

## THE ALL-NEW TOYOTA YARIS

### INTRODUCTION

- First application of Toyota GA-B platform enables style, compactness, practicality, driving enjoyment and safety
- New fourth generation hybrid system delivers 114bhp, fuel economy from 68.8mpg and CO<sub>2</sub> emissions from 92g/km (WLTP)
- Engineered to be the world's safest compact car with Advanced Driver Assistance Systems (ADAS) as standard
- Designed and developed for European customers; built in Valenciennes, France

The all-new, fourth generation Yaris is a car that meets the demands of urban life, but also provides enjoyment on the open road or highway.

It has been designed to be agile on crowded and confined urban streets, reflected in its compact proportions and tight turning radius, while at the same time providing a spacious, comfortable and high-quality interior with equipment specifications that meet all today's customer priorities for connectivity and seamless access to information.

The key to Toyota meeting its ambitions for the new Yaris is its first application of the Toyota New Global Architecture – TNGA – philosophy to a small car, introducing the modular GA-B platform that will underpin a series of new models. The GA-B platform is central to Yaris's improved dynamic performance, giving a lower centre of gravity and much greater body rigidity. It also enabled the designers to create a more distinctive and powerful-looking car with an appealing and individual identity.

The new model uses the latest evolution of Toyota's fourth generation hybrid electric powertrain, giving the car better fuel economy, lower emissions and a greatly enhanced capability to operate on its electric power alone, at higher speeds and over longer distances.

In fact, on urban journeys, new Yaris can operate for a significant amount of the time with zero emissions, just like a battery electric vehicle, but with no concerns about recharging.

Reinforcing its reputation as a segment leader in safety, the Toyota Yaris again raises the standard. True to Toyota's commitment to democratising safety, it benefits from a greater range of Toyota Safety Sense active systems as standard, including Advanced Driver

Assistance Systems (ADAS), such as Lane Trace Assist, Emergency Steering Assist and Intersection Turn Assistance.

The functionality of the Pre-Collision System has been increased so that it can detect pedestrians by day and night and cyclists in daytime driving. New Yaris also offers segment-first Intersection Turn Assistance to recognise collision risks with oncoming traffic and pedestrians when making a turn at a junction, and it is the first Toyota to be equipped with centre airbags. These help prevent driver and passenger colliding with each other in a side impact.

With these provisions and the benefit of significantly increased body rigidity from the GA-B platform, Toyota aims to make the new Yaris the world's safest small car.

### **Product development**

Yasunori Suezawa is the Chief Engineer of the new Yaris and he has a clear vision of what the car needs to deliver at a time of radical change in the motor industry. He said: "We reconsidered the values required of a compact vehicle as we moved into the next generation. The essentials are fuel economy, safety, spaciousness, usability, and performance. But we must also deliver enjoyable driving to each and every customer – a quality we express in the new Yaris's theme of 'ready to go'."

The development programme brought together skilled people from Toyota's planning, design, production engineering and manufacturing divisions in a group that became known internally as The Compact Car Company. Its aim was to make ever-better cars and a more exciting new Yaris, a mission founded on the opportunities provided by the new GA-B platform and the fourth generation hybrid electric powertrain.

### **Yaris heritage**

The Toyota Yaris has an impressive heritage as an innovator. The first generation model, launched in 1999, was Toyota's first model to win the European Car of the Year title, and was distinguished by its "big small" character with its remarkably spacious interior.

The second generation Yaris was the first B-segment model to gain a top five-star rating in Euro NCAP's safety testing programme, while the third generation introduced hybrid electric power to the small car market for the first time and made further advances in safety with the standard provision of Toyota Safety Sense active safety and driver assistance systems.

## **Yaris and the European market**

In 20 years, Yaris has become Toyota's most important model in Europe, steadily increasing both its sales volume and its market share. In 2019 it recorded around 224,000 sales and took 7.6 per cent of the B-segment market, making it Toyota's best-selling model in the region, accounting for more than 22 per cent of its new car business.

Toyota predicts the B-segment will remain a strong part of the market in Europe in the next few years and that Yaris will continue to be one of its principal models, responding to the market's requirement for cars that have even better fuel economy and lower emissions in order to meet increasingly stringent environmental regulations.

New Yaris also responds to the changing priorities of European small car customers, with rational issues such as cost, practicality, safety and quality being joined by more emotional considerations, including style, sportiness, a youthful image and fun-to-drive performance.

## **Manufacturing**

The new Yaris is built at Toyota Motor Manufacturing France's Onnaing plant, near Valenciennes, where €300 million has been invested to enable TNGA vehicle production. The 1.5-litre hybrid engine and the hybrid transmission are manufactured by Toyota Motor Manufacturing Poland.

## **DESIGN**

- Designed for a condensed and agile look and "ready-to-go" character
- Overall length reduced by 5mm, but longer wheelbase and greater width ensure cabin spaciousness and comfort
- GA-B platform allows for a more engaging, lower-set driving position
- Driver's cockpit designed around the concept of "eyes on the road, hands on the wheel"

## **Exterior design**

The new Yaris returns to the "big small" concept that inspired the first generation model but interpreting it anew in a "condensed and agile" look that expresses a sense of the car being full of energy and dynamism and always ready-to-go.

Chief Engineer Yasunori Suezawa explained: "I wanted the styling to capture the stance of an athlete on the starting blocks. You can see this in the rear wings and the car's new proportions – wider, lower and more compact – giving the impression of condensed power."

While many B-segment models have been growing progressively longer, the new Yaris is actually shorter than the current model. But although overall length has decreased to less than four metres, the wheelbase has been extended by 50mm, giving extra cabin space.

