

Service Parts

Engine

Engine Model:

General Motors 8.1 L Powertrain

Generator Models:

80-150RZG(B)

80-125GSG

G80U-G125U

G88-G130

LP Gas or Natural Gas

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Introduction

This manual lists service replacement parts for 80-150RZG(B), 80-125GSG, and G80U-G125U generator sets.

Information in this publication represents data available at the time of print. The generator set manufacturer 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.

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 4 is the Flywheel group.

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

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

Illustrations

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

How to Find Part Numbers

Use the following steps to locate a service replacement part.

1. Locate the generator set nameplate to **identify the generator set spec number**.
2. **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.
3. **Identify the group** most likely to include the service part number.
4. **Find the group variation number** at the intersection of the spec number row and the group column. Note the variation number.
5. **Page forward to locate the group** identified in step 3 or find the appropriate page in the Table of Contents.
6. **Find the part on the illustration** and note the item number of the part or **find the part description in the parts list**.
7. 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

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

Specification Number Index

Group Title	<i>Engine Block/Lower End</i>	<i>Engine Head/Upper End</i>	<i>Engine Trim Parts</i>	<i>Flywheel</i>	<i>Starter</i>	<i>Alternator, Pulley, and Belt</i>	<i>Intake and Exhaust System</i>	<i>Engine Mounting</i>	<i>Fuel System</i>	<i>Wiring Harness</i>	<i>Turbocharger</i>	<i>Breather</i>
Group No.	1	2	3	4	5	6	7	8	9	10	11	12
Spec No.	Variation Number											

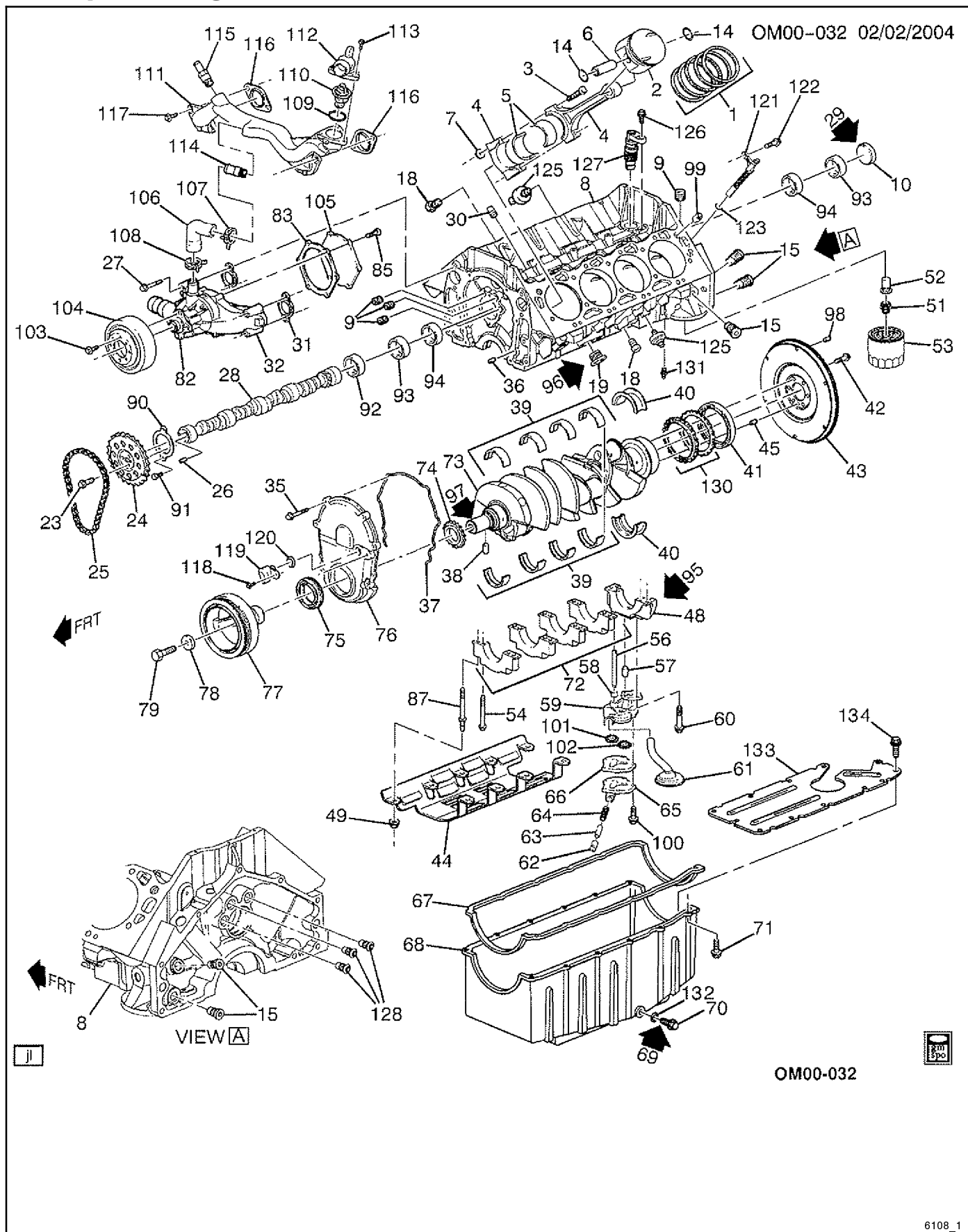
80RZG or 80GSG or G80U/G88												
GM13934-GA1(S)	1	1	1	1	1	1	1	1	1	1	-	-
GM13934-GA2(S)	1	1	1	1	1	1	1	1	2	2	-	-
GM13934-GA3(S)	1	1	1	1	1	1	1	1	NA	NA	-	-
GM13934-GA4(S)	1	1	1	1	1	1	1	1	NA	NA	-	-
GM22407-GA1(S)	1	1	3	1	1	1	1	1	5	6	-	-
GM22407-GA2(S)	1	1	3	1	1	1	1	1	7	6	-	-
GM22407-GA3(S)	1	1	3	1	1	1	1	1	NA	6	-	-
GM22407-GA4(S)	1	1	3	1	1	1	1	1	NA	6	-	-
GM34436-GA1(F)(S)	1	1	3	1	1	3	1	1	5	6	-	-
GM34436-GA2(F)(S)	1	1	3	1	1	3	1	1	7	6	-	-
GM34436-GA3(F)(S)	1	1	3	1	1	3	1	1	NA	6	-	-
GM34436-GA4(F)(S)	1	1	3	1	1	3	1	1	NA	6	-	-
GM34436-GA13	1	1	3	1	1	3	1	1	5	6	-	-
100RZG or 100GSG or G100U/G110												
GM13934-GA5(S)	2	1	1	1	1	1	1	1	1	3	-	-
GM13934-GA6(S)	2	1	1	1	1	1	1	1	2	2	-	-
GM13934-GA7(S)	2	1	1	1	1	1	1	1	NA	NA	-	-
GM13934-GA8(S)	2	1	1	1	1	1	1	1	NA	NA	-	-
GM22407-GA5(S)	2	1	3	1	1	1	1	1	6	6	-	-
GM22407-GA6(S)	2	1	3	1	1	1	1	1	8	6	-	-
GM22407-GA7(S)	2	1	3	1	1	1	1	1	NA	6	-	-
GM22407-GA8(S)	2	1	3	1	1	1	1	1	NA	6	-	-
GM34436-GA5(F)(S)	2	1	3	1	1	3	1	1	6	6	-	-
GM34436-GA6(F)(S)	2	1	3	1	1	3	1	1	8	6	-	-
GM34436-GA7(F)(S)	2	1	3	1	1	3	1	1	NA	6	-	-
GM34436-GA8(F)(S)	2	1	3	1	1	3	1	1	NA	6	-	-
GM34436-GA9	2	1	3	1	1	3	1	1	11	8	-	-
GM34436-GA10	2	1	3	1	1	3	1	1	11	8	-	-
GM34436-GA11	2	1	3	1	1	3	1	1	12	9	-	-
GM34436-GA12	2	1	3	1	1	3	1	1	13	8	-	-
GM34436-GA14	2	1	3	1	1	3	1	1	11	8	-	-

NA Parts list of this group variation is not available at time of print. Please contact your supplier of generator parts for parts information.

Specification Number Index

Group Title	Engine Block/Lower EndEngine Head/Upper EndEngine Trim PartsFlywheelStarterAlternator, Pulley, and BeltIntake and Exhaust SystemEngine MountingFuel SystemWiring HarnessTurbochargerBreatherCAC Piping												
	Group No.	1	2	3	4	5	6	7	8	9	10	11	12
Spec No.	Variation Number												
125RZG or 125GSG or G125U/G130													
GM20568-GA1(S)	2	2	2	2	1	2	2	1	3	4	1	1	-
GM20568-GA2(S)	2	2	2	2	1	2	2	1	4	5	1	1	-
GM20568-GA3(S)	2	2	2	2	1	2	2	1	NA	NA	1	1	-
GM20568-GA4(S)	2	2	2	2	1	2	2	1	NA	NA	1	1	-
GM25339-GA1(S)	2	2	2	2	1	2	2	1	9	6	1	1	-
GM25339-GA2(S)	2	2	2	2	1	2	2	1	10	6	1	1	-
GM25339-GA3(S)	2	2	2	2	1	2	2	1	NA	6	1	1	-
GM25339-GA4(S)	2	2	2	2	1	2	2	1	NA	7	1	1	-
GM34464-GA1(F)(S)	2	2	2	2	1	2	2	1	9	6	1	1	-
GM34464-GA2(F)(S)	2	2	2	2	1	2	2	1	10	6	1	1	-
GM34464-GA3(F)(S)	2	2	2	2	1	2	2	1	NA	6	1	1	-
GM34464-GA4(F)(S)	2	2	2	2	1	2	2	1	NA	7	1	1	-
GM34464-GA5	2	2	2	2	1	2	2	1	14	10	1	1	-
GM34464-GA6	2	2	2	2	1	2	2	1	17	10	1	1	-
GM34464-GA7	2	2	2	2	1	2	2	1	15	10	1	1	-
GM34464-GA8	2	2	2	2	1	2	2	1	16	11	1	1	-
GM34464-GA9	2	2	2	2	1	2	2	1	14	10	1	1	-
150RZGB													
GM49978-GA1	2	2	2	2	1	4	3	-	NA	NA	1	2	1
GM49978-GA3	2	2	2	2	1	4	3	-	18	12	1	2	1
GM49978-GA4	2	2	2	2	1	4	3	-	18	12	1	2	1

Group 1: Engine Block/Lower End



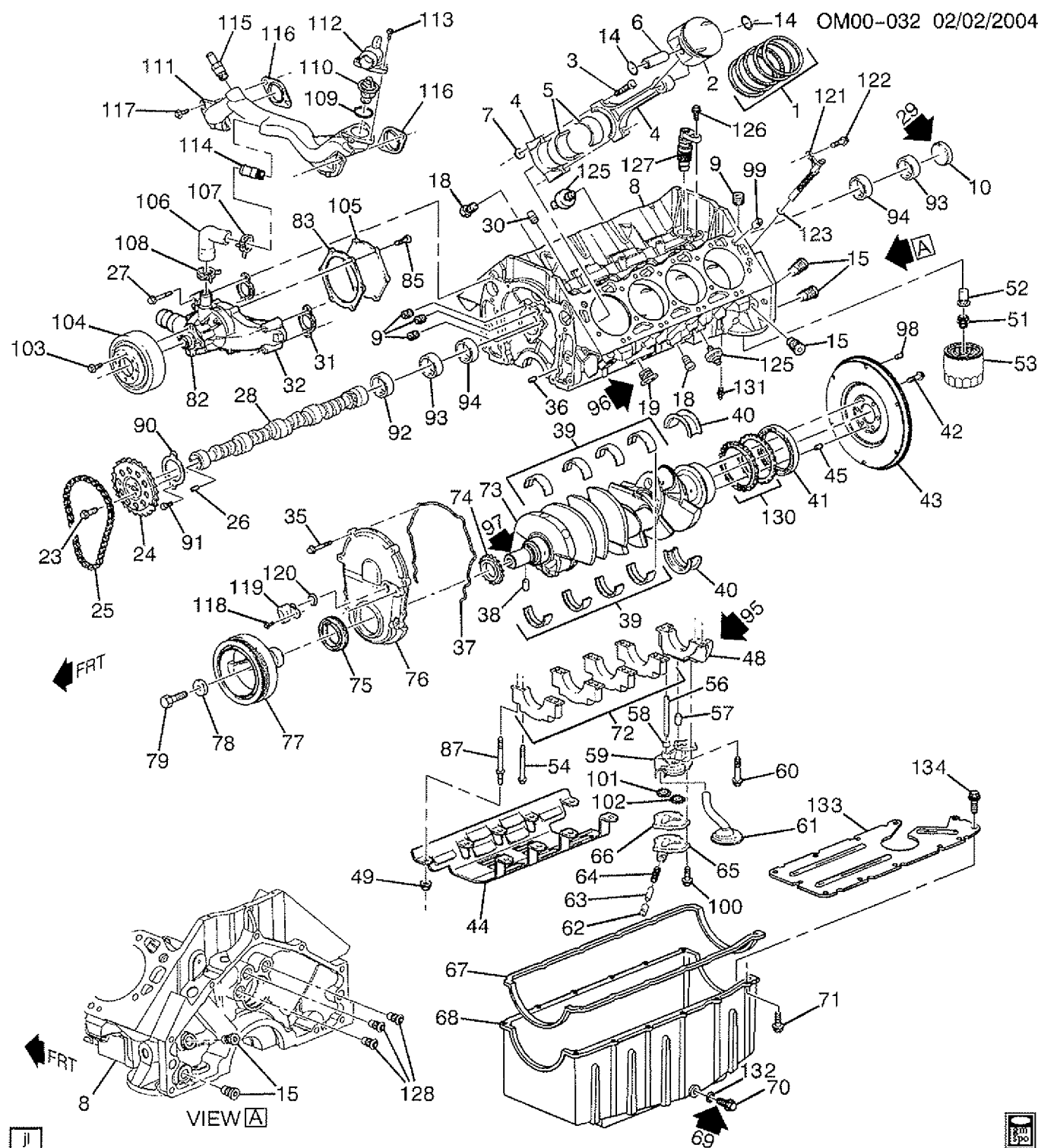
Group 1: Engine Block/Lower End

Item	Part Number	Description	Quantity	
			Variation 1	Variation 2
1	GM19028	Ring kit, piston, standard	8	8
1	GM19029	Ring kit, piston, 0.030 OS	8	8
2	GM18999	Piston w/conn rod, standard, RH	4	4
2	GM19001	Piston w/conn rod, 0.030 OS, RH	4	4
2	GM47375	Piston w/conn rod, standard, LH	4	4
2	GM19002	Piston w/conn rod, 0.030 OS, LH	4	4
3	GM47376	Bolt, conn rod, also part of 2	16	16
4	X	Not serviced separately		
5	GM19026	Bearing kit, connecting rod, standard	8	8
6	—	Not applicable		
7	GM47377	Nut, conn rod, also part of 4	16	16
9	GM18885	Plug, engine block oil galley	3	3
9	GM18886	Plug, eng. block oil galley, 1/8-27 x 3/8 NPTF	AR	AR
9	GM16510	Plug, engine block oil galley, auto drain	2	2
9	GM18887	Plug, engine block oil galley, auto drain hex head	1	1
10	GM18897	Plug, camshaft bearing hole	1	1
11	—	Not applicable		
12	—	Not applicable		
13	—	Not applicable		
14	—	Not applicable		
15	GM18925	Plug, engine block oil galley	4	4
16	—	Not applicable		
17	—	Not applicable		
18	GM66200	Plug, engine block coolant drain hole	2	2
19	GM18988	Plug, engine block coolant drain hole, LH	1	1
19	GM16504	Plug, eng. block coolant drain hole, 1/4-18 x 0.56	1	1
20	—	Not applicable		
21	—	Not applicable		
22	—	Not applicable		
23	GM18914	Bolt, camshaft sprocket with washer	3	3
24	GM19003	Sprocket, camshaft	1	1
25	GM19012	Chain, camshaft timing	1	1
26	GM16476	Pin, camshaft sprocket locator, 1/4 x 5/8	1	1
27	GM18917	Bolt, water pump, HFH, M10X1.5x65 RH	1	1
28	GM19000	Camshaft, engine (includes 22, 26, 36, 57), 80 kW	1	
28	GM32321	Camshaft, engine, 100/125 kW		1
29	GM18933	Sealer, camshaft bearing hole plug	AR	AR
30	GM18886	Plug, eng. block oil galley, 1/8-27 x 3/8 NPTF	3	3
31	GM18963	Gasket, water pump	2	2
32	GM19027	Pump kit, water (incl. 31, 82, 83, 85, 105)	1	1
33	—	Not applicable		
34	—	Not applicable		
35	GM18909	Bolt, engine front cover, M6 x 1.0 x 30	6	6
36	GM16476	Pin, engine front cover locator, 1/4 x 5/8	1	1
37	GM18951	Gasket, engine front cover, also part of 76	1	1
38	GM18986	Pin, crankshaft balancer locator	1	1
39	GM19024	Bearing kit, crankshaft, standard, pos. #1, 2, 3, 4	4	4
40	GM19025	Bearing kit, crankshaft thrust, standard, pos. #5	1	1
41	GM18971	Seal, crankshaft rear oil	1	1
42	GM18997	Bolt, flywheel, M11 x 1.5 x 29	6	6
43	See Group 4	Flywheel, engine (includes gear and locator pin)	1	1
44	GM18977	Deflector, crankshaft oil	1	1
45	GM18907	Pin, flywheel locator, part of 73	2	2
46	—	Not applicable		
47	—	Not applicable		
48	X	Not serviced separately		
49	GM18916	Nut, crankshaft oil deflector	9	9
50	—	Not applicable		
51	GM18892	Fitting, oil filter	1	1
52	GM19023	Valve, oil filter bypass	2	2
53	GM16703	Filter, oil	1	1
54	GM18953	Bolt, crankshaft bearing cap, M12 x 1.75 x 89	10	10
55	—	Not applicable		

