Toyota Mirai Adds Toyota Audio Multimedia for 2023

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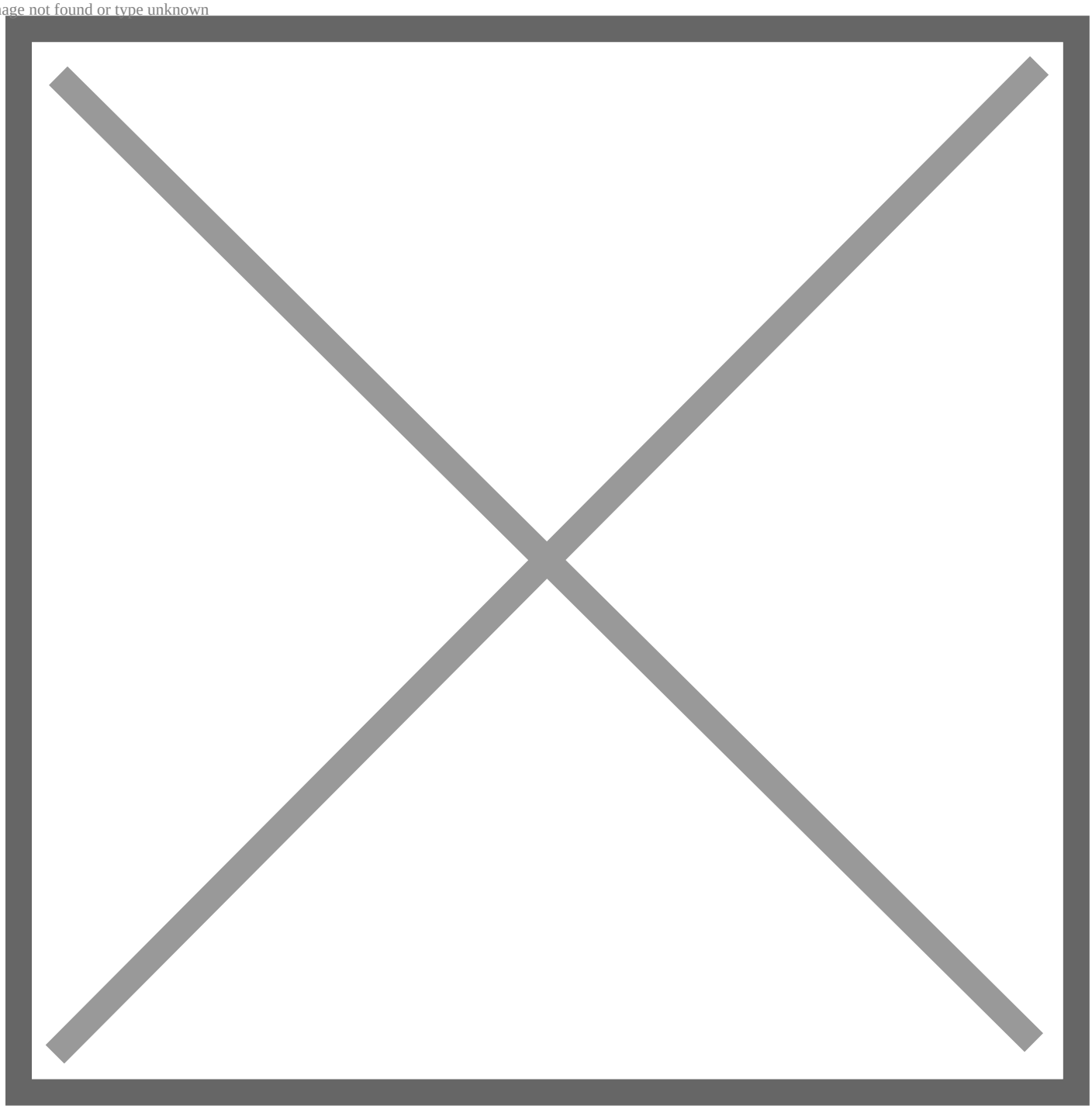


PLANO, Texas (March 23, 2023) – With an advanced powertrain, striking coupe-like design and a luxury interior that's loaded with technology, the 2023 Toyota Mirai brings the future to drivers today. Now in its second-generation, the Mirai brings a stunning design, dynamic driving performance and an EPA estimated zero emission range of 402 miles range on the Mirai XLE grade.

