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NEW COROLLA

Two distinctive designs and two hybrid powertrains



NEW RAV4 HYBRID

All SUV – All Hybrid

NEW CAMRY HYBRID

A unique offer in the European D/E sedan segment

HYBRID



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NEW COROLLA

Two distinctive designs and
two hybrid powertrains

Joining the new generation Hatchback first revealed in Geneva earlier this year, the new generation Toyota Corolla Touring Sports makes its first appearance at the 2018 Paris Motor Show. The all-new Corolla –built at Toyota UK’s plant in Burnaston– showcases a more dynamic design which differentiates between the sporting, compact and dynamic Hatchback and the sleek, refined and versatile Touring Sports more strongly than ever before.



CREATED AND DEVELOPED IN EUROPE, the Touring Sports' body type makes it a key model for fleet sales, with a growing market share.

With a brand new 2.0 litre self-charging hybrid powertrain joining the engine line-up, the new 2018 Corolla model range also marks the debut of Toyota's dual hybrid strategy.

Toyota has always prided itself on listening to its customers and responding to the feedback they provide. Now, after 20 years of hybrid leadership and more than 12 million global sales, including 1.5 million units in Europe, the company has also focused on the input of potential customers who want more power whilst driving a hybrid.

For this reason, Toyota has decided to offer its core models with a choice of two hybrid powertrains; one offering all the fourth generation hybrid system's strengths, including improved response and linearity, and the traditional benefits of fuel efficiency and a relaxing

drive, the second building on these strengths with greater power on demand, effortless acceleration and more dynamic, 'fun to drive' characteristics.

Reflecting the brand's continued focus on self-charging hybrid technology, both Hatchback and Touring Sports versions of the new Corolla will offer customers just one conventional engine - a 116 hp 1.2 litre turbo petrol unit - and a choice of 122 hp, 1.8 litre or 180 hp, 2.0 litre self-charging hybrid powertrains.

The 1.8 litre system fulfils all the requirements that customers have come to expect from a Toyota self-charging hybrid powertrain - quiet, intuitive, responsive and self-charging EV technology with low cost of ownership, no need for plug-in recharging and greater reliability than any conventional powertrain. The system offers outstanding fuel economy and low CO₂ emissions, and up to 50% all-electric driving* on the everyday commute.





Whilst continuing to reward customers with all of the above benefits, the 2.0 litre system takes full advantage of the added ride comfort, stability, handling and driving enjoyment inherent in the newly adopted Toyota New Global Architecture (TNGA) GA-C platform. It will offer drivers an 'energised drive', with more power and steering wheel-mounted paddles for a more dynamic, engaging driving experience.

Targeting the heart of the European C-segment, the new Hatchback and Touring Sports are dynamic and stylish cars which meet all the requirements of both the daily commute and diverse weekend usage, whilst combining driving enjoyment in all road conditions with the peace of mind and low running costs unique to Toyota's self-charging hybrid drive technology.

TOYOTA NEW GLOBAL ARCHITECTURE (TNGA)

Toyota New Global Architecture (TNGA) represents the foundation for all of Toyota's future powertrain and vehicle development, bringing a new-found consistency to driving feel across the entire Toyota model range. More of an entire philosophy than mere platform, TNGA marks a revolution in the way the company designs, engineers and manufactures vehicles. It is integral to the company's mission to build ever better cars that are more stylish, more enjoyable to drive and even safer.

TNGA introduces new, defined guidelines for the positioning of different components which simplify vehicle design in key areas. The impact is on items that are largely out of sight, so designers still had the freedom to give both new Corolla versions a visually distinctive and individual look with a lower stance and more appealing proportions.

The new Corolla range's TNGA GA-C platform guarantees a more rewarding driving experience thanks to a centre of gravity that is lowered by 10 mm (bonnet height -47 mm, front and rear hip points -24 and -26 mm respectively), multi-link rear suspension fitted as standard across the model range, and a 60% more rigid body shell through the use of high strength steel as reinforcement in key areas. All contribute to better handling and stability without compromising ride and comfort.

All new TNGA-based vehicles prioritise the highest active and passive safety standards.

New Corolla is designed to meet the exacting standards of independent crash testing programmes and provide increased active safety levels through the sophisticated functions and systems of the latest Toyota Safety Sense technology. (Read more about Toyota Safety Sense in the dedicated chapter).

DESIGN

Touring Sports Exterior Design

'With the new Corolla Touring Sports, we aimed to develop the most sleek and sporty wagon in the C-segment, whilst offering D-segment downsizers the benefits of class-leading rear seat legroom and a highly competitive loadspace volume' (Kazuhiko Isawa, Chief Stylist – European Design Centre)

With a body type that is unique to Europe, the new Touring Sports was styled in Europe at the recently opened Design Centre in Zaventem. Thanks to the adoption of TNGA, the new wagon is no longer merely a variation of the hatchback, but has become a distinctly separate model in its own right.

The new Touring Sports is 58 mm longer than the model it replaces. More significantly, it has a 100 mm longer wheelbase of 2,700 mm, and the front to rear seat couple distance has increased by 48 mm to 928 mm, providing best-in-class rear seat passenger legroom.

Though it shares the same dynamic, distinctive frontal styling and 25 mm reduction in overall height as the new Corolla Hatchback, every body panel of the new Touring Sports from the B pillar aft is exclusive to the model, giving the wagon the refined, sensuous appearance and sweeping roofline of an elegant yet robust shooting brake.

This sporting profile is reinforced by the same wide, flaring wheel arches as those of the Hatchback, their edges hemmed to allow the positioning of the wheels further outwards to emphasise the new Corolla's wider stance and lower centre of gravity.

To the rear, the Touring Sports design theme shares the Hatchback's muscular rear shoulders, widely spaced, full-LED lamp clusters and a rear windscreen 12 degrees more slanted than that of the current generation.

Distinct from the hatchback, the licence plate has been repositioned higher, within



the tailgate panel, and the step at the tailgate sill has been reduced for a more premium appearance. Deeper rear bumper styling also echoes the frontal Under Priority Catamaran design.

The Touring Sports will be available with a choice of five new wheel designs including 18" machine-finished aluminium alloy wheels and two new 17" alloy wheel designs -one silver and one black machine-finished.

It will be available in a choice of 11 body colours of which four -Oxide Bronze Metallic, Emotional Red 2, Precious Silver and Phantom Brown- are new.

Exclusive to the segment, the Corolla Touring Sports' dynamic design is further emphasised through a range of four optional bi-tone colour schemes available from launch. They combine the body colour with a black finish to the roof and roof pillars, and the front lower grille surround.

Hatchback Exterior Design

'Our primary goal with the new Corolla was to create the most bold and dynamic hatchback on the market, without compromising on interior usability,' explains Simon Humphries, Executive General Manager, Toyota Global Design.

'Harnessing the low centre of gravity afforded by the TNGA layout, the vehicle is light and agile in the side view, yet as we move to the rear, the architecture transforms to create a solid, wide and low

stance that is absolutely critical to the European market.'

The new Corolla adopts a significantly more sporting, dynamic and distinctive design with more striking frontal styling.

Overall length has increased by 40 mm, all of which has been absorbed within a longer wheelbase for better safety and improved design. Importantly, the overall height of the new hatchback has been reduced by some 25 mm, whilst the cowl height of the vehicle is a significant 47 mm lower. The result is a sleeker shape and a more attractive, lower bonnet, which in turn improves safety by giving the driver a clearer forward view.

The new frontal styling is a further evolution of Toyota's Under Priority Catamaran and Keen Look design philosophies. Beneath the curved front edge of a flatter, clamshell bonnet, the narrow upper grille incorporates new, all-LED headlamp clusters with integral Daytime Running Lights (DRL).

The surround to the large, trapezoidal lower grille projects powerfully forward. It is less pointed and more vertical than before, resulting in a reduction to the vehicle's front overhang of some 20 mm.

The sides of the grille surround form a trademark, catamaran hull shape at the front corners of the new Corolla, emphasising the vehicle's 30 mm increase in width, and its broad, sporting stance. The upturned edges of the



front spoiler locate new, LED foglamps. And the grille mesh itself is of a new more articulate and refined design.

In profile, the elegance of the new Hatchback's sleek, sporting silhouette is enhanced by a choice of the same five new wheel designs as those offered on the Touring Sports.

The new rear design is more rounded than before, strengthening the visual relationship between the front and rear of the vehicle. The tailgate is constructed in resin to both make possible the design's complex curvature, and save weight.

An increase in rear windscreen angle of some 14 degrees and the muscular hip above the rear wheel arch combine to make the overall appearance of the vehicle rear more compact. A roof spoiler is integrated into the tailgate and a shark fin antenna is fitted as standard on all model grades.

The rear all-LED lamp clusters feature light guides placed as far as possible towards the vehicle extremities to emphasise the new Corolla's wide, planted rear stance. And the rear bumper styling echoes the frontal Under Priority Catamaran design; a thin lower lip here incorporating twin chrome inserts.

