

For immediate release

CORVETTE ZR1

Vehicle Highlights:

- Supercharged 6.2L engine rated at 638 hp (476 kW)
- Upgraded six-speed manual transmission with dual-disc clutch technology
- Brembo carbon-ceramic four-wheel disc brakes
- Twenty-spoke 19-inch (front) and 20-inch (rear) wheels in Sterling Silver or chrome
- ZR1-specific Michelin Pilot Sport 2 tires
- ZR1-specific design features, including wider, carbon-fiber dual-port front fenders; carbon-fiber raised hood with window; and full-width, body-color rear spoiler
- Expanded use of carbon-fiber body panels, including visible carbon-fiber elements on the roof, rocker panels and front splitter
- Standard magnetic ride control specially developed for the ZR1
- Seats, sill plates and gauge cluster with the ZR1 logo; boost gauge in cluster and head-up display
- Unique ZR1 vehicle identification number sequence
- Top speed of 205 mph (330 km/h)

Model Lineup

	Engine	Transmission
Corvette ZR1	6.2L supercharged V-8 (LS9) s	Tremec TR6060 six-speed manual s

Key

Standard s

2009 CORVETTE ZR1: THE KING RETURNS

The 2009 Corvette ZR1 is an American supercar that brings the technology and engineering refinement of carbon-fiber, ceramics and electronics together in a distinctive design.

“Chevrolet’s goal with the new ZR1 is to show what an American supercar can deliver, at a price that trumps exotics that cost two, three or four times as much – and does so with exceptional driveability,” said Ed Peper, Chevrolet general manager.

The ZR1’s basic stats:

- All-new LS9 supercharged 6.2L V-8 rated at 638 horsepower (476 kW), and approximately 604 lb.-ft. of torque (819 Nm)
- Six-speed, close-ratio, race-hardened manual transmission
- New, high-capacity dual-disc clutch

- Higher-capacity and specific-diameter axle half-shafts; enhanced torque tube
- Specific suspension tuning provides more than 1g cornering grip
- Twenty-spoke 19-inch front and 20-inch rear wheels
- Michelin Pilot Sport 2 tires – P285/30ZR19 in front and P335/25ZR20 in the rear – developed specifically for the ZR1
- Standard Brembo carbon-ceramic, drilled disc brake rotors – 15.5-inch-diameter (394-mm) in the front and 15-inch-diameter (380-mm) in the rear
- Larger, blue-painted brake calipers with substantially increased pad area
- Standard Magnetic Selective Ride Control with track-level suspension
- Wider, carbon-fiber front fenders with ZR1-specific dual ports
- Carbon-fiber hood with a raised, polycarbonate window – offering a view of the intercooler below it
- Carbon-fiber roof panel, roof bow, front fascia splitter and rocker moldings with clear-coated, visible carbon-fiber weave
- ZR1-specific full-width rear spoiler with raised outboard sections
- Specific gauge cluster with boost gauge (also displayed on the head-up display) and 220-mph (370 km/h) speedometer readout
- Only two options: chrome wheels and a “luxury” package
- Curb weight of 3,324 pounds (1,508 kg)

The specialized components of the new ZR1 work harmoniously to deliver the most powerful and fastest automobile ever produced by General Motors.

“Preliminary testing shows the ZR1 builds on the highly respected Corvette Z06 in every performance category, from acceleration and braking to cornering grip and top speed,” said Peper. “It all boils down to the power-to-weight ratio and the ZR1’s is exceptional – better than the Porsche 911 GT2, the Ferrari 599 and even the Lamborghini LP640. In fact, the ZR1 is expected to be the first production Corvette to achieve a top speed of at least 200 mph.”

The ZR1 does more than reach 200 mph; it keeps going to a top speed of 205 mph (330 km/h).

Supercharged LS9 engine

The new LS9 6.2L small-block engine is the power plant that supports the ZR1's performance capability. The enabler of the LS9's performance and refinement is a large, positive-displacement Roots-type supercharger with a new, four-lobe rotor design. It is augmented with an integrated charge cooling system that reduces inlet air temperature for maximum performance.

