

Service Parts

Engine

Engine Model:

General Motors 5.0/5.7 L Powertrain

Generator Models:

50/60RES

50/60RZG

50/60GSG

50RZGB

50GSGB

G50U/G50

G60U/G66

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Introduction

This manual lists service replacement parts for 50/60RZG/RES, 50/60GSG, 50RZGB, 50GSGB, and G50U/G60U 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

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

50RZG or 50GSG

GM13686-GA1	1	1	1	1	1	1	1	1	1	-
GM13686-GA3	1	1	1	1	1	1	1	1	2	-
GM13686-GA5	1	1	1	1	1	1	1	1	NA	-
GM13686-GA7	1	1	1	1	1	1	1	1	NA	-

50RZGB/RES or 50GSGB or G50U/G50

GM21302-GA1	2	2	2	1	1	1	2	1	3	-
GM21302-GA5	2	2	2	1	1	1	2	1	5	-
GM21302-GA7	2	2	2	1	1	1	2	1	4	-
GM39374-GA1	2	2	2	1	1	1	2	1	6	-
GM39374-GA5	2	2	2	1	1	1	2	1	8	-
GM39374-GA7	2	2	2	1	1	1	2	1	7	-
GM60230-GA1	2	2	2	1	1	1	2	1	9	1
GM60230-GA2	2	2	2	1	1	1	2	1	10	1
GM60230-GA5	2	2	2	1	1	1	2	1	11	1

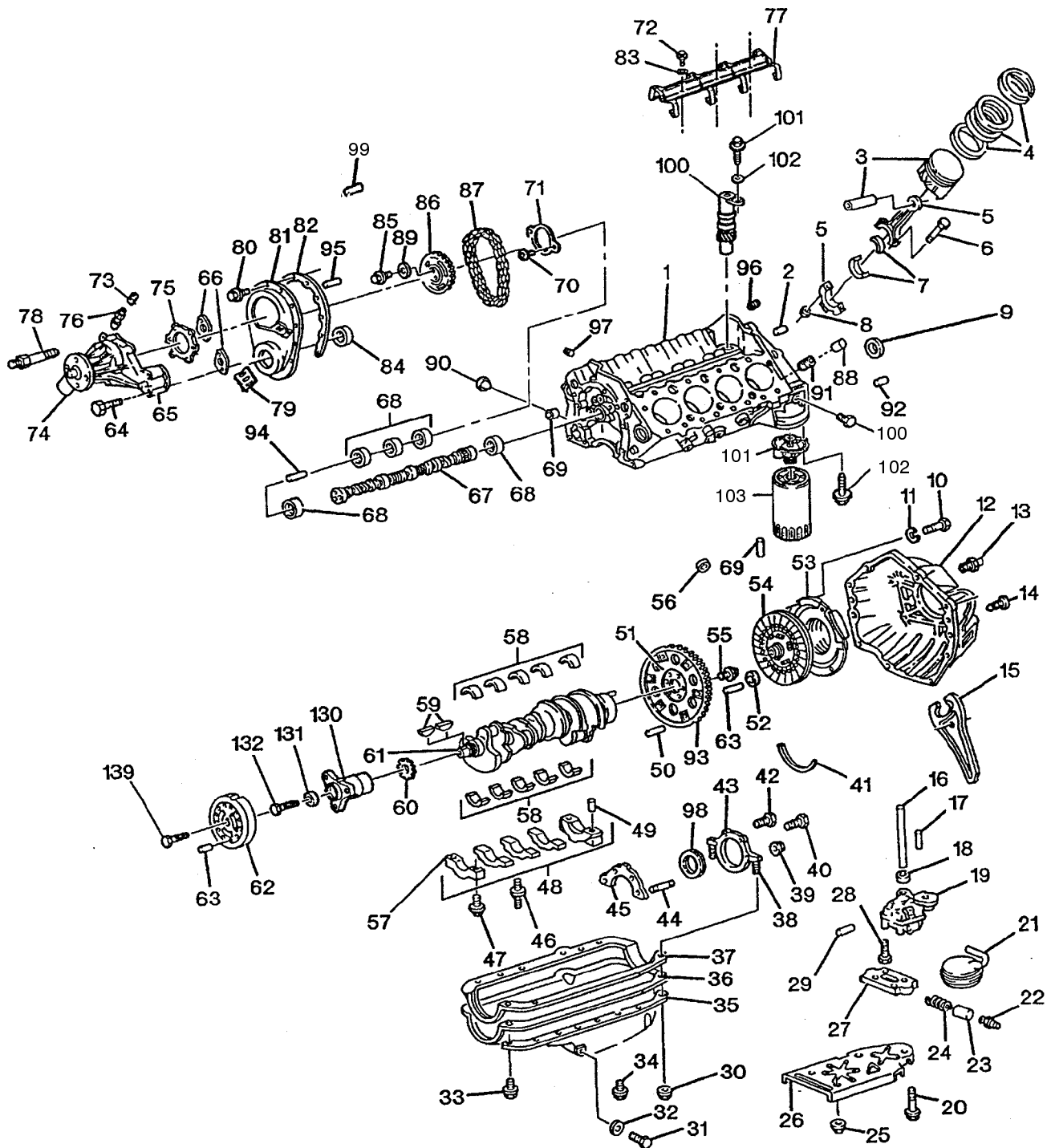
60RZG/RES or 60GSG or G60U/G66

GM13686-GA2	1	1	1	1	1	1	1	1	1	-
GM13686-GA4	1	1	1	1	1	1	1	1	2	-
GM13686-GA6	1	1	1	1	1	1	1	1	NA	-
GM13686-GA8	1	1	1	1	1	1	1	1	NA	-
GM21302-GA2	1	1	2	1	1	1	2	1	3	-
GM21302-GA6	1	1	2	1	1	1	2	1	5	-
GM21302-GA8	1	1	2	1	1	1	2	1	4	-
GM39374-GA2	1	1	2	1	1	1	2	1	6	-
GM39374-GA6	1	1	2	1	1	1	2	1	8	-
GM39374-GA8	1	1	2	1	1	1	2	1	7	-
GM60230-GA3	1	1	2	1	1	1	2	1	9	1
GM60230-GA4	1	1	2	1	1	1	2	1	10	1
GM60230-GA6	1	1	2	1	1	1	2	1	11	1

NA A parts list for this group variation was not available at time of print. Please contact your parts supplier for parts information.

Notes

Group 1: Engine Block/Lower End



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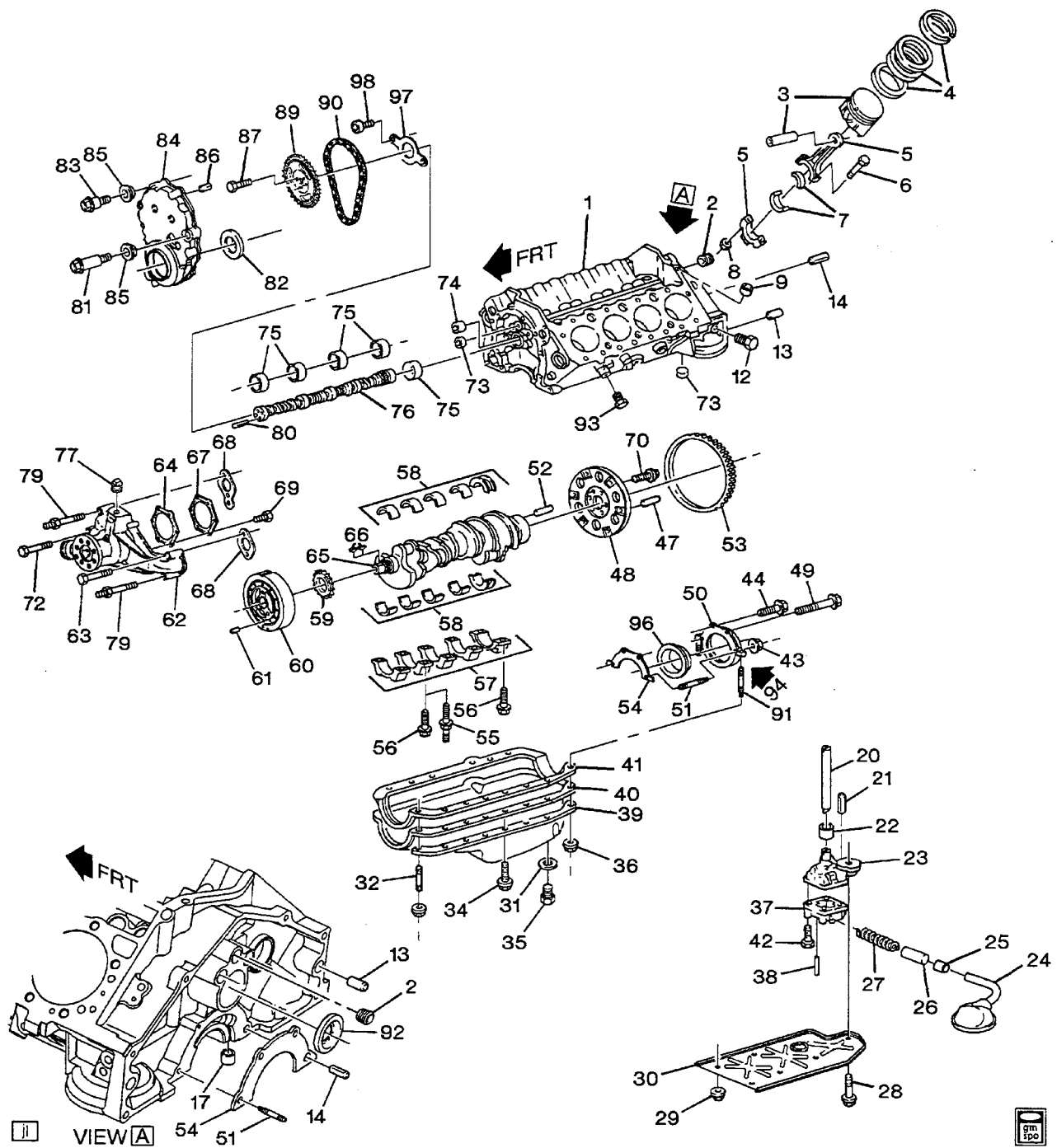
Group 1: Engine Block/Lower End