The new Corolla Hatchback will be available in the same choice of 11 body colours as the Touring Sports, and will also benefit from the same range of four optional bi-tone colour schemes.

Touring Sports and Hatchback Interior Design

'Having already demonstrated their expertise on the C-HR, a dedicated TME Sensory Quality team was assigned to oversee interior quality in the new Corolla. Working in close cooperation with stylists and engineers, the team analysed and visualised the whole interior, taking into account not only colours, grades and executions, but also such details as light intensity and direction.

Based on this work, numerous enhancements have been implemented at each development phase, ranging from shape consistency to colour and grain matching, as well as quality control in later phases. The result of such painstaking attention to detail has resulted in a significant improvement in overall sensory quality.' (Yasushi Ueda, Chief Engineer – Toyota Motor Corporation)

The new Corolla Touring Sports and Hatchback model range showcases an all-new interior designed to create a spacious, modern and cohesive cabin environment in which new textures, colours and trim combine to offer the highest levels of visual and tactile quality.

Particular attention has been paid to the interior of the Touring Sports version, which has been specifically tailored to the European market, offering customers sensory quality of the highest order.

Key to the interior's feeling of spaciousness is a new instrument panel design which is 24 mm slimmer overall. The resultant reduction

in height of the upper panel area reduces the perceived mass of the panel itself, and improves forward visibility whilst still allowing for a lowering of the front seat hip point to lower the vehicle's centre of gravity and offer a more engaging driving position.

Conversely, the centre console has been made 42 mm wider and 22 mm higher to both improve switchgear and gear lever ergonomics and also enhance the wrap-around feel of the driver's cockpit area. Simultaneously, the centre console armrest height has been optimised, and its sliding range increased by 20 mm for greater occupant comfort.

A revised front seat design features changes to both the seat back and cushion springs and the optimisation of urethane pad thickness. In combination these measures achieve a better driving posture with wider pressure dispersal for enhanced comfort and reduced long-haul fatigue.

Standard on High grade models, a newly developed front sports seat features thin and wide shoulder supports which overlap solid, thick side bolsters to combine a thin seat design with excellent holding performance.

The ergonomic excellence of the driver's cockpit area is further enhanced by a range of new switchgear and instrumentation which completes the Human Machine Interface (HMI).

Fully described in the Premium Comfort and Convenience chapter, this includes a new driver's instrument binnacle incorporating a new 3D-effect panel or a Multi-information display, a new, 10" colour head-up display, a new 8" central multimedia display, an electronic parking brake, a wireless phone charging pad and an electrochromatic rear view mirror.

In combination with the extended couple distance for greater legroom, the rear seats have also been revised, with a new seat cushion material for the more even distribution of occupant weight over the cushion area. As a standard feature, the rear seats may be lowered by remote lever operation for a fully flat loadspace.

This all new interior design is made all the more cohesive and unified in appearance through the use of a range of high visual and tactile quality material and trim finishes, including satin chrome plating and paint, piano black, synthetic and genuine leather, stitching,



and a choice of fabric, Alcantara or genuine leather seat upholstery.

The new Corolla Touring Sports has the additional benefits of a front to rear seat couple distance increased by 48 mm to 928 mm for improved rear seat passenger space, and a generous, 598 litre VDA loadspace incorporating numerous aids for to practicality and convenience.

A hands-free kick sensor is now available for operation of the power tailgate, activated by waving a foot under the central area of the rear bumper. Its opening has been extended by 10 mm.

The repositioning of the rear shock absorbers has allowed for a simplification of the deck side wall trim structure. This not only maximises loadspace width and enhances loading ease, but also makes side wall storage pockets available behind the rear wheel housings on both sides of the deck.

The load surface itself features a two (upper and lower) position deck, which may be open and closed in the upper position as if hinged



from the rear seatbacks. Fitted as standard on all grades, it is also fully reversible with carpet on the upper face and a resin-finish underside for wet or dirty use.

The deck under-space has been enlarged and fully carpeted, and features detachable side separators. Convenience is further improved through the adoption of the world's first LED compartment lamps on both sides of the loadspace, and a detachable, one-touch retractable tonneau cover.

PREMIUM COMFORT AND CONVENIENCE TECHNOLOGY

Largely fitted as standard on High grade models and available as an option throughout the new Corolla model range, a comprehensive range of comfort and convenience technology is available to enhance life on board for both the driver and all cabin occupants.

Particular attention has been paid to enhancing the convenience of the Corolla Touring Sports' loadspace, which features a reversible,

two position deck board fitted as standard throughout the range, the world's first LED lighting and, on High grade versions, an aluminium anti-slide rail.

Further technology highlights include:

LED Headlamps: A range of three, grade-dependant LED front lamp clusters includes a triple LED parabola unit type headlamp, a Bi-Beam LED headlamp with AHB, and an LED headlamp with an Adaptive High-beam System (AHS).

World First 3-D Driver's Meter: The drivers meter cluster is equipped with a 7" Multi-information Display offering a choice of digital and analogue speedometer modes. The panel may also be switched to the world's first 3-D effect, in which the dials appear to float in mid-air.

Head-up Display (HUD): Its position and brightness adjustable via the steering wheel switchgear, an optional 10" colour TFT Head-up Display projects various driving-related information and warnings onto the windscreen glass within the driver's field of view, such as speed limits, navigation prompts and an eco driving indicator.

Toyota Touch Multimedia System: The new Corolla's 8", full colour, touch-screen centre console display features Toyota's Touch® 2 with Go multimedia and navigation system. The overall user experience of this fast operating system is enhanced by pinch, zoom and slide operation, and the addition of multi-contextual One Box Search.

eCall: eCall provides drivers with assistance during an incident when the airbags are deployed. It will automatically contact national emergency services, providing essential information such as vehicle location and the number of occupants, and ensuring that vehicle occupants will be able to communicate with the emergency services operator even if seriously immobilised.

eCall also allows the vehicle occupant to contact the emergency services directly via a one-push button. The call is made using the vehicle's in-built SIM, with no charge to the owner.

Connected Services: Connected services will also be offered on the new Corolla. This all-new application makes numerous convenience and peace of mind features available to customers, including Last Mile guidance, Send to Car

navigation, Find my Car, Driving analytics and Maintenance Reminder.

JBL GreenEdge Premium Sound System: Hybrid versions of the new Corolla may be equipped with an 8-speaker JBL Premium Sound System. The speakers -including JBL's iconic, A pillar-mounted horn tweeter- have been specifically tuned to the acoustics of the Corolla's notably quiet cabin. The system incorporates Clari-Fi™ technology which supplements the frequencies that are lost on compressed audio files -such as MP3 or streaming audio files- in real time, restoring the sound quality and stereo mix as closely as possible to the original recording.

Wireless Mobile Phone Charging: A wireless charging system allows vehicle occupants to recharge all Wireless Power Consortium (WPC)-compatible mobile telephones simply by resting them on a dedicated pad located in front of the gearshift lever.

Skyview Panoramic Sunroof: The Skyview panoramic sunroof features two glass panels, the front panel sliding to give a maximum opening of 272 mm. A mesh deflector reduces wind noise when the panel is fully open, and the roof is fitted with an internal electric roller shade.

Power Tailgate Kick Sensor: A hands-free kick sensor is now available for the opening and closing of the Touring Sports' power tailgate, activated by sliding a foot under the central area of the rear bumper. The tailgate height when fully open can be customised. The tailgate now features a one-touch, close and lock button.

Simple Intelligent Park Assist with Intelligent Clearance Sonar (SIPA+ICS): The system uses a rear camera and ultrasonic sensors on the front side-bumper to identify viable reverse and parallel parking spaces. It will then automatically apply the correct sequence of steering angles for the parking manoeuvre into the target space; all the driver needs do is control the vehicle's speed. SIPA automatically activates the Intelligent Clearance Sonar (ICS) system, ensuring the safety of parking manoeuvres.

HYBRID POWERTRAINS

Society's increasing awareness of environmental issues has led to ever more strict anti-emissions regulations, particularly in large European cities. Combining the lowest possible emissions with the capability of driving for

up to 50% of a daily commute under all-electric power alone, Toyota's self-charging hybrid powertrains represent a compelling proposition in the eco-friendly urban transport market.

The new Corolla is the first Toyota model to offer a choice of 2 self-charging hybrid powertrains. Both Hatchback and Touring Sports versions of will offer customers one conventional engine -a 1.2 litre turbo petrol unit- and a choice of 122 hp, 1.8 litre or 180 hp, 2.0 litre hybrid powertrains.