A sixth-generation supercharger helps the LS9 make big power and torque at lower rpm and carries it in a wide arc to 6,600 rpm, as it pushes enough air to help the engine maintain power through the upper levels of the rpm band – the area where supercharged performance tends to diminish. Heavy-duty and lightweight reciprocating components enable the engine's confident high-rpm performance.

The LS9 is hand-assembled at GM's Performance Build Center, in Wixom, Mich., and incorporates specialty processes typically seen in racing engines to produce a highly refined and precise product. For example, cast iron cylinder liners are inserted in the aluminum block and are finish-bored and honed with a deck plate installed. The deck plate simulates the pressure and minute dimensional variances applied to the block when the cylinder heads are installed, ensuring a higher degree of accuracy that promotes maximum cylinder head sealing, piston ring fit and overall engine performance.

Transmission and axle

The LS9 engine is backed by an upgraded, stronger six-speed manual transmission and a twin-disc clutch that provide exceptional clamping power, while maintaining an easy clutch pedal effort. ZR1-specific gearing in the transmission provides a steep first-gear ratio that helps launch the car, and top speed is achieved in sixth gear – a change from the fifth-gear top-speed run-outs in the manual-transmission Corvette and Corvette Z06.

As the term implies, the twin-disc clutch system employs a pair of discs, which spreads out the engine's torque load over a wider area. This enables tremendous clamping power when the clutch is engaged, while also helping to dissipate heat better and extend the life of the clutch.

The twin-disc clutch system also contributes to the ZR1's exceptional driving quality, with smooth and easy shifting. The twin-disc system's design allows higher torque capacity with inertia and pedal effort similar to the Corvette Z06. It enables a 25-percent reduction in inertia, thanks to smaller, 260-mm plates; the Corvette Z06's uses a 290-mm single-disc system.

The rear axle also is stronger in the ZR1 and features asymmetrical axle-shaft diameters that were developed after careful testing to provide optimal torque management. The axles are also mounted on a more horizontal plane that correlates with the wider width of the rear wheels and tires.

Ride and handling

The ZR1 is built on the same aluminum-intensive chassis as the Corvette Z06 and features similar independent SLA front and rear suspensions, with aluminum upper and lower control arms. Where the ZR1 differs is the suspension tuning, which was optimized for the car's steamroller-wide front and rear tires.

Magnetic Selective Ride Control is standard and tuned specifically for the ZR1. The system's ability to deliver a compliant ride with nearly instantaneous damping adjustments enabled engineers to develop a surprisingly supple ride quality in a supercar that still delivers cornering grip of more than 1g.

From a high-performance perspective, Magnetic Selective Ride Control helps the rear axle remain planted during launch for smooth, hop-free acceleration. It also helps suppress axle movement when cornering on broken or uneven pavement.

Brakes, wheels and tires

Commensurate with the ZR1's engine output is the braking system, which is headlined by Brembo carbon-ceramic brake rotors. Found on only a few exotics and more expensive supercars, carbon-ceramic brake rotors are made of a carbon-fiber-reinforced ceramic silicon carbide material. Their advantage comes in low mass and resistance to wear and heat. In fact, the rotors should never show any corrosion or require replacement for the life of the vehicle, when used in normal driving.

The vented and cross-drilled rotors on the ZR1 measure 15.5 inches (394 mm) in diameter in the front and 15 inches (380 mm) in diameter in the rear – making them among the largest carbon-ceramic rotors available on any production vehicle.

Clamping down on the high-tech rotors are six-piston front calipers and four-piston rear calipers, each painted a ZR1-exclusive blue. The front pads are equivalent in size to the largest on any production car with a single-pad design – double that of the Corvette Z06's 70-sq.-cm. front pads.

The brakes are visible through the ZR1's exclusive wheels: 20-spoke alloy rims that measure 19 inches in diameter in the front and 20 inches in the rear. They come standard with a bright, Sterling Silver paint finish and chrome versions are optional. The wheels are wrapped in Michelin Pilot Sport 2 tires developed specifically for the ZR1, measuring P285/30ZR19 in front and P335/25ZR20 in the rear.

Exclusive exterior

The ZR1 is instantly recognizable, with perhaps the most identifiable feature a raised, all-carbon-fiber hood that incorporates a clear, polycarbonate window. The window provides a view of the top of the engine's intercooler, with the legend "LS9 SUPERCHARGED" embossed on the left and right sides, and an engine cover with the Corvette crossed flags logo debossed at the front.

