

zoom-zoom

RX-8

LIKE MOST REVOLUTIONS, THIS ONE IS FUELED BY INNOVATION.



REVOLUTIONARY RENESIS ROTARY ENGINE

DOUBLE-WISHBONE FRONT SUSPENSION

SEATING FOR 4 ADULTS

"PRE-LOADED" MULTILINK REAR SUSPENSION

4-WHEEL VENTILATED DISC BRAKES

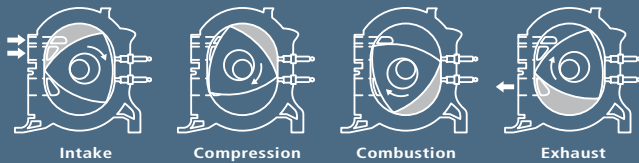
"FREESTYLE" DOOR SYSTEM

ITS ADVANCED ROTARY ENGINE PUTS A WHOLE NEW SPIN ON PERFORMANCE.

Coiled under the Mazda RX-8's weight-saving aluminum hood is an engine unlike any other—a painstakingly hand-assembled, remarkably responsive RENESIS rotary powerplant. It is an engine so advanced that it has no cylinders, pistons or valves. Just three major moving parts and an outrageously broad powerband. The rotary's compact size, light weight, reliability and power-to-weight ratio provide so many inherent advantages that the RX-8 was literally designed around it. From every angle—compared to an ordinary powerplant—a rotary is the ideal engine for a sports car. Better still, two distinct engine/transmisson choices ensure the RX-8 is tailor-made to fit your driving style. For undiluted exhilaration, a high-revving 238-hp powerplant, with a stratospheric 9,000-rpm redline, is offered with a short-throw 6-speed manual gearbox. For both convenience and fun, a higher-torque 197-hp version, with a 7,500-rpm redline, is paired with a 4-speed Sport AT automatic.



UNLIKE A CONVENTIONAL PISTON ENGINE, the RX-8's rotary engine has no cylinders, pistons or valves. Instead, two triangular rotors spinning within their own oval housings—and around a common output shaft—are used to smoothly generate power. Each of the internal combustion engine's four basic cycles occurs in a different section of the oval housing.



Intake Stroke: As an apex of the rotor passes the intake ports, fuel-air mixture is drawn in.

Compression Stroke: The intake ports are blocked and the fuel-air mixture is compressed.

Combustion Stroke: The compressed fuel-air mixture is ignited by two spark plugs. The force created by this combustion spins both rotor and output shaft.

Exhaust Stroke: The rotor's continuing orbit forces exhaust gases out the exhaust port. The cycle is then repeated.

1000 RPM

2000 RPM

3000 RPM

4000 RPM

5000 RPM

6000 RPM

7000 RPM

8000 RPM

9000 RPM

—238HP @ 8500 RPM
RX-8 (6-Speed)

—225 HP

—200 HP

—197HP @ 7200 RPM
RX-8 (Automatic)

