Absolute Powerhouse: Next-Generation 2022 Toyota Tundra

September 19, 2021

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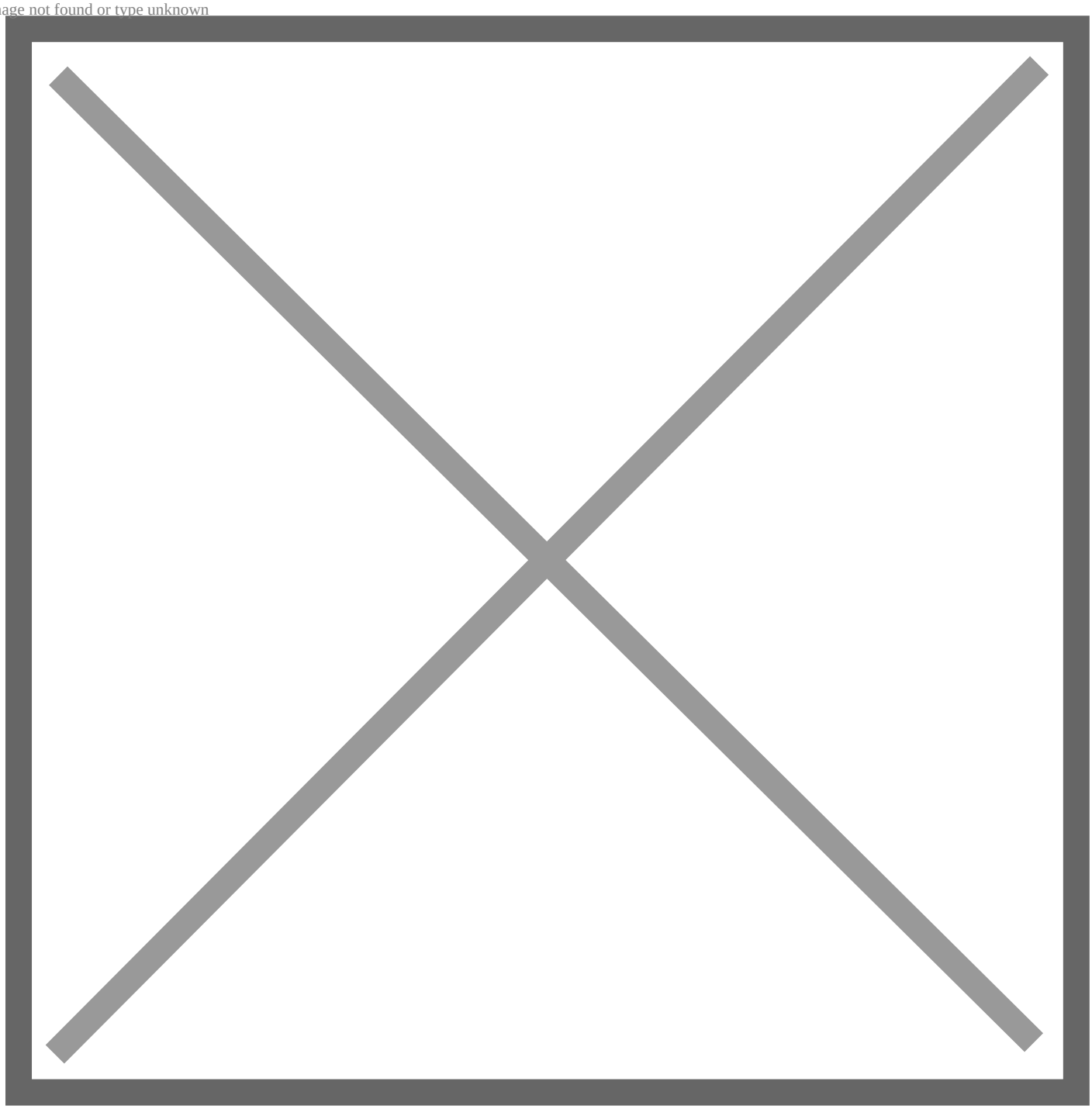


PLANO, Texas (September 19, 2021) – With a plethora of adventure-ready, go-anywhere, been-anywhere vehicles cementing its foundation, the all-new 2022 Toyota Tundra is born from a lineage of trucks and SUVs rooted in quality, durability and reliability. Its predecessors hit the million-mile mark on more than one occasion thanks to a team of engineers who built the truck above and beyond the status quo.

What does Tundra do for its next act?

It looks long and hard in the mirror and then gets to work. It resists the urge to repeat and rethinks its approach while carrying the knowledge of everything learned along the way. As the third generation of its namesake, Tundra looks to improve upon everything – performance, capability, multimedia, creature comforts and more. It's the all-new 2022 Toyota Tundra, a truck that would make its predecessors proud.

