

2008 MAZDA CX-9: INCREASED ZOOM-ZOOM PLUS NEW BLIND SPOT MONITORING SYSTEM ADD TO CX-9'S APPEAL

Published on 10/15/2007

Engineered with Mazda's "Soul of a Sports car" signature, CX-9 deftly blends sporty driving spirit with seven-passenger sport-utility vehicle (SUV) practicality. For 2008, CX-9 reaches a higher level of performance with a new standard 3.7-liter DOHC V6 engine, resulting in 10 more horsepower (273) and 21 additional lb-ft of torque (270) compared to 2007.

"Launched just last year, CX-9 garnered rave reviews, and was hailed as one of the very best in class. However, Mazda is not a company that allows complacency, we're always looking for ways to improve our products - even when they're already first-rate," said Robert Davis, senior vice president, product development and quality, Mazda North American Operations. "With the 2008 CX-9 we had an opportunity to increase the engine's displacement a bit, resulting in a significant performance increase - a great product made better."

Also new for the 2008 model year is a Blind Spot Monitoring (BSM) system, which helps see and prevent the unexpected. Available on Grand Touring models, the BSM system is designed to assist the driver by monitoring the detection areas on both sides of the vehicle to the rear and will alert the driver to possible vehicles in these areas.

The Mazda CX-9 is *the* insightful solution not only to the modern family's complex needs but also to the enthusiast driver's desires. Mazda CX-9 targets young couples and modern families. These outwardly-focused families have not lost their desire for high-intensity leisure activities, learning experiences or social interaction. The CX-9 is also ideal for couples with grown children who pursue an active lifestyle.

"Sometimes life forces us to make some difficult sacrifices. So while you may be forced to trade in that two-seat roadster for a family vehicle, the CX-9 is the perfect option for the driving enthusiast. It offers 273 horsepower, 270 lb-ft torque, 6-speed Sport AT automatic transmission with Sport Shift, front and rear stabilizer bars and ventilated front and rear disc pakes. But also features three-row, seven-passenger seating, air bags coverage to first, second and third row with roll-over protection and available rear seat entertainment system with DVD player. Everybody - driver and family - will enjoy the journey," added Davis.

REFINED POWERTRAIN AND INSPIRING PERFORMANCE

The 2008 CX-9 is powered by a new 273-horsepower 3.7-liter V6 engine, making the most complex pursuits as easy and as pleasurable as possible. The increase in displacement from 3.5 to 3.7-liters was achieved through an increase in bore, meaning the inherent "revability" praised previously has been retained.

The 60-degree short-stroke V6 is state-of-the-art throughout. Advanced features include a die-cast aluminum block with cast-in iron cylinder liners and aluminum cylinder heads for minimal weight. The valvetrain includes chain-driven dual overhead camshafts for minimal maintenance, four valves-per-cylinder with direct acting bucket-type actuators, and variable intake valve timing. A high 10.3:1 compression ratio maximizes efficiency and power output while the throttle is electronically

controlled for instantaneous response. Two close-coupled catalytic converters cleanse the exhaust without inhibiting power.

Computer-aided-engineering analysis was extensively used to configure the cylinder block casting, to shape intake and exhaust ports, and to design the high-volume exhaust system fitted with three large mufflers. Very low back pressure is one of the reasons why the power curve is still ascending at the 6500-rpm redline. In addition, the forged-steel crankshaft is fitted with induction-hardened journals, a full complement of counterweights and a dual-mass damper. Engineering details even extend to a roller-chain cam-drive sprocket lined with rubber for quiet operation.

A power peak of 273 horsepower at 6,250 rpm provides CX-9 with sparkling accelerating and passing performance. The torque curve shows a strong curve rising from 3,000 to 6,000 rpm and peaking with 270 lb-ft at 4,500 rpm. Regular fuel (87 octane) is suitable for use in the CX-9 without power loss.

