General Motors 4.3 L, 5.0 L, 5.7 L, and 8.1 L Engine Specifications and Scheduled Maintenance

Introduction

Use this information as a supplement to the generator set operation manual. Refer to the respective generator set operation manual for safety precautions, service assistance, specifications and features, operation, scheduled maintenance, troubleshooting, and voltage reconnection information. Refer to the respective spec sheet for specifications not supplied in the generator set operation manual. Refer to the respective wiring diagram manual for wiring and schematic diagrams.

The information in this manual was in effect at the time the manual was released for printing. The generator set manufacturer and engine manufacturer reserve the right to discontinue models at any time or change specifications or design without notice and without incurring obligation.

Specifications

Engine	**4.3 L**	**5.0 L**	**5.7 L**	**8.1 L**	**8.1 L**
Type	4.3 L V-6 Naturally Aspirated	5.0 L V-8 Naturally Aspirated	5.7 L V-8 GEN-1E Naturally Aspirated	8.1 L V-8 Naturally Aspirated	8.1 L V-8 Turbocharged
Displacement, cc (cid)	4294 (262)	5001 (305)	5735 (350)	8127 (496)	
Compression Ratio	9.4:1			9.1:1	
Valve Configuration	Push Rod Actuated Overhead Valve				
Valve Lifters	Hydraulic Roller				
Bore x Stroke, mm (in.)	101.60 x 88.39 (4.00 x 3.48)	94.89 x 88.39 (3.74 x 3.48)	101.60 x 88.39 (4.00 x 3.48)	107.95 x 111.0 (4.25 x 4.37)	
Main Bearing Caps	2 Bolt			4 Bolt	
Balance Method	External			Internal	
Firing Order	1-6-5-4-3-2	1-8-4-3-6-5-7-2		1-8-7-2-6-5-4-3	
Oil Filter	GM16700 or GM16701	GM16702		GM16703	
Fuel Type	LP Gas or Natural Gas				
Engine Rotation, Flywheel End	CCW				
Ignition System	Solid State Distributor			Distributorless Electronic ECU	
Ignition Timing, °BTDC LP Gas Natural Gas	 28 36			 — —	 — —
Spark Plugs	GM16704			GM16711	GM22171
Spark Plug Gap, LP/Natural Gas, mm (in.)	0.89 (0.035)				
Valve Clearance (Lash) Intake/Exhaust	Net Lash, No Adjustment	1 Turn Down from Zero Lash		Net Lash, No Adjustment	

Scheduled Maintenance

Engine Oil Recommendations

See Figure 1 for recommended multi-viscosity oils.

Do not use straight-weight or synthetic oils recommended for industrial or stationary engines. Do not use diesel CC or CD classification oils, even when labeled heavy duty or for natural gas engines.

Ambient Temperature	Engine Oil Type
-18°C (0°F) and above	SAE 10W-30
below -18°C (0°F)	SAE 5W-30

Figure 1 Oil Selection

Note: Use only engine oils displaying the American Petroleum Institute (API) Starburst certification mark FOR GASOLINE ENGINES on the container.

When checking the oil level of a hot or cold engine:

1. Remove the dipstick and wipe the dipstick blade with a clean rag.
2. Place the dipstick in the dipstick tube.
3. Wait for *at least 30 seconds* before removing the dipstick to check the oil level.
4. Add oil as needed.
5. Place the dipstick back in the dipstick tube. Repeat procedure if necessary.

This waiting time allows the oil to flow back to its normal level. Removing the dipstick and checking the oil level without the waiting time results in an erroneous low oil level reading.

Cooling System

Add to or refill the engine cooling system using only a permanent-type coolant. Use a mix of 50% ethylene glycol and 50% clean, softened water up to a maximum of 60% ethylene glycol and 40% clean, softened water.

Refer to the mixture chart on the container for additional antifreeze protection information. Do not use alcohol or methanol antifreeze or mix them with the specified coolant.

Plain water may be used in an emergency (except in freezing temperatures), but replace it with the specified coolant as quickly as possible to avoid damage to the system.

Service Schedule

Operation	Initial Startup Sequence Checks	Daily	Weekly	Every 100 Hr.	Every 200 Hr.	Every 400 Hr.	Every 800 Hr.	As Req'd
Check engine oil level	1	x						
Check coolant level*	2	x						
Check for fluid leaks	3	x						
Change engine oil and filter†					x			
Check battery charge and fluid level‡	4		x					
Inspect and clean radiator exterior‡			x					
Clean battery cables‡								x
Check belts and belt tension	5			x				
Lubricate throttle, governor, and choke linkage				x				
Inspect and clean air cleaner element			x					
Replace primary air cleaner element†						x		
Replace safety air cleaner element								x
Replace engine coolant‡*							x	
Replace fuel filter§					x			
Clean, adjust and test, or replace spark plugs‡						x		
Replace PCV valve, if equipped‡							x	
Check PCV holes, tubes, and fittings‡							x	
Replace spark plugs‡								x
Adjust throttle and governor‡								x
Check all bolts and nuts for tightness‡	6							x

* Check engine coolant condition and protection, hoses, and clamps annually (prior to cold weather).
† More frequent intervals may be required in dusty or dirty operating conditions.
‡ Seasonal or as required.
§ More frequent intervals may be required with dirt in fuel system.