Service Parts

Residential/Commercial Generator Sets



Models:

38RCL
48RCL
48RCLA/RCLB/RCLC
60RCL/RCLA/RCLB

See Group 701: Literature, inside this manual for part number of the engine parts catalog

KOHLER® Generators

TP-6812 4/26h

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Introduction

This manual lists service replacement parts Kohler Power Systems generator sets. See front cover for list of models.

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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

	Variation	
	Model/Specification number	
	38RCL	
Group Description	**GM84992-GA1**	**GM84992-GA2**
Group 101: Air Intake	GM84995-GR1	GM84995-GR1
Group 104: Cooling System	GM85088-GR1	GM92075-GR3
Group 105: Engine	GM84993-GR1	GM84993-GR1
Group 107: Nameplate and Decals	GM78523-GR1	GM78523-GR1
Group 109: Skid and Plant Mounting	GM84994-GR1	GM84994-GR1
Group 201: Alternator and Mounting	*	*
Group 301: Control and Harness	GM78527-GR1	GM91287-GR5
Circuit Breaker and Mounting	*	*
Sound Shield Enclosure	*	*
Group 701: Literature	701-184-487	701-184-487

	Variation				
	Model/Specification number				
	48RCL			48RCLA	48RCLB
Group Description	**GM78521-GA1**	**GM78521-GA2**	**GM78521-GA4**	**GM78521-GA5**	**GM102291-GA2**
Group 101: Air Intake	GM78526-GR1	GM78526-GR1	GM78526-GR1	GM88993-GR2	GM88993-GR3
Group 104: Cooling System	GM83070-GR1	GM85088-GR1	GM92075-GR3	GM92075-GR3	GM103966-GR1
Group 105: Engine	GM78522-GR1	GM78522-GR1	GM78522-GR1	GM101027-GR1	GM102341-GR1
Group 107: Nameplate and Decals	GM78523-GR1	GM78523-GR1	GM78523-GR1	GM78523-GR1	GM78523-GR1
Group 109: Skid and Plant Mounting	GM78525-GR1	GM78525-GR1	GM91038-GR2	GM91038-GR2	GM91038-GR2
Group 201: Alternator and Mounting	*	*	*	*	*
Group 301: Control and Harness	GM78527-GR1	GM78527-GR1	GM91287-GR5	GM91287-GR5	GM102389-GR1
Circuit Breaker and Mounting	*	*	*	*	*
Sound Shield Enclosure	*	*	*	*	*
Group 701: Literature	701-184-470	701-184-470	701-184-470	701-184-532	701-184-553

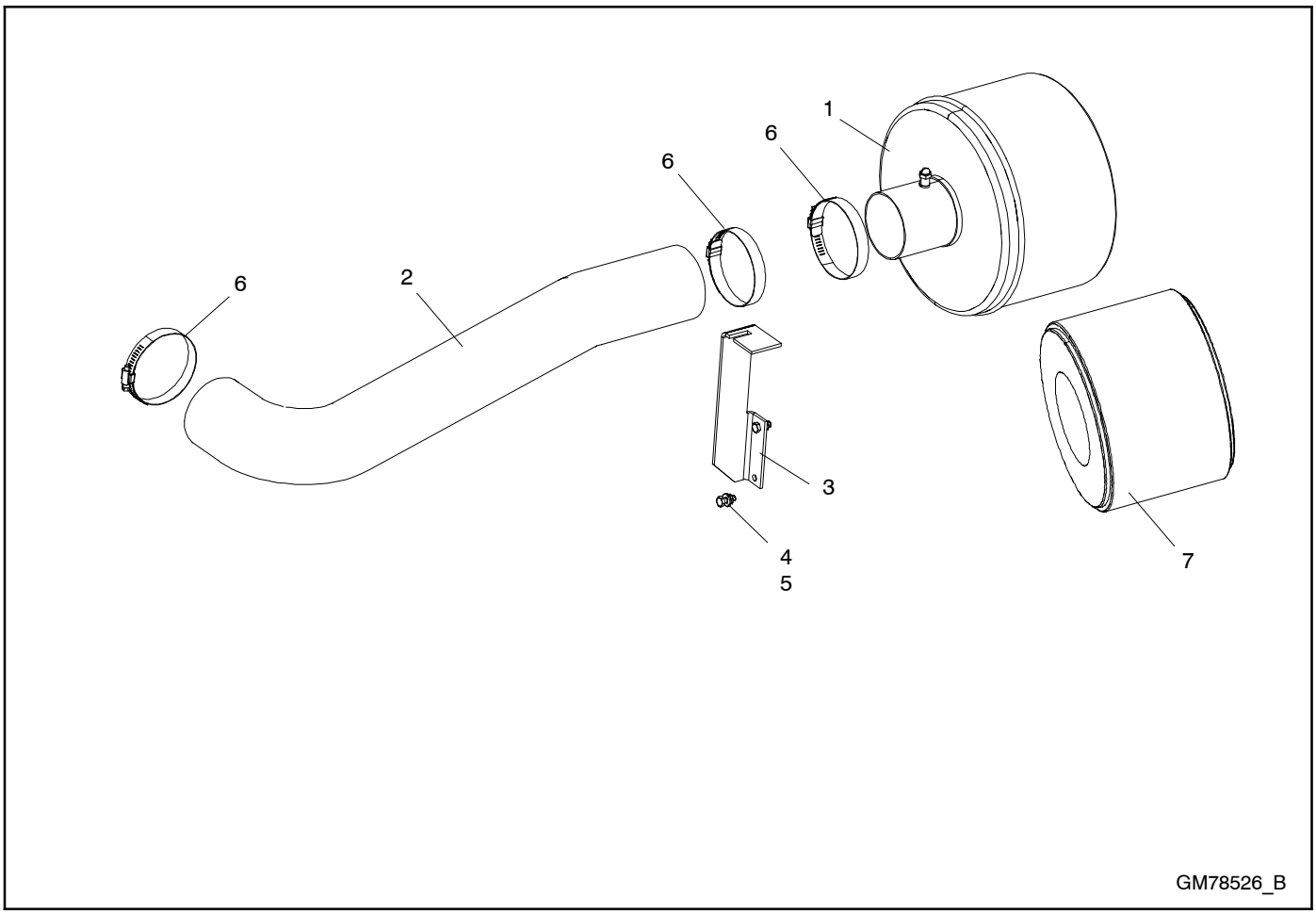
	Variation
	Model/Specification number
	48RCLC
Group Description	**GM116161-GA2**
Group 101: Air Intake	GM88993-GR3
Group 104: Cooling System	GM116144-GR1
Group 105: Engine	GM102341-GR1
Group 107: Nameplate and Decals	GM108006-GR1
Group 109: Skid and Plant Mounting	GM91038-GR2
Group 201: Alternator and Mounting	*
Group 301: Control and Harness	GM116155-GR1
Circuit Breaker and Mounting	*
Sound Shield Enclosure	*
Group 701: Literature	701-184-596-SA

	Variation			
	Model/Specification number			
	60RCL		60RCLA	60RCLB
Group Description	**GM88861-GA1**	**GM88861-GA2**	**GM102291-GA1**	**GM116161-GA1**
Group 101: Air Intake	GM88993-GR1	GM88993-GR2	GM88993-GR3	GM88993-GR3
Group 104: Cooling System	GM85088-GR1	GM92075-GR3	GM103966-GR1	GM116144-GR1
Group 105: Engine	GM88555-GR1	GM88555-GR1	GM102341-GR1	GM102341-GR1
Group 107: Nameplate and Decals	GM78523-GR1	GM78523-GR1	GM78523-GR1	GM108006-GR1
Group 109: Skid and Plant Mounting	GM78525-GR1	GM91038-GR2	GM91038-GR2	GM91038-GR2
Group 201: Alternator and Mounting	*	*	*	*
Group 301: Control and Harness	GM78527-GR1	GM91287-GR5	GM102389-GR1	GM116155-GR1
Circuit Breaker and Mounting	*	*	*	*
Sound Shield Enclosure	*	*	*	*
Group 701: Literature	701-184-516	701-184-516	701-184-554	701-184-597-SA

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

Group 101: Air Intake

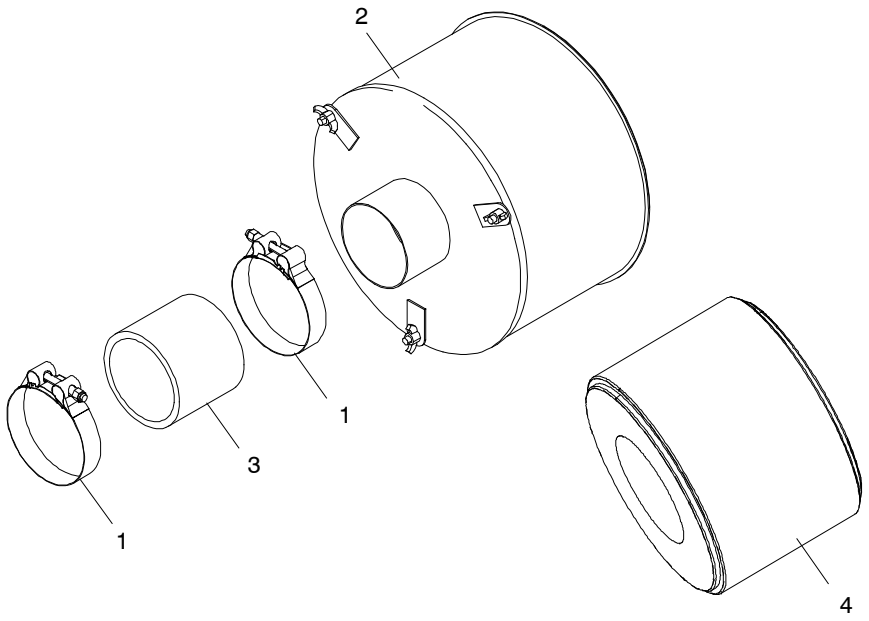
GM78526-GR1



Item	Part Number	Description	Quantity
1	A-273699	Air Cleaner Assembly	1
2	GM82861	Hose, Intake	1
3	GM82862	Bracket, Air Cleaner	1
4	M6923-06-80	Nut, Hex 6mm	2
5	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	2
6	X-426-5	Clamp, hose, 3.56/4.5 in.	3
7	253107	Element, Air Cleaner	1

Group 101: Air Intake

GM84995-GR1

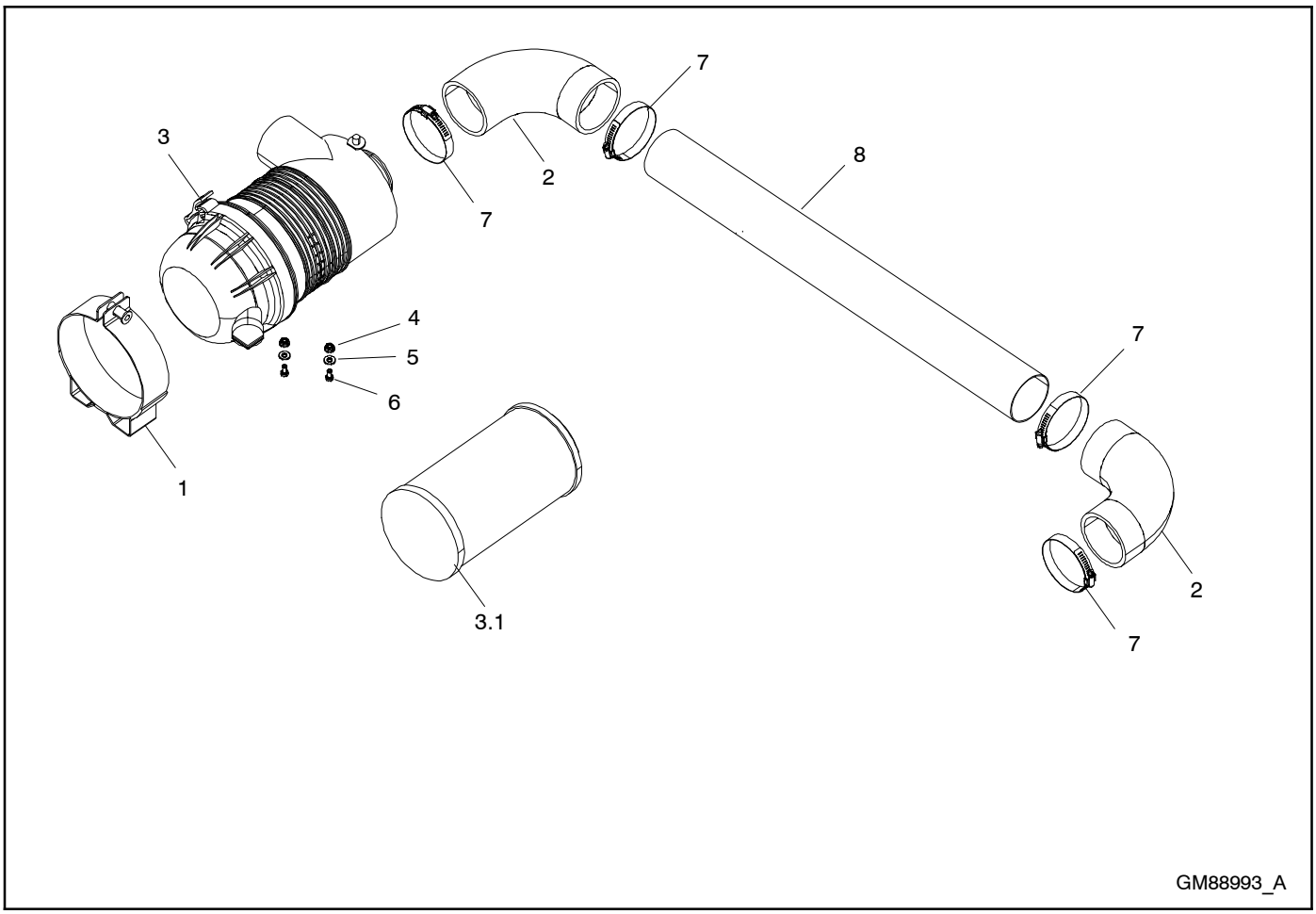


GM84995_

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

Group 101: Air Intake, continued

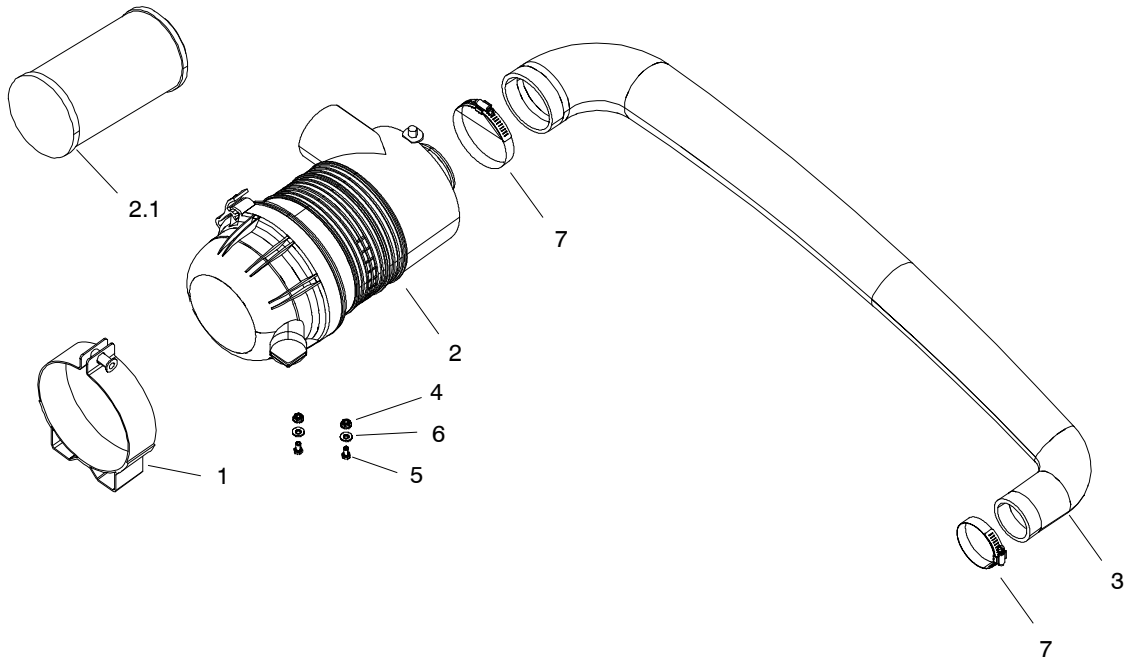
GM88993-GR1



Item	Part Number	Description	Quantity
1	GM14200	Mount, Air Cleaner (6.76 in. ID)	1
2	GM89895	Hose, 90 Deg. Elbow	2
3	GM90280	Air Cleaner Assy.	1
3.1	GM90281	Element, Air Cleaner	1
4	M6923-06-80	Nut, Hex 6 mm	2
5	M933-06012-60	Screw, Hex cap	2
6	X-25-40	Washer, Plain, .281 ID X .625 in. OD	2
7	X-426-5	Clamp, Hose, 3.56/4.5 IN.	4
8	X-522-129	Tube, Steel	1

Group 101: Air Intake, continued

GM88993-



GM88993- E

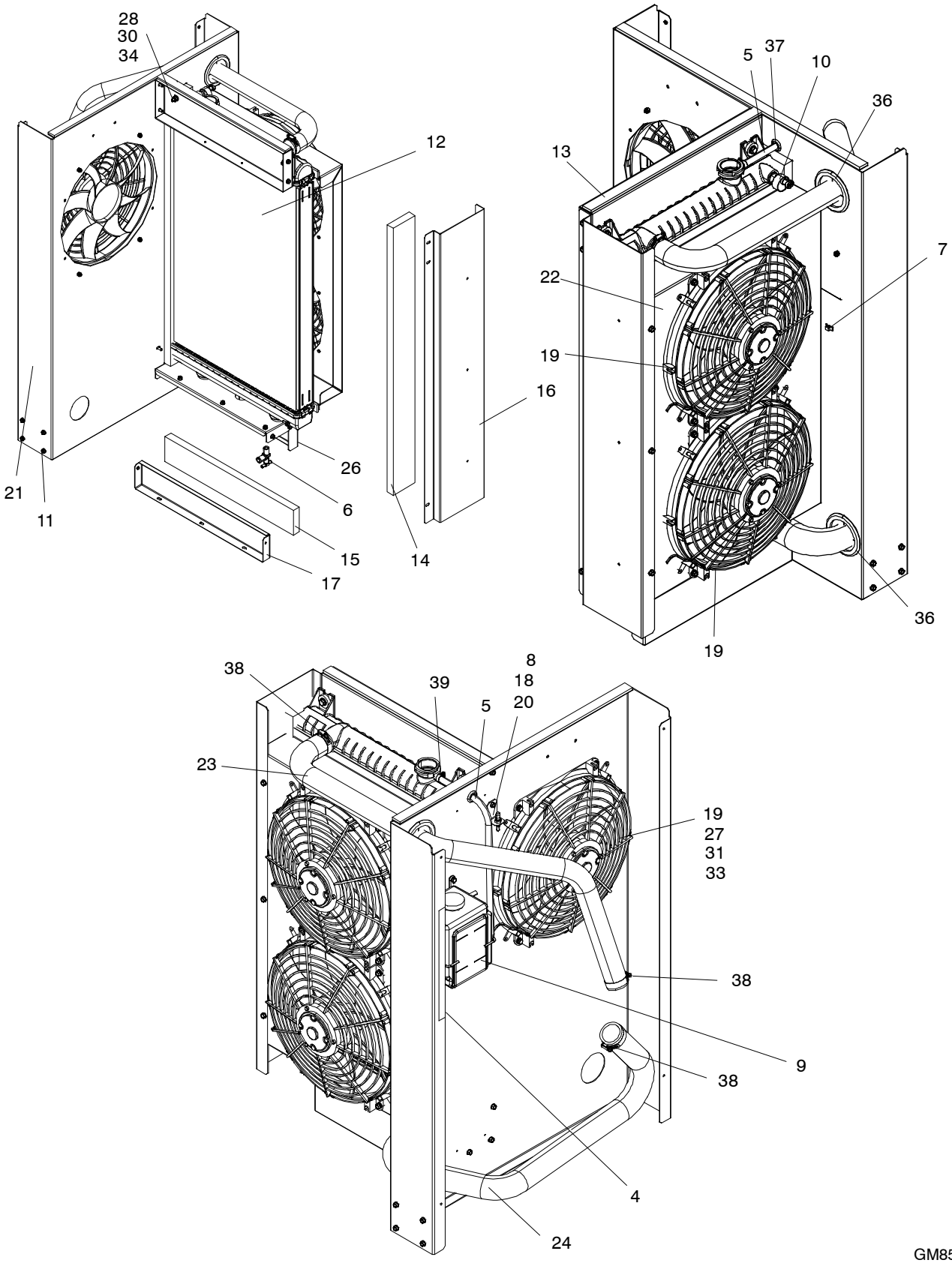
Item	Part Number	Description	Quantity Module Number GM88993-GR2	Quantity Module Number GM88993-GR3
1	GM14200	Mount, Air Cleaner (6.76”ID)	1	1
2	GM90280	Air Cleaner Assy	1	1
2.1	GM90281	Element, Air Cleaner	1	1
3	See chart	Hose, Air Intake	1	1
4	M6923-08-80	Nut, Hex 8MM	2	2
5	M933-08016-60	Screw	2	2
6	X-25-40	Washer, Plain, .281 ID X .625 in. OD	2	2
7	X-426-5	Clamp, Hose, 3.56/4.5 IN.	2	2

Use this table to identify part number of item 3.

Module No.	Part Number Item 3
GM88993-GR2	GM96301
GM88993-GR3	GM103720

Group 104: Cooling System

GM85088-GR1



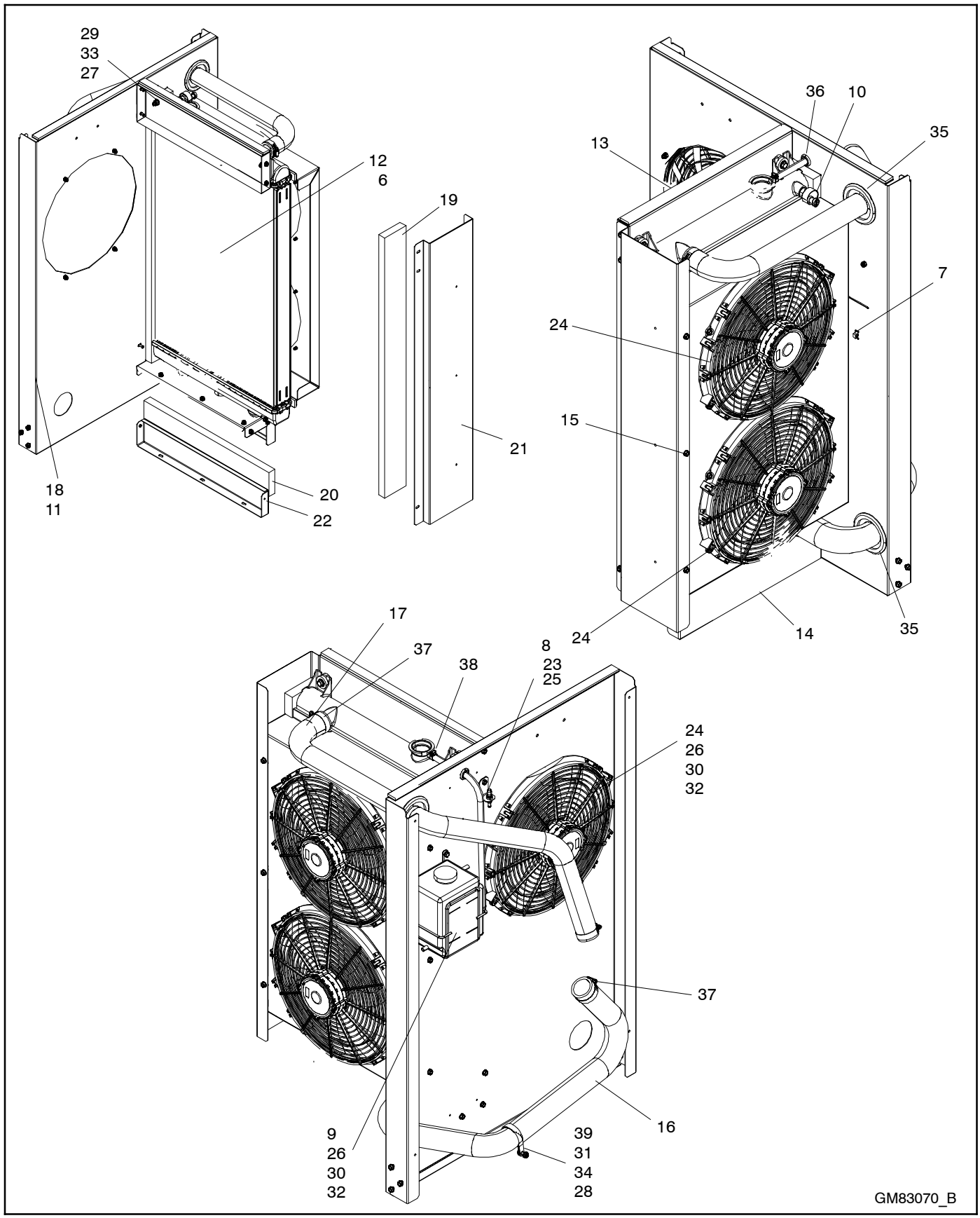
Group 104: Cooling System

GM85088-GR1

Item	Part Number	Description	Quantity
4	X-6047-31	Channel, U	1
5	X-386-142	Line, Flex Fuel	1
6	278788	Valve, drain (3/8”nptf)	1
7	361567	Base, tie wrap snapin	2
8	GM28823	Sensor, Temperature	1
9	GM47692	Bottle, Overflow	1
10	GM66270	Sensor, Low Coolant Level	1
11	GM78761-1	Screw, Sheetmetal	35
12	GM79552	Radiator	1
12.1	GM88429	Radiator Cap	1
13	GM82973	Mount, Radiator Upper	1
14	GM82979-1	Insulation, Acoustic	2
15	GM82979-2	Insulation, Acoustic	1
16	GM83755	Shroud, Radiator Front	1
17	GM83762	Bracket, Lower Radiator	1
18	GM83899	Bracket, Temperature Sender	1
19	GM83900	Fan Assembly	3
20	GM84247	Nut, 1/8-27 NPT	1
21	GM85090	Bulkhead	1
22	GM91554	Shroud, Radiator	1
23	GM85092	Hose, Upper Radiator	1
24	GM85093	Hose, Lower Radiator	1
26	GM85643	Mount, Radiator Lower	1
27	M125A-06-80	Washer, Plain	6
28	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	4
30	M931-08040-60	Screw, hex cap	2
31	M933-06020-60	Screw, hex cap	6
33	M982-06-80	Nut, hex elastic stop, 6MM	6
34	M982-08-80	Nut, hex elastic stop, 8MM	2
36	X-284-31	Grommet, round	2
37	X-284-7	Grommet, round	1
38	X-426-16	Clamp, hose, 1.81/2.75 in.	4
39	X-426-9	Clamp, hose, .25/.70 in.	2
40	X-672-18	Clamp, insulated, 2.12 in. (not shown)	

Group 104: Cooling System, continued

GM83070-GR1



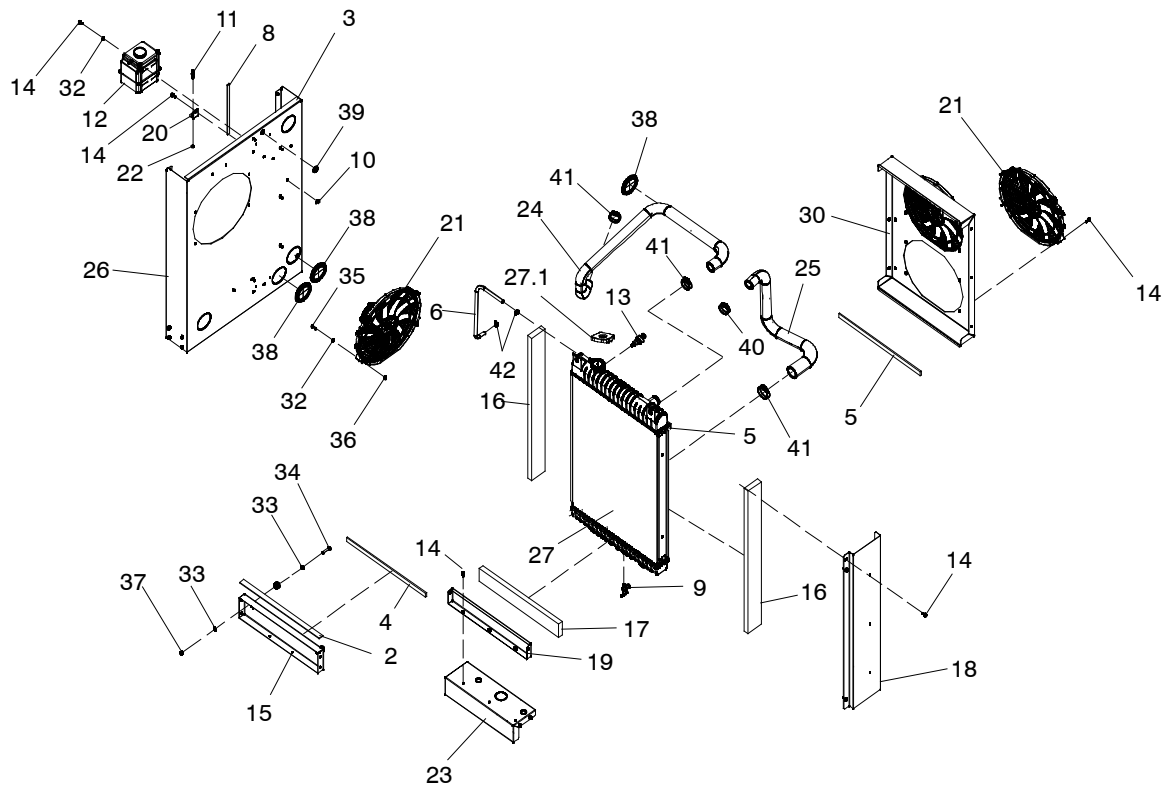
Group 104: Cooling System, continued

GM83070-GR1

Item	Part Number	Description	Quantity
6	278788	Valve, drain (⅜ in. nptf)	1
7	361567	Base, tie wrap snapin	2
8	GM28823	Sensor, Temperature	1
9	GM47692	Bottle, Overflow	1
10	GM66270	Sensor, Low Coolant Level	1
11	GM78761-1	Screw, Sheetmetal	33
12	GM79552	Radiator	1
12.1	GM88429	Radiator Cap	1
13	GM82973	Mount, Radiator Upper	1
14	GM82974	Mount, Radiator Lower	1
15	GM82975	Shroud, Radiator	1
16	GM85093	Hose, Lower Radiator	1
17	GM85092	Hose, Upper Radiator	1
18	GM82978	Bulkhead	1
19	GM82979-1	Insulation, Acoustic	2
20	GM82979-2	Insulation, Acoustic	1
21	GM83755	Shroud, Radiator Front	1
22	GM83762	Bracket, Lower Radiator	1
23	GM83899	Bracket, Temperature Sender	1
24	GM83900	Fan Assembly	3
25	GM84274	Nut, 1/8 NPT	1
26	M125A-06-80	Washer, Plain	6
27	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	4
28	M6923-06-80	Nut, Hex 6mm	1
29	M931-08040-60	Screw, hex cap	2
30	M933-06020-60	Screw, hex cap	6
31	M933-06025-60	Screw, hex cap	1
32	M982-06-80	Nut, hex elastic stop, 6MM	6
33	M982-08-80	Nut, hex elastic stop, 8MM	2
34	X-25-33	Washer, plain, .312 ID x .625 in. OD	1
35	X-284-31	Grommet, round	2
36	X-284-7	Grommet, round	1
37	X-426-16	Clamp, hose, 1.81/2.75 in.	4
38	X-426-9	Clamp, hose, .25/.70 in.	2
39	X-672-18	Clamp, insulated, 2.12 in.	1

