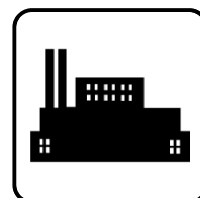


Service Parts

Industrial Generator Sets



Models:

1350-2000REOZDB

1250-2250REOZDC

1250-2250REOZDD

2500-3250REOZD

2500/2800REOZDB

2500REOZDC

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

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TP-6217 7/13h

Routine Engine Service Parts

Figure 1 identifies routine engine service parts for several generator set engines listed in this manual. Refer to Group 105: Engine for a complete list of engine assemblies. Contact your supplier of Kohler parts for spare parts of engines not listed in the table.

Refer to the groups on the following pages and the engine service parts manual for a complete list of maintenance and service parts.

Description	Alternator Belt	Oil Filter	Fuel Filter	Thermostat	Thermostat Seal
1250/1500REOZDC/D, 60 Hz	GM24553	**	**	GM30213 (5)	GM35390 (5)
1350REOZDB, 50 Hz	GM24553	**	**	GM30213 (4)	GM35390 (4)
1350REOZDB, 50 Hz w/CCB*	GM51785	**	**	GM30213 (4)	GM35390 (4)
1350REOZDB, 60 Hz	GM24553	**	**	GM30213 (4)	GM35390 (4)
1350REOZDB, 60 Hz w/CCB*	GM51785	**	**	GM30213 (4)	GM35390 (4)
1500REOZDB, 50 Hz	GM24553	**	**	GM30213 (4)	GM35390 (4)
1500REOZDB, 60 Hz	GM24553	**	**	GM30213 (4)	GM35390 (4)
1500REOZDB, 60 Hz w/CCB*	GM51785	**	**	GM30213 (4)	GM35390 (4)
1750REOZDC/D, 60 Hz	GM24553	**	**	GM30213 (5)	GM35390 (5)
1820REOZDB, 50 Hz	GM24553	**	**	GM30213 (4)	GM35390 (4)
1820REOZDB, 50 Hz w/CCB*	GM51785	**	**	GM30213 (4)	GM35390 (4)
1820REOZDB, 60 Hz	GM24553	**	**	GM30213 (4)	GM35390 (4)
1820REOZDB, 60 Hz w/CCB*	GM51785	**	**	GM30213 (4)	GM35390 (4)
2000REOZDB, 50 Hz	GM24553	**	**	GM30213 (4)	GM35390 (4)
2000REOZDB, 50 Hz w/CCB*	GM51785	**	**	GM30213 (4)	GM35390 (4)
2000REOZDB, 60 Hz	GM24553	**	**	GM30213 (4)	GM35390 (4)
2000REOZDB, 60 Hz w/CCB*	GM51785	**	**	GM30213 (4)	GM35390 (4)
2000REOZDC/D, 60 Hz	GM24553	**	**	GM30213 (5)	GM35390 (5)
2250REOZDC/D, 60 Hz	GM24553	**	**	GM30213 (5)	GM35390 (5)
2500/2800REOZD, 60 Hz	GM24553	**	**	GM30213 (4)	GM35390 (4)
2500/2800REOZDB, 60 Hz	GM64086	**	**	GM30213 (5)	GM35390 (5)
3000/3250REOZD, 60 Hz	GM64086	**	**	GM30213 (5)	GM35390 (5)

* CCB means closed crankcase breather option.

** Contact Kohler Co. with the engine serial number for filter information.

Figure 1 Common Replacement Parts

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Introduction

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

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

This manual includes the following main sections:

Table of Contents. Lists the sections of the manual.

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

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

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

Kit Sections. List modules and accessories and their parts.

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

Numbering System Significance

This manual uses the following numbering systems:

Specification Number. The product identification number located on the generator set nameplate. Spec numbers break down into groups.

Group Number. A unique number representing a parts group needed to assemble a generator set function. For example, Group 101 is the Air Intake group.

Variation or Module Number. A group might have several variations. Each variation performs the same function with different parts lists. For example, a 50 Hz generator alternator and a 60 Hz generator alternator both perform the same function; however, with different parts. Each difference requires a group variation or module number.

Part Number. The part number identifies an individual assembly, subassembly, component, or accessory kit.

Illustrations

Illustrations (or exploded-view drawings) best representing the widest range of variations accompany most groups in this manual. Illustrations do not depict all details and may not show all parts. Do not use illustrations for assembly or disassembly instructions.

How to Find Part Numbers

Use the following steps to locate a service replacement part.

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

Hardware References

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

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

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

Specification Number Index

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

Model								
1250REOZDC Tier 2								
GM40635-GA5	*	*	29	1	*	*	†	254
GM40635-GA6	*	*	30	1	*	*	†	254
GM40635-GA7	*	*	51	1	*	*	†	254
GM40635-GA8	*	*	52	1	*	*	†	254
GM40635-GA9	*	*	53	1	*	*	†	254
1250REOZDD								
GM78921-GA1	*	*	77	3	*	*	†	309
GM78921-GA2	*	*	78	3	*	*	†	309
GM78921-GA3	*	*	79	3	*	*	†	309
GM78921-GA4	*	*	80	3	*	*	†	309
1350REOZDB								
GM24213-GA1	*	*	1	1	*	*	†	178
GM24213-GA3	*	*	2	1	*	*	†	178
GM34995-GA1	*	*	13	1	*	*	†	178
GM34995-GA2	*	*	14	1	*	*	†	178
GM34995-GA5	*	*	21	1	*	*	†	178
GM34995-GA6	*	*	22	1	*	*	†	178
1500REOZDB								
GM24213-GA4	*	*	3	1	*	*	†	180
GM24213-GA6	*	*	4	1	*	*	†	180
GM34995-GA3	*	*	15	1	*	*	†	180
GM34995-GA4	*	*	16	1	*	*	†	180
GM34995-GA7	*	*	23	1	*	*	†	180
GM34995-GA8	*	*	24	1	*	*	†	180
1500REOZDC Tier 2								
GM40635-GA1	*	*	29	1	*	*	†	232
GM40635-GA3	*	*	30	1	*	*	†	232
GM40635-GA10	*	*	51	1	*	*	†	232
GM40635-GA11	*	*	52	1	*	*	†	232
GM40635-GA12	*	*	53	1	*	*	†	232
1500REOZDD								
GM78921-GA5	*	*	77	3	*	*	†	310
GM78921-GA6	*	*	78	3	*	*	†	310
GM78921-GA7	*	*	79	3	*	*	†	310
GM78921-GA8	*	*	80	3	*	*	†	310
1750REOZDC Tier 2								
GM40635-GA2	*	*	31	1	*	*	†	233
GM40635-GA4	*	*	32	1	*	*	†	233
GM40635-GA13	*	*	54	1	*	*	†	233
GM40635-GA14	*	*	55	1	*	*	†	233
GM40635-GA15	*	*	56	1	*	*	†	233
1750REOZDD								
GM78921-GA9	*	*	81	3	*	*	†	311
GM78921-GA10	*	*	82	3	*	*	†	311
GM78921-GA11	*	*	83	3	*	*	†	311
GM78921-GA12	*	*	84	3	*	*	†	311

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

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

Specification Number Index

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

Model								
1820REOZDB								
GM24214-GA1	*	*	6	1	*	*	†	182
GM24214-GA2	*	*	5	1	*	*	†	182
GM34996-GA1	*	*	17	1	*	*	†	182
GM34996-GA2	*	*	18	1	*	*	†	182
GM34996-GA5	*	*	25	1	*	*	†	182
GM34996-GA6	*	*	26	1	*	*	†	182
2000REOZDB								
GM24214-GA3	*	*	8	1	*	*	†	184
GM24214-GA4	*	*	7	1	*	*	†	184
GM34996-GA3	*	*	19	1	*	*	†	184
GM34996-GA4	*	*	20	1	*	*	†	184
GM34996-GA7	*	*	27	1	*	*	†	184
GM34996-GA8	*	*	28	1	*	*	†	184
2000REOZDC Tier 2								
GM40636-GA1	*	*	33	1	*	*	†	234
GM40636-GA3	*	*	34	1	*	*	†	234
GM40636-GA5	*	*	57	1	*	*	†	234
GM40636-GA6	*	*	58	1	*	*	†	234
GM40636-GA7	*	*	59	1	*	*	†	234
2000REOZDD								
GM78922-GA1	*	*	85	3	*	*	†	312
GM78922-GA2	*	*	86	3	*	*	†	312
GM78922-GA3	*	*	87	3	*	*	†	312
GM78922-GA4	*	*	88	3	*	*	†	312
2250REOZDC Tier 2								
GM40636-GA2	*	*	35	1	*	*	†	235
GM40636-GA4	*	*	36	1	*	*	†	235
GM40636-GA8	*	*	60	1	*	*	†	235
GM40636-GA9	*	*	61	1	*	*	†	235
GM40636-GA10	*	*	62	1	*	*	†	235
2250REOZDD								
GM78922-GA5	*	*	89	3	*	*	†	313
GM78922-GA6	*	*	90	3	*	*	†	313
GM78922-GA7	*	*	91	3	*	*	†	313
GM78922-GA8	*	*	92	3	*	*	†	313

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

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

Specification Number Index

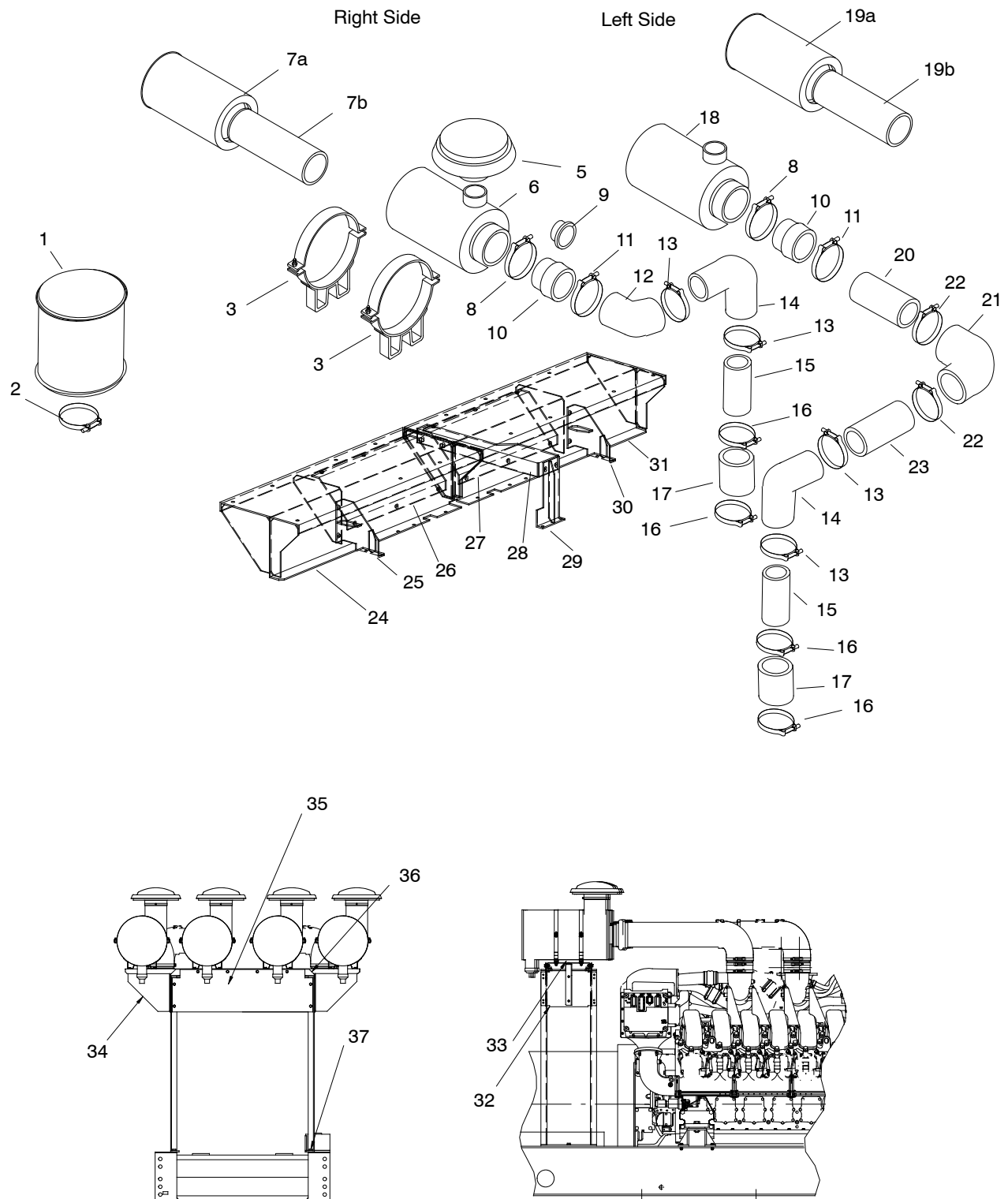
Group Title	Air Intake	Cooling System	Engine	Nameplates and Decals	Skid and Plant Mounting	Generator and Mounting	Controller and Mounting	Literature
Group No.	101	104	105	107	109	201	301	701
Spec No.	Variation Number							

2500REOZD								
GM29817-GA1	*	*	9	2	*	*	†	191
GM29817-GA3	*	*	11	2	*	*	†	191
2500REOZDB								
GM29817-GA5	*	*	37	2	*	*	†	262
GM29817-GA7	*	*	39	2	*	*	†	262
GM29817-GA8	*	*	40	2	*	*	†	262
GM29817-GA9	*	*	41	2	*	*	†	262
GM29817-GA19	*	*	63	2	*	*	†	262
GM29817-GA20	*	*	64	2	*	*	†	262
GM29817-GA21	*	*	65	2	*	*	†	262
GM29817-GA22	*	*	66	2	*	*	†	262
2500REOZDC								
GM86889-GA1	*	*	93	4	*	*	†	314
2800REOZD								
GM29817-GA2	*	*	10	2	*	*	†	193
GM29817-GA4	*	*	12	2	*	*	†	193
2800REOZDB								
GM29817-GA6	*	*	38	2	*	*	†	263
GM29817-GA10	*	*	42	2	*	*	†	263
GM29817-GA11	*	*	43	2	*	*	†	263
GM29817-GA12	*	*	44	2	*	*	†	263
GM29817-GA23	*	*	67	2	*	*	†	263
GM29817-GA24	*	*	68	2	*	*	†	263
GM29817-GA25	*	*	69	2	*	*	†	263
GM29817-GA26	*	*	70	2	*	*	†	263
3000REOZD								
GM29817-GA13	*	*	45	2	*	*	†	274
GM29817-GA14	*	*	46	2	*	*	†	274
GM29817-GA27	*	*	71	2	*	*	†	274
GM29817-GA28	*	*	72	2	*	*	†	274
3250REOZD								
GM29817-GA15	*	*	47	2	*	*	†	275
GM29817-GA16	*	*	48	2	*	*	†	275
GM29817-GA17	*	*	49	2	*	*	†	275
GM29817-GA18	*	*	50	2	*	*	†	275
GM29817-GA29	*	*	73	2	*	*	†	275
GM29817-GA30	*	*	74	2	*	*	†	275
GM29817-GA31	*	*	75	2	*	*	†	275
GM29817-GA32	*	*	76	2	*	*	†	275

- * Configured group. Refer to the generator set nameplate for the module number.
Turn to the respective group on the following pages for parts breakdowns.
- † Configured group. Refer to the generator set nameplate for the module number.
See controller parts catalog for controller parts lists.

Notes

Group 101: Air Intake



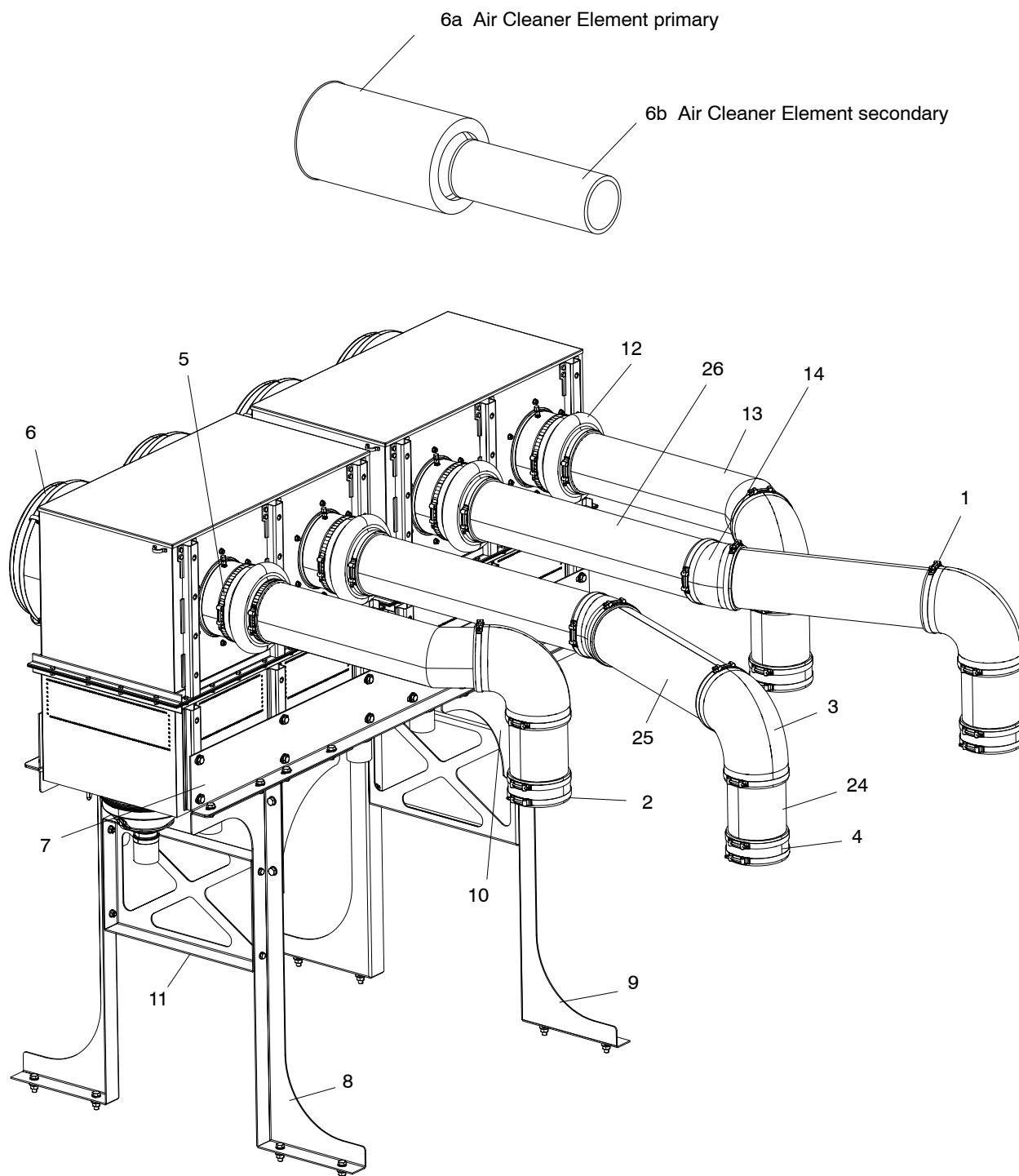
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Group 101: Air Intake

Item	Part Number	Description	Quantity									
			Module									
			GM24329-MA1	GM28368-MA1	GM28513-MA1	GM29822-MA1	GM41986-MA1	GM50376-MA1	GM50377-MA1	GM69941-MA1	GM69941-MA2	GM76047-MA1
1	GM28399	Air cleaner assembly	4			2	2					6
1	GM30077	Air cleaner assembly										
2	GM30578	Clamp, hose	4									6
2	GM30078	Clamp, hose				4	4					
3	291666	Mount, air cleaner, 16.00 in. ID			8							
3	279715	Mount, air cleaner, 18.00 in. ID		8								
5	272674	Cap, rain			4			4		4	4	
5	279722	Cap, rain		4					4			
6	A-279713	Air cleaner assembly, RS			2			2				
6	A-279714	Air cleaner assembly, RS (Use Kit GM81358-S, See Note below)		2					2			
6	GM69932	Air cleaner assembly								2	2	
6	GM81358-S	Kit, heavy duty air cleaner							2			
7a	279736	Element, air cleaner			2			2				
7b	279737	Element, air cleaner, secondary			2			2				
7a	279738	Element, air cleaner		2					2			
7b	279739	Element, air cleaner, inner		2					2			
7a	GM69997	Element, Primary (Outer)								2	2	
7b	GM69998	Element, Secondary (Inner)								2	2	
8	280998	Clamp, hose, 7.5/7.81 in.			4			4				
8	279743	Clamp, hose, 8.38/8.69 in.		4					4	4	4	
9	279718	Insert, hose reducer, 7 to 6 in.			4			4		4	4	
10	279720	Hose, hump reducer, 8 to 7 in.			4			4				
10	GM23518	Hose, hump, 8.00 in. ID		4					4	4	4	
11	279743	Clamp, hose, 8.38/8.69 in.		4	4			4	4	4	4	
12	GM28532	Tube, elbow			2							
12	GM28303	Tube, elbow		2								
12	GM50392	Tube, elbow						2		2	2	
12	GM49782	Tube, elbow							2			
13	279717	Clamp, hose, 8.63/8.94 in.		8	8			8	8	8	8	
14	GM23519	Hose, 90° elbow, 8.00 ID		4	4			4	4	4	4	
15	X-522-106	Tube, steel		4	4			4				
15	X-522-115	Tube, steel							4	4	4	
16	279743	Clamp, hose, 8.38/8.69 in.		8	8			8	8	8	8	
17	GM28302	Hose, straight air, 8.00 in. ID		4	4			4	4	4	4	
18	A-279713	Air cleaner assembly, LS			2			2				
18	A-279714	Air cleaner assembly, LS (Use Kit GM81358-S, See Note below)		2					2			
18	GM69932	Air cleaner assembly								2	2	
19a	279736	Element, air cleaner			2			2				
19b	279737	Element, air cleaner, secondary			2			2				
19a	279738	Element, air cleaner		2					2			
19b	279739	Element, air cleaner, inner		2					2			
19a	GM69997	Element, Primary (Outer)								2	2	
19b	GM69998	Element, Secondary (Inner)								2	2	
20	X-522-109	Tube, steel			2							
20	X-522-108	Tube, steel		2							2	
20	X-522-121	Tube, steel						2				
20	X-522-122	Tube, steel							2	2	2	
21	347957	Hose, 45° elbow, 8.00 in. ID		2	2			2	2	2	2	
22	279717	Clamp, hose, 8.63/8.94 in.		4	4			4	4	4	4	
23	X-522-107	Tube, steel		2	2			2	2	2	2	
24	GM28298	Bracket, heavy duty air cleaner, RH		1	1							
25	GM28296	Support, air cleaner heavy duty		1	1							
26	GM23511	Support, air cleaner heavy duty		1	1							
27	GM23511	Support, air cleaner heavy duty		1	1							
28	GM28301	Bracket, air cleaner heavy duty		1	1							
29	GM28300	Support, air cleaner heavy duty		1	1							
30	GM28297	Support, air cleaner heavy duty		1	1							
31	GM28299	Bracket, heavy duty air cleaner, LH		1	1							
32	GM50418	Support, air cleaner						2	2	2	2	
33	GM49124	Bracket, air cleaner						1	1	1	1	
34	GM50482	Support, air cleaner						2	2	2	2	
35	GM16694	Plate, air cleaner support						2	2	2	2	
36	GM16712	Support, air cleaner, top						2	2	2	2	
37	GM49123	Support, air cleaner, side						2	2	2	2	

Note: GM69932 air cleaner assembly does not fit up exactly like the old A-279714. Order service kit GM81358-S to replace A-279714. GM81358-S includes rain cap 272675, tube GM50392, and air cleaner assembly GM69932.

Group 101: Air Intake, continued

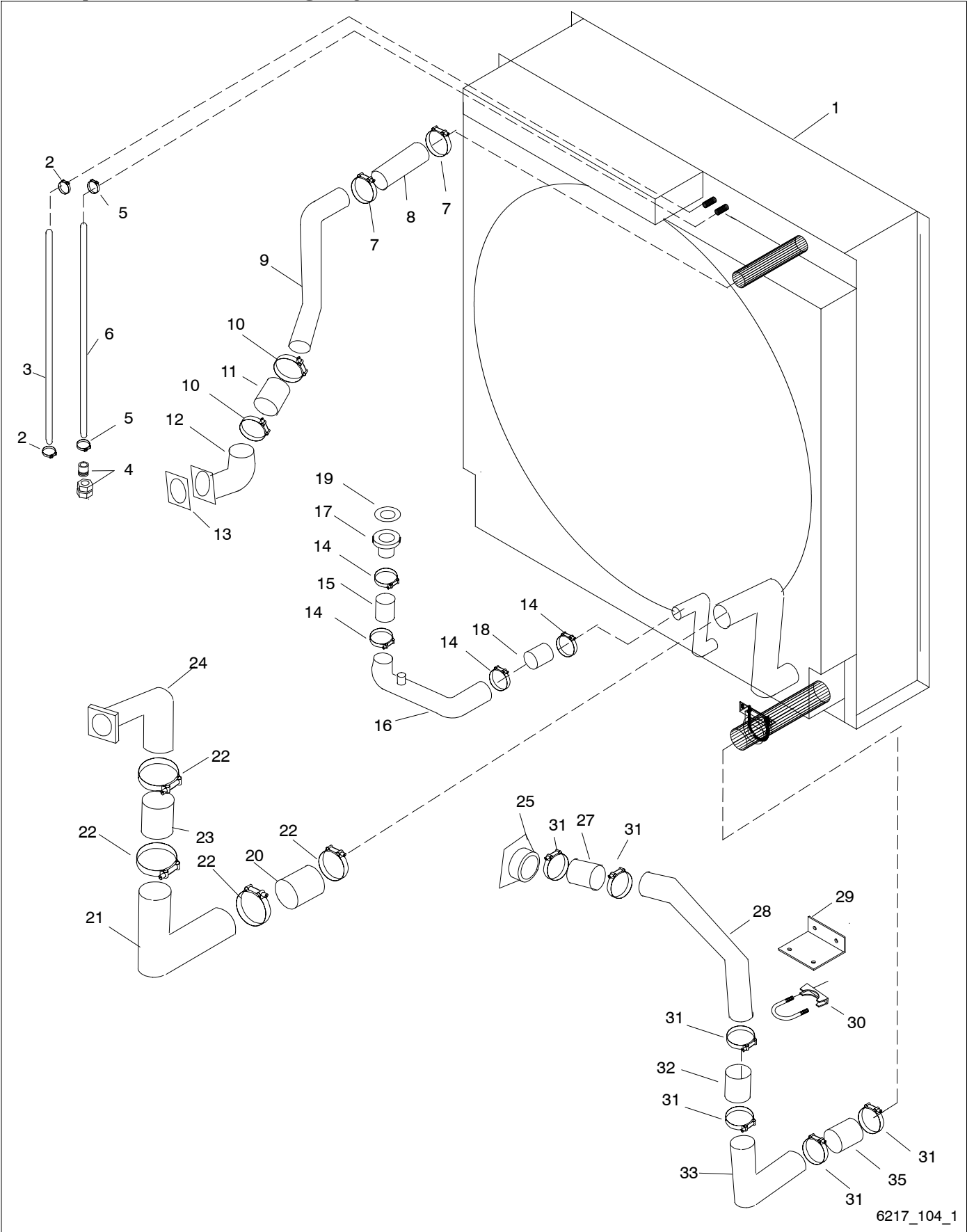


GM87435

Group 101: Air Intake, continued

Item	Part Number	Description	Quantity
			Module Number GM87435-MA1
1	279717	Clamp, hose, 8.63/8.94 in.	8
2	279743	Clamp, hose, 8.38/8.69 in.	16
3	GM23519	Hose, 90 Deg. Elbow (8.00 in. ID)	4
4	GM28302	Hose, straight air (8.00 in. ID)	4
5	GM30078	Clamp, Hose	4
6	GM87266	Heavy Duty Air Cleaner	2
6a	GM87429	Element, Air Cleaner primary	4
6b	GM87430	Element, Air Cleaner secondary	4
7	GM87279	Bracket, Air Cleaner Mtg	2
8	GM87280	Frame, Upright, Air Intake	2
9	GM87281	Frame, Upright, Air Intake	2
10	GM87282	Gusset, Inner Air Cleaner Mtg.	4
11	GM87284	Brace, Air Intake	2
12	GM87324	Hose, Reducer 8 in.-10 in. ID	4
13	GM87445	Tube, Air Intake Elbow	2
14	GM87447	Elbow, 8 in. ID x 20 Deg.	2
24	X-522-100P	Tube, Steel	4
25	X-522-113P	Tube, Steel	2
26	X-522-127	Tube, Steel	2

Group 104: Cooling System

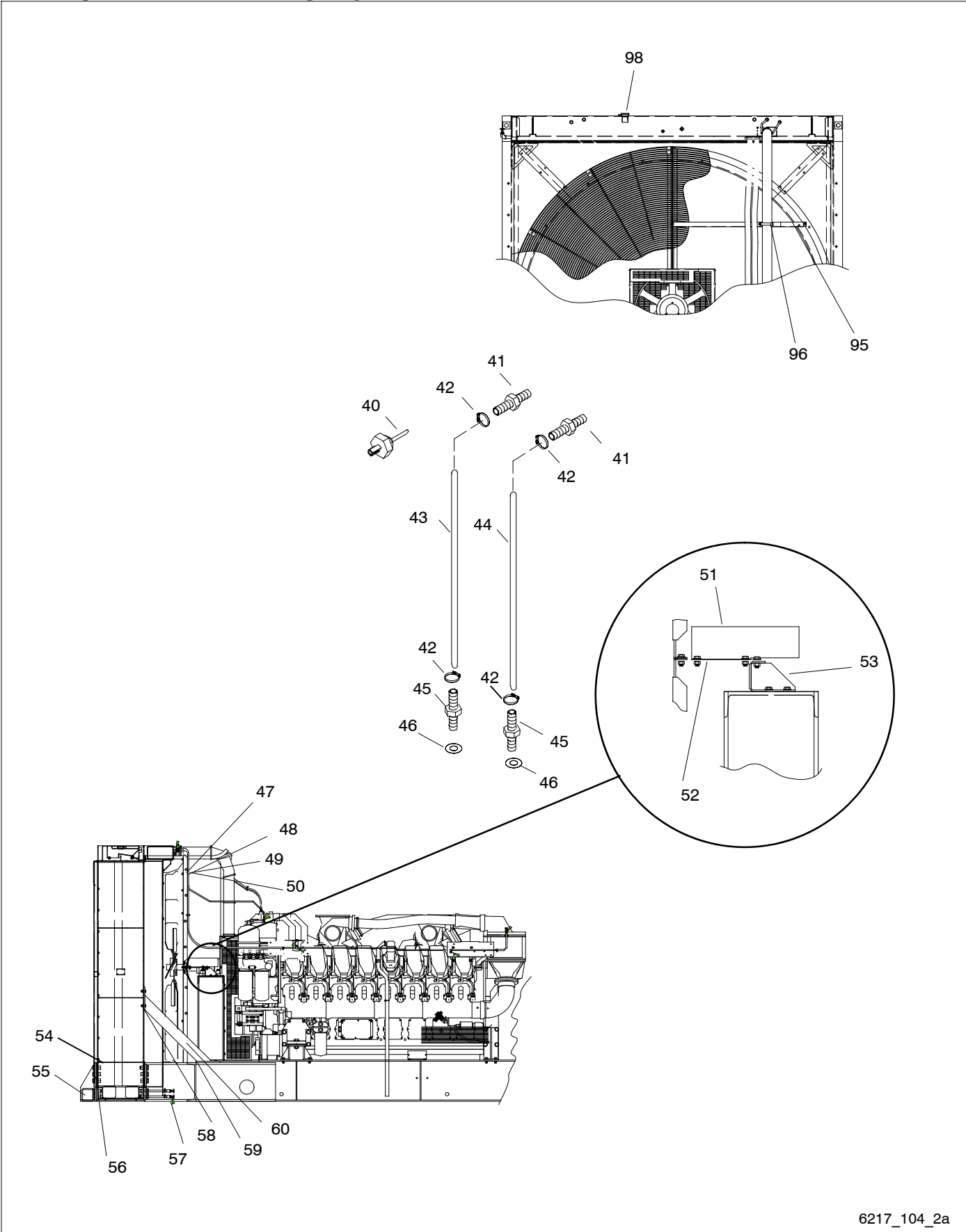


Group 104: Cooling System

Item	Part Number	Description	Quantity												
			Module												
			GM26291-MA1	GM26291-MA2	GM26291-MA3	GM28327-MA1	GM28327-MA2	GM28327-MA3	GM28427-MA1	GM28427-MA2	GM28438-MA1	GM28477-MA1	GM28477-MA2	GM29820-MA1	GM29820-MA2
1	GM25490	Radiator assembly				1	1	1				1	1		
1	GM25489	Radiator assembly	1	1	1										
1	GM28418	Radiator assembly							1	1					
1	GM28643	Radiator assembly									1			1	1
2	X-426-4	Clamp, hose, 1.31/2.25 in.	2	2	2	2	2	2	2	2		2	2	2	2
2	X-426-8	Clamp, hose, 0.81/1.75 in.									2				
3	X-6014-4	Hose, radiator wire insert				1	1	1							
3	X-6014-13	Hose, radiator wire insert	1	1	1				1	1	1			1	1
3	X-6014-115	Hose, radiator wire insert										1	1	1	1
4	GM29562	Connector, swivel	1	1	1	1	1	1	1	1	1	1	1	1	1
4	272930	Connector, hose	1	1	1	1	1	1	1	1	1	1	1	1	1
5	X-426-4	Clamp, hose, 1.31/2.25 in.	2	2	2	2	2	2	2	2		2	2	2	2
5	X-426-8	Clamp, hose, 0.81/1.75 in.									2				
6	X-6014-52	Hose, radiator				1	1	1							
6	X-6014-4	Hose, radiator	1	1	1				1	1					
6	X-6014-13	Hose, radiator									1			1	1
6	X-6014-115	Hose, radiator wire insert										1	1		
7	291542	Clamp, hose, 3.25/3.56 in.				2	2	2	2	2					
7	GM51502	Clamp, hose	2	2	2						2	2	2	2	2
8	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1
9	GM28489	Tube, intercooler return, 3.00 in. OD										1	1		
9	GM28492	Tube, intercooler return, 3.00 in. OD				1	1	1							
9	GM28414	Tube, intercooler return, 3.00 in. OD	1	1	1				1	1					
9	GM28639	Tube, intercooler return									1				
9	GM30011	Tube, intercooler return												1	1
10	291542	Clamp, hose, 3.25/3.56 in.				2	2	2	2	2					
10	GM51502	Clamp, hose	2	2	2						2	2	2	2	2
11	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1
12	GM19356	Flange, water connection, outlet				1	1	1				1	1		
12	GM21307	Flange, water connection, outlet	1	1	1						1				
12	GM30012	Flange, water connection, outlet												1	1
13	GM16101	Gasket, water	1	1	1	1	1	1	1	1	1	1	1		
14	291542	Clamp, hose, 3.25/3.56 in.	2	2	2	4	4	4	4	4	2	4	4	4	4
14	GM51502	Clamp, hose	2	2	2						2				
15	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1						1				
15	X-507-10	Hose, radiator, straight, 3 in. ID							1	1					
15	X-6014-53	Hose, radiator, straight, 3 in. ID				1	1	1				1	1	1	1
16	GM28480	Tube, intercooler inlet, 3.00 in. OD										1	1		
16	GM26157	Tube, intercooler inlet, 3.00 in. OD	1	1	1	1	1	1	1	1	1				
16	GM30015	Tube, intercooler inlet												1	1
17	GM19355	Flange, water connection, inlet	1	1	1	1	1	1	1	1	1	1	1		
17	GM30014	Flange, water connection, inlet												1	1
18	X-6014-110	Hose				1	1	1	1	1	1			1	1
18	X-6014-53	Hose, radiator, straight, 3 in. ID	1	1	1							1	1		
19	GM19378	Gasket, water inlet	1	1	1	1	1	1	1	1	1	1	1		
20	X-6350-2	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1
21	GM28488	Tube, lower radiator, 4.00 in. OD										1	1		
21	GM26155	Tube, lower radiator, 4.00 in. OD	1	1	1	1	1	1	1	1	1			1	1
22	274545	Clamp, hose, 4.31/4.62 in.	4	4	4	4	4	4	4	4	4	4	4	4	4
23	X-6350-2	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1
24	GM26156	Flange, upper water connector, 4.00 in.	1	1	1	1	1	1	1	1	1	1	1		
24	GM30013	Flange, upper water connector												1	1
25	361363	Flange, water connection	1	1	1	1	1	1	1	1	1	1	1	1	1
27	X-6014-91	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1
28	GM28481	Tube, lower radiator, 4.00 in. OD										1	1		
28	GM28400	Tube, lower radiator, 4.00 in. OD	1	1	1	1	1	1	1	1					
28	GM28638	Tube, lower radiator									1				
28	GM30016	Tube, lower radiator												1	1
29	GM13725	Bracket, charge cooler tube support									1				
29	GM28474	Bracket, lower radiator tube	1	1	1	1	1	1	1	1					
29	GM28592	Bracket, lower radiator tube										1	1		
30	289372	Clamp, muffler, 4.12 in.	1	1	1	1	1	1	1	1	1	1	1	1	1
30	X-6011-4	Washer, beveled, 0.44 ID x 1.25 in. OD									2				
30	X-400-227	Spacer, 0.406 ID x 1.25 OD x 0.5 in.												1	1
31	274545	Clamp, hose, 4.31/4.62 in.	6	6	6	6	6	6	6	6	6	6	6	6	6
32	X-6014-31	Hose, straight coolant, 4.00 in. ID				1	1	1	1	1					
32	X-6014-91	Hose, straight coolant, 4.00 in. ID	1	1	1						1			1	1
33	GM21159	Tube, lower radiator, 4.00 in. OD	1	1	1	1	1	1	1	1	1	1	1		
33	GM30018	Tube, lower radiator												1	1
35	X-6014-91	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1

Parts list continues on next page

Group 104: Cooling System, continued



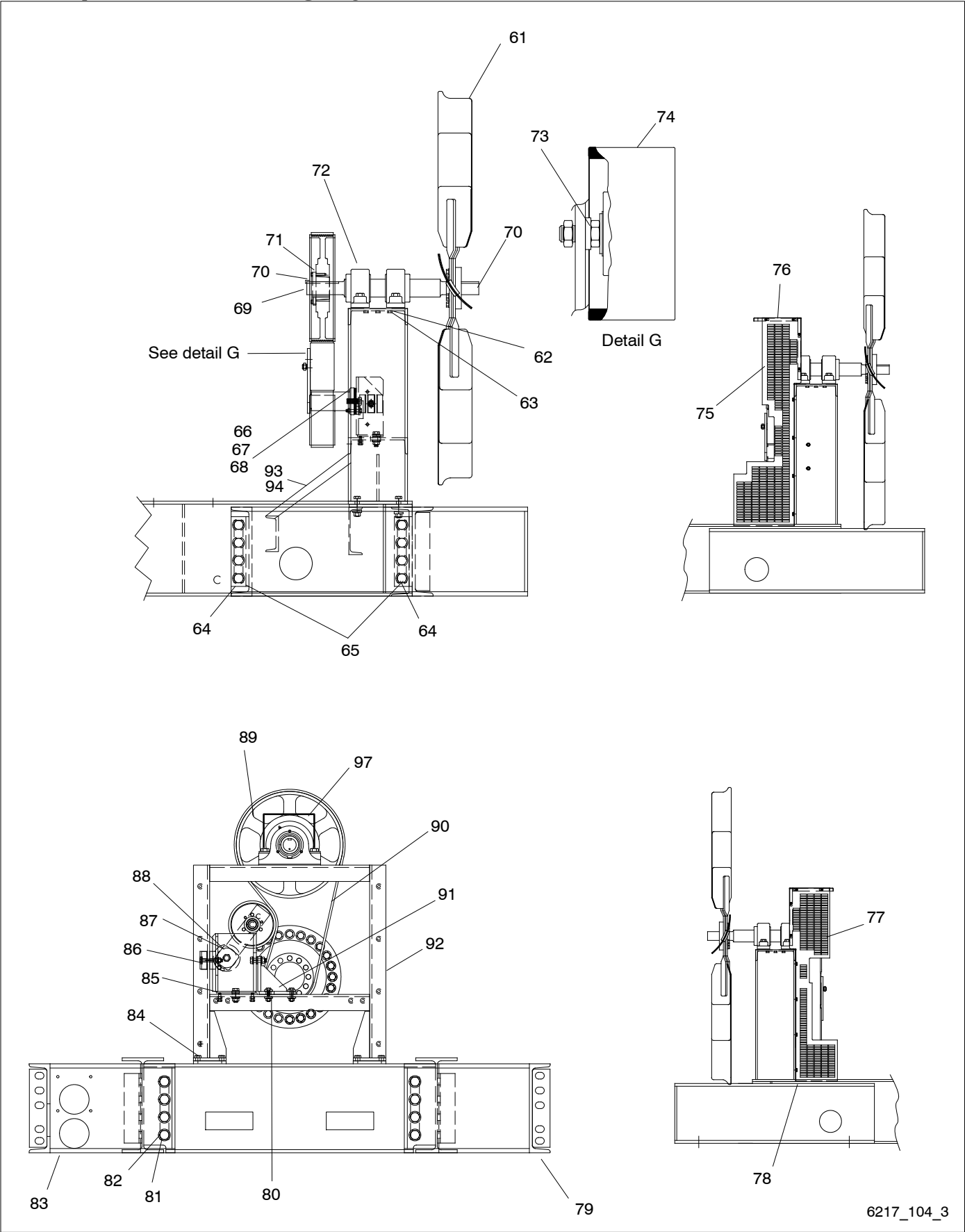
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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity												
			Module												
			GM26291-MA1	GM26291-MA2	GM26291-MA3	GM28327-MA1	GM28327-MA2	GM28327-MA3	GM28427-MA1	GM28427-MA2	GM28438-MA1	GM28477-MA1	GM28477-MA2	GM29820-MA1	GM29820-MA2
40	—	Sensor, low fluid (see engine parts catalog)	1	1	1	1	1	1	1	1	1	1	1	1	1
41	X-582-25	Connector, hose + vibra seal	2	2	2	2	2	2	2	2	2	2	2	3	3
42	X-426-9	Clamp, hose, 0.25/0.70 in.	4	4	4	4	4	4	4	4	4	4	4	10	10
43	X-6359-9	Hose, oil proof	1	1	1				1	1					
43	X-6359-3	Hose, oil proof									1				
43	X-6359-7	Hose, oil proof				1	1	1						2	2
43	X-6359-6	Hose, rubber, straight, 0.25 in. ID										1	1	1	1
44	X-6359-9	Hose, oil proof	1	1	1				1	1					
44	X-6359-3	Hose, oil proof									1			1	1
44	X-6359-7	Hose, oil proof				1	1	1							
44	X-6359-6	Hose, rubber, straight, 0.25 in. ID										1	1	1	1
44	X-6359-19	Hose, oil proof (not shown)												1	1
45	X-582-25	Connector, hose + vibra seal	2	2	2	2	2	2	2	2	2	2	2	3	3
45	352360	Adapter, bushing, M18 (not shown)	2	2	2	2	2	2	2	2	2	2	2	2	2
45	326471	Adapter, bushing, M14 (not shown)												1	1
45	GM58004	Adapter (not shown)												2	2
45	GM58005	Connector, swivel (not shown)												2	2
45	X-391-44	Elbow, hose (not shown)												2	2
46	X-6278-7	Washer, nylon, 0.75 ID x 1.063 in. OD	2	2	2	2	2	2	2	2	2	2	2	2	2
46	365499	O-ring, ISO 6149, 11.3mm ID												1	1
47	347434	Shroud									1			1	1
47	354195	Shroud, venturi fan				2	2	2	2	2					
47	361210	Shroud, venturi fan										2	2		
47	GM21309	Guard, wire fan, lower	1	1	1										
47	GM28939	Shroud, venturi fan				1	1	1	1	1		1	1		
47	GM28940	Shroud, venturi fan													
48	347435	Guard, fan									4			4	4
48	354959	Guard, flat fan				4	4	4	4	4					
48	361216	Guard, flat fan										4	4		
48	GM21308	Guard, wire fan, upper	1	1	1										
49	X-801-6	Washer, hardened, 0.469 ID x 0.922 in. OD	8	8	8	12	12	12	12	12	12	12	12	12	12
49	X-25-75	Washer, plain, 0.344 ID x 0.875 in. OD	8	8	8	12	12	12	12	12		12	12		
50	GM17890	Plate, support									12			12	12
50	GM22400	Plate, support													
51	GM19605	Guard, shaft	1	1	1	1	1	1				1	1		
51	GM30737	Guard, shaft							1	1					
51	GM26235	Guard, shaft									1			1	1
52	365645	Support, fan guard	2	2	2	2	2	2	2	2		2	2		
52	347825	Support, fan guard									2			2	2
53	365644	Support, fan guard	2	2	2	2	2	2	2	2		2	2		
53	347825	Support, fan guard									2			2	2
54	361588	Frame, radiator										1	1		
54	354999	Bracket, radiator mounting	2	2	2	2	2	2	2	2					
54	GM26236	Bracket, radiator mounting									2			2	2
55	361046	Guard, radiator				1	1	1							
55	GM22413	Guard, radiator	1	1	1				1	1					
55	347419	Guard, radiator									1			1	1
56	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	22	22	22	22	22	22	22	22	20	22	22	20	20
57	X-256-1	Valve, drain, 3/8 in. NPT	2	2	2	2	2	2	2	2		2	2		
57	278788	Valve, drain, 3/8 in. NPT												2	2
58	X-801-9	Washer, hardened, 0.688 ID x 1.373 in. OD	8	8	8	8	8	8	8	8	8	8	8	8	8
59	X-6011-3	Washer, beveled, 0.68 ID x 1.5 in. OD	4	4	4	4	4	4	4	4	4	4	4	4	4
60	354969	Brace, radiator	2	2	2	2	2	2	2	2		2	2		
60	347436	Brace, radiator									2			2	2
61	328246	Fan, pusher, 64 in.				1	1	1	1	1					
61	GM18401	Fan, 91 in.									1				1
61	GM19513	Fan, pusher	1	1	1										
61	GM19514	Fan, pusher, 64 in.										1	1		
61	GM30567	Fan												1	

