

The 2022 Toyota Prius Prime: EV-Hybrid Harmony

December 10, 2021

Image not found or type unknown



PLANO, Texas (Dec. 10, 2021) – Take the world’s best-selling hybrid, add on a no-gas EV mode when charged, top it off with Toyota value and durability and you have the Prius Prime. With an astounding 640-mile driving range, the Prius Prime takes everything people love about the legendary hybrid vehicle and adds an

estimated 25 miles of EV driving range (when fully charged) — that's sufficient to handle daily commuting distances for many U.S. drivers.

Aside from the capability of silent, battery-powered driving, Prius Prime's fuel efficiency numbers are impressive. In hybrid mode, the Prius Prime LE stands out with an estimated 55 city/53 highway/54 combined MPG. Prius Prime has an estimated 133 MPGe when fully charged. And, with an estimated 640-mile total driving range, the Prius Prime keeps on going and going long after even the longest-range current EVs must stop to be recharged.

Best of Both Worlds in One Car

In EV Auto Mode, the Prius Prime will favor the electric capability as much as possible. But in situations where it is more efficient to run the gasoline engine – climbing steep inclines, for example – the extremely efficient gas engine will engage.

Even with its super-high fuel efficiency estimates, the Prius Prime drives with unexpected verve in EV mode, including the ability to reach up to 84 mph on battery power alone (up to an estimated 25 miles). In addition, exclusive suspension tuning gives the Prius Prime an especially poised stance through curves.

Best of all, when the battery reaches a certain reduced state of charge in EV mode, the Prius Prime automatically and seamlessly switches to hybrid mode. Then, like other Prius models, it combines the output of the gasoline engine and electric motor through a planetary-type continuously variable transmission.

Notably, Prius Prime drivers do not need to invest in special, expensive equipment for home charging. Using the supplied cable, Prius Prime plugs into a standard household outlet. (Toyota recommends using a dedicated GFI 15A outlet.) Fully recharging the battery using a standard 120v outlet takes less than five-and-a-half hours. A 240v source can reduce that time to approximately two hours.

As a plug-in hybrid, Prius Prime's key advantage over an EV is that it does not need to be recharged to be driven. If you forget to plug it in, for example, and you have gas in the tank, the Prius Prime will simply function in hybrid mode like any other Prius.



Recognized Everywhere

The Prius Prime blends the instantly recognizable Prius liftback style with special elements for a distinct style of its own. The Prime wears exclusive front and rear fascias, bumpers and lighting systems. Ultra-low profile LED headlights and the large acrylic grille that complements the presence of the air intakes evoke a more advanced EV image.

Exclusive to the Prius Prime, the “dual wave” rear window combines an exotic look with aerodynamic efficiency. Also unique to the Prius Prime, a full-width LED rear combination lamp panel leaves an unforgettable nighttime signature, with a shape that follows the contour of the spoiler and the double-wave window. A full-width aero glass panel below the rear spoiler, plus a standard backup camera, aid rearward visibility.

The wind-cheating body and its high-strength/low weight structure are critical factors in the Prius Prime’s remarkably low energy consumption. Automatic grille shutters help reduce drag by closing when airflow to the radiator is not needed. Another unique detail, the 15-inch aluminum alloy wheels feature aerodynamic covers painted in a two-tone scheme.

Lights, Action, Color

The Prius Prime’s energy-conserving quad LED headlights give off a stunning nighttime look, like diamonds glowing in the night. These don’t blind oncoming drivers, thanks to standard Automatic High Beams. Using an on-board camera, the system is designed to detect approaching vehicles or a vehicle traveling ahead and also measure the surrounding environment’s light (such as street light brightness) and adjust accordingly.

Accentuating the Prius Prime’s dynamic, futuristic lines are five standard paint color choices including Classic Silver Metallic, Magnetic Gray Metallic, Midnight Black Metallic, Titanium Glow and, exclusive to the Prius Prime, Blue Magnetism. There are also two premium colors, available Supersonic Red and Wind Chill Pearl.

Prime Engineering

Like many current-generation Toyota passenger vehicles, the Prius Prime is built around the versatile TNGA-K platform architecture. The structural strength and sophisticated double-wishbone style multi-link rear suspension imbue the Prius Prime with a premium level of handling responsiveness, steering feel and ride quality.

The rear suspension design allows an estimated 19.8 cu. ft. of luggage space with the rear seatbacks in use.