Item	Part Number	Description	Qty. Var. 1	Item	Part Number	Description	Qty. Var. 1
1	GM16491	Engine, service partial (includes block, piston, crank, RR seal)	1	55	—	See Group 4	
2	GM16429	Plug, hex 1/4-18 x .69	AR	56	GM16585	Plug, engine block core hole (brass)	8
3	GM16442	Piston kit, engine std.	8	56	GM16548	Plug, engine block core hole (steel)	1
3	GM16445	Piston kit, engine (0.50 mm OS)	8	57	—	Not applicable	
4	GM16441	Ring kit, piston std.	8	58	GM16816	Bearing kit, crankshaft #1, 2, 3, 4 (std.)	4
4	GM16452	Ring kit, piston (.127 mm OS)	8	58	GM16817	Bearing kit, crankshaft #5 (std)	1
4	GM16444	Ring kit, piston (0.50 mm OS)	8	58	GM16451	Bearing kit, crankshaft #1, 2, 3, 4 (.001 OS)	4
5	GM16363	Rod, connecting	8	58	GM16447	Bearing kit, crankshaft #5 (.001 mm OS)	1
6	GM16546	Bolt, connecting rod	16	59	GM16539	Key, crankshaft balancer	2
7	—	Bearing kit, connect. rod std.	8	60	GM16509	Sprocket, crankshaft (18 teeth)	1
7	GM16443	Bearing kit, connect. rod (.001 OS)	8	61	GM16403	Crankshaft	1
8	GM16586	Nut, connecting rod	16	62	GM16490	Balancer, crankshaft	1
9	GM16397	Plug, camshaft rear bearing hole	1	63	GM16428	Pin, locator 5/8 x 1 3/16	2
10	—	Not applicable		64	GM16462	Bolt, water pump	4
11	—	Not applicable		65	GM16440	Pump kit, water (with gasket)	1
12	—	Not applicable		66	GM16582	Gasket, water pump cover	1
13	—	Not applicable		67	GM16398	Camshaft	1
14	—	Not applicable		68	GM16431	Bearing, camshaft (pos. #1)	1
15	—	Not applicable		68	GM16432	Bearing, camshaft (pos. #2-5)	2
16	GM16589	Shaft, oil pump drive	1	68	GM16433	Bearing, camshaft (pos. #3-4)	2
17	GM16476	Pin, locator 1/4 x 5/8	AR	69	GM16577	Plug, engine block oil galley (1/2 in. steel expansion)	1
18	GM16583	Retainer, oil pump drive shaft	1	69	GM16581	Plug, engine block oil galley	1
19	GM16482	Pump, oil, .742 dia. tube	1	69	GM16365	Plug, engine block oil galley (37/64 x 1/4)	2
20	GM16347	Bolt, oil pump 7/16-14 x 2 3/8	1	69	GM16512	Plug, engine block oil galley (cup 15/32 x 5/16)	1
21	GM16455	Screen, oil pump	1	69	GM16429	Plug, hex 1/4-18 x .69	1
22	GM16580	Plug, oil pressure relief valve bore	1	70	GM16513	Bolt, balancer shaft retainer	2
23	GM16579	Valve, oil pressure relief	1	71	GM16372	Retainer, camshaft	1
24	GM16343	Spring, oil pressure relief valve	1	72	GM16528	Bolt, valve lifter guide retainer	3
25	GM16603	Nut, crankshaft oil deflector	5	73	GM16533	Plug, water pump	1
26	GM16492	Deflector, crankshaft oil	1	74	GM16819	Hub, water pump	1
27	GM16376	Cover, oil pump	1	75	GM16483	Gasket, water pump cover	1
28	GM16422	Bolt, oil pump cover	4	76	—	Not applicable	
29	GM16549	Pin, oil pressure relief valve spring	1	77	GM16519	Retainer, valve lifter guide	1
30	GM16553	Nut, oil pan	AR	78	GM16820	Stud, water pump, 5/16-24 x 3/8-16 x 2 9/16 RH	1
31	GM16526	Plug, oil drain (includes seal)	1	79	—	Not applicable	
32	GM16576	Seal, oil pan drain plug (O-ring)	1	80	GM16458	Bolt, engine front cover	2
33	GM16596	Bolt, oil pan	AR	81	GM16499	Cover, engine front	1
34	GM16596	Bolt, oil pan	AR	82	—	Not applicable	
35	GM16467	Reinforcement, oil pan LH	1	83	—	Not applicable	
35	GM16468	Reinforcement, oil pan RH	1	84	GM16394	Seal, crankshaft front oil	1
36	GM16449	Pan, oil	1	85	GM16594	Bolt, camshaft sprocket	3
37	GM16362	Gasket, oil pan	1	86	GM16463	Sprocket, camshaft (36 teeth)	1
38	GM16502	Stud, crankshaft rear oil seal retainer	2	87	GM16508	Chain, camshaft timing (roller chain)	1
39	GM16426	Nut, 1/4-20 x .234	1	88	GM16577	Plug, engine block oil galley	1
40	GM16506	Bolt, crankshaft rear oil seal housing	1	89	GM16575	Washer, camshaft sprocket	3
41	—	Not serviced separately		90	GM16581	Plug, engine block oil galley	AR
42	GM16505	Bolt, crankshaft rear oil seal housing	2	91	—	Not applicable	
43	GM16473	Housing, crankshaft rear oil seal	1	92	GM16428	Pin, locator 5/8 x 1 3/16	2
44	GM16518	Stud, crankshaft rear oil seal retainer	1	93	—	See Group 4	
45	GM16487	Gasket, crankshaft rear oil seal housing	1	94	GM16476	Pin, locator 1/4 x 5/8	2
46	GM16497	Stud, crankshaft bearing cap	AR	95	GM16476	Pin, locator 1/4 x 5/8	2
47	GM16588	Bolt, crankshaft bearing cap	10	96	GM16504	Plug, hex 1/4-18 x 0.56	2
48	—	Not serviced separately		97	GM16504	Plug, hex 1/4-18 x 0.56	2
49	GM16599	Pin, crankshaft rear oil seal locator	1	98	GM16474	Seal, crankshaft rear oil	1
50	GM16578	Pin, flywheel locator	1	99	GM16476	Pin, locator 1/4 x 5/8	2
51	—	See Group 4		100	GM16429	Plug, hex 1/4-18 x .69	1
52	—	Not applicable		101	—	See Group 3	
53	—	Not applicable		102	—	See Group 3	
54	—	Not applicable		103	—	See Group 3	

AR As Required

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Group 1: Engine Block/Lower End, continued



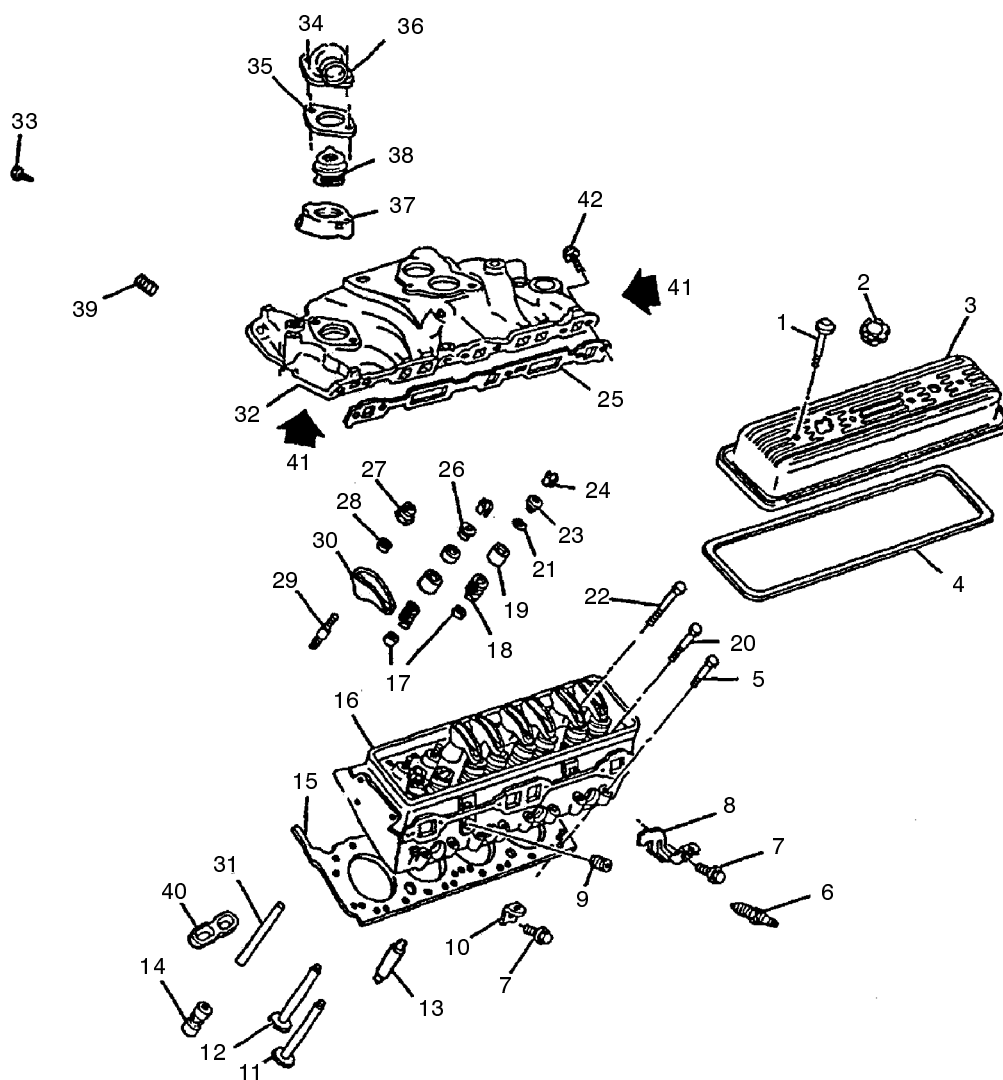
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Group 1: Engine Block/Lower End, continued

Item	Part Number	Description	Qty.	Item	Part Number	Description	Qty.
			Var. 2				Var. 2
2	GM16429	Plug, hex 1/4-18 x .69	3	51	GM16518	Stud, crankshaft rear oil seal retainer	1
3	GM75055	Piston, (w/pin) (std)	8	52	GM75013	Pin, flywheel loc	1
3	GM75056	Piston, (w/pin) (.030 OS)	8	53	GM75008	Gear, flywheel ring	1
4	GM75053	Ring kit, piston (.030 OS)	8	54	GM38981	Gasket, crankshaft rear oil seal housing	1
4	GM75052	Ring kit, piston (std)	8	55	GM16497	Stud, crankshaft bearing cap	5
5	GM16363	Rod, connecting	8	56	GM16588	Bolt, crank shaft bearing cap	10
6	GM16546	Bolt, connecting rod	16	57	-	Not Serviced	
7	GM75054	Bearing kit, connecting rod (std)	8	58	GM16451	Bearing kit, crankshaft (#, 2,3,4)	4
8	GM16586	Nut, connecting rod (3/8-24)	16	58	GM16447	Bearing kit, crankshaft (#5)	1
9	GM16577	Plug, eng blk oil gal (1/2 in. steel expnsion)	1	59	GM16509	Sprocket, Crankshaft (18 teeth)	1
12	GM16504	Plug, Hex 1/4-18 x 0.56	2	61	GM74996	Weight, Flywhl (Pin Groove)	AR
12	GM16429	Plug, hex 1/4-18 x .69	1	60	GM64571	Balancer, crank shaft	1
13	GM38899	Pin, trans loc (5/8 x 1 3/16)	2	62	GM16440	Pump kit, water	1
14	GM16599	Pin, crank shaft RR oil seal hsg	1	64	GM16483	Gasket, water pump cover	1
17	GM16512	Plug, 476 x .31	1	65	GM16403	Crankshaft	1
20	GM16589	Shaft, oil pump drive	1	66	GM16539	Key, crank shaft balancer	2
21	GM16476	Pin, locator 1/4 x 5/8	2	67	-	Cover, water pump (part of item 62)	1
22	GM16583	Retainer, oil pump drive shaft	1	68	GM16582	Gasket, water pump (LH & RH)	2
23	GM16482	Pump, oil, .742 dia. tube	1	69	-	Bolt, w/pmp cvr (part of item 62)	
24	GM16455	Screen, oil pump	1	70	GM38896	Bolt, flywheel (7/16-20 x.97)	6
25	GM16580	Plug, oil press relief valve	1	72	GM75106	Bolt, w/pump	1
26	GM16579	Valve, oil pressure relief	1	73	GM16512	Plug, 476 x .31	1
27	GM16343	Spring, oil pressure relief valve	1	74	GM16365	Plug, engine block oil galley	1
28	GM16347	Bolt, oil pump 7/16-14 x 2 3/8	1	75	GM16431	Bearing, camshaft (pos. #1)	1
29	GM16603	Nut, crank shaft oil deflector	5	75	GM16432	Bearing, camshaft (pos. #2, 5)	2
30	GM16492	Deflector, crankshaft oil	1	75	GM16433	Bearing, camshaft (pos. #3, 4)	2
31	GM75088	Seal, oil pan drain plug	1	76	GM75102	Camshaft	1
32	GM16502	Stud, crankshaft rear oil seal retainer	2	77	GM75038	Plug, pump	AR
32	GM16518	Stud, cr/sft rr oil seal ret (1/4-20 x 2 3/16)	1	79	GM16820	Stud, pump (5/16-24 x 3/8-16 x 2 9/16)	1
34	GM16596	Bolt, oil pan	14	80	GM16476	Pin, locator 1/4 x 5/8	1
35	GM16526	Plug, oil drain (includes seal)	1	81	GM16387	Bolt, engine front cover	6
36	GM16553	Nut, oil pan (5/16-18x20,286m)	4	81	GM16458	Bolt, engine front cover (center of cover)	2
37	GM16376	Cover, oil pump	1	82	GM16366	Seal, crankshaft front oil (61.5mm OD)	1
38	GM16549	Pin, oil press relief valve	1	82	GM16394	Seal, crankshaft front oil (58mm OD)	1
39	GM16467	Reinforcement, oil pan LH	1	83	GM16387	Bolt, engine front cover	6
39	GM16468	Reinforcement, oil pan RH	1	83	GM16458	Bolt, engine front cover (center of cover)	2
40	GM16449	Pan, oil	1	84	GM53099	Cover, engine front (58mm OD crank shaft front seal) (incl bolt/screw, grommet & insert)	1
41	GM16362	Gasket, oil pan	1	85	GM16388	Grommet, engine front cover	8
42	GM16422	Bolt, oil pump cover	2	86	-	Not serviced	
43	GM75010	Nut, crank shaft rear oil seal ret	1	87	GM16594	Bolt, Camshaft Sprocket	2
44	GM16505	Bolt, crankshaft rear oil seal housing	2	89	GM16463	Sprocket, camshaft (36 teeth)	1
47	GM74996	Weight, Flywhl (Pin Groove)	AR	90	GM16508	Chain, camshaft timing (roller chain)	1
48	GM75097	Flywheel (includes ring gear)	1	91	GM16502	Stud, crankshaft rear oil seal retainer	2
49	GM16506	Bolt, crankshaft rear oil seal housing	1	92	GM16397	Plug, camshaft rear bearing hole	1
50	GM16473	Housing, crankshaft rear oil seal	1	93	GM16504	Plug	1
				94	GM75223	Sealer (3 oz. tube)	AR
				96	GM16474	Seal, crankshaft rear oil	1
				97	GM16372	Retainer, camshaft	1
				98	GM16513	Bolt, balancer shaft retainer	2

