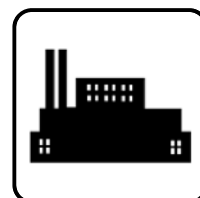


Service Parts

Industrial Generator Sets



Models:

40/50REOZJE

50/60REOZJD

80/100REOZJF

125/180REOZJG

150-200REOZJF

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

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.

Engine Description	Engine Part Number	Fan Belt	Oil Filter	Fuel Filter	Fuel Filter (primary)
40/50REOZJE					
4045TF280	GM90762-1	GM23828	GM32809	GM91830	
50REOZJD					
4024HF285	GM73388	GM63750	GM34935	GM63894	
60REOZJD					
5030HF285	GM73389-2	GM63761	GM34935	GM63894	
5030HF285	GM73389-7	GM87022	GM34935	GM63894	
80REOZJF/100REOZJF					
4045HF285, 12V	GM66704-1	GM77161	GM32809	GM50006	GM50074
4045HF285, 12V	GM66704-1	GM77161	GM32809	GM50006	GM50074
4045HF285, 24V	GM66704-2	GM77161	GM32809	GM50006	GM50074
125REOZJG					
4045HF285, 12V	GM66704-3	352793	GM32809	GM50006	GM50074
4045HF285, 24V	GM66704-4	352793	GM32809	GM50006	GM50074
150REOZJF					
6068HF285, 12V	GM70424-1	352793	GM32809	GM50006	GM50074
6068HF285, 24V	GM70424-2	352793	GM32809	GM50006	GM50074
180REOZJF/200REOZJF					
6068HFG85	GM70798-1	GM64496	GM32809	GM50006	GM50074
6068HF485	GM70798-2	GM64496	GM32809	GM50006	GM50074
6068HFG85	GM70798-3	GM64496	GM32809	GM50006	GM50074
6068HF485	GM70798-4	GM64496	GM32809	GM50006	GM50074
180REOZJG					
6068HFG82	GM84749	GM86400	GM32809	GM50006	GM50074

Figure 1 Common Replacement Parts

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80-125 kW, Decision-Maker 550/6000	80
150-200 kW, Decision-Maker 550/6000	82
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Introduction

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

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

This manual includes the following main sections:

Table of Contents. Lists the sections of the manual.

Introduction (and other information sections). Contains introductory material about part numbers, illustrations, and hardware.

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

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

Kit Sections. List modules and accessories and their parts.

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

Numbering System Significance

This manual uses the following numbering systems:

Specification Number. The product identification number located on the generator set nameplate. 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

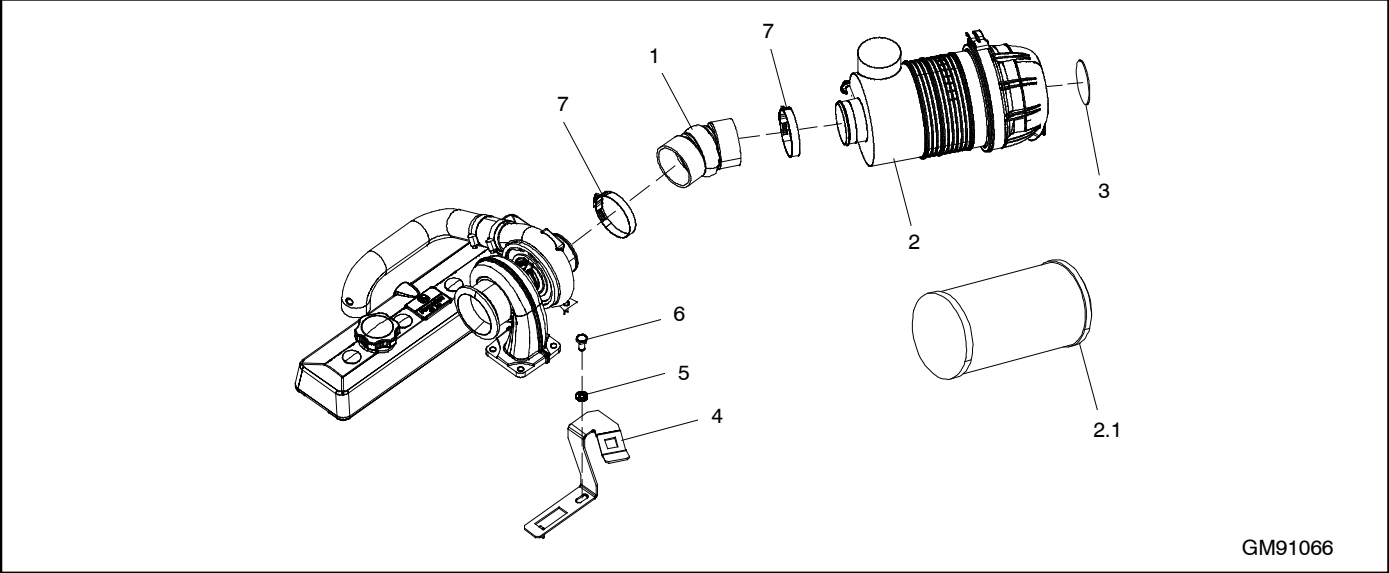
Group Title	Air Intake	Cooling System	Engine	Nameplates and Decals	Skid and Plant Mounting	Generator and Mounting	Controller and Mounting	Literature
Group No.	101	104	105	107	109	201	301	701
Spec No.	Variation Number							

40REOZJE								
GM91077-GA3	*	*	8	1	*	*	†	525
50REOZJE								
GM91077-GA4	*	*	9	1	*	*	†	526
50REOZJD								
GM79513-GA2	*	*	54	1	*	*	†	335
60REOZJD								
GM79513-GA1	*	*	56	1	*	*	†	336
GM79513-GA8	*	*	57	1	*	*	†	336
80REOZJF								
GM81567-GA1	*	*	12	2	*	*	†	481
GM81567-GA2	*	*	13	2	*	*	†	481
GM81567-GA3	*	*	12	3	*	*	†	481
GM81567-GA4	*	*	13	3	*	*	†	481
100REOZJF								
GM81567-GA5	*	*	12	3	*	*	†	482
GM81567-GA6	*	*	13	3	*	*	†	482
125REOZJG								
GM79239-GA1	*	*	1	3	*	*	†	483
GM79239-GA2	*	*	2	3	*	*	†	483
150REOZJF								
GM81645-GA1	*	*	3	3	*	*	†	484
GM81645-GA2	*	*	4	3	*	*	†	484
180REOZJF								
GM81290-GA1	*	*	5	3	*	*	†	485
GM81290-GA4	*	*	6	3	*	*	†	485
180REOZJG								
GM84750-GA1	*	*	7	3	*	*	†	488
200REOZJF								
GM81290-GA2	*	*	5	3	*	*	†	486
GM81290-GA3	*	*	6	3	*	*	†	486
GM81290-GA5	*	*	6	4	*	*	†	486

- * 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.

Group 101: Air Intake

40/50 kW, Heavy Duty

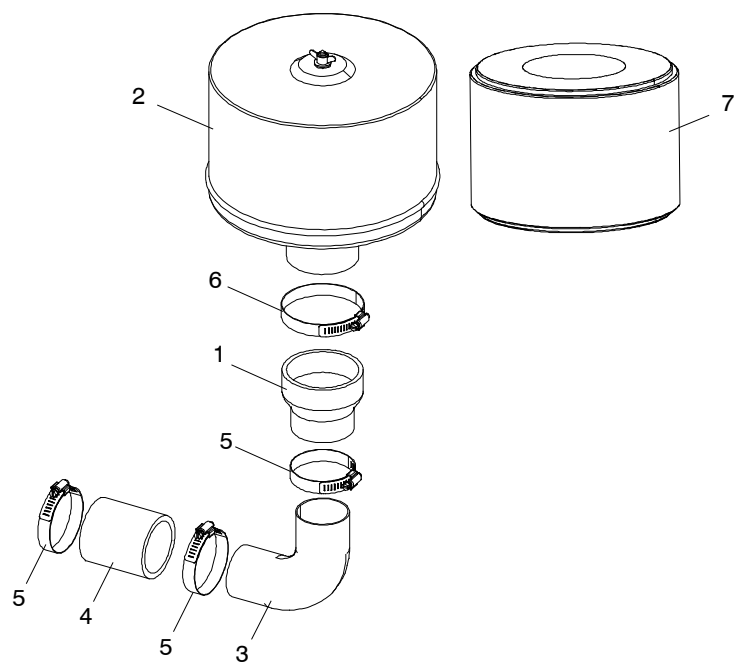


Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity
			Module
			GM91066-MA1
1	324878	Hose, hump (3.00" id) Hi-Temp	1
2	GM86445	Air Cleaner Assembly	1
2.1	GM86446	Element, Air Cleaner	1
3	GM87775	Decal, Air Cleaner	1
4	GM91635	Bracket, Mounting	1
5	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	1
6	M933-10020-60	Screw, hex cap	1
7	X-426-5	Clamp, hose, 3.56/4.5 in.	2

Group 101: Air Intake

50/60 kW, Standard Duty



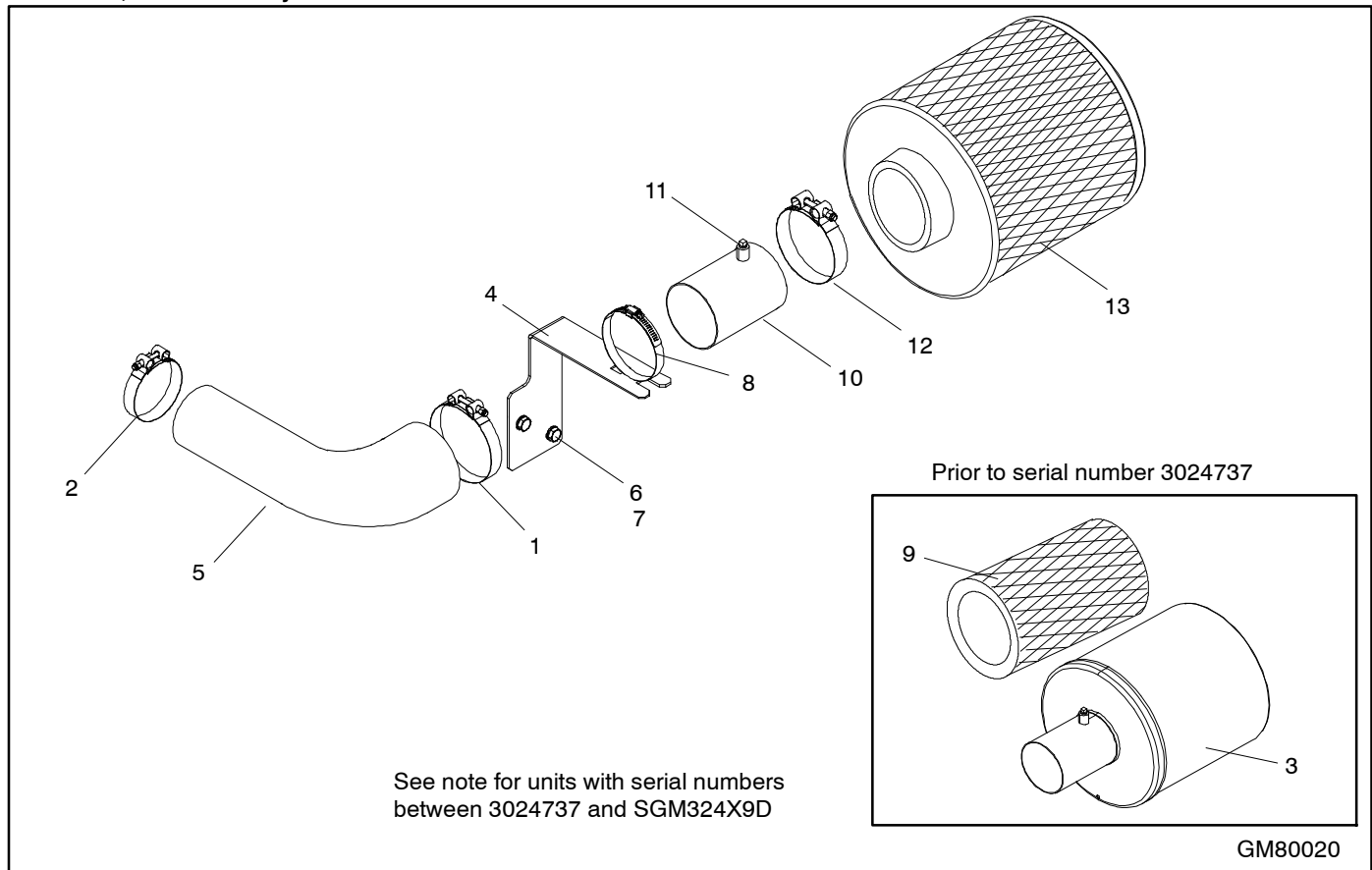
GM55374

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity	
			Module	
			GM55374-MA1	GM55374-MA4
1	328006	Hose, reducer, 3.00 in. to 2.50 in. ID	1	1
2	A-273699	Air cleaner assy.	1	1
3	GM67400	Tube, elbow		1
4	X-281-8	Hose, radiator, straight, 2.25 in. ID		1
5	X-426-2	Clamp, hose, 2.31/3.25 in.	1	3
6	X-426-5	Clamp, hose, 3.56/4.5 in.	1	1
7	253107	Element, air cleaner	1	1

Group 101: Air Intake, continued

80/100 kW, Standard Duty



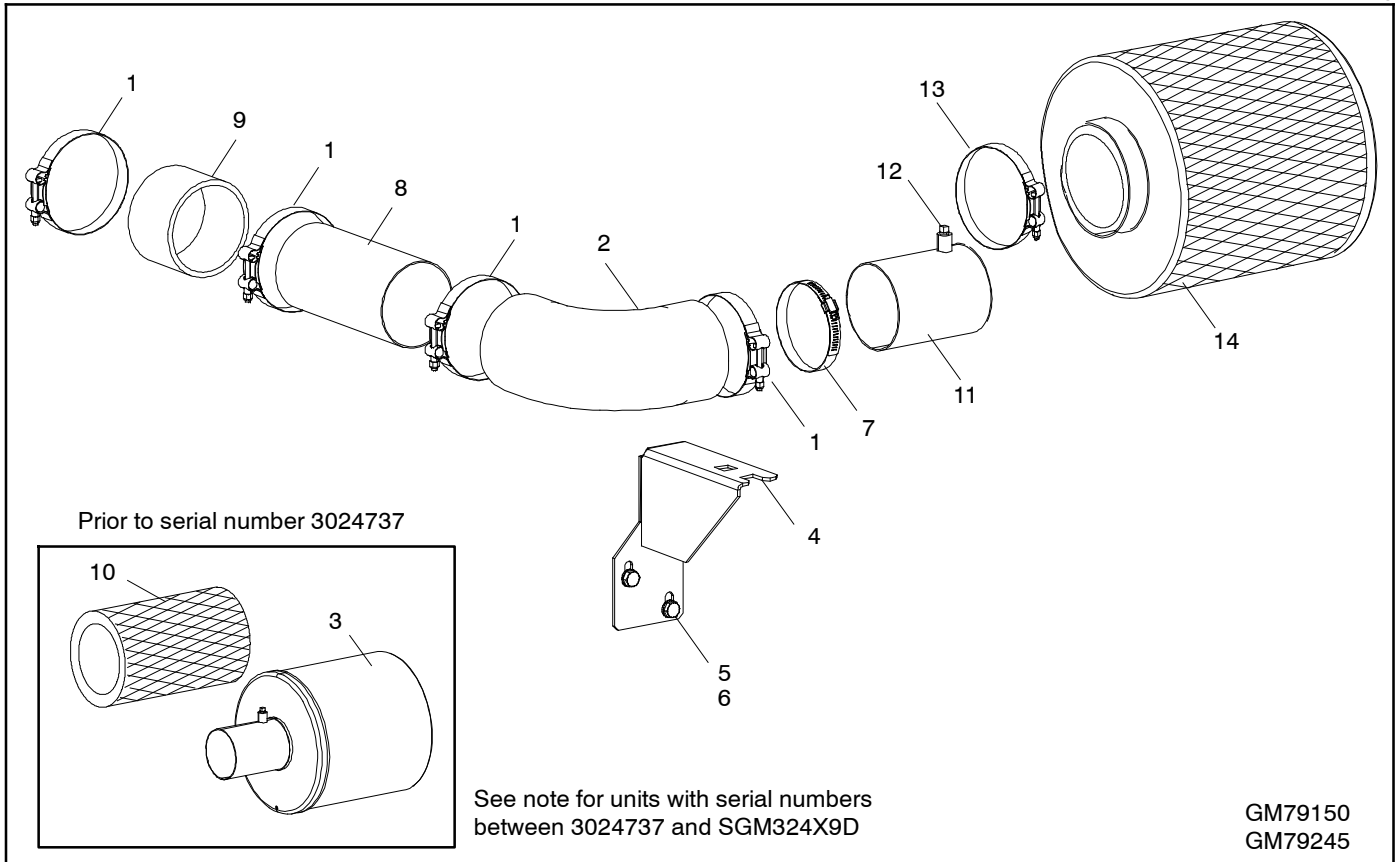
Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity
			Module
			GM80020-MA1
1	274545	Clamp, hose, 4.31/4.62 in.	1
2	324342	Clamp, hose, 3.43/3.75 in.	1
3	-	GM35792 Assembly, Air Cleaner (See note below.)	1
4	GM79132	Bracket, Air Cleaner	1
5	GM80023	Hose, Molded Air Intake	1
6	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	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	253108	Element, Air Cleaner	1
10	GM85717	Tube assembly	1
11	X-75-59	Plug, Nylon Pipe 1/8 in. NPTF	1
12	274545	Clamp, hose, 4.31/4.62 in.	1
13	GM85361	Air Cleaner	1
	GM86980-S	Service Kit, Air Cleaner Assy. includes the following:	
10	GM85717	Tube assembly	1
11	X-75-59	Plug, Nylon Pipe 1/8 in. NPTF	1
12	274545	Clamp, hose, 4.31/4.62 in.	1
13	GM85361	Air Cleaner	1

Note: Order service kit GM86980-S to replace item 3. Thereafter, order air cleaner GM85361.

Group 101: Air Intake, continued

125/150 kW, Standard Duty



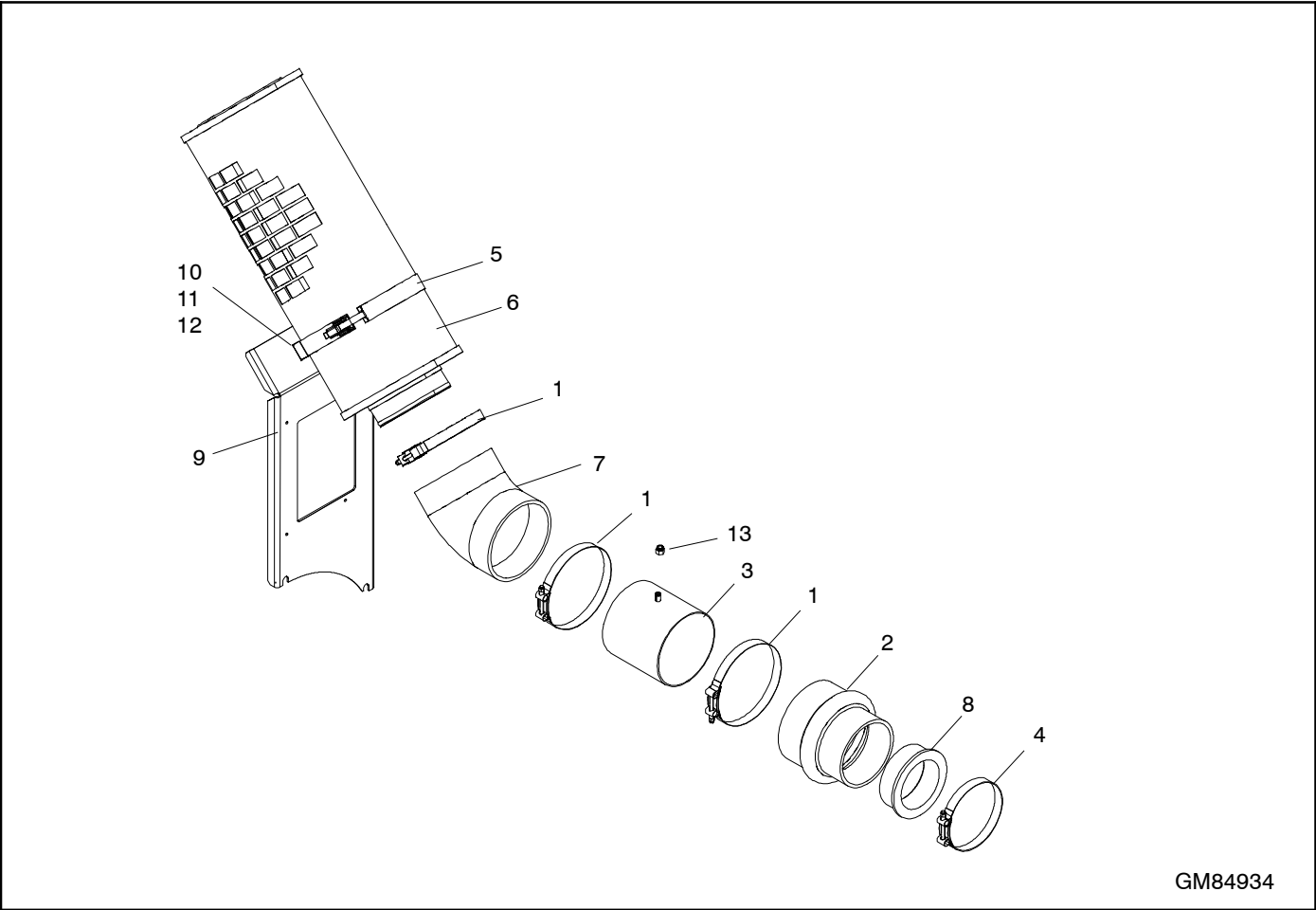
Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity	
			Module	
			GM79245-MA1	GM79150-MA1
1	274545	Clamp, hose, 4.31/4.62 in.	4	4
2	361694	Hose, 90 deg. elbow (101.6mm ID)	1	1
3	-	GM35792 Assembly, Air Cleaner (See note below.)	1	1
4	GM79132	Bracket, Air Cleaner	1	1
5	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	2	2
6	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm	2	2
7	X-426-5	Clamp, hose, 3.56/4.5 in.	1	1
8	X-522-118	Tube, Steel	1	
8	X-522-87	Tube, steel (4.00"od x 100mm)		1
9	X-6350-1	Hose, radiator, straight, 4 in. ID	1	1
10	253108	Element, Air Cleaner	1	1
11	GM85717	Tube assembly	1	1
12	X-75-59	Plug, Nylon Pipe 1/8 in. NPTF	1	1
13	274545	Clamp, hose, 4.31/4.62 in.	1	1
14	GM85361	Air Cleaner	1	1
	GM86980-S	Service Kit, Air Cleaner Assy. includes the following:		
11	GM85717	Tube assembly	1	1
12	X-75-59	Plug, Nylon Pipe 1/8 in. NPTF	1	1
13	274545	Clamp, hose, 4.31/4.62 in.	1	1
14	GM85361	Air Cleaner	1	1

Note: Order service kit GM86980-S to replace item 3. Thereafter, order air cleaner GM85361.

Group 101: Air Intake, continued

180 kW, Standard Duty

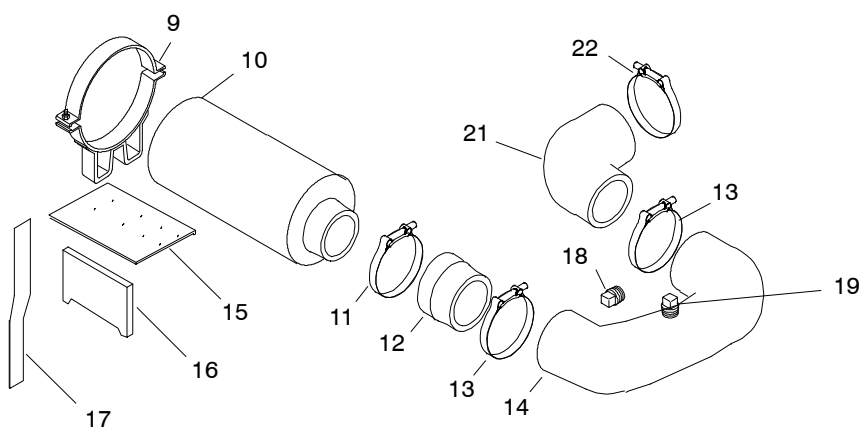


Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity
			Module
			GM84934-MA1
1	254013	Clamp, hose, 6.25/6.56 in.	3
2	272628	Hose, hump reducer (6.00 to 5.00 in. ID)	1
3	274623	Tube assembly	1
4	291562	Clamp, hose, 5.25/5.56 in.	1
5	343218	Clamp, air cleaner (9.80 in. ID)	1
6	343219	Element, Air Cleaner	1
7	347806	Hose, 45 Deg. Elbow (6.00 in. ID)	1
8	GM11458	Insert, hose reducer (5.00 to 4.00 in.)	1
9	GM84937	Bracket, Air Cleaner	1
10	M125A-10-80	Washer, Plain10.5 ID x 20.0 OD	2
11	M6923-10-80	Nut, Hex 10mm	2
12	M933-10025-60	Screw, hex cap,fully thrd M10 x 25mm	2
13	X-268-7	Cap, pipe (1/8 in. npt)	1

Group 101: Air Intake, continued

180/200 kW, Standard Duty



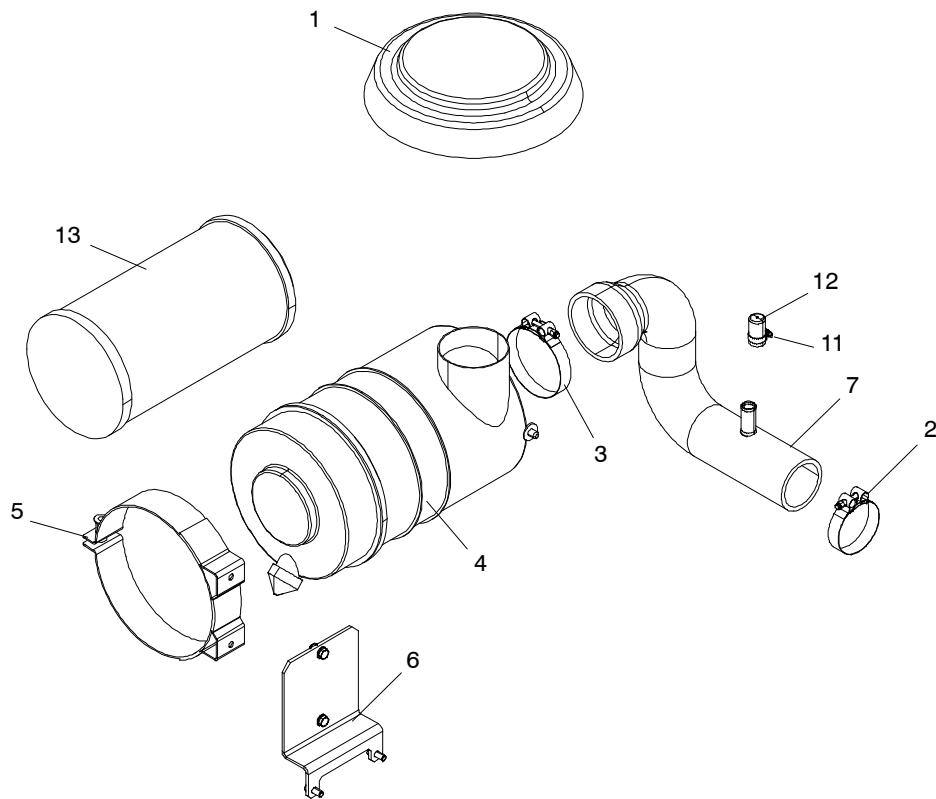
GM70805

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity	
			Module	
			GM70805-MA1	GM70805-MA2
9	343218	Clamp, air cleaner, 9.8 in. ID	2	2
10	343219	Air cleaner, industrial	1	1
11	254013	Clamp, hose, 6.25/6.56 in.	1	1
12	272628	Hose, hump, reducer, 6 to 5 in. ID	1	1
13	291562	Clamp, hose, 5.25/5.56 in.	2	2
14	GM47064	Tube, steel	1	1
15	GM71063	Bracket, air cleaner	1	1
16	GM71065	Support, air cleaner	1	
16	GM80770	Support, air cleaner		1
17	GM71064	Support, air cleaner	2	2
18	X-75-4	Plug, pipe, 1/8 in. NPTF	1	1
19	X-75-49	Plug, pipe, 3/4 in. NPTF, square key head	1	1

Group 101: Air Intake, continued

50/60 kW, Heavy Duty



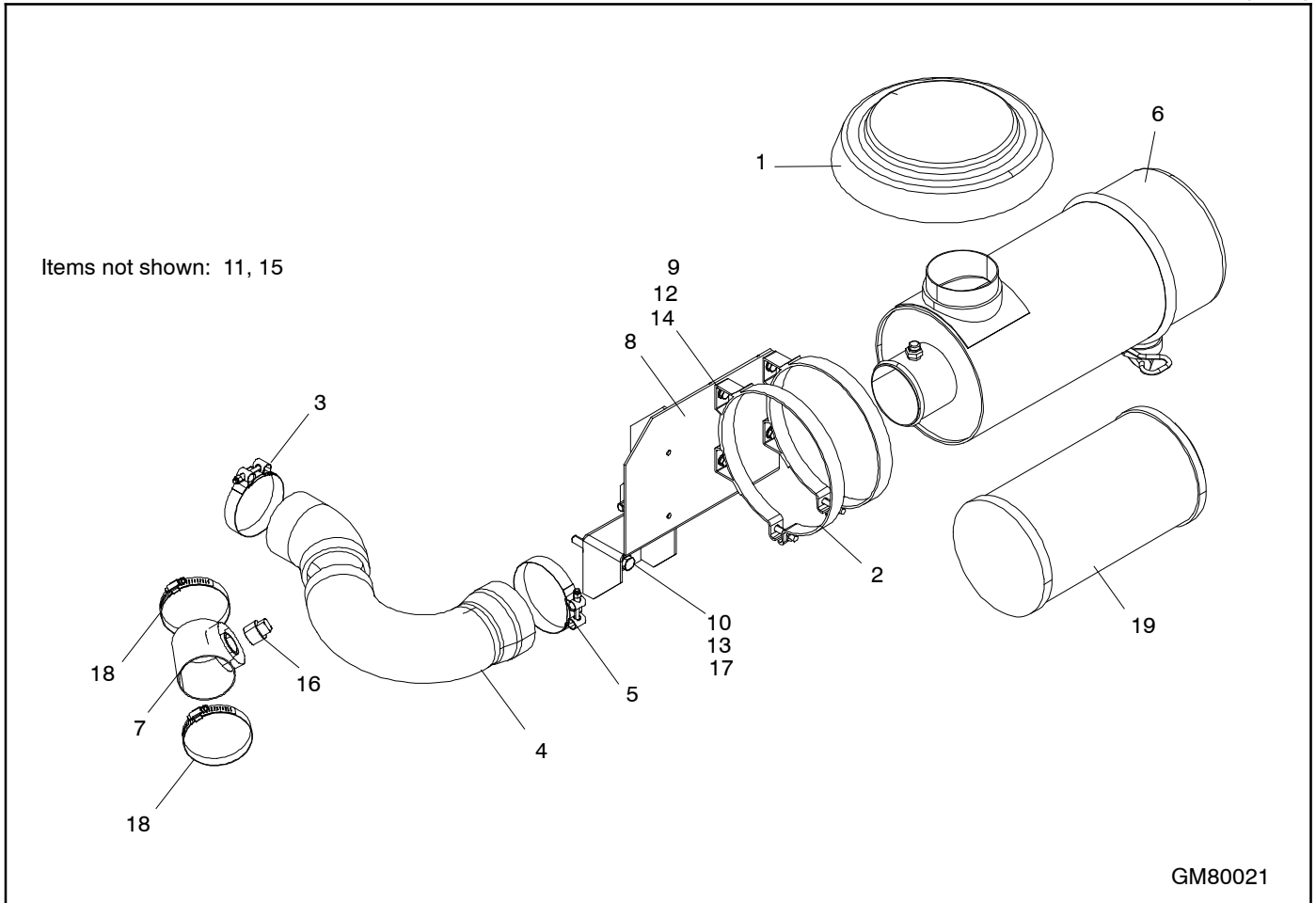
GM55375

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity Module		
			GM78007-MA1	GM55375-MA1	GM55375-MA2
1	253664	Cap	1	1	1
2	275527	Clamp, hose, 2.81/3.12 in.	1	1	1
3	291537	Clamp, hose, 3.75/4.06 in.	1		
3	336229	Clamp, hose, 3.88/4.19 in.		1	1
4	GM14312	Air cleaner assembly	1	1	1
5	GM14313	Mount, air cleaner (8.32" ID)	1	1	1
6	GM78005	Bracket, heavy duty air intake	1		
6	GM58024	Bracket, heavy duty air intake		1	1
7	GM58301	Hose, air intake	1	1	
7	GM58302	Hose, air intake			1
11	X-426-12	Clamp, hose, .69/1.25 in.	1		
11	X-426-10	Clamp, hose, .5/1 in.		1	1
12	X-6214-16	Cap	1	1	1
13	GM15398	Element, air cleaner	1	1	1

Group 101: Air Intake, continued

80/100 kW, Heavy Duty

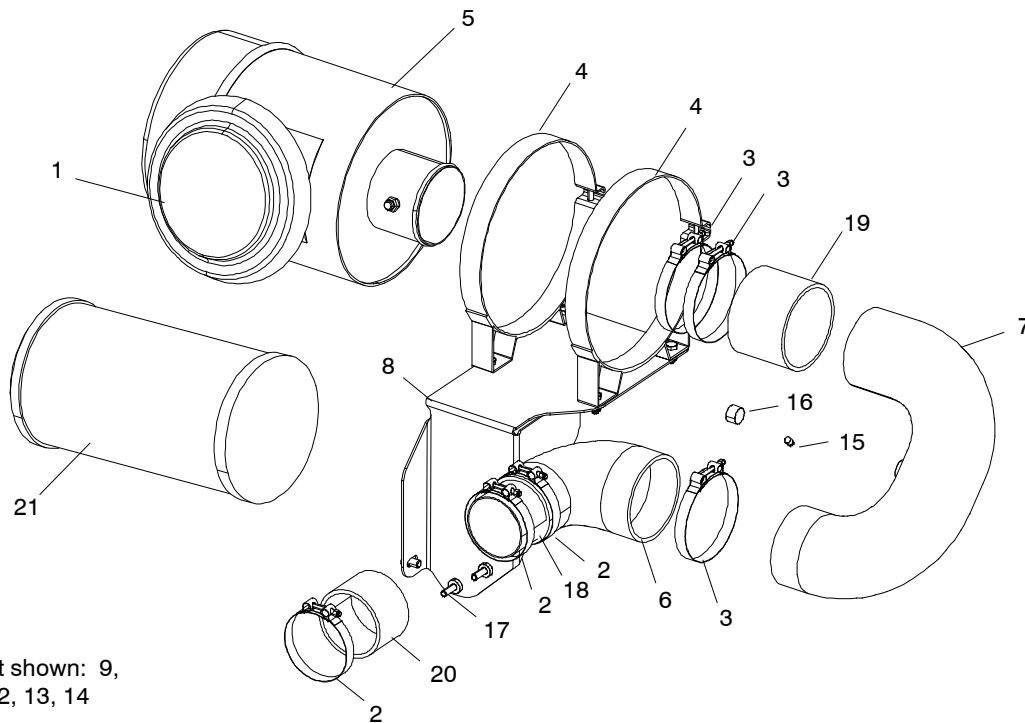


Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity
			Module
1	253664	Cap	1
2	279380	Mount, Air Cleaner/Exhaust (8.00" ID)	2
3	324342	Clamp, hose, 3.43/3.75 in.	1
4	336224	Hose, molded air intake (3.00" ID)	1
5	336229	Clamp, hose, 3.88/4.19 in.	1
6	A-274721	Air cleaner assembly	1
7	GM17092	Tube Assembly	1
8	GM80030	Bracket, HDAC Mounting	1
9	M125A-08-80	Washer, Plain 8.4 ID X 16.0 OD	4
10	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	2
11	M125A-12-80	Washer, Plain	1
12	M6923-08-80	Nut, Hex 8mm	4
13	M931-10040-60	Screw, Hex Cap	2
14	M933-08025-60	Screw, Hex Cap	4
15	M933-12020-60	Screw, Hex Cap	1
16	X-75-6	Plug, pipe (3/4" npt)	1
17	X-400-198	Spacer, .437 ID x .875 OD x .25 in.	2
18	X-426-5	Clamp, hose, 3.56/4.5 in.	2
19	274726	Element, Air Cleaner(Branded 1 per Case)	1

