

*This press pack accompanied the UK launch of the second generation Lexus IS – IS250 and IS220d – in November 2005. 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 archive web page. Additional assets and information relating to the IS range may be obtained from the Lexus press office if required.*

## **THE NEW LEXUS IS**

### **KEY POINTS**

- All-new second generation of Lexus's top-selling sports saloon
- Second Lexus production model to be designed according to L-finesse principles
- Distinctive, powerful and elegant exterior styling
- Longer and wider than previous IS with longer wheelbase for improved passenger accommodation
- Refined interior with luxury detailing
- Launched in the UK with new 204bhp 2.5-litre V6 direct injection petrol engine
  - 0-62mph in 8.1 seconds (8.4 auto), top speed 144mph (141mph auto)
  - Combined fuel consumption 28.8mpg (31.0mpg auto)
  - Carbon dioxide emissions 231g/km (214g/km auto)
- Lexus's first diesel, a 175bhp (177 DIN hp) 2.2-litre unit, to follow in the IS 220d in January 2006
  - World's cleanest diesel luxury saloon in terms of nitrogen oxides and particulate matter emissions, thanks to Lexus Clean Diesel Technology
  - Smoothness and refinement meet stringent Lexus standards
  - Diesel engine will give Lexus new strong presence in fast-growing market sector
- All versions equipped with eight airbags, including driver and front passenger knee airbags
- ABS, Electronic Brakeforce Distribution (EBD), Brake Assist System (BAS) and Traction Control (TRC) standard on all models, Vehicle Stability Control (VSC) standard on all models except IS 220d Sport
- Vehicle Dynamics Integrated Management (VDIM) standard on IS 220d Sport

- Adaptive Cruise Control (ACC) and Pre-Crash Safety (PCS) system optional on IS 250 SE-L automatic
- Independent double wishbone front and multi-link rear suspension deliver excellent driving dynamics with legendary Lexus ride comfort
- Exceptional standard equipment list includes climate control, cruise control, 16-inch alloy wheels, smart keyless entry and start-up, sequenced LED interior lighting and electric folding and heated door mirrors
- 13-speaker sound system with in-dash six-disc CD autochanger fitted as standard, with MP3 compatibility and AUX input for linking personal music systems
- Optional Multimedia Pack with 14-speaker premium Mark Levinson hi-fi with six-disc DVD autochanger and 5.1 surround sound, plus new generation satellite navigation, Bluetooth connectivity and Rear Park Assist Monitor
- SE and SE-L models feature leather upholstery with eight-way electrically adjustable heated and ventilated front seats
- IS 250, SE and SE-L on sale in the UK from 19 November
- IS 250 Sport and IS 220d models due January 2006, IS 220d Sport in April 2006
- On-the-road prices from £22,200 (IS 220d)

## **INTRODUCTION**

The launch of the all-new second generation IS range marks an important stage in the development of Lexus as a global prestige brand. The IS is well-established as Lexus's top-selling model in Europe, acclaimed for its superb driving dynamics, refined performance, peerless quality and superb specification.

The new IS extends all these qualities in a vehicle that benefits from striking, individual styling, superior dynamic performance, enhanced safety provisions and hallmark Lexus luxury and refinement.

## **DESIGN**

The new IS is the latest expression of L-finesse, the design language that is shaping the appearance of an entire new generation of Lexus models. The IS has a wide track with short front and rear overhangs, giving the car a broad, muscular stance. Sweeping

coachwork lines emphasise the 'shadow finish' of contrasting convex and concave surfaces and flow into a signature arrowhead shape through the C pillar.

Build quality and perceived quality are of the highest order throughout, with attention to detail witnessed in the careful matching of wood trim sections, 'invisible' seam stitching on leather upholstery and improved fit and finish that reduces gaps to new low levels and eradicates some altogether.

## **BODY AND CHASSIS**

The new IS is 175mm longer and 75mm wider than its predecessor, with track width increased by 40 and 50mm front and rear respectively. For driver and passengers this translates into greater front and rear leg and shoulder room, while contributing to the car's excellent dynamic handling qualities.

With a drag coefficient of 0.27, the IS is one of the most aerodynamically efficient cars in its segment, a smooth airflow aided by the design of the door mirrors, a flush-fitting windscreen, a 'duck tail' profile over the bootlid and strategic underbody design elements.

Bodyshell stiffness is greater by 20 per cent, with weight reduced through the use of aluminium for the bonnet, suspension members and engine.

Lexus has focused on delivering class-leading NVH performance, achieved through a number of innovations. These include the world's first sound-absorbing sun visors, acoustic glass in the front screen and exceptionally close panel fit.

## **ENGINES AND TRANSMISSION**

### **IS 250**

The IS 250 is powered by a new direct-injection 2.5-litre V6 petrol engine with dual VVT-i. The aluminium unit is no heavier than the 2.0-litre engine featured in the previous generation IS. It develops 204bhp (208 DIN hp) at 6,400rpm and a maximum 252Nm of torque at 4,800rpm. This enables 0-62mph acceleration in 8.1 seconds with manual transmission, 8.4 seconds in automatic versions. Top speed is 144mph manual, 141mph

automatic. Combined cycle carbon dioxide emissions are 231g/km manual, 214g/km automatic.

### **IS 220d**

The Lexus IS 200d, due for launch in the UK in January 2006, is equipped with Lexus's first diesel engine. The all-aluminium, four-cylinder, 2.2-litre common rail direct injection unit delivers the power and refinement demanded by Lexus, with 175bhp (177 DIN hp) produced at 3,600rpm and 400Nm of torque between 2,000 and 2,600rpm. Preliminary, pre-homologation figures show 0-62mph acceleration in 8.9 seconds and a top speed of 134mph.

Good fuel economy adds another appealing dimension to the IS 200d, with combined cycle consumption expected to be in the region of 44.8mpg, and extensive, strategic measures to reduce NVH levels help ensure the cabin achieves Lexus's stringent standards for comfort and quietness..

The IS 220d is also the cleanest premium diesel model available, thanks to the application of Lexus Clean Diesel Technology. A series of engine features reduces combined levels of nitrogen oxides (NOx) and particulate matter (PM) emissions to levels well below Euro IV standards.

### **Transmission**

A new six-speed manual transmission is fitted as standard, with a newly-developed six-speed automatic available as a £1,000 option on the IS 250. The close ratio automatic system features steering wheel-mounted paddle shifts for sequential manual gear selection and delivers superior fuel economy (31.0mpg combined). IS 220d Sport benefits from a shorter differential gear ratio for sharper in-gear acceleration.

### **SUSPENSION AND STEERING**

New double wishbone front and multi-link rear suspension systems with monotube shock absorbers have been adopted to deliver trademark Lexus ride comfort and excellent handling and dynamic performance.

An all-new speed-sensitive, electrically assisted power steering (EPS) system is used.

## **SAFETY**

All IS models are equipped as standard with eight airbags, including knee airbags for the driver and front passenger. The passenger front airbag is the first in the world to use a twin-chamber construction, designed to disperse impact forces across the head and shoulders, instead of across the face, as on a conventional airbag.

A full suite of electronic control systems is fitted as standard: ABS with Brake Assist System (BAS) and Electronic Brakeforce Distribution (EBD); Vehicle Stability Control (VSC); and Traction Control (TRC).

The IS 250 SE-L automatic is available with the option of Adaptive Cruise Control (ACC), which maintains a safe, pre-set distance from the vehicle ahead, and Lexus's Pre-Crash Safety (PCS) system, which determines when a frontal collision is unavoidable and tensions the front seatbelts and prepares to engage emergency braking to help minimise impact. The systems are combined in a single package, controlled by the same millimetre-wave radar system, operating through a sensor mounted on the front grille.

SE-L and Sport versions are equipped with High Intensity Discharge (HID) headlamps with Lexus's Adaptive Front-lighting System (AFS). AFS adjusts the angle of the headlamp beam in line with vehicle speed and steering angle to improve illumination through bends.

The IS 220d Sport comes as standard with Lexus's unique Vehicle Dynamics Integrated Management (VDIM) system, which enhances the vehicle's performance, traction control and stability. Using comprehensive status data collected by sensors throughout the car, VDIM integrates the operation of the ABS, Electronic Brakeforce Distribution (EBD), Traction Control (TRC) and Vehicle Stability Control (VSC) with the Electric Power Steering (EPS).

By applying integrated control of all the elements related to vehicle movement, including engine torque, brakes and steering, VDIM optimises activation of the braking, stability and traction control systems.

## **GRADE STRUCTURE, PRICING AND EQUIPMENT SPECIFICATIONS**

The IS will be launched in IS 250, SE and SE-L grades on 19 November. The IS 220d models and IS 250 Sport versions are due to join the range in January 2006, with IS 220d Sport models completing the line-up in April 2006.

All versions of the car are fitted with eight airbags, cruise control, 13-speaker sound system with six-disc CD autochanger, smart keyless entry and push-button start, climate control air conditioning, alloy wheels and front and rear armrests.

SE models feature leather upholstery with electrically adjustable, heated and ventilated front seats and 17-inch alloy wheels. The SE-L grade comes in addition with rain-sensing wipers, HID headlights with Adaptive Front Lighting System (AFS), front and rear parking sensors, electrically adjustable steering column, memory settings for the steering wheel, front seats and door mirrors and a power sunshade for the rear window.

The Sport versions will feature Cellensia suede-effect upholstery, 18-inch alloy wheels, lowered sports suspension, sport-style pedals, electrically adjustable heated front seats, HID headlamps with AFS and front and rear parking sensors.

