160		
1	Valve, siphon break, 1.50 in. hose	344160
1	TT Siphon Break, 3.5-150 kW	TT-1268
Sound Shield Kits		
Sound Shield GM16678-KP1		
10	Washer, fiber, 0.25 ID x 0.71 in. OD	222889
12	Clip, speed	297596
1	Rail subassembly, sound shield, front	GM16921
2	Clip, speed	297596
1	Foam, acoustic insulation (Powertech)	GM16860
6	Connector, outside corner	GM15486
2	Connector, inside corner	GM15487
1	Insulating blanket, exhaust (JD 50-65)	344384
1	Support, sound shield, RH	GM16741
1	Roof subassembly, sound shield (alt)	GM16919
1	Foam, acoustic insulation (Powertech)	GM16848
1	Grommet, round	X-284-31
1	Door subassembly, sound shield, rear	GM16912
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM16861
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Panel subassembly, access	GM15463
3	Clip, spring	344146
1	Foam, acoustic insulation (Powertech)	GM15329
6	Washer, plain, 0.203 ID x 0.438 in. OD	X-25-115
1	Door subassembly, sound shield, LH	GM16917
2	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM16854
2	Foam, acoustic insulation (Powertech)	GM16855
1	Foam, acoustic insulation (Powertech)	GM16856
1	Foam, acoustic insulation (Powertech)	GM16853
1	Foam, acoustic insulation (Powertech)	GM16851
1	Foam, acoustic insulation (Powertech)	GM16852
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
4	Gusset, corner	344119
1	Duct, air outlet	GM16743
1	Door subassembly, sound shield, front	GM16911
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM16858
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
4	Gusset, corner	344119
1	Roof subassembly, sound shield (eng)	GM16918
1	Decal, Caution-Not A Step	343165
1	Foam, acoustic insulation (Powertech)	GM16857
2	Brace, door	GM16726
1	Door subassembly, sound shield (alt)	GM16914
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM16841
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Door subassembly, sound shield (eng)	GM16922
1	Foam, acoustic insulation (Powertech)	GM16849
2	Clip, speed	297596
1	Door, sound shield, rear	GM16730
2	Plug, button	X-301-48
1	Duct subassembly, air intake	GM16920
1	Foam, acoustic insulation (Powertech)	GM16842
2	Foam, acoustic insulation (Powertech)	GM16844
2	Foam, acoustic insulation (Powertech)	GM16843

Qty.	Description	Part No.
Sound Shield Kits, continued		
Sound Shield, continued GM16678-KP1		
2	Foam, acoustic insulation (Powertech)	GM16846
1	Foam, acoustic insulation (Powertech)	GM16847
2	Bushing, 0.938 x 1.187 in. NPT	X-634-14
1	Bushing	X-634-29
2	Seal, push-on trim	X-6422-18
1	Seal, push-on trim	X-6423-8
1	Door subassembly, sound shield, RH	GM16915
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM16836
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Decal, Warning Rotating Parts	249808
4	Gusset, corner	344119
1	Support, sound shield, LH	GM16742
1	Panel subassembly, sound shield, LH	GM16923
1	Foam, acoustic insulation (Powertech)	GM16850
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
2	Clip, speed	297596
1	Insulation, adhesive backed foam	X-6031-11
1	Door subassembly, sound shield (alt)	GM16913
1	Decal, Kohler Power Systems	X-6348-2
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM16841
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	TT Sound Shield, 125/150EOZ, 100/125EFOZ	TT-1292
4	Bolt, hex cap	X-125-48
4	Washer, plain, 0.344 ID x 0.75 in. OD	X-25-139
10	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-142
1	Base, sound shield	GM16724
6	Bolt, hex cap	X-6238-3
6	Washer, pl, 0.406 ID x 0.812 in. OD	X-25-37
1	Fuel line, flexible	344205
1	Fuel line, flexible	GM16960
1	Fitting, half union	X-296-11
10	Bolt, hex cap	X-465-24
1	Channel, U	X-6047-40
1	Channel, U	X-6047-19
10	Screw, machine	X-73-33
1	Plug, pipe, 1/2 in. NPTF, white nylon	X-75-56
6	Foam, acoustic insulation (Yanmar)	359584
1	Fitting, straight union	X-695-2
1	Elbow, wet exhaust	GM16652
4	Screw, hex cap	M933-08020-60
4	Nut, hex, 8 mm	M6923-08-80
1	Foam, acoustic insulation (Powertech)	GM16845
1	Foam, acoustic insulation (Powertech)	GM16859
1	Fitting, half union	X-296-6
1	Fitting, half union	X-296-14
1	Panel subassembly, sound shield, RH	GM16924
1	Foam, acoustic insulation (Powertech)	GM16837
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Decal, Warning Fire Port	GM10148
2	Clip, speed	297596
1	Door subassembly, sound shield, RH	GM16916
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM16838
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
4	Gusset, corner	344119
1	Rail, sound shield, rear	GM16746
44	Screw, drill #8 stainless steel	X-794-5
1	Decal, Caution Hot Engine	249809

Parts List: Accessories, continued

Qty.	Description	Part No.
Sound Shield GM40843-KP1		
4	Bolt, hex cap	X-125-48
4	Washer, plain, 0.344 ID x 0.75 in. OD	X-25-139
10	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-142
10	Bolt, hex cap	X-465-24
1	Channel, U	X-6047-19
1	Channel, U	X-6047-40
10	Screw, machine	X-73-33
1	Plug, pipe, 1/2 in. NPTF, white nylon	X-75-56
10	Washer, fiber, 0.25 ID x 0.71 in. OD	222889
12	Clip, speed	297596
6	Connector, outside corner	GM15486
2	Connector, inside corner	GM15487
1	Foam, acoustic kit (Powertech) JD Marine	GM40856
1	Blanket, exhaust	GM40881
1	Support, sound shield, RH	GM16741
1	Support, sound shield, LH	GM16742
6	Foam, acoustic insulation (Yanmar)	359584
1	Base, sound shield	GM40868
2	Fitting, half union	X-296-11
1	Fuel line, flexible	344205
1	Fuel line, flexible	GM48025
1	Fitting, half union	X-296-6
44	Screw, drill #8 stainless steel	X-794-5
2	Plug, button	X-301-48
1	Panel subassembly, sound shield, LH	GM16923
1	Foam, acoustic insulation (Powertech)	GM16850
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
2	Clip, speed	297596
1	Insulation, adhesive backed foam	X-6031-11
1	Panel subassembly, sound shield, RH	GM16924
1	Foam, acoustic insulation (Powertech)	GM16837
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Decal, Warning Fire Port	GM10148
2	Clip, speed	297596
4	Nut, hex, 8 mm	M6923-08-80
4	Screw, hex cap	M933-08020-60
1	TT Sound Shield, 125/150EOZ, 100/125EFOZ	TT-1292
6	Washer, pl, 0.406 ID x 0.812 in. OD	X-25-37
6	Bolt, hex cap	X-6238-3
1	Foam, acoustic insulation (Powertech)	GM16839
1	Foam, acoustic insulation (Powertech)	GM16840
1	Foam, acoustic insulation (Powertech)	GM16845
1	Foam, acoustic insulation (Powertech)	GM16859
1	Panel subassembly, access	GM15463
3	Clip, spring	344146
1	Foam, acoustic insulation (Powertech)	GM15329
6	Washer, plain, 0.203 ID x 0.438 in. OD	X-25-115
1	Door subassembly, sound shield, front	GM16911
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM16858
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
4	Gusset, corner	344119
1	Door subassembly, sound shield, RH	GM16915
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM16836
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Decal, Warning Rotating Parts	249808
4	Gusset, corner	344119
1	Door subassembly, sound shield, RH	GM16916
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM16838
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
4	Gusset, corner	344119
1	Door subassembly, sound shield, rear	GM16912
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM16861
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283

Qty.	Description	Part No.
1	Door subassembly, sound shield (alt)	GM50730
1	Decal, Kohler Power Systems	X-6348-2
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM40854
1	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Door, subassembly, sound shield (alt)	GM50956
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM40854
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Door subassembly, sound shield, LH	GM16917
2	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM16854
2	Foam, acoustic insulation (Powertech)	GM16855
1	Foam, acoustic insulation (Powertech)	GM16856
1	Foam, acoustic insulation (Powertech)	GM16853
1	Foam, acoustic insulation (Powertech)	GM16851
1	Foam, acoustic insulation (Powertech)	GM16852
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
4	Gusset, corner	344119
1	Duct, air outlet	GM16743
1	Roof subassembly, sound shield (eng)	GM16918
1	Decal, Caution-Not A Step	343165
1	Foam, acoustic insulation (Powertech)	GM16857
2	Brace, door	GM16726
1	Roof subassembly, sound shield (alt)	GM51373
1	Foam, acoustic insulation (Powertech)	GM40855
1	Grommet, round	X-284-31
1	Duct subassembly, air intake	GM16920
1	Foam, acoustic insulation (Powertech)	GM16842
2	Foam, acoustic insulation (Powertech)	GM16844
2	Foam, acoustic insulation (Powertech)	GM16843
2	Foam, acoustic insulation (Powertech)	GM16846
1	Foam, acoustic insulation (Powertech)	GM16847
2	Bushing, 0.938 x 1.187 in. NPT	X-634-14
1	Bushing	X-634-29
2	Seal, push-on trim	X-6422-18
1	Seal, push-on trim	X-6423-8
1	Rail subassembly, sound shield, front	GM16921
2	Clip, speed	297596
1	Foam, acoustic insulation (Powertech)	GM16860
1	Door subassembly, sound shield (eng)	GM16922
1	Foam, acoustic insulation (Powertech)	GM16849
2	Clip, speed	297596
2	Plug, button	X-301-48