Group 104: Cooling System, continued

GM92075- GR3



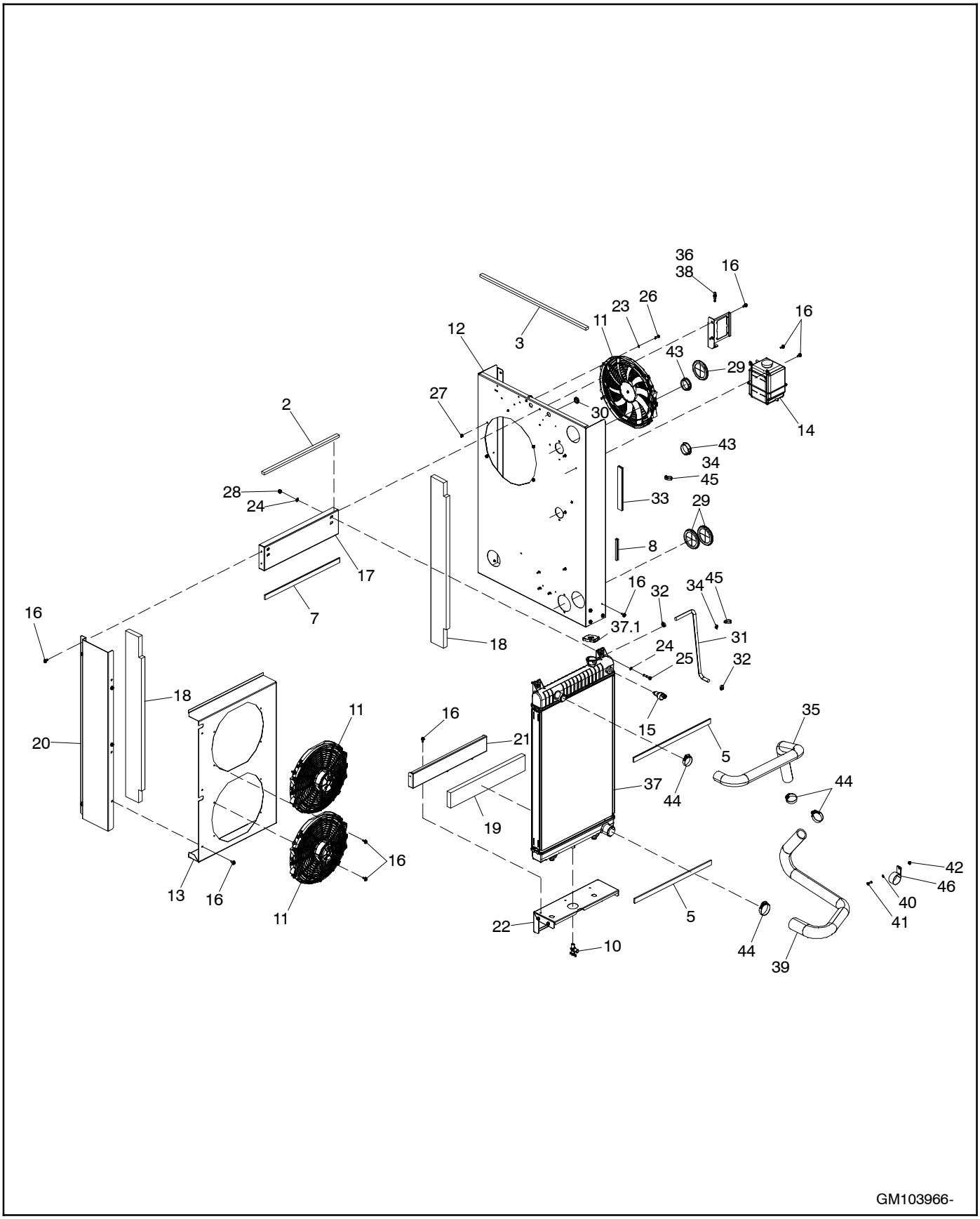
Group 104: Cooling System, continued

GM92075- GR3

Item	Part Number	Description	Quantity
2	19000 08075	Foam, gasket seal (3/4 in. tape)	1
3	19000 08075	Foam, gasket seal (3/4 in. tape)	1
4	19010 08118	Neoprene, closed cell (1 in. W x ¼ in. T)	1
5	19010 08118	Neoprene, closed cell (1 in. W x ¼ in. T)	2
6	X-386-142	Line, Flex Fuel	1
8	X-6047-31	Channel, U	1
9	278788	Valve, drain (⅜ in. nptf)	1
10	361567	Base, tie wrap snapin	2
11	GM28823	Sensor, Temperature	1
12	GM47692	Bottle, Overflow	1
13	GM66270	Sensor, Low Coolant Level	1
14	GM78761-1	Screw, Sheetmetal	37
15	GM82973	Mount, Radiator Upper	1
16	GM82979-1	Insulation, Acoustic	2
17	GM82979-2	Insulation, Acoustic	1
18	GM83755	Shroud, Radiator Front	1
19	GM83762	Bracket, Lower Radiator	1
20	GM83899	Bracket, Temperature Sender	1
21	GM83900	Fan Assembly	3
22	GM84247	Nut, 1/8-27 NPT	1
23	GM85643	Mount, Radiator Lower	1
24	GM85092	Hose, Upper Radiator	1
25	GM85093	Hose, Lower Radiator	1
26	GM91063	Panel, Bulkhead	1
27	GM79552	Radiator	1
27.1	GM88429	Radiator Cap	1
30	GM91554	Shroud, Radiator	1
32	M125A-06-80	Washer, Plain	6
33	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	4
34	M931-08040-60	Screw, Hex Cap	2
35	M933-06020-60	Screw, Hex Cap	4
36	M982-06-80	Nut, hex elastic stop, 6MM	4
37	M982-08-80	Nut, hex elastic stop, 8MM	2
38	X-284-31	Grommet, round	3
39	X-284-7	Grommet, round	1
40	X-426-16	Clamp, hose, 1.81/2.75 in.	1
41	X-426-16	Clamp, hose, 1.81/2.75 in.	3
42	X-426-9	Clamp, hose, .25/.70 in.	2
43	X-301-49	Plug, Button (not shown)	2
45	X-672-35	Clamp, insulated, 2.12 in. (not shown)	2

Group 104: Cooling System, continued

GM103966-GR1, GM116144-GR1



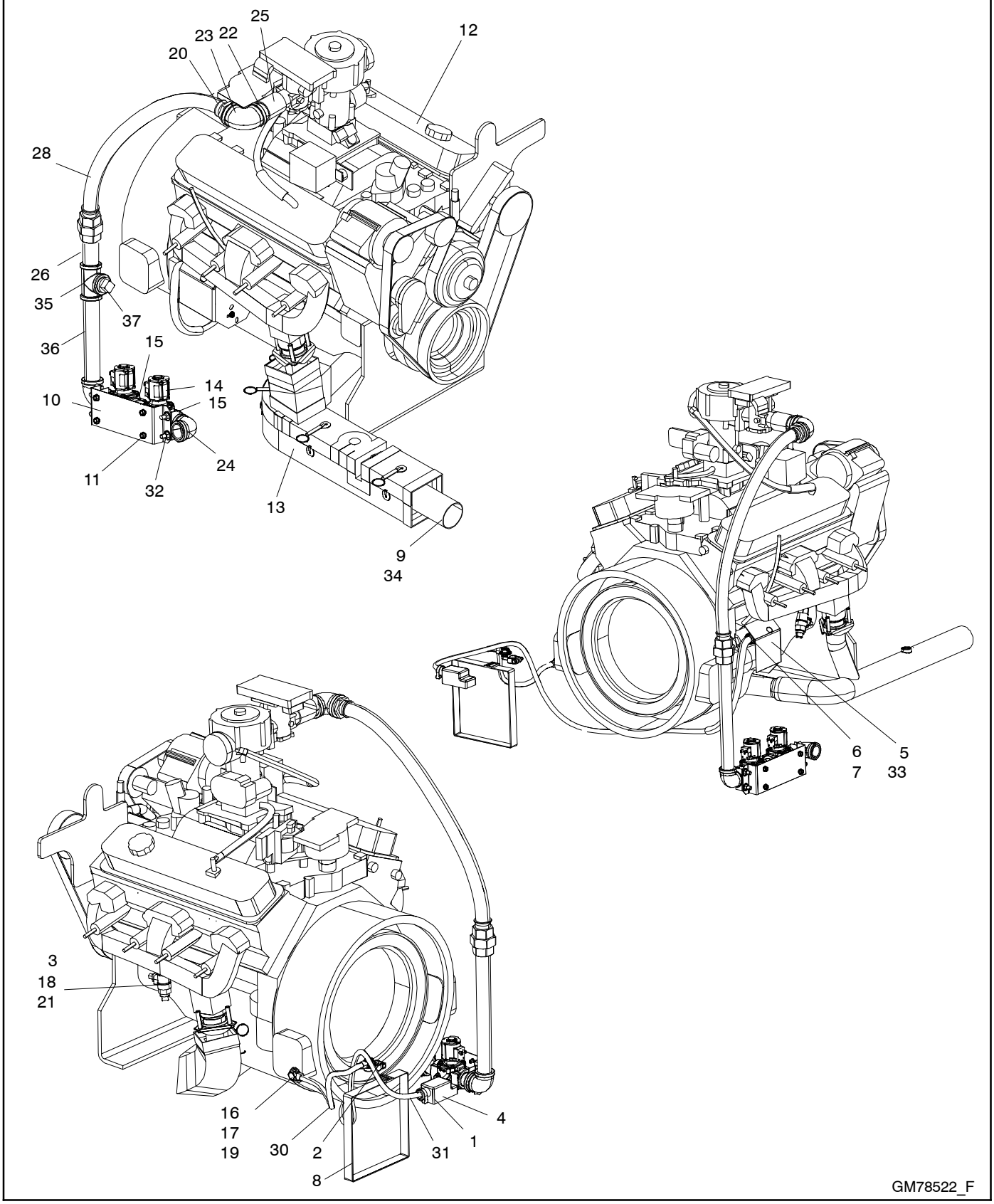
Group 104: Cooling System, continued

GM103966-GR1, GM116144-GR1

Item	Part Number	Description	Quantity GM103966-GR1	Quantity GM116144-GR1
2	19000-08075	Foam, Gasket Seal (530 mm)	1	1
3	19000-08075	Foam, Gasket Seal (750 mm)	1	1
5	19010-08112	Foam Tape (545 mm)	2	2
7	19010-08118	Foam Tape (527 mm)	1	1
8	X-6352-13	Grommet, U-channel	1	1
10	278788	Valve, drain (3/8 in. NPTF)	1	1
11	GM103146	Fan, 14 in. 12V DC axial motor	3	3
12	GM103967	Panel, bulkhead	1	
12	GM116146	Panel, bulkhead		1
13	GM103968	Shroud, radiator	1	1
14	GM47692	Bottle, overflow	1	1
15	GM66270	Sensor, low coolant level	1	1
16	GM78761-1	Screw, sheet metal M6 x 1.0 x 16 mm	37	37
17	GM82973	Mount, radiator upper	1	1
18	GM82979-1	Insulation, acoustic foam	2	2
19	GM82979-2	Insulation, acoustic	1	1
20	GM83755	Shroud, radiator front	1	1
21	GM83762	Bracket, lower radiator	1	1
22	GM85643	Mount, radiator lower	1	1
23	M125A-06-80	Washer, plain 6.4 ID x 12.0 OD	4	4
24	M125A-08-80	Washer, plain 8.4 ID x 16.0 OD	4	4
25	M931-08040-60	Screw, hex cap	2	2
26	M933-06020-60	Screw, hex cap	4	4
27	M982-06-80	Nut, hex elastic stop, 6 mm	4	4
28	M982-08-80	Nut, hex elastic stop, 8 mm	2	2
29	X-284-31	Grommet, round	3	3
30	X-284-7	Grommet, round	1	1
31	X-386-142	Line, flex fuel	1	1
32	X-426-9	Clamp, hose, .25/.70 in.	2	2
33	X-6047-31	Channel, ”u”	1	1
34	361567	Base, tie wrap snapin	7	7
35	GM102455	Hose, upper radiator	1	1
36	GM28823	Sensor, temperature	1	1
37	GM79552	Radiator	1	1
37.1	GM88429	Radiator Cap	1	1
38	GM84247	Nut, 1/8 NPT	1	1
39	GM85093	Hose, lower radiator	1	1
40	M125A-06-80	Washer, plain 6.4 ID x 12.0 OD	1	1
41	M933-06020-60	Screw, hex cap	1	1
42	M982-06-80	Nut, hex elastic stop, 6mm	1	1
43	X-301-49	Plug, button	2	
43	GM116161	Plate, cover		2
43	GM78761-1	Screw, sheetmetal		4
44	X-426-16	Clamp, hose, 1.81/2.75 in.	4	4
45	X-468-1	Cable tie	6	6
46	X-672-35	Clamp, insulated, 2.12 in.	1	1

Group 105: Engine

GM78522



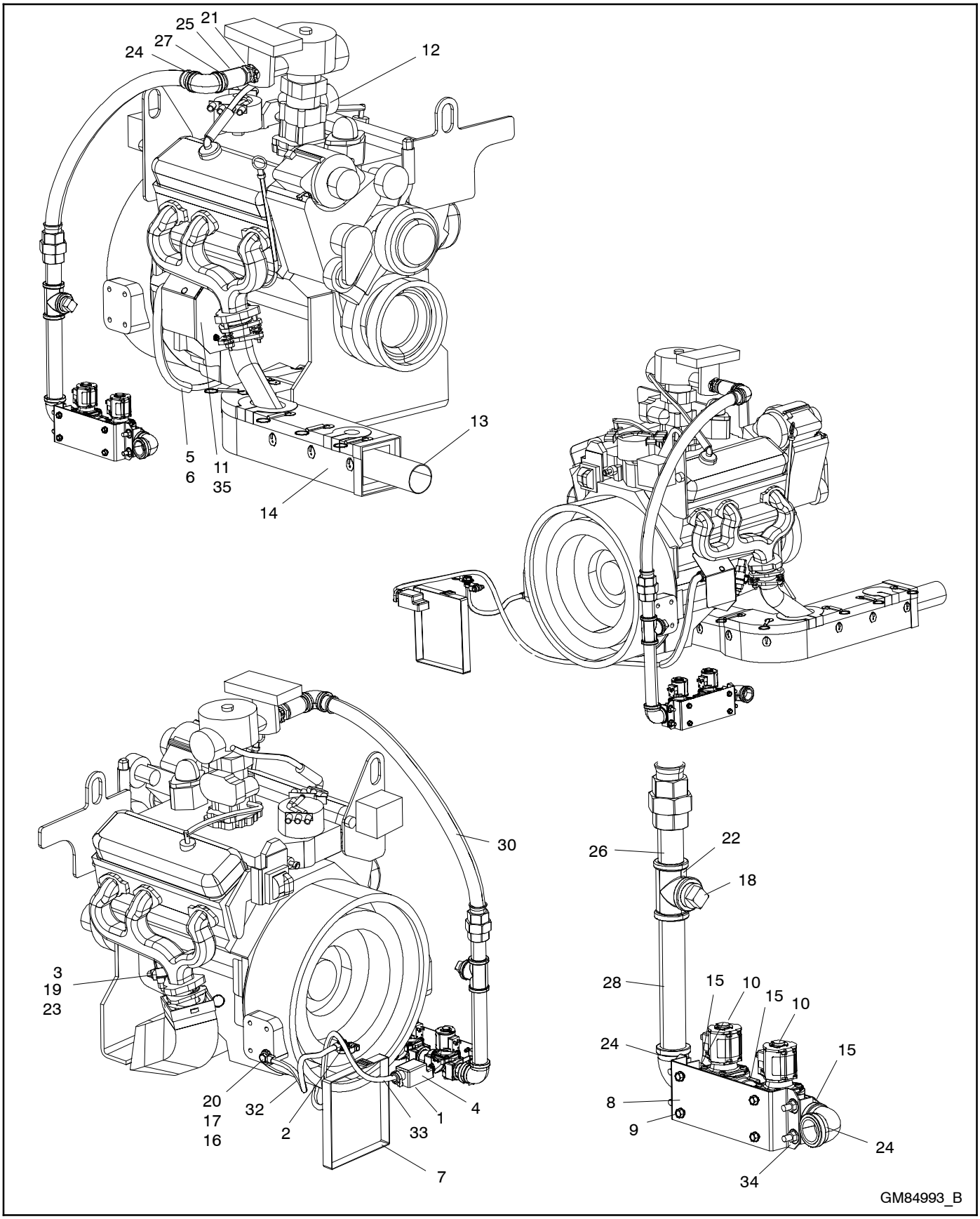
Group 105: Engine

GM78522-GR1, GR2

Item	Part Number	Description	Quantity Module Number -GR1	Quantity Module Number -GR2
1	345039	Terminal, battery	1	1
2	345056	Terminal, battery	1	1
3	GM19670	Valve, Shutoff (1/2-14npt)	2	2
4	GM20745	Boot, Battery Lug	1	1
5	GM84667	Shield, Heat	1	1
6	GM21335	Shield, heat (20mm id x 412mm length)	1	1
7	GM22350	Boot, Starter Terminal	1	1
8	GM61432	Strap, Poly Battery	1	1
9	GM78383	Pipe, Exhaust	1	1
10	GM78545	Bracket, Fuel Solenoid	1	1
11	GM78761-1	Screw, Sheetmetal	4	4
12	GM79399	Engine Assy., GM 5.0L Emissions	1	
12	GM96447	Engine Assy., GM 5.0L Emissions		1
13	GM79853	Blanket, Exhaust	1	1
14	GM82797	Valve, Shut Off	2	2
15	K-122	Pipe (1”npt x 2.00”)	3	3
16	X-22-26	Washer,lock, .521 ID x 1.24 in. OD	2	2
17	X-25-26	Washer, Plain, .531 ID x 1.062 in. OD	2	2
18	X-75-28	Plug, pipe (1/2”nptf)	2	2
19	X-129-15	Bolt, Hex Cap	2	2
20	X-202-32	Bushing, reducing (1 x 1-1/4”npt)	1	1
21	X-209-2	Pipe (1/2”npt x 1.19”)	2	2
22	X-210-8	Pipe (1-1/4”npt x 1.63”)	1	1
23	X-215-14	Elbow, pipe (90 deg x 1-1/4”npt)	1	1
24	X-215-15	Elbow, pipe (90 deg x 1”npt)	2	2
25	X-216-22	Coupling, pipe (1-1/4”npsc) straight	1	1
26	X-218-22	Pipe, Nipple (1” NPT x 3.00”)	1	1
27	X-468-1	Cable Tie	2	2
28	X-504-20	Fuel line, flexible (1.00” ID x 29”)	1	1
29	X-519-20	Plug, Cap	1	1
30	X-545-112	Cable, battery (No.2 x 16”) black-	1	1
31	X-545-153	Cable, battery (No.2 x 56”) RED+	1	1
32	X-722-8	Clamp, muffler, 1.37 in.	2	2
33	X-6210-5	Nut, flange whiz, 10-24	2	2
34	X-6238-1	Bolt, Hex Cap	6	6
35	X-203-2	Tee, pipe (1 x 1 x 1 npt)	1	1
36	X-218-27	Pipe (1”npt x 8.00”)	1	1
37	X-75-13	Plug, pipe (1/2”nptf)	1	1

Group 105: Engine, continued

GM84993-GR1



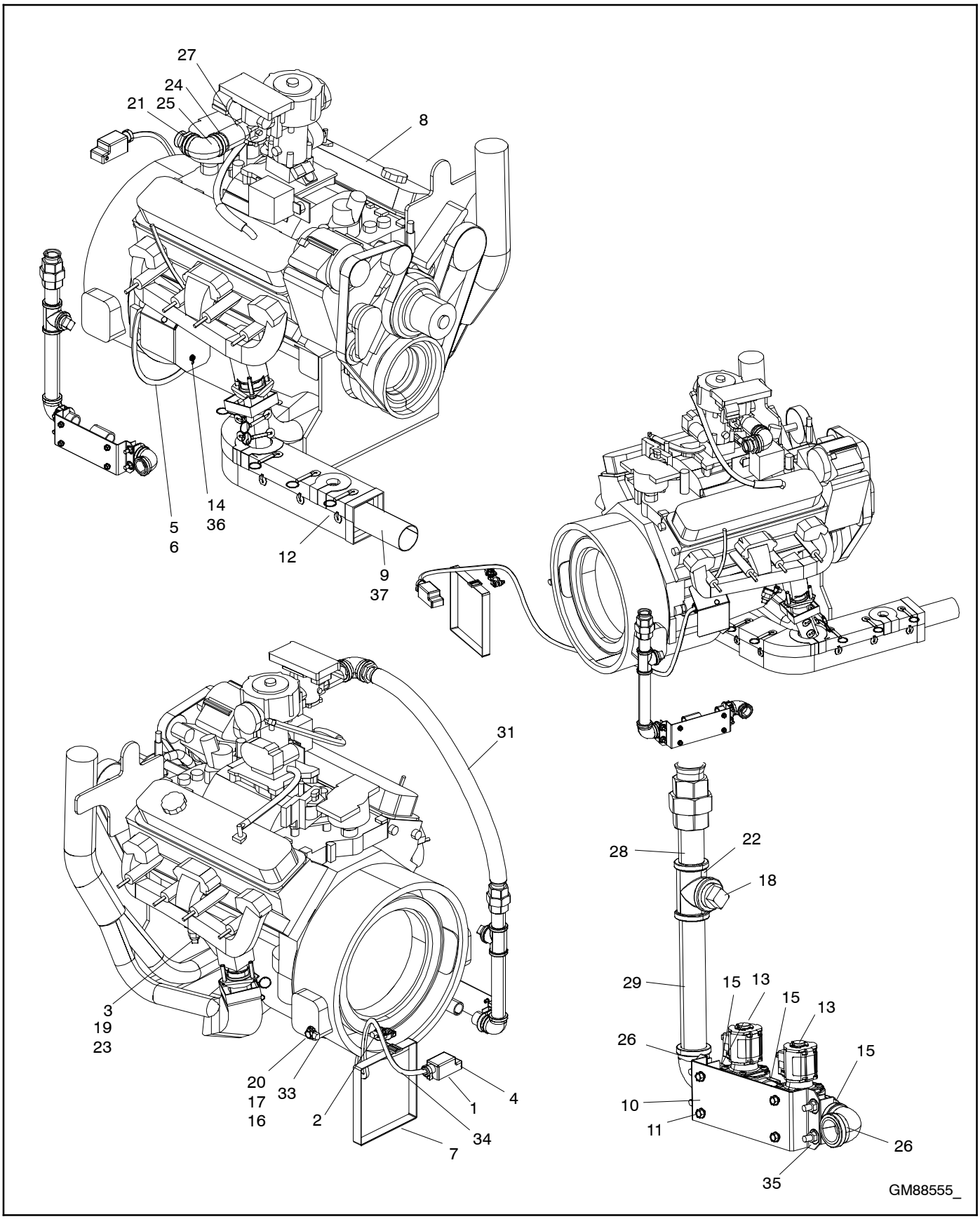
Group 105: Engine, continued

GM84993-GR1

Item	Part Number	Description	Quantity
1	345039	Terminal, battery	1
2	345056	Terminal, battery	1
3	GM19670	Valve, Shutoff (1/2-14npt)	2
4	GM20745	Boot, Battery Lug	1
5	GM21335	Shield, heat (20mm ID x 412mm length)	1
6	GM22350	Boot, Starter Terminal	1
7	GM61432	Strap, Poly Battery	1
8	GM78545	Bracket, Fuel Solenoid	1
9	GM78761-1	Screw, Sheetmetal	4
10	GM82797	Valve, Shut Off	2
11	GM84667	Shield, Heat	1
12	GM85005	Engine Assy GM 4.3L, 12V Nat./LP Gas	1
13	GM85006	Pipe, Exhaust	1
14	GM85107	Blanket, Exhaust	1
15	K-122	Pipe (1” NPT x 2.00”)	3
16	X-22-26	Washer, lock, .521 ID x 1.24 in. OD	2
17	X-25-26	Washer, Plain, .531 ID x 1.062 in. OD	2
18	X-75-13	Plug, pipe (1” nptf)	1
19	X-75-28	Plug, pipe (1/2”nptf)	2
20	X-129-15	Bolt, Hex Cap	2
21	X-202-1	Bushing, reducing (3/4 x 1”npt)	1
22	X-203-2	Tee, pipe (1 x 1 x 1 npt)	1
23	X-209-2	Pipe (1/2”npt x 1.19”)	2
24	X-215-15	Elbow, pipe (90 deg x 1”npt)	3
25	X-216-12	Coupling, pipe (1”npsc)	1
26	X-218-22	Pipe, Nipple (1” NPT x 3.00”)	1
27	X-218-24	Pipe (1”npt x 1.50”)	1
28	X-218-27	Pipe (1”npt x 8.00”)	1
29	X-468-1	Cable Tie	3
30	X-504-20	Fuel line, flexible (1.00” ID x 29”)	1
31	X-519-20	Plug, Cap	1
32	X-545-112	Cable, battery (No.2 x 16”) black-	1
33	X-545-153	Cable, battery (No.2 x 56”) RED+	1
34	X-722-8	Clamp, muffler	2
35	X-6210-5	Nut, flange whiz, 10-24	2

Group 105: Engine, continued

GM88555-GR1



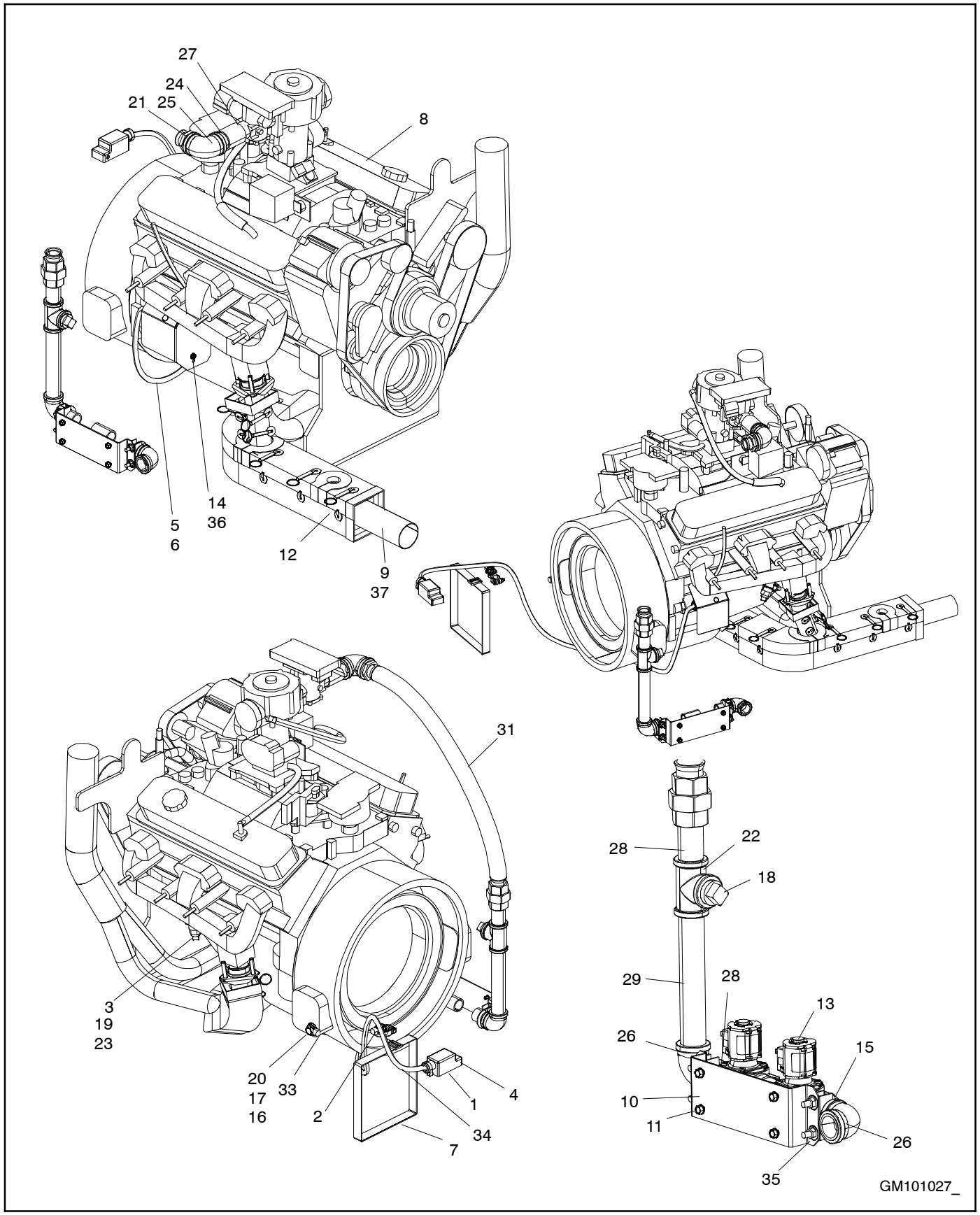
Group 105: Engine, continued

GM88555-GR1

Item	Part Number	Description	Quantity
3	GM19670	Valve, Shutoff (1/2-14npt)	2
5	GM21335	Shield, heat (20mm id x 412mm length)	1
7	GM61432	Strap, Poly Battery	1
8	GM88518	Engine Assy, GM, 5.7L 60RCL, 60Hz, 12V	1
9	GM78383	Pipe, Exhaust	1
10	GM78545	Bracket, Fuel Solenoid	1
11	GM78761-1	Screw, Sheetmetal	4
12	GM79853	Blanket, Exhaust	1
13	GM82797	Valve, Shut Off	2
14	GM84667	Shield, Heat	1
15	K-122	Pipe (1”npt x 2.00”)	3
16	X-22-26	Washer,lock.521 IDx1.24 in.OD	1
17	X-25-26	Washer. Plain	1
18	X-75-13	Plug, pipe (1” nptf)	1
19	X-75-28	Plug, pipe (1/2”nptf)	2
20	X-129-15	Bolt, Hex Cap (NRP)	1
21	X-202-32	Bushing, reducing (1 x 1-1/4”npt)	1
22	X-203-2	Tee, pipe (1 x 1 x 1 npt)	1
23	X-209-2	Pipe (1/2”npt x 1.19”)	2
24	X-210-28	Pipe (1-1/4”npt x 1.63”)	1
25	X-215-14	Elbow, pipe (90 deg x 1-1/4”npt)	1
26	X-215-15	Elbow, pipe (90 deg x 1”npt)	2
27	X-216-22	Coupling, pipe (1-1/4”npsc) straight	1
28	X-218-22	Pipe, Nipple (1” NPT x 3.00”)	1
29	X-218-27	Pipe (1”npt x 8.00”)	1
30	X-468-1	Cable Tie	2
31	X-504-20	Fuel line, flexible (1.00”id * 29”)	1
32	X-519-20	Plug, Cap	1
33	X-545-267	Cable, Battery	1
34	X-545-268	Cable, Battery	1
35	X-722-8	Clamp, muffler, 1.37 in.	2
36	X-6210-5	Nut, flange whiz, 10-24	2
37	X-6238-1	Bolt, Hex Cap (nrp)	6

Group 105: Engine, continued

GM101027-GR1



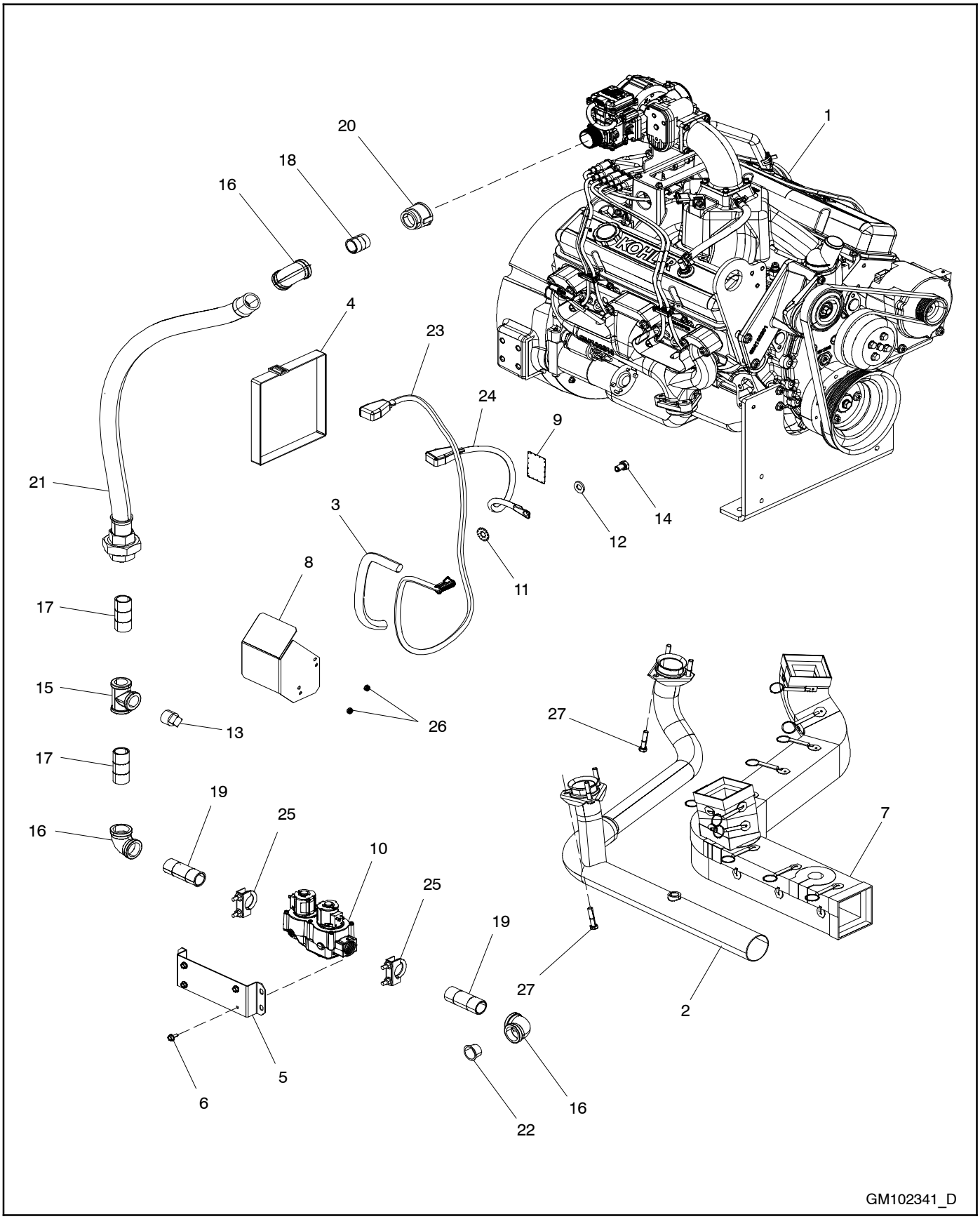
Group 105: Engine, continued

GM101027-GR1

Item	Part Number	Description	Quantity
3	GM19670	Valve, Shutoff (1/2-14npt)	2
5	GM21335	Shield, heat (20mm id x 412mm length)	1
7	GM61432	Strap, Poly Battery	1
8	GM88518	Engine Assy, GM, 5.7L 60RCL, 60Hz, 12V	1
9	GM78383	Pipe, Exhaust	1
10	GM78545	Bracket, Fuel Solenoid	1
11	GM78761-1	Screw, Sheetmetal	4
12	GM79853	Blanket, Exhaust	1
13	GM96976	Valve, Dual Solenoid	1
14	GM84667	Shield, Heat	1
15	K-122	Pipe (1”npt x 2.00”)	1
16	X-22-26	Washer,lock.521 IDx1.24 in.OD	1
17	X-25-26	Washer. Plain	1
18	X-75-13	Plug, pipe (1” nptf)	1
19	X-75-28	Plug, pipe (1/2”nptf)	2
20	X-129-15	Bolt, Hex Cap (NRP)	1
21	X-202-32	Bushing, reducing (1 x 1-1/4”npt)	1
22	X-203-2	Tee, pipe (1 x 1 x 1 npt)	1
23	X-209-2	Pipe (1/2”npt x 1.19”)	2
24	X-210-28	Pipe (1-1/4”npt x 1.63”)	1
25	X-215-14	Elbow, pipe (90 deg x 1-1/4”npt)	1
26	X-215-15	Elbow, pipe (90 deg x 1”npt)	2
27	X-216-22	Coupling, pipe (1-1/4”npsc) straight	1
28	X-218-22	Pipe, Nipple (1” NPT x 3.00”)	2
29	X-218-27	Pipe (1”npt x 8.00”)	1
31	X-504-20	Fuel line, flexible (1.00”id * 29”)	1
32	X-519-20	Plug, Cap	1
33	X-545-267	Cable, Battery	1
34	X-545-268	Cable, Battery	1
35	X-722-8	Clamp, muffler, 1.37 in.	2
36	X-6210-5	Nut, flange whiz, 10-24	2
37	X-6238-1	Bolt, Hex Cap (nrp)	6