The quality ambience of the interior is heightened with the introduction of LED sequenced spot lighting. SE-L versions feature illuminated door sills and puddle lights are integrated into the door mirrors. A multi-position electric tilt-slide sunroof is available as an option, with nine different settings.

### **Audio excellence**

All versions of the IS are equipped as standard with a 13-speaker audio system with in-dash six-disc CD autochanger and MP3/WMA compatibility. An AUX socket allows owners to connect personal audio players, such as iPods or Mini Disc players and additional system controls are provided on the multi-function steering wheel.

A Multimedia Package, available as an option on all models, provides a class-leading Mark Levinson 14-speaker package with 5.1-channel digital surround sound for auditorium-like sound reproduction. The system has been designed specifically to suit the excellent acoustic qualities of the IS's interior. Other features include a front-

mounted seven-inch VGA screen; a six-disc DVD autochanger, capable of playing both audio and, when the vehicle is stationary, video discs; Lexus's new DVD-based satellite navigation system; Bluetooth connectivity; Park Assist Monitor; and voice control function.

The improved navigation system has an enhanced, higher definition display with a wider colour range and new mapping design.

### **Wheels and tyres**

Three designs of alloy wheel are offered: standard five-spoke 16-inch rims on the IS 250 and 220d; 17-inch wheels on the SE and SE-L; and 18-inch wheels for the Sport.

### **Prices and performance**

On the road prices and insurance groups for the Lexus IS range: -

MODEL	OTR PRICE	INSURANCE GROUP
IS 250	£22,400	13E
IS 250 SE	£25,400	14E
IS 250 SE-L	£28,000	14E
IS 250 Sport	£26,500	14E
IS 220d	£22,200	12E
IS 220d SE	£25,200	13E
IS 220d SE-L	£27,800	13E
IS 220d Sport	£26,900	13E

Option prices:

OPTION	PRICE
Metallic/mica paint	£510
Electric sunroof	£800
Multimedia Package: 14-speaker Mark Levinson hi-fi, Lexus satellite navigation, Bluetooth connectivity, Rear Park Assist Monitor	£2,710
Adaptive Cruise Control and Pre-Crash Safety system	£2,150
Six-speed automatic transmission	£1,000

### **DESIGN, EXECUTION AND COST OF OWNERSHIP**

- Second production vehicle created according to Lexus's L-finesse design philosophy
- Bodywork has minimal protrusions and exterior component gaps are substantially reduced
- Interior boasts unparalleled build quality, Lexus luxury and ergonomic excellence
- Longer wheelbase for improved passenger accommodation
- Advanced interior and exterior illumination, using LED technology

The new IS is the second road-going car, following the latest-generation GS saloon, to be created according to the principles of the new Lexus design philosophy, L-finesse.

L-finesse is rooted in Japanese culture with references drawn from the heritage of ancient and modern design iconography. It informs every aspect of the new IS, its detail reflected in the interior and exterior design and the strong visual synergies between the two.

## **EXTERIOR DESIGN**

The new IS marries powerful, sweeping lines with contrasting convex and concave surfaces, reinforcing the central tenets of L-finesse. The purity of the overall form is complemented by a substantial reduction in exterior component gaps, those between the bumpers and adjacent body panels having been cut to just 0.35mm.

At the front the IS has the Lexus vertically latticed grille. The wide track and prominent wheel arches combine with short front and rear overhangs to give the car a low centre of gravity and a broad, robust, but sophisticated appearance. The bold twin-barrel headlamp units sit on a higher plane than the grille, leading the eye to focus on the apex of the vehicle, strengthening the impression of speed and agility. This approach will be a characteristic of future Lexus models.

A strong coachwork line flows from the grille, highlighting the clean, muscular bonnet surface before sweeping seamlessly into the windscreen pillar. An adjacent concave surface stretches between the bonnet and wheel arch, reinforcing the car's wide front stance, and is punctuated by a new, sporting, door-mounted mirror design as it flows into the narrowing belt line.

The profile of the car shows the tight shoulders and a wide side surface that support a steeply raked windscreen. The arrowhead shape of the glazing around the C pillar is inspired by the *Kirakaeshi*, a traditional Japanese expression of dynamism through a rapid, yet fluid change of direction – something that in the past could apply equally to a pen stroke in traditional calligraphy or the motion of a samurai sword. This motif will become a key future styling element for Lexus.

At the rear, flared wheel arches taper into a short rear overhang, topped with powerful LED lamp clusters. The design of the lights again establishes cues that will be seen on future Lexus models. The use of LED technology for the stop and number plate lights provides sharper, more refined illumination; the lights also last longer and use less energy.

The new IS is available in 10 colours, including two new shades exclusive to the model, Argento Ice and Sargasso Green. Four ‘character’ premium quality paint finishes have been specially developed to amplify the L-finesse design philosophy: Glacial Blue gives extra brilliance in strong sunlight; Ice Blue emphasises the contrasts in convex and concave surfacing; Sargasso Green has subtle changes in hue; and Mesa Red gives a glossy look with great depth, using a multi-layer finish with aluminium for the base coat and artificial mica for the second.

The principles of L-finesse are perfectly expressed in the IS’s interior, which follows the pattern of the car’s exterior in combining convex and concave surfaces. The former is used for control functions, such as the centre console switchgear and the start button, and the latter for driver and passenger accommodation. The door panel surfaces flow seamlessly into the dashboard, with the projecting instrument binnacle providing the focal point of the cabin design.

The *Kirakaeshi* principle returns in the vertical linking of cabin elements through the centre console and door grips. The apparently dislocated position of the side air vents introduces the influence of another traditional Japanese cultural symbol: *Hazushi*, or “shift out of phase”. This expresses the notion of something that is part of a whole, but at the same time retains its independence.

A combination of high quality slush moulding and vacuum forming production processes have been adopted for the upper and lower dashboard and the door trim panels. These soft-touch elements are finished in a new, scratch-resistant natural grain pattern. A black upper dashboard can be combined with a choice of three colours for the lower section: matching black, grey or ivory.

Precise fit and finish management has reduced, and in some cases eliminated gaps between interior components, creating an environment of clean, uncluttered luxury, unprecedented in the IS's class. Careful consideration has been given to the shaping and spacing of individual components, with detailed coordination of interior illumination and finishes to touch surfaces, such as the chrome highlighting on the door handles, gear shift paddles, gear knob and starter button.

Brighter, more focused LED illumination is used in conjunction with conventional incandescent bulb lighting for the front and rear map reading lights, front passenger footwell and gear lever puddle light, increasing the elegant after-dark ambience of the interior. SE-L versions of the IS also feature blue LED illumination in the stainless steel front scuff plates.

The SE-L grade also has a centre console finished in bird's eye maple. Only one per cent of the world's supply meets Lexus's exacting standards and it takes more than three weeks to select, process and finish the wood, sourced from sustainable plantations in Canada. The centre console panel is laminated to an aluminium backing plate to ensure high rigidity before being cut into three parts for manufacture of the main panel, ashtray lid and storage compartment lid. This approach, although time consuming, ensures perfect visual consistency of the finished console.

The finishing process is carried out by Yamaha's piano-building craftsmen. Yamaha has been preparing wood for automotive use since 1966, when the company supplied Toyota with its first real wood components. The bespoke, patented process involves a 20-step, multi-coating application of lacquers, resulting in a high-gloss, scratch resistant finish.

The new steering wheel has a redesigned rim cross section for added comfort. The gear shift paddles are mounted directly on the wheel, which means drivers don't have to modify their grip when changing gear, even when cornering.

The front seats provide snug lateral support and a broad shoulder area. Rear seat leg room is significantly improved, thanks to the wheelbase being 60mm longer than on the previous IS. The front-rear couple distance is now a class-leading 881mm.

The entry-level IS 250 and 220d are upholstered in beige, grey or black fabric, Sport versions have seats finished in suede-effect Cellensia and the SE and SE-L use semi-aniline leather.

Using a technique favoured by bespoke furniture makers, the leather is given an extra top coating of highly dispersed pigments and dyes. Dyeing the leather throughout before this final coating allows a particularly even colour to be achieved with only a thin finishing layer and keeps the leather itself significantly softer. Using smaller, invisible stitching holes and much tighter tolerances in the leather's double stitching gives a particularly neat appearance.

Further examples of Lexus's great attention to detail can be found throughout the interior. For example, the grab handles above the doors have a twin-articulation axis design for flush-fitting and improved ergonomics. Front and rear door ends are enhanced with a black resin cover for the panel and attachment bolts, and the front seat rails are also covered for a smarter appearance and better safety for rear seat passengers.

### **CLASS-LEADING SPECIFICATION AND VALUE**

Lexus's reputation for providing class-leading specifications and value are reinforced by the performance of the new IS, compared to its principle market rivals. Evaluating the standard equipment levels against equivalent models from Mercedes-Benz, Jaguar, BMW and Audi, the IS works out a better prospect by a margin of up to 17 per cent. And that is without taking into account features such as the front knee airbags, the sound system with MP3 compatibility and ventilation function for the front seats (SE) that rival manufacturers cannot provide, even as an extra cost option.

For example, the Mercedes-Benz C230 Elegance SE has an on-the-road price that is £1,110 cheaper than the Lexus IS 250 SE-L, but owners would have to spend more than £4,000 to come anywhere near the Lexus's specification – minus, of course the unique features mentioned above. That's equivalent to a price hike of more than 14 per cent.

