NEW AURIS

TOYOTA

ALWAYS A **BETTER** WAY

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NEW AURIS

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Combining Hatchback and Touring Sports body styles with a choice of hybrid, diesel, and petrol powertrains, and an updated specification including new safety equipment, the new Auris model range has been designed to meet the needs of every C-segment customer.

MORE STYLE AND NEW ENGINES

With the launch of the Auris Hybrid in 2010, Toyota became the first and only manufacturer to offer a choice of three powertrains in the C-segment. Today, in the face of limited and expensive competition, the broad Auris model range remains a unique proposition.

Toyota's full hybrid technology is now entirely established as a mainstream powertrain choice, and the Auris Hybrid's remarkably quiet, smooth, relaxed and stress-free driving experience has proved increasingly popular with C-segment customers.

The Hybrid model currently accounts for more than 50% of all Auris sales in Western Europe, a mix expected to grow further over the next few years. Since the hybrid powertrain was made available in the Auris range, more than 200,000 units have been sold, and today, the Auris is the best-selling hybrid in Europe.

The Auris Hybrid represents outstanding value for money. CO_2 emissions of just 79 g/km and combined cycle fuel economy of only 3.5 l/100 km offer customers significant tax incentives and exceptionally low running costs.

Reflecting both changes in this highly-competitive market and Toyota customer feedback, the 2015 Auris range features significant improvements in five key areas; Design, Sensory Quality, the Hybrid model, Safety and -improving the model's segment coverage by some 40%- Powertrains.

An all-new, 1.2 litre, direct-injection turbocharged engine joins the existing petrol line-up. The 2.0 litre turbo diesel has been replaced by a new 1.6 litre D-4D unit, and the 1.4 litre D-4D engine has been substantially upgraded, offering best-in-class CO_2 emissions in the 90 hp category. Every engine in the range now meets Euro 6 emissions regulations.

New exterior styling features a redesigned front and rear, giving the Auris a more prestigious and sophisticated road presence. On board, the sensory quality of the cabin has been significantly enhanced through a redesigned dashboard, premium quality surface and trim elements, a 7" touch screen with capacitive switchgear and a new 4.2" colour TFT multi-information screen (as from Mid-grade and standard on Hybrid).

TODAY, THE AURIS IS THE BEST-SELLING HYBRID IN EUROPE

The 2015 Auris range further benefits from suspension and steering revisions designed to improve ride comfort, handling and driver involvement. And numerous measures have also been introduced to reduce the transmission of Noise, Vibration and Harshness (NVH) into the cabin.

Finally, the Auris grade structure has been revised to bring Hybrid grades -Entry, Mid, Style and High- into line with the rest of the model range.

Toshio Kanei
Project Director, Toyota European Projects

'Europe is an important testing ground for Toyota' says Kanei; 'customers are demanding, and competition is tough. That is one of the main reasons for the increase in Toyota's activities in Europe, and the establishment of a European Projects division. That way, we can more accurately target the product improvements we want to make, so we can compete more strongly with our rivals – at first here in Europe itself, but ultimately anywhere in the world.'

'This is especially true of the C-segment' considers Kanei, 'which is a very important and advanced segment here.'

'After we launched the second generation Auris in 2012, we analysed our product position against other OEMs, and gathered feedback from dealers and customers. We identified the strengths of the current product, but we also learned from our drivers where they saw opportunities for improvement -sensory quality for example.'

'In response, we established the Sensory Quality division in 2012, bringing the same engineering skill and attention to detail that we already devote to interior ergonomics and comfort to the visual, tactile and aural senses of the occupants.'

'Its role expanding with every new model, the SQ division has collaborated with both the designers and engineers on every aspect of the interior to ensure that we could make a big step forwards with the new Auris. And its painstaking work on every aspect of the interior -shape, colour, touch, illumination, font and character- has really paid off, raising interior ambience to unprecedented levels of visual quality, consistency and harmony.'

'We have also worked a great deal on the driveability of each powertrain' says Kanei. 'Most notably in the context of the new 1.6D-4D engine, and the all-new 1.2 turbo petrol unit developed by TMC specifically for this market. And we have improved dynamics to harmonise the new styling with a more sporting and refined driving experience.'

'The C-segment hatchback is a mainstream vehicle in Europe, and customer expectations are higher than in any other market; certainly higher than in Japan or America. In Europe, good ride and handling is a must' Kanei believes. 'Driving speeds are high, and good stability and quick vehicle response to steering inputs are essential.'

'So, we feel that if we get this right for Europe it will be effective for all markets. In America they drive great distance along freeways, so they value straight line stability above all else. But even their requirements are now changing towards better, European-style handling.'

'Auris has an increasingly global relevance for Toyota' says Kanei. 'We sell it mainly in Europe, Japan and Australia, but considered the possibility of new markets with this car, including in the USA as the Scion iM, with models produced in Japan.'

'Of course, North American regulations are different, so we had to make revisions to meet their specific requirements. We also conducted focus group interviews in New York and Los Angeles to get a clearer understanding of American customer expectations and the direction we should take for the Scion version.'

'So, the body shape is the same, but there are bumper, lamp and aerodynamic part differences reflecting the more extravert direction preferred by the Scion customer. The dynamics, ride and handling, however, are taken straight from the Auris in Europe, and the American audience seems to be very pleased with that. That's just one example of how Toyota's European R&D know-how is starting to strengthen our products across the globe.'

THE C-SEGMENT HATCHBACK IS A MAINSTREAM VEHICLE IN EUROPE, AND CUSTOMER EXPECTATIONS ARE HIGHER THAN IN ANY OTHER MARKET

- New, more prestigious and sophisticated exterior design
- Improved interior design with greater consistency, uniformity and sensory quality
- 4.2” multi-information TFT and 7” touch screens with fully integrated capacitive switchgear

NEW EXTERIOR DESIGN AND IMPROVED INTERIOR SENSORY QUALITY

The front and rear of the Auris have been comprehensively redesigned to give the vehicle a visually broader stance and lower centre of gravity, and a more prestigious, sophisticated road presence.

To the front, paired chrome wings are generated from the new, more prominent Toyota logo. Underscoring the front lip of the bonnet, the powerful upper wings run the full width of the car. The less prominent lower wings sweep down into the upper surface of the front bumper, holding the sharply-angled inside edge of new LED headlamp clusters which incorporate LED Daytime Running Lights (DRL).

LED lamps have numerous advantages over conventional bulbs; they produce illumination closest to daylight on the Kelvin scale, they consume less energy than conventional bulbs, and they have a service life of up to 100,000 hours -almost the same as that of the vehicle itself.

Below a more prominent front bumper, the lower grille now runs the full width of the car, giving the Auris a broader, more purposeful stance. The grille has a narrow centre section underscored by a chrome accent to the lip spoiler, and then widens into deeper pods housing integral foglights located at the very extremities of the new design.

