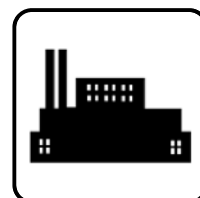


Service Parts

Industrial Generator Sets



Models:

80-275REOZJD

80-275REOZJE

125REOZJF

300REOZJ

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)
80REOZJD/100REOZJD					
4045HF285, 12V	GM40254-1	GM52514	GM32809	GM50006	GM50074
4045HF285, 24V	GM40254-2	GM52514	GM32809	GM50006	GM50074
80REOZJE/100REOZJE					
4045HF285, 12V	GM66704-1	GM77161	GM32809	GM50006	GM50074
4045HF285, 24V	GM66704-2	GM77161	GM32809	GM50006	GM50074
125REOZJD/150REOZJD					
6068HF285, 12V	GM40255-1	352793	GM32809	GM50006	GM50074
6068HF285, 24V	GM40255-2	352793	GM32809	GM50006	GM50074
125REOZJF					
4045HF285, 12V	GM66704-3	352793	GM32809	GM50006	GM50074
4045HF285, 24V	GM66704-4	352793	GM32809	GM50006	GM50074
150REOZJE					
6068HF285, 12V	GM70424-1	352793	GM32809	GM50006	GM50074
6068HF285, 24V	GM70424-2	352793	GM32809	GM50006	GM50074
180REOZJD/200REOZJD					
6068HF485, 24V	GM40256-2	GM64496	GM32809	GM50006	GM50074
180REOZJE/200REOZJE					
6068HF485	GM70798-1	GM64496	GM32809	GM50006	GM50074
230/250/275REOZJD					
6090HF485, 24V	GM40257	352793	GM48731	GM50263*	GM50263*
6090HF484, 24V	GM58216	352793	GM48731	GM50263*	GM50263*
230/250/275REOZJE					
6090HF484, 24V	GM58216	352793	GM48731	GM50263*	GM50263*
300REOZJ					
6090HFG96, 24V	GM75563	352793	GM48731	GM50263*	GM50263*

* GM50263 is a kit which includes both primary and final fuel filters.

Figure 1 Common Replacement Parts

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180/200REOZJE, APM402/DEC 3000 Controller	70
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Notes

Introduction

This manual lists service replacement parts for generator set models as 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							
80REOZJD								
GM51053-GA1	*	*	7	GR4	*	*	†	317
GM51053-GA2	*	*	8	GR4	*	*	†	317
100REOZJD								
GM51053-GA3	*	*	7	GR4	*	*	†	318
GM51053-GA4	*	*	8	GR4	*	*	†	318
125REOZJD								
GM48076-GA1	*	*	1	GR4	*	*	†	271
GM48076-GA2	*	*	2	GR4	*	*	†	271
150REOZJD								
GM48076-GA3	*	*	3	GR4	*	*	†	273
GM48076-GA4	*	*	4	GR4	*	*	†	273
180REOZJD								
GM39060-GA4	*	*	5	GR4	*	*	†	256
200REOZJD								
GM39060-GA3	*	*	5	GR5	*	*	†	257
230REOZJD								
GM46340-GA1	*	*	6	GR5	*	*	†	258
GM46340-GA5	*	*	9	GR5	*	*	†	258
250REOZJD								
GM46340-GA2	*	*	6	GR5	*	*	†	259
GM46340-GA6	*	*	9	GR5	*	*	†	259
275REOZJD								
GM46340-GA3	*	*	6	GR5	*	*	†	260
GM46340-GA7	*	*	9	GR5	*	*	†	260

* 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 TP-6009 P/C Controllers for controller parts lists.

Specification Number Index

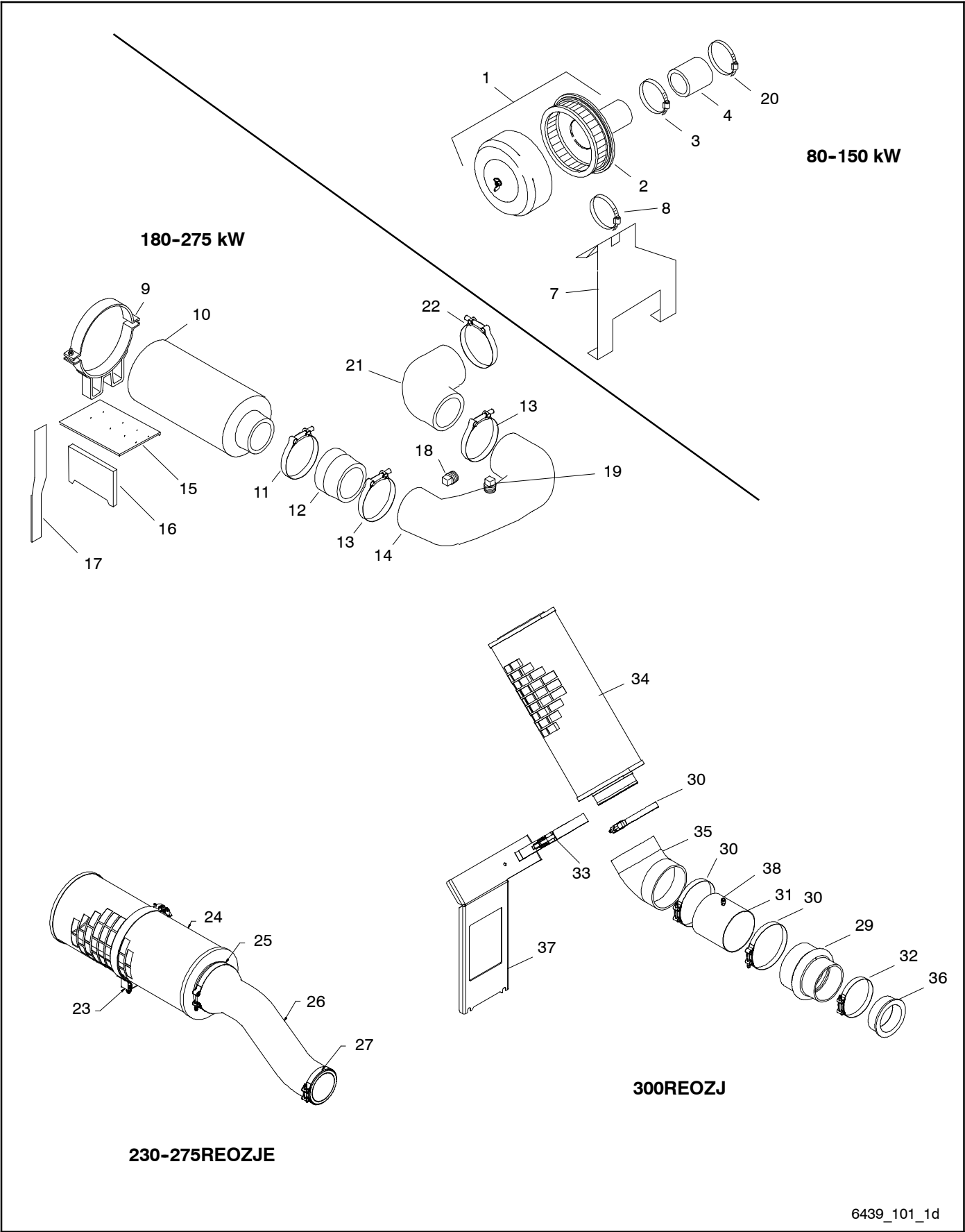
Group Title	Air Intake Cooling System Engine Nameplates and Decals Skid and Plant Mounting Generator and Mounting Controller and Mounting Literature							
Group No.	101	104	105	107	109	201	301	701
Spec No.	Variation Number							
80REOZJE								
GM66069-GA1	*	*	12	GR4	*	*	†	413
GM66069-GA2	*	*	13	GR4	*	*	†	413
100REOZJE								
GM66069-GA3	*	*	12	GR4	*	*	†	414
GM66069-GA4	*	*	13	GR4	*	*	†	414
125REOZJF								
GM72460-GA1	*	*	19	GR4	*	*	†	439
GM72460-GA2	*	*	20	GR4	*	*	†	439
150REOZJE								
GM70529-GA3	*	*	16	GR4	*	*	†	416
GM70529-GA4	*	*	17	GR4	*	*	†	416
180REOZJE								
GM70801-GA2	*	*	18	GR4	*	*	†	417
200REOZJE								
GM70801-GA1	*	*	18	GR4	*	*	†	418
230REOZJE								
GM66100-GA1	*	*	10	GR5	*	*	†	361
GM66100-GA4	*	*	11	GR5	*	*	†	361
250REOZJE								
GM66100-GA2	*	*	10	GR5	*	*	†	362
GM66100-GA5	*	*	11	GR5	*	*	†	362
275REOZJE								
GM66100-GA3	*	*	10	GR5	*	*	†	363
GM66100-GA6	*	*	22	GR5	*	*	†	363
300REOZJ								
GM66100-GA7	*	*	21	GR5	*	*	†	448

* 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.

Air Intake

Standard Duty



Air Intake

Standard Duty

Find the installed module number on the generator set nameplate.

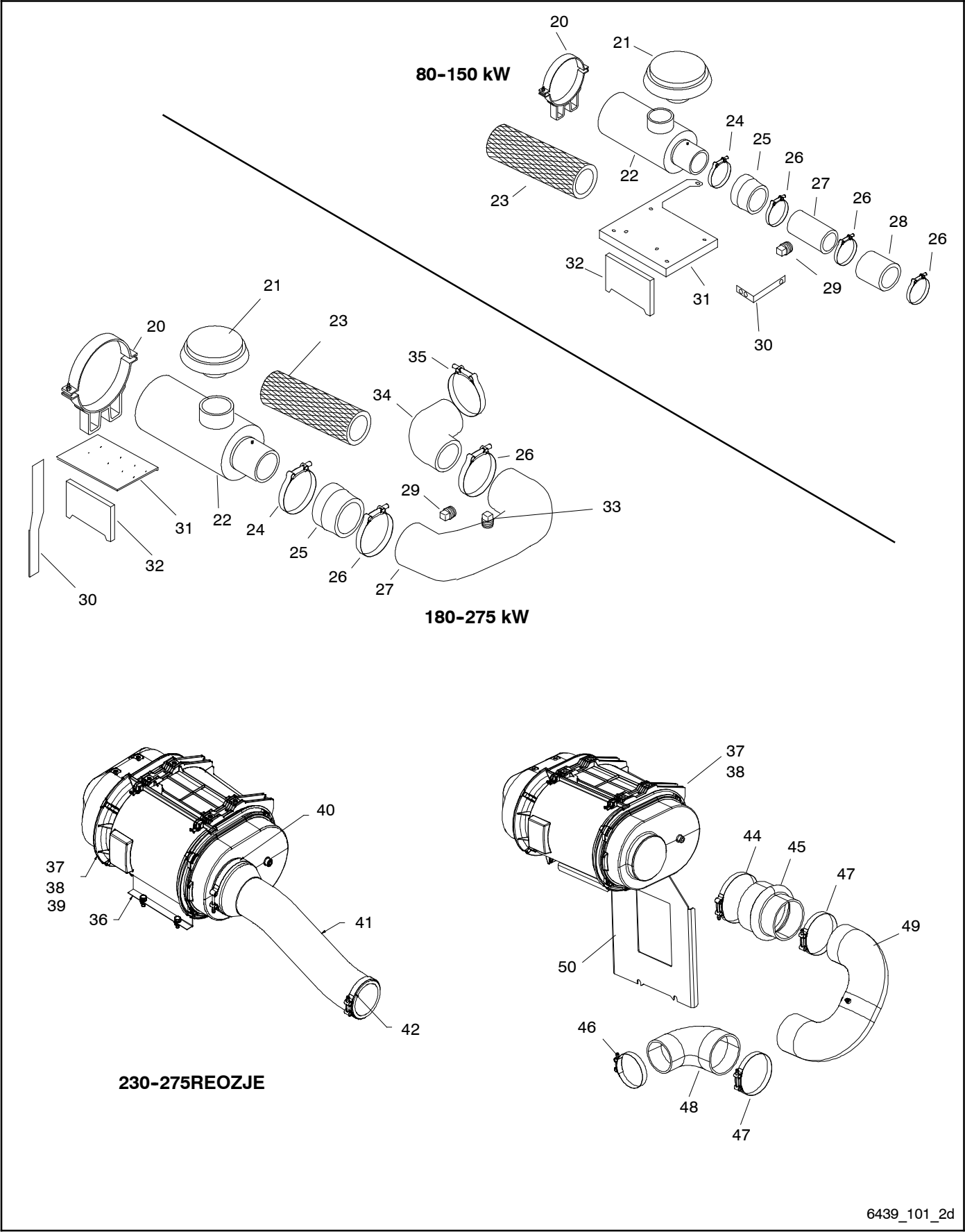
Item	Part Number	Description	Quantity								
			Module								
			GM48737-MA1	GM51058-MA1	GM46988-MA1	GM46988-MA2	GM46346-MA1	GM46346-MA2	GM63202-MA1	GM70805-MA1	GM70805-MA2
1	A-273700	Air cleaner	1								
1	GM35792	Air cleaner		1							
2	253108	Element, air cleaner	1	1							
3	274545	Clamp, hose, 4.31/4.62 in.	1	1							
4	X-6350-1	Hose, straight, 4 in. ID	1								
4	352335	Hose, reducer, 4.00 in. to 3.00 in. ID		1							
7	GM51482	Bracket, mounting	1								
7	GM50934	Bracket, mounting		1							
8	X-426-5	Clamp, hose, 3.56/4.5 in.	1	1							
9	343218	Clamp, air cleaner, 9.8 in. ID			2	2	2	2		2	2
10	343219	Air cleaner, industrial			1	1	1	1		1	1
11	254013	Clamp, hose, 6.25/6.56 in.			1	1	1	1		1	1
12	272628	Hose, hump, reducer, 6 to 5 in. ID			1	1	1	1		1	1
13	291562	Clamp, hose, 5.25/5.56 in.			2	2	2	2		2	2
14	GM47064	Tube, steel			1	1	1	1		1	1
15	GM46944	Bracket, air cleaner			1	1					
15	GM46336	Bracket, air intake					1	1			
15	GM71063	Bracket, air cleaner								1	1
16	GM46945	Support, air cleaner			1						
16	GM46946	Support, air cleaner				1					
16	GM71065	Support, air cleaner								1	
16	GM80770	Support, air cleaner									1
17	GM46947	Support, air cleaner			2	2				2	2
17	GM71064	Support, air cleaner									
18	X-75-4	Plug, pipe, 1/8 in. NPTF			1	1	1	1		1	1
18	X-75-6	Plug, pipe, 3/4 in. NPT			1	1					
19	X-75-49	Plug, pipe, 3/4 in. NPTF, square key head					1	1		1	1
20	274545	Clamp, hose, 4.31/4.62 in.	1								
20	X-426-1	Clamp, hose, 2.81/3.75 in.		1							
21	GM41126	Hose, 90 deg. elbow						1			
22	274545	Clamp, hose, 4.31/4.62 in.						1			
23	343218	Clamp, air cleaner, 9.8 in. ID							1		
24	343219	Air cleaner, industrial							1		
25	272960	Clamp, hose, 6.56/6.87 in.							1		
26	GM63140	Hose, air intake							1		
27	324555	Clamp, hose, 4.63/4.94 in.							1		
28	X-301-24	Plug, button (not shown, junction box holes)							4		
29	272628	Hose, hump reducer (6.00 to 5.00" ID)									1
30	272960	Clamp, hose, 6.56/6.87 in.									3
31	274623	Tube assembly									1
32	291562	Clamp, hose, 5.25/5.56 in.									1
33	343218	Clamp, air cleaner (9.80" ID)									1
34	343219	Element, Air Indust									1
35	347806	Hose, 45 deg. elbow (6.00" ID)									1
36	GM11458	Insert, hose reducer (5.00" to 4.00")									1
37	GM75606**	Bracket, Air Cleaner									1
38	X-268-7	Cap, pipe (1/8"npt)									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 37)
GM75604-MA1-BLK	-BLK	GM75606-BLK

Air Intake, continued

Heavy Duty



6439_101_2d

Air Intake, continued

Heavy Duty

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity Module										
			GM21224-MA1	GM48777-MA1	GM48777-MA2	GM46989-MA1	GM46989-MA2	GM46347-MA1	GM46347-MA2	GM63203-MA1	GM70806-MA1	GM70806-MA2	GM75605-MA1
20	290956	Mount, air cleaner/exhaust, 11.8 in. ID				2	2				2	2	
20	326911	Mount, air cleaner/exhaust, 12.1 in. ID		2	2								
20	254012	Mount, air cleaner/exhaust, 14.0 in. ID						2	2				
20	279380	Mount, air cleaner/exhaust, 8.00 in. ID	2										
21	254010	Cap, rain				1	1	1	1		1	1	
21	254006	Cap, rain		1	1								
21	253664	Cap, rain	1										
22	GM46952	Air cleaner assembly				1	1				1	1	
22	A-324360	Air cleaner assembly		1	1								
22	A-274721	Air cleaner assembly	1										
22	254004	Air cleaner assembly						1	1				
23	274729	Element, air cleaner		1	1								
23	254477	Element, air cleaner						1	1				
23	274726	Element, air cleaner	1										
23	GM46953	Element, primary				1	1				1	1	
23	GM47969	Element, safety				1	1				1	1	
24	291562	Clamp, hose, 5.25/5.56 in.		1	1	1	1				1	1	
24	254013	Clamp, hose, 6.25/6.56 in.						1	1				
24	336229	Clamp, hose, 3.88/4.19 in.	1										
25	GM48786	Hose, hump		1	1								
25	GM46948	Hose, hump				1	1				1	1	
25	272628	Hose, hump reducer, 6 to 5 in. ID						1	1				
26	274545	Clamp, hose, 4.31/4.62 in.		3	2								
26	X-426-1	Clamp, hose, 2.81/3.75 in.			1								
26	291562	Clamp, hose, 5.25/5.56 in.				2	2	2	2		2	2	
26	324342	Clamp, hose, 3.43/3.75 in.	1										
27	X-522-87	Tube assembly		1	1								
27	GM47064	Tube, steel				1	1	1	1		1	1	
27	336224	Hose, molded air intake, 3.00 in. ID	1										
28	352335	Hose, reducer, 4.00 to 3.00 in. ID			1								
28	X-6350-1	Hose, radiator, straight, 4 in. ID		1									
29	X-75-4	Plug, pipe, 1/8 in. NPTF						1	1		1	1	
30	GM48790	Bracket, support HDAC		1	1								
30	GM46947	Support, air cleaner				2	2						
30	GM71064	Support, air cleaner									2	2	
31	GM48788	Bracket, mounting HDAC		1	1								
31	GM46944	Bracket, air cleaner				1	1						
31	GM46336	Bracket, air intake						1	1				
31	GM71063	Bracket, air cleaner									1	1	
31	352534	Bracket, mtg. HDAC	1										
31	X-400-198	Spacer, 0.437 ID x 0.875 OD x 0.25 in. (not shown)	1										
32	GM48789	Bracket, support HDAC		1	1								
32	GM46945	Support, air cleaner				1							
32	GM46946	Support, air cleaner					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		1	1	
34	274545	Clamp, hose, 4.31/4.62 in.							1				
35	GM41126	Hose, 90 deg. elbow							1				
36	GM66747	Bracket, air cleaner mtg.								1			
37	GM66745	Air Cleaner								1			1
38	GM79488	Filter, Air primary								1			1
38	GM79489	Filter, Air secondary								1			1
39	X-400-74	Spacer, .344 ID x .625 OD x .25 in.								4			
40	272960	Clamp, hose, 6.56/6.87 in.								1			
41	GM63140	Hose, air intake								1			
42	324555	Clamp, hose, 4.63/4.94 in.								1			
43	X-301-34	Plug, button (not shown, junction box holes)								4			
44	254013	Clamp, hose, 6.25/6.56 in.											1
45	272628	Hose, hump reducer (6.00 to 5.00" id)											1
46	274545	Clamp, hose, 4.31/4.62 in.											1
47	291562	Clamp, hose, 5.25/5.56 in.											2
48	GM41126	Hose, 90 deg. Elbow											1

Item	Part Number	Description	GM21224-MA1	GM48777-MA1	GM48777-MA2	GM46989-MA1	GM46989-MA2	GM46347-MA1	GM46347-MA2	GM63203-MA1	GM70806-MA1	GM70806-MA2	GM75605-MA1
49	GM47064	Tube Steel											
50	GM75607**	Bracket, Air Cleaner											1

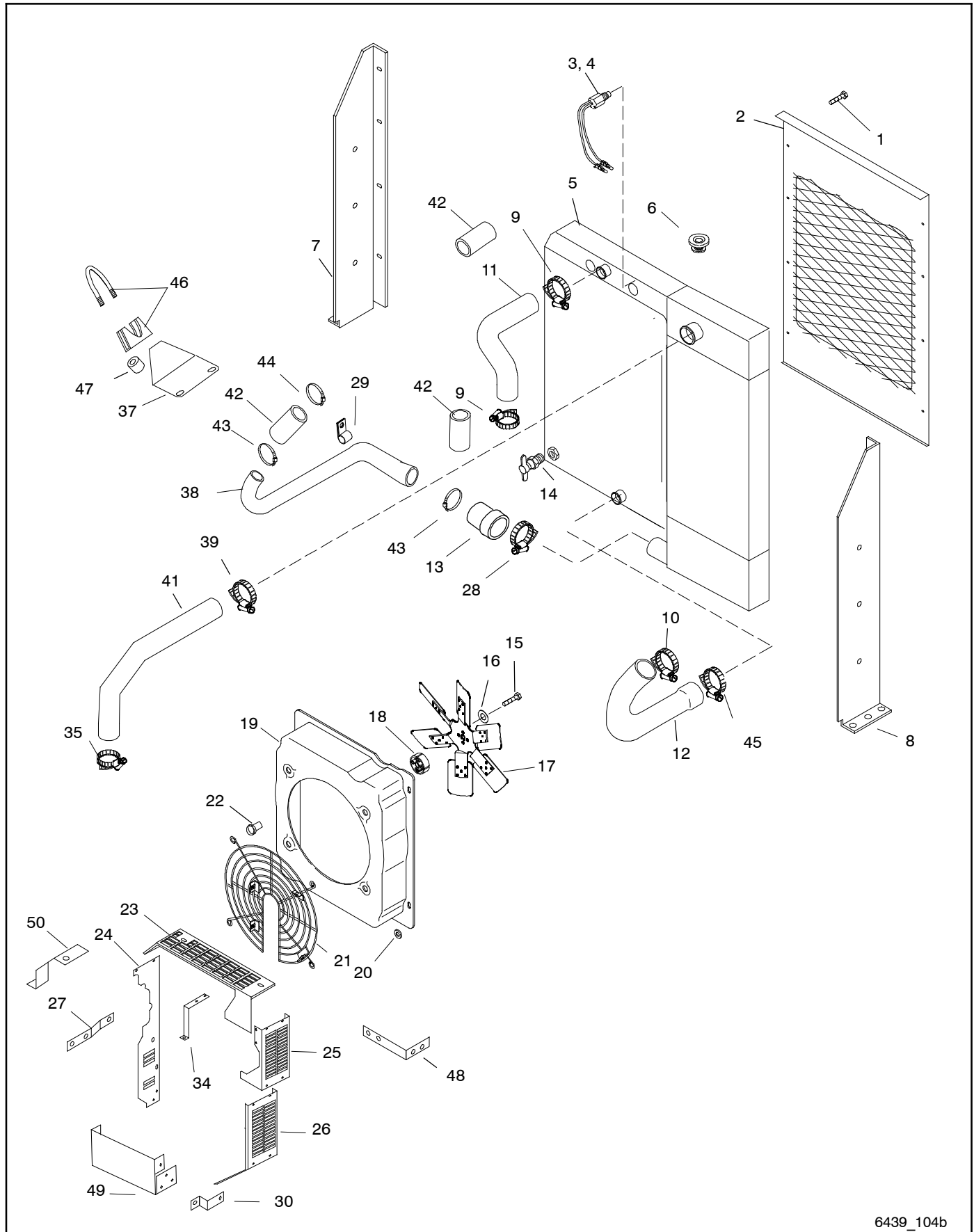
** Use the Kit number and chart below to identify the color suffix.
Add a suffix to this color dependant part number before ordering.

Kit No.	Color Dependant Parts	
	Part Number Suffix	Part Number Example (item 50)
GM75604-MA1-BLK	-BLK	GM75607-BLK

Notes

Cooling System

80-275REOZJD



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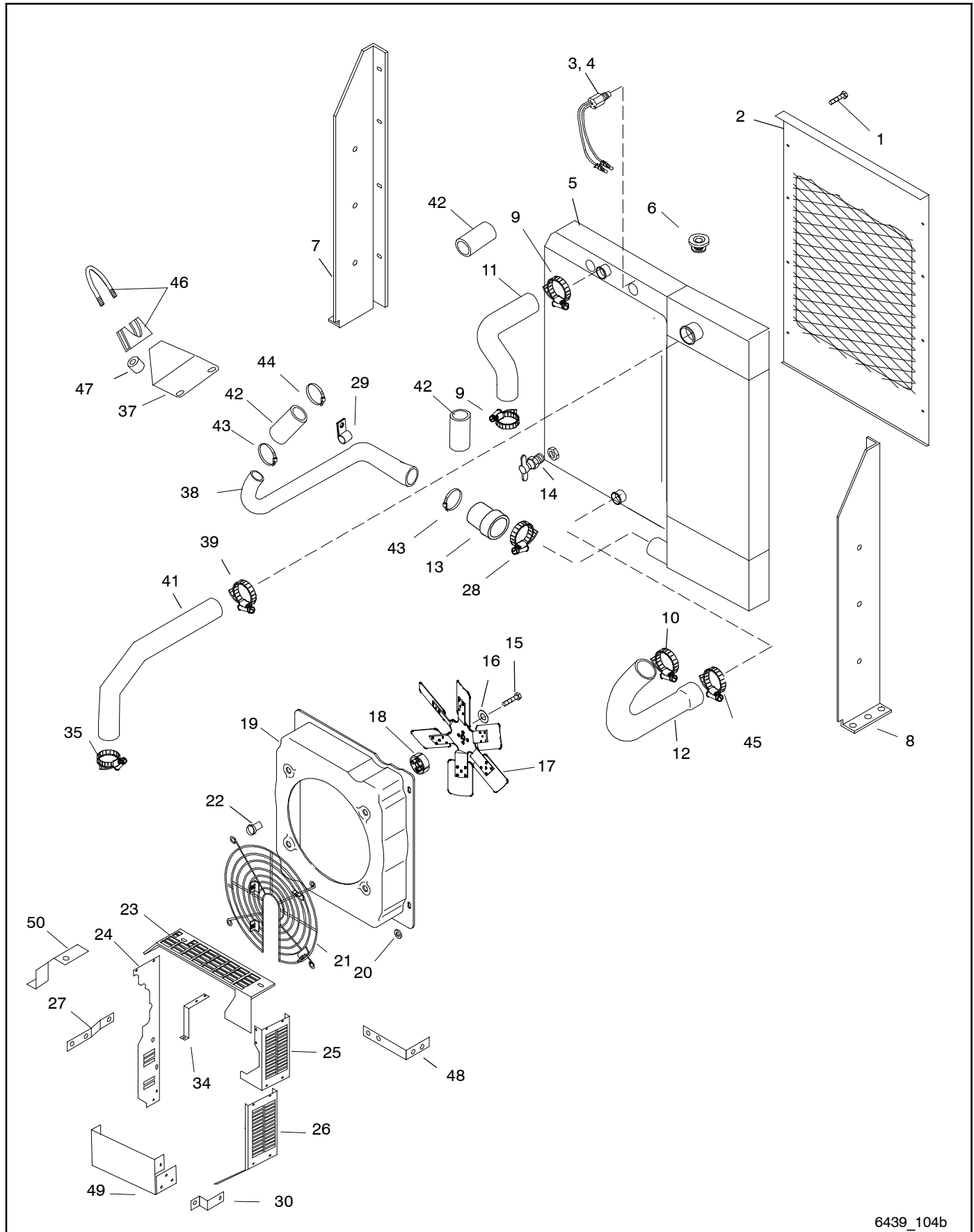
Cooling System

80-275REOZJD

Item	Part Number	Description	Quantity						
			Module						
			GM48078-MA1	GM48078-MA2	GM48078-MA3	GM46987-MA1	GM46342-MA1	GM46342-MA2	GM51055-MA1
1	X-794-1	Screw, hex washer head, drill	10	10	10	10	10	10	10
2	GM32060	Guard, radiator	1	1	1	1	1	1	1
2	GM38873	Guard, radiator							
2	GM14100	Guard, radiator							1
3	365289	Sensor, low fluid	1	1	1	1	1	1	1
4	X-6003-8	Conduit, convoluted	1	1	1	1	1	1	1
5	GM46335	Radiator/CAC assembly					1		
5	GM63538	Radiator/CAC assembly						1	
5	GM31838	Radiator/CAC assembly	1						
5	GM31839	Radiator/CAC assembly		1					
5	GM52732	Radiator/CAC assembly			1				
5	GM52734	Radiator/CAC assembly				1			
5	GM51341	Radiator assembly							1
6	GM22998	Cap, radiator	1	1					
6	GM54994	Cap, radiator 14 PSI			1	1	1	1	
6	GM64392	Cap, radiator 14 PSI							1
7	GM29990	Support, radiator, left side	1	1	1				
7	GM39280	Support, radiator, left side				1	1	1	
7	GM29988	Support, radiator, left side							1
8	GM29989	Support, radiator, right side	1	1	1				
8	GM39279	Support, radiator, right side				1	1	1	
8	GM29987	Support, radiator, right side							1
9	X-426-6	Clamp, hose, 1.56/2.5 in.	2	2	2	2			2
9	343175	Clamp, hose, 3.06/3.38 in.					4	4	
10	X-426-16	Clamp, hose	1	1	1	1			1
10	X-426-2	Clamp, hose					1	1	
11	GM32629	Hose, upper radiator	1		1				
11	GM32043	Hose, upper radiator		1					
11	GM46827	Hose, upper radiator				1			
11	GM46338	Tube, intake CAC					1	1	
11	GM29895	Hose, upper radiator							1
12	GM46337	Hose, lower radiator					1	1	
12	GM32044	Hose, lower radiator	1	1	1				
12	GM39261	Hose, lower radiator				1			
12	GM30980	Hose, lower radiator							1
13	GM24857	Hose, reducer, 3 to 2 in. ID	1	1	1	1			
13	X-6380-4	Hose					1	1	
13	GM30983	Hose, step							1
14	278788	Valve, drain, 3/8 in. NPT	1	1	1	1	1	1	1
14	X-216-23	Coupling, pipe (3/8"npsc)				1			
14	X-250-2	Coupling, reducer (3/8" x 1/4"npt)	1	1	1		1	1	1
14	X-220-6	Pipe (1/4"npt x 1.50")					1	1	
14	X-204-8	Pipe (3/8"npt x 1.50")				1			
15	M931-08100-60	Screw, hex cap	4	4	4				4
15	M931-08130-60	Screw, hex cap				4			
15	M931-10120-60	Screw, hex cap					6	6	
16	X-801-4	Washer, hardened, 0.328 ID x 0.719 in. OD	4	4	4	4			4
16	X-801-3	Washer, hardened, 0.406 ID x 0.812 in. OD					6	6	
17	GM39048	Fan, pusher					1	1	
17	GM19383	Fan, pusher	1	1	1				
17	GM39049	Fan, pusher				1			
17	GM33912	Fan, pusher							1
18	GM20545	Spacer, fan	1	1	1				1
18	GM39311	Spacer, fan				1			
18	336668	Spacer, fan					1	1	
19	343003	Shroud, fan					1	1	
19	222953	Shroud, fan	1	1	1				
19	343054	Shroud, fan				1			
19	GM29772	Shroud, fan							1
19	343422	Bracket, fan shroud (not shown)				1			
19	343423	Bracket, fan shroud (not shown)					1	1	
20	X-25-75	Washer, plain, 0.344 ID x 0.875 in. OD	8	8	8	6			4
21	336888	Guard, wire fan	1	1	1				
21	343062	Guard, wire fan				1			
21	343004	Guard, wire fan					1	1	
21	GM30963	Guard, wire fan							1
22	X-6365-2	Insert, threaded	6	6	6	6	6	6	4

Cooling System, continued

80-275REOZJD



6439_104b

Cooling System, continued

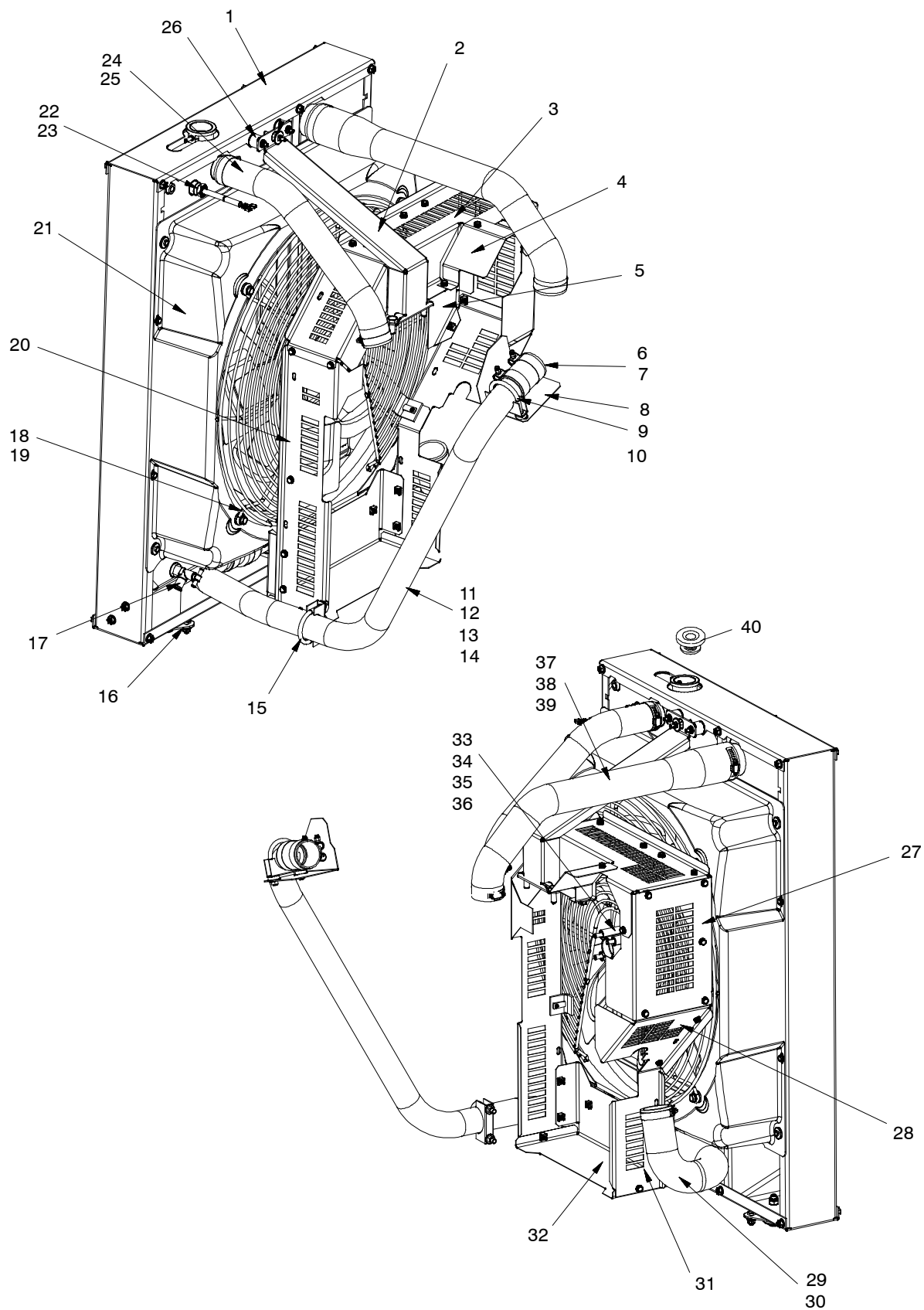
80-275REOZJD

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity						
			Module						
			GM48078-MA1	GM48078-MA2	GM48078-MA3	GM46987-MA1	GM46342-MA1	GM46342-MA2	GM51055-MA1
23	GM48853	Guard, belt top	1	1	1				
23	GM52010	Guard, belt back (not shown)	1	1	1				
23	GM46968	Guard, belt, top				1			
23	GM47049	Guard, belt, top					1	1	
23	GM24199	Guard, belt, top							1
23	GM32512	Guard, belt, top							1
24	GM48856	Guard, belt, left side	1	1	1				
24	GM46967	Guard, belt, left side				1			
24	GM47048	Guard, belt, left side					1	1	
24	GM32511	Guard, belt, left side							1
25	GM48854	Guard, belt, right side upper	1	1	1				
25	GM46965	Guard, belt, right side upper				1			
25	GM20825	Guard, belt, right side upper							1
25	GM32509	Guard, belt, right side middle							1
25	GM47047	Guard, belt, right side					1	1	
26	GM48855	Guard, belt, right side lower	1	1	1				
26	GM46966	Guard, belt, right side lower				1			
26	GM32514	Guard, belt, bottom							1
26	GM32510	Guard, belt, right side lower							1
27	GM48860	Bracket, support	1	1	1				
27	GM46970	Bracket, support				1			
27	GM47051	Bracket, belt guard mtg.					1	1	
28	343175	Clamp, hose, 3.06/3.38 in.				1	1	1	
28	328800	Clamp, hose							1
28	291542	Clamp, hose, 3.25/3.56 in.	1	1	1				
29	X-722-5	Clamp	1	1	1	1			1
30	GM39484	Bracket, support	1	1	1	1			
30	GM47051	Bracket, belt guard mtg.					1	1	
34	GM48858	Bracket, support	1	1	1				
34	GM46969	Bracket, support				1			
34	GM47053	Bracket, belt guard mtg.					1	1	
35	X-426-16	Clamp, hose, 1.81/2.75 in.	1	1	1				1
35	X-426-1	Clamp, hose, 2.81/3.75 in.				1			
35	X-426-2	Clamp, hose, 2.31/3.25 in.					1	1	
37	GM32630	Shield, heat					1	1	
37	GM50932	Shield, heat							1
38	GM48736	Tube, turbo	1	1	1				
38	GM46943	Tube, turbo				1			
38	GM46339	Tube, turbo					1	1	
38	GM50931	Tube, turbo							1
39	X-426-2	Clamp, hose, 2.31/3.25 in.					1	1	1
39	X-426-1	Clamp, hose, 2.81/3.75 in.	1	1	1	1			
40	249887	Clamp, hose, 2.25/2.56 in.	1	1	1	1			
40	324330	Clamp, hose, 2.94/3.25 in.					1	1	
41	GM48079	Hose, intake	1	1	1				
41	GM39269	Hose, radiator upper					1	1	
41	GM39263	Hose, intake				1			
41	GM30981	Hose, intake							1
42	X-6380-4	Hose	1	1	1	1	3	3	1
43	276319	Clamp, hose, 2.13/2.44	1	1	1	1			
43	249887	Clamp, hose, 2.25/2.56 in.							1
43	343175	Clamp, hose, 3.06/3.38 in.					1	1	
44	276319	Clamp, hose, 2.13/2.44	1	1	1	1			
44	249887	Clamp, hose, 2.25/2.56 in.							1
44	343175	Clamp, hose, 3.06/3.38 in.					1	1	
45	X-426-16	Clamp, hose	1	1	1	1	1	1	1
46	286283	Clamp, muffler, 3.12 in.					1	1	
46	X-722-5	Clamp, muffler, 2.12 in.							1
47	X-400-198	Spacer					2	2	2
48	GM48859	Bracket, support	1	1	1				
48	GM46971	Bracket, support				1			
49	GM39465	Guard, belt front					1	1	
49	GM47050	Guard, belt bottom					1	1	
49	GM36179	Guard, belt bottom	1	1	1				
49	GM51050	Guard, belt bottom				1			
50	GM32513	Guard, battery/chg. alternator							1

