



May 2009

PRODUCT INFORMATION

JG Cruze

Configuration

- Four door sedan

Models

- Petrol: Cruze CD, Cruze CDX (1.8 litre petrol – manual and automatic)
- Diesel: Cruze CD (2.0 litre diesel – manual and automatic)

Dimensions

| | Cruze CD and CDX |
|--------------------------------|-------------------------|
| Length | 4597mm |
| Width (no mirrors) | 1788mm |
| Height | 1477mm |
| Wheelbase | 2685mm |
| Front track | 1544mm |
| Rear track | 1558mm |
| Leg/shoulder/head room (front) | 1074mm/1391mm/999mm |
| Leg/shoulder/head room (rear) | 917mm/1370mm/963mm |
| Boot capacity | 400 litres |

Engines

- 1.8 litre DOHC 16-valve 4-cylinder ECOTEC petrol engine
Power: 104kW @ 6200rpm
Torque: 176Nm @ 3800rpm
- 2.0 litre SOHC 16-valve 4-cylinder common rail turbo diesel engine
Power: 110kW @ 4000rpm
Torque: 320Nm @ 2000rpm

Transmissions

- 5-speed manual transmission
- 6-speed automatic transmission with Active Select

Fuel economy (ADR 81/01)

- 7.0 litres/100km (1.8 litre petrol manual)
- 7.5 litres/100km (1.8 litre petrol automatic)
- 5.7 litres/100km (2.0 litre diesel manual)
- 6.8 litres/100km (2.0 litre diesel automatic)

Emissions

The 1.8 litre petrol and 2.0 litre diesel engines comply with Euro IV emission standards:

- CO₂ emission levels for the 1.8 litre petrol manual are 166 g/km
- CO₂ emission levels for the 1.8 litre petrol automatic are 179 g/km
- CO₂ emission levels for the 2.0 litre diesel manual are 149 g/km
- CO₂ emission levels for the 2.0 litre diesel automatic are 180 g/km

Development

- Global small car architecture investment – \$US4 billion
- Development period – 27 months
- Vehicle development – over one million kilometres
- Prototypes - 221
- Test locations:
 - United Kingdom
 - United States
 - Canada
 - Sweden
 - China
 - Korea
 - Australia
- Numerous durability and extreme weather tests were conducted, including hot weather tests in Phoenix, Arizona and cold weather tests in Arjeplog, Sweden.

Technical Data Overview

| 1.8 litre DOHC 16-VALVE 4 cylinder petrol engine & 2.0 litre turbocharged diesel engine with Common Rail Injection Technology | |
|--|---|
| Availability: | Petrol - standard on CD & CDX models Diesel - optional on CD models |
| Valvetrain: | Petrol - Overhead camshafts, four-valves per cylinder, double continuous variable cam phaser intake and exhaust (DCVCP) Diesel - Overhead camshafts, four valves per cylinder |
| Fuel Delivery: | Petrol - Sequential multi-port fuel injectors with electronic throttle control Diesel - Common rail high-pressure injection with electronic throttle control |
| Drive axle | Front wheel drive |
| Turning circle | 10.9 metres |
| Fuel tank capacity | 60 litres |
| Displacement | Petrol - 1796cc Diesel - 1991cc |
| Compression Ratio: | Petrol - 10.5:1 Diesel - 17:5:1 |
| Front suspension | Independent MacPherson strut |
| Rear suspension | Compound crank |
| Steering | Power assisted rack and pinion |
| Brakes | Petrol - 276mm front ventilated discs; 268mm rear solid discs Diesel - 300mm front ventilated discs; 292mm rear solid discs Electronic Stability Control (ESC) Four channel, four sensor ABS, EBD, TCS |
| Towing (kg) | Petrol - 695kg (Unbraked) / 1200kg (Braked) Diesel - 750kg (Unbraked) / 1200kg (Braked) |
| Wheels and tyres | CD - 16"x6.5" steel wheels; 205/60R16-92V tyres CDX - 17"x7" 5 spoke alloy wheels; 215/50R17 91V tyres (4) |
| Service Intervals | 3,000km (complimentary service) 15,000km or 12 months (whichever occurs first) |

