Service Parts

Marine Generator Sets



Pleasure Craft Models:

40- 200EOZDJ

33- 175EFOZDJ

Commercial Models:

40- 200EOZCJ

33- 175EFOZCJ

KOHLER®

TP-6864 12/21e

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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	Engine	Air Intake	Engine	Nameplates and Decals	Skid	Alternator and Mounting	Control and Harness	Controller and Mounting	Literature
	Variation Number								
40EOZDJ/33EFOZDJ									
GM87033- GA1	GM86759*	1	1	1	1	1	1	1	498
GM87033- GA2	GM51613*	1	2	1	1	1	1	1	498
GM87033- GA3	GM86760*	1	3	1	1	1	1	1	498
GM87033- GA4	GM51614*	1	4	1	1	1	1	1	498
GM91441- GA1	GM86759*	1	1	1	1	4	1	1	498
GM91441- GA2	GM51613*	1	2	1	1	4	1	1	498
GM91441- GA3	GM86760*	1	3	1	1	4	1	1	498
GM91441- GA4	GM51614*	1	4	1	1	4	1	1	498
40EFOZDJ									
GM86211-GA3	GM86375*	3	5	1	2	2	5	2	499
GM86211-GA4	GM86376*	3	6	1	2	2	5	2	499
GM91442-GA3	GM86375*	3	5	1	2	5	5	2	499
GM91442-GA4	GM86376*	3	6	1	2	5	5	2	499
50EFOZDJ									
GM86211-GA7	GM86375*	3	5	1	2	3	5	2	500
GM86211-GA8	GM86376*	3	6	1	2	3	5	2	500
GM91442-GA7	GM86375*	3	5	1	2	6	5	2	500
GM91442-GA8	GM86376*	3	6	1	2	6	5	2	500
55EOZDJ/45EFOZDJ									
GM86211-GA1	GM85410*	2	7	1	2	2	2	2	501
GM86211-GA2	GM85411*	2	8	1	2	2	2	2	501
GM86211-GA17	GM88609*	2	9	1	2	2	2	2	501
GM86211-GA18	GM88610*	2	10	1	2	2	2	2	501
GM91442-GA1	GM85410* GM114041-1**	2	7	1	2	5	2	2	501
GM91442-GA2	GM85411* GM114041-2**	2	8	1	2	5	2	2	501
GM91442-GA17	GM88609* GM114041-3**	2	9	1	2	5	2	2	501
GM91442-GA18	GM88610* GM114041-4**	2	10	1	2	5	2	2	501
65EOZDJ/55EFOZDJ									
GM86211-GA5	GM85410*	2	7	1	2	3	2	2	502
GM86211-GA6	GM85411*	2	8	1	2	3	2	2	502
GM86211-GA19	GM88609*	2	9	1	2	3	2	2	502
GM86211-GA20	GM88610*	2	10	1	2	3	2	2	502
GM91442-GA5	GM85410* GM114041-1**	2	7	1	2	6	2	2	502
GM91442-GA6	GM85411* GM114041-2**	2	8	1	2	6	2	2	502
GM91442-GA19	GM88609* GM114041-3**	2	9	1	2	6	2	2	502
GM91442-GA20	GM88610* GM114041-4**	2	10	1	2	6	2	2	502

***** See Engine Model Index for Engine variations.

****** Engine part number with aluminum flywheel option. Replaced original engine effective with engine serial number below.

4045TFM85 – PE4045N026001
4045AFM85 – PE4045N026003
6068AFM85 – PE6068N014781

Specification Number Index

Group Title	Engine	Air Intake	Engine	Nameplates and Decals	Skid	Alternator and Mounting	Control and Harness	Controller and Mounting	Literature
	Variation Number								
80EOZDJ/70EFOZDJ									
GM87783-GA1	GM85412*	4	11	2	3	13	3	3	503
GM87783-GA2	GM85413*	4	12	2	3	13	3	3	503
GM87783-GA9	GM88611*	4	13	2	3	13	3	3	503
GM87783-GA10	GM88612*	4	14	2	3	13	3	3	503
GM91443-GA1	GM85412* GM114042-1**	4	11	2	3	27	3	3	503
GM91443-GA2	GM85413* GM114042-2**	4	12	2	3	27	3	3	503
GM91443-GA9	GM88611* GM114042-3**	4	13	2	3	27	3	3	503
GM91443-GA10	GM88612* GM114042-4**	4	14	2	3	27	3	3	503
99EOZDJ/80EFOZDJ									
GM87783-GA3	GM85412*	4	11	2	3	14	3	3	504
GM87783-GA4	GM85413*	4	12	2	3	14	3	3	504
GM87783-GA11	GM88611*	4	13	2	3	14	3	3	504
GM87783-GA12	GM88612*	4	14	2	3	14	3	3	504
GM91443-GA3	GM85412* GM114042-1**	4	11	2	3	28	3	3	504
GM91443-GA4	GM85413* GM114042-2**	4	12	2	3	28	3	3	504
GM91443-GA11	GM88611* GM114042-3**	4	13	2	3	28	3	3	504
GM91443-GA12	GM88612* GM114042-4**	4	14	2	3	28	3	3	504

* See Engine Model Index for Engine variations.
** Engine part number with aluminum flywheel option. Replaced original engine effective with engine serial number below.
4045TFM85 – PE4045N026001
4045AFM85 – PE4045N026003
6068AFM85 – PE6068N014781

Specification Number Index

Group Title		Engine	Air Intake	Engine	Nameplates and Decals	Skid	Alternator and Mounting	Control and Harness	Controller and Mounting	Literature
		Variation Number								
125EOZDJ/100EFOZDJ										
GM90473-GA1	GM85414* GM114043-1**	9	29	3	7	29	4	4	505
GM90473-GA2	GM85415* GM114043-2**	9	30	3	7	29	4	4	505
GM90473-GA9	GM88613* GM114043-3**	9	31	3	7	29	4	4	505
GM90473-GA10	GM88614* GM114043-4**	9	32	3	7	29	4	4	505
GM90473-GA17	GM91650* GM114044-1**	9	37	3	7	29	4	4	505
GM90473-GA18	GM91651* GM114044-2**	9	38	3	7	29	4	4	505
GM90473-GA25	GM91652* GM114044-3**	9	39	3	7	29	4	4	505
GM90473-GA26	GM91653* GM114044-4**	9	40	3	7	29	4	4	505
150EOZDJ/125EFOZDJ										
GM90473-GA3	GM85414* GM114043-1**	9	29	3	8	25	4	4	506
GM90473-GA4	GM85415* GM114043-2**	9	30	3	8	25	4	4	506
GM90473-GA11	GM88613* GM114043-3**	9	31	3	8	25	4	4	506
GM90473-GA12	GM88614* GM114043-4**	9	32	3	8	25	4	4	506
GM90473-GA19	GM91650* GM114044-1**	9	37	3	8	25	4	4	506
GM90473-GA20	GM91651* GM114044-2**	9	38	3	8	25	4	4	506
GM90473-GA27	GM91652* GM114044-3**	9	39	3	8	25	4	4	506
GM90473-GA28	GM91653* GM114044-4**	9	40	3	8	25	4	4	506
200EOZDJ/175EFOZDJ										
GM94091-GA1	GM93285*	11	45	4	11	33	6	5	540
GM94091-GA2	GM93286*	11	46	4	11	33	6	5	540
GM94091-GA5	GM93287*	11	47	4	11	33	6	5	540
GM94091-GA6	GM93288*	11	48	4	11	33	6	5	540
GM94091-GA9	GM93289*	11	49	4	11	33	6	5	540
GM94091-GA10	GM93290*	11	50	4	11	33	6	5	540
GM94091-GA13	GM93291*	11	51	4	11	33	6	5	540
GM94091-GA14	GM93292*	11	52	4	11	33	6	5	540

* See Engine Model Index for Engine variations.
** Engine part number with aluminum flywheel option. Replaced original engine effective with engine serial number below.
4045TFM85 – PE4045N026001
4045AFM85 – PE4045N026003
6068AFM85 – PE6068N014781

Specification Number Index

Group Title	Engine	Air Intake	Engine	Nameplates and Decals	Skid	Alternator and Mounting	Control and Harness	Controller and Mounting	Literature
	Variation Number								
40EOZCJ/33EFOZCJ									
GM87033- GA5	GM86759*	5	15	1	4	10	1	1	507
GM87033- GA6	GM51613*	5	16	1	4	10	1	1	507
GM87033- GA7	GM86760*	5	17	1	4	10	1	1	507
GM87033- GA8	GM51614*	5	18	1	4	10	1	1	507
GM91441- GA5	GM86759*	5	15	1	4	7	1	1	507
GM91441- GA6	GM51613*	5	16	1	4	7	1	1	507
GM91441- GA7	GM86760*	5	17	1	4	7	1	1	507
GM91441- GA8	GM51614*	5	18	1	4	7	1	1	507
40EFOZCJ									
GM86211-GA11	GM86375*	7	19	1	5	11	5	2	508
GM86211-GA12	GM86376*	7	20	1	5	11	5	2	508
GM91442-GA11	GM86375*	7	19	1	5	8	5	2	508
GM91442-GA12	GM86376*	7	20	1	5	8	5	2	508
50EFOZCJ									
GM86211-GA15	GM86375*	7	19	1	5	12	5	2	509
GM86211-GA16	GM86376*	7	20	1	5	12	5	2	509
GM91442-GA15	GM86375*	7	19	1	5	9	5	2	509
GM91442-GA16	GM86376*	7	20	1	5	9	5	2	509
55EOZCJ/45EFOZCJ									
GM86211-GA9	GM85410*	6	21	1	5	11	2	2	510
GM86211-GA10	GM85411*	6	22	1	5	11	2	2	510
GM86211-GA21	GM88609*	6	23	1	5	11	2	2	510
GM86211-GA22	GM88610*	6	24	1	5	11	2	2	510
GM91442-GA9	GM85410* GM114041-1**	6	21	1	5	8	2	2	510
GM91442-GA10	GM85411* GM114041-2**	6	22	1	5	8	2	2	510
GM91442-GA21	GM88609* GM114041-3**	6	23	1	5	8	2	2	510
GM91442-GA22	GM88610* GM114041-4**	6	24	1	5	8	2	2	510
65EOZCJ/55EFOZCJ									
GM86211-GA13	GM85410*	6	21	1	5	12	2	2	511
GM86211-GA14	GM85411*	6	22	1	5	12	2	2	511
GM86211-GA23	GM88609*	6	23	1	5	12	2	2	511
GM86211-GA24	GM88610*	6	24	1	5	12	2	2	511
GM91442-GA13	GM85410* GM114041-1**	6	21	1	5	9	2	2	511
GM91442-GA14	GM85411* GM114041-2**	6	22	1	5	9	2	2	511
GM91442-GA23	GM88609* GM114041-3**	6	23	1	5	9	2	2	511
GM91442-GA24	GM88610* GM114041-4**	6	24	1	5	9	2	2	511

* See Engine Model Index for Engine variations.

** Engine part number with aluminum flywheel option. Replaced original engine effective with engine serial number below.

4045TFM85 – PE4045N026001

4045AFM85 – PE4045N026003

6068AFM85 – PE6068N014781

Specification Number Index

Group Title	Engine	Air Intake	Engine	Nameplates and Decals	Skid	Alternator and Mounting	Control and Harness	Controller and Mounting	Literature
	Variation Number								
80EOZCJ/70EFOZCJ									
GM87783-GA5	GM85412*	8	25	2	6	22	3	3	512
GM87783-GA6	GM85413*	8	26	2	6	22	3	3	512
GM87783-GA13	GM88611*	8	27	2	6	22	3	3	512
GM87783-GA14	GM88612*	8	28	2	6	22	3	3	512
GM91443-GA5	GM85412* GM114042-1**	8	25	2	6	30	3	3	512
GM91443-GA6	GM85413* GM114042-2**	8	26	2	6	30	3	3	512
GM91443-GA13	GM88611* GM114042-3**	8	27	2	6	30	3	3	512
GM91443-GA14	GM88612* GM114042-4**	8	28	2	6	30	3	3	512
99EOZCJ/80EFOZCJ									
GM87783-GA7	GM85412*	8	25	2	6	23	3	3	513
GM87783-GA8	GM85413*	8	26	2	6	23	3	3	513
GM87783-GA15	GM88611*	8	27	2	6	23	3	3	513
GM87783-GA16	GM88612*	8	28	2	6	23	3	3	513
GM91443-GA7	GM85412* GM114042-1**	8	25	2	6	31	3	3	513
GM91443-GA8	GM85413* GM114042-2**	8	26	2	6	31	3	3	513
GM91443-GA15	GM88611* GM114042-3**	8	27	2	6	31	3	3	513
GM91443-GA16	GM88612* GM114042-4**	8	28	2	6	31	3	3	513

* See Engine Model Index for Engine variations.
** Engine part number with aluminum flywheel option. Replaced original engine effective with engine serial number below.
4045TFM85 – PE4045N026001
4045AFM85 – PE4045N026003
6068AFM85 – PE6068N014781

Specification Number Index

Group Title	Engine	Air Intake	Engine	Nameplates and Decals	Skid	Alternator and Mounting	Control and Harness	Controller and Mounting	Literature
	Variation Number								
125EOZCJ/100EFOZCJ									
GM90473-GA5	GM85414* GM114043-1**	10	33	3	9	32	4	4	514
GM90473-GA6	GM85415* GM114043-2**	10	34	3	9	32	4	4	514
GM90473-GA13	GM88613* GM114043-3**	10	35	3	9	32	4	4	514
GM90473-GA14	GM88614* GM114043-4**	10	36	3	9	32	4	4	514
GM90473-GA21	GM91650* GM114044-1**	10	41	3	9	32	4	4	514
GM90473-GA22	GM91651* GM114044-2**	10	42	3	9	32	4	4	514
GM90473-GA29	GM91652* GM114044-3**	10	43	3	9	32	4	4	514
GM90473-GA30	GM91653* GM114044-4**	10	44	3	9	32	4	4	514
150EOZCJ/125EFOZCJ									
GM90473-GA7	GM85414* GM114043-1**	10	33	3	10	26	4	4	515
GM90473-GA8	GM85415* GM114043-2**	10	34	3	10	26	4	4	515
GM90473-GA15	GM88613* GM114043-3**	10	35	3	10	26	4	4	515
GM90473-GA16	GM88614* GM114043-4**	10	36	3	10	26	4	4	515
GM90473-GA23	GM91650* GM114044-1**	10	41	3	10	26	4	4	515
GM90473-GA24	GM91651* GM114044-2**	10	42	3	10	26	4	4	515
GM90473-GA31	GM91652* GM114044-3**	10	43	3	10	26	4	4	515
GM90473-GA32	GM91653* GM114044-4**	10	44	3	10	26	4	4	515
200EOZCJ/175EFOZCJ									
GM94091-GA3	GM93285*	12	53	4	12	34	6	5	541
GM94091-GA4	GM93286*	12	54	4	12	34	6	5	541
GM94091-GA7	GM93287*	12	55	4	12	34	6	5	541
GM94091-GA8	GM93288*	12	56	4	12	34	6	5	541
GM94091-GA11	GM93289*	12	57	4	12	34	6	5	541
GM94091-GA12	GM93290*	12	58	4	12	34	6	5	541
GM94091-GA15	GM93291*	12	59	4	12	34	6	5	541
GM94091-GA16	GM93292*	12	60	4	12	34	6	5	541

* See Engine Model Index for Engine variations.
** Engine part number with aluminum flywheel option. Replaced original engine effective with engine serial number below.
4045TFM85 – PE4045N026001
4045AFM85 – PE4045N026003
6068AFM85 – PE6068N014781

Engine Model Index, 33- 50 kW

	Variation					
	Engine Part Number/Model					
	GM51613	GM51614	GM86759	GM86760	GM86375	GM86376
	4045DFM70	4045DFM70	4045DFM70	4045DFM70	4045TFM75	4045TFM75
Group Description	**60 Hz, 24 V**	**50 Hz, 24 V**	**60 Hz, 12 V**	**50 Hz, 12 V**	**50 Hz, 12 V**	**50 Hz, 24 V**
Group 11: Rocker Arm Cover	1150	1150	1150	1150	1150	1150
Group 12: Oil Fill Neck	1299	1299	1299	1299	1299	1299
Group 13: Crankshaft Pulley	1333	1333	1333	1333	1333	1333
Group 14: Flywheel Housing	1406	1406	1406	1406	1406	1406
Group 15: Flywheel	1597	1597	1597	1597	1597	1597
Group 16: Fuel Injection System	167H	167K	167G	167J	168G	168H
Group 17: Intake Manifold	1783	1783	1783	1783	1785	1785
Group 18: Air Cleaner Adapter	-	-	-	-	1838	1838
Group 19: Oil Pan	1902	1902	1902	1902	1954	1954
Group 20: Water Pump Pulley	2001	2001	2001	2001	2001	2001
Group 21: Thermostat Cover	2150	2150	2150	2150	2150	2150
Group 22: Thermostat	2206	2206	2206	2206	2206	2206
Group 24: Fan Belt	24BN	24BN	24BN	24BN	24BN	24BN
Group 27: Heat Exchanger	2703	2703	2703	2703	2703	2703
Group 28: Exhaust Manifold	2843	2843	2843	2843	2843	2843
Group 29: Ventilating System	2952	2952	2952	2952	2915	2915
Group 30: Starter	3090	3090	30AG	30AG	30AG	3090
Group 31: Alternator	3149	3149	3148	3148	3148	3149
Group 35: Fuel Filter	35DH	35DH	35DH	35DH	35DH	35DH
Group 36: Front Plate	3602	3602	3602	3602	3602	3602
Group 37: Fuel Transfer Pump	3701	3701	3701	3701	3701	3701
Group 40: Engine Oil Dipstick	4002	4002	4002	4002	4002	4002
Group 44: Timing Gear Cover	4412	4412	4412	4412	4412	4412
Group 45: Balancer Shaft	4502	4502	4502	4502	4501	4501
Group 46: Cylinder Block	4601	4601	4601	4601	4614	4614
Group 47: Crankshaft	4715	4715	4715	4715	4715	4715
Group 48: Piston, Cylinder Liner	4833	4833	4833	4833	4822	4822
Group 49: Rocker Arm and Shaft	4901	4901	4901	4901	4901	4901
Group 50: Oil Pump	5001	5001	5001	5001	5001	5001
Group 51: Cylinder Head	5102	5102	5102	5102	5102	5102
Group 52: Aux. Drive Adapter	5202	5202	5202	5202	5202	5202
Group 57: Water Pump Inlet	5726	5726	5726	5726	5726	5726
Group 59: Oil Cooler and Filter	5904	5904	5904	5904	5901	5901
Group 62: Alternator Brackets	6202	6202	6202	6202	6202	6202
Group 63: Low Press. Fuel Lines	6356	6356	6356	6356	6351	6351
Group 64: Exhaust Adapter	6414	6414	6414	6414	-	-
Group 65: Turbocharger	-	-	-	-	65LV	65LV
Group 67: Engine Sensors	-	-	-	-	6716	6716
Group 80: Sea Water Pump	8020	8020	8020	8020	8020	8020
Group 81: Primary Fuel Filter	8154	8154	8150	8150	8150	8154
Group 87: Tensioner	8712	8712	8712	8712	8712	8712
Group 88: Engine Oil Filter	8843	8843	8843	8843	8843	8843
Group 99- 1: Gasket Sets	9901	9901	9901	9901	9901	9901
Group 99- 2: Engine Short Block	9902- 1	9902- 1	9902- 1	9902- 1	9902- 2	9902- 2
Group 99- 3: Engine Overhaul Kit	9903- 1	9903- 1	9903- 1	9903- 1	9903- 2	9903- 2

Engine Model Index, 55- 65 kW

	Variation			
	Engine Part Number/Model			
	GM85410	GM85411	GM88609	GM88610
	GM114041-1**	GM114041-2**	GM114041-3**	GM114041-4**
	4045TFM85	4045TFM85	4045TFM85	4045TFM85
Group Description	**60 Hz, 12V**	**60 Hz, 24V**	**50 Hz, 12V**	**50 Hz, 24V**
Group 11: Rocker Arm Cover	1161	1161	1161	1161
Group 12: Oil Fill Neck	1299	1299	1299	1299
Group 13: Crankshaft Pulley	1333	1333	1333	1333
Group 14: Flywheel Housing	1406	1406	1406	1406
Group 14: Flywheel Housing	14BY**	14BY**	14BY**	14BY**
Group 15: Flywheel	1597	1597	1597	1597
Group 16: Fuel Injection System	16KA	16KA	16KA	16KA
Group 17: Intake Manifold	1785	1785	1785	1785
Group 19: Oil Pan	1954	1954	1954	1954
Group 20: Water Pump Pulley	2001	2001	2001	2001
Group 21: Thermostat Cover	2150	2150	2150	2150
Group 22: Thermostat	2206	2206	2206	2206
Group 24: Fan Belt	24BN	24BN	24BN	24BN
Group 27: Heat Exchanger	2769	2769	2769	2769
Group 28: Exhaust Manifold	2843	2843	2843	2843
Group 29: Ventilating System	2997	2997	2997	2997
Group 30: Starter	30AG	3090	30AG	3090
Group 31: Alternator	3148	3149	3148	3149
Group 35: Fuel Filter	35DP	35DP	35DP	35DP
Group 36: Front Plate	3614	3614	3614	3614
Group 37: Fuel Transfer Pump	3713	3713	3713	3713
Group 40: Engine Oil Dipstick	4002	4002	4002	4002
Group 44: Timing Gear Cover	4443	4443	4443	4443
Group 45: Balancer Shaft	4501	4501	4501	4501
Group 46: Cylinder Block	4652	4652	4652	4652
Group 47: Crankshaft	4715	4715	4715	4715
Group 48: Piston, Cylinder Liner	4838	4838	4838	4838
Group 49: Rocker Arm and Shaft	4901	4901	4901	4901
Group 50: Oil Pump	5001	5001	5001	5001
Group 51: Cylinder Head	5130	5130	5130	5130
Group 52: Aux. Drive Adapter	5202	5202	5202	5202
Group 57: Water Pump Inlet	5726	5726	5726	5726
Group 59: Oil Cooler and Filter	5901	5901	5901	5901
Group 62: Alternator Brackets	6288	6288	6288	6288
Group 63: Low Press. Fuel Lines	63DP	63DP	63DP	63DP
Group 65: Turbocharger	65H9	65H9	65H9	65H9
Group 67: Engine Sensors	6774	6774	6774	6774
Group 80: Sea Water Pump	8020	8020	8020	8020
Group 81: Primary Fuel Filter	81BK	81BL	81BK	81BL
Group 87: Tensioner	8701	8701	8701	8701
Group 88: Engine Oil Filter	8843	8843	8843	8843

** Engine part number with aluminum flywheel option. Replaced original engine effective with engine serial number below.
4045TFM85 – PE4045N026001

Engine Model Index, 70- 99 kW

	Variation			
	Engine Part Number/Model			
	GM85412	GM85413	GM88611	GM88612
	GM114042-1**	GM114042-2**	GM114042-3**	GM114042-4**
	4045AFM85	4045AFM85	4045AFM85	4045AFM85
Group Description	**60 Hz, 12V**	**60 Hz, 24V**	**50 Hz, 12V**	**50 Hz, 24V**
Group 11: Rocker Arm Cover	1154	1154	1154	1154
Group 12: Oil Fill Neck	1299	1299	1299	1299
Group 13: Crankshaft Pulley	1333	1333	1333	1333
Group 14: Flywheel Housing	1406	1406	1406	1406
Group 14: Flywheel Housing	14BY**	14BY**	14BY**	14BY**
Group 15: Flywheel	1597	1597	1597	1597
Group 16: Fuel Injection System	16GX	16GX	16GX	16GX
Group 17: Intake Manifold	17EM	17EM	17EM	17EM
Group 19: Oil Pan	19CZ	19CZ	19CZ	19CZ
Group 20: Water Pump Pulley	2001	2001	2001	2001
Group 21: Thermostat Cover	2188	2188	2188	2188
Group 22: Thermostat	2229	2229	2229	2229
Group 24: Fan Belt	24KM	24KM	24KM	24KM
Group 27: Heat Exchanger	2765	2765	2765	2765
Group 28: Exhaust Manifold	28BV	28BV	28BV	28BV
Group 29: Ventilating System	2997	2997	2997	2997
Group 30: Starter	30AG	3090	30AG	3090
Group 31: Alternator	3148	3149	3148	3149
Group 35: Fuel Filter	See Group 81	See Group 81	See Group 81	See Group 81
Group 36: Front Plate	3614	3614	3614	3614
Group 37: Fuel Transfer Pump	3799	3799	3799	3799
Group 40: Engine Oil Dipstick	40AL	40AL	40AL	40AL
Group 44: Timing Gear Cover	4443	4443	4443	4443
Group 45: Balancer Shaft	4501	4501	4501	4501
Group 46: Cylinder Block	4634	4634	4634	4634
Group 47: Crankshaft	4722	4722	4722	4722
Group 48: Piston, Cylinder Liner	4866	4866	4866	4866
Group 49: Rocker Arm and Shaft	4906	4906	4906	4906
Group 50: Oil Pump	5001	5001	5001	5001
Group 51: Cylinder Head	5158	5158	5158	5158
Group 52: Aux. Drive Adapter	5204	5204	5204	5204
Group 57: Water Pump Inlet	5726	5726	5726	5726
Group 59: Oil Cooler and Filter	5947	5947	5947	5947
Group 62: Alternator Brackets	6257	6257	6257	6257
Group 63: Low Press. Fuel Lines	63ES	63ES	63ES	63ES
Group 65: Turbocharger	65J3	65J3	65J3	65J3
Group 67: Engine Sensors	6775	6775	6775	6775
Group 80: Sea Water Pump	8024	8024	8024	8024
Group 81: Primary Fuel Filter	81BN	81D2	81BN	81D2
Group 87: Tensioner	8701	8701	8701	8701
Group 88: Engine Oil Filter	8843	8843	8843	8843

** Engine part number with aluminum flywheel option. Replaced original engine effective with engine serial number below.
4045AFM85 – PE4045N026003

Engine Model Index, 125/150 kW

	Variation			
	Engine Part Number/Model			
	GM85414	GM85415	GM88613	GM88614
	GM114043-1**	GM114043-2**	GM114043-3**	GM114043-4**
	6068AFM85	6068AFM85	6068AFM85	6068AFM85
Group Description	**60 Hz, 12V**	**60 Hz, 24V**	**50 Hz, 12V**	**50 Hz, 24V**
Group 11: Rocker Arm Cover	1137	1137	1137	1137
Group 12: Oil Fill Neck	1299	1299	1299	1299
Group 13: Crankshaft Pulley	1333	1333	1333	1333
Group 14: Flywheel Housing	1406	1406	1406	1406
Group 14: Flywheel Housing	14BY**	14BY**	14BY**	14BY**
Group 15: Flywheel	1597	1597	1597	1597
Group 16: Fuel Injection System	1679	1679	1679	1679
Group 17: Intake Manifold	17EC	17EC	17EC	17EC
Group 19: Oil Pan	19BP	19BP	19BP	19BP
Group 20: Water Pump Pulley	2001	2001	2001	2001
Group 24: Fan Belt	24KM	24KM	24KM	24KM
Group 27: Heat Exchanger	2761	2761	2761	2761
Group 28: Exhaust Manifold	28CK	28CK	28CK	28CK
Group 29: Ventilating System	29BE	29BE	29BE	29BE
Group 30: Starter	30AG	3090	30AG	3090
Group 31: Alternator	3148	3149	3148	3149
Group 35: Fuel Filter	See Group 81	See Group 81	See Group 81	See Group 81
Group 36: Front Plate	3614	3614	3614	3614
Group 37: Fuel Transfer Pump	3799	3799	3799	3799
Group 40: Engine Oil Dipstick	4067	4067	4067	4067
Group 43: Starting Aid	4337	4338	4337	4338
Group 44: Timing Gear Cover	4443	4443	4443	4443
Group 46: Cylinder Block	4633	4633	4633	4633
Group 47: Crankshaft	4712	4712	4712	4712
Group 48: Piston, Cylinder Liner	4852	4852	4852	4852
Group 49: Rocker Arm and Shaft	4905	4905	4905	4905
Group 50: Oil Pump	5024	5024	5024	5024
Group 51: Cylinder Head	5120	5120	5120	5120
Group 52: Aux. Drive Adapter	5204	5204	5204	5204
Group 57: Water Pump Inlet	5737	5737	5737	5737
Group 59: Oil Cooler and Filter	5973	5973	5973	5973
Group 62: Alternator Brackets	6257	6257	6257	6257
Group 63: Low Press. Fuel Lines	63FG	63FG	63FG	63FG
Group 65: Turbocharger	65D6	65D6	65D6	65D6
Group 67: Engine Sensors	6749	6749	6749	6749
Group 68: Damper	6813	6813	6813	6813
Group 80: Sea Water Pump	8024	8024	8024	8024
Group 81: Primary Fuel Filter	81BS	81BT	81BS	81BT
Group 87: Tensioner	8701	8701	8701	8701
Group 88: Engine Oil Filter	8843	8843	8843	8843

** Engine part number with aluminum flywheel option. Replaced original engine effective with engine serial number below.
6068AFM85 – PE6068N014781

Engine Model Index, 125/150 kW

	Variation			
	Engine Part Number/Model			
	GM91650	GM91651	GM91652	GM91653
	GM114044-1**	GM114044-2**	GM114044-3**	GM114044-4**
	6068AFM85	6068AFM85	6068AFM85	6068AFM85
Group Description	**60 Hz, 12V**	**60 Hz, 24V**	**50 Hz, 12V**	**50 Hz, 24V**
Group 11: Rocker Arm Cover	1137	1137	1137	1137
Group 12: Oil Fill Neck	1299	1299	1299	1299
Group 13: Crankshaft Pulley	1333	1333	1333	1333
Group 14: Flywheel Housing	1406	1406	1406	1406
Group 14: Flywheel Housing	14BY**	14BY**	14BY**	14BY**
Group 15: Flywheel	1597	1597	1597	1597
Group 16: Fuel Injection System	1679	1679	1679	1679
Group 17: Intake Manifold	17EC	17EC	17EC	17EC
Group 19: Oil Pan	19BP	19BP	19BP	19BP
Group 20: Water Pump Pulley	2001	2001	2001	2001
Group 24: Fan Belt	24KM	24KM	24KM	24KM
Group 27: Expansion Tank	2763	2763	2763	2763
Group 28: Exhaust Manifold	28CK	28CK	28CK	28CK
Group 29: Ventilating System	29BE	29BE	29BE	29BE
Group 30: Starter	30AG	3090	30AG	3090
Group 31: Alternator	3148	3149	3148	3149
Group 35: Fuel Filter	See Group 81	See Group 81	See Group 81	See Group 81
Group 36: Front Plate	3614	3614	3614	3614
Group 37: Fuel Transfer Pump	3799	3799	3799	3799
Group 40: Engine Oil Dipstick	4067	4067	4067	4067
Group 43: Starting Aid	4337	4338	4337	4338
Group 44: Timing Gear Cover	4443	4443	4443	4443
Group 46: Cylinder Block	4633	4633	4633	4633
Group 47: Crankshaft	4712	4712	4712	4712
Group 48: Piston, Cylinder Liner	4852	4852	4852	4852
Group 49: Rocker Arm and Shaft	4905	4905	4905	4905
Group 50: Oil Pump	5024	5024	5024	5024
Group 51: Cylinder Head	5120	5120	5120	5120
Group 52: Aux. Drive Adapter	5204	5204	5204	5204
Group 57: Water Pump Inlet	5737	5737	5737	5737
Group 59: Oil Cooler and Filter	5973	5973	5973	5973
Group 62: Alternator Brackets	6257	6257	6257	6257
Group 63: Low Press. Fuel Lines	63FG	63FG	63FG	63FG
Group 65: Turbocharger	65D6	65D6	65D6	65D6
Group 67: Engine Sensors	6749	6749	6749	6749
Group 68: Damper	6813	6813	6813	6813
Group 81: Primary Fuel Filter	81BS	81BT	81BS	81BT
Group 87: Tensioner	8701	8701	8701	8701
Group 88: Engine Oil Filter	8843	8843	8843	8843

** Engine part number with aluminum flywheel option. Replaced original engine effective with engine serial number below.
6068AFM85 – PE6068N014781

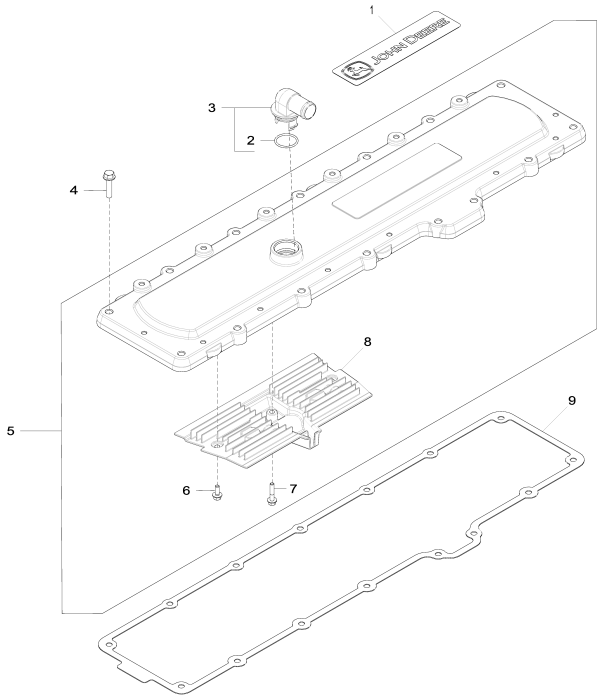
Engine Model Index, 175/200 kW

	Variation			
	Engine Part Number/Model			
	GM93285	GM93286	GM93287	GM93288
	6090AFM85	6090AFM85	6090AFM85	6090AFM85
Group Description	**60 Hz, 12V**	**60 Hz, 24V**	**50 Hz, 12V**	**50 Hz, 24V**
Group 11: Rocker Arm Cover	1107	1107	1107	1107
Group 13: Crankshaft Pulley	1359	1359	1359	1359
Group 14: Flywheel Housing	1425	1425	1425	1425
Group 15: Flywheel	1524	1524	1524	1524
Group 16: Fuel Injection System	1601	1601	1601	1601
Group 17: Intake Manifold	1712	1712	1712	1712
Group 19: Oil Pan	1932	1932	1932	1932
Group 20: Water Pump	2001-2	2001-2	2001-2	2001-2
Group 24: Fan Belt	24AM	24AM	24AM	24AM
Group 27: Heat Exchanger	2706	2706	2706	2706
Group 28: Exhaust Manifold	2821	2821	2821	2821
Group 30: Starter	3014	3015	3014	3015
Group 31: Alternator	3159	3160	3159	3160
Group 35: Fuel Filter	3514	3515	3514	3515
Group 39: Thermostat Housing	3928	3928	3928	3928
Group 40: Engine Oil Dipstick	4062	4062	4062	4062
Group 46: Cylinder Block	4609	4609	4609	4609
Group 47: Crankshaft	4705	4705	4705	4705
Group 48: Piston, Cylinder Liner	4804	4804	4804	4804
Group 49: Rocker Arm and Shaft	4903	4903	4903	4903
Group 50: Oil Pump	5003	5003	5003	5003
Group 51: Cylinder Head	5101	5101	5101	5101
Group 52: Aux. Drive Adapter	5204-2	5204-2	5204-2	5204-2
Group 57: Water Pump Inlet	5711	5711	5711	5711
Group 59: Oil Cooler and Filter	5937	5937	5937	5937
Group 62: Alternator Brackets	6222	6222	6222	6222
Group 65: Turbocharger	6565	6565	6566	6566
Group 77: Timing Gear Cover	7706	7706	7706	7706
Group 80: Sea Water Pump	8002	8002	8002	8002
Group 84: ECU	8495	8495	8495	8495
Group 99-1: Gasket Sets	9901-2	9901-2	9901-2	9901-2
Group 99-2: Engine Short Block	9902-3	9902-3	9902-3	9902-3
Group 99-3: Engine Overhaul Kit	9903-3	9903-3	9903-3	9903-3

Engine Model Index, 175/200 kW

	Variation			
	Engine Part Number/Model			
	GM93289	GM93290	GM93291	GM93292
	6090AFM85	6090AFM85	6090AFM85	6090AFM85
Group Description	**60 Hz, 12V**	**60 Hz, 24V**	**50 Hz, 12V**	**50 Hz, 24V**
Group 11: Rocker Arm Cover	1107	1107	1107	1107
Group 13: Crankshaft Pulley	1359	1359	1359	1359
Group 14: Flywheel Housing	1425	1425	1425	1425
Group 15: Flywheel	1524	1524	1524	1524
Group 16: Fuel Injection System	1601	1601	1601	1601
Group 17: Intake Manifold	1712	1712	1712	1712
Group 19: Oil Pan	1932	1932	1932	1932
Group 20: Water Pump	2001-2	2001-2	2001-2	2001-2
Group 24: Fan Belt	24AM	24AM	24AM	24AM
Group 27: Expansion Tank	2702	2702	2702	2702
Group 28: Exhaust Manifold	2821	2821	2821	2821
Group 30: Starter	3014	3015	3014	3015
Group 31: Alternator	3159	3160	3159	3160
Group 35: Fuel Filter	3514	3515	3514	3515
Group 39: Thermostat Housing	3928	3928	3928	3928
Group 40: Engine Oil Dipstick	4062	4062	4062	4062
Group 46: Cylinder Block	4609	4609	4609	4609
Group 47: Crankshaft	4705	4705	4705	4705
Group 48: Piston, Cylinder Liner	4804	4804	4804	4804
Group 49: Rocker Arm and Shaft	4903	4903	4903	4903
Group 50: Oil Pump	5003	5003	5003	5003
Group 51: Cylinder Head	5101	5101	5101	5101
Group 52: Aux. Drive Adapter	5204	5204	5204	5204
Group 57: Water Pump Inlet	5711	5711	5711	5711
Group 59: Oil Cooler and Filter	5937	5937	5937	5937
Group 62: Alternator Brackets	6222	6222	6222	6222
Group 65: Turbocharger	6565	6565	6566	6566
Group 77: Timing Gear Cover	7706	7706	7706	7706
Group 84: ECU	8495	8495	8495	8495
Group 99-1: Gasket Sets	9901-2	9901-2	9901-2	9901-2
Group 99-2: Engine Short Block	9902-3	9902-3	9902-3	9902-3
Group 99-3: Engine Overhaul Kit	9903-3	9903-3	9903-3	9903-3

Group 11: Rocker Arm Cover

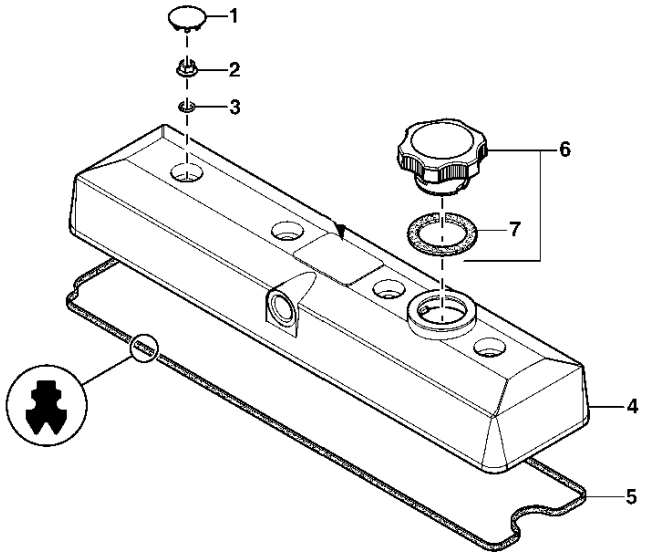


1107_RE525694_PCD

1107

Item	Part Number	Description	Quantity Variation 1107
1	#	Medallion	1
2	360170	O-RING	1
3	GM50285	Fitting, elbow	1
4	#	Screw, M8 X 35	15
5	GM98662	Cover	1
6	GM95664	Screw, M6 x 16	2
7	#	Screw, M6 X 30	1
8	GM79795	Breather	1
9	GM79796	Gasket	1

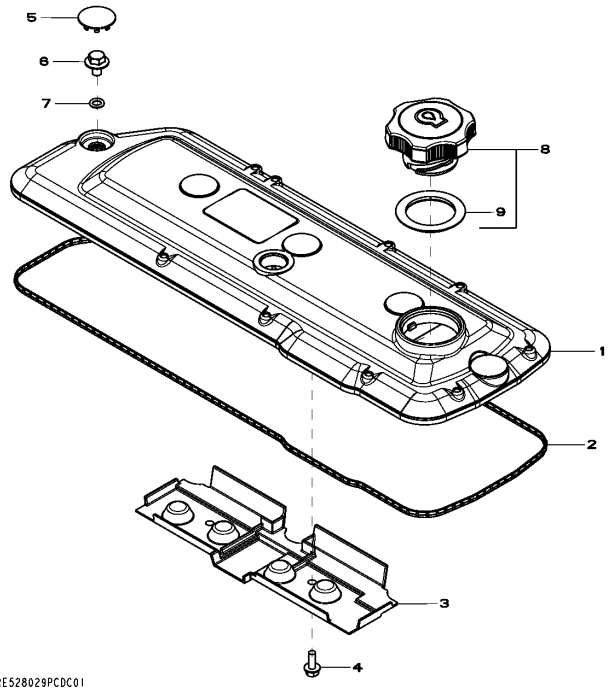
Group 11: Rocker Arm Cover, continued



6443_6_1

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

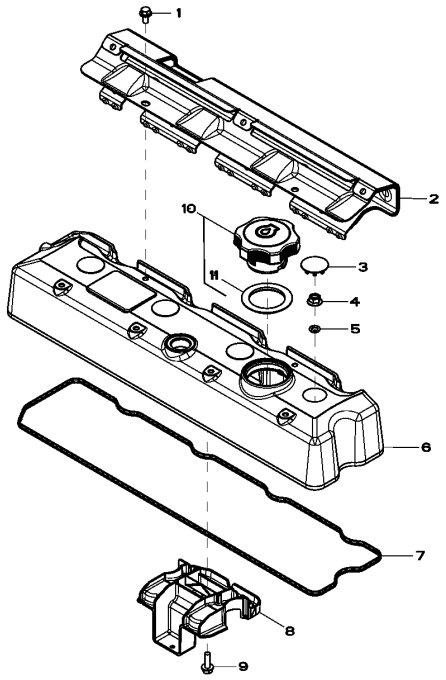
Group 11: Rocker Arm Cover, continued



1154

Item	Part Number	Description	Quantity Variation 1154
1	GM88683	Valve Cover	1
2	GM88688	Gasket	1
3	GM46620	Deflector	1
4	#	Screw, M6 X 16	2
5	360004	Plug	5
6	GM49900	Screw	5
7	360139	O-Ring	5
8	360018	Filler Cap	1
9	GM17493	Packing	1

Group 11: Rocker Arm Cover, continued

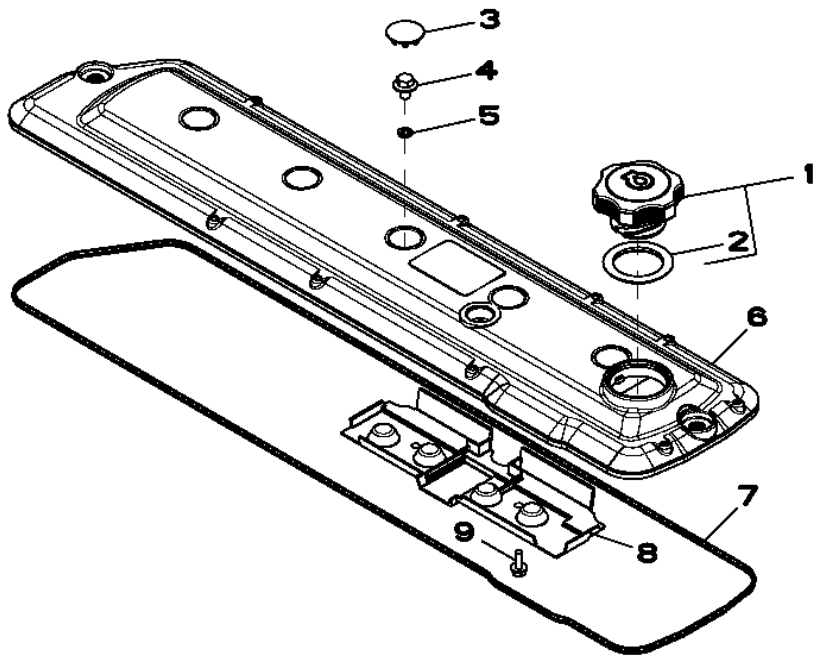


RE530011PCDC02

1161

Item	Part Number	Description	Quantity Variation 1161
1	GM50057	Screw	2
2	GM52517	Heat Shield	1
3	360004	Plug	4
4	360138	Nut	4
5	360139	O-Ring	4
6	GM88777	Valve Cover	1
7	GM52519	Gasket	1
8	GM50069	Deflector	1
9	#	Screw, M6 X 20	1
10	360018	Filler Cap	1
11	GM17493	Packing	1

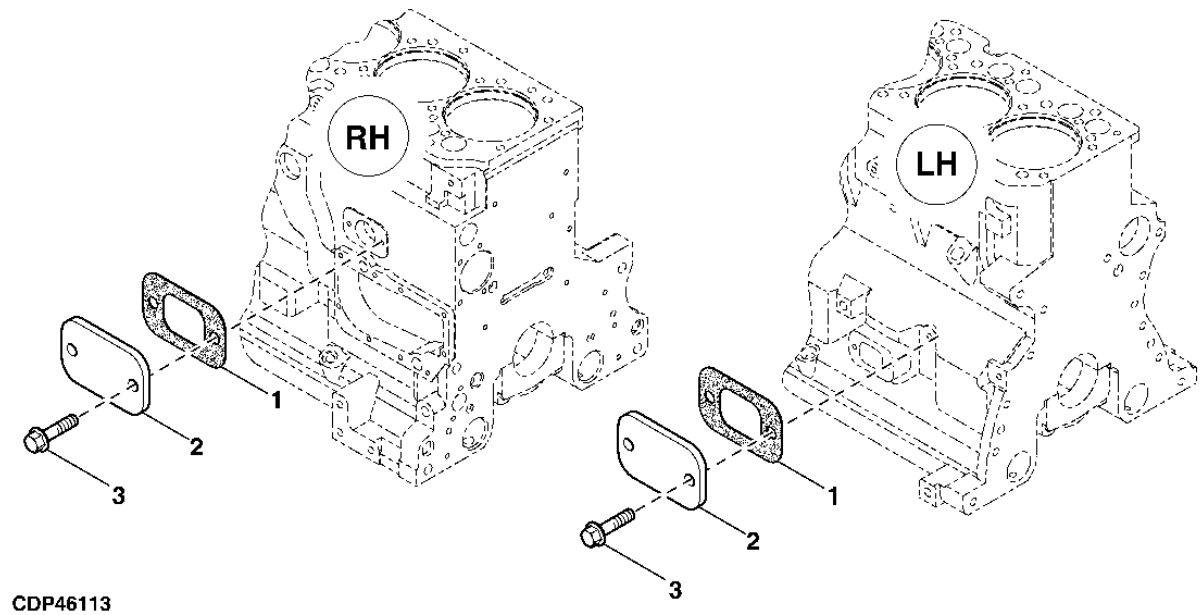
Group 11: Rocker Arm Cover, continued



1137

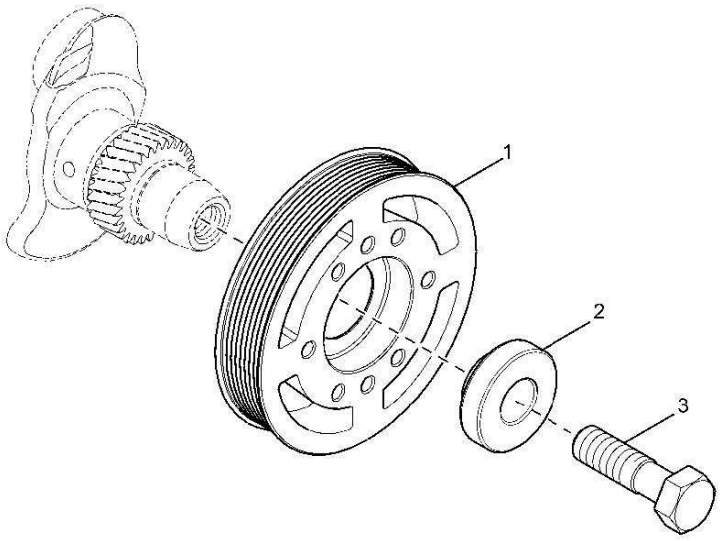
Item	Part Number	Description	Quantity Variation 1137
1	360018	Filler Cap	1
2	GM17493	Packing	1
3	360004	Plug	7
4	GM49900	Screw	7
5	360139	O-Ring	7
6	GM49910	Valve cover	1
7	GM46613	Gasket	1
8	GM46620	Deflector	1
9	#	Screw, M6 x 16	2

Group 12: Oil Fill Neck



Item	Part Number	Description	Quantity Variation 1299
1	GM17466	Gasket	2
2	360089	Cover	2
3	GM24536	Screw	4

Group 13: Crankshaft Pulley

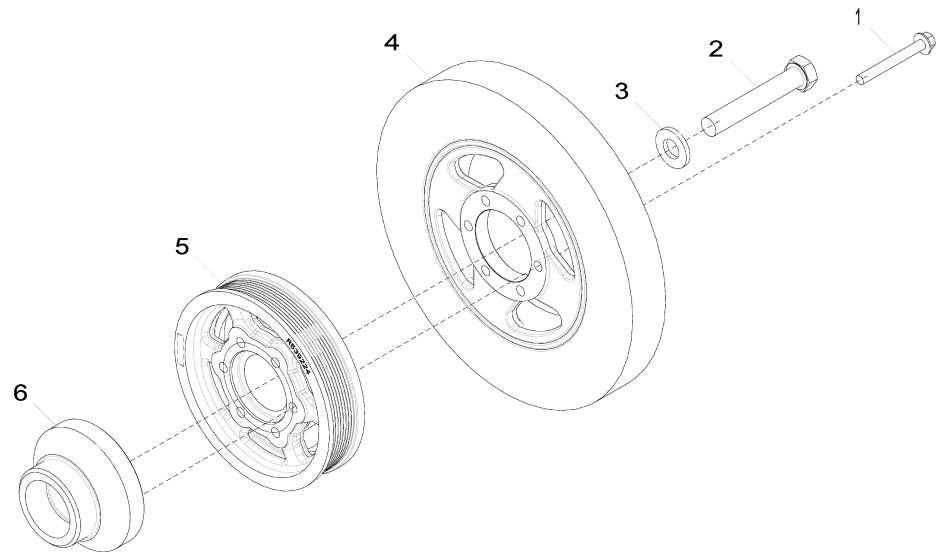


CDP45963

6443_28B_1

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

Group 13: Crankshaft Pulley, continued

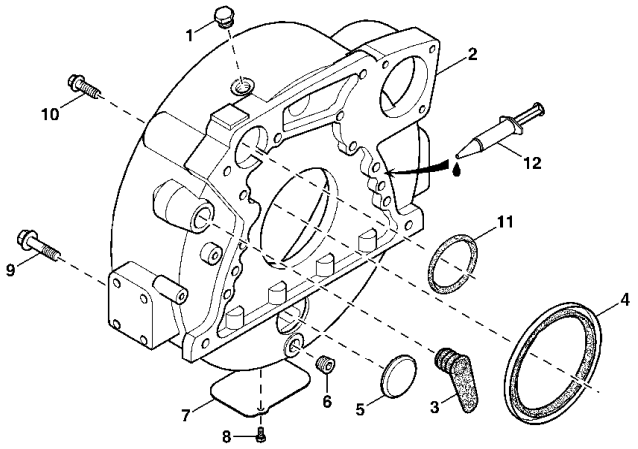


1359_RE561360_PCD

1359

Item	Part Number	Description	Quantity Variation 1359
1	#	Screw, M10 X 85	6
2	#	Screw, M20 X 120	1
3	#	Washer, 21.400 X 42 X 5 mm	1
4	GM50231	Torsional damper	1
5	GM98663	Pulley	1
6	GM79797	Hub	1

Group 14: Flywheel Housing

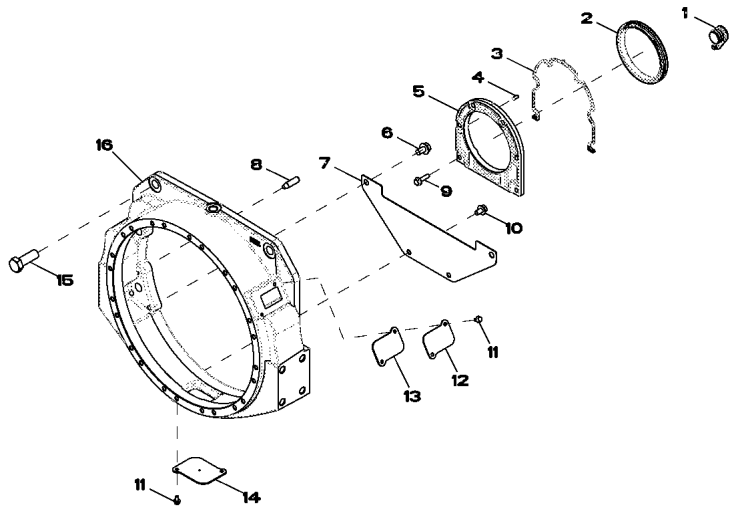


6443_29A_2

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

Common hardware; procure locally.

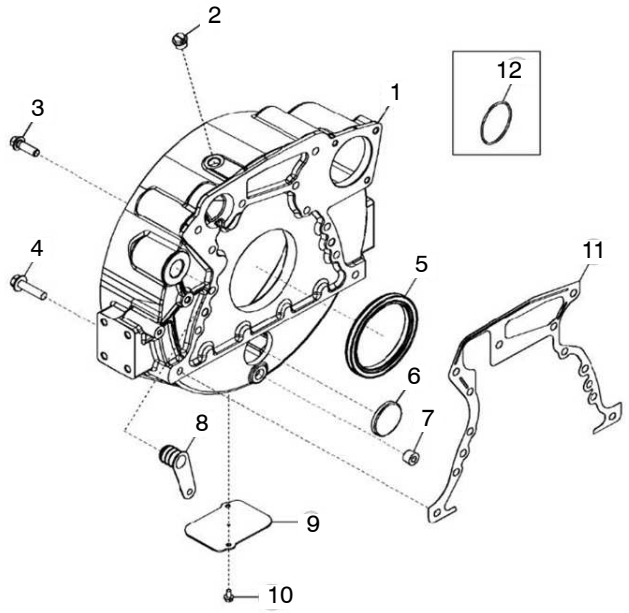
Group 14: Flywheel Housing, continued



1425

Item	Part Number	Description	Quantity Variation 1425
1	GM18691	Plug	1
2	GM79799	Seal	1
3	GM79800	Gasket	1
4	223731	DOWEL PIN	2
5	GM79801	Housing	1
6	#	Screw, M12 X 20	2
7	GM50158	Cover	1
8	352707	DOWEL PIN	2
9	#	Screw, M8 X 30	6
10	#	Screw, M10 X 16	2
11	#	Screw, M6 X 12	4
12	GM80317	Cover	1
13	GM52593	Gasket	1
14	GM52594	Plate	1
15	#	Cap Screw, M20 X 55	6
16	GM98664	Housing	1

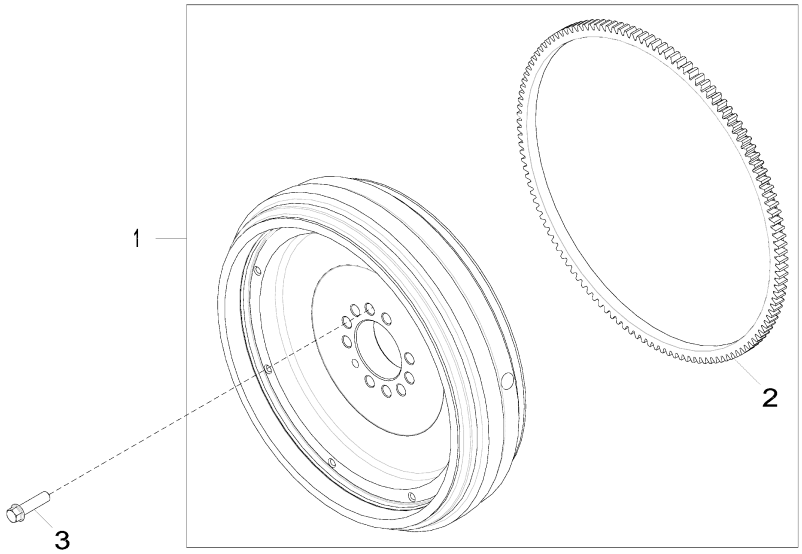
Group 14: Flywheel Housing, continued



14BY

Item	Part Number	Description	Quantity Variation 14BY
1	GM114091	Housing flywheel, aluminum	1
2	GM114092	Plug, cap, threaded	1
3	360581	Bolt	8
4	#	Screw, M12 x 50	4
5	GM114093	Seal, crankshaft, rear	1
6	GM17553	Plug	1
7	#	Fitting, pipe plug	1
8	GM17543	Plug, ½ in.	1
9	GM17449	Plate, cover	1
10	#	Screw, M6 x 12	2
11	GM114094	Gasket, flywheel housing	1
12	GM24540	O- ring	1

Group 15: Flywheel

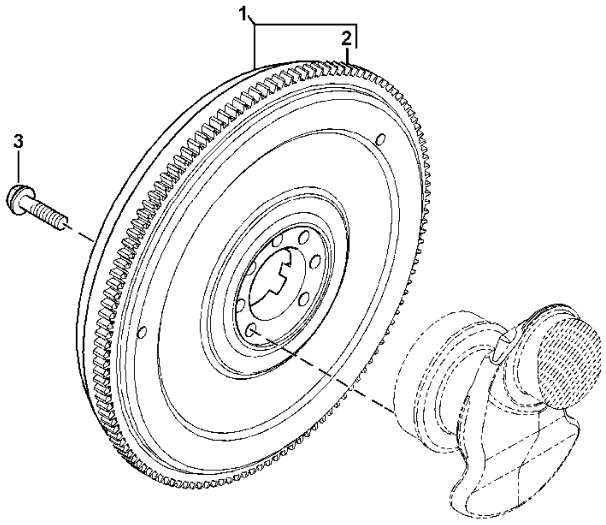


1524_RE533285_PCD

1524

Item	Part Number	Description	Quantity Variation 1524
1	GM98665	Flywheel	1
2	223750	GEAR	1
3	GM79803	Screw	10

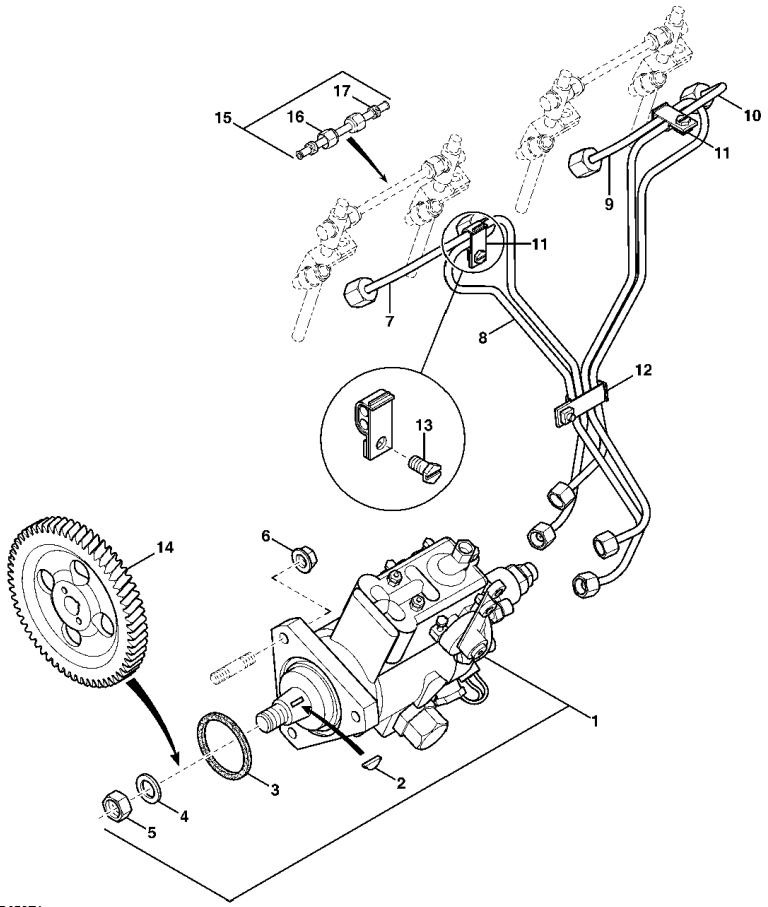
Group 15: Flywheel, continued



6443_29B_1

Item	Part Number	Description	Quantity Variation 1597
1	GM88719	Flywheel	1
2	223750	Gear	1
3	360581	Bolt	4

Group 16- 1: Fuel Injection System

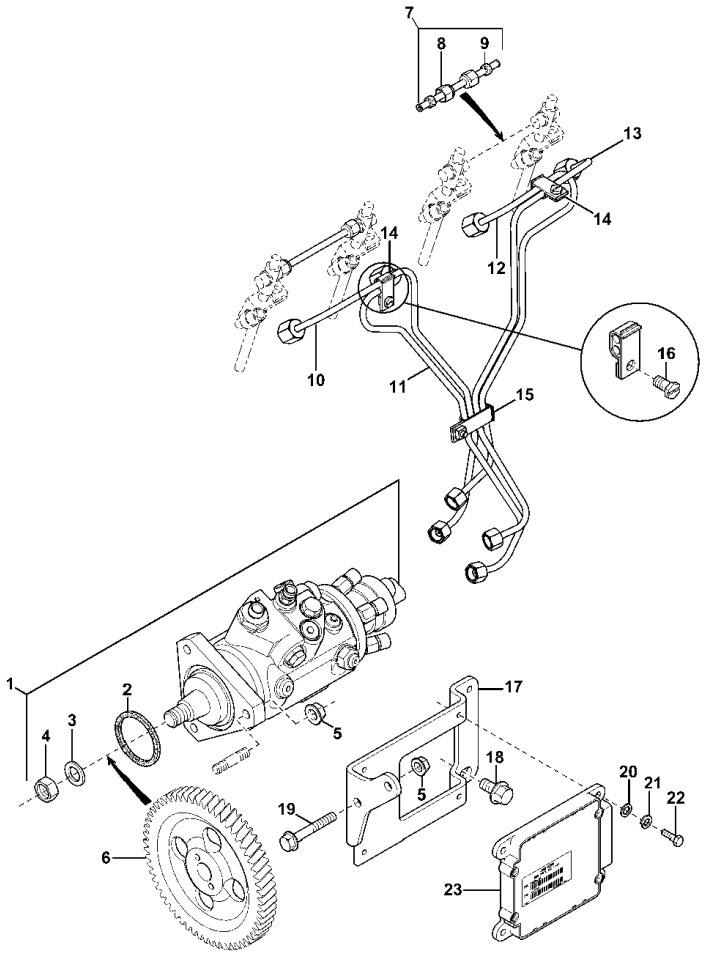


6443_18A_1

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 16- 1: Fuel Injection System, continued

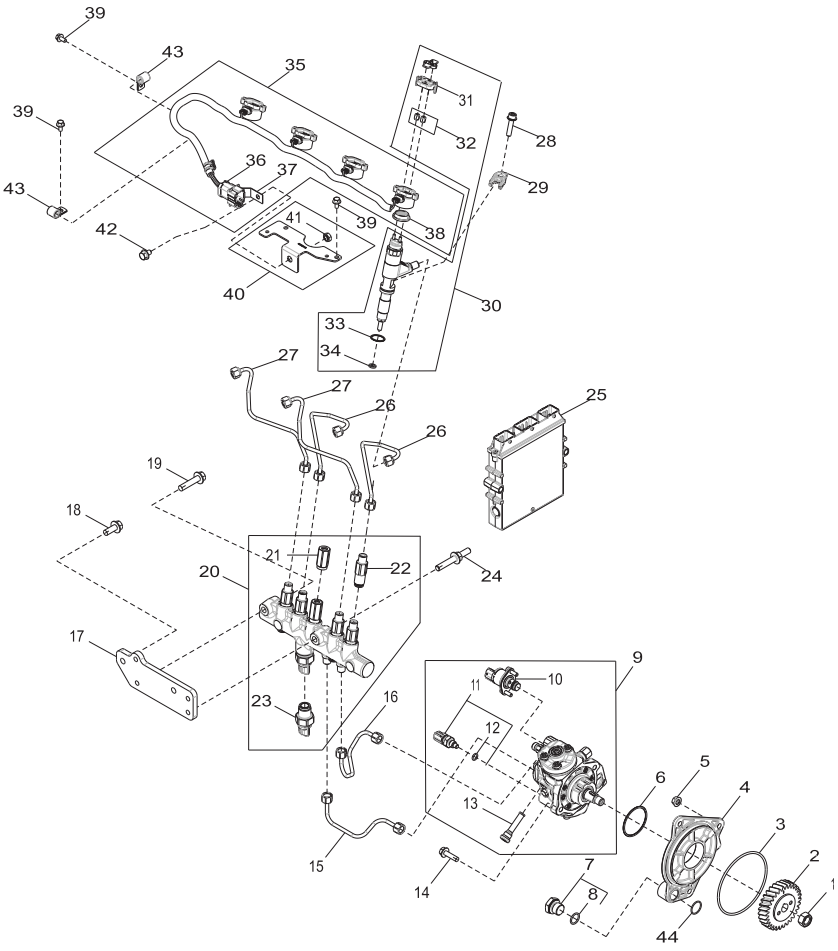


6443_18A_2

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

Common hardware; procure locally.

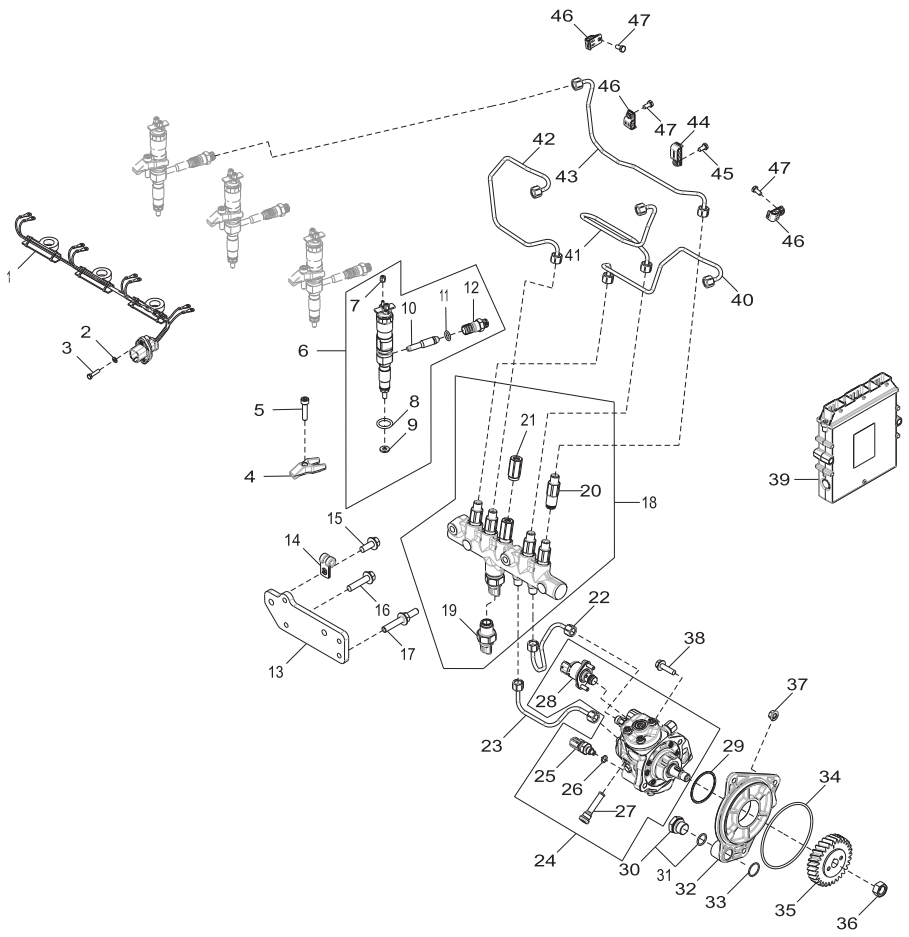
Group 16- 1: Fuel Injection System, continued



Item	Part Number	Description	Quantity Variation 16KA
1	224161	Nut	1
2	GM46645	Gear	1
3	GM46644	O-Ring	1
4	GM46647	Adapter	1
5	#	Flange Nut, M8	3
6	GM46643	O-Ring	1
7	360078	Plug, Drain	1
8	360180	O-Ring, 17.3 X 2.2 mm	1
9	GM50052	Fuel Injection Pump	1
10	GM77158	Control Valve	1
11	GM46641	Sensor, Fuel Temp	1
12	GM79805	O-Ring	1
13	GM46642	Screen	1
14	#	Screw, M8 X 30	2
15	GM88737	Fuel Line	1
16	GM88736	Fuel Line	1
17	GM52524	Bracket	1
18	#	Screw, M10 X 25	2
19	#	Screw, M10 X 45	1
20	GM52523	Rail	1
21	GM49936	Pressure Relief Valve	1
22	GM46637	Restrictor	4

Item	Part Number	Description	Quantity Variation 16KA
23	GM49988	Sensor	1
24	GM88690	Stud	1
25	GM50042	Engine Controller	1
26	GM50043	Fuel Line	2
27	GM50044	Fuel Line	2
28	GM50059	Screw With Washer	4
29	GM49883	Clamp	4
30	GM88740	Nozzle Kit (includes washer)	4
31	GM50065	Electrical Connector Cap	4
32	GM46621	Nut	8
33	GM46681	O-Ring	4
34	GM49927	Washer, Sealing	4
35	GM52520	Wiring Harness	1
36	GM88672	Elec. Connector Housing	1
37	GM49889	Bracket	1
38	GM49915	Seal	1
39	GM50057	Screw	4
40	GM49924	Bracket	1
41	#	Weld Nut, M8	1
42	GM50033	Cap Screw	1
43	223666	Clip	2
44	GM46646	O-Ring	1

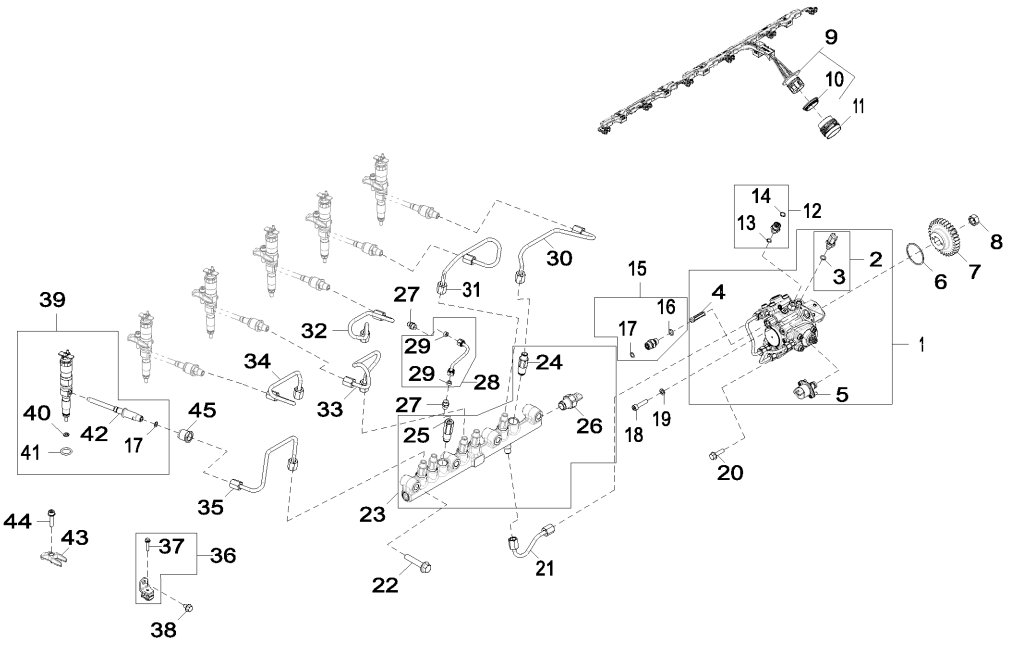
Group 16- 1: Fuel Injection System, continued



Item	Part Number	Description	Quantity Variation 16GX
1	GM88748	Wiring Harness	1
2	#	Washer, 5.300 X 10 X 1 mm	2
3	#	Cap Screw, M5 X 20	2
4	GM49839	Clamp	4
5	GM46623	Cap Screw	4
6	GM88739	Nozzle Kit	4
7	GM46621	Nut	8
8	GM46635	O-Ring	4
9	GM46638	Washer	4
10	GM49996	Tube (order O-Ring also)	4
11	GM46631	O-Ring	4
12	GM46633	Nut (order O-Ring also)	4
13	GM52524	Bracket	1
14	GM50293	Clamp	1
15	#	Screw, M10 X 25	2
16	#	Screw, M10 X 45	1
17	GM88690	Stud	1
18	GM52523	Rail	1
19	GM49988	Sensor	1
20	GM46637	Restrictor	4
21	GM49936	Press. Relief Vlv (incls shim)	1
21	GM49835	Shim	1
22	GM88736	Fuel Line	1
23	GM88737	Fuel Line	1
24	GM50052	Fuel Injection Pump	1

Item	Part Number	Description	Quantity Variation 16GX
25	GM46641	Sensor, Fuel Temp	1
26	GM79805	O-Ring	1
27	GM46642	Screen	1
28	GM77158	Control Valve	1
29	GM46643	O-Ring	1
30	360078	Plug, Drain	1
31	360180	O-Ring, 17.3 X 2.2 mm	1
32	GM46647	Adapter	1
33	GM46646	O-Ring	1
34	GM46644	O-Ring	1
35	GM46645	Gear	1
36	224161	Nut	1
37	#	Flange Nut, M8	3
38	#	Screw, M8 X 30	2
39	GM88728	Electronic Control Unit	1
40	GM88744	Fuel Line	1
41	GM88745	Fuel Line	1
42	GM88746	Fuel Line	1
43	GM88747	Fuel Line	1
44	224071	Clamp	1
45	#	Cap Screw, M6 X 12	1
46	223572	Clamp	3
47	#	Cap Screw, M6 X 12	3

Group 16- 1: Fuel Injection System, continued

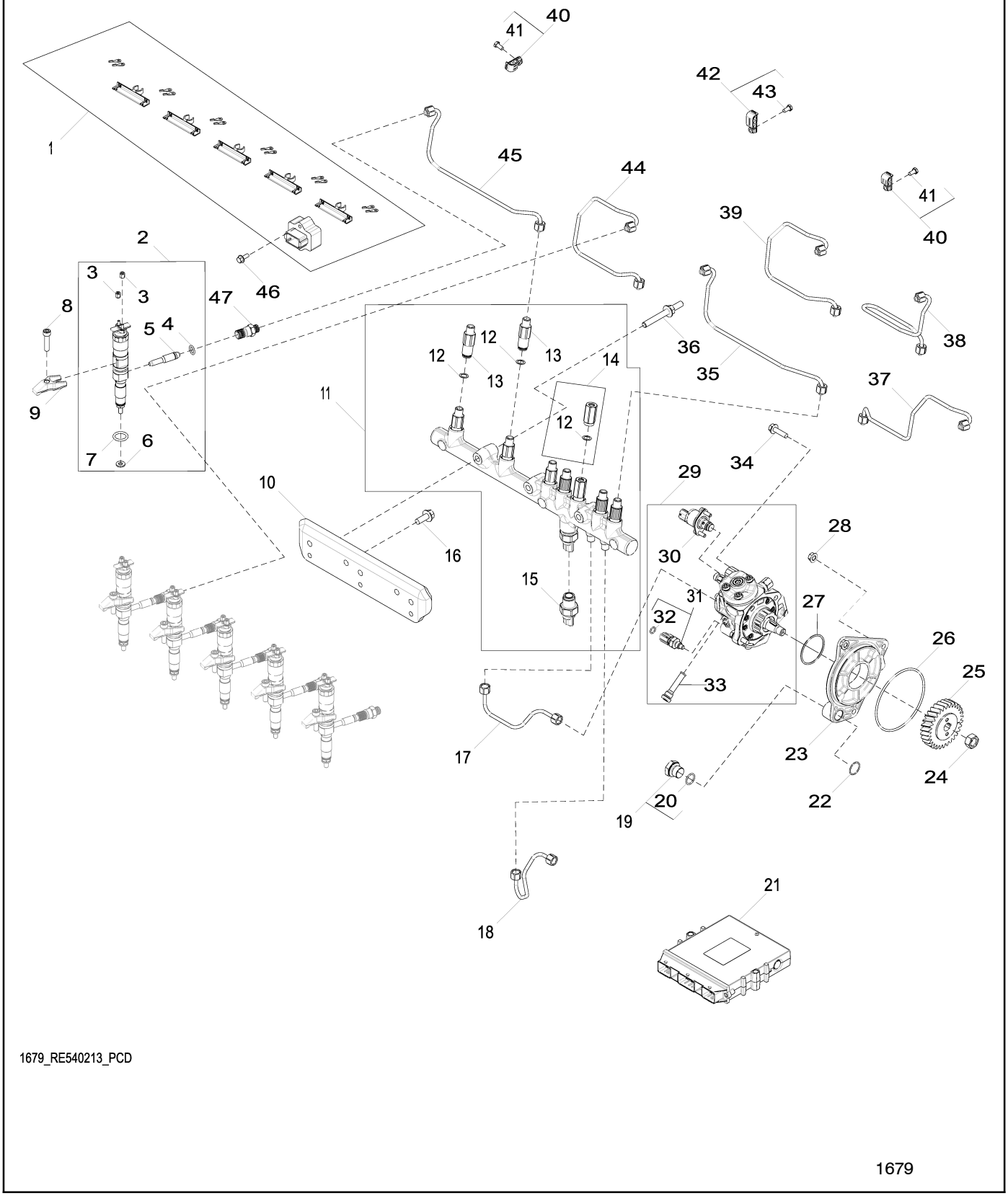


Item	Part Number	Description	Quantity Variation 1601
1	GM50210	Fuel Injection Pump	1
2	GM46641	Sensor, fuel temp	1
3	GM79805	O-Ring	1
4	GM50251	Kit	1
5	GM77150	Control Valve	1
6	GM50177	O-ring	1
7	GM50140	Gear	1
8	224161	NUT	1
9	GM98666	Wiring Harness	1
10	GM98667	Sealing Ring	1
11	GM50170	Connector	1
12	GM50250	Fitting, Adapter	1
13	GM32896	O-ring	1
14	360555	O-RING	1
15	GM52807	Fitting	1
16	GM50114	O-ring	1
17	360165	O-RING	1
18	GM46623	Cap screw	1
19	#	Washer, 8.400 x 15 x 1.600 mm	1
20	#	Screw, M8 x 30	2
21	GM50215	Fuel line	1
22	#	Screw, M12 x 60	2
22	GM98668	Stud	2

Item	Part Number	Description	Quantity Variation 1601
23	GM50224	Fuel line	1
24	GM46637	Restrictor	6
25	GM50252	Pressure relief valve	1
26	GM50243	Sensor	1
27	GM50202	Fitting, adapter	2
28	GM50216	Line	1
29	223476	PACKING	2
30	GM50256	Fuel line	1
31	GM50257	Fuel line	1
32	GM50258	Fuel line	1
33	GM50259	Fuel line	1
34	GM50260	Fuel line	1
35	GM50261	Fuel line	1
36	GM50262	Clamp	3
37	GM50274	Screw with washer	1
38	GM50033	Cap screw	3
39	GM50279	Nozzle Kit	6
40	GM50119	Washer	1
41	GM46635	O-ring	1
42	GM50225	Fitting	1
43	GM79808	Clamp	6
44	GM50059	Screw with washer	6
45	GM50153	Tube nut	6

Notes

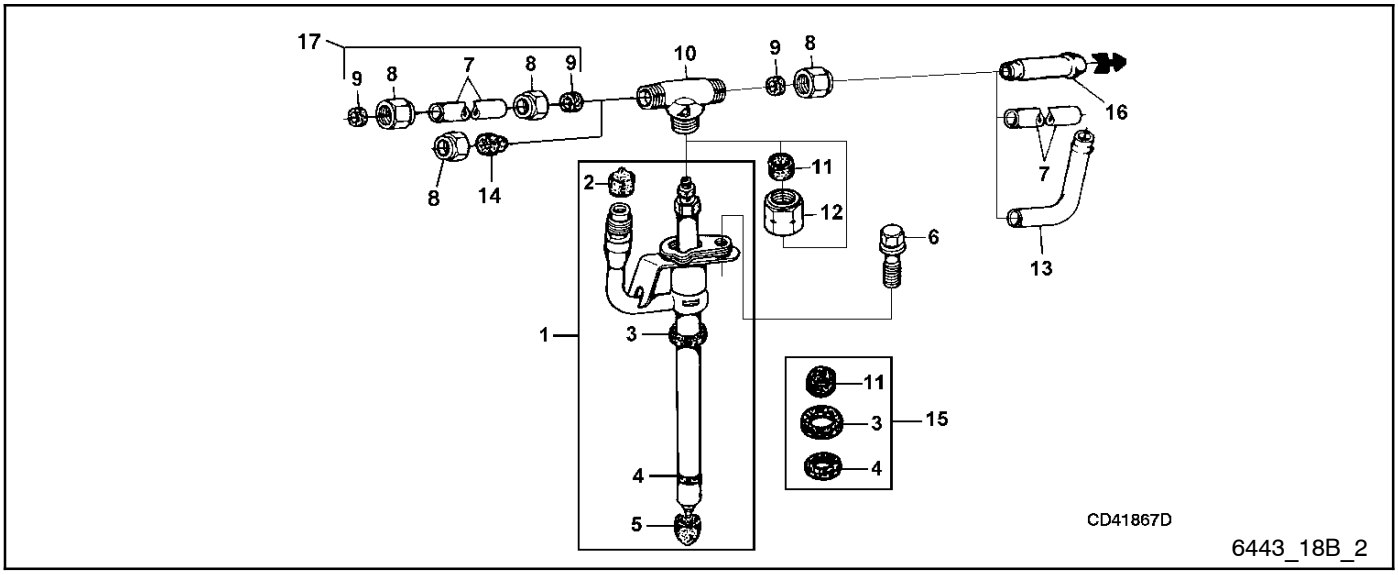
Group 16- 1: Fuel Injection System, continued



Group 16-1: Fuel Injection System, continued

Item	Part Number	Description	Quantity Variation 1679
1	GM46624	Wiring harness	1
2	GM91880	Injection Nozzle	6
3	GM46621	Nut	12
4	GM46631	O-ring	6
5	GM49996	Tube	6
6	GM50119	Washer	6
7	GM46635	O-ring	6
8	GM46623	Cap screw	6
9	GM49839	Clamp	6
10	GM49904	Bracket	1
11	GM49998	Rail	1
12	GM49835	Shim	7
13	GM46637	Restrictor	6
14	GM49936	Pressure relief valve	1
15	GM49988	Sensor	1
16	#	Screw, M10 x 25	2
17	GM50050	Fuel line	1
18	GM50049	Fuel line	1
19	360078	Plug, drain	1
20	360180	O-Ring, 17.3 X 2.2 MM	1
21	GM88728	Electronic Control Unit	1
22	GM46646	O-ring	1
23	GM46647	Adapter	1
24	224161	Nut	1
25	GM46645	Gear	1
26	GM46644	O-ring	1
27	GM46643	O-ring	1
28	#	Flange Nut, M8	3
29	GM50052	Fuel injection pump	1
30	GM77158	Control Valve	1
31	GM46641	Sensor, fuel temp	1
32	GM79805	O-Ring	1
33	GM46642	Screen	1
34	#	Screw, M8 x 30	2
35	GM91881	Fuel Line	1
36	GM86402	Stud	3
37	GM91882	Fuel Line	1
38	GM91883	Fuel Line	1
39	GM91884	Fuel Line	1
40	223572	CLAMP	5
41	#	Cap Screw, M6 x 12	1
42	224071	Clamp	1
43	#	Cap Screw, M6 x 12	1
44	GM91885	Fuel Line	1
45	GM91886	Fuel Line	1
46	#	Screw, M6 x 16	2
47	GM46633	Nut	6

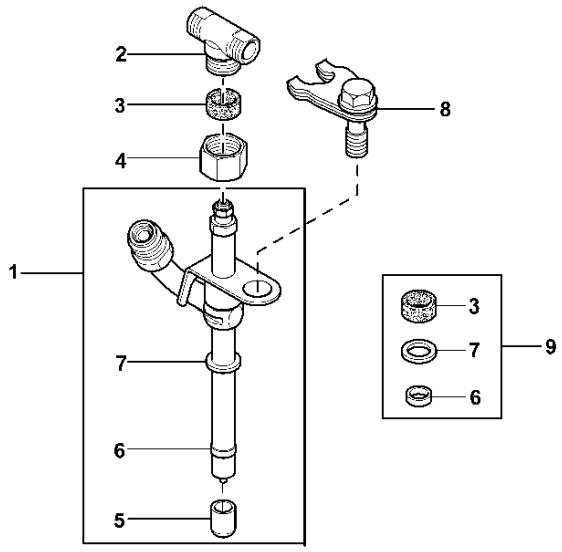
Group 16-2: Fuel Injection Nozzle



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 16-2: Fuel Injection Nozzle, continued

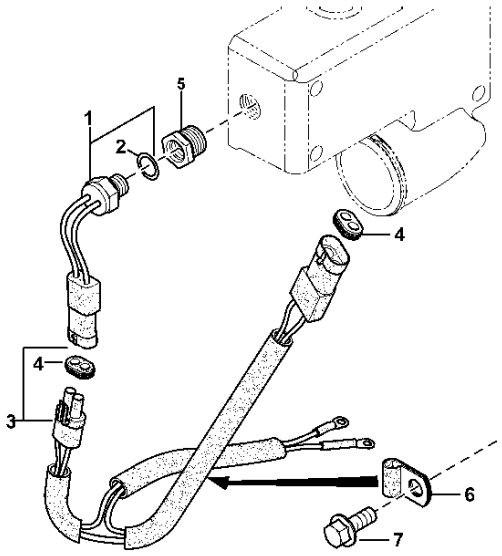


6443_18B_1

Item	Part Number	Description	Quantity Variation 168H	Quantity Variation 168G
1	GM50655	Injection nozzle	4	4
2	360167	Tee fitting	1	1
3	—	Packing	1	1
4	223517	Tube nut	1	1
5	—	Plug	1	1
6	—	Seal	1	1
7	—	Packing	1	1
8	GM32825	Clamp	4	4
9	GM21516	O-ring kit	AR	AR

AR As Required

Group 16-3: Fuel Injection Sensor

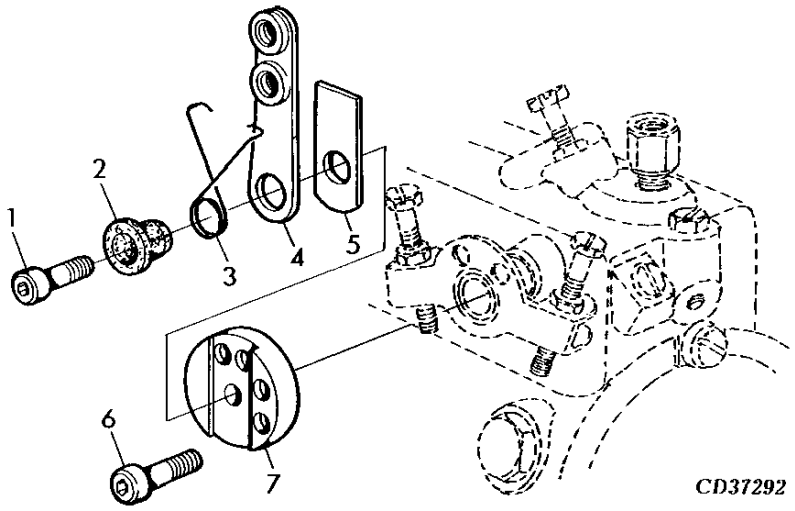


6443_18C_1

Item	Part Number	Description	Quantity Variation 167G	Quantity Variation 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.

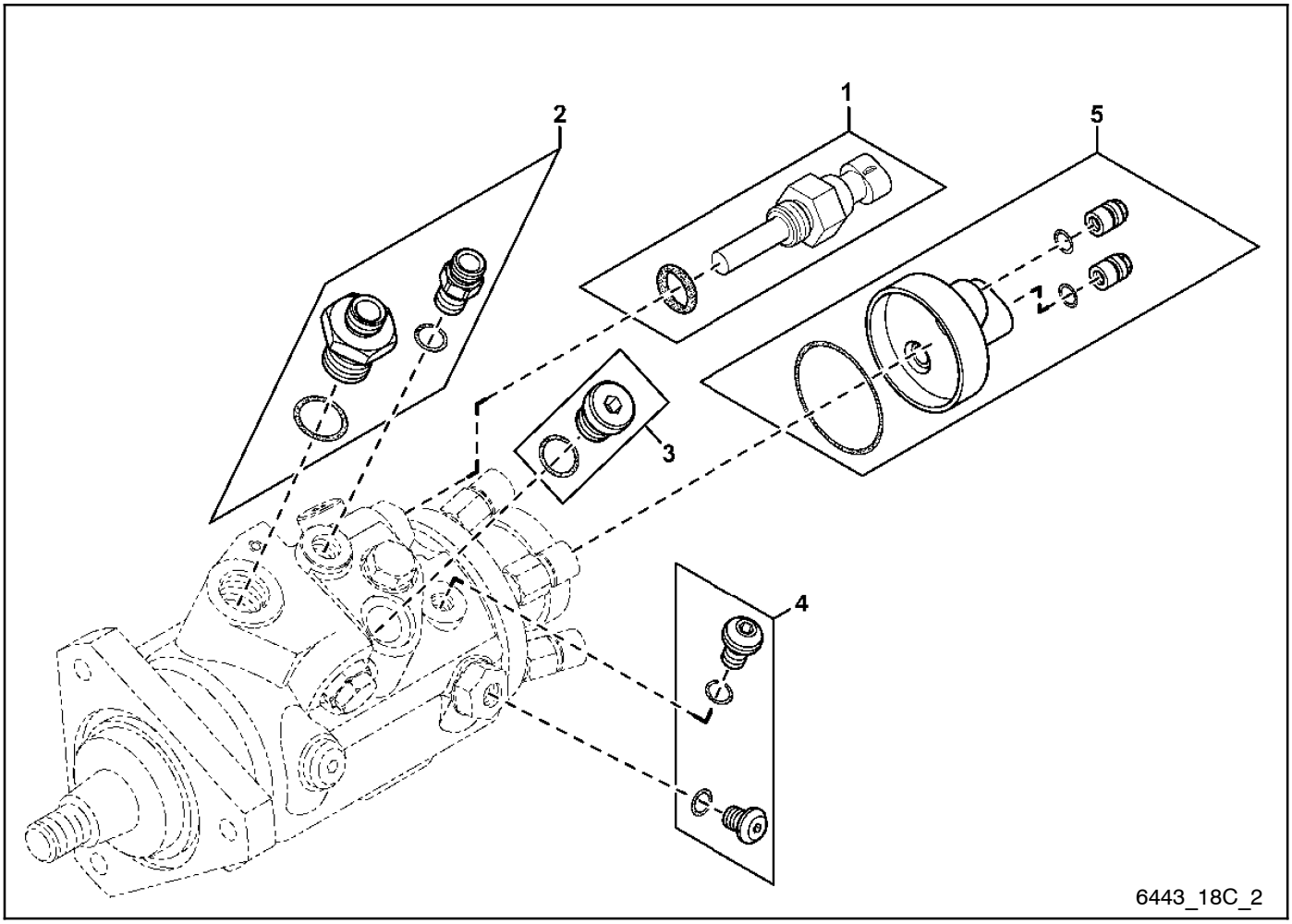
Group 16- 5: Injection Pump Parts



6443_18D

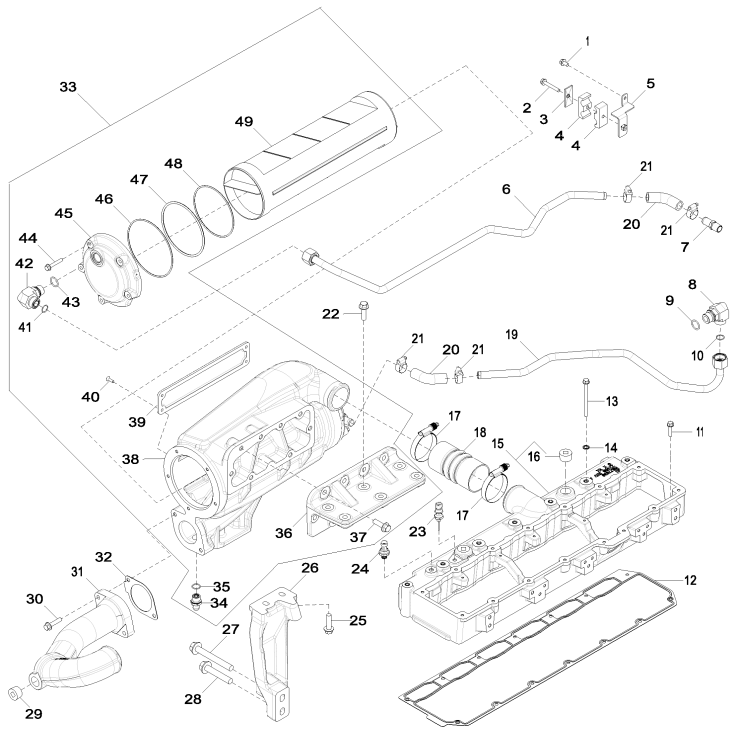
Item	Part Number	Description	Quantity Variation 167G	167H	167J	167K
1	GM50666	Screw	1	1	1	1
2	GM50667	Retainer	1	1	1	1
3	GM50668	Spring	1	1	1	1
4	GM50669	Lever	1	1	1	1
5	GM50670	Strap	1	1	1	1
6	GM50671	Screw	1	1	1	1
7	GM50672	Spacer	1	1	1	1

Group 16- 5: Injection Pump Parts, continued



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

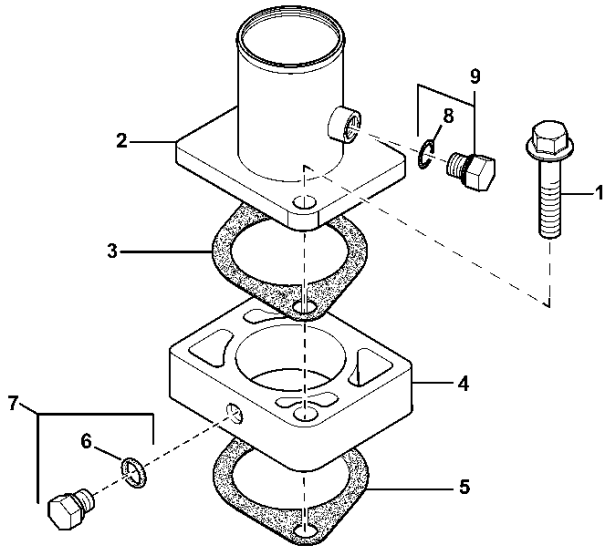
Group 17: Intake Manifold



1712

Item	Part Number	Description	Quantity Variation 1712
1	#	Screw, M8 X 16	1
2	#	Screw, M8 X 55	1
3	GM98669	Plate	1
4	GM98670	Clamp	2
5	GM98671	Bracket	1
6	GM98672	Line	1
7	223461	HOSE FITTING	1
8	GM91990	Elbow Fitting	1
9	GM69810	O-Ring	1
10	GM69811	O-Ring	1
11	GM67288	Screw	7
12	GM50142	Gasket	1
13	#	Screw, M8 X 110	7
14	GM50168	Washer, sealing	7
15	GM98673	Intake Manifold	1
16	GM98674	Pipe Plug	2
17	GM18851	Clamp	2
18	GM18726	Hose	1
19	GM98675	Line	1
20	GM98676	Hose	2
21	GM18881	Clamp	4
22	#	Bolt, M12 X 40	8
23	GM50003	Sensor, temperature	1
24	GM49999	Sensor, manifold air press.	1
25	#	Screw, M12 X 45	2
26	GM98677	Bracket	1
27	#	Screw, M16 X 130	1
28	#	Screw, M16 X 90	1
29	#	Pipe Plug, 1”	1
30	#	Screw, M10 X 45	2
31	GM98678	Air Intake	1
32	GM98679	Gasket	1
33	GM98680	Aftercooler	1
34	GM98681	Hose Fitting	1
35	GM17437	O-ring	1
36	GM98682	Bracket	1
37	#	Bolt, M12 X 40	6
38	GM98683	Housing	1
39	GM91892	Plate	1
40	#	Screw, M6 X 20	4
41	GM69811	O-Ring	1
42	GM91990	Elbow Fitting	1
43	GM69810	O-Ring	1
44	#	Screw, M8 X 50	10
45	GM98684	Cover	2
46	GM98685	O-Ring	2
47	GM98686	O-Ring	2
48	GM80377	O-Ring	2
49	GM98687	Core	1

Group 17: Intake Manifold, continued

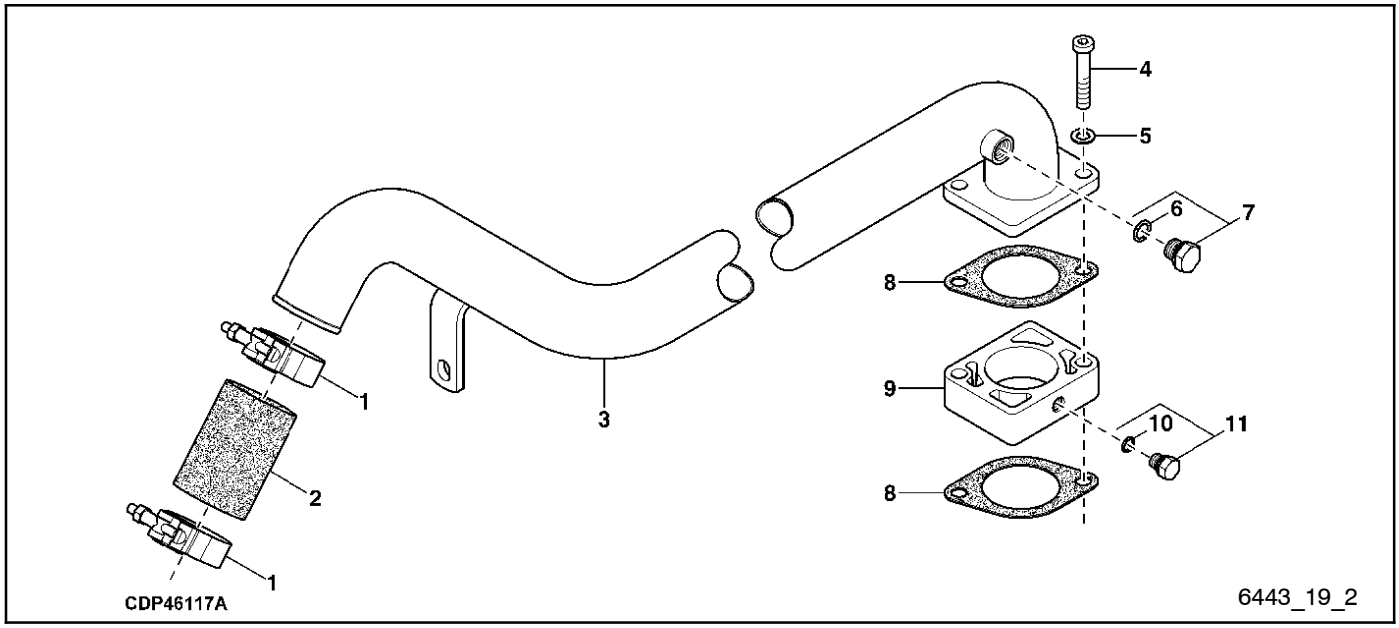


6443_19_1

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.

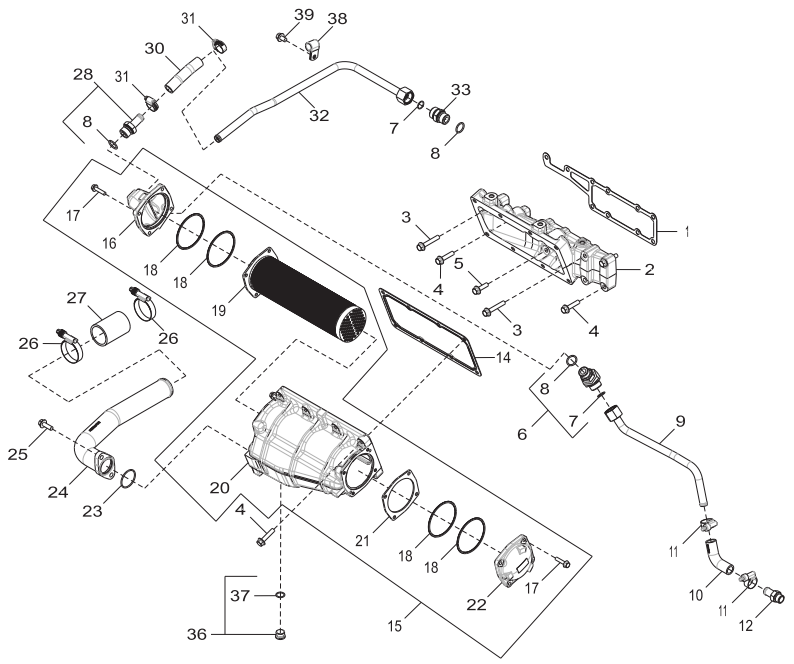
Group 17: Intake Manifold, continued



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

Common hardware; procure locally.

