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2007 CHEVROLET CORVETTE

New for 2007

- Bose audio enhancements
- Cross-drilled brake rotors now included with Magnetic Selective Ride Control option
- Steering wheel-mounted audio controls included with Bose premium audio systems
- Larger glove compartment space
- Exterior color: Atomic Orange Metallic Tintcoat
- OnStar now available on Z06
- Enhanced acoustic package included with Z06 2LZ option package
- Available two-tone modified seats with crossed flag embroidery and contrasting stitching (Cashmere, Red and Titanium Gray)
- Power top included with Convertible 3LT option package

Model Lineup

	Engines		Transmissions	
	LS2 6.0L V-8	LS7 7.0L V-8	6-spd manual	6-spd paddle shift automatic
Corvette Coupe	s	–	s	o
Corvette Convertible	s	–	s	o
Corvette Z06	–	s	s	–

Key:

Standard s

Optional o

Not available –

2007 CORVETTE: ICONIC AMERICAN SPORTS CAR IS BUILT TO IMPRESS, PERFORM

For more than 50 years, the name Corvette has become synonymous with a uniquely exhilarating world-class, high-performance sports car driving experience. Whether it's the Coupe, Convertible or 505-horsepower Z06, reintroduced during the 2006 model year, the Chevrolet Corvette stirs the performance enthusiast's soul – whether it's during a daily commute or a weekend at the track.

After a host of major performance enhancements for 2006, Corvette ushers in the 2007 model year with a number of equipment enhancements and refinements. They include:

Interior enhancements – Available on the coupe and convertible are two-tone perforated leather seating surfaces with crossed flag embroidery and contrasting stitching, in Red, Cashmere or Titanium. In addition, steering wheel-mounted audio controls are included with Bose premium audio systems.

OnStar availability – The safety and security of OnStar is now available on the Z06 when the 2LZ package is ordered.

Larger glove compartment space – Because air bag technology advancements allowed engineers to remove the old passenger-side air bag on/off switch box, Corvette designers were able to provide a roomier glove compartment.

Cross-drilled brakes included with Magnetic Selective Ride Control option – Now Corvette customers can combine heavy-duty brakes, previously only available with the Z51 performance package, with the comfort of Magnetic Selective Ride Control technology.

Power top – Corvette's power top is now included with Convertible 3LT option package.

New exterior color – Atomic Orange Tintcoat Metallic replaces Daytona Sunset Orange Metallic. The specific tintcoat adds depth to create an exciting new color.

Coupe and convertible details

The 2007 Corvette's new features refine a groundbreaking sports car that was

all-new in 2005 and substantially enhanced again in 2006. Coupe and Convertible models come with the LS2 6.0L V-8 engine that produces 400 horsepower (298 kW) and 400 lb.-ft. of torque (542 Nm). It is matched to a rear transaxle that helps improve vehicle weight balance – a six-speed manual is standard and a six-speed paddle shift transmission with automatic modes is available. The front and rear short/long arm suspensions reflect the most competition-influenced suspension tuning in the Corvette's history.

Dramatic fender forms and exposed headlamps combine with the grille to create a strong visual identity for the Corvette, while the tapered rear deck and fascia improve high-speed performance. The lean rear design sports round taillamps and center-exit exhaust. The fixed Xenon high-intensity discharge headlamps provide superior lighting performance. With a 0.286 coefficient of drag, the Coupe models are the most aerodynamic Corvettes ever, enabling a supercar-level top speed of 186 mph.

The 2007 Corvette Convertible features a power-operated soft top with the 3LT package; an easy-to-operate manual top is standard. Both configurations use a five-layer fabric that conceals the underlying structure for a good top-up appearance, plus it helps preserve the car's excellent aerodynamics and reduces road noise.

Corvette's interior is inspired by the car's dual-cockpit heritage. High-quality materials, craftsmanship and functionality help deliver premium quality meant to enhance performance driving. The instrument panel and doors are covered with cast-skin foam-in-place trim that looks like a leather-wrapped, padded panel. It is warm and inviting and has double the life of conventional trim materials.

Designers were able to provide a larger glove box by removing the frontal passenger air bag on/off switch that was required before the GM Passenger Sensing System was introduced in the 2006 model year.

Available for '07 are two-tone modified perforated leather seating surfaces with crossed flag embroidery and contrasting stitching, in available Red, Cashmere or Titanium.

