

For Immediate Release

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### **2007 MAZDA RX-8: THE ROTARY REVOLUTION ROLLS ON**

High-powered, lightweight and perfectly balanced for nimble handling and supreme control, the Mazda RX-8 is unlike any other sports car in the world. From the industry's only rotary engine to the innovative free-style doors, the RX-8 is a sports car like no other.

The 2007 model-year edition continues to push the parameters of the sports car segment, this year with only minor updates. New for 2007, the Grand Touring model offers available Sand leather-trimmed seats, while the Touring and the Grand Touring models add a standard 6-disc CD changer. Two new exterior colors are available on all 2007 RX-8 models – Crystal White Pearl and Stormy Blue Mica.

“Since its creation, the RX-8 has continued to win rave reviews from the automotive press,” said Tetsu Nakazawa, RX-8 vehicle line manager. “The RX-8 is a sports car built for the real world; ideal for zooming around a track, but equally suitable for taking the kids to soccer practice. It is a true sports car that can pull double duty.”

The 2007 Mazda RX-8 is available as either a 232-horsepower model fitted with a six-speed manual transmission, or a 212-horsepower model fitted with a six-speed automatic with steering-wheel-mounted paddle shifters for a Formula 1-style driving experience (the change in horsepower ratings from 2006 is due to the new SAE rating standards). Both automatic and manual transmission cars come equipped with power windows, mirrors and door locks, cruise control and an AM/FM/CD audio system with six speakers.

### **RENESIS ROTARY ENGINE**

The lifeline of this powerfully agile sports car rests underneath the hood thanks to its advanced RENESIS (Rotary Engine genesis – or rebirth of the rotary engine) engine. The Mazda RX-8 remains the only mass produced rotary-powered passenger car in the world.

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By turning a triangular rotor in a cocoon-shaped combustion chamber, the RX-8's rotary engine efficiently performs the four processes of intake, compression, combustion and exhaust. The RENESIS engine is remarkably smooth and high revving – all the way to 9,000 rpm (7,500 rpm on Sport A/T-equipped models) – and offers a smaller engine footprint than traditional internal combustion engines (some 60 percent smaller and lighter than a comparably powered V-6, and 40 percent smaller and lighter than a four-cylinder). In fact, the packaging and styling that define the RX-8 would not have been possible had Mazda engineers chosen a conventional piston engine.

Improving upon 40 years of rotary designs, the RENESIS engine features side intake and exhaust ports with nearly 30 percent more intake area and twice as much exhaust area than its predecessors. The efficiencies gained through larger intake and exhaust ports exclude the need for forced induction.

The RX-8's normally aspirated 1.3-liter engine might appear diminutive to the untrained eye when compared to large-displacement V-8s or heavyweight V-10s or V-12s. However, through the incredible efficiencies of a rotary powerplant, an advanced three-stage intake system and an electronic throttle, the RENESIS engine delivers smooth, linear power on a grand scale.

The 2007 RX-8 does not sacrifice emissions for power, though. Through improvements to the port design, overlap between the intake and exhaust ports has been eliminated, significantly reducing exhaust emissions, improving fuel economy and allowing the car to meet the strict Tier2 Bin 5 Federal emissions classification. The effort made by Mazda engineers to improve emissions is a prime example of the concern for environmental impact maintained throughout the development process.

By placing the powerplant low and far back in the engine bay, in what Mazda calls an advanced front-midship layout, the center of gravity is lowered, which in turn improves vehicle balance. In addition, the fuel tank is placed ahead of the rear axle, and all seating is within the wheelbase and track of the car. Combined, these factors contribute to a perfect 50/50 vehicle weight distribution, low yaw-inertia movement and superb handling characteristics. With such excellent balance, it is little wonder the RX-8 feels right at home on the twists and turns of Mazda Raceway Laguna Seca, negotiating a tight freeway onramp or in stop-and-go traffic.

### **A RACE CAR AT HEART**

The RX-8's demeanor on the track is not overlooked by the motorsports community. The same RENESIS engine found in production RX-8s is used in the professional Formula Mazda series, a popular open-wheel racing series run on the nation's most demanding race tracks. Formula Mazda is widely regarded as a training ground for developing drivers looking to build a career in motorsports. The fact that the series uses a showroom-stock, non-modified RENESIS engine is a testament to the power, reliability and light-weight of the RX-8 powerplant.

The RX-8 also campaigns in the Grand American Road Racing Association's Grand Am Cup Street Tuner (ST) division. The ST division consists of production cars driven straight from the showroom to the race track with limited racing modification. Here, the superb handling characteristics and near-bulletproof RENESIS engine already have taken the RX-8 to victory circle many times, including the 2005 drivers' and manufacturers' championships, and all indications point to many happy returns.

## **SUSPENSION AND STEERING**

The RX-8 uses an aluminum double-wishbone front suspension, reducing unsprung weight over the use of steel components. By mounting the upper and lower arms on a highly rigid sub-frame, the long arms ensure linear alignment changes throughout the jounce and rebound of the front wheels. All wheels receive mono-tube gas-filled shock absorbers designed with large-diameter internal pistons and valving, which offer excellent road feedback and a smooth ride.