In profile, the new front and rear styling generates longer overhangs, improving the overall balance of the design and leading the eye in a long, sweeping line straight from the front Toyota logo to the rear lamp cluster. This more sophisticated profile is further enhanced by a new shark fin roof antenna and new, 16" and 17" alloy wheel designs.

To the rear, the lower half of the Auris has been completely redesigned to once again add visual emphasis to the vehicle's broad road stance. The width of a deeper, more muscular bumper design is emphasised by the placement of reflector lamp housings at the extremities, and underscored by a thin chrome trim line.

The rear lamp clusters now incorporate LED light guide technology, giving the new Auris a more prestigious, instantly identifiable light signature.

IMPROVED INTERIOR SENSORY QUALITY

Toyota's European Sensory Quality Division has been fully involved in every visual, tactile and aural aspect of the new Auris' interior styling from the inception of the project, targeting the very highest standards of design required to meet discerning European customer expectations of harmony, balance and high visual quality.

With the three key goals of greater consistency, improved coherence and enhanced sensory quality, the interior of the new Auris has been significantly enriched through a reduction in the visual mass of the dashboard design, cleaner integration of more uniformly lit instrumentation, and a more consistent shape, finish and colour to grained surfaces and trim elements.

The driver's instrument binnacle now features a stronger, more sporting design with tubed tachometer and speedometer dials either side of a new 4.2" colour TFT multi-information screen.

Within a more curvaceous dashboard design featuring more consistent back-lit illumination, the centre stack instrumentation has been integrated into a single, smooth surface incorporating a 7" touch screen and touch-sensitive, capacitive switchgear. The upper surface and fascia of the dashboard itself are now finished in the same, soft-touch material with consistent colour and graining between surfaces.

Numerous detail elements such as the air vents, door handles and gearlever surround have been redesigned for a crisper, higher quality appearance. Both the shape and material of paint and chrome trim finishes throughout have been harmonised. New seat upholstery designs complete a more prestigious and sophisticated, premium quality cabin environment.

Two new exterior colours, Dark Blue Mica and Blue Metallic, are available for the new Auris.

THE FRONT AND REAR OF THE AURIS HAVE BEEN COMPREHENSIVELY REDESIGNED TO GIVE THE VEHICLE A VISUALLY BROADER STANCE AND LOWER CENTRE OF GRAVITY

Mehmet Fatih Kale
Senior Engineer, Sensory Quality, Body Design Division, Toyota Europe

'Sensory quality at Toyota is about how customers perceive the vehicle. When we sit in a car all our senses are judging the environment; predominantly visual, tactile and aural...

The Sensory Quality team was established in 2012 to be the link between design and engineering. We're trying to bring the same depth of engineering logic that applies to ergonomics and occupant comfort to the field of sensory quality. And our role has recently been expanded, so we're now involved from the very beginning of the styling process, where the initial alignment of concept and feasibility ensures the best product execution.

We map the whole interior to highlight possible areas of concern and possible improvements to discuss with the designers and the chief engineer. Mapping is very important to us at the outset, to ensure we identify every single element that needs attention, so there is no drop in sensory quality with any single component.

In the specific context of Auris, although the interior quality of the previous generation car is very good, we wanted to improve cohesion between diverse elements, bringing consistency to the design language. A sense of coherence is a crucial quality for the European market, so our focus with new Auris has been to analyse how we can create harmony on board...

To that end, we established three main pillars for Auris:

Firstly, to achieve consistency, we worked on aligning sections and matching decoration shapes; for instance, linking door trim to instrument panel to console. Additionally, the steering wheel, instrument panel and air vent chrome trim was matched to give the same look, whilst the new piano black on the centre console matches that of the display audio system.

Secondly, to enhance coherence, we worked on improving colour consistency, with a focus on interior black elements. Dividing the interior into three groups -injection moulded parts, painted parts, and soft parts- we now have a colour measurement-based system. So, the colour of all interior parts has been fine tuned to create visual unity.

Thirdly, to improve visual quality, we prioritised the instrument clusters of the driver's meter and centre console, which are the main visual elements from a driver's perspective. We designed clean and continuous surfaces by minimising split lines between elements, and removing them altogether wherever possible -such as between two adjacent panels of piano black- to create larger single elements. And this creates the same sort of visual harmony you get from, say, one piece of marble.

We removed all superfluous text from switchgear, and even, in the case of the clock adjustment for example, reduced the switchgear itself. And we adjusted instrument illumination by aligning all the blues from the different control panels together. Finally, we now use backlighting universally for greater visual uniformity.

So, for instance, each position of the gear shift indicator used to be in a different colour; now every position is white, turning to backlit colour only when you select it, providing a clean visual match with the rest of the IP and switchgear illumination.

In summary, then, aesthetics, consistency and attention to detail are the key aspects of our work in meeting European customer expectations of harmony, balance and high visual quality. And that's where our role fits so well between design and engineering; focusing on each detail and bringing all these elements together to create harmony within the vehicle.

So, in the new Auris we have removed the silver paint finish and all metal decorations are now real chrome, which highlights the piano black finish beautifully and defines the technical zone. Also, we now have door, centre console armrests and seats all finished in leather, with the same grain and matching stitching, creating the comfort zone. All these elements combine to improve visual harmony.

Nobody likes to be unpleasantly surprised by a car interior, so it's very important to use a good combination between touch, shape and surface. If a part looks hard it must feel hard; if it looks soft, it must feel soft; if it's a metal finish, it must look metallic and feel cold to the touch... And there's the fundamental difference between animal and technical grain; if you see technical grain, you expect it to feel hard to the touch, but all our experience of animal grain, for instance in furniture, says it must be soft to the touch.

The involvement and responsibility of the Sensory Quality team is growing with each new Toyota coming to the European market, and our experience and expertise are growing simultaneously. I think, to sum up what our division has aimed to achieve with the Auris, I'd say 'High sensory quality in which the whole is more than the sum of the parts'.

WE WANTED TO IMPROVE COHESION BETWEEN DIVERSE ELEMENTS, BRINGING CONSISTENCY TO THE DESIGN LANGUAGE

- Front and rear suspension revisions for improved roll damping and straight-line ride comfort
- Revised Electric Power Steering (EPS) for better feel and improved feedback
- Improved NVH measures for an even quieter driving experience

IMPROVED DRIVING DYNAMICS AND NVH

The new Auris range benefits from suspension and steering revisions designed to improve ride comfort and handling. Numerous measures have also been introduced to reduce the transmission of Noise, Vibration and Harshness (NVH) into the cabin.

Components of the front MacPherson strut suspension have been revised, including the design of the coil spring and the spring rate itself, the shock absorber, upper insulator, bound stopper and stabiliser bush.

Lateral force-reducing springs achieve a smoother stroke for enhanced ride comfort, whilst the optimisation of shock absorber damping force response promotes further improvements to ride comfort, handling and stability.

