New Toyota Highlander Turbocharged Engine Offers More Torque and Fewer Emissions

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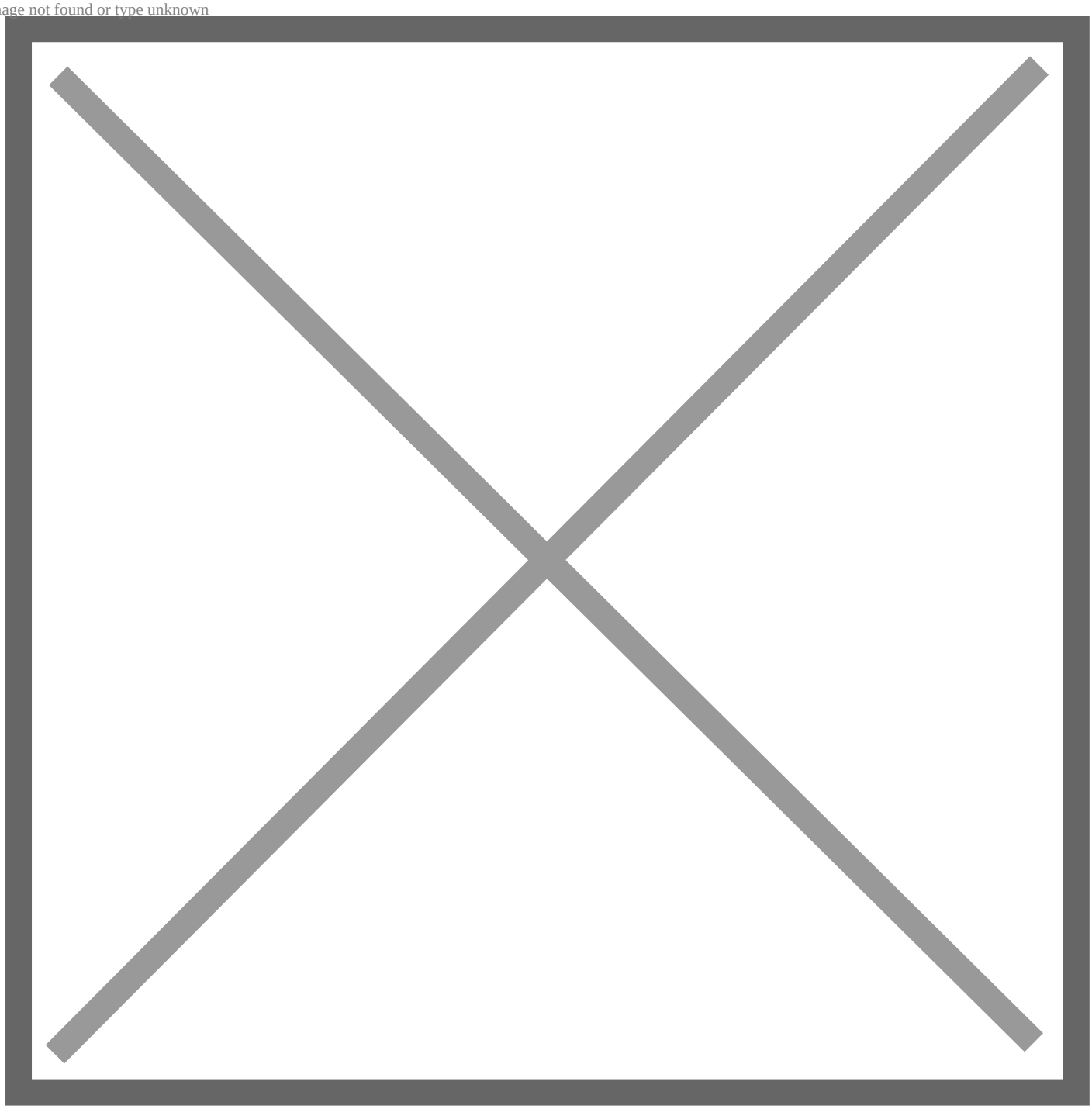

PLANO, Texas (Oct. 6, 2022) – For the 2023 model year, Toyota is giving buyers even more reasons to choose the Highlander for their next vehicle, starting with an all-new engine for the gas models that offers impressive performance in a compact package.