Cooling System, continued

80/100REOZJE



6439_104_3

Cooling System, continued

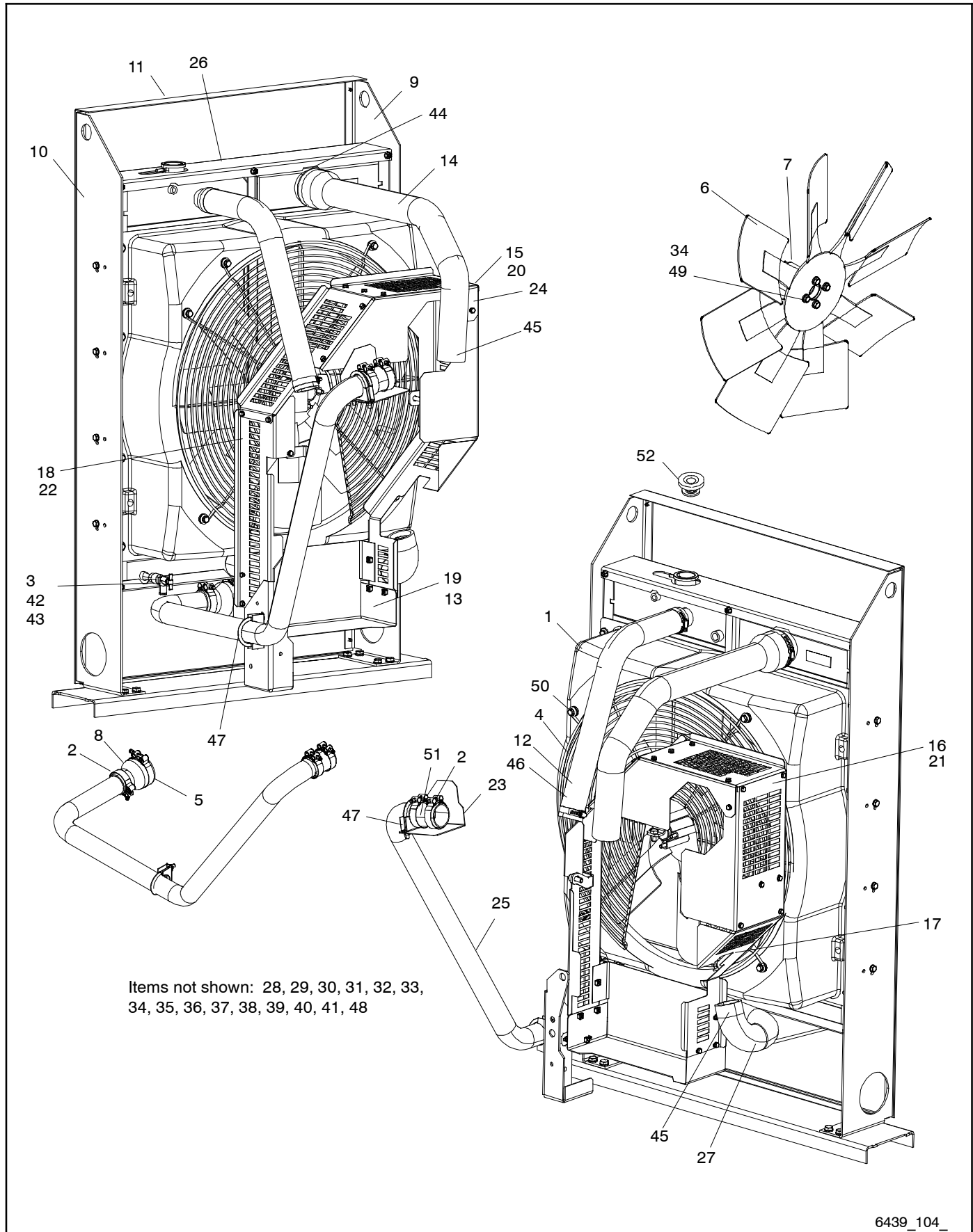
80/100REOZJE

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	328800	Clamp, hose, 2.5/2.81 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-426-6	Clamp, hose, 1.56/2.5 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

Cooling System, continued

125REOZJF



6439_104_

Cooling System, continued

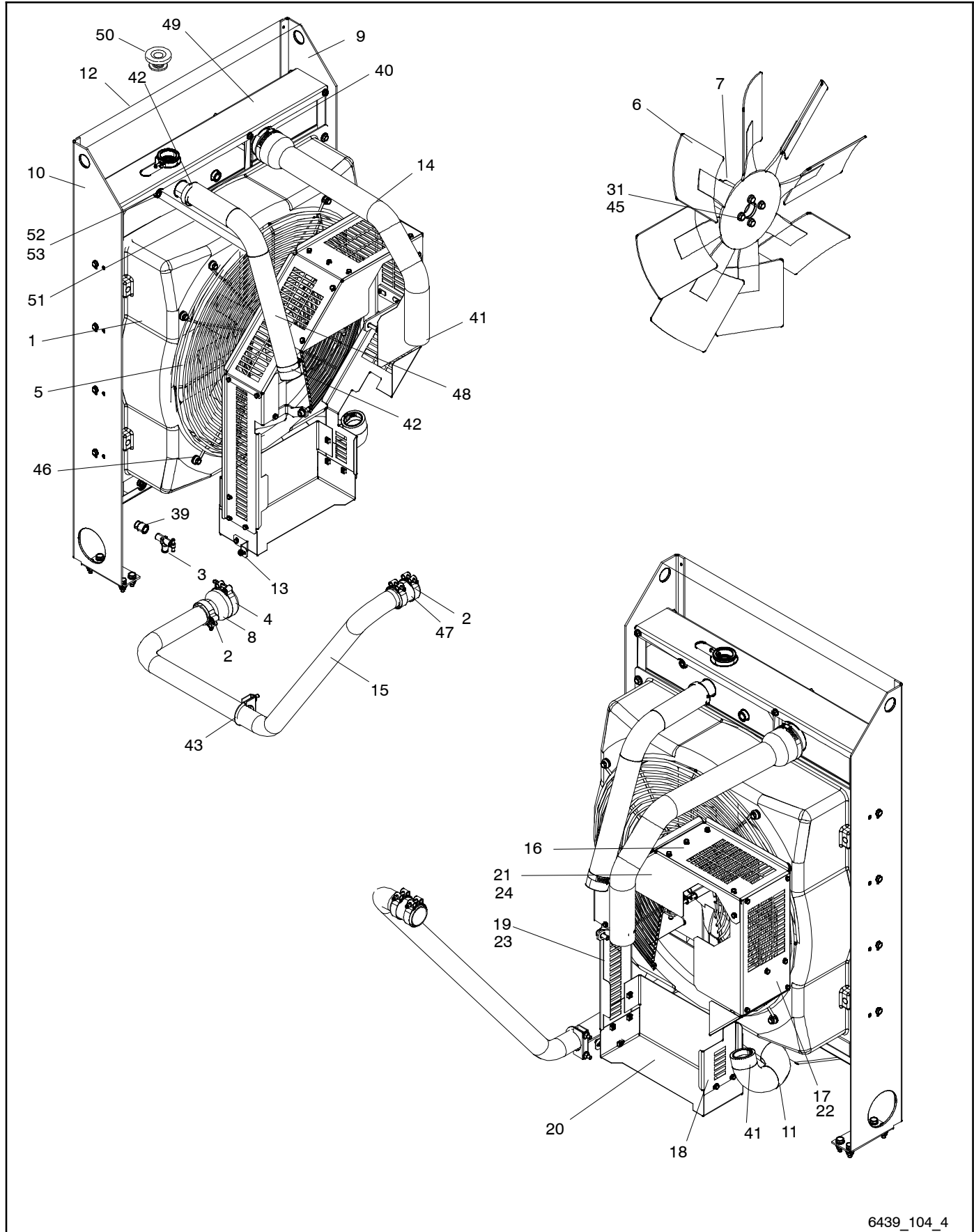
125REOZJF

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

Cooling System, continued

150-200REOZJE



6439_104_4

Cooling System, continued

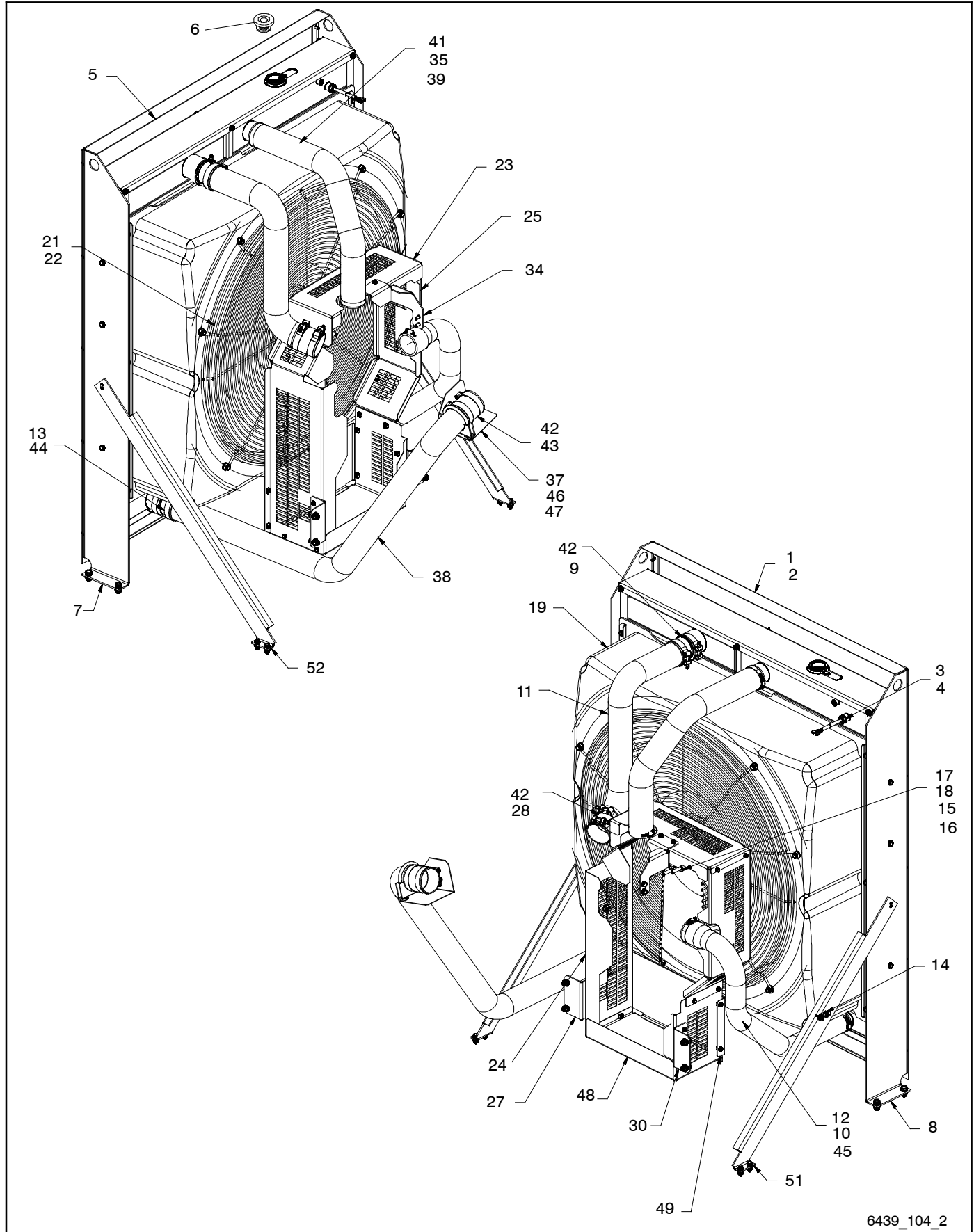
150-200REOZJE

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity	
			Module Number	
			GM70384-MA1	GM70803-MA1
1	222953	Shroud, Fan	1	
1	343054	Shroud, fan		1
1	343422	Bracket, fan shroud		2
2	276319	Clamp, hose, 2.13/2.44 in.	3	3
3	278788	Valve, drain (3/8"nptf)	1	1
4	291542	Clamp, hose, 3.25/3.56 in.	1	
4	343175	Clamp, hose, 3.06/3.38 in.		1
4	X-426-16	Clamp, hose, 1.81/2.75 in.		2
5	336888	Guard, Wire Fan	1	
5	343062	Guard, wire fan		1
6	GM19383	Fan, Pusher	1	
6	GM39049	Fan, Pusher		1
7	GM20545	Spacer, Fan	1	
7	GM39311	Spacer, Fan		1
8	GM24857	Hose, reducer (3.00" to 2.00" ID) Hi-Temp	1	1
9	GM29989	Support, Radiator (RH)	1	
9	GM70914	Support, Radiator RH		1
10	GM29990	Support, Radiator (LH)	1	
10	GM70915	Support, Radiator LH		1
11	GM32044	Hose, Radiator (Lower)	1	
11	GM39261	Hose, Radiator (Lower)		1
12	GM32060	Guard, Radiator	1	
13	GM39484	Bracket, Support	1	1
14	GM48079	Hose, Intake	1	
14	GM39263	Hose, Intake		1
15	GM48736	Tube, Turbo	1	
15	GM46943	Tube, Charge Cooler		1
16	GM48853	Guard, Belt Top	1	
16	GM46968	Guard, Belt Top		1
17	GM48854	Guard, Belt RS (Upper)	1	
17	GM46965	Guard, Belt RS (Upper)		1
18	GM48855	Guard, Belt RS (Lower)	1	
18	GM46966	Guard, Belt RS (Lower)		1
19	GM48856	Guard, Belt LS	1	
19	GM46967	Guard, Belt LS		1
20	GM48857	Guard, Belt Bottom	1	
20	GM51050	Guard, Belt (Bottom)		1
21	GM48858	Bracket, Support	1	
22	GM48859	Bracket, Support	1	
22	GM46971	Bracket, Support		1
23	GM48860	Bracket, Support	1	
23	GM46970	Bracket, Support		1
24	GM52010	Guard, Belt Back	1	
24	GM46969	Bracket, Support		1
31	M931-08100-60	Screw, hex cap	4	
31	M931-08130-60	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	
41	X-426-1	Clamp, hose, 2.81/3.75 in.		4
42	X-426-6	Clamp, hose, 1.56/2.5 in.	2	
43	X-722-5	Clamp, muffler, 2.12 in.	1	1
44	X-794-1	Screw, hex wshr hd, drill 1/4-14 x 5/8	10	
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	GM32629	Hose, Upper Radiator	1	
48	GM46827	Hose, Upper Radiator		1
49	GM52732	Radiator/CAC Assembly	1	
49	GM52734	Radiator/CAC Assembly		1
50	GM54994	Cap, radiator	1	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

Cooling System, continued

230-300REOZJ/E



6439_104_2

Cooling System, continued

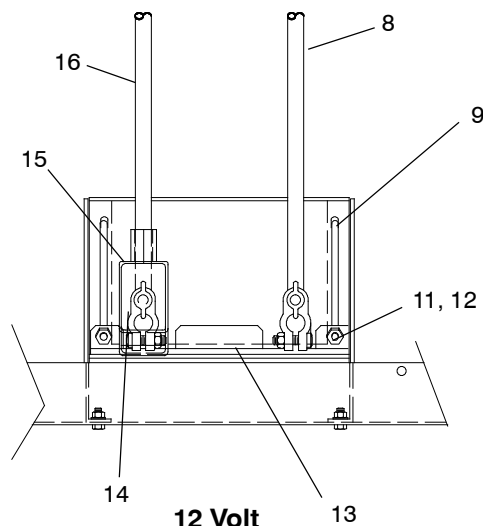
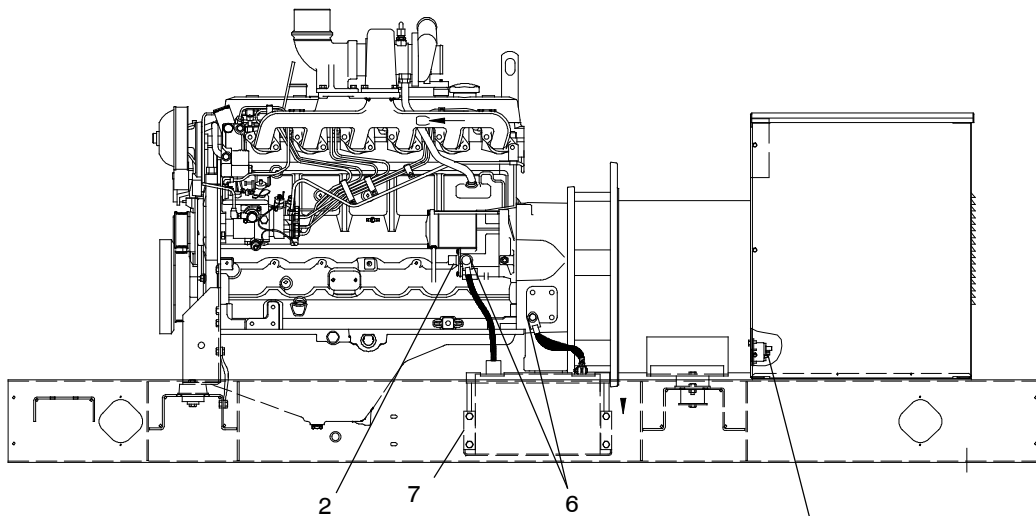
230-300REOZJ/E

Find the installed module number on the generator set nameplate.

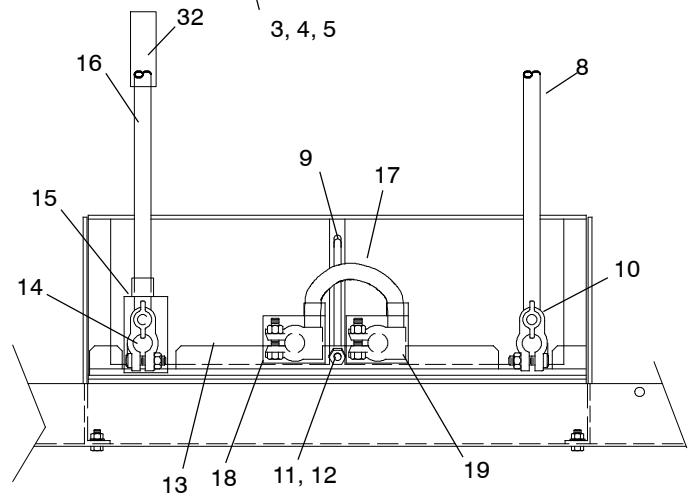
Item	Part Number	Description	Quantity	
			Module	
			GM63201-MA1	GM69553-MA1
1	X-794-1	Screw, hex washer head, drill	10	10
2	GM64299	Guard, radiator (part of Guard Kit GM64309-KA1)	1	1
3	365289	Sensor, low fluid	1	
3	-	See Control and Harness Group		1
4	X-6003-8	Conduit, convoluted	1	
4	-	See Control and Harness Group		1
5	GM63538	Radiator/CAC assembly	1	1
6	GM54994	Cap, radiator	1	1
7	GM63159	Support, radiator	1	1
8	GM63158	Support, radiator	1	1
9	343175	Clamp, hose, 3.06/3.38 in.	2	2
10	X-426-2	Clamp, hose, 2.31/3.25 in.	1	1
11	GM46338	Tube, intake CAC	1	1
12	GM46337	Hose, lower radiator	1	1
13	X-6380-4	Hose	1	1
14	X-256-3	Valve, drain, 1/4 in. NPT	1	1
15	M931-10145-82	Screw, hex cap	6	6
16	X-801-3	Washer, hardened, 0.406 ID x 0.812 in. OD	6	6
17	GM39048	Fan, pusher	1	1
18	336668	Spacer, fan	1	1
19	343003	Shroud, fan	1	1
19	343423	Bracket, fan shroud (not shown)	1	1
21	343004	Guard, wire fan	1	1
22	X-6365-2	Insert, threaded	6	6
23	GM47049	Guard, belt, top	1	1
24	GM47048	Guard, belt, left side	1	1
25	GM47047	Guard, belt, right side	1	1
27	GM47051	Bracket, belt guard mtg.	1	1
28	343175	Clamp, hose, 3.06/3.38 in.	2	2
30	GM47051	Bracket, belt guard mtg.	1	1
34	GM47053	Bracket, belt guard mtg.	1	1
35	X-426-2	Clamp, hose, 2.31/3.25 in.	1	1
37	GM32630	Shield, heat	1	1
38	GM46339	Tube, turbo	1	1
39	X-426-2	Clamp, hose, 2.31/3.25 in.	1	1
41	GM39269	Hose, radiator upper	1	1
42	X-6380-4	Hose	3	3
43	343175	Clamp, hose, 3.06/3.38 in.	2	2
44	343175	Clamp, hose, 3.06/3.38 in.	2	2
45	X-426-16	Clamp, hose	1	1
46	286283	Clamp, muffler, 3.12 in.	1	1
47	X-400-198	Spacer	2	2
48	GM47050	Guard, belt bottom	1	1
49	GM39465	Guard, belt front	1	1
51	GM64463	Support, Radiator (RH)	1	1
52	GM64464	Support, Radiator (LH)	1	1

Engine

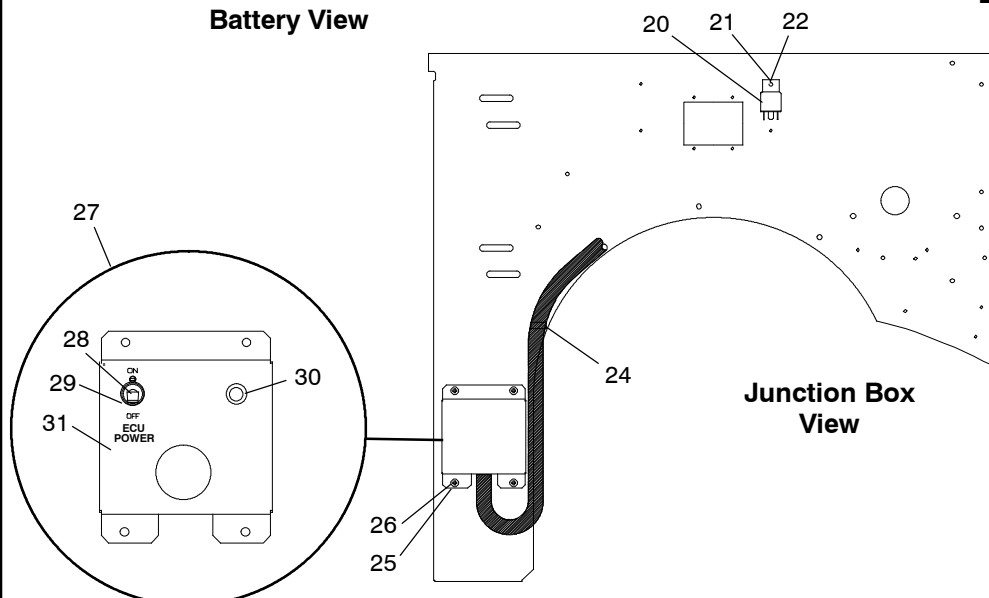
80-275REOZJD



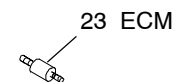
**12 Volt
Battery View**



**24 Volt
Battery View**



**Junction Box
View**



Item 33 is not shown.

6439_105a

Engine

80-275REOZJD

Item	Part Number	Description	Quantity								
			Var.								
1	2	3	4	5	6	7	8	9	10	11	12
1	—	Engine assembly (see chart below)	1	1	1	1	1	1	1	1	1
2	GM22350	Boot, starter terminal	1	1	1	1	1	1	1	1	1
3	291891	Solenoid, 12 V	1	1	1	1	1	1	1	1	1
3	268371	Solenoid, 24 V	1	1	1	1	1	1	1	1	1
4	X-6214-2	Cap	1	1	1	1	1	1	1	1	1
5	X-22-12	Washer, lock, 0.262 ID x 0.743 in. OD	2	3	2	3	3	2	3	3	3
6	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD	2	2	2	2	2	1	1	1	1
6	X-22-30	Washer, lock, 0.652 ID x 1.058 in. OD	1	1	1	1	1	1	1	1	1
7	GM23203	Rack, battery	1	1	1	1	1	1	1	1	1
7	GM19543	Rack, battery	1	1	1	1	1	1	1	1	1
7	GM30631	Rack, battery	1	1	1	1	1	1	1	1	1
7	GM14099	Rack, battery	1	1	1	1	1	1	1	1	1
8	X-545-165	Cable, battery	1	1	1	1	1	1	1	1	1
8	X-545-112	Cable, battery, No. 2, 16 in.	1	1	1	1	1	1	1	1	1
8	X-545-167	Cable, battery	1	1	1	1	1	1	1	1	1
9	286316	Bolt, angle	2	1	2	1	1	1	2	1	1
10	345056	Terminal, battery	1	1	1	1	1	1	1	1	1
11	X-101-4	Nut, hex elastic stop, 5/16-24	2	1	2	1	1	2	1	1	1
12	X-25-85	Washer, plain	2	1	2	1	1	2	1	1	1
12	X-25-44	Washer, plain	1	1	1	1	1	1	1	1	1
13	343221	Clamp, battery	1	1	1	1	1	1	1	1	1
13	336673	Clamp, battery	1	1	1	1	1	1	1	1	1
13	343089	Clamp, battery	1	1	1	1	1	1	1	1	1
13	324033	Clamp, battery	1	1	1	1	1	1	1	1	1
14	345039	Terminal, battery	1	1	1	1	1	1	1	1	1
15	GM20745	Boot, battery lug	1	1	1	1	1	1	1	1	1
15	GM20743	Boot, battery lug	1	1	1	1	1	1	1	1	1
16	X-545-129	Cable, battery	1	1	1	1	1	1	1	1	1
17	280133	Lead, battery cable, 8.5 in.	1	1	1	1	1	1	1	1	1
17	X-545-73	Cable, battery, No. 0, 8 in.	1	1	1	1	1	1	1	1	1
18	GM20748	Boot, battery, 90 deg. right	1	1	1	1	1	1	1	1	1
18	GM20745	Boot, battery lug	1	1	1	1	1	1	1	1	1
19	GM20744	Boot, battery lug	1	1	1	1	1	1	1	1	1
19	GM20745	Boot, battery lug	1	1	1	1	1	1	1	1	1
20	259391	Relay, 12 V	1	1	1	1	1	1	1	1	1
20	272684	Relay, 24 V	1	1	1	1	1	1	1	1	1
20	GM49747	Relay, 24 V	1	1	1	1	1	1	1	1	1
21	M7985A-05012-20	Screw, pan head machine	1	1	1	1	1	1	1	1	1
22	M934-05-50	Washer, plain	1	1	1	1	1	1	1	1	1
23	—	ECM (see engine parts catalog for part number)	1	1	1	1	1	1	1	1	1
23	GM38784-3	Vibromount, controller	1	1	1	1	1	1	1	1	1
24	361567	Base, tie wrap	1	1	1	1	1	1	1	1	1
25	M7985A-05012-20	Screw, pan head machine	4	4	4	4	4	4	4	4	4
26	M934-05-50	Washer, plain	4	4	4	4	4	4	4	4	4
27	GM42213	Box, assembly, diagnostic (includes items 28, 29, 31)	1	1	1	1	1	1	1	1	1
27	GM50968	Box, assembly, diagnostic (includes items 28-31)	1	1	1	1	1	1	1	1	1
28	295030	Switch, toggle	1	1	1	1	1	1	1	1	1
29	151511	Ring, lock	1	1	1	1	1	1	1	1	1
30	343684	Lamp assy 28VDC yel/amb LED	1	1	1	1	1	1	1	1	1
31	GM42212	Box, engine diagnostic	1	1	1	1	1	1	1	1	1
31	GM50969	Box, engine diagnostic	1	1	1	1	1	1	1	1	1
32	GM22350	Boot, starter terminal	1	1	1	1	1	1	1	1	1
33	GM50972	Bracket, ECM mounting (not shown)	1	1	1	1	1	1	1	1	1

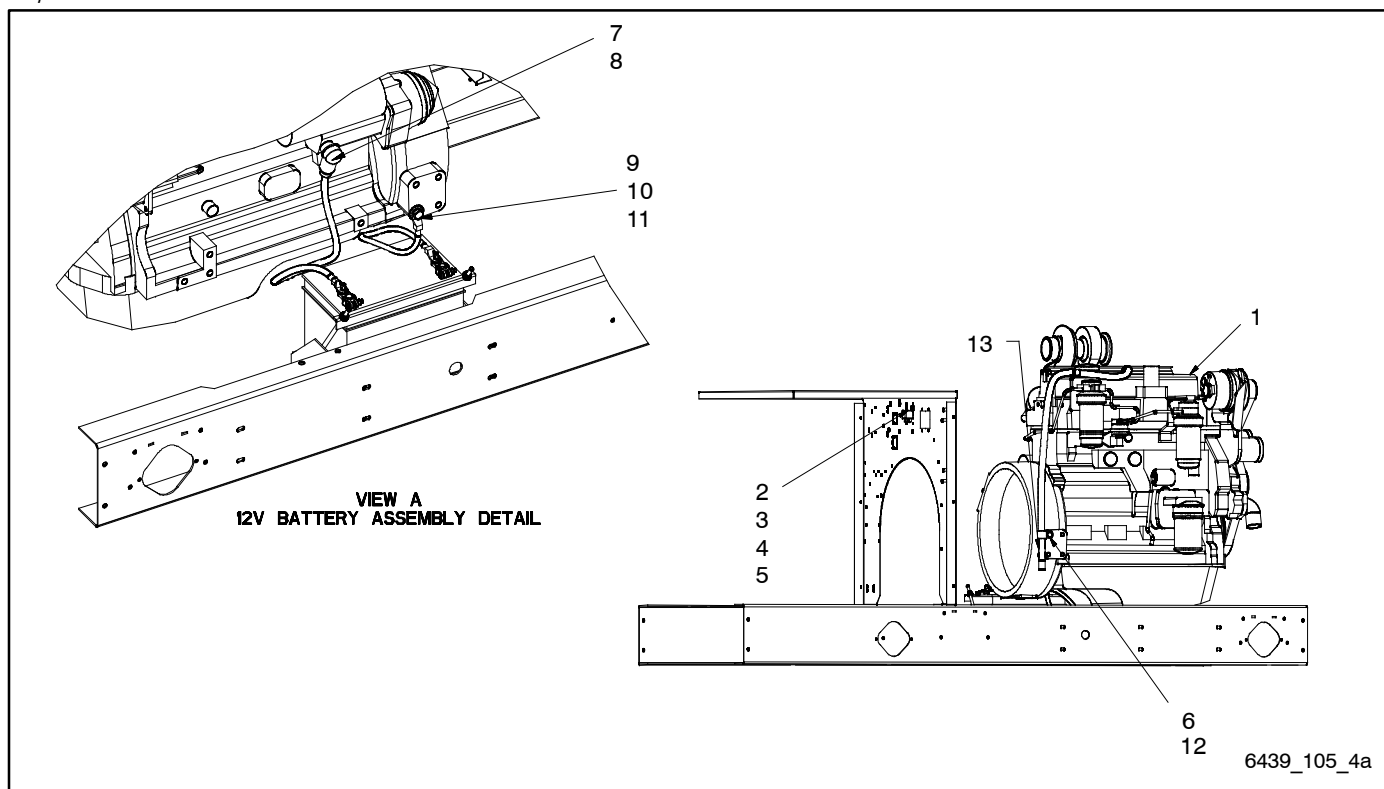
Engine Part Number

Use this table to identify the variation number's engine part number.

