

Service Parts

Engine

Engine Model:

General Motors 8.1 L Powertrain

Generator Models:

80/100 kW

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Introduction

This manual lists service replacement parts for 80/100 kW generator sets.

At the time of print this manual applied to the generator set specification (spec) numbers listed in the Specification Number Index. On occasion this manual may apply to specs not listed in the Specification Number Index.

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

This manual includes the following main sections:

Table of Contents. Lists the sections of the manual.

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

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

Numbering System Significance

This manual uses the following numbering systems:

Group Number. A unique number representing a parts group needed to assemble a generator set function. For example, Group 10 is the Fuel System group.

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

Illustrations

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

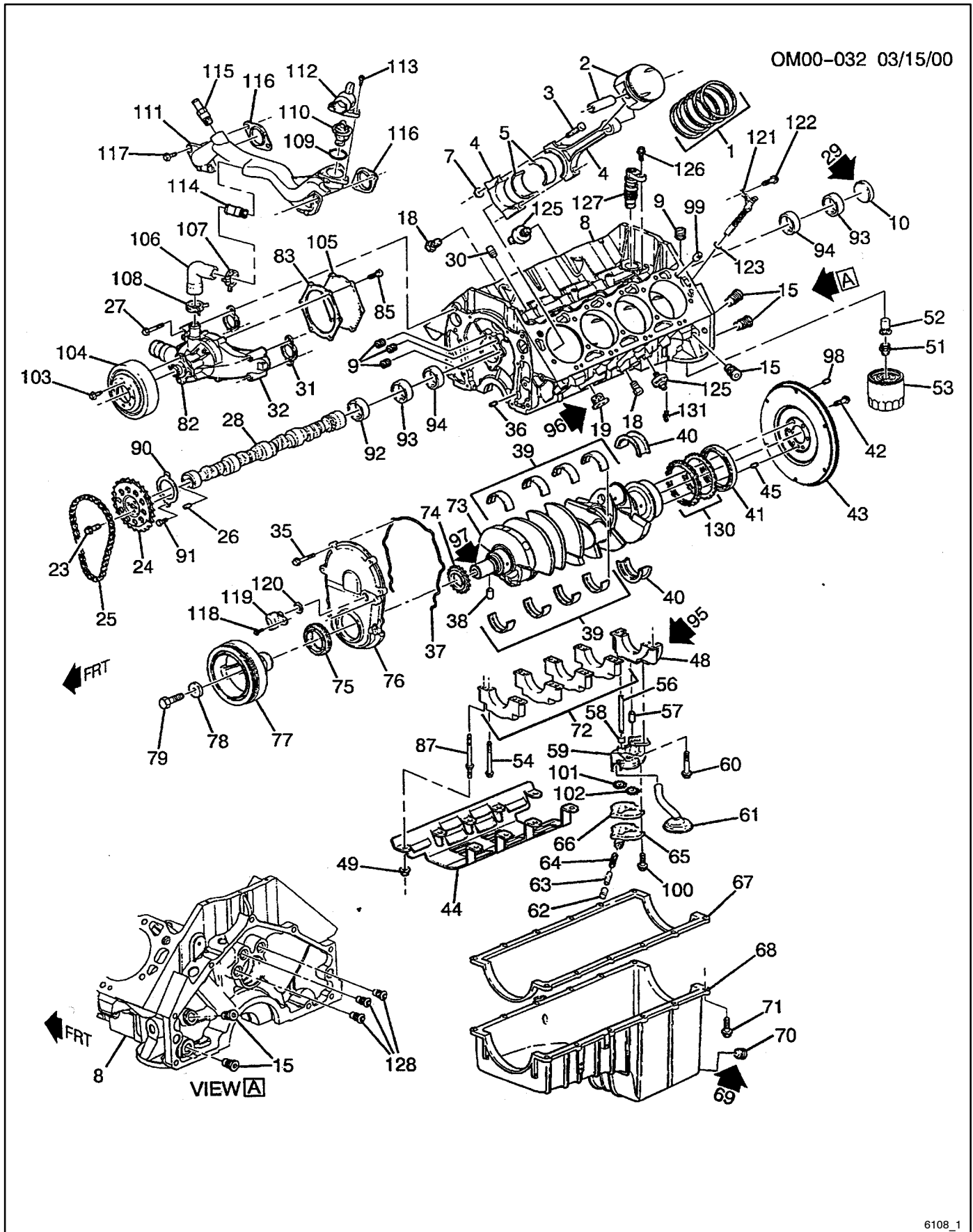
How to Find Part Numbers

Use the following steps to locate a service replacement part.

1. **Identify the group** most likely to include the service part number.
2. **Page forward to locate the group** identified in step 1 or find the appropriate page in the Table of Contents.
3. **Find the part on the illustration** and note the item number of the part or **find the part description in the parts list.**

Group 1: Engine Block/Lower End

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Group 1: Engine Block/Lower End

