

Performance and Design Highlight the All-New 2020 Toyota Corolla

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SAVANNAH, Ga. (Feb. 26, 2019) – With more than 46 million Toyota Corollas sold globally since its introduction in 1966, it would be difficult to find a driver who did not recognize the name. Everyone, it seems, has a Corolla story. Many, though, are going to be doing double takes when they see the re-imagined and reconfigured 2020 Toyota Corolla sedan. And that’s exactly the point.

The 12th-generation Toyota Corolla made its arrival in three chapters: the all-new Corolla hatchback arrived last summer, and then came the current best-selling Corolla body style, the sedan, in two waves – a reveal of the new gas model in Carmel and then the introduction of the U.S.’ first Corolla Hybrid at the Los Angeles Auto Show. All three are based on the Toyota New Global Architecture (TNGA), which is far more than a new body structure, bringing together new approaches to engineering, design, assembly, and materials. Now, there really is a Corolla for everyone.

TNGA transforms Corolla styles into drivers’ delights while also bolstering the model’s renowned value and reliability. They draw from the same DNA. It’s no surprise, then, that the 2020 Corolla sedan dramatically elevates this model’s focus on comfort and refinement while also infusing it with the Corolla hatchback’s feisty personality.

The Corolla sedan's bold new look is a perfect reflection of the bumper-to-bumper, wheels-to-roof transformation that has taken place. The TNGA platform means an available engine that produces more power than its predecessor yet delivers better fuel efficiency. TNGA imbues the Corolla sedan with greater agility, yet also with its smoothest, quietest ride. TNGA also means an elevated feeling of quality in every surface, switch and control the driver sees and touches. And, critically, TNGA delivers on Toyota's commitment to driver and passenger safety with the Toyota Safety Sense 2.0 suite of active safety systems – *standard on every Corolla sedan model.*

Design Transformation

Toyota shook up the midsize sedan ranks with the new-generation Camry, and now the compact sedan segment is in for a jolt with the 2020 Corolla sedan. From every angle, the new Corolla sedan looks lower and leaner, tauter and tighter. Powerful fender flares and generously curved fender top surfaces accent its sculpted, athletic core.

The design team called its working concept “shooting robust,” because they were shooting for a robust, confidence-inspiring stance. Yet, they had to maintain ample space for practical, real-world use. That's why people buy sedans, after all.

The 2020 Corolla sedan rides on a 106.3-inch wheelbase, like its predecessor, yet any commonality ends there. Corolla sedan's dynamic performance and stance benefit greatly from wider front (+0.47 in.) and rear (+0.87 in.) track dimensions. The front overhang was shortened by 1.3 in., and the rear overhang extended by more than half an inch. Height was reduced 0.8 in., and the hood lowered 1.4 in. for better forward visibility, made possible by mounting the engine lower. Those changes, plus many others, reduce the center of gravity by 0.39 in. That's just one part of the transformation that has turned the Corolla sedan into a highly nimble, engaging machine to drive.

The bold front fascia details vary by model grade, with the SE and XSE putting on the sportiest face, including a body-color chin spoiler and aero stabilizing fins to emphasize the wide stance. The slim, J-shaped Bi-Beam LED headlamps wrap deeply into the front fenders and give the Corolla sedan a steely stare and a distinct nighttime signature. The sporty SE and XSE grades use triple J-shaped clearance lamps with LED lights along with LED turn signals, creating a unique design signature.

The available Adaptive Front-lighting System (AFS) provides a wider field of light and steers the low beam in the direction of the turn, based on steering angle and vehicle speed.

The rear leaves a distinct lighting impression as well, with narrow combination lamps that wrap deeply into the fenders. All 2020 Corolla sedan models use LEDs, the type and style varying by model grade. The sporty grades feature smoked outer light lenses.

What better way to showcase the Corolla sedan's dramatic new sheet metal than with a dramatic new color? The new hues include a highly iridescent Celestite and Blue Print. The rest of the palette includes Blizzard Pearl, Super White, Classic Silver Metallic, Black Sand Pearl, Barcelona Red Metallic and Blue Crush Metallic.