Parts List: Accessories, continued

Qty.	Description	Part No.	Qty.	Description	Part No.
Sound Shield, 40 kW			GM47357-KP1		
12	Washer, plain, 0.203 ID x 0.438 in. OD	X-25-115	1	Roof subassembly, sound shield (eng)	GM15386
6	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-142	1	Decal, Caution-Not A Step	343165
6	Bolt, hex cap	X-465-24	1	Foam, acoustic insulation (Powertech)	GM14412
1	Channel, U	X-6047-38	1	Brace, door	GM14446
1	Channel, U	X-6047-39	2	Gusset, corner	344119
10	Screw, machine	X-73-33	1	Door subassembly, sound shield, LH	GM15394
10	Washer, fiber, 0.25 ID x 0.71 in. OD	222889	2	Latch, sound shield	344145
12	Clip, speed	297596	1	Foam, acoustic insulation (Powertech)	GM14417
1	Decal, Caution-Not A Step	343165	2	Foam, acoustic insulation (Powertech)	GM14408
2	Panel, access	344125	1	Foam, acoustic insulation (Powertech)	GM14426
6	Connector, outside corner	GM15486	1	Foam, acoustic insulation (Powertech)	GM14410
2	Connector, inside corner	GM15487	1	Foam, acoustic insulation (Powertech)	GM15328
6	Clip, spring	344146	1	Foam, acoustic insulation (Powertech)	GM14409
1	Foam, acoustic kit (Powertech) JD Marine	GM47605	2	Insert, threaded, 1/4-20 in.	344484
1	Decal, Warning Fire Port	GM10148	2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Support, sound shield, RH	GM14438	4	Gusset, corner	344119
1	Support, sound shield, LH	GM14439	1	Duct, air outlet	GM14441
1	Elbow, exhaust	GM47420	1	Duct subassembly sound shield (alt)	GM49376
5	Foam, acoustic insulation (Yanmar)	359584	1	Insulation, acoustic foam	GM47642
1	Base, sound shield	GM47558	2	Insulation, foam	GM47650
1	Fitting, straight union	X-695-2	1	Foam, acoustic insulation (Powertech)	GM15311
2	Plug, pipe, 1/4 in. NPTF	X-75-51	2	Insulation, foam	GM47651
2	Fitting, half union	X-296-11	1	Foam, acoustic insulation (Powertech)	GM15324
1	Fuel line, flexible	344205	1	Channel, U	X-6047-33
1	Fuel line, flexible	344206	1	Insulation, foam	GM47639
4	Bolt, hex cap	X-125-48	2	Bushing, 0.938 x 1.187 in. NPT	X-634-14
4	Washer, plain, 0.344 ID x 0.75 in. OD	X-25-139	1	Bushing, 1.968 x 2.50 in. NPT	X-634-23
2	Clamp, hose, 3.75/4.06 in.	291537	2	Seal, push-on trim	X-6422-16
2	Decal, Warning Rotating Parts	249808	2	Seal, push-on trim	X-6423-8
44	Screw, drill #8 stainless steel	X-794-5	2	Insulation, foam	GM47640
2	Plug, button	X-301-48	2	Insulation, acoustic foam	GM47641
1	Hose, radiator wire inset 3.50 ID	X-6014-87	1	Roof subassembly, sound shield (alt)	GM49375
1	Decal, Caution Hot Engine	249809	1	Insulation, acoustic foam	GM47614
1	Door subassembly, sound shield, front	GM15377	1	Grommet, round	X-284-31
1	Latch, sound shield	344145	1	Door subassembly, sound shield	GM15435
1	Foam, acoustic insulation (Powertech)	GM14411	1	Foam, acoustic insulation (Powertech)	GM14425
2	Insert, threaded, 1/4-20 in.	344484	2	Clip, speed	297596
2	Pin, threaded, 1/4-20 x 1.18 in.	345283	2	Plug, button	X-301-48
4	Gusset, corner	344119	2	Panel subassembly, access	GM15463
1	Door subassembly, sound shield, rear	GM15378	3	Clip, spring	344146
1	Latch, sound shield	344145	1	Foam, acoustic insulation (Powertech)	GM15329
1	Foam, acoustic insulation (Powertech)	GM14420	6	Washer, plain, 0.203 ID x 0.438 in. OD	X-25-115
2	Insert, threaded, 1/4-20 in.	344484			
2	Pin, threaded, 1/4-20 x 1.18 in.	345283			
1	Door subassembly, sound shield (alt)	GM49377			
1	Decal, Kohler Power Systems	X-6348-2			
1	Latch, sound shield	344145			
1	Insulation, acoustic foam	GM47648			
2	Insert, threaded, 1/4-20 in.	344484			
2	Pin, threaded, 1/4-20 x 1.18 in.	345283			
1	Door, subassembly sound shield (alt)	GM49378			
1	Latch, sound shield	344145			
1	Insulation, acoustic foam	GM47649			
2	Insert, threaded, 1/4-20 in.	344484			
2	Pin, threaded, 1/4-20 x 1.18 in.	345283			
1	Channel, U	X-6047-31			
1	Duct, air intake	GM47553			
1	Duct, air intake	GM47554			
1	Duct, air intake	GM47417			
1	Insulation, acoustic foam	GM47647			
1	Insulation, acoustic foam	GM47644			
1	Insulation, acoustic foam	GM47646			
1	Insulation, acoustic foam	GM47645			
1	Insulation, acoustic foam	GM47643			
1	Door subassembly, sound shield, RH	GM15385			
2	Latch, sound shield	344145			
1	Decal, Warning Fire Port	GM10148			
1	Foam, acoustic insulation (Powertech)	GM14413			
2	Insert, threaded, 1/4-20 in.	344484			
2	Pin, threaded, 1/4-20 x 1.18 in.	345283			
1	Decal, Warning Rotating Parts	249808			
4	Gusset, corner	344119			

Parts List: Accessories, continued

Qty.	Description	Part No.	Qty.	Description	Part No.
Sound Shield GM48085-KP1					
4	Bolt, hex cap	X-125-48	1	Door subassembly, sound shield, LH	GM17309
12	Washer, plain, 0.203 ID x 0.438 in. OD	X-25-115	2	Latch, sound shield	344145
4	Washer, plain, 0.344 ID x 0.75 in. OD	X-25-139	1	Foam, acoustic insulation (Powertech)	GM17345
10	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-142	2	Foam, acoustic insulation (Powertech)	GM17344
10	Bolt, hex cap	X-465-24	1	Foam, acoustic insulation (Powertech)	GM17346
1	Channel, U	X-6047-29	1	Foam, acoustic insulation (Powertech)	GM17349
1	Channel, U	X-6047-40	1	Foam, acoustic insulation (Powertech)	GM17347
1	Decal, Kohler Power Systems	X-6348-2	1	Foam, acoustic insulation (Powertech)	GM17348
10	Screw, machine	X-73-33	2	Insert, threaded, 1/4-20 in.	344484
1	Plug, pipe, 1/2 in. NPTF, white nylon	X-75-56	2	Pin, threaded, 1/4-20 x 1.18 in.	345283
10	Washer, fiber, 0.25 ID x 0.71 in. OD	222889	4	Gusset, corner	344119
12	Clip, speed	297596	1	Duct, air outlet	GM17294
1	Decal, Caution-Not A Step	343165	1	Duct subassembly, air intake	GM17311
2	Panel, access	344125	1	Foam, acoustic insulation (Powertech)	GM17337
6	Connector, outside corner	GM15486	2	Foam, acoustic insulation (Powertech)	GM17339
2	Connector, inside corner	GM15487	2	Foam, acoustic insulation (Powertech)	GM17338
6	Clip, spring	344146	2	Foam, acoustic insulation (Powertech)	GM16846
1	Foam, acoustic kit (Powertech) JD Marine	GM48804	1	Foam, acoustic insulation (Powertech)	GM16847
1	Insulating blanket, exhaust (JD 50-65)	344384	2	Bushing, 0.938 x 1.187 in. NPT	X-634-14
1	Decal, Warning Fire Port	GM10148	1	Bushing	X-634-29
18	Insert, threaded, 1/4-20 in.	344484	2	Seal, push-on trim	X-6422-19
1	Support, sound shield, RH	GM14438	1	Seal, push-on trim	X-6423-8
1	Support, sound shield, LH	GM14439	1	Door subassembly, sound shield, rear	GM17312
5	Foam, acoustic insulation (Yanmar)	359584	1	Foam, acoustic insulation (Powertech)	GM17342
1	Base, sound shield	GM48147	2	Clip, speed	297596
1	Fitting, straight union	X-695-2	1	Foam, acoustic insulation (Powertech)	GM17873
2	Plug, pipe, 1/4 in. NPTF	X-75-51	2	Plug, button	X-301-48
2	Fitting, half union	X-296-11	1	Panel subassembly, sound shield, LH	GM17313
1	Fuel line, flexible	344205	1	Foam, acoustic insulation (Powertech)	GM14423
1	Fuel line, flexible	344206	2	Insert, threaded, 1/4-20 in.	344484
1	Decal, Warning Rotating Parts	249808	2	Pin, threaded, 1/4-20 x 1.18 in.	345283
44	Screw, drill #8 stainless steel	X-794-5	1	Foam, acoustic insulation (Powertech)	GM17874
2	Rail, sound shield	344130	2	Clip, speed	297596
2	Rail, sound shield	GM48109	1	Panel subassembly, sound shield, RH	GM17314
2	Rail, sound shield	GM14442	1	Foam, acoustic insulation (Powertech)	GM17336
2	Rail, sound shield	GM14444	2	Insert, threaded, 1/4-20 in.	344484
3	Rail, sound shield	GM16736	2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Rail, sound shield	GM17285	1	Decal, Warning Fire Port	GM10148
1	Rail, sound shield	GM17286	2	Clip, speed	297596
2	Rail, sound shield	344130	1	Door, subassembly sound shield, front	GM17354
1	Decal, Caution Hot Engine	249809	1	Latch, sound shield	344145
1	Door subassembly, sound shield, front	GM17305	1	Foam, acoustic insulation (Powertech)	GM17335
1	Latch, sound shield	344145	2	Insert, threaded, 1/4-20 in.	344484
1	Foam, acoustic insulation (Powertech)	GM17350	2	Pin, threaded, 1/4-20 x 1.18 in.	345283
2	Insert, threaded, 1/4-20 in.	344484	4	Gusset, corner	344119
2	Pin, threaded, 1/4-20 x 1.18 in.	345283	1	Door subassembly, sound shield (alt)	GM50427
4	Gusset, corner	344119	2	Latch, sound shield	344145
1	Door, subassembly, sound shield (alt)	GM17306	1	Insulation, acoustic foam	GM48152
1	Latch, sound shield	344145	2	Insert, threaded, 1/4-20 in.	344484
1	Foam, acoustic insulation (Powertech)	GM17340	2	Pin, threaded, 1/4-20 x 1.18 in.	345283
2	Insert, threaded, 1/4-20 in.	344484	1	Door subassembly, sound shield (alt)	GM50428
2	Pin, threaded, 1/4-20 x 1.18 in.	345283	1	Decal, Kohler Power Systems	X-6348-2
1	Door subassembly, sound shield, front	GM17307	2	Latch, sound shield	344145
1	Latch, sound shield	344145	1	Insulation, acoustic foam	GM48152
1	Foam, acoustic insulation (Powertech)	GM17335	2	Insert, threaded, 1/4-20 in.	344484
2	Insert, threaded, 1/4-20 in.	344484	2	Pin, threaded, 1/4-20 x 1.18 in.	345283
2	Pin, threaded, 1/4-20 x 1.18 in.	345283	1	Roof subassembly, sound shield (alt)	GM50429
1	Decal, Warning Rotating Parts	249808	1	Insulation, acoustic foam	GM48150
4	Gusset, corner	344119	1	Grommet, round	X-284-31
1	Roof subassembly, sound shield (eng)	GM17308	1	Elbow, wet exhaust	344175
1	Decal, Caution-Not A Step	343165			
1	Foam, acoustic insulation (Powertech)	GM17343			
1	Brace, door	GM17295			
2	Gusset, corner	344119			