The GA-B platform has allowed the overall height to come down by 40mm, while an increase in the vehicle's width by 50mm and an extra 57mm in the track add to the car's overall low, wide and powerful stance. The overhangs have been reduced, too, with 10mm taken from the front and 50mm from the rear, further accentuating the overall compact dimensions and giving a tight 5.2m turning radius (with 16-inch wheels), ideal for negotiating urban streets and parking spaces.

The new platform also gave the designers more freedom to produce an eye-catching, impactful design and emphasise Toyota's individual design identity compared to its market competitors. The effect of the condensed proportions is amplified by strong character lines down the side of the car, projecting a sense of forward motion. The muscular front and rear wings add to the overall taut, coherent look and, together with the sculpted door panels, express the car's agility and "ready-to-go" character.

The frontal design is focused on the large grille and central Toyota emblem. The designers have added to the dynamic look by pulling the base of the A-pillar rearwards (which also improves the driver's forward view) and increasing the bonnet length. The new light units (Design grade and above) feature LED technology and include turn indicators that alternate with the daytime running lights. The headlights extend towards the front wheels in a strong styling feature that also reduces the perceived length of the front overhang.

The wheels are available in 16 and 17-inch diameter, according to model grade.

### **Interior design and packaging**

The interior reflects an overall "less is more" concept. It is a sharply designed space that has the solid, and high sensory quality and spacious feel of a car from a class above.

For the driver's cockpit, the concept is "eyes on the road, hands on the wheel" with the arrangement of displays and controls organised to ensure the driver can focus on the road and keep informed of key vehicle data with the least distraction, and excellent all-round visibility.

"We worked on two main elements to achieve this," said Chief Engineer Suezawa. "First we maximised visibility by setting the instrument panel lower and pulling the A-pillar further back. The front seats were also moved outwards, so there is more space between the driver

and passenger. Second, we wanted to let the driver take in the flow of information with minimal eye movement, so we are offering a large colour (10-inch) head-up display.”

Details include a larger area of soft-touch padding across the dashboard; soft felt inserts in the door panels; a wider front console; a lower hood for the driver’s instrument binnacle; and a small-diameter, sporty steering wheel.

### **Compact but spacious**

As detailed above, the new GA-B platform allowed for a reduction in the car’s overall length, making it the most compact model in its class, but with an increase in its wheelbase. This has been key to achieving interior packaging that ensures space and comfort for everyone on board, echoing the innovative “big-small” character of the original Yaris 20 years ago.

The increase in the car’s width has allowed for more space (an extra 20mm) between the driver and front passenger, and for a wider front console to be designed.

Similarly, load space is good with the boot offering 286 litres of storage.

### **Driving position**

The driver’s greater sense of control and connection with the car is enhanced by their position at the wheel. In the new Yaris three fundamental changes have been made to create a more engaging and comfortable driving position and support the car’s fun-to-drive character.

The seat has been moved 60mm rearwards (which also contributes to the car’s improved weight balance); the hip point has been lowered by 21mm to give a more dynamic driving position and ensure good head room within the car’s lower overall height; and the steering wheel has been angled six degrees more vertical. The wheel’s reach adjustment has been extended so that it can be brought 77mm closer to the driver.

The steering wheel has been made smaller and sportier and has new auxiliary buttons with a greater tactile quality. This makes them instinctive to use without having to look at them – another element in the “hands on the wheel, eyes on the road” concept.

Driver distraction is also minimised with a “binocular” arrangement of the meters and TFT multi-information display in the instrument binnacle (on Design grade and above); the close-at-hand positioning of the eight-inch central touchscreen display, with sharp, high-resolution graphics; and a 10-inch colour head-up display (part of the Tech Pack option, standard on the Launch Edition model).

## **POWERTRAIN**

- New fourth generation Toyota hybrid electric powertrain
- All hybrid components are new, optimised for size, weight and efficiency
- New 1.5-litre hybrid engine
- Greater fuel economy and emissions efficiency, together with increased power and torque
- Significantly greater EV driving capability, at speeds up to 80mph/130km/h

### **Fourth generation hybrid electric system**

The new Yaris uses the latest, fourth generation Toyota hybrid technology and introduces new components that have been engineered to be compact, lightweight and efficient. It also equips the car with its first TNGA engine.

For the engineering team, the focus was not just on delivering a more efficient system, but also on making the car more enjoyable to drive, with tuning and calibration to suit European roads.

The data indicates the scale of the achievement. Overall efficiency has increased by 22 per cent, which typically would be at the cost of performance. In fact, power is 16 per cent higher at 114bhp (total system output), with a 15 per cent improvement in 0-62mph acceleration, to 9.7 seconds, and sharper response to the driver's use of the accelerator.

The car's all-electric EV capabilities have been transformed: speeds of up to 80mph/130km/h can be reached and EV driving is possible for longer periods in urban traffic. This means drivers can enjoy many of the benefits of a battery electric vehicle, but at a lower price and with no concerns about when or where the battery can be recharged.

CO<sub>2</sub> emissions have dropped to 92g/km and the WLTP combined cycle fuel economy figure is from 68.8mpg, a 22 per cent improvement (data for Icon grade with 16-inch wheels).

These values are unprecedented for a Toyota model and demonstrate the ability of hybrid electric technology to deliver even higher efficiency, without sacrificing performance

The engineering team was committed to addressing the most common criticisms Toyota heard from Yaris Hybrid drivers. These focused on overtaking acceleration performance at highway speeds (the acceleration time from 50 to 75mph (80 to 120km/h) has been cut by two seconds to 8.1 seconds); quicker and more responsive acceleration at lower speeds, for example when negotiating a roundabout; and more linear, natural acceleration when driving on open, winding roads, to create a stronger fun-to-drive quality.

