

This press pack accompanied the UK launch of the first generation Lexus IS 250C in July 2009. Some changes were made to the model range during its time on sale, which can be tracked using the Timeline feature available on the Lexus IS 250C archive web page. Additional assets and information relating to the IS 250C may be obtained from the Lexus press office if required.

THE LEXUS IS 250C

INTRODUCTION

“Open” was the watchword for the development of the new IS 250C coupe/convertible. Lexus has built on its established values of prestige, quality and high-tech innovation and focused on capturing the feeling of freedom that is central to the appeal of open-top driving.

The IS 250C has the world’s fastest deploying three-part metal folding roof, which means owners can enjoy quiet, turbulence-free top-down motoring with the least fuss. The car also neatly combines the superior ride quality, responsive handling and excellent NVH characteristics of the IS saloon with the elegance, comfort and refinement of a convertible.

As with every Lexus, it has comprehensive standard equipment levels, including the most extensive array of active and passive safety systems in its segment. Excellent interior ergonomics are supported by design features that maintain the clarity of the instrumentation and appropriate performance of the climate control and audio system when the roof is down.

Showing greater attention to detail than its premium D-segment rivals and displaying both more style and substance, the new IS 250C is a car that is elegant and refined without compromise.

Design

Only the IS 250C's bonnet, headlamps, doorhandles and mirrors are shared with the IS saloon; all other body panels have been redesigned to harmonise with the three-part aluminium folding roof.

The roof can be opened or closed in just 21 seconds, faster than any other three-part roof on the market, its four-link mechanism using an array of 15 motors and 37 sensors to give smooth and silent operation.

The system is activated by a one-touch switch on the dashboard. As the folding operation extends the lip of the upper boot beyond the line of the rear bumper, sensors are integrated into the rear bumper to ensure the roof will only open and close if it is safe to do so and prevent it from hitting any obstacle. During closing, a "roof brake" slows the rate at which the hard top descends to meet the head of the windscreen.

In the cabin the instrumentation has been revised to ensure gauges and meters can be clearly read when the roof is down. LED contrast has been increased and the quality of the glass has been changed to reduce light reflection.

The front seats have eight-way power adjustment and are designed with a new arched frame with an integrated seatbelt guide. Increased heater capacity and ventilation airflow ensure they maintain comfort when driving with the top down.

Thanks to the very compact packaging of the folding roof mechanism, the IS 250C has class-leading boot space and provides generous rear seat accommodation. A one-touch fold and return switch mounted on the shoulder of the front seats gives quick and easy access to the rear.

The two full-size rear seats are set 30mm further inboard than in the saloon to maximise headroom, and are divided by a centre console with built-in cupholders. The more slender profile of the front seats adds to the legroom; the distance from the rear H-point to the front seatback is a class-leading 542mm. The rear headrests can be automatically folded forward by 65 degrees when the seats are unoccupied, increasing the driver's rearward vision.

Refinement

The IS 250C has been designed to combine the lowest possible drag coefficient – 0.29 with the roof raised – with minimal wind turbulence in the cabin when the roof is lowered, particularly around the passengers' face, shoulders and thighs.

Revisions to bodyshell rigidity, chassis tuning and sound insulation mean that in coupe trim the car achieves NVH performance that is almost identical to that of the IS saloon.

The electronic climate control has been configured for top-down motoring, improving interior temperature consistency and comfort with automatic adjustment of the air outlets, temperature and airflow. Airflow volume takes into account both the outside temperature and vehicle speed, while the temperature is adjusted in line with outside temperature, the amount of sunlight and vehicle speed.

Both the standard eight-speaker 246W premium sound system and 12-speaker 365W Mark Levinson Premium Surround Sound system shift to a different equaliser setting when the roof is down to provide consistent audio quality, automatically adapting to the natural loss of bass.

Driving performance

The new IS 250C is powered by the 205bhp/208 DIN hp direct-injection petrol V6 engine, mated to a six-speed automatic transmission with sequential, paddle-shift control. Acceleration from nought to 62mph is achieved in 9.0 seconds, top speed is 130mph, combined cycle fuel economy is 30.4mpg and CO2 emissions are 219g/km.

The suspension system is the proven double wishbone front and multi-link rear set-up featured in the IS saloon range, which gives the car sporting, agile performance. Significant chassis revisions have been made to give ride comfort appropriate for a convertible and consistent dynamic performance, in both coupe and convertible configuration.

Numerous changes have been made to the body structure, with extra bracing and reinforcements to increase collision strength, roll-over protection and torsional rigidity to minimise cowl shake and optimise chassis controllability.