2023 Highlander gas models are now equipped with a new, higher-torque, high-efficiency turbocharged engine. The 265-horsepower, 2.4-liter turbocharged four-cylinder, which uses balance shafts for super-smooth performance, delivers 310 lb-ft of torque – this results in a significant 17% increase over the previous 3.5-liter V6 engine's 263 lb-ft. Even better, the driver will feel this gain in everyday driving situations, especially when taking advantage of the Highlander's 7- or 8-person seating and generous cargo capacity. Just as important, fuel efficiency is also improved for this higher-torque engine with an EPA-estimate of up to 25 MPG combined. The new engine, standard across all gas grades, is also more environmentally conscious, with more than a 50% reduction in NOx and NMOG compared to the outgoing V6 engine.

The new Highlander turbo models are equipped to tow up to 5,000-pounds and include Trailer Sway Control (TSC), which uses the Vehicle Stability Control (VSC) to help control unwanted trailer movement. To help reduce fuel consumption and emissions, the standard Stop and Start Engine System allows the engine to shut off when the vehicle comes to a complete stop and instantly restarts when the driver's foot lifts from the brake pedal.

Arriving at dealerships nationwide this month, the 2023 Highlander with the new turbo engine will have a starting MSRP of $36,420 and the 2023 Highlander Hybrid will have a starting MSRP of $40,220.

Available All-Wheel Drive

The 2023 Highlander turbo models get a grip on just about any road with a choice of FWD or two different available AWD systems. For the Highlander Gas L, LE and XLE models, the optional AWD system can send up to 50% of available torque to the rear wheels to help counter wheel slip when necessary.

The Highlander XSE, Limited and Platinum turbo models step up to a more performance-minded system, Dynamic Torque Vectoring AWD with Drive Mode Select and Driveline Disconnect. In addition to governing torque distribution between the front and rear wheels, this advanced system uses special couplings to actively manage torque distribution between the left and right rear wheels.

For even more control for the gas all-wheel drive iteration, Downhill Assist Control (DAC) is also available. When AWD is not needed, such as in steady highway cruising, rear Driveline Disconnect automatically disengages drive to the rear wheels and stops the propeller shaft's rotation, helping to reduce fuel consumption. The system seamlessly re-engages when AWD is needed to handle road conditions.

Dynamic Torque Vectoring AWD doesn't simply react to wheel slippage. Rather, a sophisticated AWD Integrated Management (AIM) system manages Electric Power Steering (EPS), throttle control, transmission shift control and drive torque distribution to continually help optimize handling.

Using the Multi-Terrain Select control dial on the console, the driver can maximize traction for prevailing conditions. Mud & Sand mode works well for beach driving, while Rock & Dirt mode optimizes AWD traction for trails. The driver can monitor, in real time, torque allocation and slip control on the Multi-Information Display (MID).

2023 Highlander and Highlander Hybrid Updates

Updates for Highlander go beyond the new engine and offer larger multimedia screens and other amenities for greater value across all grades and powertrains. Buyers want larger, more versatile multimedia screens, and the Highlander delivers. In addition to the JBL® Premium Audio System with 11 speakers as carryover from 2022, the Limited and Platinum grades now have two 12.3-inch screens as standard; one Multi-Information Display

(MID) screen and one multimedia screen. Just as important to users, content can now occupy the full 12.3-inch, glare-reducing optically bonded screen. On both grades, a second new 12.3" Full Digital Instrument Cluster screen replaces the former 7-inch TFT, with four different visual modes for a personalized touch: Casual, Smart, Tough and Sporty mode. So now, these premium Highlander grades provide the most screen area than previous generation Highlander models.

The 12.3-inch audio multimedia touchscreen will also be optional for the XLE and sporty XSE grades, which have an 8-inch screen as standard. These two grades continue to use the 7-inch MID gauge cluster screen. On the L and LE grades, this same 7-inch MID replaces the 4.2-inch MID for enhanced usability. The 12.3-inch audio multimedia touchscreen is also now standard for the Hybrid Bronze Edition.