Parts list continues on next page

Group 104: Cooling System, continued

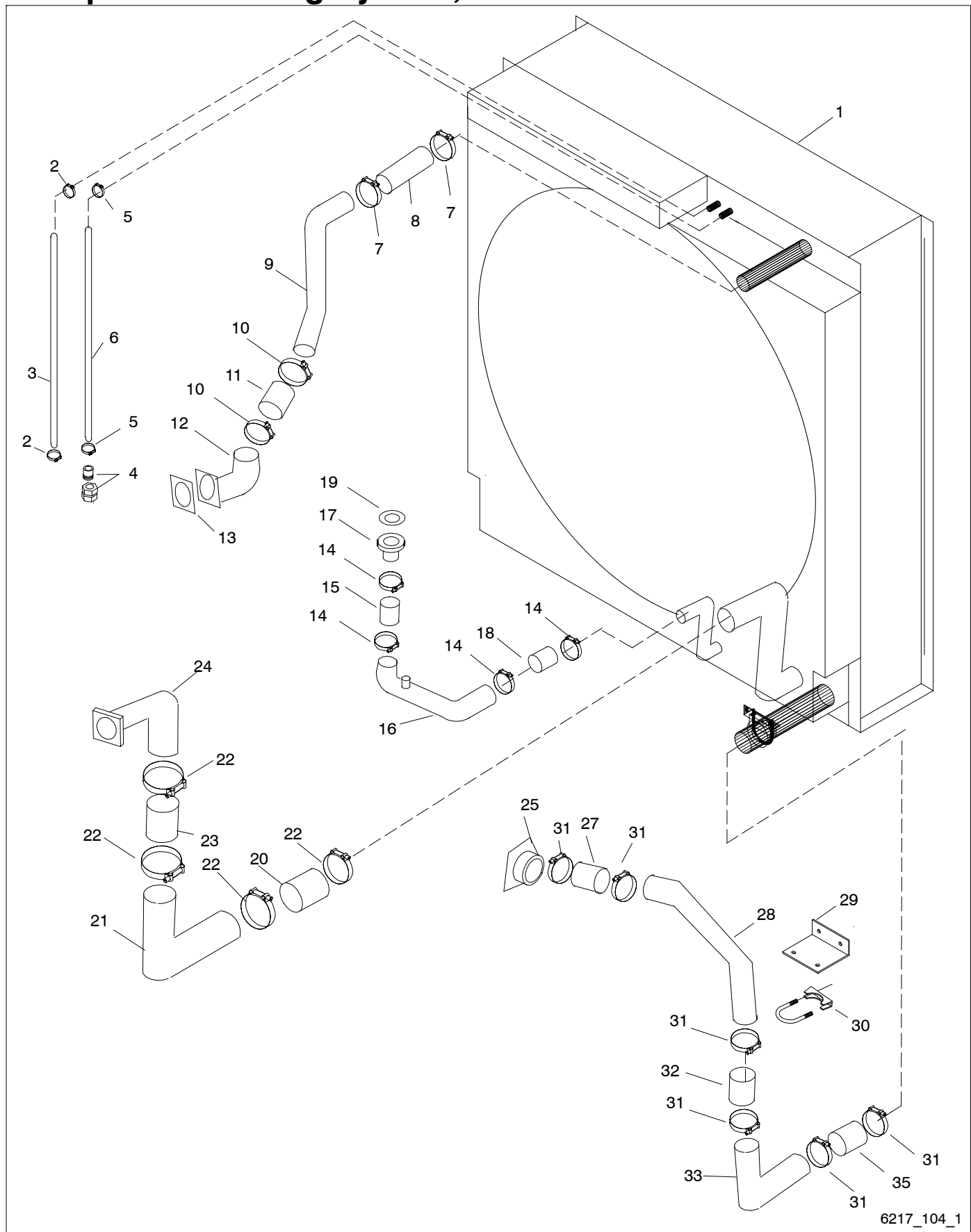


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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity													
			Module													
			GM26291-MA1	GM26291-MA2	GM26291-MA3	GM28327-MA1	GM28327-MA2	GM28327-MA3	GM28427-MA1	GM28427-MA2	GM28438-MA1	GM28477-MA1	GM28477-MA2	GM29820-MA1	GM29820-MA2	
62	X-801-8	Washer, hardened, 0.812 ID x 2 in. OD	8	8	8	8	8	8	8	8	8	8	8	8	8	
63	M934-20-80	Nut, hex	4	4	4	4	4	4	4	4	4	4	4	4	4	
64	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	16	16	16	16	16	16	16	16	16	16	16	16	16	
65	GM20151	Plate, bolting	4	4	4	4	4	4	4	4	4	4	4	6	6	
66	GM28243	Shim, 110 mm OD x 16 gauge stainless	8	8	8	8	8	8	8	8	8	8	8	8	8	
67	GM28244	Shim, 110 mm OD x 22 gauge stainless	2	2	2	2	2	2	2	2	2	2	2	2	2	
68	GM28245	Shim, 110 mm OD x 28 gauge stainless	2	2	2	2	2	2	2	2	2	2	2	2	2	
69	GM19587	Shaft, fan	1	1	1	1	1	1	1	1		1	1			
69	347431	Shaft									1			1	1	
70	328256	Key	2	2	2	1	1	1	1	1		1	1			
70	X-286-22	Key, square									1			1	1	
71	274905	Bushing, pulley, 3.998 in. NPT	1	1	1	1	1	1	1	1		1	1			
71	GM26225	Bushing, pulley									1			1	1	
72	347430	Block, pillow	3	3	3	2	2	2	2	2	3	3	3	3	3	
72	GM30510	Shim, fan and support (not shown)	2	2	2	2	2	2	2	2	2	2	2	2	2	
73	X-25-29	Washer, plain, 0.812 ID x 1.469 in. OD	3	3	3	3	3	3	3	3	3	3	3	3	3	
74	GM19453	Pulley, Idler	1	1	1	1	1	1	1	1	1	1	1	1	1	
75	GM28415	Guard, belt, RS	1	1	1	1	1	1	1	1		1	1			
75	GM28845	Guard, belt, RS									1					
75	GM30031	Guard, belt, RS												1	1	
76	GM28417	Guard, belt, top				1	1	1	1	1		1	1			
76	GM35029	Guard, belt, top	1	1	1											
76	GM28846	Guard, belt, top									1					
76	GM30033	Guard, belt, top												1	1	
77	GM28416	Guard, belt, LS	1	1	1	1	1	1	1	1		1	1			
77	GM28844	Guard, belt, LS									1					
77	GM30032	Guard, belt, LS												1	1	
78	GM28472	Guard, belt, bottom	1	1	1	1	1	1	1	1		1	1			
78	GM39673	Guard, belt, bottom									1			1	1	
79	365495	Frame, radiator				1	1	1	1	1		1	1			
79	GM21191	Frame, radiator	1	1	1											
79	GM26226	Frame, radiator									1					
79	GM29913	Frame, radiator												1	1	
80	X-801-15	Washer, hardened	6	6	6	6	6	6	6	6	6	6	6	6	6	
81	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	10	10	10	10	10	10	10	10	8	10	10	8	8	
82	GM20151	Plate, bolting	2	2	2	2	2	2	2	2	2	2	2			
83	GM21196	Frame, radiator, RS				1	1	1	1	1		1	1			
83	GM21197	Frame, radiator, RS	1	1	1											
83	GM26227	Frame, radiator, RS									1					
83	GM29912	Frame, radiator, RS												1	1	
84	X-6011-3	Washer, beveled, 0.68 ID x 1.5 in. OD	8	8	8	8	8	8	8	8	8	8	8	4	4	
85	GM26338	Plate, mounting, idler	1	1	1	1	1	1	1	1	1	1	1	1	1	
85	GM28531	Plate, mounting, idler														
86	GM26579	Shaft, pivot	1	1	1	1	1	1	1	1	1	1	1	1	1	
86	M982-12-80	Nut, hex elastic stop (not shown)	1	1	1	1	1	1	1	1	1	1	1	1	1	
87	X-801-11	Washer, hardened, 0.406 ID x 1.375 in.	1	1	1	1	1	1	1	1	1	1	1	1	1	
88	GM19558	Tensioner, belt	1	1	1	1	1	1	1	1	1	1	1	1	1	
89	274906	Pulley									1			1		
89	354984	Pulley, fan	1		1	1		1	1			1			1	
89	354986	Pulley, fan		1			1			1						
90	GM21395	Belt, fan	1		1	1		1				1				
90	GM21396	Belt, fan		1			1			1			1			
90	GM26234	Belt, poly V, 118 in., 20 ribs									1					
90	GM30036	Belt, poly V												1		
90	GM30566	Belt, poly V													1	
91	GM26339	Bracket, adjusting (idler mounting plate)	1	1	1	1	1	1	1	1	1	1	1	1	1	
92	GM19533	Frame, fan support	1	1	1	1	1	1	1	1		1	1			
92	GM20589	Frame, fan support									1					
92	GM29985	Frame, fan support												1	1	
93	GM19563	Brace, fan assembly									2			2	2	
94	X-6011-4	Washer, beveled, 0.44 ID x 1.25 in. OD									4			4	4	
95	GM28640	Brace, radiator tube									1			1	1	
96	274824	Clamp, hose, 3.68/4 in.									1			1	1	
97	347712	Guard, shaft									1			1	1	
98	GM23500	Cap, radiator	1	1	1	1	1	1	1	1	1	1	1	1	1	

Group 104: Cooling System, continued

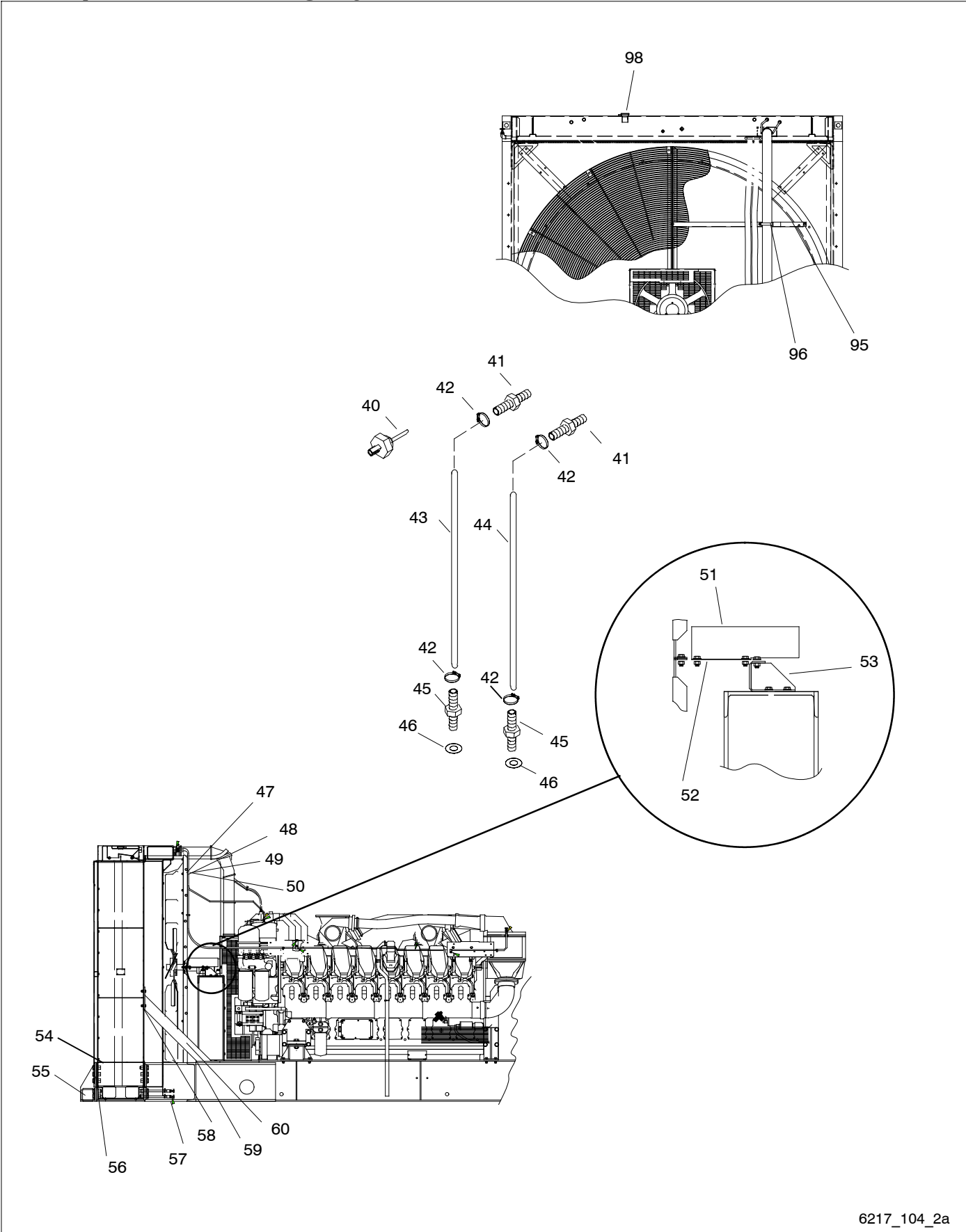


Group 104: Cooling System, continued

Item	Part Number	Description	Quantity																	
			Module																	
			GM35027-MA1	GM35027-MA2	GM35181-MA1	GM35181-MA2	GM35181-MA3	GM35181-MA4	GM35181-MA5	GM35181-MA6	GM35183-MA1	GM35183-MA2	GM35183-MA3	GM35183-MA4	GM35186-MA1	GM35186-MA2	GM35186-MA3	GM35186-MA4	GM35292-MA1	GM35292-MA2
1	GM25490	Radiator assembly	1	1	1	1	1	1	1	1										
1	GM25489	Radiator assembly									1	1	1	1	1	1	1	1		
1	GM28418	Radiator assembly																		
1	GM28643	Radiator assembly																	1	1
2	X-426-4	Clamp, hose, 1.31/2.25 in.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
2	X-426-8	Clamp, hose, 0.81/1.75 in.																	2	2
3	X-6014-4	Hose, radiator wire insert			1	1	1	1	1	1										
3	X-6014-13	Hose, radiator wire insert									1	1	1	1	1	1	1	1	1	1
3	X-6014-115	Hose, radiator wire insert	1	1																
4	GM29562	Connector, swivel	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	272930	Connector, hose	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	X-426-4	Clamp, hose, 1.31/2.25 in.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
5	X-426-8	Clamp, hose, 0.81/1.75 in.																	2	2
6	X-6014-52	Hose, radiator			1	1	1	1	1	1										
6	X-6014-4	Hose, radiator									1	1	1	1	1	1	1	1		
6	X-6014-13	Hose, radiator																	1	1
6	X-6014-115	Hose, radiator wire insert	1	1																
7	GM51502	Clamp, hose	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
8	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	GM28489	Tube, intercooler return, 3.00 in. OD	1	1																
9	GM28492	Tube, intercooler return, 3.00 in. OD			1	1	1	1	1	1										
9	GM28414	Tube, intercooler return, 3.00 in. OD									1	1	1	1	1	1	1	1		
9	GM28639	Tube, intercooler return																	1	1
9	GM30011	Tube, intercooler return																		
10	GM51502	Clamp, hose	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
11	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	GM19356	Flange, water connection, outlet	1	1	1	1	1	1	1	1										
12	GM21307	Flange, water connection, outlet									1	1	1	1	1	1	1	1	1	1
12	GM30012	Flange, water connection, outlet																		
13	GM16101	Gasket, water	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	291542	Clamp, hose, 3.25/3.56 in.	4	4	4	4	4	4	4	4	2	2	2	2	2	2	2	2	2	2
14	GM51502	Clamp, hose									2	2	2	2	2	2	2	2	2	2
15	X-507-7	Hose, radiator, straight, 3 in. ID																		
15	X-507-10	Hose, radiator, straight, 3 in. ID									1	1	1	1						
15	X-6014-53	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1										
16	GM28480	Tube, intercooler inlet, 3.00 in. OD	1	1																
16	GM26157	Tube, intercooler inlet, 3.00 in. OD			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	GM30015	Tube, intercooler inlet																		
17	GM19355	Flange, water connection, inlet	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	GM30014	Flange, water connection, inlet																		
18	X-6014-110	Hose			1	1	1	1	1	1	1	1	1	1					1	1
18	X-6014-53	Hose, radiator, straight, 3 in. ID	1	1											1	1	1	1		
19	GM19378	Gasket, water inlet	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20	X-6350-2	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21	GM28488	Tube, lower radiator, 4.00 in. OD	1	1																
21	GM26155	Tube, lower radiator, 4.00 in. OD			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21	GM30018	Tube, lower radiator																		
22	274545	Clamp, hose, 4.31/4.62 in.	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
23	X-6350-2	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
24	GM26156	Flange, upper water connector, 4.00 in.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
24	GM30013	Flange, upper water connector																		
25	361363	Flange, water connection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
27	X-6014-91	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	GM28481	Tube, lower radiator, 4.00 in. OD	1	1																
28	GM28400	Tube, lower radiator, 4.00 in. OD			1	1	1	1	1	1	1	1	1	1	1	1	1	1		
28	GM28638	Tube, lower radiator																	1	1
28	GM30016	Tube, lower radiator																		
29	GM13725	Bracket, charge cooler tube support																	1	1
29	GM28474	Bracket, lower radiator tube			1	1	1	1	1	1	1	1	1	1	1	1	1	1		
29	GM28592	Bracket, lower radiator tube	1	1																
30	289372	Clamp, muffler, 4.12 in.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	X-6011-4	Washer, beveled, 0.44 ID x 1.25 in. OD																	2	2
31	274545	Clamp, hose, 4.31/4.62 in.	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
32	X-6014-31	Hose, straight coolant, 4.00 in. ID	1	1	1	1	1	1	1	1	1	1	1	1						
32	X-6014-91	Hose, straight coolant, 4.00 in. ID													1	1	1	1	1	1
33	GM21159	Tube, lower radiator, 4.00 in. OD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35	X-6014-91	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Parts list continues on next page

Group 104: Cooling System, continued



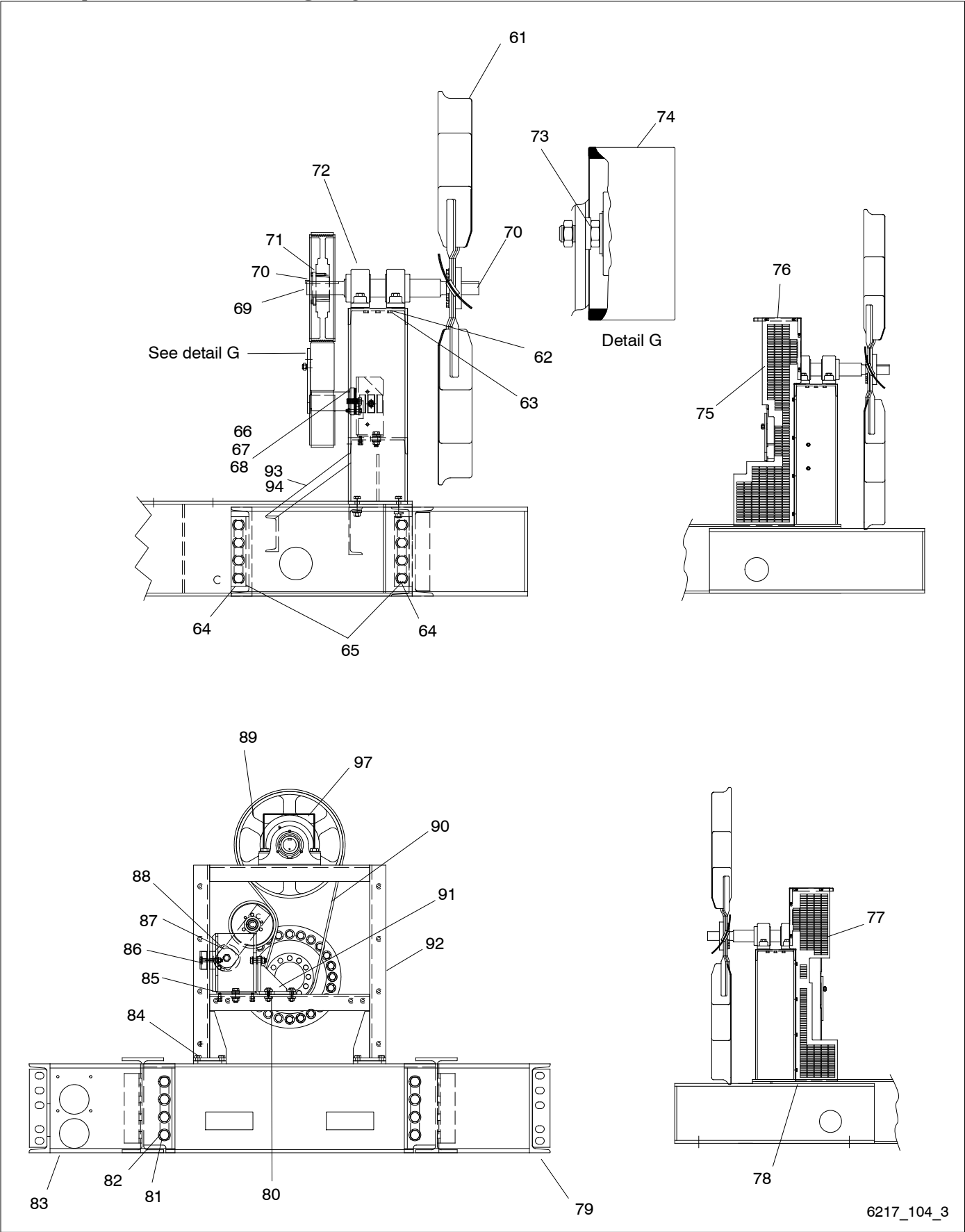
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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity Module															
			GM35027-MA1	GM35027-MA2	GM35181-MA1	GM35181-MA2	GM35181-MA3	GM35181-MA4	GM35181-MA5	GM35181-MA6	GM35183-MA1	GM35183-MA2	GM35183-MA3	GM35183-MA4	GM35186-MA1	GM35186-MA2	GM35186-MA3	GM35186-MA4
40	—	Sensor, low fluid (see eng. parts catalog)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
41	X-582-25	Connector, hose + vibra seal	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
42	X-426-9	Clamp, hose, 0.25/0.70 in.	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
43	X-6359-9	Hose, oil proof									1	1	1	1	1	1	1	
43	X-6359-3	Hose, oil proof																1
43	X-6359-7	Hose, oil proof			1	1	1	1	1	1								
43	X-6359-6	Hose, rubber, straight, 0.25 in. ID	1	1							1	1	1	1	1	1	1	
44	X-6359-9	Hose, oil proof									1	1	1	1	1	1	1	
44	X-6359-3	Hose, oil proof																1
44	X-6359-7	Hose, oil proof			1	1	1	1	1	1								
44	X-6359-6	Hose, rubber, straight, 0.25 in. ID	1	1														
45	X-582-25	Connector, hose + vibra seal	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
45	352360	Adapter, bushing, M18 (not shown)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
45	326471	Adapter, bushing, M14 (not shown)																
46	X-6278-7	Washer, nylon, 0.75 ID x 1.063 in. OD	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
46	276317	Washer, nylon, 0.578 ID x 1.067 in. OD																
47	GM60517	Shroud, venturi fan																4
47	354195	Shroud, venturi fan			2	2	2	2	2	2	2	2	2	2				
47	361210	Shroud, venturi fan	2	2														
47	GM21309	Guard, wire fan, lower													1	1	1	1
47	GM28939	Shroud, venturi fan	1	1														
47	GM28940	Shroud, venturi fan			1	1	1	1	1	1	1	1	1	1				
48	347435	Guard, fan																4
48	354959	Guard, flat fan			4	4	4	4	4	4	4	4	4	4				
48	361216	Guard, flat fan	4	4														
48	GM21308	Guard, wire fan, upper													1	1	1	1
49	X-801-6	Washer, hardened, 0.469 ID x 0.922 in.	12	12	12	12	12	12	12	12	12	12	12	12				12
49	X-25-75	Washer, plain, 0.344 ID x 0.875 in. OD													8	8	8	8
50	GM17890	Plate, support	12	12	12	12	12	12	12	12	12	12	12	12				
50	GM22400	Plate, support																12
51	GM19605	Guard, shaft	1	1	1	1	1	1	1	1					1	1	1	1
51	GM30737	Guard, shaft									1	1	1	1				
51	GM26235	Guard, shaft																1
52	365645	Support, fan guard	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
52	347825	Support, fan guard																2
53	365644	Support, fan guard	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
53	347825	Support, fan guard																2
54	361588	Frame, radiator	1	1														
54	354999	Bracket, radiator mounting			2	2	2	2	2	2	2	2	2	2	2	2	2	
54	GM26236	Bracket, radiator mounting																2
55	361046	Guard, radiator			1	1	1	1	1	1								
55	GM22413	Guard, radiator									1	1	1	1	1	1	1	
55	347419	Guard, radiator																1
56	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	20
57	278788	Valve, drain, 3/8 in. NPT	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
58	X-801-9	Washer, hardened, 0.688 ID x 1.373 in.	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
59	X-6011-3	Washer, beveled, 0.68 ID x 1.5 in. OD	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
60	354969	Brace, radiator	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
60	347436	Brace, radiator																2
61	328246	Fan, pusher, 64 in.			1	1	1	1	1	1	1	1	1	1				
61	GM18401	Fan, 91 in.																1
61	GM19513	Fan, pusher													1	1	1	
61	GM19514	Fan, pusher, 64 in.	1	1														
61	GM30567	Fan																

Parts list continues on next page

Group 104: Cooling System, continued

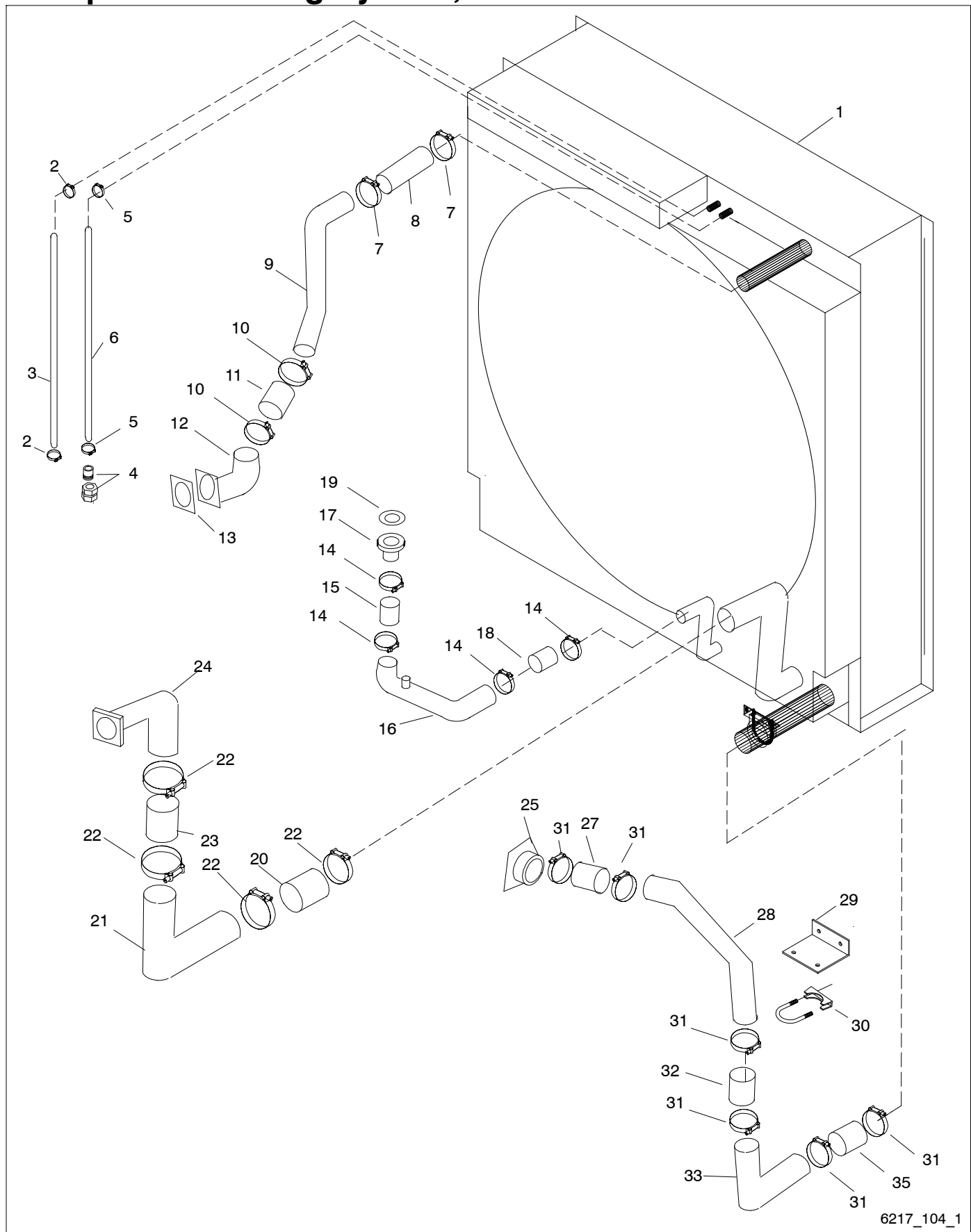


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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity Module																	
			GM35027-MA1	GM35027-MA2	GM35181-MA1	GM35181-MA2	GM35181-MA3	GM35181-MA4	GM35181-MA5	GM35181-MA6	GM35183-MA1	GM35183-MA2	GM35183-MA3	GM35183-MA4	GM35186-MA1	GM35186-MA2	GM35186-MA3	GM35186-MA4	GM35292-MA1	GM35292-MA2
62	X-801-8	Washer, hardened, 0.812 ID x 2 in. OD	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
63	M934-20-80	Nut, hex	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
64	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
65	GM20151	Plate, bolting	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
66	GM28243	Shim, 110 mm OD x 16 gauge stainless	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
67	GM28244	Shim, 110 mm OD x 22 gauge stainless	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
68	GM28245	Shim, 110 mm OD x 28 gauge stainless	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
69	GM19587	Shaft, fan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
69	347431	Shaft																1	1	
70	328256	Key	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2			
70	X-286-22	Key, square																1	1	
71	274905	Bushing, pulley, 3.998 in. NPT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
71	GM26225	Bushing, pulley																1	1	
72	347430	Block, pillow	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
72	GM30510	Shim, fan and support (not shown)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
73	X-25-29	Washer, plain, 0.812 ID x 1.469 in. OD	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
74	GM19453	Pulley, Idler	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
75	GM28415	Guard, belt, RS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
75	GM35291	Guard, belt, RS																1	1	
76	GM35029	Guard, belt, top	1		1	1	1		1	1	1	1		1	1					
76	GM38394	Guard, belt, top		1				1	1	1		1	1			1	1			
76	GM35256	Guard, belt, top																1		
76	GM38395	Guard, belt, top																	1	
77	GM28416	Guard, belt, LS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
77	GM28844	Guard, belt, LS																1	1	
77	GM30032	Guard, belt, LS																		
78	GM28472	Guard, belt, bottom	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
78	GM39673	Guard, belt, bottom																1	1	
79	365495	Frame, radiator	1	1	1	1	1	1	1	1	1	1	1	1						
79	GM21191	Frame, radiator													1	1	1			
79	GM26226	Frame, radiator																1	1	
79	GM29913	Frame, radiator																		
80	X-801-15	Washer, hardened	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
81	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	8	
82	GM20151	Plate, bolting	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
83	GM21196	Frame, radiator, RS	1	1	1	1	1	1	1	1	1	1	1	1						
83	GM21197	Frame, radiator, RS													1	1	1	1		
83	GM26227	Frame, radiator, RS																1	1	
83	GM29912	Frame, radiator, RS																		
84	X-6011-3	Washer, beveled, 0.68 ID x 1.5 in. OD	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
85	GM26338	Plate, mounting, idler	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	
85	GM28531	Plate, mounting, idler				1			1											
86	GM26579	Shaft, pivot	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
86	M982-12-80	Nut, hex elastic stop (not shown)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
87	X-801-11	Washer, hardened, 0.406 ID x 1.375 in.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
88	GM19558	Tensioner, belt	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
89	274906	Pulley																1	1	
89	354984	Pulley, fan	1	1	1		1	1		1	1		1			1				
89	354986	Pulley, fan				1			1			1					1			
90	GM21395	Belt, fan	1	1	1		1	1		1	1		1			1		1		
90	GM21396	Belt, fan				1			1			1		1	1		1			
90	GM26234	Belt, poly V, 118 in., 20 ribs																1	1	
90	GM30036	Belt, poly V																		
90	GM30566	Belt, poly V																		
91	GM26339	Bracket, adjusting (idler mounting plate)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
92	GM19533	Frame, fan support	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
92	GM20589	Frame, fan support																1	1	
92	GM29985	Frame, fan support																		
93	GM19563	Brace, fan assembly																2	2	
94	X-6011-4	Washer, beveled, 0.44 ID x 1.25 in. OD																4	4	
95	GM28640	Brace, radiator tube																1	1	
96	274824	Clamp, hose, 3.68/4 in.																1	1	
97	347712	Guard, shaft																1	1	
98	GM23500	Cap, radiator	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

Group 104: Cooling System, continued



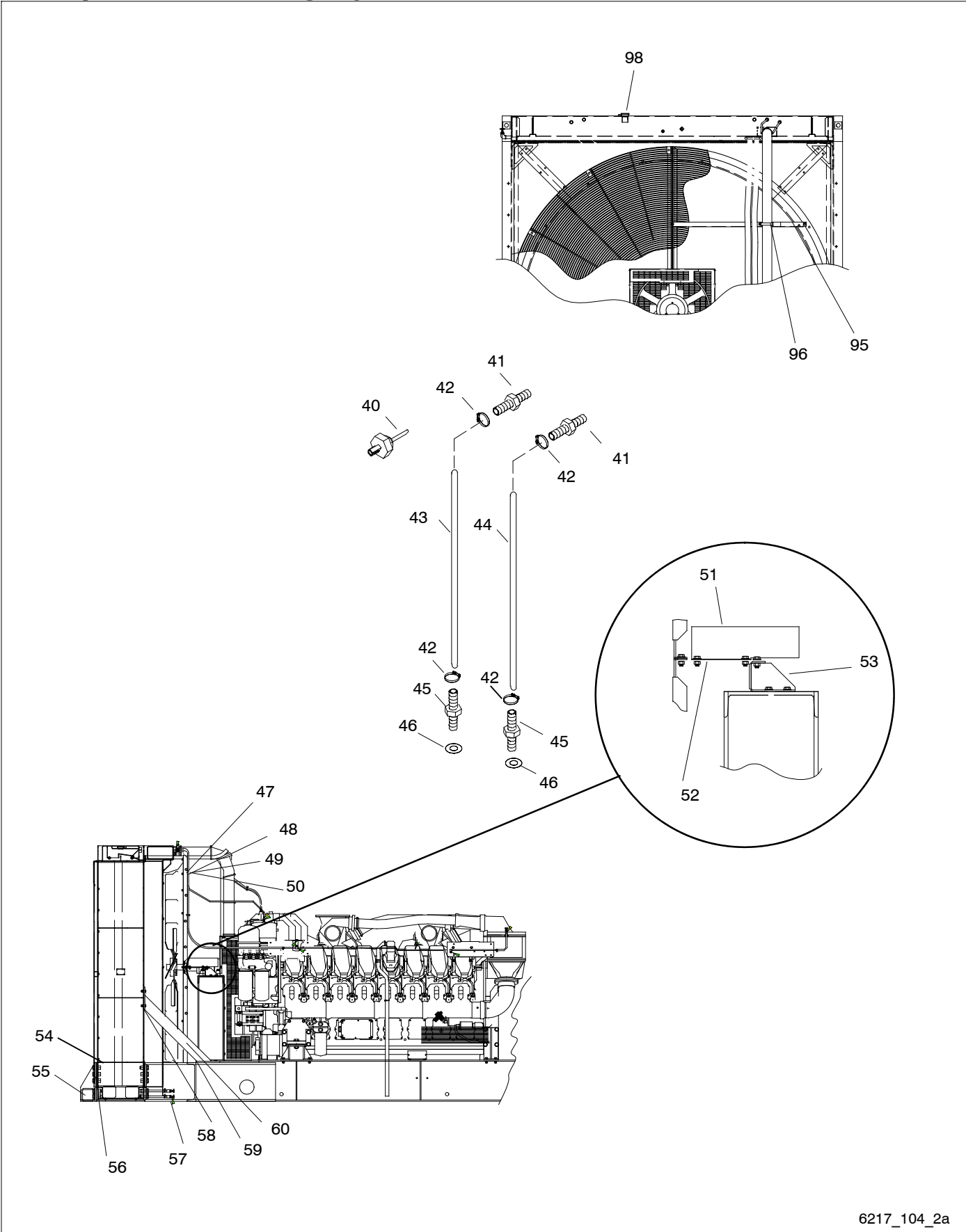
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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity											
			Module											
			GM40959-MA1	GM40959-MA2	GM40991-MA1	GM40991-MA2	GM40991-MA3	GM40991-MA4	GM40992-MA1	GM40992-MA2	GM50296-MA1	GM50296-MA2	GM50296-MA3	GM50296-MA4
1	GM40812	Radiator assembly							1	1				
1	GM40810	Radiator assembly			1	1								
1	GM40811	Radiator assembly					1	1						
1	GM40809	Radiator assembly	1	1										
1	GM40813	Radiator assembly									1	1	1	1
2	X-426-8	Clamp, hose, 0.81/1.75 in.	2	2	2	2	2	2	2	2	2	2	2	2
3	X-6014-4	Hose, radiator wire insert			1	1	1	1	1	1				
3	X-6014-13	Hose, radiator wire insert	1	1							1	1	1	1
4	GM29562	Connector, swivel	1	1	1	1	1	1	1	1	1	1	1	1
4	272930	Connector, hose	1	1	1	1	1	1	1	1	1	1	1	1
5	X-426-8	Clamp, hose, 0.81/1.75 in.	2	2	2	2	2	2	2	2	2	2	2	2
6	X-6014-52	Hose, radiator			1	1	1	1	1	1				
6	X-6014-13	Hose, radiator	1	1							1	1	1	1
7	GM51502	Clamp, hose	2	2	2	2	2	2	2	2	2	2	2	2
8	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1	1	1	1	1
9	GM52493	Tube, intercooler return	1	1										
9	GM52491	Tube, intercooler return							1	1				
9	GM52490	Tube, intercooler return, 3.00 in. OD			1	1	1	1						
9	GM52492	Tube, intercooler return									1	1	1	1
10	GM51502	Clamp, hose	2	2	2	2	2	2	2	2	2	2	2	2
11	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1	1	1	1	1
12	GM52555	Flange, water connection, outlet	1	1	1	1	1	1	1	1	1	1	1	1
13	GM16102	Gasket, water	1	1	1	1	1	1	1	1	1	1	1	1
14	GM51502	Clamp, hose	2	2	2	2	2	2			2	2	2	2
14	291542	Clamp, hose, 3.25/3.56 in.	2	2	2	2	2	2	4	4	2	2	2	2
15	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1			1	1	1	1
15	X-6014-53	Hose, radiator, straight, 3 in. ID							1	1				
16	GM52487	Tube, radiator, SCCC inlet	1	1					1	1				
16	GM40623	Tube, radiator, SCCC inlet			1	1	1	1						
16	GM52489	Tube, radiator, SCCC inlet									1	1	1	1
17	GM52553	Flange, water connection, inlet									1	1	1	1
17	GM40618	Flange, water connection, inlet	1	1	1	1	1	1	1	1				
18	X-6014-110	Hose	1	1							1	1	1	1
18	X-6014-135	Hose, radiator, straight, 3 in. ID			1	1	1	1	1	1				
19	GM16102	Gasket, water inlet	1	1	1	1	1	1	1	1	1	1	1	1
20	X-6350-2	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1	1	1	1	1
21	GM52485	Tube, lower radiator	1	1					1	1				
21	GM40623	Tube, lower radiator			1	1	1	1						
21	GM52486	Tube, lower radiator									1	1	1	1
22	274545	Clamp, hose, 4.31/4.62 in.	4	4	4	4	4	4	4	4	4	4	4	4
23	X-6350-4	Hose, radiator, straight, 4 in. ID	1	1										
23	X-6350-2	Hose, radiator, straight, 4 in. ID			1	1	1	1	1	1	1	1	1	1
24	GM40620	Flange, water connection, outlet	1	1	1	1	1	1	1	1				
24	GM52554	Flange, water connection, outlet									1	1	1	1
25	GM40374	Flange, water connection	1	1	1	1	1	1	1	1	1	1	1	1
27	X-6014-134	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1				
27	X-6014-31	Hose, radiator, straight, 4 in. ID									1	1	1	1
28	GM52977	Tube, radiator									1	1	1	1
28	GM52975	Tube, lower radiator			1	1	1	1	1	1				
28	GM52976	Tube, radiator	1	1										
29	GM52484	Bracket, tube mounting									1	1	1	1
29	GM52581	Bracket, tube mounting			1	1	1	1	1	1				
29	GM13725	Bracket, tube mounting	1	1										
30	289372	Clamp, muffler, 4.12 in.	1	1	1	1	1	1	1	1	1	1	1	1
30	X-6011-4	Washer, beveled, 0.44 ID x 1.25 in. OD	2	2							2	2	2	2
31	274545	Clamp, hose, 4.31/4.62 in.	6	6	6	6	6	6	6	6	6	6	6	6
32	X-6014-31	Hose, straight coolant, 4.00 in. ID							1	1				
32	X-6014-91	Hose, straight coolant, 4.00 in. ID	1	1	1	1	1	1			1	1	1	1
33	GM21159	Tube, lower radiator												
33	GM40630	Tube, lower radiator	1	1	1	1	1	1			1	1	1	1
35	X-6014-91	Hose, radiator, straight, 4 in. ID	1	1					1	1	1	1	1	1
35	X-6014-134	Hose, radiator, straight, 4 in. ID			1	1	1	1						