The IS 250C has the highest active and passive safety technology content in its segment, including Lexus's Vehicle dynamics Integrated Management (VDIM), with open body-specific Vehicle Stability Control (VSC) tuned for shorter stopping distances on split-friction surfaces. There is also a revised Pre-Crash Safety (PCS) system, which supports the Pre-Crash Seatbelt, Brake and Brake Assist, and a twin-chamber design passenger front airbag.

DEVELOPMENT CONCEPT

Premium segment customers are increasingly looking for more from their cars than just good looks, prestige and power. This has led to a significant growth in niche models, including a good number of new cabriolets, which display a design-driven emphasis on lifestyle factors. Interest in such models has never been higher.

Lexus has now recognised the need for a presence in the D-segment to attract customers new to the premium market. The new IS 250C joins the high performance IS F in strengthening Lexus's position in the sports and speciality market, and is specifically designed to appeal to younger customers, both male and female, with active lifestyles.

The aim is to generate incremental sales volume for the IS range and strengthen Lexus's position as a design and innovation-led brand.

The Chief Engineer's Vision (Keiichi Yoneda)

"Our development goals were not only to create a convertible that was both an excellent vehicle and perceptibly different from the competition, but also to explore the ultimate in beauty, style and elegance," said Keiichi Yoneda, IS 250C Chief Engineer, Product Planning.

"We gained extensive knowledge about convertibles through the SC Sports Coupe. However, creating a convertible saloon with a longer cabin and room for four occupants presented a new engineering challenge.

“Many packaging issues had to be addressed: the reduction in luggage space; operation noise from the roof; comfort, including weatherproofing; durability; collision safety; and other measures, such as security.”

“For example, if a soft top had been used, it would have needed less storage space, However, taking the look of the car with the roof raised, cabin noise and security into consideration, the conclusion was that a hard top with a few folding joints would be a better choice.

“Since the roof of a saloon-based model is longer, luggage space will be lost unless there is a greater number of folding points. For this reason a three part roof structure was designed with the most compact folding mechanism possible, allowing us to offer class-leading luggage space. Moreover, painstaking re-evaluation of the performance of key convertible features, such as the roof, air conditioning and audio system means that customers can enjoy top-down driving for longer.”

Development Concept

Half of the convertibles new to the premium D-segment still use a soft-top and so tend to suffer from shortcomings in ride, handling, cabin noise and practicality that are typical of models derived from a saloon or coupe, rather than being niche models in their own right.

Folding hard-tops successfully address some of these issues and are becoming increasingly popular. Generally they look better, are more durable and less prone to NVH issues.

Developing the new IS 250C under the keyword “Open”, Lexus has gone a step further by focusing on the particular driving pleasure that open-top motoring can deliver. In creating the world’s fastest deploying three-part metal folding roof, Lexus gives motorists the opportunity to enjoy quiet, turbulence-free top-down motoring as often as possible. It has successfully combined the quality ride, responsive handling and excellent NVH characteristics of the IS saloon, with the style, comfort and refinement of an elegant convertible.

True to established Lexus standards, the IS 250C has a comprehensive equipment specification, including a segment-leading array of active and passive safety systems.

DESIGN, PACKAGING, HARDTOP

- Engineering ingenuity delivers sporting elegance and top-down driving pleasure
- Aluminium roof can be opened or closed in 21 seconds, faster than any other three-part metal hard-top
- Compact packaging creates class-leading boot space and spacious, easy access rear seat accommodation

The new IS 250C offers a fusion of sporting elegance and top-down driving pleasure, with the muscular presence of a powerful coupe and the elegance of a refined convertible.

The central feature of the new car is its three-part aluminium roof, which can be lowered or raised in 21 seconds – faster than any other hard-top of its kind. The remarkably compact packaging of the folding mechanism means there is class-leading boot space and a generous rear-seat accommodation with easy access thanks to a one-touch folding front seat action.

The interior expresses Lexus's legendary quality and attention to detail, built and finished to exceed customer expectations. The instrumentation has been revised to guarantee visibility when driving with the roof down and likewise, the climate control and audio systems have been configured to compensate for open-top performance.

Exterior design

The new IS 250C builds on the Lexus L-finesse design of the IS saloon with its elegant proportions, sweeping lines and contrasting convex and concave surfaces. It combines the powerful appearance of a coupe with the style and elegance of a convertible.

Only the bonnet, headlamps, doorhandles and mirrors are shared with the IS saloon, all other body panels have been redesigned to harmonise with the new folding roof structure.

To the front, the wide track and pronounced wheelarches combine with a short overhang to give a wide, dynamic stance and project a low centre of gravity. The trademark vertically latticed grille with the signature arrowhead motif provides a focus on the apex of the car, strengthening the impression of speed and agility. The new-design foglamps are ringed with chrome and integrated in the deep front airdam.