—175 HP

—150 HP

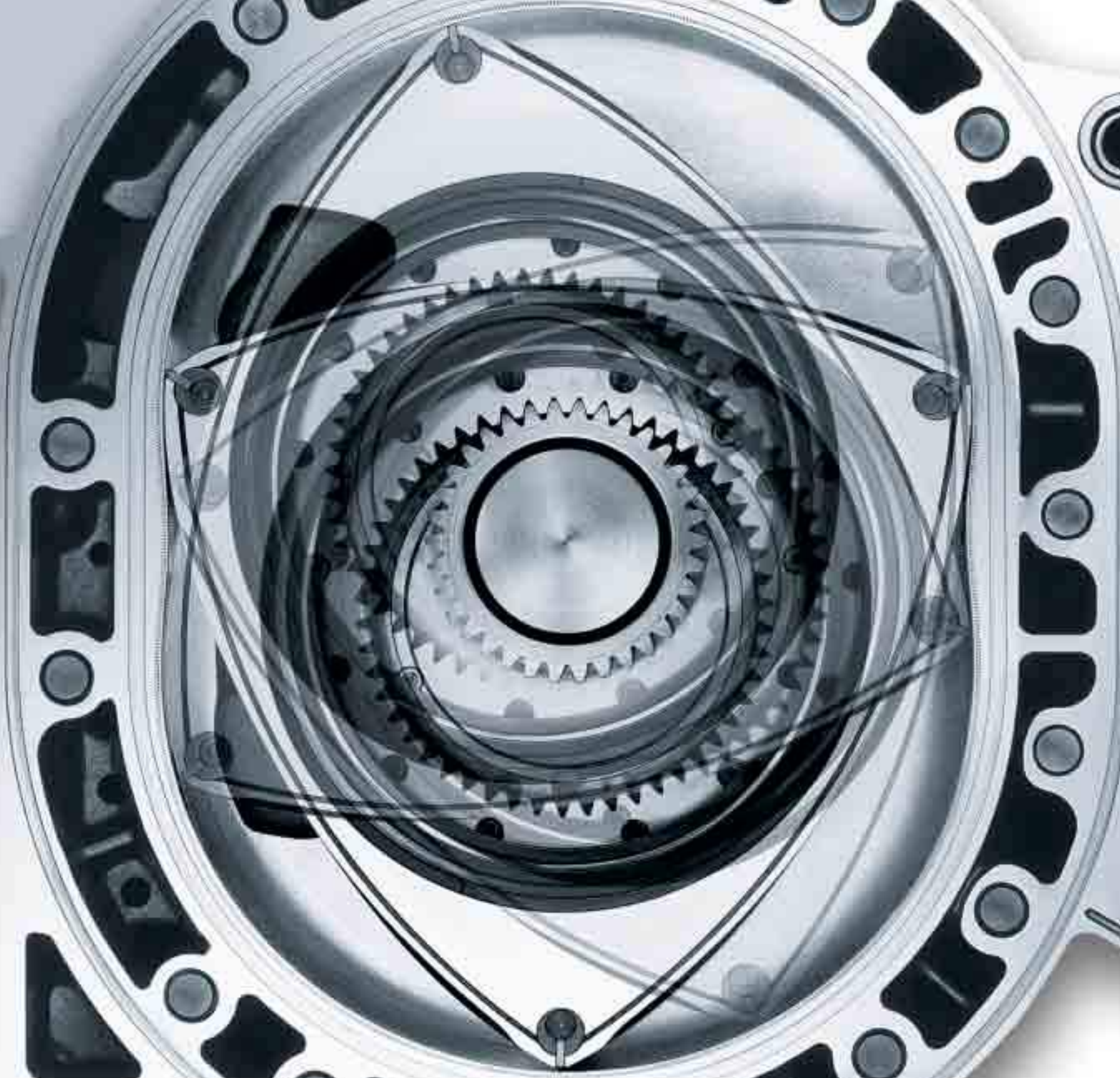
—125 HP

—100 HP

—75 HP

—50 HP

—25 HP





THE GAP BETWEEN YOUR WANTS AND NEEDS WILL DISAPPEAR IN A BLUR.

Forged from today's cutting-edge technologies, the Mazda RX-8 delivers an exhilarating experience—at speed or at rest. But its sports-car credentials are best reviewed on the road. Its advanced, fully independent suspension system will inspire both your awe and your confidence—with sophisticated double wishbones up front. Plus a “pre-loaded” multilink design in back to minimize any lag in rear suspension response. Head into a curve “hot” and its available Dynamic Stability Control (DSC) deftly adjusts power and braking, as necessary, to expertly help you maintain your course. And when you need it most, you'll instantly appreciate the impressive stopping power of the RX-8's power-assisted 4-wheel disc brakes—not to mention its massive ventilated rotors, Anti-lock Brake System (ABS) and Electronic Brakeforce Distribution (EBD).



EXCELLENT HANDLING is achieved, in part, by strategically positioning much of the RX-8's mass, including its entire powertrain and fuel tank, near the car's center point—its yaw axis. This endows the RX-8 with what engineers call a low polar moment of yaw inertia. Since “yaw” is simply a vehicle's movement, left or right, and “inertia” the tendency to continue in the same direction, having a “low polar moment” means the RX-8 is very responsive to a desired change in direction. Cars with heavy engines and widely distributed masses have a higher polar moment and can be less responsive and more difficult to control.