Parts list continues on next page

Group 104: Cooling System, continued



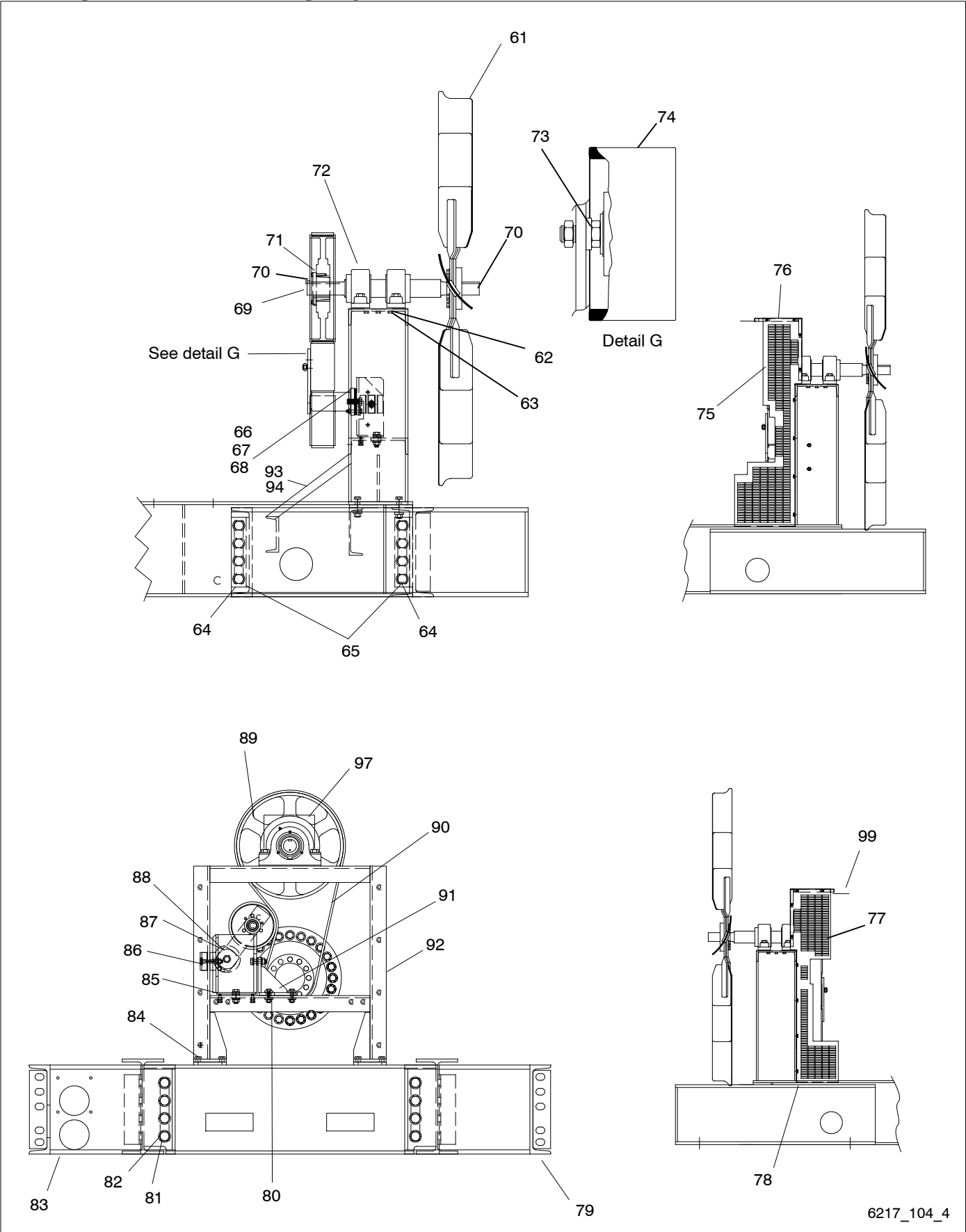
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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity Module											
			GM40959-MA1	GM40959-MA2	GM40991-MA1	GM40991-MA2	GM40991-MA3	GM40991-MA4	GM40992-MA1	GM40992-MA2	GM50296-MA1	GM50296-MA2	GM50296-MA3	GM50296-MA4
40	—	Sensor, low fluid (see eng. parts catalog)	1	1	1	1	1	1	1	1	1	1	1	1
41	X-582-25	Connector, hose + vibra seal	2	2	2	2	2	2	2	2	2	2	2	2
42	X-426-9	Clamp, hose, 0.25/0.70 in.	4	4	4	4	4	4	4	4	4	4	4	4
43	X-6359-9	Hose, oil proof			1	1	1	1						
43	X-6359-3	Hose, oil proof	1	1							1	1	1	1
43	X-6359-7	Hose, oil proof							1	1				
44	X-6359-9	Hose, oil proof			1	1	1	1						
44	X-6359-3	Hose, oil proof	1	1							1	1	1	1
44	X-6359-7	Hose, oil proof							1	1				
45	X-582-25	Connector, hose + vibra seal	2	2	2	2	2	2	2	2	2	2	2	2
45	352360	Adapter, bushing, M18 (not shown)	2	2	2	2	2	2	2	2	2	2	2	2
46	X-6278-7	Washer, nylon, 0.75 ID x 1.063 in. OD	2	2	2	2	2	2	2	2	2	2	2	2
47	GM50305	Shroud									1	1	1	1
47	354195	Shroud, venturi fan							2	2				
47	GM60517	Shroud	4	4										
47	GM21309	Guard, wire fan, lower			1	1	1	1						
47	GM28940	Shroud, venturi fan							1	1				
48	GM50304	Guard, flat fan									4	4	4	4
48	347435	Guard, flat fan	4	4										
48	354959	Guard, flat fan							4	4				
48	361216	Guard, flat fan												
48	GM21308	Guard, wire fan, upper			1	1	1	1						
49	X-801-6	Washer, hardened, 0.469 ID x 0.922 in. OD	12	12					12	12	12	12	12	12
50	GM17890	Plate, support							12	12				
50	GM22400	Plate, support	12	12							12	12	12	12
51	GM19605	Guard, shaft			1	1	1	1	1	1				
51	GM30737	Guard, shaft												
51	GM26235	Guard, shaft	1	1							1	1	1	1
52	365645	Support, fan guard			2	2	2	2	2	2				
52	347825	Support, fan guard	2	2							2	2	2	2
53	365644	Support, fan guard			2	2	2	2	2	2				
53	347825	Support, fan guard	2	2							2	2	2	2
54	361588	Frame, radiator												
54	354999	Bracket, radiator mounting	2	2	2	2	2	2	2	2	2	2	2	2
54	GM26236	Bracket, radiator mounting												
55	361046	Guard, radiator							1	1				
55	GM22413	Guard, radiator			1	1	1	1						
55	GM50370	Guard, radiator									1	1	1	1
55	347419	Guard, radiator	1	1										
56	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	20	20	22	22	22	22	22	22	20	20	20	20
56	347478	Shim, 19 gauge	4	4							4	4	4	4
57	278788	Valve, drain, 3/8 in. NPT	2	2	2	2	2	2	2	2	2	2	2	2
58	X-801-9	Washer, hardened, 0.688 ID x 1.373 in. OD	8	8	8	8	8	8	8	8	8	8	8	8
59	X-6011-3	Washer, beveled, 0.68 ID x 1.5 in. OD	4	4	4	4	4	4	4	4	4	4	4	4
60	354969	Brace, radiator			2	2	2	2	2	2				
60	347436	Brace, radiator	2	2										
60	GM55240	Brace, radiator RH									1	1	1	1
60	GM55241	Brace, radiator LH									1	1	1	1
61	328246	Fan, pusher, 64 in.							1	1				
61	GM50380	Fan									1	1		
61	GM50297	Fan											1	1
61	GM19513	Fan, pusher, 81 in.			1	1	1	1						
61	GM40814	Fan	1	1										
62	X-801-8	Washer, hardened, 0.812 ID x 2 in. OD	8	8	8	8	8	8	8	8	8	8	8	8
63	M934-20-80	Nut, hex	4	4	4	4	4	4	4	4	4	4	4	4

Parts list continues on next page

Group 104: Cooling System, continued

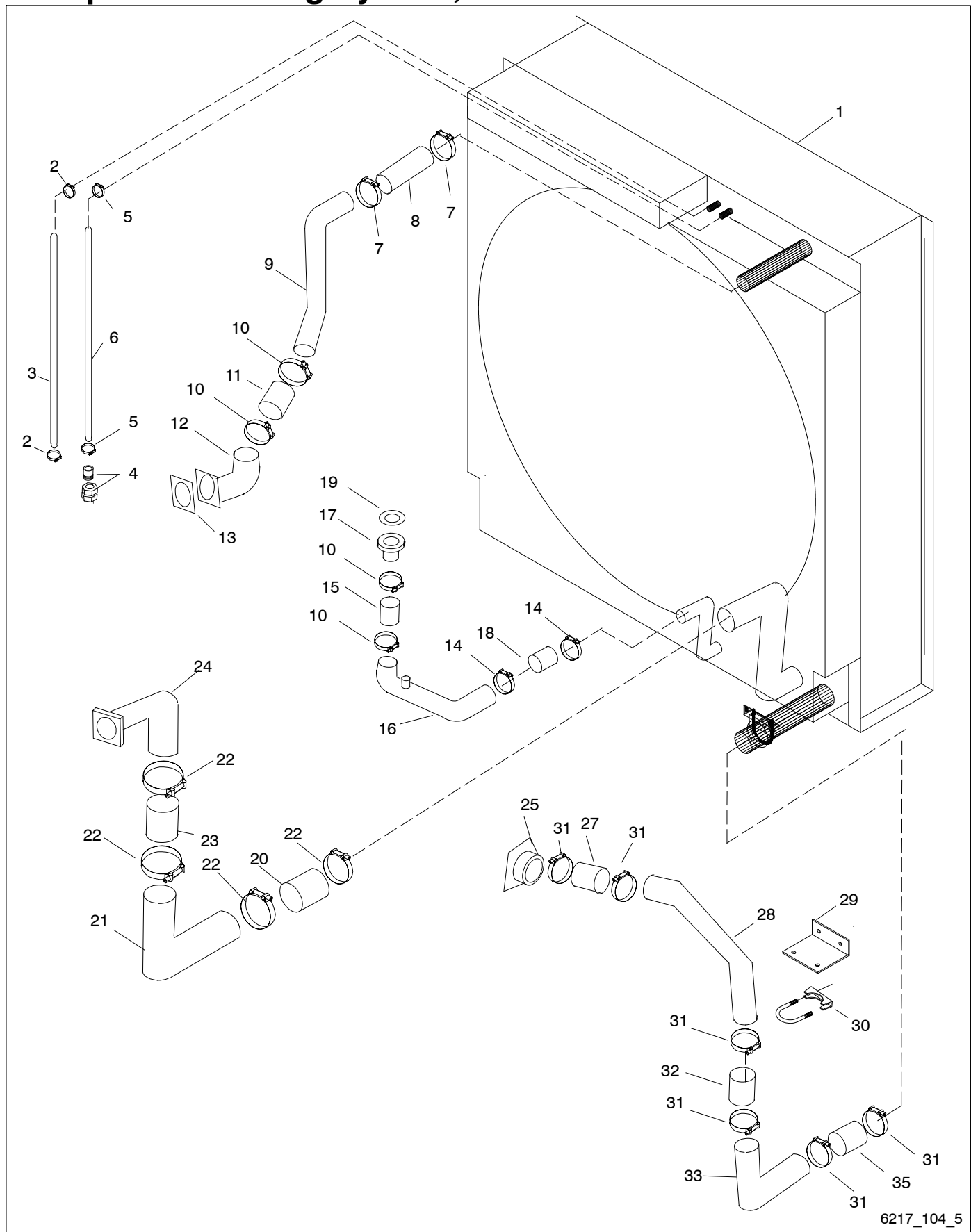


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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity Module											
			GM40959-MA1	GM40959-MA2	GM40991-MA1	GM40991-MA2	GM40991-MA3	GM40991-MA4	GM40992-MA1	GM40992-MA2	GM50296-MA1	GM50296-MA2	GM50296-MA3	GM50296-MA4
64	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	16	16	16	16	16	16	16	16	16	16	16	16
65	GM20151	Plate, bolting	4	4	4	4	4	4	4	4	4	4	4	4
66	GM28243	Shim, 110 mm OD x 16 gauge stainless	8	8	8	8	8	8	8	8	8	8	8	8
67	GM28244	Shim, 110 mm OD x 22 gauge stainless	2	2	2	2	2	2	2	2	2	2	2	2
68	GM28245	Shim, 110 mm OD x 28 gauge stainless	2	2	2	2	2	2	2	2	2	2	2	2
69	GM19587	Shaft, fan			1	1	1	1	1	1				
69	347431	Shaft	1	1							1	1	1	1
70	328256	Key			2	2	2	2	1	1				
71	274905	Bushing, pulley, 3.998 in. NPT			1	1	1	1	1	1				
71	GM26225	Bushing, pulley	1	1							1	1	1	1
72	347430	Block, pillow	2	2	2	2	2	2	2	2	2	2	2	2
72	GM30510	Shim, fan and support (not shown)	3	3	3	3	3	3	3	3	3	3	3	3
73	X-25-29	Washer, plain, 0.812 ID x 1.469 in. OD	3	3	3	3	3	3	3	3	3	3	3	3
74	GM19453	Pulley, Idler	1	1	1	1			1	1	1	1	1	1
74	GM19452	Pulley, Idler					1	1						
75	GM52505	Guard, belt, RS			1	1	1	1	1	1				
75	GM52509	Guard, belt, RS									1	1	1	1
75	GM52500	Guard, belt RS	1	1										
76	GM52507	Guard, belt, top			1	1	1	1	1	1				
76	GM52502	Guard, belt, top	1	1										
76	GM52511	Guard, belt, top									1	1	1	1
77	GM52506	Guard, belt, LS			1	1	1	1	1	1				
77	GM52510	Guard, belt, LS									1	1	1	1
77	GM52501	Guard, belt, LS	1	1										
78	GM52504	Guard, belt, bottom			1	1	1	1	1	1				
79	365495	Frame, radiator							1	1				
79	GM21191	Frame, radiator			1	1	1	1						
79	GM52495	Frame, radiator LS									1	1	1	1
79	GM26226	Frame, radiator LS	1	1										
80	X-801-15	Washer, hardened	6	6	6	6	6	6	6	6	6	6	6	6
81	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	8	8	8	8	8	8	10	10	8	8	8	8
82	GM20151	Plate, bolting	2	2	2	2	2	2	2	2	2	2	2	2
83	GM21196	Frame, radiator, RS							1	1				
83	GM21197	Frame, radiator, RS			1	1	1	1						
83	GM52494	Frame, radiator, RS									1	1	1	1
83	GM26227	Frame, radiator, RS	1	1										
84	X-6011-3	Washer, beveled, 0.68 ID x 1.5 in. OD	8	8	8	8	8	8	8	8	8	8	8	8
85	GM26338	Plate, mounting, idler	1	1	1	1	1	1	1	1	1	1	1	1
86	GM26579	Shaft, pivot	1	1	1	1	1	1	1	1	1	1	1	1
86	M982-12-80	Nut, hex elastic stop (not shown)	1	1	1	1	1	1	1	1	1	1	1	1
87	X-801-11	Washer, hardened, 0.406 ID x 1.375 in.	1	1	1	1	1	1	1	1	1	1	1	1
88	GM19558	Tensioner, belt	1	1	1	1	1	1	1	1	1	1	1	1
89	GM50306	Pulley									1	1		
89	GM50307	Pulley											1	1
89	354984	Pulley, fan			1	1			1	1				
89	274906	Pulley, fan	1	1			1	1						
90	GM21395	Belt, fan			1	1			1	1				
90	GM40525	Belt, poly V					1	1						
90	GM50369	Belt, poly V									1	1		
90	GM50368	Belt, poly V											1	1
90	GM26234	Belt, poly V, 118 in., 20 ribs	1	1										
91	GM26339	Bracket, adjusting (idler mounting plate)	1	1	1	1	1	1	1	1	1	1	1	1
92	GM64371	Frame, fan support			1	1	1	1	1	1				
92	GM52496	Frame, fan support									1	1	1	1
92	GM20589	Frame, fan support	1	1										
93	GM19563	Brace, fan assembly	2	2							2	2	2	2
94	X-6011-4	Washer, beveled, 0.44 ID x 1.25 in. OD	4	4							4	4	4	4
95	GM52580	Brace, radiator tube									1	1	1	1
95	GM52488	Brace, radiator tube	1	1										
96	343175	Clamp, hose, 3.06/3.38 in.	1	1							1	1	1	1
97	347712	Guard, shaft	1	1							1	1	1	1
98	GM23500	Cap, radiator	1	1	1	1	1	1	1	1	1	1	1	1
99	GM52508	Guard, belt back			1	1	1	1	1	1				
99	GM52512	Guard, belt back									1	1	1	1
99	GM52503	Guard, belt back	1	1										

Group 104: Cooling System, continued



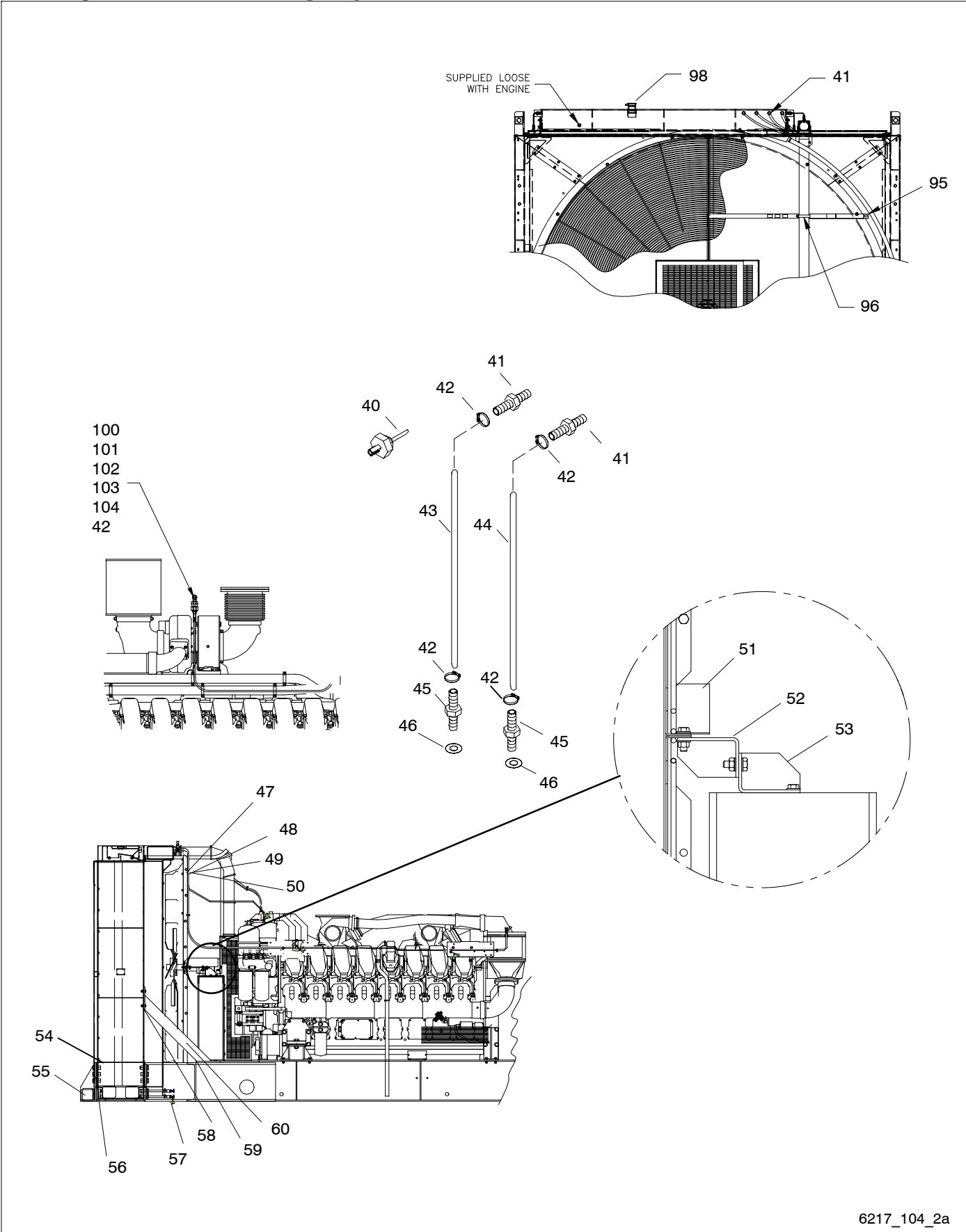
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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity Module								
			GM55228-MA1	GM62441-MA1	GM62441-MA2	GM62441-MA3	GM62441-MA4	GM62441-MA5	GM62441-MA6	GM62441-MA7	GM62441-MA8
1	GM53189	Radiator assembly	1	1	1						
1	GM53188	Radiator assembly				1	1			1	1
2	X-426-8	Clamp, hose, 0.81/1.75 in.	2	2	2	2	2	2	2	2	2
3	X-6014-13	Hose, radiator wire insert	1	1	1	1	1	1	1	1	1
4	GM29562	Connector, swivel	1	1	1	1	1	1	1	1	1
4	272930	Connector, hose	1	1	1	1	1	1	1	1	1
5	X-426-8	Clamp, hose, 0.81/1.75 in.	2	2	2	2	2	2	2	2	2
6	X-6014-13	Hose, radiator wire insert	1	1	1	1	1	1	1	1	1
7	GM51502	Clamp, hose	2	2	2	2	2	2	2	2	2
8	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1	1
9	GM55225	Tube, intercooler return	1	1	1	1	1	1	1	1	1
10	GM51502	Clamp, hose	2	2	2	2	2	2	2	2	2
11	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1	1
12	GM52555	Flange, water connection, outlet	1	1	1	1	1	1	1	1	1
13	GM16102	Gasket, intercooler inlet	1	1	1	1	1	1	1	1	1
14	GM51502	Clamp, hose	2	2	2	2	2	2	2	2	2
15	X-507-10	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1	1
16	GM52489	Tube, radiator, SCCC inlet	1	1	1	1	1	1	1	1	1
17	GM52553	Flange, water connection, inlet	1	1	1	1	1	1	1	1	1
18	X-6014-110	Hose	1	1	1	1	1	1	1	1	1
19	GM16102	Gasket, intercooler inlet	1	1	1	1	1	1	1	1	1
20	X-6350-2	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1	1
21	GM55226	Tube, lower radiator	1	1	1	1	1	1	1	1	1
22	274545	Clamp, hose, 4.31/4.62 in.	4	4	4	4	4	4	4	4	4
23	X-6350-2	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1	1
24	GM50298	Flange, water connection, outlet	1								
24	GM62399	Flange, water connection, outlet		1	1	1	1	1	1	1	1
25	GM40374	Flange, water connection	1								
25	GM62397	Flange, water connection		1	1	1	1	1	1	1	1
27	X-6014-31	Hose, radiator, straight, 4 in. ID	1								
27	GM67195	Hose, reducer		1	1	1	1	1	1	1	1
28	GM55227	Tube, radiator, J.W. inlet	1	1	1	1	1	1	1	1	1
29	GM52484	Bracket, tube support	1	1	1	1	1	1	1	1	1
30	289372	Clamp, muffler, 4.12 in.	1	1	1	1	1	1	1	1	1
30	X-6011-4	Washer, beveled, 0.44 ID x 1.25 in. OD	2	2	2	2	2	2	2	2	2
31	274545	Clamp, hose, 4.31/4.62 in.	4	3	3	3	3	3	3	3	3
31	291537	Clamp, hose, 375/4.06 in.		1	1	1	1	1	1	1	1
32	X-6014-91	Hose, straight coolant, 4.00 in. ID	1	1	1	1	1	1	1	1	1
33	GM40630	Tube, lower radiator	1	1	1	1	1	1	1	1	1
35	X-6014-91	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1	1

Parts list continues on next page

Group 104: Cooling System, continued



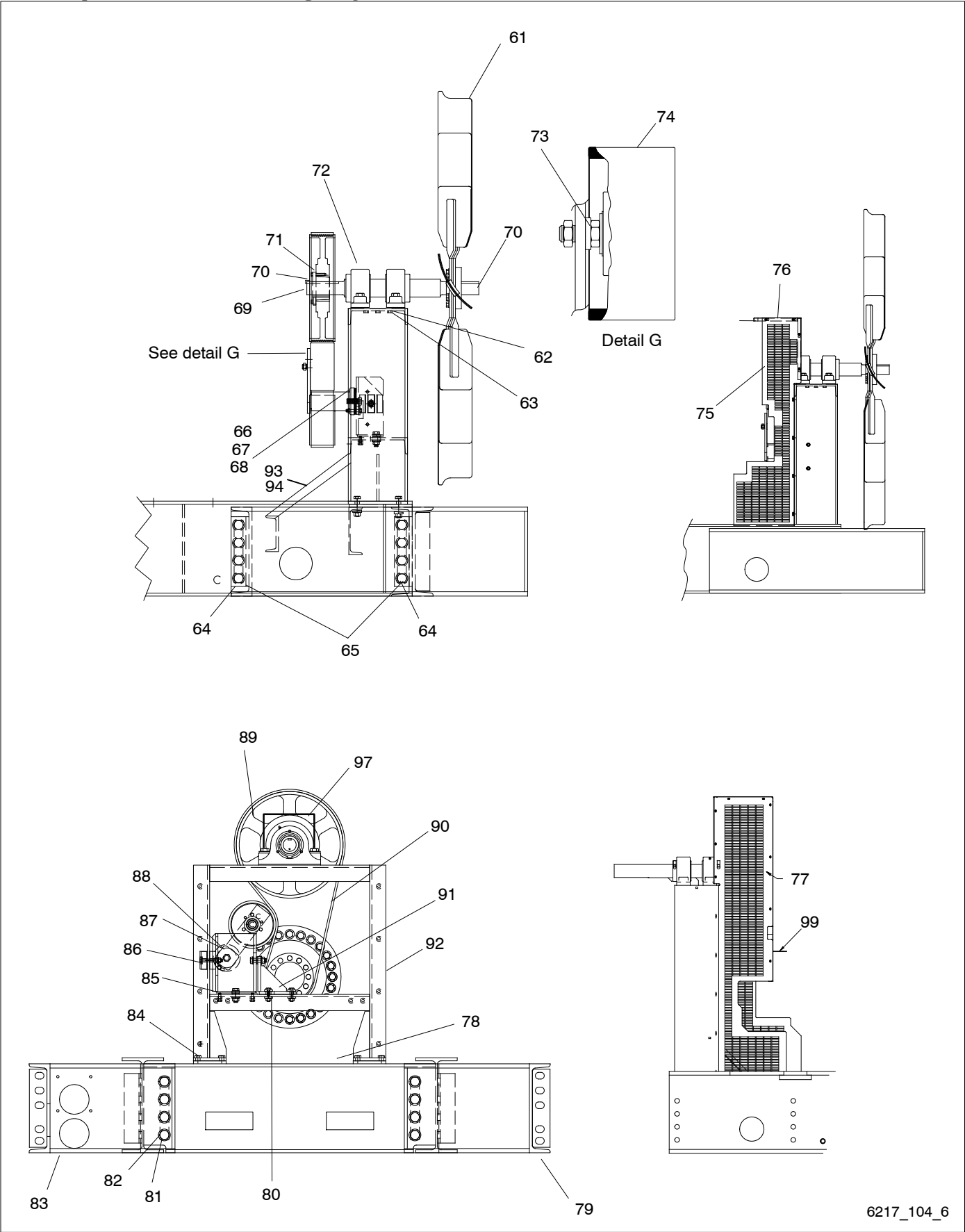
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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity Module								
			GM55228-MA1	GM62441-MA1	GM62441-MA2	GM62441-MA3	GM62441-MA4	GM62441-MA5	GM62441-MA6	GM62441-MA7	GM62441-MA8
40	—	Sensor, low fluid (see eng. parts catalog)	1	1	1	1	1	1	1	1	1
41	X-582-25	Connector, hose + vibra seal	4	4	4	4	4	2	2	2	2
42	X-426-9	Clamp, hose, 0.25/0.70 in.	8	8	8	8	8	4	4	4	4
43	X-6359-3	Hose, oil proof	1	1	1	1	1	1	1	1	1
44	X-6359-3	Hose, oil proof	1	1	1	1	1	1	1	1	1
45	X-582-25	Connector, hose + vibra seal	2	2	2	2	2	2	2	2	2
45	352360	Adapter, bushing, M18 (not shown)	2	2	2	2	2	2	2	2	2
46	X-6278-7	Washer, nylon, 0.75 ID x 1.063 in. OD	2	2	2	2	2	2	2	2	2
47	GM60518	Shroud, fan	4								
47	GM85567	Shroud, fan		8	8	8	8	8	8	8	8
48	GM79944	Guard, flat fan	4	4	4	4	4	4	4	4	4
49	X-801-6	Washer, hardened, 0.469 ID x 0.922 in. OD	12	12	12	12	12	12	12	12	12
50	GM22400	Plate, support	12	12	12	12	12	12	12	12	12
51	GM26235	Guard, shaft	1	1	1	1	1	1	1	1	1
52	347825	Support, fan guard	2	2	2	2	2	2	2	2	2
53	347825	Support, fan guard	2	2	2	2	2	2	2	2	2
54	354999	Bracket, radiator mounting	2	2	2	2	2	2	2	2	2
55	GM55239	Guard, radiator	1	1	1	1	1	1	1	1	1
56	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	20	20	20	20	20	20	20	20	20
56	347478	Shim, 19 gauge	4								
57	278788	Valve, drain, 3/8 in. NPT	2	2	2	2	2	2	2	2	2
58	X-801-9	Washer, hardened, 0.688 ID x 1.373 in. OD	8	8	8	8	8	8	8	8	8
59	X-6011-3	Washer, beveled, 0.68 ID x 1.5 in. OD	4	4	4	4	4	4	4	4	4
60	GM55240	Brace, radiator RH	1	1	1	1	1	1	1	1	1
60	GM55241	Brace, radiator LH	1	1	1	1	1	1	1	1	1
61	GM50297	Fan	1	1		1		1		1	
61	GM62284	Fan			1		1		1		1
62	X-801-8	Washer, hardened, 0.812 ID x 2 in. OD	8	8	8	8	8	8	8	8	8
63	M934-20-80	Nut, hex	4	4	4	4	4	4	4	4	4

Parts list continues on next page

Group 104: Cooling System, continued

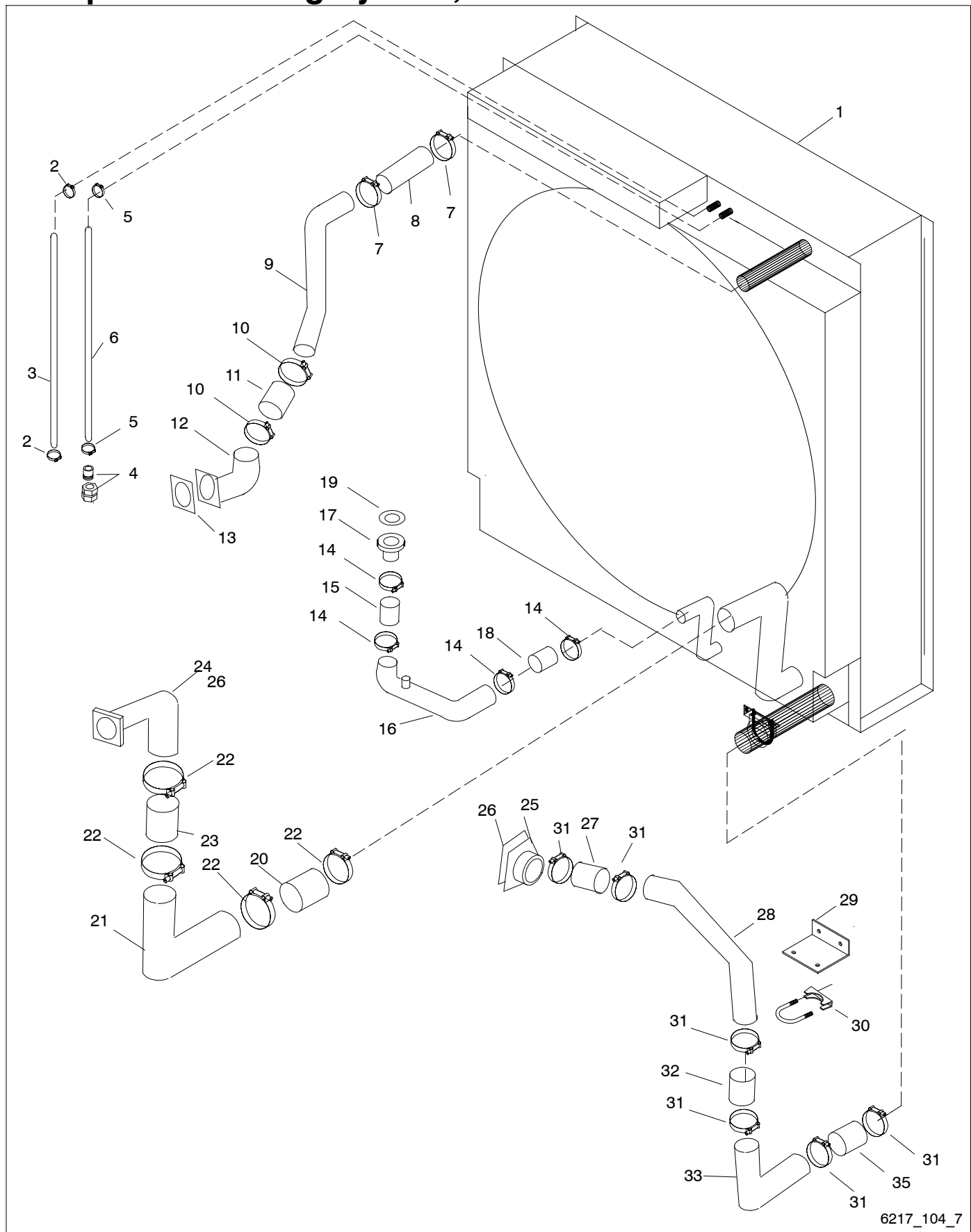


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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity								
			Module								
			GM55228-MA1	GM62441-MA1	GM62441-MA2	GM62441-MA3	GM62441-MA4	GM62441-MA5	GM62441-MA6	GM62441-MA7	GM62441-MA8
64	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	16	16	16	16	16	16	16	16	16
65	GM20151	Plate, bolting	4	4	4	4	4	4	4	4	4
66	GM28243	Shim, 110 mm OD x 16 gauge stainless	8	8	8	8	8	8	8	8	8
67	GM28244	Shim, 110 mm OD x 22 gauge stainless	2	2	2	2	2	2	2	2	2
68	GM28245	Shim, 110 mm OD x 28 gauge stainless	2	2	2	2	2	2	2	2	2
69	347431	Shaft	1	1	1	1	1	1	1	1	1
71	GM26225	Bushing, pulley	1	1	1	1	1	1	1	1	1
72	347430	Block, pillow	2	2	2	2	2	2	2	2	2
72	GM30510	Shim, fan and support (not shown)	2	2	2	2	2	2	2	2	2
73	X-25-29	Washer, plain, 0.812 ID x 1.469 in. OD	3	3	3	3	3	3	3	3	3
74	GM19453	Pulley, Idler	1	1	1	1	1	1	1	1	1
75	GM55229	Guard, belt, RH	1	1	1	1	1	1	1	1	1
76	GM55231	Guard, belt, top	1	1	1	1	1	1	1	1	1
77	GM55230	Guard, belt, LH	1	1	1	1	1	1	1	1	1
78	GM55233	Guard, belt, bottom	1	1	1	1	1	1	1	1	1
79	GM55238	Frame, radiator	1	1	1	1	1	1	1	1	1
80	X-801-15	Washer, hardened	6	6	6	6	6	6	6	6	6
81	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	8	8	8	8	8	8	8	8	8
82	GM20151	Plate, bolting	2	2	2	2	2	2	2	2	2
83	GM55237	Frame, radiator, RS	1	1	1	1	1	1	1	1	1
84	X-6011-3	Washer, beveled, 0.68 ID x 1.5 in. OD	8	8	8	8	8	8	8	8	8
85	GM26338	Plate, mounting, idler	1	1	1	1	1	1	1	1	1
86	GM26579	Shaft, pivot	1	1	1	1	1	1	1	1	1
87	X-801-11	Washer, hardened, 0.406 ID x 1.375 in.	1	1	1	1	1	1	1	1	1
88	GM19558	Tensioner, belt	1	1	1	1	1	1	1	1	1
89	GM50307	Pulley	1	1	1	1	1	1	1	1	1
90	GM59859	Belt, poly V	1	1	1	1	1	1	1	1	1
91	GM26339	Bracket, adjusting (idler mounting plate)	1	1	1	1	1	1	1	1	1
92	GM52496	Frame, fan support	1								
92	GM64372	Frame, fan support		1	1	1	1	1	1	1	1
93	GM55234	Brace, fan assembly	2	2	2	2	2	2	2	2	2
94	X-6011-4	Washer, beveled, 0.44 ID x 1.25 in. OD	6	6	6	6	6	6	6	6	6
95	GM52580	Brace, radiator tube	1	1	1	1	1	1	1	1	1
96	343175	Clamp, hose, 3.06/3.38 in.	1	1	1	1	1	1	1	1	1
97	347712	Guard, shaft	1	1	1	1	1	1	1	1	1
98	GM23500	Cap, radiator	1	1	1	1	1	1	1	1	1
99	GM55232	Guard, belt back	1	1	1	1	1	1	1	1	1
100	GM58004	Adapter	2	2	2	2	2				
101	GM19032-2	Elbow, swivel nut	2	2	2	2	2				
102	X-6370-7	Connector, hose	2	2	2	2	2				
103	X-6359-19	Hose, rubber, 0.25 in. ID, 12 ft.	1	1	1	1	1				
104	X-6359-20	Hose, rubber, 0.25 in. ID, 15 ft.	1	1	1	1	1				

Group 104: Cooling System, continued



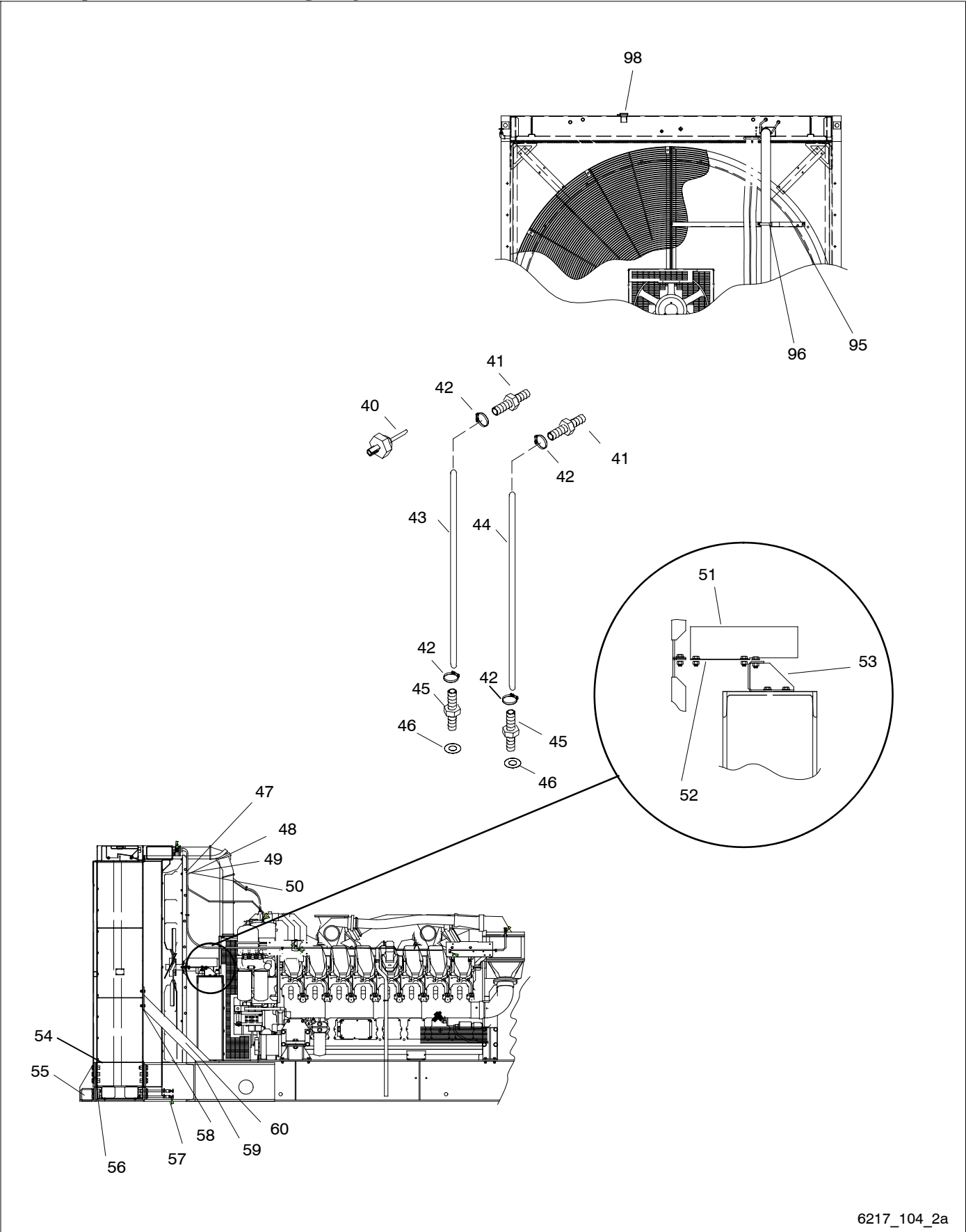
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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity Module													
			GM62442-MA1	GM62442-MA2	GM62442-MA3	GM62443-MA1	GM62443-MA2	GM62443-MA3	GM62443-MA4	GM62444-MA1	GM62444-MA2	GM62445-MA1	GM62445-MA2	GM62445-MA3	GM62445-MA4	GM62445-MA5
1	GM40812	Radiator assembly								1	1					
1	GM40810	Radiator assembly				1	1									
1	GM40811	Radiator assembly						1	1							
1	GM40809	Radiator assembly	1	1	1											
1	GM40813	Radiator assembly										1	1	1	1	1
2	X-426-8	Clamp, hose, 0.81/1.75 in.	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	X-6014-4	Hose, radiator wire insert				1	1	1	1	1	1					
3	X-6014-13	Hose, radiator wire insert	1	1	1							1	1	1	1	1
4	GM29562	Connector, swivel	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	272930	Connector, hose	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	GM59133	Fitting	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	X-426-8	Clamp, hose, 0.81/1.75 in.	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6	X-6014-52	Hose, radiator				1	1	1	1	1	1					
6	X-6014-13	Hose, radiator	1	1	1							1	1	1	1	1
7	GM51502	Clamp, hose	2	2	2	2	2	2	2	2	2	2	2	2	2	2
8	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	GM52493	Tube, intercooler return	1	1	1											
9	GM52491	Tube, intercooler return								1	1					
9	GM52490	Tube, intercooler return, 3.00 in. OD				1	1	1	1							
9	GM52492	Tube, intercooler return										1	1	1	1	1
10	GM51502	Clamp, hose	2	2	2	2	2	2	2	2	2	2	2	2	2	2
11	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	GM52555	Flange, water connection, outlet	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	GM16102	Gasket, water	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	GM51502	Clamp, hose	2	2	2	2	2	2	2	2	2	2	2	2	2	2
14	291542	Clamp, hose, 3.25/3.56 in.	2	2	2	2	2	2	2	2	2	2	2	2	2	2
15	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1			1	1	1	1	1
15	X-6014-53	Hose, radiator, straight, 3 in. ID								1	1					
16	GM52487	Tube, radiator, SCCC inlet	1	1	1					1	1					
16	GM40623	Tube, radiator, SCCC inlet				1	1	1	1							
16	GM52489	Tube, radiator, SCCC inlet										1	1	1	1	1
17	GM52553	Flange, water connection, inlet										1	1	1	1	1
17	GM40618	Flange, water connection, inlet	1	1	1	1	1	1	1	1	1					
18	X-6014-110	Hose	1	1	1							1	1	1	1	1
18	X-6014-135	Hose, radiator, straight, 3 in. ID				1	1	1	1	1	1					
19	GM16102	Gasket, water inlet	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20	X-6350-2	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21	GM52485	Tube, lower radiator	1	1	1					1	1					
21	GM40623	Tube, lower radiator				1	1	1	1							
21	GM52486	Tube, lower radiator										1	1	1	1	1
22	274545	Clamp, hose, 4.31/4.62 in.	4	4	4	4	4	4	4	4	4	4	4	4	4	4
23	X-6350-4	Hose, radiator, straight, 4 in. ID	1	1	1											
23	X-6350-2	Hose, radiator, straight, 4 in. ID				1	1	1	1	1	1	1	1	1	1	1
24	GM62398	Flange, water connection, outlet	1	1	1	1	1	1	1	1	1					
24	GM62400	Flange, water connection, outlet										1	1	1	1	1
25	GM62397	Flange, water connection	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	GM51791	Gasket, water inlet	2	2	2	2	2	2	2	2	2	2	2	2	2	2
27	GM67195	Hose, reducer	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	GM52977	Tube, radiator										1	1	1	1	1
28	GM52975	Tube, lower radiator				1	1	1	1	1	1					
28	GM52976	Tube, radiator	1	1	1											
29	GM52484	Bracket, tube mounting										1	1	1	1	1
29	GM52581	Bracket, tube mounting				1	1	1	1	1	1					
29	GM13725	Bracket, tube mounting	1	1	1											
30	289372	Clamp, muffler, 4.12 in.	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	X-6011-4	Washer, beveled, 0.44 ID x 1.25 in. OD	2	2	2							2	2	2	2	2
31	274545	Clamp, hose, 4.31/4.62 in.	5	5	5	5	5	5	5	5	5	5	5	5	5	5
31	291537	Clamp, hose, 3.75/4.06 in.	1	1	1	1	1	1	1	1	1	1	1	1	1	1
32	X-6014-31	Hose, straight coolant, 4.00 in. ID								1	1					
32	X-6014-91	Hose, straight coolant, 4.00 in. ID	1	1	1	1	1	1	1			1	1	1	1	1
33	GM21159	Tube, lower radiator								1	1					
33	GM40630	Tube, lower radiator	1	1	1	1	1	1	1			1	1	1	1	1
35	X-6014-91	Hose, radiator, straight, 4 in. ID	1	1	1					1	1	1	1	1	1	1
35	X-6014-134	Hose, radiator, straight, 4 in. ID				1	1	1	1							