AR As Required

Group 2: Engine Head/Upper End



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Group 2: Engine Head/Upper End

Item	Part Number	Description	Qty.
			Var. 1
1	GM16427	Bolt, valve rocker arm cover	8
2	GM16361	Cap, oil filler	1
3	GM16481	Cover, valve rocker arm LH	1
3	GM16480	Cover, valve rocker arm RH	1
4	GM16348	Gasket, valve rocker arm cover	2
5	GM16375	Bolt, cy. head, short (7/16 x 1 3/4)	16
6	GM16531	Spark plug	8
7	—	See Group 3	
8	—	See Group 3	
9	GM16510	Plug, 3/8-18 x .42	2
10	—	See Group 3	1
11	GM16401	Valve, intake standard	8
12	GM16464	Valve, exhaust standard	8
13	GM16523	Lifter, valve	16
14	GM16547	Pin, cylinder head locator	8
15	GM16353	Gasket, cylinder head	2
16	GM16450	Head, cylinder	2
17	GM16385	Seal, intake valve stem oil	8
19	GM16386	Spring, valve (w/o damper)	16
19	GM16342	Shield, valve stem oil	12
20	GM16374	Bolt, cy. hd, medium (7/16-14 x 3 1/16)	4
21	GM16496	Seal, exhaust valve stem oil	6
21	GM16385	Seal, intake valve stem oil	8
22	GM16373	Bolt, cy. head, long (7/16-14 x 3 51/64)	14
23	GM16402	Cap, valve spring	8
24	GM16529	Key, valve stem	32
25	—	See Group 8	1
26	GM16501	Rotator, valve	8
27	GM16493	Nut, valve rocker arm	16
28	—	Not serviced separately	
29	GM16584	Stud, valve rocker arm ball	16
30	GM16351	Arm kit, valve rocker	16
31	GM16515	Rod, valve push	16
32	—	See Group 7	1
33	—	See Group 7	2
34	—	See Group 3	2
35	—	See Group 3	1
36	—	See Group 3	1
37	—	See Group 3	
38	—	See Group 3	1
39	GM16510	Plug, 3/8-18 x .42	1
40	GM16453	Guide, valve lifter	8
41	GM16604	Sealer, intake manifold	AR
42	—	See Group 7	3

AR As Required

This technical diagram illustrates the exploded view of an engine assembly, showing the relationship between various components. The parts are numbered as follows:

- 1-40:** Individual components including pistons, connecting rods, crankshaft, valves, and other engine parts.
- 31-32:** Components related to the valve train mechanism.
- 36-37:** Components related to the timing belt or chain.
- 38-40:** Components related to the oil pump and timing mechanism.

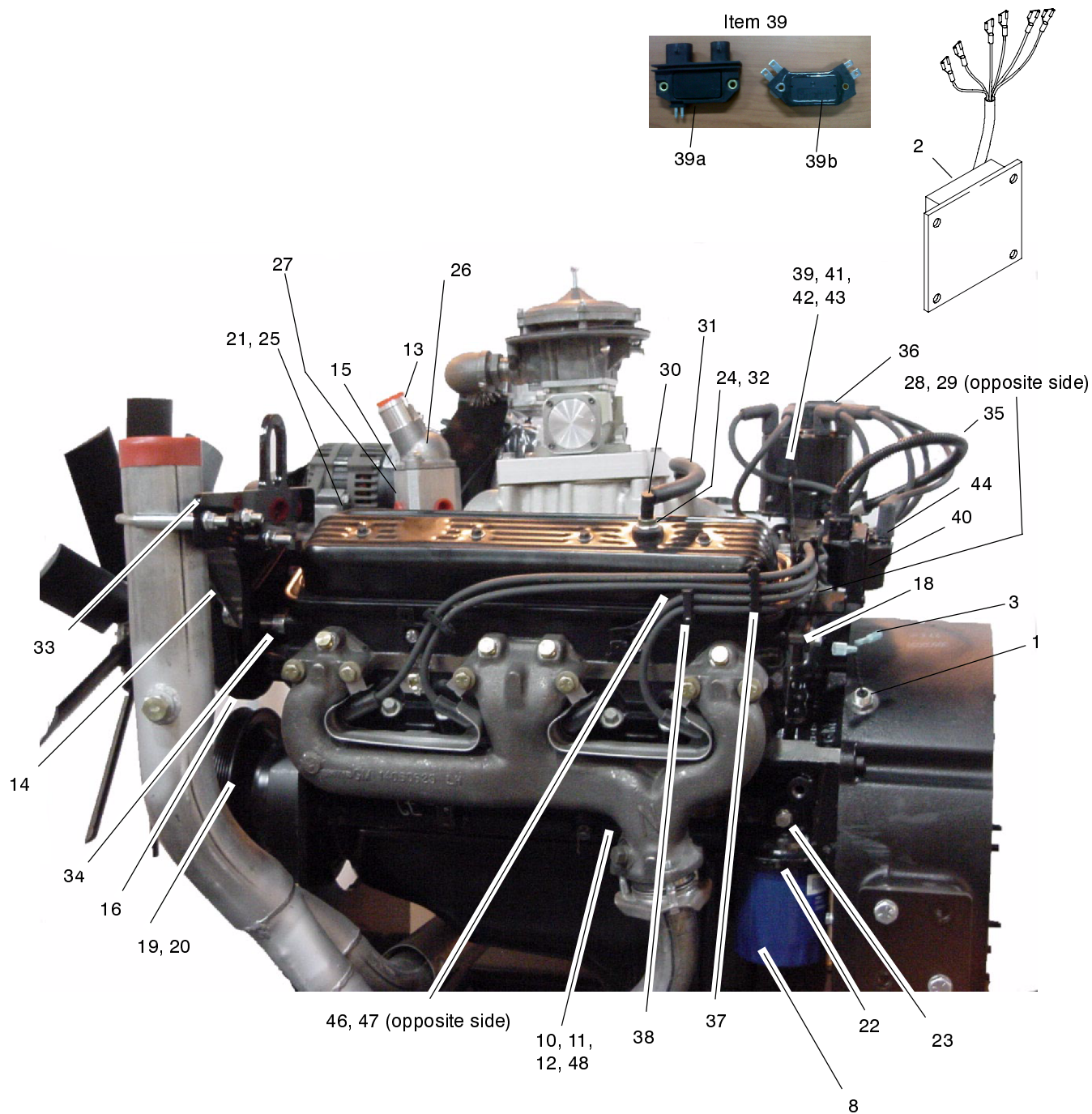
The diagram is a black and white line drawing. In the bottom right corner, there is a small GM logo and the text "OM00-036".

Group 2: Engine Head/Upper End, continued

Item	Part Number	Description	Qty.
			Var. 2
2	GM16519	Retainer, valve lifter guide	1
3	GM16528	Bolt, valve lifter guide retainer	3
4	GM16547	Pin, cylinder head loc	4
5	GM75100	Gasket, cylinder head	2
6	GM75057	Head, cylinder	2
7	GM16373	Bolt, cy. head, long (7/16-14 x 3 51/64)	14
8	GM16374	Bolt, cy. hd, medium (7/16-14 x 3 1/16)	4
9	GM16375	Bolt, cy. head, short (7/16 x 1 3/4)	16
10	GM16523	Lifter, valve	16
11	GM16453	Guide, valve lifter	8
12	GM16400	Rod, valve push	16
13	—	Not serviced, part of item 17	
14	GM16584	Stud, valve rocker arm ball (.013 in. OS)	16
14	GM38918	Stud, valve rocker arm ball (.003 in. OS)	16
15	—	Not serviced, part of item 17	-
16	—	Not serviced, part of item 17	-
17	GM16351	Arm kit, valve rocker (includes items 13, 15, 16)	16
18	GM16385	Seal, intake valve stem oil	8
19	GM16496	Seal, exhaust valve stem oil	8
20	GM16386	Spring, valve	16
21	GM16402	Cap, valve spring	16
22	GM16529	Key, valve stem	
24	GM16348	Gasket, valve rocker arm cover	2
25	GM16481	Cover, valve rocker arm	1
26	GM16427	Bolt, valve rocker arm cover	16
27	GM16361	Cap, oil fill (includes item 28)	1
28	—	Not serviced, part of item 28	
29	GM16531	Spark plug	8
30	—	Not serviced	
31	—	not used	
32	—	Not used	
36	GM75059	Cover, valve rocker arm	1
37	—	Not used	
38	—	Not used	
39	GM16456	Valve, exhaust (std)	8
40	GM75022	Valve, intake (std)	8