Parts List: Accessories, continued

Qty.	Description	Part No.	Qty.	Description	Part No.
Sound Shield GM49000-KP1					
4	Bolt, hex cap	X-125-48	1	Door subassembly, sound shield, LH	GM52610
4	Washer, plain, 0.344 ID x 0.75 in. OD	X-25-139	2	Latch, sound shield	344145
10	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-142	1	Foam, acoustic insulation (Powertech)	GM16854
10	Bolt, hex cap	X-465-24	2	Foam, acoustic insulation (Powertech)	GM16855
1	Channel, U	X-6047-19	1	Insulation, acoustic foam	GM49027
1	channel, U	X-6047-49	1	Foam, acoustic insulation (Powertech)	GM16853
10	Screw, machine	X-73-33	1	Foam, acoustic insulation (Powertech)	GM16851
2	Plug, pipe, 1/2 in. NPTF, white nylon	X-75-56	1	Foam, acoustic insulation (Powertech)	GM16852
10	Washer, fiber, 0.25 ID x 0.71 in. OD	222889	2	Insert, threaded, 1/4-20 in.	344484
20	Clip, speed	297596	2	Pin, threaded, 1/4-20 x 1.18 in.	345283
6	Connector, outside corner	GM15486	4	Gusset, corner	344119
2	Connector, inside corner	GM15487	1	Duct, air outlet	GM16743
1	Foam, acoustic kit (Powertech) JD Marine	GM49042	1	Roof subassembly sound shield (eng)	GM52611
1	Blanket, exhaust	GM40881	1	Decal, Caution-Not A Step	343165
1	Support, sound shield, RH	GM48998	1	Insulation, acoustic foam	GM49021
1	Support, sound shield, LH	GM48997	1	Roof, sound shield (eng)	GM48990
6	Foam, acoustic insulation (Yanmar)	359584	2	Brace, door	GM49012
1	Base, sound shield	GM48989	1	Duct subassembly, air intake	GM52612
2	Fitting, half union	X-296-11	1	Insulation, acoustic foam	GM49040
1	Fuel line, flexible	344205	2	Insulation, acoustic foam	GM49039
44	Screw, drill #8 stainless steel	X-794-5	2	Insulation, acoustic foam	GM49037
1	Fuel line, flexible	GM48025	2	Insulation, acoustic foam	GM49038
2	Plug, button	X-301-48	2	Bushing, 0.938 x 1.187 in. NPT	X-634-14
1	TT Sound Shield, 125/150EOZ, 100/125EFOZ	TT-1292	1	Bushing	X-634-29
1	Door subassembly, sound shield (alt)	GM52617	2	Seal, push-on trim	X-6422-33
1	Decal, Kohler Power Systems	X-6348-2	1	Seal, push-on trim	X-6423-12
2	Latch, sound shield	344145	1	Rail subassembly sound shield, front	GM52613
1	Insulation, acoustic foam	GM49025	2	Clip, speed	297596
2	Insert, threaded, 1/4-20 in.	344484	1	Insulation, acoustic foam	GM49028
2	Pin, threaded, 1/4-20 x 1.18 in.	345283	1	Door subassembly, sound shield	GM52614
4	Gusset, corner	344119	1	Insulation, acoustic foam	GM49022
1	Door subassembly, sound shield (alt)	GM52618	2	Clip, speed	297596
2	Latch, sound shield	344145	2	Plug, button	X-301-48
1	Insulation, acoustic foam	GM49025	1	Panel subassembly sound shield	GM52615
2	Insert, threaded, 1/4-20 in.	344484	1	Insulation, acoustic foam	GM49026
2	Pin, threaded, 1/4-20 x 1.18 in.	345283	2	Insert, threaded, 1/4-20 in.	344484
4	Gusset, corner	344119	2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Roof, subassembly sound shield (alt)	GM52619	2	Clip, speed	297596
1	Insulation, acoustic foam	GM49023	1	Insulation, adhesive backed foam	X-6031-11
1	Grommet, round	X-284-31	1	Panel subassembly, sound shield, RH	GM52616
4	Nut, hex, 8 mm	M6923-08-80	1	Insulation, acoustic foam	GM49031
4	Screw, hex cap	M933-08020-60	2	Insert, threaded, 1/4-20 in.	344484
6	Washer, pl, 0.406 ID x 0.812 in. OD	X-25-37	2	Pin, threaded, 1/4-20 x 1.18 in.	345283
6	Bolt, hex cap	X-6238-3	1	Decal, Warning Fire Port	GM10148
1	Panel subassembly, access	GM15463	2	Clip, speed	297596
3	Clip, spring	344146	1	Rail, sound shield	GM16734
1	Foam, acoustic insulation (Powertech)	GM15329	1	Rail, sound shield	GM16751
6	Washer, plain, 0.203 ID x 0.438 in. OD	X-25-115	2	Rail, sound shield	GM40853
1	Door, subassembly sound shield, front	GM52606	3	Rail, sound shield	GM48985
1	Latch, sound shield	344145	2	Rail, sound shield	GM48986
1	Insulation, acoustic foam	GM49029	2	Rail, sound shield	GM48987
2	Insert, threaded, 1/4-20 in.	344484	2	Rail, sound shield	GM48988
2	Pin, threaded, 1/4-20 x 1.18 in.	345283			
4	Gusset, corner	344119			
1	Door, subassembly sound shield (alt)	GM52607			
1	Latch, sound shield	344145			
1	Insulation, acoustic foam	GM49024			
2	Insert, threaded, 1/4-20 in.	344484			
2	Pin, threaded, 1/4-20 x 1.18 in.	345283			
1	Door, subassembly sound shield, front	GM52608			
1	Latch, sound shield	344145			
1	Insulation, acoustic foam	GM49030			
2	Insert, threaded, 1/4-20 in.	344484			
2	Pin, threaded, 1/4-20 x 1.18 in.	345283			
1	Decal, Warning Rotating Parts	249808			
4	Gusset, corner	344119			
1	Door, subassembly sound shield, front	GM52609			
1	Latch, sound shield	344145			
1	Insulation, acoustic foam	GM49030			
2	Insert, threaded, 1/4-20 in.	344484			
2	Pin, threaded, 1/4-20 x 1.18 in.	345283			
4	Gusset, corner	344119			

Parts List: Accessories, continued

Qty.	Description	Part No.
Sound Shield GM49710-KP1		
10	Washer, fiber, 0.25 ID x 0.71 in. OD	222889
12	Clip, speed	297596
1	Rail subassembly, sound shield, front	GM15434
1	Foam, acoustic insulation (Powertech)	GM14414
2	Clip, speed	297596
6	Connector, outside corner	GM15486
2	Connector, inside corner	GM15487
1	Foam, acoustic kit (Powertech) JD Marine	GM15306
1	Insulating blanket, exhaust (JD 50-65)	344384
1	Support, sound shield, RH	GM14438
1	Roof subassembly, sound shield (alt)	GM15414
1	Foam, acoustic insulation (Powertech)	GM15316
1	Grommet, round	X-284-31
1	Door subassembly, sound shield, rear	GM15378
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM14420
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
2	Panel subassembly, access	GM15463
3	Clip, spring	344146
1	Foam, acoustic insulation (Powertech)	GM15329
6	Washer, plain, 0.203 ID x 0.438 in. OD	X-25-115
1	Door subassembly, sound shield, LH	GM15395
2	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM14417
2	Foam, acoustic insulation (Powertech)	GM14408
1	Foam, acoustic insulation (Powertech)	GM14426
1	Foam, acoustic insulation (Powertech)	GM14410
1	Foam, acoustic insulation (Powertech)	GM14407
1	Foam, acoustic insulation (Powertech)	GM14409
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
4	Gusset, corner	344119
1	Duct, air outlet	GM14441
1	Door subassembly, sound shield, front	GM15377
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM14411
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
4	Gusset, corner	344119
1	Roof subassembly, sound shield (eng)	GM15386
1	Decal, Caution-Not A Step	343165
1	Foam, acoustic insulation (Powertech)	GM14412
1	Brace, door	GM14446
2	Gusset, corner	344119
1	Door subassembly, sound shield (alt)	GM15384
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM15310
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Door subassembly, sound shield	GM15435
1	Foam, acoustic insulation (Powertech)	GM14425
2	Clip, speed	297596
2	Plug, button	X-301-48
1	Duct subassembly, air intake	GM15417
1	Foam, acoustic insulation (Powertech)	GM15312
2	Foam, acoustic insulation (Powertech)	GM15313
2	Foam, acoustic insulation (Powertech)	GM15311
2	Foam, acoustic insulation (Powertech)	GM15315
1	Foam, acoustic insulation (Powertech)	GM15317
2	Bushing, 0.938 x 1.187 in. NPT	X-634-14
1	Bushing, 1.968 x 2.50 in. NPT	X-634-23
2	Seal, push-on trim	X-6422-16
2	Seal, push-on trim	X-6423-8
1	Door subassembly, sound shield, RH	GM15385
2	Latch, sound shield	344145
1	Decal, Warning Fire Port	GM10148
1	Foam, acoustic insulation (Powertech)	GM14413
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Decal, Warning Rotating Parts	249808
4	Gusset, corner	344119
1	Support, sound shield, LH	GM14439