The Toughest Tundra

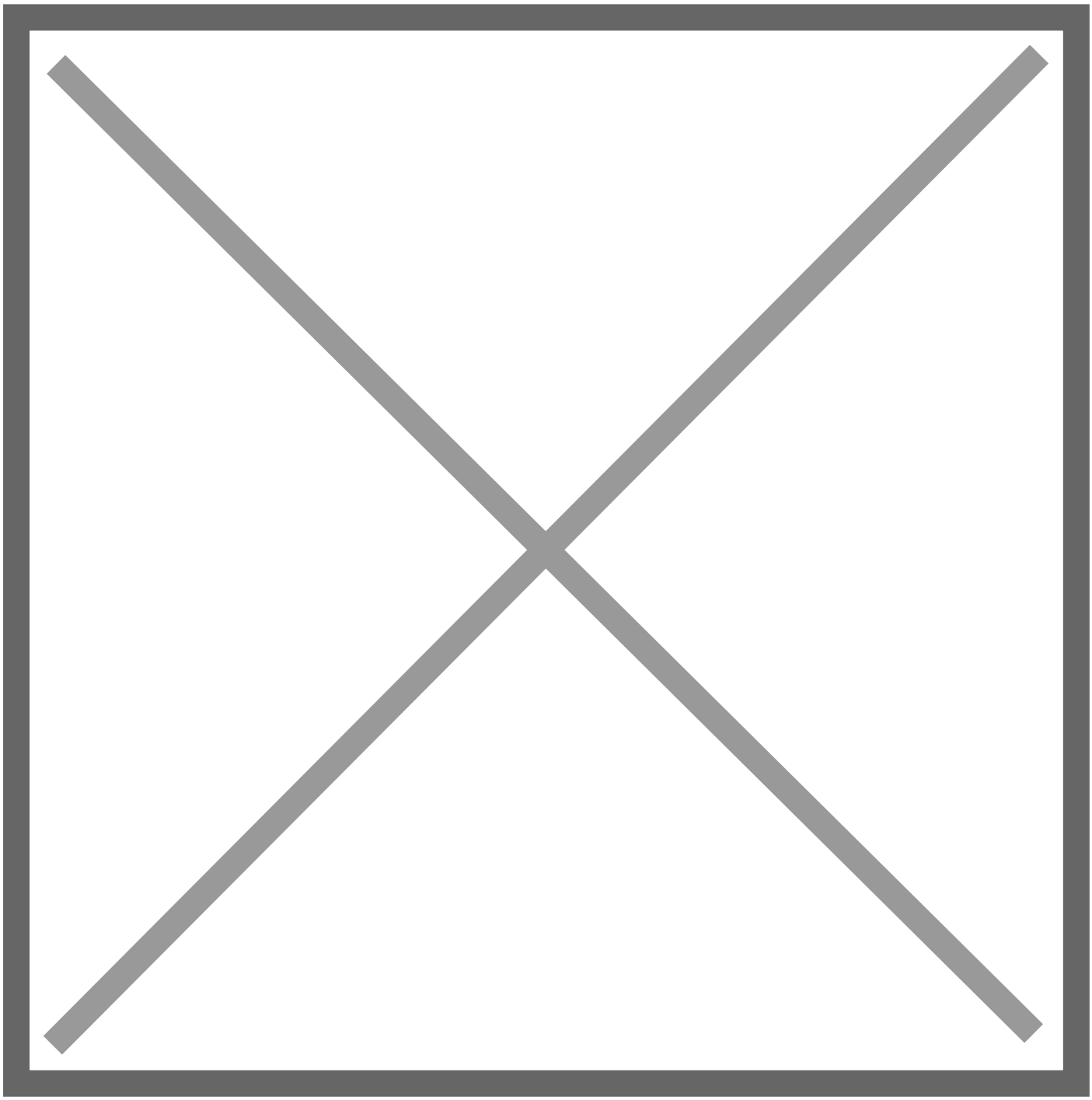
It should come as no surprise that the all-new Tundra was redesigned from the ground up. Designed, engineered and assembled in the U.S., there's no question this is the toughest, most capable, most advanced Tundra to date.

Improvements and enhancements abound, including its new high-strength boxed, steel-ladder frame, aluminum-reinforced composite bed and fully redesigned multi-link rear suspension. The outcome of development efforts gives the stout new Tundra an impressive maximum towing capacity of up to 12,000 pounds and a max payload capacity of 1,940 pounds.

Tundra will offer two different powerplant configurations. A new, highly efficient twin-turbo 3.5-liter V6 engine offers impressive output by itself, producing up to 389 horsepower and 479 lb-ft. of torque. When paired with a brilliantly engineered bell-housing motor system called the i-FORCE MAX, the result is a combined performance output of 437 horsepower and a whopping 583 lb.-ft. of torque. Both configurations will be mated to a new 10-speed automatic transmission.

A new interior will offer creature comforts for driver and passenger alike, including an available panoramic roof, heated and ventilated front seats, rear sunshade, heated steering wheel and more. A host of new tech features are found throughout Tundra as well, such as towing aids, off-road enhancements and an all-new multimedia system featuring wireless Apple CarPlay® and Android Auto and over-the-air updates. Two different four-door layouts are available, as well as various bed lengths including a 5.5-foot bed, 6.5-foot bed and an 8.1-foot bed.

The all-new Tundra will go on sale later this year, and pricing will be announced closer to the on-sale date.



Homegrown: For Truck People, By Truck People

Like the prior generation Toyota Tundra, the new Tundra will be assembled at Toyota Motor Manufacturing Texas (TMMTX) in San Antonio. But years before it hit the production line, U.S. designers and engineers were hard at work on Toyota's next full-sized Tundra pickup.

The Tundra is an American story through and through. From the first pencil sketches to the finished exterior design, the look was developed by Toyota Motor Corporation's North American design studio, Calty Design

Research, in Newport Beach, California, and Ann Arbor, Michigan. While engineers focused on key performance ingredients for the new Tundra, Calty designers worked to create the visual exemplification of toughness and capability. “Technical muscle” was a design mantra for the team, as it capitalized on the modern features of the all-new truck while retaining a nod to the outdoor lifestyle at the core of Tundra owners.

“Our design goal from the beginning was to create the most powerful, rugged and sophisticated looking full-size pickup that will take Tundra to a whole new level,” said Kevin Hunter, president of Calty Design Research. “Because recreation and an outdoor lifestyle are at the core of Toyota truck identity, we set out to create a muscular, chiseled and athletic design that also looks like it could handle the toughest towing demands.”

The interior was meant to retain that “Technical Muscle” motif. Calty chose a horizontal layout theme as a departure from the vertical layout on most other trucks in the market. This complemented the design goal to integrate the instrument panel and center stack to flow with the interior layout. Premium materials were also a must for a truck with a strong pedigree like Tundra’s, especially in high-contact areas, which is why wrapped armrests, pads across the dash, door and other areas are employed on most trims.

Calty’s design teams crafted an exterior and interior balance of angular lines and muscular refinement. Visually the truck needed to represent its capability that lives under the sheet metal.