Group 3: Engine Trim Parts

Items not shown: 4-7, 9, 17, 49-60



6107_3

Group 3: Engine Trim Parts

Item	Part Number	Description	Qty.	
			Var.	
			1	2
1	GM16113	Sensor, mag. speed 5/8-18	1	1
2	GM35807	Kit, governor replacement	1	
3	GM16822	Terminal, male	2	2
4	#	Nut, 1/2-13	4	4
5	#	Washer, lock 1/2 in.	4	4
6	#	Washer, flat 1/2 in.	8	8
7	#	Bolt, 1/2-13 x 1 1/2 hex head gr. 5	4	4
8	GM16703	Filter, oil	1	1
9	GM16115	Tube, dipstick 5.7L	1	1
10	GM16116	Adapter, freeze plug 1/2 in. NPT	2	2
11	GM16118	Plug, 1/2 in. NPT brass	2	2
12	GM16119	Pipe, street elbow 1/2 in. NPT	1	1
13	GM16120	Cover, thermostat	1	1
14	GM16123	Bracket, pulley	1	1
15	GM16536	Gasket, thermostat cover	2	2
16	GM16127	Pulley, fan	1	1
17	GM16128	Dipstick, oil 5.7L	1	1
18	GM16129	Spacer	4	2
19	GM16130	Washer, crankshaft pulley	1	1
20	GM16131	Pulley, crankshaft/fan	1	1
21	GM16140	Cap, bypass 5/8 in. (See note below)	1	1
22	GM16141	Adapter, oil filter	1	1
23	GM16142	Bolt, oil filter adapter	2	2
24	GM16143	Grommet, PCV valve	2	2
25	GM16144	Clamp, hose 1 in.	1	1
26	GM16537	Thermostat, 160 degree	1	1
27	GM16148	Spacer, thermostat cover (generator set serial numbers before 0742838)	1	
28	GM16152	Support, spark plug wire	1	1
29	GM16153	Support, spark plug wire	1	1
30	GM16157	Elbow, PCV system 5/8 in. 45 deg.	1	1
31	GM16158	Hose, PCV, 3/8 x 10 in.	1	1
32	GM16159	Valve, PCV	1	1
33	GM16172	Bracket, exhaust/lifting eye	1	1
34	GM16173	Spacer, .75 OD x .38 ID x .50	3	3
35	GM16179	Harness, distributor to coil	1	1
36	GM16184	Wire, spark plug set	1	1
37	GM16185	Retainer, 4 wire spark plug	4	4
38	GM16186	Retainer, 2 wire spark plug	4	4
39	GM16187	Distributor	1	1
39	GM16570	Cap, distributor	1	1
39a	GM16418	Ignition module (See photo insert)	1	1
39b	GM16417	Ignition module (See photo insert)	1	1
39	GM16420	Rotor, distributor	1	1
40	GM16188	Coil, ignition	1	1
41	GM16191	Clamp, distributor	1	1
42	GM16192	Gasket, distributor	1	1
43	GM16193	Bolt, distributor	1	1
44	GM16194	Wire, coil 7 mm x 13 1/2 in.	1	1
45	GM16195	Retainer, spark plug wire	1	1
46	GM16196	Retainer, spark plug wire	1	1
47	GM16197	Retainer, spark plug wire	1	1
48	GM16223	Shield, heat	1	
49	GM24188	Washer, lock 1/4 in. SAE	4	4
50	GM25974	Nut, flanged 3/8-16	1	1
51	#	Bolt, 3/8-16 x 3/4 hex head gr. 5	2	2
52	#	Bolt, 3/8-16 x 1 1/2 hex head gr. 5	4	4
53	#	Bolt, 3/8-16 x 3 1/2 hex head gr. 5	2	2
54	#	Bolt, 3/8-16 x 4 1/2 hex head gr. 5	2	2
55	#	Washer, lock 3/8	10	10
56	GM24190	Washer, flat 3/8 SAE	4	4
57	#	Bolt, 3/8-24 x 1 socket head grade 5	3	3
58	#	Bolt, 1/4-20 x 1/2 in.	4	4
59	#	Bolt, (CS) 7/16-20 x 2 1/2 gr. 8	1	1
60	#	Washer, M10		1

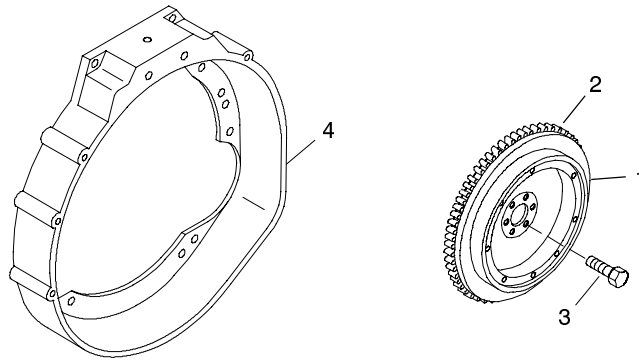
Common hardware. Procure locally.

Note:

Part number GM16140 is a kit that includes a pipe cap, hose connector, hose clamps, and rubber hose. See Service Bulletin SB-635 for details.

Group 4: Flywheel

Items not shown: 5-9

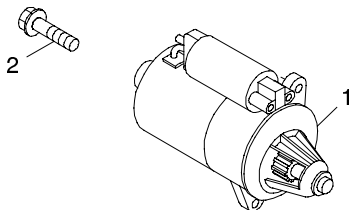


6107_4

Item	Part Number	Description	Qty.
			Var.
1	GM16814	Flywheel, SAE10-11.5	1
2	GM16821	Gear, starter ring	1
3	GM16815	Bolt, 7/16-20 x 1 grade 5	6
4	GM16135	Housing, flywheel	1
5	GM16189	Plate, starter	1
6	#	Washer, flat 1/4 in. SAE	4
7	GM24188	Washer, lock 1/4 in. SAE	4
8	#	Bolt, 1/4-20 x 3/4 hex head gr. 5	4
9	#	Bolt, 3/8-16 x 1 1/4 socket head gr. 5	6

Group 5: Starter

Items not shown: 3-5



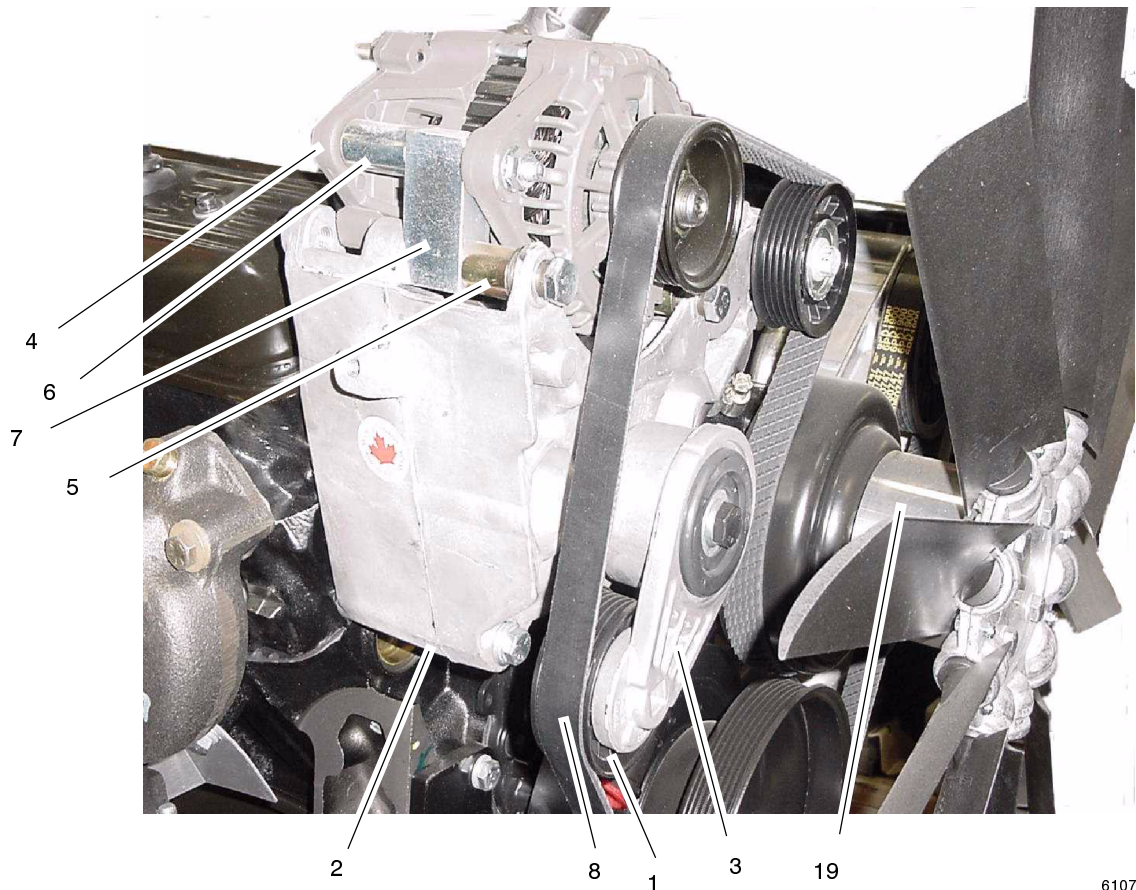
6107_5

Item	Part Number	Description	Qty.
			Var.
1	GM16178	Starter	1
2	GM16190	Bolt, starter, 4 in.	2
3	#	Nut, M5-.80	1
4	#	Washer, lock M5	1
5	#	Nut, flanged M8-1.25	1

Common hardware. Procure locally.

Group 6: Alternator, Pulley, and Belt

Items not shown: 9-18, 20-22



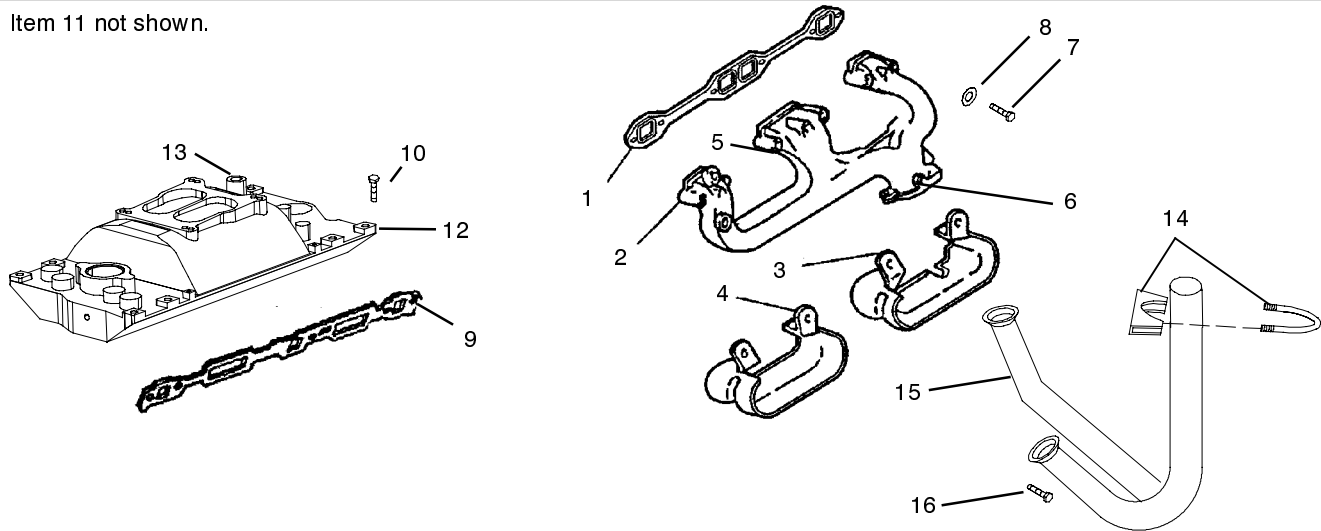
6107_6

Item	Part Number	Description	Qty.
			Var. 1
1	GM16121	Pulley, idler	1
2	GM16122	Bracket, alternator	1
3	GM16126	Pulley, tensioner	1
4	GM16180	Alternator, 70 amp	1
5	GM16181	Spacer, mount, 10 mm	2
6	GM16182	Spacer, mount, 8 mm	1
7	GM16183	Block, mount	2
8	GM16132	Belt, fan standard	1
9	#	Nut, flanged M8-1.25	1
10	#	Washer, lock 5/16	1
11	#	Bolt, M8-1.25 x 50 hex head gr. 5	1
12	#	Bolt, M10-1.50 x 90 hex head gr. 8.8	2
13	#	Washer, lock M10	1
14	#	Bolt, 3/8-16 x 4 1/2 hex head gr. 5	3
15	#	Washer, lock 3/8	3
16	GM24190	Washer, flat 3/8 SAE	4
17	#	Bolt, M10-1.50 x 85 hex head gr. 8.8	2
18	#	Bolt, M8-1.25 x 110 hex head gr. 8.8	1
19	GM16147	Spacer, fan (marked 32000264)	1
19	GM51969	Spacer, fan (marked 32000537)	1
20	#	Bolt, M8-1.25 x 20 hex head gr. 8.8	4
21	#	Washer, lock 5/16	4
22	#	Bolt, M8-1.25 x 80 socket head gr. 8.8	4

Common hardware. Procure locally.