AR As required

X Item not sold separately

Group 1: Engine Block/Lower End, continued



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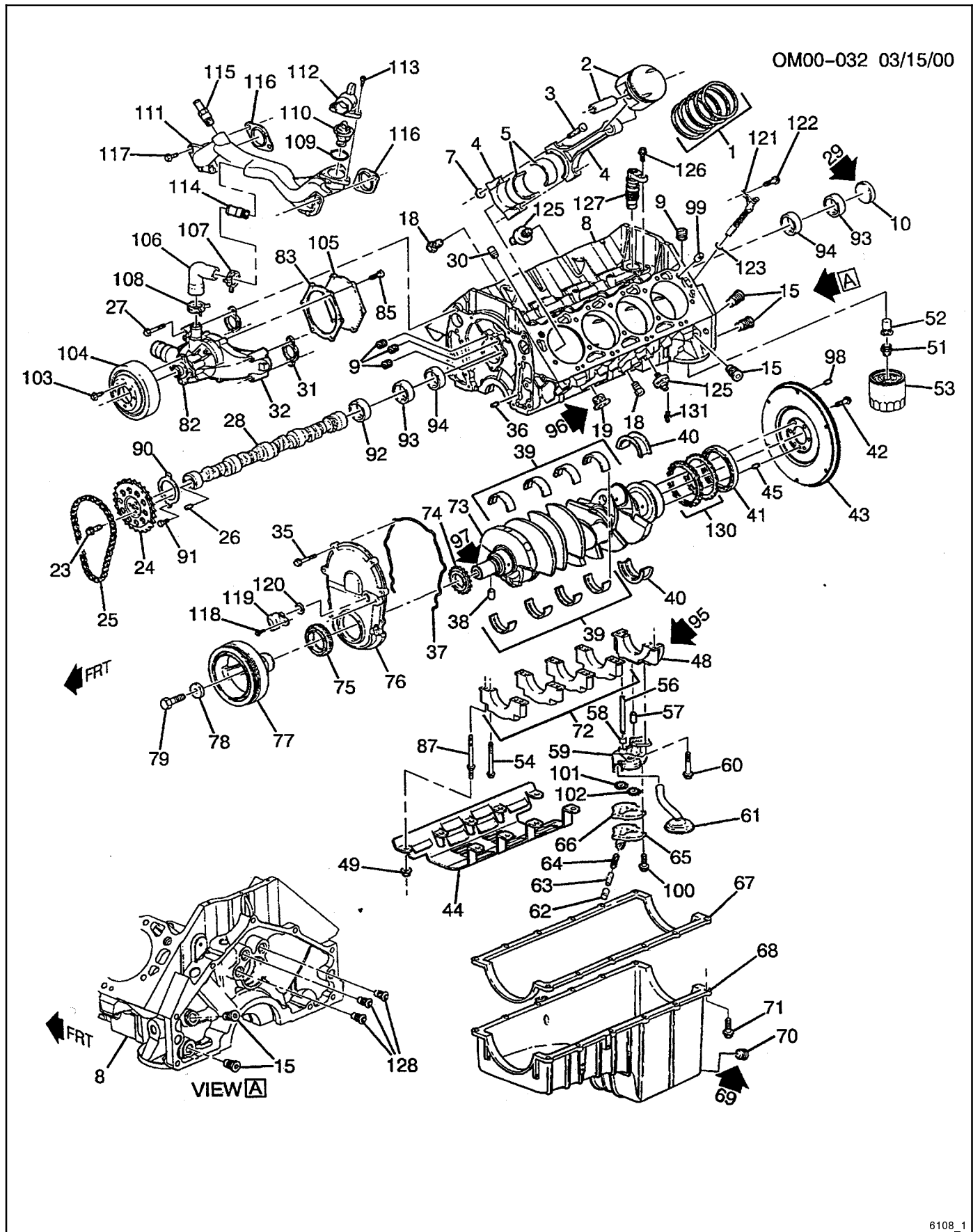
Group 1: Engine Block/Lower End, continued

Item	Part Number	Description	Quantity	
			Variation 1	Variation 2
56	GM18896	Shaft, oil pump drive	1	1
57	GM16476	Pin, oil pump locator, 1/4 x 5/8	1	1
58	GM16583	Retainer, oil pump drive shaft	1	1
59	GM18990	Pump, oil with screen	1	1
60	GM18956	Bolt, oil pump, M10 x 1.5 x 60	1	1
61	X	Not serviced separately, part of 59		
62	GM18893	Valve, oil pressure relief	1	1
63	GM18894	Spring, oil pressure relief valve	1	1
64	GM16549	Pin, oil pressure relief valve spring stay	1	1
65	GM18904	Cover, oil pump	1	1
66	X	Not serviced separately		
67	GM19009	Gasket, oil pan	1	1
68	GM18989	Pan, oil (includes pan, plug, gasket)	1	1
69	GM16430	Sealer, oil pan	AR	AR
70	GM16533	Plug, oil pan drain, 1/2-14 x 0.610	2	2
70	GM16526	Plug, oil pan drain, M12 x 1.75-6 G, 44.45 mm long	1	1
71	GM18938	Bolt, oil pan	13	13
72	X	Not serviced separately		
73	GM66251	Crankshaft (includes 94)	1	1
74	GM18982	Sprocket, crankshaft	1	1
75	GM18972	Seal, crankshaft front oil	1	1
76	GM19006	Cover, engine front (includes cover, seal, gasket)	1	1
77	GM18943	Balancer, crankshaft	1	1
78	GM19021	Washer, crankshaft balancer	1	1
79	GM19015	Bolt, crankshaft balancer, M16 x 1.5	1	1
80	—	Not applicable		
81	—	Not applicable		
82	X	Not serviced separately, part of 32		
83	X	Not serviced separately, part of 32		
84	—	Not applicable		
85	GM16513	Bolt, water pump cover, part of 32	6	6
86	—	Not applicable		
87	GM18976	Stud, crankshaft bearing cap	10	10
88	—	Not applicable		
89	—	Not applicable		
90	GM16372	Retainer, camshaft	1	1
91	GM18912	Bolt, camshaft retainer	2	2
92	GM19013	Bearing, camshaft, position #1	1	1
93	GM19014	Bearing, camshaft, position #2, 5		
94	GM18935	Bearing, camshaft, position #3, 4		
95	GM18888	Sealer, crankshaft rear main bearing	AR	AR
96	GM16430	Sealant, Loctite	AR	AR
97	GM18934	Grease, heavy duty multipurpose	AR	AR
98	GM18907	Pin, dowel flywheel locator, M6 x 20	2	2
99	GM18958	Pin, cylinder head locator, 1/2 x 5/8 OD	4	4
100	GM16422	Bolt, oil pump cover	5	5
101	X	Not serviced separately, part of 59		
102	X	Not serviced separately, part of 59		
103	GM18913	Bolt, pulley water pump	4	4
103	GM18937	Bolt, oil pump drive	1	1
104	GM18936	Pulley, fan and water pump	1	1
105	X	Not serviced separately, part of 32		
106	GM18967	Hose, therm bypass includes hose clamps	1	1
107	GM18919	Clamp, therm bypass hose, spring band 35mm silver, RH	1	1
108	GM18918	Clamp, therm bypass hose, spring band 30mm green, LH	1	1
109	See Group 3	Seal, engine coolant thermostat (O-ring)	1	1
110	See Group 3	Thermostat, engine coolant	1	1
111	GM19008	Pipe, engine coolant crossover (includes 109-110, 112-115)	1	1
112	GM18979	Outlet, water, part of 111	1	1
113	GM18914	Bolt, water outlet, part of 111	3	3
114	X	Not serviced separately		
115	GM18991	Fitting, heater hose, part of 111	1	1
116	GM18964	Gasket, engine coolant crossover	2	2

AR As required

X Item not sold separately

Group 1: Engine Block/Lower End, continued



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Group 1: Engine Block/Lower End, continued

Item	Part Number	Description	Quantity	
			Variation 1	Variation 2
117	GM18920	Bolt, engine coolant crossover	4	4
118	GM18910	Bolt, camshaft position sensor, M6 x 1 x 20	1	1
119	GM19004	Sensor, camshaft position (GM model year of 2003 and older)	1	1
119	GM75077	Sensor, Cm/Shf Posn (GM model year of 2004 and newer)	1	1
119			1	1
120	X	Not serviced separately, part of 119		
121	GM18952	Sensor, crankshaft position (includes 123)	1	1
122	GM18996	Bolt, crankshaft position sensor	1	1
123	X	Not serviced separately, part of 121		
124	—	Not applicable		
125	GM18906	Sensor, knock	2	2
126	GM18913	Bolt, oil pump drive, M8 x 1.25 x 20, heavy hex flange	4	4
126	GM18937	Bolt, oil pump drive, M8 x 1.25 x 20	1	1
127	GM19011	Drive, oil pump	1	1
128	GM18924	Plug, engine block oil galley, countersunk	3	3
129	—	Not applicable		
130	X	Not serviced separately, part of 73		
131	GM19018	Connector, engine oil cooler hose	2	2
132	GM16576	Seal, oil pan drain plug	1	1
133	GM66201	Baffle, oil pan		
134	GM66199	Bolt, oil pump cover	10	10

X Item not sold separately

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Exploded view diagram of a 4-cylinder engine assembly. The diagram shows the following components and their assembly sequence from top to bottom:

- Valvetrain Components:** Includes the intake manifold (8), valve cover (9), and various valves (10, 11, 12, 13, 15, 50, 57) with their respective springs and retainers.
- Cylinder Head:** The main upper block (29) with four combustion chambers. It includes the head gasket (30) and various mounting points for the valves and timing belt.
- Timing Belt and Drive Components:** The timing belt (35) is shown with its tensioner (36) and guide (37). The crankshaft pulley (38) and other timing components (40, 41, 42, 43, 44, 45, 46) are also shown.
- Block and Lower Components:** The engine block (69) is shown with the crankshaft (70) and connecting rods (71, 72, 73, 74). The oil pan (75) is shown at the bottom.
- Accessory Drive Components:** The water pump (76) and alternator (77) are shown mounted on the front of the engine.
- Other Components:** Various bolts, nuts, and washers (e.g., 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112) are shown in their respective positions.

VIEW A
CYLINDER HEAD
BOLT POSITION

The inset diagram shows the bolt positions for the cylinder head. It is a top-down view of the cylinder head (29) showing the locations of the 18 bolts (18) used to secure the head gasket (30) and the head to the block (69). The bolts are arranged in two rows of nine, with the top row (18) and bottom row (19) labeled.

