

The Unexpected: Toyota Reveals the Stunning Next-Generation Corolla Sedan

June 06, 2013

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TORRANCE, Calif. (June 6, 2013) – The all-new 2014 Corolla will include dramatically amplified elements of style, design, quality and craftsmanship, while building upon the stellar Corolla reputation for reliability, efficiency and function, making Toyota’s newest compact the most surprising and capable Corolla yet.

Corolla for the World: 47 years, 154 Countries, Built in 16 Locations, Immeasurable Impact

With nearly 40 million units sold, the Toyota Corolla is the best-selling car nameplate on the planet, and this year marks its 47th year on the market. Since the Corolla first appeared in Japan in 1966, it has played a major role in the motorization of Japan, and its global popularity has had a significant impact on transportation throughout the rest of the world. The global scope of Corolla now finds it manufactured in 16 locations and sold in 154 countries. The Toyota Corolla’s appeal as a global car is rooted in a product philosophy set forth by Tatsuo Hasegawa, the first Corolla’s chief engineer, who sought “to develop a car that brings happiness and well-being to people around the world.”

As a result of more than 40 years on the market satisfying consumer needs, this compact car has developed into a pillar supporting Toyota’s famed reputation for quality, durability, and reliability. The Corolla, maybe more so than any other Toyota sold globally, has been the answer for consumers in the market for a reliable, efficient, and affordable compact vehicle.

In developing this new 11th generation of Corolla, Toyota designer and engineers relied on exhaustive consumer feedback to help shape key elements of the product on a global scale. Customers emphasized the overwhelming importance of vehicle design on product perception in the marketplace. The all-new 11th generation Corolla makes a much stronger design statement, with more compelling exterior and interior executions that challenge the pre-conceptions about Corolla. The next generation Corolla continues the Toyota brand’s recent momentum set forth by design-focused product launches such as Avalon and RAV4. The 2014 Corolla will remain appealing to the current consumers while helping the world’s most popular car grow in appeal with youthful car buyers.

Unexpected Exterior Design is Expressive, Chiseled

The all-new Corolla makes an immediate visual impact with a more expressive, chiseled exterior design that elaborates on the “Iconic Dynamism” theme first seen on the Corolla Furia Concept that debuted at the North American International Auto Show. The new Corolla is distinguished by its tauter, more athletic proportions that ride on a longer wheelbase (+ 3.93 inches/ +100 mm compared to current model). With the wheels pushed out toward the corners, compact overhangs, and more tapered front and rear expression, the new Corolla communicates a more dynamic compact sedan form, even at a standstill. The new sedan is 3.90 inches (99 mm) longer overall and yet presents a more compact appearance than the current model thanks to a basic shape that tapers at the front and rear of the vehicle to help emphasize the wheel arches and wheels-to-the-corner stance.

The new Corolla features an expressive front fascia with sharper, more pronounced details above a large trapezoidal grill that rests beneath a thin intake inlet below the hood.

The front view of the new Corolla reveals a continuation of the design themes seen in recent Toyota sedans such as Camry and Avalon, and it creates a sleeker, more assertive impression of a Toyota compact sedan with its more precisely sculpted surfaces.

Among the challenges presented by the new Corolla's original design concept was the need to execute more deeply rounder corners to achieve the desired sleeker image. The thick structure of conventional headlamps would hinder the appearance of deeply rounded corners. Sleek, compact LED lamp assemblies were adopted to reduce the corner mass and help accentuate the Corolla's tapered, rounded-corner, front- end design theme. In addition, the low heat generated by the LED lamp enabled the use of a lighter weight PES resin lens instead of conventional glass. Corolla is the first compact sedan to offer standard equipped LED headlamps.