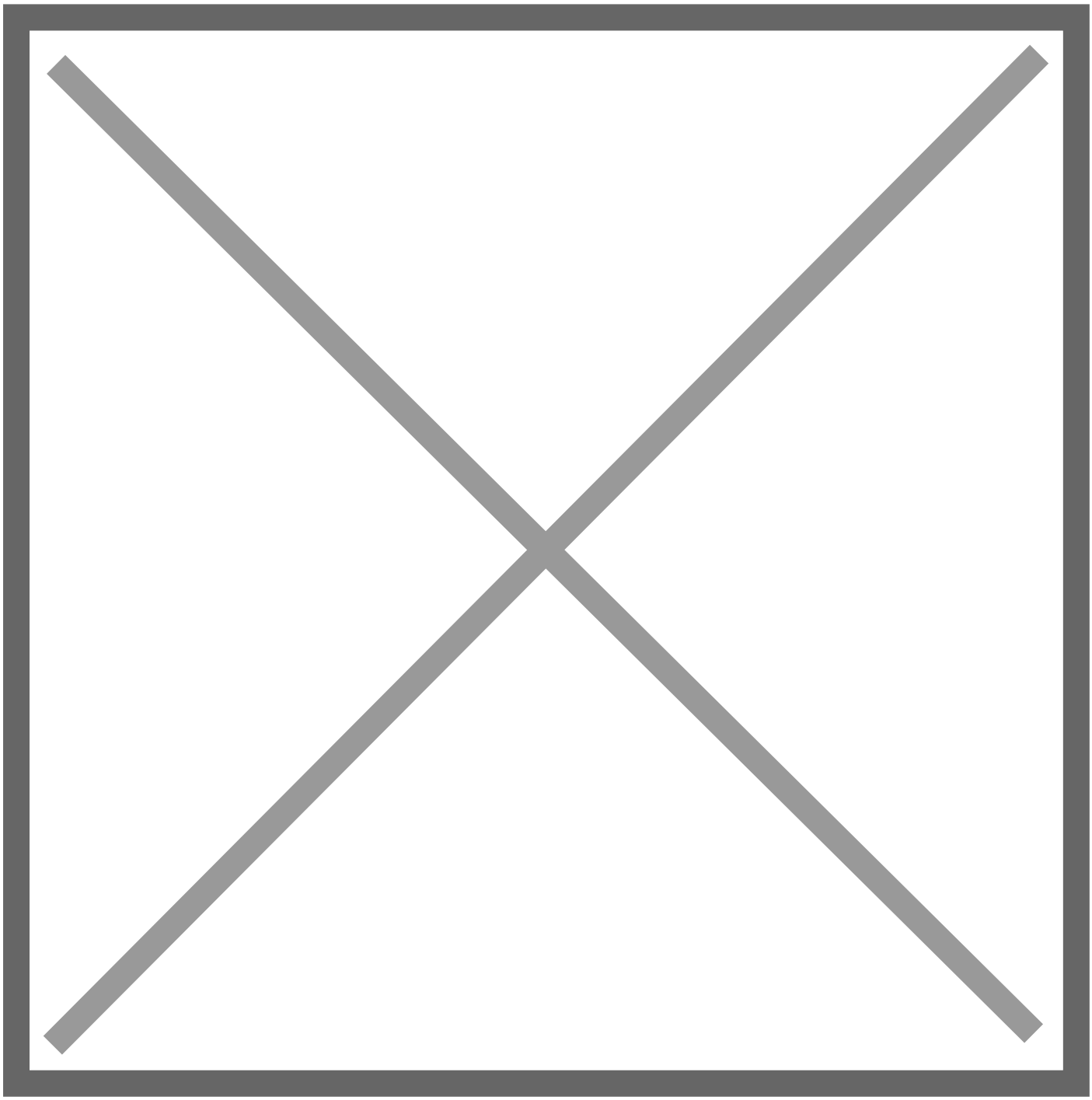
“We took a fresh, transformational approach to our truck development and had to rethink many things we’d previously done,” said Mike Sweers, senior vice president, Product Development Office, and F1 Platform chief engineer. “Not only did we improve the performance and enhance the capability of this new Tundra, at the same time, we were certain to retain the strong quality, durability and reliability for which Toyota trucks are known.”

Research and development for this truck was conducted at Toyota Technical Centers in Michigan, Arizona and California. The key themes atop the whiteboard for Tundra chassis engineers: improve capability and ride comfort compared to the competition. The team found great benefit in moving to a fully boxed frame, which improved rigidity significantly compared to current generation and offered overall improvement in capability.

The frame structure itself is an example of innovative thinking. The rear frame member is widened to improve stability and towing capability. This foundation also helped ensure excellent ride comfort and polished handling dynamics, particularly on grades Limited and above where the cabin is mounted to the frame with hydraulic cab mounts.

High-strength steel is employed throughout the chassis to increase rigidity considerably over the previous generation, while aluminum is used in key areas to help reduce weight. Frame crossmembers are more than doubled in size to provide additional reinforcement and rigidity. A new front cross member was constructed for the steering gear box, which adds rigidity via additional cross member support while enhancing steering input for the driver and handling dynamics.

The truck bed is lightweight and extremely strong thanks to the new Sheet-Molded Compound (SMC) construction and the use of reinforcing aluminum cross members in the bed. The new SMC bed offers added protection against dents, impact dings and rust compared to traditional steel decks. Even the tailgate uses lightweight construction techniques to reduce weight by 20% compared to the outgoing model. Speaking of the tailgate, one of the coolest features is the tailgate release on the key fob that is standard on all models.



Suspension: Turning Over a New Leaf

An all-new truck on an all-new chassis requires a fresh approach to suspension. The most noteworthy change to handling and performance is no doubt the new multi-link rear suspension, which ditches leaf springs in favor of coil springs.

Ride comfort, straight-line stability and overall handling dynamics are improved with the multi-link rear suspension, along with towing capability. The maximum towing capacity for Tundra increases 17.6% over the

previous generation to 12,000 pounds. The maximum payload increases to 1,940 pounds, which is an improvement of more than 11% compared to the previous generation.

The overall structure of the new frame and the multi-link rear suspension allowed engineers to adjust the placement of the shock absorbers, which are mounted outside the frame rails for improved efficiency and enhancement to roll damping and towing performance. And, as one more good measure, the lateral control arm provides increased lateral rigidity.

To further enhance the ride comfort, driving performance and overall durability, a newly developed double wishbone front suspension is fitted on Tundra. The front suspension benefits from a kingpin offset angle reduction to enhance straight-line stability and high-speed driving. The caster trail has been enlarged from 25.4mm (1 inch) on the previous generation to 34.1 mm (1.34 inches) for added stability. To improve cornering, roll steer has been reduced by 25% compared to the benchmarks, and the roll height center has been elevated (152mm compared to 104mm, or roughly 6 inches compared to 4 inches) to reduce body roll, especially when cornering.