Each of the four principal components in the hybrid system contributes to the new Yaris's enhanced drivability: the all-new hybrid engine makes its debut in the car; the new lithium-ion battery; the all-new hybrid transaxle; and the power control unit. All have been developed using the TNGA philosophy, ensuring efficient design and ease of production at scale.

### **1.5-litre Hybrid Engine**

The all-new 1.5-litre hybrid engine is from the same TNGA engine family as the 2.0-litre four-cylinder unit featured in the Toyota Corolla and C-HR. It has a long stroke, 14.0:1 compression ratio and high-speed combustion with better temperature and pressure control. This contributes to its exceptionally high thermal efficiency – 40 per cent – ensuring that more of the energy potential of every drop of fuel is captured.

In common with all Toyota's hybrid engines, it uses the Atkinson cycle, which keeps the intake valves open for longer, delaying the compression stroke. This improves efficiency and fuel economy but reduces power output. Nonetheless, the new engine has a maximum output of 90bhp/68kW with a peak 120Nm of torque delivered at lower revs (3,600rpm).

The three-cylinder configuration also brings benefits in terms of noise levels. When running at 4,000rpm, its performance is like a four-cylinder unit operating at 3,000rpm, thus delivering more power and torque, but generating less noise.

The transmission is a e-CVT automatic – an electric continuously variable transmission – which provides linear acceleration feel and quiet operation.

### **Motor/generators**

The hybrid system in the new Yaris has two motor/generators – MG1 and MG2. MG2 is linked to the front wheels and can be used as the power source to drive the vehicle. The motor rpm at which power can be directed to the wheels determines the maximum speed at which the car can be driven in EV (electric vehicle) mode, making MG2 critical to the car's drivability on electric power.

MG1 is deployed to start the engine and to generate power to charge both batteries (hybrid and 12V).

### **Lithium-ion Hybrid Battery**

The new Yaris adopts a lithium-ion hybrid battery, with voltage rising from 144 to 177.6V. The number of cells has been reduced, from 120 to 48. The current flow is significantly improved: by 100 per cent into the battery and 50 per cent out of it.

With a significantly higher power density, the battery is both smaller and lighter, by 12kg. Its compact dimensions allow it to be located beneath the rear passenger seat, together with the auxiliary battery, avoiding intrusion in the load space.

Lithium-ion battery technology is better able to supply current flow, which is key to the new Yaris having powerful EV performance in urban driving.

### **Hybrid Transaxle**

The all-new hybrid transaxle is more compact and lightweight, with the two motor generators placed on multiple shafts instead of being placed one behind the other, reducing the unit's width by around 37mm. Motor/Generator 2 benefits from new segment-type coils on the stator, which makes the unit more compact. It can deliver 59kW of power and 141Nm of torque to the front wheels at a maximum 17,000rpm. The key benefit is a major improvement in performance, so that the engine can be turned off and the vehicle run in all-electric EV mode at speeds up to 80mph/130km/h.

The transaxle also has a new oil pump, driven by the ring gear, which provides lubrication for both the gears and motor/generator 2.

### **Power Control Unit**

The Power Control Unit has the capacity to handle 100A of current, boosting the 177V from the battery to 580V and using transistor control in the inverter to change the current from direct to alternating. The transistors' efficiency is affected by heat control inside the unit; by arranging them vertically, they can be cooled on both sides, allowing for more accurate heat control and thereby a higher frequency of current switching – up to 10,000 times a second. This makes a significant contribution to the system's efficiency and transfer of power to the motor.

The converter in the power control unit converts the 177V from the hybrid battery to 12V to power the car's auxiliary components.

### **Power Split Device**

The power split device is the heart of the hybrid system, governing the interaction between the components. It enables the car to operate as a parallel hybrid with the motor/generator 2 powering the car alone, or in combination with the hybrid petrol engine.

## **DRIVING DYNAMICS**

- First application of the Toyota New Global Architecture GA-B platform, bringing fundamental benefits in handling, stability and ride comfort
- Body rigidity increased by 37 per cent
- Lower centre of gravity and improved weight balance contribute to better handling and stability
- Driving dynamics ensure agile around-town performance and driving pleasure on the open road

### **New GA-B platform**

The new Yaris's GA-B platform is the backbone of its dynamic quality, engineered to give a confident and natural drive. The car's stability inspires confidence, while its response to the driver's inputs is natural and precise, communicating a heightened sense of agility.

The combination of the car's compact, low and wide dimensions, the quality of the GA-B platform and the performance of the fourth-generation hybrid powertrain gives the car an essential fun-to-drive quality that strengthens its emotional appeal.

Around town, it offers agile handling, with a 5.2m turning radius (with 16-inch wheels) and crisp steering response making it considerably easier to manoeuvre and park on busy urban streets, while on the highway or open road, performance is smooth and relaxing with excellent straight-line stability.

"I wanted to transform Yaris's driving dynamics, delivering what we call a confident and natural drive," said Chief Engineer Suezawa. "That's one that is smooth, accurate and agile, contributing to the fun of driving. It is the TNGA chassis that has made all this possible."

The GA-B platform will be used for all Toyota's future small cars, including the Yaris Cross, its new B-SUV model.

### **High-rigidity body**

The high-rigidity body contributes to higher safety levels (detailed in the Safety chapter below) superior chassis handling and responsiveness, ride comfort, and lower noise and vibration levels.

The new Yaris's GA-B platform – including both chassis and drivetrain – delivers a 37 per cent increase in torsional rigidity, taking it to a best-in-segment level. This has been achieved through a series of body reinforcements, a stiffer dash panel and more extensive use of spot welds and bonding adhesive in the car's construction.