The 2023 Mirai Limited grade also brings the latest in advanced driver assistance technology with Toyota Teammate™, a suite of driver-assistance technologies that can be purchased as an upgrade designed to provide increased confidence for your drive. Toyota Teammate provides two functions: Advanced Drive and Advanced Park. It uses an intelligent system of cameras, radar and LiDAR, which work together in partnership to help achieve convenient and efficient mobility.

Advanced Drive can support drivers on certain limited-access highways by detecting driving conditions and executing acceleration, braking and steering commands under active supervision of the driver. Hands-free driving is also possible under certain conditions with eyes-on-the-road operation confirmed by the driver monitor system. Advanced Park assists the operations necessary for hands-free parking by automatically controlling steering, acceleration, braking and gear changes when parallel parking or backing into a parking space.

FCEV: Making Electricity from Hydrogen

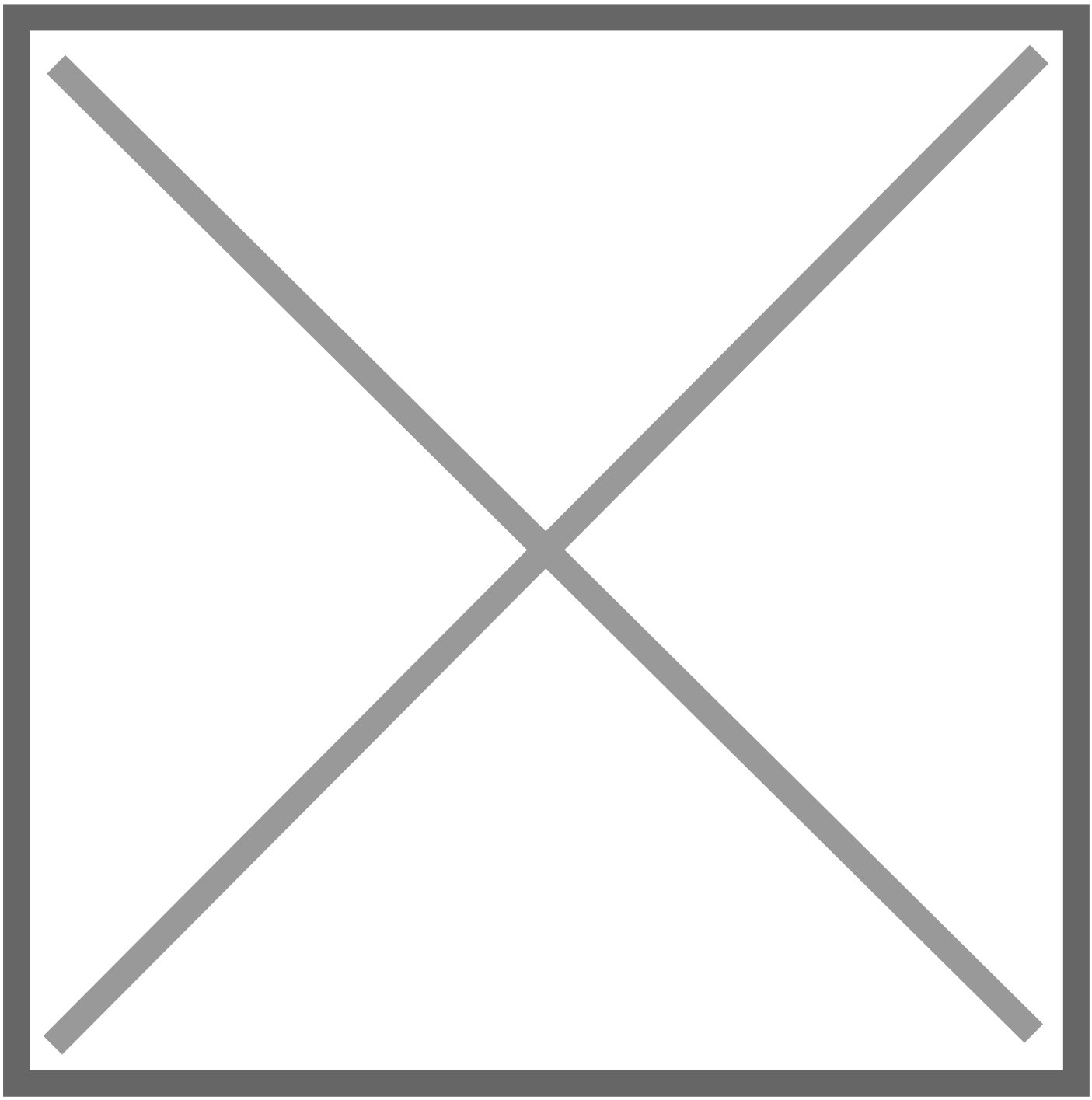
In essence, the Mirai is a "plug-less" electric vehicle. There's no need to charge a big battery, which can take several hours in a BEV even with fast charging. Instead, the FCEV driver simply fills the tank with hydrogen, just as millions of drivers do every day with gas vehicles. With an FCEV, the fuel is non-toxic, compressed hydrogen gas rather than liquid gasoline.