An AM/FM radio with CD player and MP3 capability is standard. New technology enhances conventional radio reception. An improved optional Bose audio system with an in-dash six-disc changer and XM Satellite Radio (continental U.S. only) add to the

choices available to the audiophile owner. New for '07, steering-wheel mounted audio controls are included with the Bose premium system.

A full-function OnStar system is available and an onboard navigation system is available. Using a 6.5-inch (165 mm) color touch-screen display, the DVD-based system contains all the map data for the 48 contiguous states and most of Canada on one disc.

Corvette Coupe and Convertible have a hydroformed steel rail backbone structure, which features cored composite floors, an enclosed center tunnel, rear-mounted transmission and aluminum cockpit structure. Suspension cradles, control arms, knuckles, springs, dampers, bushings, stabilizer bars and steering gear have all been redesigned. New Goodyear Extended Mobility Tires (EMT) take advantage of the latest sidewall design and compound technology for run-flat capabilities.

Three suspension choices allow drivers to choose the setup that best suits their driving style. The standard suspension is tuned for a balance of ride comfort and precise handling. Corvette is now more poised at even higher handling levels, yet easier to drive.

The optional Magnetic Selective Ride Control suspension features magneto-rheological dampers able to detect road surfaces and adjust the damping rates to those surfaces almost instantly for optimal ride control. For 2007, cross-dilled brake rotors are now included when this feature is selected, to allow customers to combine the larger brakes from the Z51 performance package with the comfort of Magnetic Selective Ride Control.

The Z51 Performance Package brings Coupe and Convertible performance very close to the widely admired previous generation Z06. The Z51 offers more aggressive dampers and springs, larger stabilizer bars, Goodyear Eagle F1 Supercar EMT tires, enhanced cooling and larger cross-drilled brake rotors (13.4 inches/340 mm in front and 13 inches/330 mm in rear) for optimum track performance while still providing a comfortable ride.

With each suspension, three standard dynamic chassis control systems – anti-lock braking, traction control and Active Handling – operate in concert. In all, the dynamic chassis control systems are smarter, less intrusive and more adept at making the

total driving experience precisely what drivers have come to expect from their Corvette.

Corvette Z06 details

As the fastest, most technologically advanced production model in Corvette's 54-year history, the 2007 Corvette Z06 offers an unprecedented level of capability and technology, making it one of the best performance values on the market. And with an exterior design incorporating aerodynamic features that were co-developed with the Le Mans winning C6.R racecar, the '07 Z06 has a visual attitude that always looks ready to demonstrate Corvette's winning attitude to any challenger around the globe.

The Z06's LS7 7.0L engine delivers 505 horsepower (377 kW) in a 3,132-pound (1,421 kg) package – a combination that delivers 0–60 performance of 3.7 seconds in first gear, quarter-mile times of 11.7 seconds at 125 mph and a top speed of 198 mph (as recorded on Germany's Autobahn). It also provides maximum lateral acceleration of 1.04 g and 60–0 braking in 111.3 feet; it also circuited Germany's famed Nürburgring in a time of 7:43. Along with astounding performance, Corvette Z06 also returns surprising fuel economy of 26 mpg on the highway and avoids the gas guzzler tax common on the world's supercars.

Inside the LS7

The LS7 reintroduced the 427-cubic-inch engine to the Corvette lineup. Unlike the previous 427 engine, which was a big-block design, the 7.0-liter LS7 is a small-block V-8 – the largest-displacement small-block ever produced by Chevrolet and GM, and a tribute to its 50 years as a performance icon.

The LS7 is easily identified under the hood by red engine covers with black lettering. The LS7 shares the same basic Gen IV V-8 architecture as the Corvette's 6.0-liter LS2, but it uses a different cylinder block casting with pressed-in steel cylinder liners to accommodate the engine's larger diameter, 104.8-mm-wide cylinder bores. Compared with the LS2, the LS7 also has a different front cover, oil pan, exhaust manifolds and cylinder heads – among many other components.

Internally, the LS7's reciprocating components make use of racing-derived lightweight technology, including titanium connecting rods and intake valves, to help

boost horsepower and rpm capability. The rpm fuel shut-off limit is 7100 rpm. The LS7's details include:

- Dry-sump oiling system
- Unique cylinder block casting with large, 104.8-mm bores and pressed-in cylinder liners
- Forged steel main bearing caps
- Forged steel crankshaft
- Titanium connecting rods with 101.6-mm stroke
- Cast aluminum flat-top pistons
- 11.0:1 compression
- High-lift camshaft
- Racing-derived CNC-ported aluminum cylinder heads with titanium intake valves and sodium-filled exhaust valves
- Low-restriction air intake system
- Hydroformed exhaust headers with unique "quad flow" collector flanges.