The underside of the hood has a visible carbon-fiber-weave. Visible carbon-fiber is used on the roof, roof bow, rocker molding and front splitter. These exterior components are protected by a specially developed glossy, UV-resistant clear coat that resists yellowing and wear.

Widened, carbon-fiber front fenders with specific, dual lower ports; and a full-width, body-color rear spoiler incorporating the center high-mounted stop lamp are also unique to the ZR1. All of the exterior features were developed to enhance high-speed stability and driver control.

Interior details

The ZR1's interior builds on the brand's dual-cockpit heritage, with high-quality materials,

craftsmanship and functionality that support the premium-quality experience promised by the car's performance. The ZR1's cabin differs from the Corvette and Corvette Z06 with the following:

- ZR1-logo sill plates
- ZR1-logo headrest embroidery
- Specific gauge cluster with "ZR1" logo on the tachometer and a 220-mph (370 km/h) readout on the speedometer
- Boost gauge added to the instrument cluster and Head-Up Display

The standard ZR1 (RPO 1ZR) comes with accoutrements based on the Z06, including lightweight seats and lightweight content. The uplevel interior package (RPO 3ZR) includes power-adjustable, heated and leather-trimmed sport seats (embroidered with the ZR1 logo); side air bags; Bose premium audio system; navigation system; Bluetooth connectivity; power telescoping steering column; custom leather-wrapped interior available in four colors and more.

By the numbers

In addition to the exterior cues and powertrain, ZR1 models will be distinguished from other Corvette models by their VIN. Each will carry a unique, identifying VIN digit, as well as a sequential build number. This makes it easy to determine the build number of a specific car – information treasured by enthusiasts and collectors. For example, a ZR1 with a VIN ending in "0150" would indicate it is the 150th ZR1 built for the model year.

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SPECIFICATIONS

Overview

Model:	Chevrolet Corvette ZR1
Body styles / driveline:	two-door hatchback coupe with fixed roof; rear-wheel drive
Construction:	composite and carbon-fiber body panels, hydroformed aluminum frame with aluminum and magnesium structural and chassis components
Manufacturing location:	Bowling Green, Ky.

Engine

	6.2L SUPERCHARGED V-8 (LS9)
Displacement (cu in / cc):	376 / 6162
Bore & stroke (in / mm):	4.06 x 3.62 / 103.25 x 92
Block material:	cast aluminum
Cylinder head material:	cast aluminum
Valvetrain:	overhead valve, two valves per cylinder
Fuel delivery:	SFI (sequential fuel injection)
Compression ratio:	9.1:1
Horsepower / kW:	638 / 476 @ 6500*
Torque (lb-ft / Nm):	604 / 819 @ 3800*
Recommended fuel:	premium required
EPA estimated fuel economy (city / hwy):	14 / 20

Transmission

	close-ratio six-speed manual
Gear ratios (:1):	
First:	2.29
Second:	1.61
Third:	1.21
Fourth:	1.00
Fifth:	0.81
Sixth:	0.67
Reverse:	3.11
Final drive ratio:	3.42

Chassis / Suspension

Front:	short/long arm (SLA) double wishbone, cast aluminum upper & lower control arms, 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
Traction control:	electronic traction control; active handling (Magnetic Selective Ride Control)

Brakes

Type:	front and rear power-assisted carbon-ceramic disc with 6-piston front and four-piston rear calipers, cross-drilled rotors; ABS std.
Rotor diameter (in / mm):	front: 15.5 / 394 rear: 15 / 380

Wheels & Tires

Wheel size:	front: 19-inch x 10-inch rear: 20-inch x 12-inch
Tires:	Michelin Pilot Sport 2 front: P285/30ZR19 rear: P335/25ZR20

Dimensions

Exterior	
Wheelbase (in / mm):	105.7 / 2685
Overall length (in / mm):	176.2 / 4476
Overall width (in / mm):	75.9 / 1928
Overall height (in / mm):	49 / 1244
Curb weight (lb / kg):	3324 / 1507
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):	22 / 634
Fuel tank (gal / L):	18 / 68.1
Engine oil (qt / L):	10.5 / 9.9

*SAE certified.

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