

Service Parts

Industrial Generator Sets



Models:

25-150REZG
25/30/80REZGB
80RZGB
40-125ERES
80ERESB

See Group 701: Literature, inside this manual for
part numbers of engine parts catalogs

KOHLER[®]
POWER SYSTEMS

9001
KOHLER
POWER SYSTEMS
NATIONALLY REGISTERED

TP-6667 2/17f

Common Replacement Parts

Figure 1 identifies common replacement parts for your generator set. Refer to the groups on the following pages and the engine parts manual listed in Group 701: Literature for a complete list of maintenance and service parts.

Description	Part Number/Quantity On Model						
	25/30 kW	25-45 kW	50 kW	60 kW	80/100 kW	125 kW	150 kW
	3.0L	4.3L	5.0L	5.7L	8.1L	8.1L	8.1L
Belt, alternator	GM39428 (1)	GM16132 (1)	GM16132 (1)	GM16132 (1)	GM65427 (1)	GM16132 (1)	GM66205 (1)
Element, air cleaner	253107 (1)	253107 (1)	253107 (1)	253107 (1)	GM62309 (1)	GM62309 (1)	GM62309 (1)
Oil filter	GM16703 (1)	GM28351 (1)	GM16703 (1)	GM16703 (1)	GM16703 (1)	GM16703 (1)	GM16703 (1)
Spark plug	GM38998 (4)	GM16531 (6)	GM16531 (8)	GM16531 (8)	GM22171 (8)	GM22171 (8)	GM22171 (8)
Thermostat	GM16537 (1)	GM16537 (1)	GM16537 (1)	GM16537 (1)	GM19726 (1)	GM19726 (1)	GM19726 (1)

Description	Part Number/Quantity On Model
	80 kW
	5.7L
Belt, alternator	GM16132 (1)
Element, air cleaner	GM62309 (1)
Oil filter	GM42034 (1)
Spark plug	GM22171 (8)
Thermostat	GM16537 (1)

Figure 1 Common Replacement Parts

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25/30 kW, Dual Fuel Natural Gas/LPG Vapor	32
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40-60 kW, Natural Gas/LPG Vapor/LP Liquid Withdrawal	36
45 kW, Natural/LP Gas, Prime	38
40-45 kW, Dual Fuel Natural Gas/LPG Vapor	40
50/60 kW, Dual Fuel Natural Gas/LPG Vapor	42
80-100 kW with 8.1L Engine, Natural Gas/LPG Vapor	44
80 kW with 5.7L Engine, Natural Gas/LPG Vapor	46
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Introduction

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. Specification 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.

How to Find Part Numbers

Use the following steps to locate a service replacement part.

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

Hardware References

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

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

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

Specification Number Index

Group Title	<i>Air Intake</i>	<i>Cooling System</i>	<i>Engine</i>	<i>Nameplates and Decals</i>	<i>Skid and Plant Mounting</i>	<i>Generator and Mounting</i>	<i>Controller and Mounting</i>	<i>Literature</i>
Group No.	101	104	105	107	109	201	301	701
Spec No.	Variation Number							

25REZG								
GM69415-GA1	*	*	17	1	*	*	†	431
GM69415-GA3	*	*	18	1	*	*	†	431
GM69415-GA5	*	*	19	1	*	*	†	431
GM69415-GA7	*	*	17	3	*	*	†	431
GM69415-GA9	*	*	18	3	*	*	†	431
GM69415-GA11	*	*	19	3	*	*	†	431
25REZGB								
GM66092-GA13	*	*	1	3	*	*	†	552
GM66092-GA14	*	*	2	3	*	*	†	552
GM66092-GA15	*	*	3	3	*	*	†	552
30REZG								
GM69415-GA2	*	*	17	1	*	*	†	432
GM69415-GA4	*	*	18	1	*	*	†	432
GM69415-GA6	*	*	19	1	*	*	†	432
GM69415-GA8	*	*	17	3	*	*	†	432
GM69415-GA10	*	*	18	3	*	*	†	432
GM69415-GA12	*	*	19	3	*	*	†	432
GM86748-GA1	*	*	30	1	*	*	†	432
30REZGB								
GM66092-GA16	*	*	1	3	*	*	†	551
GM66092-GA17	*	*	2	3	*	*	†	551
GM66092-GA18	*	*	3	3	*	*	†	551
40REZG								
GM66092-GA1	*	*	1	3	*	*	†	370
GM66092-GA3	*	*	2	3	*	*	†	370
GM66092-GA5	*	*	3	3	*	*	†	370
45REZG								
GM66092-GA2	*	*	1	3	*	*	†	373
GM66092-GA4	*	*	2	3	*	*	†	373
GM66092-GA6	*	*	3	3	*	*	†	373
GM86752-GA1	*	*	31	3	*	*	†	373
50REZG								
GM66910-GA1	*	*	4	1	*	*	†	371
GM66910-GA2	*	*	5	1	*	*	†	371
GM66910-GA3	*	*	6	1	*	*	†	371
60REZG								
GM66911-GA1	*	*	7	1	*	*	†	372
GM66911-GA2	*	*	8	1	*	*	†	372
GM66911-GA3	*	*	9	1	*	*	†	372
80REZG								
GM66590-GA1	*	*	11	2	*	*	†	389
GM66590-GA3	*	*	13	2	*	*	†	389
GM66590-GA9	*	*	14	2	*	*	†	389
80REZGB								
GM71610-GA1	*	*	20	2	*	*	†	433
80RZGB								
GM71610-GA11	*	*	29	2	*	*	†	437

Specification Number Index

Group Title	<i>Air Intake</i>	<i>Cooling System</i>	<i>Engine</i>	<i>Nameplates and Decals</i>	<i>Skid and Plant Mounting</i>	<i>Generator and Mounting</i>	<i>Controller and Mounting</i>	<i>Literature</i>
Group No.	101	104	105	107	109	201	301	701
Spec No.	Variation Number							

100REZG								
GM66590-GA2	*	*	11	2	*	*	†	388
GM66590-GA4	*	*	13	2	*	*	†	388
GM66590-GA10	*	*	14	2	*	*	†	388
125REZG								
GM65362-GA1	*	*	12	2	*	*	†	365
GM65362-GA2	*	*	15	2	*	*	†	365
GM65362-GA5	*	*	16	2	*	*	†	365
150REZG								
GM64060-GA1	*	*	10	2	*	*	†	364

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

† Configured group. Refer to the generator set nameplate for the module number.
See controller parts catalog for controller parts lists.

Specification Number Index, 40-125ERES

Group Title	<i>Air Intake</i>	<i>Cooling System</i>	<i>Engine</i>	<i>Nameplates and Decals</i>	<i>Skid and Plant Mounting</i>	<i>Generator and Mounting</i>	<i>Controller and Mounting</i>	<i>Literature</i>
Group No.	101	104	105	107	109	201	301	701
Spec No.	Variation Number							

40ERES								
GM66092-GA7	*	*	1	1	*	*	†	399
GM66092-GA9	*	*	2	1	*	*	†	399
GM66092-GA11	*	*	3	1	*	*	†	399
45ERES								
GM66092-GA8	*	*	1	1	*	*	†	400
GM66092-GA10	*	*	2	1	*	*	†	400
GM66092-GA12	*	*	3	1	*	*	†	400
50ERES								
GM66910-GA4	*	*	4	1	*	*	†	401
GM66910-GA5	*	*	5	1	*	*	†	401
GM66910-GA6	*	*	6	1	*	*	†	401
60ERES								
GM66911-GA6	*	*	7	1	*	*	†	402
GM66911-GA7	*	*	8	1	*	*	†	402
GM66911-GA8	*	*	9	1	*	*	†	402
80ERES								
GM66590-GA5	*	*	11	2	*	*	†	403
GM66590-GA7	*	*	13	2	*	*	†	403
GM66590-GA11	*	*	14	2	*	*	†	403
80ERESB								
GM71610-GA3	*	*	20	2	*	*	†	434
100ERES								
GM66590-GA6	*	*	11	2	*	*	†	404
GM66590-GA8	*	*	13	2	*	*	†	404
GM66590-GA12	*	*	14	2	*	*	†	404
125ERES								
GM65362-GA3	*	*	12	2	*	*	†	405
GM65362-GA4	*	*	15	2	*	*	†	405
GM65362-GA6	*	*	16	2	*	*	†	405

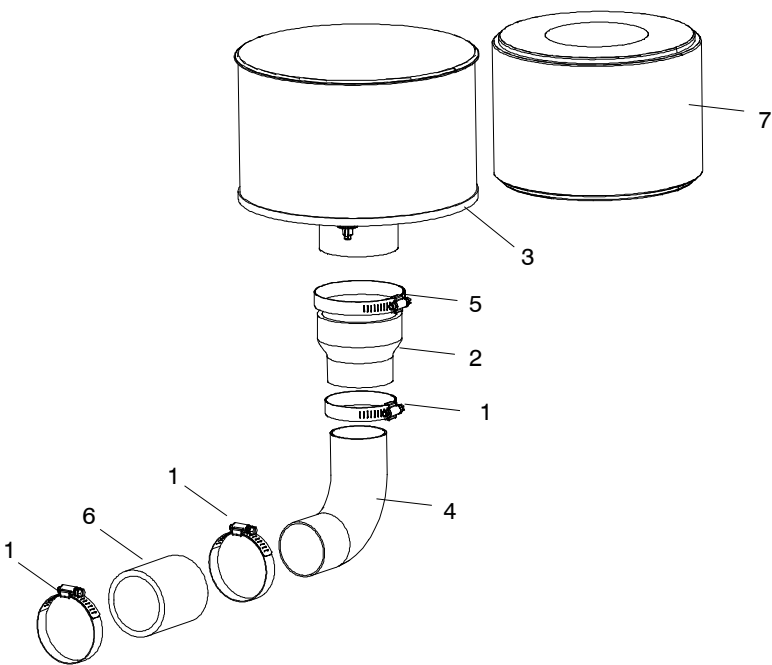
* Configured group. Refer to the generator set nameplate for the module number.
Turn to the respective group on the following pages for parts breakdowns.

† Configured group. Refer to the generator set nameplate for the module number.
See controller parts catalog for controller parts lists.

Notes

Group 101: Air Intake

25/30 kW

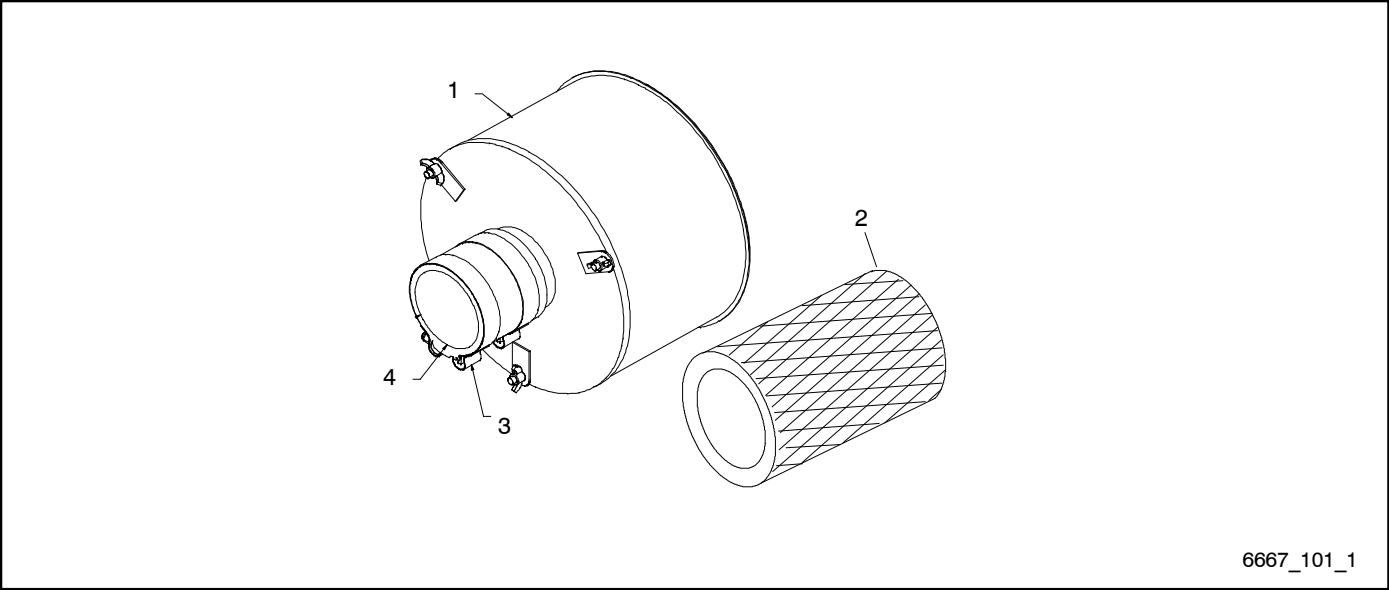


6667_101_4

Item	Part Number	Description	Quantity
			ModuleNumber GM69427-MA1
1	250081	Clamp, hose, 2.06/3 in.	3
2	328006	Hose, reducer (3.00 in. to 2.50 in. ID)	1
3	A-253104	Air cleaner assembly	1
4	GM67400	Tube, elbow	1
5	X-426-1	Clamp, hose, 2.81/3.75 in.	1
6	X-281-8	Hose, radiator wire insert 2.25 in. ID	1
7	253107	Element, air cleaner	1

Group 101: Air Intake, continued

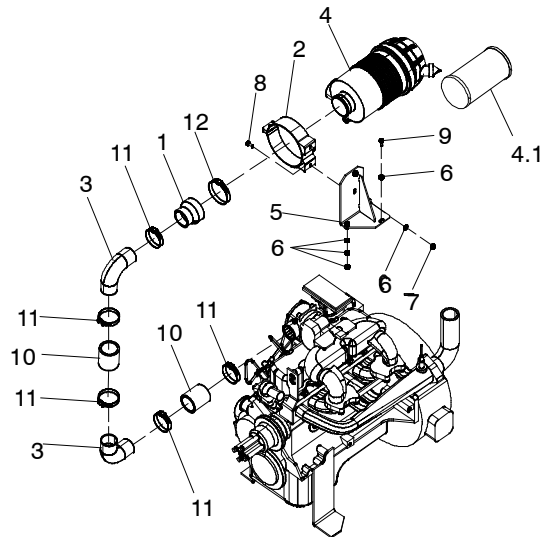
40-60 kW



Item	Part Number	Description	Quantity
			ModuleNumber GM66788-MA1
1	A-253104	Air cleaner assembly	1
2	253107	Element, Air Cleaner	1
3	291542	Clamp, Hose, 3.25/3.56 in.	2
4	X-6014-137	Hose, Wire Insert 3 in. ID	1

Group 101: Air Intake, continued

30 kW, Prime

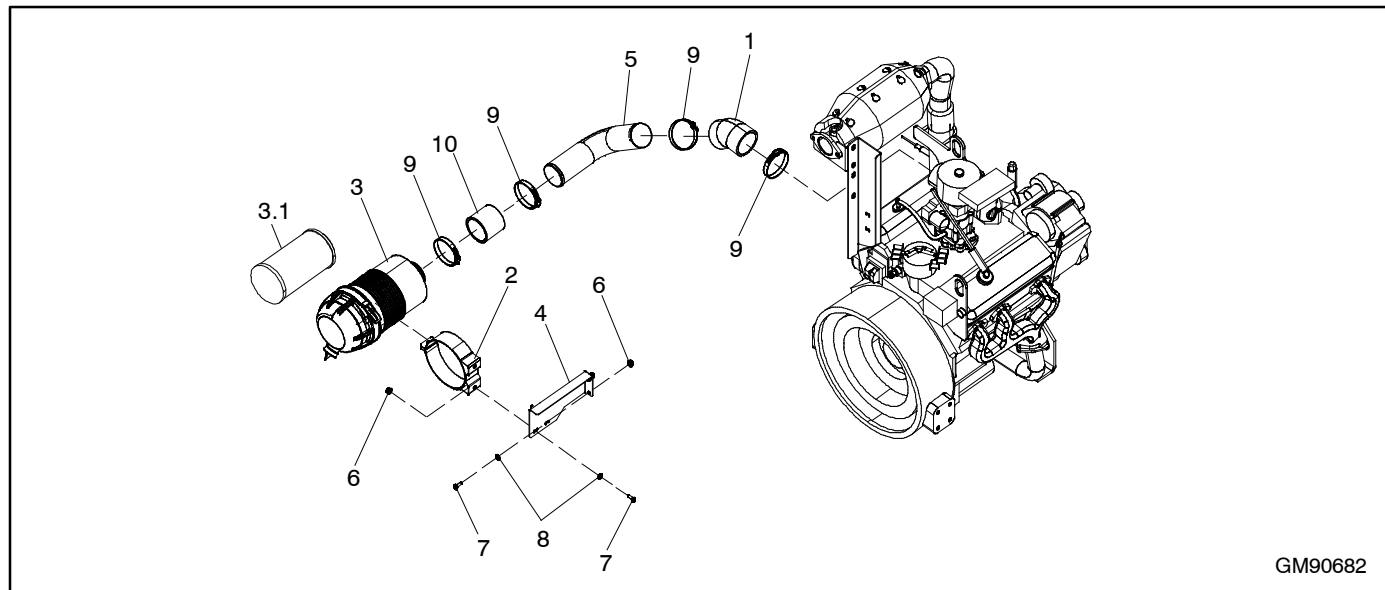


GM92138

Item	Part Number	Description	Quantity
			ModuleNumber GM92138-MA1
1	328006	Hose, reducer (3.00" to 2.50" ID)	1
2	GM14200	Mount, air cleaner (6.76" ID)	1
3	GM67400	Tube, Elbow	2
4	GM90280	Air Cleaner Assy	1
4.1	GM90281	Element, Air Cleaner	1
5	GM92140	Bracket, Air cleaner	1
6	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	7
7	M6923-08-80	Nut, Hex 8mm	2
8	M933-08020-60	Screw, Hex cap	2
9	X-125-3	Bolt, Hex Cap	2
10	X-281-8	Hose, radiator, straight, 2.25 in. ID	2
11	X-426-2	Clamp, hose, 2.31/3.25 in.	5
12	X-426-5	Clamp, hose, 3.56/4.5 in.	1

Group 101: Air Intake, continued

45 kW, Prime

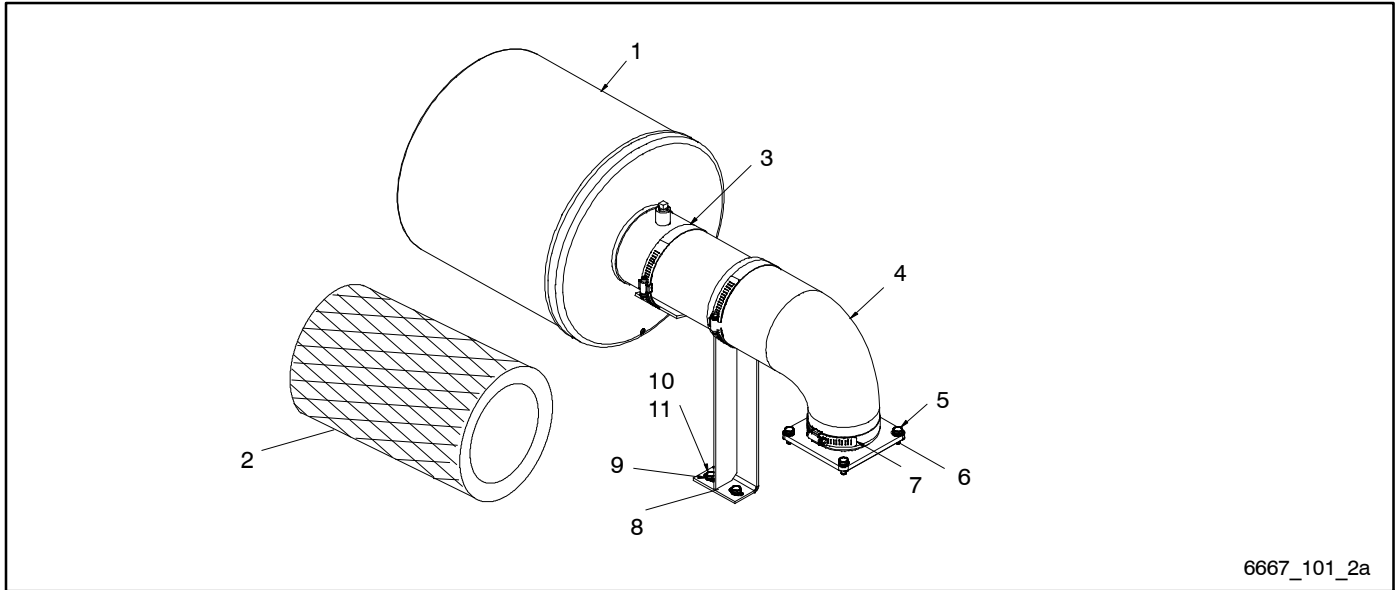


GM90682

Item	Part Number	Description	Quantity
			ModuleNumber GM90682-MA1
1	359249	Hose, 45 deg. elbow (3.00" ID)	1
2	GM14200	Mount, air cleaner (6.76" ID)	1
3	GM90280	Air Cleaner Assy	1
3.1	GM90281	Element, Air Cleaner	1
4	GM90680	Bracket, Air Intake	1
5	GM90681	Tube, Air Intake	1
6	M6923-08-80	Nut, Hex 8mm	4
7	M933-08020-60	Screw, Hex cap	4
8	X-25-40	Washer, plain, .281 ID x .625 in. OD	4
9	X-426-5	Clamp, hose, 3.56/4.5 in.	4
10	X-6014-137	Hose, Radiator Wire Insert, 3" ID	1

Group 101: Air Intake, continued

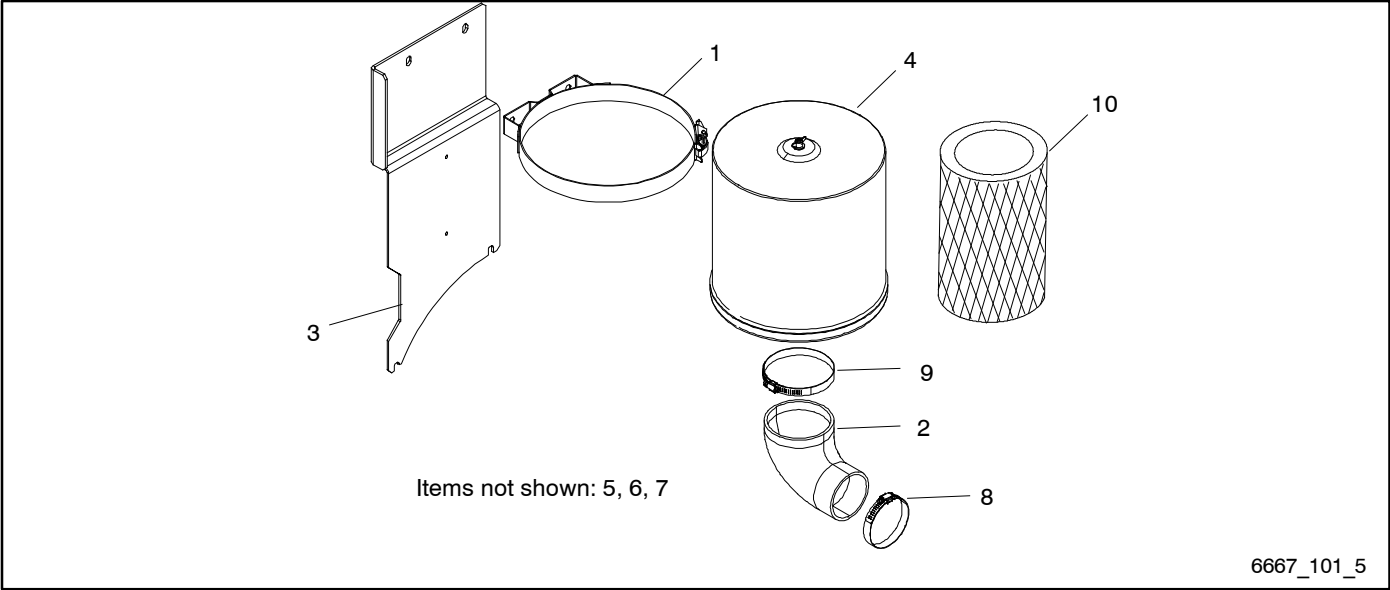
80/100 kW with 8.1L Engine



Item	Part Number	Description	Quantity
			Module Number GM66594-MA1
1	GM62308	Air cleaner assy.	1
2	GM62309	Element, air cleaner	1
3	X-426-5	Clamp, hose, 3.56/4.5 in.	2
4	GM69285	Hose, air intake	1
5	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	4
6	GM64041	Flange, air cleaner	1
7	X-426-1	Clamp, hose, 2.81/3.75 in.	1
8	GM66578	Bracket, Air Cleaner Support	1
9	M125A-06-80	Washer, plain	6
10	M933-06020-60	Screw, hex cap	2
11	M6923-06-80	Nut, hex	2

Group 101: Air Intake, continued

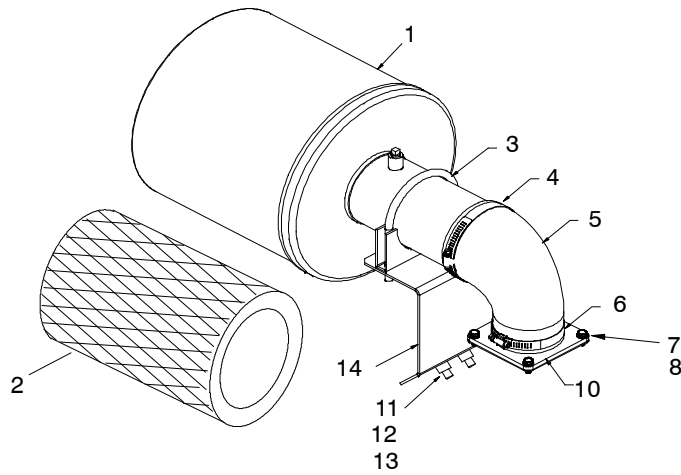
80 kW with 5.7L Engine



Item	Part Number	Description	Quantity
			Module Number GM71616-MA1
1	343530	Clamp, air cleaner (11.00" Id)	1
2	GM49984	Hose 90° Elbow	1
3	GM73999	Bracket, Air Cleaner Mtg	1
4	GM74000	Air Cleaner Assembly	1
5	M125A-10-80	Washer, Plain, 10.5 ID x 20.0 OD	2
6	M6923-10-80	Nut, Hex 10mm	2
7	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm	2
8	X-426-5	Clamp, hose, 3.56/4.5 in.	1
9	X-426-5	Clamp, hose, 3.56/4.5 in.	1
10	GM62309	Element, Air Cleaner	1

Group 101: Air Intake, continued

125/150 kW

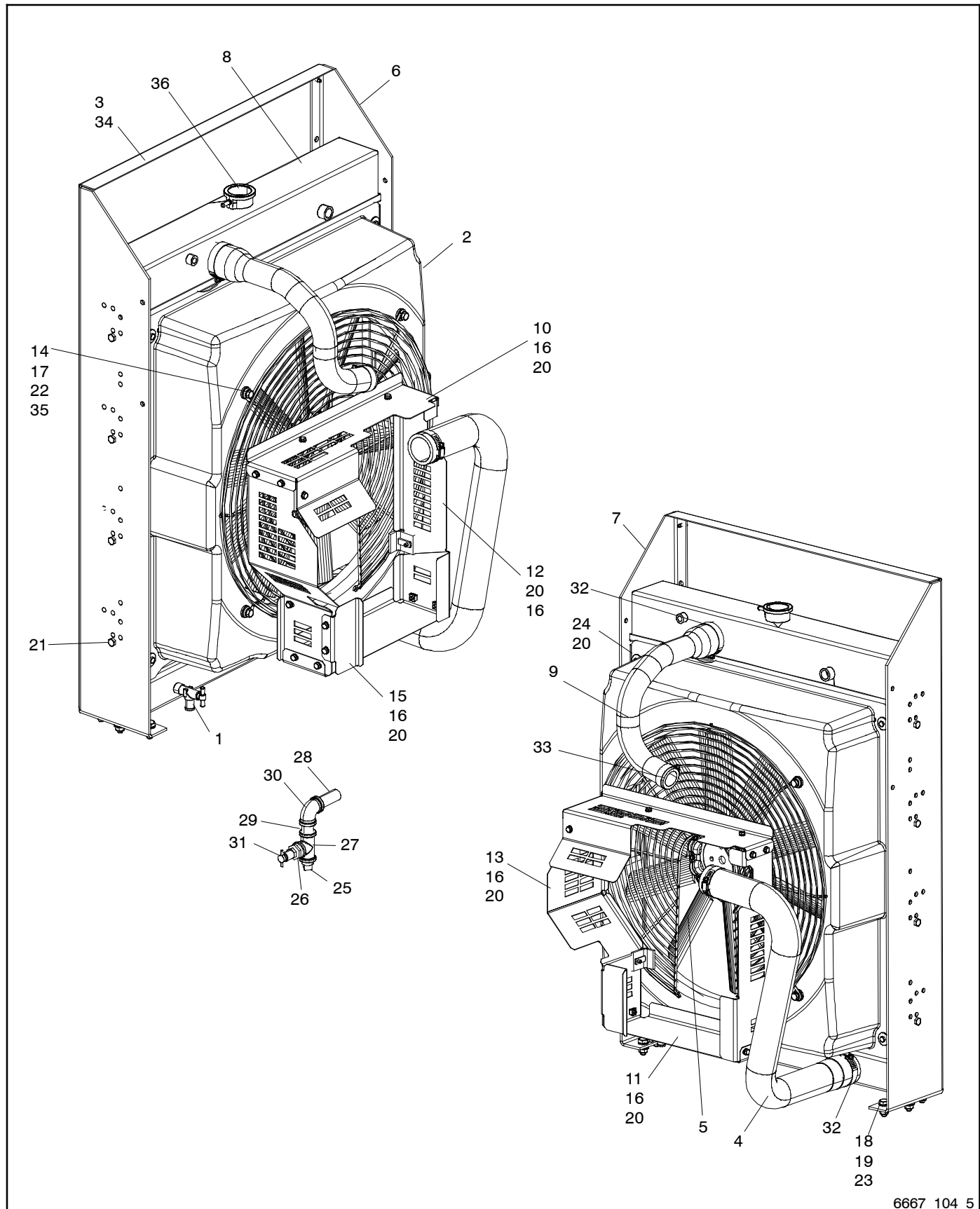


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Item	Part Number	Description	Quantity
			Module Number GM64064-MA1
1	GM62308	Air Cleaner Assy.	1
2	GM62309	Element, Air Cleaner	1
3	289372	Clamp, muffler, 4.12 in.	1
4	X-426-7	Clamp, hose, 4.06/5 in.	1
5	GM49984	Hose 90 deg. Elbow	1
6	X-426-5	Clamp, hose, 3.56/4.5 in.	1
7	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	4
8	M125A-06-80	Washer, Plain	4
10	GM64041	Flange, Air Cleaner	1
11	X-400-89	Spacer, .406 ID x .625 OD x .375 in.	2
12	X-6238-11	Bolt, Hex Cap (3/8-16 x 1 in.) gr. 5	2
13	X-25-28	Washer, plain, .406 ID x .656 OD	2
14	GM64052	Support, Air Cleaner	1

Group 104: Cooling System

25/30 kW



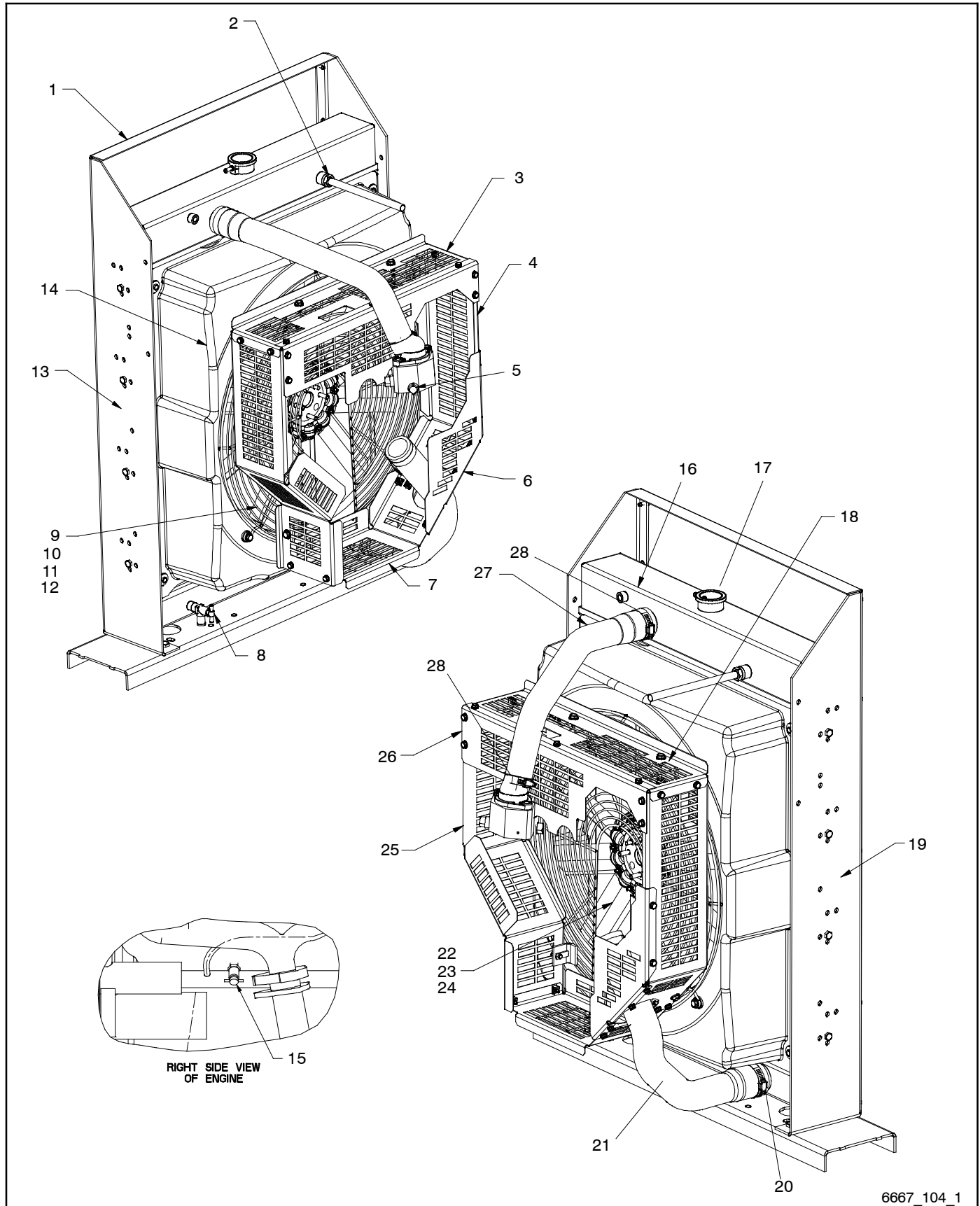
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Group 104: Cooling System

Item	Part Number	Description	Quantity
			Module Number GM69419-MA1
1	278788	Valve, drain (3/8 in. nptf)	1
2	324076	Shroud, fan	1
3	GM14100	Guard, radiator	1
4	GM21048	Hose, lower radiator	1
5	GM22215	Fan, pusher	1
6	GM29987	Support, radiator	1
7	GM29988	Support, radiator	1
8	GM52729	Radiator assembly	1
9	GM69432	Hose, upper radiator	1
10	GM69483	Guard, belt top	1
11	GM69484	Guard, belt bottom	1
12	GM69485	Guard, belt rh	1
13	GM69486	Guard, belt lh	1
14	GM69584	Guard, wire fan	1
15	GM69790	Guard, belt bottom rear	1
16	M125A-06-80	Washer, plain	15
17	M125A-08-80	Washer, plain 8.4 ID x 16.0 OD	4
18	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	6
19	M6923-10-80	Nut, Hex 10mm	6
20	M933-06016-60	Screw, hex cap, M6 x 16mm, js500 full thrd	19
21	M933-08016-60	Screw, hex cap	8
22	M933-08025-60	Screw, hex cap	4
23	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm	6
24	X-25-73	Wshr, pl .266 ID x 1 in. OD	4
25	X-75-28	Plug, pipe (1/2 in. nptf)	1
26	X-202-47	Bushing, reducing (1/4 x 1/2 in. npt)	1
27	X-203-13	Tee, pipe (1/2 x 1/2 x 1/2 npt)	1
28	X-209-3	Pipe, Nipple (1/2 in. NPT x 2.50 in.)	1
29	X-209-5	Pipe (1/2 in. npt x 1.50 in.)	1
30	X-215-1	Elbow, pipe (90 deg x 1/2 in. npt)	1
31	X-256-3	Valve, drain (1/4 in. nptf)	1
32	X-426-16	Clamp, hose, 1.81/2.75 in.	3
33	X-426-4	Clamp, hose, 1.31/2.25 in.	1
34	X-794-1	Screw, hex wshr hd, drill 1/4-14 x 5/8	10
35	X-6365-2	Insert, threaded	4
36	352327	Cap, radiator	1

Group 104: Cooling System, continued

40-60 kW



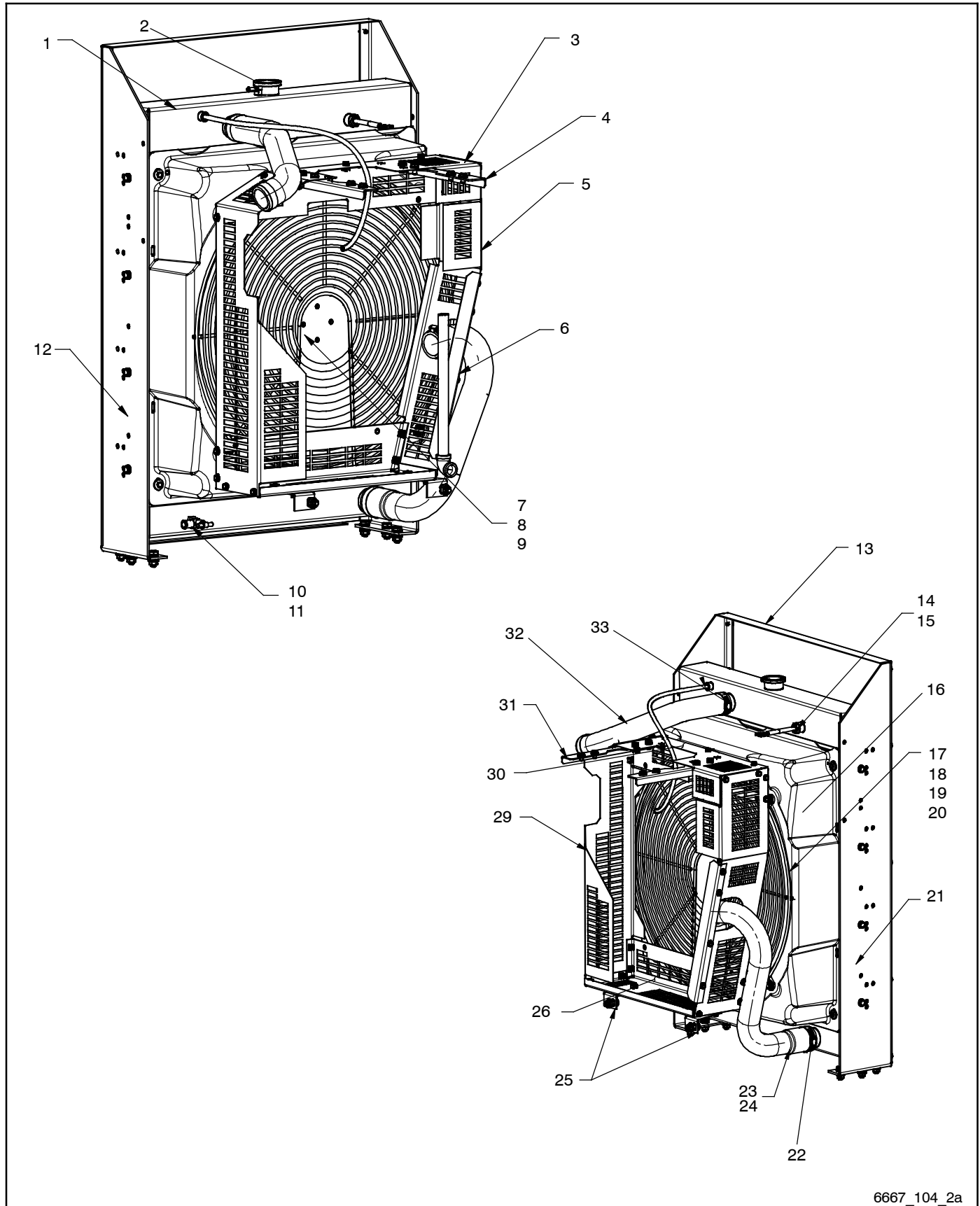
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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity Module			
			GM66094-MA1	GM66094-MA2	GM73886-MA1	GM73886-MA2
1	GM14100	Guard, Radiator	1	1	1	1
2	365289	Sensor, Low Fluid Assembly	1	1		
2	-	See Control and Harness Group			1	1
2	X-6003-8	Conduit, convoluted	1	1		
3	GM15347	Guard, Belt Top	1	1	1	1
4	GM15345	Guard, Belt RH	1	1	1	1
5	X-75-28	Plug, pipe (1/2 in. nptf)	3		3	
6	GM15349	Guard, Belt Back	1	1	1	1
7	GM15348	Guard, Belt Bottom	1	1	1	1
8	278788	Valve, drain (3/8 in. nptf)	1	1	1	1
9	352378	Guard, Wire Fan	1	1	1	1
10	X-6365-2	Insert, threaded, 5/16-18 in.	4	4	4	4
11	M933-08025-60	Bolt, Hex Cap	4	4	4	4
12	M125A-08-80	Washer, plain	4	4	4	4
13	GM29988	Support, radiator	1	1	1	1
14	324076	Shroud, fan	1	1	1	1
15	X-256-3	Valve, drain (1/4 in. nptf)	1	1	1	1
16	GM52729	Radiator Assembly	1		1	
16	GM52730	Radiator Assembly		1		1
17	352327	Cap, radiator	1	1	1	1
18	352384	Bracket, belt guard	2	2	2	2
19	GM29987	Support, radiator	1	1	1	1
20	250081	Clamp, hose, 2.06/3 in.	2	2	2	2
21	GM14098	Hose, lower radiator (44mm ID)	1	1	1	1
22	GM16769	Fan, Pusher	1	1	1	1
23	M933-08030-82	Screw, Hex Cap	4	4	4	4
24	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	4	4	4	4
25	GM15346	Guard, Belt LH	1	1	1	1
26	GM15350	Guard, Belt Upper Back	1	1	1	1
27	GM22939	Hose, upper radiator (1.5 in. ID)	1	1	1	1
28	X-426-6	Clamp, hose, 1.56/2.5 in.	2	2	2	2