For added convenience and value, the Limited and Platinum grades (both gas and hybrid) now come standard with power folding exterior mirrors for 2023, a real help for entering and exiting the home. And, inside the 2023 Highlander, the available wireless charging feature just got better for front-seat passengers. In an effort to be more accessible, Toyota moved the Qi-compatible wireless charger from the center console box to a more convenient location in the center dashboard shelf below the audio multimedia touchscreen..

As icing on the proverbial cake, the 2023 Highlander adds an elegant new Cypress green exterior color.

Remarkably Hybrid

The Highlander Hybrid, with its remarkable 36 combined MPG EPA-estimated rating, accounts for more than a quarter of Highlander sales in the U.S., a testament to its innovation, quality and value.

The 2023 Highlander Hybrid, offered in both FWD and AWD, combines a high-efficiency 2.5-liter DOHC four-cylinder engine with two electric motor-generators. The gas engine employs Variable Valve Timing-intelligent system by Electric motor (VVT-iE) on the intake camshaft, and VVT-i on the exhaust camshaft. A variable cooling system (electric water pump, electric thermostat) and a fully variable oil pump help to further enhance engine efficiency.

The gas engine and Motor Generator 2 (MG2) work in concert to deliver dynamic performance, while both MG1 and MG2 charge the hybrid battery. The bottom line is an eye opener for the efficiency-minded: 243 total system horsepower, EPA-estimated 36 combined MPG and a towing capacity of up to 3,500 pounds for all grades. The Highlander Hybrid's battery pack was developed with convenience in mind and is installed under the second-row seats, so it does not take away any cargo or passenger space.

The unique AWD system for Highlander Hybrid employs a separate rear-mounted electric motor to power the rear wheels when needed. Like the hybrid powertrain itself, the AWD system is designed to work seamlessly.

In addition, all Highlander models, in addition to hybrid, include Hill Start Assist Control (HAC) and Trailer Sway Control (TSC) for optimal on-road and off-road performance and safety.

Like all Toyota hybrid vehicles, the Highlander Hybrid simply goes about its business. For example, the system optimizes the level of electric motor assistance and gas engine speed without the engine running at high revs. Engine speed is synchronized with vehicle speed, yielding effortless and quiet acceleration.

The Highlander Hybrid offers selectable NORMAL, ECO and SPORT driving modes that let the driver choose the vehicle's performance personality. ECO mode extracts maximum efficiency from the fuel and battery, while NORMAL mode is ideal for everyday driving. SPORT mode quickens the throttle response from the hybrid system for improved acceleration control. A bonus is the EV mode, which allows electric-only driving at low speeds for short distances.

Regenerative braking captures the energy of the turning wheels as the vehicle slows, sending it to the hybrid battery. To foster greater control when driving in hilly areas, the driver can manually control regenerative braking in steps, similar to the engine braking effect of downshifting a manual transmission.

Highlander Hybrid's Predictive Efficient Drive (PED) analyzes the driver's daily driving habits and upcoming road and traffic conditions to optimize battery usage and charging. The more the vehicle is driven, the more data is accumulated, thereby helping to support fuel efficient driving patterns.

Versatility Abounds Inside

Highlander L and LE grades come standard with second-row bench for seating for eight, while the XLE and Limited grades go with a standard Captain's Chair second row for seven-seat capability. Buyers can choose a second-row bench for the XLE Gas, XLE Hybrid and Limited Gas grades.

The Hybrid Bronze Edition, XSE, Limited Hybrid and Platinum grades come standard with seven-passenger seating with second-row Captain's Chairs. Large rear doors provide easy access, while versatile seat folding features allow passengers to easily access the third row. Standard three-zone climate control ensures ample flow of warmed or cooled air to all aboard.

There's plenty of space for carrying stuff, too. With all seat rows in use, Highlander offers 16.0 cu. ft. of space behind the third row. Folding the 60/40 split fold-flat third-row seatbacks expands the space to 48.4 cu. ft., and then folding the second row raises that to 84.3 cu. ft. The versatile cargo area makes the most of the additional length with side surfaces and pockets shaped for maximum space utilization.