One of the clearest examples of the LS7's race-bred technology is its use of titanium connecting rods. They weigh just 464 grams apiece, almost 30 percent less than the rods in the LS2 V-8. Besides being lightweight, which enhances high-rpm performance and rpm range, titanium makes the rods extremely durable.

The LS7's CNC-ported aluminum cylinder heads are designed to meet the high airflow demands of the engine's 7.0-liter displacement, as it ingests approximately 100 cubic feet more air per minute than the Corvette's 6.0-liter LS2 V-8 – an 18-percent increase in airflow. Consequently, a hydraulic roller camshaft with .588/.593-inch valve lift is used to allow plenty of air to circulate in and out of the engine.

To ensure optimal, uninterrupted airflow, the LS7's heads have straight, tunnel-like intake runners. Very large by production-vehicle standards – even racing standards – they are designed to maintain fast airflow velocity, providing excellent torque at low rpm and exhilarating horsepower at high rpm. The heads feature 70-cc combustion chambers that are fed by huge, 56-mm-diameter titanium intake valves. The lightweight titanium valves weigh 21 grams less than the stainless steel valves used in the LS2, despite the valve head having 22 percent more area. They are complemented by 41-mm sodium-filled exhaust valves, vs. 39.4-mm valves in the LS2. To

accommodate the large valve face diameters, the heads' valve seats are siamesed; and, taken from experience with the engines of C5-R racecars, the LS7's valve angles are held at 12 degrees – vs. 15 degrees for the LS2 – to enhance airflow through the ports.

The LS7 has a dry-sump oiling system designed to keep the engine fully lubricated during the high cornering loads the Corvette Z06 is capable of producing. An engine compartment-mounted 8-quart reservoir delivers oil at a constant pressure to a conventional-style oil pump pick-up at the bottom of the engine. The pressurized oil feed keeps the oil pick-up continually immersed in oil at cornering loads exceeding 1 g.

Oil circulates through the engine and down to the oil pan, where it is sent back to the reservoir via a scavenge pump. The large-capacity reservoir, combined with a high efficiency air-to-oil cooler, provides necessary engine oil cooling under the demands of the engine's power output. With the dry-sump system, oil is added to the engine via the reservoir tank – which includes the oil level dipstick.

Z06 drivetrain and chassis

The Corvette Z06's powertrain and drivetrain systems are matched to the LS7's performance capability. The light, four-into-one headers discharge in to new, close-coupled catalytic converters and through to new “bi-modal” mufflers. The mufflers each feature a vacuum-actuated outlet valve, which controls exhaust noise during low-load operation but opens for maximum power.

At the rear of the LS7 engine, a single-mass flywheel and lightweight, high-capacity clutch channel torque to the rear transaxle. The six-speed manual transmission has been strengthened to handle the LS7's increased torque load. The transmission includes a pump that sends transmission fluid to the front radiator for cooling. Upon its return, the fluid removes additional heat from the differential lube before returning to the transmission. The six-speed transmission connects to a limited-slip differential, with enlarged ring and pinion gears. Stronger axle half-shafts with tougher universal joints transmit power to the rear wheels.

The Z06 has a unique aluminum body structure for optimum stiffness and light weight for the fixed-roof bodystyle. Perimeter rails are one-piece hydroformed aluminum members featuring cast suspension nodes, which replace many welded steel

components on other Corvette models. Other castings, stampings and extrusions are combined into the innovative structure with state-of-the-art manufacturing technologies.

Advanced structural composites featuring carbon fiber are bonded to the aluminum structure. The wider front wheelhouses, for example, are carbon composites and the passenger compartment floors combine carbon-fiber skins with an ultra-lightweight balsa wood core.

The Z06 has a new magnesium cradle that serves as the attachment point for the engine and some front suspension components. Magnesium is lighter than aluminum yet incredibly strong. The magnesium cradle helps improve the front-to-rear weight distribution, as do carbon-fiber front fenders and wheelhouses. Engineers also moved the battery from underhood to a position in the rear cargo area, behind one of the rear wheels.

The mass reductions are offset by some added performance enablers, including dry-sump lubrication, exhaust system with outlet valves, larger wheels and tires, larger brakes and larger roll stabilizers.

Suspension and brakes

The Z06 retains the 105.7-inch (2686-mm) wheelbase of other Corvette models, as well as the short-long arm suspension and transverse leaf spring design, but it rides on all-new wheels, tires, brakes, as well as its own rear spring and roll stabilizer.