Improved 1.8 Litre Hybrid Powertrain

The fourth generation 1.8 litre self-charging hybrid system develops 90 kW/122 hp and 142 Nm of engine torque, with the added power of a 53 kW electric motor which develops maximum torque of 163 Nm from zero rpm. It fulfils all the requirements that customers have come to expect from a Toyota self-charging hybrid powertrain -quiet, intuitive, responsive and self-sufficient EV technology with no need for plug-in recharging. It offers low cost of ownership, outstanding fuel economy and low CO₂ emissions, and up to 50%* all-electric driving on the everyday commute.

Its size and weight reduced to fit on the new GA-C platform without detriment to output or quietness, the 1.8 litre engine benefits from several friction reducing measures, a larger capacity EGR (Exhaust Gas Recirculation) system and optimal heat management.

The calibration of the hybrid drive system has been further refined. Greater torque from the electric motor provides a more linear rpm increase under acceleration. And the adoption of a lithium-ion battery pack promotes even greater fuel economy.

2.0 Litre Hybrid Powertrain

'At the start of the project, we studied European customer profiles and their satisfaction with the 1.8 litre hybrid powertrain. Whilst being very happy with the system's fuel consumption, comfort, smoothness and reliability, it became apparent that we would not be able to satisfy the requirements of a significant group of potential customers.

People driving turbocharged powertrains above 1.4 litres were clearly asking for faster ac-





POWERTRAIN	1.8 HYBRID	2.0 HYBRID
	Toyota Hybrid System	Toyota Hybrid System
Hybrid System output (DIN hp/kW)	122 / 90	180 / 132
ENGINE		
Fuel type	Petrol	Petrol
Maximum power output (DIN hp/kW @ rpm)	98/72 @ 5,200	153/112 @ 6,000
Maximum torque (Nm @ rpm)	142 @ 3,600	190 @ 6,000
PERFORMANCE		
0-100 km (sec) HB TS	10.9 11.1	7.9 8.1
Max. speed (km/h)	180	180
FUEL CONSUMPTION		
Combined (l/100 km - Corr NEDC) HB TS	3.4 3.4 ¹ (with 16" alloy)	3.8 3.8 ¹ (with 16" alloy)
CO₂ EMISSIONS		
Combined (g/km - Corr NEDC) HB TS	76 76 ¹ (with 16" alloy)	86 87 ¹ (with 16" alloy)
INTERIOR DIMENSIONS		
Boot capacity (litres - VDA) HB TS	361 598	313 ² 581
WEIGHT		
Curb weight min/max (kg) HB TS	1,345 - 1,400 1,370 - 1,430	1,410 - 1,510 1,465 - 1,560

celeration and response, and that's why we took the decision to develop the 2.0 litre hybrid for the European market.' (Rembert Serrus, Senior Manager Performance Planning – Toyota Motor Europe)

The new 2.0 litre system develops 132 kW/180 hp and 192 Nm of engine torque, also with the added torque of a nickel-metal hydride-powered electric motor.

Taking full advantage of the added stability, handling and agility inherent in the newly adopted GA-C platform, it offers drivers an 'energised drive', with more power, a Sport mode and a six-speed Sequential Shiftmatic transmission with steering wheel-mounted paddles for a more dynamic, engaging driving experience.

Moreover, the new 2.0 litre hybrid system is a unique proposition in this segment; no

¹ Based on Regulation EC 2017/1153 as amended EC 2017/1231 - pending final homologation
² = incl. volume under deckboard, above deckboard is 242l

other conventional powertrain can offer the same combination of performance and low emissions. And numerous measures have been taken to ensure that extra power is matched by enhanced fuel efficiency, lower emissions and even quieter running.

A high compression ratio of 14:1, the high speed combustion achieved through the high tumble flow of a highly efficient intake port and long stroke, a new oil pump design and several friction-reducing measures combine with a reduction in size of the transaxle, power control unit, motor and hybrid battery to enhance fuel efficiency.

In addition, the EV drive vehicle maximum speed has been increased to above 115 km/h, and system control has been changed to prohibit engine start without accelerator pedal operation even before engine warm up starts. In combination, these measures substantially enhance fuel efficiency.

Lowering emissions, the exhaust system catalytic converter has been placed closer to the engine, and warm-up control after engine start optimised to achieve early, enhanced exhaust purification.

Furthermore, a balance shaft, amended engine mount position and shape, structural changes to the transaxle, gear tooth polishing, the adoption of a positive/negative hysteresis damper, a lightweight timing chain and revisions to the water pump motor all combine to reduce powertrain noise to exceptionally low levels.

DRIVING DYNAMICS

The new GA-C platform brings considerable dynamic benefits to the new Corolla model range, as well as marked improvements to driver ergonomics and visibility.

Highly Rigid, Lightweight TNGA Bodyshell

Aluminium, high tensile strength steel and hot stamped materials have been extensively used, and the panel thickness of the doors and roof panel reduced. This has effected a considerable weight reduction and, hence, improved fuel efficiency.

At the same time, the addition of adhesives throughout the new bodyshell and an increase in the use of spot welding combine to increase body rigidity by some 60% over both outgoing

Hatchback and Touring Sports models, promoting a marked increase in handling agility, responsiveness to steering inputs and high speed stability.

Handling and agility are further improved by the lower mounting height of the engine, the lower hip point of the seats and the location of the hybrid battery beneath the rear seats. In combination, these measures have lowered the new Corolla's centre of gravity by some 10 mm.

Suspension

The new Corolla features a proven MacPherson strut front suspension system, an all-new multilink rear suspension arrangement, new shock absorber valve technology and, for the first time, the availability of Adaptive Variable Suspension (AVS).

The front suspension geometry has been revised, and the coil spring and shock absorber characteristics optimised for a linear steering response during mid- to high-speed cornering. The suspension arm and bush structures have been changed and the friction of sliding parts reduced to minimise the transmission of shocks from rough surfaces and achieve high quality ride comfort.

The newly developed multilink rear suspension combines an increase in luggage capacity through compact system packaging with excellent handling stability and ride comfort. Exclusively designed coils springs offer both handling stability and ride comfort. And link arm location has been optimised to keep the tyres at a toe-in angle both during cornering and under braking, enhancing the vehicle's response to steering inputs and stability under braking.

Both front and rear suspension systems benefit from a new shock absorber valve design which effects a 40% reduction in friction for a smoother, more comfortable ride.

The Adaptive Variable Suspension (AVS) system controls shock absorber damping on all four wheels, enhancing both ride comfort and -through improved steering response and a flatter ride- driving performance. Damping force is automatically and continuously controlled through 650 steps by a linear solenoid actuator, which operates four times faster than a conventional step motor.

AVS cooperates with the Drive Mode Select



system to control damping force in accordance with the selection of ECO, NORMAL, SPORT S, SPORT S+ or CUSTOM modes, offering drivers the appropriate balance of ride comfort and handling agility.

Aerodynamics

A further benefit of the GA-C platform is its suitability for the design of a highly aerodynamic body shape through such measures as the overall reduction in vehicle height and the significant lowering of the bonnet height.

Further enhancing fuel efficiency, an optional grille shutter controls airflow to the engine compartment. Closing the shutter not only reduces drag, but also allows the engine to reach optimum operating temperature in a shorter time after a cold start.

Improved NVH

Building on the exceptional quietness of Toyota's self-charging hybrid technology, the new Corolla benefits from numerous measures to minimise both the noise and vibration entering the cabin.

The engine installation has been carefully designed to minimise vibration during start up and at idling speeds. Engine speed increase at the start of acceleration has also been suppressed, not only to achieve a more linear

COROLLA	HB	TS
EXTERIOR DIMENSIONS		
Overall length (mm)	4,370	4,653
Overall width (mm)	1,790	1,790
Overall height (mm)	1,435	1,435
Wheelbase (mm)	2,640	2,700
Ground clearance (mm)	135	135

match of engine and vehicle speeds, but also to enhance quietness during acceleration.

The GA-C platform itself contributes to the suppression of transmission vibration. The steering wheel pad functions as a dynamic damper to suppress steering vibration, and even the tool box functions as a dynamic damper to reduce rear floor panel vibration.

The generous application of sound absorbing and insulating material in the engine bay combines with a triple-layered dashboard inner silencer to minimise the penetration of engine and transmission noise into the cabin.

An integral floor silencer has also been adopted, increased body sealer has been applied to gaps between panels, and foam material has been installed within the body frame in numerous locations to reduce the penetration of wind and road noise into the cabin.

NEW RAV4 HYBRID

All SUV - All Hybrid

In 1994, Toyota's launch of the original RAV4 introduced a new kind of car to the world, one that combined the go-anywhere performance and rugged stance of an SUV with compact dimensions and handling more akin to a hatchback.



THE SAME PIONEERING spirit is witnessed in the all-new fifth generation RAV4, which makes its first European appearance at the Paris Motor Show. This is a model which takes the SUV into a new era of performance, capability and safety, advances that are underpinned by the first use of a TNGA (Toyota New Global Architecture) platform in an SUV and a powerful new design.