Group 101: Air Intake, continued

125/150 kW, Heavy Duty



Items not shown: 9,
10, 11, 12, 13, 14

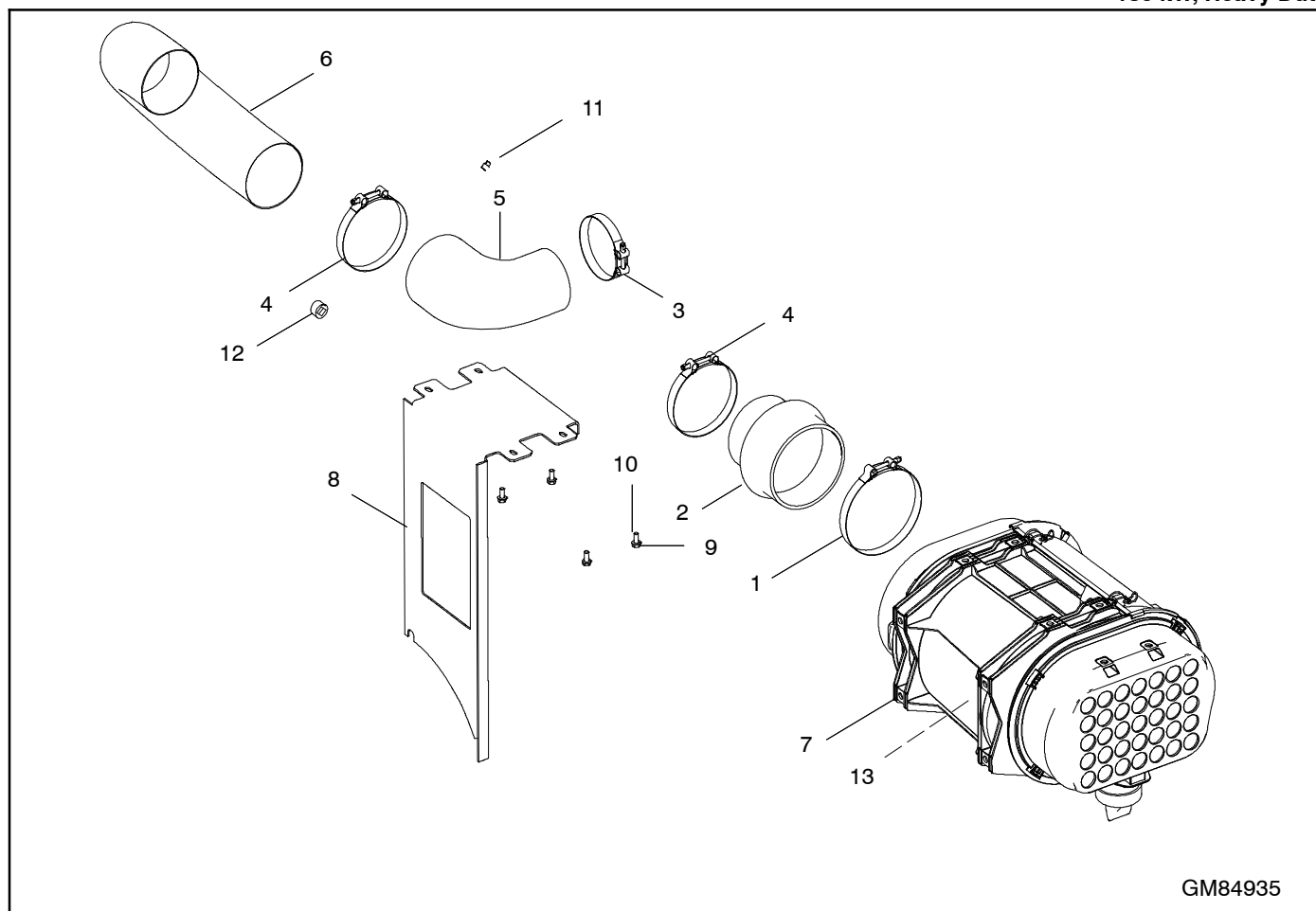
GM79246
GM79247

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity	
			Module	
			GM79246-MA1	GM79247-MA1
1	254006	Cap, rain	1	1
2	274545	Clamp, hose, 4.31/4.62 in.	3	1
3	291562	Clamp, hose, 5.25/5.56 in.	3	3
4	326911	Mount, Air Cleaner/Exhaust (12.10" ID)	2	2
5	A-324360	Air cleaner assembly	1	1
6	GM41126	Hose, 90 deg. Elbow	1	1
7	GM47064	Tube Steel	1	1
8	GM79234	Bracket, HDAC Mounting	1	1
9	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	6	6
10	M125A-12-80	Washer, Plain	1	1
11	M931-10040-60	Screw, Hex Cap	2	2
12	M933-10025-60	Screw, hex cap,fully thrd M10 x 25mm	4	4
13	M933-12020-60	Screw, Hex Cap	1	1
14	M982-10-80	Nut, hex elastic stop	4	4
15	X-75-4	Plug, pipe (1/8" nptf)	1	1
16	X-75-49	Plug, pipe (3/4" nptf) SQ.KEY head	1	1
17	X-400-198	Spacer, .437 ID x .875 OD x .25 in.		2
18	X-522-87	Tube, steel (4.00"od x 100mm)	1	
19	X-6014-141	Hose Radiator Wire Insert	1	1
20	X-6350-1	Hose, radiator, straight, 4 in. ID	1	
21	274729	Element, Air Cleaner(Branded 1 Per Case)	1	1

Group 101: Air Intake, continued

180 kW, Heavy Duty



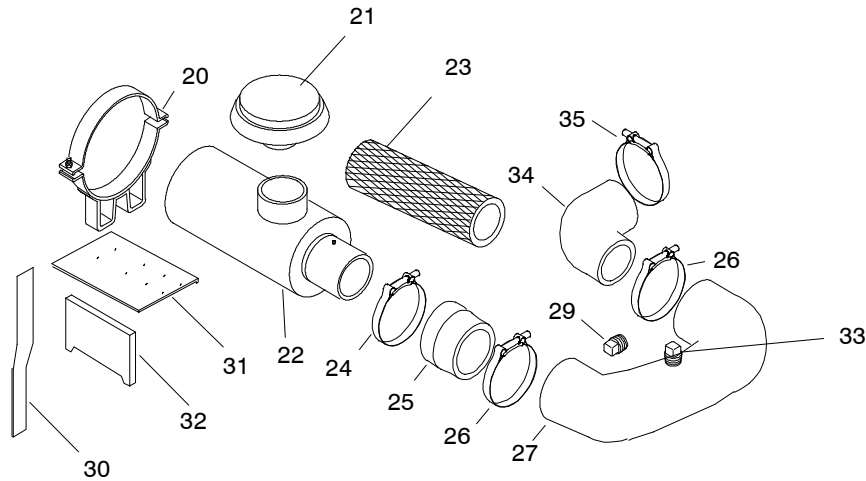
GM84935

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity
			Module
			GM84935-MA1
1	254013	Clamp, hose, 6.25/6.56 in.	1
2	272628	Hose, hump reducer (6.00 to 5.00" ID)	1
3	274545	Clamp, hose, 4.31/4.62 in.	1
4	291562	Clamp, hose, 5.25/5.56 in.	2
5	GM41126	Hose, 90 deg. Elbow	1
6	GM47064	Tube Steel	1
7	GM66745	Air Cleaner	1
8	GM84936	Bracket, Air Cleaner	1
9	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	4
10	M933-08020-60	Screw, hex cap	4
11	X-75-4	Plug, pipe (1/8" nptf)	1
12	X-75-49	Plug, pipe (3/4" nptf) SQ.KEY head	1
13	GM79489	Filter, Air Secondary	1
13	GM79488	Filter, Air Primary	1

Group 101: Air Intake, continued

180/200 kW, Heavy Duty



GM70806

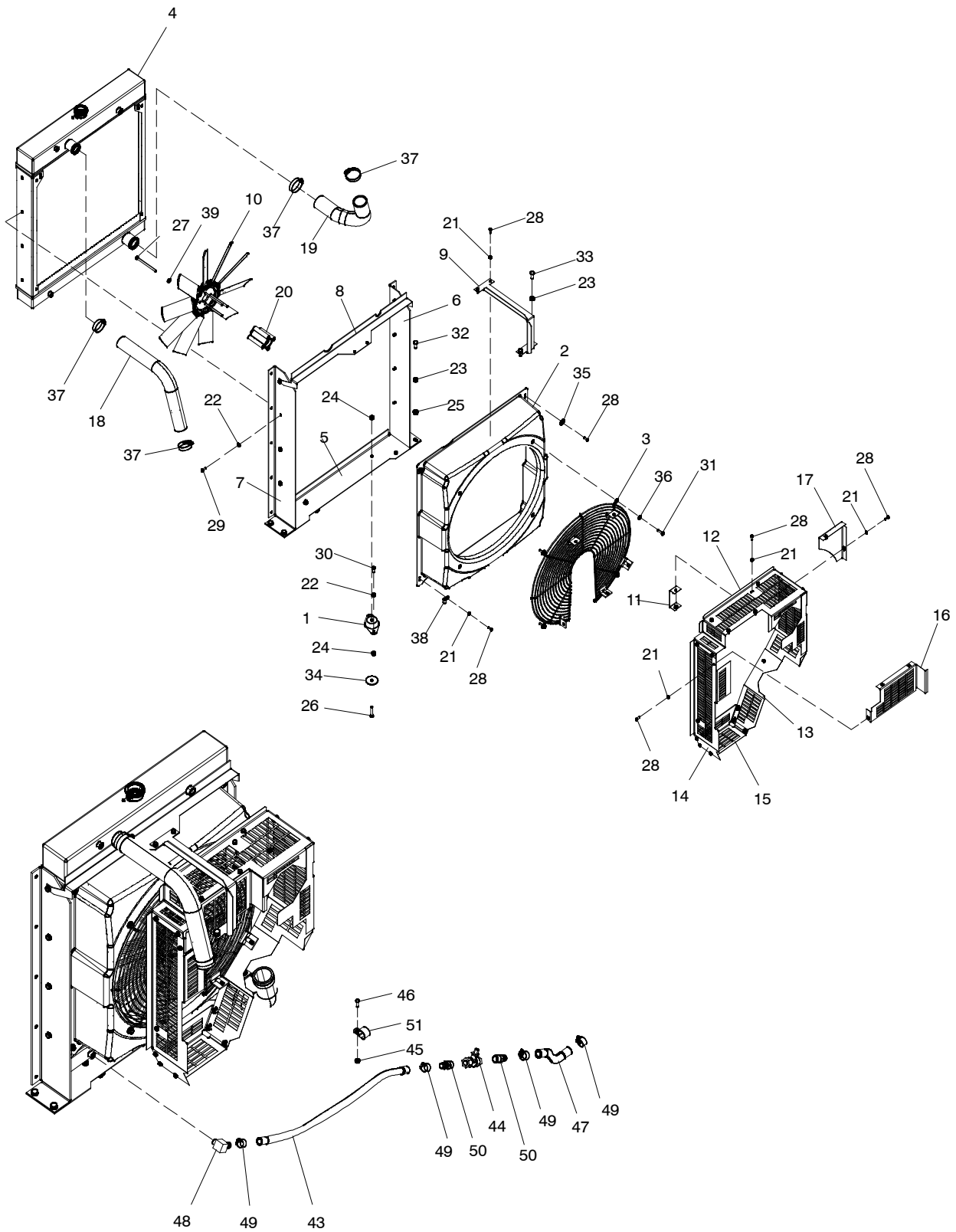
Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity	
			Module	
			GM70806-MA1	GM70806-MA2
20	290956	Mount, air cleaner/exhaust, 11.8 in. ID	2	2
21	254010	Cap, rain	1	1
22	GM46952	Air cleaner assembly	1	1
23	GM46953	Element, primary	1	1
23	GM47969	Element, safety	1	1
24	291562	Clamp, hose, 5.25/5.56 in.	1	1
25	GM46948	Hose, hump	1	1
26	291562	Clamp, hose, 5.25/5.56 in.	2	2
27	GM47064	Tube, steel	1	1
29	X-75-4	Plug, pipe, 1/8 in. NPTF	1	1
30	GM71064	Support, air cleaner	2	2
31	GM71063	Bracket, air cleaner	1	1
32	GM71065	Support, air cleaner	1	
32	GM80770	Support, air cleaner		1
33	X-75-49	Plug, pipe, 3/4 in. NPTF, square key head	1	1

Notes

Group 104: Cooling System

40/50 kW



GM90909_D

Group 104: Cooling System

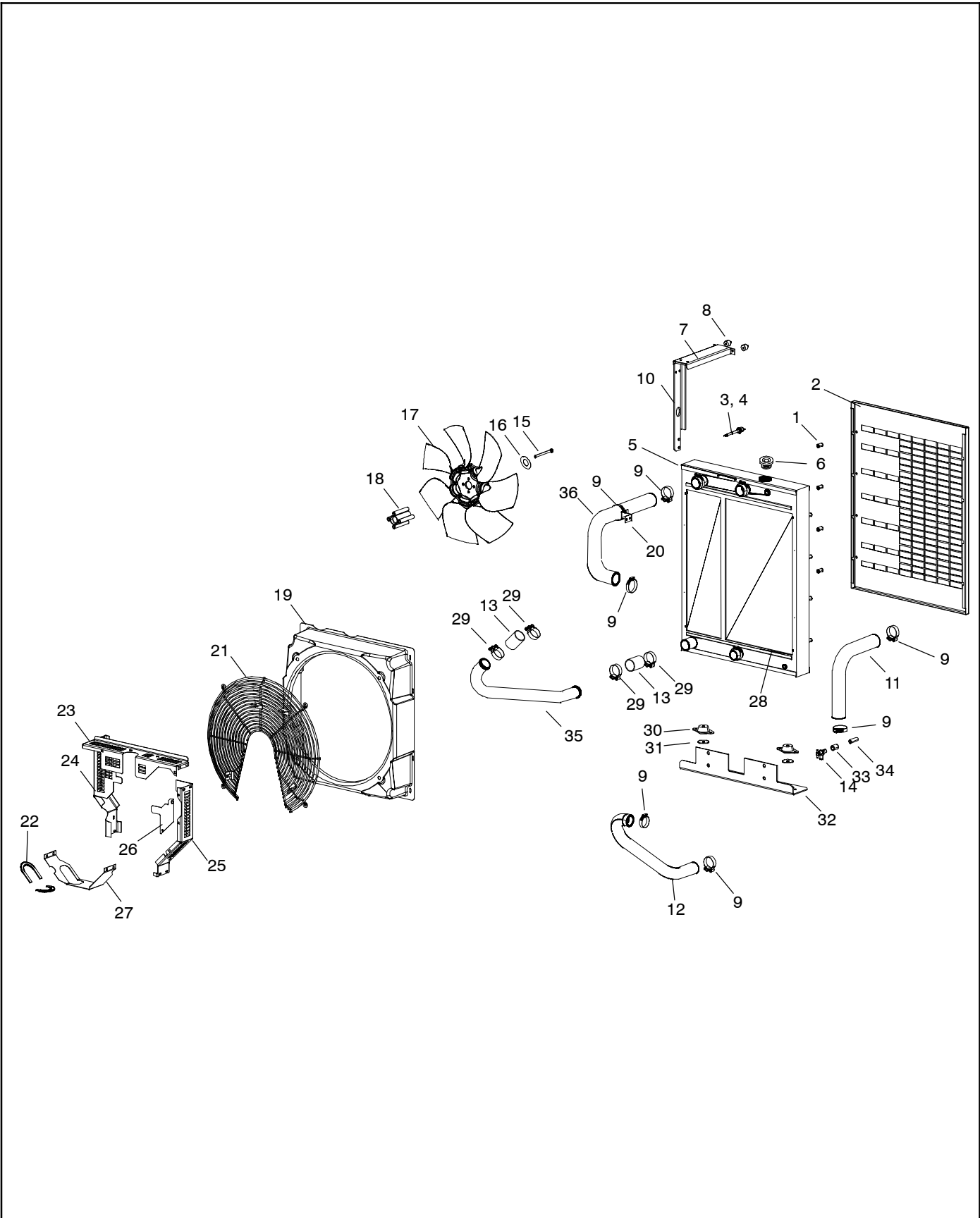
40/50 kW

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity	
			Module	
			GM90909-MA1	GM90909-MA2
1	258659	Vibromount	2	2
2	324076	Shroud, fan	1	1
3	GM20740	Guard, Wire Fan	1	1
4	GM52729	Radiator Assembly	1	1
5	GM90928	Support Radiator (Bottom)	1	1
6	GM90929	Support Radiator (RH)	1	1
7	GM90930	Support Radiator (LH)	1	1
8	GM90931	Support Radiator Top	1	1
9	GM90932	Bracket, Support Radiator (Top)	1	1
10	GM90962	Fan, Pusher	1	1
11	GM91024	Bracket, Belt Guard	2	2
12	GM91025	Guard, Belt Top	1	1
13	GM91026	Guard, Belt RH	1	1
14	GM91027	Guard, Belt LH	1	1
15	GM91028	Guard, Belt Bottom	1	1
16	GM91029	Guard, Belt, Back Cover	1	1
17	GM91030	Guard, Belt, Front Cover	1	1
18	GM91064	Hose, Radiator (Upper)	1	1
19	GM91065	Hose, Radiator (Lower)	1	1
20	GM91332	Spacer, Fan	1	1
21	M125A-06-80	Washer, Plain	24	24
22	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	12	12
23	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	6	6
24	M6923-08-80	Nut, Hex 8mm	6	6
25	M6923-10-80	Nut, Hex 10mm	4	4
26	M931-08050-60	Screw, Hex Cap	2	2
27	M931-08120-60	Screw, hex cap	4	4
28	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	27	27
29	M933-08016-60	Screw, hex cap	8	8
30	M933-08020-60	Screw, hex cap	4	4
31	M933-08025-60	Screw, hex cap	4	4
32	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm	4	4
33	M961-10025-60	Screw, Hex Cap	2	2
34	X-25-101	Washer, plain, .375 ID x 2 in. OD	2	2
35	X-25-73	Washer, pl .266 ID x 1" OD	3	3
36	X-25-85	Washer, plain, .344 ID x .687 in. OD	4	4
37	X-426-16	Clamp, hose, 1.81/2.75 in.	4	4
38	X-672-7	Clamp, insulated, .44 in.	1	1
39	X-801-4	Washer, hardened, .328 ID x .719 in. OD	4	4
43	X-312-5	Hose, .63 ID	1	
43	X-312-14	Hose, .63 ID		1
44	GM19670	Valve, Shutoff (1/2-14npt)	1	
45	M6923-06-80	Nut, Hex 6mm	1	
46	M933-06020-60	Screw, hex cap	1	
47	X-312-44	Hose, .63 ID	1	
48	X-391-2	Connector, 90 deg. (5/8" id hose)	1	
48	278788	Valve, drain		1
49	X-426-12	Clamp, hose, .69/1.25 in.	4	2
50	X-582-1	Connector, Hose 5/8" x 1/2" MIP Brass	2	
51	X-672-32	Clamp, insulated, 1.06 in.	1	

Group 104: Cooling System, continued

50/60 kW



Group 104: Cooling System, continued

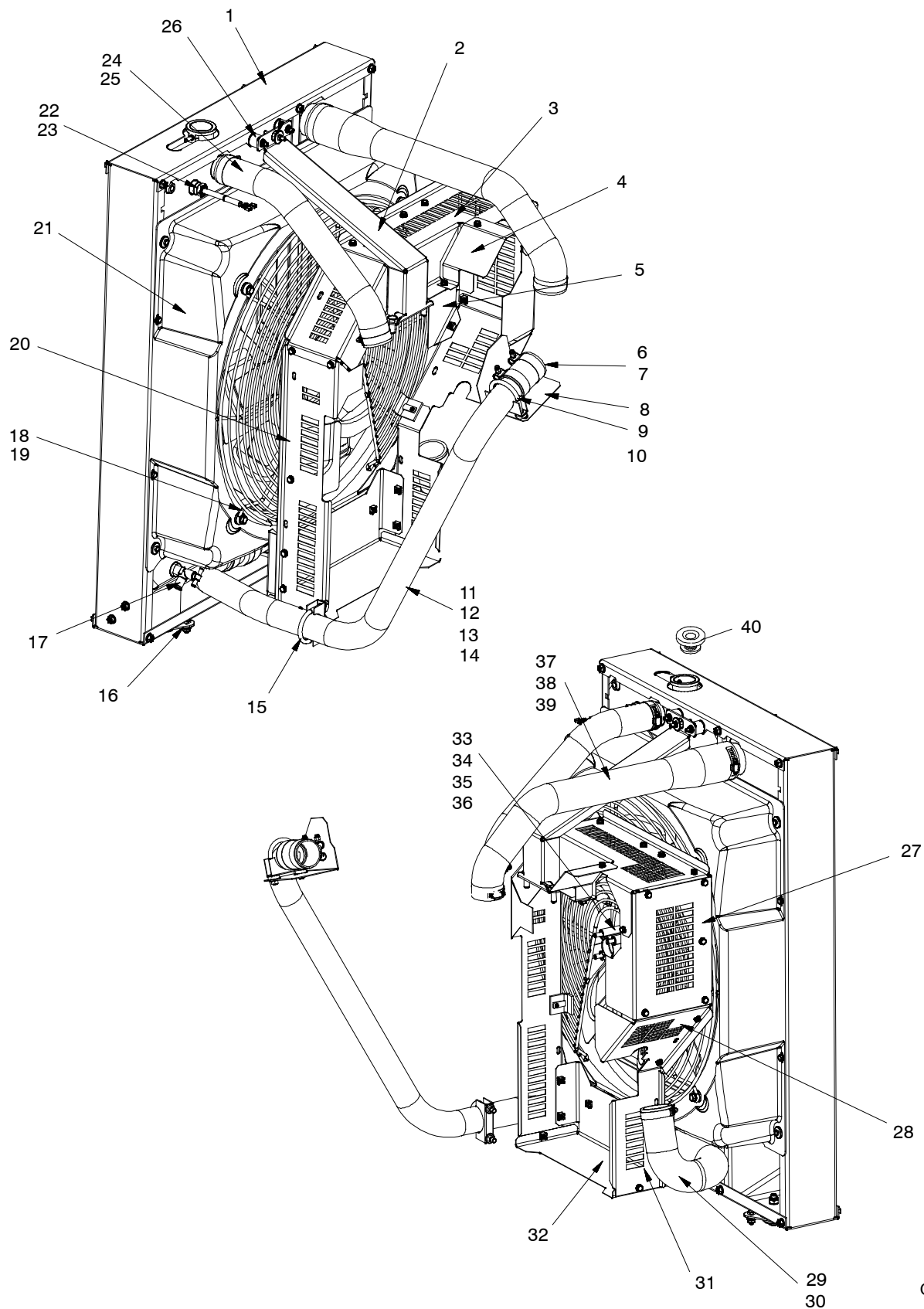
50/60 kW

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity
			Module
			GM73384-MA 1
1	265693	Spacer, 0.357 ID x 0.625 OD x 1.062 in.	8
2	GM62496	Guard, radiator	
3	-	Sensor, low fluid (See Control and Harness group)	1
4	-	Conduit, convoluted (See Control and Harness group)	1
5	GM57125	Radiator assembly	1
6	GM54994	Cap, radiator	1
7	GM58082	Support, radiator upper	1
8	GM38784-2	Vibromount	2
8	245297	Strap, ground (5 in.) (not shown)	2
9	X-426-16	Clamp, hose, 1.81/2.75 in.	7
10	GM58083	Bracket, radiator mounting	1
11	GM55369	Hose, radiator, upper	1
12	GM57148	Hose, lower radiator	1
13	X-6380-3	Hose, Nomex	2
14	278788	Valve, drain, 3/8 in. NPTF	1
15	M931-08130-60	Screw, hex cap	4
16	X-801-4	Washer, hardened, 0.328 ID x 0.719 in. OD	4
17	GM73385	Fan, pusher	1
18	GM71576	Spacer, fan	1
19	GM29772	Shroud, fan	1
20	GM52020	Bracket, support	1
21	GM58643	Guard, wire fan	1
22	X-6003-107	Channel, U	1
23	GM57143	Guard, belt top	1
24	GM57144	Guard, belt, left side	1
25	GM57145	Guard, belt, right side	1
26	GM57147	Guard, belt, rear	1
27	GM57146	Guard, belt bottom	1
28	X-6423-8	Seal, push-on trim	2
29	276319	Clamp, hose	4
30	258659	Vibromount	2
31	X-25-101	Washer, plain, 0.375 ID x 2 in. OD	2
32	GM58013	Bracket, radiator mounting	1
33	X-216-23	Coupling, pipe, 3/8 in.	1
34	X-204-6	Pipe, nipple, 3/8 in. NPT x 2 in.	1
35	GM57564	Tube, CAC (turbo)	1
36	GM58031	Hose, intake	1

Group 104: Cooling System, continued

80/100 kW



GM66071

Group 104: Cooling System, continued

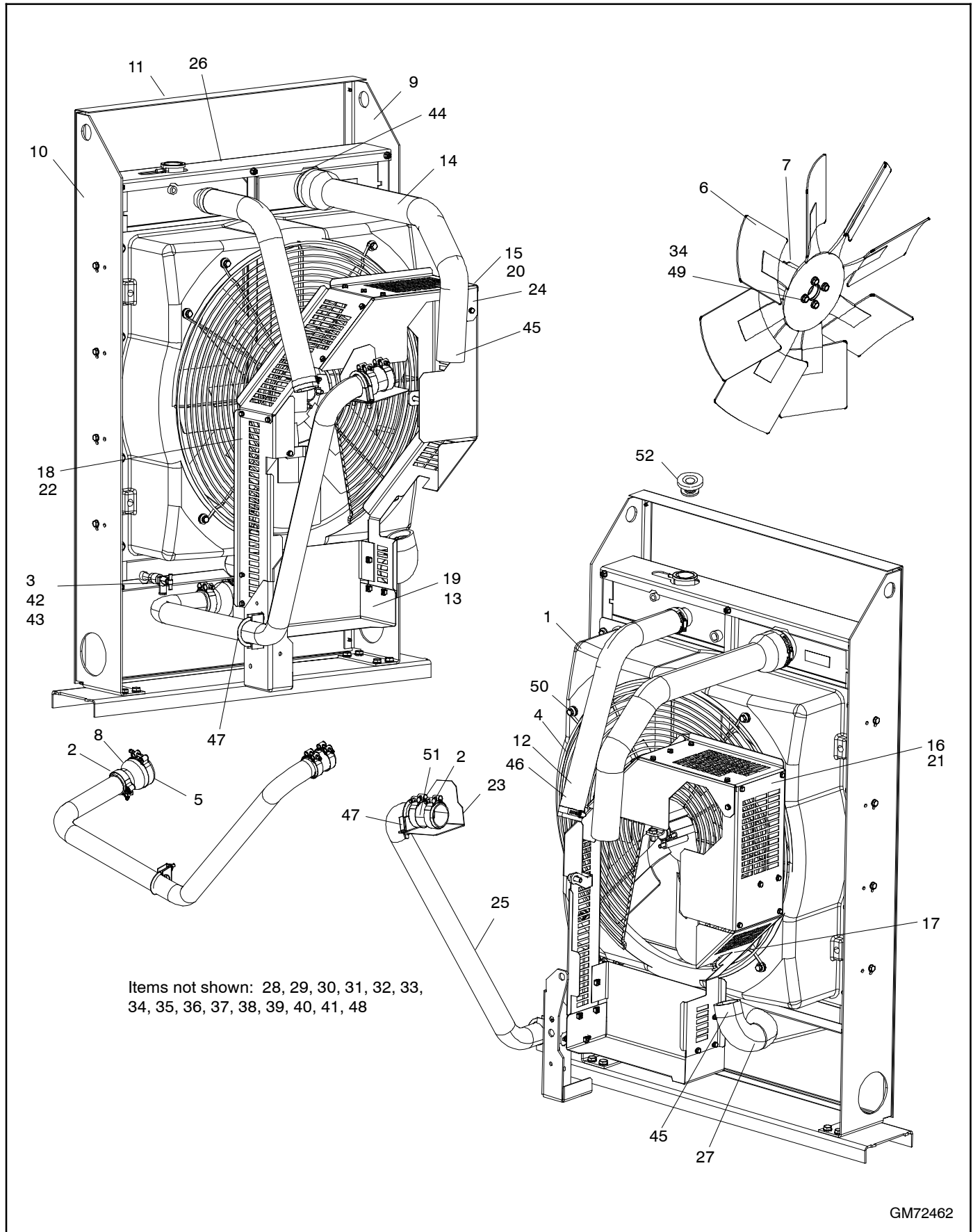
80/100 kW

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity
			Module Number GM66071-MA1
1	GM66193	Radiator Assembly	1
2	GM66316	Bracket, Radiator, Support	1
3	GM32512	Guard, Belt Top	1
4	GM32513	Guard, Batt Chg Alternator	1
5	GM24199	Guard, Belt Top	1
6	X-6380-3	Hose, Nomex	1
7	276319	Clamp, hose, 2.13/2.44 in.	2
8	GM50932	Shield, Heat	1
9	X-722-5	Clamp, muffler, 2.12 in.	1
10	X-400-198	Spacer, .437 ID x .875 OD x .25 in.	2
11	GM66344	Tube, Turbo (CAC)	1
12	GM30983	Hose, Step	1
13	336228	Clamp, hose, 2.63/2.94 in.	1
14	276319	Clamp, hose, 2.13/2.44 in.	1
15	X-722-5	Clamp, muffler, 2.12 in.	1
16	258659	Vibromount	2
17	278788	Valve, drain (3/8"nptf)	1
18	GM30963	Guard, Wire Fan	1
19	X-6365-2	Insert, threaded	4
20	GM32511	Guard, Belt LS	1
21	GM29772	Shroud, Fan	1
22	-	Sensor, Low Fluid Assy.(See Control and Harness group)	1
23	-	Conduit, convoluted (See Control and Harness group)	1
24	GM66941	Hose, Upper Radiator	1
25	X-426-19	Clamp, hose, 1.00/2.00 in.	2
26	GM38784-2	Vibromount, Controller	2
27	GM20825	Guard, Belt (R.S.) (Upper)	1
28	GM32509	Guard, Belt RS (Middle)	1
29	GM30980	Hose, Radiator Lower	1
30	X-426-16	Clamp, hose, 1.81/2.75 in.	2
31	GM32510	Guard, Belt RS (Lower)	1
32	GM32514	Guard, Belt Bottom	1
33	GM33912	Fan, Pusher	1
34	GM20545	Spacer, Fan	1
35	X-801-4	Washer, hardened, .328 ID x .719 in. OD	4
36	M931-08100-60	Screw, hex cap	4
37	GM30981	Hose, Intake	1
38	X-426-2	Clamp, hose, 2.31/3.25 in.	1
39	X-426-16	Clamp, hose, 1.81/2.75 in.	1
40	GM54994	Cap, radiator	1

Group 104: Cooling System, continued

125 kW



Group 104: Cooling System, continued

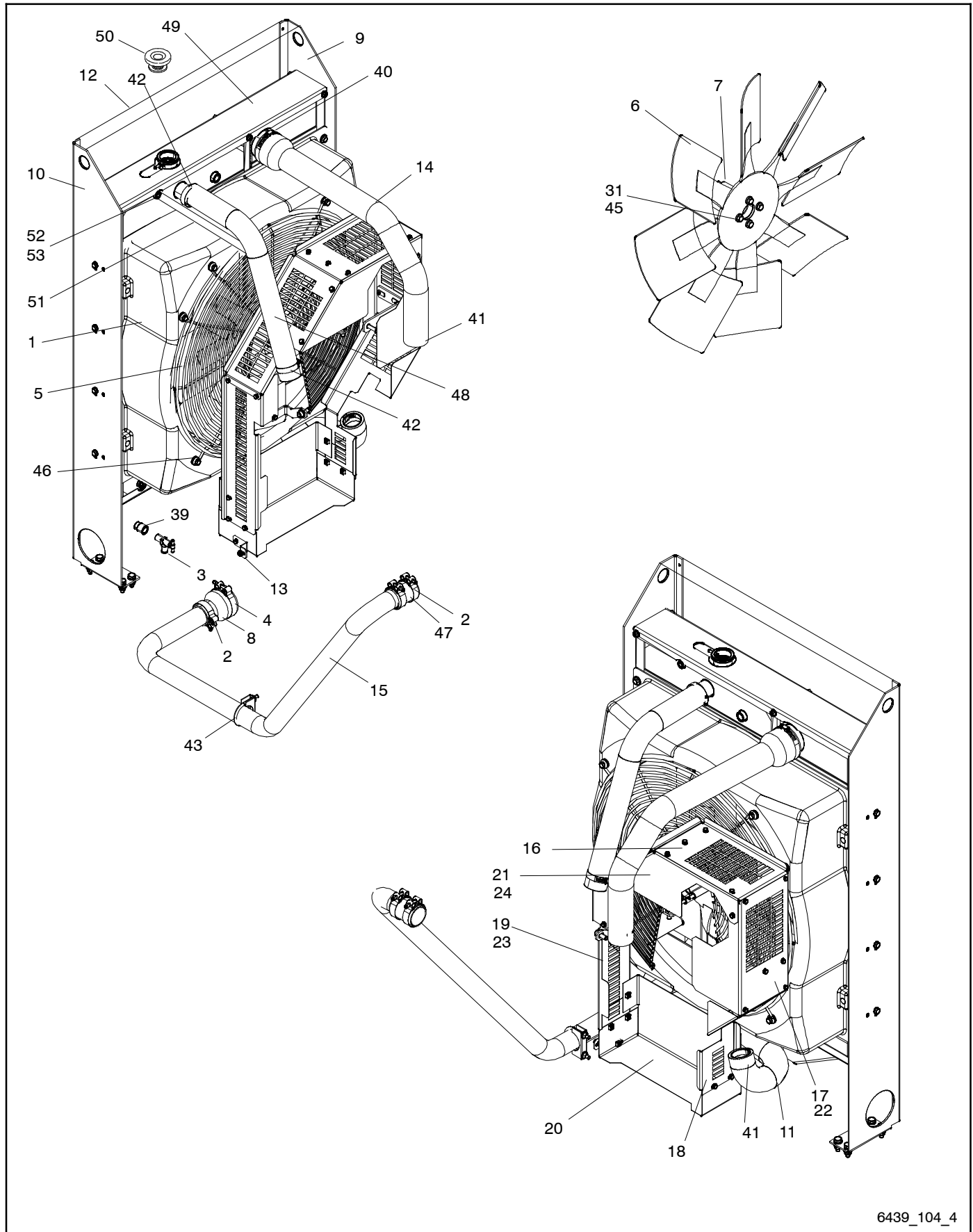
125 kW

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity
			Module Number GM72462-MA1
1	222953	Shroud, Fan	1
2	276319	Clamp, hose, 2.13/2.44 in.	3
3	278788	Valve, drain (3/8"nptf)	1
4	336888	Guard, Wire Fan	1
5	343175	Clamp, hose, 3.06/3.38 in.	1
6	GM19383	Fan, Pusher	1
7	GM20545	Spacer, Fan	1
8	GM24857	Hose, reducer (3.00" to 2.00" id) Hi-Temp	1
9	GM29989	Support, Radiator (RH)	1
10	GM29990	Support, Radiator (LH)	1
11	GM32060	Guard, Radiator	1
12	GM32629	Hose, Upper Radiator	1
13	GM39484	Bracket, Support	1
14	GM48079	Hose, Intake	1
15	GM48853	Guard, Belt Top	1
16	GM48854	Guard, Belt RS (Upper)	1
17	GM48855	Guard, Belt RS (Lower)	1
18	GM48856	Guard, Belt LS	1
19	GM48857	Guard, Belt Bottom	1
20	GM48858	Bracket, Support	1
21	GM48859	Bracket, Support	1
22	GM48860	Bracket, Support	1
23	GM50932	Shield, Heat	1
24	GM52010	Guard, Belt Back	1
25	GM72603	Tube Turbo (CAC)	1
26	GM75705	Radiator/CAC Assembly	1
27	GM77106	Hose, Lower Radiator	1
28	M125A-06-80	Washer, Plain	24
29	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	14
30	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	9
31	M6923-06-80	Nut, Hex 6mm	1
32	M6923-10-80	Nut, Hex 10mm	8
33	M912-10025-92	Screw, Socket Head Cap	1
34	M931-08100-60	Screw, Hex Cap	4
35	M933-06014-60	Screw, Hex Cap	24
36	M933-08012-60	Screw, Hex Cap	8
37	M933-08016-60	Screw, Hex Cap	14
38	M933-10020-60	Screw, Hex Cap	1
39	M933-10030-60	Screw, Hex Cap	8
40	M933-10035-60	Screw, Hex Cap	2
41	X-25-75	Washer, plain, .344 ID x .875 in. OD	8
42	X-220-6	Pipe (1/4" NPT x 1.5 in.)	1
43	X-250-2	Coupling, reducer (3/8" x 1/4"npt)	1
44	X-426-1	Clamp, hose, 2.81/3.75 in.	1
45	X-426-16	Clamp, hose, 1.81/2.75 in.	3
46	X-426-6	Clamp, hose, 1.56/2.5 in.	2
47	X-722-5	Clamp, muffler, 2.12 in.	2
48	X-794-1	Screw, hex wshr hd, drill 1/4-14 x 5/8	10
49	X-801-4	Washer, hardened, .328 ID x .719 in. OD	4
50	X-6365-2	Insert, threaded	6
51	X-6380-3	Hose, Nomex	1
52	GM54994	Cap, radiator	1

Group 104: Cooling System, continued

150 kW



6439_104_4

Group 104: Cooling System, continued

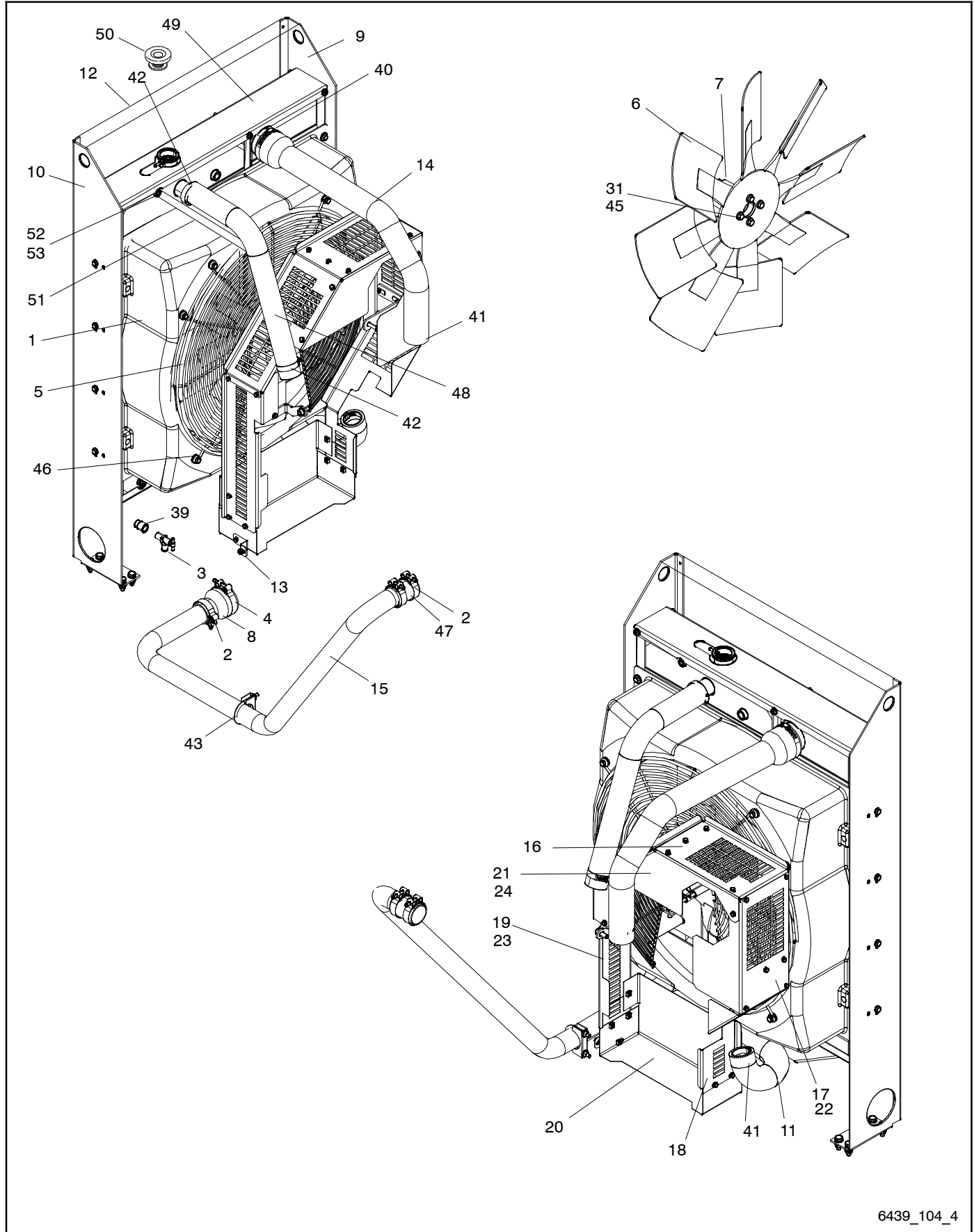
150 kW

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity
			Module Number GM70384-MA1
1	222953	Shroud, Fan	1
2	276319	Clamp, hose, 2.13/2.44 in.	3
3	278788	Valve, drain (3/8"nptf)	1
4	291542	Clamp, hose, 3.25/3.56 in.	1
5	336888	Guard, Wire Fan	1
6	GM19383	Fan, Pusher	1
7	GM20545	Spacer, Fan	1
8	GM24857	Hose, reducer (3.00" to 2.00" ID) Hi-Temp	1
9	GM29989	Support, Radiator (RH)	1
10	GM29990	Support, Radiator (LH)	1
11	GM32044	Hose, Radiator (Lower)	1
12	GM32060	Guard, Radiator	1
13	GM39484	Bracket, Support	1
14	GM48079	Hose, Intake	1
15	GM48736	Tube, Turbo	1
16	GM48853	Guard, Belt Top	1
17	GM48854	Guard, Belt RS (Upper)	1
18	GM48855	Guard, Belt RS (Lower)	1
19	GM48856	Guard, Belt LS	1
20	GM48857	Guard, Belt Bottom	1
21	GM48858	Bracket, Support	1
22	GM48859	Bracket, Support	1
23	GM48860	Bracket, Support	1
24	GM52010	Guard, Belt Back	1
31	M931-08100-60	Screw, hex cap	4
39	X-250-2	Coupling, reducer (3/8" x 1/4"npt)	1
40	X-426-1	Clamp, hose, 2.81/3.75 in.	1
41	X-426-16	Clamp, hose, 1.81/2.75 in.	3
42	X-426-6	Clamp, hose, 1.56/2.5 in.	2
43	X-722-5	Clamp, muffler, 2.12 in.	1
45	X-801-4	Washer, hardened, .328 ID x .719 in. OD	4
46	X-6365-2	Insert, threaded	6
47	X-6380-3	Hose, Nomex	1
48	GM32629	Hose, Upper Radiator	1
49	GM52732	Radiator/CAC Assembly	1
50	GM54994	Cap, radiator	1