The new Auris features either a double wishbone or torsion beam rear suspension system. The double wishbone system equips all 1.2 litre turbo, 1.6 litre petrol, 1.6 litre diesel and full hybrid models. 1.33 litre petrol and 1.4 litre diesel engine models feature torsion beam rear suspension. Both systems benefit from enhanced damping force response for improved ride comfort under all driving conditions.

In combination, these front and rear suspension revisions improve initial roll damping, minimise friction and enhance straight-line comfort with a smoother ride over bumps.

In addition, the mapping of the Auris' Electric Power Steering (EPS) has been tuned to not only improve steering feel from the neutral position, but also to further build steering weight as vehicle speeds rise, giving improved feedback above speeds of 60-80 km/h.

ENHANCED NVH MEASURES

New sound management measures targeting engine and high speed wind noise have resulted in marked NVH improvements, ensuring that the new Auris' more comfortable ride is complimented by a noticeably quieter cabin.

Soundproofing has been enhanced through the adoption of additional sound absorption materials within the cowl outer silencer, the instrument panel and the transmission tunnel. An outer tunnel silencer has also been added to minimise transmission noise.

Additional sealing in the front fender, dashboard inner silencer and door area further reduces the transmission of engine, road and wind noise into the cabin.

THE NEW AURIS RANGE BENEFITS FROM SUSPENSION AND STEERING REVISIONS DESIGNED TO IMPROVE RIDE COMFORT AND HANDLING

JAN LYSEN
Manager, Toyota Europe Marketing Management

'In order to grow Toyota sales, we want to find more customers who have not driven one of our cars before, and hybrid plays the lead role in this plan' says Lysen. 'For them, we want a very strong proposition, and Hybrid fits the bill beautifully.'

'We already know from the current generation Auris that the hybrid experience attracts customers to the Toyota brand' says Lysen. 'The Hybrid model currently accounts for half of all Auris sales in Europe. It is now the most sold Hybrid in Europe ahead of Yaris.'

'However, we still want to increase Auris sales further and have a big job to do in getting the hybrid out to the consumers and getting them to experience how good the driving experience makes them feel. To a lot of people outside the industry, this is still a new technology' considers Lysen. 'This is not a conventional petrol or diesel, this is something different. Remember, many people are still daunted by their first experience of driving a car with automatic transmission...'

'The hybrid proposition is about how the car drives' says Lysen, 'with fuel economy and CO_2 a secondary part of the proposition. The combination of automatic transmission and the electric motor gives easy, relaxed, feel-good driving which fits very well with today's congested traffic environment.'

'We call it intuitive, responsive and quiet' he adds. 'Hassle-free stop start driving the uniqueness of which, once they have experienced it, everybody immediately understands.'

'So, key for us with the launch of the new Auris is challenging our retailers and ourselves to ensure that as many people as possible try the Hybrid. If you haven't experienced the driving experience first-hand you just won't get the whole hybrid idea...'

'Of course, the hybrid is our unique proposition, the thing that gets us noticed' says Lysen. 'But for those who are attracted to Toyota and the Auris and wish to opt for a more traditional powertrain, we now have the new 1.2 litre turbo and 1.6 litre diesel options.'

'If you start splitting the engines and their demand very mathematically, by horsepower or capacity, we have not been in these horsepower bands within this segment before. With these two new engines, our offer is much more spot on for where the majority of demand is, and we will improve our model segment coverage by some 40%.'

WE STILL WANT TO INCREASE AURIS SALES FURTHER AND HAVE A BIG JOB TO DO IN GETTING THE HYBRID OUT TO THE CONSUMERS AND GETTING THEM TO EXPERIENCE HOW GOOD THE DRIVING EXPERIENCE MAKES THEM FEEL

- 1.8 litre full hybrid powertrain with class-leading CO_2 emissions now as low as 79 g/km, 3.5 l/100 km average fuel consumption and lower Total Cost of Ownership
- All-new, direct injection, 1.2 litre turbo petrol engine combining impressive performance with 4.6 l/100 km and 106 g/km
- New, Euro 6-compliant 1.6D-4D and uprated 1.4D-4D tubodiesels

REVISED POWERTRAIN LINE-UP

Reflecting changing trends in the C-segment market which call for further reductions in fuel consumption, emissions and cost of ownership without detriment to performance or driving pleasure, the Auris full hybrid, petrol and diesel powertrain line-up has been both extended and extensively revised.

Every engine in the range now meets Euro 6 emissions regulations.

The 1.2T, an all-new, direct-injection turbocharged engine joins the existing 1.33 litre Dual VVT-i and 1.6 litre Valvematic units to offer customers an expanded choice of three petrol engines. The 2.0 litre turbo diesel has been replaced by a new 1.6 litre D-4D unit, and the 1.4 litre D-4D engine has been substantially upgraded.

A 1.8 litre hybrid powertrain completes one of the broadest ranges of engine choice offered by any model in this segment. Combining a uniquely intuitive and engaging driving experience with class-leading CO_2 emissions now as low as 79 g/km, Toyota's full hybrid technology, which already accounts for more than 50% of European Auris sales in 2014[1], is now entirely established as a mainstream proposition.

Every powertrain in the Auris engine line-up offers customers the benefits of Toyota Optimal Drive; a combination of wide-ranging advanced technologies and internal improvement programmes designed to optimise the balance of performance and driving enjoyment with fuel economy and low emissions.

LOWER FULL HYBRID SYSTEM EMISSIONS

Further lowering Total Cost of Ownership, the new Auris Hybrid now combines an average fuel consumption of just 3.5 l/100 km with class-leading, highly tax-efficient CO_2 emissions figures as low as a remarkable 79 g/km in the European homologation combined cycle.

Toyota's full hybrid technology offers customers a uniquely quiet, relaxing and entirely intuitive driving experience. Of particular note are the highly responsive performance offered by the combination of petrol engine and electric motor when accelerating from a standstill, overtaking or changing lanes; a completely seamless gearchange and system restart for stress-free driving in traffic congestion; and the exceptionally quiet running of the hybrid system when operating under electric motor power alone, from start up and at speeds up to 70 km/h.

Capable of operating both independently and in combination, the HSD system's 1.8 litre VVT-i petrol engine and electric motor generate a maximum power output of 136 DIN hp, equipping the Auris Hybrid with a 0-100 km/h acceleration time of 10.9 seconds and a maximum speed of 180 km/h.

The Auris Hybrid generates virtually no NOx and Particulate Matter emissions. Moreover, when operating in the unique, switchable EV mode not available to mild hybrid vehicles, it generates zero CO_2, NOx and particulate emissions, driving for up to two kilometres continuously at speeds of up to about 50 km/h, dependant on battery charge and driving conditions.

The Auris Hybrid's powertrain is designed to eliminate the need for the petrol engine as often as possible during city driving. Toyota's own data show that the cumulative effect of full hybrid operation leads to high proportions of zero-emissions driving.