Big Wheels Keep on Turning

The Corolla sedan transformation continues where the rubber meets the road. For the first time, 18-inch wheels are on the menu, standard on the SE and XSE grades. These multi-spoke alloys get their great looks from a complex machining technique paired with deep surfacing and dark gray accents. The LE Hybrid rides on 15-in. alloy wheels with covers while the LE grade gets 16-inch steel wheels with covers. The XLE grade gets new 16-inch alloy wheels with three-dimensional twisted spokes.

Cabin Fever

Simple. Warm. Inviting. Sensuous. These descriptors, seemingly from the luxury car realm, inspired designers' efforts when visualizing Corolla sedan's cabin. The result is called "sensuous minimalism." It's equal parts sporty and elegant, and, as always, Corolla-comfortable and durable.

A neat instrument panel lends an open, harmonious feeling thanks to its slimmer upper surface, with character lines that interlock with the door trim to convey an airy atmosphere. At the center of the instrument panel, within easy view for the driver and front passenger, sits a high-resolution 8-inch multimedia touchscreen on all grades except the L grade, which gets a 7-inch multimedia touchscreen.

The center stack screen provides access to vehicle settings, audio controls, navigation, and audio multimedia. The center stack flows into a wider console, with an armrest that's nearly 0.8-in. longer than in the previous model, for greater comfort.

The cockpit provides an engaging interior space that surrounds the driver while offering a spacious environment for all passengers. Compared to the previous Corolla sedan, the instrument panel, cowl, hood and beltline height are all lowered to increase visibility and create the interior's open feel.

High-gloss materials are paired with matte elements – silver accents with piano black and available contrasting stitching – to accentuate a premium look and feel. Minimized gaps between buttons and switches, along with the elimination of unnecessary lettering on switchgear, adds to the high-class ambience. Consistency in all materials' and elements' shape, color, grain, and gloss maximize continuity and aesthetic quality.

Available ambient lighting illuminates the front door trim, console tray and front cupholder. The tray can hold small items such as a smartphone or wallet, or, when so equipped, houses the optional Qi wireless device charging pad. Terraced cup holders adapt to various-sized beverage containers.

Digital Tools

The Corolla sedan comes standard with a 4.2-inch thin film transistor (TFT) Multi-Information Display (MID) that is located between the high-grade tachometer and speedometer, there is also an available 7-inch MID. With the larger display, the driver can switch between analog and digital speedometer styles.

Featuring rich graphics, the easy-to-read MID can be custom configured by the driver and offers intuitive operation to access information for the audio and multimedia systems, navigation system, vehicle information including fuel efficiency and tire pressure, Dynamic Radar Cruise Control (DRCC), Lane Departure Alert (LDA), Road Sign Assist (RSA), Lane Tracing Assist (LTA), and other important parameters and system settings.

Front Row Seating

From behind the wheel, the 2020 Corolla sedan feels quite different than its predecessor. Positioning the driver's hip point 0.91-in. lower and 1.57-in. further rearward yields an optimized driving position. The result not only improves comfort, but also helps to lower the vehicle's center of gravity and improves front/rear weight distribution.

These changes, along with the reconfigured lower beltline, slimmer instrument panel, slimmer A-pillars, and repositioned side view mirrors, result in more expansive outward visibility.

The front seats of the SE and XSE grades debut a new design featuring a unique shape with a headrest that nestles into the shoulder area, while the LE and XLE grades offer a seatback with a new U-shaped pattern. This major departure from a conventional square seatback design creates a sense of youthful, sporty appeal while improving comfort. The SE and XSE grades' front seats offer thin, yet broad shoulder supports, evocative of a competition bucket seat, which overlap solid and thick side bolsters to achieve enhanced holding performance.

Seating materials include standard cloth or, in higher grades, SofTex. New interior color schemes include several striking two-tone accents. Choices include Black/Blue (black as the main color with blue highlights),

Moonstone (light gray as the main color with dark gray highlights) and new Macadamia (a warm, inviting cream color).

Lots of Room, Not Noise

The Corolla sedan may break tradition in the styling department, but it keeps to Toyota tradition when it comes to passenger room and comfort. The rear seat area retains excellent headroom, despite the lower roofline. Legroom is also plentiful, fulfilling a basic mission of sedans.