In profile the car's sporting stance is accentuated by a rising beltline which kicks up towards the rear. The steeply raked windscreen flows seamlessly into the clean arc of the roofline, which itself meets the boot surface in an elegant C-pillar that is incorporated into the folding roof. The cabin tapers to the rear, which allows for a fluid line from the C-pillar to the luggage compartment.

When the hard-top is stowed, the car has a seamless profile that is only punctuated by the integral roll-over hoops behind the rear headrests. None of the roof mechanism elements remain in view or project above the vehicle's waistline, everything is neatly concealed beneath the broad, sweeping boot surface and flush-fitting parcel shelf.

The IS 250C has been designed to combine the lowest possible drag coefficient with minimal turbulence affecting the open cabin. With the hard-top raised, the figure of 0.29Cd compares favourably with the 0.27Cd achieved by the saloon.

The model rides on sporty 18-inch five-spoke alloy wheels with 225/40R18 front tyres and 255/40R18 rear tyres.. Eight exterior paint finishes are available: Arctic Pearl, Argento Ice, Cadoxton Slate, Velvet Black, Mesa Red, Windsor Blue, Cerulean Blue and Tyrian Grey.

Interior design

Eye-catching styling and superb build quality characterise the cabin of the IS 250C, part of the car that is more frequently in open view than in a saloon. Key elements

include flowing, bespoke door panels and rear quarter trims, sports front seats and a twin rear-seat design that focuses on comfort, practicality and safety.

The instrument panel, its surrounding components and the steering wheel are shared with the IS saloon, but the instrument binnacle has been extensively revised to make sure the display can be clearly read when driving with the roof down. Detail changes include a change in glass specification to compensate for the difference in ambient lighting conditions, a different needle design on the dials and metallic-finish bezels. The multi-display screen includes a read-out showing hard-top operation status.

Many luxury and innovative features are carried over from the IS saloon, including the high-intensity white LED courtesy lights, with revisions to the ventilation and audio systems to tailor performance for top-down driving. The climate control has been reconfigured with an additional speed sensitive control that automatically increases airflow in roof-open mode and in line with vehicle speed.

The LCD touch screen on the centre console has been improved with a new set-up screen and extra tabs for controlling the audio system.

SE-I models are available with Mellow White or Black leather upholstery, with metallic effect trim. The SE-L version is finished with semi-aniline leather in the same shades with dark grey birdseye maple trim or, with the black upholstery, dark brown birdseye maple detailing.

Packaging

The front sports seats have eight-way power adjustment and feature a new arched frame with a built-in seatbelt guide. On all models, increased front seat heater capacity, extending the heating around the shoulder area and extra ventilation airflow add to the top-down driving comfort, whatever the weather.

The two full-size rear seats are set 30mm further inboard than those in the IS saloon to gain the maximum headroom, and are divided by a centre console with integrated cupholders. Because of the front seats' more slender profile, there is ample legroom for rear passengers, with 542mm between the rear H-point to the front seatback.

The rear headrests have a remote control folding function, operated from the driver's seat, to increase the rearward vision when the seats are unoccupied.

Access to the rear seats has been made easier thanks to doors that are 300mm longer than those on the saloon and an electric, front seat fold/forward-slide walk-in function, with easy-to-reach inner and outer control levers.

A one-touch walk-in switch is located on the shoulder of each front seat for an automatic fold and return seat function. When the switch is pressed, the seat automatically moves to the walk-in position, 55mm short of its furthest forward slide position. A second press of the switch returns the seat to a position 120mm in front of its most rearward position, optimising rear legroom. Pressing and holding down the switch returns the seat to its original, memorised position.

A 50mm increase in the rear overhang and the compact packaging of the folding roof mechanism generates generous luggage space. Maximum boot capacity is 583 litres with the hard-top in place and 235 litres with the roof down. This makes the IS 250C the only convertible in its class to be able to carry a nine-inch golf bag with the top stowed and the luggage cover in place.

Three-part folding roof

The folding roof is made largely of lightweight aluminium and can be raised or lowered in a class-leading (for a three-part metal structure) 21 seconds.

Displaying the quality and attention to detail Lexus gained from its experience with the SC coupe-convertible, the three-panel, four-link mechanism uses 15 motors and 37 sensors to achieve smooth, seamless and silent operation.

To achieve a high level of quality and acoustic comfort, the entire headlining is fabric-trimmed. Careful attention to the design of all the seals also contribute to a quiet cabin environment and protect against leaks due to rain, car washes or even high-pressure cleaning jets.

The folding roof mechanism is activated by a switch on the dashboard. A unique "roof brake" system gradually slows the rate at which the top closes as it approaches the

head of the windscreen. Unlike many other systems, where the weight of the roof causes an increase in speed just before the point of closure, the IS 250C's top descends smoothly into place.