With its low centre of gravity and significantly increased body rigidity, the new RAV4's GA-K platform directly contributes to superior handling, ride comfort, a spacious interior, class-leading load space and the freedom to produce a strong, eye-catching design with lower roof and hood lines and higher ground clearance. As well as providing more space and comfort, the cabin displays exceptional quality and finish throughout.

The new RAV4 remains unique in its class in offering customers a self-charging hybrid powertrain – the choice of an overwhelming majority of customers in Western Europe (85 per cent in 2018). The new 2.5 litre, 222 DIN hp TNGA hybrid powertrain will strengthen customer appeal, delivering step-changes in power, responsiveness and efficiency, with best-in-class fuel economy and emissions levels.

At the same time, all-wheel drive systems have been comprehensively improved to achieve a “drive on any road” capability. The new RAV4 Hybrid's electric AWD system has been re-engineered and enhanced to provide a much stronger performance in challenging conditions and secure handling on slippery surfaces.

The new RAV4 is also the first Toyota to benefit from additional Toyota Safety Sense features that extend the use of advanced technologies to help prevent accidents and provide greater driver assistance, including systems that introduce a degree of automated driving.

TOYOTA NEW GLOBAL ARCHITECTURE PLATFORM

The foundation of the new RAV4's dynamic qualities is its all-new TNGA platform. This gives the car the core strengths of a low centre gravity, light weight and a strong, rigid and balanced chassis that delivers exceptional handling, stability and driver rewards.

For the customer this makes the car more fun to drive, while at the same time enabling great design inside and out, enhanced safety performance that gives greater peace of mind and greater comfort for everyone on board.

The lowest possible centre of gravity is achieved by making every component lighter and locating it lower down in the vehicle – everything from the engine to the seats in the cabin. The platform also allows for a 57 per cent increase in the RAV4's body rigidity, which contributes to a stable, flat ride with superior handling.

The TNGA platform underpins the “confident and natural” driving quality Toyota has sought for the new model: “confident” in not reacting adversely to disturbances and communicating a sense of stability, and “natural” in its intuitive, natural response to the driver's inputs. Beyond the benefits of the chassis itself, further detailed measures make important contributions to its overall quality, with Toyota's top engineers leading the development of the new RAV4's dynamic performance, fine-tuning its handling and driveability.

For example, the design and location of the fuel tank have been changed to achieve better handling and stability. The tank is now located laterally in front of the rear axle so that its load is spread evenly between the wheels, supporting flat, stable performance. Optimum weight balance is not only achieved front-to-rear (51/49) but also left-to-right.

Response from the Electric Power Steering has been improved by moving the assist motor from the column to the rack. The result is more linear increase in steering input torque and less strain on the steering shaft, which communicates a better, more direct feel to the driver as the steering loads up and gives more faithful line tracing through corners. Summer-specification tyres are used in place of the all-weather type, further adding to the precise driving quality and achieving top-class braking distances.

The RAV4's TNGA platform also distinguishes itself in its use of a double wishbone rear suspension system. Thanks to the low centre of gravity and high body rigidity, the suspension does not have to be rendered stiffer to meet dynamic targets. Nonetheless, precise adjust-

ments have been made to the rear suspension to focus on better ride comfort, including a more upright setting for the shock absorbers and optimisation of the locating point for the trailing arms.

Handling is thus agile, faithful and neutral, giving the driver confidence with accurate responses to the driver's use of the steering wheel and throttle pedal and optimised shift patterns.

CONCEPT AND DESIGN

The TNGA platform was of great benefit to Toyota's designers in their mission to give the new RAV4 a strong SUV character and styling that sets it apart from other models in its segment.

The fact that TNGA introduces so many standardised parts "under the skin" simplifies the development process, giving the designers more time and scope to create an all-new look, inside and out. The exterior lines and detailing in the cabin are influenced by regular, polygonal shapes, communicating strength and coherence.

The powerful design combines with the unique new self-charging hybrid powertrain to give the new RAV4 the stand-out qualities required to attract customers in a highly competitive marketplace, in particular conquest sales to people new to the model and the Toyota brand.

Key elements in generating this impact include raising the ground clearance (+15 mm), using large diameter wheels and making the car suitable for multiple types of use.

The exterior look is powerful and individual, with a solid form that extends from the front of the vehicle along the sides to the rear, giving the sense of a strong mass and authentic SUV capabilities. At the front the emphasis is on width and strength with extra volume added to the lower bumper section, and there is a similar effect at the rear where the horizontal line created by the tail lights and back window angles sharply downwards at each edge, drawing the eye towards the rear wheels and expressing the "polygon" influence on the design.

The cabin is characterised by high sensory quality throughout and precision execution. Soft-touch surfaces abound, including the dashboard and door panels. Consistent pat-

terns, textures, colours and ambient lighting are applied, with symmetrical shapes and use of the polygon motif seen in the Toyota FT-AC concept model. Switchgear is new, too, with cleanly integrated buttons and pleasingly tactile controls, such as the button/dial to adjust the air conditioning.

The low-set instrument panel – a further benefit of the TNGA platform – has powerful horizontal lines that flow into the door panels, emphasising the cabin's generous width and giving the driver a clearer view of the road ahead. A larger, open centre console between the front seats is in keeping with a welcoming, functional SUV interior. Special attention was paid to providing plenty of useful and easily accessible storage for the driver and front passenger.

The TNGA platform helps secure impressive cabin space, best-in-class load space and all-round comfort. Reducing the front and rear overhangs by a combined 35 mm (-5 mm front, -30 mm rear) means the new model is shorter overall by 5 mm (4,600 mm) and retains its agile manoeuvrability, yet the wheelbase has been increased by 30 mm (2,690 mm), securing a more spacious cabin.

To add to the new model's purposeful, wide stance, overall width has grown by 10 mm (1,855 mm) and the front and rear treads have been increased. At the same time, overall height has been brought down by 10 mm (to 1,650 mm).

On-board comfort and convenience

Securing better all-round visibility was a key consideration in the RAV4's design process. The TNGA platform allows the hood to sit 15 mm lower, adding two degrees to the driver's forward field of vision, and the external mirrors have been moved to a lower position on the front doors. The front pillars have been made slimmer, the belt line has been lowered and the rearward view from the driver's seat has been improved by enlarging the rear side windows and making a new digital rear-view mirror available (further details in the Equipment section).

The driver's comfort and sense of control when at the wheel are important considerations, and the new TNGA chassis allows for a more engaging driving position, without de-



tracting from the commanding view of the road that's a defining quality of SUVs. The driver's hip point has been lowered by 15 mm, but the range of steering wheel adjustment has been increased by 50 per cent. This, together with a generous seat adjustment range and precise positioning of the pedals and arm rest, ensures more customers are able to find their ideal position when driving.

Comfort for rear seat passengers has been improved with 40 mm added to the left/right couple distance, more spacious rear footwells and two air vents. Increasing the opening angle of the rear doors and reducing the distance from the hip point to the rocker panel makes getting into and out of the vehicle and access to child seats easier.

The load space behind the rear seats has been made larger and more user-friendly, notably

RAV4 HERITAGE AND MARKET SUCCESS

The Toyota RAV4 started out as a pioneer, niche model but has gone from strength to strength to become one of the world's best-selling vehicles. It can be credited with creating a whole new market segment, one in which today every major manufacturer is represented.

The model now sits at the heart of Toyota's global business. Cumulative global sales across four generations since 1994 have reached more than 8.1 million, while in 2017 the current RAV4 was the world's best-selling SUV and fourth best-selling model overall, with 810,953 sales.

In Europe, high customer demand for SUVs has seen the market increase four-fold in the past four years (accounting for 22.7 per cent of the new car market) and annual sales are expected to reach more than five million by 2023. Sales volumes in the D-SUV segment remain stable, at around 1.5 million a year.

¹ Based on Regulation EC 2017/1153 as amended EC 2017/1231 – pending final homologation



thanks to a fully flat floor and a length extended by 60 mm to secure best-in-class capacity, 79 litres more than in the current RAV4. Flexibility is designed-in so that the space can easily be adapted to gain more cargo room when required: with the rear seats folded down, the new RAV4 can accommodate a 29-inch mountain bike without any wheels having to be removed.

There is a height-adjustable, two-level deck board that can be reversed when dirty items need to be carried. The rear seats have a 60:40 split-folding function and there are storage nets on each side of the boot. Clever details include a hand grip on the tailgate that can serve as a hanger and a power-operated tailgate with hands-free function.

POWERTRAINS AND PERFORMANCE

The new RAV4 will be available with two TNGA powertrains, both more powerful and fuel-efficient than those in the current model.

The new 2.5 litre RAV4 Hybrid combines fuel and emissions efficiency and quiet operation with more power and greater responsiveness.