What you don't get in the 2020 Corolla sedan is noise. Powertrain and road noise have been culled thanks to revised drivetrain efficiencies, plus the widespread implementation of sound-absorbing materials, including Thinsulate®, sealants, foams, and silencers. The TNGA structure utilizes additional seals in its body panel gaps to insulate noise penetration and enhance air-sealing performance. As one example, the floor silencer pad is now one large piece, instead of many smaller elements. The inner and outer dash silencers are thicker. Combine all that with Corolla sedan's quieter powertrain, and it's one tranquil ride.

Cooler Where It Counts

Corolla sedan's fully redesigned air conditioning system is more compact, more efficient and more effective. One example of the smarter climate control is the innovative twin-layer recirculation/fresh air induction unit: In cold climates, it will automatically send dehumidified fresh air to the upper cabin to reduce glass fogging while promoting recirculation of warm cabin air in lower areas.

System controls, located below the multimedia portal, are fashioned in a bright, highly-visible digitized configuration. The climate control interface features a piano black background with satin and silver accents for a premium, high-quality look and feel.

Multi-choice Multimedia

The 2020 Corolla sedan comes ready to pair with the driver's digital life. The standard audio multimedia system includes an available 8-in. touch-screen display; six speakers; Apple CarPlay®, Amazon Alexa, and Scout GPS Link compatibility; hands-free phone capability with voice recognition and music streaming via Bluetooth® wireless technology; customizable home screen settings along with connected services such as Safety Connect and Wi-Fi Connect Powered by Verizon.

The LE, LE Hybrid, SE, XLE and XSE grades get the 8-inch touch screen and 2 USB ports standard.

Audio Plus, standard on XSE, XLE and optional on SE CVT, adds SiriusXM Radio, Service Connect, and Remote Connect.

Topping the range is Premium Audio, which is optional on XSE and XLE. The package includes a JBL nine-speaker, 800-watt system with Clari-Fi; Dynamic Voice Recognition; Dynamic Navigation; Dynamic Points of Interest Search; and Destination Assist Connect.

The JBL Audio system is also available on the SE CVT.

JBL Audio system highlights include:

- JBL is available in the Corolla for the first time in over 10 years
- Next-Generation HID8 amplifier creates 800-watts of total power
- Free-standing horn tweeters located in the A-pillar at ear level for optimal high-frequency performance
- 10-in. dual coil subwoofer in rear deck provides powerful deep-bass response
- Sealed inner door panels promote cleaner, more powerful sound
- Midrange speakers in all four doors provide full-range sound for all passengers

- Clari-Fi software analyzes and rebuilds all audio to restore audio quality lost during digital compression

Featured audio multimedia features include:

Safety Connect®

In the event of an accident or other emergency, assistance can be dispatched directly to the vehicle's GPS location. Other connected services available on the Corolla include airbag-linked Automatic Emergency Notification, Manual Emergency Notification (SOS button) and Stolen Vehicle Locator. This technology is standard on all Corolla grades.

Service Connect

Provides updates on fuel level and mileage to maintenance alerts and more via email or the mobile app.

Remote Connect

Can lock and unlock doors, start the engine, locate the vehicle in a parking lot and alert you if your guest driver goes over a set speed, leave a specified location or if they take the vehicle after curfew.

Wi-Fi Connect – powered by Verizon

Connects up to five devices using the in-vehicle 4G LTE Wi-Fi hotspot.

Destination Assist Connect

Directions and destinations delivered by a real person with 24-hour, en-route navigation assistance.

Dynamic Navigation

Provides the most up-to-date map data, routes and POI on its embedded system. (Available with Premium Audio.)

Dynamic Force is with You

The 2020 Corolla sedan L, LE, and XLE grades will use the 1.8-liter engine (2ZR-FAE) found in the previous generation, yet with more horsepower and better fuel efficiency. The SE and XSE grades are powered by a completely-new 2.0-liter Dynamic-Force direct-injection inline four-cylinder engine (M20A-FKS). This new engine delivers more performance while using less fuel. Remarkably, the new Corolla sedan engine is physically smaller and lighter, helping to lower the car's center of gravity and improve its overall balance.