Classic Comfort Across All Grades

The 2023 Highlander offers plush accommodations across all grades. Taking inspiration from luxury-crafted interiors to create a premium ambience, details include soft-padded surfaces and a tailored look with stitching that extends from the door trim to the instrument panel. Inset steering wheel controls are a modern luxury touch on all grades.

Highlanders have long been renowned for a quiet ride, and, with the high-strength TNGA platform, Toyota raised the bar even higher. Sound-dampening and soundproofing materials are optimized throughout the vehicle with the takumi approach, focusing particularly on minimizing noise in the frequencies that interfere with conversation. As an example, Limited and Platinum grades have acoustic glass on the front side windows to further isolate the driver from outside noise.

Highlander L and LE grades offer comfortable woven cloth seat surfaces in Graphite or Black; the XLE offers SofTex® trim in Harvest Beige, Graphite or Black, while the Limited offers those colors in perforated leather trim. XSE grade sticks to its sporty nature thanks to black SofTex®-trimmed seats with fabric inserts or a striking red and black leather option; while the Bronze Edition for Highlander Hybrid keeps it classy with mid-century modern-inspired SofTex-trimmed seats with fabric inserts and bronze-colored stitching. The Platinum grade, the most luxurious Highlander, exclusively features embossed, perforated leather-trim in those three colors (Harvest Beige, Graphite and Black) plus a luxuriously delicious brown called Glazed Caramel. On XSE, Hybrid Bronze Edition, Limited and Platinum grades, standard ambient LED cabin lighting sets a relaxing mood.

Multifaceted Multimedia

The Highlander comes standard with an 8-inch, and available 12.3-inch, Toyota Audio Multimedia system designed and engineered by Toyota's Texas-based Connected Technologies team. Highlander drivers will be at the ready thanks to a wide range of enhanced connectivity and convenience features, including being Over-the-Air (OTA) updatable. Users can interact with the system through intuitive touch and voice activation controls. With the available Connected Service Drive Connect, drivers and passengers have access to Intelligent Assistant, Cloud Navigation and Destination Assist. With Intelligent Assistant, simple phrases like "Hey Toyota" awaken

the system for voice activated commands to search for directions, find Points of Interest (POI), adjust audio controls, change the cabin temperatures and more. Cloud Navigation, the available onboard navigation solution, utilizes the cloud to download the latest available map, traffic and routing information. To ensure users have the most up-to-date search capabilities, POI search is provided by Google Points-of-Interest data. Destination Assist also gives access to 24/7 live agent assistance to locate the next destination.

The new Toyota Audio Multimedia allows for dual Bluetooth® phone connectivity, with support for standard wireless Apple CarPlay® and Android Auto™ compatibility. With further connectivity, the Highlander has an available Wi-Fi Connect subscription that offers 4G connectivity for up to five devices – turning the Highlander into an AT&T Hotspot. Adding to the already robust offering of audio playback ability with HD Radio®, USB data and a SiriusXM® Platinum Plan 3-month trial subscription, Wi-Fi Connect also enables the new Integrated Streaming feature, providing customers the ability to link their separate Apple Music® and Amazon Music subscriptions to the vehicle for onboard control.

For those looking for an enhanced audio experience, the Highlander offers a JBL® Premium Audio system boasting 1,200 watts of power playing through 11 speakers in nine locations creating a mobile concert from any music genre. With the use of Clari-Fi® technology, the system is also able to breathe life into compressed digital music formats enhancing the audio experience. This system is available on XSE grades, while the Limited and Platinum grades include it as standard.

Each Highlander offers a host of additional available Connected Services. Safety Connect includes an Emergency Assistance Button (SOS), 24/7 Enhanced Roadside Assistance, Automatic Collision Notification, Stolen Vehicle Locator and Collision Assistance with up to a 10-year trial. Service Connect gives drivers the capability to receive Vehicle Health Reports, Maintenance Alerts and reminders, also with up to a 10-year trial.

With the Toyota app, users can stay connected to their Highlander with a 1-year trial of Remote Connect service, available on LE grades and above. Users can activate headlights, lock/unlock the doors and remote start the vehicle. Users can also check vehicle status, receive reminder notifications and set Guest Driver Alerts.