The full system maximum output of 222 DIN hp/163 kW compares to 197 DIN hp /145 kW for the current model, signalling how Toyota's latest self-charging hybrid technology is not lacking in strength; acceleration from rest to 100 km/h takes just 8.1 seconds.

This proposal of "power with no compromise" gives the new RAV4 a unique advantage in its class and, with the benefit of its improved performance, driveability and efficiency, is expected to account for an even greater proportion of sales. Toyota predicts that this will rise from the current 85 per cent to 90 per cent for the new model in Western Europe. A new 2.0 litre petrol engine will also be available, with a choice of manual or automatic transmissions.

Toyota's fourth generation self-charging hybrid system makes its debut in the RAV4, bringing with it multiple benefits. Key components, including the power control unit (PCU) and the Nickel metal-hydride battery are more compact and lighter in weight, and have been engineered to reduce electrical and mechanical losses.

The powertrain makes use of Toyota's new 2.5 litre Dynamic Force engine, a four-cylinder



unit with direct and indirect injection that targets best-in-class fuel consumption and emissions for the new RAV4. Toyota expects combined cycle fuel economy to be 4.5 l/100 km* (Correlated NEDC) with CO₂ emissions from as low as 102 g/km* (Correlated NEDC). For the driver, the results are better acceleration from stationary, improved efficiency at higher speeds and overall smoother and more linear acceleration.

ALL-WHEEL DRIVE

Toyota is introducing improvements in the all-wheel drive technology in the new RAV4 to deliver enhanced performance, capabilities and control in all driving conditions, adding to the model's "go anywhere" spirit and driving pleasure. Its impressive AWD performance on-road and off will further distinguish the new RAV4 among its competitors, with secure



cornering performance and grip in all conditions.

RAV Hybrid with significantly enhanced electric AWD system

The new RAV4 Hybrid is equipped with a significantly enhanced and more capable electric AWD system that comes with no penalties: it returns better fuel economy in urban driving, quieter performance at high speeds and better traction in slippery conditions. It is also more compact and lighter in weight than mechanical AWD systems, so fuel consumption and vehicle packaging are not compromised.

The system efficiently generates drive torque using power from the hybrid vehicle system and an additional motor generator on the rear axle. This design reduces energy losses, saves weight and optimises AWD operation in different driving conditions.

Compared to the current model, the level of torque that can be directed to the rear wheels has been increased by 30 per cent, enabling a front/rear split from 100:0 to up to 20:80, depending on driving conditions. Maximum torque to the rear wheels has increased from 953 to 1,300 Nm, matching or overachieving torque achieved by mechanical systems and giving more sure-footed performance, for example when pulling away on loose, slippery surfaces.

The electric AWD system automatically optimises this torque ratio according to driving conditions, providing improved handling, stability and off-road performance, particularly in faithful line tracing through bends in slippery conditions, giving the driver a strong feeling of all four wheels being in good contact with the road.

The mechanical all-wheel drive system on





the new RAV4 2.0 litre petrol CVT model is equipped with Toyota's first dynamic torque vectoring system with Rear Driveline Disconnect. Featuring twin couplings on the rear axle, this manages torque distribution between the left and right rear wheels to give stable performance and accurate response to the driver's steering inputs when cornering, both in dry and slippery conditions.

AWD Integrated Management

The new RAV4's AWD performance is further improved with the introduction of AWD Integrated Management (AIM), a unique feature in its class. This automatically adjusts different vehicle systems – steering assist, brake and throttle control, shift pattern and drive torque distribution – according to the drive mode selected. In the new RAV4 Hybrid, the driver can switch from Normal to Eco or Sport mode. When choosing Sport mode, AIM modifies the steering assist, throttle control shift schedule and drive torque distribution to gain better on-road performance.

Greater “escape” capability with Trail Mode

The RAV4 Hybrid gains a higher level of capability with the introduction of a new automatic limited-slip differential control – Trail Mode – which ensures the best possible grip and con-



trol in slippery conditions. It can also provide valuable assistance when tackling challenging off-road conditions.

With the current generation RAV4 Hybrid, there is a risk of the vehicle becoming stranded if a driven wheel loses contact with the ground on very uneven terrain. On the new model, by activating the Trail Mode (via a Drive mode selector on the centre console), the free rotating wheel can be braked and drive torque directed to the grounded wheel. Throttle control and the transmission shift pattern are also adapted to help the driver keep the vehicle moving.

EQUIPMENT AND ENHANCED TOYOTA SAFETY SENSE SYSTEMS

Equipment specifications for the new RAV4 will demonstrate how Toyota continues to apply technologies to deliver useful innovations in safety, technology, comfort and everyday practicality.

Features that will be available as standard or as options, according to model grade, will include a power-operated panoramic roof, ventilated seats, wireless charging for smartphones and up to five USB ports around the cabin for the connection of multiple devices.

Equipment features

The new RAV4 will offer generous equipment specifications across its range in Europe, with all models equipped as standard with the latest iteration of Toyota Safety Sense with an eCall emergency contact function. (Read more about Toyota Safety Sense in the dedicated chapter).

Even at entry level, the check-list will include 17 inch alloy wheels, roof rails, LED headlights, push-button start, a seven-inch display audio and 4.2 inch TFT multi-information display.

Features such as 18 inch alloys, smart entry, extensive soft touch cabin trims, larger display screens, leather upholstery, projector LED headlights, rear privacy glass and a power-operated tailgate will also be available.

Style grade for RAV4 Hybrid

The Style grade will stand out with its bi-tone paint finish, striking a contrast between the bodywork colour (a choice of four) and a black roof section, plus projector LED headlights and black 18 inch alloys. In the cabin sports-style seats, a black headlining and blue trim accents

POWERTRAIN	HYBRID AWD	HYBRID FWD
	Toyota Hybrid System with electric AWD system	Toyota Hybrid System
Hybrid System output (DIN hp/kW)	222/163	218/160

ENGINE

Fuel type	Petrol	Petrol
Maximum power output (DIN hp/kW @ rpm)	177/130 @ 6,000	177/130 @ 6,000
Maximum torque (Nm @ rpm)	221 @ 4,400	221 @ 4,400

PERFORMANCE

0-100 km (sec)	8.1	8.4
Max. speed (km/h)	180	180

FUEL CONSUMPTION

Combined (l/100 km - Corr NEDC)	4.6* (with 17" alloy)	4.5* (with 17" alloy)
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CO₂ EMISSIONS

Combined (g/km - Corr NEDC)	105* (with 17" alloy)	102* (with 17" alloy)
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EXTERIOR DIMENSIONS

Overall length (mm)	4,600	4,600
Overall width (mm)	1,855	1,855
Overall height (mm)	1,685	1,685
Wheelbase (mm)	2,690	2,690
Ground clearance (mm)	190	190

INTERIOR DIMENSIONS

Boot capacity (litres - VDA)	580	580
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WEIGHT

Curb weight min/max (kg)	1,645 - 1,730	1,590 - 1,680
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* Based on Regulation EC 2017/1153 as amended EC 2017/1231 - pending final homologation

further emphasise the car's distinctive quality. A wide range of option packs and accessories will be available so owners can equip their RAV4 to perfectly meet their lifestyle preferences.

New digital rear-view mirror

The new RAV4 helps drivers gain a better view of their surroundings with a new digital rear-view mirror – a Toyota first. It can be used as a conventional, electrochromic auto-dimming mirror, directly reflecting the road and traffic behind the car, or as a digital monitor with a much wider field of vision.

At the touch of a switch, it presents real-time images relayed from an adjustable, high-definition camera mounted high up on



the RAV4's back window. This ensures a clear view, for example when large items in the load space or tall rear-seat passengers obscure the driver's line of sight. The camera also provides a wider field of vision and the driver can use touch controls to adjust the image, including a zoom function.

Panoramic View Monitor, Panoramic Moonroof and JBL audio system

Further premium features which will be available on the new RAV4 include a Panoramic View Monitor, which provides the driver with a real-time 360-degree view of the area immediately around the vehicle, including a bird's eye aspect from above. This is of value both off-road,

to better negotiate tricky terrain, and when manoeuvring in confined spaces where hazards can lurk outside the driver's line of sight.

The open and spacious cabin environment can be further enhanced with an opening panoramic roof. Where on-board entertainment is concerned, Toyota has worked with premium audio partner JBL to deliver a truly unique and immersive experience. Tailored-made new RAV4 JBL audio system will deliver concert sound quality through its 9-speakers architecture. It features JBL-signature Horn Tweeters, new powerful subwoofer and amplifier with music restoration technology Clari-Fi™.





NEW CAMRY HYBRID

**A unique offer in the European D/E
sedan segment**

Making its European debut at the 2018 Paris Motor Show, the new Toyota Camry Hybrid combines stylish design and superior comfort levels with the high efficiency of its latest generation self-charging hybrid powertrain.



THE CURRENT SHIFT in market focus away from diesel powertrains paves the way for the re-introduction of the Camry in Western Europe after an absence of 14 years.