To combine excellent acceleration and high fuel mileage, CX-9 includes an Aisin-supplied six-speed Sport AT automatic transmission with manual-mode as standard equipment. Gear ratios maximize flexibility by providing enthusiastic launch acceleration with quiet cruising. The top two gears are both overdrive ratios.

Front-wheel drive is standard in the Mazda CX-9 for excellent drivability, with Mazda's Active Torque Split All-Wheel Drive optionally available. Originally developed for the high-performance *MAZDASPEED6*, this system rapidly adjusts to changing traction needs by monitoring wheel slippage, steering angle, yaw rate, lateral acceleration and available driveline torque. In normal driving, 100-percent of the driving torque is delivered to the front wheels. During aggressive acceleration or when one front wheel is on the verge of slip, a controlled percentage of the available torque is directed to the rear axle. A power take-off

device integrated with the CX-9's transaxle spins a drive shaft attached to an active coupling built into the rear differential. Commanded by a control module, the servo-controlled multi-plate coupling can route up to 50 percent of the available torque to the rear wheels. This all-wheel drive system has been especially well received in *MAZDASPEED6* and CX-7 applications.

CHASSIS ENGINEERED FOR SAFETY AND PERFORMANCE

The Mazda CX-9 has received the U.S. government's National Highway Traffic Safety Administration (NHTSA) highest possible ratings in frontal and side impact crashes - *five stars*. In addition, both the FWD and AWD versions of the CX-9 received four-star rollover resistance ratings. With five stars to back it up, it comes as no surprise that Mazda's advanced engineering provides CX-9 with one of the safest unibodies on the market. Guiding development principles are:

- Front frame rails that are large in section and as straight as possible.

- A front subframe (supporting the powertrain, suspension, and steering equipment) attached to the unibody at six widely separated points. A forward extension integral to the subframe helps it to more effectively absorb collision energy.
- B-pillars securely anchored to members in the floor and rocker areas with increased cross-section for all load-bearing members.
- Rear frame rails positioned higher and configured as straight as possible.
- Bumper attachments manufactured using a hot-stamping technique.
- More than a dozen structural members in the floor and roof pillars made of high-tensile steel. Multiple steel reinforcements in the roof and a triple-H-shaped floor structure help absorb side-impact energy.
- A fuel tank positioned near the middle of the vehicle and surrounded by multiple torque boxes and crossmembers.
- A spare tire positioned horizontally in the cargo area to help absorb rear collision energy.
- Maximum overlap between the doors and the unibody to minimize side-impact intrusion. Added energy absorbing material on front and rear door trim diminishes the transfer of impact loads to occupants.
- Extra spot welds, laser welding in high-stress areas, and weld bonding (combination of welding and structural adhesives) to improve unibody stiffness and its ability to absorb collision energy.
- Acoustical foam filler applied to internal cavities to block noise transmission from underbody into cabin areas.
- Highly rigid damping sheet added to large expanses of the floor pan to eliminate resonance and to block road noise.

For CX-9 to wear the Mazda Winged-M symbol, it had to be more than just another crossover SUV. It had to be a true Mazda, embodying the company's trademark "Soul of a Sports Car." And so engineers determined CX-9 had to have an independent suspension on all four corners.

In front, the perimeter frame mounted to the unibody through six rubber isolators supports the powertrain, the engine-speed-sensitive rack-and-pinion power steering, and a low friction strut-type suspension system using coil springs. The multilink rear suspension consists of one trailing arm and two lateral locating members per side. To minimize cargo-compartment intrusion and permit a wider load space, the rear coil spring is positioned between the lower lateral member and the unibody. A damper is located as close as possible to each rear wheel to provide excellent motion control with minimal friction. Anti-roll bars at each end maximize agility and control during assertive driving.

Twenty-inch, V-rated, low-profile radial tires (P245/50R-20) are standard equipment on the top Grand Touring model while Sport and Touring editions roll on P245/60R-18 tires. As a result, CX-9 looks and feels unusually nimble for its size and is the clear class leader for driving pleasure.