Group 7: Intake and Exhaust System

Item 11 not shown.

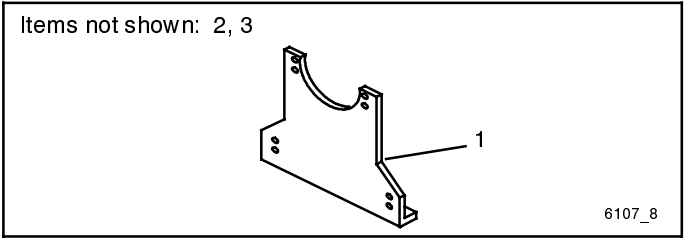


6107_7a

Item	Part Number	Description	Qty.	
			Var.	
			1	2
1	GM16199	Gasket, manifold exhaust	2	2
2	GM16216	Manifold, exhaust left side	2	2
3	GM16217	Shield, heat exhaust (2 wire)	3	3
4	GM16218	Shield, heat	1	1
5	GM16219	Plug, exhaust 1/4 in. brass	8	8
6	GM16220	Plug, exhaust	2	2
7	#	Bolt, 3/8-16 X 2 1/4 hex head gr. 5	12	12
8	GM16225	Washer, flat 3/8 in. (hardened)	12	12
9	GM16133	Gasket, intake manifold	1	1
10	GM16134	Bolt, intake manifold	8	8
11	GM16161	Tee, fitting vacuum	1	1
12	GM16222	Manifold, intake (aluminum, generator set serial numbers before 0742838)	1	
12	GM29842	Manifold, intake (cast iron, generator set serial numbers 0742838 and after)	1	
12	GM29842	Manifold, intake (cast iron)		1
13	#	Plug, 1/2 in. NPT	2	2
14	GM16145	Clamp, muffler 3 in.	1	1
15	GM16214	Pipe, Y w/heat shield	1	1
16	#	Bolt, 3/8-16 x 1 3/4 hex head	6	6

Common hardware. Procure locally.

Group 8: Engine Mounting



Item	Part Number	Description	Qty.
			Var.
1	GM16139	Mount, front 3/8 in.	1
2	#	Bolt, 3/8-16 x 1 1/4 hex head gr. 5	4
3	#	Washer, lock 3/8	4

Common hardware. Procure locally.

Group 9: Fuel System, Natural Gas/LP

Items not shown: 18-26

Variations 1 and 2

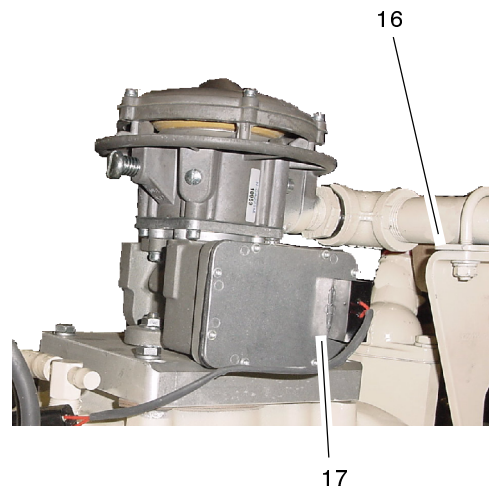
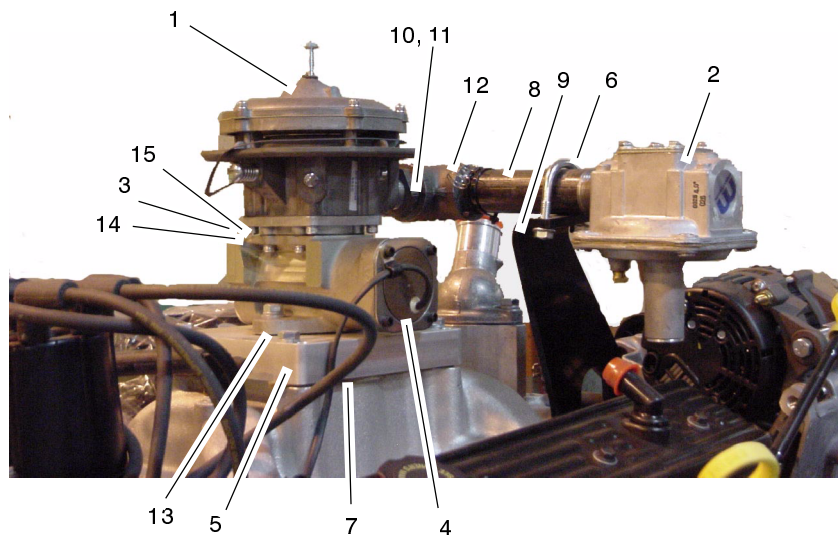


Figure 1

6107_9a

Item	Part Number	Description	Qty.	
			Var.	
			1	2
1	GM16165	Mixer, nat. gas (complete assembly)*	1	
1	GM17382	Mixer, LP (complete assembly)*		1
2	GM16166	Regulator, fuel 1 in. NPT	1	1
3	GM16167	Adapter, power flow	1	1
4	See note	Valve, throttle/actuator	1	1
5	GM16175	Adapter, manifold	1	1
6	GM16177	Clamp, U-bolt 5/16-18 x 1 5/8	1	1
7	GM16202	Gasket, intake manifold	1	1
8	GM16203	Pipe, nipple 1 x 6 in.	1	1
9	GM16204	Bracket, pipe support	1	1
10	GM16205	Bushing, 1-3/4 in.	1	1
11	GM16206	Pipe, closed nipple, 3/4 in.	1	1
12	GM16207	Pipe, 1 in. fitting elbow 90 deg.	1	1
13	GM16150	Gasket, carburetor	1	1
14	GM17395	Gasket, throttle body	1	1
15	GM29845	Gasket, mixer	1	1
16	GM23541	Spacer, U-bolt plate	1	1
17	GM23540	Valve, throttle/actuator	1	1
18	#	Washer, lock 5/16	6	6
19	#	Washer, flat 5/16	2	2
20	#	Bolt, 5/16-18 x 1 hex head gr. 5	2	2
21	#	Bolt, 3/8-16 x 3/4 hex head gr. 5	2	2
22	#	Washer, lock 3/8	2	2
23	#	Washer, flat 3/8 SAE	2	2
24	#	Washer, lock 7/16	2	2
25	#	Washer, flat 7/16	2	2
26	#	Bolt, 5/16-18 x 1 3/4 hex head gr. 5	4	4

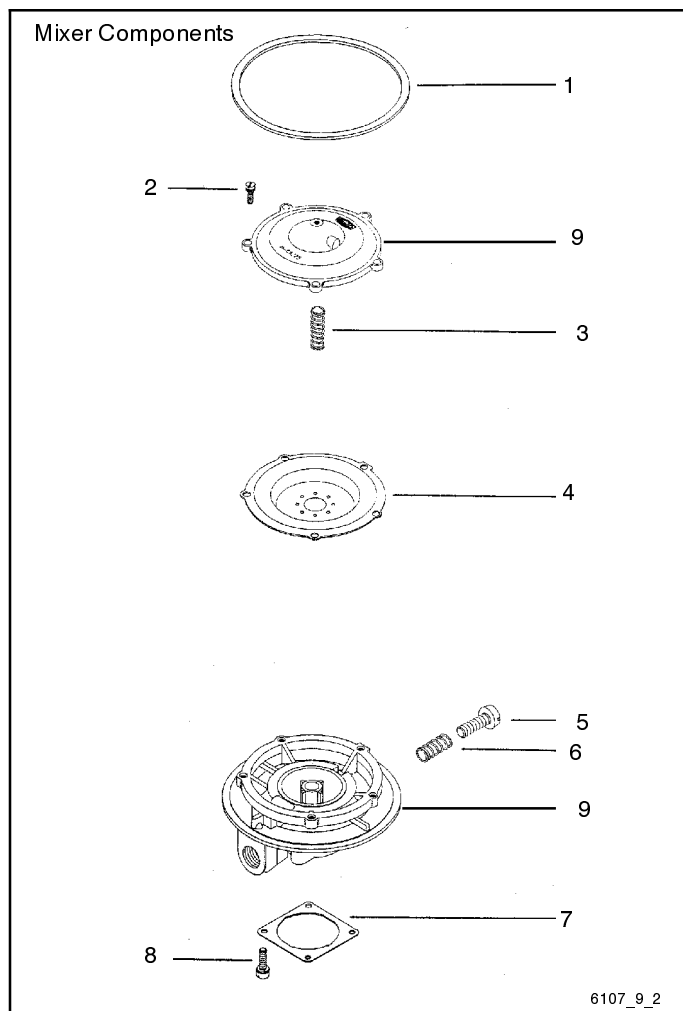
Common hardware. Procure locally.

* Following page shows mixer components.

Note

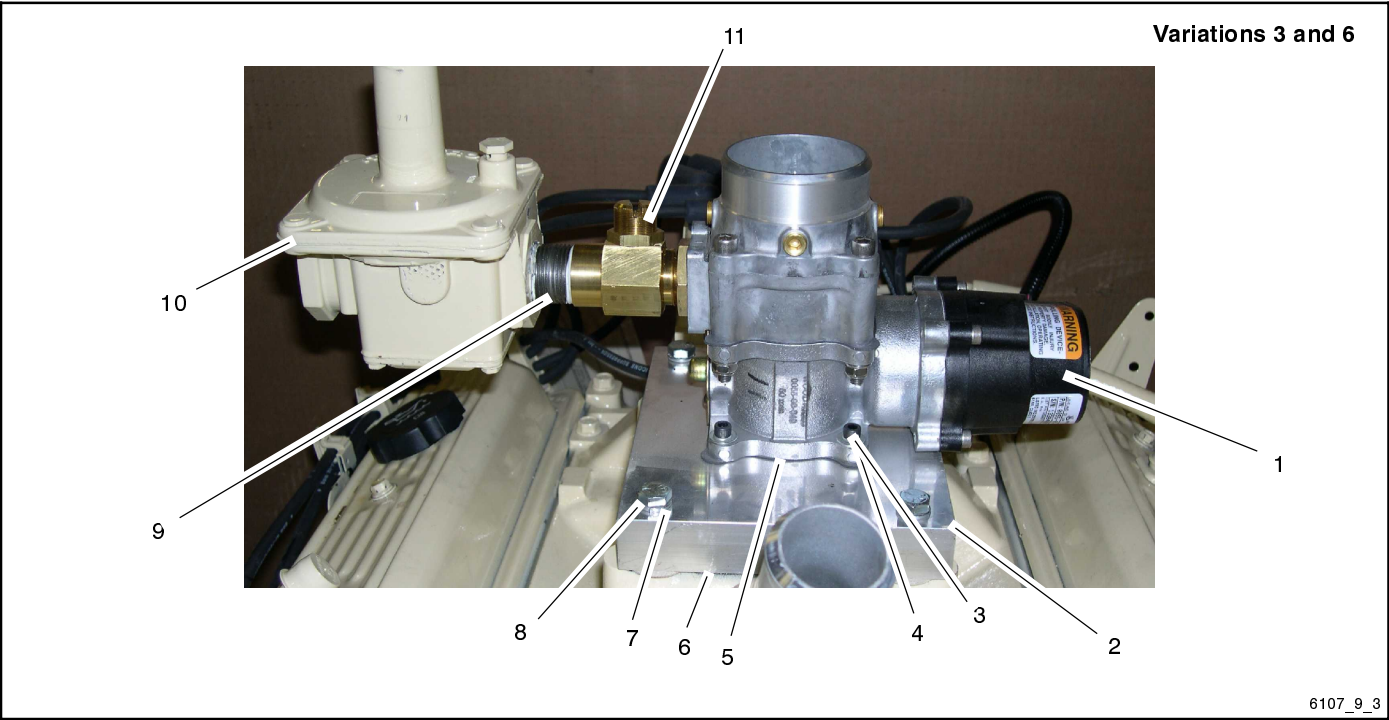
Replace the throttle valve/actuator shown in figure 1 (item 4) with service kit GM23539. Service kit GM23539 includes items 5, 7, 13, 16, and 17.