Hot-stamped and high tensile steels, which allow for intricate forms that are both lightweight and strong, are used extensively throughout the Prius Prime body. Aluminum components, including the hood and brake calipers, help keep vehicle weight in check. Innovative fastening methods, such as laser screw welding and advanced adhesives, contribute to structural strength.

Additional weight savings come from a lightweight carbon-fiber rear liftgate, which also makes opening and closing almost effortless.

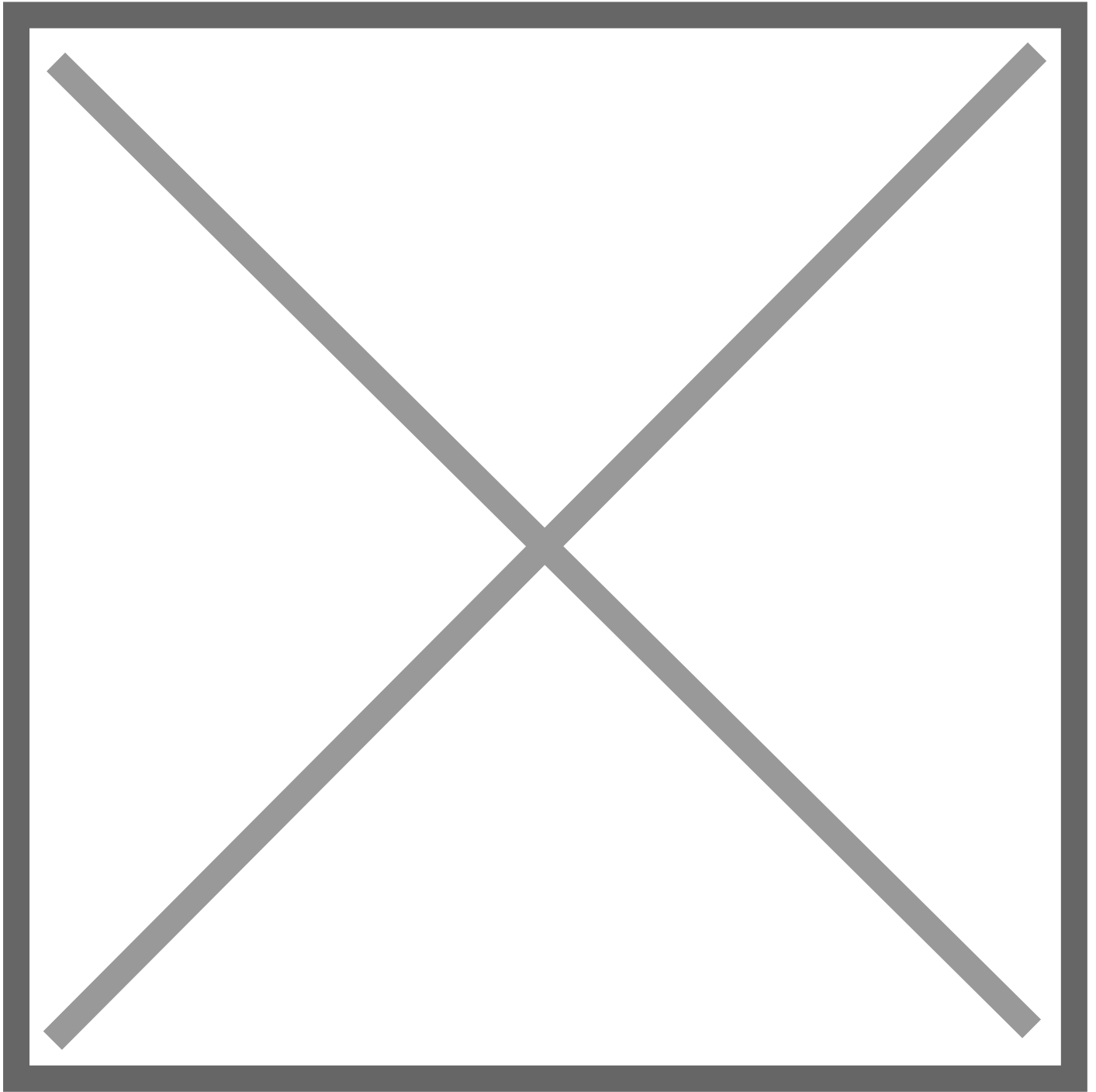
The Next Step in Toyota Hybrids

The Prius Prime was the first Toyota hybrid to use a dual motor drive, which helps improve acceleration in EV Mode for spirited driving. The system engages both the generator (MG1) and electric drive motor (MG2) for drive torque via an innovative one-way clutch. This is the first deployment of MG1 for that purpose. In other Prius models, MG1 provides only battery charging while MG2 provides drive torque and charging.