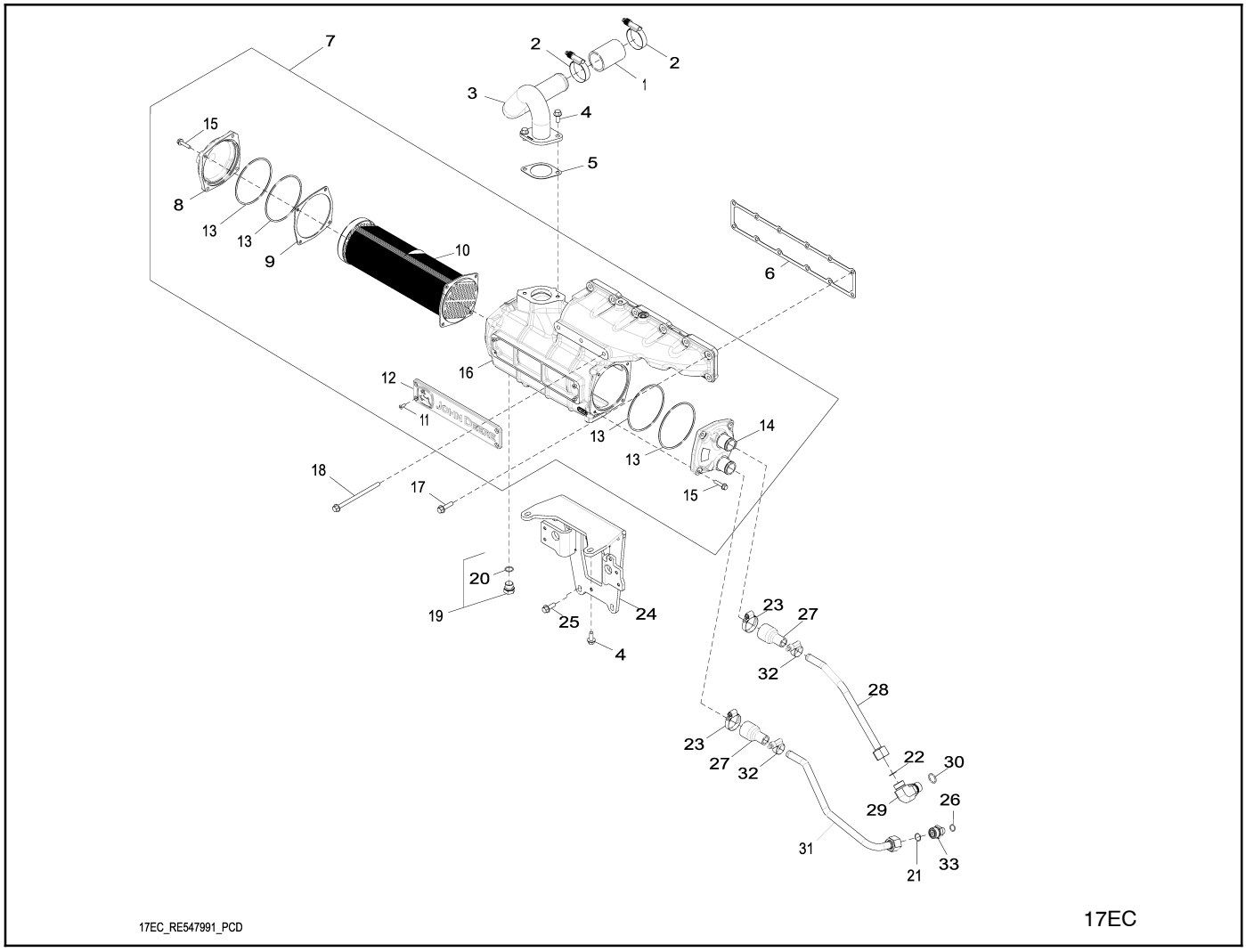
Group 17: Intake Manifold, continued



17EM

Item	Part Number	Description	Quantity Variation 17EM
1	GM88706	Gasket	1
2	GM88699	Intake Manifold	1
3	#	Screw, M10 X 60	3
4	#	Screw, M10 X 45	13
5	#	Screw, Hex Cap M10 X 35mm	2
6	GM88673	Elbow Fitting	1
7	GM69811	O-Ring	2
8	GM69810	O-Ring	3
9	GM88755	Line	1
10	GM88709	Hose	1
11	GM67286	Hose Clamp	2
12	GM88717	Hose Fitting	1
13	GM17437	O-Ring	1
14	GM88704	Gasket	1
15	GM88749	Aftercooler	1
16	GM88701	Adapter	1
17	#	Screw, M8 X 35	8
18	GM88712	O-Ring	4
19	GM88751	Core	1
20	GM88702	Housing	1
21	GM88703	Plate	1
22	GM88700	Cover	1
23	GM88776	O-Ring	1
24	GM88762	Air Flow Tube	1
25	#	Screw, Hex Cap M10 X 30mm	2
26	GM88773	Clamp	2
27	GM88714	Hose	1
28	GM88718	Fitting	1
30	GM88687	Hose	1
31	360062	Clamp	2
32	GM88756	Line	1
33	GM88782	Adapter Fitting	1
36	GM88720	Fitting Plug	1
37	GM17437	O-Ring	1
38	GM50694	Clamp	1
39	#	Screw, M10 X 16	1

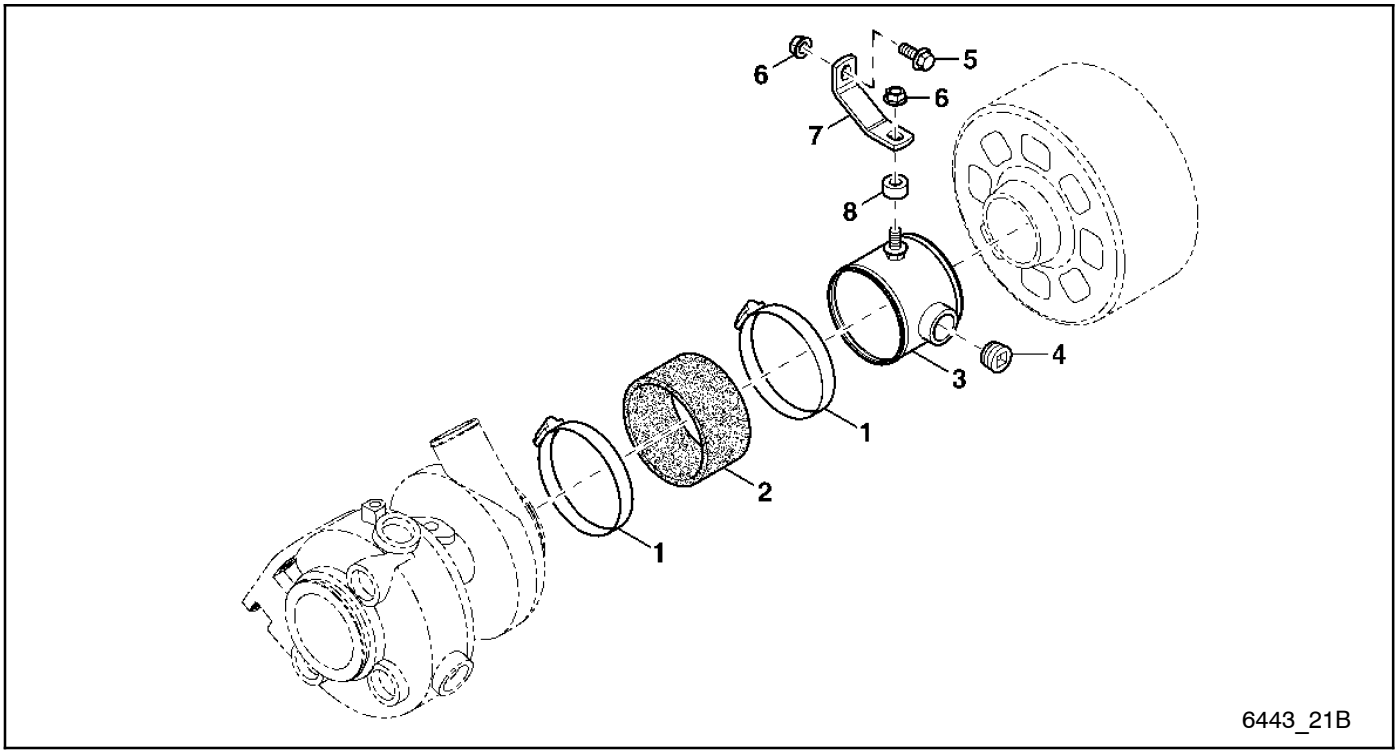
Group 17: Intake Manifold, continued



Item	Part Number	Description	Quantity Variation 17EC
1	GM88714	Hose	1
2	GM88773	Clamp	2
3	GM91887	Air Flow Tube	1
4	#	Screw, M10 x 25	4
5	GM52821	Gasket	1
6	GM46588	Gasket	1
7	GM91888	Aftercooler	1
8	GM91889	Cover	1
9	GM91890	Plate	1
10	GM91891	Core	1
11	#	Screw, M6 x 16	4
12	GM91892	Plate	1
13	GM91893	O-Ring	4
14	GM91894	Adapter	1
15	#	Screw, M8 x 35	8
16	GM91895	Housing	1
17	#	Screw, M10 x 40	9
18	#	Screw, M10 x 165	3
19	GM17498	Fitting	1
20	GM17437	O-ring	1
21	GM69811	O-Ring	1
22	GM69811	O-Ring	1
23	GM91896	Clamp	2
24	GM91897	Bracket	1

Item	Part Number	Description	Quantity Variation 17EC
25	#	Screw, M10 x 30	2
26	360176	O-Ring	1
27	GM91898	Hose	2
28	GM91899	Line	1
29	GM91900	Elbow Fitting	1
30	GM69810	O-Ring	1
31	GM91901	Line	1
32	GM67286	Hose clamp	2
33	GM91902	Adapter Fitting	1

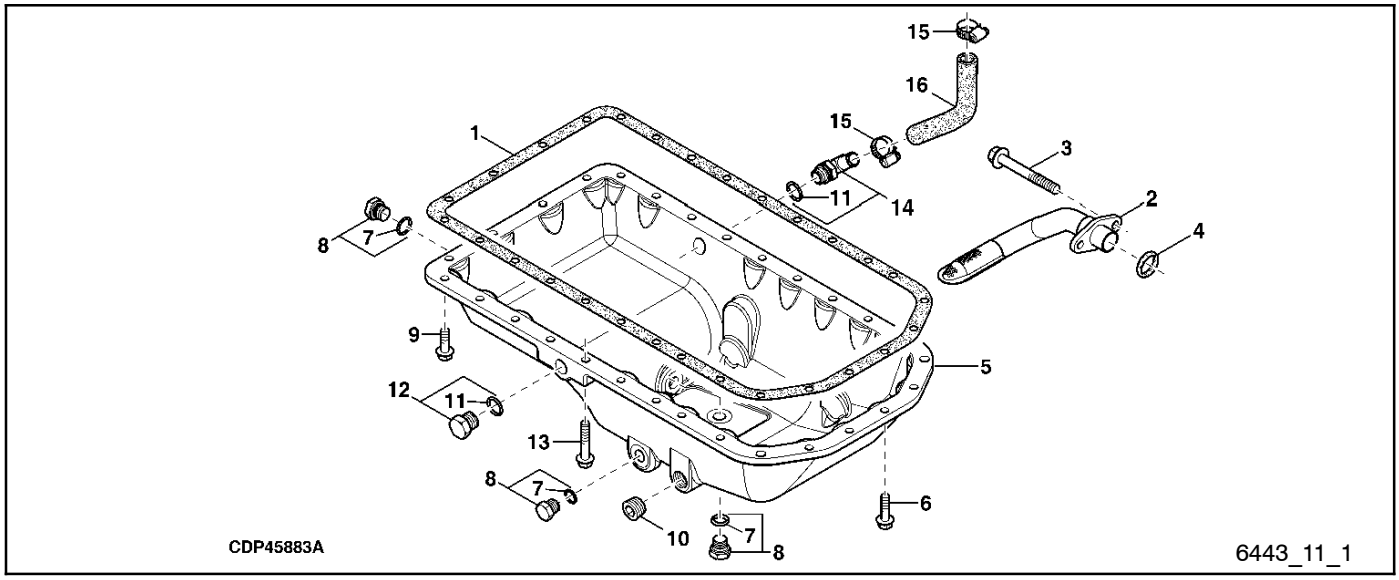
Group 18: Air Cleaner Adapter



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

Common hardware; procure locally.

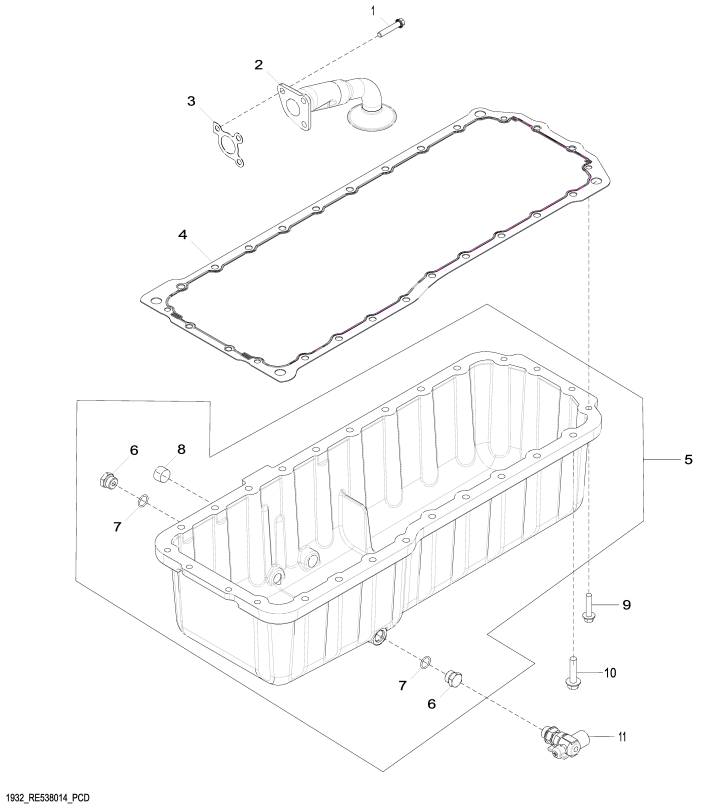
Group 19: Oil Pan



Item	Part Number	Description	Quantity Variation 1954	Quantity Variation 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	

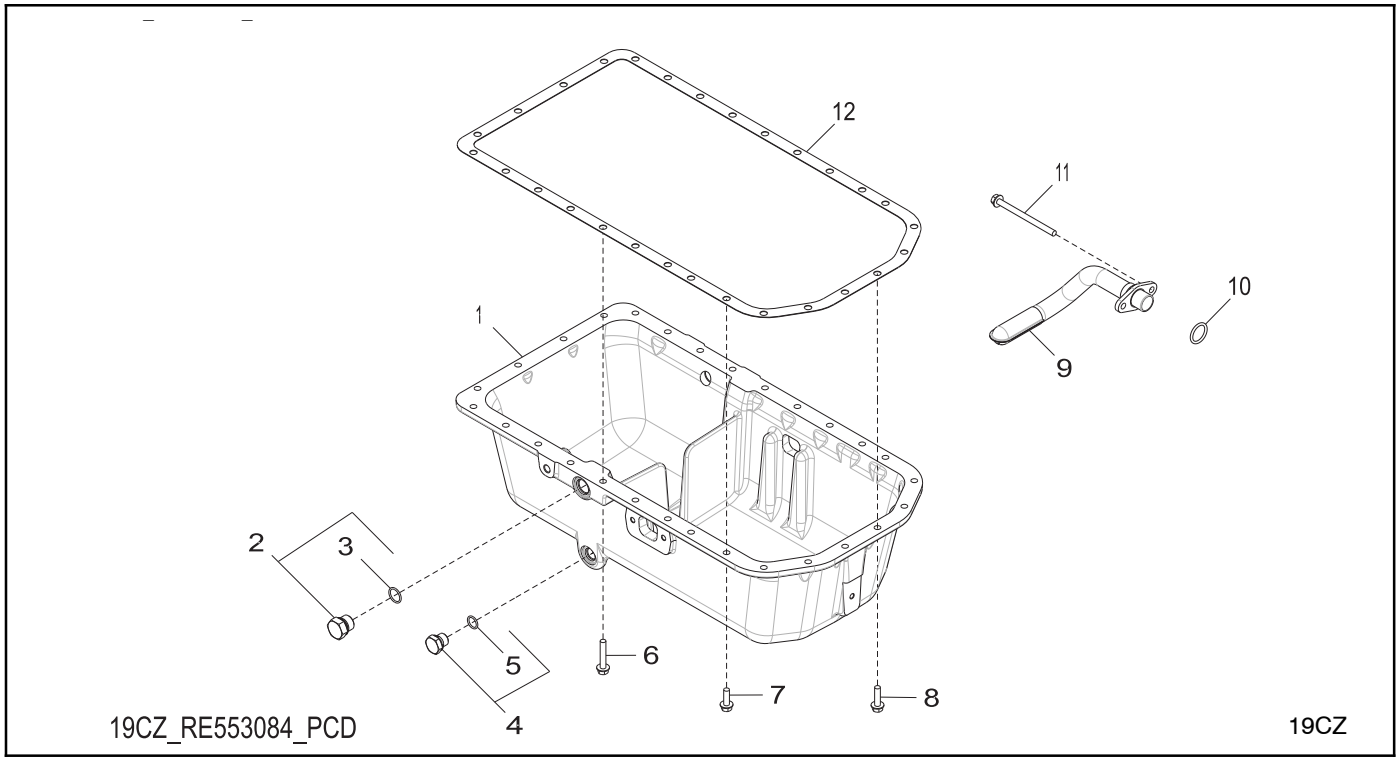
Common hardware; procure locally.

Group 19: Oil Pan, continued



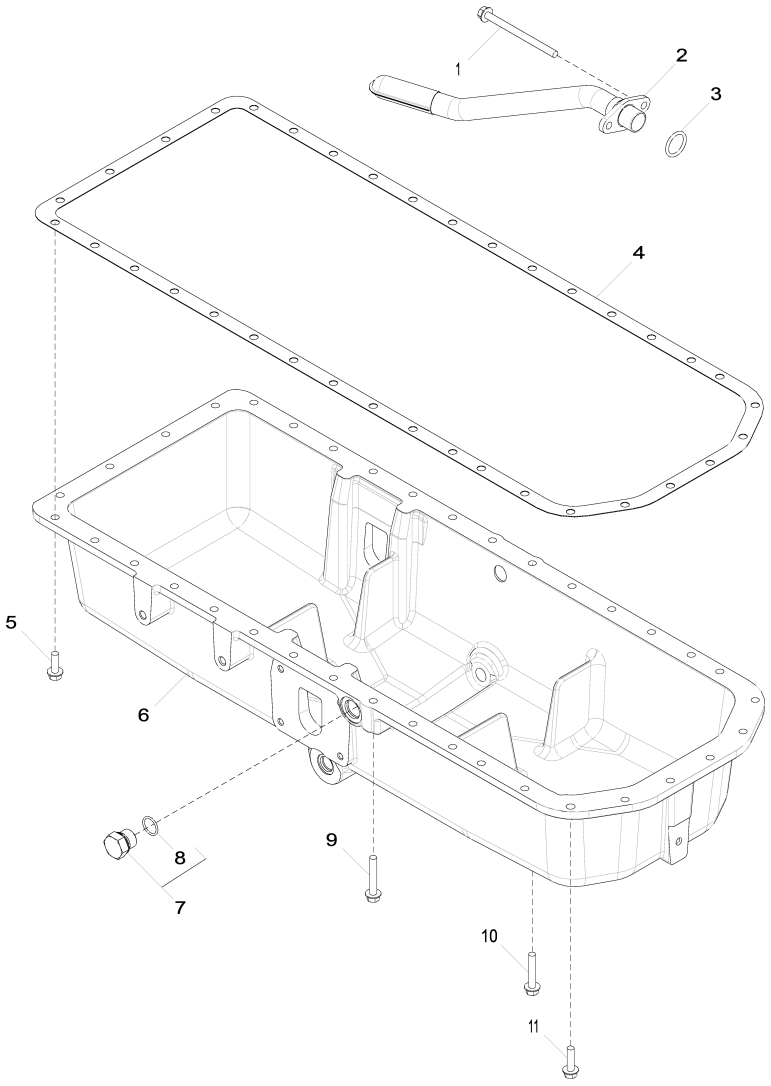
1932

Item	Part Number	Description	Quantity Variation 1932
1	GM98688	Screw	3
2	GM50220	Oil pump intake	1
3	352709	GASKET	1
4	GM98689	Gasket	1
5	GM50246	Oil pan	1
6	223458	DRAIN PLUG	2
7	223466	O-RING	2
8	GM53024	Plug, pipe	1
9	GM75821	Screw	8
10	#	Screw, M12 X 50	18
11	GM50204	Drain valve	1



Item	Part Number	Description	Quantity Variation 19CZ
1	GM88707	Oil Pan	1
2	GM17498	Fitting	1
3	GM17437	O-Ring	1
4	360014	Plug	2
5	360176	O-Ring	1
6	#	Screw, M8 X 45	4
7	#	Screw, M8 X 25	18
8	#	Screw, M8 X 30	6
9	GM32846	Oil Pan Intake	1
10	224035	O-Ring	1
11	#	Screw, M8 X 110	2
12	360527	Gasket, Oil Pan	1

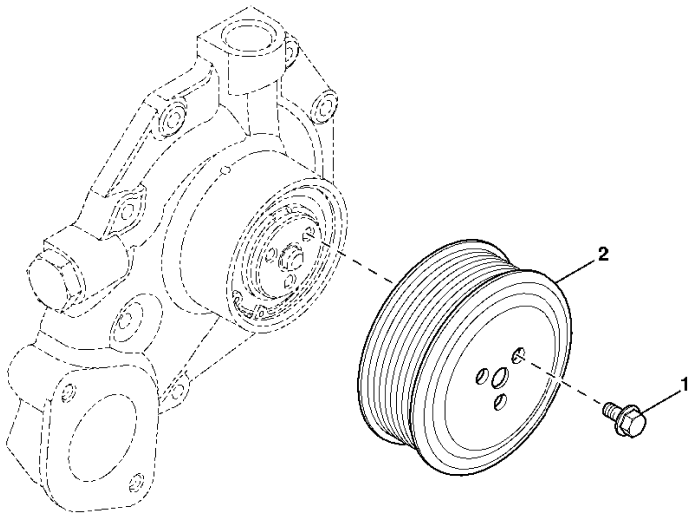
Group 19: Oil Pan, continued



19BP

Item	Part Number	Description	Quantity Variation 19BP
1	#	Screw, M8 x 110	2
2	GM91903	Tube	1
3	224035	O-Ring	1
4	360123	Gasket, oil pan	1
5	#	Screw, M8 x 25	27
6	GM91904	Oil Pan	1
7	GM17498	Fitting	1
8	GM17437	O-ring	1
9	#	Screw, M8 x 50	1
10	#	Screw, M8 x 45	2
11	#	Screw, M8 x 30	6

Group 20: Water Pump/Pulley

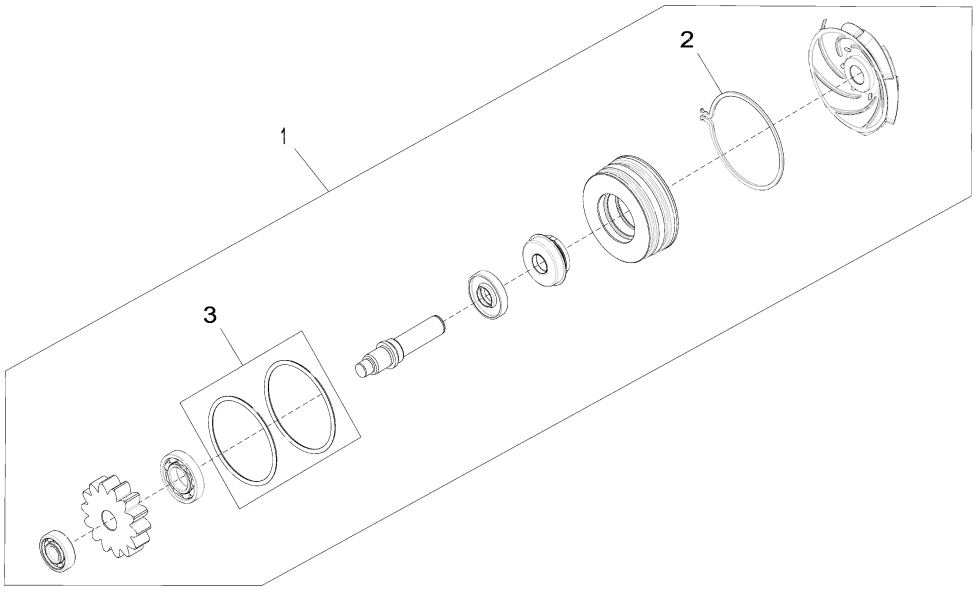


6443_22B

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

Common hardware; procure locally.

Group 20: Water Pump/Pulley, continued

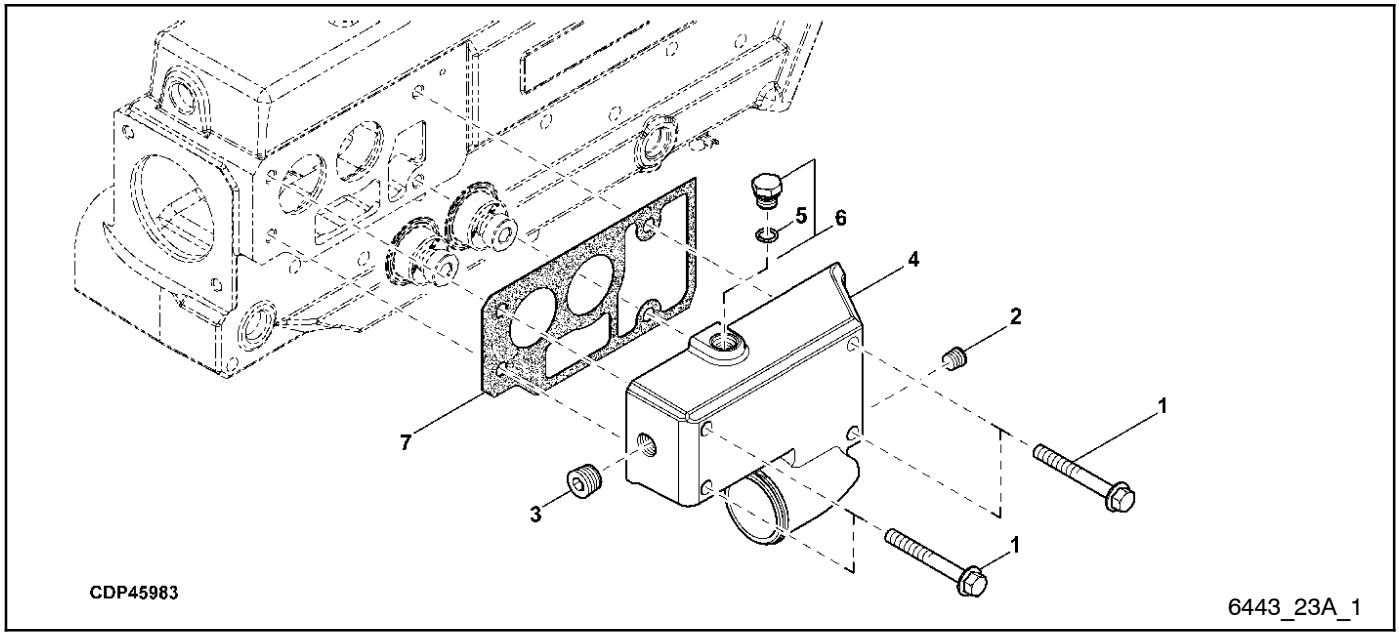


2001_RE523116_PCD

2001 - 2

Item	Part Number	Description	Quantity Variation 2001 - 2
1	GM50288	Kit, water pump	1
2	GM50172	Snap ring	1
3	GM50205	O-ring kit	1

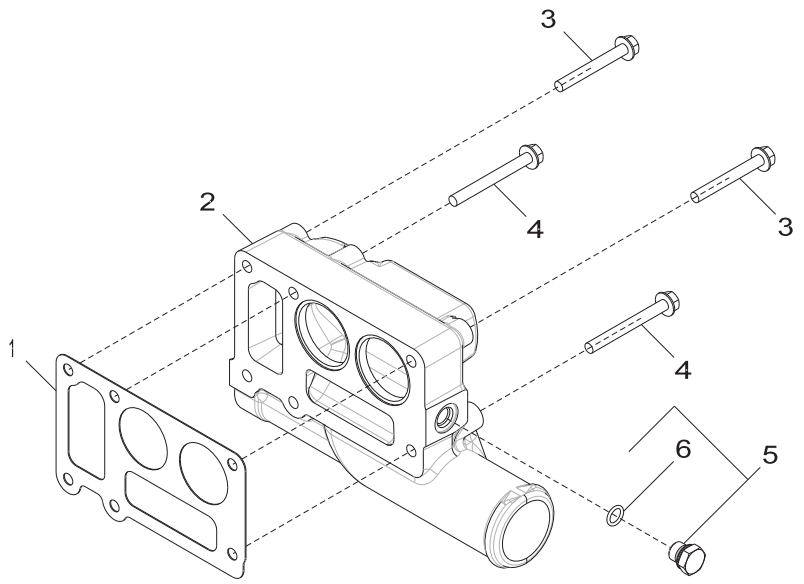
Group 21: Thermostat Cover



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.

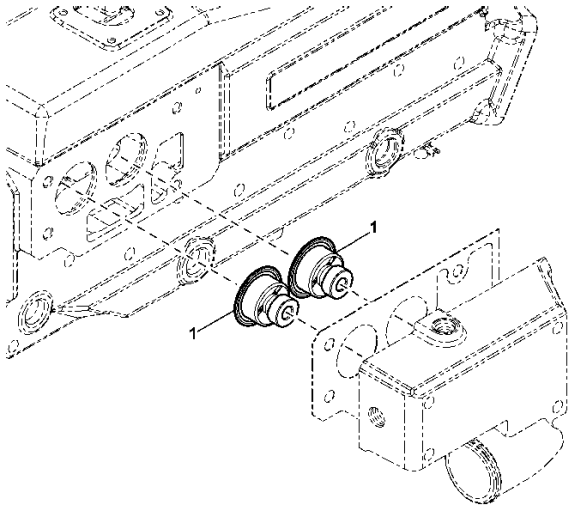
Group 21: Thermostat Cover, continued



2188

Item	Part Number	Description	Quantity Variation 2188
1	GM88710	Gasket	1
2	GM88696	Cover	1
3	#	Screw, M8 X 65	3
4	#	Screw, M8 X 35	3
5	360013	Plug	1
6	GM21508	O-Ring	1

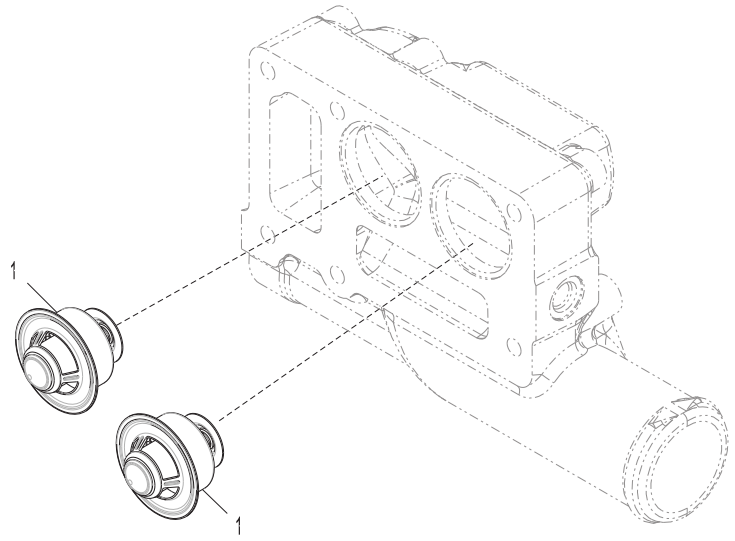
Group 22: Thermostat



6443_23C_1

Item	Part Number	Description	Quantity Variation 2206
1	223676	Thermostat	2

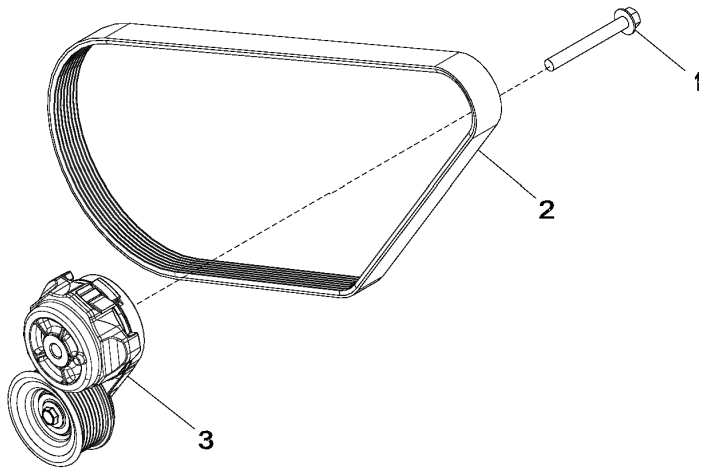
Group 22: Thermostat, continued



2229

Item	Part Number	Description	Quantity Variation 2229
1	GM88766	Thermostat	2

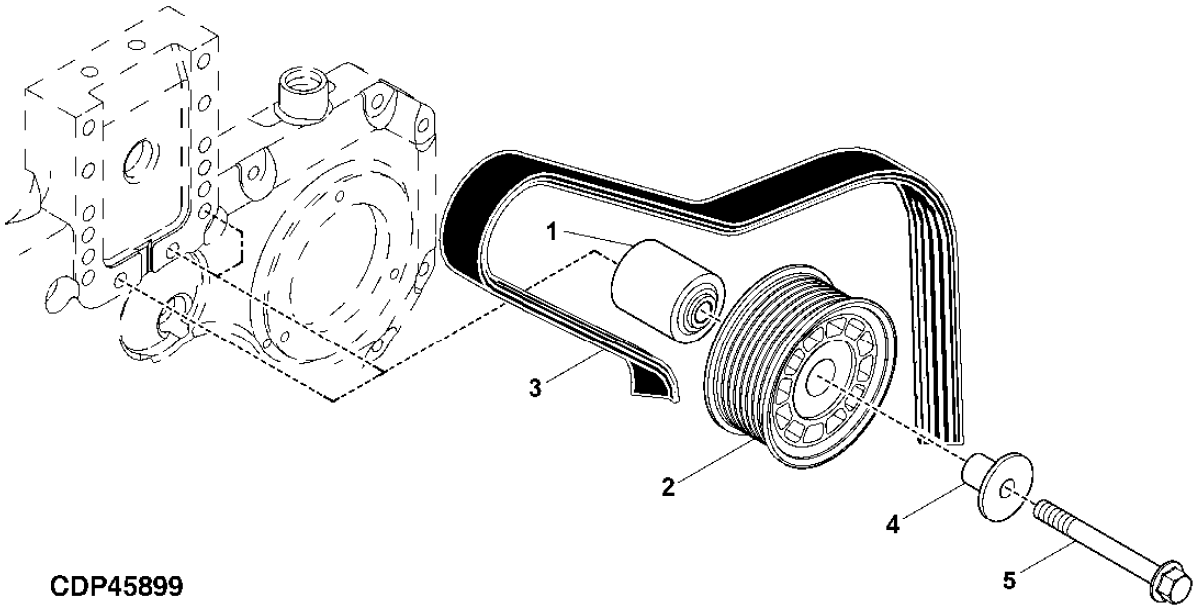
Group 24: Fan Belt



24AM

Item	Part Number	Description	Quantity Variation 24AM
1	#	Screw, M10 X 85	1
2	GM98801	Belt	1
3	GM98802	Belt Tensioner	1

Group 24: Fan Belt, continued

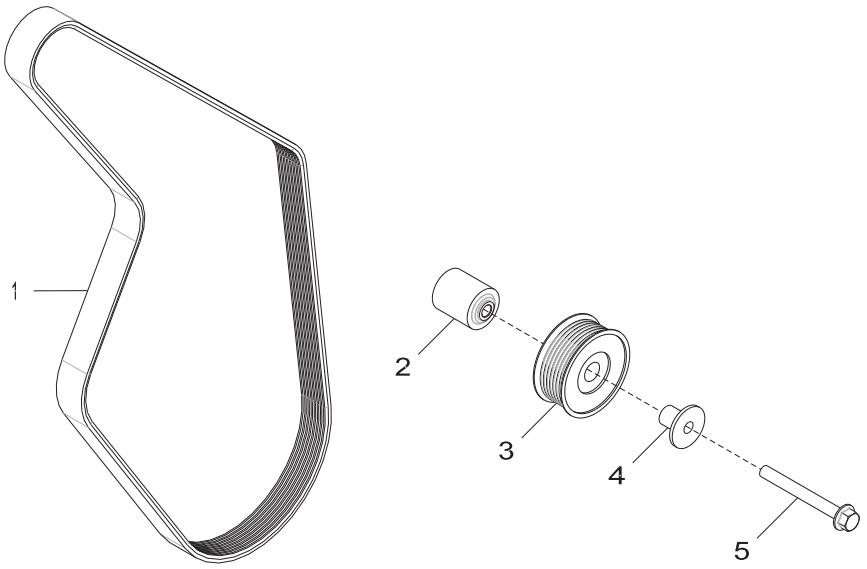


6443_28A_1

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.

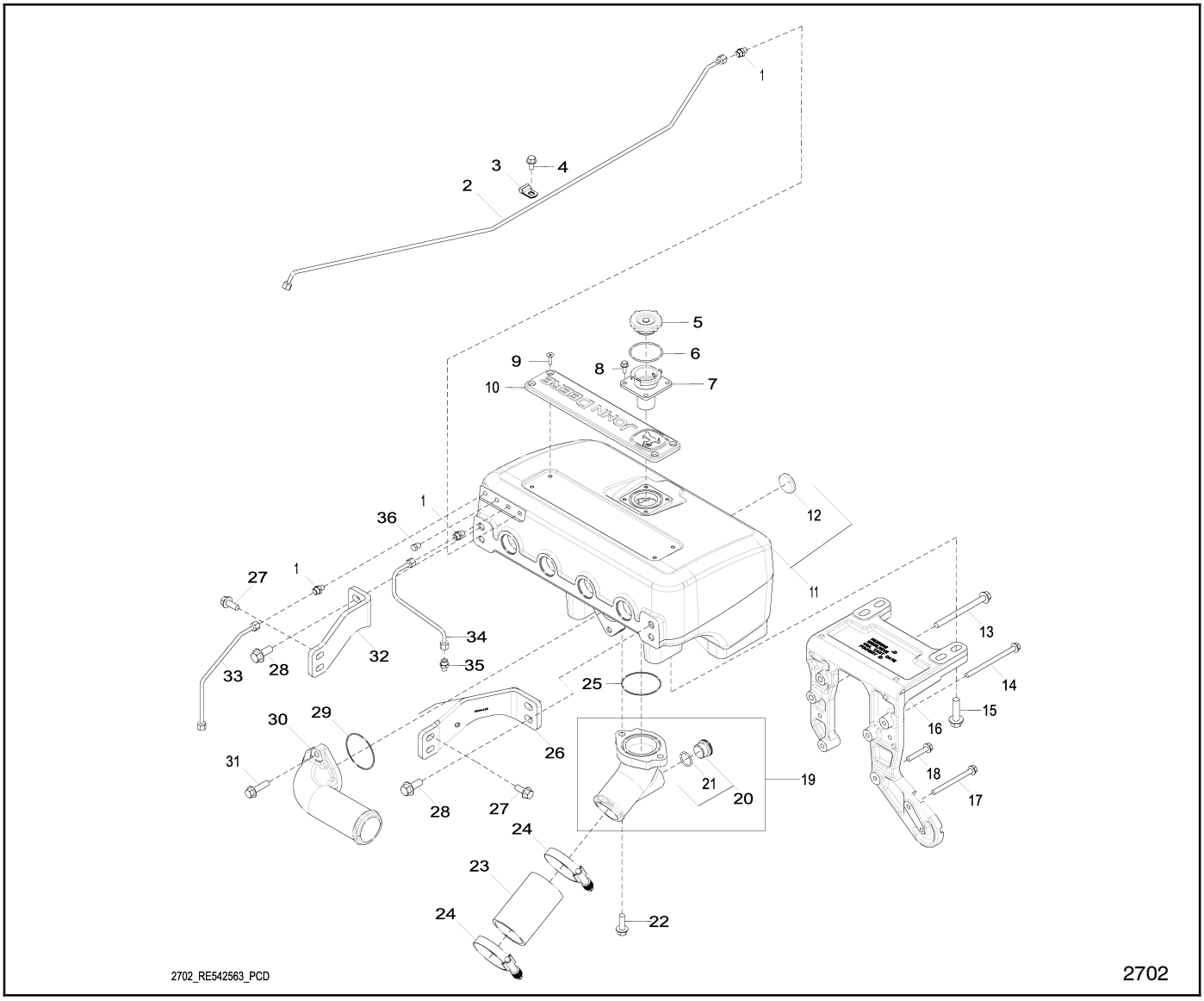
Group 24: Fan Belt, continued



24KM

Item	Part Number	Description	Quantity Variation 24KM
1	GM88686	V-Belt	1
2	GM17457	Spacer	1
3	GM17441	Pulley	1
4	GM17488	Sleeve	1
5	#	Screw, M10 X 90	1

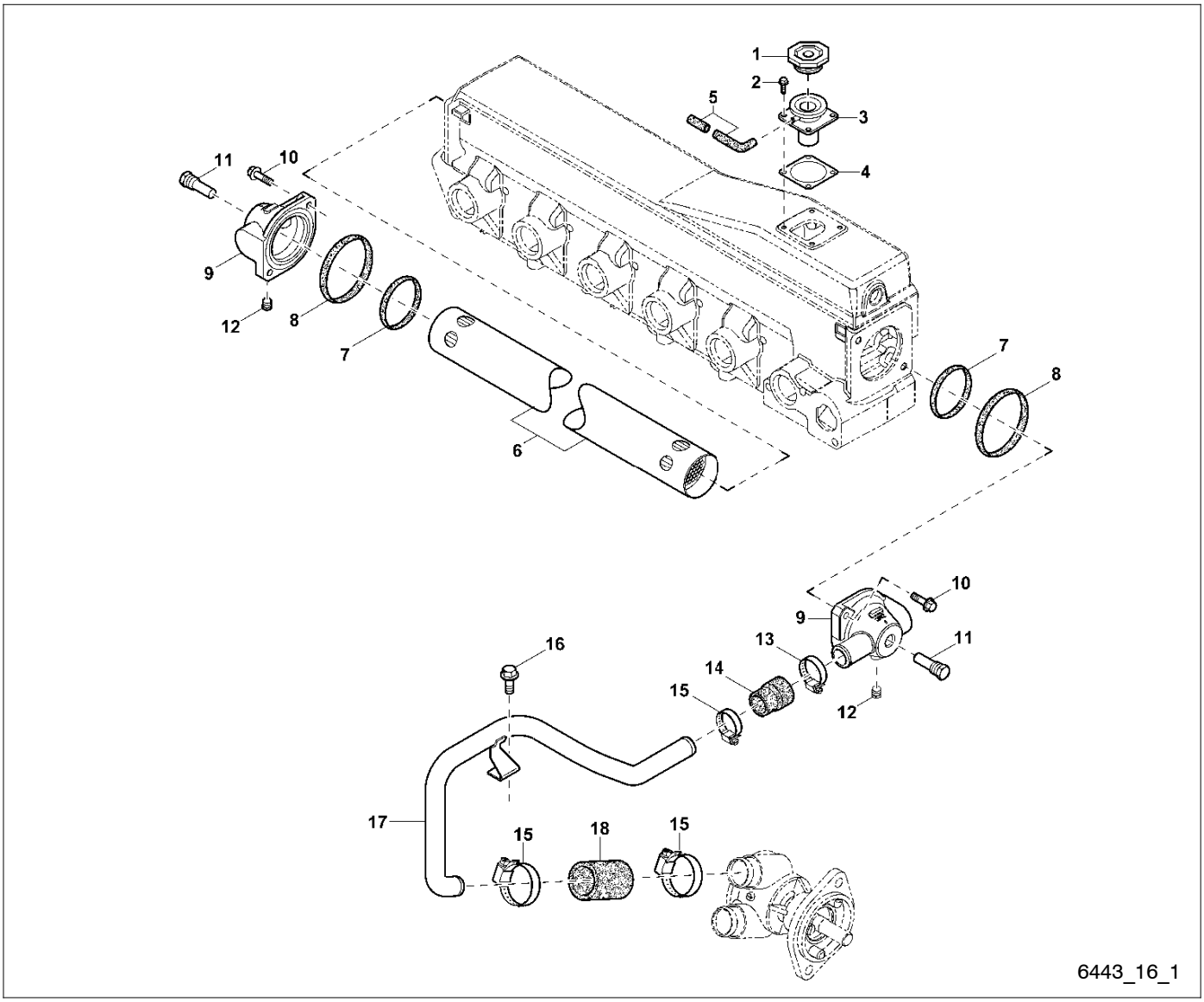
Group 27: Heat Exchanger



Item	Part Number	Description	Quantity Variation 2702
1	223820	FITTING	3
2	GM98708	Line	1
3	GM18754	Clip	2
4	#	Screw, M8 X 16	2
5	GM88674	Filler Cap	1
6	GM88675	O-Ring	1
7	352112	Filler Neck	1
8	GM95664	Screw, M6 x 16	4
9	#	M6 X 20	4
10	GM91892	Plate	1
11	GM98924	Tank	1
12	GM80245	Plug	8
13	GM98692	Cap Screw	2
14	GM98691	Cap Screw	3
15	#	Screw,M12 X 45	4
16	GM98690	Bracket	1
17	#	Screw, M8 X 100	1
18	#	Screw, M8 X 50	1
19	GM98695	Adapter	1

Item	Part Number	Description	Quantity Variation 2702
20	GM96103	Fitting	1
21	GM69810	O-Ring	1
22	M933-10030-82	SCREW, HEX CAP M10 x 30mm	2
23	GM98694	Hose	1
24	GM98693	Clamp	2
25	GM98696	O-Ring	1
26	GM98704	Bracket	1
27	#	Screw, M10 X 25	4
28	GM95662	Screw, M12 x 30	4
29	GM98696	O-Ring	1
30	GM98925	Adapter	1
31	#	Screw, M10 X 40	2
32	GM98711	Bracket	1
33	GM98926	Line	1
34	GM98927	Line	1
35	223820	FITTING	1
36	#	Pipe Plug, 1/8”	1

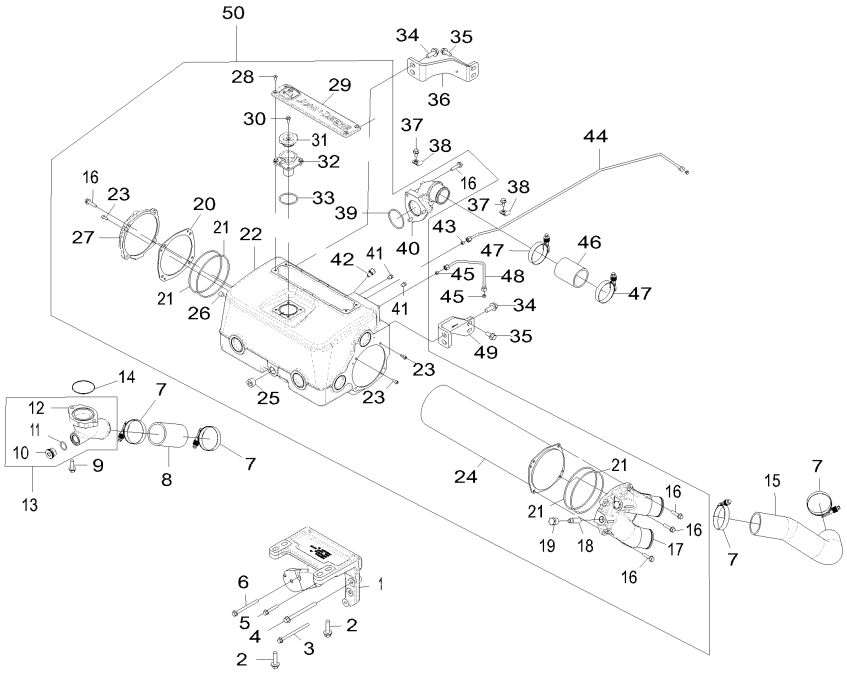
Group 27: Heat Exchanger, continued



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

Common hardware; procure locally.

Group 27: Heat Exchanger, continued

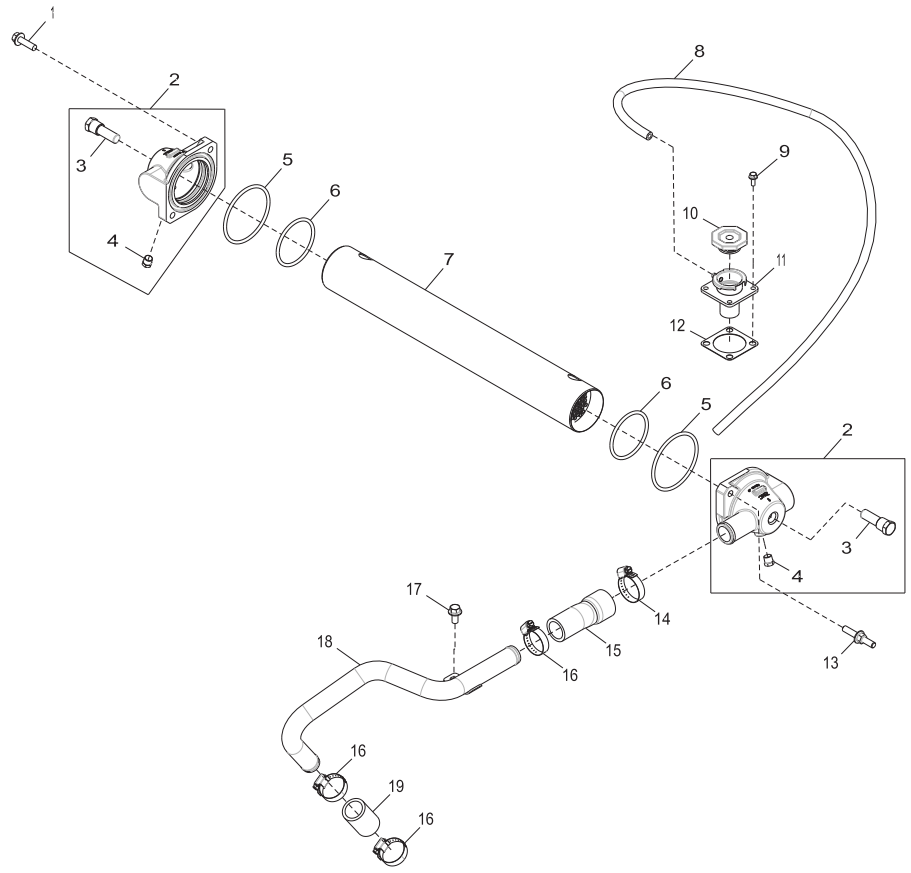


2706

Item	Part Number	Description	Quantity Variation 2706
1	GM98690	Bracket	1
2	#	Screw, M12 X 45	4
3	GM98691	Cap Screw	3
4	GM98692	Cap Screw	2
5	#	Screw, M8 X 50	1
6	#	Screw, M8 X 100	1
7	GM98693	Clamp	4
8	GM98694	Hose	1
9	M933-10030-82	SCREW, HEX CAP M10 x 30mm	2
10	GM96103	Fitting	1
11	GM69810	O-Ring	1
12	-	ORDER RE545494	1
13	GM98695	Adapter	1
14	GM98696	O-Ring	1
15	GM98697	Hose	1
16	#	Screw, M8 X 35	11
17	GM98698	Adapter	1
18	352142	Zinc Anode	1
19	352142	Zinc Anode	3
20	GM98699	Plate	1
21	GM98700	O-Ring	4
22	GM98701	Housing	1
23	#	Screw, M6 X 16	6
24	GM98702	Core	1

Item	Part Number	Description	Quantity Variation 2706
25	GM53024	Plug, pipe	1
26	#	Pipe Plug, 1/4”	1
27	GM98703	Cover	1
28	GM95661	Screw, M6 x 16	4
29	GM91892	Plate	1
30	GM95664	Screw, M6 x 16	4
31	GM88674	Filler Cap	1
32	352112	Filler Neck	1
33	GM91912	O-Ring	1
34	GM95662	Screw, M12 x 30	4
35	#	Screw, M10 X 25	4
36	GM98704	Bracket	1
37	#	Screw, M8 X 16	2
38	GM18754	Clip	2
39	GM98705	O-Ring	1
40	GM98706	Adapter	1
41	#	Pipe Plug, 1/8”	2
42	GM98707	Set Screw	2
43	223476	PACKING	2
44	GM98708	Line	1
45	223476	PACKING	2
46	GM98709	Hose	1
47	GM98693	Clamp	2
48	GM98710	Line	1
49	GM98711	Bracket	1
50	GM98712	Heat Exchanger	1

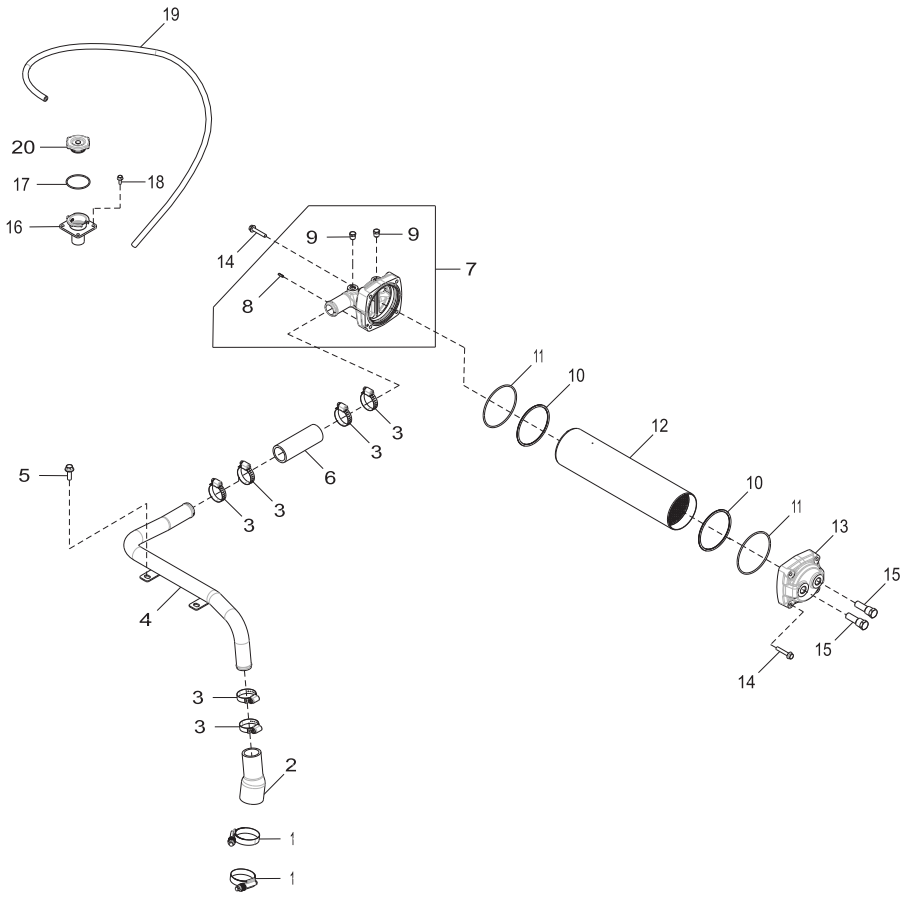
Group 27: Heat Exchanger, continued



2769

Item	Part Number	Description	Quantity Variation 2769
1	#	Screw, Hex Cap M10 X 35mm	2
2	GM88743	Cover	2
3	352142	Zinc Anode	1
4	352023	Drain Plug	1
5	352022	O-Ring	2
6	352021	O-Ring	2
7	GM17526	Heat Exchanger	1
8	GM88716	Hose	1
9	#	Screw, M6 X 16	4
10	GM17497	Filler Cap	1
11	352112	Filler Neck	1
12	352033	Gasket	1
13	GM88694	Stud	2
14	GM17438	Clamp	1
15	GM88713	Hose	1
16	336705	Clamp, Hose	3
17	GM32765	Screw, M10 X 20	1
18	GM88764	Tube	1
19	352038	Bulk Hose	1

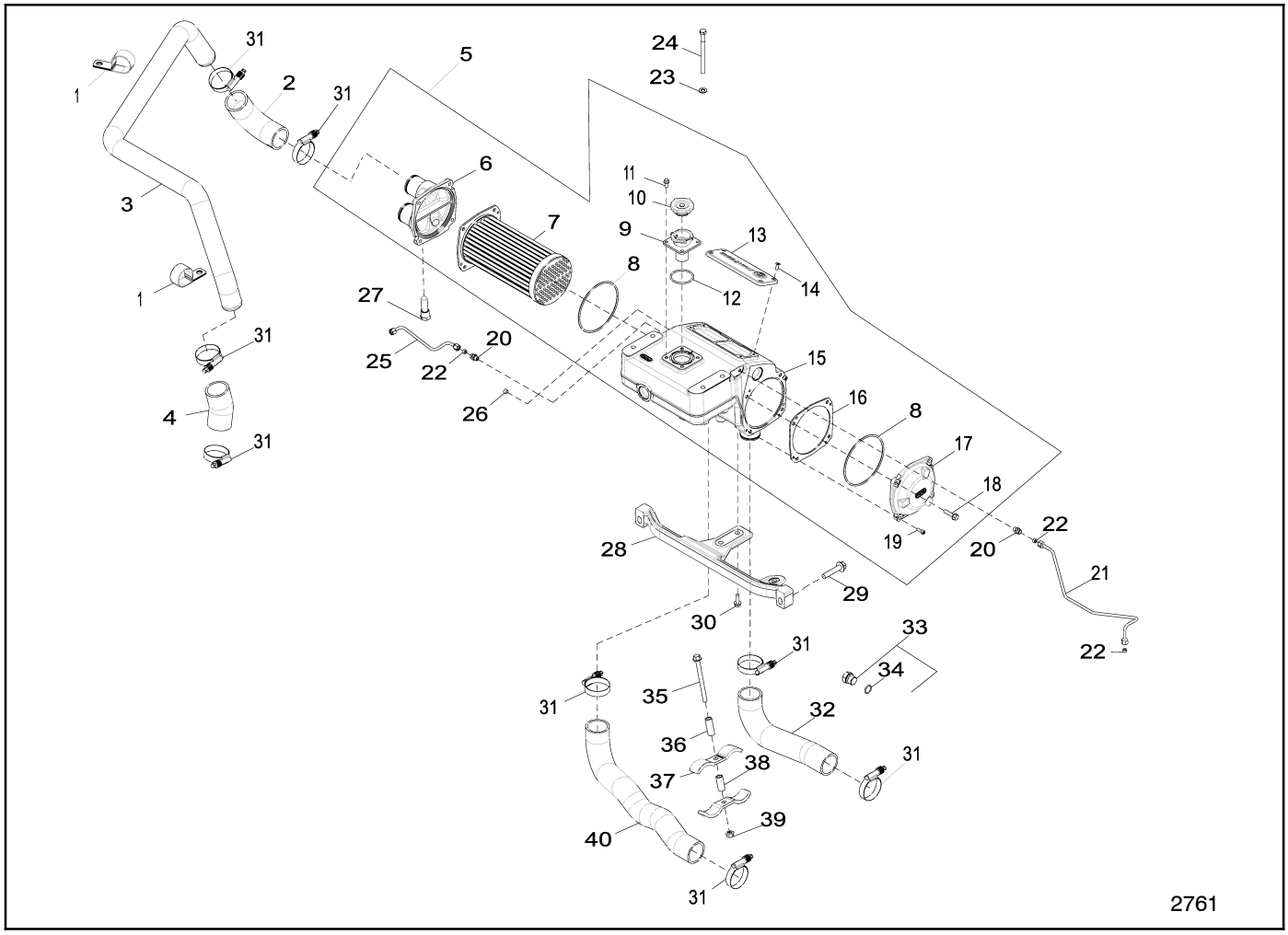
Group 27: Heat Exchanger, continued



2765

Item	Part Number	Description	Quantity Variation 2765
1	GM88773	Clamp	2
2	GM88705	Hose	1
3	GM18882	Clamp	6
4	GM88753	Tube	1
5	#	Screw, Hex Cap M10 X 30mm	2
6	GM88711	Hose	1
7	GM88765	Cover	1
8	GM88781	Spring Pin	1
9	352023	Drain Plug	2
10	GM88774	O-Ring	2
11	GM88172	O-Ring	2
12	GM88752	Core	1
13	GM88697	Cover	1
14	#	Screw, M8 X 45	8
15	352142	Zinc Anode	2
16	352112	Filler Neck	1
17	GM88675	O-Ring	1
18	#	Screw, M6 X 16	4
19	352081	Tube	1
20	GM88674	Filler Cap	1

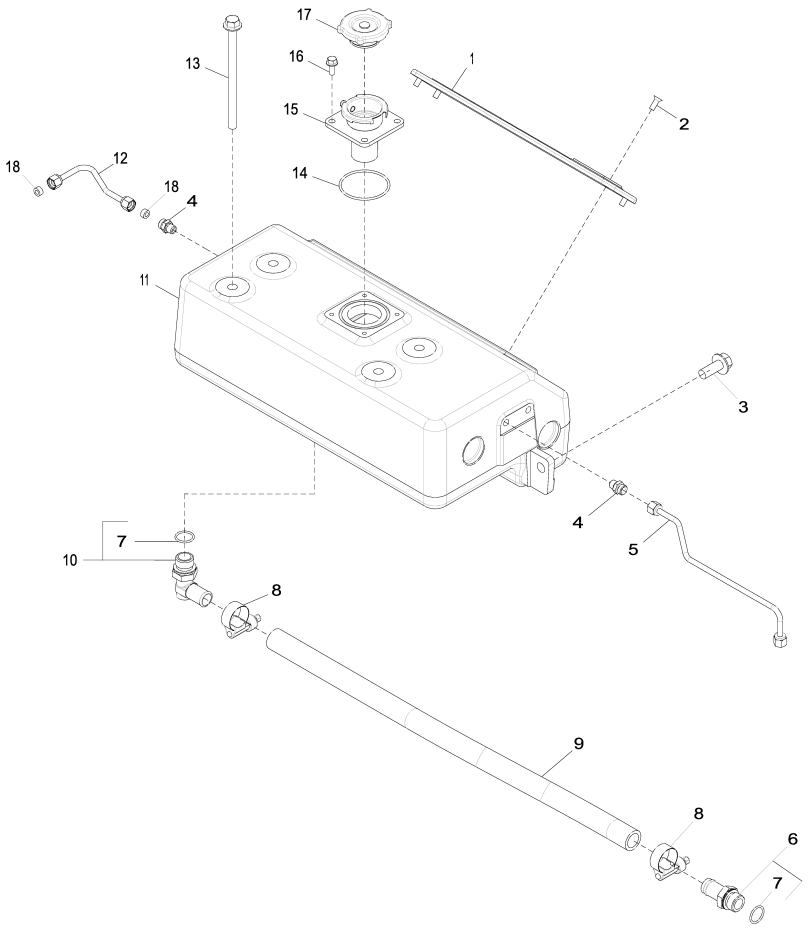
Group 27: Heat Exchanger, continued



Item	Part Number	Description	Quantity Variation 2761
1	GM91905	Hose Clamp	2
2	GM91906	Hose	1
3	GM91907	Tube	1
4	GM91908	Hose	1
5	GM91909	Heat Exchanger	1
6	GM91910	Cover	1
7	GM91911	Core	1
8	GM91893	O-Ring	4
9	352112	Filler Neck	1
10	GM88674	Filler Cap	1
11	#	Screw, M6 x 16	4
12	GM91912	O-Ring	1
13	GM91913	Plate	1
14	#	Screw, M6 x 16	4
15	GM91914	Housing	1
16	GM91915	Plate	1
17	GM91916	Cover	1
18	#	Screw, M8 x 35	8
19	#	Screw, M6 x 16	6
20	GM50679	Fitting,1/8”-27npt x 1/2”-24un	2
21	GM91917	Line	1
22	223476	Packing	4
23	#	Washer, 10.500 X 20 X 2 mm	4
24	GM91918	Cap Screw	4

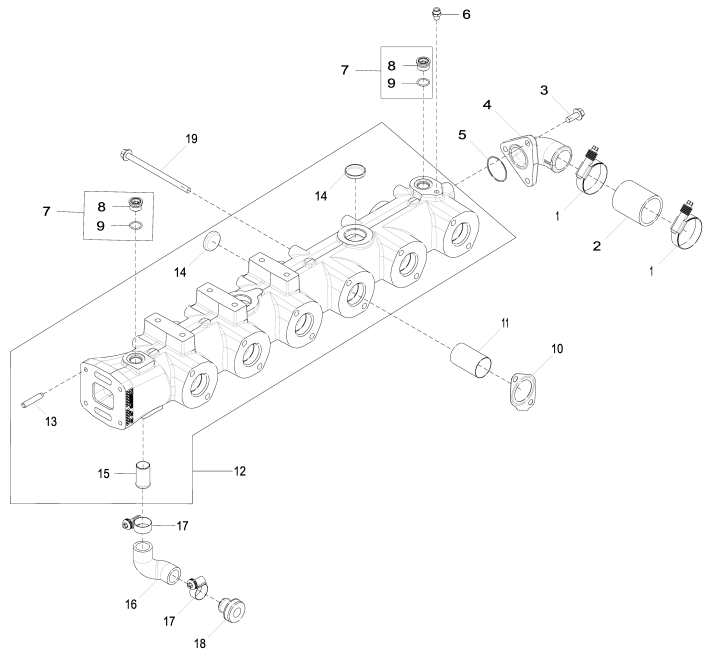
Item	Part Number	Description	Quantity Variation 2761
25	GM91919	Line	1
26	#	Pipe Plug, 1/8”	1
27	352142	Zinc Anode	1
28	GM91920	Support	1
29	#	Screw, M12 x 60	2
30	#	Screw, M8 x 25	2
31	GM88773	Clamp	12
32	GM91921	Hose	1
33	GM17498	Fitting	1
34	GM17437	O-ring	1
35	#	Screw, M10 x 120	1
36	GM47105	Bushing	1
37	GM91922	Half Clamp	2
38	GM47104	Bushing	1
39	GM30375	Flange Nut, M10	1
40	GM91923	Hose	1

Group 27: Heat Exchanger, continued



Item	Part Number	Description	Quantity Variation 2763
1	-	Identification Plate	1
2	#	Screw, M6 x 16	4
3	#	Screw, M12 x 30	2
4	223820	Fitting	2
5	GM91924	Tube	1
6	GM50019	Fitting	1
7	GM17437	O-ring	2
8	GM67286	Hose clamp	2
9	GM91925	Hose	1
10	GM17512	Elbow fitting	1
11	GM91926	Housing	1
12	GM91927	Line	1
13	#	Screw, M10 x 150	4
14	GM88675	O-Ring	1
15	352112	Filler Neck	1
16	#	Screw, M6 x 16	4
17	GM88674	Filler Cap	1
18	223476	Packing	2

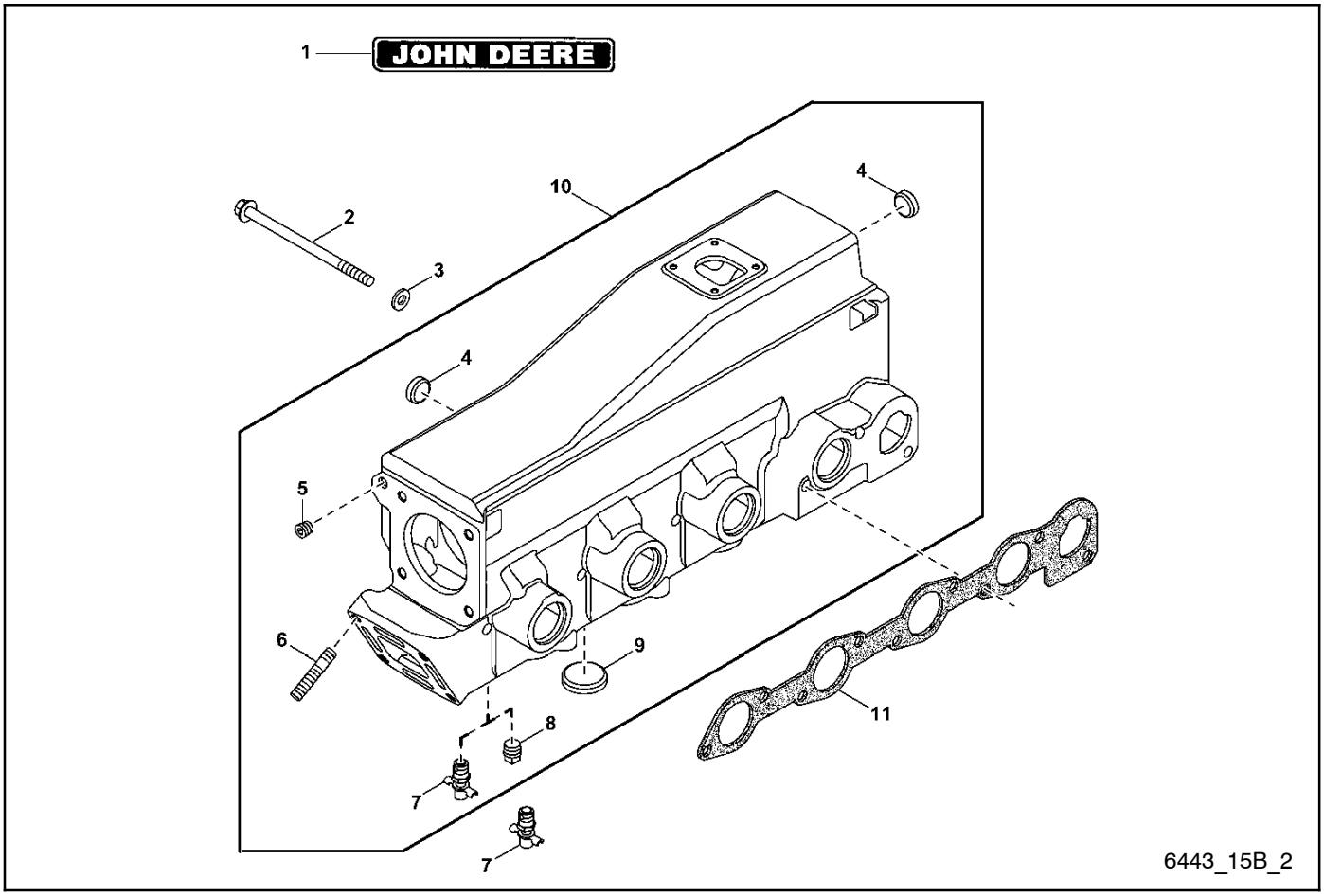
Group 28: Exhaust Manifold



2821

Item	Part Number	Description	Quantity Variation 2821
1	GM88773	Clamp	2
2	GM98713	Hose	1
3	#	Screw, M10 X 25	3
4	GM98714	Cover	1
5	GM98715	O-Ring	1
6	223820	FITTING	1
7	GM88720	Fitting Plug	2
8	GM17447	Fitting	1
9	GM17437	O-ring	1
10	GM50156	Gasket	6
11	GM50191	Sleeve	6
12	GM98716	Exhaust Manifold	1
13	GM88685	Stud	4
14	GM91933	Plug	7
15	GM80370	Tube	1
16	GM98717	Hose	1
17	GM98718	Clamp	2
18	GM98719	Fitting	1
19	#	Screw, M10 X 160	12

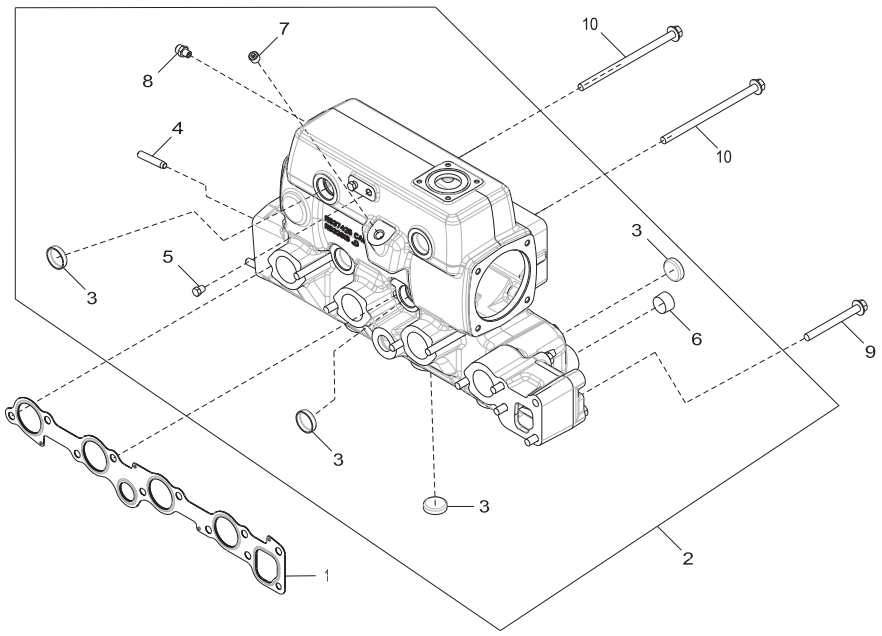
Group 28: Exhaust Manifold, continued



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

Common hardware; procure locally.

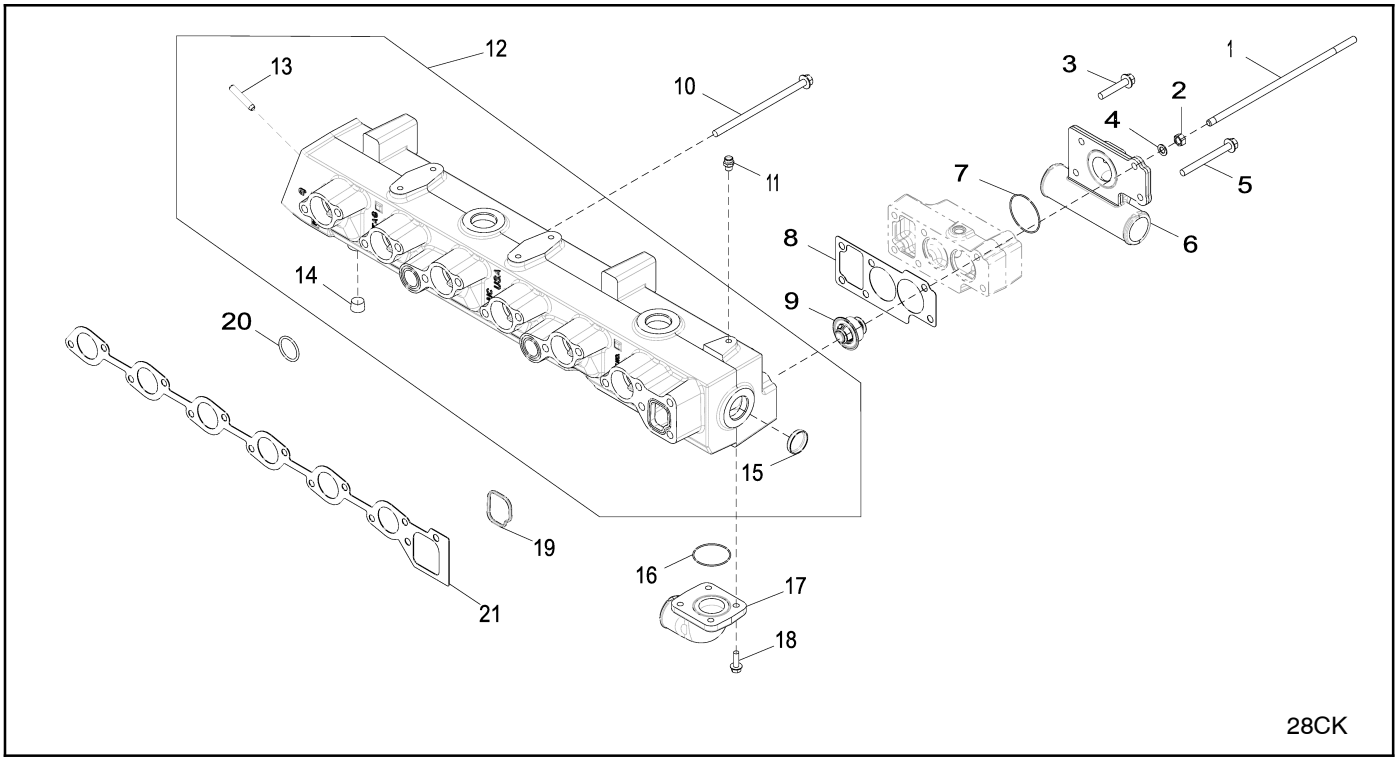
Group 28: Exhaust Manifold, continued



28BV

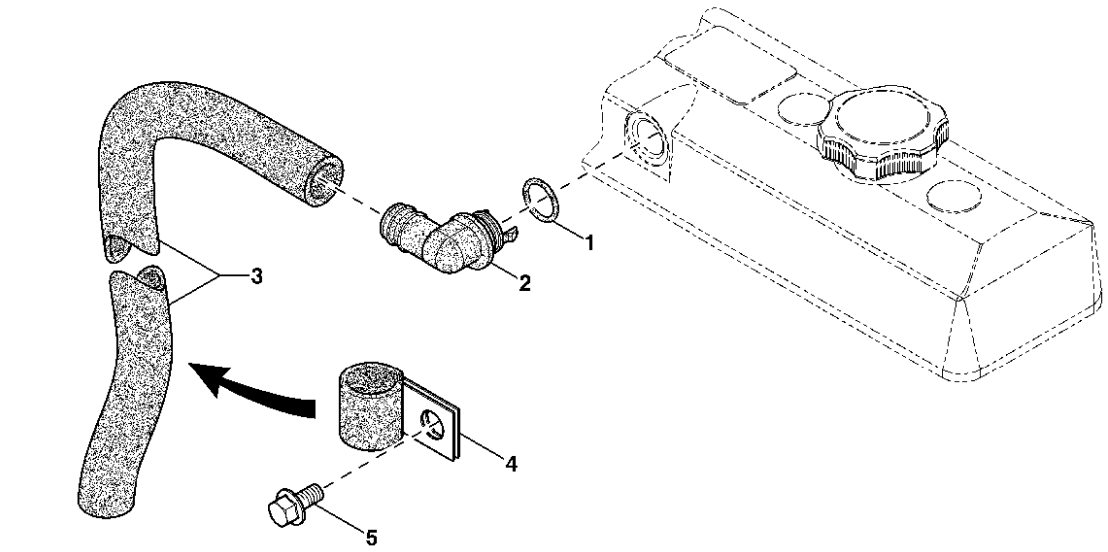
Item	Part Number	Description	Quantity Variation 28BV
1	GM88750	Gasket	1
2	GM88741	Exhaust Manifold	1
3	223448	Cap	10
4	GM88685	Stud	4
5	#	Pipe Plug, 1/8”	2
6	GM53024	Plug, Pipe, 3/4”	1
7	#	Pipe Plug, 1/4”	1
8	223820	Fitting	1
9	GM70547	Screw, M10 X 100	4
10	#	Screw, M10 X 180	7

Group 28: Exhaust Manifold, continued



Item	Part Number	Description	Quantity Variation 28CK
1	GM91928	Rod	1
2	#	Nut, M10	1
3	#	Screw, M10 x 55	2
4	#	Washer, 10.500 X 18 X 1.600 mm	1
5	GM70547	Screw, M10 x 100	3
6	GM91929	Cover	1
7	GM91930	O-Ring	1
8	GM91931	Housing	1
9	GM88766	Thermostat	2
10	#	Screw, M10 x 190	14
11	GM50679	Fitting,1/8”-27npt x 1/2”-24un	1
12	GM91932	Exhaust Manifold	1
13	GM88685	Stud	4
14	GM15403	Plug, pipe	1
15	GM91933	Plug	7
16	GM91934	O-Ring	1
17	GM91935	Cover	1
18	#	Screw, M8 x 25	4
19	GM91936	Seal	1
20	GM91937	O-Ring	2
21	GM91938	Gasket	1

Group 29: Vent Tube



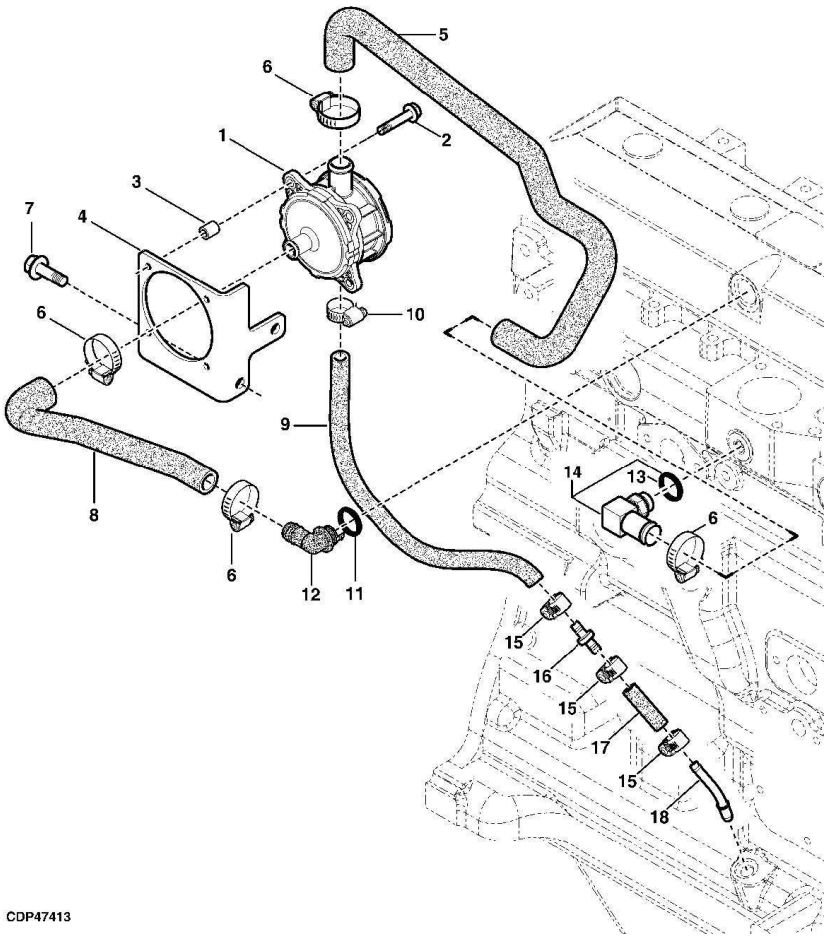
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6443_13_1

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.

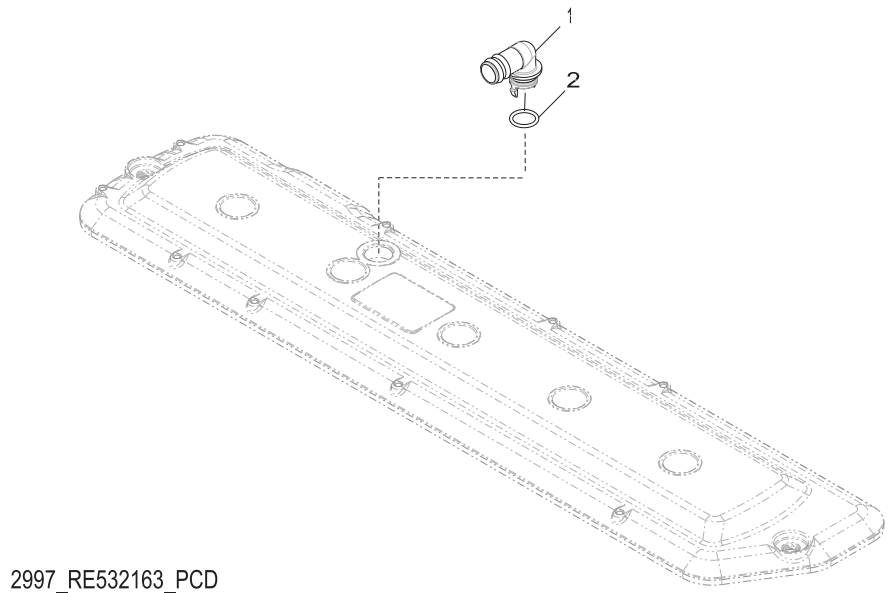
Group 29: Vent Tube, continued



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.

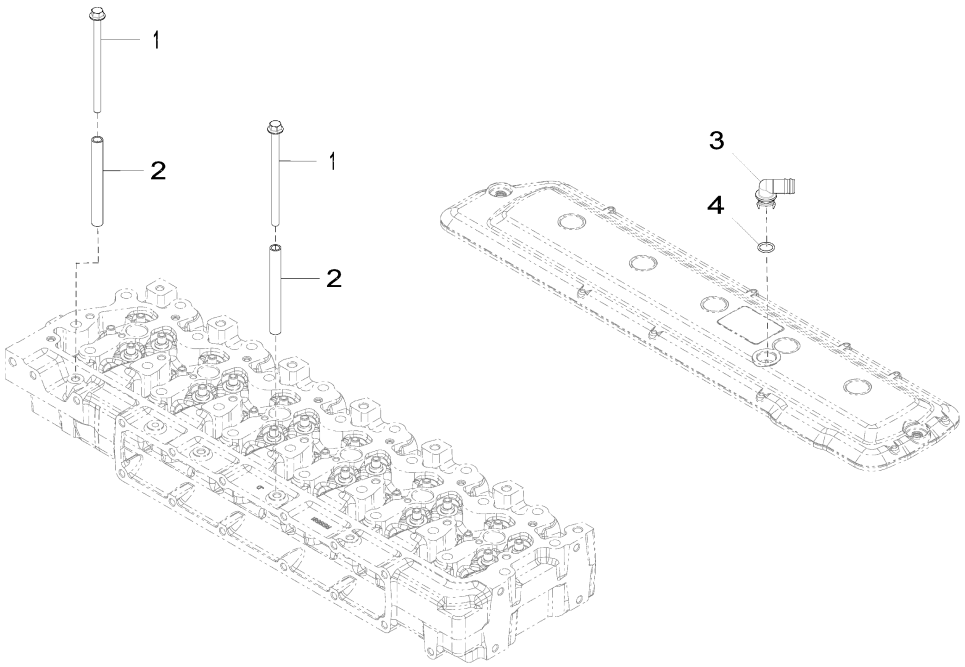


2997_RE532163_PCD

2997

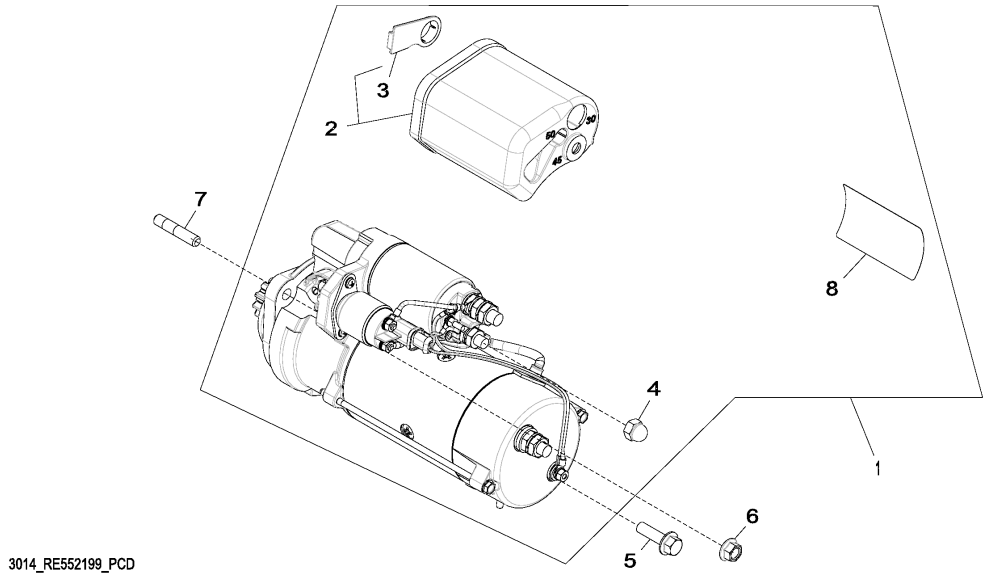
Item	Part Number	Description	Quantity Variation 2997
1	360098	Fitting, Elbow	1
2	GM88715	O-Ring	1

Group 29: Vent Tube, continued



29BE

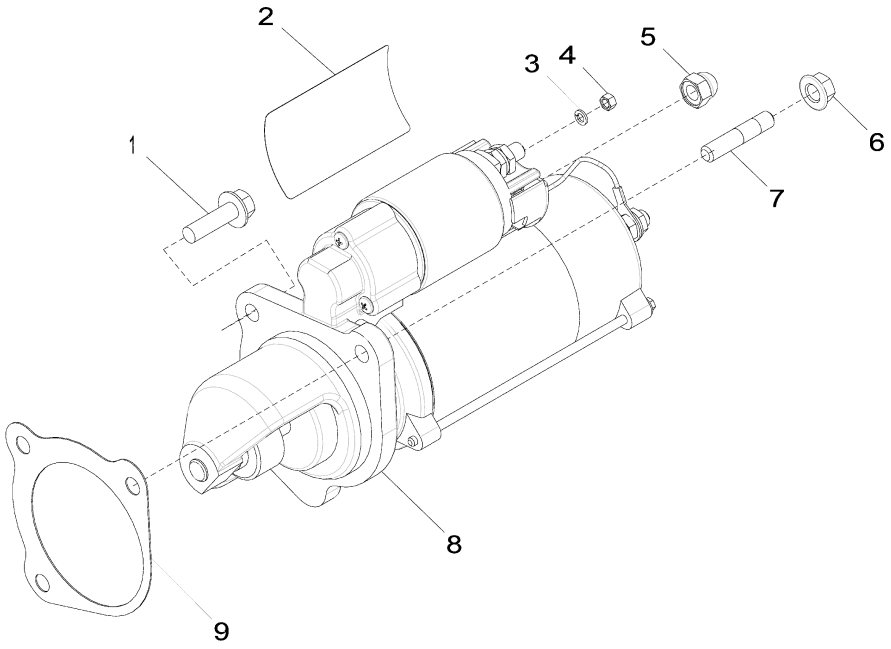
Item	Part Number	Description	Quantity Variation 29BE
1	#	Screw, M10 x 165	2
2	GM91939	Spacer	2
3	360098	Fitting, Elbow	1
4	223851	O-Ring	1



3014

Item	Part Number	Description	Quantity Variation 3014
1	GM98928	Starter Motor Kit	1
2	GM83048	Cover	1
3	GM98929	Cover	1
4	GM80280	Nut	1
5	M933-10035-82	SCREW, HEX CAP M10 x 35mm	1
6	GM30375	Flange Nut, M10	2
7	GM50112	Stud	2
8	GM17554	Label	1

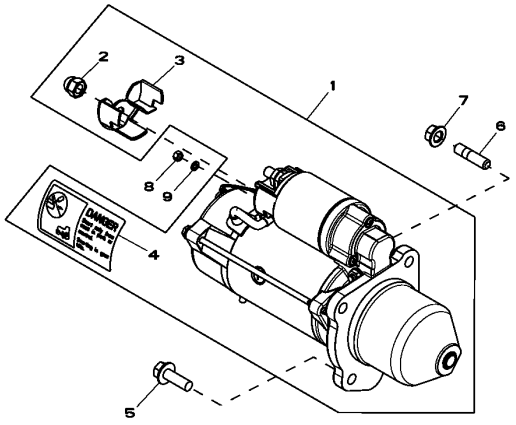
Group 30: Starting Motor, continued



3015_RE552200_PCD

3015

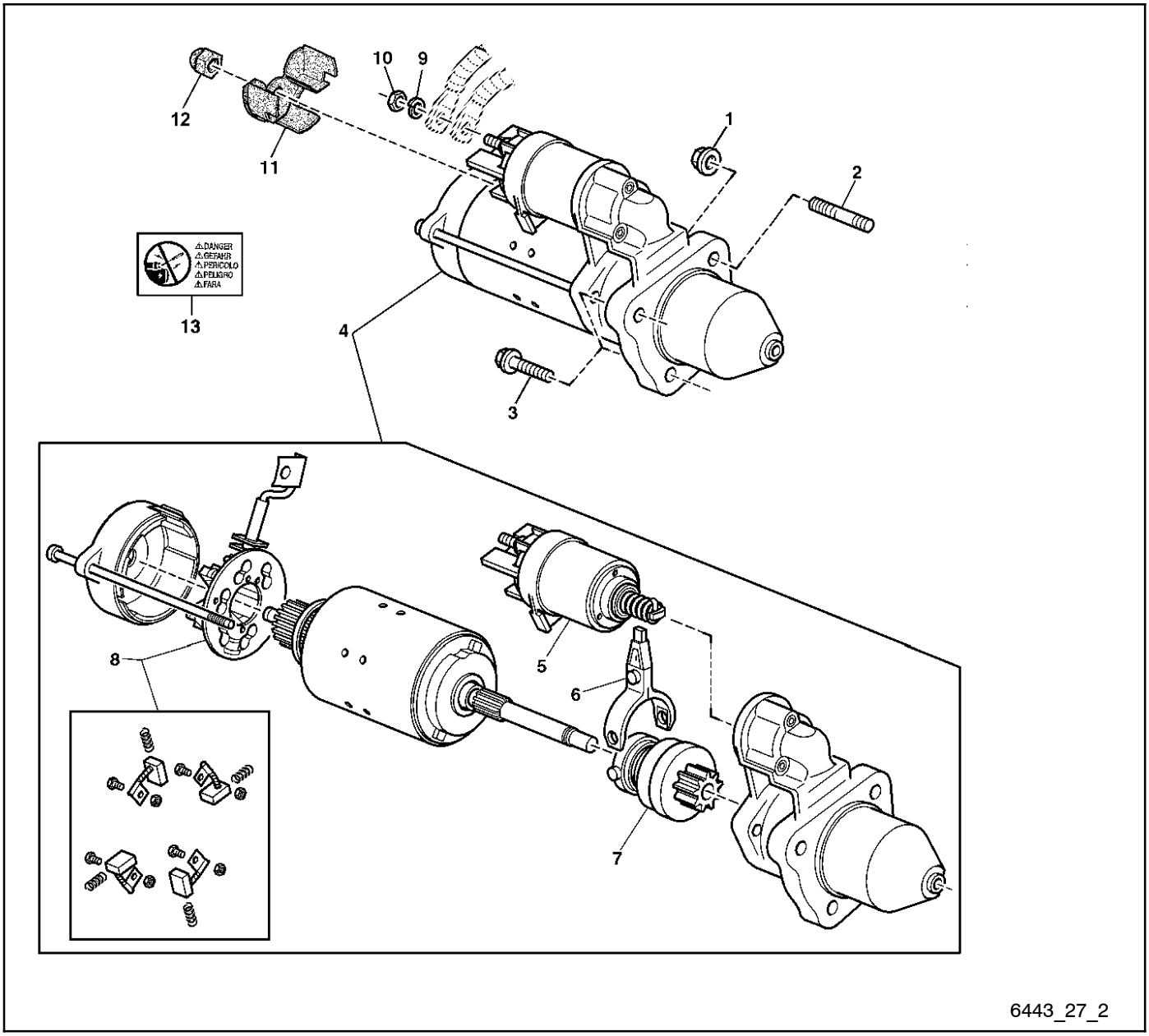
Item	Part Number	Description	Quantity Variation 3015
1	M933-10035-82	SCREW, HEX CAP M10 x 35mm	2
2	GM17554	Label	1
3	#	Lock Washer, 5 mm	1
4	#	Nut, M5	1
5	GM80280	Nut	1
6	GM30375	Flange Nut, M10	1
7	GM50112	Stud	1
8	GM50639	Starter motor	1
9	223791	GASKET	1



30AG

Item	Part Number	Description	Quantity Variation 30AG
1	GM91982	Starter Motor	1
2	GM80280	Nut	1
3	GM50642	Cover	1
4	GM17554	Label	1
5	#	Screw, M10 X 30	2
6	GM91983	Stud	1
7	#	Flange Nut, M10	1
8	#	Nut, M5	1
9	#	Lock Washer, 5mm	1

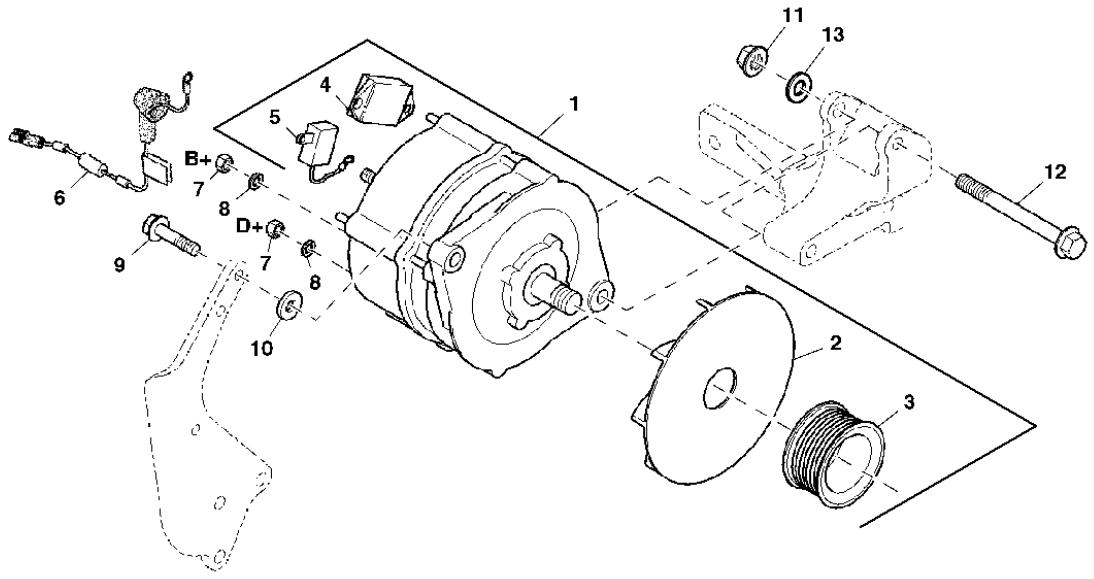
Group 30: Starting Motor, continued



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 31: Alternator



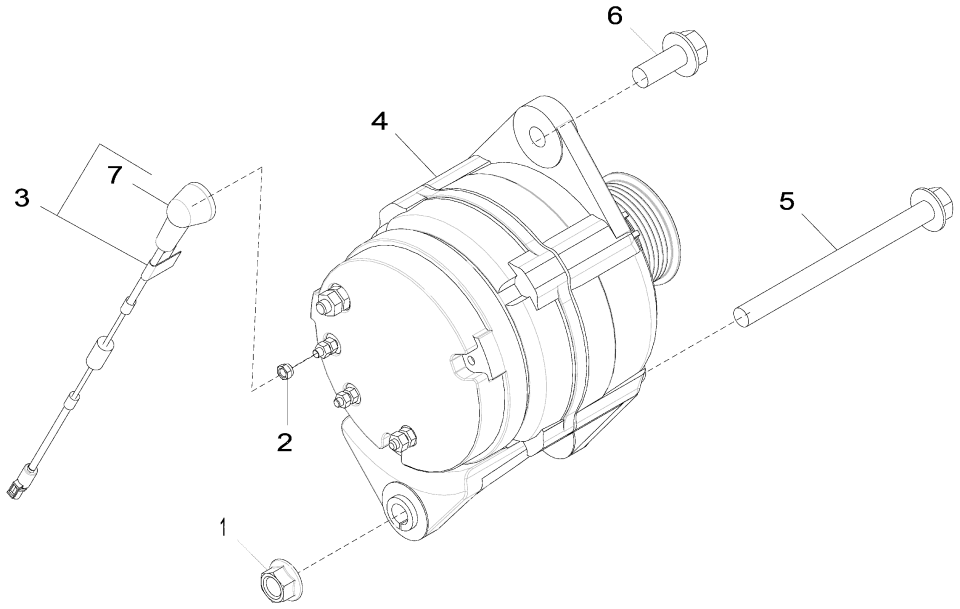
6443_35_1

Item	Part Number	Description	Quantity Variation 3148	Quantity Variation 3149
1	GM52595	Alternator, 12 V	1	
1	GM52600	Alternator, 24 V		1
2	GM52596	Fan	1	1
3	GM52597	Pulley	1	1
4	GM52598	Regulator	1	1
5	GM52599	Capacitor	1	1
6	GM32923	Harness, wiring	1	1
7	#	Nut, M5	2	2
8	#	Lock washer, 5 mm	2	2
9	#	Screw, M8 x 30	1	1
10	GM18719	Washer	1	
11	#	Flange nut, M10	1	1
12	#	Screw, M10 x 100	1	1
13	360166	Thrust washer	1	1

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Common hardware; procure locally.

