

Prius v Expands Iconic Hybrid 'Family' of Vehicles

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The newest entrant in a growing Prius family of hybrid vehicles, the Prius v delivers an unparalleled blend of versatility and fuel efficiency in a comfortable, mid-size package. A new evolution in hybrid vehicles with excellent cargo space and Prius' heritage of environmental performance and fuel economy, the 2012 Prius v will

go on sale in Fall 2011.

The new Prius *v*, with “*v*” expressing the vehicle’s *versatility*, will meet the needs of growing families with active lifestyles while providing the same attributes traditionally found in the Prius DNA. Despite the spaciousness of a family friendly midsize vehicle, the Prius *v* will deliver estimated EPA fuel economy ratings of 44 mpg city, 40 mpg highway and 42 mpg combined.

“The Prius *v* brings leading-edge hybrid technology to customers who need more room and provides more cargo space than 80 percent of all small SUVs,” said Toyota Division Group Vice President and General Manager Bob Carter. “And because it’s a Prius, it produces 66 percent fewer smog-forming emissions than the average new vehicle and will have the best mileage ratings of any SUV, crossover, or wagon sold in America. We think that’s a win-win for everybody.”

The Prius *v* will be utilizing the same proven Hybrid Synergy Drive system as the third-generation Prius, with the advantages of high mileage, low emissions, and never needing to be recharged.

A product of the same culture of innovation that spawned the original Prius 14 years and two-million units ago, the Prius *v* follows family tradition with new technologies and equipment advances that continues to raise the bar on the cutting edge automotive science.

Big Enough For Families and Cargo

The Prius *v* emphasizes overall proportion with spaciousness and flexibility for active families. Comfortable interior space and good visibility have been assisted by a high seating position, ample head room, and an impressive 38-inch couple distance, providing generous rear legroom. A low, wide-opening rear hatch reveals 34.3 cubic feet of cargo space behind the rear seats, making it the most spacious dedicated hybrid vehicle on the market.

Comfortable seating for five is specifically designed for young families. Sliding second row seats allow for easier ingress and egress and rear-storage flexibility, with a 45-degree recline for greater comfort. The 60/40 split, folding rear seats present four different seat arrangements that provide excellent usability for passengers and luggage, while a fold-flat front-passenger seat allows for extremely long cargo.

The driver is kept informed via a center-mounted instrument panel, a visually succinct, space-efficient design that is also exceptionally user-friendly. As with other Prius models, the driving controls including Push Button Start, parking switch, drive-by-wire shift toggle, and driving mode buttons are immediately at hand. Each of these driving control features are distinguished by silver trim. Instrument-panel controls, including a single dial automatic climate control, provide an advanced look and user-friendly command.

The center console is accessible from both the driver side and rear seats. The console is big enough to hold 23 CD cases, yet low enough so that lines of sight and conversation between passengers can be relaxed and natural. The console design helps make the cabin a human-friendly space, and a low-fatigue environment for long rides.

A wide variety of engineered storage spaces are located throughout the cabin. These include dual glove boxes, a center console utility tray and five cup holders in large and medium sizes. Bottle holders are built into the front and rear door pockets, while most models will feature an overhead storage space suitable for sunglasses. In addition to the larger main luggage compartment, there are storage units built into the sides and under the cargo platform for storing equipment such as car wash items or gloves. Even a special space for umbrellas is located under the second row of seats.

Rear seats fold, slide and recline to configure for any mix of passengers and cargo, and operation switches are located conveniently close to the occupants. New for Toyota, an available seat material called SofTex is designed for easy cleaning, resisting spills and wear in a family vehicle that could see heavy use on a daily basis. Soft to the touch, SofTex's attributes as compared to leather and other traditional leatherette-type materials include a weight reduction of 50 percent, a manufacturing process with approximately 99 percent fewer volatile organic compounds (VOCs) than conventional synthetic leather, and it's water and stain resistant. It also does not include any animal-based material.

Advanced Connectivity

Seamlessly integrated into the Prius *v* are state-of-the-art electronics and enhanced connectivity features. A Bluetooth wireless connection for compatible hands-free phone calls is standard, now improved by an automatic phone book transfer function. Also standard is a USB port that allows playing of music and video from portable audio devices, using the vehicle sound system and in-dash display screen, including full iPod integration.

The standard audio system has a 6.1-inch screen and six speakers. The screen also displays the energy monitor and fuel consumption data, and functions as the monitor for the integrated back-up camera and the Display Audio System. The screen also offers a new value-driven navigation system and serves as a portal for Entune.