Regenerative braking recaptures electrical energy under deceleration and braking and stores it in the battery, which helps to reduce fuel consumption.

The Prius Prime can even help optimize range by memorizing the driver’s stopping patterns on frequently driven routes and suggesting when to let off the accelerator. Here’s how: The available Predictive Efficient Drive with Predictive Deceleration Support collects daily driving data to predict points of deceleration and stopping. From

then on, when the driver passes through a location in the database, the system indicates when to let off the accelerator and can also apply assisted deceleration to help boost fuel efficiency.



Making Every Drop Count

The Prius Prime's efficiency credentials are not battery-focused; the gasoline engine is also a star in its own right. The 1.8-liter Atkinson-cycle, 4-cylinder engine, used in all current Prius liftback models, achieves a groundbreaking 40%-plus thermal efficiency compared to about 25-30% for most modern automobile engines.

Myriad details throughout the hybrid powertrain contribute to its efficiency, starting with a very high compression ratio of 13.0:1. Yet, like all Prius models, the Prius Prime runs on regular-grade gasoline. Other efficiency team players here include an exhaust gas recirculation (EGR) system with a cooler, a smaller, lighter, quieter hybrid system water pump and an exhaust heat recirculation system that helps speed engine warm-up.

The Prius Prime's combined net output is 121 horsepower, and the effect of the electric motors and the planetary-type continuously variable transmission give the Prius Prime a spunky, responsive attitude. On the highway, in EV mode, the Prius Prime cruises in silence. It remains a quiet cruiser in all drive modes thanks to the sound-insulating laminated windshield and front door glass, comprehensive sound insulation measures and the optimized aero shape that all help to subdue wind noise.

Smarter Climate Control

The Prius Prime ensures cabin comfort no matter the weather, with tech that simultaneously minimizes energy usage. Heated front seats are standard in all three model grades, and the automatic climate control system employs a very quiet electric compressor.

Toyota calls the climate control system "smart-flow," because it focuses airflow only to areas where occupants are seated in order to help maximize fuel economy and comfort. The climate control system can also operate without the engine running, with a heat pump that allows the system to cool or heat the cabin while driving in EV mode.

The Prius Prime goes above and beyond to ensure both a comfortable cabin temperature and optimal EV performance in cold weather. The heat pump can function without the engine running in weather down to 14 degrees F, where a conventional heat pump system could only function with the temperature above 32 F. The cabin gets heat quickly even with a cold powertrain.

Also, on cold days, a battery warmer activates at the end of a charge to keep the battery temperature above 32 degrees F, helping to ensure that it can deliver optimal EV performance and range when the vehicle is started again. On the top-line Prius Prime Limited, the driver can activate the remote air conditioning system with a key fob or smartphone app to cool the interior before entering the cabin.

High Grades for Comfort and Convenience

The centrally mounted gauge panel, a Prius design hallmark since the model's inception, appears to float above the dashboard. The panel features dual 4.2-inch full-color multi-information displays, and the driver can change their content by using steering wheel controls. Customizable screens include Energy Monitor, Hybrid System and Climate Control Indicator, along with a suite of "Eco" features: Eco Score, Eco Savings Record, Drive Monitor and Eco Diary. Other screens provide displays for driver support systems, audio system content and navigation system content.

The Prius Prime is offered in LE, XLE and Limited grades, each with successively more amenities and technology. Prius Prime LE starts with a long roster of standard features including fabric-trimmed heated front seats with armrests and seatback pockets, power windows with auto up/down, smart-flow climate control system with pollen filtration, integrated navigation and backup camera, dual sun visors with illuminated vanity mirrors and heated power outside mirrors.

The standard SofTex®-trimmed tilt/telescopic steering wheel integrates controls for audio, climate, the Multi-Information Display and Bluetooth® hands-free phone. Additional user tech includes the Smart Key System (on driver side) with Push Button Start. To power devices, there's a 12v auxiliary power outlet up front, and another in the rear, plus one front USB power outlet.

Stepping up to the Prius Prime XLE nets more technology, comfort and convenience. Toyota Audio uses the huge 11.6-inch vertical HD multimedia display. The Smart Key System with Push Button Start is expanded to three doors and includes remote illuminated entry. The Prius Prime XLE comes with wireless cell phone charging for Qi-compatible devices using the console charging pad.