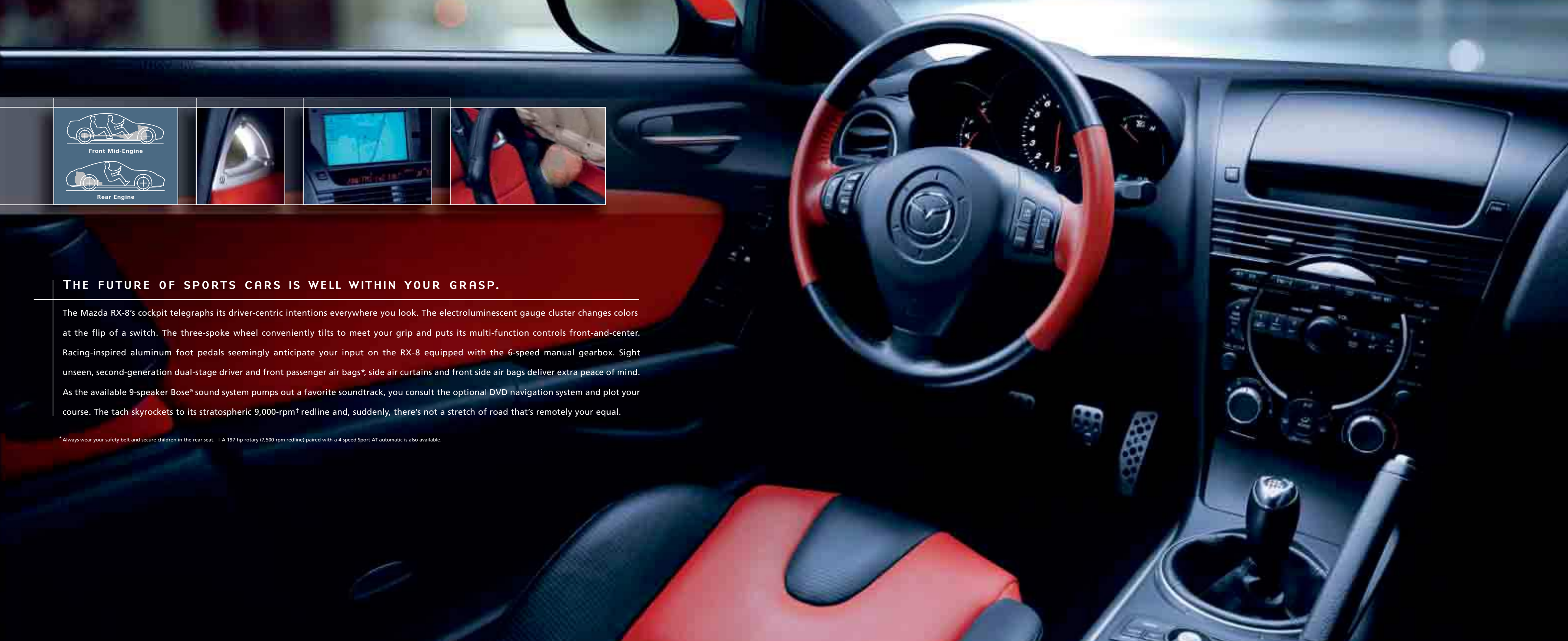


COMPLEMENTING ITS HIGH-PERFORMANCE HEART IS A BACKBONE OF STEEL.

Sophisticated rotary technology is just the tip of the iceberg when it comes to the Mazda RX-8's advanced engineering. For example, regardless of which engine/transmission pairing you select, you'll also benefit from the RX-8's integral Power Plant Frame (PPF). Functionally speaking, the Power Plant Frame marries engine, transmission and differential into a single, super-rigid unit. The remarkable result of this mechanical magic is a drivetrain that virtually eliminates the typical powertrain twisting that wastes precious energy. So even the slightest request your right foot makes for more power is instantly—and more efficiently—transformed into meaningful performance.



WEIGHT DISTRIBUTION, front to rear, significantly impacts handling. So the Mazda RX-8 is designed to maintain an approximate 50:50 weight distribution—regardless of passenger load. Much of the credit for this remarkable feat goes to its rotary engine. Smaller and lighter than a piston engine of comparable power, it also provides the RX-8 with a superb power-to-weight ratio for spirited acceleration. And more cabin space to comfortably enjoy its inspiring performance.