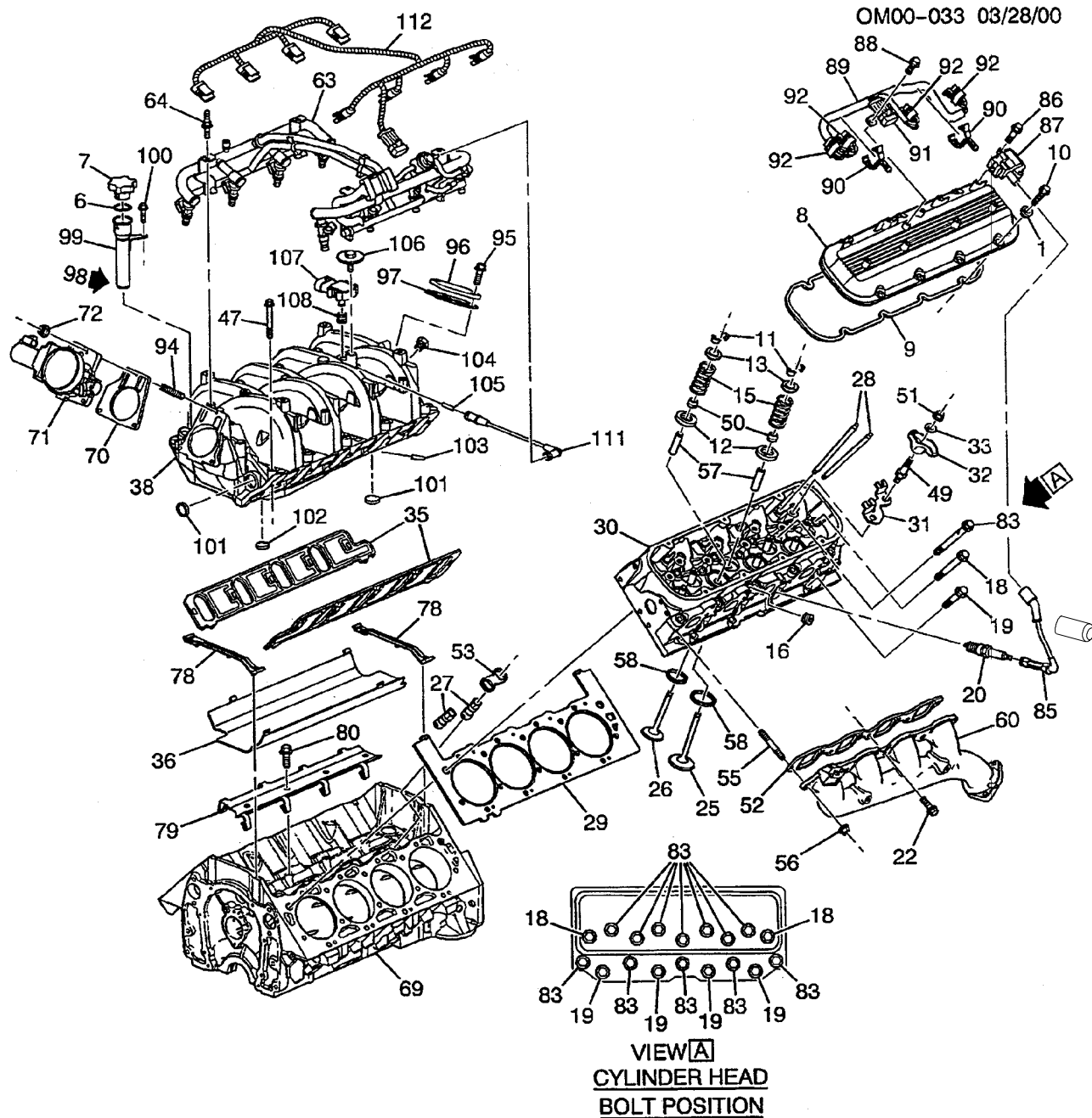
Group 2: Engine Head/Upper End

Item	Part Number	Description	Quantity	
			Variation 1	Variation 2
1	GM18957	Gasket, valve rocker arm cover bolt	14	14
2	—	Not applicable		
3	—	Not applicable		
4	—	Not applicable		
5	—	Not applicable		
6	X	Not serviced separately, part of 7		
7	GM18905	Cap, oil filler (includes 6)	1	1
8	GM18973	Cover, valve rocker arm (includes gasket)	2	2
9	GM18974	Gasket, valve rocker arm cover, part of 8	2	2
10	GM18975	Bolt, valve rocker arm cover, M6 x 1.0 x 26	14	14
11	GM18895	Key, valve stem	32	32
12	GM18903	Rotator, valve	8	8
13	GM18902	Cap, valve spring	8	8
14	—	Not applicable		
15	GM19005	Spring, valve	1	1
16	GM16533	Plug, cylinder head core hole, 1 /2-14 x 0.610 std	2	2
17	—	Not applicable		
18	GM18922	Bolt, cylinder head, pos #15, 18	4	4
19	GM18923	Bolt, cylinder head, pos #4, 5, 12, 13	8	8
20	GM16711	Spark plug	8	
20	GM22171	Spark plug, 125 kW		8
21	—	Not applicable		
22	#	Bolt, exhaust manifold, 8 x 1.25 x 30	16	16
23	GM18958	Pin, cylinder head locator, 1/2 x 5/8 OD	4	4
24	—	Not applicable		
25	GM18950	Valve, intake, standard	8	8
25	GM18992	Valve, Intake, 0.003 in., OS	8	8
25	GM18993	Valve, Intake, 0.015 in., OS	8	8
25	GM18994	Valve, Intake, 0.030 in., OS	8	8
26	GM18962	Valve, exhaust, standard	8	8
26	GM18968	Valve, exhaust, 0.003 in., OS	8	8
26	GM18969	Valve, exhaust, 0.015 in., OS	8	8
26	GM18970	Valve, exhaust, 0.030 in., OS	8	8
27	GM19020	Lifter, valve	16	16
28	GM18946	Rod, valve push, intake	8	8
28	GM18947	Rod, valve push, exhaust	8	8
29	GM18959	Gasket, cylinder head LH	1	1
29	GM18960	Gasket, cylinder head RH	1	1
30	GM18983	Head, cylinder (incl. seats and guides) RH	1	1
30	GM18984	Head, cylinder (incl. seats and guides) LH	1	1
31	GM18995	Guide, valve lifter push rod	8	8
32	GM18948	Arm, valve rocker	16	16
33	GM18949	Ball, valve rocker arm	16	16
34	—	Not applicable		
35	GM19030	Gasket, intake manifold (set of 2)	1	
35	GM47739	Gasket w/flame arrestor, intake manifold (qty.1)		2
36	GM18980	Shield, intake manifold oil splash	1	1
37	—	Not applicable		
38	GM18998	Manifold, intake	1	
38	GM66245	Manifold, intake		1
39	—	Not applicable		
40	—	Not applicable		
41	—	Not applicable		
42	—	Not applicable		
43	—	Not applicable		
44	—	Not applicable		
45	—	Not applicable		
46	—	Not applicable		
47	GM18987	Bolt, intake manifold, lower intake to cylinder head	10	10
48	—	Not applicable		
49	GM19010	Stud, valve rocker arm pivot	16	16
50	GM18945	Seal, valve stem oil	1	1
51	GM16521	Nut, valve rocker arm, nonadjustable	12	12
52	GM19721	Gasket, exhaust manifold	2	2
53	GM18940	Guide, valve lifter, restrictor valve rotator	8	8

X Item not sold separately

Common hardware; procure locally

Group 2: Engine Head/Upper End, continued



6108_2

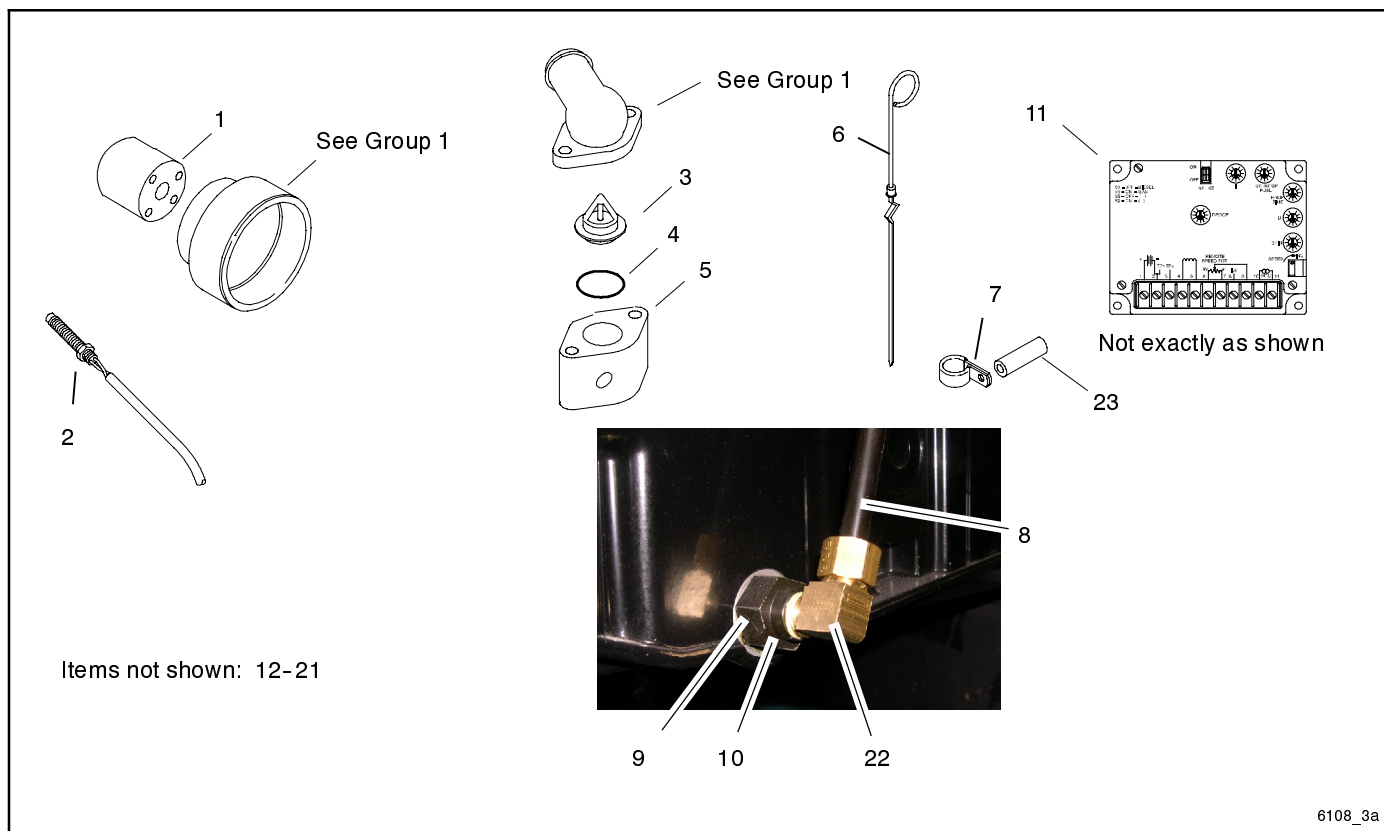
Group 2: Engine Head/Upper End, continued

Item	Part Number	Description	Quantity	
			Variation 1	Variation 2
54	—	Not applicable		
55	—	See item 22	14	14
56	—	See item 22	14	14
57	X	Not serviced separately, part of 30		
58	X	Not serviced separately, part of 30		
59	—	Not applicable		
60	GM19722	Manifold, exhaust	1	
60	GM28927	Manifold, exhaust, 125/150 kW		1
61	—	Not applicable		
62	—	Not applicable		
63	—	Not applicable		
64	GM18900	Stud, fuel injection rail	2	2
65	—	Not applicable		
66	—	Not applicable		
67	—	Not applicable		
68	—	Not applicable		
70	GM18939	Gasket, throttle body	1	1
71	—	Not applicable		
72	GM18890	Nut, throttle body	3	3
73	—	Not applicable		
74	—	Not applicable		
75	—	Not applicable		
76	—	Not applicable		
77	—	Not applicable		
78	GM75613	Intake manifold end gasket	2	2
79	GM18941	Retainer, valve lifter guide, restrictor	1	1
80	GM18914	Bolt, valve lifter guide retainer	7	7
81	—	Not applicable		
82	—	Not applicable		
83	GM18921	Bolt, cylinder head, position #1, 2, 3, 6-11, 14, 16, 17	24	24
84	—	Not applicable		
85	GM28582	Wire, spark plug	8	8
85	GM48779	Metal boot, spark plug wire	8	8
85	GM18928	Retainer, spark plug wire	12	12
86	GM18955	Bolt, ignition coil	16	16
87	GM18966	Coil, ignition (engine model year 2002)	8	8
87	GM38393	Coil, ignition (engine model year 2003-)	8	8
88	GM18908	Bolt, wiring harness bracket	4	4
89	GM19017	Harness, ignition coil wiring (engine model year 2002 and older)	1	1
89	GM79143	Harness, ignition coil wiring (engine model year 2003-)	1	1
90	GM18929	Clip, wiring harness	1	1
91	GM18926	Connector, inline to engine harness	1	1
92	GM18927	Connector, coil ignition	4	4
93	—	Not applicable		
94	GM18942	Stud, throttle body	3	3
95	GM18938	Bolt, EGR valve opening cover	2	2
96	GM18981	Cover, EGR valve opening	1	1
97	GM18965	Gasket, EGR valve opening cover	1	1
98	GM18933	Sealer, oil fill tube	AR	AR
99	GM19007	Tube, oil filler	1	1
100	GM18911	Bolt, oil filler tube, M6 x 1 x 20	1	1
101	GM18889	Plug, int manifold, (must use with GM18933 sealant)	2	2
102	GM18891	Plug, int manifold (must use with GM18933 sealant)	1	1
103	X	Not serviced separately, part of 38		
104	GM18901	Plug, int manifold (must use with GM18933 sealant)	1	1
105	—	Not serviced separately		
106	GM18899	Bolt, map sensor	3	3
107	GM18898	Sensor, map (includes 108)	1	1
108	GM19019	Seal, map sensor, part of 106	1	1
109	—	Not applicable		
110	—	Not applicable		
111	GM18985	Hose, fuel pressure reg vac	1	1
112	—	Not applicable		

X Item not sold separately

AR As required

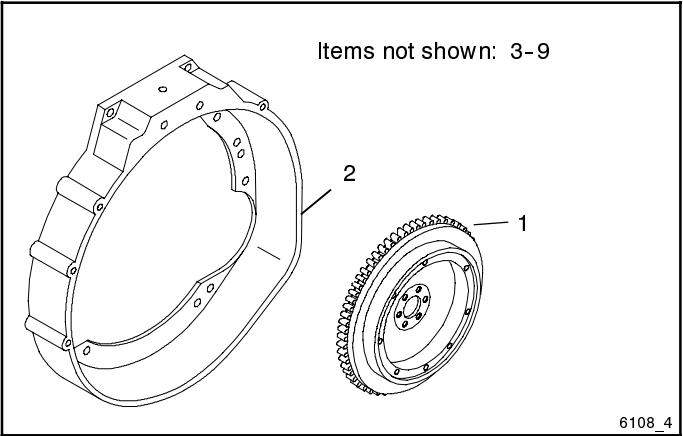
Group 3: Engine Trim Parts



Item	Part Number	Description	Quantity		
			Variation		
			1	2	3
1	GM16147	Spacer, fan	1	1	1
2	GM16113	Sensor, magnetic speed, 5/8-18	1	1	1
3	GM19726	Thermostat, 160°	1	1	1
4	GM19727	O-ring, water sensor tube	1	1	1
5	GM19725	Housing, sensor	1	1	1
6	GM19761	Dipstick, modified	1	1	1
7	GM16154	Clamp, steel tube, 3/8 in.	1	1	1
8	GM19762	Tube, dipstick modified	1	1	1
9	GM19731	O-ring, dipstick adapter	1	1	1
10	GM19734	Adapter, M12-1.75 to 1/4-18 FPT	1	1	1
11	GM19457	Controller, governor, DPG	1		
12	GM16118	Plug, 1/2 in. NPT, brass	2	2	2
13	GM19760	Label, PSI serial number	1	1	1
14	#	Bolt, M8-1.25 x 80, socket head, grade 8.8	4	4	4
15	#	Washer, lock 5/16	3	3	3
16	#	Bolt, M8-1.25 x 90, hex head, grade 8.8	3	3	3
17	#	Washer, flat, 5/16 USS	1	1	1
18	#	Washer, lock, 5/16	1	1	1
19	#	Bolt, M8-1.25 x 40, hex head, grade 8.8	1	1	1
21	GM28906	Sensor, map		1	
22	GM19735	Fitting, 3/8 in., 90° elbow	1	1	1
23	GM19730	Spacer, dipstick tube mounting	1	1	1

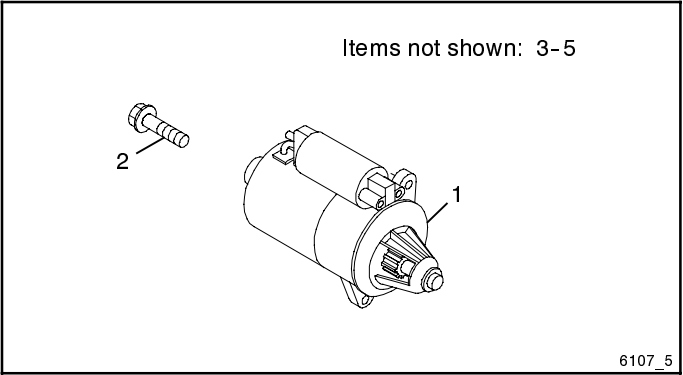
Common hardware; procure locally.

Group 4: Flywheel



Item	Part Number	Description	Quantity	
			Variation	
			1	2
1	GM19764	Flywheel assembly	1	
1	GM28886	Flywheel assembly (SAE10-11.5)		1
2	GM16135	Housing, flywheel, SAE3	1	1
3	GM19723	Plate, cover	1	1
4	#	Washer, flat, 1/4 in., SAE	4	4
5	#	Washer, lock, 1/4 in., SAE	4	4
6	#	Bolt, 1/4-20 x 3/4, hex head, grade 5	4	4
7	#	Bolt, M10-1.5 x 30, socket head, grade 5	6	6

Group 5: Starter



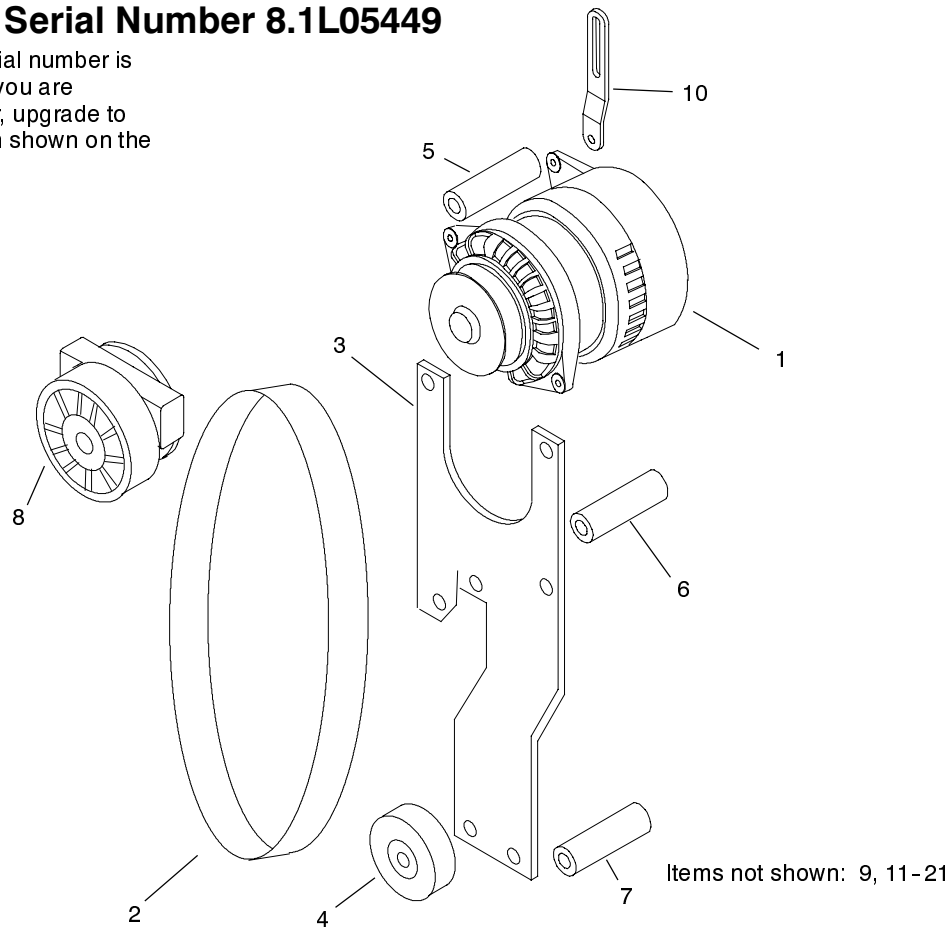
Item	Part Number	Description	Quantity	
			Variation	
			1	
1	GM59864	Starter	1	
2	GM17378	Bolt, starter, special	2	
3	#	Nut, M5-0.80	1	
4	#	Washer, lock, M5	1	
5	#	Nut, flanged, M8-1.25	1	

Common hardware; procure locally.