Group 104: Cooling System, continued

180/200 kW



6439_104_4

Group 104: Cooling System, continued

180/200 kW

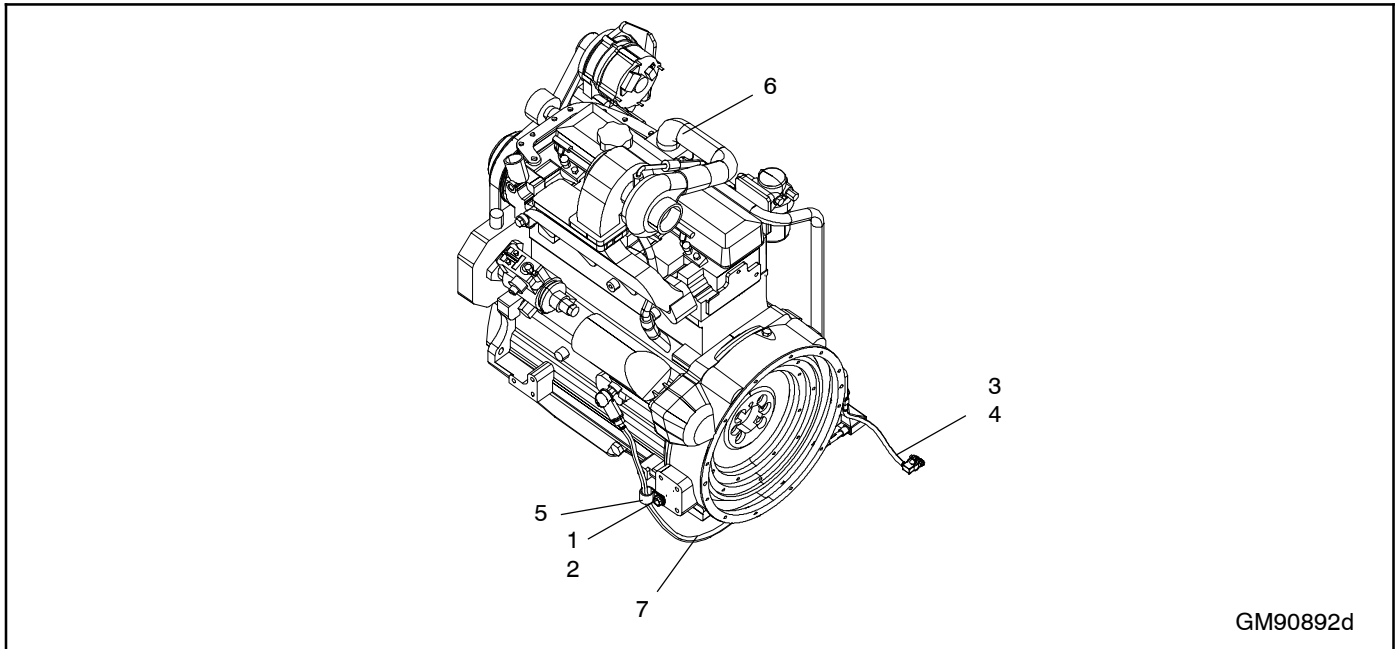
Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity	
			Module Number	
			GM70803-MA1	GM84752-MA1
1	343054	Shroud, Fan	1	1
1	343422	Bracket, fan shroud	2	2
2	276319	Clamp, hose, 2.13/2.44 in.	3	3
3	278788	Valve, drain (3/8"nptf)	1	1
4	343175	Clamp, hose, 3.06/3.38 in.	1	1
4	X-426-16	Clamp, hose, 1.81/2.75 in.	2	
5	343062	Guard, wire fan	1	1
6	GM39049	Fan, Pusher	1	1
7	GM39311	Spacer, Fan	1	1
8	GM24857	Hose, reducer (3.00" to 2.00" ID) Hi-Temp	1	1
9	GM70914	Support, Radiator RH	1	1
10	GM70915	Support, Radiator LH	1	1
11	GM39261	Hose, Radiator (Lower)	1	
11	GM84755	Hose, Radiator (Lower)		1
13	GM39484	Bracket, Support	1	2
14	GM39263	Hose, Intake	1	
14	GM84757	Hose, Radiator (Upper)		1
15	GM46943	Tube, Charge Cooler	1	
15	GM84758	Tube, Turbo		1
16	GM46968	Guard, Belt Top	1	
16	GM84762	Guard, Belt Top		1
17	GM46965	Guard, Belt RS (Upper)	1	
17	GM84759	Guard, Belt RS (Upper)		1
18	GM46966	Guard, Belt RS (Lower)	1	
18	GM84760	Guard, Belt RS (Lower)		1
19	GM46967	Guard, Belt LS	1	
19	GM84761	Guard, Belt LS		1
20	GM51050	Guard, Belt Bottom	1	
20	GM84932	Guard, Belt Bottom		1
22	GM46971	Bracket, Support	1	1
23	GM46970	Bracket, Support	1	
24	GM46969	Bracket, Support	1	
31	M931-08130-60	Screw, hex cap	4	4
40	X-426-1	Clamp, hose, 2.81/3.75 in.		2
41	X-426-16	Clamp, hose, 1.81/2.75 in.		3
41	X-426-1	Clamp, hose, 2.81/3.75 in.	4	
42	X-426-6	Clamp, hose, 1.56/2.5 in.		1
43	X-722-5	Clamp, muffler, 2.12 in.	1	1
45	X-801-4	Washer, hardened, .328 ID x .719 in. OD	4	4
46	X-6365-2	Insert, threaded	6	6
47	X-6380-3	Hose, Nomex	1	1
48	GM46827	Hose, Upper Radiator	1	
48	GM84756	Hose, Intake		1
49	GM52734	Radiator/CAC Assembly	1	
49	GM84763	Radiator/CAC Assembly		1
50	GM54994	Cap, radiator	1	
51	X-386-90	Line, Flex Fuel	1	
52	X-380-4	Connector, hose + Vibra Seal	1	
53	X-426-10	Clamp, hose, .5/1 in.	2	

Notes

Group 105: Engine

40/50 kW



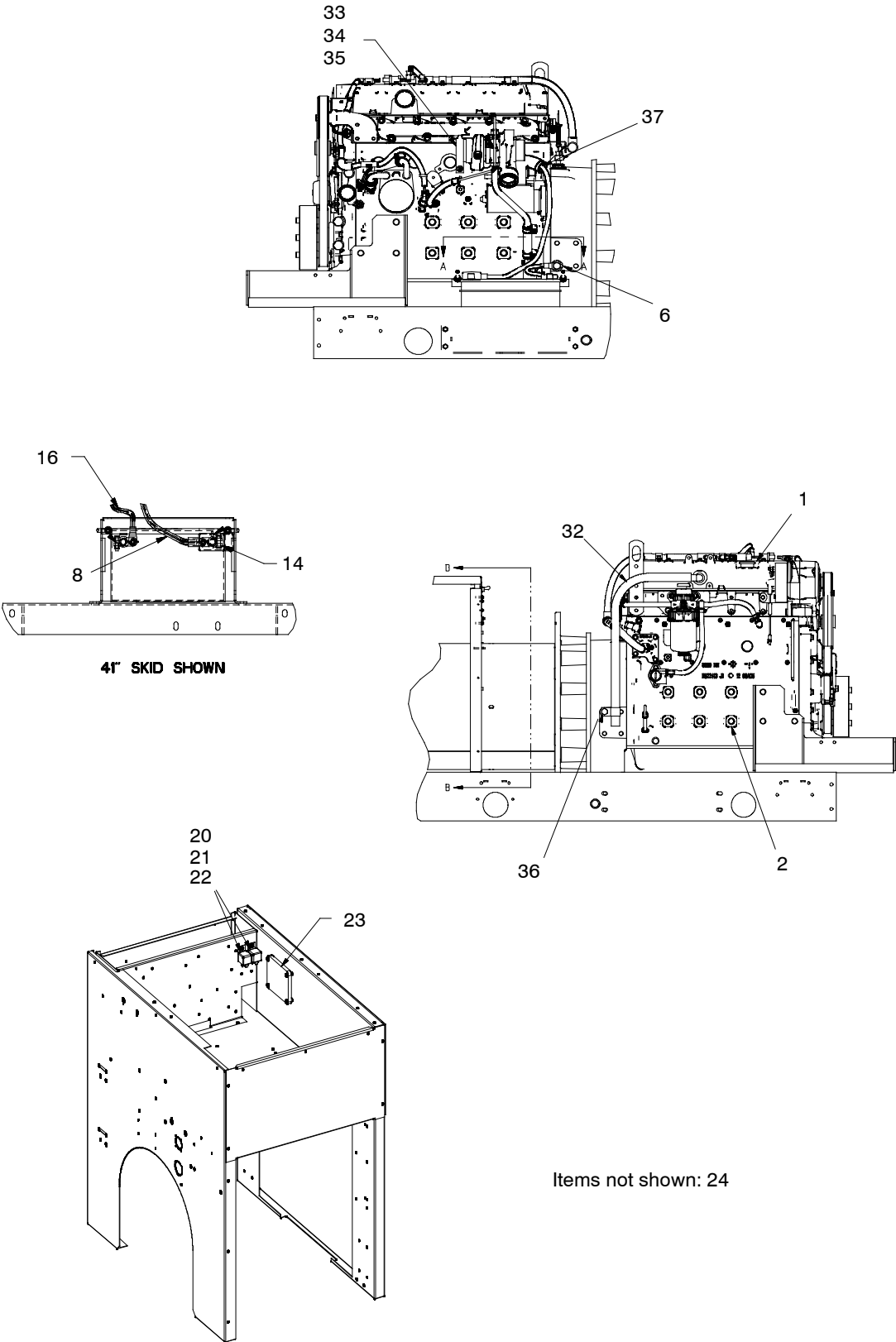
GM90892d

Item	Part Number	Description	Quantity
			Variation No.
1	M125A-12-80	Washer, Plain	1
2	M933-12020-60	Screw, Hex Cap	2
3	X-22-26	Washer,lock.521 IDx1.24 in.OD	1
4	X-545-97	Cable, battery (No.2 x 20") black-	1
5	X-672-37	Clamp	1
6	GM90762-1	Engine, JD 4045TF280, 12V 50kW	1
7	X-545-221	Cable, Battery	1

Internal and some external engine parts are shown in a separate engine parts catalog.
See Group 701: Literature for part numbers of engine parts catalogs.

Group 105: Engine, continued

50/60 kW



Items not shown: 24

DEC 550
UL J-BOX
RELAY MOUNTING LOCATION

GM73382

Group 105: Engine, continued

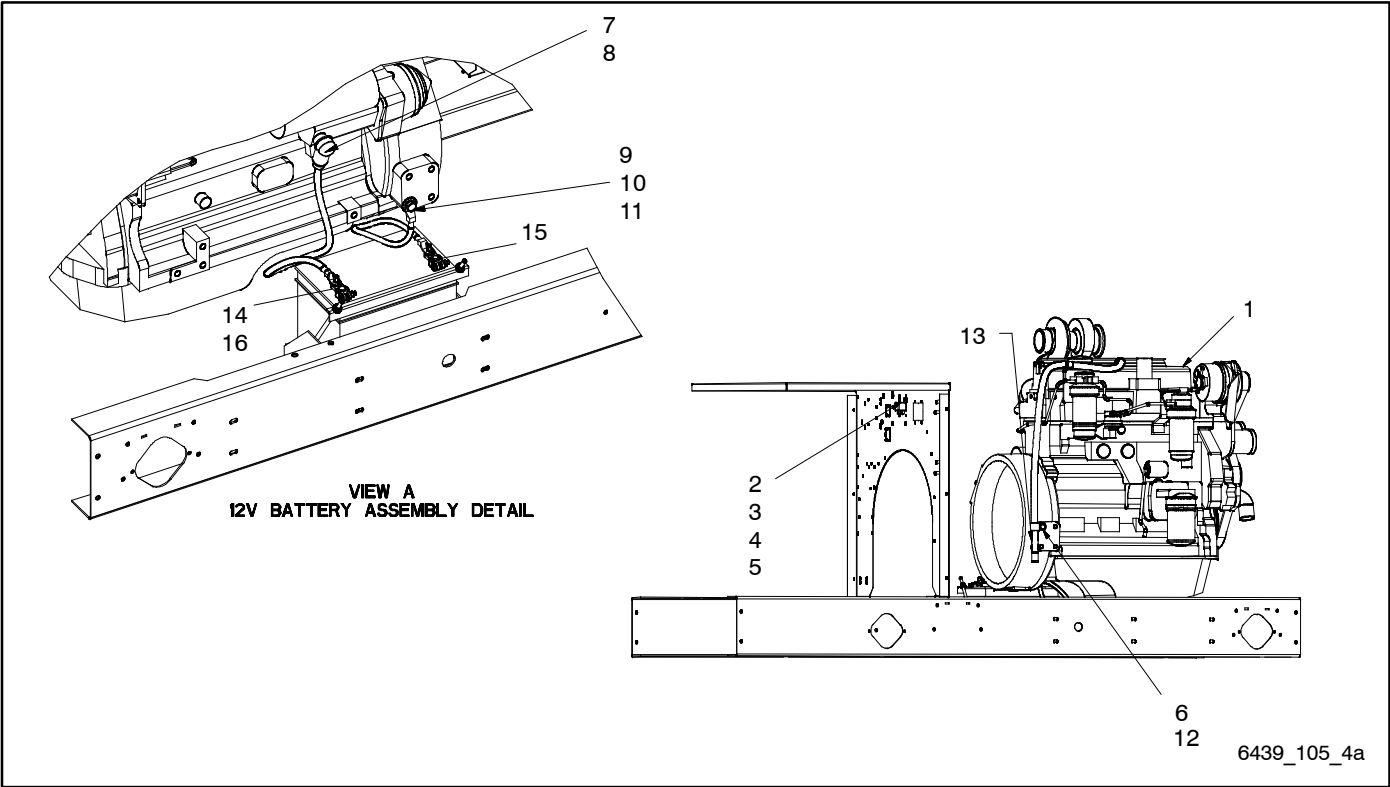
50/60 kW

Internal and some external engine parts are shown in a separate engine parts catalog.
See Group 701: Literature for part numbers of engine parts catalogs.

Item	Part Number	Description	Quantity		
			Variation Number		
			54	56	57
1	GM80018	Engine Assy, JD 4024HF285, 12V	1		
1	GM73389-2	Engine Assy, JD 5030HF285, 12V		1	
1	GM73389-7	Engine Assy, JD 5030HF285, 12V			1
2	GM58861	Bracket, ECU mounting	1	1	1
6	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD	1	1	1
8	X-545-221	Cable, battery	1	1	1
16	X-545-97	Cable, battery, no. 2 x 20 in., black -	1	1	1
20	GM49746	Relay, 12 VDC	2	2	2
21	M7985A-05012-20	Screw, pan head machine	6	6	6
22	M934-05-50	Washer, plain	6	6	6
23	—	Governor controller			
		See engine parts catalog for controller part number	1	1	1
24	361567	Base, tie wrap (not shown)	3	3	3
32	X-373-16	Hose, 3/4 in. ID	1	1	1
33	336851	Screw, hex head machine, special thread	1	1	1
34	GM22535	Clamp, exhaust (3.34 in.)	1	1	1
35	X-6210-7	Nut, flange spiralock, 5/16-18	1	1	1
36	X-672-37	Clamp	1	1	1
37	GM17809	Shield, heat (32mm ID x 152mm length)	1	1	1

Group 105: Engine, continued

80/100 kW



Group 105: Engine, continued

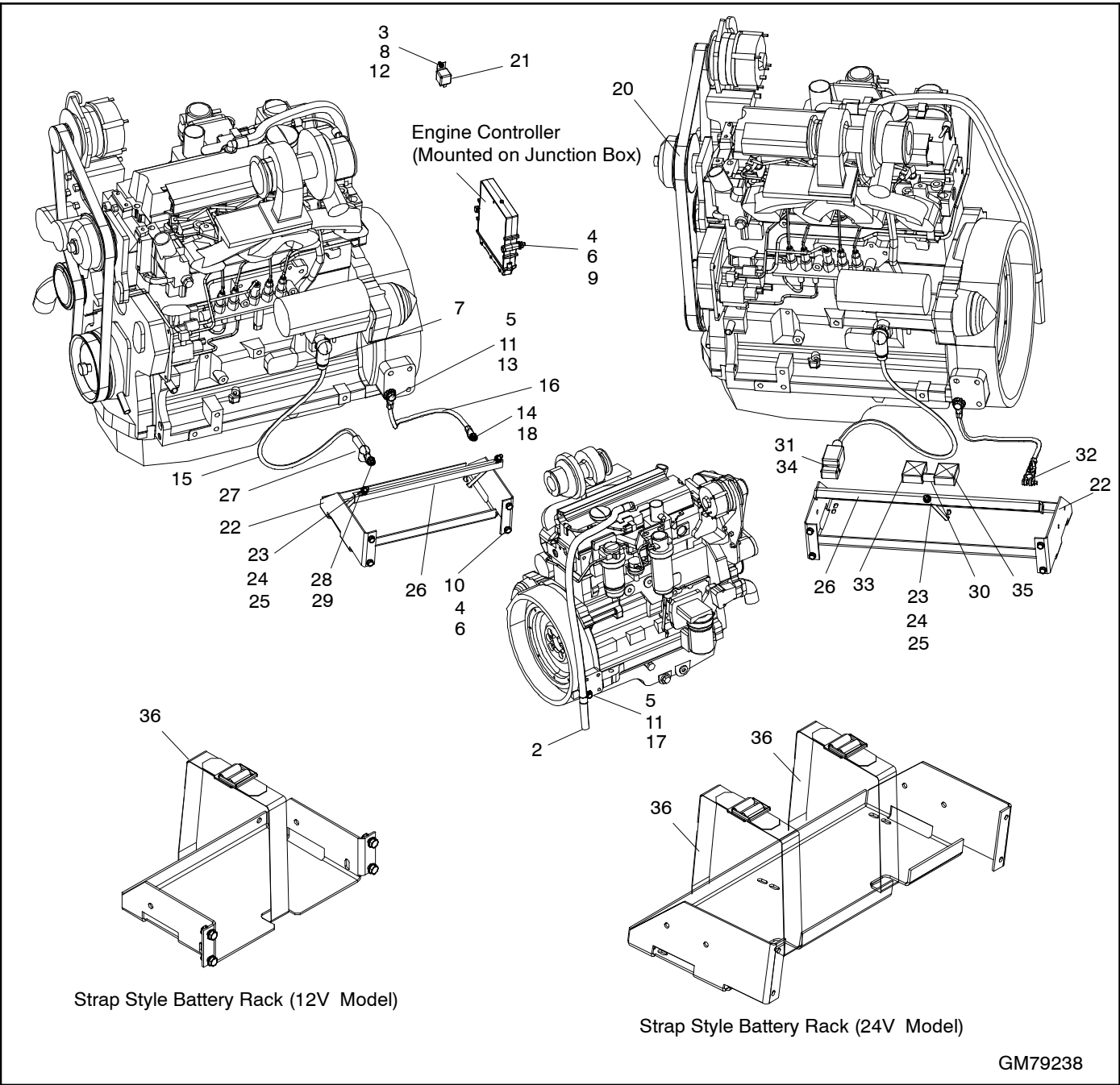
80/100 kW

Internal and some external engine parts are shown in a separate engine parts catalog.
See Group 701: Literature for part numbers of engine parts catalogs.

Item	Part Number	Description	Quantity	
			Variation	Number
			12	13
1	GM66704-1	Engine Assy, 80/100 kW JD 4045HF285, 12V	1	
1	GM66704-2	Engine Assy, 80/100 kW JD 4045HF285, 24V		1
2	GM49746	Relay, 12 VDC	1	
2	GM49747	Relay, 24 VDC		1
3	M7985A-05012-20	Screw, pan head mach.	1	1
4	M125A-05-80	Washer, Plain	1	1
5	M934-05-50	Nut, Hex 5mm	1	1
6	M933-12020-60	Screw, hex cap	1	1
7	X-545-129	Cable, battery (No.0 x 30") red+	1	1
8	M6923-10-80	Nut, Hex 10mm	1	1
9	X-545-165	Cable, battery	1	
9	X-545-112	Cable, battery		1
10	M933-12020-60	Screw, hex cap	1	1
11	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	1	1
12	X-672-37	Clamp	1	1
13	X-373-16	Hose, 3/4 In. I.D.	1	1
14	345039	Terminal, battery	1	1
15	345056	Terminal, battery	1	1
16	GM20745	Boot, Battery Lug (not shown)	1	1

Group 105: Engine, continued

125 kW



Group 105: Engine, continued

125 kW

Internal and some external engine parts are shown in a separate engine parts catalog.
See Group 701: Literature for part numbers of engine parts catalogs.

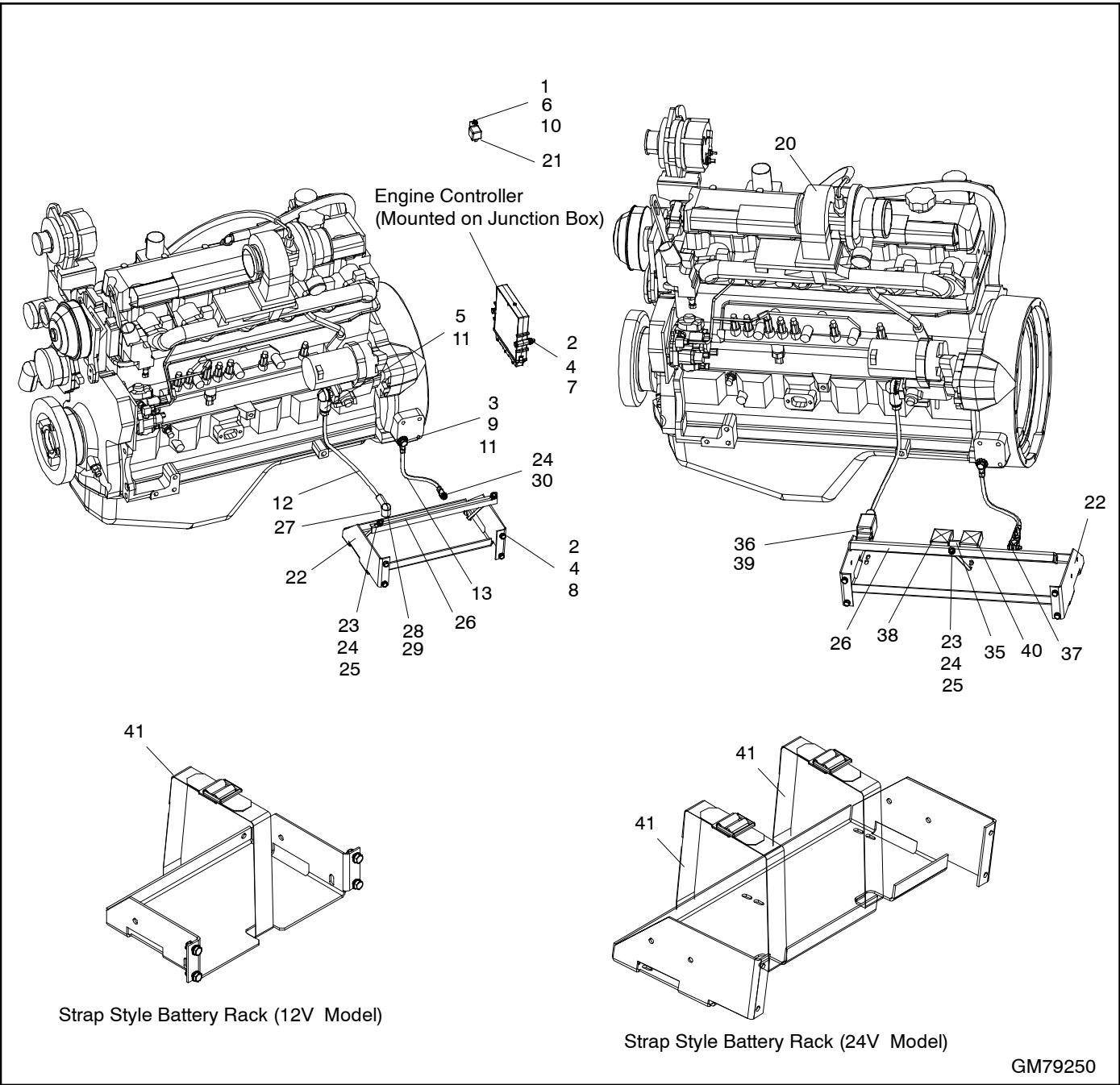
Item	Part Number	Description	Quantity	
			Variation Number	
			1	2
2	X-373-12	Hose, Molded, .75 In. ID	1	1
3	M125A-05-80	Washer, Plain	1	1
4	M125A-08-80	Washer, Plain 8.4 ID X 16.0 OD	6	6
5	M125A-12-80	Washer, Plain	2	2
6	M6923-08-80	Nut, Hex 8mm	6	6
7	M6923-10-80	Nut, Hex 10mm	1	1
8	M7985A-05012-20	Screw, Pan Head Mach.	1	1
9	M931-08055-60	Screw, Hex Cap	2	2
10	M933-08020-60	Screw, Hex Cap	4	4
11	M933-12020-60	Screw, Hex Cap	2	2
12	M934-05-50	Nut, Hex 5mm	1	1
13	X-22-26	Washer, Lock, .521 ID x 1.24 In. OD	1	1
14	X-25-85	Washer, Plain, .344 ID X .687 In. OD	1	1
15	X-545-129	Cable, Battery (No.0 X 30") Red+	1	1
16	X-545-165	Cable, Battery	1	1
17	X-672-37	Clamp	1	1
18	X-6210-7	Nut, Flange Spirallock, 5/16-18	1	1
20	GM66704-3	Engine, JD 4045HF285 125kwe, 12V	1	
20	GM66704-4	Engine, JD 4045HF285 125kwe, 24V		1
21	GM49746	Relay, 12 VDC	1	
21	GM49747	Relay, 24V DC		1
22	GM23203	Rack, Battery	1	
22	GM19543	Rack, Battery (24V)		1
23	286316	Bolt, Angle (See Note)	2	1
24	X-25-85	Washer, Plain, .344 ID X .687 In. OD (See Note)	2	1
25	X-101-4	Nut, Hex Elastic Stop, 5/16-24 (See Note)	2	1
26	336673	Clamp, Battery (See Note)	1	
26	343089	Clamp, Battery (See Note)		1
27	GM20743	Boot, Starter Terminal	1	
28	X-25-37	Washer, Plain, .406 ID X .812 In. OD	1	
29	X-6210-9	Nut, Flange Spirallock, 3/8-16	1	
30	280133	Cable, Battery (No.0 X 8.50") Black-		1
31	345039	Terminal, Battery		1
32	345056	Terminal, Battery		1
33	GM20744	Boot, Battery Lug		1
34	GM20745	Boot, Battery Lug		1
35	GM20748	Boot, Battery Lug		1
36	GM61432	Strap, Battery	1	2

Note:

Effective 9/20/2013, metal battery clamp and hardware style changed to strap style (item 36). If converting unit to strap style, order a battery rack. Racks were modified to add clearance for the strap.

Group 105: Engine, continued

150 kW



Group 105: Engine, continued

150 kW

Internal and some external engine parts are shown in a separate engine parts catalog.
See Group 701: Literature for part numbers of engine parts catalogs.

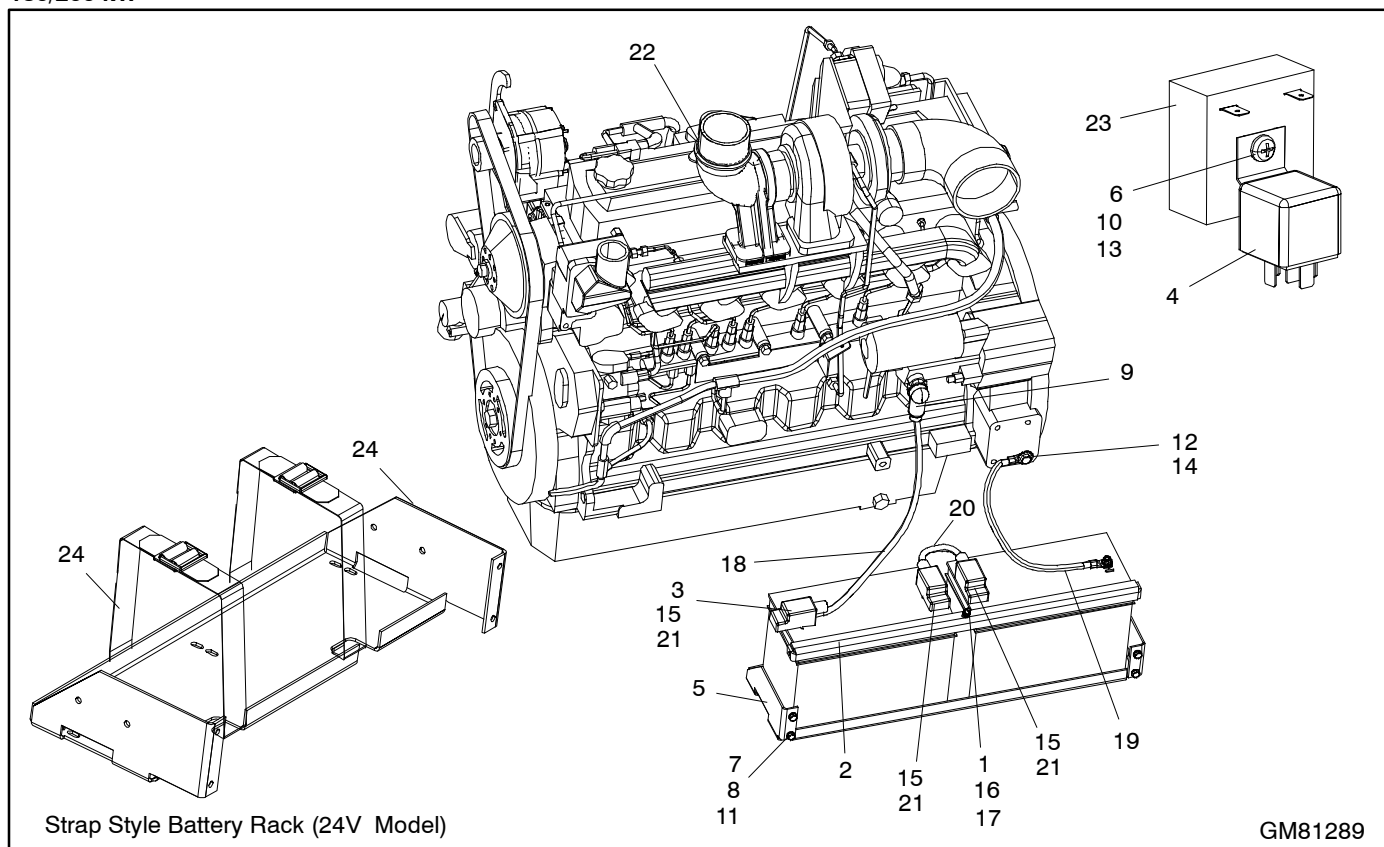
Item	Part Number	Description	Quantity	
			Variation Number	
			3	4
1	M125A-05-80	Washer, Plain	1	1
2	M125A-08-80	Washer, Plain 8.4 ID X 16.0 OD	6	6
3	M125A-12-80	Washer, Plain	1	1
4	M6923-08-80	Nut, Hex 8mm	6	6
5	M6923-12-80	Nut, Hex	1	1
6	M7985A-05012-20	Screw, Pan Head Mach.	1	1
7	M931-08055-60	Screw, Hex Cap	2	2
8	M933-08020-60	Screw, Hex Cap	4	4
9	M933-12020-60	Screw, Hex Cap	1	1
10	M934-05-50	Nut, Hex 5mm	1	1
11	X-22-26	Washer, Lock, .521 ID x 1.24 In. OD	2	2
12	X-545-129	Cable, Battery (No.0 X 30") Red+	1	1
13	X-545-112	Cable, battery (No.2 x 16") black-	1	1
20	GM70424-1	Engine, JD 6068HF285 125/150kwe, 12V	1	
20	GM70424-2	Engine, JD 6068HF285 125/150kwe, 24V		1
21	GM49746	Relay, 12 VDC	1	
21	GM49747	Relay, 24V DC		1
22	GM23203	Rack, Battery	1	
22	GM19543	Rack, Battery (24V)		1
23	286316	Bolt, Angle (See Note)	2	1
24	X-25-85	Washer, Plain, .344 Id X .687 In. OD (See Note)	3	1
25	X-101-4	Nut, Hex Elastic Stop, 5/16-24 (See Note)	2	1
26	336673	Clamp, Battery (See Note)	1	
26	343089	Clamp, Battery (See Note)		1
27	GM20743	Boot, Starter Terminal	1	
28	X-25-37	Washer, Plain, .406 ID X .812 In. OD	1	
29	X-6210-9	Nut, Flange Spiralock, 3/8-16	1	
30	X-6210-7	Nut, Flange Spiralock, 5/16-18	1	
35	280133	Cable, Battery (No.0 X 8.50") Black-		1
36	345039	Terminal, Battery		1
37	345056	Terminal, Battery		1
38	GM20744	Boot, Battery Lug		1
39	GM20745	Boot, Battery Lug		1
40	GM20748	Boot, Battery Lug		1
41	GM61432	Strap, Battery	1	1

Note:

Effective 9/20/2013, metal battery clamp and hardware style changed to strap GM61432. If converting unit to strap style, order a battery rack. Racks were modified to add clearance for the strap.

Group 105: Engine, continued

180/200 kW



Item	Part Number	Description	Quantity		
			Variation Number		
			5	6	7
1	286316	Bolt, Angle (See Note)	1	1	
1	GM13268	Bolt, Angle (See Note)			1
2	343221	Clamp, Battery (See Note)	1	1	1
3	GM20745	Boot, Battery Lug	1	1	1
4	GM49747	Relay, 24V DC	1	1	1
5	GM63164	Rack, Battery	1	1	1
6	M125A-05-80	Washer, Plain	1	1	1
7	M125A-08-80	Washer, Plain 8.4 ID X 16.0 OD	4	4	4
8	M6923-08-80	Nut, Hex 8mm	4	4	4
9	M6923-12-80	Nut, Hex	1	1	
10	M7985A-05012-20	Screw, Pan Head Mach.	1	1	
10	M7985A-05040-20	Screw, Pan Head Mach.			1
11	M933-08020-60	Screw, Hex Cap	4	4	4
12	M933-12020-60	Screw, Hex Cap	1	1	1
13	M934-05-50	Nut, Hex 5mm	1	1	1
14	X-22-26	Washer, Lock, .521 ID x 1.24 In. OD	2	2	1
15	X-25-37	Washer, Plain, .406 ID X .812 In. OD	4	4	4
16	X-25-44	Washer, Plain, .328 ID X .562 OD (See Note)	1	1	
16	M125A-08-80	Washer, Plain 8.4 ID X 16.0 OD (See Note)			1
17	X-101-4	Nut, Hex Elastic Stop, 5/16-24 (See Note)	1	1	
17	M982-08-80	Nut, hex elastic stop, 8MM (See Note)			1
18	X-545-129	Cable, Battery (No.0 X 30") Red+	1	1	1
19	X-545-165	Cable, Battery	1	1	
19	X-545-167	Cable, Battery			1
20	X-545-73	Cable, Battery (No.0 X 8") Black	1	1	1
21	X-6210-9	Nut, Flange Spiralock, 3/8-16	4	4	4
22	GM70798-1	Engine Assembly, JD 6068HFG85	1		
22	GM70798-3	Engine Assembly, JD 6068HFG85		1	
22	GM84749	Engine Assembly, JD 6068HFG82			1
23	X-6123-65	Relay			1
24	GM61432	Strap, Battery	2	2	2

Note:

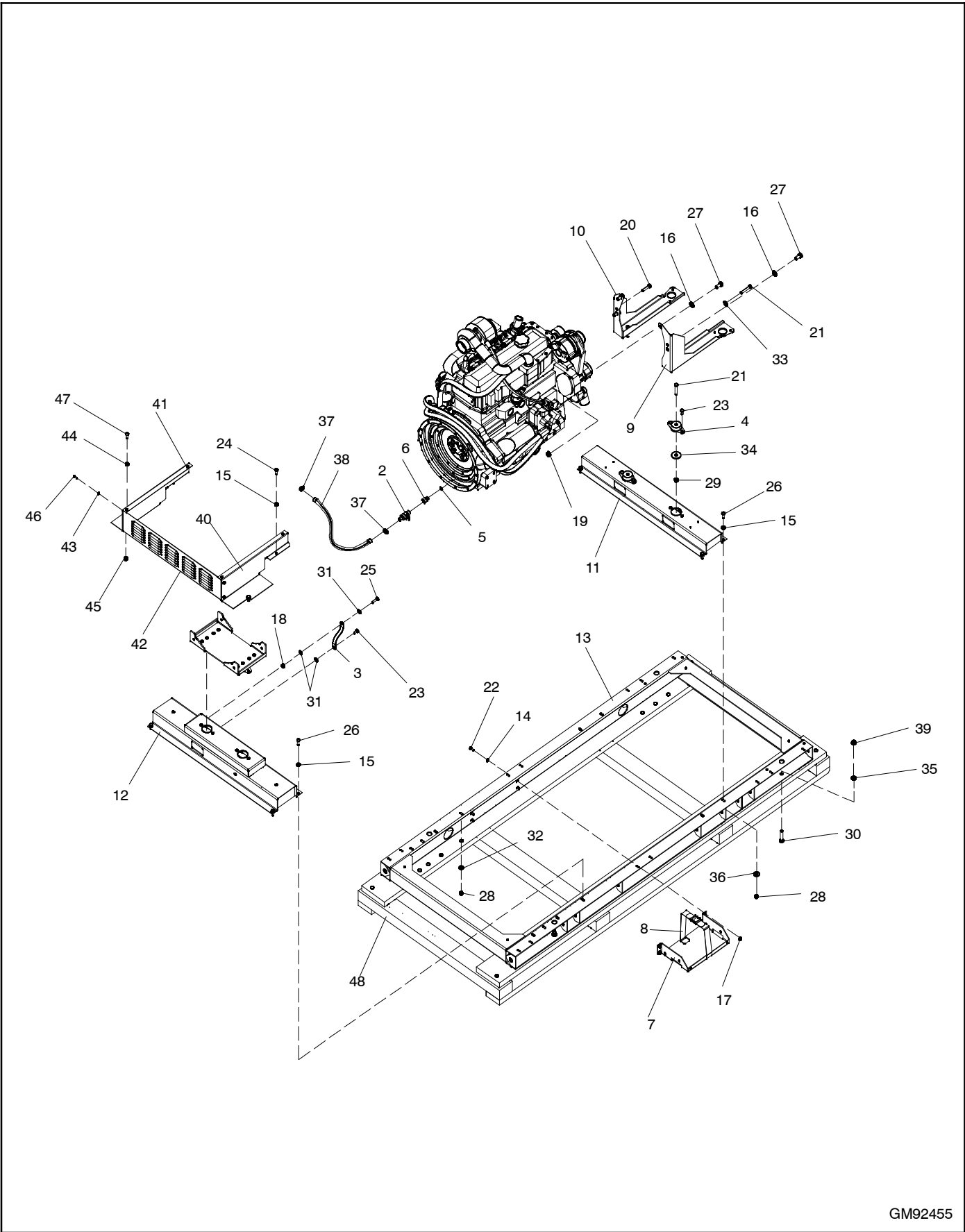
Effective 9/20/2013, metal battery clamp and hardware style changed to strap GM61432. If converting unit to strap style, order a battery rack. Racks were modified to add clearance for the strap.