Item	Part Number	Description	Qty.	Item	Part Number	Description	Qty.
			Var. 1				Var. 1
1	GM19028	Ring kit, piston, standard	8	50	—	Not applicable	
1	GM19029	Ring kit, piston, .030 OS	8	51	GM18892	Fitting, oil filter	1
2	GM18999	Piston w/conn rod, standard, RH	4	52	GM19023	Valve, oil filter bypass	2
2	GM19001	Piston w/conn rod, .030 OS, RH	4	53	GM16703	Filter, oil	1
2	TBD	Piston w/conn rod, standard, LH	4	54	GM18953	Bolt, crankshaft bearing cap, M12 x 1.75 x 89	10
2	GM19002	Piston w/conn rod, .030 OS, LH	4				
3	TBD	Bolt, conn rod, also part of 2		55	—	Not applicable	
4	X	Not serviced separately		56	GM18896	Shaft, oil pump drive	1
5	GM19026	Bearing kit, connecting rod, standard	8	57	GM16476	Pin, oil pump locator, 1/4 x 5/8	1
6	—	Not applicable		58	GM16583	Retainer, oil pump drive shaft	1
7	TBD	Nut, conn rod, also part of 4		59	GM18990	Pump, oil with screen	1
8	TBD	Block, engine w/pistons		60	GM18956	Bolt, oil pump, M10 x 1.5 x 60	1
8	TBD	Engine, service partial		61	X	Not serviced separately, part of 59	
8	TBD	Engine, gasoline		62	GM18893	Valve, oil pressure relief	1
9	GM18885	Plug, engine block oil galley	3	63	GM18894	Spring, oil pressure relief valve	1
9	GM18886	Plug, eng. block oil galley, 1/8-27 x 3/8 NPTF	AR	64	GM16549	Pin, oil pressure relief valve spring stay	1
9	GM16510	Plug, engine block oil galley, auto drain	2	65	GM18904	Cover, oil pump	1
9	GM18887	Plug, engine block oil galley, auto drain hex head	1	66	X	Not serviced separately	
				67	GM19009	Gasket, oil pan	1
10	GM18897	Plug, camshaft bearing hole	1	68	GM18989	Pan, oil (includes pan, plug, gasket)	1
11	—	Not applicable		69	GM16430	Sealer, oil pan	AR
12	—	Not applicable		70	GM16533	Plug, oil pan drain, 1/2-14 x .610	2
13	—	Not applicable		70	GM16526	Plug, oil pan drain, M12 x 1.75-6 G 44.45 mm long	1
14	—	Not applicable					
15	GM18925	Plug, engine block oil galley	4	71	GM18938	Bolt, oil pan	13
16	—	Not applicable		72	X	Not serviced separately	
17	—	Not applicable		73	TBD	Crankshaft (includes 94)	1
18	TBD	Plug, engine block coolant drain hole		74	GM18982	Sprocket, crankshaft	1
19	GM18988	Plug, engine block coolant drain hole, LH	1	75	GM18972	Seal, crankshaft front oil	1
19	GM16504	Plug, eng. block coolant drain hole, 1/4-18 x 0.56	1	76	GM19006	Cover, engine front (includes cover, seal, gasket)	1
20	—	Not applicable		77	GM18943	Balancer, crankshaft	1
21	—	Not applicable		78	GM19021	Washer, crankshaft balancer	1
22	—	Not applicable		79	GM19015	Bolt, crankshaft balancer, M16 x 1.5	1
23	GM18914	Bolt, camshaft sprocket with washer	3	80	—	Not applicable	
24	GM19003	Sprocket, camshaft	1	81	—	Not applicable	
25	GM19012	Chain, camshaft timing	1	82	X	Not serviced separately, part of 32	
26	GM16476	Pin, camshaft sprocket locator, 1/4 x 5/8	1	83	X	Not serviced separately, part of 32	
27	GM18917	Bolt, water pump, HFH, MIOX1.5x65 RH	1	84	—	Not applicable	
28	GM19000	Camshaft, engine (includes 22, 26, 36, 57)	1	85	GM16513	Bolt, water pump cover, part of 32	6
29	GM18933	Sealer, camshaft bearing hole plug	AR	86	—	Not applicable	
30	GM18886	Plug, eng. block oil galley, 1/8-27 x 3/8 NPTF	3	87	GM18976	Stud, crankshaft bearing cap	10
31	GM18963	Gasket, water pump	2	88	—	Not applicable	
32	GM19027	Pump kit, water (incl. 31, 82, 83, 85, 105)	1	89	—	Not applicable	
33	—	Not applicable		90	GM16372	Retainer, camshaft	1
34	—	Not applicable		91	GM18912	Bolt, camshaft retainer	2
35	GM18909	Bolt, engine front cover, M6 x 1.0 x 30	6	92	GM19013	Bearing, camshaft, position #1	1
36	GM16476	Pin, engine front cover locator, 1/4 x 5/8	1	93	GM19014	Bearing, camshaft, position #2, 5	
37	GM18951	Gasket, engine front cover, also part of 76	1	94	GM18935	Bearing, camshaft, position #3, 4	
38	GM18986	Pin, crankshaft balancer locator	1	95	GM18888	Sealer, crankshaft rear main bearing	AR
39	GM19024	Bearing kit, crankshaft, std., pos. #1, 2, 3, 4	4	96	GM16430	Sealant, Loctite	AR
40	GM19025	Bearing kit, crankshaft thrust, std., pos. #5	1	97	GM18934	Grease, heavy duty multipurpose	AR
41	GM18971	Seal, crankshaft rear oil	1	98	GM18907	Pin, dowel flywheel locator, M6 x 20	2
42	GM18997	Bolt, flywheel, M11 x 1.5 x 29	6	99	GM18958	Pin, cylinder head locator, 1/2 x 5/8 OD	4
43	GM18944	Flywheel, engine (incl. gear & locator pin)	1	100	GM16422	Bolt, oil pump cover	5
44	GM18977	Deflector, crankshaft oil	1	101	X	Not serviced separately, part of 59	
45	GM18907	Pin, flywheel locator, part of 73	2	102	X	Not serviced separately, part of 59	
46	—	Not applicable		103	GM18913	Bolt, pulley water pump	4
47	—	Not applicable		103	GM18937	Bolt, oil pump drive	1
48	X	Not serviced separately		104	GM18936	Pulley, fan & water pump	1
49	GM18916	Nut, crankshaft oil deflector	9	105	X	Not serviced separately, part of 32	