The firmer suspension works harmoniously with large 18 x 9.5-inch cast-spun aluminum wheels and 275/35ZR18 tires in the front, and 19 x 12-inch cast-spun aluminum wheels with 325/30ZR19 tires in the rear – the largest wheel-and-tire combination ever offered on a Corvette. The tires use the latest extended-mobility technology from Goodyear to provide a satisfactory ride, but still allow the vehicle to achieve lateral acceleration of more than 1 g. The extended-mobility tires eliminate the need – and weight – for a spare tire and jack or inflator kit, while also reducing the chance of a sudden loss of handling capability.

Complementing the suspension system and large rolling stock is an equally capable four-wheel disc brake system, consisting of 14-inch (355-mm) vented and

cross-drilled front rotors and 13.4-inch (340-mm) vented and cross-drilled rear rotors.

The front rotors are acted upon by huge, red-painted six-piston calipers that use six individual brake pads. Individual brake pads are used because they deliver more equalized wear compared to what would otherwise be a pair of very long single-piece pads. For the rear brakes, four-piston calipers with four individual brake pads are used. A Delphi four-channel ABS system is standard, as is a very competent active handling system – complete with a Competitive Driving mode.

Design details

The Z06 has an unmistakable and aggressive appearance, with design cues that include:

- A wide front fascia with a large, forward-facing grille opening, a splitter along the bottom and wheel opening extensions along the sides to provide aerodynamic downforce
- A cold air scoop in front of the hood that integrates an air inlet system for the engine
- The trailing edge of the front wheel opening is radiused to achieve improved drag, but protects the body finish with a tough molding, and a large air extractor is located behind the wheel
- A fixed-roof bodystyle optimizes body rigidity and mass
- Wider rear fenders with flares cover the massive rear tires and a brake cooling scoop in front of the wheels visually balances the fender extractor
- A tall rear spoiler houses the CHMSL on the top of the rear fascia
- 10-spoke wheels (18-inch, front; 19-inch, rear)
- Four larger stainless steel exhaust outlets
- Z06 badging on the carbon fiber front fenders

For 2007, an available enhanced acoustic package is designed to reduce road noise in the cabin.

The aerodynamics of the Z06's exterior were shaped by the experiences of the Corvette racing program, where high-speed stability and cornering capability are paramount. And while the race cars use large rear wings, the Z06's elevated spoiler

provides sufficient downforce to balance the road-worthy front splitter without adversely affecting aerodynamic drag. The Z06's Cd is.34.

For all its race-inspired functionality, the Z06 is designed to be a daily driveable high-performance vehicle. To that end, comfort and convenience are held to a very high standard. High-Intensity Discharge lighting, fog lamps, leather seating, dual-zone air conditioning, cabin air filtration and head-up display (HUD) with track mode and g-meter are standard.

The Z06 gauge cluster displays the Z06 logo on the 7000-redline tachometer and has a readout on the oil pressure gauge to reflect the higher standard pressure of the dry-sump oiling system. The seats feature two-tone leather surfaces, with Z06-logo embroidery and contrasting stitching.

Z06 options include a Bose audio system with an in-dash six-CD changer, polished wheels, a telescoping steering wheel, heated seats, side-impact air bags, a navigation system with GPS, universal home remote, OnStar (new for 2007) and XM Satellite Radio.

OnStar-equipped Corvettes feature OnStar dual-mode (analog-digital) equipment. OnStar's digital equipment also includes enhanced hands-free voice recognition capabilities including more intuitive continuous digit dialing and improved voice recognition accuracy. OnStar is the leading provider of in-vehicle safety, security and information services in the United States and Canada. Using the GPS satellite network and wireless technology, OnStar features core safety services and OnStar Hands-Free Calling that allow drivers to make and receive voice-activated phone calls using an externally mounted antenna for greater reception.

** Horsepower and torque are SAE certified. A new voluntary power and torque certification procedure developed by the SAE Engine Test Code committee was approved March 31, 2005. This procedure (J2723) ensures fair, accurate ratings for horsepower and torque by allowing manufacturers to certify their engines through third-party witness testing. GM was the first auto manufacturer to begin using the procedure and expects to use it for all newly rated engines in the future.*

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SPECIFICATIONS

(See GM of Canada section for Canadian product information.)