Qty.	Description	Part No.
1	Panel subassembly, sound shield	GM15436
1	Foam, acoustic insulation (Powertech)	GM14423
1	Foam, acoustic insulation (Powertech)	GM14424
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
2	Clip, speed	297596
1	Door subassembly, sound shield (alt)	GM15383
1	Decal, Kohler Power Systems	X-6348-2
1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM15310
2	Insert, threaded, 1/4-20 in.	344484
2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	TT Sound Shield, 65EOZ/55EFOZ	TT-1290
4	Bolt, hex cap	X-125-48
4	Washer, plain, 0.344 ID x 0.75 in. OD	X-25-139
8	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-142
1	Base, sound shield	GM15298
4	Bolt, hex cap	X-6238-3
4	Washer, pl, 0.406 ID x 0.812 in. OD	X-25-37
1	Fuel line, flexible	344205
1	Fuel line, flexible	344206
2	Fitting, half union	X-296-11
8	Bolt, hex cap	X-465-24
1	Channel, U	X-6047-39
1	Channel, U	X-6047-38
10	Screw, machine	X-73-33
1	Plug, pipe, 1/2 in. NPTF, white nylon	X-75-56
5	Foam, acoustic insulation (Yanmar)	359584
1	Fitting, straight union	X-695-2
4	Screw, hex cap	M933-08020-60
4	Nut, hex, 8 mm	M6923-08-80
1	Rail, sound shield, rear	GM14448
44	Screw, drill #8 stainless steel	X-794-5
1	Rail, sound shield, front	GM14447
2	Rail, sound shield	GM14448
2	Rail, sound shield	344130
2	Rail, sound shield	344134
3	Rail, sound shield	GM14394
2	Rail, sound shield	GM14442
2	Rail, sound shield	GM14443
2	Rail, sound shield	GM14444
1	Decal, Caution Hot Engine	249809
2	Decal, Warning Rotating Parts	249808

Parts List: Accessories, continued

Qty.	Description	Part No.	Qty.	Description	Part No.
Sound Shield			GM49711-KP1		
10	Washer, fiber, 0.25 ID x 0.71 in. OD	222889	1	Panel subassembly, sound shield, LH	GM17313
12	Clip, speed	297596	1	Foam, acoustic insulation (Powertech)	GM14423
1	Rail subassembly, sound shield, front	GM16921	2	Insert, threaded, 1/4-20 in.	344484
6	Connector, outside corner	GM15486	2	Pin, threaded, 1/4-20 x 1.18 in.	345283
2	Connector, inside corner	GM15487	1	Foam, acoustic insulation (Powertech)	GM17874
1	Foam, acoustic kit (Powertech) JD Marine	GM17296	2	Clip, speed	297596
1	Insulating blanket, exhaust (JD 50-65)	344384	1	Door subassembly, sound shield (alt)	GM15383
1	Support, sound shield, RH	GM14438	1	Decal, Kohler Power Systems	X-6348-2
1	Roof subassembly, sound shield (alt)	GM17310	1	Latch, sound shield	344145
1	Foam, acoustic insulation (Powertech)	GM17341	1	Foam, acoustic insulation (Powertech)	GM15310
1	Grommet, round	X-284-31	2	Insert, threaded, 1/4-20 in.	344484
1	Door, subassembly, sound shield (alt)	GM17306	2	Pin, threaded, 1/4-20 x 1.18 in.	345283
1	Latch, sound shield	344145	1	TT Sound Shield, 80/99EOZ, 70/80EFOZ	TT-1291
1	Foam, acoustic insulation (Powertech)	GM17340	4	Bolt, hex cap	X-125-48
2	Insert, threaded, 1/4-20 in.	344484	4	Washer, plain, 0.344 ID x 0.75 in. OD	X-25-139
2	Pin, threaded, 1/4-20 x 1.18 in.	345283	10	Washer, plain, 0.281 ID x 0.625 in. OD	X-25-142
2	Panel subassembly, access	GM15463	1	Base, sound shield	GM17284
3	Clip, spring	344146	4	Bolt, hex cap	X-6238-3
1	Foam, acoustic insulation (Powertech)	GM15329	4	Washer, pl, 0.406 ID x 0.812 in. OD	X-25-37
6	Washer, plain, 0.203 ID x 0.438 in. OD	X-25-115	1	Fuel line, flexible	344205
1	Door subassembly, sound shield, LH	GM17309	1	Fuel line, flexible	344206
2	Latch, sound shield	344145	2	Fitting, half union	X-296-11
1	Foam, acoustic insulation (Powertech)	GM17345	10	Bolt, hex cap	X-465-24
2	Foam, acoustic insulation (Powertech)	GM17344	1	Channel, U	X-6047-40
1	Foam, acoustic insulation (Powertech)	GM17346	1	Channel, U	X-6047-29
1	Foam, acoustic insulation (Powertech)	GM17349	10	Screw, machine	X-73-33
1	Foam, acoustic insulation (Powertech)	GM17347	1	Plug, pipe, 1/2 in. NPTF, white nylon	X-75-56
1	Foam, acoustic insulation (Powertech)	GM17348	5	Foam, acoustic insulation (Yanmar)	359584
2	Insert, threaded, 1/4-20 in.	344484	1	Fitting, straight union	X-695-2
2	Pin, threaded, 1/4-20 x 1.18 in.	345283	4	Screw, hex cap	M933-08020-60
4	Gusset, corner	344119	4	Nut, hex, 8 mm	M6923-08-80
1	Duct, air outlet	GM17294	1	Panel subassembly, sound shield, RH	GM17314
1	Door subassembly, sound shield, front	GM17305	1	Foam, acoustic insulation (Powertech)	GM17336
1	Latch, sound shield	344145	2	Insert, threaded, 1/4-20 in.	344484
1	Foam, acoustic insulation (Powertech)	GM17350	2	Pin, threaded, 1/4-20 x 1.18 in.	345283
2	Insert, threaded, 1/4-20 in.	344484	1	Decal, Warning Fire Port	GM10148
2	Pin, threaded, 1/4-20 x 1.18 in.	345283	2	Clip, speed	297596
4	Gusset, corner	344119	1	Door, subassembly sound shield, front	GM17354
1	Roof subassembly, sound shield (eng)	GM17308	1	Latch, sound shield	344145
1	Decal, Caution-Not A Step	343165	1	Foam, acoustic insulation (Powertech)	GM17335
1	Foam, acoustic insulation (Powertech)	GM17343	2	Insert, threaded, 1/4-20 in.	344484
1	Brace, door	GM17295	2	Pin, threaded, 1/4-20 x 1.18 in.	345283
2	Gusset, corner	344119	4	Gusset, corner	344119
1	Door subassembly, sound shield (alt)	GM15384	44	Screw, drill #8 stainless steel	X-794-5
1	Latch, sound shield	344145	1	Rail, sound shield, front	GM16745
1	Foam, acoustic insulation (Powertech)	GM15310	1	Rail, sound shield, rear	GM16746
2	Insert, threaded, 1/4-20 in.	344484	1	Rail, subassembly	GM24813-NST
2	Pin, threaded, 1/4-20 x 1.18 in.	345283	2	Rail, sound shield	344130
1	Door subassembly, sound shield, rear	GM17312	2	Rail, sound shield	344134
1	Foam, acoustic insulation (Powertech)	GM17342	2	Rail, sound shield	GM14442
2	Clip, speed	297596	2	Rail, sound shield	GM14444
1	Foam, acoustic insulation (Powertech)	GM17873	3	Rail, sound shield	GM16736
2	Plug, button	X-301-48	1	Rail, sound shield	GM17285
1	Duct subassembly, air intake	GM17311	1	Rail, sound shield	GM17286
1	Foam, acoustic insulation (Powertech)	GM17337	1	Decal, Caution Hot Engine	249809
2	Foam, acoustic insulation (Powertech)	GM17339			
2	Foam, acoustic insulation (Powertech)	GM17338			
2	Foam, acoustic insulation (Powertech)	GM16846			
1	Foam, acoustic insulation (Powertech)	GM16847			
2	Bushing, 0.938 x 1.187 in. NPT	X-634-14			
1	Bushing	X-634-29			
2	Seal, push-on trim	X-6422-19			
1	Seal, push-on trim	X-6423-8			
1	Door subassembly, sound shield, front	GM17307			
1	Latch, sound shield	344145			
1	Foam, acoustic insulation (Powertech)	GM17335			
2	Insert, threaded, 1/4-20 in.	344484			
2	Pin, threaded, 1/4-20 x 1.18 in.	345283			
1	Decal, Warning Rotating Parts	249808			
4	Gusset, corner	344119			
1	Support, sound shield, LH	GM14439			

Notes

Appendix A Abbreviations

The following list contains abbreviations that may appear in this publication.