1.2T: AN ALL-NEW DIRECT INJECTION TURBO PETROL ENGINE

The all-new 1,197cc, 16 valve, 4-cylinder, direct-injection turbo petrol engine offers a level of performance similar to that of a 1.6 litre engine, while its fuel consumption and CO_2 emissions are perceptibly lower.

The lightweight, highly compact unit features numerous sophisticated technologies, including direct injection, enhanced Dual Variable Valve Timing-intelligent Wide (VVT-iW[2]), a high tumble port cylinder head with an integrated exhaust manifold, a lightweight valve train system, a variable control oil jet system and a resin intake manifold and intake pipes.

The turbo, direct-injection allowing multiple injections, and the newly developed VVT-iW[2] work hand in hand to provide high torque at low revs, strong performance and low fuel consumption.

The new engine has a maximum power output of 116 DIN hp, and develops an impressive maximum torque of 185 Nm from 1,500 to 4,000 rpm. Mated to a 6-speed manual transmission, this equips the new Auris 1.2 with a highly competitive 0-100 km/h acceleration time of 10.1 seconds, and a top speed of 200 km/h.

THE AURIS FULL HYBRID, PETROL AND DIESEL POWERTRAIN LINE-UP HAS BEEN BOTH EXTENDED AND EXTENSIVELY REVISED

[1] 2014 Europe sales = EU 28 + 3 EFTA countries (Switzerland, Norway and Iceland)
[2] Variable Valve Timing Intelligent Wide

At the same time, the new engine returns average fuel consumption figures of 4.7 l/100 km, and generates CO_2 emission of only 109 g/km, offering customers considerable cost of ownership benefits. Multidrive S transmission further reduces both fuel consumption and emissions, to 4.6 l/100 km and 106 g/km respectively.

NEW 1.6D-4D

Making its first appearance in the Auris range, an all-new, 1,598 cc turbodiesel replaces the outgoing 2.0 litre unit, matching customer powertrain demands at the heart of the segment.

The new engine develops 112 DIN hp and maximum torque of 270 Nm between 1,750 and 2,250 rpm. This equips the Auris 1.6D-4D with highly class-competitive performance figures of 0-100 km/h in 10.5 seconds, 80-120 km/h (in 5th gear) in 10.9 seconds, and a top speed of 190 km/h.

Conversely, CO_2 emissions are markedly lower than those of the outgoing 2.0 litre unit, falling to just 104 g/km, and average fuel consumption is now only 4.1 l/100 km. Auris 1.6D-4D cost of ownership is further reduced by a new service scheme featuring a 20,000 km service interval.

UPRATED 1.4D-4D

The 1,364 cc turbodiesel has been upgraded to be Euro 6 compliant, but the changes go significantly further than that.

The unit features numerous enhancements to both improve performance and lower emissions. A new, smaller turbocharger reduces friction in the turbine shaft by 20%, and improves efficiency by generating a higher boost pressure at low engine speeds.

A new solenoid fuel injection system features a larger supply pump and higher common-rail injection pressures of 180 Mpa, making it compatible with the Euro 6 engine's ECU and software. A NOx Storage Reduction (NSR) catalyst has been adopted within the exhaust system to meet the Euro 6 requirement for a 55% reduction in NOx.

A new piston design with an open chamber combustion bowl improves fuel economy by 3.4%. The new pistons feature a Diamond-like Carbon (DLC) coating which reduces friction to lower fuel consumption.

A new cylinder head cover is now fabricated in plastic for a 40% reduction in weight, and offers improvements to both camshaft lubrication and oil capture performance.

THE BREADTH OF TORQUE GENERATION HAS BEEN EXPANDED 400 RPM LOWER DOWN THE REV RANGE, WITH A MAXIMUM 205 NM NOW AVAILABLE FROM ONLY 1,400 RPM

The uprated engine develops 66 kW / 90 DIN hp. The breadth of torque generation has been expanded 400 rpm lower down the rev range, with a maximum 205 Nm now available from only 1,400 rpm, up to 2,800 rpm. The Auris 1.4D-4D will accelerate from 0-100 km/h in 12.5 seconds, and has a maximum speed of 180 km/h.

TOYOTA AURIS	1.4D-4D Euro 6	1.4D-4D Euro 5
Displacement (cm^3)	1,364	1,364
Compression ratio	16.5 : 1	16.5 : 1
Common rail pressure (mpa)	180	160
NOx reduction system	NSR + HPL - EGR[1]	HPL - EGR[1]
Max. power (DIN hp/ kW @ rpm)	90/66 @ 3,800	90/66 @ 3,800
Max. torque (Nm @ rpm)	205 @ 1,400 - 2,800	205 @ 1,800 - 2,800
CO_2 emissions (combined, g/km)	89	99

[1] NSR: NOx Storage and reduction
HPL: High Presure Loop
EGR: Exhaust Gas Recirculation

Equipped with a manual transmission and Stop & Start technology, the improved 1.4D-4D unit now returns combined cycle fuel consumption of 3.4 l/100 km and benefits from a substantial reduction in CO_2 emissions to only 89 g/km.

MULTIDRIVE S CONTINUOUSLY-VARIABLE TRANSMISSION

Available on 1.2 turbo and 1.6 Valvematic petrol versions of the Auris, Multidrive S is a continuously-variable transmission (CVT) featuring both fully-automatic seamless shift and sequential, stepped 7-speed Sport modes.

In Sport mode, the system is optimised for response and direct engine control, and the transmission step position can be selected by either gear lever or shift paddle. Sport mode also features precise cornering control. On detecting deceleration, the system downshifts and applies engine braking to assist braking force. On exiting a corner, predictive downshift logic controls the system to ensure the optimal gear ratio is selected for the required level of acceleration.

JENS BRECH
Senior Manager, Toyota Europe Product Planning

'The main target of the European Product Planning department is to help ensure that the development of every new model meets discerning European customer expectations' says Brech.'

'In the case of the new Auris, that relates to exterior and interior styling, sensory quality, driving performance and, of course, safety, with the new Toyota Safety Sense package. Our role is to bring all these elements together to make the best possible product for the European market.'

'We wanted to maintain our current strengths, such as design and the hybrid powertrain' says Brech. 'So we took the original design, function, specification and safety targets for the current Auris and, driven by customer feedback, have improved on key areas such as sensory quality and advanced specifications.'

'One of the most important and immediately noticeable aspects of the new Auris is the major improvements we've made in both the design and sensory quality of the interior. Our aim was to strengthen the connection between our really sporting and dynamic styling of the exterior and the new, premium-status interior.'

'So, in conjunction with a comprehensive upgrading of materials and finishes, we now offer customers a new, double-layer cockpit with a high quality display audio system featuring capacitive buttons fully integrated within the centre stack. This full flush integrated centre display is attended by meters in a new sporty tube design including a 4.2 inch colour TFT screen to support the driver with all relevant information. The side air vents have been improved and now look far more stylish. And we have also improved the connection of the centre console to the centre stack which gives a stronger, clearer and visible driver-oriented emphasis.