Variation No.	Module Number	Model	Engine Part Number	Engine Description
1	GM48077-GR1	125	GM40255-1	6068HF285, 12 V
2	GM48077-GR2	125	GM40255-2	6068HF285, 24 V
3	GM48077-GR3	150	GM40255-1	6068HF285, 12 V
4	GM48077-GR4	150	GM40255-2	6068HF285, 24 V
5	GM39061-GR4	180/200	GM40256-2	6068HF485, 24 V
6	GM46341-GR1	230/250/275	GM40257	6090HF485, 24 V
7	GM51054-GR1	80/100	GM40254-1	4045HF285, 12 V
8	GM51054-GR2	80/100	GM40254-2	4045HF285, 24 V
9	GM46341-GR6	230/250/275	GM58216	6090HF484, 24 V

Engine, continued

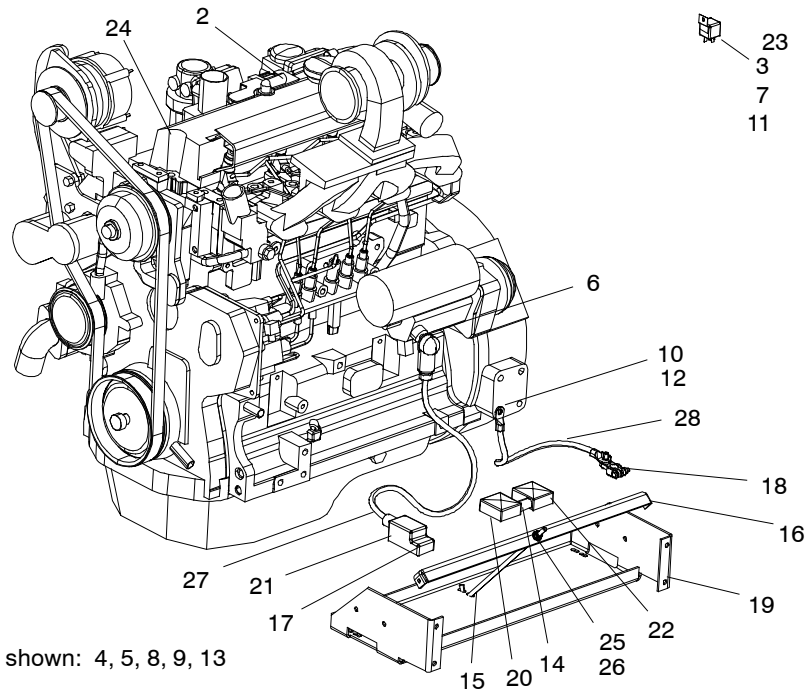
80/100REOZJE



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-545-112	Cable, battery (No.2 x 16") black-	1	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

Engine, continued

125RE0ZJF



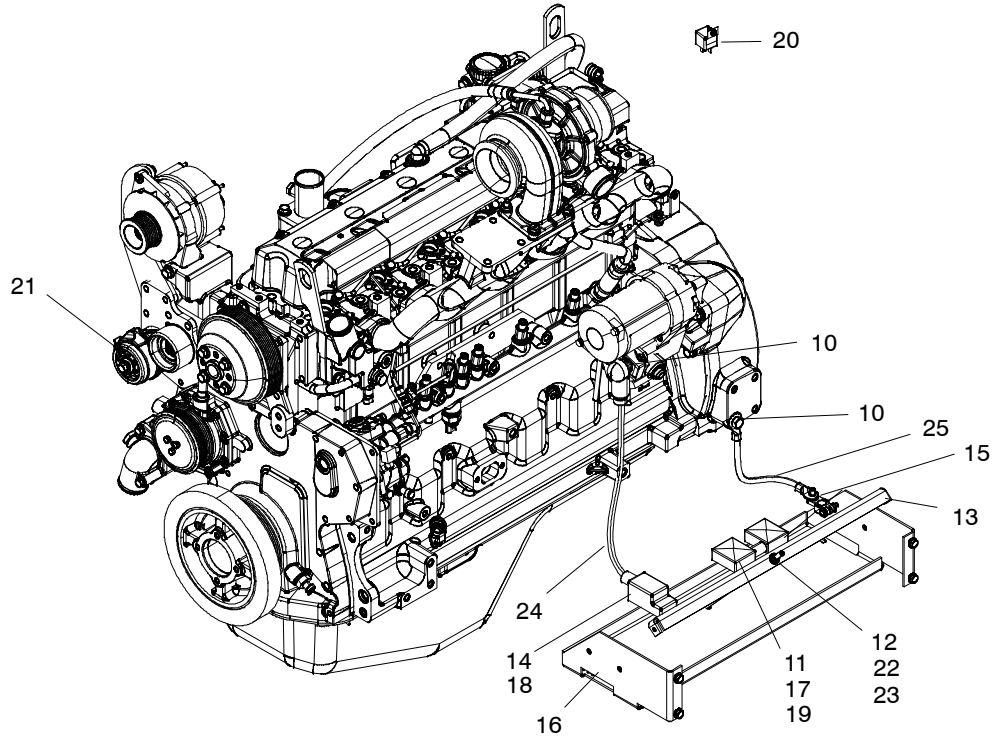
Items not shown: 4, 5, 8, 9, 13

6439_105_

Item	Part Number	Description	Quantity	
			Variation	Number
			19	20
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	M6923-08-80	Nut, Hex 8mm	6	6
6	M6923-10-80	Nut, Hex 10mm	1	1
7	M7985A-05012-20	Screw, pan head mach.	1	1
8	M931-08055-60	Screw, Hex Cap	2	2
9	M933-08020-60	Screw, Hex Cap	4	4
10	M933-12020-60	Screw, Hex Cap	2	2
11	M934-05-50	Nut, Hex 5mm	1	1
12	X-22-26	Washer,lock.521 IDx1.24 in.OD	1	1
13	X-672-37	Clamp	1	1
14	280133	Cable, battery (No.0 x 8.50") black-		1
15	286316	Bolt, Angle	2	1
16	336673	Clamp, battery	1	
16	343089	Clamp, battery		1
17	345039	Terminal, battery		1
18	345056	Terminal, battery		1
19	GM23203	Rack, Battery (12V)	1	
19	GM19543	Rack, Battery (24V)		1
20	GM20744	Boot, Battery Lug		1
21	GM20743	Boot, Battery Lug	1	
21	GM20745	Boot, Battery Lug		1
22	GM20748	Boot, Battery Lug		1
23	GM49746	Relay, 12V DC	1	
23	GM49747	Relay, 24V DC		1
24	GM66704-3	Engine, JD 4045HF285 125kW, 12V	1	
24	GM66704-4	Engine, JD 4045HF285 125kW, 24V		1
25	X-25-85	Washer, plain, .344 ID x .687 in. OD	3	1
26	X-101-4	Nut, hex elastic stop, 5/16-24	2	1
27	X-545-129	Cable, battery (No.0 x 30") red+	1	1
28	X-545-165	Cable, Battery	1	1

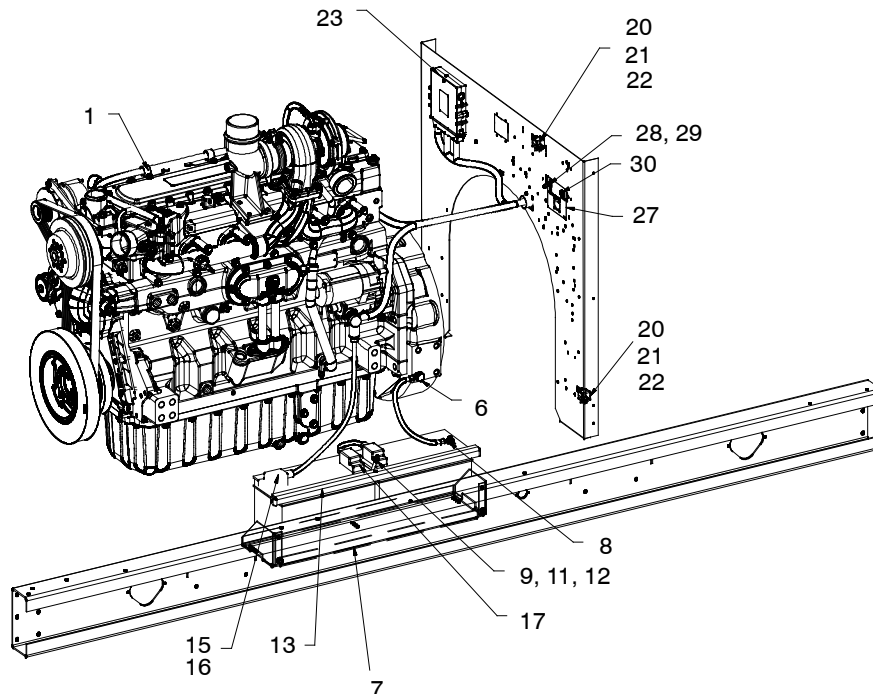
Engine, continued

150-200REOZJE



6439_105_3

Item	Part Number	Description	Quantity				
			Variation Number				
			14	15	16	17	18
10	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	2	2	2	2	2
11	280133	Cable, battery (No.0 x 8.50") black-		1		1	
11	X-545-73	Cable, battery (No.0 x 8") black					1
12	286316	Bolt, Angle (NRP)	2	1	2	1	1
13	343089	Clamp, battery		1		1	
13	336673	Clamp, battery	1		1		
13	343221	Clamp, battery					1
14	345039	Terminal, battery		1		1	
15	345056	Terminal, battery		1		1	
15	X-25-37	Washer, plain, .406 ID x.812 in. OD					4
15	X-6210-9	Nut, flange spirallock, 3/8-16					4
16	GM19543	Rack, Battery (24V)		1		1	
16	GM23203	Rack, Battery	1		1		
16	GM63164	Rack, Battery					1
17	GM20744	Boot, Battery Lug		1		1	
18	GM20745	Boot, Battery Lug		1		1	1
18	GM20743	Boot, Battery Lug	1		1		
19	GM20748	Boot, Battery Lug		1		1	
20	GM49746	Relay, 12V DC	1		1		
20	GM49747	Relay, 24V DC		1		1	1
21	GM70424-1	Engine, JD 6068HF285 125/150kWe, 12V	1		1		
21	GM70424-2	Engine, JD 6068HF285 125/150kWe, 24V		1		1	
21	GM70798-1	Engine Assembly, JD 6068HF485					1
22	X-25-85	Washer, plain, .344 ID x .687 in. OD	3	1	3	1	
22	X-25-44	Washer, Plain, .328 ID x .562 OD					1
23	X-101-4	Nut, hex elastic stop, 5/16-24	2	1	2	1	1
24	X-545-129	Cable, battery (No.0 x 30") red+	1	1	1	1	1
25	X-545-165	Cable, Battery	1	1	1	1	1



6439_105_2

Item	Part Number	Description	Quantity			
			Variation			
			10	11	21	22
1	GM58216	Engine, JD 6090HF484 230-275kWe	1	1		1
1	GM75563	Engine, JD 6090HFG96 300kWe				
6	X-22-30	Washer, lock, 0.652 ID x 1.058 in. OD	2	2	2	2
7	GM63164	Rack, battery	1	1	1	1
8	X-545-167	Cable, battery	1	1	1	1
9	286316	Bolt, angle	1	1	1	1
11	X-101-4	Nut, hex elastic stop, 5/16-24	1	1	1	1
12	X-25-44	Washer, plain, .328 ld x .562 OD	1	1	1	1
13	343221	Clamp, battery	1	1	1	1
15	GM20745	Boot, battery lug	1	1	1	1
16	X-545-129	Cable, battery	1	1	1	1
17	X-545-73	Cable, battery, No. 0, 8 in.	1	1	1	1
20	GM49747	Relay, 24 V	2	2	2	2
21	M7985A-05012-20	Screw, pan head machine	2	2	2	2
22	M934-05-50	Washer, plain	2	2	2	2
23	—	ECM (see engine parts catalog for part number)	1	1	1	1
27	GM63565	Decal, diagnostic	1			
27	-	See Control and Harness Group		1	1	1
28	295030	Switch, toggle	1			
28	-	See Control and Harness Group		1	1	1
29	151511	Ring, lock	1			
29	-	See Control and Harness Group		1	1	1
30	343684	Lamp assy. 28 VDC yel/amb LED	1			
30	-	See Control and Harness Group		1	1	1

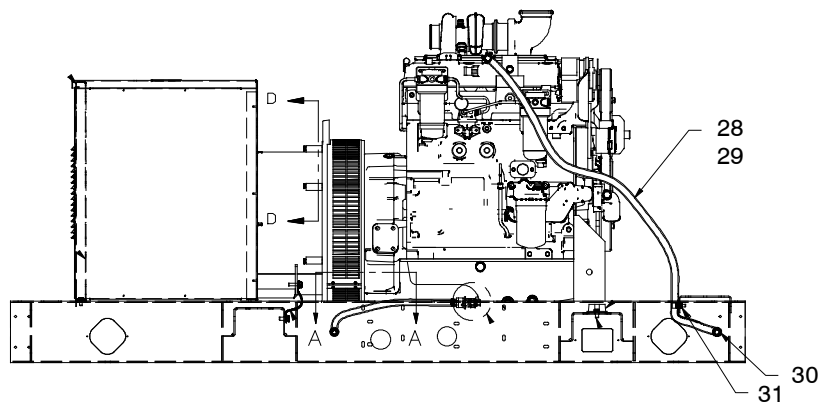
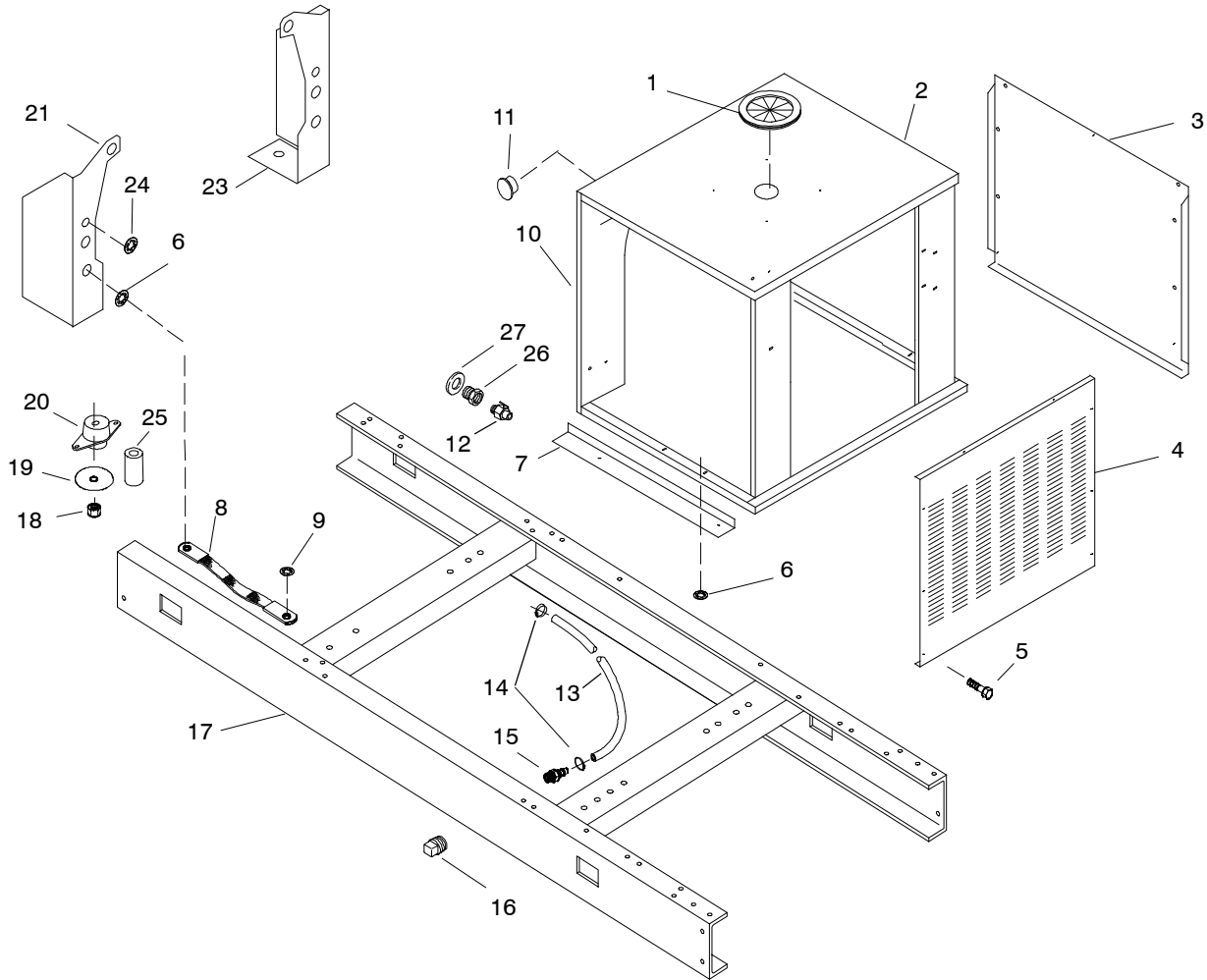
Nameplate and Decals

Item	Part Number	Description	Quantity Variation			
			GR1	GR2	GR4	GR5
1	238402	Decal, caution positive terminal only	1	1	1	1
2	249808	Decal, warning rotating parts	1	1	1	1
3	249809	Decal, caution hot engine	2	2	2	1
4	249810	Decal, warning hot coolant	1	1	1	1
5	273780	Decal, warning explosion	1	1	1	1
6	224233	Decal, 1-800 number	1	1	1	1
7	257438	Decal, danger moving rotor	3	3	3	3
8	257441	Decal, warning lifting eye	1	1	1	1
9	258815	Decal, warning voltage backfeed	1	1	1	1
10	GM13776	Decal, FRII reconnection	1	1	1	1
11	327004	Nameplate, model/ratings, Kohler	1	1	1	1
12	X-6232-3	Decal, stripes		1		1
12	X-6232-6	Decal, stripe	3	2	3	2
13	X-6246-1	Decal, Kohler Power System	2	2	2	2
15	GM15300	Decal, exhaust piping	1	1	1	1
16	GM19296	Decal, fuel type	1	1	1	1
17	343165	Decal, caution not a step			1	1
18	364116	Decal, caution welding disconnect			1	2
19	GM39683	Tag, hang lug selection	1	1	1	1
20	GM60531	Decal, control height				1

Notes

Skid and Plant Mounting

80-275REOZJD



6439_109a

Skid and Plant Mounting

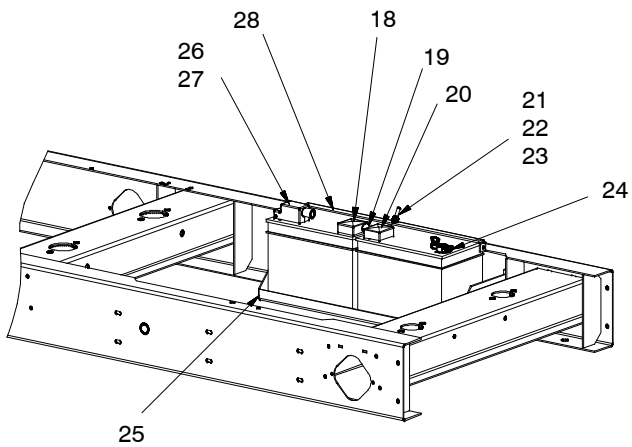
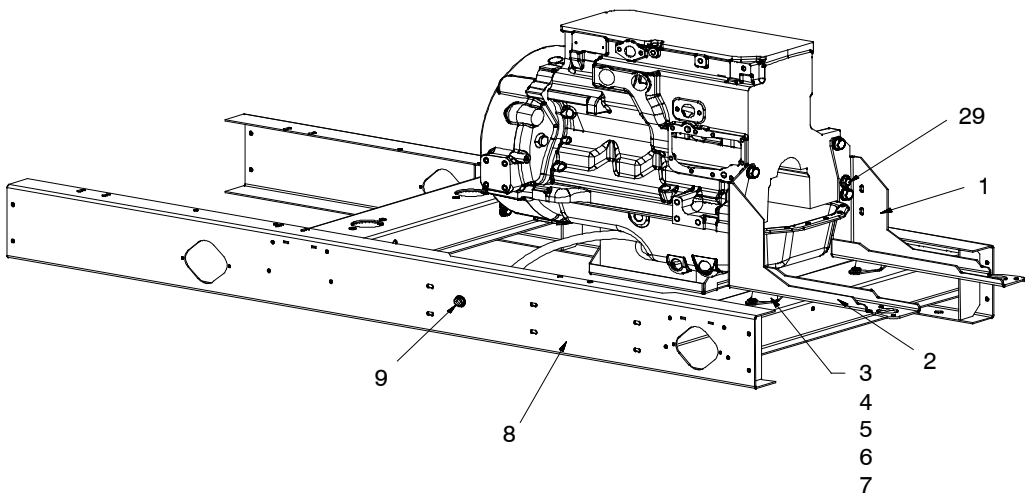
80-275REOZJD

Find the installed module number on the generator set nameplate.

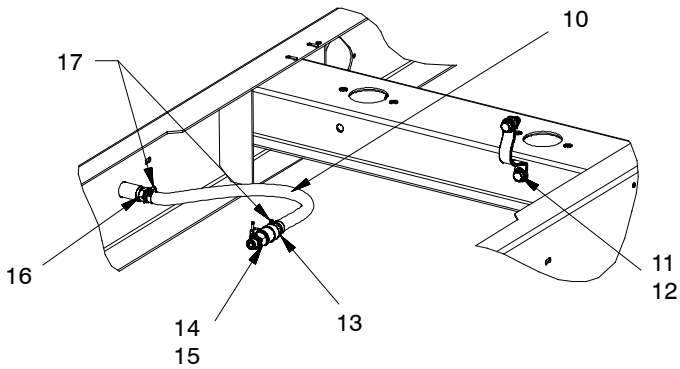
Item	Part Number	Description	Quantity													
			Module													
			GM20497-MA2	GM39063-MA3	GM39063-MA4	GM46343-MA1	GM51056-MA1	GM51056-MA2	GM52903-MA1	GM52903-MA2	GM52905-MA2	GM52905-MA3	GM52907-MA2	GM52907-MA3	GM52909-MA1	GM52909-MA2
1	X-284-31	Grommet, round	1								1	1				
1	X-6033-15	Grommet					1	1	1	1	1					
2	GM17623-KCB	Panel, junction box, front	1		1		1	1	1	1	1	1		1		
2	GM10555	Box, junction		1		1										
2	GM50880	Box, junction											1		1	1
2	324861	Plug, button (not shown)		4		4							4	4	4	4
3	GM17640-BLK	Cover, side	2		2		2	2								
3	336001-BLK	Cover, side		2		2										
3	-	Cover, side (see Cover Kit)							2	2	2	2	2	2	2	2
4	GM17625-BLK	Cover, rear	1		1		1	1								
4	-	Cover, rear (see Cover Kit)														
5	X-6216-1	Screw, Phillips hex crimpite	12	12	12	12	12	12	12	12	12	12	12	12	12	12
6	X-22-16	Washer, lock, 0.326 ID x 0.883 in. OD	6	10	10	8	4	6	4	6	6	6	10	10	8	8
7	GM46949	Support, junction box			2											
7	GM65810	Support, junction box	2					2		2	2					
7	GM47771	Support, junction box										2				
7	GM19557	Bracket, junction box mounting		4		4							4		4	4
7	GM55334	Support, junction box												4		
8	266581	Strap, ground, 8 in.	3													
8	290418	Strap, ground		3	3		2	2	2	2	3	3	3	3		
8	GM21085	Strap, ground, 16 in.				1									1	1
9	X-22-16	Washer, lock, 0.326 ID x 0.883 in. OD				2										
9	X-22-14	Washer, lock, 0.391 ID x 0.975 in. OD					3	3	3	3	3	3				
9	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD											2	2	2	2
10	GM17624	Panel, junction box, rear	1		1	1	1	1	1	1	1	1		1		
11	X-301-45	Plug, button	1				1	1	1	1	1	1				
12	272701	Valve, oil drain	1	1	1		1	1	1	1	1	1	1	1		
12	X-582-3	Connector, hose + vibra seal				1									1	1
13	X-577-35	Hose, rubber, straight, 0.62 in. ID (2.50 ft.)				1		1		1					1	1
13	X-577-24	Hose, rubber, straight, 0.62 in. ID (1.75 ft.)	1	1	1								1	1		
13	X-577-27	Hose, rubber, straight, 0.62 in. ID (1.92 ft.)					1		1							
13	X-577-44	Hose, rubber, straight, 0.62 in. ID (2.25 ft.)														1
13	X-577-47	Hose, rubber, straight, 0.62 in. ID(1.25 ft.)									1	1				
14	X-426-10	Clamp, hose, 0.5/1 in.	2	2	2	2	2	2	2	2	2	2	2	2	2	2
15	X-582-1	Connector, hose + vibra seal	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	X-75-3	Plug, pipe, 1/2 in. NPT	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	GM41661	Skid				1									1	
17	GM46939	Skid			1									1		
17	GM48069	Skid	1								1					
17	GM46822	Skid		1									1			
17	GM47771	Skid										1				
17	GM51902	Skid, 34 in.					1		1							
17	GM50990	Skid, 41 in.						1		1						
17	GM47763	Skid														1
18	M982-12-80	Nut, hex elastic stop		2	2		2	2	2	2	2	2	2	2		
18	M982-16-80	Nut, hex elastic stop	2			2									2	2
19	X-25-112	Washer, plain				2									2	2
19	X-25-103	Washer, plain, 0.531 ID x 2.75 in.	2	2	2						2	2	2	2		
19	X-25-140	Washer, plain, 0.531 ID x 1.24 in.					2	2	2	2						
20	324389	Vibromount	2	2	2						2	2	2	2		
20	324391	Vibromount				2									2	2
20	324074	Vibromount					2	2	2	2						
21	GM19556	Bracket, engine mounting				1									1	1
21	GM22370	Support, engine, left side	1				1	1	1	1	1	1				
21	GM39285	Support, engine, left side		1	1								1	1		
23	GM19556	Bracket, engine mounting				1									1	1
23	GM22369	Support, engine, right side	1				1	1	1	1	1	1				
23	GM39284	Support, engine, right side		1	1								1	1		
24	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD	6	2	2		2	2	2	2	2	2				
24	X-22-30	Washer, lock, 0.652 ID x 1.058 in. OD				1									1	1
25	X-400-154	Spacer, 0.527 ID x 0.625 OD x 2.3 in.	2	2	2						2	2	2	2		
26	GM40116	Bushing, adapter	1	1	1						1	1	1	1		
26	GM22991	Bushing, adapter					1	1	1	1						
27	GM42443	O-ring	1	1	1						1	1	1	1		
27	GM11694	O-ring, ISO 6149, 15.3 mm ID					1	1	1	1	1					
28	X-373-20	Hose, fuel/oil 3/4 in. ID					1	1	1	1	1					
29	X-426-8	Clamp, hose, 0.81/1.75 in.					2	2	2	2						
30	X-582-7	Connector, hose					1	1	1	1	1					
31	X-672-28	Clamp, insulated, 0.88 in.					1	1	1	1	1					

Skid and Plant Mounting, continued

80/100REOZJE



VIEW B
24V BATTERY ASSEMBLY DETAIL



OIL DRAIN HOSE / GROUND STRAP
ASSEMBLY DETAIL

6439_109_3

Skid and Plant Mounting, continued

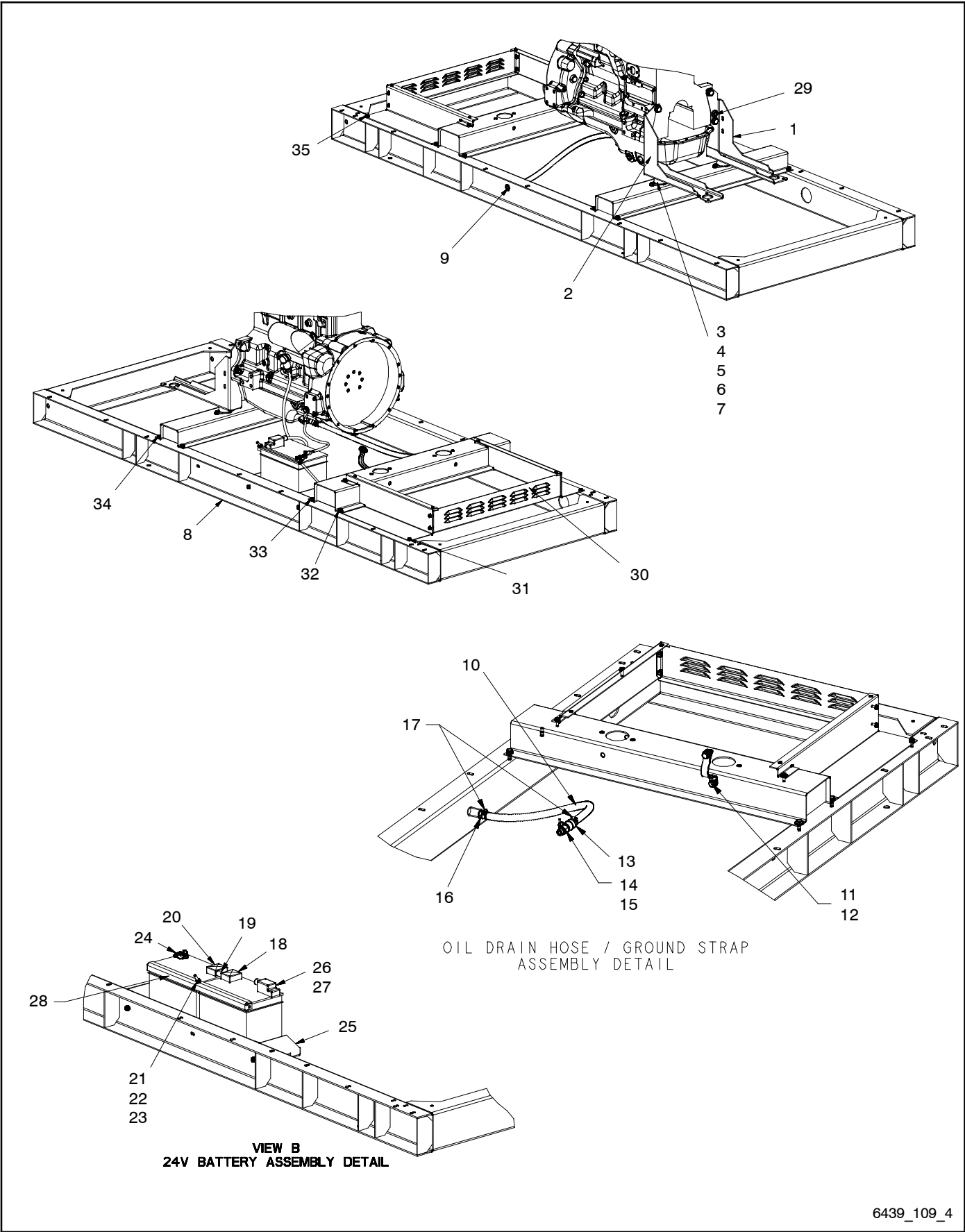
80/100REOZJE

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity	
			Module	
			GM66075-MA1	GM66075-MA2
1	GM66191	Support, Engine (LH)	1	1
2	GM66190	Support, Engine R.H. (R.H.)	1	1
3	324074	Vibromount	2	2
4	M931-12065-60	Screw, hex cap	2	2
5	X-25-140	Washer, plain, .531 ID x 2 in. OD	2	2
6	M982-12-80	Nut, hex elastic stop	2	2
7	M933-10020-60	Screw, hex cap	4	4
8	GM66189	Skid, 34"	1	1
9	X-75-3	Plug, pipe (1/2" nptf)	1	1
10	X-577-27	Hose, rubber, straight, .62 in. ID	1	1
11	290418	Strap, ground (8 in.)	2	2
12	X-22-14	Washer, lock, .391 ID x .975 in. OD	4	4
13	272701	Valve, oil drain (1/2-14 nptf)	1	1
14	GM22991	Bushing, Adapter	1	1
15	GM11694	O-ring, ISO 6149 (15.3mm ID)	1	1
16	X-582-1	Connector, Hose 5/8" x 1/2" MIP Brass	1	1
17	X-426-10	Clamp, hose, .5/1 in.	2	2
18	GM20748	Boot, Battery Lug		1
19	280133	Cable, battery (No.0 x 8.50") black-		1
20	GM20744	Boot, Battery Lug		1
21	286316	Bolt, Angle	2	1
22	X-25-85	Washer, plain, .344 ID x .687 in. OD	2	1
23	X-101-4	Nut, hex elastic stop, 5/16-24	2	1
24	345056	Terminal, battery (neg.)	1	1
25	GM14099	Rack, Battery (12V)	1	
25	GM19543	Rack, Battery (24V)		1
26	GM20745	Boot, Battery Lug	1	1
27	345039	Terminal, battery (pos.)	1	1
28	324033	Clamp, battery	1	
28	343089	Clamp, battery		1
29	X-22-26	Washer, lock, .521 ID x 1.24 in. OD		2

Skid and Plant Mounting, continued

80/100REOZJE w/Enclosure



6439_109_4

Skid and Plant Mounting, continued

80/100REOZJE w/Enclosure

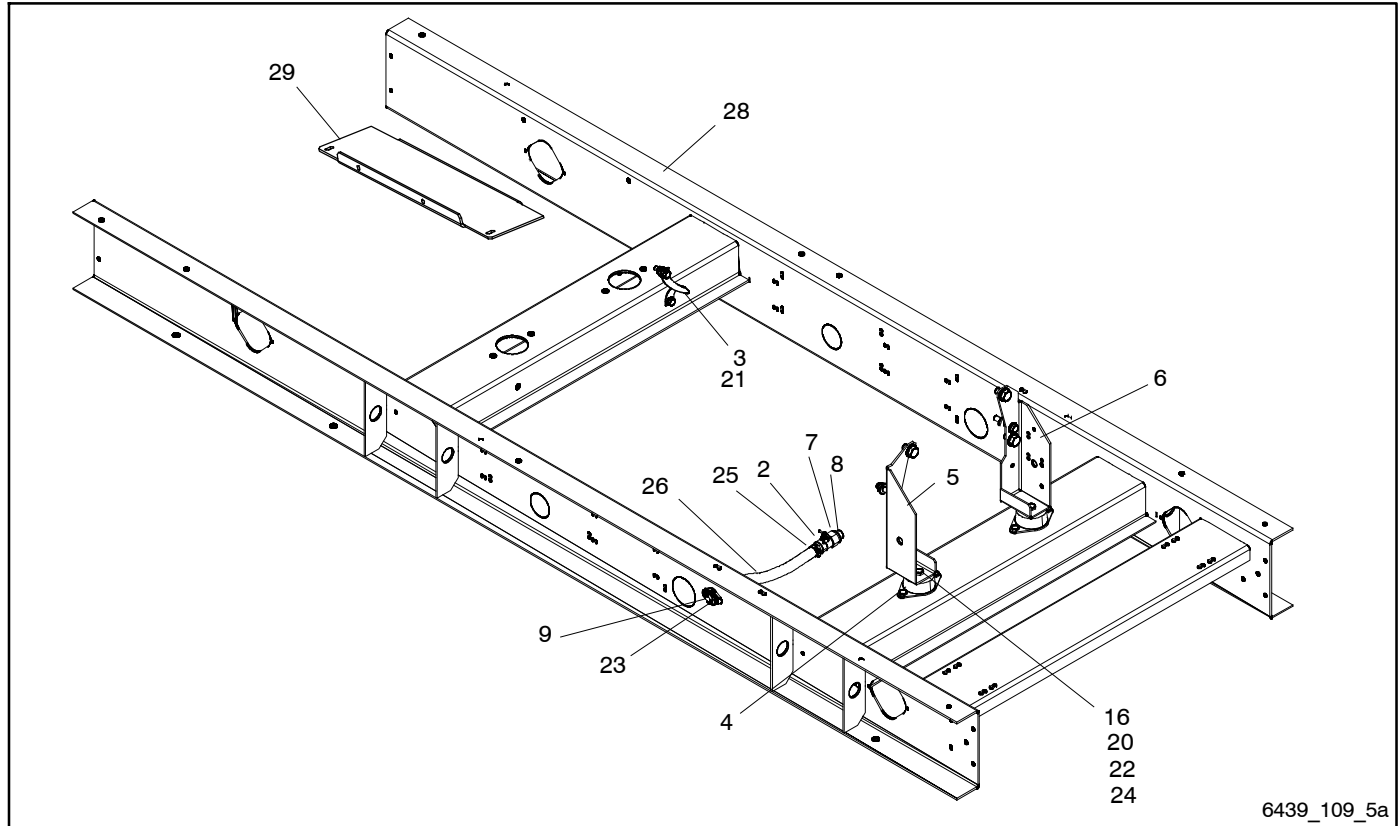
Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity			
			Module			
			GM66076-MA1	GM66076-MA2	GM66076-MA3	GM66076-MA4
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	GM66186	Skid, 44"	1	1	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	4	4
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
18	GM20748	Boot, Battery Lug		1		1
19	280133	Cable, battery (No.0 x 8.50") black-		1		1
20	GM20744	Boot, Battery Lug		1		1
21	286316	Bolt, Angle	2	1	2	1
22	X-25-85	Washer, plain, .344 ID x .687 in. OD	2	1	2	1
23	X-101-4	Nut, hex elastic stop, 5/16-24	2	1	2	1
24	345056	Terminal, battery (neg.)	1	1	1	1
25	GM57161	Rack, Battery	1		1	
25	GM63164	Rack, Battery		1		1
26	GM20745	Boot, Battery Lug	1	1	1	1
27	345039	Terminal, battery (pos.)	1	1	1	1
28	324033	Clamp, battery	1		1	
28	343089	Clamp, battery		1		1
29	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	2	2	2	2
30	GM60189	Cover, End J-Box	1	1	1	1
31	GM66538	Bracket, J-Box Mounting	1	1		
31	GM66680	Bracket, J-Box Mounting LH			1	1
32	GM66188	Crossmember, Alternator	1	1	1	1
33	X-22-15	Washer, lock, .456 ID x 1.058 in. OD	2	2	2	2
34	GM66187	Crossmember, Engine	1	1	1	1
35	GM66537	Bracket, JBox Mounting RH	1	1		
35	GM66679	Bracket, JBox Mounting RH			1	1

Skid and Plant Mounting, continued

150REOZJE

Find the installed module number on the generator set nameplate.