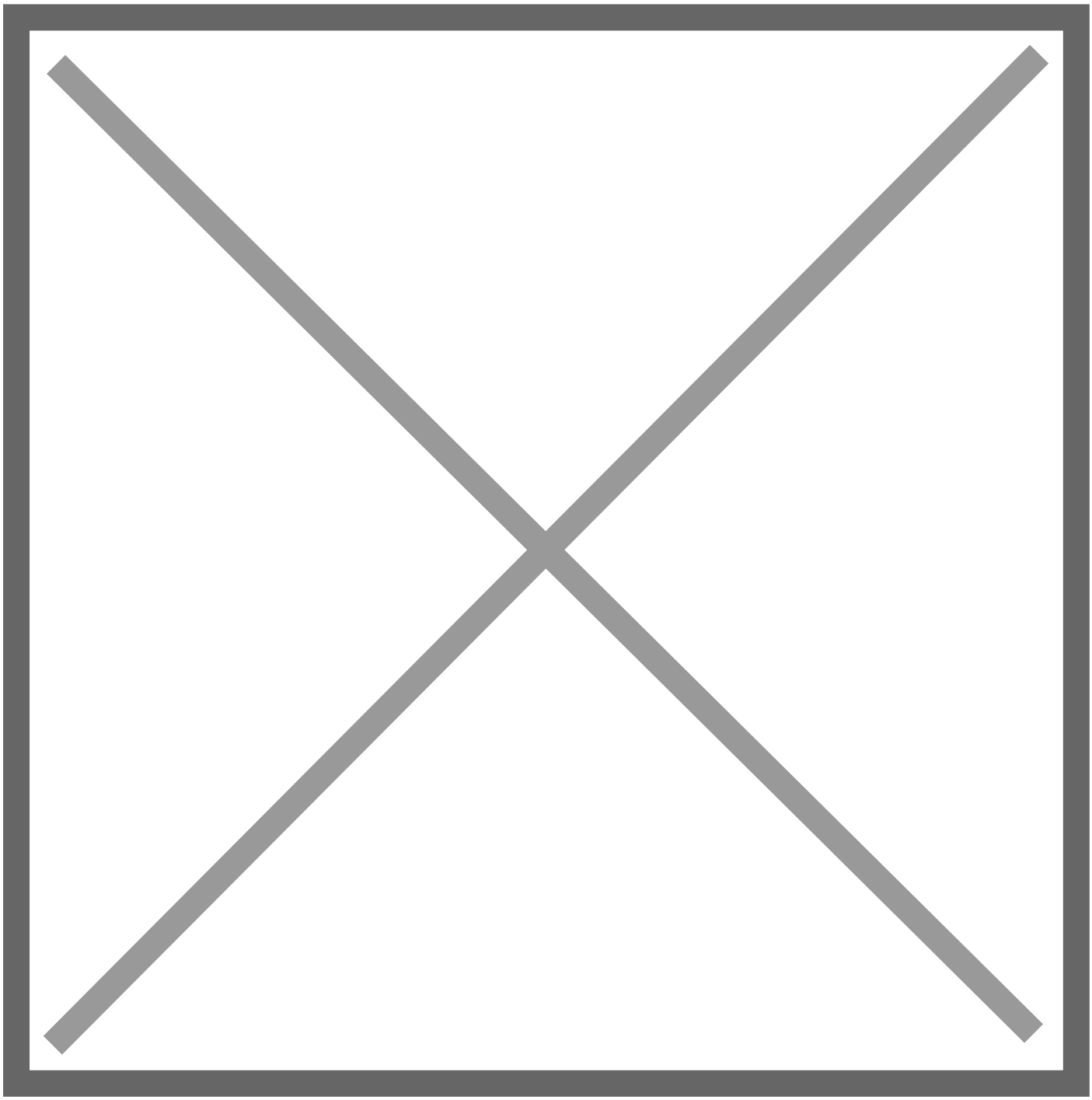
Tundra will feature standard twin-tube shocks at the front and rear of each truck. The shock absorbers feature triple-oil seals and extended dust covers for added protection and durability. Beefy new aluminum forged knuckles are employed to optimize weight. To help prevent corrosion and stress cracks, steel inserts reinforce the ball joints. For TRD Off-Road packages, monotube Bilstein shocks improve damping for on- and off-highway driving.

For maximum off-road performance, TRD Pro grades are fitted with 2.5-inch diameter FOX internal bypass shocks that stand at the ready. The front FOX shocks provide the truck with a 1.1-inch front lift. The aluminum-bodied front and rear shocks feature piggyback reservoirs to house additional oil for improved off-road performance in the most demanding terrain. The shocks use a new polytetrafluorethylene-infused (PTFE) Fox shock fluid to improve on-road comfort. This fluid includes microscopic particles infused with the oil to reduce friction.

TRD Pro also gains a few additional off-road attributes, including a new TRD Pro front stabilizer bar, red painted suspension parts, TRD aluminum front skid plate along with additional underbody protection and unique all-terrain Falken tires.

The multi-link rear suspension provided the flexibility for the engineers to add Tundra’s new air suspension system to the rear of the truck. Available on certain grades, the system features automatic and manual leveling functions. It features height modes for High, Low and Normal. The High setting is designed for slow-speed off-road driving, and it will return to Normal height if the truck exceeds 18 mph; it also optimizes damping to reduce roll rigidity for off-road driving. Low height mode allows for ease of loading and unloading, and it will return to Normal height once the truck exceeds speeds of 8 mph. How’s that for versatile?

Adaptive Variable Suspension (AVS) system is also available or the first time on Tundra. It is designed to adjust damping force based on ever-changing road conditions, whether it be a large pothole, bump or small rock. The linear-solenoid-type AVS features built-in actuators in the front and rear shock absorbers to continuously change damping force based on the conditions, all to enhance handling, stability and comfort of the new Tundra.



A Pair of Powerful Powertrains

The all-new Tundra will offer two powertrain options: a twin-turbo V6 engine and a hybrid twin-turbo V6. What may be surprising to some is the hybrid powertrain will be the most powerful of the two. Mated to both engines will be a 10-speed Electronically Controlled Automatic Transmission with intelligence (ECTi). The new 10-speed features a sequential shift mode, uphill/downhill shift logic and TOW/HAUL driving modes.

Calling the twin-turbo V6 a “base” engine just doesn’t seem right. Its aluminum block features a displacement of 3,445cc via an 85.5mm bore and 100mm stroke. The 24-valve, Dual Overhead Cam V6 is chain-driven and features Dual VVTi systems. Thanks to the water-cooled intercooler keeping turbo temperatures down, the V6 engine improves on the outgoing V8 engine in every way with impressive performance figures: 389 horsepower and 479 lb.-ft. of torque.