The car's longitudinal beams are connected to the bumper reinforcements, and in the front suspension the top of the shock absorber serves as the upper steering pivot. Further rigidity has been gained from a new ring structure in the dash/cowl area, while in the middle section of the car there are reinforcements to the tunnel and rear structure, creating another robust ring structure.

At the rear, gussets have been added to the wheelhouse floor panel, with reinforcements to the wheelhouse and rear pillar again forming a ring structure.

### **Low centre of gravity**

As in all TNGA-based models, the new Yaris has a low centre of gravity – around 12mm lower than the current model – giving the car better inertia characteristics and making it feel more stable when cornering at speed. This reduction has been achieved by moving heavier components closer to the centre of the car, and setting them lower, starting with the roofline and including the engine and the seats.

As well as a lower centre of gravity, the car has an improved weight balance, both front/rear and left/right, which helps reduce body roll and improve braking stability and stopping distances.

### **Suspension**

The suspension design is critical to a car's driving dynamics. One of the most significant applications of the TNGA philosophy is to ensure that each new model benefits from the optimum set-up. The Yaris has an all-new arrangement, with the front MacPherson struts set at a revised angle, operating with reduced friction. The top of the shock absorbers now serves as the upper steering pivot, while the change in suspension angle has allowed for better alignment of the shock absorbers and springs, resulting in less vibration.

The rear torsion beam has been made 80 per cent stiffer and the rear roll stiffness has been increased from 320 to 580Nm/deg, reducing body roll when cornering and improving the car's all-round agility. The increase in suspension stiffness has allowed for softer springs to be used. Together with the car's improved front/rear chassis balance, this improves ride comfort.

### **Reduced noise and vibration**

The GA-B platform brings further benefits in terms of reduced noise and vibration levels, making for quieter and more refined environment on board.

The platform architecture and the upper body are designed to reduce the amount of noise entering the cabin. The engineers pinpointed the areas where most noise intrudes – the dashboard and door panels – and adjusted their design to filter out external noise.

Extensive body sealing, which also contributes to the car's rigidity, further helps keep noise away from the cabin.

## **EQUIPMENT FEATURES**

- High equipment specifications, offering “class above” features
- Optional 10” colour head-up display and JBL premium audio system
- Focus on connectivity with Apple CarPlay and Android Auto smartphone integration

### **Generous specifications**

The quality of the new Toyota Yaris' design and performance are matched by generous equipment specifications and the availability of features more commonly found in larger models from a class above. Outline details of the UK model specifications are provided in a separate chapter below; full information is provided in the equipment specification table.

Across the range, standard features include Toyota Safety Sense, a reversing camera and an electronic parking brake. Options include Rear Cross-Traffic Alert with Auto Brake, to help safe manoeuvring out of parking spaces, a Blind Spot Monitor and Intelligent Clearance Sonars.

### **Colour head-up display**

The new Yaris is the only model in the B-segment to offer the option of a 10-inch colour head-up display. This projects key information onto the base of the windscreen, in the driver's line of sight, true to the car's “hands on the wheel, eyes on the road” concept. The data includes vehicle speed, safety warnings (linked to the Toyota Safety Sense systems), navigation support and multimedia information. The driver can select which information to view using a menu setting on the multi-information display.

### **Premium features**

Examples of the premium quality features that can be specified for the new Yaris include an eight-speaker JBL premium audio system and ambient blue cabin lighting in the footwells, door panels and centre console. A full LED lighting pack is also available, including fog lights.

## **Seamless connectivity**

All new Yaris models enable seamless, wireless smartphone integration via Apple CarPlay and Android Auto, allowing users easy access to their favourite apps using the car's central eight-inch multimedia control screen.

Useful connected services can also be reached using the MyT Toyota app. Features include practical and useful information about Toyota, and an eco-driving app.

MyT also logs driving data, so information about mileage, speed and acceleration can be retrieved at a later date. It can also provide reminders when the car's service is due.

From summer 2021, MyT functions extended to include remote operation of the car's hazard lights, the climate control and door locking and unlocking. The functionality is standard on Dynamic and Excel grade models.

## **SAFETY**

- Toyota's democratisation policy provides latest Toyota Safety Sense systems standard
- New Yaris Engineered to be the safety leader in its segment
- Introduction of Advanced Driver Assistance Systems (ADAS), including Lane Trace Assist and co-operation between Adaptive Cruise Control and Road Sign Assist functions
- Pre-Collision System gains day/night pedestrian detection, daytime cyclist detection and – first in a Toyota – Intersection Turn Assistance and Emergency Steering Assistance

The Toyota Yaris has an impressive safety track record, the second-generation model having been the first model in its class to achieve the top five-star ranking in the European motor industry's benchmark Euro NCAP safety testing. Subsequently the benefits of more advanced collision avoidance and driver assistance technology were made available with the introduction of Toyota Safety Sense to the range as standard in 2017 – another first for the segment.

The new Yaris takes small car safety to an unprecedented level and has been equipped to be the safest model in its segment. Its key strengths are a significant increase in body rigidity, a direct benefit of the new GA-B platform, and a leap forward two generations in Toyota Safety Sense. In fact, a number of new features and systems are making their debut

in a Toyota, reaffirming Toyota's commitment to democratising the highest safety provisions, making them as widely available as possible.

Being equipped with a data collection module, the new Yaris benefits from eCall to automatically alert the emergency services to the car's location in the event of serious impact.

### **Increased body rigidity**

Building new Yaris on the GA-B platform has brought about a 37 per cent increase in the car's torsional rigidity to the highest level in the B-segment.

This built in strength has been achieved through extra welding and bonding adhesives, additional reinforcements and the creation of robust ring structures in the body to increase stiffness (full details in the Driving Dynamics chapter, above). This added strength allows for better absorption of impact forces, helping maintain the integrity of the cabin and the safety of the occupants in the event of a collision.