2014 Corolla

<i>Basic Exterior Dimensions Compared to Current model (change in parenthesis)</i>		
Overall length	182.6 in. (+3.90 in.) 183.1 for S-grade	4639 mm (+99), 4650mm for S-grade
Overall width	69.9 in. (+0.63 in.)	1776 mm (+16)
Overall height	57.3 in. (-0.39 in.)	1455 mm (-10)
Wheelbase	106.3 in. (+ 3.93 in.)	2700 mm (+100)
Front Overhang	37.7 in. (+0.90 in.)	958 mm (+23)
Rear Overhang	38.6 in. (-0.94 in.)	981 mm (-24)

Heightening the exterior design's attention to detail, the new Corolla's athletic profile reveals door handles that have been sculpted into the body to align with a character line that spans the length the door surfaces, utilizing a vertically asymmetrical door handle design. The new Corolla's C-pillar features a "faster", longer sloping angle that blends in to the rear deck more athletically. The rear view is highlighted by large, sharply-sculpted rear taillight assemblies. The new Corolla is available with a subtle rear deck-lid spoiler that accentuates the sportier nature of this new compact.

Elevated Interior Experience With a Greater Sense of Craftsmanship in its Design

The new Corolla's interior continues the "Iconic Dynamism" theme to create a stylish, highly functional, and inviting interior space with a greater sense of craftsmanship in its design, use of materials, and attention to detail. A horizontally oriented dash structure helps enhance the interior's sense of spaciousness while providing a more wide-open, intuitively functional space for interface with vehicle controls. The interior offers a premium aesthetic with its use of piano-black gloss trim highlighted by metallic ornamentation and trim that conveys an upscale yet sportier image.

Depending on interior color theme, blue, black or amber pinstriped accents are used in conjunction with the dash and door panel ornamentation to enhance the premium appeal of the interior. Ornamental stitching along the leading edge of the dash pad adds a sense of craftsmanship to the interior's upscale nature. An available decorative boot with ornamental stitching surrounding the shift lever adds a sporty, premium look.

As a result of the 3.93 inch increase in vehicle wheelbase, the new Corolla's interior package has been dramatically improved in terms of passenger comfort, gaining considerable legroom for the rear seat occupants. Compared to the outgoing model, the rear seat hip point has been moved back 2.95 inches (75 mm), and additional leg-room was gained by adopting a slim front seat back. The rear passenger floor was also made flatter by re-routing exhaust pipes beneath the vehicle to offer better middle position foot room. Rear seat

comfort is also enhanced with the use of denser urethane pads and foam inserts within the seats.

The 2014 Corolla elevates the compact car's interior experience by treating occupants to a high level of cabin quietness. Environmental noise, in addition to road and engine sounds entering the cabin, are mitigated by an acoustic glass windscreen, improved floor carpet insulation, an instrument panel seal between the cowl and the windshield, a fender sound insulator, and an inner dash silencer pad.

Corolla's front seats include a longer, more supportive lower cushion and an improved bolster design, while offering a 0.59-inch (15-mm) increase in the seat's range of adjustment to help accommodate a wider range of physiques. The effort required operating the Corolla's front seat slide, reclining, and lift mechanisms has also been greatly reduced.

Corolla's standard gauge cluster offers three dials with sharp image detail and clear blue illumination, surrounded by chrome trimmed rings. Within the speedometer dial is a multi-information display that shows odometer, trip odometer, current fuel consumption, average fuel consumption, cruising distance and average vehicle speed. The S-grade meter cluster offers a high technology feel with a 3.5-inch black and white TFT display that rests between two large dials.

The new Corolla offers an expanded range of interior choices with seat fabrics that create an appealing contrast with the piano black and metallic-accent surfaces. Depending on the Corolla trim level, the seating surfaces are trimmed in premium, detailed fabric or a durable, upscale SofTex™ material.