Group 104: Cooling System, continued

80–100 kW with 8.1L Engine



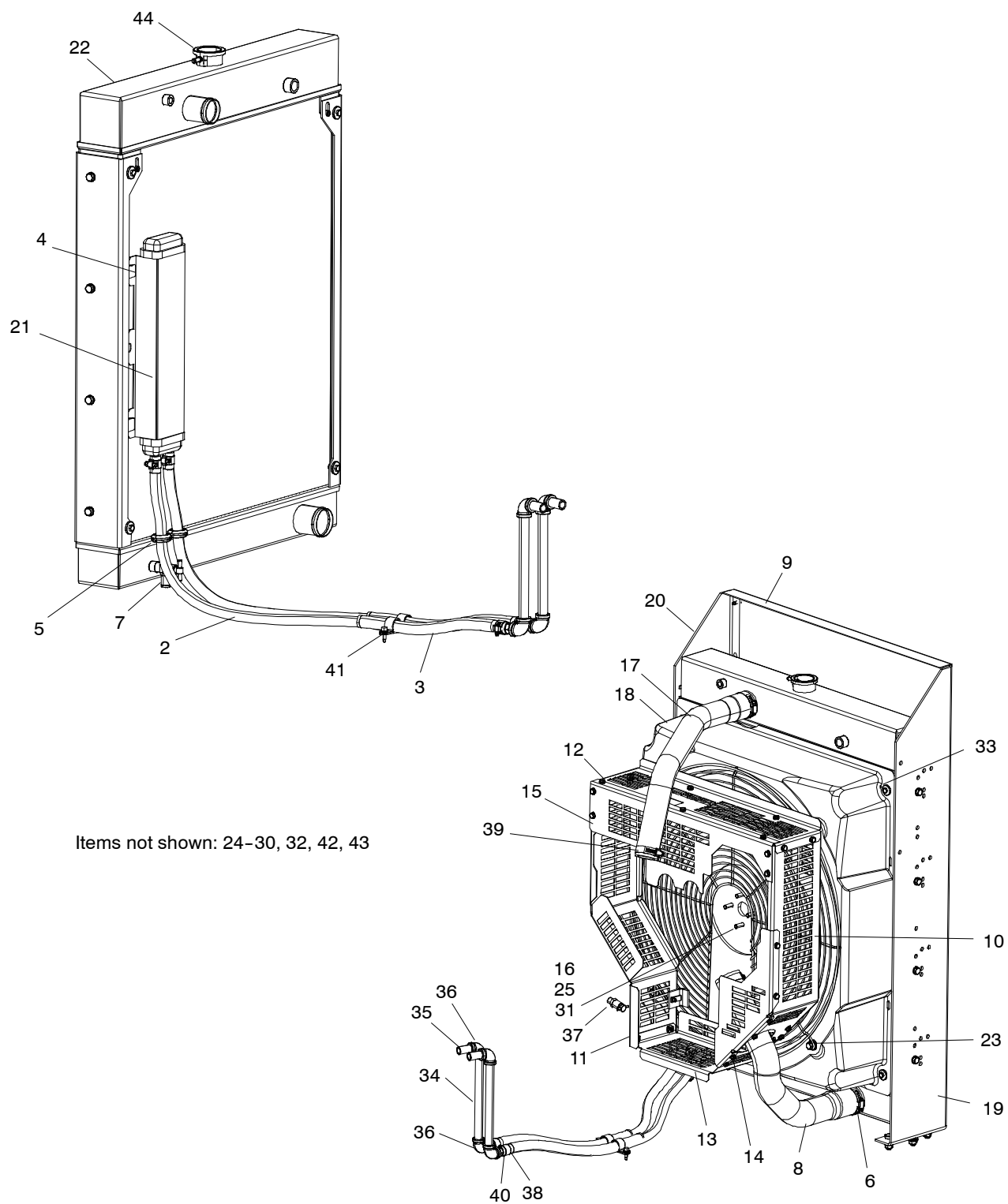
6667_104_2a

Group 104: Cooling System, continued

Item	Part Number	Description	Quantity	
			Module Number	
			GM66592-MA1	GM66592-MA2
1	GM52730	Radiator assembly	1	1
2	352327	Cap, radiator	1	1
3	GM64617	Guard, belt top	1	1
4	GM64270	Bracket, belt guard	1	1
5	GM66599	Guard, belt rh	1	1
6	GM16080	Guard, belt back	1	1
7	GM16770	Fan, pusher	1	1
8	M933-08030-82	Screw, hex cap	4	4
9	M125A-08-80	Washer, plain 8.4 ID x 16.0 OD	4	4
10	X-204-6	Pipe, Nipple (3/8" npt x 2.00")	1	1
10	X-216-23	Coupling, pipe (3/8"npsc)	1	1
11	278788	Valve, drain	1	1
12	GM29988	Support, radiator	1	1
13	GM14100	Guard, radiator	1	1
14	365289	Sensor, low fluid assy	1	
14	-	See Control and Harness Group		1
15	X-6003-8	Conduit, convoluted	1	1
16	GM29772	Shroud, fan	1	1
17	GM16662	Guard, wire fan	1	1
18	X-125-31	Bolt, hex cap	4	4
19	X-25-85	Washer, plain, .344 ID x .687 in. OD	4	4
20	X-6365-1	Insert, threaded, 5/16-18 in.	4	4
21	GM29987	Support, radiator	1	1
22	250081	Clamp, hose	1	1
23	GM13884	Hose, lower radiator (45.4mm ID)	1	1
24	X-426-6	Clamp, hose, 1.56/2.5 in.	1	1
25	GM16078	Bracket, belt guard	2	2
26	GM66596	Guard, belt bottom	1	1
29	GM16077	Guard, belt l.h.	1	1
30	GM66597	Guard, belt	1	1
31	GM64271	Bracket, belt guard	1	1
32	GM29884	Hose, upper radiator	1	1
33	X-426-6	Clamp, hose, 1.56/2.5 in.	2	2

Group 104: Cooling System, continued

80 kW with 5.7L Engine



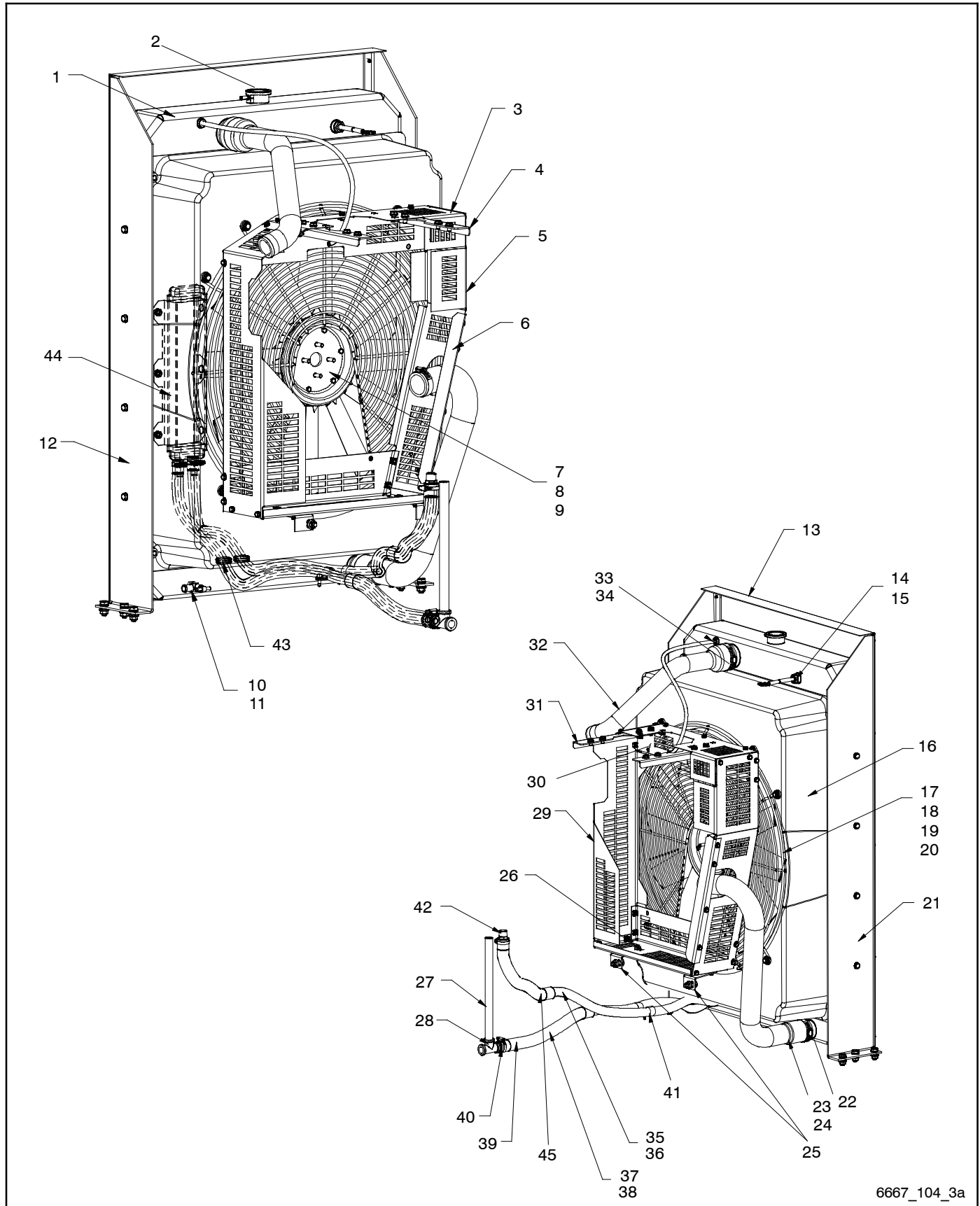
GM71612_B

Group 104: Cooling System, continued

Item	Part Number	Description	Quantity
			Module Number GM71612-MA1
2	X-6242-15	Line, Flex Fuel	2
3	GM23718	Shield, heat (32mm ID x 455mm length)	2
4	GM74847	Strap, Mounting Package	1
5	243488	Grommet, round	2
6	X-426-2	Clamp, hose, 2.31/3.25 in.	2
7	278788	Valve, drain (3/8"nptf)	1
8	GM14098	Hose, lower radiator (44mm ID)	1
9	GM14100	Guard, Radiator	1
10	GM15345	Guard, Belt RH	1
11	GM15346	Guard, Belt LH	1
12	GM15347	Guard, Belt Top	1
13	GM15348	Guard, Belt Bottom	1
14	GM15349	Guard, Belt Back	1
15	GM15350	Guard, Belt Upper Back	1
16	GM16770	Fan, Pusher	1
17	GM22939	Hose, upper radiator (1.50" ID)	1
18	GM29772	Shroud, Fan	1
19	GM29987	Support, radiator	1
20	GM29988	Support, radiator	1
21	GM30589	Cooler, Engine Oil	1
22	GM52730	Radiator Assembly	1
23	GM71609	Guard, Wire Fan	1
24	M125A-06-80	Washer, Plain	25
25	M125A-08-80	Washer, Plain, 8.4 ID x 16.0 OD	16
26	M125A-10-80	Washer, Plain, 10.5 ID x 20.0 OD	6
27	M6923-10-80	Nut, Hex 10mm	6
28	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	29
29	M933-08016-60	Screw, hex cap	8
30	M933-08025-60	Screw, hex cap	4
31	M933-08030-82	Screw, hex cap	4
32	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm	6
33	X-25-75	Washer,plain, .344 ID x .875 in. OD	4
34	X-204-17	Pipe (3/8"npt x 8.00")	2
35	X-204-8	Pipe (3/8"npt x 1.50")	2
36	X-215-9	Elbow, pipe (90 deg x 3/8"npt)	4
37	X-256-3	Valve, drain (1/4"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-582-4	Connector, hose + Vibra Seal	2
41	X-672-13	Clamp, insulated, .88 in.	2
42	X-794-1	Screw, hex wshr hd, drill 1/4-14 x 5/8	12
43	X-6365-2	Insert, threaded	4
44	352327	Cap, Radiator	1

Group 104: Cooling System, continued

125 kW



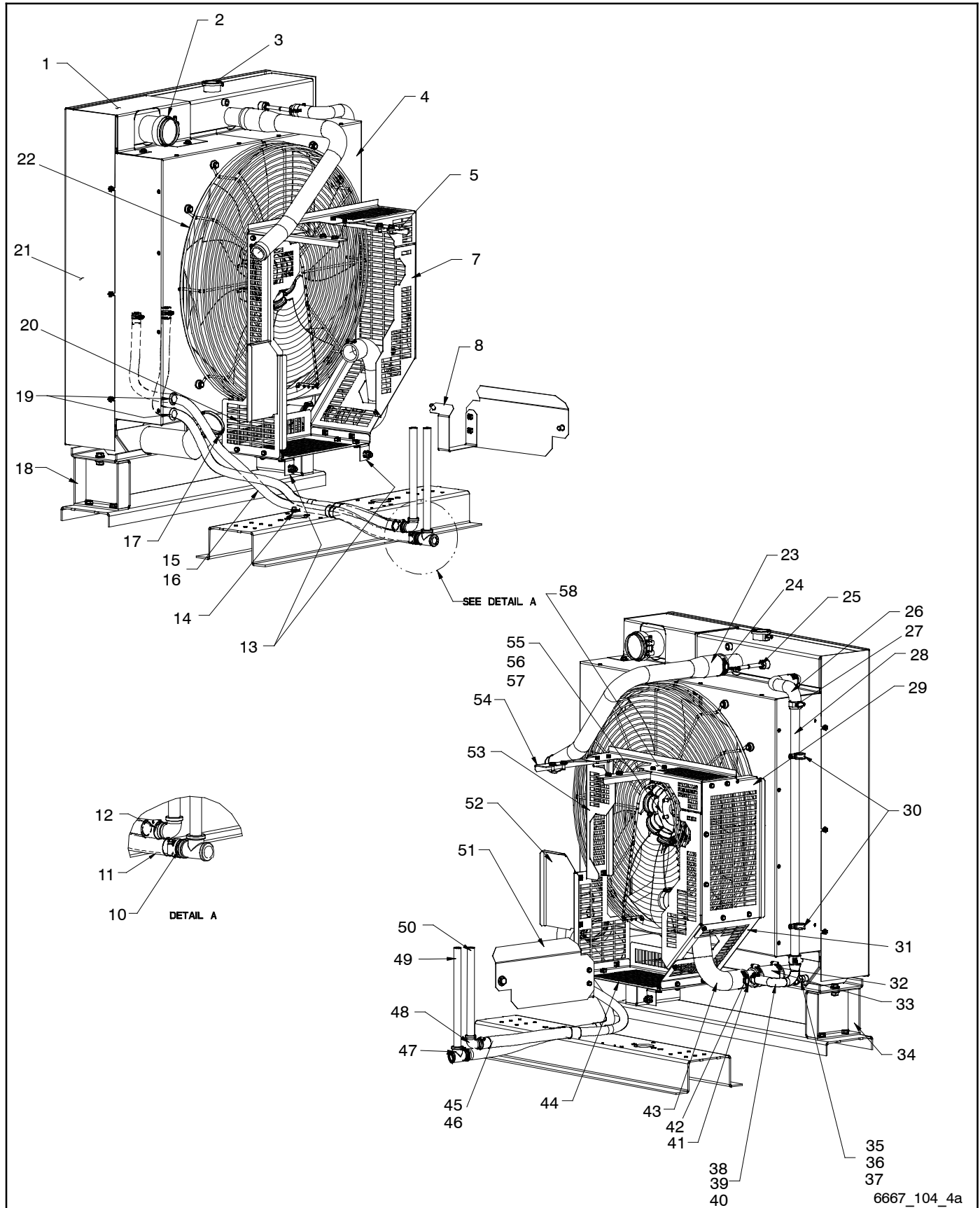
6667_104_3a

Group 104: Cooling System, continued

Item	Part Number	Description	Quantity	
			Module Number	
			GM65367-MA1	GM65367-MA2
1	GM52731	Radiator assembly	1	1
2	352327	Cap, radiator	1	1
3	GM64617	Guard, belt top	1	1
4	GM64270	Bracket, belt guard	1	1
5	GM66599	Guard, belt rh	1	1
6	GM16080	Guard, belt back	1	1
7	GM31940	Fan, pusher	1	1
8	M933-08030-82	Screw, hex cap	4	4
9	M125A-08-80	Washer, plain 8.4ID x 16.0 OD	4	4
10	X-204-6	Pipe, Nipple (3/8" npt x 2.00")	1	1
10	X-216-23	Coupling, pipe (3/8"npsc)	1	1
11	278788	Valve, drain	1	1
12	GM32286	Support, radiator (lh)	1	1
13	GM31192	Guard, radiator	1	1
14	365289	Sensor, low fluid assy	1	
14	-	See Control and Harness Group		1
15	X-6003-8	Conduit, convoluted	1	1
16	GM29800	Shroud, fan	1	1
17	336888	Guard, wire fan	1	1
18	X-125-31	Bolt, hex cap	6	6
19	X-25-85	Washer, plain, .344 ID x .687 in. OD	6	6
20	X-6365-1	Insert, threaded, 5/16-18 in.	6	6
21	GM32285	Support, radiator (rh)	1	1
22	250081	Clamp, hose	1	1
23	GM31195	Hose, lower radiator	1	1
24	X-426-6	Clamp, hose, 1.56/2.5 in.	1	1
25	GM16078	Bracket, belt guard	2	2
26	GM66596	Guard, belt bottom	1	1
27	X-209-26	Pipe (1/2in. npt x 12.00 in.)	1	1
28	X-203-13	Tee, pipe (1/2 x 1/2 x 1/2 npt)	1	1
29	GM16077	Guard, belt l.h.	1	1
30	GM66597	Guard, belt	1	1
31	GM64271	Bracket, belt guard	1	1
32	GM31194	Hose, upper radiator	1	1
33	X-426-6	Clamp, hose, 1.56/2.5 in.	1	1
34	X-426-2	Clamp, hose, 2.31/3.25 in.	1	1
35	X-6242-13	Line, flex fuel	1	1
36	X-426-10	Clamp, hose, .5/1 in.	2	2
37	X-6242-19	Line, flex fuel	1	1
38	X-426-10	Clamp, hose, .5/1 in.	2	2
39	GM23718	Shield, heat (32mm id x 455mm length)	1	1
40	X-582-5	Connector, hose + vibra seal	1	1
41	X-672-13	Clamp, insulated, .88 in.	2	2
42	X-582-5	Connector, hose + vibra seal	1	1
43	243488	Grommet	2	2
44	GM30589	Cooler, engine oil	1	1
45	GM71831	Shield, heat	1	1

Group 104: Cooling System, continued

150 kW

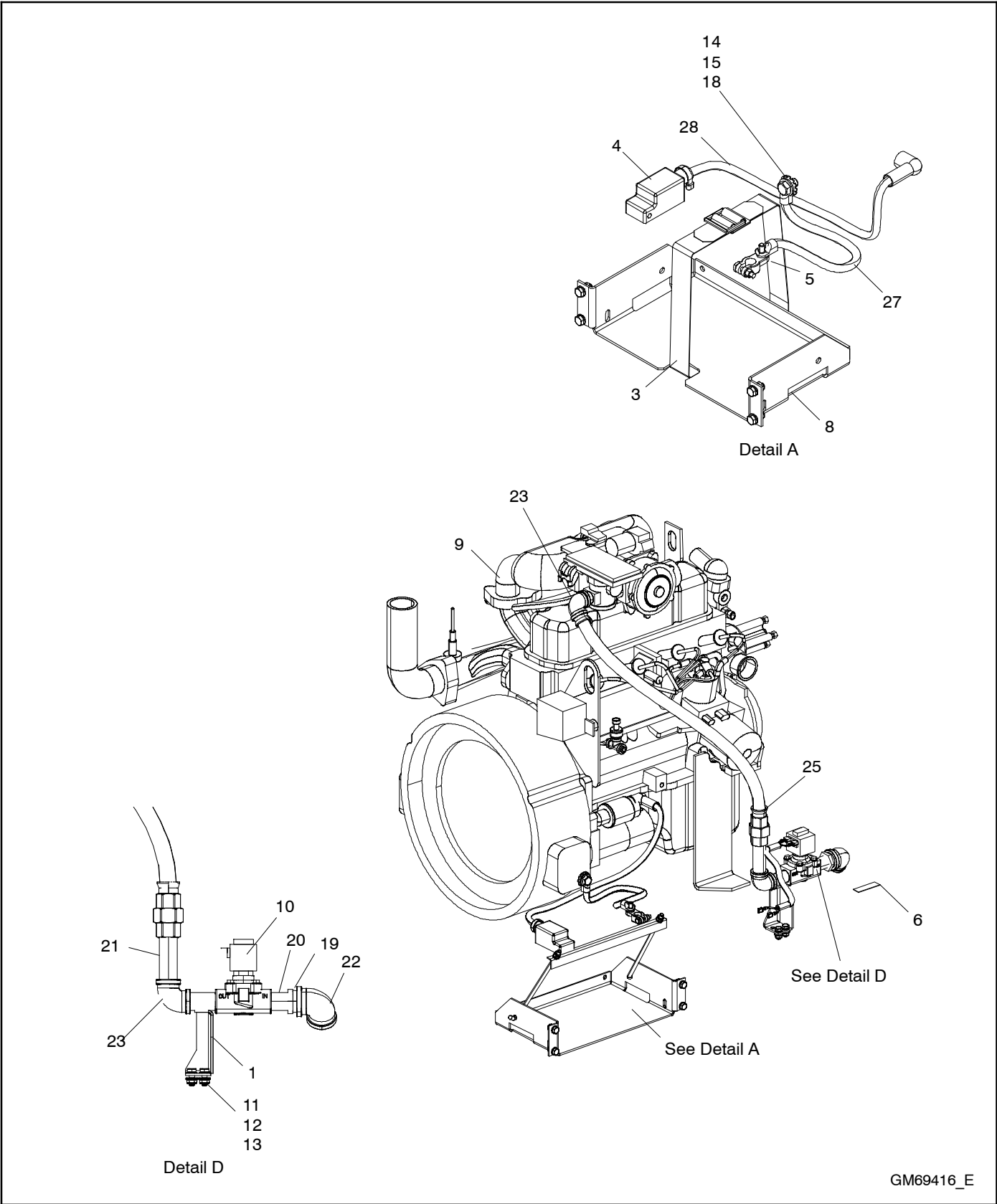


Group 104: Cooling System, continued

Item	Part Number	Description	Quantity	
			Module Number	
			GM64159-MA1	GM64159-MA2
1	GM55317	Guard, Charge Cooler	1	1
2	343175	Clamp, hose, 3.06/3.38 in.	1	1
3	GM64392	Cap, radiator	1	1
4	GM49660	Radiator Assembly	1	1
5	GM64270	Bracket, Belt Guard	1	1
7	GM64263	Guard, Belt Rear	1	1
8	GM55480	Bracket, Heat Shield	1	1
10	X-582-5	Connector, hose + Vibra Seal	1	1
11	GM23718	Shield, heat (32mm id x 455mm length)	2	2
12	X-582-5	Connector, hose + Vibra Seal	1	1
13	GM64267	Bracket, Belt Guard	2	2
14	X-672-13	Clamp, insulated, .88 in.	2	2
15	X-6242-13	Line, Flex Fuel	1	1
16	X-426-10	Clamp, hose, .5/1 in.	2	2
17	343175	Clamp, hose, 3.06/3.38 in.	1	1
18	GM49983	Bracket, Radiator Mtg.	1	1
19	243488	Grommet, round	2	2
20	GM64264	Guard, Belt Lower Left	1	1
21	GM58171	Guard, Radiator	1	1
22	GM64239	Guard, Wire Fan	1	1
23	GM51912	Hose, Upper Radiator	1	1
24	X-426-6	Clamp, hose, 1.56/2.5 in.	2	2
25	365289	Sensor, Low Fluid Assembly	1	
25	-	See Control and Harness Group		1
26	GM51923	Hose, Radiator Bypass	1	1
27	X-426-15	Clamp, hose, .75/1.5 in.	2	2
28	GM52263	Tube, Radiator Bypass	1	1
29	GM64268	Guard, Belt Upper Right	1	1
30	X-672-30	Clamp, insulated, 1.06 in.	2	2
31	GM64261	Guard, Belt Right Lower	1	1
32	X-311-7	Hose, radiator, straight, 1.75 in. ID	1	1
33	X-426-6	Clamp, hose, 1.56/2.5 in.	2	2
34	GM49983	Bracket, Radiator Mtg.	1	1
35	278788	Valve, drain (3/8 in. nptf)	1	1
36	X-250-2	Coupling, reducer (3/8 in. x 1/4 in. npt)	1	1
37	X-220-6	Pipe (1/4 in. npt x 1.50 in.)	1	1
38	GM51972	Hose, Lower Radiator Bypass	1	1
39	X-426-15	Clamp, hose, .75/1.5 in.	1	1
40	X-426-3	Clamp, hose, .56/1.06 in.	1	1
41	GM59156	Connector, Hose	1	1
42	GM58131	Hose, Lower Radiator	1	1
43	X-426-6	Clamp, hose, 1.56/2.5 in.	2	2
44	GM64262	Guard, Belt Bottom	1	1
45	X-6242-15	Line, Flex Fuel	1	1
46	X-426-10	Clamp, hose, .5/1 in.	2	2
47	X-203-13	Tee, pipe (1/2 x 1/2 x 1/2 npt)	1	1
48	X-215-1	Elbow, pipe (90 deg x 1/2 in. npt)	1	1
49	X-209-26	Pipe (1/2 in. npt x 12.00 in.)	1	1
50	X-209-31	Pipe, Nipple 1/2 in. NPT x 10.5 in. Long	1	1
51	GM55481	Shield, Heat	1	1
52	GM64266	Guard, Belt Manifold	1	1
53	GM64265	Guard, Belt Upper Left	1	1
54	GM64271	Bracket, Belt Guard	1	1
55	GM49816	Fan, Pusher	1	1
56	X-125-5	Bolt, Hex Cap	4	4
57	X-801-4	Washer, hardened, .328 ID x .719 in. OD	4	4
58	GM64269	Guard, Belt Top	1	1

Group 105: Engine

25/30 kW, Natural Gas/LPG Vapor



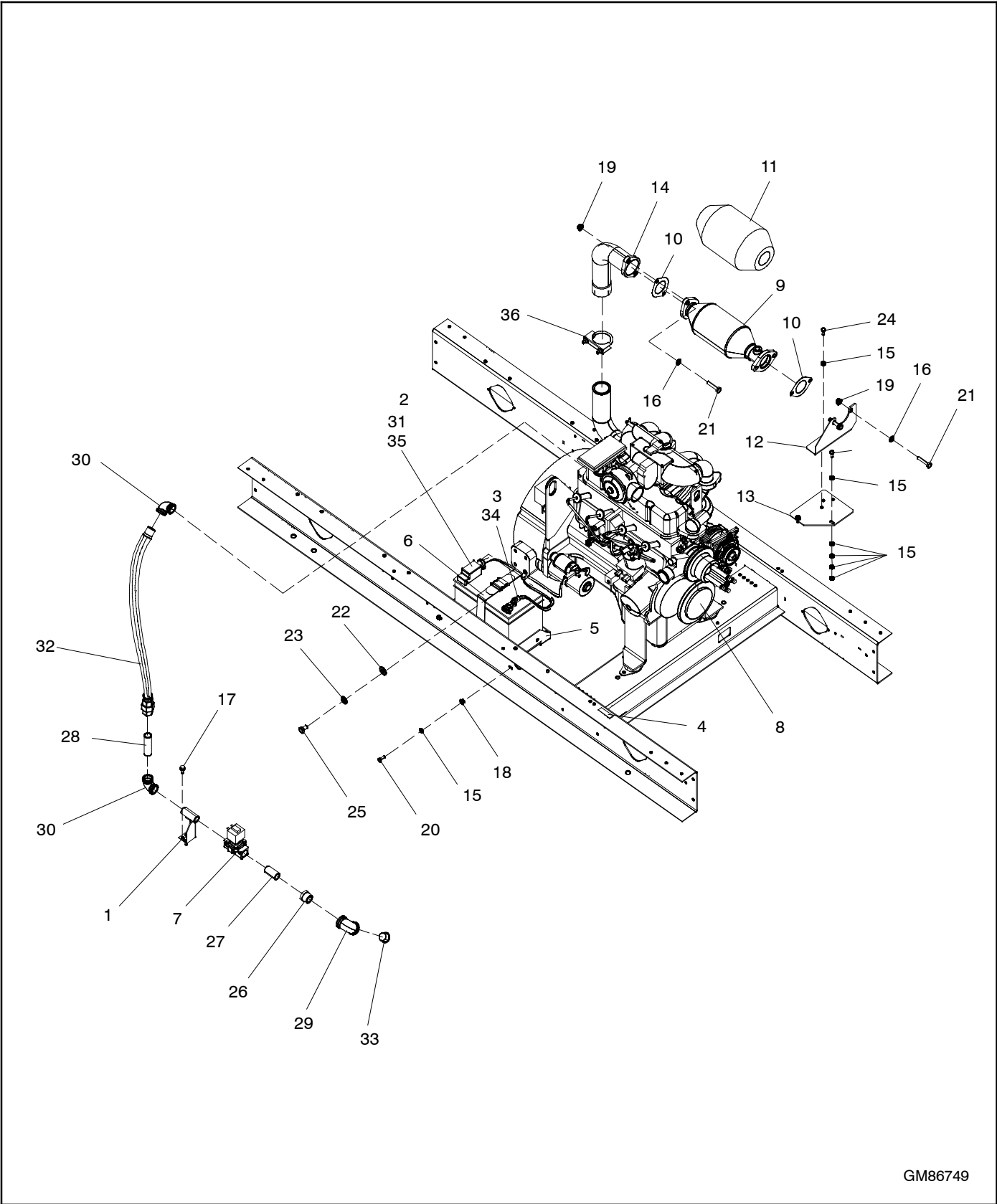
GM69416_E

Group 105: Engine

Item	Part Number	Description	Qty.
			Var. No.
			17
1	254456	Bracket, fuel valve	1
3	GM61432	Strap, battery	1
4	345039	Terminal, battery	1
5	345056	Terminal, battery	1
6	GM20577	Decal, fuel type	1
8	GM57161	Rack, battery	1
9	GM65505-1	Engine assy	1
10	GM71053	Valve, shut off	1
11	M125A-08-80	Washer, plain 8.4 ID x 16.0 OD	4
12	M6923-08-80	Nut, Hex 8mm	4
13	M933-08020-60	Screw, hex cap	4
14	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1
15	X-25-26	Washer, plain, .531 ID x 1.062 in. OD	1
16	X-25-44	Washer, plain, .328 ID x .562 OD	2
17	X-101-16	Nut, hex elastic stop, 5/16-18	2
18	X-129-15	Bolt, hex cap	1
19	X-202-1	Bushing, reducing (3/4 x 1 in. npt)	1
20	X-206-2	Pipe, Nipple (3/4 in. npt x 2.00 in.)	1
21	X-206-6	Pipe (3/4 in. npt x 3.50 in.)	1
22	X-215-15	Elbow, pipe (90 deg x 1 in. npt)	1
23	X-215-2	Elbow, pipe (90 deg x 3/4 in. npt)	2
24	X-468-1	Cable tie	1
25	X-504-18	Fuel line, flexible (.75 in. ID x 28.75 in.)	1
26	X-519-20	Plug, cap	1
27	X-545-112	Cable, battery (No.2 x 16 in.) black-	1
28	X-545-135	Cable, battery (No.0 x 30 in.) red+	1

Group 105: Engine, continued

30 kW, Natural/LP Gas, Prime



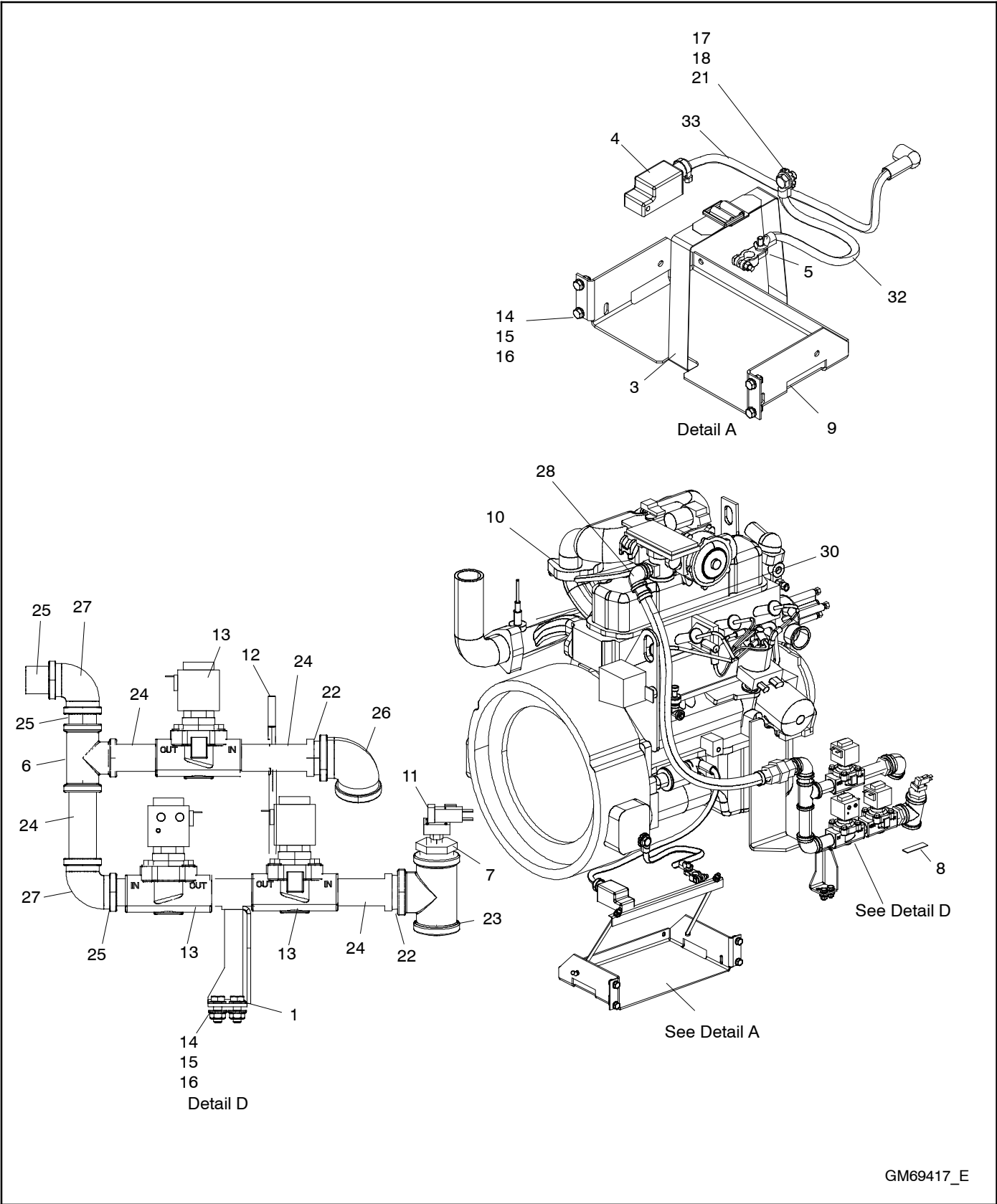
GM86749

Group 105: Engine, continued

Item	Part Number	Description	Qty.
			Var. No. 30
1	254456	Bracket, fuel valve	1
2	345039	Terminal, battery	1
3	345056	Terminal, battery	1
4	GM20577	Decal, Fuel Type	1
5	GM57161	Rack, Battery	1
6	GM61432	Strap, Poly Battery	1
7	GM71053	Valve, Shut Off	1
8	GM85265	Engine Assy., 3.0L 12V Nat./LP Gas	1
9	GM86450	Catalyst	1
10	GM86495	Gasket, Exhaust	2
11	GM86497	Wrap, Catalyst	1
12	GM90306	Bracket, Catalyst Support	1
13	GM90307	Bracket, Catalyst Mounting	1
14	GM90308	Tube, Exhaust	1
15	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	13
16	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	4
17	M6921-08020-60	Screw, Hex Flange M8 x 20	2
18	M6923-08-80	Nut, Hex 8mm	4
19	M6923-10-80	Nut, Hex 10mm	4
20	M933-08020-60	Screw, Hex cap	4
21	M933-10050-60	Screw, Hex Cap	4
24	X-125-3	Bolt, Hex Cap	5
25	X-129-15	Bolt, Hex Cap	1
26	X-202-1	Bushing, reducing (3/4 x 1"npt)	1
27	X-206-2	Pipe, Nipple (3/4" npt x 2.00")	1
28	X-206-6	Pipe (3/4"npt x 3.50")	1
29	X-215-15	Elbow, pipe (90 deg x 1"npt)	1
30	X-215-2	Elbow, pipe (90 deg x 3/4"npt)	2
22	X-22-26	Washer, lock. 521 ID x 1.24 in. OD	1
23	X-25-26	Washer, Plain	1
31	X-468-1	Cable Tie	1
32	X-504-18	Fuel line, flexible (.75" ID * 28.75")	1
33	X-519-20	Plug, Cap	1
34	X-545-112	Cable, battery (No.2 x 16") black-	1
35	X-545-135	Cable, battery (No.0 x 30") red+	1
36	X-722-2	Clamp, muffler, 2.62 in.	1