Group 31: Alternator, continued

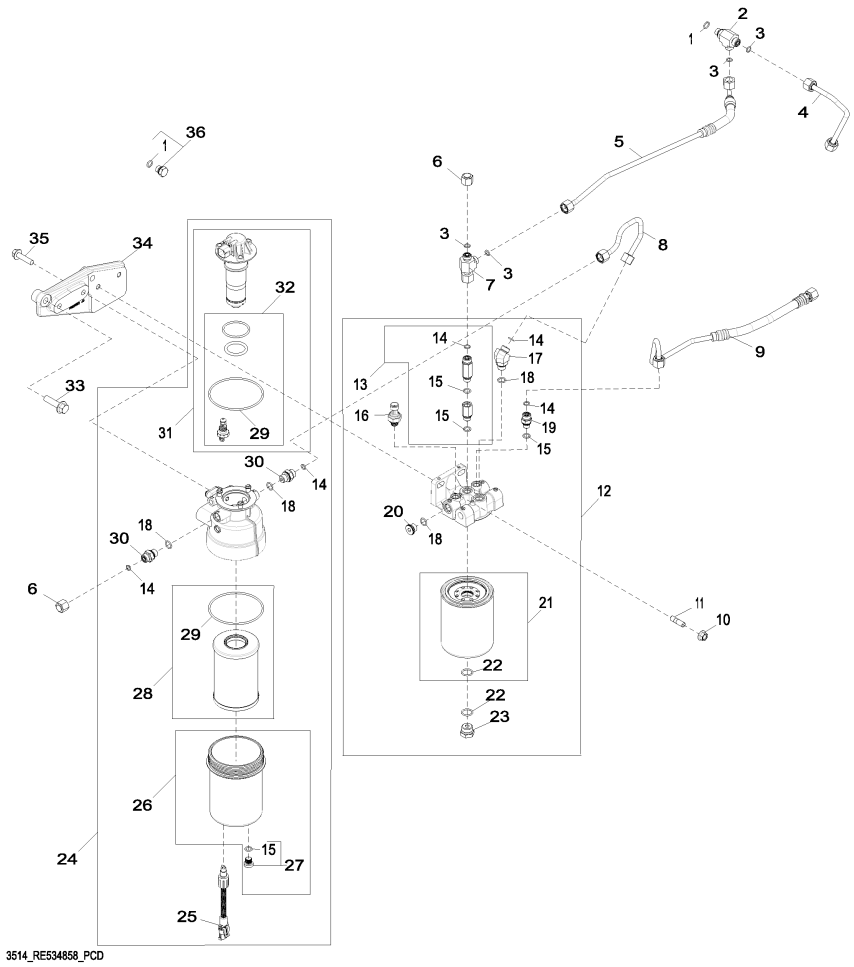


3159_RE543830_PCD

3159

Item	Part Number	Description	Quantity Variation 3159	Quantity Variation 3160
1	#	Flange Nut, M12	1	1
2	#	Lock Nut, M5	1	1
3	GM32923	Harness, wiring	1	1
4	GM99038	Alternator	1	
4	GM98720	Alternator		1
5	#	Screw, M12 X 150	1	1
6	#	Screw, 1/2” X 1-1/4”	1	1
7	GM98721	Boot	1	1

Group 35: Fuel Filter

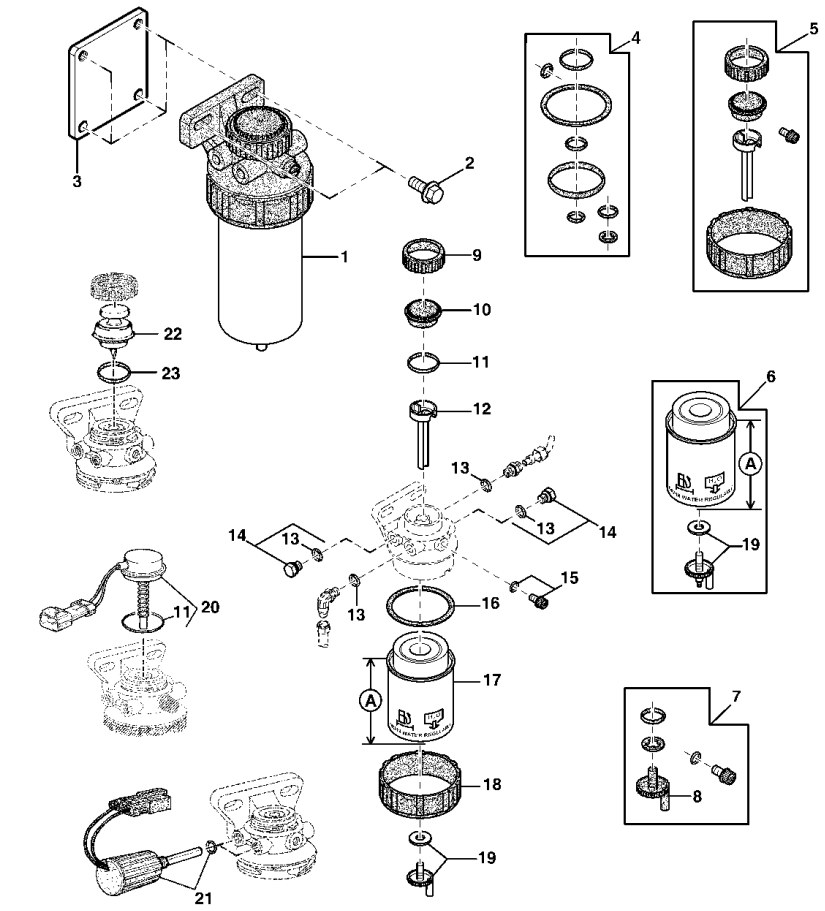


3514

Item	Part Number	Description	Quantity Variation 3514	Quantity Variation 3515
1	GM21508	O-ring	1	2
2	GM50108	Fitting, tee	1	1
3	360555	O-RING	2	4
4	GM98722	Fuel Line	1	1
5	GM98723	Fuel Line	1	1
6	GM80225	Fitting	2	2
7	GM50109	Fitting, tee	1	1
8	GM50234	Fuel line	1	1
9	GM98724	Fuel Line	1	1
10	GM30375	Flange Nut, M10	2	2
11	GM50113	Stud	2	2
12	GM91976	Filter	1	1
13	GM50280	Bleed valve	1	1
14	360165	O-RING	2	5
15	GM50114	O-ring	1	4
16	GM50115	O-ring	2	4
17	360556	ELBOW FITTING, 45 DEG.	1	1
18	GM50106	Fitting, adapter	1	1
19	GM50230	Sensor	1	1
20	GM50292	Fitting plug	1	1

Item	Part Number	Description	Quantity Variation 3514	Quantity Variation 3515
21	GM91974	Filter Element (includes primary and secondary fuel filter element)	1	1
22	223466	O-RING	1	2
23	223458	DRAIN PLUG	1	1
24	GM98930	Fuel Filter	1	
24	GM98725	Fuel Filter		1
25	GM84091	Sensor	1	1
26	GM91975	Bowl	1	1
27	GM52830	Drain plug	1	1
28	-	Order GM91974	1	1
29	GM50193	O-ring	1	2
30	GM50107	Fitting, adapter	2	2
31	GM91973	Fuel Pump	1	
31	GM50241	Fuel Pump		1
32	GM77149	Seal Kit	1	1
33	#	Screw, M12 X 45	2	2
34	GM50160	Bracket	1	1
35	#	Screw, M10 X 40	2	2
36	360013	PLUG	1	1

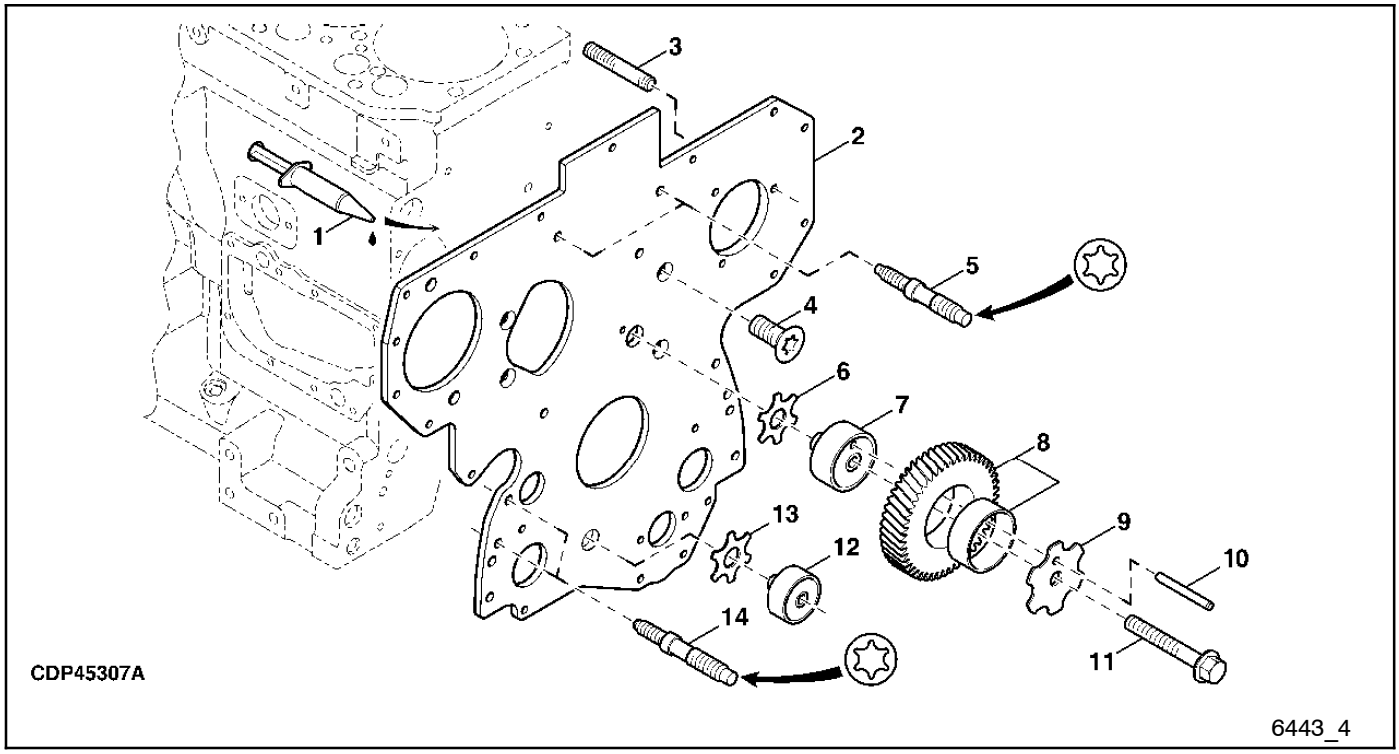
Group 35: Secondary Fuel Filter



35DP

Item	Part Number	Description	Quantity Variation 35DH	Quantity Variation 35DP
1	GM88724	Fuel Filter	1	
1	GM50952	Fuel Filter		1
2	GM32765	Screw, M10 X 20	4	4
3	GM32800	Bracket	1	1
4	222772	Seal Kit	1	1
5	222773	Seal Kit	1	1
6	GM48728	Element, Fuel Filter	1	
6	GM48730	Element, Fuel Filter		1
7	360048	Kit, Bleed Plug & Drain Valve	1	1
8	-	Drain Valve	1	1
9	-	Retainer (order item 5)	1	1
10	-	Retainer (order item 5)	1	1
11	GM32836	Ring Kit	1	1
12	-	Retainer (order item 5)	1	1
13	360178	O-Ring	AR	AR
14	360015	Plug	AR	AR
15	-	Drain Plug (order item 5 or item 7)	1	1
16	GM17445	O-Ring	1	1
17	-	Filter Element (order item 6)	1	1
18	-	Retainer (order item 5)	1	1
19	352141	Drain Valve	1	1
20	-	Not used	-	-
21	-	Not used	-	-
22	-	Not used	-	-
23	-	Not used	-	-

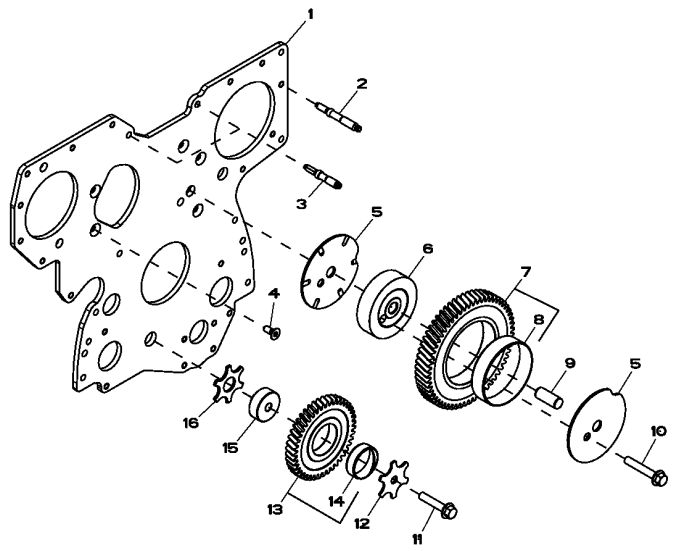
Group 36: Front Plate & Crankshaft Upper Idler Gears



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.

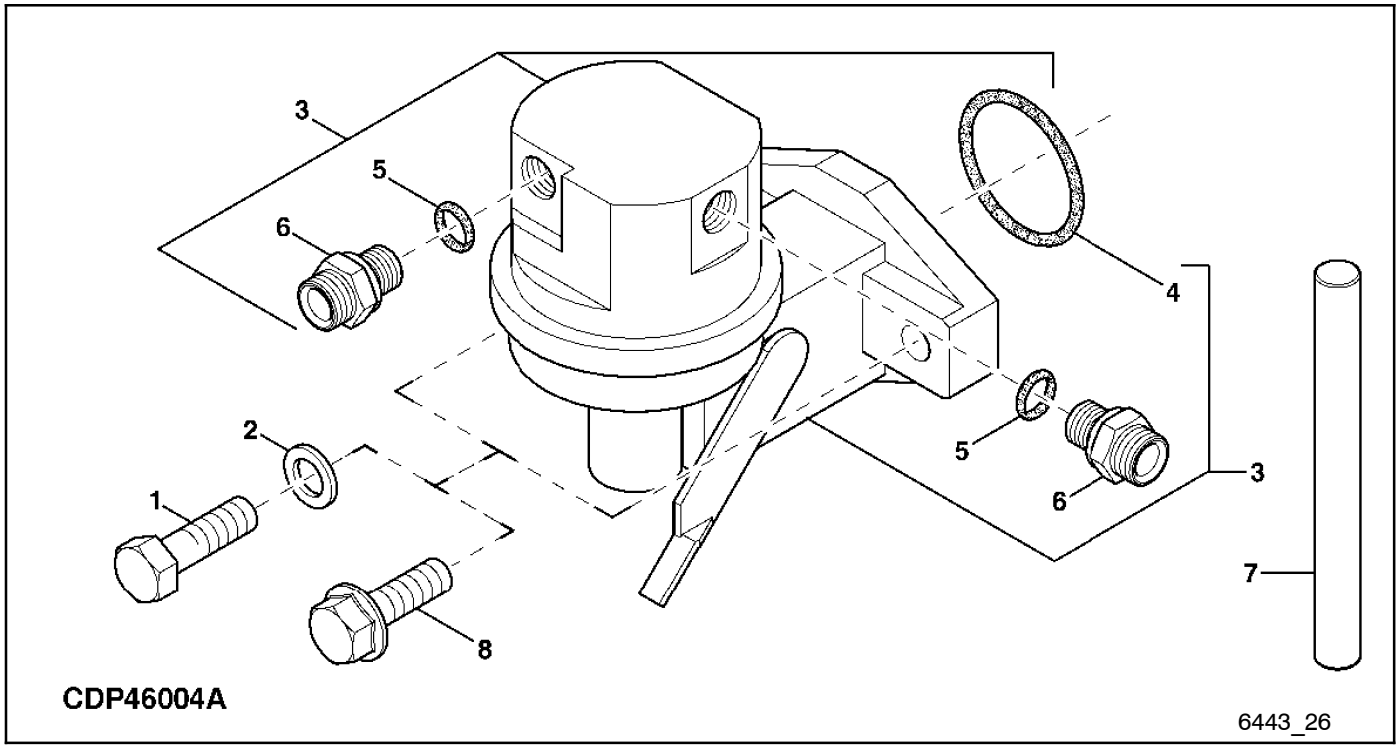
Group 36: Front Plate & Crankshaft Upper Idler Gears, continued



3614

Item	Part Number	Description	Quantity Variation 3614
1	GM88677	Plate	1
2	360140	Stud	7
3	360514	Stud	2
4	360516	Screw	5
5	GM46691	Lock Washer	2
6	GM46692	Shaft (Upper)	1
7	GM46694	Gear	1
8	-	Bushing	1
9	GM46693	Dowel Pin	1
10	#	Screw, M10 X 60	1
11	#	Screw, M10 X 50	1
12	360148	Thrust Washer	1
13	360021	Gear	1
14	360082	Bushing	1
15	360083	Shaft	1
16	336446	Thrust Washer	1

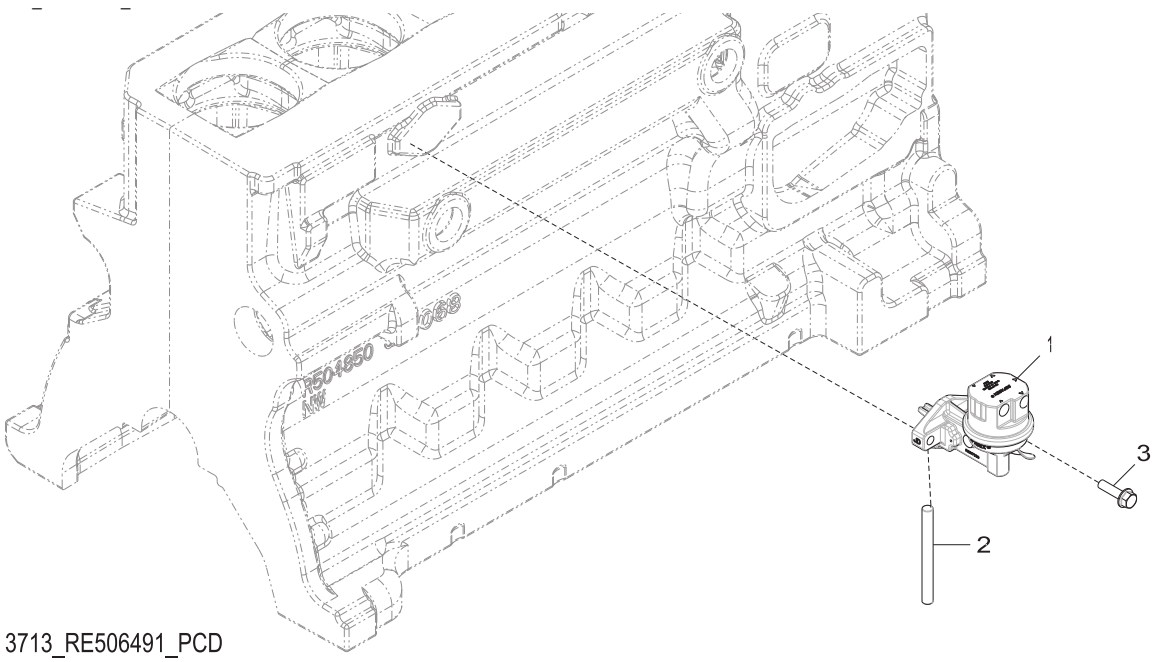
Group 37: Fuel Transfer Pump



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

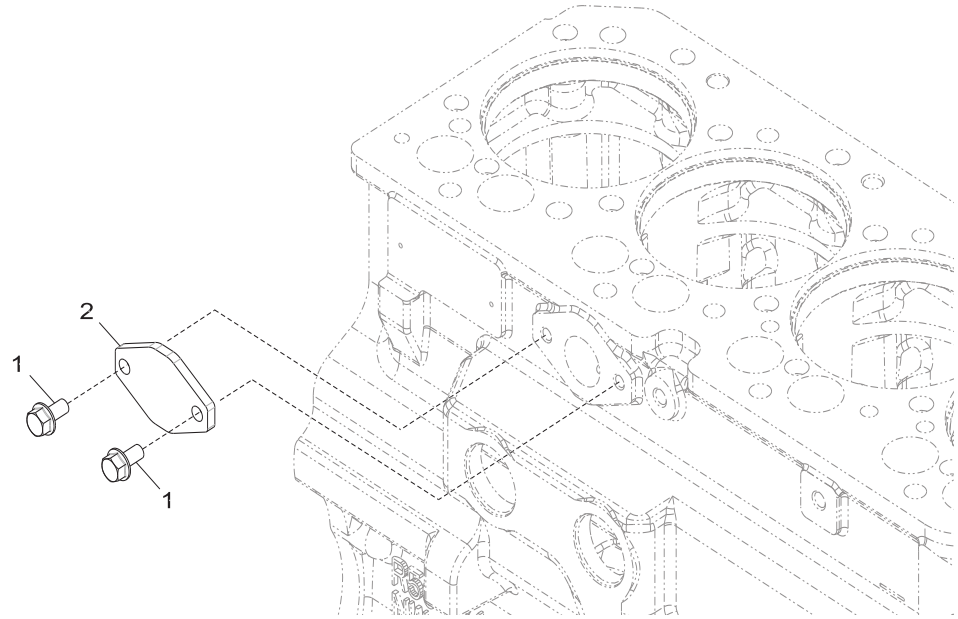
Common hardware; procure locally.

Group 37: Fuel Transfer Pump, continued



3713

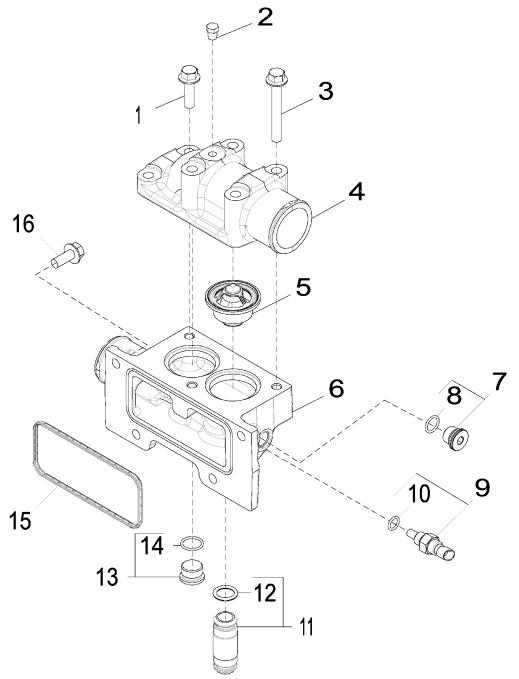
Item	Part Number	Description	Quantity Variation 3713
1	GM52528	Fuel Pump (includes O-Ring)	1
2	360159	Push Rod	1
3	GM17525	Cap Screw	2
	360119	O-Ring	1



3799

Item	Part Number	Description	Quantity Variation 3799
1	360067	Cap Screw	2
2	GM91980	Cover	1

Group 39: Thermostat Housing

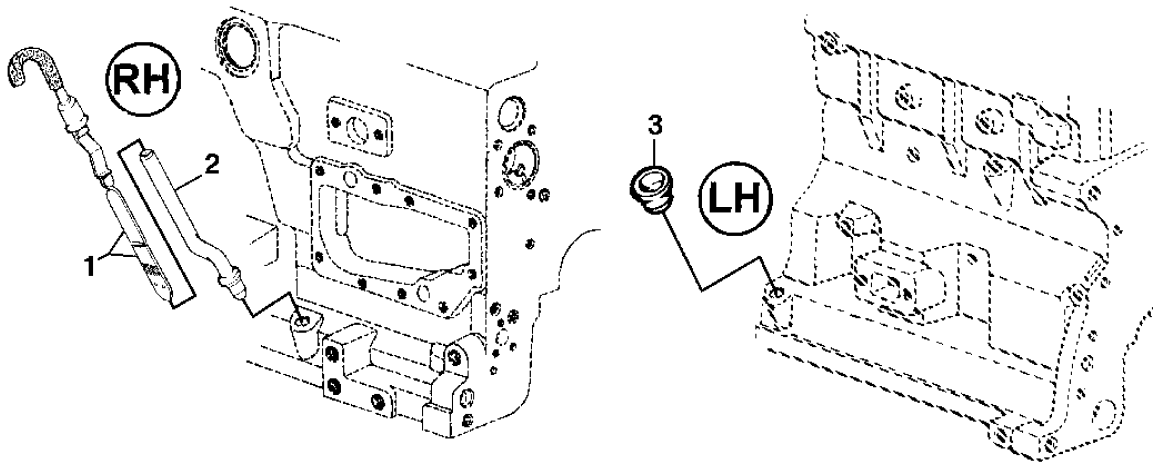


3928_RE568596_PCD

3928

Item	Part Number	Description	Quantity Variation 3928
1	M933-10035-82	SCREW, HEX CAP M10 x 35mm	1
2	#	Pipe Plug, 1/8”	1
3	#	Screw, M10 X 75	2
4	GM98726	Cover	1
5	GM98727	Thermostat	2
6	GM98728	Housing	1
7	GM96102	Fitting	1
8	360176	O-RING	1
9	GM50195	Sensor	1
10	GM21508	O-ring	1
11	GM50203	Tube	1
12	GM50131	O-ring	2
13	GM88720	Fitting Plug	1
14	GM17437	O-ring	1
15	GM50134	Gasket	1
16	#	Screw, M10 X 25	4

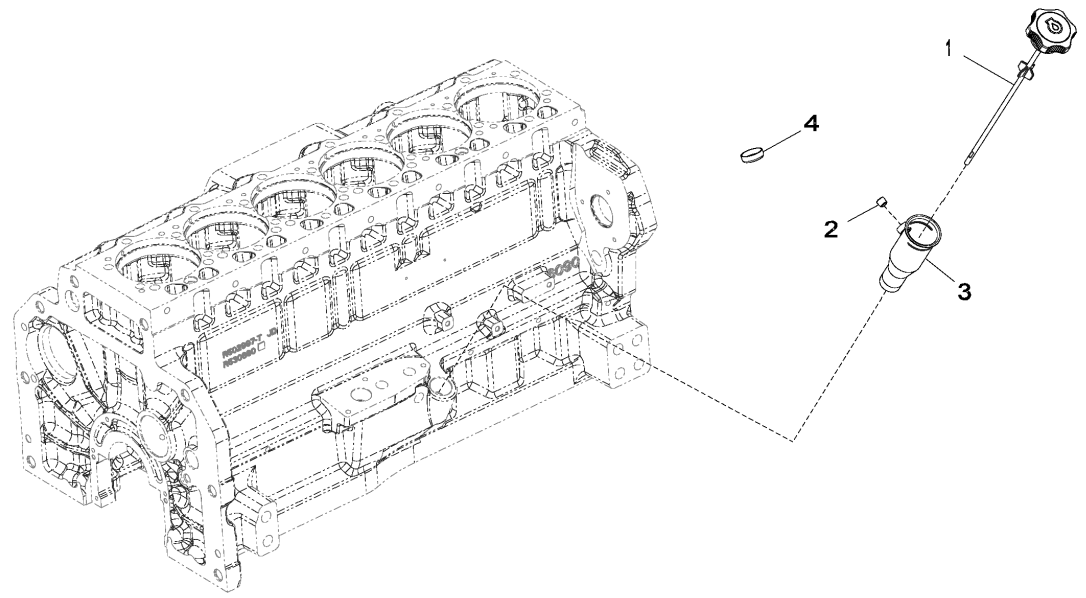
Group 40: Oil Dipstick



6443_10A_1

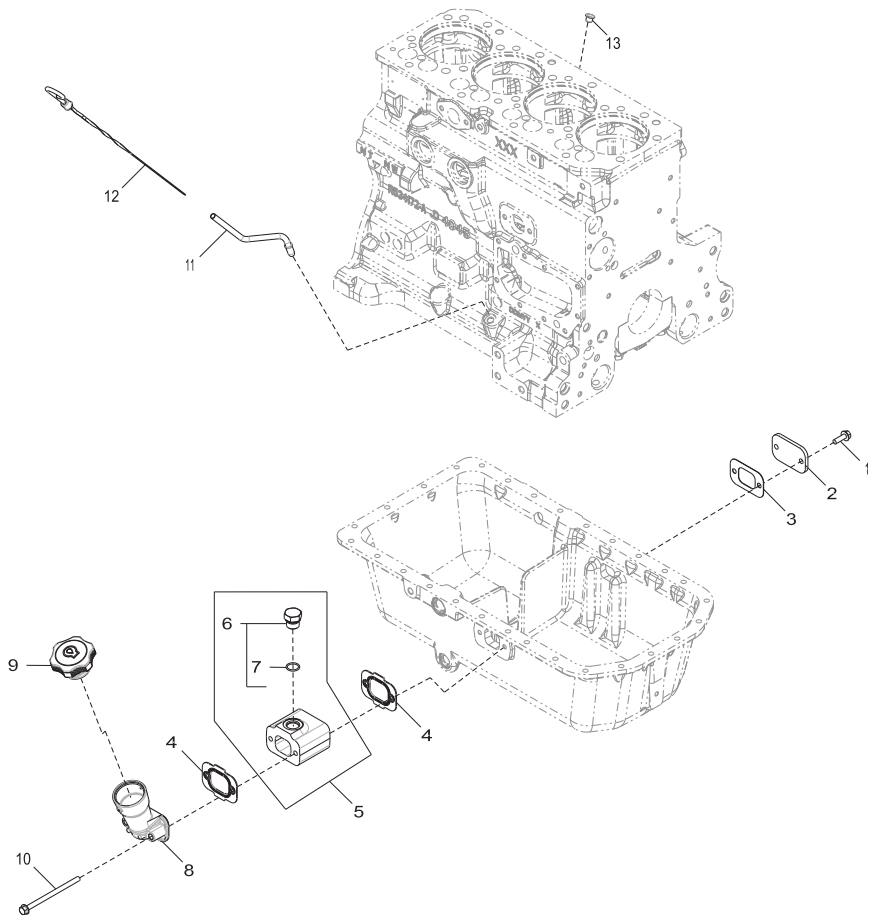
Item	Part Number	Description	Quantity Variation 4002
1	360073	Dipstick	1
2	GM32788	Tube, dipstick	1
3	GM32789	Plug	1

Group 40: Oil Dipstick, continued



Item	Part Number	Description	Quantity Variation 4062
1	GM50196	Dipstick	1
2	#	Pipe Plug, 1/4”	1
3	GM98759	Dipstick Tube	1
4	GM18877	Cap (oil fill hole)	1

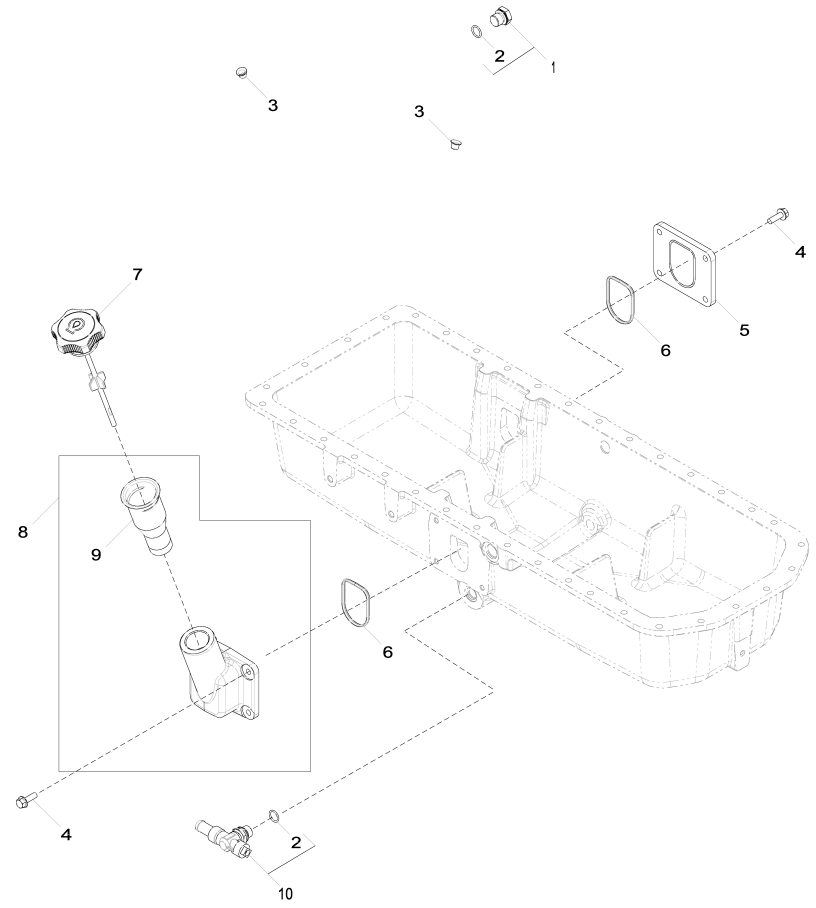
Group 40: Oil Dipstick, continued



40AL

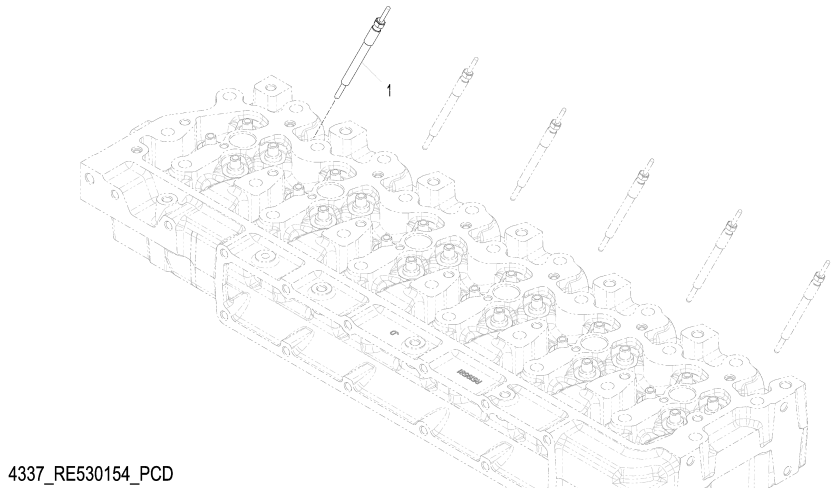
Item	Part Number	Description	Quantity Variation 40AL
1	#	Screw, M8 X 25	2
2	360089	Cover	1
3	GM17466	Gasket	1
4	GM88692	Gasket	2
5	GM88769	Adapter	1
6	GM17498	Fitting	1
7	GM17437	O-Ring	1
8	GM42207	Filler Neck	1
9	360018	Filler Cap	1
10	#	Screw, M8 X 130	2
11	GM88708	Dipstick Tube	1
12	GM88722	Dipstick	1
13	GM32789	Plug	1

Group 40: Oil Dipstick, continued



4067

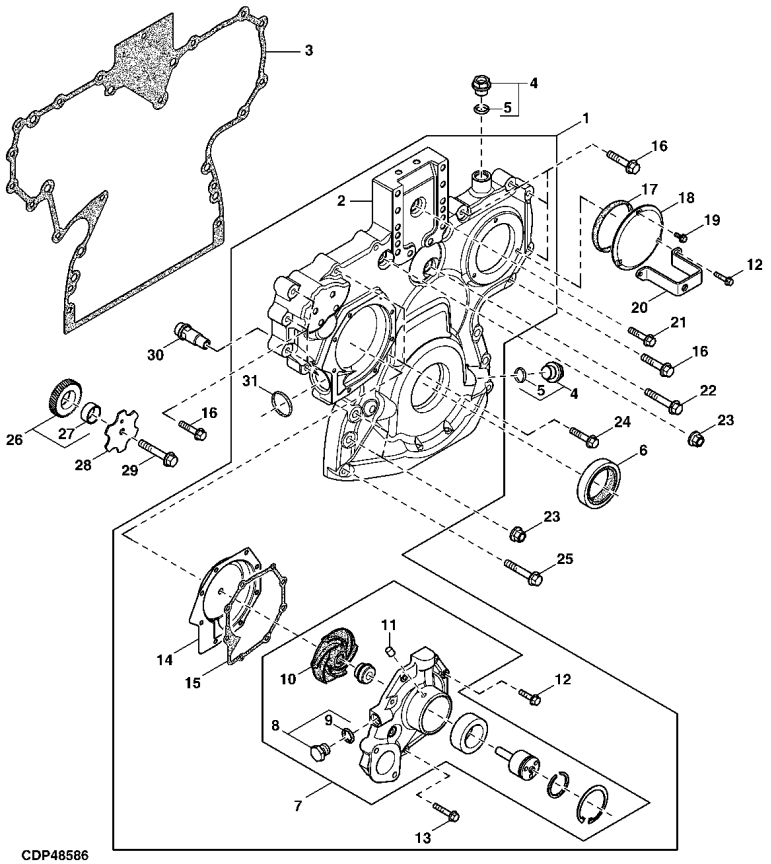
Item	Part Number	Description	Quantity Variation 4067
1	360014	Plug	1
2	360176	O-Ring	1
3	GM32789	Plug	2
4	#	Screw, M8 x 25	8
5	GM91940	Plate	1
6	GM91941	Seal	2
7	GM91942	Dipstick	1
8	GM91943	Housing	1
9	352758	Dipstick tube	1
10	GM91944	Drain Valve	1



4337_RE530154_PCD

Item	Part Number	Description	Quantity Variation 4337	Quantity Variation 4338
1	GM91945	Glow Plug	6	
1	GM46711	Glow plug		6

Group 44: Timing Gear Cover & Water Pump

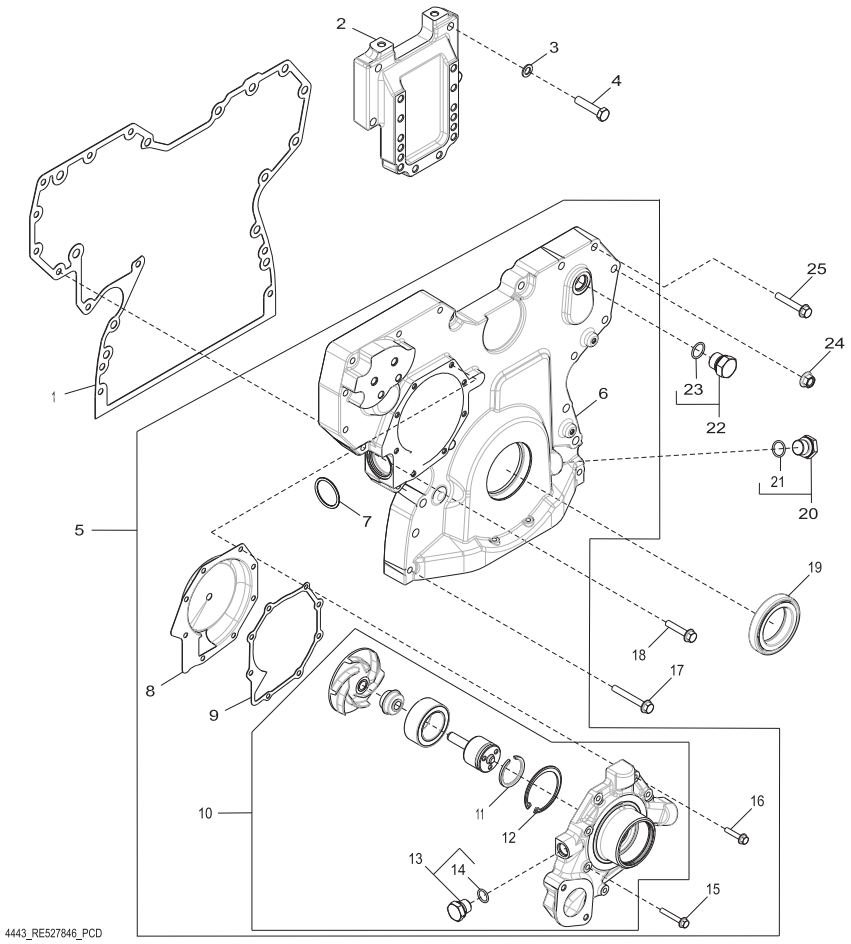


6443_5_1

Item	Part Number	Description	Quantity Variation 4412
1	GM84804	Kit, Cover	1
2	-		1
3	GM60527	Gasket	1
4	360078	Plug	2
5	360180	O- Ring	1
6	360181	Seal	1
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	#	Screw, M6 X 25	7
13	#	Screw, M6 X 30	3
14	360029	Kit, stainless steel insert	1
15	360124	Gasket, Water Pump	1
16	#	Screw, M8 X 40	8
17	360107	O- Ring	1
18	360105	Cover	1
19	#	Screw, M6 X 16	1
20	GM17552	Bracket	1
21	#	Screw, M8 X 35	1
22	360512	Screw, M8 X 45	1
23	#	Flange Nut, M10	6
24	#	Screw, M8 X 60	2
25	#	Screw, M8 X 55	4
26	360021	Gear	2
27	360082	Bushing	1
28	360148	Thurst Washer	1
29		Screw, M10 X 50	1
30	GM32810	Valve	1
31	GM24543	O- Ring	1

AR As Required # Common hardware; procure locally.

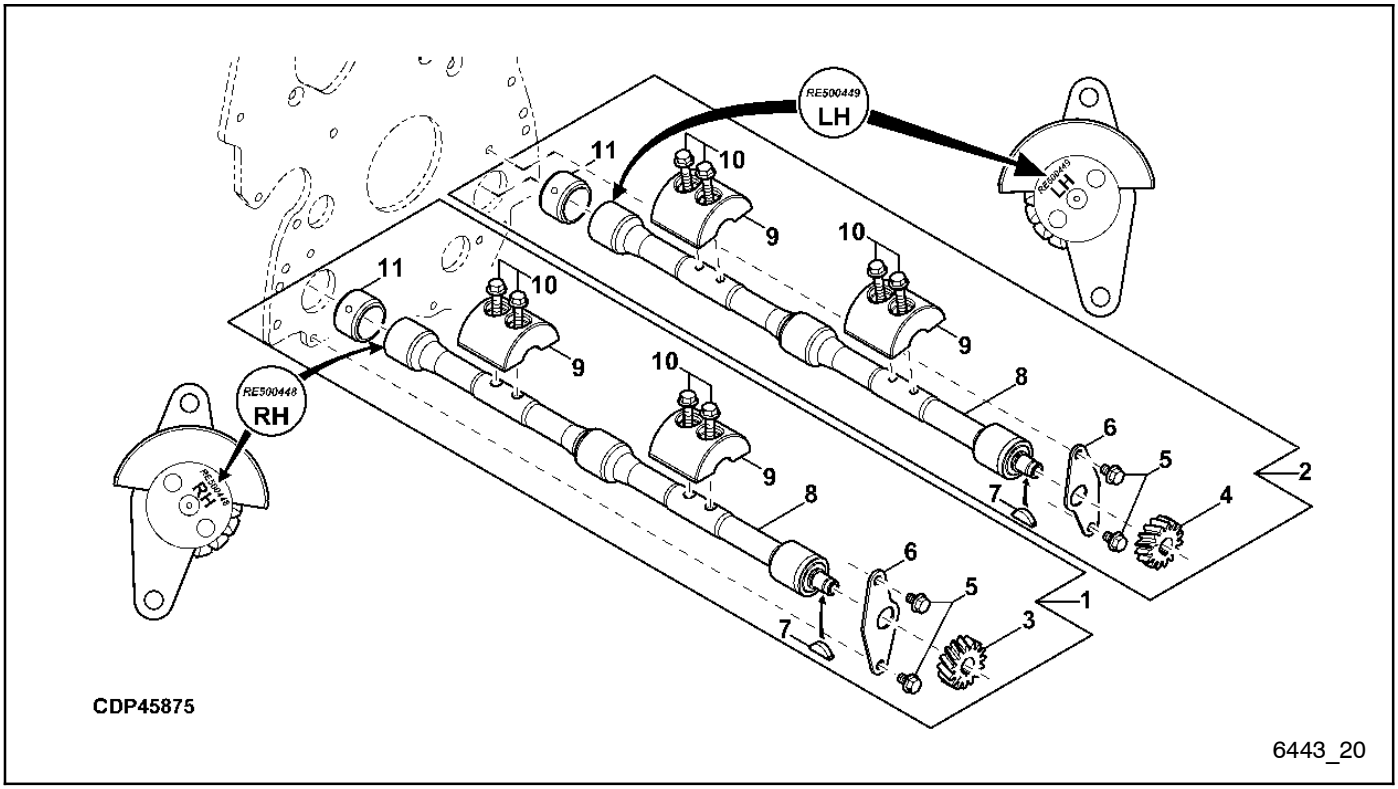
Group 44: Timing Gear Cover & Water Pump, continued



4443

Item	Part Number	Description	Quantity Variation 4443
1	GM88691	Gasket	1
2	GM52534	Support	1
3	#	Washer, 10.500 X 18 X 1.600 Mm	4
4	#	Cap Screw, M10 X 45	4
5	GM88726	Cover	1
6	GM88721	Cover	1
7	GM24543	O-Ring	1
8	360029	Kit, Stainless Steel Insert	1
9	360124	Gasket, Water Pump	1
10	GM88727	Water Pump (order insert and gasket also)	1
11	360003	Snap Ring	1
12	GM49931	Ring	1
13	360014	Plug	1
14	360176	O-Ring	1
15	#	Screw, M6 X 40	3
16	#	Screw, M6 X 30	5
17	#	Screw, M8 X 60	3
18	#	Screw, M8 X 40	1
19	360181	Seal	1
20	360078	Plug, Drain	1
21	360180	O-Ring, 17.3 X 2.2 Mm	1
22	GM17498	Fitting	1
23	GM17437	O-Ring	1
24	GM30375	Flange Nut, M10	9
25	#	Screw, M8 X 50	8

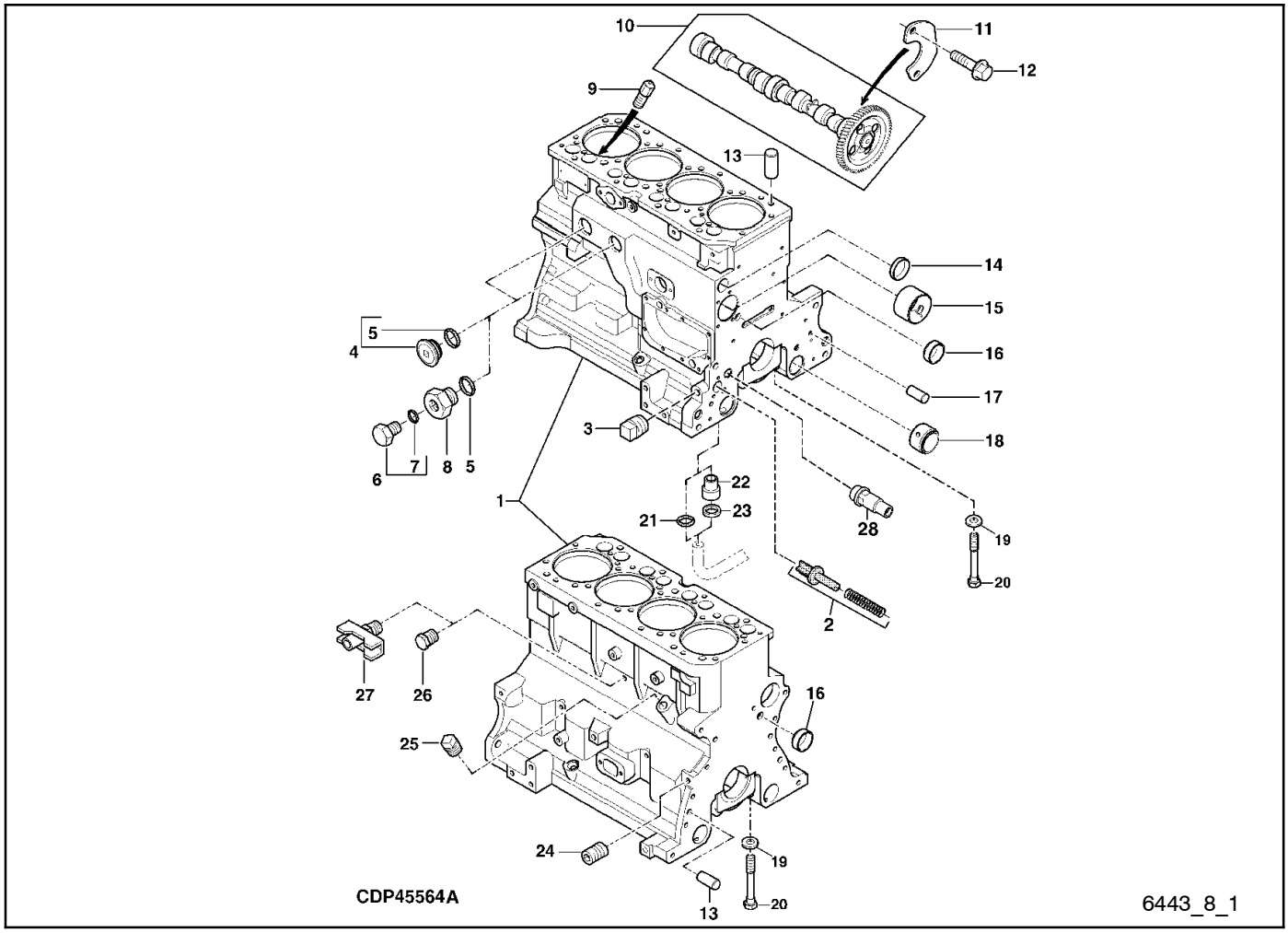
Group 45: Engine Balancer Shafts



Item	Part Number	Description	Quantity Variation 4501	Quantity Variation 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.

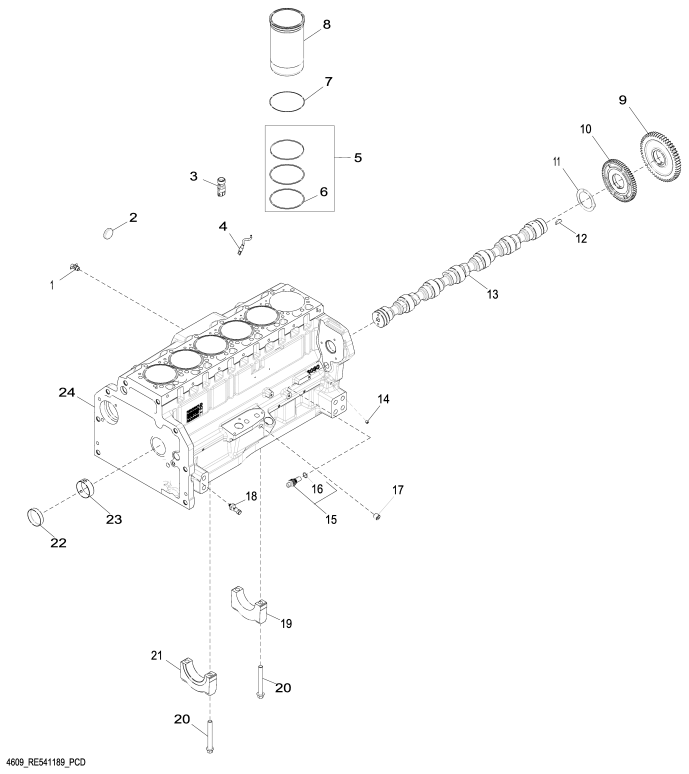
Group 46: Cylinder Block



Item	Part Number	Description	Quantity Variation 4601	Quantity Variation 4614
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	AR	2
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.

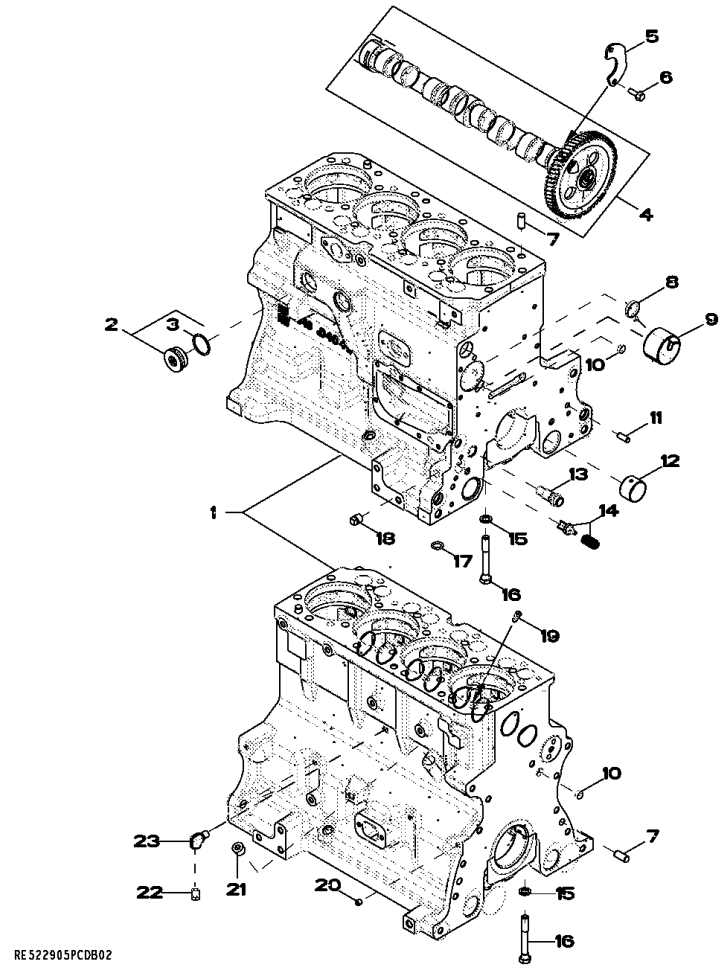
Group 46: Cylinder Block, continued



4609

Item	Part Number	Description	Quantity Variation 4609
1	223435	DRAIN VALVE	1
2	224157	CAP	1
3	GM98729	Cam Follower Roller	12
4	GM50232	Orifice	6
5	223716	KIT	6
6	GM79817	O-Ring	6
7	GM79818	Shim	6
8	-	Cylinder Liner	6
9	GM79820	Gear	1
10	GM50141	Gear	1
11	GM50132	Washer	1
12	352700	SHAFT KEY	1
13	GM79821	Camshaft	1
14	GM18873	Pipe plug	5
15	GM59793	Sensor (engine speed)	2
16	360180	O-RING, 17.3 X 2.2 MM	1
17	GM18862	Pipe plug, 1/2”	3
18	GM32919	Sensor, pressure	1
19	352748	BEARING CAP	6
20	GM79822	Cap Screw	14
21	352813	BEARING CAP, THRUST	1
22	223866	CAP	1
23	GM79823	Bushing	6
24	-	Order short block assembly	1

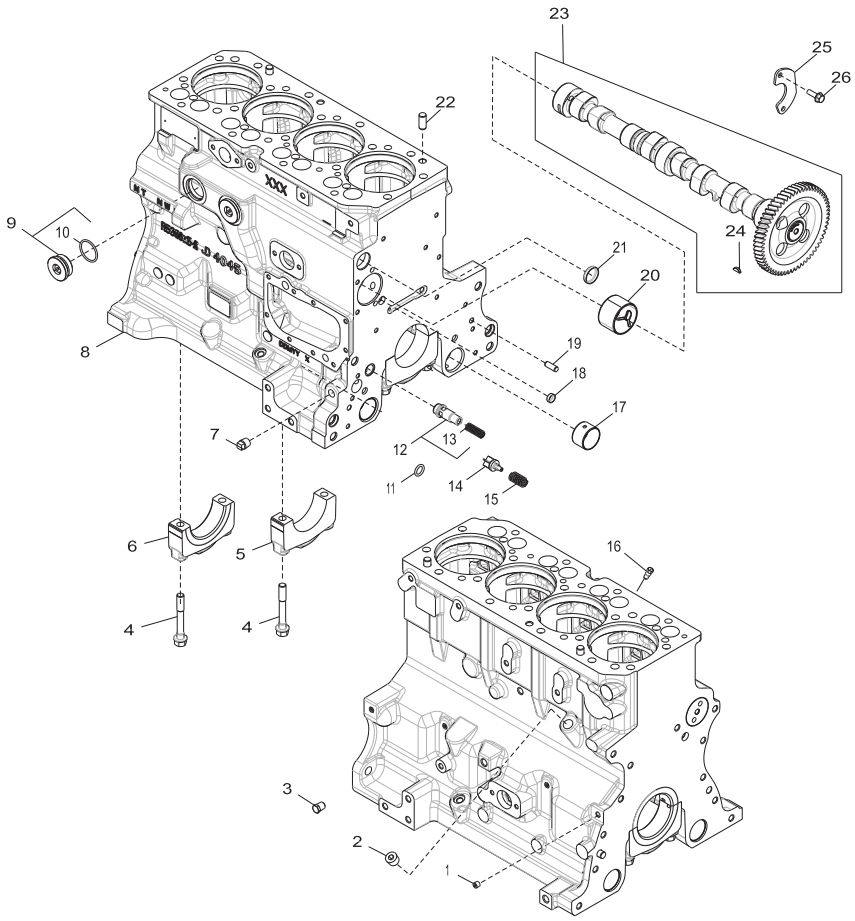
Group 46: Cylinder Block, continued



4634

Item	Part Number	Description	Quantity Variation 4634
1	-	Cylinder Block	1
2	GM32824	Plug	2
3	223988	O-Ring	1
4	GM88730	Camshaft	1
5	360154	Plate, Thrust	1
6	#	Screw, M8 X 25	2
7	223472	Dowel Pin	4
8	360093	Plug	1
9	352246	Bushing	1
10	360517	Cap	1
11	352064	Dowel Pin	1
12	360519	Bushing	6
13	GM32810	Valve	1
14	GM21420	Valve Kit	1
15	224089	Washer	10
16	223639	Cap Screw	10
17	336458	O-Ring	1
18	#	Pipe Plug, 3/8”	1
19	360146	Jet	4
20	GM18873	Pipe Plug	5
21	#	Pipe Plug, 1/2”	1
22	GM86406	Pipe Plug	1
23	GM77165	Elbow Fitting	1

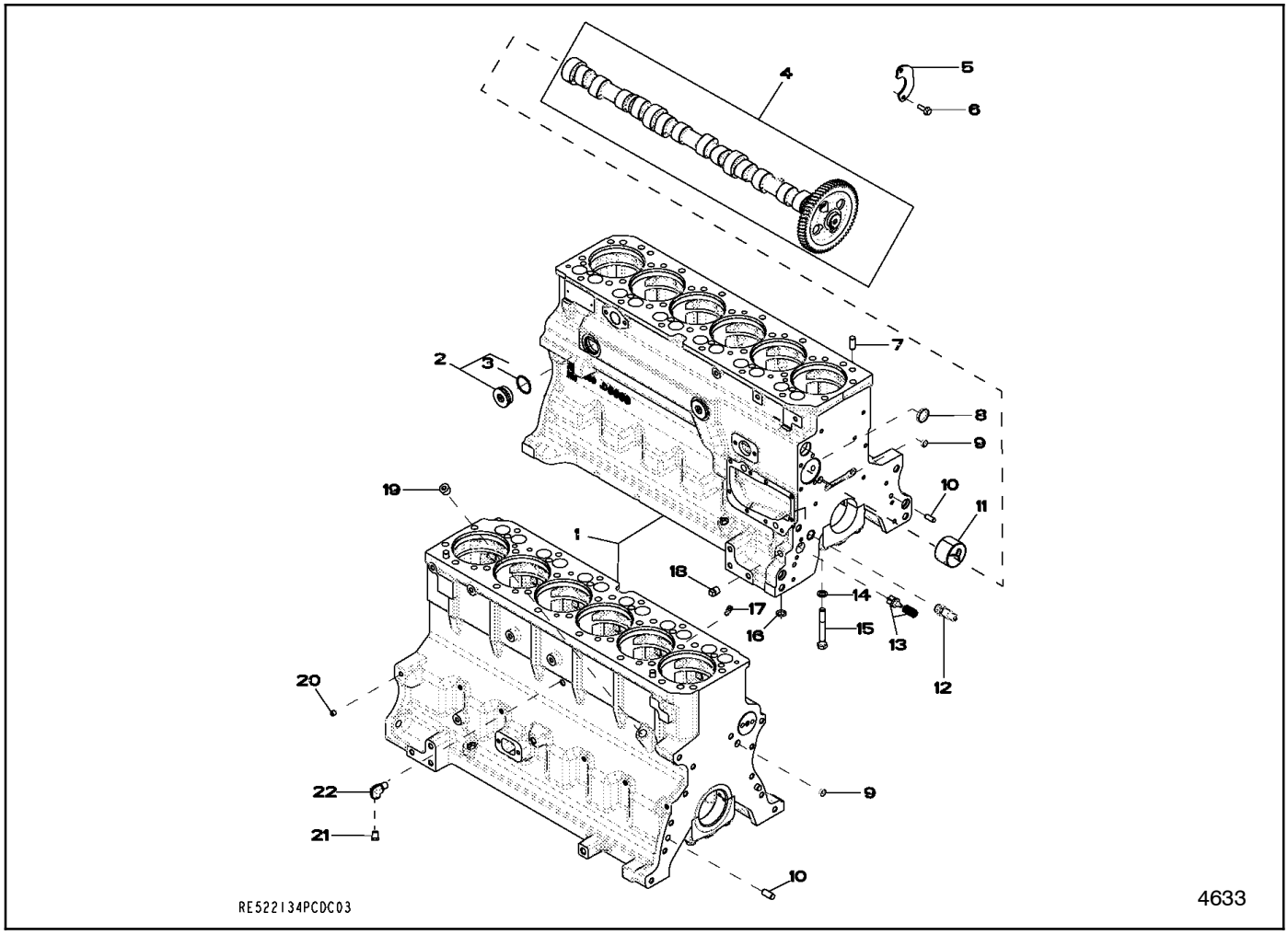
Group 46: Cylinder Block, continued



4652

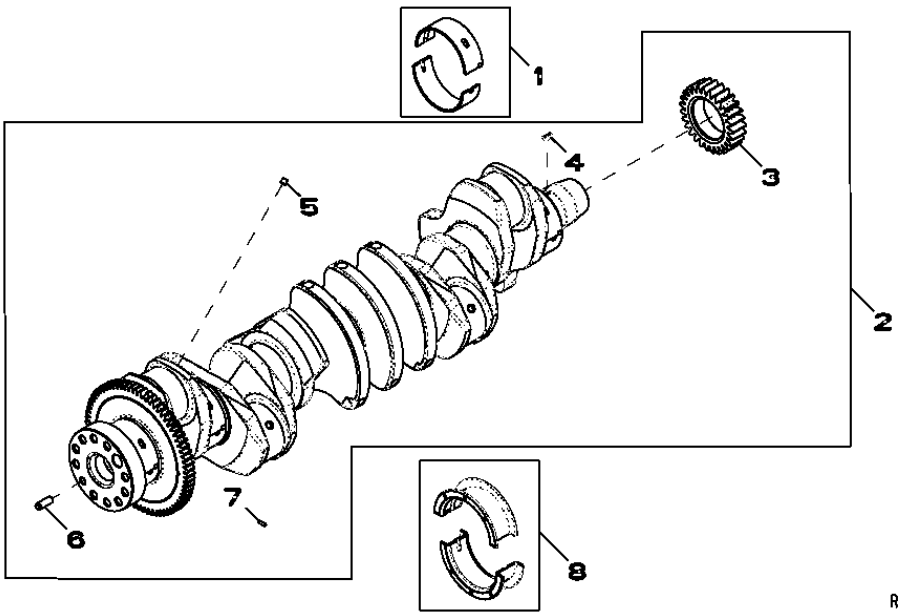
Item	Part Number	Description	Quantity Variation 4652
1	224268	Pipe Plug	1
2	#	Pipe Plug, 1/2”	1
3	223802	Pipe Plug	10
4	GM86407	Cap Screw	4
5	360084	Bearing Cap, Main Bearing	1
6	GM86408	Bearing Cap	1
7	#	Pipe Plug, 3/8”	1
8	-	Cylinder Block	1
9	GM32824	Plug	2
10	223988	O-Ring	1
11	336458	O-Ring	1
12	GM32810	Valve	1
13	GM17452	Compression Spring	1
14	360103	Valve, Engine Oil Bypass	1
15	360080	Spring	1
16	360146	Jet	4
17	360519	Bushing	6
18	360517	Cap	2
19	GM49823	Pin, Dowel	2
20	352246	Bushing	1
21	360093	Plug	1
22	GM49822	Pin, Dowel	4
23	GM32813	Camshaft	1
24	360158	Key, Shaft	1
25	360154	Plate, Thrust	1
26	#	Screw, M8 X 25	2

Group 46: Cylinder Block, continued



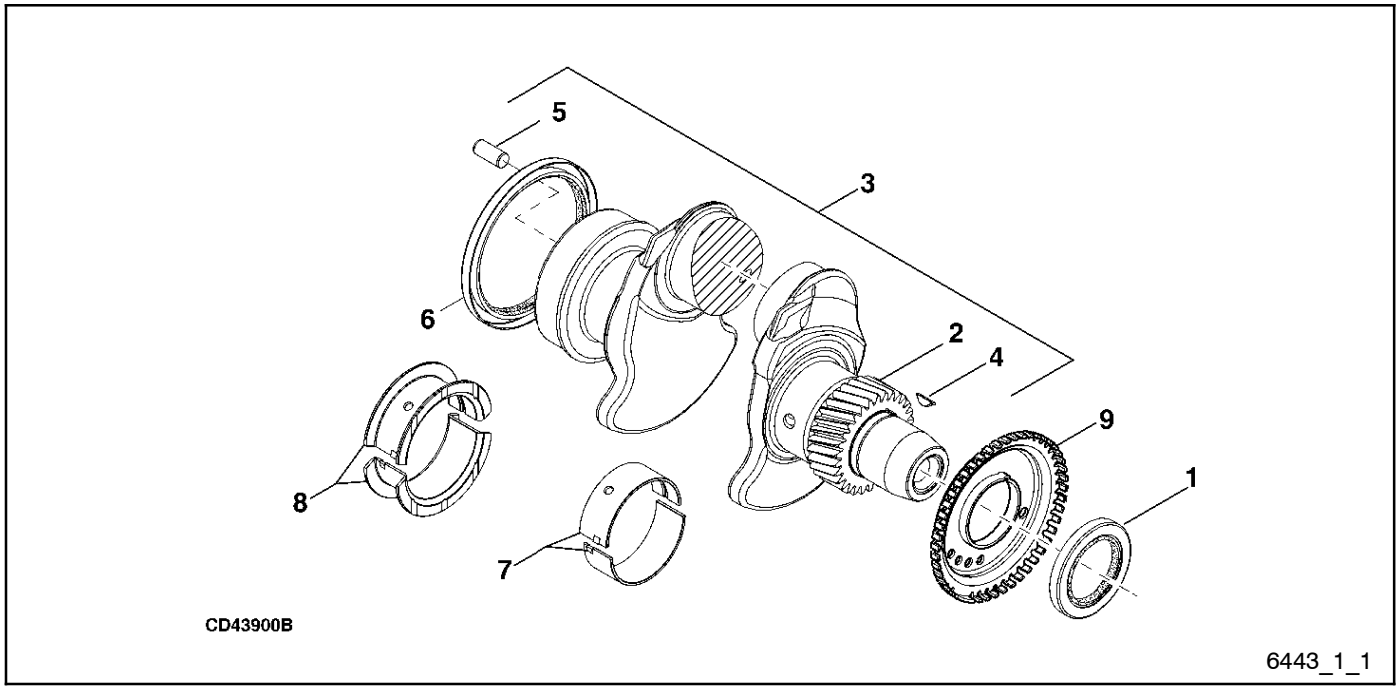
Item	Part Number	Description	Quantity Variation 4633
1	-	Cylinder Block	1
2	GM32824	Plug	2
3	223988	O-Ring	1
4	GM50071	Camshaft	1
5	360154	PLate, Thrust	1
6	#	Screw, M8 x 25	2
7	223472	Dowel Pin	4
8	360093	Plug	1
9	360517	Cap	2
10	352064	Dowel Pin	2
11	352246	Bushing	1
12	GM32810	Valve	1
13	GM21420	Valve kit	1
14	224089	Washer	14
15	223639	Cap Screw	14
16	336458	O-Ring	1
17	360146	Jet	6
18	#	Pipe Plug, 3/8”	1
19	#	Pipe Plug, 1/2”	1
20	GM18873	Pipe plug	7
21	GM86406	Pipe Plug	1
22	GM77165	Elbow fitting	1

Group 47: Crankshaft



4705

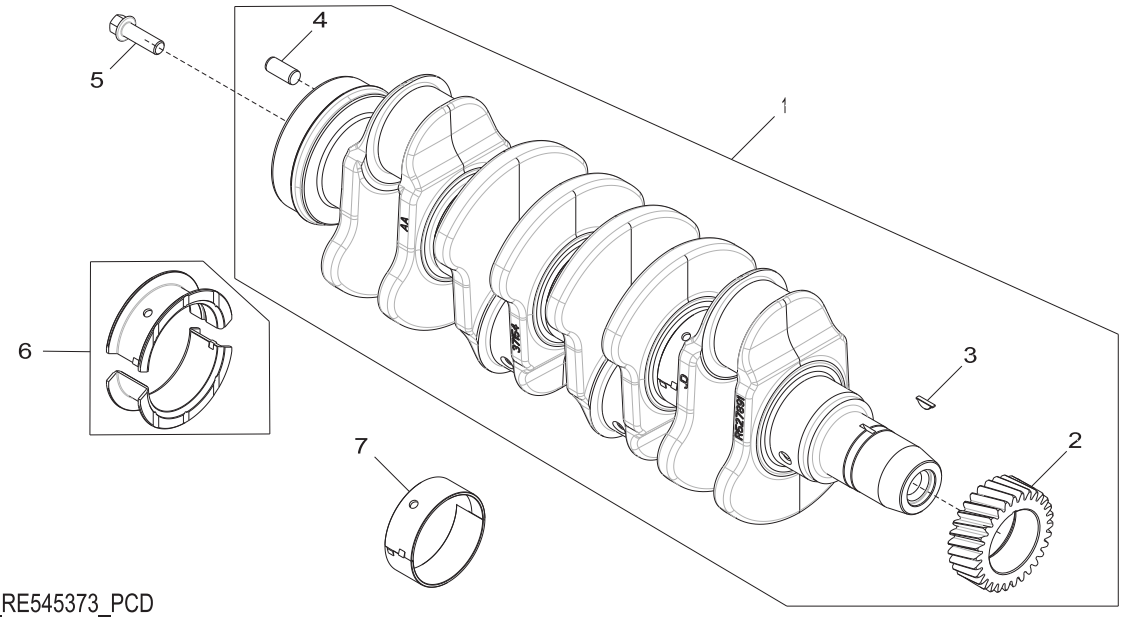
Item	Part Number	Description	Quantity Variation 4705
1	352853	Bearing	6
2	GM79825	Crankshaft	1
3	352715	GEAR	1
4	352746	KEY	1
5	GM79828	Plug	6
6	GM79829	Dowel Pin	1
7	GM79830	Dowel Pin	1
8	352854	THRUST BEARING	1



Item	Part Number	Description	Quantity Variation 4715	Quantity Variation 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

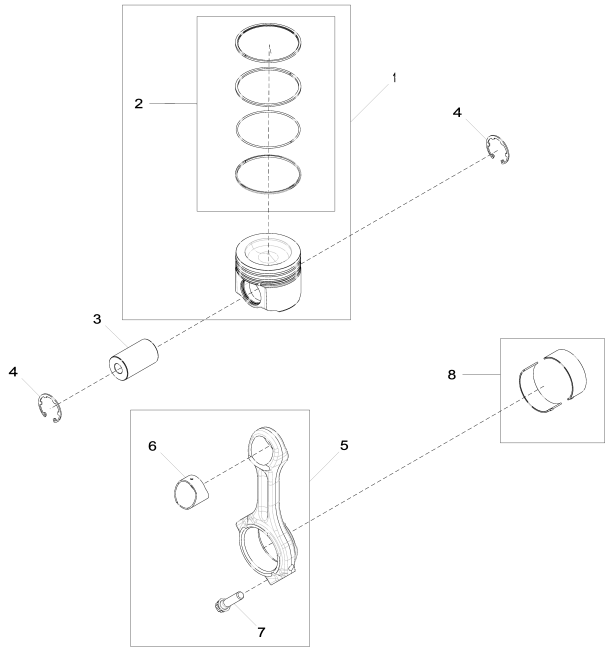
Group 47: Crankshaft, continued



4722

Item	Part Number	Description	Quantity Variation 4722
1	GM88731	Crankshaft	1
2	360099	Gear (30 Theeth)	1
3	GM50610	Shaft Key	1
4	223472	Dowel Pin	1
5	GM88695	Cap Screw	6
6	360050	Bearing, Standard	1
7	360049	Bearing, Standard	4

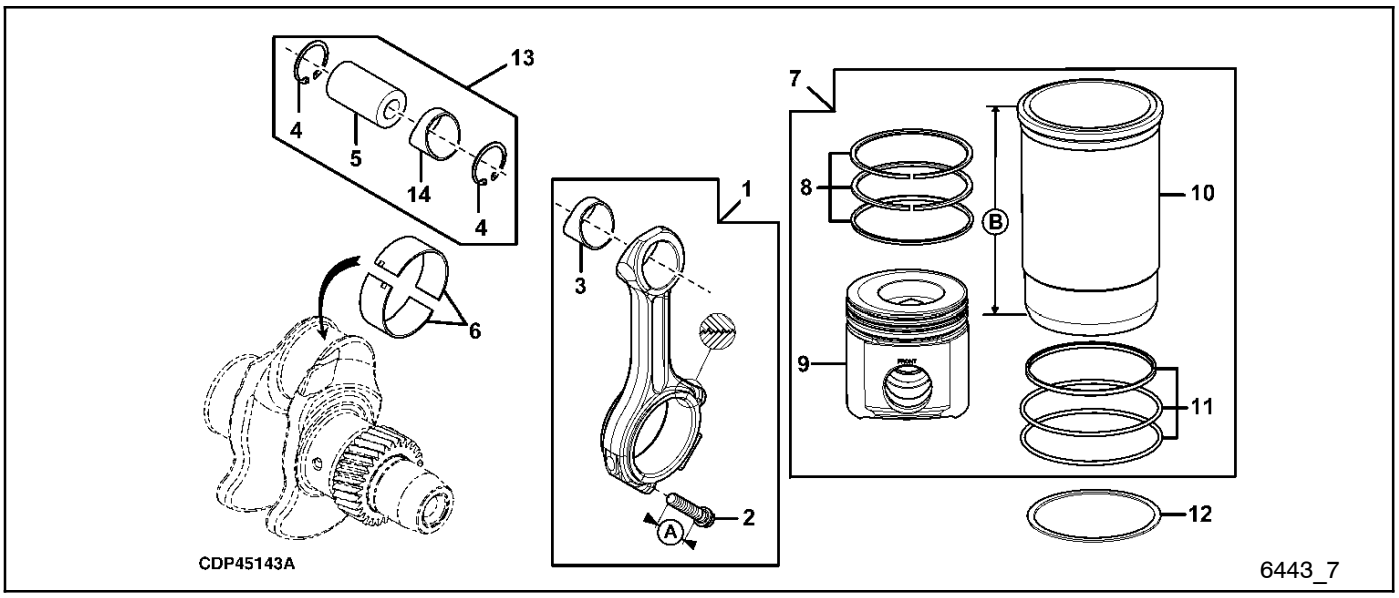
Group 48: Piston and Connecting Rod



4804

Item	Part Number	Description	Quantity Variation 4804
1	GM79832	Piston	6
2	GM98730	Piston Ring	6
3	GM50135	Piston pin	6
4	GM50159	Snap ring	12
5	GM79833	Connecting Rod	6
6	223853	BUSHING	1
7	GM18728	Screw	2
8	GM79834	Bearing	6

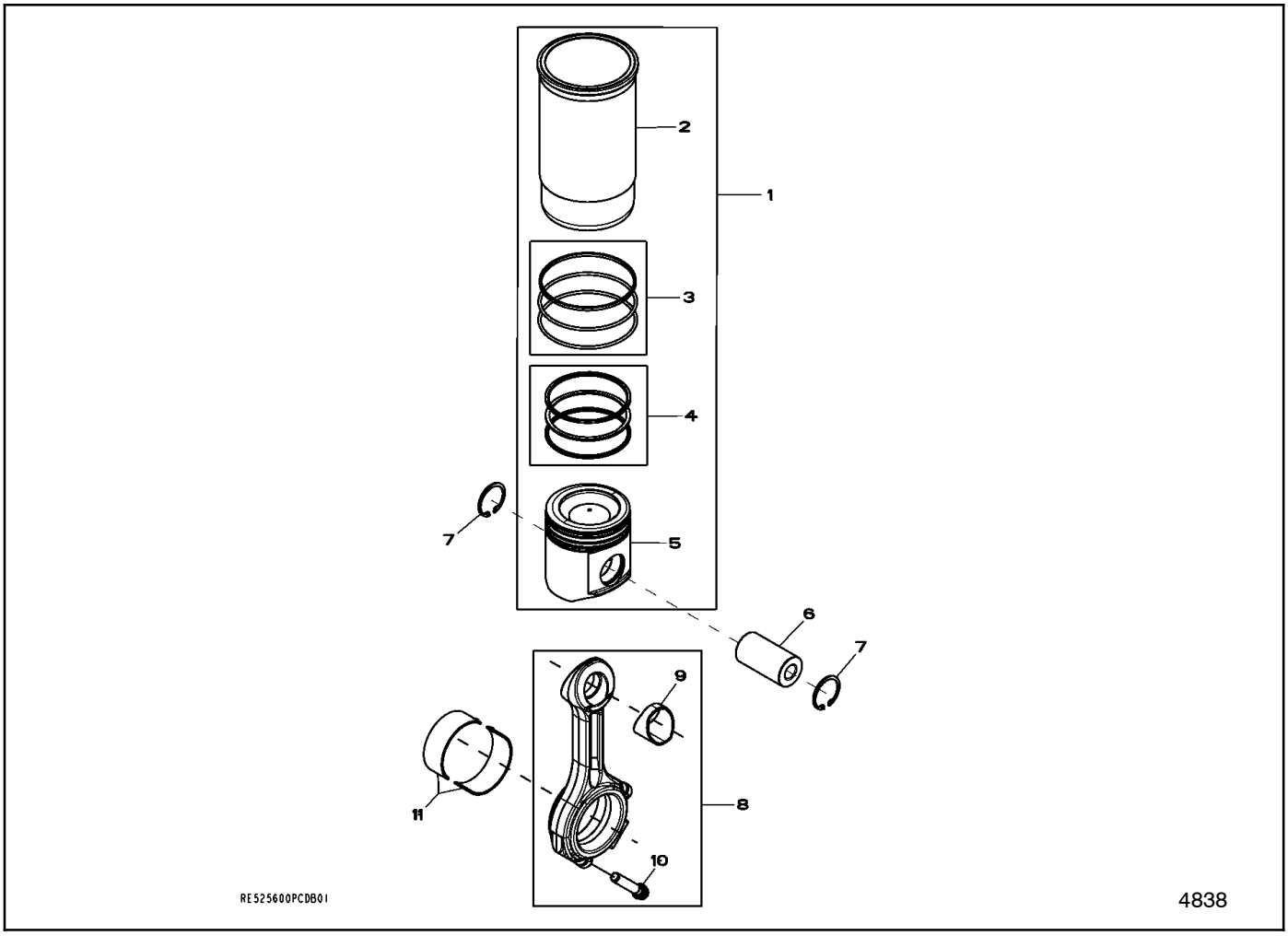
Group 48: Piston and Connecting Rod, continued



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

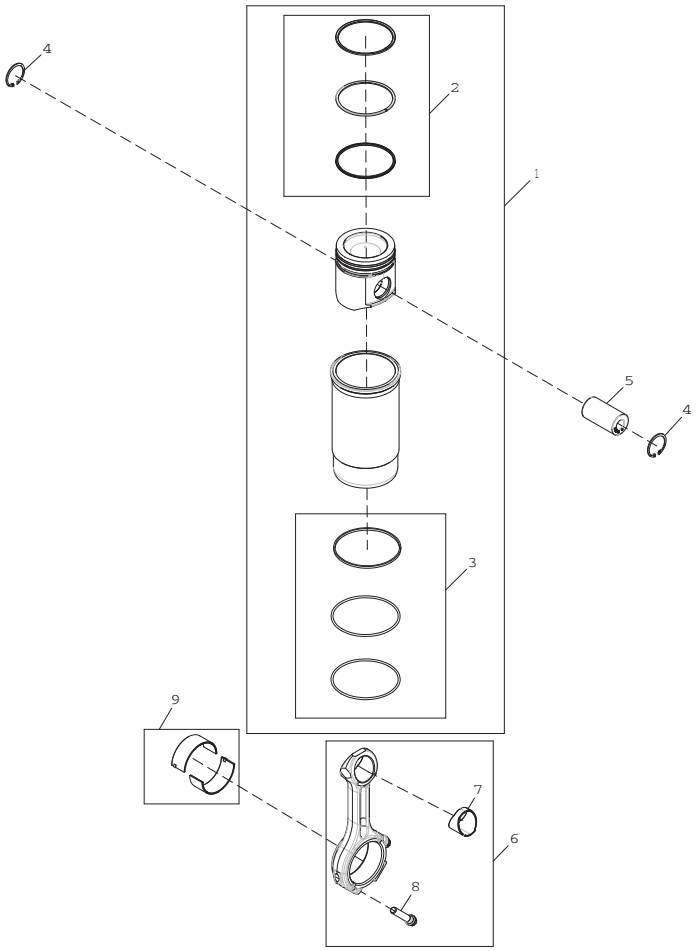
AR As Required

Group 48: Piston and Connecting Rod, continued



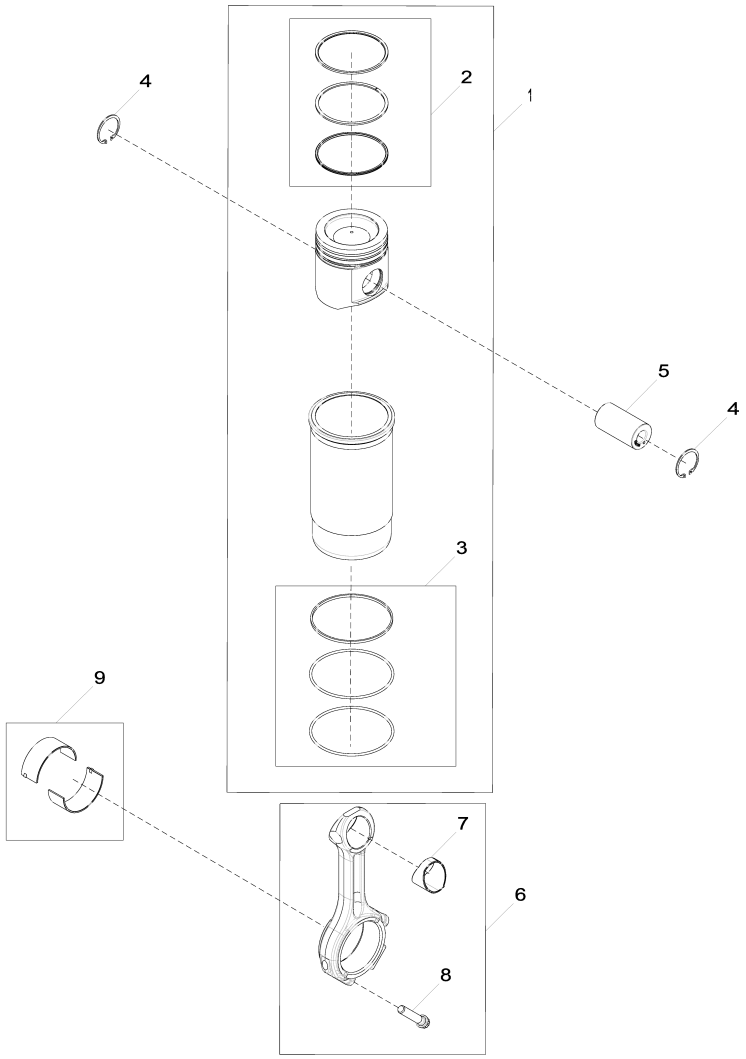
Item	Part Number	Description	Quantity Variation 4838
1	GM50055	Piston-Liner Kit	4
2	-	Cylinder Liner (order item 1)	1
3	223419	O-Ring Kit	1
4	GM50056	Piston Ring Kit	1
5	-	Piston (order item 1)	1
6	GM46667	Piston Pin	4
7	223479	Snap Ring	8
8	GM17610	Connecting Rod	4
9	GM17446	Bushing	1
10	GM17477	Screw	2
11	360053	Bearing, Standard	4
	360054	Bearing, .25 Mm Undersize	AR

Group 48: Piston and Connecting Rod, continued



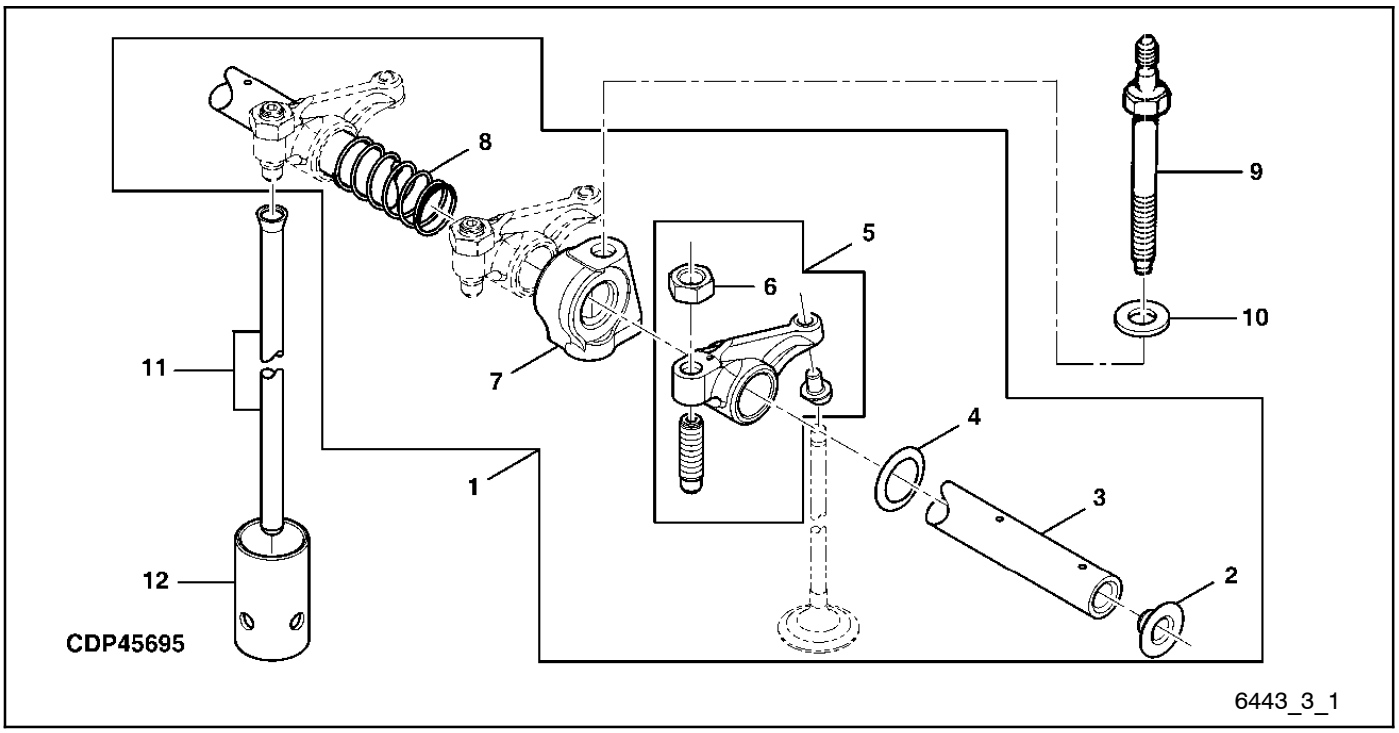
Item	Part Number	Description	Quantity Variation 4866
1	GM88790	Cylinder Kit	4
2	GM50031	Piston ring kit	1
3	223419	O-Ring Kit	1
4	223479	Snap Ring	8
5	GM46667	Piston pin	4
6	GM17610	Connecting rod	4
7	GM17446	Bushing	1
8	GM17477	Screw	2
9	360053	Bearing, Standard	4

Group 48: Piston and Connecting Rod, continued



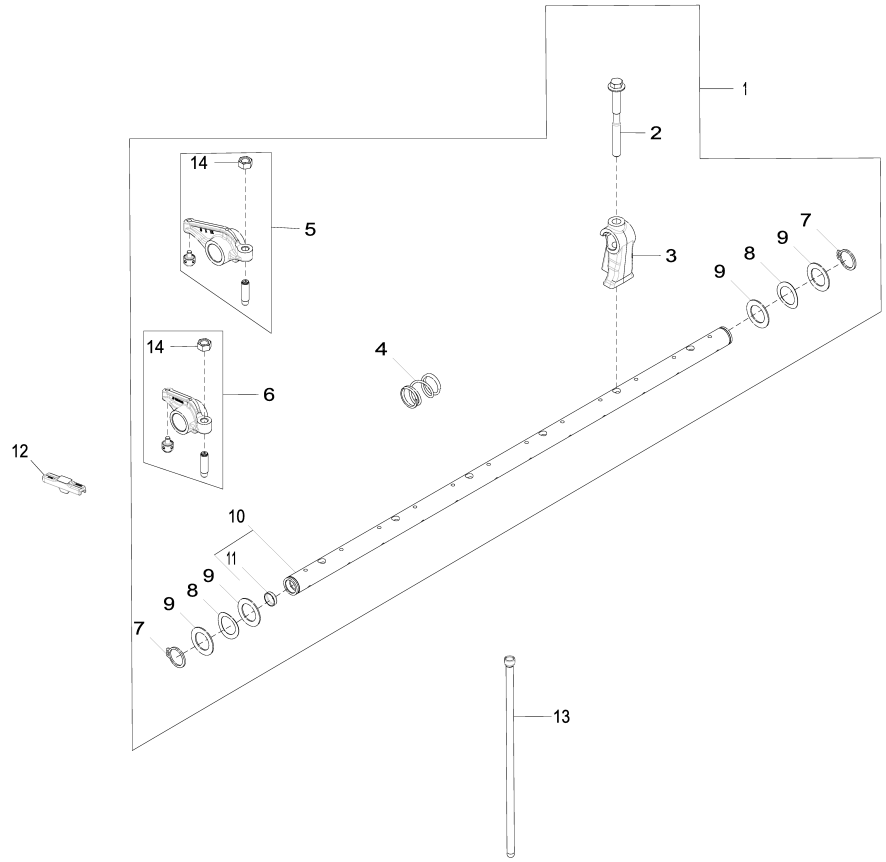
Item	Part Number	Description	Quantity Variation 4852
1	GM88790	Cylinder Kit	6
2	GM50031	Piston Ring Kit	1
3	223419	O-Ring Kit	1
4	223479	Snap Ring	12
5	GM46667	Piston Pin	6
6	GM17610	Connecting Rod	6
7	GM17446	Bushing	1
8	GM17477	Screw	2
9	360053	Bearing	6

Group 49: Valve Train



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

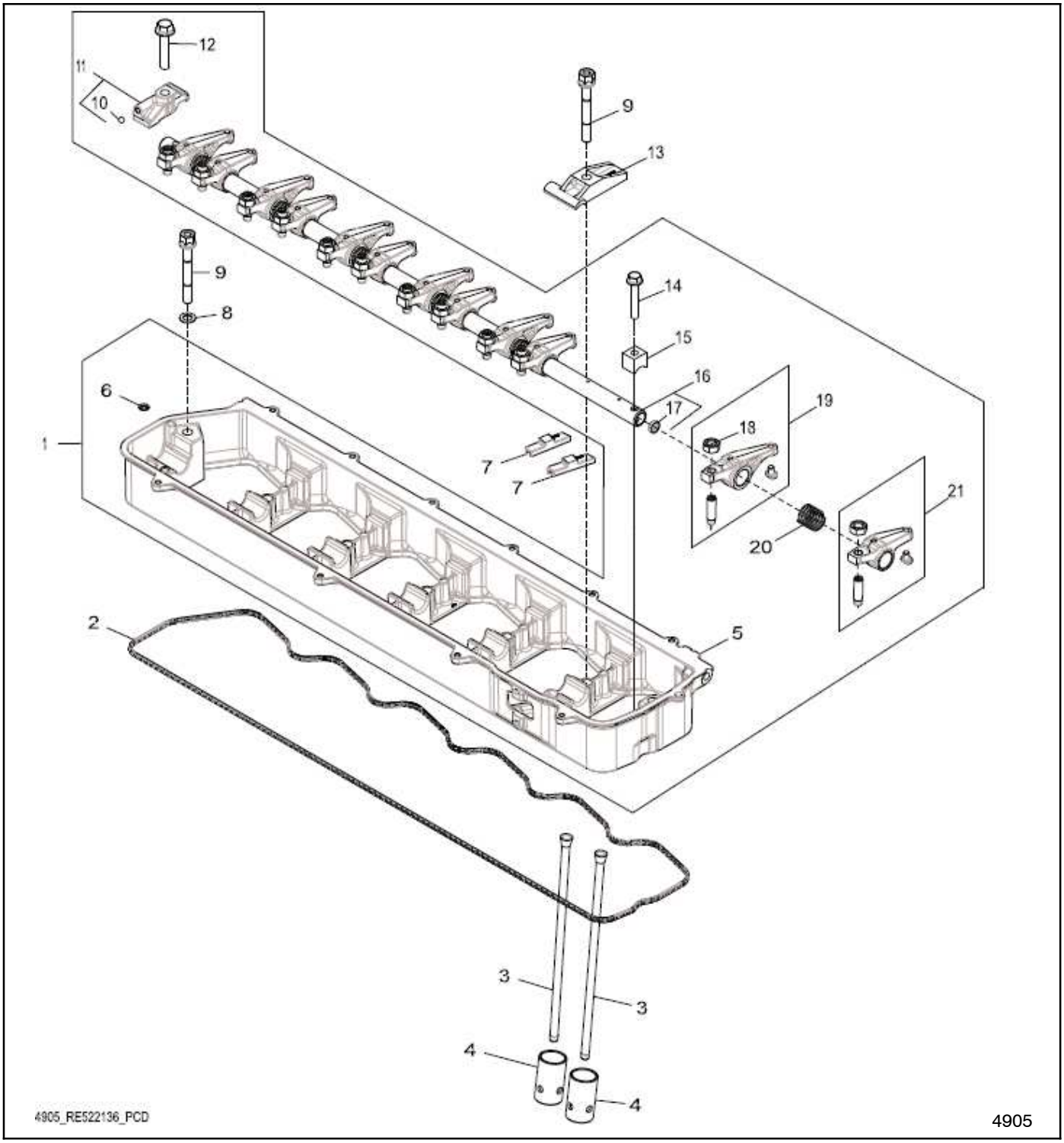
Common hardware; procure locally.