Group 105: Engine, continued

GM102341-GR1



Group 105: Engine, continued

GM102341-GR1

Item	Part Number	Description	Quantity
1	GM100213	Engine, Kohler, KG6208, 12V	1
2	GM104615	Pipe, exhaust	1
3	GM21335	Shield, heat (20 mm ID x 412 mm length)	1
4	GM61432	Strap, poly battery	1
5	GM78545	Bracket, fuel solenoid	1
6	GM78761-1	Screw, sheet metal M6 x 1.0 x 16 mm	4
7	GM79853	Blanket, exhaust	1
8	GM84667	Shield, heat	1
9	GM93951	Nameplate	1
10	GM96976	Valve, dual solenoid	1
11	X-22-26	Washer, lock	1
12	X-25-26	Washer, plain, .531 ID x 1.062 in. OD	1
13	X-75-13	Plug, pipe (1 in. NPTF)	1
14	X-129-15	Bolt, hex cap	1
15	X-203-2	Tee, pipe (1 x 1 x 1 NPT)	1
16	X-215-15	Elbow, pipe (90° x 1 in. NPT)	3
17	X-218-22	Pipe, nipple (1 in. NPT x 3 in.)	2
18	X-218-24	Pipe (1 in. NPT x 1.5 in.)	1
19	X-218-32	Pipe (1 in. NPT x 3.35 in.)	2
20	X-250-6	Coupling, Reducer (1-1/4 x 1 in. NPT)	1
21	X-504-20	Line, flexible fuel	1
22	X-519-20	Plug, cap	1
23	X-545-267	Cable, battery	1
24	X-545-268	Cable, battery	1
25	X-722-8	Clamp, muffler, 1.37 in.	2
26	X-6210-5	Nut, flange serrated, 10-24	2
27	X-6238-1	Bolt, hex cap	6

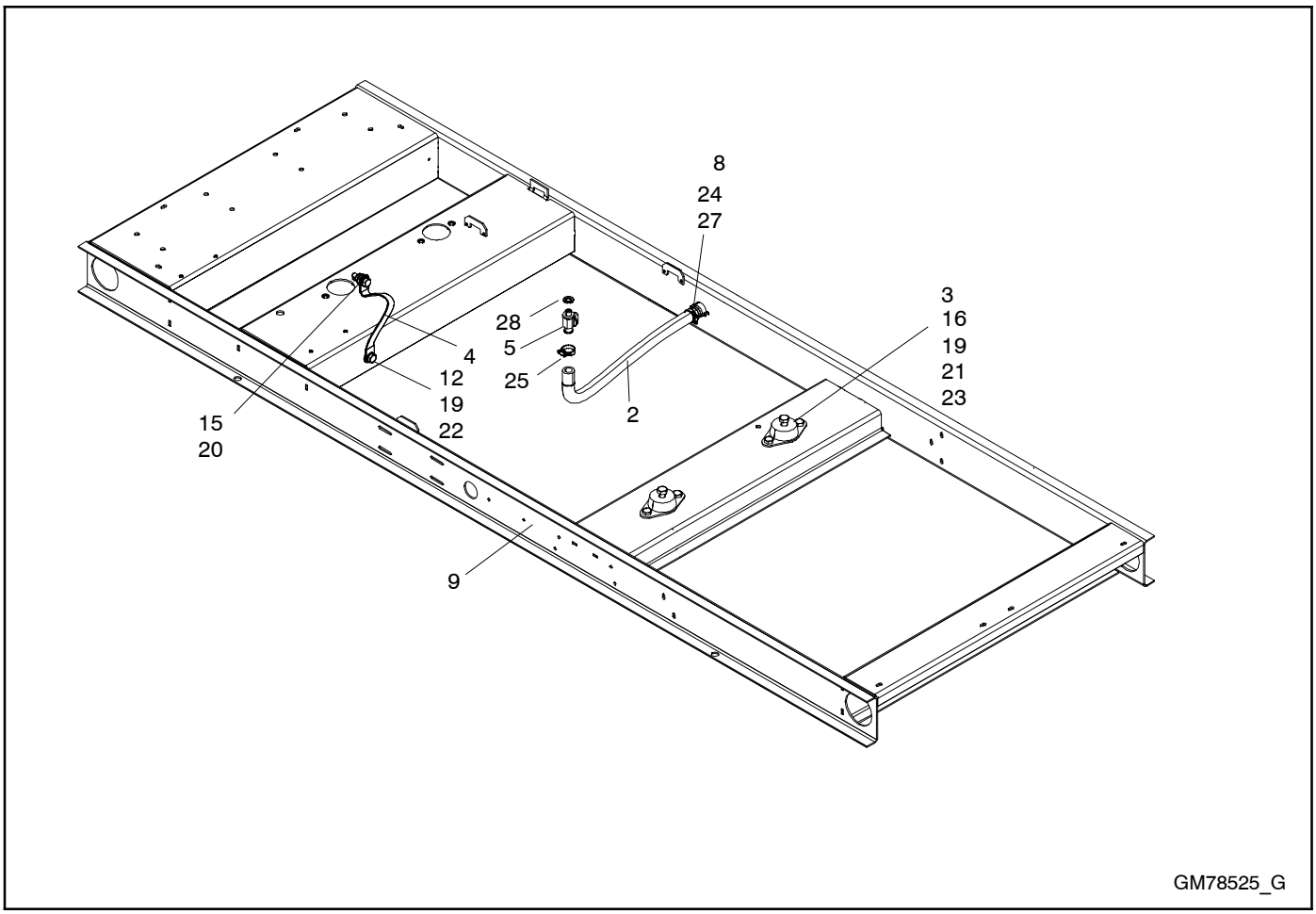
Group 107: Nameplate and Decals

GM78523-GR1, GM108006-GR1 Not illustrated

Item	Part Number	Description	Quantity	
			Module Number	
			GM78523-GR1	GM108006-GR1
1	239789	Decal, notice, neutral bonded to frame	1	1
2	249808	Decal, warning rotating parts	2	
2	GM106120	Decal, warning		1
3	249809	Decal, Caution hot engine	5	
3	GM107366	Decal, Caution hot surface		5
4	249810	Decal, warning hot coolant	1	
4	GM107367	Decal, warning hot coolant		1
5	257438	Decal, danger moving rotor	1	
6	257441	Decal, warning lifting eye	1	
6	GM107364	Decal, warning lifting eye		1
7	258815	Decal, warning voltage backfeed	1	
7	GM107362	Decal, warning voltage backfeed		1
8	273780	Decal, warning explosion	1	
8	GM107369	Decal, warning spark explosion		1
9	294520	Decal, danger, high voltage	3	
9	GM107361	Decal, danger, high voltage		3
10	GM15299	Decal, rainproof enclosure	1	1
11	GM20577	Decal, fuel type	1	
11	GM115393	Decal, fuel type		1
12	X-6275-3	Logo, Kohler	3	3
13	GM81760	Decal, Kohler -RDC2/DC2/VSC	1	1
14	GM15301	Decal, power breaker	1	1
15	GM62217	Nameplate, 5 in. tall, blank	1	1
16	GM107363	Decal, danger, rotating parts		3

Group 109: Skid and Mounting

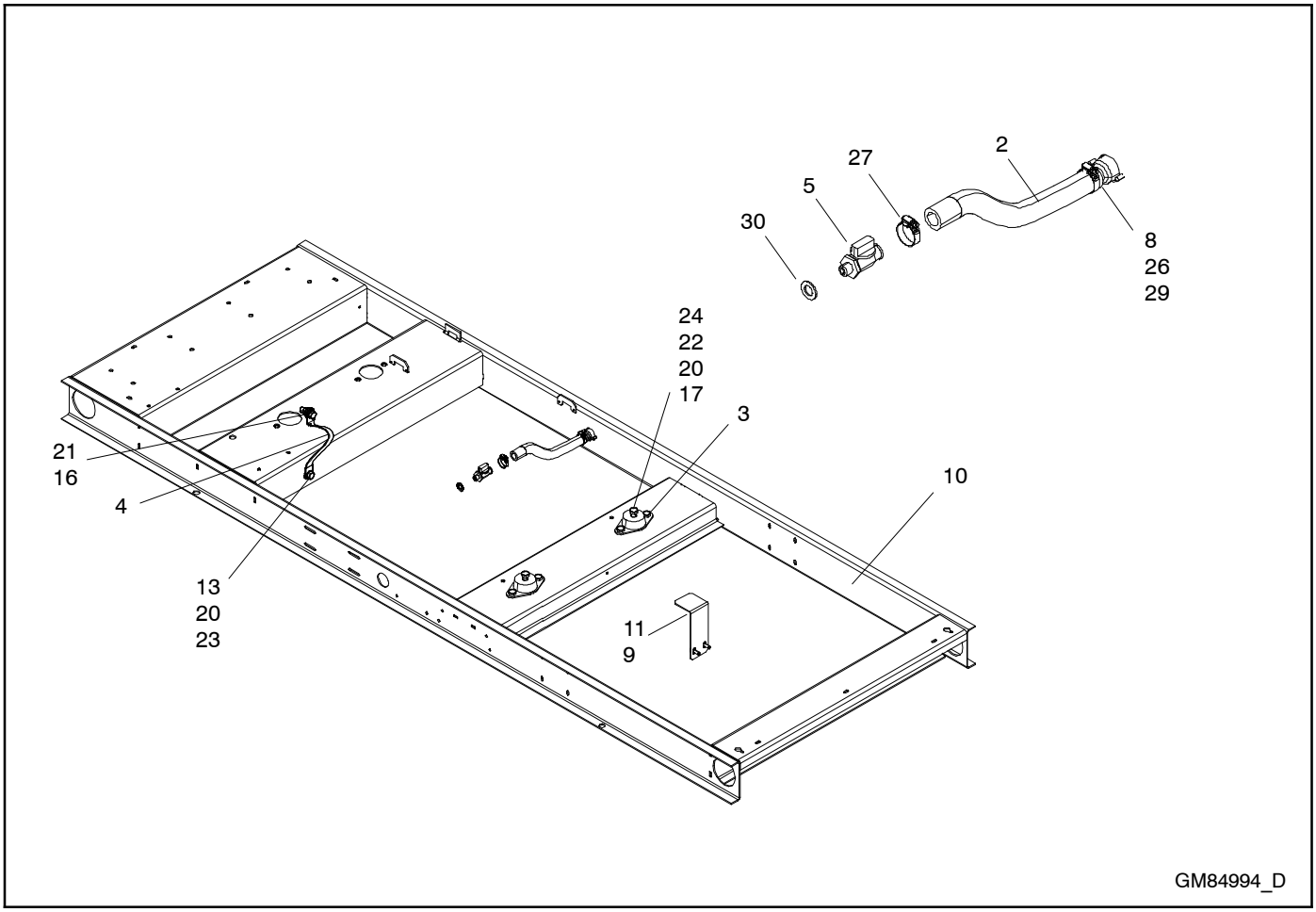
GM78525-GR1



Item	Part Number	Description	Quantity
2	X-577-28	Hose, rubber, straight, .62 in. ID	1
3	276476	Vibromount	2
4	290418	Strap, ground (11 in.)	1
5	GM19299	Valve, oil drain (M12 x 1.75)	1
8	GM59015	Fitting, Bulkhead Drain	1
9	GM77957	Skid	1
12	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	2
15	M6923-10-80	Nut, Hex 10mm	1
16	M931-12065-60	Screw, Hex Cap	2
19	M933-10020-60	Screw, hex cap	5
20	M933-10035-60	Screw, hex cap	1
21	M982-12-80	Nut, hex elastic stop	2
22	X-22-15	Washer,lock, .456 ID x 1.058 in. OD	2
23	X-25-140	Washer, plain, .531 ID x 2in. OD	2
24	X-75-58	Plug, Pipe	1
25	X-426-10	Clamp, hose, .5/1 in.	2
27	X-781-22	Rivet, Pop	2
28	X-6278-9	Washer, nylon, .48 ID x .825 in. OD	1

Group 109: Skid and Mounting

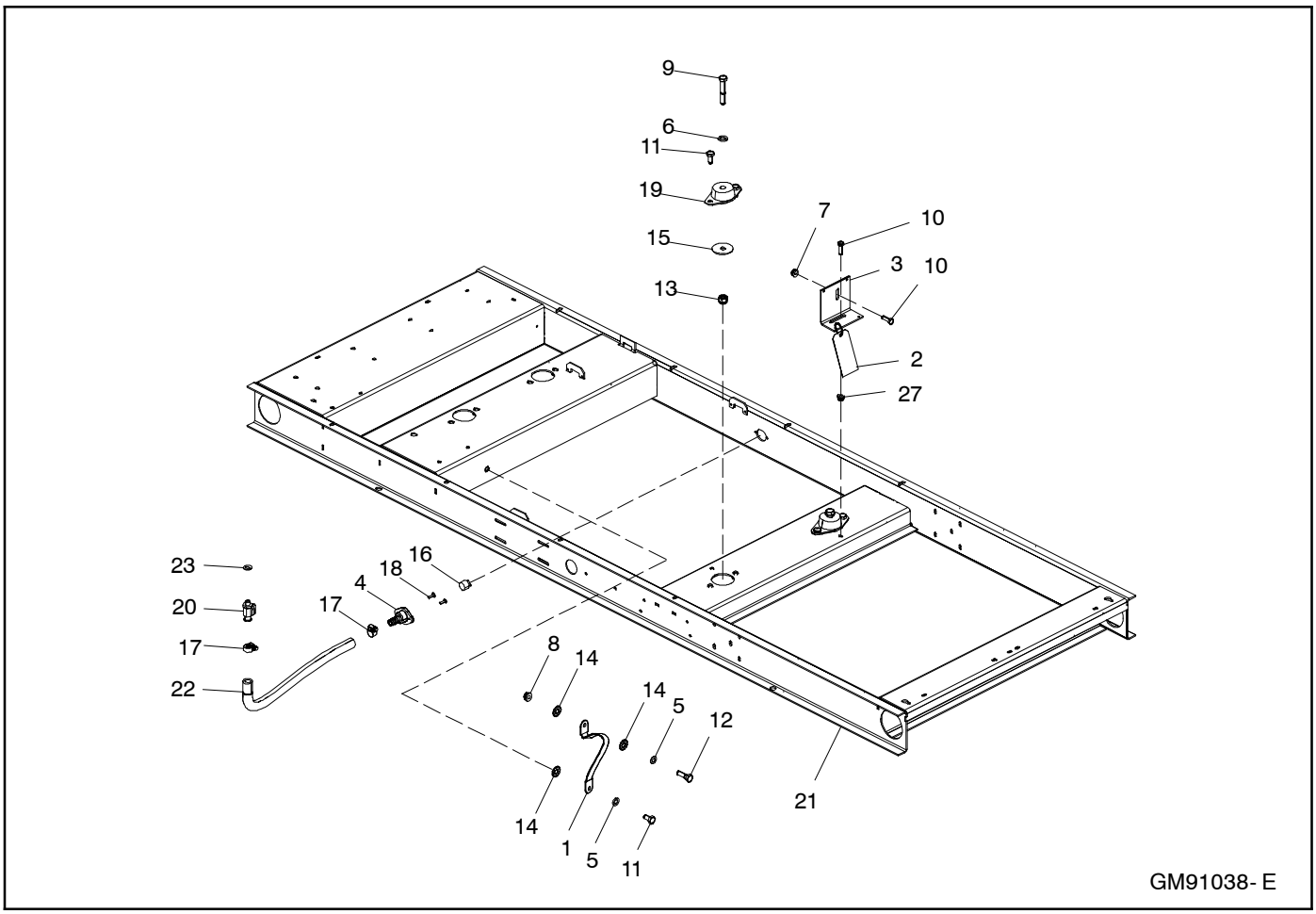
GM84994-GR1



Item	Part Number	Description	Quantity
2	X-577-28	Hose, rubber, straight, .62 in. ID	1
3	276476	Vibromount	2
4	290418	Strap, ground (11 in.)	1
5	GM19299	Valve, oil drain (M12 x 1.75)	1
8	GM59015	Fitting, Bulkhead Drain	1
9	GM78761-1	Screw, Sheetmetal	1
10	GM85007	Skid	1
11	GM85102	Bracket, Support	1
13	M125A-10-80	Washer, Plain 8.4 ID x 16.0 OD	2
16	M6923-10-80	Nut, Hex 10mm	1
17	M931-12065-60	Screw, hex cap	2
20	M933-10020-60	Screw, hex cap	5
21	M933-10035-60	Screw, hex cap	1
22	M982-12-80	Nut, hex elastic stop, 12MM	2
23	X-22-15	Washer, lock, .456 ID x 1.058 in. OD	2
24	X-25-140	Washer, plain, .531 ID x 2in. OD	2
26	X-75-58	Plug, Pipe	1
27	X-426-10	Clamp, hose, .5/1 in.	2
29	X-781-22	Rivet, Pop	2
30	X-6278-9	Washer, nylon, .48 ID x .825 in. OD	1

Group 109: Skid and Mounting , continued

GM91038- GR2



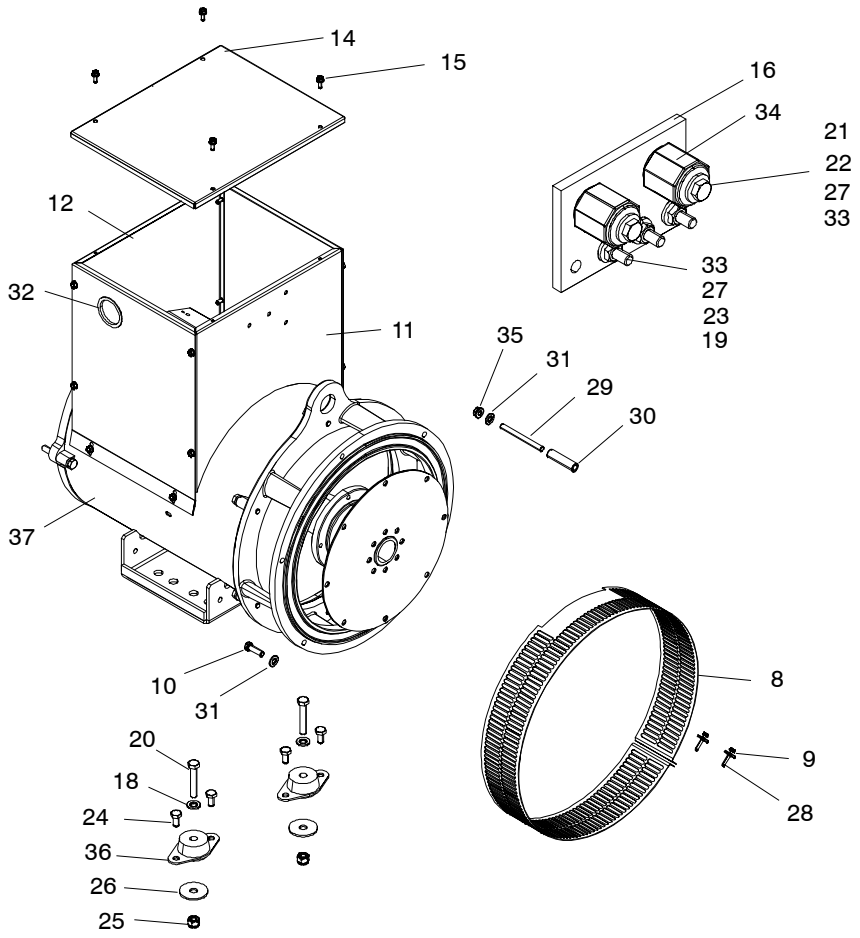
GM91038- E

Item	Part Number	Description	Quantity
1	290418	Strap, ground	1
2	GM28552	Tag, hang shipping bracket	1
3	GM51689	Bracket, shipping	1
4	GM59015	Fitting, bulkhead drain	1
5	M125A- 10- 80	Washer, plain 10.5 ID x 20 OD	2
6	M125A- 12- 80	Washer, plain	2
7	M6923- 08- 80	Nut, hex 8 mm	1
8	M6923- 10- 80	Nut, hex 10 mm	1
9	M931- 12065- 60	Screw, hex cap	2
10	M933- 08025- 60	Screw, hex cap	2
11	M933- 10020- 60	Screw, hex cap	5
12	M933- 10035- 60	Screw, hex cap	1
13	M982- 12- 80	Nut, hex elastic stop	2
14	X- 22- 15	Washer, lock	3
15	X- 25- 140	Washer, plain, .531 ID x 2 in. OD	2
16	X- 75- 58	Plug, pipe	1
17	X- 426- 10	Clamp, hose, .5/1 in.	2
18	X- 781- 22	RIVET, POP, .187 in	2
19	324074	Vibromount	2
20	GM19299	Valve, oil drain (M12 x 1.75)	1
21	GM77957	Skid	1
22	X- 577- 28	Hose, rubber	1
23	X- 6278- 9	Washer, nylon, .48 ID x .825 in. OD	1
27	M6923- 08- 80	Nut, hex 8 mm	1

Notes

Group 201: Alternator and Mounting

GM78543-MA1



Items not shown:
4, 5, 7

Group 201: Alternator and Mounting

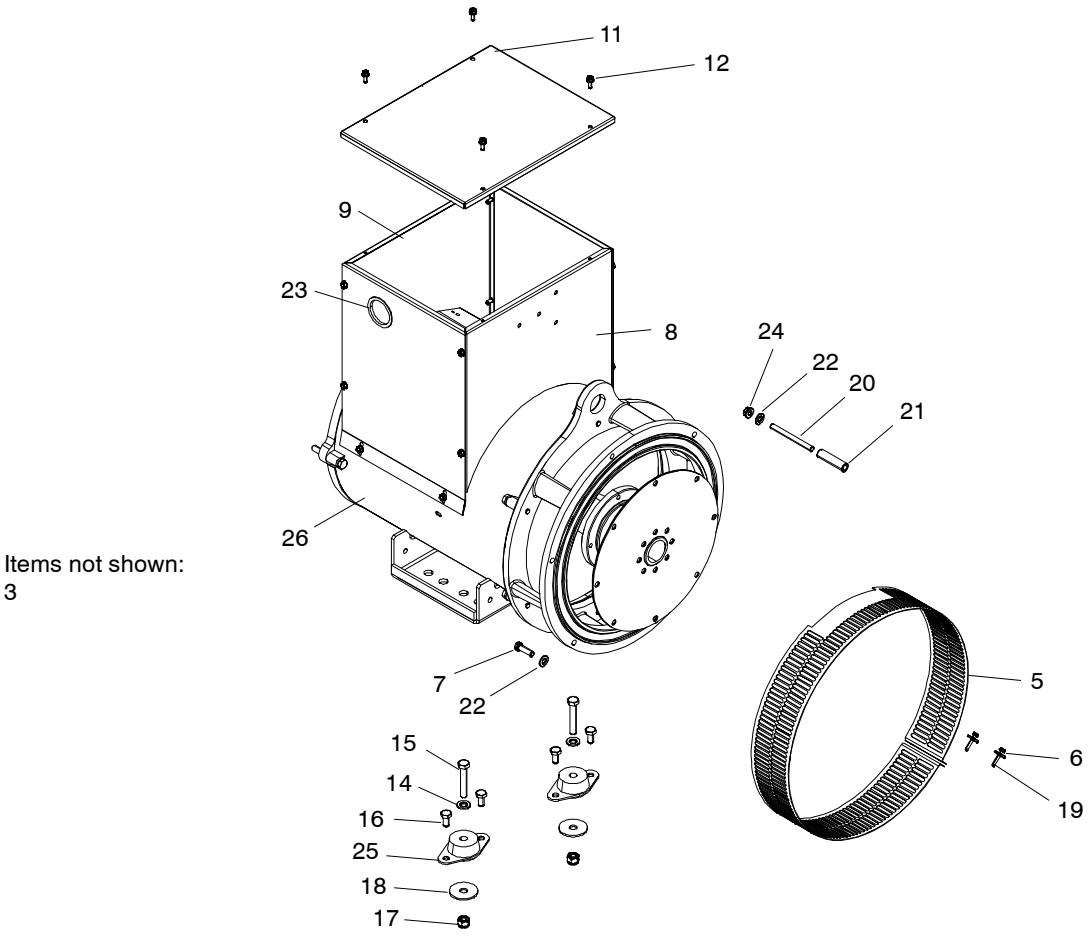
GM78543-MA1

Item	Part Number	Description	Quantity
4	X-750-18	Marker, wire	2
5	GM81106	Lead	1
7	229883	Decal, 12 Wire Reconnection	1
8	257046	Guard, generator fan	1
9	257442	Clip, speed	2
10	270956	Bolt, Hex Cap	6
11	GM85522	Panel, Front & Side J-box	1
12	GM85523	Panel, Back & Side J-box	1
14	GM88576	Cover, J-box	1
15	GM78761-1	Screw, Sheetmetal	12
16	GM80901	Bus, Neutral	1
18	M125A-12-80	Washer, Plain	2
19	M6923-06-80	Nut, Hex 6mm	3
20	M931-12065-60	Screw, Hex Cap	2
21	M933-06010-60	Screw, hex cap	2
22	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	2
23	M933-06025-60	Screw, hex cap	3
24	M933-10020-60	Screw, hex cap	4
25	M982-12-80	Nut, hex elastic stop	2
26	X-25-140	Washer, plain, .531 ID x 2in. OD	2
27	X-25-20	Washer, Flat, .312 ID x.75 OD	7
28	X-67-125	Screw, hex washer, thread-forming	2
29	X-352-63	Stud, 3/8-16 x 4 in.	8
30	X-400-132	Spacer, .406 ID x .625 OD x 2.531 in.	8
31	X-801-3	Washer, hardened, .406 ID x .812 in. OD	14
32	X-6033-5	Grommet, U-channel	1
33	X-6086-24	Washer, Spring	5
34	X-6128-35	Insulator, Standoff	2
35	X-6210-9	Nut, flange spiralock, 3/8-16	8
36	324073	Vibromount	2
37	GC70113-20	Alternator Assy, 4P7BX (SAE 10”, #3)	1

See page 48 for alternator parts list.

Group 201: Alternator and Mounting, continued

GM83071-MA1



Items not shown:
3

Group 201: Alternator and Mounting, continued

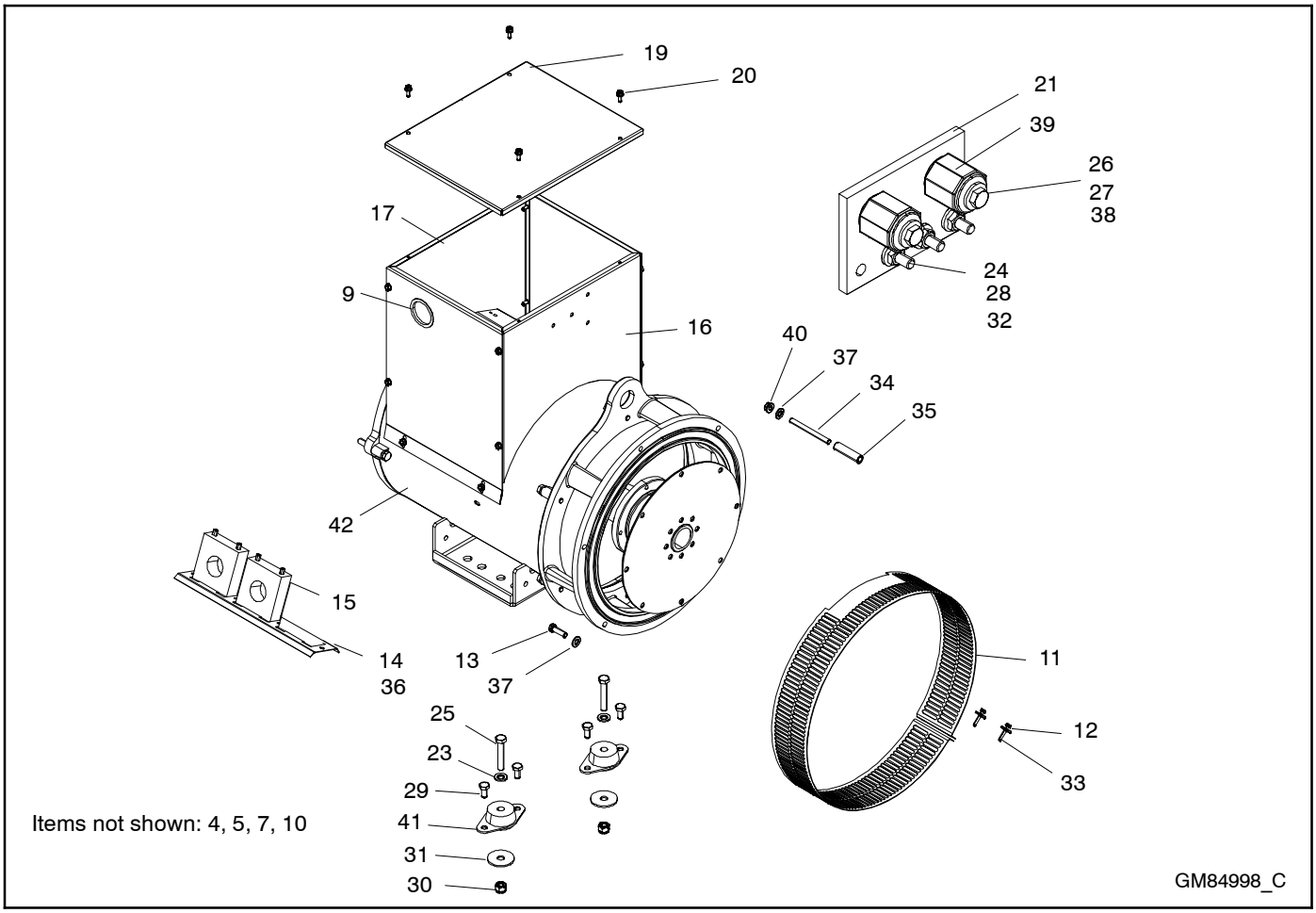
GM83071-MA1

Item	Part Number	Description	Quantity
3	X-750-18	Marker, wire	1
5	257046	Guard, generator fan	1
6	257442	Clip, speed	2
7	270956	Bolt, Hex Cap	6
8	GM85522	Panel, Front & Side J-box	1
9	GM85523	Panel, Back & Side J-box	1
11	GM85576	Cover, J-box	1
12	GM78761-1	Screw, Sheetmetal	12
14	M125A-12-80	Washer, Plain	2
15	M931-12065-60	Screw, Hex Cap	2
16	M933-10020-60	Screw, hex cap	4
17	M982-12-80	Nut, hex elastic stop	2
18	X-25-140	Washer, plain, .531 ID x 2in. OD	2
19	X-67-125	Screw, hex washer, thread-forming	2
20	X-352-63	Stud, 3/8-16 x 4 in.	8
21	X-400-132	Spacer, .406 ID x .625 OD x 2.531 in.	8
22	X-801-3	Washer, hardened, .406 ID x .812 in. OD	14
23	X-6033-5	Grommet, U-channel	1
24	X-6210-9	Nut, flange spiralock, 3/8-16	8
25	324073	Vibromount	2
26	GC70113-24	Alternator Assy, 4Q7BX (SAE 10”, #3)	1

See page 48 for alternator parts list.