### **First Toyota with centre airbags**

The new Yaris is the first Toyota to be equipped with SRS centre airbags. Fitted as standard, these deploy in the event of a side impact to help prevent the driver and front seat passenger colliding with each other.

### **Toyota Safety Sense**

Being a small car is no barrier to the new Yaris benefiting from the latest Advanced Driver Assistance Systems (ADAS). An established pioneer in its class in the field of active safety provisions, Yaris now moves further ahead – not just benefiting from the latest-generation features but adopting a number that are appearing for the first time in a Toyota.

The Toyota Safety Sense package for the new Yaris offers more features than any other current Toyota model and is more extensive than any of its B-segment competitors, comprising:

- Pre-Collision System with vehicle detection, pedestrian detection (day/night), cyclist detection (day), Intersection Turn Assistance (vehicle and pedestrian detection), Emergency Steering Assistance
- Full speed range Intelligent Adaptive Cruise Control
- Road Sign Assist
- Lane Departure Alert with Steering Control and Lane Trace Assist
- Automatic High-Beam

## **Collision avoidance support**

The collision avoidance support has been upgraded with improved operation and wider functionality. Notably the vehicle-to-vehicle speed range of the Pre-Collision System (PCS) has been increased to 112mph/180km/h.

PCS also gains the ability to detect pedestrians in the car's path, in both day and night-time driving, at speeds up to 50mph/80km/h, and cyclists, in daylight driving.

## **Intersection Turn Assistance**

The new Yaris is the first Toyota to benefit from Intersection Turn Assistance. This helps avoid the common risk of colliding with another vehicle or a pedestrian when making a turn at an intersection.

If the system detects an oncoming pedestrian crossing the carriageway the vehicle is about to turn into, or if there is a risk of the vehicle moving across the path of oncoming traffic, it will sound an alert and, if the driver fails to respond, apply automatic emergency braking.

The function operates at speeds between 6 and 15mph (10 and 25km/h).

## **Adaptive Cruise Control**

The upgrades to the Toyota Safety Sense systems include the Adaptive Cruise Control operating at speeds from zero to 112mph (180km/h). It will bring the car to a stop if the vehicle in front comes to a halt. If the stop is less than three seconds, restart is automatic; after a longer stop, the car can be restarted with slight pressure on the accelerator, or by pressing the ACC switch. As well as improving safety, this takes much of the stress out of driving in stop-start traffic.

## **Lane Departure Alert with Steering Control and Lane Trace Assist**

Lane Trace Assist is also provided on the Yaris for the first time, together with Lane Departure Alert with Steering Control.

If the car unintentionally leaves its traffic lane, crossing a lane marking, a warning buzzer sounds. The driver can now additionally select steering control, which automatically keeps the vehicle centred in its lane.

The system can recognise standard white and yellow road markings, and also road margins (kerbs, grass or earth), so that steering assistance is available for more of the time, both on straight roads and through bends.

If the road markings are obscured, or can't be detected, the system will follow the path of the vehicle ahead, while keeping within the traffic lane.

## **Emergency Steering Assist**

Emergency Steering Assist is another Toyota safety first. It supports the driver when there is a possible collision risk with a pedestrian or obstacle in the car's lane of traffic and they have to swerve to avoid an impact. The system provides additional steering torque to enhance vehicle stability and prevent the car from leaving its traffic lane.

## **Rear Cross-Traffic Alert and Blind Spot Monitor**

To help prevent common bumps when manoeuvring at low speed, Rear Cross-Traffic Alert is available as an option, including an automatic braking function that operates if cross-traffic is detected when reversing, or a static hazard when parking. This option also includes a Blind Spot Monitor which will alert the driver to potentially unseen vehicles to either side.

## **Intelligent Clearance Sonar with automatic braking**

The Intelligent Clearance Sonar system can help owners avoid the kind of bumps and scratches that can easily occur when parking manually and cost a lot to repair. If the ultrasonic sensors at the rear of the car detect an object that's about to be hit, automatic braking is triggered to prevent an impact.

## **UK MODEL RANGE AND PRICING**

- Four equipment grades – Icon, Design, Dynamic and Excel
- Special high-specification Launch Edition model
- Standard features include Toyota Safety Sense, automatic headlights and wipers, electronic parking brake and smartphone integration
- All new Yaris covered by Toyota's five-year/100,000-mile new vehicle warranty.

The new Yaris is available to customers in four grades that offer specifications focusing on convenience, technology and style.

Entry point to the line-up is Icon grade, with features including: -

- Toyota Safety Sense
- 16-inch alloy wheels
- Smartphone integration
- Toyota Touch 2 seven-inch multimedia display
- Reversing camera
- Automatic headlights and wipers
- Electronic Parking Brake and driver's arm rest

- Automatic air conditioning
- Front power windows
- Power-adjustable, heated door mirrors
- eCall

The Design grade adds the following: -

- 16-inch machined-face alloy wheels
- Toyota Touch 2 eight-inch multimedia display
- Binocular instrument display
- LED headlights and rear lights
- Rear privacy glass
- Power rear windows
- Optional panoramic roof

Dynamic grade builds on the Design specification with: -

- 17-inch machined face alloy wheels
- Front sport seats
- Black part-synthetic leather upholstery
- Smart entry and push-button start
- Dual-zone air conditioning
- JBL premium eight-speaker sound system
- Optional bi-tone paint finish
- Optional City Pack

The Excel grade also takes the Design specification as its starting point, adding: -

- 17-inch machined face alloy wheels
- Front sport seats
- Light-coloured part-synthetic leather upholstery
- Smart entry and push-button start
- Dual-zone air conditioning
- Six-speaker sound system
- Auto-folding door mirrors
- Blind Spot Monitor
- Intelligent Clearance Sonars with auto-braking
- Optional panoramic roof
- Optional Tech Pack

## Yaris Launch Edition

To introduce new Yaris to the UK market, a special Launch Edition model is available. It maximises the specification and emphasises the car's styling with a Tokyo Fusion Red and Eclipse Black Pearlescent bi-tone paint finish.