Group 6: Alternator, Pulley, and Belt

Below Engine Serial Number 8.1L05449

Note: If the engine serial number is below 8.1L05449 and you are replacing the alternator, upgrade to the newer drive system shown on the following page.



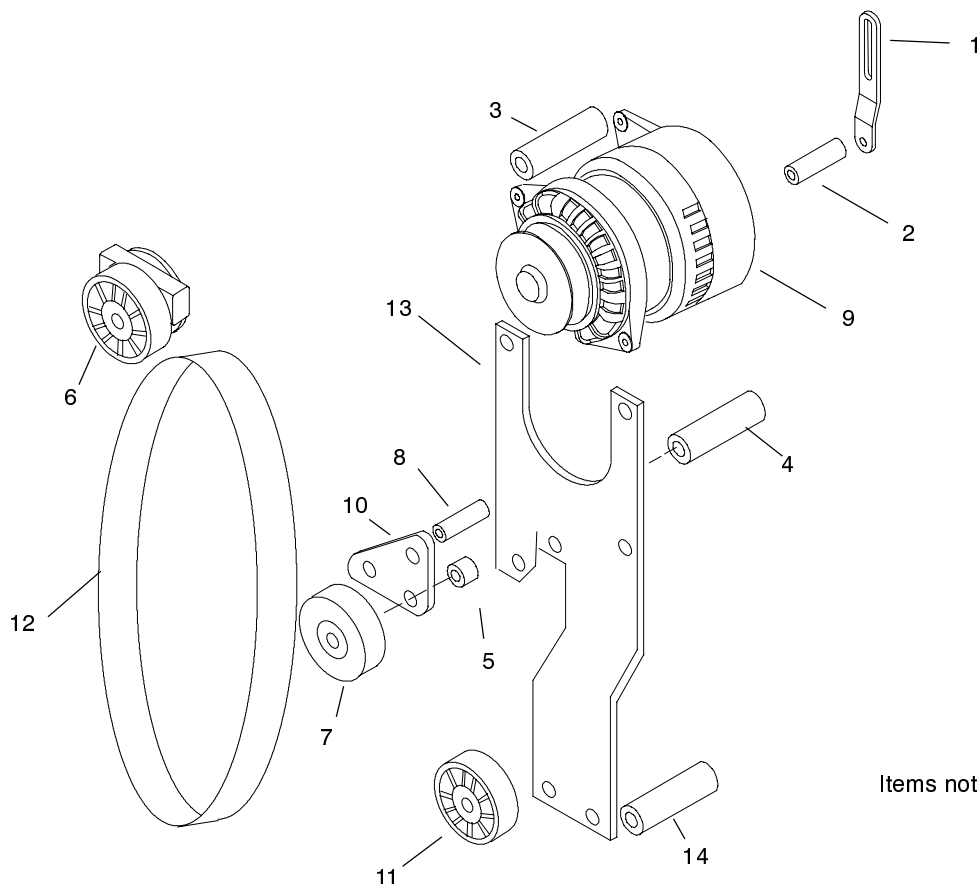
6108_6_1

Item	Part Number	Description	Quantity
			Variation 1
1	GM16180	Alternator, 7SI (see note above)	1
2	GM22993	Belt, fan	1
3	GM19740	Plate, alternator mounting	1
4	GM19741	Pulley, idler	1
5	GM19742	Spacer, 0.437 ID x 2.343 in.	1
6	GM19743	Spacer, 0.437 ID x 2.906 in.	1
7	GM19744	Spacer, 0.437 ID x 3.718 in.	1
8	GM19746	Pulley, tensioner	1
9	GM19747	Spacer, alternator mounting, 0.375 ID x 2.19 in.	1
10	GM19748	Brace, alternator	1
11	#	Nut, M6-1.0	1
12	#	Bolt, M8-1.25 x 30, hex head, grade 8.8	1
13	#	Nut, flanged, M8-1.25	1
14	#	Washer, lock, 5/16	2
15	#	Bolt, M10-1.50 x 90, hex head, grade 8.8	1
16	#	Washer, lock, M10	5
17	#	Bolt, M10-1.50 x 100, hex head, grade 8.8	1
18	#	Bolt, M10-1.50 x 40, hex head, grade 8.8	2
19	#	Nut, flanged, M10-1.50	1
20	#	Bolt, M8-1.25 x 110, hex head, grade 8.8	1
21	#	Bolt, M10-1.50 x 120, hex head, grade 8.8	1

Common hardware; procure locally.

Group 6: Alternator, Pulley, and Belt

As of Engine Serial Number 8.1L05449



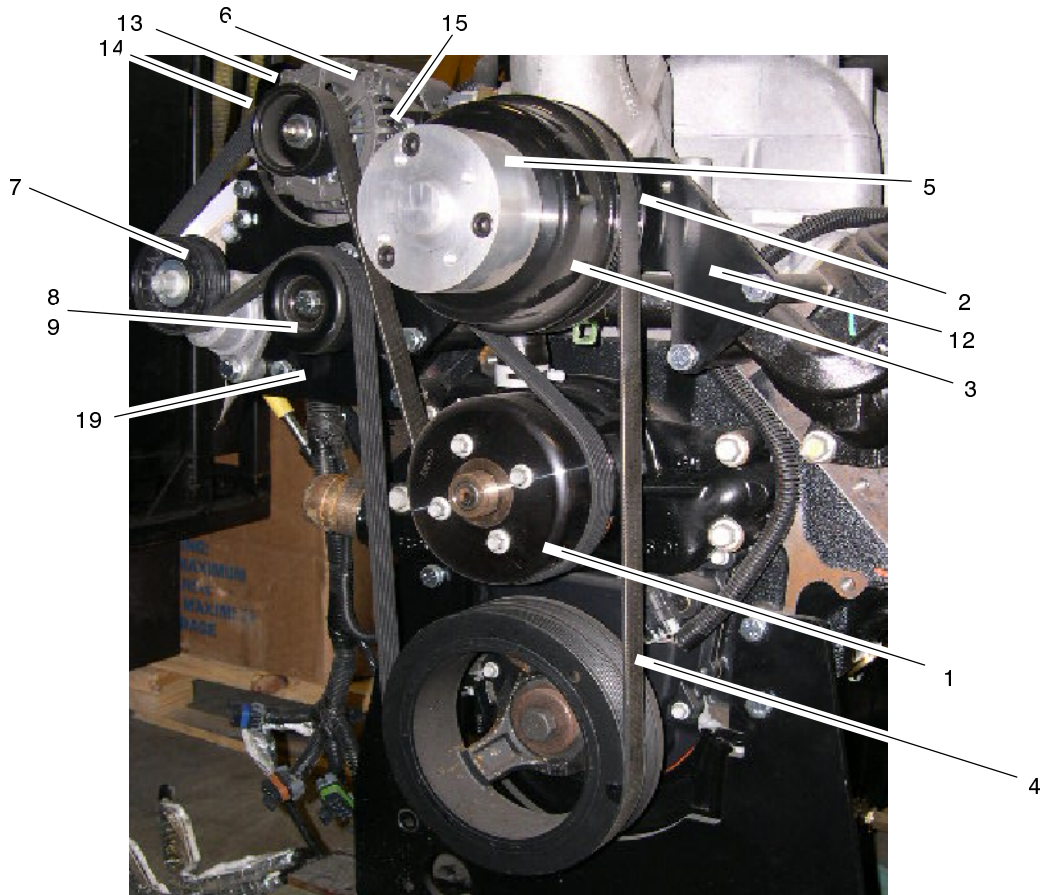
Items not shown: 15-26

6108_6_2

Item	Part Number	Description	Quantity		
			Variation		
			1	2	3
1	GM19748	Brace, alternator	1	1	1
2	GM19742	Spacer, 0.437 ID x 2.343 in.	1	1	1
3	GM19747	Spacer, alternator mounting	1	1	1
4	GM19743	Spacer, 0.437 ID x 2.906 in.	1	1	1
5	GM23421	Spacer, idler short	1	1	1
6	GM19746	Pulley, tensioner	1	1	1
7	GM19741	Pulley, idler	1	1	1
8	GM23420	Spacer, idler long	1	1	1
9	GM16180	Alternator, 70-amp	1	1	1
10	GM23423	Plate, idler	1	1	1
11	GM16121	Pulley, idler	1	1	1
12	GM19739	Belt	1		
12	GM65427	Belt, 76 in.			1
12	GM16132	Belt		1	
13	GM19740	Plate, alternator mounting	1	1	1
14	GM19744	Spacer, 0.437 ID x 3.718 in.	1	1	1
15	#	Nut, M6-1.0	1	1	1
16	#	Bolt, M8-1.25 x 30, hex head, grade 8.8	1	1	1
17	#	Nut, flanged, M8-1.25	1	1	1
18	#	Washer, lock, 5/16	2	1	2
19	#	Bolt, M10-1.50 x 90, hex head, grade 8.8	1		1
20	#	Washer, lock, M10	5	5	5
21	#	Bolt, M10-1.50 x 100, hex head, grade 8.8	1		1
22	#	Bolt, M10-1.50 x 40, hex head, grade 8.8	2	2	2
23	#	Nut, flanged, M10-1.50	1	2	1
24	#	Bolt, M8-1.25 x 110, hex head, grade 8.8	1	1	1
25	#	Bolt, M10-1.50 x 120, hex head, grade 8.8	1	3	1
26	GM23422	Washer, idler	1	1	1

Common hardware; procure locally.

Group 6: Alternator, Pulley, and Belt, 150 kW

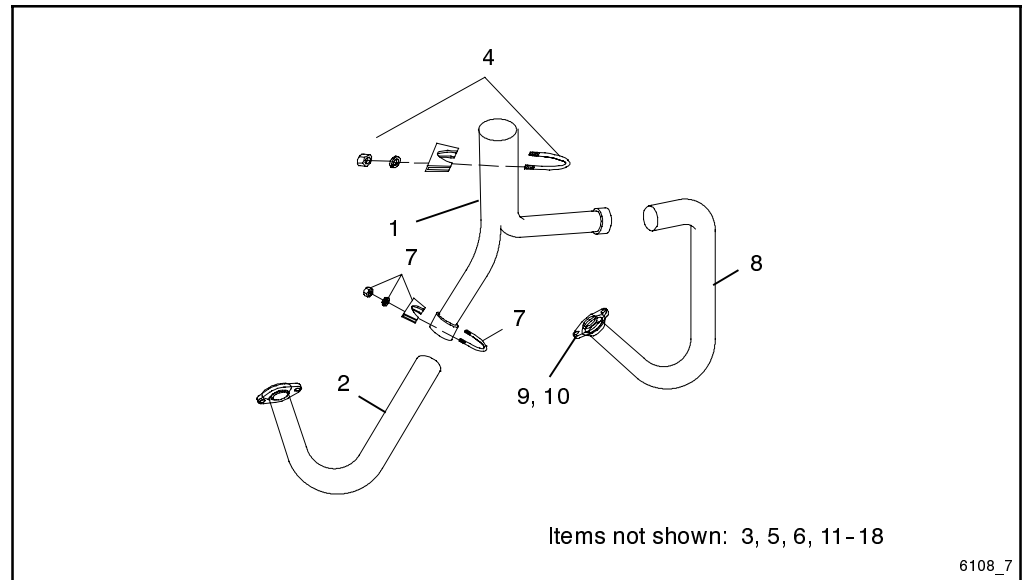


Items 10, 11, 16, 17, 18 are not shown.

6108_6_3

Item	Part Number	Description	Quantity
			Variation 4
1	GM66202	Pulley, water pump/fan	1
2	GM66203	Bearing assembly, hsg, hub	1
3	GM66204	Pulley, hi-fan drive	1
4	GM66205	Belt, poly-6V, 97.5 in.	1
5	GM66206	Spacer, fan	1
6	GM16180	Alternator, 7SI	1
7	GM19746	Pulley, tensioner	1
8	GM39234	Pulley, idler	1
9	GM39236	Dust shield, idler	1
10	GM66225	Spacer, 0.437 ID x 3.375 in.	1
11	GM66226	Spacer, 0.437 ID x 3.688 in.	1
12	GM66228	Plate, hi-fan mounting	1
13	GM66229	Eye, lifting, front	1
14	GM66230	Spacer, block	1
15	GM66231	Support, alternator	1
16	GM66232	Spacer, idler	1
17	GM66233	Spacer, tension plate	1
18	GM66234	Spacer, fan plate	1
19	GM66235	Plate, tensioner	1

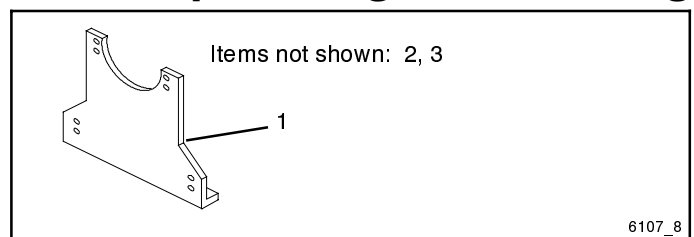
Group 7: Intake and Exhaust System



Item	Part Number	Description	Quantity		
			Variation		
			1	2	3
1	GM19749	Pipe, Y	1		
2	GM19750	Pipe, left hand	1		
2	GM28922	Pipe, left side (w/Y section)		1	
2	-	Pipe (not sold separately; order item 19)			1
3	GM19751	Bracket, mounting	1		
4	GM19752	Clamp, muffler, 3 1/2 in.	1	1	
5	GM19753	Spacer, 0.437 ID x 0.375 in.	2		
6	GM19754	Spacer, 0.437 ID x 0.875 in.	2		
7	GM19755	Kit, exhaust installation	1		
7	GM28921	Clamp, muffler (U-bolt), 2 1/2 in.		1	
8	GM19759	Pipe, right hand	1		
8	GM28923	Pipe, right side		1	
8	-	Pipe (not sold separately; order item 19)			1
9	GM28931	Flange		1	
10	GM28932	Gasket, exhaust		2	2
11	See Group 2	Gasket, exhaust manifold	2	2	2
12	See Group 2	Manifold, exhaust	2	2	2
13	GM23738	Bolt, M8-1.25 x 30, hex head, grade 8.8	16	16	16
14	#	Washer, flat 5/16 in., hardened	16	16	
15	#	Bolt, M10-1.50 x 30, hex head, grade 8.8	6	2	
16	#	Washer, lock, M10	6		
17	#	Bolt, M10-1.50 x 35, hex head, grade 8.8	2		
18	#	Bolt, M10-1.50 x 50, hex head, grade 8.8	2		
19	GM66237	Kit, exhaust pipe assembly			1