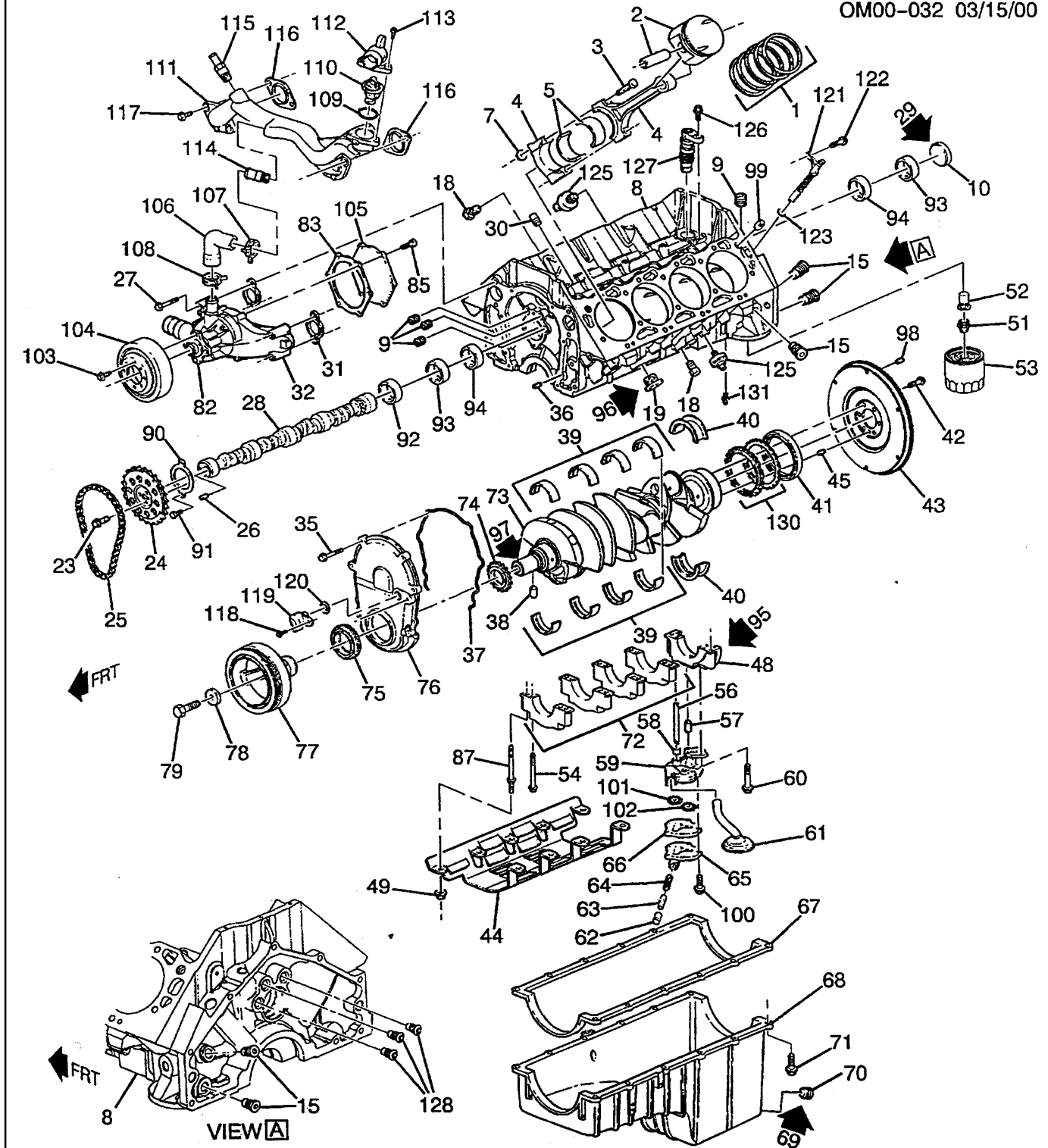
X Item not sold separately

AR As required

TBD Part number to be determined

Group 1: Engine Block/Lower End, continued

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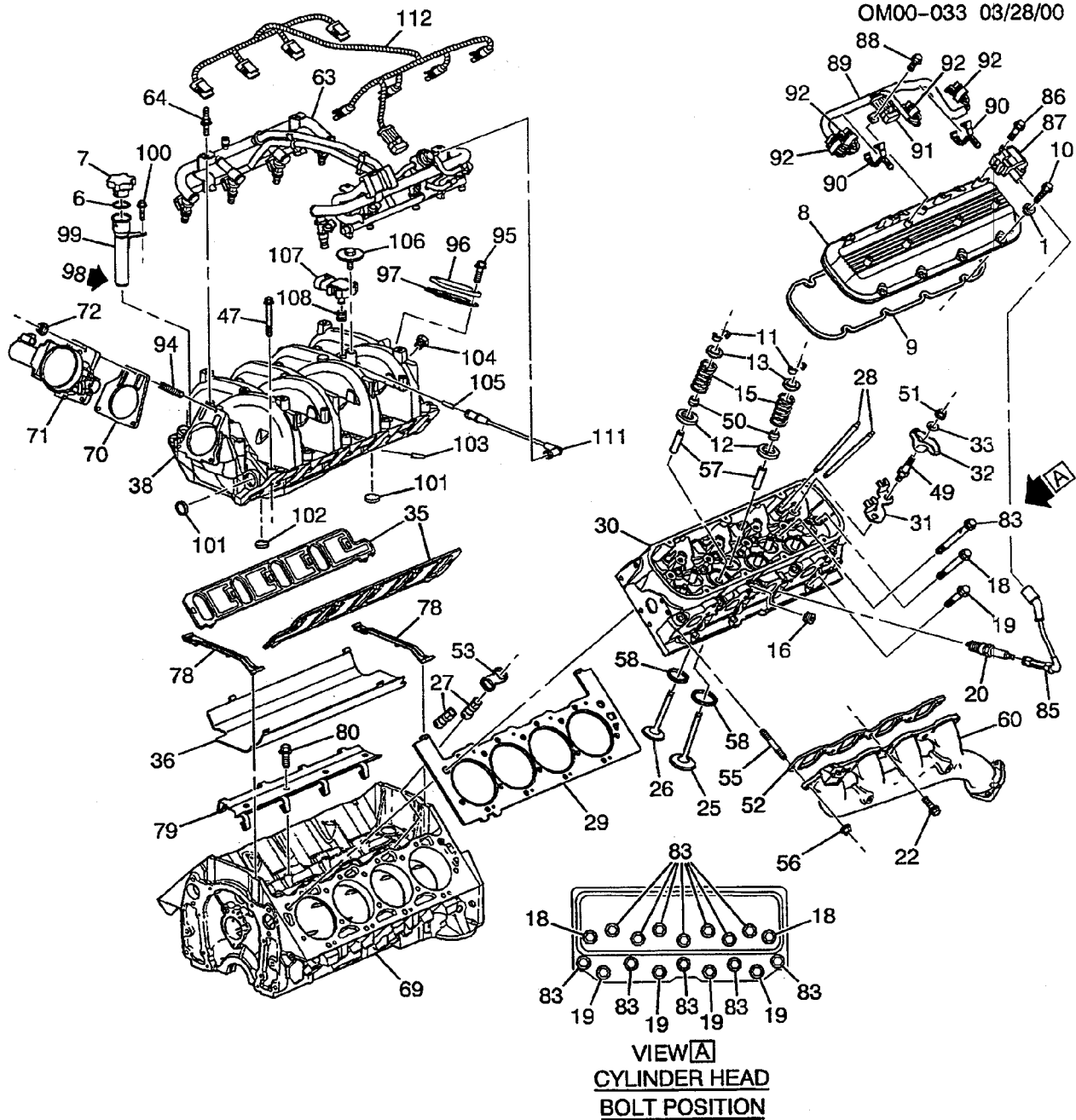
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Group 1: Engine Block/Lower End, continued