Special equipment features (in addition to the Dynamic grade specification) include auto-folding door mirrors, Blind Spot Monitor, 10-inch colour head-up display, clear blue ambient cabin lighting and an auto-dimming rear-view mirror.

## Option packs

The Tech Pack, available on Excel grade, provides an eight-speaker JBL premium sound system with eight-channel amplifier; the 10-inch full-colour head-up display; and auto-dimming rear-view mirror.

The City Pack, available for the Yaris Hybrid Dynamic, includes front and rear parking sensors with Rear Cross Traffic Alert and auto-braking, auto-folding door mirrors and Blind Spot Monitor.

The fixed glass panoramic roof is available for Design and Excel models while the Dynamic version is available with a bi-tone paint finish, featuring an Eclipse Black roof and pillars.

## YARIS TIMELINE AND SALES

YEAR	MONTH	EVENT
1997	September	Toyota unveils its European-designed Funtime/Funcargo/Funcoupe concept cars at the Frankfurt motor show, models that provide the inspiration for the production Yaris.
1999	April	The first generation Yaris goes on sale in the UK, in three and five-door body styles with a 1.0-litre VVT-I petrol engine.
	November	Yaris is named European Car of the Year 2000.
2000	January	Yaris Verso mini-MPV goes on sale in the UK, introducing a 1.3 VVT-I engine that is also offered in Yaris.
	March	Toyota presents a Yaris Cabrio concept at the Geneva motor show.  ABS with EBD made standard on all models.
2001	January	European Yaris production starts at the Valenciennes factory in France.

	April	The three-door Yaris T Sport is introduced, with sports suspension, body styling kit and 1.5 VVT-I engine.
2002	January	Yaris Colour Collection Red model is introduced.
	March	A 1.4 D-4D diesel engine debuts in Yaris and Yaris Verso.
	July	Colour Collection Blue is added to the range.
	December	Colour Collection Silver is launched.
2003	April	The Yaris range is revised with new styling details. A five-door T Sport model is introduced and a new grade structure adopted (T <sub>2</sub> , T <sub>3</sub> , T Spirit).  A new 86hp 1.3 VVT-I engine debuts and MultiMode (M/M) transmission is made available with the 1.0 VVT-I engine.
	April	Yaris Blue special edition model is launched.
2005	February	New Yaris Colour Collection feature model is launched.
	September	Yaris Verso UK sales end.
	October	Second-generation Yaris achieves five-star Euro NCAP rating for adult occupant safety.
2006	June	The second generation Yaris is launched with 1.0 and 1.3 VVT-I and 1.4 D-D engines. M/M transmission is available as an option with the latter two units.
	July	Special edition Yaris Ion is launched.
	December	Valenciennes Yaris production passes one million units.
2007	January	Yaris Zinc special edition model is launched.
	March	VSC stability control with TRC traction control made an option on all Yaris models.
	April	New sporting flagship Yaris SR launched, with new dual VVT-I 1.8 engine. Sports-styled 1.3 VVT-I and 1.4 D-4D SR models are also added to the range.
	June	Yaris TR feature model is launched.
2008	January	Yaris TR specification is revised.
2008	February	Yaris SR 1.3 and 1.4 D-4D specification revised
2009	January	2009 Yaris launched with new 1.33 engine with Stop & Start and revised 1.0 VVT-I and 1.4 D-4D engines, and new six-speed manual and MultiMode transmissions. New grade structure introduced: T <sub>2</sub> , TR, SR and T Spirit. Exterior styling is slightly revised.

	July	TR model revised to include alloy wheels as standard, SR grade deleted from the range.
	October	T Spirit grade is deleted from the range.
2010	January	Introduction of the 2010 Yaris with improved TR equipment specifications and exterior/interior styling details.
2011	January	SR and T Spirit grades reintroduced
	March	Hybrid Yaris HSD concept presented at the Geneva motor show.
	September	New, third generation Yaris launched in the UK in T <sub>2</sub> , TR, SR and T Spirit grades.
2012	June	Special Edition and Trend models introduced
2013	January	New <a href="#">Yaris Trend</a> introduced.
	December	Yaris adopts a new grade structure (Active, Icon, Icon Plus and Trend). 1.4 D-4D engine is revised to give 99g/km CO <sub>2</sub> emissions.
2014	May	Toyota <a href="#">announces styling and equipment revisions</a> for Yaris and improved powertrains.
	July	<a href="#">UK prices and specifications</a> for Yaris in the UK are released.
	August	First customer deliveries of the revised Yaris.
2015	June	Yaris's 1.4 D-4D engine becomes Euro 6-compliant, with consequent improvements in fuel economy and CO <sub>2</sub> emissions.
	August	<a href="#">Toyota Safety Sense</a> is made available as an option on all Yaris models above Active grade.
	December	The <a href="#">2016 Yaris</a> is launched, with new Design grade and a bi-colour bodywork option. Sport grade is discontinued and Excel grade becomes hybrid-only.
2016	July	The <a href="#">Yaris Orange Edition</a> model is added to the range. Yaris Hybrid achieves equal top score in the <a href="#">2016 Which? New Car Survey</a> .
2017	March	Yaris undergoes major revisions, announced at the Geneva motor show, including new exterior styling and equipment grades. A new 1.5-litre Dual VVT-iE petrol engine is introduced, replacing the previous 1.33-litre unit. A high-performance version, the Yaris GRMN is also presented at Geneva.
	April	The new Yaris goes on sale in the UK.