Parts list continues on next page

Group 104: Cooling System, continued



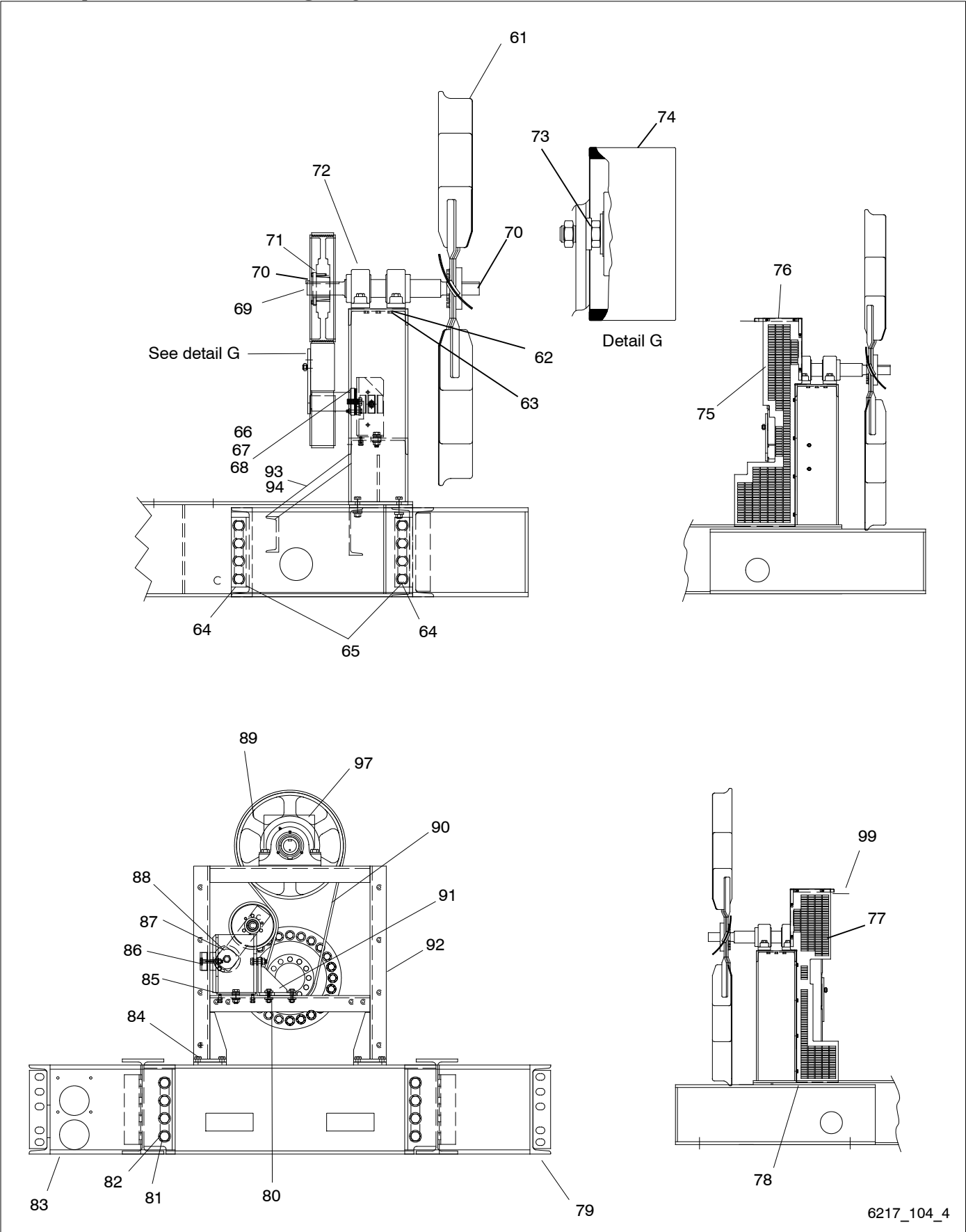
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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity Module													
			GM62442-MA1	GM62442-MA2	GM62442-MA3	GM62443-MA1	GM62443-MA2	GM62443-MA3	GM62443-MA4	GM62444-MA1	GM62444-MA2	GM62445-MA1	GM62445-MA2	GM62445-MA3	GM62445-MA4	GM62445-MA5
40	GM35000	Sensor, low fluid	1	1	1	1	1	1	1	1	1	1	1	1	1	1
41	X-582-25	Connector, hose + vibra seal	2	2	2	2	2	2	2	2	2	2	2	2	2	2
42	X-426-9	Clamp, hose, 0.25/0.70 in.	4	4	4	4	4	4	4	4	4	4	4	4	4	4
43	X-6359-9	Hose, oil proof				1	1	1	1							
43	X-6359-3	Hose, oil proof	1	1	1							1	1	1	1	1
43	X-6359-7	Hose, oil proof								1	1					
44	X-6359-9	Hose, oil proof				1	1	1	1							
44	X-6359-3	Hose, oil proof	1	1	1							1	1	1	1	1
44	X-6359-7	Hose, oil proof								1	1					
45	X-582-25	Connector, hose + vibra seal	2	2	2	2	2	2	2	2	2	2	2	2	2	2
45	352360	Adapter, bushing, M18 (not shown)	2	2	2	2	2	2	2	2	2	2	2	2	2	2
46	X-6278-7	Washer, nylon, 0.75 ID x 1.063 in. OD	2	2	2	2	2	2	2	2	2	2	2	2	2	2
47	GM50305	Shroud										1	1	1	1	1
47	GM85566	Shroud, venturi fan								6	6					
47	GM86088	Shroud, venturi fan	8	8	8											
47	GM21309	Guard, wire fan, lower				1	1	1	1							
47	GM28940	Shroud, venturi fan								1	1					
48	GM85567	Guard, flat fan										8	8	8	8	8
48	347435	Guard, flat fan	4	4	4											
48	354959	Guard, flat fan								4	4					
48	361216	Guard, flat fan														
48	GM21308	Guard, wire fan, upper				1	1	1	1							
49	X-801-6	Washer, hardened, 0.469 ID x 0.922 in. OD	12	12	12					12	12	12	12	12	12	12
50	GM17890	Plate, support								12	12					
50	GM22400	Plate, support	12	12	12							12	12	12	12	12
51	GM19605	Guard, shaft				1	1	1	1	1	1					
51	GM30737	Guard, shaft														
51	GM26235	Guard, shaft	1	1	1							1	1	1	1	1
52	365645	Support, fan guard				2	2	2	2	2	2					
52	347825	Support, fan guard	2	2	2							2	2	2	2	2
53	365644	Support, fan guard				2	2	2	2	2	2					
53	347825	Support, fan guard	2	2	2							2	2	2	2	2
54	361588	Frame, radiator														
54	354999	Bracket, radiator mounting	2	2	2	2	2	2	2	2	2	2	2	2	2	2
54	GM26236	Bracket, radiator mounting														
55	361046	Guard, radiator								1	1					
55	GM22413	Guard, radiator				1	1	1	1							
55	GM50370	Guard, radiator										1	1	1	1	1
55	347419	Guard, radiator	1	1	1											
56	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	20	20	20	22	22	22	22	22	22	20	20	20	20	20
56	347478	Shim, 19 gauge	4	4	4							4	4	4	4	4
57	278788	Valve, drain, 3/8 in. NPT	2	2	2	2	2	2	2	2	2	2	2	2	2	2
58	X-801-9	Washer, hardened, 0.688 ID x 1.373 in. OD	8	8	8	8	8	8	8	8	8	8	8	8	8	8
59	X-6011-3	Washer, beveled, 0.68 ID x 1.5 in. OD	4	4	4	4	4	4	4	4	4	4	4	4	4	4
60	354969	Brace, radiator				2	2	2	2	2	2					
60	347436	Brace, radiator	2	2	2											
60	GM55240	Brace, radiator RH										1	1	1	1	1
60	GM55241	Brace, radiator LH										1	1	1	1	1
61	328246	Fan, pusher, 64 in.								1	1					
61	GM50380	Fan										1	1			
61	GM50297	Fan												1	1	
61	GM19513	Fan, pusher, 81 in.				1	1	1	1							
61	GM40814	Fan	1	1												
61	GM62283	Fan			1											
61	GM62284	Fan														
62	X-801-8	Washer, hardened, 0.812 ID x 2 in. OD	8	8	8	8	8	8	8	8	8	8	8	8	8	8
63	M934-20-80	Nut, hex	4	4	4	4	4	4	4	4	4	4	4	4	4	4

Parts list continues on next page

Group 104: Cooling System, continued

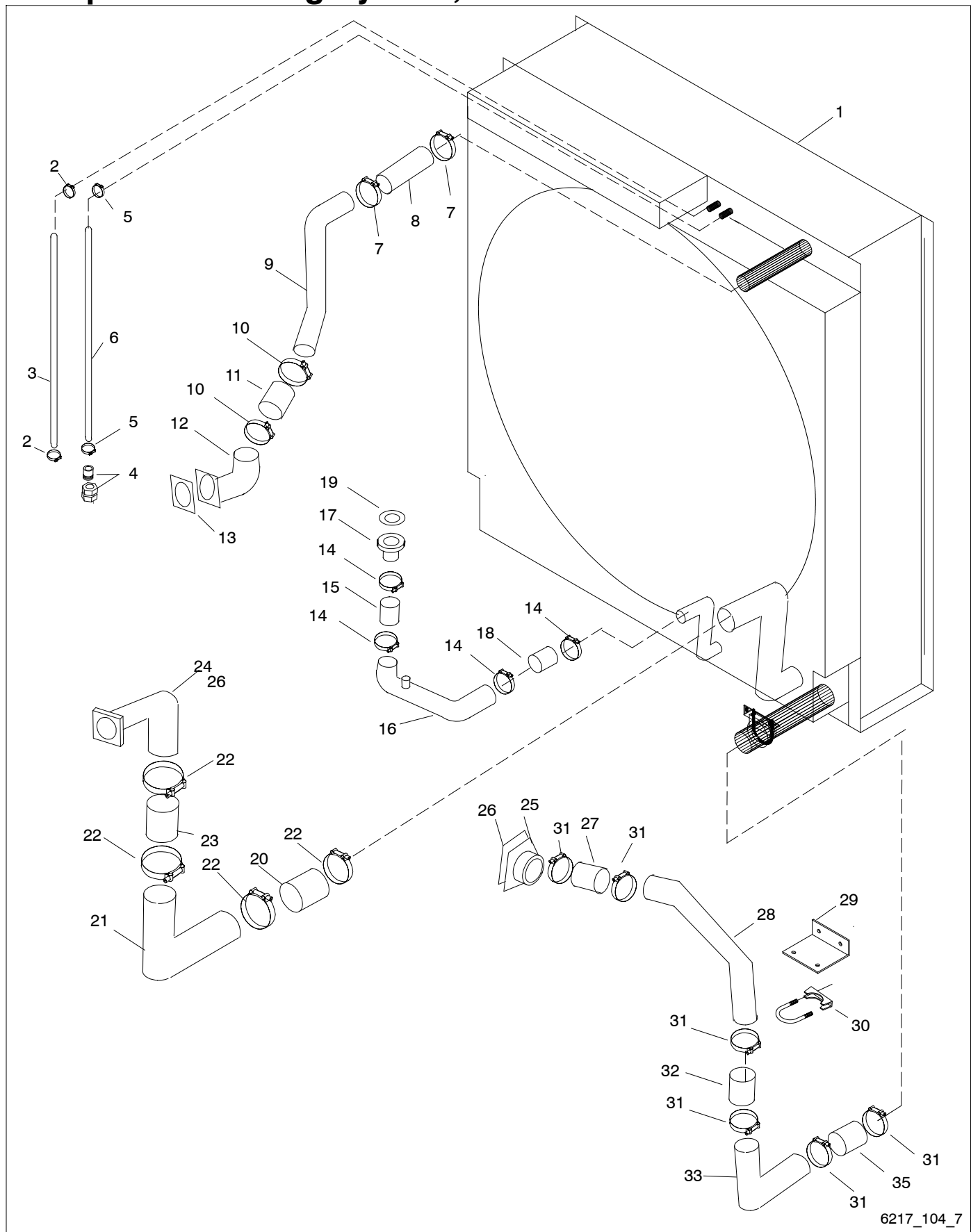


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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity Module													
			GM62442-MA1	GM62442-MA2	GM62442-MA3	GM62443-MA1	GM62443-MA2	GM62443-MA3	GM62443-MA4	GM62444-MA1	GM62444-MA2	GM62445-MA1	GM62445-MA2	GM62445-MA3	GM62445-MA4	GM62445-MA5
64	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	16	16	16	16	16	16	16	16	16	16	16	16	16	16
65	GM20151	Plate, bolting	4	4	4	4	4	4	4	4	4	4	4	4	4	4
66	GM28243	Shim, 110 mm OD x 16 gauge stainless	8	8	8	8	8	8	8	8	8	8	8	8	8	8
67	GM28244	Shim, 110 mm OD x 22 gauge stainless	2	2	2	2	2	2	2	2	2	2	2	2	2	2
68	GM28245	Shim, 110 mm OD x 28 gauge stainless	2	2	2	2	2	2	2	2	2	2	2	2	2	2
69	GM19587	Shaft, fan				1	1	1	1	1	1					
69	347431	Shaft	1	1	1							1	1	1	1	1
70	328256	Key				2	2	2	2	1	1					
71	274905	Bushing, pulley, 3.998 in. NPT				1	1	1	1	1	1					
71	GM26225	Bushing, pulley	1	1	1							1	1	1	1	1
72	347430	Block, pillow	2	2	2	2	2	2	2	2	2	2	2	2	2	2
72	GM30510	Shim, fan and support (not shown)	3	3	3	3	3	3	3	3	3	3	3	3	3	3
73	X-25-29	Washer, plain, 0.812 ID x 1.469 in. OD	3	3	3	3	3	3	3	3	3	3	3	3	3	3
74	GM19453	Pulley, idler	1	1	1	1	1			1	1	1	1	1	1	1
74	GM19452	Pulley, idler						1	1							
75	GM52505	Guard, belt, RS				1	1	1	1	1	1					
75	GM52509	Guard, belt, RS										1	1	1	1	1
75	GM52500	Guard, belt RS	1	1	1											
76	GM52507	Guard, belt, top				1	1	1	1	1	1					
76	GM52502	Guard, belt, top	1	1	1											
76	GM52511	Guard, belt, top										1	1	1	1	1
77	GM52506	Guard, belt, LS				1	1	1	1	1	1					
77	GM52510	Guard, belt, LS										1	1	1	1	1
77	GM52501	Guard, belt, LS	1	1	1											
78	GM52504	Guard, belt, bottom				1	1	1	1	1	1					
79	365495	Frame, radiator								1	1					
79	GM21191	Frame, radiator				1	1	1	1							
79	GM52495	Frame, radiator LS										1	1	1	1	1
79	GM26226	Frame, radiator LS	1	1	1											
80	X-801-15	Washer, hardened	6	6	6	6	6	6	6	6	6	6	6	6	6	6
81	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	8	8	8	8	8	8	8	10	10	8	8	8	8	8
82	GM20151	Plate, bolting	2	2	2	2	2	2	2	2	2	2	2	2	2	2
83	GM21196	Frame, radiator, RS								1	1					
83	GM21197	Frame, radiator, RS				1	1	1	1							
83	GM52494	Frame, radiator, RS										1	1	1	1	1
83	GM26227	Frame, radiator, RS	1	1	1											
84	X-6011-3	Washer, beveled, 0.68 ID x 1.5 in. OD	8	8	8	8	8	8	8	8	8	8	8	8	8	8
85	GM26338	Plate, mounting, idler	1	1	1	1	1	1	1	1	1	1	1	1	1	1
86	GM26579	Shaft, pivot	1	1	1	1	1	1	1	1	1	1	1	1	1	1
86	M982-12-80	Nut, hex elastic stop (not shown)	1	1	1	1	1	1	1	1	1	1	1	1	1	1
87	X-801-11	Washer, hardened, 0.406 ID x 1.375 in.	1	1	1	1	1	1	1	1	1	1	1	1	1	1
88	GM19558	Tensioner, belt	1	1	1	1	1	1	1	1	1	1	1	1	1	1
89	GM50306	Pulley										1	1			
89	GM50307	Pulley												1	1	
89	354984	Pulley, fan				1	1			1	1					
89	274906	Pulley, fan	1	1	1											
90	GM21395	Belt, fan				1	1			1	1					
90	GM40525	Belt, poly V						1	1							
90	GM50369	Belt, poly V										1	1			
90	GM50368	Belt, poly V												1	1	
90	GM26234	Belt, poly V, 118 in., 20 ribs	1	1	1											
91	GM26339	Bracket, adjusting (idler mounting plate)	1	1	1	1	1	1	1	1	1	1	1	1	1	1
92	GM64371	Frame, fan support				1	1	1	1	1	1					
92	GM64372	Frame, fan support										1	1	1	1	1
92	GM64373	Frame, fan support	1	1	1											
93	GM19563	Brace, fan assembly	2	2	2							2	2	2	2	2
94	X-6011-4	Washer, beveled, 0.44 ID x 1.25 in. OD	4	4	4							4	4	4	4	4
95	GM52580	Brace, radiator tube										1	1	1	1	1
95	GM52488	Brace, radiator tube	1	1	1											
96	343175	Clamp, hose, 3.06/3.38 in.	1	1	1							1	1	1	1	1
97	347712	Guard, shaft	1	1	1							1	1	1	1	1
98	GM23500	Cap, radiator	1	1	1	1	1	1	1	1	1	1	1	1	1	1
99	GM52508	Guard, belt back				1	1	1	1	1	1					
99	GM52512	Guard, belt back										1	1	1	1	1
99	GM52503	Guard, belt back	1	1	1											

Group 104: Cooling System, continued



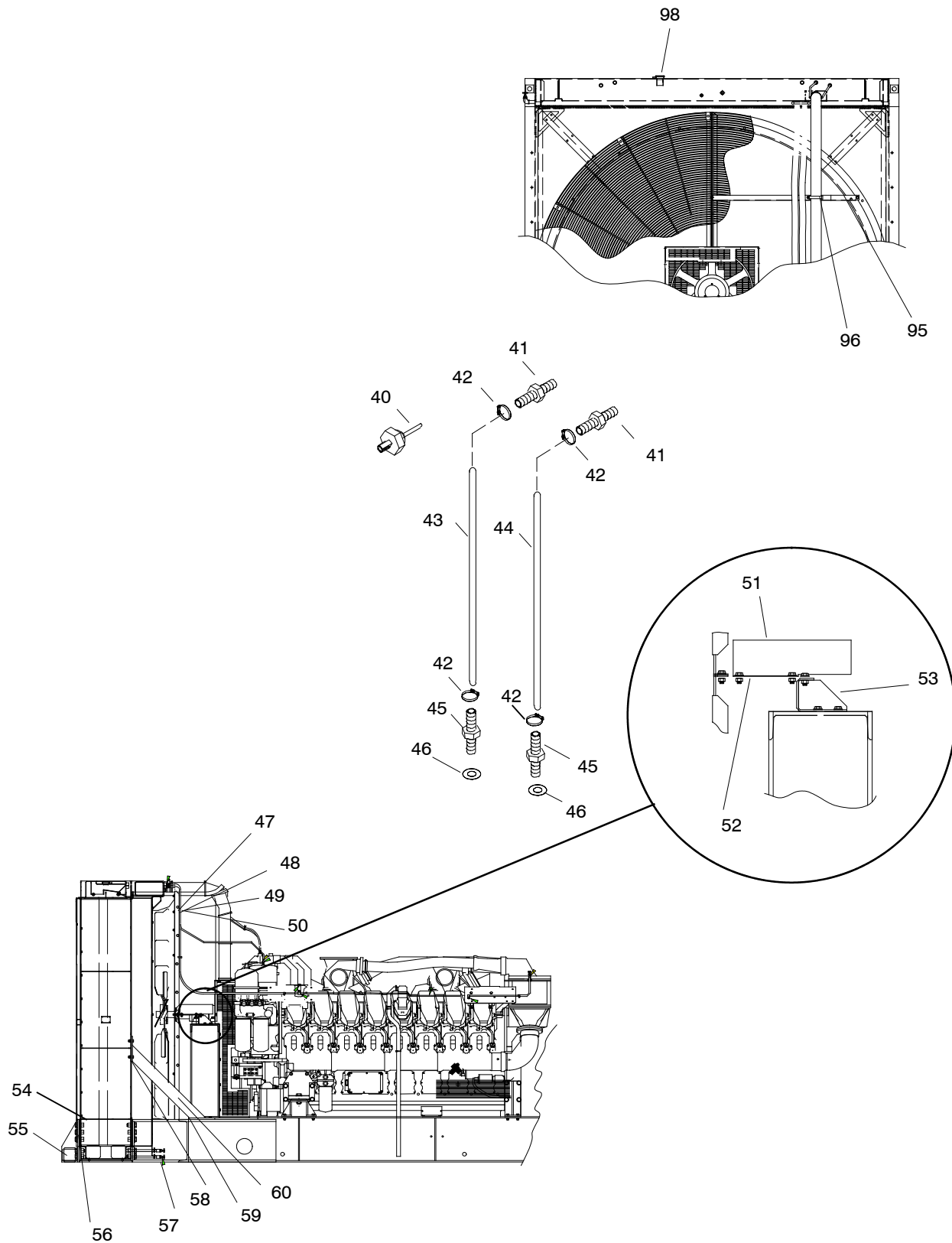
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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity									
			Module									
			GM75497-MA1	GM75497-MA2	GM75497-MA3	GM75497-MA4	GM75497-MA5	GM75497-MA6	GM75498-MA1	GM75498-MA2	GM75498-MA3	GM75498-MA4
1	GM75469	Radiator assembly	1	1			1					
1	GM75470	Radiator assembly			1	1		1				
1	GM75468	Radiator assembly							1	1		
1	GM75467	Radiator assembly									1	1
2	X-426-12	Clamp, hose, .69/1.25 in.	2	2	2	2	2	2	2	2	2	2
3	X-6014-4	Hose, radiator wire insert							1	1	1	1
3	X-6014-13	Hose, radiator wire insert	1	1	1	1	1	1				
4	GM29562	Connector, swivel	1	1	1	1	1	1	1	1	1	1
4	272930	Connector, hose	1	1	1	1	1	1	1	1	1	1
4	GM59133	Fitting	1	1	1	1	1	1	1	1	1	1
5	X-426-12	Clamp, hose, .69/1.25 in.	2	2	2	2	2	2				
5	291542	Clamp, hose, 3.25/3.56 in.							2	2	2	2
6	X-6014-52	Hose, radiator							1	1	1	1
6	X-6014-13	Hose, radiator	1	1	1	1	1	1				
7	GM51502	Clamp, hose	2	2	2	2	2	2				
8	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1	1	1
9	GM52493	Tube, intercooler return	1	1	1	1	1	1				
9	GM52490	Tube, intercooler return, 3.00 in. OD							1	1	1	1
10	GM51502	Clamp, hose	2	2	2	2	2	2	2	2	2	2
11	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1	1	1
12	GM52555	Flange, water connection, outlet	1	1	1	1	1	1	1	1	1	1
13	GM16102	Gasket, water	1	1	1	1	1	1	1	1	1	1
14	GM51502	Clamp, hose	2	2	2	2	2	2				
14	291542	Clamp, hose, 3.25/3.56 in.							2	2	2	2
15	X-507-7	Hose, radiator, straight, 3 in. ID	1	1	1	1	1	1	1	1	1	1
15	X-6014-53	Hose, radiator, straight, 3 in. ID										
16	GM52487	Tube, radiator, SCCC inlet	1	1	1	1	1	1				
16	GM40623	Tube, radiator, SCCC inlet							1	1	1	1
17	GM40618	Flange, water connection, inlet	1	1	1	1	1	1	1	1	1	1
18	X-6014-110	Hose	1	1	1	1	1	1				
18	X-6014-135	Hose, radiator, straight, 3 in. ID							1	1	1	1
19	GM16102	Gasket, water inlet	1	1	1	1	1	1	1	1	1	1
20	X-6350-2	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1	1	1	1	1
21	GM52485	Tube, lower radiator	1	1	1	1	1	1				
21	GM40623	Tube, lower radiator							1	1	1	1
22	274545	Clamp, hose, 4.31/4.62 in.	4	4	4	4	4	4	4	4	4	4
23	X-6350-4	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1				
23	X-6350-2	Hose, radiator, straight, 4 in. ID							1	1	1	1
24	GM62398	Flange, water connection, outlet	1	1	1	1	1	1	1	1	1	1
25	GM62397	Flange, water connection	1	1	1	1	1	1	1	1	1	1
26	GM51791	Gasket, water inlet	2	2	2	2	2	2	2	2	2	2
27	GM67195	Hose, reducer	1	1	1	1	1	1	1	1	1	1
28	GM52975	Tube, lower radiator							1	1	1	1
28	GM52976	Tube, radiator	1	1	1	1	1	1				
29	GM52581	Bracket, tube mounting							1	1	1	1
29	GM13725	Bracket, tube mounting	1	1	1	1	1	1				
30	289372	Clamp, muffler, 4.12 in.	1	1	1	1	1	1	1	1	1	1
30	X-6011-4	Washer, beveled, 0.44 ID x 1.25 in. OD	2	2	2	2	2	2				
31	274545	Clamp, hose, 4.31/4.62 in.	5	5	5	5	5	5	5	5	5	5
31	291537	Clamp, hose, 3.75/4.06 in.	1	1	1	1	1	1	1	1	1	1
32	X-6014-91	Hose, straight coolant, 4.00 in. ID	1	1	1	1	1	1	1	1	1	1
33	GM40630	Tube, lower radiator	1	1	1	1	1	1	1	1	1	1
35	X-6014-91	Hose, radiator, straight, 4 in. ID	1	1	1	1	1	1				
35	X-6014-134	Hose, radiator, straight, 4 in. ID							1	1	1	1

Parts list continues on next page

Group 104: Cooling System, continued



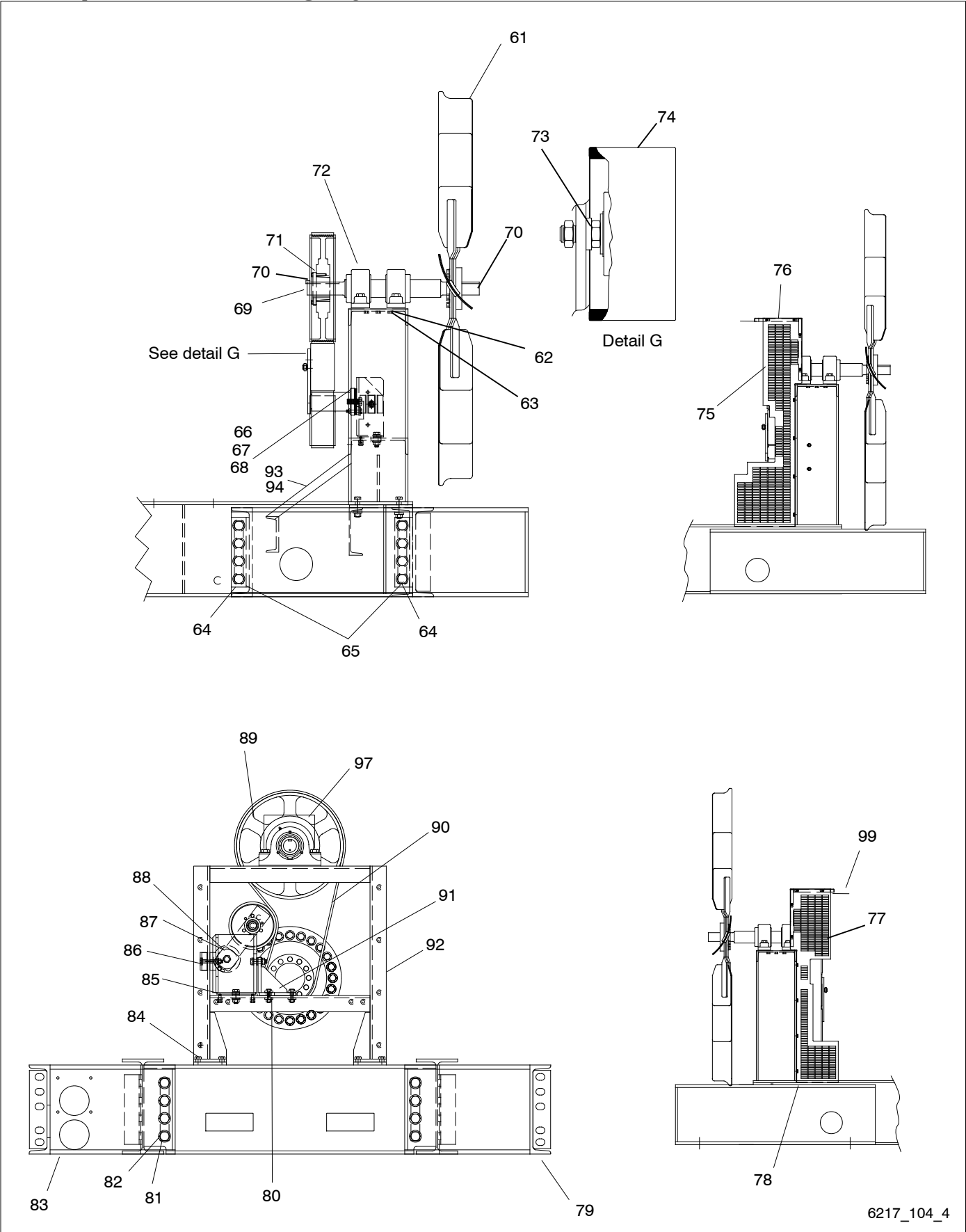
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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity									
			Module									
			GM75497-MA1	GM75497-MA2	GM75497-MA3	GM75497-MA4	GM75497-MA5	GM75497-MA6	GM75498-MA1	GM75498-MA2	GM75498-MA3	GM75498-MA4
40	GM35000	Sensor, low fluid	1	1	1	1	1	1	1	1	1	1
41	X-582-25	Connector, hose + vibra seal	2	2	2	2	2	2	2	2	2	2
42	X-426-9	Clamp, hose, 0.25/0.70 in.	4	4	4	4	4	4	4	4	4	4
43	X-6359-9	Hose, oil proof										
43	X-6359-3	Hose, oil proof	1	1	1	1	1	1	1	1	1	1
44	X-6359-9	Hose, oil proof										
44	X-6359-3	Hose, oil proof							1	1	1	1
45	X-582-25	Connector, hose + vibra seal	1	1	1	1	1	1				
45	352360	Adapter, bushing, M18 (not shown)	2	2	2	2	2	2	2	2	2	2
46	X-6278-7	Washer, nylon, 0.75 ID x 1.063 in. OD	2	2	2	2	2	2	2	2	2	2
47	GM86088	Shroud	8	8	8	8	8	8				
47	GM21309	Guard, wire fan, lower							1	1	1	1
48	GM79943	Guard, flat fan	4	4	4	4	4	4				
48	GM21308	Guard, wire fan, upper							1	1	1	1
49	X-801-6	Washer, hardened, 0.469 ID x 0.922 in. OD	12	12	12	12	12	12				
50	GM22400	Plate, support	12	12	12	12	12	12				
51	GM19605	Guard, shaft							1	1	1	1
51	GM26235	Guard, shaft	1	1	1	1	1	1				
52	365645	Support, fan guard							2	2	2	2
52	347825	Support, fan guard	2	2	2	2	2	2				
53	365644	Support, fan guard							2	2	2	2
53	347825	Support, fan guard	2	2	2	2	2	2				
54	354999	Bracket, radiator mounting	2	2	2	2	2	2	2	2	2	2
55	GM22413	Guard, radiator							1	1	1	1
55	347419	Guard, radiator	1	1	1	1	1	1				
56	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	20	20	20	20	20	20	22	22	22	22
56	347478	Shim, 19 gauge	4	4	4	4	4	4				
57	278788	Valve, drain, 3/8 in. NPT	2	2	2	2	2	2	2	2	2	2
58	X-801-9	Washer, hardened, 0.688 ID x 1.373 in. OD	8	8	8	8	8	8	8	8	8	8
59	X-6011-3	Washer, beveled, 0.68 ID x 1.5 in. OD	4	4	4	4	4	4	4	4	4	4
60	354969	Brace, radiator							2	2	2	2
60	347436	Brace, radiator	2	2	2	2	2	2				
61	GM40814	Fan	1	1	1	1						
61	GM62283	Fan					1	1				
61	GM75475	Fan							1	1	1	1
62	X-801-8	Washer, hardened, 0.812 ID x 2 in. OD	8	8	8	8	8	8	8	8	8	8
63	M934-20-80	Nut, hex	4	4	4	4	4	4	4	4	4	4

Parts list continues on next page

Group 104: Cooling System, continued

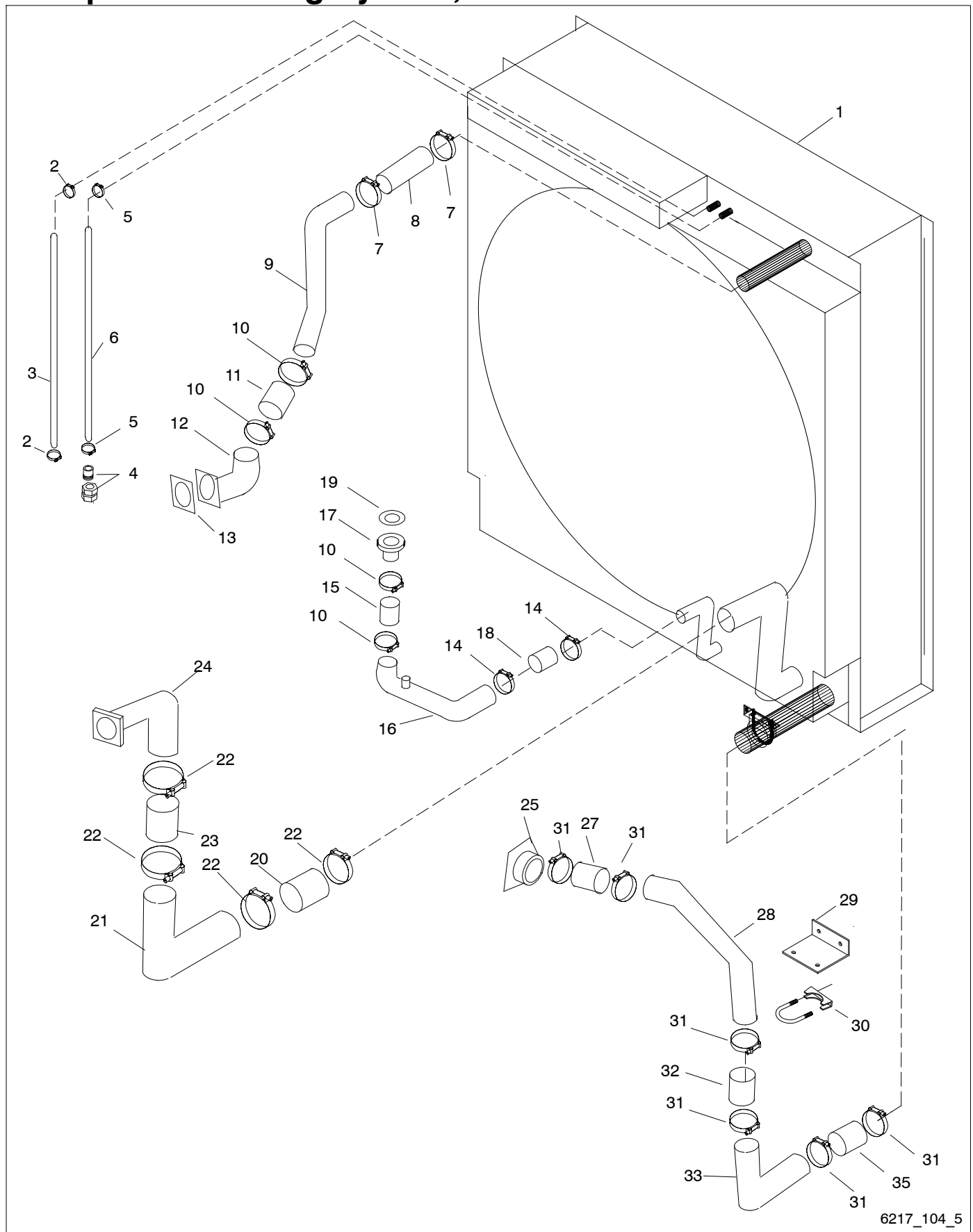


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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity									
			Module									
			GM75497-MA1	GM75497-MA2	GM75497-MA3	GM75497-MA4	GM75497-MA5	GM75497-MA6	GM75498-MA1	GM75498-MA2	GM75498-MA3	GM75498-MA4
64	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	16	16	16	16	16	16	16	16	16	16
65	GM20151	Plate, bolting	4	4	4	4	4	4	4	4	4	4
66	GM28243	Shim, 110 mm OD x 16 gauge stainless	8	8	8	8	8	8	8	8	8	8
67	GM28244	Shim, 110 mm OD x 22 gauge stainless	2	2	2	2	2	2	2	2	2	2
68	GM28245	Shim, 110 mm OD x 28 gauge stainless	2	2	2	2	2	2	2	2	2	2
69	GM19587	Shaft, fan							1	1	1	1
69	347431	Shaft	1	1	1	1	1	1				
70	328256	Key							2	2	2	2
71	274905	Bushing, pulley, 3.998 in. NPT							1	1	1	1
71	GM26225	Bushing, pulley	1	1	1	1	1	1				
72	347430	Block, pillow	2	2	2	2	2	2	2	2	2	2
72	GM30510	Shim, fan and support (not shown)	3	3	3	3	3	3	3	3	3	3
73	X-25-29	Washer, plain, 0.812 ID x 1.469 in. OD	3	3	3	3	3	3	3	3	3	3
74	GM19453	Pulley, idler	1	1	1	1	1	1	1	1	1	1
75	GM52505	Guard, belt, RS							1	1	1	1
75	GM52500	Guard, belt RS	1	1	1	1	1	1				
76	GM52507	Guard, belt, top							1	1	1	1
76	GM52502	Guard, belt, top	1	1	1	1	1	1				
77	GM52506	Guard, belt, LS							1	1	1	1
77	GM52501	Guard, belt, LS	1	1	1	1	1	1				
78	GM52504	Guard, belt, bottom							1	1	1	1
79	GM21191	Frame, radiator							1	1	1	1
79	GM26226	Frame, radiator LS	1	1	1	1	1	1				
80	X-801-15	Washer, hardened	6	6	6	6	6	6	6	6	6	6
81	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	8	8	8	8	8	8	8	8	8	8
82	GM20151	Plate, bolting	2	2	2	2	2	2	2	2	2	2
83	GM21197	Frame, radiator, RS							1	1	1	1
83	GM26227	Frame, radiator, RS	1	1	1	1	1	1				
84	X-6011-3	Washer, beveled, 0.68 ID x 1.5 in. OD	8	8	8	8	8	8	8	8	8	8
85	GM26338	Plate, mounting, idler	1	1	1	1	1	1	1	1	1	1
86	GM26579	Shaft, pivot	1	1	1	1	1	1	1	1	1	1
86	M982-12-80	Nut, hex elastic stop (not shown)	1	1	1	1	1	1	1	1	1	1
87	X-801-11	Washer, hardened, 0.406 ID x 1.375 in.	1	1	1	1	1	1	1	1	1	1
88	GM19558	Tensioner, belt	1	1	1	1	1	1	1	1	1	1
89	354984	Pulley, fan							1	1	1	1
89	274906	Pulley, fan	1	1	1	1	1	1				
90	GM21395	Belt, fan							1	1	1	1
90	GM26234	Belt, poly V, 118 in., 20 ribs	1	1	1	1	1	1				
91	GM26339	Bracket, adjusting (idler mounting plate)	1	1	1	1	1	1	1	1	1	1
92	GM64371	Frame, fan support							1	1	1	1
92	GM64373	Frame, fan support	1	1	1	1	1	1				
93	GM19563	Brace, fan assembly	2	2	2	2	2	2				
94	X-6011-4	Washer, beveled, 0.44 ID x 1.25 in. OD	4	4	4	4	4	4				
95	GM52488	Brace, radiator tube	1	1	1	1	1	1				
96	343175	Clamp, hose, 3.06/3.38 in.	1	1	1	1	1	1				
97	347712	Guard, shaft	1	1	1	1	1	1				
98	GM23500	Cap, radiator	1	1	1	1	1	1	1	1	1	1
99	GM52508	Guard, belt back							1	1	1	1
99	GM52503	Guard, belt back	1	1	1	1	1	1				