An FCEV generates its own electricity onboard from hydrogen, with water as the only emission. A fuel cell system combines stored hydrogen with oxygen from the air, and a chemical reaction that produces electric current, and water, which drops out of a hidden vent pipe beneath the car.

Electricity generated by the Mirai's fuel cell and the regenerative braking system is stored in a lithium-ion battery. Pressing the accelerator pedal yields immediate flow of electric power from the fuel cell and/or battery to the rear-mounted AC synchronous electric motor, which drives the rear wheels. An electric air compressor pressurizes the intake air, and a water-cooled intercooler reduces the temperature of the compressed air before it enters the fuel cell stack. A water-cooled oil cooler integrated with the air compressor helps maximize efficiency.

The intake system is designed to mitigate noise, which is virtually unnoticeable to occupants. By necessity, the intake air for the fuel cell must be purified. And so, an electrostatic air cleaner element captures ultra-fine particles (Particulate Matter 2.5), and a charcoal filter removes chemical substances.

All new Toyota Mirai will include up to $15,000 of complimentary hydrogen with a purchase or lease.



Fuel Cells: Back to the Future

Fuel cell technology pre-dates the automobile by half a century. In 1838, a Welsh physicist combined hydrogen and oxygen in the presence of an electrolyte and produced an electric current, though not enough to be useful. By the 1960s, the technology was being used in America's Gemini and Apollo spacecraft, where it provided crews with both electricity and water from stored hydrogen and oxygen.

Fuel cells had been studied for the automotive sector, but the technology only recently became practical and cost-effective. Toyota began its fuel cell development around the same time as the original Prius – nearly 25 years ago, and the Mirai shares technology from the company's hybrid program.

Toyota developed the solid-polymer electrolyte fuel cells used in the first- and second-generation Mirai models. To help foster FCEV proliferation, the company has released over 5,000 of its patents, royalty-free.

It is a scalable technology that can be made small enough to power a phone or large enough to power a building, or anything in between. For example, Toyota installed fuel cell powertrains in a fleet of class-8 semi-trucks that are rated for a maximum 80,000-pound load. These big rigs have been used for moving freight in and around the Ports of Los Angeles and Long Beach, California.

Hydrogen can be produced from a variety of domestic resources. The goal of the Hydrogen Council, for which Toyota is a founding member, is to use decarbonized hydrogen for transportation such as that produced from bio-resources or renewable electricity via electrolysis by 2030.