A, amp	ampere	cfm	cubic feet per minute	est.	estimated
ABDC	after bottom dead center	CG	center of gravity	E-Stop	emergency stop
AC	alternating current	CID	cubic inch displacement	etc.	et cetera (and so forth)
A/D	analog to digital	CL	centerline	exh.	exhaust
ADC	advanced digital control;	cm	centimeter	ext.	external
	analog to digital converter	CMOS	complementary metal oxide	F	Fahrenheit, female
adj.	adjust, adjustment		substrate (semiconductor)	fglass.	fiberglass
ADV	advertising dimensional	cogen.	cogeneration	FHM	flat head machine (screw)
	drawing	com	communications (port)	fl. oz.	fluid ounce
Ah	amp-hour	coml	commercial	flex.	flexible
AHWT	anticipatory high water	Coml/Rec	Commercial/Recreational	freq.	frequency
	temperature	conn.	connection	FS	full scale
AISI	American Iron and Steel	cont.	continued	ft.	foot, feet
	Institute	CPVC	chlorinated polyvinyl chloride	ft. lb.	foot pounds (torque)
ALOP	anticipatory low oil pressure	crit.	critical	ft./min.	feet per minute
alt.	alternator	CRT	cathode ray tube	ftp	file transfer protocol
Al	aluminum	CSA	Canadian Standards	g	gram
ANSI	American National Standards		Association	ga.	gauge (meters, wire size)
	Institute (formerly American	CT	current transformer	gal.	gallon
	Standards Association, ASA)	Cu	copper	gen.	generator
AO	anticipatory only	cUL	Canadian Underwriter's	genset	generator set
APDC	Air Pollution Control District		Laboratories	GFI	ground fault interrupter
API	American Petroleum Institute	CUL	Canadian Underwriter's		
approx.	approximate, approximately		Laboratories	GND, ⊕	ground
AQMD	Air Quality Management District	cu. in.	cubic inch	gov.	governor
AR	as required, as requested	cw.	clockwise	gph	gallons per hour
AS	as supplied, as stated, as	CWC	city water-cooled	gpm	gallons per minute
	suggested	cyl.	cylinder	gr.	grade, gross
ASE	American Society of Engineers	D/A	digital to analog	GRD	equipment ground
ASME	American Society of	DAC	digital to analog converter	gr. wt.	gross weight
	Mechanical Engineers	dB	decibel	H x W x D	height by width by depth
assy.	assembly	dB(A)	decibel (A weighted)	HC	hex cap
ASTM	American Society for Testing	DC	direct current	HCHT	high cylinder head temperature
	Materials	DCR	direct current resistance	HD	heavy duty
ATDC	after top dead center	deg., °	degree	HET	high exhaust temp., high
ATS	automatic transfer switch	dept.	department		engine temp.
auto.	automatic	DFMEA	Design Failure Mode and	hex	hexagon
aux.	auxiliary		Effects Analysis	Hg	mercury (element)
avg.	average	dia.	diameter	HH	hex head
AVR	automatic voltage regulator	DI/EO	dual inlet/end outlet	HHC	hex head cap
AWG	American Wire Gauge	DIN	Deutsches Institut für Normung	HP	horsepower
AWM	appliance wiring material		e. V. (also Deutsche Industrie	hr.	hour
bat.	battery		Normenausschuss)	HS	heat shrink
BBDC	before bottom dead center	DIP	dual inline package	hsg.	housing
BC	battery charger, battery	DPDT	double-pole, double-throw	HVAC	heating, ventilation, and air
	charging	DPST	double-pole, single-throw		conditioning
BCA	battery charging alternator	DS	disconnect switch	HWT	high water temperature
BCI	Battery Council International	DVR	digital voltage regulator	Hz	hertz (cycles per second)
BDC	before dead center	E, emer.	emergency (power source)	IC	integrated circuit
BHP	brake horsepower	ECM	electronic control module,	ID	inside diameter, identification
blk.	black (paint color), block		engine control module	IEC	International Electrotechnical
	(engine)	EDI	electronic data interchange		Commission
blk. htr.	block heater	EFR	emergency frequency relay	IEEE	Institute of Electrical and
BMEP	brake mean effective pressure	e.g.	for example (<i>exempli gratia</i>)		Electronics Engineers
bps	bits per second	EG	electronic governor	IMS	improved motor starting
br.	brass	EGSA	Electrical Generating Systems	in.	inch
BTDC	before top dead center		Association	in. H ₂ O	inches of water
Btu	British thermal unit	EIA	Electronic Industries	in. Hg	inches of mercury
Btu/min.	British thermal units per minute		Association	in. lb.	inch pounds
C	Celsius, centigrade	EI/EO	end inlet/end outlet	Inc.	incorporated
cal.	calorie	EMI	electromagnetic interference	ind.	industrial
CAN	controller area network	emiss.	emission	int.	internal
CARB	California Air Resources Board	eng.	engine	int./ext.	internal/external
CB	circuit breaker	EPA	Environmental Protection	I/O	input/output
cc	cubic centimeter		Agency	IP	iron pipe
CCA	cold cranking amps	EPS	emergency power system	ISO	International Organization for
ccw.	counterclockwise	ER	emergency relay		Standardization
CEC	Canadian Electrical Code	ES	engineering special,	J	joule
cert.	certificate, certification, certified		engineered special	JIS	Japanese Industry Standard
cfh	cubic feet per hour	ESD	electrostatic discharge		

k	kilo (1000)	MTBO	mean time between overhauls	rms	root mean square
K	kelvin	mtg.	mounting	rnd.	round
kA	kiloampere	MTU	Motoren-und Turbinen-Union	ROM	read only memory
KB	kilobyte (2 ¹⁰ bytes)	MW	megawatt	rot.	rotate, rotating
KBus	Kohler communication protocol	mW	milliwatt	rpm	revolutions per minute
kg	kilogram	μF	microfarad	RS	right side
kg/cm ²	kilograms per square centimeter	N, norm.	normal (power source)	RTU	remote terminal unit
kgm	kilogram-meter	NA	not available, not applicable	RTV	room temperature vulcanization
kg/m ³	kilograms per cubic meter	nat. gas	natural gas	RW	read/write
kHz	kilohertz	NBS	National Bureau of Standards	SAE	Society of Automotive Engineers
kJ	kilojoule	NC	normally closed	scfm	standard cubic feet per minute
km	kilometer	NEC	National Electrical Code	SCR	silicon controlled rectifier
kOhm, kΩ	kilo-ohm	NEMA	National Electrical Manufacturers Association	s, sec.	second
kPa	kilopascal	NFPA	National Fire Protection Association	SI	<i>Système international d'unités</i> , International System of Units
kph	kilometers per hour	Nm	newton meter	SI/EO	side in/end out
kV	kilovolt	NO	normally open	sil.	silencer
kVA	kilovolt ampere	no., nos.	number, numbers	SN	serial number
kVAR	kilovolt ampere reactive	NPS	National Pipe, Straight	SNMP	simple network management protocol
kW	kilowatt	NPSC	National Pipe, Straight-coupling	SPDT	single-pole, double-throw
kWh	kilowatt-hour	NPT	National Standard taper pipe thread per general use	SPST	single-pole, single-throw
kWm	kilowatt mechanical	NPTF	National Pipe, Taper-Fine	spec	specification
kWth	kilowatt-thermal	NR	not required, normal relay	specs	specification(s)
L	liter	ns	nanosecond	sq.	square
LAN	local area network	OC	overcrank	sq. cm	square centimeter
L x W x H	length by width by height	OD	outside diameter	sq. in.	square inch
lb.	pound, pounds	OEM	original equipment manufacturer	SS	stainless steel
lbm/ft ³	pounds mass per cubic feet	OF	overfrequency	std.	standard
LCB	line circuit breaker	opt.	option, optional	stl.	steel
LCD	liquid crystal display	OS	oversize, overspeed	tach.	tachometer
ld. shd.	load shed	OSHA	Occupational Safety and Health Administration	TD	time delay
LED	light emitting diode	OV	overvoltage	TDC	top dead center
Lph	liters per hour	oz.	ounce	TDEC	time delay engine cooldown
Lpm	liters per minute	p., pp.	page, pages	TDEN	time delay emergency to normal
LOP	low oil pressure	PC	personal computer	TDES	time delay engine start
LP	liquefied petroleum	PCB	printed circuit board	TDNE	time delay normal to emergency
LPG	liquefied petroleum gas	pF	picofarad	TDOE	time delay off to emergency
LS	left side	PF	power factor	TDON	time delay off to normal
L _{wa}	sound power level, A weighted	ph., ∅	phase	temp.	temperature
LWL	low water level	PHC	Phillips® head Crimptite® (screw)	term.	terminal
LWT	low water temperature	PHH	Phillips® hex head (screw)	THD	total harmonic distortion
m	meter, milli (1/1000)	PHM	pan head machine (screw)	TIF	telephone influence factor
M	mega (10 ⁶ when used with SI units), male	PLC	programmable logic control	TIR	total indicator reading
m ³	cubic meter	PMG	permanent magnet generator	tol.	tolerance
m ³ /hr.	cubic meters per hour	pot	potentiometer, potential	turbo.	turbocharger
m ³ /min.	cubic meters per minute	ppm	parts per million	typ.	typical (same in multiple locations)
mA	milliampere	PROM	programmable read-only memory	UF	underfrequency
man.	manual	psi	pounds per square inch	UHF	ultrahigh frequency
max.	maximum	psig	pounds per square inch gauge	UL	Underwriter's Laboratories, Inc.
MB	megabyte (2 ²⁰ bytes)	pt.	pint	UNC	unified coarse thread (was NC)
MCCB	molded-case circuit breaker	PTC	positive temperature coefficient	UNF	unified fine thread (was NF)
MCM	one thousand circular mils	PTO	power takeoff	univ.	universal
meggar	megohmmeter	PVC	polyvinyl chloride	US	undersize, underspeed
MHz	megahertz	qt.	quart, quarts	UV	ultraviolet, undervoltage
mi.	mile	qty.	quantity	V	volt
mil	one one-thousandth of an inch	R	replacement (emergency) power source	VAC	volts alternating current
min.	minimum, minute	rad.	radiator, radius	VAR	voltampere reactive
misc.	miscellaneous	RAM	random access memory	VDC	volts direct current
MJ	megajoule	RDO	relay driver output	VFD	vacuum fluorescent display
mJ	millijoule	ref.	reference	VGA	video graphics adapter
mm	millimeter	rem.	remote	VHF	very high frequency
mOhm, mΩ	milliohm	Res/Coml	Residential/Commercial	W	watt
MOhm, MΩ	megohm	RFI	radio frequency interference	WCR	withstand and closing rating
MOV	metal oxide varistor	RH	round head	w/	with
MPa	megapascal	RHM	round head machine (screw)	w/o	without
mpg	miles per gallon	rlly.	relay	wt.	weight
mph	miles per hour			xfrm	transformer
MS	military standard				
ms	millisecond				
m/sec.	meters per second				
MTBF	mean time between failure				

Appendix B Common Hardware Application Guidelines

Use the information below and on the following pages to identify proper fastening techniques when no specific reference for reassembly is made.

Bolt/Screw Length: When bolt/screw length is not given, use Figure 1 as a guide. As a general rule, a minimum length of one thread beyond the nut and a maximum length of 1/2 the bolt/screw diameter beyond the nut is the preferred method.

