2009 Escape Hybrid Overview

BETTER FUEL ECONOMY, ENHANCED POWER DRIVE FORD ESCAPE, MERCURY MARINER MODELS FOR 2009

2009 Escape Hybrid

A new powertrain lineup, with a more powerful and fuel-efficient 2.5-liter I-4 engine and a new six-speed automatic transmission, leads the list of enhancements for the 2009 Ford Escape and Mercury Mariner models.

Ford Escape and Mercury Mariner, the popular compact SUVs, boast better fuel economy, thanks to a combination of the new engine and fuel-saving six-speed transmission. Other fuel-efficiency measures, such as refined aerodynamics and new low-rolling-resistance tires, also enhance fuel economy while contributing to a quieter, more refined cabin environment.

Escape and Mariner for 2009 also introduce Easy Fuel™ capless refueling, ambient lighting and standard cruise control. A 3.0-liter V-6 engine with 20 percent more horsepower and a 1 mpg fuel economy improvement also is available.

Standard on all Escape and Mariner models are an anti-lock braking system and Ford's exclusive AdvanceTrac® with RSC® (Roll Stability Control). The only available electronic stability control system with two gyroscopic effect sensors, AdvanceTrac with RSC measures vehicle motion about both the yaw and roll axes.

Ford Motor Company today has more than 80 patents worldwide for this innovative system, which features roll-rate sensing and stability enhancement capability, offering assistance to the driver in maintaining vehicle control during extreme maneuvers. The system automatically engages counter measures to help the driver maintain maximum control and reduce the risk of rollover.

"We're offering customers more power with better fuel efficiency and comfort," said David Finnegan, Ford Escape marketing manager. "The 2009 Escape and Mariner also have a quieter ride and better handling. They're engaging and fun to drive."

New 2.5-liter I-4 Engine Debuts
The 2009 Ford Escape and Mercury Mariner offer a new, 171-hp, 2.5-liter four-cylinder engine with intake variable cam timing (i-VCT) for enhanced fuel economy and performance.

The new engine is expected to gain 1 mpg in both city and highway fuel economy when equipped with the new six-speed transmission, as compared to the previous model's smaller-displacement 2.3-liter engine and four-speed automatic.

The new engine offers an 11 percent increase in power output versus the 2.3-liter (153 hp). This gives Ford Escape and Mercury Mariner a 1.7-second improvement in 0-60 mph acceleration.

"With gas prices rising, we want to offer our customers even more fuel-efficient vehicles," says Ron Razzano, Escape/Mariner vehicle engineering manager. "But more fuel efficiency doesn't need to reduce performance. We tried to give our customers more of both, so there wouldn't be any compromise with Escape and Mariner."

Responsive with its peak 171 lb.-ft. of torque at 4500 rpm, the engine also is refined, with dual-mode crankshaft damping, electronic throttle control and PowerPC engine electronic control. Key new elements of the engine design include intake and exhaust manifolds, camshafts, pistons and bore size.

The i-VCT technology optimizes the valve timing for performance and efficiency, creating a broad torque curve and delivering increased power and improved fuel efficiency at the same time.

The powertrain also incorporates electronic throttle control (ETC). This technology replaces the manual linkage between accelerator and throttle with a control unit that calculates the optimal throttle position from a number of sensors. ETC is a form of the state-of-the-art, drive-by-wire technology.

Escape Hybrid and Mercury Hybrid also will feature a version of the new engine that uses the fuel-efficient Atkinson Cycle for combustion.

New Six-Speed Transmission Saves Fuel
The new I-4 engine's full fuel efficiency potential is enhanced when it is equipped with the optional 6F-mid-range six-speed automatic transmission. A five-speed manual transmission is standard equipment.

"The introduction of the six-speed is a big enhancement for Escape and Mariner," Razzano said. "A taller top gear reduces engine speed while cruising and shifting at lower rpms in each gear help make the new six-speed 4 to 6 percent more fuel efficient than the four-speed it replaces."

The new six-speed is calibrated for cruising fuel efficiency without sacrificing launch feel and performance feel in lower gears. A wider range of gear ratios is key to the six-speed transmission's ability to deliver this combination of performance and fuel economy.

Other Fuel Efficiency Improvements
Beyond the major technology upgrades, the 2009 Escape and Mariner development team focused on key details such as tire technology and aerodynamic efficiency to deliver an overall 1 mpg fuel economy improvement, helping make each tank full go farther.

- Escape and Mariner feature new low-rolling-resistance tires, developed in cooperation with Michelin.
  The new 16-inch Michelin Latitude Tour design features a unique mold design, reduced weight and a new-generation tread pattern optimized for reduced fuel consumption.
- Aerodynamic refinements that account for increased fuel efficiency include a redesigned front bumper spoiler and new rear tire spoilers, the first application on a Ford SUV.
- Additionally, Electric Power Assist Steering (EPAS) is featured on both the standard and hybrid models of Escape and Mariner. EPAS replaces the traditional hydraulic power steering pump. Because it operates only when required for steering assistance, it contributes to lower fuel consumption than the hydraulic pump, which operated constantly during engine operation.