THE FUTURE OF SPORTS CARS IS WELL WITHIN YOUR GRASP.

The Mazda RX-8's cockpit telegraphs its driver-centric intentions everywhere you look. The electroluminescent gauge cluster changes colors at the flip of a switch. The three-spoke wheel conveniently tilts to meet your grip and puts its multi-function controls front-and-center. Racing-inspired aluminum foot pedals seemingly anticipate your input on the RX-8 equipped with the 6-speed manual gearbox. Sight unseen, second-generation dual-stage driver and front passenger air bags*, side air curtains and front side air bags deliver extra peace of mind. As the available 9-speaker Bose® sound system pumps out a favorite soundtrack, you consult the optional DVD navigation system and plot your course. The tach skyrockets to its stratospheric 9,000-rpm† redline and, suddenly, there's not a stretch of road that's remotely your equal.

* Always wear your safety belt and secure children in the rear seat. † A 197-hp rotary (7,500-rpm redline) paired with a 4-speed Sport AT automatic is also available.

ROTARY-DRIVEN DESIGN:



The Mazda RX-8 wears its rotary heritage with genuine pride. In fact, both inside and outside the car, its designers have tastefully integrated the Mazda rotary engine icon into everything from the RX-8's aluminum hood and fascia panels to its seatbacks and manual shift knob. The icon is a badge of honor representing over four decades of continuous evolution and refinement. The eye-catching icon's three corners also symbolize the three key areas where the RX-8 excels: Design, Performance, and Innovation. For those who've driven an RX-8, it's also a reminder that the way you think about a sports car will never be the same.

ROTARY-DRIVEN PERFORMANCE:

Mazda engineers have more practical experience with rotary engines than anyone else in the world. Fact is, the RX-8's advanced RENESIS rotary engine is the culmination of more than 40 years of extensive research, development, racing and refinement. Since 1961, Mazda



has designed and built more than 80 different rotary engines in 2-, 3-, and even 4-rotor configurations. For the record, Mazda has sold nearly 1.8 million rotary-powered vehicles worldwide, including three generations of the RX-8's immediate sports car predecessor, the legendary RX-7.

ROTARY-DRIVEN INNOVATION:

Mazda's ingenious RENESIS rotary engine has also inspired a host of other innovations in other areas of the RX-8's design. For example, in addition to the side reinforcement beams found in the front doors, the RX-8's "Freestyle" rear doors utilize vertical reinforcement beams with special top-and-bottom latch mechanisms to eliminate the need for conventional center pillars and provide excellent side-impact protection. Additional innovations include an advanced multilink rear suspension that's "pre-loaded" to minimize any lag in rear suspension response, plus an available Dynamic Stability Control (DSC) system with traction control to enhance performance, handling and safety under many driving conditions.



0 PISTONS. 4 DOORS. 6 SPEEDS AND 238 HORSEPOWER* PLUS 1,028 HAIRS
STANDING UP ON THE BACK OF YOUR NECK.

No matter how you crunch the numbers, the Mazda RX-8 adds up to sheer excitement. A truly advanced, no-holds-barred sports car overflowing with revolutionary ideas designed to reward you at every turn. From its tense, athletic stance and clear-lens headlights to its concave, aerodynamically shaped roof and metallic taillight accents, there's nothing else remotely like it. Its ingenious rotary engine enables a fusion of free-flowing power, inspired performance, stellar good looks and unexpected versatility. The Mazda RX-8 is, in fact, a true original. And the perfect formula for undiluted exhilaration.

*A 197-hp rotary (7,500-rpm redline) paired with a 4-speed Sport AT automatic is also available.



ENGINE WEIGHT AND PLACEMENT also contribute to the RX-8's agile, responsive handling. The RX-8's innovative rotary powerplant is nearly 90 lbs. lighter than a popular all-aluminum V6 engine. Better still, the rotary engine's low, compact profile allows it to be mounted well behind the front axle in a position that helps the RX-8 achieve its exceptional balance and low center of gravity.