Group 201: Alternator and Mounting, continued

GM84998-MA1



Group 201: Alternator and Mounting, continued

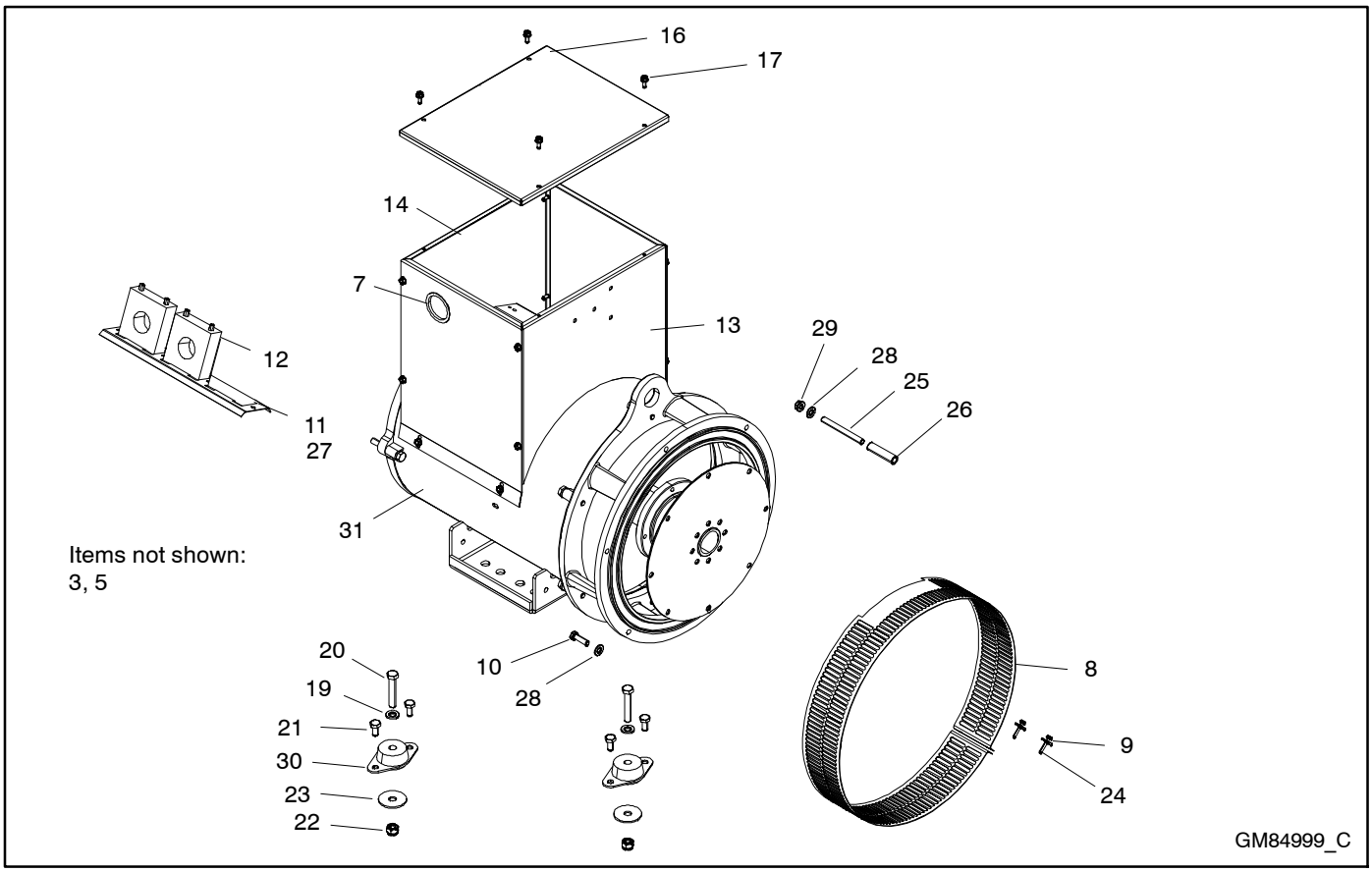
GM84998-MA1

Item	Part Number	Description	Quantity
4	X-750-18	Marker, wire	2
5	GM81106	Lead	1
7	GM85198	Harness, Wiring Current Transformer	1
9	X-6033-5	Grommet, U- Channel	1
10	229883	Decal, 12 Wire Reconnection	1
11	257046	Guard, generator fan	1
12	257442	Clip, speed	2
13	270956	Bolt, Hex Cap	6
14	276417	Bracket, CT mounting	1
15	GM16252	Transformer, Current 200A:3 VAC	2
16	GM85522	Panel, Front & Side J-box	1
17	GM85523	Panel, Back & Side J-box	1
19	GM85576	Cover, J-box	1
20	GM78761-1	Screw, Sheetmetal	12
21	GM80901	Bus, Neutral	1
23	M125A-12-80	Washer, Plain	2
24	M6923-06-80	Nut, Hex 6mm	3
25	M931-12065-60	Screw, Hex Cap	2
26	M933-06010-60	Screw, hex cap	2
27	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	2
28	M933-06025-60	Screw, hex cap	3
29	M933-10020-60	Screw, hex cap	4
30	M982-12-80	Nut, hex elastic stop	2
31	X-25-140	Washer, plain, .531 ID x 2 in. OD	2
32	X-25-40	Washer, plain, .281 ID x .625 in.OD	7
33	X-67-125	Screw, hex washer, thread-forming	2
34	X-352-63	Stud, 3/8-16 x 4 in.	8
35	X-400-132	Spacer, .406 ID x .625 OD x 2.531 in.	8
36	X-794-1	Screw, hex wshr hd, drill 1/4- 14 x 5/8	4
37	X-801-3	Washer, hardened, .406 ID x .812 in. OD	14
38	X-6086-24	Washer, Spring	5
39	X-6128-35	Insulator, Standoff	2
40	X-6210-9	Nut, flange spiralock, 3/8-16	8
41	324073	Vibromount	2
42	GCC-257719	Alternator Assembly	1

See page 50 for alternator parts list.

Group 201: Alternator and Mounting, continued

GM84999-MA1



Group 201: Alternator and Mounting, continued

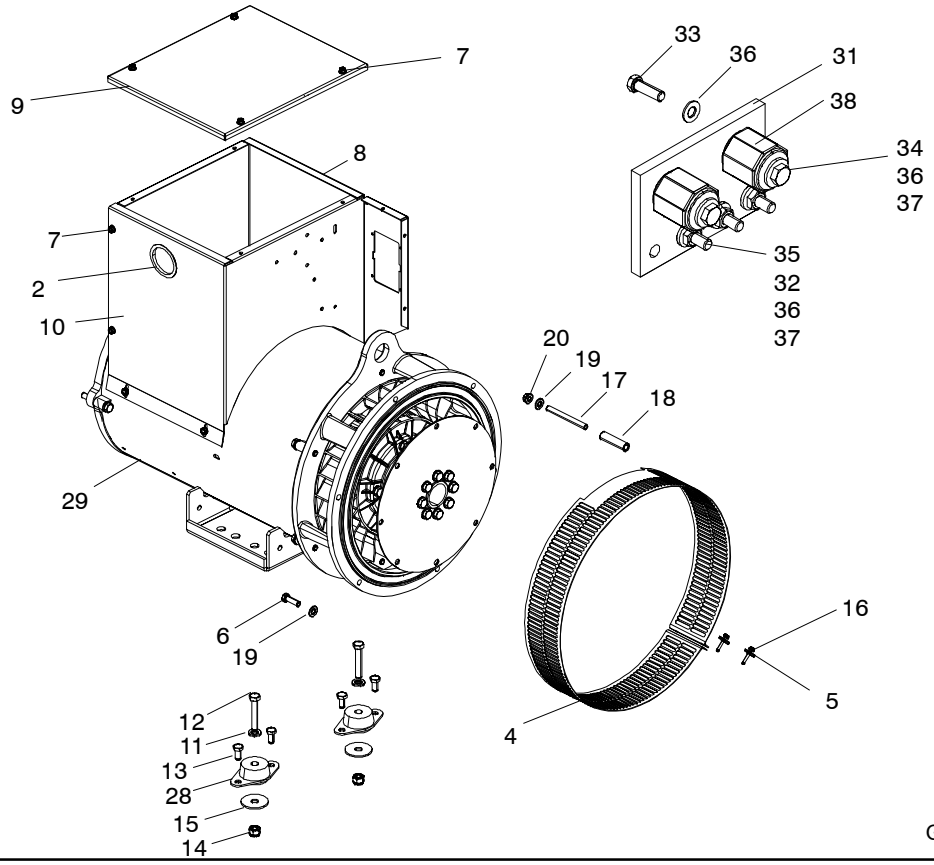
GM84999-MA1

Item	Part Number	Description	Quantity
3	X-750-18	Marker, wire	2
5	GM85198	Harness, Wiring Current Transformer	1
7	X-6033-5	Grommet, U-channel	1
8	257046	Guard, generator fan	1
9	257442	Clip, speed	2
10	270956	Bolt, Hex Cap	6
11	276417	Bracket, CT mounting	1
12	GM16252	Transformer, Current 200A:3 VAC	2
13	GM85522	Panel, Front & Side J-box	1
14	GM85523	Panel, Back & Side J-box	1
16	GM85576	Cover, J-box	1
17	GM78761-1	Screw, Sheetmetal	12
19	M125A-12-80	Washer, Plain	2
20	M931-12065-60	Screw, hex cap	2
21	M933-10020-60	Screw, hex cap	4
22	M982-12-80	Nut, hex elastic stop, 12MM	2
23	X-25-140	Washer, plain, .531 ID x 2 in. OD	2
24	X-67-125	Screw, hex washer, thread-forming	2
25	X-352-63	Stud, 3/8-16 x 4 in.	8
26	X-400-132	Spacer, .406 ID x .625 OD x 2.531 in.	8
27	X-794-1	Screw, hex wshr hd, drill 1/4-14 x 5/8	4
28	X-801-3	Washer, hardened, .406 ID x .812 in. OD	14
29	X-6210-9	Nut, flange spiralock, 3/8-16	8
30	324073	Vibromount	2
31	GCB-360736	Alternator Assembly	1

See page 50 for alternator parts list.

Group 201: Alternator and Mounting, continued

GM88819-MA1



Items not shown: 3, 27, 30

Group 201: Alternator and Mounting, continued

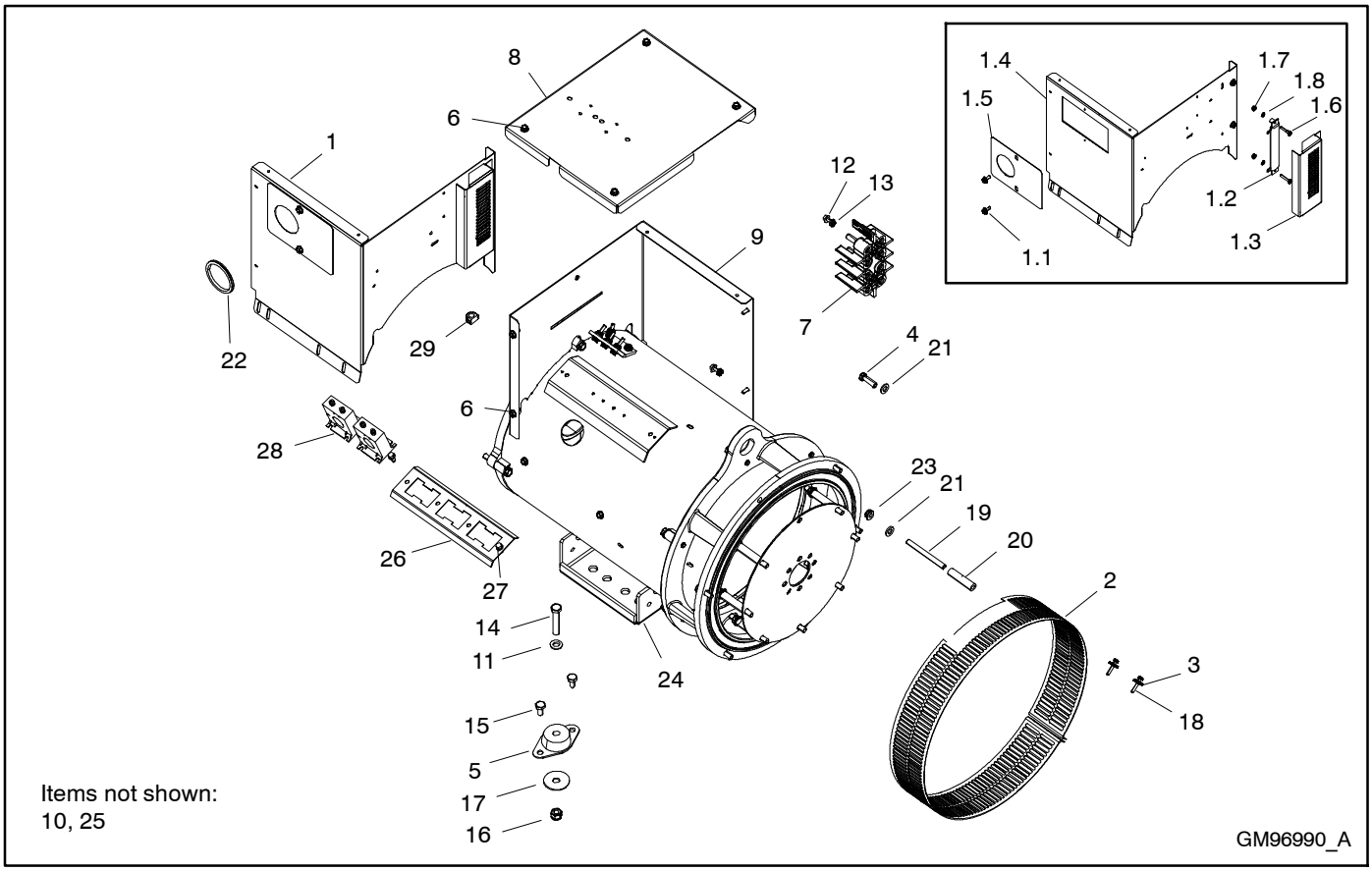
GM88819-

Item	Part Number	Description	Quantity Module Number -MA1	Quantity Module Number -MA2
2	X-6033-5	Grommet, u-channel	1	1
3	X-750-18	Marker, wire	2	2
4	257046	Guard, Generator Fan	1	1
5	257442	Clip, speed	2	2
6	270956	Bolt, Hex Cap	6	6
7	GM78761-1	Screw, Sheetmetal	12	12
8	GM85523	Panel, back & side J-box	1	1
9	GM85576	Cover, J-box	1	1
10	GM88986	Panel, Front & Side J-Box	1	1
11	M125A-12-80	Washer, Plain	2	2
12	M931-12065-60	Screw, Hex Cap	2	2
13	M933-10020-60	Screw, Hex Cap	4	4
14	M982-12-80	Nut, hex elastic stop	2	2
15	X-25-140	Washer,plain,.531 IDx2in.OD	2	2
16	X-67-125	Screw, hex washer, thread-forming	2	2
17	X-352-63	Stud, 3/8-16 x 4 in.	8	8
18	X-400-132	Spacer,.406 ID x .625 OD x 2.531 in.	8	8
19	X-801-3	Washer,hardened,.406 ID x .812 in.OD	14	14
20	X-6210-9	Nut, flange spiralock, 3/8-16	8	8
27	GM81106	Lead	1	
28	324073	Vibromount	2	2
29	GC70113-32	Alternator Assy, 4P10X (SAE 10”, #3)	1	
29	GC70113-38	Alternator Assy, 4Q10X (SAE 10”, #3)		1
30	229883	Decal, 12 Wire Reconnection	1	
31	GM80901	Bus, Neutral	1	
32	M6923-06-80	Nut, Hex 6mm	3	
33	M933-06010-60	Screw, hex cap	2	
34	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	2	
35	M933-06025-60	Screw, Hex Cap (Expense)	3	
36	X-25-40	Washer, plain, .281 ID x .625 in.OD	7	
37	X-6086-24	Washer, Spring	5	
38	X-6128-35	Insulator, Standoff	2	

See page 48 for alternator parts list.

Group 201: Alternator and Mounting, continued

GM96990



Group 201: Alternator and Mounting, continued

GM96990-

Item	Part Number	Description	Quantity
1	GM96989	Subassy, Saddle Box	1
1.1	GM78761-1	Screw, Sheetmetal	4
1.2	GM83895	Resistor	1
1.3	GM92902	Guard, Resistor	1
1.4	GM96986	Panel, Side	1
1.5	GM96987	Panel, Harness	1
1.6	M7985A-05030-20	Screw, Pan Head Machine	2
1.7	M934-05-50	Nut, Hex 5mm (NRP)	2
1.8	X-22-11	Lock .262 ID x .469 OD (KM)	2
2	257046	Guard, Generator Fan	1
3	257442	Clip, speed	2
4	270956	Bolt, Hex Cap	6
5	324073	Vibromount	2
6	GM78761-1	Screw, Sheetmetal	10
7	GM90316	Terminal Block	1
8	GM96342	Cover, Saddle Box	1
9	GM96988	Panel, Side	1
10	229883	Decal, 12 Wire Reconnection (not shown)	1
11	M125A-12-80	Washer, Plain	2
12	M6921-06020-SS	Screw, Hex Flange (M6-1.0 x 20mm)	2
13	M6923-06-80	Nut, Hex 6mm	2
14	M931-12065-60	Screw, Hex Cap	2
15	M933-10020-60	Screw, Hex Cap	4
16	M982-12-80	Nut, hex elastic stop	2
17	X-25-140	Washer,plain,.531 IDx2in.OD	2
18	X-67-125	Screw, hex washer, thread-forming	2
19	X-352-63	Stud, 3/8-16 x 4 in.	8
20	X-400-132	Spacer,.406 ID x .625 OD x 2.531 in.	8
21	X-801-3	Washer,hardened,.406 ID x .812 in.OD	14
22	X-6033-5	Grommet, u-channel	1
23	X-6210-9	Nut, Flange Spiralock, 3/8-16	8
24	See chart	Alternator Assembly	1
25	GM85198	Harness, Wiring Current Transformer (not shown)	1
26	276417	Bracket, CT mounting	1
27	X-794-1	Screw, hex wshr hd, drill 1/4-14 x 5/8	4
28	GM16252	Transformer, Current 200A:3 VAC	2
29	See chart	Grommet, u-shaped	1

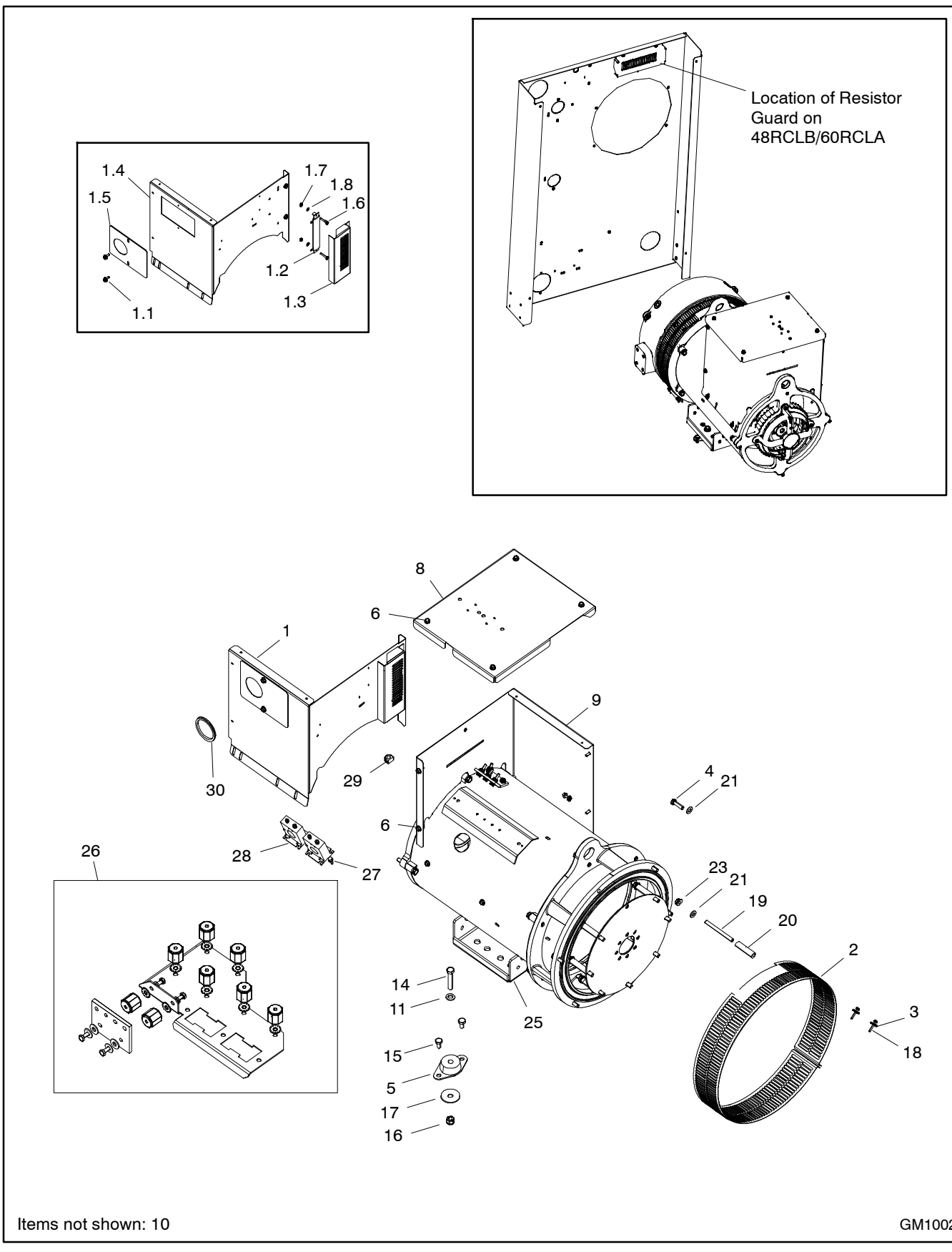
Use this table to identify part numbers of items 1, 3- 5.

Module No.	Model	Part Number	
		Item 24, Alternator	Item 29, Grommet
GM96990- MA1	60RCL	GC70113- 32	-
GM96990- MA2	60RCL, 1Ph	GC70113- 38	-
GM96990- MA3	48RCL	GC70113- 20	-
GM96990- MA4	48RCL, 1Ph	GC70113- 24	-
GM96990- MA5	4P7BX	GC70113- 20	-
GM96990- MA6	4Q7BX	GC70113- 24	-
GM96990- MA7	38RCL, 1Ph	GCB- 360736	257069
GM96990- MA8	38RCL,	GCC- 257719	257069

See page 48 for alternator parts list.

Group 201: Alternator and Mounting, continued

GM100257



Items not shown: 10

GM100257_

Group 201: Alternator and Mounting, continued

GM100257-

Item	Part Number	Description	Quantity
1	GM96989	Subassy, Saddle Box	1
1.1	GM78761-1	Screw, Sheetmetal	4
1.2	GM83895	Resistor	1
1.3	GM92902	Guard, Resistor	1
1.4	GM96986	Panel, Side	1
1.5	GM96987	Panel, Harness	1
1.6	M7985A-05030-20	Screw, Pan Head Machine	2
1.7	M934-05-50	Nut, Hex 5mm (NRP)	2
1.8	X-22-11	Lock .262 ID x .469 OD (KM)	2
2	257046	Guard, Generator Fan	1
3	257442	Clip, speed	2
4	270956	Bolt, Hex Cap	6
5	324073	Vibromount	2
6	GM78761-1	Screw, Sheetmetal	12
8	GM96342	Cover, Saddle Box	1
9	GM96988	Panel, Side	1
10	See Chart	Decal, 12 Wire Reconnection (not shown)	1
11	M125A-12-80	Washer, Plain	2
14	M931-12065-60	Screw, Hex Cap	2
15	M933-10020-60	Screw, Hex Cap	4
16	M982-12-80	Nut, hex elastic stop	2
17	X-25-140	Washer,plain,.531 IDx2in.OD	2
18	X-67-125	Screw, hex washer, thread-forming	2
19	X-352-63	Stud, 3/8-16 x 4 in.	8
20	X-400-132	Spacer,.406 ID x .625 OD x 2.531 in.	8
21	X-801-3	Washer,hardened,.406 ID x .812 in.OD	14
22	X-6033-16	Grommet, u-channel	1
23	X-6210-9	Nut, Flange Spiralock, 3/8-16	8
25	See chart	Alternator Assembly	1
26	See chart	Bracket Assy, CT mounting	1
27	See chart	Screw, hex wshr hd, drill 1/4-14 x 5/8	See Chart
28	See thart	Transformer, Current 200A:3 VAC	2
29	See chart	Harness, Wiring Current Transformer (not shown)	1
30	See chart	Grommet, u-shaped	1

Use this table to identify part numbers of items 10, 25- 30.

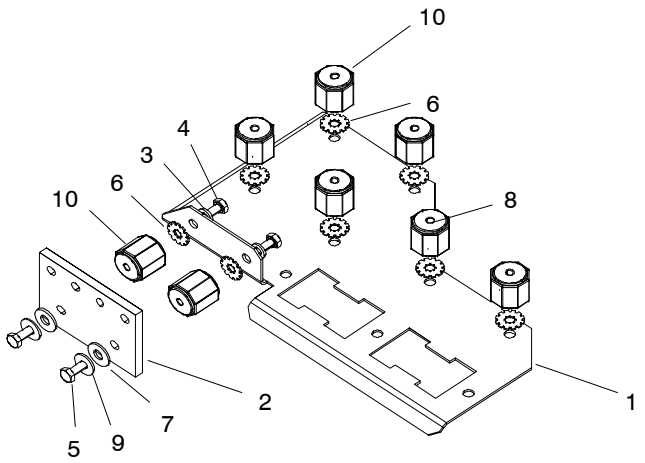
Module No.	Model	Part Number			
		Item 10	Item 25	Item 26	Item 27 (qty.)
GM100257- MA1	4P10X	229883	GC70113-32	GM100253	X-794-1 (4)
GM100257- MA2	4Q10X	-	GC70113-38	GM100254	X-794-1 (3)
GM100257- MA3	4P7BX	229883	GC70113-20	GM100253	X-794-1 (4)
GM100257- MA4	4Q7BX	-	GC70113-24	GM100254	X-794-1 (3)
GM100257- MA5	4P7BX	229883	GC70113-20	GM100253	X-794-1 (4)
GM100257- MA6	4Q7BX	-	GC70113-24	GM100254	X-794-1 (3)
GM100257- MA7	4Q5	-	GCB-360736	GM100254	X-794-1 (3)
GM100257- MA8	4P5	229883	GCC-257719	GM100255	X-794-1 (4)

Module No.	Model	Part Number		
		Item 28	Item 29	Item 30
GM100257- MA1	4P10X	GM16254	GM85198	-
GM100257- MA2	4Q10X	GM16254	GM85198	-
GM100257- MA3	4P7BX	-	-	-
GM100257- MA4	4Q7BX	-	-	-
GM100257- MA5	4P7BX	GM16252	GM85198	-
GM100257- MA6	4Q7BX	GM16252	GM85198	-
GM100257- MA7	4Q5	GM16252	GM85198	257069
GM100257- MA8	4P5	GM16252	GM85198	257069

See page 48 for alternator parts list.

Group 201: Alternator and Mounting, continued

CT Mounting Bracket Assy.



GM100253_

GM100253

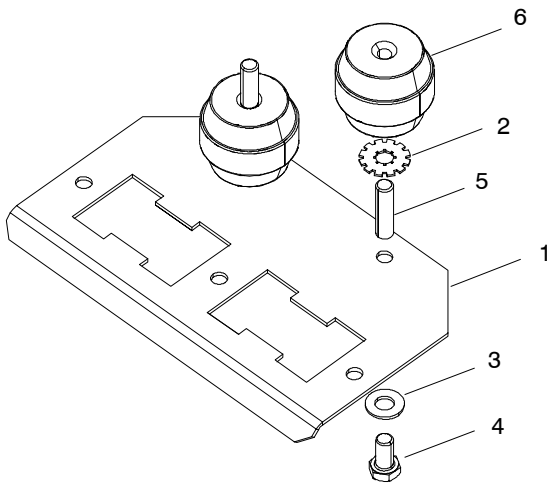
Item	Part Number	Description	Quantity
1	GM100179	Bracket, CT Mounting	1
2	GM80901	Bus, Neutral	1
3	M125A-06-80	Washer, Plain	8
4	M933-06012-60	Screw	8
5	M933-06016-60	Screw, hex cap, M6x16mm	2
6	X-22-12	Washer, lock.262 IDx.743 in.OD	8
7	X-25-20	Washer, Flat .312 ID x.75 OD	2
8	X-6054-23	Stud (Metric)	6
9	X-6086-24	Washer, Spring	2
10	X-6128-35	Insulator , Standoff	8

GM100255

Item	Part Number	Description	Quantity
1	GM100180	Bracket, CT Mounting	1
2	GM80901	Bus, Neutral	1
3	M125A-06-80	Washer, Plain	8
4	M933-06012-60	Screw	8
5	M933-06016-60	Screw, hex cap, M6x16mm	2
6	X-22-12	Washer, lock.262 IDx.743 in.OD	8
7	X-25-20	Washer, Flat .312 ID x.75 OD	2
8	X-6054-23	Stud (Metric)	6
9	X-6086-24	Washer, Spring	2
10	X-6128-35	Insulator , Standoff	8

Group 201: Alternator and Mounting, continued

CT Mounting Bracket Assy.