	July	The Yaris Yellow Edition model is added to the range.
	December	Yaris achieves top five-star rating in Euro NCAP testing.
2018	September	New Yaris Y20 and GR Sport models debut at the Paris motor show.
2019	January	Yaris Y20 and GR Sport go on sale in the UK.
2020	January	Toyota releases details of the <a href="#">all-new fourth generation Yaris</a> and the high-performance <a href="#">GR Yaris</a>
	August	New Yaris goes on sale in the UK
	November	The new GR Yaris is launched.

Sales in UK markets in 2020: 21,001

Cumulative UK sales since launch: 635,783

## TOYOTA YARIS TECHNICAL SPECIFICATIONS

<b>POWERTRAIN</b>		<b>1.5-litre Hybrid</b>
Type	3 cylinders in-line	
Valve mechanism	DOHC 12-valve with VVT-iE (intake) and VVT-I (exhaust)	
Fuel system	Direct multipoint injection	
Displacement (cc)	1,490	
Bore x stroke (mm)	80.5 x 97.6	
Compression ratio	14.0:1	
Max. torque (Nm @ rpm)	120 @ 3,600	
Max. engine power (bhp/DIN Hp/kW @ rpm)	90/91/67 @ 5,500	
<b>Total hybrid system max. power (bhp/DIN hp/kW)</b>	<b>114/116/85</b>	
<b>Electric motor/generator (MG2)</b>		
Motor type	Permanent magnet, synchronous motor	
Max. voltage (v)	580	
Max.power (kW)	59	
Max. torque (Nm)	141	
<b>High-voltage battery</b>		
Battery type	Lithium-ion	
Number of cells	48	
Nominal voltage (v)	177.6	
Capacity (amp/h)	4.3	
<b>TRANSMISSION</b>		
Type	e-CVT	
Differential gear ratio	2.834:1	
<b>PERFORMANCE</b>		
Max. speed (mph)	109	
0-62mph acceleration (sec)	9.7	
<b>FUEL CONSUMPTION (WLTP)</b>		
Combined cycle (mpg)	Icon	57.6 – 68.8
	Design	57.6 – 68.8
	Excel	57.6 – 65.6
	Dynamic	57.6 – 65.6
Fuel tank capacity (l)	36	

<b>CO<sub>2</sub> EMISSIONS (WLTP), INSURANCE, WARRANTY &amp; SERVICING</b>		
Combined cycle (g/km)	Icon	92 – 112
	Design	92 – 112
	Excel	98 – 112
	Dynamic	98 – 112
Insurance groups		13E (Icon) 14E (all other grades)
New vehicle warranty		5 years/100,000 miles
Service schedule		10,000 miles/annually
<b>BRAKES</b>		
Front		Ventilated discs
Rear		Solid discs
Parking brake		Electronic
<b>SUSPENSION</b>		
Front		MacPherson struts
Rear		Torsion beam
<b>STEERING</b>		
Type		Rack and pinion, electric power assistance
Turns lock-to-lock		2.73
Min. turning radius – body (m)	16in wheel	5.5
	17in wheel	5.5
Min. turning radius – tyre (m)	16in wheel	5.2
	17in wheel	5.2
<b>EXTERIOR DIMENSIONS</b>		
Overall length (mm)		3,940
Overall width (mm)		1,745
Overall height (mm)		1,500
Wheelbase (mm)		2,560
Front overhang (mm)		790
Rear overhang (mm)		590
Front track (mm)		1,518
Rear track (mm)		1,514
Coefficient of drag (Cd)		0.31

<b>INTERIOR DIMENSIONS</b>		
Interior length (mm)		1,845
Interior width (mm)		1,430
Interior height (mm)		1,190
Loadspace length – rear seats up (mm)		630
Loadspace max. width (mm)		1,004
Loadspace height (mm)		837
Load capacity (l)		286
<b>WEIGHTS</b>		
Kerb weight (kg)		1,085 – 1,160
Gross vehicle weight (kg)		1,615
Towing capacity – braked (kg)		450
Towing capacity – unbraked (kg)		450
<b>WHEELS &amp; TYRES</b>		
Wheels		16 or 17in alloy
Tyres	16in wheel	195/55R16
	17in wheel	205/45R17

## TOYOTA YARIS EQUIPMENT SPECIFICATIONS

<b>SAFETY</b>	<b>ICON</b>	<b>DESIGN</b>	<b>DYNAMIC</b>	<b>EXCEL</b>
Toyota Safety Sense (Pre-Collision System, Lane Trace Assist, Intelligent Adaptive Cruise Control Road Sign Assist and Automatic High Beam)	✓	✓	✓	✓
Driver's airbag	✓	✓	✓	✓
Front passenger airbag with cut-off switch	✓	✓	✓	✓
Front side airbags	✓	✓	✓	✓
Curtain shield airbags	✓	✓	✓	✓
Front centre airbags	✓	✓	✓	✓
ISOFIX child seat fixings on outer rear seats	✓	✓	✓	✓
Front and rear seatbelt fastening reminder	✓	✓	✓	✓
Anti-lock Braking System (ABS)	✓	✓	✓	✓
Vehicle Stability Control (VSC)	✓	✓	✓	✓
Hill-start Assist Control (HAC)	✓	✓	✓	✓
Active head rests	✓	✓	✓	✓
Tyre pressure warning system	✓	✓	✓	✓
Blind Spot Monitor (BSM)	x	x	Opt <sup>1</sup>	✓
eCall	✓	✓	✓	✓
<b>INSTRUMENTS &amp; CONTROLS</b>	<b>ICON</b>	<b>DESIGN</b>	<b>DYNAMIC</b>	<b>EXCEL</b>
4.2 colour TFT multi-information display	✓	x	x	x
Analogue speedometer	✓	x	x	x
Binocular colour instrument display	x	✓	✓	✓
Digital speedometer	x	✓	✓	✓
Hybrid energy display	✓	✓	✓	✓
10in full-colour head-up display	x	x	x	Opt <sup>2</sup>
Electronic parking brake	✓	✓	✓	✓
Remote control functions using MyT app - door locking, hazard lights and climate control	x	x	✓	✓

