

## 6.0L V-8, L96

### TIME-ALTERING EFFICIENCY

The 6.0L V-8 L96 is a heavy-duty workhorse engine. Variable Valve Timing helps the 6.0L L96 optimize performance, efficiency, and emissions. Intake flow was improved over previous engines by straightening out and optimizing the flow path from the intake manifold into the cylinder heads, while the exhaust ports are designed for greater flow. The engine's efficiency also optimizes emissions performance. Quiet features built into the engine are complemented by an improved engine cradle and mounting system. These help reduce vibrations transmitted through the chassis and into the passenger compartment.

### STATE-OF-THE-ART TECHNOLOGIES

#### Cast-Iron Cylinder Block & Aluminum Heads

- Cast iron deep-skirt cylinder block with six-bolt main bearing caps that limit crankshaft flex and stiffen the engine's structure.
- Cast aluminum structural oil pan for additional rigidity.
- High-flow aluminum cylinder head design.

#### Valvetrain

- Variable Valve Timing uses a hydraulic cam phaser to retard cam timing for low-end torque and advanced cam timing for high-rpm horsepower.
- Steel camshaft, hydraulic roller lifters, and steel roller rocker arms for reduced friction and excellent durability.
- Return-less fuel injection with stainless steel fuel rail.

#### Engine Control Features

- Electronic Throttle Body fully compatible with electronic throttle control software in the MEFI-6 engine control module.
- Factory-installed EFI hardware, including coil-near-plug ignition, is standard on the 6.0L GEN-IV engine.
- Coil-near-plug ignition system with 58X crankshaft position encoder, 4X cam sensor, and dual flat response knock sensors for precise control of ignition timing under all operating conditions.



6.0L L96 GM Global Solutions engine shown

### ADDITIONAL FEATURES

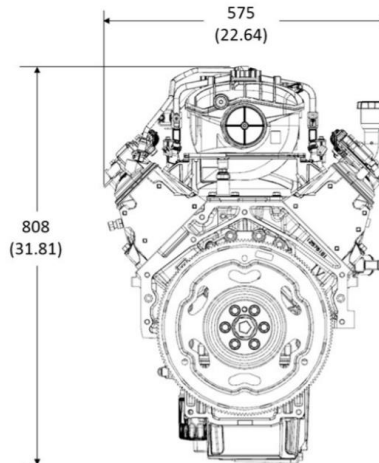
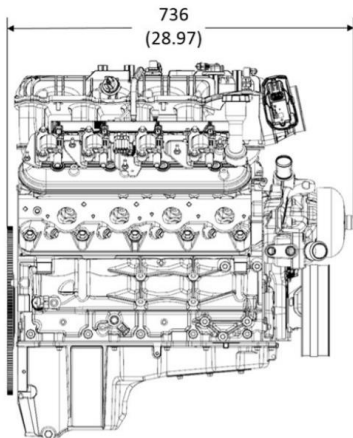
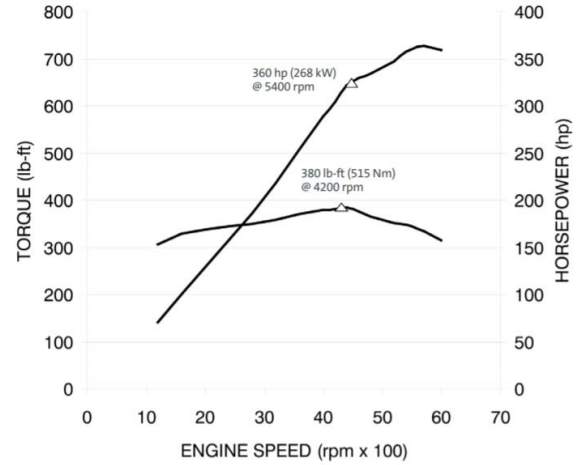
- Iridium-tipped, extended-life spark plugs with improved "self-cleaning" properties that decrease the potential for plug fouling
- External water crossover integrated into the water pump casting so that no coolant flows through the composite intake manifold
- High-temperature exhaust valves for long-term durability
- Shallow sump oil pan for marine applications
- Floating pin pistons that reduce noise and increase durability
- Heavy-duty timing chain with a new leaf spring dampener to ensure quiet operation and long-term durability.
- Sil-1 nitrided intake valve added (E85 capability)
- Brico 3010 intake/exhaust seat inserts (E85 capability)

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## SPECIFICATIONS

Type:	6.0L Gen-IV V-8 Small-Block
Displacement:	5967 CC
Engine orientation:	Longitudinal
Compression ratio:	97.0:1
Valve configuration:	Overhead valves
Vales per cylinder:	Two
Assembly site:	Romulus, MI; St. Catharines, Ontario; and Silao, Mexico
Valve lifters:	Hydraulic roller
Firing order:	1 - 8 - 7 - 2 - 6 - 5 - 4 - 3
Bore x stroke:	101.6 x 92.0 mm
Fuel system	Sequential fuel injection
Fuel type:	Regular unleaded, E85 Flexfuel
Horsepower:	360 hp (268 kW) @ 5400 rpm*
Torque:	380 lb-ft (515 Nm) @ 4200 rpm* *As tested in Chevrolet Silverado HD
Maximum engine speed:	6000 RPM
Emissions control:	Catalytic converters, three-way catalyst, positive crankcase ventilation
Block:	Cast iron
Cylinder head:	Cast aluminum
Intake manifold:	Composite
Exhaust manifold:	Cast nodular iron
Main bearing caps material:	Powder metal
Crankshaft:	Cast nodular iron with undercut and rolled fillets
Camshaft:	Hollow steel
Connecting rod:	Powder metal

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