1.8L 4 cylinder DOHC petrol engine – feature highlights

The 1.8 litre petrol engine ensures lively performance even at low engine speeds for relaxed everyday driving and features numerous technological highlights, including:

- Two continuously adjustable camshafts (DCVCP – Double Continuous Variable Cam Phasing) to optimize the charge cycle for high output and torque characteristics reduced emissions and reduced fuel consumption.
- A lightweight design achieved by mass reduction that helps contribute to high efficiency.
- Low maintenance applications, such as a toothed timing belt that only requires change intervals of every 10 years or 150,000km (whichever comes first), nickeltipped spark plugs which have a maintenance interval of 60,000km and piston-cooling oil jets for enhanced lubrication, resulting in engine longevity and extended maintenance intervals.

2.0 litre turbo diesel engine – feature highlights

The 2.0 litre turbo diesel engine is a powerful and fuel efficient diesel offering. Highlights include:

- An advanced, electronically controlled turbocharger with intercooler that enables smooth driving, lower fuel economy and lower emissions.
- A high-pressure common rail system that delivers multiple injection performance and optimized injection quality within the combustion chamber. This ensures reduced combustion noise, fuel economy and reduced emissions.
- A diesel particulate filter system that's maintenance free for the life of the vehicle

Safety

Occupant safety was an overriding objective when developing Cruze, achieving a maximum 5-star ANCAP (Australian New Car Assessment Program) rating in Australia.

Cruze incorporates a host of structural enhancements as well as a full range of active and passive safety systems standard across the range – all designed to place it among the safest vehicles in its class.

Cruze offers an impressive level of standard safety including:

- Electronic Stability Control (ESC)
- Anti-lock Braking System (ABS)
- Electronic Brakeforce Distribution (EBD)
- Traction Control (TC)
- Brake Assist
- 6 airbags (driver, front passenger, front side and curtain)
- Collapsible pedal release system
- Driver and front passenger seatbelt reminder
- Four-way adjustable headrests for whiplash protection
- Three-point seatbelts in all five seating positions
- Seatbelt retractor and lap pretensioners in driver and front passenger position
- Front seatbelt load limiters
- Child seat latching system at rear seating positions

An extremely strong structure and stiff body with efficient, effective load paths provide Cruze maximum protection in the event of a collision from virtually any direction.

A unibody of high-strength steel incorporates full-length frame rails and a safety cage into a single, welded unit. It is designed with front and rear crush zones engineered to collapse in a controlled manner to help absorb crash energy.

Bumper systems are engineered to require minimal repairs after front or rear collisions. The front bumper is positioned for optimum safety in the event of a collision with another vehicle.

Collapsible pedal release system reduces the chance of lower extremity injuries to the driver in the event of a front collision.

For maximum protection in certain frontal collisions, Cruze will deploy front airbags for the driver and front passenger. The 60 litre driver airbag can fully inflate in 60 milliseconds, while the front passenger airbag can inflate to a full 130 litres in just 70 milliseconds.

Standard side airbags are mounted on the driver and front passenger seat for thorax protection of front row occupants.

Standard head curtain airbags are mounted to the roof rails between the A and C pillars for additional head and neck protection of both front and second-row seat occupants.

Standard three-point lap and shoulder belts available for all passengers suit a wide range of physiques.

Two side impact sensors mounted in the B pillars on both sides of Cruze trigger the side curtain roof rail air bags, seat-mounted thorax air bags and seatbelt pre-tensioners.

Cargo/Storage

A centre console incorporates CD storage beneath a fore/aft articulating armrest with an MP3 player “plug and play” auxiliary input plug.

The lower IP storage contains an auxiliary power outlet and a sliding dual cup holder design that uses automatically adjusting pincher elements to carry any cup size.

A 6.3 centimetre deep bin in the IP is located at the top of the centre stack and contains a rubberized base for additional storage capability.

An illuminated, lockable glove box provides additional storage space.

Integrated bottle holders in all door pockets provide added beverage storage.