Here are some of the tech bits on Corolla sedan's new available engine:

The new Dynamic Force engine gets its high power and efficiency from a combination of high compression ratio (13:1), Toyota D4-S fuel injection combining direct and secondary port injectors, high-speed combustion, VVT-iE intelligent variable valve-timing on the intake side and VVT-i on the exhaust. VVT-iE uses an electric motor instead of oil pressure to control the variable valve timing.

A two-discharge port oil pump and a variable cooling system with electric water pump help maximize engine performance and efficiency. The more efficient cooling system also ensures quicker cabin heating on cold days and quicker cool-down when the air conditioner is used.

All of these technologies, along with ultra-low internal friction, yield a maximum thermal efficiency of 40 percent, very high for a passenger vehicle engine. You can't feel thermal efficiency, but you can feel the effects of 169 peak horsepower at 6,600 rpm and 151 lb.-ft peak torque at 4,800 rpm.

Fit for a Hybrid

The hybrid powertrain and battery were a natural fit for the new Corolla because of the Toyota New Global Architecture (TNGA) platform. There's no compromise in cabin roominess, for example, when choosing the Corolla Hybrid versus a gas model.

The new hybrid system combines a 1.8-liter four-cylinder gasoline engine with two motor/generators through an electronically controlled planetary-type continuously variable transmission (CVT) transaxle. Combined system output of 121 horsepower yields decidedly responsive performance.

The nickel-metal hydride (Ni-MH) battery pack's smaller size and flatter shape allow it to be packaged under

the rear seat, rather than taking up trunk space, and also allowing a 60/40 split folding rear seatback to expand cargo capacity. The battery location also contributes to the vehicle's lower center of gravity, a boon to agility.

The other half of the Hybrid Synergy Drive team, the gas engine, is no less impressive than the electric side. The 2ZR-FXE 1.8-liter inline four-cylinder engine was designed specifically for a hybrid application. The long-stroke configuration employs the Atkinson cycle, which uses a very high compression ratio (13.0:1) along with a shorter intake stroke and longer expansion stroke than the Otto cycle. The Atkinson cycle extracts more energy from the fuel, and the electric motors compensate for reduced low-end power (versus the Otto cycle).

Friction created by the piston skirts, rotating parts and oil pump is reduced, and an electric water pump eliminates the parasitic losses with a conventional belt-driven pump. Toyota sought efficiency gains in every system. The highly-efficient air conditioning system, for example, uses S-FLOW control, which automatically optimizes airflow throughout the cabin according to the temperature setting, actual cabin and outside temperatures, sunlight intensity, and occupied seats.

Getting the engine up to operating temperature quickly is critical to conserving fuel and reducing emissions at start-up. In the Corolla Hybrid, an exhaust heat recirculation system speeds up engine coolant warm-up. That in turn allows the hybrid system to stop the gas engine earlier and more often in the driving cycle when it's not needed, such as in low-power-demand city driving conditions.

The PTC (Positive Temperature Coefficient) heater quickly provides cabin heat electrically in cold temperatures.

Shifting Smarter

Sedan buyer trends are shifting, and the 2020 Corolla sedan is right there with them. The new Dynamic-Shift CVT (continuously variable transmission) combines the smooth, fuel-efficient performance of a CVT with the more direct driving feel of a traditional geared automatic. The key to its distinct performance feel is a physical first gear used for start-off acceleration, before handing off to the CVT's pulley system.

Because the launch gear is handling the higher input load at launch, the size of the CVT's belt and pulley components could be reduced, yielding shifting speeds that are 20 percent faster than in a conventional CVT.

High-speed, high-response gear-shifting technology using a multiplate wet clutch, switches power from the gearset to the CVT's belt and pulleys. The Direct Shift CVT has simulated 10-speed Sequential Shiftmatic steps along with Sport Mode. Synchronization of the increasing engine revs and vehicle speed gives a linear acceleration feel.