Group 107: Nameplate and Decals

Item	Part Number	Description	Qty.			
			Var. No.			
			1	2	3	4
1	238402	Decal, caution positive term.only	1	1	1	1
2	249808	Decal, warning rotating parts	1	1	1	1
3	249809	Decal, Caution Hot Engine	2	2	2	4
4	249810	Decal, warning hot coolant	1	1	1	1
5	273780	Decal, warning explosion	1	1	1	1
6	GM15300	Decal, Exhaust Piping	1	1	1	1
7	GM19296	Decal, fuel type	1	1	1	1
8	224233	Decal, 1-800 number	1	1	1	1
9	257438	Decal, danger moving rotor	3	3	3	3
10	257441	Decal, warning lifting eye	1	1	1	1
11	258815	Decal, warning voltage backfeed	1	1	1	1
12	362176	Decal, danger	2	2	2	2
13	GM13776	Decal, FRIL Reconnection	1	1	1	1
15	GM39683	Tag, Hang	1	1		
16	GM60531	Decal, Control Height	1	1	1	1
17	X-6232-6	Decal, stripe	2	2	2	2
19	343165	Decal, caution-not a step	1	1	1	1
20	364116	Decal, caution welding disconnect	1	1	2	2
21	X-6246-20	Decal, Kohler Power.Com				1
21	X-6246-23	Decal, Kohler Power.Com	1	1	1	
22	X-6246-22	Decal, Kohler Power Systems				2
22	X-6246-21	Decal, Kohler Power Systems	2	2	2	

Group 109: Skid and Plant Mounting

40/50 kW



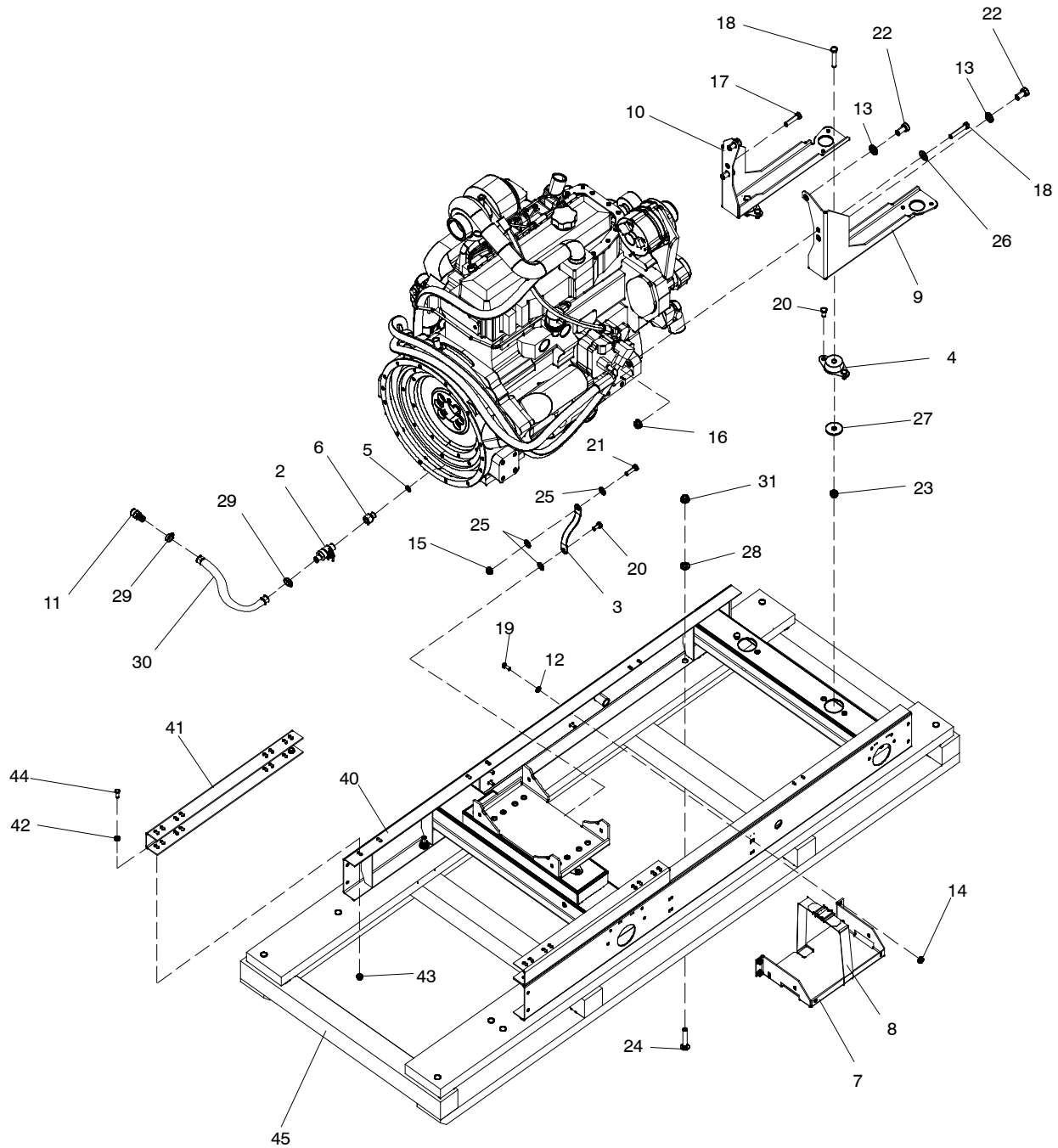
GM92455

Group 109: Skid and Plant Mounting

			40/50 kW
Item	Part Number	Description	Quantity
			Module Number GM92455-MA1
2	272701	Valve, oil drain (1/2-14 nptf)	1
3	290418	Strap, Ground (11 in.)	1
4	324074	Vibromount	2
5	GM11694	O-ring, ISO 6149 (15.3mm id)	1
6	GM22991	Bushing, Adapter	1
7	GM57161	Rack, Battery	1
8	GM61432	Strap, Poly Battery	1
9	GM66190	Support, Engine (RH)	1
10	GM66191	Support, Engine (LH)	1
11	GM90905	Crossmember, Engine	1
12	GM90906	Crossmember, Alternator	1
13	GM92252	Skid, 41"	1
14	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	4
15	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	9
16	M125A-16-80	Washer, Plain	4
17	M6923-08-80	Nut, Hex 8mm	4
18	M6923-10-80	Nut, Hex 10mm	1
19	M6923-12-80	Nut, Hex	2
20	M931-12050-60	Screw, Hex Cap	1
21	M931-12065-60	Screw, Hex Cap	3
22	M933-08020-60	Screw, Hex Cap	4
23	M933-10020-60	Screw, Hex Cap	5
24	M933-10025-60	Screw, hex cap,fully thrd M10 x 25mm	2
25	M933-10035-60	Screw, Hex Cap	1
26	M961-10030-60	Screw, Hex Cap	8
27	M961-16030-82	Screw, Hex Cap	4
28	M982-10-80	Nut, hex elastic stop	8
29	M982-12-80	Nut, hex elastic stop	2
30	PNP-2002-30	Bolt, carriage (1/2-13 x 3.00")	4
31	X-22-14	Washer, lock, .391 ID x .975 in. OD	3
32	X-22-15	Washer,lock,.456 IDx1.058 in.OD	2
33	X-22-26	Washer,lock.521 IDx1.24 in.OD	2
34	X-25-140	Washer,plain,.531 IDx2in.OD	2
35	X-25-26	Washer, Plain	4
36	X-25-38	Washer, plain, .406 IDx1.25in.OD	7
37	X-426-10	Clamp, hose, .5/1 in.	2
38	X-577-34	Hose, rubber, straight, .62 in. ID	1
39	X-6210-12	Nut, flange spiralock, 1/2-13	4
40	GM91069	Bracket, J-Box Mounting (RS)	1
41	GM91070	Bracket, J-Box Mounting (LS)	1
42	GM91648	Cover, End J-Box	1
43	M125A-06-80	Washer, Plain	4
44	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	2
45	M6923-10-80	Nut, Hex 10mm	2
46	M933-06020-60	Screw, Hex Cap	4
47	M933-10025-60	Screw, hex cap,fully thrd M10 x 25mm	2
48	PFS-2010	Base, Wood	1

Group 109: Skid and Plant Mounting, continued

40/50 kW



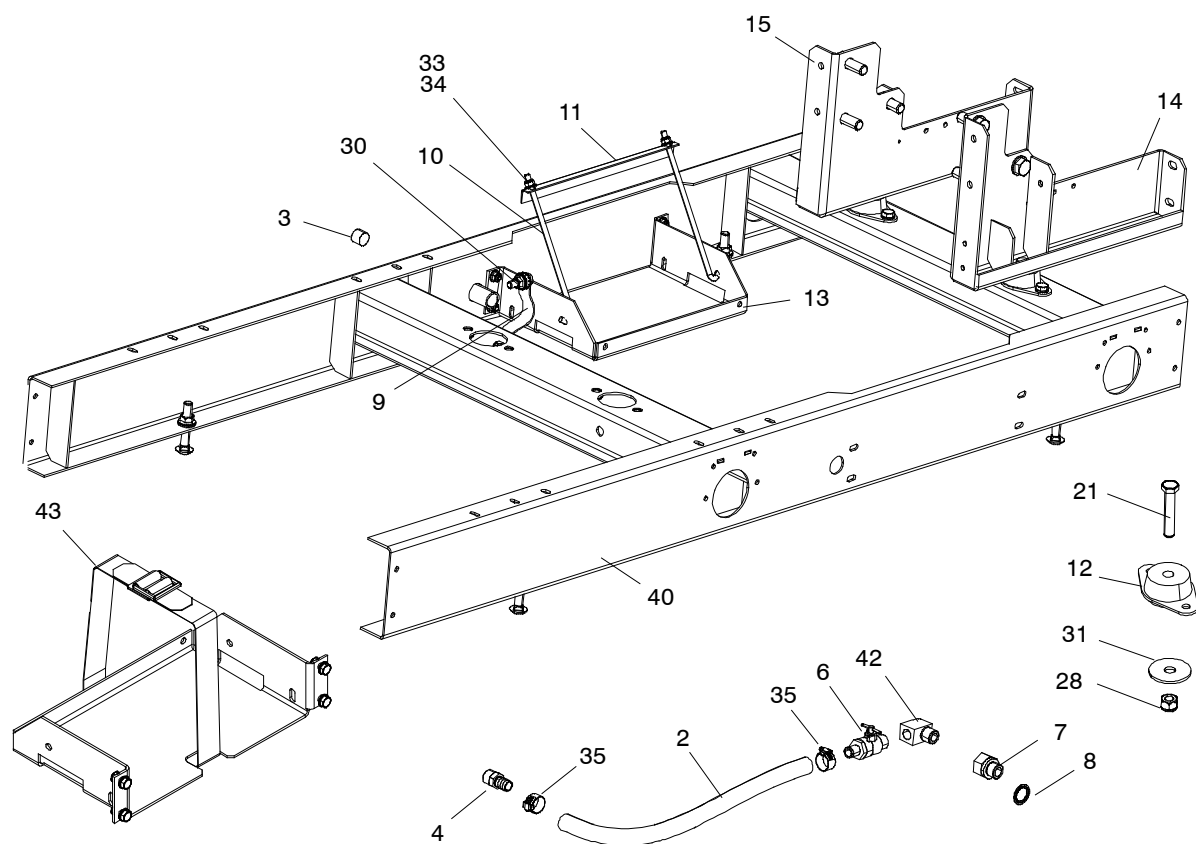
GM92477

Group 109: Skid and Plant Mounting, continued

			40/50 kW
Item	Part Number	Description	Quantity
			Module Number GM92477-MA1
2	272701	Valve, oil drain (1/2-14 nptf)	1
3	290418	Strap, Ground (11 in.)	1
4	324074	Vibromount	2
5	GM11694	O-ring, ISO 6149 (15.3mm ID)	1
6	GM22991	Bushing, Adapter	1
7	GM57161	Rack, Battery	1
8	GM61432	Strap, Poly Battery	1
9	GM66190	Support, Engine (RH)	1
10	GM66191	Support, Engine (LH)	1
11	GM81620	Connector, Hose 5/8" x 1/2" NPT	1
12	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	4
13	M125A-16-80	Washer, Plain	4
14	M6923-08-80	Nut, Hex 8mm	4
15	M6923-10-80	Nut, Hex 10mm	1
16	M6923-12-80	Nut, Hex	2
17	M931-12050-60	Screw, Hex Cap	1
18	M931-12065-60	Screw, Hex Cap	3
19	M933-08020-60	Screw, Hex Cap	4
20	M933-10020-60	Screw, Hex Cap	5
21	M933-10035-60	Screw, Hex Cap	1
22	M961-16030-82	Screw, Hex Cap	4
23	M982-12-80	Nut, hex elastic stop	2
24	PNP-2002-30	Bolt, carriage (1/2-13 x 3.00")	4
25	X-22-14	Washer, lock, .391 ID x .975 in. OD	3
26	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	2
27	X-25-140	Washer, plain, .531 ID x 2 in. OD	2
28	X-25-26	Washer, Plain	4
29	X-426-10	Clamp, hose, .5/1 in.	2
30	X-577-28	Hose, rubber, straight, .62 in. ID	1
31	X-6210-12	Nut, flange spirallock, 1/2-13	4
40	GM92476	Skid, 31" JD4045TF	1
41	GM93021	Bracket, J-Box Mtg	2
42	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	4
43	M6923-10-80	Nut, Hex 10mm	2
44	M933-08020-60	Screw, Hex Cap	4

Group 109: Skid and Plant Mounting, continued

50/60 kW



Strap Style Battery Rack (12V Model)

Items not shown: 16-20, 22-27, 29, 32, 36-39

GM78080

Group 109: Skid and Plant Mounting, continued

50/60 kW

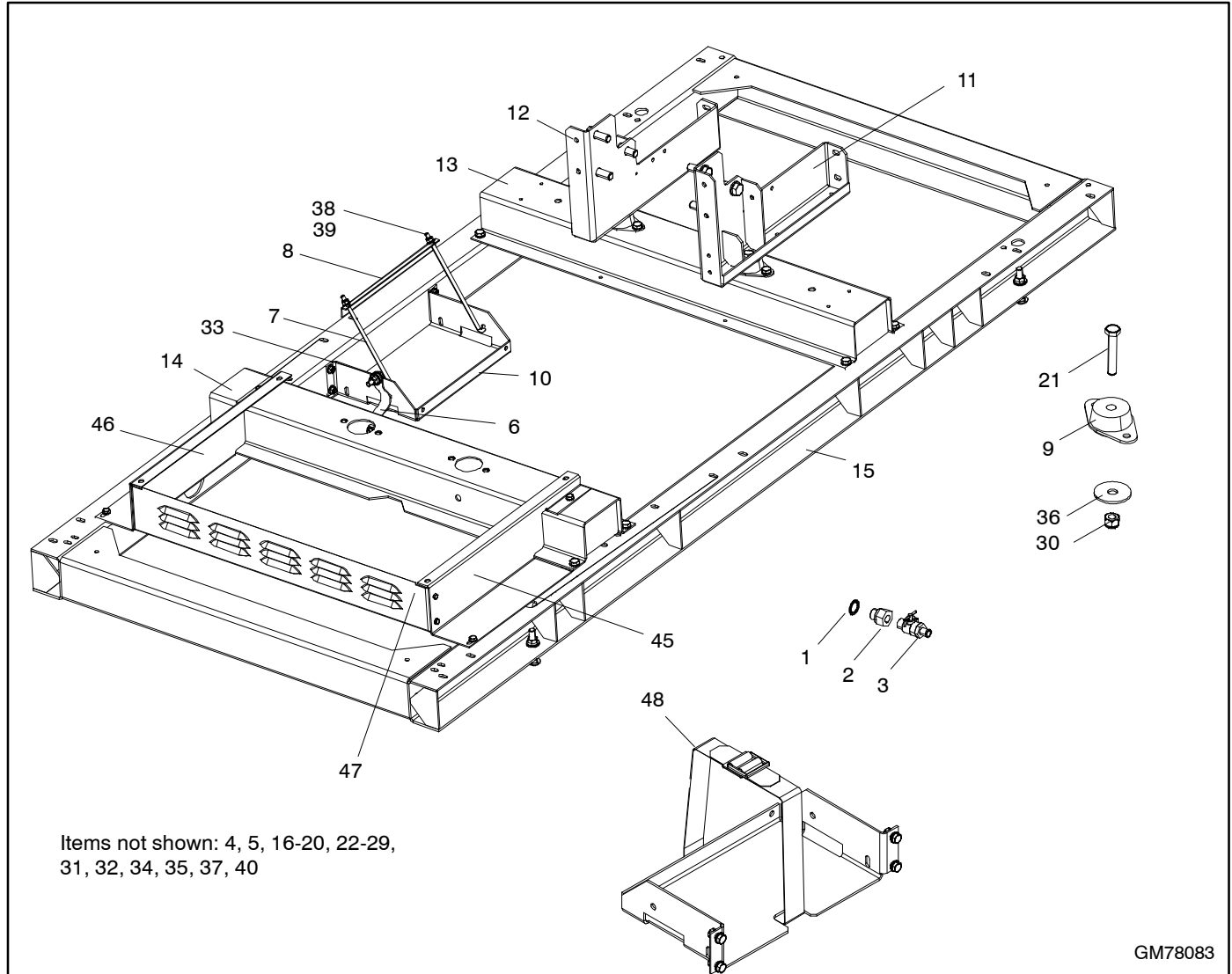
Item	Part Number	Description	Quantity		
			Module Number		
			GM78080-MA1	GM78080-MA2	GM78080-MA3
2	X-577-24	Hose, rubber, straight, .62 in. ID	1	1	1
3	X-75-3	Plug, pipe (1/2" nptf)	1	1	1
4	X-582-1	Connector, Hose 5/8" x 1/2" MIP Brass	1	1	1
6	272701	Valve, oil drain (1/2-14 nptf)	1	1	1
7	GM40116	Adapter Bushing	1	1	1
8	GM42443	Washer, Sealing	1	1	1
9	290418	Strap, ground (8 in.)	1	1	1
10	290869	Bolt, Angle (See Note)	2	2	2
11	324033	Clamp, battery (See Note)	1	1	1
12	324073	Vibromount	2	2	2
13	GM57161	Rack, Battery	1	1	1
14	GM57989	Support, Engine (RS)	1	1	1
15	GM57990	Support, Engine (LS)	1	1	1
16	M125A-08-80	Washer, Plain, 8.4 ID x 16.0 OD	4	4	4
17	M125A-10-80	Washer, Plain, 10.5 ID x 20.0 OD	5	5	5
18	M125A-16-80	Washer, Plain	6	6	6
19	M6923-08-80	Nut, Hex 8mm	4	4	4
20	M6923-10-80	Nut, Hex 10mm	1	1	1
21	M931-12065-60	Screw, hex cap	2	2	2
22	M933-08020-60	Screw, hex cap	4	4	4
23	M933-10020-60	Screw, hex cap	4	4	4
24	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm	1	1	1
25	M933-10035-60	Screw, hex cap	1	1	1
26	M933-16030-82	Screw, hex cap	2	2	2
27	M933-16040-60	Screw, hex cap	4	4	4
28	M982-12-80	Nut, hex elastic stop	2	2	2
29	PNP-2002-30	Bolt, carriage (1/2-13 x 3.00")	4	4	4
30	X-22-14	Washer, lock, .391 ID x .975 in. OD	3	3	3
31	X-25-140	Washer, plain, .531 ID x 2 in. OD	2	2	2
32	X-25-26	Washer, plain, .531 ID x 1.062 in. OD	4	4	4
33	X-25-85	Washer, plain, .344 ID x .687 in. OD (See Note)	2	2	2
34	X-101-16	Nut, hex elastic stop, 5/16-18 (See Note)	2	2	2
35	X-426-10	Clamp, hose, .5/1 in.	2	2	2
36	X-6210-12	Nut, flange spirallock, 1/2-13	4	4	4
40	GM55376	Skid, 31"	1		
40	GM55422	Skid, 31"		1	
40	GM70367	Skid, 31"			1
42	X-211-3	Elbow, street (90 deg x 1/2" nptf)	1		1
43	GM61432	Strap, Battery	1	1	1

Note:

Effective 9/20/2013, metal battery clamp and hardware style changed to strap GM61432. If converting unit to strap style, order a battery rack. Racks were modified to add clearance for the strap.

Group 109: Skid and Plant Mounting, continued

50/60 kW



Group 109: Skid and Plant Mounting, continued

50/60 kW

Item	Part Number	Description	Quantity	
			Module Number	
			GM78083-MA1	GM78083-MA2
1	GM42443	Washer, Sealing	1	1
2	GM40116	Adapter Bushing	1	1
3	272701	Valve, oil drain (1/2-14 nptf)	1	1
4	M125A-06-80	Washer, Plain	4	4
5	M933-06016-60	Screw, hex cap, M6 x 16mm, js500 full thrd	4	4
6	290418	Strap, ground (8 in.)	1	1
7	290869	Bolt, Angle (See Note)	2	2
8	324033	Clamp, battery (See Note)	1	1
9	324073	Vibromount	2	2
10	GM57161	Rack, Battery	1	1
11	GM57989	Support, Engine (RS)	1	1
12	GM57990	Support, Engine (LS)	1	1
13	GM57991	Crossmember, Engine	1	1
14	GM57992	Crossmember, Alternator, 4P	1	1
15	GM58014	Skid, 41" (C line)	1	1
16	M125A-08-80	Washer, Plain, 8.4 ID x 16.0 OD	7	7
17	M125A-10-80	Washer, Plain, 10.5 ID x 20.0 OD	19	19
18	M125A-16-80	Washer, Plain	6	6
19	M6923-08-80	Nut, Hex 8mm	6	6
20	M6923-10-80	Nut, Hex 10mm	1	1
21	M931-12065-60	Screw, hex cap	2	2
22	M933-08020-60	Screw, hex cap	8	8
23	M933-10020-60	Screw, hex cap	4	4
24	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm	1	1
25	M933-10030-60	Screw, hex cap	8	8
26	M933-10035-60	Screw, hex cap	1	1
27	M933-16030-82	Screw, hex cap	2	2
28	M933-16040-60	Screw, hex cap	4	4
29	M982-10-80	Nut, hex elastic stop	8	8
30	M982-12-80	Nut, hex elastic stop	2	2
31	PFS-2010	Base, Wood	1	1
32	PNP-2002-30	Bolt, carriage (1/2-13 x 3.00")	4	4
33	X-22-14	Washer, lock, .391 ID x .975 in. OD	3	3
34	X-22-15	Washer, lock, .456 ID x 1.058 in. OD	2	2
35	X-22-16	Washer, lock, .326 ID x .883 in. OD	1	1
36	X-25-140	Washer, plain, .531 ID x 2 in. OD	2	2
37	X-25-26	Washer, plain, .531 ID x 1.062 in. OD	4	4
38	X-25-85	Washer, plain, .344 ID x .687 in. OD (See Note)	2	2
39	X-101-16	Nut, hex elastic stop, 5/16-18 (See Note)	2	2
40	X-6210-12	Nut, flange spiralock, 1/2-13	4	4
45	GM78255	Bracket, J-Box Mounting (RH)	1	
45	GM58874	Bracket, J-Box Mounting (RH)		1
46	GM78256	Bracket, J-Box Mounting (LS)	1	
46	GM58875	Bracket, J-Box Mounting (LS)		1
47	GM78257	Cover, J-Box Mounting	1	
47	GM60189	Cover, End J-Box		1
48	GM61432	Strap, Battery	1	1

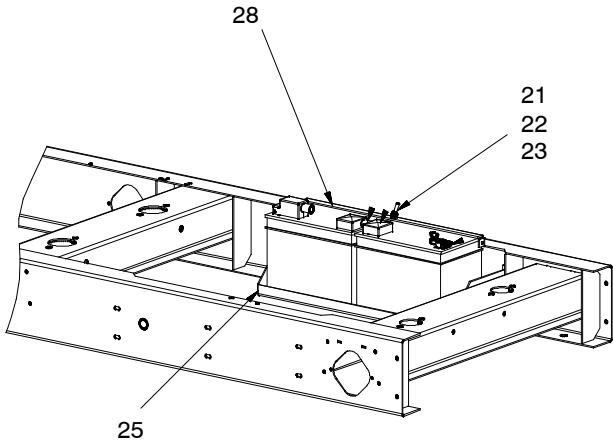
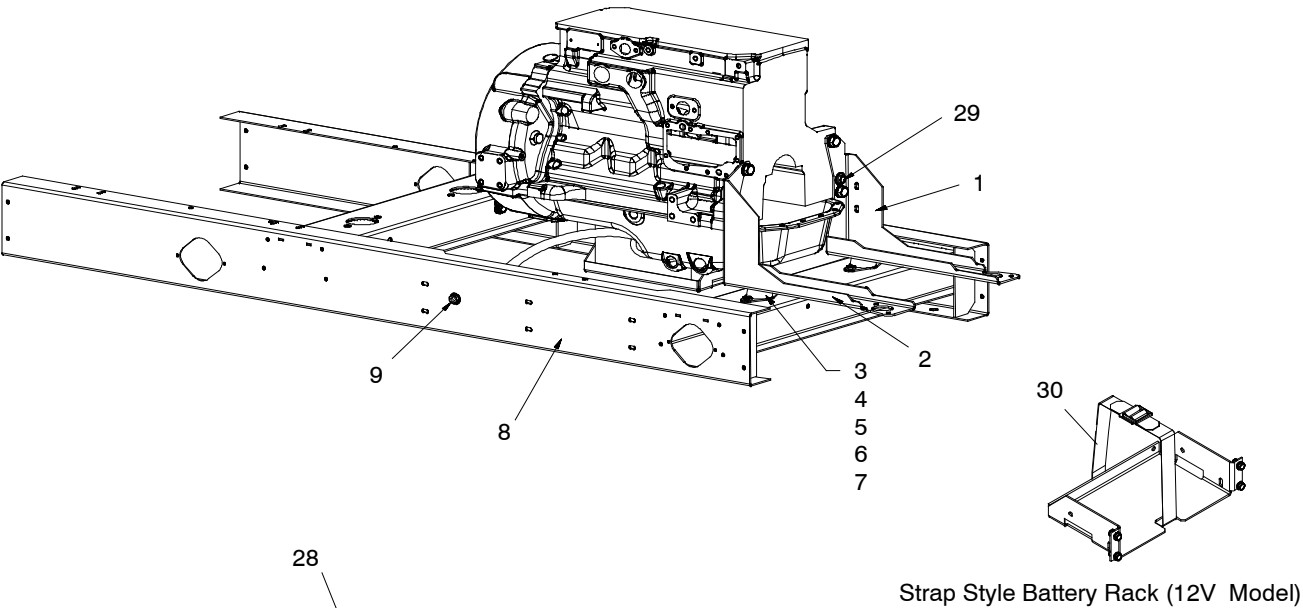
Note:

Effective 9/20/2013, metal battery clamp and hardware style changed to strap GM61432. If converting unit to strap style, order a battery rack.

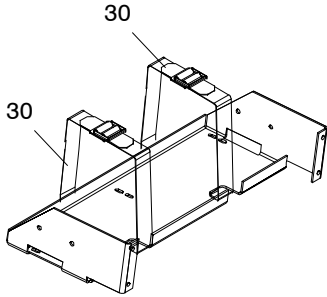
Racks were modified to add clearance for the strap.

Group 109: Skid and Plant Mounting, continued

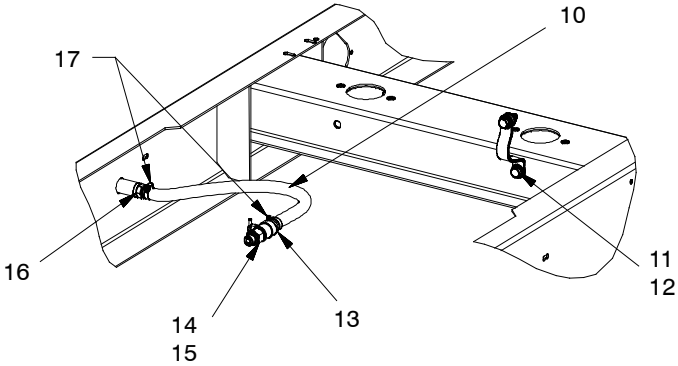
80/100 kW



VIEW B
24V BATTERY ASSEMBLY DETAIL



Strap Style Battery Rack (24V Model)



OIL DRAIN HOSE / GROUND STRAP
ASSEMBLY DETAIL

6439_109_3

Group 109: Skid and Plant Mounting, continued

80/100 kW

Find the installed module number on the generator set nameplate.

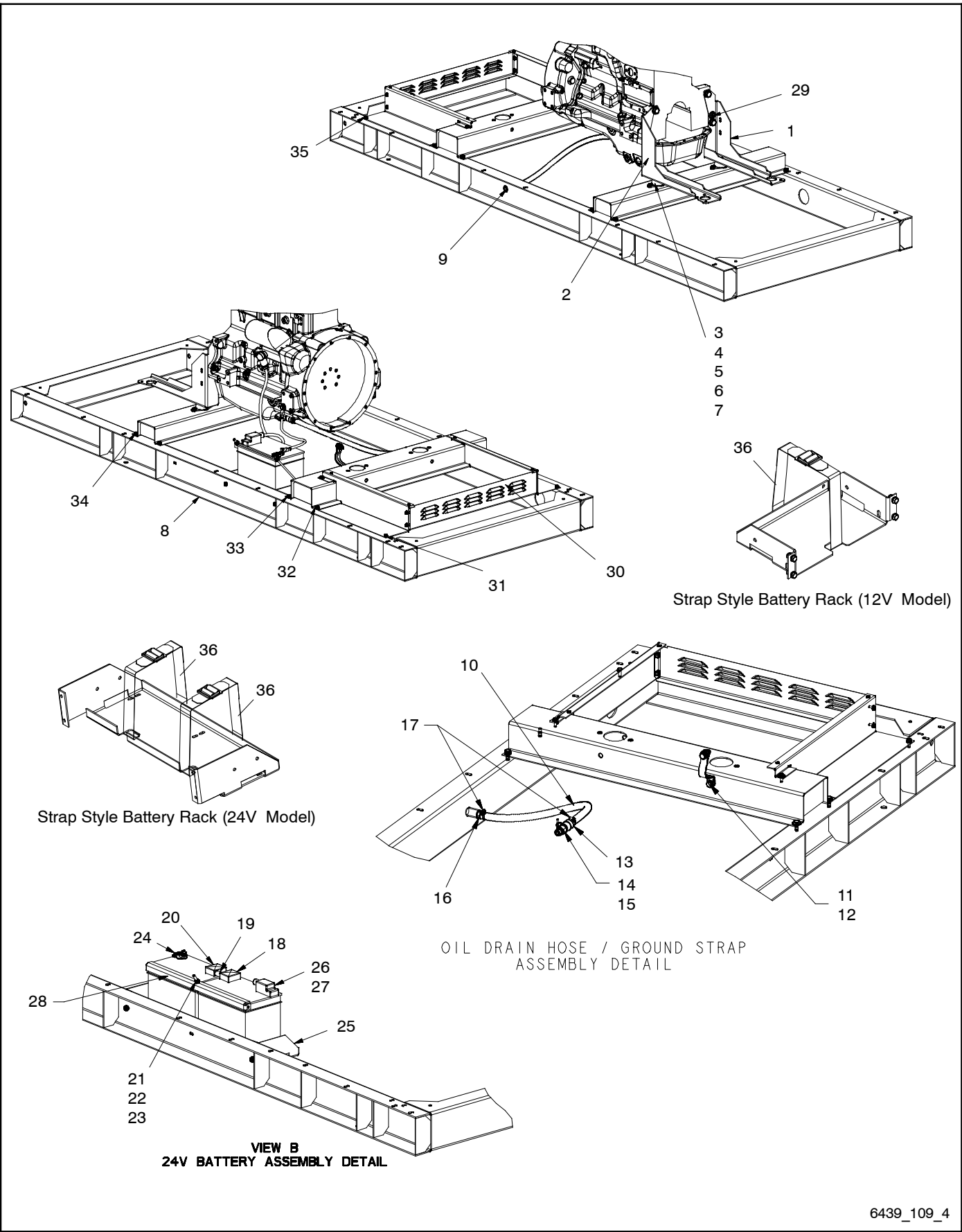
Item	Part Number	Description	Quantity			
			Module			
			GM66075-MA1	GM66075-MA2	GM79227-MA1	GM79227-MA2
1	GM66191	Support, Engine (LH)	1	1	1	1
2	GM66190	Support, Engine R.H. (R.H.)	1	1	1	1
3	324074	Vibromount	2	2	2	2
4	M931-12065-60	Screw, hex cap	2	2	2	2
5	X-25-140	Washer, plain, .531 ID x 2 in. OD	2	2	2	2
6	M982-12-80	Nut, hex elastic stop	2	2	2	2
7	M933-10020-60	Screw, hex cap	4	4	4	4
8	GM66189	Skid, 34"	1	1		
8	GM79226	Skid, 34"			1	1
8	GM79225	Bracket, 4PX J-Box Mtg (not shown)			1	1
9	X-75-3	Plug, pipe (1/2" nptf)	1	1	1	1
10	X-577-27	Hose, rubber, straight, .62 in. ID	1	1	1	1
11	290418	Strap, ground (8 in.)	2	2	2	2
12	X-22-14	Washer, lock, .391 ID x .975 in. OD	4	4	3	3
13	272701	Valve, oil drain (1/2-14 nptf)	1	1	1	1
14	GM22991	Bushing, Adapter	1	1	1	1
15	GM11694	O-ring, ISO 6149 (15.3mm ID)	1	1	1	1
16	X-582-1	Connector, Hose 5/8" x 1/2" MIP Brass	1	1	1	1
17	X-426-10	Clamp, hose, .5/1 in.	2	2	2	2
21	286316	Bolt, Angle (See Note)	2	1	2	1
22	X-25-85	Washer, plain, .344 ID x .687 in. OD (See Note)	2	1	2	1
23	X-101-4	Nut, hex elastic stop, 5/16-24	2	1	2	1
25	GM14099	Rack, Battery (12V)	1		1	
25	GM19543	Rack, Battery (24V)		1		1
28	324033	Clamp, battery (See Note)	1		1	
28	343089	Clamp, battery (See Note)		1		1
29	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	2	2	2	2
30	GM61432	Strap, Battery	1	2	1	2

Note:

Effective 9/20/2013, metal battery clamp and hardware style changed to strap GM61432. If converting unit to strap style, order a battery rack. Racks were modified to add clearance for the strap.