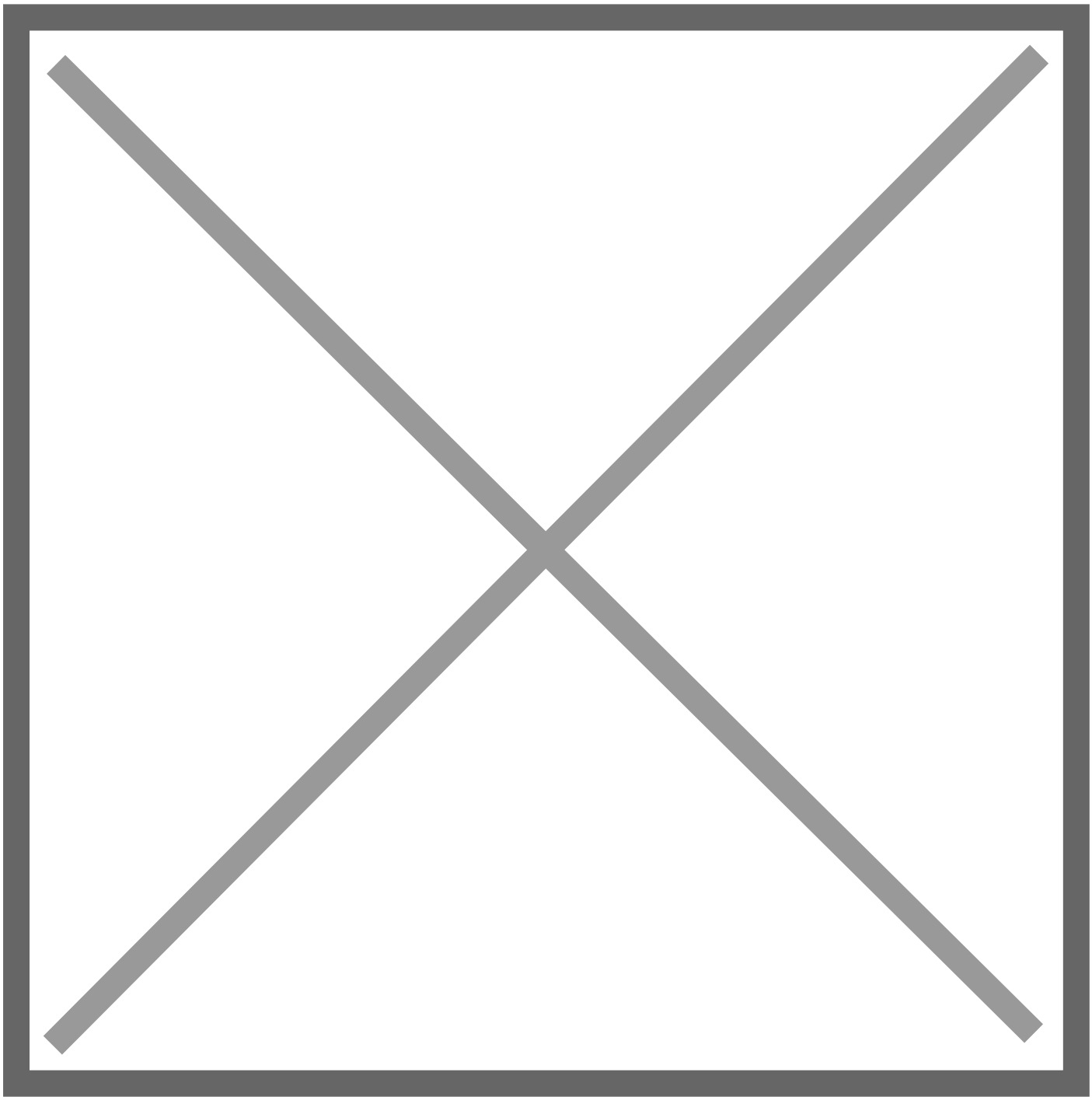
Luxury Car Chassis

The Mirai is built on the premium Rear-Wheel Drive (RWD) GA-L platform, creating a mid-size luxury-sport sedan. The RWD configuration helps support an engaging driving experience that also allows for an additional hydrogen fuel tank over the first generation car.

The high-strength GA-L platform with sophisticated multilink suspension provides the foundation for superb handling agility and an exceptionally smooth, quiet ride. Laser screw welding and adhesive structure bonding, proven on many other Toyota and Lexus models, are among the construction techniques used to give the Mirai a truly premium feel on the road.

Active Cornering Assist engages the stability control to reduce understeer in certain cornering situations. Hill Start Assist Control, standard for both grades, allows smooth, safe takeoffs from stops on hills.

Electric power steering delivers quick response, with a tight 38.6-ft. turning circle for easy maneuverability. Both the XLE and Limited grades are equipped with 19 x 8-inch alloy wheels and 235/55R19 all-season tires. The Limited offers optional 20 x 8.5-inch turbine-style Super Chrome alloy wheels with 245/45ZR20 tires.