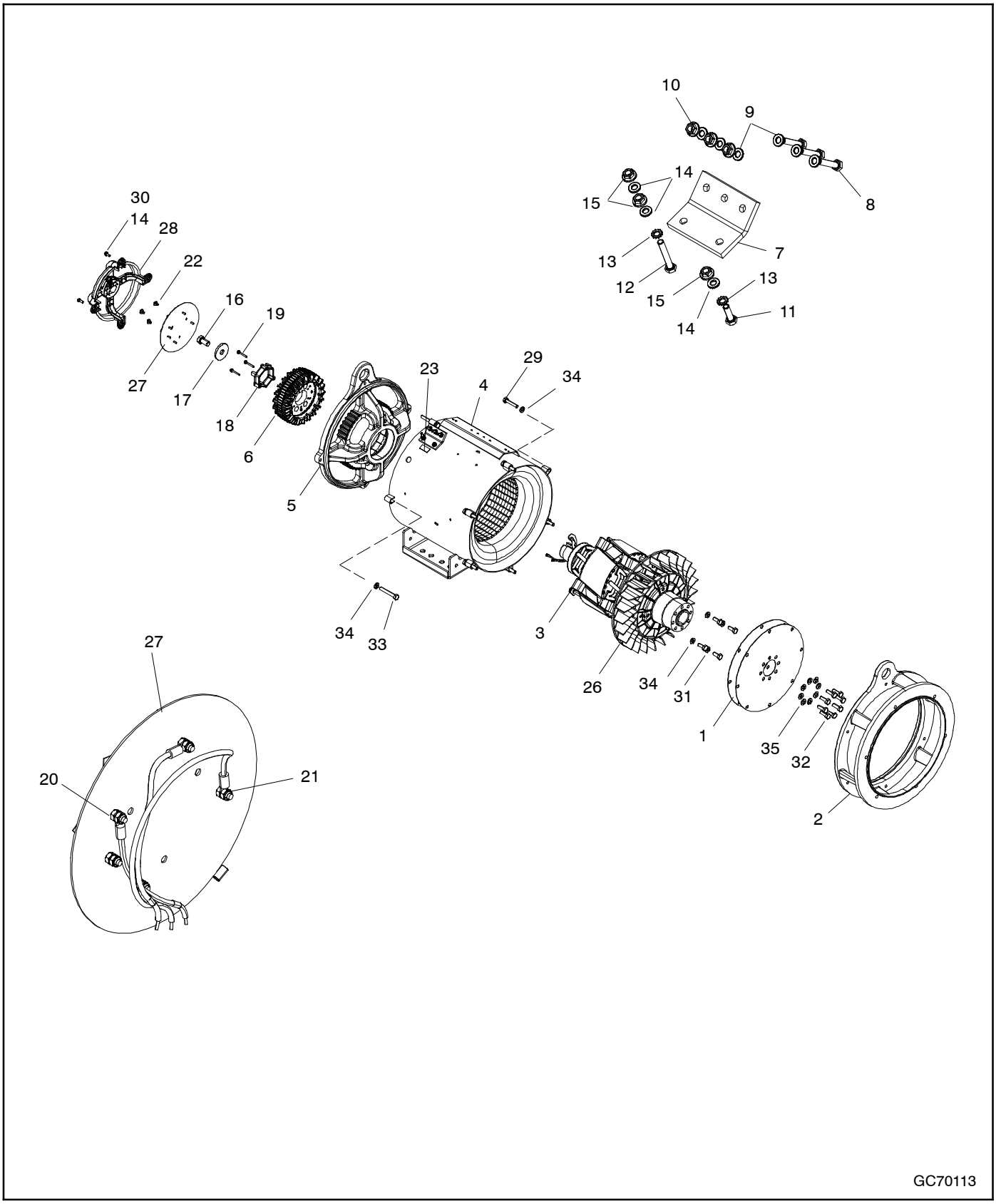


GM100254

Item	Part Number	Description	Quantity
1	GM100275	Bracket, CT Mounting	1
2	X-22-16	Washer, lock.326 IDx.883 in.OD	2
3	X-25-85	Washer, plain, .344 ID x .687 in.OD	2
4	X-125-23	Bolt, Hex Cap	2
5	X-352-37	Stud, 5/16-18 x 1.03 in.	2
6	X-6128-34	Insulator, Standoff	2

Group 201: Alternator and Mounting, continued

4P_X/4Q_X Alternators GC70113-



Group 201: Alternator and Mounting, continued

4P_X/4Q_X Alternators GC70113-

Item	Part Number	Description	Quantity
1	See chart	Disc, Drive	2
2	See chart	Adapter, Generator	1
3	See chart	Rotor Assembly	1
4	See chart	Stator Assembly	1
5	See chart	Bracket Assembly, End	1
6	See chart	Exciter Armature, SCR	1
7	See chart	Bus, Ground	1
8	See chart	Screw, Hex Cap	3
9	See chart	Washer, Plain	6
10	See chart	Nut, Hex	3
11	M933-06020-60	Screw, hex cap	1
12	M933-06040-60	Screw, hex cap	1
13	M6797A-06-SS	Washer, Internal & External Tooth	2
14	M125A-06-80	Washer, Plain	7
15	M6923-06-80	Nut, Hex 6mm	3
16	M933-16030-82	Screw, hex cap	1
17	GM70070	Washer, FRX Exciter Mtg	1
18	GM70076	Spacer, FRX Activator	1
19	M7500D-05035-85	Screw, Metric Thread Forming	3
20	M934-04-SS	Nut, Hex (Stainless Steel)	5
21	M985-04-SS	Nut, Hex Elastic Stop	5
22	X-6071-8	Screw, Thread Forming	3
23	344295	Decal, equipment grd	1
26	347697	Fan, Alternator	1
27	GM72391	PCB ASSY, World Alternator Activator	1
28	GM74218	Holder Assy, LED Optic Board	1
29	M931-10050-60	Screw, hex cap	6
30	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	4
31	M933-10025-60	Screw, hex cap,fully thrd M10 x 25mm	4
32	M933-10030-82	Screw, hex cap	8
33	M933-10070-60	Screw, Hex Cap	4
34	X-25-93	Washer,plain .406ID x .75in. OD	14
35	X-801-3	Washer,hardened,.406 ID x .812 in.OD	8

Alternator Part Number and Mount Type

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

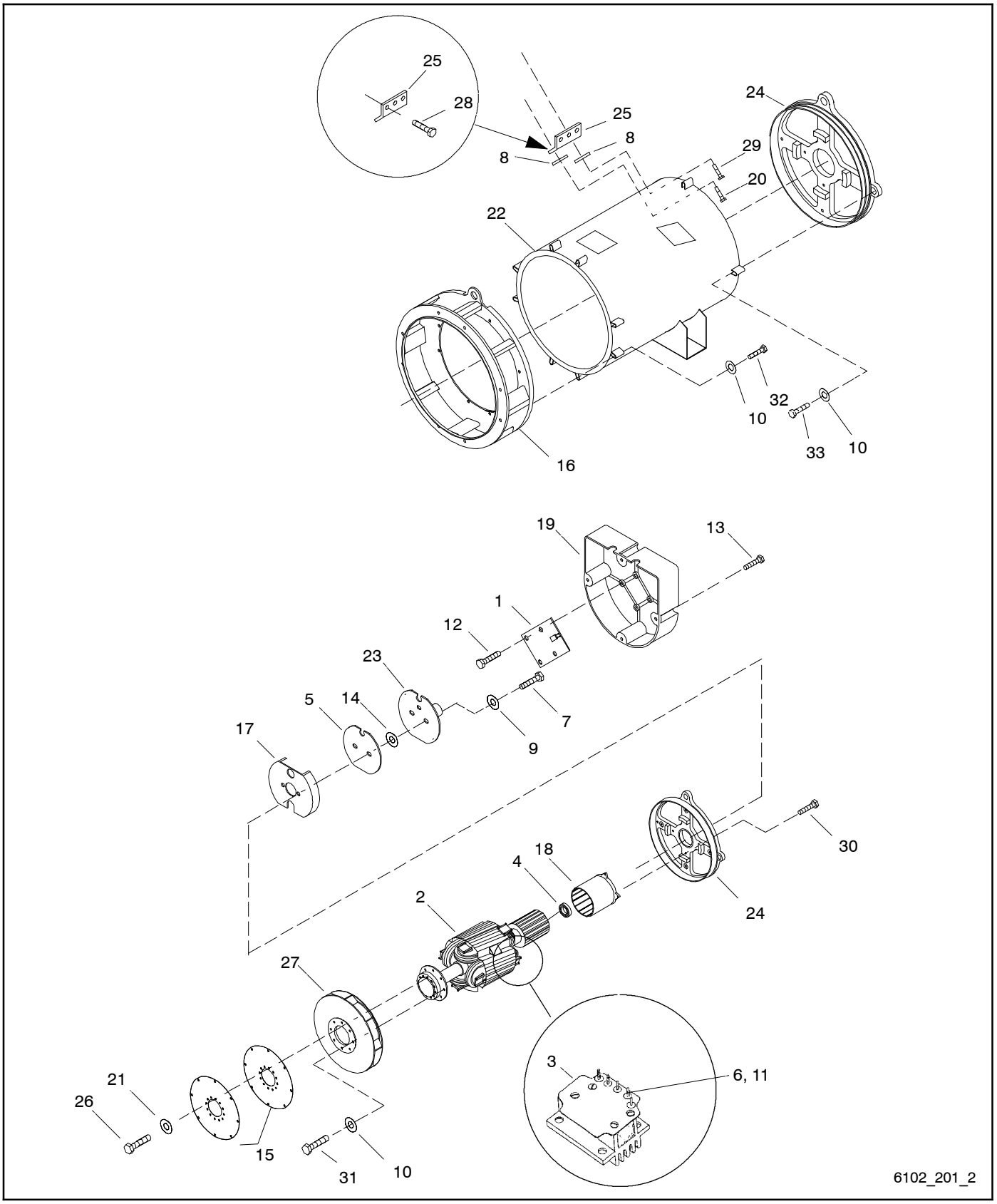
Alternator No.	Assembly				
	Item 1, Drive Disc	Item 2, Adapter	Item 3, Rotor Assy.	Item 4, Stator Assy.	Item 5, End Bracket
GC70113-20	257015	GM32006	GC70100-4	GC70110-4	GM70080-2
GC70113-24	257015	GM32006	GC70100-4	GC70112-4	GM70080-2
GC70113-30	257015	GM32006	GC70100-5	GC70112-5	GM70080-2
GC70113-31	257015	GM32007	GC70100-6	GC70110-6	GM70080-2
GC70113-32	257015	GM32006	GC70100-6	GC70110-6	GM70080-2
GC70113-38	257015	GM32006	GC70100-6	GC70112-6	GM70080-2

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

Alternator No.	Assembly				
	Item 6, Exciter	Item 7, Ground Bus	Item 8, Screws	Item 9, Washers	Item 10, Nuts
GC70113-20	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-24	GC70064-2	257985	M933-08030-60	M125A-08-80	M6923-08-80
GC70113-30	GC70064-2	257985	M933-08030-60	M125A-08-80	M6923-08-80
GC70113-31	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-32	GC70064-2	257986	M933-06030-60	M125A-06-80	M6923-06-80
GC70113-38	GC70064-2	257985	M933-08030-60	M125A-08-80	M6923-08-80

Group 201: Alternator and Mounting, continued

4P5/4Q5 Alternators



Group 201: Alternator and Mounting, continued

4P5/4Q5 Alternators

Item	Part Number	Description	Quantity
1	B-257099	PCB Assembly Alternator Optic	1
2	See chart	Rotor assembly	1
3	B-258545	Heatsink	1
4	X-758-2	Bearing, ball	1
5	GM34505	PCB assembly, photo receiver	1
6	X-101-24	Nut, hex elastic stop, 6-32	5
7	X-117-5	Screw, hex head machine	2
8	X-22-44	Washer, lock, 0.262 ID x 0.743 in. OD	2
9	X-22-9	Washer, lock, 0.20 ID x 0.373 in. OD	2
10	X-25-93	Washer, plain, 0.406 ID x 0.75 in. OD	14
11	X-283-7	Terminal, ring, male, 22-16 AWG	4
12	X-6071-1	Screw, Phillips pan head	4
13	X-67-133	Screw, hex washer, thread-forming	3
14	243321	Washer, insulating, 0.195 ID x 0.5 in.	2
15	257015	Lamination, armature drive	2
16	257018	Adapter, generator	1
17	257077	Actuator, magnetic cup	1
18	See chart	Exciter field assembly	1
19	257258	Cover, FR LED circuit board	1
20	X-791-5	Screw, hex head machine	1
21	X-801-3	Washer, hardened, 0.406 ID x 0.812 in.	8
22	See chart	Stator assembly	1
23	257850	Insulator	1
24	257984	End bracket	1
25	257985	Lead connector	1
26	270956	Bolt, Hex Cap	8
27	347697	Fan, alternator	1
28	X-125-24	Bolt, Hex Cap	3
29	X-456-16	Bolt, Hex Cap	1
30	X-125-34	Bolt, Hex Cap	4
31	X-6238-11	Bolt, Hex Cap (3/8-16 x 1”) Gr5	4
32	X-6238-6	Bolt, Hex Cap (3/8-16 x 2”) Gr5	6
33	273736	Screw, hex head machine, special thread	4

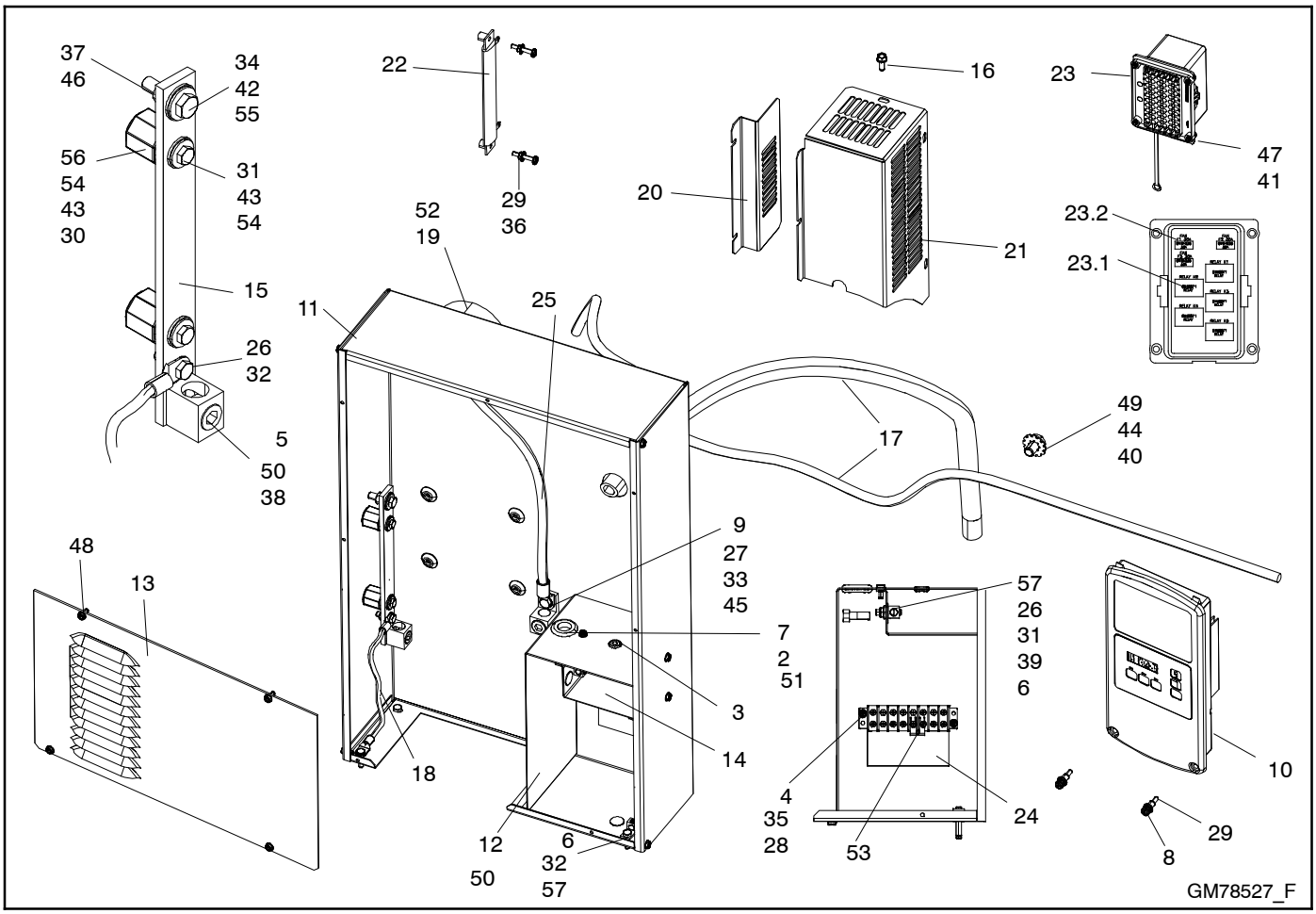
Alternator Part Number and Mount Type

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

	Assembly		
Alternator	Item 2, Rotor	Item 22, Stator	Item 18, Exciter Field
GCC-257719	GCA-258979	GC257766	GC257080
GCB-360736	GCA-258979	GC360748	GC257080

Group 301: Control and Harness

GM78527-

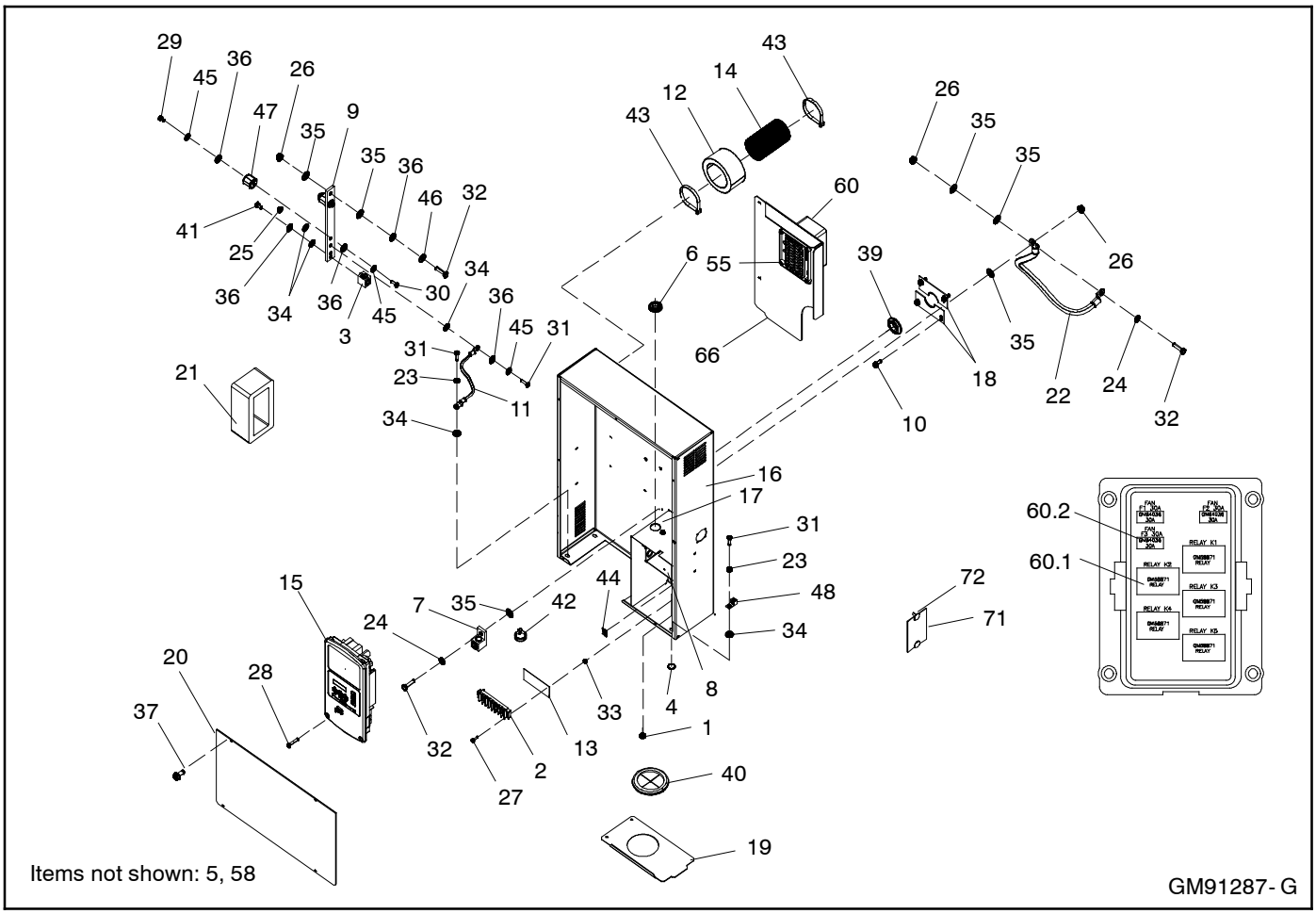


Group 301: Control and Harness

Item	Part Number	Description	GM78527- Quantity Module Number -GR1
2	357477	Cable, Patch, 3 Ft. RJ-45	1
3	200705	Grommet, round	1
4	246115	Terminal block	1
5	297712	Lug, terminal	1
6	345211	Decal, ground	3
7	D-1128	Grommet, round	1
8	GM11040-6	Insert, Threaded, M5-0.8	2
9	GM28413	Lug, Terminal	1
10	GM92089	Service Controller, RDC2	1
11	GM78530	Box, Junction	1
12	GM78533	Divider, Junction Box	1
13	GM78534	Plate, Access	1
14	GM78536	Divider, Junction Box	1
15	GM78547	Bus, Neutral	1
16	GM78761-1	Screw	6
17	GM79870	Harness, Engine 48 kW Light Commercial	1
18	GM82875	Lead	1
19	GM82972	Insulation, Acoustic Foam 2”	1
20	GM83893	Cover, Resistor	1
21	GM85577	Cover, Fuse Box	1
22	GM83895	Resistor	1
23	GM83896	Harness, Electric Fans 48RCL	1
23.1	GM58871	Relay	5
23.2	GM64036	Fuse, 30A, 32V. (12V)	3
24	GM84245	Decal	1
25	LK-0624-3636	Lead	1
26	M6923-06-80	Nut, Hex 6mm	2
27	M6923-08-80	Nut, Hex 8mm	1
28	M7985A-04016-20	Screw, Pan Head Machine	2
29	M7985A-05030-20	Screw, Pan Head Machine	4
30	M933-06010-60	Screw, hex cap	2
31	M933-06016-60	Screw, hex cap, M6x16mm, js500 full thrd	3
32	M933-06020-60	Screw, hex cap	5
33	M933-08020-60	Screw, hex cap	1
34	M933-08030-60	Screw, hex cap	1
35	M934-04-50	Nut, Hex 4mm	2
36	M934-05-50	Nut, Hex 5mm	2
37	M934-08-60	Nut, Hex	1
38	X-22-11	Washer, Lock, .262 ID x .469 OD	3
39	X-22-12	Washer, lock, .262 ID x .743 in. OD	2
40	X-22-26	Washer,lock, .521 ID x 1.24 in. OD	1
41	X-22-9	Washer, lock, .20 ID x.373 in. OD	4
42	X-25-18	Washer, Flat, .391 ID x.875 in. OD	1
43	X-25-20	Washer, Flat, .312 ID x.75 OD	5
44	X-25-26	Washer, Plain, .531 ID x 1.062 in. OD	1
45	X-25-40	Washer, plain, .281 ID x .625 in. OD	1
46	X-25-85	Washer, plain, .344 ID x .687 in. OD	1
47	X-50-1	Screw, Machine	4
48	X-67-156	Screw, Tapping	12
49	X-129-15	Bolt, Hex Cap	1
50	X-465-6	Bolt, Hex Cap (1/4-20 x 1/2”) Gr5	1
51	X-468-1	Cable Tie	1
52	GM85171-1	Conduit, Convoluted	1
52	X-6033-5	Grommet, U-channel	1
53	X-6048-2	Jumper, term block 2 pos	1
54	X-6086-24	Washer, Spring	5
55	X-6086-25	Washer, Spring	1
56	X-6128-35	Insulator, Standoff	2
57	X-6207-1	Lug, terminal, aluminum	2
58	GM94607	Decal, Warning (not shown)	2

Group 301: Control and Harness, continued

GM91287- GR5



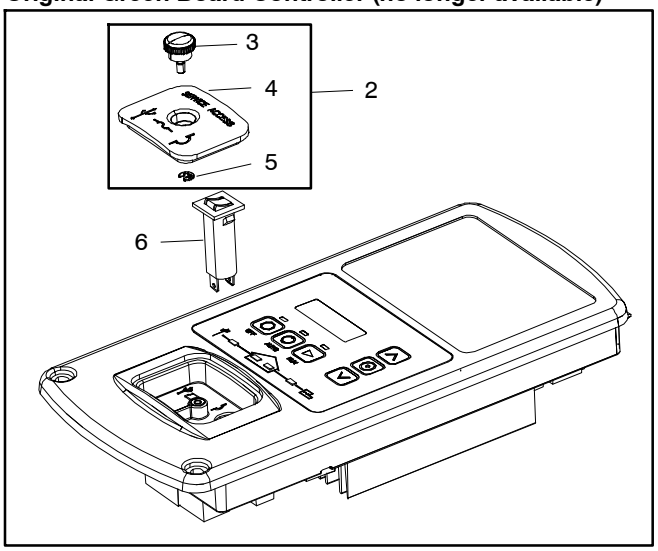
Group 301: Control and Harness, continued

GM91287- GR5

Item	Part Number	Description	Quantity
1	200705	Grommet, round	1
2	246115	Terminal block	1
3	297712	Lug, terminal	1
4	345211	Decal, ground	3
5	357477	Cable, Patch, 3 Ft. RJ-45	1
6	D-1128	Grommet, round	1
7	GM28413	Lug, Terminal	1
8	GM78536	Divider, Junction Box	1
9	GM78547	Bus, Neutral	1
10	GM78761-1	Screw, Sheetmetal	4
11	GM82875	Lead	1
12	GM82972	Insulation, Acoustic Foam 2”	1
13	GM84245	Decal, Terminal Block	1
13	GM94607	Decal, Warning (not shown)	1
14	GM85171-1	Conduit, Convoluted	1
15	GM92089	Service Controller, RDC2	1
16	GM91133	Box, Juction	1
17	GM91306	Divider, Junction Box	1
18	GM93075	Plate, Harness	2
19	GM93731	Plate, Conduit Cover	1
20	GM93736	Plate, Acess	1
21	GM93741	Insulation, Acoustic Foam 2”	1
22	LK-0618-3637	Lead	1
23	M125A-06-80	Washer, Plain	3
24	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	2
25	M6923-06-80	Nut, Hex 6mm	2
26	M6923-08-80	Nut, Hex 8mm	3
27	M7985A-04016-20	Screw, Pan Head Machine	2
28	M7985A-05030-20	Screw, Pan Head Machine	2
29	M933-06010-60	Screw, Hex Cap	2
30	M933-06016-60	Screw, Hex Cap	2
31	M933-06020-60	Screw, Hex Cap	4
32	M933-08030-60	Screw, Hex Cap	3
33	M934-04-50	Nut, Hex 4mm	2
34	X-22-12	Washer, lock.262 IDx.743 in.OD	7
35	X-22-16	Washer, lock.326 IDx.883 in.OD	6
36	X-25-20	Washer, Flat .312 ID x.75 OD	5
37	X-6216-1	Screw, Phillips hex crimptite	12
39	X-284-3	Grommet, round	1
40	X-284-31	Grommet, round	1
41	X-465-2	Bolt, Hex Cap	1
42	X-468-1	Cable Tie	1
43	X-468-4	Cable Tie	2
44	X-6048-2	Jumper, term block 2 pos	1
45	X-6086-24	Washer, Spring	5
46	X-6086-25	Washer, Spring	1
47	X-6128-35	Insulator , Standoff	2
48	X-6207-1	Lug, terminal, aluminum	2
55	X-50-1	Screw, Machine	4
	GM97332	Subassy, Bus Bar (includes items 3, 9, 11, 25,30,31,34,36, 41, 45, 47)	
58	GM79870	Harness, Engine	1
60	GM83896	Harness, Electric Fans 48RCL	1
60.1	GM58871	Relay	5
60.2	GM64036	Fuse, 30A. 32V. (12V)	3
66	GM97485	Bracket, Fuse Box	1
71	GM69919	Cover, Air Inlet	1
72	X-6340-2	Clip, Panel Fastener	1

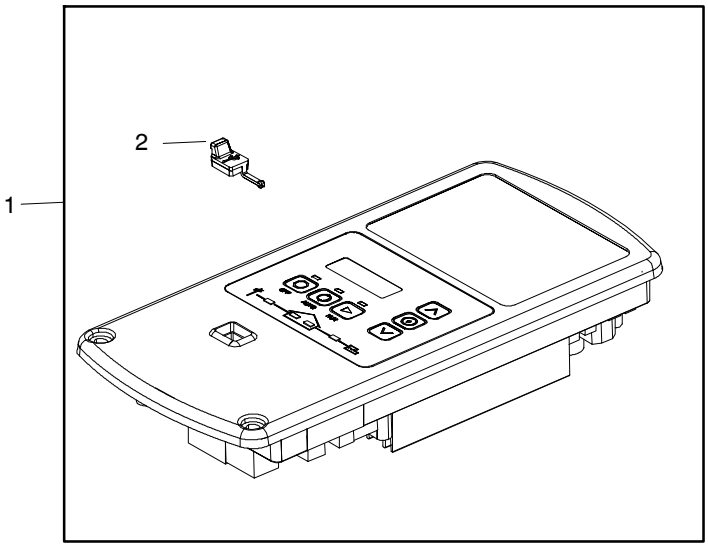
Group 301: Control and Harness, continued

Original Green Board Controller (no longer available)



Item	Part Number	Description	Qty.
2	GM71174	Fuse Cover Assy	1
3	GM63652	Screw, Thumb	1
4	GM62862	Cover, Fuse	1
5	X-269-51	Ring, Retaining	1
6	GM63134	Breaker, Circuit (20A.)	1

Service Controller GM92089

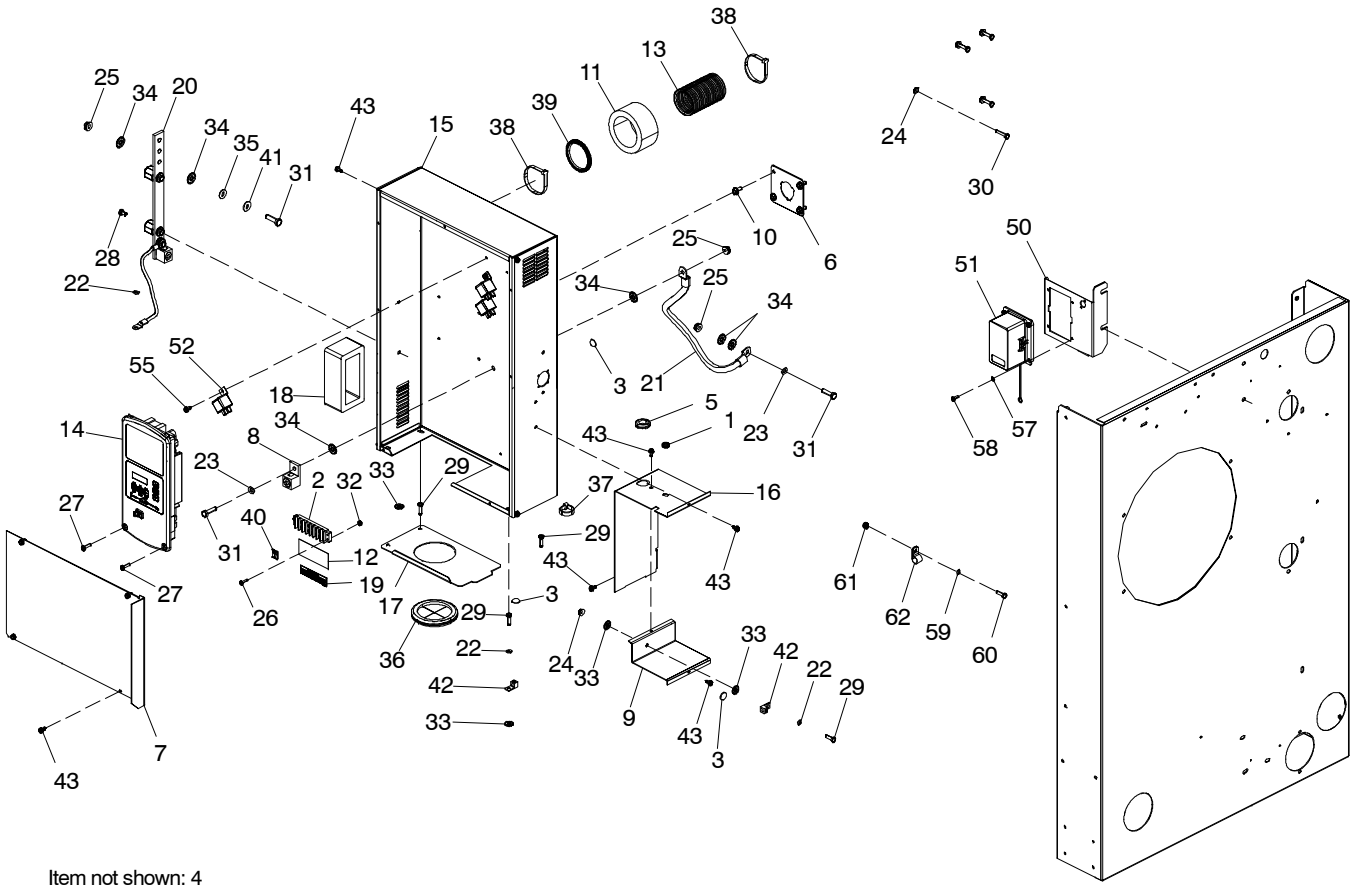


Item	Part Number	Description	Qty.
1	GM92089	Service Controller, RDC2	1
2	GM89865	Plug, USB	1

Notes

Group 301: Control and Harness, continued

GM102389- GR1



Item not shown: 4

GM102389_B

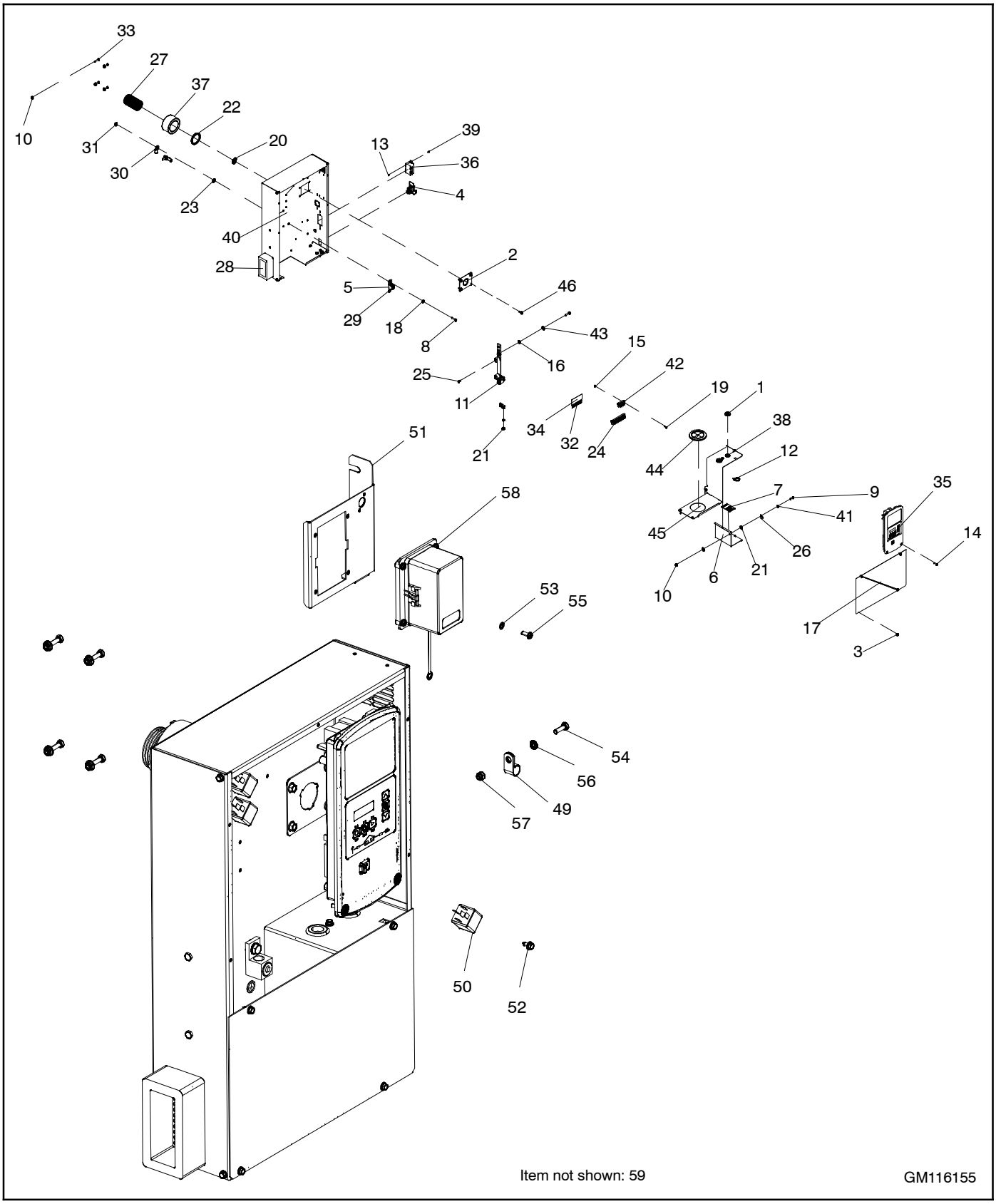
Group 301: Control and Harness, continued