Four Distinct Grades; High-level of Standard Equipment

The 2014 Corolla is available in four distinct grades: L, LE, S, and the new LE Eco grade. While each grade offers its own equipment level, all Corollas feature LED lowbeam headlamps with LED daytime running lights, an in-glass AM/FM antenna, color-keyed outside door handles, color-keyed outside mirrors, a 60/40 split fold-down rear seat, power door locks with automatic locking feature, power windows with driver-side one-touch up/down, air conditioning with pollen filter, standard Bluetooth connectivity and eight airbags.

Other popular features available for Corolla's trim levels include Smart Key System on front doors and trunk with Push Button Start, auto air-conditioning with pollen filter, leather-trimmed tilt/telescopic three-spoke steering wheel with paddle shifters and audio controls, Multi-Information Display, Bluetooth hands-free phone voice-command controls, SofTex™-trimmed heated front seats, and a range of audio capability that will offer navigation and Entune™ apps accessible through the head unit. Much more will be shared regarding Corolla's grade level content, capability, and price structure closer to on-sale timing in the fall.

Drivetrain and Aerodynamics Maximize Efficiency

The Corolla has always prioritized delivering outstanding fuel economy and the new 2014 model maintains that focus. The new Corolla LE Eco model targets an estimated EPA highway fuel economy rating of over 40 mpg. The Corolla LE Eco is a new grade that enhances the fuel economy with the help of aerodynamic underbody covers, color-keyed rear spoiler, a more efficient 1.8-liter engine with Valvematic technology, low rolling resistance tires on 15-inch wheels or available 16-inch aerodynamic alloy wheels, and an efficient CVT.

Efforts to reduce wind resistance have helped the new Corolla achieve a drag coefficient of 0.28, which places it near the top of the compact-sedan class. Careful attention has been taken to refine airflow and reduce turbulence over the front and rear edges of the car. The Corolla's underbody features a smoother, flatter smoother design to help reduce turbulent airflow. Both the LE Eco grade and S grade offer strategically placed vehicle under covers located below the bumper fascia, engine, front floor, rear floor, and fuel tank to help manage airflow under the vehicle for improved efficiency.

The 2014 Corolla offers two efficient 1.8-liter, all-aluminum four-cylinder engines. The base 1.8-liter unit with VVT-i is available on the L, LE, and S grades and is rated at 132 horsepower. The Corolla's new LE Eco trim level is equipped with a 1.8-liter engine with Valvematic, a valve train technology which appears for the first time in North America with Corolla. Valvematic offers a broader range of continuously variable valve timing (lift and phasing) to provide optimal intake valve (not on exhaust side) operation relative to engine demands. Valvematic offers more than a five-percent improvement in fuel economy and engine output (140 horsepower).

2014 Corolla Engine Specifications		
Engine Type	2ZR-FE	2ZR-FAE
Number of Cylinders/arrangement	4 cylinders, in-line	4 cylinders, in-line
Valve Mechanism	16-valve DOHC with Dual VVT-i	16-valve DOHC with Valvematic
Bore x Stroke mm	80.5 x 88.3	80.5 x 88.3
Displacement c.c.	1798	1798
Compression Ratio	10.0:1	10.6:1
Fuel System	EFI	EFI
Max Output	132 Hp/ 6000 rpm	140 Hp/6100 rpm
Max Torque	128 lb-ft/ 4400rpm	126 lb-ft/4000 rpm

The 2014 Corolla also offers improved fuel economy thanks to its advanced Continuously Variable Transmission. This CVTi-S (i for intelligent, S for shift), which will be available on the LE, S, and LE Eco Corolla models, features several enhancements to improve its efficiency and driving performance with discrete shift points that help create a sensation more similar to a traditional hydraulic automatic transmission.

While the efficiency and reduced weight inherent in a pulley-type CVT would seem an ideal solution for vehicles emphasizing fuel efficiency, the characteristic CVT "rubber band" driving sensation of the engine winding to its power band upon acceleration has earned detractors. With Corolla's new CVTi-S, Toyota's engineers improved the drivability of the new Corolla by adapting discrete stepped "gears" or shift points, into the car's acceleration and deceleration curves. The Corolla's new CVTi-S even mimics the familiar characteristics of hydraulic automatics creating a sense of positive shift engagement. On the Corolla S trim, up to seven shift-points can also be manually actuated from the shift gate or steering wheel paddle shifters.