Comfort is enhanced by SofTex®-trimmed heated front seats with armrests and seatback pockets, and the XLE driver gets an 8-way power adjustable seat with power lumbar support.

Prime Luxury

The Prius Prime Limited is simply the best equipped, highest-tech Prius ever, with features including a heated steering wheel, remote climate control system, rain-sensing variable intermittent windshield wipers and auto-dimming rearview mirror with HomeLink® universal transceiver.

LED fog lights help bolster visibility, while a color head-up display (HUD) helps the driver keep focused on the road by projecting vital information onto the lower portion of the windshield. HUD displays include speedometer, hybrid battery charge, hybrid system indicator navigation and some of the various systems within the TSS 2.0 driver-assist system.

The Limited grade's safety tech roster is augmented with Blind Spot Monitor with Rear Cross-Traffic Alert and a complimentary three-year trials subscription to Safety Connect®, which includes Emergency Assistance, Stolen Vehicle Locator and Automatic Collision Notification.

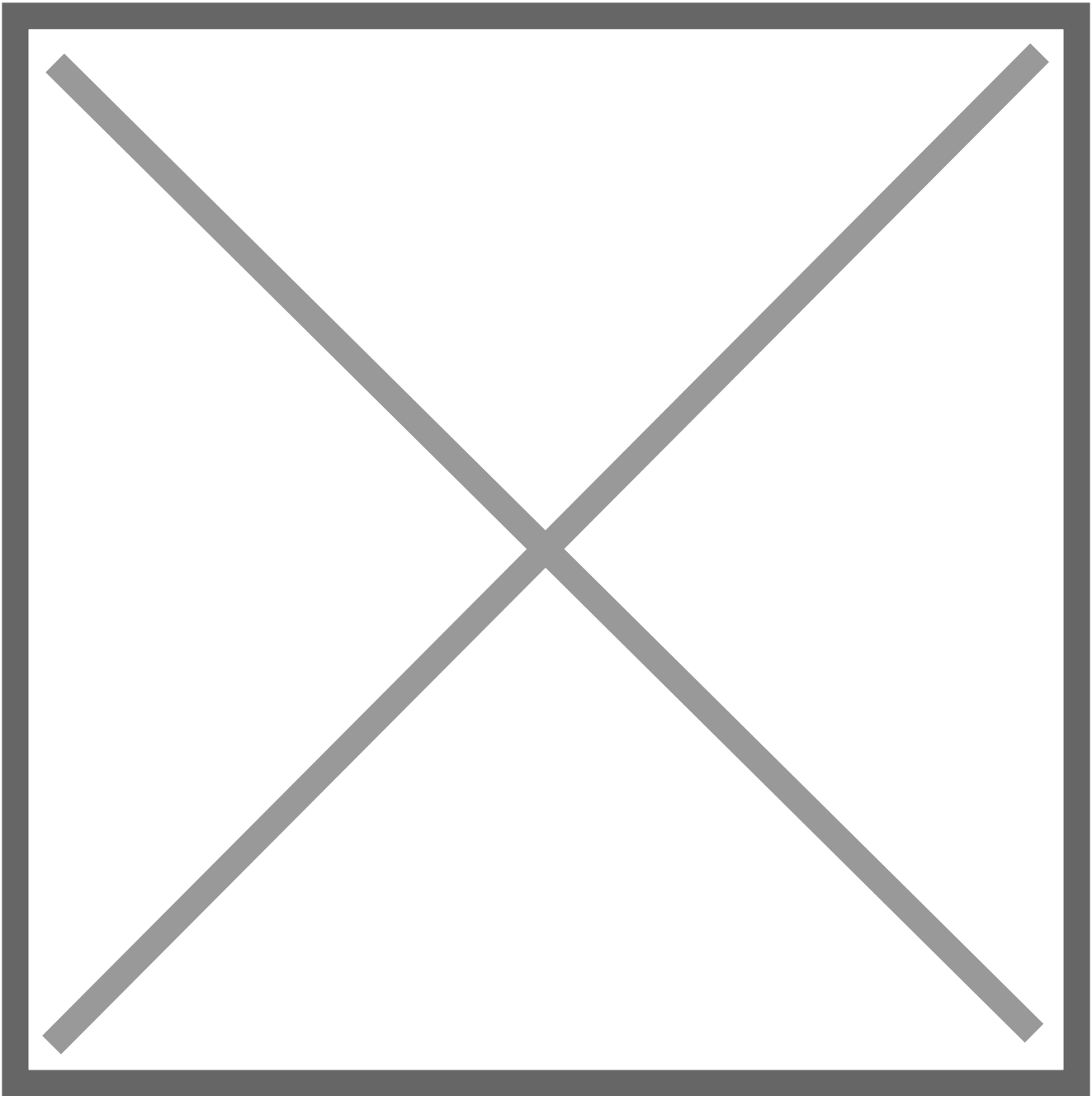
The Prius Prime Limited's standard Intelligent Clearance Sonar (ICS) with Intelligent Parking Assist (IPA) uses ultrasonic wave sensors to size up a parallel parking space and then, when activated by the driver, can steer the car into it. The system can also reverse the vehicle into a perpendicular space and automatically steer it out of a parallel space. If you drive into a tight spot, such as a narrow alley or driveway, Intelligent Clearance Sonar provides visible and audible warnings when the car gets too close to obstacles on the sides.