GM102389-GR1

Item	Part Number	Description	Quantity
1	200705	Grommet, round	1
2	246115	Terminal block	1
3	345211	Decal, ground	3
4	357477	Cable, patch, 3 ft. RJ-45	1
5	D-1128	Grommet, round	1
6	GM103113	Plate, harness connector	1
7	GM104255	Plate, access	1
8	GM28413	Lug, terminal	1
9	GM78536	Divider, junction box	1
10	GM78761-1	Screw, sheet metal M6 x 1.0 x 16 mm	4
11	GM82972	Insulation, acoustic foam 2 in.	1
12	GM84245	Decal, terminal block	1
13	GM85171-1	Conduit, convoluted	1
14	GM92089	Assy. controller	1
15	GM91133	Box, junction	1
16	GM91306	Divider, junction box	1
17	GM93731	Plate, conduit cover	1
18	GM93741	Insulation, acoustic foam 2 in.	1
19	GM94607	Decal, warning	1
20	GM97332	Subassy, bus bar	1
21	LK-0618-3637	Lead	1
22	M125A-06-80	Washer, plain 6.4 ID x 12.0 OD	3
23	M125A-08-80	Washer, plain 8.4 ID x 16.0 OD	2
24	M6923-06-80	Nut, hex 6 mm	5
25	M6923-08-80	Nut, hex 8 mm	3
26	M7985A-04016-20	Screw, pan head machine	2
27	M7985A-05020-20	Screw, pan head machine	2
28	M933-06010-60	Screw, hex cap	2
29	M933-06020-60	Screw, hex cap	4
30	M933-06030-60	Screw, hex cap	4
31	M933-08030-60	Screw, hex cap	3
32	M934-04-50	Nut, hex 4mm	2
33	X-22-12	Washer, lock	4
34	X-22-16	Washer, lock	6
35	X-25-20	Washer, flat .312 ID x .75 OD	1
36	X-284-31	Grommet, round	1
37	X-468-1	Cable tie	1
38	X-468-4	Cable tie	2
39	X-6033-16	Grommet, u-channel	1
40	X-6048-2	Jumper	1
41	X-6086-25	Washer, spring	1
42	X-6207-1	Lug, terminal, aluminum	2
43	X-6216-1	Screw, Phillips hex crimptite	12
50	GM103737	Bracket, fuse box	1
51	GM102522	Harness, 48 RCLB/60RCLA generator	1
52	GM49746	Relay, 12 VDC	3
55	X-6216-1	Screw, Phillips hex crimptite	3
57	X-22-9	Washer, lock	4
58	X-50-1	Screw, machine	4
59	M125A-06-80	Washer, plain 6.4 ID x 12.0 OD	1
60	M933-06020-60	Screw, hex cap	1
61	M982-06-80	Nut, hex elastic stop, 6 mm	1
62	X-414-1	Clip, tube 9/16 x 11/32 in.	1

Group 301: Control and Harness, continued

GM116155-GR1



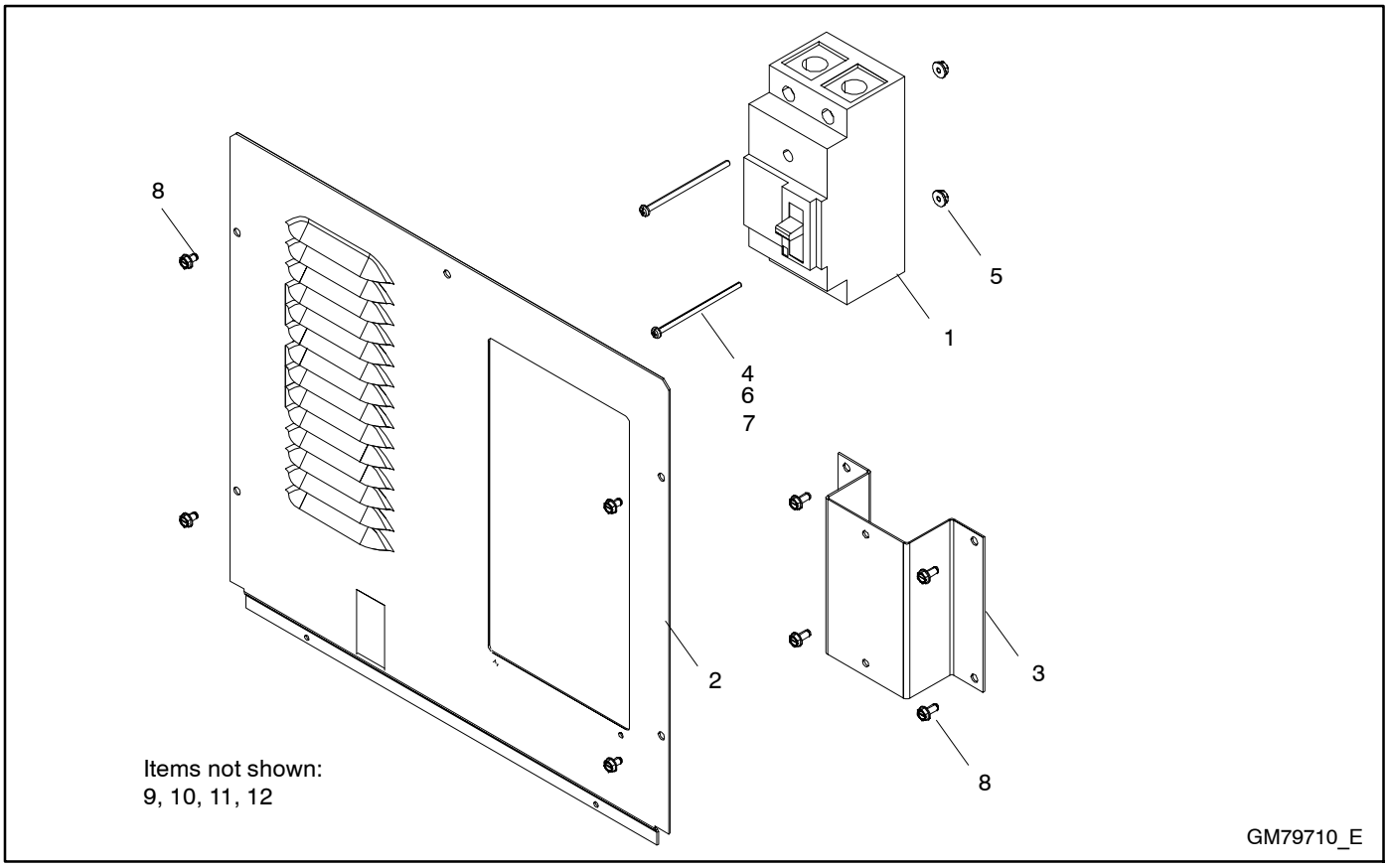
Group 301: Control and Harness, continued

GM116155-GR1

Item	Part Number	Description	Quantity
1	D-1128	Grommet, round	2
2	GM103113	Plate, Harness Connector	1
3	X-6216-1	Screw, Phillips hex crimptite	12
4	GM111084	Switch, Engine Shutdown	1
5	GM28413	Lug, Terminal	1
6	GM116157	Divider, Junction Box	1
7	GM107359	Decal, Danger, High Voltage	1
8	M933-08030-60	Screw, Hex Cap M8 X 30	3
9	M933-06020-60	Screw, Hex Cap M6 X 20	4
10	M6923-06-80	Nut, Hex 6mm	5
11	GM97332	Subassy, Bus Bar	1
12	X-468-1	Cable Tie	1
13	M934-03-50	Nut, Hex 3mm	2
14	M7985A-05020-20	Screw, Pan Head Machine	2
15	M934-04-50	Nut, Hex 4mm	4
16	X-25-20	Washer, Flat .312 ID x.75 OD	1
17	GM93736	Plate, Access	1
18	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	2
19	M7985A-04016-20	Screw, Pan Head Machine	4
20	X-468-4	Cable tie	2
21	X-22-12	Washer, lock.262 IDx.743 in. OD	4
22	X-6033-16	Grommet, U-Channel	1
23	X-22-16	Washer, Lock .326 in. ID X .883 in. OD	6
24	246115	Terminal Block, 8-Position, 2-Row	1
25	M933-06010-60	Screw, Hex Cap M6 X 10	2
26	X-6207-1	Lug, terminal, aluminum	2
27	GM85171-1	Conduit, Convoluted	1
28	GM93741	Insulation, Acoustic Foam 2 in.	1
29	345211	Decal, ground	3
30	LK-0618-3637	Lead	1
31	M6923-08-80	Nut, Hex 8mm	3
32	GM94607	Decal, Warning	1
33	M933-06030-60	Screw, Hex Cap M6 X 30	4
34	GM84245	Decal, Terminal Block	1
35	GM92089	Controller, Service RDC2, Resi-LC Distrib	1
36	GM33905	Receptacle, GFCI Duplex	1
37	GM82972	Insulation, Acoustic Foam 2 in.	1
38	GM116162	Divider, Junction Box	1
39	M7985A-03008-20	Screw, Pan Head Machine	2
40	GM116156	Box, Junction	1
41	M125A-06-80	Washer, Plain	3
42	223096	Terminal Block, 3-Position, 2-Row	1
43	X-6086-25	Washer, Spring	1
44	X-284-31	Grommet, round	1
45	GM93731	Plate, Conduit Cover	1
46	GM78761-1	Screw, Sheetmetal	4
47	GM116303	Harness, 24-60RCL Outlet	1
48	357477	Cable, Patch, 3 Ft. RJ-45	1
50	GM49746	Relay, 12 VDC	3
51	GM103737	Bracket, Fuse Box	1
52	X-6216-1	Screw, Phillips Hex Crimptite	3
53	X-22-9	Washer, Lock .20 ID x .373 in. OD	4
54	M933-06020-60	Screw, Hex Cap M6 X20	1
55	X-50-1	Screw, Machine	4
56	M125A-06-80	Washer, Plain	1
57	M982-06-80	Nut, Hex Elastic Stop, 6 mm	1
58	GM115905	Harness, Genset 6.2L Turbo	1
59	GM115902	Diagram, Wiring 6.2L Turbo	1

Circuit Breaker and Mounting

GM79709-, GM79710-



Circuit Breaker and Mounting

GM79709-

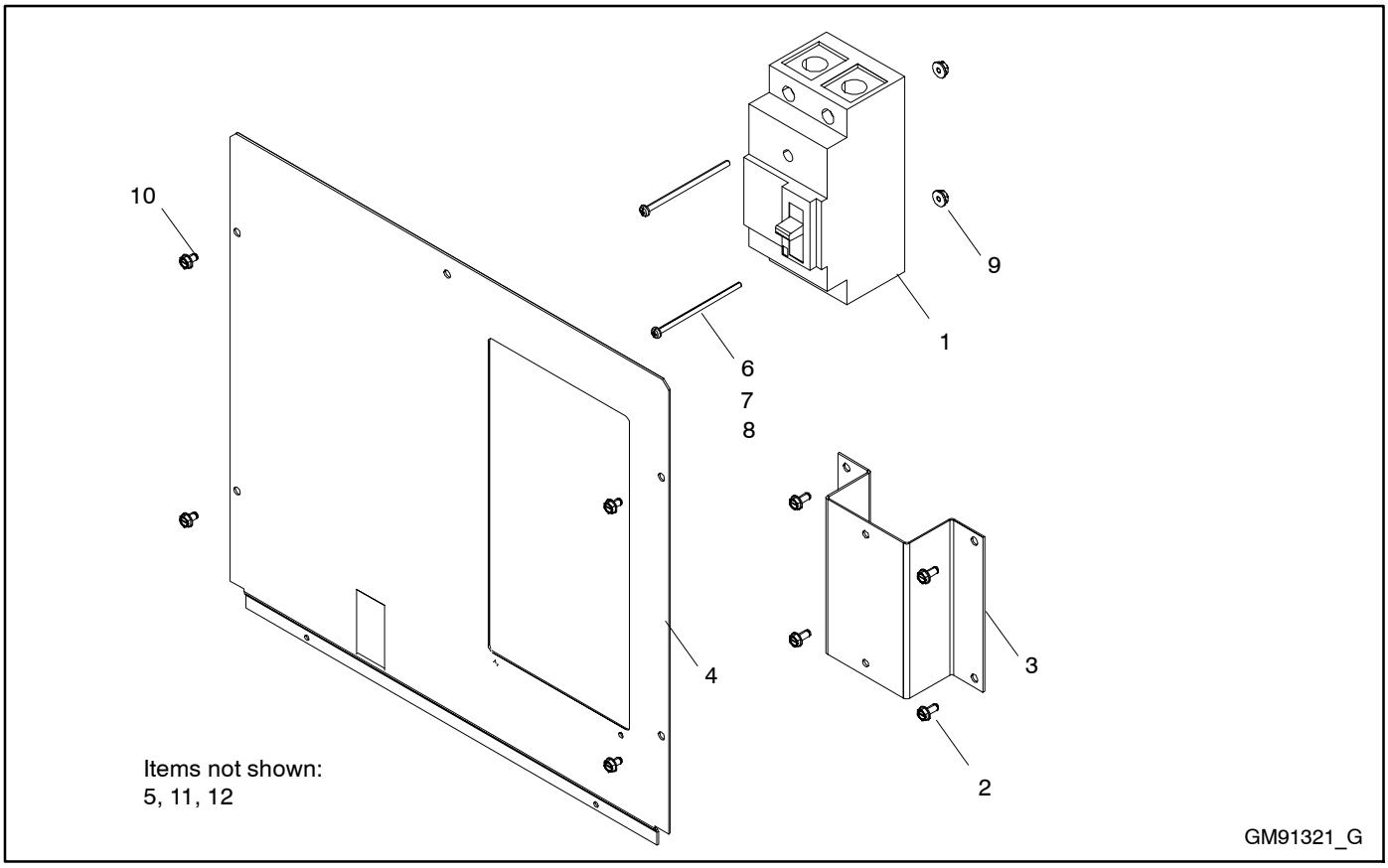
Item	Part Number	Description	Quantity Module Number -MA1	-MA2	-MA3	-MA4	-MA5	-MA6	-MA7
1	GM47476-6	Breaker, Circuit 175A. 3P.	1						
1	GM47475-48	Breaker, Circuit 150A		1					
1	GM47475-39	Breaker, Circuit 80A			1				
1	GM47475-46	Breaker, Circuit 125A				1			
1	GM47475-35	Breaker, Circuit 60A					1		
1	GM47476-8	Breaker, Circuit 200A						1	
1	GM47475-43	Breaker, Circuit 100A							1
2	GM79792	Cover, Junction Box	1	1	1	1	1	1	1
3	GM78549	Bracket, Circuit Breaker	1	1	1	1	1	1	1
4	M7985A-04080-20	Screw, Pan Head Machine	2	2	2	2	2	2	2
5	M934-04-50	Nut, Hex 4mm	2	2	2	2	2	2	2
6	X-22-20	Washer, lock, .172 ID x .373 in. OD	2	2	2	2	2	2	2
7	X-25-45	Washer, plain, .203 ID x .75 in. OD	2	2	2	2	2	2	2
8	X-67-156	Screw, Tapping	9	9	9	9	9	9	9
9	X-750-14	Marker, Wire	2	2	2	2	2	2	2
10	X-750-15	Marker, Wire	2	2	2	2	2	2	2
11	X-750-16	Marker, Wire	2	2	2	2	2	2	2
12	GM86006	Lead, Circuit Breaker	3					3	
12	GM86005	Lead, Circuit Breaker		3					
12	GM86004	Lead, Circuit Breaker			3	3	3		3

GM79710-

Item	Part Number	Description	Quantity Module Number -MA1	-MA2	-MA3
1	GM62495-6	Breaker, Circuit 200A (QBL)	1		
1	GM62495-3	Breaker, 175A, QBL Frame 2-Pole		1	
1	GM90342	Breaker, Circuit			1
2	GM78532	Cover, Junction Box	1	1	
2	GM90406	Cover, Juction Box			1
3	GM79499	Bracket, Circuit Breaker	1	1	
3	GM90405	Bracket, Circuit Breaker			1
4	M7985A-04080-20	Screw, Pan Head Machine	1	1	1
4	M7985A-04100-20	Screw, Pan Head Machine	1	1	1
5	M934-04-50	Nut, Hex 4mm	2	2	2
6	X-22-20	Washer, lock, .172 ID x .373 in. OD	2	2	2
7	X-25-45	Washer, plain, .203 ID x .75 in. OD	2	2	2
8	X-67-156	Screw, Tapping	9	9	9
9	X-750-14	Marker, Wire	2	2	2
10	X-750-15	Marker, Wire	2	2	2
12	GM82942	Lead	2		
12	GM81107	Lead		2	
12	GM82942	Lead			2

Circuit Breaker and Mounting, continued

GM91321-



Circuit Breaker and Mounting, continued

GM91321-

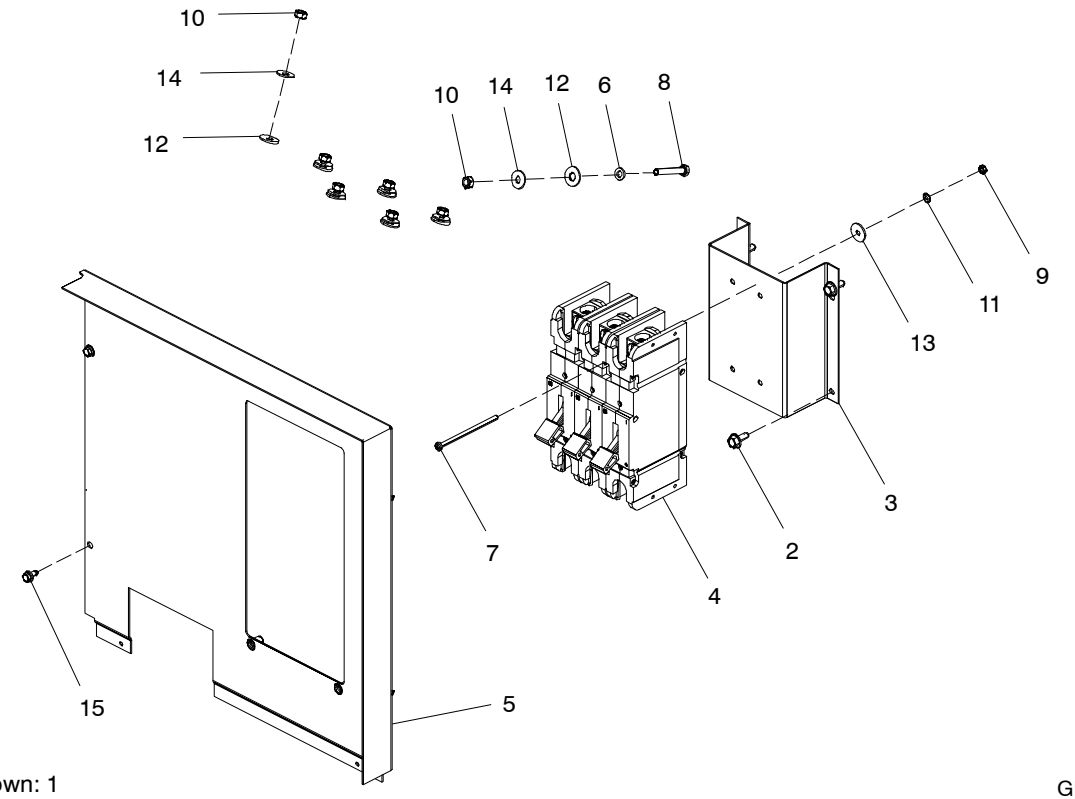
Item	Part Number	Description	Quantity
1	See chart	Breaker, Circuit	1
2	GM78761-1	Screw, Sheetmetal	4
3	See chart	Bracket, Circuit Breaker	1
4	See chart	Cover, Junction Box	1
5	See chart	Harness, Circuit Breaker	1
6	M7985A-04080-20	Screw, Pan Head Machine	2
7	X-25-45	Washer,plain, .203 ID x .75 in. OD	2
8	X-22-20	Washer, lock, .172 ID x .373 in.OD	2
9	M934-04-50	Nut, Hex 4mm	2
10	X-6216-1	Screw, Phillips hex crimptite	5
11	M6923-10-80	Nut, Hex 10mm	
12	M127B-10-80	Washer, Lock	

Use this table to identify part numbers of items 1, 3-5.

Module No.	Model	Assembly			
		Item 1, Circuit Breaker	Item 3, Bracket	Item 4, Cover	Item 5, Harness
GM91321-MA11	200A, 2P	GM62495-6	GM93646	GM99080	GM93661
GM91321-MA12	175A, 3P	GM47476-1	GM91322	GM99079	GM93662
GM91321-MA13	150A, 3P	GM47475-8	GM91322	GM99079	GM93663
GM91321-MA14	70A, 3P	GM47475-3	GM91322	GM99079	GM93482
GM91321-MA15	80A, 3P	GM47475-4	GM91322	GM99079	GM93482
GM91321-MA16	125A, 3P	GM47475-7	GM91322	GM99079	GM97557
GM91321-MA17	100A, 3P, 240V	GM96421	GM93427	GM99077	GM97557
GM91321-MA18	50A, 3P	GM47475-14	GM91322	GM99079	GM93483
GM91321-MA19	60A, 3P	GM47475-2	GM91322	GM99079	GM93483
GM91321-MA20	150A, 2P	GM62495-1	GM93646	GM99080	GM93485
GM91321-MA21	175A, 2P	GM62495-3	GM93646	GM99080	GM93485
GM91321-MA22	100A, 3P	GM47475-6	GM91322	GM99079	GM97557
GM91321-MA23	250A, 2P	GM90342	GM97258	GM99081	GM97548
GM91321-MA24	200A, 3P	GM97558	GM97258	GM99082	GM97547
GM91321-MA25	225A, 3P	GM97559	GM97258	GM99082	GM97547

Circuit Breaker and Mounting, continued

GM100252-



Items not shown: 1

GM100252_C

Circuit Breaker and Mounting, continued

GM100252-

Item	Part Number	Description	Quantity
1	See chart	Harness, Circuit Breaker	1
2	GM78761-1	Screw, Sheetmetal	4
3	See chart	Bracket, Circuit Breaker	1
4	See chart	Breaker, Circuit	1
5	See chart	Cover, Junction Box	1
6	See Chart	Washer, Plain	-
7	M7985A-04080-20	Screw, Pan Head Machine	2
8	See Chart	Screw, Hex cap	-
9	M934-04-50	Nut, Hex 4 mm	2
10	See Chart	Nut, Hex	-
11	X-22-20	Washer, lock	2
12	See Chart	Washer, Flat	-
13	X-25-45	Washer,plain	2
14	See chart	Washer, Spring	-
15	X-6216-1	Screw, Phillips hex crimptite	5

Use this table to identify part numbers of items 1, 3, 4, 5.

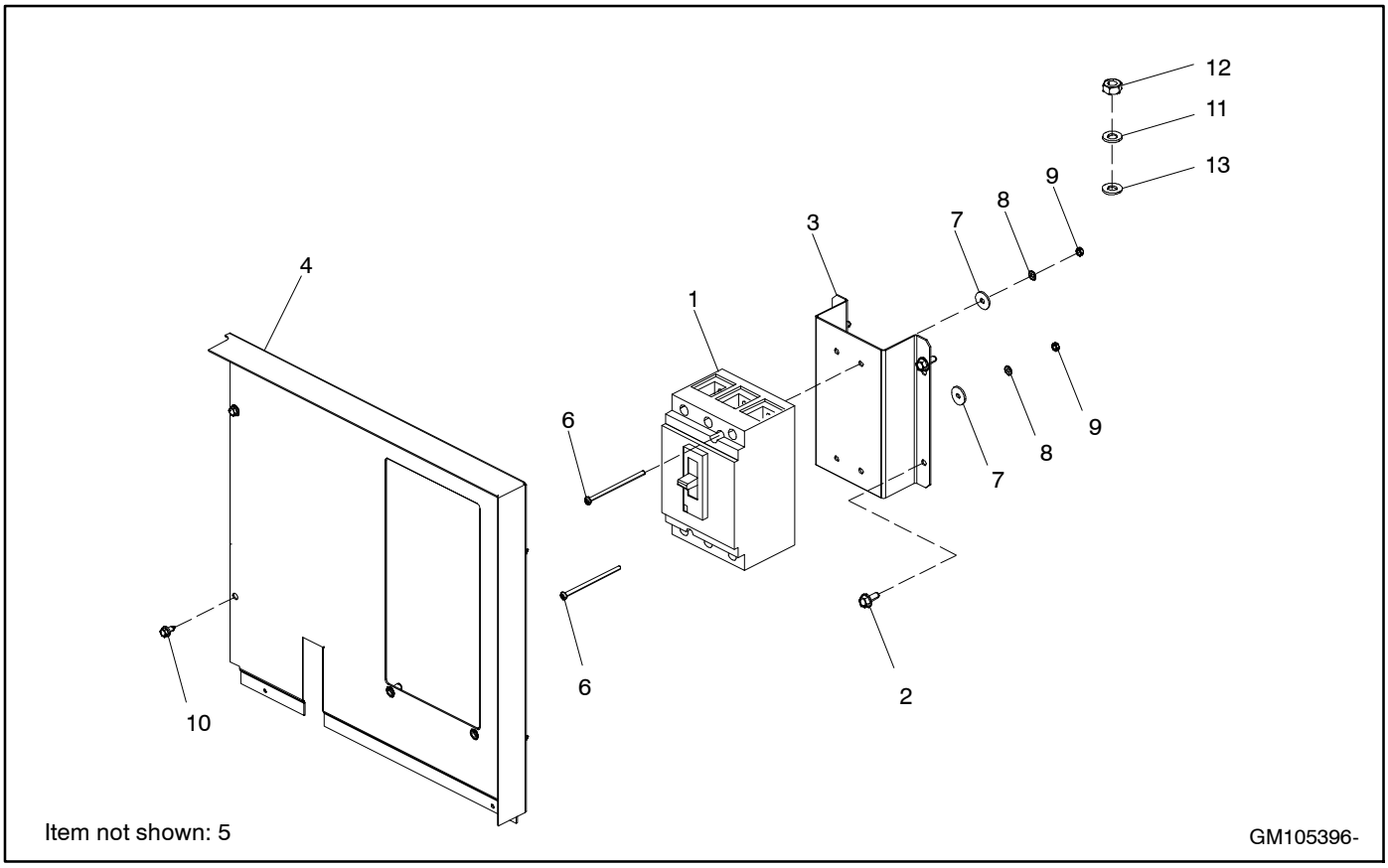
Module No.	Model	Assembly			
		Item 1, Harness	Item 3, Bracket	Item 4, Circuit Breaker	Item 5, Cover
GM100252-MA1	200A, 2P	GM100245	GM93646	GM62495-6	GM104259
GM100252-MA2	175A, 3P	GM100246	GM91322	GM47476-1	GM104258
GM100252-MA3	150A, 3P	GM100247	GM91322	GM47475-8	GM104258
GM100252-MA4	80A, 3P	GM100242	GM91322	GM47475-4	GM104258
GM100252-MA5	125A, 3P	GM100250	GM91322	GM47475-7	GM99079
GM100252-MA6	60A, 3P	GM100243	GM91322	GM47475-2	GM99079
GM100252-MA7	175A, 2P	GM100251	GM93646	GM62495-3	GM99080
GM100252-MA8	100A, 3P	GM100250	GM91322	GM47475-43	GM104258
GM100252-MA9	250A, 2P	GM100249	GM97258	GM90342	GM104260
GM100252-MA10	200A, 3P	GM100248	GM97258	GM97558	GM104261
GM100252-MA11	225A, 3P	GM100248	GM97258	GM97559	GM104261

Use this table to identify quantity of items 6, 8, 10, 12, 14.

Module No.	Model	Quantity				
		Item 6, Washer	Item 8, Screw	Item 10, Nut	Item 12, Washer	Item 14, Washer
GM100252-MA1	200A, 2P	-	-	X-82-6 (2)	X-25-75 (2)	X-6086-25 (2)
GM100252-MA2	175A, 3P	M125A-06-80 (3)	M933-06040-60 (3)	M934-06-60 (6)	X-25-20 (6)	X-6086-24 (6)
GM100252-MA3	150A, 3P	M125A-06-80 (3)	M933-06040-60 (3)	M934-06-60 (6)	X-25-20 (6)	X-6086-24 (6)
GM100252-MA4	80A, 3P	M125A-06-80 (1)	M933-06040-60 (1)	M934-06-60 (7)	X-25-20 (7)	X-6086-24 (7)
GM100252-MA5	125A, 3P	M125A-06-80 (3)	M933-06040-60 (3)	M934-06-60 (6)	X-25-20 (6)	X-6086-24 (6)
GM100252-MA6	60A, 3P	M125A-06-80 (1)	M933-06040-60 (1)	M934-06-60 (7)	X-25-20 (7)	X-6086-24 (7)
GM100252-MA7	175A, 2P	-	-	M934-06-60 (2)	X-25-20 (2)	X-6086-24 (2)
GM100252-MA8	100A, 3P	M125A-06-80 (1)	M933-06040-60 (1)	M934-06-60 (7)	X-25-20 (7)	X-6086-24 (7)
GM100252-MA9	250A, 2P	-	-	X-82-6 (2)	X-25-75 (2)	X-6086-25 (2)
GM100252-MA10	200A, 3P	M125A-06-80 (1)	M933-06040-60 (1)	M934-06-60 (7)	X-25-20 (7)	X-6086-24 (7)
GM100252-MA11	225A, 3P	M125A-06-80 (3)	M933-06040-60 (3)	M934-06-60 (6)	X-25-20 (6)	X-6086-24 (6)

Circuit Breaker and Mounting, continued

GM105396-



Circuit Breaker and Mounting

GM105396-

Item	Part Number	Description	Quantity
1	See chart	Circuit Breaker	1
2	GM78761-1	Screw, Sheetmetal	4
3	See chart	Bracket, Circuit Breaker	1
4	See chart	Cover, Junction Box	1
5	See chart	Lead set, Circuit Breaker	1
5.1	See chart	Harness, Circuit Breaker	1
6	See Chart	Screw, Pan Head Machine	2
7	See Chart	Washer, Plain	2
8	See Chart	Washer, lock	2
9	M934-04-50	Nut, Hex 4 mm	2
10	X-6216-1	Screw, Phillips hex	5
11	See Chart	Washer, plain 10.5 ID x 20 OD	-
12	See Chart	Nut, Hex 10 mm	-
13	See Chart	Washer, spring .39 ID x .81 in. OD	-

Use this table to identify part numbers of items 1, 3, 4, 5, 5.1.

Module No.	Model	Assembly				
		Item 1, Circuit Breaker	Item 3, Bracket	Item 4, Cover	Item 5, Lead set	Item 5.1, Harness
GM105396-MA1	80A, 3P	GM22481	GM93427	GM104256	GM105227	-
GM105396-MA2	90A, 3P	GM93425	GM93427	GM104256	GM105227	-
GM105396-MA3	40A, 3P	GM47475-28	GM91322	GM104258	GM105238	-
GM105396-MA4	100A, 2P	GM22482	GM93427	GM104257	GM105225	-
GM105396-MA5	125A, 3P	GM47475-46	GM91322	GM104258	-	GM105235
GM105396-MA6	100A, 3P	GM96421	GM93427	GM104256	-	GM105226
GM105396-MA7	50A, 3P	GM47475-32	GM91322	GM104258	GM105238	-
GM105396-MA8	60A, 3P	GM47475-35	GM91322	GM104258	GM105238	-
GM105396-MA9	150A, 2P	GM79791-2	GM93646	GM104259	GM105231	-
GM105396-MA10	150A, 3P	GM47475-48	GM91322	GM104258	GM105233	-
GM105396-MA11	175A, 2P	GM79791-3	GM93646	GM104259	-	GM105230

Use this table to identify quantity of items 6, 7, 8.