Strengthening Toyota's presence in the D/E-sedan segment, the new Camry Hybrid represents a unique offer thanks to its powerful, self-charging hybrid powertrain. The new sedan expands Toyota's European line-up of self-charging hybrid vehicles to eight models.

The all-new Camry is the 8th generation of a car that has won countless awards and distinctions since it first went on sale in 1982. The model is sold in more than 100 countries globally, with sales totalling over 19 million units to date.

With annual sales of more than 700,000 units, Camry remains the best-selling D/E-segment sedan in the world.

The all-new Camry builds on all the core values that have made it so popular to date - segment-leading levels of QDR (quality, durability and reliability), quietness and ride quality- with head-turning new exterior and interior design, outstanding comfort and roominess, state-of-the-art powertrain technology and newfound levels of driving pleasure.

The latest generation Camry showcases the Toyota New Global Architecture (TNGA) design and engineering philosophy. Applied to every aspect of the vehicle and its powertrain, TNGA places enthusiast-oriented 'fun to drive' characteristics and alluring styling on an equal footing with superlative build quality, highly efficient packaging, advanced technology and strong environmental performance.

SLEEK EXTERIOR DESIGN

The new Camry Hybrid's styling has a bold and distinctive appearance that seamlessly melds athletic accents and creases within the sheet metal.

The front represents a bold evolution of the brand's Under Priority and Keen Look design language -Catamaran Under Priority.

A slim and deep upper grille emphasises the Toyota emblem and incorporates thin Hi-LED headlamp clusters at its extremities.

The large, trapezoidal lower grille occupies almost the full width of the bumper area. Only the bumper side corners remain, sandwiching the grille in a manner reminiscent of the twin hulls of a catamaran and emphasising the wide track and broad, purposeful stance of the new Camry Hybrid.

The lower grille itself features horizontal bars which have been meticulously crafted to strengthen the visual power of the Catamaran Under Priority design and add both aggression and prestige to the wide, low frontal styling.

In profile, the low bonnet and roofline combine with a low belt line to give the appearance of a cabin pulled downwards into the body, visually lowering the new Camry's centre of gravity even further.

The cabin combines an extended roofline to ensure occupant comfort with compact side glazing that fits within the wheelbase to create a uniquely stylish, sporting appearance.

The rear half of the cabin tapers inwards, tucked between the broad, protruding shoul-

ders of the rear wheel arches. Below, bumper-enveloping 'aero' corners flow from all-LED tail lamp clusters to further emphasise the new Camry's wide, dynamic stance.

ERGONOMIC AND PREMIUM CABIN SPACE

The interior of the new Camry has been designed to offer a carefully considered fusion of function, style and craftsmanship.

The sensuous curves of the new dashboard combine an ergonomically ideal, driver-focused cockpit environment with spacious, comfortable passenger accommodation. Together, the seamless component layout, painstakingly crafted textures and consistency in the use of materials create a cabin of outstanding quality and prestige.

The audio system, air-conditioning control panel and 8" infotainment system screen have been fully integrated into the completely flush, piano black surface of the centre console with no gaps between the controls.

The new Camry's Human Machine Interface (HMI) features a trio of easy-to-read, information coordinating displays consisting of: a high visibility, colour, 10" Head-up Display (HUD) ; a 7" in-meter Multi-information Display; and an 8" centre console display incorporating the latest version of Toyota's Touch® 2 multimedia system.

The switchgear has been completely redesigned for improved functionality, appearance and tactility. All controls have been carefully shaped and ergonomically optimised, including the high-quality satin metallic switches. Seamless texture and finish quality throughout the instrument panel epitomises the Camry's high levels of interior precision.

Virtually every surface of the spacious, opulent cabin is finished in high-quality soft-touch padding, supple leather, elegant wood grain mouldings or a lustrous, newly developed satin chrome trim. A new Tiger Eye ornamentation trim is available, offering a sense of depth and shine that varies with the viewing angle in the manner of the tiger's eye gemstone.

With a choice of leather or fabric upholstery, the new Camry Hybrid interior is available in two colour schemes: Beige (leather) -which combines a dark grey carpet and upper dashboard with two shades of beige; and Black (fabric or leather) -which highlights the interior's new satin chrome accents.

In response to the enhanced levels of handling agility delivered by the new GA-K platform, the front seats have been redesigned to offer high comfort and great lateral holding ability for less fatigue.



Replicating the design of the front seats, rear accommodation is available in two formats; 60:40 split foldable seats, and 40:20:40 split power reclining seats with wide headrests and a large rear seat centre armrest for enhanced comfort.

The power reclining seat format is available with a capacitive touch control panel built into the front of the centre armrest, allowing for the rear seat operation of the air conditioning, audio system, and seat reclining controls.

Finally, the adoption of a new rear double wishbone suspension system reduces shock absorber incursion into the loadspace of the new Camry, enabling luggage capacity of 524 litres.

NEW 2.5 LITRE HYBRID ELECTRIC POWERTRAIN

The new Camry Hybrid's 2.5 litre self-charging hybrid powertrain combines fuel efficiency, low emissions and quiet operation with more power and greater responsiveness.

Delivering 160 kW/218 DIN hp, Camry Hybrid generates CO₂ emissions as low as 98 g/km and returns combined fuel consumption of only 4.2 l/100 km¹.

Providing high power output with smooth and highly refined operation, the new 2.5 lit-

er four-cylinder Dynamic Force Engine boasts world-class top level maximum thermal efficiency of 41%.

It incorporates an array of Toyota's most advanced technologies including Dual VVT-i with VVT-iE (Variable Valve Timing intelligent system by Electric motor) and D-4S (Direct injection 4-stroke gasoline engine Superior version) for optimal power production, emissions performance and fuel efficiency.

The new Toyota Hybrid System (THS II) includes new Sequential Shiftmatic technology that allows the driver to 'shift' with the console-mounted lever, mimicking a quick-shifting six-speed automatic transmission, for spirited performance and driving enjoyment.

ENGAGING DRIVING DYNAMICS

Key to the new Camry's enhanced dynamic abilities and superior ride quality is its all-new, TNGA-based GA-K platform. Key ingredients to ensure an engaging drive are increased torsional rigidity, a new rear-double wishbone suspension and a significantly lowered centre of gravity.

The lightweight, highly rigid bodysell offers a substantial 30% increase in torsional rigidity over the previous model. While a newly





developed, four-point engine mounting system has been designed to not only dramatically reduce engine vibration, but also further increase the Camry's rigidity and handling stability.

New suspension consisting of a MacPherson strut configuration at the front and a new double wishbone layout at the rear has been engineered to not only give superior stability and flatter cornering to inspire driver confidence, but also to deliver a premium ride quality that surpasses that of other vehicles in its class.

Last but not least, the GA-K platform is designed to achieve a low centre of gravity which results in a more engaging driving position, and more precise and responsive handling with less body roll. As a result, the overall vehicle height and bonnet height have been reduced, and the cabin floor has been lowered.

INCREASED LEVELS OF SAFETY

New Camry Hybrid is equipped with a wide range of active and passive safety features.

All models come as standard with 'Toyota Safety Sense', a set of active safety technologies designed to help prevent or mitigate collisions across a wide range of traffic situations.

Combining a camera and millimetre-wave radar for a high level of detection performance, the new Camry's Toyota Safety Sense system features a Pre-Collision System (PCS) with a Pedestrian Detection function, Adaptive Cruise Control (ACC), Lane Departure Alert (LDA) with steering assist, Automatic High Beam (AHB) and Road Sign Assist (RSA) technology.

Further driver support and safety enhancing systems include a Blind Spot Monitor (BSM) with Rear Cross Traffic Alert (RCTA), front and rear corner clearance sonar, a Back Monitor with parking guidelines, and a full suite of brake and traction control systems.

The Camry's body structure has been designed to absorb front, side and rear impacts, dispersing collision energy to help prevent deformation of the high-strength cabin area.

While the use of a newly developed, 'floating-island' bonnet inner structure and a cowl louvre impact absorbing structure contributes to first class pedestrian protection performance.