Item	Part Number	Description	Qty.
			Var. 1
106	GM18967	Hose, therm bypass includes hose clamps	1
107	GM18919	Clamp, therm bypass hose, spring band 35mm silver, RH	1
108	GM18918	Clamp, therm bypass hose, spring band 30mm green, LH	1
109	See Group 3	Seal, engine coolant thermostat (O-ring)	1
110	See Group 3	Thermostat, engine coolant	1
111	GM19008	Pipe, engine coolant crossover (includes 109-110, 112-115)	1
112	GM18979	Outlet, water, part of 111	1
113	GM18914	Bolt, water outlet, part of 111	3
114	X	Not serviced separately	
115	GM18991	Fitting, heater hose, part of 111	1
116	GM18964	Gasket, engine coolant crossover	2
117	GM18920	Bolt, engine coolant crossover	4
118	GM18910	Bolt, camshaft position sensor, M6 x 1 x 20	1
119	GM19004	Sensor, camshaft position (includes 120)	1
120	X	Not serviced separately, part of 119	
121	GM18952	Sensor, crankshaft position (includes 123)	1
122	GM18996	Bolt, crankshaft position sensor	1
123	X	Not serviced separately, part of 121	
124	—	Not applicable	
125	GM18906	Sensor, knock	2
126	GM18913	Bolt, oil pump drive, M8 x 1.25 x 20, heavy hex flange	4
126	GM18937	Bolt, oil pump drive, M8 x 1.25 x 20	1
127	GM19011	Drive, oil pump	1
128	GM18924	Plug, engine block oil galley, countersunk	3
129	—	Not applicable	
130	X	Not serviced separately, part of 73	
131	GM19018	Connector, engine oil cooler hose	2

X Item not sold separately

Group 2: Engine Head/Upper End



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Group 2: Engine Head/Upper End

Item	Part Number	Description	Qty.	Item	Part Number	Description	Qty.
			Var. 1				Var. 1
1	GM18957	Gasket, valve rocker arm cover bolt	14	54	—	Not applicable	
2	—	Not applicable		55	—	See item 22	14
3	—	Not applicable		56	—	See item 22	14
4	—	Not applicable		57	X	Not serviced separately, part of 30	
5	—	Not applicable		58	X	Not serviced separately, part of 30	
6	X	Not serviced separately, part of 7		59	—	Not applicable	
7	GM18905	Cap, oil filler (includes 6)	1	60	GM19722	Manifold, exhaust	
8	GM18973	Cover, valve rocker arm (includes gasket)	2	61	—	Not applicable	
9	GM18974	Gasket, valve rocker arm cover, part of 8	2	62	—	Not applicable	
10	GM18975	Bolt, valve rocker arm cover, M6 x 1.0 x 26	14	63	GM19016	Harness, m/port fuel injection	1
11	GM18895	Key, valve stem	32	64	GM18900	Stud, fuel injection rail	2
12	GM18903	Rotator, valve	8	65	—	Not applicable	
13	GM18902	Cap, valve spring	8	66	—	Not applicable	
14	—	Not applicable		67	—	Not applicable	
15	GM19005	Spring, valve	1	68	—	Not applicable	
16	GM16533	Plug, cylinder head core hole, 1/2-14 x .610 stl	2	69	TBD	Engine, 8.1 L	
17	—	Not applicable		70	GM18939	Gasket, throttle body	1
18	GM18922	Bolt, cylinder head, pos #15, 18	4	71	—	Not applicable	
19	GM18923	Bolt, cylinder head, pos #4, 5, 12, 13	8	72	GM18890	Nut, throttle body	3
20	GM16711	Spark plug	8	73	—	Not applicable	
21	—	Not applicable		74	—	Not applicable	
22	#	Bolt, exhaust manifold, 8 x 1.25 x 30	16	75	—	Not applicable	
23	GM18958	Pin, cylinder head locator, 1/2 x 5/8 OD	4	76	—	Not applicable	
24	—	Not applicable		77	—	Not applicable	
25	GM18950	Valve, Intake, standard	8	78	X	Not serviced separately, part of 35	
25	GM18992	Valve, Intake, 0.003 in., OS	8	79	GM18941	Retainer, valve lifter guide, restrictor	1
25	GM18993	Valve, Intake, 0.015 in., OS	8	80	GM18914	Bolt, valve lifter guide retainer	7
25	GM18994	Valve, Intake, 0.030 in., OS	8	81	—	Not applicable	
26	GM18962	Valve, exhaust, standard	8	82	—	Not applicable	
26	GM18968	Valve, exhaust, 0.003 in., OS	8	83	GM18921	Bolt, cylinder head, position #1, 2, 3, 6-11, 14, 16, 17	24
26	GM18969	Valve, exhaust, 0.015 in., OS	8	84	—	Not applicable	
26	GM18970	Valve, exhaust, 0.030 in., OS	8	85	GM18930	Wire kit, spark plug	1
27	GM19020	Lifter, valve	16	85	GM18931	Wire, spark plug #1,2,7,8 cylinders	4
28	GM18946	Rod, valve push, intake	8	85	GM18932	Wire, spark plug #3,4,5,6 cylinders	4
28	GM18947	Rod, valve push, exhaust	8	85	GM18928	Retainer, spark plug wire	12
29	GM18959	Gasket, cylinder head LH	1	86	GM18955	Bolt, ignition coil	16
29	GM18960	Gasket, cylinder head RH	1	87	GM18966	Coil, ignition	8
30	GM18983	Head, cylinder (incl. seats & guides) RH	1	88	GM18908	Bolt, wiring harness bracket	4
30	GM18984	Head, cylinder (incl. seats & guides) LH	1	89	GM19017	Harness, ignition coil wiring	1
31	GM18995	Guide, valve lifter push rod	8	90	GM18929	Clip, wiring harness	1
32	GM18948	Arm, valve rocker	16	91	GM18926	Connector, inline to engine harness	1
33	GM18949	Ball, valve rocker arm	16	92	GM18927	Connector, coil ignition	4
34	—	Not applicable		93	—	Not applicable	
35	GM19030	Gasket, intake manifold	2	94	GM18942	Stud, throttle body	3
36	GM18980	Shield, intake manifold oil splash	1	95	GM18938	Bolt, EGR valve opening cover	2
37	—	Not applicable		96	GM18981	Cover, EGR valve opening	1
38	GM18998	Manifold, intake	1	97	GM18965	Gasket, EGR valve opening cover	1
39	—	Not applicable		98	GM18933	Sealer, oil fill tube	AR
40	—	Not applicable		99	GM19007	Tube, oil filler	1
41	—	Not applicable		100	GM18911	Bolt, oil filler tube, M6 x 1 x 20	1
42	—	Not applicable		101	GM18889	Plug, int manifold, (must use with 12345382 sealant	2
43	—	Not applicable		102	GM18891	Plug, int manifold (must use with 12345382 sealant	1
44	—	Not applicable		103	X	Not serviced separately, part of 38	
45	—	Not applicable		104	GM18901	Plug, int manifold (must use with 12345382 sealant	1
46	—	Not applicable		105	—	Not serviced separately	
47	GM18987	Bolt, intake manifold, lower intake to cylinder head	10	106	GM18899	Bolt, map sensor	3
48	—	Not applicable		107	GM18898	Sensor, map (includes 108)	1
49	GM19010	Stud, valve rocker arm pivot	16	108	GM19019	Seal, map sensor, part of 106	1
49	GM18954	Stud, valve rocker arm pivot	16	109	—	Not applicable	
50	GM18945	Seal, valve stem oil	1	110	—	Not applicable	
51	GM16521	Nut, valve rocker arm, non-adjustable	12	111	GM18985	Hose, fuel pressure reg vac	1
52	GM19721	Gasket, exhaust manifold		112	GM19016	Harness, m/port fuel injection	1
53	GM18940	Guide, valve lifter, restrictor valve rotator	8				