If the driver continues to press the switch after the roof has opened fully, both the front and rear side windows will open fully. Similarly, maintaining pressure on the switch once the roof has closed will automatically close all the windows, too.

With the roof up, the front windows automatically lower 3mm when the doors are opened, rising back into place as they are closed. This ensures the doors can be opened smoothly, with minimum effort, without compromising the acoustic and weatherproof seal around the glass.

When the roof is lowered or raised, the upper lip of the boot projects 250mm beyond the line of the rear bumper. To prevent any risk of striking an obstacle, the system is co-ordinated with the rear parking sensors, so the roof will only deploy if it is safe to do so. If an obstacle is detected more than 450mm from the rear bumper, operation will proceed; if an obstacle is identified between 350 and 450mm from the bumper, operation can go ahead, but a proximity warning will be sounded; and if an obstacle is detected within 350mm from the bumper, the system automatically becomes inoperable and a driver warning is shown on the display screen. To prevent any damage to luggage, the integral luggage cover has to be fixed in place in the boot before the roof mechanism will operate.

REFINEMENT

- Aerodynamic efficiency with 0.29 drag coefficient, with effective windstream management for minimal open-cabin air turbulence
- Comprehensive bodyshell rigidity, chassis tuning and noise insulation to match IS saloon NVH performance
- Bespoke, speed-sensitive air conditioning
- Audio system with automatic equaliser for consistent quality, top up or down

In brief

The new IS 250C has been designed to achieve the lowest possible drag coefficient – 0.29Cd – with its roof raised, and the least wind turbulence around the cabin when

the hard-top is down, particular around the head, shoulders and thighs of everyone on board.

Comprehensive bodyshell rigidity, chassis tuning and sound insulation measures have been implemented to ensure that, with the roof in place, the car achieves noise, vibration and harshness (NVH) characteristics almost identical to those of the IS saloon.

The electronic climate control system has been configured for top-down driving, with airflow automatically adjusted for top-down driving and in line with vehicle speed.

Both the standard, eight-speaker, 246W premium sound system and the 12-speaker 365W Mark Levinson Premium Surround Sound system featured in multi-media option models, feature a new equaliser setting to ensure consistent audio quality whether the roof is up or down, and automatically adjusting to the natural loss of bass when the roof is stowed.

Aerodynamics and wind stream management

With the roof in place, the IS 250C's drag coefficient (C_d) is 0.29, which compares well with the 0.27 C_d achieved by the IS saloon. Lexus design engineers also focused their attention on reducing wind turbulence and generating the most comfortable airflow characteristics around the cabin when driving with the roof down.

The angle of the front windscreen and fine detail of the design of the head of the screen are major contributors to achieving exceptionally low wind turbulences around the face, shoulders and thighs of those on board, even without the optional rear-seat mounted wind deflector in place. To further suppress wind turbulence to class-leading levels, the length and shape of the open cabin and height shape of the boot lid have been analysed to create the optimum bodyshell profile to minimise the air separation that can cause turbulence. As a result, wind turbulence around the face and shoulders has been largely eliminated, even at motorway speeds.

The flush upper body surfaces, steeply raked windscreen, smooth cabin profile and duck-tail rear styling are all key factors in the IS 250C's aerodynamic efficiency, together with numerous other features such as the design of the door mirrors, the

shape of the rocker panel and the addition of fairing to the front and rear wheelarches. Even the high-mounted stop light and “airkick” effect rear lamp clusters have been styled to ensure a smooth flow of air off the back of the car.

Beneath the car there is a comprehensive array of covers, matched to new under-bracing designed to give the car maximum torsional rigidity. A Venturi effect at the front of the vehicle, a flat middle section and a rear diffuser generate a smooth and fast airflow under the vehicle, promoting reduced lift, aerodynamic drag and high-speed stability.

Noise vibration and harshness (NVH)

During development, the IS 250C and its folding hard-top were tested in a huge range of real-world driving conditions, including on stone roads, the Nürburgring circuit and almost 25,000 miles of gravel surfaces. Extensive bench testing was also carried out and operation in extremes of temperature, from -30 to 80°C, to eliminate all types of vibration-generated cabin noise.

Together with these temperature, vibration and shaking tests, revisions have been made to the bodysheet and chassis (detailed in chapter four of this press pack) to ensure that in coupe configuration, the IS 250C demonstrates NVH characteristics almost identical to those of the IS saloon.