Group 105: Engine, continued

25/30 kW, Dual Fuel Natural Gas/LPG Vapor



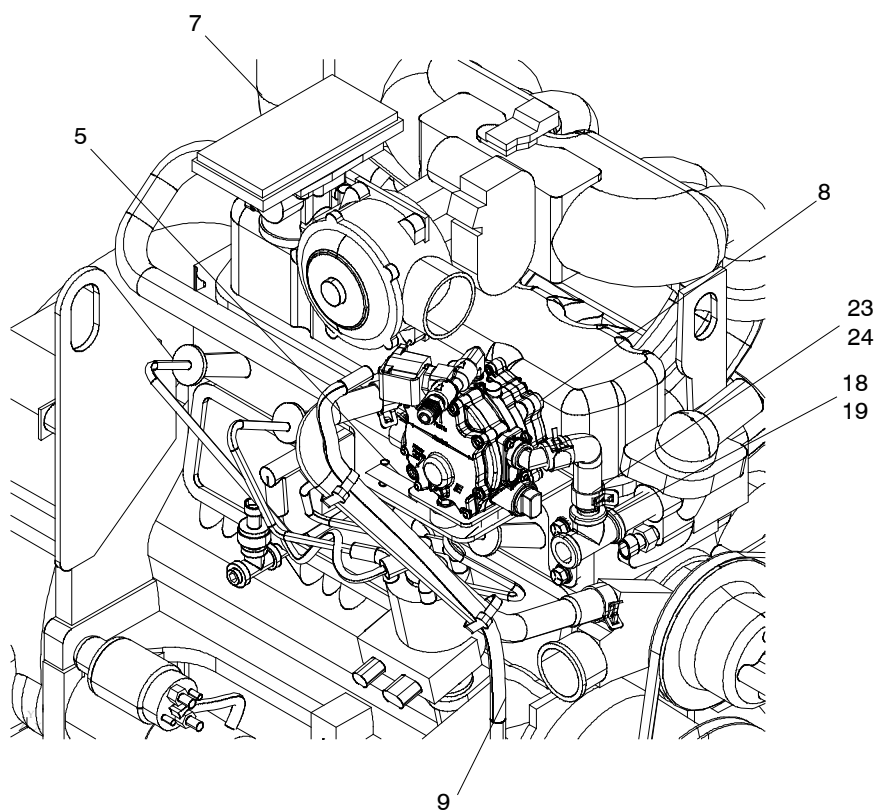
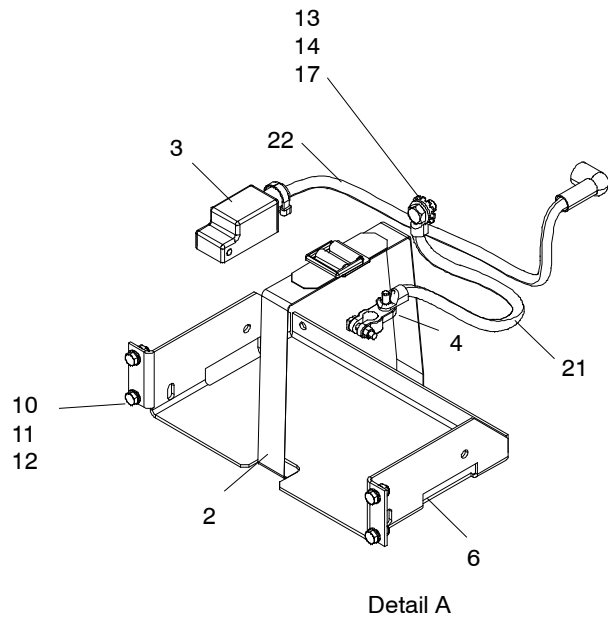
GM69417_E

Group 105: Engine, continued

Item	Part Number	Description	Qty.
			Var. No. 18
1	254456	Bracket, fuel valve	1
3	GM61432	Strap, battery	1
4	345039	Terminal, battery	1
5	345056	Terminal, battery	1
6	A-108	Tee, pipe (3/4 x 3/4 x 3/4 npt)	1
7	AC-1459	Bushing, reducing (1/8 x 1 in. npt)	1
7	GM77915	Fitting, Restriction (not shown)	1
7	X-216-24	Coupling, pipe (1/8"npt) (not shown)	1
8	GM20173	Decal, fuel type	1
9	GM57161	Rack, battery	1
10	GM65505-2	Engine assy	1
11	GM70538	Switch, pressure 7.0 in. h20	1
12	GM70638	Harness, dual fuel extension	1
13	GM71053	Valve, shut off	3
14	M125A-08-80	Washer, plain 8.4 ID x 16.0 OD	4
15	M6923-08-80	Nut, Hex 8mm	4
16	M933-08020-60	Screw, hex cap	4
17	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1
18	X-25-26	Washer, plain, .531 ID x 1.062 in. OD	1
21	X-129-15	Bolt, hex cap	1
22	X-202-1	Bushing, reducing (3/4 x 1 in. npt)	2
23	X-203-2	Tee, pipe (1 x 1 x 1 npt)	1
24	X-206-6	Pipe, nipple (3/4 in. npt x 4.00 in.)	4
25	X-206-9	Pipe (3/4 in. npt x 1.38 in.)	3
26	X-215-15	Elbow, pipe (90 deg x 1 in. npt)	1
27	X-215-2	Elbow, pipe (90 deg x 3/4 in. npt)	3
28	X-468-1	Cable tie	1
29	X-504-18	Line, flexible fuel	1
30	X-519-20	Plug, cap	2
31	X-545-112	Cable, battery (No.2 x 16 in.) black-	1
32	X-545-135	Cable, battery (No.0 x 30 in.) red+	1

Group 105: Engine, continued

25/30 kW, LP Liquid Withdrawal



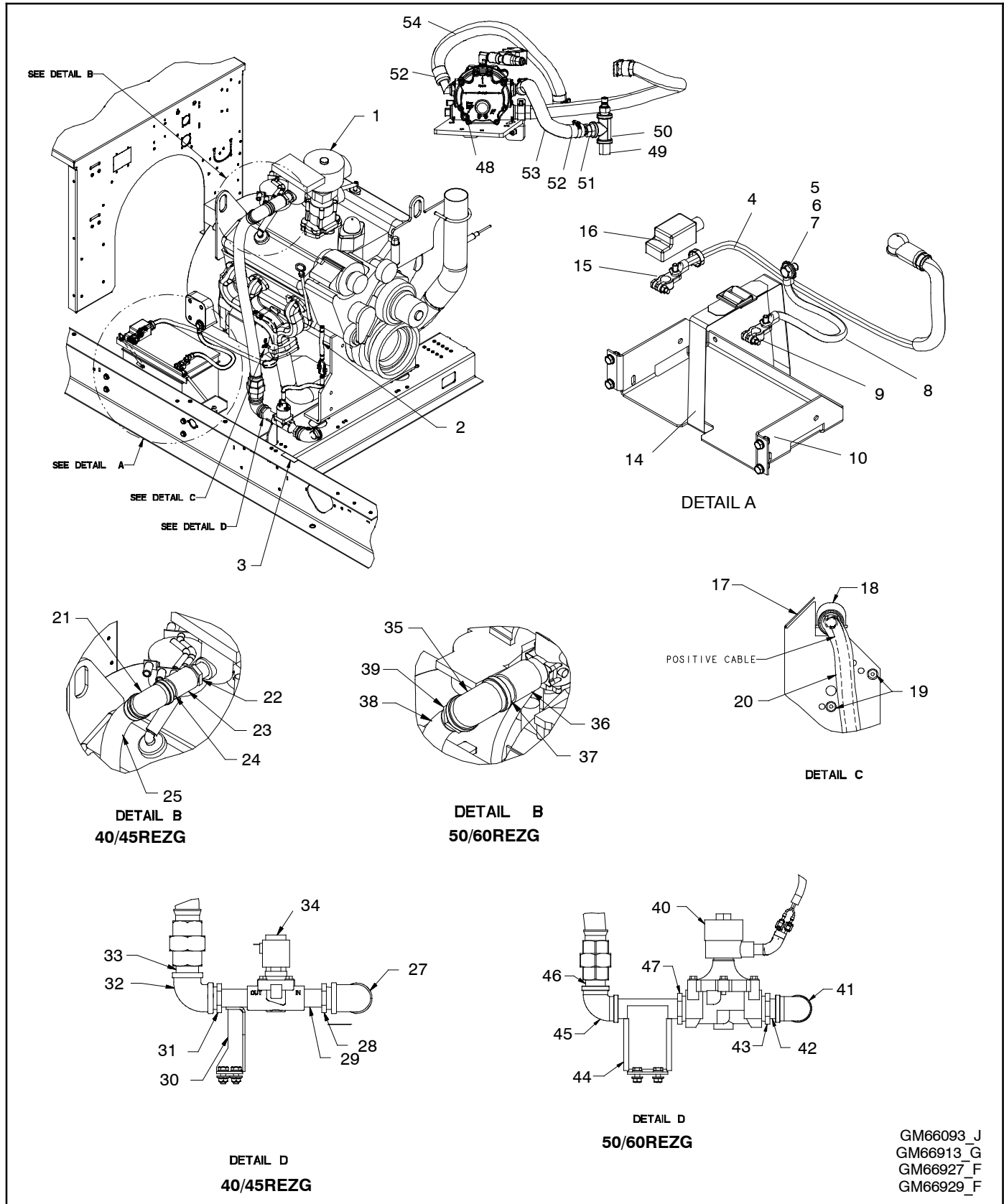
GM69418_D

Group 105: Engine, continued

Item	Part Number	Description	Qty.
			Var. No.
			19
2	GM61432	Strap, battery	1
3	345039	Terminal, battery	1
4	345056	Terminal, battery	1
5	GM77365	Bracket, Mtg Vaporizer 3.0L GM	1
5	GM20175	Decal, fuel type	1
6	GM57161	Rack, battery	1
7	GM65505-2	Engine assy	1
8	GM70312	Vaporizer, lp liquid withdrawal, 3.0l	1
9	GM70629	Harness, liq fuel	1
10	M125A-08-80	Washer, plain 8.4 ID x 16.0 OD	4
11	M6923-08-80	Nut, Hex 8mm	4
12	M933-08020-60	Screw, hex cap	4
13	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1
14	X-25-26	Washer, plain, .531 ID x 1.062 in. OD	1
17	X-129-15	Bolt, hex cap	1
18	X-203-13	Tee, pipe	1
19	X-203-3	Fitting, pipe nipple	1
20	X-468-1	Cable tie	3
21	X-545-112	Cable, battery (No.2 x 16 in.) black-	1
22	X-545-135	Cable, battery (No.0 x 30 in.) red+	1
23	X-582-1	Connector, Hose 5/8" x 1/2" MIP Brass	1
24	X-426-12	Clamp, hose, .69/1.25 in. (NRP)	4

Group 105: Engine, continued

40-60 kW, Natural Gas/LPG Vapor/LP Liquid Withdrawal

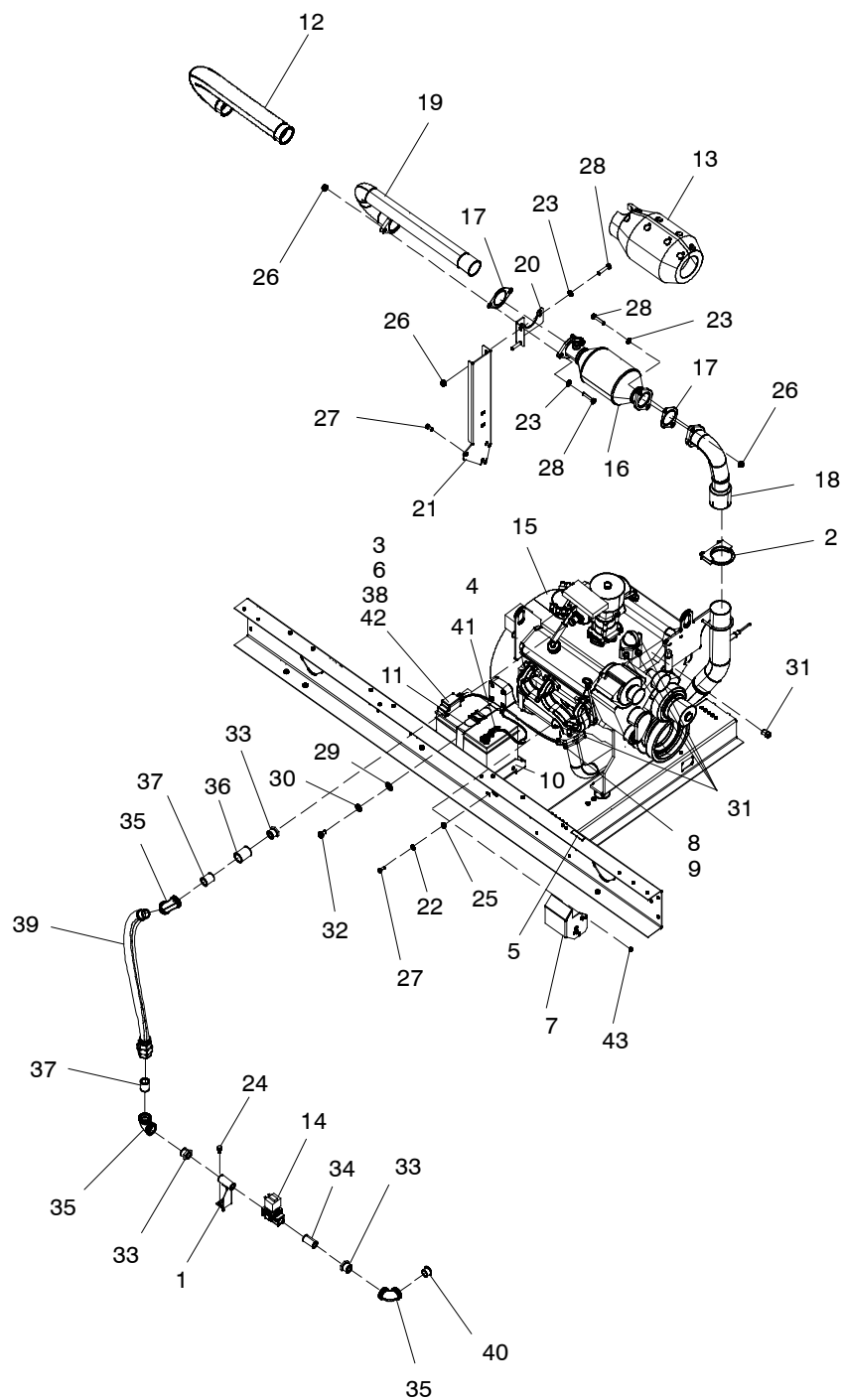


Group 105: Engine, continued

Item	Part Number	Description	Quantity					
			Variation Number					
			1	3	4	6	7	9
1	GM65420-1	Engine Assy 4.3L 12V Nat./LP Gas	1	1				
1	GM65421-1	Engine Assy 5.0L 12V Nat./LP Gas			1	1		
1	GM65422-1	Engine Assy 5.7L 12V Nat./LP Gas					1	1
2	GM14263	Harness, Fuel Nat./LP Gas			1		1	
2	GM70629	Harness, Liquid Fuel		1				
2	GM70480	Harness, Liquid Fuel				1		1
3	GM20577	Decal, Fuel Type	1		1		1	
3	GM20175	Decal, Fuel Type		1		1		1
4	X-545-137	Cable, battery (No.2 x 30 in.) red+	1	1	1	1	1	1
5	X-129-15	Bolt, Hex Cap	1	1	1	1	1	1
6	X-22-26	Washer,lock, .521 ID x 1.24 in. OD	1	1	1	1	1	1
7	X-25-26	Washer, plain, .531 ID x 1.062 in. OD	1	1	1	1	1	1
8	X-545-112	Cable, battery (No.2 x 16 in.) black-	1	1	1	1	1	1
9	345056	Terminal, battery	1	1	1	1	1	1
10	GM57161	Rack, Battery	1	1	1	1	1	1
14	GM61432	Strap, battery	1	1	1	1	1	1
15	345039	Terminal, battery	1	1	1	1	1	1
16	GM20745	Boot, Battery Lug	1	1	1	1	1	1
17	GM21188	Shield, Heat	1	1	1	1	1	1
18	GM22350	Boot, Starter Terminal	1	1	1	1	1	1
19	X-6210-5	Nut, flange whiz, 10-24	2	2	2	2	2	2
20	GM21335	Shield, heat (20mm ID x 412mm length)	1	1	1	1	1	1
21	X-215-15	Elbow, pipe (90 deg x 1 in. npt)	1					
22	X-202-1	Bushing, reducing (3/4 x 1 in. npt)	1					
23	X-216-12	Coupling, pipe (1 in. npsc)	1					
24	X-218-24	Pipe (1 in. npt x 1.50 in.)	1					
25	X-504-20	Fuel line, flexible (1.00 in. ID x 29 in.)	1					
27	X-215-15	Elbow, pipe (90 deg x 1 in. npt)	1					
28	X-202-1	Bushing, reducing (3/4 x 1 in. npt)	1					
29	X-206-2	Pipe, Nipple (3/4 in. npt x 2.00 in.)	1					
30	254456	Bracket, fuel valve	1					
31	X-202-1	Bushing, reducing (3/4 x 1 in. npt)	1					
32	X-215-15	Elbow, pipe (90 deg x 1 in. npt)	1					
33	X-218-24	Pipe (1 in. npt x 1.50 in.)	1					
34	GM42530	Valve, Gas Shut-Off	1					
35	X-215-14	Elbow, pipe (90 deg x 1-1/4 in. npt)			1		1	
36	X-216-22	Coupling, pipe (1-1/4 in. npsc)			1		1	
37	X-210-8	Pipe (1-1/4 in. npt x 1.63 in.)			1		1	
38	X-504-20	Fuel line, flexible (1.00 in. ID x 29 in.)			1		1	
39	X-202-32	Bushing, reducing (1 x 1-1/4 in. npt)			1		1	
40	GM70497	Valve assembly, gas			1		1	
41	X-215-15	Elbow, pipe (90 deg x 1 in. npt)			1		1	
42	X-218-24	Pipe (1 in. npt x 1.50 in.)			1		1	
43	X-202-32	Bushing, reducing (1 x 1-1/4 in. npt)			1		1	
44	GM13662	Bracket, Support			1		1	
45	X-215-15	Elbow, pipe (90 deg x 1 in. npt)			1		1	
46	X-218-24	Pipe (1 in. npt x 1.50 in.)			1		1	
47	X-202-32	Bushing, reducing (1 x 1-1/4 in. npt)			1		1	
48	GM70198	Vaporizer, LP Liquid Withdrawal		1				
48	GM70313	Vaporizer, LP Liquid Withdrawal				1		1
49	X-209-5	Pipe (1/2"npt x 1.50")		1		1		1
50	X-203-13	Tee, pipe (1/2 x 1/2 x 1/2 npt)		1		1		1
51	X-582-1	Connector, hose		1		1		1
52	X-426-12	Clamp, hose, .69/1.25 in.		4		4		4
53	X-312-52	Hose, .63 ID x 19 in.		1		1		1
54	X-312-34	Hose, .63 ID x 10 in.		1		1		1
54	X-6047-14	Channel, U (not shown)		1		1		1

Group 105: Engine, continued

45 kW, Natural/LP Gas, Prime

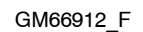


GM86753

Group 105: Engine, continued

Item	Part Number	Description	Qty.
			Var. No. 31
1	254456	Bracket, fuel valve	1
2	286286	Clamp, muffler, 3.62 in.	1
3	345039	Terminal, battery	1
4	345056	Terminal, battery	1
5	GM20577	Decal, Fuel Type	1
6	GM20745	Boot, Battery Lug	1
7	GM21188	Shield, Heat	1
8	GM21335	Shield, heat (20mm ID x 412mm length)	1
9	GM22350	Boot, Starter Terminal	1
10	GM57161	Rack, Battery	1
11	GM61432	Strap, Poly Battery	1
12	GM62589	Insulation, Exhaust Tube	1
13	GM67001	Wrap, Catalyst	1
14	GM71053	Valve, Shut Off	1
15	GM85266	Engine Assy., 4.3L 12V Nat./LP Gas	1
16	GM86451	Catalyst	1
17	GM86496	Gasket, Exhaust	2
18	GM90252	Tube, Exhaust	1
19	GM90253	Tube, Exhaust	1
20	GM90254	Bracket, Support	1
21	GM90255	Bracket, Exhaust	1
22	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	4
23	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	6
24	M6921-08020-60	Screw, Hex Flange M8 x 20	2
25	M6923-08-80	Nut, Hex 8mm	4
26	M6923-10-80	Nut, Hex 10mm	6
27	M933-08020-60	Screw, Hex cap	7
28	M933-10050-60	Screw, Hex Cap	6
29	X-22-26	Washer, lock. 521 ID x 1.24 in. OD	1
30	X-25-26	Washer, Plain	1
31	X-75-28	Plug, pipe (1/2"nptf)	5
32	X-129-15	Bolt, Hex Cap	1
33	X-202-1	Bushing, reducing (3/4 x 1"npt)	3
34	X-206-2	Pipe, Nipple (3/4" npt x 2.00")	1
35	X-215-15	Elbow, pipe (90 deg x 1"npt)	3
36	X-216-12	Coupling, pipe (1"npvc)	1
37	X-218-24	Pipe (1"npt x 1.50")	2
38	X-468-1	Cable Tie	2
39	X-504-20	Fuel line, flexible (1.00" ID * 29")	1
40	X-519-20	Plug, Cap	1
41	X-545-112	Cable, battery (No.2 x 16") black-	1
42	X-545-137	Cable, battery (No.2 x 30") red+	1
43	X-6210-5	Nut, flange whiz, 10-24	2

40-45 kW, Dual Fuel Natural Gas/LPG Vapor

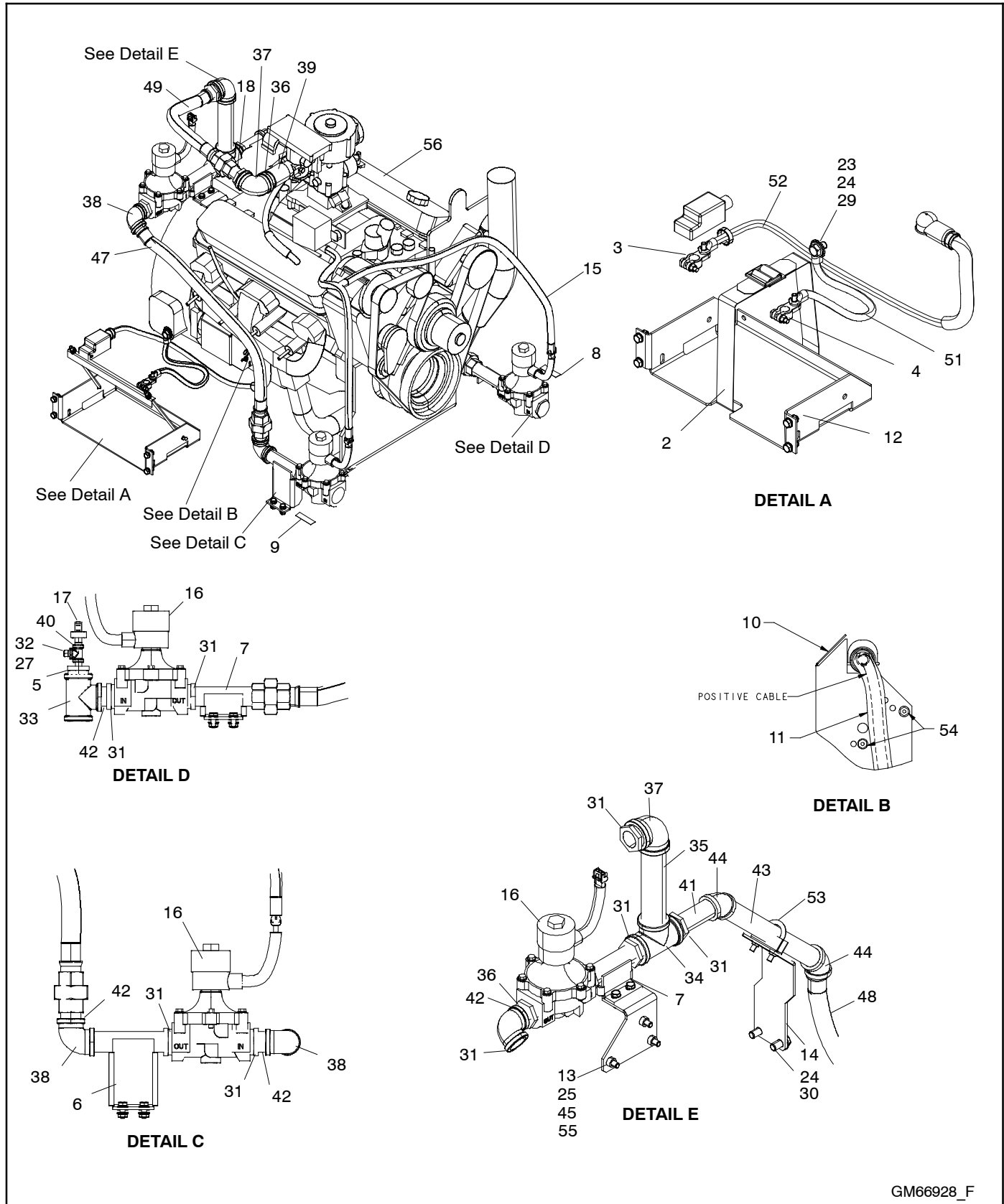


Group 105: Engine, continued

Item	Part Number	Description	Qty.
			Var. No.
1	254456	Bracket, fuel valve	1
3	GM61432	Strap, battery	1
4	345039	Terminal, battery	1
5	345056	Terminal, battery	1
6	AC-1459	Bushing, reducing (1/8 x 1 in. npt)	1
7	GM20577	Decal, Fuel Type	1
8	GM20745	Boot, Battery Lug	1
9	GM21188	Shield, Heat	1
10	GM21335	Shield, heat (20mm ID x 412mm length)	1
11	GM22350	Boot, Starter Terminal	1
12	GM57161	Rack, Battery	1
13	GM65420-2	Engine Assy 4.3L 12V Nat./LP Gas	1
14	GM70539	Switch, Pressure 3.0 in. H2O	1
15	GM70638	Harness, Dual Fuel GM 40/45 kW	1
16	GM71053	Valve, Shut Off	3
20	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1
21	X-25-26	Washer, plain, .531 ID x 1.062 in. OD	1
24	X-129-15	Bolt, Hex Cap	1
25	X-202-1	Bushing, reducing (3/4 x 1 in. npt)	5
26	X-203-2	Tee, pipe (1 x 1 x 1 npt)	2
27	X-206-6	Pipe, Nipple (3/4 in. npt x 3.50 in.)	3
28	X-206-9	Pipe (3/4 in. npt x 1.38 in.)	1
29	X-215-15	Elbow, pipe (90 deg x 1 in. npt)	3
30	X-216-12	Coupling, pipe (1 in. npsc)	1
31	X-218-24	Pipe (1 in. npt x 1.50 in.)	3
32	X-218-30	Pipe (1 in. npt x 5.00 in.)	1
33	X-225-9	Elbow, pipe (45 deg x 1 in. npt)	1
35	X-504-20	Fuel line, flexible (1.00 in. ID x 29 in.)	1
37	X-545-112	Cable, battery (No.2 x 16 in.) black-	1
38	X-545-137	Cable, battery (No.2 x 30 in.) red+	1
39	X-6210-5	Nut, flange whiz, 10-24	2

Group 105: Engine, continued

50/60 kW, Dual Fuel Natural Gas/LPG Vapor



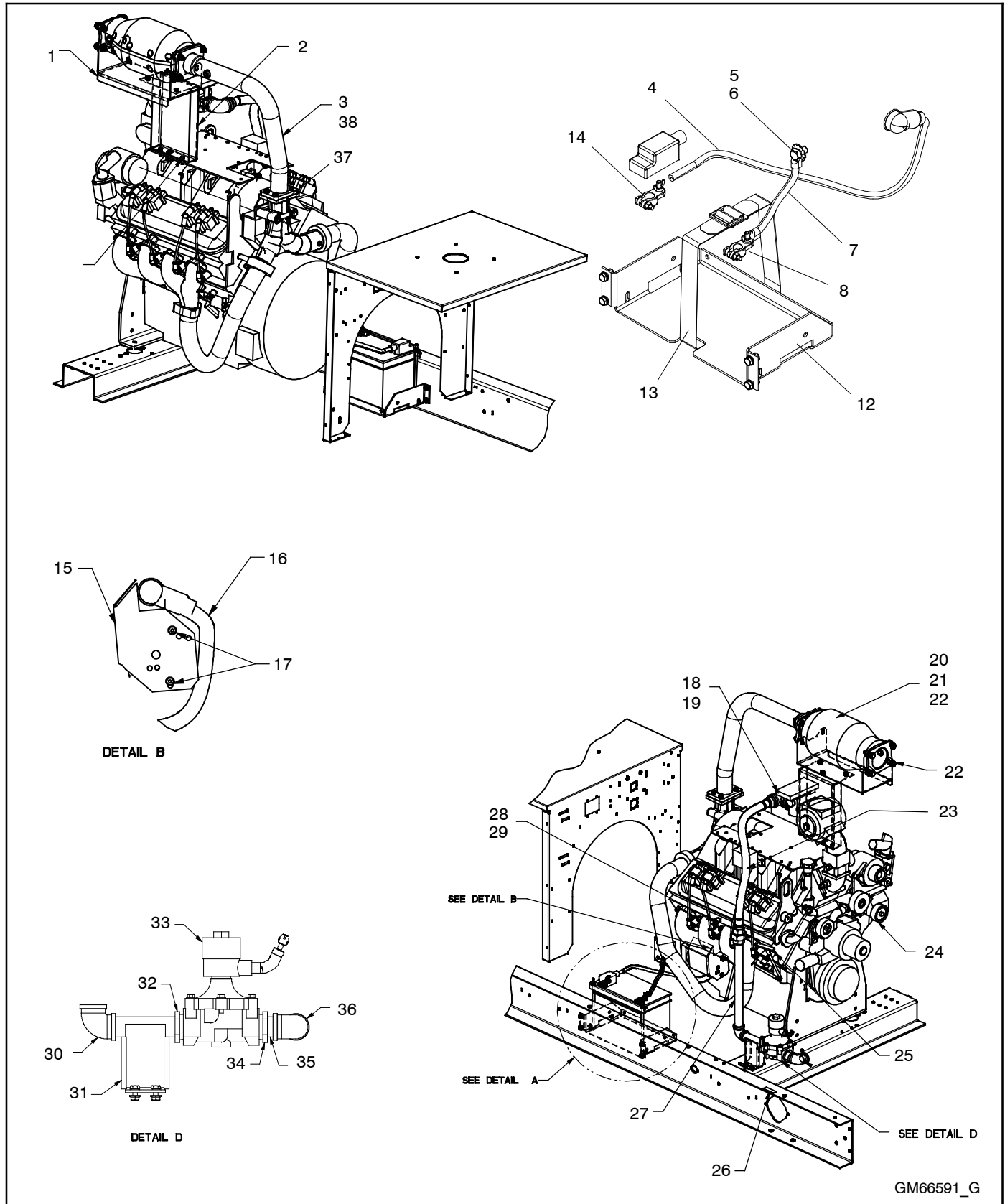
GM66928_F

Group 105: Engine, continued

Item	Part Number	Description	Qty.	
			Var. No.	
			5	8
2	GM61432	Strap, battery	1	1
3	345039	Terminal, battery	1	1
4	345056	Terminal, battery	1	1
5	AC-1459	Bushing, reducing (1/8 x 1 in. npt)	1	1
6	GM13662	Bracket, Support	1	1
7	GM17263	Bracket, Fuel Valve	2	2
8	GM20174	Decal, Fuel Type	1	1
9	GM20173	Decal, Fuel Type	1	1
10	GM21188	Shield, Heat	1	1
11	GM21335	Shield, heat (20mm ID x 412mm length)	1	1
12	GM57161	Rack, Battery	1	1
13	GM70377	Bracket, Support	1	1
14	GM70399	Bracket, Support	1	1
15	GM70471	Harness, Dual Fuel Nat/LP Gas	1	1
16	GM70497	Valve, Gas Assy	3	3
17	GM70538	Switch, Pressure 6.27 in. H2O	1	1
18	K-122	Pipe (1 NPT x 2 in.)	1	1
23	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1	1
24	X-25-26	Washer, plain, .531 ID x 1.062 in. OD	3	3
25	X-25-37	Washer, plain, .406 ID x .812 in. OD	3	3
26	X-25-44	Washer, Plain.328 ID x .562 OD	2	2
29	X-129-15	Bolt, Hex Cap	1	1
30	X-129-17	Bolt, Hex Cap	2	2
31	X-202-32	Bushing, reducing (1 x 1-1/4 in. npt)	10	10
32	X-203-10	Tee, pipe (1/8 x 1/8 x 1/8 npt)	1	1
33	X-203-2	Tee, pipe (1 x 1 x 1 npt)	1	1
34	X-203-26	Tee, pipe (1-1/4 x 1-1/4 x 1-1/4 npt)	1	1
35	X-210-18	Pipe (1-1/4 in. npt x 7.00 in.)	1	1
36	X-210-8	Pipe (1-1/4 in. npt x 1.63 in.)	2	1
37	X-215-14	Elbow, pipe (90 deg x 1-1/4 in. npt)	3	2
38	X-215-15	Elbow, pipe (90 deg x 1 in. npt)	2	3
39	X-216-22	Coupling, pipe (1-1/4 in. npsc)	1	1
40	X-217-6	Pipe (1/8 in. npt x .75 in.)	1	1
41	X-218-13	Pipe (1 in. npt x 4.00 in.)	1	1
42	X-218-24	Pipe (1 in. npt x 1.50 in.)	3	4
43	X-218-26	Pipe (1 in. npt x 12.75 in.)	1	1
44	X-225-9	Elbow, pipe (45 deg x 1 in. npt)	2	2
45	X-400-75	Spacer, .406 ID x .625 OD x .297 in.	3	3
47	X-504-20	Fuel line, flexible (1.00 in. ID x 29 in.)	1	1
48	X-504-20	Fuel line, flexible (1.00 in. ID x 29 in.)	1	1
49	X-504-21	Fuel line, flexible (1.00 in. ID x 18 in.)	1	1
51	X-545-112	Cable, battery (No.2 x 16 in.) black-	1	1
52	X-545-137	Cable, battery (No.2 x 30 in.) red+	1	1
53	X-722-8	Clamp, muffler, 1.37 in.	1	1
54	X-6210-5	Nut, flange whiz, 10-24	2	2
55	X-6238-11	Bolt, Hex Cap (3/8-16 x 1 in.) Gr. 5	3	3
56	GM65421-2	Engine Assy 5.0L 12V Nat./LP Gas	1	
56	GM65422-2	Engine Assy 5.7L 12V Nat./LP Gas		1

Group 105: Engine, continued

80–100 kW with 8.1L Engine, Natural Gas/LPG Vapor

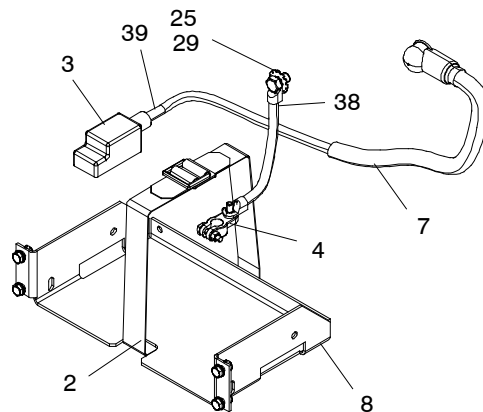
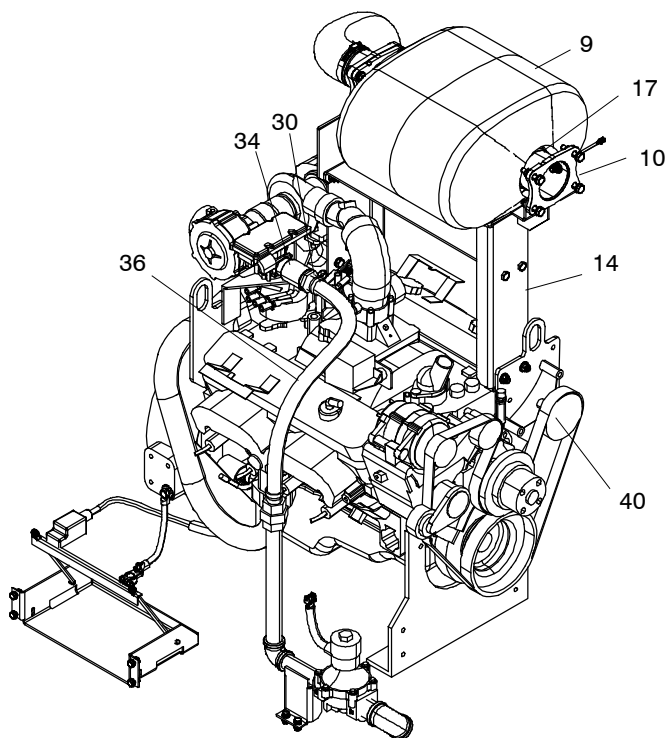


Group 105: Engine, continued

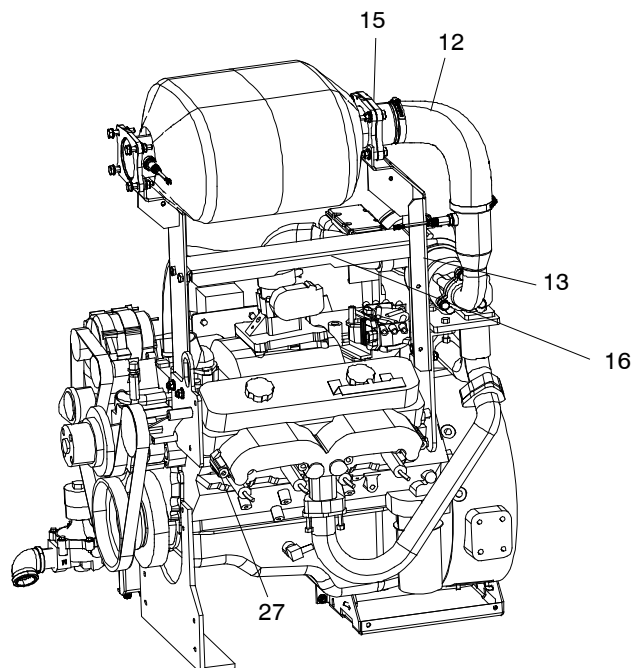
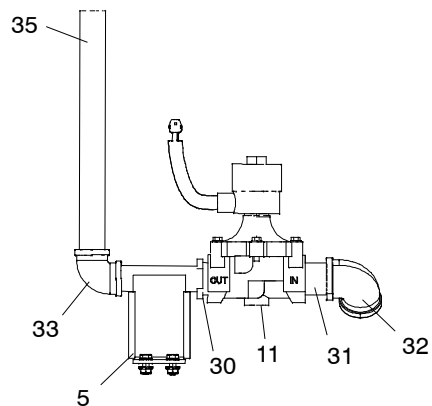
Item	Part Number	Description	Qty.
			Var. No.
1	GM66579	Bracket, catalyst mount	1
2	GM66580	Bracket, catalyst support	1
3	GM66576	Tube, exhaust	1
4	X-545-137	Cable, battery (no.2 x 30 in.) red+	1
5	X-129-15	Bolt, hex cap	1
6	X-22-26	Washer,lock, .521 ID x 1.24 in. OD	1
7	X-545-112	Cable, battery (no.2 x 16 in.) black-	1
8	345056	Terminal,battery	1
12	GM57161	Rack, battery	1
13	GM61432	Strap, battery	1
14	345039	Terminal, battery	1
15	GM21188	Shield, heat	1
16	GM21335	Shield, heat (20mm ID x 412mm length)	1
17	X-6210-5	Nut, flange whiz, 10-24	2
18	X-215-14	Elbow, pipe (90 deg x 1-1/4 in. npt)	1
19	X-202-32	Bushing, reducing (1 x 1-1/4 in. npt)	1
20	GM66574	Catalyst	1
21	GM67001	Wrap, catalyst	1
22	GM66053	Gasket, exhaust	2
23	X-504-20	Fuel line, flexible (1.00 in. ID X 29 in.)	1
24	GM62287-1	Engine assy NA 8.1L 12V NG/LPG	1
25	X-22-14	Washer, lock, .391 ID x .975 in. OD	1
26	GM20577	Decal, fuel type	1
27	X-218-26	Pipe (1 in. npt x 12.75 in.)	1
28	X-209-3	Pipe, Nipple, (1/2" NPT x 2.50)	1
28	X-203-13	Tee, pipe (1/2 x 1/2 x 1/2 NPT)	1
28	X-75-28	Plug, pipe (1/2" NPT)	1
29	X-256-3	Valve, drain (1/4 in. nptf)	1
29	X-202-47	Bushing, reducing (1/4 x 1/2 in. npt)	1
30	X-215-15	Elbow, pipe (90 deg x 1 in. npt)	1
31	GM13662	Bracket, support	1
32	X-202-32	Bushing, reducing (1 x 1-1/4 in. npt)	1
33	GM70497	Valve assembly, gas	1
34	X-202-32	Bushing, reducing (1 x 1-1/4 in. npt)	1
35	X-218-24	Pipe (1 in. npt x 1.50 in.)	1
36	X-215-15	Elbow, pipe (90 deg x 1 in. npt)	1
37	GM66600	Gasket, exhaust	1
38	GM70711	Blanket, insulation	1