<b>COMFORT &amp; CONVENIENCE</b>	<b>ICON</b>	<b>DESIGN</b>	<b>DYNAMIC</b>	<b>EXCEL</b>
Front power windows	✓	✓	✓	✓
Rear power windows	✘	✓	✓	✓
Auto-dimming rear-view mirror	✘	✘	✘	Opt <sup>2</sup>
Reversing camera	✓	✓	✓	✓
Front and rear parking sensors, Intelligent Clearance Sonar with automatic braking	✘	✘	Opt <sup>1</sup>	✓
Tilt and telescopic steering wheel adjustment	✓	✓	✓	✓
Three-spoke steering wheel	✓	✓	✓	✓
Auxiliary switches on steering wheel	✓	✓	✓	✓
Automatic windscreen wipers	✓	✓	✓	✓
Follow-me-home headlight function	✓	✓	✓	✓
Automatic headlights	✓	✓	✓	✓
Manual headlight levelling	✓	✓	✓	✓
Smart entry and push-button start	✘	✘	✓	✓
Seatback map pockets	✓	✓	✓	✓
Shopping bag hooks (x2) in boot	✓	✓	✓	✓
Adjustable boot height (two-level floor)	✓	✓	✓	✓
<b>VENTILATION</b>	<b>ICON</b>	<b>DESIGN</b>	<b>DYNAMIC</b>	<b>EXCEL</b>
Automatic air conditioning	✓	✓	✘	✘
Dual-zone automatic air conditioning	✘	✘	✓	✓
Pollen filter	✓	✓	✓	✓
<b>AUDIO, COMMUNICATION &amp; INFORMATION</b>	<b>ICON</b>	<b>DESIGN</b>	<b>DYNAMIC</b>	<b>EXCEL</b>
4-speaker audio system	✓	✓	✘	✘
6-speaker audio system	✘	✘	✘	✓
8-speaker JBL premium sound system	✘	✘	✓	Opt <sup>2</sup>
Toyota Touch 2 multimedia system	✓	✓	✓	✓
DAB radio	✓	✓	✓	✓
7in multimedia screen	✓	✘	✘	✘
8in multimedia screen	✘	✓	✓	✓
Smartphone integration – Apple CarPlay & Android Auto	✓	✓	✓	✓

Bluetooth	✓	✓	✓	✓
USB connection	✓	✓	✓	✓
Data Communication Module (DCM)	✓	✓	✓	✓
<b>SECURITY</b>	<b>ICON</b>	<b>DESIGN</b>	<b>DYNAMIC</b>	<b>EXCEL</b>
Transponder engine immobiliser	✓	✓	✓	✓
Remote control central double locking	✓	✓	✓	✓
Alarm	✓	✓	✓	✓
<b>SEATING, UPHOLSTERY &amp; TRIM</b>	<b>ICON</b>	<b>DESIGN</b>	<b>DYNAMIC</b>	<b>EXCEL</b>
Front sports seats	✗	✗	✓	✓
60:40 split-fold rear seats	✓	✓	✓	✓
Height-adjustable driver's seat	✓	✓	✓	✓
Height-adjustable front passenger seat	✗	✗	✓	✓
Fabric upholstery	✓	✓	✗	✗
Combination fabric/synthetic leather upholstery	✗	✗	✓	✓
Front arm rest	✓	✓	✓	✓
Leather gear shift trim	✓	✓	✓	✓
Leather steering wheel trim	✓	✓	✓	✓
Soft-touch instrument panel trim	✓	✓	✓	✓
<b>EXTERIOR &amp; BODY</b>	<b>ICON</b>	<b>DESIGN</b>	<b>DYNAMIC</b>	<b>EXCEL</b>
LED headlights	✗	✓	✓	✓
LED daytime running lights	✓	✓	✓	✓
LED front fog lights	✗	✓	✓	✓
Full LED rear lights	✗	✓	✓	✓
LED turn indicators	✗	✓	✓	✓
Panoramic roof	✗	Opt*	✗	Opt*
Acoustic windscreen	✓	✓	✓	✓
Rear privacy glass	✗	✓	✓	✓
Rear spoiler	✓	✓	✓	✓
Shark fin antenna	✓	✓	✓	✓
Body-colour door mirrors with integrated turn indicators	✓	✓	✓	✓
Power-adjustable heated door mirrors	✓	✓	✓	✓
Auto-retracting door mirrors	✗	✗	Opt <sup>1</sup>	✓
Bi-tone paint finish	✗	✗	Opt	✗

16in alloy wheels	✓	✓	x	x
17in alloy wheels	x	x	✓	✓
Space saver spare wheel	✓	✓*	✓	✓*
<b>OPTION PACKS</b>	<b>ICON</b>	<b>DESIGN</b>	<b>DYNAMIC</b>	<b>EXCEL</b>
<sup>1</sup> City Pack: auto-retracting door mirrors, blind spot monitor and parking pack	x	x	Opt	x
<sup>2</sup> Tech Pack: JBL sound system, auto-dimming rear-view mirror and head-up display	x	x	x	Opt

\* Tyre repair kit replaces space saver spare wheel when panoramic roof option is specified.

ENDS

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