Electrifying Design, Slippery Aero

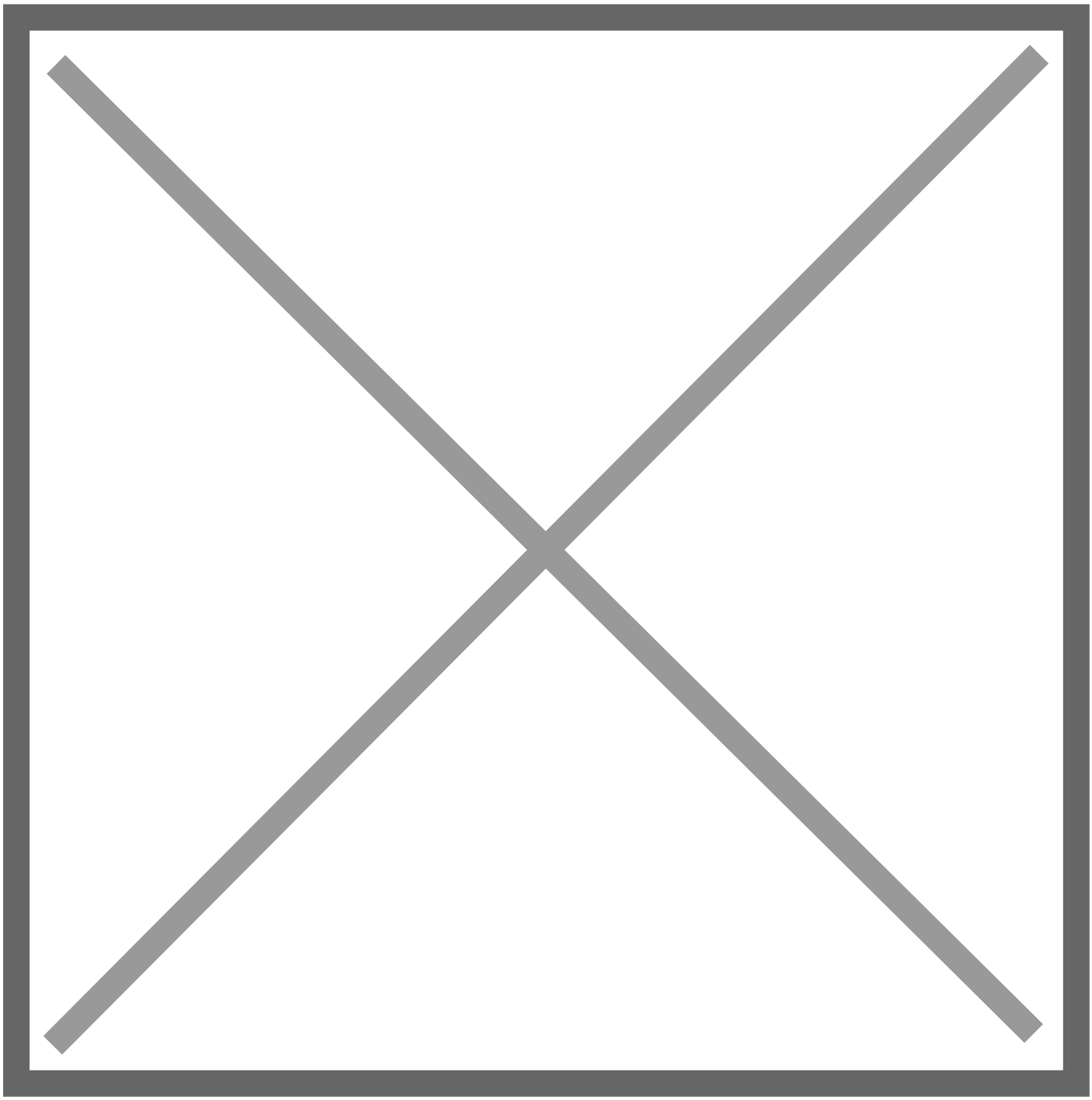
The second-generation Mirai design conveys a sense of motion with a long-hood, sweeping roofline and short rear deck rendered in a practical four-door sedan package. The overall effect is that of a single metal form sculpted into a bold shape. The five exterior colors offered help the Mirai make a dramatic statement: Black, Oxygen White, Supersonic Red, Heavy Metal, and Limited grade exclusive Hydro Blue.