As the first pulley-style CVT product offered by Toyota in North America, the engineering effort prioritized making the new CVTi-S' operation and power application more appealing and familiar to North American drivers. Corolla's engineers maximized the fuel saving design inherent in a pulley CVT while enhancing its operation to provide a more "direct feel" to pedal inputs through careful analysis of traditional automatic transmission operation. The new CVTi-S will provide a more linear connection between pedal effort and acceleration feel compared to previous CVT designs.

Toyota engineers addressed challenges presented by typical CVT design such as the high level of hydraulic pressure CVT's require for operation, and the optimization of the pulley ratio range to offer the best performance and fuel economy. Typically, CVT hydraulic-fluid pumps are driven at the same rate as engine speed; as a result, the pump wastes considerable effort, hurting transmission efficiency at higher engine speeds as the pump moves more fluid than necessary to lubricate and sandwich the CVT's belt. With this new CVTi-S, hydraulic pressure was reduced to an optimal point to protect against belt slippage, while conserving drive effort to limit excess pumping losses. The Corolla's new CVTi-S is fitted with an oil pump that features a coaxial 2-port design that enables a 25-percent reduction in pump drive torque compared to other pump designs, and results in a greater efficiency with its reduction in parasitic engine loss.

For a belt-driven CVT, the range of speed ratios is determined by the diameters of the input and output pulleys. The greater the disparity in size between these two pulleys, the greater the range of gear ratios, efficiency and performance the transmission can offer. The clearances within the Corolla's CVTi-S exterior casing and between internal components have been enhanced to better accommodate the most optimally sized pulleys within the compact transmission case. The CVTi-S offers a forward gear ratio range of 0.396 to 2.480, which works well for acceleration, cruising speeds, and fuel-conscious driving with a 4.761 final drive ratio. The new CVTi-S includes a transmission fluid warmer is used to help get fluid to optimal temperature faster.

The Corolla's new CVTi-S is uses a lower viscosity CVT fluid that protects all of the transmission's internal parts while helping reduce parasitic loss to enhance efficiency and performance. The CVTi-S also offers extremely quiet operation from a compact, lightweight case design that adds reinforcing ribs and an optimal shape to help suppress vibration and noise.

ECO and SPORT Drive Modes Add Efficiency and Excitement

Corolla models equipped with CVTi-S offer the capability of either an ECO or SPORT driving mode. On the Corolla LE Eco, the ECO driving mode makes accelerator control become non-linear to suppress the vehicle's response to choppy driving and contain acceleration from standing start to help reduce fuel consumption. The accelerator pedal's communication is the same as Normal-mode after 50-percent throttle. In ECO mode, the air conditioning operation is controlled in the interest of efficiency with compressor power reduced, the utilization of recirculation mode, and extra time allowed to attain a desired interior cabin temperature.

As equipped on the Corolla S, the new CVTi-S offers a SPORT mode that helps deliver a more dynamic driving experience with software tuning that alters shift points, creating transmission behavior during acceleration that enhances the sporty character of the S-grade. SPORT mode is not a track focused mode, but rather a transmission setting that, along with unique electric power steering programming, helps create a sportier driving sensation during normal road and freeway driving. On the Corolla S equipped with CVTi-S, steering wheel mounted paddle shifters allow drivers to make fast, sequential, stepped shifts through "7-speeds" to help enhance the driving experience. The Corolla S console shifter also offers a manual gate (M-position) that also allows drivers to make brisk upshifts or downshifts using the shift lever. The next shift step will automatically be engaged if the engine revolutions become high enough or down shifted if they become low enough. The M mode activity is displayed in the black and white display of the Corolla S combination meter. The Corolla's Sport mode was developed and evaluated on roads within the key global markets to help ensure a more energetic drive across a broad range of conditions.