An electric rack-and-pinion power-steering system transmits just the right amount of road information back to the driver. Mazda engineers have chosen to pursue their own path by using an electric motor for steering assistance rather than a conventional power-steering pump. The electric motor provides additional assistance at low speeds to ease parking and reduces steering assistance at higher speeds to provide greater road feel, responsiveness and feedback. And, in keeping with the rest of the development on RX-8, it is far lighter and easier to package than a conventional power-steering rack.

## **PRACTICAL STYLING**

The RX-8's unique "freestyle" four-door design is proof that a true sports car does not need to sacrifice space or convenience for performance. The advanced design of the rear-hinged rear doors, provides a large door opening, allowing adult-sized passengers to easily enter and exit the vehicle. This design is also advantageous when securing a baby or a small child in the back seat. With a spacious rear seat area providing ample passenger room for four full-size adults, and enough trunk space for a weekend's worth of luggage, this sports car proves its versatility.

Taut muscular lines give RX-8 the liberating look of an athlete in motion. The muscular styling maintains classic sports car proportions while adding a Zoom-Zoom edge that is unmistakably Mazda. Integrated throughout the exterior is the unique triangular rotor design, which clearly can be seen in the front fascia, head lamps, hood and rear bumper valence.

The RX-8's exterior styling presents a genuine sports car form, while the interior boasts a comfortable and intelligently designed cabin. An extremely low cabin floor allows the seats to be mounted low in the chassis, which, along with a low instrument cluster and hood, enhance driver visibility. Mazda designers concentrated on the shape of the front seat backs and the rear seat cushions to ensure adequate rear-seat knee room. Front seat slide-rails are positioned to allow maximum leg room for rear-seat passengers.

The rotary design element is incorporated through the interior of the RX-8 in creative ways, appearing in the seats, center console, shift knob and emergency brake. The stylish cabin also evokes a sense of luxury and high-end quality. Mazda's design team examined every aspect and component of the interior and has created an elegant, driver-centric atmosphere. Through the use of advanced ergonomic research, Mazda engineers established improper seating posture to be a cause of driver fatigue and built in optimum support in the front seats to help offset discomfort. In addition, the soft blue lighting used in the RX-8's instrument cluster was found to reduce eye fatigue and strain.

### **SUPERIOR SAFETY**

When designing the RX-8, safety was given as much of a priority as was performance. For Mazda, the safety process incorporates both accident avoidance and accident protection. In effect, this approach to safety means the RX-8 can help the driver avoid various dangers and protect occupants in the unfortunate event of a collision. In rollover tests performed by the National Highway Traffic Safety Administration (NHTSA), the RX-8 achieved an impressive five-star rating.

Mazda engineers integrated numerous active and passive safety elements throughout the car. Active safety features, which require input from the driver, include the use of large ABS-equipped disc brakes on all wheels as well as precise steering and suspension systems. Dynamic Stability Control (standard on manual transmission cars with Sport Package, optional on RX-8s with automatic transmissions) delivers a superior level of handling that can be disabled when driving and road conditions allow safe operation.

Passive systems, or those that take effect automatically without the driver's involvement, also are present throughout the RX-8. Despite the absence of a center B-pillar, the RX-8 has an exceptionally rigid body, accomplished through the use of a series of locking pins, which hold the doors together and bind each door directly into the roof and floor. Integrating the frame components helps dissipate crash energy through the vehicle's structure.

Other standard passive systems on the RX-8 include front airbags, seat-mounted side-impact airbags and side-curtain airbags. Additionally, the front end and engine bay have ample crumple zones, the front seats are designed to reduce whiplash injuries, the brake pedal is designed to break away in the event of a collision of sufficient force to protect feet and legs and all four seating positions are fitted with three-point seatbelts. Even pedestrian protection was considered, as the RX-8 is fitted with Mazda's "shock-cone" hood design that yields more to the impact of a pedestrian onto the hood than a standard design, yet is strong enough to not deform in normal use.

### **TRIM AND WARRANTY**

Four trim packages are available for both automatic and manual transmission RX-8s: a Standard Model, a Sport Package (adds HID headlights, fog lamps and DSC to M/T cars; adds 18-inch wheels, a limited-slip differential, sport-tuned suspension and larger front disc brakes to these items for Sport A/T cars), a Touring Package (adds moonroof, auto dimming mirror with Homelink® and Bose® audio system with 6-disc auto changer to the Sport Package offerings) and a Grand Touring Package (adds power-adjustable driver's seat with lumbar support, leather seating surfaces with the option of Sand leather trim – heated in front – and heated outside mirrors to the Touring and Sport Packages). A DVD-driven satellite-navigation unit is available as a stand-alone option and uses a single DVD for mapping the entire United States and portions of Canada.

All 2007 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 2007 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.

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