Next-level enhancements help make this twin-turbo V6 stand alone at the top of the powertrain mountain. Engineers developed state-of-the-art cylinder heads for max-boost reliability with a two-layer water jacket structure for maximum coolant flow and combustion chamber strength and then added machined cross-channels for additional combustion chamber cooling. Low-profile, laser-applied powder-metal intake valve seats enhance the intake port efficiency and allow maximum coolant flow close to the spark plug.

Exhaust cooling starts with the computer-optimized exhaust valve shape and is further enhanced by the integrated exhaust manifold and cylinder head design that uses the same water jacket to lower exhaust gas temperature entering the turbochargers to further improve reliability and performance.

The cylinder heads themselves have machined cross-channels to allow coolant to flow through them laterally to provide additional cooling to the combustion chambers. This also contributes to cylinder head reliability and operating efficiency. The exhaust valves’ shape has also been optimized to enhance cooling performance.

Drumroll, please! The showstopper for Tundra is really the i-FORCE MAX powertrain. The numbers alone are jaw-dropping – 437 horsepower at 5,200 rpm and a staggering 583 lb.-ft. of torque at only 2,400 rpm. The numbers are impressive, but how this beast achieves them is the best part.

The new i-FORCE MAX relies on the same twin-turbo V6 platform but features a unique attribute – a motor generator with a clutch located within the bell housing between the engine and 10-speed automatic transmission. In essence, the motor generator is built in-line to provide additional power that is transferred efficiently via the transmission, while the engine start-up, EV driving, electric assist and energy regeneration are solely done via the parallel hybrid components.

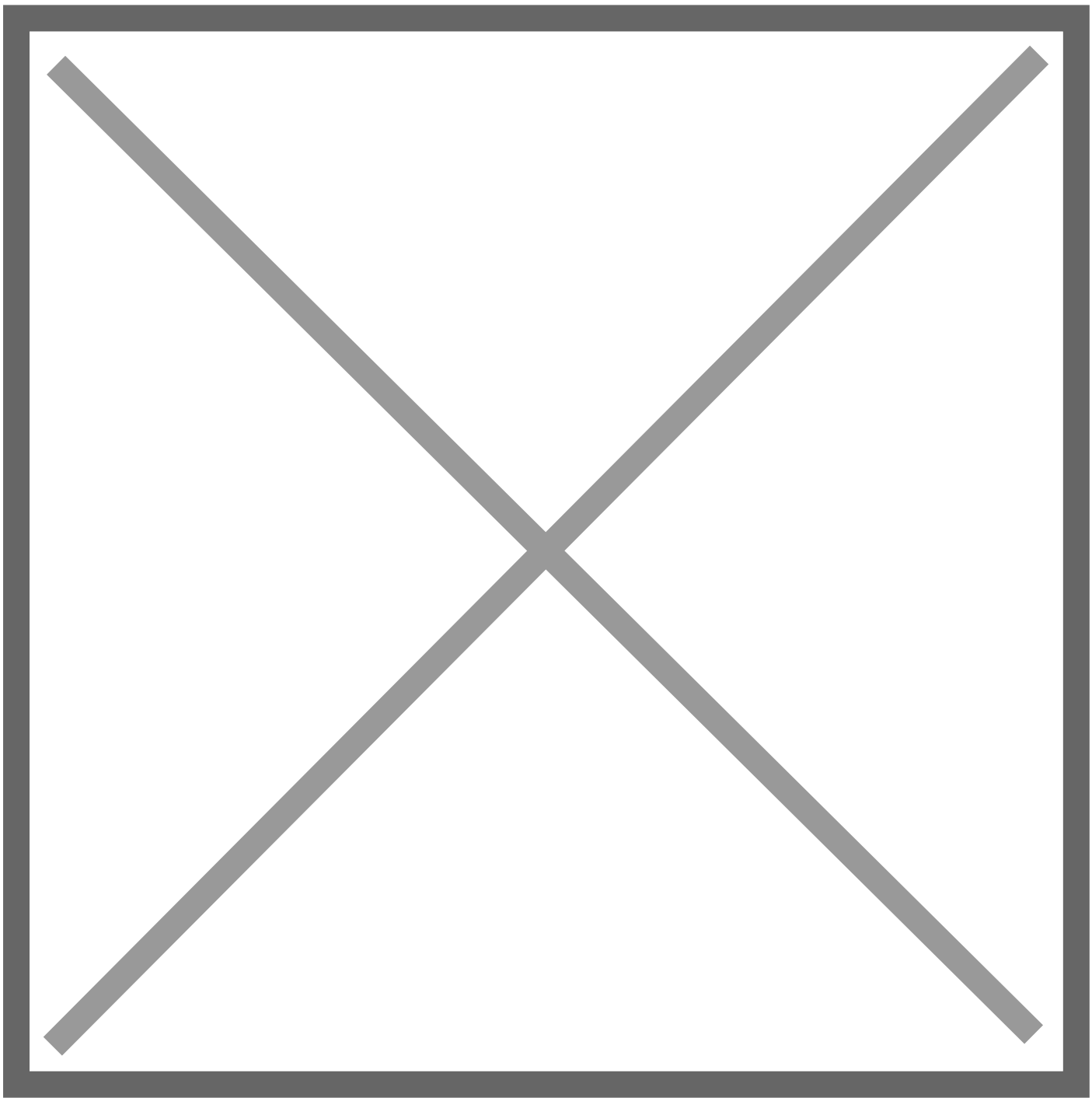
The i-FORCE MAX powertrain is designed to provide maximum performance and maximum efficiency at every extreme. During towing applications, the hybrid system provides additional power and torque. In city driving, it offers a quiet ride with improved efficiency while in low-speed EV mode. On the highway, responsive linear power delivery is the name of the game, and off-road driving is further enhanced thanks to peak torque performance being achieved low in the RPM range.

A newly developed Power Control Unit (PCU) is used to achieve excellent battery durability and thermal performance with a focus on drive performance. The system employs a tried-and-true 288V sealed Nickel-Metal Hydride (Ni-MH) battery that resides under the rear passenger seats.

Using the SPORT or SPORT+ settings under Drive Mode Select, i-FORCE MAX makes use of the electric motor’s instantaneous responsiveness. Although the electric motor does the bulk of the work at lower speeds, once above 18 mph, the gasoline engine is constantly in operation for excellent performance in the mid- and high-speed range. When in TOW/HAUL mode, the i-FORCE MAX system is constantly in operation to provide impressive acceleration and torque for towing needs.