Group 109: Skid and Plant Mounting, continued

80/100 kW w/Enclosure



6439_109_4

Group 109: Skid and Plant Mounting, continued

80/100 kW w/Enclosure

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity							
			Module							
			GM66076-MA1	GM66076-MA2	GM66076-MA3	GM66076-MA4	GM66076-MA5	GM66076-MA6	GM79230-MA1	GM79230-MA2
1	GM66191	Support, Engine (LH)	1	1	1	1	1	1	1	1
2	GM66190	Support, Engine R.H. (R.H.)	1	1	1	1	1	1	1	1
3	324074	Vibromount	2	2	2	2	2	2	2	2
4	M931-12065-60	Screw, hex cap	2	2	2	2	2	2	2	2
5	X-25-140	Washer, plain, .531 ID x 2 in. OD	2	2	2	2	2	2	2	2
6	M982-12-80	Nut, hex elastic stop	2	2	2	2	2	2	2	2
7	M933-10020-60	Screw, hex cap	4	4	4	4	4	4	4	4
8	GM66186	Skid, 44"	1	1	1	1	1	1	1	1
9	X-75-3	Plug, pipe (1/2" nptf)	1	1	1	1	1	1	1	1
10	X-577-27	Hose, rubber, straight, .62 in. ID	1	1	1	1	1	1	1	1
11	290418	Strap, ground (8 in.)	2	2	2	2	2	2	2	2
12	X-22-14	Washer, lock, .391 ID x .975 in. OD	3	3	3	3	3	3	3	3
13	272701	Valve, oil drain (1/2-14 nptf)	1	1	1	1	1	1	1	1
14	GM22991	Bushing, Adapter	1	1	1	1	1	1	1	1
15	GM11694	O-ring, ISO 6149 (15.3mm ID)	1	1	1	1	1	1	1	1
16	X-582-1	Connector, Hose 5/8" x 1/2" MIP Brass	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
21	286316	Bolt, Angle (See Note)	2	1	2	1	2	1	2	1
22	X-25-85	Washer, plain, .344 ID x .687 in. OD (See Note)	2	1	2	1	2	1	2	1
23	X-101-4	Nut, hex elastic stop, 5/16-24 (See Note)	2	1	2	1	2	1	2	1
25	GM57161	Rack, Battery	1		1		1		1	
25	GM63164	Rack, Battery		1		1		1		1
28	324033	Clamp, battery (See Note)	1		1		1		1	
28	343089	Clamp, battery (See Note)		1		1		1		1
29	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	2	2	2	2	2	2	2	2
30	GM60189	Cover, End J-Box	1	1	1	1				
30	GM79242	Cover, End J-Box					1	1		
30	GM79223	Cover, J-Box Mounting Bracket							1	1
31	GM66538	Bracket, J-Box Mounting	1	1		1				
31	GM66680	Bracket, J-Box Mounting LH			1	1				
31	GM79241	Bracket, J-Box Mounting LH					1	1		
31	GM79229	Bracket, J-Box Mounting LH							1	1
32	GM66188	Crossmember, Alternator	1	1	1	1	1	1		
32	GM79224	Crossmember, Alternator							1	1
33	X-22-15	Washer, lock, .456 ID x 1.058 in. OD	2	2	2	2	2	2		
34	GM66187	Crossmember, Engine	1	1	1	1	1	1	1	1
35	GM66537	Bracket, JBox Mounting RH	1	1						
35	GM66679	Bracket, JBox Mounting RH			1	1				
35	GM79240	Bracket, JBox Mounting RH					1	1		
35	GM79228	Bracket, JBox Mounting RH							1	1
36	GM61432	Strap, Battery	1	2	1	2	1	2	1	2

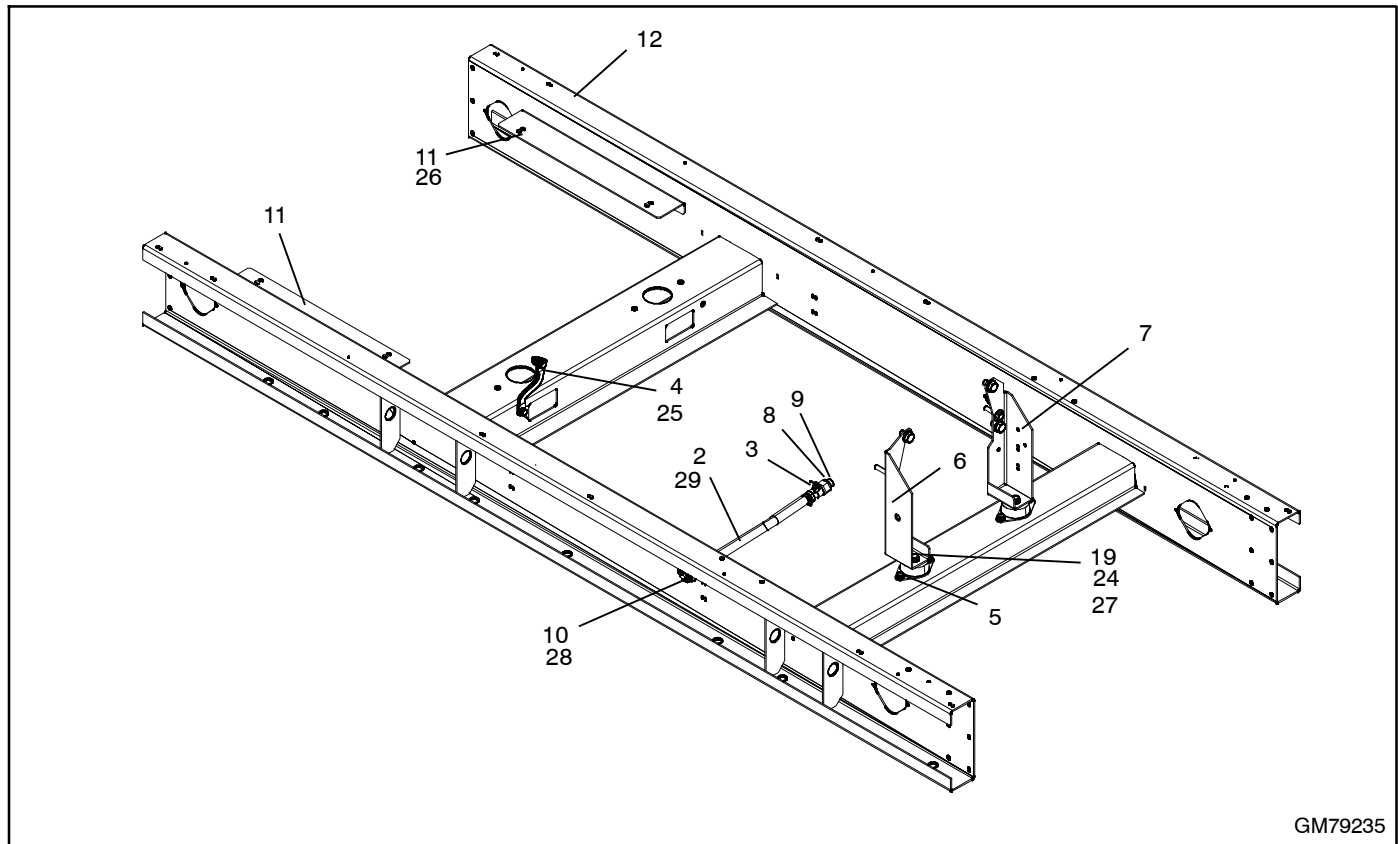
Note:

Effective 9/20/2013, metal battery clamp and hardware style changed to strap GM61432. If converting unit to strap style, order a battery rack. Racks were modified to add clearance for the strap.

Group 109: Skid and Plant Mounting, continued

125 kW

Find the installed module number on the generator set nameplate.

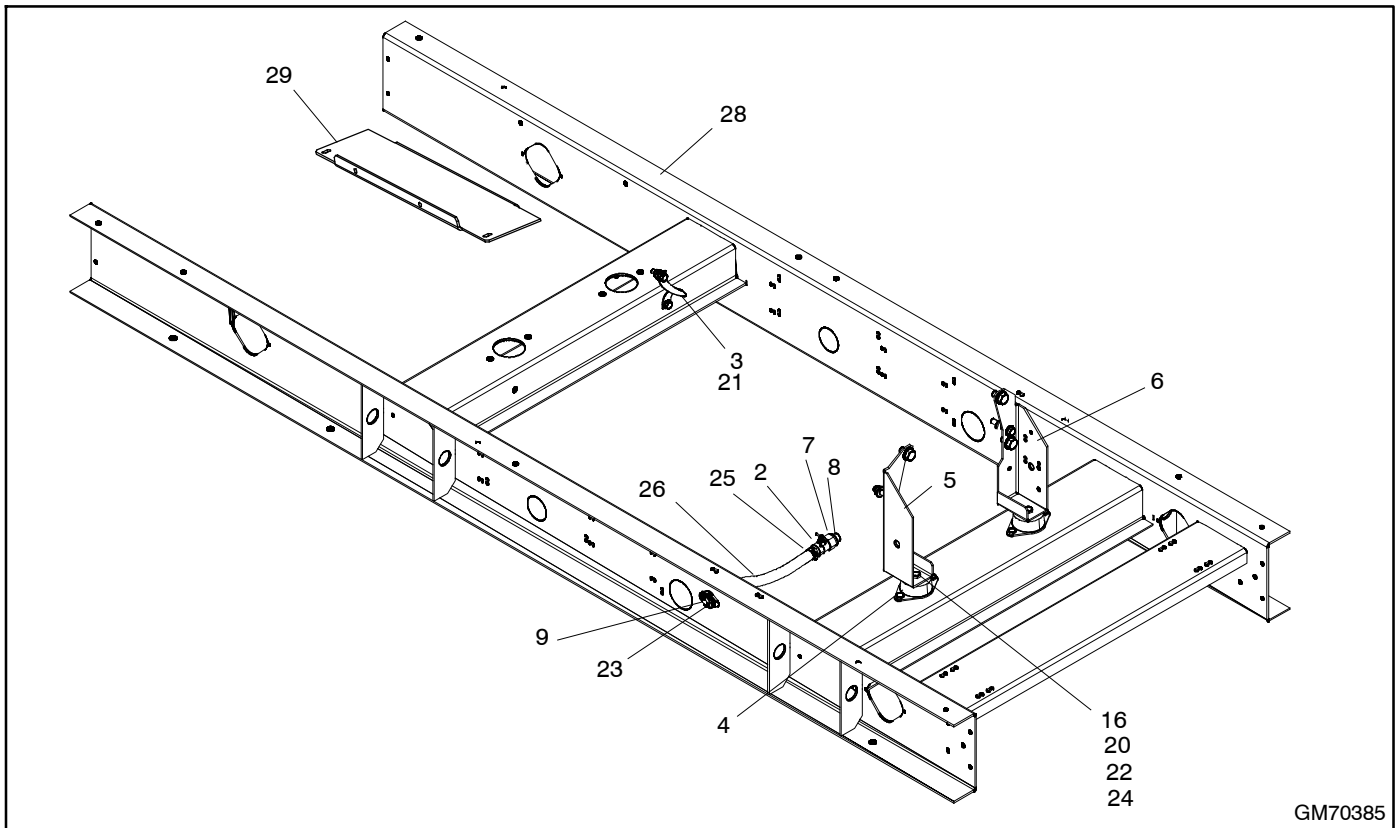


Item	Part Number	Description	Quantity
			Module Number GM79235-MA1
2	X-577-5	Hose, rubber, straight, .62 in. ID	1
3	272701	Valve, oil drain (1/2-14 nptf)	1
4	290418	Strap, ground (8 in.)	2
5	324074	Vibromount	2
6	GM22369	Support, Engine (RH)	1
7	GM22370	Support, Engine (RH)	1
8	GM22991	Adapter Bushing	1
9	GM11694	Washer, Sealing	1
10	GM59015	Fitting, Bulkhead Drain	1
11	GM64117	Support, Junction Box	2
12	GM72468	Skid	1
19	M931-12065-60	Screw, hex cap	2
24	M982-12-80	Nut, hex elastic stop	2
25	X-22-14	Washer, lock, .391 ID x .975 in. OD	3
26	X-22-15	Washer, lock, .391 ID x .975 in. OD	2
27	X-25-140	Washer, plain, .531 ID x 2.00 in. OD	2
28	X-75-58	Plug, Pipe	1
29	X-426-12	Clamp, hose, .5/1 in.	2
30	X-781-15	Rivet, pop, .187 in.	2

Group 109: Skid and Plant Mounting, continued

150 kW

Find the installed module number on the generator set nameplate.



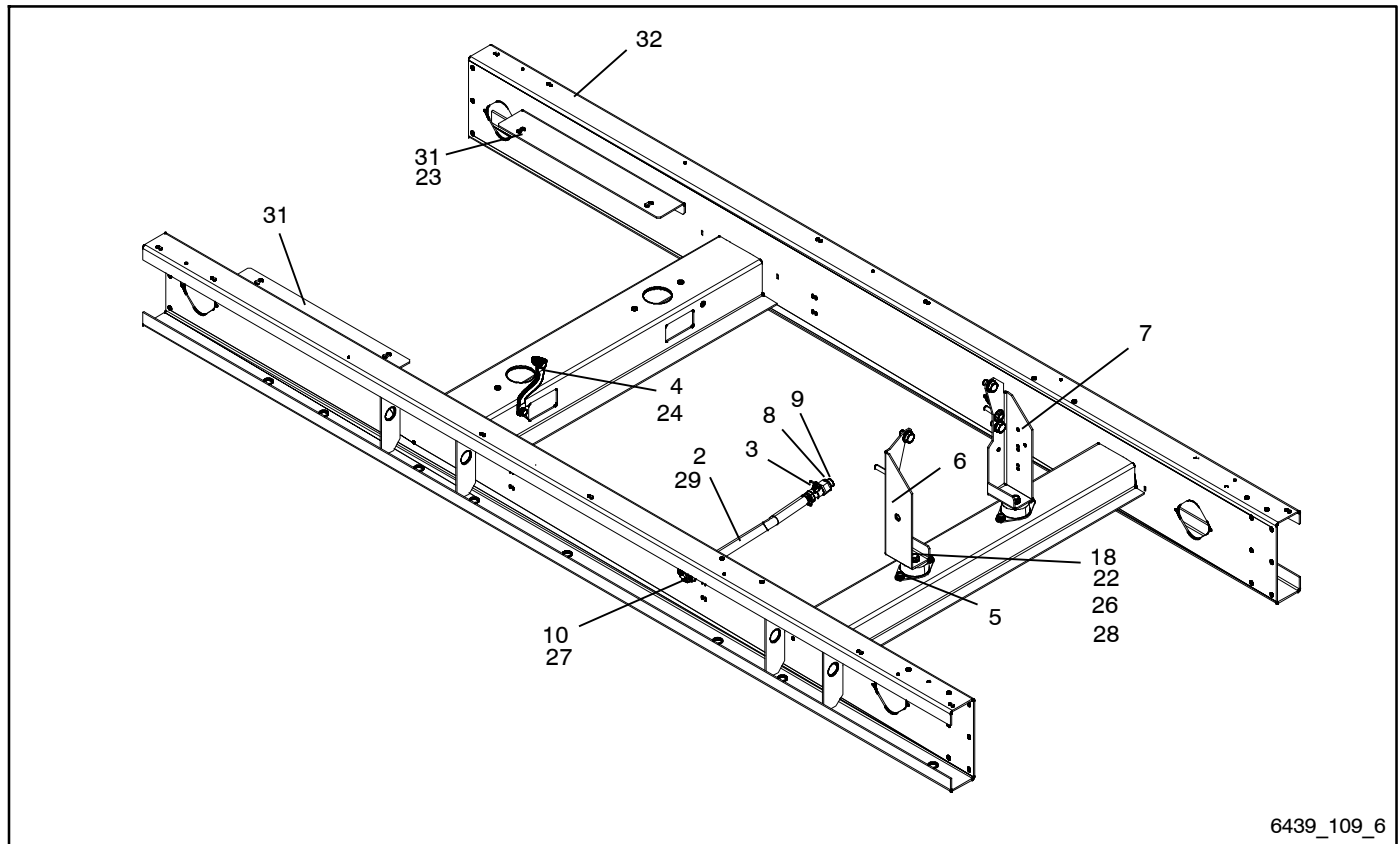
GM70385

Item	Part Number	Description	Quantity
			Module Number GM70385-MA1
2	272701	Valve, oil drain (1/2-14 nptf)	1
3	290418	Strap, ground (8 in.)	3
4	324389	Vibromount	2
5	GM22369	Support, Engine (R.H.)	1
6	GM22370	Support, Engine (L.H.)	1
7	GM40116	Adapter Bushing	1
8	GM42443	Washer, Sealing	1
9	GM59015	Fitting, Bulkhead Drain	1
16	M931-12100-60	Screw, hex cap	2
20	M982-12-80	Nut, hex elastic stop	2
21	X-22-14	Washer, lock, .391 ID x .975 in. OD	4
22	X-25-103	Washer, plain, .531 ID x 2.75 in. OD	2
24	X-400-154	Spacer, .527 ID x .625 OD x 2.3 in.	2
25	X-426-10	Clamp, hose, .5/1 in.	2
26	X-577-6	Hose, rubber, straight, .62 in. ID	1
23	X-75-58	Plug, Pipe	1
28	GM70530	Skid 44"	1
29	GM64117	Support, Junction Box	2

Group 109: Skid and Plant Mounting, continued

180/200 kW

Find the installed module number on the generator set nameplate.

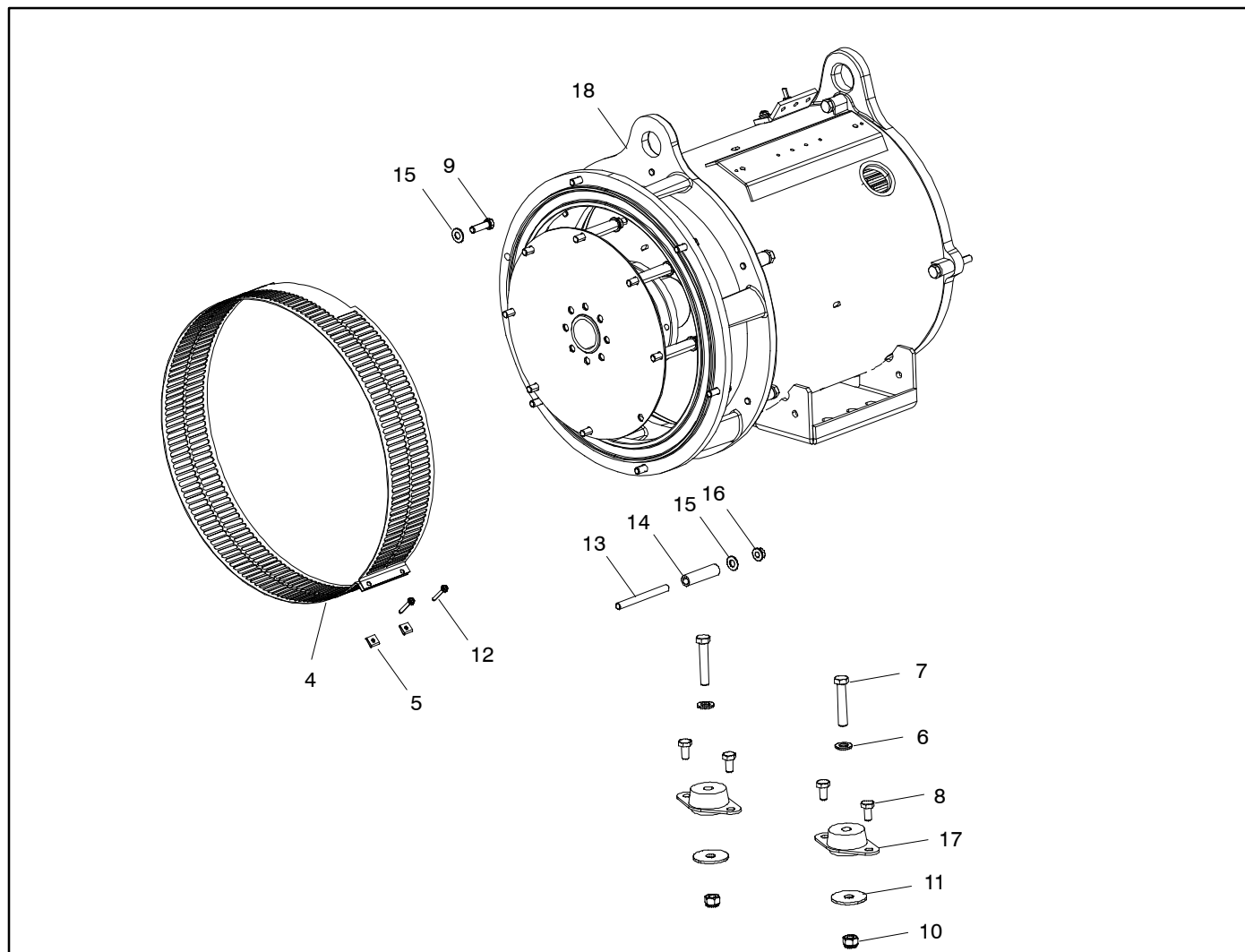


6439_109_6

Item	Part Number	Description	Quantity		
			Module Number		
			GM70804-MA1	GM70804-MA2	GM70804-MA3
2	X-577-24	Hose, rubber, straight, .62 in. ID	1	1	1
3	272701	Valve, oil drain (1/2-14 nptf)	1	1	1
4	290418	Strap, ground (8 in.)	3	3	3
5	324389	Vibromount	2	2	2
6	GM39284	Support, Engine (RH)	1	1	1
7	GM39285	Support, Engine (LS)	1	1	1
8	GM40116	Adapter Bushing	1	1	1
9	GM42443	Washer, Sealing	1	1	1
10	GM59015	Fitting, Bulkhead Drain	1	1	1
18	M931-12090-60	Screw, hex cap	2	2	2
22	M982-12-80	Nut, hex elastic stop	2	2	2
23	X-22-14	Washer, lock, .391 ID x .975 in. OD	2	2	2
24	X-22-16	Washer, lock, .326 ID x .883 in. OD	3	3	3
26	X-25-103	Washer, plain, .531 ID x 2.75 in. OD	2	2	2
27	X-75-58	Plug, Pipe	1	1	1
28	X-400-154	Spacer, .527 ID x .625 OD x 2.3 in.	2	2	2
29	X-426-10	Clamp, hose, .5/1 in.	2	2	2
30	X-781-15	Rivet, pop, .187 in.	2	2	2
31	GM77934	Support, Junction Box			2
31	GM63118	Support, Junction Box	2		
31	GM70408	Support, Junction Box		2	
32	GM70800	Skid			1
32	GM70799	Skid	1		
32	GM70800	Skid		1	

Group 201: Alternator and Mounting

4P/4Q Alternator Modules GM57159-



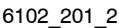
Item	Part Number	Description	Qty.
4	257046	Guard, generator fan	1
5	257442	Clip, speed	2
6	M125A-12-80	Washer, plain	2
7	M931-12065-60	Screw, hex cap	2
8	M933-10025-60	Screw, hex cap	4
9	M933-10035-82	Screw, hex cap	6
10	M982-12-80	Nut, hex elastic stop	2
11	X-25-141	Washer, plain	2
12	X-67-125	Screw, hex washer, thread-forming	2
13	X-352-63	Stud, 3/8-16 x 4 in.	8
14	X-400-132	Spacer, 0.406 ID x 0.625 OD x 2.531 in.	8
15	X-801-3	Washer, hardened, 0.406 ID x 0.812 OD	14
16	X-6210-9	Nut, flange spiralock, 3/8-16	8
17	See chart below	Vibromount	2
18	See chart below	Alternator assembly	1

Alternator Module Parts

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

Module No.	Alternator Description	Item 17, Vibromount	Item 18, Alternator Assembly
GM57159-MA20	4P5	324073	GCC-257719
GM57159-MA21	4Q5, 600 V	324073	GC58668-2
GM57159-MA22	4Q5	324073	GCB-360736

4P/4Q Alternators



Group 201: Alternator and Mounting, continued

Item	Part Number	Description	Qty.
1	B-257099	PCB assembly, LED, FRII	1
2	See chart below	Rotor assembly	1
3	B-258545	Heatsink	1
4	X-758-2	Bearing, ball	1
5	GM34505	PCB assembly, photo receiver	1
6	X-101-24	Nut, hex elastic stop, 6-32	5
7	X-117-5	Screw, hex head machine	2
8	X-22-44	Washer, lock, 0.262 ID x 0.743 in. OD	2
9	X-22-9	Washer, lock, 0.20 ID x 0.373 in. OD	2
10	X-25-93	Washer, plain, 0.406 ID x 0.75 in. OD	14
11	X-283-7	Terminal, ring, male, 22-16 AWG	4
11	X-431-25	Terminal, fast-on, female	4
12	X-6071-1	Screw, Phillips pan head	4
13	X-67-133	Screw, hex washer, thread-forming	3
14	243321	Washer, insulating, 0.195 ID x 0.5 in.	2
15	257015	Disc, drive	2
16	257018	Adapter, generator	1
17	257077	Actuator, magnetic cup	1
18	GC257080	Exciter field assembly	1
19	257258	Cover, FR LED circuit board	1
20	X-791-5	Screw, hex head machine	1
21	X-801-3	Washer, hardened, 0.406 ID x 0.812 in.	8
22	See chart below	Stator assembly	1
23	257850	Insulator	1
24	257984	Bracket, end	1
25	See chart below	Connector, lead	1
26	270956	Bolt, hex cap	8
27	347697	Fan, alternator	1
28	X-465-8	Screw, hex cap	3
29	X-456-16	Screw, hex cap	1
30	X-125-34	Screw, hex cap	4
31	X-6238-11	Screw, hex cap	4
32	X-6238-6	Screw, hex cap	4
33	X-6238-6	Screw, hex cap	6
34	347119	Fitting, grease	1
35	X-801-3	Washer, hardened, 0.406 ID x 0.812 in. (4UA alternators)	4

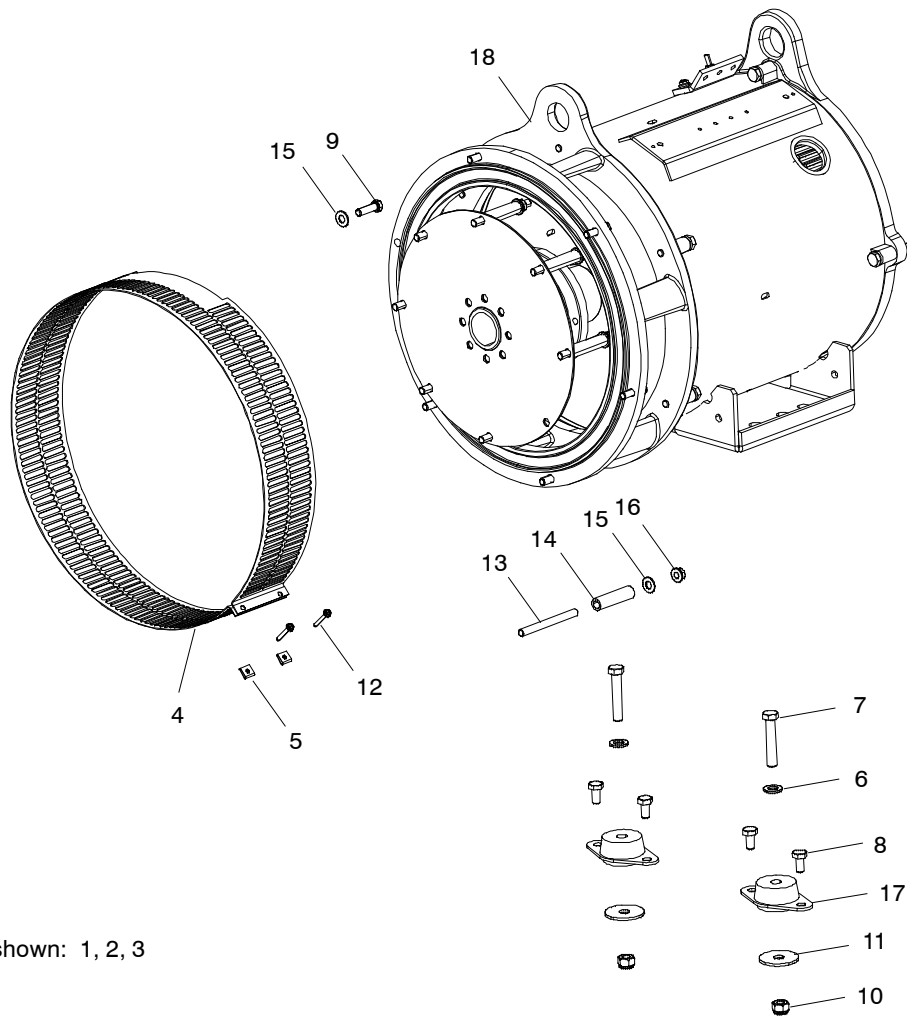
Alternator Part Number and Mount Type

Use this table to identify the part numbers of items 2, 22, and 25.

Module Number	Alternator Description	Alternator Assembly	Item 2 Rotor Assembly	Item 22, Stator Assembly	Item 25, Lead Connector
GM57159-MA20	4P5	GCC-257719	GCA-258979	GC257766	257986
GM57159-MA21	4Q5, 600 V	GC58668-2	GCA-258979	GC58667-2	257986
GM57159-MA22	4Q5	GCB-360736	GCA-258979	GC360748	257985

Group 201: Alternator and Mounting, continued

4P_X/4Q_X Alternator Modules GM77219-, GM77220-



Items not shown: 1, 2, 3

GM77219
GM77220

Item	Part Number	Description	Qty.
1	X-750-14	Marker, wire L1 (not shown)	1
2	X-750-15	Marker, wire L2 (not shown)	1
3	X-750-16	Marker, wire L3 (not shown)	1
4	257046	Guard, generator fan	1
5	257442	Clip, speed	2
6	M125A-12-80	Washer, plain	2
7	M931-12065-60	Screw, hex cap	2
8	M933-10020-60	Screw, hex cap	4
9	M933-10035-82	Screw, hex cap	6
10	M982-12-80	Nut, hex elastic stop	2
11	X-25-140	Washer, plain, 0.531 ID x 2 in. OD	2
12	X-67-125	Screw, hex washer, thread-forming	2
13	X-352-63	Stud, 3/8-16 x 4 in.	8
14	X-400-132	Spacer, 0.406 ID x 0.625 OD x 2.531 in.	8
15	X-801-3	Washer, hardened, 0.406 ID x 0.812 OD	14
16	X-6210-9	Nut, flange spirallock, 3/8-16	8
17	See chart page 61	Vibromount	2
18	See chart page 61	Alternator assembly	1

Group 201: Alternator and Mounting, continued

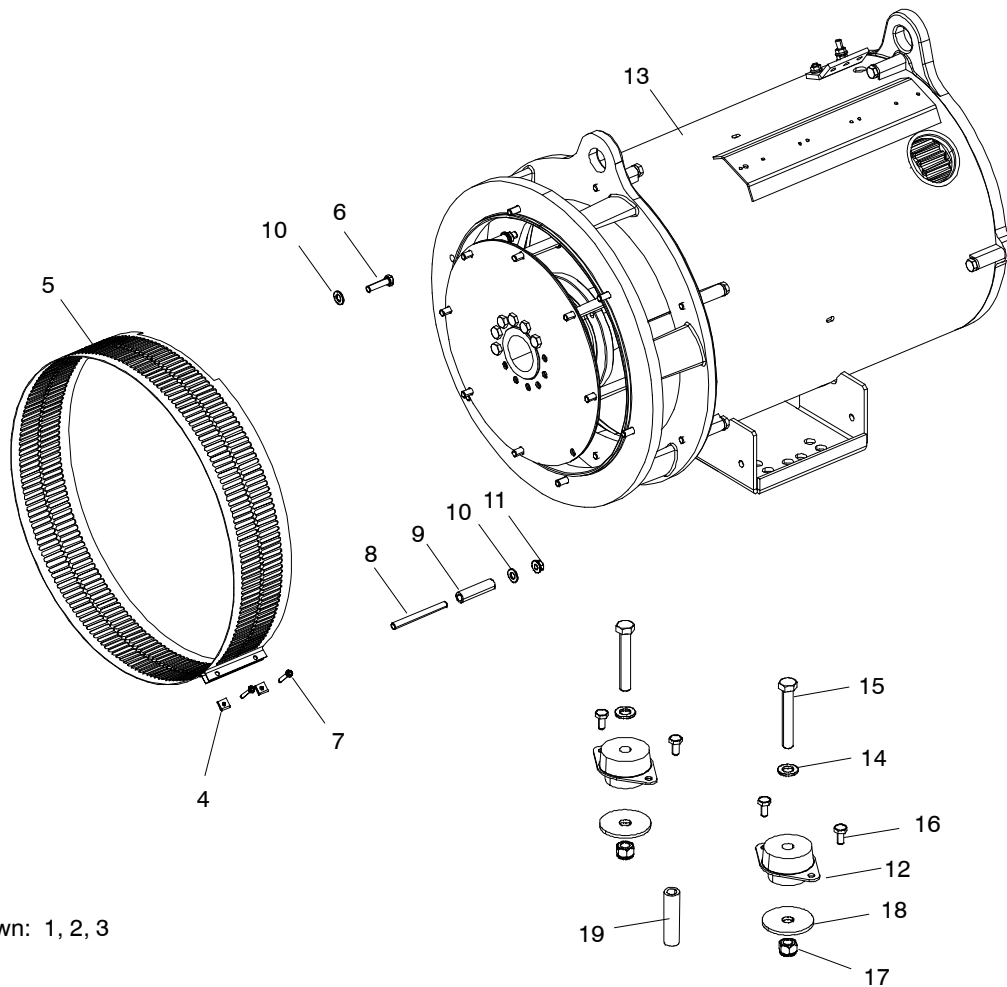
4P_X/4Q_X Alternator Modules GM77219-, GM77220-, GM57159- Alternator Module Parts

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

Module No.	Alternator Description	Item 17, Vibromount	Item 18, Alternator Assembly
GM77219-MA1	4P4X	276310	GC70113-1
GM77219-MA2	4P4X, 600 V	276310	GC70113-3
GM77219-MA3	4Q4X	276310	GC70113-5
GM77219-MA4	4P5X	324073	GC70113-7
GM77219-MA5	4P5X, 600 V	324073	GC70113-9
GM77219-MA6	4Q5X	324073	GC70113-11
GM77219-MA7	4P7BX	324074	GC70113-19
GM77219-MA8	4P7BX, 600 V	324074	GC70113-21
GM77219-MA9	4Q7BX	324074	GC70113-23
GM77219-MA10	4P10X	324075	GC70113-31
GM77219-MA11	4P10X, 600 V	324075	GC70113-34
GM77219-MA12	4Q10X	324075	GC70113-37
GM77219-MA13	4P7BX	324074	GC70113-20
GM77219-MA14	4P7BX, 600 V	324074	GC70113-22
GM77219-MA15	4Q7BX	324074	GC70113-24
GM77219-MA16	4P10X	324075	GC70113-32
GM77219-MA17	4P10X, 600 V	324075	GC70113-35
GM77219-MA18	4Q10X	324075	GC70113-38
GM77219-MA19	4P8X	324074	GC70113-25
GM77219-MA20	4P8X, 600 V	324074	GC70113-27
GM77219-MA21	4Q8X	324074	GC70113-29
GM77219-MA22	4P8X	324074	GC70113-26
GM77219-MA23	4P8X, 600 V	324074	GC70113-28
GM77219-MA24	4Q8X	324074	GC70113-30
GM77219-MA24	4Q8X	324074	GC70113-30
GM77219-MA25	4P7BX	324075	GC70113-20
GM77219-MA26	4Q7BX	324075	GC70113-24
GM77219-MA27	4P8X	324075	GC70113-26
GM77219-MA28	4Q8X	324075	GC70113-30
GM77220-MA1	4P10X	324075	GC70113-33
GM77220-MA2	4P10X, 600 V	324075	GC70113-36

Group 201: Alternator and Mounting, continued

4R_X/4T_X Alternator Modules GM77931-



Items not shown: 1, 2, 3

GM77931

Item	Part Number	Description	Qty.
1	X-750-14	Marker, wire L1 (not shown)	1
2	X-750-15	Marker, wire L2 (not shown)	1
3	X-750-16	Marker, wire L3 (not shown)	1
4	257442	Clip, speed	2
5	GM70117	Guard, generator fan	1
6	M933-10035-82	Screw, Hex Cap	6
7	X-67-125	Screw, hex washer, thread-forming	2
8	X-352-63	Stud, 3/8-16 x 4 in.	8
9	X-400-132	Spacer, 0.406 ID x 0.625 OD x 2.531 in.	8
10	X-801-3	Washer, hardened, 0.406 ID x 0.812 OD	14
11	X-6210-9	Nut, flange spiralock, 3/8-16	8
12	See chart page 63	Vibromount	2
13	See chart page 63	Alternator assembly	1
14	See chart page 63	Washer, plain	2
15	See chart page 63	Screw, hex cap	2
16	See chart page 63	Screw, hex cap	4
17	See chart page 63	Nut, hex elastic stop	2
18	See chart page 63	Washer, plain	2
19	See chart page 63	Spacer	2

Group 201: Alternator and Mounting, continued

4R_X/4T_X Alternator Modules GM77931- Alternator Module Parts

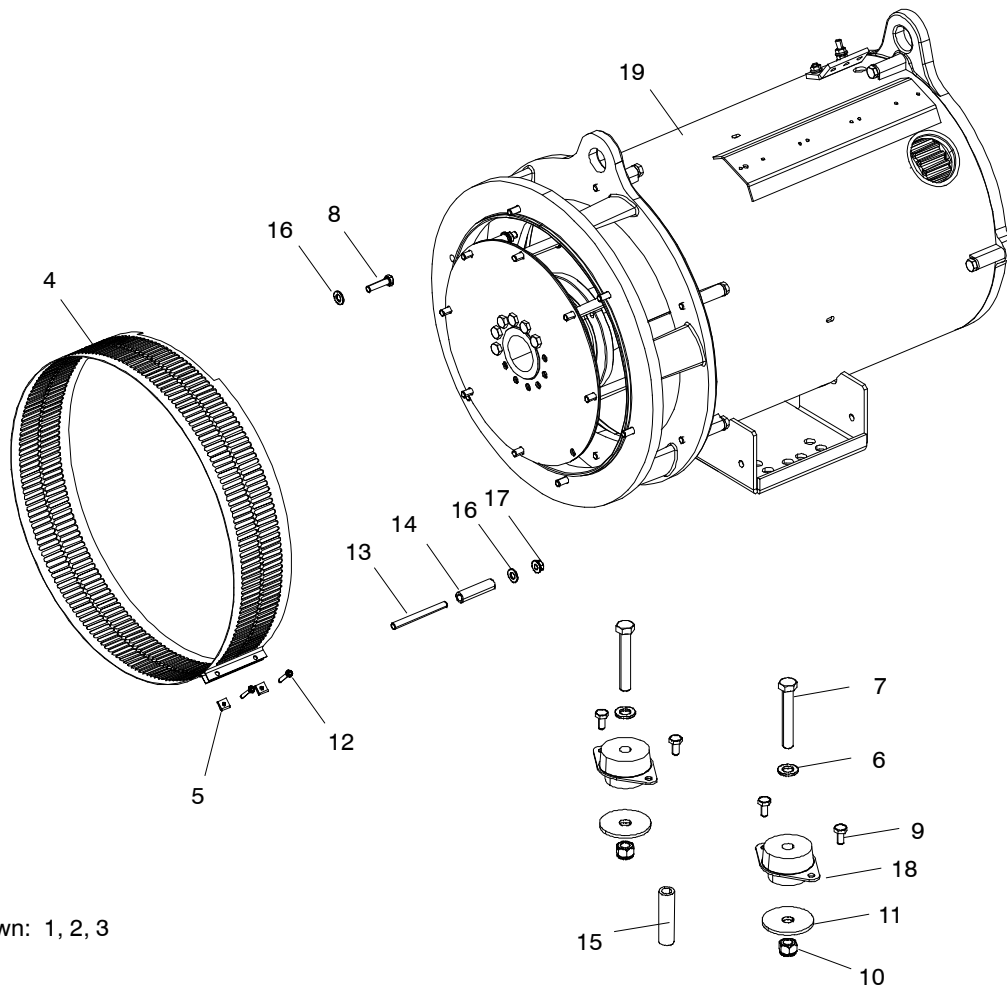
Use this table to identify the module number's alternator part number and vibromount part number.