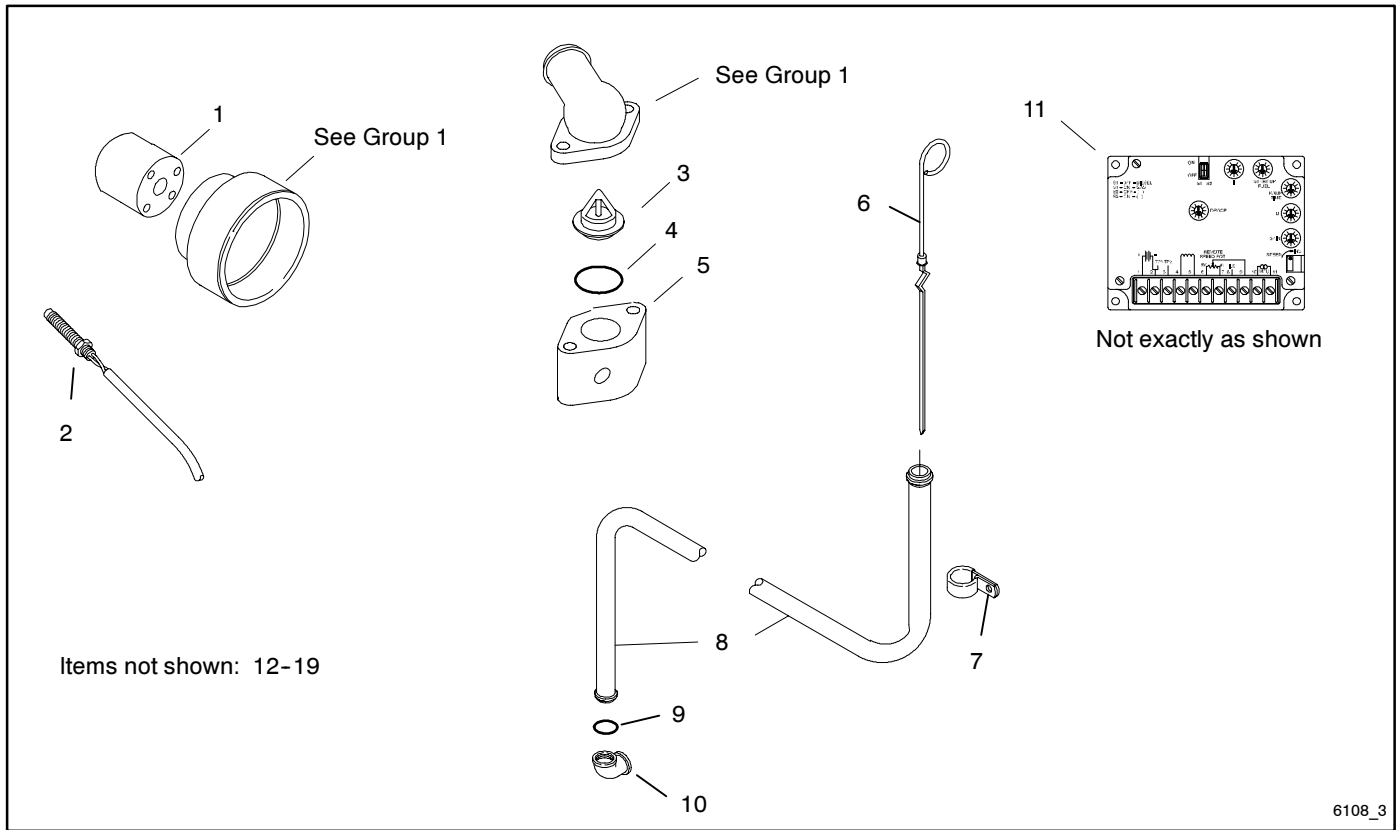
X Item not sold separately

Common hardware; procure locally.