Group 104: Cooling System, continued

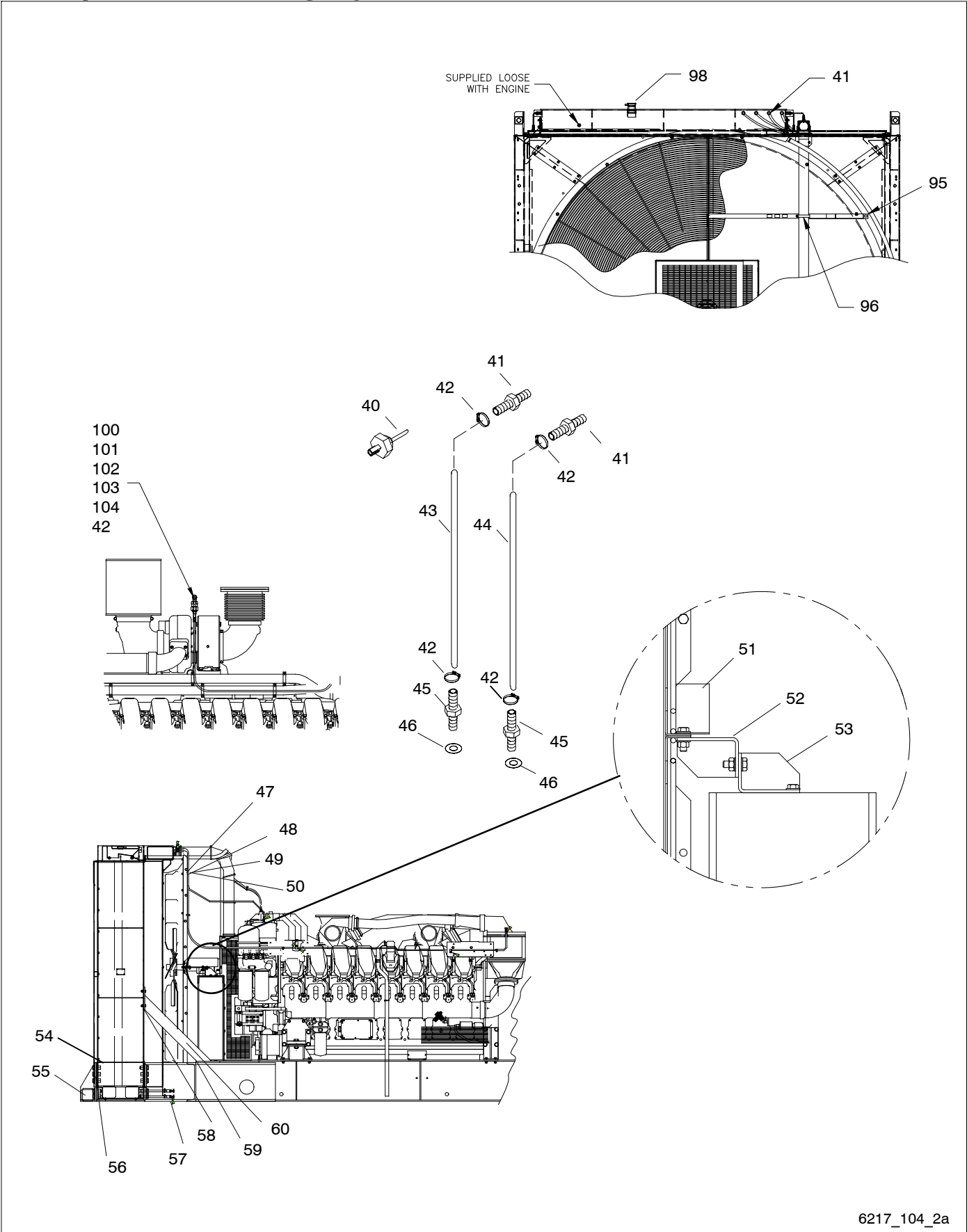


Group 104: Cooling System, continued

Item	Part Number	Description	Quantity
			Module
			GM87541-MA1
1	GM87540	Radiator assembly	1
2	X-426-8	Clamp, hose, 0.81/1.75 in.	2
3	X-6014-13	Hose, radiator wire insert	1
4	GM29562	Connector, swivel	1
4	272930	Connector, hose	1
5	X-426-8	Clamp, hose, 0.81/1.75 in.	2
6	X-6014-13	Hose, radiator wire insert	1
7	GM51502	Clamp, hose	2
8	X-507-7	Hose, radiator, straight, 3 in. ID	1
9	GM55225	Tube, intercooler return	1
10	GM51502	Clamp, hose	2
11	X-507-7	Hose, radiator, straight, 3 in. ID	1
12	GM52555	Flange, water connection, outlet	1
13	GM16102	Gasket, intercooler inlet	1
14	GM51502	Clamp, hose	2
15	X-507-10	Hose, radiator, straight, 3 in. ID	1
16	GM52489	Tube, radiator, SCCC inlet	1
17	GM52553	Flange, water connection, inlet	1
18	X-6014-110	Hose	1
19	GM16102	Gasket, intercooler inlet	1
20	X-6350-2	Hose, radiator, straight, 4 in. ID	1
21	GM55226	Tube, lower radiator	1
22	274545	Clamp, hose, 4.31/4.62 in.	4
23	X-6350-2	Hose, radiator, straight, 4 in. ID	1
24	GM62399	Flange, water connection, outlet	1
25	GM62397	Flange, water connection	1
27	GM67195	Hose, reducer	1
28	GM55227	Tube, radiator, J.W. inlet	1
29	GM52484	Bracket, tube support	1
30	289372	Clamp, muffler, 4.12 in.	1
30	X-6011-4	Washer, beveled, 0.44 ID x 1.25 in. OD	2
31	274545	Clamp, hose, 4.31/4.62 in.	3
31	291537	Clamp, hose, 375/4.06 in.	1
32	X-6014-91	Hose, straight coolant, 4.00 in. ID	1
33	GM40630	Tube, lower radiator	1
35	X-6014-91	Hose, radiator, straight, 4 in. ID	1

Parts list continues on next page

Group 104: Cooling System, continued



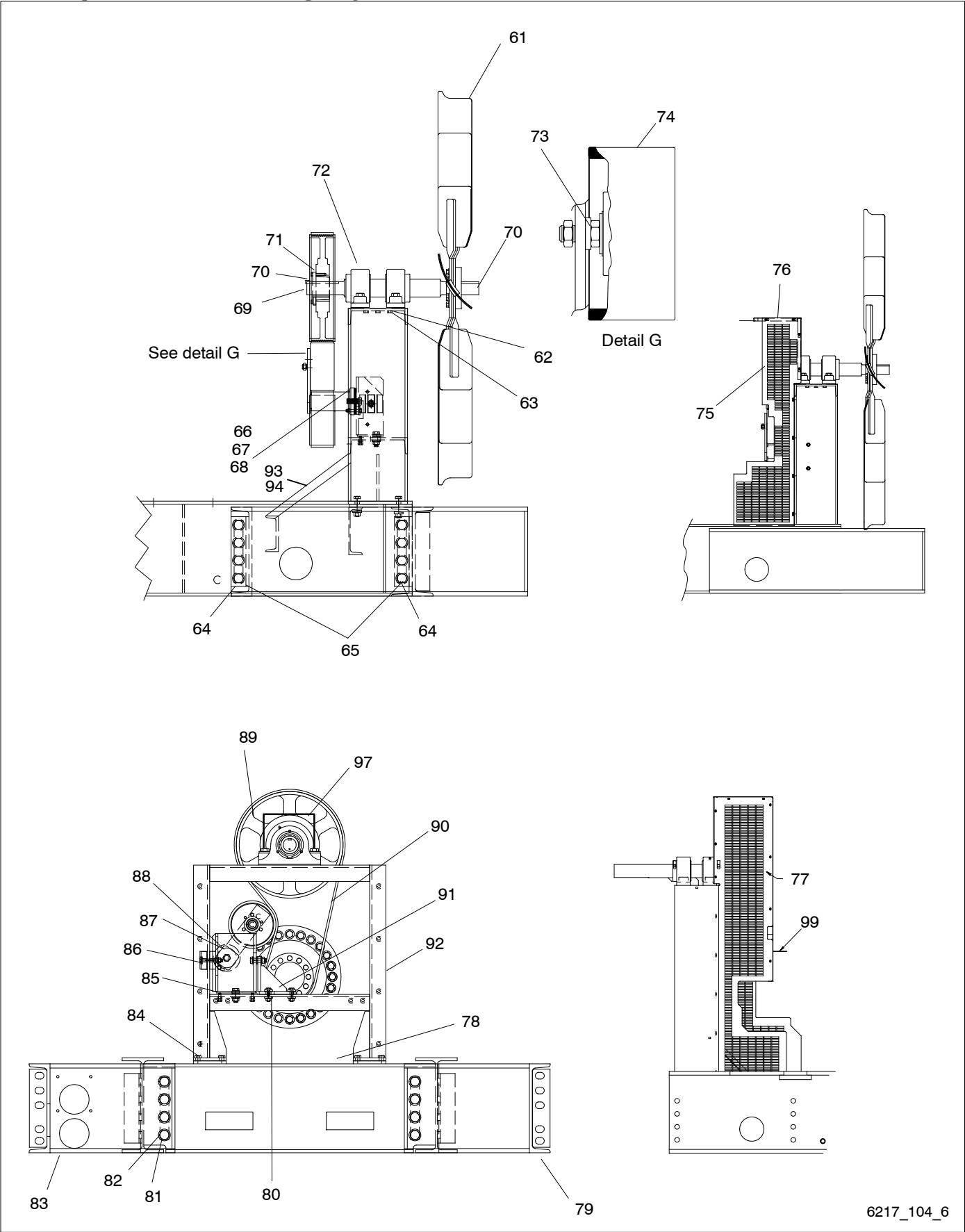
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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity
			Module GM87541-MA1
40	—	Sensor, low fluid (see eng. parts catalog)	1
41	X-582-25	Connector, hose + vibra seal	2
42	X-426-9	Clamp, hose, 0.25/0.70 in.	4
43	X-6359-3	Hose, oil proof	1
44	X-6359-3	Hose, oil proof	1
45	X-582-25	Connector, hose + vibra seal	2
45	352360	Adapter, bushing, M18 (not shown)	2
46	X-6278-7	Washer, nylon, 0.75 ID x 1.063 in. OD	2
47	GM60518	Shroud, fan	4
48	GM50304	Guard, flat fan	4
49	X-801-6	Washer, hardened, 0.469 ID x 0.922 in. OD	12
50	GM22400	Plate, support	12
51	GM26235	Guard, shaft	1
52	347825	Support, fan guard	2
53	347825	Support, fan guard	2
54	354999	Bracket, radiator mounting	2
55	GM55239	Guard, radiator	1
56	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	20
57	278788	Valve, drain, 3/8 in. NPT	2
58	X-801-9	Washer, hardened, 0.688 ID x 1.373 in. OD	8
59	X-6011-3	Washer, beveled, 0.68 ID x 1.5 in. OD	4
60	GM55240	Brace, radiator RH	1
60	GM55241	Brace, radiator LH	1
95	GM52580	Brace, radiator tube	1
96	343175	Clamp, hose, 3.06/3.38 in.	1
98	GM23500	Cap, radiator	1

Parts list continues on next page

Group 104: Cooling System, continued

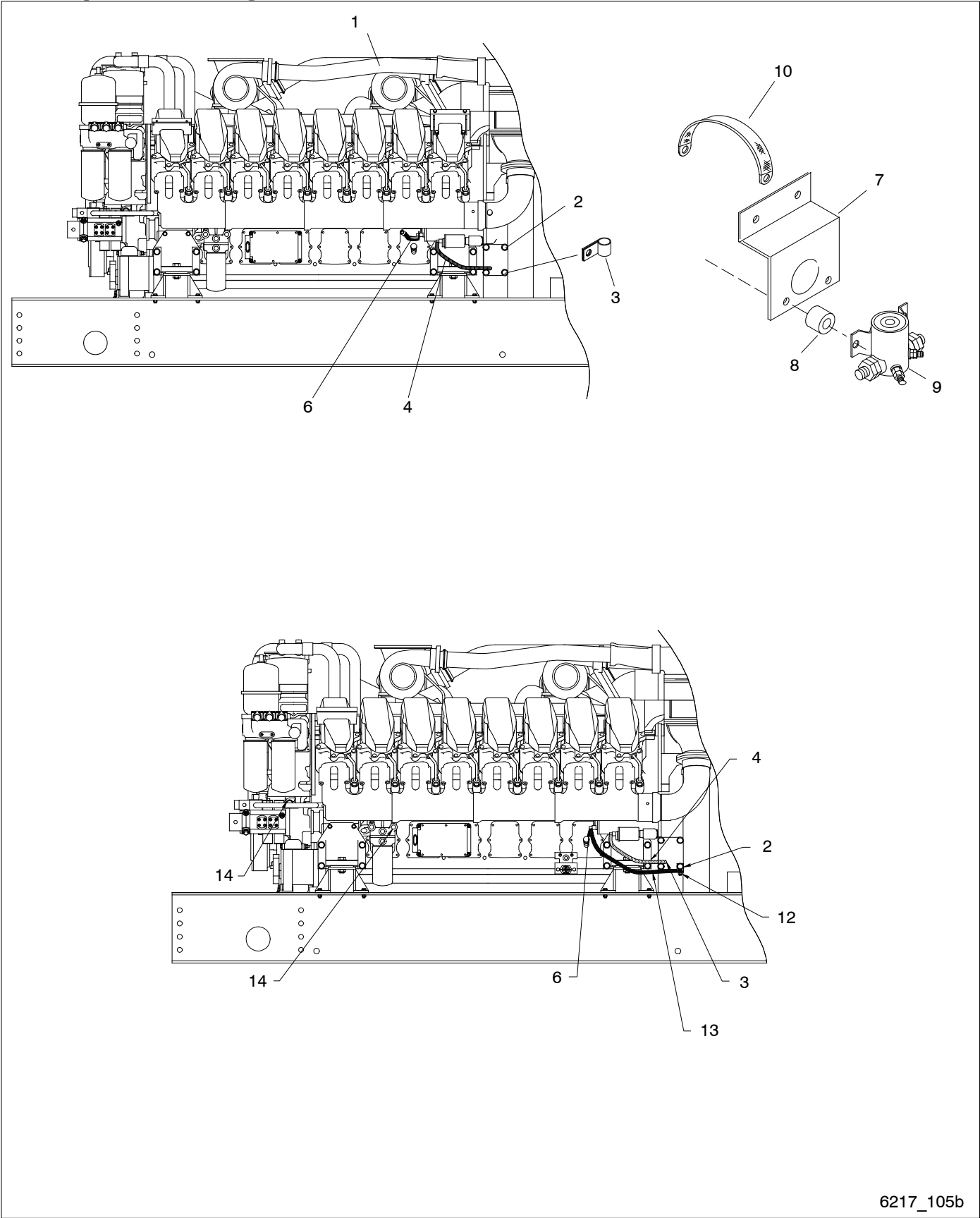


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Group 104: Cooling System, continued

Item	Part Number	Description	Quantity
			Module
			GM87541-MA1
61	GM50297	Fan	1
62	X-801-8	Washer, hardened, 0.812 ID x 2 in. OD	8
63	M934-20-80	Nut, hex	4
64	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	16
65	GM20151	Plate, bolting	4
66	GM28243	Shim, 110 mm OD x 16 gauge stainless	8
67	GM28244	Shim, 110 mm OD x 22 gauge stainless	2
68	GM28245	Shim, 110 mm OD x 28 gauge stainless	2
69	347431	Shaft	1
71	GM26225	Bushing, pulley	1
72	347430	Block, pillow	2
72	GM30510	Shim, fan and support (not shown)	2
73	X-25-29	Washer, plain, 0.812 ID x 1.469 in. OD	3
74	GM19453	Pulley, idler	1
75	GM55229	Guard, belt, RH	1
76	GM55231	Guard, belt, top	1
77	GM55230	Guard, belt, LH	1
78	GM55233	Guard, belt, bottom	1
79	GM87481	Frame, radiator LS	1
80	X-801-15	Washer, hardened	6
81	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	8
82	GM20151	Plate, bolting	2
83	GM87480	Frame, radiator, RS	1
84	X-6011-3	Washer, beveled, 0.68 ID x 1.5 in. OD	8
85	GM26338	Plate, mounting, idler	1
86	GM26579	Shaft, pivot	1
87	X-801-11	Washer, hardened, 0.406 ID x 1.375 in.	1
88	GM19558	Tensioner, belt	1
89	GM50307	Pulley	1
90	GM59859	Belt, poly V	1
91	GM26339	Bracket, adjusting (idler mounting plate)	1
92	GM64372	Frame, fan support	1
93	GM55234	Brace, fan assembly	2
94	X-6011-4	Washer, beveled, 0.44 ID x 1.25 in. OD	6
97	347712	Guard, shaft	1
99	GM55232	Guard, belt back	1

Group 105: Engine



6217_105b

Group 105: Engine

Item	Part Number	Description	Qty.
1	See chart	Engine assembly	1
2	GM28395	Plate, closing	2
3	X-672-6	Clamp, insulated, 1.38 in.	2
3	X-672-20	Clamp, insulated, 1.25 in.	2
4	X-545-138	Cable, battery, 108 in. red	1
6	287363	Strap, ground, 8 in., LS (non-Tier 2 units)	1
6	X-6046-5	Strap, ground, 14 in., RS (non-Tier 2)	1
6	X-545-202	Cable, batt., 123 in. blk (2500-3250 kW)	1
7	361103	Bracket, relay mounting	2
8	259632	Bumper	4
9	272713	Solenoid	2
10	223033	Strap, ground, 5 in.	2
12	GM74535	Terminal, Ground	1
13	X-545-232	Cable, Battery	1
14	GM59134	Union	2

Engine Assembly Part Numbers

Variation Number	Item 1, Engine Assembly	Description
1	GM24216	1350, 60 Hz
2	GM24217	1350, 50 Hz
3	GM24218	1500, 60 Hz
4	GM24219	1500, 50 Hz
5	GM24220	1820, 60 Hz
6	GM24221	1820, 50 Hz
7	GM23728	2000, 60 Hz
8	GM24222	2000, 50 Hz
9	GM30063	2500, 60 Hz
10	GM28944	2800, 60 Hz
11	GM30440	2500, 50 Hz
12	GM28441	2800, 50 Hz
13	GM34981	1350, 60 Hz
14	GM34982	1350, 50 Hz
15	GM34983	1500, 60 Hz
16	GM34984	1500, 50 Hz
17	GM34985	1820, 60 Hz
18	GM34986	1820, 50 Hz
19	GM34987	2000, 60 Hz
20	GM34988	2000, 50 Hz
21	GM38377	1350, 60 Hz
22	GM38378	1350, 50 Hz
23	GM38379	1500, 60 Hz
24	GM38380	1500, 50 Hz

Engine Assembly Part Numbers, continued

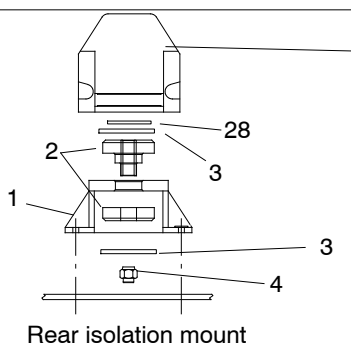
Variation Number	Item 1, Engine Assembly	Description
25	GM38381	1820, 60 Hz
26	GM38382	1820, 50 Hz
27	GM38383	2000, 60 Hz
28	GM38384	2000, 50 Hz
29	GM47140	1250/1500, 60 Hz, Tier 2
30	GM47149	1250/1500, 60 Hz, Tier 2
31	GM47139	1750, 60 Hz, Tier 2
32	GM47148	1750, 60 Hz, Tier 2
33	GM47138	2000, 60 Hz, Tier 2
34	GM47147	2000, 60 Hz, Tier 2
35	GM47137	2250, 60 Hz, Tier 2
36	GM47146	2250, 60 Hz, Tier 2
37	GM51978	2500, 60 Hz, Tier 2
38	GM51977	2800, 60 Hz, Tier 2
39	GM62902	2500, 60 Hz, Tier 2
40	GM62900	2500, 50 Hz, Tier 2
41	GM62901	2500, 50 Hz, Tier 2
42	GM62905	2800, 60 Hz, Tier 2
43	GM62903	2800, 50 Hz, Tier 2
44	GM62904	2800, 50 Hz, Tier 2
45	GM51976	3000, 60 Hz, Tier 2
46	GM62908	3000, 60 Hz, Tier 2
47	GM51976	3250, 60 Hz, Tier 2
48	GM62908	3250, 60 Hz, Tier 2
49	GM62906	3250, 50 Hz, Tier 2
50	GM62907	3250, 50 Hz, Tier 2
51	GM62890	1250/1500, 60 Hz, Tier 2
52	GM62888	1250/1500, 50 Hz, Tier 2
53	GM62889	1250/1500, 50 Hz, Tier 2
54	GM62893	1750, 60 Hz, Tier 2
55	GM62891	1750, 50 Hz, Tier 2
56	GM62892	1750, 50 Hz, Tier 2
57	GM62896	2000, 60 Hz, Tier 2
58	GM62894	2000, 50 Hz, Tier 2
59	GM62895	2000, 50 Hz, Tier 2
60	GM62899	2250, 60 Hz, Tier 2
61	GM62897	2250, 50 Hz, Tier 2
62	GM62898	2250, 50 Hz, Tier 2
63	GM76051	2500, 60 Hz, Tier 2
64	GM76052	2500, 60 Hz, Tier 2
65	GM76053	2500, 50 Hz, Tier 2
66	GM76054	2500, 50 Hz, Tier 2
67	GM76055	2800, 60 Hz, Tier 2
68	GM76056	2800, 60 Hz, Tier 2
69	GM76057	2800, 50 Hz, Tier 2
70	GM76058	2800, 50 Hz, Tier 2
71	GM76059	3000, 60 Hz, Tier 2
72	GM76060	3000, 60 Hz, Tier 2
73	GM76059	3250, 60 Hz, Tier 2
74	GM76060	3250, 60 Hz, Tier 2
75	GM76061	3250, 50 Hz, Tier 2
76	GM76062	3250, 50 Hz, Tier 2
77	GM47140	1250/1500, 60 Hz, Tier 2
78	GM62890	1250/1500, 60 Hz, Tier 2
79	GM62888	1250/1500, 50 Hz, Tier 2
80	GM62889	1250/1500, 50 Hz, Tier 2
81	GM47139	1750, 60 Hz, Tier 2
82	GM62893	1750, 60 Hz, Tier 2
83	GM62891	1750, 50 Hz, Tier 2
84	GM62892	1750, 50 Hz, Tier 2
85	GM47138	2000, 60 Hz, Tier 2
86	GM62896	2000, 60 Hz, Tier 2
87	GM62894	2000, 50 Hz, Tier 2
88	GM62895	2000, 50 Hz, Tier 2
89	GM47137	2250, 60 Hz, Tier 2
90	GM62899	2250, 60 Hz, Tier 2
91	GM62897	2250, 50 Hz, Tier 2
92	GM62898	2250, 50 Hz, Tier 2
93	GM86891	2500, 60Hz

Group 107: Nameplates and Decals

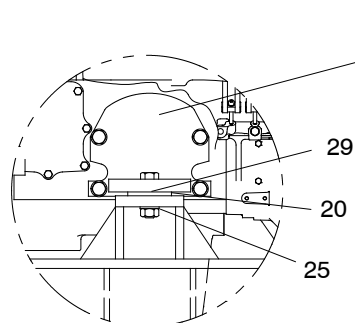
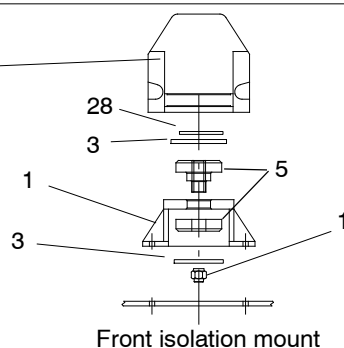
Item	Part Number	Description	Quantity			
			Variation			
			1	2	3	4
1	X-6232-3	Decal, stripes	1	1		1
1	X-6232-6	Decal, stripe		1	2	1
2	X-6246-1	Decal, Kohler Power System	1		2	
2	X-6246-13	Decal, Kohler Power System		1		
2	X-6246-14	Decal, Kohler Power System				1
2	X-6348-4	Decal, Kohler Power System (black)		1		1
3	X-6276-8	Logo, Kohler	1	2		2
4	224233	Decal, 1-800 number	1	1		1
5	238402	Decal, caution positive term. only	2	2	2	2
6	249809	Decal, caution hot engine	2	2	2	2
7	249810	Decal, warning hot coolant	1	1	1	1
8	255882	Decal, caution standby SVC connect	1	1	2	1
9	257438	Decal, danger moving rotor	1	1	2	1
10	279748	Decal, caution	1	1		1
11	345211	Decal, ground			1	
12	343165	Decal, caution—not a step	1	1		1
13	258815	Decal, warning voltage backfeed			2	
16	249808	Decal, warning rotating parts	1	1	1	1
17	364116	Decal, caution welding disconnect	2	3	2	3
18	294520	Decal, danger, high voltage	1	1	2	2
19	GM13228	Decal, warning lifting support	1	1		1
20	GM13227	Decal, warning fan force	1	1		1
21	GM19296	Decal, fuel type	1	1		1
22	GM15300	Decal, exhaust piping	1	1		1
23	GM38600	Tag, hang caution fuel inlet and supply connection	1	1		1
24	GM39683	Tag, hang lug selection	1		1	
25	GM49352	Tag, hang caution risk of electrical shock	1		1	
26	GM60531	Decal, Control Height	1	1	1	1
27	257441	Decal, warning lifting eye		2		2
28	354290	Decal, Caution		1		1
29	X-6333-12	Decal, Diagnostic		1		
30	226917	Decal, negative battery conn			1	
31	GM79042	Decal, Phasing			2	
32	GM79043	Decal, Phasing C-B-A			2	

Notes

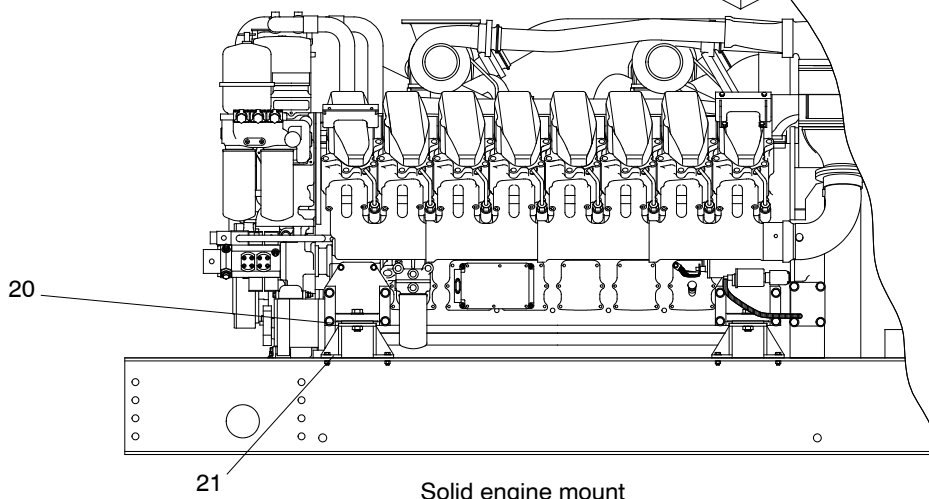
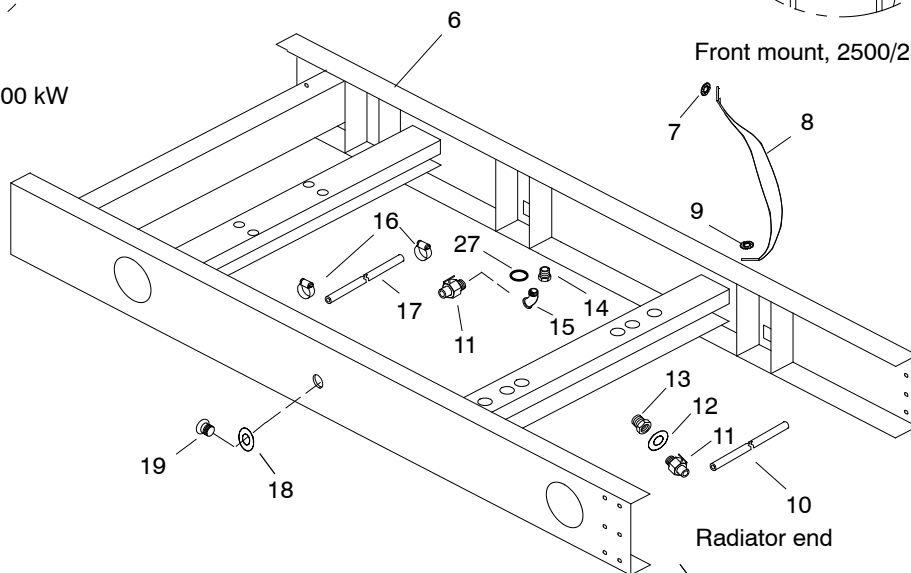
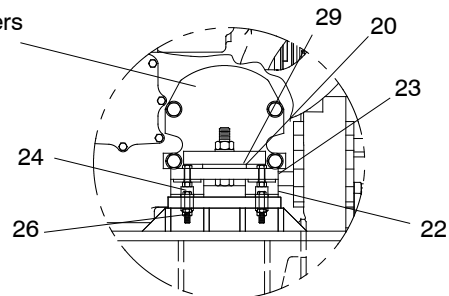
Group 109: Skid and Plant Mounting



See engine parts catalog
for part numbers of mount-
ing brackets and hardware.



See engine parts catalog for part numbers
of mounting brackets and hardware.

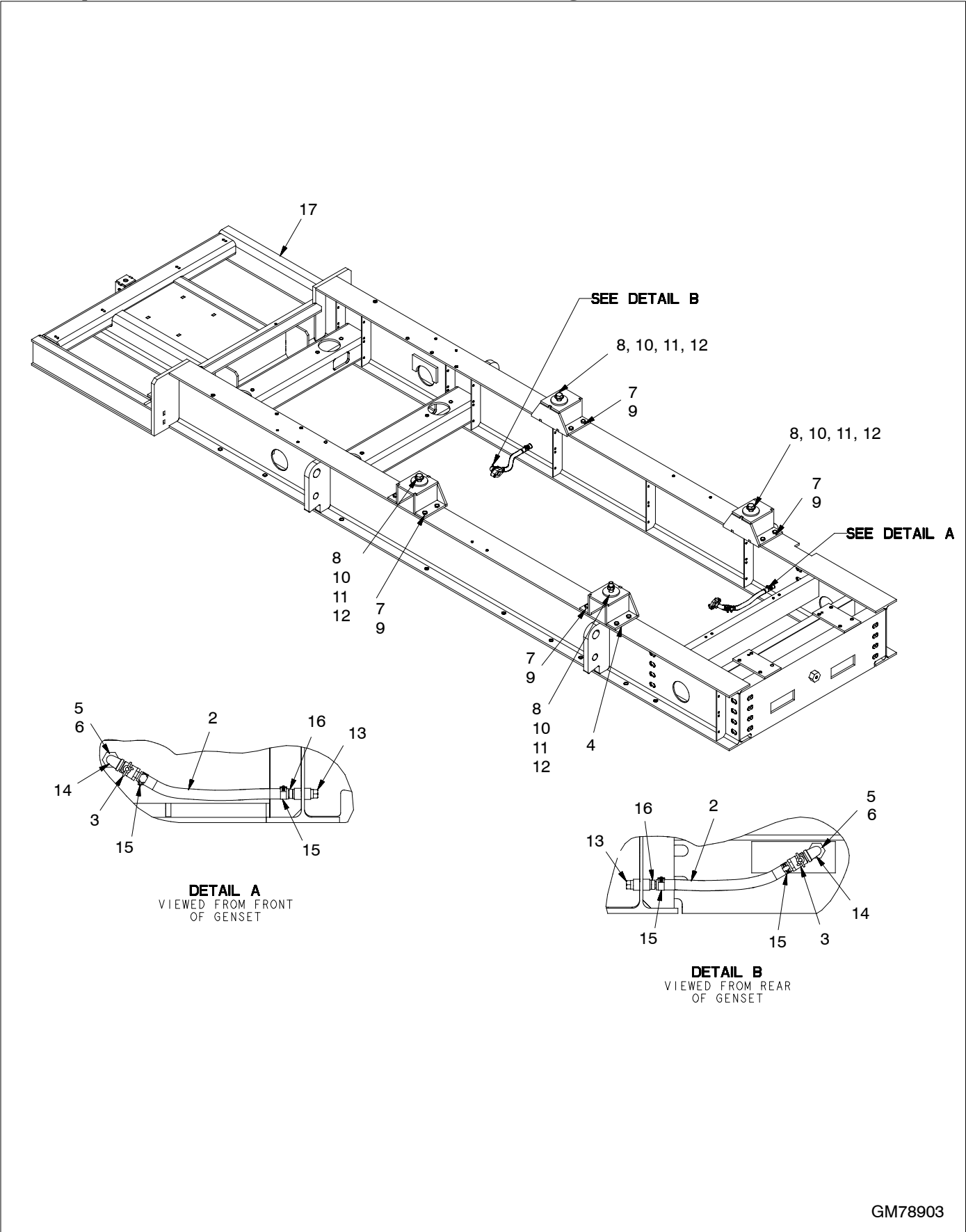


6217_109a

Group 109: Skid and Plant Mounting

Item	Part Number	Description	Quantity Module																
			GM28377-MA1	GM40719-MA1	GM40719-MA2	GM40719-MA3	GM28377-MA2	GM28377-MA3	GM26292-MA1	GM40681-MA1	GM40681-MA2	GM40681-MA3	GM26292-MA2	GM26292-MA3	GM29821-MA1	GM29821-MA2	GM29821-MA3	GM55242-MA1	GM55242-MA2
1	361024	Mount, engine	4	4	4	4	4	4											
2	361053	Vibromount	2	2	2	2	2	2											
3	X-25-152	Washer, plain, 1.06 ID x 5.25 in. OD	8	8	8	8	8	8											
4	M934-24-80	Nut, hex							4	4	4	4	4	4					
4	M982-24-60	Nut, hex	4	4	4	4	4	4											
5	361179	Vibromount	2	2	2	2	2	2											
6	GM28337	Skid	1						1										
6	GM28376	Skid					1					1							
6	GM28372	Skid						1					1						
6	GM29808	Skid												1					
6	GM29809	Skid													1				
6	GM30654	Skid														1			
6	GM40682	Skid		1						1									
6	GM40683	Skid			1						1								
6	GM48828	Skid				1						1							
6	GM55235	Skid															1		
6	GM55236	Skid																1	
6	GM64512	Skid																	1
7	X-22-26	Washer, lock, 0.521 ID x 1.24 in. OD	1	1	1	1	1	1	1	1	1	1	1	1					
8	GM21085	Strap, ground, 16 in.	2	2	2	2	2	2	2	2	2	2	2	2					
9	X-22-15	Washer, lock, 0.456 ID x 1.058 in. OD	2				2	2	2	2	2	2	2	2					
9	X-22-14	Washer, lock, 0.391 ID x 0.975 in. OD		2	2	2													
10	X-577-28	Hose, rubber, straight, 0.62 in. ID	1				1	1	1				1	1	1	1	1	1	1
10	X-577-34	Hose, rubber, straight, 0.62 in. ID		1	1	1				1	1	1							
11	272701	Valve, oil drain	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
12	X-6427-3	Washer, copper, 1.067 ID x 2.00 in. OD	1				1	1	1				1	1	1	1	1	1	1
13	361358	Adapter, bushing	1				1	1	1				1	1	1	1	1	1	1
13	X-211-1	Elbow, street, 90° x 1/2 in. NPTF		1	1	1				1	1	1							
14	GM28443	Adapter, bushing	1	2	2	2	1	1	1	2	2	2	1	1	1	1	1	1	1
15	X-211-1	Elbow, street, 90° x 1/2 in. NPTF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	X-426-10	Clamp, hose, 0.5/1 in.	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
17	X-577-34	Hose, rubber, straight, 0.62 in. ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19	X-75-28	Plug, pipe, 1/2 in. NPTF	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
19	X-582-1	Connector, hose	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
20	X-25-165	Washer, plain							4	4	4	4	4	4	4	4	4	4	4
21	361037	Mount, engine							4	4	4	4	4						
22	GM29297	Mount, isolation													4	4	4	4	4
23	GM29832	Plate, mounting													2	2	2	2	2
24	X-400-256	Spacer													4	4	4	4	4
25	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD								8	8	8			2	2	2	8	8
26	X-801-15	Washer, hardened													8	8	8	8	8
27	GM24573	O-ring, 26.7 mm ID	1	2	2	2	1	1	1	2	2	2	1	1	1	1	1	1	1
28	GM32569	Washer, plain	4	4	4	4	4	4											
29	GM30701	Shim													12	12	12	12	12

Group 109: Skid and Plant Mounting, continued



Group 109: Skid and Plant Mounting, continued

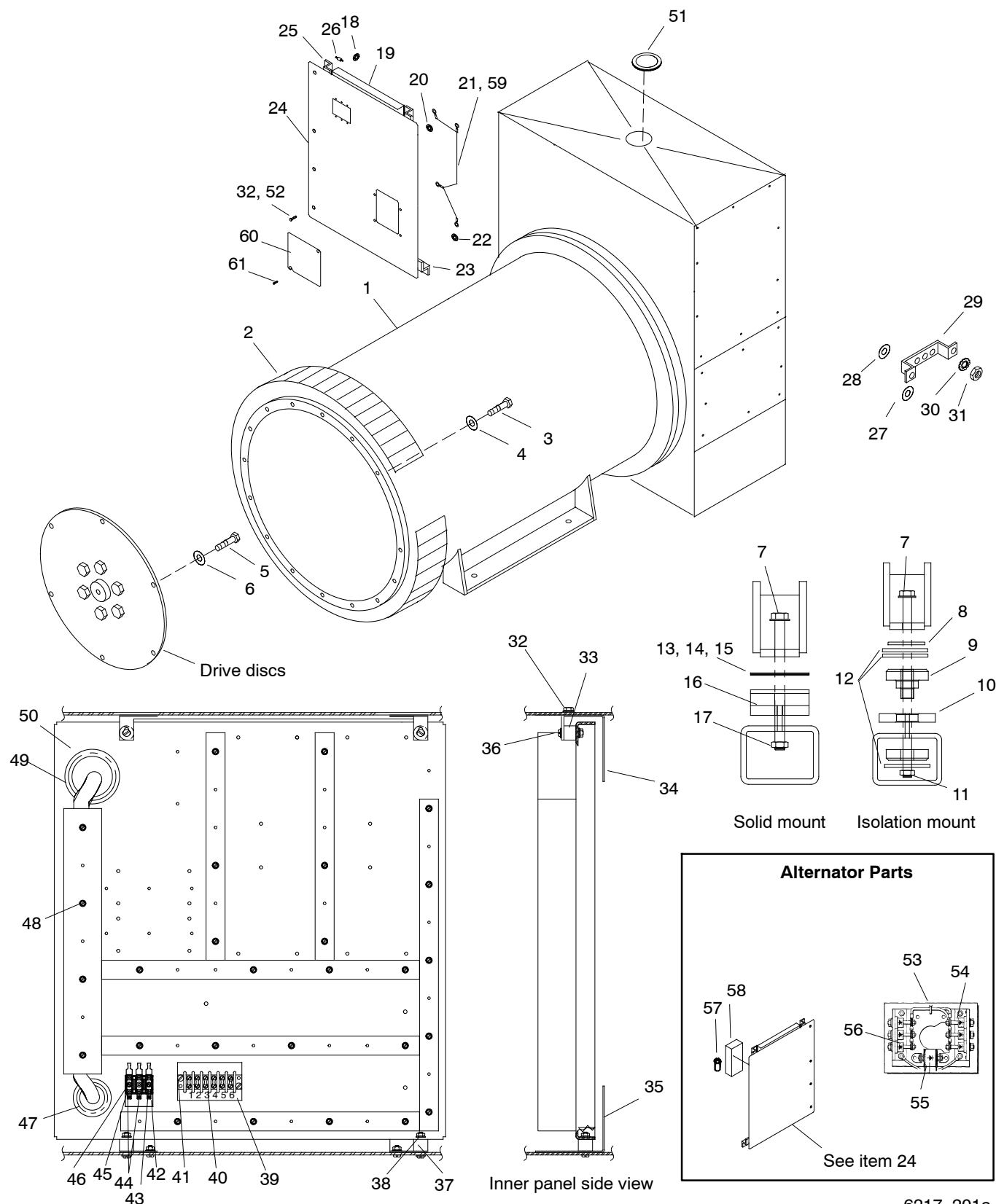
			Quantity					
			Module					
Item	Part Number	Description	GM78903-MA1	GM78902-MA1	GM78902-MA2	GM78902-MA3	GM86900-MA1	GM86900-MA2
2	X-577-34	Hose, rubber, straight, .62 in. ID (24 in.)	2	2	2	2		
2	X-577-28	Hose, rubber, straight, .62 in. ID (17 in.)					1	1
2	X-577-44	Hose, rubber, straight, .62 in. ID (27 in.)					1	1
3	272701	Valve, oil drain (1/2-14 nptf)	2	2	2	2	2	2
4	361037	Mount, Engine (1/2")	4	4	4	4		
5	GM24573	O'Ring (26.7mm ID)	2	2	2	2	2	2
6	GM28443	Adapter, Bushing	2	2	2	2	2	2
7	M6923-16-80	Nut, hex	16	16	16	16		
8	M931-24090-60	Screw, Hex Cap	4	4	4	4		
8	M931-24120-60	Screw, Hex Cap					4	4
9	M933-16050-60	Screw, Hex Cap	16	16	16	16		
10	M934-24-80	Nut, Hex	4	4	4	4	4	4
11	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	8	8	8	8		
11	X-25-127	Washer, plain, 1.062 ID x 2 in. OD					4	4
12	X-25-165	Washer, Plain	4	4	4	4	4	4
13	X-75-28	Plug, pipe (1/2"nptf)	2	2	2	2	2	2
14	X-211-1	Elbow, Street (90 deg x 1/2"nptf)	2	2	2	2	2	2
15	X-426-12	Clamp, hose, .69/1.25 in.	4	4	4	4		
15	X-426-10	Clamp, hose, .5/1 in.					4	4
16	X-582-1	Connector, Hose 5/8" x 1/2" MIP Brass	2	2	2	2	2	2
17	GM78901	Skid, 7M744	1					
17	GM78898	Skid, 7M742		1				
17	GM78899	Skid, 7M743			1			
17	GM78900	Skid, 7M744				1		
17	GM86899	Skid					1	
17	GM87354	Skid						1

Group 201: Alternator and Mounting

Non-Tier 2

1250-2000 kW

Items not shown: 52, 59



6217_201a

Group 201: Alternator and Mounting

Item	Part Number	Description	Qty.	Item	Part Number	Description	Qty.
1	See chart	Alternator assembly	1	31	X-83-7	Nut, hex	2
2	328904	Screen	1	32	X-6217-10	Screw, hex flange machine	16
3	M931-12050-82	Screw, hex head cap	16	33	229353	Mount, controller	2
4	290945	Washer, hardened	16	34	365476	Bracket, inner panel	3
5	M931-16100-82	Screw, hex cap	12	35	361478	Retainer, inner panel	2
6	X-801-5	Washer, hardened	12	36	X-22-12	Washer, lock, 0.262 ID x 0.743 in. OD	4
7	M931-24160-60	Screw, hex cap, solid mount	4	37	229353	Mount, controller	2
7	M931-24200-60	Screw, hex cap, isolation mount	4	38	X-22-12	Washer, lock, 0.262 ID x 0.743 in. OD	4
7	X-801-10	Washer, hardened, 1.062 ID x 2 in.	4	39	299090	Marker, strip	1
8	GM32569	Washer, plain special	4	40	295314	Block, terminal	2
9	361054	Vibromount	4	41	X-49-6	Screw, pan head machine	2
10	361039	Plate, generator mounting	4	42	GM28584	Marker, strip	1
11	M982-24-60	Nut, hex, elastic stop	4	43	239298	Fuse, 5 A, 250 V	1
12	X-25-152	Washer, plain	12	44	292937	Fuse, 20 A, 250 V	1
13	290743	Shim	4	45	292821	Holder, fuse	1
14	290744	Shim	4	46	X-49-26	Screw, pan head machine	2
15	291191	Shim	4	47	X-634-16	Bushing, nylon, 1.312 in. ID	1
16	361061	Plate, generator mounting	4	48	X-67-43	Screw, hex slotted	27
17	M934-24-80	Nut, hex	4	49	X-634-23	Bushing, nylon, 1.968 in.	1
18	X-22-18	Washer, lock	12	50	361186	Panel, J-box inner	1
19	GM13563	Panel, inner door	1	51	X-634-23	Bushing, nylon, 1.968 in.	1
20	X-22-12	Washer, lock, 0.262 ID x 0.743 in. OD	2	52	295009	Retainer (not shown)	10
21	GM21264	Harness, ground	1	53	347070	Exciter rectifier assembly	1
22	X-22-13	Washer, lock	1	54	279773	Diode, standard polarity	1
23	GM13561	Bracket, door panel mounting, bottom	1	55	279777	Surge suppressor	1
24	GM31958	Door, junction box	1	56	279775	Diode, reversing polarity	1
25	GM13562	Bracket, door panel mounting, top	2	57	347160	Capacitor	1
26	282829	Vibromount	6	58	GM24876-S	Regulator, voltage DVR2000	1
27	X-25-118	Washer, plain	4	59	361567	Base, tie wrap (not shown)	2
28	X-6086-6	Washer, spring	2	60	GM17571	Cover, access	1
29	361271	Bus, ground	1	61	X-50-2	Screw, slotted pan head machine	4
30	X-22-14	Washer, lock, int./ext. tooth, 3/8 in.	4				

Alternator Part Number and Mount Type

Use this table to identify the kit/module number's alternator part number (item 1) and mount type.