Standard on TRD Pro models and available on 4×4 trucks equipped with the TRD Off-Road package are a slew of off-road upgrades that enhance off-pavement exploration. Multi-Terrain Select offers adjustable settings to help control wheel spin on a variety of terrain. CRAWL Control functions as a low-speed, off-road cruise control that allows the driver to focus on steering while it maintains one of five selectable speeds. Downhill Assist Control is another off-road feature that helps the driver navigate tricky slopes by limiting the speed of the vehicle

during descent.



Premium Towing Machine

The maximum towing capacity offers impressive performance benefits based on huge numbers alone, but that 12,000-pound max tow rating is also paired with a host of new towing features designed to make trailering a less daunting task.

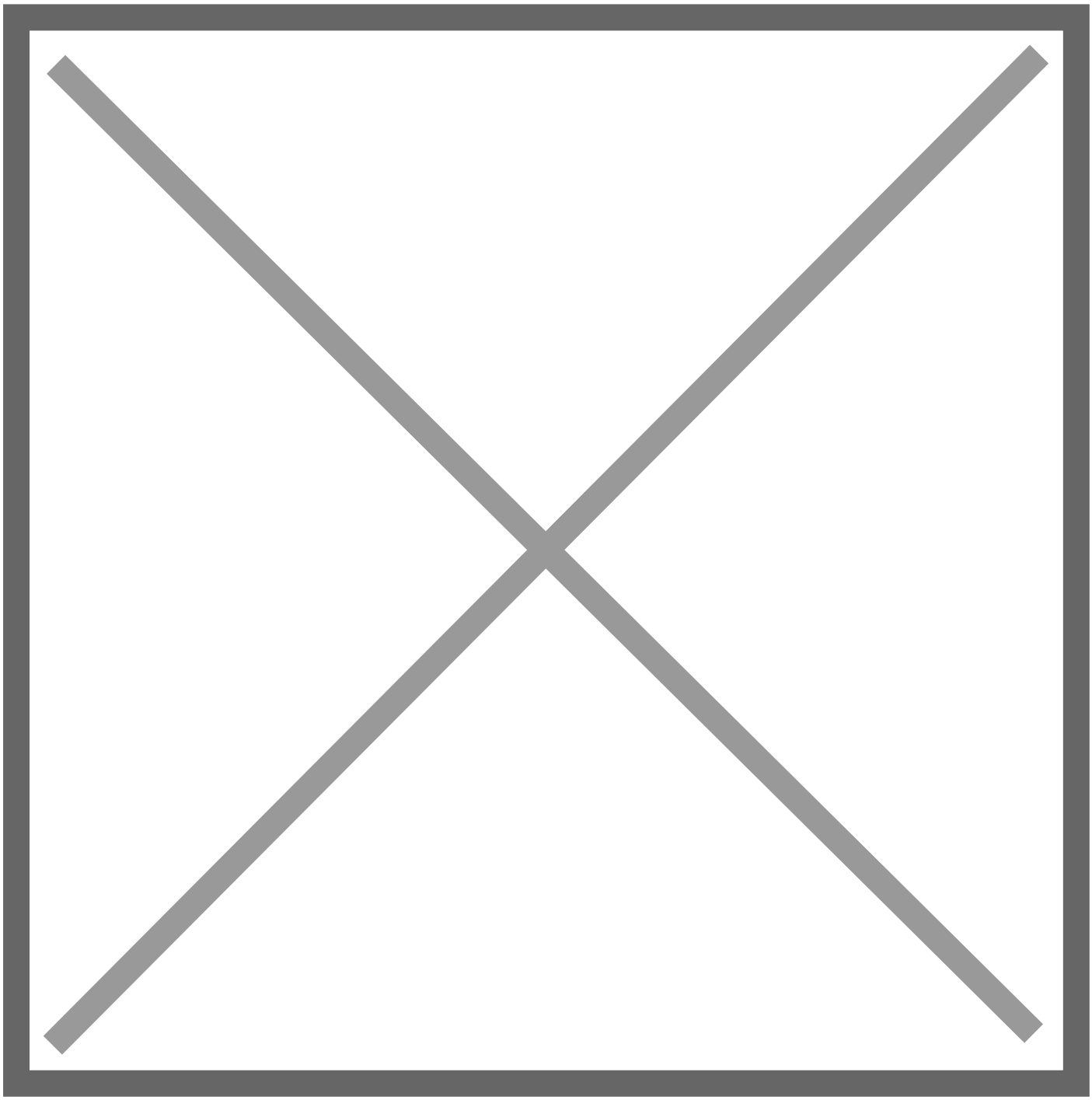
First off, two new Tow/Haul modes are available on Tundra. The standard Tow/Haul mode increases throttle response and is ideal for lighter to moderate needs, such as small box trailers, utility trailers or small boats. In Tow/Haul+ mode, throttle response is more aggressive for situations when towing larger trailers such as RVs, larger box trailers or larger boats. On the i-FORCE MAX powertrains, not only is the electric motor constantly in operation for immediate responsiveness when needed, but the Stop and Start functions are also deactivated so as not to inhibit performance.

Several new cameras are employed on Tundra, displaying multiple exterior angles that are viewable from the available 14-inch touchscreen or the available rearview mirror camera accessory. On TRD Pro or vehicles with the TRD Off-Road package added, Multi-Terrain Monitor is available to allow the driver to check the immediate surroundings for potential obstacles by simply pressing a button for front-, rear- and side-camera views on the display. But those trailering will be especially interested in Panoramic View Monitor (PVM), which uses cameras to display a top-down view of the truck on the available 14-inch monitor for added visibility. Views include the rear truck bed to check on cargo, a rear split view to show what's nearby on each side of the trailer and a hitch view to assist with trailer connecting.

New power extending and folding tow mirrors offer an improved view of whatever you're trailering, thanks to the taller profile and the revised spherical radius of the mirror curvature to increase the driver's field of view. The new mirrors are heated, feature an integrated turn signal and Blind Spot Monitor (BSM) notification, and they also house the cameras for the PVM/MTM systems. One of the brightest ideas on the new mirrors is the addition of LED trailering lights, which are controlled via a button inside the cabin to provide light rearward toward the trailer during nighttime or low-visibility situations.

Trailer Back Guidance aids in overall maneuvering of trailers, while the Straight Path Assist feature is designed to ensure your truck and trailer will back up in a straight line. The available 360-degree cameras aid with visibility and tough-to-see areas around the truck and trailer. When connected with Toyota's integrated trailer brake controller, even the Blind Spot Monitor can recognize blind spots for not just the truck but the trailer as well.