Comprehensive underfloor bracing and the use of high tensile strength sheet steel cross-bracing promotes a high-rigidity body structure to eliminate body and cowl-shake; using a bespoke exhaust hanger system also contributes to preventing cowl-shake. The front and rear suspension mounting bushes have been revised to reduce low, 15-20Hz vibrations at idle and minimise noise and vibration transmission from the road surface. Effective positioning of sound insulation, particularly in the rear bulkhead, further minimises booming and road and engine noise.

Additional sound absorption and insulation materials have been introduced throughout the cabin to create the quietest and most comfortable environment possible, in both coupe and convertible configuration. Airflow cut-off structures have been integrated in the A-pillar and the introduction of polypropylene sheet foam prevents noise generation and resonance in the roof header.

Extra sound insulation in the roof sides, roof folding mechanism bays and rear wheelarches further contribute to cabin quietness and the entire vehicle underfloor is coated with a rubberised, sound insulating polymer. Class-leading low wind noise levels are achieved with the help of acoustic windscreen glass and optimised roof, door and window panel seals.

Climate control

The IS 250C's electronic climate control is configured for top-down motoring, improving the consistency of cabin temperature and comfort. The system automatically adjusts the air outlets, temperature and airflow, with airflow volume changing in line with outside temperature and vehicle speed; temperature control additionally takes the amount of sunlight into account.

Using a quiet and efficient variable displacement compressor, the air conditioning provides independent left and right side control, automatic control of the upper and lower cabin air zones, and an automatic cool air bypass function.

The air intake is isolated from the engine compartment to reduce engine noise intrusion. An automatic air recirculation mode, linked to NOx detection, prevents exhaust gases from entering the cabin. There is also an air filter with a deodorising active carbon layer, which filters dust, pollen and small particles from the airflow, while simultaneously removing unpleasant smells. A switchable, face-vent pollen removal filter works with 97 per cent efficiency in removing airborne allergens.

Audio and navigation

Both the standard, eight-speaker, 246W premium sound system and the 12-speaker 365W Mark Levinson Premium Surround Sound system featured in multi-media option models, feature a new equaliser setting to ensure consistent audio quality whether the roof is up or down, and automatically adjusting to the natural loss of bass when the roof is stowed.

Both systems are DAB-ready, with DAB tuners available as an accessory, or fitted as standard with the Mark Levinson system. USB and audio jack plugs are also provided

for fully controlled use of portable music players and Bluetooth is provided for mobile phone connectivity with an audio streaming function.

When integrated with the Lexus Navigation System's 40GB Hard Disc Drive (HDD), the Mark Levinson system benefits from a 10GB sound library for storing music files ripped from CD.

The new navigation system covers the whole of Europe, including traffic information infrastructure for each country. The voice recognition function has been upgraded and the menu can be operated in 14 languages.

DRIVING PERFORMANCE

- 205bhp direct injection V6 petrol engine with Dual VVT-i
- Six-speed automatic transmission with sequential manual paddle shift mode and AI-SHIFT control
- Revised suspension for greater ride comfort and consistent dynamic performance in coupe and convertible guise
- High rigidity body structure for better collision strength, roll-over protection and chassis control
- Vehicle Dynamics Integrated Management (VDIM) standard on all versions

In brief

The new Lexus IS 250C is equipped with the same engine as the IS 250 saloon, a 205bhp 2.5-litre direct-injection V6 petrol unit matched to a six-speed automatic transmission with sequential manual paddle shift control. Acceleration from nought to 62mph takes 9.0 seconds and top speed is 130mph. Combined cycle fuel consumption is 30.4mpg and CO2 emissions are 219g/km.

The coupe/convertible uses the proven double wishbone front and multi-link rear suspension design from the IS saloon, giving a sporty, agile driving experience. Significant chassis revisions have been made to provide greater ride comfort suitable for a convertible, and to achieve consistent dynamic performance, roof up or roof down.

Numerous body structure changes, bracing and reinforcements improve collision strength and torsional rigidity, minimising cowl shake and optimising chassis control.

The IS 250C is equipped with the highest active and passive safety technology in its segment, including Vehicle Dynamics Integrated Management (VDIM), incorporating Vehicle Stability Control (VSC) that is tuned for an open-top car. SE-L versions feature Lexus's Pre-Crash Safety (PCS) and Adaptive Cruise Control (ACC) systems.

Powertrain

2.5-litre V6 petrol engine

The chain-driven, double overhead cam, 24-valve 2,500cc V6 Dual VVT-i petrol engine is compact and lightweight, with an aluminium die-cast cylinder block and intake manifold and a resin intake chamber.

Using direct injection, it has a high, 130-bar injection pressure and develops 205bhp at 6,400rpm and 252Nm of torque at 4,800rpm. This gives nought- 62mph acceleration in 9.0 seconds, a 130mph top speed, 30.4mpg combined cycle fuel consumption and 219g/km CO2 emissions.