Wheelbase, height, length and width were all increased over the first-generation, front-wheel drive Mirai. Weight increased by just 176 lbs., yet weight distribution improved to near 50:50, and the center of gravity is lower to significantly enhance handling agility.

The second-generation Mirai introduced a new lighting signature for a Toyota sedan, with long, narrow headlights that sweep rearward into the fenders. Available in XLE and Limited, all Mirai models are equipped with auto-leveling bi-beam LED headlights, multi-LED front and rear turn signal indicators, Daytime Running Lights (DRL) and clearance lights. The LED side marker lamps are etched with the Mirai logo.

A thin LED taillight panel spans the car's width, tapered in the center, and creates a unique nighttime signature with three distinct gradation lines. Color-keyed heated power-folding outside mirrors feature turn signal indicators, defrosters, blind spot warning and puddle lights.

The Mirai's 0.29 coefficient of drag is the result not only of the body's shape, but a slew of bumper-to-bumper aero details, such as windshield wipers that retract to a lower position when not in use. The wipers show the kind of detail Toyota infused to raise comfort and convenience to a higher level in the Mirai: They feature direct-spray washer fluid arms, and, when in use, operate more quietly thanks to slower speed at the reversing point.



Tech and Comfort: Above and Beyond

Both Mirai grades come equipped with a standard 8-inch driver's display and 12.3-inch multimedia display that put tech front and center for drivers and passengers alike.

The 12.3-inch display provides easy access for the driver or front passenger, and the multimedia, climate control and navigation content can be toggled from left and right. This display also relays imagery from the Panoramic View Monitor (standard on Limited and available for XLE), which provides an overhead 360-degree view in

drive and reverse.

Within the 8-inch gauge cluster, a 4.2-in. multi-information display includes an ECO drive indicator that helps the driver to maximize fuel efficiency by providing acceleration guidance and assigning a score on economical driving. Hydrogen fuel level and remaining range are always shown. For Limited grade drivers, a Color Head Up Display (HUD) with speedometer and navigation cines standard.

Powering devices also comes easy with a Qi-compatible smartphone wireless charging tray, one USB Media port, 3 USB Type C Charging ports, a 12V DC Socket in center console and, on the Limited grade, a 120V/1500W in luggage compartment.

The Mirai XLE grade features SoftTex- trimmed and heated, power-adjustable front seats (8-way for driver, 4-way for passenger). The Limited steps up to perforated SoftTex-trimmed heated and ventilated front and rear seats, including an 8-way power front passenger seat.

The Limited interior is available in dramatic two-tone color schemes: white and brown or black. LED ambient lighting includes eight driver-selectable colors and blue footwell illumination. The Limited grade's standard digital rear-view mirror with a HomeLink® transmitter in the Limited can be switched from conventional to digital modes. The latter relays an expansive camera view from behind the vehicle and can also brighten the nighttime image.

Exacting craftsmanship and high tech give the Mirai comfort that's above the ordinary. The headliner, for example, integrates an infrared reflective layer on the roof-facing surface to block that part of the light spectrum, helping reduce heat buildup inside the cabin. That also reduces electrical load on the air conditioning system. A layer of Thinsulate™ within the headliner also helps to block heat as well as provide additional sound damping. The side windows are UV-protected and water-repellent.

For rear seat passengers in the Limited, digital touch switches on the rear of the center console operate the audio and climate controls and the available panorama roof's power sunshade. The Limited features available manual sunshades for the side windows and a power shade for the rear window.