For those who want to shift for themselves, the 2020 Corolla sedan offers an intriguing choice with the all-new 6-speed iMT (intelligent manual transmission). Like some premium sports cars, it features downshift rev-matching control, automatically detecting when the driver is shifting and quickly rev-matching to make any driver a stick-shift pro.

New control logic improves acceleration feel when starting off, and improved shift feel makes this a stick shift you want to use. Increased use of micro polishing on gear teeth reduces cabin noise. Standard Hill-start Assist Control (also on the CVT models), helps prevent the dreaded roll-back when starting off on an incline.

Driving the Corolla Hybrid

The Corolla Hybrid's linear acceleration response may take some by surprise. When pulling away, the battery provides a subtle power boost in order to put less strain on the engine and eliminate the "rubber band" effect experienced with some hybrids.

A preload differential adds to the confident acceleration feel. During low loads and low differential rotation, differential-limited torque is distributed to the left and right wheels, yielding excellent handling stability. At mid-range and high engine loads, the preload differential functions as an open differential.

Corolla Hybrid has EV mode, which allows the vehicle to be operated as a pure electric vehicle for short distances, depending upon certain conditions, such as battery charge level. This mode is useful for operating the vehicle in parking lots or indoor parking garages, for example. The Vehicle Proximity Notification feature alerts pedestrians of the vehicle's presence when running in battery mode.

Along with the expected NORMAL and ECO drive modes, a SPORT drive mode setting allows for an increase in power for stronger acceleration response when desired.

- **NORMAL mode:** Allows the hybrid system to achieve an ideal combination of fuel economy and vehicle acceleration. The accelerator opening amount changes linearly in response to accelerator pedal operation.
- **ECO mode:** Improves hybrid system efficiency by limiting power in response to light to moderate accelerator pedal input.
- **SPORT mode:** Available power is increased, allowing for improved acceleration response.

Platform: The Strong, Silent Type

A super-rigid structure, lower center of gravity and highly refined suspension tuning endow the Corolla sedan with exemplary handling agility and ride comfort, along with a distinctive driving personality. This high-strength platform is fortified through the increased use of ultra-high-tensile steel as well as the application of new structural adhesive technology for enhanced body rigidity and occupant safety. Specifically, torsional rigidity is improved by 60 percent compared to its predecessor.

The new body uses a totally new multi-load path front structure to absorb frontal collision impact forces and disperses collision energy to help prevent deformation of the occupant compartment. High-tensile steel in the rocker panel reinforcements and the upper kick panel; wider underbody side members; strengthened rear bumper reinforcements, and thicker dashboard panel, floor panels, and underbody tunnel all improve energy dispersion in the event of a collision.

A squared figure eight reinforced ring-shaped structure around the door openings, along with larger-diameter impact beams for the front and rear doors, are designed to help in the event of a side collision.

Sport Sedan Handling, Sedan Comfort

The 2020 Corolla sedan looks the part of a fun-to-drive sport sedan, and the chassis delivers on the promise. The multi-link rear suspension is a major advance over the torsion beam setup used in the previous model, more adept at comfortably absorbing bumps while also ratcheting up agility.

The MacPherson strut front suspension, totally revised for this platform, uses sophisticated techniques, including a strut bearing mounted coaxially with the kingpin axis. This feature allows smoother upward suspension travel, especially while traversing bumps, resulting in more comfortable steering feel. Overall, front and rear suspension friction has been reduced by 40 percent. Newly developed shock absorbers have been tuned to provide optimal damping force for dynamic handling and stability with exemplary ride comfort.

Efficiency No Matter the Grade

Every grade of the 2020 Corolla has better combined fuel efficiency estimates than the previous generation. The L and LE grades have better fuel efficiency estimates in all three categories – city/highway/combined – while the XLE has better fuel efficiency estimates in city and highway and has the same combined fuel economy

estimate.

The new Dynamic Force engine, which adds 37 horsepower to the SE and XSE grades over the previous generation models, has an estimated three more combined mpg with the CVT, and an estimated two more combined mpg with the manual transmission.

The Corolla Hybrid, which has the lowest purchase price of any hybrid in the Toyota lineup, has the second-highest mpg estimate of any vehicle in that same lineup.