The available new air suspension system can also make towing a simpler proposition, as it offers the ability to load-level the rear height to find the right balance between truck and trailer.



All-New Toyota Audio Multimedia

Tundra will be the first Toyota to welcome the all-new Audio Multimedia system designed and engineered by Toyota's Texas-based Connected Technologies team. The system operates on Tundra models via newly designed touchscreens and features an all-new Human Machine Interface (HMI). The advanced HMI delivers improved interaction through sight, touch and voice activation.

Boasting processing power five times greater than the previous generation system, the latest Toyota Audio Multimedia system features a centrally located standard 8-inch touchscreen or an available 14-inch touchscreen with improved screen resolutions for high-quality, crisp visuals. It also includes more responsive touch functionality that is more familiar to consumers like the pinch and zoom functions we experience on our phones and tablets. Certain to be a favorite among gloved Tundra passengers, the new system still uses a large, easy-to-grip dial for audio volume. The new system also offers standard wireless Apple CarPlay® and Android Auto compatibility.

The virtual Intelligent Assistant provides an easy-to-use virtual companion that is more advanced and personalized than ever before. With simple wake-up phrases such as “Hey/Hi/Hello/OK Toyota” to make connection easy and seamless. Dual integrated cabin microphones allow for front passengers to use voice-activated commands to search for directions, find POIs, adjust audio controls and more. Intuitive and natural VA responses allow for audible replies by the vehicle occupant creating a human-like conversation experience.

The cloud-based native navigation system allows for real-time Over the Air (OTA) updates for mapping and Points of Interest (POIs). The new navigation system allows drivers and passengers to use the voice-activated commands or touchscreen to search for directions, find points of interest or explore local businesses. Google (POI) data is integrated to ensure up-to-date search capability. Navigation is available to passengers with or without network connection, with offline mode designed to detect when the vehicle is near or entering an area with low connectivity. Applicable maps and services are cached in advance to ensure seamless operation.

To aid in connectivity and convenience, the User Profile feature is available through the Toyota App to recall personalized vehicle settings, such as preferred media and climate settings. The profile is stored on the cloud, meaning users can access and take their experiences on the go with them across vehicles featuring the new Audio Multimedia system. Once created, users can use a Bluetooth handheld device such as a smartphone or tablet, smart key or even manual login to access their profile upon return to the vehicle.

Toyota Connected Services offer peace of mind and convenience to Toyota owners. Safety Connect offers added reassurance for when unexpected emergencies occur by connecting drivers with a 24/7 emergency response agent who can quickly request dispatch of emergency services to a vehicle’s exact location or assist authorities in locating a stolen vehicle. Service Connect provides drivers with personalized maintenance updates, vehicle health reports and maintenance reminders to help them maintain their vehicle through a standard trial period from the time of a new purchase and with available subscriptions on the Toyota App.

Wi-Fi Connect offers 4G connectivity for up to 10 devices by turning Tundra into an AT&T Hotspot. It also offers the ability to link your separate Apple Music® and Amazon Music subscriptions to your vehicle with Integrated Streaming.

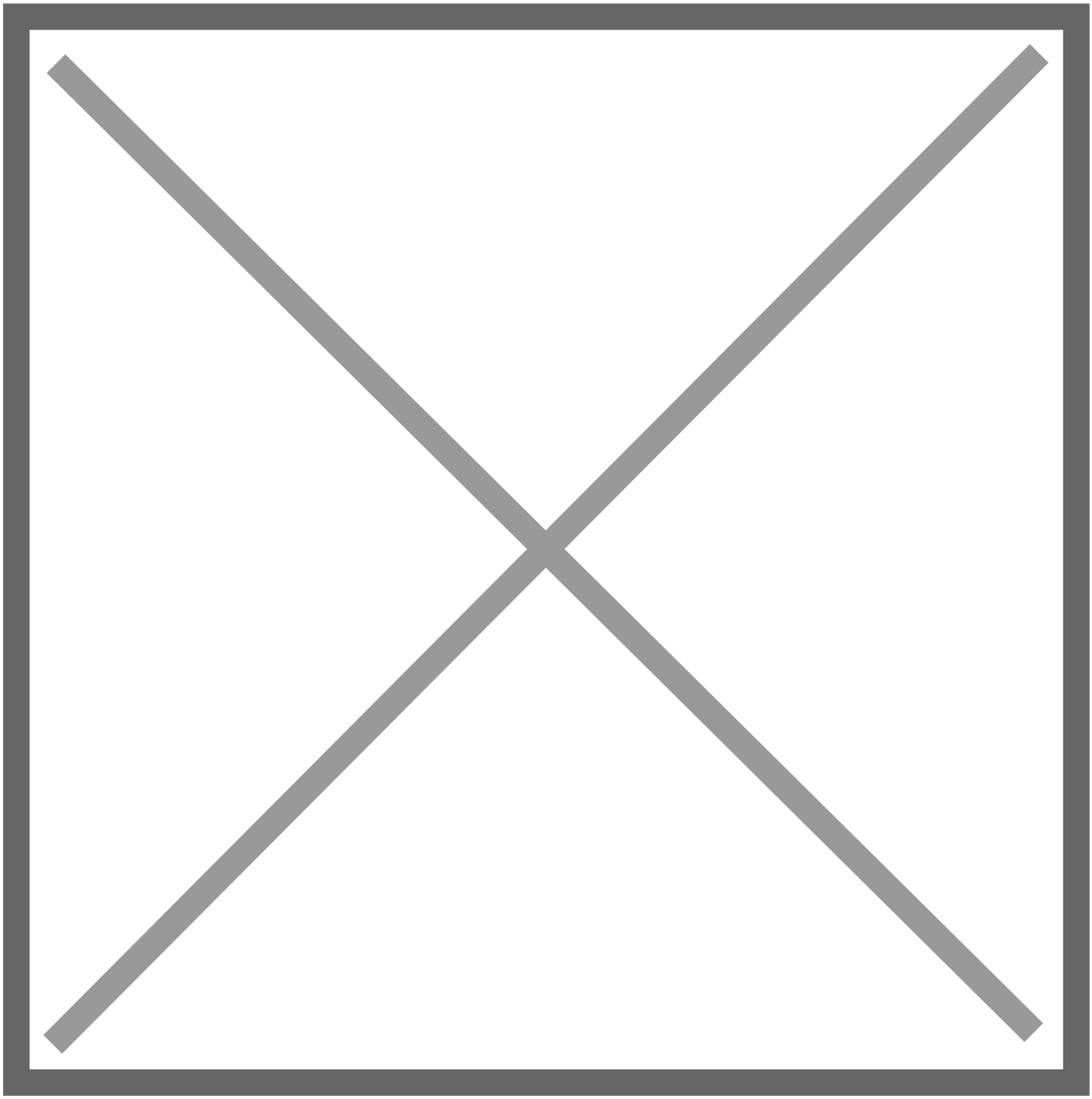
While the 14-inch Audio Multimedia display atop the center stack will draw the most immediate attention, the driver is certainly high on the priority list for impressive new tech in the new Tundra. Two newly designed instrumentation panels provide quick, easy-to-read access to the driver, and there’s no question the available 12.3-inch thin film transistor (TFT) display will create a strong impression.