On the Mercedes, the BMW 325i SE and Audi A4 2.0 T FSI SE, leather upholstery will add more than £1,200 to the bill, while a set of 17-inch alloys for the BMW will set you back more than £900. If you want the electrically adjustable seats with memory settings that are standard on the Lexus for your A4, you have to find £1,600 extra on top of the OTR price.

The comparisons are even starker when you match the rivals to the Lexus IS SE, with specification-adjusted prices that put the Jaguar at 10.5 per cent more expensive, the BMW at 15.7 per cent and the Mercedes-Benz at 18.2 per cent.

#### COMPETITOR SPECIFICATION AND PRICING COMPARISON – LEXUS IS 250 SE (manual)

MODEL	LEXUS IS 250 SE (man.)	MERCEDES C230 Classic SE	JAGUAR X-Type 2.5 V6 SE	BMW 325i SE	AUDI A4 2.0 T FSI SE
On-the-road price	£25,400	£26,290	£26,770	£25,525	£22,925
Intrusion sensor alarm	✓	✓	✓	✓	✓
Smart keyless entry with push button start	✓	x	x	x	x
Cruise control	✓	✓	✓	✓	✓
Curtain airbags	✓	✓	✓	✓	✓
Knee airbags	✓	x	x	x	x
Brake Assist (BA)	✓	✓	✓	✓	x
Electronic Brakeforce Distribution (EBD)	✓	x	x	✓	✓
Vehicle Stability Control	✓	✓	£340	✓	✓
Traction Control (TRC)	✓	✓	✓	✓	✓
Electric power steering	✓	x	x	x	x
Electric foldable heated door mirrors	✓	✓	£135	£165	£120
Climate control	✓	✓	✓	✓	✓
6-disc CD autochanger	✓	£360	✓	£295	£320
13 speakers	✓	6	6	6	10
MP3 compatibility	✓	x	x	x	x
Leather steering wheel	✓	✓	✓	✓	✓
Heated front seats	✓	£320	✓	£260	£250
Ventilated front seats	✓	x	x	x	x
Electrically adjustable front seats	✓	✓	£275	£890	£800
Seat memory function	✓	£1,045	£410	✓	✓
Front and rear armrests	✓	✓	£145	£110	✓
Alloy wheels	17in	£725	17in	£935	£500

Leather seats	✓	£1,275	✓	£1,220	£1,250
Specification adjusted price	£25,400	£30,015	£28,075	£29,400	£26,165
Absolute specification adjustment vs Lexus IS 250 SE	-	£4,615	£2,675	£4,000	£765
Price position vs Lexus IS 250 SE		+18.2%	+10.5%	+15.7%	+3.0%

Prices at October 2005

#### COMPETITOR SPECIFICATION AND PRICING COMPARISON – LEXUS IS 250 SE-L (manual)

MODEL	LEXUS IS 250 SE-L man.	MERCEDES C230 Elegance SE	JAGUAR X-Type 2.5 V6 SE	BMW 325i SE	AUDI A4 2.0 T FSI SE
On-the-road price	£28,000	£26,790	£26,770	£25,525	£22,925
Intrusion sensor alarm	✓	✓	✓	✓	✓
Smart keyless entry with push button start	✓	×	×	×	×
Cruise control	✓	✓	✓	✓	✓
Curtain airbags	✓	✓	✓	✓	✓
Knee airbags	✓	×	×	×	×
Brake Assist (BA)	✓	✓	✓	✓	×
Electronic Brakeforce Distribution (EBD)	✓	×	×	✓	×
Vehicle Stability Control	✓	✓	£340	✓	✓
Traction Control (TRC)	✓	✓	✓	✓	✓
Electric power steering	✓	×	×	×	×
Electric foldable heated door mirrors	✓	✓	£135	£165	£120
Climate control	✓	✓	✓	✓	✓
6-disc CD autochanger	✓	£360	✓	£295	£320
13 speakers	✓	6	6	6	10
MP3 compatibility	✓	×	×	×	×
Leather steering wheel	✓	✓	✓	✓	✓
Front and rear armrest	✓	✓	£145	£110	✓
Alloy wheels	17in	£440	17in	£935	£500
Heated front seats	✓	£320	✓	£260	£250
Ventilated front seats	✓	×	×	×	×
Electrically adjustable front seats with memory	✓	£1,045	£685	£890	£1,600
Front and rear parking sensors	✓	£605	£295	£285	£500
HID headlamps with AFS	✓	£725	£450	£1,480	£1,100
Power rear blind	✓	£375	×	£195	£325
Windscreen de-icer	✓	×	×	×	×
Rain sensing wipers	✓	£90	£325	×	×
Leather seats	✓	£1,275	✓	£1,220	£1,250
Specification adjusted price	£28,000	£32,025	£29,145	£31,360	£28,890
Absolute specification adjustment vs Lexus IS 250 SE-L	-	£4,025	£1,145	£3,360	£890
Price position vs Lexus IS 250 SE-L		+14.4%	+4.1%	+12.0%	+3.2%

Prices at October 2005

#### COMPETITIVE PARTS PRICING

Another important area in which the new Lexus IS excels compared to its principle rivals is in the cost of replacement parts. In the event of a typical front or rear collision, the repair parts costs for the Lexus work out substantially cheaper – an aspect of the car which has a positive impact on the model's UK insurance group ratings.

For example, the combined cost of front-end elements, including bonnet, grille, bumper cover, wing, headlamp, radiator, front panel and air conditioning condenser for the Audi A4 is almost 26 per cent greater than for the Lexus, while the Mercedes C-Class, Jaguar X-Type and BMW 3-Series range between 18 and 24 per cent more expensive.

As well as achieving lower costs compared to the competition, Lexus has also achieved a reduction in price of more than 24 per cent compared to the previous generation IS.

It's a similar story where the rear of the car is concerned, except that the Lexus's price advantage is even more marked. The bumper cover for the Lexus costs approximately £124, compared to £311 for the same item on a 3-Series. And the X-Type's bootlid costs a hefty £280, almost £150 more than that on the IS. Adding together rear bumper cover, bootlid, rear quarter panel, rear panel and light cluster, the combined costs for the X-Type and the 3-Series are more than 50 per cent greater than for the Lexus, with the Mercedes marking a hike of almost 30 per cent and the Audi priced more than 11 per cent higher.

## **MARKET TARGETS**

The launch of the new IS is set to generate substantial sales growth for the Lexus brand in the UK. In the first full year of sales, Lexus expects to sell 7,400 units, with the split roughly two to one, diesel to petrol. Totals should continue to rise towards the end of the decade.

The strong appeal of the new car and the first availability of a diesel engine option will bring many new owners to the Lexus brand, with around 70 per cent of the first year total expected to be conquest sales from other premium marques, or buyers looking to move up to the premium sector for the first time.

## **BODY AND CHASSIS**

- Body longer, wider and 20 per cent stiffer
- Detailed aerodynamics package for high speed stability and low wind noise
- Extensive NVH reduction measures for ultra-quiet cabin
- Double wishbone front and multilink rear suspension for strong driving dynamics and ride quality
- New fade-compensating brake system
- New Electric Power Steering (EPS), linked to Vehicle Dynamics Integrated Management (VDIM) active safety system on IS 200d Sport

The new generation Lexus IS is wider and lower than its competitors, its low centre of gravity combining with a sophisticated suspension design and new electric power steering to deliver dynamic performance without compromising the legendary Lexus ride quality.

Smooth bodywork with minimal panel gaps and numerous aerodynamic underbody elements promote high speed stability, reduce wind noise levels and contribute to improved fuel efficiency. And comprehensive measures to cut noise, vibration and harshness (NVH) levels ensure an ultra-quiet cabin environment.

## **BODYSHELL**

The new Lexus IS shares the same luxury saloon platform as the latest generation GS. It is 175mm longer and 75mm wider than its predecessor, with front and rear track increased 40mm.

Torsional stiffness is 20 per cent greater, achieved through extensive use of high tensile steel and a brace located between the frontal attachment of the rear sub-frame and the front floor reinforcement. Transverse rigidity is further improved by means of a pipe brace interconnecting the new bracing members.

The bonnet, main engine components and several suspension elements are made of aluminium to reduce yaw moment and unsprung weight, thus enhancing the new IS's agility.

## **AERODYNAMICS**

The new Lexus IS has a drag coefficient of just 0.27, making it one of the most aerodynamically efficient cars in its segment. The sleek, flowing bodywork has exceptionally narrow gaps, minimal protrusions and flush bonnet, headlight and windscreen surface surrounds. Door-mounted mirrors reduce air turbulence around the A pillars and at the rear a duck-tail lip to the trailing edge of the boot lid and an 'air-kick' detail moulded into the lamp clusters ensure a clean passage of air, further reducing drag and turbulence.

High speed stability and low wind noise levels are aided by the deep front spoiler and side skirts, while beneath the vehicle front and rear tyre fairings and covers to the cabin floor, transmission, fuel tank and rear suspension create the smoothest and flattest surface possible. A new engine undercover has been designed to create a venturi effect, which generates downforce for a zero lift coefficient at high speeds. A rear floor diffuser with twin vertical fins is fitted, like a racing car undertray, to reduce the rear lift coefficient and bolster high speed handling stability.

## **NOISE, VIBRATION AND HARSHNESS**

Lexus has paid special attention to reducing the intrusion of external noise and refining the acoustic qualities of the new IS's cabin. Sound absorbing and insulating materials are used extensively throughout the interior, including a newly developed foam-asphalt sheeting that also contributes to the car's overall weight-saving gains. Rubberised underbody floor covers and sound absorbing felt and rubber resin wheel arch liners combat the noise made by water and gravel splatter. The interior carpeting has an absorption-insulation-absorption sandwich to help cut road noise disturbance.