Dual VVT-i (variable valve timing – intelligent) control of both intake and exhaust valves supports strong and efficient engine performance.

The layout of the stainless steel exhaust system has been modified to accommodate the car's extra underbody bracing, the dual-tube split at an optimal point between the braces without compromising the exhaust note or back pressure performance.

Transmission

The six-speed automatic transmission has a sequential range selection mode, operated using paddle controls mounted on the steering wheel. Gear range selection can also be made using the gear lever. With faster downshift times than in fully automatic mode, it gives the option of greater driver involvement and the chance to fully exploit the car's dynamic abilities.

An artificial intelligence (AI-SHIFT) control automatically changes the shift pattern according to road conditions and individual driving style.

Suspension

The IS 250C uses the proven front and rear suspension systems from the IS saloon, with chassis revisions to achieve ride comfort appropriate for a convertible and to gain consistent dynamic performance in both roof-up and roof-down driving.

The front, high-mount double wishbone suspension system combines lightweight, forged aluminium knuckles with a high tensile steel lower arms and hollow anti-roll bar, helping reduce the car's unsprung weight. For improved ride comfort, the coil springs and high-performance monotube shock absorbers have been fine tuned, the torsional stiffness of the bushings has been reduced and the shape of the anti-roll bar has been optimised.

The rear advanced multilink system lets the IS 250C achieve a strong balance of handling, stability and ride comfort. Aligning the shock absorbers along the same, lower axis as the coil springs helps maintain a wide boot space.

Specific changes to the rear suspension include tuning of the springs and shock absorbers for greater ride comfort; the use of high-capacity suspension member rubber mounts to reduce vibration; and reduced torsional rigidity in the bushings to give smooth suspension movement with minimal alignment change. The rear toe-control arm has been redesigned; a performance ring added to the suspension tower; and the tower upper support has been lowered to increase rigidity, improve linear yaw response and increase luggage space when the roof is stowed.

Electric power steering

The IS 250C uses a speed-sensitive, electrically assisted EPS system that contributes to cutting fuel consumption, operates quietly and gives smooth, linear feedback to the driver.

The coupe/convertible has a bespoke 14.6:1 steering gear ratio, giving 3.16 turns lock-to-lock. The turning circle is a class-leading 5.1m.

The EPS is integrated in the Vehicle Dynamics Integrated Management (VDIM) system, that co-ordinates the steering, braking and handling systems to provide smoother on-the-limit performance with unobtrusive intervention.

SAFETY

In coupe or convertible form, the IS 250C benefits from a segment-leading array of active and passive safety technology. This includes VDIM as standard on all models, and Vehicle Stability Control (VSC) tuned for operation in an open-body car.

To ensure passive safety provisions appropriate for top-down driving, the IS 250C has new, larger side airbags that extend to provide head protection in the event of a side impact. The bodyshell has also been equipped with extra energy-absorbing side impact pads for front and rear seat occupants.

The highly rigid body structure affords excellent car-to-car impact compatibility. Six airbags are fitted as standard, including a twin-chamber front passenger airbag. The front seats are of second-generation WIL (whiplash injury-lessening) design. SE-L models benefit from HID headlamps with Intelligent-Adaptive Front Lighting (I-AFS) that turns the lights in line with vehicle speed and steering angle for better illumination through bends and at junctions.

SE-L versions are available with options of Lexus's Pre-Crash Safety and Adaptive Cruise Control systems. PCS will alert the driver to an imminent collision and, if an impact is unavoidable, deploy the pre-crash seatbelt pretensioners and pre-crash brake assist to help mitigate the consequences. ACC uses the same radar-based technology to maintain a pre-set safe distance from the vehicle ahead, returning the car to its selected cruising speed once the road is clear. Front and rear parking sensors are standard on all grades.

Passive safety

Body structure

The IS 250C has numerous body structure elements that enhance collision strength, roll-over protection and torsional rigidity. The A-pillar is made from ultra-high tensile sheet steel, with a combined centre plate and boot plate structure in its lower section.

The lower part of the B-pillar has an extra plate to suppress surface buckling due to the height difference between the upper surface of the rocker panel and the strengthened rear floor cross member. The rocker panel itself has a larger cross-section – 55mm taller and 29mm wider than on the saloon to give improved torsional and flexural rigidity and greater collision strength.

Upper and floor level rear cross-members made of high tensile sheet steel have been added and the gussets that join the upper part of the B-pillar to the upper rear cross-member are designed to deform in a side impact. Safety is also enhanced by the provision of a sub-latch on the trailing edge of the door impact beam, which transmits side impact forces to the lower B-pillar.