'We've also incorporated many advanced specification details throughout the car' adds Brech, 'such as the shark fin antenna, bezel-less parking sensors, LED headlamps and tail lights with lightguide technology, and new designed 17" machine faced alloy wheels... Specifications that are normally only found in higher segment vehicles, that we are now offering on Auris.'

'When it comes to powertrains, Toyota's perspective is obviously a little different' considers Brech, 'because Auris is unique in the segment for its affordable hybrid, which accounts for more than 50% of model sales. But, to be competitive, we still need to be in the heart of a market driven by fuel costs and CO_2 emissions with our other powertrains; hence the small-displacement, 1.2 litre turbo petrol engine and a better 1.6D-4D litre unit, both positioned now in the centre of the segment.

'Auris is the first Toyota to feature the 1.2 litre turbo. We needed to offer our customers an engine with very good CO_2 figures, and this is something that can usually only be delivered with the help of turbocharging, which also has the benefit of not compromising on performance. Actually, compared to the 1.6 litre petrol unit, the 1.2 turbo has a better performance in terms of both acceleration and elasticity, has the same top speed, and yet offers a sizeable 29 g/km reduction in CO_2 emissions.'

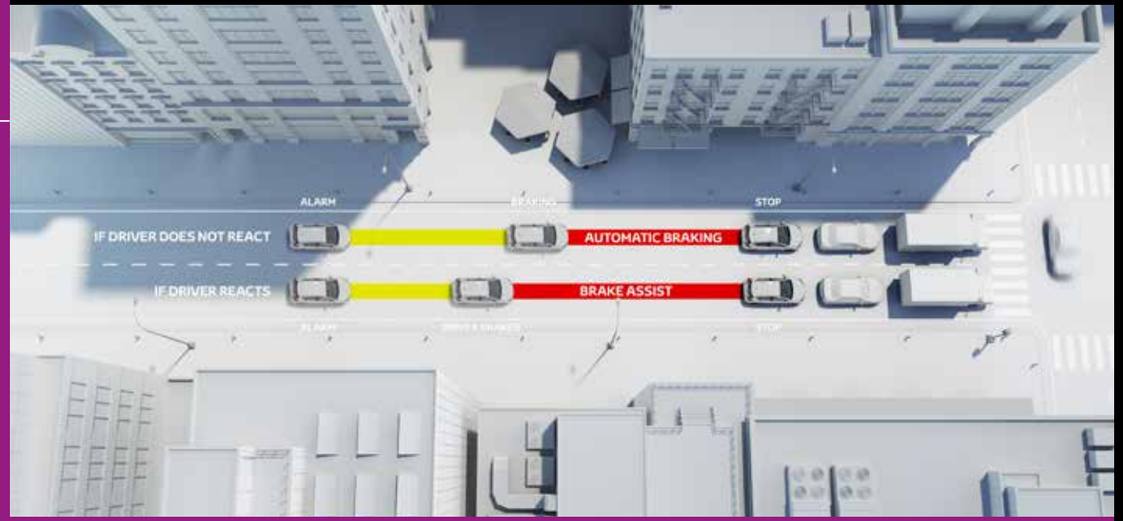
'The diesel is also at the heart of the market but, once again in the interests of economy and emissions, is now in a smaller, 1.6 litre format.'

'Finally' adds Brech, 'safety was also one of the areas in which we needed to be more competitive, hence the arrival of Toyota Safety Sense. Combining a wide range of active, passive and preventive safety features encompassing everything from an urban-friendly Pre-Collision System to Lane Departure Alert, it offers Auris customers one of the most comprehensive and technologically advanced safety packages in the segment.'

OUR AIM WAS TO STRENGTHEN THE CONNECTION BETWEEN OUR REALLY SPORTING AND DYNAMIC STYLING OF THE EXTERIOR AND THE NEW, PREMIUM-STATUS INTERIOR

- Active Safety Technologies designed to help prevent or mitigate collisions
- Pre-Collision System and Lane Departure Alert
- Automatic High Beam and Road Sign Assist systems

TOYOTA SAFETY SENSE



PRE-COLLISION SYSTEM

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.

This year, Toyota is launching 'Toyota Safety Sense', a newly developed set of active safety technologies designed to help prevent or mitigate collisions across a wide range of traffic situations.

All Auris equipped with Toyota Safety Sense will feature a Pre-Collision System[1] (PCS) and Lane Departure Alert (LDA). To further enhance safety as well as driver convenience, Auris will also feature Automatic High Beam (AHB) and Road Sign Assist (RSA) systems.

Between speeds of approximately 10 km/h to 80 km/h, Pre-Collision System detects vehicles in front and reduces the risk of hitting them from the back. When there is a possibility of a collision it prompts the driver to brake with an audible and visual alert. PCS also primes the brake system 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 30 km/h[2] or even bringing the car to a complete stop, in order to prevent the collision or mitigate the force of impact.

The Lane Departure Alert system monitors lane markings and 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.

Automatic High Beam helps ensure excellent forward visibility during night-time driving. It detects both the headlights of oncoming vehicles and the tail lights of preceding vehicles, automatically 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 supports drivers by ensuring they always have the best possible information, even if they have, perhaps, overlooked a road sign. It identifies traffic signage such as speed limit and no overtaking. System status and alert information is displayed to the driver on the instrument colour TFT multi-information screen. In case of speed limits, the system gives a visual and audible alert should the driver exceed the posted limit.

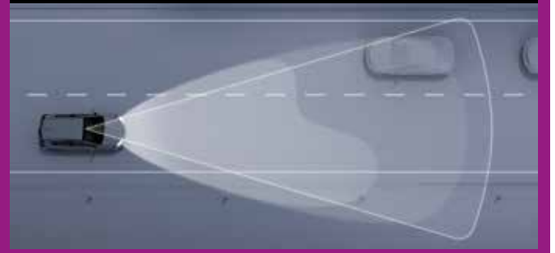
Thanks to the Toyota Safety Sense system reducing the risk of being involved in traffic accidents, drivers of the new Auris may benefit from lower insurance costs[3] or a more advantageous insurance reclassification[3].

The new safety pack will initially be made available on the new Auris and new Avensis ranges, as well as on AYGO and Yaris. Depending on the model and on the market, Toyota Safety Sense will be offered as standard, or at a competitive price.