The base model Corolla L is offered with a four-speed automatic transmission or a six-speed manual transmission. The six-speed manual is also available in the Corolla S.

Rigid Unibody and Tuned Suspension Offer Engaging Handling

The new Corolla offers improved handling and steering thanks to a rigid unibody that can take advantage of improved suspension tuning to offer a more engaging, better handling, more dynamic car. The Corolla's unibody makes extensive use of high-strength steel to improve the rigidity of the structure, but also keeps vehicle curb weight under 2,900 pounds for all grades, which helps fuel efficiency. The use of high tensile-strength steel allows for reduced thickness and optimized shape of structural panels while increasing strength to help improve collision performance. Corolla is expected to perform very well in collision safety ratings test. The new Corolla features additional unibody bracing (tunnel brace and rear floor brace) to help increase platform rigidity over the current model.

The new Corolla's suspension uses a Macpherson strut design for the front with a new, more rigid control-arm design. A rear torsion beam arrangement is used for the rear. Both suspension layouts have been designed to take advantage of the additional body rigidity to provide improved handling responses and steering control. While

the spring rates on Corolla have been optimized for ride comfort, the S-model equipped with 17-inch wheels includes unique coil, damper, and bushing tuning to help offer a sportier driving characteristic. The rear torsion beam's attachments points are now fastened to the body at a slanted, diagonal angle for its bushings as opposed to the straight attachment orientation of the previous generation vehicle. This diagonal attachment point layout contributes to improved rear handling, grip, and stability.

The new Corolla is equipped with an electric power steering system that offers enhanced feel and 'weight' in the hands of drivers, while increasing its sense of directness with little effort. The use of an electric rack and pinion system eliminates an accessory driven hydraulic steering system, which would represent parasitic loss to the engine. The lightweight and compact components of the tilt, telescopic steering structure are designed to help enhance steering rigidity, while reducing vibration. A more structurally rigid steering intermediate shaft help improve the directness of the new Corolla's steering. The new Corolla's steering measures 3.19 turns from lock to lock.

The braking system includes a 10.82-inch (275-mm) ventilated front disc, and either a 10.19-inch (259-mm) solid rear disc (available on S-grade) or nine-inch (229-mm) rear drum (all other grades). Like all Toyota models, the 2014 Corolla will feature Toyota's Star Safety System™ standard, which includes Vehicle Stability Control (VSC), Traction Control (TRAC), Anti-lock Braking System (ABS), Electronic Brake-force Distribution (EBD) and Brake Assist. It also features the standard Smart Stop Technology brake-override system. An electronic tire pressure monitoring system is standard equipment.

Corolla offers a broad range of wheels ranging from 15-inch wheels with covers (L and LE Eco grades), 16-inch steel wheels with covers (LE and S), 16 inch aluminum wheels (LE), a 16-inch aluminum design unique to the Eco grade and 17-inch alloy wheels unique to the S grade. The wheels help emphasize the character of each Corolla model, with the most fuel-economy-focused Corolla LE Eco wearing 15-inch wheels with covers shod in low rolling resistance 195/65R-15 rubber. At the other side of the Corolla spectrum is the sportiest grade of Corolla S that wears impactful available 17-inch alloy wheels covers in more performance oriented 215/45R-17 rubber. The 16-inch wheels used for the LE (both the steel and aluminum) and the 16-inch aluminum aero-wheel for the LE Eco model all use a 205/55R-16 tire.

The 2014 Corolla will elevate the consumer's experience for the world's most popular sedan with modern, expressive styling, a more premium interior experience, improved fuel economy and performance, and a strong menu of available features. Vehicle pricing, final grade content, and option packages will be made available closer to launch timing.