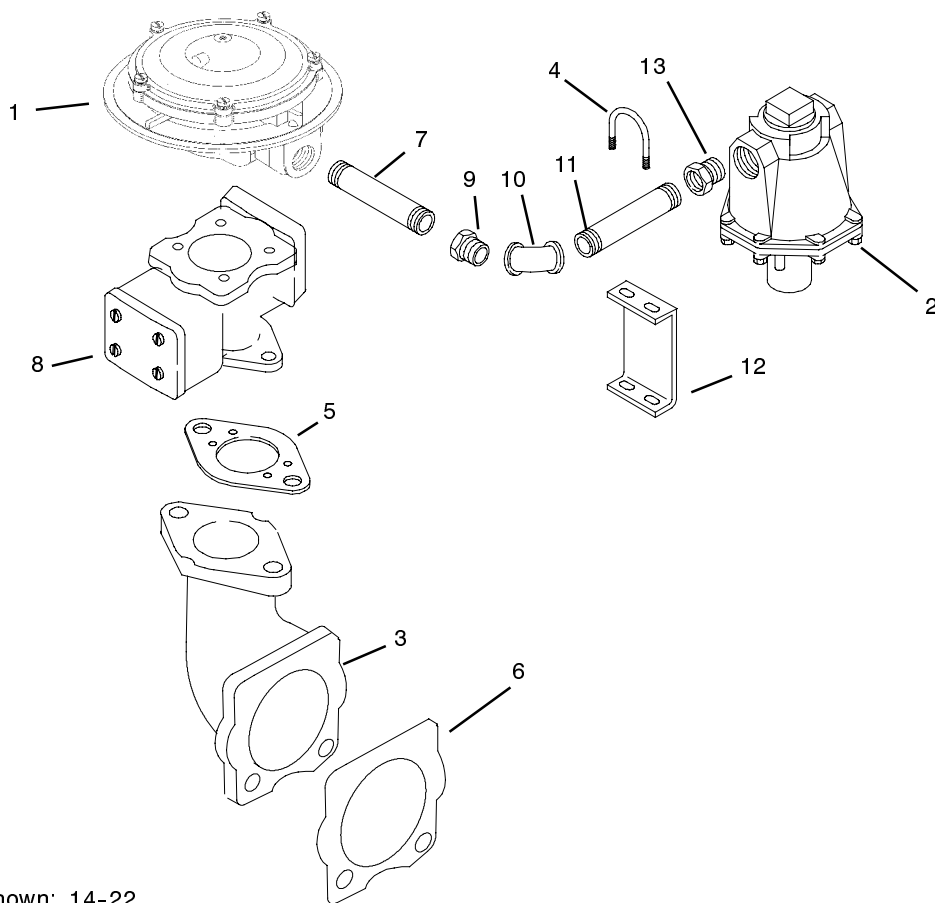
Group 8: Engine Mounting

Item	Part Number	Description	Qty.
			Var. 1
1	GM19724	Mount, front engine	1
2	#	Bolt, M10-1.50 x 30 hex head, grade 8.8	4
3	#	Washer, lock M10	4



Common hardware; procure locally.

Group 9: Fuel System, 80/100 kW



Items not shown: 14-22

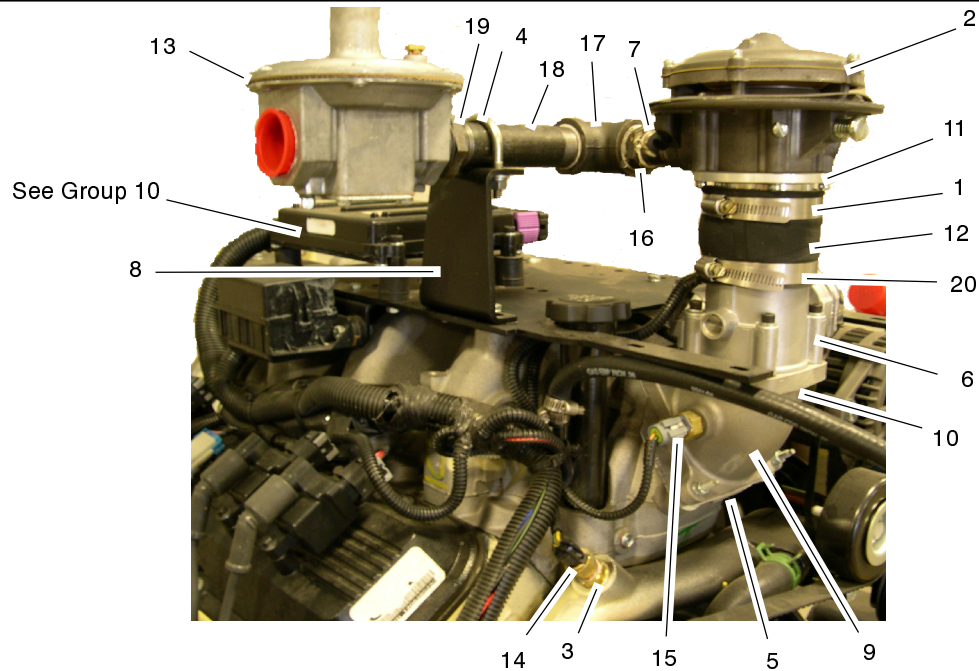
6108_9

Item	Part Number	Description	Quantity	
			Variation	
			1	2
1	GM16165	Mixer, natural gas, complete assembly*	1	
1	GM17382	Mixer, LP, complete assembly*		1
2	GM19728	Regulator, fuel	1	1
3	GM19729	Adapter, manifold	1	1
4	GM16177	U-bolt, w/o plate	1	1
5	GM19732	Gasket, manifold adapter	1	1
6	GM19733	Gasket, intake manifold to adapter	1	1
7	GM19736	Pipe, nipple, 3/4 x 3 in.	1	1
8	GM19737	Valve, air	1	1
9	GM16205	Bushing, reducer	1	1
10	GM16207	Pipe, 1 in. fitting elbow, 90°	1	1
11	GM19756	Pipe, nipple, 1 x 5 1/2 in.	1	1
12	GM19757	Bracket, pipe support	1	1
13	GM19758	Bushing, 1 1/4 x 1	1	1
14	#	Nut, M6-1.0	3	3
15	#	Washer, flat 1/4 in. SAE	2	2
16	#	Washer, lock 1/4 in. SAE	2	2
17	#	Bolt, 1/4-20 x 3/4, hex head	2	2
18	#	Washer, lock, 5/16	4	4
19	#	Nut, 5/16-18	2	2
20	#	Washer, flat 5/16	2	2
21	#	Bolt, 5/16-18 x 1 1/4, hex head	2	2
22	#	Washer, lock, M8	3	3

Common hardware; procure locally.

* Mixer components are shown on following page.

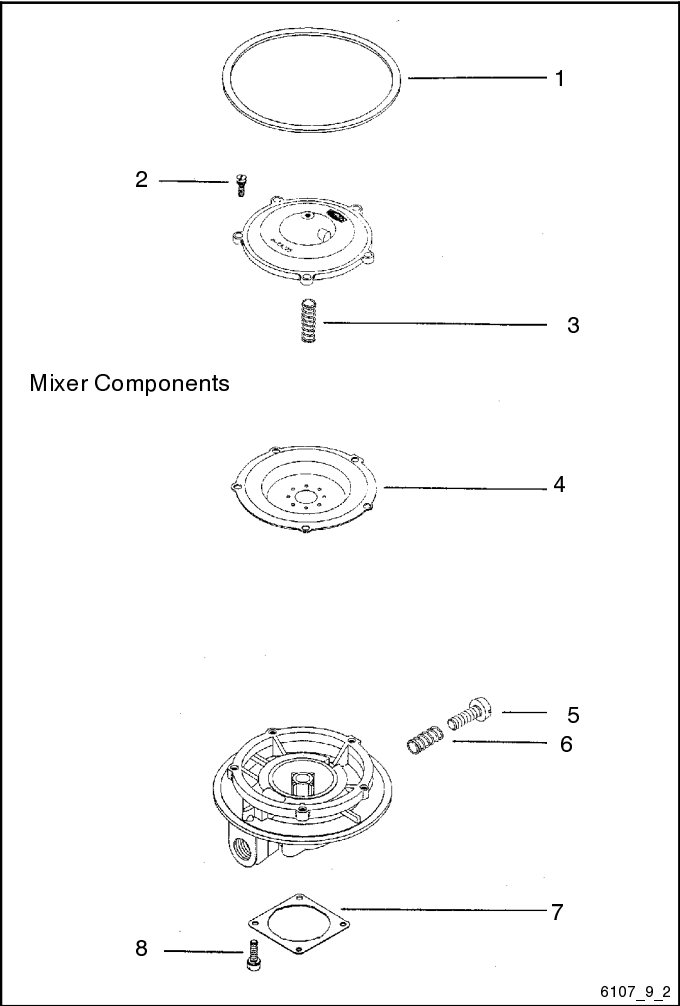
Group 9: Fuel System, 80/100 kW



6107_9_3

Item	Part Number	Description	Quantity Variation					
			5	6	7	8	11	12
1	GM28887	Clamp, hose S-52 3 1/2 in.	1		1			1
1	GM29581	Clamp, hose S-64 4 1/4 in.		1		1		1
1	GM29601	Clamp, 2 3/4-3 5/8 in.					1	
2	GM24538	Mixer, NG	1					
2	GM29593	Mixer, NG		1				
2	GM17382	Mixer, LP gas			1			
2	GM28969	Mixer, LP gas				1		1
2	GM66218	Mixer, venturi horiz. 60 insert					1	
3	GM24341	Fitting, 1/2 MPT x 3/8 FPT bushing	1	1				1
4	GM16177	U-bolt, 5/16 x 1 3/8 x 2 1/2 in.	1	4	1	4	1	1
5	GM19733	Gasket (intake manifold to adapter)	1	1	1	1	1	1
6	GM29586	Valve, throttle, 60 mm	1	1	1	1	1	1
7	GM29587	Pipe, nipple, 3/4 x 2 in.	1		1			
7	GM24548	Pipe, nipple, 1 x 2 in.		1				1
7	GM29612	Pipe, nipple, 1 x 1 1/2 in.				1		
7	GM24187	Valve, line load (not shown)					1	
8	GM29590	Bracket, pipe support	1	1	1	1		1
8	GM66216	Bracket, pipe support					1	
9	GM29591	Adapter, manifold (cast)	1	1	1	1	1	1
10	GM29592	Gasket (manifold adapter)	1	1	1	1	1	1
11	GM29594	Adapter, mixer to throttle body	1		1			
11	GM29589	Adapter, 475 mixer		1		1		1
12	GM29595	Hose, mix adapter to throttle body	1		1			
12	GM29588	Hose, 475 to valve		1		1		1
12	GM66217	Hose, reducer					1	
13	GM29596	Regulator, RV61	1	1	1	1		1
13	GM25971	Regulator						1
13	GM35948	Spring, LPGV RV81 regulator (not shown)						1
13	GM35948	Spring, CA55 (not shown)						1
13	GM65748	Regulator, Maxitrol ES492 x 1 in.					1	
14	GM29608	Sensor, coolant	1	1	1	1	1	1
15	GM29609	Sensor, inlet air	1	1	1	1	1	1
16	GM16205	Bushing, reducing, 1 NPT-3/4 in.	1		1			
16	GM24551	Pipe, nipple, 1 in.					1	
17	GM16207	Pipe, 1 in. fitting elbow	1	1	1	1	1	
18	GM19756	Pipe, nipple, 1 x 5 1/2 in.	1	1	1	1		1
18	GM16203	Pipe, nipple, 1 x 6 in.					1	
19	GM19758	Bushing, 1 1/4-1 in.	1	1	1	1		1
20	GM28887	Clamp, hose, S-52 3 1/2 in.	1	1	1	1		
20	GM29601	Clamp, 2 3/4-3 5/8 in.					1	
21	GM24550	Fitting, pipe tee 1 x 1 x 1 in. (not shown)						1
22	GM25973	Bushing, reducing (not shown)						1

Group 9: Fuel System (Mixer), 80/100 kW



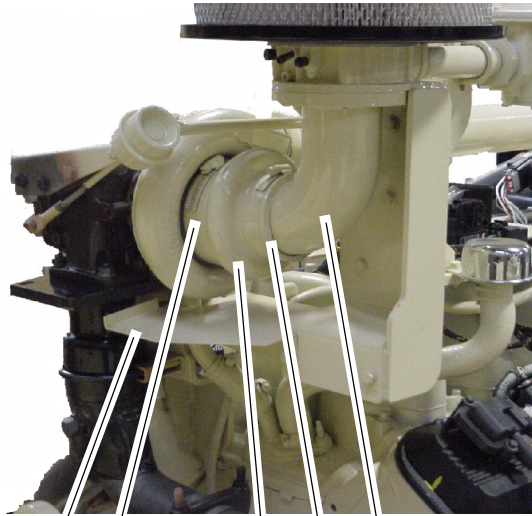
Item	Part Number	Description	Quantity	
			Variation	
			1	2
1	GM17393	Gasket, mixer to air horn	1	1
2	GM17388	Screw, 10-24 x 5/8, SEMS	5	5
3	GM17394	Spring, air valve	1	1
4	GM17384	Diaphragm, silicone, natural gas	1	
4	GM17009	Diaphragm, silicone, LP		1
5	GM17390	Idle screw	1	1
6	GM17391	Spring, idle screw	1	1
7	GM17395	Gasket, throttle body to mixer	1	1
8	GM17396	Screw, 12-24 x 5/8, SEMS	4	4

Group 9: Fuel System, 100 kW LPG Liquid

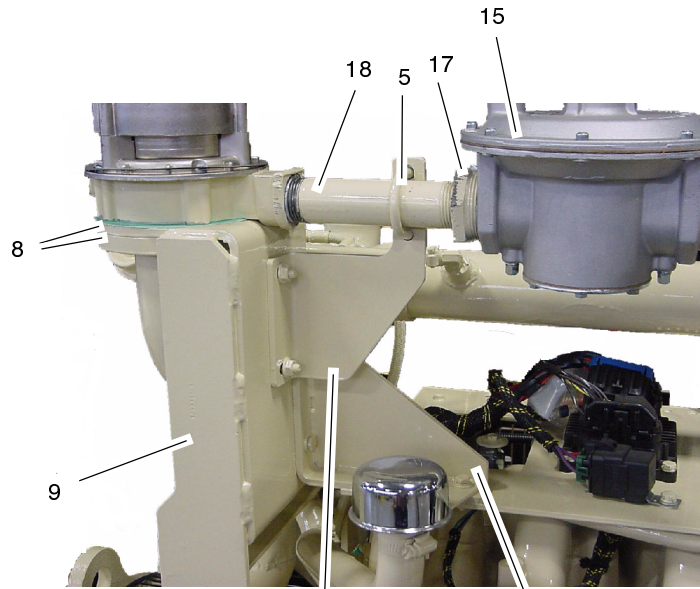
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Item	Part Number	Description	Quantity
			Variation 13
1	GM24335	Hose	1
2	GM28887	Clamp, hose, 3 1/2 in.	1
3	GM29581	Clamp, hose, S-64 4 1/4 in.	1
4	GM16144	Clamp, hose, 1 in.	1
5	GM36134	Sleeve, thermo	1
6	GM24337	Fitting, 1/4 MPT x 3/8 SAE male flare	1
7	GM24338	Fitting, 1/4 MPT x 3/8 SAE flare 90° elbow	1
8	GM28949	Fitting, 5/8 bead hose x 3/8 MPT x 90	1
9	GM28950	Fitting, 1/2 MPT x 5/8 in. beaded hose	1
10	GM24340	Fitting, 5/8 beaded hose x 3/8 MPT	1
11	GM60248	Reducer, brass, 1/2 to 3/8	1
12	GM19733	Gasket, intake manifold to adapter	1
13	GM24345	Valve, LPG	1
14	GM24348	Fitting, 1 in. MPT x 1 in. barb hose, elb plas	1
15	GM24350	Hose, vapor w/wire 1 in. ID	1
16	GM28765	Converter, LPG liquid	1
17	GM28895	Clamp, hose, 13/16-1 1/2 in.	1
18	GM28954	Nipple, pipe 1/2 x 4 in. blk.	1
19	GM28955	Pipe, 1/2 in. MPT sq. hd. plug, blk.	1
20	GM28956	Tee, fitting, 1/2 x 1/2 x 1/2 in. pipe, blk.	1
21	GM28957	Pipe, closed nipple, 1/2 in.	1
22	GM28958	Fitting, 1/2 FPT 90° elbow, blk.	1
23	GM36135	Tube, fuel 3/8 in. stl w/firenuts	1
24	GM29586	Valve, 60 mm	1
25	GM65475	Fitting, 1 in. MPT x 1 in. str pla	1
26	GM29588	Hose, 475 to valve	1
27	GM29589	Adapter, 475 mixer	1
28	GM29591	Adapter, manifold (cast)	1
29	GM29592	Gasket (manifold adapter)	1
30	GM36137	Bracket, converter	1
31	GM28969	Mixer, LPV	1
32	GM29608	Sensor, coolant	1
33	GM29609	Sensor, inlet air	1