The detailed design of external bodywork seals, weather strips and door and window frame mouldings, contributes to greatly reduced wind noise. Triple seals are used on all four doors, with additional door sill seals to prevent air ingress, and a rubber seal is fitted right around the rim of the bonnet. Wind noise is also reduced by the flush mounted mouldings for the windscreen and door glazing. The windscreen itself has a noise damping, acoustic inner film that leads to a reduction in cabin noise of up to 4dB at idle.

A further example of Lexus's attention to detail is the introduction of perforated, sound-absorbing sun visors. Their unique design yields a significant reduction in wind noise intrusion from the top of the windscreen and the A pillars.

## **SUSPENSION**

The new Lexus IS has double wishbone front and multilink rear suspension, which successfully deliver Lexus's legendary ride comfort with excellent handling and dynamic performance.

### **Front suspension**

The front, high-mount double wishbone suspension system combines lightweight forged aluminium knuckles with a high tensile steel lower arm and hollow anti-roll bar to reduce unsprung weight.

This new configuration has a 35 per cent higher camber angle than the previous generation IS, which improves steering wheel centring and the level of negative camber to the outside wheel when cornering. Steering feedback is also better. An 18 per cent modified kingpin angle improves straight line stability, a 10 per cent increase in caster trail promotes more stable steering feel, and a 22 per cent reduction in roll centre height provides better cornering stability with reduced body roll.

Precise steering control and straight line, high speed stability are also aided by the new forward-mounted power steering gear, allied to low toe variation along the suspension stroke.

### **Rear suspension**

The rear suspension is an advanced multilink system with toe control arms and an aluminium rear axle carrier. It combines stiffer suspension component materials with a reduction in unsprung mass for excellent ride comfort and high cornering stability. The double-linked upper arm and integrated bearings and hub also deliver high rigidity and significant weight savings.

Using a multilink system enables a fine balance of handling, stability and ride comfort to be achieved. The upper arms contribute to a reduction in upward spring motion; the mid-arm helps reduce body roll; and the low arm provides an improved anti-lift/anti-squat ratio. Also, aligning the shock absorbers along the same lower axis as the coil springs avoids compromising the width of the boot.

### **Shock absorbers**

The new IS uses new, high performance monotube shock absorbers, designed to dissipate heat more efficiently and so deliver better control and less high-use fade.

A large, 45mm piston diameter gives sharper response to vertical wheel movement and a new fluid and oil seal design delivers greater damping force under smaller compression. A pyramidal valve stack design reduces camping force under higher piston velocity, reducing impact shock when, for instance, the vehicle drives over a bump at high speed.

Large diameter, liquid-filled bushings to the lower suspension arm further reduces the transmission of vibration and rebound springs in all four shock absorbers control the roll angle in extreme situations.

The IS 250 Sport has its own, bespoke suspension set-up with stiffer spring and damper settings, which let the car sit 10mm lower to the ground. The firmer arrangement improves handling and reduces body roll even further.

### **ELECTRIC POWER STEERING**

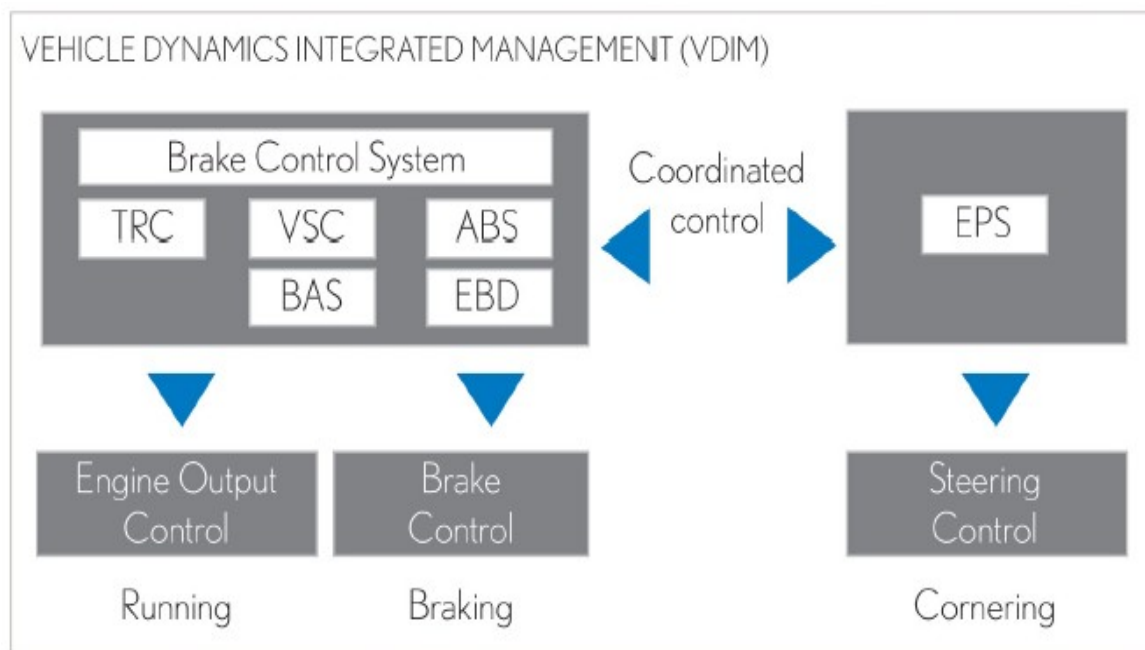
The new IS uses a new speed-sensitive, electrically assisted power steering (EPS) system. Compared to conventional hydraulic systems, it is more fuel efficient, noise-free and, with the steering gearbox located ahead of the front axle, gives smooth, linear feedback to the driver. Both the DC motor and the reduction mechanism are built into the ultra-compact steering gear housing.

The system's electric motor uses a 42V AC current for quicker response to steering inputs. Unlike conventional steering systems, in which power assistance is determined

solely by vehicle and engine speed, EPS additionally registers steering angle and torque in order to calculate the amount of assistance required at any time.

Key steering parameters have been amended from the previous IS model to create a quicker, more direct steering feel. The number of turns lock-to-lock has been reduced from 3.0 to 2.91, and the gear ratio has been simultaneously reduced from 14.5 to 13.5. Furthermore, the IS has a class-leading turning radius of 5.1m.

On the IS 220d Sport, which is equipped with Lexus's Vehicle Dynamics Integrated Management (VDIM), EPS is incorporated into the system to promote smoother vehicle behaviour on the limit. Via the EPS actuator, VDIM will provide steering assistance to reduce torque steer under braking on surfaces with varying levels of grip. It will also introduce steering torque assistance to help counter both understeer and oversteer, helping the driver find the best front wheel steering angle and maintain vehicle stability with the least input. Unlike conventional stability control systems, which simply correct the vehicle's path when under or oversteer is detected, VDIM anticipates the car reaching its dynamic limit and intervenes smoothly and discreetly.



## **BRAKES**

Powerful 296 x 28mm ventilated front discs and 291 x 10mm rear discs are fitted to all IS models. A new pressure compensating system constantly monitors performance by comparing brake pedal effort with vehicle deceleration, applying additional pressure to reduce the effects of brake fade. Stiffer brake hose material is used, which distorts less under pressure and so gives better braking feel, and new high-grip coefficient brake pads further increase braking efficiency.

A new, link-type variable ratio brake pedal provides a progressive action, giving good low-deceleration feel with maximum high deceleration power.

The IS deploys a comprehensive range of active safety braking functions: ABS, Traction Control (TRC), Vehicle Stability Control (VSC), Brake Assist System (BAS), Electronic Brakeforce Distribution (EBD) and Hill-start Assist Control (HAC). On models equipped with automatic transmission, HAC lets the vehicle pull away smoothly on a gradient without rolling backwards. This is achieved by maintaining brake pressure for five seconds after the brake pedal has been released.

IS models fitted with VDIM also benefit from integrated activation of these braking, stability and traction control systems, further improving the overall dynamic performance of the vehicle.

## **WHEELS AND TYRES**

The new IS is available with a choice of bespoke 16, 17 and 18-inch alloy wheels. The 16-inch rims are fitted as standard to the IS 250 and 220d; the 17-inch versions to the SE and SE-L models; and the 18-inch wheels to the Sport versions.

The 18-inch wheels are fitted with wider, 255/40R18 Dunlop SP Sport Maxx tyres at the rear, specially developed for the Lexus IS to provide superior grip on all road surface conditions.

## **POWERTRAINS**

- New 204bhp direct injection 2.5-litre V6 petrol engine with Dual VVT-i
- Lexus's first diesel, an aluminium block 175bhp 2.2-litre common rail unit offering class-leading refinement

- Lexus Clean Diesel Technology ensures the IS 220d is the cleanest luxury diesel car for combined NOx and PM emissions
- IS 220d Sport model features shorter differential gear ratio for 30 per cent improvement in in-gear acceleration

The new generation Lexus IS is offered with a choice of two power units: a 204bhp 2.5-litre direct injection petrol V6 and Lexus's first diesel engine, a four-cylinder 175bhp 2.2-litre unit. This new diesel will dramatically strengthen Lexus's position in a highly competitive market segment.

Both engines are mated to a newly-developed six-speed manual transmission. The V6 is also available with an optional six-speed automatic with sequential paddle shift control.

### **2.5-LITRE V6 PETROL ENGINE**

Lexus's new, chain driven DOHC 24-valve 2.5-litre V6 petrol engine has a compact design and is notably light. Weighing in at 180kg (service mass), it is no heavier than the 2.0-litre engine used in the previous generation IS.