4903

Item	Part Number	Description	Quantity Variation 4903
1	GM79835	Rocker Arm	1
2	GM79836	Cap Screw	6
3	GM79837	Pedestal	6
4	GM50136	Spring	5
5	GM79842	Rocker Arm	6
6	GM79838	Rocker Arm	6
7	GM50111	Snap ring	2
8	GM50123	Washer	2
9	GM50182	Washer	4
10	GM79840	Rocker Arm Shaft	1
11	GM79841	Plug	2
12	GM79843	Guide	12
13	223877	Push Rod	12
14	GM79839	Nut	1

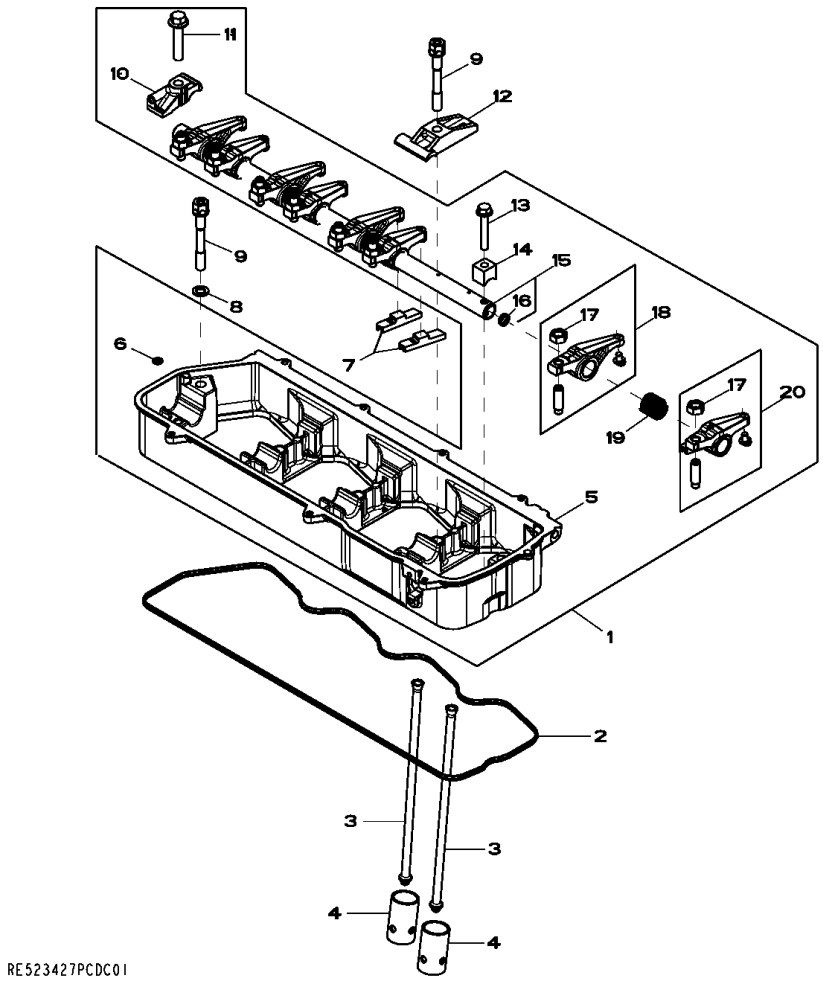
Group 49: Valve Train, continued



Group 49: Valve Train, continued

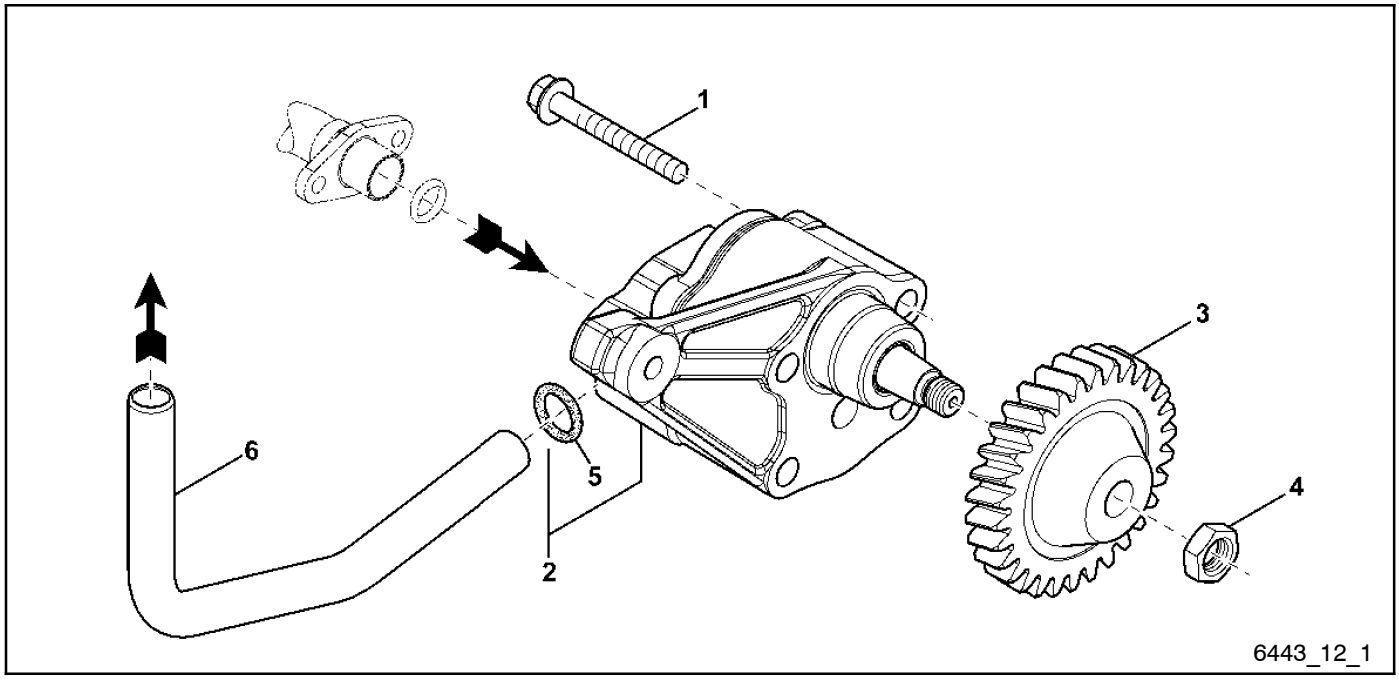
Item	Part Number	Description	Quantity Variation 4905
1	GM91946	Rocker Arm Shaft	1
2	GM91947	Gasket	1
3	GM91948	Push Rod	12
4	360135	Tappet	12
5	GM91949	Housing	1
6	GM49886	O-ring	1
7	GM46610	Lever	12
8	#	Washer, 10.500 X 18 X 1.600 mm	2
9	GM49902	Screw	7
10	GM49930	Ball	1
11	GM50008	Cap	1
12	#	Screw, M10 x 50	1
13	GM46607	Strap	5
14	#	Screw, M8 x 50	1
15	GM46604	Clamp	1
16	GM46605	Rocker arm shaft	1
17	GM49818	Plug	2
18	#	Nut, M10	1
19	GM46609	Rocker arm, exhaust valve	6
20	GM46611	Spring	6
21	GM50007	Rocker arm, intake	6

Group 49: Valve Train, continued



Item	Part Number	Description	Quantity Variation 4906
1	GM88729	Rocker Arm Shaft	1
2	GM88678	Gasket	1
3	GM46614	Push Rod	8
4	360135	Tappet	8
5	-	Cradle (order item 1)	1
6	GM49886	O-Ring	1
7	GM46610	Lever	8
8	#	Washer, 10.500 X 18 X 1.600 MM	2
9	GM49902	Screw	5
10	GM50008	Cap	1
11	#	Screw, M10 X 50	1
12	GM46607	Strap	3
13	#	Screw, M8 X 50	1
14	GM46604	Clamp	1
15	GM88723	Rocker Arm Shaft	1
16	GM49818	Plug	2
17	#	Nut, M10	8
18	GM46609	Rocker Arm, Exhaust Valve	4
19	GM46611	Spring	4
20	GM50007	Rocker Arm	4

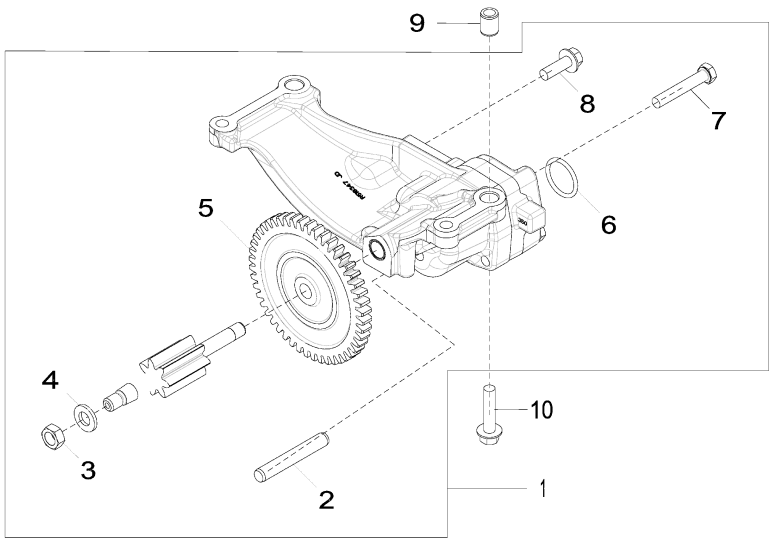
Group 50: Engine Oil Pump



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 50: Engine Oil Pump, continued

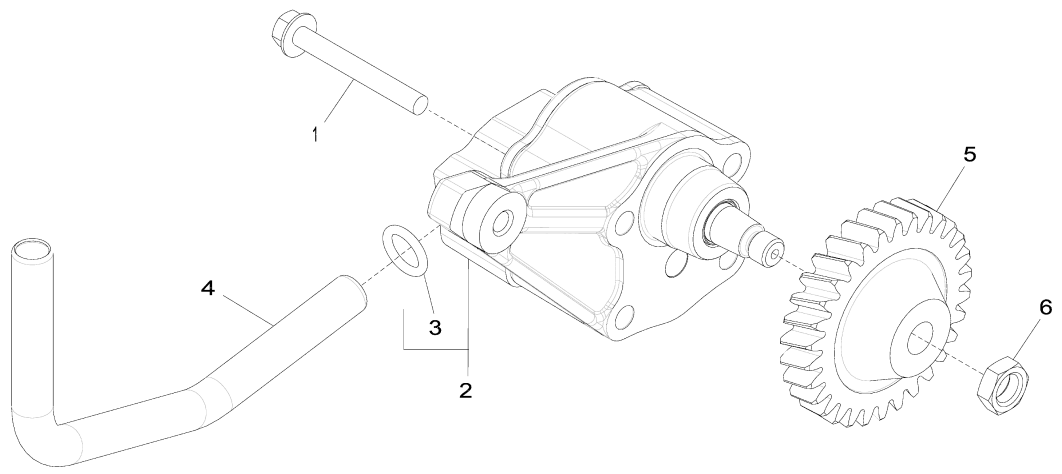


5003_RE543185_PCD

5003

Item	Part Number	Description	Quantity Variation 5003
1	GM79844	Oil Pump	1
2	GM98731	Quick Lock Pin	1
3	#	Nut, 1/2”	1
4	223982	WASHER	1
5	GM79845	Gear	1
6	223850	O-RING	1
7	#	Cap Screw, M10 X 60	2
8	M933-10030-82	SCREW, HEX CAP M10 x 30mm	1
9	GM18727	Bushing	2
10	#	Screw, M10 X 45	4

Group 50: Engine Oil Pump, continued

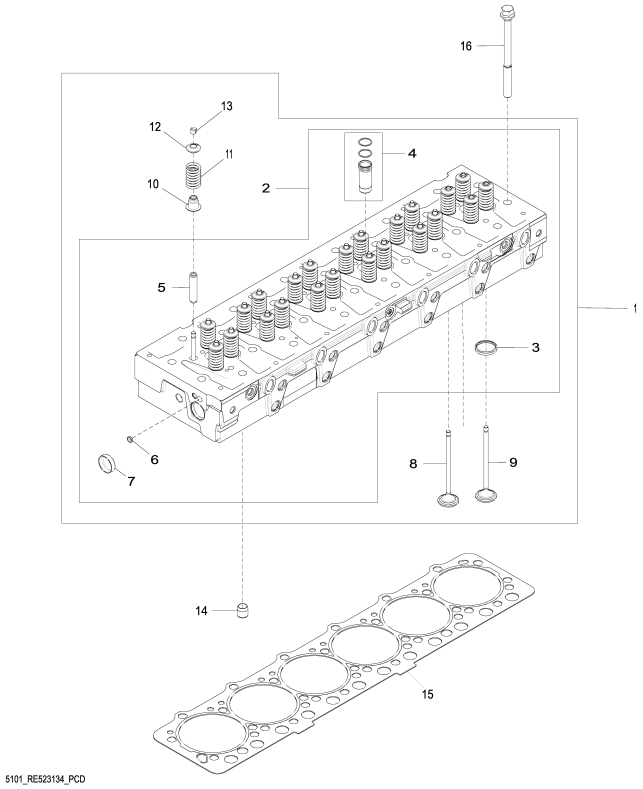


5024_RE522137_PCD

5024

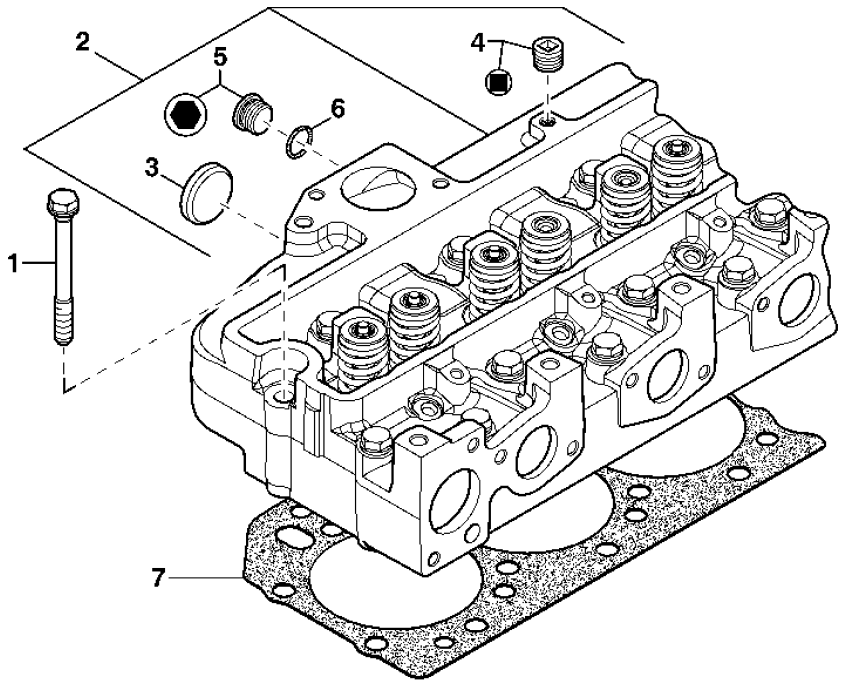
Item	Part Number	Description	Quantity Variation 5024
1	#	Screw, M8 x 65	2
2	GM49994	Oil pump	1
3	336458	O-Ring	1
4	GM91950	Oil Tube	1
5	360524	Gear, 30 Teeth	1
6	#	Nut, M12	1

Group 51-1: Cylinder Head



5101

Item	Part Number	Description	Quantity Variation 5101
1	GM67294	Cylinder head	1
2	-	Order item 1	1
3	GM79846	Valve Seat Insert	24
4	GM46683	Sleeve	6
5	GM79848	Guide	24
6	GM67271	Plug	3
7	GM67303	Plug	1
8	GM50162	Intake valve	12
9	GM50163	Exhaust valve	12
10	GM67291	Seal	24
11	GM50127	Spring	24
12	GM50139	Retainer	24
13	GM50173	Retainer	48
14	223755	BUSHING	2
15	GM79847	Engine Cylinder Head Gasket	1
16	GM67273	Screw	26

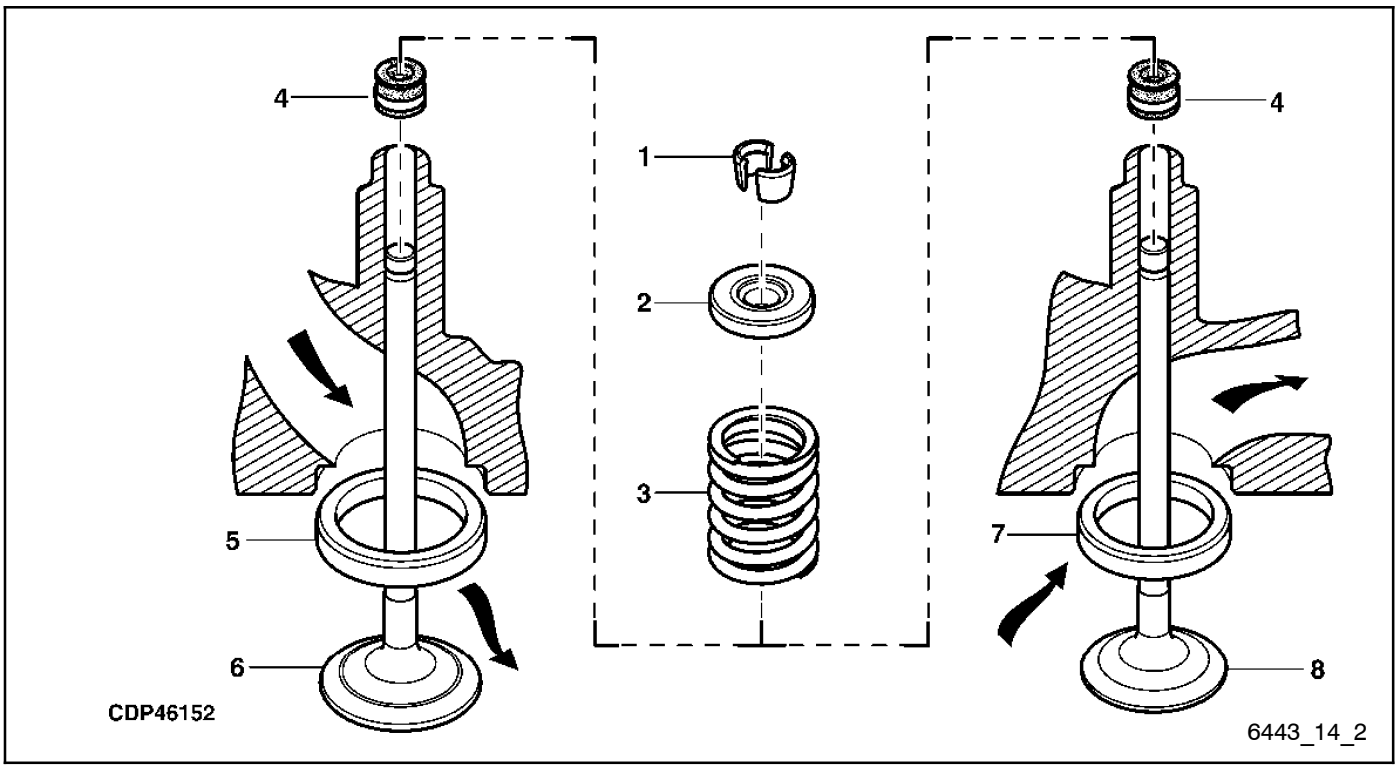


6443_14_1

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

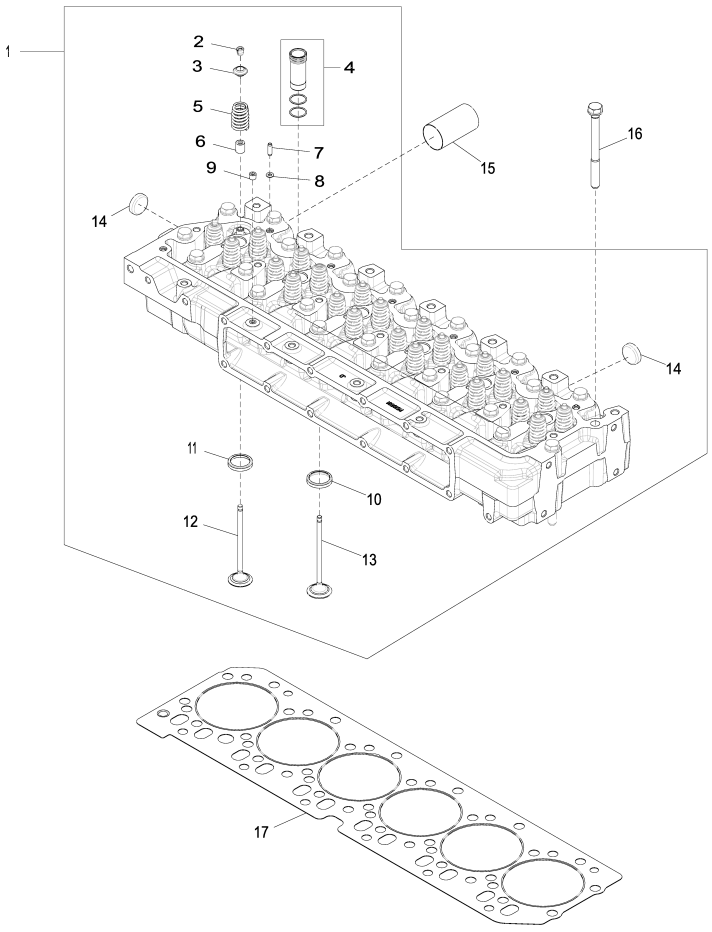
AR As Required

Group 51-2: Cylinder Head, continued



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

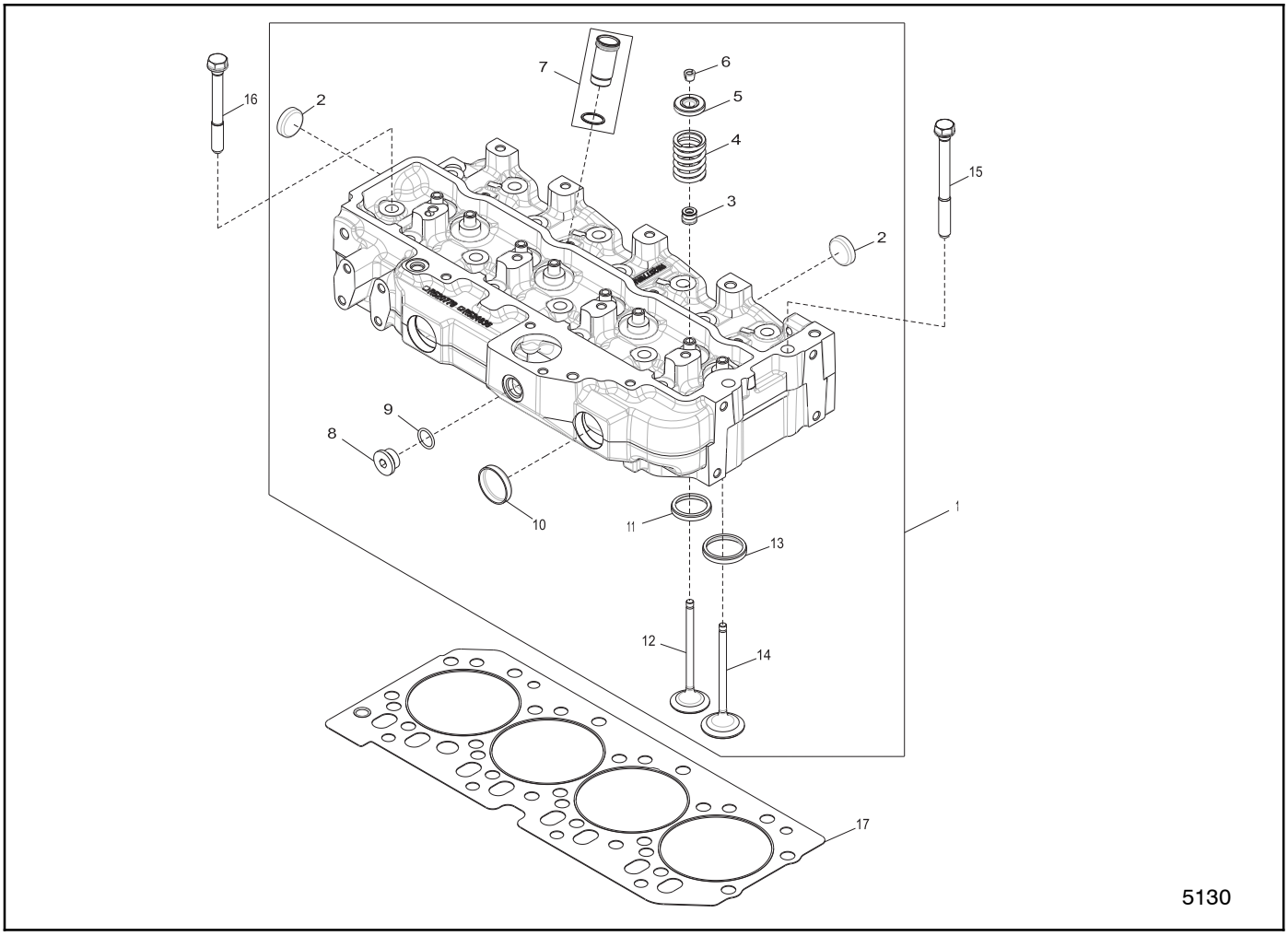
AR As Required



5120

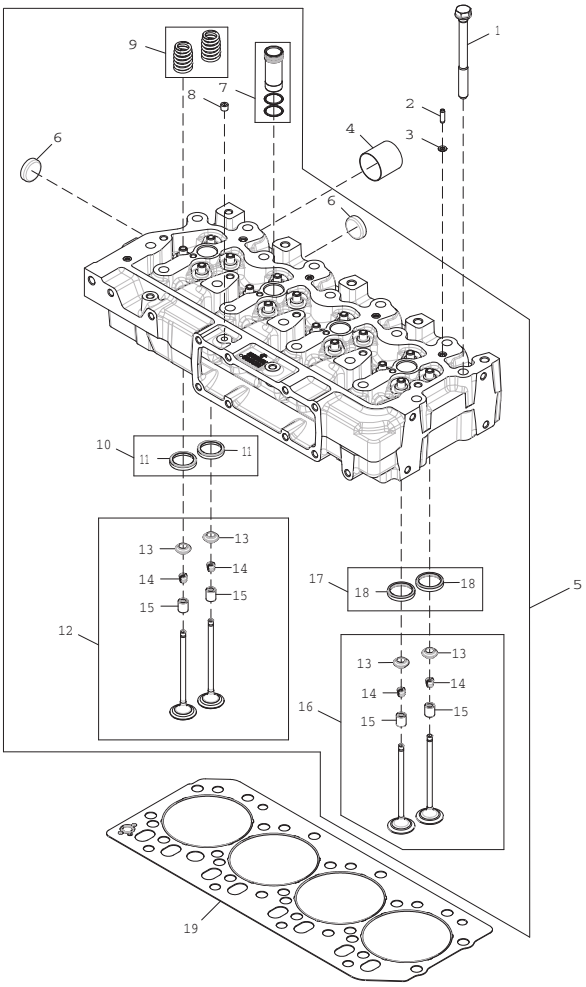
Item	Part Number	Description	Quantity Variation 5120
1	GM91951	Cylinder Head	1
2	GM88786	Retainer	48
3	GM46673	Cap	24
4	GM46683	Sleeve	6
5	GM49845	Spring	24
6	GM50041	Seal	24
7	GM49906	Bushing	2
8	GM49886	O-ring	7
9	GM18873	Pipe plug	1
10	GM88785	Valve Seat Insert	12
11	GM88784	Valve Seat Insert	12
12	GM88799	Valve Kit	12
13	GM49841	Valve Kit (Intake)	12
14	223448	CAP	4
15	GM49860	Sleeve	6
16	GM88698	Cap Screw	26
17	360094	Gasket, Cylinder Head	1

Group 51: Cylinder Head, continued



Item	Part Number	Description	Quantity Variation 5130
1	GM77164	Cylinder Head Kit	1
2	223448	Cap	4
3	224243	Seal	8
4	223455	Spring	8
5	224176	Rotator	8
6	224184	Lock	16
7	GM50051	Sleeve	4
8	360174	Fitting (order O-ring also)	1
9	223746	O-Ring	1
10	224157	Cap	2
11	GM21434	Insert, Valve	4
12	224156	Exhaust Valve	4
13	GM21433	Insert, Valve	4
14	224168	Intake Valve	4
15	GM88698	Cap Screw	2
16	224164	Cap Screw	16
17	360531	Gasket, Cylinder Head	1

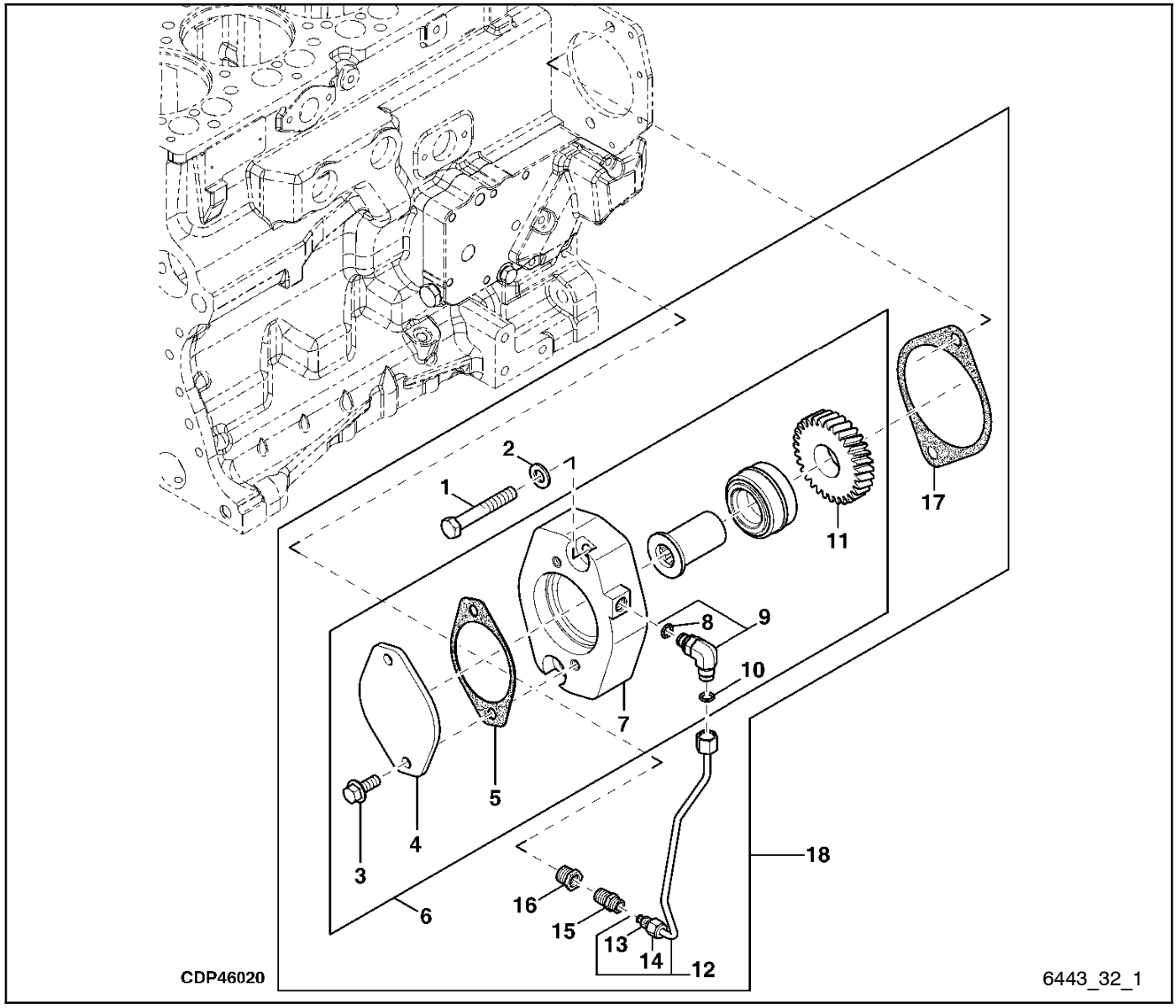
Group 51: Cylinder Head, continued



5158

Item	Part Number	Description	Quantity Variation 5158
1	GM88698	Cap Screw	18
2	GM49906	Bushing	2
3	GM49886	O-ring	5
4	GM46676	Sleeve	4
5	GM88798	Cylinder Head	1
6	223448	Cap	3
7	GM46683	Sleeve	4
8	GM18873	Pipe plug	1
9	GM49845	Spring	16
10	GM46678	Valve seat insert	4
11	GM88784	Valve Seat Insert	8
12	GM88799	Valve Kit (exhaust) (includes (2) seal)	4
13	GM46673	Cap	16
14	GM88786	Retainer	32
15	GM50041	Seal	16
16	GM49841	Valve Kit (intake) (includes (2) seal)	4
17	GM46677	Valve seat insert	4
18	GM88785	Valve Seat Insert	8
19	360531	Gasket, Cylinder Head	1
20	GM46675	Seal (not shown)	4

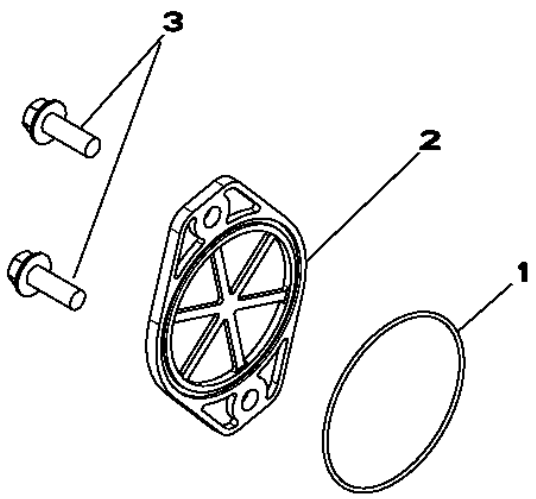
Group 52: Auxiliary Drive Adapter and Cover



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.

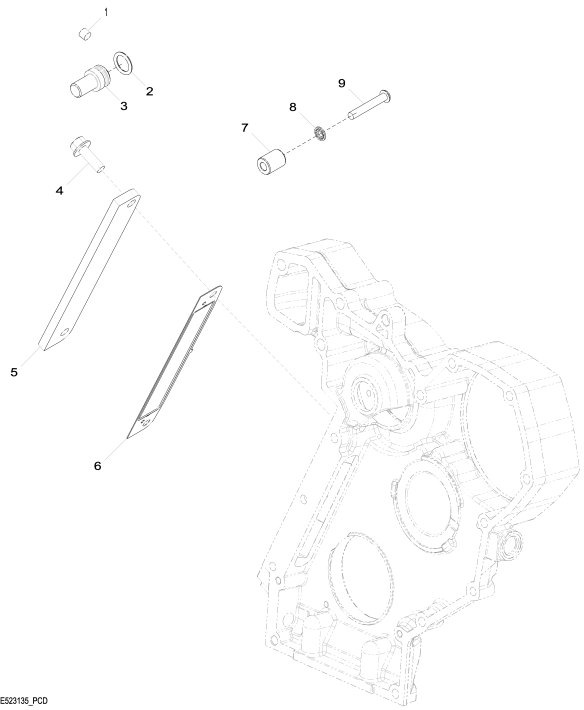
Group 52: Auxiliary Drive Adapter and Cover, continued



5204

Item	Part Number	Description	Quantity Variation 5204
1	360172	O-Ring	1
2	360593	Cover	1
3	GM70546	Screw, M12 X 35	2

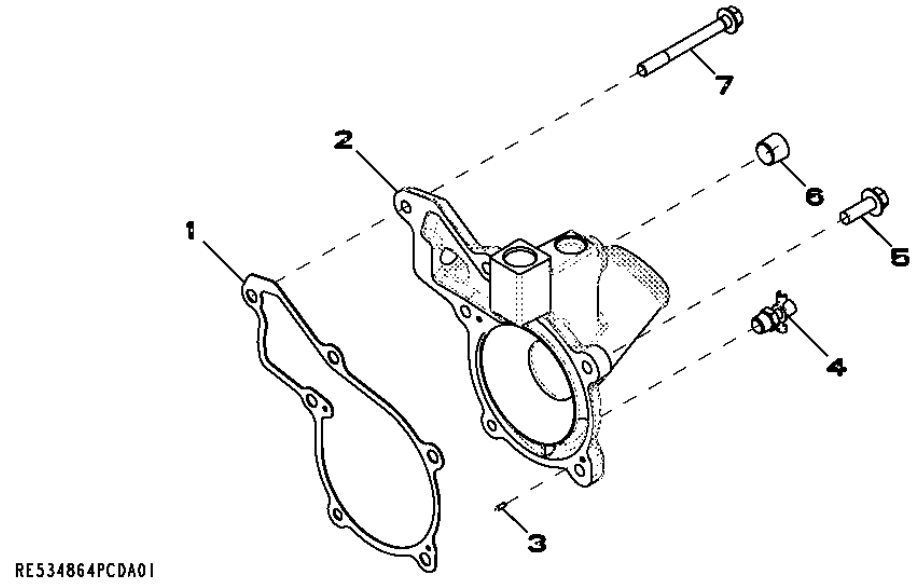
Group 52: Auxiliary Drive Adapter and Cover, continued



5204- 2

Item	Part Number	Description	Quantity Variation 5204- 2
1	GM18873	Pipe plug	1
2	GM95964	O-Ring	1
3	GM98732	Cap Screw	1
4	M933-10030-82	SCREW, HEX CAP M10 x 30mm	2
5	GM98733	Cover	1
6	GM52853	Gasket	1
7	GM98734	Spacer	1
8	GM18681	Seal	1
9	GM98735	Screw	1

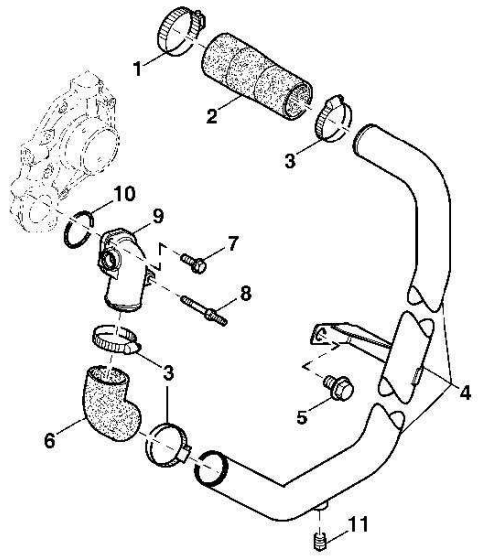
Group 57: Water Pump Inlet



5711

Item	Part Number	Description	Quantity Variation 5711
1	352737	GASKET	1
2	GM98736	Cover	1
3	352726	DOWEL PIN	2
4	223435	DRAIN VALVE	1
5	M933-10030-82	SCREW, HEX CAP M10 x 30mm	2
6	GM18862	Pipe plug, 1/2”	2
7	GM67274	Screw	1

Group 57: Water Pump Inlet, continued

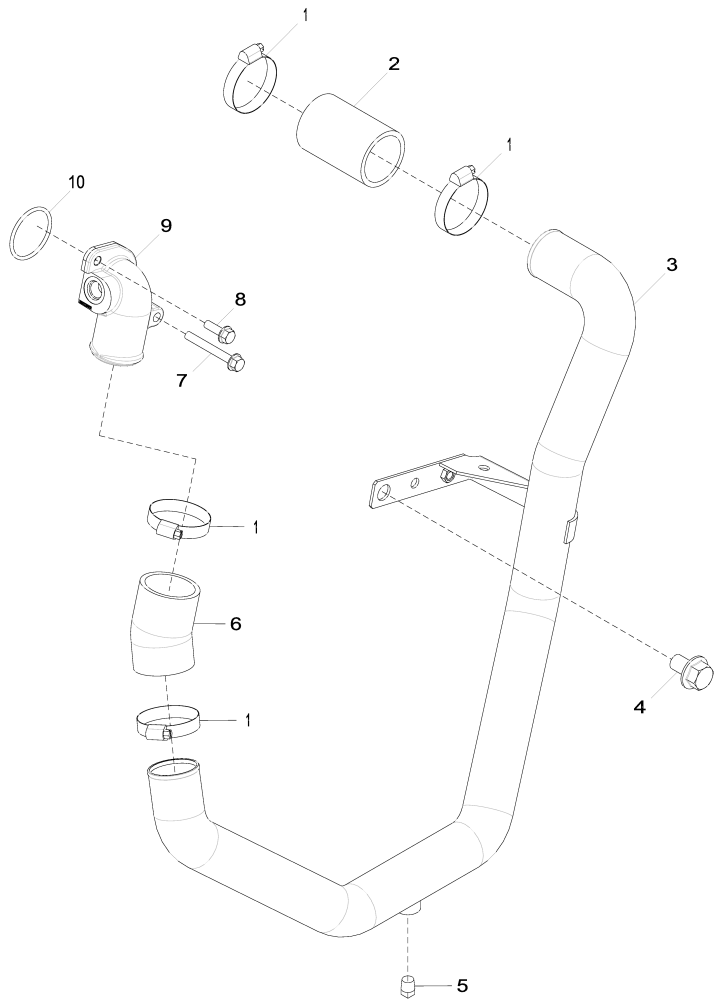


CDP47316

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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.

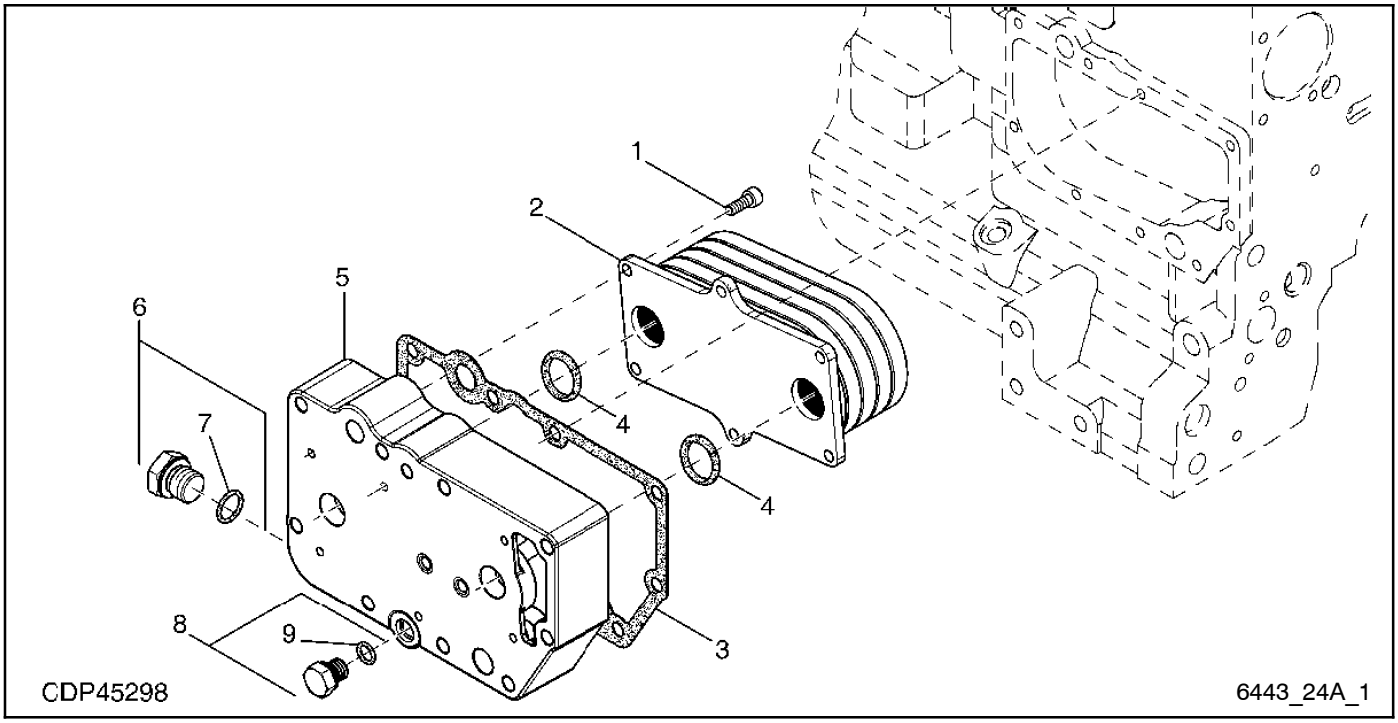


5737_RE544610_PCD

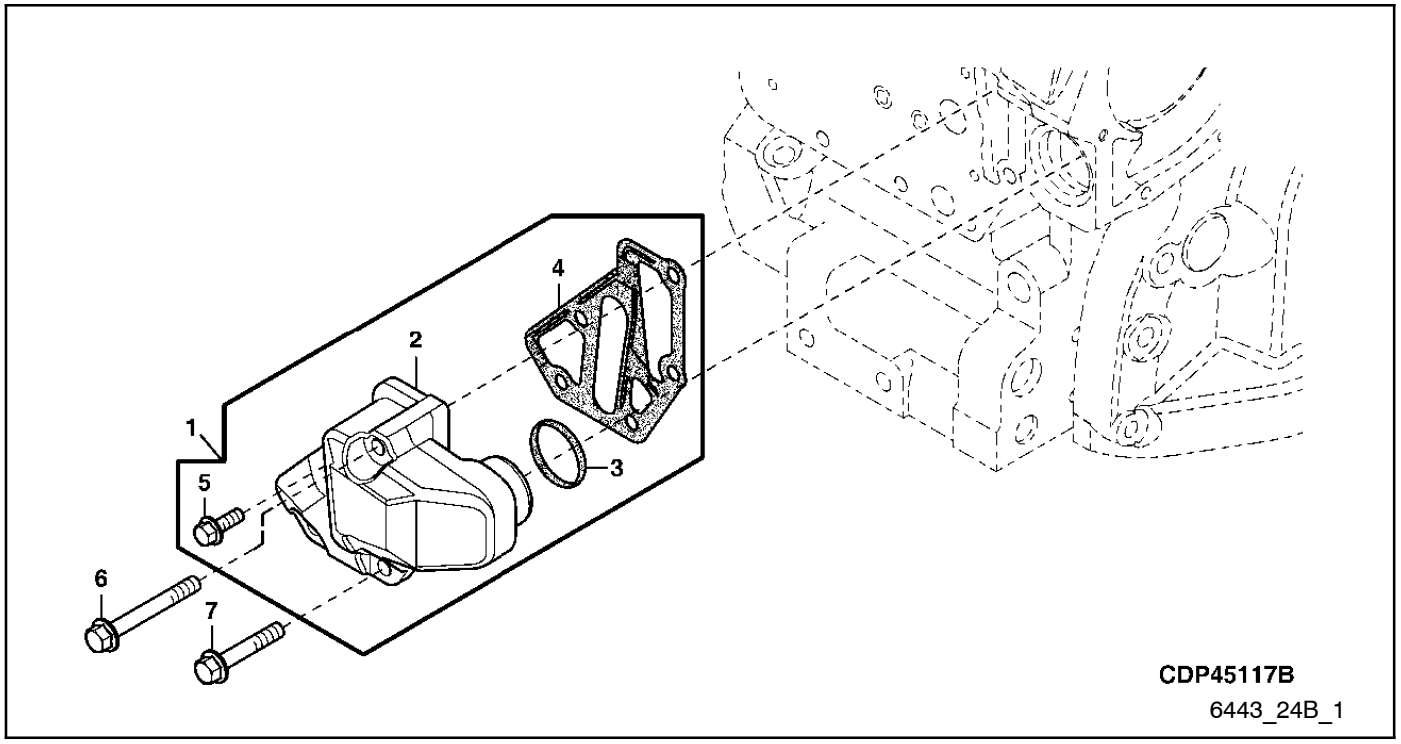
5737

Item	Part Number	Description	Quantity Variation 5737
1	GM18882	Clamp	4
2	GM91952	Radiator Hose	1
3	GM91953	Tube	1
4	#	Screw, M16 x 25	1
5	#	Pipe Plug, 1/4”	1
6	GM91954	Hose	1
7	#	Screw, M8 x 65	1
8	#	Screw, M8 x 25	1
9	GM32792	Housing	1
10	224172	O-Ring	1

Group 59-1: Engine Oil Cooler



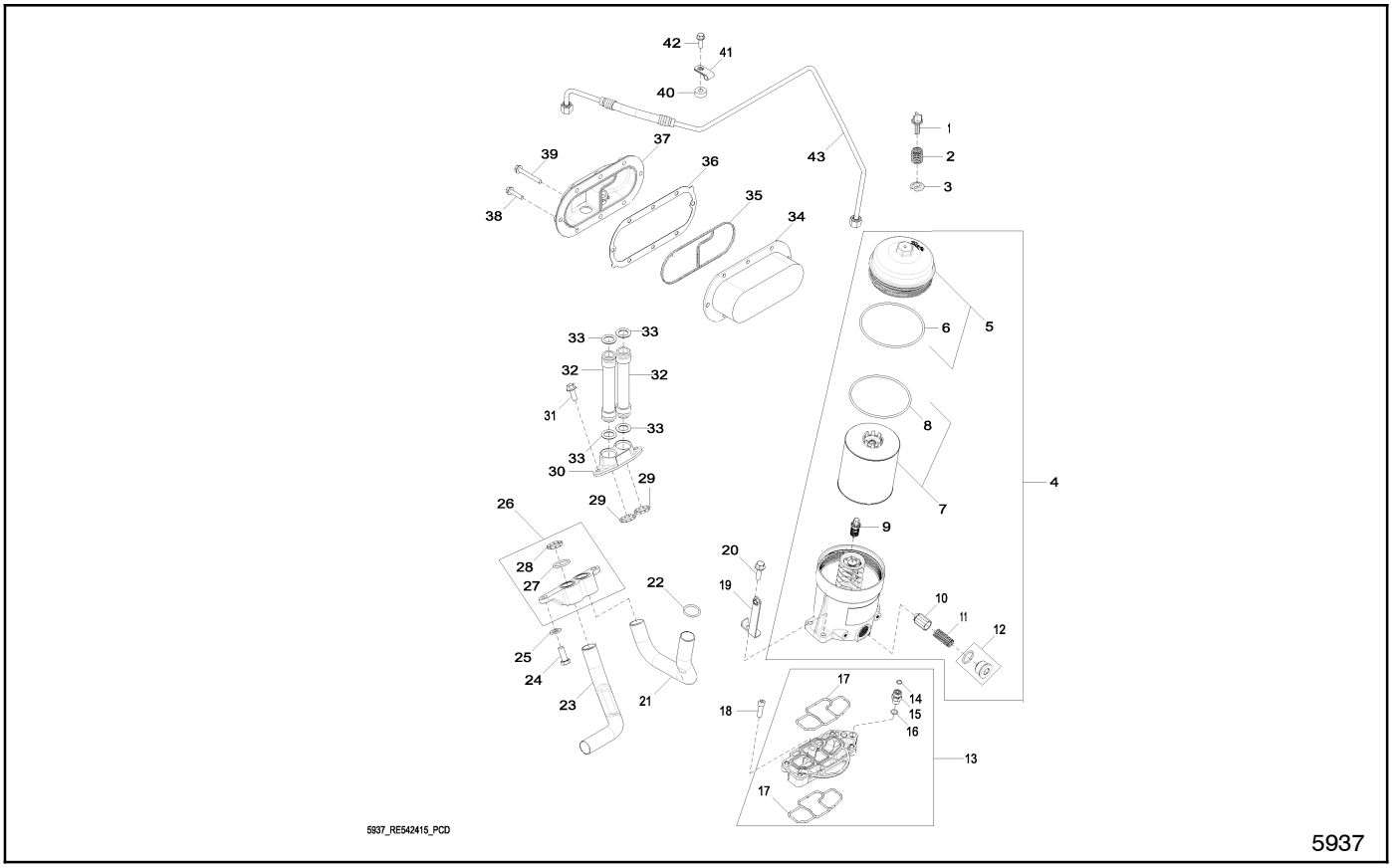
Item	Part Number	Description	Quantity Variation 5901	Quantity Variation 5904
1	GM50684	Screw, M6 x 16	6	6
2	GM17531	Oil cooler	1	
2	GM17533	Oil cooler		1
3	360130	Gasket, oil cooler housing	1	1
4	360170	O-ring	2	2
5	360127	Housing	1	1
6	360014	Plug	1	1
7	360176	O-ring	1	1
8	360015	Plug	1	1
9	360178	O-ring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



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

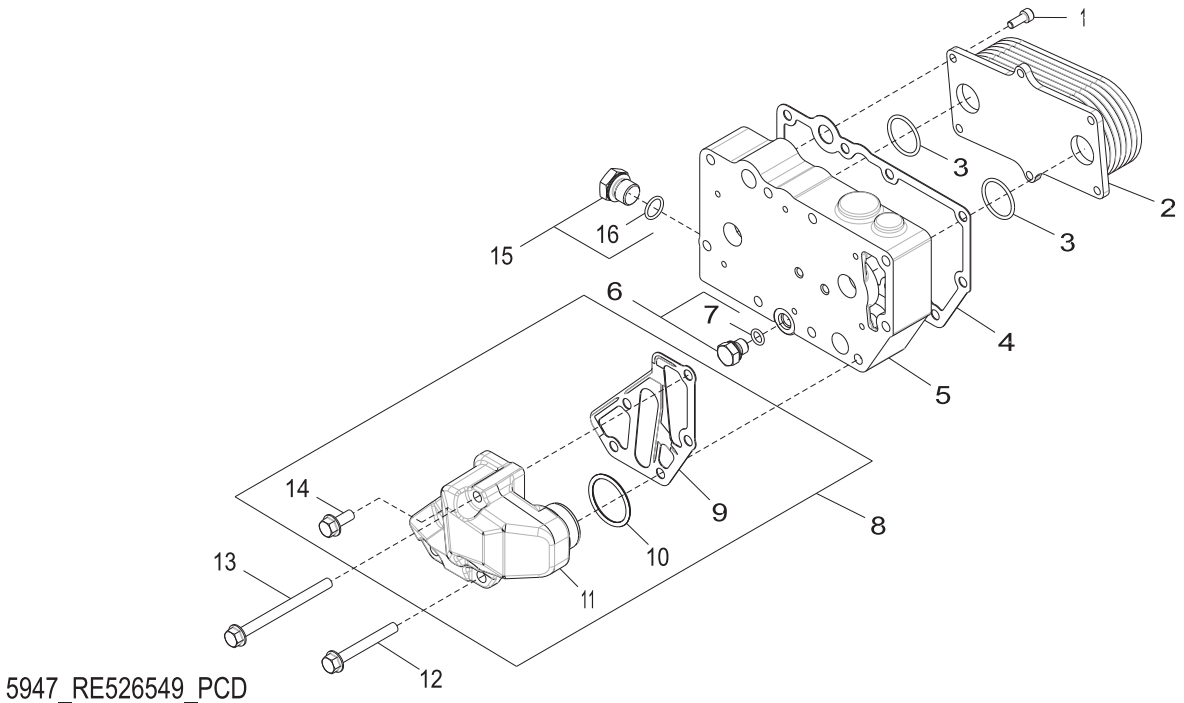
Common hardware; procure locally.

Group 59- 1: Engine Oil Cooler, continued



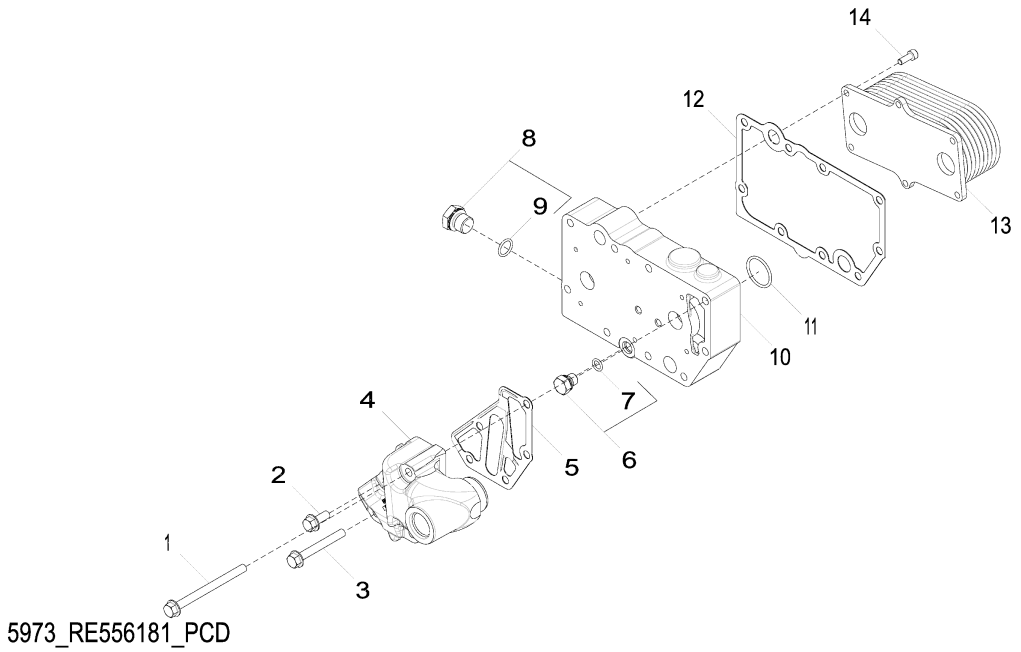
Item	Part Number	Description	Quantity Variation 5937
1	352722	VALVE (was R108867)	1
2	352811	SPRING, BYPASS	1
3	GM50130	Retainer	1
4	GM50200	Filter assembly (Replaces RE505743)	1
5	GM52862	Cap	1
6	GM67282	O-ring	1
7	GM48731	Element, oil filter	1
8	GM67282	O-ring	1
9	GM67292	Drain valve	1
10	GM52863	Pressure relief valve	1
11	GM52864	Compression spring	1
12	GM52865	Fitting plug	1
13	GM50219	Fitting, adapter	1
14	360555	O-RING	1
15	GM67272	Adapter fitting	1
16	223742	O-RING	1
17	GM50207	Seal kit	2
18	GM67279	Cap screw	3
19	GM98737	Bracket	1
20	M933-10035-82	SCREW, HEX CAP M10 x 35mm	4
21	GM50146	Oil tube	1
22	223850	O-RING	1
23	GM67285	Oil tube	1
24	#	Cap Screw	2
25	#	Washer, M12 X 30	2
26	GM50247	Fitting, Adapter	1
27	223850	O-RING	2
28	GM50129	Seal	2
29	GM50129	Seal	2
30	GM50145	Fitting, Adapter	1
31	#	Screw, M10 X 25	2
32	GM50206	Oil tube	2
33	GM50149	O-ring (Replaces R518804)	4
34	223680	OIL COOLER	1
35	GM88067	Seal (Replaces R504668)	1
36	GM98738	Gasket	1
37	GM50128	Cover	1
38	#	Screw, M8 X 35	7
39	#	Screw, M8 X 65	1
40	GM98739	Spacer	2
41	GM52867	Clamp	2
42	#	Screw, M8 X 25	2
43	GM98740	Oil Line	1

Group 59- 1: Engine Oil Cooler, continued



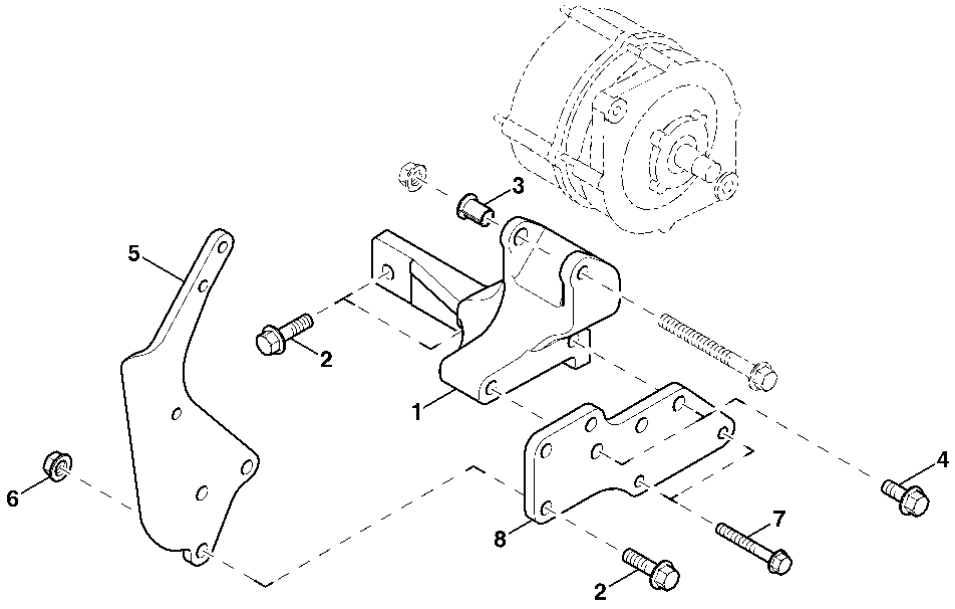
Item	Part Number	Description	Quantity Variation 5947
1	GM50684	Screw, M6 X 16	6
2	275503	Cooler, Oil	1
3	360170	O-Ring	2
4	360130	Gasket, Oil Cooler Housing	1
5	GM49890	Housing	1
6	360015	Plug	1
7	360178	O-Ring	1
8	GM50685	Adapter Fitting	1
9	GM17479	Gasket	1
10	GM24543	O-Ring	1
11	-	Adapter Fitting (order item 8)	1
12	#	Screw, M8 X 65	2
13	#	Screw, M8 X 100	2
14	GM24536	Screw	1
15	360014	Plug	1
16	360176	O-Ring	1

Group 59- 1: Engine Oil Cooler, continued



Item	Part Number	Description	Quantity Variation 5973
1	#	Screw, M8 x 100	2
2	GM24536	Screw	1
3	#	Screw, M8 x 65	2
4	GM91955	Cover	1
5	GM17479	Gasket	1
6	360015	Plug	1
7	360178	O-Ring	1
8	360014	Plug	1
9	360176	O-Ring	1
10	GM49890	Housing	1
11	360170	O-Ring	2
12	360130	Gasket, Oil Cooler Housing	1
13	GM32957	Cooler, oil	1
14	GM50082	Screw	6

Group 62: Alternator Brackets

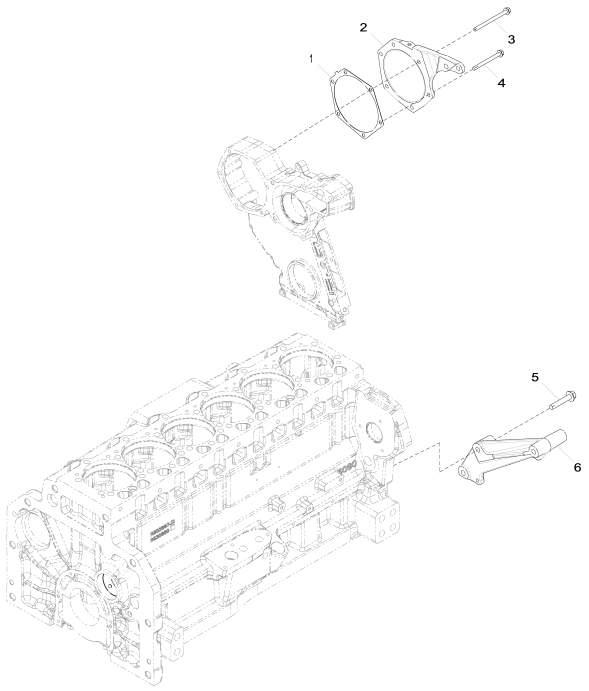


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Item	Part Number	Description	Quantity Variation 6202
1	360150	Bracket, alternator mounting	1
2	#	Screw, M10 x 30	5
3	360076	Bushing	1
4	#	Screw, M10 x 25	2
5	GM17455	Strap	1
6	#	Flange nut, M10	1
7	#	Screw, M8 x 60	2
8	360155	Bracket, alternator mounting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

Common hardware; procure locally.

Group 62: Alternator Brackets, continued

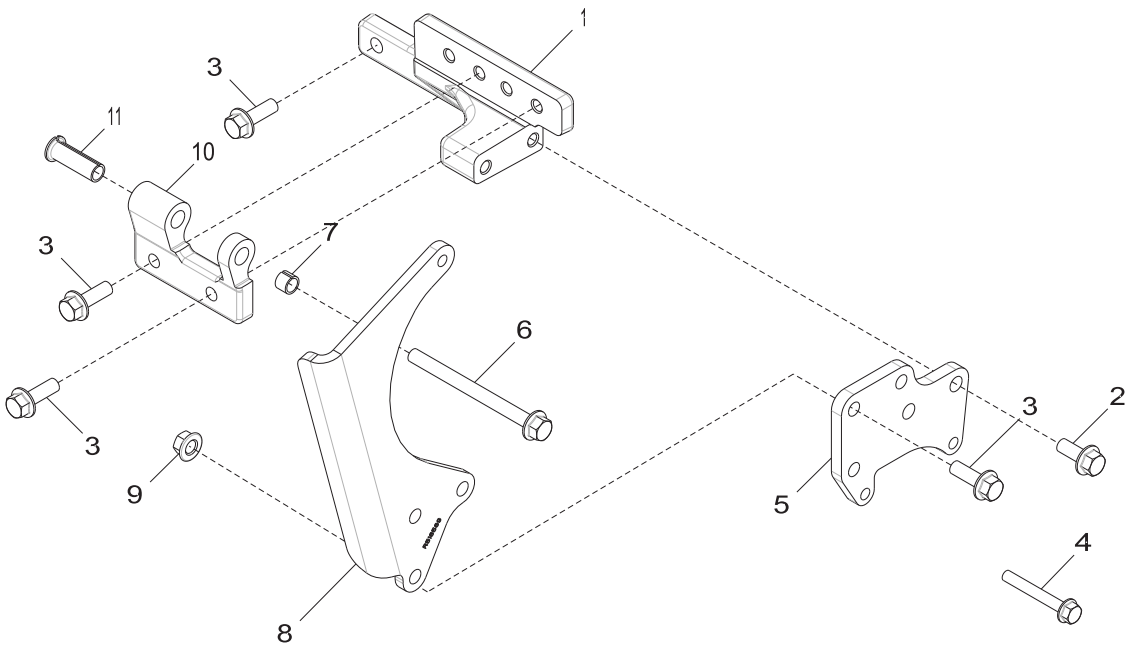


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6222

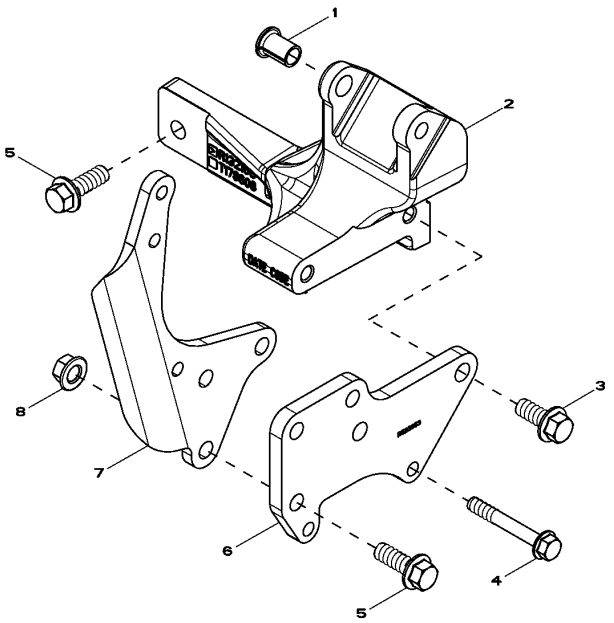
Item	Part Number	Description	Quantity Variation 6222
1	223774	Gasket	1
2	GM98741	Bracket	1
3	#	Screw, M8 X 110	1
4	#	Screw, M8 X 90	1
5	#	Screw, M12 X 65	2
6	GM98742	Bracket	1

Group 62: Alternator Brackets, continued



Item	Part Number	Description	Quantity Variation 6257
1	GM88693	Bracket	1
2	#	Screw, M10 X 25	2
3	#	Screw, Hex Cap M10 X 30mm	7
4	#	Screw, M8 X 60	2
5	GM88680	Hose	1
6	#	Screw, M10 X 120	1
7	GM18707	Bushing	1
8	GM46701	Strap	1
9	GM30375	Flange Nut, M10	3
10	GM46703	Bracket	1
11	GM46702	Bushing	

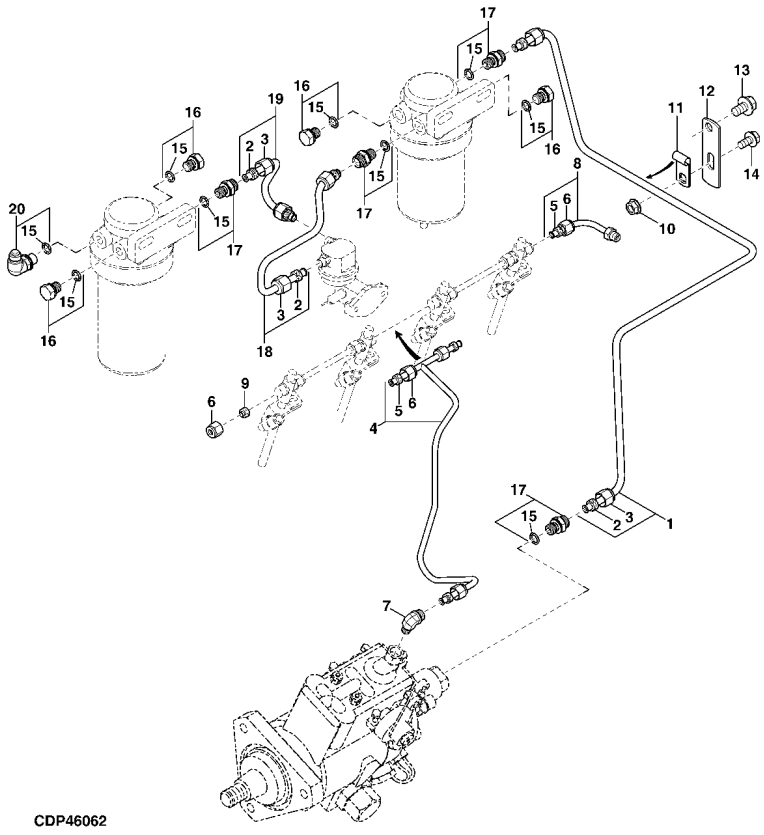
Group 62: Alternator Brackets, continued



6288

Item	Part Number	Description	Quantity Variation 6288
1	360076	Bushing	1
2	360150	Bracket, Alternator Mounting	1
3	#	Screw, M10 X 25	2
4	#	Screw, M8 X 60	2
5	#	Screw, Hex Cap M10 X 30mm	5
6	GM88684	Support	1
7	GM17455	Strap	1
8	GM30375	Flange Nut, M10	3

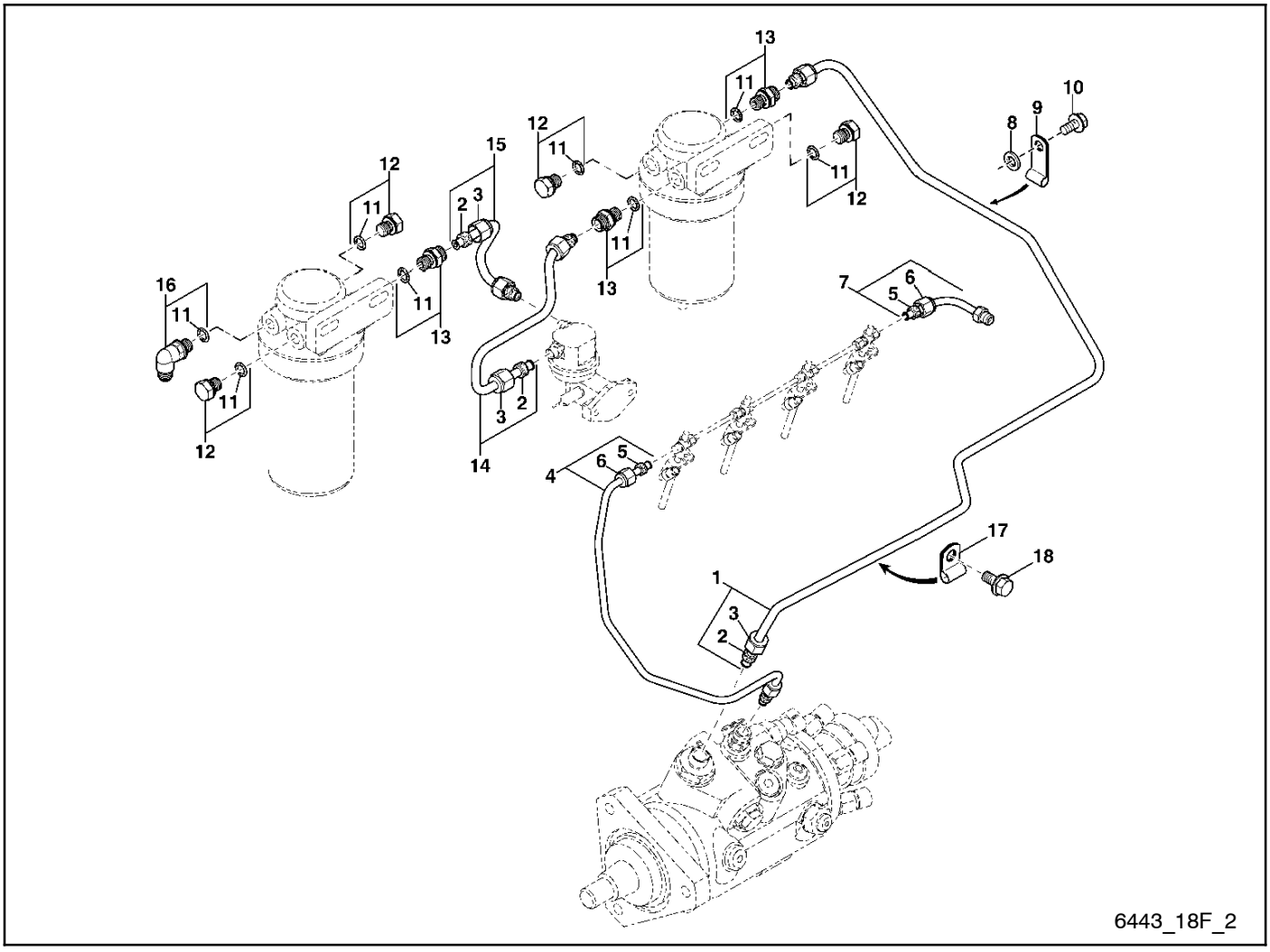
Group 63: Low Pressure Fuel Line



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	GM50676	Elbow fitting, M12 x 1.5 x 1/2 in.-20 UNF	1

Common hardware; procure locally.

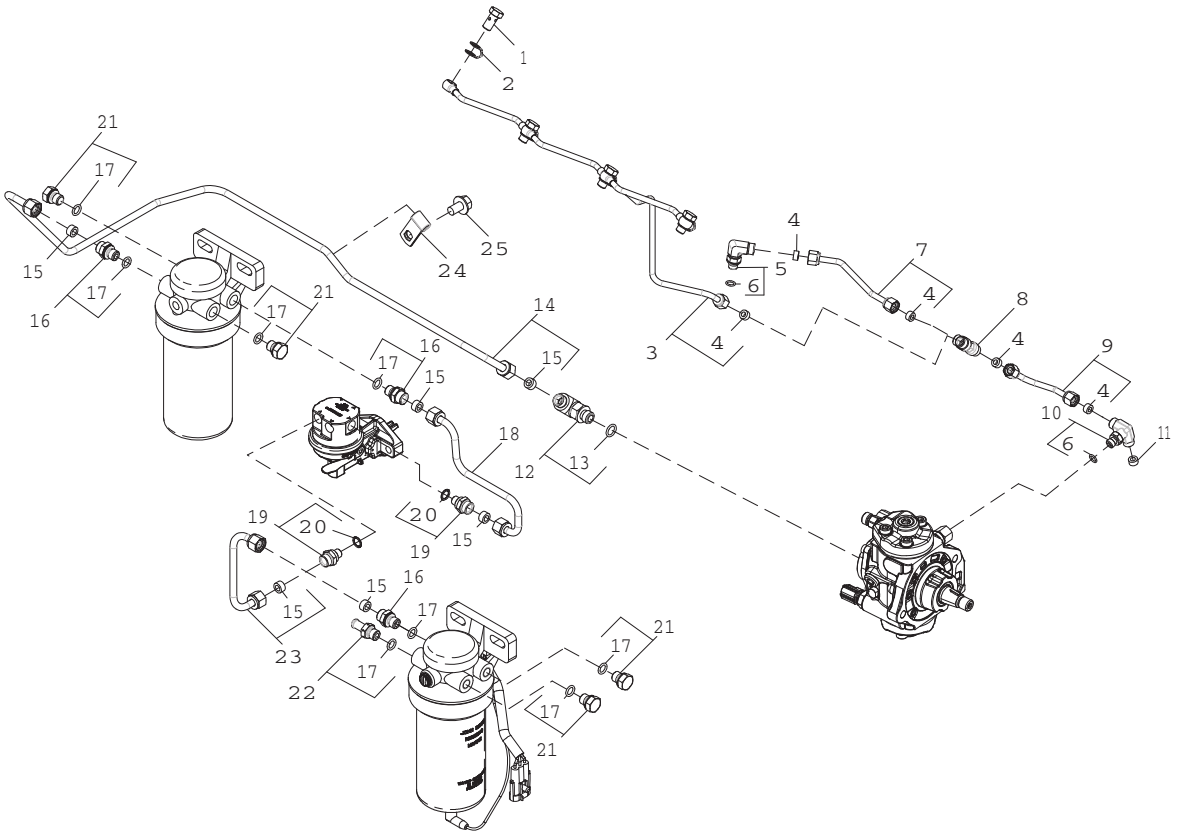
Group 63: Low Pressure Fuel Line, continued



Item	Part Number	Description	Quantity Variation 6351
1	GM50673	Fuel line	1
2	GM17494	Sealing washer	6
3	GM21453	Nut	6
4	GM50674	Fuel line	1
5	223476	Packing	3
6	360141	Nut	3
7	352126	Line, leakoff	1
8	#	Washer, 10 x 18 x 2.5 mm	1
9	336749	Clamp	1
10	#	Screw, M10 x 16	1
11	360178	O-ring	8
12	360015	Plug	4
13	360037	Fitting	3
14	GM32830	Line, fuel	1
15	GM50675	Fuel line	1
16	GM50676	Elbow fitting	1
17	360171	Clip	1
18	#	Screw, M10 x 16	1

Common hardware; procure locally.

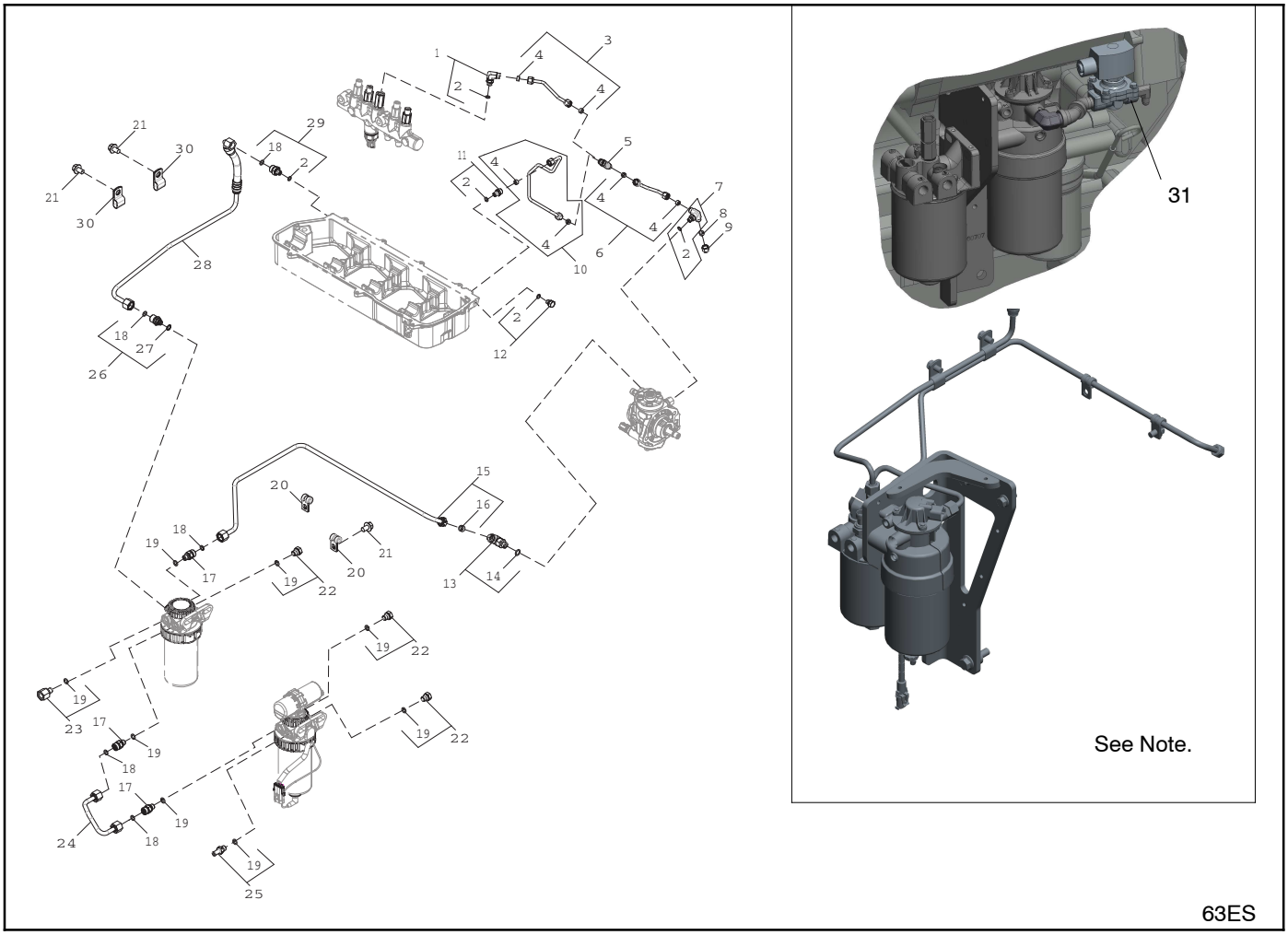
Group 63: Low Pressure Fuel Line, continued



63DP

Item	Part Number	Description	Quantity Variation 63DP
1	GM32895	Fitting	4
2	GM49918	Washer, sealing	4
3	GM88794	Fuel Line	1
4	223476	Packing	5
5	GM32920	Fitting	1
6	GM32896	O-ring	2
7	GM88791	Fuel Line	1
8	223912	Tee Fitting	1
9	GM88793	Fuel Line	1
10	GM50026	Fitting	1
11	223710	Plug	1
12	GM50037	Fitting, elbow	1
13	GM21508	O-ring	1
14	GM52526	Fuel line	1
15	GM17494	Sealing washer	6
16	360037	Fitting	3
17	360178	O-ring	8
18	GM32830	Fuel Line	1
19	GM17470	Fitting	2
20	GM17471	O-ing	2
21	360015	PLug	4
22	GM34530	Adapter	1
23	GM52525	Fuel line	1
24	GM88783	Clamp	1
25	#	Screw, M10 X 16	1

Group 63: Low Pressure Fuel Line, continued

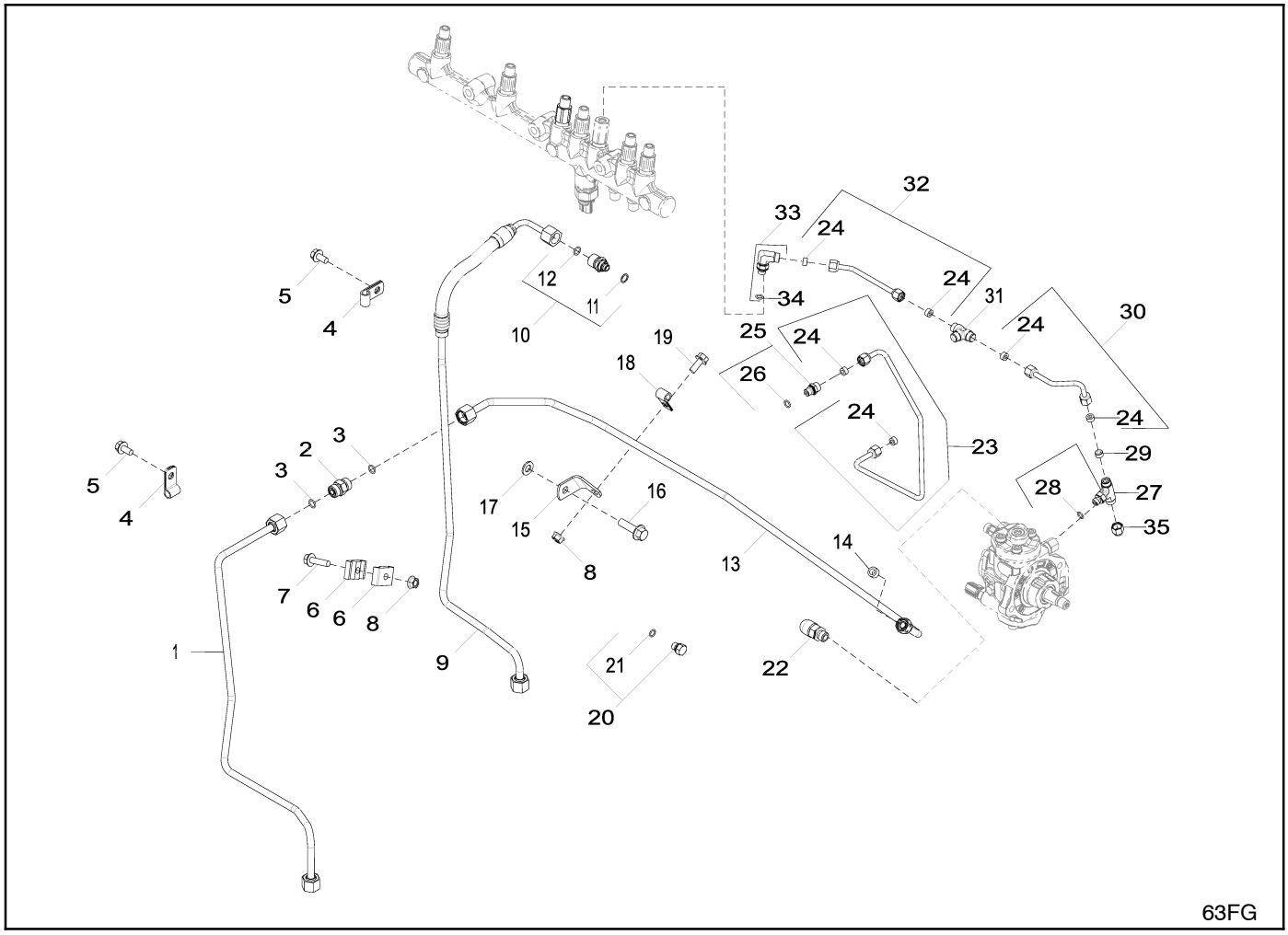


Item	Part Number	Description	Quantity Variation 63ES
1	GM32920	Fitting	1
2	GM32896	O-ring	5
3	GM88791	Fuel Line	1
4	223476	Packing	6
5	223912	Tee Fitting	1
6	GM88793	Fuel Line	1
7	GM50026	Fitting	1
8	223710	Plug	1
9	360141	Nut	1
10	GM88792	Fuel Line	1
11	360036	Fitting	1
12	GM24516	Fitting	1
13	GM46659	Elbow fitting	1
14	GM21508	O-ring	1
15	GM88796	Fuel Line	1
16	223835	Packing	1

Item	Part Number	Description	Quantity Variation 63ES
17	GM49819	Fitting, adapter	1
18	360555	O-Ring	5
19	360178	O-Ring	8
20	GM50293	Clamp	2
21	#	Screw, M10 X 16	3
22	360015	Plug	3
23	GM88788	Adapter Fitting	1
24	GM88795	Fuel Line	1
25	GM34530	Adapter	1
26	GM88787	Hose Fitting (order O-Ring also)	1
27	GM17471	O-ring	1
28	GM88797	Fuel Line	1
29	GM50250	Fitting, Adapter	1
30	GM88801	Clamp	2
31	GM90152	Valve, fuel shutoff (12V)	2
31	GM90153	Valve, fuel shutoff (24V)	2

Note
Optional Agency Approval Installed Items. See Accessories Section for additional parts.

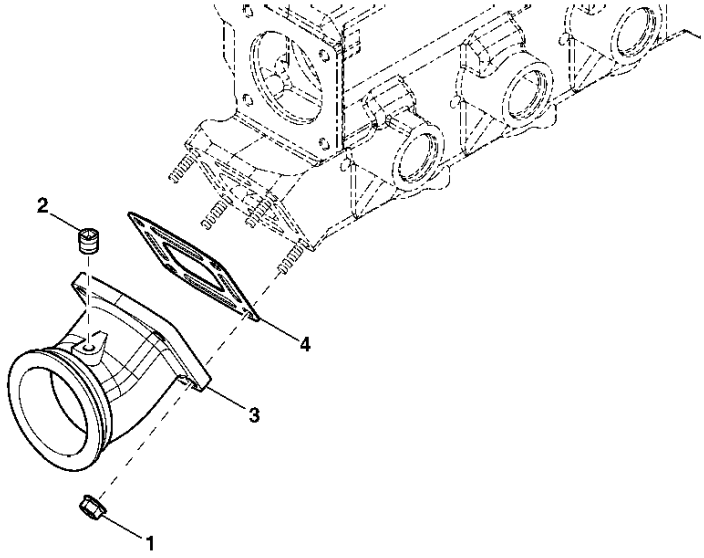
Group 63: Low Pressure Fuel Line, continued



Item	Part Number	Description	Quantity Variation 63FG
1	GM91956	Fuel Line	1
2	GM91957	Union Fitting	1
3	360165	O-Ring	2
4	GM52867	Clamp	2
5	#	Screw, M8 x 16	2
6	GM91958	Clamp	2
7	#	Screw, M8 x 30	1
8	#	Flange Nut, M8	2
9	GM91959	Fuel Line	1
10	GM88787	Hose Fitting	1
11	GM17471	O-ring	1
12	360555	O-Ring	1
13	GM91960	Fuel Line	1
14	223835	Packing	1
15	GM91961	Bracket	1
16	#	Screw, M10 x 35	1
17	#	Washer, 10.500 X 20 X 2 mm	1
18	GM32961	Support	1
19	#	Screw, M8 x 20	1
20	GM24516	Fitting	1
21	GM32896	O-ring	1
22	GM46659	Elbow fitting	1
23	GM91962	Fuel Line	1
24	223476	Packing	6

Item	Part Number	Description	Quantity Variation 63FG
25	360036	Fitting	1
26	GM32896	O-ring	1
27	GM46658	Fitting	1
28	GM32896	O-ring	1
29	223710	Plug	1
30	GM50017	Fuel line	1
31	223912	Tee Fitting	1
32	GM50018	Fuel line	1
33	GM32920	Fitting	1
34	GM32896	O-ring	1
35	360141	Nut	1

Group 64: Exhaust Adapter

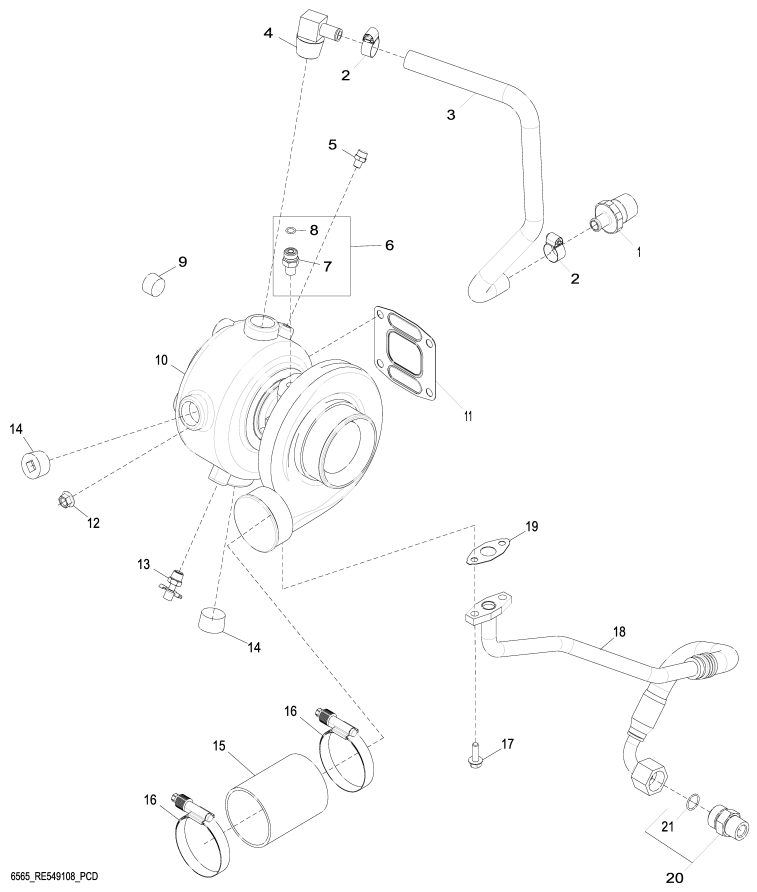


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Item	Part Number	Description	Quantity Variation 6414
1	#	Flange nut, M10	4
2	224268	Pipe plug	1
3	352059	Adapter	1
4	352029	Gasket	1

Common hardware; procure locally.

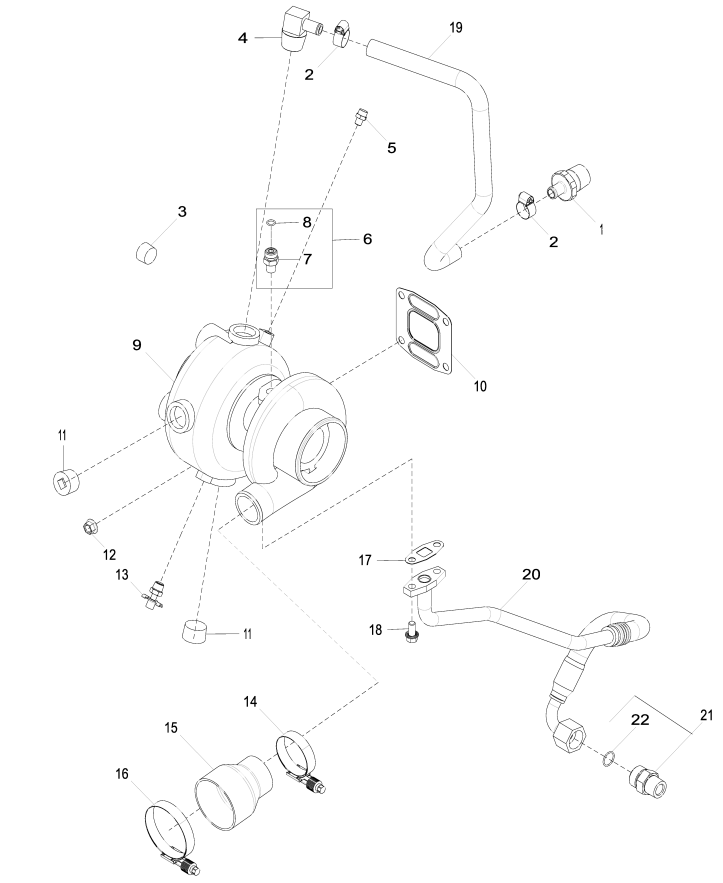
Group 65: Turbocharger



6565

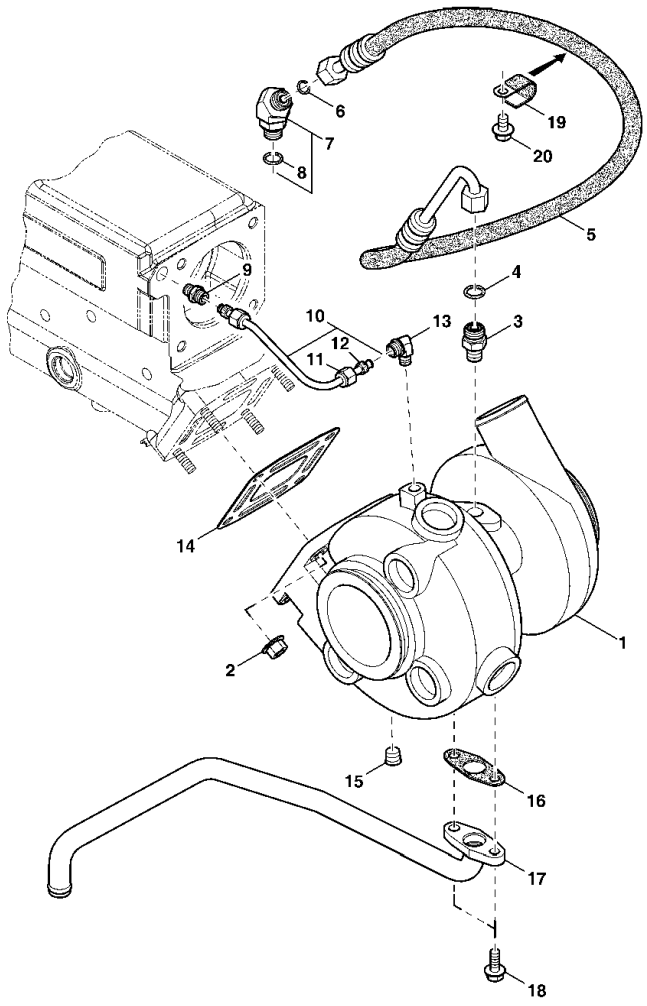
Item	Part Number	Description	Quantity Variation 6565
1	GM98743	Fitting	1
2	GM98744	Hose Clamp	2
3	GM98748	Hose	1
4	GM98745	Elbow Fitting	1
5	223820	FITTING	1
6	GM67297	Fitting	1
7	360006	ADAPTER	1
8	360165	O-RING	1
9	GM53024	Plug, pipe	1
10	GM98931	Turbocharger	1
11	GM88742	Gasket	1
12	GM30375	Flange Nut, M10	4
13	223435	DRAIN VALVE	1
14	#	Pipe Plug, 1”	2
15	GM98932	Hose	1
16	GM18851	Clamp	2
17	GM49825	Screw	2
18	GM98749	Oil Line	1
19	GM49894	Gasket	1
20	GM98750	Fitting	1
21	GM95954	O-Ring	1

Group 65: Turbocharger, continued



6566

Item	Part Number	Description	Quantity Variation 6566
1	GM98743	Fitting	1
2	GM98744	Hose Clamp	2
3	GM53024	Plug, pipe	1
4	GM98745	Elbow Fitting	1
5	223820	FITTING	1
6	GM67297	Fitting	1
7	360006	ADAPTER	1
8	360165	O-RING	1
9	GM98746	Turbocharger Reman	1
10	GM88742	Gasket	1
11	#	Pipe Plug	2
12	GM30375	Flange Nut, M10	4
13	223435	DRAIN VALVE	1
14	GM88773	Clamp	1
15	GM98747	Hose	1
16	GM18851	Clamp	1
17	223757	GASKET (was 336503)	1
17	223757	GASKET	1
18	GM32526	Screw	2
19	GM98748	Hose	1
20	GM98749	Oil Line	1
21	GM98750	Fitting	1
22	GM95954	O-Ring	1

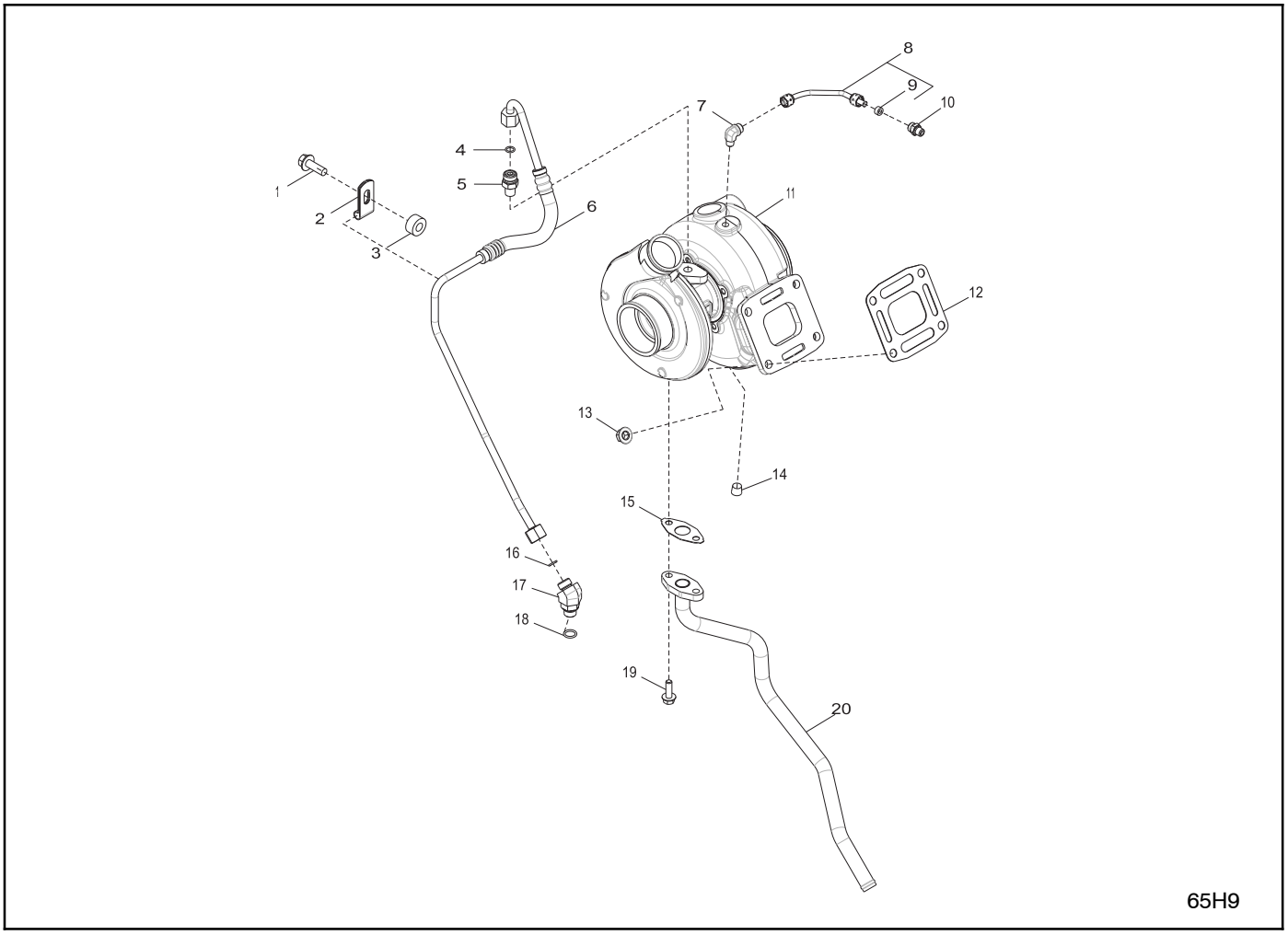


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Item	Part Number	Description	Quantity Variation 65LV
1	GM50678	Turbocharger	1
2	#	Flange nut, M8	4
3	360006	Adapter	1
4	360165	O-ring	1
5	GM17521	Oil line	1
6	360555	O-ring	1
7	360556	Elbow fitting, 45 deg.	1
8	360557	O-ring	1
9	GM50679	Fitting	1
10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

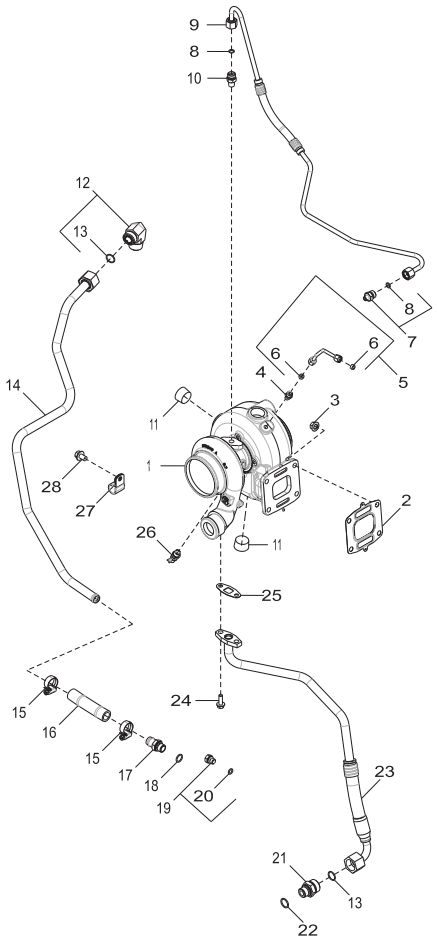
Common hardware; procure locally.

Group 65: Turbocharger, continued



Item	Part Number	Description	Quantity Variation 65H9
1	#	Screw, Hex Cap M10 X 30mm	1
2	GM88689	Clip	1
3	GM50948	Spacer	1
4	360165	O-Ring	1
5	360006	Adapter	1
6	GM88768	Oil Line	1
7	223837	Elbow Fitting	1
8	GM17511	Tube	1
9	223476	Packing	2
10	223820	Fitting	1
11	GM88763	Turbocharger	1
12	352029	Gasket	1
13	GM30375	Flange Nut, M10	4
14	#	Pipe Plug, 1/4”	1
15	GM49894	Gasket	1
16	360555	O-Ring	1
17	360556	Elbow Fitting, 45 Deg.	1
18	360557	O-Ring	1
19	#	Screw, M8 X 25	2
20	GM88738	Line	1

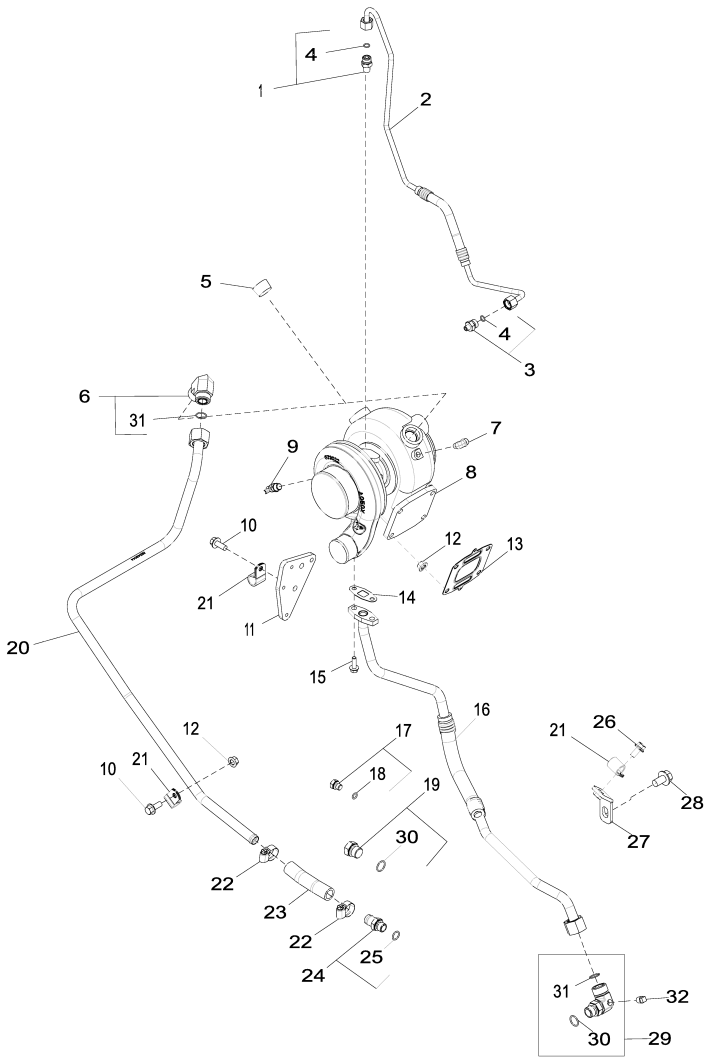
Group 65: Turbocharger, continued



65J3

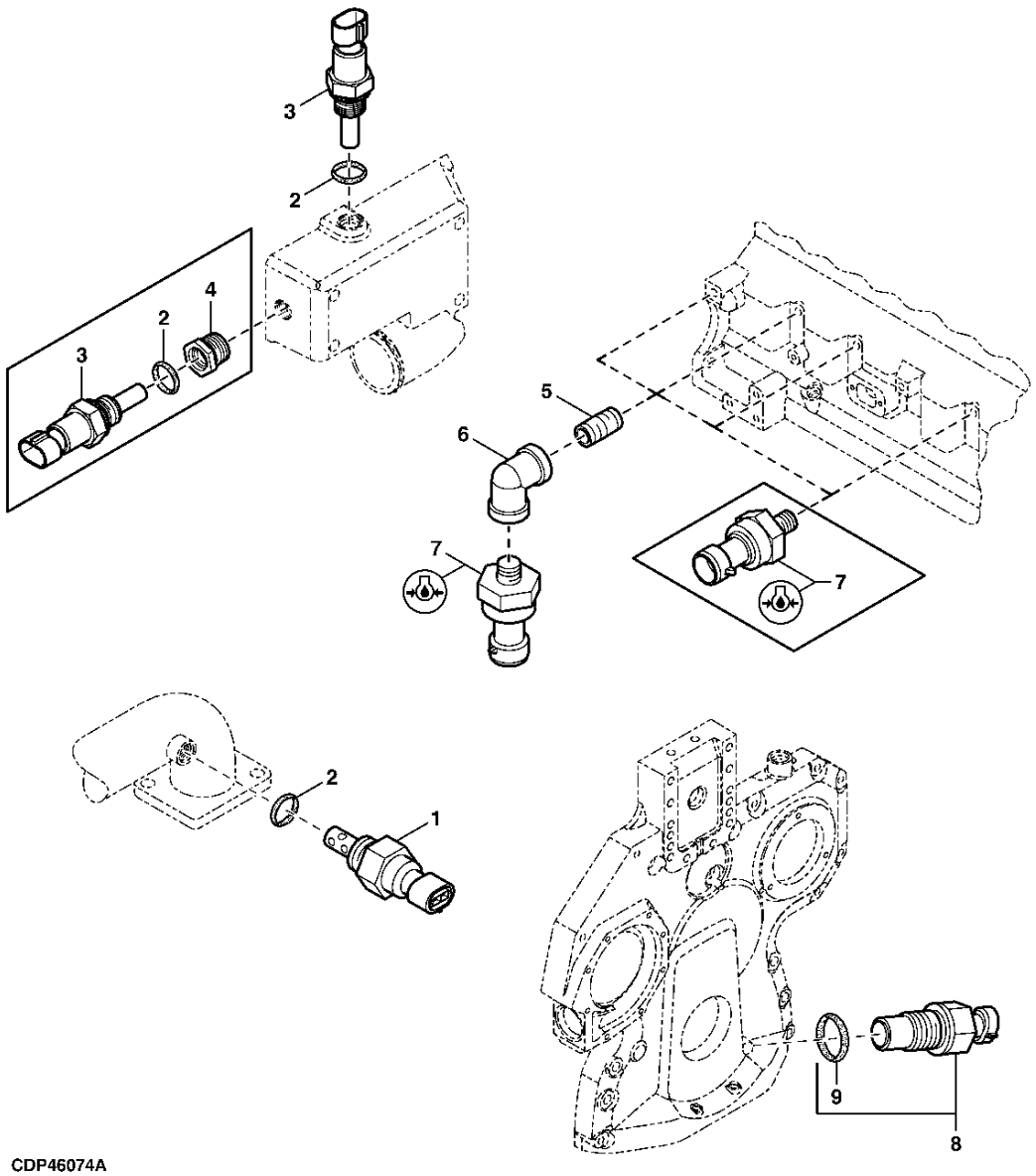
Item	Part Number	Description	Quantity Variation 65J3
1	GM88767	Turbocharger	1
2	GM88742	Gasket	1
3	GM30375	Flange Nut, M10	4
4	223820	Fitting	1
5	GM88758	Line	1
6	223476	Packing	2
7	GM49990	Fitting, Adapter	1
8	360165	O-Ring	2
9	GM88772	Oil Line	1
10	360006	Adapter	1
11	#	Pipe Plug, 1”	2
12	GM88725	Elbow Fitting	1
13	GM69811	O-Ring	2
14	GM88757	Line	1
15	360062	Clamp	2
16	GM88687	Hose	1
17	GM88682	Fitting	1
18	360176	O-Ring	1
19	360015	Plug	1
20	360178	O-Ring	1
21	GM88671	Adapter Fitting	1
22	GM17437	O-Ring	1
23	GM88771	Oil Line	1
24	#	Screw, M8 X 25	2
25	360136	Gasket, Turbo Oil Outlet Tube	1
26	223435	Drain Valve	1
27	GM50694	Clamp	1
28	#	Screw, M10 X 16	1

Group 65: Turbocharger, continued



Item	Part Number	Description	Quantity Variation 65D6
1	360006	Adapter	1
2	GM91963	Oil Line	1
3	GM49990	Fitting, adapter	1
4	360165	O-Ring	2
5	#	Pipe Plug, 1”	2
6	GM88725	Elbow Fitting	1
7	223837	Elbow Fitting	1
8	GM91964	Turbocharger	1
9	223435	Drain Valve	1
10	#	Screw, M10 x 25	3
11	GM91965	Bracket	1
12	GM30375	Flange Nut, M10	5
13	GM88742	Gasket	1
14	360136	Gasket, Turbo Oil Outlet Tube	1
15	#	Screw, M8 x 25	2
16	GM91966	Oil Line	1
17	360015	Plug	1
18	360178	O-Ring	1
19	GM17498	Fitting	1
20	GM91967	Line	1

Item	Part Number	Description	Quantity Variation 65D6
21	GM50694	Clamp	3
22	360062	Clamp	2
23	GM88687	Hose	1
24	GM91968	Hose Fitting	1
25	360176	O-Ring	1
26	GM32765	Screw, M10 x 20	1
27	GM91969	Bracket	1
28	#	Screw, M14 x 25	1
29	GM91970	Elbow Fitting	1
30	GM17437	O-ring	2
31	GM69811	O-Ring	2
32	#	Pipe Plug, 1/4”	1

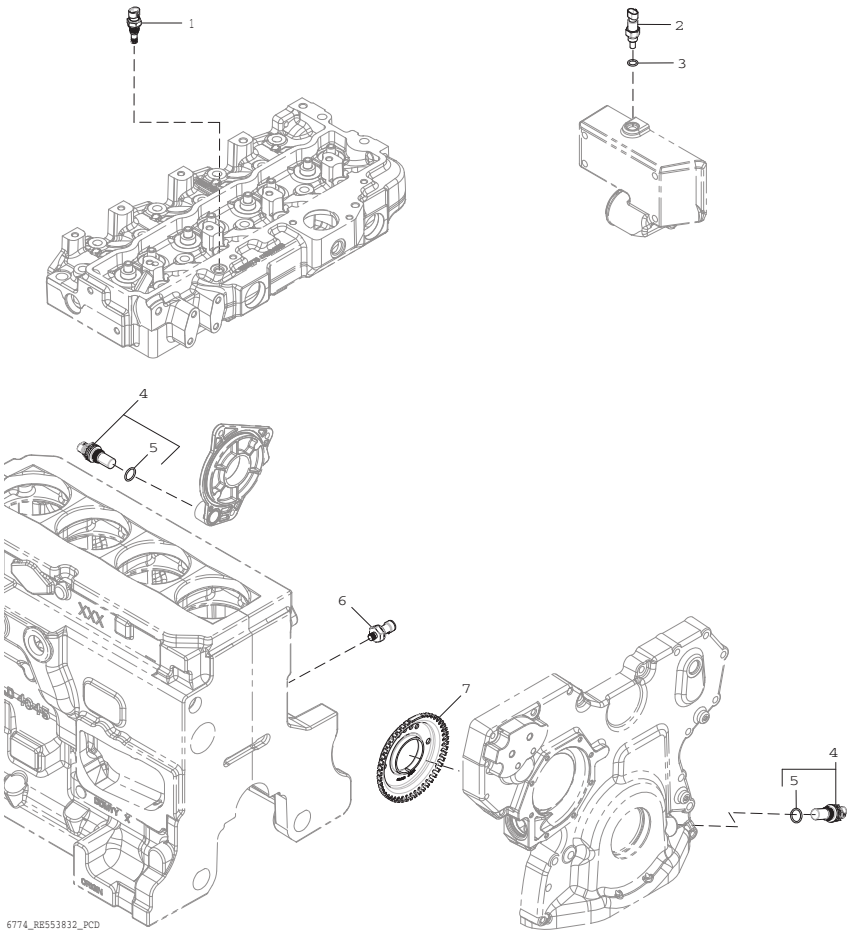


6443_36B

Item	Part Number	Description	Quantity Variation 6716
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
8	GM50704	Sensor, engine speed	1
9	360180	O-ring, 17.3 x 2.2 mm	1

Common hardware; procure locally.