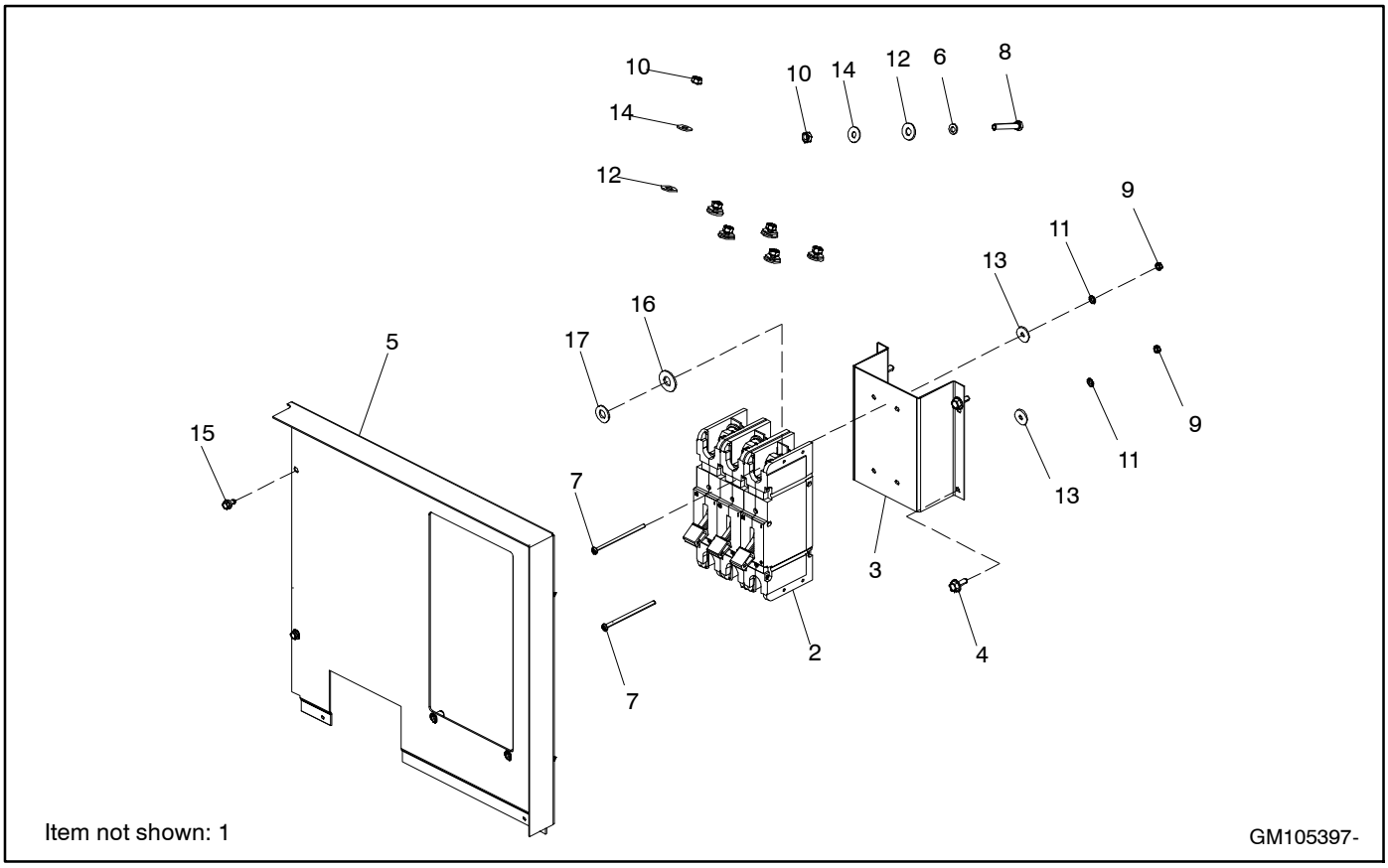
Module No.	Model	Quantity		
		Item 6, Screw	Item 7, Washer	Item 8, Washer
GM105396-MA1	80A, 3P	M7985A-04010-20	M125A-04-80	X-19-1
GM105396-MA2	90A, 3P	M7985A-04010-20	M125A-04-80	X-19-1
GM105396-MA3	40A, 3P	M7985A-04080-20	X-25-45	X-22-20
GM105396-MA4	100A, 2P	M7985A-04010-20	M125A-04-80	X-19-1
GM105396-MA5	125A, 3P	M7985A-04080-20	X-25-45	X-22-20
GM105396-MA6	100A, 3P	M7985A-04010-20	M125A-04-80	X-19-1
GM105396-MA7	50A, 3P	M7985A-04080-20	X-25-45	X-22-20
GM105396-MA8	60A, 3P	M7985A-04080-20	X-25-45	X-22-20
GM105396-MA9	150A, 2P	M7985A-04080-20	X-25-45	X-22-20
GM105396-MA10	150A, 3P	M7985A-04080-20	X-25-45	X-22-20
GM105396-MA11	175A, 2P	M7985A-04080-20	X-25-45	X-22-20

Use this table to identify quantity of items 11, 12, 13.

Module No.	Model	Quantity		
		Item 11, Washer	Item 12, Nut	Item 13, Washer
GM105396-MA1	80A, 3P	M125A-10-80 (7)	M934-10-60 (7)	X-6086-6 (7)
GM105396-MA2	90A, 3P	M125A-10-80 (4)	M934-10-60 (4)	X-6086-6 (4)
GM105396-MA3	40A, 3P	M125A-10-80 (7)	M934-10-60 (7)	X-6086-6 (7)
GM105396-MA4	100A, 2P	M125A-10-80 (3)	M934-10-60 (3)	X-6086-6 (3)
GM105396-MA5	125A, 3P	M125A-10-80 (4)	M934-10-60 (4)	X-6086-6 (4)
GM105396-MA6	100A, 3P	M125A-10-80 (7)	M934-10-60 (7)	X-6086-6 (7)
GM105396-MA7	50A, 3P	M125A-10-80 (7)	M934-10-60 (7)	X-6086-6 (7)
GM105396-MA8	60A, 3P	M125A-10-80 (7)	M934-10-60 (7)	X-6086-6 (7)
GM105396-MA9	150A, 2P	M125A-10-80 (7)	M934-10-60 (7)	X-6086-6 (7)
GM105396-MA10	150A, 3P	M125A-10-80 (7)	M934-10-60 (7)	X-6086-6 (7)
GM105396-MA11	175A, 2P	M125A-10-80 (3)	M934-10-60 (3)	X-6086-6 (3)

Circuit Breaker and Mounting, continued

GM105397-



Circuit Breaker and Mounting

GM105397-

Item	Part Number	Description	Quantity
1	See chart	Harness, Circuit Breaker	1
2	See Chart	Circuit Breaker	1
3	See chart	Bracket, Circuit Breaker	1
4	GM78761-1	Screw, Sheetmetal	4
5	See chart	Cover, Junction Box	1
6	See chart	Washer, Plain	-
7	M7985A-04080-20	Screw, Pan Head Machine	2
8	See Chart	Screw, hex cap	-
9	M934-04-50	Nut, Hex 4 mm	2
10	See Chart	Nut, Hex	-
11	X-22-20	Washer, lock	2
12	See Chart	Washer, plain	-
13	X-25-45	Washer, plain	2
14	See Chart	Washer, spring	-
15	X-6216-1	Screw, Phillips hex	5
16	See Chart	Washer, plain, .406 ID x 1 in. OD	-
18	See Chart	Washer, spring .39 ID x .81 in. OD	-

Use this table to identify part numbers of items 1, 2, 3, 5, 6, 8.

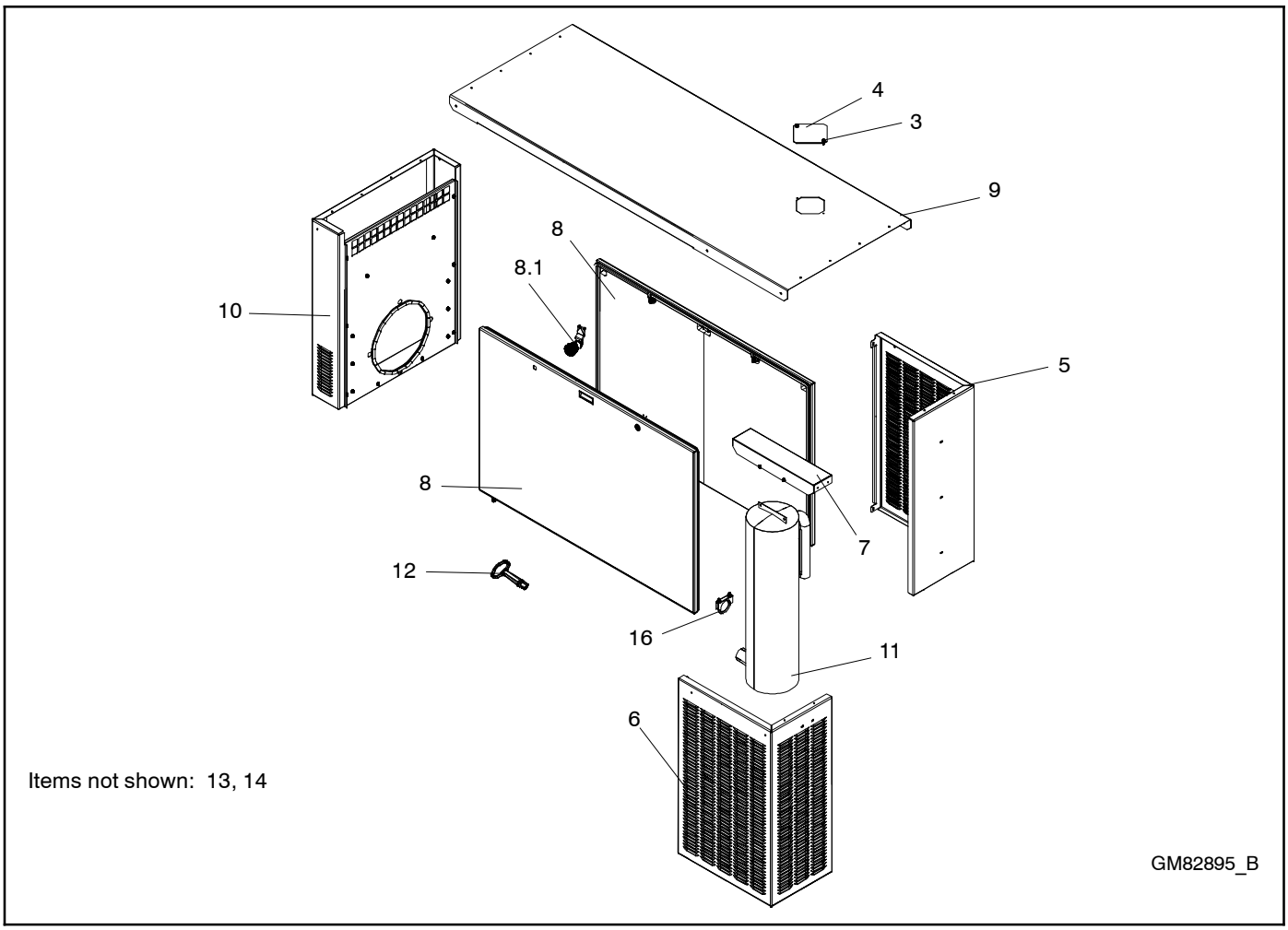
Module No.	Model	Assembly					
		Item 1, Harness	Item 2, Circuit Breaker	Item 3, Bracket	Item 5, Cover	Item 6, Washer	Item 8, Screw
GM105397-MA1	200A, 2P	GM105232	GM79791-1	GM93646	GM104259	-	-
GM105397-MA2	250A, 2P	GM105229	GM105224	GM97258	GM104260	-	-
GM105397-MA3	175A, 3P	GM105239	GM47476-6	GM91322	GM104258	M125A-06-80 (3)	M933-06040-60 (3)
GM105397-MA4	150A, 3P	GM105234	GM47475-48	GM91322	GM104258	M125A-06-80 (3)	M933-06040-60 (3)
GM105397-MA5	225A, 3P	GM105228	GM92251	GM97258	GM104261	M125A-06-80 (3)	M933-06040-60 (3)
GM105397-MA6	80A, 3P	GM105236	GM47475-39	GM91322	GM104258	M125A-06-80 (1)	M933-06040-60 (1)
GM105397-MA7	100A, 3P	GM105237	GM47475-43	GM91322	GM104258	M125A-06-80 (1)	M933-06040-60 (1)
GM105397-MA8	200A, 3P	GM105228	GM92250	GM97258	GM104261	M125A-06-80 (1)	M933-06040-60 (1)

Use this table to identify part numbers of items 9, 10, 12, 14, 16, 18.

Module No.	Model	Assembly				
		Item 10, Nut	Item 12, Washer	Item 14, Washer	Item 16, Washer	Item 18, Washer
GM105397-MA1	200A, 2P	X-82-6 (2)	X-25-75 (2)	X-6086-25 (2)	-	-
GM105397-MA2	250A, 2P	X-82-6 (2)	X-25-75 (2)	X-6086-25 (2)	X-25-118 (2)	X-6086-6 (2)
GM105397-MA3	175A, 3P	M934-06-60 (6)	X-25-20 (6)	X-6086-24 (6)	-	-
GM105397-MA4	150A, 3P	M934-06-60 (6)	X-25-20 (6)	X-6086-24 (6)	-	-
GM105397-MA5	225A, 3P	M934-06-60 (6)	X-25-20 (6)	X-6086-24 (6)	X-25-118 (3)	X-6086-6 (3)
GM105397-MA6	80A, 3P	M934-06-60 (7)	X-25-20 (7)	X-6086-24 (7)	-	-
GM105397-MA7	100A, 3P	M934-06-60 (7)	X-25-20 (7)	X-6086-24 (7)	-	-
GM105397-MA8	200A, 3P	M934-06-60 (7)	X-25-20 (7)	X-6086-24 (7)	X-25-118 (3)	X-6086-6 (3)

Sound Shield Enclosure

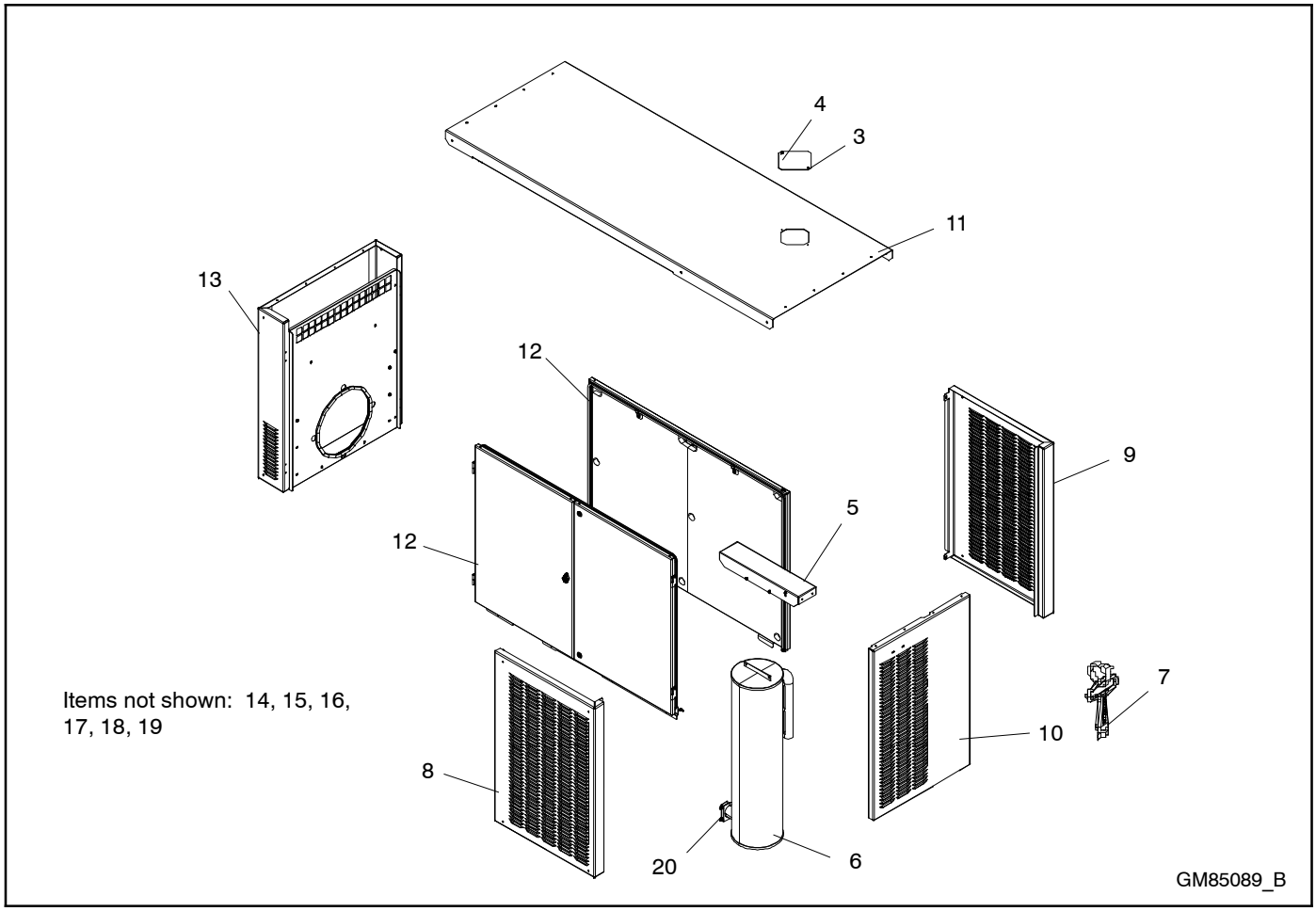
GM82895-MA1



Item	Part Number	Description	Quantity
3	GM78761-1	Screw, Sheetmetal	41
4	GM81601	Cover, Radiator Fill	1
5	GM82845	Panel, Enclosure Front	1
6	GM82846	Panel, Enclosure Front	1
7	GM82880	Bracket, Exhaust Mounting	1
8	GM82896	Door Sub Assy, Enclosure	2
8.1	GM78669	Latch, Compression	2
9	GM82897	Roof Sub Assy, Enclosure	1
10	GM82898	End Panel Sub Assy, Enclosure (Rear)	1
11	GM88560	Silencer	1
12	GM82922	Tool, Latch Opening	2
13	LK-1036-1515	Lead	2
14	X-22-16	Washer, lock, .326 ID x .883 in. OD	4
16	X-722-2	Clamp, muffler, 2.62 in.	1

Sound Shield Enclosure

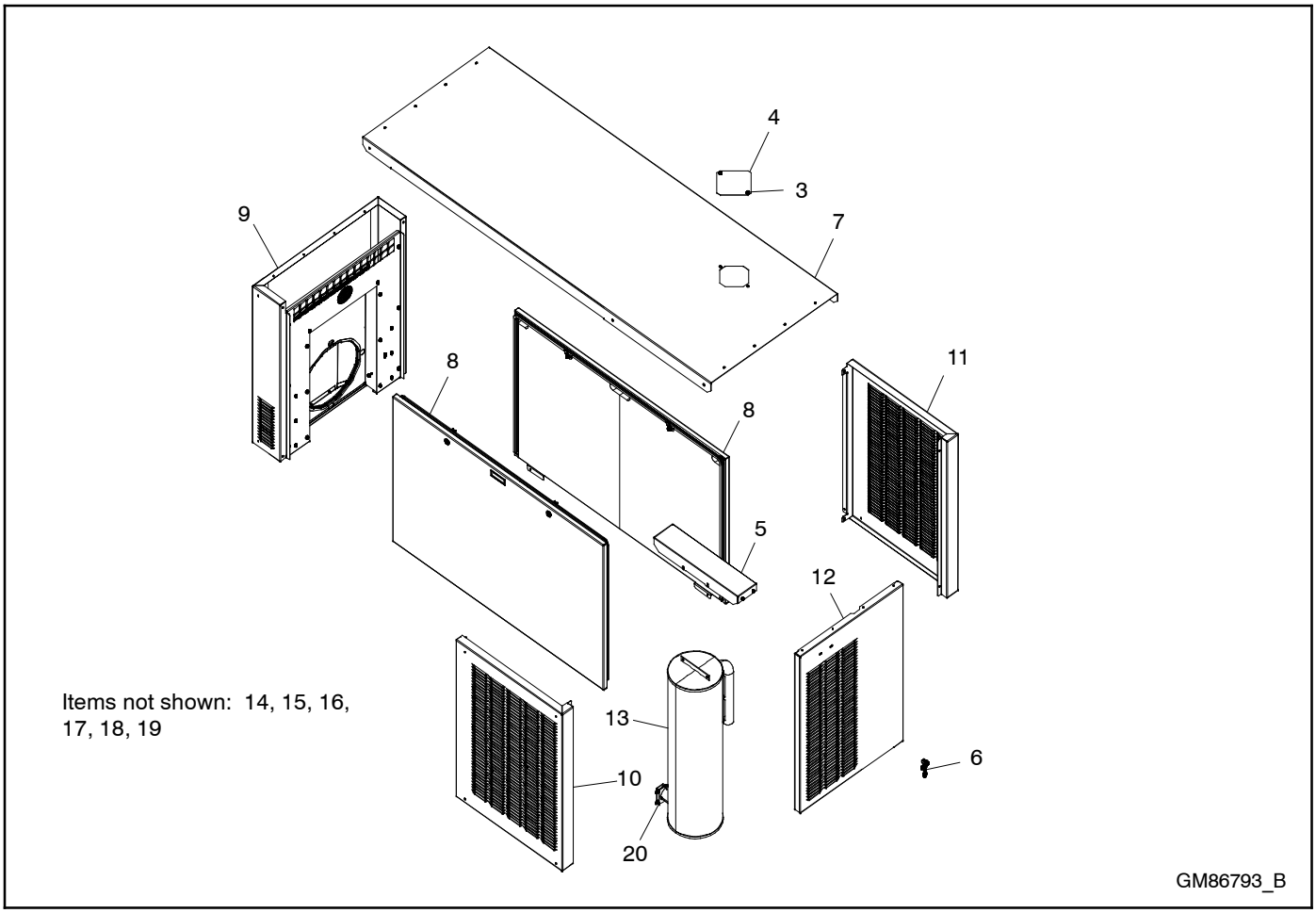
GM85089-MA1



Item	Part Number	Description	Quantity
2	25493 00006	Seal, Push-On Trim	25.25
3	GM78761-1	Screw, Sheetmetal	37
4	GM81601	Cover, Radiator Fill	1
5	GM82880	Bracket, Exhaust Mounting	1
6	GM88560	Silencer	1
7	GM82922	Latch, Opening Tool	2
8	GM85075	Panel, Enclosure Front (RH)	1
9	GM85077	Panel, Enclosure Front (LH)	1
10	GM85079	Panel, Front Enclosure	1
11	GM85138	Roof Sub Assy, Enclosure	1
12	GM85141	Access Panel Sub Assy, Enclosure (L)	2
13	GM85182	End Panel Sub Assy, Enclosure (Rear)	1
14	LK-1036-1515	Lead	2
15	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	2
16	M933-08020-60	Screw, hex cap	2
17	M982-08-80	Nut, hex elastic stop, 8MM	2
18	X-22-16	Washer, lock, .326 ID x .883 in. OD	8
19	X-468-1	Cable Tie	3
20	X-722-2	Clamp, muffler, 2.62 in.	1

Sound Shield Enclosure, continued

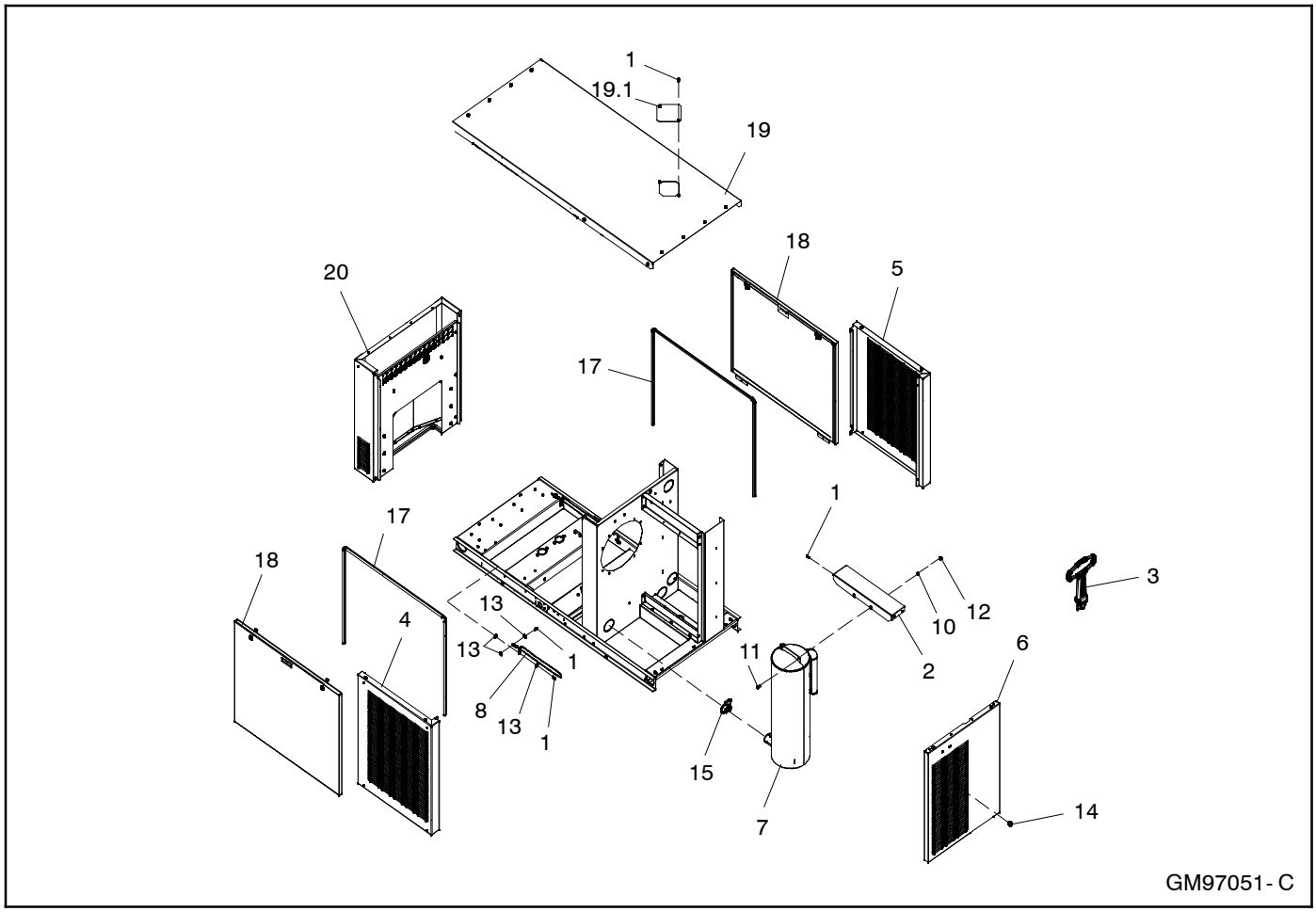
GM86793-



Item	Part Number	Description	Quantity Module Number -MA1	Quantity Module Number -MA2
3	GM78761-1	Screw, Sheetmetal	37	37
4	GM81601	Cover, Radiator Fill	1	1
5	GM82880	Bracket, Exhaust Mounting	1	1
6	GM82922	Latch, Opening Tool	2	2
7	GM85138	Roof Sub Assy, Enclosure	1	1
8	GM85141	Access Panel Sub Assy, Enclosure (L)	2	2
9	GM86794	Panel, End Sub Assy, Enclosure	1	
9	GM90799	Panel, End Sub Assy, Enclosure		1
10	GM88395	Panel, Enclosure Front (RH)	1	1
11	GM88396	Panel, Enclosure Front (LH)	1	1
12	GM88397	Panel, Front Enclosure	1	1
13	GM88560	Silencer	1	1
14	LK-1036-1515	Lead	2	2
15	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	2	2
16	M933-08020-60	Screw, Hex cap	2	2
17	M982-08-80	Nut, hex elastic stop, 8MM	2	2
18	X-22-16	Washer, lock.326 IDx.883 in.OD	8	8
19	X-468-1	Cable Tie	1	1
20	X-722-2	Clamp, muffler, 2.62 in.	1	1

Sound Shield Enclosure, continued

GM97051



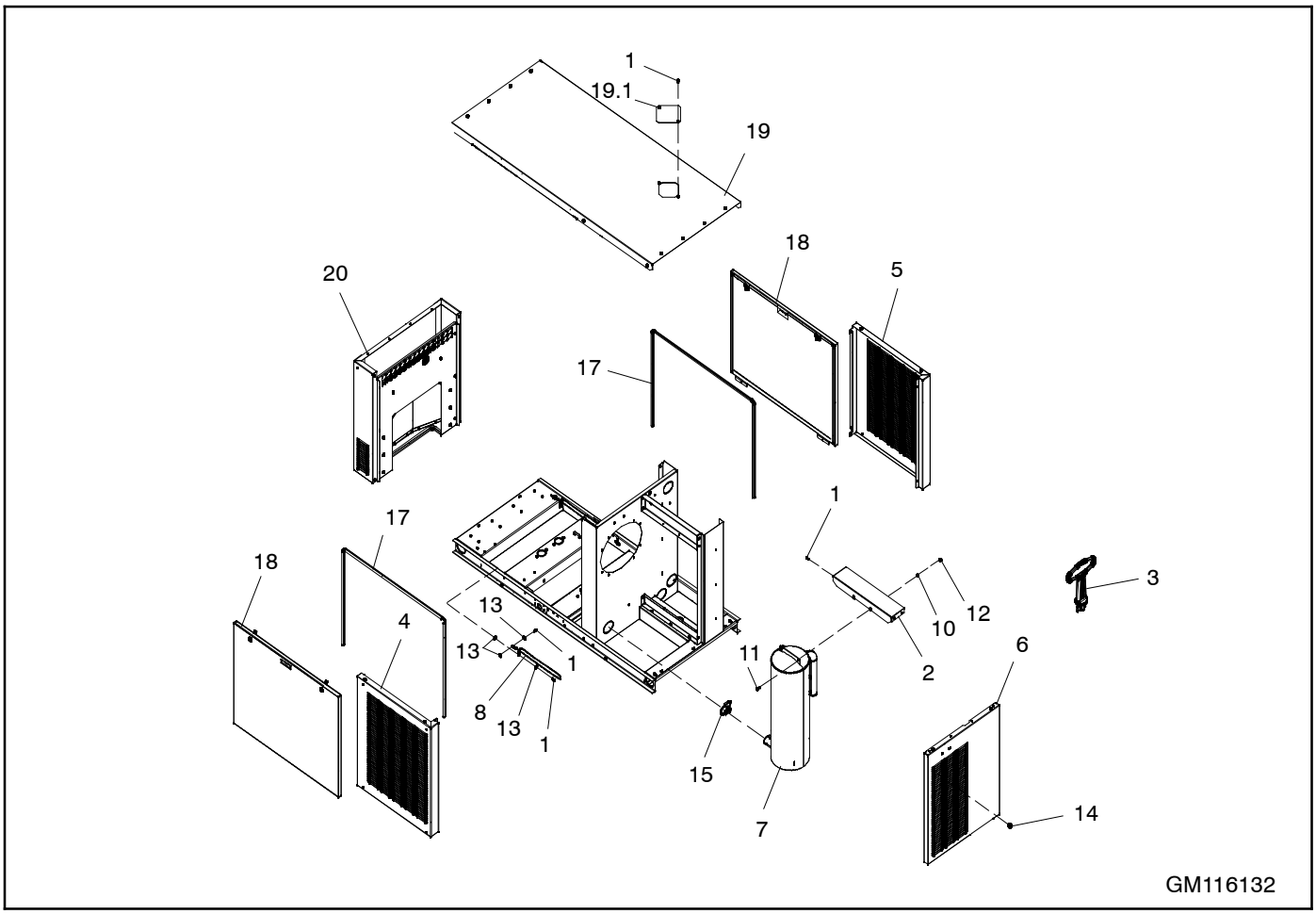
Item	Part Number	Description	Quantity
1	GM78761-1	Screw, Sheetmetal	35
2	GM82880	Bracket, Exhaust Mounting	1
3	GM82922	Tool, Latch Opening	2
4	GM88395	Panel, Enclosure Front (RH)	1
5	GM88396	Panel, Enclosure Front (LH)	1
6	GM88397	Panel, Front Enclosure	1
7	GM88560	Silencer	1
8	LK-1036-1515	Lead	2
9	M125A-06-80	Washer, Plain (not shown)	4
10	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	2
11	M933-08020-60	Screw, Hex Cap	2
12	M982-08-80	Nut, hex elastic stop, 8 mm	2
13	X-22-12	Washer, lock	4
14	X-468-1	Cable Tie	1
15	X-722-2	Spacer, .312 OD, .56 in.	1
17	25493 00006	Seal, Push-On Trim	2
18	See chart	Panel, Access Assy, Enclosure	2
19	See chart	Roof Sub Assy, Enclosure	1
19.1	GM81601	Cover, Radiator Fill	1
20	See chart	Panel, End Sub Assy, Enclosure	1

Use this table to identify part numbers of items 18- 20.