AR As required

TBD Part number to be determined

Group 3: Engine Trim Parts

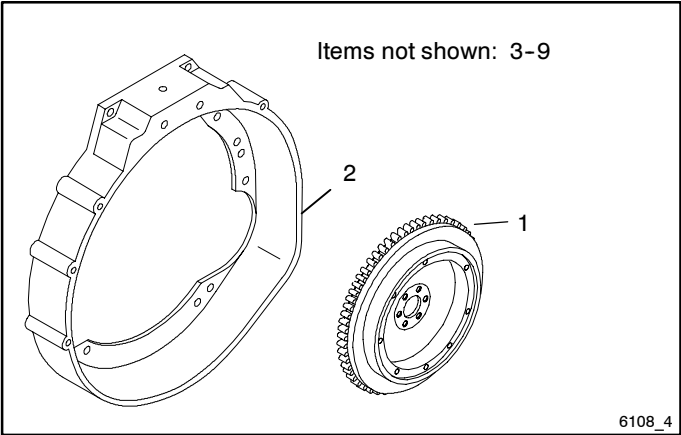


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Item	Part Number	Description	Qty.
			Var. 1
1	GM16147	Spacer, fan	1
2	GM16113	Sensor, magnetic speed, 5/8-18	1
3	GM19726	Thermostat, 160 degree	1
4	GM19727	O-ring, water sensor tube	1
5	GM19725	Housing, sensor	1
6	GM19761	Dipstick, modified	1
7	GM16154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

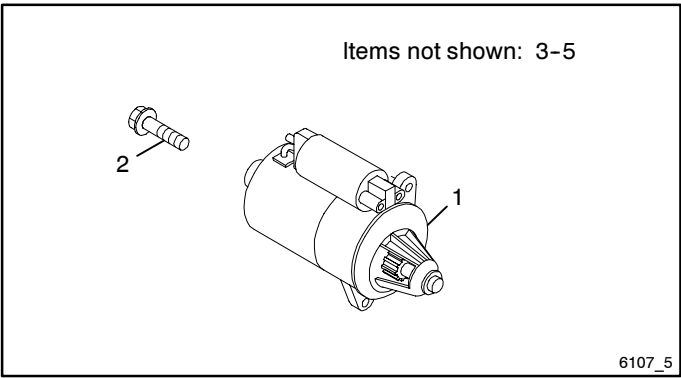
Common hardware; procure locally.

Group 4: Flywheel



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

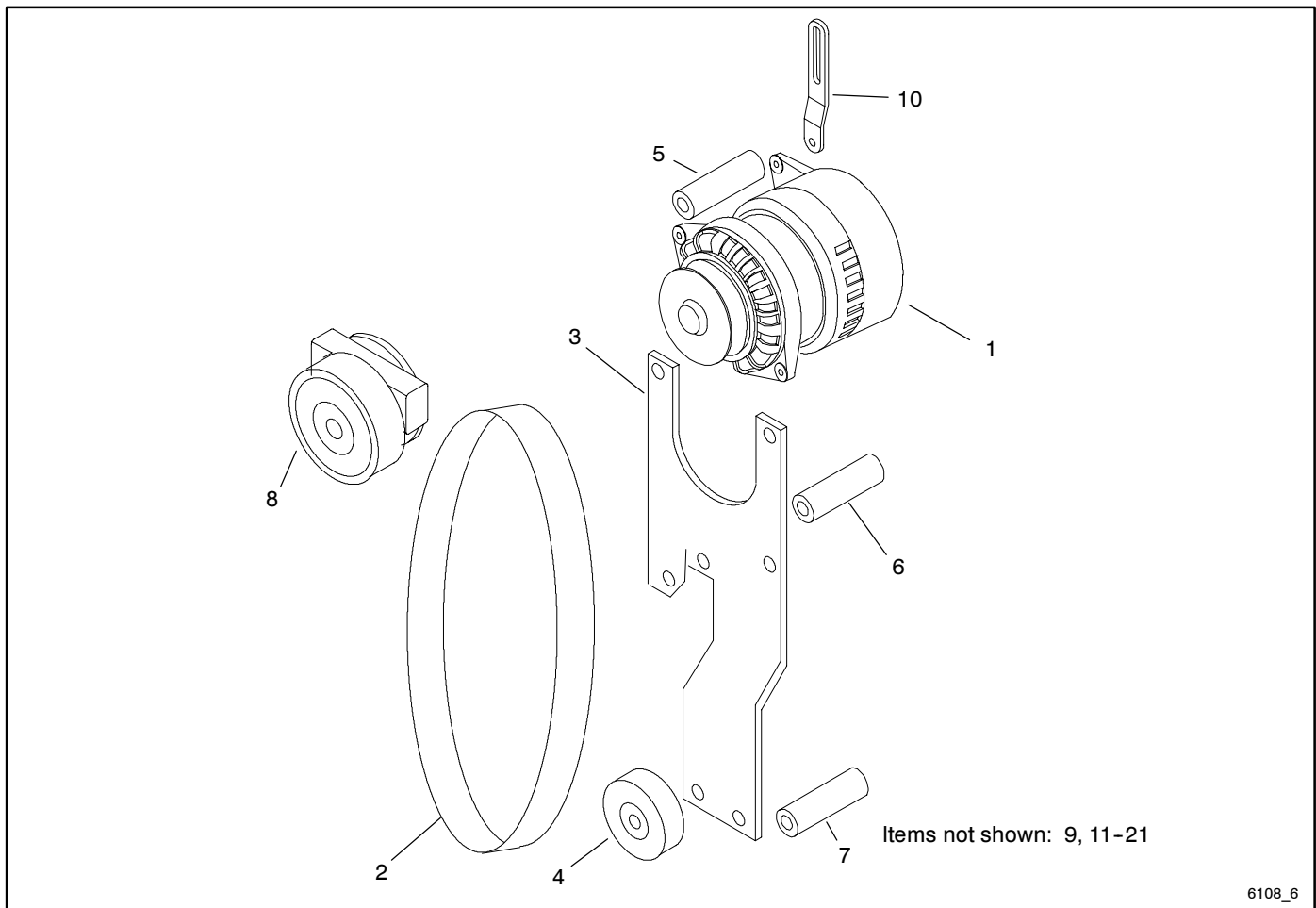
Group 5: Starter



Item	Part Number	Description	Qty.
			Var. 1
1	GM16178	Starter	1
2	GM17378	Bolt, starter, special	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