EYES IN THE BACK OF YOUR HEAD

The Blind Spot Monitoring (BSM) system monitors the detection areas on both sides of the vehicle to the rear when vehicle speed is about 20 mph or greater. BSM will alert the driver to possible vehicles in these areas in certain situations such as when changing lanes on roads and freeways. The BSM system notifies the driver of vehicles in the detection areas by illuminating the BSM warning light located in the mirror. If the turn signal lever is operated in the direction of the BSM warning light is illuminated, the warning light will flash and the system

will also warn the driver of the vehicle in the detection area with the sound of a beep.

SUV FOR SEVEN

The Mazda CX-9 rides on a 113.2-inch wheelbase, one of the longest in the segment, providing easy access to its three-row seating. There's ample room for adults in every position and sufficient cargo space to accommodate modern American families. Under the sleek exterior is an interior that will impress demanding customers with its space, utility, versatility, and premium features.

To ease accommodations for all drivers, the driver's seat and steering column move quickly and easily over a long range of adjustment. The 60-40 split second row carries three in comfort and offers approximately five-inches of fore-and-aft slide travel and a reclining backrest. In the 50-50-split third row, the seating position and leg room are both class-leading in numbers and real comfort. Entry to the third row is easy, with nearly 26 inches of access space between the folded second-row seat and the C-pillar. Even with the third row occupied, the CX-9 provides 17.2 cubic feet of cargo capacity, eclipsing many large sedan trunks. Both second- and third-row seats fold flat to allow additional storage all the way up to the back of the front seats.

Extra thought is invested in small details, such as how the CX-9's seat releases are configured. For example, releasing the second row seat in order to enter the third row requires only one simple hand motion to unlatch the seat and move it forward. Likewise, a clever strap attached behind the third row seat's backrest serves as both a release for folding the seat and a means of pulling it back erect again.

AN OPULENT LOOK AND FEEL

Many mid-sized crossover SUVs strive for the utilitarian look. The Mazda CX-9, however, is designed to evoke a strong pride of ownership. Without sacrificing versatility or efficiency, the CX-9 strives for the sophisticated appearance of a vehicle costing two to three times as much. Its smooth and flowing silhouette, prominent wheels and tires, muscular fenders and steeply angled windshield and backlight give the CX-9 a dramatic-but-refined look.

CX-9's front end is unmistakably Mazda, with its elegantly sculpted sporty five-point grille and wide, bold bumper. A horizontal streak of chrome floats on the front grille bar, giving a distinctive and high quality feel. Side windows form a flowing, open and modern greenhouse, allowing clear vision from all seating positions. The unique trapezoid chrome exhaust pipe accentuates the fine detail put into the design.

CRAFTED AND REFINED INTERIOR STYLING

Once inside the CX-9, the driver is greeted by a neatly organized combination of cylindrical shapes and blacked-out instruments on a T-shaped instrument panel. pightly edged gauges with metal-look trim and indirect blue illumination set a cool mood. Indirect lighting also is embedded in the front and rear door trim and ceiling for a warm glow. Horizontal elements in areas such as the center panel, door trim and seat design intersect with vertical accents to create the same harmony present in fine furniture.

Interior craftsmanship and attention to detail is visible everywhere. Soft trim is elegantly configured and constructed of top-quality materials and seats have an inviting yet sporty look and feel appropriate to this type of vehicle. The dash panel houses large, clearly marked entertainment and climate controls. Delicate stitching and the

metallic look of the floating door trim-grips reveal the designer's fine eye for detail.

SAFETY WITH ADVANCED TECHNOLOGY

The Mazda CX-9's safety features are highlighted by an advanced Roll Stability Control (RSC) system that uses both body-roll rate and wheel speed sensors to determine when corrective action is necessary. A momentary torque reduction, combined with an automatic brake application, assists in restoring the CX-9 to an even keel.