An available HD Radio system enables CD sound quality from digital FM broadcasts, and has features that maximize analog and AM broadcast sound quality. The system will include HD Radio with iTunes tagging for future purchase and SiriusXM Satellite Radio™.

The top-of-the-line audio is equipped with a new seven-inch Premium HDD Navigation system with Entune and JBL. This system offers a new split-screen feature that allows for simultaneously displaying navigation and audio information and full iPod video integration.

The premium system adds a new JBL GreenEdge™ audio system that combines an eight-channel amplifier and door-mounted "acoustic lens" speakers, to provide a high-quality sound. The GreenEdge amplifier achieves a 66-percent reduction in overall mass and a 50-percent enhancement in sound efficiency. The GreenEdge speakers produce a higher output of sound with the same power or less consumption of conventional models.

Entune Multimedia System

Prius *v* will be one of the first Toyotas to offer the Entune™ multimedia system. For the first time ever in a Toyota automobile, this innovative new system leverages the mobile smartphone to provide a richer in-vehicle experience with fully integrated access to navigation, entertainment and information services.

Toyota Entune debuts the first-ever support for engaging mobile apps, such as Bing, OpenTable, and movietickets.com, along with accessing useful travel-related services, such as live weather, traffic, fuel information (location and price), stocks, and sports. Toyota Entune brings the largest selection of music options available to a vehicle, including iheartradio's 750+ stations, and Pandora's personalized music service.

The audio systems combined with Entune feature a best-in-class, advanced conversational voice recognition system that helps the driver to stay focused on the road by eliminating the need to memorize thousands of voice commands.

Sleek, Aerodynamic and Efficient

With a balance between outstanding spaciousness, refined style, and smooth aerodynamics, Prius *v* has a low 0.29 coefficient of drag, which does not inhibit the vehicle's convenient packaging. It is a new vehicle designed

from the ground up, with a shape that evolved from Prius rather than being an elongated version.

Keeping air resistance low is the familiar triangular Prius silhouette, adapted to a larger size. A flush surface from the front of the vehicle through the front pillar works with side “aerocorners” for exceptionally clean airflow. The smooth front sheetmetal blends into a carefully designed roof and cabin, leading to an optimized cabin-end shape that acts to converge side and roof airflow. Wheels and wheel caps are designed with aerodynamic effects in mind. These measures and others also have the beneficial effect of suppressing wind noise.

Enhancing the clean, low wind-resistance design are materials that keep the Prius *v* relatively light and easy to move. The door panels are foam-injected with polypropylene and the deck board with light-weight urethane to produce a weight savings of approximately 20 percent. Significant weight reduction is also achieved through the use of high-tensile grades of steel throughout the body along with aluminum in key body panels and systems.

High-strength steel sheets and bars used throughout the body to ensure a light, yet highly rigid platform structure.

Also available, and a Toyota-first, is a resin Panoramic View Moonroof with power retractable sun shades that provides an open atmosphere in the cabin with a 40-percent reduction in weight as compared to conventional glass roofs of the same size, and excellent heat insulation performance. This improved thermal resistance means the engine needs to run less to preserve comfortable ambient temperatures, which in turn enhances fuel efficiency. The moonroof has an electrically operated shade system with a jam protection function.

Available LED headlamps work to improve visibility while reducing current draw. They use projector lenses to offer long-range visibility and are designed to be virtually maintenance free for the expected life of the vehicle. Prius *v* features a climate control system with enhanced cooling capability to cope with a larger cabin. The system uses an electric compressor, so the air conditioning can run without depending on the engine, and improved component design for better maximum-demand cooling performance.

Proven Hybrid Synergy Drive System Now More Versatile

The Hybrid Synergy Drive system in the Prius *v* is essentially the same as the current third-generation Prius. The system uses two high-output motors, one 60kw (80 hp) unit that mainly works to power the compact, lightweight transaxle and another smaller motor that mainly works as the electric power source. Maximum motor drive voltage is 650 volts DC. The proven and practical nickel-metal hydride battery pack is the same as on the third-generation Prius liftback, but with a cooling duct located under the rear seat.

As with current-generation Prius cars, Hybrid Synergy Drive is a series-parallel hybrid system that can provide power either from the engine alone, or the motor alone, or any mix of both. A hybrid control computer manages the system so that optimum power is delivered according to driver demand. It uses a start/stop system and regenerative braking to conserve fuel and recharge the battery upon deceleration.