Washers and Nuts: Use split lock washers as a bolt locking device where specified. Use SAE flat washers with whiz nuts, spirallock nuts, or standard nuts and preloading (torque) of the bolt in all other applications. See Appendix C, General Torque Specifications, and other torque specifications in the service literature.

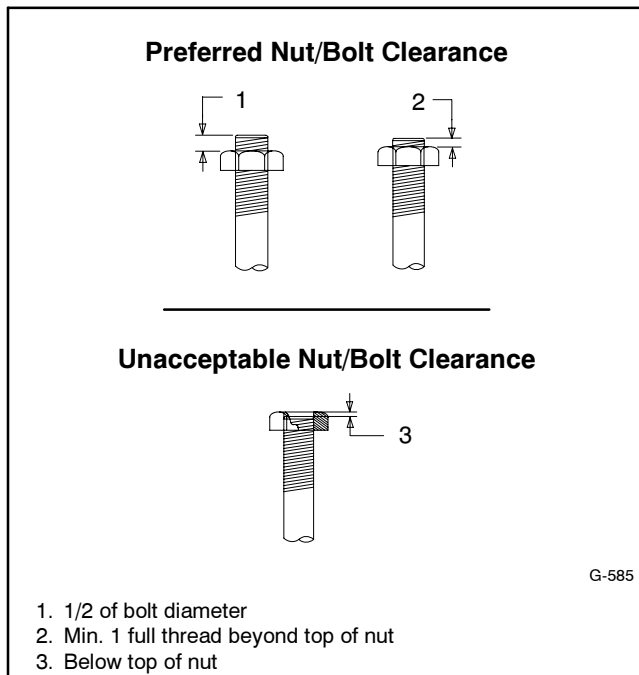


Figure 1 Acceptable Bolt Lengths

Steps for common hardware application:

1. Determine entry hole type: round or slotted.
2. Determine exit hole type: fixed female thread (weld nut), round, or slotted.

For round and slotted exit holes, determine if hardware is greater than 1/2 inch in diameter, or 1/2 inch in diameter or less. Hardware that is *greater than 1/2 inch* in diameter takes a standard nut and SAE washer. Hardware *1/2 inch or less* in diameter can take a properly torqued whiz nut or spirallock nut. See Figure 2.

3. Follow these SAE washer rules after determining exit hole type:
 - a. Always use a washer between hardware and a slot.
 - b. Always use a washer under a nut (see 2 above for exception).
 - c. Use a washer under a bolt when the female thread is fixed (weld nut).
4. Refer to Figure 2, which depicts the preceding hardware configuration possibilities.

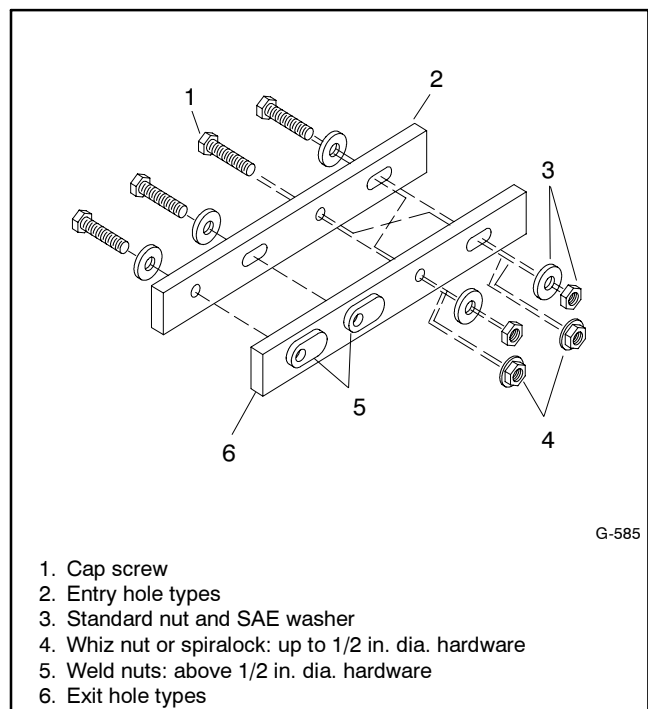


Figure 2 Acceptable Hardware Combinations

Appendix C General Torque Specifications

American Standard Fasteners Torque Specifications					
Size	Torque Measurement	Assembled into Cast Iron or Steel			Assembled into Aluminum Grade 2 or 5
		Grade 2	Grade 5	Grade 8	
8-32	Nm (in. lb.)	1.8 (16)	2.3 (20)	—	See Note 3
10-24	Nm (in. lb.)	2.9 (26)	3.6 (32)	—	
10-32	Nm (in. lb.)	2.9 (26)	3.6 (32)	—	
1/4-20	Nm (in. lb.)	6.8 (60)	10.8 (96)	14.9 (132)	
1/4-28	Nm (in. lb.)	8.1 (72)	12.2 (108)	16.3 (144)	
5/16-18	Nm (in. lb.)	13.6 (120)	21.7 (192)	29.8 (264)	
5/16-24	Nm (in. lb.)	14.9 (132)	23.1 (204)	32.5 (288)	
3/8-16	Nm (ft. lb.)	24.0 (18)	38.0 (28)	53.0 (39)	
3/8-24	Nm (ft. lb.)	27.0 (20)	42.0 (31)	60.0 (44)	
7/16-14	Nm (ft. lb.)	39.0 (29)	60.0 (44)	85.0 (63)	
7/16-20	Nm (ft. lb.)	43.0 (32)	68.0 (50)	95.0 (70)	
1/2-13	Nm (ft. lb.)	60.0 (44)	92.0 (68)	130.0 (96)	
1/2-20	Nm (ft. lb.)	66.0 (49)	103.0 (76)	146.0 (108)	
9/16-12	Nm (ft. lb.)	81.0 (60)	133.0 (98)	187.0 (138)	
9/16-18	Nm (ft. lb.)	91.0 (67)	148.0 (109)	209.0 (154)	
5/8-11	Nm (ft. lb.)	113.0 (83)	183.0 (135)	259.0 (191)	
5/8-18	Nm (ft. lb.)	128.0 (94)	208.0 (153)	293.0 (216)	
3/4-10	Nm (ft. lb.)	199.0 (147)	325.0 (240)	458.0 (338)	
3/4-16	Nm (ft. lb.)	222.0 (164)	363.0 (268)	513.0 (378)	
1-8	Nm (ft. lb.)	259.0 (191)	721.0 (532)	1109.0 (818)	
1-12	Nm (ft. lb.)	283.0 (209)	789.0 (582)	1214.0 (895)	

Metric Fasteners Torque Specifications, Measured in Nm (ft. lb.)				
Size (mm)	Assembled into Cast Iron or Steel			Assembled into Aluminum Grade 5.8 or 8.8
	Grade 5.8	Grade 8.8	Grade 10.9	
M6 x 1.00	6.2 (4.6)	9.5 (7)	13.6 (10)	See Note 3
M8 x 1.25	15.0 (11)	23.0 (17)	33.0 (24)	
M8 x 1.00	16.0 (11)	24.0 (18)	34.0 (25)	
M10 x 1.50	30.0 (22)	45.0 (34)	65.0 (48)	
M10 x 1.25	31.0 (23)	47.0 (35)	68.0 (50)	
M12 x 1.75	53.0 (39)	80.0 (59)	115.0 (85)	
M12 x 1.50	56.0 (41)	85.0 (63)	122.0 (90)	
M14 x 2.00	83.0 (61)	126.0 (93)	180.0 (133)	
M14 x 1.50	87.0 (64)	133.0 (98)	190.0 (140)	
M16 x 2.00	127.0 (94)	194.0 (143)	278.0 (205)	
M16 x 1.50	132.0 (97)	201.0 (148)	287.0 (212)	
M18 x 2.50	179.0 (132)	273.0 (201)	390.0 (288)	
M18 x 1.50	189.0 (140)	289.0 (213)	413.0 (305)	

Notes:

1. The torque values above are general guidelines. Always use the torque values specified in the service manuals and/or assembly drawings when they differ from the above torque values.
2. The torque values above are based on new plated threads. Increase torque values by 15% if non-plated threads are used.
3. Hardware threaded into aluminum must have either two diameters of thread engagement or a 30% or more reduction in the torque to prevent stripped threads.
4. Torque values are calculated as equivalent stress loading on American hardware with an approximate preload of 90% of the yield strength and a friction coefficient of 0.125.

Appendix D Common Hardware Identification

Screw/Bolts/Studs	
Head Styles	
Hex Head or Machine Head	
Hex Head or Machine Head with Washer	
Flat Head (FHM)	
Round Head (RHM)	
Pan Head	
Hex Socket Head Cap or Allen™ Head Cap	
Hex Socket Head or Allen™ Head Shoulder Bolt	
Sheet Metal Screw	
Stud	
Drive Styles	
Hex	
Hex and Slotted	
Phillips®	
Slotted	
Hex Socket	

Nuts	
Nut Styles	
Hex Head	
Lock or Elastic	
Square	
Cap or Acorn	
Wing	
Washers	
Washer Styles	
Plain	
Split Lock or Spring	
Spring or Wave	
External Tooth Lock	
Internal Tooth Lock	
Internal-External Tooth Lock	

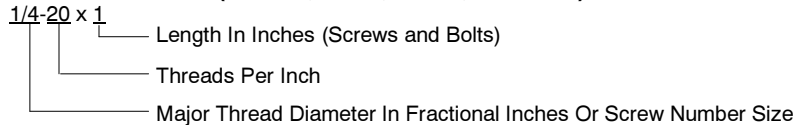
Hardness Grades	
American Standard	
Grade 2	
Grade 5	
Grade 8	
Grade 8/9 (Hex Socket Head)	
Metric	
Number stamped on hardware; 5.8 shown	

Allen™ head screw is a trademark of Holo-Krome Co.

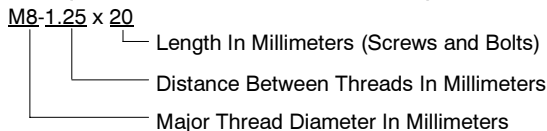
Phillips® screw is a registered trademark of Phillips Screw Company.