Group 105: Engine, continued

80 kW with 5.7L Engine, Natural Gas/LPG Vapor



Items not shown: 6, 18-24



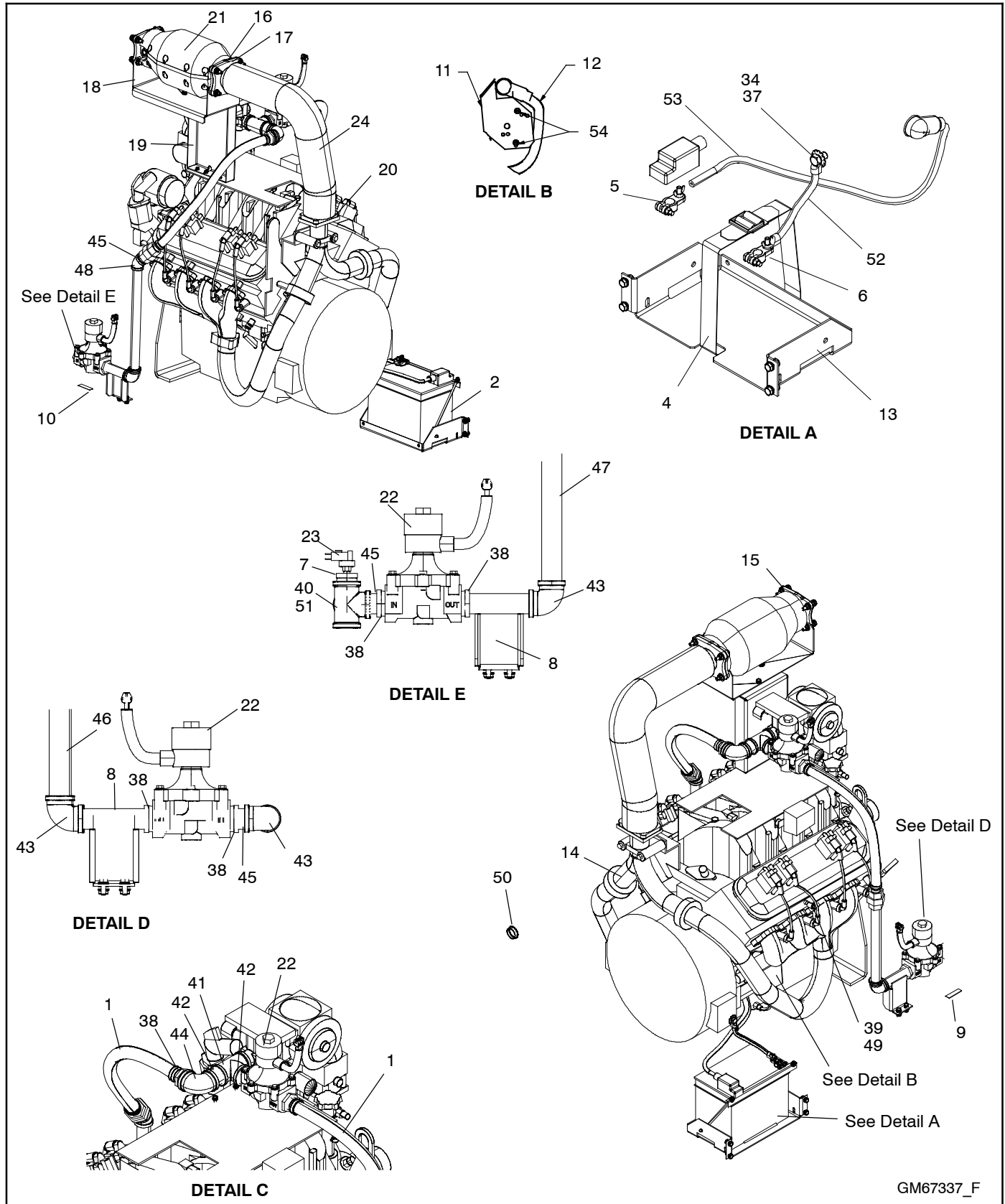
GM71611
GM74851

Group 105: Engine, continued

Item	Part Number	Description	Quantity			
			Variation Number			
			20	21	25	29
2	GM61432	Strap, battery	1	1	1	1
3	345039	Terminal, battery	1	1	1	1
4	345056	Terminal, battery	1	1	1	1
5	GM13662	Bracket, Support	1	1	1	1
6	GM20173	Decal, Fuel Type	1	1	1	1
7	GM21335	Shield, heat (20mm ID x 412mm length)	1	1	1	1
7	GM17809	Shield, heat (32mm ID x 152mm length)	1	1	1	1
8	GM57161	Rack, Battery	1	1	1	1
9	GM65752	Wrap, Catalyst	1	1		
10	GM66053	Gasket, Exhaust	2	2	1	1
11	GM70497	Valve, Gas Assy	1	1	1	1
12	GM71006	Insulation, Exhaust Tube	1	1	1	1
13	GM73987	Bracket, Catalyst Mtg	1	1	1	1
14	GM73988	Bracket, Catalyst Mtg	1	1		
15	GM73990	Tube, Exhaust	1	1	1	1
16	GM73993	Bracket, Support	1	1		
17	GM75660	Catalyst	1	1		
18	M125A-08-80	Washer, Plain, 8.4 ID x 16.0 OD	4	4	4	4
19	M125A-10-80	Washer, Plain, 10.5 ID x 20.0 OD	25	25	11	11
20	M6923-08-80	Nut, Hex 8mm	7	7	4	4
21	M6923-10-80	Nut, Hex 10mm	17	17	4	4
22	M933-08020-60	Screw, hex cap	4	4	4	4
23	M933-10030-60	Screw, hex cap	12	12	3	3
24	M933-10050-60	Screw, Hex Cap (Metric)	8	8	4	4
25	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1	1	1	1
27	X-75-28	Plug, pipe (1/2"nptf)	2	2	2	2
29	X-129-15	Bolt, Hex Cap	1	1	1	1
30	X-202-32	Bushing, reducing (1 x 1-1/4"npt)	2	2	2	2
31	X-210-8	Pipe (1-1/4"npt x 1.63")	1	1	1	1
32	X-215-14	Elbow, pipe (90 deg x 1-1/4"npt)	1	1	1	1
33	X-215-15	Elbow, pipe (90 deg x 1"npt)	1	1	1	1
34	X-216-22	Coupling, pipe (1-1/4"npvc) straight	1	1	1	1
35	X-218-26	Pipe (1"npt x 12.75")	1	1	1	1
36	X-504-20	Fuel line, flexible (1.00" ID x 29")	1	1	1	1
37	X-519-18	Plug, cap	1	1	1	1
38	X-545-112	Cable, battery (No.2 x 16") black-	1	1	1	1
39	X-545-137	Cable, battery (No.2 x 30") red+	1	1		
39	X-545-135	Cable, battery (No.0 x 30") red+			1	1
40	GM71607-1	Engine, 5.7L GM, Single Fuel, Nat.Gas	1			
40	GM71608-1	Engine, 5.7L CAC GM, Single Fuel, Nat.Gas		1		
40	GM71607-2	Engine, 5.7L GM, Single Fuel, Nat.Gas				1
40	GM71608-2	Engine, 5.7L CAC GM, Single Fuel, Nat.Gas			1	

Group 105: Engine, continued

80-100 kW with 8.1L Engine, Dual Fuel

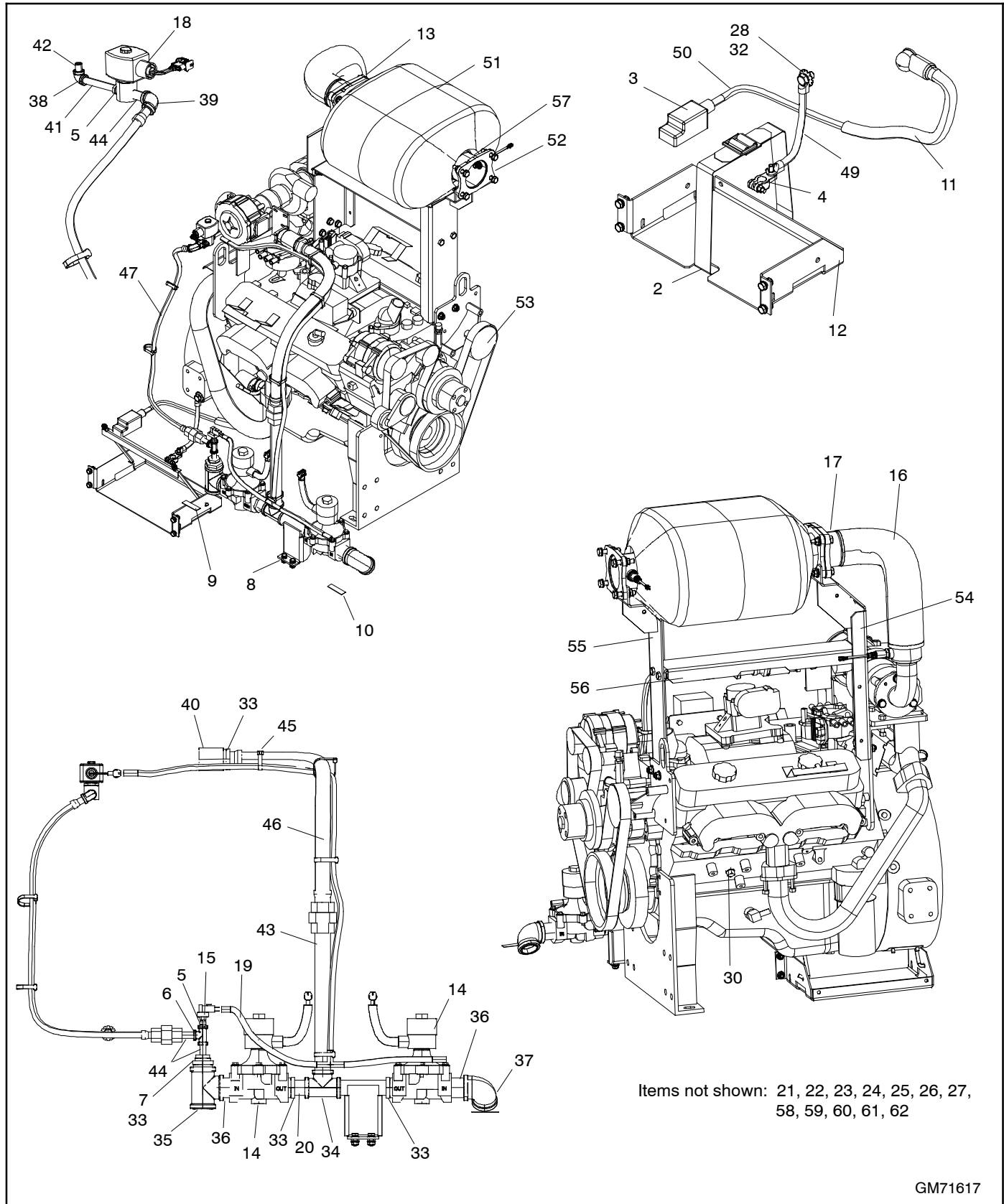


Group 105: Engine, continued

Item	Part Number	Description	Qty.
			Var. No. 13
1	X-504-20	Fuel line, flexible (1.00 in. ID x 29 in.)	2
2	256985	Battery, 1/12V, 650CCA, Wet	1
4	GM61432	Strap, battery	1
5	345039	Terminal, battery	1
6	345056	Terminal, battery	1
7	AC-1459	Bushing, reducing (1/8 x 1 in. npt)	1
8	GM13662	Bracket, Support	2
9	GM20173	Decal, Fuel Type	1
10	GM20174	Decal, Fuel Type	1
11	GM21188	Shield, Heat	1
12	GM21335	Shield, heat (20mm ID x 412mm length)	1
13	GM57161	Rack, Battery	1
14	GM62287-2	Engine Assy NA 8.1L 12V Dual NG/LPG	1
15	GM66053	Gasket, Exhaust	2
16	GM66574	Catalyst	1
17	GM66576	Tube, Exhaust	1
18	GM66579	Bracket, Catalyst Mount	1
19	GM66580	Bracket, Catalyst Support	1
20	GM66600	Gasket, Exhaust	1
21	GM67001	Wrap, Catalyst	1
22	GM70497	Valve, Gas Assy	3
22	GM70471	Harness, Dual Fuel Nat/LP Gas (not shown)	1
23	GM70539	Switch, Pressure 3.0 in. H2O	1
24	GM70711	Blanket, Insulation	1
34	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1
37	X-129-15	Bolt, Hex Cap	1
38	X-202-32	Bushing, reducing (1 x 1-1/4 in. npt)	7
39	X-209-3	Pipe, Nipple, (1/2" NPT x 2.50)	1
39	X-203-13	Tee, pipe (1/2 x 1/2 x 1/2 NPT)	1
39	X-75-28	Plug, pipe (1/2" NPT)	1
40	X-203-2	Tee, pipe (1 x 1 x 1 npt)	1
41	X-203-26	Tee, pipe (1-1/4 x 1-1/4 x 1-1/4 npt)	1
42	X-210-8	Pipe (1-1/4 in. npt x 1.63 in.)	2
43	X-215-15	Elbow, pipe (90 deg x 1 in. npt)	3
44	X-215-20	Fitting, elbow, pipe	1
45	X-218-24	Pipe (1 in. npt x 1.50 in.)	3
46	X-218-26	Pipe (1 in. npt x 12.75 in.)	1
47	X-218-26	Pipe (1 in. npt x 12.75 in.)	1
48	X-225-9	Elbow, pipe (45 deg x 1 in. npt)	1
49	X-256-3	Valve, drain (1/4 in. nptf)	1
49	X-202-47	Bushing, reducing (1/4 x 1/2 in. npt)	1
50	X-301-45	Plug, Button	1
51	X-519-20	Plug, Cap	2
52	X-545-112	Cable, battery (No.2 x 16 in.) black-	1
53	X-545-137	Cable, battery (No.2 x 30 in.) red+	1
54	X-6210-5	Nut, flange whiz, 10-24	2

Group 105: Engine, continued

100 kW with 5.7L Engine, Dual Fuel, Natural Gas/LPG, Non-EPA



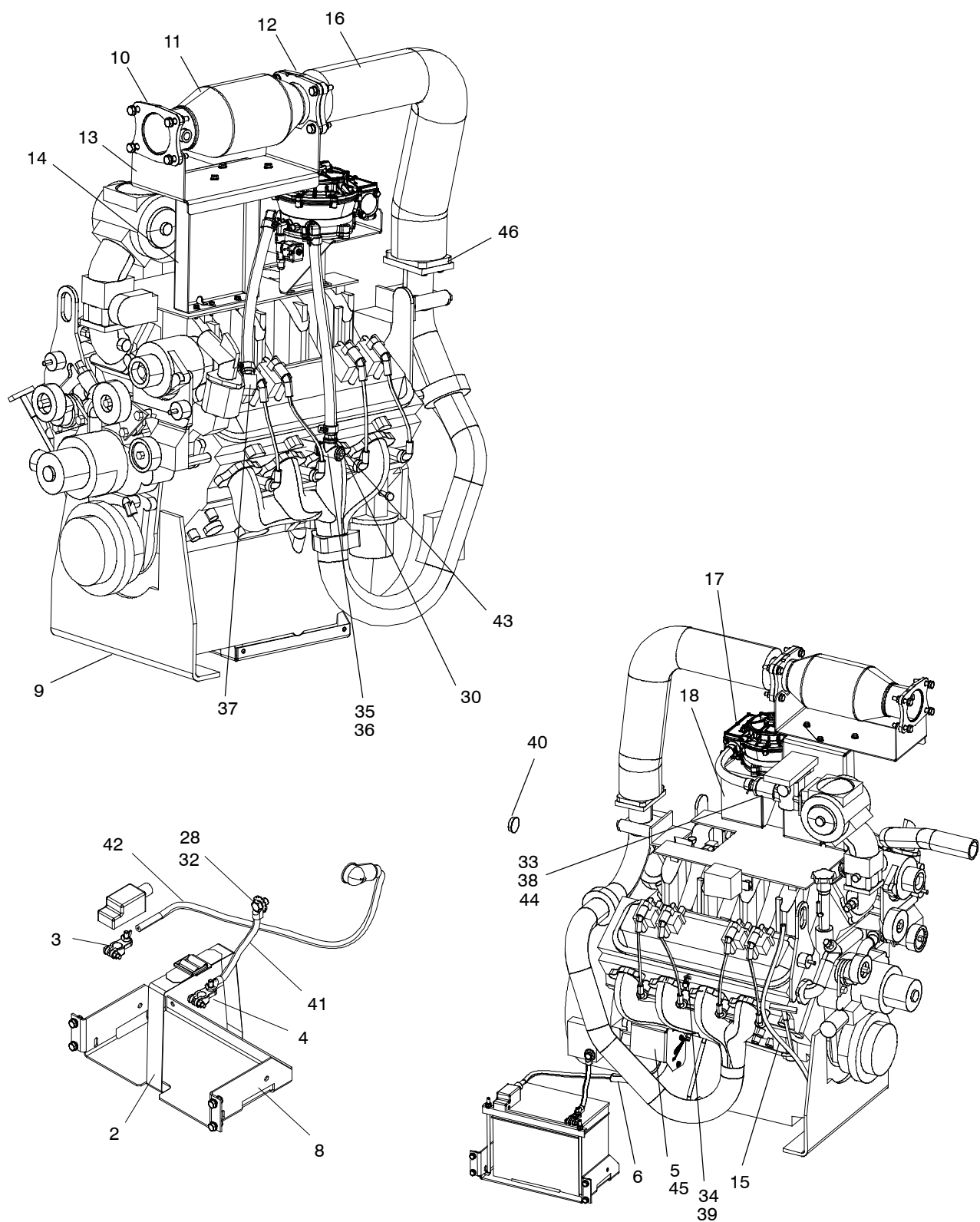
GM71617

Group 105: Engine, continued

Item	Part Number	Description	Quantity	
			Variation Number	
			24	28
2	GM61432	Strap, battery	1	1
3	345039	Terminal, battery	1	1
4	345056	Terminal, battery	1	1
5	A-106	Bushing, reducing (1/8 x 1/4"npt)	2	2
6	A-110	Tee, pipe (1/4 x 1/4 x 1/4 npt)	1	1
7	D-2159	Bushing, Reducer	1	1
8	GM13662	Bracket, Support	1	1
9	GM20173	Decal, Fuel Type	1	1
10	GM20174	Decal, Fuel Type	1	1
11	GM21335	Shield, heat (20mm ID x 412mm length)	1	1
12	GM57161	Rack, Battery	1	1
13	GM66053	Gasket, Exhaust	1	1
14	GM70497	Valve, Gas Assy	2	2
15	GM70536	Switch, Pressure 3.6" H2O	1	1
16	GM71006	Insulation, Exhaust Tube	1	1
17	GM73990	Tube, Exhaust	1	1
18	GM74499	Valve Assembly, Vent	1	1
19	GM74500	Harness, Dual Fuel	1	1
20	K-122	Pipe (1"npt x 2.00")	1	1
21	M125A-08-80	Washer, Plain, 8.4 ID x 16.0 OD	4	4
22	M125A-10-80	Washer, Plain, 10.5 ID x 20.0 OD	11	11
23	M6923-08-80	Nut, Hex 8mm	4	4
24	M6923-10-80	Nut, Hex 10mm	4	4
25	M933-08020-60	Screw, hex cap	6	6
26	M933-10030-60	Screw, hex cap	3	3
27	M933-10050-60	Screw, Hex Cap (Metric)	4	4
28	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1	1
30	X-75-28	Plug, pipe (1/2"nptf)	2	2
32	X-129-15	Bolt, Hex Cap	1	1
33	X-202-32	Bushing, reducing (1 x 1-1/4"npt)	4	4
34	X-203-2	Tee, pipe (1 x 1 x 1 npt)	1	1
35	X-203-26	Tee, pipe (1-1/4 x 1-1/4 x 1-1/4 npt)	1	1
36	X-210-8	Pipe (1-1/4"npt x 1.63")	2	2
37	X-215-14	Elbow, pipe (90 deg x 1-1/4"npt)	1	1
38	X-215-19	Elbow, pipe (90 deg x 1/8"npt)	1	1
39	X-215-5	Elbow, pipe (90 deg x 1/4"npt)	1	1
40	X-216-22	Coupling, pipe (1-1/4"npsc) straight	1	1
41	X-217-15	Pipe, Nipple (1/8" npt x 3.00")	1	1
42	X-217-6	Pipe (1/8"npt x .75")	1	1
43	X-218-26	Pipe (1"npt x 12.75")	1	1
44	X-220-6	Pipe (1/4"npt x 1.50")	3	3
45	X-468-1	Cable Tie	6	6
46	X-504-20	Fuel line, flexible (1.00" ID x 29")	1	1
47	X-504-25	Line, Flex Fuel	1	1
48	X-519-18	Plug, cap	2	2
49	X-545-112	Cable, battery (No.2 x 16") black-	1	1
50	X-545-135	Cable, battery (No.0 x 30") red+	1	1
51	GM65752	Wrap, Catalyst	1	
52	GM66053	Gasket, Exhaust	1	
53	GM71608-1	Engine, 5.7L CAC GM, Single Fuel, Nat. Gas	1	
53	GM71608-2	Engine, 5.7L CAC GM, Dual Fuel, Nat		1
54	GM73987	Bracket, Catalyst Mtg	1	
55	GM73988	Bracket, Catalyst Mtg	1	
56	GM73993	Bracket, Support	1	
57	GM75660	Catalyst	1	
58	M125A-10-80	Washer, Plain, 10.5 ID x 20.0 OD	17	
59	M6923-10-80	Nut, Hex 10mm	13	
60	M933-10030-60	Screw, hex cap	9	
62	M933-10050-60	Screw, Hex Cap (Metric)	4	

Group 105: Engine, continued

80-100 kW with 8.1L Engine, LP Liquid Withdrawal



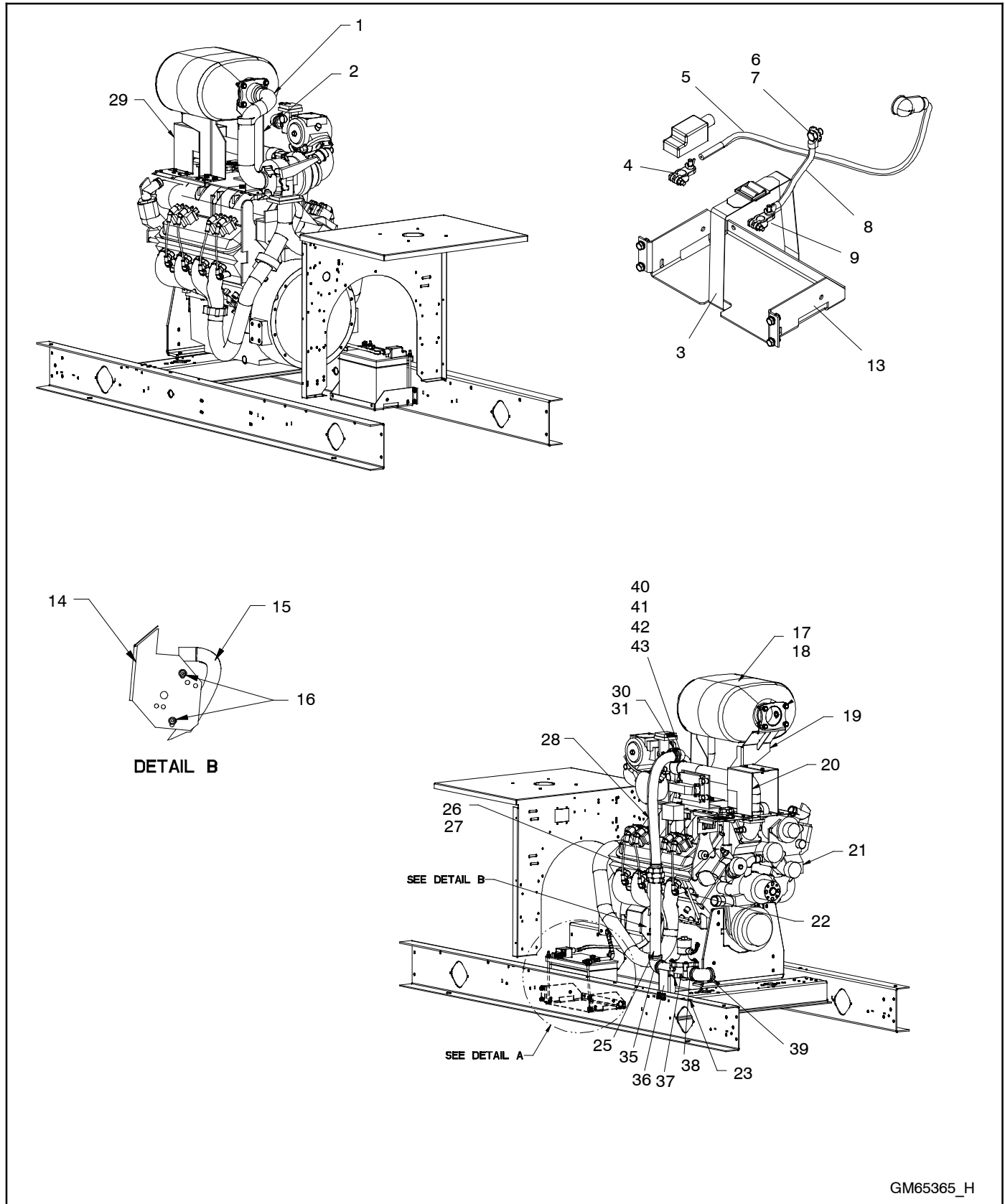
GM71327_G

Group 105: Engine, continued

Item	Part Number	Description	Qty.
			Var. No.
			14
2	GM61432	Strap, battery	1
3	345039	Terminal, battery	1
4	345056	Terminal, battery	1
5	GM21188	Shield, Heat	1
6	GM21335	Shield, heat (20mm ID x 412mm length)	1
8	GM57161	Rack, Battery	1
9	GM62287-2	Engine Assy NA 8.1L 12V Dual NG/LPG	1
10	GM66053	Gasket, Exhaust	2
11	GM66574	Catalyst	1
11	GM67001	Wrap, Catalyst (not shown)	1
12	GM66576	Tube, Exhaust	1
13	GM66579	Bracket, Catalyst Mount	1
14	GM66580	Bracket, Catalyst Support	1
15	GM75612	Harness, extension LP Liquid Fuel	1
16	GM70711	Blanket, Insulation	1
17	GM71290	Vaporizer, LP Liquid Withdrawal	1
18	GM71331	Bracket, vaporizer mounting	1
28	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1
30	X-75-54	Plug, pipe (1/2 in. nptf) brass	1
32	X-129-15	Bolt, Hex Cap	1
33	X-202-18	Bushing, reducing (3/4 x 1-1/4 in. npt)	1
34	X-209-3	Pipe, Nipple, (1/2" NPT x 2.50)	1
34	X-203-13	Tee, pipe (1/2 x 1/2 x 1/2 NPT)	1
34	X-75-28	Plug, pipe (1/2" NPT)	1
35	X-203-13	Tee, pipe (1/2 x 1/2 x 1/2 npt)	1
36	X-209-21	Pipe (1/2"npt x 4.50")	1
37	X-211-3	Elbow, street (90 deg x 1/2 in. nptf)	1
38	X-216-30	Coupling	1
39	X-256-3	Valve, drain (1/4 in. nptf)	1
39	X-202-47	Bushing, reducing (1/4 x 1/2 in. npt)	1
40	X-301-45	Plug, Button	1
41	X-545-112	Cable, battery (No.2 x 16 in.) black-	1
42	X-545-137	Cable, battery (No.2 x 30 in.) red+	1
43	X-582-1	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	2
43	X-426-12	Clamp, hose, .69/1.25 in.	4
44	X-582-8	Connector, hose + Vibra Seal	1
45	X-6210-5	Nut, flange whiz, 10-24	2
46	GM66600	Gasket, exhaust	1

Group 105: Engine, continued

125 kW, Natural Gas/LPG Vapor

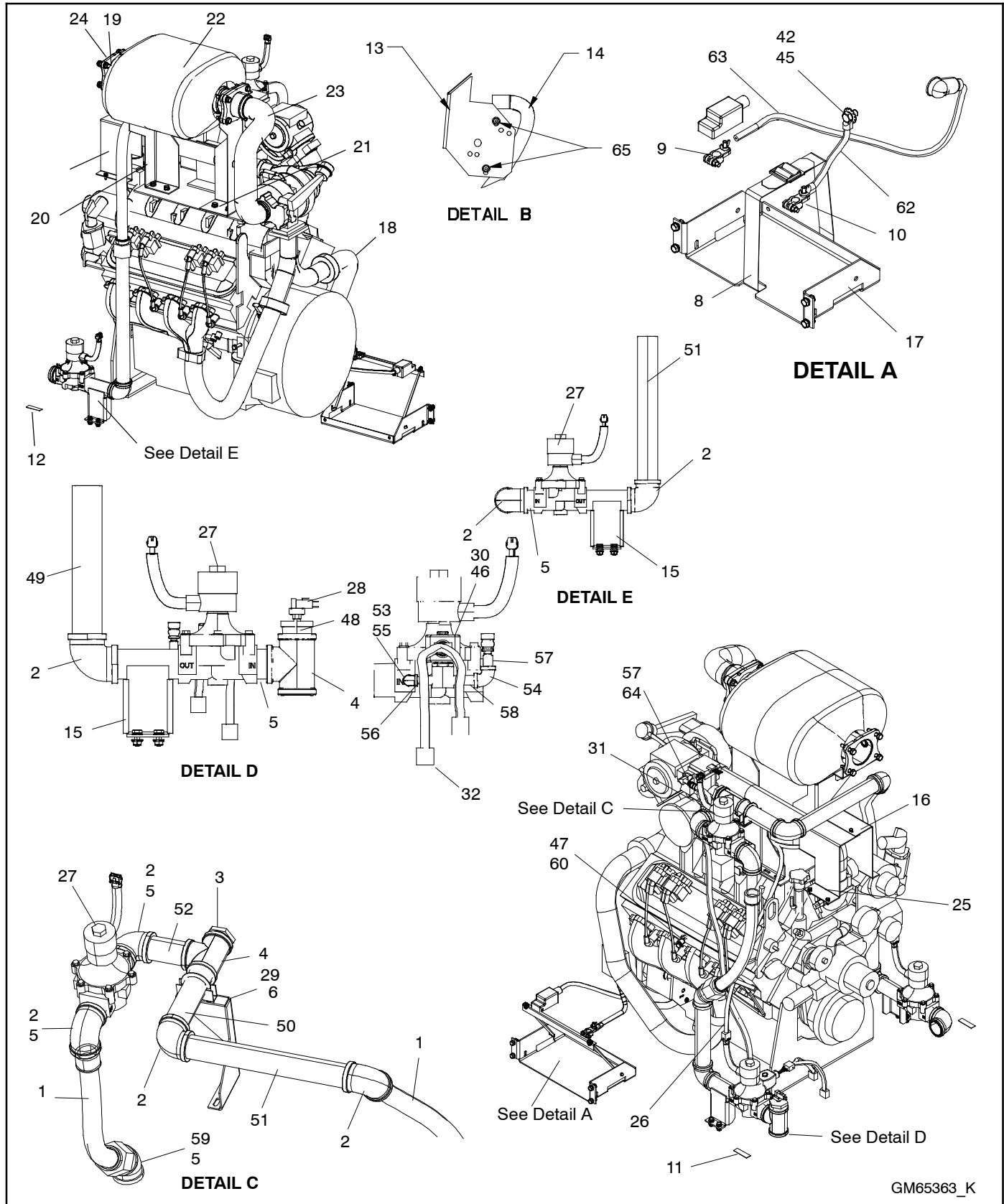


Group 105: Engine, continued

Item	Part Number	Description	Qty.
			Var. No. 12
1	GM66052	Tube, exhaust	1
2	GM65751	Bracket, support	1
3	GM61432	Strap, battery	1
4	345039	Terminal, battery	1
5	X-545-137	Cable, battery (no.2 x 30 in.) red+	1
6	X-129-15	Bolt, hex cap	1
7	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1
8	X-545-112	Cable, battery (no.2 x 16 in.) black-	1
9	345056	Terminal, battery	1
13	GM57161	Rack, battery	1
14	GM21188	Shield, heat	1
15	GM21335	Shield, heat (20mm ID x 412mm length)	1
16	X-6210-5	Nut, flange whiz, 10-24	2
17	GM65728	Catalyst	1
17	GM65752	Wrap, catalyst	1
18	GM66053	Gasket, exhaust	2
19	GM65743	Bracket, support	1
20	GM66598	Guard, hose (left)	1
21	GM62288-1	Engine assy turbo 8.1L 12V NG/LPG	1
22	X-22-14	Washer, lock, .391 ID x .975 in. OD	1
23	GM20577	Decal, fuel type	1
25	X-205-25	Pipe (1-1/2 in. npt x 14.25 in.)	1
26	X-209-3	Pipe, Nipple, (1/2" NPT x 2.50)	1
26	X-203-13	Tee, pipe (1/2 x 1/2 x 1/2 NPT)	1
26	X-75-28	Plug, pipe (1/2" NPT)	1
27	X-256-3	Valve, drain (1/4 in. nptf)	1
27	X-202-47	Bushing, reducing (1/4 x 1/2 in. npt)	1
28	X-504-22	Fuel line, flexible (1.50 in. ID x 28.25 in.)	1
29	GM30906	Guard, hose (right)	1
30	151771	Elbow, pipe (90 deg x 1-1/2 in. npt)	1
31	153016	Bushing, reducer	1
35	151771	Elbow, pipe (90 deg x 1-1/2 in. npt)	1
36	GM23545	Bracket, support	1
37	GM70498	Valve, gas	1
38	155040	Pipe (1-1/2 in. npt x 1.75 in.)	1
39	151771	Elbow, pipe (90 deg x 1-1/2 in. npt)	1
40	X-210-27	Pipe, Nipple (1-1/4" npt x 5.00")	1
41	X-216-22	Coupling, pipe (1-1/4"npsc) straight	1
42	GM70920	Bracket, Fuel Support	1
43	277706	Clamp, muffler, 1.87 in.	1

Group 105: Engine, continued

125 kW, Dual Fuel Natural Gas/LPG Vapor



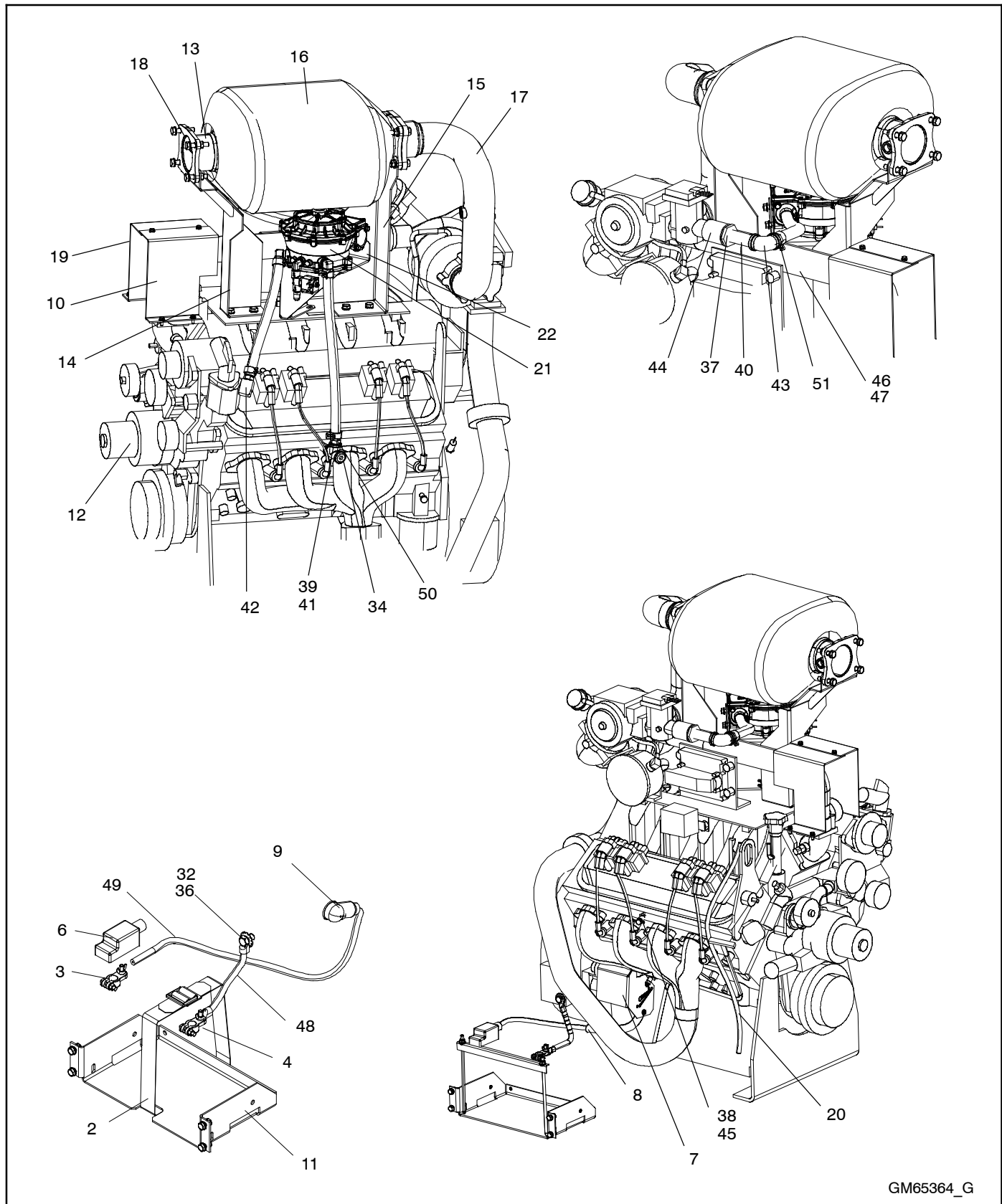
GM65363_K

Group 105: Engine, continued

Item	Part Number	Description	Qty.
			Var. No. 15
1	X-504-22	Fuel line, flexible (1.50" id x 28.25")	2
2	151771	Elbow, pipe (90 deg x 1-1/2" npt)	7
3	153016	Bushing, reducing (1-1/4 x 1-1/2" npt)	1
4	155039	Tee, pipe (1-1/2 x 1-1/2 x 1-1/2 npt)	2
5	155040	Pipe (1-1/2" npt x 1.75")	5
6	X-722-5	Clamp, muffler, 2.12 in.	1
8	GM61432	Strap, battery	1
9	345039	Terminal, battery	1
10	345056	Terminal, battery	1
11	GM20173	Decal, Fuel Type	1
12	GM76139	Decal, Fuel Type	1
13	GM21188	Shield, Heat	1
14	GM21335	Shield, heat (20mm id x 412mm length)	1
15	GM23545	Bracket, Support	2
16	GM30906	Guard, Hose (Right)	1
17	GM57161	Rack, Battery	1
18	GM62288-2	Engine Assy Turbo 8.1L 12V Dual NG/LPG	1
19	GM65728	Catalyst	1
20	GM65743	Bracket, Support	1
21	GM65751	Bracket, Support	1
22	GM65752	Wrap, Catalyst	1
23	GM66052	Tube, Exhaust	1
24	GM66053	Gasket, Exhaust	2
25	GM66598	Guard, hose (left)	1
26	GM70471	Harness, Dual Fuel Nat/LP Gas	1
27	GM70498	Valve, Gas Assy	3
28	GM70538	Switch, Pressure 7.0" H2O	1
29	GM70920	Bracket, Fuel Support	1
30	GM74499	Valve Assembly, Vent	1
31	GM75369	Hose, Flex Fuel	1
32	GM75370	Harness, Dual Fuel Gas Vent	1
33	M125A-06-80	Washer, Plain	6
34	M125A-08-80	WASHER, PLAIN, 8.4 ID x 16.0 OD	8
35	M125A-10-80	Washer, Plain, 10.5 ID x 20.0 OD	16
36	M6923-08-80	Nut, Hex 8mm	8
37	M6923-10-80	Nut, Hex 10mm	12
38	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	6
39	M933-08020-60	Screw, hex cap	8
40	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm EXP	4
41	M933-10050-60	Screw, Hex Cap (Metric)	8
42	X-22-26	Washer, lock. 521 ID x 1.24 in. OD	1
45	X-129-15	Bolt, Hex Cap	1
46	X-202-27	Bushing, reducing (1/8 x 1/4" npt) + vibra	1
47	X-209-3	Pipe, Nipple, (1/2" NPT x 2.50)	1
47	X-203-13	Tee, pipe (1/2 x 1/2 x 1/2 NPT)	1
47	X-75-28	Plug, pipe (1/2" NPT)	1
48	X-202-59	Bushing, reducing (1-1/2" npt to 1/8" npt)	1
48	GM77915	Fitting, Restriction (not shown)	1
48	X-216-24	Coupling, pipe (1/8" npt) (not shown)	1
49	X-205-15	Pipe (1-1/2" npt x 7.00")	1
50	X-205-15	Pipe (1-1/2" npt x 7.00")	1
51	X-205-25	Pipe (1-1/2" npt x 14.25")	4
52	X-205-7	Pipe (1-1/2" npt x 4.00")	1
53	X-215-19	Elbow, pipe (90 deg x 1/8" npt)	1
54	X-215-5	Elbow, pipe (90 deg x 1/4" npt)	1
55	X-217-2	Pipe, Nipple (1/8" NPT x 1.50")	1
56	X-217-6	Pipe (1/8" npt x .75")	1
57	X-220-5	Pipe (1/4" npt x .87")	2
58	X-220-6	Pipe (1/4" npt x 1.50")	1
59	X-225-3	Elbow, pipe (45 deg x 1-1/2" npt)	1
60	X-256-3	Valve, drain (1/4 in. nptf)	1
60	X-202-47	Bushing, reducing (1/4 x 1/2 in. npt)	1
61	X-519-21	Plug, Cap	2
62	X-545-112	Cable, battery (No. 2 x 16") black-	1
63	X-545-137	Cable, battery (No. 2 x 30") red+	1
64	X-555-1	Elbow, street (90 deg x 1/4" nptf)	2
65	X-6210-5	Nut, flange whiz, 10-24	2