New Toyota Audio Multimedia

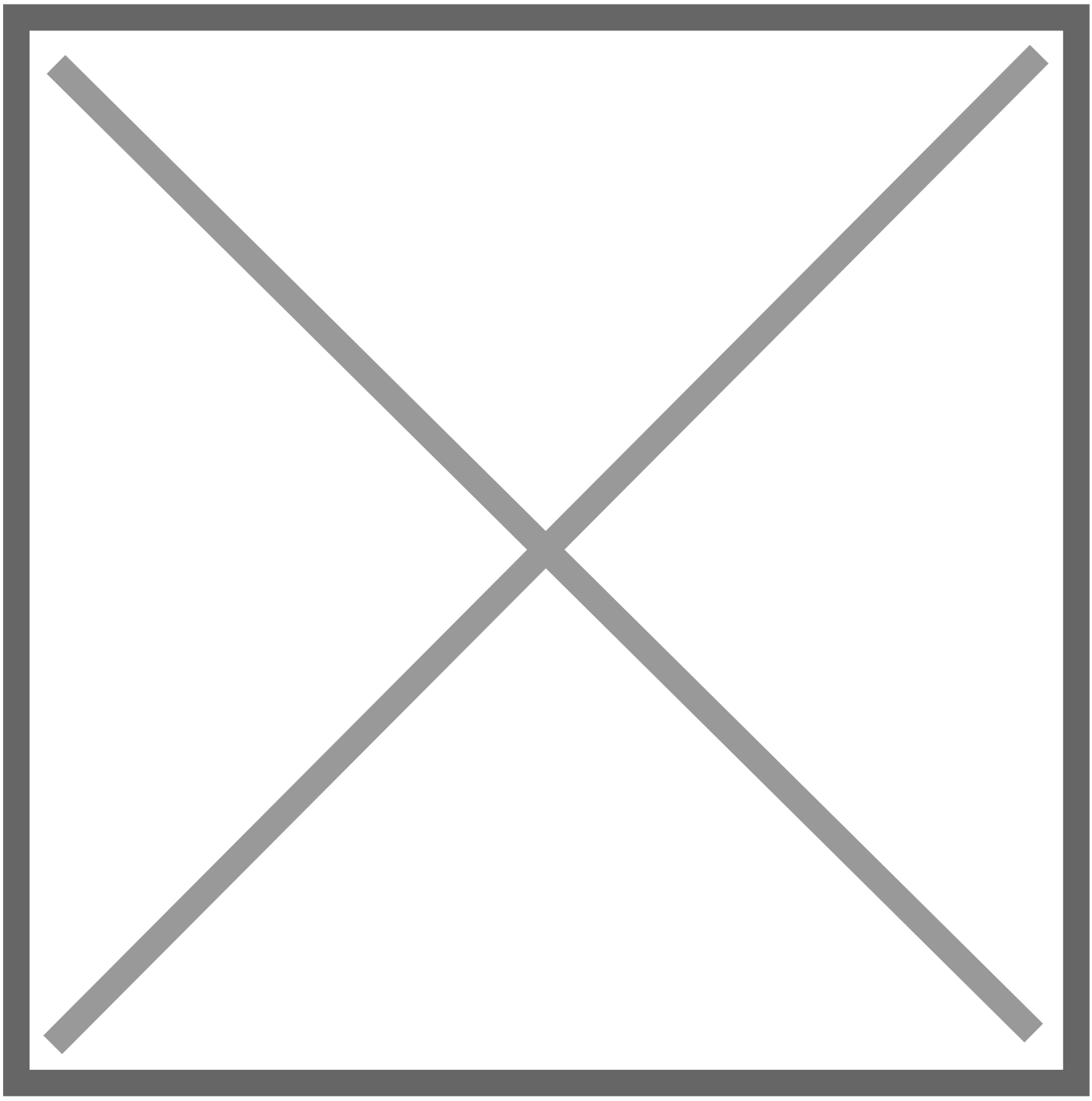
The 2023 Toyota Mirai is equipped with Toyota Audio Multimedia system designed and engineered by Toyota's Texas-based Connected Technologies team. Mirai drivers will also have the opportunity to access a wide range of enhanced connectivity and convenience features, including Over-the-Air (OTA) updates.

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 is also a feature of the new Toyota Audio Multimedia system. This 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.

Toyota Audio Multimedia also allows for dual Bluetooth® phone connectivity, with support for standard wireless Apple CarPlay® and Android Auto™ compatibility. With further connectivity, the Mirai has an available Wi-Fi Connect 1-month trial that offers 4G connectivity for up to five devices – turning the Mirai 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.