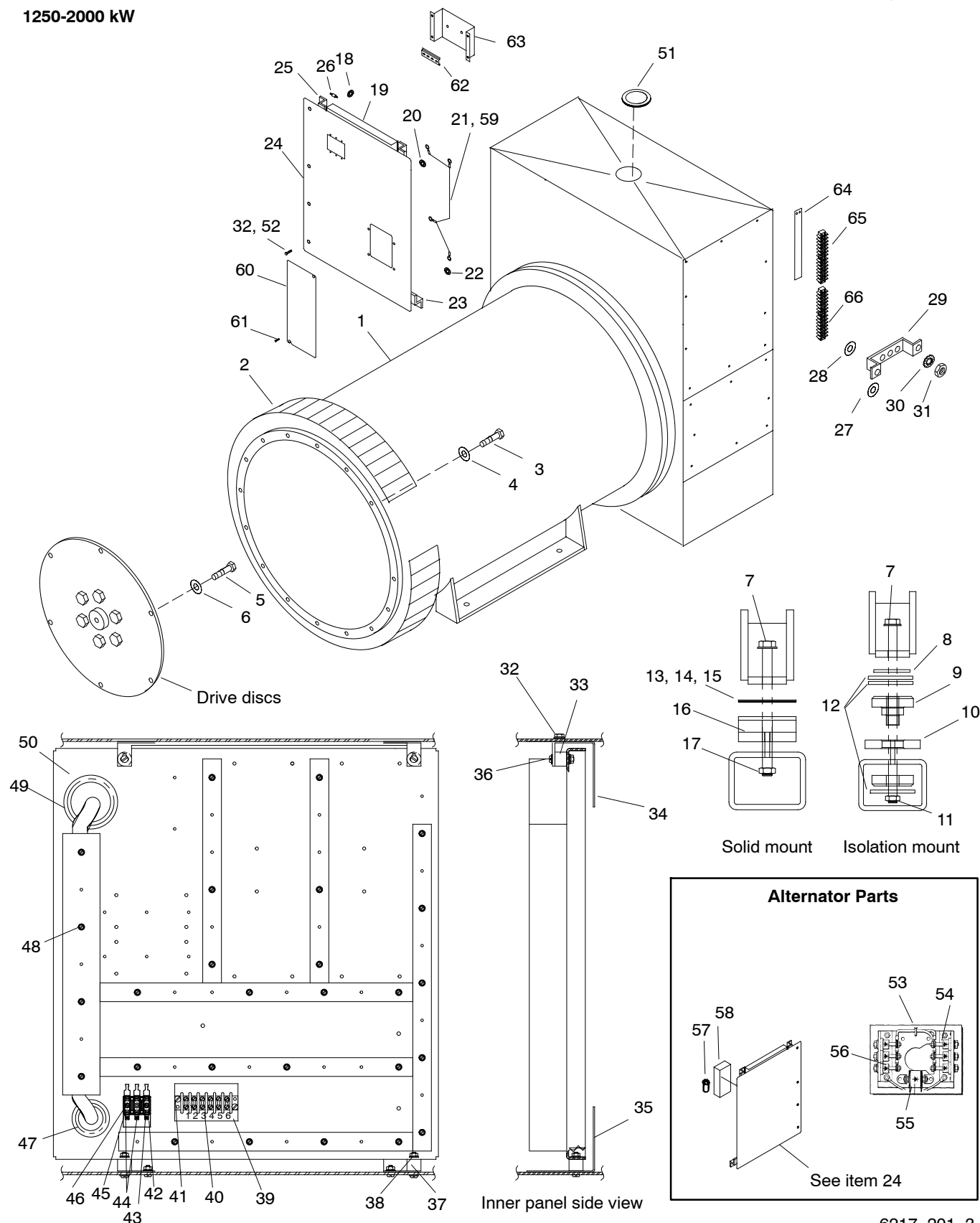
Model	Alternator Description	Kit/Module Number	Alternator Part Number	Mount Type
1350, 50/60 Hz	7M4046	GM28379-MA1	A-361003	Isolation
1350, 50/60 Hz	7M4046	GM28379-MA2	A-361003	Solid
1350, 50/60 Hz	7M4048	GM28379-MA3	B-361004	Isolation
1350, 50/60 Hz	7M4048	GM28379-MA4	B-361004	Solid
1350/1500, 50/60 Hz	7M4050	GM28379-MA5	B-361005	Isolation
1350/1500, 50/60 Hz	7M4050	GM28379-MA6	B-361005	Solid
1350/1500, 50/60 Hz; 1820, 50 Hz	7M4052	GM28379-MA7	B-361006	Isolation
1350/1500/1820, 50/60 Hz	7M4052	GM28379-MA8	B-361006	Solid
1820/2000 50 Hz	7M4054	GM28379-MA9	F-361007	Isolation
1820/2000 50/60 Hz	7M4054	GM28379-MA10	F-361007	Solid
1820/2000 50 Hz	7M4058	GM28379-MA11	F-361008	Isolation
1820/2000 50/60 Hz	7M4058	GM28379-MA12	F-361008	Solid
1350, 60 Hz	7M4172	GM28379-MA13	B-361009	Isolation
1350, 60 Hz	7M4172	GM28379-MA14	B-361009	Solid
1350/1500, 60 Hz	7M4174	GM28379-MA15	B-361010	Isolation
1350/1500, 60 Hz	7M4174	GM28379-MA16	B-361010	Solid
1500, 60 Hz	7M4176	GM28379-MA17	F-361011	Isolation
1500/1820/2000, 60 Hz	7M4176	GM28379-MA18	F-361011	Solid
1350, 60 Hz	7M4288	GM28379-MA19	B-361012	Isolation
1350, 60 Hz	7M4288	GM28379-MA20	B-361012	Solid
1500, 60 Hz	7M4290	GM28379-MA21	B-361013	Isolation
1500, 60 Hz	7M4290	GM28379-MA22	B-361013	Solid
1820/2000, 60 Hz	7M4292	GM28379-MA24	F-361014	Solid
1350, 50/60 Hz	7M4366	GM28379-MA25	B-361015	Isolation
1350, 50/60 Hz	7M4366	GM28379-MA26	B-361015	Solid
1350/1500, 50/60 Hz	7M4368	GM28379-MA27	F-361016	Isolation
1350/1500, 50/60 Hz	7M4368	GM28379-MA28	F-361016	Solid
1500, 50/60 Hz; 1820, 50 Hz	7M4370	GM28379-MA29	F-361017	Isolation
1500/1820, 50/60 Hz	7M4370	GM28379-MA30	F-361017	Solid
1820/2000, 50 Hz	7M4374	GM28379-MA31	F-361018	Isolation
1820/2000, 50/60 Hz	7M4374	GM28379-MA32	F-361018	Solid
1820/2000, 50 Hz	7M4056	GM28379-MA33	GM41659	Isolation
1820/2000, 50/60 Hz	7M4056	GM28379-MA34	GM41659	Solid

Group 201: Alternator and Mounting, continued

Tier 2

1250-2000 kW

Items not shown: 52, 59



6217_201_3

Group 201: Alternator and Mounting, continued

Item	Part Number	Description	Qty.	Item	Part Number	Description	Qty.
1	See chart	Alternator assembly	1	33	229353	Mount, controller	2
2	328904	Screen	1	34	365476	Bracket, inner panel	3
3	M931-12050-82	Screw, hex head cap	16	35	361478	Retainer, inner panel	2
4	290945	Washer, hardened	16	36	X-22-12	Washer, lock, 0.262 ID x 0.743 in. OD	4
5	M933-16045-82	Screw, hex cap	12	37	229353	Mount, controller	2
6	X-801-5	Washer, hardened	12	38	X-22-12	Washer, lock, 0.262 ID x 0.743 in. OD	4
7	M931-24160-60	Screw, hex cap, solid mount	4	39	299090	Marker, strip	1
7	M931-24200-60	Screw, hex cap, isolation mount	4	40	295314	Block, terminal	2
7	X-801-10	Washer, hardened, 1.062 ID x 2 in.	4	41	X-49-6	Screw, pan head machine	2
8	GM32569	Washer, plain special	4	42	GM40888	Marker, strip	1
9	361054	Vibromount	4	43	283645	Fuse, 15 A	1
10	361039	Plate, generator mounting	4	44	283645	Fuse, 15 A	1
11	M982-24-60	Nut, hex, elastic stop	4	45	292821	Holder, fuse	1
12	X-25-152	Washer, plain	12	46	X-49-26	Screw, pan head machine	2
13	290743	Shim	4	47	X-634-16	Bushing, nylon, 1.312 in. ID	1
14	290744	Shim	4	48	X-67-43	Screw, hex slotted	27
15	291191	Shim	4	49	X-634-23	Bushing, nylon, 1.968 in.	1
16	361061	Plate, generator mounting	4	50	361186	Panel, J-box inner	1
17	M934-24-80	Nut, hex	4	51	X-634-23	Bushing, nylon, 1.968 in.	1
18	X-22-18	Washer, lock	12	52	295009	Retainer (not shown)	10
19	GM13563	Panel, inner door	1	53	347070	Exciter rectifier assembly	1
20	X-22-12	Washer, lock, 0.262 ID x 0.743 in. OD	2	54	279773	Diode, standard polarity	1
21	GM21264	Harness, ground	1	55	279777	Surge suppressor	1
22	X-22-13	Washer, lock	1	56	279775	Diode, reversing polarity	1
23	GM13561	Bracket, door panel mounting, bottom	1	57	347160	Capacitor	1
24	GM13564	Door, junction box	1	58	GM24876-S	Regulator, voltage DVR2000	1
25	GM13562	Bracket, door panel mounting, top	2	59	361567	Base, tie wrap (not shown)	2
26	282829	Vibromount	6	60	GM13565	Cover, access	1
27	X-25-118	Washer, plain	4	61	X-50-2	Screw, slotted pan head machine	6
28	X-6086-6	Washer, spring	2	62	GM48806	Rail, DIN	1
29	361271	Bus, ground	1	63	GM48785	Bracket, mounting	1
30	X-22-14	Washer, lock, int./ext. tooth, 3/8 in.	4	64	GM11657	Strip, marker	1
31	X-83-7	Nut, hex	2	65	328913	Strip, terminal	1
32	X-6217-10	Screw, hex flange machine	16	66	273769	Terminal block	1

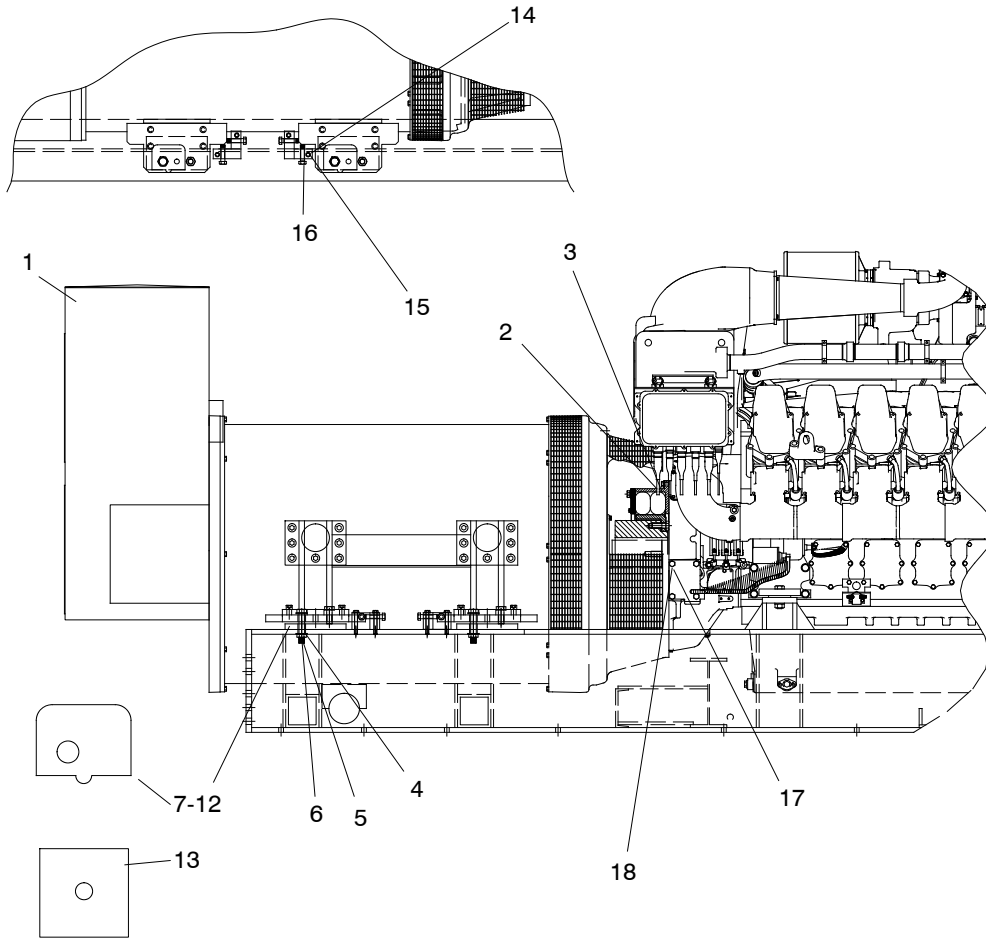
Alternator Part Number and Mount Type

Use this table to identify the kit/module number's alternator part number (item 1) and mount type.

Model	Alternator Description	Kit/Module Number	Alternator Part Number	Mount Type
1500, 60 Hz	7M4050	GM40676-MA1	GM47964	Isolation
1500, 60 Hz	7M4050	GM40676-MA2	GM47964	Solid
1500/1750, 60 Hz	7M4052	GM40676-MA3	B-361006	Isolation
1500/1750, 60 Hz	7M4052	GM40676-MA4	B-361006	Solid
1750, 60 Hz	7M4054	GM40676-MA5	F-361007	Isolation
1750/2000, 60 Hz	7M4054	GM40676-MA6	F-361007	Solid
1750, 60 Hz	7M4056	GM40676-MA7	GM41659	Isolation
1750/2000/2250, 60 Hz	7M4056	GM40676-MA8	GM41659	Solid
1750, 60 Hz	7M4058	GM40676-MA9	F-361008	Isolation
1750/2000/2250, 60 Hz	7M4058	GM40676-MA10	F-361008	Solid
1500, 60 Hz	7M4174	GM40676-MA11	B-361010	Isolation
1500, 60 Hz	7M4174	GM40676-MA12	B-361010	Solid
1500/1750, 60 Hz	7M4176	GM40676-MA13	F-361011	Isolation
1500/1750/2000, 60 Hz	7M4176	GM40676-MA14	F-361011	Solid
1500, 60 Hz	7M4290	GM40676-MA15	B-361013	Isolation
1500, 60 Hz	7M4290	GM40676-MA16	B-361013	Solid
1750, 60 Hz	7M4292	GM40676-MA17	F-361014	Isolation
2000, 60 Hz	7M4292	GM40676-MA18	F-361014	Solid
1500, 60 Hz	7M4368	GM40676-MA19	F-361016	Isolation
1500, 60 Hz	7M4368	GM40676-MA20	F-361016	Solid
1500/1750, 60 Hz	7M4370	GM40676-MA21	F-361017	Isolation
1500/1750, 60 Hz	7M4370	GM40676-MA22	F-361017	Solid
1750, 60 Hz	7M4374	GM40676-MA23	F-361018	Solid
1750/2000, 60 Hz	7M4374	GM40676-MA24	F-361018	Isolation
2250, 60 Hz	7M4376	GM40676-MA25	GM49380	Solid
1250, 60 Hz	7M4048	GM40676-MA26	B-361004	Isolation
1250, 60 Hz	7M4048	GM40676-MA27	B-361004	Solid

Group 201: Alternator and Mounting, continued

2500-3250 kW



6217_201_2a

Item	Part Number	Description	Qty.
1	See chart	Alternator assembly	1
2	See chart	Screw, hex cap	-
3	X-801-16	Washer, Hardened	24
4	X-6361-2	Screw, hex cap	4
5	X-801-12	Washer, hardened, 1.156 ID x 2.25 in. OD	8
6	X-80-9	Nut, hex, 1 1/8-7	4
7	GM29907-1	Shim, thickness = .002	8
8	GM29907-2	Shim, thickness = .005	8
9	GM29907-3	Shim, thickness = .010	4
10	GM29907-4	Shim, thickness = .030	8
11	GM29907-5	Shim, thickness = .050	4
12	GM29907-6	Shim, thickness = .125	8
13	GM29908	Shim	8
14	273738	Screw, head head machine, special thread	8
15	354204	Block, adjusting	4
16	279493	Screw, hex head machine, special thread	8
17	See chart	Screw, hex cap	16
18	290945	Washer, hardened, 0.531 ID x 1.06 in. OD	16

Group 201: Alternator and Mounting, continued

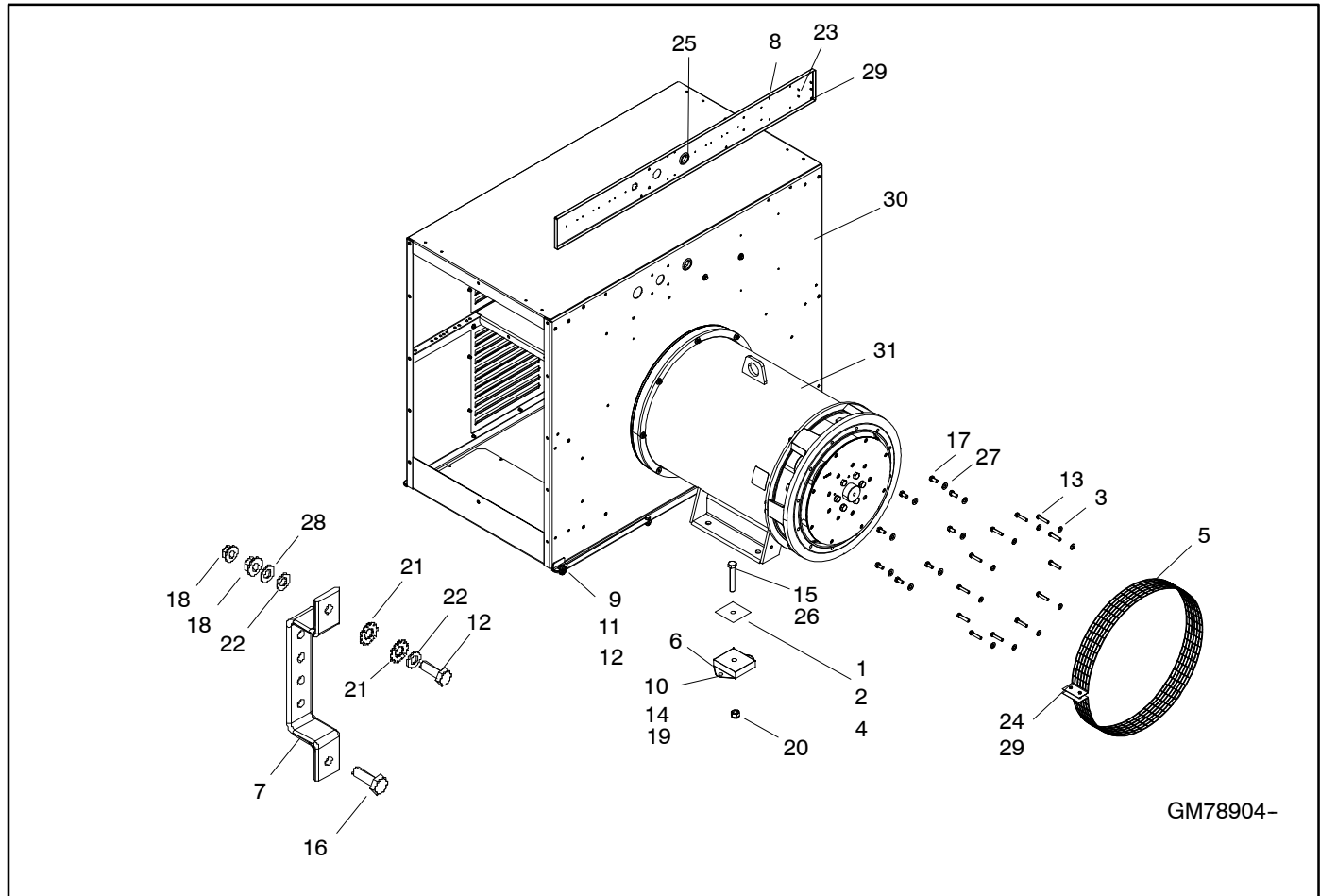
Alternator Part Number

Use this table to identify the module number's alternator part number (item 1) and item 17.

Module Number	Alternator Description (Frame/Volt)	Item 1 Alternator assembly	Item 2 Screw	Item 3 Washer, hardened	Item 17 Screw
GM29819-MA1	1020/480	GM29833-1	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA2	1020/600	GM29833-2	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA3	1020/4160	GM29833-3	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA4	1030/12.47, 13.20, 13.80 K	GM29833-4	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA5	1020/480, 380 50 Hz	GM29833-5	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA6	1020/600	GM29833-6	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA7	1020/4160, 3300 50 Hz	GM29833-7	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA8	1030/12.47, 13.20, 13.80 K	GM29833-8	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA9	1030/480, 380 50 Hz	GM29833-9	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA10	1030/600	GM29833-10	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA11	1030/4160, 3300	GM29833-11	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA12	1050/12.47, 13.20, 13.80 K	GM29833-12	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA13	1040/380	GM29833-13	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA15	1030/3300	GM29833-15	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA16	1040/6600	GM29833-16	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA17	1030/6600	GM29833-17	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA18	1040/6600	GM29833-18	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA19	1030/11000	GM29833-19	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM29819-MA20	1040/11000	GM29833-20	M931-16100-82 (12)	X-801-5 (12)	M931-12060-82
GM40046-MA1	1020/480	GM40045-1	M912-16110-92 (12)	-	M931-12065-60
GM40046-MA2	1020/600	GM40045-2	M912-16110-92 (12)	-	M931-12065-60
GM40046-MA3	1020/4160, 3300	GM40045-3	M912-16110-92 (12)	-	M931-12065-60
GM40046-MA4	1030/12.47, 13.20, 13.80 KV, 11000V	GM40045-4	M912-16110-92 (12)	-	M931-12065-60
GM40046-MA5	1020/480, 380 50 Hz	GM40045-5	M912-16110-92 (12)	-	M931-12065-60
GM40046-MA6	1020/600	GM40045-6	M912-16110-92 (12)	-	M931-12065-60
GM40046-MA7	1020/4160, 3300 50 Hz	GM40045-7	M912-16110-92 (12)	-	M931-12065-60
GM40046-MA8	1030/12.47, 13.20, 13.80 K	GM40045-8	M912-16110-92 (12)	-	M931-12065-60
GM40046-MA9	1030/480, 380 50 Hz	GM40045-9	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA10	1030/600	GM40045-10	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA11	1020/4160	GM40045-11	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA12	1050/12.47, 13.20, 13.80 K	GM40045-12	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA13	1030/380, 480	GM40045-13	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA14	1020/3300	GM40045-14	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA15	1040/6600	GM40045-15	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA16	1030/6600	GM40045-16	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA17	1040/11000	GM40045-17	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA18	1030/11000	GM40045-18	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA19	1030/11000	GM40045-19	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA20	1030/11000	GM40045-20	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA21	1030/4160, 3300	GM40045-21	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA22	1030/480, 380	GM40045-22	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA23	1030/4160, 3300	GM40045-23	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA24	1030/600	GM40045-24	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA25	1040/12.47, 13.20, 13.80KV, 11000	GM40045-25	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM40046-MA26	1020/6600	GM40045-26	M912-16110-92 (12)	-	M931-12065-60
GM40046-MA27	1020/6600	GM40045-27	M912-16110-92 (12)	-	M931-12065-60
GM40046-MA28	1030/6600	GM40045-28	M912-16110-92 (12)	-	M931-12065-60
GM81941-MA1	1020/480, 380	GM81940-1	M912-16110-92 (12)	-	M931-12065-60
GM81941-MA2	1020/480, 380	GM81940-2	M912-16110-92 (12)	-	M931-12065-60
GM81941-MA3	1020/480, 380	GM81940-3	M912-16110-92 (12)	-	M931-12065-60
GM81941-MA4	1020/480, 380	GM81940-4	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM81941-MA5	1030/480, 380	GM81940-5	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM81941-MA6	1020/600	GM81940-6	M912-16110-92 (12)	-	M931-12065-60
GM81941-MA7	1020/600	GM81940-7	M912-16110-92 (12)	-	M931-12065-60
GM81941-MA8	1030/600	GM81940-8	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM81941-MA9	1030/600	GM81940-9	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM81941-MA10	1020/4160, 3300	GM81940-10	M912-16110-92 (12)	-	M931-12065-60
GM81941-MA11	1020/4160, 3300	GM81940-11	M912-16110-92 (12)	-	M931-12065-60
GM81941-MA12	1020/4160, 3300	GM81940-12	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM81941-MA13	1030/4160, 3300	GM81940-13	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM81941-MA14	1030/4160, 3300	GM81940-14	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM81941-MA15	1020/11-13.80KV	GM81940-15	M912-16110-92 (12)	-	M931-12065-60
GM81941-MA16	1030/11-13.80KV	GM81940-16	M912-16110-92 (12)	-	M931-12065-60
GM81941-MA17	1030/11-13.80KV	GM81940-17	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM81941-MA18	1040/11-13.80KV	GM81940-18	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM81941-MA19	1030/480, 380	GM81940-19	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60
GM81941-MA20	1030/11-13.80KV	GM81940-20	M912-16110-92 (12)	-	M931-12065-60
GM81941-MA21	1040/11-13.80KV	GM81940-21	M912-16050-92 (24)	X-801-16 (24)	M931-12065-60

Group 201: Alternator and Mounting, continued

GM78904-



GM78904-

GM78904-

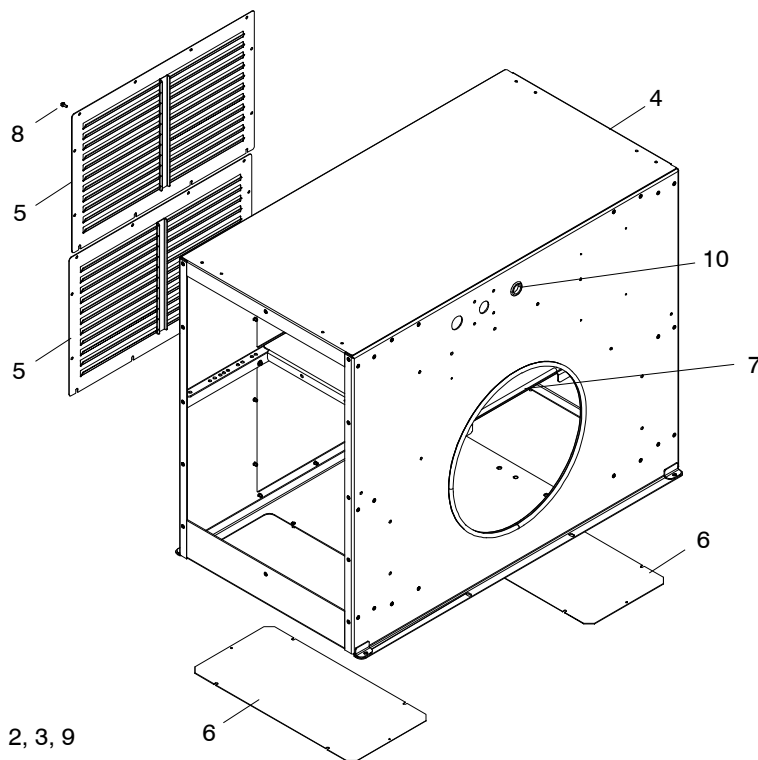
Item	Part No.	Description	Qty.
1	290743	Shim	AR
2	290744	Shim	AR
3	290945	Washer, hardened, .531 IDx1.06 in. OD	16
4	291191	Shim	AR
5	328904	Screen	1
6	361061	Plate, generator mounting	4
7	361271	Bus, ground	1
8	GM75910	Panel, Component Mtg.	1
9	M125A-10-80	Washer, Plain	7
10	M125A-20-80	Washer, Plain	8
11	M6923-10-80	Nut, Hex 10mm	8
12	M931-10040-60	Screw, Hex Head	9
15	M931-24160-60	Screw, Hex Cap	4
16	M933-10030-60	Screw, Hex Cap	1
14	M931-20065-60	Screw, Hex Cap	8
18	M934-10-60	Nut, hex	3
19	M934-20-80	Nut, hex	8
20	M934-24-80	Nut, hex	4
13	M931-12050-82	Screw, Hex Head	16
17	M933-16045-82	Screw, Hex Head	12
24	X-73-11	Screw, Machine	2
21	X-22-15	Washer, lock	6
22	X-25-118	Washer, plain, .406 ID x 1 in. OD	4
23	X-67-59	Screw, hex washer, thread-forming	4
25	X-284-25	Grommet	1
26	X-801-10	Washer, hardened, 1.062 ID x 2 in. OD	4
27	X-801-5	Washer, hardened, .656 ID x 1.06 in. OD	12
28	X-6086-6	Washer, spring	2
29	X-6210-2	Nut, flange spirallock, 1/4-20	10
30	GM75930-3	Junction Box Assembly	1
31	See chart	Alternator Assy	1

Group 201: Alternator and Mounting, continued

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

Module No.	Alternator Description	Item 31, Alternator Assembly
GM78904-MA1	7M4048	GM77510-2
GM78904-MA2	7M4050	GM77510-3
GM78904-MA3	7M4052	GM77511-1
GM78904-MA4	7M4054	GM77511-2
GM78904-MA5	7M4056	GM77511-3
GM78904-MA6	7M4058	GM77511-4
GM78904-MA7	7M4174	GM77511-5
GM78904-MA8	7M4176	GM77511-6
GM78904-MA9	7M4290	GM77511-8
GM78904-MA10	7M4292	GM77511-9
GM78904-MA11	7M4368	GM77511-10
GM78904-MA12	7M4370	GM77511-11
GM78904-MA13	7M4374	GM77511-12
GM78904-MA14	7M4376	GM77511-13

Group 201: Alternator and Mounting, continued



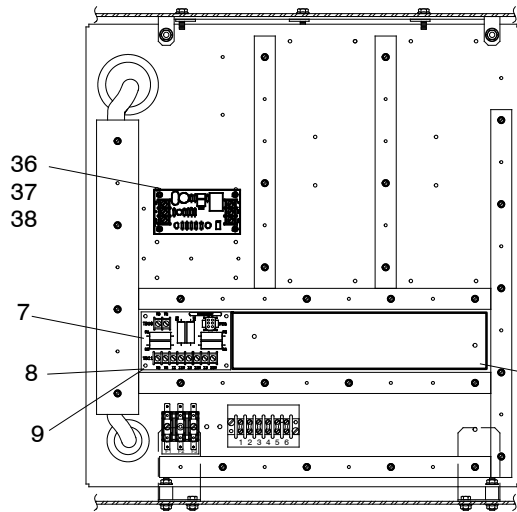
GM75930-D

Item	Part Number	Description	Quantity		
			Module Number		
			GM75930-1	GM75930-2	GM75930-3
2	361567	Base, tie wrap snapin	5	5	5
3	GM11040-7	Insert, Threaded (M6 x 1.0 Hex)	76	76	76
4	GM75889	Box, Junction (4M)	1		
4	GM75890	Box, Junction (5M)		1	
4	GM75891	Box, Junction (7M)			1
5	GM75892	Panel, J-Box (Louvered)	2	2	2
6	GM75895	Panel, J-Box (Cable Entry)	2	2	2
7	GM78489	Guard, Shelf 4M	1		
7	GM78490	Guard, Shelf 5M/7M		1	1
8	M6921-06016-60	Screw, Hex Flange M6x16mm fly thrd js500	32	32	32
9	X-284-2	Grommet, round (2 in. dia.)	1	1	1
10	X-284-25	Grommet, round	1	1	1

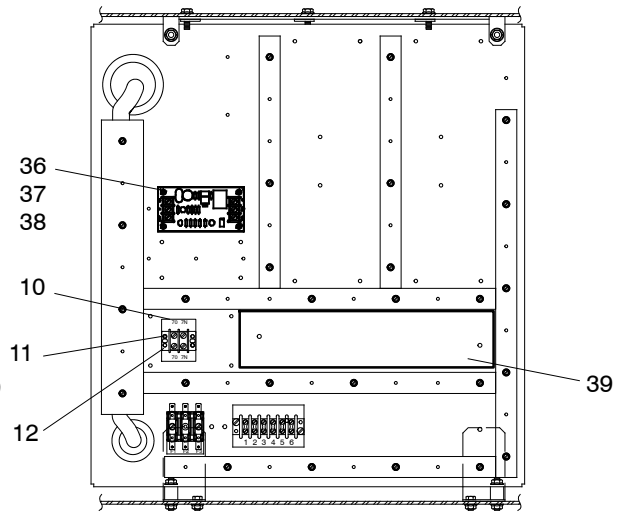
Notes

Group 301: Control and Harness

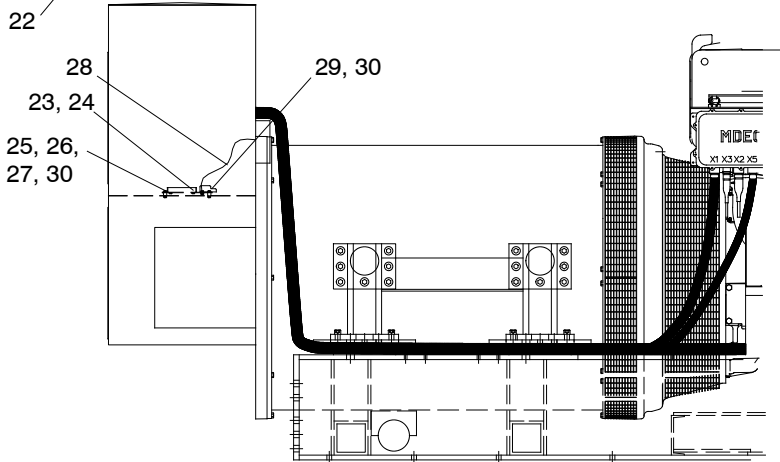
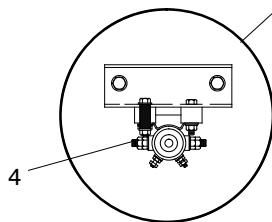
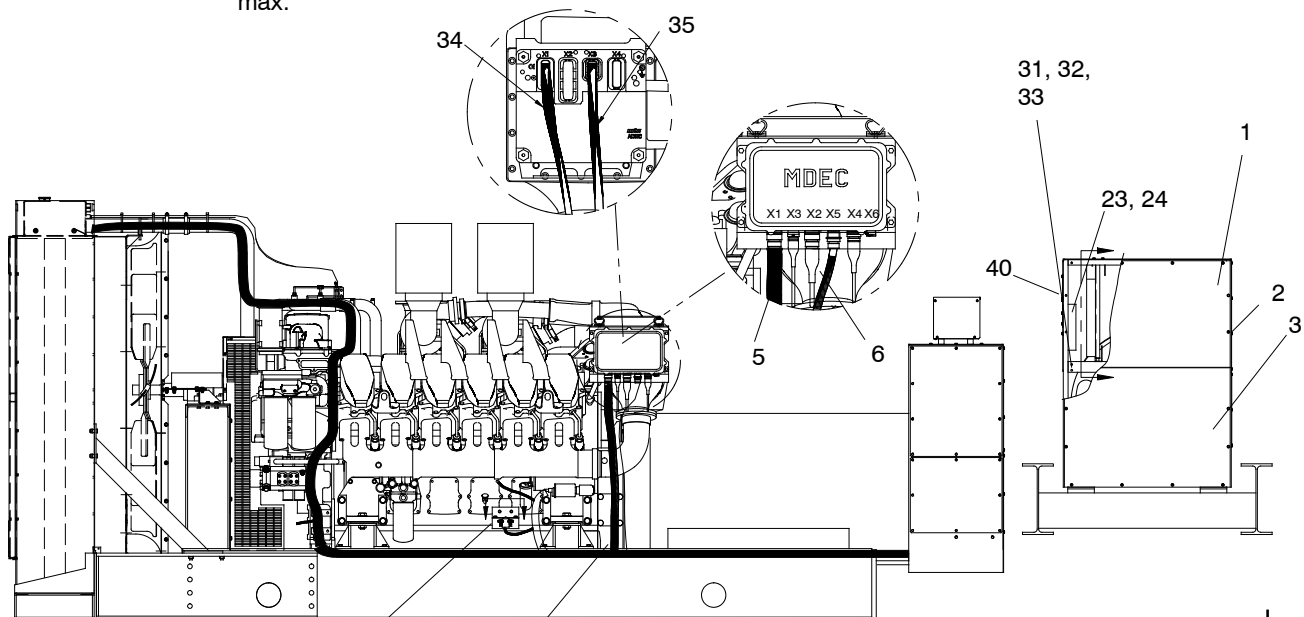
Items not shown: 13-21



DEC 550, 600 volt max.