Group 105: Engine, continued

125 kW, Liquid Withdrawal



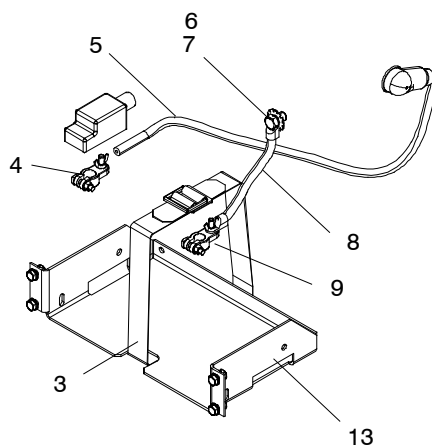
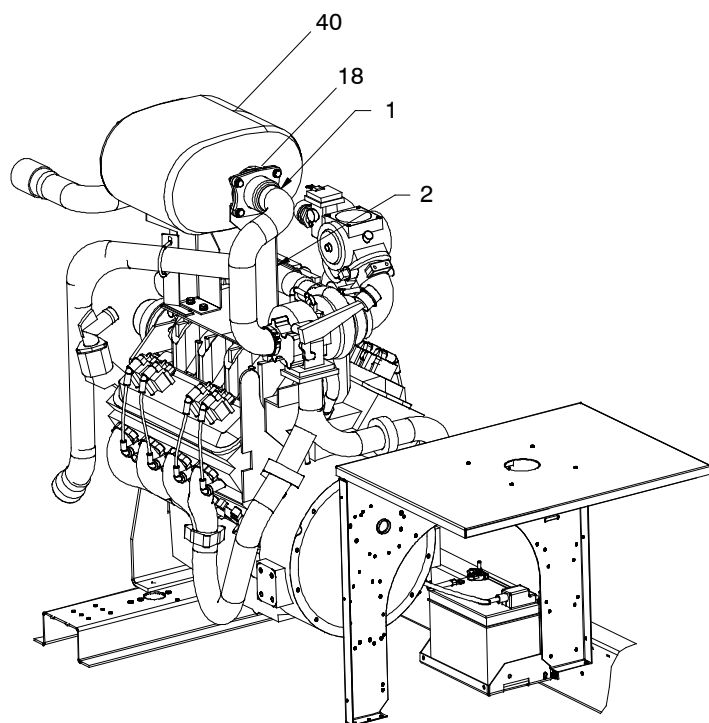
GM65364_G

Group 105: Engine, continued

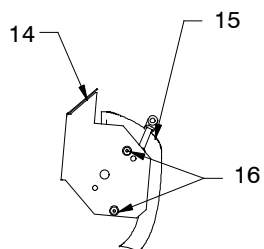
Item	Part Number	Description	Qty.
			Var. No. 16
2	GM61432	Strap, battery	1
3	345039	Terminal, battery	1
4	345056	Terminal, battery	1
5	GM20175	Decal, Fuel Type	1
6	GM20745	Boot, Battery Lug	1
7	GM21188	Shield, Heat	1
8	GM21335	Shield, heat (20mm ID x 412mm length)	1
9	GM22350	Boot, Starter Terminal	1
10	GM30906	Guard, Hose (Right)	1
11	GM57161	Rack, Battery	1
12	GM62288-1	Engine Assy Turbo 8.1L 12V NG/LPG	1
13	GM65728	Catalyst	1
14	GM65743	Bracket, Support	1
15	GM65751	Bracket, Support	1
16	GM65752	Wrap, Catalyst	1
17	GM66052	Tube, Exhaust	1
18	GM66053	Gasket, Exhaust	2
19	GM66598	Guard, hose (left)	1
20	GM75612	Harness, extension LP Liquid Fuel	1
21	GM71290	Vaporizer, LP Liquid Withdrawal	1
22	GM71331	Bracket, vaporizer mounting	1
32	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1
34	X-75-54	Plug, pipe (1/2 in. nptf) brass	1
36	X-129-15	Bolt, Hex Cap	1
37	X-202-18	Bushing, reducing (3/4 x 1-1/4 in. npt)	1
38	X-209-3	Pipe, Nipple, (1/2" NPT x 2.50)	1
38	X-203-13	Tee, pipe (1/2 x 1/2 x 1/2 NPT)	1
38	X-75-28	Plug, pipe (1/2" NPT)	1
39	X-203-13	Tee, pipe (1/2 x 1/2 x 1/2 npt)	1
40	X-206-6	Pipe (3/4 in. npt x 3.50 in.)	1
41	X-209-21	Pipe (1/2"npt x 4.50")	1
42	X-211-3	Elbow, street (90 deg x 1/2 in. nptf)	1
43	X-215-2	Elbow, pipe (90 deg x 3/4 in. npt)	1
44	X-216-30	Coupling	1
45	X-256-3	Valve, drain (1/4 in. nptf)	1
45	X-202-47	Bushing, reducing (1/4 x 1/2 in. npt)	1
46	X-431-25	Terminal, fast-on, female, 18-22 awg	1
47	X-431-29	Terminal, fast-on, male, 18-22 AWG	1
48	X-545-112	Cable, battery (No.2 x 16 in.) black-	1
49	X-545-137	Cable, battery (No.2 x 30 in.) red+	1
50	X-582-1	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	2
50	X-426-12	Clamp, hose, .69/1.25 in.	4
51	X-582-8	Connector, hose + Vibra Seal	1
52	X-6210-5	Nut, flange whiz, 10-24	2

Group 105: Engine, continued

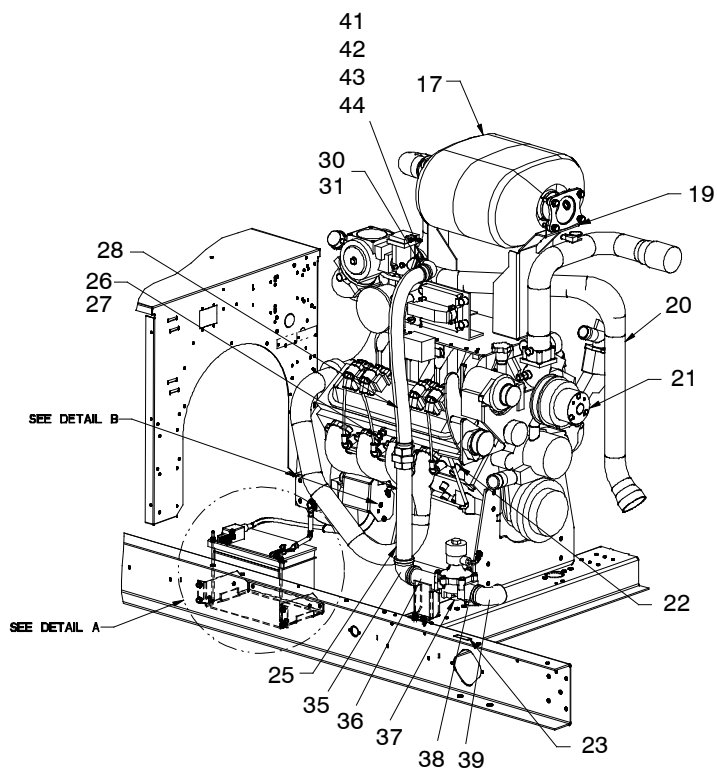
150 kW



DETAIL A



DETAIL B



GM64061_H

Group 105: Engine, continued

Item	Part Number	Description	Qty.
			Var. No. 10
1	GM66052	Tube, Exhaust	1
2	GM65751	Bracket, Support	1
3	GM61432	Strap, battery	1
4	345039	Terminal, battery	1
5	X-545-137	Cable, battery (No.2 x 30 in.) red+	1
6	X-129-15	Bolt, Hex Cap	1
7	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1
8	X-545-112	Cable, battery (No.2 x 16 in.) black-	1
9	345056	Terminal, battery	1
13	GM57161	Rack, Battery	1
14	GM21188	Shield, Heat	1
15	GM21335	Shield, heat (20mm ID x 412mm length)	1
16	X-6210-5	Nut, flange whiz, 10-24	2
17	GM65728	Catalyst	1
18	GM66053	Gasket, Exhaust	2
19	GM65743	Bracket, Support	1
20	GM64376	Tube, Charge Cooler	1
21	GM62289-1	Engine Assy, Turbo CAC 8.1L 12V NG/LPG	1
22	X-22-14	Washer, lock, .391 ID x .975 in. OD	1
23	GM20577	Decal, Fuel Type	1
24	GM20708-2	Solenoid, Gas Group (includes items 35-39)	1
25	X-205-25	Pipe (1-1/2 in. npt x 14.25 in.)	1
26	X-202-47	Bushing, reducing (1/4 x 1/2 in. npt)	1
27	X-256-3	Valve, drain (1/4 in. nptf)	1
28	X-504-22	Fuel line, flexible (1.50 in. ID x 28.25 in.)	1
30	X-215-14	Elbow, pipe (90 deg x 1-1/4 in. npt)	1
31	153016	Bushing, reducing (1-1/4 x 1-1/2 in. npt)	1
35	151771	Elbow, pipe (90 deg x 1-1/2 in. npt)	1
36	GM23545	Bracket, Support	1
37	GM70498	Valve, gas	1
38	155040	Pipe (1-1/2 in. npt x 1.75 in.)	1
39	151771	Elbow, pipe (90 deg x 1-1/2 in. npt)	1
40	GM65752	Wrap, Catalyst	1
41	X-210-27	Pipe, Nipple (1-1/4" npt x 5.00")	1
42	X-216-22	Coupling, pipe (1-1/4"npsc) straight	1
43	GM70920	Bracket, Fuel Support	1
44	277706	Clamp, muffler, 1.87 in.	1

Group 107: Nameplate and Decals

25-60 kW

Item	Part Number	Description	Qty.
			Var. No.
1	238402	Decal, caution positive term.only	1
2	249808	Decal, warning rotating parts	1
3	249809	Decal, Caution Hot Engine	2
4	249810	Decal, warning hot coolant	1
5	273780	Decal, warning explosion	1
6	GM15300	Decal, Exhaust Piping	1
7	224233	Decal, 1-800 number	1
8	257438	Decal, danger moving rotor	3
9	257441	Decal, warning lifting eye	1
10	258815	Decal, warning voltage backfeed	1
11	327004	Nameplate, model/ratings, Kohler	1
12	GM13776	Decal, FRIL Reconnection	1
13	GM39683	Tag, Hang	1
14	GM60531	Decal, Control Height	1
15	X-6232-6	Decal, stripe	3
16	X-6246-6	Decal, Kohler Power System	2

Item	Part Number	Description	Qty.
			Var. No.
1	238402	Decal, caution positive term.only	1
2	249808	Decal, warning rotating parts	1
3	249809	Decal, Caution Hot Engine	2
4	249810	Decal, warning hot coolant	1
5	273780	Decal, warning explosion	1
6	GM15300	Decal, Exhaust Piping	1
7	224233	Decal, 1-800 number	1
8	257438	Decal, danger moving rotor	3
9	257441	Decal, warning lifting eye	1
10	258815	Decal, warning voltage backfeed	1
11	362176	Decal, danger	2
12	GM13776	Decal, FRIL Reconnection	1
14	GM39683	Tag, Hang	1
15	GM60531	Decal, Control Height	1
17	X-6246-21*	Decal, Kohler Power System Logo	2
17	GM91124-11	Decal, Kohler Logo	2
18	X-6246-21*	Decal, KohlerPower.com	2
18	X-6348-23	Decal, KohlerPower.com	2

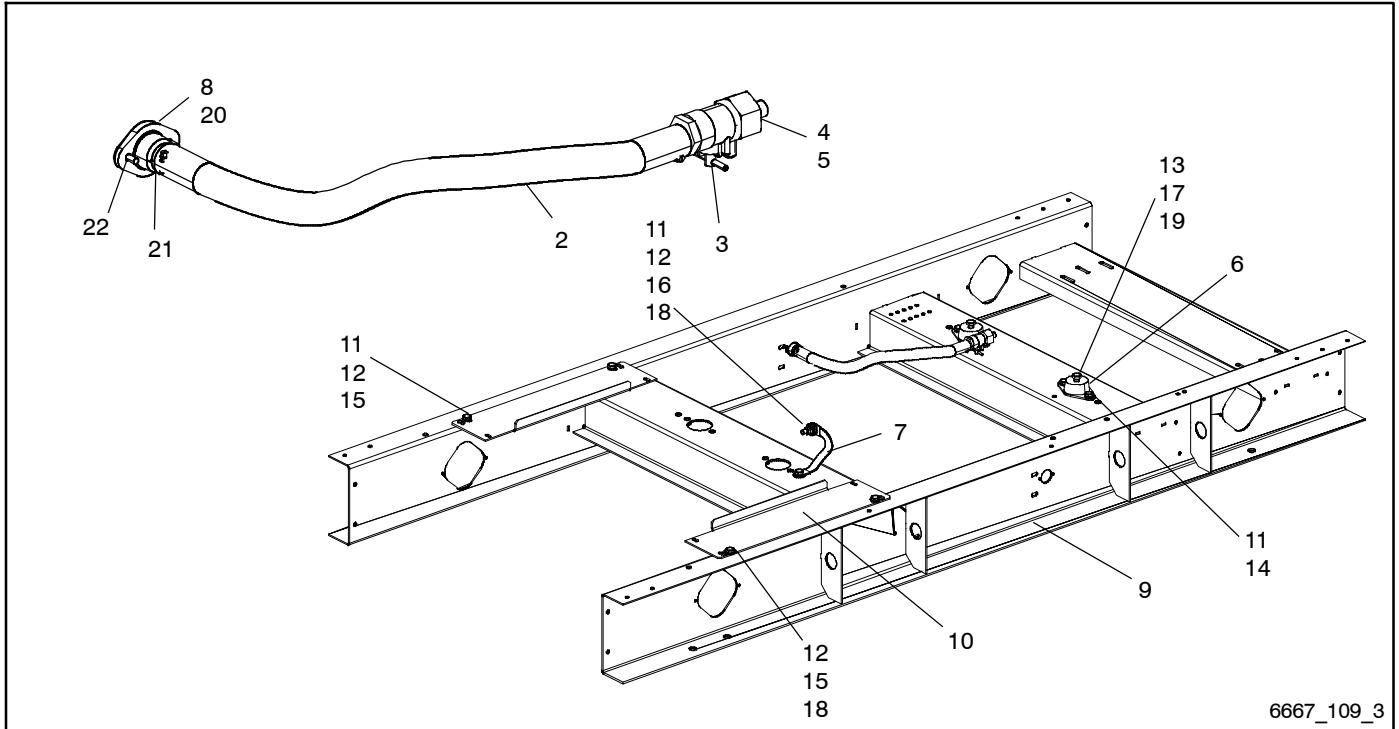
80-150 kW

Item	Part Number	Description	Qty.
			Var. No.
1	238402	Decal, caution positive term.only	1
2	249808	Decal, warning rotating parts	1
3	249809	Decal, Caution Hot Engine	2
4	249810	Decal, warning hot coolant	1
5	273780	Decal, warning explosion	1
6	GM15300	Decal, Exhaust Piping	1
7	224233	Decal, 1-800 number	1
8	257438	Decal, danger moving rotor	3
9	257441	Decal, warning lifting eye	1
10	258815	Decal, warning voltage backfeed	1
11	327004	Nameplate, model/ratings, Kohler	1
12	GM13776	Decal, FRIL Reconnection	1
13	GM39683	Tag, Hang	1
14	GM60531	Decal, Control Height	1
15	X-6232-6	Decal, stripe	3
16	X-6246-1	Decal, Kohler Power System	2

* Before build date of 1/16/2017

Group 109: Skid and Plant Mounting

25/30 kW

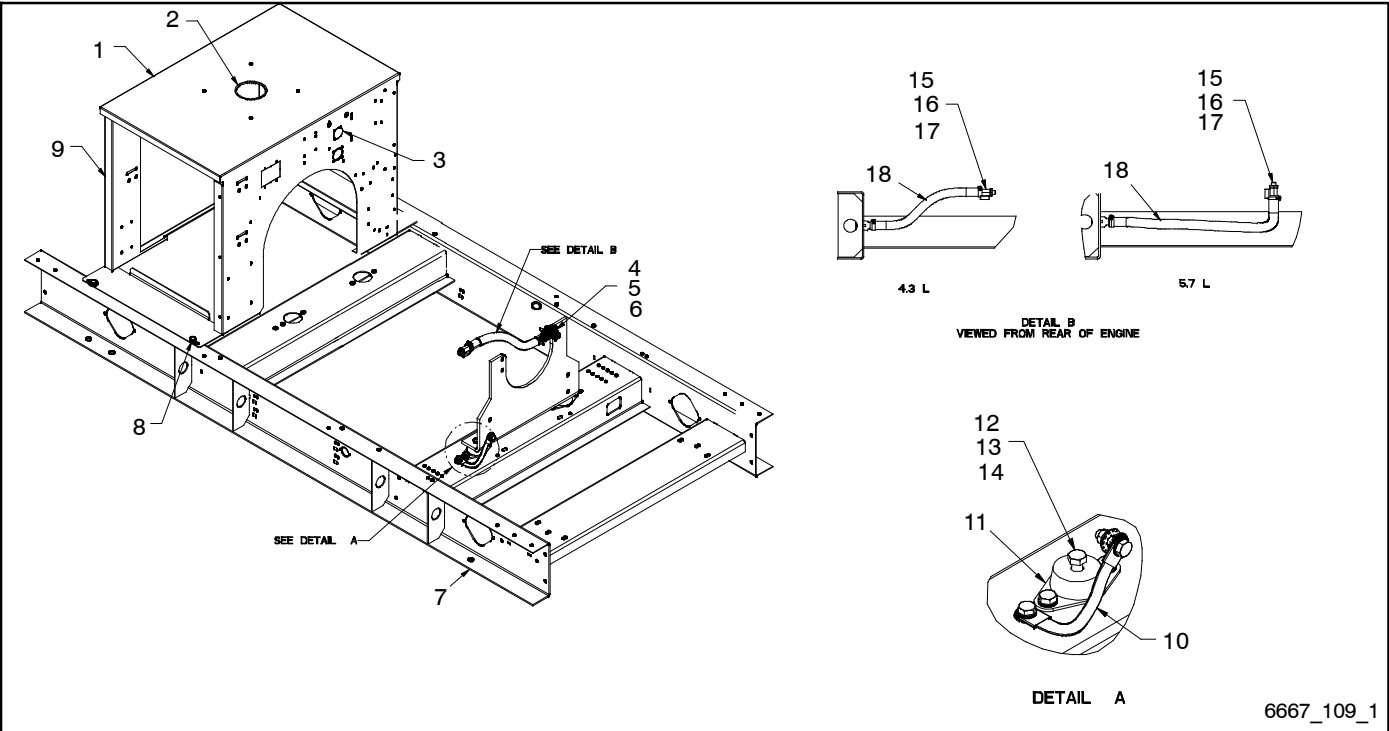


6667_109_3

Item	Part Number	Description	Quantity	
			Module Number	
			GM69420-MA1	GM69422-MA1
2	X-577-34	Hose, rubber, straight, .62 in. ID	1	1
3	272701	Valve, oil drain (1/2-14 nptf)	1	1
4	276273	Adapter, bushing	1	1
5	276278	Washer, nylon, .511 ID x .906 in. OD	1	1
6	276476	Vibromount	2	2
7	290418	Strap, ground (8 in.)	1	1
8	GM59015	Fitting, bulkhead drain	1	1
9	GM65723	Skid	1	
9	GM65763	Skid, 41 in.		1
10	GM65811	Support, junction box		2
11	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	7	13
12	M6923-10-80	Nut, Hex 10mm	1	5
13	M931-12065-60	Screw, hex cap	2	2
14	M933-10020-60	Screw, hex cap	5	5
15	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm		4
16	M933-10035-60	Screw, hex cap	1	1
17	M982-12-80	Nut, hex elastic stop	2	2
18	X-22-15	Washer, lock, .456 ID x 1.058 in. OD	3	5
19	X-25-140	Washer, plain, .531 ID x 2 in. OD	2	2
20	X-75-58	Plug, pipe	1	1
21	X-426-10	Clamp, hose, .5/1 in.	2	2
22	X-781-15	Rivet, pop, .187 in.	2	2

Group 109: Skid and Plant Mounting, continued

40-60 kW

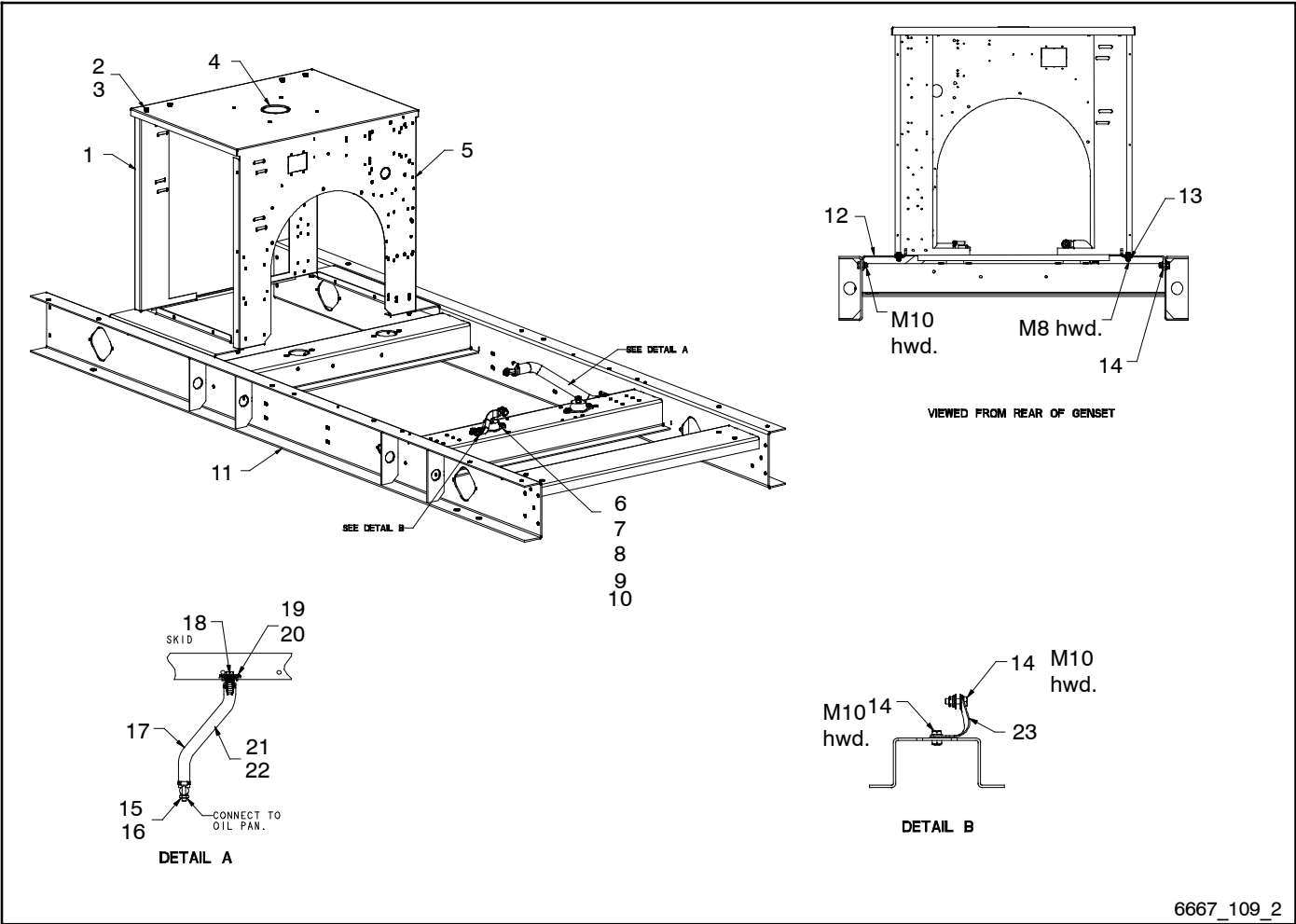


Group 109: Skid and Plant Mounting

Item	Part Number	Description	Quantity											
			Module											
			GM66095-MA1	GM66095-MA2	GM66096-MA1	GM66096-MA2	GM66916-MA1	GM66917-MA1	GM71692-MA1	GM71692-MA2	GM71693-MA1	GM71693-MA2	GM71694-MA1	GM71695-MA1
1	GM60788-KCB	Panel, Junction Box (Front)	1	1	1	1								
1	GM62774-KCB	Panel, Junction Box (Front)					1	1						
1	-	See Control and Harness Group							1	1	1	1	1	1
2	X-6033-15	Grommet	1	1	1	1	1	1						
2	-	See Control and Harness Group							1	1	1	1	1	1
3	X-301-35	Button, Plug	1	1	1	1	1	1						
3	-	See Control and Harness Group							1	1	1	1	1	1
4	GM59015	Fitting, Bulkhead Drain	1	1	1	1	1	1	1	1	1	1	1	1
5	X-781-15	Rivet, pop, .187 in.	2	2	2	2	2	2	2	2	2	2	2	2
6	X-75-58	Plug, Pipe	1	1	1	1	1	1	1	1	1	1	1	1
7	GM65723	Skid, 34 in.	1						1					
7	GM65779	Skid, 34 in.		1						1				
7	GM65780	Skid, 34 in.					1						1	
7	GM65763	Skid, 41 in.			1						1			
7	GM65781	Skid, 41 in.				1						1		
7	GM65782	Skid, 41 in.						1						1
8	GM65811	Support, Junction Box			2	2					2	2		
8	GM65810	Support, Junction Box						2						2
9	GM17418	Panel, Junction Box (Rear)	1	1	1	1								
9	GM17624	Panel, Junction Box (Rear)					1	1						
9	-	See Control and Harness Group							1	1	1	1	1	1
10	290418	Strap, ground (8 in.)	1	1	1	1	1	1	1	1	1	1	1	1
11	276476	Vibromount	2		2				2		2			
11	324073	Vibromount		2		2	2	2		2		2	2	2
12	M931-12065-60	Screw, hex cap	2	2	2	2	2	2	2	2	2	2	2	2
13	X-25-140	Washer, plain, .531 ID x2 in. OD	2	2	2	2	2	2	2	2	2	2	2	2
14	M982-12-80	Nut, hex elastic stop	2	2	2	2	2	2	2	2	2	2	2	2
15	GM19299	Valve, oil drain (M12 x 1.75)	1	1	1	1	1	1	1	1	1	1	1	1
16	X-6278-9	Washer, nylon, .48 ID x .825 in. OD	1	1	1	1	1	1	1	1	1	1	1	1
17	X-426-10	Clamp, hose, .5/1 in.	2	2	2	2	2	2	2	2	2	2	2	2
18	X-577-5	Hose, rubber, straight, .62 in. ID (1.17 ft.)	1		1				1		1			
18	X-577-24	Hose, rubber, straight, .62 in. ID (1.75 ft.)		1		1	1	1		1		1	1	1

Group 109: Skid and Plant Mounting, continued

80-150 kW with 8.1L Engine



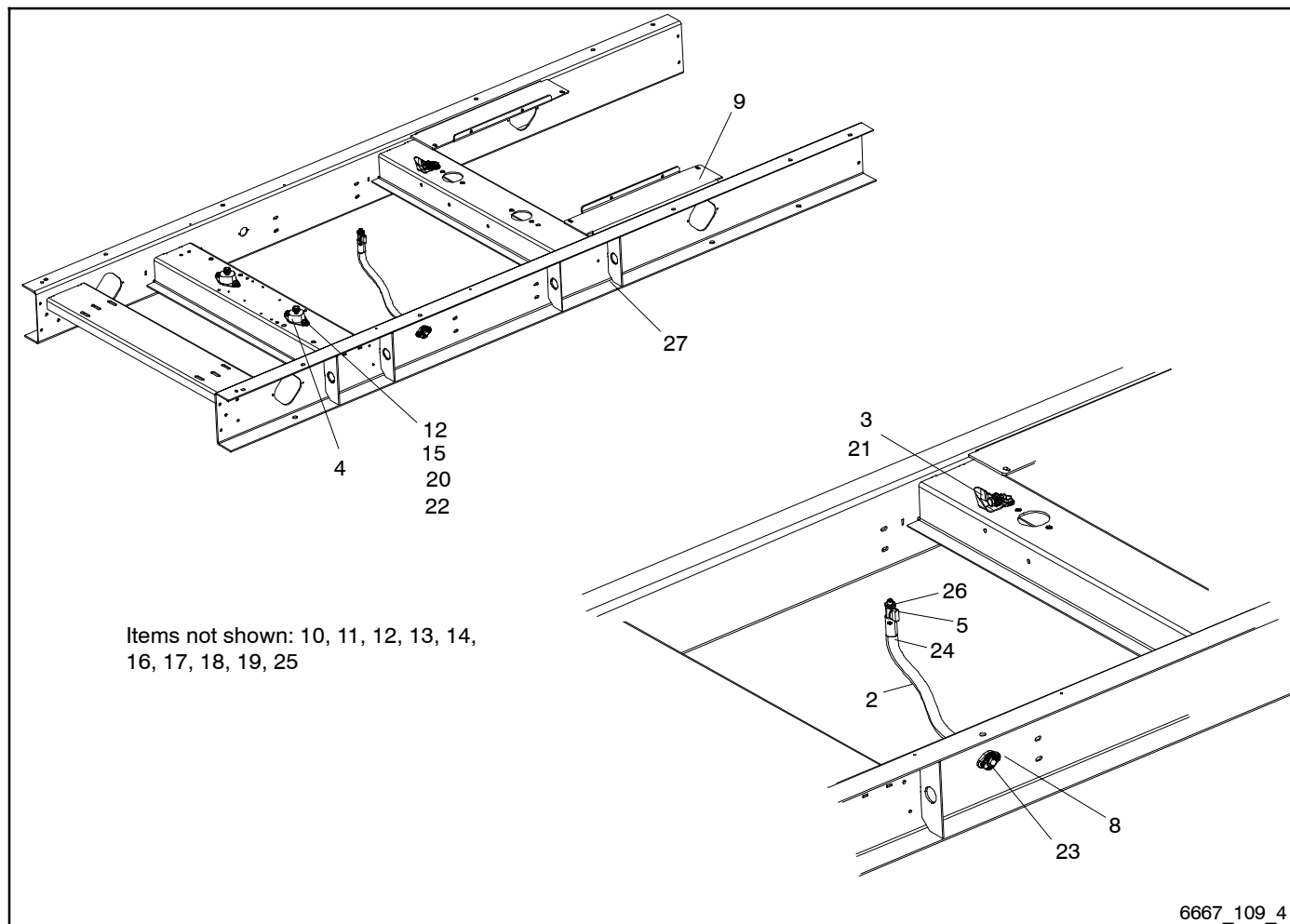
6667_109_2

Group 109: Skid and Plant Mounting, continued

Item	Part Number	Description	Quantity Module									
			GM64062-MA1	GM64062-MA2	GM64062-MA3	GM65366-MA1	GM65366-MA2	GM71684-MA1	GM71684-MA2	GM71684-MA3	GM71656-MA1	GM71656-MA2
1	GM17624	Panel, Junction Box (Rear)	1	1	1	1	1					
1	-	See Control and Harness Group						1	1	1	1	1
2	X-6210-2	Nut, flange spiralock, 1/4-20	4	4	4	4	4					
2	-	See Control and Harness Group						4	4	4	4	4
3	X-25-40	Washer, plain, .281 ID x .625 in. OD	4	4	4	4	4					
3	-	See Control and Harness Group						4	4	4	4	4
4	X-6033-15	Grommet	1	1	1	1	1					
4	-	See Control and Harness Group						4	4	4	4	4
5	GM62774-KCB	Panel, Junction Box (Front)	1	1	1	1	1					
5	-	See Control and Harness Group						4	4	4	4	4
6	324073	Vibromount	2	2	2	2	2	2	2	2	2	2
7	M933-10020-60	Screw, hex cap	5	5	5	4	4	4	4	4	4	4
8	M931-12065-60	Screw, hex cap	2	2	2	2	2	2	2	2	2	2
9	M982-12-80	Nut, hex elastic stop	2	2	2	2	2	2	2	2	2	2
10	X-25-140	Washer, plain, .531 ID x2 in. OD	2	2	2	2	2	2	2	2	2	2
11	GM64063	Skid	1					1				
11	GM65342	Skid		1					1			
11	GM66560	Skid			1					1		
11	GM65377	Skid				1					1	
11	GM67060	Skid					1					1
12	GM64117	Support, Junction Box	2	2	2			2	2	2		
13	X-22-16	Washer, lock, .326 ID x .883 in. OD	4	4	4	4	4					
13	-	See Control and Harness Group						4	4	4	4	4
14	X-22-15	Washer, lock, .456 ID x 1.058 in. OD	5	5	5	3	3	5	5	5	3	3
15	GM19299	Valve, oil drain (M12 x 1.75)	1	1	1	1	1	1	1	1	1	1
16	X-6278-9	Washer, nylon, .48 ID x .825 in. OD	1	1	1	1	1	1	1	1	1	1
17	GM10669	Shield, heat (32mm ID x 305mm length)	1	1	1	1	1	1	1	1	1	1
18	X-75-58	Plug, Pipe	1	1	1	1	1	1	1	1	1	1
19	GM59015	Fitting, Bulkhead Drain	1	1	1	1	1	1	1	1	1	1
20	X-781-15	Rivet, pop, .187 in.	2	2	2	2	2	2	2	2	2	2
21	X-577-5	Hose, rubber, straight, .62 in. ID	1	1	1	1	1	1	1	1	1	1
22	X-426-10	Clamp, hose, .5/1 in.	2	2	2	2	2	2	2	2	2	2
23	290418	Strap, ground (8 in.)	2	2	2	2	2	2	2	2	2	2

Group 109: Skid and Plant Mounting, continued

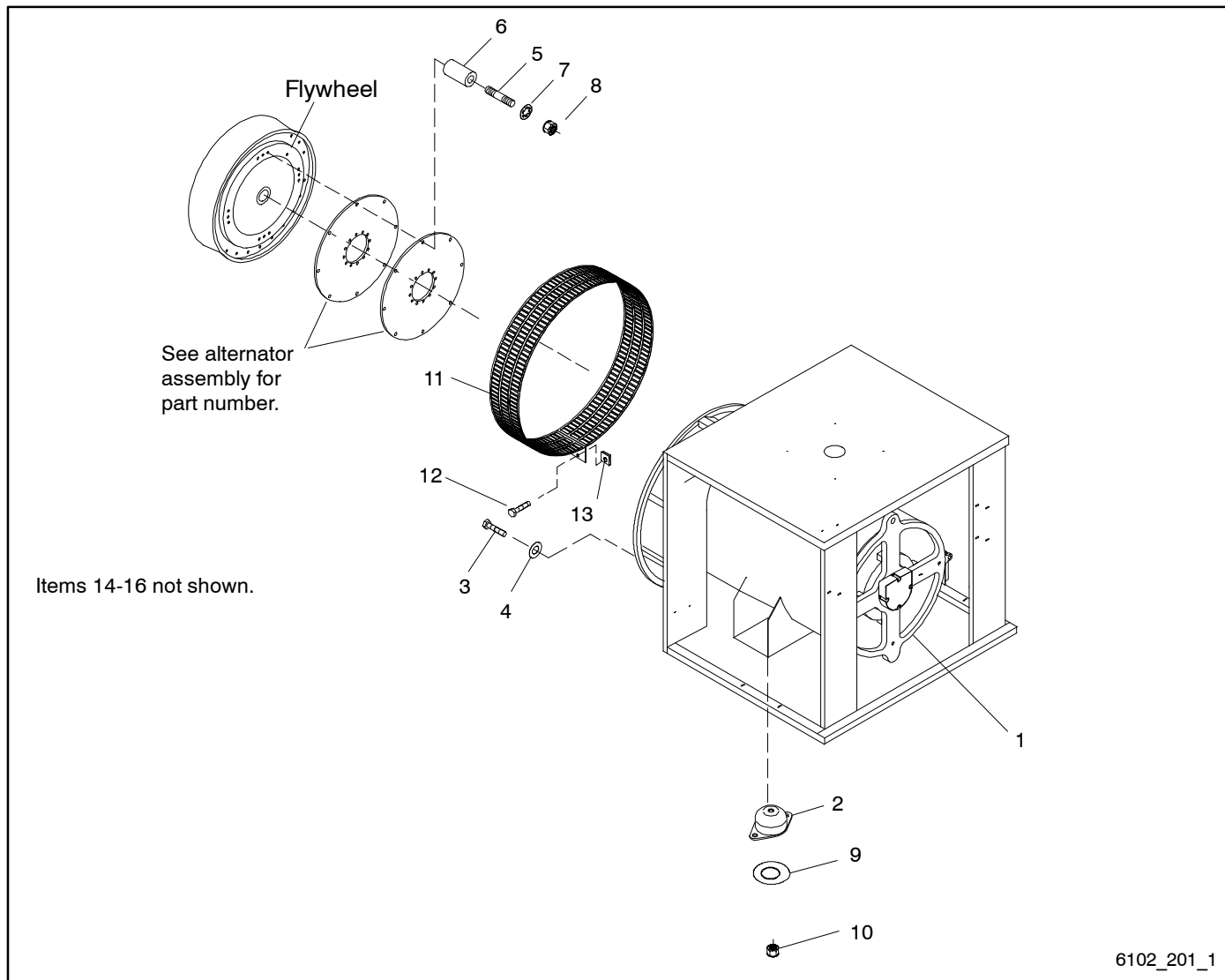
80 kW with 5.7L Engine



Group 109: Skid and Plant Mounting, continued

Item	Part Number	Description	Quantity		
			Module		
			GM71623-MA1	GM71623-MA2	GM71613-MA1
2	X-577-27	Hose, rubber, straight, .62 in. ID	1	1	
2	X-577-24	Hose, rubber, straight, .62 in. ID			1
3	290418	Strap, ground (8 in.)	2	2	2
4	324073	Vibromount	2	2	2
5	GM19299	Valve, oil drain (M12 x 1.75)	1	1	1
8	GM59015	Fitting, Bulkhead Drain	1	1	1
9	GM64117	Support, Junction Box	2	2	
10	M125A-08-80	Washer, Plain, 8.4 ID x 16.0 OD	2	2	2
11	M125A-10-80	Washer, Plain, 10.5 ID x 20.0 OD	10	10	7
12	M125A-12-80	Washer, Plain	2	2	2
13	M6923-08-80	Nut, Hex 8mm	2	2	2
14	M6923-10-80	Nut, Hex 10mm	5	5	1
15	M931-12065-60	Screw, hex cap	2	2	2
16	M933-08025-60	Screw, hex cap	2	2	2
17	M933-10020-60	Screw, hex cap	5	5	5
18	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm	4	4	4
19	M933-10035-60	Screw, hex cap	1	1	1
20	M982-12-80	Nut, hex elastic stop	2	2	2
21	X-22-15	Washer, lock, .456 ID x 1.058 in. OD	5	5	3
22	X-25-140	Washer, plain, .531 ID x 2 in.OD	2	2	2
23	X-75-58	Plug, Pipe	1	1	1
24	X-426-10	Clamp, hose, .5/1 in.	2	2	2
25	X-781-15	Rivet, pop, .187 in.	2	2	2
26	X-6278-9	Washer, nylon, .48 ID x .825 in. OD	1	1	1
27	GM71621	Skid, 44"	1		
27	GM71625	Skid, 44"		1	
27	GM71620	Skid, 34"			1

Group 201: Generator and Mounting



Item	Part Number	Description	Qty.
1	See chart	Alternator assembly	1
2	See chart	Vibromount	2
3	270956	Screw, 3/8-16 x 1 1/4, (4P, 4Q alternator)	6
3	270158	Bolt, hex cap (4S, 4V alternator)	6
4	X-801-3	Washer, hardened, 0.406 ID x 0.812 OD	6
5	X-352-63	Stud, 3/8-16 x 4 in.	8
6	X-400-132	Spacer, 0.406 ID x 0.625 OD x 2.531 in.	8
7	X-801-3	Washer, hardened, 0.406 ID x 0.812 OD	8
8	X-6210-9	Nut, flange spirallock, 3/8-16	8
9	X-25-140	Washer, plain, 0.531 ID x 2 in. OD	2
9	X-25-112*	Washer, plain	2
10	M982-12-80	Nut, hex elastic stop	2
10	M982-16-80*	Nut, hex elastic stop	2
11	257046	Guard, generator fan	1
11	257179	Guard, generator fan (4S and 4V alt)	1
12	X-67-125	Screw, hex washer, thread-forming	2
13	257442	Clip, speed	2
14	X-750-14	Marker, wire L1 (not shown)	1
15	X-750-15	Marker, wire L2 (not shown)	1
16	X-750-16	Marker, wire L3 (not shown)	1

Alternator assembly includes items 1-32 on following page.

* Select this part number for modules using SAE 11 1/2 in. flywheel.