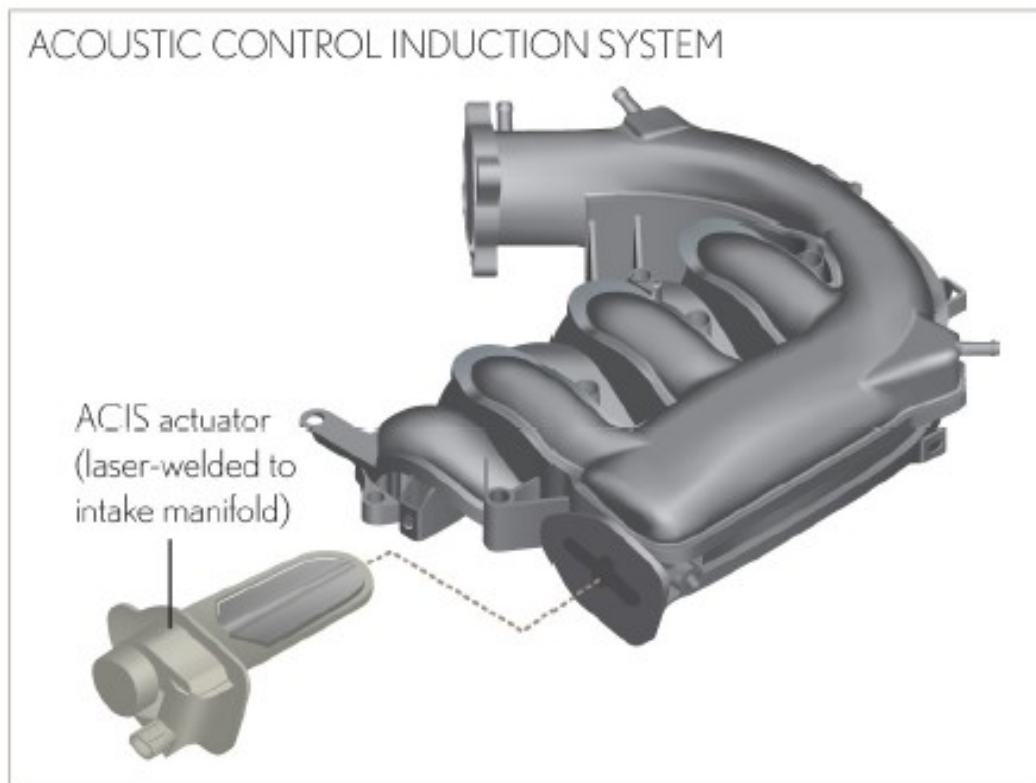
Weight-saving features include an aluminium die-cast cylinder block and intake manifold, a resin intake chamber, and water and oil pumps located within the chain cover.

The direct injection technology gives the engine the highest injection pressure among petrol engines, at 130 bar. It develops 204bhp at 6,400rpm and a class-leading 252Nm of torque at 4,800rpm, translating into performance figures of 0-62mph in 8.1 seconds (8.4 seconds automatic) and a top speed of 144mph (141mph automatic). Combined cycle fuel consumption is 28.8mpg (31.0mpg automatic).

The adoption of D-4 direct injection reduces the intake mixture temperature, which allows for a higher compression ratio, which in turn results in both enhanced power output and fuel efficiency. Unlike conventional petrol engines, the Lexus V6 achieves greater injection precision through control of both injection timing and volume. In addition, compression stroke injection operates during cold engine starts to increase exhaust gas temperature and expedite catalyst warm-up. High pressure fan-nozzle slit injectors are used to achieve the best fuel-air mixture, and pent-roof combustion

chambers with a shallow piston cavity deliver excellent combustion and anti-knock performance.

The new V6 also uses an electrically activated, two-stage Acoustic Control Induction System (ACIS). This divides the intake manifold into two sections, with an intake air control in the bulkhead that opens and closes to vary the length of the manifold according to engine speed and throttle valve angle. This increases power output at all engine speeds. The ACIS electric actuator is bonded to the plastic intake chamber using an advanced laser welding process.



Swirl Control Valves (SCVs) are installed in the intake manifold, one per cylinder. With optimised intake port diameter and length, these stabilise combustion at a low coolant temperature and allow high levels of torque to be generated at low engine revs.

The adoption of Dual VVT-i (Variable Valve Timing – intelligent) on both intake and exhaust camshafts also significantly improves engine performance. Dual VVT-i can control the intake and exhaust camshafts through angles of up to 40 and 35 degrees respectively and allows a greater intake/exhaust overlap. This benefits low end and top

end torque performance, as well as helping to reduce exhaust emissions and give better cold start performance.

The chain-driven valve system employs roller rocker arms, the marked reduction in friction between the cam and sliding components helping to enhance fuel efficiency. In addition, a concave camshaft profile increases valve lift to boost output. The system requires no adjustment of the valve clearance over the life of the vehicle.

All exhaust components are fabricated in stainless steel. Using a dual-tube exhaust manifold construction improves resistance to corrosion and also reduces heat loss and noise. Compared to the system on the previous IS 300 model, larger twin main silencers with variable back-pressure valves and a long-tail structure reduce low frequency booming (7dB less at 1,200rpm) and cut back-pressure at high revs by 30 per cent to improve engine output.

## **2.2-LITRE DIESEL ENGINE**

Lexus's first diesel engine is a four-cylinder, 2,231cc common rail diesel unit that will power the new IS 220d, due for launch in the UK in January 2006. The unit meets Lexus's stringent standards for refinement, with special attention given to NVH performance, and has an aluminium block, which helps save weight and aids driving dynamics.

The engine produces 175bhp at 3,600rpm and 400Nm of torque from 2,000 to 2,600rpm. Preliminary, pre-UK homologation performance data indicate acceleration from rest to 62mph in 8.9 seconds and a top speed of 134mph, while returning strong fuel economy – 44.8mpg in combined cycle driving. These figures remain to be confirmed prior to the IS 220d's launch in January.

The engine features third-generation common rail technology with piezoelectric fuel injectors, operating with an exceptionally high injection pressure of 1,800bar and one of the world's lowest compression ratios for a diesel, 15.8:1. The low compression ratio reduces the compression build-up and reduces noise and vibration from the combustion process.

The common rail system is equipped with high speed injectors with 10 holes and a 0.13mm nozzle diameter, enabling five separate injections per cycle.

Measures to reduce noise and vibration include the adoption of a balancer shaft, which reduces the level of engine booming noise between 2,000 and 3,000rpm. A urethane plastic cover and three-layer heat insulator work with urethane spacers on the upper surface of the inlet manifold and the rear of the oil cooler and oil pan to further reduce engine noise, and a variable backpressure system cuts down noise from the exhaust at low engine speeds. The exhaust also incorporates twin ball joints to reduce vibration and noise.

These NVH reduction measures give the Lexus IS 220d a particularly quiet cabin environment. Testing using the Articulation Index, based on the audibility of random words in conversation, shows performance superior to many petrol-powered vehicles.

The diesel engine is equipped with Lexus Clean Diesel Technology, a package of innovative features that work to reduce exhaust emissions substantially below Euro-IV levels. Central to the technology is the Diesel Particulate NOx Reduction (DPNR) four-way catalytic converter, the only catalyst in the world which simultaneously reduces nitrogen oxides (NOx) and particulate matter (PM), achieving emissions levels respectively of 0.159 and 0.0019g/km. This performance makes the IS 220d the cleanest luxury diesel car in the world in terms of combined NOx and PM emissions.

## **TRANSMISSIONS**

Both diesel and petrol IS models use a compact and precise six-speed manual transmission. The unit features a multi-cone synchroniser to reduce shift effort; slide ball bearings in the gear lever shaft and fork shaft to improve shift efficiency; a triple-synchro mechanism from first to third to enhance shift feel; and a shift guide plate to reduce the amount of play in the transmission after a shift has been made.

The IS 220d features a quiet, durable driveline adopted from the Lexus LS 430 and further improved with a liquid-filled differential mount for better vibration damping. Sport models use a shorter differential gear ratio, which improves in-gear acceleration by an average 30 per cent.

The ultra-smooth V6 petrol engine is also available with an all-new six-speed automatic transmission. This system offers manual sequential gear range selection, using paddle controls mounted on the steering wheel, allowing the driver to make shifts without having to modify his or her grip on the wheel, even when cornering. Alternatively, shifts can be made using the gear lever. The sequential mode effects faster downshifts than the fully automatic mode enabling the driver to enjoy greater involvement and exploitation of the IS's dynamic qualities.

The automatic transmission has three planetary gear units, four clutches and four one-way clutches. A new clutch-to-clutch shift control operates between fifth and sixth gears, eliminating the one-way clutch between them, saving weight and allowing a more compact design to be used. Artificial Intelligence control (AI SHIFT) automatically changes the gear shifting pattern according to road conditions and driving style.

An improved lock-up timing control can improve fuel consumption in fifth and sixth gear driving and further economy during cold starts is achieved by means of an automatic transmission fluid warmer.

## **SAFETY**

- Pre-crash Safety (PCS) and Adaptive Cruise Control (ACC), optional on IS 250 automatic
- Unique Vehicle Dynamics Integrated Management (VDIM) system, standard on IS 220d Sport
- Adaptive Front-lighting System (AFS) with four-bulb high beam lamp design
- Comprehensive passive safety provisions, including world's first twin-chamber passenger airbag and driver and passenger knee airbags
- Subjected to Lexus's stringent car-to-car and roll-over standards
- Next generation Whiplash Injury Lessening (WIL) front seats

## **ACTIVE SAFETY**

The Lexus IS range is equipped across the board with ABS with Electronic Brakeforce Distribution, Brake Assist System (BAS), Traction Control (TRC) and Vehicle Stability Control (VSC).