DEC 550, medium voltage



2500/2800 kW View

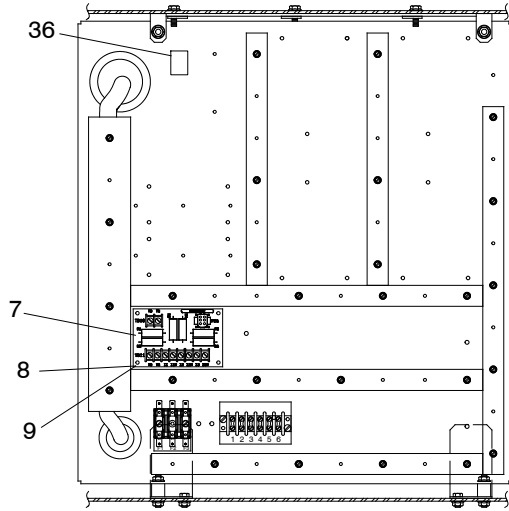
6217_301b

Group 301: Control and Harness

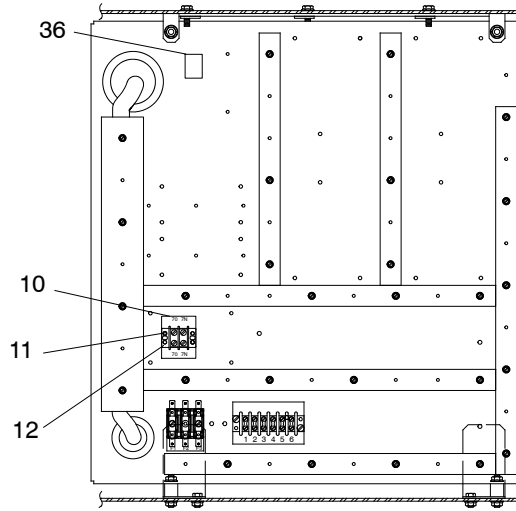
Item	Part Number	Description	Quantity Module														
			GM28440-MA1	GM28440-MA2	GM28440-MA3	GM28440-MA4	GM29824-MA1	GM29824-MA2	GM29824-MA3	GM40057-MA1	GM40057-MA2	GM40057-MA3	GM40983-MA1	GM40983-MA2	GM55121-MA1	GM55121-MA2	GM55121-MA3
1	361184	Panel, junction box, front	1	1	1	1											
1	GM30076	Cover, louvered					1	1		1	1	1	1	1	1	1	1
2	X-6217-10	Screw, hex flange machine	24	24	24	24							24	24			
3	328901	Cover, louvered	1	1	1	1							1	1			
3	GM30076	Cover, louvered					1	1									
3	GM40079	Cover, louvered								1	1	1			1	1	1
4	238915	Boot	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	GM28373	Harness, engine (includes 13-20)	1	1	1	1											
5	GM30070	Harness, engine (includes 13-20)					1	1	1	1	1	1					
5	GM40956	Harness, engine (includes 13-20)											1	1			
5	GM55117	Harness, engine 2500/2800 kW Tier 2													1	1	1
6	GM28567	Wiring harness, eng. power (incl item 21)	1	1	1	1											
6	GM30071	Wiring harness, eng. power (incl item 21)					1	1	1	1	1	1					
7	GM13980	PCB assembly CT burden resistor	1	1			1			1	1	1	1		1		1
8	X-70-12	Nut, hex machine screw, 8-32	4	4			4			4		4	4		4		4
9	X-712-9	Spacer, 0.25 OD, 0.5 in.	4	4			4			4		4	4		4		4
10	X-405-2	Terminal block															
11	254127	Marker, strip			1	1								1	1		
12	X-49-6	Screw, cross recess pan head machine			2	2								2			
13	233959	Diode, 6 A (not shown)	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
14	292800	Connector, cable (not shown)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	295145	Connector, 24-position (not shown)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	GM11496	Connector, plug, 3-position (not shown)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	GM28375	Connector, 55-pin (not shown)	1	1	1	1	1	1	1	1	1	1					
17	337131	Connector, plug, 6-position (not shown)											1	1	1	1	1
18	GM28574	Connector, 4-pin (not shown)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19	GM28623	Connector, weathertight (not shown)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
20	GM28873	Connector, 4-pin (not shown)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21	GM28568	Connector, 5-pin (not shown)	1	1	1	1	1	1	1	1	1	1			1	1	1
22	X-672-20	Clamp, insulated, 1.25 in.	1	1	1	1							1	1			
23	GM11718	PCB assy., Marathon excitation interface	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
24	M965A-06012-20	Screw, pan head machine	4	4	4	4	4	4	4				4	4			
25	GM31141	Plate, mounting					1	1	1								
26	259919	Vibromount					4	4	4								
27	X-22-18	Washer, lock, 0.172 ID x 0.595 OD					8	8	8								
28	GM30874	Harness, extension					1	1	1	1	1	1			1	1	1
29	X-51-4	Screw, pan head 8-32 x 7/8 (capacitor supplied with alternator)															
30	X-6210-4	Nut, flange whiz, 8-32					4	4	4								
31	X-414-12	Camp, uninsulated, 0.38 in. dia.					12	12	12					1	1	1	1
32	X-414-13	Camp, uninsulated, 0.69 in. dia.												1	1	1	1
33	X-73-1	Screw, cross recess, round head												2	2	2	2
34	GM40893	Harness, S2000 Tier II ECM 46-pin												1	1		
34	GM55119	Harness, S2000/4000 ECM														1	1
35	GM40895	Harness, PWR 900-1000 Tier II												1	1		
35	GM55120	Harness, Tier II ECM 21-pin														1	1
36	C-294301	PCB Assy. 1 Relay Dry Cont.												1	1		
37	X-70-12	Nut, hex machine screw, 8-32												4	4		
38	X-712-9	Spacer, 0.25 OD, 0.5 in.												4	4		
39	GM28632-1	Connection Board, DEC550												1	1		
40	GM59135	Board Plug In												1	1		

Group 301: Control and Harness, continued

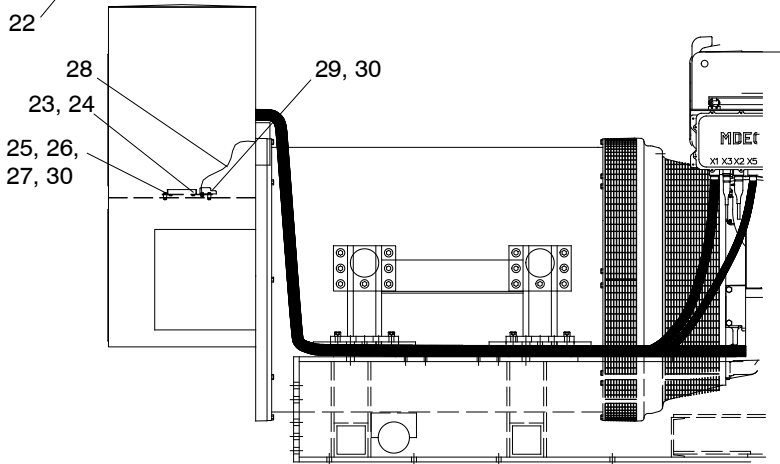
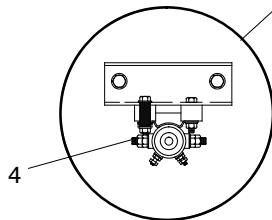
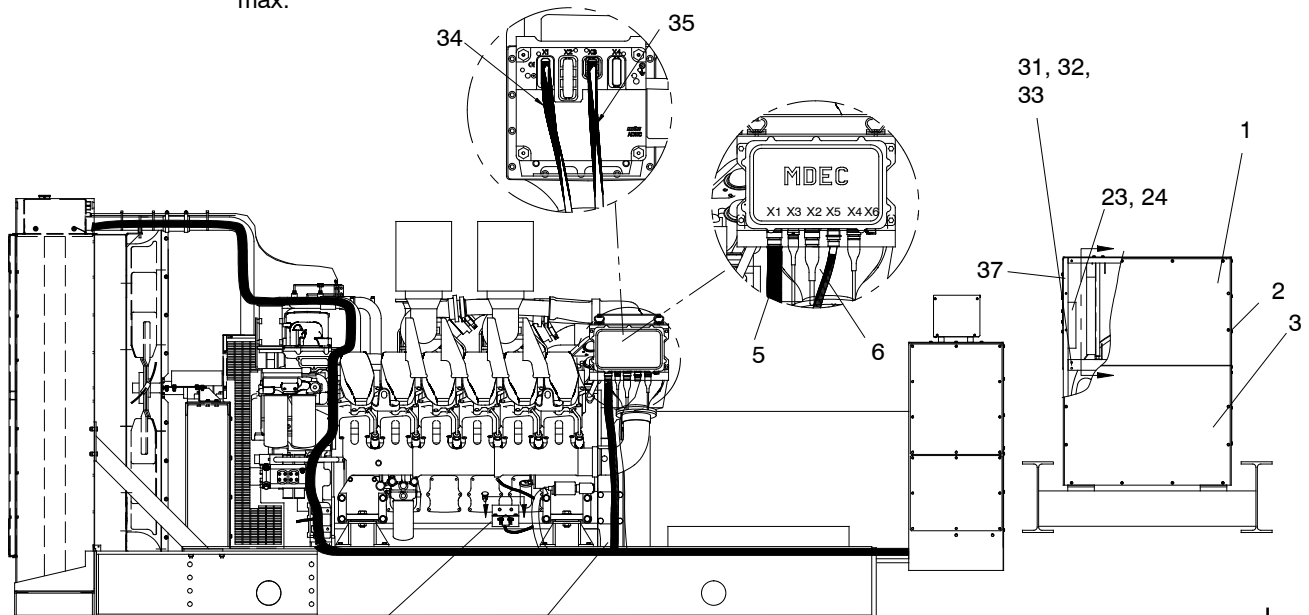
Items not shown: 13-21



DEC 550, 600 volt max.



DEC 550, medium voltage



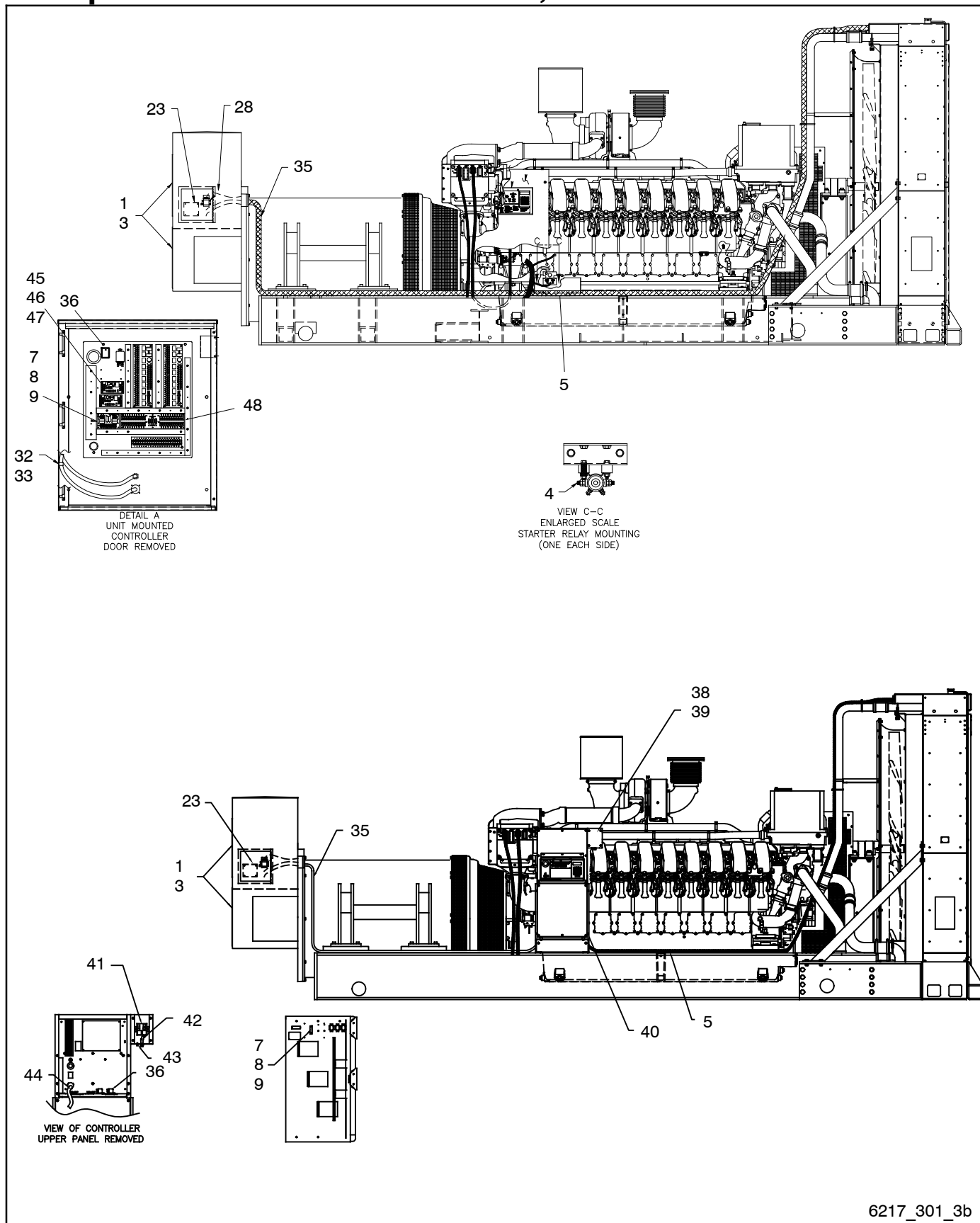
2500/2800 kW View

6217_301c

Group 301: Control and Harness, continued

			Quantity	
			Module	
			GM74957-MA1	GM74957-MA2
Item	Part Number	Description		
1	361184-BLK	Panel, junction box, front	1	1
2	X-6217-10	Screw, hex flange machine	24	24
3	328901-BLK	Cover, louvered	1	1
4	238915	Boot	4	4
5	GM74963	Harness, engine, DDC Series 4000 (incl 13)	1	1
7	GM13980	PCB assembly CT burden resistor	1	
8	X-70-12	Nut, hex machine screw, 8-32	4	
9	X-712-9	Spacer, 0.25 OD, 0.5 in.	4	
10	X-405-2	Terminal block		1
11	254127	Marker, strip		1
12	X-49-6	Screw, cross recess pan head machine		2
13	233959	Diode, 6 A (not shown)	6	6
22	X-672-20	Clamp, insulated, 1.25 in.	1	1
23	GM11718	PCB assembly, Marathon excitation interface	1	1
24	M965A-06012-20	Screw, pan head machine	4	4
36	GM49747	Relay, 24V DC	1	1
37	GM59135	Board Plug In	1	1

Group 301: Control and Harness, continued

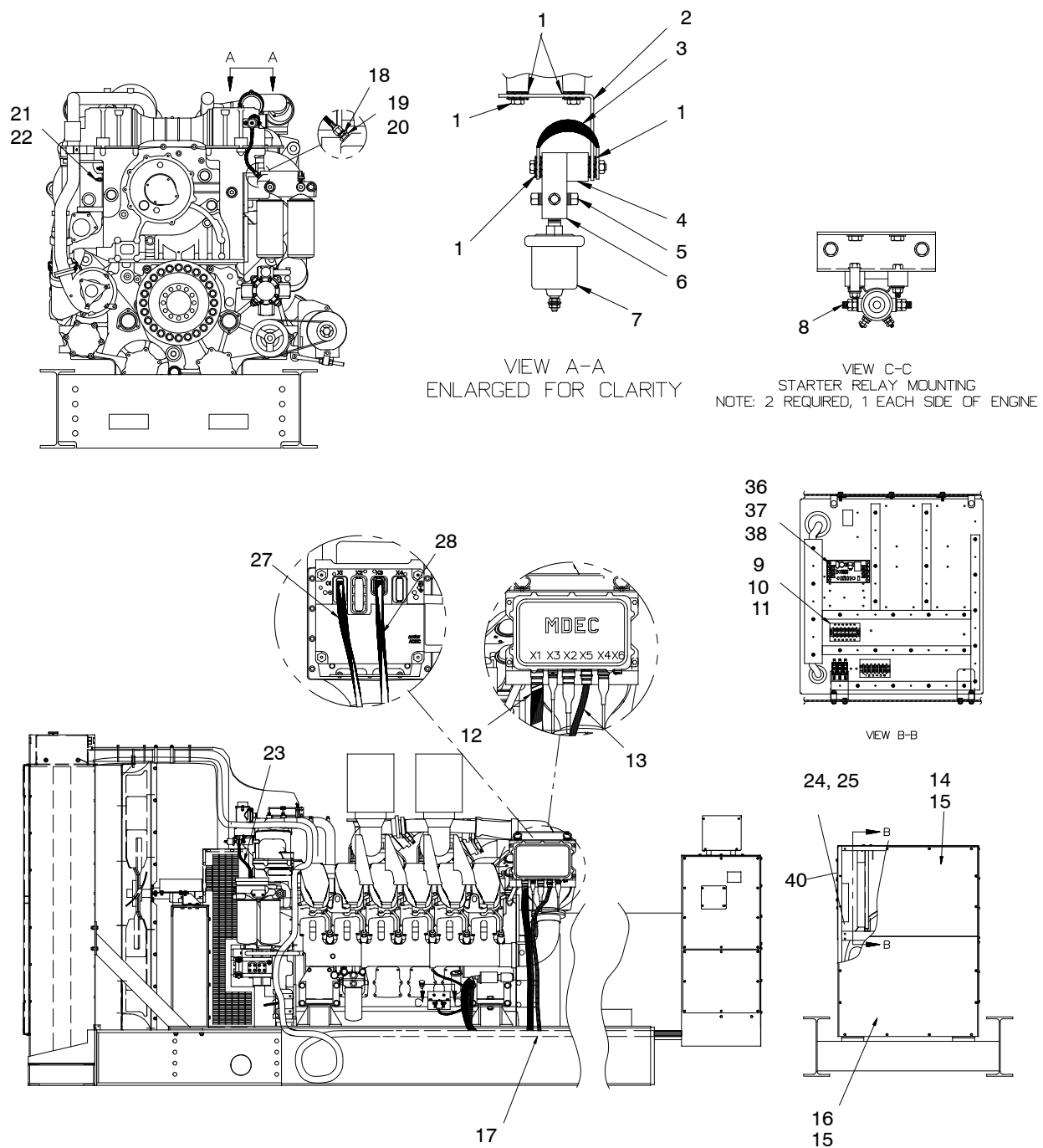


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Group 301: Control and Harness, continued

Item	Part Number	Description	Quantity Module													
			GM65627-MA1	GM65627-MA2	GM65627-MA3	GM74958-MA1	GM74958-MA2	GM74958-MA3	GM81704-MA1	GM81704-MA2	GM81704-MA3	GM81704-MA4	GM87433-MA1	GM87433-MA2	GM87433-MA3	GM87433-MA4
1	GM30076-KCB	Cover, louvered	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	GM40079-KCB	Cover, louvered	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	238915	Boot	4	4	4	4	4	4								
5	GM65641	Harness, engine 2500-3250 kW Tier 2	1	1	1	1	1	1								
5	GM81955	Harness, engine 2500-3250 kW Tier 2							1	1	1	1				
5	GM82122	Harness, Engine 1250-2250 kW Tier II											1	1	1	1
7	GM13980	PCB assembly CT burden resistor	1		1	1		1	1		1	1	1		1	1
8	X-70-12	Nut, hex machine screw, 8-32	4		4	4		4	4		4	4	4		4	4
9	X-712-9	Spacer, 0.25 OD, 0.5 in.	4		4	4		4	4		4	4	4		4	4
23	GM11718	PCB assembly, Marathon excitation interface	1	1	1	1	1	1								
23	GM79677	Board, Assy Marathon Interface							1	1	1	1	1	1	1	1
28	GM30874	Harness, extension	1	1	1	1	1	1			1	1	1	1	1	1
32	X-414-13	Camp, uninsulated, 0.69 in. dia.	1	1	1	1	1	1								
33	X-73-1	Screw, cross recess, round head	1	1	1	1	1	1								
35	GM65643	Harness, AC CT/PT wiring	1	1	1	1	1	1								
35	GM81958	Harness, A/C 480-600V							1			1	1			1
35	GM81959	Harness, A/C 3300-6600V								1				1		
35	GM81960	Harness, A/C 11-13.8KV									1				1	
36	GM49747	Relay, 24V DC				1	1	1	2	2	2	2	2	2	2	2
38	GM82000	Enclosure, Diagnostic							1	1	1	1	1	1	1	1
39	GM82001	Cover, Enclosure Diagnostic							1	1	1	1	1	1	1	1
40	324861	Coupling, black plastic							16	16	16	16	16	16	16	16
41	GM48806	Rail, Din							1	1	1	1	1	1	1	1
42	GM82004	Harness, Diagnostic							1	1	1	1	1	1	1	1
43	361567	Base, tie wrap snapin							1	1	1	1	1	1	1	1
44	GM81956	Harness, Control Box 1250-3250 DEC550							1	1	1		1	1	1	
44	GM81957	Harness, Control Box 1250-3250 DEC6000							1	1	1		1			1
45	C-294301	PCB Assy. 1 Relay Dry Cont.	1	1	1											
46	X-70-12	Nut, hex machine screw, 8-32	4	4	4											
47	X-712-9	Spacer, 0.25 OD, 0.5 in.	4	4	4											
48	GM28632-1	Connection Board, DEC550	1	1	1											
49	GM81153	Block, Contact One N.C. (not shown, in back of E-Stop)							1	1	1	1	1	1	1	1

Group 301: Control and Harness, continued

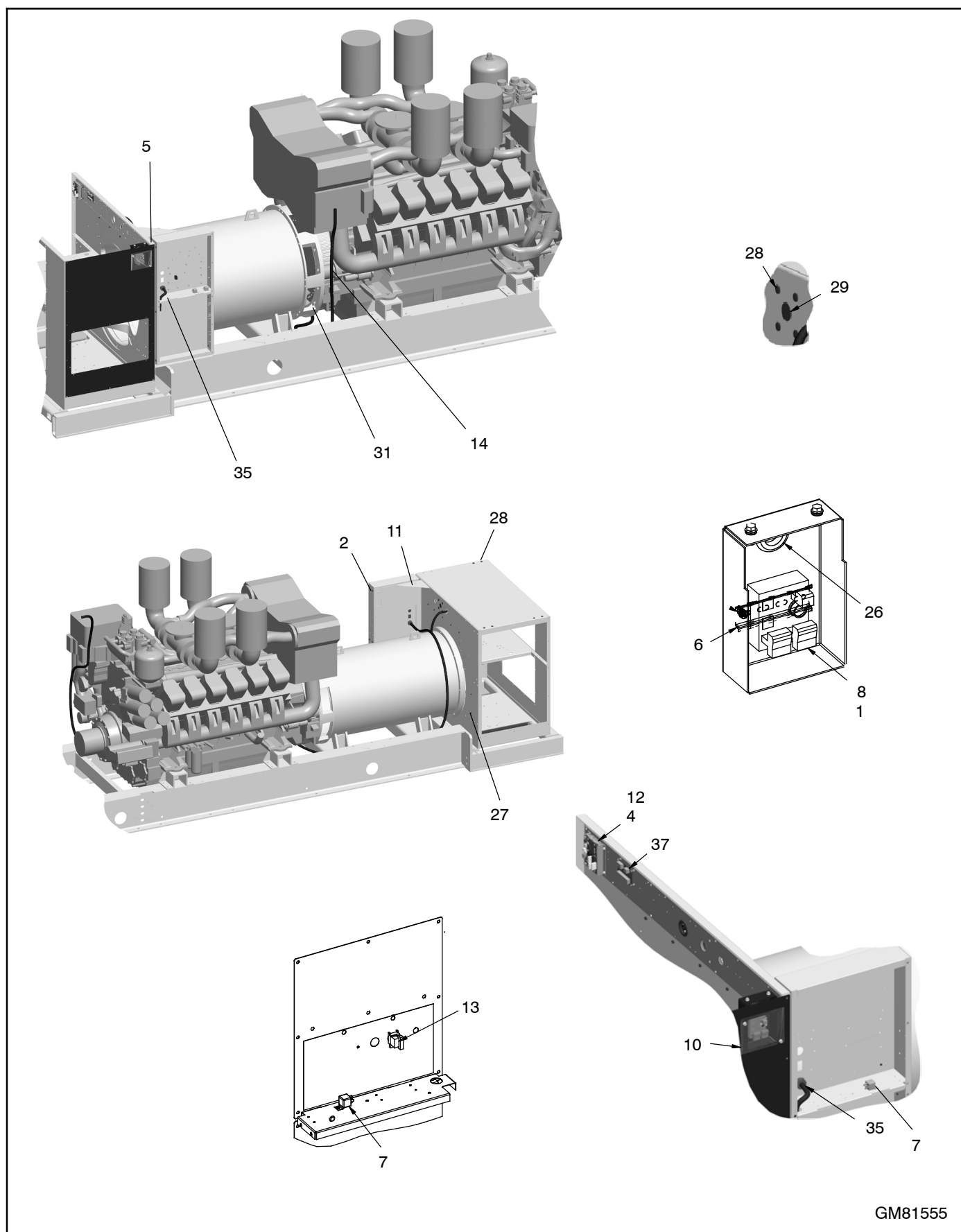


6217_301_2b

Group 301: Control and Harness, continued

Item	Part Number	Description	Quantity		
			Module		
			GM35383-MA1	GM40984-MA1	GM74960-MA1
1	X-22-12	Washer, lock, 0.262 ID x 0.743 in. OD	8	3	2
2	GM36223	Bracket, sender	1		
2	GM35184	Bracket, sender		1	1
3	223033	Strap, ground, 5 in.	1		
4	259632	Bumper	1	1	1
5	X-75-4	Plug, pipe, 1/8 in. NPTF	3	3	3
6	267548	Block, oil gauge	1	1	1
7	365624	Sender, oil pressure	1		
7	GM41023	Sender, pressure		1	1
8	238915	Boot	4	4	4
9	295314	Terminal block	1	1	1
10	255080	Marker, strip	1	1	1
11	X-49-6	Screw, pan head 6-32 x 3/4	2	2	2
12	GM35946	Harness, engine Series 4000	1		
12	GM40951	Harness, engine 1500-2250 kW Tier 2		1	
12	GM74967	Harness, Engine 1500-2250 kW Tier 2			1
13	GM28567	Harness, engine power	1		
14	361184-BLK	Panel, J-box front	1	1	1
15	X-6217-10	Screw, hex flange machine	24	24	24
16	328901-BLK	Cover, louvered	1	1	1
17	X-672-20	Clamp, insulated, 1.25 in.	1	1	1
18	X-296-21	Fitting, half union	1		
18	X-296-1	Fitting, half union		1	1
19	GM22991	Bushing, adapter	1		
19	364350	Bushing, adapter		1	1
19	X-555-2	Elbow, street, 90° x 1/8 in. NPTF		1	1
20	GM11694	O-ring, ISO 6149, 15.3mm ID	1	1	1
21	GM10166	Sender, temperature	1		
21	GM41022	Sender, temperature		1	1
22	365499	O-ring, ISO 6149, 11.3mm ID	1	1	1
23	265462	Fuel line, flexible	1	1	1
24	GM24876-S	Regulator, Voltage (Digital)	1	1	1
25	GM66039	Screw, Plastic Tapping, 6-19 x 0.625	6	6	6
27	GM40893	Harness, S2000 Tier II ECM 46-pin		1	
28	GM40895	Harness, PWR 900-1000 Tier 2		1	
29	GM49747	Relay, 24V DC			1
36	C-294301	PCB Assy. 1 Relay Dry Cont.		1	
37	X-70-12	Nut, hex machine screw, 8-32		4	
38	X-712-9	Spacer, 0.25 OD, 0.5 in.		4	
40	GM59135	Board Plug In		1	

Group 301: Control and Harness, continued



GM81555

Group 301: Control and Harness, continued

Item	Part Number	Description	Qty.
1	X-6333-12	Decal, diagnostic	1
2	324861	Plug, black plastic	12
3	GM11040-7	Insert, metric (threaded)	2
4	GM38784-1	Vibromount, controller	4
5	GM38784-2	Vibromount, controller	4
6	GM48806	Rail, din	1
7	GM49747	Relay, 24V DC	2
8	GM59135	Board, plug in	1
10	GM77908	Cover, diagnostic	1
11	GM79448	Bracket, controller	1
12	GM79677	Board, assembly marathon interface	1
13	GM81153	Block, contact	1
14	GM82122	Harness, engine 1250-2250 kW ADEC	1
27	X-301-34	Plug,button	7
28	X-301-47	Plug,button	10
29	X-301-48	Plug,button	1
31	X-672-20	Clamp, insulated, 1.25 in.	1
35	See Chart	Harness, control box	1
37	See Chart	PCB Assy, CT burden resistor	1

Module Item Part Numbers

Use this table to identify item 3, item 35 and item 37.

Module Number	Item 35, Harness, control box	Item 37, PCB Assy.
GM78924-MA1	GM81956	GM13980
GM78924-MA2	GM81957	GM13980
GM78924-MA3	GM81956	-

Group 701: Literature

Item	Part Number	Description	Quantity												
			Variation												
			178	180	182	184	191	193	232	233	234	235	254	262	263
1	TP-5374	Warranty, 1-year Limited, Industrial	1	1	1	1	1	1	1	1	1	1	1	1	1
2	TP-5578	O/I/S/M Marathon Alternator MmaxDVR	1	1	1	1	1	1	1	1	1	1	1		
2	TP-6221	O/I/S/M Marathon MagnaPower												1	1
3	TP-6373	S/M Pilot-Excited PM Alt., 350-2800kW	1	1	1	1	1	1	1	1	1	1	1	1	1
4	TP-5700	I/M Industrial	1	1	1	1	1	1	1	1	1	1	1	1	1
5	TP-6009	P/C Controller, Industrial DEC3+	1	1	1	1	1	1	1	1	1	1	1	1	1
5	TP-6746	P/C Decision-Maker 6000 Controller							1	1	1	1	1	1	1
7	TP-6140	O/I/M Contr Setup and Application, Dec 550	1	1	1	1	1	1	1	1	1	1	1	1	1
8	TP-6200	O/M Decision-Maker 550, Version 2.10	1	1	1	1	1	1	1	1	1	1	1	1	1
8	TP-6750	O/M DEC 6000 Controller							1	1	1	1	1	1	1
9	TP-6216	W/D 1350-2000REOZDB, Industrial	1	1	1	1	1	1						1	
9	TP-6485	W/D 650-3250 kW DD/MTU-Powered, Ind							1	1	1	1	1		1
10	TP-6217	P/C 1250-3250REOZD/B/C, Ind	1	1	1	1	1	1	1	1	1	1	1	1	1
11	TP-6235	P/C 1350-1500 kW DDC Engine	1	1											
11	TP-6236	P/C 1820-2000 kW DDC Engine			1	1									
11	TP-6243	P/C 2500 kW DDC Engine					1								
11	TP-6244	P/C 2800 kW DDC Engine						1							
11	TP-6472	P/C MTU/DD 12V4000 T 2, 1250-1750kW							1	1			1		
11	TP-6473	P/C MTU/DD 16V4000 Tier 2, 2000/2250kW									1	1			
11	TP-6568	P/C MTU/DD, 20 V 4000, 2500 kW												1	
11	TP-6549	P/C MTU/DD, 20 V 4000, 2800 kW													1
12	TP-6237	O/M MTU/DDC 12/16V	1	1	1	1			1	1	1	1	1		
12	TP-6248	O/M 20V DDC 2500-2800 KW					1	1							
12	TP-6605	O/M 20V DDC 2500-2800 KW												1	1
13	TP-6238	S/M MTU/DDC 12V	1	1	1	1			1				1		
13	TP-6239	S/M MTU/DDC 16V4000								1	1	1			
13	TP-6249	S/M 20V DDC 2500-2800 KW					1	1							
14	TP-6161	O/M Decision-Maker 3+ w/Comm, Dec. 1	1	1	1	1	1	1	1	1	1	1	1		
15	TP-6199	O/I/S/M Marathon DVR2000E	1	1	1	1			1	1	1	1	1		
16	TP-6356	S/M Controllers, 20-2800 kW	1	1	1	1	1	1	1	1	1	1	1	1	1
17	SB-566	Dual Bearing Altern. Install, 2000-2800 kW					1	1						1	1

Item	Part Number	Description	Quantity						
			Var.						
			274	275	309	310	311	312	314
1	TP-5374	Warranty, 1-year Limited, Industrial	1	1	1	1	1	1	1
2	TP-6221	O/I/S/M Marathon MagnaPower	1	1					
2	TP-5578	O/I/S/M Marathon Altntr MmaxDVR			1	1	1	1	1
3	TP-6373	S/M Pilot-Excited PM Alt., 350-2800kW	1	1	1	1	1	1	1
4	TP-5700	I/M Industrial	1	1	1	1	1	1	1
5	TP-6009	P/C Controller, Industrial DEC3+	1	1					
5	TP-6746	P/C Decision-Maker 6000 Controller	1	1	1	1	1	1	1
5	TP-6780	P/C DEC 550 Controller (J-Box Panel Mt)			1	1	1	1	1
7	TP-6140	O/I/M Contr Setup and Application, Dec 550	1	1	1	1	1	1	1
8	TP-6200	O/M Decision-Maker 550, Version 2.10	1	1	1	1	1	1	1
8	TP-6750	O/M DEC 6000 Controller	1	1	1	1	1	1	1
8	TP-6747	O/I/M DPS System Installation and Setup			1	1	1	1	1
9	TP-6485	W/D 650-3250 kW DD/MTU-Powered, Ind	1	1					
9	TP-6815	W/D 1250-2250REOZDD			1	1	1	1	
9	TP-6814	W/D 700-3250 kW DD/MTU-powered, Ind.							1
10	TP-6217	P/C 1250-3250REOZD/B/C, Ind	1	1	1	1	1	1	1
11	TP-6549	P/C MTU/DD, 20 V 4000, 2800 kW	1	1					
11	TP-6472	P/C MTU/DD 12V4000 Tier 2, 1250-1750 kW			1	1			
11	TP-6473	P/C MTU/DD 16V4000 Tier 2, 2000/2250kW					1	1	1
12	TP-6248	O/M 20V DDC 2500-2800 KW	1	1					
12	TP-6503	O/M 12V/16V4000 DDC			1	1	1	1	1
16	TP-6356	S/M Controllers, 20-2800 kW	1	1	1	1	1	1	1
17	SB-566	Dual Bearing Altern. Install, 2000-2800 kW	1	1					

Kit List

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

	1250 kW	1350/1500/1750 kW	1820/2000/2250 kW	2500-3250 kW
Cooling Systems				
Unit-mounted radiator (See Group 104 for parts lists)				
City water, heat exchanger	—	ES	ES	ES
Remote radiator set-up	—	GM28439-MA1	GM28439-MA1	GM30227-MA1
Remote radiator set-up (Tier 2 models)	GM47783-MA1	GM47783-MA1	GM47783-MA1	GM55248-MA1
Remote radiator flex kit	—	PA-361327	PA-361327	PA-361327
Block heater, 240 V, 1-phase	—	GM19408-KP1	GM19408-KP6	GM30883-KP1
Block heater, 240 V, 1-phase (Tier 2)	GM47775-KP1	GM47775-KP1	GM47775-KP7	GM55243-KP1
Block heater, 480 V, 1-phase	—	GM19408-KP2	GM19408-KP7	GM30883-KP2
Block heater, 480 V, 1-phase (Tier 2)	GM47775-KP2	GM47775-KP2	GM47775-KP8	GM55243-KP2
Block heater, 240 V, 3-phase	—	GM19408-KP3	GM19408-KP8	GM30883-KP3
Block heater, 240 V, 3-phase (Tier 2)	GM47775-KP3	GM47775-KP3	GM47775-KP9	GM55243-KP3
Block heater, 380 V, 3-phase	—	GM19408-KP4	GM19408-KP9	GM30883-KP4
Block heater, 380 V, 3-phase (Tier 2)	GM47775-KP4	GM47775-KP4	GM47775-KP10	GM55243-KP4
Block heater, 480 V, 3-phase	—	GM19408-KP5	GM19408-KP10	GM30883-KP5
Block heater, 480 V, 3-phase (Tier 2)	GM47775-KP5	GM47775-KP5	GM47775-KP11	GM55243-KP5
Block heater, 208 V, 1-phase	—	GM19408-KP16	GM19408-KP17	GM30883-KP6
Block heater, 208 V, 1-phase (Tier 2)	GM47775-KP6	GM47775-KP6	GM47775-KP12	GM55243-KP6
CSM Style Block Heaters				
Block heater, 240 V, 1-phase (Tier 2)	GM64400-KA1	GM64400-KA1	GM64400-KA7	GM64401-KA1
Block heater, 480 V, 1-phase (Tier 2)	GM64400-KA2	GM64400-KA2	GM64400-KA8	GM64401-KA2
Block heater, 240 V, 3-phase (Tier 2)	GM64400-KA3	GM64400-KA3	GM64400-KA9	GM64401-KA3
Block heater, 380 V, 3-phase (Tier 2)	GM64400-KA4	GM64400-KA4	GM64400-KA10	GM64401-KA4
Block heater, 480 V, 3-phase (Tier 2)	GM64400-KA5	GM64400-KA5	GM64400-KA11	GM64401-KA5
Block heater, 208 V, 1-phase (Tier 2)	GM64400-KA6	GM64400-KA6	GM64400-KA12	GM64401-KA6

Touch-Up Paint

Gloss and textured paint is available from Aftermarket Parts.

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

Cooling System Kits

Qty.	Description	Part No.
Flex Kit, Remote Radiator		
2	Adapter, flexible radiator, neoprene	354044
2	Adapter, flexible radiator, neoprene	354281
64	Screw, hex head machine	X-6021-1
64	Nut, hex, 5/8-11, zinc	X-85-3
Remote Radiator Setup		
1	Clamp, muffler, 4.12 in.	289372
1	Tube, water inlet, 4.00 in. OD, steel	361299
1	Tube, water outlet, 4.00 in. OD	361300
1	Tube, intercooler inlet, 2.50 in. OD	GM16095
1	Tube, intercooler return, 2.50 in. OD	GM16096
1	Gasket, water	GM16101
1	Gasket, intercooler inlet	GM16102
1	Guard, top and front pulley	GM28554
1	Guard, pulley, LS	GM28555
1	Guard, pulley, RS	GM28556
1	Bracket, lower radiator tube	GM28626
2	Washer, beveled, 0.68 ID x 1.5 in. OD	X-6011-3
4	Washer, beveled, 0.44 ID x 1.25 in. OD	X-6011-4
1	Cap, 37 degree flared end, 1 5/16-12	X-6372-3
2	Spacer, 0.406 ID x 1.25 OD x 0.5 in.	X-400-227
Remote Radiator Setup		
1	Clamp, muffler, 4.12 in.	289372
1	Flange, water connection, upper	GM30228
1	Tube, water inlet	GM30229
1	Tube, intercooler outlet	GM30230
1	Tube, intercooler inlet	GM30231
1	Guard, top and front pulley	GM30235
1	Guard, pulley, LS	GM30234
1	Guard, pulley, RS	GM30233
1	Bracket, lower radiator tube	GM30232
4	Washer, beveled, 0.68 ID x 1.50 in. OD	X-6011-3
2	Spacer, .531 ID x 1 OD x .75 in.	X-400-161
2	Spacer, .406 ID x .625 OD x .5 in.	X-400-91

Qty.	Description	Part No.
Remote Radiator Setup		
2	Gasket, intercooler inlet	GM16102
1	Sender, MDEC Coolant Level	GM35000
1	Flange, water connection (inlet)	GM47779
1	Flange, water connection (outlet)	GM47780
1	Flange, water connection (outlet)	GM47781
1	Flange, water connection (inlet)	GM47782
1	Gasket, Water Inlet	GM51791
1	Guard, belt, RH	GM52688
1	Guard, belt, LH	GM52689
1	Guard, belt, Top	GM52690
1	Fitting	GM59133
2	Cover, Coolant Connection	GM74080
2	Cover, Coolant Connection	GM74081
4	Washer, beveled, 0.44 ID x 1.25 in. OD	X-6011-4
1	Cap, 37° flared end, 1 5/16-12	X-6372-3
Remote Radiator Setup		
2	Gasket, intercooler inlet	GM16102
1	Sender, MDEC Coolant Level	GM35000
1	Flange, water connection (inlet)	GM47779
1	Flange, water connection (outlet)	GM47780
1	Flange, water connection (outlet)	GM47781
1	Flange, water connection (inlet)	GM47782
1	Guard, belt, RH	GM55244
1	Guard, belt, LH	GM55245
1	Guard, belt, top	GM55246
2	Cover, Coolant Connection	GM74080
2	Cover, Coolant Connection	GM74081
1	Cap, 37° flared end, 1 5/16-12	X-6372-3

Cooling System Kits

Block Heater Kits

Kits: GM19408-KP1 to GM19408-KP5

Qty.	Description	Common Parts	Unique Parts				
			GM19408-KP1	GM19408-KP2	GM19408-KP3	GM19408-KP4	GM19408-KP5
1	Heater, block		361246	361247	361248	361249	361240
1	(CSS Style; use service kit)		GM29666	GM29667	GM29668	GM29669	GM29665
1	Block heater service element		GM66014-61	GM66014-62	GM66014-63	GM66014-64	GM66014-65
1	Block Heater Service Kit		GM62499	GM62500	GM62501	GM62502	GM62498
1	Block Heater (CSM Style)		GM62639	GM62640	GM62641	GM62642	GM62638
1	Block Heater element						
1	Hose, coolant	X-6367-5					
1	Tag, hang	279047					
1	Tag, instruction	299896					
4	Vibromount, controller	328645					
1	Fitting, swivel, 37°	361596					
1	Fitting, elbow, 90°	361597					
1	Connector, swivel nut	361598					
2	Valve, shutoff, 3/4-14 NPT	GM19666					
1	Bracket, block heater	GM30921					
1	Bracket, block heater	GM30922					
1	Bushing, reducng, 1/2 x 3/4 in. NPT	X-202-41					
1	Tee, pipe, 1 x 1 x 1 NPT	X-203-2					
1	Pipe, 3/4 in. NPT x 2.50 in.	X-206-4					
1	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9					
1	Pipe, 1/2 in. NPT x 1.50 in. brass	X-209-1					
1	Elbow, street, 90° x 3/4 in. NPTF	X-211-5					
1	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2					
1	Pipe, 1 in. NPT x 1.50 in.	X-218-24					
8	Washer, lock, .326ID x .883 in.	X-22-16					
1	Elbow, street, 45° x 3/4 in. NPT	X-274-2					
1	Fitting, half union	X-296-17					
4	Stud, 5/16-18 x 1.5 in.	X-352-65					
4	Clamp, hose, 0.69/1.25 in.	X-426-12					
2	Connector, hose + vibra seal	X-582-15					
2	Connector, hose + vibra seal	X-582-8					
1	Hose, coolant, 35 in.	X-6367-11					
1	Plug, pipe, 1 in. NPTF	X-75-13					

Kits: GM19408-KP6 to GM19408-KP10

Qty.	Description	Common Parts	Unique Parts				
			GM19408-KP6	GM19408-KP7	GM19408-KP8	GM19408-KP9	GM19408-KP10
1	Heater, block		361246	361247	361248	361249	361240
1	Block heater service element		GM29666	GM29667	GM29668	GM29669	GM29665
1	Block Heater Service Kit		GM66014-66	GM66014-67	GM66014-68	GM66014-69	GM66014-70
1	Block Heater (CSM Style)		GM62499	GM62500	GM62501	GM62502	GM62498
1	Block Heater element		GM62639	GM62640	GM62641	GM62642	GM62638
1	Hose, coolant	X-6367-7					
1	Tag, hang	279047					
1	Tag, instruction	299896					
4	Vibromount, controller	328645					
1	Fitting, swivel, 37°	361596					
1	Fitting, elbow, 90°	361597					
1	Connector, swivel nut	361598					
2	Valve, shutoff, 3/4-14 NPT	GM19666					
1	Bracket, block heater	GM30921					
1	Bracket, block heater	GM30922					
1	Bushing, reducng, 1/2 x 3/4 in. NPT	X-202-41					
1	Tee, pipe, 1 x 1 x 1 NPT	X-203-2					
1	Pipe, 3/4 in. NPT x 2.50 in.	X-206-4					
1	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9					
1	Pipe, 1/2 in. NPT x 1.50 in. brass	X-209-1					
1	Elbow, street, 90° x 3/4 in. NPTF	X-211-5					
1	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2					
1	Pipe, 1 in. NPT x 1.50 in.	X-218-24					
8	Washer, lock, .326 ID x .883 in.	X-22-16					
1	Elbow, street, 45° x 3/4 in. NPT	X-274-2					
1	Fitting, half union	X-296-17					
4	Stud, 5/16-18 x 1.5 in.	X-352-65					
4	Clamp, hose, .69/1.25 in.	X-426-12					
2	Connector, hose + vibra seal	X-582-15					
2	Connector, hose + vibra seal	X-582-8					
1	Hose, coolant, 35 in.	X-6367-11					
1	Plug, pipe, 1 in. NPTF	X-75-13					

Cooling System Kits, continued

Block Heater Kits, continued

Kits: GM19408-KP16, GM19408-KP17

Qty.	Description	Common Parts	Unique Parts	
			GM19408-KP16	GM19408-KP17
1	Heater, block (CSS Style; use service kit)		GM42088	GM42088
1	Block heater service element		GM42089	GM42089
1	Block Heater Service Kit		GM66014-71	GM66014-72
1	Block Heater (CSM Style)		GM62509	GM62509
1	Block Heater element		GM62649	GM62649
1	Hose, coolant		X-6367-5	X-6367-7
1	Tag, hang	279047		
1	Tag, instruction	299896		
4	Vibromount, controller	328645		
1	Fitting, swivel, 37°	361596		
1	Fitting, elbow, 90°	361597		
1	Connector, swivel nut	361598		
2	Valve, shutoff, 3/4-14 NPT	GM19666		
1	Bracket, block heater	GM30921		
1	Bracket, block heater	GM30922		
1	Bushing, reducing, 1/2 x 3/4 in. NPT	X-202-41		
1	Tee, pipe, 1 x 1 x 1 NPT	X-203-2		
1	Pipe, 3/4 in. NPT x 2.50 in.	X-206-4		
1	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9		
1	Pipe, 1/2 in. NPT x 1.50 in. brass	X-209-1		
1	Elbow, street, 90° x 3/4 in. NPTF	X-211-5		
1	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2		
1	Pipe, 1 in. NPT x 1.50 in.	X-218-24		
8	Washer, lock, 0.326 ID x 0.883 in. OD	X-22-16		
1	Elbow, street, 45° x 3/4 in. NPT	X-274-2		
1	Fitting, half union	X-296-17		
4	Stud, 5/16-18 x 1.5 in.	X-352-65		
4	Clamp, hose, 0.69/1.25 in.	X-426-12		
2	Connector, hose + vibra seal	X-582-15		
2	Connector, hose + vibra seal	X-582-8		
1	Hose, coolant, 35 in.	X-6367-11		
1	Plug, pipe, 1 in. NPTF	X-75-13		