Group 201: Generator and Mounting

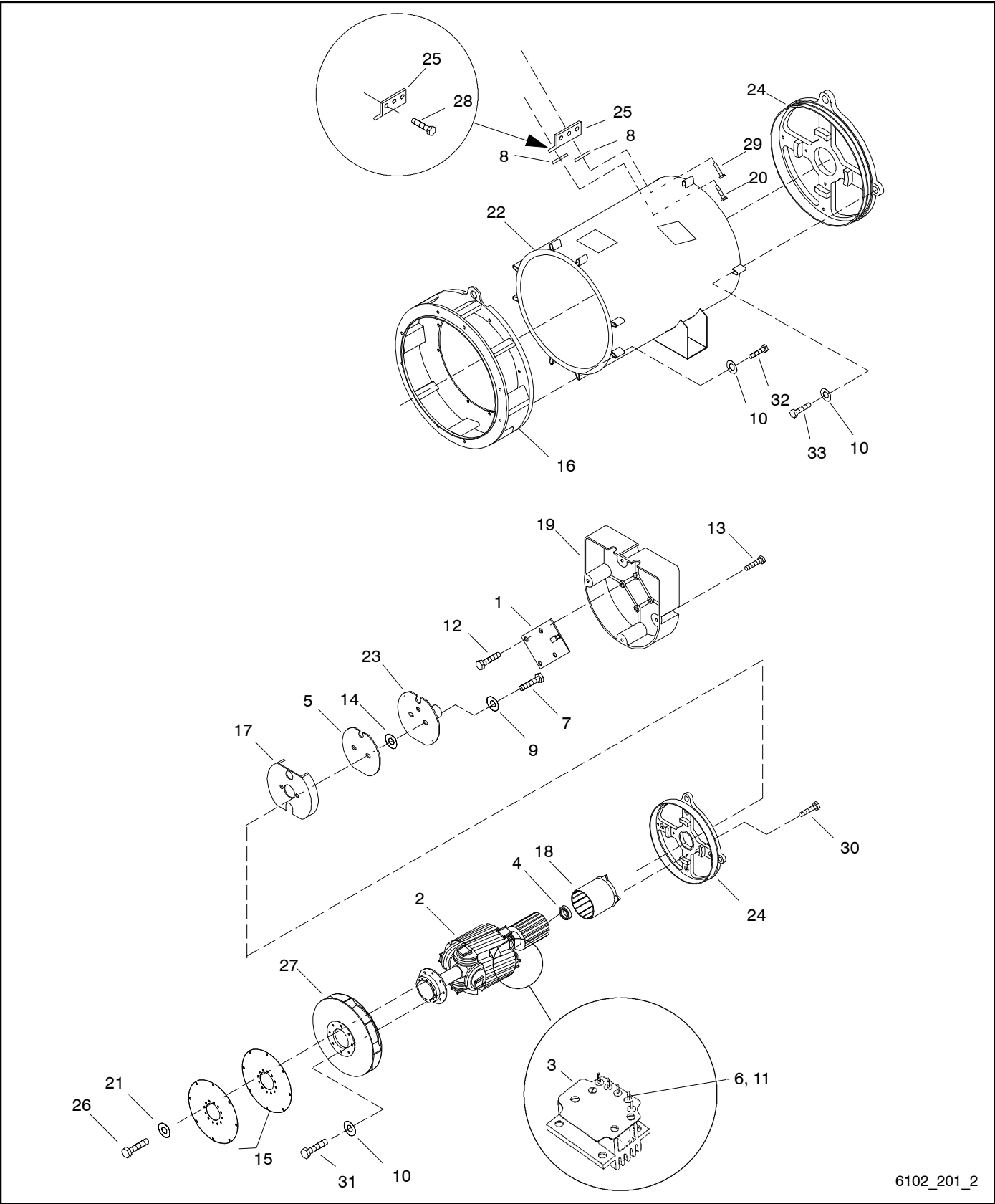
Alternator Part Number and Mount Type

Use this table to identify the module number's alternator part number and vibromount part number.

Module No.	Alternator Description	Item 1, Alternator Assembly	Item 2, Vibromount
GM17701-MA1	4P5	GCC-257719	324073
GM17701-MA2	4P5, 600 V	C-257726	324073
GM17701-MA3	4P5B	GC16880	324073
GM17701-MA4	4P5B, 600 V	GM16881	324073
GM17701-MA5	4P7B	GC16882	324074
GM17701-MA6	4P7B, 600 V	GM16883	324074
GM17701-MA7	4P8	GCC-257721	324074
GM17701-MA8	4P8, 600 V	C-257728	324074
GM17701-MA9	4P10	GCC-257739	324074
GM17701-MA10	4P10, 600 V	C-257729	324074
GM17701-MA11	4Q5	GCB-360736	324073
GM17701-MA12	4Q10	GCB-360739	324074
GM17701-MA36	4P4	GCC-257718	324073
GM17701-MA37	4P4, 600 V	GM58668-1	324073
GM17701-MA42	4P4, 600 V	GM58668-1	324073
GM17701-MA43	4P5, 600 V	GM58668-2	324073
GM17701-MA44	4P7B, 600 V	GC58668-3	324074
GM17701-MA45	4P4, 600 V	GC58668-3	324073
GM17701-MA46	4P8, 600 V	GC58668-5	324074
GM17701-MA47	4P10, 600 V	GC58668-6	324074
GM17701-MA48	4Q710	GCB-360737	324073
GM17701-MA49	4P7	GCC-257720	324073
GM17701-MA50	4P7, 600 V	GC58668-13	324073
GM17701-MA51	4Q4	GC58668-14	324073
GM17672-MA1	4S7	GC17563-1	324075
GM17672-MA2	4S7, 600 V	GM17563-4	324075
GM17672-MA3*	4S7	GC17563-13	336813
GM17672-MA4*	4S7, 600 V	GM17563-15	336813
GM17672-MA5*	4S9	GC17563-14	324391
GM17672-MA6*	4S9, 600 V	GM17563-16	324391
GM17672-MA7*	4S13	GC17563-11	336024
GM17672-MA8*	4S13, 600 V	GM17563-12	336024
GM17672-MA9	4V7	GC17563-26	324075
GM17672-MA10*	4V9	GC17563-24	324391
GM17672-MA11*	4V11	GC17563-23	336024
GM17672-MA12*	4S11	GC17563-21	336024
GM17672-MA13*	4S11, 600 V	GC17563-45	336024
GM17672-MA153*	4S15	GC17563-32	336024
GM17672-MA154*	4S15, 600 V	GM17563-33	336024
GM17672-MA168	4S7, 600 V	GC17563-40	324075
GM17672-MA169*	4S7, 600 V	GC17563-43	336813
GM17672-MA170*	4S9, 600 V	GC17563-44	324391
GM17672-MA171*	4S13, 600 V	GC17563-46	336024
GM17672-MA172*	4S11, 600 V	GC17563-45	336024
GM17672-MA173*	4S15, 600 V	GC17563-47	336024
GM17672-MA175	4V9	GM17563-27	324075

* Modules use SAE 11 1/2 in. flywheel.

Group 201: Generator and Mounting, continued

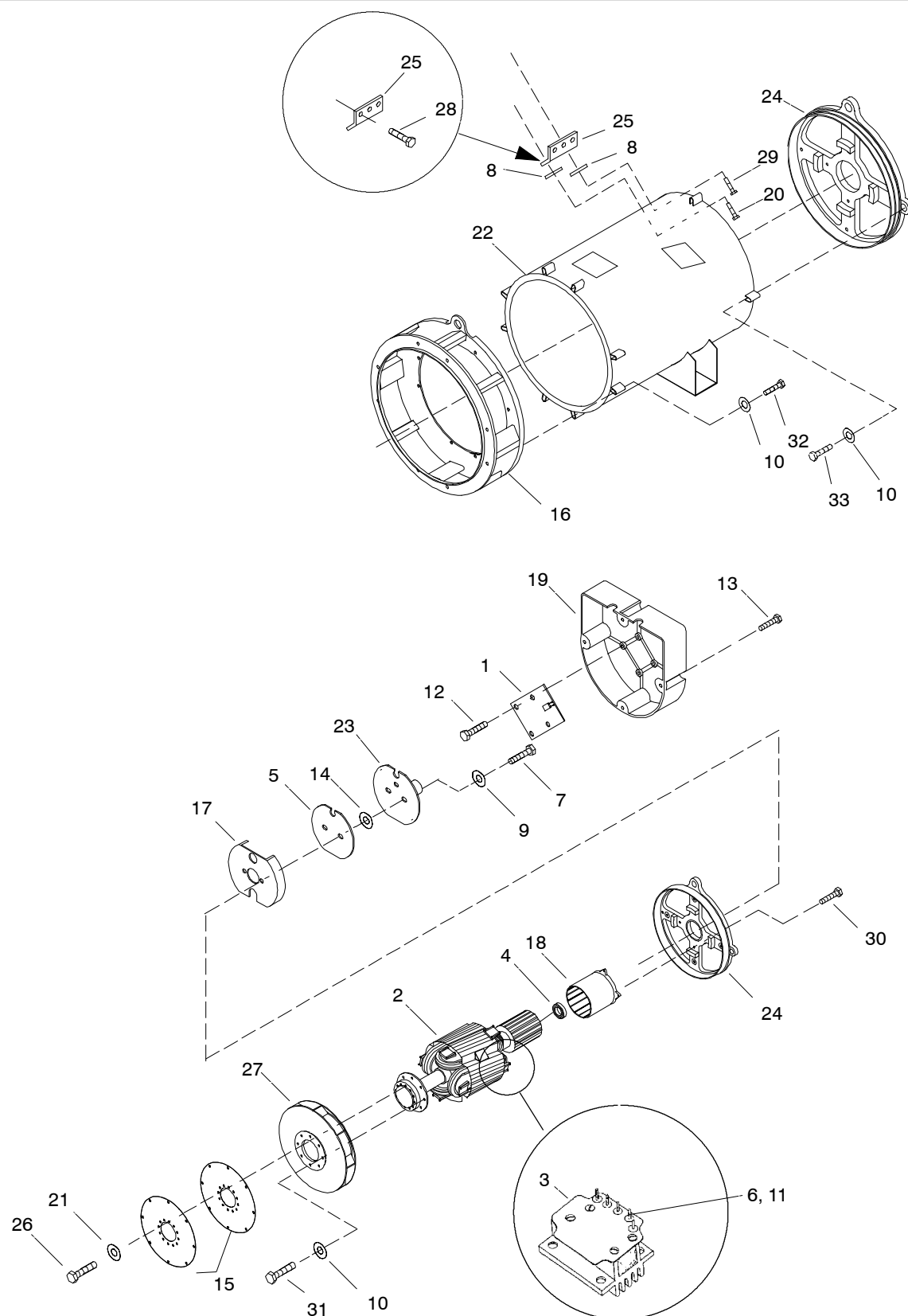


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Group 201: Generator and Mounting, continued

Item	Part No.	Description	Qty.
1	B-257099	PCB assembly, LED, FRIL	1
2	See chart	Rotor assembly	1
3	B-258545	Heatsink (4P and 4Q alternators)	1
3	B-258549	Heatsink (4S and 4V alternators)	1
4	X-758-2	Bearing, ball (4P and 4Q alternators)	1
4	X-758-6	Bearing, ball (4S and 4V alternators)	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-22-44	Washer, lock, 0.262 ID x 0.743 in. OD (4P and 4Q alt.)	2
8	X-22-45	Washer, lock, 0.338 ID x 0.884 in. OD (4S and 4 V alt.)	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
11	X-283-7	Terminal, ring, male, 22-16 AWG	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	257015	Lamination, armature drive (4P and 4Q alternators)	2
15	257103	Lamination, armature drive (4S and 4V SAE 11 1/2 flywheel)	3
15	257102	Lamination, armature drive (4S and 4V SAE 10 in. flywheel)	3
16	257018	Adapter, generator (4P and 4Q alternators)	1
16	257175	Adapter, generator (4S and 4V alternators)	1
17	257077	Actuator, magnetic cup	1
18	See chart	Exciter field assembly	1
19	257258	Cover, FR LED circuit board	1
20	X-791-5	Screw, HHM (4P and 4Q alternators)	1
20	X-791-7	Screw, HHM (4S and 4V alternators)	1
21	X-801-3	Washer, hardened, 0.406 ID x 0.812 in.	8
21	X-801-3	Washer, hardened, 0.406 ID x 0.812 in.	12
22	See chart	Stator assembly	1
23	257850	Insulator	1
24	257984	End bracket (4P and 4Q alternators)	1
24	257983	End bracket (4S and 4V alternators)	1
25	257986	Lead connector (4P and 4Q alternators)	1
25	257985	Lead connector (4S and 4V alternators)	1
25	257978	Lead connector (4S and 4V alt., 1-phase)	1
26	270956	Screw, cylinder head, 3/8-16 x 1 1/4 (4P and 4Q alternators)	8
26	270956	Screw, cylinder head, 3/8-16 x 1 1/4 (4S and 4V alternators)	12
27	347697	Fan, alternator (4P and 4Q alternators)	1
27	257173	Fan, alternator (4S and 4V alternators)	1
28	X-125-24	Screw, HC (4S and 4V alternators)	3
28	X-6238-5	Screw, HC (4S and 4V alternators, 1-phase)	3
28	X-465-8	Screw, HC (4P and 4Q alternators)	3
29	X-456-16	Screw, HC (4S and 4V alternators)	1
29	X-125-31	Screw, HC (4P and 4Q alternators)	1
30	X-125-34	Screw, HC	4
31	X-6238-11	Screw, HC	4
32	X-6238-6	Screw, HC (4P and 4Q alternators)	6
32	X-6238-6	Screw, HC (4S and 4V alternators)	1
32	X-6238-9	Screw, HC (4S and 4V alternators)	5
33	273736	Screw, hex head machine, special thread (4P and 4Q alt.)	4
33	352415	Screw, hex head machine, special thread (4S and 4V alt.)	4

Group 201: Generator and Mounting, continued



6102_201_2

Group 201: Generator and Mounting, continued

Alternator Part Number and Mount Type

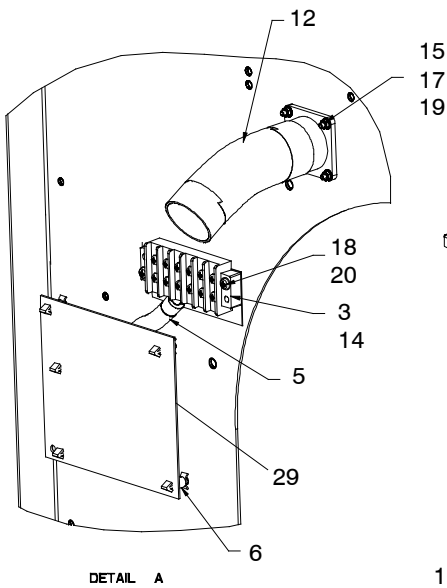
Use this table to identify the module number's alternator, rotor, and stator part numbers.

Module No.	Alternator Description	Assembly			
		Alternator	Item 2, Rotor	Item 22, Stator	Item 18, Exciter Field
GM17701-MA1	4P5	GCC-257719	GCA-258979	GC257766	GC257080
GM17701-MA2	4P5, 600V	C-257726	A-258979	257771	257080
GM17701-MA3	4P5B	GC16880	GCA-326938	GC360501	GC257080
GM17701-MA4	4P5B,600V	GM16881	A-326938	GM13681	257080
GM17701-MA5	4P7B	GC16882	GCA-336564	GC326728	GC257081
GM17701-MA6	4P7B,600V	GM16883	GCA-336564	GC13682	GC257081
GM17701-MA7	4P8	GCC-257721	GCA-258977	GC257768	GC257081
GM17701-MA8	4P8, 600V	C-257728	A-258977	257773	257081
GM17701-MA9	4P10	GCC-257739	GCA-258975	GC257769	GC257081
GM17701-MA10	4P10, 600V	C-257729	A-258975	257774	257081
GM17701-MA11	4Q5	GCB-360736	GCA-258979	GC360748	GC257080
GM17701-MA12	4Q10	GCB-360739	GCA-258975	GC360751	GC257081
GM17701-MA36	4P4	GCC-257718	GCA-258980	GC257765	GC257080
GM17701-MA37	4P4, 600V	GM58668-1	A-258980	GM58667-1	257080
GM17701-MA42	4P4, 600V	GM58668-1	A-258980	GM58667-1	257080
GM17701-MA43	4P5, 600V	GM58668-2	A-258979	GM58667-2	257080
GM17701-MA44	4P7B,600	GC58668-3	GCA-326938	GC58667-3	GC257080
GM17701-MA45	4P5, 600V	GC58668-3	GCA-326938	GC58667-3	GC257080
GM17701-MA46	4P8, 600V	GC58668-5	GCA-258977	GC58667-6	GC257081
GM17701-MA47	4P10,600V	GC58668-6	GCA-258975	GC58667-7	GC257081
GM17701-MA48	4Q10	GCB-360737	GCA-258978	GC360749	GC257081
GM17701-MA49	4P7	GCC-257720	GCA-258978	GC257767	GC257081
GM17701-MA50	4P7, 600V	GC58668-13	GCA-258978	GC58667-4	GC257081
GM17701-MA51	4Q4	GC58668-14	GCA-258980	GC360747	GC257080
GM17672-MA1	4S7	GC17563-1	GCA-276659	GC17559-1	GC276657
GM17672-MA2	4S7, 600V	GM17563-4	A-276659	GM17561-1	276657
GM17672-MA3*	4S7	GC17563-13	GCA-276664	GC17559-1	GC276657
GM17672-MA4*	4S7, 600V	GM17563-15	A-276664	GM17561-1	276657
GM17672-MA5*	4S9	GC17563-14	GCA-276665	GC17559-2	GC276657
GM17672-MA6*	4S9, 600V	GM17563-16	A-276665	GM17561-2	276657
GM17672-MA7*	4S13	GC17563-11	GCA-276666	GC17559-3	GC276657
GM17672-MA8*	4S13,600V	GM17563-12	A-276666	GM17561-3	276657
GM17672-MA9	4V7	GC17563-26	GCA-276659	GC17562-3	GC276657
GM17672-MA10*	4V9	GC17563-24	GCA-276665	GC17562-2	GC276657
GM17672-MA11*	4V11	GC17563-23	GCA-343443	GC17562-1	GC276657
GM17672-MA12*	4S11	GC17563-21	GCA-343443	GC17559-4	GC276657
GM17672-MA13*	4S11,600V	GC17563-45	GCA-343443	GC58669-3	GC276657
GM17672-MA153*	4S15	GC17563-32	GCA-364409	GC17560	GC276657
GM17672-MA154*	4S15,600V	GM17563-33	A-364409	GM17561-5	276657
GM17672-MA168	4S7,600V	GC17563-40	GCA-276659	GC58669-1	GC276657
GM17672-MA169*	4S7,600V	GC17563-43	GCA-276664	GC58669-1	GC276657
GM17672-MA170*	4S9,600V	GC17563-44	GCA-276665	GC58669-2	GC276657
GM17672-MA171*	4S13,600V	GC17563-46	GCA-276666	GC58669-4	GC276657
GM17672-MA172*	4S11,600V	GC17563-45	GCA-343443	GC58669-3	GC276657
GM17672-MA173*	4S15,600V	GC17563-47	GCA-364409	GC58669-5	GC276657
GM17672-MA175	4V9	GM17563-27	A-276660	GM17562-2	276657

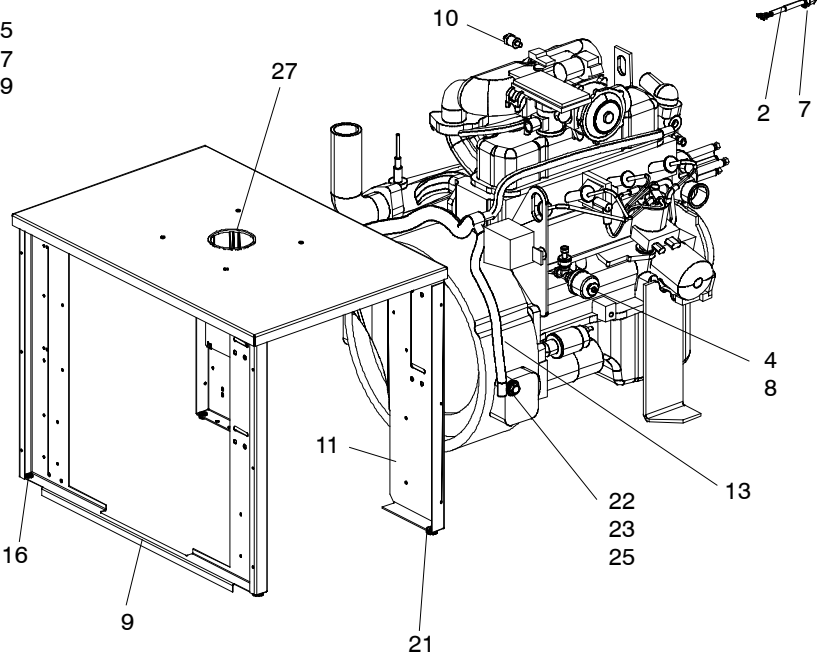
* Modules use SAE 11 1/2 in. flywheel.

Control and Harness

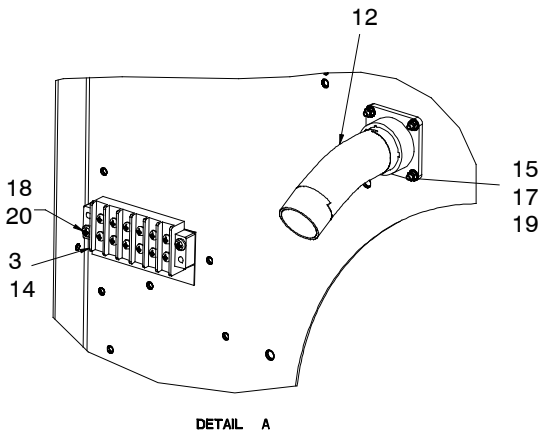
25/30 kW, Decision-Maker 3+/550



Non-DEC 550 Controller



Items not shown: 24,26,28



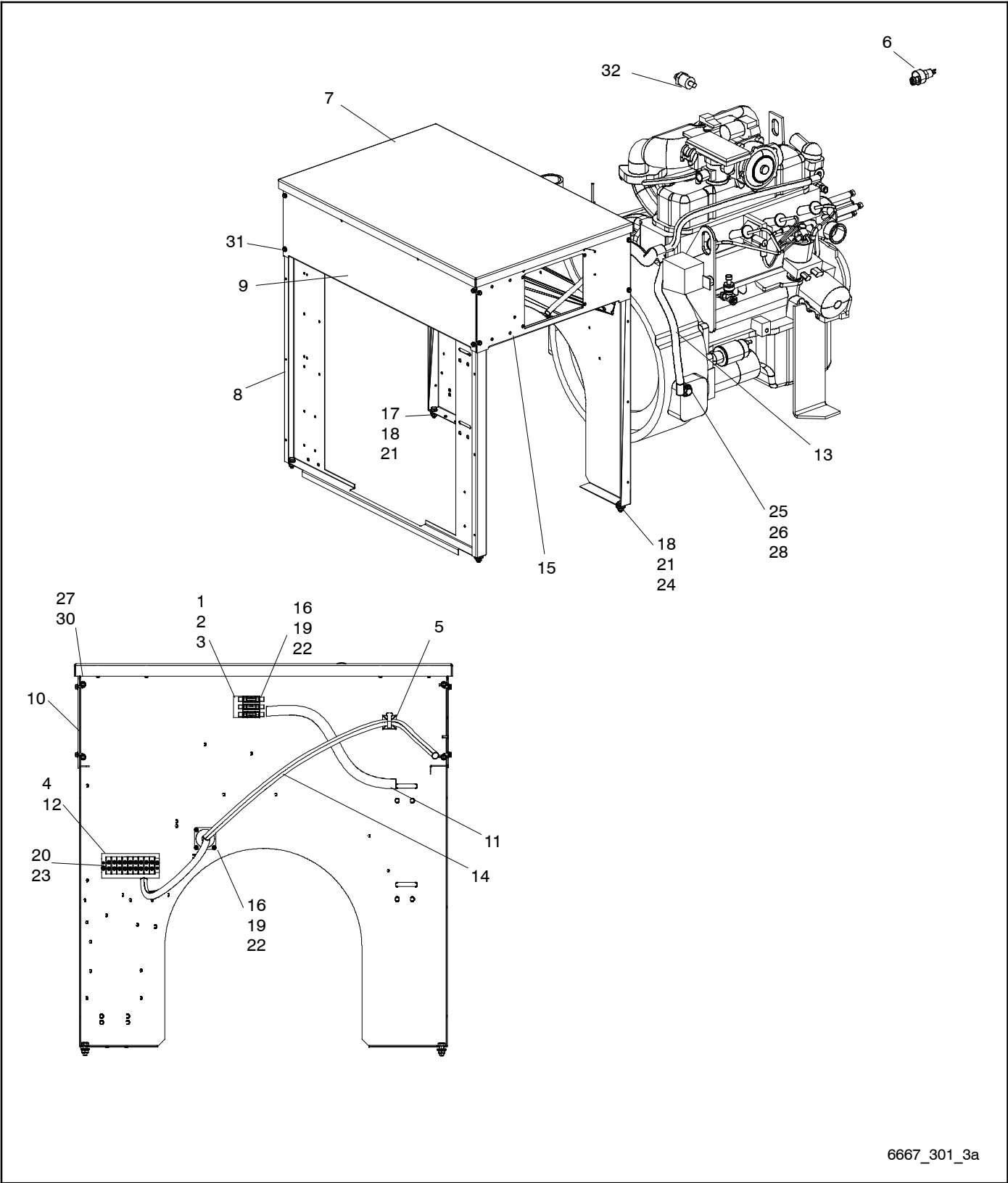
DEC 550 Controller

Control and Harness

Item	Part Number	Description	Quantity		
			Module Number		
			GM69424-MA1	GM69424-MA2	GM69425-MA1
2	X-6003-8	Conduit, convoluted	1	1	1
3	295313	Terminal block	2	2	1
4	343473	Sender, oil pressure	1	1	
5	354118	Harness, CT wiring FRIL	1	1	
6	360459	Standoff, circuit board	5	5	
7	365289	Sensor, low fluid assembly	1	1	
8	A-106	Bushing, reducing (1/8 x 1/4 in. npt)	1	1	
9	GM17418	Panel, junction box (rear)	1	1	1
10	GM39458	Sender, temperature	1	1	
11	GM60788-KCB	Panel, junction box (front)	1	1	1
12	GM63940	Harness, J-Box GM 60-150 kw , DEC 3+	1	1	
12	GM63939	Harness, J-box GM 60-150 kw, DEC 550			1
13	GM63946	Harness, Engine GM 25-30 kw	1	1	
13	GM70941	Harness, engine GM 25-30 kw DEC 550			1
14	GM70413	Strip, marker	1	1	1
15	M125A-03-60	Washer, plain	4	4	4
16	M125A-08-80	Washer, plain 8.4 ID x 16.0 OD	4	4	4
17	M7985A-03012-20	Screw, pan head M3 x 12	4	4	4
18	M7985A-04020-20	Screw, pan head mach.	2	2	2
19	M934-03-50	Nut, Hex 3mm	4	4	4
20	M934-04-50	Nut, Hex 4mm	2	2	2
21	X-22-16	Washer, lock, .326 ID x .883 in. OD	4	4	4
22	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1	1	1
23	X-25-26	Washer, plain, .531 ID x 1.062 in. OD	1	1	1
24	X-25-40	Washer, plain, .281 ID x .625 in. OD	4	4	4
25	X-129-15	Bolt, hex cap	1	1	1
26	X-301-35	Button, plug	1	1	1
27	X-6033-15	Grommet	1	1	1
28	X-6210-2	Nut, flange spiralock, 1/4-20	4	4	4
29	C-255670	PCB assembly, FRIL voltage/Hz reg.	1		
29	A-354653	PCB assembly, V/Hz regulator, FRIL		1	

Control and Harness, continued

25/30 kW, Decision-Maker 3000



6667_301_3a

Control and Harness, continued

Item	Part Number	Description	Quantity
			ModuleNumber GM72450-MA1
1	225179	Strip, marker	1
2	291207	Fuse, 1.5 A, 250 V	3
3	292821	Fuse holder	1
4	295313	Terminal block	1
5	298776	Base, tie, wrap	1
6	GM66270	Sensor, low coolant level	1
7	GM69856-KCB	Panel, junction box (front) 4p	1
8	GM69972	Panel, junction box(rear) 4p	1
9	GM69977	Panel, J-box DEC 3000 4s,4p (rear)	1
10	GM69979	Panel, J-box DEC 3000 4p(left)	1
11	GM70319	Harness, A/C DEC 3000	1
12	GM70413	Strip, marker	1
13	GM70941	Harness, engine GM 25-30 kw	1
14	GM71673	Harness, J-box GM 25-150 kw, DEC 3000	1
15	GM71698	Panel, J-box DEC 3000 mnt 4p right	1
16	M125A-03-60	Washer, plain	6
17	M125A-08-80	Washer, plain 8.4 ID x 16.0 OD	2
18	M6923-08-80	Nut, Hex 8mm	4
19	M7985A-03012-20	Screw, pan head M3 x 12	6
20	M7985A-04020-20	Screw, pan head mach.	2
21	M933-08020-60	Screw, hex cap	4
22	M934-03-50	Nut, Hex 3mm	6
23	M934-04-50	Nut, Hex 4mm	2
24	X-22-16	Washer, lock, .326 ID x .883 in. OD	4
25	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1
26	X-25-26	Washer, plain, .531 ID x 1.062 in. OD	1
27	X-25-40	Washer, plain, .281 ID x .625 in. OD	4
28	X-129-15	Bolt, hex cap	1
29	X-468-1	Cable tie	1
30	X-6210-2	Nut, flange spiralock, 1/4-20	4
31	X-6216-1	Screw, Phillips hex crimpite	12
32	GM39458	Sender, Temperature	1

25-45 kW, Decision-Maker 3000



Control and Harness, continued

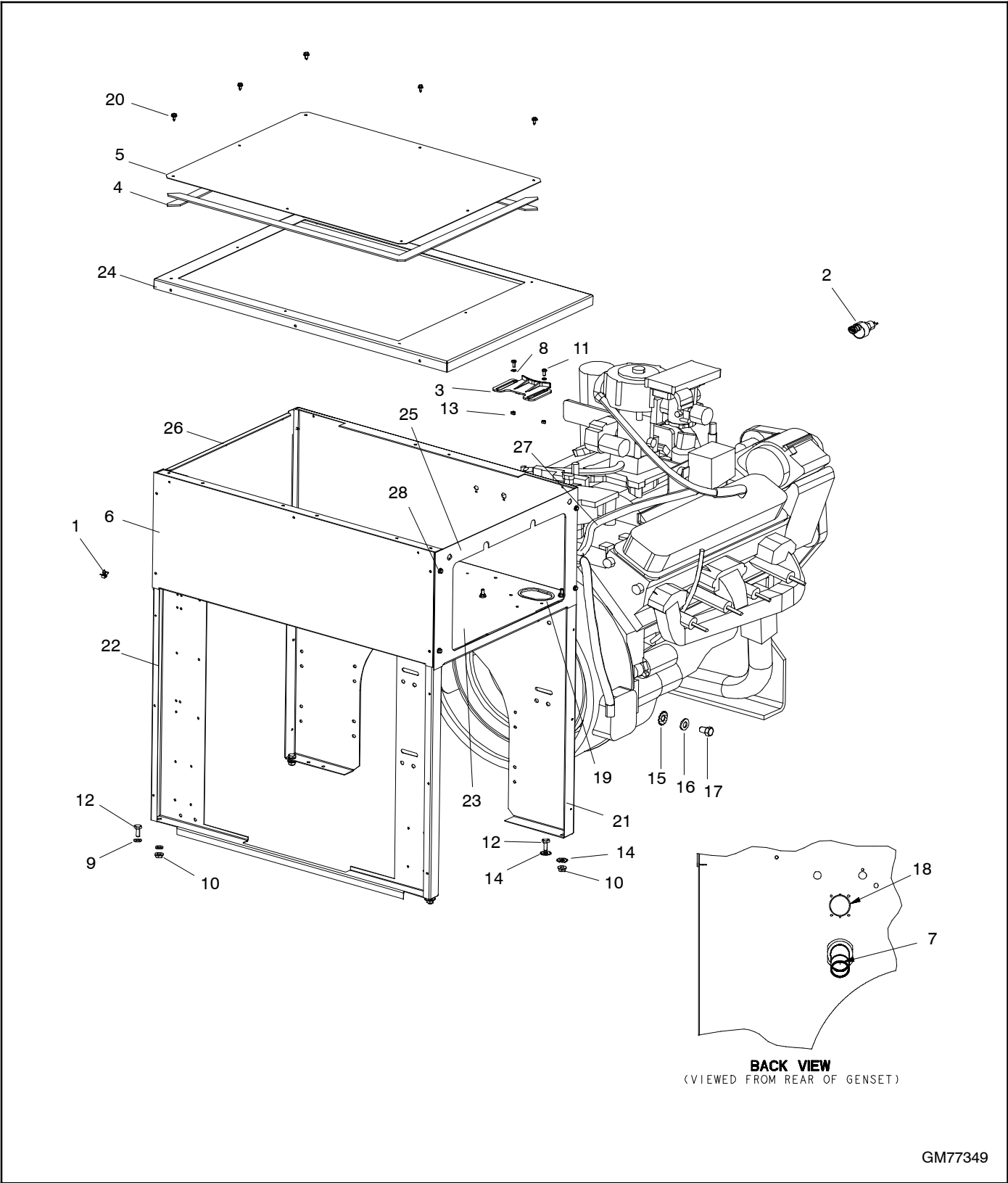
Item	Part Number	Description	Quantity	
			Module Number	
			GM77348-MA1	GM77350-MA3
1	GM39458	Sender, Temperature	1	1
2	361567	Base, tie wrap snapin	2	2
2	X-203-13	Tee, pipe (1/2 x 1/2 x 1/2 npt) (not shown)	1	
2	X-209-5	Pipe (1/2"npt x 1.50") (not shown)	1	
3	GM66270	Sensor, Low Coolant Level	1	1
4	GM74531	Guard, Rodent	1	1
5	GM75773	Gasket, Controller Cover	2	2
6	GM76171	Panel, Junction Box (Top)	1	1
7	GM76175	Cover, Controller (Rear)	1	1
8	GM77945	Harness, Control Box 20-250 kW Gas	1	1
9	M125A-05-80	Washer, plain	2	2
10	M125A-08-80	Washer, plain 8.4 ID x 16.0 OD	4	4
11	M6923-08-80	Nut, Hex 8mm	4	4
12	M7985A-05012-20	Screw, pan head mach.	2	2
13	M933-08020-60	Screw, hex cap	4	4
14	M934-05-50	Nut, Hex 5mm	2	2
15	X-22-16	Washer, lock.326 IDx.883 in.OD	4	4
16	X-22-26	Washer,lock.521 IDx1.24 in.OD	1	1
17	X-25-26	Washer, Plain, .531 IDx1.062 in.OD	1	1
18	X-129-15	Bolt, Hex Cap	1	1
19	X-301-35	Button, Plug	1	1
20	X-6033-5	Grommet, U-channel	1	1
21	X-6216-1	Screw, Phillips hex crimpitite	12	12
22	GM76167**	Panel, Junction Box (Front)	1	1
23	GM76168	Panel, Junction Box (Rear)	1	1
24	GM76169	Panel, Junction Box (Shelf)	1	1
25	GM76170**	Cover, Junction Box (Top)	1	1
26	GM76173	Cover, Controller (Left)	1	1
27	GM76174	Panel, J-Box DEC3000 Mnt (Right)	1	1
28	GM77407	Harness, Engine 25-30 kW GM	1	
28	GM77408	Harness, Engine 40-45 kW GM		1
29	X-6216-1	Screw, Phillips hex crimpitite	24	24

** Use the Kit number and chart below to identify the color suffix.
Add a suffix to this color dependant part number before ordering.

Kit No.	Color Dependant Parts	
	Part Number Suffix	Part Number Example (item 22)
GM77348-MA1-BLK	-BLK	GM76167-BLK
GM77350-MA3-BLK	-BLK	GM76167-BLK

Control and Harness

25-45 kW, Decision-Maker 550



Control and Harness

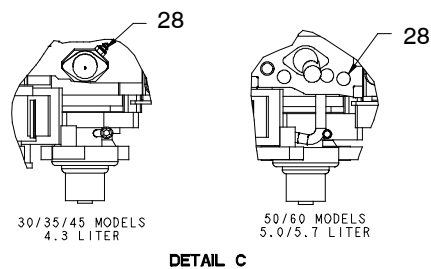
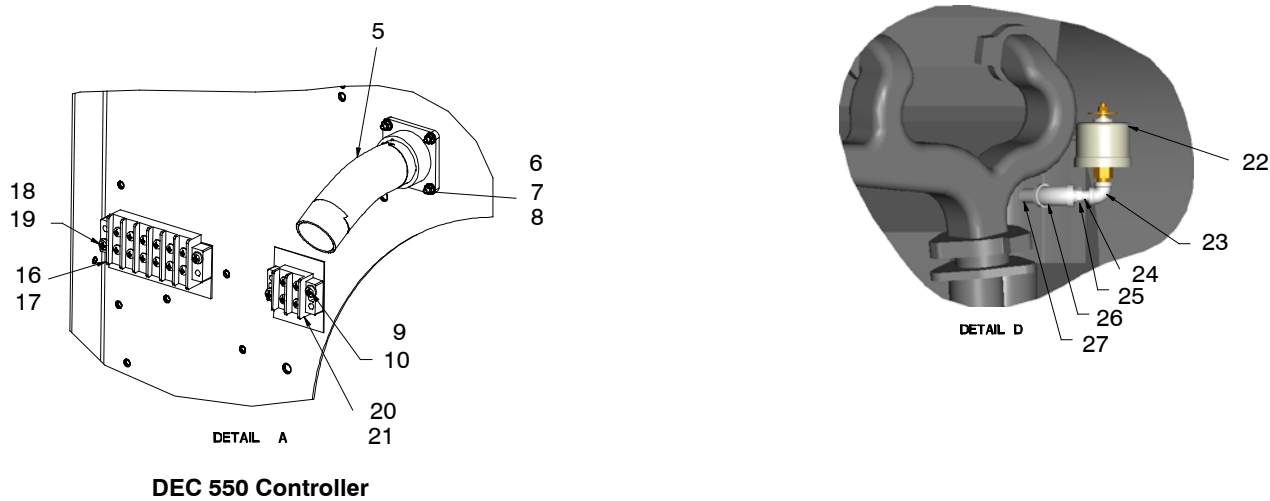
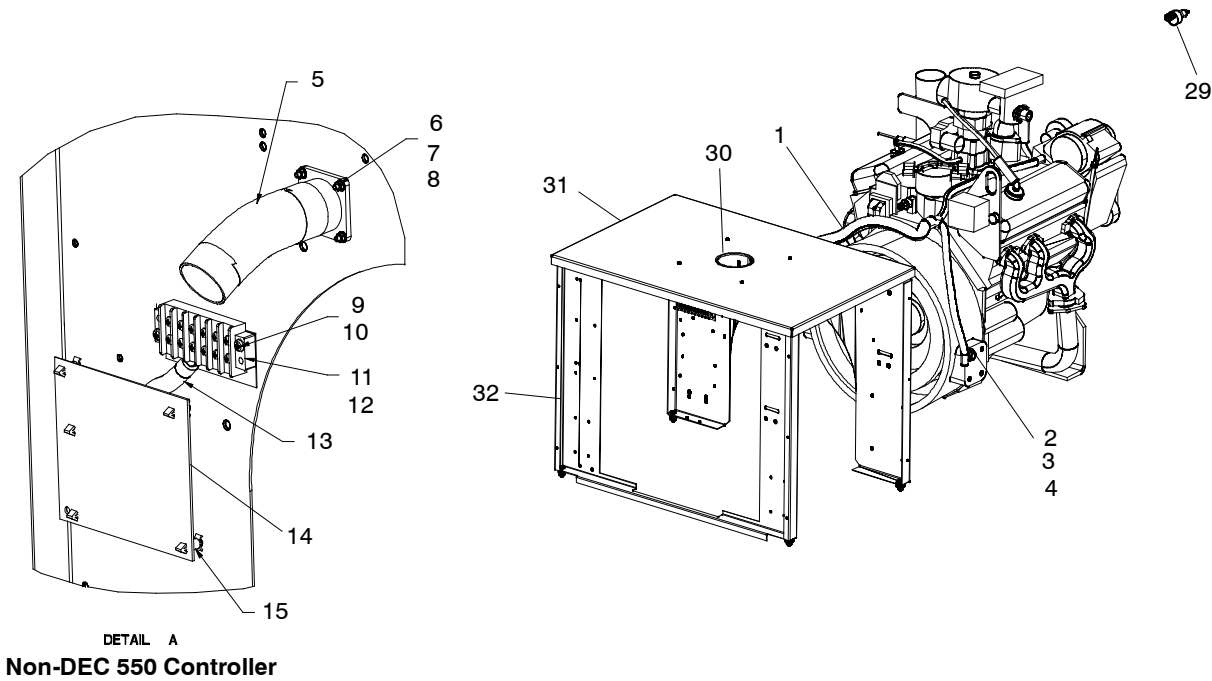
Item	Part Number	Description	Quantity	
			Module Number	
			GM77347-MA1	GM77349-MA3
1	361567	Base, tie wrap snapin	2	2
2	GM66270	Sensor, Low Coolant Level	1	1
3	GM74531	Guard, Rodent	1	1
4	GM75773	Gasket, Controller Cover	2	2
5	GM76171	Panel, Junction Box (Top)	1	1
6	GM76175	Cover, Controller (Rear)	1	1
7	GM77406	Harness, Control Box 25-250 kW Gas	1	1
8	M125A-05-80	Washer, plain	2	2
9	M125A-08-80	Washer, plain 8.4 ID x 16.0 OD	4	4
10	M6923-08-80	Nut, Hex 8mm	4	4
11	M7985A-05012-20	Screw, pan head mach.	2	2
12	M933-08020-60	Screw, hex cap	4	4
13	M934-05-50	Nut, Hex 5mm	2	2
14	X-22-16	Washer, lock.326 IDx.883 in.OD	4	4
15	X-22-26	Washer,lock.521 IDx1.24 in.OD	1	1
16	X-25-26	Washer, Plain, .531 IDx1.062 in.OD	1	1
17	X-129-15	Bolt, Hex Cap	1	1
18	X-301-35	Button, Plug	1	1
19	X-6033-5	Grommet, U-channel	1	1
20	X-6216-1	Screw, Phillips hex crimpite	12	12
21	GM76167**	Panel, Junction Box (Front)	1	1
22	GM76168	Panel, Junction Box (Rear)	1	1
23	GM76169	Panel, Junction Box (Shelf)	1	1
24	GM76170**	Cover, Junction Box (Top)	1	1
25	GM76172	Panel, Controller Face	1	1
26	GM76173	Cover, Controller (Left)	1	1
27	GM77407	Harness, Engine 25-30 kW GM	1	
27	GM77408	Harness, Engine 40-45 kW GM		1
28	X-6216-1	Screw, Phillips hex crimpite	24	24

** Use the Kit number and chart below to identify the color suffix.
Add a suffix to this color dependant part number before ordering.