Prime Multimedia Experience

Sound, vision, and information in the Prius Prime likewise meet the standard of the car's name. The Prius Prime LE comes standard with the comprehensive Toyota Premium Audio with Integrated Navigation system and standard Apple CarPlay®, Android Auto and Amazon Alexa compatibility as well as a SiriusXM® All-Access three-month trial.

This easy-to-use multimedia system brings a world of music and information through a 7.0-inch high-resolution touch-screen with split-screen capability and includes Integrated Navigation System, AM/FM, six speakers, auxiliary audio jack, USB 2.0 port with iPod® connectivity and control, two additional USB 2.1A ports for the rear passengers, advanced voice recognition, hands-free phone capability, phone book access and music streaming via Bluetooth® wireless technology, plus Siri® Eyes Free mode and an integrated backup camera display.

The Multimedia Bundle adds AM/FM cache radio (letting you pause songs and play later), HD Radio, HD Radio Traffic, HD Radio Weather, the SiriusXM All Access Radio trial and Gracenote album cover art. The Prius Prime XLE puts that multimedia smorgasbord on a bright 11.6-in. high-resolution multimedia display that makes navigation graphics and album cover art really pop. Tablet-like operation for this vertically oriented screen, including pinch and zoom functionality, will be immediately familiar to most drivers and passengers. Capacitive touch switches flank the screen on both sides, providing easy access to major functions.



Prime Soundstage

To all of the above, the Prius Prime Limited adds JBL® Audio with Prime Apps. The system includes 10 JBL® GreenEdge™ speakers plus Prime Apps for smartphones with 3-year complimentary trial. Prime Apps include Remote Charge Management, Charging Station Map, ECO Dashboard, Remote Climate and Vehicle Finder.

With those, the Prius Prime owner can remotely manage the vehicle's charging schedule and status, locate charging stations, track and compare eco driving scores with others on social media, remotely control the vehicle's climate system and more – all from a smartphone. (Access to Prius Prime Apps requires an active Safety Connect subscription after the 3-year complimentary trial.)

Safety Maven

Prius Prime models come equipped with 10 supplemental restraint system airbags, including driver and front passenger Advanced Airbag System, driver and front-passenger seat mounted side airbags, front and rear side curtain airbags, a driver knee airbag, a front passenger seat cushion airbag and two rear side airbags.

For 2022, the Prius Prime features Toyota Safety Sense 2.0. This advanced suite of driver-assist technologies is highlighted by automatic emergency braking and includes:

- Pre-Collision System with Pedestrian and Bicyclist Detection
- Full-Speed Range Dynamic Radar Cruise Control
- Lane Departure Alert with Steering Assist
- Automatic High Beam
- Lane Tracing Assist
- Road Sign Assist

In addition to TSS 2.0, the 2022 Prius Prime is equipped with Toyota's Star Safety System, which includes Enhanced Vehicle Stability Control (VSC), Traction Control (TRAC), Electronic Brake-force Distribution (EBD), Brake Assist (BA), Anti-lock Braking System (ABS) and Smart Stop Technology (SST).

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 battery is covered for 10 years from date of first use or 150,000 miles, whichever comes first. The coverage is transferable to subsequent owners, a boon to resale value.

