

For Immediate Release

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## **A TRUE BREATH OF FRESH AIR: THE 2008 MAZDA TRIBUTE HYBRID**

Showing its commitment to improving the world's air quality, Mazda North American Operations (MNAO) introduces the all-new Mazda Tribute Hybrid-Electric Vehicle (HEV) for the 2008 model year. With a hydrogen-powered version of the RX-8 and a hydrogen-powered hybrid version of the MAZDA5 undergoing extensive testing in Japan, the Tribute HEV is the latest environmentally friendly vehicle to join the Mazda lineup. A limited-production model, the 2008 Tribute HEV made its debut at the 2007 North American International Auto Show and went on sale in California in August 2007.

"With virtually all new Mazda vehicles sold in the U.S. earning either Low Emission Vehicle (LEV) or Ultra Low Emission Vehicle (ULEV) status, protecting the global environment is a long-standing concern of ours," said Robert Davis, senior vice president, Quality, Research and Development, MNAO. "The Tribute HEV is the next step towards strengthening Mazda's environmental efforts."

A "full" hybrid, the Tribute HEV can run on 100 percent electric power up to approximately 25 mph, maximizing in-city fuel economy and making it one of the least-polluting vehicles sold. Still, the Tribute HEV stays true to the Zoom-Zoom Mazda owners have come to expect by delivering the performance required by SUV owners. The Tribute HEV provides plenty of power yet meets California's strict Advanced Technology Partial Zero Emissions Vehicle (AT-PZEV) requirements by achieving Super Ultra Low Emissions Vehicle II (SULEV II) standards, plus zero evaporative emissions standards – the strictest emission regulations a gasoline-fueled vehicle can meet.

Tribute HEV technology, at a glance:

- A special 2.3-liter four-cylinder gasoline engine features Atkinson-cycle combustion for improved efficiency and produces 133 horsepower at 6,000 rpm.
- A 70-kWatt (equivalent to 94 horsepower) electric traction motor provides an added boost to the drive wheels when maximum acceleration is desired.
- A generator-motor recharges the batteries, starts the engine and helps regulate how the two propulsion channels blend together in the transaxle.
- A special electronically controlled, continuously variable transmission (eCVT) harnesses internal combustion and electric power sources to drive the vehicle.
- A 330-volt nickel-metal-hydride battery pack located and sealed at the rear load floor stores electrical energy.
- An electronic vehicle system controller manages charging, drive assist and engine-starting functions. This device shuts the engine down during coasting and at stoplights to save fuel. It also converts the traction motor into a generator during braking to help recharge the batteries.

The Tribute HEV offers superior environmental performance with its MZR 2.3-liter gasoline engine, which has been modified to run on the Atkinson combustion cycle for superior fuel efficiency. The Atkinson cycle modifies the timing of the closing of the valves, enabling the engine to realize more power with cleaner emissions. At low speeds or in low-load situations, drive is provided by a permanent magnet AC synchronous electric motor, producing 70 kW @ 5,000 rpm and 330 V maximum voltage.

When additional power is required, the Tribute HEV's 2.3-liter DOHC 16-valve Atkinson cycle four-cylinder engine seamlessly engages, contributing 133 horsepower at 6,000 rpm and 124 lb.-ft of torque at 4,250 rpm. As a result, the Tribute HEV pushes out a combined 155-hp, with 0-60 times comparable to a 200-horsepower V-6 engine, while increasing city-driving fuel economy by nearly 75-percent. The Tribute HEV is equipped with a smooth-shifting, electronically controlled Continuously Variable Transmission (CVT) that realizes seamless, highly efficient adjustment of the gear ratio under electronic control.

Once the vehicle reaches speeds above 25 mph, or vehicle load exceeds a certain threshold (such a fully-laden vehicle or a "jack-rabbit" start), the motor supplements the gasoline engine, providing extra torque as needed. During deceleration, it charges the battery by working as a generator. The generator-motor also provides power boosts during heavy load situations, helping Tribute HEV accelerate briskly to speed. In addition to fuel-free operation, electric motors deliver maximum torque at low rpm, so they are an ideal complement to gasoline engines that generate peak power at higher rpm.

The transition through four modes – all-electric, gas-electric, gas-only and charging the battery pack – is seamless, and the only clue to the mode in which the vehicle is operating is the "charge/assist" gauge on the dashboard.

An electronic vehicle system-controller manages charging, drive-assist and engine-starting functions. This device shuts the engine down during coasting and at stoplights to save fuel. It also enables the traction motor to convert to a generator to provide engine-braking and recharge the batteries.

Equipped with standard front-wheel-drive or optional electronic four-wheel-drive, Tribute HEV is offered in two trim levels, Touring and Grand Touring. Mirroring design cues shared by its gasoline-powered sibling, Tribute HEV offers a bold, rugged exterior set off by 16" alloy wheels and new front and rear fascias, hood, liftgate, body-side molding, power side view mirrors, headlamps, taillamps and standard fog lights – features that can all be found on the redesigned conventional 2008 Tribute as well.

Like all good SUVs, the Tribute HEV has a commanding driving position, great visibility, good ground clearance, a tall roof and large cargo area. The elevated seating position and superb visibility mean drivers get a better view of the road when weather conditions are bad, such as heavy driving rain. The vehicle seats five adults in comfort. Storage compartments in both front doors provide easily accessible storage options. In addition, a center console storage compartment with removable bins offers enough space to store a laptop. There is 29.2 cubic feet of carrying space behind the rear seat when it's up, and 66 cubic feet when the seatback is reclined. The rear seat is asymmetrically split 60:40, which improves carrying versatility. For extra practicality, the tailgate features a rear window that lifts separately, ideal for loading less heavy objects.

Safety is a priority. The all-steel unibody construction is not only very rigid, it is also enormously strong. The crumple zones and 'Triple H' construction are designed to absorb and redirect energy away from the passenger cabin. 'Triple H' refers to the H-shaped structures in the sides, floor and roof that provide a rigid cell around the cockpit. Side impact door beams are also fitted, further to improve safety in a side impact.

The Tribute HEV comes with advanced front airbags that use various sensors to deploy each front airbag with exactly the right amount of force to deal with the impact. Sensors measure the weight of the seat occupant, the force of the impact and the seat distance from the steering wheel. Side airbags, fitted into the seats rather than the doors – so they work equally effectively, irrespective of seat position – are standard. Front side-impact airbags, side-impact air curtains, independent multilink rear suspension and four-wheel Anti-lock Braking System (ABS) are also standard. Front three-point seat belts have pre-tensioners to reduce slack in the early moments of a frontal impact. In the rear, all three seats have three-point belts and adjustable head restraints for extra safety. Providing additional safety and security, a tire pressure monitoring system is standard.

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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