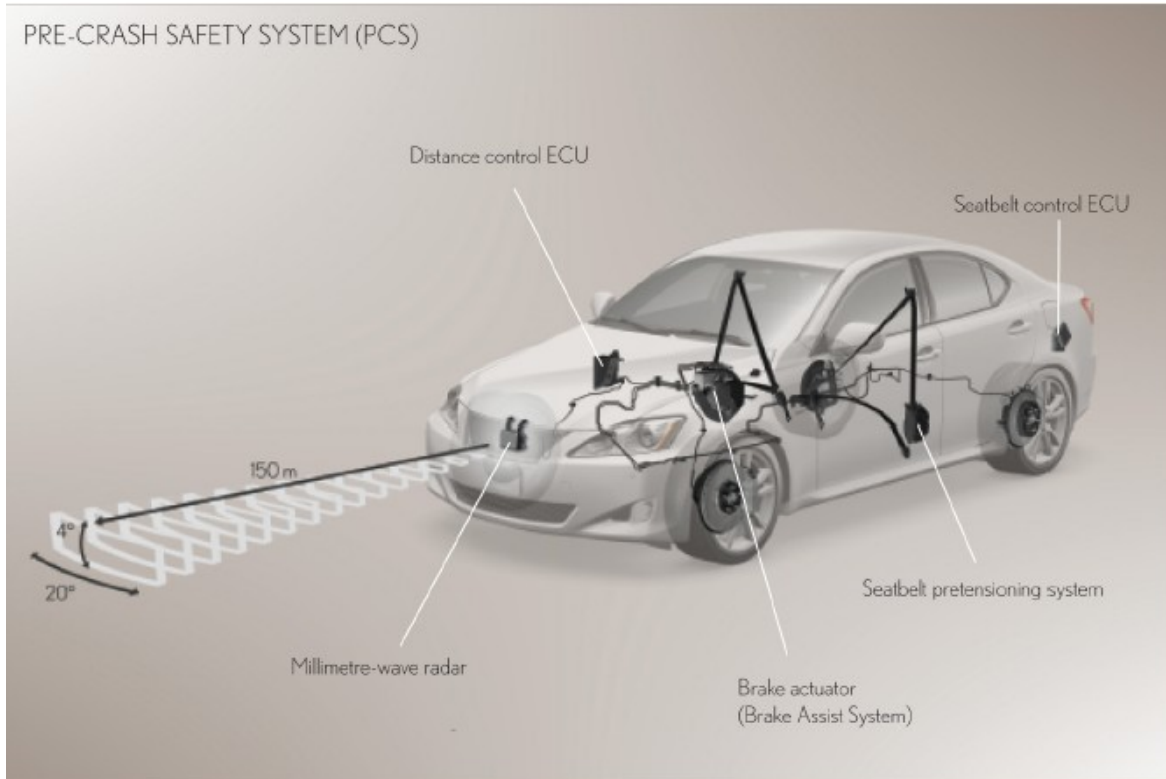
### **Pre-crash safety (PCS)**

The IS 250 SE-L with automatic transmission is available with an optional sophisticated Pre-crash Safety system (PCS), which detects when a collision is inevitable and coordinates safety systems to help reduce the impact. A millimetre-wave radar sensor is fitted to the front of the vehicle, which scans through 20 degrees and 100 metres ahead to detect other vehicles or obstacles, even when the car is cornering. Through a network of sensors, the system's computer constantly checks data including vehicle speed, steering angle and yaw rate to determine in advance if a collision is unavoidable.

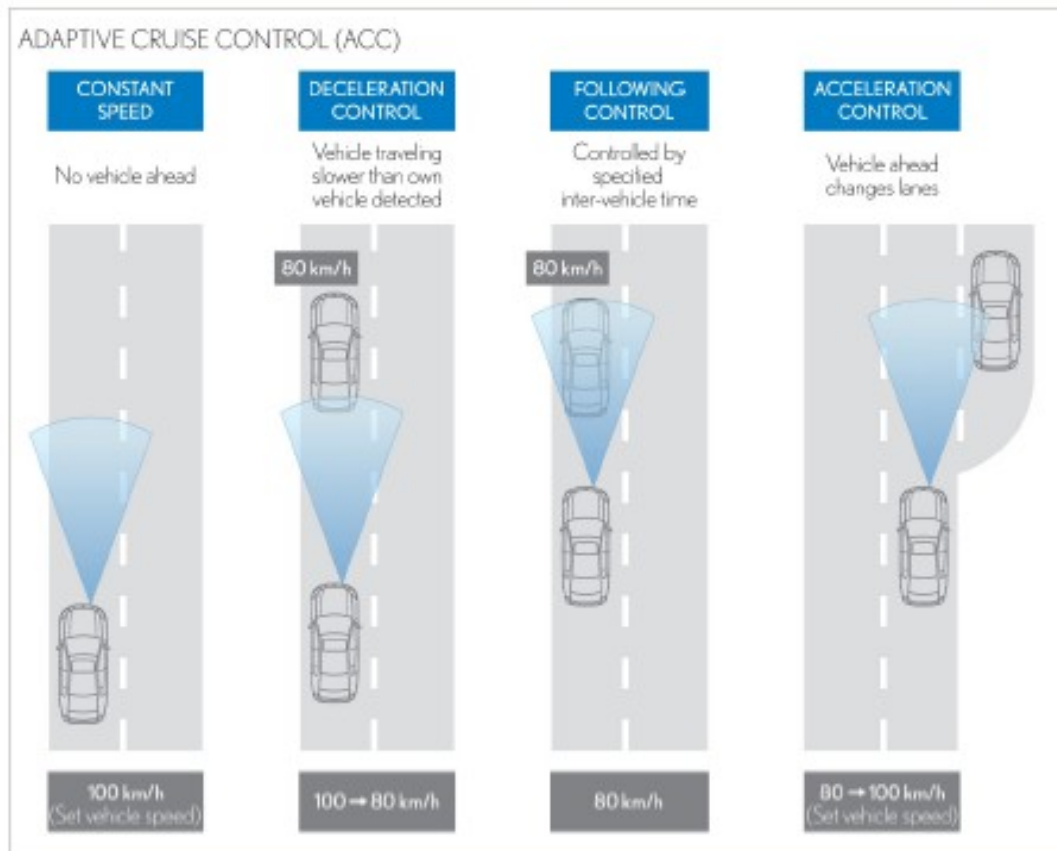
If PCS calculates that a crash will happen, it triggers pretensioners to take up any slack in the front seatbelts and simultaneously adjusts the Brake Assist System to deliver maximum braking power as soon as the driver presses the brake pedal. PCS will also operate if severe under or oversteer is experienced or during emergency braking, if the vehicle is travelling at more than 10mph (15km/h).

### **Adaptive Cruise Control (ACC)**

Adaptive Cruise Control (ACC) is a system that is complementary to PCS and included in the same equipment option for the IS 250 SE-L with automatic transmission. ACC operates in two modes: constant speed control and vehicle-to-vehicle distance control.



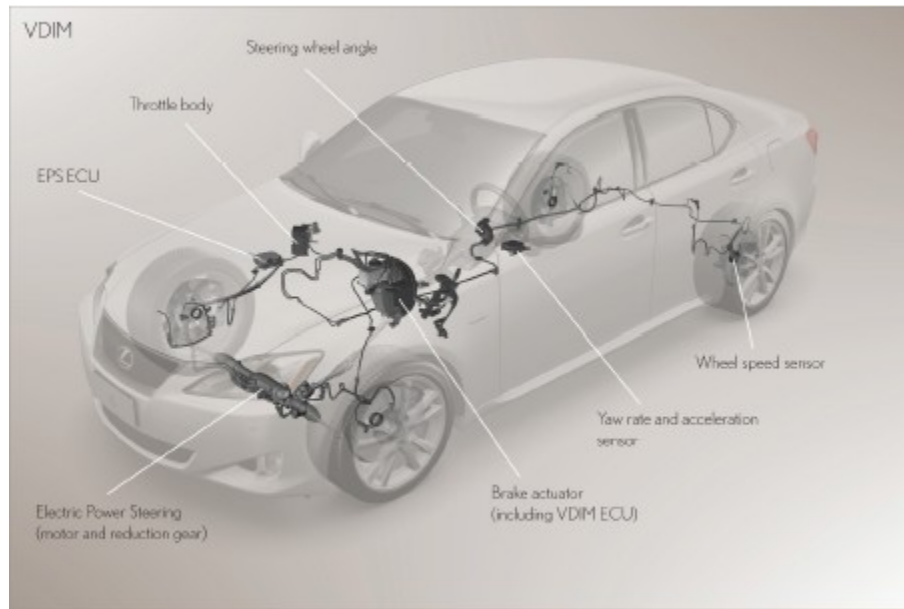
The first mode works like a conventional cruise control system, while the second uses the PCS millimetre-wave radar sensor, linked to a constant speed decelerator, to monitor the distance from the vehicle in front and automatically slow the car to maintain a safe gap. Once the road ahead is clear, ACC accelerates back to the selected cruising speed.



The driver can select the preferred minimum vehicle-to-vehicle distance – long, middle or short – to be maintained by using a switch on the steering wheel and the system's control settings are shown on the IS's multi-information display.