POWERTRAIN	CAMRY HYBRID
	Toyota Hybrid System
Hybrid System output (DIN hp/kW)	218/160

ENGINE	
Fuel type	Petrol
Maximum power output (DIN hp/kW @ rpm)	177/130 @ 5,700
Maximum torque (Nm @ rpm)	221 @ 3,600 - 5,200

PERFORMANCE	
0-100 km (sec)	8.3
Max. speed (km/h)	180

FUEL CONSUMPTION	
Combined (l/100 km - Corr NEDC)	4.2 ¹ (with 17" alloy) 4.3 ¹ (with 18" alloy)

CO ₂ EMISSIONS	
Combined (g/km - Corr NEDC)	98 ¹ (with 17" alloy) 101 ¹ (with 18" alloy)

EXTERIOR DIMENSIONS	
Overall length (mm)	4,885
Overall width (mm)	1,840
Overall height (mm)	1,445
Wheelbase (mm)	2,825

INTERIOR DIMENSIONS	
Boot capacity (litres - VDA)	524

WEIGHT	
Curb weight min/max (kg)	1,595 - 1,635

¹ Based on Regulation EC 2017/1153 as amended EC 2017/1231 - pending final homologation

TOYOTA YARIS GR SPORT

GAZOO Racing inspired performance

INSPIRED BY THE EXCLUSIVE YARIS GRMN performance hatchback, the new Yaris GR SPORT is set to bring more sports driving pleasure to Toyota's supermini range. Due to go on sale from late 2018, the new model makes its world debut at the Paris Motor Show and will be the first GR SPORT specification car to be launched in Europe.

The introduction of the GR SPORT grade is a further example of how the international motorsports success of Toyota GAZOO Racing is feeding directly into an exciting new generation of GR-branded road-going cars. Toyota's return to the World Rally Championship in 2017 led to the development of the performance-focused Yaris GRMN, which won high critical acclaim and was a sell-out success with all 400 examples snapped up by customers before the car reached the showroom.

The new GR SPORT takes the GAZOO Racing sporting influence to the heart of the Yaris range, delivering genuine fun-to-drive performance

and sports styling. The GRMN-inspired modifications are focused on the suspension, giving the car engaging handling and responsiveness. It uses Sachs Performance shock absorbers similar to those fitted to the GRMN and a solid (rather than hollow) anti-roll bar to gain extra rigidity. The car has a sporting stance, too, with ground clearance reduced by 11 mm compared to the standard Yaris, and with the gap between wheel and body brought down by 18 mm.

The black 17-inch cast alloy wheels are exclusive to the GR SPORT, but are fitted with the same Bridgestone Potenza RE50 205/45R17 tyres as the GRMN model. Care has been taken to avoid any mass increase by restricting the model's feature options.

The GR SPORT is exclusively a five-door and will be available with the Yaris' standard 1.5-litre self-charging hybrid powertrain.

The exterior styling follows that of the Yaris GRMN, including a black bi-tone roof with





shark fin antenna and rear spoiler. There are piano black door mouldings, a black honeycomb grille, black door mirror housings and black front fog light surrounds. The headlights are unique to the GR SPORT, with black interior detailing. Dark-tinted rear privacy glass is also fitted as standard, together with GR badging. Red decals can be added to the front lip and the top line of the lower rear bumper to generate extra sporty visual appeal.

In the cabin the GR influence is highly visible, with GR-branded sports front seats, upholstered in black Ultrasuede with contrast white stitching and white inserts. When the driver presses the start button, the multi-information TFT display comes to life with the GR logo, setting the tone for a rewarding drive in

store. To help make the most of the car's handling potential, the GR SPORT is equipped with the same small-diameter three-spoke steering wheel as the GT86 coupe.

The sporting feel of the interior is enhanced by a black headlining and satin chrome trim for the gear shift lever and the air vent and door-mounted audio speaker surrounds. As a finishing touch, black GR-branded carpet mats with silver edging are fitted.

NEW TOYOTA SUPRA PRIORITY ORDERS OPEN WITH MEMBERSHIP TO THE SUPRA 900 CLUB

Following the announcement of the new Toyota Supra at the Geneva Motor Show in March, Toyota can confirm that online reservations for the first 900 units open on 2 October 2018 in major European sports car markets at first stage. Consumers in other markets will be kept up-to-date through the sign-up function on the Toyota Supra website until pre-order opens in those markets.

Faithful to its distinguished heritage as a pure, sports car, the thoroughbred fifth generation Toyota Supra features a front-mounted, 3.0 litre straight six-cylinder petrol engine with rear-wheel drive and active differential. The new two-seater package promises exhilarating driving performance, ensured by its perfectly balanced 50:50 weight distribution.

Production of the new Toyota Supra is due to commence next year with the first 900 European customers due to receive their cars after the summer. This privileged group of owners will not only have Toyota's pure sports car at their fingertips, they'll also be joining the Supra 900 Club. As members, they will have access to exclusive content, rewards and experiences in the build-up to delivery.





TOYOTA YARIS Y20

Celebrating 20 years of Yaris

TOYOTA IS PAYING TRIBUTE to the original Yaris by introducing a new Y20 grade to its 2019 model range, marking the 20th anniversary of its successful B segment car displayed for the first time at Paris Motor Show in 1998. Through two decades and three generations, Yaris has become firmly established as Toyota's best-selling model in Europe, also being built here at its Valenciennes factory in France.

The revised Yaris range, revealed for the first time at the Paris Motor Show, will offer a new multimedia system that enables smartphone integration.

In fitting style, there will be an initial production run of 1,998 Launch Edition Y20 models featuring the same gold paintwork used by the first Yaris back in 1998, but with

the contemporary twist of a bi-tone dark grey roof.

The full-production Y20 models will sit at the heart of the 2019 Yaris model range, replacing the current Mid+ grade and offering a strong value proposition for customers. Standard and bi-tone versions will be available, the latter matching silver, pearl or black bodywork colours with a new dark grey finish for the roof.

The exterior styling uses dark grey features to distinguish the Y20 within the Yaris line-up. These include, 16-inch grey and machined-face 10-spoke alloy wheels, and dark grey side mouldings, front grille, door mirror casings and fog light surrounds (with chrome detailing). The Y20 also sports a shark fin antenna, colour-matched to the roof, dark-tinted rear privacy glass and special Y20 badging at the rear.



The interior extends the dark grey theme, applied to the centre console, steering wheel inserts and new chequer-pattern fabric upholstery. Satin chrome air vent, audio speaker and meter surrounds and gear knob trim, black carpet mats with silver edging and Y20 badging on the instrument panel and front seatbacks further enhance the quality feel of the interior.

NEW MULTIMEDIA SYSTEM

The 2019 model year Yaris' new multimedia system is in tune with people's desire to keep connected at all times. Connectivity has become an increasingly important purchase consideration for customers and the new package

will enable easy smartphone integration and access to useful, popular apps.

Operation is via a simple central touchscreen; once connected, selected smartphone contents can be viewed and accessed using the screen. Functionality will be extended over time to enable access to other third party apps.

The system has a clear and simple hardware and HMI design. It can be used to provide smartphone-enabled route navigation and is able to respond to voice commands, via a new microphone and a dedicated button on the head unit, with least driver distraction. The touchscreen will also respond to familiar multi-touch gestures, such as screen flicking and pinching in/out.



TOYOTA SAFETY SENSE

One step closer to an automotive society with zero accidents

Toyota rolls out the second generation of the Toyota Safety Sense active safety package.

IN 2015 TOYOTA DECIDED to instigate the democratisation of advanced safety technologies in its cars with 'Toyota Safety Sense', a set of active safety technologies designed to help prevent or mitigate collisions across a wide range of traffic situations.

Since then, more than 8 million Toyota vehicles worldwide have been fitted with Toyota Safety Sense. In real-world traffic conditions, the resultant effects of accident reduction¹ can be clearly seen, such as a reduction in rear-end collisions of approximately 50%, rising to approximately 90% in conjunction with the Intelligent Clearance Sonar (ICS).

Committed to achieving a safe mobility society, Toyota believes it is important to promote an approach which involves people, vehicles, and the traffic environment, as well as the pursuit of 'real-world safety' by learning from accidents and incorporating that knowledge into vehicle development.

Moving one step closer to its ultimate goal of an automotive society with zero accidents, Toyota now rolls out the second generation of Toyota Safety Sense.

The upgraded active safety package features a single-lens camera and millimetre-wave radar. The performance of both systems has been enhanced to expand the scope of hazard detection and improve functionality. The new system unit has also been reduced in size for ease of installation across the Toyota model line-up.

Toyota Safety Sense now includes² upgraded versions of the Pre-Collision System (PCS), Adaptive Cruise Control (ACC), Lane Departure



³ Results achieved during testing using a vehicle travelling at 50 km/h and a stationary vehicle; system operation depends on driving environment (incl. road and weather) and vehicle circumstances.

¹ Based on study conducted in Japan
² Available features depend on model and grade

Alert (LDA), Road Sign Assist (RSA) and Automatic High Beam (AHB).

In addition, it introduces a new Lane Trace Assist (LTA) for advanced driving support.

PRE-COLLISION SYSTEM (PCS)

On all Toyotas equipped with the second generation Toyota Safety Sense, the upgraded PCS now detects vehicles in front between speeds of approximately 10 km/h and 180 km/h, and reduces the risk of hitting them from behind. When there is a possibility of a collision PCS prompts the driver to brake with an audible and visual alert. It also primes the brake system



ACC
Adaptive Cruise Control

to deliver extra stopping force when the driver presses the brake pedal. If the driver fails to react in time, the system automatically applies the brakes, reducing speed by approximately 50 km/h³ or even bringing the car to a complete stop, in order to prevent the collision or mitigate the force of impact.