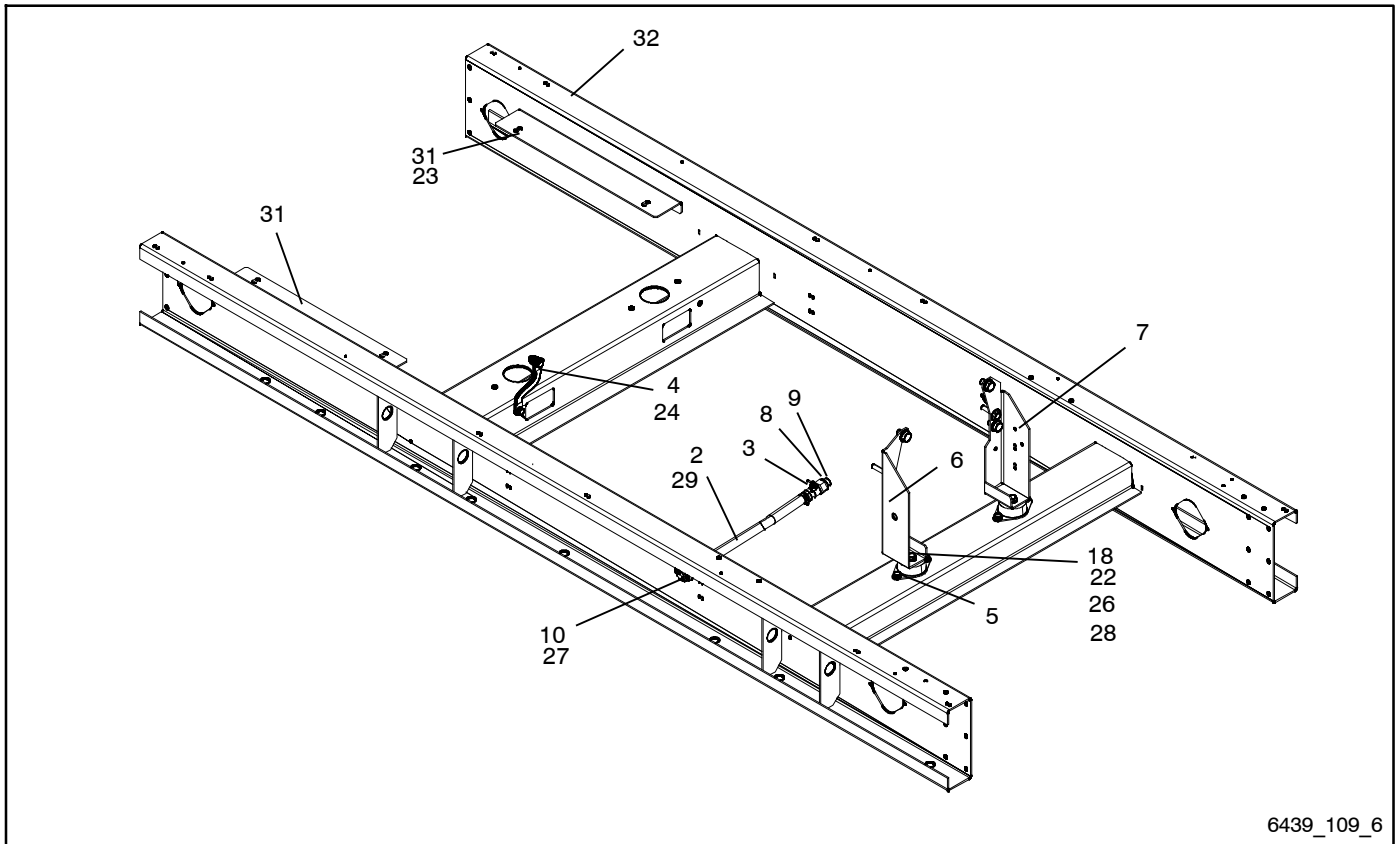
6439_109_5a

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	2
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

Skid and Plant Mounting, continued

125REOZJF & 180/200REOZJE

Find the installed module number on the generator set nameplate.

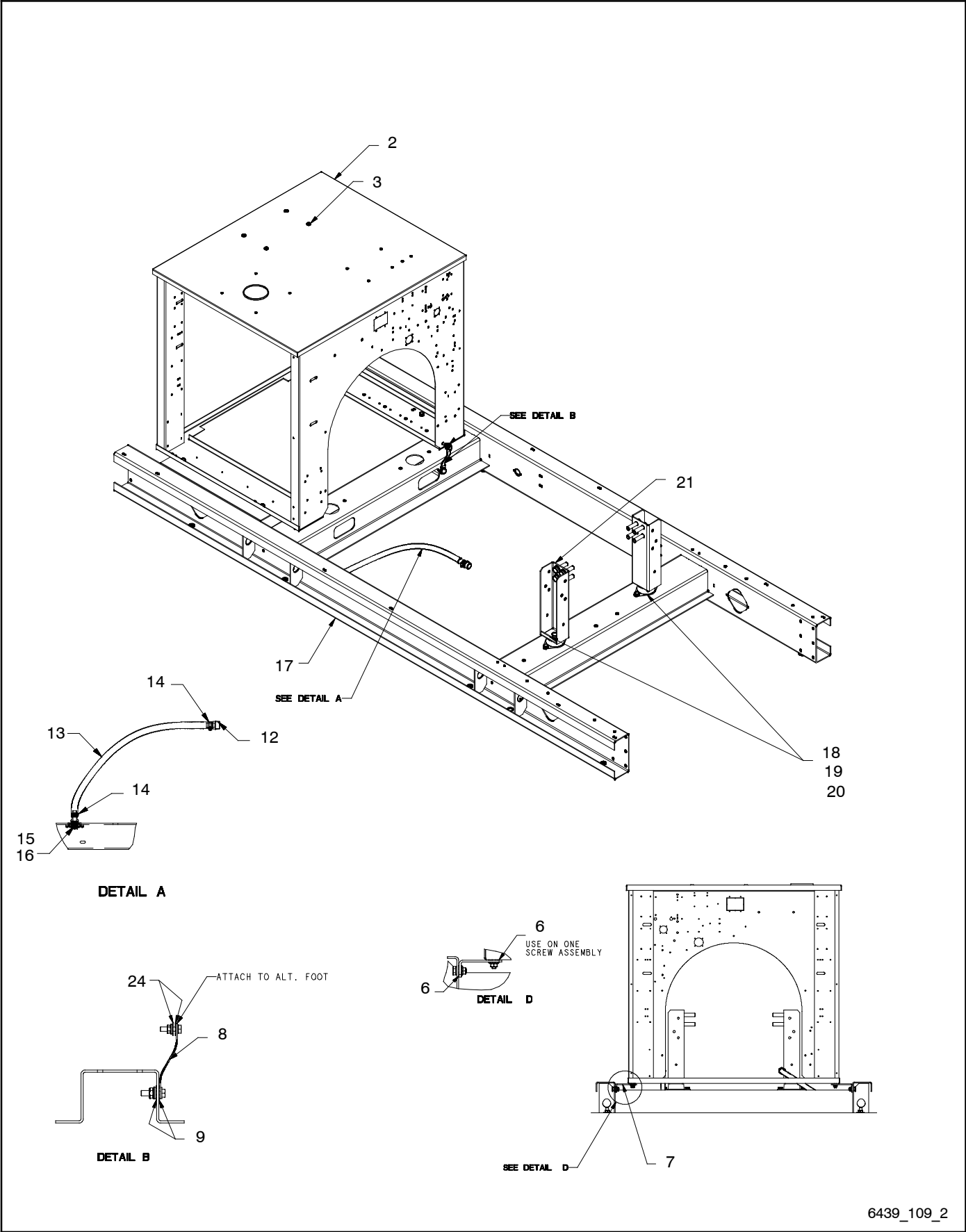


6439_109_6

Item	Part Number	Description	Quantity		
			Module Number		
			GM70804-MA1	GM70804-MA2	GM72463-MA1
2	X-577-24	Hose, rubber, straight, .62 in. ID	1	1	
2	X-577-5	Hose, rubber, straight, .62 in. ID			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	
5	324074	Vibromount			2
6	GM39284	Support, Engine (RH)	1	1	
6	GM22369	Support, Engine (RH)			1
7	GM39285	Support, Engine (LS)	1	1	
7	GM22370	Support, Engine (RH)			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	
18	M931-12065-60	Screw, hex cap			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	
23	X-22-15	Washer, lock, .391 ID x .975 in. OD			2
24	X-22-16	Washer, lock, .326 ID x .883 in. OD	3	3	
24	X-22-14	Washer, lock, .391 ID x .975 in. OD			2
26	X-25-103	Washer, plain, .531 ID x 2.75 in. OD	2	2	
26	X-25-140	Washer, plain, .531 ID x 2.00 in. OD			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	
29	X-426-10	Clamp, hose, 5/1 in.	2	2	2
30	X-781-15	Rivet, pop, .187 in.	2	2	2
31	GM63118	Support, Junction Box	2		
31	GM70408	Support, Junction Box		2	
31	GM64117	Support, Junction Box			2
32	GM70799	Skid	1		
32	GM70800	Skid		1	
32	GM72468	Skid			1

Skid and Plant Mounting, continued

230-300REOZJ/E



Skid and Plant Mounting, continued

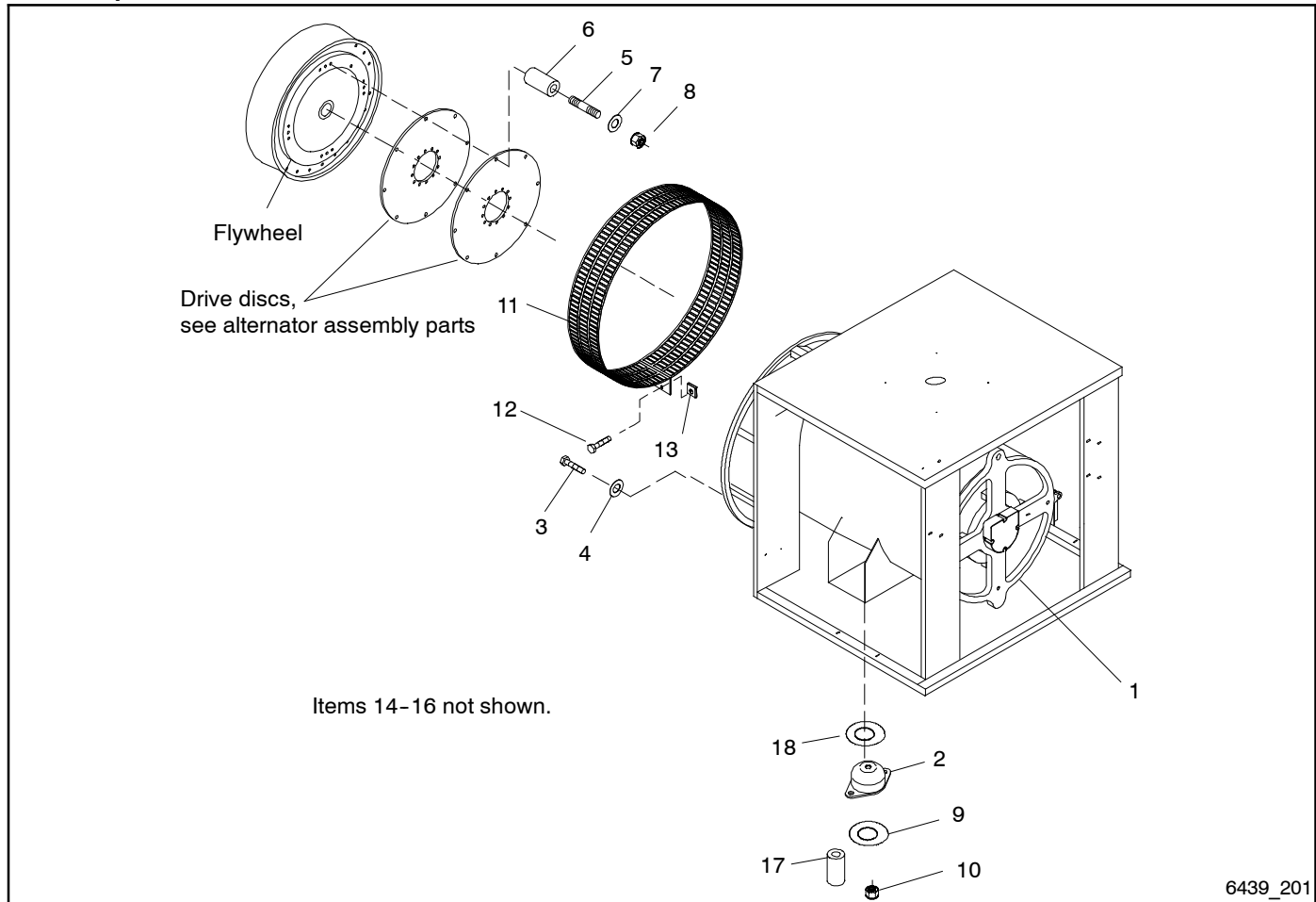
230-300REOZJ/E

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity				
			Module				
			GM66101-MA1	GM64370-MA1	GM69405-MA1	GM69406-MA1	GM69406-MA2
2	GM65343	Box, junction	1	1			
2	-	See Control and Harness Group			1	1	1
3	324861	Coupling, black plastic	4	4			
2	-	See Control and Harness Group			4	4	4
6	X-22-14	Washer, lock, 0.391 ID x 0.975 in. OD	4	4	2		
6	X-22-15	Washer, lock, 0.456 ID x 1.058 in. OD				2	2
7	GM63118	Bracket, J-Box Mtg.	2	2	2	2	2
8	GM21085	Strap, ground, 16 in.	1	1	1	1	1
9	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD	2	2	2	2	2
12	X-582-3	Connector, hose + vibra seal	1	1	1	1	1
13	X-577-35	Hose, rubber, straight, 0.62 in. ID (2.50 ft)	1	1	1	1	1
14	X-426-10	Clamp, hose, 0.5/1 in.	2	2	2	2	2
15	GM59015	Fitting, bulkhead drain	1	1	1	1	1
16	X-75-58	Plug, pipe	1	1	1	1	1
17	GM66102	Skid	1		1		
17	GM64148-1	Tank, subbase fuel (not shown)		1			
17	GM74928-1	Tank, subbase fuel (not shown)				1	
17	GM74410	Tank, subbase fuel (not shown)					1
17	GM69381	Harness, fuel level (not shown)				1	1
17	GM66194	Cover, oil drain hole (not shown)				1	1
17	GM64374	Crossmember, skid/tank (not shown)		1		1	1
17	GM64375	Crossmember, skid/tank (not shown)		1		1	1
18	M982-16-80	Nut, hex elastic stop	2	2	2	2	2
19	X-25-112	Washer, plain	2	2	2	2	2
20	324391	Vibromount	2	2	2	2	2
21	GM64142	Bracket, engine mounting	2	2	2	2	2
24	X-22-15	Washer, lock, 0.456 ID x 1.058 in. OD	2	2	2	2	2

Alternator and Mounting

Fast-Response II Alternators



Item	Part Number	Description	Qty.
1	See chart on following page	Alternator assembly	1
2	See chart on following page	Vibromount	2
3	M933-10035-82	Screw, hex cap (80-180 kW)	6
3	M931-10040-82	Screw, hex cap (200-300 kW)	12
4	X-801-3	Washer, hardened, 0.406 ID x 0.812 OD (80-180 kW)	6
4	X-801-3	Washer, hardened, 0.406 ID x 0.812 OD (200-300 kW)	12
5	See chart on following page	Stud/Bolt	8
6	See chart on following page	Spacer	8
7	X-801-3	Washer, hardened, 0.406 ID x 0.812 OD (80-200 kW)	8
7	290945	Washer, hardened, 0.531 ID x 1.06 in. OD (230-300 kW)	8
8	X-6210-9	Nut, flange spirallock, 3/8-16 (80/100, 180, 200 kW)	8
8	M6923-10-80	Nut, flange spirallock, M10 (125, 150 kW)	8
9	X-25-103	Washer, plain, 0.531 ID x 2.75 in. OD (125-180 kW)	2
9	X-25-112	Washer, plain (80/100 kW)	2
9	X-25-150	Washer, plain (200-300 kW)	2
10	M982-12-80	Nut, hex elastic stop (125-180 kW)	2
10	M982-16-80	Nut, hex elastic stop (80/100, 200-300 kW)	2
11	257179	Guard, generator fan (80-180 kW)	1
11	347268	Guard, generator fan (200-300 kW)	2
12	X-67-125	Screw, hex washer, thread-forming (80-180 kW)	2
12	X-67-125	Screw, hex washer, thread-forming (200-300 kW)	4
13	257442	Clip, speed (80-180 kW)	2
13	257442	Clip, speed (200-300 kW)	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 (200-300 kW)	2
17	X-400-197	Spacer, 0.532 ID x 0.75 OD x 2.88 in. (125-180 kW)	2
18	X-25-150	Washer (180 kW)	2

Alternator and Mounting

Find the installed module number on the generator set nameplate.

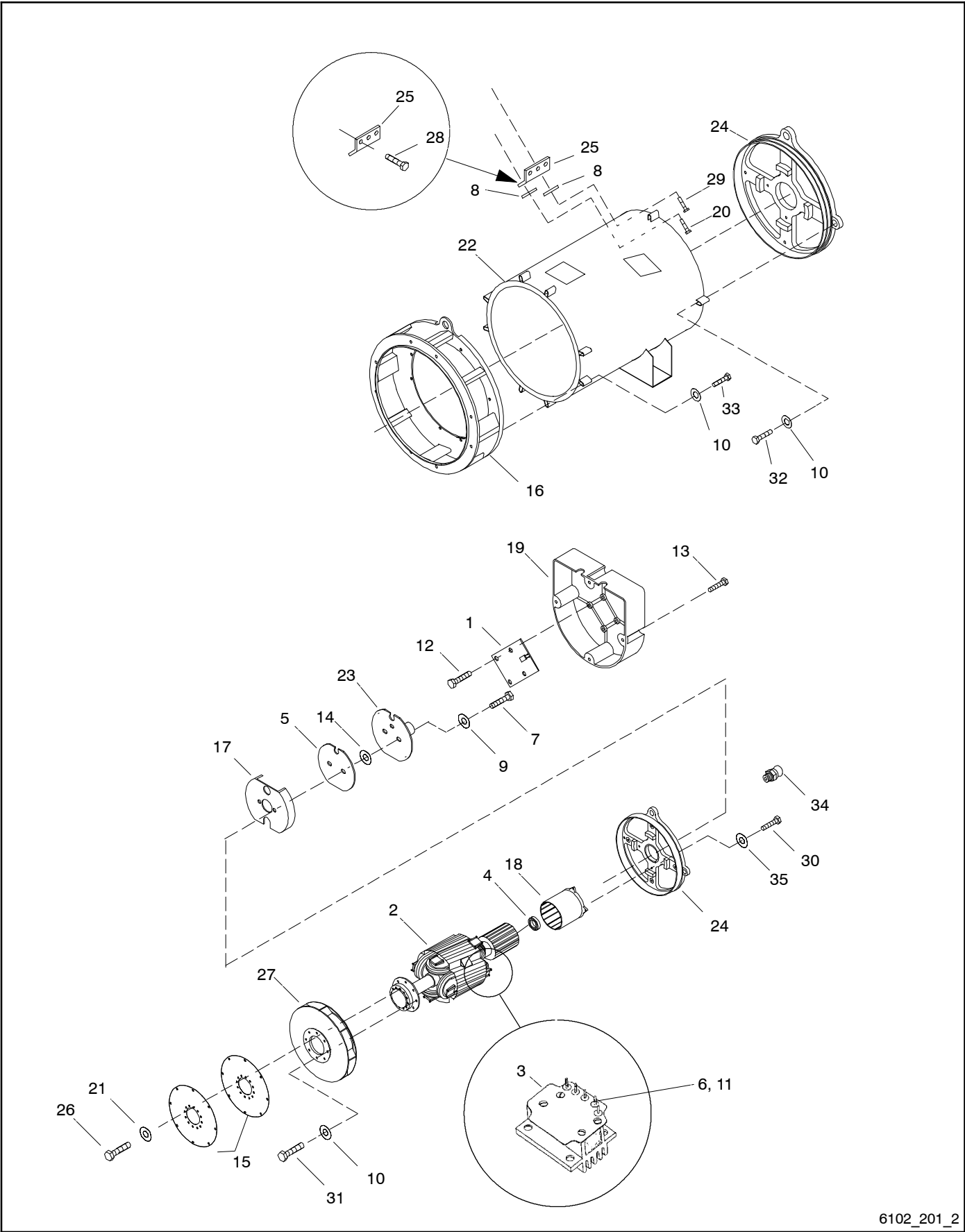
Alternator Part Number and Mounting Parts, Fast-Response II Alternators

Module Number	Alternator Description	KW Range	Item 1, Alternator Assembly	Item 2, Vibromount	Item 5, Stud	Item 6, Spacer
GM17672-MA18	4S11	125	GC17563-21	324392	X-352-63	X-400-132
GM17672-MA20	4S13	125-150	GC17563-11	324392	X-352-63	X-400-132
GM17672-MA22	4S15	150	GC17563-32	324393	X-352-63	X-400-132
GM17672-MA24	4S7	80	GM17563-13	336813	X-352-63	X-400-132
GM17672-MA25	4S7, 600 V	80	GM17563-15	336813	X-352-121	X-400-219
GM17672-MA26	4S9	80/100	GM17563-14	324391	X-352-63	X-400-132
GM17672-MA27	4S9, 600 V	80/100	GM17563-16	324391	X-352-121	X-400-219
GM17672-MA28	4V9, 1 Phase	80	GM17563-24	324391	X-352-63	X-400-132
GM17672-MA33	4S11	100	GM17563-21	336024	X-352-63	X-400-132
GM17672-MA34	4S11, 600 V	100	GM17563-22	336024	X-352-121	X-400-219
GM17672-MA35	4V11, 1 Phase	100	GM17563-23	336024	X-352-63	X-400-132
GM17672-MA136	4S15	180	GM17563-34	324393	X-352-121	X-400-219
GM17672-MA137	4S15, 600 V	180	GM17563-35	324393	X-352-121	X-400-219
GM17672-MA141	4S11	125-150	GM17563-21	324392	X-6054-19	X-400-131
GM17672-MA142	4S11, 600 V	125-150	GM17563-22	324392	X-6054-19	X-400-131
GM17672-MA143	4S13	125-150	GM17563-11	324392	X-6054-19	X-400-131
GM17672-MA144	4S13, 600 V	125-150	GM17563-12	324392	X-6054-19	X-400-131
GM17672-MA145	4S15	125-150	GM17563-32	324393	X-6054-19	X-400-131
GM17672-MA146	4S15, 600 V	125-150	GM17563-33	324393	X-6054-19	X-400-131
GM17672-MA159	4S7, 600 V	80	GC17563-43	336813	X-352-63	X-400-132
GM17672-MA160	4S9, 600 V	80/100	GC17563-44	324391	X-352-63	X-400-132
GM17672-MA162	4S11, 600 V	100	GC17563-45	336024	X-352-63	X-400-132
GM17672-MA163	4S11, 600 V	125	GC17563-45	324392	X-352-63	X-400-132
GM17672-MA164	4S13, 600 V	125/150	GC17563-46	324392	X-352-63	X-400-132
GM17672-MA165	4S15, 600 V	150	GC17563-47	324393	X-352-63	X-400-132
GM17672-MA167	4S15, 600 V	180	GC17563-49	324393	X-352-63	X-400-132
GM19673-MA172	4U9	230-300	GM24411-3	354622	X-129-59	-
GM19673-MA173	4U9, 600 V	230-300	GM24411-4	354622	X-129-59	-
GM19673-MA174	4U10	230-300	GM24411-5	354622	X-129-59	-
GM19673-MA175	4U10, 600 V	230-300	GM24411-6	354622	X-129-59	-
GM19673-MA176	4U13	230-300	GM24411-7	354622	X-129-59	-
GM19673-MA177	4U13, 600 V	230-300	GM24411-8	354622	X-129-59	-
GM19673-MA184	4U9	200	GM24411-11	354634	X-352-121	X-400-219
GM19673-MA185	4U9, 600 V	200	GM24411-12	354634	X-352-121	X-400-219
GM19673-MA186	4U13	200	GM24411-15	354634	X-352-121	X-400-219
GM19673-MA187	4U13, 600 V	200	GM24411-16	354634	X-352-121	X-400-219
GM58642-MA27	4U9	230-300	GC58673-3	354622	X-129-59	-
GM58642-MA28	4U9, 600 V	230-300	GC58673-4	354622	X-129-59	-
GM58642-MA29	4U10	230-300	GC58673-5	354622	X-129-59	-
GM58642-MA30	4U10, 600 V	230-300	GC58673-6	354622	X-129-59	-
GM58642-MA31	4U13	230-300	GC58673-7	354622	X-129-59	-
GM58642-MA32	4U13, 600 V	230-300	GC58673-8	354622	X-129-59	-
GM58642-MA33	4UA9	200	GC58673-11	354622	X-352-121	X-400-219
GM58642-MA34	4UA9, 600 V	200	GC58673-12	354622	X-352-121	X-400-219
GM58642-MA35	4UA13	200	GC58673-15	354622	X-352-121	X-400-219
GM58642-MA36	4UA13, 600 V	200	GC58673-16	354622	X-352-121	X-400-219
GM66074-MA1	4S7	80/100	GC17563-13	336813	X-352-63	X-400-132
GM66074-MA2	4S9	80/100	GC17563-14	324391	X-352-63	X-400-132
GM66074-MA3	4S9, 1 Phase	80/100	GC17563-24	324391	X-352-63	X-400-132
GM66074-MA4	4S11	80/100	GC17563-21	336024	X-352-63	X-400-132
GM66074-MA5	4S11, 1 Phase	80/100	GC17563-23	336024	X-352-63	X-400-132
GM66074-MA6	4S7, 600 V	80/100	GM17563-43	336813	X-352-63	X-400-132
GM66074-MA7	4S9, 600 V	80/100	GM17563-44	324391	X-352-63	X-400-132
GM66074-MA8	4S11, 600 V	80/100	GM17563-45	336024	X-352-63	X-400-132

Alternator assembly includes items 1-35 on following page.

Alternator and Mounting, continued

Fast-Response II Alternators



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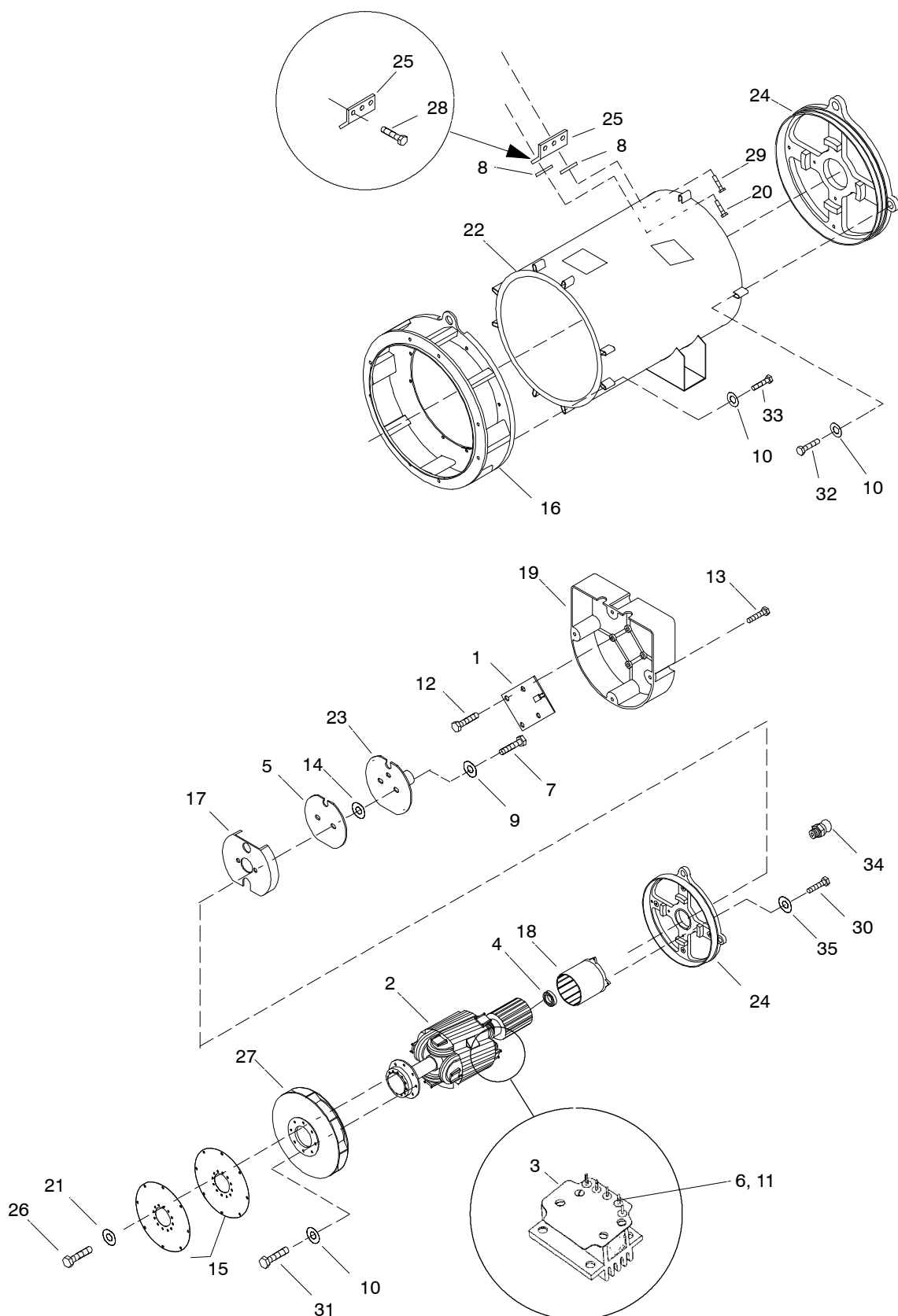
Alternator and Mounting, continued

Fast-Response II Alternators

Item	Part Number	Description	Qty.
1	B-257099	PCB assembly, LED, FRII	1
2	See chart on page 49	Rotor assembly	1
3	B-258549	Heatsink (4S and 4V alternators)	1
3	A-354299	Heatsink (4UA alternators)	1
4	X-758-6	Bearing, ball (4S and 4V alternators)	1
4	X-758-9	Bearing, ball (4UA alternators)	1
5	GM34505	PCB assembly, photo receiver	1
6	X-101-24	Nut, hex elastic stop, 6-32	5
7	X-117-5	Screw, hex head machine	2
8	X-22-45	Washer, lock, 0.338 ID x 0.884 in. OD (4S and 4V alternators)	2
8	X-22-46	Washer, lock, 0.391 ID x 0.975 in. OD (4UA alternators)	2
9	X-22-9	Washer, lock, 0.20 ID x 0.373 in. OD	2
10	X-25-93	Washer, plain, 0.406 ID x 0.75 in. OD	14
10	290945	Washer, hardened, 0.531 ID x 1.06 in. OD (4UA alternators)	12
10	257951	Washer, special, 0.562 ID x 1.13 in. OD (4UA alternators)	12
11	X-283-7	Terminal, ring, male, 22-16 AWG	4
11	X-431-25	Terminal, fast-on, female	4
12	X-6071-1	Screw, Phillips pan head	4
13	X-67-133	Screw, hex washer, thread-forming	3
14	243321	Washer, insulating, 0.195 ID x 0.5 in.	2
15	See chart on page 49	Disc, drive	3/4
16	See chart on page 49	Adapter, generator	1
17	257077	Actuator, magnetic cup	1
18	See chart on page 49	Exciter field assembly	1
19	257258	Cover, FR LED circuit board	1
20	X-791-7	Screw, hex head machine (4S and 4V alternators)	1
20	X-791-6	Screw, hex head machine (4UA alternators)	1
21	X-801-3	Washer, hardened, 0.406 ID x 0.812 in.	12
22	See chart on page 49	Stator assembly	1
23	257850	Insulator	1
24	257983	Bracket, end (4S and 4V alternators)	1
24	347236	Bracket, end (4UA alternators)	1
25	See chart on page 49	Connector, lead	1
26	270956	Screw, cylinder head, 3/8-16 x1 1/4 (4S and 4V alternators)	12
26	270158	Screw, cylinder head, 3/8-16 x1 1/4 (4UA alternators)	12
27	257173	Fan, alternator (4S and 4V alternators)	1
27	257855	Fan, alternator (4UA alternators)	1
28	X-125-24	Screw, hex cap (4S alternators)	3
28	X-6238-5	Screw, hex cap (4V alternators)	3
29	X-125-31	Screw, hex cap (4S and 4V alternators)	1
29	X-6238-11	Screw, hex cap (4UA alternators)	1
30	X-125-34	Screw, hex cap	4
30	X-6238-17	Screw, hex cap (4UA alternators)	4
31	X-6238-11	Screw, hex cap	4
31	X-6238-11	Screw, hex cap (4UA alternators)	8
32	X-6238-9	Screw, hex cap (4S and 4V alternators)	4
32	X-129-25	Screw, hex cap (4UA alternators)	4
33	X-6238-6	Screw, hex cap (4S and 4V alternators)	1
33	X-6238-9	Screw, hex cap (4S and 4V alternators)	5
33	X-129-25	Screw, hex cap (4UA alternators)	8
34	347119	Fitting, grease	1
35	X-801-3	Washer, hardened, 0.406 ID x 0.812 in. (4UA alternators)	4

Alternator and Mounting, continued

Fast-Response II Alternators



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Alternator and Mounting, continued

Find the installed module number on the generator set nameplate.

Fast-Response II Alternators

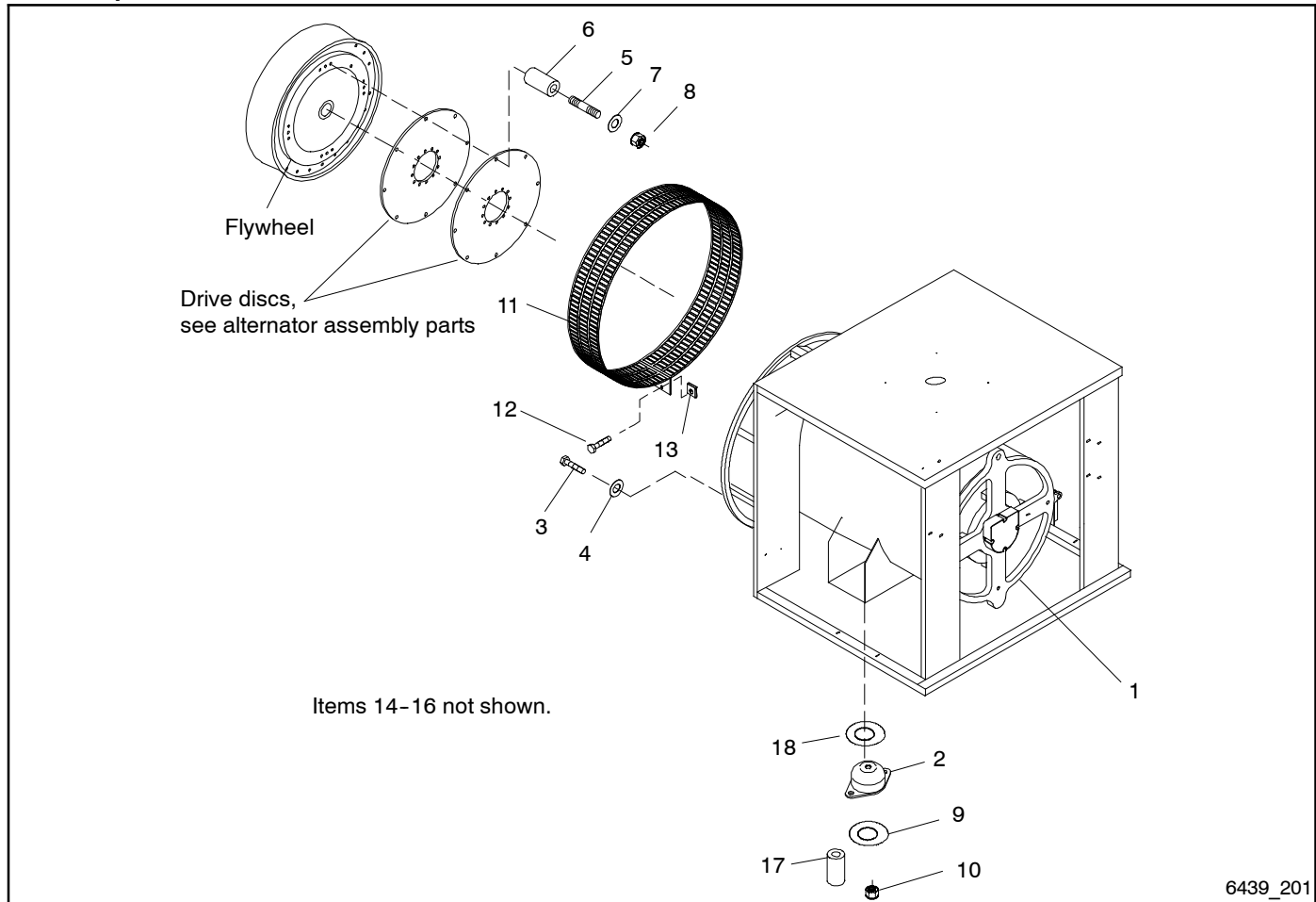
Alternator Part Number and Mount Type

Use this table to identify the part numbers of items 2, 15, 16, 18, 22, and 25.