"By the end of 2015, up to 70% of European Toyota buyers will be able to spec their car with Toyota Safety Sense", says Didier Leroy, Chairman, Toyota Motor Europe. "It is only when safety systems are in widespread use that they can have a real impact on the elimination of traffic accidents and fatalities. That's why Toyota has decided to launch the democratisation of advanced safety technologies in its cars"

TOYOTA SAFETY SENSE, A NEWLY DEVELOPED SET OF ACTIVE SAFETY TECHNOLOGIES DESIGNED TO HELP PREVENT OR MITIGATE COLLISIONS ACROSS A WIDE RANGE OF TRAFFIC SITUATIONS

AUTOMATIC HIGH BEAM



LANE DEPARTURE ALERT

ROAD SIGN ASSIST

[1] Technical name: Pre-Crash System
[2] Results achieved during testing using a vehicle travelling at 30 km/h and a stationary vehicle; system operation depends on driving environment (incl. road and weather) and vehicle circumstances.
[3] Market dependant

TJARK KREUZINGER
Senior Manager, Safety Research and Technical Affairs

'Toyota's global vision for automotive safety hinges on the safest and most responsible way of moving people' says Kreuzinger. 'We have always considered our work within a three part initiative; people, the traffic environment and vehicles.'

'We think it is essential that people are educated and aware of the importance of safety in traffic; that the traffic environment is set up in a way that supports safe driving; and because, of course, we are a manufacturer, we not only ensure our vehicles meet current safety regulations but also keep developing passive and active safety to go beyond existing safety standards.'

'Real-world safety can only be achieved if, firstly, we understand why accidents happen and what the consequences of those accidents are' Kreuzinger believes. 'We call this the pursuit of real-world safety.'

'Next we go to the second step, which is to evaluate what happens to a car in an accident, then work on improvements to both avoid the accident and also mitigate the effects of the crash.'

'Then the third step is the development and testing of our efforts to see if they are successful. With every new generation of cars we go through this cycle again.'

'We have achieved a great deal in the area of passive safety over the last 20 years; better seat belts, airbags, stronger bodyshell compartments, more robust seats, more effective front and rear crumple zones... Obviously there is still more work to be done, but since the arrival of ABS and ESC, the focus has very much switched to active safety.'

'You could say that the introduction of ABS was the first step in preventive safety; reducing the risk of, or even preventing, an accident. Our work, then, is moving more and more towards trying to avoid the accident in the first place.'

'We see this move in focus towards active and preventive safety with changes at Euro NCAP as well; the way they test the vehicles, the introduction of new tests to cater for new technologies, and the changes to the scoring system are all designed to encourage manufacturers to further investigate active safety features.'

'Since 2009, Euro NCAP has created a 4 box approach' Kreuzinger explains. 'The first concerns adult occupancy, which is what Euro NCAP was primarily about before 2009. The second is child safety - ISOFIX systems, etc. The third is pedestrian safety -the head, leg and hip impacts of adults and children. Initially, the fourth box was merely concerned with a seat belt reminder and stability control, but it now includes more 'Driver Assistance Systems', and already assesses lane departure Forward Collision Warning (FCW) and Automated Emergency Braking Systems (AEB). We appreciate that Euro NCAP is considering the evolution of safety developments in their testing program.'

'Toyota was, in fact, the first car manufacturer in the world to have a radar-based FCW, which we called our pre-crash safety system, back in 2002' Kreuzinger recalls. 'And that's because we understood very early in our safety development work that this was a critical element in increasing road safety, since we already knew that three-quarters of traffic accidents were caused by driver inattention.'

'Indeed, the majority of accidents are still caused by a driver's misperception, inattention or inappropriate reaction to a situation' Kreuzinger continues. 'In line with this philosophy, and knowing that the majority of drivers can react properly when they are alerted, an audible and visual warning is usually enough to allow them to take the correct action.'

'It can be noted that Toyota has not focused on low speed AEB systems, because they tend not to involve serious occupant injury. Modern cars are designed to absorb such impacts without harm coming to passengers.'

'Now, with the Toyota Safety Sense system we have our uniquely affordable AEB technology, which works at higher vehicle speeds. We have the technology and we'll use it.'

'The affordability of Toyota Safety Sense is extremely significant to the wider picture, because only when such safety systems are in widespread use they can have a real impact on the reducing number and consequences of traffic accidents.'

'As to the future, it is possible to foresee a time, particularly with the growth of automated motoring, when the number of traffic accidents might fall to literally zero' says Kreuzinger. 'And this is fully in line with the Toyota Way; to always aim for a Vision, which we will continue to work for, no matter how challenging it may be'

'Of course, where technology is involved, there will always be a realistic limit. With the growth of automated driving, however, I think that we should target safety levels equivalent to those of railways.'

WE NOT ONLY ENSURE OUR VEHICLES MEET CURRENT SAFETY REGULATIONS BUT ALSO KEEP DEVELOPING PASSIVE AND ACTIVE SAFETY TO GO BEYOND EXISTING SAFETY STANDARDS

1.2T ENGINE
MORE FOR LESS

The 1.2T, an all-new direct injection turbo-charged petrol engine, makes its global debut in the New Auris. It belongs to the range of 14 new engines that Toyota will launch globally between April 2014 and the end of 2015.

In April of last year, Toyota announced its plans to introduce a series of newly-developed, highly fuel efficient engines, applying several combustion and loss-reduction technologies that until then had been reserved for hybrid engines. The new 4-cylinder 1.2T engine is the second engine from this family to come to Europe under the Toyota brand, after the 3-cylinder 1.0 engine that went on sale in AYGO and Yaris last year. Like the 1.0, the 1.2T uses advanced technologies that allow the engine to change from the Otto-cycle to the Atkinson cycle under low loads, it has vertical vortex high tumble air flow intake ports, an exhaust manifold integrated in the cylinder-head and advanced heat management.

To this, the 1.2T adds a direct injection system, as well as a water-cooled turbo and heat-exchanger. Furthermore, the VVT-i (Variable Valve Timing – intelligent) system known from the 1.0, is upgraded to a VVT-iW (Variable Valve Timing - intelligent Wide) system, which allows even more flexibility in the valve-timing.

The combination of these technologies results in outstanding performance and efficiency. For a displacement of 1197cc, the engine delivers 116 DIN hp (85kW) and a constant torque of 185Nm between 1500 and 4000 rpm. It will push the New Auris, the first model to which it is applied, from 0 to 100 km/h in 10.1 seconds. 5th gear acceleration from 80 to 120km/h takes just 13.7 seconds, and the top speed is set at 200 km/h. All of this is achieved despite a strong focus on fuel consumption and CO_2 – the car achieves 4.7l/100 km on the combined cycle, and delivers just 109g/km of CO_2.

BETTER PERFORMANCE FOR LOWER CONSUMPTION

The key to achieving outstanding fuel consumption without compromising performance, is to apply a higher compression. But generally, as the compression increases, so does the risk of uncontrolled combustion, also known as knocking.

The 1.2T's high compression ratio of 10:1 was made possible thanks to the adoption of a series of key technologies that improve control over the combustion process. That way, the risk of knocking could be avoided.

First of all, the intake ports have been designed to generate a more intense flow and a 'vertical vortex', and also the shape of the piston has been optimized to improve in-cylinder turbulence. As a result, fuel and intake air mix faster, and a more homogeneous mixture is formed. This leads to a higher combustion speed – which helps prevent knocking.