Connected Services & Owner Benefits

Each Mirai offers a host of additional available Connected Services. Safety Connect includes an Emergency Assistance Button (SOS), 24/7 Enhanced Roadside Assistance, Automatic Collision Notification and Stolen Vehicle Locator with up to a 10-year trial. Service Connect gives drivers the ability 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 Mirai with a 1-year trial of Remote Connect service, standard on XLE and Limited grades. Users can activate hazard lights on, lock/unlock the doors and remotely start the vehicle. Users can also check vehicle status, receive reminder notifications and set Guest Driver Alerts.

In addition to standard Toyota warranties benefits, all 23MY Mirai owners will receive the following:

- Extended ToyotaCare for three years or 35,000 miles (whichever comes first)
- Safety Connect Enhanced Roadside Assistance for up to 10 years, including expedited towing service and trip interruption reimbursement
- Dedicated Mirai 24/7 phone support for three years
- Complimentary hydrogen fuel of $15,000, or up to three years for new Mirai leases or up to six years for new Mirai purchases (whichever comes first)
- Eight-year/100,000-mile FCEV warranty on key fuel cell electric vehicle components
- Ten-year/150,000-mile hybrid battery warranty on key hybrid components
- Complimentary rental experience for up to 21 days during the first three years of ownership
- Eligible for HOV carpool sticker

Safety and Convenience

The robust Toyota Safety Sense™ 2.5+ (TSS 2.5+) system comes standard on all 2023 Mirai. This system includes:

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

Additional standard safety includes:

- 8 airbags
- Star Safety System™
- Blind Spot Monitor with Rear Cross Traffic Alert
- Tire Pressure Monitor System (TPMS)
- Tire repair kit
- Back-up camera

For Limited grade drivers Front and Rear Parking Assist with Braking come standard, both features are available with the Advanced Technology Package on the XLE grade. Intelligent Parking Assist (IPA) comes standard on the Limited grade.

Making the Grade

The Mirai XLE comes well equipped with standard SofTex-trimmed seating featuring heated, 8-way power driver and 4-way power passenger seats; dual-zone automatic climate control with remote feature; Smart Key

System remote keyless entry system with trunk-release, panic button and remote illuminated entry; auto-leveling LED headlamps; LED front interior reading lights; Toyota Audio Multimedia system with JBL and 14 JBL speakers and navigation; Qi wireless charger; power tilt/telescoping steering wheel; auto-dimming rearview mirror, and electronic parking brake.

As an option, the XLE offers the Advanced Technology Package that includes Panoramic View Monitor, Front and Rear Parking Assist with Automated Braking and Front Seat Foot Illumination.

The Mirai Limited grade makes those features standard, along with ventilated front seats, heated rear seating, three-zone automatic climate control (two-zone in front, one-zone in rear with separate digital control panel), ambient lighting and a panorama roof, which features fixed glass panels and a power sunshade, and Intelligent Parking Assist (IPA).

Mirai Pricing*

The 2023 XLE grade has a starting MSRP of $49,500. An Advanced Technology Package, which includes Bird's Eye View camera, front and rear Parking Assist with Automated Braking and front seat foot illumination, can be added to the XLE grade for $1,410.

The Limited grade has a starting MSRP of $66,000, with optional 20-inch Super Chrome Alloy wheels available for an additional $1,120. The Toyota Teammate option for Limited grade can be added for $5,170, on vehicles not equipped with the 20-in. Super Chrome Allow wheels.

Both the XLE and Limited grades have a Special Color price of $425 for Oxygen White, Heavy Metal, Supersonic Red and, exclusive to the Limited, Hydro Blue.

Each Mirai comes with up to $15,000 of complimentary hydrogen.

An extended ToyotaCare maintenance plan, good for three years or 35,000 miles, is included with the vehicle. Other owner benefits include roadside assistance for three years (unlimited miles), an eight-year/100,000-mile FCEV warranty on key fuel cell electric vehicle components, a complimentary rental experience for up to 21 days during the first three years of ownership and much more.

* MSRP excludes Toyota Dealer Processing and Handling (DPH) Fee of $1,025 (DPH subject to change).