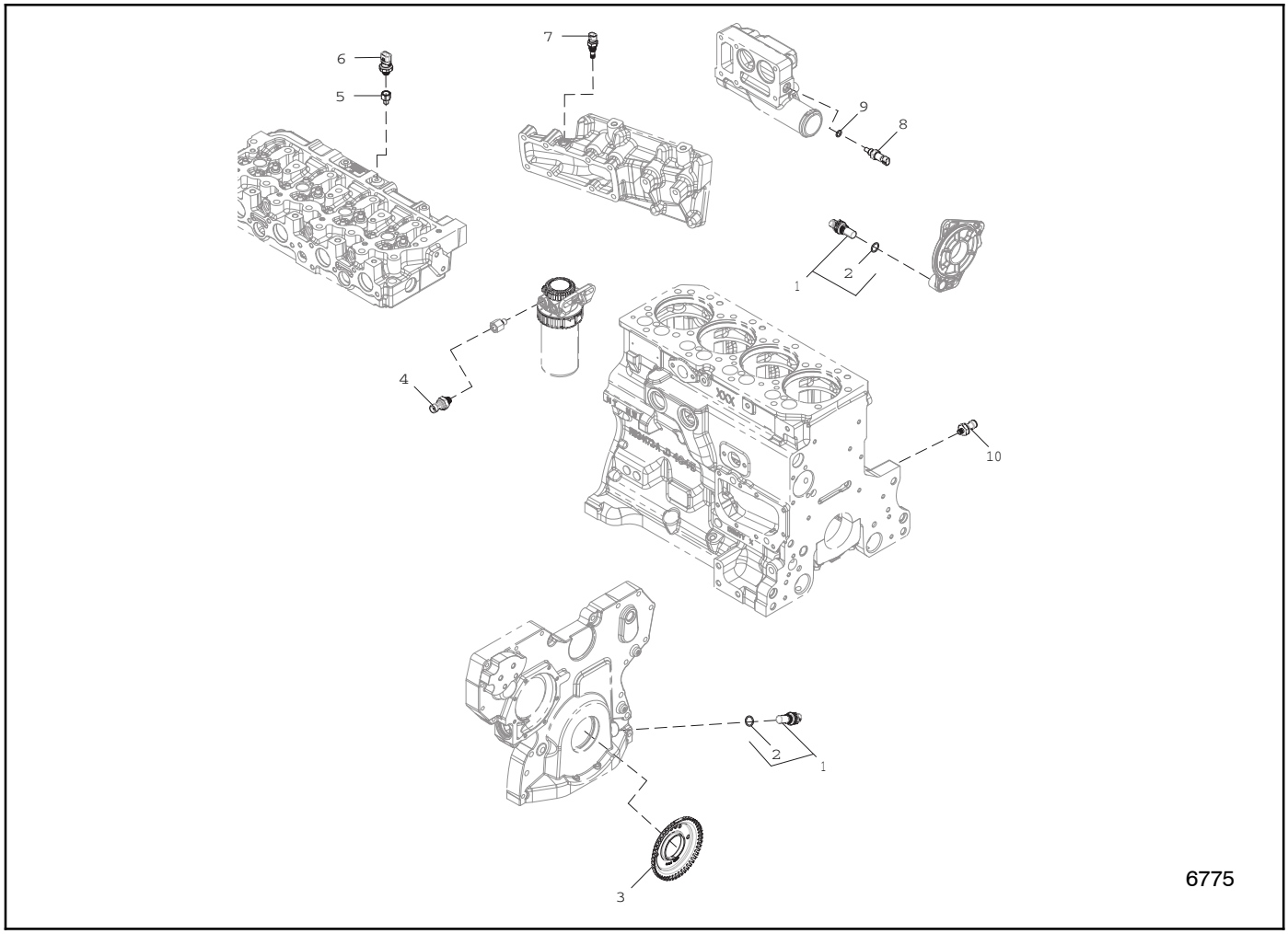
Group 67: Engine Sensors, continued



6774
6775

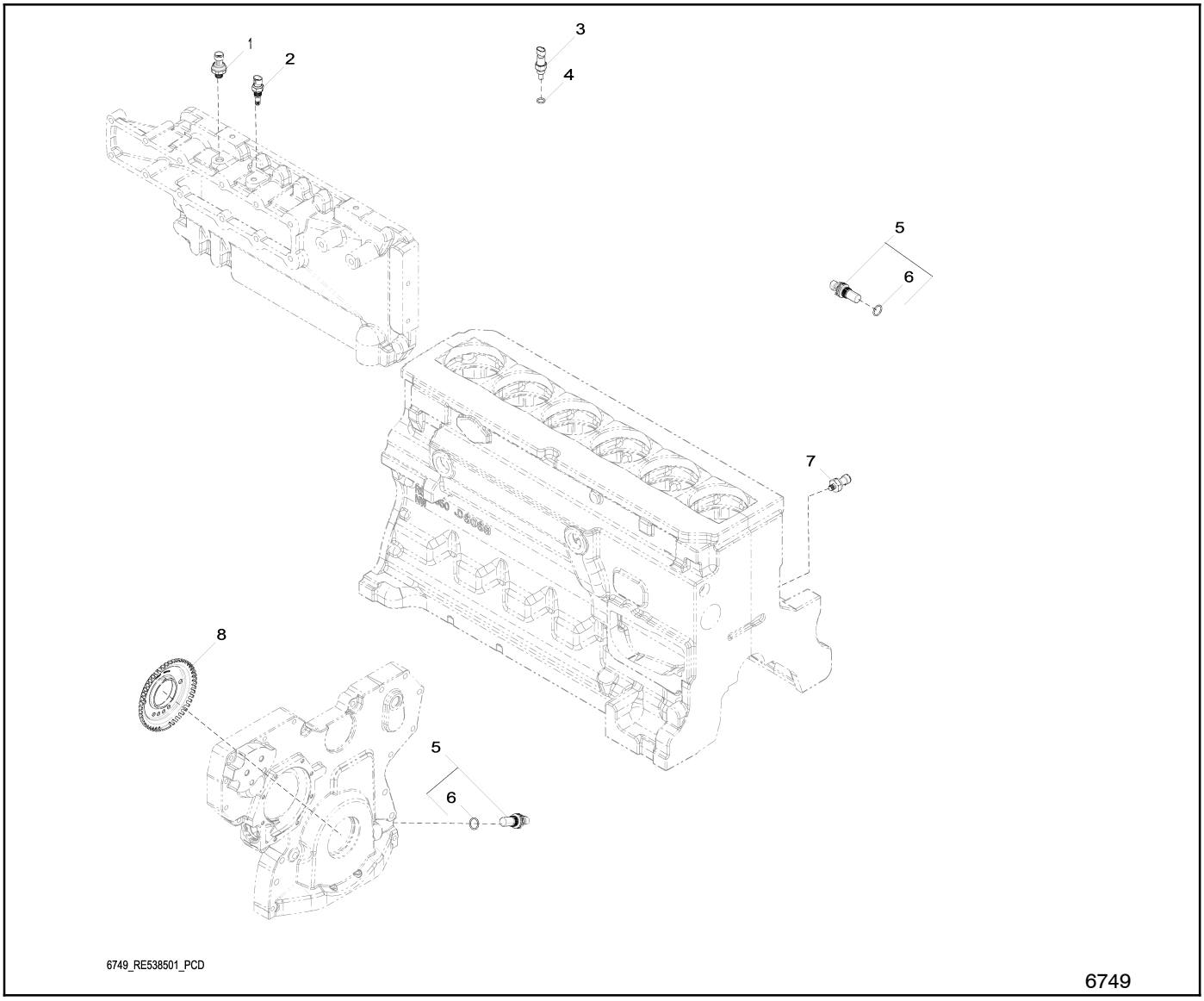
Item	Part Number	Description	Quantity Variation 6774
1	GM50034	Thermocouple (air temperature)	1
2	GM32955	Sensor, coolant temperature	1
3	GM21508	O-ring	1
4	GM59793	Sensor, Magnetic Pick-up	2
5	360180	O-Ring, 17.3 X 2.2 MM	1
6	GM32919	Sensor, pressure	1
7	GM49838	Wheel	1

Group 67: Engine Sensors, continued



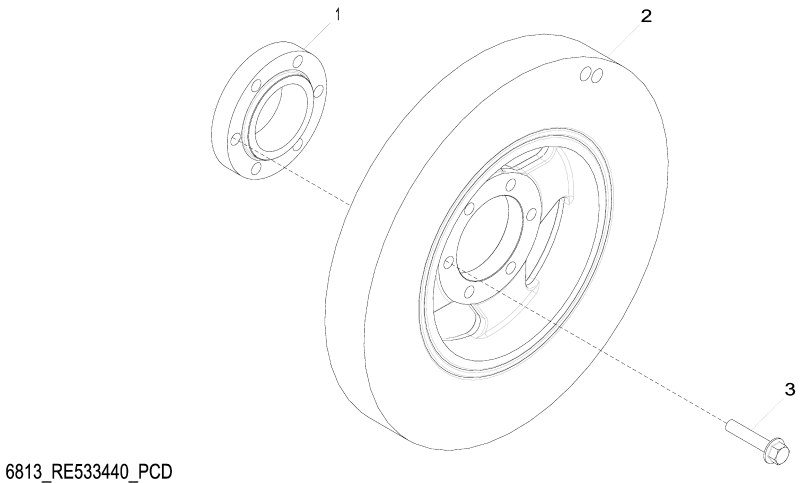
Item	Part Number	Description	Quantity Variation 6775
1	GM59793	Sensor, Magnetic Pick-up	2
2	360180	O-Ring, 17.3 X 2.2 MM	2
3	GM49838	Wheel	1
4	GM50230	Sensor	1
5	GM88800	Adapter Fitting	1
6	GM88789	Manifold Air Press. Sensor	1
7	GM50034	Thermocouple (air temperature)	1
8	GM32955	Sensor, coolant temperature	1
9	GM21508	O-ring	1
10	GM32919	Sensor, pressure	1

Group 67: Engine Sensors, continued



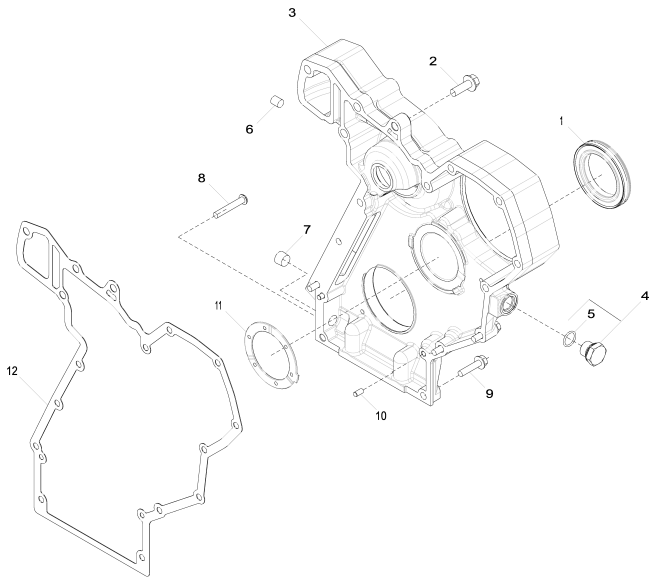
Item	Part Number	Description	Quantity Variation 6749
1	GM49999	Sensor, manifold air press.	1
2	GM50034	Thermocouple (air temperature)	1
3	GM32955	Sensor, coolant temperature	1
4	GM21508	O-ring	1
5	GM59793	Sensor, Magnetic Pick-up	2
6	360180	O-Ring, 17.3 X 2.2 MM	1
7	GM32919	Sensor, pressure	1
8	GM49838	Wheel	1

Group 68: Damper



Item	Part Number	Description	Quantity Variation 6813
1	GM91971	Adapter	1
2	GM50231	Torsional damper	1
3	#	Screw, M10 x 50	6

Group 77: Timing Gear Cover

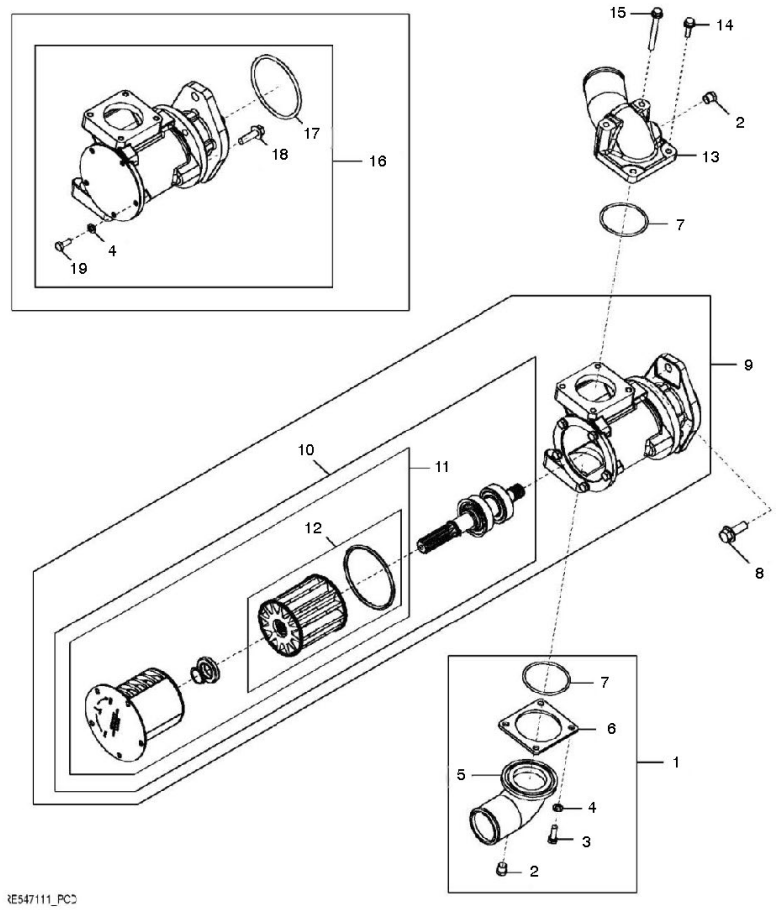


7706_RE541402_PCD

7706

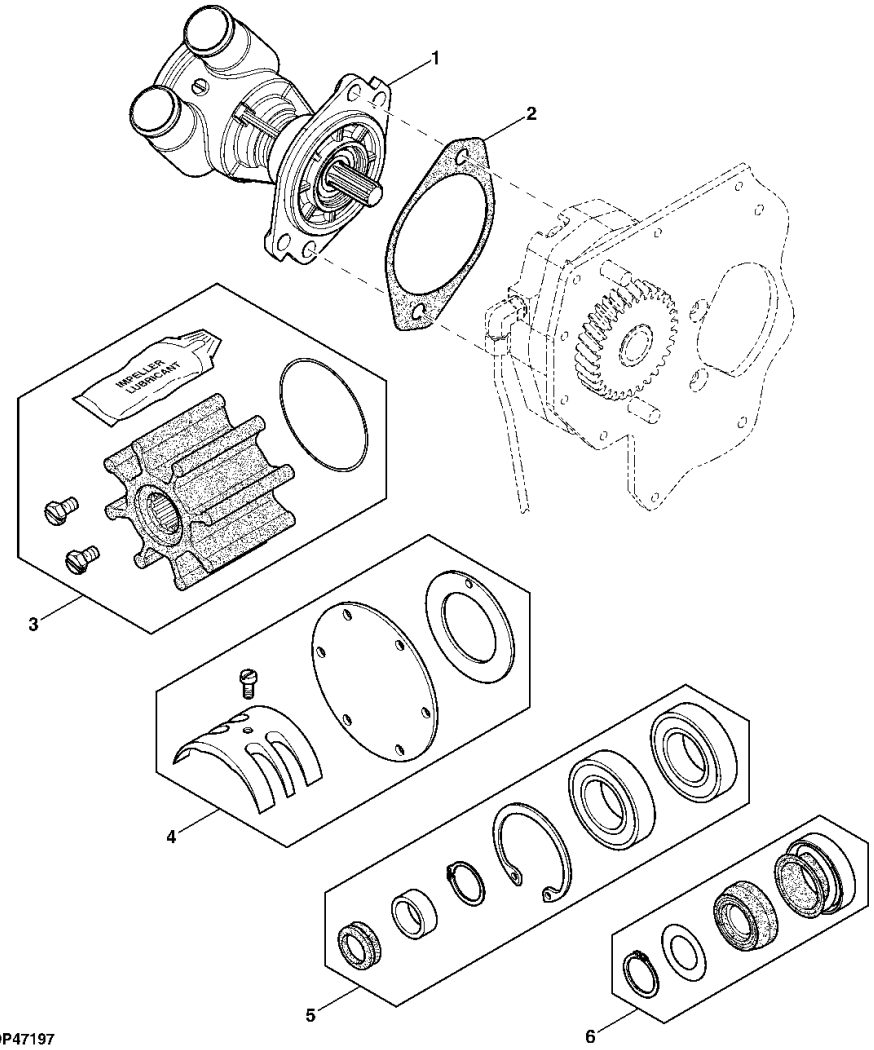
Item	Part Number	Description	Quantity Variation 7706
1	GM79849	Seal	1
2	M933-10030-82	SCREW, HEX CAP M10 x 30mm	1
3	GM79850	Cover	1
4	360078	Plug, drain	1
5	360180	O-RING, 17.3 X 2.2 MM	1
6	352812	FILTER	1
7	#	Pipe Plug, 3/8”	1
8	#	Screw, M8 X 50	2
9	#	Screw, M8 X 35	3
10	223731	DOWEL PIN	2
11	GM50132	Washer	1
12	352738	GASKET	1

Group 80: Seawater Pump



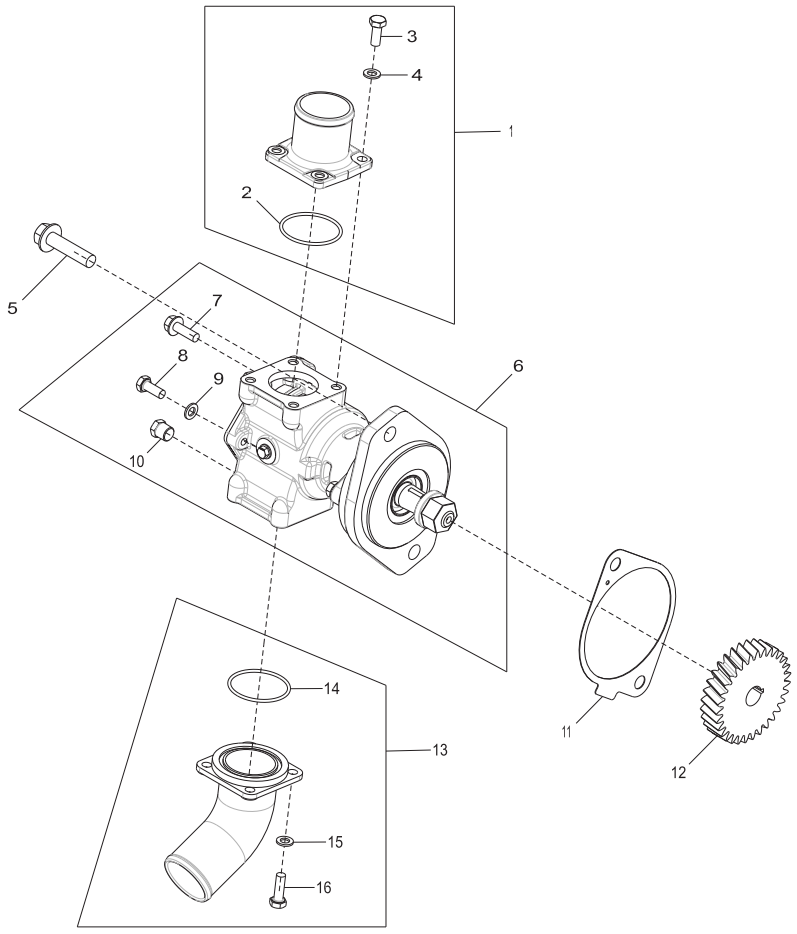
Item	Part Number	Description	Quantity Variation 8002
1	GM117626	Support kit	1
2	352023	Drain Plug	2
3	#	Screw, M8 X 25	4
4	#	Washer, 8.4 X 15 X 1.6 mm	9
5	GM117627	Cover	1
6	GM117628	Plate	1
7	GM98752	O-Ring	2
8	GM70546	Screw, M12 X 35	2
9	GM117328	Water pump (Beginning at RG6090L133666 engine serial number)	1
10	GM117331	Pump Repair Kit (Use with GM117328)	1
10	GM98755	Pump Repair Kit (Use with GM98753)	1
11	GM117332	Pump Repair Kit (Use with GM117328)	1
11	GM98754	Pump Repair Kit (Use with GM98753)	1
12	GM117329	Impeller Kit (Use with GM117328)	1
12	GM98756	Impeller Kit (Use with GM98753)	1
13	GM98751	Adapter	1
14	GM114639	Screw M8 X 25	2
15	#	Screw	2
16	GM98753	Water Pump	1
17	GM98757	O-Ring	1
18	M933- 10035- 82	Screw, M10 X 35 mm	3
19	#	Screw, M8 X 20	5

Group 80: Seawater Pump, continued



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

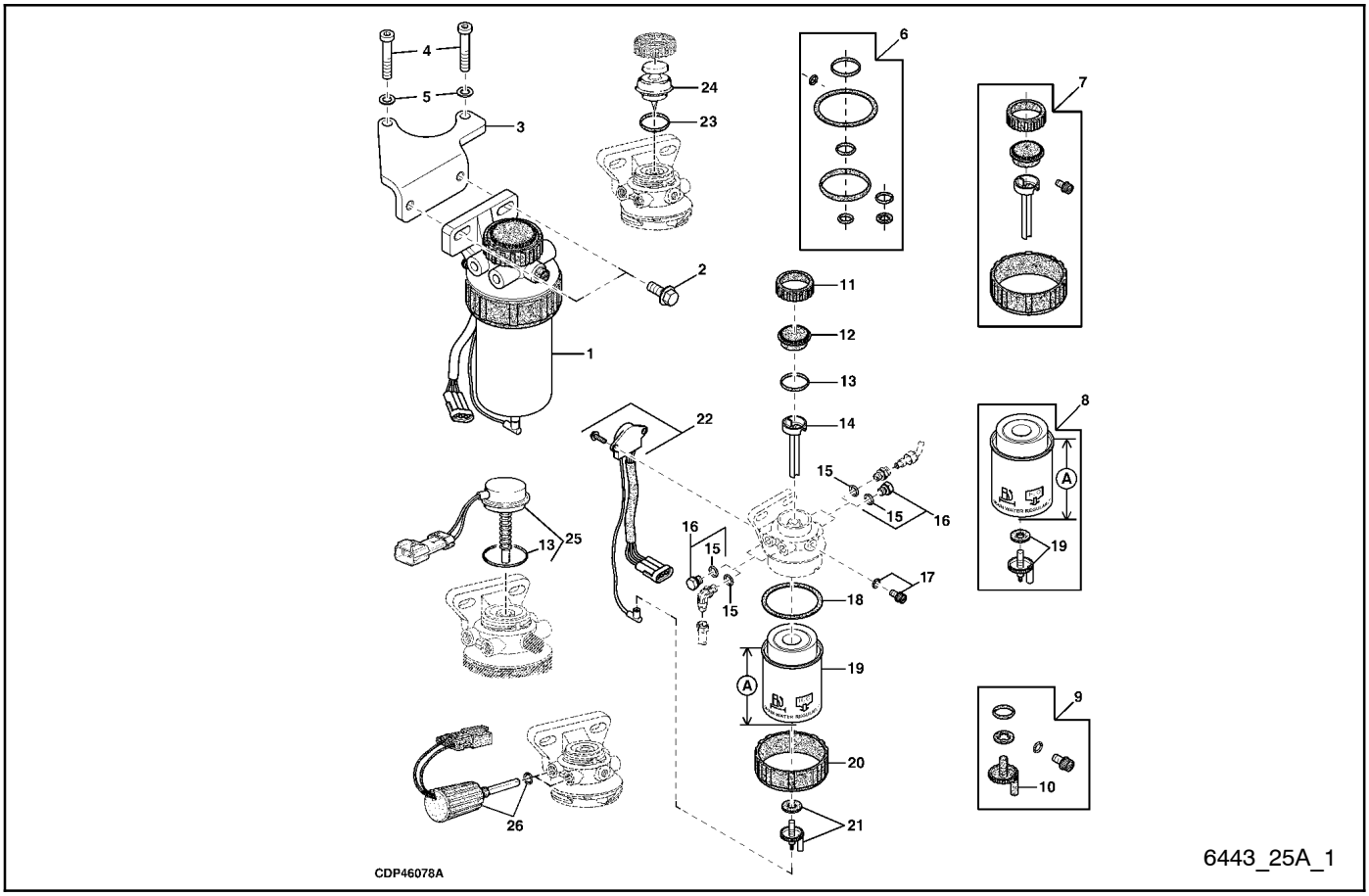
Group 80: Seawater Pump, continued



8024

Item	Part Number	Description	Quantity Variation 8024
1	GM88734	Adapter	1
2	GM88775	O-Ring	1
3	#	Screw, M8 X 20	4
4	#	Washer, 8.400 X 15 X 1.600 MM	4
5	#	Screw, M12 X 50	2
6	GM88732	Water Pump	1
7	#	Screw, M8 X 25	4
8	#	Screw, M8 X 20	3
9	#	Washer, 8.400 X 15 X 1.600 MM	3
10	352023	Drain Plug	2
11	GM17460	Gasket	1
12	GM88676	Gear	1
13	GM88733	Adapter	1
14	GM88775	O-Ring	1
15	#	Washer, 8.400 X 15 X 1.600 MM	4
16	#	Screw, M8 X 25	4
	GM18793	Impeller Kit	1
	GM88735	Pump Repair Kit (Water Pump Major Repair)	1

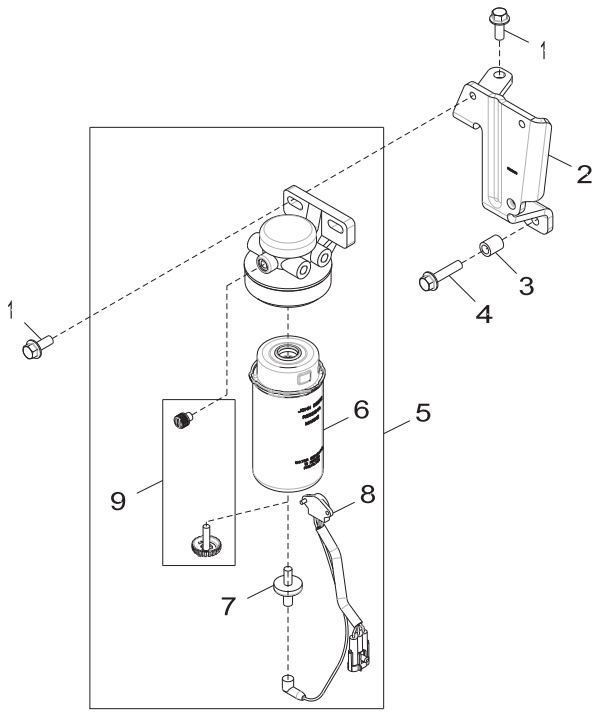
Group 81: Primary Fuel Filter



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

AR As Required # Common hardware; procure locally. NA Not Available

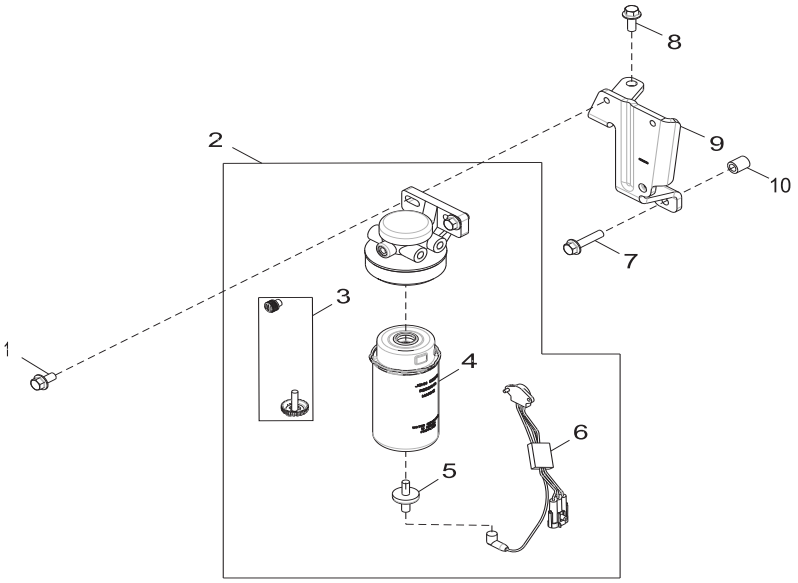
Group 81: Primary Fuel Filter, continued



81BK

Item	Part Number	Description	Quantity Variation 81BK
1	#	Screw, M10 X 25	3
2	GM52539	Bracket	1
3	GM52540	Spacer	1
4	GM75821	Screw, M10 X 45	1
5	GM50949	Fuel Filter	1
6	GM48729	Element, Fuel Filter	1
7	352141	Drain Valve	1
8	GM50688	Wiring Harness, 12V	1
9	360048	Kit, Bleed Plug & Drain Valve	1

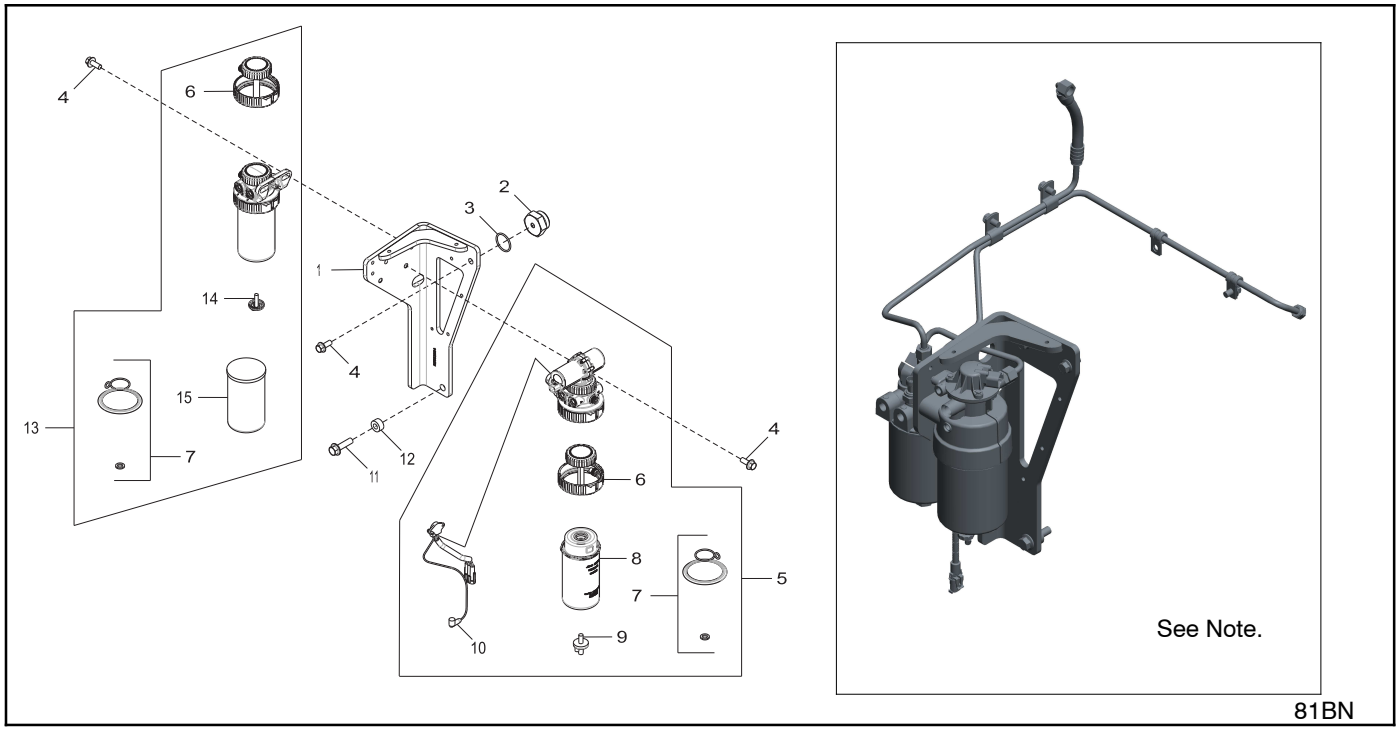
Group 81: Primary Fuel Filter, continued



81BL

Item	Part Number	Description	Quantity Variation 81BL
1	#	Screw, M10 X 20	2
2	GM50950	Fuel Filter	1
3	360048	Kit, Bleed Plug & Drain Valve	1
4	GM48729	Element, Fuel Filter	1
5	352141	Drain Valve	1
6	GM50690	Wiring Harness, 12V	1
7	#	Screw, M10 X 45	1
8	#	Screw, M10 X 25	1
9	GM52539	Bracket	1
10	GM52540	Spacer	1

Group 81: Primary Fuel Filter, continued

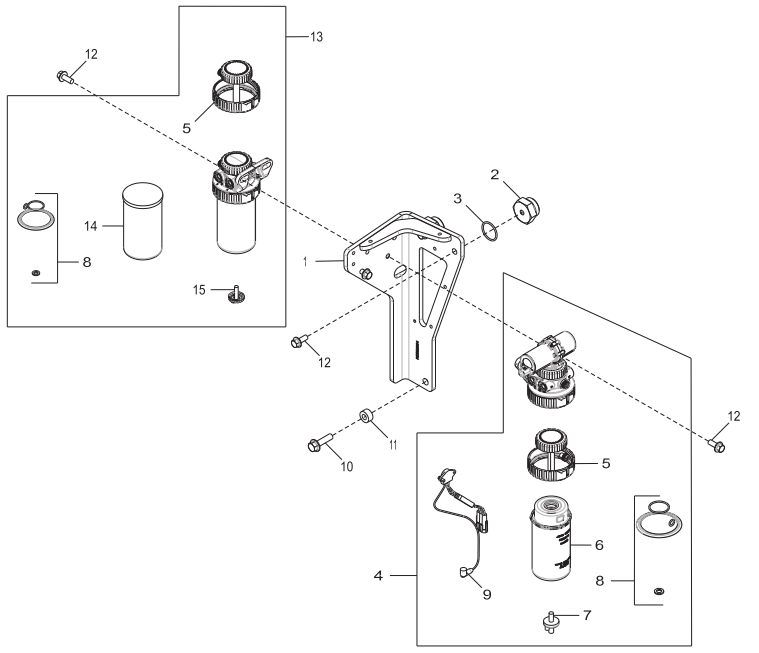


81BN

Item	Part Number	Description	Quantity Variation 81BN
1	GM88754	Bracket * See Note	1
2	GM88679	Pipe Plug	2
3	223988	O-Ring	2
4	#	Screw, M10 X 25	6
5	GM88759	Filter Head* See Note	1
6	222773	Seal Kit* See Note	2
7	GM88770	Seal Kit* See Note	2
8	GM48729	Element, Fuel Filter* See Note	1
9	352141	Drain Valve* See Note	1
10	GM50688	Wiring Harness, 12V* See Note	1
11	#	Screw, M12 X 45	1
12	GM50948	Spacer	1
13	GM88760	Filter Head* See Note	1
14	GM17448	Drain Valve* See Note	1
15	GM48730	Element, Fuel Filter* See Note	1

Note
If optional Agency Approval items are installed,
see page 131 and Accessories Section for additional parts.

Group 81: Primary Fuel Filter, continued





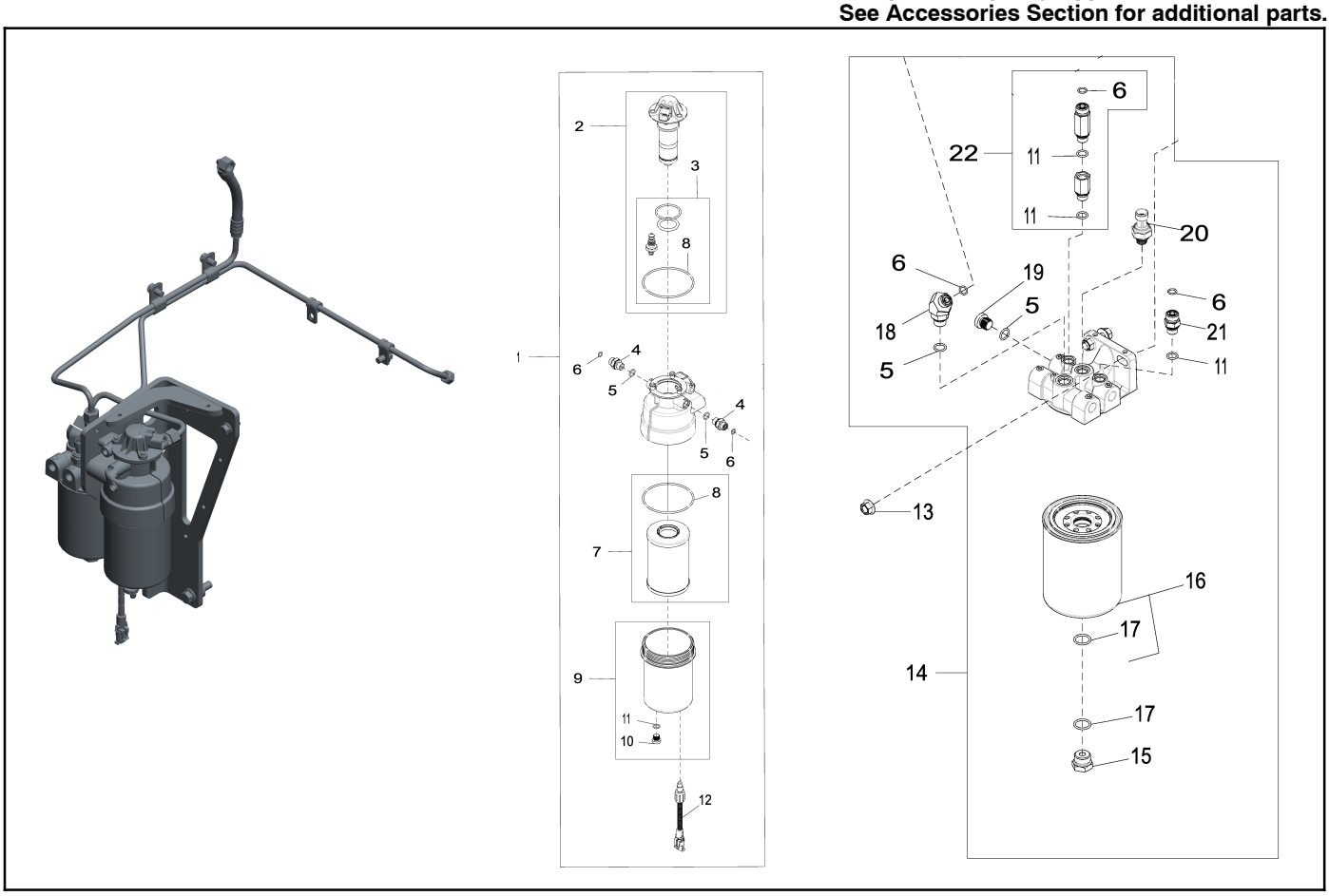
81D2

Item	Part Number	Description	Quantity Variation 81D2
1	GM88754	Bracket* See Note	1
2	GM88679	Pipe Plug	2
3	223988	O-Ring	2
4	GM88761	Filter Head* See Note	1
5	222773	Seal Kit* See Note	2
6	GM48729	Element, Fuel Filter* See Note	1
7	352141	Drain Valve* See Note	1
8	GM88770	Seal Kit* See Note	2
9	GM50690	Wiring Harness, 24V* See Note	1
10	#	Screw, M12 X 45	1
11	GM50948	Spacer	1
12	#	Screw, M10 X 25	6
13	GM88760	Filter Head* See Note	1
14	GM48730	Element, Fuel Filter* See Note	1
15	GM17448	Drain Valve* See Note	1

Note
If optional Agency Approval items are installed,
see page 131 and Accessories Section for additional parts.

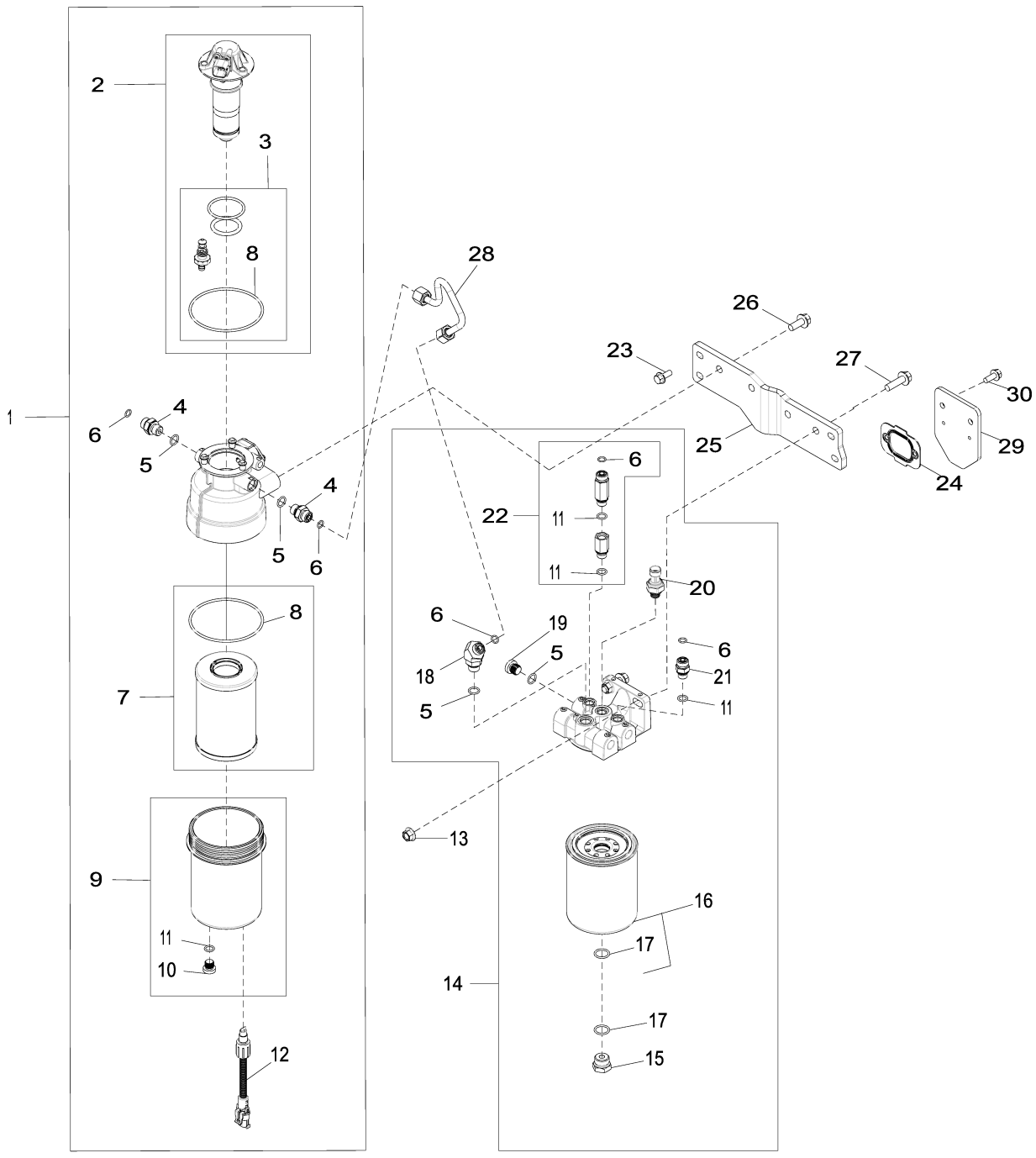
Group 81: Primary Fuel Filter, continued

Variation 81BN, 81D2
Optional Agency Approval Installed Items.
See Accessories Section for additional parts.



Item	Part Number	Description	Variation Quantity
1	-	Fuel Filter	1
2	GM50241	Fuel Pump	1
3	GM77149	Seal Kit	1
4	GM50107	Fitting, adapter	2
5	GM50115	O-ring	4
6	360165	O-Ring	5
7	GM50263	Fuel Filter Kit (includes primary and secondary filters)	1
8	GM50193	O-ring	1
9	GM91975	Filter Bowl	1
10	GM52830	Drain plug	1
11	GM50114	O-ring	4
12	GM84091	Sensor	1
13	GM30375	Flange Nut, M10	2
14	GM91976	Filter	1
15	223458	Drain Plug	1
16	GM50263	Fuel Filter Kit (includes primary and secondary filters)	1
17	223466	O-Ring	1
18	360556	Elbow Fitting, 45 deg.	1
19	GM50292	Fitting plug	1
20	GM50230	Sensor	1
21	GM50106	Fitting, adapter	1
22	GM50280	Bleed valve	1

Group 81: Primary Fuel Filter, continued

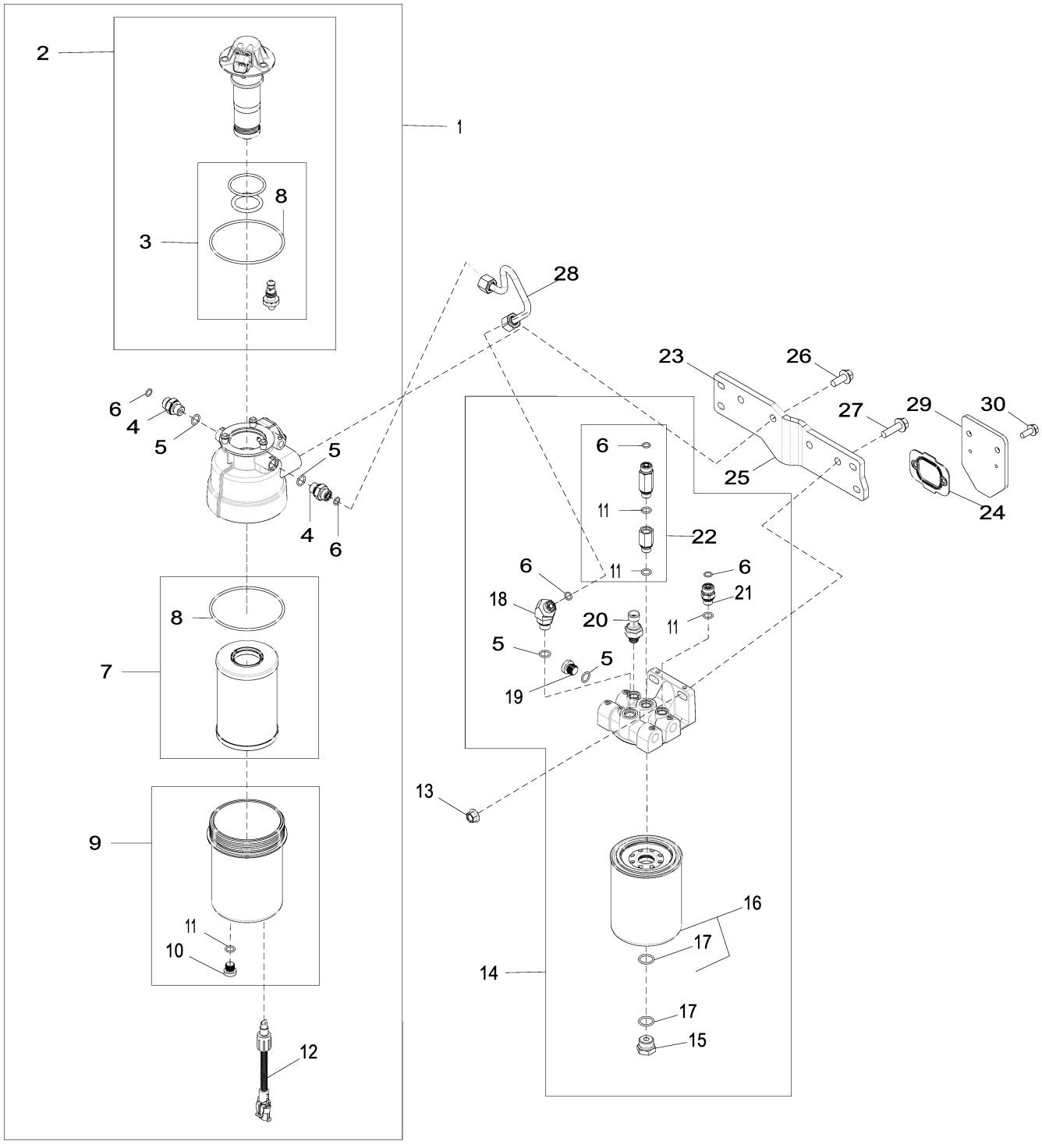


81BS

Group 81: Primary Fuel Filter, continued

Item	Part Number	Description	Quantity Variation 81BS
1	GM91972	Fuel Filter	1
2	GM91973	Fuel Pump	1
3	GM77149	Seal Kit	1
4	GM50107	Fitting, adapter	2
5	GM50115	O-ring	4
6	360165	O-Ring	5
7	GM50263	Fuel Filter Kit (includes primary and secondary filters)	1
8	GM50193	O-ring	1
9	GM91975	Filter Bowl	1
10	GM52830	Drain plug	1
11	GM50114	O-ring	4
12	GM84091	Sensor	1
13	GM30375	Flange Nut, M10	2
14	GM91976	Filter	1
15	223458	Drain Plug	1
16	GM50263	Fuel Filter Kit (includes primary and secondary filters)	1
17	223466	O-Ring	1
18	360556	Elbow Fitting, 45 deg.	1
19	GM50292	Fitting plug	1
20	GM50230	Sensor	1
21	GM50106	Fitting, adapter	1
22	GM50280	Bleed valve	1
23	#	Screw, M8 x 20	4
24	GM88692	Gasket	1
25	GM91977	Bracket	1
26	#	Screw, M10 x 25	2
27	#	Screw, M10 x 35	2
28	GM91978	Fuel Line	1
29	GM91979	Plate	1
30	GM24536	Screw	2

Group 81: Primary Fuel Filter, continued



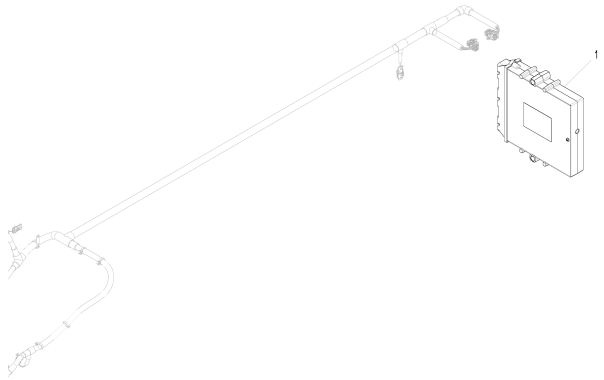
81BT_RE555913_PCD

81BT

Group 81: Primary Fuel Filter, continued

Item	Part Number	Description	Quantity Variation 81BT
1	GM91972	Fuel Filter	1
2	GM91973	Fuel Pump	1
3	GM77149	Seal Kit	1
4	GM50107	Fitting, adapter	2
5	GM50115	O-ring	4
6	360165	O-ring	5
7	GM91974	Fuel Filter	1
8	GM50193	O-ring	1
9	GM91975	Filter	1
10	GM52830	Drain plug	1
11	GM50114	O-ring	4
12	GM84091	Sensor	1
13	GM30375	Flange Nut, M10	2
14	GM91976	Filter	1
15	223458	Drain Plug	1
16	GM91974	Fuel Filter	1
17	223466	O-Ring	1
18	360556	Elbow Fitting, 45 deg.	1
19	GM50292	Fitting plug	1
20	GM50230	Sensor	1
21	GM50106	Fitting, adapter	1
22	GM50280	Bleed valve	1
23	#	Screw, M8 x 20	4
24	GM88692	Gasket	1
25	GM91977	Bracket	1
26	#	Screw, M10 x 25	2
27	#	Screw, M10 x 35	2
28	GM91978	Fuel Line	1
29	GM91979	Plate	1
30	GM24536	Screw	2

Group 84: ECU

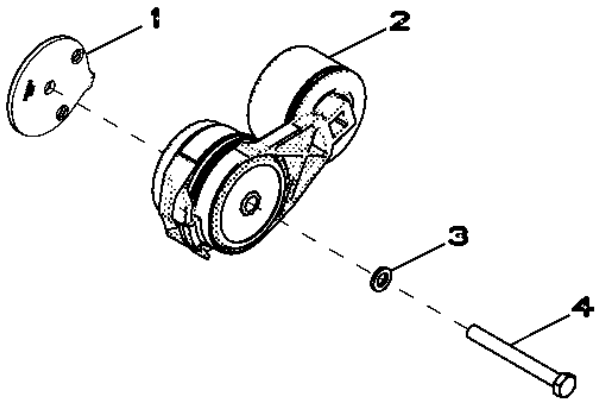


8495_RE532465_PCD

8495

Item	Part Number	Description	Quantity Variation 8495
1	GM49989	Engine controller	1

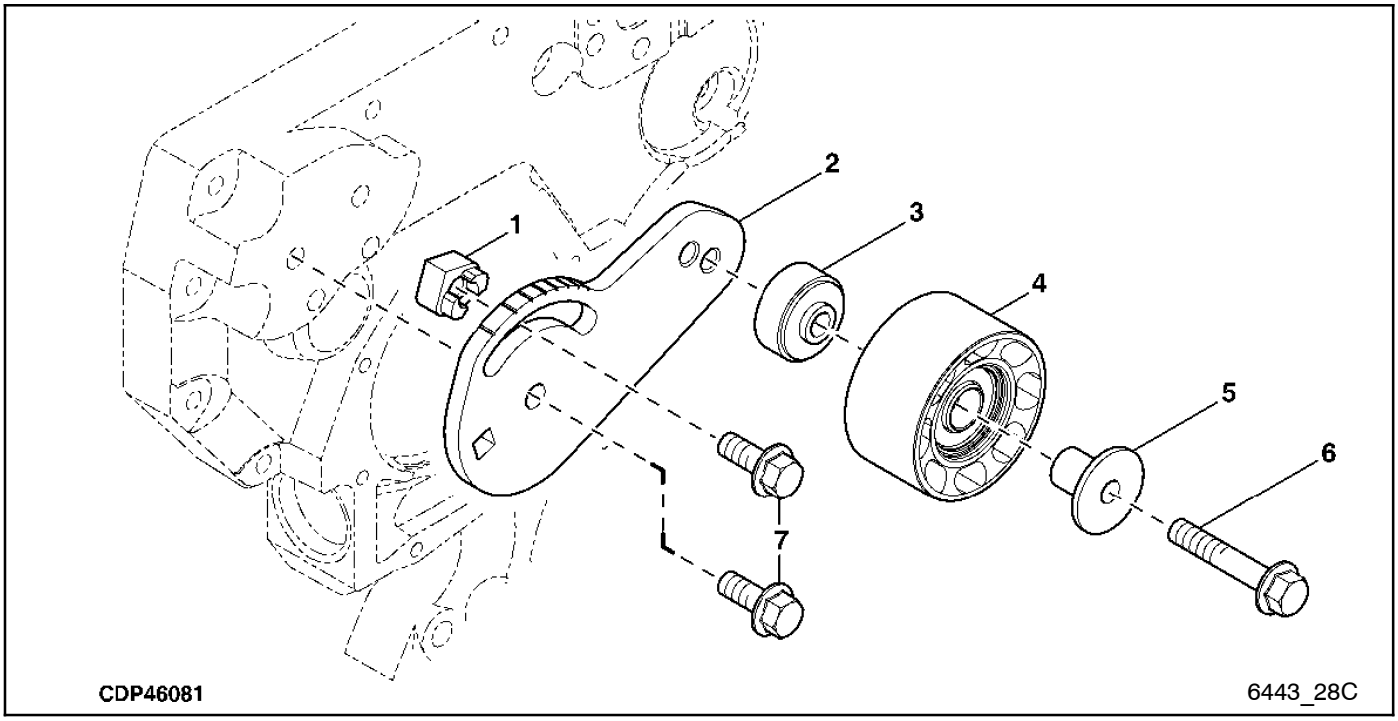
Group 87: Belt Tensioner



8701

Item	Part Number	Description	Quantity Variation 8701
1	GM88681	Spacer	1
2	GM49938	Tightener	1
3	#	Washer, 10 X 18 X 2.500 Mm	1
4	#	Cap Screw, M10 X 90	1

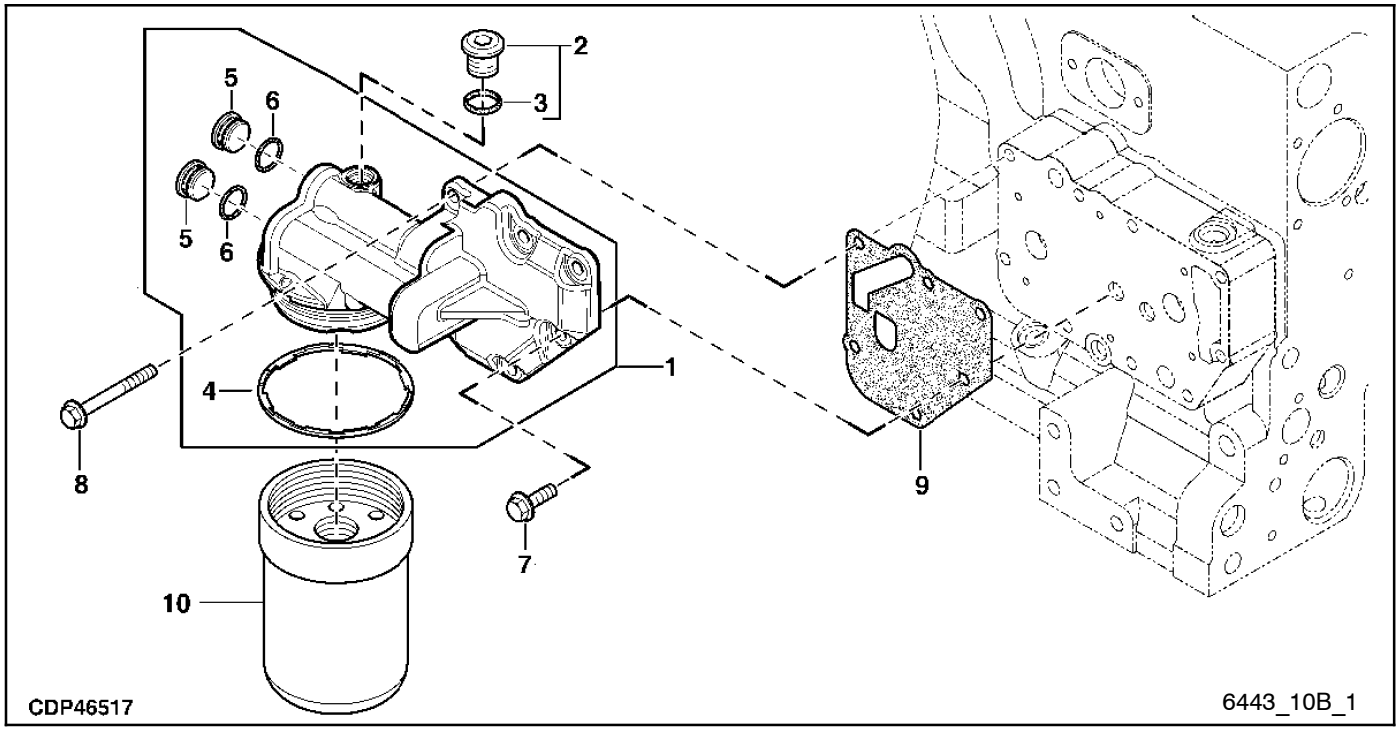
Group 87: Belt Tensioner, continued



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.

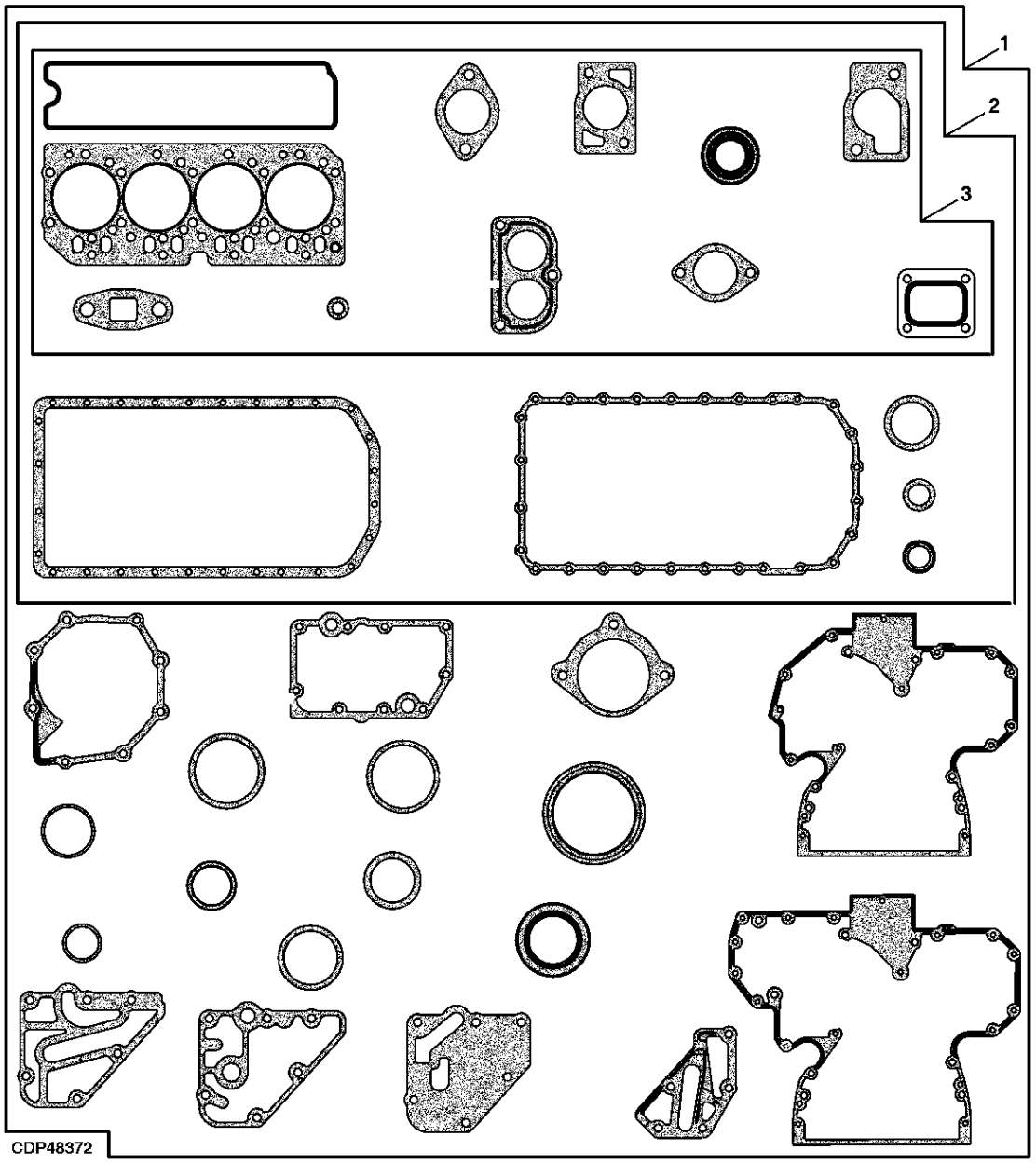
Group 88: Oil Filter



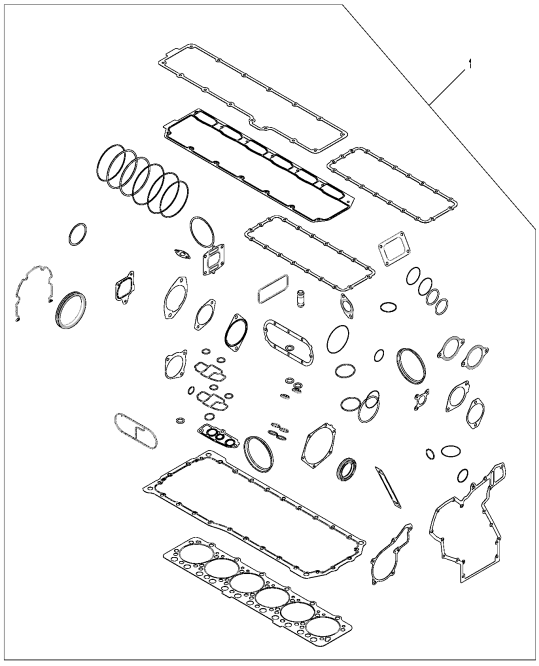
Item	Part Number	Description	Quantity Variation 8843
1	GM46686	Filter head	1
2	GM24535	Plug	AR
3	360557	O-ring	AR
4	GM32787	Seal	1
5	GM17447	Fitting	2
6	GM17437	O-ring	2
7	GM24536	Screw	1
8	#	Screw, M8 x 65	5
9	GM17472	Gasket	1
10	GM32809	Filter, oil	1

AR As Required
Common hardware; procure locally.

Group 99-1: Gasket Sets



Item	Part Number	Description	Quantity Variation 9901
1	360587	Gasket kit, overhaul	1
2			
3	360586	Gasket kit, cylinder head	1

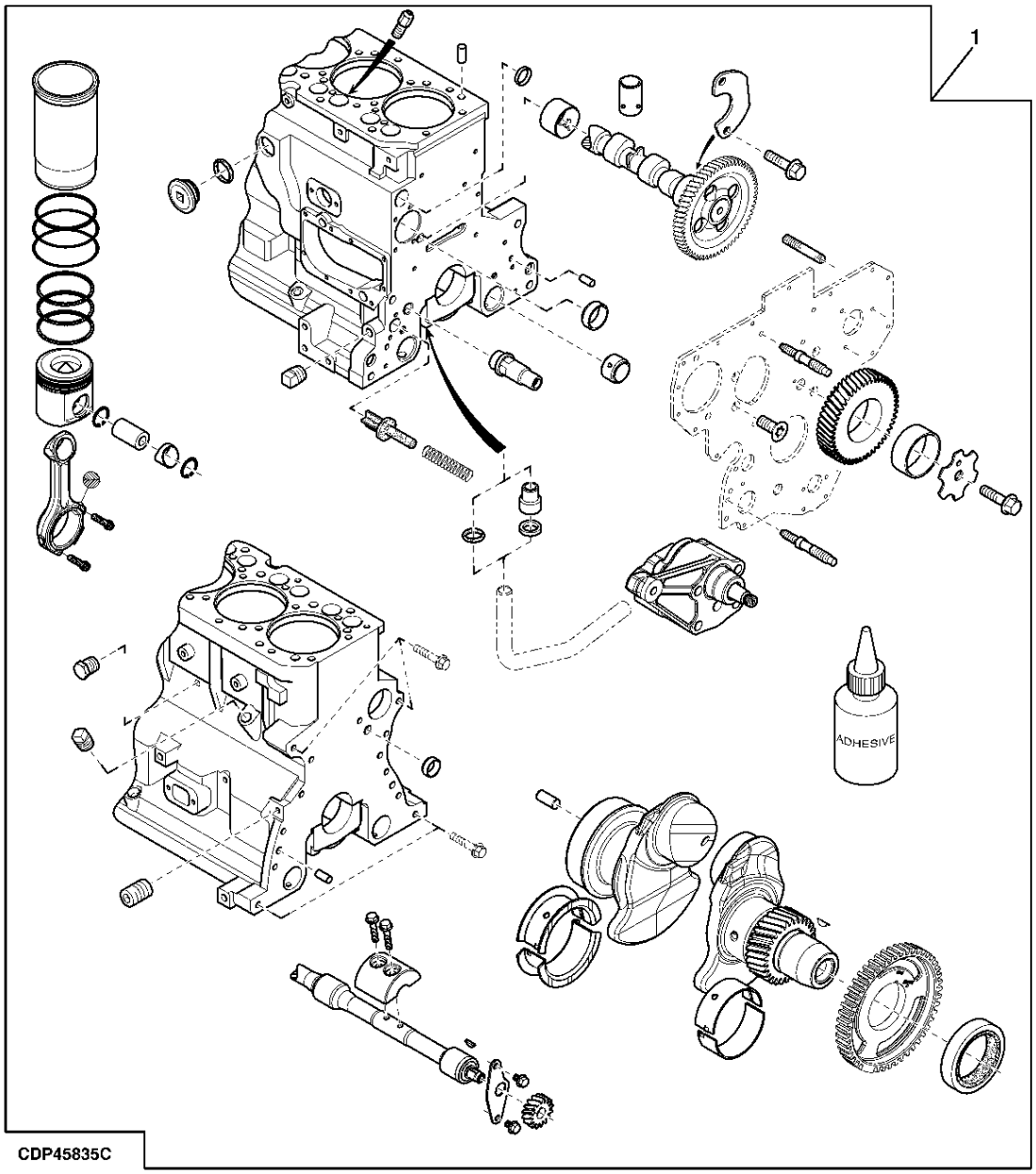


9901_RE572767_PCD

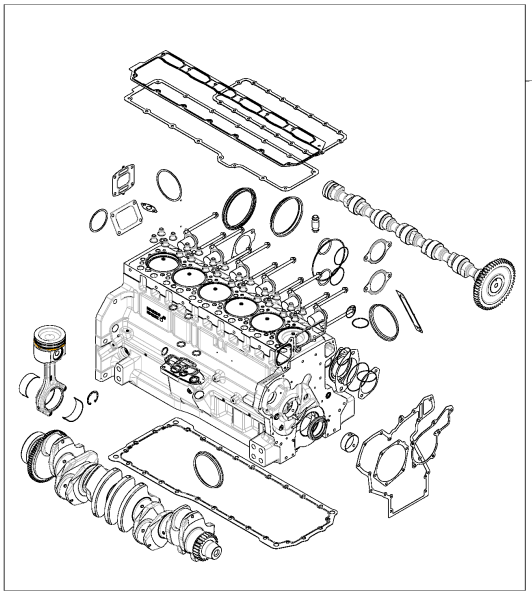
9901-2

Item	Part Number	Description	Quantity Variation 9901-2
1	GM98761	Gasket Kit	1

Group 99-2: Engine Short Block



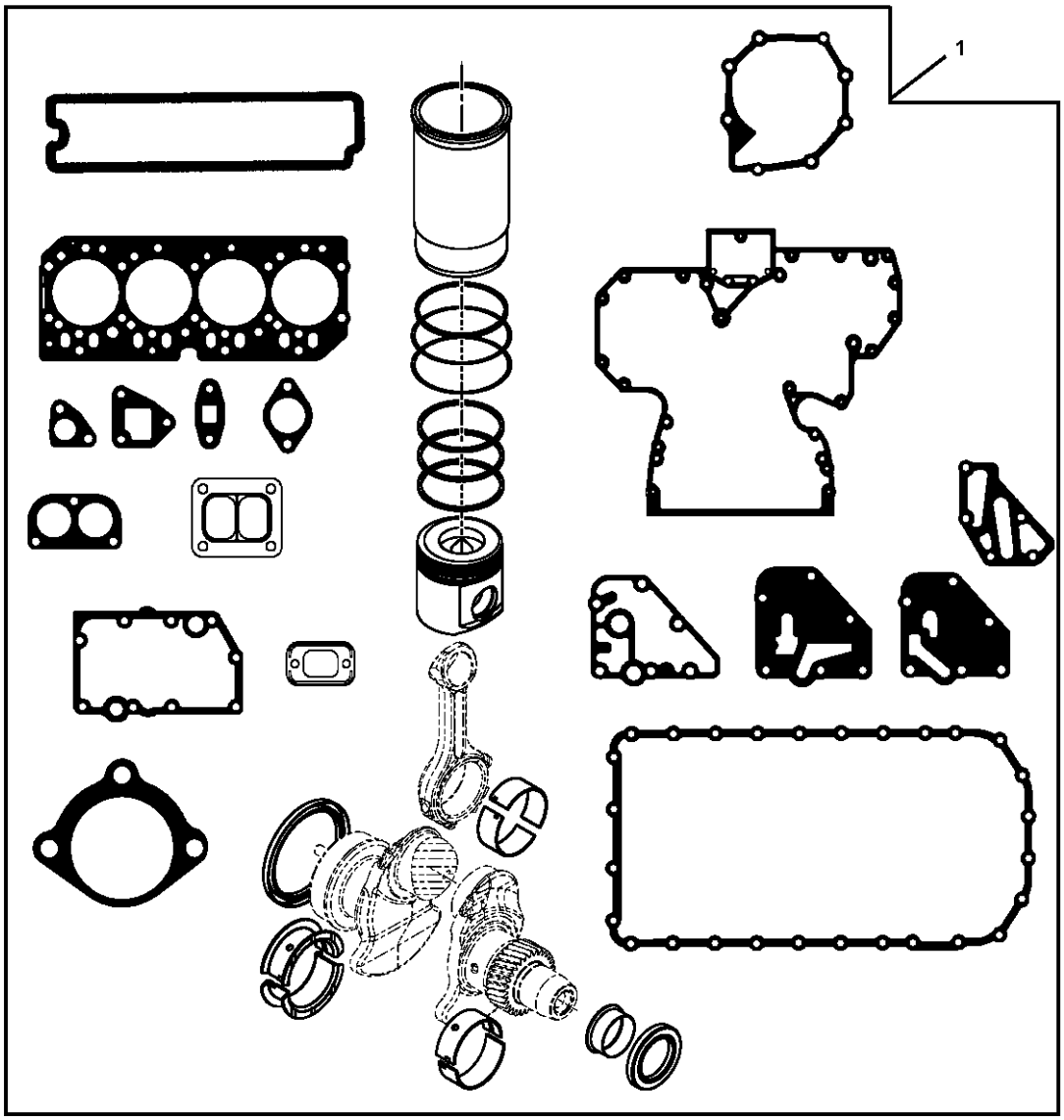
Item	Part Number	Description	Quantity Variation 9902-1	Quantity Variation 9902-2
1	GM50619	Short block assembly	1	
1	GM50620	Short block assembly		1



9902-3

Item	Part Number	Description	Quantity Variation 9902-3
1	GM98765	Short Block Assembly	1

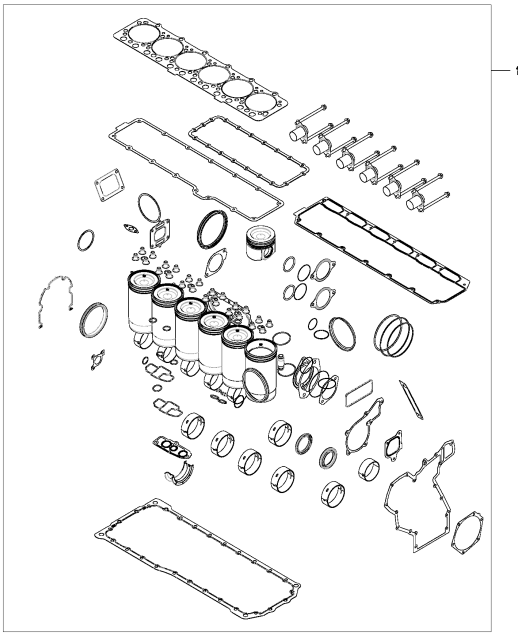
Group 99-3: Engine Overhaul Kit



CDP45848

Item	Part Number	Description	Quantity Variation 9903-1	Quantity Variation 9903-2
1	GM91981	Engine Overhaul Kit	1	
1	GM84858	Engine Overhaul Kit		1

Group 99-3: Engine Overhaul Kit, continued

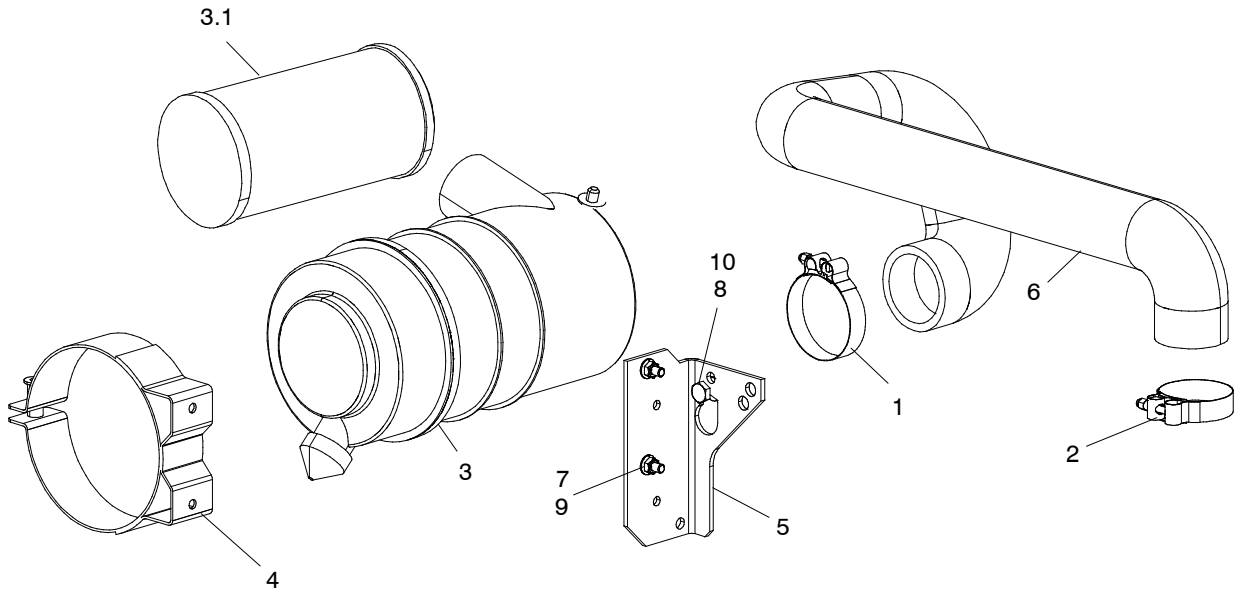


9901_RE572768_PCD

9903-3

Item	Part Number	Description	Quantity Variation 9903-3
1	GM98760	Engine Overhaul Kit	1

Air Intake

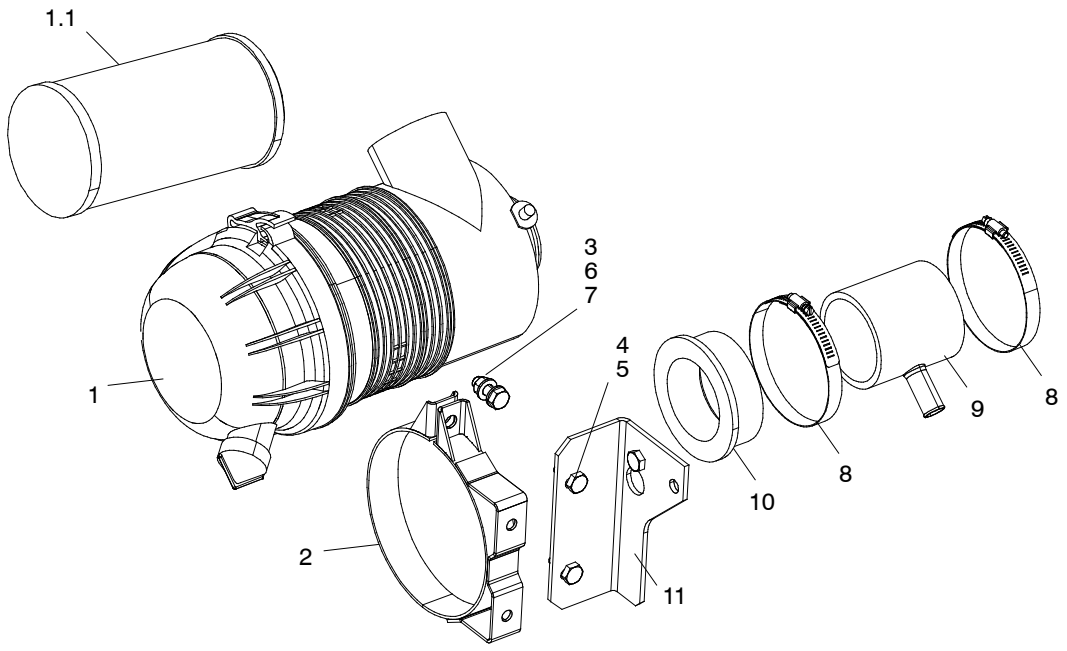


Variation 1, 5

Item	Part Number	Description	Quantity
1	275527	Clamp, Hose, 2.81/3.12 In.	1
2	276320	Clamp, Hose, 2.38/2.69 In.	1
3	GM14199	Air Cleaner Assembly (JD)	1
3.1	226915	Element, Air Cleaner (Branded 1 Per Case)	1
4	GM14200	Mount, Air Cleaner (6.76” ID)	1
5	See chart	Bracket, Air Cleaner Mounting	1
6	GM40739	Hose, Air Intake	1
7	M6923-08-80	Nut, Hex 8mm	2
8	M6923-10-80	Nut, Hex 10mm	1
9	M933-08025-60	Screw, Hex Cap	2
10	M933-10025-60	Screw, Hex Cap	1

Use this table to identify part numbers of item 5.

Variation	Module	Part Number
		Item 5, Bracket
1	GM86745-GR1-WHT	GM14202-WHT
5	GM86745-GR1-G49	GM14202-G49



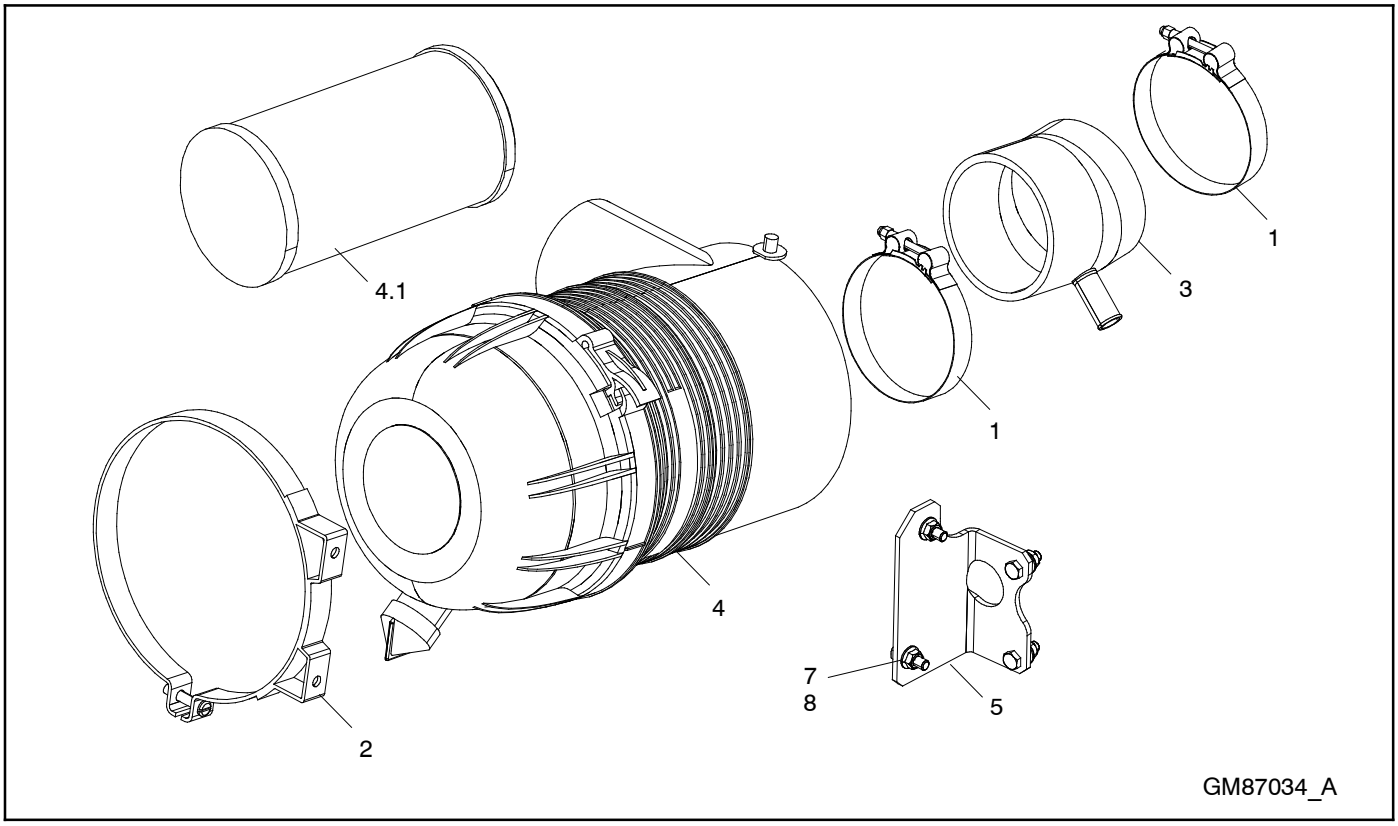
Variation 2, 3, 6, 7

Item	Part Number	Description	Quantity
1	GM86445	Air Cleaner Assembly	1
1.1	GM86446	Element, Air Cleaner	1
2	GM88452	Mount, Air Cleaner	1
3	M125A-10-80	Washer, Plain, 10.5 ID X 20.0 OD	2
4	M6923-10-80	Nut, Hex 10mm	3
5	M933-10025-60	Screw, Hex Cap,Fully Thrd M10 X 25mm	3
6	M933-10030-60	Screw, Hex Cap	1
7	M934-10-60	Nut, Hex 10mm	1
8	See chart	Clamp, Hose, 3.56/4.5 In.	2
9	See chart	Hose, Air Intake	1
10	See chart	Insert, Hose Reducer (4.00” To 3.00”)	1
11	See chart	Bracket, Air Cleaner Mounting	1

Use this table to identify part numbers of item 8- 11.

Variation	Module	Part Number			
		Item 8, Clamp	Item 9, Hose	Item 10, Insert	Item 11, Bracket
2	GM85595- GR1- WHT	X-426-5	GM86624-1	Not used	GM86625-WHT
3	GM85595- GR2- WHT	X-426-7	GM86624-2	274724	GM86625-WHT
6	GM85595- GR1- G49	X-426-5	GM86624-1	Not used	GM86625-G49
7	GM85595- GR2- G49	X-426-7	GM86624-2	274724	GM86625-G49

Air Intake, continued

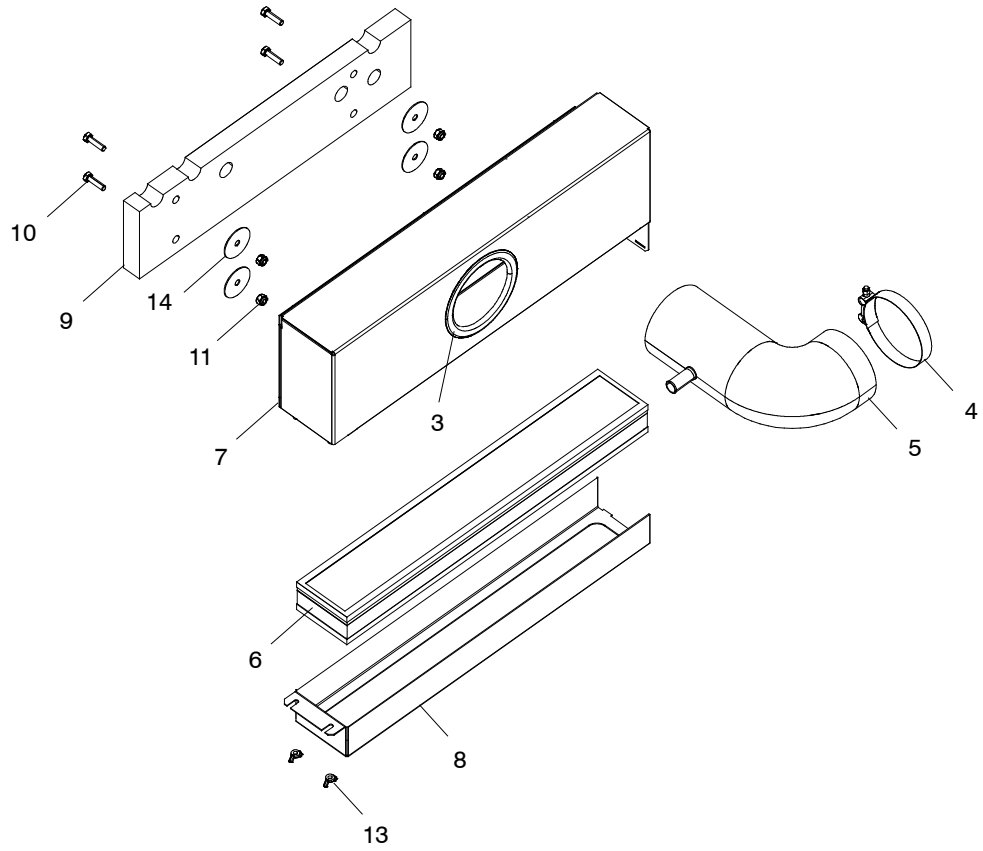


Variation 4, 8

Item	Part Number	Description	Quantity
1	274545	Clamp, Hose, 4.31/4.62 In.	2
2	324362	Mount, Air Cleaner/Exhaust (8.50” ID)	1
3	GM86624-2	Hose, Air Intake	1
4	GM87478	Air Cleaner Assy	1
4.1	GM87479	Element, Air Cleaner	1
5	See chart	Bracket, Air Cleaner Mounting	1
6	GM87774	Decal, Air Cleaner	1
7	M6923-08-80	Nut, Hex 8mm	4
8	M933-08025-60	Screw, Hex Cap	4

Use this table to identify part numbers of item 5.

Variation	Module	Part Number
		Item 5, Bracket
4	GM87034-GR1-WHT	GM87483-WHT
8	GM87034-GR1-G49	GM87483-G49



GM88864_A

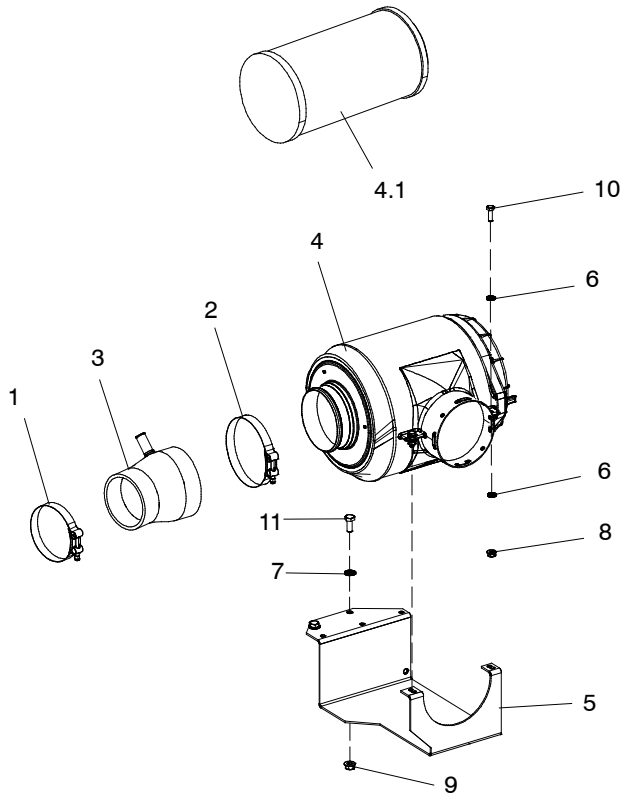
Variations 9, 10

Item	Part Number	Description	Quantity
3	X-6047-7	Channel, U	1
4	274545	Clamp, hose, 4.31/4.62 in.	1
5	GM90294	Hose, Molded Air Intake	1
6	GM90310	Filter, Air	1
7	See chart	Box, Air Filter	1
8	See chart	Tray, Air Filter	1
9	GM92022	Insulation, Acoustic Foam	1
10	M933-08030-60	Screw, hex cap	4
11	M982-08-80	Nut, hex elastic stop, 8MM	4
12	X-25-101	Washer, plain, .375 ID x 2 in. OD	4
13	X-276-9	Nut, wing, 1/4-20	2

Use this table to identify part numbers of items 7 and 8.

Variation	Module	Part Number	
		Item 7, Box, Air Filter	Item 8, Tray, Air Filter
9	GM88864-GR1-WHT	GM90311-WHT	GM91693-WHT
10	GM88864-GR1-G49	GM90311-G49	GM91693-G49

Air Intake, continued



GM93101_A

Variations 11, 12

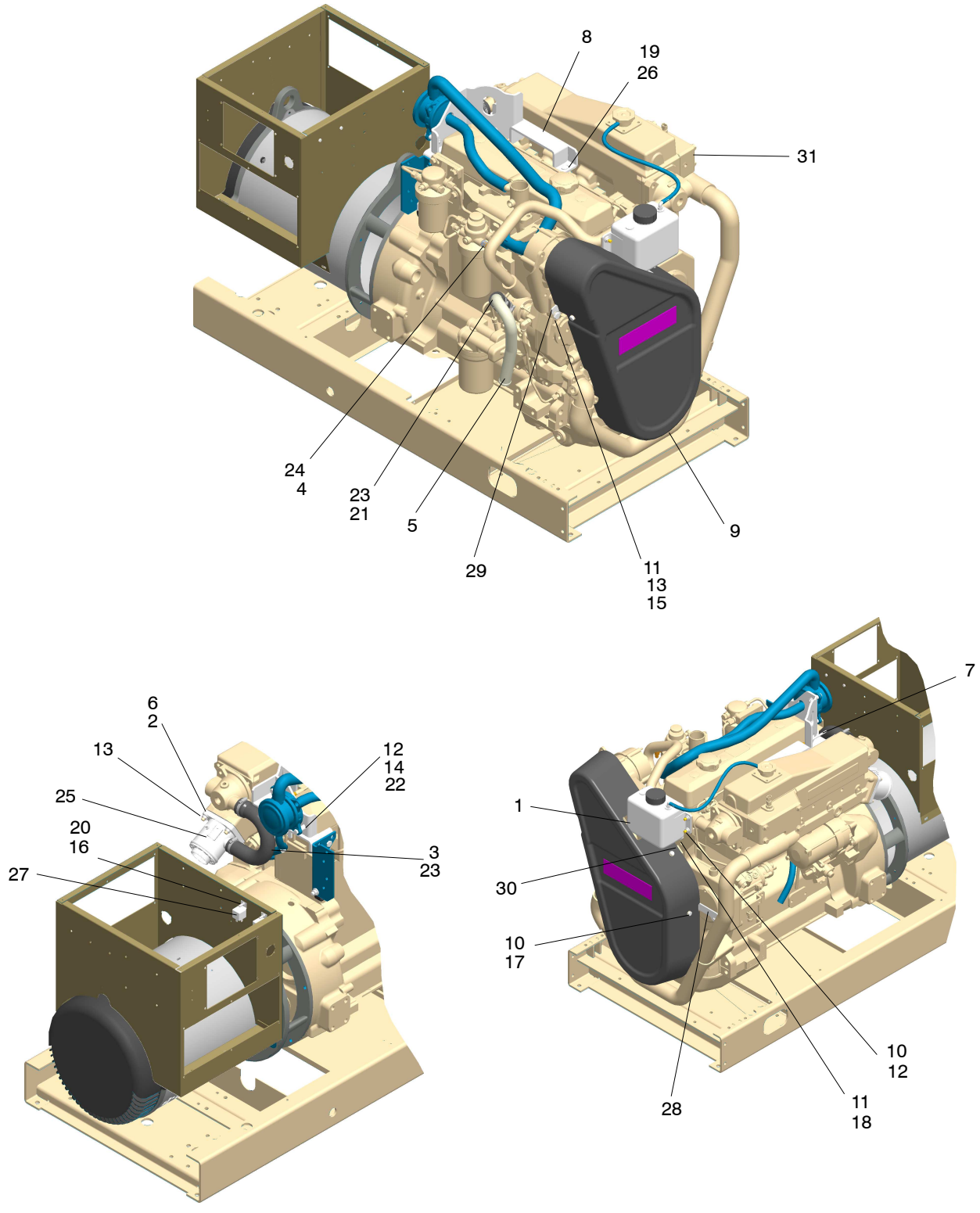
Item	Part Number	Description	Quantity
1	274545	Clamp, hose, 4.31/4.62 in.	1
2	291562	Clamp, hose, 5.25/5.56 in.	1
3	GM93709	Hose, Molded Air Intake	1
4	GM93710	Air Cleaner Assy	1
4.1	GM98860	Element, Air Cleaner	1
5	See chart	Bracket, Air Cleaner Mounting	1
6	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	7
7	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	2
8	M6923-08-80	Nut, Hex 8mm	5
9	M6923-10-80	Nut, Hex 10mm	2
10	M933-08025-60	Screw, hex cap	5
11	M933-10025-60	Screw, hex cap,fully thrd M10 x 25mm	2

Use this table to identify part number of item 5.

Variation	Module	Part Number
		Item 5, Bracket
11	GM93101-GR1-WHT	GM93713-WHT
12	GM93101-GR1-G49	GM93713-G49

Notes

Engine



GM86744_A

Engine, continued

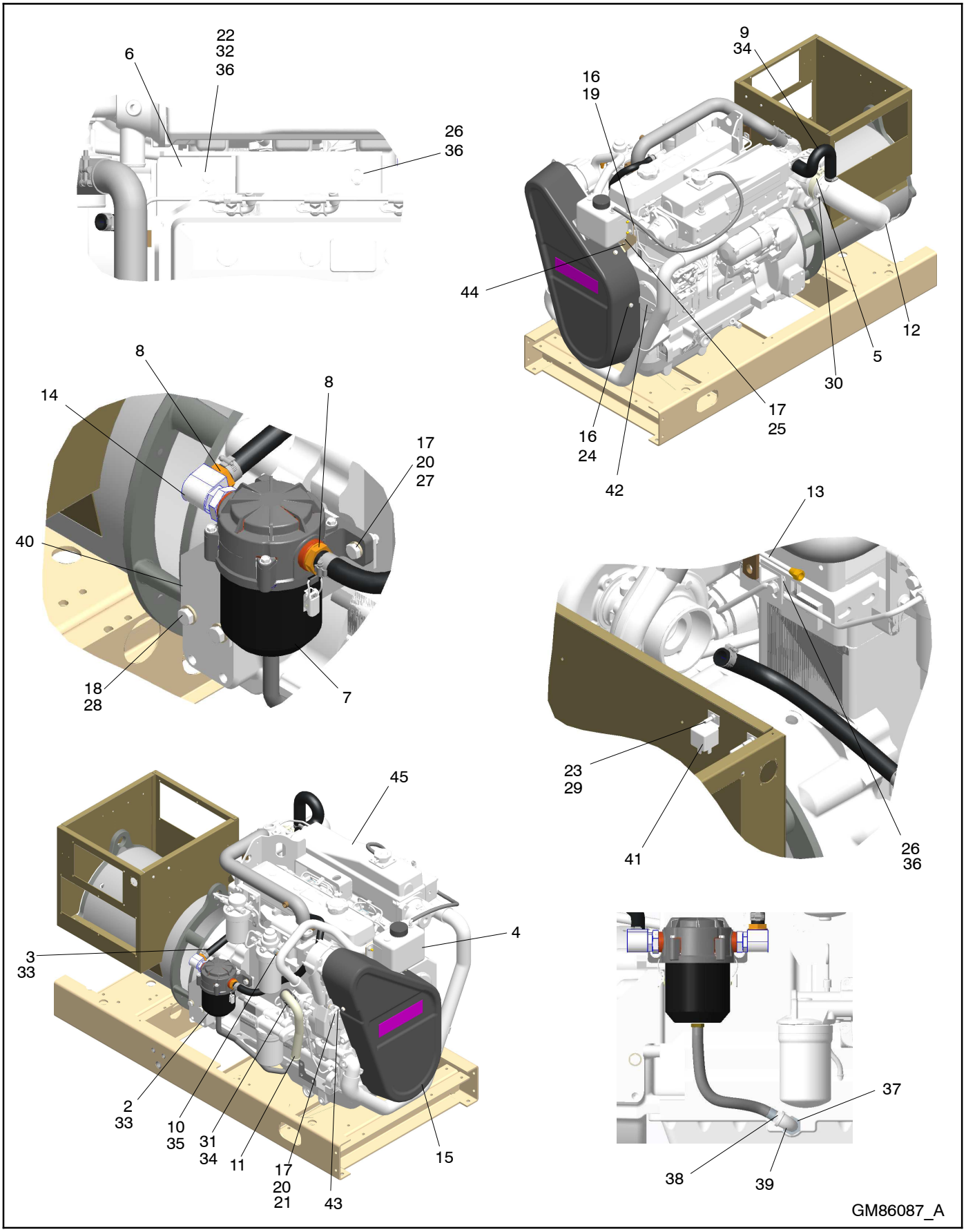
Variation 1, 2, 3, 4, 15, 16, 17, 18

Item	Part Number	Description	Quantity
1	256971	Bottle, Overflow	1
2	352029	Gasket	1
3	GM25430	Hose, Seawater (1.25” ID)	1
4	GM42525	Adapter Bushing	1
5	GM47453	Tube, Water Inlet	1
6	GM47702	Elbow, Wet Exhaust	1
7	GM48028	Line, Fuel	1
8	GM63139	Eye, Lifting	1
9	GM86086	Guard, Belt	1
10	M125A-08-80	Washer, Plain, 8.4 ID X 16.0 OD	7
11	M125A-10-80	Washer, Plain, 10.5 ID X 20.0 OD	3
12	M6923-08-80	Nut, Hex 8mm	7
13	M6923-10-80	Nut, Hex 10mm	6
14	M931-08045-60	Screw, Hex Cap	3
15	M931-10040-60	Screw, Hex Cap	1
16	M933-05020-60	Screw, Hex Cap	2
17	M933-08025-60	Screw, Hex Cap	3
18	M933-10025-60	Screw, Hex Cap,Fully Thrd M10 X 25mm	3
19	M933-10025-82	Screw, Hex Cap	3
20	M934-05-50	Nut, Hex 5mm	2
21	X-272-2	Hose, Radiator, Straight, 1.25 In. ID	1
22	X-400-52	Spacer, .359 ID X .547 OD X .75 In.	3
23	X-426-19	Clamp, Hose, 1.00/2.00 In.	4
24	X-447-23	Elbow, Male Tube (90 Deg) + Vibra Seal	1
25	X-75-4	Plug, Pipe (1/8” Nptf)	1
26	X-801-3	Washer, Hardened,.406 ID X .812 In. OD	3
27	See Chart	Relay, 12 VDC	2
28	See Chart	Bracket, Belt Guard	1
29	See Chart	Bracket, Belt Guard	1
30	See Chart	Bracket, Water Bottle	1
31	See Chart	Engine Assembly	1

Use this table to identify part numbers of items 28- 32.