The operating conditions of PCS have been further upgraded, enabling the system to also detect potential collisions with pedestrians during both daytime and night time, and cyclists during daytime, in the event of which automated braking operates at relative speeds of between 10 to 80 km/h, and can reduce speed by approximately 40 km/h⁴.

ADAPTIVE CRUISE CONTROL (ACC)

ACC helps the driver to keep a safe distance from the car in front. It detects preceding vehicles and determines their speed. The system then adjusts vehicle speed to ensure that there is a safe distance between both cars.

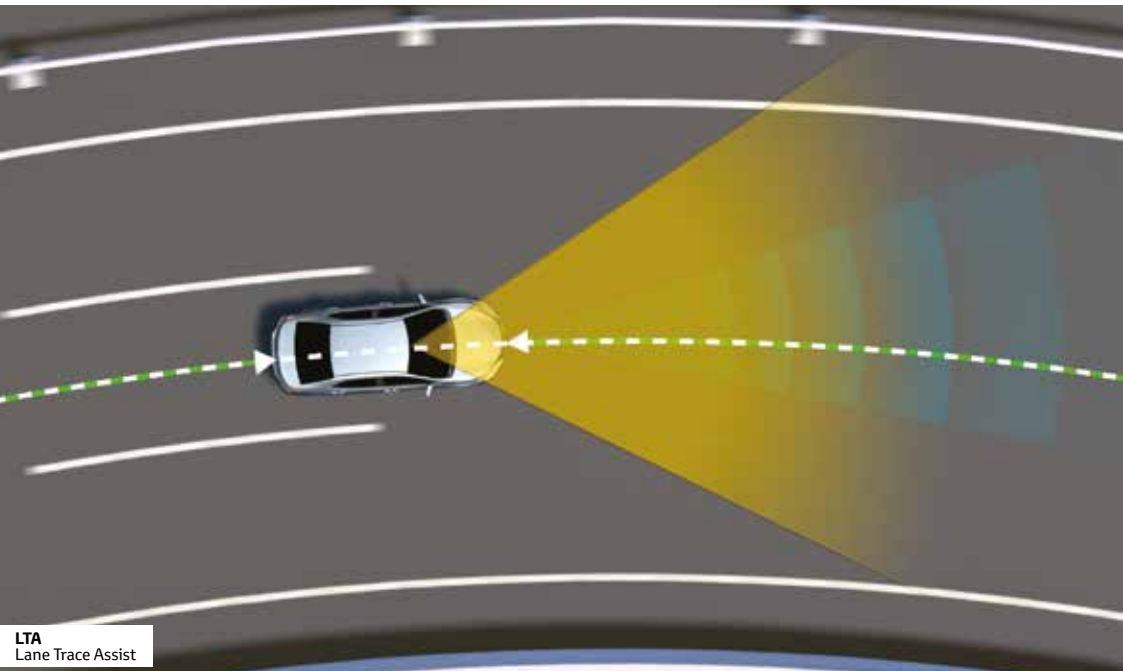
The upgraded ACC benefits from improved acceleration and deceleration control for enhanced performance and greater comfort, and can be easily controlled by new steering wheel mounted switchgear.

ACC now includes low speed following and stop-start driving at speeds between 0 and approximately 30 km/h. In congested traffic, the vehicle will stop when the preceding vehicle comes to a stop, maintaining an appropriate distance to the vehicle ahead. The driver then restarts the vehicle, either with the use of the accelerator pedal or the steering wheel-mounted switchgear, reactivating the ACC system.

At speeds over 70 km/h, smooth overtaking of preceding vehicles is enhanced by side-indicator-linked control. When following a preceding vehicle that is travelling slower than the vehicle speed setting, preliminary acceleration is applied when the driver operates the side-indicator to change lanes. If a preceding vehicle is detected in the overtaking lane, however, acceleration is suppressed to prevent suddenly approaching the preceding vehicle, enabling the driver to overtake with peace-of-mind.

A new intelligent Adaptive Cruise Control (iACC) is now also available, linking the ACC with Road Sign Assist (RSA). When the vehicle

⁴ Results achieved during testing using a vehicle travelling at 40 km/h and a stationary pedestrian/cyclist; system operation depends on driving environment (incl. road and weather) and vehicle circumstances.



LTA
Lane Trace Assist

travels at a constant speed in accordance with the speed preset by the driver, and a speed limit sign is recognised by RSA, the driver can easily reset the vehicle speed in accordance with the new speed limit, by using the switches on the steering wheel.

LANE DEPARTURE ALERT (LDA)

At speeds above 50 km/h, LDA helps prevent accidents and head-on collisions caused by leaving lanes. If the vehicle starts to deviate from the lane without the indicators having been engaged, LDA warns the driver with an audible and visual alert, and can provide steering input to assist the driver to regain the intended track.

The upgraded system can now also recognise the road edge on straight roads without lane markings.

The Vehicle Sway Warning function detects vehicle sway which tends to occur when the driver starts to lose attentiveness or become tired, and alerts the driver with an audible and visual warning, urging the driver to take a break.

LANE TRACE ASSIST (LTA)

Advanced driving support is now being introduced through Lane Trace Assist (LTA) - a new system which helps to further reduce the burden on the driver.

When Adaptive Cruise Control (ACC) and LTA are active, the system assists the driver in steering control with gentle inputs to keep the vehicle in the centre of the lane, even on gentle highway curves.

LTA can operate from highway speeds down to almost standstill, to support the driver also in case of congested traffic. And if it's difficult or not possible for the system to see the lane markings, such as when they are faded, the car will follow the path of the preceding vehicle recognised by the camera and millimetre wave radar.

Vehicles equipped with LTA also support all LDA features.

AUTOMATIC HIGH BEAM (AHB)

AHB helps ensure excellent forward visibility during night-time driving. It detects both the headlights of oncoming vehicles and the tail lights of preceding vehicles, automatical-

SYSTEM	FUNCTION	2ND GENERATION TOYOTA SAFETY SENSE (SINGLE-LENS CAMERA AND MILLIMETRE-WAVE RADAR)	CURRENT TOYOTA SAFETY SENSE (SINGLE LENSE CAMERA AND LASER RADAR)	CURRENT TOYOTA SAFETY SENSE (SINGLE-LENS CAMERA AND MILLIMETRE-WAVE RADAR)
Pre-Collision System (PCS) (speed at which the emergency brake operates)	Other vehicles	(10 - 180 km/h)	(10 - 80 km/h)	(10 - 180 km/h)
	Pedestrians (day)	(10 - 80 km/h)	-	(10 - 80 km/h)
	Pedestrians (night)	(10 - 80 km/h)	-	-
	Cyclists (day)	(10 - 80 km/h)	-	-
Adaptive Cruise Control (ACC)	Follows the vehicle in front	•	-	•
	iACC (set speed to match RSA display)	•	-	-
Lane Departure Alert (LDA)	Lane Departure Alert Function	•	•	•
	Steering Assist Function	•	-	•
	Detects white/yellow lines	•	•	•
	Detects road edges	•	-	-
	Vehicle Sway Warning Function	•	-	•
Lane Trace Assist (LTA)	Follows the lane	•	-	-
Automatic High Beam (AHB)		•	•	•
Road Sign Assist (RSA) (supported traffic signs)	Displays traffic signs (speed limits, no overtaking, no entry, stop)	(speed limits, no overtaking, no entry, stop)	(speed limits, no overtaking)	(speed limits, no overtaking)
	Warning for excessive speed/zones where overtaking is prohibited	•	•	•



ly switching between high and low beams to avoid dazzling other drivers. By using high beams more frequently the system enables earlier detection of pedestrians and obstacles.

ROAD SIGN ASSIST (RSA)

RSA supports drivers by ensuring they always have the best possible information, even if they have, perhaps, overlooked a road sign. System status and alert information is displayed to the driver on the instrument colour TFT multi-information screen. In the case of

speed limits, the system gives a visual and audible alert should the driver exceed the posted limit.

The system now recognises a larger number of traffic signs such as speed limit, no overtaking, road condition, stop and no entry signs, start/end of highways, urban and residential areas, and end of all restrictions.

Second generation Toyota Safety Sense will be progressively rolled out across the Toyota line-up, starting with the new RAV4 and new Corolla.

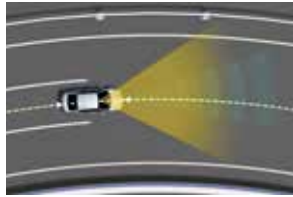
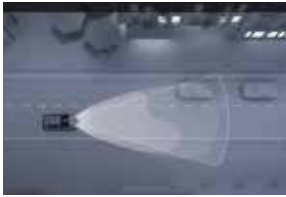
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