### Vehicle Dynamics Integrated Management (VDIM)

The IS 220d Sport is equipped with Lexus's unique Vehicle Dynamics Integrated Management system, which enhances the vehicle's performance, traction control and stability. Using comprehensive status data collected by sensors throughout the car, VDIM integrates the operation of the ABS, Electronic Brakeforce Distribution (EBD), Traction Control (TRC) and Vehicle Stability Control (VSC) with the Electric Power Steering (EPS).



By applying integrated control of all the elements related to vehicle movement, including engine torque, brakes and steering, VDIM not only optimizes activation of the braking, stability and traction control systems, it also further improves the vehicle's overall dynamic performance.

More than that, whereas conventional active safety systems are only activated immediately after a vehicle reaches the limit of its performance, VDIM engages control before that limit is reached. As a result, the IS 220d Sport's dynamic threshold is expanded and the vehicle behaves more smoothly on the limit, thanks to the less obtrusive intervention of the control systems.

For example, when braking in a corner, a loss of rear tyre grip can result in oversteer. Through the Electronic Brakeforce Distribution function, the use of linear brake actuators makes it possible for control to start before the vehicle reaches its limit. The VDIM system apportions the appropriate braking force to each wheel, ensuring continued vehicle stability by pre-emptively restraining the tendency for wheelspin, while also contributing to superior braking performance.

Even harder braking in a corner can provoke front-wheel lock-up and a loss of grip, causing understeer. Once again, by independently controlling the braking force to all four

wheels via EBD, VDIM helps prevent lock-up and regain vehicle balance, providing seamless control until the conventional ABS and VSC functions come into play.

Moreover, by means of the EPS actuator, VDIM augments VSC operation, providing steering assistance to reduce torque steer on surfaces with varying levels of grip. It will also introduce steering torque assistance in both understeer and oversteer conditions, helping the driver optimise the steering angle of the front wheels and maintain vehicle stability with minimum input.

### **Adaptive Front-lighting System (AFS)**

The new IS is fitted with Lexus's Adaptive Front-Lighting System, which swivels one projector (both on high and low beam) of the bi-xenon headlamps through up to 15 degrees, helping to illuminate a bend as the driver steers into it. The new bi-xenon headlights now have four high-beam bulbs, widening the high beam illumination pattern from mid to long range.

## **PASSIVE SAFETY**

### **Body structure**

The highly rigid bodyshell of the new Lexus IS features numerous structural reinforcements to enhance its performance in a collision. Lexus's own internal testing suggests the new IS has the potential to achieve a five-star rating for adult passenger protection from Euro NCAP.

Compared to the previous generation IS, a new, octagonal section front side member crash box improves energy absorption within a shorter front overhang. The inner door reinforcements have been strengthened and the gap between the inner door panel and the B pillar has been reduced. This directs the impact load to the door belt line reinforcement more effectively, reducing the load to the pillar in the event of an offset frontal collision.

To improve side impact protection, the B pillar itself has been reinforced, while the use of high tensile steel for the both the bulkhead inside the rocker and the cross-member

reinforcement further increases structural stiffness. Further strategic reinforcements help disperse side impact forces and prevent deformation of the vehicle body.

### **Airbags**

The new IS is the first car in the world to feature a front passenger airbag with a dual-chamber design. Its advanced shape is based on the Lexus Omni-Support concept: once inflated, the twin chambers create a depression in the centre of the airbag, effectively cradling the passenger's face, while allowing the physical impact of the bag to be dispersed across other parts of the head, shoulders and upper body.

The new IS introduces driver and passenger knee airbags to its market segment and is also equipped with new, larger seat-mounted front side airbags. These Torso Abdomen Pelvis (TAP) airbags provide superior protection, being 30 per cent bigger than previous designs. Curtain shield airbags that run the length of the interior are also fitted.

In total, eight airbags are fitted as standard to all IS models.

### **Car-to-car compatibility and roll-over tests**

The new IS is the first model to be developed according to Lexus's own more stringent car-to-car compatibility and roll-over crash test standards. These include frontal, side and rear collisions with a two-tonne vehicle at 34mph (55km/h, 50 per cent overlap).

This programme ensures the IS provides class-leading passive safety protection across a comprehensive range of real-world crash scenarios.

### **Whiplash Injury Lessening (WIL) seats**

The new Lexus IS features second-generation Whiplash Injury Lessening seats, revised with a new seatback structure and a headrest designed to sit as close as possible to the occupant's head during normal use. In the event of a rear impact, the lower seat back pushes backwards, closing the gap between the passenger's head and the headrest and significantly reducing the risk of whiplash.

## **INTERIOR REFINEMENT AND TECHNOLOGY**

- Third generation smart keyless entry system with programmable smart key

- Optitron instrumentation with progressive lighting technology
- Dual-zone climate control air conditioning system with clean air sensor
- Optional Multimedia Pack with Mark Levinson 14-speaker audio and DVD system, new-generation Lexus Navigation System, Bluetooth connectivity and first-in-class Parking Assist Monitor

The new Lexus IS range is offered in four grades: the entry point IS 250, SE and SE-L models are available from launch, with IS 220d versions and the IS 250 Sport due to join the line-up in January 2006; the IS 220d Sport will arrive in April. All IS models come equipped as standard with an excellent range of equipment, but owners can take advantage of high-tech options that deliver exceptional performance in satellite navigation and on-board entertainment.

IS 250 models feature:

- Driver and front passenger front, side and knee airbags
- Curtain airbags
- ABS with Brake Assist System (BAS) and Electronic Brakeforce Distribution (EBD)
- Traction Control (TRC)
- Vehicle Stability Control (VSC)
- Cruise control
- Smart keyless entry system
- Push-button start
- 16in alloy wheels
- Optitron instrumentation
- LED sequenced interior lighting
- Multi-Information Display
- 13-speaker sound system with in-dash six-disc CD autochanger, MP3 compatibility and AUX socket for connecting personal music players
- Electrically adjustable folding and heated door mirrors
- Steering wheel controls for audio and Multi-Information Display
- UV-reducing tinted side and rear windows

SE models add:

- 17in alloy wheels
- Leather Seating Pack (leather upholstery, heated and ventilated front seats, eight-way electric front seat adjustment)

SE-L models add:

- Front and rear parking sensors
- Rain-sensing wipers
- Automatic headlights
- Electrochromic auto-dimming rear view and door mirrors
- High Intensity Discharge headlamps with Adaptive Front-lighting System (AFS) and washers
- Rear armrest with storage box hatch through to boot
- Electric rear window sunshade
- Illuminated front scuff plates
- Bird's eye maple wood trim detail
- Electrically adjustable steering column
- Memory settings for steering wheel, front seats and door mirrors

Sport models feature:

- 18in alloy wheels
- Sport suspension
- Sports pedals
- Metal effect trim
- Cellensia Seating pack (Cellensia suede-effect upholstery, heated front seats, eight-way electric front seat adjustment, front seat, steering wheel and door mirror position)

Sport specification matches that of SE-L models, with the exception of the power rear window blind, illuminated front scuff plates and front seat ventilation function.

### **SMART KEYLESS ENTRY SYSTEM**

All IS models benefit from Lexus's third-generation smart keyless entry system. To gain entry to the vehicle and start the engine using the push-button, the driver simply needs to have the smart key on their person.

When the smart key comes within 0.7 to 1.0 metres of the locked vehicle door, it communicates with a transmitter built into the door handle and matches identity codes. A touch of the handle is then all that's needed to unlock the door, or, when leaving the vehicle, to lock it.

The key also automatically activates the IS's sequential entry lighting: first the puddle lights integrated into the door mirrors; followed by the main interior dome light.

Once inside the vehicle, the smart key identity is automatically recognised, allowing the driver to switch on the engine simply by pressing the push-button control on the dashboard.

Two smart keys are provided for each IS for different drivers to use. These can be programmed with individual preferences for driver's seat and steering wheel position on SE-L and Sport models.

The key's ECU can also be programmed to unlock one, two or all four doors in a single action. The IS cannot be locked if the smart key is detected in the cabin or boot and, should the battery run low, a warning message is displayed on the Multi-Information Display.

## **ELECTRONIC CLIMATE CONTROL**

The latest-generation climate control air conditioning system, fitted as standard to all IS models, uses a variable-displacement compressor for quiet and efficient operation. It provides independent left and right side temperature controls and automatic control of the upper and lower cabin air zones, a humidity sensor and automatic cool air bypass control.

The air intake is isolated from the engine compartment to reduce the intrusion of engine noise. On IS 250 models the system incorporates an automatic recirculation mode, triggered by a clean air sensor, to prevent exhaust gases being drawn into the cabin. There is also a switchable pollen filter for the face vents, which operates with 97 per cent efficiency.

## **OPTITRON INSTRUMENTATION**

The sculpted instrument binnacle employs second-generation Optitron technology for the white, backlit display. The rev counter and speedometer needles have progressive illumination and activate with a full dial-sweep. They are backed by secondary amber sweep rings that show the manual settings for the speed limiter and optimum gear shift revs. If the engine speed reaches the rev limit, a red ring light illuminates in the tachometer.

## **PREMIUM AUDIO SYSTEM**

Lexus has achieved industry-leading standards in the field of in-car hi-fi and the new IS lives up to this reputation with a standard-fit 13-speaker audio system with a six-disc in-dash CD autochanger and auxiliary controls located on the steering wheel. The speaker array includes a slim subwoofer mounted in the parcel tray and each door houses a three-way configuration, comprising tweeter, woofer and mid-range unit, to deliver full-range sound reproduction throughout the interior.