Kit No.	Color Dependant Parts	
	Part Number Suffix	Part Number Example (item 21)
GM77347-MA1-BLK	-BLK	GM76167-BLK
GM77349-MA3-BLK	-BLK	GM76167-BLK

Control and Harness, continued

40-60 kW, Decision-Maker 3+



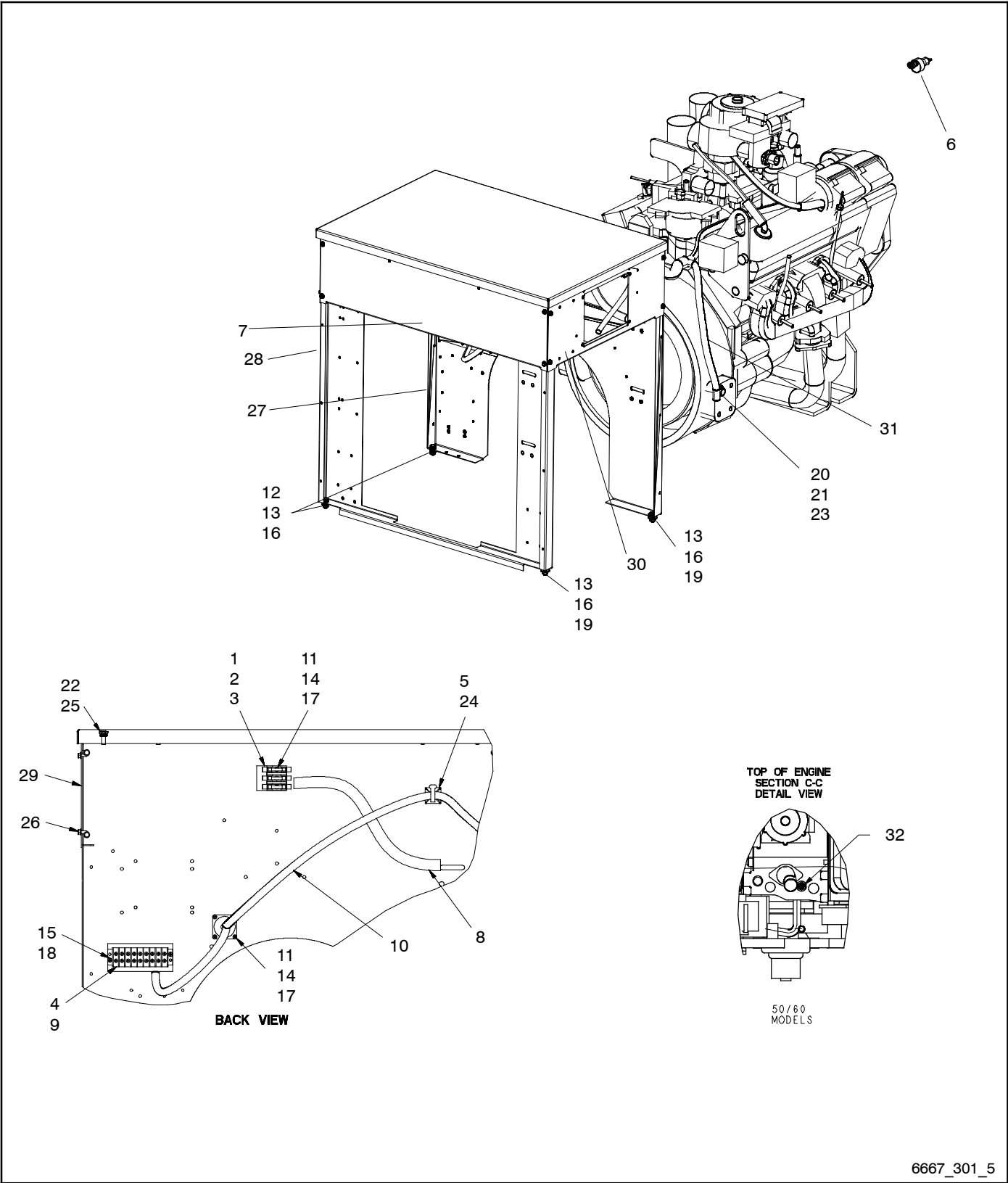
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Control and Harness, continued

Item	Part Number	Description	Quantity Module								
			GM66097-MA1	GM66097-MA2	GM66097-MA3	GM66097-MA4	GM66098-MA1	GM66098-MA2	GM71696-MA1	GM71696-MA2	GM71696-MA3
1	GM69776	Harness, Engine GM 35-60KW	1	1							
1	GM70542	Harness, Engine GM 50/60 kW			1	1		1			
1	GM63944	Harness, Engine GM 40 & 45 kW					1				
1	GM73884	Harness, Engine GM 50/60 kW							1	1	
1	GM73446	Harness, Engine GM 35-60 kW									1
2	X-129-15	Bolt, Hex Cap	1	1	1	1	1	1	1	1	1
3	X-22-26	Washer,lock, .521 ID x 1.24 in. OD	1	1	1	1	1	1	1	1	1
4	X-25-26	Washer, plain, .531 ID x 1.062 in. OD	1	1	1	1			1	1	1
5	GM63940	Harness, J-Box GM 60-150 kW , DEC 3+	1	1	1	1					
5	GM63939	Harness, J-Box GM 60-150 kW , DEC 550					1	1	1	1	1
6	M7985A-03012-20	Screw, pan head M3 x 12	4	4	4	4	4	4	4	4	4
7	M934-03-50	Nut, Hex 3mm	4	4	4	4	4	4	4	4	4
8	M125A-03-60	Washer, Plain	4	4	4	4	4	4	4	4	4
9	M7985A-04020-20	Screw, pan head mach.	2	2	2	2	2	2			
10	M934-04-50	Nut, Hex 4mm	2	2	2	2	2	2			
11	295314	Terminal block	1	1	1	1					
12	255080	Marker, strip	1	1	1	1					
13	354118	Harness, CT Wiring FRIL	1	1	1	1					
14	C-255670	PCB assembly, FRIL voltage/Hz reg.	1								
14	A-354653	PCB assembly, FRIL voltage/Hz reg.		1	1	1					
15	360459	Standoff, circuit board	5	5	5	5					
16	M7985A-04020-20	Screw, pan head mach.					2	2	2	2	2
17	M934-04-50	Nut, Hex 4mm					2	2	2	2	2
18	295314	Terminal block					1	1			
18	295313	Terminal block							1	1	1
19	299090	Marker, strip					1	1			
19	GM70413	Marker, strip							1	1	1
20	254127	Marker, strip					1	1			
21	X-405-2	Terminal block					1	1			
22	343473	Sender, oil pressure	1	1	1	1					
23	X-215-19	Elbow, pipe (90 deg x 1/8 in. npt)	1	1	1	1					
24	X-217-6	Pipe (1/8 npt x .75 in.)	1	1	1	1					
25	X-202-27	Bushing, reducing (1/8 x 1/4 in. npt)	1	1	1	1					
26	X-225-17	Elbow, pipe (45 deg x 1/4 in. npt)	1	1	1	1					
27	X-220-6	Pipe (1/4 npt x 1.50 in.)	1	1	1	1					
28	GM39458	Sender, Temperature	1	1	1	1					
29	GM66270	Sensor, Low Coolant Level							1	1	1
29	-	See Group 104	1	1	1	1	1	1			
30	X-6033-15	Grommet							1	1	1
30	-	See Group 109	1	1	1	1	1	1			
31	GM60788-KCB	Panel, Junction Box (Front)							1		1
31	GM62774-KCB	Panel, Junction Box (Front)								1	
31	-	See Group 109	1	1	1	1	1	1			
32	GM17418	Panel, Junction Box (Rear)							1		1
32	GM17624	Panel, Junction Box (Rear)								1	
32	-	See Group 109	1	1	1	1	1	1			
33	X-301-35	Button, plug							1	1	1
33	-	See Group 109	1	1	1	1	1	1			

Control and Harness, continued

40-60 kW, Decision-Maker 3000

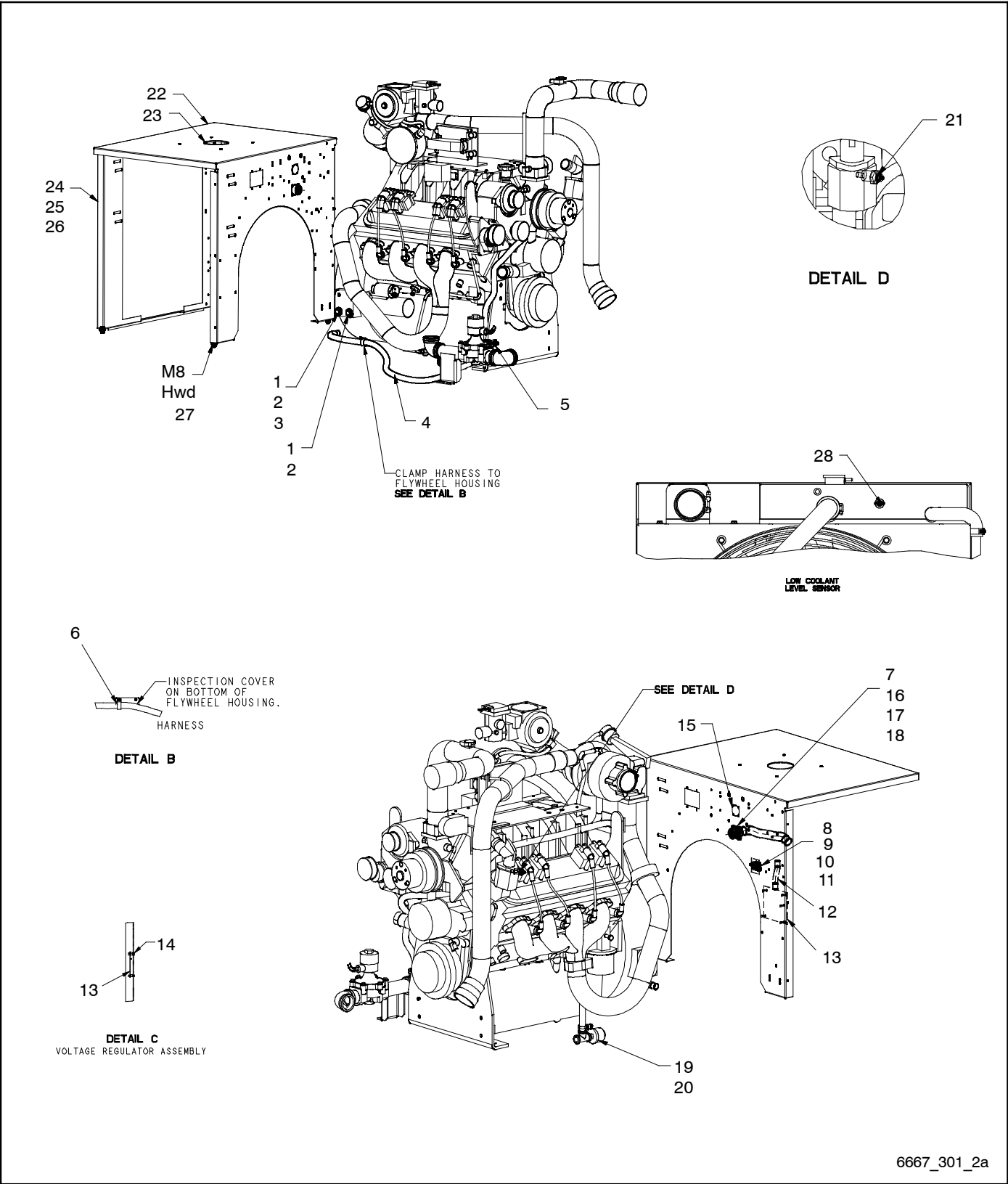


Control and Harness, continued

Item	Part Number	Description	Quantity		
			Module Number		
			GM71699-MA1	GM71699-MA2	GM71699-MA3
1	225179	Strip, marker	1	1	1
2	291207	Fuse, 1.5 A, 250 V	3	3	3
3	292821	Fuse holder	1	1	1
4	295313	Terminal block	1	1	1
5	298776	Base, tie, wrap	1	1	1
6	GM66270	Sensor, Low Coolant Level	1	1	1
7	GM69977	Panel, J-Box DEC3000 4S,4P (Rear)	1	1	1
8	GM70319	Harness, A/C DEC 3000	1	1	1
9	GM70413	Strip, Marker	1	1	1
10	GM71673	Harness, J-Box GM 25-150KW, DEC 3000	1	1	1
11	M125A-03-60	Washer, Plain	6	6	6
12	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	4	4	4
13	M6923-08-80	Nut, Hex 8mm	4	4	4
14	M7985A-03012-20	Screw, pan head M3X12	6	6	6
15	M7985A-04020-20	Screw, pan head mach.	2	2	2
16	M933-08020-60	Screw, hex cap	4	4	4
17	M934-03-50	Nut, Hex 3mm	6	6	6
18	M934-04-50	Nut, Hex 4mm	2	2	2
19	X-22-16	Washer, lock.326 IDx.883 in.OD	4	4	4
20	X-22-26	Washer,lock.521 IDx1.24 in.OD	1	1	1
21	X-25-26	Washer, plain, .531 IDx1.062 in.OD	1	1	1
22	X-25-40	Washer, plain, .281 ID x .625 in.OD	4	4	4
23	X-129-15	Bolt, Hex Cap	1	1	1
24	X-468-1	Cable Tie	1	1	1
25	X-6210-2	Nut, flange spiralock, 1/4-20	4	4	4
26	X-6216-1	Screw, Phillips hex crimpite	12	12	12
27	GM69856-KCB	Panel, Junction Box (Front) 4P	1		1
27	GM69970-KCB	Panel, Junction Box (Front) 4S		1	
28	GM69972	Panel, Junction Box(Rear) 4P	1		1
28	GM69971	Panel, Junction Box (Rear) 4S		1	
29	GM69979	Panel, J-Box DEC3000 4P(Left)	1		1
29	GM69981	Panel, J-Box DEC3000 4S(Left)		1	
30	GM71698	Panel, J-Box DEC300 MNT 4P Right	1		1
30	GM71663	Panel, J-Box DEC3000 Mtg 4S (RH)		1	
31	GM73884	Harness, Engine GM 50/60 kW DEC550/3000	1	1	
31	GM73446	Harness, Engine GM 35-60kW			1
32	GM39458	Sender, Temperature	1	1	1

Control and Harness, continued

80-150 kW with 8.1L Engine, Decision-Maker 3+/550

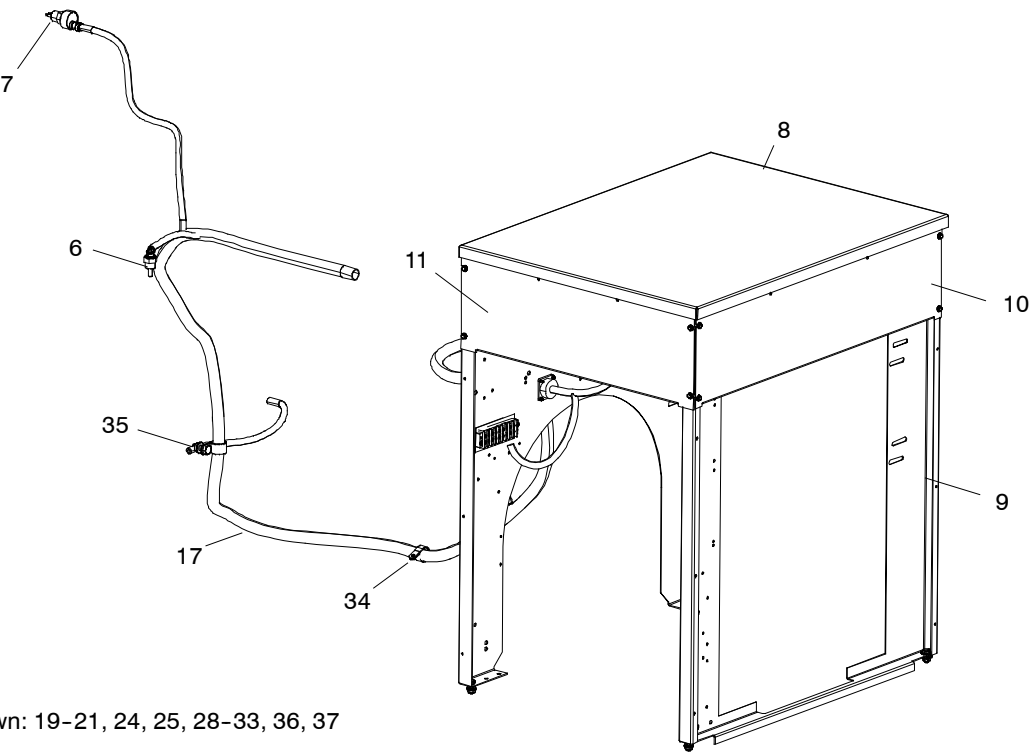


Control and Harness, continued

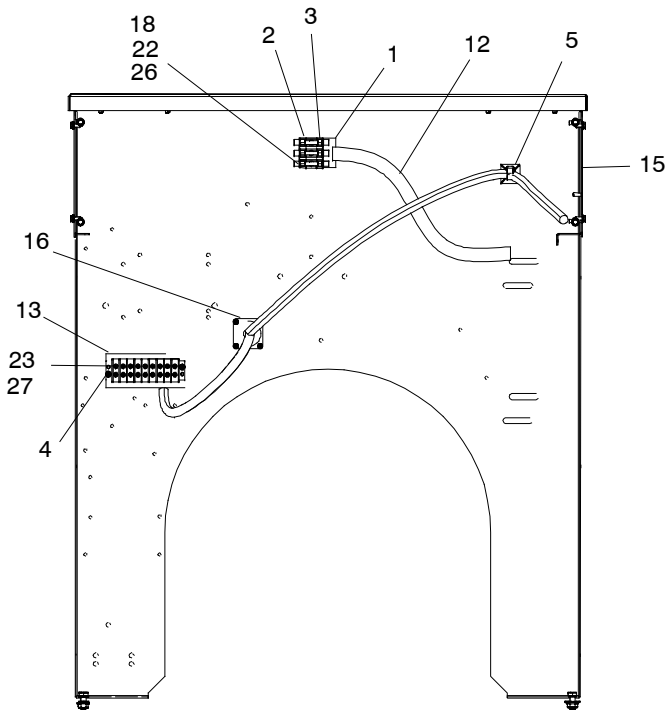
Item	Part Number	Description	Quantity Module			
			GM64296-MA1	GM64296-MA2	GM64297-MA1	GM71654-MA1
1	X-129-15	Bolt, Hex Cap	2	2	2	2
2	X-22-26	Washer, lock, .521 ID x .24 in. OD	2	2	2	2
3	X-25-26	Washer, plain, .531 ID x .062 in. OD	1	1	1	1
4	GM70553	Harness, Engine GM 80-150 kW	1	1	1	
4	GM73447	Harness, Engine 80-150KW GM				1
5	X-672-3	Clamp, insulating	1	1	1	1
6	X-672-30	Clamp, insulated, 1.06 in.	1	1		1
7	GM63940	Harness, J-Box GM 60-150 kW , DEC 3+	1	1		
7	GM63939	Harness, J-Box GM 60-150 kW , DEC 550			1	1
8	295314	Terminal block	1	1		
8	X-405-2	Terminal block			1	
8	295313	Terminal block				1
9	255080	Marker, strip	1	1		
9	254127	Marker, strip			1	
9	GM70413	Marker, strip				1
10	M7985A-04020-20	Screw, pan head mach.	2	2	2	2
11	M934-04-50	Nut, Hex 4mm	2	2	2	2
12	354118	Harness, CT Wiring FRIL	1	1		
13	C-255670	PCB assembly, FRIL voltage/Hz reg.	1			
13	A-354653	PCB assembly, FRIL voltage/Hz reg.		1		
14	360459	Standoff, circuit board	5	5		
15	X-301-35	Plug, button	1	1	1	1
16	M7985A-03012-20	Screw, pan head mach.	4	4	4	4
17	M125A-03-60	Washer, Plain	4	4	4	4
18	M934-03-50	Nut, Hex,	4	4	4	4
19	343473	Sender, oil pressure	1	1		
20	X-202-29	Bushing, reducing (1/8 x 1/2" npt)	1	1		
20	X-75-3	Plug, pipe			1	1
21	GM39458	Sender, Temperature	1	1		
22	GM62774-KCB	Panel, Junction Box (Front)				1
22	-	See Skid and Mounting Group	1	1	1	
23	X-6033-15	Grommet				1
23	-	See Skid and Mounting Group	1	1	1	
24	GM17624	Panel, Junction Box (Rear)				1
24	-	See Skid and Mounting Group	1	1	1	
25	X-25-40	Washer, plain, .281 ID x .625 in.OD				4
25	-	See Skid and Mounting Group	4	4	4	
26	X-6210-2	Nut, flange spirallock, 1/4-20				4
26	-	See Skid and Mounting Group	4	4	4	
27	X-22-16	Washer, lock.326 IDx.883 in.OD				4
27	-	See Skid and Mounting Group	4	4	4	
28	-	See Cooling System Group	1	1	1	
28	GM66270	Sensor, Low Coolant Level				1

Control and Harness, continued

80 kW with 5.7L Engine, Decision-Maker 3000



Items not shown: 19-21, 24, 25, 28-33, 36, 37



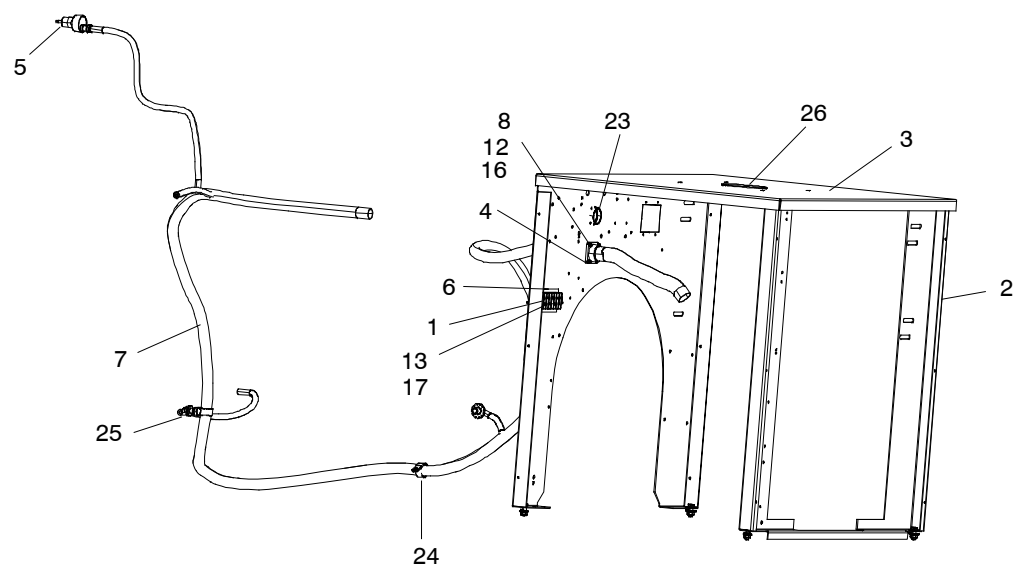
6667_301_6

Control and Harness, continued

Item	Part Number	Description	Quantity
			Module Number GM71615-MA1
1	225179	Strip, marker	1
2	291207	Fuse, 1.5 A, 250 V	3
3	292821	Fuse holder	1
4	295313	Terminal block	1
5	298776	Base, tie, wrap	1
6	GM39458	Sender, Temperature	1
7	GM66270	Sensor, Low Coolant Level	1
8	GM69970-KCB	Panel, Junction Box (Front) 4S	1
9	GM69971	Panel, Junction Box (Rear) 4S	1
10	GM69977	Panel, J-Box DEC3000 4S,4P (Rear)	1
11	GM69981	Panel, J-Box DEC3000 4S(Left)	1
12	GM70319	Harness, A/C DEC 3000	1
13	GM70413	Strip, Marker	1
15	GM71663	Panel, J-Box DEC3000 Mtg 4S (RH)	1
16	GM71673	Harness, J-Box GM 25-150KW, DEC 3000	1
17	GM73998	Harness, Engine GM 80 & 100 kW (Turbo)	1
18	M125A-03-60	Washer, Plain	6
19	M125A-08-80	Washer, Plain, 8.4 ID x 16.0 OD	4
20	M6923-08-80	Nut, Hex 8mm	4
21	M6923-10-80	Nut, Hex 10mm	1
22	M7985A-03012-20	Screw, pan head M3X12	6
23	M7985A-04020-20	Screw, pan head mach.	2
24	M933-08020-60	Screw, hex cap	4
25	M933-10030-60	Screw, hex cap	1
26	M934-03-50	Nut, Hex 3mm	6
27	M934-04-50	Nut, Hex 4mm	2
28	X-22-16	Washer, lock, .326 ID x .883 in.OD	4
29	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1
30	X-25-26	Washer, Plain, .531 ID x 1.062 in.OD	1
31	X-25-40	Washer, plain, .281 ID x .625 in. OD	4
32	X-129-15	Bolt, Hex Cap	1
33	X-468-1	Cable Tie	1
34	X-672-30	Clamp, insulated, 1.06 in.	1
35	X-672-32	Clamp, insulated, 1.06 in.	1
36	X-6210-2	Nut, flange spiralock, 1/4-20	4
37	X-6216-1	Screw, Phillips hex crimpite	12

Control and Harness, continued

80 kW with 5.7L Engine, Decision-Maker 550



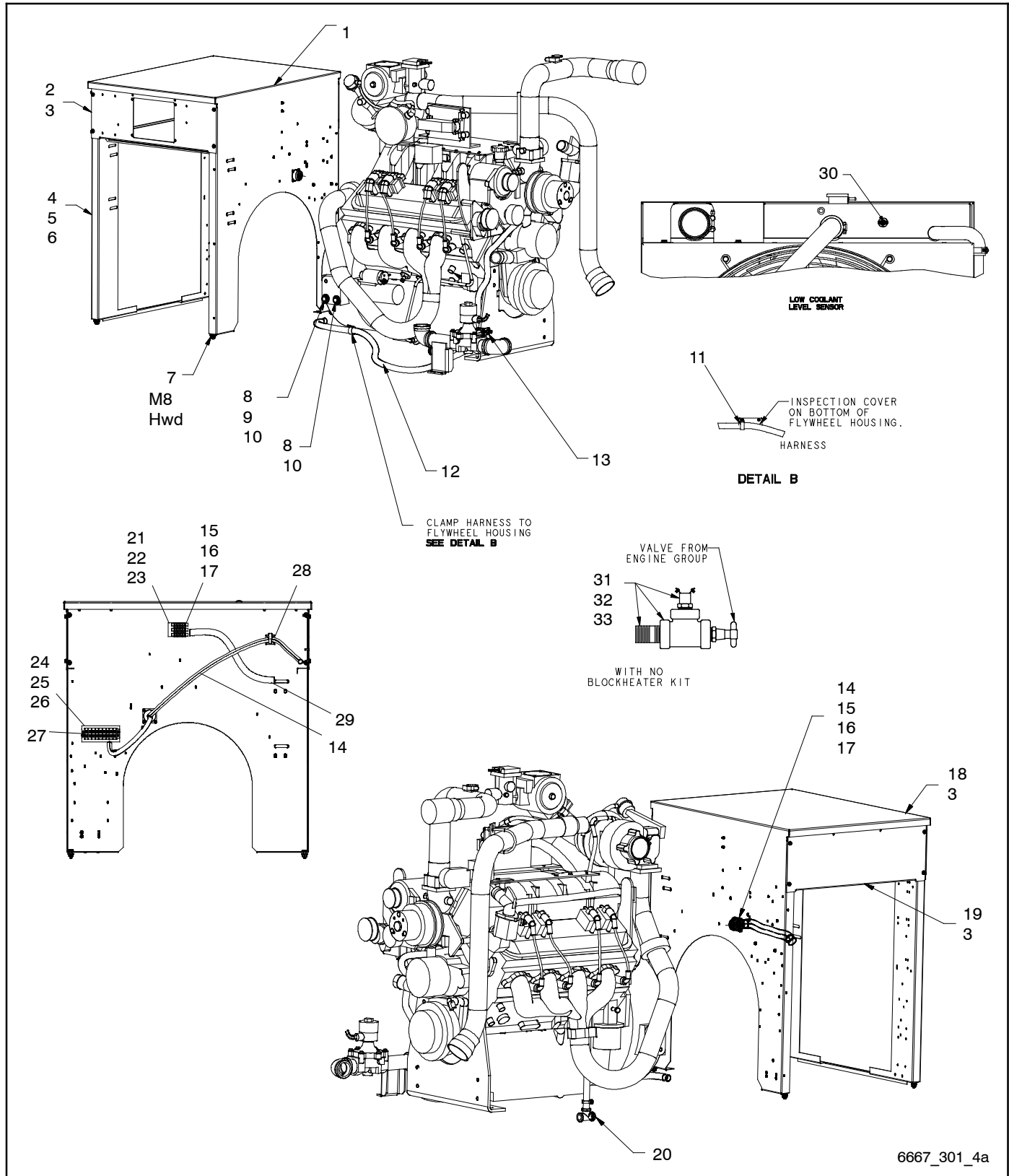
Items not shown: 9-11, 14, 15, 18-22, 27

Control and Harness, continued

Item	Part Number	Description	Quantity
			Module Number GM71614-MA1
1	295313	Terminal block	1
2	GM17624	Panel, Junction Box (Rear)	1
3	GM62774-KCB	Panel, Junction Box (Front)	1
4	GM63939	Harness, J-Box GM 60-150KW, DEC 550	1
5	GM66270	Sensor, Low Coolant Level	1
6	GM70413	Strip, Marker	1
7	GM73998	Harness, Engine GM 80 & 100 kW (Turbo)	1
8	M125A-03-60	Washer, Plain	4
9	M125A-08-80	Washer, Plain, 8.4 ID x 16.0 OD	4
10	M6923-08-80	Nut, Hex 8mm	4
11	M6923-10-80	Nut, Hex 10mm	1
12	M7985A-03012-20	Screw, pan head M3X12	4
13	M7985A-04020-20	Screw, pan head mach.	2
14	M933-08020-60	Screw, hex cap	4
15	M933-10030-60	Screw, hex cap	1
16	M934-03-50	Nut, Hex 3mm	4
17	M934-04-50	Nut, Hex 4mm	2
18	X-22-16	Washer, lock, .326 ID x .883 in. OD	4
19	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1
20	X-25-26	Washer, Plain, .531 ID x 1.062 in.OD	1
21	X-25-40	Washer, plain, .281 ID x .625 in. OD	4
22	X-129-15	Bolt, Hex Cap	1
23	X-301-35	Button, Plug	1
24	X-672-30	Clamp, insulated, 1.06 in.	1
25	X-672-32	Clamp, insulated, 1.06 in.	1
26	X-6033-15	Grommet	1
27	X-6210-2	Nut, flange spiralock, 1/4-20	4

Control and Harness, continued

80-150 kW with 8.1L Engine, Decision-Maker 3000



Control and Harness, continued

Item	Part Number	Description	Quantity
			ModuleNumber GM71655-MA1
1	GM69970-KCB	Panel, Junction Box (Front) 4S	1
2	GM71663	Panel, J-Box DEC 3000 Mtg 4S (RH)	1
3	X-6216-1	Screw, Phillips hex crimpite	12
4	GM69971	Panel, Junction Box (Rear) 4S	1
5	X-6210-2	Nut, flange spiralock, 1/4-20	4
6	X-25-40	Washer, plain, .281 ID x .625 in. OD	4
7	X-22-16	Washer, lock, .326 ID x .883 in. OD	4
8	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	2
9	X-25-26	Washer, plain, .531 ID x 1.062 in. OD	1
10	X-129-15	Bolt, Hex Cap	2
11	X-672-30	Clamp, insulated, 1.06 in.	1
12	GM73447	Harness, Engine 80-150KW GM	1
13	X-672-3	Clamp, insulating	1
14	GM71673	Harness, J-Box GM 25-150KW, DEC 3000	1
15	M7985A-03012-20	Screw, pan head M3 x 12	4
16	M125A-03-60	Washer, Plain	4
17	M934-03-50	Nut, Hex 3mm	4
18	GM69977	Panel, J-Box DEC 3000 4S,4P (Rear)	1
19	GM69981	Panel, J-Box DEC 3000 4S (Left)	1
20	X-75-3	Plug, pipe (1/2" nptf)	1
21	225179	Strip, marker	1
22	292821	Fuse holder	1
23	291207	Fuse, 1.5 A, 250 V	3
24	295313	Terminal block	1
25	M7985A-04020-20	Screw, pan head mach.	2
26	M934-04-50	Nut, Hex 4mm	2
27	GM70413	Strip, Marker	1
28	298776	Base, tie, wrap	1
29	GM70319	Harness, A/C DEC 3000	1
30	GM66270	Sensor, Low Coolant Level	1
31	GM39458	Sender, Temperature	1
32	-	Tee (See Group 105)	1
33	-	Pipe (See Group 105)	1

Group 701: Literature

Item	Part Number	Description	Quantity										
			Variation Number										
			364	370	371	372	373	388	389	431	432	551	552
1	TP-5374	Warranty 1-Year Limited, Industrial	1	1	1	1	1	1	1	1	1	1	1
2	TP-5700	I/M 20-3250kW, Industrial	1	1	1	1	1	1	1	1	1	1	1
3	TP-6009	P/C DEC 3+/550 Controllers, Industrial	1	1	1	1	1	1	1	1	1		
3	TP-6781	P/C DEC 3000 Controllers, Industrial	1	1	1	1	1	1	1	1	1	1	1
3	TP-6780	P/C DEC 550 J-Box Panel Mtg. Controllers	1	1	1	1	1	1	1	1	1		
4	TP-6101	O/M Supplement, GM Engines	1	1	1	1	1	1	1	1	1	1	1
5	TP-6105	S/M GM 8.1L 80-100 kW	1					1	1				
5	TP-6104	S/M GM 5.0/5.7L 50-60 kW			1	1							
5	TP-6103	S/M GM 4.3L 30-45 kW		1			1					1	1
6	TP-6732	P/C GM 8.1L Powertrain, 80-150 kW	1					1	1				
6	TP-6730	P/C GM 4.3L Powertrain, 30-45 kW		1			1					1	1
6	TP-6731	P/C GM 5.0/5.7L Powertrain, 50/60 kW			1	1							
6	TP-6742	P/C GM 3.0L Powertrain, 25/30 kW								1	1		
7	TP-6140	O/I/M Cntrlr Setup & Appl, DecMaker550	1	1	1	1	1	1	1	1	1		
8	TP-6161	O/M 20-2250kW, Industrial	1	1	1	1	1	1	1				
9	TP-6200	O/M 20-2000 kW, DecMaker550	1	1	1	1	1	1	1	1	1		
9	TP-6694	O/M DEC 3000 Controller	1	1	1	1	1	1	1	1	1	1	1
10	TP-6215	S/M ECM 3.0/8.1L, 30/80-125kW, GM Engine	1					1	1				
10	TP-6724	S/M PSI/GM 1.6-8.1L Emission-Certified								1	1	1	1
11	TP-6799	W/D 25-150 kW, GM and PSI, Industrial										1	1
11	TP-6712	W/D 40-150REZG/ERES	1	1	1	1	1	1	1	1	1		
12	TP-6353	S/M Fast-Response II Alternator,20-400 kW	1	1	1	1	1	1	1	1	1	1	1
13	TP-6356	S/M Controllers, 20-2800 kW	1	1	1	1	1	1	1	1	1	1	1
14	TP-6667	P/C 25-150REZG/ERES	1	1	1	1	1	1	1	1	1	1	1

Item	Part Number	Description	Quantity						
			Variation Number						
399	400	401	402	403	404	405			
1	TP-5374	Warranty 1-Year Limited, Industrial	1	1	1	1	1	1	1
2	TP-5700	I/M 20-3250kW, Industrial	1	1	1	1	1	1	1
3	TP-6009	P/C DEC 3+/550 Controllers, Industrial	1	1	1	1	1	1	1
3	TP-6781	P/C DEC 3000 Controllers, Industrial	1	1	1	1	1	1	1
3	TP-6780	P/C DEC 550 J-Box Panel Mtg. Controllers	1	1	1	1	1	1	1
4	TP-6101	O/M Supplement, GM Engines	1	1	1	1	1	1	1
5	TP-6105	S/M GM 8.1L 80-100 kW					1	1	1
5	TP-6104	S/M GM 5.0/5.7L 50-60 kW			1	1			
5	TP-6103	S/M GM 4.3L 30-45 kW	1	1					
6	TP-6732	P/C GM 8.1L Powertrain, 80-150 kW					1	1	1
6	TP-6730	P/C GM 4.3L Powertrain, 30-45 kW	1	1					
6	TP-6731	P/C GM 5.0/5.7L Powertrain, 50/60 kW			1	1			
7	TP-6140	O/I/M Cntrlr Setup & Appl, DecMaker550	1	1	1	1	1	1	1
8	TP-6161	O/M 20-2250kW, Industrial	1	1	1	1	1	1	1
9	TP-6200	O/M 20-2000 kW, DecMaker550	1	1	1	1	1	1	1
9	TP-6694	O/M DEC 3000 Controller	1	1	1	1	1	1	1
10	TP-6215	S/M ECM 3.0/8.1L, 30/80-125kW, GM Engine					1	1	1
11	TP-6712	W/D 40-150REZG/ERES	1	1	1	1	1	1	1
12	TP-6353	S/M Fast-Response II Alternator,20-400 kW	1	1	1	1	1	1	1
13	TP-6356	S/M Controllers, 20-2800 kW	1	1	1	1	1	1	1
14	TP-6667	P/C 40-150REZG/ERES	1	1	1	1	1	1	1

Group 701: Literature

Item	Part Number	Description	Quantity					
			Variation Number					
			433	434	435	436	437	438
1	TP-5374	Warranty 1-Year Limited, Industrial	1	1	1	1	1	1
2	TP-5700	I/M 20-3250kW, Industrial	1	1	1	1	1	1
3	TP-6009	P/C DEC 3+/550 Controllers, Industrial	1	1	1	1	1	1
3	TP-6781	P/C DEC 3000 Controllers, Industrial	1	1	1	1	1	1
3	TP-6780	P/C DEC 550 J-Box Panel Mtg. Controllers, Industrial	1	1	1	1	1	1
4	TP-6101	O/M Supplement, GM Engines	1	1	1	1	1	1
5	TP-6104	S/M GM 5.0/5.7L 50-60 kW	1	1	1	1	1	1
6	TP-6731	P/C GM 5.0/5.7L Powertrain, 50/60 kW	1	1	1	1	1	1
7	TP-6140	O/I/M Cntrlr Setup & Appl, DecMaker550	1	1	1	1	1	1
9	TP-6200	O/M 20-2000 kW, DecMaker550	1	1	1	1	1	1
9	TP-6694	O/M DEC 3000 Controller	1	1	1	1	1	1
10	TP-6724	S/M PSI/GM 1.6-8.1L Emissions-Certified	1	1	1	1	1	1
11	TP-6712	W/D 40-150REZG/ERES	1	1	1	1	1	1
12	TP-6353	S/M Fast-Response II Alternator, 20-400 kW	1	1	1	1	1	1
13	TP-6356	S/M Controllers, 20-2800 kW	1	1	1	1	1	1
14	TP-6667	P/C 40-150REZG/ERES	1	1	1	1	1	1

Kit List

This section lists the part numbers of modules/kits not listed in the group parts lists. Refer to the generator set nameplate or the list below to identify the module/kit number installed on your generator set. See the sections following this page for the parts list of the module/kit.