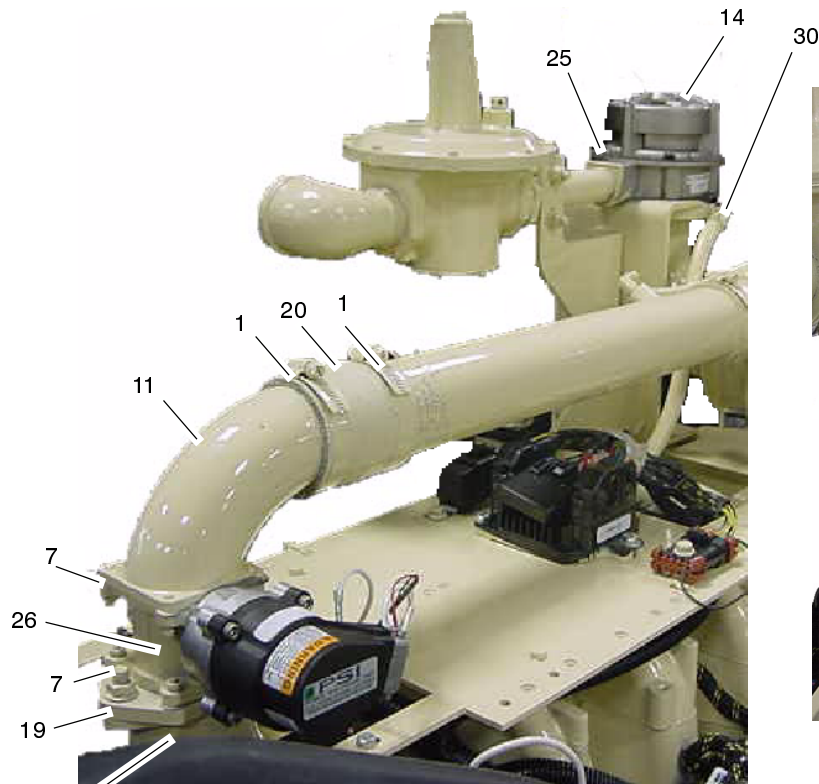
Group 9: Fuel System, 125/150 kW



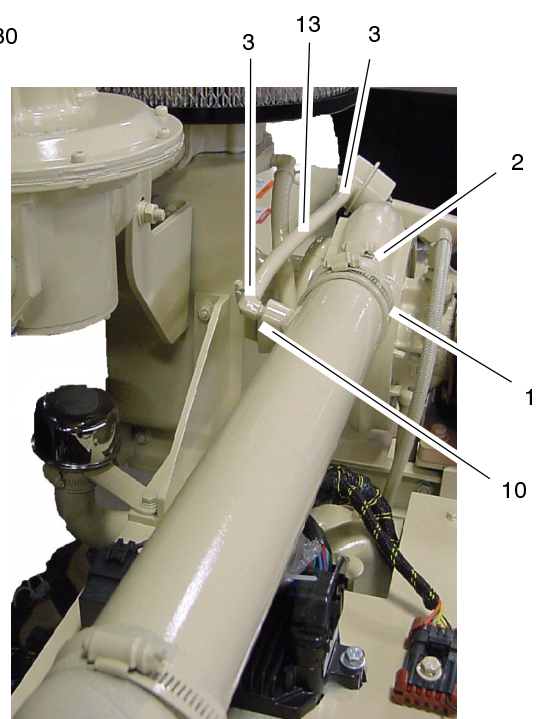
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22 24 23
27, 28, 29



8 9 16 21 18 5 17 15



1 11 20 1 25 14 30 7 26 7 19 4, 6 10



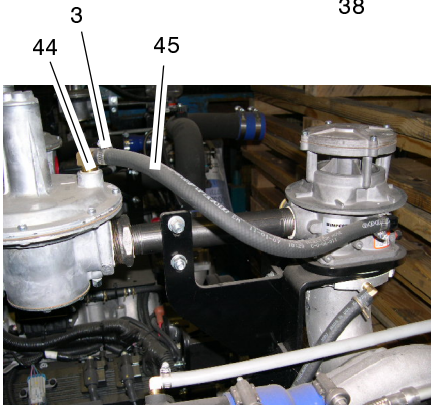
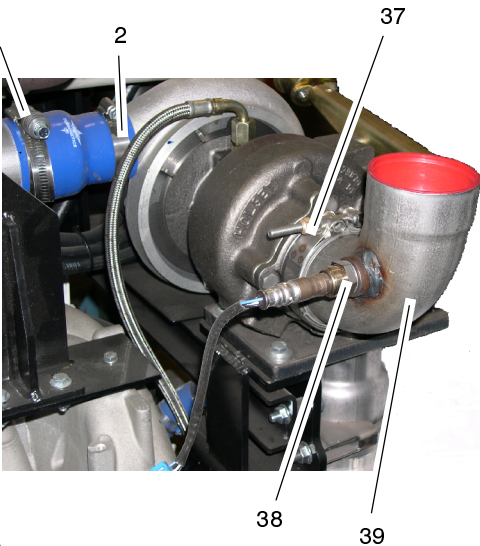
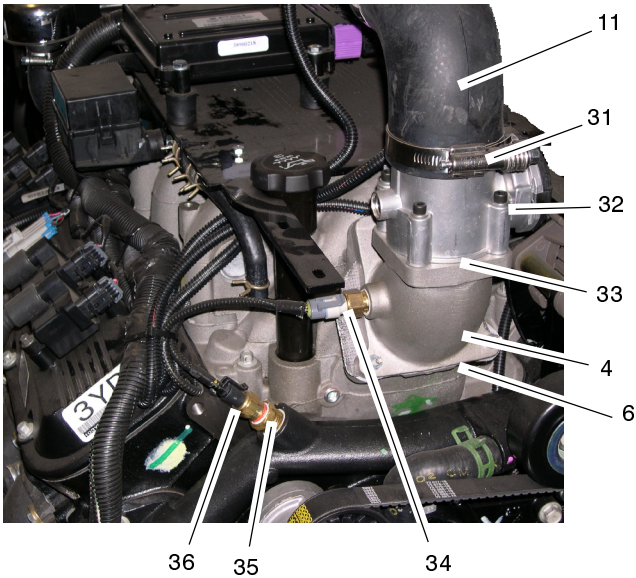
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6107_9_4

Group 9: Fuel System, 125/150 kW

Item	Part Number	Description	Quantity						
			Variation						
			3	4	9	10	14	17	18
1	GM28888	Clamp, hose, 3 in.	3	3					
1	GM29601	Clamp, hose, 2 3/4-3 5/8 in.			2	2			
2	GM25970	Clamp, hose, 2 1/4 in.	1	1					
2	GM29603	Clamp, hose, 1 9/16-2 1/2 in.			1	1	1	1	
3	GM28892	Clamp, 3/8 in. (M4)	2	2	2	2	2	2	4
4	GM19729	Adapter, manifold	1	1					
4	GM29591	Adapter, manifold			1	1	1	1	1
5	GM16177	U-bolt	1	1	1	1	1	1	1
6	GM19733	Gasket (intake manifold to adapter)	1	1	1	1	1	1	1
7	GM28766	Gasket, LC-50 (50/43 mm) valve	2	2					
8	GM23714	Gasket, mixer adapter	2	2	2	2			
8	GM66223	Gasket, mixer adapter					1	1	1
9	GM28911	Bracket, mixer mounting	1	1	1	1			
9	GM66222	Bracket, mixer mounting					1	1	1
10	GM28912	Tube w/wastegate fitting	1	1					
10	GM29599	Tube, turbo to throttle			1	1	1	1	
10	GM29583	Fitting, 1/8 MPT x 1/4 hosebarb 90° elbow (not shown)			1	1	1	1	1
11	GM28913	Adapter, elbow 90° tube	1	1					
11	GM29600	Elbow, rubber 90° tube to throttle			1	1	1	1	
12	GM28915	Clamp, hose, 5 in.	1	1	1	1	1	1	1
13	GM28916	Hose, pushlock, 1/4 in. ID x 1/2 in OD, 11 in.	1	1	1	1	1	1	1
14	GM28917	Mixer, CA475M (natural gas)	1		1				
14	GM28919	Mixer, CA475M (LP)		1					
14	GM28966	Mixer, N16-475-5A				1			
14	GM64230	Mixer, NG 425					1		1
14	GM64227	Mixer, 8.1L LP						1	
14	GM66220	Plate, adapter 425 mixer					1	1	1
15	GM25971	Regulator	1	1	1		1	1	1
15	GM28970	Regulator				1			
16	GM25972	Bracket, regulator	1	1					
16	GM29597	Bracket, regulator			1	1			
16	GM66219	Bracket, regulator					1	1	1
17	GM25973	Bushing, reducer	1	1	1	1	1	1	1
18	GM16203	Pipe, nipple, 1 x 6 in.	1	1	1	1			
18	GM66209	Pipe, nipple, 1 x 8 in.					1	1	1
19	GM28920	Adapter, intake elbow	1	1					
20	GM28924	Hose, turbo outlet, 3 in.	1	1					
21	GM28925	Bracket, mixer support	1	1	1	1	1	1	1
22	GM28926	Hose, hump reducer	1	1	1	1			
22	GM66214	Hose, hump, intake 4 x 4					1	1	1
23	GM28934	Elbow, intake	1	1					
23	GM29602	Elbow, intake			1	1			
23	GM29582	Plug, brass, 1/8 in. NPT			1	1			
23	GM66221	Elbow, mixer to turbo					1	1	1
24	GM28887	Clamp, hose, 3 1/2 in.	1	1	1	1			
25	GM28933	Screw, 10-24 x 2 1/2 socket head	4	4	4	4			
26	GM23715	Throttle assembly	1	1					
27	See Group 11	Heat shield, intake elbow	1	1	1	1			
28	See Group 11	Spacer (not shown)	2	2	2	2			
29	GM29598	Spacer, 1/4 x 5/8 in. (not shown)			1	1	1	1	1
30	GM28918	Fitting, 1/8 NPT x 3/8 90° elbow			1	1			
31	GM29601	Clamp, hose, 2 3/4-3 5/8 in.			1	1	1	1	
32	GM29586	Valve, throttle 60 mm			1	1	1	1	1
33	GM29592	Gasket (manifold adapter)			1	1	1	1	1
34	GM29609	Sensor, inlet air			1	1	1	1	1
35	GM24341	Fitting, 1/2 MPT x 3/8 in. FPT bushing			1	1	1	1	1
36	GM29608	Sensor, coolant			1	1	1	1	1
37	See Group 11	Clamp, V-band, 2 3/4 in.			1	1	1	1	1
38	GM29585	Sensor, O2			1	1			
39	GM29613	Elbow, turbo exhaust (w/O2 port)			1	1	1	1	1
40	GM35947	Spring, CA-55 (not shown)						1	
41	GM35948	Spring, LPV regulator (not shown)						1	
42	GM28918	Fitting, 1/8 NPT x 3/8 in. (not shown)						1	
43	GM19753	Spacer, 0.437 ID x 0.375 in. (not shown)						1	
44	GM66208	Fitting, 3/8 MPT x 3/8 hose brb 90°							2
45	GM66213	Hose, fuel 3/8 diameter							1

Group 9: Fuel System, 125/150 kW, continued

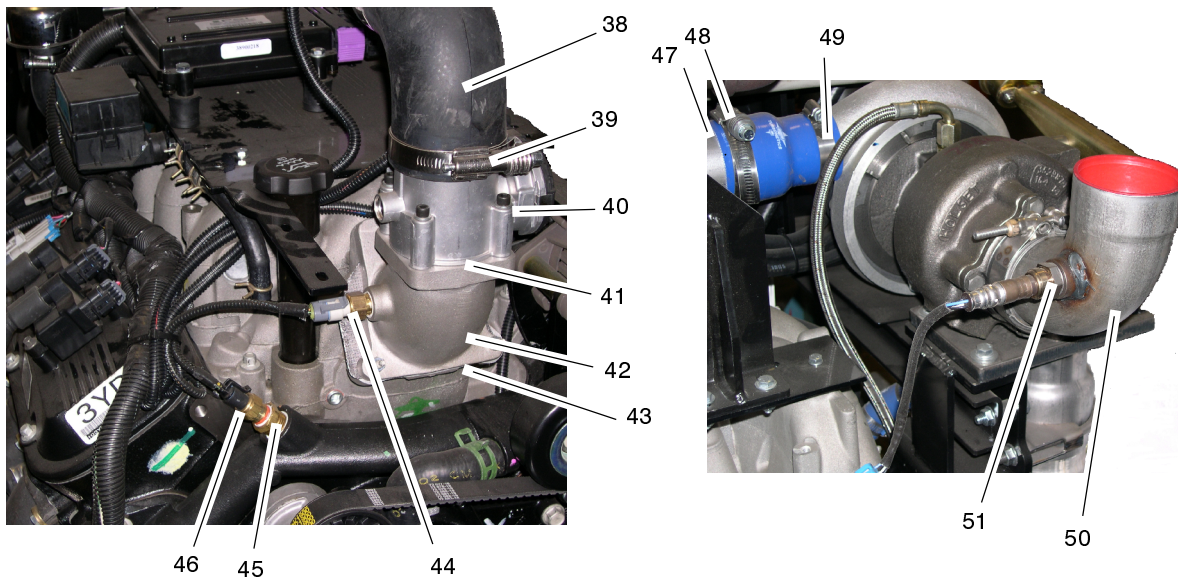
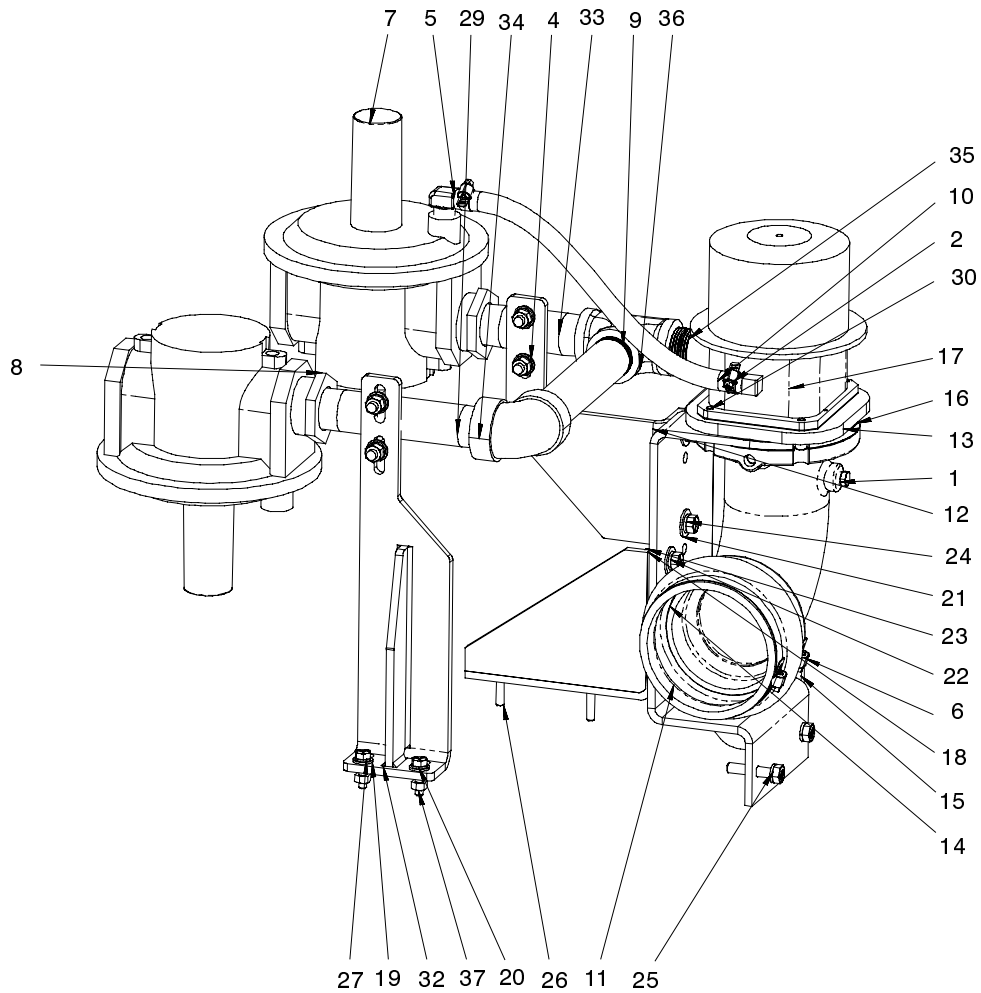