Sample Dimensions

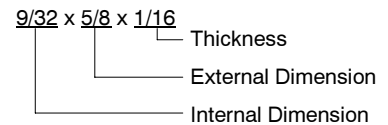
American Standard (Screws, Bolts, Studs, and Nuts)



Metric (Screws, Bolts, Studs, and Nuts)



Plain Washers



Lock Washers



Appendix E Common Hardware List

The Common Hardware List lists part numbers and dimensions for common hardware items.

American Standard

Part No.	Dimensions	Part No.	Dimensions	Part No.	Dimensions	Type		
Hex Head Bolts (Grade 5)		Hex Head Bolts, cont.		Hex Nuts				
X-465-17	1/4-20 x .38	X-6238-14	3/8-24 x .75	X-6009-1	1-8	Standard		
X-465-6	1/4-20 x .50	X-6238-16	3/8-24 x 1.25					
X-465-2	1/4-20 x .62	X-6238-21	3/8-24 x 4.00					
X-465-16	1/4-20 x .75	X-6238-22	3/8-24 x 4.50					
X-465-18	1/4-20 x .88				X-6210-3	6-32	Whiz	
X-465-7	1/4-20 x 1.00	X-6024-5	7/16-14 x .75		X-6210-4	8-32	Whiz	
X-465-8	1/4-20 x 1.25	X-6024-2	7/16-14 x 1.00		X-6210-5	10-24	Whiz	
X-465-9	1/4-20 x 1.50	X-6024-8	7/16-14 x 1.25		X-6210-1	10-32	Whiz	
X-465-10	1/4-20 x 1.75	X-6024-3	7/16-14 x 1.50					
X-465-11	1/4-20 x 2.00	X-6024-4	7/16-14 x 2.00		X-6210-2	1/4-20	Spiralock	
X-465-12	1/4-20 x 2.25	X-6024-11	7/16-14 x 2.75		X-6210-6	1/4-28	Spiralock	
X-465-14	1/4-20 x 2.75	X-6024-12	7/16-14 x 6.50		X-6210-7	5/16-18	Spiralock	
X-465-21	1/4-20 x 5.00				X-6210-8	5/16-24	Spiralock	
X-465-25	1/4-28 x .38	X-129-15	1/2-13 x .75		X-6210-9	3/8-16	Spiralock	
X-465-20	1/4-28 x 1.00	X-129-17	1/2-13 x 1.00	X-6210-10	3/8-24	Spiralock		
		X-129-18	1/2-13 x 1.25	X-6210-11	7/16-14	Spiralock		
		X-129-19	1/2-13 x 1.50	X-6210-12	1/2-13	Spiralock		
X-125-33	5/16-18 x .50	X-129-20	1/2-13 x 1.75	X-6210-15	7/16-20	Spiralock		
X-125-23	5/16-18 x .62	X-129-21	1/2-13 x 2.00	X-6210-14	1/2-20	Spiralock		
X-125-3	5/16-18 x .75	X-129-22	1/2-13 x 2.25					
X-125-31	5/16-18 x .88	X-129-23	1/2-13 x 2.50	X-85-3	5/8-11	Standard		
X-125-5	5/16-18 x 1.00	X-129-24	1/2-13 x 2.75	X-88-12	3/4-10	Standard		
X-125-24	5/16-18 x 1.25	X-129-25	1/2-13 x 3.00	X-89-2	1/2-20	Standard		
X-125-34	5/16-18 x 1.50	X-129-27	1/2-13 x 3.50					
X-125-25	5/16-18 x 1.75	X-129-29	1/2-13 x 4.00					
X-125-26	5/16-18 x 2.00	X-129-30	1/2-13 x 4.50					
230578	5/16-18 x 2.25	X-463-9	1/2-13 x 5.50					
X-125-29	5/16-18 x 2.50	X-129-44	1/2-13 x 6.00					
X-125-27	5/16-18 x 2.75							
X-125-28	5/16-18 x 3.00	X-129-51	1/2-20 x .75					
X-125-22	5/16-18 x 4.50	X-129-45	1/2-20 x 1.25	X-25-46	.125	.250	.022	#4
X-125-32	5/16-18 x 5.00	X-129-52	1/2-20 x 1.50	X-25-9	.156	.375	.049	#6
X-125-35	5/16-18 x 5.50			X-25-48	.188	.438	.049	#8
X-125-36	5/16-18 x 6.00	X-6021-3	5/8-11 x 1.00	X-25-36	.219	.500	.049	#10
X-125-40	5/16-18 x 6.50	X-6021-4	5/8-11 x 1.25	X-25-40	.281	.625	.065	1/4
		X-6021-2	5/8-11 x 1.50	X-25-85	.344	.687	.065	5/16
X-125-43	5/16-24 x 1.75	X-6021-1	5/8-11 x 1.75	X-25-37	.406	.812	.065	3/8
X-125-44	5/16-24 x 2.50	273049	5/8-11 x 2.00	X-25-34	.469	.922	.065	7/16
X-125-30	5/16-24 x .75	X-6021-5	5/8-11 x 2.25	X-25-26	.531	1.062	.095	1/2
X-125-39	5/16-24 x 2.00	X-6021-6	5/8-11 x 2.50	X-25-15	.656	1.312	.095	5/8
X-125-38	5/16-24 x 2.75	X-6021-7	5/8-11 x 2.75	X-25-29	.812	1.469	.134	3/4
		X-6021-12	5/8-11 x 3.75	X-25-127	1.062	2.000	.134	1
X-6238-2	3/8-16 x .62	X-6021-11	5/8-11 x 4.50					
X-6238-10	3/8-16 x .75	X-6021-10	5/8-11 x 6.00					
X-6238-3	3/8-16 x .88							
X-6238-11	3/8-16 x 1.00	X-6021-9	5/8-18 x 2.50					
X-6238-4	3/8-16 x 1.25							
X-6238-5	3/8-16 x 1.50	X-6239-1	3/4-10 x 1.00					
X-6238-1	3/8-16 x 1.75	X-6239-8	3/4-10 x 1.25					
X-6238-6	3/8-16 x 2.00	X-6239-2	3/4-10 x 1.50					
X-6238-17	3/8-16 x 2.25	X-6239-3	3/4-10 x 2.00					
X-6238-7	3/8-16 x 2.50	X-6239-4	3/4-10 x 2.50					
X-6238-8	3/8-16 x 2.75	X-6239-5	3/4-10 x 3.00					
X-6238-9	3/8-16 x 3.00	X-6239-6	3/4-10 x 3.50					
X-6238-19	3/8-16 x 3.25							
X-6238-12	3/8-16 x 3.50	X-792-1	1-8 x 2.25					
X-6238-20	3/8-16 x 3.75	X-792-5	1-8 x 3.00					
X-6238-13	3/8-16 x 4.50	X-792-8	1-8 x 5.00					
X-6238-18	3/8-16 x 5.50							
X-6238-25	3/8-16 x 6.50							

Metric

Hex head bolts are hardness grade 8.8 unless noted.

Part No. Dimensions Hex Head Bolts (Partial Thread)

M931-05055-60	M5-0.80 x 55
M931-06040-60	M6-1.00 x 40
M931-06055-60	M6-1.00 x 55
M931-06060-60	M6-1.00 x 60
M931-06060-SS	M6-1.00 x 60
M931-06070-60	M6-1.00 x 70
M931-06070-SS	M6-1.00 x 70
M931-06075-60	M6-1.00 x 75
M931-06090-60	M6-1.00 x 90
M931-06145-60	M6-1.00 x 145
M931-06150-60	M6-1.00 x 150
M931-08035-60	M8-1.25 x 35
M931-08040-60	M8-1.25 x 40
M931-08045-60	M8-1.25 x 45
M931-08050-60	M8-1.25 x 50
M931-08055-60	M8-1.25 x 55
M931-08055-82	M8-1.25 x 55*
M931-08060-60	M8-1.25 x 60
M931-08070-60	M8-1.25 x 70
M931-08070-82	M8-1.25 x 70*
M931-08075-60	M8-1.25 x 75
M931-08080-60	M8-1.25 x 80
M931-08090-60	M8-1.25 x 90
M931-08095-60	M8-1.25 x 95
M931-08100-60	M8-1.25 x 100
M931-08110-60	M8-1.25 x 110
M931-08120-60	M8-1.25 x 120
M931-08130-60	M8-1.25 x 130
M931-08140-60	M8-1.25 x 140
M931-08150-60	M8-1.25 x 150
M931-08200-60	M8-1.25 x 200
M931-10040-82	M10-1.25 x 40*
M931-10040-60	M10-1.50 x 40
M931-10045-60	M10-1.50 x 45
M931-10050-60	M10-1.50 x 50
M931-10050-82	M10-1.25 x 50*
M931-10055-60	M10-1.50 x 55
M931-10060-60	M10-1.50 x 60
M931-10065-60	M10-1.50 x 65
M931-10070-60	M10-1.50 x 70
M931-10080-60	M10-1.50 x 80
M931-10080-82	M10-1.25 x 80*
M931-10090-60	M10-1.50 x 90
M931-10090-82	M10-1.50 x 90*
M931-10100-60	M10-1.50 x 100
M931-10110-60	M10-1.50 x 110
M931-10120-60	M10-1.50 x 120
M931-10130-60	M10-1.50 x 130
M931-10140-60	M10-1.50 x 140
M931-10180-60	M10-1.50 x 180
M931-10235-60	M10-1.50 x 235
M931-10260-60	M10-1.50 x 260
M960-10330-60	M10-1.25 x 330
M931-12045-60	M12-1.75 x 45
M960-12050-60	M12-1.25 x 50
M960-12050-82	M12-1.25 x 50*
M931-12050-60	M12-1.75 x 50
M931-12050-82	M12-1.75 x 50*
M931-12055-60	M12-1.75 x 55
M931-12060-60	M12-1.75 x 60
M931-12060-82	M12-1.75 x 60*
M931-12065-60	M12-1.75 x 65
M931-12075-60	M12-1.75 x 75
M931-12080-60	M12-1.75 x 80
M931-12090-60	M12-1.75 x 90
M931-12100-60	M12-1.75 x 100
M931-12110-60	M12-1.75 x 110