Variation	Module	Part Number				
		Item 28, Relay	Item 29, Bracket	Item 30, Bracket	Item 31, Bracket	Item 32, Engine
1	GM86744- GR1- WHT	GM49746	GM49941-WHT	GM49942-WHT	GM85815-WHT	GM86759
2	GM86744- GR2- WHT	GM49747	GM49941-WHT	GM49942-WHT	GM85815-WHT	GM51613
3	GM86744- GR3- WHT	GM49746	GM49941-WHT	GM49942-WHT	GM85815-WHT	GM86760
4	GM86744- GR4- WHT	GM49747	GM49941-WHT	GM49942-WHT	GM85815-WHT	GM51614
15	GM86744- GR1- G49	GM49746	GM49941-G49	GM49942-G49	GM85815-G49	GM86759
16	GM86744- GR2- G49	GM49747	GM49941-G49	GM49942-G49	GM85815-G49	GM51613
17	GM86744- GR3- G49	GM49746	GM49941-G49	GM49942-G49	GM85815-G49	GM86760
18	GM86744- GR4- G49	GM49747	GM49941-G49	GM49942-G49	GM85815-G49	GM51614

Engine, continued



Engine, continued

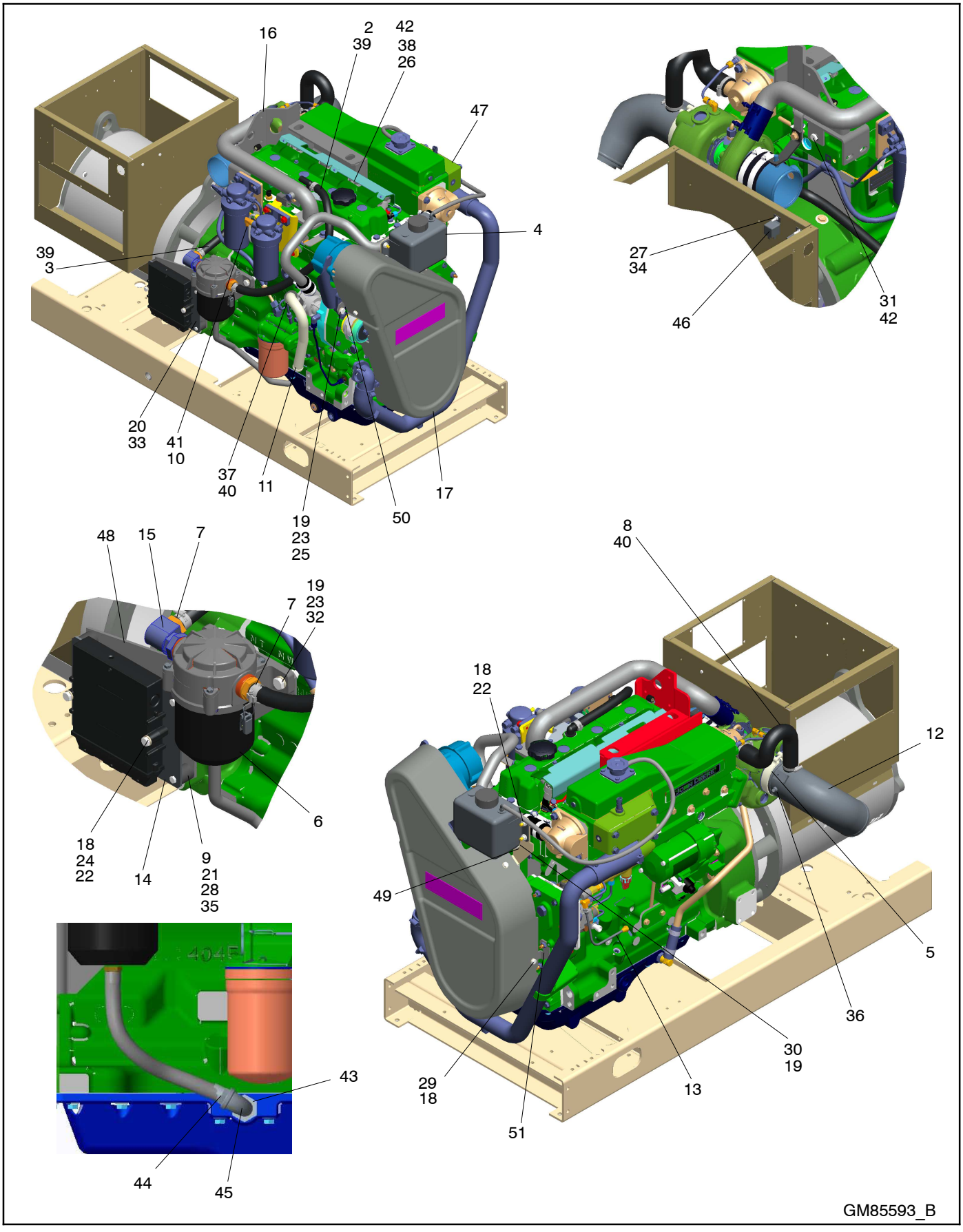
Variation 5, 6, 19, 20

Item	Part Number	Description	Quantity
2	X-373-9	Hose, 3/4 In. I.D.	1
3	X-373-25	Hose, 3/4 In. I.D.	1
4	256971	Bottle, Overflow	1
5	324245	Clamp, Exhaust (4.25 In.)	1
6	GM14216	Eye, Lifting	1
7	GM16234	Assembly, Emissions Filter	1
7.1	GM32404	Element, Air Emissions Filter	1
8	GM16246	Connector, Hose	1
9	GM25435	Hose, Seawater (1.25” ID)	1
10	GM42525	Adapter Bushing	1
11	GM47453	Tube, Water Inlet	1
12	GM47704	Elbow, Wet Exhaust	1
13	GM48028	Line, Fuel	1
14	GM64277	Fitting, 90 deg. Elbow	1
15	GM86086	Guard, Belt	1
16	M125A-08-80	Washer, Plain, 8.4 ID X 16.0 OD	7
17	M125A-10-80	Washer, Plain, 10.5 ID X 20.0 OD	5
18	M125A-12-80	Washer, Plain	2
19	M6923-08-80	Nut, Hex 8mm	4
20	M6923-10-80	Nut, Hex 10mm	3
21	M931-10040-60	Screw, Hex Cap	1
22	M931-10065-82	Screw, Hex Cap (Metric)	1
23	M933-05020-60	Screw, Hex Cap	2
24	M933-08025-60	Screw, Hex Cap	3
25	M933-10025-60	Screw, Hex Cap,Fully Thrd M10 X 25mm	2
26	M933-10025-82	Screw, Hex Cap	2
27	M933-10035-60	Screw, Hex Cap	2
28	M933-12030-60	Screw, Hex Cap	2
29	M934-05-50	Nut, Hex 5mm	2
30	X-75-4	Plug, Pipe (1/8” Nptf)	1
31	X-272-2	Hose, Radiator, Straight, 1.25 In. ID	1
32	X-400-209	Spacer, .406 ID X 1 OD X 1.48 In.	1
33	X-426-12	Clamp, Hose, .69/1.25 In.	4
34	X-426-19	Clamp, Hose, 1.00/2.00 In.	4
35	X-447-23	Elbow, Male Tube (90 Deg) + Vibra Seal	1
36	X-801-3	Washer,Hardened,.406 ID X .812 In. OD	3
37	GM40116	Adapter, bushing	1
38	X-202-47	Bushing, reducing (1/4 in. X 1/2 In.)	1
39	X-211-1	Elbow, street (90 deg X 1/2 in.)	1
40	See chart	Bracket, Filter Mounting	1
41	See chart	Relay, 12 VDC	2
42	See chart	Bracket, Belt Guard	1
43	See chart	Bracket, Belt Guard	1
44	See chart	Bracket, Water Bottle	1
45	See chart	Engine Assembly	1

Use this table to identify part numbers of items 40- 45.

Variation	Module	Part Number					
		Item 40, Bracket	Item 41, Relay	Item 42, Bracket	Item 43, Bracket	Item 44, Bracket	Item 45, Engine
5	GM86087- GR1- WHT	GM16285-WHT	GM49746	GM49941-WHT	GM49942-WHT	GM85815-WHT	GM86375
6	GM86087- GR2- WHT	GM16285-WHT	GM49747	GM49941-WHT	GM49942-WHT	GM85815-WHT	GM86376
19	GM86087- GR1- G49	GM16285-G49	GM49746	GM49941-G49	GM49942-G49	GM85815-G49	GM86375
20	GM86087- GR2- G49	GM16285-G49	GM49747	GM49941-G49	GM49942-G49	GM85815-G49	GM86376

Engine, continued



Engine, continued

Variation 7, 8, 9, 10, 21, 22, 23, 24

Item	Part Number	Description	Quantity
2	X-373-15	Hose, 3/4 In. I.D.	1
3	X-373-25	Hose, Fuel/Oil .75” Id	1
4	256971	Bottle, Overflow	1
5	324245	Clamp, Exhaust (4.25 In.)	1
6	GM16234	Assembly, Emissions Filter	1
6.1	GM32404	Element, Air Emissions Filter	1
7	GM16246	Connector, Hose	2
8	GM25435	Hose, Seawater (1.25” ID)	1
9	GM38784-3	Vibromount, Controller	4
10	GM42525	Adapter Bushing	1
11	GM47453	Tube, Water Inlet	1
12	GM47704	Elbow, Wet Exhaust	1
13	GM48028	Fuel Line	1
14	GM50971	Bracket, ECM Mounting	1
15	GM64277	Fitting, 90 deg. Elbow	2
16	GM85681	Eye, Lifting	1
17	GM85816	Guard, Belt	1
18	M125A-08-80	Washer, Plain, 8.4 ID X 16.0 OD	9
19	M125A-10-80	Washer, Plain, 10.5 ID X 20.0 OD	5
20	M125A-12-80	Washer, Plain	2
21	M6923-06-80	Nut, Hex 6mm	4
22	M6923-08-80	Nut, Hex 8mm	6
23	M6923-10-80	Nut, Hex 10mm	3
24	M931-08055-60	Screw, Hex Cap	2
25	M931-10040-60	Screw, Hex Cap	1
26	M931-10050-82	Screw, Hex Cap	2
27	M933-05020-60	Screw, Hex Cap	2
28	M933-06010-60	Screw, Hex Cap	4
29	M933-08025-60	Screw, Hex Cap	3
30	M933-10025-60	Screw, Hex Cap,Fully Thrd M10 X 25mm	2
31	M933-10025-82	Screw, Hex Cap	1
32	M933-10035-60	Screw, Hex Cap	2
33	M933-12030-60	Screw, Hex Cap	2
34	M934-05-50	Nut, Hex 5mm	2
35	X-22-12	Washer, Lock, .262 Idx.743 In. OD	8
36	X-75-4	Plug, Pipe (1/8” Nptf)	1
37	X-272-2	Hose, Radiator, Straight, 1.25 In. ID	1
38	X-400-235	Spacer, .437 ID X .875 OD X 1.125 In.	2
39	X-426-12	Clamp, Hose, .69/1.25 In.	4
40	X-426-19	Clamp, Hose, 1.00/2.00 In.	4
41	X-447-23	Elbow, Male Tube (90 Deg) + Vibra Seal	1
42	X-801-3	Washer,Hardened,.406 ID X .812 In. OD	3
43	GM40116	Adapter, bushing	1
44	X-202-47	Bushing, reducing (1/4 in. X 1/2 In.)	1
45	X-211-1	Elbow, street (90 deg X 1/2 in.)	1
46	See chart	Relay, 12 VDC	2
47	See chart	Engine 4045TFM85, John Deere, 12 V, Dsl	1
48	See chart	Bracket, Filter Mounting	1
49	See chart	Bracket, Water Bottle	1
50	See chart	Bracket, Belt Guard (RH)	1
51	See chart	Bracket, Belt Guard (LH)	1

Engine, continued

Use this table to identify part numbers of items 46- 51.

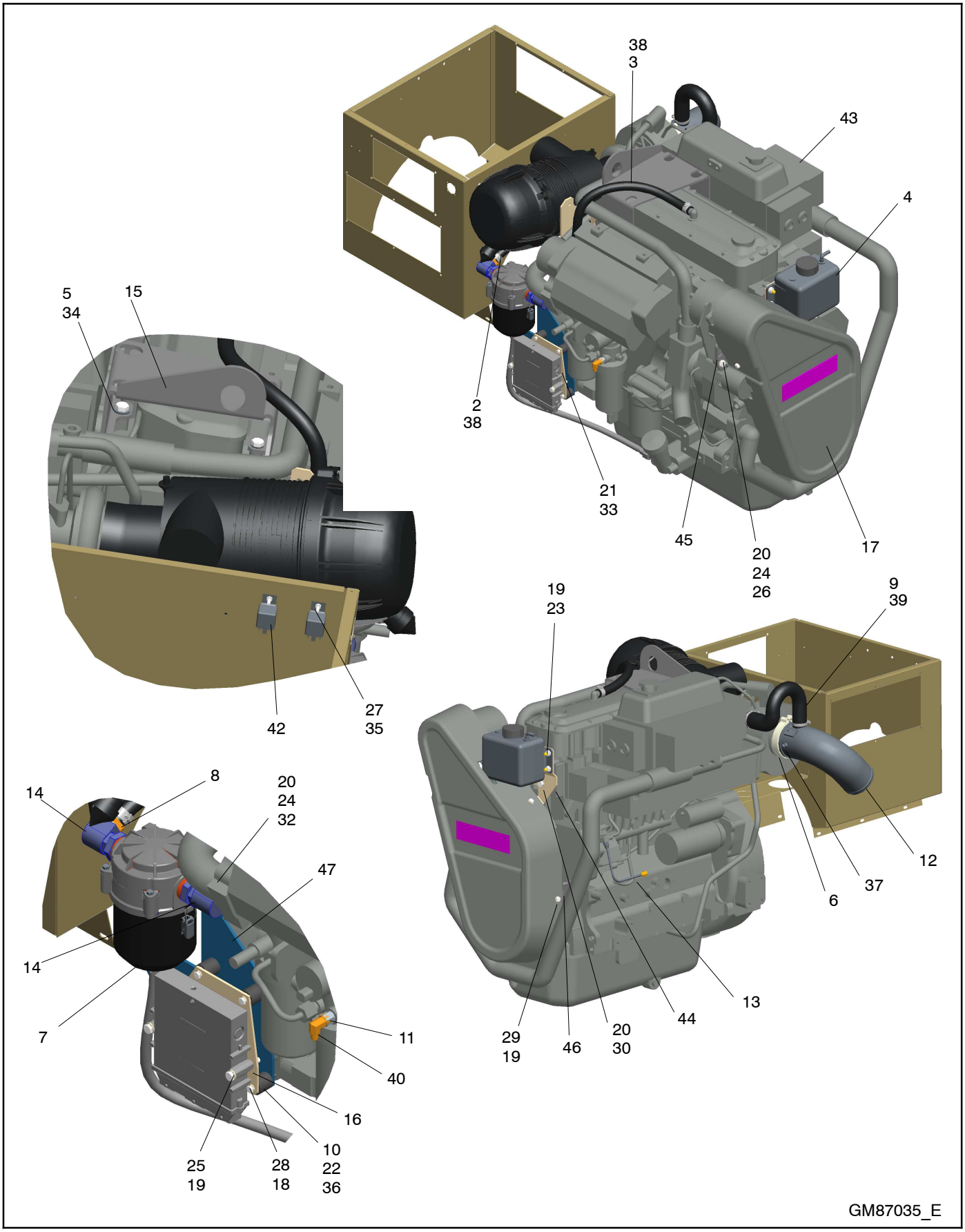
Variation	Module	Part Number					
		Item 46, Relay	Item 47, Engine	Item 47, Engine	Item 48, Bracket	Item 49, Bracket	Item 50, Bracket
7	GM85593- GR1- WHT	GM49746	GM85410	GM114041-1**	GM85814-WHT	GM85815-WHT	GM85817-WHT
8	GM85593- GR2- WHT	GM49747	GM85411	GM114041-2**	GM85814-WHT	GM85815-WHT	GM85817-WHT
9	GM85593- GR3- WHT	GM49746	GM88609	GM114041-3**	GM85814-WHT	GM85815-WHT	GM85817-WHT
10	GM85593- GR4- WHT	GM49747	GM88610	GM114041-4**	GM85814-WHT	GM85815-WHT	GM85817-WHT
21	GM85593- GR1- G49	GM49746	GM85410	GM114041-1**	GM85814-G49	GM85815-G49	GM85817-G49
22	GM85593- GR2- G49	GM49747	GM85411	GM114041-2**	GM85814-G49	GM85815-G49	GM85817-G49
23	GM85593- GR3- G49	GM49746	GM88609	GM114041-3**	GM85814-G49	GM85815-G49	GM85817-G49
24	GM85593- GR4- G49	GM49747	GM88610	GM114041-4**	GM85814-G49	GM85815-G49	GM85817-G49

Variation	Module	Part Number
		Item 51, Bracket
7	GM85593- GR1- WHT	GM85988-WHT
8	GM85593- GR2- WHT	GM85988-WHT
9	GM85593- GR3- WHT	GM85988-WHT
10	GM85593- GR4- WHT	GM85988-WHT
21	GM85593- GR1- G49	GM85988-G49
22	GM85593- GR2- G49	GM85988-G49
23	GM85593- GR3- G49	GM85988-G49
24	GM85593- GR4- G49	GM85988-G49

** Engine part number with aluminum flywheel option. Replaced original engine effective with engine serial number below.
4045TFM85 – PE4045N026001

Notes

Engine, continued



Engine, continued

Variation 11, 12, 13, 14, 25, 26, 27, 28

Item	Part Number	Description	Quantity
2	X-373-14	Hose, 3/4 In. I.D.	1
3	X-373-15	Hose, 3/4 In. I.D.	1
4	256971	Bottle, Overflow	1
5	X-801-3	Washer,Hardened,.406 ID X .812 In. OD	1
5	X-400-227	Spacer, .406 ID x 1.25 OD x .5 in.	1
6	324245	Clamp, Exhaust (4.25 In.)	1
7	GM16234	Assembly, Emissions Filter	1
7.1	GM32404	Element, Air Emissions Filter	1
8	GM16246	Connector, Hose	2
9	GM25435	Hose, Seawater (1.25” ID)	1
10	GM38784-3	Vibromount, Controller	4
11	GM42525	Adapter Bushing	1
12	GM92412	Elbow, Wet Exhaust	1
13	GM48028	Line, Fuel	1
14	GM64277	Fitting, 90 deg. Elbow	2
15	GM87321	Eye, Lifting	1
16	GM87704	Bracket, ECU Mounting	1
17	GM87839	Guard, Belt	1
18	M125A-06-80	Washer, Plain	4
19	M125A-08-80	Washer, Plain, 8.4 ID X 16.0 OD	9
20	M125A-10-80	Washer, Plain, 10.5 ID X 20.0 OD	5
21	M125A-12-80	Washer, Plain	2
22	M6923-06-80	Nut, Hex 6mm	4
23	M6923-08-80	Nut, Hex 8mm	4
24	M6923-10-80	Nut, Hex 10mm	3
25	M931-08055-60	Screw, Hex Cap	2
26	M931-10040-60	Screw, Hex Cap	1
27	M933-05020-60	Screw, Hex Cap	2
28	M933-06014-60	Screw, Hex Cap	4
29	M933-08025-60	Screw, Hex Cap	3
30	M933-10025-60	Screw, Hex Cap,Fully Thrd M10 X 25mm	2
32	M933-10035-60	Screw, Hex Cap	2
33	M933-12030-60	Screw, Hex Cap	2
34	M933-12035-82	Screw, Hex Cap	1
35	M934-05-50	Nut, Hex 5mm	2
36	X-22-12	Washer, Lock, .262 Idx.743 In. OD	8
37	X-75-4	Plug, Pipe (1/8” Nptf)	1
38	X-426-12	Clamp, Hose, .69/1.25 In.	4
39	X-426-19	Clamp, Hose, 1.00/2.00 In.	2
40	X-447-23	Elbow, Male Tube (90 Deg) + Vibra Seal	1
42	See chart	Relay, 12 VDC	2
43	See chart	Engine 4045AFM85, John Deere, 12 V, DSL	1
44	See chart	Bracket, Water Bottle	1
45	See chart	Bracket, Belt Guard (RH)	1
46	See chart	Bracket, Belt Guard (LH)	1
47	See chart	Bracket, Filter Mounting	1

Engine, continued

Use this table to identify part numbers of items 42- 47.

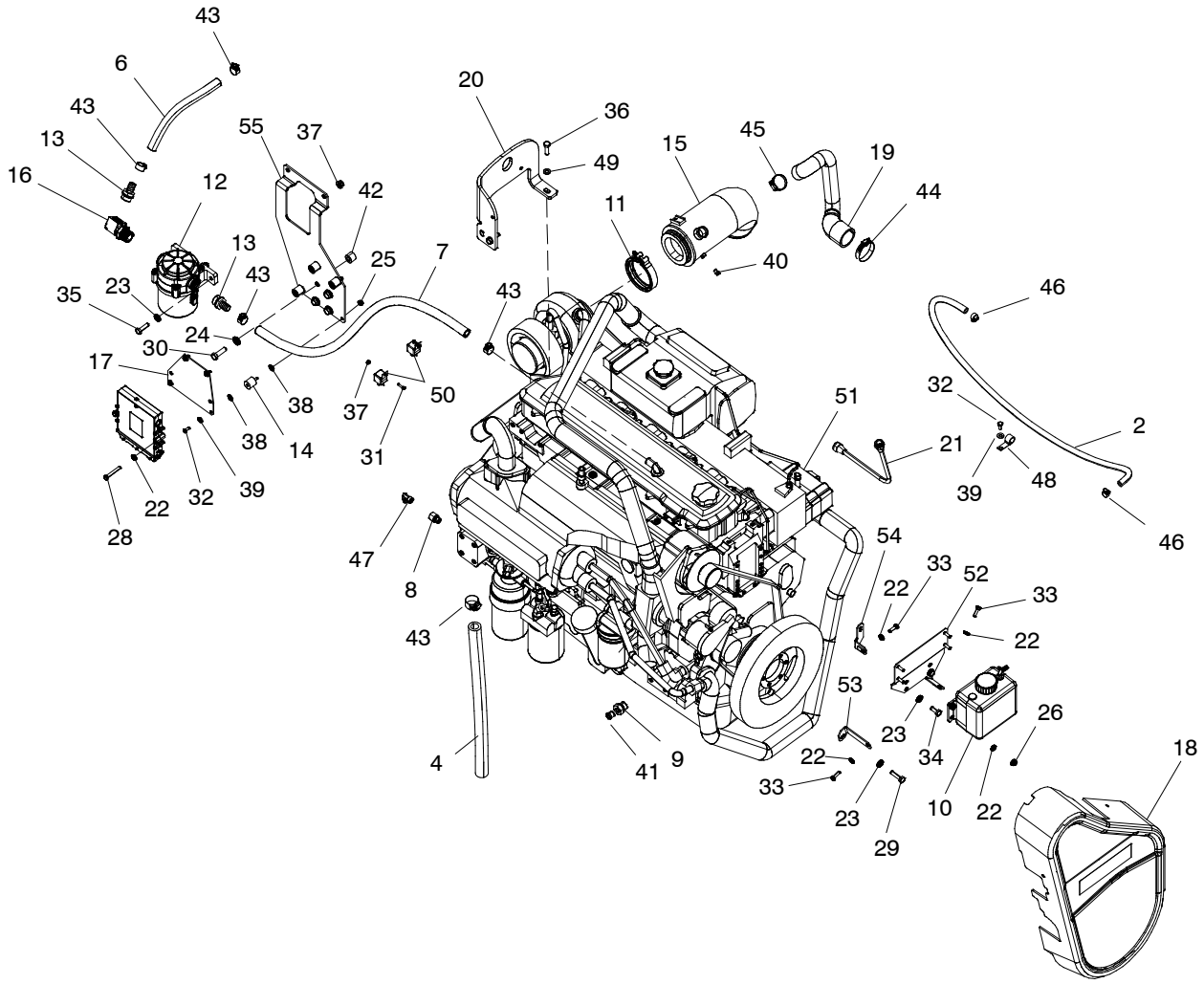
Variation	Module	Part Number					
		Item 42, Relay	Item 43, Engine	Item 43, Engine	Item 44, Bracket	Item 45, Bracket	Item 46, Bracket
11	GM87035- GR1- WHT	GM49746	GM85412	GM114042-1**	GM85815-WHT	GM85817-WHT	GM85988-WHT
12	GM87035- GR2- WHT	GM49747	GM85413	GM114042-2**	GM85815-WHT	GM85817-WHT	GM85988-WHT
13	GM87035- GR3- WHT	GM49746	GM88611	GM114042-3**	GM85815-WHT	GM85817-WHT	GM85988-WHT
14	GM87035- GR4- WHT	GM49747	GM88612	GM114042-4**	GM85815-WHT	GM85817-WHT	GM85988-WHT
25	GM87035- GR1- G49	GM49746	GM85412	GM114042-1**	GM85815-G49	GM85817-G49	GM85988-G49
26	GM87035- GR2- G49	GM49747	GM85413	GM114042-2**	GM85815-G49	GM85817-G49	GM85988-G49
27	GM87035- GR3- G49	GM49746	GM88611	GM114042-3**	GM85815-G49	GM85817-G49	GM85988-G49
28	GM87035- GR4- G49	GM49747	GM88612	GM114042-4**	GM85815-G49	GM85817-G49	GM85988-G49

Variation	Module	Part Number
		Item 47, Bracket
11	GM87035- GR1- WHT	GM87285-WHT
12	GM87035- GR2- WHT	GM87285-WHT
13	GM87035- GR3- WHT	GM87285-WHT
14	GM87035- GR4- WHT	GM87285-WHT
25	GM87035- GR1- G49	GM87285-G49
26	GM87035- GR2- G49	GM87285-G49
27	GM87035- GR3- G49	GM87285-G49
28	GM87035- GR4- G49	GM87285-G49

** Engine part number with aluminum flywheel option. Replaced original engine effective with engine serial number below.
4045AFM85 – PE4045N026003

Notes

Engine, continued



Engine, continued

Variations 29- 36

Item	Part Number	Description	Quantity
2	X-386-36	Fuel line, flexible	1
4	X-577-47	Hose, rubber, straight, .62 in. ID	1
6	X-373-11	Hose, molded, .75 in. ID	1
7	X-373-16	Hose, 3/4 In. I.D.	1
8	225127	Adapter, bushing	1
9	249959	Adaptor, bushing	1
10	256971	Bottle, overflow	1
11	324245	Clamp, exhaust (4.25 in.)	1
12	GM16234	Assembly, Emissions Filter	1
12.1	GM32404	Element, Air Emissions Filter	1
13	GM16246	Connector, Hose	2
14	GM38784-3	Vibromount, Controller	4
15	GM47705	Elbow, Wet Exhaust	1
16	GM64277	Fitting, 90 deg. Elbow	1
17	GM87704	Bracket, ECU Mounting	1
18	GM88333	Guard, Belt	1
19	GM89806	Hose, Molded Seawater	1
20	GM90227	Eye, Lifting	1
21	GM91720	Line, Fuel	1
22	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	9
23	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	5
24	M125A-12-80	Washer, Plain	4
25	M6923-06-80	Nut, Hex 6mm	4
26	M6923-08-80	Nut, Hex 8mm	4
27	M6923-10-80	Nut, Hex 10mm	2
28	M931-08055-60	Screw, Hex Cap	2
29	M931-10040-60	Screw, Hex Cap	1
30	M931-12050-60	Screw, Hex Cap	4
31	M933-05020-60	Screw, Hex Cap	2
32	M933-06014-60	Screw, Hex Cap	5
33	M933-08025-60	Screw, hex cap	3
34	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm EXP	2
35	M933-10035-60	Screw, Hex Cap	2
36	M933-10035-82	Screw, Hex Cap	2
37	M934-05-50	Nut, Hex 5mm	2
38	X-22-12	Washer, lock.262 IDx.743 in. OD	8
39	X-25-40	Washer, plain, .281 ID x .625 in. OD	5
40	X-75-4	Plug, pipe (1/8” nptf)	1
41	X-202-30	Bushing, reducing (1/4 x 3/8”npt)+vibra	1
42	X-400-161	Spacer, .531 ID x 1 OD x .75 in.	4
43	X-426-12	Clamp, hose, .69/1.25 in.	5
44	X-426-16	Clamp, hose, 1.81/2.75 in.	1
45	X-426-19	Clamp, hose, 1.00/2.00 in.	1
46	X-426-9	Clamp, hose, .25/.70 in.	2
47	X-447-9	Elbow, Male Tube (90 deg) + vibra seal	1
48	X-672-24	Clamp, insulated, .62 in.	1
49	X-801-3	Washer,hardened,.406 ID x .812 in. OD	2
50	See chart	Relay	2
51	See chart	Engine Assy.	1
52	See chart	Bracket, Water Bottle	1
53	See chart	Bracket, Belt Guard (RH)	1
54	See chart	Bracket, Belt Guard (LH)	1
55	See chart	Bracket, Filter Mounting	1

Engine, continued

Use this table to identify part numbers of items 50- 55.

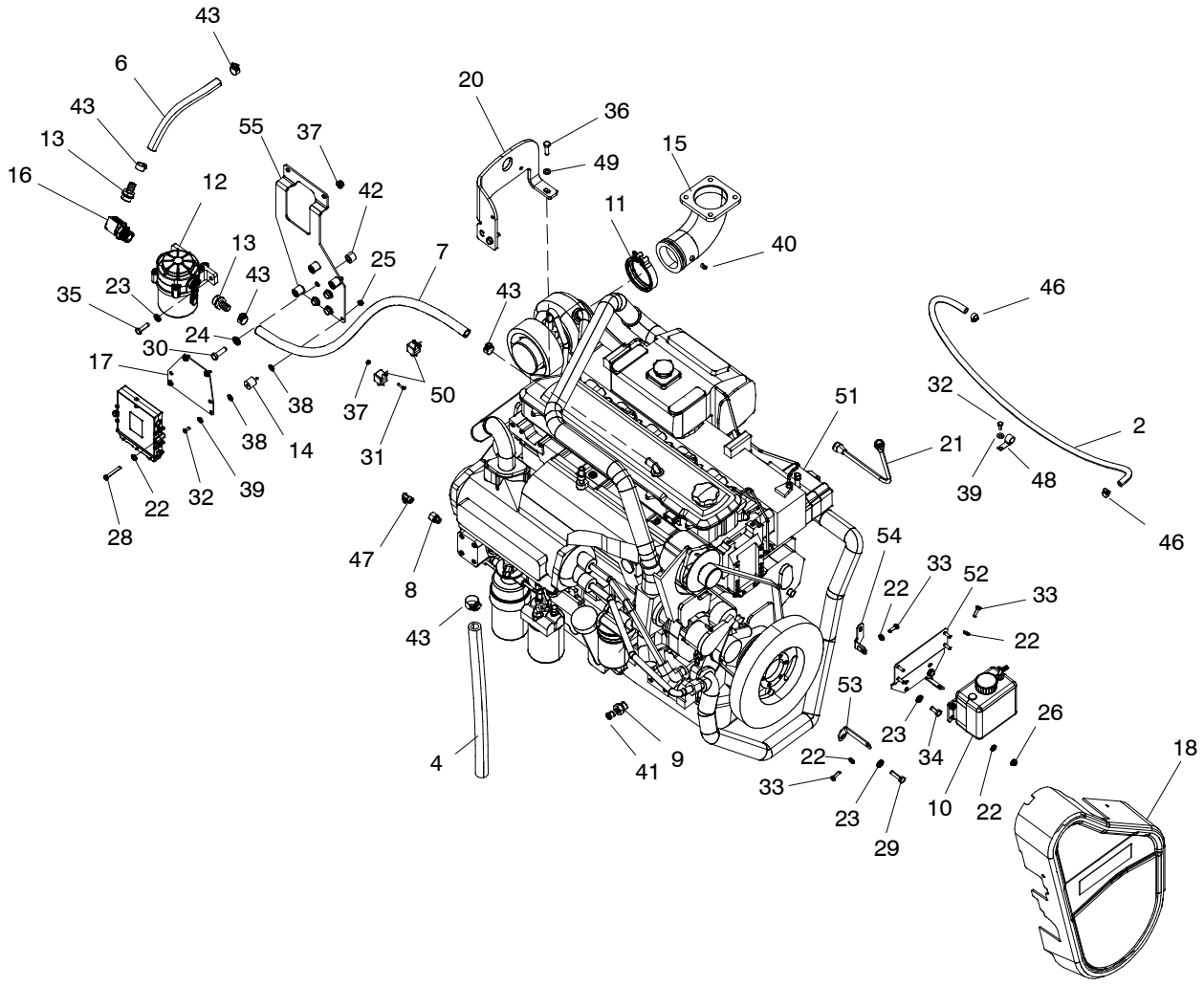
Variation	Module	Part Number					
		Item 50, Relay	Item 51, Engine	Item 51, Engine	Item 52, Bracket	Item 53, Bracket	Item 54, Bracket
29	GM88865- GR1- WHT	GM49746	GM85414	GM114043-1**	GM85815- WHT	GM85817- WHT	GM88937- WHT
30	GM88865- GR2- WHT	GM49747	GM85415	GM114043-2**	GM85815- WHT	GM85817- WHT	GM88937- WHT
31	GM88865- GR3- WHT	GM49746	GM88613	GM114043-3**	GM85815- WHT	GM85817- WHT	GM88937- WHT
32	GM88865- GR4- WHT	GM49747	GM88614	GM114043-4**	GM85815- WHT	GM85817- WHT	GM88937- WHT
33	GM88865- GR1- G49	GM49746	GM85414	GM114043-1**	GM85815- G49	GM85817- G49	GM88937- G49
34	GM88865- GR2- G49	GM49747	GM85415	GM114043-2**	GM85815- G49	GM85817- G49	GM88937- G49
35	GM88865- GR3- G49	GM49746	GM88613	GM114043-3**	GM85815- G49	GM85817- G49	GM88937- G49
36	GM88865- GR4- G49	GM49747	GM88614	GM114043-4**	GM85815- G49	GM85817- G49	GM88937- G49

Variation	Module	Part Number
		Item 55, Bracket
29	GM88865- GR1- WHT	GM89519- WHT
30	GM88865- GR2- WHT	GM89519- WHT
31	GM88865- GR3- WHT	GM89519- WHT
32	GM88865- GR4- WHT	GM89519- WHT
33	GM88865- GR1- G49	GM89519- G49
34	GM88865- GR2- G49	GM89519- G49
35	GM88865- GR3- G49	GM89519- G49
36	GM88865- GR4- G49	GM89519- G49

**** Engine part number with aluminum flywheel option. Replaced original engine effective with engine serial number below.
6068AFM85 – PE6068N014781

Notes

Engine, continued



GM91658

Engine, continued

Variations 37- 44 (Keel Cooled)

Item	Part Number	Description	Quantity
2	X-386-36	Fuel line, flexible	1
4	X-577-47	Hose, rubber, straight, .62 in. ID	1
6	X-373-11	Hose, molded, .75 in. ID	1
7	X-373-16	Hose, 3/4 In. I.D.	1
8	225127	Adapter, bushing	1
9	249959	Adaptor, bushing	1
10	256971	Bottle, overflow	1
11	324245	Clamp, exhaust (4.25 in.)	1
12	GM16234	Assembly, Emissions Filter	1
12.1	GM32404	Element, Air Emissions Filter	1
13	GM16246	Connector, Hose	2
14	GM38784-3	Vibromount, Controller	4
15	GM49740	Elbow, Dry Exhaust	1
16	GM64277	Fitting, 90 deg. Elbow	1
17	GM87704	Bracket, ECU Mounting	1
18	GM88333	Guard, Belt	1
20	GM90227	Eye, Lifting	1
21	GM91720	Line, Fuel	1
22	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	9
23	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	5
24	M125A-12-80	Washer, Plain	4
25	M6923-06-80	Nut, Hex 6mm	4
26	M6923-08-80	Nut, Hex 8mm	4
27	M6923-10-80	Nut, Hex 10mm	2
28	M931-08055-60	Screw, Hex Cap	2
29	M931-10040-60	Screw, Hex Cap	1
30	M931-12050-60	Screw, Hex Cap	4
31	M933-05020-60	Screw, Hex Cap	2
32	M933-06014-60	Screw, Hex Cap	5
33	M933-08025-60	Screw, hex cap	3
34	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm EXP	2
35	M933-10035-60	Screw, Hex Cap	2
36	M933-10035-82	Screw, Hex Cap	2
37	M934-05-50	Nut, Hex 5mm	2
38	X-22-12	Washer, lock.262 IDx.743 in. OD	8
39	X-25-40	Washer, plain, .281 ID x .625 in. OD	5
40	X-75-4	Plug, pipe (1/8” nptf)	1
41	X-202-30	Bushing, reducing (1/4 x 3/8”npt)+vibra	1
42	X-400-161	Spacer, .531 ID x 1 OD x .75 in.	4
43	X-426-12	Clamp, hose, .69/1.25 in.	5
46	X-426-9	Clamp, hose, .25/.70 in.	2
47	X-447-9	Elbow, Male Tube (90 deg) + vibra seal	1
48	X-672-24	Clamp, insulated, .62 in.	1
49	X-801-3	Washer,hardened,.406 ID x .812 in. OD	2
50	See chart	Relay	2
51	See chart	Engine Assy.	1
52	See chart	Bracket, Water Bottle	1
53	See chart	Bracket, Belt Guard (RH)	1
54	See chart	Bracket, Belt Guard (LH)	1
55	See chart	Bracket, Filter Mounting	1

Engine, continued

Use this table to identify part numbers of items 50- 55.

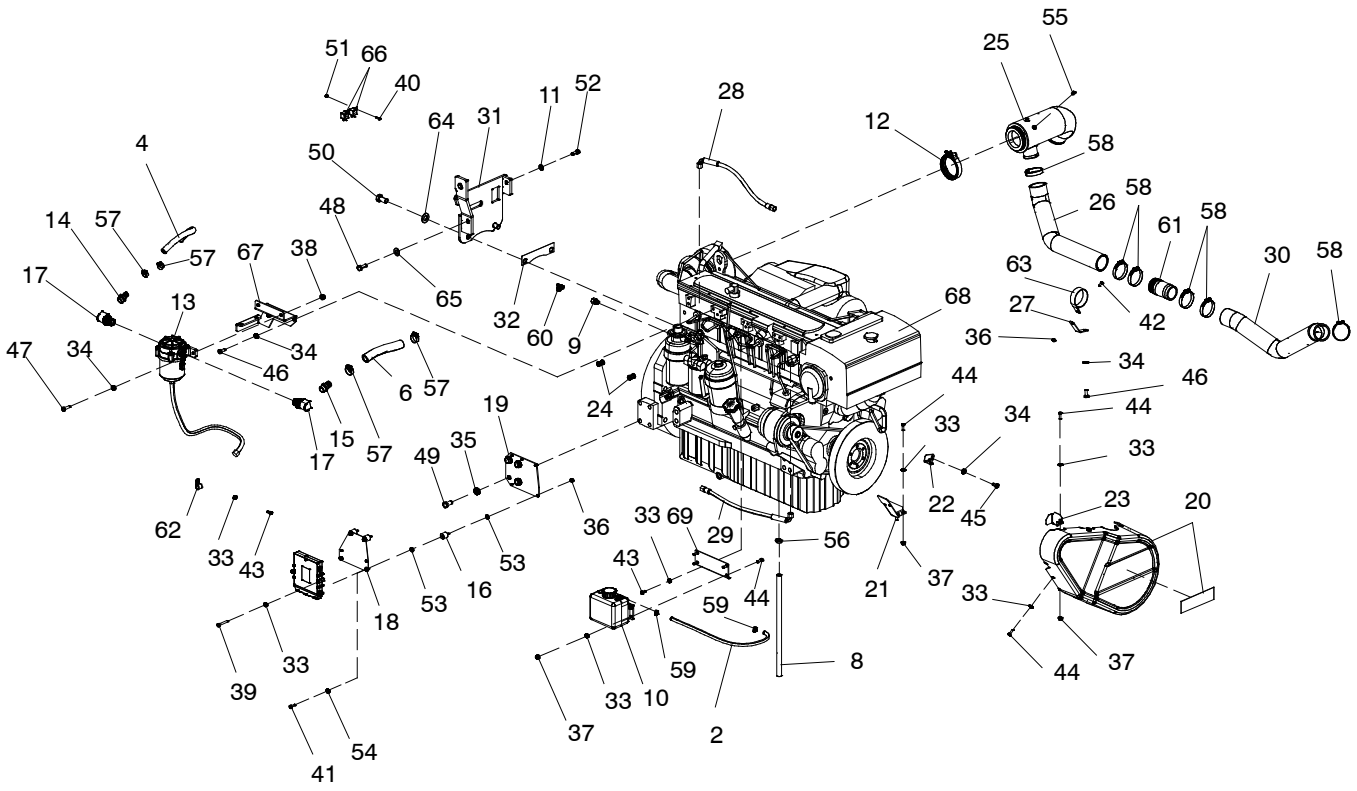
Variation	Module	Part Number					
		Item 50, Relay	Item 51, Engine	Item 51, Engine	Item 52, Bracket	Item 53, Bracket	Item 54, Bracket
37	GM91658- GR1- WHT	GM49746	GM91650	GM114044-1**	GM85815- WHT	GM85817- WHT	GM88937- WHT
38	GM91658- GR2- WHT	GM49747	GM91651	GM114044-2**	GM85815- WHT	GM85817- WHT	GM88937- WHT
39	GM91658- GR3- WHT	GM49746	GM91652	GM114044-3**	GM85815- WHT	GM85817- WHT	GM88937- WHT
40	GM91658- GR4- WHT	GM49747	GM91653	GM114044-4**	GM85815- WHT	GM85817- WHT	GM88937- WHT
41	GM91658- GR1- G49	GM49746	GM91650	GM114044-1**	GM85815- G49	GM85817- G49	GM88937- G49
42	GM91658- GR1- G49	GM49747	GM91651	GM114044-2**	GM85815- G49	GM85817- G49	GM88937- G49
43	GM91658- GR1- G49	GM49746	GM91651	GM114044-3**	GM85815- G49	GM85817- G49	GM88937- G49
44	GM91658- GR1- G49	GM49747	GM91653	GM114044-4**	GM85815- G49	GM85817- G49	GM88937- G49

Variation	Module	Part Number
		Item 55, Bracket
37	GM91658- GR1- WHT	GM89519- WHT
38	GM91658- GR2- WHT	GM89519- WHT
39	GM91658- GR3- WHT	GM89519- WHT
40	GM91658- GR4- WHT	GM89519- WHT
41	GM91658- GR1- G49	GM89519- G49
42	GM91658- GR1- G49	GM89519- G49
43	GM91658- GR1- G49	GM89519- G49
44	GM91658- GR1- G49	GM89519- G49

** Engine part number with aluminum flywheel option. Replaced original engine effective with engine serial number below.
6068AFM85 – PE6068N014781

Notes

Engine, continued



GM93102

Engine, continued

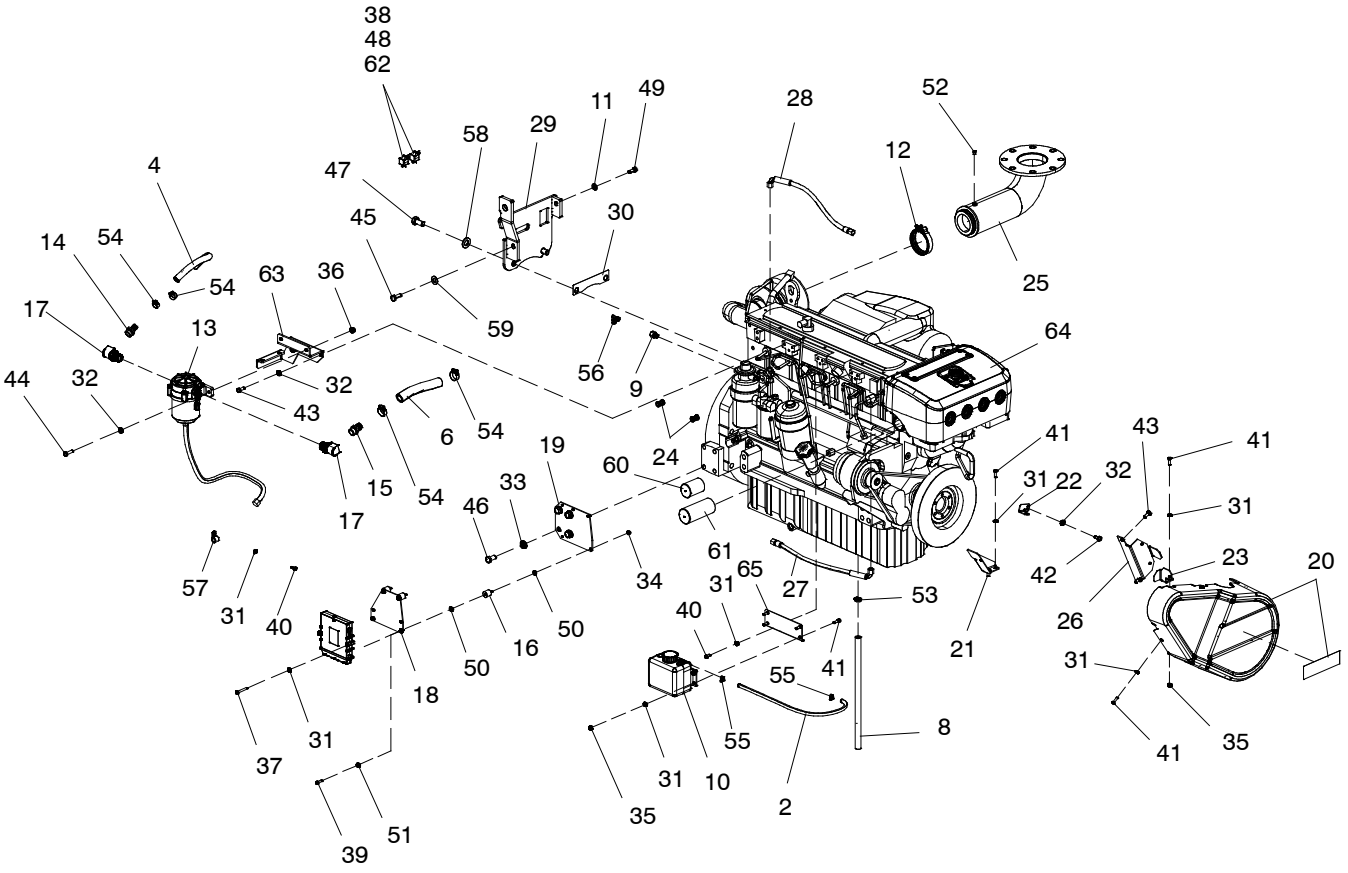
Variations 45- 48, 53- 56

Item	Part Number	Description	Qty.
2	X-386-34	Fuel line, flexible	1
4	X-373-25	Hose, Fuel/Oil .75” ID, 14 in.	1
6	X-356-28	Hose, radiator, straight, 1 in. ID	1
8	X-312-46	Hose,.63 ID, 20 in.	1
9	225127	Adapter, bushing	1
10	256971	Bottle, overflow	1
11	290945	Washer, hardened, .531 ID x 1.06 in. OD	2
12	324245	Clamp, exhaust (4.25 in.)	1
13	GM16234	Assembly, Emissions Filter	1
13.1	GM32404	Element, Air Emissions Filter	1
14	GM16246	Connector, Hose	1
15	GM30635	Connector, Hose	1
16	GM38784-3	Vibromount, Controller	4
17	GM64277	Fitting, 90 Elbow	2
18	GM87704	Bracket, ECU Mounting	1
19	GM93204	Bracket, ECU Mounting	1
20	GM93656	Guard, Belt	1
21	GM93680	Bracket, Belt Guard (RH)	1
22	GM93702	Bracket, Belt Guard (Top)	1
23	GM93703	Bracket, Belt Guard (Bottom)	1
24	GM93818-2	Bearing, Nylon	4
25	GM94420	Elbow, Wet Exhaust	1
26	GM94429	Hose, Molded Seawater	1
27	GM94532	Bracket, Hose Support	1
28	GM95672	Line, Fuel	1
29	GM95672	Line, Fuel	1
30	GM95750	Hose, Molded Seawater	1
31	GM97561	Eye, Lifting	1
32	GM97564	Spacer, Lifting Eye	1
33	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	15
34	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	7
35	M125A-16-80	Washer, Plain	4
36	M6923-06-80	Nut, Hex 6mm	5
37	M6923-08-80	Nut, Hex 8mm	7
38	M6923-10-80	Nut, Hex 10mm	2
39	M931-08055-60	Screw, Hex Cap	2
40	M933-05020-60	Screw, Hex Cap	2
41	M933-06014-60	Screw, Hex Cap	4
42	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	1
43	M933-08016-60	Screw, hex cap	3
44	M933-08025-60	Screw, hex cap	10
45	M933-10020-60	Screw, Hex Cap	1
46	M933-10025-60	Screw, hex cap,fully thrd M10 x 25mm	4
47	M933-10035-60	Screw, Hex Cap	2
48	M933-14035-82	Screw, Hex Cap	2
49	M933-16025-60	Screw, Hex Cap	4
50	M933-20040-82	Screw, Hex Cap	2
51	M934-05-50	Nut, Hex 5mm	2
52	M961-12030-82	Screw, Hex Cap	1
53	X-22-12	Washer, lock.262 IDx.743 in.OD(GM-NRP)KM	8
54	X-25-40	Washer, plain, .281 ID x .625 in.OD	4
55	X-75-4	Plug, pipe (1/8” nptf)	1
56	X-426-10	Clamp, hose, .5/1 in.	1
57	X-426-12	Clamp, hose, .69/1.25 in.	4
58	X-426-2	Clamp, hose, 2.31/3.25 in.	2
59	X-426-9	Clamp, hose, .25/.70 in.	2
60	X-447-9	Elbow, Male Tube (90 deg) + vibra seal	1
61	X-582-51	Connector, Hose	1
62	X-672-31	Clamp, insulated, .75 in.	1
63	X-672-41	Clamp, Insulated	1
64	X-801-13	Washer, Hardened	2
65	X-801-16	Washer, Hardened	1
66	See chart	Relay, 12 VDC	2
67	See chart	Bracket, Filter Mounting	1
68	See chart	Engine, 6090AFM85	1
69	See chart	Bracket, Water Bottle	1

Use this table to identify part numbers of items 66- 69.

Variation	Module	Part Number			
		Item 66, Relay	Item 67, Bracket	Item 68, Engine	Item 69, Bracket
45	GM93102- GR1- WHT	GM49746	GM93202- WHT	GM93285	GM94680- WHT
46	GM93102- GR2- WHT	GM49747	GM93202- WHT	GM93286	GM94680- WHT
47	GM93102- GR3- WHT	GM49746	GM93202- WHT	GM93287	GM94680- WHT
48	GM93102- GR4- WHT	GM49747	GM93202- WHT	GM93288	GM94680- WHT
53	GM93102- GR1- G49	GM49746	GM93202- G49	GM93285	GM94680- G49
54	GM93102- GR1- G49	GM49747	GM93202- G49	GM93286	GM94680- G49
55	GM93102- GR1- G49	GM49746	GM93202- G49	GM93287	GM94680- G49
56	GM93102- GR1- G49	GM49747	GM93202- G49	GM93288	GM94680- G49

Engine, continued



GM95561

Engine, continued

Variations 49- 52, 57- 60 (Keel Cooled)

Item	Part Number	Description	Quantity
2	X-386-34	Fuel line, flexible	1
4	X-373-25	Hose, Fuel/Oil .75” ID, 14 in.	1
6	X-356-28	Hose, radiator, straight, 1 in. ID	1
8	X-312-46	Hose, .63 ID, 20 in.	1
9	225127	Adapter, bushing	1
10	256971	Bottle, overflow	1
11	290945	Washer, hardened, .531 ID x 1.06 in. OD	1
12	324245	Clamp, exhaust (4.25 in.)	1
13	GM16234	Assembly, Emissions Filter	1
14	GM16246	Connector, Hose	1
15	GM30635	Connector, Hose	1
16	GM38784-3	Vibromount, Controller	4
17	GM64277	Fitting, 90 Elbow	2
18	GM87704	Bracket, ECU Mounting	1
19	GM93204	Bracket, ECU Mounting	1
20	GM93656	Guard, Belt	1
21	GM93680	Bracket, Belt Guard (RH)	1
22	GM93702	Bracket, Belt Guard (Top)	1
23	GM93703	Bracket, Belt Guard (Bottom)	1
24	GM93818-2	Bearing, Nylon	1
25	GM94423	ELBOW, DRY EXHAUST	1
26	GM95616	COVER, AUXILIARY DRIVE	1
27	GM95672	Line, Fuel	1
28	GM95672	Line, Fuel	1
29	GM97561	Eye, Lifting	1
30	GM97564	Spacer, Lifting Eye	1
31	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	15
32	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	8
33	M125A-16-80	Washer, Plain	4
34	M6923-06-80	Nut, Hex 6mm	4
35	M6923-08-80	Nut, Hex 8mm	7
36	M6923-10-80	Nut, Hex 10mm	2
37	M931-08055-60	Screw, Hex Cap	2
38	M933-05020-60	Screw, Hex Cap	2
39	M933-06014-60	Screw, Hex Cap	4
40	M933-08016-60	Screw, hex cap	3
41	M933-08025-60	Screw, hex cap	10
42	M933-10020-60	Screw, Hex Cap	1
43	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm	5
44	M933-10035-60	Screw, Hex Cap	2
45	M933-14035-82	Screw, Hex Cap	2
46	M933-16030-82	Screw, Hex Cap	4
47	M933-20040-82	Screw, Hex Cap	2
48	M934-05-50	Nut, Hex 5mm	2
49	M961-12030-82	Screw, Hex Cap	1
50	X-22-12	Washer, lock .262 ID x .743 in. OD (GM-NRP)KM	8
51	X-25-40	Washer, plain, .281 ID x .625 in .OD	4
52	X-75-4	Plug, pipe (1/8” nptf)	1
53	X-426-10	Clamp, hose, .5/1 in.	1
54	X-426-12	Clamp, hose, .69/1.25 in.	4
55	X-426-9	Clamp, hose, .25/.70 in.	2
56	X-447-9	Elbow, Male Tube (90 deg) + vibra seal	1
57	X-672-31	Clamp, insulated, .75 in.	1
58	X-801-13	Washer, Hardened	2
59	X-801-16	Washer, Hardened	1
60	X-6214-13	Cap	1
61	X-6214-17	Cap, Plastic (4PX)	1
62	See chart	Relay, 12 VDC	2
63	See chart	Bracket, Filter Mounting	1
64	See chart	Engine, 6090AFM85	1
65	See chart	Bracket, Water Bottle	1

Use this table to identify part numbers of items 62- 65.

Variation	Module	Part Number			
		Item 62, Relay	Item 63, Bracket	Item 64, Engine	Item 65, Bracket
49	GM95561- GR1- WHT	GM49746	GM93202- WHT	GM93289	GM94680- WHT
50	GM95561- GR2- WHT	GM49747	GM93202- WHT	GM93290	GM94680- WHT
51	GM95561- GR3- WHT	GM49746	GM93202- WHT	GM93291	GM94680- WHT
52	GM95561- GR4- WHT	GM49747	GM93202- WHT	GM93292	GM94680- WHT
57	GM95561- GR1- G49	GM49746	GM93202- G49	GM93289	GM94680- G49
58	GM95561- GR1- G49	GM49747	GM93202- G49	GM93290	GM94680- G49
59	GM95561- GR1- G49	GM49746	GM93202- G49	GM93291	GM94680- G49
60	GM95561- GR1- G49	GM49747	GM93202- G49	GM93292	GM94680- G49

Nameplate and Decals

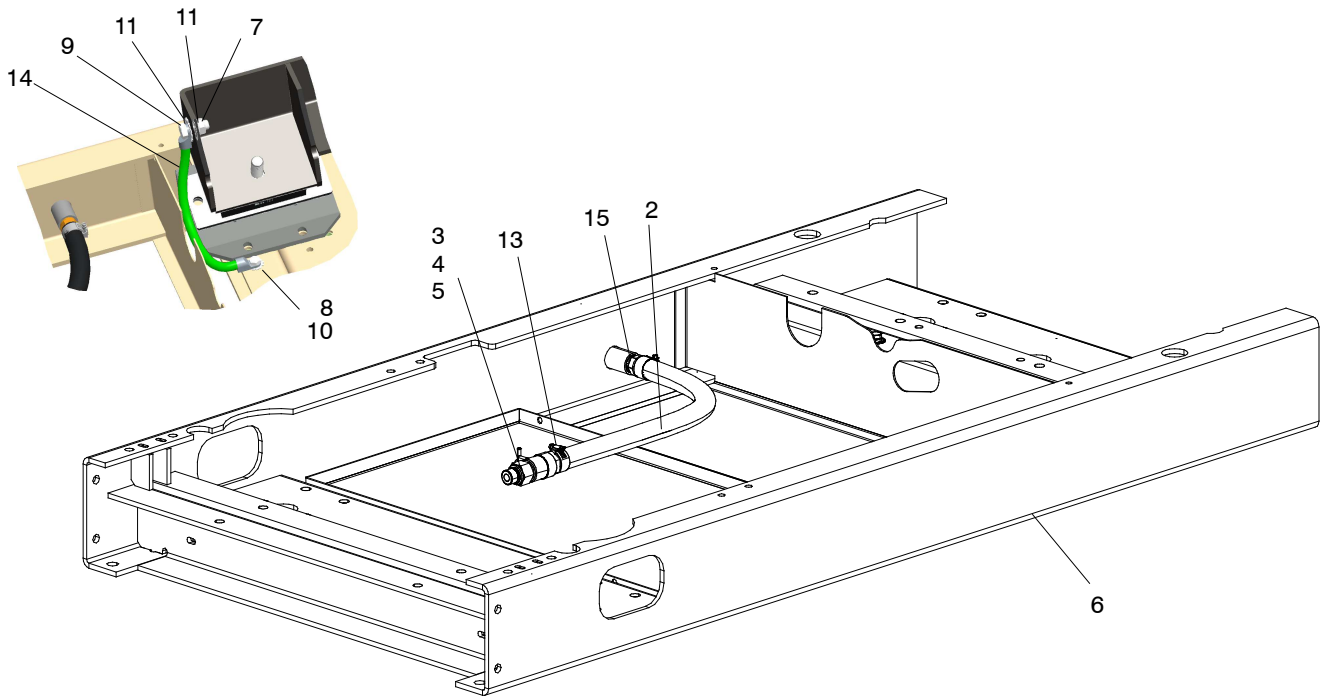
Item	Part Number	Description	Quantity Variation 1
1	224233	Decal, 1-800 Number	1
2	226917	Decal, Negative Battery Conn	1
3	238162	Decal, Pos. Battery Connection	1
4	239796	Decal, Warning	1
5	249808	Decal, Warning Rotating Parts	1
6	249809	Decal, Caution Hot Engine	1
7	249810	Decal, Warning Hot Coolant	1
8	257438	Decal, Danger Moving Rotor	1
9	259365	Decal	1
10	344282	Decal, Notice	1
11	344486	Decal, CE	1
12	359278	Decal, Fuel Inlet	1
13	359279	Decal, Fuel Return	1
14	GM14167	Decal, Drain	1
15	GM28971	Decal, Battery Connection	1
16	X-6348-3	Decal, Kohler Power Systems	1

Item	Part Number	Description	Quantity Variation 2
1	224233	Decal, 1-800 Number	1
2	226917	Decal, Negative Battery Conn	1
3	238162	Decal, Pos. Battery Connection	1
4	239796	Decal, Warning	1
5	249808	Decal, Warning Rotating Parts	1
6	249809	Decal, Caution Hot Engine	1
7	249810	Decal, Warning Hot Coolant	1
8	257438	Decal, Danger Moving Rotor	1
9	259365	Decal	1
10	344282	Decal, Notice	1
11	344486	Decal, CE	1
12	GM14167	Decal, Drain	1
13	X-6348-3	Decal, Kohler Power Systems	1

Item	Part Number	Description	Quantity Variation 3
1	224233	Decal, 1-800 Number	1
2	226917	Decal, Negative Battery Conn	1
3	238162	Decal, Pos. Battery Connection	1
4	239796	Decal, Warning	1
5	249808	Decal, Warning Rotating Parts	1
6	249809	Decal, Caution Hot Engine	1
7	249810	Decal, Warning Hot Coolant	1
8	257438	Decal, Danger Moving Rotor	1
9	GM90356	Decal, Reconnection Diagram	1
10	344282	Decal, Notice	1
11	344486	Decal, CE	1
12	X-6348-3	Decal, Kohler Power Systems	1

Item	Part Number	Description	Quantity Variation 4
1	224233	Decal, 1-800 number	1
2	226917	Decal, negative battery conn	1
3	238162	Decal, pos. battery connection	1
4	239796	Decal, warning	1
5	249808	Decal, warning rotating parts	1
6	249809	Decal, Caution Hot Engine	1
7	249810	Decal, warning hot coolant	1
8	257438	Decal, danger moving rotor	1
9	344282	Decal, notice	1
10	344486	Decal, CE	1
11	GM14167	Decal, Drain	1
12	GM90356	Decal, Reconnection Diagram	1
13	X-6348-8	Decal, Kohler Power Systems	1

Skid



Items not shown: 12

GM86747_A

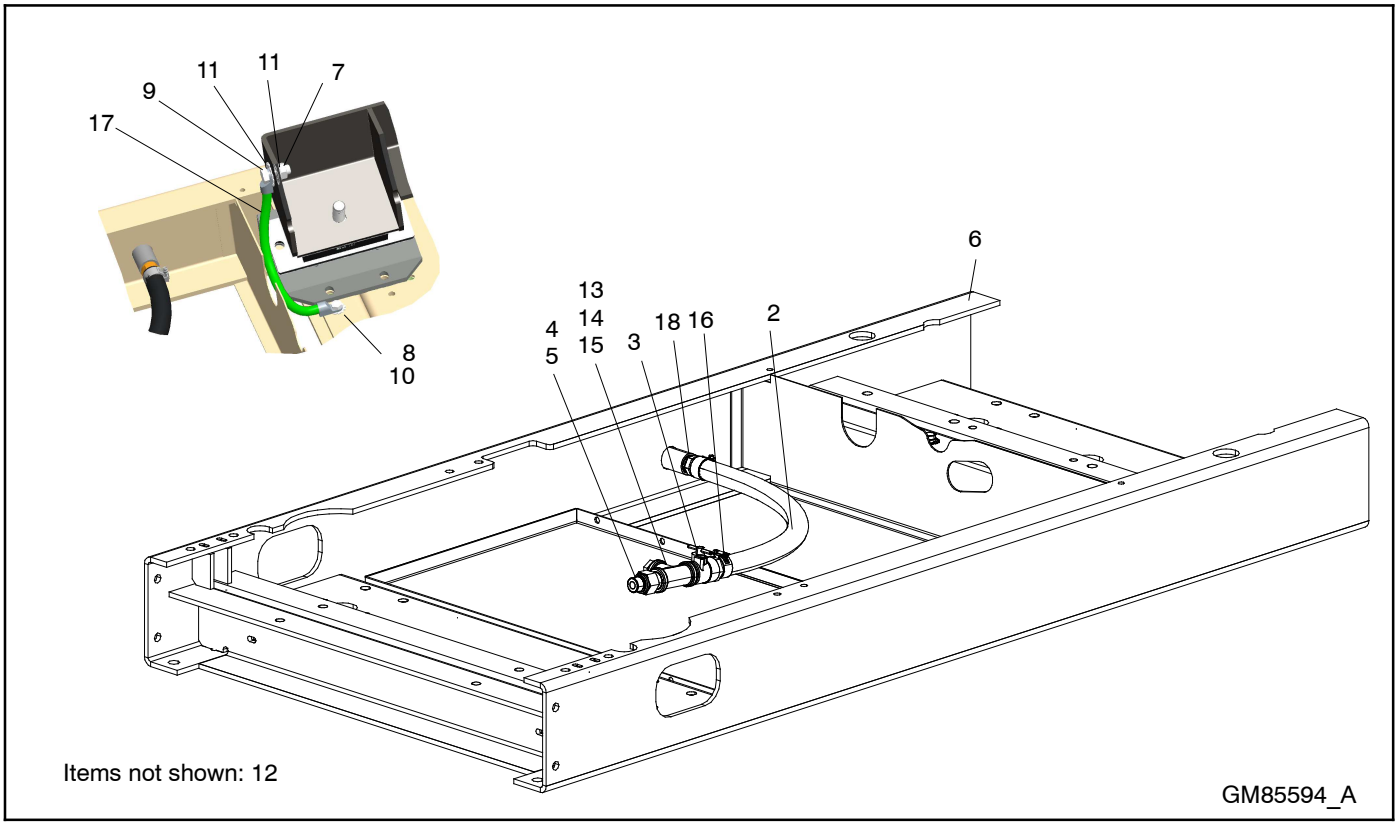
Variation 1, 4

Item	Part Number	Description	Quantity
2	X-577-27	Hose, Rubber, Straight, .62 In. ID	1
3	272701	Valve, Oil Drain (1/2-14 Nptf)	1
4	GM11694	O-Ring, ISO 6149 (15.3mm Id)	1
5	GM22991	Bushing, Adapter	1
6	See chart	Skid	1
7	M6923-12-80	Nut, Hex	1
8	M933-08020-60	Screw, Hex Cap	1
9	M933-12030-60	Screw, Hex Cap	1
10	X-22-16	Washer, Lock, .326 Idx.883 In. OD	1
11	X-22-26	Washer, Lock, .521 Idx1.24 In. OD	2
12	X-75-54	Plug, Pipe (1/2”Nptf) Brass	1
13	X-426-12	Clamp, Hose, .69/1.25 In.	2
14	X-545-200	Cable, Battery	1
15	X-582-1	Connector, Hose 5/8” X 1/2” MIP Brass	1

Use this table to identify part numbers of item 6.

Variation	Module	Part Number Item 6, Skid
1	GM86747-GR1-WHT	GM85165-WHT
4	GM86747-GR1-G49	GM85165-G49

Skid, continued



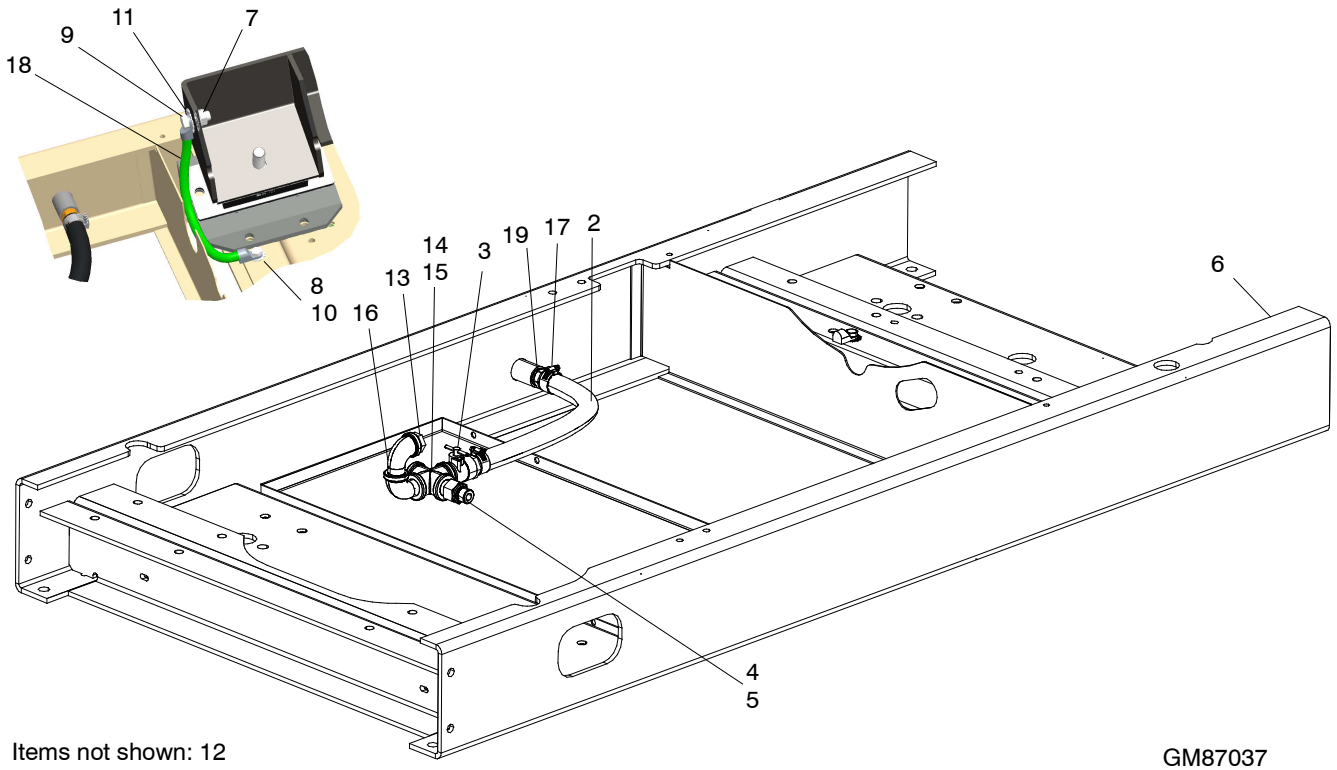
Variation 2, 5

Item	Part Number	Description	Quantity
2	X-577-48	Hose, Rubber, Straight, .62 In. ID	1
3	272701	Valve, Oil Drain (1/2-14 Nptf)	1
4	GM11694	O-Ring, ISO 6149 (15.3mm ID)	1
5	GM22991	Bushing, Adapter	1
6	See chart	Skid	1
7	M6923-12-80	Nut, Hex	1
8	M933-08020-60	Screw, Hex Cap	1
9	M933-12030-60	Screw, Hex Cap	1
10	X-22-16	Washer, Lock, .326 Idx.883 In. OD	1
11	X-22-26	Washer, Lock, .521 Idx1.24 In. OD	2
12	X-75-54	Plug, Pipe (1/2”Nptf) Brass	1
13	X-202-47	Bushing, Reducing (1/4 X 1/2”Npt)	1
14	X-203-13	Tee, Pipe (1/2 X 1/2 X 1/2 Npt)	1
15	X-209-2	Pipe (1/2”Npt X 1.19”)	1
16	X-426-12	Clamp, Hose, .69/1.25 In.	2
17	X-545-200	Cable, Battery	1
18	X-582-1	Connector, Hose 5/8” X 1/2” MIP Brass	1

Use this table to identify part numbers of item 6.

Variation	Module	Part Number
		Item 6, Skid
2	GM85594- GR1- WHT	GM85165-WHT
5	GM85594- GR1- G49	GM85165-G49

Skid, continued



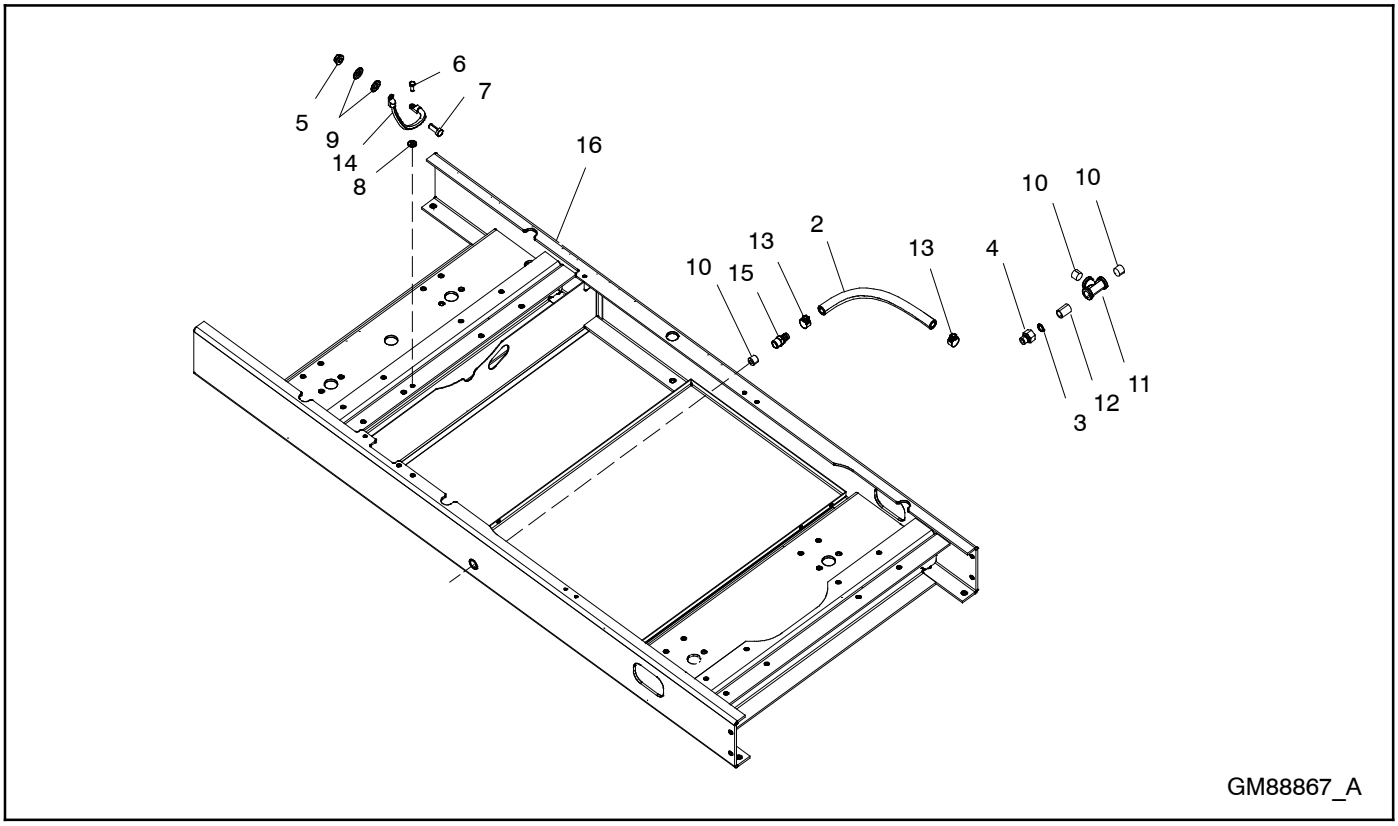
Variation 3, 6

Item	Part Number	Description	Quantity
2	X-577-5	Hose, Rubber, Straight, .62 In. ID	1
3	272701	Valve, Oil Drain (1/2-14 Nptf)	1
4	GM11694	O-Ring, ISO 6149 (15.3mm Id)	1
5	GM22991	Bushing, Adapter	1
6	See chart	Skid	1
7	M6923-12-80	Nut, Hex	1
8	M933-08020-60	Screw, Hex Cap	1
9	M933-12030-60	Screw, Hex Cap	1
10	X-22-16	Washer, Lock, .326 Idx.883 In. OD	1
11	X-22-26	Washer, Lock, .521 Idx1.24 In. OD	2
12	X-75-54	Plug, Pipe (1/2”Nptf) Brass	2
13	X-202-47	Bushing, Reducing (1/4 X 1/2”Npt)	1
14	X-207-7	Cross, Pipe (1/2” Npt)	1
15	X-209-2	Pipe (1/2”Npt X 1.19”)	1
16	X-211-1	Elbow, Street (90 Deg X 1/2”Nptf)	2
17	X-426-12	Clamp, Hose, .69/1.25 In.	2
18	X-545-200	Cable, Battery	1
19	X-582-1	Connector, Hose 5/8” X 1/2” MIP Brass	1

Use this table to identify part numbers of item 6.

Variation	Module	Part Number: Item 6, Skid
3	GM87037-GR1-WHT	GM85166-WHT
6	GM87037-GR1-G49	GM85166-G49

Skid, continued



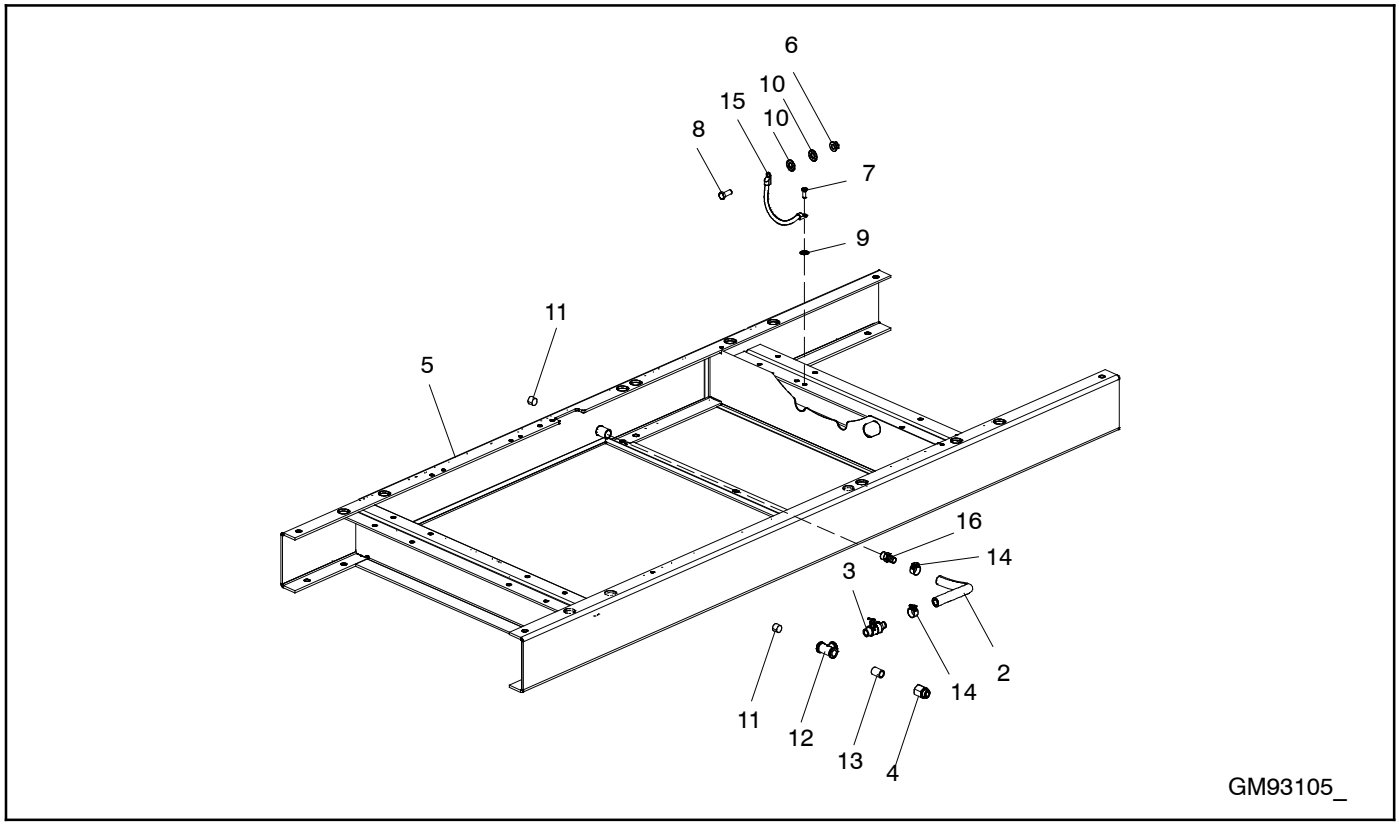
Variation 7- 10

Item	Part Number	Description	Quantity
2	X-577-28	Hose, rubber, straight, .62 in. ID	1
3	GM11694	O-ring, ISO 6149 (15.3mm ID)	1
4	GM22991	Bushing, Adapter	1
5	M6923-12-80	Nut, Hex	1
6	M933-08020-60	Screw, Hex cap	1
7	M933-12030-60	Screw, Hex Cap	1
8	X-22-16	Washer, lock.326 IDx.883 in. OD	1
9	X-22-26	Washer,lock.521 IDx1.24 in. OD	2
10	X-75-54	Plug, pipe (1/2”nptf) brass	3
11	X-203-13	Tee, Pipe (1/2 x 1/2 x 1/2 npt)	1
12	X-209-2	Pipe (1/2”npt x 1.19”)	1
13	X-426-12	Clamp, hose, .69/1.25 in.	2
14	X-545-200	Cable, Battery	1
15	X-582-1	Connector, Hose 5/8” x 1/2” MIP Brass	1
16	See chart	Skid	1

Use this table to identify part numbers of item 16.

Variation	Module	Part Number
		Item 16, Skid
7	GM88867- GR1- WHT	GM85167- WHT
8	GM88867- GR2- WHT	GM85168- WHT
9	GM88867- GR1- G49	GM85167- G49
10	GM88867- GR2- G49	GM85168- G49

Skid, continued



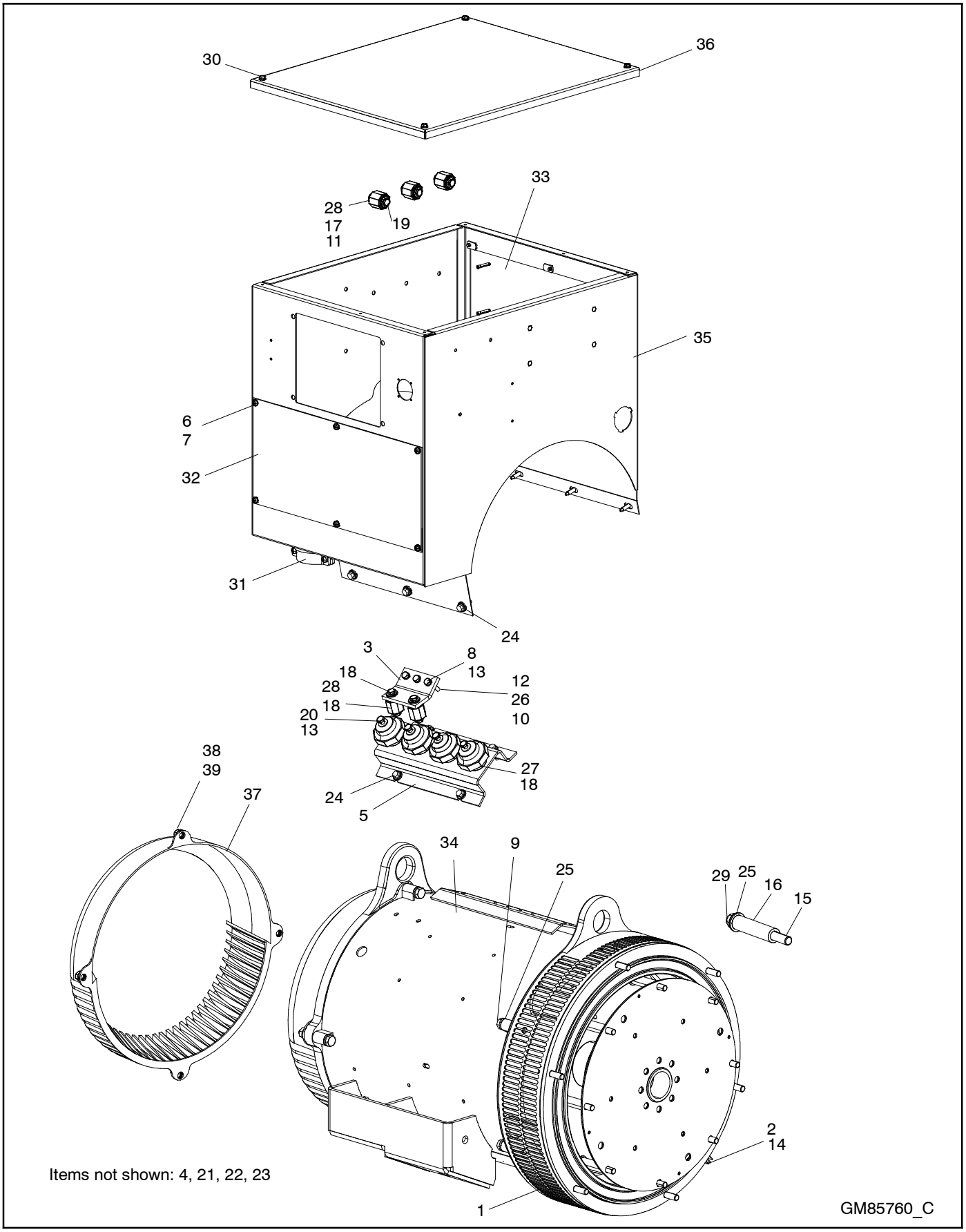
Variation 11, 12

Item	Part Number	Description	Quantity
2	X-577-5	Hose, rubber, straight, .62 in. ID	1
3	272701	Valve, oil drain (1/2-14 nptf)	1
4	GM81345-1	Adapter, Male Straight W/O-Ring SAE-10	1
5	See chart	Skid	1
6	M6923-12-80	Nut, Hex	1
7	M933-08020-60	Screw, Hex cap	1
8	M933-12030-60	Screw, Hex Cap	1
9	X-22-16	Washer, lock.326 IDx.883 in.OD	1
10	X-22-26	Washer, Lock.521 IDx1.24 in.OD	2
11	X-75-54	Plug, pipe (1/2"nptf) brass	2
12	X-203-13	Tee, Pipe (1/2 x 1/2 x 1/2 npt)	1
13	X-209-2	Pipe (1/2"npt x 1.19")	1
14	X-426-12	Clamp, hose, .69/1.25 in.	2
15	X-545-200	Cable, Battery	1
16	X-582-1	Connector, Hose 5/8" x 1/2" MIP Brass	1

Use this table to identify part number of item 5.

Variation	Module	Part Number Item 5, Skid
11	GM93104-GR1-WHT	GM92847-WHT
12	GM93104-GR2-G49	GM92847-G49

Alternator and Mounting



Alternator and Mounting, continued

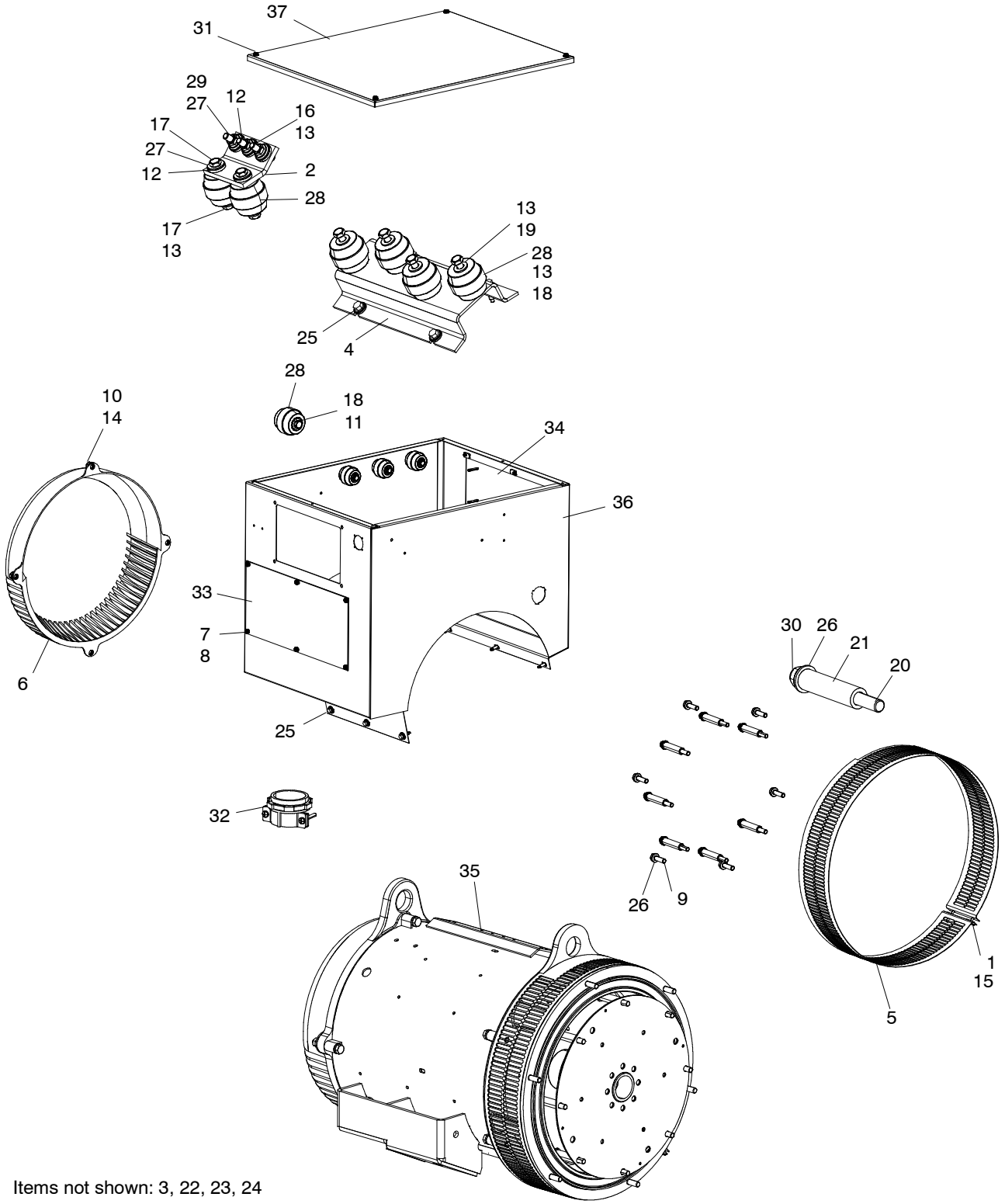
Variation 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Item	Part Number	Description	Quantity
1	257046	Guard, Generator Fan	1
2	257442	Clip, Speed	2
3	257986	Bus, Ground 1/4”	1
4	362323	Cap, Masking	6
5	GM14210	Bracket, Lead Connection	1
6	M125A-05-80	Washer, Plain	12
7	M7985A-05010-20	Screw, Pan Head M5x10	12
8	M933-06030-60	Screw, Hex Cap	3
9	M933-10035-82	Screw, Hex Cap	6
10	M934-06-60	Nut, Hex 6mm	3
11	X-22-12	Washer, Lock, .262 Idx.743 In. OD	6
12	X-25-20	Washer, Flat, .312 ID X.75 OD	5
13	X-25-40	Washer, Plain, .281 ID X .625 In. OD	7
14	X-67-125	Screw, Hex Washer, Thread-Forming	2
15	X-352-121	Stud, 3/8-16 X 3.62 In.	8
16	X-400-210	Spacer, .406 ID x .625 OD x 2.344 in.	8
17	X-465-17	Bolt, Hex Cap	3
18	X-465-2	Bolt, Hex Cap	8
19	X-465-6	Bolt, Hex Cap (1/4-20 X 1/2”) Gr5	3
20	X-465-9	Bolt, Hex Cap	4
21	X-750-14	Marker, Wire	1
22	X-750-15	Marker, Wire	1
23	X-750-16	Marker, Wire	1
24	X-794-4	Screw, Hex Wshr Hd, Drill 1/4-14 X 7/8	10
25	X-801-3	Washer,Hardened,.406 ID X .812 In. OD	14
26	X-6086-24	Washer, Spring	5
27	X-6128-3	Insulator, Standoff 1/4-20 X 1.5 In.	4
28	X-6128-30	Standoff Insulator, 1/4-20 X 1 In.	5
29	X-6210-9	Nut, Flange Spiralock, 3/8-16	8
30	X-6216-1	Screw, Phillips Hex Crimptite	4
31	X-6266-2	Connector, Cable	1
32	See chart	Panel, Junction Box	1
33	See chart	Panel, Junction Box	1
34	See chart	Alternator, 4PX	1
35	See chart	Box, Junction	1
36	See chart	Cover, Junction Box	1
37	GM79560	Cover, End Bracket (4PX)	1
38	M125A-10-80	Washer, Plain	4
39	M934-10-60	Nut, Hex 10 mm	4

Use this table to identify part numbers of items 32- 36.

Variation	Module	Part Number				
		Item 32, Panel (RH)	Item 33, Panel (LH)	Item 34, Alternator	Item 35, Junction Box	Item 36, Cover
1	GM85760-MA1-WHT	344082-WHT	344421-WHT	GC79429-43	GM84658-WHT	GM84861-WHT
2	GM85760-MA2-WHT	344082-WHT	344421-WHT	GC79429-44	GM84659-WHT	GM84862-WHT
3	GM85760-MA3-WHT	344082-WHT	344421-WHT	GC79429-45	GM84659-WHT	GM84862-WHT
4	GM91280-MA1-WHT	GM91120-WHT	344421-WHT	GC79429-43	GM91239-WHT	GM84861-WHT
5	GM91280-MA2-WHT	GM91120-WHT	344421-WHT	GC79429-44	GM91240-WHT	GM84862-WHT
6	GM91280-MA3-WHT	GM91120-WHT	344421-WHT	GC79429-45	GM91240-WHT	GM84862-WHT
7	GM91280-MA4-G49	GM91120-G49	344421-G49	GM87763	GM91239-G49	GM84861-G49
8	GM91280-MA5-G49	GM91120-G49	344421-G49	GM87764	GM91240-G49	GM84862-G49
9	GM91280-MA6-G49	GM91120-G49	344421-G49	GM87765	GM91240-G49	GM84862-G49
10	GM85760-MA4-G49	344082-G49	344421-G49	GM87763	GM84658-G49	GM84861-G49
11	GM85760-MA5-G49	344082-G49	344421-G49	GM87764	GM84659-G49	GM84862-G49
12	GM85760-MA6-G49	344082-G49	344421-G49	GM87765	GM84659-G49	GM84862-G49

Alternator and Mounting, continued



Items not shown: 3, 22, 23, 24

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Alternator and Mounting, continued

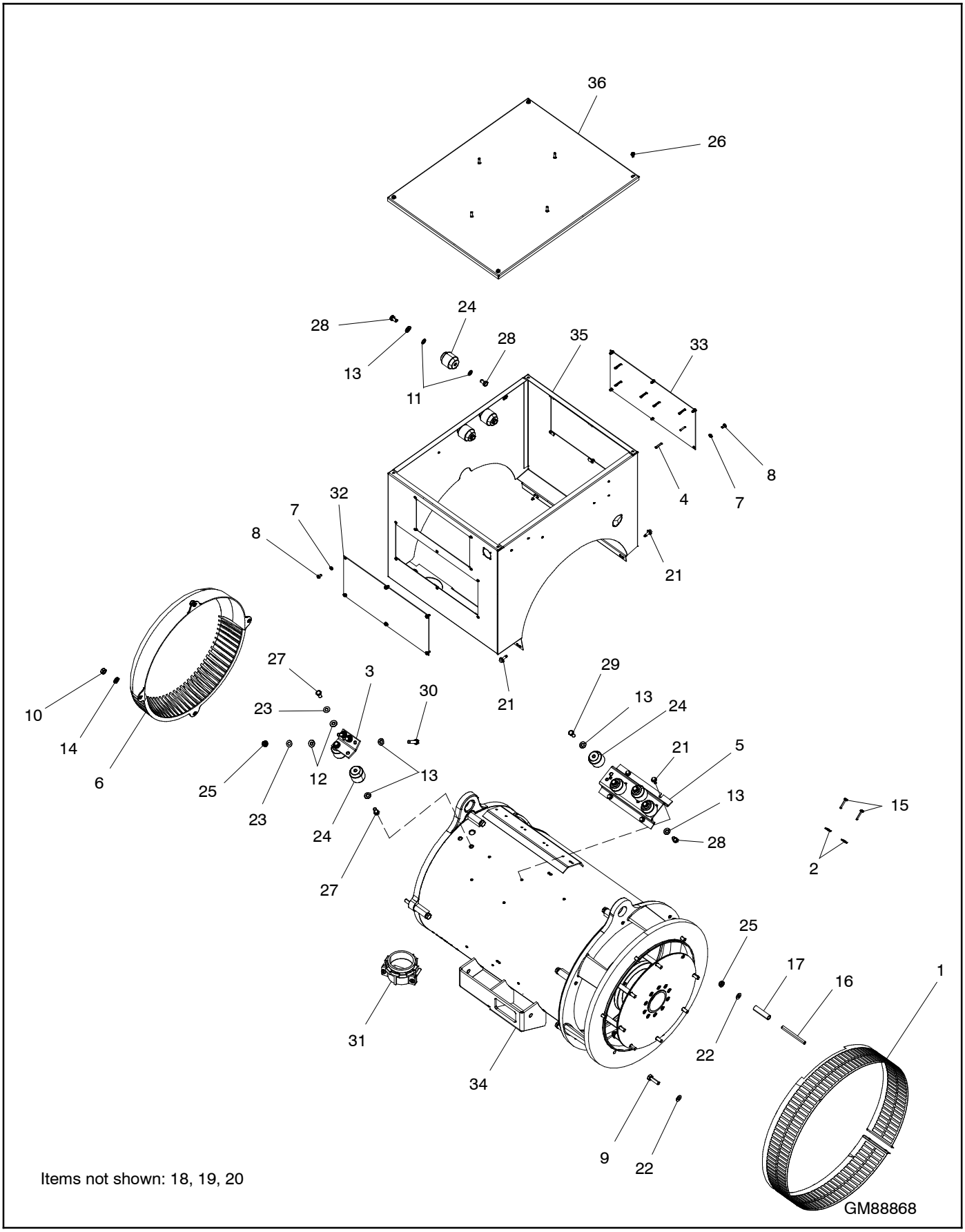
Variation 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24

Item	Part Number	Description	Quantity
1	257442	Clip, Speed	2
2	257985	Bus, Ground 5/16”	1
3	362323	Cap, Masking	6
4	GM14210	Bracket, Lead Connection	1
5	GM70117	Guard, Gen Fan (4RX Sae# 2&3)	1
6	GM79592	Cover, End Bracket	1
7	M125A-05-80	Washer, Plain	12
8	M7985A-05010-20	Screw, Pan Head M5x10	12
9	M933-10035-82	Screw, Hex Cap	6
10	M934-10-60	Nut, Hex 10mm	4
11	X-22-16	Washer, Lock, .326 Idx.883 In. OD	6
12	X-25-75	Washer, Plain, .344 ID X .875 In. OD	5
13	X-25-85	Washer, Plain, .344 ID X .687 In. OD	16
14	X-25-93	Washer, Plain, .406ID X .75in. OD	4
15	X-67-125	Screw, Hex Washer, Thread-Forming	2
16	X-125-24	Bolt, Hex Cap	3
17	X-125-31	Bolt, Hex Cap	4
18	X-125-33	Bolt, Hex Cap 5/16-18 X 1/2”	10
19	X-125-34	Bolt, Hex Cap	4
20	X-352-63	Stud, 3/8-16 X 4 In.	8
21	X-400-132	Spacer,.406 ID X .625 OD X 2.531 In	8
22	X-750-14	Marker, Wire	1
23	X-750-15	Marker, Wire	1
24	X-750-16	Marker, Wire	1
25	X-794-4	Screw, Hex Wshr Hd, Drill 1/4-14 X 7/8	10
26	X-801-3	Washer,Hardened,.406 ID X .812 In. OD	14
27	X-6086-25	Washer, Spring	5
28	X-6128-34	Insulator, Standoff	9
29	X-6210-7	Nut, Flange Spiralock, 5/16-18	3
30	X-6210-9	Nut, Flange Spiralock, 3/8-16	8
31	X-6216-1	Screw, Phillips Hex Crimptite	4
32	X-6266-3	Conn. Cable	1
33	See chart	Panel, Junction Box	1
34	See chart	Panel, Junction Box	1
35	See chart	Alternator, 4RX	1
36	See chart	Box, Junction	1
37	See chart	Cover, Junction Box	1

Use this table to identify part numbers of items 33- 37.