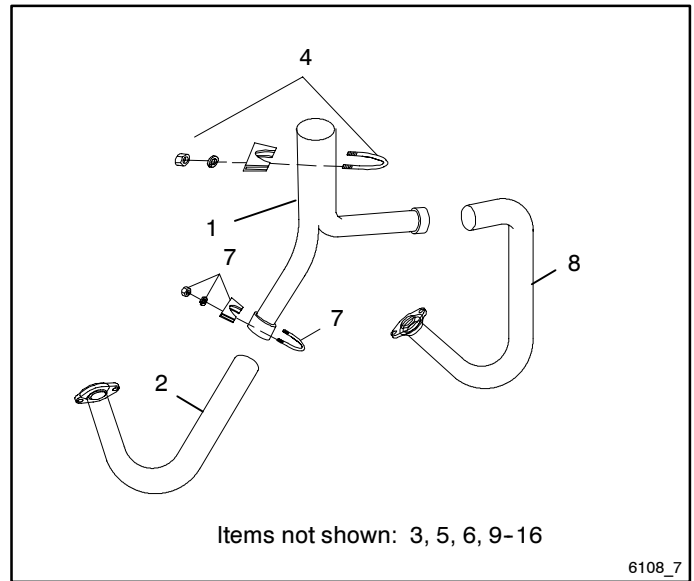


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Item	Part Number	Description	Qty.
			Var. 1
1	GM16180	Alternator, 7SI	1
2	GM19739	Belt, fan	1
3	GM19740	Plate, alternator mounting	1
4	GM19741	Pulley, idler	1
5	GM19742	Spacer, .437 ID x 2.343 in.	1
6	GM19743	Spacer, .437 ID x 2.906 in.	1
7	GM19744	Spacer, .437 ID x 3.718 in.	1
8	GM19746	Pulley, tensioner	1
9	GM19747	Spacer, alternator mounting, .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

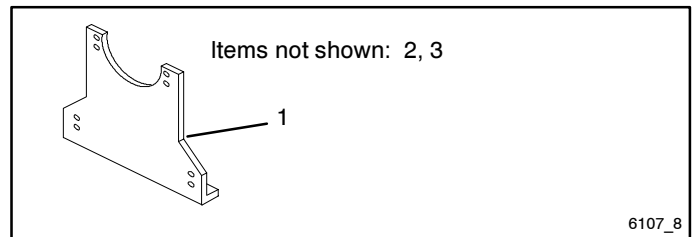
Common hardware; procure locally.

Group 7: Intake and Exhaust System



Item	Part Number	Description	Qty.
			Var. 1
1	GM19749	Pipe, Y	1
2	GM19750	Pipe, left hand	1
3	GM19751	Bracket, mounting	1
4	GM19752	Clamp, muffler, 3 1/2 in.	1
5	GM19753	Spacer, .437 ID x .375 in.	2
6	GM19754	Spacer, .437 ID x .875 in.	2
7	GM19755	Kit, exhaust installation	1
8	GM19759	Pipe, right hand	1
9	See Group1	Gasket, exhaust manifold	2
10	See Group1	Manifold, exhaust	2
11	#	Bolt, M8-1.25 x 30, hex head grade 8.8	16
12	#	Washer, flat 5/16 in., hardened	16
13	#	Bolt, M10-1.50 x 30, hex head grade 8.8	6
14	#	Washer, lock M10	6
15	#	Bolt, M10-1.50 x 35, hex head grade 8.8	2
16	#	Bolt, M10-1.50 x 50, hex head grade 8.8	2