Being ready to handle all your device charging needs, the Highlander is equipped with five USB ports in the cabin. Up front, two Type-C USB ports plus one Type-A port are located at the bottom of the center stack. For second-row passengers, two Type-C USB ports are located at the bottom rear of the center console.

Convenience features are aplenty for Highlander, too. Blind Spot Monitor (BSM) with Rear Cross Traffic Alert (RCTA) is standard on the LE grade and above. Front and Rear Parking Assist with Automatic Braking is available on Limited and Platinum. A Panoramic View Monitor with Perimeter Scan is available on Limited and standard on Platinum and provides a live rotating 360-degree view around the vehicle.

Head-Turning Style: Hybrid Bronze Edition and XSE

Those looking for revved up style in the super-practical and comfortable Highlander will find it in two compelling choices for 2023, one each for hybrid and one for gas. The Highlander Hybrid Bronze Edition launched last year, making a striking design statement. Available in Cement (exclusive to Bronze Edition), Wind Chill Pearl or Midnight Black Metallic exterior colors, the Bronze Edition features bronze-colored accents, starting with 18-inch bronze wheels.

Mid-century modern-inspired SofTex®-trimmed seats with fabric inserts and bronze-colored stitching seem like something from a concept car, an effect amplified by the Captain's Chair's layout. Illuminated bronze-colored door sills and unique floor and cargo mats embroidered with a special bronze-stitched logo complete the designer look. Tech features only enhance the Bronze Edition – thanks to two interior 120V/up to 1,500-watt outlets, a hands-free power liftgate and rain sensing wipers, to name a few.

On the gas side, the Highlander XSE is available with either front-wheel drive or Dynamic Torque Vectoring All-Wheel Drive. The XSE for 2023 will now roll on exclusive all-black 20-inch wheels, wrapped in 235/55R20 all-season tires. A specially tuned suspension with high-rate springs and rear stabilizer bar and low-friction shock absorbers works in concert with tuned electric power steering to give the XSE a distinctly sporty feel.

XSE-exclusive styling applies to the front fascia, grille, lower spoiler and headlamps. Unique rocker panels add an edgy accent to the Highlander XSE's sculpted lines. Black roof rails, mirror caps and window moldings dial up the subtle cool factor, finished off by a twin exhaust tip.

Inside, the Highlander XSE rocks black SofTex®-trimmed seats with fabric inserts, while ambient lighting and carbon-fiber style finish on the instrument panel sets the sportier mood. A striking two-tone red and black leather-trimmed interior with red-stitched instrument panel is available at no additional cost.

Safety Leader, Too

Highlander is a repeat IIHS TOP SAFETY PICK+ recipient. This is the organization's highest rating, and one that acknowledges the standard Toyota Safety Sense 2.5+ system that includes:

- Pre-Collision System with Pedestrian Detection (PCS w/ PD)
- Full-Speed Range Dynamic Radar Cruise Control (DRCC)
- Lane Departure Alert with Steering Assist (LDA w/ SA)
- Lane Tracing Assist (LTA)
- Road Sign Assist (RSA)
- Automatic High Beams (AHB)

The 2023 Highlander is equipped with eight airbags, including side curtain airbags for all three rows. Toyota's Star Safety System includes 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).

Hybrid models employ Vehicle Dynamics Integrated Management (VDIM), which provides integrated control of the ABS, Brake Assist, TRAC, VSC, Hill-Start Assist control and electric power steering (EPS) systems. The system helps to maintain vehicle stability when swerving on slippery road surfaces by controlling the brakes, hybrid system output and steering assist.

2023 Highlander Pricing*

No matter the grade, every Highlander offers something to suit varying lifestyles, whether it's for a city exploration or a weekend trip to the countryside. With an array of trims to choose from for gas and hybrid models, the 2023 Highlander arrives at dealerships with an option for everyone.