Variation	Module	Part Number				
		Item 33, Panel (RH)	Item 34, Panel (LH)	Item 35, Alternator	Item 36, Junction Box	Item 37, Cover
13	GM87038-MA1-WHT	344082-WHT	344421-WHT	GC79454-28	GM84660-WHT	GM84863-WHT
14	GM87038-MA2-WHT	344082-WHT	344421-WHT	GC79454-29	GM84660-WHT	GM84863-WHT
15	GM87038-MA3-WHT	344082-WHT	344421-WHT	GC79454-30	GM84660-WHT	GM90314-WHT
22	GM87038-MA4-G49	344082-G49	344421-G49	GM87766	GM84660-G49	GM84863-G49
23	GM87038-MA5-G49	344082-G49	344421-G49	GM87767	GM84660-G49	GM84863-G49
24	GM87038-MA6-G49	344082-G49	344421-G49	GM87768	GM84660-G49	GM90314-G49
27	GM91281- MA1-WHT	GM91006- WHT	344421-WHT	GC79454-28	GM91241- WHT	GM84863-WHT
28	GM91281- MA2-WHT	GM91006- WHT	344421-WHT	GC79454-29	GM91241- WHT	GM84863-WHT
29	GM91281- MA3-WHT	GM91006- WHT	344421-WHT	GC79454-30	GM91724- WHT	GM84863-WHT
30	GM91281- MA4- G49	GM91006- G49	344421-G49	GM87766	GM91241- G49	GM84863-WHT
31	GM91281- MA5- G49	GM91006- G49	344421-G49	GM87767	GM91241- G49	GM84863-WHT
32	GM91281- MA6- G49	GM91006- G49	344421-G49	GM87768	GM91724- G49	GM84863-WHT

Alternator and Mounting, continued



Alternator and Mounting, continued

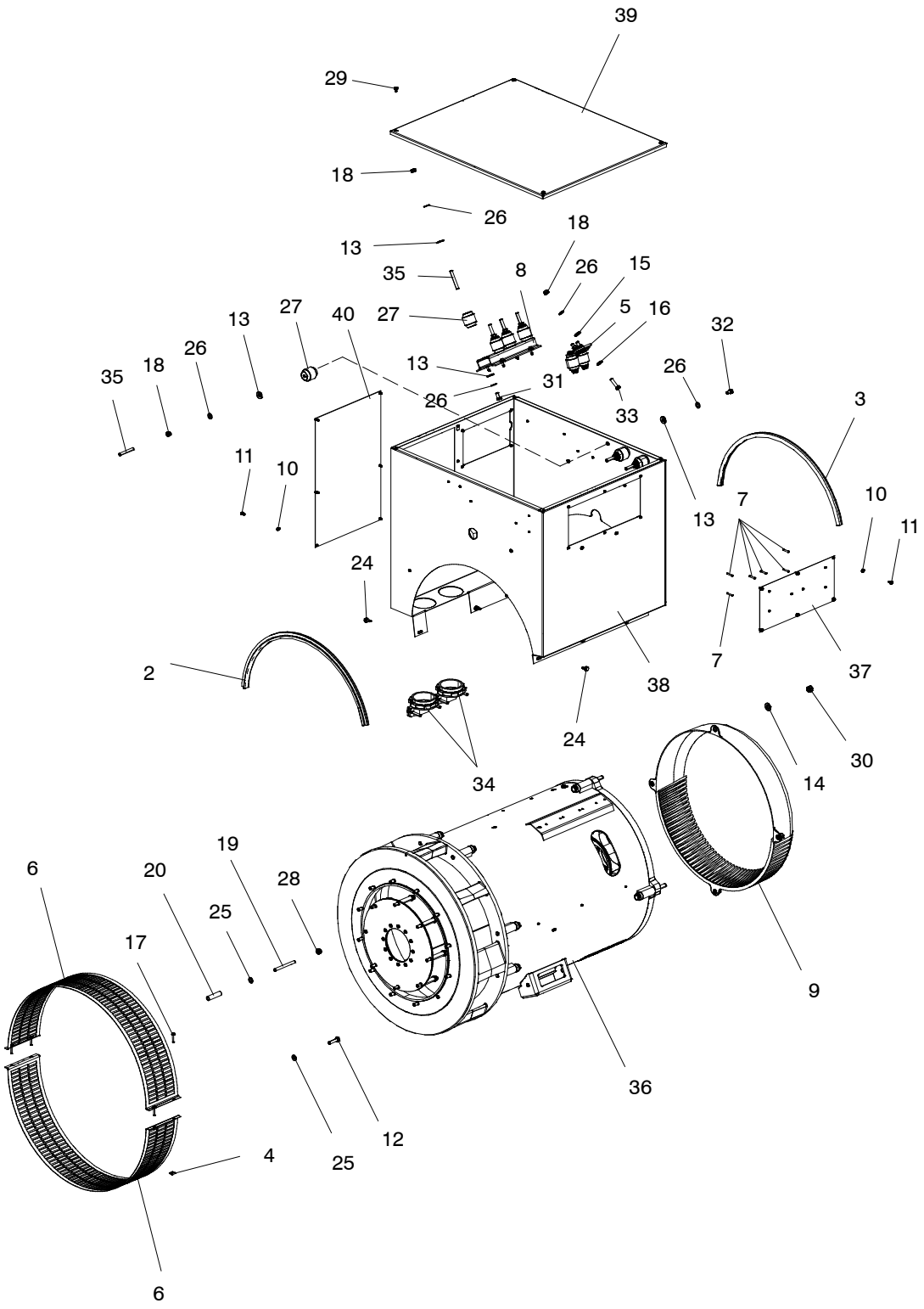
Variation 25, 26

Item	Part Number	Description	Quantity
1	257179	Guard, generator fan	1
2	257442	Clip, speed	2
3	257978	Bus, Ground 3/8”	1
4	362323	Cap, masking	6
5	GM14210	Bracket, Lead Connection	1
6	GM79593	Cover, End Bracket	1
7	M125A-05-80	Washer, Plain	12
8	M7985A-05010-20	Screw, Pan Head M5X10	12
9	M933-10035-82	Screw, Hex Cap	6
10	M934-10-60	Nut, Hex 10mm	4
11	X-22-10	Washer, lock .391 IDx.681 in. OD	6
12	X-25-18	Washer, Flat, .391 ID x.875 in. OD	5
13	X-25-37	Washer, plain, .406 ID x.812 in OD	16
14	X-25-93	Washer, plain .406ID x .75in. OD	4
15	X-67-125	Screw, hex washer, thread-forming	2
16	X-352-63	Stud, 3/8-16 x 4 in.	8
17	X-400-132	Spacer,.406 ID x .625 OD x 2.531 in	8
18	X-750-14	Marker, wire	1
19	X-750-15	Marker, wire	1
20	X-750-16	Marker, wire	1
21	X-794-6	Screw, Drill	6
21	X-794-4	Screw, hex wshr hd, drill 1/4-14 x 7/8	4
22	X-801-3	Washer, hardened, .406 ID x .812 in. OD	14
23	X-6086-6	Washer, Spring, .39 ID x .81 in OD	5
24	X-6128-29	Standoff insulator, 3/8-16 x 2 in.	9
25	X-6210-9	Nut, flange spiralock, 3/8-16	11
26	X-6216-1	Screw, Phillips hex crimptite	4
27	X-6238-10	Bolt, Hex Cap	4
28	X-6238-2	Bolt, Hex Cap	10
29	X-6238-3	Bolt, Hex Cap	4
30	X-6238-5	Bolt, Hex Cap (3/8-16 x 1.5”) Gr5	3
31	X-6266-3	Conn. Cable	1
32	See chart	Panel, Junction Box	1
33	See chart	Panel, junction box	1
34	See chart	Alternator Assembly	1
35	See chart	Junction Box	1
36	See chart	Cover, Junction Box	1

Use this table to identify part numbers of items 32- 36.

Variation	Module	Part Number				
		Item 32, Panel (RH)	Item 33, Panel (LH)	Item 34, Alternator	Item 35, Junction Box	Item 36, Cover
25	GM88868- MA1- WHT	GM91006- WHT	344421- WHT	GC70194- 13	GM84661- WHT	GM84864- WHT
26	GM88868- MA2- G49	GM91006- G49	344421- G49	GM89474	GM84661- G49	GM84864- G49

Alternator and Mounting, continued



Items not shown: 21, 22, 23

GM93105_B

Alternator and Mounting, continued

Variation 33, 34

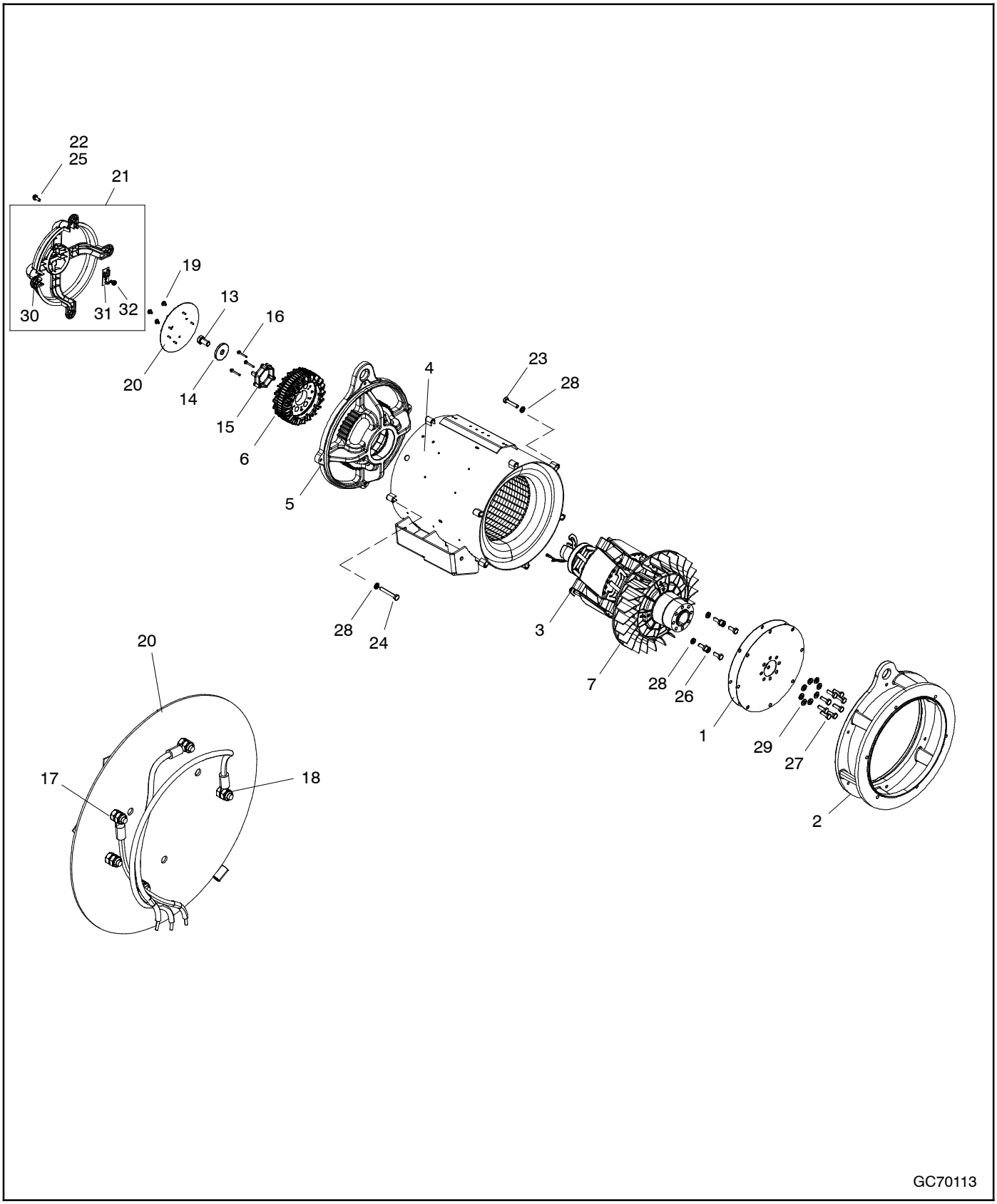
Item	Part Number	Description	Quantity
2	X-6422-36	Seal, Push-on Trim	1
4	257442	Clip, speed	4
5	257978	Bus, Alternator Ground (3/8”)	1
6	347268	Guard, generator fan	2
7	362323	Cap, masking	6
8	GM14210	Bracket, Lead Connection	1
9	GM94901	Cover, End Bracket (4UA)	1
10	M125A-05-80	Washer, Plain	12
11	M7985A-05010-20	Screw, Pan Head M5X10	12
12	M931-10040-82	Screw, Hex Cap	12
13	X-25-118	Washer, Plain .406 ID x 1 in. OD	14
14	X-25-169	Washer, Plain	4
15	X-25-18	Washer, Flat, .391 ID x.875 in.ODKM	5
16	X-25-37	Washer, Plain, .406 ID X.812 IN. OD	5
17	X-67-125	Screw, hex washer, thread-forming	4
18	X-83-7	Nut, hex, 3/8-16, zinc	10
19	X-352-63	Stud, 3/8-16 x 4 in.	8
20	X-400-132	Spacer,.406 ID x .625 OD x 2.531 in	8
21	X-750-14	Marker, wire	1
22	X-750-15	Marker, wire	1
23	X-750-16	Marker, wire	1
24	X-794-4	Screw, hex wshr hd, drill 1/4-14 x 7/8	10
25	X-801-3	Washer,hardened,.406 ID x .812 in.OD	20
26	X-6086-6	Washer, Spring, .39 ID x .81 in OD	19
27	X-6128-29	Standoff insulator, 3/8-16 x 2 in.	9
28	X-6210-9	Nut, Flange Spiralock, 3/8-16	8
29	X-6216-1	Screw, Phillips hex crimptite	4
30	X-6234-9	Nut, Hex	4
31	X-6238-10	Bolt, Hex Cap	8
32	X-6238-2	Bolt, Hex Cap	3
33	X-6238-5	Bolt, Hex Cap (3/8-16 X 1.5”) GR5	3
34	X-6266-3	Conn. Cable	2
35	X-6274-7	Stud	7
36	See chart	Alternator Assembly, 4UA10 Marine	1
37	See chart	Panel, Junction Box	1
38	See chart	Box, Junction (4UA)	1
39	See chart	Cover, Junction Box (4UA)	1
40	See chart	Panel, 4UA Junction Box (RH)	1

Use this table to identify part numbers of items 36- 40.

Variation	Module	Part Number				
		Item 36, Alternator	Item 37, Panel (LH)	Item 38, Junction Box	Item 39, Cover	Item 40, Panel (RH)
33	GM93105- MA1- WHT	GC94676	344421- WHT	GM93095- WHT	GM93096- WHT	GM93515- WHT
34	GM93105- MA2- G49	GM94692	344421- G49	GM93095- G49	GM93096- G49	GM93515- G49

Alternator and Mounting, continued

4PX Alternators



Alternator and Mounting, continued

4PX Alternators

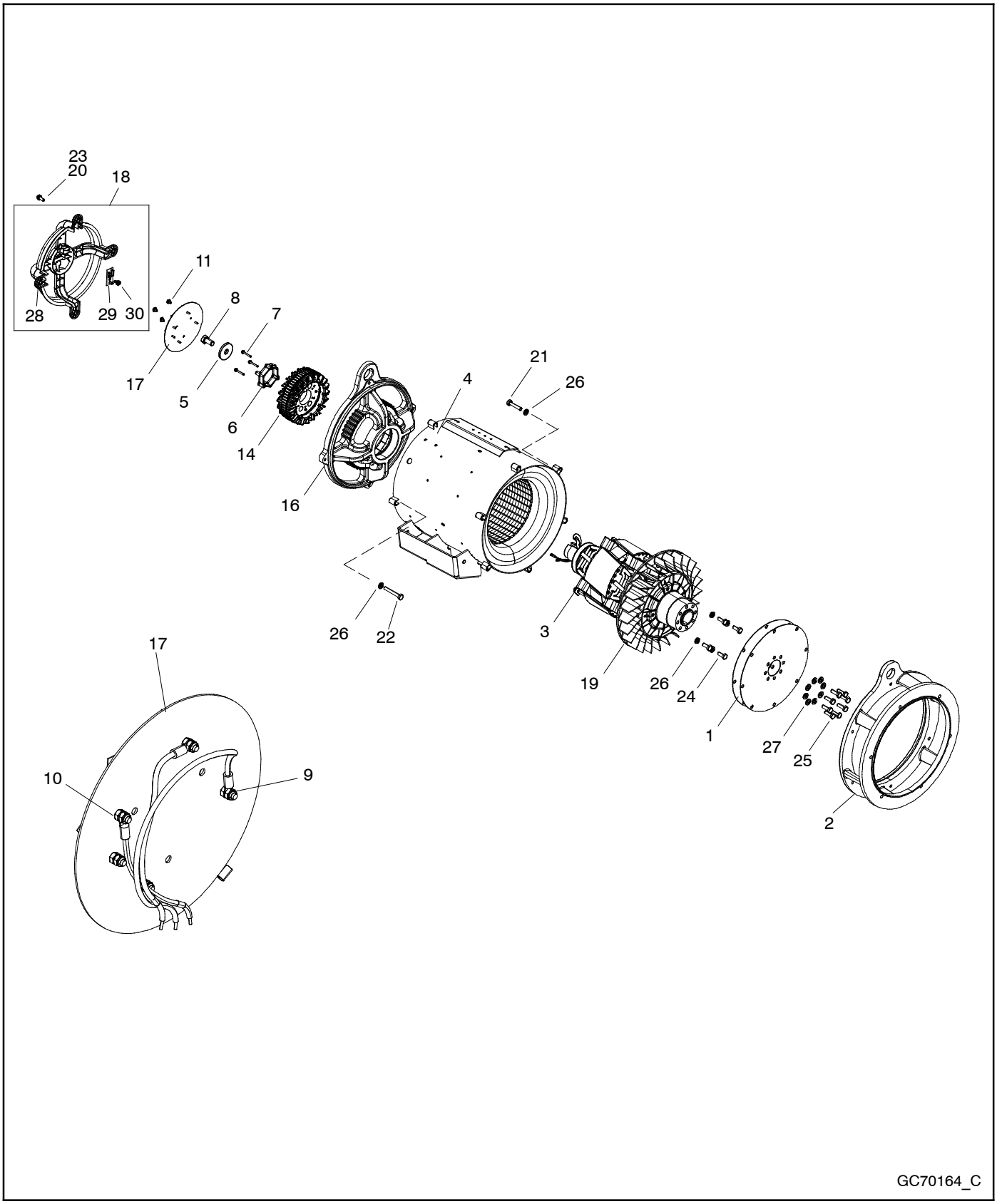
Item	Part Number	Description	Qty.
1	See chart	Disc, Drive	2
2	See chart	Adapter, Generator	1
3	See chart	Rotor Assembly	1
4	See chart	Stator Assembly	1
5	See chart	Bracket Assembly, End	1
6	See chart	Exciter Armature, SCR	1
7	See chart	Fan, Alternator	1
13	M933-16030-82	Screw, hex cap	1
14	GM70070	Washer, FRX Exciter Mtg	1
15	GM70076	Spacer, FRX Activator	1
16	M7500D-05035-85	Screw, Metric Thread Forming	3
17	M934-04-SS	Nut, Hex (Stainless Steel)	5
18	M985-04-SS	Nut, Hex Elastic Stop	5
19	X-6071-8	Screw, Thread Forming	3
20	GM72391	PCB ASSY, World Alternator Activator	1
21	GM74218	Holder Assy, LED Optic Board (includes items 30- 32)	1
22	M125A-06-80	Washer, Plain	4
23	M931-10050-60	Screw, hex cap	6
24	M933-10065-60	Screw, Hex Cap	4
25	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	4
26	M933-10025-60	Screw, hex cap,fully thrd M10 x 25mm EXP	4
27	M933-10030-82	Screw, hex cap	8
28	X-25-93	Washer,plain .406ID x .75in. OD	14
29	X-801-3	Washer,hardened,.406 ID x .812 in.OD	8
30	GM74110	Holder, LED Optic Board	1
31	GM74198	PCB ASSY, Alt. LED Optic Board	1
32	M7500C-05010-83	Screw, Thread Forming Metric	1

Use this table to identify part numbers of items 1- 7.

Alternator No.	Part Number						
	Item 1, Drive Disc	Item 2, Adapter	Item 3, Rotor Assy.	Item 4, Stator Assy.	Item 5, End Bracket	Item 6, Exciter Armature	Item 7, Fan
GC79429-43	257016	GM87533	GC81408-11	GC85348-1	GM81402-2	GC70064-2	GM87190
GC79429-44	257016	GM87533	GC81408-10	GC85342-1	GM81402-2	GC70064-2	GM87190
GC79429-45	257016	GM87533	GC81408-7	GC85342-2	GM81402-2	GC70064-2	GM87190
GM87763	257016	GM87533	GC81408-11	GC85348-1	GM81402-2	GC70064-2	GM87190
GM87764	257016	GM87533	GC81408-10	GC85342-1	GM81402-2	GC70064-2	GM87190
GM87765	257016	GM87533	GC81408-7	GC85342-2	GM81402-2	GC70064-2	GM87190

Alternator and Mounting, continued

4RX Alternators



Alternator and Mounting, continued

4RX Alternators

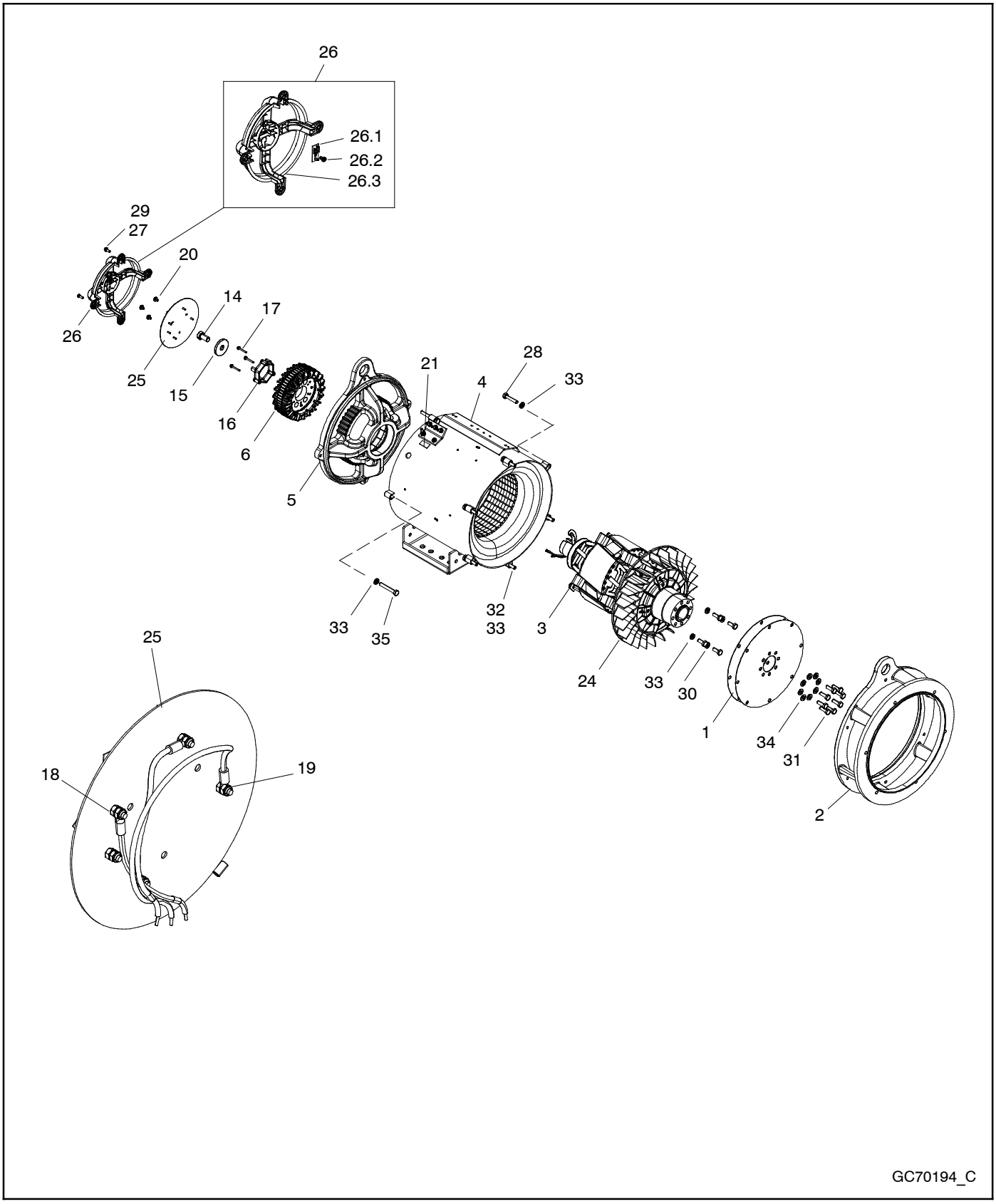
Item	Part Number	Description	Qty.
1	See chart	Disc, Drive	3
2	See chart	Adapter, Generator	1
3	See chart	Rotor Assembly	1
4	See chart	Stator Assembly	1
5	GM70070	Washer, FRX Exciter Mtg	1
6	GM70076	Spacer, FRX Activator	1
7	M7500D-05035-85	Screw, Metric Thread Forming	3
8	M933-16030-82	Screw, hex cap	1
9	M934-04-SS	Nut, Hex (Stainless Steel)	5
10	M985-04-SS	Nut, Hex Elastic Stop	5
11	X-6071-8	Screw, Thread Forming	3
14	GC70064-3	Exciter Armature, SCR	1
16	GM70116	Bracket Assembly, End	1
17	GM72391	PCB ASSY, World Alternator Activator	1
18	GM74218	Holder Assy, LED Optic Board (includes items 28- 30)	1
19	GM81609	Fan, Alternator	1
20	M125A-06-80	Washer, Plain	4
21	M931-10080-60	Screw, hex cap	6
22	M933-10100-60	Screw, hex cap	4
23	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	4
24	M933-10025-60	Screw, hex cap,fully thrd M10 x 25mm EXP	4
25	M933-10030-82	Screw, hex cap	12
26	X-25-93	Washer,plain .406ID x .75in. OD	14
27	X-801-3	Washer,hardened,.406 ID x .812 in.OD	12
28	GM74110	Holder, LED Optic Board	1
29	GM74198	PCB ASSY, Alt. LED Optic Board	1
30	M7500C-05010-83	Screw, Thread Forming Metric	1

Use this table to identify part numbers of items 1- 4.

Alternator No.	Part Number			
	Item 1, Drive Disc	Item 2, Adapter	Item 3, Rotor Assy.	Item 4, Stator Assy.
GC79454- 28	257103	GM81773	GC81424- 2	GC87302- 1
GC79454- 29	257103	GM81773	GC81424- 4	GC87302- 2
GC79454- 30	257103	GM81773	GC81424- 9	GC87302- 3
GM87766	257103	GM81773	GC81424- 2	GC87302- 1
GM87767	257103	GM81773	GC81424- 4	GC87302- 2
GM87768	257103	GM81773	GC81424- 9	GC87302- 3

Group 201: Generator and Mounting

4S_X Alternators



Group 201: Generator and Mounting, continued

4S_X Alternators

Item	Part Number	Description	Qty.
1	See chart	Disc, Drive	3
2	See chart	Adapter, Generator	1
3	See chart	Rotor Assembly	1
4	See chart	Stator Assembly	1
5	GM70167	Bracket Assembly, End	1
6	GC70064-4	Exciter Armature, SCR	1
14	M933-16030-82	Screw, hex cap	1
15	GM70070	Washer, FRX Exciter Mtg	1
16	GM70076	Spacer, FRX Activator	1
17	M7500D-05035-85	Screw, Metric Thread Forming	3
18	M934-04-SS	Nut, Hex (Stainless Steel)	5
19	M985-04-SS	Nut, Hex Elastic Stop	5
20	X-6071-8	Screw, Thread Forming	3
21	344295	Decal, equipment grd	1
24	GM79507	Fan, Alternator	1
25	GM72391	PCB ASSY, World Alternator Activator	1
26	GM74218	Holder Assy, LED Optic Board	1
26.1	GM74198	PCB ASSY, Alt. LED Optic Board	1
26.2	M7500C-05010-83	Screw, Thread Forming Metric	1
26.3	GM74110	Holder, LED Optic Board	1
27	M125A-06-80	Washer, Plain	4
28	M931-10080-60	Screw, hex cap	5
29	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	4
30	M933-10025-60	Screw, hex cap,fully thrd M10 x 25mm EXP	4
31	M933-12040-82	Screw, hex cap	10
32	M931-10055-60	Screw, hex cap	1
33	X-25-93	Washer,plain .406ID x .75in. OD	14
34	290945	Washer,hardened,.531 ID x 1.06 in.OD	10
35	M933-10100-60	Screw, hex cap	4

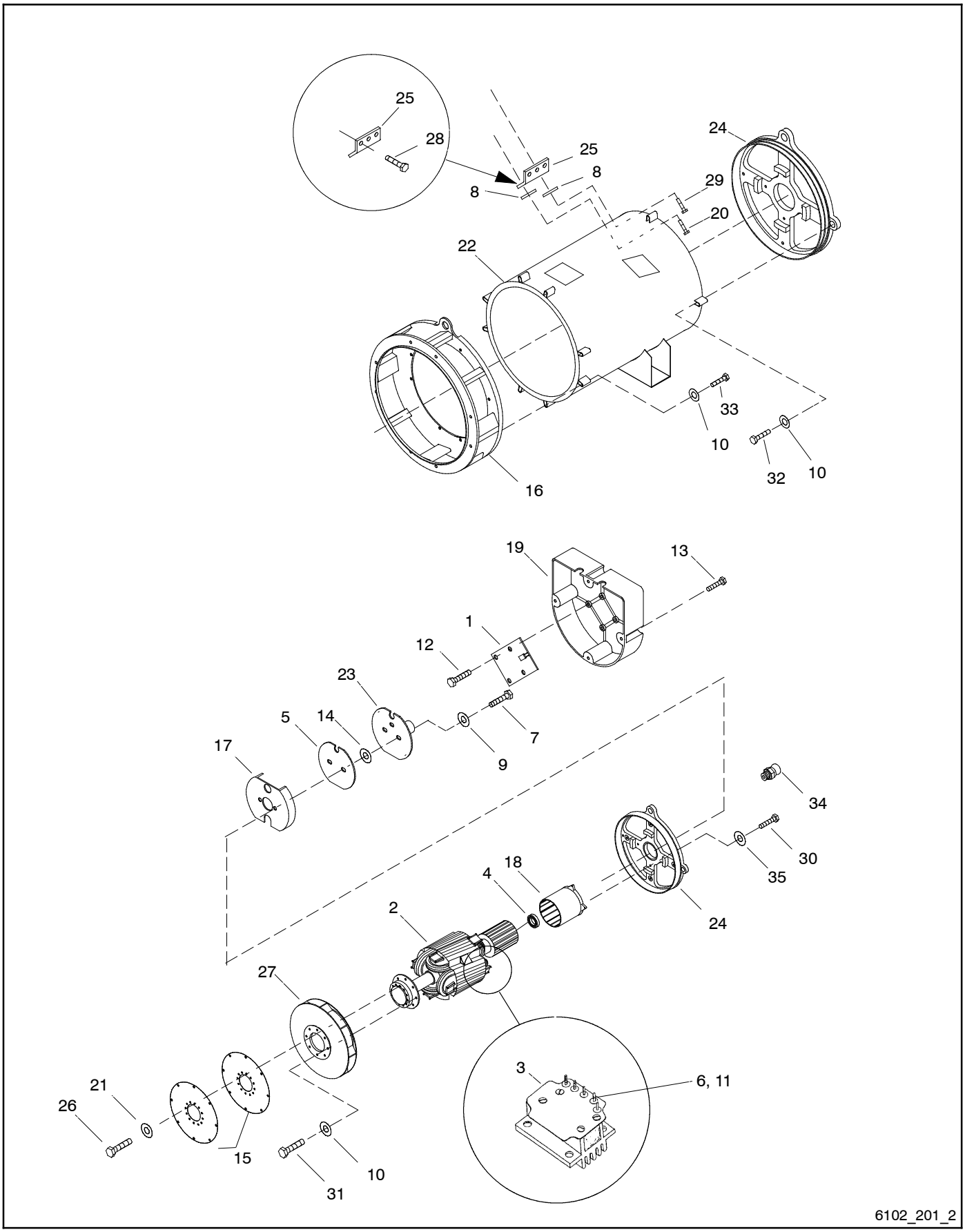
Alternator Part Number and Mount Type

Use this table to identify part numbers of items 1-4.

Alternator No.	Assembly			
	Item 1, Drive Disc	Item 2, Adapter	Item 3, Rotor Assy.	Item 4, Stator Assy.
GC70194-13	GM70180	GM78317	GC70182-5	GC88488-1
GM89474	GM70180	GM78317	GC70182-5	GC88488-1

Group 201: Generator and Mounting, continued

4UA10 Alternators



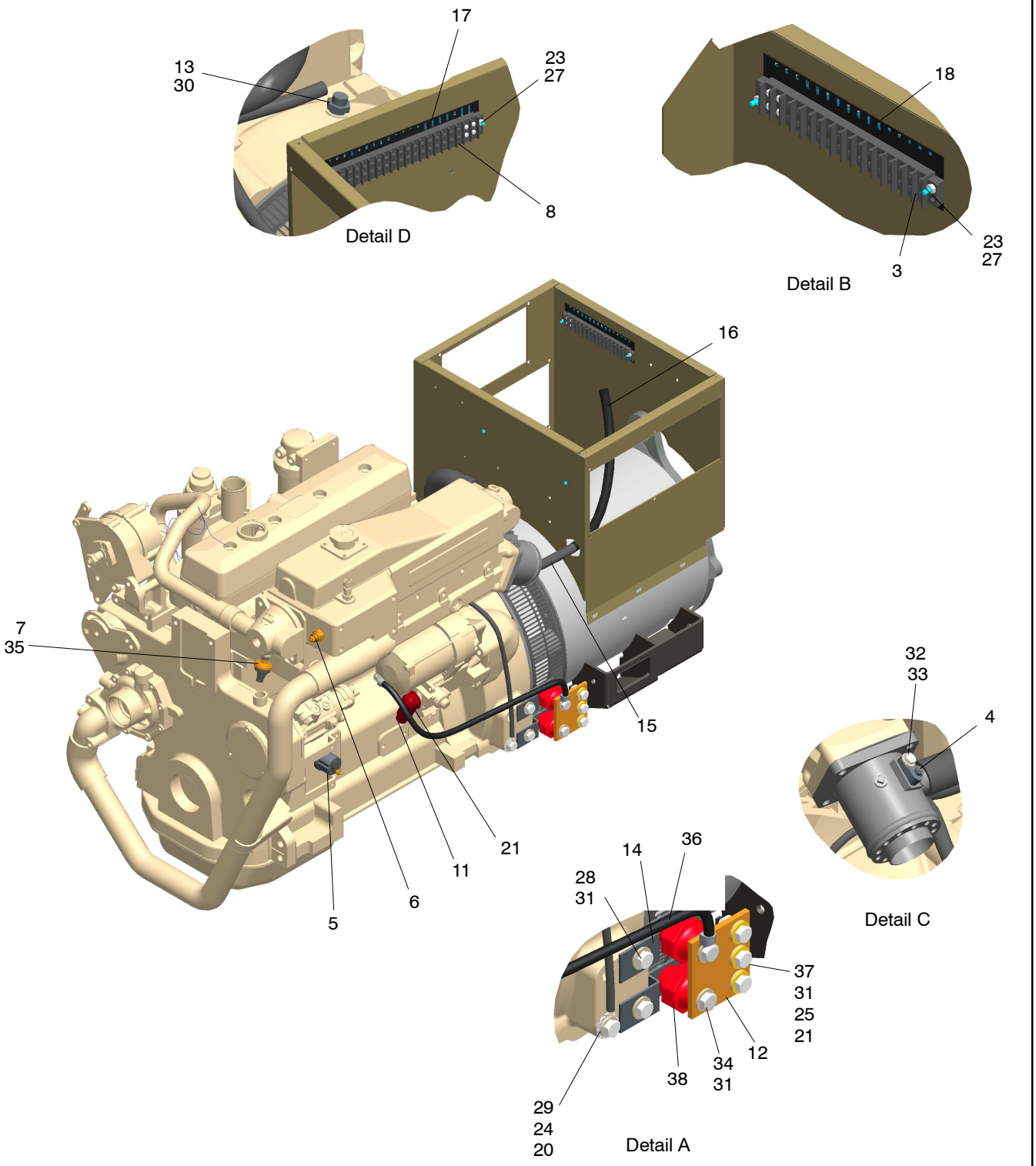
Group 201: Generator and Mounting, continued

4UA10 Alternators

Item	Part Number	Description	Qty.
1	B-257099	PCB assembly, LED, FRII	1
2	GC94649	Rotor assembly	1
3	A-354299	Heatsink	1
4	X-758-9	Bearing, ball	1
5	GM34505	PCB assembly, photo receiver	1
6	X-101-24	Nut, hex elastic stop, 6-32	5
7	X-117-5	Screw, hex head machine	2
8	X-22-46	Washer, lock, 0.391 ID x 0.975 in. OD	2
9	X-22-9	Washer, lock, 0.20 ID x 0.373 in. OD	2
10	X-25-93	Washer, plain, 0.406 ID x 0.75 in. OD	14
10	290945	Washer, hardened, 0.531 ID x 1.06 in. OD	12
10	257951	Washer, special, 0.562 ID x 1.13 in. OD	12
11	X-283-7	Terminal, ring, male, 22-16 AWG	4
11	X-431-25	Terminal, fast-on, female	4
12	X-6071-1	Screw, Phillips pan head	4
13	X-67-133	Screw, hex washer, thread-forming	3
14	243321	Washer, insulating, 0.195 ID x 0.5 in.	2
15	222881	Disc, drive	4
16	347241	Adapter, generator	1
17	257077	Actuator, magnetic cup	1
18	GC347707	Exciter field assembly	1
19	257258	Cover, FR LED circuit board	1
20	X-791-6	Screw, hex head machine	1
21	X-801-3	Washer, hardened, 0.406 ID x 0.812 in.	12
22	GC94675	Stator assembly	1
23	257850	Insulator	1
24	347236	Bracket, end	1
25	257978	Connector, lead	1
26	270158	Screw, cylinder head, 3/8-16 x1 1/4	12
27	257855	Fan, alternator	1
28	X-6238-5	Screw, hex cap	3
29	X-6238-11	Screw, hex cap	1
30	X-6238-17	Screw, hex cap	4
31	X-6238-11	Screw, hex cap	8
32	X-129-25	Screw, hex cap	4
33	X-129-25	Screw, hex cap	8
34	347119	Fitting, grease	1
35	X-801-3	Washer, hardened, 0.406 ID x 0.812 in.	4

Alternator Description	Alternator Assembly
4UA10	GC94676
4UA10 w/varish overcoat	GM94692

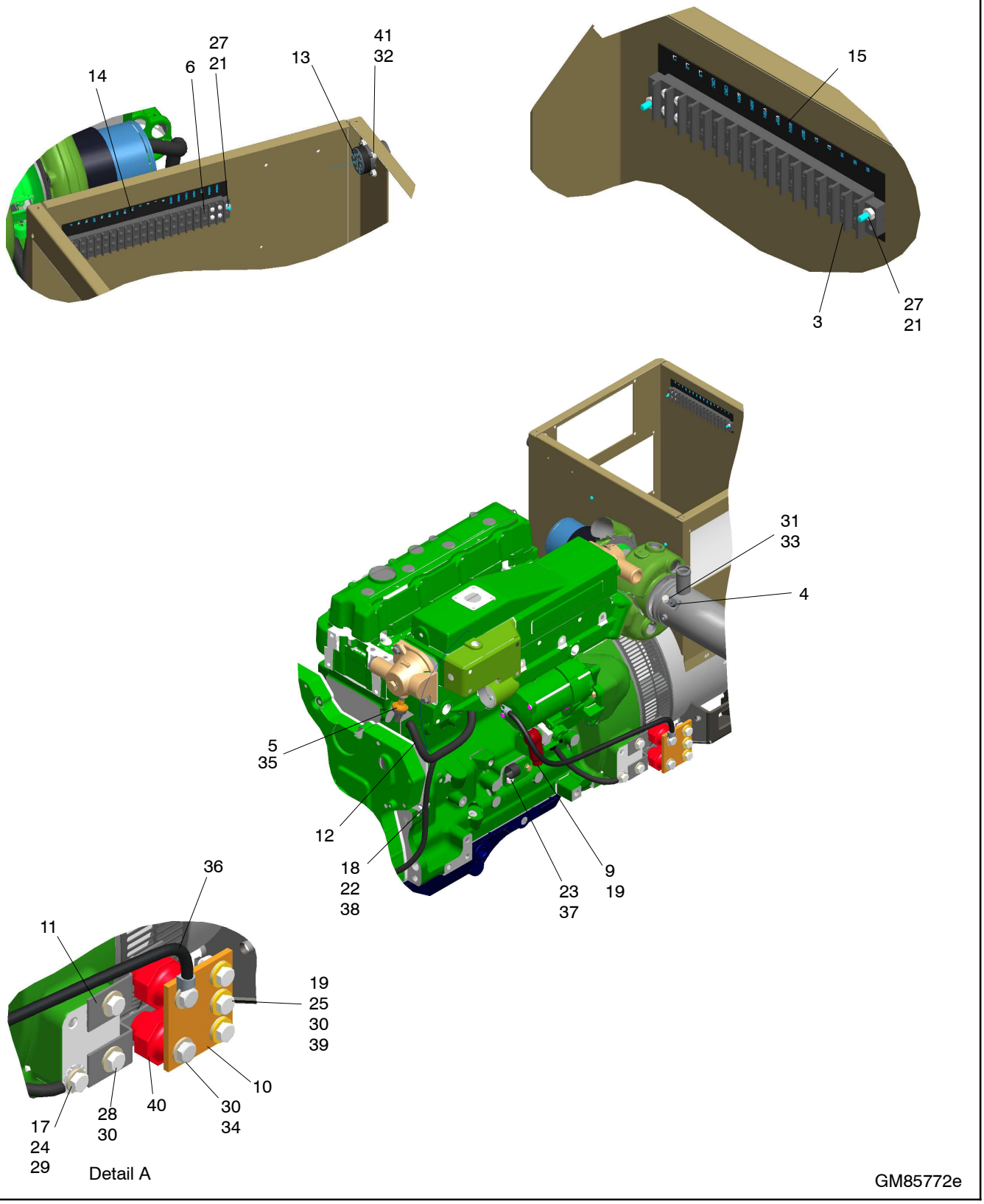
Control and Harness



Control and Harness, continued

Item	Part Number	Description	Quantity Variation 1
3	241621	Strip, Terminal	1
4	GM39934	Switch, High Temperature Shutoff	1
5	264390	Sender, Oil Pressure	1
6	268298	Sender, Water Temperature	1
7	GM30263	Switch Assembly, Pressure	1
8	273769	Terminal Block	1
11	GM22350	Boot, Starter Terminal	1
12	GM49728	Bus, Starter Negative	1
13	255750	Pickup, RPM	1
14	GM74032	Bracket	2
15	GM86392	Harness Engine 40 T2 Marine DEC3500	1
16	GM86393	Harness , Jbox 40 T2 Marine DEC3500	1
17	GM87761	Marker, Strip	1
18	GM87762	Marker, Strip	1
20	M125A-12-80	Washer, Plain	1
21	M6923-12-80	Nut, Hex	4
23	M7985A-04020-20	Screw, Pan Head Mach.	4
24	M933-12020-60	Screw, Hex Cap	1
25	M933-12030-60	Screw, Hex Cap	3
27	M934-04-50	Nut, Hex 4mm	4
28	M961-12030-60	Screw, Hex Cap	2
29	X-22-26	Washer, Lock, .521 Idx1.24 In. OD	1
30	X-25-145	Washer, Plain, .859 ID X 1.185 In. OD	1
31	X-25-26	Washer, Plain, .531 Idx1.062 In. OD	9
32	X-25-85	Washer, Plain, .344 ID X .687 In. OD	1
33	X-125-23	Bolt, Hex Cap	1
34	X-129-15	Bolt, Hex Cap	4
35	X-202-27	Bushing, Reducing (1/8 X 1/4”Npt)+Vibra	1
36	X-545-229	Cable, Battery	1
37	X-6086-5	Washer, Spring, .515 Idx1.06in.OD	3
38	X-6128-1	Standoff Insulator, 1/2-13 X 2 In.	2

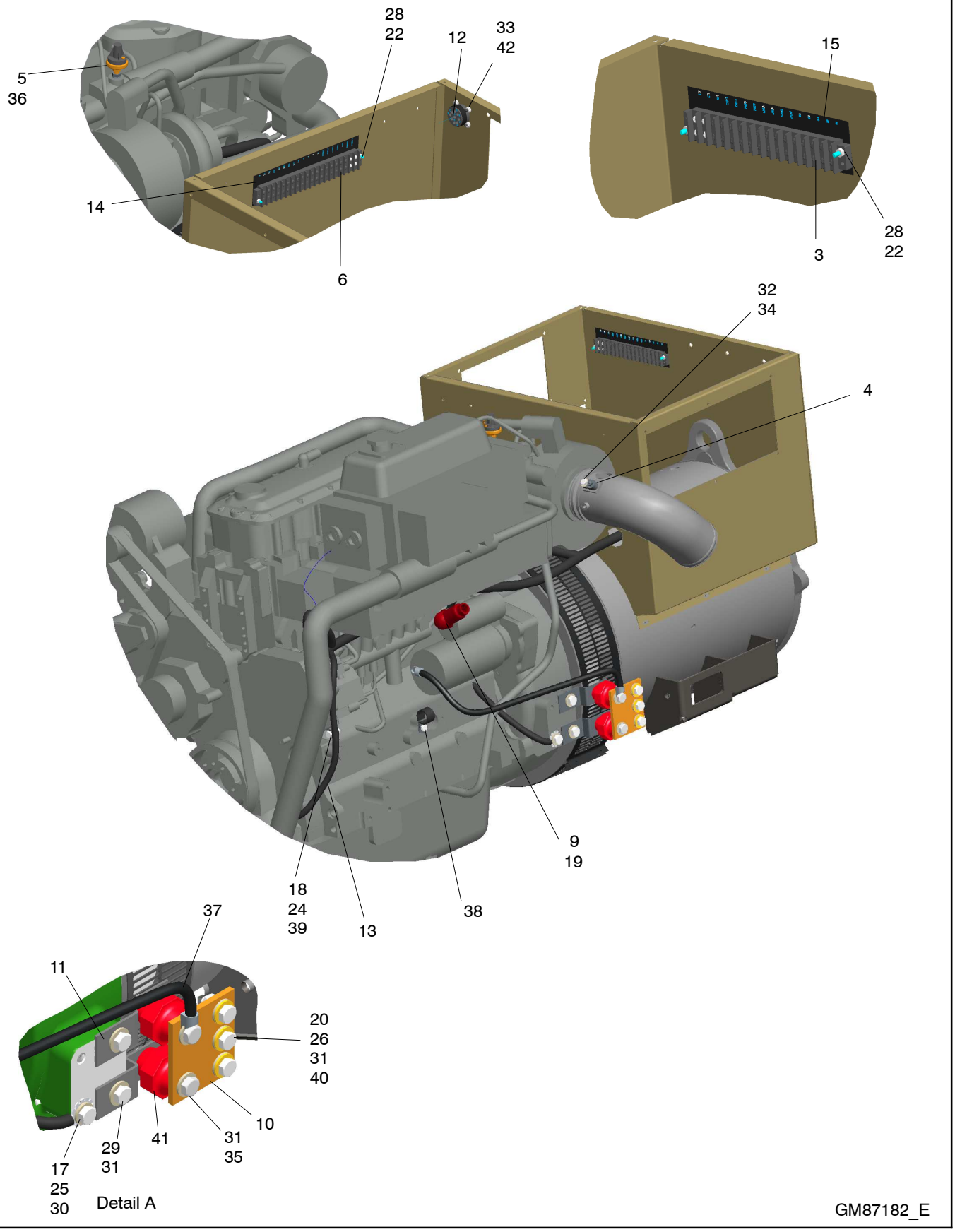
Control and Harness, continued



Control and Harness, continued

Item	Part Number	Description	Quantity Variation 2	Quantity Variation 5
3	241621	Strip, Terminal	1	1
4	GM39934	Switch, High Temperature Shutoff	1	1
5	GM30263	Switch Assembly, Pressure	1	1
6	273769	Terminal Block	1	1
9	GM22350	Boot, Starter Terminal	1	1
10	GM49728	Bus, Starter Negative	1	1
11	GM74032	Bracket	2	2
12	GM85770	Harness, Engine 55-99 JD Tier III	1	
12	GM86389	Harness, Engine 50 kW JD Tier 2		1
13	GM85771	Harness, J-Box	1	
13	GM86390	Harness, Control Box 50 kW JD Marine		1
14	GM87761	Marker, Strip	1	1
15	GM87762	Marker, Strip	1	1
17	M125A-12-80	Washer, Plain	1	1
18	M6923-08-80	Nut, Hex 8mm	1	1
19	M6923-12-80	Nut, Hex	4	4
21	M7985A-04020-20	Screw, Pan Head Mach.	4	4
22	M933-08025-60	Screw, Hex Cap	1	1
23	M933-10020-60	Screw, Hex Cap	2	2
24	M933-12020-60	Screw, Hex Cap	1	1
25	M933-12030-60	Screw, Hex Cap	3	3
27	M934-04-50	Nut, Hex 4mm	4	4
28	M961-12030-60	Screw, Hex Cap	2	2
29	X-22-26	Washer, Lock, .521 IDx1.24 In. OD	1	1
30	X-25-26	Washer, Plain, .531 IDx1.062 In. OD	9	9
31	X-25-85	Washer, Plain, .344 ID X .687 In. OD	1	1
32	X-49-26	Screw, Machine	4	4
33	X-125-23	Bolt, Hex Cap	1	1
34	X-129-15	Bolt, Hex Cap	4	4
35	X-202-27	Bushing, Reducing (1/8 X 1/4”Npt)+Vibra	1	1
36	X-545-229	Cable, Battery	1	1
37	X-672-32	Clamp, Insulated, 1.06 In.	2	2
38	X-672-7	Clamp, Insulated, .44 In.	1	1
39	X-6086-5	Washer, Spring, .515 IDx1.06in.OD	3	3
40	X-6128-1	Standoff Insulator, 1/2-13 X 2 In.	2	2
41	X-6210-3	Nut, Flange Whiz, 6-32	4	4

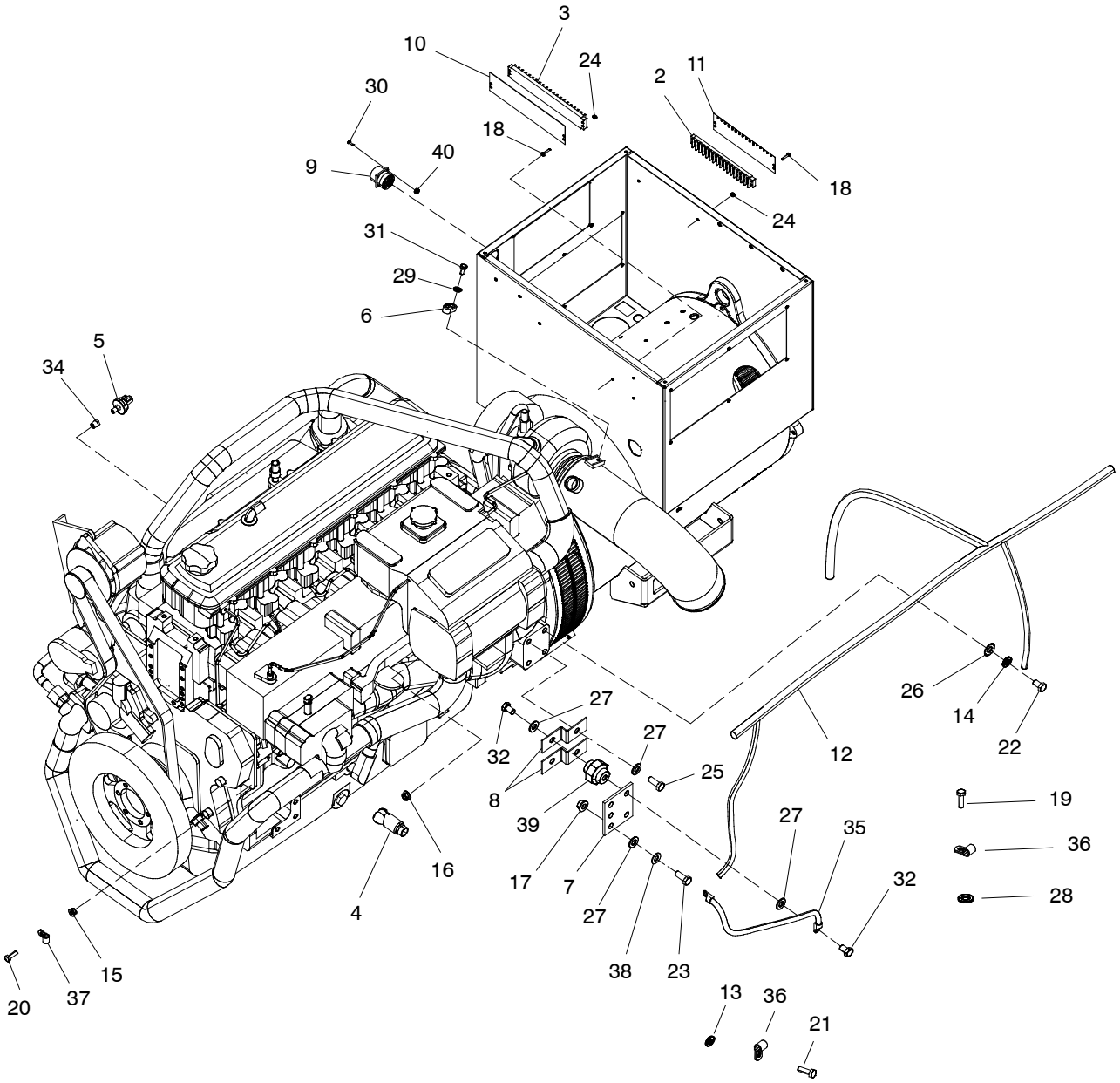
Control and Harness, continued



Control and Harness, continued

Item	Part Number	Description	Quantity Variation 3
3	241621	Strip, Terminal	1
4	GM39934	Switch, High Temperature Shutoff	1
5	GM30263	Switch Assembly, Pressure	1
6	273769	Terminal Block	1
9	GM22350	Boot, Starter Terminal	1
10	GM49728	Bus, Starter Negative	1
11	GM74032	Bracket	2
12	GM85771	Harness, J-Box	1
13	GM87759	Harness, Engine 80-99 KW JD Marine	1
14	GM87761	Marker, Strip	1
15	GM87762	Marker, Strip	1
17	M125A-12-80	Washer, Plain	1
18	M6923-08-80	Nut, Hex 8mm	1
19	M6923-10-80	Nut, Hex 10mm	1
20	M6923-12-80	Nut, Hex	3
22	M7985A-04020-20	Screw, Pan Head Mach.	4
24	M933-08025-60	Screw, Hex Cap	1
25	M933-12020-60	Screw, Hex Cap	1
26	M933-12030-60	Screw, Hex Cap	3
28	M934-04-50	Nut, Hex 4mm	4
29	M961-12030-60	Screw, Hex Cap	2
30	X-22-26	Washer, Lock, .521 Idx1.24 In. OD	1
31	X-25-26	Washer, Plain, .531 Idx1.062 In. OD	9
32	X-25-85	Washer, Plain, .344 ID X .687 In. OD	1
33	X-49-26	Screw, Machine	4
34	X-125-23	Bolt, Hex Cap	1
35	X-129-15	Bolt, Hex Cap	4
36	X-202-27	Bushing, Reducing (1/8 X 1/4”Npt)+Vibra	1
37	X-545-229	Cable, Battery	1
38	X-672-32	Clamp, Insulated, 1.06 In.	1
39	X-672-7	Clamp, Insulated, .44 In.	1
40	X-6086-5	Washer, Spring, .515 Idx1.06in.OD	3
41	X-6128-1	Standoff Insulator, 1/2-13 X 2 In.	2
42	X-6210-3	Nut, Flange Whiz, 6-32	4

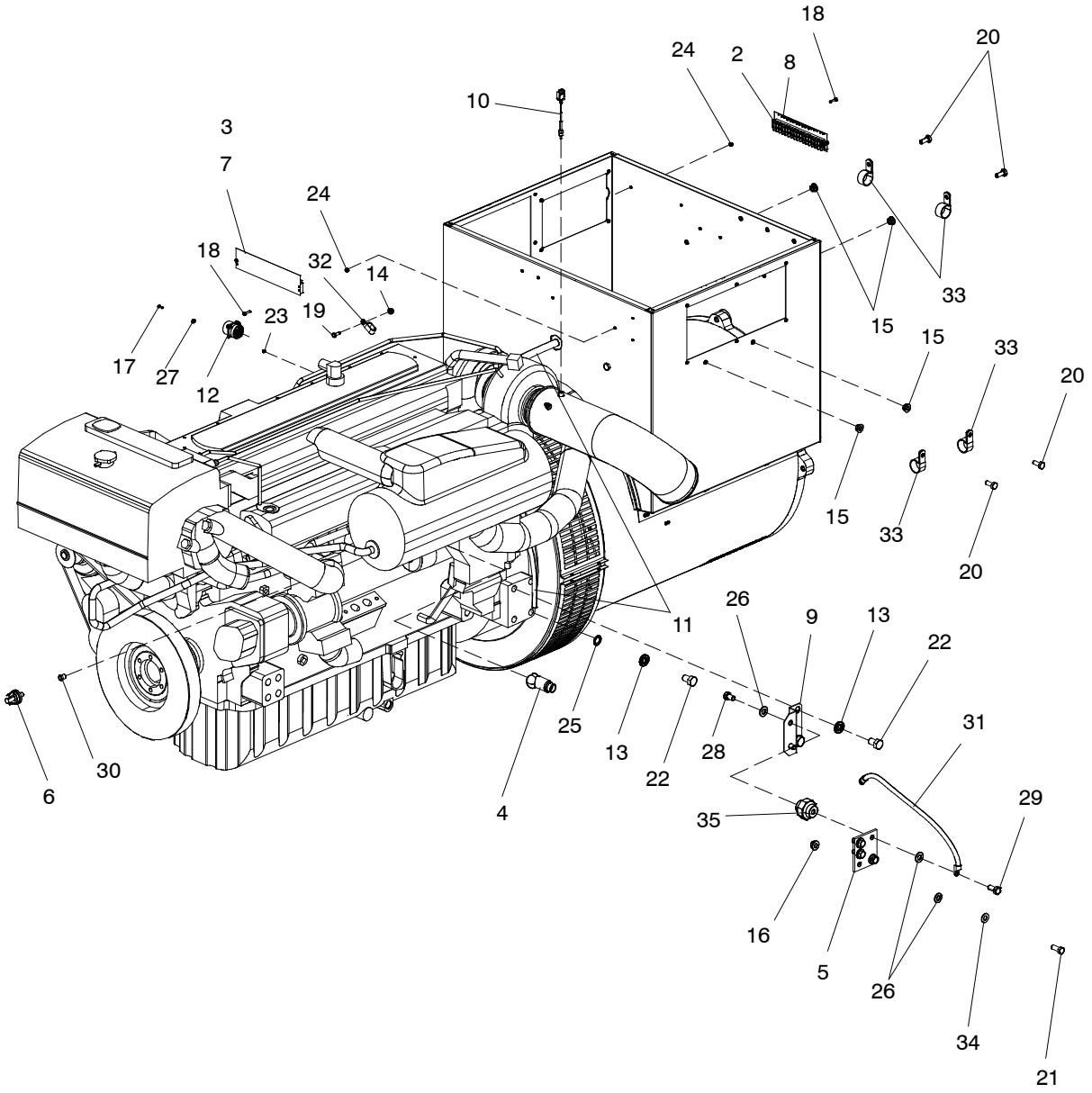
Control and Harness, continued



Control and Harness, continued

Item	Number	Description	Quantity Variation 4
2	241621	Strip, terminal	1
3	273769	Terminal block	1
4	GM22350	Boot, Starter Terminal	1
5	GM30263	Switch, Pressure Assembly	1
6	GM39934	Switch, High Temp. Cutout	1
7	GM49728	Bus, Starter Negative	1
8	GM74032	Bracket	2
9	GM85771	Harness, JBox	1
10	GM87761	Marker, Strip	1
11	GM87762	Marker, Strip	1
12	GM89491	Harness, Engine 125-150Kw Marine	1
13	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	1
14	M125A-12-80	Washer, Plain	1
15	M6923-08-80	Nut, Hex 8mm	1
16	M6923-10-80	Nut, Hex 10mm	1
17	M6923-12-80	Nut, Hex	3
18	M7985A-04020-20	Screw, pan head mach.	4
19	M933-06014-60	Screw, Hex Cap	1
20	M933-08025-60	Screw, hex cap	1
21	M933-10020-60	Screw, Hex Cap	1
22	M933-12020-60	Screw, Hex Cap	1
23	M933-12030-60	Screw, Hex Cap	3
24	M934-04-50	Nut, Hex 4mm	4
25	M961-12030-60	Screw, Hex Cap	2
26	X-22-26	Washer, lock.521 IDx1.24 in. OD	1
27	X-25-26	Washer, Plain	9
28	X-25-40	Washer, plain, .281 ID x .625 in. OD	1
29	X-25-85	Washer, plain, .344 ID x .687 in. OD	1
30	X-49-26	Screw, Machine	4
31	X-125-23	Bolt, Hex Cap	1
32	X-129-15	Bolt, Hex Cap	4
33	X-129-17	Bolt, Hex Cap (1/2-13 x 1”) Gr5	2
34	X-202-27	Bushing, reducing (1/8 x 1/4”npt)+vibra	1
35	X-545-229	Cable, Battery	1
36	X-672-32	Clamp, insulated, 1.06 in.	2
37	X-672-7	Clamp, insulated, .44 in.	1
38	X-6086-5	Washer, spring, .515 IDx1.06in.OD	3
39	X-6128-1	Standoff insulator, 1/2-13 x 2 in.	2
40	X-6210-3	Nut, flange whiz, 6-32	4

Control and Harness, continued

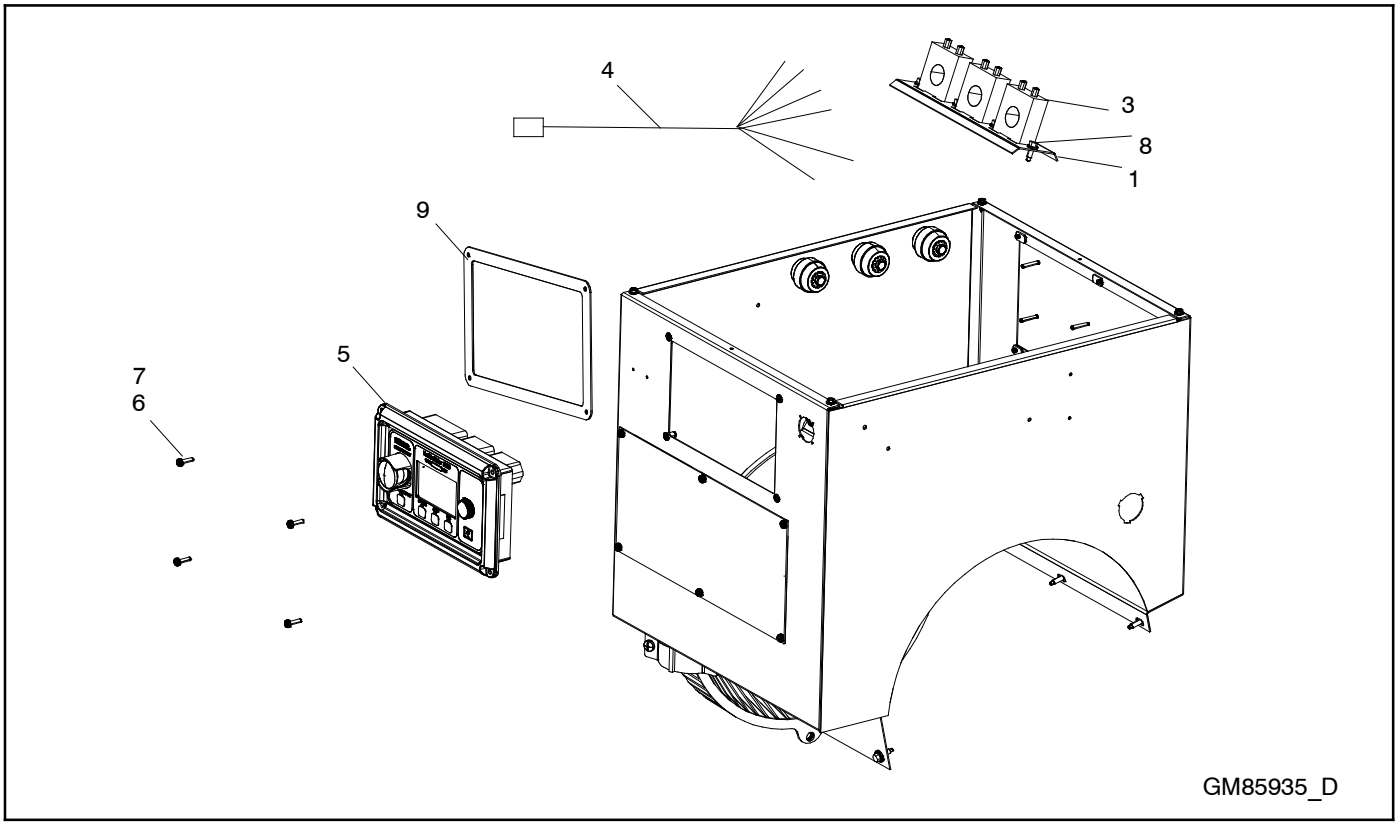


GM93203_B

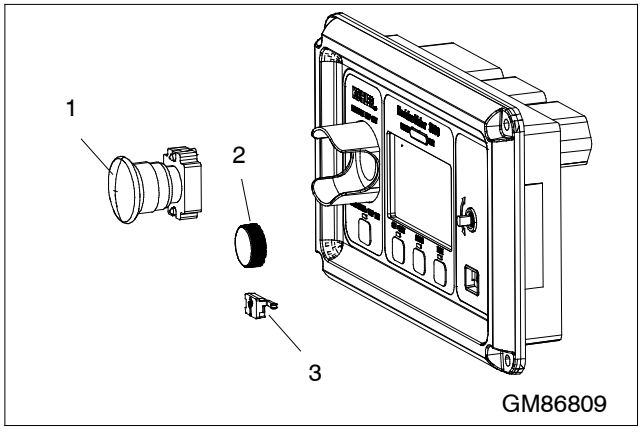
Control and Harness, continued

Item	Number	Description	Quantity Variation 6
2	241621	Strip, terminal	1
3	273769	Terminal block	1
4	GM22350	Boot, Starter Terminal	1
5	GM49728	Bus, Starter Negative	1
6	GM54744	Switch, Pressure	1
7	GM87761	Marker, Strip	1
8	GM87762	Marker, Strip	1
9	GM93428	Bracket, Bus Mounting	1
10	GM93708	Sender, Temperature	1
11	GM95012	Harness, Engine 200 KW Marine	1
12	GM96313	Harness, Control Box 200 KW JD Marine	1
13	M125A-16-80	Washer, Plain	3
14	M6923-06-80	Nut, Hex 6mm	1
15	M6923-10-80	Nut, Hex 10mm	6
16	M6923-12-80	Nut, Hex	3
17	M7985A-03012-20	Screw, pan head M3X12	4
18	M7985A-04020-20	Screw, pan head mach.	4
19	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	1
20	M933-10025-60	Screw, hex cap,fully thrd M10 x 25mm	5
21	M933-12030-60	Screw, Hex Cap	3
22	M933-16025-60	Screw, Hex Cap	3
23	M934-03-50	Nut, Hex 3mm	4
24	M934-04-50	Nut, Hex 4mm	4
25	X-22-30	Washer, lock.652 IDx1.058 in.OD	1
26	X-25-26	Washer, Plain	7
27	X-25-9	Washer, plain, .156 ID x .375 in.OD	4
28	X-129-15	Bolt, Hex Cap	2
29	X-129-17	Bolt, Hex Cap (1/2-13 x 1”) Gr5	2
30	X-202-27	Bushing, reducing (1/8 x 1/4”npt)+vibra	1
31	X-545-229	Cable, Battery	1
32	X-672-10	Clamp, insulated, .5 in.	1
33	X-672-20	Clamp, insulated, 1.25 in.	5
34	X-6086-5	Washer, spring, .515 IDx1.06in.OD	3
35	X-6128-1	Standoff insulator, 1/2-13 x 2 in.	2

Controller



Item	Part Number	Description	Quantity Variation 1	2	3	4	5
1	276417	Bracket, CT Mounting	1	1	1		
1	299966	Bracket, CT Mounting				1	1
2	GM11040-6	Insert, Threaded, M5-0.8	4	4	4	4	4
3	GM16252	Transformer, Current 200A:3 VAC	3				
3	GM16257	Transformer, Current 400A:3 VAC		3	3		
3	GM16259	Transformer, Current 600A:3 VAC				3	
3	GM24898	Transformer, Current 800A:3 VAC					3
4	GM91749	Harness, Wiring Current Transformer	1	1	1	1	1
5	GM92086	Controller Assy, DEC3500 (service)	1	1	1	1	1
6	M125A-05-80	Washer, Plain	4	4	4	4	4
7	M7985A-05020-20	Screw, Pan Head Machine	4	4	4	4	4
8	X-794-1	Screw, Hex Wshr Hd, Drill 1/4-14 X 5/8	4	4	4	4	4
9	GM88990	Gasket, Controller Cover	1	1	1	1	1



Item	Part Number	Description	Qty Var All
1	GM86812	Switch, Push Button	1
2	GM58147	Knob, Adjustment	1
3	GM60403	Plug, USB	1

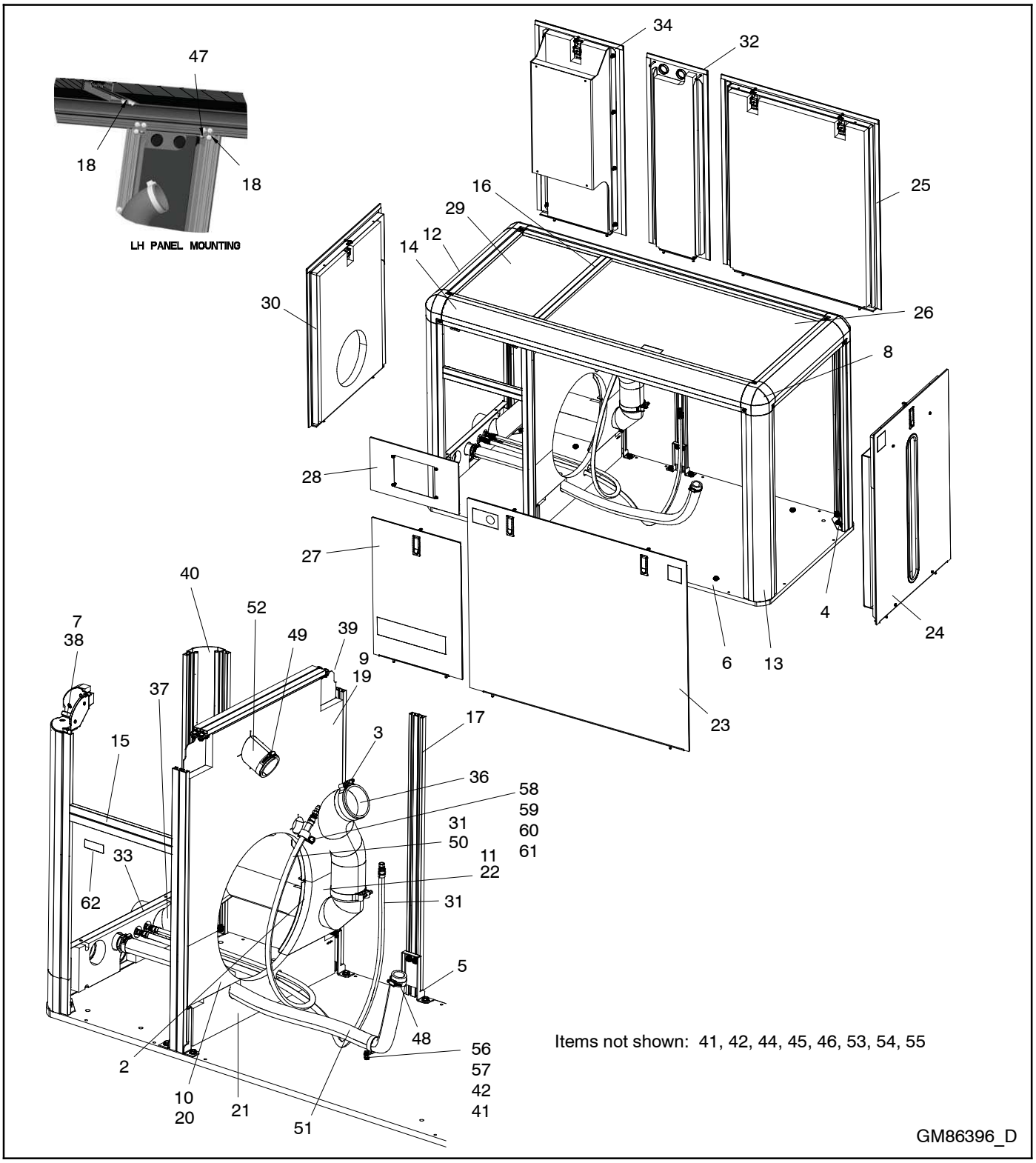
Item	Part Number	Description	Quantity Variation 498	499	500	501	502	503	504	505	506
1	TP-5620	Safety Precautions, Marine	1	1	1	1	1	1	1	1	1
2	TP-5854	S/M John Deere 4045/6068, (CTM104)	1	1	1	1	1	1	1	1	1
3	TP-6444	O/M JD6068TFM75, Marine (OMRG35856)	1	1	1						
3	TP-6889	O/M JD 4045/6068TFM/AFM85, Mar OMRG3940				1	1	1	1	1	1
4	TP-6692	Warranty, Marine (33 kW & Above)	1	1	1	1	1	1	1	1	1
5	TP-6829	S/M JD 4.5&6.8 L Dsl Mch Fl Sys (CTM207)	1								
5	TP-6830	S/M JD 4.5&6.8 L Dsl Ele Fl Sys (CTM331)		1	1	1	1	1	1		
5	TP-6456	S/M JD 6068HF285, Fuel System (CTM502)								1	1
6	TP-6861	O/M 40-150EOZDJ & 33-125EFOZDJ, Marine	1	1	1	1	1	1	1	1	1
7	TP-6862	I/M 40-150EOZDJ/33-125EFOZDJ, Marine	1	1	1	1	1	1	1	1	1
8	TP-6863	S/M 40-150EOZDJ & 33-125EFOZDJ, Marine	1	1	1	1	1	1	1	1	1
9	TP-6864	P/C 40-150EOZCJ/DJ & 33-125EFOZCJ/DJ, Ma	1	1	1	1	1	1	1	1	1

Item	Part Number	Description	Quantity Variation 507	508	509	510	511	512	513	514	515
1	TP-5620	Safety Precautions, Marine	1	1	1	1	1	1	1	1	1
2	TP-5854	S/M John Deere 4045/6068, (CTM104)	1	1	1	1	1	1	1	1	1
3	TP-6444	O/M JD6068TFM75, Marine (OMRG35856)	1	1	1						
3	TP-6889	O/M JD 4045/6068TFM/AFM85, Mar OMRG3940				1	1	1	1	1	1
4	TP-6692	Warranty, Marine (33 kW & Above)	1	1	1	1	1	1	1	1	1
5	TP-6829	S/M JD 4.5&6.8 L Dsl Mch Fl Sys (CTM207)	1								
5	TP-6830	S/M JD 4.5&6.8 L Dsl Ele Fl Sys (CTM331)		1	1	1	1	1	1		
5	TP-6456	S/M JD 6068HF285, Fuel System (CTM502)								1	1
6	TP-6861	O/M 40-150EOZDJ & 33-125EFOZDJ, Marine	1	1	1	1	1	1	1	1	1
7	TP-6862	I/M 40-150EOZDJ/33-125EFOZDJ, Marine	1	1	1	1	1	1	1	1	1
8	TP-6863	S/M 40-150EOZDJ & 33-125EFOZDJ, Marine	1	1	1	1	1	1	1	1	1
9	TP-6864	P/C 40-150EOZCJ/DJ & 33-125EFOZCJ/DJ, Ma	1	1	1	1	1	1	1	1	1

Item	Part Number	Description	Quantity Variation 540
1	TP-5620	Safety Precautions, Marine	1
2	TP-6458	S/M John Deere 6090, (CTM400)	1
3	TP-6459	S/M John Deere 6090, (CTM385)	1
4	TP-6692	Warranty, Marine (33 kW & Above)	1
5	TP-6701	O/M SiteTech Software	1
6	TP-6861	O/M 40-150EOZDJ & 33-125EFOZDJ, Marine	1
7	TP-6862	I/M 40-150EOZCJ/DJ & 33-125EFOZCJ/DJ, Ma	1
8	TP-6863	S/M 40-150EOZDJ & 33-125EFOZDJ, Marine	1
9	TP-6864	P/C 40-150EOZCJ/DJ & 33-125EFOZCJ/DJ, Ma	1
10	TP-6972	O/M JD 9.0L Dsl, Tier 3, Mar (OMRG39578)	1

Sound Shield

33EFOZDJ/40EOZDJ

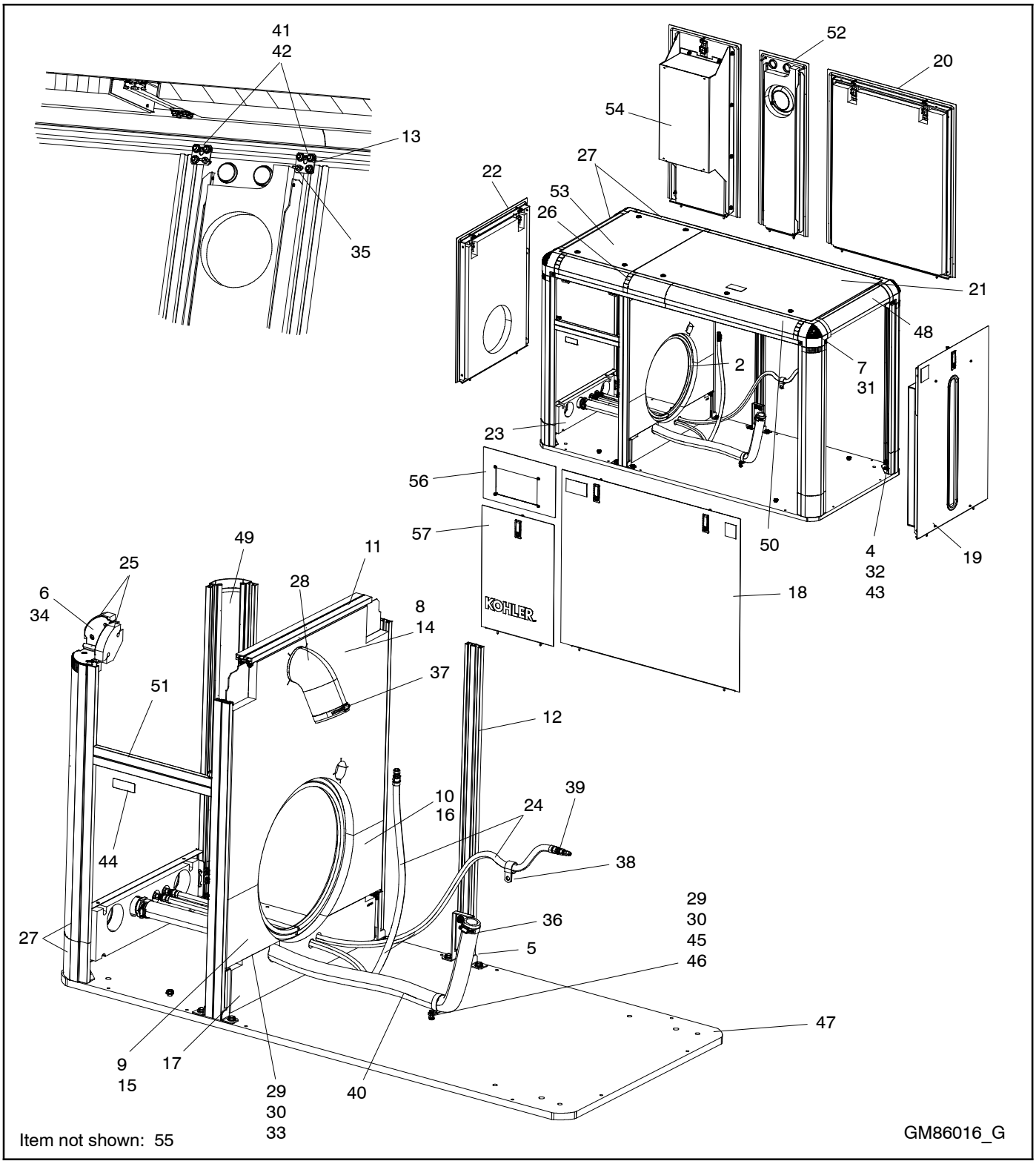


Sound Shield, continued

Item	Part Number	Description	Quantity Variation GM86396-KA1
2	X-6422-12	Seal, Push-On Trim	1
3	291537	Clamp, Hose, 3.75/4.06 In.	2
4	GM85875	Bracket, Corner Extrusion Mounting	4
5	GM85876	Bracket, Extrusion Mounting	3
6	GM86014	Base, Sound Shield	1
7	GM86035	Corner, Sound Shield	4
8	GM86036	Cover, Sound Shield Corner	4
9	GM93272	Bulkhead Upper Sound Shield	1
10	GM86075	Bulkhead Sound Shield(RH)	1
11	GM86076	Bulkhead Sound Shield (LH)	1
12	GM86078	Rail, Sound Shield	2
13	GM86079	Bulkhead Sound Shield (LH)	4
14	GM86080	Rail, Sound Shield	2
15	GM86082	Rail, Internal Sound Shield	1
16	GM86084	Rail, Internal Sound Shield	1
17	GM86085	Rail, Internal Sound Shield	3
18	GM86091	Bracket, Sound Shield	11
19	GM86092-28	Insulation, Acoustic Foam	1
20	GM86092-13	Insulation, Acoustic Foam	1
21	GM86092-15	Insulation, Acoustic Foam	1
22	GM86092-22	Insulation, Acoustic Foam	1
23	GM86093	Panel, Subassy, Sound Shield (RH)	1
24	GM86094	Panel, Subassy, Sound Shield Front	1
25	GM86095	Panel, Subassy, Sound Shield (LH)	1
26	GM103434	Roof Subassy, Soundshield (Engine)	1
27	GM93009	Panel, Subassy, Sound Shield Alt (RH)	1
28	GM93007	Panel, Subassy, Sound Shield Controller	1
29	GM103440	Roof Subassy, Sound Shield (ALT)	1
30	GM86106	Panel, Subassy, Sound Shield (Rear)	1
31	GM86395	Line, Flexible Fuel	2
32	GM86851	Panel Subassy, Sound Shield (LH)	1
33	GM86854	Panel Subassy, Bulkhead Connection	1
34	GM86872	Panel Subassy, Sound Shield Alt (LH)	1
35	GM86884	Insulation, Acoustic Foam	1
36	GM86937	Hose, Molded Wet Exhaust	1
37	GM86938	Elbow, Exhaust	1
38	GM87547	Insulation, Acoustic Foam Corner	12
39	GM87548	Insulation, Acoustic Foam Rail	2
40	GM87549	Insulation, Acoustic Foam	11
41	M6923-06-80	Nut, Hex 6mm	7
42	M933-06020-60	Screw, Hex Cap	7
43	M965A-06020-20	Screw, Pan Head Mach., M6 X 20mm	12
44	X-25-37	Washer, Plain, .406 ID X.812 In OD	34
45	X-25-40	Washer, Plain, .281 ID X .625 In. OD	6
46	X-67-141	Screw, Hex Washer, Thread-Forming	24
47	X-276-9	Nut, Wing, 1/4-20	4
48	X-426-19	Clamp, Hose, 1.00/2.00 In.	2
49	X-426-2	Clamp, Hose, 2.31/3.25 In.	1
50	X-695-2	Fitting, Straight Union	1
51	X-6014-66	Hose, Radiator Wire Inset 1.25 Id	1
52	X-6014-147	Hose, Radiator Wire Inset 2.50 Id	1
53	X-6210-7	Nut, Flange Spiralock, 5/16-18	54
54	X-6224-20	Bolt, Carriage	54
55	X-6238-3	Bolt, Hex Cap	14
56	X-672-12	Clamp, insulated, 1.75 in.	1
57	M125A-06-80	Washer, plain, 0.251 in. ID x 0.472 in. OD	1
58	X-672-32	Clamp, insulated, 1.06 in.	1
59	M933-08020-60	Screw, hex cap	1
60	X-25-85	Washer, plain, 0.344 in. ID x 0.687 in. OD	1
61	M6923-08-80	Nut, hex 8 mm	1
62	GM93648	Decal, caution	1

Sound Shield, continued

55E(F)OZDJ- 65EOZDJ



Sound Shield, continued

Item	Part Number	Description	Quantity Variation GM86016-
2	X-6422-12	Seal, Push-On Trim	1
4	GM85875	Bracket, Corner Extrusion Mounting	4
5	GM85876	Bracket, Extrusion Mounting	3
6	GM86035	Corner, Sound Shield	4
7	GM86036	Cover, Sound Shield Corner	4
8	GM86074	BulkHead Upper Sound Shield	1
9	GM86075	Bulkhead Sound Shield(RH)	1
10	GM86076	Bulkhead Sound Shield (LH)	1
11	GM86084	Rail, Internal Sound Shield	1
12	GM86085	Rail, Internal Sound Shield	3
13	GM86091	Bracket, Sound Shield	11
14	GM86092-12	Insulation, Acoustic Foam	1
15	GM86092-13	Insulation, Acoustic Foam	1
16	GM86092-15	Insulation, Acoustic Foam	1
17	GM86092-14	Insulation, Acoustic Foam	1
18	GM86093	Panel, Subassy, Sound Shield (RH)	1
19	GM86094	Panel, Subassy, Sound Shield Front	1
20	GM86095	Panel, Subassy, Sound Shield (LH)	1
21	GM103434	Roof Subassy, Sound shield (Engine)	1
22	GM86106	Panel, Subassy, Sound Shield (Rear)	1
23	GM86346	Panel, Subassy, Bulkhead Connection	1
24	GM86395	Line, Flexible Fuel	2
25	GM87547	Insulation, Acoustic Foam Corner	12
26	GM87548	Insulation, Acoustic Foam Rail	2
27	GM87549	Insulation, Acoustic Foam	11
28	GM92558	Hose, Manifold air intake	1
29	M6923-06-80	Nut, Hex 6mm	7
30	M933-06020-60	Screw, Hex Cap	7
31	M965A-06020-20	Screw, Pan Head Mach., M6 X 20mm	12
32	X-25-37	Washer, Plain, .406 ID X.812 In OD	34
33	X-25-40	Washer, Plain, .281 ID X .625 In. OD	6
34	X-67-141	Screw, Hex Washer, Thread-Forming	24
35	X-276-9	Nut, Wing, 1/4-20	4
36	X-426-19	Clamp, Hose, 1.00/2.00 In.	2
37	X-426-5	Clamp, Hose, 3.56/4.5 In.	1
38	X-672-32	Clamp, Hose, 1.06 In.	1
39	X-695-2	Fitting, Straight Union	1
40	X-6014-66	Hose, Radiator Wire Inset 1.25 ID	1
41	X-6210-7	Nut, Flange Spiralock, 5/16-18	54
42	X-6224-20	Bolt, Carriage	54
43	X-6238-3	Bolt, Hex Cap	14
44	GM93648	Decal, Caution	1
45	X-672-17	Clamp, insulated, 1.75 in.	1
46	M125A-06-80	Washer, plain 0.251 in. ID x 0.472 in. OD	1
47	See chart	Base, Sound Shield	1
48	See chart	Rail, Sound Shield	2
49	See chart	Rail, Sound Shield	4
50	See chart	Rail, Sound Shield	2
51	See chart	Rail, Internal Sound Shield	1
52	See chart	Panel, Subassy, Sound Shield Exhaust	1
53	See chart	Roof Subassy, Sound Shield (ALT)	1
54	See chart	Panel, Subassy, Sound Shield Alt (LH)	1
55	See chart	Insulation, Acoustic foam	1
56	See chart	Panel, Subassy, Sound Shield Controller	1
57	See chart	Panel, Subassy, Sound Shield Alt (RH)	1

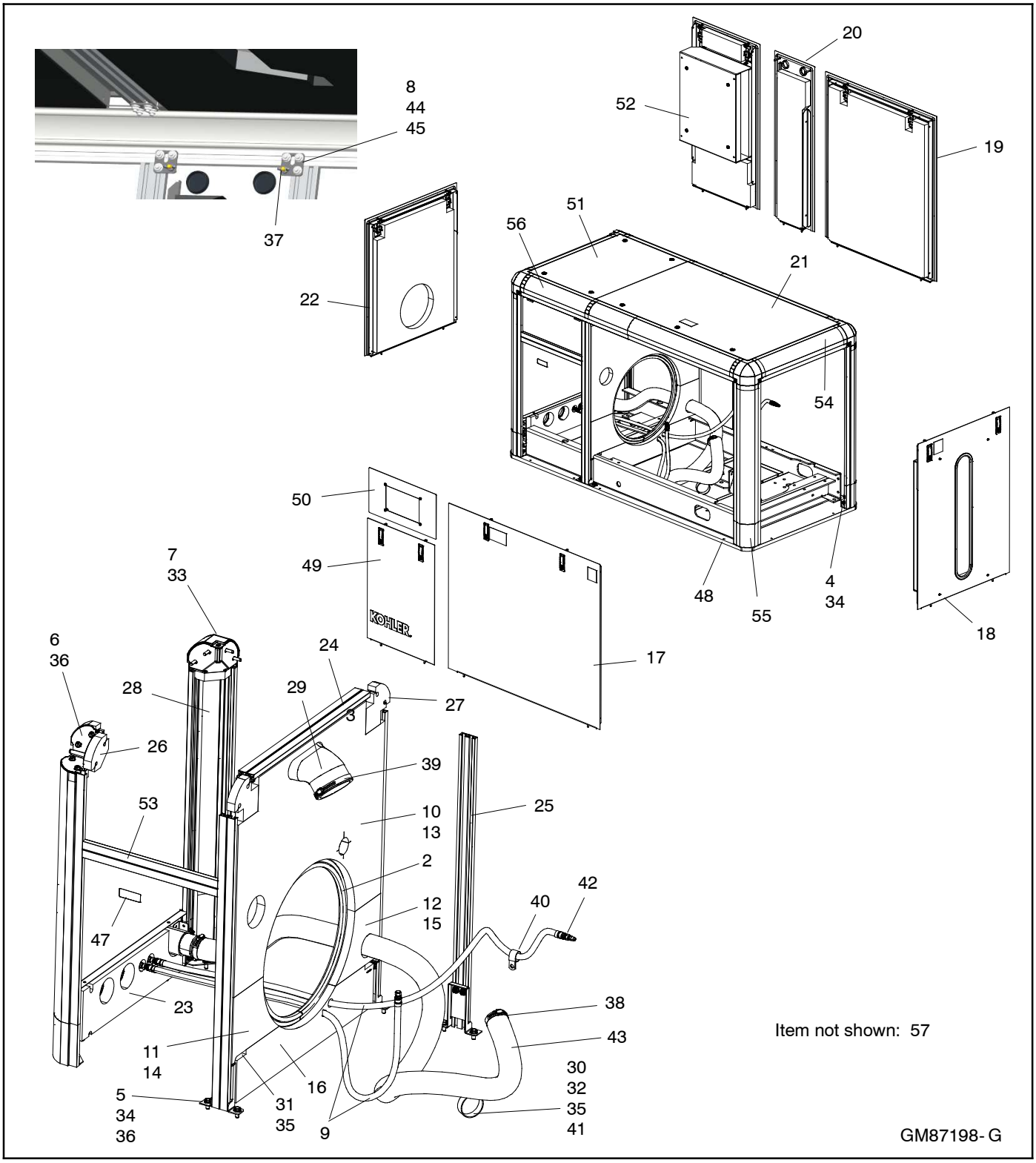
Use this table to identify part numbers of items 47-57.

Module	Model	Part Number				
		Item 47, Base	Item 48, Rail	Item 49, Rail	Item 50, Rail	Item 51, Rail
GM86016-KA1	45EFOZDJ/55EOZDJ	GM86014	GM86078	GM86079	GM86080	GM86082
GM86016-KA2	55EFOZDJ/65EOZDJ	GM86015	GM86078	GM86079	GM86081	GM86083
GM86016-KA3	40EFOZDJ	GM86014	GM86078	GM86079	GM86080	GM86082
GM86016-KA4	50EFOZDJ	GM86015	GM86078	GM86079	GM86081	GM86083

Module	Part Number					
	Item 52, Panel	Item 53, Roof	Item 54, Panel	Item 55, Insulation	Item 56, Panel	Item 57, Panel
GM86016-KA1	GM86096	GM103440	GM86104	GM86356	GM93007	GM93009
GM86016-KA2	GM86096	GM103442	GM86105	GM86357	GM93008	GM93010
GM86016-KA3	GM86096	GM103440	GM86104	GM86356	GM93007	GM93009
GM86016-KA4	GM86096	GM103442	GM86105	GM86357	GM93008	GM93010

Sound Shield, continued

70/80EFOZDJ & 80/99EOZDJ



Sound Shield, continued

Item	Part Number	Description	Quantity Variation GM87198-
2	X-6422-38	Seal, Push-On Trim	1
4	GM85875	Bracket, Corner Extrusion Mounting	4
5	GM85876	Bracket, Extrusion Mounting	3
6	GM86035	Corner, Sound Shield	4
7	GM86036	Cover, Sound Shield Corner	4
8	GM86091	Bracket, Sound Shield	11
9	GM86395	Line, Flexible Fuel	2
10	GM87203	Bulkhead, Upper Sound Shield	1
11	GM87204	Bulkhead, Sound Shield (RH)	1
12	GM87205	Bulkhead, Sound Shield (LH)	1
13	GM87223-12	Insulation, Acoustic Foam	1
14	GM87223-13	Insulation, Acoustic Foam	1
15	GM87223-14	Insulation, Acoustic Foam	1
16	GM87223-15	Insulation, Acoustic Foam	1
17	GM87224	Panel, Subassy, Sound Shield (RH)	1
18	GM87225	Panel, Subassy, Sound Shield Front	1
19	GM87226	Panel, Subassy, Sound Shield (LH)	1
20	GM87227	Panel, Subassy, Sound Shield Exhaust	1
21	GM103436	Roof Subassy, Sound shield (Engine)	1
22	GM87237	Panel, Subassy, Sound Shield (Rear)	1
23	GM87238	Panel, Subassy, Bulkhead Connection	1
24	GM87544	Rail, Internal Sound Shield	1
25	GM87545	Rail, Internal Sound Shield	3
26	GM87547	Insulation, Acoustic Foam Corner	12
27	GM87548	Insulation, Acoustic Foam Rail	2
28	GM87549	Insulation, Acoustic Foam	12
29	GM92876	Hose, Moled air intake	6
30	M6923-06-80	Nut, Hex 6mm	7
31	M933-06020-60	Screw, Hex Cap, M6 X 20mm	6
32	M933-06025-60	Screw, Hex Cap, M6 X 25mm	1
33	M965A-06020-20	Screw, Pan Head Mach., M6 X 20mm	12
34	X-25-37	Washer, Plain, .406 ID X.812 In OD	34
35	X-25-40	Washer, Plain, .281 ID X .625 In. OD	6
36	X-67-141	Screw, Hex Washer, Thread-Forming	24
37	X-276-9	Nut, Wing, 1/4-20	4
38	X-426-16	Clamp, Hose, 1.81/2.75 in.	2
39	X-426-7	Clamp, Hose, 4.06/5 in.	2
40	X-672-32	Clamp, Insulated, 1.06 in.	2
41	X-672-33	Clamp, Insulated, 2.62 in.	2
42	X-695-2	Fitting, Straight Union	1
43	X-6014-133	Hose, Radiator Wire Inset 1.25 Id	1
44	X-6210-7	Nut, Flange Spiralock, 5/16-18	54
45	X-6224-20	Bolt, Carriage	54
46	X-6238-3	Bolt, Hex Cap	14
47	GM93648	Decal, Caution	1
48	See chart	Base, Sound Shield	1
49	See chart	Panel, Subassy, Sound Shield Alt (RH)	1
50	See chart	Panel, Subassy, Sound Shield Controller	1
51	See chart	Roof Subassy, Sound Shield (ALT)	1
52	See chart	Panel, Subassy, Sound Shield Alt (LH)	1
53	See chart	Rail, Internal Sound Shield	1
54	See chart	Rail, Sound Shield	2
55	See chart	Rail, Sound Shield	4
56	See chart	Rail, Sound Shield	2
57	See chart	Insulation, Acoustic foam	1

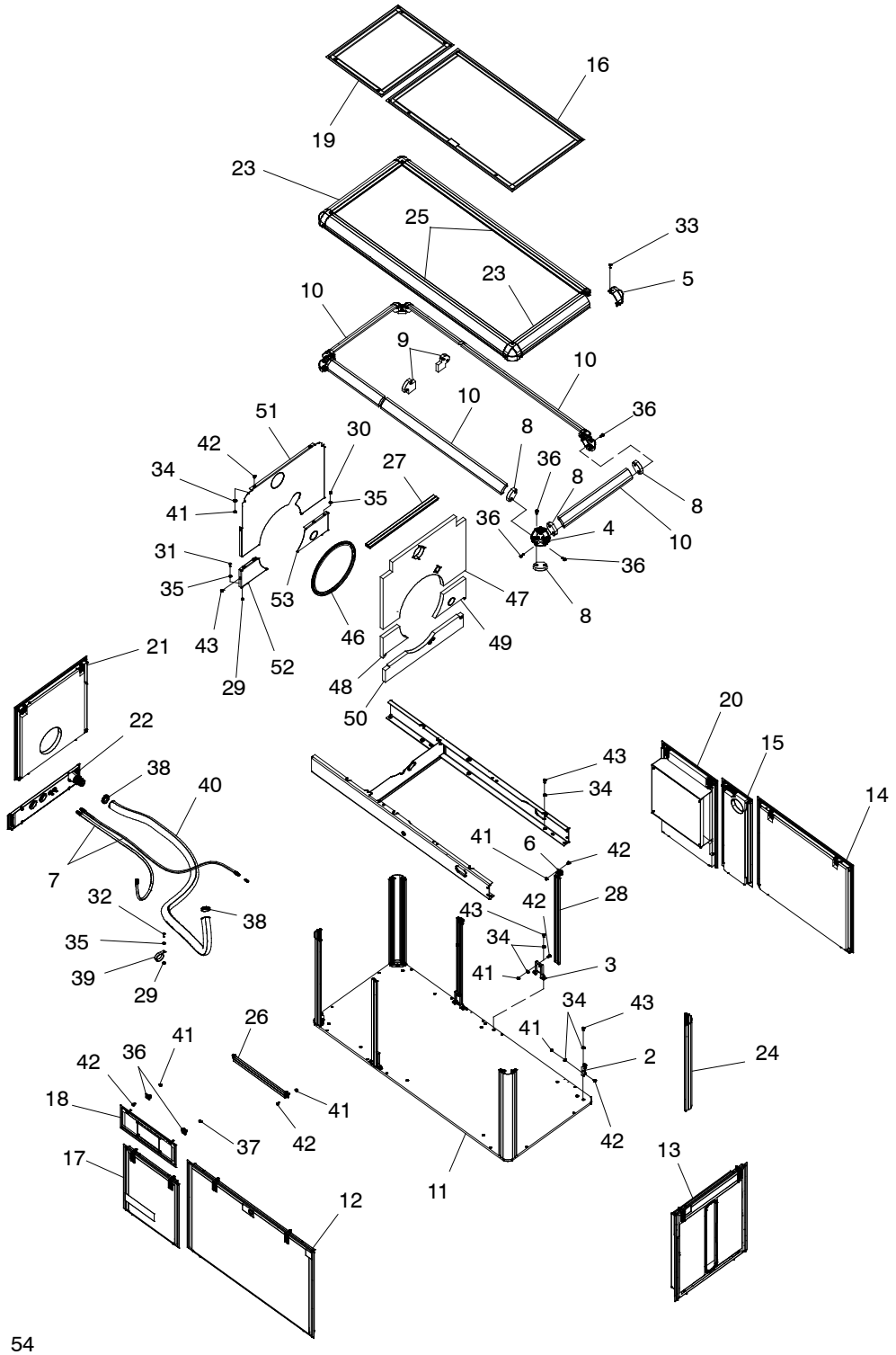
Use this table to identify part numbers of items 48-57.

Module	Model	Part Number				
		Item 48, Base	Item 49, Panel	Item 50, Panel	Item 51, Roof	Item 52, Panel
GM87198-KA1	70EFOZDJ/80EOZDJ	GM87199	GM87229	GM87231	GM103444	GM87235
GM87198-KA2	80EFOZDJ/99EOZDJ	GM87200	GM87230	GM87232	GM103446	GM87236

Module	Part Number				
	Item 53, Rail	Item 54, Rail	Item 55, Rail	Item 56, Rail	Item 57, Insulation
GM87198-KA1	GM87542	GM87712	GM87713	GM87715	GM87769
GM87198-KA2	GM87542	GM87712	GM87713	GM87715	GM87770

Sound Shield, continued

125/150EOZDJ



Sound Shield, continued

Item	Part Number	Description	Quantity Variation GM89754-
2	GM85875	Bracket, Corner Extrusion Mounting	4
3	GM85876	Bracket, Extrusion Mounting	4
4	GM86035	Corner, Sound Shield	4
5	GM86036	Cover, Sound Shield Corner	4
6	GM86091	Bracket, Sound Shield	19
7	GM91721	Line, Flexible Fuel	2
8	GM87547	Insulation, Acoustic Foam Corner	12
9	GM87548	Insulation, Acoustic Foam Rail	2
10	GM87549	Insulation, Acoustic Foam	13
11	GM89551	Base, Sound Shield	1
12	GM89743	Panel Subassy, Sound Shield (RH)	2
13	GM89744	Panel Subassy, Sound Shield (Front)	1
14	GM89745	Panel Subassy, Sound Shield (LH)	1
15	GM89746	Panel Subassy, Sound Shield Exhaust	1
16	GM103454	Roof Subassy, Sound Shield (Engine)	1
17	GM89748	Panel Subassy, Sound Shield Alt (RH)	1
18	GM89749	Panel Subassy, Sound Shield Controller	1
19	GM103460	Roof Subassy, Sound Shield (Alt)	1
20	GM89751	Panel Subassy, Sound Shield Alt (LH)	1
21	GM89752	Panel Subassy, Sound Shield (Rear)	1
22	GM89753	Bulkhead Subassy, Sound Shield	1
23	GM89769	Rail, Sound Shield	2
24	GM89770	Rail, Sound Shield	4
25	GM89771	Rail, Sound Shield	2
26	GM89772	Rail, Internal Sound Shield	1
27	GM89773	Rail, Internal Sound Shield	1
28	GM89774	Rail, Internal Sound Shield	4
29	M6923-06-80	Nut, Hex 6mm	7
30	M933-06012-60	Screw	4
31	M933-06020-60	Screw, hex cap	2
32	M933-06025-60	Screw, Hex Cap	1
33	M965A-06020-20	Screw, Pan Head Mach., M6 x 20mm	12
34	X-25-37	Washer, plain, .406 ID x.812 in OD	40
35	X-25-40	Washer, plain, .281 ID x .625 in. OD	7
36	X-67-141	Screw, hex washer, thread-forming	24
37	X-276-9	Nut, wing, 1/4-20	4
38	X-426-16	Clamp, hose, 1.81/2.75 in.	2
39	X-672-33	Clamp, insulated, 2.62 in.	1
40	X-6014-38	Hose, Radiator Wire Insert 2.00 ID	1
41	X-6210-7	Nut, flange spiralock, 5/16-18	60
42	X-6224-20	Bolt, Carriage	60
43	X-6238-3	Bolt, Hex Cap	18
44	GM93648	Decal, caution	1
46	See chart	Seal, Push-On Trim	1
47	See chart	Insulation, Acoustic Foam	1
48	See chart	Insulation, Acoustic Foam	1
49	See chart	Insulation, Acoustic Foam	1
50	See chart	Insulation, Acoustic Foam	1
51	See chart	Bulkhead, Upper Sound Shield	1
52	See chart	Bulkhead, Sound Shield (RH)	1
53	See chart	Bulkhead, Sound Shield (LH)	1
54	See chart	Insulation, Acoustic Foam	1

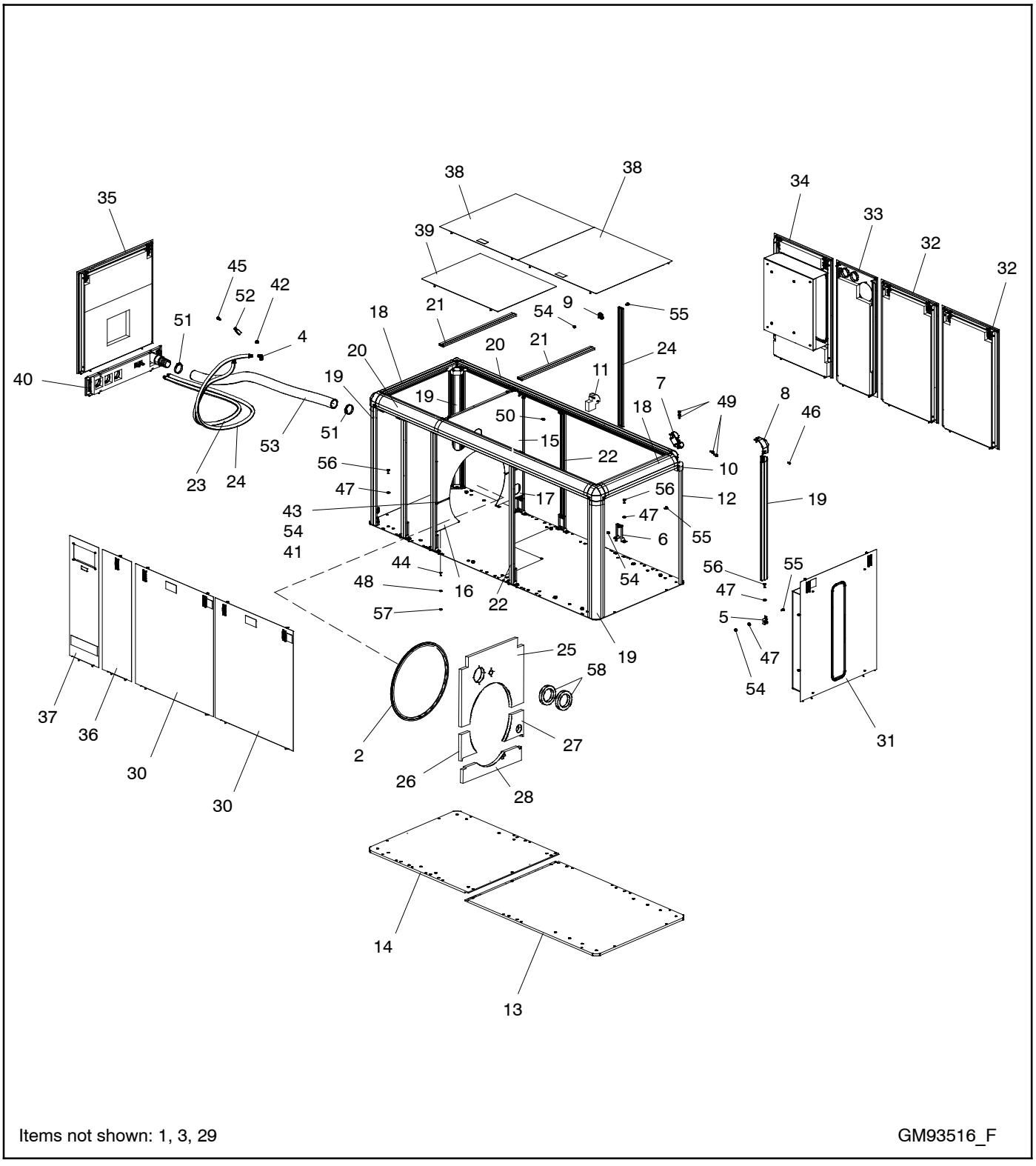
Use this table to identify part numbers of items 46- 54.