	25/30 kW	40/45 kW	50/60 kW	80/100 kW	125 kW	150 kW
Controllers						
See Controller Parts Catalog for parts lists.						
Cooling Systems						
Heater, block						
110–120 V	GM69426-KA1	GM66283-KA1	GM66283-KA1	GM64366-KA1	GM64366-KA1	GM64366-KA1
110–120 V				GM75566-KA1		
110–120 V	GM75564-KA1	GM75565-KA1	GM75565-KA1	GM73499-KA1*	GM75566-KA1	GM75566-KA1
110–120 V				GM77944-KA1*		
190–240 V	GM69426-KA2	GM66283-KA2	GM66283-KA2	GM64366-KA2	GM64366-KA2	GM64366-KA2
190–240 V				GM75566-KA2		
190–240 V	GM75564-KA2	GM75565-KA2	GM75565-KA2	GM73499-KA2*	GM75566-KA2	GM75566-KA2
110–120 V				GM77944-KA2*		
Duct Flange, radiator	GM13896-KA1	GM13896-KA1	GM13896-KA1	GM13896-KA1	GM13896-KA2	GM13896-KA5
Duct Flange, radiator				GM13896-KA1*		
Fuel Systems						
Fuel lines, flexible	GM13706-KP1	GM13706-KP1	GM13706-KP1	GM13706-KP3	GM13706-KP2	GM13706-KP2
Fuel lines, flexible				GM13706-KP3*		
Fuel lines, flexible, dual fuel	GM14272-KP1	GM14272-KP1	GM14272-KP1	—	—	—
Filter, natural gas	PA-343303	PA-343303	PA-343303	PA-343303	PA-343303	PA-343303
Filter, natural gas				PA-343303*		
Additional gas solenoid valve						
Nat. gas	GM70624-KA1	GM70624-KA1	GM70040-KA1	GM70443-KA1	GM71195-KA1	GM71195-KA1
LP gas	GM70624-KA1	GM70624-KA1	GM70040-KA1	GM70443-KA1	GM71195-KA1	GM71195-KA1
				GM71619-KA1*		
Auto. dual fuel	GM70624-KA1	GM70624-KA1	GM70612-KA1	GM70928-KA1	GM70928-KA2	—
LP liquid	GM70626-KA1	GM70626-KA1	GM70639-KA1	GM78581-KA1	GM78581-KA1	—
Paint and Miscellaneous Parts						
Paint, Kohler Cream Beige	All models use GM71387 1-gallon can					

This section lists the part numbers of modules/kits not listed in the group parts lists. Refer to the generator set nameplate or the list below to identify the module/kit number installed on your generator set. See the sections following this page for the parts list of the module/kit.

* This list is used on 80 kW units with 5.7L engine.

Cooling System Kits

Qty.	Description	Part No.
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Block Heater, 1800W, 110-120V

GM64366-KA1

1	Tag, hang	279047
1	Shield, heat (32mm ID x 305mm length)	GM10669
1	Shield, heat (32mm ID x 152mm length)	GM17809
1	Heater, Block (120V, 1800 amp)	GM23005
1	Plug, block heater	GM23576
1	Block heater therm	GM25778
1	Shield, heat (32mm ID x 455mm length)	GM23718
1	Bracket, Block Heater Mtg.	GM64285
4	Washer, Plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
4	Nut, Hex 6mm	M6923-06-80
2	Nut, Hex 10mm	M6923-10-80
4	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
2	Tee, pipe (1/2 x 1/2 x 1/2 npt)	X-203-13
2	Pipe (1/2 in. npt x 1.19 in.)	X-209-2
1	Pipe (1/2 in. npt x 12.00 in.)	X-209-26
2	Pipe, Nipple (1/2 in. NPT x 2.50 in.)	X-209-3
1	Elbow, pipe (90 deg x 1/2 in. npt)	X-215-1
1	Coupling, pipe (1/2 in. npsc)	X-216-20
1	Hose, .63 in. ID	X-312-34
1	Hose, .63 ID	X-312-51
4	Clamp, hose, .5/1 in.	X-426-10
1	Clamp, hose, .75/1.5 in.	X-426-15
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1

Block Heater, 2000W, 190-240V

GM64366-KA2

1	Tag, hang	279047
1	Shield, heat (32mm ID x 305mm length)	GM10669
1	Shield, heat (32mm ID x 152mm length)	GM17809
1	Heater, Block (240V, 2000 amp)	GM23006
1	Shield, heat (32mm ID x 455mm length)	GM23718
1	Bracket, Block Heater Mtg.	GM64285
4	Washer, Plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
4	Nut, Hex 6mm	M6923-06-80
2	Nut, Hex 10mm	M6923-10-80
4	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
2	Tee, pipe (1/2 x 1/2 x 1/2 npt)	X-203-13
2	Pipe (1/2 in. npt x 1.19 in.)	X-209-2
1	Pipe (1/2 in. npt x 12.00 in.)	X-209-26
2	Pipe, Nipple (1/2 in. NPT x 2.50 in.)	X-209-3
1	Elbow, pipe (90 deg x 1/2 in. npt)	X-215-1
1	Coupling, pipe (1/2 in. npsc)	X-216-20
1	Hose, .63 in. ID	X-312-34
1	Hose, .63 ID	X-312-51
4	Clamp, hose, .5/1 in.	X-426-10
1	Clamp, hose, .75/1.5 in.	X-426-15
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1

Block Heater, 1500W, 110-120V

GM66283-KA1

1	Heater, block (120V, 1500 amp)	326228
1	Sensor, thermostat	224341
1	Thermostat, block heater	279813
1	Hose, molded (.62 in. ID)	276206
1	Tag, hang	279047
1	Shield, heat (32mm ID x 152mm length)	GM17809
1	Bracket, Block Heater Mtg.	GM64285
4	Washer, Plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
4	Nut, Hex 6mm	M6923-06-80
2	Nut, Hex 10mm	M6923-10-80
4	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
1	Hose, .63 ID	X-312-35
4	Clamp, hose, .5/1 in.	X-426-10
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1

Qty.	Description	Part No.
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Block Heater, 1500W, 190-240V

GM66283-KA2

1	Heater, block (120V, 1500 amp)	326229
1	Hose, molded (.62 in. ID)	276206
1	Tag, hang	279047
1	Shield, heat (32mm ID x 152mm length)	GM17809
1	Bracket, Block Heater Mtg.	GM64285
4	Washer, Plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
4	Nut, Hex 6mm	M6923-06-80
2	Nut, Hex 10mm	M6923-10-80
4	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
1	Hose, .63 ID	X-312-35
4	Clamp, hose, .5/1 in.	X-426-10
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1

Block Heater, 1000W, 110-120V

GM69426-KA1

1	Heater, block (120v, 1000amp)	GM31942
1	Tag, hang	279047
1	Bracket, block heater mtg.	GM64285
4	Washer, plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
4	Nut, Hex 6mm	M6923-06-80
2	Nut, Hex 10mm	M6923-10-80
4	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
2	Hose, .63 in. ID	X-312-50
1	Hose, .63 in. ID	X-312-24
4	Clamp, hose, .5/1 in.	X-426-10
2	Cable tie	X-468-1
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1

Block Heater, 1000W, 190-240V

GM69426-KA2

1	Heater, block (240v, 1000amp)	GM31943
1	Tag, hang	279047
1	Bracket, block heater mtg.	GM64285
4	Washer, plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
4	Nut, Hex 6mm	M6923-06-80
2	Nut, Hex 10mm	M6923-10-80
4	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
2	Hose, .63 in. ID	X-312-50
1	Hose, .63 in. ID	X-312-24
4	Clamp, hose, .5/1 in.	X-426-10
2	Cable tie	X-468-1
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1

Block Heater, 1500W, 110-120V

GM73499-KA1

1	Heater, block (120V, 1500 amp)	326228
1	Sensor, thermostat	224341
1	Thermostat, block heater	279813
1	Tag, hang	279047
1	Shield, heat	GM42198
1	Bracket, Block Heater Mtg.	GM64285
2	Washer, Plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
2	Nut, Hex 6mm	M6923-06-80
2	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
1	Elbow, street (45 deg x 1/2"npt)	X-274-13
1	Hose, .63 ID	X-312-35
1	Hose, .63 ID	X-312-52
4	Clamp, hose, .5/1 in.	X-426-10
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1

Cooling System Kits

Qty.	Description	Part No.
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Block Heater, 1500W, 190-240V			GM73499-KA2		
1	Heater, block (240V, 1500 amp)	326229	1	Heater, block (240V, 1500 amp)	326229
1	Tag, hang	279047	1	Tag, hang	279047
1	Shield, heat	GM42198	1	Shield, heat (32mm ID x 152mm length)	GM17809
1	Bracket, Block Heater Mtg.	GM64285	1	Bracket, Block Heater Mtg.	GM64285
2	Washer, Plain	M125A-06-80	2	Washer, Plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80	2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
2	Nut, Hex 6mm	M6923-06-80	2	Nut, Hex 6mm	M6923-06-80
2	Screw, hex cap	M933-06020-60	2	Nut, Hex 10mm	M6923-10-80
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60	2	Screw, hex cap	M933-06020-60
1	Elbow, street (45 deg x 1/2"npt)	X-274-13	2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
1	Hose, .63 ID	X-312-35	1	Hose, .63 ID	X-312-35
1	Hose, .63 ID	X-312-52	4	Clamp, hose, .69/1.25 in.	X-426-12
4	Clamp, hose, .5/1 in.	X-426-10	2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1			

Block Heater, 1000W, 110-120V			GM75564-KA1		
1	Heater, block (120V, 1000 amp)	358311	1	Heater, block (120V, 1000 amp)	358311
1	Tag, hang	279047	1	Tag, hang	279047
1	Bracket, Block Heater Mtg.	GM64285	1	Bracket, Block Heater Mtg.	GM64285
2	Washer, Plain	M125A-06-80	2	Washer, Plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80	2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
2	Nut, Hex 6mm	M6923-06-80	2	Nut, Hex 6mm	M6923-06-80
2	Nut, Hex 10mm	M6923-10-80	2	Nut, Hex 10mm	M6923-10-80
2	Screw, hex cap	M933-06020-60	2	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60	2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
1	Hose, .63 ID	X-312-24	1	Hose, .63 ID	X-312-24
2	Hose, .63 ID	X-312-50	4	Clamp, hose, .69/1.25 in.	X-426-12
4	Clamp, hose, .69/1.25 in.	X-426-12	2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1			

Block Heater, 1000W, 190-240V			GM75564-KA2		
1	Heater, block (240V, 1000 amp)	358327	1	Heater, block (240V, 1000 amp)	358327
1	Tag, hang	279047	1	Tag, hang	279047
1	Bracket, Block Heater Mtg.	GM64285	1	Bracket, Block Heater Mtg.	GM64285
2	Washer, Plain	M125A-06-80	2	Washer, Plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80	2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
2	Nut, Hex 6mm	M6923-06-80	2	Nut, Hex 6mm	M6923-06-80
2	Nut, Hex 10mm	M6923-10-80	2	Nut, Hex 10mm	M6923-10-80
2	Screw, hex cap	M933-06020-60	2	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60	2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
1	Hose, .63 ID	X-312-24	1	Hose, .63 ID	X-312-24
2	Hose, .63 ID	X-312-50	4	Clamp, hose, .69/1.25 in.	X-426-12
4	Clamp, hose, .69/1.25 in.	X-426-12	2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1			

Block Heater, 1500W, 110-120V			GM75565-KA1		
1	Heater, block (120V, 1500 amp)	352945	1	Heater, block (120V, 1500 amp)	352945
1	Hose, molded (.62 in. ID)	276206	1	Hose, molded (.62 in. ID)	276206
1	Tag, hang	279047	1	Tag, hang	279047
1	Shield, heat (32mm ID x 152mm length)	GM17809	1	Shield, heat (32mm ID x 152mm length)	GM17809
1	Bracket, Block Heater Mtg.	GM64285	1	Bracket, Block Heater Mtg.	GM64285
2	Washer, Plain	M125A-06-80	2	Washer, Plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80	2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
2	Nut, Hex 6mm	M6923-06-80	2	Nut, Hex 6mm	M6923-06-80
2	Nut, Hex 10mm	M6923-10-80	2	Nut, Hex 10mm	M6923-10-80
2	Screw, hex cap	M933-06020-60	2	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60	2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
1	Hose, .63 ID	X-312-35	1	Hose, .63 ID	X-312-35
4	Clamp, hose, .69/1.25 in.	X-426-12	4	Clamp, hose, .69/1.25 in.	X-426-12
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1	2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1

Qty.	Description	Part No.
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Block Heater, 1500W, 190-240V			GM75565-KA2		
1	Heater, block (240V, 1500 amp)	352946	1	Heater, block (240V, 1500 amp)	352946
1	Hose, molded (.62 in. ID)	276206	1	Hose, molded (.62 in. ID)	276206
1	Tag, hang	279047	1	Tag, hang	279047
1	Shield, heat (32mm ID x 152mm length)	GM17809	1	Shield, heat (32mm ID x 152mm length)	GM17809
1	Bracket, Block Heater Mtg.	GM64285	1	Bracket, Block Heater Mtg.	GM64285
2	Washer, Plain	M125A-06-80	2	Washer, Plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80	2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
2	Nut, Hex 6mm	M6923-06-80	2	Nut, Hex 6mm	M6923-06-80
2	Nut, Hex 10mm	M6923-10-80	2	Nut, Hex 10mm	M6923-10-80
2	Screw, hex cap	M933-06020-60	2	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60	2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
1	Hose, .63 ID	X-312-35	1	Hose, .63 ID	X-312-35
4	Clamp, hose, .69/1.25 in.	X-426-12	4	Clamp, hose, .69/1.25 in.	X-426-12
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1	2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1

Block Heater, 1800W, 110-120V			GM75566-KA1		
1	Tag, hang	279047	1	Tag, hang	279047
1	Shield, heat (32mm ID x 305mm length)	GM10669	1	Shield, heat (32mm ID x 305mm length)	GM10669
1	Shield, heat (32mm ID x 455mm length)	GM23718	1	Shield, heat (32mm ID x 455mm length)	GM23718
1	Bracket, Block Heater Mtg.	GM64285	1	Bracket, Block Heater Mtg.	GM64285
1	Heater, block (120V, 1800 amp)	GM75552	1	Heater, block (120V, 1800 amp)	GM75552
2	Washer, Plain	M125A-06-80	2	Washer, Plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80	2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
2	Nut, Hex 6mm	M6923-06-80	2	Nut, Hex 6mm	M6923-06-80
2	Nut, Hex 10mm	M6923-10-80	2	Nut, Hex 10mm	M6923-10-80
2	Screw, hex cap	M933-06020-60	2	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60	2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
2	Tee, pipe (1/2 x 1/2 x 1/2 npt)	X-203-13	2	Tee, pipe (1/2 x 1/2 x 1/2 npt)	X-203-13
2	Pipe (1/2"npt x 1.19")	X-209-2	2	Pipe (1/2"npt x 1.19")	X-209-2
1	Pipe (1/2"npt x 12.00")	X-209-26	1	Pipe (1/2"npt x 12.00")	X-209-26
2	Pipe, Nipple (1/2" NPT x 2.50")	X-209-3	2	Pipe, Nipple (1/2" NPT x 2.50")	X-209-3
1	Elbow, pipe (90 deg x 1/2"npt)	X-215-1	1	Elbow, pipe (90 deg x 1/2"npt)	X-215-1
1	Coupling, pipe (1/2"npvc)	X-216-20	1	Coupling, pipe (1/2"npvc)	X-216-20
1	Hose, .63 ID	X-312-34	1	Hose, .63 ID	X-312-34
1	Hose, .63 ID	X-312-51	1	Hose, .63 ID	X-312-51
4	Clamp, hose, .69/1.25 in.	X-426-12	4	Clamp, hose, .69/1.25 in.	X-426-12
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1	2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1

Block Heater, 1800W, 190-240V			GM75566-KA2		
1	Tag, hang	279047	1	Tag, hang	279047
1	Shield, heat (32mm ID x 305mm length)	GM10669	1	Shield, heat (32mm ID x 305mm length)	GM10669
1	Shield, heat (32mm ID x 455mm length)	GM23718	1	Shield, heat (32mm ID x 455mm length)	GM23718
1	Bracket, Block Heater Mtg.	GM64285	1	Bracket, Block Heater Mtg.	GM64285
1	Heater, block (240V, 2000 amp)	GM75553	1	Heater, block (240V, 2000 amp)	GM75553
2	Washer, Plain	M125A-06-80	2	Washer, Plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80	2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
2	Nut, Hex 6mm	M6923-06-80	2	Nut, Hex 6mm	M6923-06-80
2	Nut, Hex 10mm	M6923-10-80	2	Nut, Hex 10mm	M6923-10-80
2	Screw, hex cap	M933-06020-60	2	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60	2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
2	Tee, pipe (1/2 x 1/2 x 1/2 npt)	X-203-13	2	Tee, pipe (1/2 x 1/2 x 1/2 npt)	X-203-13
2	Pipe (1/2"npt x 1.19")	X-209-2	2	Pipe (1/2"npt x 1.19")	X-209-2
1	Pipe (1/2"npt x 12.00")	X-209-26	1	Pipe (1/2"npt x 12.00")	X-209-26
2	Pipe, Nipple (1/2" NPT x 2.50")	X-209-3	2	Pipe, Nipple (1/2" NPT x 2.50")	X-209-3
1	Elbow, pipe (90 deg x 1/2"npt)	X-215-1	1	Elbow, pipe (90 deg x 1/2"npt)	X-215-1
1	Coupling, pipe (1/2"npvc)	X-216-20	1	Coupling, pipe (1/2"npvc)	X-216-20
1	Hose, .63 ID	X-312-34	1	Hose, .63 ID	X-312-34
1	Hose, .63 ID	X-312-51	1	Hose, .63 ID	X-312-51
4	Clamp, hose, .69/1.25 in.	X-426-12	4	Clamp, hose, .69/1.25 in.	X-426-12
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1	2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1

Cooling/Fuel System Kits

Qty.	Description	Part No.
Block Heater, 1500W, 110-120V		
1	Heater, block (120V, 1500 amp)	GM77944-KA1 352945
1	Sensor, thermostat	224341
1	Thermostat, block heater	279813
1	Tag, hang	279047
1	Shield, heat	GM42198
1	Bracket, Block Heater Mtg.	GM64285
2	Washer, Plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
2	Nut, Hex 6mm	M6923-06-80
2	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
1	Elbow, street (45 deg x 1/2"npt)	X-274-13
1	Hose, .63 ID	X-312-35
1	Hose, .63 ID	X-312-52
4	Clamp, hose, .5/1 in.	X-426-10
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1
Block Heater, 1500W, 190-240V		
1	Heater, block (240V, 1500 amp)	GM77944-KA2 352946
1	Tag, hang	279047
1	Shield, heat	GM42198
1	Bracket, Block Heater Mtg.	GM64285
2	Washer, Plain	M125A-06-80
2	Washer, Plain 10.5 ID x 20.0 OD	M125A-10-80
2	Nut, Hex 6mm	M6923-06-80
2	Screw, hex cap	M933-06020-60
2	Screw, hex cap, fully thrd M10 x 25mm	M933-10025-60
1	Elbow, street (45 deg x 1/2"npt)	X-274-13
1	Hose, .63 ID	X-312-35
1	Hose, .63 ID	X-312-52
4	Clamp, hose, .5/1 in.	X-426-10
2	Connector, Hose 5/8 in. x 1/2 in. MIP Brass	X-582-1
Duct Flange, Radiator		
2	Frame, air duct	GM13896-KA1 GM13897
2	Frame, air duct	GM13898
8	Rivet, pop, 0.187 in.	X-781-19
4	Screw, hex seal washer head, drill	X-794-4
Duct Flange, Radiator		
2	Frame, air duct	GM13896-KA2 GM32061
2	Frame, air duct	GM31193
8	Rivet, pop, 0.187 in.	X-781-19
4	Screw, hex seal washer head, drill	X-794-4
Duct Flange, Radiator		
2	Frame, air duct	GM13896-KA5 GM32061
2	Frame, air duct, vertical	GM50558
8	Rivet, pop, 0.187 in.	X-781-11
Fuel Lines, Flexible		
1	Nipple, pipe, 1 x 1 1/2 in.	GM13706-KP1 X-218-24
1	Fuel line, flexible	X-504-21
Fuel Lines, Flexible		
1	Pipe, 1 1/2 in. NPT x 1.75 in.	GM13706-KP2 155040
1	Fuel line, flexible	X-504-22
Fuel Lines, Flexible		
1	Bushing, reducing, 1 x 1 1/2 in. NPT	GM13706-KP3 X-202-11
1	Pipe, 1 in. NPT x 1.50 in..	X-218-24
1	Fuel line, flexible, 1.5 in. ID x 28.25 in.	X-504-22
Fuel Lines, Flexible (Dual Fuel)		
2	Nipple, pipe, 1 x 1 1/2 in.	GM14272-KP1 X-218-24
2	Fuel line, flexible	X-504-21
Fuel Lines, Flexible (Dual Fuel)		
2	Pipe, 1 1/2 in NPT x 1.75 in.	GM14272-KP2 155040
2	Fuel line, flexible	X-504-22

Qty.	Description	Part No.
Fuel Lines, Flexible (Dual Fuel)		
2	Bushing, reducing, 1 x 1 1/2 in. NPT	GM14272-KP3 X-202-11
2	Pipe, 1 in. NPT x 1.50 in..	X-218-24
2	Fuel line, flexible, 1.5 in. ID x 28.25 in.	X-504-22
Filter, Natural Gas		
1	Filter, gas	PA-343303 343302
1	Element, gas filter	343304
Conversion Kit, Natural Gas to LP		
1	Diaphragm assembly, LP	GM17010-KP1 GM17009
Conversion Kit, Natural Gas to LP		
1	Mixer, LP	GM17010-KP2 GM17382
1	Regulator, pressure	GM28970
1	Bushing, reducing, 1 x 1 1/2 in. NPT	X-202-11
1	Service Bulletin, Fuel Mix Adj, Oxygen Sensor	SB-634
1	Service Bulletin, NG to LP Conversion	SB-633
Conversion Kit, Natural Gas to LP		
1	Mixer	GM17010-KP3 GM28969
1	Regulator, pressure	GM28970
1	Bushing, reducing, 1 x 1 1/2 in. NPT	X-202-11
1	Service Bulletin, Fuel Mix Adj, Oxygen Sensor	SB-634
1	Service Bulletin, NG to LP Conversion	SB-633
Conversion Kit, Natural Gas to LP		
1	Mixer	GM17010-KP4 GM28966
1	Regulator, pressure	GM28970
1	Service Bulletin, Fuel Mix Adj, Oxygen Sensor	SB-634
1	Service Bulletin, NG to LP Conversion	SB-633
Kit, LP Gas to Dual Fuel		
1	Gasket, carburetor	GM24235 GM16150
1	Regulator, fuel, 3/4 in. NPT	GM16171
1	Bushing, 1 3/4 in.	GM16205
1	Pipe, closed nipple, 3/4 in.	GM16206
4	Screw, 10-24 x 5/8 SEMS	GM17388
1	Gasket, throttle body to mixer	GM17392
1	Pipe, nipple 3/4 x 3 in.	GM19736
1	Bracket, LS	GM24184
1	Fitting, tee 3/4 x 3/4 x 3/4	GM24185
1	U-bolt, 5/16 x 3/4 x 3	GM24186
1	Valve, line load	GM24187
2	Washer, lock	GM24188
2	Nut, 5/16-18	GM24189
2	Washer, flat 3/8 SAE	GM24190
Additional Gas Solenoid Valve		
1	Harness, gas solenoid valve	GM39203-KA1 GM39204
1	Valve assembly, gas	GM14318
1	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9
Additional Gas Solenoid Valve		
1	Harness, additional gas solenoid valve	GM39396-KA1 GM39397
1	Valve assembly, gas	GM14318
1	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9
Additional Gas Solenoid Valve		
2	Valve assembly, gas	GM39396-KA2 GM14318
1	Harness, additional gas solenoid valve	GM39407
1	Harness, additional gas solenoid valve	GM39408
2	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9

Fuel System Kits

Qty.	Description	Part No.
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Additional Gas Solenoid Valve

- 1 Harness, additional gas solenoid valve
- 1 Solenoid
- 1 Pipe, 1/4 in. NPT x 2.50 in.
- 1 Elbow, male tube, 90° + vibra seal
- 1 Terminal, fast-on, female, 18-22 AWG
- 1 Terminal, fast-on, male, 18-22 AWG

GM39396-KA3

- GM39397
- GM74259
- X-220-14
- X-447-1
- X-431-25
- X-431-29

Additional Gas Solenoid Valve

- 1 Spacer, 0.406 ID x 0.625 OD x 0.297 in.
- 1 Spacer, 0.406 ID x 0.625 OD x 0.375 in.
- 1 Bracket, fuel support
- 1 Elbow, pipe, 45° x 1 in. NPT
- 1 Pipe, 1 in. NPT x 3.00 in.
- 1 Clamp, muffler
- 1 Elbow, pipe, 90° x 1 in. NPT
- 1 Pipe, 1 in. NPT x 2.00 in.
- 1 Bushing, reducing, 1 x 1 1/4 in. NPT
- 1 Valve assembly, gas
- 1 Bushing, reducing, 3/4 x 1 1/4 in. NPT
- 1 Elbow, street, 90° x 1-1/4 in. NPTF
- 1 Harness, additional gas solenoid valve
- 1 Pipe, 3/4 in. NPT x 2.50 in.

GM39530-KA1

- X-400-75
- X-400-89
- GM39531
- X-225-9
- X-218-22
- X-722-9
- X-215-15
- K-122
- X-202-32
- A-254469
- X-202-18
- EH-2226
- GM39533
- X-206-4

Additional Gas Solenoid Valve

- 1 Spacer, 0.406 ID x 0.625 OD x 0.297 in.
- 1 Spacer, 0.406 ID x 0.625 OD x 0.375 in.
- 1 Bracket, fuel support
- 2 Elbow, pipe, 45° x 1 in. NPT
- 2 Pipe, 1 in. NPT x 3.00 in.
- 2 Clamp, muffler
- 4 Elbow, pipe, 90° x 1 in. NPT
- 4 Bushing, reducing, 1 x 1 1/4 in. NPT
- 2 Valve assembly, gas
- 1 Bracket, fuel support
- 5 Pipe, 1 in. NPT x 1.50 in.
- 1 Elbow, street, 45° x 1 in. NPT
- 1 Harness, additional gas solenoid valve
- 1 Harness, additional gas solenoid valve
- 1 Pipe, 1 in. NPT x 5.00 in.

GM39530-KA2

- X-400-75
- X-400-89
- GM39531
- X-225-9
- X-218-22
- X-722-9
- X-215-15
- X-202-32
- A-254469
- GM39532
- X-218-24
- X-274-10
- GM39534
- GM39535
- X-218-30

Additional Gas Solenoid Valve

- 1 Harness, additional gas solenoid valve
- 1 Solenoid
- 1 Pipe, 1/4 in. NPT x 2.50 in.
- 1 Elbow, male tube, 90° + vibra seal
- 1 Terminal, fast-on, female, 18-22 AWG
- 1 Terminal, fast-on, male, 18-22 AWG

GM39530-KA3

- GM39397
- GM74259
- X-220-14
- X-447-1
- X-431-25
- X-431-29

Additional Gas Solenoid Valve

- 1 Harness, second solenoid valve
- 1 Bracket, fuel support
- 1 Elbow, street, 90° x 1 1/4 in. NPTF
- 1 Valve assembly, gas
- 1 Pipe, 1 1/4 in. NPT x 1.63 in.
- 1 Terminal, fast-on, female, 18-22 AWG
- 1 Terminal, fast-on, male, 18-22 AWG
- 1 Clamp, muffler, 2.12 in.

GM39788-KA1

- GM37448
- GM37446
- EH-2226
- A-254469
- X-210-8
- X-431-25
- X-431-29
- X-722-5

Additional Gas Solenoid Valve

- 1 Harness, gas solenoid valve
- 1 Bracket, fuel support
- 2 Elbow, street, 90° x 1 1/4 in. NPTF
- 1 Valve assembly, gas
- 1 Pipe, 1 1/4 in. NPT x 1.63 in.
- 1 Terminal, fast-on, female, 18-22 AWG
- 1 Terminal, fast-on, male, 18-22 AWG
- 1 Clamp, muffler, 2.12 in.

GM39788-KA2

- GM39789
- GM37446
- EH-2226
- A-254469
- X-210-8
- X-431-25
- X-431-29
- X-722-5

Qty.	Description	Part No.
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Additional Gas Solenoid Valve

- 1 Harness, gas solenoid valve
- 1 Solenoid
- 1 Pipe, 1/4 in. NPT x 2.50 in.
- 1 Terminal, fast-on, female, 18-22 AWG
- 1 Terminal, fast-on, male, 18-22 AWG
- 1 Elbow, male tube, 90° + vibra seal

GM39788-KA3

- GM39790
- GM74259
- X-220-14
- X-431-25
- X-431-29
- X-447-1

Additional Gas Solenoid Valve

- 1 Harness, second solenoid valve
- 1 Bracket, fuel support
- 4 Elbow, street, 90° x 1 1/4 in. NPTF
- 2 Valve assembly, gas
- 2 Pipe, 1 1/4 in. NPT x 1.63 in.
- 2 Terminal, fast-on, female, 18-22 AWG
- 2 Terminal, fast-on, male, 18-22 AWG
- 1 Clamp, muffler, 2.12 in.
- 1 Harness, fuel LP
- 1 Pipe, 1 in. NPT x 2.00 in.
- 1 Harness, gas solenoid valve

GM39788-KA4

- GM37448
- GM37446
- EH-2226
- A-254469
- X-210-8
- X-431-25
- X-431-29
- X-722-5
- GM25009
- K-122
- GM39790

Additional Gas Solenoid Valve

- 1 Harness, second solenoid valve
- 1 Valve, gas
- 1 Pipe, 1 1/2 in. NPT x 1.75 in.
- 1 Terminal, fast-on, female, 18-22 AWG
- 1 Terminal, fast-on, male, 18-22 AWG

GM39864-KA1

- GM37448
- GM23542
- 155040
- X-431-25
- X-431-29

Additional Gas Solenoid Valve

- 1 Harness, gas solenoid valve
- 1 Valve, gas
- 1 Pipe, 1 1/2 in. NPT x 1.75 in.
- 1 Terminal, fast-on, female, 18-22 AWG
- 1 Terminal, fast-on, male, 18-22 AWG

GM39864-KA2

- GM39789
- GM23542
- 155040
- X-431-25
- X-431-29

Additional Gas Solenoid Valve

- 1 Harness, gas solenoid valve
- 1 Solenoid
- 1 Pipe, 1/4 in. NPT x 2.50 in.
- 1 Terminal, fast-on, female, 18-22 AWG
- 1 Terminal, fast-on, male, 18-22 AWG
- 1 Elbow, male tube, 90° + vibra seal
- 1 Elbow, street, 90° x 1/4 in. NPTF

GM39864-KA3

- GM39790
- X-220-14
- X-431-25
- X-431-29
- X-447-1
- X-555-1

Additional Gas Solenoid Valve

- 1 Harness, second solenoid valve
- 2 Valve, gas
- 2 Pipe, 1 1/2 in. NPT x 1.75 in.
- 2 Terminal, fast-on, female, 18-22 AWG
- 2 Terminal, fast-on, male, 18-22 AWG
- 1 Harness, gas solenoid valve
- 1 Harness, fuel LP
- 1 Nipple, pipe, 1 x 1 1/2 in.
- 1 Fuel line, flexible

GM39864-KA4

- GM37448
- GM23542
- 155040
- X-431-25
- X-431-29
- GM39790
- GM25009
- X-218-24
- X-504-21

Additional Gas Solenoid Valve

- 1 Harness, additional gas solenoid valve
- 1 Valve assembly, gas
- 1 Pipe, 3/4 in. NPT x 1.38 in.

GM42547-KA1

- GM42559
- GM42530
- X-206-9

Additional Gas Solenoid Valve

- 1 Harness, additional gas solenoid valve
- 1 Valve assembly, gas
- 1 Pipe, 3/4 in. NPT x 1.38 in.

GM42547-KA2

- GM52262
- GM42530
- X-206-9

Additional Gas Solenoid Valve

- 1 Harness, additional gas solenoid valve
- 1 Harness, gas valve
- 1 Valve assembly, gas
- 1 Pipe, 3/4 in. NPT x 1.38 in.

GM42548-KA1

- GM42804
- GM45927
- GM42530
- X-206-9

Fuel System Kits, continued

Qty.	Description	Part No.
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Additional Gas Solenoid Valve		GM42548-KA2
1	Harness, additional gas solenoid valve	GM42805
1	Harness, additional gas solenoid valve	GM42806
1	Harness, gas valve	GM45927
1	Valve assembly, gas	GM42530
1	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9

Additional Gas Solenoid Valve		GM70624-KA1
1	Valve, shutoff	GM71053
1	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9

Additional Gas Solenoid Valve		GM70626-KA1
1	Solenoid, LP fuel	GM74259
1	Harness, extension LP liquid fuel	GM70626
1	Pipe, 1/4 in. NPT x 2.50 in.	X-220-14
1	Elbow, male tube, 90° + vibra seal	X-447-1
1	Terminal, fast-on, female, 18-22 AWG	X-431-25
1	Terminal, fast-on, male, 18-22 AWG	X-431-29

Additional Gas Solenoid Valve		GM70040-KA1
1	Pipe (1 1/4"npt x 1.63")	X-210-8
1	Pipe (1"npt x 2.00")	K-122
1	Bracket, fuel support	GM39531
1	Valve, Gas Assy	GM70497
2	Elbow, pipe, 90° x 1 in. NPT	X-215-15
1	Pipe, 1 in. NPT x 6.50 in.	X-218-9
2	Spacer, .406 ID x .625 OD x .875 in	X-400-46
1	Clamp, muffler	X-722-9

Additional Gas Solenoid Valve Dual Fuel		GM70612-KA1
1	Valve, Gas Assy	GM70497
1	Elbow, street (90 deg x 1-1/4"nptf)	EH-2226
1	Pipe (1-1/4"npt x 1.63")	X-210-8

Additional Gas Solenoid Valve		GM70639-KA1
1	Solenoid, LP fuel	GM74259
1	Harness, extension LP liquid fuel	GM70480
1	Pipe, 1/4 in. NPT x 4.00 in.	X-220-2
1	Terminal, fast-on, female, 18-22 AWG	X-431-25
1	Terminal, fast-on, male, 18-22 AWG	X-431-29
1	Elbow, male tube, 90° + vibra seal	X-447-1

Additional Gas Solenoid Valve		GM70443-KA1
1	Valve assembly, gas	GM70497
1	Bushing, reducing, 1 x 1 1/4 in. NPT	X-202-32
1	Pipe, 1 1/4 in. NPT x 1.63 in.	X-210-8

Additional Gas Solenoid Valve Dual Fuel		GM70928-KA1
1	Valve, Gas Assy	GM70497
1	Pipe (1-1/4"npt x 5.00")	X-210-27
1	Pipe (1-1/4"npt x 1.63")	X-210-8
1	Elbow, pipe (90 deg x 1-1/4"npt)	X-215-14

Additional Gas Solenoid Valve Dual Fuel		GM70928-KA2
1	Pipe (1-1/2"npt x 1.75")	155040
1	Valve, Gas Assy	GM70498
1	Pipe (1-1/2"npt x 4.00")	X-205-7

Additional Gas Solenoid Valve		GM71195-KA1
1	Pipe (1-1/2"npt x 1.75")	155010
1	Valve, gas	GM70498

Qty.	Description	Part No.
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Additional Gas Solenoid Valve		GM71619-KA1
1	Clamp, muffler	237548
1	Valve, Gas Assy	GM70497
1	Bracket, Solenoid Valve Mtg.	GM74846
1	Pipe (1"npt x 2.00")	K-122
2	Bushing, reducing (1 x 1-1/4"npt)	X-202-32
2	Elbow, pipe (90 deg x 1"npt)	X-215-15
1	Pipe, Nipple (1" NPT x 3.00") (KM)	X-218-22
1	Pipe (1"npt x 1.50")	X-218-24
1	Pipe (1"npt x 8.00")	X-218-27

Additional Gas Solenoid Valve, LP Liquid		GM78581-KA1
1	Valve, Solenoid	GM74259
2	Pipe (1/4"npt x 1.50")	X-220-6
1	Elbow, Male Tube (90 deg) + vibra	X-447-1
1	Terminal, fast-on, female, 18-22 AWG	X-431-25
1	Terminal, fast-on, male, 18-22 AWG	X-431-29

Appendix A Abbreviations

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

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

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

Appendix B Common Hardware Application Guidelines

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

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

Washers and Nuts: Use split lock washers as a bolt locking device where specified. Use SAE flat washers with whiz nuts, spirallock nuts, or standard nuts and preloading (torque) of the bolt in all other applications.

See Appendix C, General Torque Specifications, and other torque specifications in the service literature.

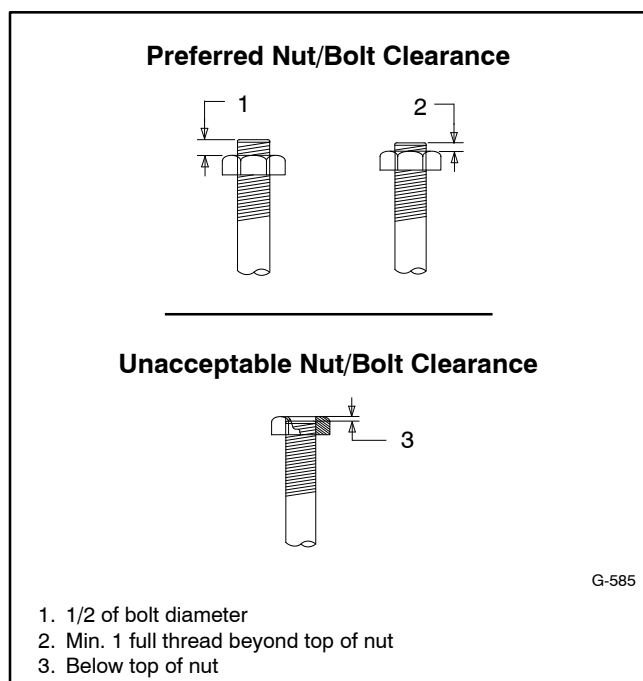


Figure 1 Acceptable Bolt Lengths

Steps for common hardware application:

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

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

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

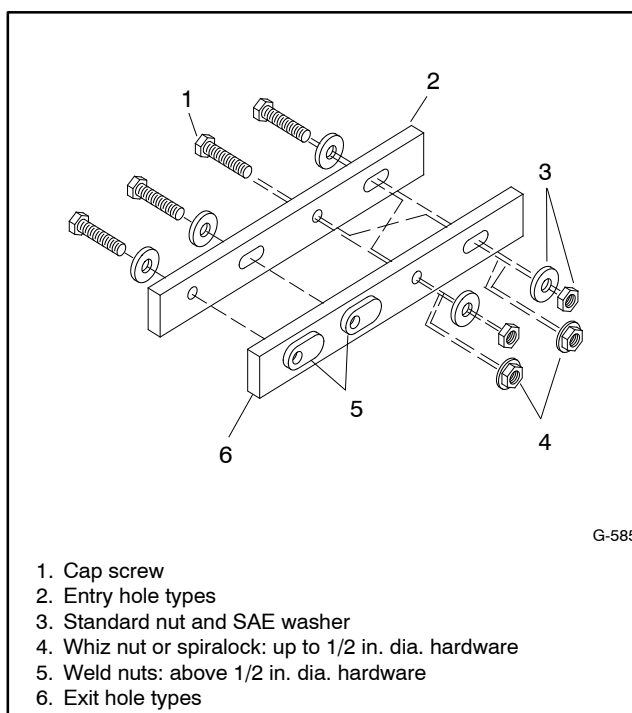


Figure 2 Acceptable Hardware Combinations

Appendix C General Torque Specifications

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

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

Notes:

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

Appendix D Common Hardware Identification

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

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

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

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

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

Sample Dimensions

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

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

Metric

Hex head bolts are hardness grade 8.8 unless noted.

Part No. Dimensions Hex Head Bolts (Partial Thread)

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

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

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

Hex Head Bolts (Full Thread)

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

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

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

Pan Head Machine Screws

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

Flat Head Machine Screws

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

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

Metric, continued

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

Washers

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

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

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