Improved Fuel Efficiency, Performance to 3.0-liter V-6 Engine
Escape and Mariner's new 3.0-liter V-6 engine also improves for 2009, leveraging a new 10.3:1 compression ratio to gain 40 hp compared with the 2008 3.0-liter.

The 240-hp V-6 is equipped with i-VCT and ETC along with new cylinder heads, intake and exhaust cams, injectors, intake and exhaust manifolds, and pistons. This engine uses Ford's new six-speed transmission exclusively in place of the four-speed automatic used previously.

Enhanced Dynamics, Ride Comfort
The 2009 Ford Escape and Mercury Mariner feature a series of chassis system upgrades that improve dynamic capability, steering response and ride comfort.

The vehicles' suspension has been revised and retuned, with the addition of a new rear stabilizer bar and revised shock absorber tuning, helping to deliver a balance of enhanced ride comfort and

handling confidence. The steering system also has been retuned for better control and tighter cornering capabilities.

"When it comes to steering, it's about finding the proper balance between tire performance and steering dynamics," Razzano says. "With Escape and Mariner, we found that balance, giving optimal car-like drivability and increased responsiveness."

The braking system of the Escape and Mariner also incorporates improvements. The development team's efforts focused on enhancing initial braking system responsiveness and making further fine-tuning calibrations for the ABS, resulting in better brake feel and shorter stopping distances.

Hybrid Models Enhanced, Too
Fresh from their most successful sales year, the Escape Hybrid and Mariner Hybrid for 2009 bring an array of new features and technologies to strengthen their claim as America's most fuel-efficient and environmentally friendly SUVs.

Hybrid versions of Escape and Mariner saw combined sales up approximately 10 percent last year.

For 2009, the Hybrid models will use the new 2.5-liter I-4 designed to run on the Atkinson combustion cycle. A new engine processor enables nearly imperceptible transitions between gas and electric vehicle mode. The hybrid models also feature a new powertrain damping system to reduce vibrations and feedback to the driver and other vehicle occupants.

The Hybrids' braking system also has been refined. Engineers achieved a more seamless transition from electric regenerative braking system to traditional braking operation. A new brake pedal sensor is at the heart of the improvements.

With the introduction of the 2009 models, the Escape Hybrid adds a new model, the Escape Limited Hybrid. Along with its gas counterpart, the Escape Limited Hybrid features 16-inch, six-spoke bright machined aluminum wheels and exterior chrome accents, a standard AM-FM/six-CD changer, chrome and ebony interior touches and a luxury and convenience package that includes ambient lighting, heated front leather seating surfaces, a power moonroof and retractable cargo area cover.

Escape Limited Hybrid models also offer standard SecuriCode™ keyless entry.
The introduction of Escape Limited comes as result of continued dialogue with customers who have asked to receive all the accessories and equipment expected in higher-specification versions of the base vehicle, Finnegan said.

Sustainable Comfort
The 2009 Escape and Mariner score in both comfort and sustainability with the addition of new comfort-designed seats. The seats include soy-based foam that substitutes for petroleum-based products to conserve limited resources and reduce CO2 emissions.

Eco-friendly seat fabrics also are offered on Escape made from post-industrial 100 percent recycled materials.

"These vehicles show that we can combine performance with sustainability," said Finnegan. "Customers can be environmentally responsible and still have a vehicle that provides the utility of an SUV and is fun to drive."

Escape/Mariner Safety Technologies
The 2009 Ford Escape and Mercury Mariner feature an array of safety technologies, including:

- AdvanceTrac® with RSC®
- Safety Canopy™, a side air curtain technology offering protection for the first and second seating rows

- Personal Safety System®, a suite of seven safety technologies, including new dual-stage front air bags for the driver and front-seat passenger, side air bags and a front passenger sensor system
- Tire Pressure Monitoring System
- LATCH (Lower Anchors and Tethers for Children) system on rear seating positions

Features and Connectivity
Earth-friendly and high-end amenities go hand-in-hand on the 2009 Escape and Mariner Hybrids. Both feature:

- SYNC – Developed by Ford and Microsoft, this award-winning in-car communications and entertainment platform allows users to control most MP3 players and Bluetooth®-enabled mobile phones hands-free using voice commands. Standard on Escape Limited and Escape Hybrid, and on Mariner Premier, Premier V-6 and Mariner Hybrid models. SYNC is optional on all other models.
- SIRIUS® Satellite Radio – Escape XLT and Limited, Mariner Premier and Premier V-6 and all hybrid models are equipped with SIRIUS® satellite radio, with the receiver module and roof-mounted antenna. Customers receive an initial six-month SIRIUS® subscription.
- Voice-Activated Navigation with SIRIUS® Travel Link™ – Escape and Mariner offer an optional voice-activated navigation system, which includes an AM-FM/six-disc in-dash changer, seven speakers and a subwoofer.
- Ambient Lighting is standard on Escape Limited and Escape Limited Hybrid as well as Mariner Premier and Premier V-6.
- Steering wheel audio controls are standard on all Mariner models.
- An auxiliary input jack in the instrument panel center stack is offered as standard equipment for the ease of connecting MP3 players to the audio system.
- All 2009 Escape and Mariner hybrid models feature a standard 110V AC power outlet.

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