Hybrid Synergy Drive is built around a specially adapted, efficient 98-horsepower 1.8-liter four-cylinder engine that runs on the Atkinson cycle and contributes to a total system horsepower of 134. Key components include an electric water pump that requires no belts, and an exhaust gas recirculation (EGR) system that helps warm the engine quickly, reducing fuel consumption when the engine is cold. Compact and light weight, the engine produces minimal noise and vibration. Sophisticated valve control, injector design, and other technologies reduce emissions to allow the Prius *v* to qualify for SULEV and Tier2 Bin3 emissions standards.

Four Driving Modes

In addition to the standard driving mode, Prius *v* drive system also includes an Eco driving mode, an EV driving mode, and a Power mode. In Power mode, enhanced mid-range response enables easier coping with slopes and

mountainous terrain. In EV mode, the Prius *v* can run on battery power alone for short distances and lower speeds, up to about a mile. In Eco driving mode, the engine management system prioritizes fuel economy, managing throttle response and limiting power consumption from the air conditioning.

Pitch and Bounce Control; Better Ride, Better Handling

A new feature, Pitch and Bounce Control, works with suspension enhancements to improve ride comfort and control. Because the Prius *v* is a larger vehicle more likely to carry loads and passengers, front and rear suspension components have been redesigned to improve handling and ride quality. Front coil-over spring and damper capacities have been significantly increased and a new upper support has been designed. The steering gear has been attached to the front suspension member, and the stabilizer bar repositioned for more responsive steering feel and enhanced ride comfort.

In the rear, a torsion-beam suspension design has been fitted with appropriately tuned springs and dampers. The new rear-suspension system is designed to help ensure stability and ride comfort, and it has a lower mounting point to improve luggage space.

Pitch and Bounce Control uses the torque of the hybrid motor to enhance ride comfort and control. The system, working with wheel-speed sensors and in tune with the suspension, helps suppress bounce and toss motions to improve comfort for occupants. Because it helps control the balance and posture of the vehicle as a whole, it also functions to improve handling response.

Standard wheels are 16 inches in diameter, with 17-inch wheels available as an option.

Cutting Edge Safety and Security

A variety of available and standard features maintain the Prius tradition of premium-level equipment packaging. Not least among them is a broad suite of advanced features, both active and passive, that are designed to help maximize occupant safety.

The all-new Prius *v* platform is designed with a force-absorbing body structure. Increased use of high-strength steel, notably in the front frame members, is a key part of providing a strong body structure without increasing weight. Helping to protect the cabin from side and rear intrusions are similarly engineered reinforcements using high tensile steels, all designed to disperse energy strategically throughout the vehicle to help protect passengers. Like all Toyota models, the Prius *v* will feature Toyota's Star Safety System™ standard, which includes Vehicle Stability Control (VSC), Traction Control (TRAC), Anti-lock Braking System (ABS), Electronic Brake-force Distribution (EBD) and Brake Assist. It also features the standard Smart Stop Technology brake-override system.

An electronic tire pressure monitoring system is standard equipment, and there are seven airbags strategically located about the cabin, including a knee airbag for the driver. New driver and front-passenger seat design helps lessen the possibility of whiplash injury during certain types of collisions while minimizing weight. A new Vehicle Proximity Notification System helps alert pedestrians and cyclists of an oncoming vehicle under certain conditions by emitting a small warning sound.

An available Pre-Collision System (PCS) retracts seatbelts and applies the brakes in certain conditions when a frontal crash is unavoidable. It is paired with Dynamic Radar Cruise Control.

Another available safety system, Safety Connect, can access a call center with a live operator who can dispatch police and emergency vehicles. The system combines automatic collision notification and a stolen vehicle locator feature, which can track the location of the stolen vehicle via GPS and help guide police to recover it.

Peace of Mind Warranty Protection

Toyota's 36-month/36,000 mile basic new-vehicle warranty applies to all components other than normal wear and maintenance items. Additional 60-month warranties cover the powertrain for 60,000 miles and against corrosion with no mileage limitation. The hybrid-related components, including the HV battery, battery control module, hybrid control module and inverter with converter, are covered for eight years/100,000 miles.

The Prius v will also come standard with Toyota Care, a complimentary plan covering normal factory-scheduled maintenance and 24-hour roadside assistance for two years or 25,000 miles, whichever comes first.

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