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Group 9: Fuel System, 125/150 kW, continued

Item	Part Number	Description	Quantity						
			Variation						
			3	4	9	10	14	17	18
1	GM28888	Clamp, hose, 3 in.	3	3					
1	GM29601	Clamp, hose, 2 3/4-3 5/8 in.			2	2			
2	GM25970	Clamp, hose, 2 1/4 in.	1	1					
2	GM29603	Clamp, hose, 1 9/16-2 1/2 in.			1	1	1	1	
3	GM28892	Clamp, 3/8 in. (M4)	2	2	2	2	2	2	4
4	GM19729	Adapter, manifold	1	1					
4	GM29591	Adapter, manifold			1	1	1	1	1
5	GM16177	U-bolt	1	1	1	1	1	1	1
6	GM19733	Gasket (intake manifold to adapter)	1	1	1	1	1	1	1
7	GM28766	Gasket, LC-50 (50/43 mm) valve	2	2					
8	GM23714	Gasket, mixer adapter	2	2	2	2			
8	GM66223	Gasket, mixer adapter					1	1	1
9	GM28911	Bracket, mixer mounting	1	1	1	1			
9	GM66222	Bracket, mixer mounting					1	1	1
10	GM28912	Tube w/wastegate fitting	1	1					
10	GM29599	Tube, turbo to throttle			1	1	1	1	
10	GM29583	Fitting, 1/8 MPT x 1/4 hosebarb 90° elbow (not shown)			1	1	1	1	1
11	GM28913	Adapter, elbow 90° tube	1	1					
11	GM29600	Elbow, rubber 90° tube to throttle			1	1	1	1	
12	GM28915	Clamp, hose, 5 in.	1	1	1	1	1	1	1
13	GM28916	Hose, pushlock, 1/4 in. ID x 1/2 in OD, 11 in.	1	1	1	1	1	1	1
14	GM28917	Mixer, CA475M (natural gas)	1		1				
14	GM28919	Mixer, CA475M (LP)		1					
14	GM28966	Mixer, N16-475-5A				1			
14	GM64230	Mixer, NG 425					1		1
14	GM64227	Mixer, 8.1L LP						1	
14	GM66220	Plate, adapter 425 mixer					1	1	1
15	GM25971	Regulator	1	1	1		1	1	1
15	GM28970	Regulator				1			
16	GM25972	Bracket, regulator	1	1					
16	GM29597	Bracket, regulator			1	1			
16	GM66219	Bracket, regulator					1	1	1
17	GM25973	Bushing, reducer	1	1	1	1	1	1	1
18	GM16203	Pipe, nipple, 1 x 6 in.	1	1	1	1			
18	GM66209	Pipe, nipple, 1 x 8 in.					1	1	1
19	GM28920	Adapter, intake elbow	1	1					
20	GM28924	Hose, turbo outlet, 3 in.	1	1					
21	GM28925	Bracket, mixer support	1	1	1	1	1	1	1
22	GM28926	Hose, hump reducer	1	1	1	1			
22	GM66214	Hose, hump, intake 4 x 4					1	1	1
23	GM28934	Elbow, intake	1	1					
23	GM29602	Elbow, intake			1	1			
23	GM29582	Plug, brass, 1/8 in. NPT			1	1			
23	GM66221	Elbow, mixer to turbo					1	1	1
24	GM28887	Clamp, hose, 3 1/2 in.	1	1	1	1			
25	GM28933	Screw, 10-24 x 2 1/2 socket head	4	4	4	4			
26	GM23715	Throttle assembly	1	1					
27	See Group 11	Heat shield, intake elbow	1	1	1	1			
28	See Group 11	Spacer (not shown)	2	2	2	2			
29	GM29598	Spacer, 1/4 x 5/8 in. (not shown)			1	1	1	1	1
30	GM28918	Fitting, 1/8 NPT x 3/8 90° elbow			1	1			
31	GM29601	Clamp, hose, 2 3/4-3 5/8 in.			1	1	1	1	
32	GM29586	Valve, throttle 60 mm			1	1	1	1	1
33	GM29592	Gasket (manifold adapter)			1	1	1	1	1
34	GM29609	Sensor, inlet air			1	1	1	1	1
35	GM24341	Fitting, 1/2 MPT x 3/8 in. FPT bushing			1	1	1	1	1
36	GM29608	Sensor, coolant			1	1	1	1	1
37	See Group 11	Clamp, V-band, 2 3/4 in.			1	1	1	1	1
38	GM29585	Sensor, O2			1	1			
39	GM29613	Elbow, turbo exhaust (w/O2 port)			1	1	1	1	1
40	GM35947	Spring, CA-55 (not shown)						1	
41	GM35948	Spring, LPV regulator (not shown)						1	
42	GM28918	Fitting, 1/8 NPT x 3/8 in. (not shown)						1	
43	GM19753	Spacer, 0.437 ID x 0.375 in. (not shown)						1	
44	GM66208	Fitting, 3/8 MPT x 3/8 hose brb 90°							2
45	GM66213	Hose, fuel 3/8 diameter							1

Group 9: Fuel System, 125 kW Dual Fuel



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Group 9: Fuel System, 125 kW Dual Fuel

Item	Part Number	Description	Quantity
			Variation 16
1	GM29582	Plug, brass 1/8 in. NPT	1
2	GM28892	Clamp, 3/8 in. (M4)	4
3	GM29583	Fitting, 1/8 MPT x 1/4 hosebarb 90° elbow	1
4	GM16177	Clamp, U-bolt, 5/16-18 x 1 5/8	2
5	GM66208	Fitting, 3/8 MPT x 1 in. bbhse, elb plas	1
6	GM28915	Clamp, hose, 5 in.	2
7	GM25971	Regulator, RV81	2
8	GM25973	Bushing, reducer, 1 1/2 to 1 in.	2
9	GM66209	Pipe, nipple 1 x 8 in. lg	1
10	GM66213	Hose, fuel 3/8 diameter 15"	1
11	GM66214	Hose, hump, intake, 4 x 4	1
12	GM66219	Bracket, regulator	1
13	GM66220	Plate, adapter 425 mixer	1
14	GM66221	Elbow, cast mixer to turbo	1
15	GM66222	Bracket, mixer mounting	1
16	GM66223	Gasket, mixer adapter	2
17	GM64230	Mixer	1
18	GM28925	Bracket, mixer support	1
19	#	Washer, 1/4 flat	4
20	#	Washer, 1/4 lock	4
21	GM75194	Washer, Flat 5/16 USS	4
22	#	Washer, 5/16 lock	5
23	#	Nut, 5/16-18 hex	4
24	#	Bolt, 5/16-18 x 1 hex head	4
25	#	Bolt, M8 x 1.25 x 40 hex head	2
26	#	Bolt, 1/4-20 x 1 1/2 hex head	2
27	GM65474	Bolt, 1/4-20 x 1 Hx hd Grade 5	2
28	#	Screw, #10-24 x 1 skt head	4
29	GM38449	Pipe, nipple, 1 in. NPT x 6.5 lg	1
30	#	Bolt, #12-24 x 3/4 skt head	4
31	#	Washer, #12 lock	4
32	GM66224	Bracket, DF 425 mixer	1
33	GM66236	Pipe, nipple, 1 x 4 in. long	1
34	GM16207	Pipe, 1 in. fitting elbow 90°	1
35	GM24551	Pipe, closed nipple, 1 in. NPT	1
36	GM24550	Fitting, pipe tee, 1 x 1 x 1 in.	1
37	#	Nut, 1/4-20 hex	2
38	GM29600	Elbow, Rubber 90° tube to throttle	1
39	GM29601	Clamp, 2 3/4-3 5/8 in.	1
40	GM29586	Valve, 60 mm	1
41	GM29592	Gasket (manifold adapter)	1
42	GM29591	Adapter, manifold (cast)	1
43	GM19733	Gasket, intake manifold to adapter	1
44	GM29609	Sensor, inlet air	1
46	GM29608	Sensor, coolant	1
47	GM29599	Tube, turbo to throttle	1
48	GM29601	Clamp, 2 3/4-3 5/8 in.	1
49	GM29603	Clamp, 1 9/16-2 1/2 in.	1
51	GM29585	Sensor, O2	1
		Items not shown	1
	GM19753	Spacer, 0.437 ID x 0.375 in.	1
	GM24548	Nipple, pipe 1 x 2 in. lg	1
	GM28916	Hose, pushlock, 1/4 in. ID x 1/2 in OD, 11 in.	1
	GM28918	Fitting, 1/8 NPT x 3/8 in.	1
	GM29598	Spacer, 1/4 in. ID	1
	GM35947	Spring, CA55	1
	GM35948	Spring, LPGV RV81 regulator	1
	GM36137	Bracket, converter	1
	GM42580	Fitting, 1/8 MPT x 1/8 FPT elbow	1
	GM42581	Fitting, 1/8 MPT x 1/4 HB 90° elbow	1
	GM42582	Fitting, 1/8 FPT tee, brass	1
	GM42583	Fitting, 1/8 MPT closed nipple, brass	1
	GM60248	Reducer, brass, 1/2 to 3/8	1
	GM66207	Hose, 1/4 in. gas supply	1
	GM66210	Fitting, 1/8 MPT x 1/4 HB straight	1
	GM66211	Valve, solenoid	1
	GM66212	Nipple, 1/8 x 2 in. long brass	1
	GM66215	Fitting, 1/8FPT x 1/8FPT 90° elb bras	1

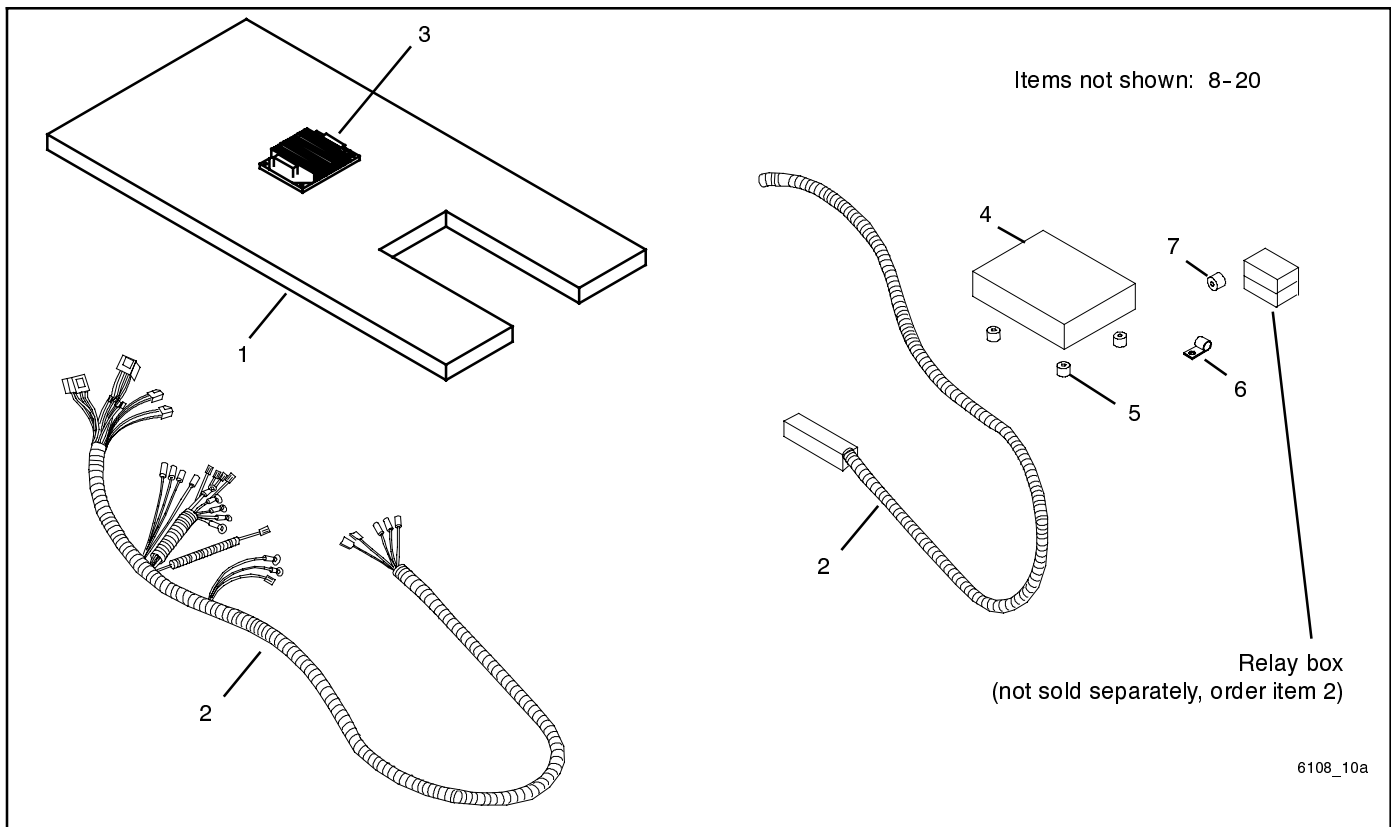
Group 9: Fuel System, 125 kW LPG Liquid

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Group 9: Fuel System, 125 kW LPG Liquid

Item	Part Number	Description	Quantity
			Variation 15
1	GM24335	Hose	1
2	GM16144	Clamp, hose 1 in.	1
3	GM29600	Elbow, rubber 90° tube to throttle	1
4	GM28892	Clamp, 3/8 in. (M4)	1
5	GM36134	Sleeve, thermo	1
6	GM24337	Fitting, 1/4 MPT x 3/8 SAE male flare	1
7	GM24338	Fitting, 1/4 MPT x 3/8 SAE flare 90° elbow	1
8	GM28949	Fitting, 5/8 bead hose x 3/8 MPT x 90	1
9	GM28950	Fitting, 1/2 MPT x 5/8 in. beaded hose	1
10	GM29583	Fitting, 1/8 MPT x 1/4 hosebarb 90° elbow	1
11	GM24340	Fitting, 5/8 beaded hose x 3/8 MPT	1
12	GM60248	Reducer, Brass 1/2 to 3/8	1
13	GM19733	Gasket, intake manifold to adapter	1
14	GM24345	Valve, LPG	1
15	GM24348	Fitting, 1 in. MPT x 1 in. barb hose, elb plas	1
16	GM24350	Hose, vapor w/wire, 1 in. ID	1
18	GM28765	Converter, LPG liquid	1
17	GM66208	Fitting, 3/8 MPT x 1 in. bbhse, elb plas	1
19	GM28895	Clamp, hose, 13/16-1 1/2 in.	1
20	GM28954	Nipple, pipe, 1/2 x 4 in. blk.	1
21	GM28955	Pipe, 1/2 in. MPT sq. hd. plug blk.	1
22	GM28956	Tee, fitting, 1/2 x 1/2 x 1/2 in. pipe blk.	1
23	GM28957	Pipe, closed nipple 1/2 in.	1
24	GM28958	Fitting, 1/2 FPT 90° elbow blk.	1
25	GM28915	Clamp, hose, 5 in.	1
26	GM28916	Hose, pushlock, 1/4 in. ID x 1/2 in OD, 11 in.	1
27	GM36135	Tube, fuel 3/8 in. stl w/firenuts	1
28	GM29586	Valve, 60 mm	1
29	GM28918	Fitting, 1/8 NPT x 3/8 in.	1
30	GM29591	Adapter, manifold (cast)	1
31	GM29592	Gasket (manifold adapter)	1
32	GM29598	Spacer, 1/4 in. ID	1
33	GM29599	Tube, turbo to throttle	1
34	GM29601	Clamp, 2 3/4-3 5/8 in.	1
35	GM66213	Hose, fuel, 3/8 diameter	1
36	GM36137	Bracket, converter	1
37	GM29603	Clamp, 1 9/16-2 1/2 in.	1
38	GM66214	Hose, hump, intake 4 x 4	1
39	#	Plug, 1/8 NPT skt hd brass	1
40	GM66220	Plate, adapter 425 mixer	1
41	GM66221	Elbow, cast mixer to turbo	1
42	GM66222	Bracket, mixer mounting	1
43	GM66223	Gasket, mixer adapter	1
44	GM64227	Mixer, LPV	1
45	GM29608	Sensor, coolant	1
46	GM29609	Sensor, inlet air	1
47	GM28925	Bracket, mixer support	1