Group 9: Fuel System, Natural Gas/LP, continued



Item	Part Number	Description	Qty.	
			Var.	
			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 (nat. 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
9	—	Not sold separately		

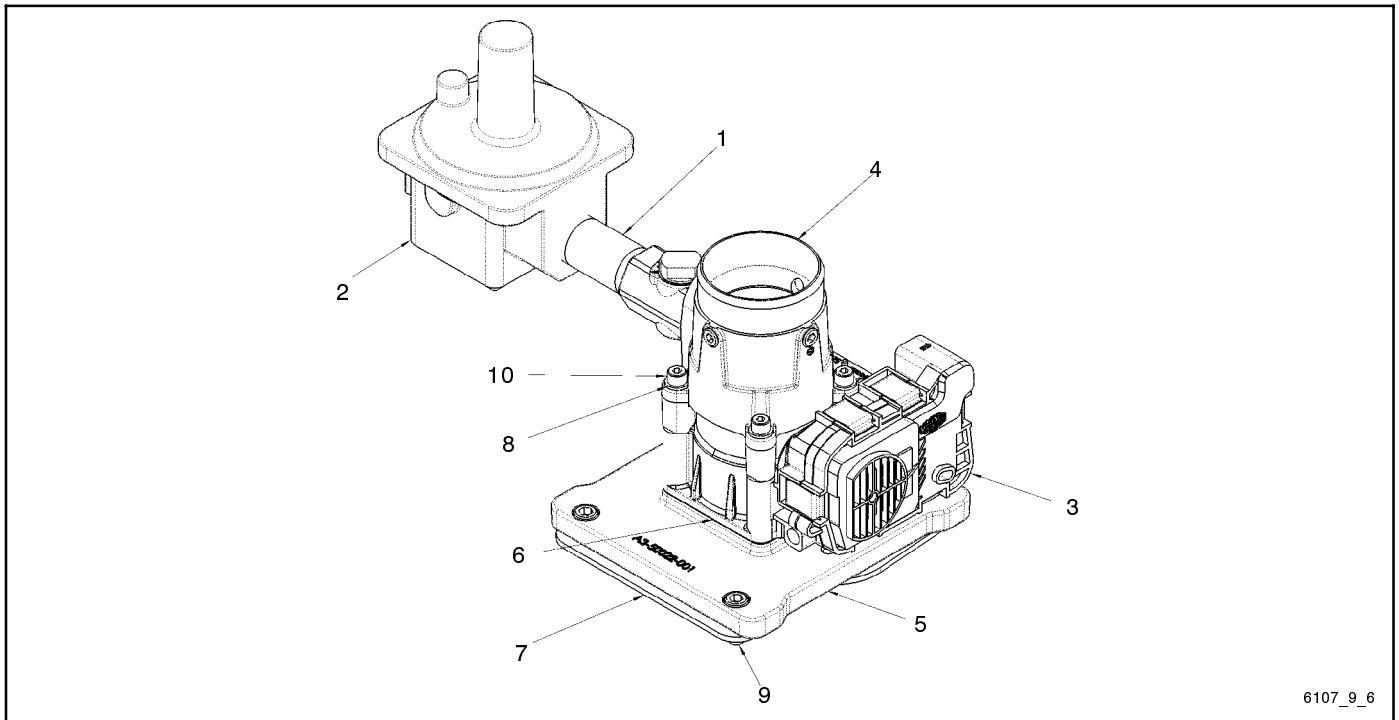
Group 9: Fuel System, Natural Gas/LP, continued



Item	Part Number	Description	Quantity	
			Variation 3	Variation 6
1	GM40176	Valve, mixer	1	
1	GM29428	Valve, mixer L-series		1
2	GM29843	Adapter, Manifold (LC50)	1	1
3	GM28767	Screw, cap, 10-24 x 3/4 in.	4	4
4	#	Washer, Lock #10	4	4
5	GM28766	Gasket, LC-50 valve	1	1
6	GM16202	Gasket, intake manifold	1	1
7	#	Washer, Lock 5/16 in.	4	4
8	#	Bolt, 5/16-18 x 1 3/4 hex head gr. 5	4	4
9	GM16206	Pipe, closed nipple, 3/4 in.	1	1
10	GM28832	Regulator, fuel	1	1
11	GM29426	Valve assembly, fuel metering	1	1

Common hardware. Procure locally.

Group 9: Fuel System, Natural Gas/LP, continued



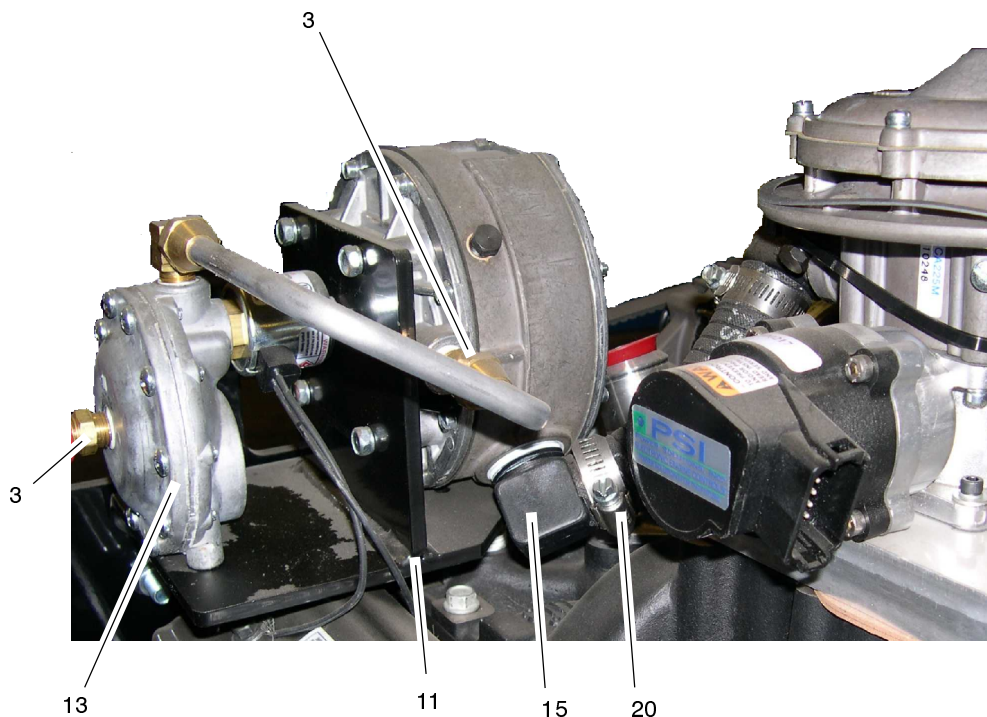
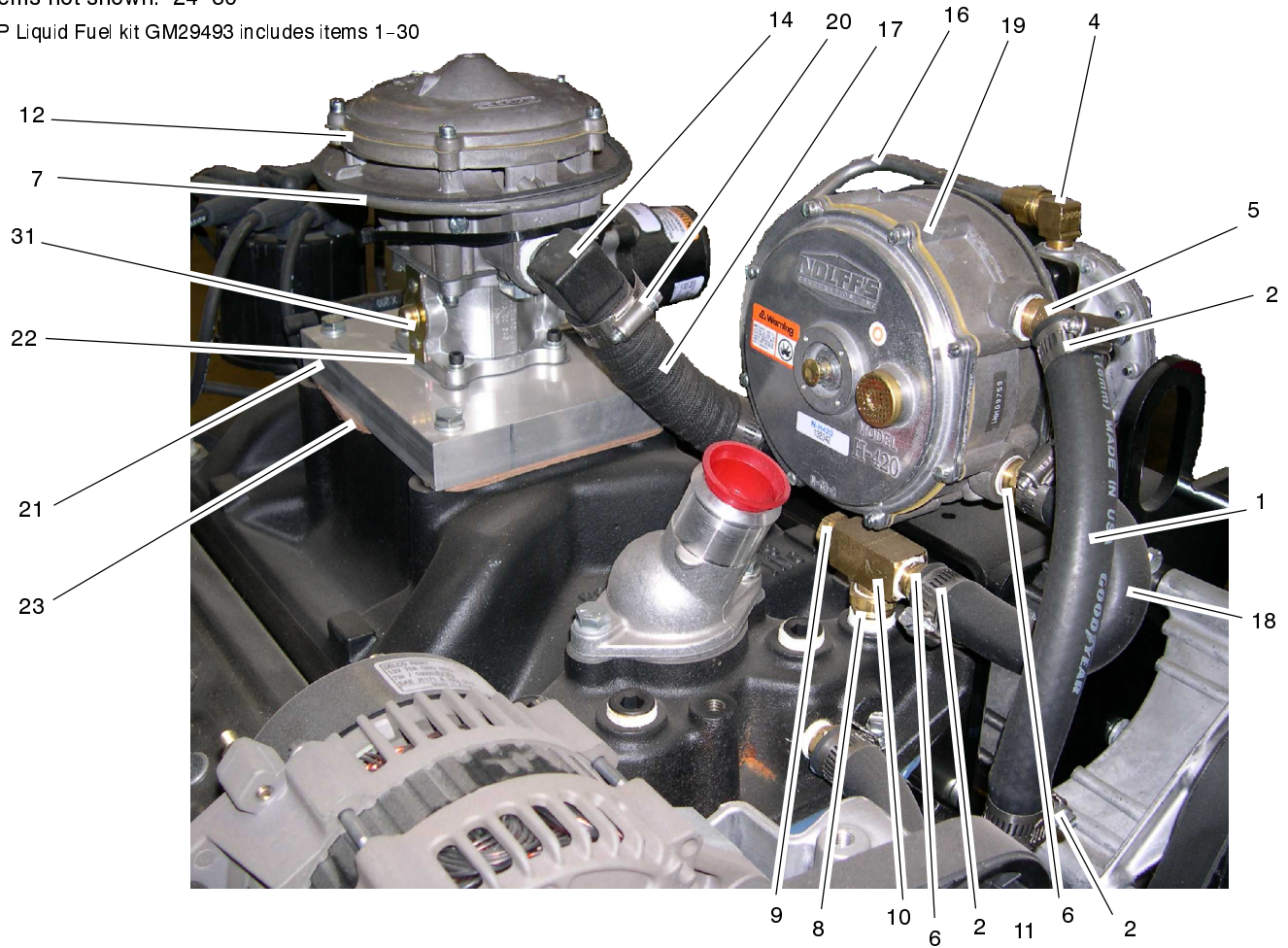
Item	Part Number	Description	Qty.
			Var. 9
1	GM19736	Pipe, nipple 3/4 x 3 in.	1
2	GM60234	Regulator, fuel 3/4 in. NTP	1
3	GM60253	Body, throttle venturi 52 mm	1
4	GM60254	Mixer, venturi 52 mm	1
5	GM60255	Adapter, intake 52 mm TB	1
6	GM60238	Gasket, man. adapter venturi	1
7	GM15202	Gasket, intake manifold	1
9	GM24188	Washer, lock 1/4 in. SAE	4
9	#	Bolt, 5/16-18 x 3/4 skt hd gr. 5	4
10	#	Bolt, 1/4-20 x 3 skt hd, gr. 5	4

Common hardware. Procure locally.