Module No.	Part Number	Item 18, Panel Assy.	Item 19, Roof Assy.	Item 20, Panel Assy.
GM97051- MA3	38/48RCL/48RCLA/48RCLB	GM85141	GM96246	GM114695- 1
GM97051- MA4	60RCL/60RCLA	GM85141	GM96246	GM114695- 2

Sound Shield Enclosure, continued

GM116132



Item	Part Number	Description	Quantity
1	GM78761-1	Screw, Sheetmetal	35
2	GM82880	Bracket, Exhaust Mounting	1
3	GM82922	Tool, Latch Opening	2
4	GM88395	Panel, Enclosure Front (RH)	1
5	GM88396	Panel, Enclosure Front (LH)	1
6	GM88397	Panel, Front Enclosure	1
7	GM88560	Silencer	1
8	LK-1036-1515	Lead	2
9	M125A-06-80	Washer, Plain (not shown)	4
10	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	2
11	M933-08020-60	Screw, Hex Cap	2
12	M982-08-80	Nut, hex elastic stop, 8 mm	2
13	X-22-12	Washer, lock	4
14	X-468-1	Cable Tie	1
15	X-722-2	Spacer, .312 OD, .56 in.	1
17	25493 00006	Seal, Push-On Trim	2
18	See chart	Panel, Access Assy, Enclosure	2
19	See chart	Roof Sub Assy, Enclosure	1
19.1	GM81601	Cover, Radiator Fill	1
20	See chart	Panel, End Sub Assy, Enclosure	1

Use this table to identify part numbers of items 18- 20.

Module No.	Part Number	Item 18, Panel Assy.	Item 19, Roof Assy.	Item 20, Panel Assy.
GM116132- MA3	48RCLC	GM116151	GM116149	GM116147- 1
GM116132- MA4	60RCLB	GM116151	GM116149	GM116147- 2

Group 701: Literature

Not illustrated

Item	Part Number	Description	Quantity Variation Number 470	487	516	532	537	553	554
1	TP-6101	O/M PSI/GM Engines	1	1	1	1	1		
2	TP-6104	S/M GM 5.0/5.7L Engine	1		1	1	1		
2	TP-6103	S/M GM 4.3L Engine		1					
3	TP-6479	Warranty, 5-Yr., Standby	1	1	1	1	1	1	1
4	TP-6724	S/M PSI/GM 1.6-8.1L Emission-Certified	1	1	1	1	1		
5	TP-6731	P/C GM 5.0/5.7L 50/60 kW Emissions Eng	1		1	1	1		
5	TP-6730	P/C GM 4.3L 40/45 kW Emissions Engine		1					
6	TP-6783	S/M 50-200,Fst Rspnse X (FR-X) Altr, Ind	1		1	1	1	1	1
6	TP-6353	S/M Fast-Response II Alternator,20-400kW		1					
7	TP-6809	I/M 38/48/60RCL	1	1	1	1	1		
8	TP-6810	O/M 38/48/60RCL	1	1	1	1	1		
9	TP-6811	S/M 38/48/60RCL	1	1	1	1	1		
10	TP-6812	P/C 38/48/60RCL	1	1	1	1	1	1	1
11	TP-7002	Warranty, 5-Yr./2000 hr. Canada, Res						1	1
12	TP-7095	O/M KG6208 6.2L Engines						1	1
13	TP-7096	S/M KG6208 6.2L Engines						1	1
13	TP-7097	S/M KG6208 Fuel Systems and Diagonst						1	1
13	TP-7098	P/C KG6208 6.2L Engines						1	1
14	TP-7101	I/M 48RCLB/60RCLA, Res/Coml						1	1
15	TP-7102	O/M 48RCLB/60RCLA, Res/Coml						1	1
16	TP-7103	S/M 48RCLB/60RCLA, Res/Coml						1	1

Item	Part Number	Description	Quantity Variation Number 596-SA	597-SA
1	TP-7002	Warranty, 5-Yr./2000 hr. Canada, Res/Com	1	1
2	TP-7095	O/M Kohler, KG6208, 48-60RCL, KG40-125	1	1
3	TP-7102	O/M 48RCLB/60RCLA, Res/Coml	1	1
4	TP-7125	Warranty, CARB/EPA SORE 2-yr 6.2L	1	1
5	TP-7152	Warranty, Resi, 1 year, Not US or Canada	1	1
6	TP-7156	Warranty, Resi, 5 year, US only	1	1
7	TP-7203	I/M 48RCLC/60RCLB Res/Com	1	1

Notes

Optional Kits

Qty.	Description	Part No.

Block Heater, 1500W, 120V — **GM78529-KP1-QS**

Qty.	Description	Part No.
1	Heater, block (120V, 1500W)	352945
1	Hose, molded (.62" ID)	276206
1	Tag, hang	279047
1	Shield, heat (32mm id x 152mm length)	GM17809
1	Shield, heat (32mm id x 455mm length)	GM23718
1	Bracket, Block Heater Mtg.	GM78546
4	Washer, Plain	M125A-06-80
6	Nut, Hex 6mm	M6923-06-80
2	Screw, hex cap, M6x16mm, js500 full thrd	M933-06016-60
4	Screw, hex cap	M933-06020-60
1	Hose, .63 ID	X-312-53
1	Connector, 90 deg. (5/8"id hose)	X-391-19
4	Clamp, hose, .69/1.25 in.	X-426-12
1	Connector, Hose 5/8" x 1/2" MIP Brass	X-582-1
1	TT Block Heater Kit	TT-1587

Block Heater, 1500W, 240V — **GM78529-KP2**

Qty.	Description	Part No.
1	Heater, block (240V, 1500W)	352946
1	Hose, molded (.62" ID)	276206
1	Tag, hang	279047
1	Shield, heat (32mm id x 152mm length)	GM17809
1	Shield, heat (32mm id x 455mm length)	GM23718
1	Bracket, Block Heater Mtg.	GM78546
4	Washer, Plain	M125A-06-80
6	Nut, Hex 6mm	M6923-06-80
2	Screw, hex cap, M6x16mm, js500 full thrd	M933-06016-60
4	Screw, hex cap	M933-06020-60
1	Hose, .63 ID	X-312-53
1	Connector, 90 deg. (5/8"id hose)	X-391-19
4	Clamp, hose, .69/1.25 in.	X-426-12
1	Connector, Hose 5/8" x 1/2" MIP Brass	X-582-1
1	TT Block Heater Kit	TT-1587

Block Heater, 1000W, 120V — **GM84997-KP1-QS**

Qty.	Description	Part No.
1	Heater, block (120V, 1000W)	358311
1	Tag, hang	279047
1	Shield, heat (32mm ID x 152mm length)	GM17809
1	Shield, heat (32mm ID x 455mm length)	GM23718
1	Bracket, Block Heater Mtg.	GM78546
4	Washer, Plain	M125A-06-80
6	Nut, Hex 6mm	M6923-06-80
2	Screw, hex cap, M6x16mm, js500 full thrd	M933-06016-60
4	Screw, hex cap	M933-06020-60
1	Hose,.63 ID x 24 in.	X-312-53
1	Hose,.63 ID x 8 in.	X-312-61
1	Connector, 90 deg. (5/8"id hose)	X-391-19
4	Clamp, hose, .69/1.25 in.	X-426-12
1	Connector, Hose 5/8" x 1/2" MIP Brass	X-582-1
1	TT Block Heater Kit	TT-1587

Block Heater, 1000W, 240V — **GM84997-KP2**

Qty.	Description	Part No.
1	Heater, block (240V, 1000W)	358327
1	Tag, hang	279047
1	Shield, heat (32mm ID x 152mm length)	GM17809
1	Shield, heat (32mm ID x 455mm length)	GM23718
1	Bracket, Block Heater Mtg.	GM78546
4	Washer, Plain	M125A-06-80
6	Nut, Hex 6mm	M6923-06-80
2	Screw, hex cap, M6x16mm, js500 full thrd	M933-06016-60
4	Screw, hex cap	M933-06020-60
1	Hose,.63 ID x 24 in.	X-312-53
1	Hose,.63 ID x 8 in.	X-312-61
1	Connector, 90 deg. (5/8"id hose)	X-391-19
4	Clamp, hose, .69/1.25 in.	X-426-12
1	Connector, Hose 5/8" x 1/2" MIP Brass	X-582-1
1	TT Block Heater Kit	TT-1587

Qty.	Description	Part No.

OnCue,RDC2/DC2/VSC Controller — **GM81385-KA1**

Qty.	Description	Part No.
1	OnCue Welcome Letter	G18-246
1	OnCue App Quick Start Guide	G18-247
1	Decal, OnCue Activation Code	GM81386
1	Dwg, OnCue Decal Placement	GM81770
1	Connector, RJ45 Female to RJ45 Female	GM84651
1	O/M User Guide, OnCue Plus	TP-7006
1	I/M Tech Manual OnCue Plus	TP-7007

OnCue Plus,RDC2/DC2/VSC — **GM81385-KP2-QS**

Qty.	Description	Part No.
1	OnCue Welcome Letter	G18-246
1	OnCue App Quick Start Guide	G18-247
1	Decal, OnCue Activation Code	GM81386
1	Dwg, OnCue Decal Placement	GM81770
1	Connector, RJ45 Female to RJ45 Female	GM84651
1	O/M User Guide, OnCue Plus	TP-7006
1	I/M Tech Manual OnCue Plus	TP-7007

OnCue Plus, Wireless, RDC2/DC2/VSC — **GM81385-KP3-QS**

Qty.	Description	Part No.
1	Cable, Patch, 3 Ft. RJ- 45	357477
1	OnCue Welcome Letter	G18-246
1	OnCue App Quick Start Guide	G18-247
1	Decal, OnCue Activation Code	GM81386
1	Dwg, OnCue Decal Placement	GM81770
1	Kit, Wireless Router	GM91273
1	Tape, VHB 3/4", 10in Long	GM94015
1	O/M OnCue Software	TP-6928
1	Install Guide WiFi Kit Res/Coml	TT- 1618

Battery,1/12V,650CCA,Wet — **PA-256985**

Qty.	Description	Part No.
1	Battery, wet charged (12V, 650 CCA)	256984

Battery,1/12V,650CCA,Wet — **GM89020-KP1**

Qty.	Description	Part No.
1	Battery, wet charged (12V, 650 CCA)	256984

Heater, Battery Wrap — **GM79481-KP1**

Qty.	Description	Part No.
1	Heater, battery wrap	336814

Heater, Battery Wrap — **GM104703-KP1**

Qty.	Description	Part No.
1	Heater, battery wrap	GM104699

Heater, Battery Wrap — **GM103794-KP1**

Qty.	Description	Part No.
1	Heater, battery wrap	GM103784

Lockable Emergency Stop — **GM103279-KP1**

Qty.	Description	Part No.
1	E- stop, NEC Remote	GM103743

Load Control Module, w/ Harness — **GM77177-KP1-QS**

Qty.	Description	Part No.
1	Load Control Module Assy, w/ Harness	GM77177-1
1	Decal, CSA	297721
1	Decal, equipment grd (NRP)	344295
2	Insert, threaded, #10-24	346258
1	Dimension Print, Load Control Module	ADV-8198
4	Gasket	GM20990
2	Label, Blank	GM24703
1	Decal, 120VAC Only	GM75393
1	Plate, Mounting	GM77176
4	Relay	GM77178
1	Cover w/ Decals, Load Shed	GM77191
1	Enclosure, Load Shed	GM79445
1	Harness, Load Control	GM80092
1	Harness, Relay Control	GM80673
1	Indicator, Load Status	GM80879
1	Decal, Wiring Diagram	GM80950
2	Decal, Warning	GM81264
1	PCB Assy, RDC2 Load Control	GM81372-1
1	Transformer, Current	GM83929
1	Decal, LCM - w/ whip	GM84656-1
1	TT Load Control Module, Res/Comm	TT-1574
1	Terminal block	X-405-2
3	Washer	X-6086-23
3	Lug, terminal, aluminum	X-6207-3

Optional Kits

Qty.	Description	Part No.

Load Control Module, w/ Terminal Blocks **GM77177-KP2-QS**

Qty.	Description	Part No.
1	Load Control Module Assy, w/ Term.	GM77177-2
1	Decal, equipment grd (NRP)	344295
2	Insert, threaded, #10-24	346258
1	Dimension Print, Load Control Module	ADV-8198
4	Gasket	GM20990
1	Decal, Nameplate	GM21291
2	Label, Blank	GM24703
1	Decal, 120VAC Only	GM75393
1	Plate, Mounting	GM77176
4	Relay,	GM77178
1	Cover w/ Decals, Load Shed	GM77191
1	Enclosure, Load Shed	GM79445
1	Harness, Relay Control	GM80673
8	Harness, Terminal Block	GM80674
4	Block, Terminal	GM80862
1	Indicator, Load Status	GM80879
1	Marker, Strip	GM80949
1	Decal, Wiring Diagram	GM80950
2	Decal, Warning	GM81264
1	PCB Assy, RDC2 Load Control	GM81372-1
1	Diagram, Wiring Load Control	GM81374
1	Diagram, Schematic Load Control	GM81638
1	Transformer, Current	GM83929
1	TT Load Control Module, Res/Comm	TT-1574
1	Terminal block	X-405-2
3	Washer	X-6086-23
3	Lug, terminal, aluminum	X-6207-3

Load Control Module, w/ Harness, CSA **GM77177-KP3-QS**

Qty.	Description	Part No.
1	Load Control Module Assy, w/ Harness	GM77177-1
1	Decal, CSA	297721
1	Decal, equipment grd (NRP)	344295
2	Insert, threaded, #10-24	346258
1	Dimension Print, Load Control Module	ADV-8198
4	Gasket	GM20990
2	Label, Blank	GM24703
1	Decal, 120VAC Only	GM75393
1	Plate, Mounting	GM77176
4	Relay	GM77178
1	Cover w/ Decals, Load Shed	GM77191
1	Enclosure, Load Shed	GM79445
1	Harness, Load Control	GM80092
1	Harness, Relay Control	GM80673
1	Indicator, Load Status	GM80879
1	Decal, Wiring Diagram	GM80950
2	Decal, Warning	GM81264
1	PCB Assy, RDC2 Load Control	GM81372-1
1	Transformer, Current	GM83929
1	Decal, LCM - w/ whip	GM84656-1
1	TT Load Control Module, Res/Comm	TT-1574
1	Terminal block	X-405-2
3	Washer	X-6086-23
3	Lug, terminal, aluminum	X-6207-3

Load Control Module, w/ Terminal Blocks, CSA **GM77177-KP4-QS**

Qty.	Description	Part No.
1	Load Control Module Assy, w/ Term.	GM77177-2
1	Decal, CSA	297721
1	Decal, equipment grd (NRP)	344295
2	Insert, threaded, #10-24	346258
1	Dimension Print, Load Control Module	ADV-8198
4	Gasket	GM20990
1	Decal, Nameplate	GM21291
2	Label, Blank	GM24703
1	Decal, 120VAC Only	GM75393
1	Plate, Mounting	GM77176
4	Relay,	GM77178
1	Cover w/ Decals, Load Shed	GM77191
1	Enclosure, Load Shed	GM79445
1	Harness, Relay Control	GM80673
8	Harness, Terminal Block	GM80674
4	Block, Terminal	GM80862
1	Indicator, Load Status	GM80879
1	Marker, Strip	GM80949
1	Decal, Wiring Diagram	GM80950
2	Decal, Warning	GM81264
1	PCB Assy, RDC2 Load Control	GM81372-1
1	Diagram, Wiring Load Control	GM81374
1	Diagram, Schematic Load Control	GM81638
1	Transformer, Current	GM83929
1	TT Load Control Module, Res/Comm	TT-1574
1	Terminal block	X-405-2
3	Washer	X-6086-23
3	Lug, terminal, aluminum	X-6207-3

Power Relay Module **GM92001-KP1-QS**

Qty.	Description	Part No.
1	Dimension Print, Load Management Module	ADV-8742
1	TT 50 Amp Relay Box for Load Shed,	TT-1646
1	Load Management Module	GM92001-1
1	Enclosure, Base	GM91999
1	Enclosure, Cover	GM92000
1	Relay, Sub Assy	GM92005

Programmable Interface Module (PIM) **GM81529-KP1-QS**

Qty.	Description	Part No.
1	Dimension Print, Programable Intf Module	ADV-8199
1	Diagram, Wiring PIM	GM84085
1	Diagram, Schematic PIM	GM84086
1	Programmable Interface Module (PIM)	TT-1584
1	PIM, Assy NEMA 3R	GM81529-1
1	Decal, Equipment GRD	344295
2	Gasket	GM20990
1	Hasp, ATS Enclosure	GM65624
1	PCB Assy, RDC2 Programmable Interface	GM81372-2
1	Enclosure, PIM	GM81527
1	Silkscreen, Cover	GM82189
1	Decal, Torque	GM82855
1	Decal, PIM	GM84656-3
1	Lug, terminal, aluminum	X-6207-3

Programmable Interface Module (PIM), CSA **GM81529-KP2-QS**

Qty.	Description	Part No.
1	Dimension Print, Programable Intf Module	ADV-8199
1	Diagram, Wiring PIM	GM84085
1	Diagram, Schematic PIM	GM84086
1	Programmable Interface Module (PIM)	TT-1584
1	PIM, Assy NEMA 3R CSA	GM81529-2
1	Decal, Equipment GRD	344295
2	Gasket	GM20990
1	Hasp, ATS Enclosure	GM65624
1	PCB Assy, RDC2 Programmable Interface	GM81372-2
1	Enclosure, PIM	GM81527
1	Silkscreen, Cover	GM82189
1	Decal, Torque	GM82855
1	Decal, PIM	GM84656-3
1	Lug, terminal, aluminum	X-6207-3

Optional Kits

Qty.	Description	Part No.

Maintenance Service Kit
(includes oil, oil filter, air filter, spark plugs, and instructions (TT-1445))

1	Kit, Residential Maint (38RCL)	GM86771-SKP1-QS
1	Kit, Residential Maint (38RCLA & 48RCL)	GM83718-SKP1-QS
1	Kit, Residential Maint (60RCL and 48RCLA)	GM89979-SKP1-QS

Fuel Lines, Flexible **GM13706-KP1**

1	Pipe (1"npt x 1.50")	X-218-24
1	Fuel line, flexible (1.00" ID x 18")	X-504-21

Fuel Lines, Flexible **GM13706-KA4**

1	Pipe (1"npt x 1.50")	X-218-24
1	Fuel line, flexible (1.00" ID x 18")	X-504-21

Windload Access Door Assembly **GM103707-KP1-CAS**

2	Door, Windload RCLB	GM103706-1-CAS
2	Panel, Enclosure Sill	GM103804-CAS
2	Foam, Acoustic, Windload RCLB	GM103889
2	Panel, Cover	GM104593-CAS
8	Insert, Threaded (Metric) 8 mm	GM11040-9
8	Screw, Sheetmetal	GM78761-1
2	Washer, Plain	M125A-06-80
8	Screw, Hex Flange (M8-1.25 x 30 mm)	M6921-08030-60
2	Nut, Hex 6 mm	M6923-06-80
2	Screw, Hex Cap (Metric)	M933-06025-82
2	Spacer, .344 ID x .625 OD x .25 in.	X-400-74

Notes

Appendix A Abbreviations

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

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

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

Appendix B Common Hardware Application Guidelines

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

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

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

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

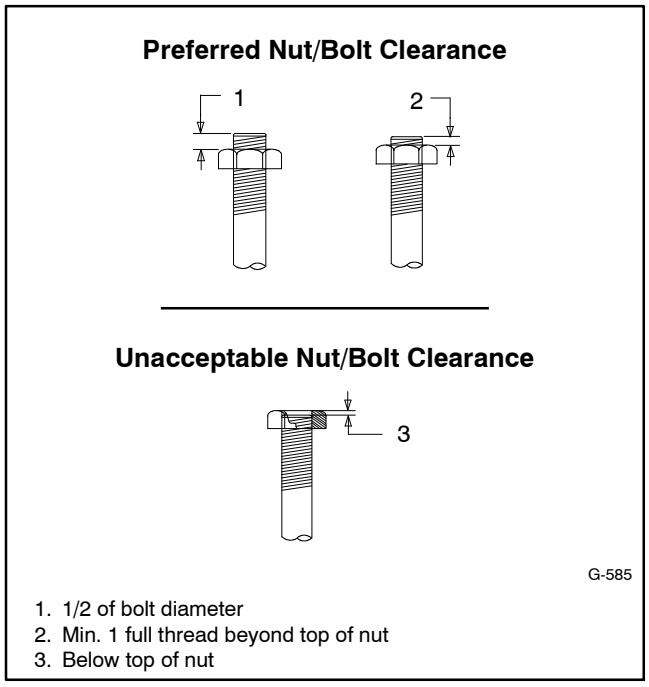


Figure 1 Acceptable Bolt Lengths

Steps for common hardware application:

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

   For round and slotted exit holes, determine if hardware is greater than 1/2 inch in diameter, or 1/2 inch in diameter or less. Hardware that is *greater than 1/2 inch* in diameter takes a standard nut and SAE washer. Hardware *1/2 inch or less* in diameter can take a properly torqued whiz nut or spiralock nut. See Figure 2.
3. Follow these SAE washer rules after determining exit hole type:
   a. Always use a washer between hardware and a slot.
   b. Always use a washer under a nut (see 2 above for exception).
   c. Use a washer under a bolt when the female thread is fixed (weld nut).
4. Refer to Figure 2, which depicts the preceding hardware configuration possibilities.

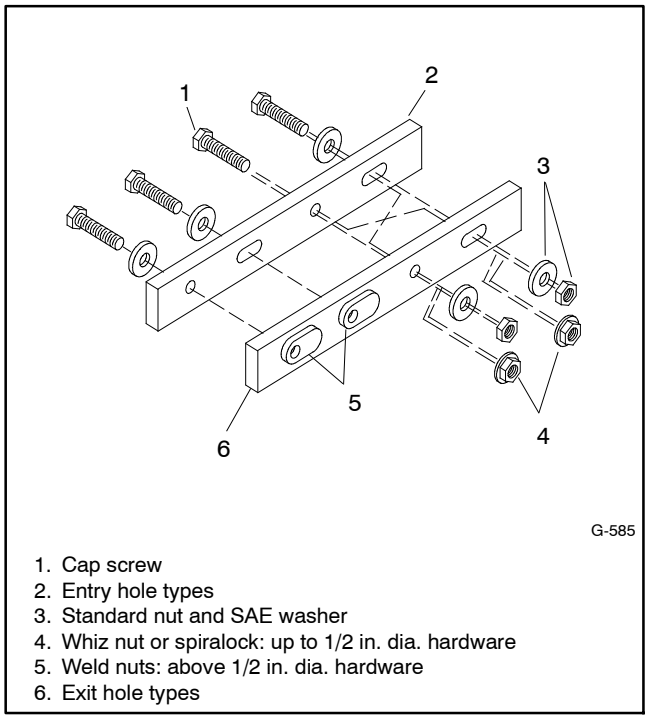


Figure 2 Acceptable Hardware Combinations

Appendix C General Torque Specifications

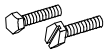
American Standard Fasteners Torque Specifications													
	Assembled into Cast Iron or Steel												Assembled into Aluminum
Size	Grade 2			Grade 5			Grade 8						
8-32	2.0	Nm	(18 in. lb.)	3.1	Nm	(27 in. lb.)	-						
10-24	3.2	Nm	(28 in. lb.)	4.9	Nm	(43 in. lb.)	-						
10-32	3.6	Nm	(32 in. lb.)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

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

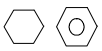
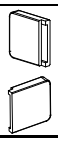
Notes:

1. The torque values above are general guidelines. Always use the torque values specified in the service manuals and/or assembly drawings when they differ from the above torque values.
2. The torque values above are based on new plated threads. Increase torque values by 15% if non-plated threads are used.
3. At minimum, hardware threaded into aluminum must have two diameters of thread engagement. Hardware threaded into steel and cast iron must have 1.25 diameters of thread.
4. Torque values are calculated as equivalent stress loading on American hardware with an approximate preload of 75% of proof strength and a friction coefficient of 0.2.

Appendix D Common Hardware Identification

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

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

Hardness Grades	
American Standard	
Grade 2	
Grade 5	
Grade 8	
Grade 8/9 (Hex Socket Head)	
Metric	
Number stamped on hardware; 5.8 shown	
Hose Clamp Covers	
Black, EPDM rubber used on worm gear clamps	

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

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

Sample Dimensions

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

1/4-20 x 1

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

Metric (Screws, Bolts, Studs, and Nuts)

M8-1.25 x 20

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

Plain Washers

9/32 x 5/8 x 1/16

- Thickness
- External Dimension
- Internal Dimension

Lock Washers

5/8

- Internal Dimension

Appendix E Common Hardware List

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

American Standard

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

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

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

Washers

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

Hose Clamp Covers

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

Metric

Hex head bolts are hardness grade 8.8 unless noted.

Part No.	Dimensions
Hex Head Bolts (Partial Thread)	
M931-05055-60	M5-0.80 x 55
M931-06040-60	M6-1.00 x 40
M931-06055-60	M6-1.00 x 55
M931-06060-60	M6-1.00 x 60
M931-06060-SS	M6-1.00 x 60
M931-06070-60	M6-1.00 x 70
M931-06070-SS	M6-1.00 x 70
M931-06075-60	M6-1.00 x 75
M931-06090-60	M6-1.00 x 90
M931-06145-60	M6-1.00 x 145
M931-06150-60	M6-1.00 x 150
M931-08035-60	M8-1.25 x 35
M931-08040-60	M8-1.25 x 40
M931-08045-60	M8-1.25 x 45
M931-08050-60	M8-1.25 x 50
M931-08055-60	M8-1.25 x 55
M931-08055-82	M8-1.25 x 55*
M931-08060-60	M8-1.25 x 60
M931-08070-60	M8-1.25 x 70
M931-08070-82	M8-1.25 x 70*
M931-08075-60	M8-1.25 x 75
M931-08080-60	M8-1.25 x 80
M931-08090-60	M8-1.25 x 90
M931-08095-60	M8-1.25 x 95
M931-08100-60	M8-1.25 x 100
M931-08110-60	M8-1.25 x 110
M931-08120-60	M8-1.25 x 120
M931-08130-60	M8-1.25 x 130
M931-08140-60	M8-1.25 x 140
M931-08150-60	M8-1.25 x 150
M931-08200-60	M8-1.25 x 200
M931-10040-82	M10-1.25 x 40*
M931-10040-60	M10-1.50 x 40
M931-10045-60	M10-1.50 x 45
M931-10050-60	M10-1.50 x 50
M931-10050-82	M10-1.25 x 50*
M931-10055-60	M10-1.50 x 55
M931-10060-60	M10-1.50 x 60
M931-10065-60	M10-1.50 x 65
M931-10070-60	M10-1.50 x 70
M931-10080-60	M10-1.50 x 80
M931-10080-82	M10-1.25 x 80*
M931-10090-60	M10-1.50 x 90
M931-10090-82	M10-1.50 x 90*
M931-10100-60	M10-1.50 x 100
M931-10110-60	M10-1.50 x 110
M931-10120-60	M10-1.50 x 120
M931-10130-60	M10-1.50 x 130
M931-10140-60	M10-1.50 x 140
M931-10180-60	M10-1.50 x 180
M931-10235-60	M10-1.50 x 235
M931-10260-60	M10-1.50 x 260
M960-10330-60	M10-1.25 x 330
M931-12045-60	M12-1.75 x 45
M960-12050-60	M12-1.25 x 50
M960-12050-82	M12-1.25 x 50*
M931-12050-60	M12-1.75 x 50
M931-12050-82	M12-1.75 x 50*
M931-12055-60	M12-1.75 x 55
M931-12060-60	M12-1.75 x 60
M931-12060-82	M12-1.75 x 60*
M931-12065-60	M12-1.75 x 65
M931-12075-60	M12-1.75 x 75
M931-12080-60	M12-1.75 x 80
M931-12090-60	M12-1.75 x 90
M931-12100-60	M12-1.75 x 100
M931-12110-60	M12-1.75 x 110

Part No.	Dimensions
Hex Head Bolts (Partial Thread), continued	
M960-16090-60	M16-1.50 x 90
M931-16090-60	M16-2.00 x 90
M931-16100-60	M16-2.00 x 100
M931-16100-82	M16-2.00 x 100*
M931-16120-60	M16-2.00 x 120
M931-16150-60	M16-2.00 x 150
M931-20065-60	M20-2.50 x 65
M931-20090-60	M20-2.50 x 90
M931-20100-60	M20-2.50 x 100
M931-20120-60	M20-2.50 x 120
M931-20140-60	M20-2.50 x 140
M931-20160-60	M20-2.50 x 160
M931-22090-60	M22-2.50 x 90
M931-22120-60	M22-2.50 x 120
M931-22160-60	M22-2.50 x 160
M931-24090-60	M24-3.00 x 90
M931-24120-60	M24-3.00 x 120
M931-24160-60	M24-3.00 x 160
M931-24200-60	M24-3.00 x 200
Hex Head Bolts (Full Thread)	
M933-04006-60	M4-0.70 x 6
M933-05030-60	M5-0.80 x 30
M933-05035-60	M5-0.80 x 35
M933-05050-60	M5-0.80 x 50
M933-06010-60	M6-1.00 x 10
M933-06012-60	M6-1.00 x 12
M933-06014-60	M6-1.00 x 14
M933-06016-60	M6-1.00 x 16
M933-06020-60	M6-1.00 x 20
M933-06025-60	M6-1.00 x 25
M933-06030-60	M6-1.00 x 30
M933-06040-60	M6-1.00 x 40
M933-06050-60	M6-1.00 x 50
M933-07025-60	M7-1.00 x 25
M933-08010-60	M8-1.25 x 10
M933-08012-60	M8-1.25 x 12
M933-08016-60	M8-1.25 x 16
M933-08020-60	M8-1.25 x 20
M933-08025-60	M8-1.25 x 25
M933-08030-60	M8-1.25 x 30
M933-08030-82	M8-1.25 x 30*
M933-10012-60	M10-1.50 x 12
M961-10020-60	M10-1.25 x 20
M933-10020-60	M10-1.50 x 20
M933-10025-60	M10-1.50 x 25
M961-10025-60	M10-1.25 x 25
M933-10025-82	M10-1.50 x 25*
M961-10030-60	M10-1.25 x 30
M933-10030-60	M10-1.50 x 30
M933-10030-82	M10-1.50 x 30*
M961-10035-60	M10-1.25 x 35
M933-10035-60	M10-1.50 x 35
M933-10035-82	M10-1.50 x 35*
M961-10040-60	M10-1.25 x 40

Part No.	Dimensions
Hex Head Bolts (Full Thread), continued	
M933-12016-60	M12-1.75 x 16
M933-12020-60	M12-1.75 x 20
M961-12020-60F	M12-1.50 x 20
M933-12025-60	M12-1.75 x 25
M933-12025-82	M12-1.75 x 25*
M961-12030-60	M12-1.25 x 30
M933-12030-82	M12-1.75 x 30*
M961-12030-82F	M12-1.50 x 30*
M933-12030-60	M12-1.75 x 30
M933-12035-60	M12-1.75 x 35
M961-12040-82	M12-1.25 x 40*
M933-12040-60	M12-1.75 x 40
M933-12040-82	M12-1.75 x 40*
M961-14025-60	M14-1.50 x 25
M933-14025-60	M14-2.00 x 25
M961-14050-82	M14-1.50 x 50*
M961-16025-60	M16-1.50 x 25
M933-16025-60	M16-2.00 x 25
M961-16030-82	M16-1.50 x 30*
M933-16030-82	M16-2.00 x 30*
M933-16035-60	M16-2.00 x 35
M961-16040-60	M16-1.50 x 40
M933-16040-60	M16-2.00 x 40
M961-16045-82	M16-1.50 x 45*
M933-16045-82	M16-2.00 x 45*
M933-16050-60	M16-2.00 x 50
M933-16050-82	M16-2.00 x 50*
M933-16060-60	M16-2.00 x 60
M933-16070-60	M16-2.00 x 70
M933-18035-60	M18-2.50 x 35
M933-18050-60	M18-2.50 x 50
M933-18060-60	M18-2.50 x 60
M933-20050-60	M20-2.50 x 50
M933-20055-60	M20-2.50 x 55
M933-24060-60	M24-3.00 x 60
M933-24065-60	M24-3.00 x 65
M933-24070-60	M24-3.00 x 70
Pan Head Machine Screws	
M7985A-03010-20	M3-0.50 x 10
M7985A-03012-20	M3-0.50 x 12
M7985A-04010-20	M4-0.70 x 10
M7985A-04016-20	M4-0.70 x 16
M7985A-04020-20	M4-0.70 x 20
M7985A-04050-20	M4-0.70 x 50
M7985A-04100-20	M4-0.70 x 100
M7985A-05010-20	M5-0.80 x 10
M7985A-05012-20	M5-0.80 x 12
M7985A-05016-20	M5-0.80 x 16
M7985A-05020-20	M5-0.80 x 20
M7985A-05025-20	M5-0.80 x 25
M7985A-05030-20	M5-0.80 x 30
M7985A-05080-20	M5-0.80 x 80
M7985A-05100-20	M5-0.80 x 100
M7985A-06100-20	M6-1.00 x 100
Flat Head Machine Screws	
M965A-04012-SS	M4-0.70 x 12
M965A-05012-SS	M5-0.80 x 12
M965A-05016-20	M5-0.80 x 16
M965A-06012-20	M6-1.00 x 12

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

Metric, continued

Hex Nuts

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

Washers

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

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

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