Module Number	Alternator Description	Alternator Assembly	Item 2, Rotor Assembly	Item 15, Drive Disc	Item 16, Adapter	Item 18, Field Exciter	Item 22, Stator Assembly	Item 25, Lead Connector
GM17672-MA18	4S11	GC17563-21	GCA-343443	257103 (3)	257175	GC276657	GC17559-4	257985
GM17672-MA20	4S13	GC17563-11	GCA-276666	257103 (3)	257175	GC276657	GC17559-3	257985
GM17672-MA22	4S15	GC17563-32	GCA-364409	257103 (3)	257175	GC276657	GC17560	257985
GM17672-MA24	4S7	GM17563-13	A-276664	257103 (3)	257175	276657	GM17559-1	257985
GM17672-MA25	4S7, 600 V	GM17563-15	A-276664	257103 (3)	257175	276657	GM17561-1	257985
GM17672-MA26	4S9	GM17563-14	A-276665	257103 (3)	257175	276657	GM17559-2	257985
GM17672-MA27	4S9, 600 V	GM17563-16	A-276665	257103 (3)	257175	276657	GM17561-2	257985
GM17672-MA28	4V9, 1 Phase	GM17563-24	A-276665	257103 (3)	257175	276657	GM17562-2	257978
GM17672-MA33	4S11	GM17563-21	A-343443	257103 (3)	257175	276657	GM17559-4	257985
GM17672-MA34	4S11, 600 V	GM17563-22	A-343443	257103 (3)	257175	276657	GM17561-4	257985
GM17672-MA35	4V11, 1 Phase	GM17563-23	A-343443	257103 (3)	257175	276657	GM17562-1	257978
GM17672-MA136	4S15	GM17563-34	A-364409	257103 (3)	257248	276657	GM17560	257985
GM17672-MA137	4S15, 600 V	GM17563-35	A-364409	257103 (3)	257248	276657	GM17561-5	257985
GM17672-MA141	4S11	GM17563-21	A-343443	257103 (3)	257175	276657	GM17559-4	257985
GM17672-MA142	4S11, 600 V	GM17563-22	A-343443	257103 (3)	257175	276657	GM17561-4	257985
GM17672-MA143	4S13	GM17563-11	A-276666	257103 (3)	257175	276657	GM17559-3	257985
GM17672-MA144	4S13, 600 V	GM17563-12	A-276666	257103 (3)	257175	276657	GM17561-3	257985
GM17672-MA145	4S15	GM17563-32	A-364409	257103 (3)	257175	276657	GM17560	257985
GM17672-MA146	4S15, 600 V	GM17563-33	A-364409	257103 (3)	257175	276657	GM17561-5	257985
GM17672-MA159	4S7, 600 V	GC17563-43	GCA-276664	257103 (3)	257175	GC276657	GC58669-1	257985
GM17672-MA160	4S9, 600 V	GC17563-44	GCA-276665	257103 (3)	257175	GC276657	GC58669-2	257985
GM17672-MA162	4S11, 600 V	GC17563-45	GCA-343443	257103 (3)	257175	GC276657	GC58669-3	257985
GM17672-MA163	4S11, 600 V	GC17563-45	GCA-343443	257103 (3)	257175	GC276657	GC58669-3	257985
GM17672-MA164	4S15, 600 V	GC17563-46	GCA-276666	257103 (3)	257175	GC276657	GC58669-4	257985
GM17672-MA165	4S15, 600 V	GC17563-47	GCA-364409	257103 (3)	257175	GC276657	GC58669-5	257985
GM17672-MA167	4S15, 600 V	GC17563-49	GCA-364409	257103 (3)	257248	GC276657	GC58669-5	257985
GM19673-MA172	4UA9	GM24411-3	A-347187	257581 (4)	347240	347707	GM24409-2	257978
GM19673-MA173	4UA9, 600 V	GM24411-4	A-347187	257581 (4)	347240	347707	GM24410-2	257978
GM19673-MA174	4UA10	GM24411-5	A-347188	257581 (4)	347240	347707	GM24409-3	257978
GM19673-MA175	4UA10, 600 V	GM24411-6	A-347188	257581 (4)	347240	347707	GM24410-3	257978
GM19673-MA176	4UA13	GM24411-7	A-347189	257581 (4)	347240	347707	GM24409-4	257979
GM19673-MA177	4UA13, 600 V	GM24411-8	A-347189	257581 (4)	347240	347707	GM24410-4	257978
GM19673-MA184	4UA9	GM24411-11	A-347191	222881 (4)	347241	347707	GM24409-2	257978
GM19673-MA185	4UA9, 600 V	GM24411-12	A-347191	222881 (4)	347241	347707	GM24410-2	257978
GM19673-MA186	4UA13	GM24411-15	A-365222	222881 (4)	347241	347707	GM24409-4	257979
GM19673-MA187	4UA13, 600 V	GM24411-16	A-365222	222881 (4)	347241	347707	GM24410-4	257979
GM58642-MA27	4UA9	GC58673-3	GCA-347187	257581 (4)	347240	GC347707	GC58670-2	257978
GM58642-MA28	4UA9, 600 V	GC58673-4	GCA-347187	257581 (4)	347240	GC347707	GC58671-2	257978
GM58642-MA29	4UA10	GC58673-5	GCA-347188	257581 (4)	347240	GC347707	GC58670-3	257978
GM58642-MA30	4UA10, 600 V	GC58673-6	GCA-347188	257581 (4)	347240	GC347707	GC58671-3	257978
GM58642-MA31	4UA13	GC58673-7	GCA-347189	257581 (4)	347240	GC347707	GC58670-4	257979
GM58642-MA32	4UA13, 600 V	GC58673-8	GCA-347189	257581 (4)	347240	GC347707	GC58671-4	257978
GM58642-MA33	4UA9	GC58673-11	GCA-347191	222881 (4)	347241	GC347707	GC58670-2	257978
GM58642-MA34	4UA9, 600 V	GC58673-12	GCA-347191	222881 (4)	347241	GC347707	GC58671-2	257978
GM58642-MA35	4UA13	GC58673-15	GCA-365222	222881 (4)	347241	GC347707	GC58670-4	257979
GM58642-MA36	4UA13, 600 V	GC58673-16	GCA-365222	222881 (4)	347241	GC347707	GC58671-4	257978
GM66074-MA1	4S7	GC17563-13	GCA-276664	257103 (3)	257175	GC276657	GC17559-1	257985
GM66074-MA2	4S9	GC17563-14	GCA-276665	257103 (3)	257175	GC276657	GC17559-1	257985
GM66074-MA3	4V9, 1 Phase	GC17563-24	GCA-276665	257103 (3)	257175	GC276657	GC17562-2	257978
GM66074-MA4	4S11	GC17563-21	GCA-343443	257103 (3)	257175	GC276657	GC17559-4	257985
GM66074-MA5	4S11, 1 Phase	GC17563-23	GCA-343443	257103 (3)	257175	GC276657	GC17562-1	257978
GM66074-MA6	4S7, 600 V	GC17563-43	GCA-276664	257103 (3)	257175	GC276657	GC58669-1	257985
GM66074-MA7	4S9, 600 V	GC17563-44	GCA-276665	257103 (3)	257175	GC276657	GC58669-2	257985
GM66074-MA8	4S11, 600 V	GC17563-45	GCA-343443	257103 (3)	257175	GC276657	GC58669-3	257985

Alternator and Mounting, continued

Fast-Response III Alternators



Item	Part Number	Description	Qty.
1	See chart on following page	Alternator assembly	1
2	See chart on following page	Vibromount	2
3	M933-10035-82	Screw, hex cap (80-180 kW)	6
3	M931-10040-82	Screw, hex cap (200 kW)	12
3	M933-12040-82	Screw, hex cap (230-300 kW)	12
4	X-801-3	Washer, hardened, 0.406 ID x 0.812 OD (80-180 kW)	6
4	X-801-3	Washer, hardened, 0.406 ID x 0.812 OD (200 kW)	12
4	290945	Washer, hardened, 0.531 ID x 1.06 in. OD (230-300 kW)	12
5	See chart on following page	Stud/Bolt	8
6	See chart on following page	Spacer	8
7	X-801-3	Washer, hardened, 0.406 ID x 0.812 OD (80-200 kW)	8
7	290945	Washer, hardened, 0.531 ID x 1.06 in. OD (230-300 kW)	8
8	X-6210-9	Nut, flange spirallock, 3/8-16 (80/100, 180, 200 kW)	8
8	M6923-10-80	Nut, flange spirallock, M10 (125, 150 kW)	8
9	X-25-103	Washer, plain, 0.531 ID x 2.75 in. OD (125-180 kW)	2
9	X-25-112	Washer, plain (80/100 kW)	2
9	X-25-150	Washer, plain (200-300 kW)	2
10	M982-12-80	Nut, hex elastic stop (125-180 kW)	2
10	M982-16-80	Nut, hex elastic stop (80/100, 200-300 kW)	2
11	257179	Guard, generator fan (80-180 kW)	1
11	347268	Guard, generator fan (200-300 kW)	2
12	X-67-125	Screw, hex washer, thread-forming (80-180 kW)	2
12	X-67-125	Screw, hex washer, thread-forming (200-300 kW)	4
13	257442	Clip, speed (80-180 kW)	2
13	257442	Clip, speed (200-300 kW)	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 (200-300 kW)	2
17	X-400-197	Spacer, 0.532 ID x 0.75 OD x 2.88 in. (125-180 kW)	2
18	X-25-150	Washer (180 kW)	2

Alternator and Mounting, continued

Find the installed module number on the generator set nameplate.

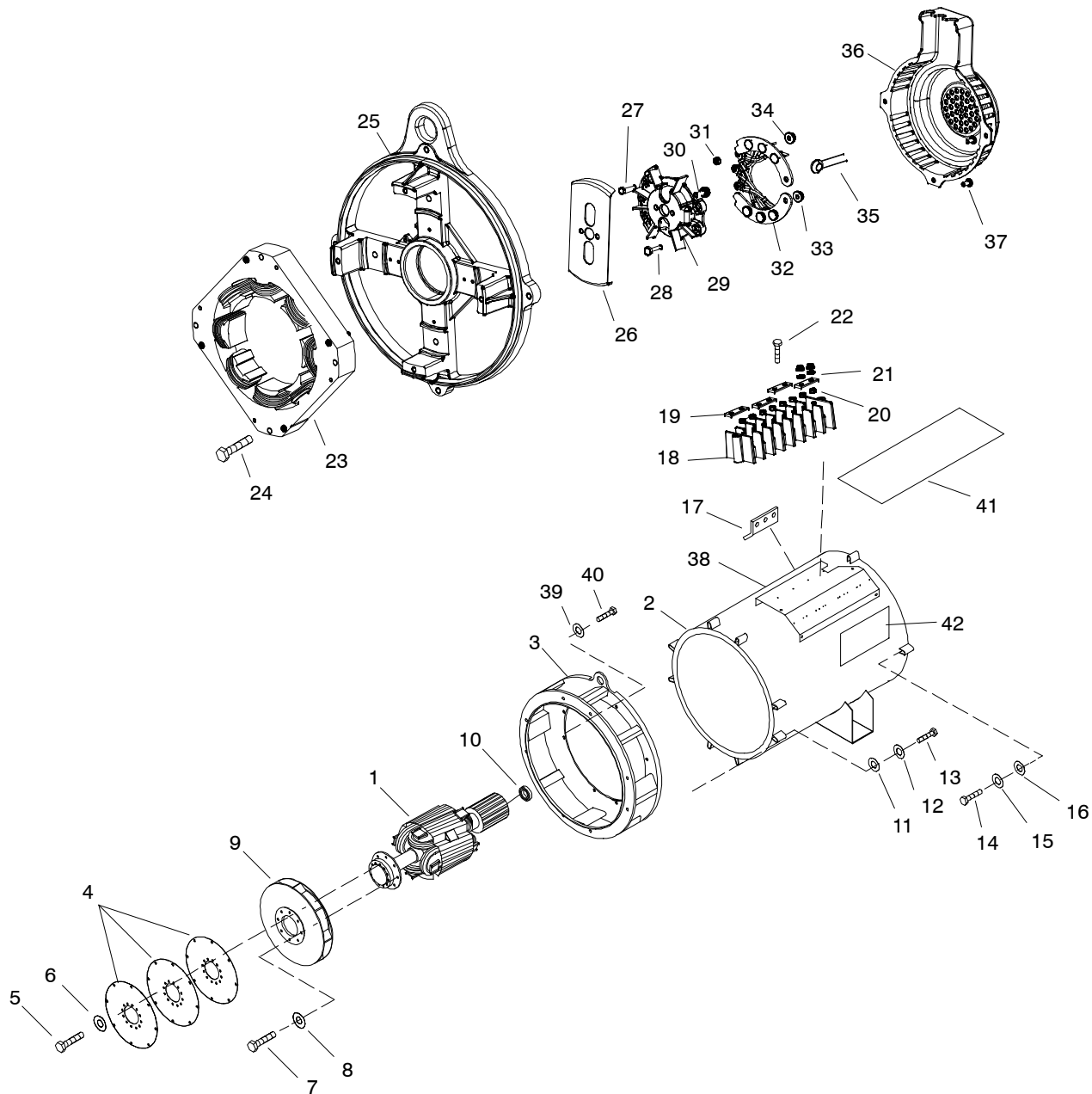
Alternator Part Number and Mounting Parts, Fast-Response III Alternators

Module Number	Alternator Description	KW Range	Item 1, Alternator Assembly	Item 2, Vibromount	Item 5, Stud	Item 6, Spacer
GM17672-MA114	4S7W	80	GM39944-3	336813	X-352-121	X-400-219
GM17672-MA115	4S7W, 600 V	80	GM39944-5	336813	X-352-121	X-400-219
GM17672-MA116	4S9W	80/100	GM39944-11	324391	X-352-121	X-400-219
GM17672-MA117	4S9W, 600 V	80/100	GM39944-13	324391	X-352-121	X-400-219
GM17672-MA118	4V9W, 1 Phase	80	GM39944-16	324391	X-352-121	X-400-219
GM17672-MA123	4S11W	100	GM39944-17	336024	X-352-121	X-400-219
GM17672-MA124	4S11W, 600 V	100	GM39944-19	336024	X-352-121	X-400-219
GM17672-MA125	4V11W, 1 Phase	100	GM39944-23	336024	X-352-121	X-400-219
GM17672-MA138	4S15W	180	GM39944-32	324393	X-352-121	X-400-219
GM17672-MA139	4S15W, 600 V	180	GM39944-34	324393	X-352-121	X-400-219
GM17672-MA147	4S11W	125-150	GM39944-17	324392	X-6054-19	X-400-131
GM17672-MA148	4S11W, 600 V	125-150	GM39944-19	324392	X-6054-19	X-400-131
GM17672-MA149	4S13W	125-150	GM39944-26	324392	X-6054-19	X-400-131
GM17672-MA150	4S13W, 600 V	125-150	GM39944-30	324392	X-6054-19	X-400-131
GM17672-MA151	4S15W	125-150	GM39944-33	324393	X-352-121	X-400-219
GM17672-MA152	4S15W, 600 V	125-150	GM39944-35	324393	X-352-121	X-400-219
GM19673-MA178	4U9W	230-300	GM39945-6	354622	X-129-59	-
GM19673-MA179	4U9W, 600 V	230-300	GM39945-8	354622	X-129-59	-
GM19673-MA180	4U10W	230-300	GM39945-10	354622	X-129-59	-
GM19673-MA181	4U10W, 600 V	230-300	GM39945-12	354622	X-129-59	-
GM19673-MA182	4U13W	230-300	GM39945-14	354622	X-129-59	-
GM19673-MA183	4U13W, 600 V	230-300	GM39945-16	354622	X-129-59	-
GM19673-MA188	4U9W	200	GM39945-5	354634	X-352-63	X-400-132
GM19673-MA189	4U9W, 600 V	200	GM39945-7	354634	X-352-63	X-400-132
GM19673-MA190	4U13W	200	GM39945-13	354634	X-352-63	X-400-132
GM19673-MA191	4U13W, 600 V	200	GM39945-15	354634	X-352-63	X-400-132

Alternator assembly includes items 1-35 on following page.

Alternator and Mounting, continued

Fast-Response III Alternators



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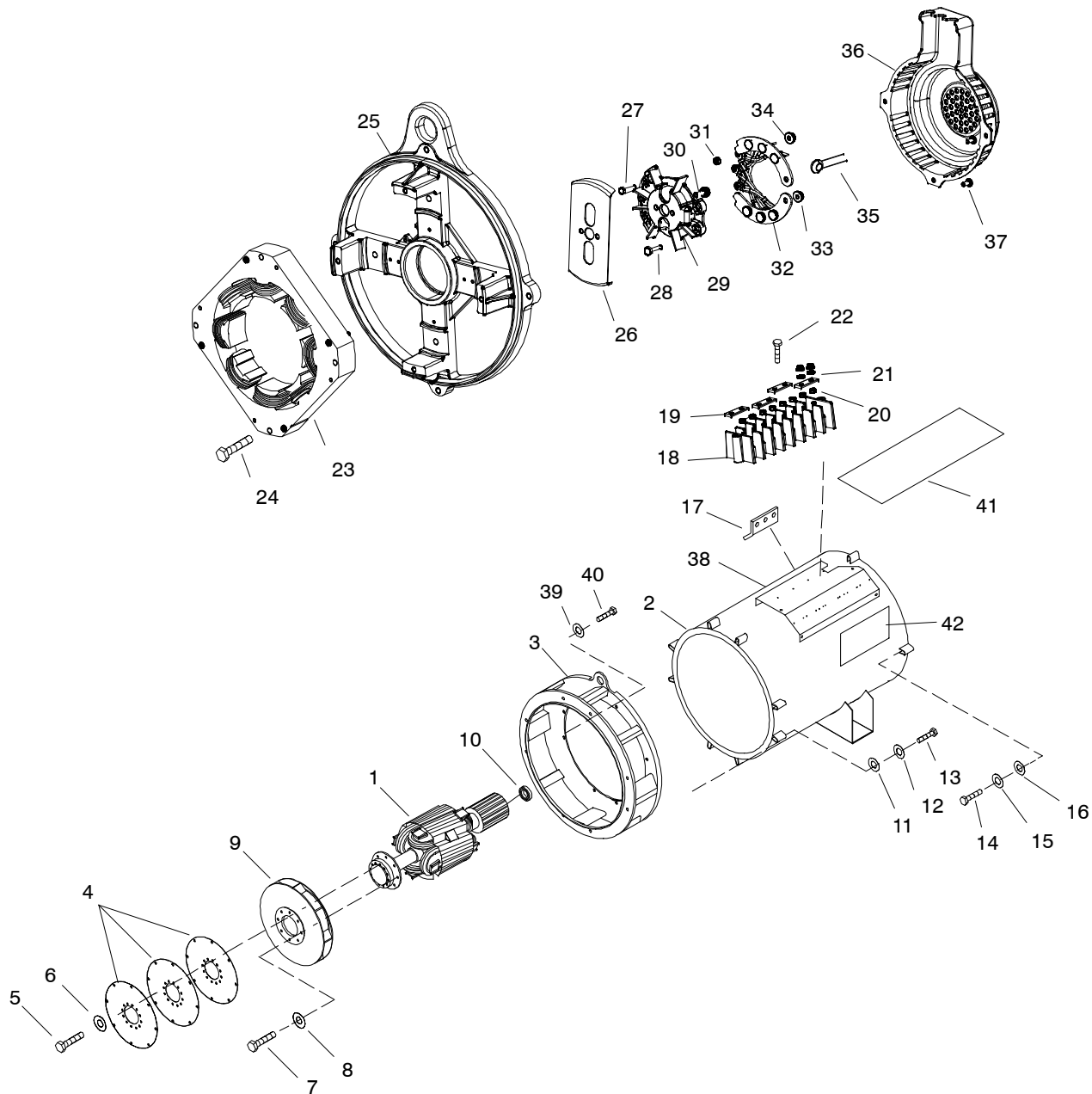
Alternator and Mounting, continued

Fast-Response III Alternators

Item	Part No.	Description	Qty.
1	See chart on page 55	Rotor assembly	1
2	See chart on page 55	Stator assembly	1
3	See chart on page 55	Adapter, generator	1
4	See chart on page 55	Disc, drive	4
5	M933-10035-82	Screw, hex cap (4SW and 4VW)	12
5	M933-12040-82	Screw, hex cap (4UAW)	12
6	X-801-3	Washer, hardened, 0.406 ID x 0.812 in. OD (4SW and 4VW)	12
6	290945	Washer, 0.531 ID x 1.06 in. OD (4UAW)	12
7	M933-10025-60	Screw, hex cap (4SW and 4VW)	4
7	M933-10025-60	Screw, hex cap (4UAW)	8
8	X-25-93	Washer, 0.406 ID x 0.75 in. OD (4SW and 4VW)	4
8	X-25-93	Washer, 0.406 ID x 0.75 in. OD (4UAW)	8
9	257173	Fan, generator (4SW and 4VW)	1
9	257855	Fan, generator (4UAW)	1
10	X-758-6	Bearing, ball (4SW and 4VW)	1
10	X-758-9	Bearing, ball (4UAW)	1
11	257951	Washer, 0.562 ID x 1.13 in. OD (4UAW)	8
12	X-25-93	Washer, 0.406 ID x 0.75 in. OD (4SW and 4VW)	6
12	290945	Washer, 0.531 ID x 1.06 in. OD (4UAW)	8
13	M931-10050-60	Screw, hex cap (4SW and 4VW)	1
13	M931-10080-60	Screw, hex cap (4SW and 4VW)	5
13	M931-12095-60	Screw, hex cap (4UAW)	8
14	M933-10100-60	Screw, hex cap (4SW and 4VW)	4
14	M931-12095-60	Screw, hex cap (4UAW)	4
15	X-25-93	Washer, 0.406 ID x 0.75 in. OD (4SW and 4VW)	4
15	290945	Washer, 0.531 ID x 1.06 in. OD (4UAW)	4
16	257951	Washer, 0.562 ID x 1.13 in. OD (4UAW)	4
17	257986	Bus (4SW and 4VW)	1
17	257978	Bus (4UAW)	1
18	GM31969	Block, terminal	1
19	—	Link, terminal block (see Load Connection Kit for part number)	—
20	—	Nut, hex, 10 mm (see Load Connection Kit for part number)	—
21	—	Washer, plain (see Load Connection Kit for part number)	—
22	M7500D-06020-81	Screw	2
23	GM32516-2	Exciter field (4SW and 4VW)	1
23	GM32518-3	Exciter field (4UAW)	1
23	GM32518-4	Exciter field (4UA13W)	1
24	M933-08100-60	Screw, hex head (4SW and 4VW)	4
24	M931-08060-60	Screw, hex head (4UAW)	4
24	M931-08085-60	Screw, hex head (4UA13W)	4
25	GM28964	Bracket, end (4SW and 4VW)	1
25	GM31973	Bracket, end (4UAW)	1
26	GM31967	Actuator, magnetic	1
27	M933-05020-60	Screw, hex cap	3
28	M933-06020-60	Screw, hex cap	2
29	GM31960	Hub, rotating diode assembly	1
30	M933-06016-60	Screw, hex cap	2
31	M934-05-50	Nut, hex, 5 mm	3
32	GM31963	Plates, diode assembly	1
33	M982-06-80	Nut, hex, elastic stop	2
34	M982-05-60	Nut, hex, elastic stop	3
35	228061	Varistor, 250 V	1
36	GM31968	Cover, rotating diode assembly	1
37	M7500D-05010-81	Screw, thread forming metric	3
38	344295	Decal, equipment ground	1
39	X-801-6	Washer, 0.469 ID x 0.922 in. OD (4UAW)	8
40	X-6024-18	Screw, hex head (4UAW)	8
41	GM39793	Decal, terminal board	1
42	GM39792	Decal, board reconnection	1

Alternator and Mounting, continued

Fast-Response III Alternators



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Alternator and Mounting, continued

Find the installed module number on the generator set nameplate.

Fast-Response III Alternators

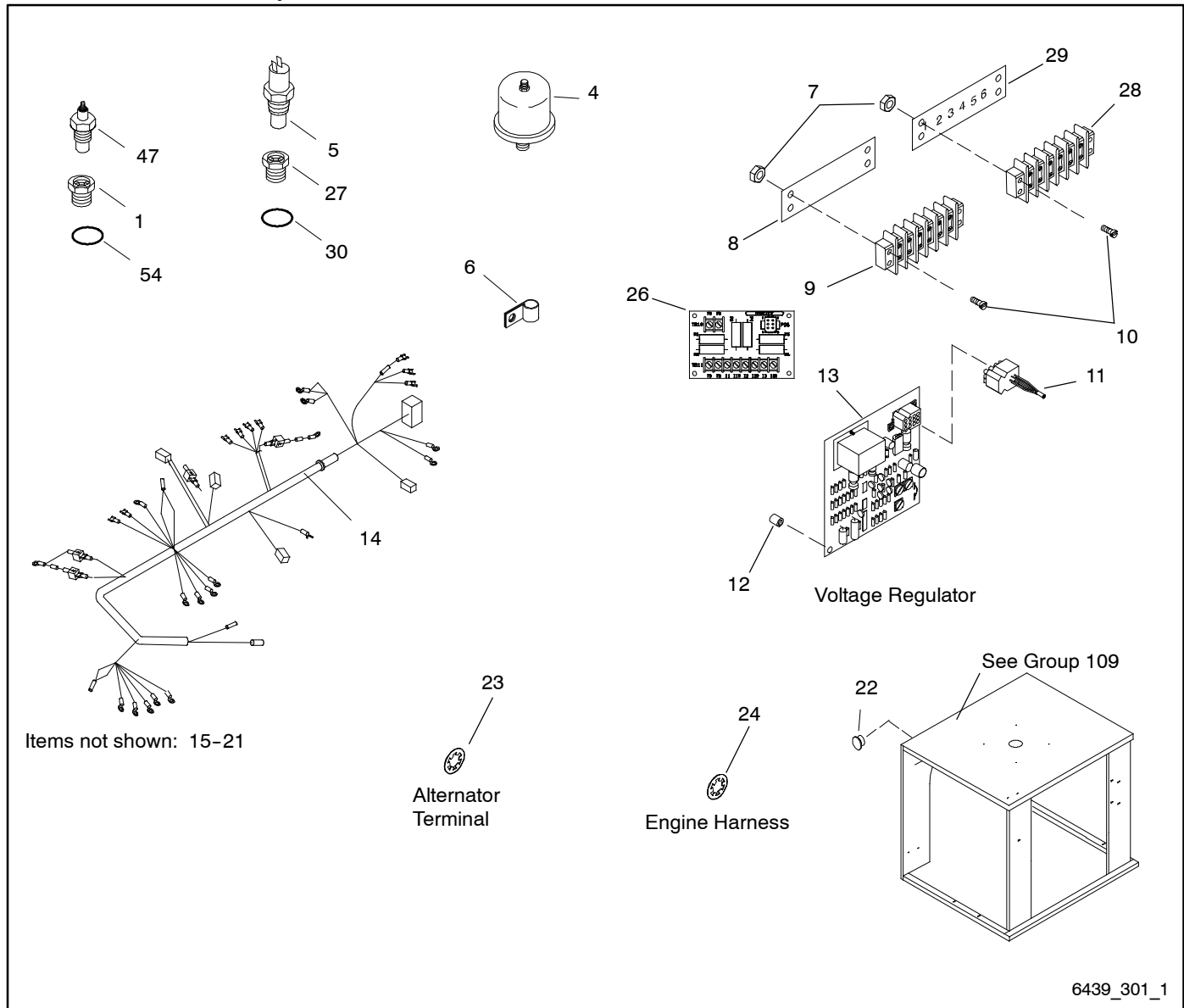
Alternator Part Number and Components

Use this table to identify the alternator rotor, stator, adapter, and drive disc part numbers (items 1-4).

Module Number	Alternator Description	Alternator Part No.	Item 1, Rotor	Item 2, Stator	Item 3, Adapter	Item 4, Drive Discs
GM17672-MA114	4S7W	GM39944-3	GM32407-2	GM39940-1	GM32008	257103
GM17672-MA115	4S7W, 600 V	GM39944-5	GM32407-2	GM39942-1	GM32008	257103
GM17672-MA116	4S9W	GM39944-11	GM32407-4	GM39940-2	GM32008	257103
GM17672-MA117	4S9W, 600 V	GM39944-13	GM32407-4	GM39942-2	GM32008	257103
GM17672-MA118	4V9W	GM39944-16	GM32407-4	GM39943-2	GM32008	257103
GM17672-MA123	4S11W	GM39944-17	GM32407-6	GM39940-3	GM32008	257103
GM17672-MA124	4S11W, 600 V	GM39944-19	GM32407-6	GM39942-3	GM32008	257103
GM17672-MA125	4V11W	GM39944-23	GM32407-6	GM39943-3	GM32008	257103
GM17672-MA138	4S15W	GM39944-32	GM32407-11	GM39941	GM32009	257103
GM17672-MA139	4S15W, 600 V	GM39944-34	GM32407-11	GM39942-5	GM32009	257103
GM17672-MA147	4S11W	GM39944-17	GM32407-6	GM39940-3	GM32008	257103
GM17672-MA148	4S11W, 600 V	GM39944-19	GM32407-6	GM39942-3	GM32008	257103
GM17672-MA149	4S13W	GM39944-26	GM32407-9	GM39940-4	GM32008	257103
GM17672-MA150	4S13W, 600 V	GM39944-30	GM32407-9	GM39942-4	GM32008	257103
GM17672-MA151	4S15W	GM39944-33	GM32407-11	GM39941	GM32008	257103
GM17672-MA152	4S15W, 600 V	GM39944-35	GM32407-11	GM39942-5	GM32008	257103
GM19673-MA178	4UA9W	GM39945-6	GM32424-4	GM32996-2	GM32011	GM31972
GM19673-MA179	4UA9W, 600 V	GM39945-8	GM32424-4	GM32997-2	GM32011	GM31972
GM19673-MA180	4UA10W	GM39945-10	GM32424-6	GM32996-3	GM32011	GM31972
GM19673-MA181	4UA10W, 600 V	GM39945-12	GM32424-6	GM32997-3	GM32011	GM31972
GM19673-MA182	4UA13W	GM39945-14	GM32424-8	GM39830	GM32011	GM31972
GM19673-MA183	4UA13W, 600 V	GM39945-16	GM32424-8	GM32997-4	GM32011	GM31972
GM19673-MA188	4UA9W	GM39945-5	GM32424-3	GM32996-2	GM32012	GM31971
GM19673-MA189	4UA9W, 600 V	GM39945-7	GM32424-3	GM32997-2	GM32012	GM31971
GM19673-MA190	4UA13W	GM39945-13	GM32424-7	GM39830	GM32012	GM31971
GM19673-MA191	4UA13W, 600 V	GM39945-15	GM32424-7	GM32997-4	GM32012	GM31971

Control and Harness

80-275REOZJD Fast-Response II Alternators With Non-DEC 550 Controller



Control and Harness

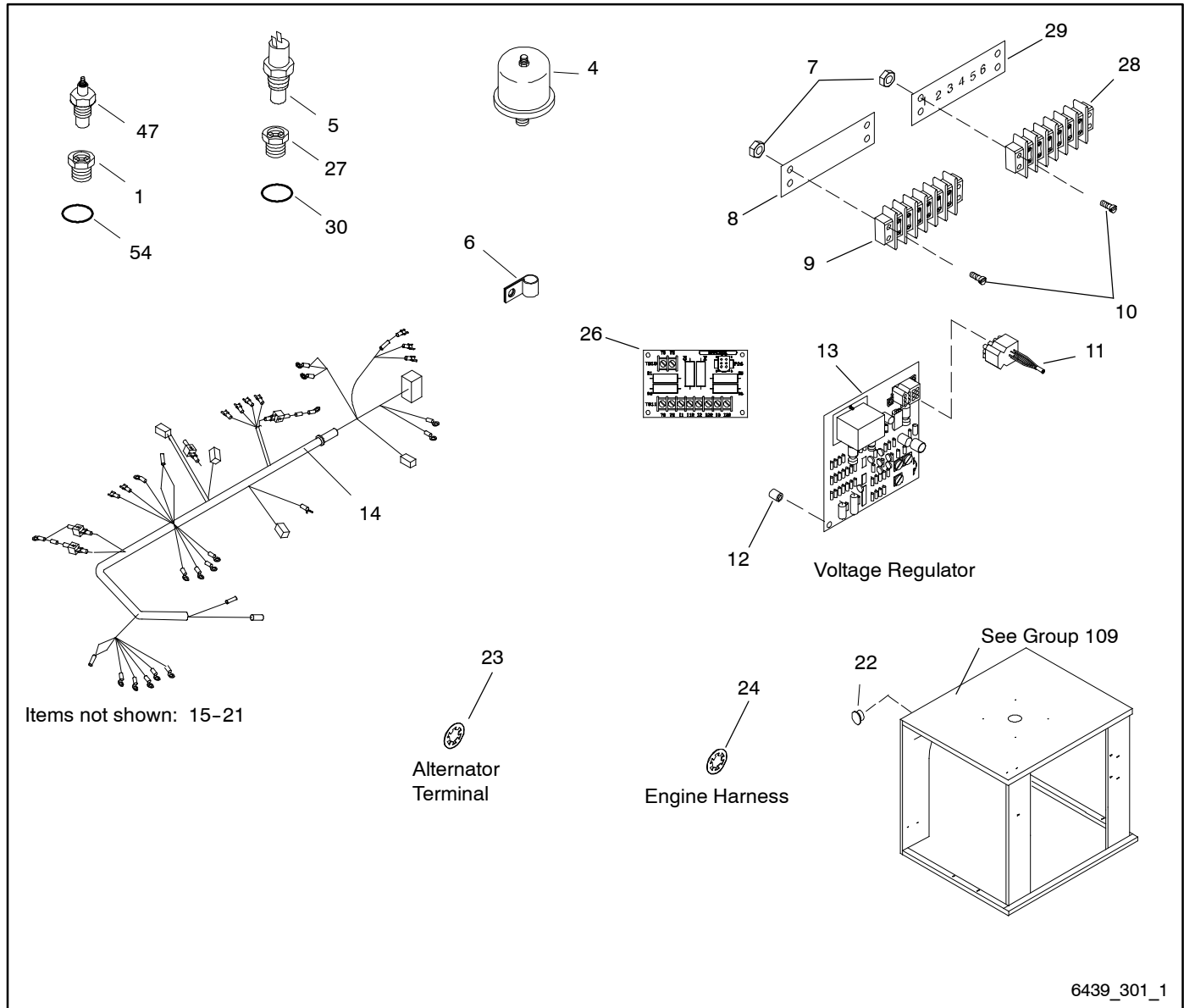
Find the installed module number on the generator set nameplate.
80-275REOZJD Fast-Response II Alternators With Non-DEC 550 Controller

Item	Part Number	Description	Quantity					
			Module					
			GM48081-MA1	GM47165-MA1	GM46344-MA1	GM46344-MA3	GM51057-MA1	GM58223-MA1
1	153659	Bushing, reducing, 1/2 x 3/4 in NPT			1	1		
4	343473	Sender, oil pressure		1	1	1		
4	267428	Fitting, 45 deg. street elbow (not shown)			1	1		
5	GM51705	Switch, low water temperature	1		1	1	1	1
5	361956	Switch, low coolant temperature		1				
6	X-672-3	Clamp, insulated, 0.84 in.	1				3	
6	X-672-28	Clamp, insulated, 0.88 in.	2				1	
6	X-672-31	Clamp, insulated, 0.75 in.			1	1		1
6	X-672-37	Clamp, insulated, 1.06 in.		1				
6	X-672-38	Clamp, insulated, 1.06 in.			1	1		1
6	X-672-36	Clamp, insulated, 0.38 in.					1	
6	X-672-4	Clamp, insulated, 1.25 in.					3	
6	298776	Base, tie wrap		1				
6	361567	Base, tie wrap	2					
7	M934-04-50	Nut, hex, 4 mm	4	4	4	4	4	4
8	255080	Marker, strip	1	1	1	1	1	1
9	295314	Block, terminal	1	1	1	1	1	1
10	M7985A-04020-20	Screw, pan head machine	4	4	4	4	4	4
11	354118	Harness, wiring	1	1	1	1	1	1
12	360459	Standoff, circuit board	5	5	5	5	5	5
13	C-255670	PCB assembly, FRIL voltage, Hz regulator	1				1	
13	A-354653	PCB assembly, FRIL voltage, Hz regulator		1	1	1		1
14	GM48925	Harness, engine	1					
14	GM47232	Harness, engine		1				
14	GM47235	Harness, engine			1			
14	GM51003	Harness, engine 230-275 kW J.D. Tier I3				1		
14	GM51030	Harness, engine 80-100 kW JD Tier 3					1	
14	GM58878	Harness, Engine 230-275 kW JD Tier 3						1
15	295145	Connector (P1) (not shown)	1	1	1	1	1	1
16	GM11496	Connector (P2)	1	1	1	1		1
17	GM47227	Connector (P4)	1	1	1	1		1
17	GM51469	Connector (P4)					1	
18	GM47225	Connector (P6)	1	1	1	1		1
19	GM47224	Connector (P8)	1	1	1	1		1
19	GM51486	Connector (P8)					1	
20	GM47222	Connector (P9)	1	1	1	1		1
20	GM47427	Fuse	1	1	1	1		1
21	GM47699	Connector (P10)			1	1		1
21	GM51469	Connector (P10)					1	
22	X-301-45	Plug, button		1	1	1		1
23	X-22-12	Washer, lock, 0.262 ID x 0.743 in. OD			1	1		1
24	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD	1				1	
27	X-202-41	Bushing, reducing, 1/2 x 3/4 in. NPT			1	1		1
28	295314	Block, terminal	1	1	1	1	1	1
29	299090	Marker, strip	1	1	1	1	1	1
30	365499	O-ring		1				
47	GM10166	Sender, temperature		1				
47	GM39458	Sender, temperature			1	1		
54	365499	O-ring		1				
55	GM38784-3	Vibromount, controller (not shown)					4	
56	GM50971	Bracket, ECM mounting (not shown)					1	

* Harness includes items 15-21, not shown.