Overview

Models:	Chevrolet Corvette Coupe, Convertible and Z06
Body styles / driveline:	2-door hatchback coupe with removable roof; rear-wheel drive (Coupe and Convertible) 2-door hatchback coupe with fixed roof; rear-wheel drive (Z06)
Construction:	composite body panels, hydroformed steel frame with aluminum and magnesium structural and chassis components (coupe); composite and carbon-fiber body panels, hydroformed aluminum frame with aluminum and magnesium structural and chassis

	components (Z06)
Manufacturing location:	Bowling Green, Ky.

Engines

	6.0L V-8 LS2	7.0L V-8 LS7 (Z06)
Displacement (cu in / cc):	364 / 5970	427.6 / 7008
Bore & stroke (in / mm):	4 x 3.62 / 101.6 x 92	4.125 x 4 / 104.8 x 101.6
Block material:	cast aluminum	cast aluminum
Cylinder head material:	cast aluminum	cast aluminum
Valvetrain:	overhead valve, 2 valves per cylinder	overhead valve, 2 valves per cylinder
Fuel delivery:	SFI (sequential fuel injection)	SFI (sequential fuel injection)
Compression ratio:	10.9:1	11:1
Horsepower (hp / kW @ rpm):	400 / 298 @ 6000	505 / 377 @ 6300*
Torque (lb-ft / Nm @ rpm):	400 / 542 @ 4400	470 / 637 @ 4800*
Recommended fuel:	premium recommended but not required	premium required
Estimated fuel economy (mpg city / hwy / combined):	manual: 18 / 28 / 22.5 automatic: 17 / 27 / 21.5	16 / 26 / 20.5

Chassis / Suspension

	Coupe and Convertible	Z06
Front:	short/long arm (SLA) double wishbone, cast aluminum upper & lower control arms,	short/long arm (SLA) double wishbone, cast aluminum upper & lower control arms,

	transverse-mounted composite leaf spring, monotube shock absorber	transverse-mounted composite leaf spring, monotube shock absorber
Rear:	short/long arm (SLA) double wishbone, cast aluminum upper & lower control arms, transverse-mounted composite leaf spring, monotube shock absorber	short/long arm (SLA) double wishbone, cast aluminum upper & lower control arms, transverse-mounted composite leaf spring, monotube shock absorber
Traction control:	electronic traction control; Active Handling	electronic traction control; Active Handling

Brakes

	Coupe and Convertible	Z06
Type:	front and rear power-assisted disc with ABS; cross-drilled rotors with Z51 package and Magnetic Ride Control	front and rear power-assisted disc with ABS with 6-piston front and 4-piston rear calipers, cross-drilled rotors
Rotor diameter x thickness (in / mm):	front: 12.8 x 1.26 / 325 x 32 rear: 12 x 1 / 305 x 26; Z51 Performance Package: front: 13.4 x 1.26 / 340 x 32 rear: 13 x 1 / 330 x 26	front: 14 x 1.3 / 355 x 32 rear: 13.4 x 1 / 340 x 26

Wheels & Tires

Wheel size:	front: 18 inch x 8.5 inch rear: 19 inch x 10 inch	front: 18 inch x 9.5 inch rear: 19 inch x 12 inch
Tires:	Goodyear Eagle F1 Supercar (w/Z51) Extended Mobility front: P245/40ZR18 rear: P285/35ZR19	Goodyear Eagle F1 Supercar Extended Mobility front: P275/35ZR18 rear: P325/30ZR19

Dimensions

Exterior

	Coupe and Convertible	Z06
Wheelbase (in / mm):	105.7 / 2685	105.7 / 2685
Overall length (in / mm):	174.6 / 4435	175.6 / 4460
Overall width (in / mm):	72.6 / 1844	75.9 / 1928
Overall height (in / mm):	49 / 1244	49 / 1244
Curb weight (lb / kg):	Coupe: 3179 / 1442 Conv.: 3199 / 1451	3132 / 1421

Interior

Seating capacity	2
Interior volume (cu ft / L):	52 / 1475 (all models)
Headroom (in / mm):	38 / 962 (all models)
Legroom (in / mm):	43 / 1092 (all models)
Shoulder room (in / mm):	55 / 1397 (all models)
Hip room (in / mm):	54 / 1371 (all models)

Capacities

Cargo volume (cu ft / L):	Coupe and Z06: 22 / 634 Convertible: 11 / 295 (top up); 7.5 / 212 (top down)
Fuel tank (gal / L):	18 / 68.1
Engine oil (qt / L):	Coupe and Convertible: 5.5 / 5.2 Z06: 8 / 7.5

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Note: Information shown is current at time of publication.