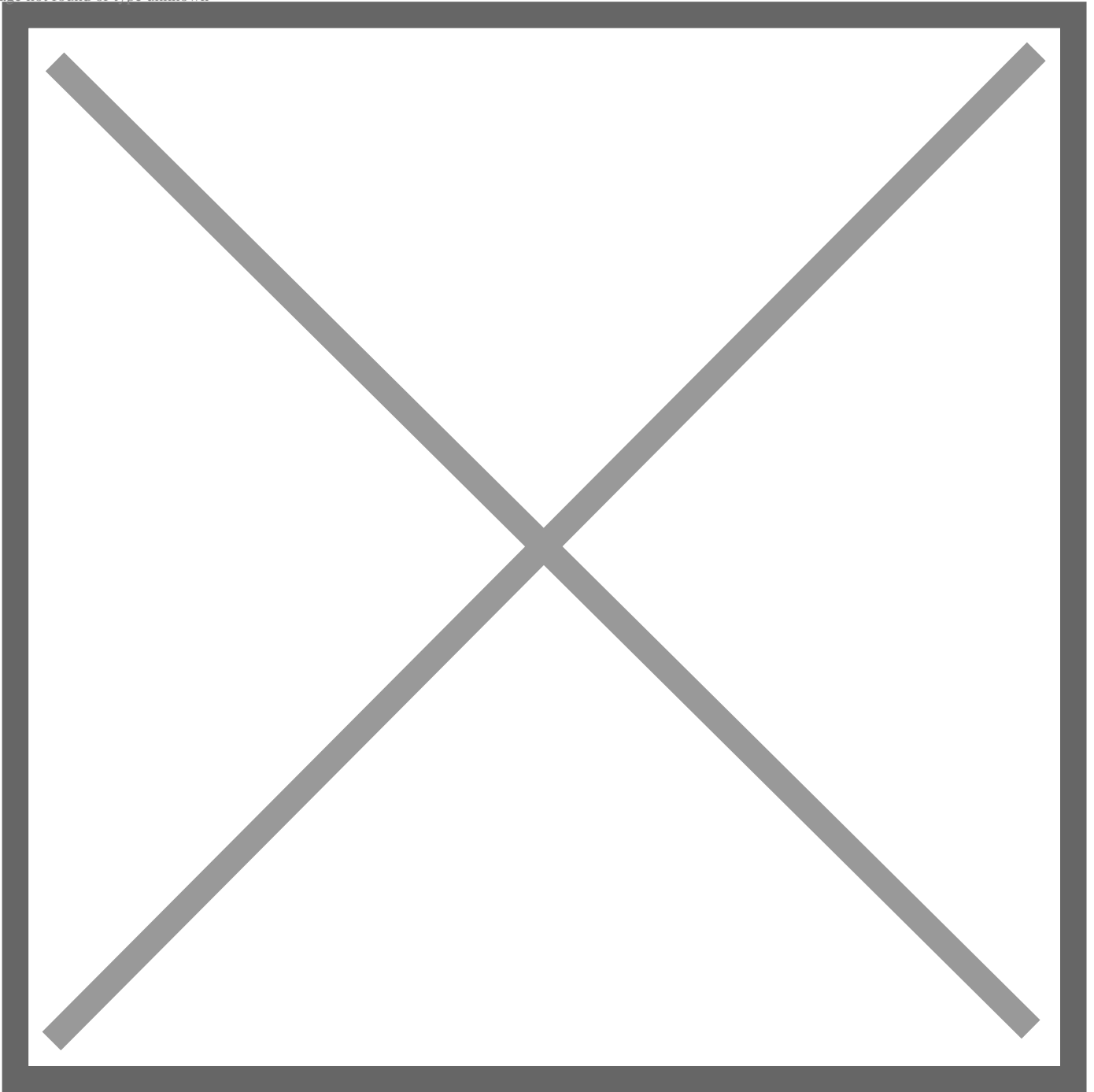
The hybrid components retain coverage of 8 years/100,000 miles, whichever comes first. In applicable states hybrid-related component coverage is 15 years/150,000 miles with the exception of the hybrid battery, which is covered for 10 years/150,000 miles.

The Prius Prime also comes standard with Toyota Care, a complimentary plan covering normal factory-scheduled maintenance for two years or 25,000 miles, whichever comes first. Prius models include three years of 24-hour roadside assistance from date of purchase.

2022 Prius Prime Pricing*

Prius Prime offers fun EV and Hybrid driving, ready for a commute, silently conquering the school pickup line, or a weekend adventure on the road. With three grades available, the 2022 Prius is just the right mix of EV and hybrid for everyone.

Image not found or type unknown



* MSRP excludes delivery, processing and handling fee of \$1,025 (subject to change). Excludes taxes, title, license and optional equipment. Dealer price may vary.