Module No.	Alternator Description	Item 12, Vibromount	Item 13, Alternator Assembly	Item 14, Washer	Item 15, Screw, Hex Cap
GM77931-MA1	4R9X	324391	GC70164-2	M125A-16-80	M931-16100-60
GM77931-MA2	4R9X, 600V	324391	GC70164-4	M125A-16-80	M931-16100-60
GM77931-MA3	4T9X	324391	GC70164-6	M125A-16-80	M931-16100-60
GM77931-MA4	4R12X	336024	GC70164-8	M125A-16-80	M931-16100-60
GM77931-MA5	4R12X, 600V	336024	GC70164-11	M125A-16-80	M931-16100-60
GM77931-MA6	4T12X	336024	GC70164-14	M125A-16-80	M931-16100-60
GM77931-MA7	4R12X	324392	GC70164-8	M125A-12-80	M931-12110-60
GM77931-MA8	4R12X, 600V	324392	GC70164-11	M125A-12-80	M931-12110-60
GM77931-MA9	4R12X	324392	GC70164-14	M125A-12-80	M931-12110-60
GM77931-MA10	4R13X	324392	GC70164-17	M125A-12-80	M931-12110-60
GM77931-MA11	4R13X, 600V	324392	GC70164-21	M125A-12-80	M931-12110-60
GM77931-MA12	4T13X	324392	GC70164-25	M125A-12-80	M931-12110-60

Module No.	Alternator Description	Item 17, Nut	Item 16, Screw, Hex Cap	Item 18, Washer	Item 19, Spacer
GM77931-MA1	4R9X	M982-16-80	M933-10020-60	X-25-112	-
GM77931-MA2	4R9X, 600V	M982-16-80	M933-10020-60	X-25-112	-
GM77931-MA3	4T9X	M982-16-80	M933-10020-60	X-25-112	-
GM77931-MA4	4R12X	M982-16-80	M933-10020-60	X-25-112	-
GM77931-MA5	4R12X, 600V	M982-16-80	M933-10020-60	X-25-112	-
GM77931-MA6	4T12X	M982-16-80	M933-10020-60	X-25-103	-
GM77931-MA7	4R12X	M982-12-80	M933-12030-60	X-25-103	X-400-197
GM77931-MA8	4R12X, 600V	M982-12-80	M933-12030-60	X-25-103	X-400-197
GM77931-MA9	4R12X	M982-12-80	M933-12030-60	X-25-103	X-400-197
GM77931-MA10	4R13X	M982-12-80	M933-12030-60	X-25-103	X-400-197
GM77931-MA11	4R13X, 600V	M982-12-80	M933-12030-60	X-25-103	X-400-197
GM77931-MA12	4T13X	M982-12-80	M933-12030-60	X-25-103	X-400-197

Group 201: Alternator and Mounting, continued

4S_X Alternator Modules GM77932-, GM77933-



GM77932_A
GM77933_A

Item	Part Number	Description	Qty.
1	X-750-14	Marker, wire L1 (not shown)	1
2	X-750-15	Marker, wire L2 (not shown)	1
3	X-750-16	Marker, wire L3 (not shown)	1
4	257179	Guard, generator fan	1
5	257442	Clip, speed	2
6	M125A-12-80	Washer, plain	2
7	M931-12110-60	Screw, hex cap	2
8	M933-10035-82	Screw, Hex Cap	6
9	M933-12030-60	Screw, hex cap	4
10	M982-12-80	Nut, hex elastic stop	2
11	X-25-103	Washer, plain	2
12	X-67-125	Screw, hex washer, thread-forming	2
13	See chart page 65	Stud, 3/8-16 x 4 in.	8
14	See chart page 65	Spacer, 0.406 ID x 0.625 OD x 2.531 in.	8
15	X-400-197	Spacer, .532 ID x .75 OD x 2.88 in.	2
16	X-801-3	Washer, hardened, 0.406 ID x 0.812 OD	14
17	X-6210-9	Nut, flange spiralock, 3/8-16	8
18	See chart page 65	Vibromount	2
19	See chart page 65	Alternator assembly	1

Group 201: Alternator and Mounting, continued

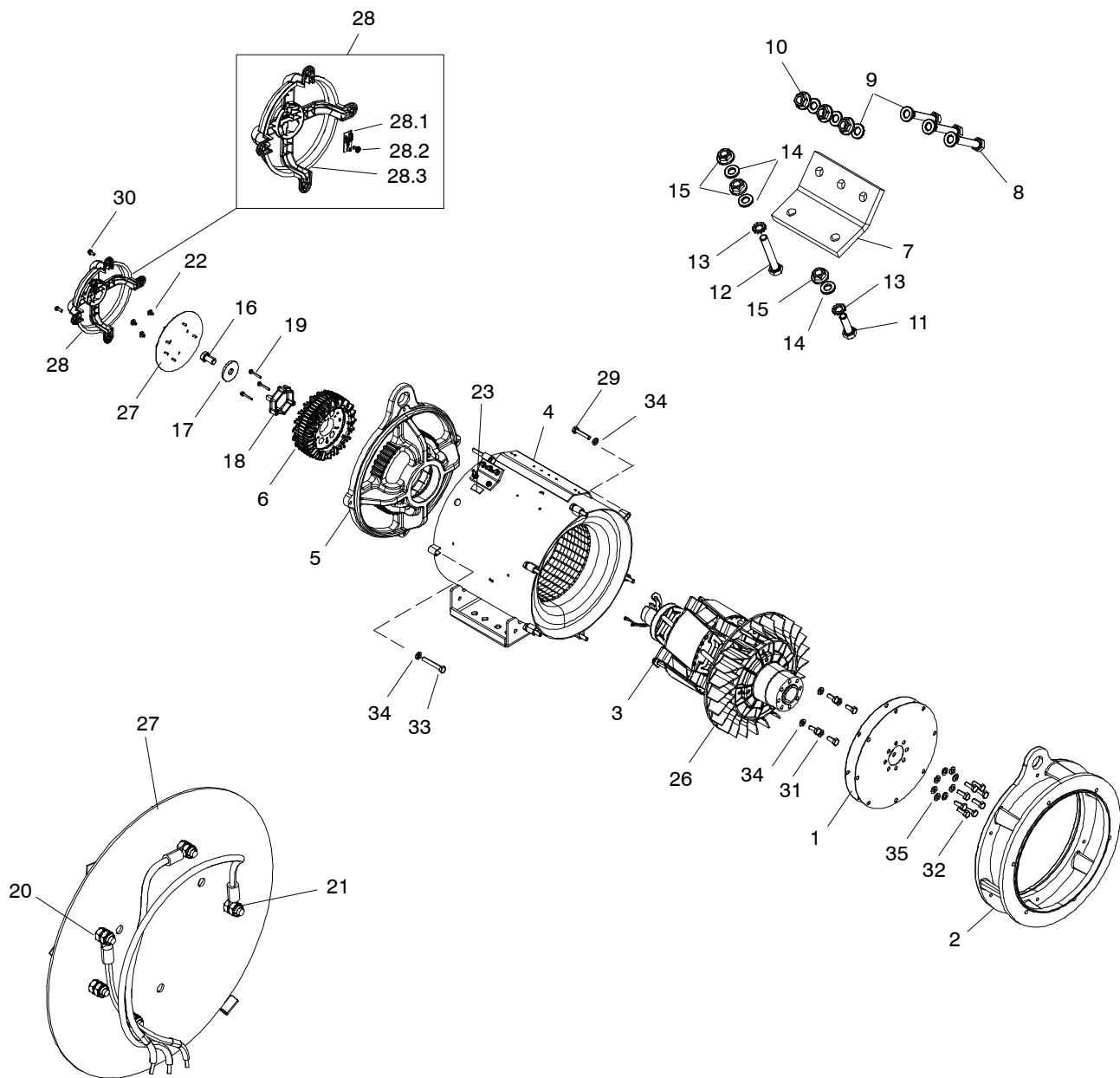
4S_X Alternator Modules GM77932-, GM77933- Alternator Module Parts

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

Module No.	Alternator Description	Item 13, Stud	Item 14, Spacer	Item 18, Vibromount	Item 19, Alternator Assembly
GM77932-MA1	4S12X	X-352-63	X-400-132	324392	GC70194-1
GM77932-MA2	4S12X, 600 V	X-352-63	X-400-132	324392	GC70194-4
GM77932-MA3	4S13X	X-352-63	X-400-132	324392	GC70194-11
GM77932-MA4	4S13X, 600 V	X-352-63	X-400-132	324392	GC70194-12
GM77933-MA1	4S12X	X-352-121	X-400-219	324392	GC70194-2
GM77933-MA2	4S12X, 600 V	X-352-121	X-400-219	324392	GC70194-5
GM77933-MA3	4S13X	X-352-121	X-400-219	324392	GC70194-7
GM77933-MA4	4S13X, 600 V	X-352-121	X-400-219	324392	GC70194-9

Group 201: Alternator and Mounting, continued

4P_X/4Q_X Alternators GC70113-



GC70113

Group 201: Alternator and Mounting, continued

4P_X/4Q_X Alternators GC70113-

Item	Part No.	Description	Qty.
1	See chart page 68	Disc, Drive	2
2	See chart page 68	Adapter, Generator	1
3	See chart page 68	Rotor Assembly	1
4	See chart page 68	Stator Assembly	1
5	See chart page 68	Bracket Assembly, End	1
6	See chart page 69	Exciter Armature, SCR	1
7	See chart page 69	Bus, Ground	1
8	See chart page 69	Screw, Hex Cap	3
9	See chart page 69	Washer, Plain	6
10	See chart page 69	Nut, Hex	3
11	M933-06020-60	Screw, hex cap	1
12	M933-06040-60	Screw, hex cap	1
13	M6797A-06-SS	Washer, Internal & External Tooth	2
14	M125A-06-80	Washer, Plain	7
15	M6923-06-80	Nut, Hex 6mm	3
16	M933-16030-82	Screw, hex cap	1
17	GM70070	Washer, FRX Exciter Mtg	1
18	GM70076	Spacer, FRX Activator	1
19	M7500D-05035-85	Screw, Metric Thread Forming	3
20	M934-04-SS	Nut, Hex (Stainless Steel)	5
21	M985-04-SS	Nut, Hex Elastic Stop	5
22	X-6071-8	Screw, Thread Forming	3
23	344295	Decal, equipment grd	1
26	347697	Fan, Alternator	1
27	GM72391	PCB Assy, World Alternator Activator	1
28	GM74218	Holder Assy, LED Optic Board	1
28.1	GM74198	PCB ASSY, Alt. LED Optic Board	1
28.2	M7500C-05010-83	Screw, Thread Forming Metric	1
28.3	GM74110	Holder, LED Optic Board	1
29	M931-10050-60	Screw, hex cap	6
30	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	4
31	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm EXP	4
32	M933-10030-82	Screw, hex cap	8
33	M933-10070-60	Screw, Hex Cap	4
34	X-25-93	Washer, plain .406ID x .75in. OD	14
35	X-801-3	Washer, hardened, .406 ID x .812 in. OD	8

Group 201: Alternator and Mounting, continued

4P_X/4Q_X Alternators GC70113-

Alternator Part Numbers and Components

Use this table to identify part numbers of items 1-5.

Alternator No.	Item				
	Item 1, Drive Disc	Item 2, Adapter	Item 3, Rotor Assy.	Item 4, Stator Assy.	Item 5, End Bracket
GC70113-1	257015	GM32007	GC70100-1	GC70110-1	GM70080-1
GC70113-2	257015	GM32006	GC70100-1	GC70110-1	GM70080-1
GC70113-3	257015	GM32007	GC70100-1	GC70111-1	GM70080-1
GC70113-4	257015	GM32006	GC70100-1	GC70111-1	GM70080-1
GC70113-5	257015	GM32007	GC70100-1	GC70112-1	GM70080-1
GC70113-6	257015	GM32006	GC70100-1	GC70112-1	GM70080-1
GC70113-7	257015	GM32007	GC70100-2	GC70110-2	GM70080-1
GC70113-8	257015	GM32006	GC70100-2	GC70110-2	GM70080-1
GC70113-9	257015	GM32007	GC70100-2	GC70111-2	GM70080-1
GC70113-10	257015	GM32006	GC70100-2	GC70111-2	GM70080-1
GC70113-11	257015	GM32007	GC70100-2	GC70112-2	GM70080-1
GC70113-12	257015	GM32006	GC70100-2	GC70112-2	GM70080-1
GC70113-13	257015	GM32007	GC70100-3	GC70110-3	GM70080-2
GC70113-14	257015	GM32006	GC70100-3	GC70110-3	GM70080-2
GC70113-15	257015	GM32007	GC70100-3	GC70111-3	GM70080-2
GC70113-16	257015	GM32006	GC70100-3	GC70111-3	GM70080-2
GC70113-17	257015	GM32007	GC70100-3	GC70112-3	GM70080-2
GC70113-18	257015	GM32006	GC70100-3	GC70112-3	GM70080-2
GC70113-19	257015	GM32007	GC70100-4	GC70110-4	GM70080-2
GC70113-20	257015	GM32006	GC70100-4	GC70110-4	GM70080-2
GC70113-21	257015	GM32007	GC70100-4	GC70111-4	GM70080-2
GC70113-22	257015	GM32006	GC70100-4	GC70111-4	GM70080-2
GC70113-23	257015	GM32007	GC70100-4	GC70112-4	GM70080-2
GC70113-24	257015	GM32006	GC70100-4	GC70112-4	GM70080-2
GC70113-25	257015	GM32007	GC70100-5	GC70110-5	GM70080-2
GC70113-26	257015	GM32006	GC70100-5	GC70110-5	GM70080-2
GC70113-27	257015	GM32007	GC70100-5	GC70111-5	GM70080-2
GC70113-28	257015	GM32006	GC70100-5	GC70111-5	GM70080-2
GC70113-29	257015	GM32007	GC70100-5	GC70112-5	GM70080-2
GC70113-30	257015	GM32006	GC70100-5	GC70112-5	GM70080-2
GC70113-31	257015	GM32007	GC70100-6	GC70110-6	GM70080-2
GC70113-32	257015	GM32006	GC70100-6	GC70110-6	GM70080-2
GC70113-33	257016	GM32006	GC70100-7	GC70110-6	GM70080-2
GC70113-34	257015	GM32007	GC70100-6	GC70111-6	GM70080-2
GC70113-35	257015	GM32006	GC70100-6	GC70111-6	GM70080-2
GC70113-36	257016	GM32006	GC70100-7	GC70111-6	GM70080-2
GC70113-37	257015	GM32007	GC70100-6	GC70112-6	GM70080-2
GC70113-38	257015	GM32006	GC70100-6	GC70112-6	GM70080-2
GC70113-39	257016	GM32006	GC70100-7	GC70112-6	GM70080-2

Group 201: Alternator and Mounting, continued

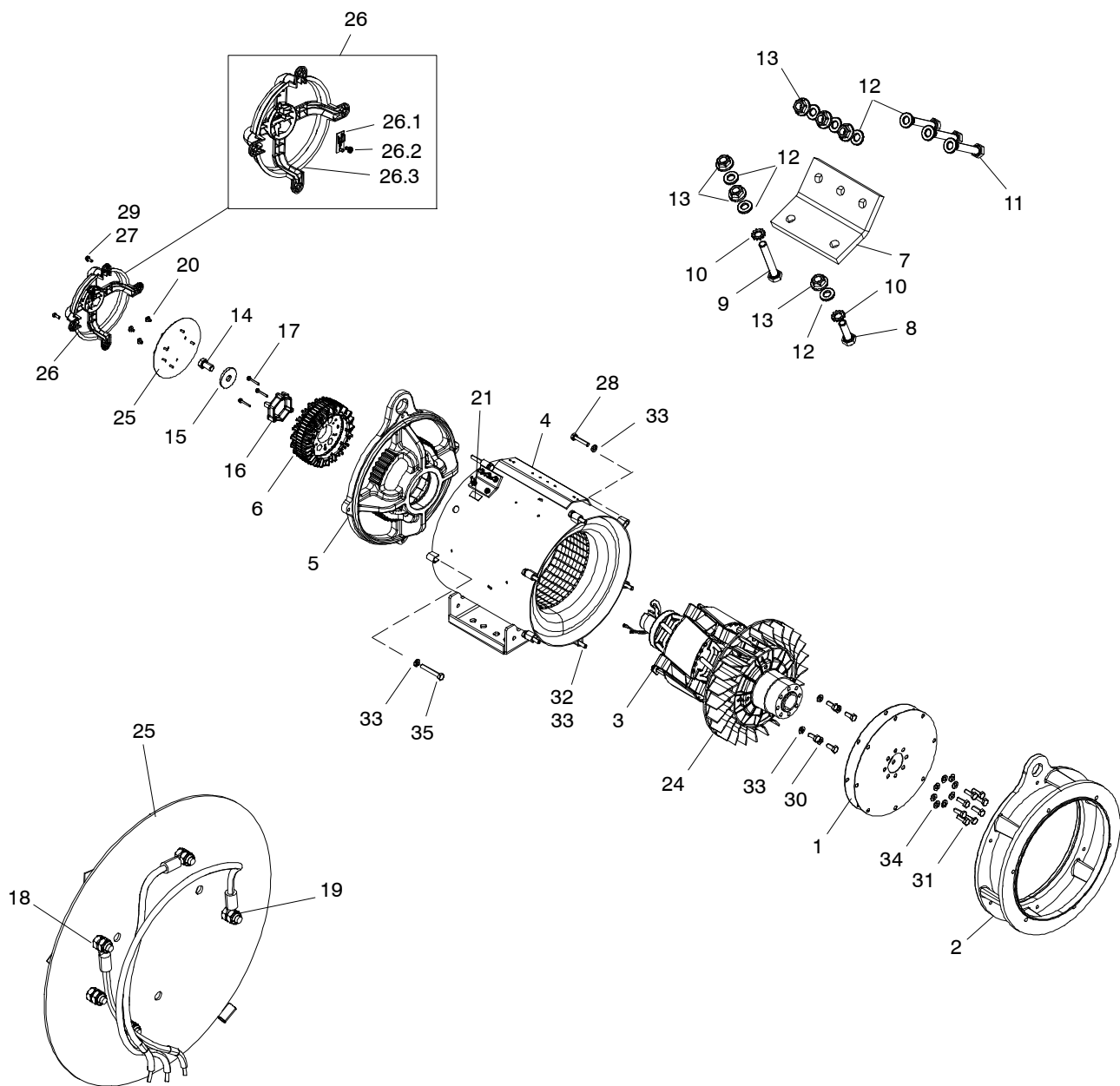
4P_X/4Q_X Alternators GC70113-
Alternator Part Numbers and Components

Use this table to identify part numbers of items 6-10.

Alternator No.	Assembly				
	Item 6, Exciter	Item 7, Ground Bus	Item 8, Screws	Item 9, Washers	Item 10, Nuts
GC70113-1	GC70064-1	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-2	GC70064-1	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-3	GC70064-1	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-4	GC70064-1	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-5	GC70064-1	257985	M933-08030-60	M125A-08-80	M6923-08-80
GC70113-6	GC70064-1	257985	M933-08030-60	M125A-08-80	M6923-08-80
GC70113-7	GC70064-1	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-8	GC70064-1	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-9	GC70064-1	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-10	GC70064-1	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-11	GC70064-1	257985	M933-08030-60	M125A-08-80	M6923-08-80
GC70113-12	GC70064-1	257985	M933-08030-60	M125A-08-80	M6923-08-80
GC70113-13	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-14	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-15	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-16	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-17	GC70064-2	257985	M933-08030-60	M125A-08-80	M6923-08-80
GC70113-18	GC70064-2	257985	M933-08030-60	M125A-08-80	M6923-08-80
GC70113-19	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-20	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-21	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-22	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-23	GC70064-2	257985	M933-08030-60	M125A-08-80	M6923-08-80
GC70113-24	GC70064-2	257985	M933-08030-60	M125A-08-80	M6923-08-80
GC70113-25	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-26	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-27	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-28	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-29	GC70064-2	257985	M933-08030-60	M125A-08-80	M6923-08-80
GC70113-30	GC70064-2	257985	M933-08030-60	M125A-08-80	M6923-08-80
GC70113-31	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-32	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-33	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-34	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-35	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-36	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-37	GC70064-2	257985	M933-08030-60	M125A-08-80	M6923-08-80
GC70113-38	GC70064-2	257985	M933-08030-60	M125A-08-80	M6923-08-80
GC70113-39	GC70064-2	257985	M933-08030-60	M125A-08-80	M6923-08-80

Group 201: Alternator and Mounting, continued

4S_X Alternators GC70194-



GC70194_C

Group 201: Alternator and Mounting, continued

4S_X Alternators GC70194-

Item	Part No.	Description	Qty.
1	See chart below	Disc, Drive	3
2	See chart below	Adapter, Generator	1
3	See chart below	Rotor Assembly	1
4	See chart below	Stator Assembly	1
5	GM70167	Bracket Assembly, End	1
6	GC70064-4	Exciter Armature, SCR	1
7	257978	Bus, Ground	1
8	M933-10030-60	Screw, hex cap	1
9	M933-10050-60	Screw, hex cap	1
10	M6797A-10-SS	Washer, Internal & External Tooth	2
11	M933-10035-60	Screw, Hex Cap	3
12	M125A-10-80	Washer, Plain	9
13	M6923-10-80	Nut, Hex 10mm	6
14	M933-16030-82	Screw, hex cap	1
15	GM70070	Washer, FRX Exciter Mtg	1
16	GM70076	Spacer, FRX Activator	1
17	M7500D-05035-85	Screw, Metric Thread Forming	3
18	M934-04-SS	Nut, Hex (Stainless Steel)	5
19	M985-04-SS	Nut, Hex Elastic Stop	5
20	X-6071-8	Screw, Thread Forming	3
21	344295	Decal, equipment grd	1
24	GM79507	Fan, Alternator	1
25	GM72391	PCB ASSY, World Alternator Activator	1
26	GM74218	Holder Assy, LED Optic Board	1
26.1	GM74198	PCB ASSY, Alt. LED Optic Board	1
26.2	M7500C-05010-83	Screw, Thread Forming Metric	1
26.3	GM74110	Holder, LED Optic Board	1
27	M125A-06-80	Washer, Plain	4
28	M931-10080-60	Screw, hex cap	5
29	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	4
30	M933-10025-60	Screw, hex cap, fully thrd M10 x 25mm EXP	4
31	M933-12040-82	Screw, hex cap	10
32	M931-10055-60	Screw, hex cap	1
33	X-25-93	Washer, plain .406ID x .75in. OD	14
34	290945	Washer, hardened, .531 ID x 1.06 in. OD	10
35	M933-10100-60	Screw, hex cap	4

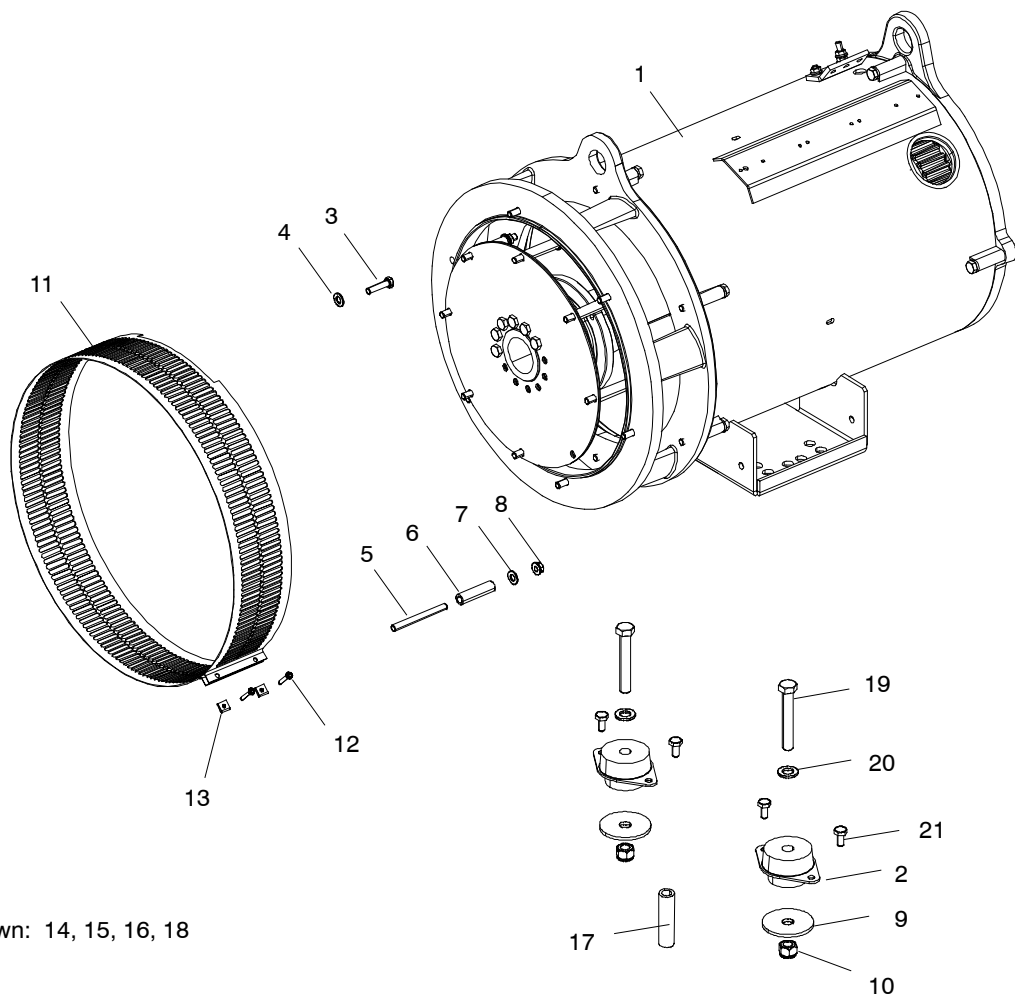
Alternator Part Number and Mount Type

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

Alternator No.	Assembly			
	Item 1, Drive Disc	Item 2, Adapter	Item 3, Rotor Assy.	Item 4, Stator Assy.
GC70194-1	GM70180	GM78317	GC70182-1	GC70192-1
GC70194-2	GM70180	GM78316	GC70182-1	GC70192-1
GC70194-3	GM70181	GM78315	GC70182-2	GC70192-1
GC70194-4	GM70180	GM78317	GC70182-1	GC70193-1
GC70194-5	GM70180	GM78316	GC70182-1	GC70193-1
GC70194-6	GM70181	GM78315	GC70182-2	GC70193-1
GC70194-7	GM70180	GM78316	GC70182-3	GC70192-2
GC70194-8	GM70181	GM78315	GC70182-4	GC70192-2
GC70194-9	GM70180	GM78316	GC70182-3	GC70193-2
GC70194-10	GM70181	GM78315	GC70182-4	GC70193-2
GC70194-11	GM70180	GM78317	GC70182-3	GC70192-2
GC70194-12	GM70180	GM78317	GC70182-3	GC70193-2

Group 201: Alternator and Mounting, continued

4UA Alternator Modules GM58642-



Items not shown: 14, 15, 16, 18

GM58642

Group 201: Alternator and Mounting, continued

4UA Alternator Modules GM58642-

Item	Part Number	Description	Qty.
1	See chart below	Alternator assembly	1
2	354622	Vibromount	2
3	M931-10040-82	Screw, hex cap	12
4	X-801-3	Washer, hardened, 0.406 ID x 0.812	12
5	X-352-121	Stud, 3/8-16 x 3.62 in.	8
6	X-400-219	Spacer, .406 ID x .625 OD x 2.156 in.	8
7	X-801-3	Washer, hardened, 0.406 ID x 0.812	8
8	X-6210-9	Nut, flange spiralock, 3/8-16	8
9	X-25-112	Washer, plain	2
10	M982-16-80	Nut, hex elastic stop	2
11	347268	Guard, generator fan	2
12	X-67-125	Screw, hex washer, thread-forming	4
13	257442	Clip, speed	4
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
17	X-400-251	Spacer	2
18	354717	Plate, generator mounting (not shown)	2
19	M931-16100-60	Screw, Hex Cap	2
20	X-25-112	Washer, plain	2
21	M931-12045-60	Screw, Hex Cap	4

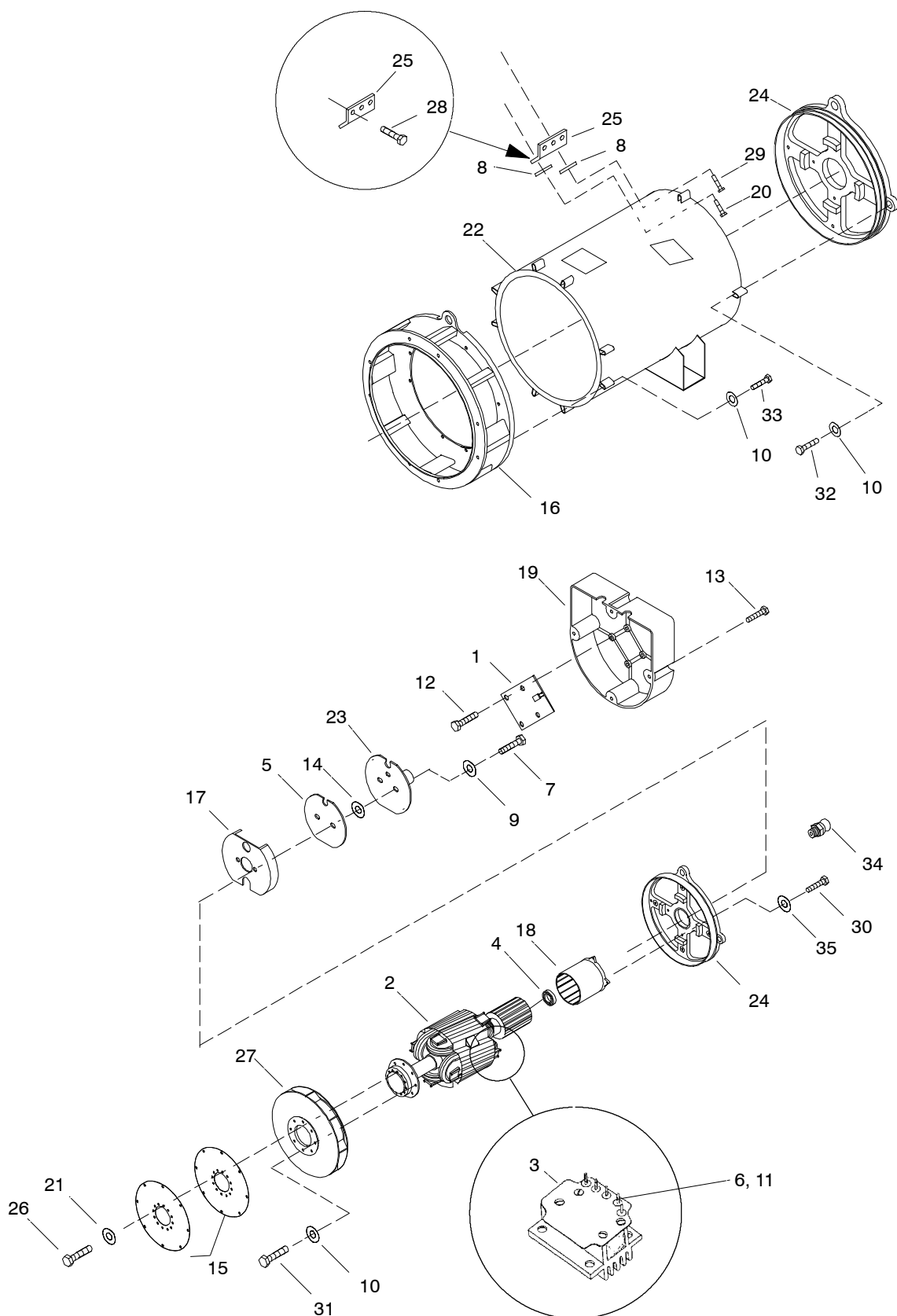
Alternator Module Parts

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

Module No.	Alternator Description	Item 1, Alternator Assembly
GM58642-MA33	4UA9	GC58673-11
GM58642-MA34	4UA9, 600 V	GC58673-12
GM58642-MA35	4UA13	GC58673-15
GM58642-MA36	4UA13, 600 V	GC58673-16

Group 201: Alternator and Mounting, continued

4UA Alternators GC58673-



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Group 201: Alternator and Mounting, continued

4UA Alternators GC58673-

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

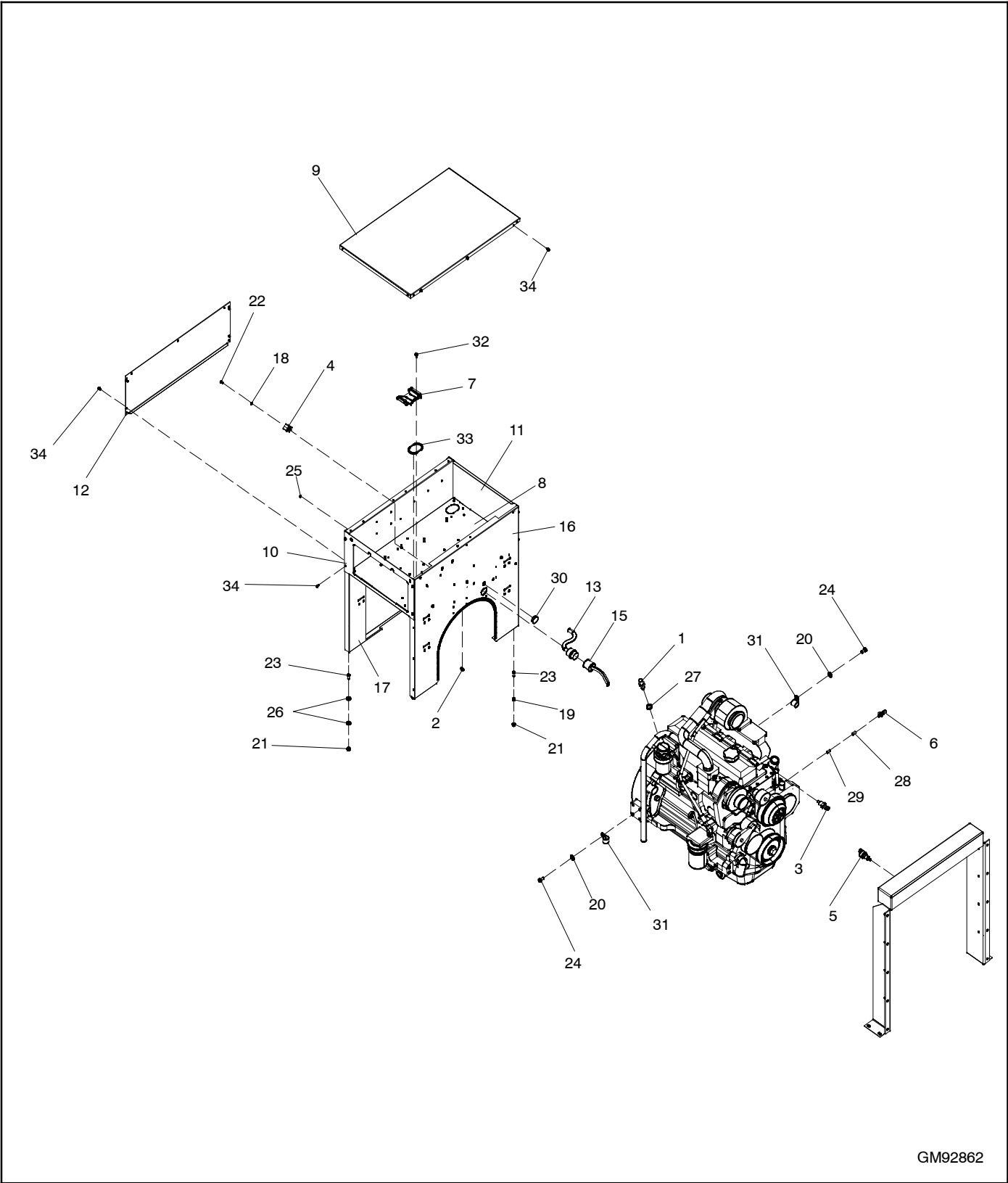
Alternator Part Number and Mount Type

Use this table to identify the part numbers of items 2, 22, and 25.