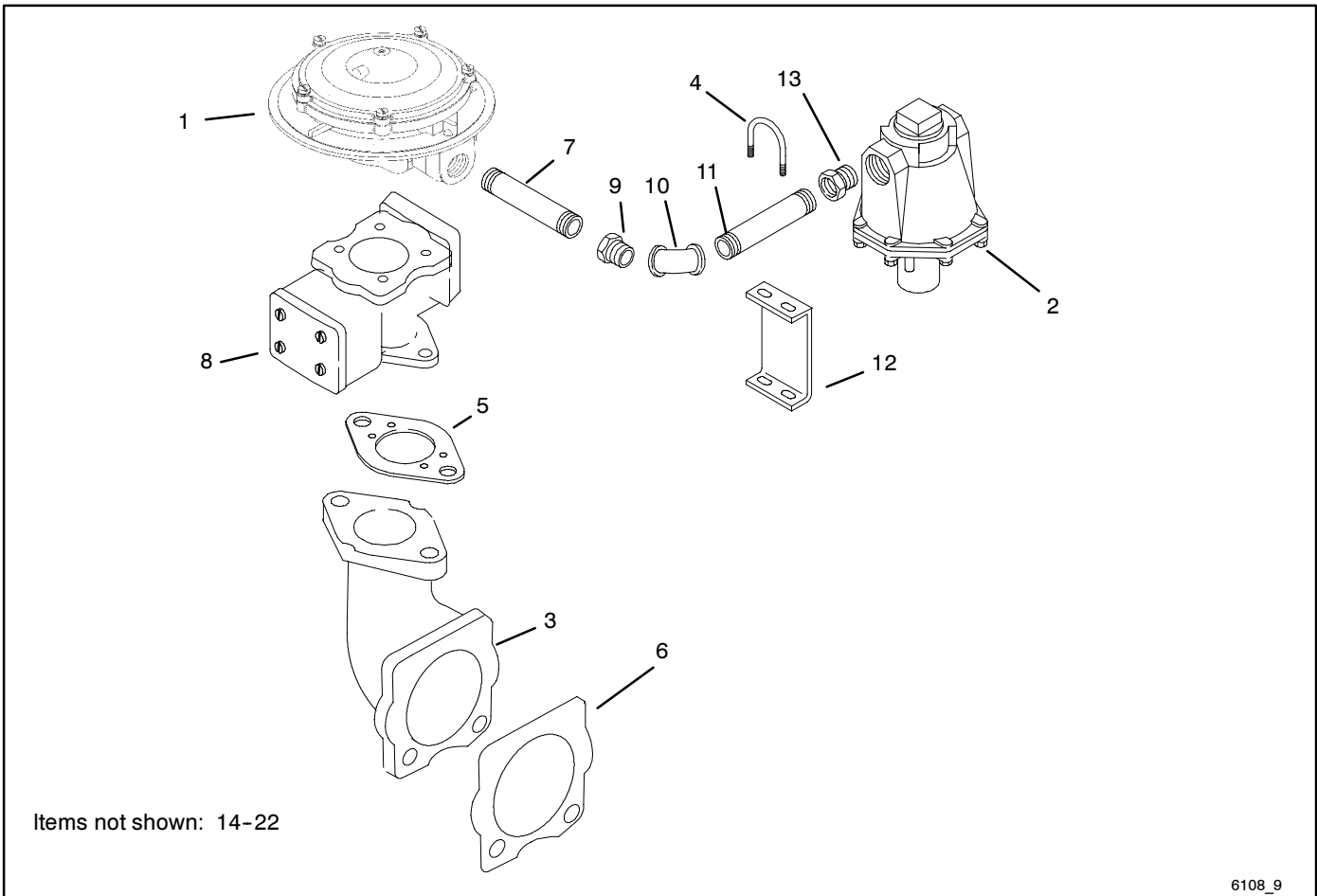
Group 8: Engine Mounting



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



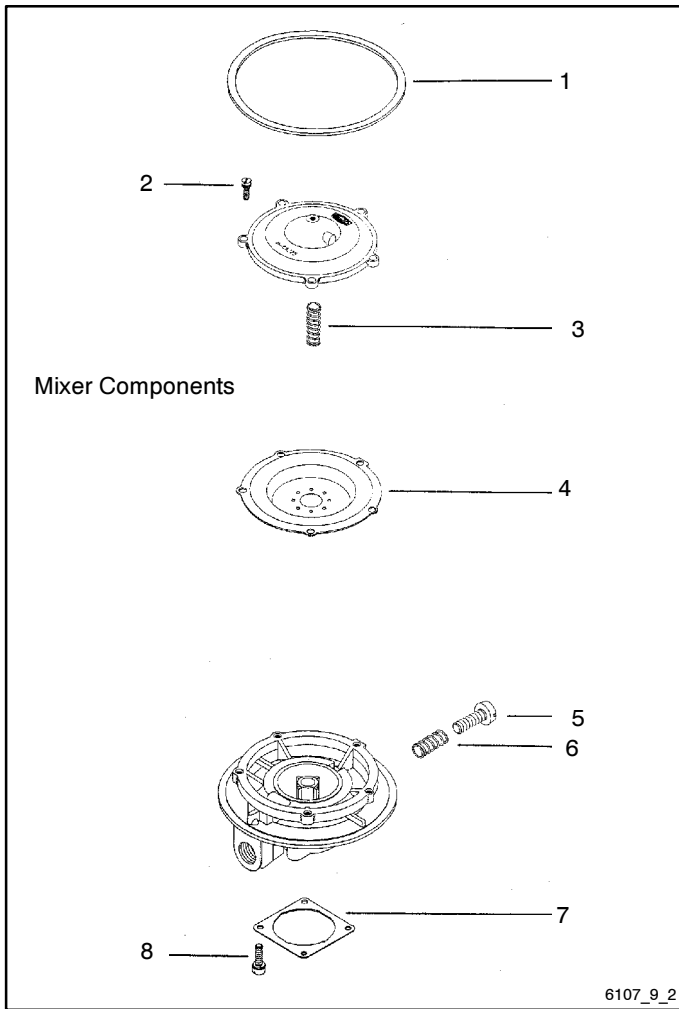
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Item	Part Number	Description	Qty.
			Var.
1	GM16165	Mixer, natural gas, complete assembly*	1
1	GM17382	Mixer, LP, complete assembly*	1
2	GM19728	Regulator, fuel	1
3	GM19729	Adapter, manifold	1
4	GM16177	U-Bolt, w/o plate	1
5	GM19732	Gasket, manifold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

Common hardware; procure locally.

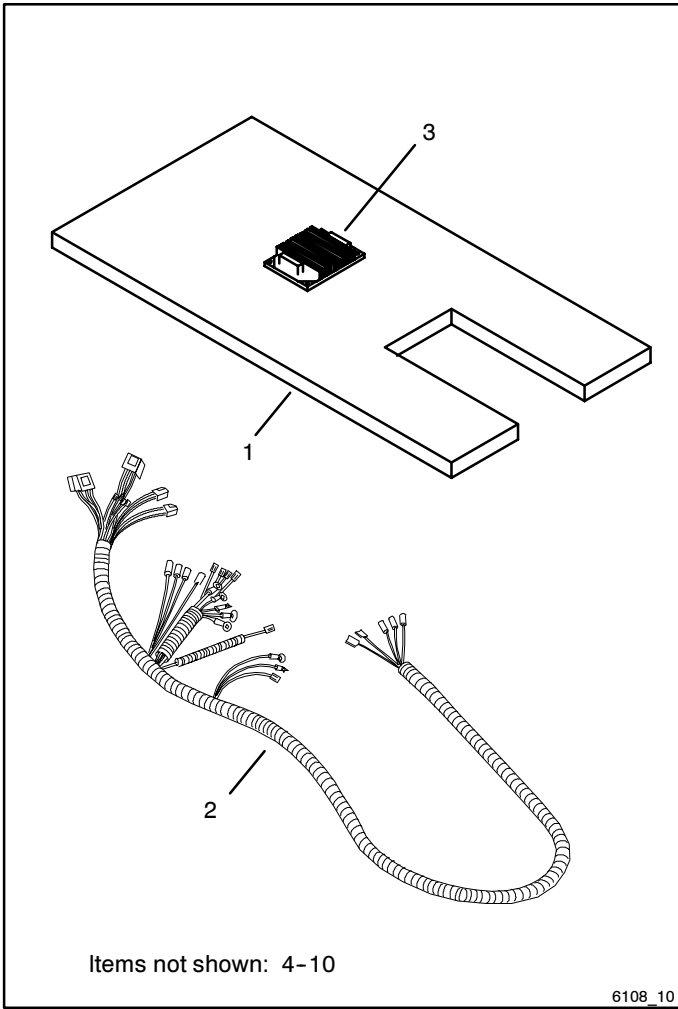
* Mixer components are shown on following page.

Group 9: Fuel System, continued



Item	Part Number	Description	Qty.	
			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 10: Wiring Harness



Item	Part Number	Description	Qty.		
			1	2	3
1	GM19738	Plate, FS mounting	1	1	1
2	GM19745	Harness, wire	1	1	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	
4	#	Washer, flat 1/4 in., SAE	6	6	6
5	#	Washer, lock 1/4 in., SAE	5	5	5
6	#	Bolt, 1/4-20 x 3/4, hex head grade 5	4	4	4
7	#	Bolt, 1/4-20 x 1 1/4, hex head grade 5	1	1	1
8	#	Bolt, 1/4-20 x 1, hex head grade 5	3	3	3
9	#	Bolt, M6-1.0 x 20, hex head grade 8.8	4	4	4
10	#	Washer, lock, M6	4	4	4

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