Control and Harness, continued

80-275REOZJD Fast-Response II Alternators With
DEC 550 Controller



Control and Harness, continued

Find the installed module number on the generator set nameplate.

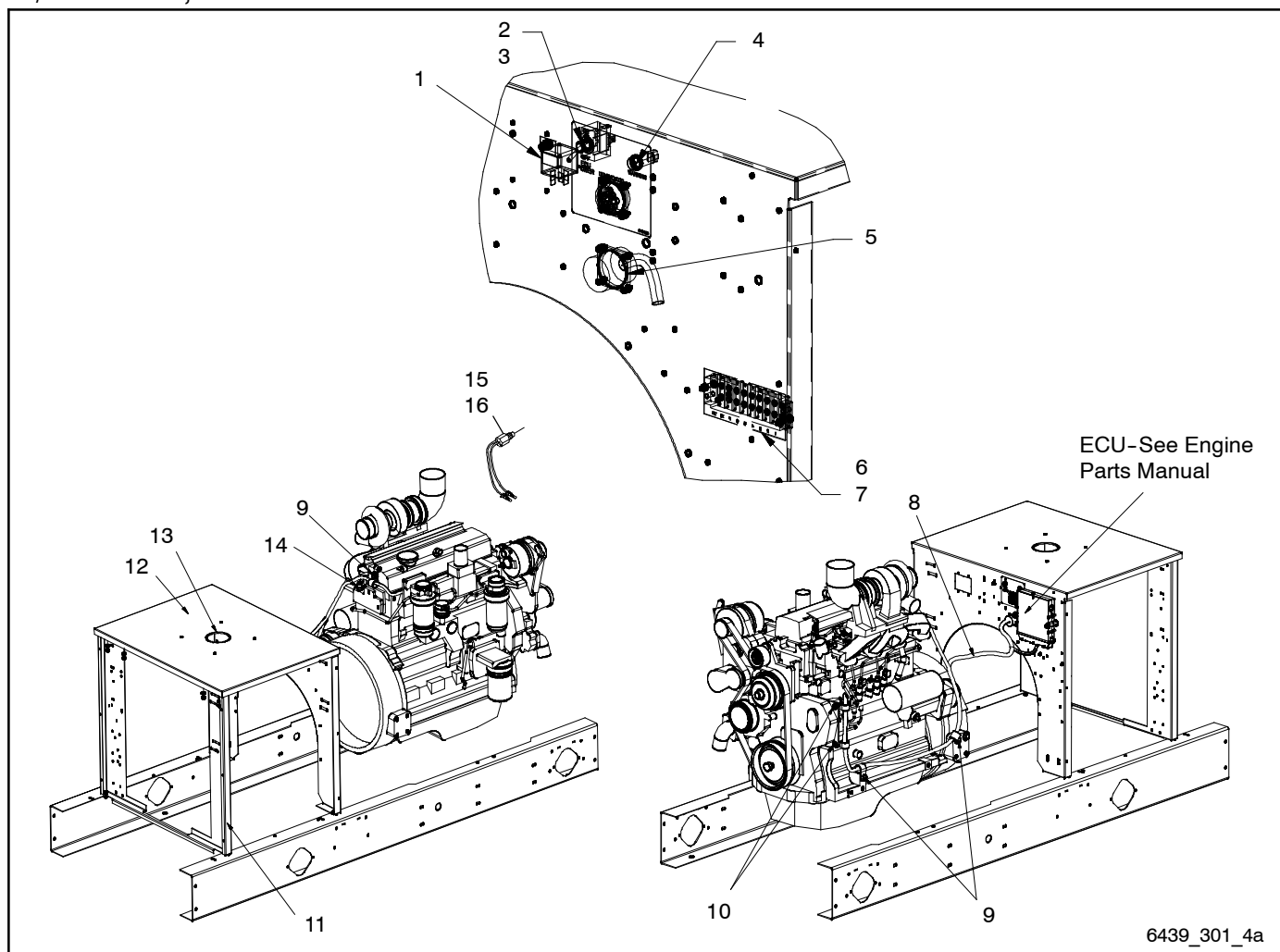
80-275REOZJD Fast-Response II Alternators With DEC 550 Controller

Item	Part Number	Description	Quantity						
			Module						
			GM48082-MA1	GM48082-MA3	GM48082-MA5	GM47166-MA1	GM46345-MA1	GM46345-MA3	GM51057-MA3
5	GM51705	Switch, low water temperature	1	1	1		1	1	1
5	361956	Switch, low water temperature				1			
6	X-672-3	Clamp, insulated, 0.94 in.	1	1	1				3
6	X-672-28	Clamp, insulated, 0.88 in.	2	2	2				1
6	X-672-31	Clamp, insulated, 0.75 in.					1	1	
6	X-672-37	Clamp, insulated, 1.06 in.				1			
6	X-672-38	Clamp, insulated, 1.06 in.					1	1	
6	X-672-36	Clamp, insulated, 0.38 in.							1
6	X-672-4	Clamp, insulated, 1.25 in.							3
6	298776	Base, tie wrap				1			
6	361567	Base, tie wrap	2	2	2				
7	M934-04-50	Nut, hex, 4 mm	4	4	4	2	2	2	4
8	254127	Marker, strip	1	1	1				1
9	X-405-2	Terminal block	1	1	1				1
10	M7985A-04020-20	Screw, pan head machine	4	4	4	2	2	2	4
14	GM48926	Harness, engine	1						
14	GM49369	Harness, engine		1					
14	GM50991	Harness, engine			1				
14	GM47233	Harness, engine				1			
14	GM47236	Harness, engine					1		
14	GM51001	Harness, engine, 230-275 kW JD Tier 3						1	
14	GM51031	Harness, engine, 80-100 kW JD Tier 3							1
15	295145	Connector (P1) (not shown)	1	1	1	1	1	1	1
16	GM11496	Connector (P2)	1	1	1	1	1	1	
16	337131	Connector (P3)				1			
16	257118	Connector (P3)					1	1	
17	GM47227	Connector (P4)	1	1	1	1	1	1	
17	GM51469	Connector (P4)							1
18	GM47225	Connector (P6)	1	1	1	1	1	1	
19	GM47224	Connector (P8)	1	1	1	1	1	1	
19	GM51486	Connector (P8)							1
20	GM47222	Connector (P9)	1	1	1	1	1	1	
20	GM47427	Fuse	1	1	1	1	1	1	
21	GM47699	Connector (P10)					1	1	
21	GM51469	Connector (P10)							1
22	X-301-45	Plug, button				1	1	1	
23	X-22-12	Washer, lock, 0.262 ID x 0.743 in. OD					1	1	
24	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD	1	1	1				1
26	GM13980	PCB assembly, CT burden resistor				1	1	1	
26	282829	Vibromount (not shown)				4	4	4	
27	X-202-41	Bushing, reducing, 1/2 x 3/4 in. NPT					1	1	
28	295314	Block, terminal	1	1	1	1	1	1	1
29	299090	Marker, strip	1	1	1	1	1	1	1
30	365499	O-ring, ISO 6149, 11.3 mm ID				1			
55	GM38784-3	Vibromount, controller (not shown)							4
56	GM50971	Bracket, ECM mounting (not shown)							1

* Harness includes items 15-21, not shown.

Control and Harness, continued

80/100REOZJE, DEC 550 Controller



Control and Harness, continued

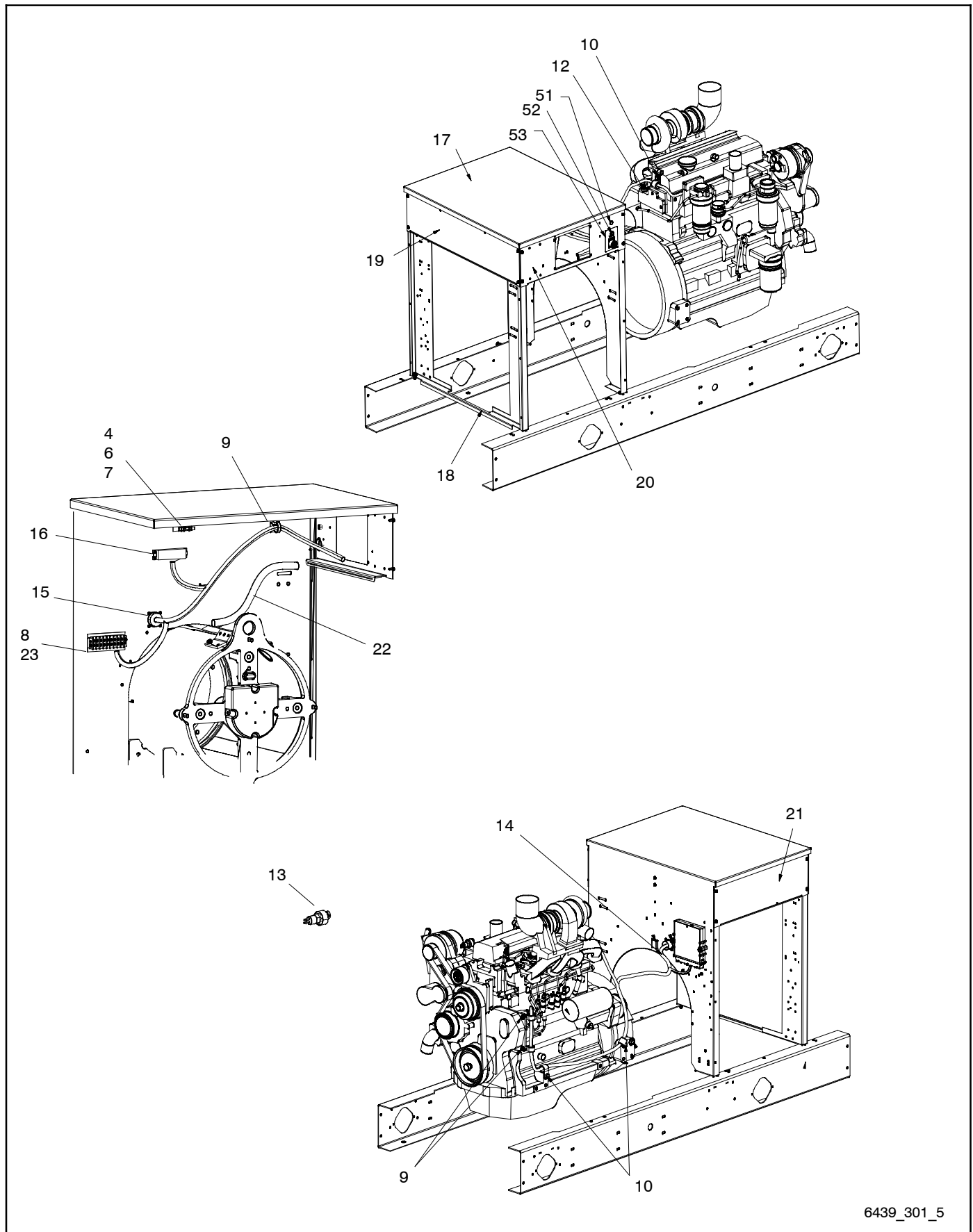
80/100REOZJE, DEC 550 Controller

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity	
			Module Number	
			GM66072-MA1	GM66072-MA2
1	GM49746	Relay, 12 VDC	1	
1	GM49747	Relay, 24 VDC		1
2	295030	Switch, toggle, 1 pole	1	1
3	151511	Ring, lock switch	1	1
4	343684	Lamp assy, 28VDC yel/amb led	1	1
5	GM66697	Harness, J-box 80-100 kW JD Tier III	1	1
6	295313	Terminal block	1	1
7	GM70413	Strip, Marker	1	1
8	GM66695	Harness, Engine 80-100 JD DEC550	1	1
9	X-672-37	Clamp	3	3
10	X-672-32	Clamp, insulated, 1.06 in.	2	2
11	GM17624	Panel, Junction Box (Rear)	1	1
12	GM62774-KCB	Panel, Junction Box (Front)	1	1
13	X-6033-15	Grommet	1	1
14	GM51705	Switch, Low Water Temp.	1	1
15	365289	Sensor, Low Fluid Assy.	1	1
16	X-6003-8	Conduit, convoluted	1	1

Control and Harness, continued

80/100REOZJE & 125REOZJF, APM402/DEC 3000 Controller



6439_301_5

Control and Harness, continued

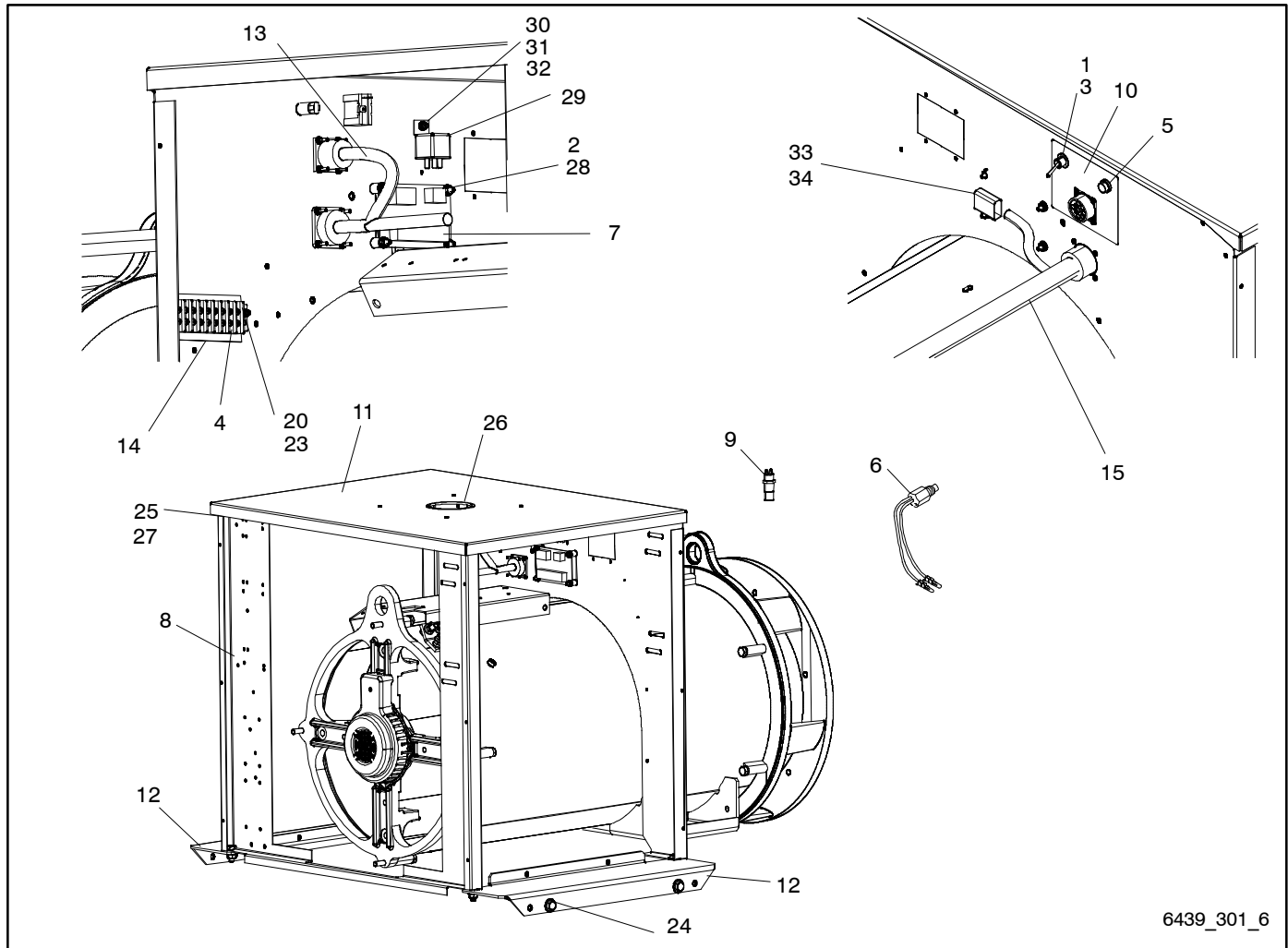
80/100REOZJE & 125REOZJF, APM402/DEC 3000 Controller

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity	
			Module	
			GM66798-MA1	GM72465-MA1
4	225179	Strip, Marker	1	1
6	291207	Fuse, 1.5 A, 250 V	3	3
7	292821	Fuse Holder	1	1
8	295313	Terminal Block	1	1
9	X-672-32	Clamp, insulated, 1.06 in.	2	2
10	X-672-37	Clamp	3	3
12	GM39458	Sender, Temperature	1	1
13	GM66270	Sensor, Low Coolant Level	1	1
14	GM66698	Harness, Engine 80-100 JD	1	1
14	GM47427	Fuse, 20A	1	1
14	GM47559	Cover, Connector	1	1
15	GM66696	Harness, J-Box 80-100 kW JD	1	1
17	GM69970-KCB	Panel, Junction Box (Front) 4S	1	1
18	GM69971	Panel, Junction Box (Rear) 4S	1	1
19	GM69977	Panel, J-Box DEC 3000 4S, 4P (Rear)	1	1
20	GM69980	Panel, J-Box DEC 3000 Mnt 4S (Right)	1	1
21	GM69981	Panel, J-Box DEC 3000 4S (Left)	1	1
22	GM70319	Harness, A/C DEC 3000	1	1
23	GM70413	Strip, Marker	1	
23	273781	Strip, Marker		1
52	343684	Lamp Assy., 28VDC yel/amb LED	1	1
51	X-301-23	Plug, button	1	1
53	GM69565	Decal, Diagnostic	1	1

Control and Harness, continued

125REOZJF & 150REOZJE, DEC 550 Controller



Control and Harness, continued

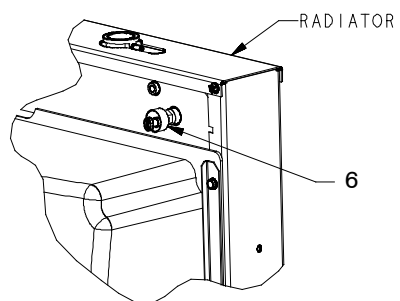
125REOZJF & 150REOZJE, DEC 550 Controller

Find the installed module number on the generator set nameplate.

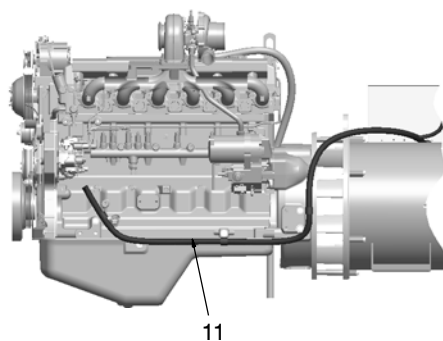
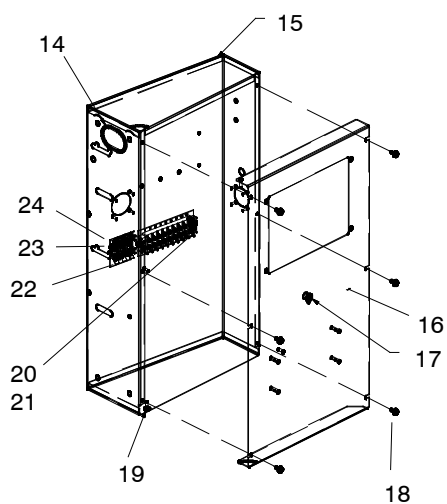
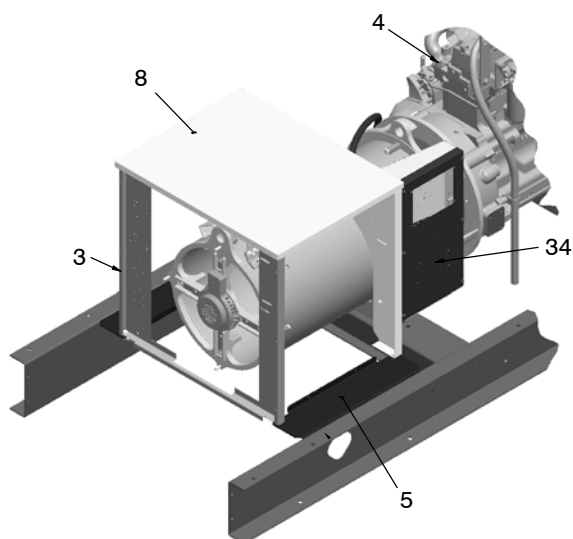
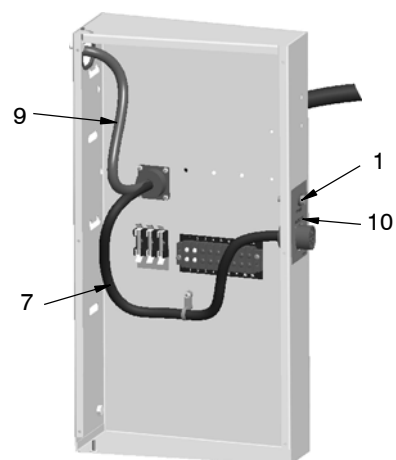
Item	Part Number	Description	Quantity		
			Module Number		
			GM70386-MA1	GM70386-MA2	GM72464-MA1
1	151511	Ring, lock switch	1	1	1
2	282829	Vibromount			4
3	295030	Switch, toggle, 1 pole	1	1	1
4	295313	Terminal block	1	1	1
5	343684	Lamp assy, 28VDC yel/amb led	1	1	1
6	365289	Sensor, Low Fluid Assembly	1	1	1
7	GM13980	PCB Assy, CT Burden Resistor			1
8	GM17624	Panel, Junction Box (Rear)	1	1	1
9	GM51705	Switch, Low Water Temp.	1	1	1
10	GM62565	Decal, Diagnostic	1	1	1
11	GM62774-KCB	Panel, Junction Box (Front)	1	1	1
12	-	Support, Junction Box (See Skid)	2	2	2
13	GM66697	Harness, J-box 80-100 kW JD Tier III	1	1	1
14	GM70413	Strip, Marker	1	1	1
15	GM70772	Harness, Engine 125-150 kW JD Tier III	1	1	
15	GM66695	Harness, Engine			1
20	M7985A-04020-20	Screw, pan head mach.	2	2	2
23	M934-04-50	Nut, Hex 4mm	2	2	2
24	X-22-15	Washer, lock, .456 ID x 1.058 in. OD	6	6	8
25	X-25-40	Washer, plain, .281 ID x .625 in. OD	4	4	4
26	X-6033-15	Grommet	1	1	1
27	X-6210-2	Nut, flange spiralock, 1/4-20	4	4	4
28	X-6210-4	Nut, flange whiz, 8-32			8
29	GM49746	Relay, 12 VDC	1		
29	GM49747	Relay, 24 VDC		1	1
30	M125A-05-80	Washer, Plain	1	1	1
31	M7985A-05012-20	Screw, pan head mach.	1	1	1
32	M934-05-50	Nut, Hex 5mm	1	1	1
33	GM47427	Fuse, 20A	1	1	1
34	GM47230	Cover, Connector	1	1	1
35	X-672-32	Clamp, insulated, 1.06 in. (not shown)			2
35	X-672-37	Clamp, insulated (not shown)			3

Control and Harness, continued

150REOZJE, APM402/DEC 3000 Controller



SENDER DETAIL
(RIGHT SIDE VIEW)



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Control and Harness, continued

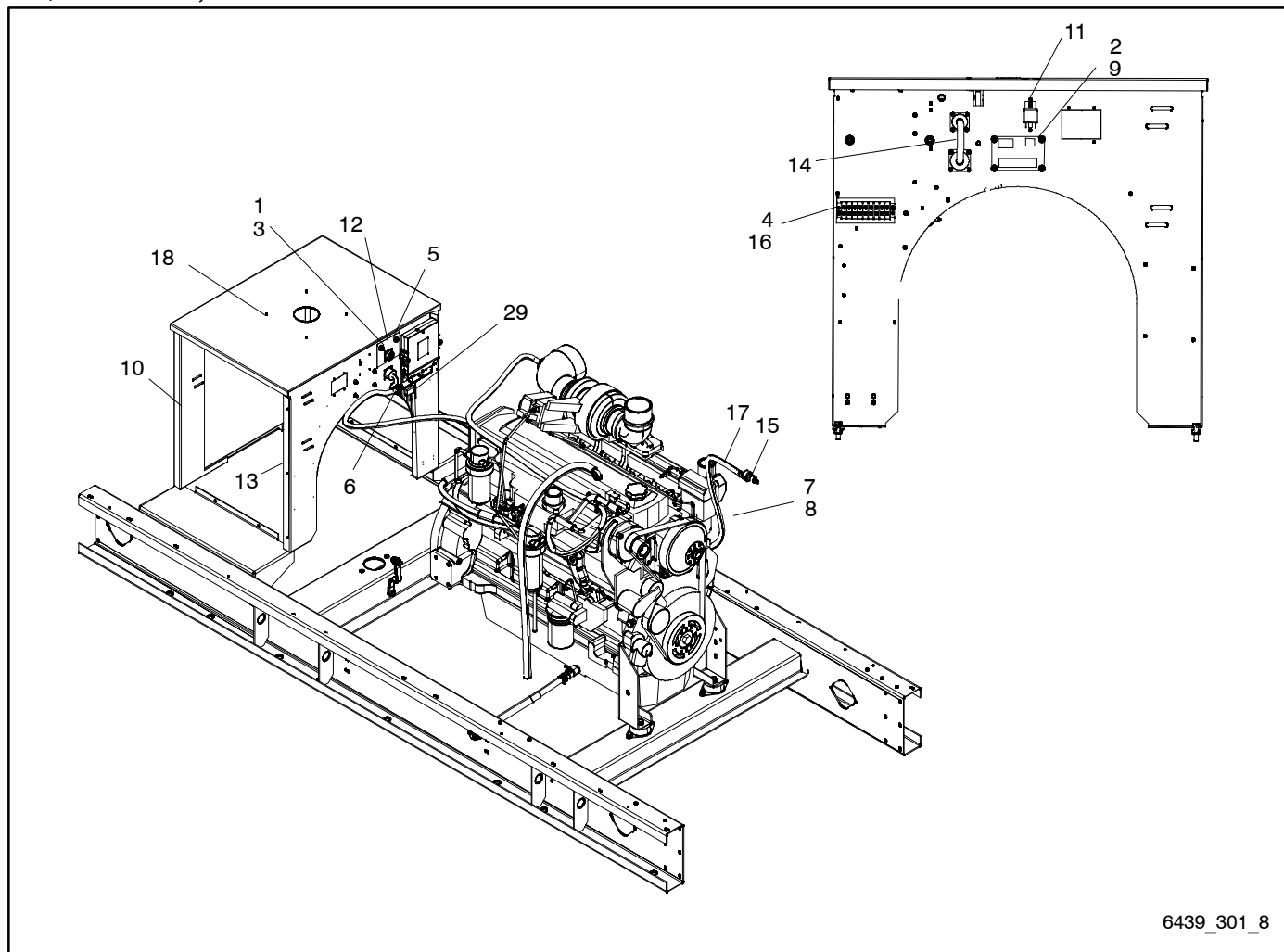
150REOZJE, APM402/DEC 3000 Controller

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity	
			Module Number	
			GM70387-MA1	GM70387-MA2
1	343684	Lamp Assy., 28VDC yel/amb led	1	1
2	361567	Base, Tie Wrap Snapin	1	1
3	GM17624	Panel, Junction Box (Rear)	1	1
4	GM39458	Sender, Temperature	1	1
5	-	Support, Junction Box (See Skid)	2	2
6	GM66270	Sensor, Low Coolant Level	1	1
7	GM66368	Harness, Control Box 80-275 JD Tier III	1	1
8	GM66540-KCB	Box, Junction	1	1
9	GM66919	Harness, A/C DEC 3000	1	1
10	GM69565	Decal, Diagnostic	1	1
11	GM70773	Harness, Engine 125-150 kW JD Tier III	1	1
12	GM47427	Fuse, 20A	1	1
13	GM47230	Cover, Connector	1	1
14	X-6033-8	Grommet, U-channel	1	1
15	GM65331	Box, Controller	1	1
16	GM65601	Plate, Closure	1	
16	GM65602	Plate, Closure		1
17	X-301-23	Plug, Button	1	1
18	X-6216-1	Screw, Phillips hex crimpite	6	6
19	X-6278-1	Washer, Nylon, .201 ID x .46 in. OD	1	1
20	GM70413	Strip, Marker	1	1
21	295313	Terminal Mlock	1	1
22	225179	Strip, Marker	1	1
23	292821	Fuse Holder	1	1
24	291207	Fuse, 1.5 A, 250 V	3	3
34	GM66964-1	Box, Controller DEC3000 (includes items 14-24)	1	
34	GM66964-2	Box, Controller DEC3000 (includes items 14-24)		1

Control and Harness, continued

180/200REOZJE, DEC 550 Controller



Control and Harness, continued

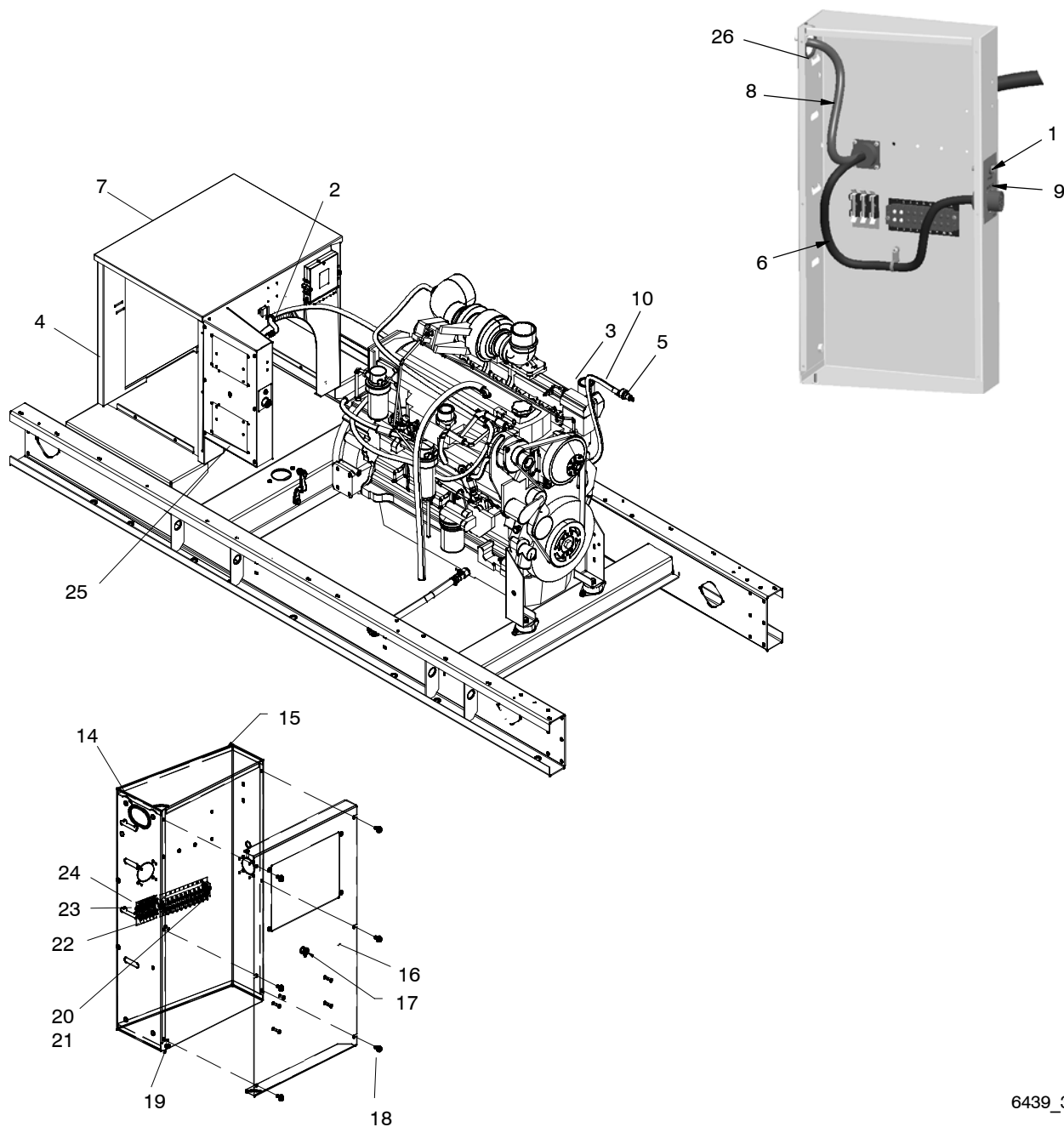
180/200REOZJE, DEC 550 Controller

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity	
			Module Number	
			GM70807-MA1	GM74556-MA1
1	151511	Ring, lock switch	1	1
2	282829	Vibromount	4	
3	295030	Switch, toggle, 1 pole	1	1
4	295313	Terminal block	1	1
5	343684	Lamp assy, 28VDC yel/amb led	1	1
6	361567	Base, tie wrap snapin	4	4
7	361956	Switch, low water temp	1	1
8	365499	O-ring, ISO 6149 (11.3mm ID)	1	1
9	GM13980	PCB Assy, CT Burden Resistor	1	
10	GM17624	Panel, Junction Box (Rear)		1
11	GM49747	Relay, 24V DC	1	1
12	GM62565	Decal, Diagnostic	1	1
13	GM65343	Box, Junction	1	
13	GM62774-KCB	Panel, Junction Box (Front)		1
14	GM63532	Harness, J-Box 230-275 kW JD Tier III	1	
14	GM66697	Harness, J-box 80-100 kW JD Tier III		1
15	GM66270	Sensor, Low Coolant Level	1	1
16	GM70413	Strip, Marker	1	1
17	GM71179	Harness, Engine 180 kW JD Tier III		1
17	GM70967	Harness, Engine 200 kW JD Tier III	1	
18	324861	Coupling, black plastic	4	
29	GM47230	Cover, Connector	1	1
29	GM47427	Fuse, 20A	1	1