Alternator No.	Assembly		
	Item 2, Rotor Assembly	Item 22, Stator Assembly	Item 25, Lead Connector
GC58673-11	GCA-347191	GC58670-2	257978
GC58673-12	GCA-347191	GC58671-2	257978
GC58673-15	GCA-365222	GC58670-4	257979
GC58673-16	GCA-365222	GC58671-4	257978

Group 301: Control and Harness

40/50 kW, Decision-Maker 550



GM92862

Group 301: Control and Harness

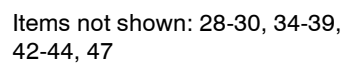
40/50 kW, Decision-Maker 550

Item	Part Number	Description	Quantity
			Module Number GM92862-MA1
1	255750	Pickup, magnetic	1
2	361567	Base, tie wrap snapin	2
3	GM31045-1	SENSOR, TEMP., 1/2-14 NPT, 0.65 PROBE	1
4	GM49746	Relay, 12 VDC	2
5	GM66270	Sensor, Low Coolant Level	1
6	GM70917	SENDER, PRESSURE	1
7	GM74531	GUARD, RODENT	1
8	GM76169	Panel, Junction Box (Shelf)	1
9	GM76170**	Cover, Junction Box (Top)	1
10	GM76172	PANEL, CONTROLLER FACE	1
11	GM76173	Cover, Controller (Left)	1
12	GM76175	Cover, Controller (Rear)	1
13	GM92807	HARNESS, J-BOX 50KW DEC550	1
15	GM92822	HARNESS, ENGINE 50 KW JD	1
16	GM92863	Panel, Junction Box (Front)	1
17	GM93002	Panel, Junction Box (Rear)	1
18	M125A-05-80	Washer, Plain	2
19	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	2
20	M125A-12-80	Washer, Plain	2
21	M6923-08-80	Nut, Hex 8mm	4
22	M7985A-05012-20	Screw, pan head mach.	2
23	M933-08020-60	Screw, Hex Cap	4
24	M933-12020-60	Screw, Hex Cap	2
25	M934-05-50	Nut, Hex 5mm	2
26	X-22-16	Washer, lock. 326 ID x .883 in. OD	4
27	X-25-145	Washer, plain, .859 ID x 1.185 in. OD	1
28	X-216-24	Coupling, pipe (1/8" npt)	1
29	X-217-6	Pipe (1/8" npt x .75")	1
30	X-301-35	Button, Plug	1
31	X-672-37	Clamp	2
32	X-794-1	Screw, hex wshr hd, drill 1/4-14 x 5/8	2
33	X-6033-5	Grommet, U-channel	1
34	X-6216-1	Screw, Phillips hex crimp tite	25

** 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 9)
GM92862-MA1-BLK	-BLK	GM76170-BLK

50/60 kW, Decision-Maker 550



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Group 301: Control and Harness, continued

50/60 kW, Decision-Maker 550

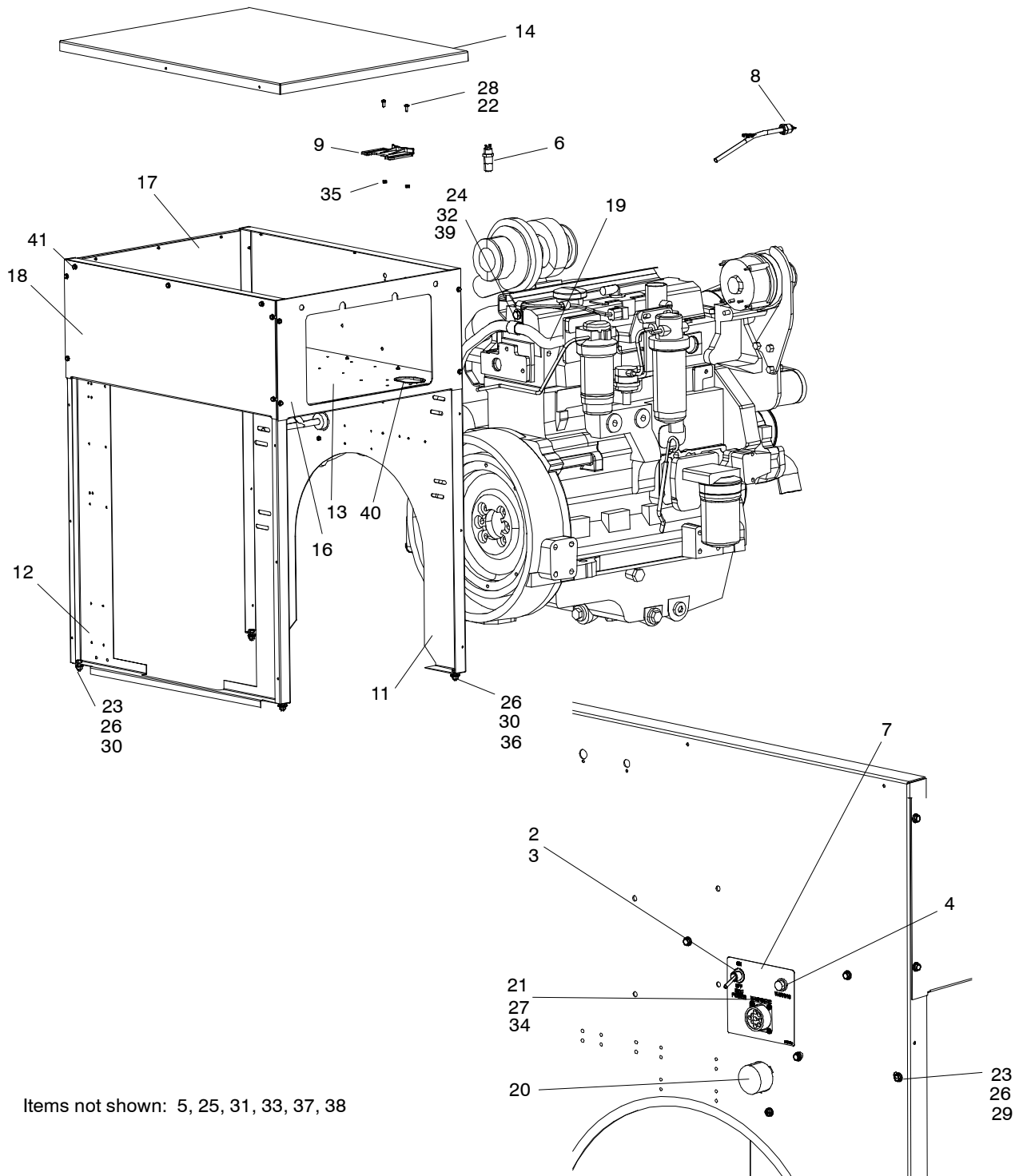
Item	Part Number	Description	Quantity
			Module Number GM76186-MA1
2	151511	Ring, lock switch	1
3	295030	Switch, toggle, 1 pole	1
4	343684	Lamp assy 28VDC yel/amb led	1
5	361567	Base, tie wrap snapin	2
6	365289	Sensor, Low Fluid Assembly	1
7	GM11694	O-ring, ISO 6149 (15.3mm ID)	1
8	GM38784-3	Vibromount, Controller	4
9	GM55368	Bracket, Mounting	1
10	GM59794	Switch, Low Water Temperature	1
11	GM62565	Decal, Diagnostic	1
12	GM74531	Guard, Rodent	1
14	GM76167**	Panel, Junction Box (Front)	1
15	GM76168	Panel, Junction Box (Rear)	1
16	GM76169	Panel, Junction Box (Shelf)	1
17	GM76170**	Cover, Junction Box (Top)	1
19	GM76172	Panel, Controller Face	1
20	GM76173	Cover, Controller (Left)	1
21	GM76175	Cover, Controller (Rear)	1
22	GM78234	Harness, Control Box 40-60KW JD	1
23	GM78236	Harness, Engine 40-60KW JD	1
24	M125A-03-60	Washer, Plain	4
25	M125A-05-80	Washer, Plain	2
26	M125A-06-80	Washer, Plain	6
27	M125A-08-80	Washer, Plain, 8.4 ID x 16.0 OD	4
28	M125A-12-80	Washer, Plain	5
29	M125A-16-80	Washer, Plain	1
30	M6923-06-80	Nut, Hex 6mm	4
31	M6923-08-80	Nut, Hex 8mm	4
32	M7985A-03012-20	Screw, pan head M3 X 12	4
33	M7985A-05012-20	Screw, pan head machine	2
34	M931-08055-60	Screw, Hex Cap	2
35	M933-06012-60	Screw	2
36	M933-06014-60	Screw, Hex Cap	4
37	M933-08020-60	Screw, Hex Cap	4
38	M933-12020-60	Screw, Hex Cap	5
39	M933-16035-60	Screw, Hex Cap	1
40	M934-03-50	Nut, Hex 3mm	4
41	M934-05-50	Nut, Hex 5mm	2
42	X-22-12	Washer, lock, .262 ID x .743 in.OD	8
43	X-22-16	Washer, lock, .326 ID x .883 in.OD	4
44	X-22-26	Washer,lock, .521 ID x 1.24 in. OD	1
45	X-672-10	Clamp, insulated, .5 in.	2
46	X-672-37	Clamp	4
47	X-672-38	Clamp	1
48	X-672-7	Clamp, insulated, .44 in.	2
49	X-6003-8	Conduit, convoluted	1
50	X-6033-5	Grommet, U-channel	1
51	X-6216-1	Screw, Phillips hex crimpite	28

** 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 14)
GM76186-MA1-BLK	-BLK	GM76167-BLK

Group 301: Control and Harness, continued

80-125 kW, Decision-Maker 550/6000



GM79232
GM79236
GM79243

Group 301: Control and Harness, continued

80–125 kW, Decision-Maker 550/6000

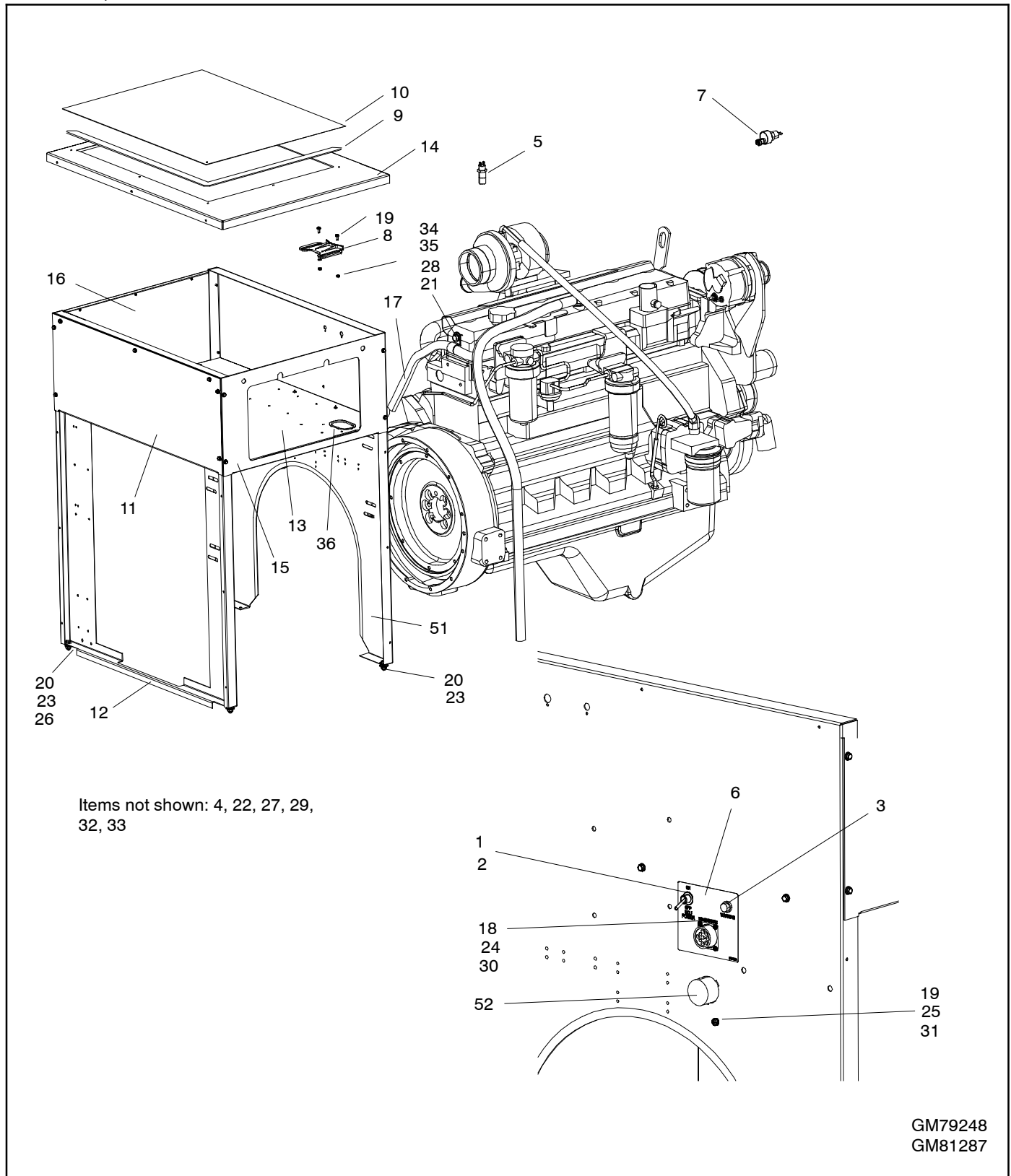
Item	Part Number	Description	Quantity				
			Module				
			GM79232-MA1	GM79243-MA1	GM79243-MA2	GM79236-MA1	GM79236-MA2
2	151511	Ring, lock switch	1	1	1	1	1
3	295030	Switch, toggle, 1 pole	1	1	1	1	1
4	343684	Lamp assy 28VDC yel/amb led	1	1	1	1	1
5	361567	Base, tie wrap snapin	2	2	2	2	2
6	GM51705	Switch, Low Water Temp.	1	1	1	1	1
7	GM62565	Decal, Diagnostic	1	1	1	1	1
8	GM66270	Sensor, Low Coolant Level	1	1	1	1	1
9	GM74531	Guard, Rodent	1	1	1	1	1
11	GM76167**	Panel, Junction Box (Front)	1				
11	GM76176**	Panel, Junction Box (Front)		1	1	1	1
12	GM76168	Panel, Junction Box (Rear)	1				
12	GM76177	Panel, Junction Box (Rear)		1	1	1	1
13	GM76169	Panel, Junction Box (Shelf)	1				
13	GM76178	Panel, Junction Box (Shelf)		1	1	1	1
14	GM76170**	Cover, Junction Box (Top)	1				
14	GM76179**	Cover, Junction Box (Top)		1	1	1	1
16	GM76172	Panel, Controller Face	1				
16	GM76180	Panel, Controller Face		1	1	1	1
17	GM76173	Cover, Controller (Left)	1				
17	GM76181	Cover, Controller (Left)		1	1	1	1
18	GM76175	Cover, Controller (Rear)	1	1	1	1	1
19	GM79686	Harness, Engine 180-125KW JD	1	1	1	1	1
20	GM75859	Harness, Control Box 80-200KW JD DEC 550	1	1		1	
20	GM81335	Harness, Control Box 80-200KW JD DEC 6000			1		1
21	M125A-03-60	Washer, Plain	4	4	4	4	4
22	M125A-05-80	Washer, Plain	3	3	3	3	3
23	M125A-08-80	Washer, Plain 8.4 ID X 16.0 OD	6	6	6	4	4
24	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	1	1	1	1	1
25	M125A-12-80	Washer, Plain	3	3	3	3	3
26	M6923-08-80	Nut, Hex 8mm	8	8	8	6	6
27	M7985A-03012-20	Screw, pan head M3 X 12	4	4	4	4	4
28	M7985A-05012-20	Screw, Pan Head Mach.	3	3	3	3	3
29	M931-08055-60	Screw, Hex Cap	2	2	2		
30	M933-08020-60	Screw, Hex Cap	4	4	4	4	4
31	M933-08025-60	Screw, Hex Cap	2	2	2	2	2
32	M933-10020-60	Screw, Hex Cap	1	1	1	1	1
33	M933-12020-60	Screw, Hex Cap	3	3	3	3	3
34	M934-03-50	Nut, Hex 3mm	4	4	4	4	4
35	M934-05-50	Nut, Hex 5mm	3	3	3	3	3
36	X-22-16	Washer, lock, .326 ID x .883 in. OD	4	4	4	4	4
37	X-22-26	Washer, Lock, .521 ID x 1.24 In. OD	1	1	1	1	1
38	X-672-32	Clamp, insulated, 1.06 in.	2	2	2	2	2
39	X-672-37	Clamp	3	3	3	3	3
40	X-6033-5	Grommet, U-channel	1	1	1	1	1
41	X-6216-1	Screw, Phillips hex crimpitpe	28	28	28	28	28

** 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 14)
GM79232-MA1-BLK	-BLK	GM76170-BLK
GM79243-MA1-BLK	-BLK	GM76179-BLK
GM79243-MA2-BLK	-BLK	GM76179-BLK
GM79236-MA1-BLK	-BLK	GM76179-BLK
GM79236-MA2-BLK	-BLK	GM76179-BLK

Group 301: Control and Harness, continued

150-200 kW, Decision-Maker 550/6000



Group 301: Control and Harness, continued

150-200 kW, Decision-Maker 550/6000

Item	Part Number	Description	Quantity									
			Module									
			GM79248-MA1	GM79248-MA2	GM79248-MA3	GM79248-MA4	GM81287-MA1	GM81287-MA2	GM82008-MA2	GM82008-MA1	GM88863-MA1	GM88863-MA2
1	151511	Ring, lock switch	1	1	1	1	1	1	1	1	1	1
2	295030	Switch, toggle, 1 pole	1	1	1	1	1	1	1	1	1	1
3	343684	Lamp assy 28VDC yel/amb led	1	1	1	1	1	1	1	1	1	1
4	361567	Base, tie wrap snapin	2	2	2	2	5	5	3	3	2	2
5	GM51705	Switch, Low Water Temp.	1	1	1	1					1	1
5	361956	Switch, Low Water Temp.					1	1	1	1		
5	365499	O-ring, ISO 6149 (11.3mm ID)					1	1	1	1		
6	GM62565	Decal, Diagnostic	1	1	1	1	1	1	1	1	1	1
7	GM66270	Sensor, Low Coolant Level	1	1	1	1	1	1	1	1	1	1
8	GM74531	Guard, Rodent	1	1	1	1	1	1	1	1	1	1
9	GM75773	Gasket, Controller Cover							2	2		
10	GM76171	Panel, Junction Box (Top)							1	1		
11	GM76175	Cover, Controller (Rear)	1	1	1	1	1	1			1	1
11	GM75785	Cover, Controller (Rear)							1	1		
12	GM76177	Panel, Junction Box (Rear)	1	1	1	1	1	1			1	1
12	GM75777**	Junction Box							1	1		
13	GM76178	Panel, Junction Box (Shelf)	1	1	1	1	1	1			1	1
14	GM76179**	Cover, Junction Box (Top)	1	1	1	1	1	1			1	1
14	GM75781**	Cover, Junction Box (Top)							1	1		
15	GM76180	Panel, Controller Face	1	1	1	1	1	1			1	1
15	GM75783	Panel, Controller Face							1	1		
16	GM76181	Cover, Controller (Left)	1	1	1	1	1	1			1	1
16	GM75786	Cover, Controller (Left)							1	1		
17	GM79691	Harness, Engine 150KW JD Tier III	1	1	1	1					1	1
17	GM79931	Harness, Engine 180-200 kW JD Tier III					1	1				
17	GM82006	Harness, Engine 200 kW JD Tier III							1	1		
18	M125A-03-60	Washer, Plain	4	4	4	4	4	4	4	4	4	4
19	M125A-05-80	Washer, Plain	3	3	3	3	3	3	2	2	3	3
20	M125A-08-80	Washer, Plain 8.4 ID X 16.0 OD	4	4	4	4	4	4			4	4
21	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	1	1	1	1			3	3	1	1
22	M125A-12-80	Washer, Plain	4	4	4	4					4	4
23	M6923-08-80	Nut, Hex 8mm	6	6	6	6	6	6			6	6
23	M6923-10-80	Nut, Hex 10mm							4	4		
24	M7985A-03012-20	Screw, pan head M3 X 12	4	4	4	4	4	4	4	4	4	4
25	M7985A-05012-20	Screw, Pan Head Mach.	3	3	3	3	3	3	3	3	3	3
26	M933-08020-60	Screw, Hex Cap	4	4	4	4	4	4			4	4
26	M933-10030-60	Screw, Hex Cap							4	4		
27	M933-08025-60	Screw, Hex Cap	2	2	2	2					2	2
28	M933-10020-60	Screw, Hex Cap	1	1	1	1					1	1
29	M933-12020-60	Screw, Hex Cap	4	4	4	4					4	4
30	M934-03-50	Nut, Hex 3mm	4	4	4	4	4	4	4	4	4	4
31	M934-05-50	Nut, Hex 5mm	3	3	3	3	3	3	3	3	3	3
32	X-22-16	Washer, lock, .326 ID x .883 in. OD	4	4	4	4	4	4			4	4
33	X-22-26	Washer, Lock, .521 ID x 1.24 in. OD	1	1	1	1					1	1
36	X-6033-5	Grommet, U-channel	1	1	1	1	1	1	1	1	1	1
37	X-6216-1	Screw, Phillips hex crimpitite	28	28	28	28	28	28	30	30	28	28
34	X-672-32	Clamp, insulated, 1.06 in.	2	2	2	2					2	2
35	X-672-37	Clamp	4	4	4	4					4	4
51	GM76176**	Panel, Junction Box (Front) 4RX/4TX	1		1						1	
51	GM77548**	Panel, Junction Box (Front) 4S/4V/4SX		1		1	1	1				1
52	GM75859	Harness, Control Box 80-200KW JD	1	1								
52	GM81335	Harness, Control Box 80-300 kW JD			1	1		1				
52	GM75859	Harness, Control Box DEC 550/6000					1			1		
52	GM79145	Harness, Control Box DEC 550/6000							1			
52	GM88842	Harness, Control Box 180 JD DEC550									1	
52	GM88844	Harness, Control Box 180 JD DEC6000										1
52	GM75812	Plate, Harness Connector							1	1		

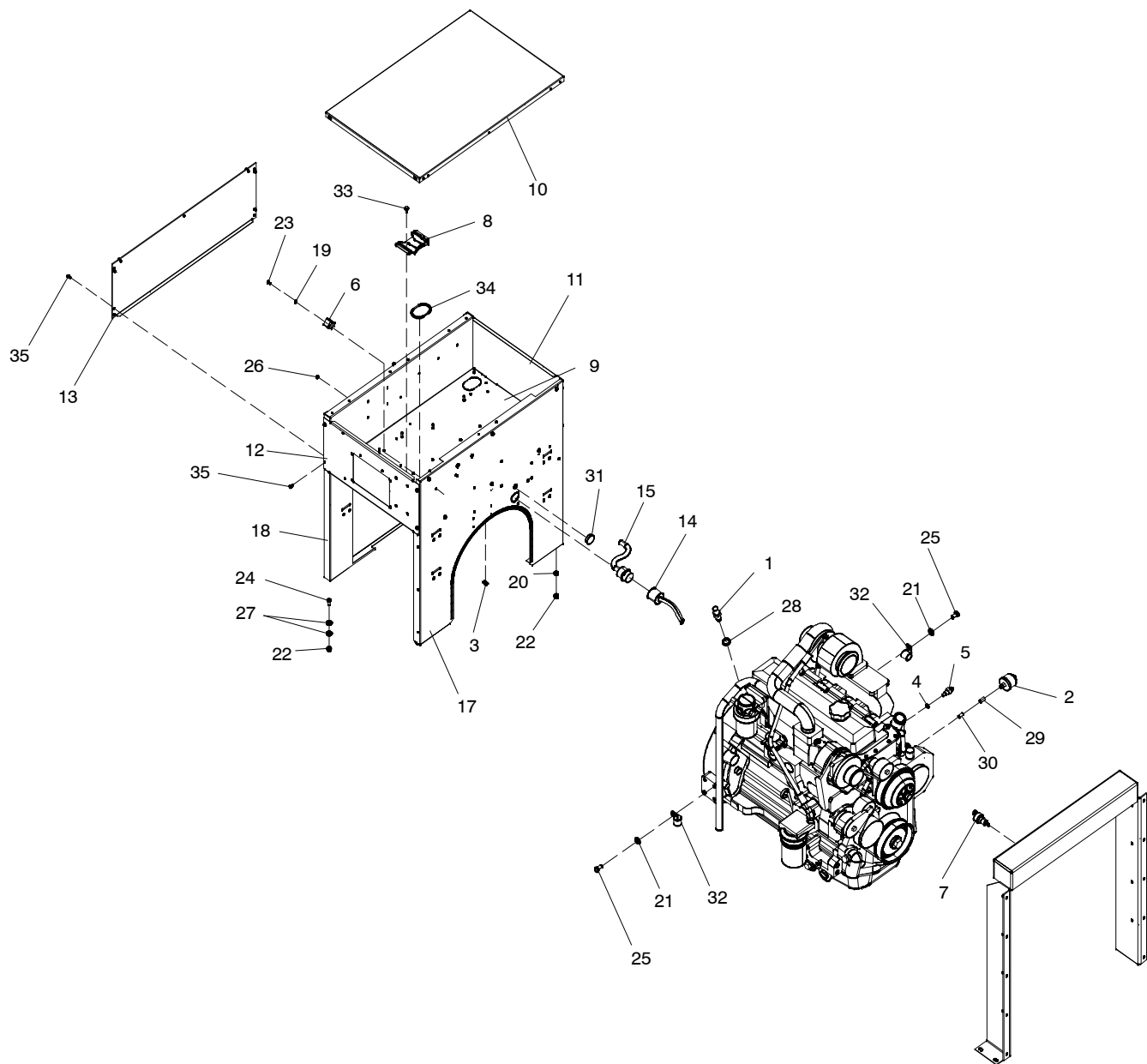
** Use the Kit number and chart below to identify the color suffix.
Add a suffix to this color dependant part number before ordering.

Kit No.	Color Dependant Parts	
	Part Number Suffix	Part Number Example (item 14)
GM79248-MA1-BLK	-BLK	GM76179-BLK
GM79248-MA2-BLK	-BLK	GM76179-BLK
GM79248-MA3-BLK	-BLK	GM76179-BLK
GM79248-MA4-BLK	-BLK	GM76179-BLK
GM88863-MA1-BLK	-BLK	GM76179-BLK
GM88863-MA2-BLK	-BLK	GM76179-BLK
GM81287-MA1-BLK	-BLK	GM76179-BLK
GM81287-MA2-BLK	-BLK	GM76179-BLK
GM82008-MA1-BLK	-BLK	GM75781-BLK
GM82008-MA2-BLK	-BLK	GM75781-BLK

Notes

Group 301: Control and Harness, continued

40/50 kW, APM402/Decision-Maker 3000



GM92861

Group 301: Control and Harness, continued

40/50 kW, APM402/Decision-Maker 3000

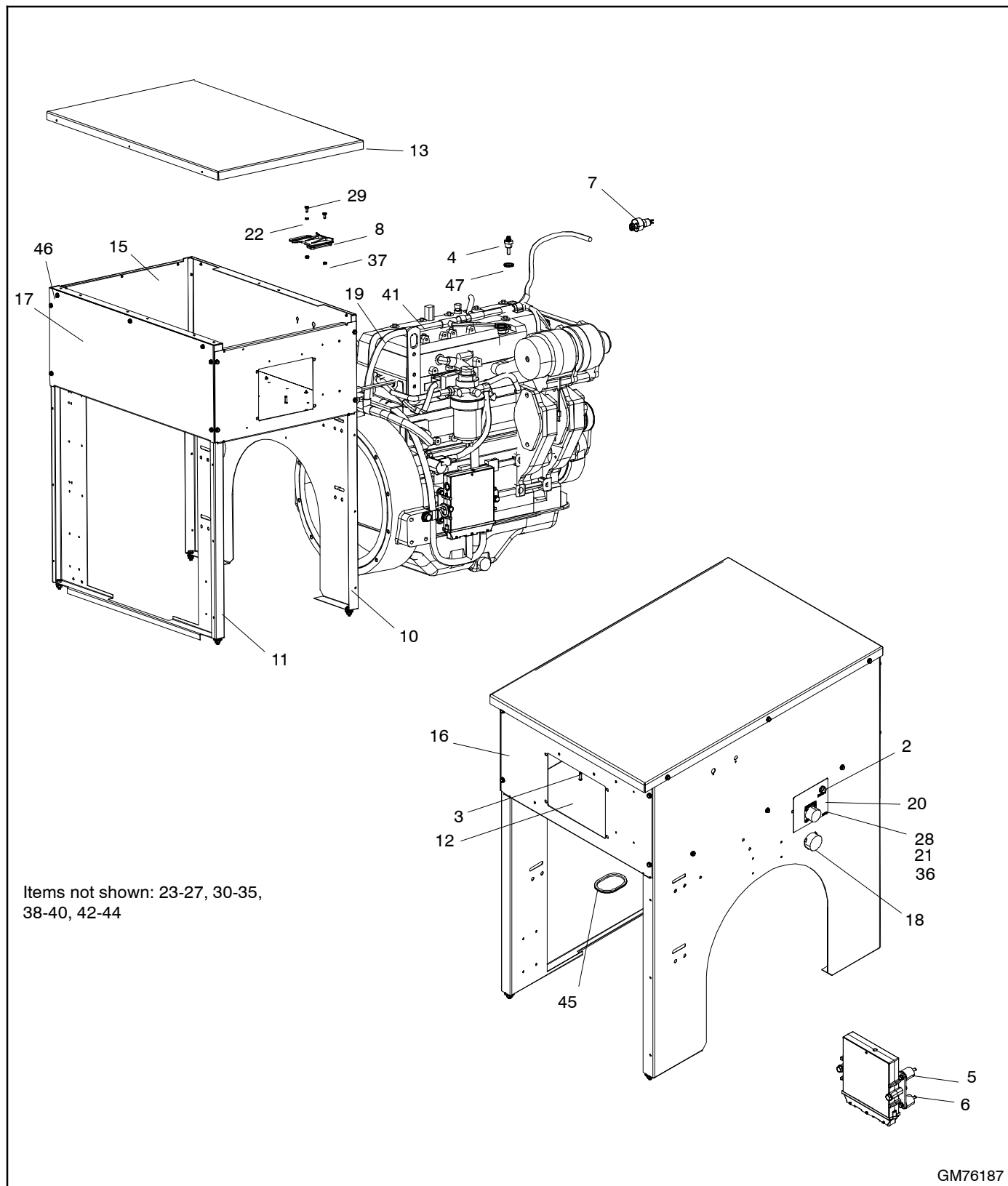
Item	Part Number	Description	Quantity	
			Module Number	
			GM92861-MA1	GM104377-MA1-BLK
1	255750	Pickup, magnetic	1	1
2	GM102100	Sender, oil pressure	1	1
3	361567	Base, tie wrap snapin	2	2
4	365499	O-ring, ISO 6149 (11.3mm ID)	1	1
5	GM10166	Sender, Temperature	1	1
6	GM49746	Relay, 12 VDC	2	2
7	GM66270	Sensor, Low Coolant Level	1	1
8	GM74531	Guard, Rodent	1	1
9	GM76169	Panel, Junction Box (Shelf)	1	1
10	GM76170**	Cover, Junction Box (Top)	1	1
11	GM76173	Cover, Controller (Left)	1	1
12	GM76174	Panel, J-Box DEC3000 Mnt (Right)	1	1
13	GM76175	Cover, Controller (Rear)	1	1
14	GM91262	Harness, Engine 50 kw	1	1
15	GM92806	Harness, J-box DEC3000	1	1
17	GM92863	Panel, Junction Box (Front)	1	1
18	GM93002	Panel, Junction Box (Rear)	1	1
19	M125A-05-80	Washer, Plain	2	2
20	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	2	2
21	M125A-12-80	Washer, Plain	2	2
22	M6923-08-80	Nut, Hex 8mm	4	4
23	M7985A-05012-20	Screw, pan head mach.	2	2
24	M933-08020-60	Screw, Hex Cap	4	4
25	M933-12020-60	Screw, Hex Cap	2	2
26	M934-05-50	Nut, Hex 5mm	2	2
27	X-22-16	Washer, lock.326 IDx.883 in.OD	4	4
28	X-25-145	Washer, plain, .859 ID x 1.185 in. OD	1	1
29	X-216-24	Coupling, pipe (1/8"npt)	1	1
30	X-217-6	Pipe (1/8"npt x .75")	1	1
31	X-301-35	Button, Plug	1	1
32	X-672-37	Clamp	2	2
33	X-794-1	Screw, hex wshr hd, drill 1/4-14 x 5/8	2	2
34	X-6033-5	Grommet, U-channel	1	1
35	X-6216-1	Screw, Phillips hex crimpite	25	25

** 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 10)
GM92861-MA1-BLK	-BLK	GM76170-BLK
GM104377-MA1-BLK	-BLK	GM76170-BLK

Group 301: Control and Harness, continued

50/60 kW, APM402/Decision-Maker 3000



Group 301: Control and Harness, continued

50/60 kW, APM402/Decision-Maker 3000

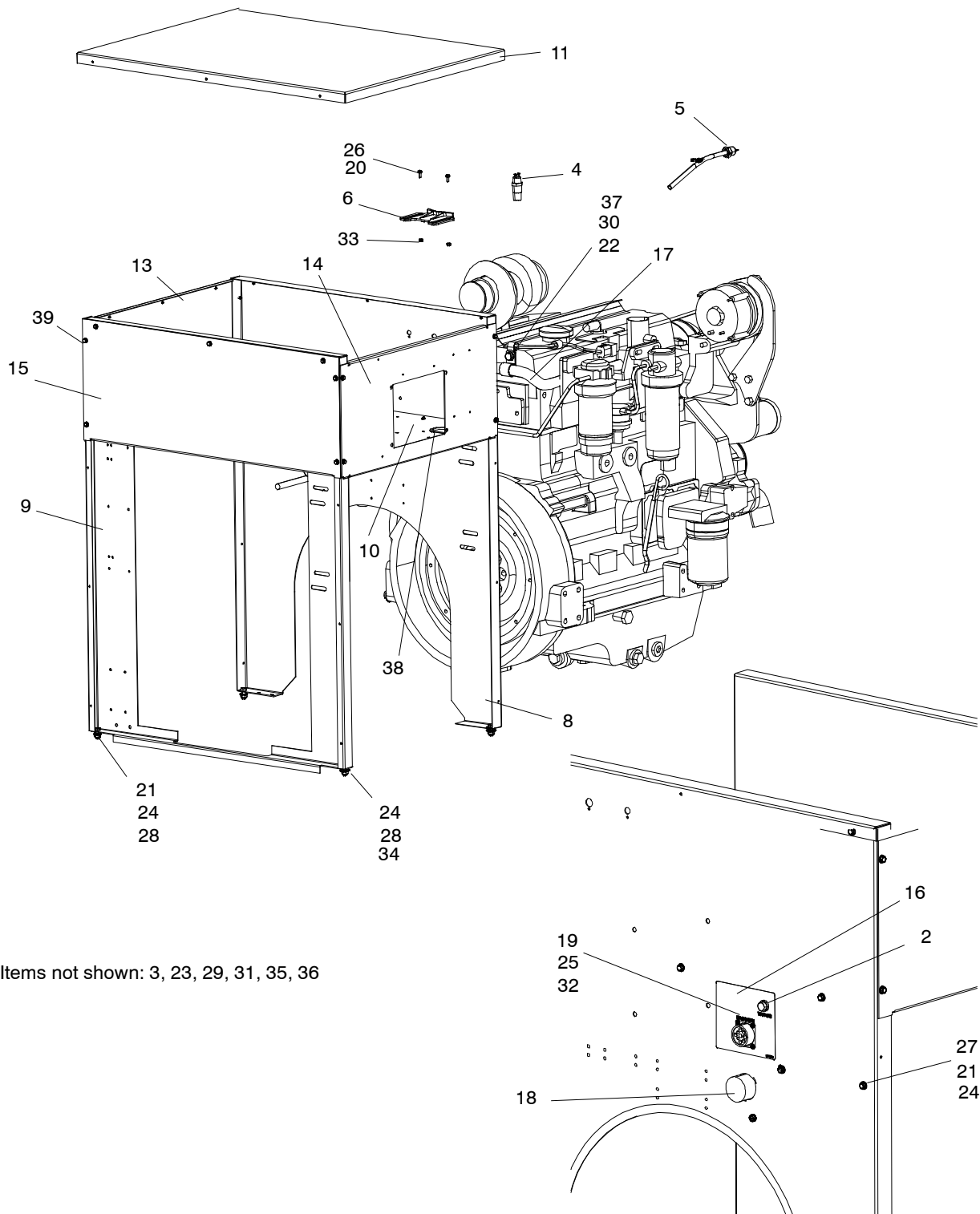
Item	Part Number	Description	Quantity	
			Module Number	
			GM104375-MA1-BLK	GM76187-MA1
2	343684	Lamp assy 28VDC yel/amb led	1	1
3	361567	Base, tie wrap snapin	2	2
4	274988	Sender, Temperature	1	1
4	GM86895	Adapter, Bushing (not shown)	1	1
5	GM38784-3	Vibromount, Controller	4	4
6	GM55368	Bracket, Mounting	1	1
7	GM66270	Sensor, Low Coolant Level	1	1
8	GM74531	Guard, Rodent	1	1
10	GM76167**	Panel, Junction Box (Front)	1	1
11	GM76168	Panel, Junction Box (Rear)	1	1
12	GM76169	Panel, Junction Box (Shelf)	1	1
13	GM76170**	Cover, Junction Box (Top)	1	1
15	GM76173	Cover, Controller (Left)	1	1
16	GM76174	Panel, J-Box DEC3000 Mnt (Right)	1	1
17	GM76175	Cover, Controller (Rear)	1	1
18	GM78235	Harness, Control Box 40-60KW JD	1	1
19	GM78236	Harness, Engine 40-60KW JD	1	1
20	GM78866	Decal, Diagnostic	1	1
21	M125A-03-60	Washer, Plain	4	4
22	M125A-05-80	Washer, Plain	2	2
23	M125A-06-80	Washer, Plain	6	6
24	M125A-08-80	Washer, Plain, 8.4 ID x 16.0 OD	4	4
25	M125A-12-80	Washer, Plain	5	5
26	M125A-16-80	Washer, Plain	1	1
27	M6923-08-80	Nut, Hex 8mm	4	4
28	M7985A-03012-20	Screw, pan head M3 X 12	4	4
29	M7985A-05012-20	Screw, pan head machine	2	2
30	M931-08055-60	Screw, Hex Cap	2	2
31	M933-06012-60	Screw	2	2
32	M933-06014-60	Screw, Hex Cap	4	4
33	M933-08020-60	Screw, Hex Cap	4	4
34	M933-12020-60	Screw, Hex Cap	5	5
35	M933-16035-60	Screw, Hex Cap	1	1
36	M934-03-50	Nut, Hex 3mm	4	4
37	M934-05-50	Nut, Hex 5mm	2	2
38	X-22-12	Washer, lock, .262 ID x .743 in.OD	8	8
39	X-22-16	Washer, lock, .326 ID x .883 in.OD	4	4
40	X-22-26	Washer,lock, .521 ID x 1.24 in. OD	1	1
41	X-672-10	Clamp, insulated, .5 in.	2	2
42	X-672-37	Clamp	4	4
43	X-672-38	Clamp	1	1
44	X-672-7	Clamp, insulated, .44 in.	2	2
45	X-6033-5	Grommet, U-channel	1	1
46	X-6216-1	Screw, Phillips hex crimpitpe	28	28
47	GM11694	O-ring, ISO 6149 (15.3mm id)	1	1

** 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 10)
GM76187-MA1-BLK	-BLK	GM76167-BLK
GM104375-MA1-BLK	-BLK	GM76167-BLK