Seatback pockets are large enough to carry books, road atlases or thin laptops.

60/40 split-folding rear seatbacks supply large pass-through access to the boot for longer items.

Rear split-seat folding capability includes an articulating armrest with integrated dual cupholders.

An acoustically trimmed, illuminated boot provides 400 litre volume of additional storage space.

A clever shopping hook is positioned on the left side of the boot.

Convenience

Standard six-way manually adjustable driver and front-passenger seats.

Front heated seats (standard on CDX models) offer three levels of heated comfort – low, medium and high. They are designed for quick warm-up and use an electronically controlled heat pad integrated into the seat cushion and back.

Standard front and rear power windows with:

- Express down and up for driver on CD and CDX models.
- Express down for front and rear passengers on CD and CDX models.

Standard power door locks are automatic and programmable.

Delayed entry and exit interior lighting (with theatre dimming) provides added convenience using rear courtesy lights and front map lights (located in overhead console).

Follow me home lighting allows programmable timing of up to three minutes which enable front headlamps to remain on after exit and locking of vehicle.

Padded driver and front passenger visors (with ticket holder) and vanity mirrors provide added convenience.

An overhead console with front map lights is standard.

Overhead assist grips are located on the front-passenger door and rear doors while convenience hooks can be found in the rear and boot.

An auxiliary power outlet in the lower IP is standard on all models and can be used with laptops and mobile phones. A second auxiliary power outlet on CDX models is located in the 2nd row below the centre console.

Retained accessory power enables the power windows, radio to remain operational for ten minutes after the ignition is turned off, or until a door is opened.

An electronic touch pad enables the opening of the boot.

The boot can be opened from inside the cabin by depressing the door lock/unlock button continuously for three seconds.

Noise and vibration

A stiffer structure helps to tune out and isolate powertrain, road and wind noise and create a quiet, pleasant cabin comfort level.

The body on Cruze incorporates extensive sealing to help eliminate the most minute “pins of daylight” and the potential noise, wind or outside contaminants they might admit.

All doors incorporate a triple-layered sealing system to reduce noise, vibration and airflow through the door and into the passenger compartment.

A four-point isolated engine cradle helps minimize road and powertrain noise and vibration into the cabin.

A formed fibreglass blanket on the underside of the hood serves as an effective barrier to engine noise that could pass through the windshield.

The front-of-dash panel is sandwiched between two damping mats as an additional abatement to noise transfer.

The headliner is of thermal fibre acoustic design and incorporates five layers for superior sound isolation.

Floor carpet is precisely formed to the floor pan of Cruze to effectively damp out noise frequency and vibration.

Composite wheel house liners at all four corners help damp rain noise and other impacts (such as gravel) that create “sizzle” noise from transferring into the passenger compartment.

The boot is fully lined with a thick walled acoustic material.

Audio systems

Standard audio system and features:

- 6-speaker audio system with MP3 compatible in dash CD, radio and MP3 “plug and play” functionality.
- Up to 6 “favourites” pages, which store both AM/FM on the one favourite page eliminating the need to switch between FM and AM bands.
- Digital clock
- Internal four-channel amplifier
- Graphic text display (two colour)

Security and alerts

A standard vehicle immobilizer won't let the engine of Cruze start unless the ignition switch verifies the correct key is being used.

Standard child safety door locks and a lockout switch control the function of the inside door handle to help protect children inside Cruze.

Standard power door locks are automatic and programmable. As soon as vehicle velocity exceeds a certain speed, all four doors can lock automatically. A simple procedure allows the driver to tailor the unlock function.

A standard remote keyless entry system has three buttons – lock, unlock and boot.

Interior lamps illuminate as soon as the power door locks are activated by the remote keyless entry system.

After occupants enter Cruze and close the doors, the lamps remain on for a short period to facilitate latching seat belts and inserting the key into the ignition switch.

Battery rundown protection shuts down certain lights inadvertently left on after 20 minutes.

Servicing

Cruze servicing is at 3000km or three months (no cost inspection) then every 15,000km or 12 months, whichever comes first.

Place of manufacture

- GMDAT, Gunsan, South Korea.