Control and Harness, continued

180/200REOZJE, APM402/DEC 3000 Controller



6439_301_9

Control and Harness, continued

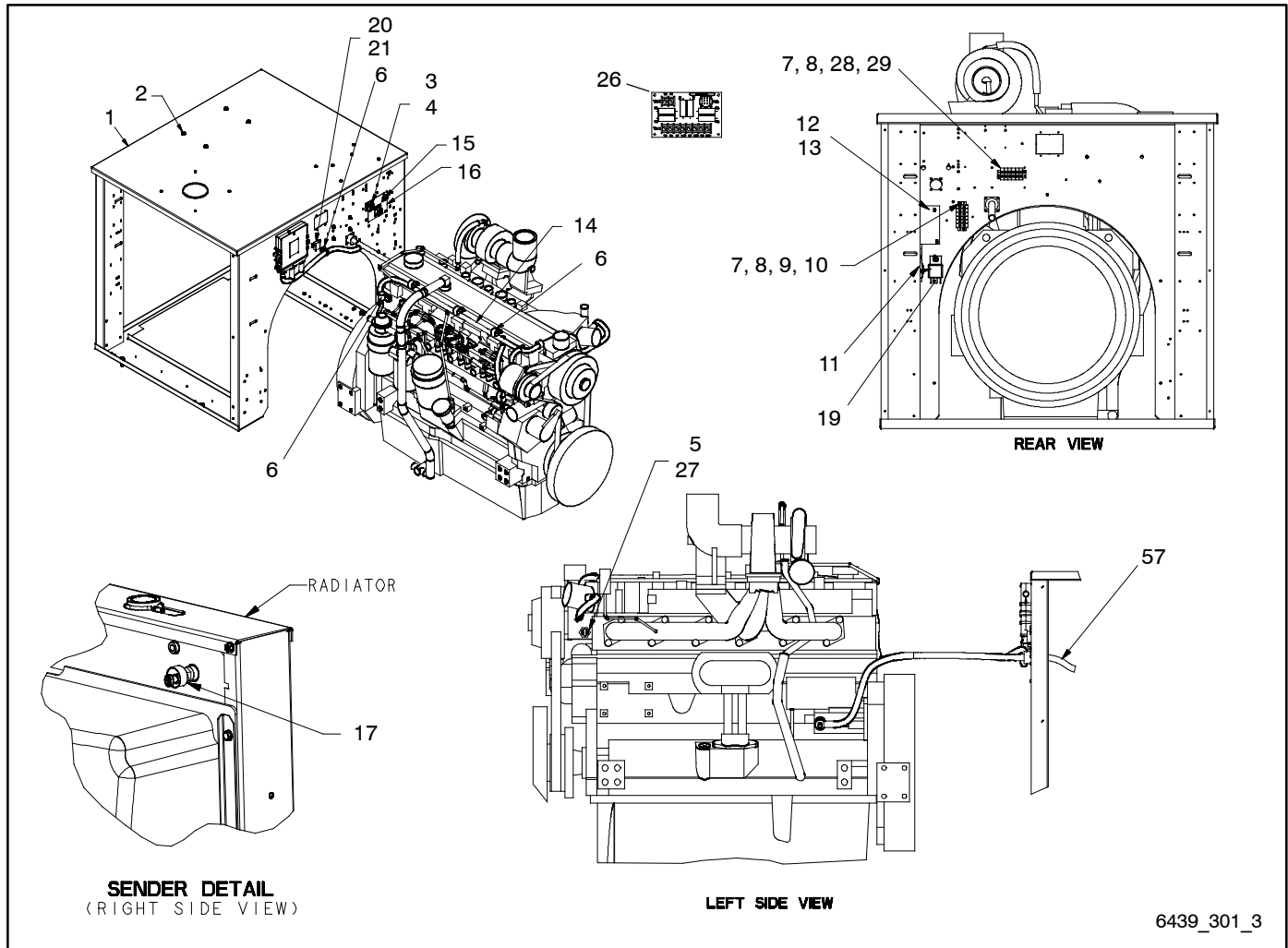
180/200REOZJE, APM402/DEC 3000 Controller

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity			
			Module			
			GM70808-MA3	GM70808-MA4	GM74555-MA1	GM74555-MA2
1	343684	Lamp assy, 28VDC yel/amb led	1	1	1	1
2	361567	Base, tie wrap snapin	4	4	4	4
3	GM10166	Sender, Temperature	1	1	1	1
3	365499	O-ring, ISO 6149 (11.3mm ID)	1	1		
4	GM17624	Panel, Junction Box (Rear)			1	1
5	GM66270	Sensor, Low Coolant Level			1	1
5	365289	Sensor, Low Fluid Assembly	1	1		
6	GM66368	Harness, Control Box 80-275 JD Tier III	1	1	1	1
7	GM66540-KCB	Box, Junction			1	1
7	GM69409	Box, Junction	1	1		
8	GM66919	Harness, A/C DEC 3000	1	1	1	1
9	GM69565	Decal, Diagnostic	1	1	1	1
10	GM70968	Harness, Engine 180-200kw JD Tier 111	1	1	1	1
14	X-6033-8	Grommet, U-channel	1	1	1	1
15	GM65331	Box, Controller	1	1	1	1
16	GM65601	Plate, Closure	1		1	
16	GM65602	Plate, Closure		1		1
17	X-301-23	Plug, Button	1	1	1	1
18	X-6216-1	Screw, Phillips hex crimpite	6	6	6	6
19	X-6278-1	Washer, Nylon, .201 ID x .46 in. OD	1	1	1	1
20	GM70413	Strip, Marker	1	1	1	1
21	295313	Terminal Mlock	1	1	1	1
22	225179	Strip, Marker	1	1	1	1
23	292821	Fuse Holder	1	1	1	1
24	291207	Fuse, 1.5 A, 250 V	3	3	3	3
25	GM66964-1	Box, Controller DEC3000 (includes items 14-24)	1		1	
25	GM66964-2	Box, Controller DEC3000 (includes items 14-24)		1		1
26	X-6033-4	Grommet, U-channel	1	1	1	1
27	324861	Coupling, black plastic	4	4		

Control and Harness, continued

230-275REOZJE



Control and Harness, continued

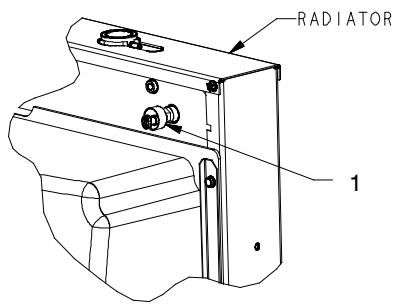
230-275REOZJE

Find the installed module number on the generator set nameplate.

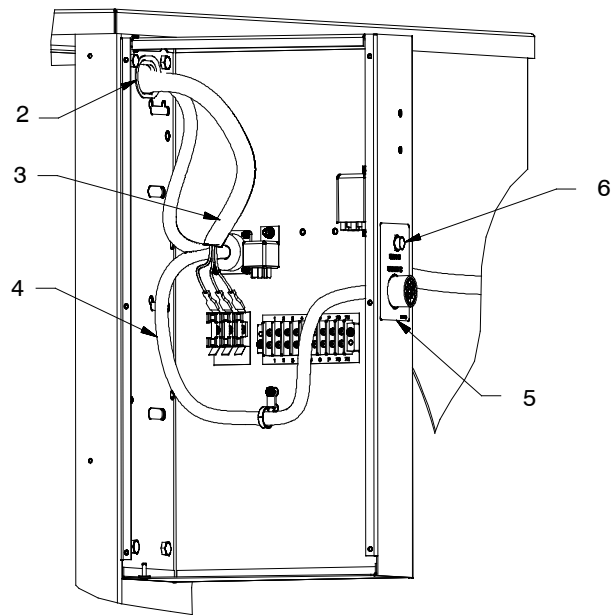
Item	Part Number	Description	Quantity		
			Module		
			GM64075-MA1	GM64075-MA2	GM69410-MA1
1	GM65343	Box, junction	1	1	1
2	324861	Coupling, black plastic	4	4	4
3	295030	Switch, toggle	1		
4	151511	Ring, lock			1
5	GM51705	Switch, low water temperature	1	1	1
6	X-672-32	Clamp, insulated, 1.06 in.	4	4	4
6	X-672-38	Clamp, insulated	1	1	1
6	361567	Base, tie wrap	1	1	1
7	M934-04-50	Nut, hex, 4 mm	5	2	2
8	299090	Marker, strip	1	1	
8	GM70413	Marker, strip	1		1
9	295314	Block, terminal		1	
9	295313	Block, terminal			1
10	M7985A-04020-20	Screw, pan head machine	4	2	2
11	354118	Harness, CT wiring FRIL	1		
12	360459	Standoff, circuit board	5		
13	A-354653	PCB assembly, FRIL voltage, Hz regulator	1		
14	GM63530	Harness, engine, 230-275 kW JD Tier 3	1	1	1
15	343684	Lamp assy 28VDC yel/amb LED			1
16	GM62565	Decal, diagnostic			1
17	365289	Sensor, low fluid assembly			1
18	X-6003-9	Conduit, convoluted			1
19	GM49747	Relay, 24 VDC	1		1
20	GM47427	Fuse, 20A	1	1	1
21	GM47230	Cover	1	1	1
26	GM13980	PCB Assy CT Burden Resistor		1	1
26	282829	Vibromount		4	4
27	X-202-41	Bushing, reducing, 1/2 x 3/4 in. NPT	1	1	1
28	295314	Block, terminal	1		
29	255080	Marker, strip	1		
57	GM63531	Harness, J-Box 230-275 kW JD Tier 3	1		
57	GM63532	Harness, J-Box 230-275 kW JD Tier 3		1	1

Control and Harness, continued

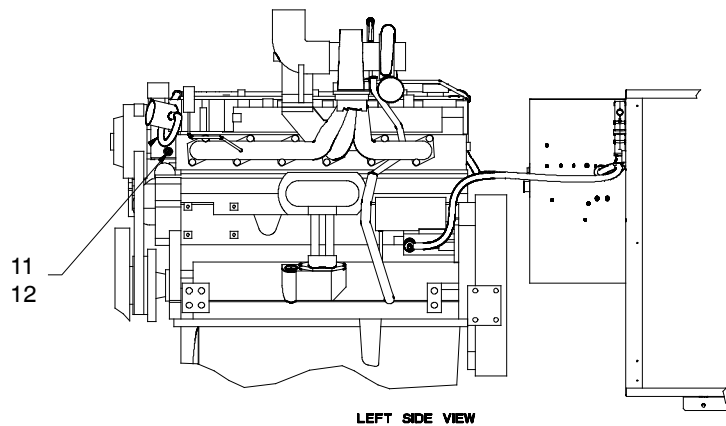
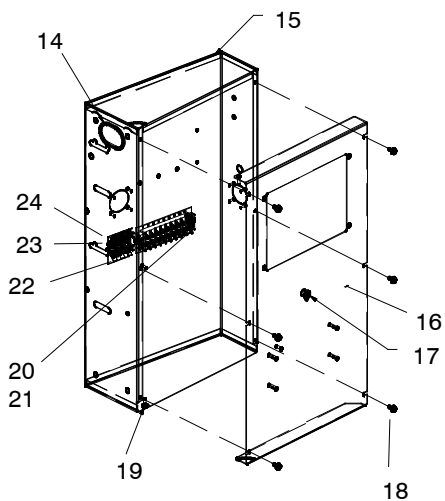
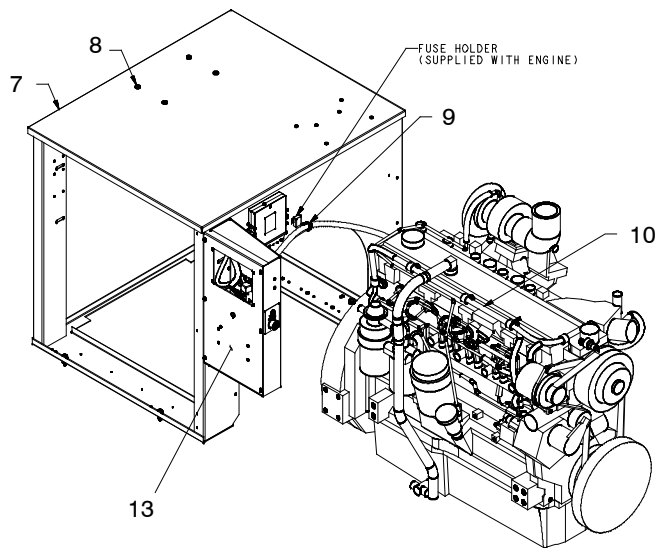
230-275REOZJE, APM402/DEC 3000 Controller



SENDER DETAIL
(RIGHT SIDE VIEW)



CONTROL BOX DETAIL



LEFT SIDE VIEW

6439_301_10

Control and Harness, continued

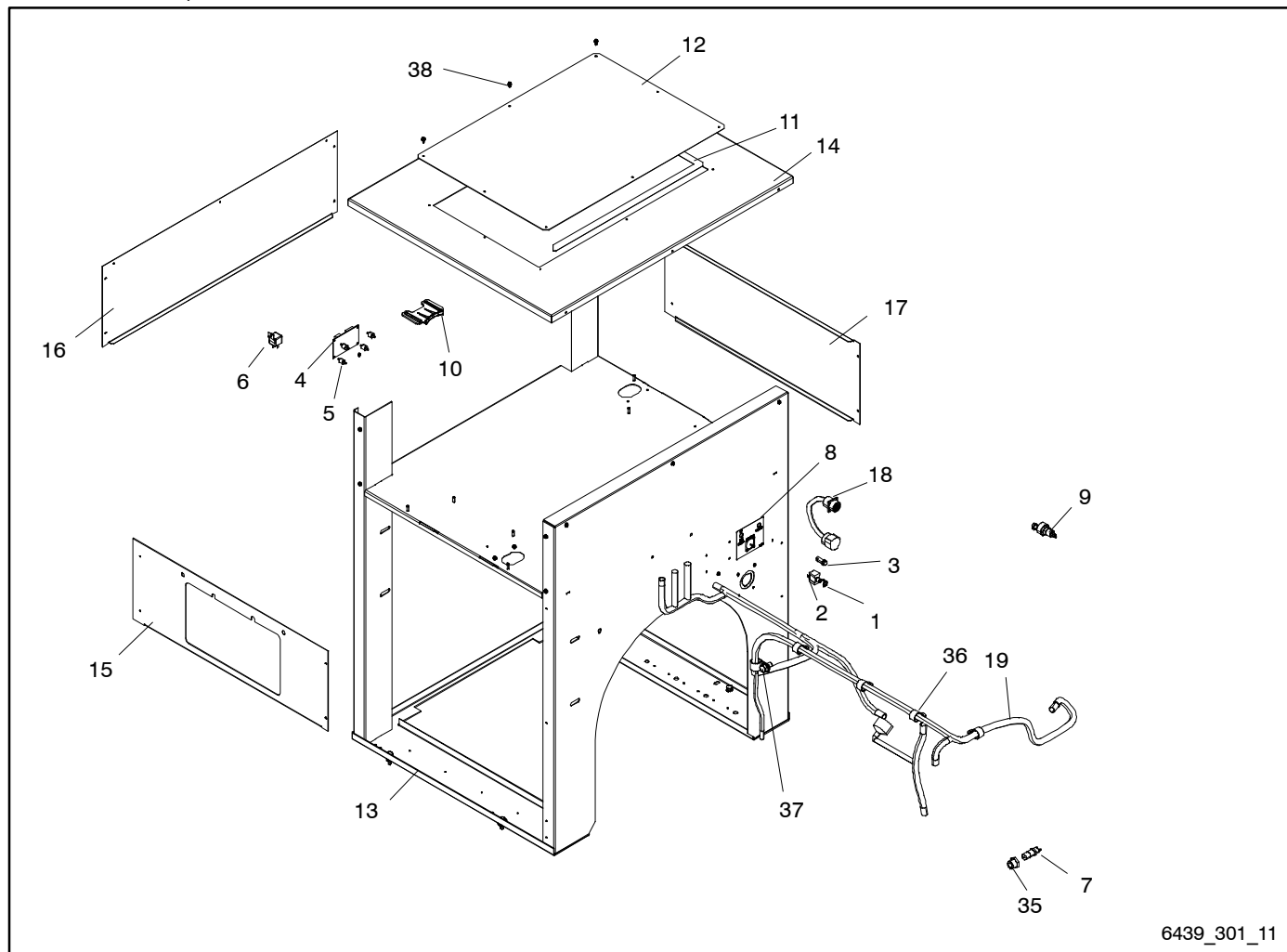
230-275REOZJE, APM402/DEC 3000 Controller

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity	
			Module Number	
			GM69407-MA1	GM69407-MA2
1	GM66270	Sensor, Low Coolant Level	1	1
2	X-6033-4	Grommet, U-channel	1	1
3	GM66919	Harness, A/C DEC 3000	1	1
4	GM66368	Harness, Control Box 80-275 JD Tier III	1	1
5	GM69565	Decal, Diagnostic	1	1
6	343684	Lamp Assy., 28VDC yel/amb led	1	1
7	GM69409	Box, Junction	1	1
8	324861	Coupling, Black Plastic	4	4
9	361567	Base, Tie Wrap Snapin	1	1
10	GM66909	Harness, Engine 230-275 kW JD Tier III	1	1
11	226717	Sender, Water	1	1
12	GM70317	Bushing, Face Reducing	1	1
13	GM66964-1	Box, Controller DEC3000 (includes items 14-24)	1	
13	GM66964-2	Box, Controller DEC3000 (includes items 14-24)		1
14	X-6033-8	Grommet, U-channel	1	1
15	GM65331	Box, Controller	1	1
16	GM65601	Plate, Closure	1	
16	GM65602	Plate, Closure		1
17	X-301-23	Plug, button	1	1
18	X-6216-1	Screw, Phillips hex crimplite	6	6
19	X-6278-1	Washer, Nylon, .201 ID x .46 in. OD	1	1
20	GM70413	Strip, Marker	1	1
21	295313	Terminal Block	1	1
22	225179	Strip, Marker	1	1
23	292821	Fuse Holder	1	1
24	291207	Fuse, 1.5 A, 250 V	3	3

Control and Harness, continued

230-300REOZJ/E



6439_301_11

Control and Harness, continued

230-300REOZJ/E

Find the installed module number on the generator set nameplate.

Item	Part Number	Description	Quantity			
			Module			
			GM70131-MA1	GM104877-MA1	GM75790-MA1	GM75790-MA2
1	151511	Ring, lock switch (GM-NRP)			1	1
2	295030	Switch, toggle, 1 pole			1	1
3	343684	Lamp assy 28VDC yel/amb led	1	1	1	1
4	GM13980	PCB Assy CT Burden Resistor			1	1
5	GM38784-1	Vibromount, Controller			4	4
6	GM49747	Relay, 24V DC			1	1
7	226717	Sender, water	1	1		
7	GM51705	Switch, Low Water Temp.			1	1
8	GM78866	Decal, Diagnostic	1	1		
8	GM62565	Decal, Diagnostic			1	1
9	GM66270	Sensor, Low Coolant Level	1	1	1	1
10	GM74531	Guard, Rodent	1	1	1	1
11	GM75773	Gasket, Controller Cover	1	1	1	1
12	GM76171**	Panel, Junction Box (Top)	1	1	1	1
13	GM75777**	Box, Junction	1	1	1	1
14	GM75781**	Cover, J-Box	1	1	1	1
15	GM70132	Panel, Controller Face	1	1		
15	GM75783	Panel, Controller Face			1	1
16	GM75785	Cover, Controller (Rear)	1	1	1	1
17	GM75786	Cover, Controller (Left)	1	1	1	1
18	GM75952	Harness, Control Box DEC3000	1	1		
18	GM75859	Harness, Control Box DEC550			1	
18	GM78254	Harness, Control Box DEC6000				1
19	GM75862	Harness, Engine 300kw JD	1	1	1	1
19	GM70317	Bushing, Face Reducing	1	1		
35	X-202-41	Bushing, reducing (1/2 x 3/4"npt)			1	1
38	X-6216-1	Screw, Phillips hex crimpitite	29	29	29	29
36	X-672-32	Clamp, insulated, 1.06 in.	4	4	4	4
37	X-672-38	Clamp	1	1	1	1

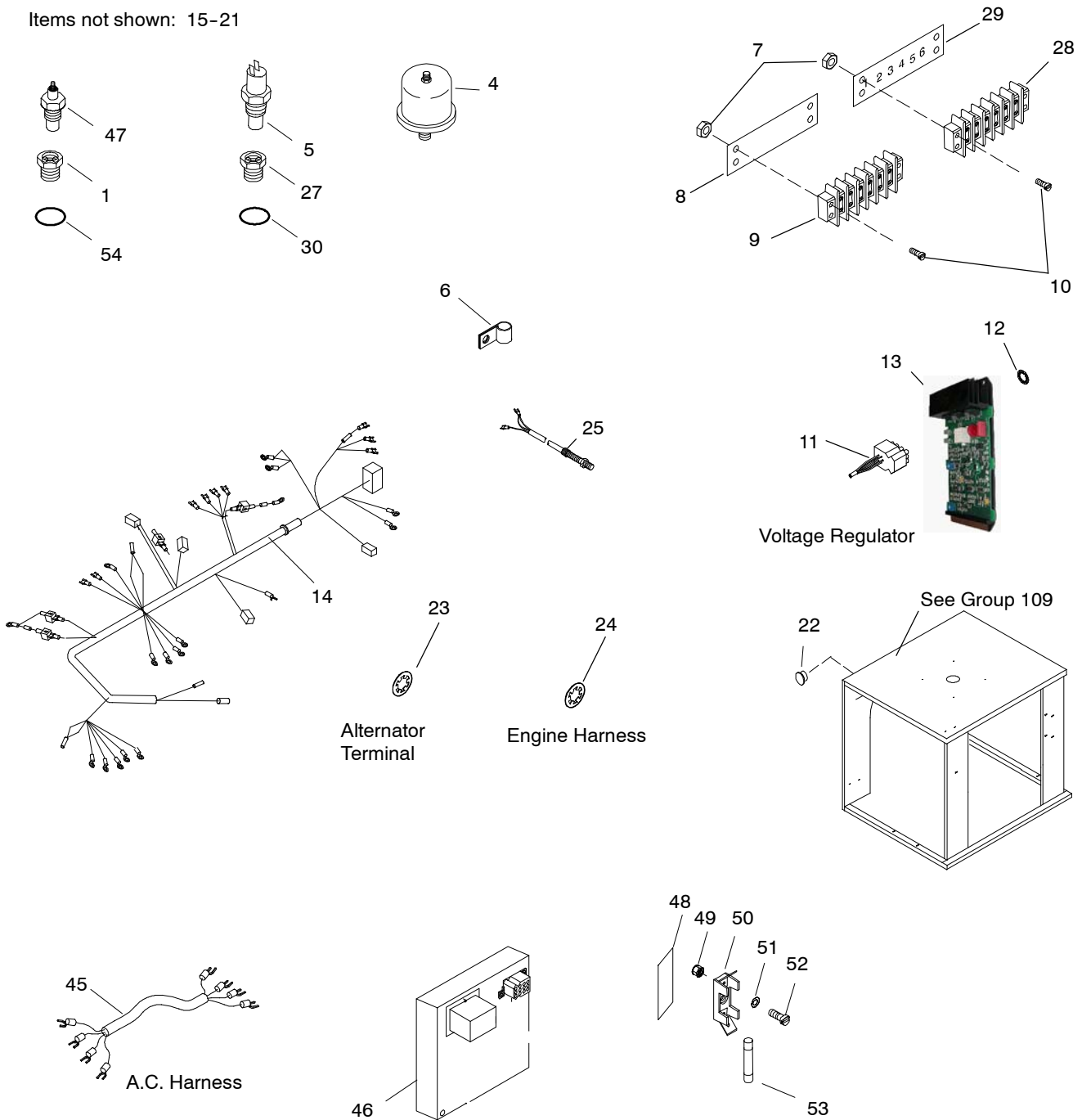
** Use the Kit number and chart below to identify the color suffix.
Add a suffix to this color dependant part number before ordering.

Kit No.	Color Dependant Parts	
	Part Number Suffix	Part Number Example (item 13)
GM70131-MA1-BLK	-BLK	GM75777-BLK
GM75790-MA1-BLK	-BLK	GM75777-BLK
GM75790-MA2-BLK	-BLK	GM75777-BLK
GM104887-MA1-BLK	-BLK	GM75777-BLK

Control and Harness, continued

80-275REOZJD Fast-Response III Alternators With Non-DEC 550 Controller

Items not shown: 15-21



6439_301_2

Control and Harness, continued

Find the installed module number on the generator set nameplate.

80-275REOZJD Fast-Response III Alternators With Non-DEC 550 Controller

Item	Part Number	Description	Quantity			
			Module			
			GM48081-MA2	GM47165-MA2	GM46344-MA2	GM51057-MA2
1	153659	Bushing, reducing, 1/2 x 3/4 in. NPT			1	
4	343473	Sender, oil pressure		1	1	
5	GM51705	Switch, low water temperature	1		1	1
5	361956	Switch, low water temperature		1		
6	X-672-3	Clamp, insulated, 94 in.	1			3
6	X-672-28	Clamp, insulated, 0.88 in.	2			1
6	X-672-31	Clamp, insulated, 0.75 in.			1	
6	X-672-37	Clamp, insulated, 1.06 in.		1		
6	X-672-38	Clamp, insulated, 1.06 in.			1	
6	X-672-36	Clamp, insulated, 0.38 in.				1
6	X-672-4	Clamp, insulated, 1.25 in.				3
6	298776	Base, tie wrap		1		
6	361567	Base, tie wrap	2			
7	M934-04-50	Nut, hex, 4 mm	4	4	4	4
8	255080	Marker, strip	1	1	1	1
9	295314	Block, terminal	1	1	1	1
10	M7985A-04020-20	Screw, pan head machine	4	4	4	4
11	GM39873	Harness, regulator	1	1	1	1
12	#	Hardware, M5	4	4	4	4
13	GM40179	PCB assembly, wound field regulator	1	1	1	1
14	GM48925	Harness, engine	1			
14	GM47232	Harness, engine		1		
14	GM47235	Harness, engine			1	
14	GM51030	Harness, engine 80-100 kW JD Tier 3				1
15	295145	Connector (P1) (not shown)	1	1	1	1
16	GM11496	Connector (P2)	1	1	1	
17	GM47227	Connector (P4)	1	1	1	
17	GM51469	Connector (P4)				1
18	GM47225	Connector (P6)	1	1	1	
19	GM47224	Connector (P8)	1	1	1	
19	GM51486	Connector (P8)				1
20	GM47222	Connector (P9)	1	1	1	
20	GM47427	Fuse	1	1	1	
21	GM47699	Connector (P10)			1	
21	GM51469	Connector (P10)				1
22	X-301-45	Plug, button		1	1	
23	X-22-12	Washer, lock, 0.262 ID x 0.743 in. OD			1	
24	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD				1
27	X-202-41	Bushing, reducing, 1/2 x 3/4 in. NPT			1	
28	295314	Block, terminal	1	1	1	1
29	299090	Marker, strip	1	1	1	1
30	365499	O-ring		1		
45	GM35357	Harness, wiring (AC harness)	1	1	1	1
47	GM10166	Sender, temperature		1		
47	GM39458	Sender, temperature			1	
48	GM39798	Strip, marker	1	1	1	1
49	M934-03-50	Nut, hex, 3 mm	1	1	1	
50	336634	Fuse holder	1	1	1	1
51	X-22-6	Washer, lock, 0.146 ID x 0.285 in. OD	1	1	1	
52	M7985A-03010-20	Screw, pan head, M3 x 10	1	1	1	
53	358337	Fuse, 10 A, 250 V	1	1	1	1
54	365499	O-ring		1		
55	GM38784-3	Vibromount, controller (not shown)				4
56	GM50971	Bracket, ECM mounting (not shown)				1

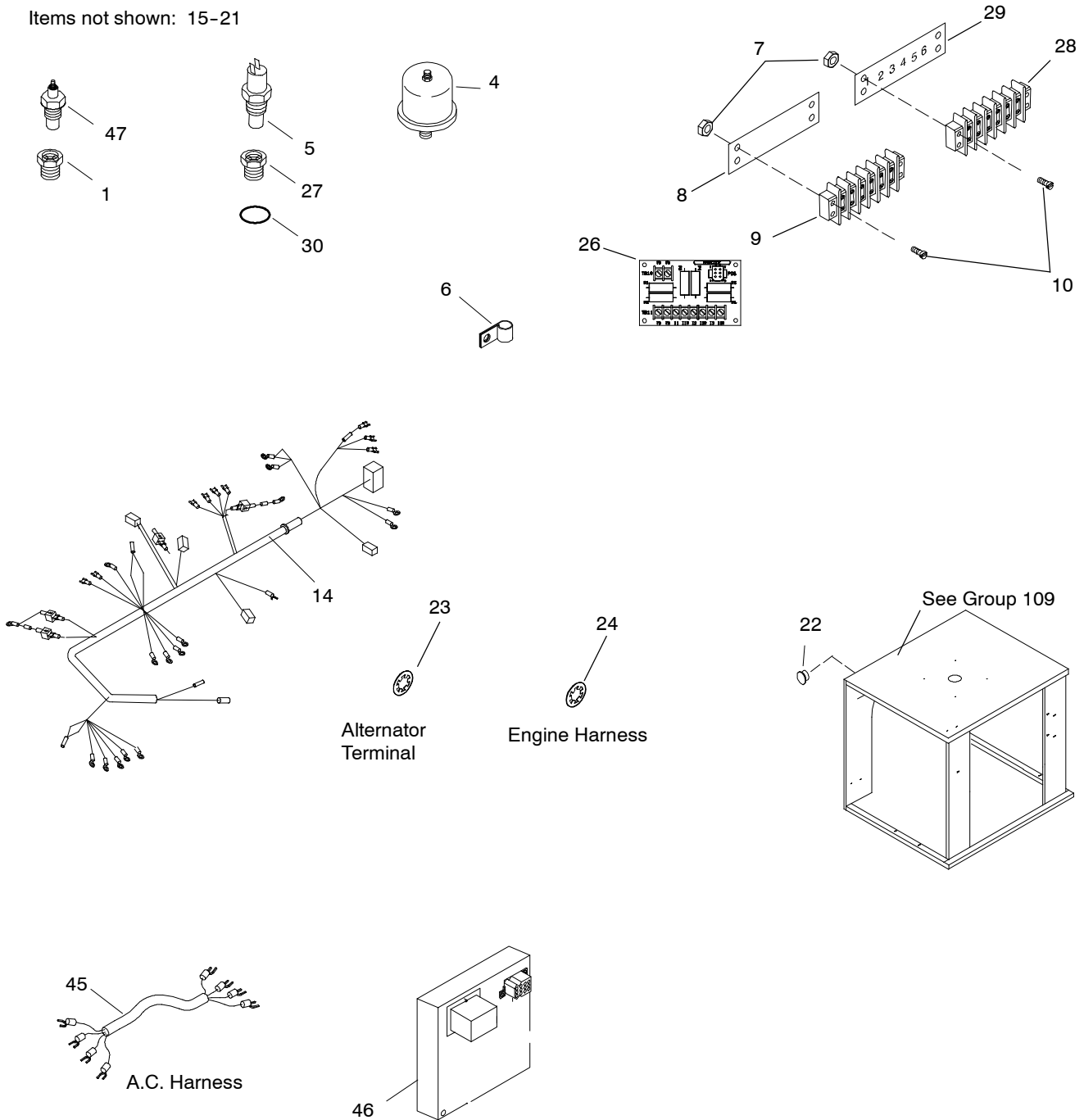
* Harness includes items 15-21, not shown.

Common hardware. Procure locally.

Control and Harness, continued

80-275REOZJD Fast-Response III Alternators With DEC 550 Controller

Items not shown: 15-21



6439_301_2

Control and Harness, continued

Find the installed module number on the generator set nameplate.

80-275REOZJD Fast-Response III Alternators With DEC 550 Controller

Item	Part Number	Description	Quantity			
			Module			
			GM48082-MA2	GM47166-MA2	GM46345-MA2	GM51057-MA4
5	GM51705	Switch, low water temperature	1		1	
6	X-672-3	Clamp, insulated, 0.94 in.	1			3
6	X-672-31	Clamp, insulated, 0.75 in.			1	
6	X-672-37	Clamp, insulated, 1.06 in.		1		
6	X-672-38	Clamp, insulated, 1.06 in.			1	
6	X-672-28	Clamp, insulated, 0.88 in.				1
6	X-672-36	Clamp, insulated, 0.38 in.				1
6	361567	Base, tie wrap	2			
6	X-672-4	Clamp, insulated, 1.25 in.				3
7	M934-04-50	Nut, hex, 4 mm	2	2	2	4
8	254127	Marker, strip				1
9	X-405-2	Terminal block				1
10	M7985A-04020-20	Screw, pan head machine	2	2	2	4
14	GM48927	Harness, engine	1			
14	GM47234	Harness, engine		1		
14	GM47237	Harness, engine			1	
14	GM51032	Harness, engine, 80-100 kW JD Tier 3				1
15	295145	Connector (P1) (not shown)	1	1	1	1
16	GM11496	Connector (P2)	1	1	1	
16	337131	Connector (P3)	1	1	1	
17	GM47227	Connector (P4)	1	1	1	
17	GM51469	Connector (P4)				1
18	GM47225	Connector (P6)	1	1	1	
19	GM47224	Connector (P8)	1	1	1	
19	GM51486	Connector (P8)				1
20	GM47222	Connector (P9)	1	1	1	
20	GM47427	Fuse	1	1	1	
21	GM47699	Connector (P10)			1	
21	GM51469	Connector (P10)				1
22	X-301-45	Plug, button		1	1	
23	X-22-12	Washer, lock, 0.262 ID x 0.743 in. OD			1	
24	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD	1			1
26	GM13980	PCB assembly, CT burden resistor		1	1	
26	282829	Vibromount		4	4	
27	X-202-41	Bushing, reducing, 1/2 x 3/4 in. NPT			1	
28	295314	Block, terminal	1	1	1	1
29	299090	Marker, strip	1	1	1	1
30	365499	O-ring, ISO 6149, 11.3 mm ID		1		
45	GM35357	Harness, wiring (AC harness)	1	1	1	1
46	GM11718	PCB assembly, excitation interface	1	1	1	1
55	GM38784-3	Vibromount, controller (not shown)				4
56	GM50971	Bracket, ECM mounting (not shown)				1

* Harness includes items 15-21, not shown.