Module	Model	Part Number				
		Item 46, Seal	Item 47, Insulation	Item 48, Insulation	Item 49, Insulation	Item 50, Insulation
GM89754- KA1	125EOZDJ	X-6422-38	GM89778-12	GM89778-13	GM89778-14	GM89778-15
GM89754- KA2	150EOZDJ	X-6422-39	GM89778-18	GM89778-19	GM89778-22	GM89778-21

Module	Part Number			
	Item 51, Bulkhead	Item 52, Bulkhead	Item 53, Bulkhead	Item 54, Insulation
GM89754- KA1	GM89856	GM89857	GM89858	GM90499
GM89754- KA2	GM89859	GM89860	GM89861	GM90500

Sound Shield, continued

200EOZDJ



Items not shown: 1, 3, 29

GM93516_F

Sound Shield, continued

Item	Part Number	Description	Quantity Variation GM93516-KA1
1	25493 00001	Seal, push-on trim	6.58
2	X-6422-44	Seal, Push-On Trim	1
3	32200 00198	Sealant, Dow RTV 732	0.5
4	GM39538	Fitting, Fuel	1
5	GM85875	Bracket, Corner Extrusion Mounting	4
6	GM85876	Bracket,Extrusion Mounting	6
7	GM86035	Corner, Sound Shield	4
8	GM86036	Cover, Sound Shield Corner	4
9	GM86091	Bracket,Sound Shield	14
10	GM87547	Insulation, Acoustic Foam Corner	12
11	GM87548	Insulation, Acoustic Foam Rail	2
12	GM87549	Insulation, Acoustic Foam	16
13	GM93517-1	Base, Sound Shield (Front)	1
14	GM93517-2	Base, Sound Shield (Rear)	1
15	GM93567	Bulkhead, Upper Sound Shield	1
16	GM93568	Bulkhead, Sound Shield (RH)	1
17	GM93569	Bulkhead, Sound Shield (LH)	1
18	GM94933	Rail, Sound Shield	2
19	GM94934	Rail, Sound Shield	4
20	GM94935	Rail, Sound Shield	2
21	GM94936	Rail, Internal Sound Shield	2
22	GM94937	Rail, Internal Sound Shield	6
23	GM95059	Line, Flexible Fuel	1
24	GM95060	Line, Flexible Fuel	1
25	GM93550-12	Insulation, Acoustic Foam	1
26	GM93550-13	Insulation, Acoustic Foam	1
27	GM93550-14	Insulation, Acoustic Foam	1
28	GM93550-15	Insulation, Acoustic Foam	1
29	GM93551	Insulation, Acoustic Foam 200EOZDJ	1
30	GM93535	Panel Subassy, Sound Shield (RH)	2
31	GM93536	Panel Subassy, Sound Shield (Front)	1
32	GM93537	Panel Subassy, Sound Shield (LH)	2
33	GM93538	Panel Subassy, Sound Shield Exhaust	1
34	GM93539	Panel Subassy, Sound Shield Alt (LH)	1
35	GM93540	Panel Subassy, Sound Shield (Rear)	1
36	GM93541	Panel Subassy, Sound Shield Alt (RH)	1
37	GM93542	Panel Subassy, Sound Shield Controller	1
38	GM103456	Roof Subassy, Sound Shield (Engine)	2
39	GM103462	Roof Subassy, Sound Shield (Alt)	1
40	GM93545	Panel Subassy, Bulkhead Connection	1
41	M6923-06-80	Nut, Hex 6mm	6
42	M6923-10-80	Nut, Hex 10mm	1
43	M933-06012-60	Screw	4
44	M933-06020-60	Screw, hex cap	2
45	M933-10025-60	Screw, hex cap,fully thrd M10 x 25mm	1
46	M965A-06020-20	Screw, Pan Head Mach., M6 x 20mm	12
47	X-25-37	Washer, Plain, .406 ID X.812 IN. OD	43
48	X-25-40	Washer, plain, .281 ID x .625 in.OD	6
49	X-67-141	Screw, hex washer, thread-forming	24
50	X-276-9	Nut, wing, 1/4-20	4
51	X-426-2	Clamp, hose, 2.31/3.25 in.	2
52	X-672-20	Clamp, insulated, 1.25 in.	1
53	X-6014-145	Hose, Radiator Wire Inserted	1
54	X-6210-7	Nut,flange spiralock, 5/16-18	72
55	X-6224-20	Bolt, Carriage	72
56	X-6238-11	Bolt, Hex Cap (3/8-16 X 1") GR5	13
57	X-6238-3	Bolt, Hex Cap	16
58	GM95789	Insulation, Acoustic Foam	2

Parts List: Accessories

Block Heater Kits

Kits: GM63526-KP3 and GM63526-KP4

Qty.	Description	Common Parts	Unique Parts	
			GM63526- KP3	GM63526- KP4
1	Adapter, bushing	273692		
1	O- Ring (1.475" id)	273693		
1	O- ring, ISO 6149 (15.3mm id)	GM11694		
1	Bushing, Adapter	GM22991		
1	Bracket, Block Heater	GM32987		
1	Hose, molded, .62 in. ID	X- 312- 17		
1	Hose, molded, .62 in. ID	X- 312- 51		
2	Elbow, Street (90 deg x 1/2"nptf)	X-211-1		
2	Connector, Hose 5/8" x 1/2" MIP Brass	X-582-1		
4	Clamp, hose, .69/1.25 in.	X- 426- 12		
1	Installation Instructions	TT- 1533		
1	Heater, block (1500W)		352945	352946

Kits: GM87771-KP1 and GM87771-KP2

Qty.	Description	Common Parts	Unique Parts	
			GM87771- KP1	GM87771- KP2
1	Bushing, reducing (1/2 x 3/4"npt)+vibra	153659		
1	O-ring, ISO 6149 (15.3mm ID)	GM11694		
1	Bushing, Adapter	GM22991		
1	Bracket, Block Heater	GM32987		
1	Elbow, Street(90 deg x 1/2"nptf)	X-211-1		
1	Elbow, Street (90 deg x 1/2"nptf)	X-211-3		
1	Hose,.63 in. ID	X-312-24		
1	Hose,.63 in. ID	X-312-57		
2	Connector, Hose 5/8" x 1/2" MIP Brass	X-582-1		
4	Clamp, hose, .69/1.25 in.	X- 426- 12		
1	Heater, block (1500W)		352945	352946

Kits: GM89494-KP1 and GM89494-KP2

Qty.	Description	Common Parts	Unique Parts	
			GM89494- KP1	GM89494- KP2
1	Elbow, street (45 deg x 1/2"npt)	227642		
1	Adapter, bushing	273692		
1	O- Ring (1.475" id)	273693		
1	O- ring, ISO 6149 (15.3mm id)	GM11694		
1	Bushing, Adapter	GM22991		
1	Bracket, Block Heater	GM32987		
1	Hose, molded, .62 in. ID	X- 312- 17		
1	Hose, molded, .62 in. ID	X- 312- 50		
4	Clamp, hose, .69/1.25 in.	X- 426- 12		
1	Heater, block (1500W)		352945	352946

Block Heater Kits

Kits: GM93652-KP1 and GM93652-KP2

Qty.	Description	Common Parts	Unique Parts	
			GM93652- KP1	GM93652- KP2
1	Elbow, street (45 deg x 1/2"npt)	227642		
1	Washer,nylon,.878 IDx1.132in.OD	276552		
1	O- ring, ISO 6149 (15.3mm id)	GM11694		
1	Bracket, Block Heater	GM32987		
1	Adapter Bushing	GM40116		
1	Bushing, Adapter	GM95762		
1	Hose,.63 ID, 45 in.	X- 312- 36		
1	Hose,.63 ID, 56 in.	X- 312- 46		
4	Clamp, hose, .69/1.25 in.	X- 426- 12		
1	Connector, Hose 5/8" x 1/2" MIP Brass	X- 582- 1		
1	Adapter, bushing	X- 672- 32		
1	Heater, block		GM75552	GM755523

Parts List: Accessories, continued

Qty.	Description	Part No.

Circuit Breaker Kits

Line Circuit Breaker		**PA-334369**
1	TT Circuit Brkr, 33-125EFOZ, 40-150EOZ	TT-1296
4	Washer, plain, .156 ID x .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 Brkr, 33-125EFOZ, 40-150EOZ	TT-1296
4	Washer, plain, .156 ID x .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
Line Circuit Breaker, 80A		**GM15276-KP1**
1	TT Circuit Brkr, 33-125EFOZ, 40-150EOZ	TT-1296
4	Washer, plain, .156 ID x .375 in. OD	X-25-9
4	Screw, Machine	X-49-2
1	Circuit breaker, 80 A, 480 V, 3 pole	253225
1	Panel, circuit breaker mounting	344083-WHT
1	Decal, notice	246242
Line Cir. Breaker, 80A, UL/IEC		**GM15276-KP2**
1	TT Circuit Brkr, 33-125EFOZ, 40-150EOZ	TT-1296
4	Washer, plain, .156 ID x .375 in. OD	X-25-9
4	Screw, Machine	X-49-2
1	Circuit breaker, 80 A, 480 V, 3 pole	253225
1	Panel, circuit breaker mounting	344083-G49
1	Decal, notice	246242
Line Cir. Breaker, 90A		**GM15277-KP1**
1	TT Circuit Brkr, 33-125EFOZ, 40-150EOZ	TT-1296
4	Washer, plain, .156 ID x .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-WHT
Line Cir. Breaker, 90A, UL/IEC		**GM15277-KP2**
1	TT Circuit Brkr, 33-125EFOZ, 40-150EOZ	TT-1296
4	Washer, plain, .156 ID x .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-G49
Line Circuit Breaker, 100A, UL1077		**GM15278-KP1**
1	TT Circuit Brkr, 33-125EFOZ, 40-150EOZ	TT-1296
4	Washer, plain, .156 ID x .375 in. OD	X-25-9
4	Screw, Machine	X-49-2
1	Breaker, Circuit,E-Frame,100A,480V	GM23366-10
1	Panel, circuit breaker mounting	344083-WHT
1	Decal, notice	246242
Line Cir. Breaker, 100A, UL/IEC		**GM15278-KP2**
4	Screw, Machine	X-49-2
1	Breaker, Circuit,E-Frame,100A,480V	GM23366-10
1	Panel, circuit breaker mounting	344083-G49
1	Decal, Power Breaker	GM15301
Circuit Breaker		**GM74766-KP1**
4	Screw, Machine	X-49-2
1	Circuit breaker, 70 A, 600 V, 3 pole	258381
1	Panel, Junction box (RH)	344082
1	Panel, circuit breaker mounting	344083-G49
1	Decal, Power Breaker	GM15301

Qty.	Description	Part No.

Circuit Breaker		**GM74767-KP1**
4	Screw, Machine	X-49-2
1	Circuit breaker, 60 A, 600 V, 3 pole	253224
1	Panel, Junction box (RH)	344082
1	Panel, circuit breaker mounting	344083-G49
1	Decal, Power Breaker	GM15301

Parts List: Accessories, continued

Circuit Breaker Kits

Kits: GM87090-KA1 to GM87090-KA4

Qty.	Description	Common Parts	Unique Parts			
			GM87090-KA1	GM87090-KA2	GM87090-KA3	GM87090-KA4
2	Lug, H-Frame M6 Terminal Insert	GM25991-17				
1	Bus, Load	GM87578				
1	Bus, Load	GM87579				
1	Bus, Load	GM87580				
3	Bus, Load	GM87581				
2	Spacer, .209 ID x .375 OD x 1.062	X-400-247				
1	Panel, Load Lead Access		344651*	344651*	344651*	344651*
1	Breaker, Circuit		GM47475-47	GM47475-49	GM47475-44	GM47475-42
1	Panel, Circuit Breaker Mtg.		GM87091*	GM87091*	GM87091*	GM87091*

Kits: GM87090-KA5 to GM87090-KA7

Qty.	Description	Common Parts	Unique Parts		
			GM87090-KA5	GM87090-KA6	GM87090-KA7
2	Lug, H-Frame M6 Terminal Insert	GM25991-17			
1	Bus, Load	GM87578			
1	Bus, Load	GM87579			
1	Bus, Load	GM87580			
3	Bus, Load	GM87581			
2	Spacer, .209 ID x .375 OD x 1.062	X-400-247			
1	Panel, Load Lead Access		344651*	344651*	344651*
1	Breaker, Circuit		GM47475-40	GM47475-38	GM47475-36
1	Panel, Circuit Breaker Mtg.		GM87091*	GM87091*	GM87091*

Kits: GM87093-KA1 to GM87093-KA3

Qty.	Description	Common Parts	Unique Parts		
			GM87093-KA1	GM87093-KA2	GM87093-KA3
2	Lug, J-Frame M6 Terminal Insert	GM25991-18			
1	Bus, Load	GM87576			
2	Bus, Load	GM87577			
1	Bus, Load	GM87582			
1	Bus, Load	GM87583			
3	Bus, Load	GM87584			
3	Bus, Load	GM87585			
1	Bus, Load	GM87586			
2	Spacer, .209 ID x .375 OD x 1.062	X-400-247			
1	Panel, Load Lead Access		344651*	344651*	344651*
1	Breaker, Circuit		GM47476-9	GM47475-13	GM47475-7
1	Panel, Circuit Breaker Mtg.		GM87091*	GM87091*	GM87091*

Kits: GM87094-KA1 to GM87094-KA2

Qty.	Description	Common Parts	Unique Parts	
			GM87094-KA1	GM87094-KA2
4	Bus, Load	GM87451		
1	Bus, Load	GM87452		
4	Bus, Load	GM87453		
2	Bus, Load	GM87454		
1	Bus, Load	GM87456		
4	Spacer	X-400-249		
1	Breaker, Circuit		GM85432-4	GM85432-7
1	Panel, Circuit Breaker Mtg.		GM87446*	GM87446*
1	Panel, Load Lead Access		GM87461	GM87461
4	Bus, Load			GM87452
1	Bus, Load			GM87454
1	Bus, Load			GM87455

* Model EOZDJ/EFOZDJ (white), add -WHT suffix to part number. Model EOZCJ/EFOZCJ (gray), add -G49 suffix to part number.

Circuit Breaker Kits

Kits: GM91140-KA1(KP1) to GM91140-KA4(KP4)

Qty.	Description	Common Parts	Unique Parts			
			GM91140-KA1	GM91140-KA2	GM91140-KA3	GM91140-KA4
2	Bus, Load	GM91179				
1	Bus, Load	GM91180				
1	Bus, Load	GM91181				
3	Bus, Load	GM91182				
1	Bus, Load	GM91183				
1	Bracket, CB Mtg.	GM91012				
1	Circuit Breaker		GM91134-1	GM91134-2	GM91134-3	GM91134-4
1	Panel		GM91114*	GM91114*	GM91114*	GM91114*

Kits: GM91140-KA5(KP5) to GM91140-KA8(KP8)

Qty.	Description	Common Parts	Unique Parts			
			GM91140-KA5	GM91140-KA6	GM91140-KA7	GM91140-KA8
2	Bus, Load	GM91179				
1	Bus, Load	GM91180				
1	Bus, Load	GM91181				
3	Bus, Load	GM91182				
1	Bus, Load	GM91183				
1	Bracket, CB Mtg.	GM91012				
1	Circuit Breaker		GM91134-1	GM91134-2	GM91134-3	GM91134-4
1	Panel		GM91009*	GM91009*	GM91009*	GM91009*

Kits: GM91141-KA1(KP1) to GM91141-KA5(KP5)

Qty.	Description	Common Parts	Unique Parts				
			GM91141-KA1	GM91141-KA2	GM91141-KA3	GM91141-KA4	GM91141-KA5
1	Bus, Load	GM91184					
2	Bus, Load	GM91185					
1	Bus, Load	GM91186					
2	Bus, Load	GM91187					
3	Bus, Load	GM91188					
3	Bus, Load	GM91189					
1	Bus, Load	GM91190					
1	Bus, Load	GM91191					
1	Bus, Load	GM91192					
1	Bus, Load	GM91193					
1	Bracket, CB Mtg.	GM91012					
1	Circuit Breaker		GM91134-5	GM91134-6	GM91134-7	GM91134-5	GM91134-6
1	Panel		GM91114*	GM91114*	GM91114*	GM91009*	GM91009*

Kits: GM91141-KA6(KP6) to GM91141-KA9(KP9)

Qty.	Description	Common Parts	Unique Parts			
			GM91141-KA6	GM91141-KA7	GM91141-KA8	GM91141-KA9
1	Bus, Load	GM91184				
2	Bus, Load	GM91185				
1	Bus, Load	GM91186				
2	Bus, Load	GM91187				
3	Bus, Load	GM91188				
3	Bus, Load	GM91189				
1	Bus, Load	GM91190				
1	Bus, Load	GM91191				
1	Bus, Load	GM91192				
1	Bus, Load	GM91193				
1	Bracket, CB Mtg.	GM91012				
1	Circuit Breaker		GM91134-7	GM91134-5	GM91134-6	GM91134-7
1	Panel		GM91009*	GM91009*	GM91009*	GM91009*

* Model EOZDJ/EFOZDJ (white), add -WHT suffix to part number. Model EOZCJ/EFOZCJ (gray), add -G49 suffix to part number.

Parts List: Accessories, continued

Circuit Breaker Kits

Kits: GM91142-KA1(KP1) to GM91142-KA4(KP4)

Qty.	Description	Common Parts	Unique Parts			
			GM91141-KA1	GM91141-KA2	GM91141-KA3	GM91141-KA4
2	Bus, Load	GM91194				
1	Bus, Load	GM91195				
1	Bus, Load	GM91206				
2	Bus, Load	GM91207				
3	Bus, Load	GM91208				
1	Bus, Load	GM91209				
1	Bus, Load	GM91210				
1	Bus, Load	GM91211				
1	Bus, Load	GM91213				
1	Bus, Load	GM91214				
1	Bus, Load	GM91215				
1	Bus, Load	GM91216				
1	Bracket, CB Mtg.	GM91011				
1	Circuit Breaker		GM91135-1	GM91135-2	GM91135-1	GM91135-2
1	Panel		GM91010*	GM91010*	GM91010*	GM91010*
1	Bus, Load			GM91195		GM91195
1	Bus, Load			GM91206		GM91206
1	Bus, Load			GM91207		GM91207
2	Bus, Load			GM91209		GM91209
1	Bus, Load			GM91212		GM91212
1	Bus, Load			GM91217		GM91217
1	Bus, Load			GM91218		GM91218

Kits: GM91276-KA1(KP1) to GM91276-KA5(KP5)

Qty.	Description	Common Parts	Unique Parts				
			GM91276-KA1	GM91276-KA2	GM91276-KA3	GM91276-KA4	GM91276-KA5
2	Lug	GM25991-17					
1	Bus, Load	GM87578					
1	Bus, Load	GM87579					
1	Bus, Load	GM87580					
3	Bus, Load	GM87581					
1	Bracket, CB Mtg.	GM91012					
1	Circuit Breaker		GM47475-36	GM47475-38	GM47475-40	GM47475-42	GM47475-44
1	Panel		GM91113*	GM91113*	GM91113*	GM91113*	GM91113*

Kits: GM91276-KA6(KP6) to GM91276-KA10(KP10)

Qty.	Description	Common Parts	Unique Parts				
			GM91276-KA6	GM91276-KA7	GM91276-KA8	GM91276-KA9	GM91276-KA10
2	Lug	GM25991-17					
1	Bus, Load	GM87578					
1	Bus, Load	GM87579					
1	Bus, Load	GM87580					
3	Bus, Load	GM87581					
1	Bracket, CB Mtg.	GM91012					
1	Circuit Breaker		GM47475-47	GM47475-49	GM47475-36	GM47475-38	GM47475-40
1	Panel		GM91113*	GM91113*	GM91113*	GM91007*	GM91007*

Kits: GM91276-KA11(KP11) to GM91276-KA14(KP14)

Qty.	Description	Common Parts	Unique Parts			
			GM91276-KA11	GM91276-KA12	GM91276-KA13	GM91276-KA14
2	Lug	GM25991-17				
1	Bus, Load	GM87578				
1	Bus, Load	GM87579				
1	Bus, Load	GM87580				
3	Bus, Load	GM87581				
1	Bracket, CB Mtg.	GM91012				
1	Circuit Breaker		GM47475-42	GM47475-44	GM47475-47	GM47475-49
1	Panel		GM91007*	GM91007*	GM91007*	GM91007*

* Model EOZDJ/EFOZDJ (white), add -WHT suffix to part number. Model EOZCJ/EFOZCJ (gray), add -G49 suffix to part number.

Circuit Breaker Kits

Kits: GM91277-KA1(KP1) to GM91277-KA5(KP5)

Qty.	Description	Common Parts	Unique Parts				
			GM91277-KA1	GM91277-KA2	GM91277-KA3	GM91277-KA4	GM91277-KA5
2	Lug	GM25991-18					
1	Bus, Load	GM87576					
2	Bus, Load	GM87577					
1	Bus, Load	GM87582					
1	Bus, Load	GM87583					
3	Bus, Load	GM87584					
3	Bus, Load	GM87585					
1	Bus, Load	GM87586					
1	Bracket, CB Mtg.	GM91012					
1	Circuit Breaker		GM47476-7	GM47476-9	GM47476-13	GM47476-7	GM47476-9
1	Panel		GM91113*	GM91113*	GM91113*	GM91007*	GM91007*

Kits: GM91277-KA6(KP6) to GM91277-KA9(KP9)

Qty.	Description	Common Parts	Unique Parts			
			GM91277-KA6	GM91277-KA7	GM91277-KA8	GM91277-KA9
2	Lug	GM25991-18				
1	Bus, Load	GM87576				
2	Bus, Load	GM87577				
1	Bus, Load	GM87582				
1	Bus, Load	GM87583				
3	Bus, Load	GM87584				
3	Bus, Load	GM87585				
1	Bus, Load	GM87586				
1	Bracket, CB Mtg.	GM91012				
1	Circuit Breaker		GM47476-13	GM47476-7	GM47476-9	GM47476-13
1	Panel		GM91007*	GM91007*	GM91007*	GM91007*

Kits: GM91278-KA1(KP1) to GM91278-KA4(KP4)

Qty.	Description	Common Parts	Unique Parts			
			GM91278-KA1	GM91278-KA2	GM91278-KA3	GM91278-KA4
4	Bus, Load	GM87451				
1	Bus, Load	GM87452				
4	Bus, Load	GM87453				
2	Bus, Load	GM87454				
1	Bus, Load	GM87456				
1	Bracket, CB Mtg.	GM91011				
1	Circuit Breaker		GM85432-4	GM85432-7	GM85432-4	GM85432-7
1	Panel		GM91008*	GM91008*	GM91008*	GM91008*
4	Bus, Load			GM87452		GM87452
1	Bus, Load			GM87454		GM87454
1	Bus, Load			GM87455		GM87455

Kits: GM91278-KA1(KP1) to GM91278-KA4(KP4)

Qty.	Description	Common Parts	Unique Parts			
			GM91278-KA1	GM91278-KA2	GM91278-KA3	GM91278-KA4
4	Bus, Load	GM87451				
1	Bus, Load	GM87452				
4	Bus, Load	GM87453				
2	Bus, Load	GM87454				
1	Bus, Load	GM87456				
1	Bracket, CB Mtg.	GM91011				
1	Circuit Breaker		GM85432-4	GM85432-7	GM85432-4	GM85432-7
1	Panel		GM91008*	GM91008*	GM91008*	GM91008*
4	Bus, Load			GM87452		GM87452
1	Bus, Load			GM87454		GM87454
1	Bus, Load			GM87455		GM87455

* Model EOZDJ/EFOZDJ (white), add -WHT suffix to part number. Model EOZCJ/EFOZCJ (gray), add -G49 suffix to part number.

Parts List: Accessories, continued

Circuit Breaker Kits

Kits: GM94109-KA1(KP1) to GM94109-KA2(KP2)

Qty.	Description	Common Parts	Unique Parts	
			GM94109-KA1	GM94109-KA2
2	Bus, Load	GM87451		
1	Bus, Load	GM87452		
2	Bus, Load	GM87453		
6	Bus, Load	GM87454		
1	Bus, Load	GM87456		
1	Bracket, Circuit Breaker Mounting	GM94108		
1	Breaker, Circuit		GM85432-4	GM85432-7
1	Panel, Circuit Breaker Mtg.		GM94120*	GM94120*
2	Bus, Load			GM87452
3	Bus, Load			GM87454
1	Bus, Load			GM87455

Kits: GM94110-KA1(KP1) to GM94110-KA2(KP2)

Qty.	Description	Common Parts	Unique Parts	
			GM94109-KA1	GM94109-KA2
4	Bus, Load	GM91194		
2	Bus, Load	GM91195		
2	Bus, Load	GM91206		
1	Bus, Load	GM91207		
1	Bus, Load	GM91208		
1	Bus, Load	GM91213		
1	Bus, Load	GM91214		
1	Bus, Load	GM91215		
1	Bus, Load	GM91216		
1	Bracket, Circuit Breaker Mounting	GM94108		
1	Bus, Line	GM96401		
1	Bus, Line	GM96402		
1	Breaker, Circuit		GM91135-1	GM91135-1
1	Panel, Circuit Breaker Mtg.		GM94121*	GM94121*
2	Bus, Load			GM91195
2	Bus, Load			GM91206
1	Bus, Load			GM91209
1	Bus, Load			GM91217
1	Bus, Load			GM91218
1	Bus, Line			GM96403

Kits: GM94128-KA1(KP1)

Qty.	Description	Common Parts	Unique Parts	
			GM94128-KA1	
1	Bracket, Circuit Breaker Mounting	GM93737		
3	Bus,Line	GM93738		
3	Bus,Line	GM94334		
1	Insulation, Circuit Breaker	GM97032		
6	Standoff insulator, 3/8-16 x 2 in.	X-6128-29		
1	Breaker, Circuit 800A 3P NS		GM93732-1	
1	Panel, NS Frame Circuit Breaker		GM94122*	

Kits: GM94129-KA1(KP1)

Qty.	Description	Common Parts	Unique Parts	
			GM94129-KA1	
1	Bracket, Circuit Breaker Mounting	GM93737		
3	Bus,Line	GM93738		
4	Bus,Line	GM94334		
1	Bus,Line	GM96400		
1	Insulation, Circuit Breaker	GM97032		
8	Standoff insulator, 3/8-16 x 2 in.	X-6128-29		
1	Breaker, Circuit 800A 4P NS		GM93733-1	
1	Panel, NS Frame Circuit Breaker		GM94122*	

Kits: GM94130-KA1(KP1)

Qty.	Description	Common Parts	Unique Parts	
			GM94130-KA1	
1	Auxiliary Contact	GM25990		
1	Bracket, Circuit Breaker Mounting	GM93737		
3	Bus,Line	GM93738		
3	Bus,Line	GM94334		
1	Insulation, Circuit Breaker	GM97032		
6	Standoff insulator, 3/8-16 x 2 in.	X-6128-29		
1	Breaker, Circuit 800A 3P EO NS		GM93734-1	
1	Panel, EO NS Frame Circuit Breaker		GM94123*	

Kits: GM94131-KA1(KP1)

Qty.	Description	Common Parts	Unique Parts	
			GM94131-KA1	
1	Auxiliary Contact	GM25990		
1	Bracket, Circuit Breaker Mounting	GM93737		
3	Bus,Line	GM93738		
4	Bus,Line	GM94334		
1	Bus,Line	GM96400		
1	Insulation, Circuit Breaker	GM97032		
8	Standoff insulator, 3/8-16 x 2 in.	X-6128-29		
1	Breaker, Circuit 800A 4P EO NS		GM93735-1	
1	Panel, EO NS Frame Circuit Breaker		GM94123*	

Circuit Breaker Motor Operator Kits

Kits: GM91377-KA1(KP1) to GM91377-KA5(KP5)

Qty.	Description	Common Parts	Unique Parts				
			GM91377-KA1	GM91377-KA2	GM91377-KA3	GM91377-KA4	GM91377-KA5
1	Auxiliary Contact	GM25990					
1	Harness, Breaker	GM90140					
2	Relay		GM49746	GM49747	GM49746	GM49747	GM49746
1	Operator, Motor		GM89929	GM89929	GM89929	GM89929	GM89930
1	Panel		GM91384*	GM91384*	GM91385*	GM91385*	GM91385*

Kits: GM91377-KA6(KP6) to GM91377-KA10(KP10)

Qty.	Description	Common Parts	Unique Parts				
			GM91377-KA6	GM91377-KA7	GM91377-KA8	GM91377-KA9	GM91377-KA10
1	Auxiliary Contact	GM25990					
1	Harness, Breaker	GM90140					
2	Relay		GM49747	GM49746	GM49747	GM49746	GM49747
1	Operator, Motor		GM89930	GM89930	GM89930	GM89931	GM89931
1	Panel		GM91384*	GM91385*	GM91385*	GM91386*	GM91386*

Kits: GM91377-KA11(KP11) to GM91377-KA15(KP15)

Qty.	Description	Common Parts	Unique Parts				
			GM91377-KA11	GM91377-KA12	GM91377-KA13	GM91377-KA14	GM91377-KA15
1	Auxiliary Contact	GM25990					
1	Harness, Breaker	GM90140					
2	Relay		GM49746	GM49747	GM49746	GM49747	GM49746
1	Operator, Motor		GM89929	GM89929	GM89929	GM89929	GM89930
1	Panel		GM91387*	GM91387*	GM91388*	GM91388*	GM91387*

Kits: GM91377-KA16(KP16) to GM91377-KA20(KP20)

Qty.	Description	Common Parts	Unique Parts				
			GM91377-KA16	GM91377-KA17	GM91377-KA18	GM91377-KA19	GM91377-KA20
1	Auxiliary Contact	GM25990					
1	Harness, Breaker	GM90140					
2	Relay		GM49747	GM49746	GM49747	GM49746	GM49747
1	Operator, Motor		GM89930	GM89930	GM89930	GM89931	GM89931
1	Panel		GM91387*	GM91388*	GM91388*	GM91389*	GM91389*

* Model EOZDJ/EFOZDJ (white), add -WHT suffix to part number. Model EOZCJ/EFOZCJ (gray), add -G49 suffix to part number.

Parts List: Accessories, continued

Qty.	Description	Part No.

Fuel System Kits

Duplex Fuel Filter		**GM49664-KP1**
1	Filter, Fuel/Water Separator	GM49227
Duplex Fuel Filter		**GM97298-KP1**
1	Filter, Fuel/Water Separator	GM97297
Fuel Boost Pump, 24V		**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”npt)+vibra	X-202-27
6	Washer, plain, .281 ID x .625 in. OD	X-25-40
3	Grommet, Round	X-284-39
1	Connector, 90 deg. (1/4” ID hose)	X-391-20
1	Elbow, street (90 deg x 1/4”nptf)	X-555-1
Fuel Lines, Double Wall w/Leak Alarm		**GM52980-KP1**
1	Fuel Line, Double Wall 4045DFM70	GM49701
1	Bracket, Relay Mounting	GM14320-WHT
2	Screw, Hex Cap	M933-08020-60
2	Nut, Hex 8mm	M6923-08-80
2	Washer, lock.326 IDx.883 in.OD	X-22-16
2	Screw, Hex Cap	M933-06020-60
2	Nut, Hex 6mm	M6923-06-80
2	Washer, lock.262 IDx.743 in.OD	X-22-12
Fuel Lines, Double Wall w/Leak Alarm		**GM52980-KP2**
1	Fuel Lines, Double Wall 4045TFM75	GM49702
1	Bracket, Relay Mounting	GM14320-WHT
2	Screw, Hex Cap	M933-08020-60
2	Nut, Hex 8mm	M6923-08-80
2	Washer, lock.326 IDx.883 in.OD	X-22-16
2	Screw, Hex Cap	M933-06020-60
2	Nut, Hex 6mm	M6923-06-80
2	Washer, lock.262 IDx.743 in.OD	X-22-12
Double Wall Fuel Line, 40kW		**GM52980-KP5**
1	Fuel Line, Double Wall 4045DFM70	GM49701
1	Bracket, Relay Mounting	GM14320-G49
2	Washer, lock.326 IDx.883 in.OD	X-22-16
2	Washer, lock.262 IDx.743 in.OD	X-22-12
2	Screw, Hex Cap	M933-06020-60
2	Nut, Hex 6mm	M6923-06-80
2	Screw, Hex Cap	M933-08020-60
2	Nut, Hex 8mm	M6923-08-80
Double Wall Fuel Lines		**GM88159-KP1**
1	Bracket, Relay Mounting	GM14320*
1	Fuel Lines, Double Wall 4045TFM85	GM88158
2	Nut, Hex 8mm	M6923-08-80
2	Nut, Hex 6mm	M6923-06-80
2	Screw, Hex Cap	M933-06025-60
2	Screw, Hex Cap	M933-08020-60
2	Washer, lock.262 IDx.743 in.OD	X-22-12
2	Washer, lock.326 IDx.883 in.OD	X-22-16

Qty.	Description	Part No.
Double Wall Fuel Lines		**GM88165-KP1**
1	Bracket, Relay Mounting	GM14320*
1	Fuel Lines, Double Wall 4045AFM85	GM88164
1	Fitting, fuel inlet	GM90346
2	Fuel Line	GM93584
2	Bearing, Nylon	GM93818-1
1	Bearing, Nylon	GM93818-2
1	Coupling, pipe	X-216-23
2	Elbow, Street (45 deg, x 3/8 in. NPT)	X-274-6
2	Washer, Nylon	X-6278-11
1	Washer, Nylon, .48 X x .825 in. OD	X-6278-9
1	JD Fuel System Kit 12V	GM90088
Double Wall Fuel Lines		**GM88165-KP2**
1	Bracket, Relay Mounting	GM14320*
1	Fuel Lines, Double Wall 4045AFM85	GM88164
1	Fitting, fuel inlet	GM90346
2	Fuel Line	GM93584
2	Bearing, Nylon	GM93818-1
1	Bearing, Nylon	GM93818-2
1	Coupling, pipe	X-216-23
2	Elbow, Street (45 deg, x 3/8 in. NPT)	X-274-6
2	Washer, Nylon	X-6278-11
1	Washer, Nylon, .48 X x .825 in. OD	X-6278-9
1	JD Fuel System Kit 24V	GM90089
Fuel Boost Pump, 12V		**PA-229172**
3	Nut, hex elastic stop, M6-1	X-101-25
1	Bushing, reducing (1/8 x 1/4”npt)+vibra	X-202-27
6	Washer, plain, .281 ID x .625 in. OD	X-25-40
3	Grommet, Round	X-284-39
1	Elbow, street (90 deg x 1/4”nptf)	X-555-1
1	Bracket, mounting	229050
1	Pump, fuel	229051
1	Lead assembly	229168
1	Connector, 90 deg. (1/4” ID hose)	X-391-20
Double Wall Fuel Lines w/Alarm Tank		**GM91876- KP1**
1	Bracket, Relay Mounting	GM14320*
1	Fuel Lines, Double Wall 6068AFM85	GM91875
Double Wall Fuel Lines		**GM95150-KP1**
1	Bracket, Relay Mounting	GM14320*
	1Fuel Lines, Double Wall 6090AFM85	GM95151
2	Nut, Hex 8mm	M6923-08-80
2	Nut, Hex 6mm	M6923-06-80
2	Screw, Hex Cap	M933-06025-60
2	Screw, Hex Cap	M933-08020-60
2	Washer, lock.262 IDx.743 in.OD	X-22-12
2	Washer, lock.326 IDx.883 in.OD	X-22-16

* Model EOZDJ/EFOZDJ (white), add - WHT suffix to part number. Model EOZCJ/EFOZCJ (gray), add - G49 suffix to part number.

Radiator Cooling Kits

Kits: GM87705-KA1 to GM87705-KA6

Qty.	Description	Common Parts	Unique Parts					
			GM87705-KA1	GM87705-KA2	GM87705-KA3	GM87705-KA4	GM87705-KA5	GM87705-KA6
1	Valve, drain (3/8 in. NPTF)	278788						
1	Guard, wire fan	336888						
1	Stud	352020						
1	Spacer	352043						
1	Washer	352044						
1	Gasket	352092						
1	Shroud, fan	GM29800						
1	Bracket, belt guard	GM64267						
1	Sensor, low coolant level	GM66270						
1	Spacer, fan (2 in.)	GM87556						
1	Hose, upper radiator	GM87557						
1	Hose, lower radiator	GM87558						
1	Support, radiator (RH)	GM87559						
1	Support, radiator (LH)	GM87560						
1	Guard, radiator	GM87561						
1	Cover plate, top	GM87564						
1	Bracket, fan pulley mounting	GM87571						
1	Fan, pulley	GM87572						
1	Belt (402 mm)	GM87574						
1	Fan, pusher	GM87991						
1	Guard, belt bottom	GM89274						
1	Guard, belt top	GM89450						
1	Guard, belt (RH)	GM89451						
1	Guard, belt (LH)	GM89452						
1	Harness, Radiator	GM91709						
1	Cover		352091*	352091*	352091*	352091*	352091*	352091*
1	Elbow, dry Exhaust		GM49739	GM49740	GM49740	GM49739	GM49740	GM49740
1	Radiator assembly		GM52731	GM52731	GM52731	GM89382	GM89382	GM89382
2	Skid, extension		GM87553*	GM87553*	GM87553*	GM87553*	GM87553*	GM87553*
1	End cap		GM87554*	GM87554*	GM87554*	GM87554*	GM87554*	GM87554*
2	Bracket, skid extension		GM87555*	GM87555*	GM87555*	GM87555*	GM87555*	GM87555*
1	Bracket, belt guard		GM89277*	GM89277*	GM89277*	GM89277*	GM89277*	GM89277*
1	Bracket, belt guard		GM89453*	GM89453*	GM89276*	GM89453*	GM89453*	GM89276*
1	Bracket guard back cover		GM90293	GM90293	GM89459	GM90293	GM90293	GM89459
1	Gasket, exhaust		352029			352029		

* Model EOZDJ/EFOZDJ (white), add -WHT suffix to part number. Model EOZCJ/EFOZCJ (gray), add -G49 suffix to part number.

Parts List: Accessories, continued

Radiator Cooling Kits

Kits: GM87787-KP1 and GM87787-KP2

Qty.	Description	Common Parts	Unique Parts	
			GM87787-KP1	GM87787-KP2
1	Valve, drain (3/8 in. NPTF)	278788		
1	Guard, wire fan	336888		
1	Shroud, fan	GM29800		
1	Elbow, dry exhaust	GM49740		
1	Cover, engine gear	GM59872-P		
1	Bracket, belt guard	GM64267		
1	Sensor, low coolant level	GM66270		
1	Spacer, fan (2 in.)	GM87556		
1	Guard, radiator	GM87561		
1	Cover plate, top	GM87564		
1	Bracket, fan pulley mounting	GM87571		
1	Belt (402 mm)	GM87574		
1	Support, radiator (RH)	GM87706		
1	Support, radiator (LH)	GM87707		
1	Fan, pulley	GM87709		
1	Fan, pusher	GM87991		
2	Cover, assembly	GM88171		
2	O-ring, cover	GM88172		
1	Adapter	GM88173		
1	O-ring, adapter	GM88174		
1	Hose, upper radiator	GM88176		
1	Hose, lower radiator	GM88177		
1	Guard, belt top	GM89271		
1	Guard, belt (RH)	GM89272		
1	Guard, belt (LH)	GM89273		
1	Guard, belt bottom	GM89274		
1	Belt guard back cover	GM89275		
1	Radiator assembly		GM52731*	GM89382*
2	Bracket, skid extension		GM87555*	GM87555*
2	Skid, extension		GM87563*	GM87563*
1	End cap		GM87573*	GM87573*
1	Bracket, belt guard		GM89276*	GM89276*
1	Bracket, belt guard		GM89277*	GM89277*

Kits: GM90678-KP1 and GM90678-KP2

Qty.	Description	Common Parts	Unique Parts	
			GM90678-KP1	GM90678-KP2
1	Valve, drain (3/8”nptf)	278788		
1	Shroud, Fan	343054		
1	Guard, Wire Fan	343062		
2	Bracket, fan shroud	343422		
1	Fan, Pusher	GM39049		
1	Spacer, Fan	GM39311		
1	Elbow, Dry Exhaust	GM49740		
1	Bracket, Belt Guard	GM64267		
1	Sensor, Low Coolant Level	GM66270		
1	Cover Plate Top	GM87564		
1	Bracket, Fan Pulley Mtg	GM87571		
1	Belt, 40-54 Kw	GM87574		
1	Fan Pulley	GM87709		
1	Belt Guard Back Cover	GM89275		
1	Guard, Belt (Top)	GM90779		
1	Guard, Belt (RH)	GM90780		
1	Guard, Belt (LH)	GM90781		
1	Guard, Belt (Bottom)	GM90782		
1	Support, Radiator (RH)	GM90787		
1	Support, Radiator (LH)	GM90788		
1	Guard, Radiator	GM90798		
1	Hose, Upper Radiator	GM90937		
1	Hose, Lower Radiator	GM90938		
1	Harness, Radiator	GM91709		
1	Bracket, Coolant Hose Support	GM93398		
2	Bracket, skid extension		GM87555*	GM87555*
1	Bracket, belt guard		GM89277*	GM89277*
1	Radiator Assembly		GM90767	GM90768
1	Cap, Skid Extension End		GM90783*	GM90783*
2	Skid, extension		GM90785*	GM90785*
1	Bracket, Radiator Mounting (RH)		GM90789*	GM90789*
1	Bracket, Radiator Mounting (LH)		GM90790*	GM90790*
1	Bracket, Belt Guard (LH)		GM90898*	GM90898*
1	Bracket, Belt Guard (RH)		GM93388*	GM93388*

Rectangular Focus Mount Kits

Kits: GM85978-MA1 to GM85978-MA3

Qty.	Description	Common Parts	Unique Parts		
			GM85978-MA1	GM85978-MA2	GM85978-MA3
1	Support, Engine (RH)	GM85597			
1	Support, Engine (LH)	GM85598			
2	Bracket, Rectangular Vibromount	GM85954			
2	Bracket, Rectangular Vibromount	GM86397			
2	Mount, Fail-Safe Plate		GM84779	GM84780	GM84780
2	Mount, Fail-Safe Plate		GM84781	GM84781	GM84782

Kits: GM87059-MA1 to GM87059-MA3

Qty.	Description	Common Parts	Unique Parts		
			GM87059-MA1	GM87059-MA2	GM87059-MA3
1	Support, Engine (RH)	GM85597			
1	Support, Engine (LH)	GM85598			
4	Bracket, Rectangular Vibromount	GM85954			
2	Mount, Fail-Safe Plate (engine mount)		GM84781	GM84781	GM84783
2	Mount, Fail-Safe Plate (alternator mount)		GM84783	GM84784	GM84785

Kits: GM87059-MA1 to GM87059-MA3

Qty.	Description	Common Parts	Unique Parts		
			GM87059-MA1	GM87059-MA2	GM87059-MA3
1	Support, Engine (RH)	GM85597			
1	Support, Engine (LH)	GM85598			
4	Bracket, Rectangular Vibromount	GM85954			
2	Mount, Fail-Safe Plate (engine mount)		GM84781	GM84781	GM84783
2	Mount, Fail-Safe Plate (alternator mount)		GM84783	GM84784	GM84785

Kits: GM893100-MA1

Qty.	Description	Unique Parts
		GM93100-MA1
1	Support, Engine (RH)	GM92848
1	Support, Engine (LH)	GM92849
4	Bracket, Rectangular Vibromount	GM85954
2	Mount, Fail-Safe Plate (engine mount)	GM95087
2	Mount, Fail-Safe Plate (alternator mount)	GM84785

Standard Vibromount Kits

Kits: GM87903-MA1 to GM87903-MA3

Qty.	Description	Common Parts	Unique Parts		
			GM87903-MA1	GM87903-MA2	GM87903-MA3
1	Support, Engine (RH)	GM85597			
1	Support, Engine (LH)	GM85598			
4	Support, Standard Vibromount	GM87908			
4	Spacer, .527 ID x .625 OD x 2.3 in.	X-400-154			
2	Vibromount		324389	324390	324389
2	Vibromount		336022	336022	324390

Kits: GM87904-MA1 to GM87903-MA2

Qty.	Description	Common Parts	Unique Parts	
			GM87904-MA1	GM87904-MA2
1	Support, Engine (RH)	GM85597		
1	Support, Engine (LH)	GM85598		
2	Support, Standard Vibromount	GM87908		
2	Support, Standard Vibromount	GM87910		
4	Spacer, .527 ID x .625 OD x 2.3 in.	X-400-154		
2	Vibromount		324390	336813
2	Vibromount		336813	336813

Parts List: Accessories, continued

Hydolastic Mount Kits

Kits: GM87931-MA1 to GM87932-MA2

Qty.	Description	Common Parts	Unique Parts	
			GM87932-MA1	GM87932-MA2
1	Support, Engine (RH)	GM85597		
1	Support, Engine (LH)	GM85598		
2	Spacer, .640 ID x 1 OD x .531 in.		X-400-172	X-400-172
2	Mount, Fluid		344091	344339
2	Mount, Fluid		344339	344339

Rubber Mount Kits

Kits: GM87936-MA1 and GM87937-MA1

Qty.	Description	Common Parts	Unique Parts	
			GM87936-MA1	GM87937-MA1
1	Support, Engine (RH)	GM85597		
1	Support, Engine (LH)	GM85598		
4	Mount, Vibro Duro 45	GM79272		
4	Support, Rubber Mount	GM87938		
4	Washer, plain, .688 ID x 3.25 in. OD			X-25-132

Parts List: Accessories, continued

Qty.	Description	Part No.

Sound Shield Accessory Kits

Siphon Break Hose Connection		**GM86345-KP1**
1	Valve, siphon break (1.50” hose)	344160
	includes 1 Valve, duct	GM78573
2	Connector, hose (90 deg elbow)(Nylon)	GM15467
2	Grommet, round	X-284-4
1	Hose, Molded Seawater	GM86352
1	Hose, Molded Seawater	GM86351
2	Clamp, hose, 1.00/2.00 in.	X-426-19
Siphon Break Hose Connection		**GM86911-KP1**
1	Valve, siphon break (1.50” hose)	344160
	includes 1 Valve, duct	GM78573
2	Connector, hose (90 deg elbow)(Nylon)	GM15467
2	Grommet, round	X-284-4
1	Hose, Molded Seawater	GM86913
1	Hose, Molded Seawater	GM86912
2	Clamp, hose, 1.00/2.00 in.	X-426-19
Siphon Break Hose Connection		**GM87820-KP1**
1	Valve, siphon break (1.50” hose)	344160
	includes 1 Valve, duct	GM78573
2	Connector, hose (90 deg elbow)(Nylon)	GM15467
1	Hose, Molded Seawater	GM86351
1	Hose, Molded Seawater	GM87822
2	Grommet, round	X-284-4
2	Clamp, hose, 1.00/2.00 in.	X-426-19
Siphon Break		**PA-344160**
1	Valve, siphon break (1.50” hose)	344160
	includes 1 Valve, duct	GM78573
1	TT Siphon Break, 3.5-150 kW	TT-1268
Siphon Break		**GM97310- KP1**
1	Valve, Siphon Break	GM95470
Siphon Break Hose Connection		**GM89902- KP1**
1	Valve, siphon break (1.50” hose)	344160
2	Connector, hose (90 deg elbow)(Nylon)	GM15467
1	Hose, Molded Seawater	GM89903
1	Hose, Molded Seawater	GM89904
2	Grommet, round	X- 284- 4
2	Clamp, hose, 1.00/2.00 in. (NRP)	X- 426- 19

Miscellaneous Kits

Low Coolant Level Indicator		**GM40921-KP1**
1	Switch, Liquid Level	GM15506
1	Bracket, Water Level Switch	GM40920-WHT
1	Connector, 90 deg. (1/4” ID hose)	X-391-20
2	Connector, hose + Vibra Seal 6.4	X-582-25
1	Hose, Rubber	X-6359-18
2	Clamp, hose, .25/.70 in.	X-426-9
1	Low Coolant Level Indicator Kit, Marine	TT-1561
1	Coupling, non-metallic	X-567-1
1	Insulink, 22-18 gauge, insulated	X-367-3
1	O-Ring (1.475” ID)	273693
1	Adapter, bushing	273692
1	Elbow, street (45 deg x 1/2”npt)	227642

Qty.	Description	Part No.
Low Coolant Level Indicator		**GM40921-KP2**
1	Switch, Liquid Level	GM15506
1	Bracket, Water Level Switch	GM40920-WHT
1	Connector, 90 deg. (1/4” ID hose)	X-391-20
3	Connector, hose + Vibra Seal 6.4	X-582-25
2	Hose, rubber, straight, .25 in. ID	X-6359-1
4	Clamp, hose, .25/.70 in.	X-426-9
1	Coupling, non-metallic	X-567-1
1	Insulink, 22-18 gauge, insulated	X-367-3
1	Pipe (1/2”npt x 1.50”) brass	X-209-1
1	Tee, pipe (1/2 x 1/2 x 1/2 npt)	K-1118
1	Adapter, bushing	364350
1	Connector, 90 deg. (1/4” ID hose)	X-391-1
1	O-Ring (1.475” ID)	273693
1	Adapter, bushing	273692
1	Elbow, street (45 deg x 1/2”npt)	227642
2	Clip	X-6084-1
Low Coolant level Indicator		**GM40921-KP8**
1	Switch, Liquid Level	GM15506
1	Bracket, Water Level Switch	GM40920-G49
1	Connector, 90 deg. (1/4” ID hose)	X-391-20
2	Connector, hose + Vibra Seal 6.4	X-582-25
2	Clamp, hose, .25/.70 in.	X-426-9
1	Coupling, non-metallic	X-567-1
1	Insulink, 22-18 gauge, insulated	X-367-3
1	Hose, Rubber	X-6359-18
1	O-Ring (1.475” ID)	273693
1	Adapter, bushing	273692
1	Elbow, street (45 deg x 1/2”npt)	227642
1	Low Coolant Level Indicator Kit, Marine	TT-1561
Low Coolant level Indicator		**GM40921-KP9**
1	Elbow, street (45 deg x 1/2”npt)	227642
1	Adapter, bushing	273692
1	O-Ring (1.475” ID)	273693
1	Adapter, bushing	364350
1	Switch, Liquid Level	GM15506
1	Bracket, Water Level Switch	GM40920-G49
1	Tee, pipe (1/2 x 1/2 x 1/2 npt)	K-1118
1	Pipe (1/2”npt x 1.50”) brass	X- 209- 1
1	Insulink, 22-18 gauge, insulated	X-367-3
1	Connector, 90 deg. (1/4” ID hose)	X-391-2
4	Clamp, hose, .25/.70 in.	X-426-9
1	Coupling, non-metallic	X-567-1
1	Connector, hose + Vibra Seal 6.4	X- 582- 25
2	Hose, Rubber	X-6359-1
2	Clip	X-6084-1
1	Low Coolant Level Indicator Kit, Marine	TT-1561
Low Coolant Level Indicator		**GM86386-KP1**
1	Switch, Liquid Level	GM15506
1	Bracket, Water Level Switch	GM86385*
1	Connector, 90 deg. (1/4” ID hose)	X-391-20
3	Connector, hose + Vibra Seal 6.4	X-582-25
2	Hose, rubber, straight, .25 in. ID	X-6359-2
4	Clamp, hose, .25/.70 in.	X-426-9
1	Coupling, non-metallic	X-567-1
1	Insulink, 22-18 gauge, insulated	X-367-3
1	O-Ring (1.475” ID)	273693
1	Adapter, bushing	273692
1	Elbow, street (45 deg x 1/2”npt)	227642
1	Hose, Rubber	X-6359-15
1	Elbow, Street (90 deg x 1/2”nptf)	X-211-3

Parts List: Accessories, continued

Qty.	Description	Part No.
Low Coolant Level Indicator		**GM87381-KP1**
1	O-ring, ISO 6149 (15.3mm ID)	GM11694
1	Switch, Liquid Level	GM15506
1	Bushing, Adapter	GM22991
1	Bracket, Water Level Switch	GM87377*0
1	Tee, Pipe (1/2 x 1/2 x 1/2 npt)	X-203-13
1	Pipe (1/2"npt x 2.00")	X-209-6
1	Elbow, Street (90 deg x 1/2"nptf)	X-211-3
1	Insulink, 22-18 gauge, insulated	X-367-3
1	Connector, 90 deg. (1/4" ID hose)	X-391-1
1	Connector, 90 deg. (1/4" ID hose)	X-391-20
4	Clamp, hose, .25/.70 in.	X-426-9
1	Coupling, non-metallic	X-567-1
2	Connector, hose + Vibra Seal 6.4	X-582-25
1	Hose, rubber	X-6359-11
1	Hose, Rubber	X-6359-15
1	Plug, pipe (1/2" nptf)	X-75-3
Low Coolant Level Indicator		**GM90353-KP1**
1	O-ring, ISO 6149 (15.3mm id)	GM11694
1	Switch, Liquid Level	GM15506
1	Bushing, Adapter	GM22991
1	Bracket, Water Level Switch	GM90352*
1	Tee, Pipe (1/2 x 1/2 x 1/2 npt)	X-203-13
1	Pipe (1/2"npt x 3.00")	X-209-11
1	Elbow, Street (90 deg x 1/2"nptf)	X-211-3
1	Coupling, pipe (1/8"npt)(NRP)	X-216-24
1	Pipe, Nipple (1/8" npt x 2.00")	X-217-12
1	Insulink, 22-18 gauge, insulated	X-367-3
1	Connector, 90 deg. (1/4"id hose)	X-391-1
1	Connector, 90 deg. (1/4"id hose)	X-391-20
2	Spacer,.406 ID x .625 OD x .297 in.(NRP)	X-400-75
4	Clamp, hose, .25/.70 in. (GM-NRP) (KM)	X-426-9
1	Coupling, non-metallic	X-567-1
2	Connector, hose + Vibra Seal 6.4	X-582-25
1	Hose, Rubber	X-6359-15
1	Hose, rubber, straight, .25 in. ID	X-6359-6
2	Clamp, insulated, .5 in.	X-672-10
1	Plug, pipe (1/2" nptf)	X-75-3
Low Coolant Level Indicator		**GM93817-KP1**
1	Connector, hose + Vibra Seal	337553
1	Switch, Liquid Level	GM15506
1	Bracket, Water Level Switch	GM94528-WHT
2	Washer, Plain 8.4 ID x 16.0 OD	M125A-08-80
2	Nut, Hex 6mm	M6923-06-80
2	Screw, hex cap	M933-06020-60
2	Screw, Hex cap	M933-08020-60
1	INSTRUCTION, INSTALLATION	TT-1
1	Elbow, Street(90 deg x 1/2"nptf)	X-211-3
1	Coupling, pipe (1/8"npt)	X-216-24
1	Pipe, Nipple (1/8" npt x 2.00")	X-217-12
1	Insulink, 22-18 gauge, insulated	X-367-3
2	Connector, 90 deg. (1/4"id hose)	X-391-20
4	Clamp, hose, .25/.70 in.	X-426-9
1	Coupling, non-metallic	X-567-1
1	Connector, hose + Vibra Seal 6.4	X-582-25
2	Hose, Rubber	X-6359-15
Dry Exhaust Elbow		**GM49689-KP1**
1	Elbow, Dry Exhaust	GM49739
1	Gasket	352029
Dry Exhaust Elbow		**GM49689-KP2**
1	Elbow, Dry Exhaust	GM49740

Qty.	Description	Part No.
Keel Cooling & Dry Exhaust		**GM49690-KP1**
1	Stud	352020
1	Plug	352043
1	Strap	352044
1	Washer, Plain .406 ID x .656 OD	X-25-28
2	Plug, pipe (1/2"nptf) brass	X-75-54
1	Cover	352091-WHT
1	Gasket	352092
1	Elbow, Dry Exhaust	GM49739
1	Gasket	352029
1	Nut, flange spiralock, 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	40-99EOZD/EOZC Marine Keel Cooling Kit	TT-1535
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 .406 ID x .656 OD	X-25-28
2	Plug, pipe (1/2"nptf) brass	X-75-54
1	Cover	352091-WHT
1	Gasket	352092
1	Clamp, exhaust (4.25 in.)	324245
1	Elbow, Dry Exhaust	GM49740
1	Nut, flange spiralock, 3/8-16	X-6210-9
1	40-99EOZD/EOZC Marine Keel Cooling Kit	TT-1535
1	TT Keel Cooling Guidelines, 40-150EOZ	TT-1361
Keel Cooling and Dry Exhaust		**GM49690-KP3**
1	Stud	352020
1	Plug	352043
1	Strap	352044
1	Washer, Plain .406 ID x .656 OD	X-25-28
2	Plug, pipe (1/2"nptf) brass	X-75-54
1	Cover	352091-G49
1	Gasket	352092
1	Elbow, Dry Exhaust	GM49739
1	Gasket	352029
8	Screw,slotted hex washer head,mach	X-794-3
2	Cap, plug	258892
1	Plate, Cover	GM39785
1	TT Keel Cooling Guidelines, 40-150EOZ	TT-1361
1	40-99EOZD/EOZC Marine Keel Cooling Kit	TT-1535
1	Nut, flange spiralock, 3/8-16	X-6210-9
Keel Cooling & Dry Exhaust		**GM88272-KP1**
1	Cover	352091*
1	Elbow, Dry Exhaust	GM49740
2	Cover, Assembly	GM88171
2	O-Ring,Cover	GM88172
1	Adapter	GM88173
1	O-Ring, Adapter	GM88174
1	Gasket	352092
2	Cap, plug	258892
Keel Cooling & Dry Exhaust		**GM95562-KP1**
1	ELBOW, DRY EXHAUST	GM94423
1	Expansion Tank Assembly	GM95563
1	Adapter, Coolant Tube	GM95608
1	Tube Assembly, Coolant	GM95609
1	Tube Assembly, Coolant	GM95610
1	Gasket, Auxiliary Drive	GM95615
1	COVER, AUXILIARY DRIVE	GM95616
2	Washer, Plain (EXP) 10.5 ID x 20.0 OD	M125A-10-80
2	Screw, hex cap,fully thrd M10 x 25mm EXP	M933-10025-60
1	Plug, pipe (1/8" nptf)	X-75-4

* Model EOZDJ/EFOZDJ (white), add -WHT suffix to part number. Model EOZCJ/EFOZCJ (gray), add -G49 suffix to part number.

Parts List: Accessories, continued

Qty.	Description	Part No.
Assy, JD Marine LCB Cover		**GM67403-KA1**
1	Hood, Breaker Handle	GM65564
5	Screw, Pan Head Machine	M7985A-05016-20
Exhaust Elbow, Wet		**GM69322-KP1**
1	Blanket, Exhaust	GM40881
1	Elbow, Wet Exhaust	GM69237
Insulating Blanket, Exhaust		**GM69323-KA1**
1	Blanket, Exhaust	GM40881
Elbow, Wet Exhaust (4” OD) Kit		**GM78338-KP1**
1	Elbow, Wet Exhaust (4” OD)	GM78337
Dry Exhaust Elbow		**GM95603- KP1**
1	Elbow, Dry Exhaust	GM93521
Generator Heater, 120/240V, 200W		**GM79104-KP1**
1	TT Generator Strip Heater, 20-200 kW	TT-1567
4	Washer, Plain	M125A-05-80
4	Screw, M5 x 14mm	M933-05014-60
2	Heater, Strip	GM79574
LCB/Motor Operator Cover		**GM91861- KA2**
1	Hood, Cir Brkr Motor Operator (4RX/4SX)	GM91860
LCB/Motor Operator Cover		**GM95590- KA1**
1	Hood, Circuit Brkr Motor Operator (4UA)	GM95591
Oil Level Indicator (Low/High)		**GM86334-KP1**
1	Bushing, reducing (1/2 x 3/4”npt)+vibra	153659
1	Gauge, oil level	227257
4	Mount, controller	241769
1	Fitting, tee, hose	296755
1	Bracket, Oil Level Alarm	GM86335*
2	Nut, Hex 10mm	M6923-10-80
2	Screw, hex cap,fully thrd M10 x 25mm	M933-10025-60
4	Washer, lock.262 IDx.743 in.OD	X-22-12
1	Fuel line, flexible	X-386-62
2	Connector, 90 deg. (1/2” ID hose)	X-391-21
1	Fuel line, flexible	X-422-6
4	Clamp, hose, .69/1.25 in.	X-426-12
2	Clamp, hose, .25/.70 in.	X-426-9
1	Coupling, non-metallic	X-567-1
4	Nut, flange spiralock, 1/4-20	X-6210-2
Oil Level Indicator (Low/High)		**GM87026-KP1**
1	Gauge, oil level	227257
4	Mount, controller	241769
1	Cover, Plate	GM47418*
1	Bracket, Oil Level Alarm	GM86335*
2	Nut, Hex 10mm	M6923-10-80
2	Screw, hex cap,fully thrd M10 x 25mm	M933-10025-60
1	Cross, pipe (1/2” npt)	X-207-7
1	Pipe (1/2”npt x 1.19”)	X-209-2
4	Washer, lock.262 IDx.743 in.OD	X-22-12
1	Fuel line, flexible	X-386-74
1	Line, Flex Fuel .50” I.D.	X-422-18
2	Clamp, hose, .69/1.25 in.	X-426-12
2	Clamp, hose, .25/.70 in.	X-426-9
1	Coupling, non-metallic	X-567-1
1	Connector, Hose	X-582-38
2	Connector, hose + Vibra Seal	X-582-5
4	Nut, flange spiralock, 1/4-20	X-6210-2
1	Plug, pipe (1/2” nptf)	X-75-3

Qty.	Description	Part No.
Oil Level Indicator		**GM87773-KP1**
1	Gauge, oil level	227257
4	Mount, controller	241769
1	Cover, Plate	GM47418*
1	Bracket, Oil Level Alarm	GM86335*
2	Nut, Hex 10mm	M6923-10-80
2	Screw, hex cap,fully thrd M10 x 25mm	M933-10025-60
4	Washer, lock.262 IDx.743 in.OD	X-22-12
1	Fuel line, flexible	X-386-75
2	Connector, 90 deg. (1/2” ID hose)	X-391-21
1	Elbow, Hose	X-391-44
1	Fuel line, flexible	X-422-19
2	Clamp, hose, .69/1.25 in.	X-426-12
2	Clamp, hose, .25/.70 in.	X-426-9
1	Coupling, non-metallic	X-567-1
4	Nut, flange spiralock, 1/4-20	X-6210-2
Oil Level Indicator		**GM90276- KP1**
1	Gauge, oil level	227257
4	Mount, controller	241769
1	Cover, Plate	GM47418*
1	Bracket, Oil Level Alarm	GM86335*
2	Nut, Hex 10mm	M6923- 10- 80
2	Screw, hex cap,fully thrd M10 x 25mm	M933- 10025- 60
4	Washer, lock.262 IDx.743 in.OD	X- 22- 12
1	Fuel line, flexible	X- 386- 56
2	Connector, hose + Vibra Seal	X- 582- 5
1	Elbow, Hose	X- 391- 44
1	Hose, Flex Fuel Line	X- 422- 36
2	Clamp, hose, .69/1.25 in.	X- 426- 12
2	Clamp, hose, .25/.70 in.	X- 426- 9
1	Coupling, non- metallic	X- 567- 1
Oil Level Indicator		**GM90276- KP1**
1	Gauge, oil level	227257
4	Mount, controller	241769
1	Tube, Seawater	GM30882
1	Bracket, Oil Level Alarm	GM86335*
2	Nut, Hex 10mm	M6923- 10- 80
2	Screw, hex cap,fully thrd M10 x 25mm	M933- 10025- 60
4	Washer, lock.262 IDx.743 in.OD	X- 22- 12
1	Fuel line, flexible	X- 386- 75
1	Connector, 90 deg. (1/4”id hose)	X- 391- 1
1	Connector, 90 deg. (1/2”id hose)	X- 391- 21
1	Fuel line, flexible	X- 422- 6
4	Clamp, hose, .69/1.25 in.	X- 426- 12
2	Clamp, hose, .25/.70 in.	X- 426- 9
1	Coupling, non- metallic	X- 567- 1
1	Connector, hose + Vibra Seal	X- 582- 5

* Model EOZDJ/EFOZDJ (white), add - WHT suffix to part number. Model EOZCJ/EFOZCJ (gray), add - G49 suffix to part number.

Parts List: Accessories, continued

Open Unit Guard Kits

Kits: GM88060-KA1 to GM88060-KA4

Qty.	Description	Common Parts	Unique Parts			
			GM88060-KA1	GM88060-KA2	GM88060-KA3	GM88060-KA4
1	Guard, Generator Fan		GM65509	GM65509	GM88061	GM65509
2	Seal, Push-on Trim		X-6422-37	X-6422-37	X-6422-16	X-6422-37

Open Unit Guard Kits

Kits: GM95120-KA1

Qty.	Description	Common Parts	Unique Parts			
			GM95120-KA1			
1	Guard, Generator Fan		GM65511			

Agency Approval Kits

Kits: GM88313-KA1 to GM88313-KA4

Qty.	Description	Common Parts	Unique Parts			
			GM88313-KA1	GM88313-KA2	GM88313-KA3	GM88313-KA4
1	Bushing, reducing (1/2 x 3/4”npt)	153659				
2	Sender, oil pressure	264390				
1	Sender, water temperature	268298				
1	Elbow, street (90 deg x 3/8”nptf)	S-404				
1	Bushing, reducing (1/8 x 1/4”npt)	X-202-27				
2	Pipe, Nipple (3/8” npt x 2.00”)	X-204-6				
1	Elbow, pipe (90 deg x 3/8”npt)	X-215-9				
1	Valve, Fuel Shutoff		GM90152	GM90153	GM90152	GM90153
1	Insulated Blanket		GM51347	GM51347	GM51347	GM51347

Kits: GM88313-KA5 to GM883139-KA8

Qty.	Description	Common Parts	Unique Parts			
			GM88313-KA5	GM88313-KA6	GM88313-KA7	GM88313-KA8
1	Bushing, reducing (1/2 x 3/4”npt)	153659				
2	Sender, oil pressure	264390				
1	Sender, water temperature	268298				
1	Elbow, street (90 deg x 3/8”nptf)	S-404				
1	Bushing, reducing (1/8 x 1/4”npt)	X-202-27				
2	Pipe, Nipple (3/8” npt x 2.00”)	X-204-6				
1	Elbow, pipe (90 deg x 3/8”npt)	X-215-9				
1	Valve, Fuel Shutoff		GM90152	GM90153	GM90152	GM90153
1	Insulated Blanket		GM51347	GM51347	GM51347	GM51347

Kits: GM88313-KA9 to GM88313-KA12

Qty.	Description	Common Parts	Unique Parts			
			GM88313-KA9	GM88313-KA10	GM88313-KA11	GM88313-KA12
1	Bushing, reducing (1/2 x 3/4”npt)	153659				
2	Sender, oil pressure	264390				
1	Sender, water temperature	268298				
1	Elbow, street (90 deg x 3/8”nptf)	S-404				
1	Bushing, reducing (1/8 x 1/4”npt)	X-202-27				
2	Pipe, Nipple (3/8” npt x 2.00”)	X-204-6				
1	Elbow, pipe (90 deg x 3/8”npt)	X-215-9				
1	Valve, Fuel Shutoff		GM90152	GM90153	GM90152	GM90153
1	Insulated Blanket		GM88316	GM88316	GM88316	GM88316
1	Metal Fuel Filter Parts Kit		GM90438	GM90438	GM90438	GM90438

Kits: GM88313-KA13 to GM88313-KA16

Qty.	Description	Common Parts	Unique Parts			
			GM88313-KA13	GM88313-KA14	GM88313-KA15	GM88313-KA16
1	Bushing, reducing (1/2 x 3/4"npt)	153659				
2	Sender, oil pressure	264390				
1	Sender, water temperature	268298				
1	Elbow, street (90 deg x 3/8"nptf)	S-404				
1	Bushing, reducing (1/8 x 1/4"npt)	X-202-27				
2	Pipe, Nipple (3/8" npt x 2.00")	X-204-6				
1	Elbow, pipe (90 deg x 3/8"npt)	X-215-9				
1	Valve, Fuel Shutoff		GM90152	GM90153	GM90152	GM90153
1	Insulated Blanket		GM88316	GM88316	GM88316	GM88316
1	Metal Fuel Filter Parts Kit		GM90438	GM90438	GM90438	GM90438

Agency Approval Kits

Kits: GM88314-KA1 to GM88314-KA4

Qty.	Description	Common Parts	Unique Parts			
			GM88314-KA1	GM88314-KA2	GM88314-KA3	GM88314-KA4
2	Sender, oil pressure	264390				
1	Adapter, bushing	364350				
1	O-ring, ISO 6149 (15.3mm id)	GM11694				
1	Sender, Temperature	GM38523				
1	Exhaust Manifold Blanket	GM90105				
1	Valve, Fuel Shutoff		GM90152	GM90153	GM90152	GM90153

Kits: GM88314-KA5 to GM88314-KA8

Qty.	Description	Common Parts	Unique Parts			
			GM88314-KA5	GM88314-KA6	GM88314-KA7	GM88314-KA8
2	Sender, oil pressure	264390				
1	Adapter, bushing	364350				
1	O-ring, ISO 6149 (15.3mm id)	GM11694				
1	Sender, Temperature	GM38523				
1	Exhaust Manifold Blanket	GM90105				
1	Valve, Fuel Shutoff		GM90152	GM90153	GM90152	GM90153

Motor Operator Adapter Panel

Kits: GM92349-KA1 to GM92349-KA4

Qty.	Description	Common Parts	Unique Parts			
			GM92349-KA1	GM92349-KA2	GM92349-KA3	GM92349-KA4
1	Panel Subassy, Sound Shield Alt (RH)		GM91731	GM91732	GM91733	GM91733
1	Panel, NSX Frame Cir Brkr 4RX-4SX				GM91388*	

Kits: GM92349-KA5 to GM92349-KA8

Qty.	Description	Common Parts	Unique Parts			
			GM92349-KA5	GM92349-KA6	GM92349-KA7	GM92349-KA8
1	Panel Subassy, Sound Shield Alt (RH)		GM91734	GM91734	GM91735	GM91735
1	Panel, NSX Frame Cir Brkr 4RX-4SX		GM91389*		GM91388*	

Kits: GM92349-KA9 to GM92349-KA12

Qty.	Description	Common Parts	Unique Parts			
			GM92349-KA9	GM92349-KA10	GM92349-KA11	GM92349-KA12
1	Panel Subassy, Sound Shield Alt (RH)		GM92189	GM92189	GM92190	GM92191
1	Panel, NSX Frame Cir Brkr 4RX-4SX		GM91389*		GM91388*	GM91389*

Kits: GM92349-KA13 to GM9234916

Qty.	Description	Common Parts	Unique Parts			
			GM92349-KA13	GM92349-KA14	GM92349-KA15	GM92349-KA16
1	Panel Subassy, Sound Shield Alt (RH)		GM92191	GM92341	GM92342	GM92343
1	Panel, NSX Frame Cir Brkr 4RX-4SX					GM91388*

Parts List: Accessories, continued

Kits: GM92349-KA17 to GM92349-KA20

Qty.	Description	Common Parts	Unique Parts			
			GM92349-KA17	GM92349-KA18	GM92349-KA19	GM92349-KA20
1	Panel Subassy, Sound Shield Alt (RH)		GM92343	GM92344	GM92344	GM92345
1	Panel, NSX Frame Cir Brkr 4RX-4SX			GM91389*		GM91388*

Motor Operator Adapter Panel

Kits: GM92349-KA21 to GM92349-KA24

Qty.	Description	Common Parts	Unique Parts			
			GM92349-KA21	GM92349-KA22	GM92349-KA23	GM92349-KA24
1	Panel Subassy, Sound Shield Alt (RH)		GM92345	GM92346	GM92346	GM92347
1	Panel, NSX Frame Cir Brkr 4RX-4SX			GM91389*		

Kits: GM92349-KA25 to GM92349-KA26

Qty.	Description	Common Parts	Unique Parts	
			GM92349-KA25	GM92349-KA26
1	Panel Subassy, Sound Shield Alt (RH)		GM92348	GM92348
1	Panel, NSX Frame Cir Brkr 4RX-4SX		GM91389*	

Electric Clutch PTO Kits

Kits: GM88296-KP1 to GM88296-KP4

Qty.	Description	Common Parts	Unique Parts			
			GM88296-KP1	GM88296-KP2	GM88296-KP3	GM88296-KP4
1	Housing, power take-off	GM88223				
1	Hub, PTO drive	GM19415				
1	Coupling, flexible	GM19416				
1	Tube, coolant	GM88511				
1	Guard, power take-off	GM88541				
1	Clutch, electric		344240	344241	344242	344243
1	Plate, clutch mounting		GM88670	GM52104	GM88670	GM52104
1	Hub, PTO clutch drive	GM88669				
1	Clamp (2.0 in. ID)	X-672-40				
2	Mount	GM84781				
1	Guard, belt	GM88544				

Kits: GM88297-KP1 to GM88297-KP4

Qty.	Description	Common Parts	Unique Parts			
			GM88297-KP1	GM88297-KP2	GM88297-KP3	GM88297-KP4
1	Housing, power take-off	GM88223				
1	Hub, PTO drive	GM88816				
1	Coupling, flexible	GM86965				
1	Tube, coolant	GM88511				
1	Guard, power take-off	GM88541				
1	Clutch, electric		GM51571	GM52062	GM51571	GM52062
1	Plate, clutch mounting	GM52104				
1	Shaft, PTO drive	GM86964				
1	Clamp (2.0 in. ID)	X-672-40				
1	Cover, plate				360089	360089
2	Mount		GM84781	GM84781	GM84782	GM84782
1	Guard, belt		GM88545	GM88545	GM88546	GM88546

PTO Adapter Kits

Kits: GM88282-KP1 and GM88282-KP2

Qty.	Description	Common Parts	Unique Parts	
			GM88282-KP1	GM88282-KP2
1	Panel		GM89131	GM89177
1	Panel		GM89134	GM89180
2	Bracket	GM86091		

* Model EOZDJ/EFOZDJ (white), add -WHT suffix to part number. Model EOZCJ/EFOZCJ (gray), add -G49 suffix to part number.

Kits: GM88283-KP1 and GM88283-KP2

Qty.	Description	Common Parts	Unique Parts	
			GM88283-KP1	GM88283-KP2
1	Panel		GM89132	GM89178
1	Panel		GM89135	GM89181
2	Bracket	GM86091		

Governor Kits

Kits: GM17725-KP6 and GM17725-KP8

Qty.	Description	Common Parts	Unique Parts	
			GM17725-KP6	GM17725-KP8
1	Pickup, magnetic	255750		
1	Controller, Governor (LS)Req Programming	GM17644-5		
1	Bushing, 1.312 x 1.50 in. NPT	X-634-16		
4	Spacer, .209 ID x .375 OD x .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		
1	TT Governor, 125-150EOZ/100-125EFOZ	TT-1420		
1	TT Digital Isochronous Governor Program	TT-1388		
1	Relay		259391	272684
1	Actuator, governor		324516	324703

Kits: GM91245-KP1 and GM91245-KP2

Qty.	Description	Common Parts	Unique Parts	
			GM91245-KP1	GM91245-KP2
1	Governor, Electronic	GM90652		
1	Actuator, governor		324516	324703
2	Spacer, .282 ID x .5 OD x .531 in.	X-400-28		

Parts List: Accessories, continued

Qty.	Description	Part No.

Electrical System Kits

RSA Wiring, 50'		**GM64595-KP1**
1	Cable, Communications 50 Ft	GM66135
RSA Wiring, 100'		**GM64595-KP2**
1	Cable, Communications 100 Ft	GM66136
Display, Remote Digital		**GM88293-KP1**
1	Display, Remote Digital	GM91770
Generator Heater, 120/240V, 200W		**GM79104-KP1**
2	Heater, Strip	GM79574
Harness,25',Remote Std. Panel		**GM88294-KP1**
1	Harness, Extension	GM90442
1	Strap	X-526-3
Harness,50',Remote Std. Panel		**GM88294-KP2**
1	Harness, Extension	GM90443
1	Strap	X-526-3
Harness,100',Remote Std. Panel		**GM88294-KP3**
1	Harness, Extension	GM90444
1	Strap	X-526-3
Harness, Remote Display 25'		**GM91774-KP1**
1	HARNESS, REMOTE GAUGE 25'	GM91771
1	Strap	X-526-3
Harness, Remote Display 50'		**GM91774-KP2**
1	HARNESS, REMOTE GAUGE 50'	GM91772
1	Strap	X-526-3
Harness, Remote Display 100'		**GM91774-KP3**
1	HARNESS, REMOTE GAUGE 100'	GM91773
1	Strap	X-526-3
Harness, 25' Digital Display Ext.		**GM92053-KP1**
1	HARNESS, EXTENSION	GM92055
1	Strap	X-526-3
Harness, 50' Digital Display Ext.		**GM92053-KP2**
1	HARNESS, EXTENSION	GM92056
1	Strap	X-526-3
Harness, 100' Digital Display Ext.		**GM92053-KP3**
1	HARNESS, EXTENSION	GM92057
1	Strap	X-526-3
Harness, Digital Display Y		**GM92054-KP1**
1	HARNESS, ADAPTER	GM92058

Qty.	Description	Part No.
Standard Panel, 12V		**GM88292-KP1**
1	Decal, warning	249494
1	Panel Assy, Control 12V	GM62337
	1 Switch, rocker, 1 pole	344392
	1 Wiring harness, Remote Panel	344391
Standard Panel, 24V		**GM88292-KP2**
1	Decal, warning	249494
1	Panel Assy, Control 24V	GM62338
	1 Switch, rocker, 1 pole	344398
	1 Wiring harness, Remote Panel	344391
Remote Controller Mounting, DEC3500 40'		**GM96985-KP1**
1	TT Remote Controller Mounting Kits	TT-1671
1	Gasket, Controller Cover	GM88990
1	Panel, Remote PCB Mounting	GM96382*
1	PCB ASSY, DEC3500 Interface Board	GM96419
1	HARNESS, REMOTE CONTROLLER	GM96428
16	Spacer, .25 OD, .375 in.	X-712-13
Run Relay, 12V		**PA-273743**
1	TT Run Relay, 20-1600 kW	TT-700
2	Washer, plain, .156 ID x .375 in. OD	X-25-9
2	Screw, Machine	X-49-26
2	Nut, flange whiz, 6-32	X-6210-3
1	Relay Assembly, 3PDT, 12VDC	273705
Run Relay, 24V		**PA-273744**
1	TT Run Relay, 20-1600 kW	TT-700
4	Washer, plain, .156 ID x .375 in. OD	X-25-9
2	Screw, Machine	X-49-26
2	Nut, flange whiz, 6-32	X-6210-3
1	Relay Assembly, 3PDT, 24VDC	273706
15 Relay Dry Contact Kit		**GM88193-KP1**
1	PCB Assy, 15 Relay Dry Contact w/ Com	GM84063
1	Harness, 15 Relay	GM88192
1	Decal, warning	344556
6	Nut, hex machine screw, 8-32	X-70-12
6	Spacer, .25 OD, .5 in.	X-712-9
15 Relay Dry Contact Kit		**GM93966-KP1**
1	PCB Assy, 15 Relay Dry Contact w/ Com	GM92483
1	Decal, warning	344556
6	Nut, hex machine screw, 8-32	X-70-12
6	Spacer, .25 OD, .5 in.	X-712-9

Notes

Appendix A Abbreviations

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

A, amp	ampere
ABDC	after bottom dead center
AC	alternating current
A/D	analog to digital
ADC	advanced digital control; analog to digital converter
adj.	adjust, adjustment
ADV	advertising dimensional drawing
Ah	amp- hour
AHWT	anticipatory high water temperature
AISI	American Iron and Steel Institute
ALOP	anticipatory low oil pressure
alt.	alternator
Al	aluminum
ANSI	American National Standards Institute (formerly American Standards Association, ASA)
AO	anticipatory only
APDC	Air Pollution Control District
API	American Petroleum Institute
approx.	approximate, approximately
AQMD	Air Quality Management District
AR	as required, as requested
AS	as supplied, as stated, as suggested
ASE	American Society of Engineers
ASME	American Society of Mechanical Engineers
assy.	assembly
ASTM	American Society for Testing Materials
ATDC	after top dead center
ATS	automatic transfer switch
auto.	automatic
aux.	auxiliary
avg.	average
AVR	automatic voltage regulator
AWG	American Wire Gauge
AWM	appliance wiring material
bat.	battery
BBDC	before bottom dead center
BC	battery charger, battery charging
BCA	battery charging alternator
BCI	Battery Council International
BDC	before dead center
BHP	brake horsepower
blk.	black (paint color), block (engine)
blk. htr.	block heater
BMEP	brake mean effective pressure
bps	bits per second
br.	brass
BTDC	before top dead center
Btu	British thermal unit
Btu/min.	British thermal units per minute
C	Celsius, centigrade
cal.	calorie
CAN	controller area network
CARB	California Air Resources Board
CB	circuit breaker
cc	cubic centimeter
CCA	cold cranking amps
ccw.	counterclockwise
CEC	Canadian Electrical Code
cert.	certificate, certification, certified
cfh	cubic feet per hour
cfm	cubic feet per minute
CG	center of gravity
CID	cubic inch displacement
CL	centerline
cm	centimeter
CMOS	complementary metal oxide substrate (semiconductor)
cogen.	cogeneration
com	communications (port)
coml	commercial
Coml/Rec	Commercial/Recreational
conn.	connection
cont.	continued
CPVC	chlorinated polyvinyl chloride
crit.	critical
CRT	cathode ray tube
CSA	Canadian Standards Association
CT	current transformer
Cu	copper
cUL	Canadian Underwriter's Laboratories
CUL	Canadian Underwriter's Laboratories
cu. in.	cubic inch
cw.	clockwise
CWC	city water- cooled
cyl.	cylinder
D/A	digital to analog
DAC	digital to analog converter
dB	decibel
dB(A)	decibel (A weighted)
DC	direct current
DCR	direct current resistance
deg., °	degree
dept.	department
DFMEA	Design Failure Mode and Effects Analysis
dia.	diameter
DI/EO	dual inlet/end outlet
DIN	Deutsches Institut fur Normung e. V. (also Deutsche Industrie Normenausschuss)
DIP	dual inline package
DPDT	double- pole, double- throw
DPST	double- pole, single- throw
DS	disconnect switch
DVR	digital voltage regulator
E, emer.	emergency (power source)
ECM	electronic control module, engine control module
EDI	electronic data interchange
EFR	emergency frequency relay
e.g.	for example (*exempli gratia)*
EG	electronic governor
EGSA	Electrical Generating Systems Association
EIA	Electronic Industries Association
EI/EO	end inlet/end outlet
EMI	electromagnetic interference
emiss.	emission
eng.	engine
EPA	Environmental Protection Agency
EPS	emergency power system
ER	emergency relay
ES	engineering special, engineered special
ESD	electrostatic discharge
est.	estimated
E- Stop	emergency stop
etc.	et cetera (and so forth)
exh.	exhaust
ext.	external
F	Fahrenheit, female
fglass.	fiberglass
FHM	flat head machine (screw)
fl. oz.	fluid ounce
flex.	flexible
freq.	frequency
FS	full scale
ft.	foot, feet
ft. lb.	foot pounds (torque)
ft./min.	feet per minute
ftp	file transfer protocol
g	gram
ga.	gauge (meters, wire size)
gal.	gallon
gen.	generator
genset	generator set
GFI	ground fault interrupter
GND, ⏚	ground
gov.	governor
gph	gallons per hour
gpm	gallons per minute
gr.	grade, gross
GRD	equipment ground
gr. wt.	gross weight
H x W x D	height by width by depth
HC	hex cap
HCHT	high cylinder head temperature
HD	heavy duty
HET	high exhaust temp., high engine temp.
hex	hexagon
Hg	mercury (element)
HH	hex head
HHC	hex head cap
HP	horsepower
hr.	hour
HS	heat shrink
hsg.	housing
HVAC	heating, ventilation, and air conditioning
HWT	high water temperature
Hz	hertz (cycles per second)
IC	integrated circuit
ID	inside diameter, identification
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IMS	improved motor starting
in.	inch
in. H_2O	inches of water
in. Hg	inches of mercury
in. lb.	inch pounds
Inc.	incorporated
ind.	industrial
int.	internal
int./ext.	internal/external
I/O	input/output
IP	iron pipe
ISO	International Organization for Standardization
J	joule
JIS	Japanese Industry Standard

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

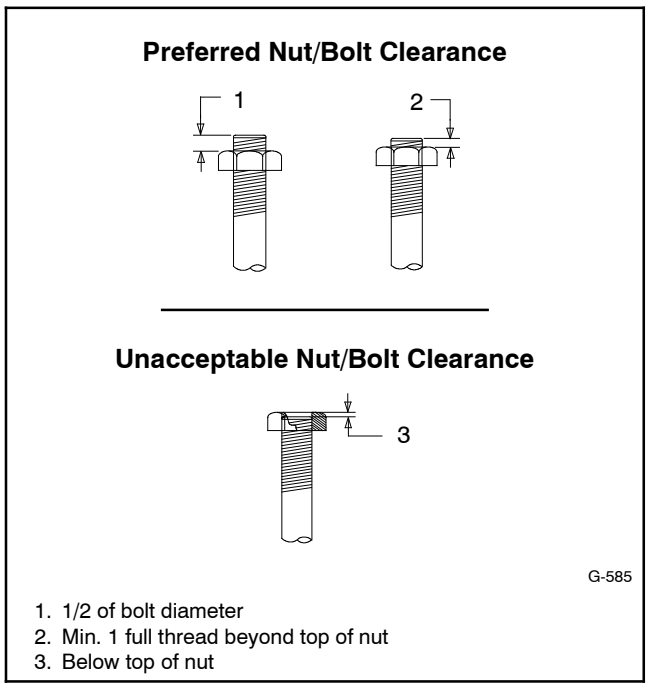
Appendix B Common Hardware Application Guidelines

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, spiralock 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.



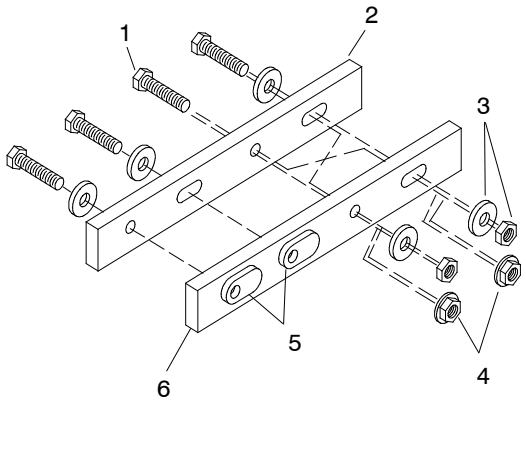
1. 1/2 of bolt diameter
2. Min. 1 full thread beyond top of nut
3. Below top of nut

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 spiralock 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.



1. Cap screw
2. Entry hole types
3. Standard nut and SAE washer
4. Whiz nut or spiralock: up to 1/2 in. dia. hardware
5. Weld nuts: above 1/2 in. dia. hardware
6. Exit hole types

Figure 2 Acceptable Hardware Combinations

Appendix C General Torque Specifications

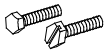
American Standard Fasteners Torque Specifications													
	Assembled into Cast Iron or Steel												Assembled into Aluminum
Size	Grade 2			Grade 5			Grade 8						
8-32	2.0	Nm	(18 in. lb.)	3.1	Nm	(27 in. lb.)	-						
10-24	3.2	Nm	(28 in. lb.)	4.9	Nm	(43 in. lb.)	-						
10-32	3.6	Nm	(32 in. lb.)	5.5	Nm	(49 in. lb.)	-						
12-24	5.0	Nm	(44 in. lb.)	7.7	Nm	(68 in. lb.)	-						
1/4-20	7.6	Nm	(67 in. lb.)	11.6	Nm	(103 in. lb.)	16.5	Nm	(146 in. lb.)				
1/4-28	8.6	Nm	(76 in. lb.)	13.2	Nm	(117 in. lb.)	18.8	Nm	(166 in. lb.)				
5/16-18	15.5	Nm	(137 in. lb.)	24.0	Nm	(212 in. lb.)	33.9	Nm	(300 in. lb.)				
5/16-24	17.1	Nm	(151 in. lb.)	26.4	Nm	(234 in. lb.)	40	Nm	(28 ft. lb.)				
3/8-16	27	Nm	(243 in. lb.)	42	Nm	(31 ft. lb.)	60	Nm	(44 ft. lb.)				
3/8-24	31	Nm	(274 in. lb.)	47	Nm	(35 ft. lb.)	68	Nm	(50 ft. lb.)				
7/16-14	43	Nm	(32 ft. lb.)	68	Nm	(50 ft. lb.)	96	Nm	(71 ft. lb.)				See Note 3
7/16-20	49	Nm	(36 ft. lb.)	76	Nm	(56 ft. lb.)	107	Nm	(79 ft. lb.)				
1/2-13	66	Nm	(49 ft. lb.)	103	Nm	(76 ft. lb.)	146	Nm	(108 ft. lb.)				
1/2-20	75	Nm	(55 ft. lb.)	117	Nm	(86 ft. lb.)	164	Nm	(121 ft. lb.)				
9/16-12	96	Nm	(71 ft. lb.)	149	Nm	(110 ft. lb.)	210	Nm	(155 ft. lb.)				
9/16-18	107	Nm	(79 ft. lb.)	165	Nm	(122 ft. lb.)	235	Nm	(173 ft. lb.)				
5/8-11	133	Nm	(98 ft. lb.)	206	Nm	(152 ft. lb.)	290	Nm	(214 ft. lb.)				
5/8-18	150	Nm	(111 ft. lb.)	232	Nm	(171 ft. lb.)	328	Nm	(242 ft. lb.)				
3/4-10	-			365	Nm	(269 ft. lb.)	515	Nm	(380 ft. lb.)				
3/4-16	-			405	Nm	(299 ft. lb.)	572	Nm	(422 ft. lb.)				
1-8	-			881	Nm	(650 ft. lb.)	1245	Nm	(918 ft. lb.)				
1-12	-			961	Nm	(709 ft. lb.)	1357	Nm	(1001 ft. lb.)				

Metric Fasteners Torque Specifications, Measured in Nm (ft. lb.)									
	Assembled into Cast Iron or Steel								Assembled into Aluminum
Size (mm)	Grade 5.8		Grade 8.8		Grade 10.9		Grade 12.9		
Mxxx-04xxx-xx	1.9	(1.4)	2.9	(2.1)	4.3	(3.2)	4.3	(3.2)	See Note 3
Mxxx-05xxx-xx	3.8	(2.8)	5.8	(4.3)	8.5	(6.3)	8.5	(6.3)	
Mxxx-06xxx-xx	6.5	(4.8)	10.4	(7.7)	14.7	(11)	17.6	(13)	
Mxxx-08xxx-xx	16	(12)	25	(17)	36	(26)	43	(31)	
Mxxx-08xxx-xxF	17	(13)	27	(20)	38	(28)	46	(34)	
Mxxx-10xxx-xx	31	(23)	50	(37)	70	(52)	85	(62)	
Mxxx-10xxx-xxF	33	(24)	53	(39)	74	(55)	89	(66)	
Mxxx-12xxx-xx	55	(40)	87	(64)	123	(91)	147	(109)	
Mxxx-12xxx-xxF	60	(44)	95	(70)	134	(99)	161	(119)	
Mxxx-14xxx-xx	87	(64)	135	(103)	196	(145)	236	(174)	
Mxxx-14xxx-xxF	94	(69)	151	(111)	212	(156)	254	(188)	
Mxxx-16xxx-xx	135	(100)	217	(160)	305	(225)	365	(270)	
Mxxx-16xxx-xxF	145	(107)	231	(171)	325	(240)	390	(288)	
Mxxx-18xxx-xx	187	(138)	299	(221)	421	(310)	505	(373)	
Mxxx-18xxx-xxF	210	(155)	336	(248)	473	(349)	567	(419)	
Mxxx-20xxx-xx	264	(195)	423	(312)	595	(439)	714	(526)	
Mxxx-20xxx-xxF	293	(216)	469	(346)	660	(487)	792	(584)	
Mxxx-22xxx-xx	360	(266)	576	(425)	811	(598)	973	(718)	
Mxxx-22xxx-xxF	396	(292)	633	(467)	890	(657)	1068	(788)	
Mxxx-24xxx-xx	457	(337)	731	(539)	1028	(758)	1233	(910)	
Mxxx-24xxx-xxF	498	(367)	797	(588)	1121	(827)	1345	(992)	
Mxxx-27xxx-xx	-		1072	(790)	1507	(1112)	1809	(1334)	
Mxxx-27xxx-xxF	-		1156	(853)	1626	(1199)	1952	(1439)	
Mxxx-30xxx-xx	-		1453	(1072)	2043	(1507)	2452	(1809)	

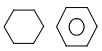
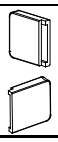
Notes:

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. At minimum, hardware threaded into aluminum must have two diameters of thread engagement. Hardware threaded into steel and cast iron must have 1.25 diameters of thread.
4. Torque values are calculated as equivalent stress loading on American hardware with an approximate preload of 75% of proof strength and a friction coefficient of 0.2.

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	
Hose Clamp Covers	
Black, EPDM rubber used on worm gear clamps	

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)

1/4-20 x 1

- Length In Inches (Screws and Bolts)
- Threads Per Inch
- Major Thread Diameter In Fractional Inches Or Screw Number Size

Metric (Screws, Bolts, Studs, and Nuts)

M8-1.25 x 20

- Length In Millimeters (Screws and Bolts)
- Distance Between Threads In Millimeters
- Major Thread Diameter In Millimeters

Plain Washers

9/32 x 5/8 x 1/16

- Thickness
- External Dimension
- Internal Dimension

Lock Washers

5/8

- Internal Dimension

Appendix E Common Hardware List

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

American Standard

Part No.	Dimensions
Hex Head Bolts (Grade 5)	
X-465-17	1/4-20 x .38
X-465-6	1/4-20 x .50
X-465-2	1/4-20 x .62
X-465-16	1/4-20 x .75
X-465-18	1/4-20 x .88
X-465-7	1/4-20 x 1.00
X-465-8	1/4-20 x 1.25
X-465-9	1/4-20 x 1.50
X-465-10	1/4-20 x 1.75
X-465-11	1/4-20 x 2.00
X-465-12	1/4-20 x 2.25
X-465-14	1/4-20 x 2.75
X-465-21	1/4-20 x 5.00
X-465-25	1/4-28 x .38
X-465-20	1/4-28 x 1.00
X-125-33	5/16-18 x .50
X-125-23	5/16-18 x .62
X-125-3	5/16-18 x .75
X-125-31	5/16-18 x .88
X-125-5	5/16-18 x 1.00
X-125-24	5/16-18 x 1.25
X-125-34	5/16-18 x 1.50
X-125-25	5/16-18 x 1.75
X-125-26	5/16-18 x 2.00
230578	5/16-18 x 2.25
X-125-29	5/16-18 x 2.50
X-125-27	5/16-18 x 2.75
X-125-28	5/16-18 x 3.00
X-125-22	5/16-18 x 4.50
X-125-32	5/16-18 x 5.00
X-125-35	5/16-18 x 5.50
X-125-36	5/16-18 x 6.00
X-125-40	5/16-18 x 6.50
X-125-43	5/16-24 x 1.75
X-125-44	5/16-24 x 2.50
X-125-30	5/16-24 x .75
X-125-39	5/16-24 x 2.00
X-125-38	5/16-24 x 2.75
X-6238-2	3/8-16 x .62
X-6238-10	3/8-16 x .75
X-6238-3	3/8-16 x .88
X-6238-11	3/8-16 x 1.00
X-6238-4	3/8-16 x 1.25
X-6238-5	3/8-16 x 1.50
X-6238-1	3/8-16 x 1.75
X-6238-6	3/8-16 x 2.00
X-6238-17	3/8-16 x 2.25
X-6238-7	3/8-16 x 2.50
X-6238-8	3/8-16 x 2.75
X-6238-9	3/8-16 x 3.00
X-6238-19	3/8-16 x 3.25
X-6238-12	3/8-16 x 3.50
X-6238-20	3/8-16 x 3.75
X-6238-13	3/8-16 x 4.50
X-6238-18	3/8-16 x 5.50
X-6238-25	3/8-16 x 6.50

Part No.	Dimensions
Hex Head Bolts, cont.	
X-6238-14	3/8-24 x .75
X-6238-16	3/8-24 x 1.25
X-6238-21	3/8-24 x 4.00
X-6238-22	3/8-24 x 4.50
X-6024-5	7/16-14 x .75
X-6024-2	7/16-14 x 1.00
X-6024-8	7/16-14 x 1.25
X-6024-3	7/16-14 x 1.50
X-6024-4	7/16-14 x 2.00
X-6024-11	7/16-14 x 2.75
X-6024-12	7/16-14 x 6.50
X-129-15	1/2-13 x .75
X-129-17	1/2-13 x 1.00
X-129-18	1/2-13 x 1.25
X-129-19	1/2-13 x 1.50
X-129-20	1/2-13 x 1.75
X-129-21	1/2-13 x 2.00
X-129-22	1/2-13 x 2.25
X-129-23	1/2-13 x 2.50
X-129-24	1/2-13 x 2.75
X-129-25	1/2-13 x 3.00
X-129-27	1/2-13 x 3.50
X-129-29	1/2-13 x 4.00
X-129-30	1/2-13 x 4.50
X-463-9	1/2-13 x 5.50
X-129-44	1/2-13 x 6.00
X-129-51	1/2-20 x .75
X-129-45	1/2-20 x 1.25
X-129-52	1/2-20 x 1.50
X-6021-3	5/8-11 x 1.00
X-6021-4	5/8-11 x 1.25
X-6021-2	5/8-11 x 1.50
X-6021-1	5/8-11 x 1.75
273049	5/8-11 x 2.00
X-6021-5	5/8-11 x 2.25
X-6021-6	5/8-11 x 2.50
X-6021-7	5/8-11 x 2.75
X-6021-12	5/8-11 x 3.75
X-6021-11	5/8-11 x 4.50
X-6021-10	5/8-11 x 6.00
X-6021-9	5/8-18 x 2.50
X-6239-1	3/4-10 x 1.00
X-6239-8	3/4-10 x 1.25
X-6239-2	3/4-10 x 1.50
X-6239-3	3/4-10 x 2.00
X-6239-4	3/4-10 x 2.50
X-6239-5	3/4-10 x 3.00
X-6239-6	3/4-10 x 3.50
X-792-1	1-8 x 2.25
X-792-5	1-8 x 3.00
X-792-8	1-8 x 5.00

Part No.	Dimensions	Type
Hex Nuts		
X-6009-1	1-8	Standard
X-6210-3	6-32	Whiz
X-6210-4	8-32	Whiz
X-6210-5	10-24	Whiz
X-6210-1	10-32	Whiz
X-6210-2	1/4-20	Spiralock
X-6210-6	1/4-28	Spiralock
X-6210-7	5/16-18	Spiralock
X-6210-8	5/16-24	Spiralock
X-6210-9	3/8-16	Spiralock
X-6210-10	3/8-24	Spiralock
X-6210-11	7/16-14	Spiralock
X-6210-12	1/2-13	Spiralock
X-6210-15	7/16-20	Spiralock
X-6210-14	1/2-20	Spiralock
X-85-3	5/8-11	Standard
X-88-12	3/4-10	Standard
X-89-2	1/2-20	Standard

Washers

Part No.	ID	OD	Thick.	Bolt/ Screw
X-25-46	.125	.250	.022	#4
X-25-9	.156	.375	.049	#6
X-25-48	.188	.438	.049	#8
X-25-36	.219	.500	.049	#10
X-25-40	.281	.625	.065	1/4
X-25-85	.344	.687	.065	5/16
X-25-37	.406	.812	.065	3/8
X-25-34	.469	.922	.065	7/16
X-25-26	.531	1.062	.095	1/2
X-25-15	.656	1.312	.095	5/8
X-25-29	.812	1.469	.134	3/4
X-25-127	1.062	2.000	.134	1

Hose Clamp Covers

Part No.	Clamp Size
GM102674-1	13 mm (1/2 in.)
GM102674-2	8 mm (5/16 in.)

Metric

Hex head bolts are hardness grade 8.8 unless noted.

Hex Head Bolts (Partial Thread)

Part No.	Dimensions
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

Hex Head Bolts (Partial Thread), continued

Part No.	Dimensions
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)

Part No.	Dimensions
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

Hex Head Bolts (Full Thread), continued

Part No.	Dimensions
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

Hex Nuts

Part No.	Dimensions	Type
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.

TP-6864 12/21e

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