Group 301: Control and Harness, continued

80-125 kW, APM402/Decision-Maker 3000



GM79233

Group 301: Control and Harness, continued

80-125 kW, APM402/Decision-Maker 3000

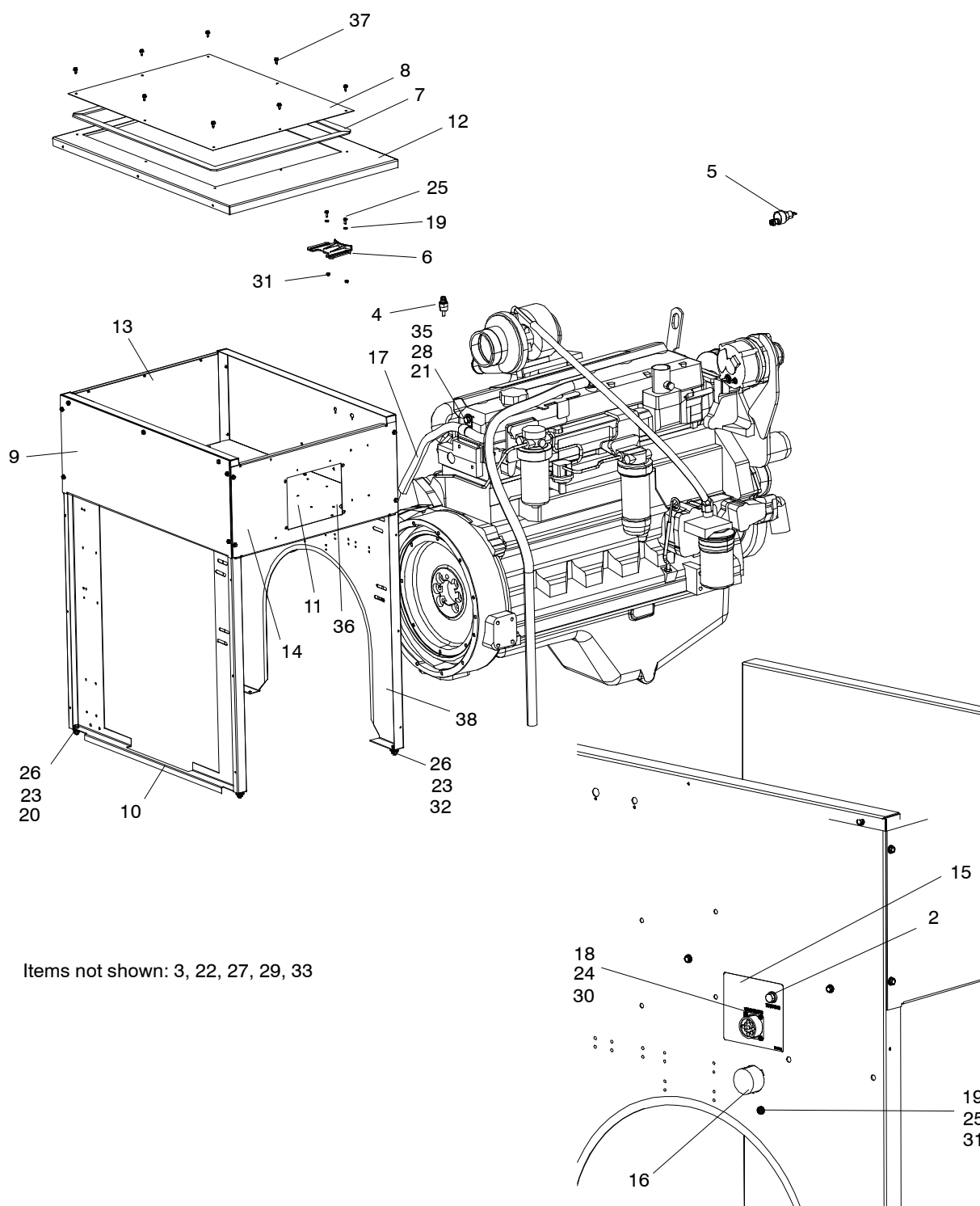
Item	Part Number	Description	Quantity					
			Module					
			GM79233-MA1	GM104379-MA1	GM79244-MA1	GM104380-MA1	GM79237-MA1	GM104381-MA1
2	343684	Lamp assy 28VDC yel/amb led	1	1	1	1	1	1
3	361567	Base, tie wrap snapin	2	2	2	2	2	2
4	GM39458	Sender, Temperature	1	1	1	1	1	1
5	GM66270	Sensor, Low Coolant Level	1	1	1	1	1	1
6	GM74531	Guard, Rodent	1	1	1	1	1	1
8	GM76167**	Panel, Junction Box (Front)	1	1				
8	GM76176**	Panel, Junction Box (Front)			1	1	1	1
9	GM76168	Panel, Junction Box (Rear)	1	1				
9	GM76177	Panel, Junction Box (Rear)			1	1	1	1
10	GM76169	Panel, Junction Box (Shelf)	1	1				
10	GM76178	Panel, Junction Box (Shelf)			1	1	1	1
11	GM76170**	Cover, Junction Box (Top)	1	1				
11	GM76179**	Cover, Junction Box (Top)			1	1	1	1
13	GM76173	Cover, Controller (Left)	1	1				
13	GM76181	Cover, Controller (Left)			1	1	1	1
14	GM76174	Panel, J-Box DEC3000 Mnt (Right)	1	1				
14	GM76182	Panel, J-Box DEC3000 Mnt (Right)			1	1	1	1
15	GM76175	Cover, Controller (Rear)	1	1	1	1	1	1
16	GM78866	Decal, Diagnostic	1	1	1	1	1	1
17	GM79686	Harness, Engine 180-125KW JD	1	1	1	1	1	1
18	GM79688	Harness, Control Box 80-200KW JD	1	1	1	1	1	1
19	M125A-03-60	Washer, Plain	4	4	4	4	4	4
20	M125A-05-80	Washer, Plain	3	3	3	3	3	3
21	M125A-08-80	Washer, Plain 8.4 ID X 16.0 OD	6	6	6	6	4	4
22	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	1	1	1	1	1	1
23	M125A-12-80	Washer, Plain	3	3	3	3	3	3
24	M6923-08-80	Nut, Hex 8mm	8	8	8	8	6	6
25	M7985A-03012-20	Screw, pan head M3 X 12	4	4	4	4	4	4
26	M7985A-05012-20	Screw, Pan Head Mach.	3	3	3	3	3	3
27	M931-08055-60	Screw, Hex Cap	2	2	2	2		
28	M933-08020-60	Screw, Hex Cap	4	4	4	4	4	4
29	M933-08025-60	Screw, Hex Cap	2	2	2	2	2	2
30	M933-10020-60	Screw, Hex Cap	1	1	1	1	1	1
31	M933-12020-60	Screw, Hex Cap	3	3	3	3	3	3
32	M934-03-50	Nut, Hex 3mm	4	4	4	4	4	4
33	M934-05-50	Nut, Hex 5mm	3	3	3	3	3	3
34	X-22-16	Washer, lock, .326 ID x .883 in. OD	4	4	4	4	4	4
35	X-22-26	Washer, Lock, .521 ID x 1.24 in. OD	1	1	1	1	1	1
36	X-672-32	Clamp, insulated, 1.06 in.	2	2	2	2	2	2
37	X-672-37	Clamp	3	3	3	3	3	3
38	X-6033-5	Grommet, U-channel	1	1	1	1	1	1
39	X-6216-1	Screw, Phillips hex crimpitite	28	28	28	28	28	28

** 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 8)
GM79233-MA1-BLK	-BLK	GM76167-BLK
GM79244-MA1-BLK	-BLK	GM76176-BLK
GM79237-MA1-BLK	-BLK	GM76176-BLK
GM104379-MA1-BLK	-BLK	GM76167-BLK
GM104380-MA1-BLK	-BLK	GM76176-BLK
GM104381-MA1-BLK	-BLK	GM76176-BLK

Group 301: Control and Harness, continued

150-200 kW, APM402/Decision-Maker 3000



GM79249
GM81288

Group 301: Control and Harness, continued

150-200 kW, APM402/Decision-Maker 3000

Item	Part Number	Description	Quantity							
			Module							
			GM79249-MA1	GM79249-MA2	GM104382-MA1	GM104382-MA2	GM81288-MA1	GM82007-MA1	GM88862-MA1	GM104383-MA1
2	343684	Lamp assy 28VDC yel/amb LED	1	1	1	1	1	1	1	1
3	361567	Base, tie wrap snapin	2	2	2	2	5	3	2	2
4	GM39458	Sender, Temperature	1	1	1	1			1	1
4	GM10166	Sender, Temperature					1	1		
4	365499	O-ring, ISO 6149 (11.3mm ID)					1	1		
5	GM66270	Sensor, Low Coolant Level	1	1	1	1	1	1	1	1
6	GM74531	Guard, Rodent	1	1	1	1	1	1	1	1
7	GM75773	Gasket, Controller Cover						2		
8	GM76171**	Panel, Junction Box (Top)						1		
9	GM76175	Cover, Controller (Rear)	1	1	1	1	1		1	1
9	GM75785	Cover, Controller (Rear)						1		
10	GM76177	Panel, Junction Box (Rear)	1	1	1	1	1		1	1
10	GM75777**	Junction Box						1		
11	GM76178	Panel, Junction Box (Shelf)	1	1	1	1	1		1	1
12	GM76179**	Cover, Junction Box (Top)	1	1	1	1	1		1	1
12	GM75781**	Cover, Junction Box (Top)						1		
13	GM76181	Cover, Controller (Left)	1	1	1	1	1		1	1
13	GM75786	Cover, Controller (Left)						1		
14	GM76182	Panel, J-Box DEC3000 Mnt (Right)	1	1	1	1	1		1	1
14	GM70132	Panel, J-Box DEC3000 Mnt (Right)						1		
15	GM78866	Decal, Diagnostic	1	1	1	1	1	1	1	1
16	GM79688	Harness, Control Box 80-200KW JD	1	1	1	1	1	1		
16	GM88840	Harness, Control Box 150 JD							1	1
16	GM75812	Plate, Harness Connector						1		
17	GM79691	Harnesss, Engine 150KW JD Tier III	1	1	1	1			1	1
17	GM79931	Harness, Engine 180-200 kW JD Tier III					1			
17	GM82006	Harness, Engine 200 kW JD Tier III						1		
18	M125A-03-60	Washer, Plain	4	4	4	4	4	4	4	4
19	M125A-05-80	Washer, Plain	3	3	3	3	3	2	3	3
20	M125A-08-80	Washer, Plain 8.4 ID X 16.0 OD	2	2	2	2	4		2	2
21	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	1	1	1	1		3	1	1
22	M125A-12-80	Washer, Plain	3	3	3	3			3	3
23	M6923-08-80	Nut, Hex 8mm	6	6	6	6	6		4	4
23	M6923-10-80	Nut, Hex 10mm						4		
24	M7985A-03012-20	Screw, pan head M3 X 12	4	4	4	4	4	4	4	4
25	M7985A-05012-20	Screw, Pan Head Mach.	3	3	3	3	3	3	3	3
26	M933-08020-60	Screw, Hex Cap	4	4	4	4	4		4	4
27	M933-08025-60	Screw, Hex Cap	2	2	2	2				
28	M933-10020-60	Screw, Hex Cap	1	1	1	1			1	1
29	M933-12020-60	Screw, Hex Cap	3	34	3	34			3	3
30	M934-03-50	Nut, Hex 3mm	4	4	4	4	4	4	4	4
31	M934-05-50	Nut, Hex 5mm	3	3	3	3	3	3	3	3
32	X-22-16	Washer, lock, .326 ID x .883 in. OD	4	4	4	4	4		4	4
33	X-22-26	Washer, Lock, .521 ID x 1.24 In. OD	1	1	1	1			1	1
35	X-672-37	Clamp	4	4	4	4			4	4
36	X-6033-5	Grommet, U-channel	1	1	1	1	1	1	1	1
37	X-6216-1	Screw, Phillips hex crimpitite	28	28	28	28	28	30	28	28
38	GM76176**	Panel, Junction Box (Front) 4RX/4TX	1		1					
38	GM77548**	Panel, Junction Box (Front) 4S/4V/4SX		1		1	1		1	1

** 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 12)
GM79249-MA1-BLK	-BLK	GM76179-BLK
GM79249-MA2-BLK	-BLK	GM76179-BLK
GM81288-MA1-BLK	-BLK	GM76179-BLK
GM88862-MA1-BLK	-BLK	GM76179-BLK
GM82007-MA1-BLK	-BLK	GM76781-BLK
GM104382-MA1-BLK	-BLK	GM76179-BLK
GM104382-MA2-BLK	-BLK	GM76179-BLK
GM104383-MA1-BLK	-BLK	GM76179-BLK
GM104385-MA1-BLK	-BLK	GM76179-BLK
GM104386-MA1-BLK	-BLK	GM76781-BLK

Group 701: Literature

Item	Part Number	Description	Quantity								
			Variation Number								
			335	336	481	482	483	484	485	486	488
1	TP-5374	Warranty 1-Year Limited, Industrial	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
3	TP-6140	O/I/M Cntrlr Setup & Appl, DecMaker550	1	1				1	1	1	1
4	TP-6200	O/M 20-2000 kW, DecMaker550	1	1	1	1	1	1	1	1	1
5	TP-6286	S/M John Deere Mechanical Fuel Systems	1	1							
6	TP-6290	P/C John Deere 4024/4045/5030, Tier 2/3	1	1	1	1	1				
6	TP-6291	P/C JD 6068HF275/285/475/485, Tier 2						1	1	1	1
7	TP-6356	S/M Controllers, 20-2800 kW	1	1	1	1	1	1	1	1	1
8	TP-6572	S/M JD 4024HF285, 40-60kW	1	1							
8	TP-5854	S/M John Deere 4045/6068			1	1	1	1	1	1	1
8	TP-6371	S/M JD Alt & Starting Motors	1	1	1	1	1		1	1	1
8	TP-6454	S/M John Deere 6068HF285, Fuel System			1	1		1			
8	TP-6372	S/M Deere 4.5/6.8L Fuel Syst wDenso HPCR					1				
8	TP-6456	S/M John Deere 6068HF485							1	1	1
9	TP-6573	O/M JD 4024HF285, 40-60kW	1	1							
9	TP-6453	O/M JD 4045/6068HF285			1	1	1	1			
9	TP-6455	O/M JD 4045/6068HF485							1	1	1
10	TP-6694	O/M DEC 3000 Controller	1	1	1	1	1	1	1	1	1
11	TP-6697	W/D 20-60REOZJ(C),80-275(E),125(F), Ind	1	1							
11	TP-6798	W/D 20-300kW, John Deere, Industrial	1	1	1	1	1	1	1	1	1
12	TP-6780	P/C DEC 550 Controller (J-Box Panel Mt)	1	1	1	1	1	1	1	1	1
13	TP-6781	P/C DEC 3000 Controller	1	1	1	1	1	1	1	1	1
14	TP-6783	S/M Fast Response X (FR-X) Alternator	1	1	1	1	1	1	1	1	1
15	TP-6790	P/C 50/60REOZJD, 80/100/150-200REOZJF, 125REOZJG	1	1	1	1	1	1	1	1	1
16	TP-6746	P/C DEC6000 AND DPS System				1	1	1	1	1	1
17	TP-6747	O/I/M DPS System Installation and Setup				1	1	1	1	1	1
18	TP-6750	O/M DEC 6000 Controller				1	1	1	1	1	1

Item	Part Number	Description	Quantity	
			Variation Number	
			525	526
1	TP-5374	Warranty 1-Year Limited, Industrial	1	1
2	TP-5700	I/M 20-3250kW, Industrial	1	1
3	TP-6140	O/I/M Cntrlr Setup & Appl, DecMaker550	1	1
4	TP-6200	O/M 20-2000 kW, DecMaker550	1	1
5	TP-6286	S/M John Deere Mechanical Fuel Systems	1	1
6	TP-6290	P/C John Deere 4024/4045/5030, Tier 2/3	1	1
7	TP-6356	S/M Controllers, 20-2800 kW	1	1
8	TP-6371	S/M JD Alt & Starting Motors	1	1
9	TP-6943	O/M JD 4045TF280	1	1
10	TP-6694	O/M DEC 3000 Controller	1	1
11	TP-6798	W/D 20-300kW, John Deere, Industrial	1	1
12	TP-6780	P/C DEC 550 Controller (J-Box Panel Mt)	1	1
13	TP-6781	P/C DEC 3000 Controller	1	1
14	TP-6353	S/M Fast-Response II Alternator,20-400kW	1	1
15	TP-6790	P/C 50/60REOZJD, 80/100/150-200REOZJF, 125REOZJG	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.

	40/50 kW	50/60 kW	80/100 kW	125 kW	150 kW	180/200 kW
Cooling Systems						
Heater, block						
110–120 V	GM91708-KA1	GM58098-KA1	GM75556-KA1	GM75536-KA1	GM75555-KA5	GM75555-KA5
110–120 V, with 44" skid	-	-	GM75557-KA1	-	-	-
190–240 V	-	GM58098-KA2	GM75556-KA2	GM75536-KA2	GM75555-KA6	GM75555-KA6
190–240 V, with 44" skid	-	-	GM75557-KA2	-	-	-
Radiator Guard	GM92565-KA1	GM61476-KA2	-	-	-	-
Duct Flange, radiator	GM92625-KA1	GM13896-KA6	GM13896-KA7	GM13896-KA2	GM13896-KA2	GM13896-KA4
Duct Flange, radiator						GM84753-KA1

Touch-Up Paint

Gloss and textured paint is available from Aftermarket Parts.

Description	Part Number
Paint, Gloss KCB, 12oz spray can	GM71383
Paint, Gloss KCB, 1 gallon can	GM71387
Paint, Textured KCB, 12oz spray can	GM82834
Paint, Textured KCB, 1 gallon can	GM82835
Paint, Textured Black, 12 oz spray can	GM82836
Paint, Tank touch up	GM82837

Cooling System Kits

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

GM20968-KA5

1	Heater, block	326234
1	Sensor, thermostat	224341
1	O-ring	GM11694
1	Bushing, adapter	GM22991
1	Elbow, street, 90 deg. x 1/2 in. NPT	X-211-1
1	Hose, 0.63in. ID x 2.33 ft.	X-312-35
1	Hose, 0.63in. ID x 3.75 ft.	X-312-36
1	Elbow, street, 45 deg. x 1/2 in. NPT	227642
2	Adapter, bushing	273692
2	O-ring	273693
1	Tag, hang	279047
1	Bracket, block heater mounting	326219
4	Clamp, hose, 0.5/1 in.	X-426-10
2	Connector, hose + vibraseal	X-582-1

Block Heater, 2000W, 240V

GM20968-KA6

1	Heater, block	326235
1	O-ring	GM11694
1	Bushing, adapter	GM22991
1	Elbow, street, 90 deg. x 1/2 in. NPT	X-211-1
1	Hose, 0.63in. ID x 2.33 ft.	X-312-35
1	Hose, 0.63in. ID x 3.75 ft.	X-312-36
1	Elbow, street, 45 deg. x 1/2 in. NPT	227642
2	Adapter, bushing	273692
2	O-ring	273693
1	Tag, hang	279047
1	Bracket, block heater mounting	326219
4	Clamp, hose, 0.5/1 in.	X-426-10
2	Connector, hose + vibraseal	X-582-1

Block Heater, 1500W, 120V

GM51082-KA1

1	Elbow, street, 45 deg x 1/2 in. NPT	227642
2	Adapter, bushing	273692
2	O-ring, 1.475 in. ID	273693
1	Tag, hang	279047
1	Bracket, block heater mounting	326219
1	Heater, block (includes items marked *)	326228
	*Sensor, thermostat	224341
	*Thermostat, block heater	279813
1	O-ring, ISO 6149, 15.3 mm ID	GM11694
1	Bushing, adapter	GM22991
1	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
1	Hose, 0.63in. ID	X-312-5
1	Hose, 0.63ID	X-312-54
4	Clamp, hose, 0.5/1 in.	X-426-10
2	Connector, hose + vibraseal	X-582-1

Block Heater, 1500W, 120V

GM51082-KA2

1	Elbow, street, 45 deg x 1/2 in. NPT	227642
2	Adapter, bushing	273692
2	O-ring, 0.475 in. ID	273693
1	Tag, hang	279047
1	Bracket, block heater mounting	326219
1	Heater, block (includes items marked *)	326229
1	O-ring, ISO 6149, 15.3 mm ID	GM11694
1	Bushing, adapter	GM22991
1	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
1	Hose, 0.63 in. ID	X-312-5
1	Hose, 0.63 ID	X-312-54
4	Clamp, hose, 0.5/1 in.	X-426-10
2	Connector, hose + vibraseal	X-582-1

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

GM58098-KA1

1	Heater, block	358311
1	Elbow, street, 45 deg. x 1/2 in. NPT	227642
1	O-ring, ISO 6149, 15.3 mm ID	GM11694
1	Bushing, adapter	GM22991
1	Adapter, freeze plug	GM57959
1	Bracket, block heater mounting	GM58750
1	Pipe, 1/2 in. NPT x 2.5 in.	X-209-3
1	Elbow, pipe (45 deg x 1/2"npt)	X-225-7
1	Hose, 0.63 in. ID	X-312-4
1	Hose, 0.63 ID	X-312-44
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose, 5/8 in. x 1/2 in.	X-582-1

Block Heater, 190-240 V

GM58098-KA2

1	Heater, block	358327
1	Elbow, street, 45 deg. x 1/2 in. NPT	227642
1	O-ring, ISO 6149, 15.3 mm ID	GM11694
1	Bushing, adapter	GM22991
1	Adapter, freeze plug	GM57959
1	Bracket, block heater mounting	GM58750
1	Pipe, 1/2 in. NPT x 2.5 in.	X-209-3
1	Elbow, pipe (45 deg x 1/2"npt)	X-225-7
1	Hose, 0.63 in. ID	X-312-4
1	Hose, 0.63 ID	X-312-44
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose, 5/8 in. x 1/2 in.	X-582-1

Block Heater, 1500W, 120V

GM75536-KA1

1	Heater, block (includes items marked *)	326228
	*Sensor, thermostat	224341
	*Thermostat, block heater	279813
1	Elbow, street, 45 deg x 1/2 in. NPT	227642
2	Adapter, bushing	273692
2	O-ring, 1.475 in. ID	273693
1	Tag, hang	279047
1	O-ring, ISO 6149, 15.3 mm ID	GM11694
1	Bushing, adapter	GM22991
1	Bracket, block heater mounting	GM64285
1	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
1	Hose, 0.63ID	X-312-17
1	Hose, 0.63in. ID	X-312-5
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose + vibraseal	X-582-1

Block Heater, 1500W, 240V

GM75536-KA2

1	Heater, block	326229
1	Elbow, street, 45 deg x 1/2 in. NPT	227642
2	Adapter, bushing	273692
2	O-ring, 1.475 in. ID	273693
1	Tag, hang	279047
1	O-ring, ISO 6149, 15.3 mm ID	GM11694
1	Bushing, adapter	GM22991
1	Bracket, block heater mounting	GM64285
1	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
1	Hose, 0.63ID	X-312-17
1	Hose, 0.63in. ID	X-312-5
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose + vibraseal	X-582-1

Cooling System Kits

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

1	Heater, block	
1	Hose, 0.63 in. ID	
1	Hose, 0.63 in. ID	
1	O-ring, ISO 6149 (15.3mm id)	
1	Bushing, Adapter	
1	Elbow, Street(90 deg x 1/2"nptf)	
1	Elbow, street, 45 deg. x 1/2 in. NPT	
2	Adapter, bushing	
2	O-ring	
1	Tag, hang	
1	Bracket, block heater mounting	
4	Clamp, hose, 0.69/1.25 in.	
2	Connector, hose + vibraseal	

GM75555-KA5

GM75552	
X-312-35	
X-312-5	
GM11694	
GM22991	
X-211-1	
227642	
273692	
273693	
279047	
GM64285	
X-426-12	
X-582-1	

Block Heater, 240 V, 2000W

1	Heater, block	
1	Hose, 0.63 in. ID	
1	Hose, 0.63 in. ID	
1	O-ring, ISO 6149 (15.3mm id)	
1	Bushing, Adapter	
1	Elbow, Street(90 deg x 1/2"nptf)	
1	Elbow, street, 45 deg. x 1/2 in. NPT	
2	Adapter, bushing	
2	O-ring	
1	Tag, hang	
1	Bracket, block heater mounting	
4	Clamp, hose, 0.69/1.25 in.	
2	Connector, hose + vibraseal	

GM75555-KA6

GM75553	
X-312-35	
X-312-5	
GM11694	
GM22991	
X-211-1	
227642	
273692	
273693	
279047	
GM64285	
X-426-12	
X-582-1	

Block Heater, 1500W, 120V

1	Elbow, street (45 deg x 1/2"npt)	
1	Adapter, bushing	
1	O-Ring (1.475" id)	
1	Tag, hang (NRP)	
1	Heater, block (120V, 1500AMP)	
1	O-ring, ISO 6149 (15.3mm id)	
1	Bushing, Adapter	
1	Bracket, Block Heater Mtg.	
2	Washer, Plain	
2	Washer, Plain 10.5 ID x 20.0 OD	
2	Nut, Hex 6mm	
2	Nut, Hex 10mm	
2	Screw, hex cap	
2	Screw, hex cap,fully thrd M10 x 25mm	
1	Elbow, Street(90 deg x 1/2"nptf)	
1	Hose,.63 in. ID	
1	Hose,.63 ID	
4	Clamp, hose, .69/1.25 in. (NRP)	
2	Connector, Hose 5/8" x 1/2" MIP Brass	

GM75556-KA1

227642	
273692	
273693	
279047	
352945	
GM11694	
GM22991	
GM64285	
M125A-06-80	
M125A-10-80	
M6923-06-80	
M6923-10-80	
M933-06020-60	
M933-10025-60	
X-211-1	
X-312-5	
X-312-54	
X-426-12	
X-582-1	

Block Heater, 1500W, 240V

1	Elbow, street (45 deg x 1/2"npt)	
1	Adapter, bushing	
1	O-Ring (1.475" id)	
1	Tag, hang	
1	Heater, block (240V, 1500AMP)	
1	O-ring, ISO 6149 (15.3mm id)	
1	Bushing, Adapter	
1	Bracket, Block Heater Mtg.	
2	Washer, Plain	
2	Washer, Plain 10.5 ID x 20.0 OD	
2	Nut, Hex 6mm	
2	Nut, Hex 10mm	
2	Screw, hex cap	
2	Screw, hex cap,fully thrd M10 x 25mm	
1	Elbow, Street(90 deg x 1/2"nptf)	
1	Hose,.63 in. ID	
1	Hose,.63 ID	
4	Clamp, hose, .69/1.25 in.	
2	Connector, Hose 5/8" x 1/2" MIP Brass	

GM75556-KA2

227642	
273692	
273693	
279047	
352946	
GM11694	
GM22991	
GM64285	
M125A-06-80	
M125A-10-80	
M6923-06-80	
M6923-10-80	
M933-06020-60	
M933-10025-60	
X-211-1	
X-312-5	
X-312-54	
X-426-12	
X-582-1	

Qty.	Description	Part No.
------	-------------	----------

Block Heater, 1500W, 120V

1	Elbow, street (45 deg x 1/2"npt)	
1	Adapter, bushing	
1	O-Ring (1.475" id)	
1	Tag, hang	
1	Heater, block (120V, 1500AMP)	
1	O-ring, ISO 6149 (15.3mm id)	
1	Bushing, Adapter	
1	Bracket, Block Heater Mtg.	
2	Washer, Plain	
2	Nut, Hex 6mm	
2	Screw, hex cap	
1	Elbow, Street(90 deg x 1/2"nptf)	
1	Hose,.63 in. ID	
1	Hose,.63 ID	
4	Clamp, hose, .69/1.25 in.	
2	Connector, Hose 5/8" x 1/2" MIP Brass	
2	Screw, hex wshr hd, drill 1/4-14 x 7/8	

GM75557-KA1

227642	
273692	
273693	
279047	
352945	
GM11694	
GM22991	
GM69388	
M125A-06-80	
M6923-06-80	
M933-06020-60	
X-211-1	
X-312-5	
X-312-54	
X-426-12	
X-582-1	
X-794-4	

Block Heater, 1500W, 240V

1	Elbow, street (45 deg x 1/2"npt)	
1	Adapter, bushing	
1	O-Ring (1.475" id)	
1	Tag, hang	
1	Heater, block (240V, 1500AMP)	
1	O-ring, ISO 6149 (15.3mm id)	
1	Bushing, Adapter	
1	Bracket, Block Heater Mtg.	
2	Washer, Plain	
2	Nut, Hex 6mm	
2	Screw, hex cap	
1	Elbow, Street(90 deg x 1/2"nptf)	
1	Hose,.63 in. ID	
1	Hose,.63 ID	
4	Clamp, hose, .69/1.25 in.	
2	Connector, Hose 5/8" x 1/2" MIP Brass	
2	Screw, hex wshr hd, drill 1/4-14 x 7/8	

GM75557-KA2

227642	
273692	
273693	
279047	
352946	
GM11694	
GM22991	
GM69388	
M125A-06-80	
M6923-06-80	
M933-06020-60	
X-211-1	
X-312-5	
X-312-54	
X-426-12	
X-582-1	
X-794-4	

Block Heater, 1500W, 110-120V

1	Heater, block (120V, 1500W)	
1	Elbow, street (45 deg x 1/2"npt)	
1	Adapter, bushing	
1	O-Ring (1.475" id)	
1	Tag, hang	
3	Hose, Coolant SAE 20R3 D1 (.63" id)	
1	O-ring, ISO 6149 (15.3mm id)	
2	Valve, Shutoff (1/2-14npt)	
1	Bushing, Adapter	
1	Bracket, Block Heater Mtg.	
1	Dwg, Assy, Block Heater	
2	Washer, Plain	
2	Nut, Hex 6mm	
2	Screw, hex cap	
3	Pipe, Nipple (1/2" NPT x 2.50")	
1	Elbow, pipe (90 deg x 1/2"npt)	
1	Hose,.63 in. ID	
1	Hose,.63 ID	
4	Clamp, hose, .69/1.25 in.	
2	Connector, Hose 5/8" x 1/2" MIP Brass	
2	Screw, hex wshr hd, drill 1/4-14 x 7/8	

GM91708-KA1

352945	
227642	
273692	
273693	
279047	
25450 00062	
GM11694	
GM19670	
GM22991	
GM69388	
GM91708	
M125A-06-80	
M6923-06-80	
M933-06020-60	
X-209-3	
X-215-1	
X-312-5	
X-312-54	
X-426-12	
X-582-1	
X-794-4	

Duct Flange, Radiator

2	Frame, air duct	
2	Frame, air duct	

GM13896-KA2

GM31193	
GM32061	

Duct Flange, Radiator

2	Frame, air duct horizontal	
2	Frame, air duct vertical	

GM13896-KA4

GM39281	
GM39282	

Duct Flange, Radiator

2	Frame, air duct	
2	Frame, air duct	

GM13896-KA6

GM60030	
GM32061	

Cooling System Kits, continued

Qty.	Description	Part No.
Duct Flange, Radiator		GM13896-KA7
2	Frame, air duct	GM13897
2	Frame, air duct	GM13898
Duct Flange, Radiator		GM84753-KA1
2	Frame, air duct vertical	GM39282
2	Frame, air duct horizontal	GM84938
Radiator Duct Flange		GM92625-KA1
1	Frame, Air Duct	GM92623
2	Frame, Air Duct	GM92624
1	Frame, Air Duct	GM92799
Radiator Guard		GM61476-KA2
1	Guard, radiator	GM69596
Radiator Guard		GM92565-KA1
1	Guard, radiator	GM92564

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

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.

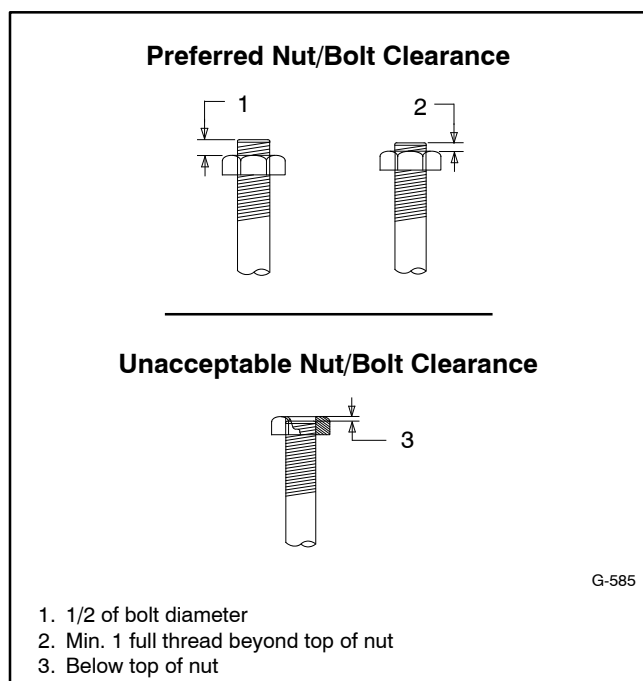


Figure 1 Acceptable Bolt Lengths

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.

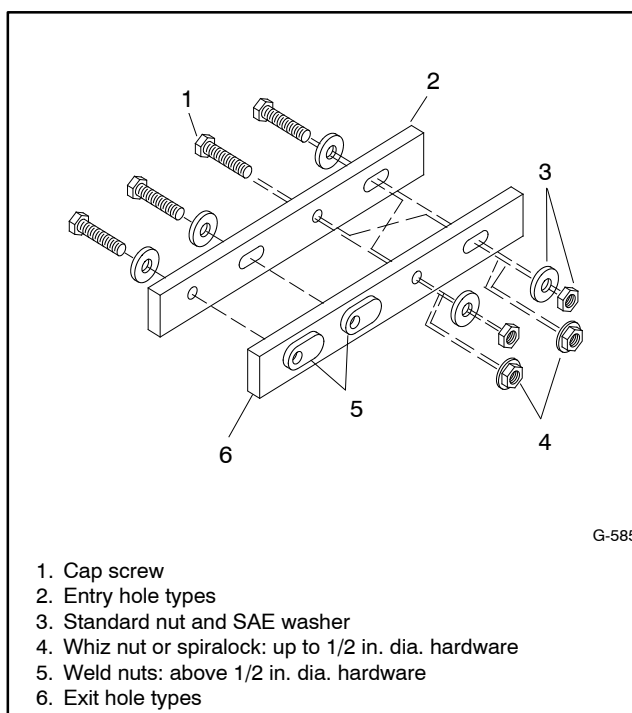


Figure 2 Acceptable Hardware Combinations

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)

$\frac{1}{4}$ -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

$\frac{9}{32}$ x $\frac{5}{8}$ x $\frac{1}{16}$
 Thickness
 External Dimension
 Internal Dimension

Lock Washers

$\frac{5}{8}$
 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	Part No.	Dimensions	Part No.	Dimensions	Type		
Hex Head Bolts (Grade 5)		Hex Head Bolts, cont.		Hex Nuts				
X-465-17	1/4-20 x .38	X-6238-14	3/8-24 x .75	X-6009-1	1-8	Standard		
X-465-6	1/4-20 x .50	X-6238-16	3/8-24 x 1.25		X-6210-3	6-32	Whiz	
X-465-2	1/4-20 x .62	X-6238-21	3/8-24 x 4.00			X-6210-4	8-32	Whiz
X-465-16	1/4-20 x .75	X-6238-22	3/8-24 x 4.50			X-6210-5	10-24	Whiz
X-465-18	1/4-20 x .88					X-6210-1	10-32	Whiz
X-465-7	1/4-20 x 1.00	X-6024-5	7/16-14 x .75		X-6210-2	1/4-20	Spiralock	
X-465-8	1/4-20 x 1.25	X-6024-2	7/16-14 x 1.00			X-6210-6	1/4-28	Spiralock
X-465-9	1/4-20 x 1.50	X-6024-8	7/16-14 x 1.25			X-6210-7	5/16-18	Spiralock
X-465-10	1/4-20 x 1.75	X-6024-3	7/16-14 x 1.50			X-6210-8	5/16-24	Spiralock
X-465-11	1/4-20 x 2.00	X-6024-4	7/16-14 x 2.00			X-6210-9	3/8-16	Spiralock
X-465-12	1/4-20 x 2.25	X-6024-11	7/16-14 x 2.75			X-6210-10	3/8-24	Spiralock
X-465-14	1/4-20 x 2.75	X-6024-12	7/16-14 x 6.50		X-6210-11	7/16-14	Spiralock	
X-465-21	1/4-20 x 5.00	X-129-15	1/2-13 x .75		X-6210-12	1/2-13	Spiralock	
X-465-25	1/4-28 x .38	X-129-17	1/2-13 x 1.00		X-6210-15	7/16-20	Spiralock	
X-465-20	1/4-28 x 1.00	X-129-18	1/2-13 x 1.25	X-6210-14	1/2-20	Spiralock		
		X-129-19	1/2-13 x 1.50					
X-125-33	5/16-18 x .50	X-129-20	1/2-13 x 1.75	X-85-3	5/8-11	Standard		
X-125-23	5/16-18 x .62	X-129-21	1/2-13 x 2.00		X-88-12	3/4-10	Standard	
X-125-3	5/16-18 x .75	X-129-22	1/2-13 x 2.25			X-89-2	1/2-20	Standard
X-125-31	5/16-18 x .88	X-129-23	1/2-13 x 2.50					
X-125-5	5/16-18 x 1.00	X-129-24	1/2-13 x 2.75					
X-125-24	5/16-18 x 1.25	X-129-25	1/2-13 x 3.00					
X-125-34	5/16-18 x 1.50	X-129-27	1/2-13 x 3.50					
X-125-25	5/16-18 x 1.75	X-129-29	1/2-13 x 4.00					
X-125-26	5/16-18 x 2.00	X-129-30	1/2-13 x 4.50					
230578	5/16-18 x 2.25	X-463-9	1/2-13 x 5.50					
X-125-29	5/16-18 x 2.50	X-129-44	1/2-13 x 6.00					
X-125-27	5/16-18 x 2.75							
X-125-28	5/16-18 x 3.00	X-129-51	1/2-20 x .75					
X-125-22	5/16-18 x 4.50	X-129-45	1/2-20 x 1.25					
X-125-32	5/16-18 x 5.00	X-129-52	1/2-20 x 1.50					
X-125-35	5/16-18 x 5.50							
X-125-36	5/16-18 x 6.00	X-6021-3	5/8-11 x 1.00					
X-125-40	5/16-18 x 6.50	X-6021-4	5/8-11 x 1.25					
		X-6021-2	5/8-11 x 1.50					
X-125-43	5/16-24 x 1.75	X-6021-1	5/8-11 x 1.75					
X-125-44	5/16-24 x 2.50	273049	5/8-11 x 2.00					
X-125-30	5/16-24 x .75	X-6021-5	5/8-11 x 2.25					
X-125-39	5/16-24 x 2.00	X-6021-6	5/8-11 x 2.50					
X-125-38	5/16-24 x 2.75	X-6021-7	5/8-11 x 2.75					
		X-6021-12	5/8-11 x 3.75					
X-6238-2	3/8-16 x .62	X-6021-11	5/8-11 x 4.50					
X-6238-10	3/8-16 x .75	X-6021-10	5/8-11 x 6.00					
X-6238-3	3/8-16 x .88							
X-6238-11	3/8-16 x 1.00	X-6021-9	5/8-18 x 2.50					
X-6238-4	3/8-16 x 1.25							
X-6238-5	3/8-16 x 1.50	X-6239-1	3/4-10 x 1.00					
X-6238-1	3/8-16 x 1.75	X-6239-8	3/4-10 x 1.25					
X-6238-6	3/8-16 x 2.00	X-6239-2	3/4-10 x 1.50					
X-6238-17	3/8-16 x 2.25	X-6239-3	3/4-10 x 2.00					
X-6238-7	3/8-16 x 2.50	X-6239-4	3/4-10 x 2.50					
X-6238-8	3/8-16 x 2.75	X-6239-5	3/4-10 x 3.00					
X-6238-9	3/8-16 x 3.00	X-6239-6	3/4-10 x 3.50					
X-6238-19	3/8-16 x 3.25							
X-6238-12	3/8-16 x 3.50	X-792-1	1-8 x 2.25					
X-6238-20	3/8-16 x 3.75	X-792-5	1-8 x 3.00					
X-6238-13	3/8-16 x 4.50	X-792-8	1-8 x 5.00					
X-6238-18	3/8-16 x 5.50							
X-6238-25	3/8-16 x 6.50							

Metric

Hex head bolts are hardness grade 8.8 unless noted.

Part No. Dimensions Hex Head Bolts (Partial Thread)

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

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

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

Hex Head Bolts (Full Thread)

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

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

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

Pan Head Machine Screws

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

Flat Head Machine Screws

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

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

Metric, continued

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

Washers

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

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

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