Literature

Item	Part Number	Description	Quantity								
			Variation Number								
			271	273	256	257	258	259	260	317	318
1	TP-6349	S/M Fast Response III Alternator, 20-300 kW	1	1	1	1	1	1	1	1	1
1	TP-6353	S/M Fast Response II Alternator, 20-400 kW	1	1	1	1	1	1	1	1	1
2	TP-5374	Warranty, 1 Yr. Ltd.	1	1	1	1	1	1	1	1	1
3	TP-5700	I/M 20-3250kW, Industrial	1	1	1	1	1	1	1	1	1
4	TP-6161	O/M Decision-Maker 3+ w/Comm, Decision-Maker 1	1	1	1	1	1	1	1	1	1
5	TP-5889	O/M John Deere Engine Service Supplement	1	1	1	1	1	1	1	1	1
6	TP-6009	P/C Controllers, DEC+, DEC 550, Industrial	1	1	1	1	1	1	1	1	1
7	TP-6200	O/M Decision-Maker 550 Controller, Version 2.10	1	1	1	1	1	1	1	1	1
8	TP-6116	P/C Accessories, 20-200 kW Diesel, Industrial	1	1	1	1	1	1	1	1	1
9	TP-6291	P/C JD 6068HF275/285/475/485, Tier 2	1	1	1	1	1	1	1	1	1
9	TP-6438	P/C John Deere 6090HF484/485, Tier 3	1	1	1	1	1	1	1	1	1
9	TP-6290	P/C John Deere 4024/4045/5030, Tier 2/3	1	1	1	1	1	1	1	1	1
10	TP-6439	P/C 80-275REOZJD/REOZJE, Ind	1	1	1	1	1	1	1	1	1
11	TP-6453	O/M John Deere 6068HF285	1	1	1	1	1	1	1	1	1
11	TP-6455	O/M John Deere 6068HF485	1	1	1	1	1	1	1	1	1
11	TP-6457	O/M John Deere 6090HF485	1	1	1	1	1	1	1	1	1
12	TP-5854	S/M John Deere 4045/6068	1	1	1	1	1	1	1	1	1
12	TP-6458	S/M John Deere 6090HF485	1	1	1	1	1	1	1	1	1
12	TP-6454	S/M John Deere 6068HF285, Fuel System	1	1	1	1	1	1	1	1	1
12	TP-6456	S/M John Deere 6068HF485, Fuel System	1	1	1	1	1	1	1	1	1
12	TP-6459	S/M John Deere 6090HF485, Fuel System	1	1	1	1	1	1	1	1	1
12	TP-6371	S/M Deere Alternators & Starting Motors	1	1	1	1	1	1	1	1	1
13	TP-6146	W/D 20ROZJB/20-230REOZJB/60-275REOZJC/D	1	1	1	1	1	1	1	1	1
14	TP-6356	S/M Controllers 20-2800 kW	1	1	1	1	1	1	1	1	1
15	TP-6140	O/I/M Controller Setup & Appl. Decision-Maker 550	1	1	1	1	1	1	1	1	1

Item	Part Number	Description	Quantity									
			Variation Number									
			361	362	363	413	414	415	416	417	418	439
1	TP-6353	S/M Fast Response II Alternator, 20-400 kW	1	1	1	1	1	1	1	1	1	1
2	TP-5374	Warranty, 1 Yr. Ltd.	1	1	1	1	1	1	1	1	1	1
3	TP-5700	I/M 20-3250kW, Industrial	1	1	1	1	1	1	1	1	1	1
4	TP-6161	O/M 20-2250kW, Industrial	1	1	1	1	1	1	1	1	1	1
6	TP-6009	P/C Controllers, DEC+, DEC 550, Industrial	1	1	1	1	1	1	1	1	1	1
6	PB-138	DEC3000 Controller Service Parts	1	1	1	1	1	1	1	1	1	1
6	TP-6746	P/C Decision-Maker 6000 Controller	1	1	1	1	1	1	1	1	1	1
6	TP-6780	P/C Decision-Maker 550 Controller (J-Box Panel Mt.)	1	1	1	1	1	1	1	1	1	1
6	TP-6781	P/C Decision-Maker 3000 Controller	1	1	1	1	1	1	1	1	1	1
7	TP-6200	O/M Decision-Maker 550 Controller, Version 2.10	1	1	1	1	1	1	1	1	1	1
7	TP-6694	O/M Decision-Maker 3000 Controller	1	1	1	1	1	1	1	1	1	1
7	TP-6750	O/M Decision-Maker 3000 Controller	1	1	1	1	1	1	1	1	1	1
9	TP-6438	P/C John Deere 6090HF484/485, Tier 3	1	1	1	1	1	1	1	1	1	1
9	TP-6290	P/C John Deere 4024/4045/5030, Tier 2/3	1	1	1	1	1	1	1	1	1	1
9	TP-6291	P/C JD 6068HF275/285/475/485, Tier 2	1	1	1	1	1	1	1	1	1	1
10	TP-6439	P/C 80-275REOZJD/REOZJE, Ind	1	1	1	1	1	1	1	1	1	1
11	TP-6457	O/M John Deere 6090HF485	1	1	1	1	1	1	1	1	1	1
11	TP-6453	O/M JD 4045/6068HF285	1	1	1	1	1	1	1	1	1	1
11	TP-6455	O/M JD 4045/6068HF485	1	1	1	1	1	1	1	1	1	1
12	TP-6458	S/M John Deere 6090HF485	1	1	1	1	1	1	1	1	1	1
12	TP-5854	S/M John Deere 4045/6068	1	1	1	1	1	1	1	1	1	1
12	TP-6372	S/M Deere 4.5/6.8L Fuel Syst wDenso HPCR	1	1	1	1	1	1	1	1	1	1
12	TP-6459	S/M John Deere 6090HF485, Fuel System	1	1	1	1	1	1	1	1	1	1
12	TP-6454	S/M John Deere 6068HF285, Fuel System	1	1	1	1	1	1	1	1	1	1
12	TP-6456	S/M John Deere 6068HF485, Fuel System	1	1	1	1	1	1	1	1	1	1
12	TP-6371	S/M Deere Alternators & Starting Motors	1	1	1	1	1	1	1	1	1	1
13	TP-6146	W/D 20ROZJB/20-230REOZJB/60-275REOZJC/D	1	1	1	1	1	1	1	1	1	1
13	TP-6697	W/D 20-60REOZJC, 80-150/230-275REOZJE	1	1	1	1	1	1	1	1	1	1
14	TP-6356	S/M Controllers 20-2800 kW	1	1	1	1	1	1	1	1	1	1
15	TP-6140	O/I/M Controller Setup & Appl. Decision-Maker 550	1	1	1	1	1	1	1	1	1	1
16	TP-6747	O/I/M DPS System Installation and Setup	1	1	1	1	1	1	1	1	1	1

Kit List

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

	80/100 kW	125/150 kW	180/200 kW	230-275 kW
Controllers				
See Parts Catalog TP-6009 for parts lists.				
Cooling Systems				
Heater, block				
90-120 V	—	—	—	GM38838-KA5 GM76118-KA1
110-120 V	GM51082-KA1	GM20968-KA5	GM20968-KA5	—
190-208 V	—	—	—	GM38838-KA6 GM76118-KA2
190-240 V	GM51082-KA2	GM20968-KA6	GM20968-KA6	—
208-240 V	—	—	—	GM38838-KA7 GM76118-KA3
380-480 V	—	—	—	GM38838-KA8 GM76118-KA4
Duct flange, radiator	GM13896-KA1	GM13896-KA2	GM13896-KA4	GM13896-KA4

Paint and Miscellaneous Parts

Paint, Kohler Cream Beige All models use 221338 spray can, 221337 gallon

	80/100REOZJE	125REOZJF	150REOZJE	180/200REOZJE	230-300REOZJ/E
Controllers					
See Parts Catalog TP-6009 for Decision-Maker 550 parts lists.					
See Parts Bulletin PB-138 for Decision-Maker 3000 parts lists.					
Cooling Systems					
Heater, block					
90-120 V	GM69387-KA1	GM51082-KA1	GM20968-KA5	GM20968-KA5	GM66105-KA1 GM76120-KA1
190-208 V	-	-	-	-	GM66105-KA2 GM76120-KA2
208-240 V	GM69387-KA2	GM51082-KA2	GM20968-KA6	GM20968-KA6	GM66105-KA3 GM76120-KA3
380-480 V	-	-	-	-	GM66105-KA4 GM76120-KA4
Duct flange, radiator	GM13896-KA1	GM13896-KA2	GM13896-KA4	GM13896-KA4	GM13896-KA4
Guard, radiator					GM64309-KA1

Paint and Miscellaneous Parts

Paint, Kohler Cream Beige All models use GM71383 12 oz. spray can, GM71387 1 gallon can

Cooling System Kits

Qty.	Description	Part No.	Qty.	Description	Part No.
Block Heater, 1800W, 120V			Block Heater, 2500W, 190-208V		
1	Heater, block	GM20968-KA5 326234	1	Box, block heater control	GM38838-KA6 354315
1	Sensor, thermostat	224341	1	Label, wiring diagram	354327
1	O-ring	GM11694	1	Block heater (includes items marked *)	GM20134
1	Bushing, adapter	GM22991	1	*Block heater service element	GM29478
1	Elbow, street, 90 deg. x 1/2 in. NPT	X-211-1	1	*Thermostat	GM29529
1	Hose, 0.63in. ID x 2.33 ft.	X-312-35	1	Bushing, reducing, 1/3 x 3/4 in. NPT	153659
1	Hose, 0.63in. ID x 3.75 ft.	X-312-36	1	Strap, ground	223033
1	Elbow, street, 45 deg. x 1/2 in. NPT	227642	1	Adapter, bushing	273692
2	Adapter, bushing	273692	1	O-ring, 1.475 in. ID	273693
2	O-ring	273693	1	Bracket, support	274431
1	Tag, hang	279047	1	Tag, hang	279047
1	Bracket, block heater mounting	326219	1	Thermostat, block heater	279813
4	Clamp, hose, 0.5/1 in.	X-426-10	4	Gasket, washer	297001
2	Connector, hose + vibraseal	X-582-1	1	Cover, block heater control box	354317
Block Heater, 2000W, 240V			1	Gasket, control box	354318
1	Heater, block	GM20968-KA6 326235	1	Decal, warning	354325
1	O-ring	GM11694	2	Valve, shutoff	GM19670
1	Bushing, adapter	GM22991	4	Vibromount	GM38784-2
1	Elbow, street, 90 deg. x 1/2 in. NPT	X-211-1	1	Bracket, block heater	GM38834
1	Hose, 0.63in. ID x 2.33 ft.	X-312-35	1	Tag, hang	GM39752
1	Hose, 0.63in. ID x 3.75 ft.	X-312-36	1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
1	Elbow, street, 45 deg. x 1/2 in. NPT	227642	2	Pipe, 1/2 x 2.00 in.	X-209-6
2	Adapter, bushing	273692	2	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
2	O-ring	273693	4	Washer, lock, 0.262 ID x 0.469 in. OD	X-22-11
1	Tag, hang	279047	8	Washer, lock, 0.262 ID x 0.743 in. OD	X-22-12
1	Bracket, block heater mounting	326219	2	Washer, lock, 0.391 ID x 0.975 in. ID	X-22-14
4	Clamp, hose, 0.5/1 in.	X-426-10	4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose + vibraseal	X-582-1	2	Connector, hose	X-582-7
Block Heater, 2500W, 90/120V			2	Hose, coolant, 26 in.	X-6367-6
1	Box, block heater control	GM38838-KA5 354315	4	Screw, slotted hex washer head, machine	X-97-13
1	Label, wiring diagram	354327	Block Heater, 2500W, 208-240V		
1	Block heater (includes items marked *)	GM20133	1	Box, block heater control	GM38838-KA7 354315
1	*Block heater service element	GM29477	1	Label, wiring diagram	354327
1	*Thermostat	GM29529	1	Block heater (includes items marked *)	GM20135
1	Bushing, reducing, 1/3 x 3/4 in. NPT	153659	1	*Block heater service element	GM29478
1	Strap, ground	223033	1	*Thermostat	GM29529
1	Adapter, bushing	273692	1	Bushing, reducing, 1/3 x 3/4 in. NPT	153659
1	O-ring, 1.475 in. ID	273693	1	Strap, ground	223033
1	Bracket, support	274431	1	Adapter, bushing	273692
1	Tag, hang	279047	1	O-ring, 1.475 in. ID	273693
1	Thermostat, block heater	279813	1	Bracket, support	274431
4	Gasket, washer	297001	1	Tag, hang	279047
1	Cover, block heater control box	354317	1	Thermostat, block heater	279813
1	Gasket, control box	354318	4	Gasket, washer	297001
1	Decal, warning	354325	1	Cover, block heater control box	354317
2	Valve, shutoff	GM19670	1	Gasket, control box	354318
4	Vibromount	GM38784-2	1	Decal, warning	354325
1	Bracket, block heater	GM38834	2	Valve, shutoff	GM19670
1	Tag, hang	GM39752	4	Vibromount	GM38784-2
1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11	1	Bracket, block heater	GM38834
2	Pipe, 1/2 x 2.00 in.	X-209-6	1	Tag, hang	GM39752
2	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1	1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
4	Washer, lock, 0.262 ID x 0.469 in. OD	X-22-11	2	Pipe, 1/2 x 2.00 in.	X-209-6
8	Washer, lock, 0.262 ID x 0.743 in. OD	X-22-12	2	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
2	Washer, lock, 0.391 ID x 0.975 in. ID	X-22-14	4	Washer, lock, 0.262 ID x 0.469 in. OD	X-22-11
4	Clamp, hose, 0.69/1.25 in.	X-426-12	8	Washer, lock, 0.262 ID x 0.743 in. OD	X-22-12
2	Connector, hose	X-582-7	2	Washer, lock, 0.391 ID x 0.975 in. ID	X-22-14
2	Hose, coolant, 26 in.	X-6367-6	4	Clamp, hose, 0.69/1.25 in.	X-426-12
4	Screw, slotted hex washer head, machine	X-97-13	2	Connector, hose	X-582-7
			2	Hose, coolant, 26 in.	X-6367-6
			4	Screw, slotted hex washer head, machine	X-97-13

Cooling System Kits

Qty.	Description	Part No.
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Block Heater, 2500W, 380-480V

GM38838-KA8

1	Box, block heater control	354316
1	Label, wiring diagram	354328
1	Block heater (includes items marked *)	GM20136
1	*Block heater service element	GM29479
1	*Thermostat	GM29529
1	Bushing, reducing, 1/3 x 3/4 in. NPT	153659
1	Strap, ground	223033
1	Adapter, bushing	273692
1	O-ring, 1.475 in. ID	273693
1	Bracket, support	274431
1	Tag, hang	279047
1	Thermostat, block heater	279813
4	Gasket, washer	297001
1	Cover, block heater control box	354317
1	Gasket, control box	354318
1	Decal, warning	354325
2	Valve, shutoff	GM19670
4	Vibromount	GM38784-2
1	Bracket, block heater	GM38834
1	Tag, hang	GM39752
1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
2	Pipe, 1/2 x 2.00 in.	X-209-6
2	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
4	Washer, lock, 0.262 ID x 0.469 in. OD	X-22-11
8	Washer, lock, 0.262 ID x 0.743 in. OD	X-22-12
2	Washer, lock, 0.391 ID x 0.975 in. ID	X-22-14
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose	X-582-7
2	Hose, coolant, 26 in.	X-6367-6
4	Screw, slotted hex washer head, machine	X-97-13

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

Qty.	Description	Part No.
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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

Block Heater, 2500W, 90/120V

GM66105-KA1

1	Box, block heater control	354315
1	Label, wiring diagram	354327
1	Block heater (includes items marked *)	GM20133
1	*Block heater service element	GM29477
1	*Thermostat	GM29529
1	Bushing, reducing, 1/3 x 3/4 in. NPT	153659
1	Strap, ground	223033
1	Adapter, bushing	273692
1	O-ring, 1.475 in. ID	273693
1	Tag, hang	279047
1	Thermostat, block heater	279813
4	Gasket, washer	297001
1	Cover, block heater control box	354317
1	Gasket, control box	354318
1	Decal, warning	354325
2	Valve, shutoff	GM19670
4	Vibromount	GM38784-2
1	Bracket, block heater	GM38834
1	Tag, hang	GM39752
1	Bracket, block heater	GM51263
1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
1	Pipe, 1/2 x 2.00 in.	X-209-6
2	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
4	Washer, lock, 0.262 ID x 0.469 in. OD	X-22-11
8	Washer, lock, 0.262 ID x .0743 in. OD	X-22-12
2	Washer, lock, 0.391 ID x .0975 in. ID	X-22-14
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose	X-582-7
1	Conduit, Convolute	X-6003-121
1	Hose, coolant, 35 in.	X-6367-11
1	Hose, coolant, 29 in.	X-6367-12
4	Screw, slotted hex washer head, machine	X-97-13

Cooling System Kits, continued

Qty.	Description	Part No.
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Block Heater, 2500W, 190/208V

GM66105-KA2

1	Box, block heater control	354315
1	Label, wiring diagram	354327
1	Block heater (includes items marked *)	GM20134
1	*Block heater service element	GM29478
1	*Thermostat	GM29529
1	Bushing, reducing, 1/3 x 3/4 in. NPT	153659
1	Strap, ground	223033
1	Adapter, bushing	273692
1	O-ring, 1.475 in. ID	273693
1	Tag, hang	279047
1	Thermostat, block heater	279813
4	Gasket, washer	297001
1	Cover, block heater control box	354317
1	Gasket, control box	354318
1	Decal, warning	354325
2	Valve, shutoff	GM19670
4	Vibromount	GM38784-2
1	Bracket, block heater	GM38834
1	Tag, hang	GM39752
1	Bracket, block heater	GM51263
1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
1	Pipe, 1/2 x 2.00 in.	X-209-6
2	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
4	Washer, lock, 0.262 ID x 0.469 in. OD	X-22-11
8	Washer, lock, 0.262 ID x .0743 in. OD	X-22-12
2	Washer, lock, 0.391 ID x .0975 in. ID	X-22-14
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose	X-582-7
1	Conduit, Convuluted	X-6003-121
1	Hose, coolant, 35 in.	X-6367-11
1	Hose, coolant, 29 in.	X-6367-12
4	Screw, slotted hex washer head, machine	X-97-13

Block Heater, 2500W, 210/240V

GM66105-KA3

1	Box, block heater control	354315
1	Label, wiring diagram	354327
1	Block heater (includes items marked *)	GM20135
1	*Block heater service element	GM29474
1	*Thermostat	GM29529
1	Bushing, reducing, 1/3 x 3/4 in. NPT	153659
1	Strap, ground	223033
1	Adapter, bushing	273692
1	O-ring, 1.475 in. ID	273693
1	Tag, hang	279047
1	Thermostat, block heater	279813
4	Gasket, washer	297001
1	Cover, block heater control box	354317
1	Gasket, control box	354318
1	Decal, warning	354325
2	Valve, shutoff	GM19670
4	Vibromount	GM38784-2
1	Bracket, block heater	GM38834
1	Tag, hang	GM39752
1	Bracket, block heater	GM51263
1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
1	Pipe, 1/2 x 2.00 in.	X-209-6
2	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
4	Washer, lock, 0.262 ID x 0.469 in. OD	X-22-11
8	Washer, lock, 0.262 ID x .0743 in. OD	X-22-12
2	Washer, lock, 0.391 ID x .0975 in. ID	X-22-14
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose	X-582-7
1	Conduit, Convuluted	X-6003-121
1	Hose, coolant, 35 in.	X-6367-11
1	Hose, coolant, 29 in.	X-6367-12
4	Screw, slotted hex washer head, machine	X-97-13

Qty.	Description	Part No.
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Block Heater, 2500W, 210/240V

GM66105-KA4

1	Box, block heater control	354316
1	Label, wiring diagram	354328
1	Block heater (includes items marked *)	GM20136
1	*Block heater service element	GM29479
1	*Thermostat	GM29529
1	Bushing, reducing, 1/3 x 3/4 in. NPT	153659
1	Strap, ground	223033
1	Adapter, bushing	273692
1	O-ring, 1.475 in. ID	273693
1	Tag, hang	279047
1	Thermostat, block heater	279813
4	Gasket, washer	297001
1	Cover, block heater control box	354317
1	Gasket, control box	354318
1	Decal, warning	354325
2	Valve, shutoff	GM19670
4	Vibromount	GM38784-2
1	Bracket, block heater	GM38834
1	Tag, hang	GM39752
1	Bracket, block heater	GM51263
1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
1	Pipe, 1/2 x 2.00 in.	X-209-6
2	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
4	Washer, lock, 0.262 ID x 0.469 in. OD	X-22-11
8	Washer, lock, 0.262 ID x .0743 in. OD	X-22-12
2	Washer, lock, 0.391 ID x .0975 in. ID	X-22-14
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose	X-582-7
1	Conduit, Convuluted	X-6003-121
1	Hose, coolant, 35 in.	X-6367-11
1	Hose, coolant, 29 in.	X-6367-12
4	Screw, slotted hex washer head, machine	X-97-13

Block Heater, 1500W, 120V

GM69387-KA1

1	Elbow, street (45 deg x 1/2"npt)	227642
2	Adapter, bushing	273692
2	O-Ring (1.475" ID)	273693
1	Tag, hang	279047
1	Heater, block (120V, 1500AMP)	326228
1	O-ring, ISO 6149 (15.3mm ID)	GM11694
1	Bushing, Adapter	GM22991
1	Bracket, Block Heater Mtg.	GM69388
2	Washer, Plain	M125A-06-80
2	Nut, Hex 6mm	M6923-06-80
2	Screw, hex cap	M933-06020-60
1	Elbow, Street(90 deg x 1/2"nptf)	X-211-1
1	Hose,.63 in. ID	X-312-5
1	Hose,.63 ID	X-312-54
4	Clamp, hose, .5/1 in.	X-426-10
2	Connector, Hose 5/8" x 1/2" MIP Brass	X-582-1
2	Screw, hex wshr hd, drill 1/4-14 x 7/8	X-794-4

Block Heater, 1500W, 240V

GM69387-KA2

1	Elbow, street (45 deg x 1/2"npt)	227642
2	Adapter, bushing	273692
2	O-Ring (1.475" ID)	273693
1	Tag, hang	279047
1	Heater, block (240V, 1500AMP)	326229
1	O-ring, ISO 6149 (15.3mm ID)	GM11694
1	Bushing, Adapter	GM22991
1	Bracket, Block Heater Mtg.	GM69388
2	Washer, Plain	M125A-06-80
2	Nut, Hex 6mm	M6923-06-80
2	Screw, hex cap	M933-06020-60
1	Elbow, Street(90 deg x 1/2"nptf)	X-211-1
1	Hose,.63 in. ID	X-312-5
1	Hose,.63 ID	X-312-54
4	Clamp, hose, .5/1 in.	X-426-10
2	Connector, Hose 5/8" x 1/2" MIP Brass	X-582-1
2	Screw, hex wshr hd, drill 1/4-14 x 7/8	X-794-4

Cooling System Kits, continued

Qty.	Description	Part No.
Block Heater, 2500W, 90/120V, 1Ph		
1	Heater, Block	GM76113
1	Adapter, bushing	273692
1	O-ring, 1.475 in. ID	273693
1	Bracket, support	274431
2	Valve, shutoff	GM19670
1	Tag, hang	GM39752
1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
1	Pipe, 1/2 x 2.00 in.	X-209-6
2	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose	X-582-7
2	Hose, coolant, 26 in.	X-6367-6
Block Heater, 2500W, 190/208V, 1Ph		
1	Heater, Block	GM76114
1	Adapter, bushing	273692
1	O-ring, 1.475 in. ID	273693
1	Bracket, support	274431
2	Valve, shutoff	GM19670
1	Tag, hang	GM39752
1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
1	Pipe, 1/2 x 2.00 in.	X-209-6
2	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose	X-582-7
2	Hose, coolant, 26 in.	X-6367-6
Block Heater, 2500W, 210/240V, 1Ph		
1	Heater, Block	GM76115
1	Adapter, bushing	273692
1	O-ring, 1.475 in. ID	273693
1	Bracket, support	274431
2	Valve, shutoff	GM19670
1	Tag, hang	GM39752
1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
1	Pipe, 1/2 x 2.00 in.	X-209-6
2	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose	X-582-7
2	Hose, coolant, 26 in.	X-6367-6
Block Heater, 2500W, 380/480V, 1Ph		
1	Heater, Block	GM76116
1	Adapter, bushing	273692
1	O-ring, 1.475 in. ID	273693
1	Bracket, support	274431
2	Valve, shutoff	GM19670
1	Tag, hang	GM39752
1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
1	Pipe, 1/2 x 2.00 in.	X-209-6
2	Elbow, street, 90 deg. x 1/2 in. NPTF	X-211-1
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose	X-582-7
2	Hose, coolant, 26 in.	X-6367-6

Qty.	Description	Part No.
Block Heater, 2500W, 90/120V, 1Ph		
1	Heater, Block	GM76113
1	Adapter, bushing	273692
1	O-ring, 1.475 in. ID	273693
2	Valve, shutoff	GM19670
1	Tag, hang	GM39752
1	Bracket, Block Heater	GM51263
1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
1	Pipe, 1/2 in. NPT x 4.00 in.	X-209-18
2	Pipe, 1/2 x 1.50 in.	X-209-5
2	Elbow, pipe, 90 deg. x 1/2 in. NPTF	X-215-1
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose	X-582-7
1	Conduit, Convoluted	X-6003-121
1	Hose, coolant, 35 in.	X-6367-11
1	Hose, coolant	X-6367-12
Block Heater, 2500W, 190/208V, 1Ph		
1	Heater, Block	GM76114
1	Adapter, bushing	273692
1	O-ring, 1.475 in. ID	273693
2	Valve, shutoff	GM19670
1	Tag, hang	GM39752
1	Bracket, Block Heater	GM51263
1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
1	Pipe, 1/2 in. NPT x 4.00 in.	X-209-18
2	Pipe, 1/2 x 1.50 in.	X-209-5
2	Elbow, pipe, 90 deg. x 1/2 in. NPTF	X-215-1
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose	X-582-7
1	Conduit, Convoluted	X-6003-121
1	Hose, coolant, 35 in.	X-6367-11
1	Hose, coolant	X-6367-12
Block Heater, 2500W, 210/240V, 1Ph		
1	Heater, Block	GM76115
1	Adapter, bushing	273692
1	O-ring, 1.475 in. ID	273693
2	Valve, shutoff	GM19670
1	Tag, hang	GM39752
1	Bracket, Block Heater	GM51263
1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
1	Pipe, 1/2 in. NPT x 4.00 in.	X-209-18
2	Pipe, 1/2 x 1.50 in.	X-209-5
2	Elbow, pipe, 90 deg. x 1/2 in. NPTF	X-215-1
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose	X-582-7
1	Conduit, Convoluted	X-6003-121
1	Hose, coolant, 35 in.	X-6367-11
1	Hose, coolant	X-6367-12
Block Heater, 2500W, 380/480V, 1Ph		
1	Heater, Block	GM76116
1	Adapter, bushing	273692
1	O-ring, 1.475 in. ID	273693
2	Valve, shutoff	GM19670
1	Tag, hang	GM39752
1	Bracket, Block Heater	GM51263
1	Pipe, 1/2 in. NPT x 3.00 in.	X-209-11
1	Pipe, 1/2 in. NPT x 4.00 in.	X-209-18
2	Pipe, 1/2 x 1.50 in.	X-209-5
2	Elbow, pipe, 90 deg. x 1/2 in. NPTF	X-215-1
4	Clamp, hose, 0.69/1.25 in.	X-426-12
2	Connector, hose	X-582-7
1	Conduit, Convoluted	X-6003-121
1	Hose, coolant, 35 in.	X-6367-11
1	Hose, coolant	X-6367-12

Cooling System Kits, continued

Qty.	Description	Part No.
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Duct Flange, Radiator

GM13896-KA1

2	Frame, air duct	GM13897
2	Frame, air duct	GM13898
8	Rivet, pop, 0.187 in.	X-781-11

Qty.	Description	Part No.
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Duct Flange, Radiator

GM13896-KA2

2	Frame, air duct	GM31193
2	Frame, air duct	GM32061
8	Rivet, pop, 0.187 in.	X-781-11

Duct Flange, Radiator

GM13896-KA4

2	Frame, air duct horizontal	GM39281
2	Frame, air duct vertical	GM39282
8	Rivet, pop, 0.187 in.	X-781-11

Guard, Radiator

GM64309-KA1

1	Guard, Radiator	GM64299
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Appendix A Abbreviations

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

A, amp	ampere	CG	center of gravity	etc.	et cetera (and so forth)
ABDC	after bottom dead center	CID	cubic inch displacement	exh.	exhaust
AC	alternating current	CL	centerline	ext.	external
A/D	analog to digital	cm	centimeter	F	Fahrenheit, female
ADC	advanced digital control; analog to digital converter	CMOS	complementary metal oxide substrate (semiconductor)	fglass.	fiberglass
adj.	adjust, adjustment	cogen.	cogeneration	FHM	flat head machine (screw)
ADV	advertising dimensional drawing	com	communications (port)	fl. oz.	fluid ounce
Ah	amp-hour	coml	commercial	flex.	flexible
AHWT	anticipatory high water temperature	Coml/Rec	Commercial/Recreational	freq.	frequency
AISI	American Iron and Steel Institute	conn.	connection	FS	full scale
ALOP	anticipatory low oil pressure	cont.	continued	ft.	foot, feet
alt.	alternator	CPVC	chlorinated polyvinyl chloride	ft. lb.	foot pounds (torque)
Al	aluminum	crit.	critical	ft./min.	feet per minute
ANSI	American National Standards Institute (formerly American Standards Association, ASA)	CRT	cathode ray tube	ftp	file transfer protocol
AO	anticipatory only	CSA	Canadian Standards Association	g	gram
APDC	Air Pollution Control District	CT	current transformer	ga.	gauge (meters, wire size)
API	American Petroleum Institute	Cu	copper	gal.	gallon
approx.	approximate, approximately	cUL	Canadian Underwriter's Laboratories	gen.	generator
AQMD	Air Quality Management District	CUL	Canadian Underwriter's Laboratories	genset	generator set
AR	as required, as requested	cu. in.	cubic inch	GFI	ground fault interrupter
AS	as supplied, as stated, as suggested	cw.	clockwise	GND, 	ground
ASE	American Society of Engineers	CWC	city water-cooled	gov.	governor
ASME	American Society of Mechanical Engineers	cyl.	cylinder	gph	gallons per hour
assy.	assembly	D/A	digital to analog	gpm	gallons per minute
ASTM	American Society for Testing Materials	DAC	digital to analog converter	gr.	grade, gross
ATDC	after top dead center	dB	decibel	GRD	equipment ground
ATS	automatic transfer switch	dB(A)	decibel (A weighted)	gr. wt.	gross weight
auto.	automatic	DC	direct current	H x W x D	height by width by depth
aux.	auxiliary	DCR	direct current resistance	HC	hex cap
avg.	average	deg., °	degree	HCHT	high cylinder head temperature
AVR	automatic voltage regulator	dept.	department	HD	heavy duty
AWG	American Wire Gauge	DFMEA	Design Failure Mode and Effects Analysis	HET	high exhaust temp., high engine temp.
AWM	appliance wiring material	dia.	diameter	hex	hexagon
bat.	battery	DI/EO	dual inlet/end outlet	Hg	mercury (element)
BBDC	before bottom dead center	DIN	Deutsches Institut für Normung e. V. (also Deutsche Industrie Normenausschuss)	HH	hex head
BC	battery charger, battery charging	DIP	dual inline package	HHC	hex head cap
BCA	battery charging alternator	DPDT	double-pole, double-throw	HP	horsepower
BCI	Battery Council International	DPST	double-pole, single-throw	hr.	hour
BDC	before dead center	DS	disconnect switch	HS	heat shrink
BHP	brake horsepower	DVR	digital voltage regulator	hsg.	housing
blk.	black (paint color), block (engine)	E, emer.	emergency (power source)	HVAC	heating, ventilation, and air conditioning
blk. htr.	block heater	ECM	electronic control module, engine control module	HWT	high water temperature
BMEP	brake mean effective pressure	EDI	electronic data interchange	Hz	hertz (cycles per second)
bps	bits per second	EFR	emergency frequency relay	IC	integrated circuit
br.	brass	e.g.	for example (<i>exempli gratia</i>)	ID	inside diameter, identification
BTDC	before top dead center	EG	electronic governor	IEC	International Electrotechnical Commission
Btu	British thermal unit	EGSA	Electrical Generating Systems Association	IEEE	Institute of Electrical and Electronics Engineers
Btu/min.	British thermal units per minute	EIA	Electronic Industries Association	IMS	improved motor starting
C	Celsius, centigrade	EI/EO	end inlet/end outlet	in.	inch
cal.	calorie	EMI	electromagnetic interference	in. H ₂ O	inches of water
CAN	controller area network	emiss.	emission	in. Hg	inches of mercury
CARB	California Air Resources Board	eng.	engine	in. lb.	inch pounds
CB	circuit breaker	EPA	Environmental Protection Agency	Inc.	incorporated
cc	cubic centimeter	EPS	emergency power system	ind.	industrial
CCA	cold cranking amps	ER	emergency relay	int.	internal
ccw.	counterclockwise	ES	engineering special, engineered special	int./ext.	internal/external
CEC	Canadian Electrical Code	ESD	electrostatic discharge	I/O	input/output
cert.	certificate, certification, certified	est.	estimated	IP	iron pipe
cfh	cubic feet per hour	E-Stop	emergency stop	ISO	International Organization for Standardization
cfm	cubic feet per minute			J	joule
				JIS	Japanese Industry Standard
				k	kilo (1000)
				K	kelvin
				kA	kiloampere

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

Appendix B Common Hardware Application Guidelines

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

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

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

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

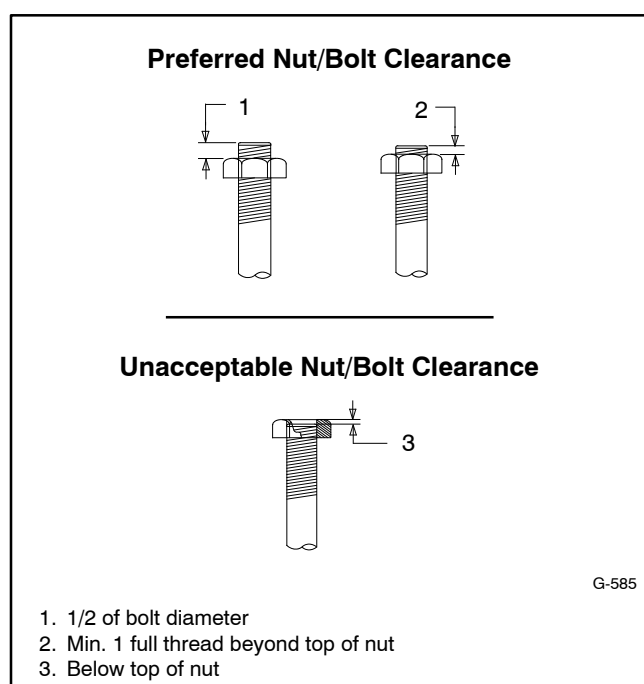


Figure 1 Acceptable Bolt Lengths

Steps for common hardware application:

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

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

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

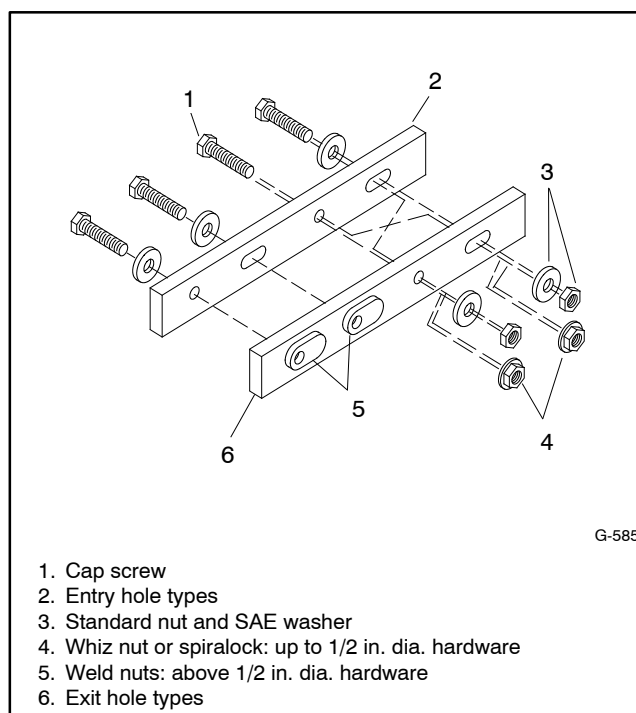


Figure 2 Acceptable Hardware Combinations

Appendix C General Torque Specifications

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

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

Notes:

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

Appendix D Common Hardware Identification

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

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

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

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

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

Sample Dimensions

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

1/4-20 x 1
 — Length In Inches (Screws and Bolts)
 — Threads Per Inch
 — Major Thread Diameter In Fractional Inches Or Screw Number Size

Metric (Screws, Bolts, Studs, and Nuts)

M8-1.25 x 20
 — Length In Millimeters (Screws and Bolts)
 — Distance Between Threads In Millimeters
 — Major Thread Diameter In Millimeters

Plain Washers

9/32 x 5/8 x 1/16
 — Thickness
 — External Dimension
 — Internal Dimension

Lock Washers

5/8
 — Internal Dimension

Appendix E Common Hardware List

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

American Standard

Part No.	Dimensions	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-25-46	.125	.250	.022	#4
X-125-22	5/16-18 x 4.50	X-129-45	1/2-20 x 1.25		X-25-9	.156	.375	.049	#6
X-125-32	5/16-18 x 5.00	X-129-52	1/2-20 x 1.50	X-25-48	.188	.438	.049	#8	
X-125-35	5/16-18 x 5.50			X-25-36	.219	.500	.049	#10	
X-125-36	5/16-18 x 6.00	X-6021-3	5/8-11 x 1.00	X-25-40	.281	.625	.065	1/4	
X-125-40	5/16-18 x 6.50	X-6021-4	5/8-11 x 1.25	X-25-85	.344	.687	.065	5/16	
		X-6021-2	5/8-11 x 1.50	X-25-37	.406	.812	.065	3/8	
X-125-43	5/16-24 x 1.75	X-6021-1	5/8-11 x 1.75	X-25-34	.469	.922	.065	7/16	
X-125-44	5/16-24 x 2.50	273049	5/8-11 x 2.00	X-25-26	.531	1.062	.095	1/2	
X-125-30	5/16-24 x .75	X-6021-5	5/8-11 x 2.25	X-25-15	.656	1.312	.095	5/8	
X-125-39	5/16-24 x 2.00	X-6021-6	5/8-11 x 2.50	X-25-29	.812	1.469	.134	3/4	
X-125-38	5/16-24 x 2.75	X-6021-7	5/8-11 x 2.75	X-25-127	1.062	2.000	.134	1	
		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
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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
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Flat Head Machine Screws

M965A-04012-SS	M4-0.70 x 12
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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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