Group 9: Fuel System, LP Liquid Withdrawal

Items not shown: 24-30

LP Liquid Fuel kit GM29493 includes items 1-30



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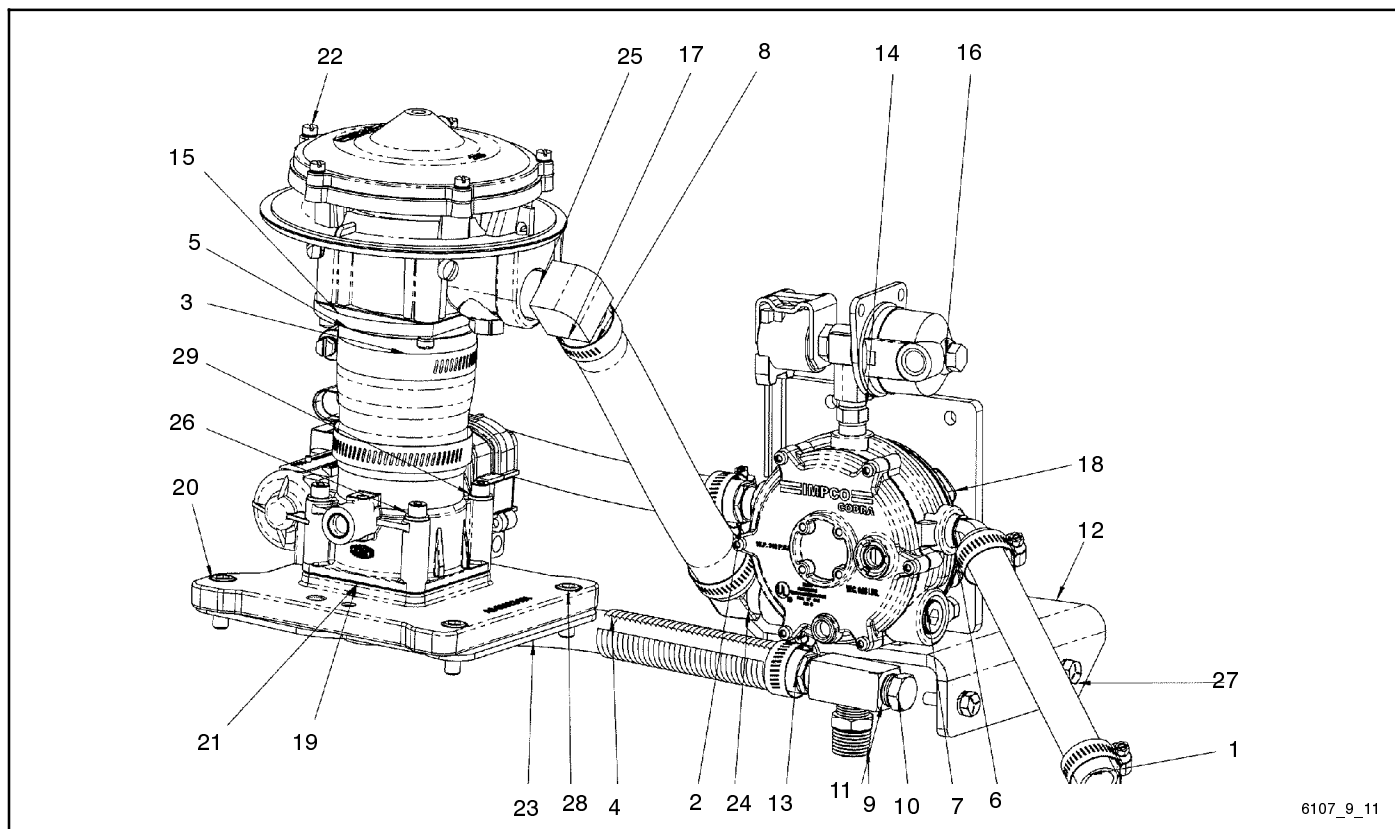
Group 9: Fuel System, LP Liquid Withdrawal

Item	Part Number	Description	Quantity	
			Variation 4	Variation 7
1	GM24335	Hose, water 5/8 in. ID, 250 PSI x 8.25 in.	1	1
2	GM16144	Clamp, hose 1 in.	4	4
3	GM24337	Fitting, 1/4 x 3/8 in. male flare	2	2
4	GM24338	Fitting, 1/4 x 3/8 in. flare 90 deg. elbow	1	1
5	GM24339	Fitting, 5/8 x 3/8 in. x 45 deg. elbow	1	1
6	GM24340	Fitting, 5/8 x 3/8 in.	2	2
7	GM16165	Mixer, NG-LP (CA225M-2)	1	1
8	GM24341	Fitting, 1/2 x 3/8 in. bushing	1	1
9	GM24342	Fitting, 3/8 in. plug, hex	1	1
10	GM24343	Fitting, 3/8 x 3/8 in. tee	1	1
11	GM24344	Bracket, regulator filter-lock	1	1
12	GM17009	Diaphragm assembly, LP	1	1
13	GM24345	Valve, LPG	1	1
14	GM24347	Fitting, 3/4 x 1 in., plastic elbow	1	1
15	GM24348	Fitting, 1 x 1 in., plastic elbow	1	1
16	GM24349	Tube, fuel 3/8 in. steel	1	1
17	GM24350	Hose, vapor w/wire 1 in. ID x 4.75 in.	1	1
18	GM24351	Hose, elbow 5/8 in. ID	1	1
19	GM28765	Converter, LPG (liquid)	1	1
20	GM28895	Clamp, hose S-16 13/16-1 1/2 in.	2	2
21	GM29843	Adapter, manifold (LC50)	1	1
22	GM28766	Gasket, LC-50 (50/43 mm) valve	1	1
23	GM16202	Gasket, intake manifold	1	1
24	GM24188	Washer, lock 1/4 in.	2	2
25	#	Washer, lock 5/16 in.	4	4
26	#	Bolt, 1/4-20 x 1 hex head gr. 5	2	2
27	GM25975	Washer, flat #10	4	4
28	#	Washer, lock #10	8	8
29	#	Bolt, 5/16-18 x 1 3/4 hex head gr. 5	4	4
30	GM28767	Screw, cap 10-24 x 3/4 in. socket head	8	8
31	GM40177	Valve, 50 mm LC-50 w/o mixer	1	
31	GM40174	Valve, 50 mm L-series		1

LP Liquid Fuel kit GM29493 includes items 1–30

Common hardware. Procure locally.

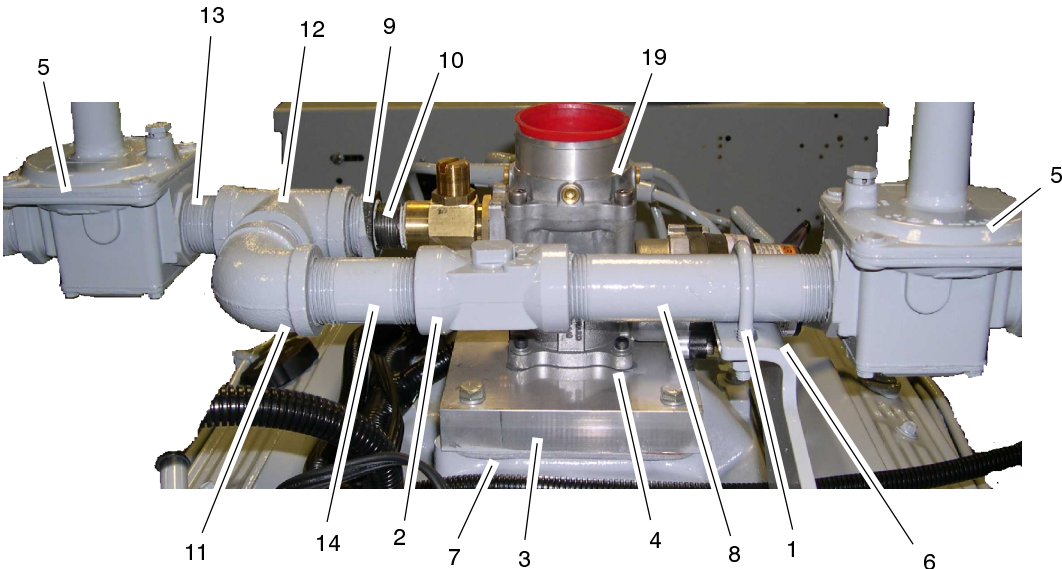
Group 9: Fuel System, LP Liquid Withdrawal, continued



Item	Part Number	Description	Qty. Var. 11
1	GM24335	Hose, water 5/8 in. ID, 250 PSI x 8.25 in.	1
2	GM16144	Clamp, hose 1 in.	4
3	GM28888	Clamp, hose, 3 in.	2
4	GM42575	Loom, split 3/4 in. x 15 in.	1
5	GM65466	Hose, reducer	1
6	GM24339	Fitting, 5/8 x 3/8 in. x 45 deg. elbow	1
7	GM24340	Fitting, 5/8 x 3/8 in.	2
8	GM28893	Clamp, hose, 1 1/4 in.	2
9	GM60248	Reducer, brass 1/2 to 3/8 in.	1
10	GM24342	Fitting, 3/8 in. plug, hex	1
11	GM24343	Fitting, 3/8 x 3/8 in. tee	1
12	GM24344	Bracket, regulator filter-lock	1
13	GM24351	Hose, elbow 5/8 in. ID	1
14	GM65467	Nipple, hex 1/4 MPT x 1/4 NPT	1
15	GM29594	Adapter, mixer to throttle body	1
16	GM65468	Valve, lock-off	1
17	#	Hose, 3/4 ID x 7.5 in.	1
18	GM65469	Converter, LPG (liquid)	1
19	GM60253	Throttle body	1
20	GM60255	Adapter, intake	1
21	GM60238	Gasket, manifold adapter	1
22	GM65470	Mixer	1
23	GM16202	Gasket, intake manifold	1
24	GM65472	Fitting, 1/2 in. NPT x 3/4 hose barb 90 deg.	1
25	GM65473	Fitting, elbow 90 deg. 3/4 x 3/4 hose	1
26	GM24188	Washer, lock 1/4 in.	6
27	#	Bolt, 1/4-20 x 1 hex head gr. 5	2
28	#	Bolt, 5/16-18 x 3/4 hex head gr. 5	4
29	GM47684	Bolt, 1/4-20 x 2 in. socket head gr. 8	4

Common hardware. Procure locally.

Group 9: Fuel System, Dual Fuel/Natural Gas and LP Gas

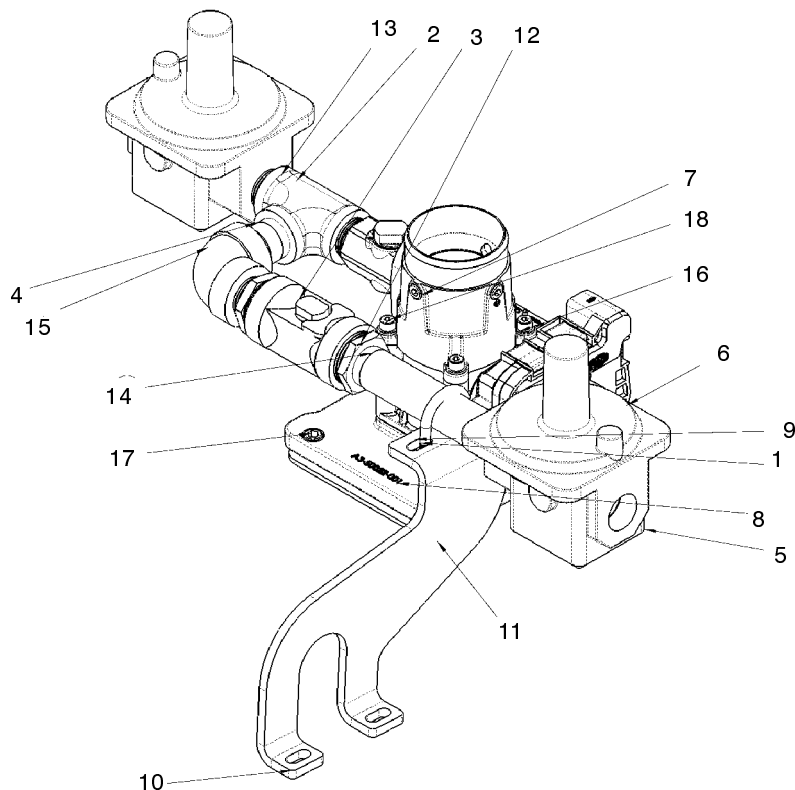


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Item	Part Number	Description	Quantity	
			Variation 5	Variation 8
1	GM16177	U-bolt, 5/16 in. x 1 3/8 in. x 2 1/2 in.	1	1
2	GM24187	Valve, line load	1	1
3	GM29843	Adapter, manifold (LC50)	1	1
4	GM28766	Gasket, LC-50 (50/43 mm) valve	1	1
5	ES-64763	Regulator, fuel 1 in. NPT	2	2
6	ES-64764	Bracket, pipe support	1	1
7	GM16202	Gasket, intake manifold	1	1
8	GM16203	Pipe, nipple 1 in. x 6 in. long	1	1
9	GM16205	Bushing, reducer 1 NPT-3/4 in., hex	1	1
10	GM16206	Pipe, closed nipple, 3/4 in.	1	1
11	GM16207	Pipe, elbow, 1 in.	1	1
12	GM24550	Fitting, pipe tee 1 x1 x 1 in.	1	1
13	GM24551	Pipe, closed nipple 1 in.	1	1
14	GM29776	Pipe, nipple 1 in. x 3 in. long	1	1
15	#	Washer, lock 5/16	4	4
16	#	Washer, lock #10	4	4
17	#	Bolt, 5/16-18 x 1 3/4 hex head gr. 5	4	4
18	GM28767	Screw, cap 10-24 x 3/4 in. socket head	4	4
19	GM40176	Valve, mixer 50 mm	1	
19	GM29428	Valve, mixer L-series		1

Common hardware. Procure locally.