Advanced heat-management is in itself a great way to improve fuel economy, but it is also another way of reducing the risk of knocking. The engine was designed in such a way, that the temperature of each individual part can be optimized. For example, the bottom of the pistons is cooled by oil-jets and the cooling of the cylinder head is separated from that of the engine block. This allows to reduce the temperature in the combustion chamber, whilst keeping the block itself hot enough to reduce friction.

Direct injection contributes as well, as it helps to dissipate the heat in the combustion chamber. And the charge air passes through the intercooler, which uses an independent low temperature cooling circuit.

LOW-END TORQUE AND QUICK RESPONSE

A low-inertia turbocharger, the VVT-iW valve system and the D-4T direct injection system work hand in hand to ensure excellent torque delivery from the lowest engine speeds. Together with the limited volume intake system, this ensures an immediate response to the accelerator pedal.

The injection system has been newly developed for the 1.2T engine. Compact in design, it is perfect for utilisation in a small displacement engine. It allows multiple injections per cycle, and the optimized width and reduced length of the fuel spray ensure the quality of the combustion, regardless of the engine regime and load.

FROM OTTO TO ATKINSON

The VVT-i (Variable Valve Timing - intelligent) system operates on both the intake and the exhaust side, and allows maximizing torque at all engine speeds. In addition, the new VVT-iW (Variable Valve Timing - intelligent Wide) allows for the intake valve closing to be delayed, which means that the engine can operate in both the Otto and the Atkinson cycle. The latter is used in extremely low load conditions, when the intake valve remains open for a fraction of time, after the compression stroke has set in, allowing part of the gas charge to be pushed back into the intake. As a result, the effective compression stroke is shortened. Pumping losses are reduced, since the pressure on the piston is lower, and also the throttle valve can be opened wider.

QUICK AND SMOOTH STOP & START

A new start control was developed to ensure a quick and smooth engine restart. When the system shuts down the engine, it controls the stop position to leave the piston half way in the compression stroke. Then, upon restart, it applies stratified injection in the first compressed cylinder to counter vibrations. And by retarding the ignition, torque increase is kept in check, preventing the engine from revving excessively, hence ensuring a confident and tranquil take-off.

TOYOTA AURIS 1.2T

Engine type	4 in-line
Injection type	direct
Displacement (cm^3)	1,197
Bore x Stroke (mm)	71.5 x 74.5
Compression ratio	10 : 1
Max power (hp/kW @ rpm)	116/85 @ 5,200 - 5,600
Specific power (hp/litre)	96.9
Max torque (Nm @ rpm)	185 @ 1,500-4,000
Specific torque (Nm/litre)	154.6
CO_2 emissions 6MT/CVT (g/km EU combined cycle)	109/106
Max Speed (km/h)	200
0 - 100 km/h (s)	10.1

SPECIFICATIONS

ENGINE	1.33 Dual VVT-i	1.6 Valvematic	1.2T	1.4D-4D	1.6D-4D	1.8 VVT-i Hybrid		
Engine code	1NR-FE	1ZR-FAE	8NR-FTS	1ND-TV	1ND-TV	2ZR-FXE	Motor Generator	
Type	4 in-line cylinders			4 in-line cylinders		4-in line cylinders	permanent magnet AC syncronous motor	
Fuel type	95 unleaded petrol or higher			48 Cetane diesel or higher		95 unleaded petrol or higher		
Valve mechanism	DOHC 16-valve with Dual VVT-i	DOHC 16-valve with Valvematic	DOHC 16-valve with Dual VVT-iW	SOHC 8-valve	DOHC 16-valve	DOHC 16-valve with VVT-i		
Fuel system	EFI	EFI	direct injection	common rail + piezo injection		direct injection	Max. voltage (V)	650
Supercharging	-	-	single scroll turbo charger	turbo	variable turbo charger	-	Max. output (kW)	60
Displacement (cm^3)	1,329	1,598	1,197	1,364	1,598	1,798	Max. torque (Nm)	207
Bore x stroke (mm)	72.5 x 80.5	80.5 x 78.5	71.5 x 74.5	73.0 x 81.5	78 x 83.6	80.5 x 88.3	Batttery	Ni-Mh
Compression ratio	11.5 : 1	10.7 : 1	10.0 : 1	16.5 : 1	16.5 : 1	13.0 : 1	Nominal voltage (V)	201.6
Max. power (DIN hp/ kW @ rpm)	99/73 @ 6,000	132/97 @ 6,400	116/85 @ 5,200-5,600	90/66 @ 3,800	112/82 @ 4,000	system total: 136/100 @ 5,200	Number of cells	28
Max. torque (Nm @ rpm)	128 @ 3,800	160 @ 4,400	185 @ 1,500-4,000	205 @ 1,400-2,800	270 @ 1,750-2,250	petrol engine only: 142 @ 4,000	Capacity (kWh)	1.31
Emissions level	Euro 6	Euro 6	Euro 6	Euro 6	Euro 6	Euro 6	Capacity (Ah)	6.5
Stop&Start System	yes	no	yes	yes	yes	HV system	-	-

TRANSMISSION	1.33 Dual VVT-i	1.6 Valvematic		1.2T		1.4D-4D	1.6D-4D	1.8 VVT-i Hybrid
Type	Manual	Manual	Multidrive S	Manual	Multidrive S	Manual	Manual	Planetary Gear System
Gear ratios (:1)								
1st	3.538	3.538	Forward : 2.386 to 0.411	3.727	Forward : 2.480 to 0.396	3.538	3.818	Forward: 2.683
2nd	1.913	1.913		2.045		1.913	1.913	
3rd	1.392	1.310		1.310		1.233	1.218	
4th	1.029	0.971		0.971		0.916	0.860	
5th	0.875	0.818	Reverse: 2.505 to 1.680	0.764	Reverse: 2.604 to 1.680	0.675	0.790	
6th	0.743	0.700		0.619		0.590	0.638	Reverse: 2.683
Reverse	3.333	3.333		3.333		3.333	4.139	
Differential gear ratio (:1)	4.538	4.294	5.698	3.944	5.045	3.944	3.526*; 3.045**	3.267
*1st to 4th gear; **5th, 6th, Reverse	-	-		-		-	-	-