Group 10: Wiring Harness

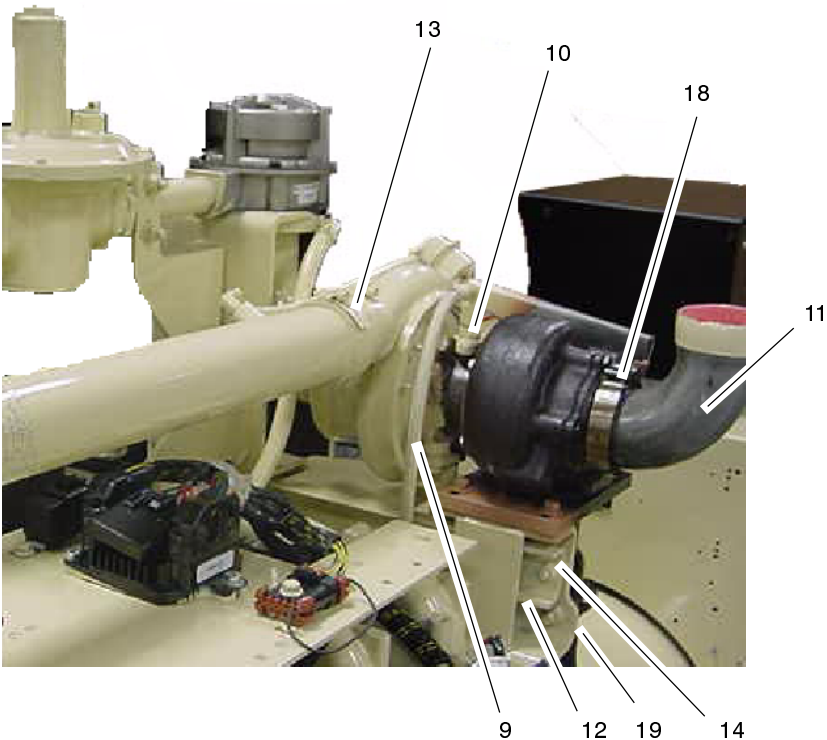
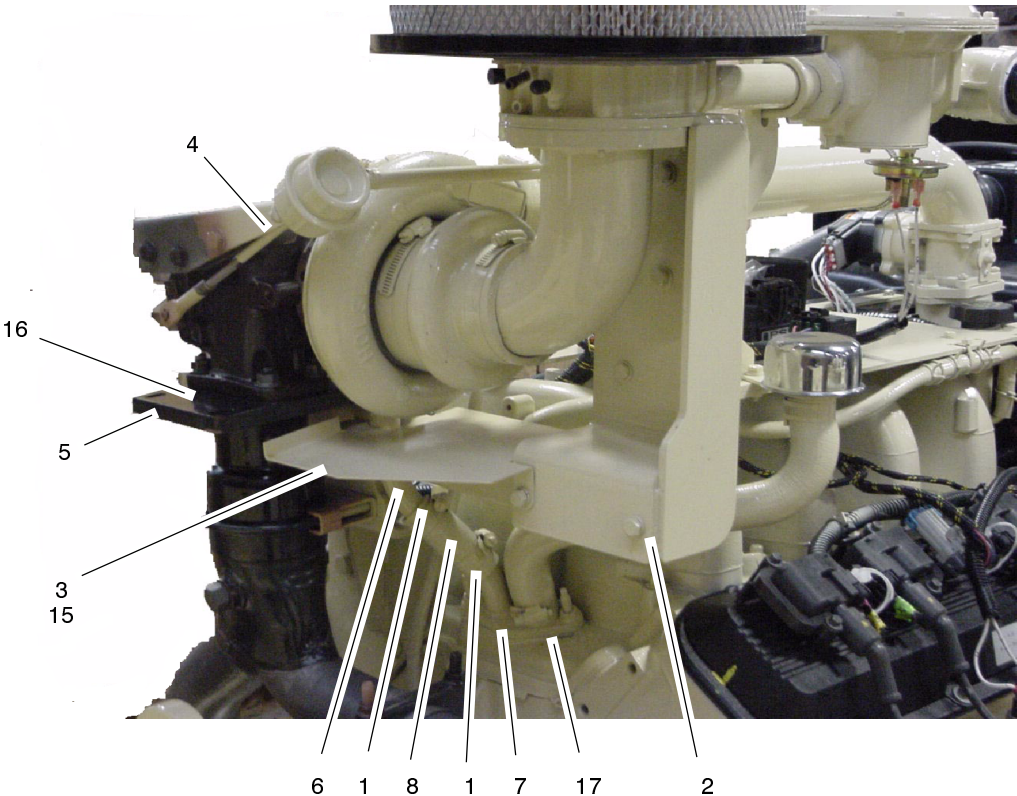


Group 10: Wiring Harness

Item	Part Number	Description	Quantity											
			Variation											
			1	2	3	4	5	6	7	8	9	10	11	12
1	GM19738	Plate, FS mounting	1	1	1	1	1	1	1	1	1	1	1	1
2	GM19745	Harness, wire	1	1	1	1	1							
2	GM29606	Harness, wire ECM						1	1					
2	GM66227	Harness, 8.1L new cam sensor (year 2004 and later GM engine)						1	1	1	1	1	1	
2	GM66248	Harness, 8.1L new cam sensor												1
3	GM19763	Module, NG ECU control, 80 kW	1											
3	GM19766	Module, NG ECU control, 100 kW			1									
3	GM19765	Module, LP ECU control, 80 and 100 kW		1										
3	GM22170	Module, LP ECU control, 125 kW					1							
3	GM25969	Module, NG ECU control, 125 kW				1								
4	GM29607	ECU						1	1		1			
4	GM66249	ECU								1				
4	GM66246	ECU										1		
4	GM66247	ECU												1
4	GM29245	ECU											1	
5	GM29610	Isolator, ECU						4	4	4	4	4	4	4
6	GM29584	Clamp, steel tube, 1 in.						1	1					
6	GM66250	Clamp, insulated								1	1	1	1	1
7	GM29604	Isolator, relay box						2	2	2	2	2	2	2
8	GM29605	Bracket, relay box						1	1	1	1	1	1	1
9	GM29611	Harness, wire, solenoid valve							1				1	
10	#	Washer, flat 1/4 in., SAE	6	6	6	6	6							
11	GM24188	Washer, lock 1/4 in., SAE	5	5	5	5	5	16	16	16	16	16	16	16
12	GM28961	Bolt, 1/4-20 x 3/4, hex head, grade 5	4	4	4	4	4	2	2	2	2	2	2	2
13	#	Bolt, 1/4-20 x 1 1/4, hex head, grade 5	1	1	1	1	1	3	3	3	3	3	3	3
14	#	Bolt, 1/4-20 x 1, hex head, grade 5	3	3	3	3	3							
15	#	Bolt, M6-1.0 x 20, hex head, grade 8.8	4	4	4	4	4	4	4	4	4	4	4	4
16	GM28963	Washer, lock, M6	4	4	4	2	2	4	4	4	4	4	4	4
17	#	Bolt, M10-1.50 x 15 hex head, grade 8.8				2	2							
18	#	Nut, 1/4-20						6	6	6	6	6	6	6
19	#	Bolt, 1/4-20 x 1/2						4	4	4	4	4	4	4
20	#	Bolt, 1/4-20 x 1 1/2, hex head, grade 5						1	1	1	1	1	1	1

Common hardware; procure locally.

Group 11: Turbocharger

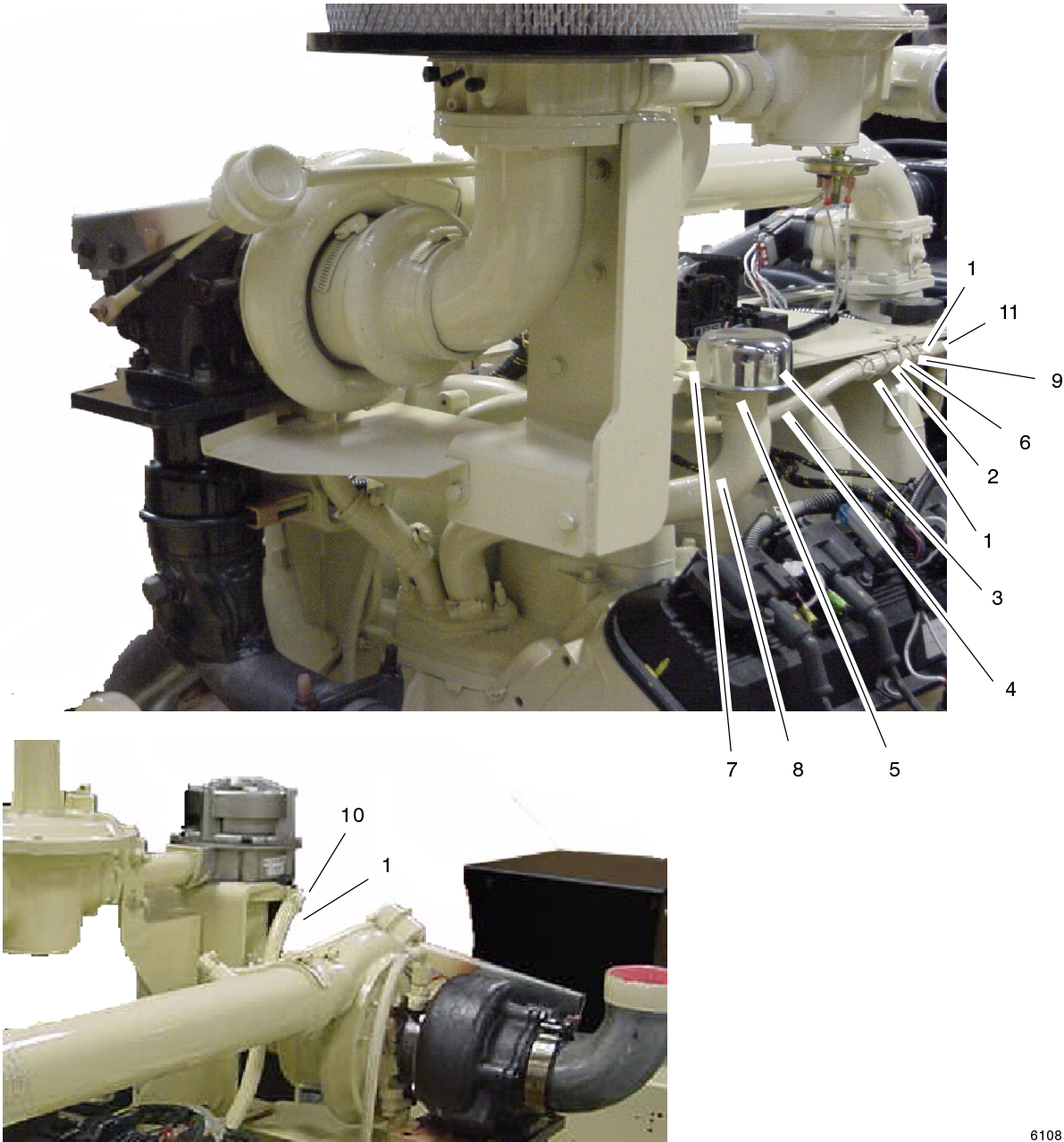


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Group 11: Turbocharger

Item	Part Number	Description	Quantity
			Variation 1
1	GM28893	Clamp, hose, 1 1/4 in.	2
2	GM28894	Spacer, 0.75 OD x 0.44 ID x 0.625 (not shown)	2
3	GM19730	Spacer, dipstick	2
4	GM28897	Turbocharger	1
5	GM45896	Assembly, exhaust inlet/turbo mtg.	1
6	GM28899	Plate assembly, oil drain	1
7	GM28900	Breather assembly, oil drain pipe	1
8	GM28901	Hose, oil drain, 7/8 in. ID, 3 in.	1
9	GM28902	Hose, oil supply	1
10	GM28903	Fitting, oil supply turbo	1
11	GM28904	Elbow, turbo exhaust	1
12	GM28905	Bar, mixer support	1
13	GM28914	Hose	1
14	GM19753	Spacer, 0.437 ID x 0.375	3
15	GM23614	Heat shield, intake elbow	1
16	GM28928	Gasket, turbocharger	1
17	GM28929	Gasket, oil drain	1
18	GM28930	Clamp, V-band, 2 3/4 in.	1
19	GM28898	Weldmount, bracket mounting exh./turbo	1

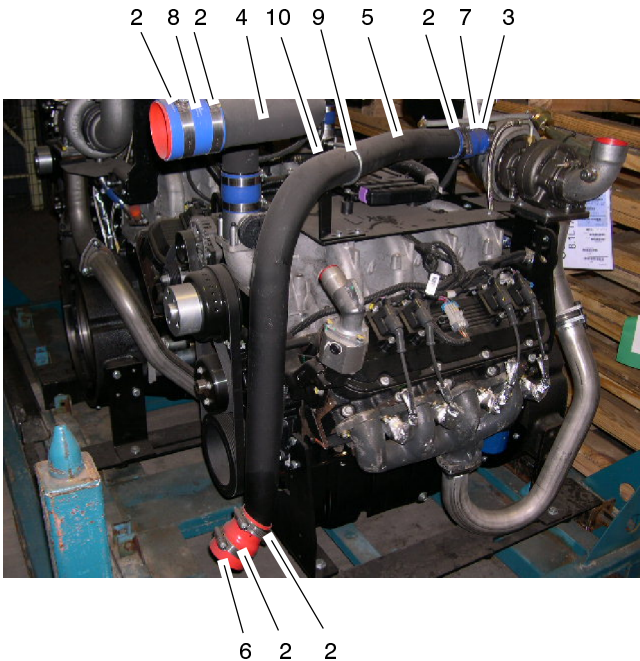
Group 12: Breather



6108_12

Item	Part Number	Description	Quantity	
			Variation 1	Variation 2
1	GM28889	Clamp, hose, 9/16 in. OD, spring type	4	4
2	GM28890	Clamp, hose, 3/4 in. OD, spring type	2	2
3	GM28891	Cap, oil fill	1	
4	GM16158	Hose, PCV, 3/8 in.	1	1
5	GM28895	Clamp, hose, 13/16-1 1/2 in.	2	
6	GM28896	Valve, PCV	1	1
7	GM28907	Bracket, breather	1	
8	GM28908	Hose, breather	1	
9	GM28909	Fitting, 3/8 x 1/2 in. hose mender	1	1
10	GM28918	Fitting, 1/8 NPT x 3/8 in.	1	
11	GM28910	Hose, PCV, 1/2 x 2 in.	1	1

Group 13: CAC Piping



Item 1 is not shown.

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Item	Part Number	Description	Quantity
			Variation 1
1	GM29598	Spacer, 1/4 in. ID	1
2	GM29601	Clamp, 2 3/4-3 5/8 in.	5
3	GM29603	Clamp, 1 9/16-2 1/2 in.	1
4	GM66238	Pipe, CAC intake	1
5	GM66239	Pipe, turbo-CAC	1
6	GM66240	Hose, silicone, red, 2 1/2 x 3	1
7	GM66241	Hose, silicone, red, 2 3/4 ID x 3 in. LG	1
8	GM66242	Hose, silicone, 3 in. ID x 3 in. LG	2
9	GM66243	U-bolt, 2 1/2 in. OD, 5/15-18 thread	1
10	GM66244	Bracket, CAC pipe support	1