Chassis underfloor

Numerous underfloor bracing members have been added at strategic points to maintain handling stability and ride comfort. These include a front torque box and trapezoidal braces, an M-shaped under-tank brace and rear torque box and suspension bracing.

Allied to high tensile sheet steel bracing, these underfloor elements create a highly rigid body structure that gives better collision safety performance and eliminates body and cowl-shake.

LEXUS IS 250C AND THE UK MARKET

The new Lexus IS 250C will serve as a halo model for the IS range in the UK, strengthening Lexus's reputation for design and innovation. Its target customers will be men and women, typically with grown-up families, who want a second car for the household that has style, prestige and a "fun factor", but which doesn't compromise comfort or convenience.

Entering an increasingly competitive niche in the premium D-segment, Lexus is aiming to achieve a market share of about four per cent.

Grade structure

The new IS 250C will be available in two core grades: SE-I and SE-L.

Key features of the SE-I model include six airbags, Vehicle Integrated Dynamics Management (VDIM), front and rear parking sensors, automatic windscreen wipers, eight-speaker premium audio system, six-CD changer, USB and Aux-in sockets, Bluetooth, smart keyless entry and push-button start, cruise control, leather upholstery, electrically adjustable front seats, dual-zone climate control, auto-dimming rear view mirror, electric folding and heated door mirrors, 18-inch alloy wheels and aluminium sports pedals.

The SE-L versions add auto-dimming door mirrors, illuminated scuff plates, semi-aniline leather upholstery, front seats with integrated heating and ventilation, High-Intensity Discharge (HID) headlights with Adaptive Front-lighting System (I-AFS), HDD-based satellite navigation and Rear Park Assist Monitor.

The SE-I can be ordered with Lexus's new HDD-based satellite navigation system, which comes with a Rear Park Assist Monitor. The SE-L can be upgraded with includes the HDD navigation, Rear Park Assist Monitor and a 12-speaker Mark Levinson 5.1 Surround Sound audio system, plus smart card entry, Pre-Crash Safety (PCS) system and Adaptive Cruise Control (ACC).

Pricing and VED

The new IS 250C is available to order now with first deliveries to customers in July. On-the-road prices and Vehicle Excise Duty bands are detailed below; insurance groups are yet to be announced.

MODEL	OTR PRICE	VED BAND
IS 250C SE-I	£34,550	K
IS 250C SE-I with Lexus Navigation system	£36,750	K
IS 250C SE-L	£39,540	K
IS 250C SE-L with Multimedia Pack, PCS and ACC	£43,250	K

Lexus IS 250C TECHNICAL SPECIFICATIONS

ENGINE	
Engine type	4GR-FSE
No of cylinders and arrangement	V6

Valve mechanism		24-valve DOHC with Dual VVT-i
Bore x stroke (mm)		83.0 x 77.0
Displacement (cc)		2,500
Compression ratio		12.0 : 1
Fuel system		EFI D4 direct injection
Octane No		95 or greater
Max. power (bhp @ rpm)		205 @ 6,400
Max. torque (Nm @ rpm)		252 @ 4,800
TRANSMISSION		
Transmission type		A960E 6AT
Gear ratios	1st	3.538
	2nd	2.060
	3rd	1.404
	4th	1.000
	5th	0.713
	6th	0.582
	Reverse	3.168
Differential gear ratio		3.909
PERFORMANCE		
Max. speed (mph)		130
Acceleration 0-62mph (sec)		9.0
FUEL CONSUMPTION & EMISSIONS		
Urban (mpg)		21.6
Extra-urban (mpg)		39.8
Combined (mpg)		30.4
CO ₂ emissions (g/km)		219
VED Band		K
DIMENSIONS AND WEIGHTS		
Exterior dimensions		
Overall length (mm)		4,635
Overall width (mm)		1,800
Overall height (mm)		1,415
Wheelbase (mm)		2,730
Front track (mm)		1,535
Rear track (mm)		1,525
Front overhang (mm)		820
Rear overhang (mm)		1085
Coefficient of drag (Cd)		0.29
Interior dimensions		
Cabin length (mm)		1,605
Cabin width (mm)		1,480
Cabin height (mm)		1,130
Luggage capacity – top down (l)		235
Luggage capacity – top up (l)		583
Fuel tank capacity (l)		65
Weights		
Kerb weight (min.-max. – kg)		1,730 – 1,750
Gross vehicle weight (kg)		2,075
SUSPENSION		
Front		Double wishbone with anti-roll bar
Rear		Multi-link with anti-roll bar
BRAKES		
Front (diameter x width, mm)		Ventilated discs, 296 x 28