Part No. Dimensions Hex Head Bolts (Partial Thread), continued

M960-16090-60	M16-1.50 x 90
M931-16090-60	M16-2.00 x 90
M931-16100-60	M16-2.00 x 100
M931-16100-82	M16-2.00 x 100*
M931-16120-60	M16-2.00 x 120
M931-16150-60	M16-2.00 x 150
M931-20065-60	M20-2.50 x 65
M931-20090-60	M20-2.50 x 90
M931-20100-60	M20-2.50 x 100
M931-20120-60	M20-2.50 x 120
M931-20140-60	M20-2.50 x 140
M931-20160-60	M20-2.50 x 160
M931-22090-60	M22-2.50 x 90
M931-22120-60	M22-2.50 x 120
M931-22160-60	M22-2.50 x 160
M931-24090-60	M24-3.00 x 90
M931-24120-60	M24-3.00 x 120
M931-24160-60	M24-3.00 x 160
M931-24200-60	M24-3.00 x 200

Hex Head Bolts (Full Thread)

M933-04006-60	M4-0.70 x 6
M933-05030-60	M5-0.80 x 30
M933-05035-60	M5-0.80 x 35
M933-05050-60	M5-0.80 x 50
M933-06010-60	M6-1.00 x 10
M933-06012-60	M6-1.00 x 12
M933-06014-60	M6-1.00 x 14
M933-06016-60	M6-1.00 x 16
M933-06020-60	M6-1.00 x 20
M933-06025-60	M6-1.00 x 25
M933-06030-60	M6-1.00 x 30
M933-06040-60	M6-1.00 x 40
M933-06050-60	M6-1.00 x 50
M933-07025-60	M7-1.00 x 25
M933-08010-60	M8-1.25 x 10
M933-08012-60	M8-1.25 x 12
M933-08016-60	M8-1.25 x 16
M933-08020-60	M8-1.25 x 20
M933-08025-60	M8-1.25 x 25
M933-08030-60	M8-1.25 x 30
M933-08030-82	M8-1.25 x 30*
M933-10012-60	M10-1.50 x 12
M961-10020-60	M10-1.25 x 20
M933-10020-60	M10-1.50 x 20
M933-10025-60	M10-1.50 x 25
M961-10025-60	M10-1.25 x 25
M933-10025-82	M10-1.50 x 25*
M961-10030-60	M10-1.25 x 30
M933-10030-60	M10-1.50 x 30
M933-10030-82	M10-1.50 x 30*
M961-10035-60	M10-1.25 x 35
M933-10035-60	M10-1.50 x 35
M933-10035-82	M10-1.50 x 35*
M961-10040-60	M10-1.25 x 40

Part No. Dimensions Hex Head Bolts (Full Thread), continued

M933-12016-60	M12-1.75 x 16
M933-12020-60	M12-1.75 x 20
M961-12020-60F	M12-1.50 x 20
M933-12025-60	M12-1.75 x 25
M933-12025-82	M12-1.75 x 25*
M961-12030-60	M12-1.25 x 30
M933-12030-82	M12-1.75 x 30*
M961-12030-82F	M12-1.50 x 30*
M933-12030-60	M12-1.75 x 30
M933-12035-60	M12-1.75 x 35
M961-12040-82	M12-1.25 x 40*
M933-12040-60	M12-1.75 x 40
M933-12040-82	M12-1.75 x 40*
M961-14025-60	M14-1.50 x 25
M933-14025-60	M14-2.00 x 25
M961-14050-82	M14-1.50 x 50*
M961-16025-60	M16-1.50 x 25
M933-16025-60	M16-2.00 x 25
M961-16030-82	M16-1.50 x 30*
M933-16030-82	M16-2.00 x 30*
M933-16035-60	M16-2.00 x 35
M961-16040-60	M16-1.50 x 40
M933-16040-60	M16-2.00 x 40
M961-16045-82	M16-1.50 x 45*
M933-16045-82	M16-2.00 x 45*
M933-16050-60	M16-2.00 x 50
M933-16050-82	M16-2.00 x 50*
M933-16060-60	M16-2.00 x 60
M933-16070-60	M16-2.00 x 70
M933-18035-60	M18-2.50 x 35
M933-18050-60	M18-2.50 x 50
M933-18060-60	M18-2.50 x 60
M933-20050-60	M20-2.50 x 50
M933-20055-60	M20-2.50 x 55
M933-24060-60	M24-3.00 x 60
M933-24065-60	M24-3.00 x 65
M933-24070-60	M24-3.00 x 70

Pan Head Machine Screws

M7985A-03010-20	M3-0.50 x 10
M7985A-03012-20	M3-0.50 x 12
M7985A-04010-20	M4-0.70 x 10
M7985A-04016-20	M4-0.70 x 16
M7985A-04020-20	M4-0.70 x 20
M7985A-04050-20	M4-0.70 x 50
M7985A-04100-20	M4-0.70 x 100
M7985A-05010-20	M5-0.80 x 10
M7985A-05012-20	M5-0.80 x 12
M7985A-05016-20	M5-0.80 x 16
M7985A-05020-20	M5-0.80 x 20
M7985A-05025-20	M5-0.80 x 25
M7985A-05030-20	M5-0.80 x 30
M7985A-05080-20	M5-0.80 x 80
M7985A-05100-20	M5-0.80 x 100
M7985A-06100-20	M6-1.00 x 100

Flat Head Machine Screws

M965A-04012-SS	M4-0.70 x 12
M965A-05012-SS	M5-0.80 x 12
M965A-05016-20	M5-0.80 x 16
M965A-06012-20	M6-1.00 x 12

* This metric hex bolt's hardness is grade 10.9.

Metric, continued

Part No.	Dimensions	Type
Hex Nuts		
M934-03-50	M3-0.50	Standard
M934-04-50	M4-0.70	Standard
M934-04-B	M4-0.70	Brass
M934-05-50	M5-0.80	Standard
M934-06-60	M6-1.00	Standard
M934-06-64	M6-1.00	Std. (green)
M6923-06-80	M6-1.00	Spiralock
M982-06-80	M6-1.00	Elastic Stop
M934-08-60	M8-1.25	Standard
M6923-08-80	M8-1.25	Spiralock
M982-08-80	M8-1.25	Elastic Stop
M934-10-60	M10-1.50	Standard
M934-10-60F	M10-1.25	Standard
M6923-10-80	M10-1.50	Spiralock
M6923-10-62	M10-1.50	Spiralock†
M982-10-80	M10-1.50	Elastic Stop
M934-12-60	M12-1.75	Standard
M934-12-60F	M12-1.25	Standard
M6923-12-80	M12-1.75	Spiralock
M982-12-80	M12-1.75	Elastic Stop
M982-14-60	M14-2.00	Elastic Stop
M6923-16-80	M16-2.00	Spiralock
M982-16-80	M16-2.00	Elastic Stop
M934-18-80	M18-2.5	Standard
M982-18-60	M18-2.50	Elastic Stop
M934-20-80	M20-2.50	Standard
M982-20-80	M20-2.50	Elastic Stop
M934-22-60	M22-2.50	Standard
M934-24-80	M24-3.00	Standard
M982-24-60	M24-3.00	Elastic Stop
M934-30-80	M30-3.50	Standard

Washers

Part No.	ID	OD	Thick.	Bolt/ Screw
M125A-03-80	3.2	7.0	0.5	M3
M125A-04-80	4.3	9.0	0.8	M4
M125A-05-80	5.3	10.0	1.0	M5
M125A-06-80	6.4	12.0	1.6	M6
M125A-08-80	8.4	16.0	1.6	M8
M125A-10-80	10.5	20.0	2.0	M10
M125A-12-80	13.0	24.0	2.5	M12
M125A-14-80	15.0	28.0	2.5	M14
M125A-16-80	17.0	30.0	3.0	M16
M125A-18-80	19.0	34.0	3.0	M18
M125A-20-80	21.0	37.0	3.0	M20
M125A-24-80	25.0	44.0	4.0	M24

† This metric hex nut's hardness is grade 8.

Index

This list provides part numbers and page numbers of modules listed in this manual. Italicized numbers refer to the page numbers on which modules appear.

GM40397-MA1, 135, 139	GM40397-MA27, 137, 139	GM40720-MA7, 144	GM48845-MA5, 131
GM40397-MA2, 135, 139	GM40397-MA28, 137, 139	GM40720-MA8, 144	GM48845-MA6, 131
GM40397-MA5, 135, 141	GM40397-MA29, 137, 143	GM40720-MA9, 144	GM48871-MA1, 127, 129
GM40397-MA6, 135, 141	GM40397-MA30, 137, 143	GM40720-MA10, 144	GM48871-MA2, 127, 129
GM40397-MA9, 135, 141	GM40397-MA31, 137, 139	GM40720-MA11, 144	GM48871-MA3, 127, 129
GM40397-MA10, 135, 141	GM40397-MA32, 137, 139	GM40720-MA12, 144	GM48871-MA4, 127, 129
GM40397-MA13, 135, 141	GM40397-MA33, 137, 143	GM40823-MA1, 131	GM48871-MA5, 127, 129
GM40397-MA14, 135, 141	GM40397-MA34, 137, 143	GM40823-MA2, 131	GM48871-MA6, 127, 129
GM40397-MA17, 135, 141	GM40397-MA35, 137, 143	GM40823-MA3, 131	GM48871-MA7, 127, 129
GM40397-MA18, 135, 141	GM40397-MA36, 137, 143	GM40823-MA4, 131	GM49128-MA1, 133
GM40397-MA21, 135, 141	GM40720-MA1, 144	GM40823-MA5, 131	GM49128-MA2, 133
GM40397-MA22, 135, 141	GM40720-MA2, 144	GM40823-MA6, 131	GM49128-MA3, 133
GM40397-MA23, 135, 141	GM40720-MA3, 144	GM48845-MA1, 131	GM49128-MA4, 133
GM40397-MA24, 135, 141	GM40720-MA4, 144	GM48845-MA2, 131	GM49128-MA5, 133
GM40397-MA25, 135, 139	GM40720-MA5, 144	GM48845-MA3, 131	GM49128-MA6, 133
GM40397-MA26, 135, 139	GM40720-MA6, 144	GM48845-MA4, 131	

TP-6443 4/07c

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