Group 9: Fuel System, Auto Dual Fuel Nat/LP Gas

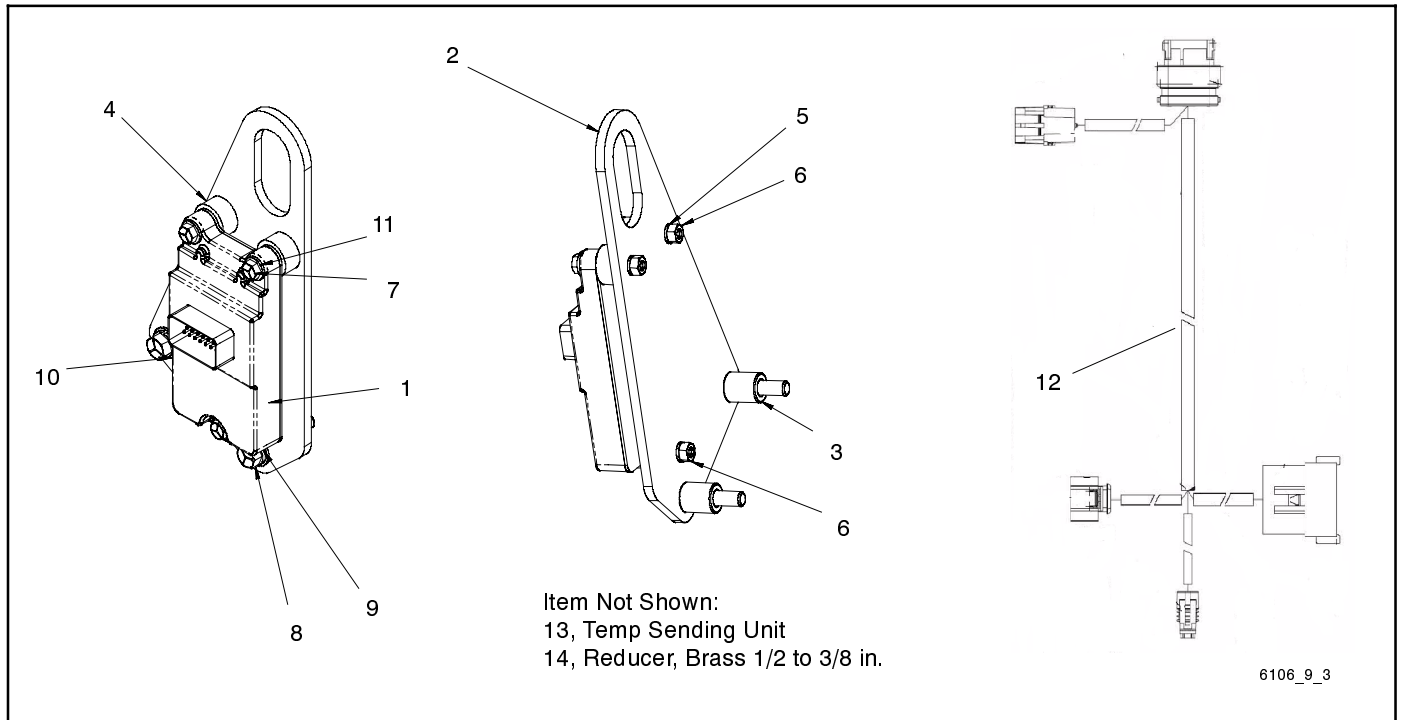


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Item	Part Number	Description	Qty. Var. 10
1	GM16176	Clamp, U-bolt 5/16-18 x 1 3/8	1
2	GM24185	Fitting, tee 3/4 x 3/4 x 3/4 in.	1
3	GM24187	Valve, line load	1
4	GM29587	Pipe, nipple 3/4 x 2 in.	1
5	GM60234	Regulator, fuel 3/4 in. NTP	2
6	GM60253	Body, throttle venturi 52 mm	1
7	GM60254	Mixer, venturi 52 mm	1
8	GM60255	Adapter, intake 52 mm TB	1
9	GM60238	Gasket, man. adapter venturi	1
10	GM60258	Bracket, LCI dual fuel 5.0/5.7L	1
11	GM16202	Gasket, intake manifold	1
12	GM16205	Bushing, reducer 1 to 3/4 in.	2
13	GM16206	Pipe, closed nipple, 3/4 in.	3
14	GM16209	Pipe, nipple 3/4 x 6 in.	1
15	GM16212	Elbow, 90 deg. 3/4 in.	1
16	GM24188	Washer, lock 1/4 in.	4
17	#	Bolt, 5/16-18 x 3/4 skt hd, gr. 5	4
18	#	Bolt, 1/4-20 x 3 skt hd, gr. 5	4

Common hardware. Procure locally.

Group 10: ECU and Wiring



Item	Part Number	Description	Qty.
			Var. 1
1	-	ECM (order with calibration)	1
1	GM60243	5.0L E-Controls ECM	1
1	GM60244	5.7L E-Controls ECM	1
2	GM60242	Bracket, LCI ECU mount	1
3	GM16181	Spacer, mount, 10 mm	2
4	GM26904	Isolator	3
5	GM24188	Washer, lock	3
6	#	Nut, 1/4-20	3
7	GM28961	Bolt, 1/4-20 x 3/4 hex gr. 5	3
8	GM16224	Bolt, 3/8-16 x 2 hex head gr. 5	2
9	#	Washer, lock 3/8	2
10	GM24190	Washer, flat 3/8 SAE	2
11	#	Washer, flat 1/in. hardened	3
12	GM60245	Harness	1
13	GM60247	Sender, temp. unit E-Controls	1
14	GM60248	Reducer, brass 1/2 to 3/8 in.	1

Common hardware. Procure locally.

Appendix A 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-6024-5	7/16-14 x .75	X-6210-1	10-32	Whiz
X-465-7	1/4-20 x 1.00	X-6024-2	7/16-14 x 1.00	X-6210-2	1/4-20	Spiralock
X-465-8	1/4-20 x 1.25	X-6024-8	7/16-14 x 1.25	X-6210-6	1/4-28	Spiralock
X-465-9	1/4-20 x 1.50	X-6024-3	7/16-14 x 1.50	X-6210-7	5/16-18	Spiralock
X-465-10	1/4-20 x 1.75	X-6024-4	7/16-14 x 2.00	X-6210-8	5/16-24	Spiralock
X-465-11	1/4-20 x 2.00	X-6024-11	7/16-14 x 2.75	X-6210-9	3/8-16	Spiralock
X-465-12	1/4-20 x 2.25	X-6024-12	7/16-14 x 6.50	X-6210-10	3/8-24	Spiralock
X-465-14	1/4-20 x 2.75	X-129-15	1/2-13 x .75	X-6210-11	7/16-14	Spiralock
X-465-21	1/4-20 x 5.00	X-129-17	1/2-13 x 1.00	X-6210-12	1/2-13	Spiralock
X-465-25	1/4-28 x .38	X-129-18	1/2-13 x 1.25	X-6210-15	7/16-20	Spiralock
X-465-20	1/4-28 x 1.00	X-129-19	1/2-13 x 1.50	X-6210-14	1/2-20	Spiralock
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-129-51	1/2-20 x .75			
X-125-28	5/16-18 x 3.00	X-129-45	1/2-20 x 1.25			
X-125-22	5/16-18 x 4.50	X-129-52	1/2-20 x 1.50			
X-125-32	5/16-18 x 5.00	X-6021-3	5/8-11 x 1.00			
X-125-35	5/16-18 x 5.50	X-6021-4	5/8-11 x 1.25			
X-125-36	5/16-18 x 6.00	X-6021-2	5/8-11 x 1.50			
X-125-40	5/16-18 x 6.50	X-6021-1	5/8-11 x 1.75			
X-125-43	5/16-24 x 1.75	273049	5/8-11 x 2.00			
X-125-44	5/16-24 x 2.50	X-6021-5	5/8-11 x 2.25			
X-125-30	5/16-24 x .75	X-6021-6	5/8-11 x 2.50			
X-125-39	5/16-24 x 2.00	X-6021-7	5/8-11 x 2.75			
X-125-38	5/16-24 x 2.75	X-6021-12	5/8-11 x 3.75			
X-6238-2	3/8-16 x .62	X-6021-11	5/8-11 x 4.50			
X-6238-10	3/8-16 x .75	X-6021-10	5/8-11 x 6.00			
X-6238-3	3/8-16 x .88	X-6021-9	5/8-18 x 2.50			
X-6238-11	3/8-16 x 1.00	X-6239-1	3/4-10 x 1.00			
X-6238-4	3/8-16 x 1.25	X-6239-8	3/4-10 x 1.25			
X-6238-5	3/8-16 x 1.50	X-6239-2	3/4-10 x 1.50			
X-6238-1	3/8-16 x 1.75	X-6239-3	3/4-10 x 2.00			
X-6238-6	3/8-16 x 2.00	X-6239-4	3/4-10 x 2.50			
X-6238-17	3/8-16 x 2.25	X-6239-5	3/4-10 x 3.00			
X-6238-7	3/8-16 x 2.50	X-6239-6	3/4-10 x 3.50			
X-6238-8	3/8-16 x 2.75	X-792-1	1-8 x 2.25			
X-6238-9	3/8-16 x 3.00	X-792-5	1-8 x 3.00			
X-6238-19	3/8-16 x 3.25	X-792-8	1-8 x 5.00			
X-6238-12	3/8-16 x 3.50					
X-6238-20	3/8-16 x 3.75					
X-6238-13	3/8-16 x 4.50					
X-6238-18	3/8-16 x 5.50					
X-6238-25	3/8-16 x 6.50					

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
M931-08040-82	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

M931-10040-82	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
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
M931-16120-60	M16-2.00 x 120
M931-16150-60	M16-2.00 x 150

M931-20065-60	M20-2.50 x 65
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

Hex Head Bolts (Full Thread)

M933-04006-60	M4-0.70 x 6
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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
M933-06040-60	M6-1.00 x 40
M933-06050-60	M6-1.00 x 50

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

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

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
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*

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

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
M934-05-50	M5-0.80	Standard
M982-05-60	M5-0.80	Elastic Stop
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.