Rear (diameter x width, mm)	Ventilated discs, 310 x 18
Additional features	ABS, EBD, Brake Assist, Traction Control, Vehicle Stability Control, Vehicle Dynamics Integrated Management
WHEELS AND TYRES	
Wheels	18in alloy
Tyres	225/40R18 (front)
	255/40R18 (rear)
STEERING	
Steering gear type	Rack and pinion
Steering gear ratio	14.6:1
Turns lock-to-lock	3.16
Power steering type	EPS
Min. turning radius (m)	5.1

LEXUS IS 250C EQUIPMENT SPECIFICATIONS

SAFETY	SE-I	SE-L
Driver & front passenger airbags	✓	✓
Driver & front passenger side airbags	✓	✓
Driver & front passenger knee airbags	✓	✓
Front passenger airbag cut-off switch	✓	✓
ABS with Electronic Brakeforce Distribution (EBD) with Brake Assist System (BAS)	✓	✓
Vehicle Stability Control (VSC)	✓	✓
Traction Control (TRC)	✓	✓
Vehicle Dynamics Integrated Management (VDIM)	✓	✓
Energy absorbing steering column	✓	✓
Side impact beams	✓	✓
Energy absorbing crumple zones front and rear	✓	✓
Electronic front seatbelt pretensioners with force limiters	✓	✓
Four three-point seatbelts and headrests	✓	✓
High mounted rear LED stop light	✓	✓
Seatbelt warning system	✓	✓
Active front headrests	✓	✓
Adaptive Cruise Control (ACC) and Pre-crash Safety (PCS)	×	Opt*
SECURITY	SE-I	SE-L
Intrusion sensor and alarm	✓	✓
Remote central locking with deadlocks	✓	✓
Two-step double locking	✓	✓
Vehicle parts marking traceable to VIN	✓	✓
Security window etching	✓	✓
Transponder key engine immobiliser	✓	✓
AUDIO, NAVIGATION AND CONNECTIVITY	SE-I	SE-L
8-speaker premium audio system	✓	✓
6-disc in-dash CD autochanger	✓	✓
USB and AUX-in sockets	✓	✓
DAB tuner	Opt	Opt
Bluetooth	✓	✓
Full Map Navigation Pack (HDD navigation, 7in VGA screen, Bluetooth, Rear Park Assist monitor)	Opt	✓
Multimedia Pack (12-speaker Mark Levinson premium audio, six-disc DVD autochanger, 5.1 surround sound, DAB Tuner, Lexus HDD satellite navigation, Bluetooth and Rear Park Assist monitor)	×	Opt *

INSTRUMENTS & CONTROLS	SE-I	SE-L
Optitron instrumentation	✓	✓
In-dash multi-information display	✓	✓
Outside temperature display	✓	✓
Electric headlamp levelling	✓	✓
Rain-sensing windscreen wipers	✗	✓
Front and rear parking sensors	✓	✓
COMFORT AND CONVENIENCE	SE-I	SE-L
Smart keyless entry and push-start	✓	✓
Smart card entry (in addition to smart key)	✗	Opt*
Speed-sensitive Electric Power Steering (EPS)	✓	✓
Cruise control	✓	✓
Windscreen de-icer	✓	✓
Front and rear parking sensors	✓	✓
Electrically adjustable, retractable heated door mirrors	✓	✓
Electrochromic auto-dimming rear view mirror	✓	✓
Electrochromic auto-dimming door mirrors	✗	✓
Electrically adjustable steering column	✓	✓
Remote fuel flap release	✓	✓
Driver and front passenger illuminated vanity mirrors	✓	✓
Boot release from interior and by remote key operation	✓	✓
Electric front and rear windows	✓	✓
Leather console box	✗	✓
Illuminated entry system	✗	✓
Illuminated scuff plates	✗	✓
LED interior lighting	✓	✓
VENTILATION	SE-I	SE-L
Climate control dual-zone air conditioning with clean air filter	✓	✓
SEATING, UPHOLSTERY & TRIM	SE-I	SE-L
Leather upholstery	✓	✗
Semi-aniline leather upholstery	✗	✓
8-way electrically adjustable front seats	✓	✗
8-way electrically adjustable heated and ventilated front seats with memory settings	✗	✓
Folding rear headrests	✓	✓
Metal effect interior trim	✓	✗
Wood interior trim	✗	✓
Leather steering wheel and gear knob trim	✓	✓
Aluminium sports pedals	✓	✓
EXTERIOR FEATURES	SE-I	SE-L
Electrically operated 3-part folding metal roof	✓	✓
18in alloy wheels with locking wheel nuts	✓	✓
Tyre repair kit	✓	✓
High Intensity Discharge (HID) headlamps	✗	✓
Headlamp washers	✗	✓
LED rear lamp and stop lamp	✓	✓

* With upgrade pack