Grade	MPG/ Highway/ Combined
L	30/38/33
LE	30/38/33
LE Hybrid	53/52/52
XLE	29/37/32
SE 6MT	29/36/32
SE CVT	31/40/34
XSE	21/38/34

Foundation for Safety

The 2020 Corolla sedan features eight standard airbags and Toyota's Star Safety System, which includes Enhanced Vehicle Stability Control, Traction Control, Electronic Brake-force Distribution, Brake Assist, Anti-lock Braking System, and Smart Stop Technology. All Corolla sedan models come equipped with a standard backup camera.

Toyota Safety Sense 2.0

Significantly, all 2020 Toyota Corolla sedan models are equipped standard with Toyota Safety Sense 2.0, an advanced suite of integrated active and pre-collision safety features.

PCS (Pre-Collision System): Uses both a millimeter wave radar sensor and a forward-facing camera sensor for detection of a vehicle or pedestrian or bicyclist in front of the vehicle. If the PCS determines there is a high probability of a collision, or if it deems a collision is unavoidable, the system is designed to automatically activate the brakes to help avoid the collision entirely or mitigate the impact force.

DRCC (Dynamic Radar Cruise Control): Designed for highway use, has a vehicle-to-vehicle distance control mode that utilizes a millimeter wave radar sensor and camera sensor to maintain a pre-set following distance from the preceding vehicle. The Full-speed DRCC version, available on CVT models, is also capable of low-speed following, including stop-and-go traffic that may occur on the highway. The Corolla sedan is designed to stop when the vehicle ahead comes to a stop, maintaining an appropriate distance to it.

LDA (Lane Departure Alert) with Steer Assist: Provides the driver with audible and visual warnings (vehicle

positioning warning image shown in the Multi-Information Display) and, if necessary, is designed to provide steering assistance to help the driver stay in their lane if the system determines the possibility of deviation from the driving lane. It is also designed to detect vehicle sway (excess weaving within the driving lane) that might indicate driver distraction, inattention or drowsiness.

LTA (Lane Tracing Assist): LTA, available on CVT-equipped models, is enabled when LDA and DRCC are both on and active. LTA employs a lane centering function that is designed to make constant steering inputs to help the driver keep the vehicle in the center of its lane. LTA is designed for uses on relatively straight highways to preemptively avoid unwanted lane departures and reduce driver fatigue.

AHB (Automatic High Beams): When enabled, the AHB system uses an in-vehicle camera to help detect the headlights of oncoming vehicles and taillights of preceding vehicles, then automatically switches between high and low beams as appropriate.

RSA (Road Sign Assist): Designed to recognize Speed Limit, Stop, Yield, and Do Not Enter signs and display them on the vehicles' MID to help assist the driver.

Blind Spot Monitor is a standard or optional convenience feature, depending on model grade. When a vehicle in an adjacent lane is detected, the system is designed to alert the driver using indicators on the outside mirrors.

Brake Hold, when engaged, is a convenient technology that helps reduce driver workload while waiting at a traffic light or while driving in traffic. When the driver depresses the accelerator pedal, Brake Hold releases.

More Grades, More Plants

Corolla has been and will continue to be assembled at Toyota Motor Manufacturing Mississippi (TMMMS), where 1,500 Toyota team members are employed. Additionally, as of 2021, Corolla will also be assembled at the new joint-venture manufacturing plant with Mazda in Huntsville, Alabama. The new manufacturing facility represents a combined investment of \$1.6 billion by the two companies. Once complete, it will employ 4,000 production workers and have an annual capacity of 300,000 vehicles.

Corolla Hybrid will be assembled in the Takaoka plant in Japan.

COROLLA GAS

Model #	Grade	Drive	MSRP 20MY
1866	XSE	FWD	\$25,450
1856	XLE	FWD	\$23,950
1863	SE MT	FWD	\$22,650
1864	SE CVT	FWD	\$21,950
1852	LE	FWD	\$19,950
1832	L	FWD	\$19,500

COROLLA HYBRID

Model #	Grade	Drive	MSRP 20MY
1882	LE HV	FWD	\$22,950