SPECIFICATIONS

CHASSIS	1.33 Dual VVT-i	1.6 Valvematic	1.2T	1.4D-4D	1.6D-4D	1.8 VVT-i Hybrid
Front suspension	MacPherson Strut			MacPherson Strut		MacPherson Strut
Stabiliser bar diameter (mm)	23.2	23.2	23.2	23.2	23.2	23.2
Rear suspension	Torsion beam	Double wishbone	Double wishbone	Torsion beam	Double wishbone	Double wishbone
Stabiliser bar diameter (mm)	-	22.0	22.0	-	22.0	22.0
Steering	Rack & Pignon, Electric Power Steering			Rack & Pignon, Electric Power Steering		Rack & Pignon, Electric Power Steering
Overall ratio	14.8 : 1		14.8 : 1	14.8 : 1		14.8 : 1
Lock to lock (with 17" wheels)	2.67 (2.59)		2.67 (2.59)	2.67 (2.59)		2.67 (2.59)
Min. turning circle tyre/body (m) (15" & 16" wheels)	10.4/11		10.4/11	10.4/11		10.4/11
Min. turning circle tyre/body (m) (17" wheels)	10.8/11.4		10.8/11.4	10.8/11.4		10.8/11.4
Brakes						
Front (mm)	Ventilated disc (277)		Ventilated disc (277)	Ventilated disc (277)	Ventilated disc (277)	Ventilated disc (277 or 296 with 17" wheels)
Rear (mm)	Solid disc (270)		Solid disc (270)	Solid disc (270)	Solid disc (270)	Solid disc (270)
Tyres	195/65 R15 91H - 205/55 R16 91V- 215/45 R17 87W - 225/45 R17 91W					195/65 R15 91H - 205/55 R16 91V- 225/45 R17 91W

WEIGHT (KG)	1.33 Dual VVT-i	1.6 Valvematic		1.2T		1.4D-4D	1.6D-4D	1.8 VVT-i Hybrid
	Manual	Manual	Multidrive S	Manual	Multidrive S	Manual	Manual	Planetary Gear System
Curb weight min/max (Hatchback)	1,150/1,280	1,190/1,335	1,205/1,360	1,190/1,350	1,205/1,375	1,200/1,340	1,295/1,435	1,310/1,430
Gross weight (Hatchback)	1,735	1,805	1,830	1,820	1,845	1,820	1,890	1,815/1,840
Curb weight min/max (Touring Sports)	1,175/1,330	1,205/1,385	1,225/1,405	1,205/1,400	1,225/1,420	1,225/1,385	1,320/1,480	1,335/1,465
Gross weight (Touring Sports)	1,765	1,835	1,860	1,850	1,875	1,850	1,890	1,815/1,865
Towing capacity braked/unbraked	1,000/450	1,300/450	1,300/450	1,300/450	1,300/450	1,000/450	1,000/450	345/345

AERODYNAMIC	1.33 Dual VVT-i	1.6 Valvematic	1.2T	1.4D-4D	1.6D-4D	1.8 VVT-i Hybrid
Cd (Drag coefficient) (Hatchback/Touring Sports)	0.29/0.29	0.29/0.30	0.29/0.30	0.28/0.28	0.28/0.28	0.28/0.29

EXTERIOR DIMENSIONS (MM)	Hatchback	Touring Sports
Overall length	4,330	4,595
Overall width	1,760	1,760
Overall height	1,475	1,485
Wheelbase	2,600	2,600
Tread front (15"/16"/17")	1,535/1,525/1,515	1,535/1,525/1,515
Tread rear (15"/16"/17")	1,525/1,515/1,505	1,525/1,515/1,505
Front overhang	955	955
Rear overhang	775	1.040
Ground clearance	140	140

CARGO	Hatchback	Touring Sports
Capacity (dm^3)		
Rear seats up	360	530
Rear seats down	1,199	1,658

INTERIOR DIMENSIONS (MM)	Hatchback	Touring Sports
Lenght	1,830	1,830
Width	1,485	1,485
Height	1,180 (1,155 with panoramic roof)	1,180

HATCHBACK	1.33 Dual VVT-i	1.6 Valvematic		1.2T		1.4D-4D	1.6D-4D	1.8 VVT-i Hybrid
PERFORMANCE	Manual	Manual	Multidrive S	Manual	Multidrive S	Manual	Manual	Planetary Gear System
Max. speed (km/h)	175	200	195	200	190	180	195	180
Acc. 0 - 100 km/h (seconds)	12.6	10.0	10.8	10.1	10.5	12.5	10.5	10.9
Acc. 0 - 400 m (seconds)	18.6	17.5	17.8	17.3	17.5	18.4	17.5	17.5
80 to 120 km/h (seconds)	18.0	16.0	7.9	13.7	8.4	16.4	12.4	9.0
FUEL CONSUMPTION (l/100)								
Urban (15"/16"/17")	6.8/6.8/7.0	7.9/7.9/7.9	7.3/7.3/7.4	5.8/5.9/6.5	5.5/5.5/5.9	3.9/4.0/4.4	5.0/5.0/5.1	3.4/3.5/3.9
Extra-urban (15"/16"/17")	4.8/4.8/4.8	4.8/4.8/5.0	4.6/4.6/4.8	4.1/4.2/4.8	4.1/4.1/4.7	3.1/3.2/3.6	3.5/3.7/3.8	3.4/3.5/3.9
Combined (15"/16"/17")	5.5/5.5/5.6	5.9/5.9/6.1	5.6/5.6/5.7	4.7/4.8/5.4	4.6/4.6/5.1	3.4/3.5/3.9	4.1/4.2/4.3	3.5/3.6/3.9
Fuel tank capacity (l)	50	50	50	50	50	50	50	45
CO_2 EMISSIONS (g/km)								
Combined (15"/16"/17")	128/128/130	138/138/140	129/129/132	109/112/125	106/106/119	89/92/101	104/108/110	79/82/91

TOURING SPORTS	1.33 Dual VVT-i	1.6 Valvematic		1.2T		1.4D-4D	1.6D-4D	1.8 VVT-i Hybrid
PERFORMANCE	Manual	Manual	Multidrive S	Manual	Multidrive S	Manual	Manual	Planetary Gear System
Max. speed (km/h)	175	195	190	195	190	175	195	175
Acc. 0 - 100 km/h (seconds)	13.2	10.5	11.2	10.4	10.8	13.0	10.7	11.2
FUEL CONSUMPTION (l/100)								
Urban (15"/16"/17")	7.1/7.1/7.2	8.0/8.0/8.1	7.5/7.5/7.6	5.9/5.9/6.6	5.7/5.7/6.1	4.4/4.6/4.6	5.0/5.0/5.1	3.5/3.5/3.9
Extra-urban (15"/16"/17")	4.8/4.8/4.9	5.0/5.0/5.1	4.7/4.7/5.0	4.2/4.2/4.8	4.3/4.3/4.8	3.5/3.8/3.8	3.6/3.7/3.8	3.4/3.5/3.9
Combined (15"/16"/17")	5.6/5.6/5.7	6.1/6.1/6.2	5.7/5.7/5.9	4.8/4.8/5.5	4.8/4.8/5.3	3.9/4.1/4.1	4.1/4.2/4.3	3.5/3.6/4.0
Fuel tank capacity (l)	50	50	50	50	50	50	50	45
CO_2 EMISSIONS (g/km)								
Combined (15"/16"/17")	130/130/132	140/140/143	132/132/137	112/112/126	110/110/122	100/106/106	107/108/110	81/82/92

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