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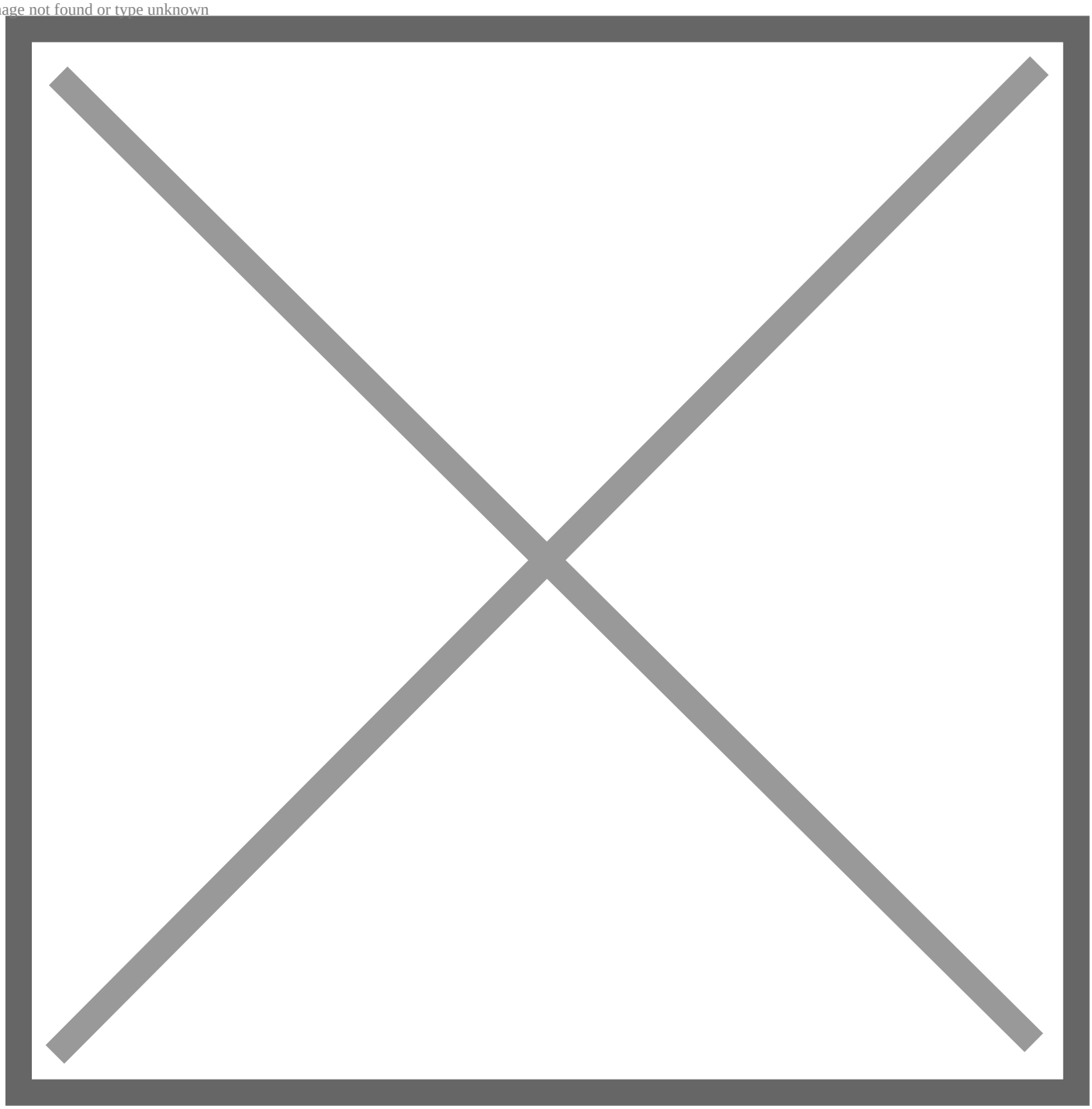

Toyota Limited Warranty

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 perforation from corrosion for 60 months with no mileage limitation. Hybrid-related components that require repairs needed to correct defects in materials or workmanship are covered for 8 years/100,000 miles, whichever comes first from original date of first use when sold as new. The hybrid battery is covered for 10 years/150,000 miles, whichever comes first, and is transferrable across ownership.

The 2023 Highlander also comes with ToyotaCare, a plan covering normal factory-scheduled maintenance, for

two years or 25,000 miles, whichever comes first, and 2 years of Roadside Assistance, unlimited mileage.

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