Four-wheel ventilated disc-brakes include an Anti-lock brake System (ABS) to prevent lockup during emergency use. Dual-piston front brake calipers operate in conjunction with 12.6-inch diameter by 1.1-inch thick ventilated rotors. Single-piston rear calipers squeeze 12.8-inch diameter by 0.71-inch thick rotors, also ventilated. Front-to-rear distribution of braking force is electronically controlled to take full advantage of available traction during stops. In the event the driver applies the brakes rapidly in an emergency but with insufficient force to engage the ABS function, a brake assist function takes over to stop the vehicle as quickly as possible. To provide drivers with a confident feel during stops, the CX-9's braking system is extra-rigid so that deceleration is more directly proportional to pedal pressure than pedal travel. The payoff with this more linear response is enhanced controllability.

When excessive wheel slippage is detected, a Traction Control System (TCS) automatically reduces driveline torque to help restore traction. Dynamic Stability Control (DSC) reduces driveline torque and automatically applies one or more brakes to minimize under- or over-steer during emergency maneuvers.

Additional protection is provided by sensor-activated side-curtain airbags which extend from the first to the third row. These inflatable restraints deploy in the event of a lateral collision or a rollover to reduce the likelihood of injury and limb or head ejection. Inflation is maintained for approximately six seconds for maximum effectiveness, although the only way these systems work properly is when used in combination with seatbelts. Pretensioner devices automatically remove slack from the belt system immediately after a moderate or greater frontal collision and load limiters are incorporated to provide some give as the occupant moves forward. The CX-9's front headrests incorporate new design features, which are designed primarily to reduce neck injuries during rear impacts.

CX-9's robust unibody uses the Mazda Advanced Impact-Energy Distribution and Absorption System to help protect its cabin from deformation harm in the event of a collision.

A combination of large-section members, some made from high-tensile steel, envelope the passenger compartment to absorb impact energy while guarding against intrusion.

TRIM AND ENTERTAINMENT FEATURES

CX-9 is offered in three trim levels: Sport, Touring and Grand Touring. All models include air conditioning, power windows, power door locks with remote keyless entry, cruise control, six air bags, and a choice of black or beige interior hues.

The CX-9 Sport is equipped with 18-inch aluminum wheels and tires, halogen headlamps, and cloth upholstery. Power front seat adjusters are optional. Stepping up to the Touring model adds leather seat trim, power front-seat

adjusters and, for the first time ever on a Mazda vehicle, standard Bluetooth hands-free capability for easy mobile phone use. The top Grand Touring edition rolls on 20-inch pightly finished aluminum wheels. It's also equipped with the aforementioned Touring equipment plus pight exterior door handles, rain-sensing wipers, an anti-theft alarm system, exterior mirrors with turn indicators, a memory driver's seat, the Mazda Advanced Keyless Entry and Start System, wood instrument panel trim, indirect blue interior lighting and a silver finish for the side surfaces of the rear console.

CX-9 will offer as optional features a factory towing package, power sunroof, BOSE® audio system, and a rear seat entertainment system. (The rear-seat entertainment system is packaged with the upgraded BOSE® audio system and includes a 115-volt AC power outlet.) An Assistant Package - including a DVD navigation system, back-up monitor, and power lift gate - is available as an option with Touring and Grand Touring trim.

All 2008 Mazdas come with a roadside assistance program. With a call to a toll-free number, owners can access roadside assistance 24 hours a day, 365 days a year throughout the United States and Canada. In addition, a comprehensive three-year/36,000-mile warranty covers every part on the vehicle except those subject to normal wear. Also, all 2008 models receive a five-year/60,000 mile powertrain warranty and a five-year/unlimited-mileage corrosion warranty.

Headquartered in Irvine, Calif., Mazda North American Operations oversees the sales, marketing, parts and customer service support of Mazda vehicles in the United States, Canada and Mexico through nearly 900 dealers. Operations in Canada are managed by Mazda Canada, Inc., located in Ontario, Canada, and in Mexico by Mazda Motor de Mexico in Mexico City.

Source URL: <http://www.mazdausamedia.com/content/2008-mazda-cx-9-increased-zoom-zoom-plus-new-blind-spot-monitoring-system-add-cx-9%E2%80%99s-appeal>