Cooling System Kits, continued

Block Heater Kits, continued

Kits: GM30883-KP1 to GM30883-KP3

Qty.	Description	Common Parts	Unique Parts		
			GM30883-KP1	GM30883-KP2	GM30883-KP3
1	Heater, block (CSS Style; use service kit)		GM30237	GM30238	GM30239
1	Block heater service element		GM30490	GM30491	GM30492
1	Block Heater Service Kit		GM66014-73	GM66014-74	GM66014-75
1	Block Heater (CSM Style)		GM62504	GM62505	GM62506
1	Block Heater element		GM62644	GM62645	GM62646
1	Tag, hang	279047			
1	Tag, instruction	299896			
4	Vibromount, controller	328645			
1	Connector, swivel nut	361598			
2	Valve, shutoff, 3/4-14 NPT	GM19666			
1	Bracket, block heater	GM30921			
1	Bracket, block heater	GM30922			
1	Tee, pipe, 1 x 1 x 1 NPT	X-203-2			
2	Pipe, 3/4 in. NPT x 6 in.	X-206-15			
2	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9			
1	Elbow, street, 90° x 3/4 in. NPTF	X-211-5			
1	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2			
1	Pipe, 1 in. NPT x 1.50 in.	X-218-24			
8	Washer, lock, 0.326 ID x 0.883 in. OD	X-22-16			
1	Elbow, street, 45° x 1 in. NPT	X-274-10			
1	Elbow, street, 45° x 3/4 in. NPT	X-274-2			
1	Fitting, half union	X-296-17			
4	Stud, 5/16-18 x 1.5 in.	X-352-65			
4	Clamp, hose, 0.69/1.25 in.	X-426-12			
2	Connector, hose + vibra seal	X-582-15			
2	Connector, hose + vibra seal	X-582-8			
1	Hose, coolant, 56 in.	X-6367-5			
1	Hose, coolant, 65 in.	X-6367-9			
1	Plug, pipe, 1 in. NPTF	X-75-13			

Kits: GM30883-KP4 to GM30883-KP6

Qty.	Description	Common Parts	Unique Parts		
			GM30883-KP4	GM30883-KP5	GM30883-KP6
1	Heater, block (CSS Style; use service kit)		GM30240	GM30236	GM42088
1	Block heater service element		GM30493	GM30489	GM42089
1	Block Heater Service Kit		GM66014-76	GM66014-77	GM66014-78
1	Block Heater (CSM Style)		GM62507	GM62503	GM62508
1	Block Heater element		GM62647	GM62643	GM62648
1	Tag, hang	279047			
1	Tag, instruction	299896			
4	Vibromount, controller	328645			
1	Connector, swivel nut	361598			
2	Valve, shutoff, 3/4-14 NPT	GM19666			
1	Bracket, block heater	GM30921			
1	Bracket, block heater	GM30922			
1	Tee, pipe, 1 x 1 x 1 NPT	X-203-2			
2	Pipe, 3/4 in. NPT x 6 in.	X-206-15			
2	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9			
1	Elbow, street, 90° x 3/4 in. NPTF	X-211-5			
1	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2			
1	Pipe, 1 in. NPT x 1.50 in.	X-218-24			
8	Washer, lock, 0.326 ID x 0.883 in. OD	X-22-16			
1	Elbow, street, 45° x 1 in. NPT	X-274-10			
1	Elbow, street, 45° x 3/4 in. NPT	X-274-2			
1	Fitting, half union	X-296-17			
4	Stud, 5/16-18 x 1.5 in.	X-352-65			
4	Clamp, hose, 0.69/1.25 in.	X-426-12			
2	Connector, hose + vibra seal	X-582-15			
2	Connector, hose + vibra seal	X-582-8			
1	Hose, coolant, 56 in.	X-6367-5			
1	Hose, coolant, 65 in.	X-6367-9			
1	Plug, pipe, 1 in. NPTF	X-75-13			

Cooling System Kits, continued

Block Heater Kits, continued

Kits: GM47775-KP1 to GM47775-KP5

Qty.	Description	Common Parts	Unique Parts				
			GM47775-KP1	GM47775-KP2	GM47775-KP3	GM47775-KP4	GM47775-KP5
1	Heater, block (CSS Style; use service kit)		GM30237	GM30238	GM30239	GM30240	GM30236
1	Block heater service element		GM30490	GM30491	GM30492	GM30493	GM30489
1	Block Heater Service Kit		GM66014-31	GM66014-32	GM66014-33	GM66014-34	GM66014-35
1	Block Heater (CSM Style)		GM62504	GM62505	GM62506	GM62507	GM62503
1	Block Heater element		GM62644	GM62645	GM62646	GM62647	GM62643
1	Hose, coolant, 65 in.	X-6367-9					
1	Tag, hang	279047					
1	Tag, instruction	299896					
4	Vibromount, controller	328645					
2	Fitting, elbow, 90°	361597					
3	Valve, shutoff, 3/4-14 NPT	GM19666					
2	Connector, swivel 37° flared	GM29562					
1	Bracket, block heater	GM30921					
1	Bracket, block heater	GM30922					
2	Fitting, 37° flared swivel	GM47776					
1	Adapter bushing	GM47777					
1	O-ring	GM47778					
2	Bushing, reducing, 1/2 x 3/4 in.	X-202-41					
4	Pipe, 3/4 in. NPT x 2.50 in.	X-206-4					
1	Cross, pipe, 1 in. NPT	X-207-1					
2	Pipe, 1/2 in. NPT x 1.5 in. brass	X-209-1					
2	Elbow, pipe, 90° x 1 in. NPT	X-215-15					
3	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2					
1	Pipe, 1 in. NPT x 3 in.	X-218-22					
2	Pipe, 1 in. NPT x 1.50 in.	X-218-24					
1	Pipe, 1 in. NPT x 6.50 in.	X-218-9					
8	Washer, lock, .326ID x .883 in.	X-22-16					
1	Elbow, pipe, 45° x 1 in. NPT	X-225-9					
2	Elbow, street, 45° x 3/4 in. NPT	X-274-2					
4	Stud, 5/16-18 x 1.5 in.	X-352-65					
6	Clamp, hose, 0.69/1.25 in.	X-426-12					
3	Connector, hose + vibra seal	X-582-15					
3	Connector, hose + vibra seal	X-582-8					
1	Hose, coolant, 35 in.	X-6367-11					
1	Hose, coolant, 70 in.	X-6367-3					
1	Plug, pipe, 1 in. NPTF	X-75-13					

Cooling System Kits, continued

Block Heater Kits, continued

Kits: GM47775-KP6 to GM47775-KP10

Qty.	Description	Common Parts	Unique Parts				
			GM47775-KP6	GM47775-KP7	GM47775-KP8	GM47775-KP9	GM47775-KP10
1	Heater, block (CSS Style; use service kit)		GM42090	GM30237	GM30238	GM30239	GM30240
1	Block heater service element		GM42091	GM30490	GM30491	GM30492	GM30493
1	Block Heater Service Kit		GM66014-36	GM66014-37	GM66014-38	GM66014-39	GM66014-40
1	Block Heater (CSM Style)		GM62508	GM62504	GM62505	GM62506	GM62507
1	Block Heater element		GM62648	GM62644	GM62645	GM62646	GM62647
1	Hose, coolant		X-6367-9	X-6367-16	X-6367-16	X-6367-16	X-6367-16
1	Tag, hang	279047					
1	Tag, instruction	299896					
4	Vibromount, controller	328645					
2	Fitting, elbow, 90°	361597					
3	Valve, shutoff, 3/4-14 NPT	GM19666					
2	Connector, swivel 37° flared	GM29562					
1	Bracket, block heater	GM30921					
1	Bracket, block heater	GM30922					
2	Fitting, 37° flared swivel	GM47776					
1	Adapter bushing	GM47777					
1	O-ring	GM47778					
2	Bushing, reducng, 1/2 x 3/4 in.	X-202-41					
4	Pipe, 3/4 in. NPT x 2.50 in.	X-206-4					
1	Cross, pipe, 1 in. NPT	X-207-1					
2	Pipe, 1/2 in. NPT x 1.5 in. brass	X-209-1					
2	Elbow, pipe, 90° x 1 in. NPT	X-215-15					
3	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2					
1	Pipe, 1 in. NPT x 3 in.	X-218-22					
2	Pipe, 1 in. NPT x 1.50 in.	X-218-24					
1	Pipe, 1 in. NPT x 6.50 in.	X-218-9					
8	Washer, lock, .326ID x .883 in.	X-22-16					
1	Elbow, pipe, 45° x 1 in. NPT	X-225-9					
2	Elbow, street, 45° x 3/4 in. NPT	X-274-2					
4	Stud, 5/16-18 x 1.5 in.	X-352-65					
6	Clamp, hose, .69/1.25 in.	X-426-12					
3	Connector, hose + vibra seal	X-582-15					
3	Connector, hose + vibra seal	X-582-8					
1	Hose, coolant, 35 in.	X-6367-11					
1	Hose, coolant, 70 in.	X-6367-3					
1	Plug, pipe, 1 in. NPTF	X-75-13					

Cooling System Kits, continued

Block Heater Kits, continued

Kits: GM47775-KP11 to GM47775-KP12

Qty.	Description	Common Parts	Unique Parts	
			GM47775-KP11	GM47775-KP12
1	Heater, block (CSS Style; use service kit)		GM30236	GM42090
1	Block heater service element		GM30489	GM42091
1	Block Heater Service Kit		GM66014-41	GM66014-42
1	Block Heater (CSM Style)		GM62503	GM62508
1	Block Heater element		GM62643	GM62648
1	Hose, coolant	X-6367-16		
1	Tag, hang	279047		
1	Tag, instruction	299896		
4	Vibromount, controller	328645		
2	Fitting, elbow, 90°	361597		
3	Valve, shutoff, 3/4-14 NPT	GM19666		
2	Connector, swivel 37° flared	GM29562		
1	Bracket, block heater	GM30921		
1	Bracket, block heater	GM30922		
2	Fitting, 37° flared swivel	GM47776		
1	Adapter bushing	GM47777		
1	O-ring	GM47778		
2	Bushing, reducing, 1/2 x 3/4 in. NPT	X-202-41		
4	Pipe, 3/4 in. NPT x 2.50 in.	X-206-4		
1	Cross, pipe, 1 in. NPT	X-207-1		
2	Pipe, 1/2 in. NPT x 1.5 in. brass	X-209-1		
2	Elbow, pipe, 90° x 1 in. NPT	X-215-15		
3	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2		
1	Pipe, 1 in. NPT x 3 in.	X-218-22		
2	Pipe, 1 in. NPT x 1.50 in.	X-218-24		
1	Pipe, 1 in. NPT x 6.50 in.	X-218-9		
8	Washer, lock, 0.3261D x 0.883 in. OD	X-22-16		
1	Elbow, pipe, 45° x 1 in. NPT	X-225-9		
2	Elbow, street, 45° x 3/4 in. NPT	X-274-2		
4	Stud, 5/16-18 x 1.5 in.	X-352-65		
6	Clamp, hose, 0.69/1.25 in.	X-426-12		
3	Connector, hose + vibra seal	X-582-15		
3	Connector, hose + vibra seal	X-582-8		
1	Hose, coolant, 35 in.	X-6367-11		
1	Hose, coolant, 70 in.	X-6367-3		
1	Plug, pipe, 1 in. NPTF	X-75-13		

Cooling System Kits, continued

Block Heater Kits, continued

Kits: GM55243-KP1 to GM55243-KP3

Qty.	Description	Common Parts	Unique Parts		
			GM55243-KP1	GM55243-KP2	GM55243-KP3
1	Heater, block (CSS Style; use service kit)		GM30237	GM30238	GM30239
1	Block heater service element		GM30490	GM30491	GM30492
1	Block Heater Service Kit		GM66014-43	GM66014-44	GM66014-45
1	Block Heater (CSM Style)		GM62504	GM62505	GM62506
1	Block Heater element		GM62644	GM62645	GM62646
1	Tag, hang	279047			
1	Tag, instruction	299896			
4	Vibromount, controller	328645			
2	Connector, swivel 37° flared	GM29562			
3	Valve, shutoff, 3/4-14 NPT	GM19666			
1	Bracket, block heater	GM30921			
1	Bracket, block heater	GM30922			
1	Adapter bushing	GM47777			
1	O-ring	GM47778			
2	Bushing, reducing, 3/4 x 1 in. NPT	X-202-1			
1	Tee, pipe, 1 x 1 x 1 NPT	X-203-2			
4	Pipe, 3/4 in. NPT x 2.5 in.	X-206-4			
2	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9			
1	Elbow, street, 90° x 3/4 in. NPTF	X-211-5			
2	Elbow, pipe, 90° x 1 in. NPT	X-215-15			
3	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2			
1	Pipe, 1 in. NPT x 3 in.	X-218-22			
2	Pipe, 1 in. NPT x 1.50 in.	X-218-24			
1	Pipe, 1 in. NPT x 6.50 in.	X-218-9			
1	Elbow, pipe, 45° x 1 in. NPT	X-225-9			
1	Elbow, street, 45° x 1 in. NPT	X-274-10			
2	Elbow, street, 45° x 3/4 in. NPT	X-274-2			
1	Clamp, insulated, 1.25 in.	X-672-20			
4	Stud, 5/16-18 x 1.5 in.	X-352-65			
6	Clamp, hose, 0.69/1.25 in.	X-426-12			
3	Connector, hose + vibra seal	X-582-15			
3	Connector, hose + vibra seal	X-582-8			
1	Hose, coolant, 56 in.	X-6367-5			
1	Hose, coolant	X-6367-15			
1	Hose, coolant, 70 in.	X-6367-3			
1	Plug, pipe, 1 in. NPTF	X-75-13			

Cooling System Kits, continued

Block Heater Kits, continued

Kits: GM55243-KP4 to GM55243-KP6

Qty.	Description	Common Parts	Unique Parts		
			GM55243-KP4	GM55243-KP5	GM55243-KP6
1	Heater, block (CSS Style; use service kit)		GM30240	GM30236	GM42090
1	Block heater service element		GM30493	GM30489	GM42091
1	Block Heater Service Kit		GM66014-46	GM66014-47	GM66014-48
1	Block Heater (CSM Style)		GM62507	GM62503	GM62508
1	Block Heater element		GM62647	GM62643	GM62648
1	Tag, hang	279047			
1	Tag, instruction	299896			
4	Vibromount, controller	328645			
2	Connector, swivel 37° flared	GM29562			
3	Valve, shutoff, 3/4-14 NPT	GM19666			
1	Bracket, block heater	GM30921			
1	Bracket, block heater	GM30922			
1	Adapter bushing	GM47777			
1	O-ring	GM47778			
2	Bushing, reducing, 3/4 x 1 in. NPT	X-202-1			
1	Tee, pipe, 1 x 1 x 1 NPT	X-203-2			
4	Pipe, 3/4 in. NPT x 2.5 in.	X-206-4			
2	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9			
1	Elbow, street, 90° x 3/4 in. NPTF	X-211-5			
2	Elbow, pipe, 90° x 1 in. NPT	X-215-15			
3	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2			
1	Pipe, 1 in. NPT x 3 in.	X-218-22			
2	Pipe, 1 in. NPT x 1.50 in.	X-218-24			
1	Pipe, 1 in. NPT x 6.50 in.	X-218-9			
1	Elbow, pipe, 45° x 1 in. NPT	X-225-9			
1	Elbow, street, 45° x 1 in. NPT	X-274-10			
2	Elbow, street, 45° x 3/4 in. NPT	X-274-2			
1	Clamp, insulated, 1.25 in.	X-672-20			
4	Stud, 5/16-18 x 1.5 in.	X-352-65			
6	Clamp, hose, 0.69/1.25 in.	X-426-12			
3	Connector, hose + vibra seal	X-582-15			
3	Connector, hose + vibra seal	X-582-8			
1	Hose, coolant, 56 in.	X-6367-5			
1	Hose, coolant	X-6367-15			
1	Hose, coolant, 70 in.	X-6367-3			
1	Plug, pipe, 1 in. NPTF	X-75-13			

Cooling System Kits, continued

Block Heater Kits, continued

Kits: GM64400-KP1 to GM64400-KP6

Qty.	Description	Common Parts	Unique Parts				
			GM64400-KP1	GM64400-KP2	GM64400-KP3	GM64400-KP4	GM64400-KP5
1	Heater, block		GM62504	GM62505	GM62506	GM62507	GM62503
1	Block heater service element		GM62644	GM62645	GM62646	GM62647	GM62643
1	Hose, coolant, 65 in.	X-6367-9					
1	Elbow, street (90 deg x 1"nptf)	151385					
1	Tag, hang	279047					
1	Tag, instruction	299896					
4	Vibromount, controller	328645					
3	Valve, shutoff, 3/4-14 NPT	GM19666					
2	Connector, swivel 37° flared	GM29562					
1	Adapter bushing	GM47777					
2	Fitting	GM59138					
1	Bracket, block heater	GM60615					
2	Bushing, reduc, 3/4 x 1 in. NPT	X-202-1					
2	Tee, pipe (1 x 1 x 1 npt)	X-203-2					
4	Pipe, 3/4 in. NPT x 2.50 in.	X-206-4					
2	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9					
2	Pipe, 1/2 in. NPT x 1.5 in. brass	X-209-1					
4	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2					
2	Pipe, 1 in. NPT x 1.50 in.	X-218-24					
8	Washer, lock, .326ID x .883 in.	X-22-16					
2	Elbow, street, 45° x 3/4 in. NPT	X-274-2					
4	Stud, 5/16-18 x 1.5 in.	X-352-65					
6	Clamp, hose, 0.69/1.25 in.	X-426-12					
3	Connector, hose + vibra seal	X-582-15					
3	Connector, hose + vibra seal	X-582-8					
1	Hose, coolant, 35 in.	X-6367-11					
1	Hose, coolant, 70 in.	X-6367-3					
3	Clamp, insulated	X-672-32					
1	Plug, pipe, 1 in. NPTF	X-75-13					

Kits: GM64400-KP6 to GM64400-KP10

Qty.	Description	Common Parts	Unique Parts				
			GM64400-KP6	GM64400-KP7	GM64400-KP8	GM64400-KP9	GM64400-KP10
1	Heater, block		GM62508	GM62504	GM62505	GM62506	GM62507
1	Block heater service element		GM62648	GM62644	GM62645	GM62646	GM62647
1	Hose, coolant		X-6367-9	X-6367-16	X-6367-16	X-6367-16	X-6367-16
1	Elbow, street (90 deg x 1"nptf)	151385					
1	Tag, hang	279047					
1	Tag, instruction	299896					
4	Vibromount, controller	328645					
3	Valve, shutoff, 3/4-14 NPT	GM19666					
2	Connector, swivel 37° flared	GM29562					
1	Adapter bushing	GM47777					
2	Fitting	GM59138					
1	Bracket, block heater	GM60615					
2	Bushing, reduc, 3/4 x 1 in. NPT	X-202-1					
2	Tee, pipe (1 x 1 x 1 npt)	X-203-2					
4	Pipe, 3/4 in. NPT x 2.50 in.	X-206-4					
2	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9					
2	Pipe, 1/2 in. NPT x 1.5 in. brass	X-209-1					
4	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2					
2	Pipe, 1 in. NPT x 1.50 in.	X-218-24					
8	Washer, lock, .326ID x .883 in.	X-22-16					
2	Elbow, street, 45° x 3/4 in. NPT	X-274-2					
4	Stud, 5/16-18 x 1.5 in.	X-352-65					
6	Clamp, hose, 0.69/1.25 in.	X-426-12					
3	Connector, hose + vibra seal	X-582-15					
3	Connector, hose + vibra seal	X-582-8					
1	Hose, coolant, 35 in.	X-6367-11					
1	Hose, coolant, 70 in.	X-6367-3					
3	Clamp, insulated	X-672-32					
1	Plug, pipe, 1 in. NPTF	X-75-13					

Cooling System Kits, continued

Block Heater Kits, continued

Kits: GM64400-KP11 to GM64400-KP12

Qty.	Description	Common Parts	Unique Parts	
			GM64400-KP11	GM64400-KP12
1	Heater, block		GM62503	GM62508
1	Block heater service element		GM62643	GM62648
1	Hose, coolant	X-6367-16		
1	Elbow, street (90 deg x 1"nptf)	151385		
1	Tag, hang	279047		
1	Tag, instruction	299896		
4	Vibromount, controller	328645		
3	Valve, shutoff, 3/4-14 NPT	GM19666		
2	Connector, swivel 37° flared	GM29562		
1	Adapter bushing	GM47777		
2	Fitting	GM59138		
1	Bracket, block heater	GM60615		
2	Bushing, reduc, 3/4 x 1 in. NPT	X-202-1		
2	Tee, pipe (1 x 1 x 1 npt)	X-203-2		
4	Pipe, 3/4 in. NPT x 2.50 in.	X-206-4		
2	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9		
2	Pipe, 1/2 in. NPT x 1.5 in. brass	X-209-1		
4	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2		
2	Pipe, 1 in. NPT x 1.50 in.	X-218-24		
8	Washer, lock, .326ID x .883 in. OD	X-22-16		
2	Elbow, street, 45° x 3/4 in. NPT	X-274-2		
4	Stud, 5/16-18 x 1.5 in.	X-352-65		
6	Clamp, hose, 0.69/1.25 in.	X-426-12		
3	Connector, hose + vibra seal	X-582-15		
3	Connector, hose + vibra seal	X-582-8		
1	Hose, coolant, 35 in.	X-6367-11		
1	Hose, coolant, 70 in.	X-6367-3		
3	Clamp, insulated	X-672-32		
1	Plug, pipe, 1 in. NPTF	X-75-13		

Kits: GM64401-KP1 to GM64401-KP6

Qty.	Description	Common Parts	Unique Parts		
			GM64401-KP1	GM64401-KP2	GM64401-KP3
1	Heater, block		GM62504	GM62505	GM62506
1	Block heater service element		GM62644	GM62645	GM62646
1	Elbow, street (90 deg x 1"nptf)	151385			
1	Tag, hang	279047			
1	Tag, instruction	299896			
4	Vibromount, controller	328645			
3	Valve, shutoff, 3/4-14 NPT	GM19666			
2	Connector, swivel 37° flared	GM29562			
1	Adapter bushing	GM47777			
1	Bracket, block heater	GM60615			
2	Bushing, reduc, 3/4 x 1 in. NPT	X-202-1			
2	Tee, pipe (1 x 1 x 1 npt)	X-203-2			
4	Pipe, 3/4 in. NPT x 2.50 in.	X-206-4			
2	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9			
4	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2			
2	Pipe, 1 in. NPT x 1.50 in.	X-218-24			
8	Washer, lock, .326ID x .883 in. OD	X-22-16			
2	Elbow, street, 45° x 3/4 in. NPT	X-274-2			
4	Stud, 5/16-18 x 1.5 in.	X-352-65			
6	Clamp, hose, 0.69/1.25 in.	X-426-12			
3	Connector, hose + vibra seal	X-582-15			
3	Connector, hose + vibra seal	X-582-8			
1	Hose, coolant	X-6367-15			
1	Hose, coolant, 56 in.	X-6367-5			
1	Hose, coolant, 70 in.	X-6367-3			
3	Clamp, insulated	X-672-32			
1	Plug, pipe, 1 in. NPTF	X-75-13			

Cooling System Kits, continued

Kits: GM64401-KP4 to GM64401-KP6

Qty.	Description	Common Parts	Unique Parts		
			GM64401-KP4	GM64401-KP5	GM64401-KP6
1	Heater, block		GM62507	GM62503	GM62508
1	Block heater service element		GM62647	GM62643	GM62648
1	Elbow, street (90 deg x 1"nptf)	151385			
1	Tag, hang	279047			
1	Tag, instruction	299896			
4	Vibromount, controller	328645			
3	Valve, shutoff, 3/4-14 NPT	GM19666			
2	Connector, swivel 37° flared	GM29562			
1	Adapter bushing	GM47777			
1	Bracket, block heater	GM60615			
2	Bushing, reduc, 3/4 x 1 in. NPT	X-202-1			
2	Tee, pipe (1 x 1 x 1 npt)	X-203-2			
4	Pipe, 3/4 in. NPT x 2.50 in.	X-206-4			
2	Pipe, 3/4 in. NPT x 1.38 in.	X-206-9			
4	Elbow, pipe, 90° x 3/4 in. NPT	X-215-2			
2	Pipe, 1 in. NPT x 1.50 in.	X-218-24			
8	Washer, lock, .326ID x .883 in. OD	X-22-16			
2	Elbow, street, 45° x 3/4 in. NPT	X-274-2			
4	Stud, 5/16-18 x 1.5 in.	X-352-65			
6	Clamp, hose, 0.69/1.25 in.	X-426-12			
3	Connector, hose + vibra seal	X-582-15			
3	Connector, hose + vibra seal	X-582-8			
1	Hose, coolant	X-6367-15			
1	Hose, coolant, 56 in.	X-6367-5			
1	Hose, coolant, 70 in.	X-6367-3			
3	Clamp, insulated	X-672-32			
1	Plug, pipe, 1 in. NPTF	X-75-13			

Notes

Appendix A Abbreviations

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

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

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

Appendix B Common Hardware Application Guidelines

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

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

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

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

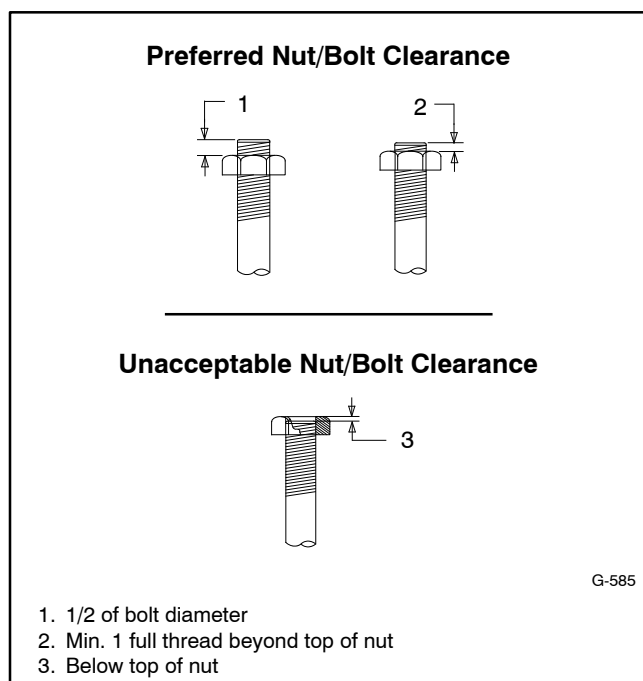


Figure 1 Acceptable Bolt Lengths

Steps for common hardware application:

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

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

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

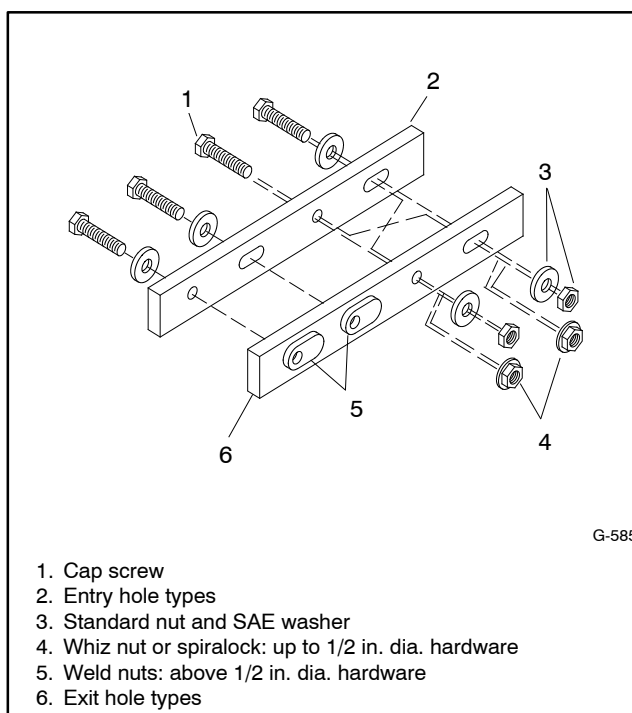


Figure 2 Acceptable Hardware Combinations

Appendix C General Torque Specifications

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

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

Notes:

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

Appendix D Common Hardware Identification

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

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

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

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

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

Sample Dimensions

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

$\frac{1}{4}$ -20 x 1
 Length In Inches (Screws and Bolts)
 Threads Per Inch
 Major Thread Diameter In Fractional Inches Or Screw Number Size

Metric (Screws, Bolts, Studs, and Nuts)

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

Plain Washers

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

Lock Washers

$\frac{5}{8}$
 Internal Dimension

Appendix E Common Hardware List

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

American Standard

Part No.	Dimensions	Part No.	Dimensions	Part No.	Dimensions	Type			
Hex Head Bolts (Grade 5)		Hex Head Bolts, cont.		Hex Nuts					
X-465-17	1/4-20 x .38	X-6238-14	3/8-24 x .75	X-6009-1	1-8	Standard			
X-465-6	1/4-20 x .50	X-6238-16	3/8-24 x 1.25		X-6210-3	6-32	Whiz		
X-465-2	1/4-20 x .62	X-6238-21	3/8-24 x 4.00			X-6210-4	8-32	Whiz	
X-465-16	1/4-20 x .75	X-6238-22	3/8-24 x 4.50			X-6210-5	10-24	Whiz	
X-465-18	1/4-20 x .88					X-6210-1	10-32	Whiz	
X-465-7	1/4-20 x 1.00	X-6024-5	7/16-14 x .75		X-6210-2	1/4-20	Spiralock		
X-465-8	1/4-20 x 1.25	X-6024-2	7/16-14 x 1.00			X-6210-6	1/4-28	Spiralock	
X-465-9	1/4-20 x 1.50	X-6024-8	7/16-14 x 1.25			X-6210-7	5/16-18	Spiralock	
X-465-10	1/4-20 x 1.75	X-6024-3	7/16-14 x 1.50			X-6210-8	5/16-24	Spiralock	
X-465-11	1/4-20 x 2.00	X-6024-4	7/16-14 x 2.00			X-6210-9	3/8-16	Spiralock	
X-465-12	1/4-20 x 2.25	X-6024-11	7/16-14 x 2.75			X-6210-10	3/8-24	Spiralock	
X-465-14	1/4-20 x 2.75	X-6024-12	7/16-14 x 6.50		X-6210-11	7/16-14	Spiralock		
X-465-21	1/4-20 x 5.00	X-129-15	1/2-13 x .75		X-6210-12	1/2-13	Spiralock		
X-465-25	1/4-28 x .38	X-129-17	1/2-13 x 1.00		X-6210-15	7/16-20	Spiralock		
X-465-20	1/4-28 x 1.00	X-129-18	1/2-13 x 1.25	X-6210-14	1/2-20	Spiralock			
		X-129-19	1/2-13 x 1.50						
X-125-33	5/16-18 x .50	X-129-20	1/2-13 x 1.75	X-85-3	5/8-11	Standard			
X-125-23	5/16-18 x .62	X-129-21	1/2-13 x 2.00		X-88-12	3/4-10	Standard		
X-125-3	5/16-18 x .75	X-129-22	1/2-13 x 2.25			X-89-2	1/2-20	Standard	
X-125-31	5/16-18 x .88	X-129-23	1/2-13 x 2.50						
X-125-5	5/16-18 x 1.00	X-129-24	1/2-13 x 2.75						
X-125-24	5/16-18 x 1.25	X-129-25	1/2-13 x 3.00						
X-125-34	5/16-18 x 1.50	X-129-27	1/2-13 x 3.50						
X-125-25	5/16-18 x 1.75	X-129-29	1/2-13 x 4.00						
X-125-26	5/16-18 x 2.00	X-129-30	1/2-13 x 4.50						
230578	5/16-18 x 2.25	X-463-9	1/2-13 x 5.50						
X-125-29	5/16-18 x 2.50	X-129-44	1/2-13 x 6.00						
X-125-27	5/16-18 x 2.75								
X-125-28	5/16-18 x 3.00	X-129-51	1/2-20 x .75		X-25-46	.125	.250	.022	#4
X-125-22	5/16-18 x 4.50	X-129-45	1/2-20 x 1.25		X-25-9	.156	.375	.049	#6
X-125-32	5/16-18 x 5.00	X-129-52	1/2-20 x 1.50	X-25-48	.188	.438	.049	#8	
X-125-35	5/16-18 x 5.50			X-25-36	.219	.500	.049	#10	
X-125-36	5/16-18 x 6.00	X-6021-3	5/8-11 x 1.00	X-25-40	.281	.625	.065	1/4	
X-125-40	5/16-18 x 6.50	X-6021-4	5/8-11 x 1.25	X-25-85	.344	.687	.065	5/16	
		X-6021-2	5/8-11 x 1.50	X-25-37	.406	.812	.065	3/8	
X-125-43	5/16-24 x 1.75	X-6021-1	5/8-11 x 1.75	X-25-34	.469	.922	.065	7/16	
X-125-44	5/16-24 x 2.50	273049	5/8-11 x 2.00	X-25-26	.531	1.062	.095	1/2	
X-125-30	5/16-24 x .75	X-6021-5	5/8-11 x 2.25	X-25-15	.656	1.312	.095	5/8	
X-125-39	5/16-24 x 2.00	X-6021-6	5/8-11 x 2.50	X-25-29	.812	1.469	.134	3/4	
X-125-38	5/16-24 x 2.75	X-6021-7	5/8-11 x 2.75	X-25-127	1.062	2.000	.134	1	
		X-6021-12	5/8-11 x 3.75						
X-6238-2	3/8-16 x .62	X-6021-11	5/8-11 x 4.50						
X-6238-10	3/8-16 x .75	X-6021-10	5/8-11 x 6.00						
X-6238-3	3/8-16 x .88								
X-6238-11	3/8-16 x 1.00	X-6021-9	5/8-18 x 2.50						
X-6238-4	3/8-16 x 1.25								
X-6238-5	3/8-16 x 1.50	X-6239-1	3/4-10 x 1.00						
X-6238-1	3/8-16 x 1.75	X-6239-8	3/4-10 x 1.25						
X-6238-6	3/8-16 x 2.00	X-6239-2	3/4-10 x 1.50						
X-6238-17	3/8-16 x 2.25	X-6239-3	3/4-10 x 2.00						
X-6238-7	3/8-16 x 2.50	X-6239-4	3/4-10 x 2.50						
X-6238-8	3/8-16 x 2.75	X-6239-5	3/4-10 x 3.00						
X-6238-9	3/8-16 x 3.00	X-6239-6	3/4-10 x 3.50						
X-6238-19	3/8-16 x 3.25								
X-6238-12	3/8-16 x 3.50	X-792-1	1-8 x 2.25						
X-6238-20	3/8-16 x 3.75	X-792-5	1-8 x 3.00						
X-6238-13	3/8-16 x 4.50	X-792-8	1-8 x 5.00						
X-6238-18	3/8-16 x 5.50								
X-6238-25	3/8-16 x 6.50								

Metric

Hex head bolts are hardness grade 8.8 unless noted.

Part No. Dimensions Hex Head Bolts (Partial Thread)

M931-05055-60	M5-0.80 x 55
M931-06040-60	M6-1.00 x 40
M931-06055-60	M6-1.00 x 55
M931-06060-60	M6-1.00 x 60
M931-06060-SS	M6-1.00 x 60
M931-06070-60	M6-1.00 x 70
M931-06070-SS	M6-1.00 x 70
M931-06075-60	M6-1.00 x 75
M931-06090-60	M6-1.00 x 90
M931-06145-60	M6-1.00 x 145
M931-06150-60	M6-1.00 x 150

M931-08035-60	M8-1.25 x 35
M931-08040-60	M8-1.25 x 40
M931-08045-60	M8-1.25 x 45
M931-08050-60	M8-1.25 x 50
M931-08055-60	M8-1.25 x 55
M931-08055-82	M8-1.25 x 55*
M931-08060-60	M8-1.25 x 60
M931-08070-60	M8-1.25 x 70
M931-08070-82	M8-1.25 x 70*
M931-08075-60	M8-1.25 x 75
M931-08080-60	M8-1.25 x 80
M931-08090-60	M8-1.25 x 90
M931-08095-60	M8-1.25 x 95
M931-08100-60	M8-1.25 x 100
M931-08110-60	M8-1.25 x 110
M931-08120-60	M8-1.25 x 120
M931-08130-60	M8-1.25 x 130
M931-08140-60	M8-1.25 x 140
M931-08150-60	M8-1.25 x 150
M931-08200-60	M8-1.25 x 200

M931-10040-82	M10-1.25 x 40*
M931-10040-60	M10-1.50 x 40
M931-10045-60	M10-1.50 x 45
M931-10050-60	M10-1.50 x 50
M931-10050-82	M10-1.25 x 50*
M931-10055-60	M10-1.50 x 55
M931-10060-60	M10-1.50 x 60
M931-10065-60	M10-1.50 x 65
M931-10070-60	M10-1.50 x 70
M931-10080-60	M10-1.50 x 80
M931-10080-82	M10-1.25 x 80*
M931-10090-60	M10-1.50 x 90
M931-10090-82	M10-1.50 x 90*
M931-10100-60	M10-1.50 x 100
M931-10110-60	M10-1.50 x 110
M931-10120-60	M10-1.50 x 120
M931-10130-60	M10-1.50 x 130
M931-10140-60	M10-1.50 x 140
M931-10180-60	M10-1.50 x 180
M931-10235-60	M10-1.50 x 235
M931-10260-60	M10-1.50 x 260
M960-10330-60	M10-1.25 x 330

M931-12045-60	M12-1.75 x 45
M960-12050-60	M12-1.25 x 50
M960-12050-82	M12-1.25 x 50*
M931-12050-60	M12-1.75 x 50
M931-12050-82	M12-1.75 x 50*
M931-12055-60	M12-1.75 x 55
M931-12060-60	M12-1.75 x 60
M931-12060-82	M12-1.75 x 60*
M931-12065-60	M12-1.75 x 65
M931-12075-60	M12-1.75 x 75
M931-12080-60	M12-1.75 x 80
M931-12090-60	M12-1.75 x 90
M931-12100-60	M12-1.75 x 100
M931-12110-60	M12-1.75 x 110

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

M960-16090-60	M16-1.50 x 90
M931-16090-60	M16-2.00 x 90
M931-16100-60	M16-2.00 x 100
M931-16100-82	M16-2.00 x 100*
M931-16120-60	M16-2.00 x 120
M931-16150-60	M16-2.00 x 150

M931-20065-60	M20-2.50 x 65
M931-20090-60	M20-2.50 x 90
M931-20100-60	M20-2.50 x 100
M931-20120-60	M20-2.50 x 120
M931-20140-60	M20-2.50 x 140
M931-20160-60	M20-2.50 x 160

M931-22090-60	M22-2.50 x 90
M931-22120-60	M22-2.50 x 120
M931-22160-60	M22-2.50 x 160

M931-24090-60	M24-3.00 x 90
M931-24120-60	M24-3.00 x 120
M931-24160-60	M24-3.00 x 160
M931-24200-60	M24-3.00 x 200

Hex Head Bolts (Full Thread)

M933-04006-60	M4-0.70 x 6
M933-05030-60	M5-0.80 x 30
M933-05035-60	M5-0.80 x 35
M933-05050-60	M5-0.80 x 50

M933-06010-60	M6-1.00 x 10
M933-06012-60	M6-1.00 x 12
M933-06014-60	M6-1.00 x 14
M933-06016-60	M6-1.00 x 16
M933-06020-60	M6-1.00 x 20
M933-06025-60	M6-1.00 x 25
M933-06030-60	M6-1.00 x 30
M933-06040-60	M6-1.00 x 40
M933-06050-60	M6-1.00 x 50

M933-07025-60	M7-1.00 x 25
M933-08010-60	M8-1.25 x 10
M933-08012-60	M8-1.25 x 12
M933-08016-60	M8-1.25 x 16
M933-08020-60	M8-1.25 x 20
M933-08025-60	M8-1.25 x 25
M933-08030-60	M8-1.25 x 30
M933-08030-82	M8-1.25 x 30*

M933-10012-60	M10-1.50 x 12
M961-10020-60	M10-1.25 x 20
M933-10020-60	M10-1.50 x 20
M933-10025-60	M10-1.50 x 25
M961-10025-60	M10-1.25 x 25
M933-10025-82	M10-1.50 x 25*
M961-10030-60	M10-1.25 x 30
M933-10030-60	M10-1.50 x 30
M933-10030-82	M10-1.50 x 30*
M961-10035-60	M10-1.25 x 35
M933-10035-60	M10-1.50 x 35
M933-10035-82	M10-1.50 x 35*
M961-10040-60	M10-1.25 x 40

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

M933-12016-60	M12-1.75 x 16
M933-12020-60	M12-1.75 x 20
M961-12020-60F	M12-1.50 x 20
M933-12025-60	M12-1.75 x 25
M933-12025-82	M12-1.75 x 25*
M961-12030-60	M12-1.25 x 30
M933-12030-82	M12-1.75 x 30*
M961-12030-82F	M12-1.50 x 30*
M933-12030-60	M12-1.75 x 30
M933-12035-60	M12-1.75 x 35
M961-12040-82	M12-1.25 x 40*
M933-12040-60	M12-1.75 x 40
M933-12040-82	M12-1.75 x 40*

M961-14025-60	M14-1.50 x 25
M933-14025-60	M14-2.00 x 25
M961-14050-82	M14-1.50 x 50*

M961-16025-60	M16-1.50 x 25
M933-16025-60	M16-2.00 x 25
M961-16030-82	M16-1.50 x 30*
M933-16030-82	M16-2.00 x 30*
M933-16035-60	M16-2.00 x 35
M961-16040-60	M16-1.50 x 40
M933-16040-60	M16-2.00 x 40
M961-16045-82	M16-1.50 x 45*
M933-16045-82	M16-2.00 x 45*
M933-16050-60	M16-2.00 x 50
M933-16050-82	M16-2.00 x 50*
M933-16060-60	M16-2.00 x 60
M933-16070-60	M16-2.00 x 70

M933-18035-60	M18-2.50 x 35
M933-18050-60	M18-2.50 x 50
M933-18060-60	M18-2.50 x 60

M933-20050-60	M20-2.50 x 50
M933-20055-60	M20-2.50 x 55

M933-24060-60	M24-3.00 x 60
M933-24065-60	M24-3.00 x 65
M933-24070-60	M24-3.00 x 70

Pan Head Machine Screws

M7985A-03010-20	M3-0.50 x 10
M7985A-03012-20	M3-0.50 x 12

M7985A-04010-20	M4-0.70 x 10
M7985A-04016-20	M4-0.70 x 16
M7985A-04020-20	M4-0.70 x 20
M7985A-04050-20	M4-0.70 x 50
M7985A-04100-20	M4-0.70 x 100

M7985A-05010-20	M5-0.80 x 10
M7985A-05012-20	M5-0.80 x 12
M7985A-05016-20	M5-0.80 x 16
M7985A-05020-20	M5-0.80 x 20
M7985A-05025-20	M5-0.80 x 25
M7985A-05030-20	M5-0.80 x 30
M7985A-05080-20	M5-0.80 x 80
M7985A-05100-20	M5-0.80 x 100

M7985A-06100-20	M6-1.00 x 100
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Flat Head Machine Screws

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

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

Metric, continued

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

Washers

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

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

Notes

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