There are two new instrumentation panels on Tundra: the available 12.3-inch TFT panel or a combination meter that includes a 4.1-inch digital multi-information screen (MID) with analog readouts. Aside from vehicle diagnostics, the new displays also provide access to safety features, navigation, audio controls, off-road features and towing functions.

Standard with the i-FORCE MAX powertrain and on Platinum, 1794 and TRD Pro grades, the 12.3-inch display illuminates when the vehicle is powered on to display one of five rotating Tundra animations that fill up the screen. The display features digital gauges like tachometer and speedometer and customizable content that

includes options from tow gauges, pitch and roll displays to engine performance gauges. Its appearance also changes with drive modes, and it provides specific information for off-road and towing functions.

On the combination meter, the 4.1-inch MID screen toggles between multiple screen options that include navigation, audio selections, vehicle diagnostics and more. Surrounding the MID screen are analog gauges that include tachometer, speedometer, oil and fuel gauges.



Options-A-Plenty

There’s no shortage of demands on full-size trucks, and that’s why Tundra is offered in a variety of configurations. It will be offered in two four-door options: Double Cab and CrewMax. Double Cab models will be offered with the choice of a 6.5-foot bed or an 8.1-foot bed. CrewMax models will be offered with either a 5.5-foot bed or a new 6.5-foot bed.

The grade breakdown for Tundra offers something for everyone, with SR, SR5, Limited, Platinum and 1794 available. TRD Pro will also return to the Tundra lineup, but it will only be offered with the i-FORCE MAX powertrain, whereas i-FORCE MAX will be an option on Limited, Platinum and 1794.

The TRD Off-Road Package is available on SR5, Limited and 1794 models, and it includes 18-inch TRD wheels (unique 20-inch wheels on Limited and 1794), TRD grille, TRD off-road suspension, skid plates, mud guards and TRD leather shift knob, while 4×4 models will also gain electronic rear differential lock, Multi-Terrain Select (MTS) and Crawl Control.

The TRD Sport package is also available on 4×2 or 4×4 SR5 models in CrewMax and Double Cab configurations. It includes the addition of 20-inch TRD wheels, TRD grille, TRD lowered sport suspension and a TRD leather shift knob.

Tundra will be offered in a host of colors that include: Super White, Wind Chill Pearl, Magnetic Gray Metallic, Celestial Silver Metallic, Midnight Black Metallic, Super Sonic Red, Army Green, Lunar Rock, Blueprint, Smoked Mesquite (Limited and 1794) and Solar Octane (TRD Pro exclusive).

TSS 2.5 Standard on All Tundras

Some truck manufacturers might require buyers to move up a few grades into the lineup before getting standard active safety – but not Toyota. Every Tundra will come standard with Toyota Safety Sense 2.5 on every single grade – that means from SR up to 1794 and TRD Pro.

The Pre-Collision System with Pedestrian Detection (PCS w/ PD) features multiple enhancements, including not only detecting the vehicle ahead but also a pedestrian in low light, bicyclist in daytime, an oncoming vehicle and a pedestrian at intersections when making a turn. At intersections, the system is designed to detect an oncoming vehicle or pedestrian when performing a left-hand turn and provide audio/visual alerts and automatic braking in certain conditions. Emergency steering assist is an additional function designed to detect pedestrians and stabilize the driver’s emergency evasive steering maneuvers and help prevent lane departure.

Tundra will be equipped with Dynamic Radar Cruise Control (DRCC). Lane Departure Alert notifies the driver via audible alert if it senses the vehicle is leaving the lane without engaging a turn signal. When DRCC is set and engaged, Lane Tracing Assist (LTA) is designed to assist the driver by providing a slight steering force to help center the vehicle in its lane using visible lane markers or a preceding vehicle.

Automatic High Beams are designed to detect preceding or oncoming vehicles and automatically switch between high beam and low beam headlights. Road Sign Assist (RSA) is designed to recognize certain road sign information using a forward-facing camera and display them on the multi-information display (MID).

Toyota’s Rear Seat Reminder comes standard on all 2022 Tundras. The feature can note whether a rear door was opened within 10 minutes of the vehicle being turned on, or at any time after the vehicle has been turned on, with a reminder message in the instrument cluster after the engine is turned off, accompanied by multitone chimes.

In addition to the TSS 2.5 system, other standard safety features include Blind Spot Monitor (BSM), which is designed to help detect and warn you of vehicles approaching or positioned in the adjacent lanes. Rear Cross

Traffic Alert (RCTA) can offer added peace of mind by helping to detect vehicles approaching from either side while backing out and alerting you with a visual and audible warning. The available Parking Support Brake is designed to implement brake control when there's a possibility of a collision with a stationary object, approaching vehicle or while parking.

Limited Warranty and ToyotaCare

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 corrosion with no mileage limitation. Toyota dealers have complete details on the limited warranty. Tundra also comes with ToyotaCare, a plan covering normal factory-scheduled maintenance and 24-hour roadside assistance for two years or 25,000 miles, whichever comes first.

The 2022 Toyota Tundra will go on sale late in 2021. Pricing will be announced closer to the on-sale date. Visit Toyota.com for more information.

*Certain features include a trial period at no extra cost upon original date of new vehicle purchase or lease. After the trial period ends, a paid subscription is required. More detail on trial-periods and subscription based features can be found at https://www.toyota.com/connected-services/.

To see an overview of Tundra's features, please check out this video.

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