The system is equipped to play MP3 and WMA (Windows Media Audio) files and includes a mini-jack AUX socket, neatly located in the centre console box, to allow portable music players, such as iPods, to be connected.

## **LEXUS MULTIMEDIA AND NAVIGATION SYSTEM**

All versions of the new Lexus IS can be specified with an optional Multimedia Pack, comprising a bespoke Mark Levinson sound system, new generation Lexus satellite navigation and the Lexus Parking Assist Monitor – a first in the premium D segment.

### **Mark Levinson audio system**

Lexus has continued its exclusive relationship with world-leading audio designer Mark Levinson to create a system designed specifically for the IS. The result is an exceptional 14-speaker, 300 watt package that fully exploits the excellent acoustic qualities of IS's cabin and delivers the segment's first complete, discrete 5.1 home theatre entertainment experience.

The quality of the new Lexus IS's cabin makes a significant contribution to achieving the superb sound quality: the interior of the car is well isolated, with ultra-low levels of ambient noise, and the high rigidity of several components avoids unwelcome resonances.

The new equipment can play MP3 and WMA files stored on CD or DVD, and, through an auxiliary socket located in the centre console box, can link to personal audio equipment such as an iPod or Mini Disc player. An in-dash, six-disc CD and DVD player is also provided.

The system is the first in the premium D segment to offer a complete, discrete 5.1 home theatre entertainment experience, optimised for the playing of music. When the vehicle is stationary, music videos on disc and DVD films can be played via the seven-inch high-resolution Electro Multi Vision (EMV) display.

### **New-generation Lexus Navigation System**

The new IS is the first model to benefit from the new-generation Lexus Navigation System. The DVD-based package stores mapping for all of western Europe on a single disc and marks a 65 per cent improvement in route calculation speed.

Thanks to increased power for the system hardware, the EMV full colour display has evolved to a VGA (video graphics array), increasing the range from 256 to 32,000 colours.

The system is equipped with three-language voice activation (English, French and German) and voice guidance is available in 10 languages. It is one of few on the market to combine the advantages of both touch-screen and voice activation for several navigation functions and audio, ventilation and telephone controls.

A Help function has been added, enabling the user to receive further instructions from an on-screen help button. Route tracing and lane guidance in major European cities (Berlin, Birmingham, Brussels, Cologne, Frankfurt, Glasgow, London, Manchester and Munich) are provided, together with Electronic Traffic Avoidance to help beat delays on route-programmed journeys.

**Bluetooth connectivity**

The system also provides Bluetooth connectivity, allowing hands-free use of compatible mobile phones via touch controls on the display screen, voice commands or buttons on the multi-function steering wheel. Up to 1,000 numbers can be stored.

**Lexus Parking Assist Monitor**

The Lexus Parking Assist Monitor is the first system of its kind to be offered in the premium D segment. It features a miniature camera mounted in the rear number plate surround, which projects a real-time full colour view of the area behind the IS to the EMV screen in the centre console. To help execute reverse parking manoeuvres, guidelines can be generated, showing the prospective path of the vehicle based on the current steering angle.

**LUXURY SPECIFICATIONS**

SE and SE-L versions of the new Lexus IS are fitted with a Leather Seating Pack. This includes full leather eight-way electrically adjustable front seats with heating and ventilation functions. In ventilation mode, two fans silently draw air through the perforated seat back and cushion for extra comfort.

The Sport grade features electrically adjustable, heated front seats with Cellensia suede-effect upholstery instead of leather.

On SE-L and Sport models further sophistication is provided with an electrically adjustable steering column and three memory settings for the steering wheel, front seats and door mirrors.

SE-L and Sport grades provide electrochromatic rear view and door mirrors, which automatically adjust to avoid glare from the headlights of following vehicles. The door mirrors tilt downwards when reverse gear is selected, to provide a better view of the kerb when parking, and front and rear parking sensors give extra assistance when manoeuvring in tight spots, showing the position and proximity of any obstacles on the EMV screen and sounding a warning buzzer intermittently, then continuously, as the gap from the vehicle decreases.

Features unique to the SE-L grade include dark bird's eye maple wood trim details, illuminated front scuff plates and an electrically operated sunshade for the back window. The sunshade automatically retracts when reverse gear is engaged, then redeploys once vehicle speed reaches 10mph (15km/h).

An electric tilt and slide sunroof is available as an option on SE, SE-L and Sport models. It is operated by a rotary control with nine different settings, including one-touch open and close functions.

## LEXUS IS TECHNICAL SPECIFICATIONS

ENGINE	IS 250		IS 220d	
Engine code	4GR-FSE		2AD-FHV	
Engine type	V6, 60°		Four in-line	
Valve mechanism	24 valves, dual VVT-i		16 valves	
Block & head material	Aluminium		Aluminium	
Displacement (cc)	2,499		2,231	
Bore x stroke (mm)	83.0 x 77.0		86.0 x 96.0	
Fuel rating	95 octane petrol or higher		48 cetane low sulphur diesel	
Compression ratio	12.0:1		15.8:1	
Max. power (bhp/rpm)	204 @ 6,400		175 @ 3,600	
Max. torque (Nm/rpm)	252 @ 4,800		400 @ 2,000-2,600	
PERFORMANCE	MANUAL	AUTO	MANUAL	MANUAL SPORT
0-62mph (sec)	8.1	8.4	8.9	8.9
Max. speed (mph)	144	141	134	134
DIMENSIONS				
Overall length (mm)	4,575			
Overall width (mm)	1,800			
Overall height (mm)	1,425			
Wheelbase (mm)	2,730			
Track front (mm)	1,535			
Track rear (mm)	1,545			
Overhang front (mm)	810			
Overhang rear (mm)	1,035			
Coefficient of Drag (Cd)	0.27			
Minimum turning radius (m)	5.1			
Fuel tank capacity (litres)	65			
INTERIOR DIMENSIONS	IS 250		IS 220d	
Interior length (mm)	1,855			
Interior width (mm)	1,475			
Interior height (mm)	1,165/1,120 with sunroof			

Luggage capacity (litres)		378			
<b>WEIGHTS (kg)</b>		<b>MANUAL</b>	<b>AUTO</b>	<b>MANUAL</b>	<b>MANUAL SPORT</b>
Kerb weight		1,570 – 1,635	1,570 – 1,635	1,585 – 1,655	1,585 – 1,655
Gross vehicle weight		2,055	2,045	2,075	2,075
Towing capacity (braked)		1,500	1,500	1,500	1,500
Towing capacity (unbraked)		560	560	560	560
<b>TRANSMISSION</b>		<b>MANUAL</b>	<b>AUTO</b>	<b>MANUAL</b>	<b>MANUAL SPORT</b>
Gear ratios	1 <sup>st</sup>	3.791	3.538	5.232	5.232
	2 <sup>nd</sup>	2.275	2.060	2.644	2.644
	3 <sup>rd</sup>	1.524	1.404	1.605	1.605
	4 <sup>th</sup>	1.185	1.000	1.219	1.219
	5 <sup>th</sup>	1.000	0.713	1.000	1.000
	6 <sup>th</sup>	0.786	0.582	0.728	0.728
	Reverse	3.466	3.168	4.525	4.525
Differential Gear Ratio		3.583	3.909	2.474	3.200
<b>FUEL CONSUMPTION</b>		<b>MANUAL</b>	<b>AUTO</b>	<b>MANUAL</b>	<b>MANUAL SPORT</b>
Combined (mpg)		28.8	31.0	44.8	N/A
Extra Urban (mpg)		36.7	40.4	52.3	N/A
Urban (mpg)		20.9	22.2	35.8	N/A
<b>EMISSIONS</b>		<b>MANUAL</b>	<b>AUTO</b>	<b>MANUAL</b>	<b>MANUAL SPORT</b>
CO <sub>2</sub> (g/km)		231	214	168	N/A
NO <sub>x</sub> (g/km)		0.04	0.06	0.159	N/A
PM (g/km)		-	-	0.0019	N/A
HC (g/km)		0.04	0.05	-	N/A
HC + NO <sub>x</sub> (g/km)		-	-	0.160	N/A
VED band		F	F	F	F
<b>SUSPENSION</b>					
Front		Double wishbones			
Rear		5-arm multilink			
Shock absorbers		Gas-filled monotube type with multi-leaf type linear control valve			
<b>BRAKES</b>					
Front (diameter x width, mm)		Ventilated discs, 296 x 28			
Rear (diameter x width, mm)		Solid discs, 291 x 10			
<b>STEERING</b>					
Type		Rack and pinion			
Ratio		13.5:1			
Power steering type		Electric Power Steering (EPS)			
Turns (lock to lock)		2.91			

TYRES AND WHEELS		
Tyre size	IS 250/220d	205/55 R16
	SE and SE-L	225/45R17
	Sport	225/40R18
Wheel size	IS 250/220d	16 x 7JJ
	SE and SE-L	17 x 8 JJ
	Sport	18 x 8J

### LEXUS IS 250/IS 220d EQUIPMENT LIST

SAFETY	IS 250 IS 220D	SE	SE-L	SPORT
Driver & front passenger airbags	✓	✓	✓	✓
Driver & front passenger side airbags	✓	✓	✓	✓
Driver & front passenger knee airbags	✓	✓	✓	✓
Curtain Shield airbags	✓	✓	✓	✓
Front passenger airbag cut-off switch	✓	✓	✓	✓
Child proof locks on all rear doors	✓	✓	✓	✓
ABS (four-channel independent)	✓	✓	✓	✓
Electronic Brakeforce Distribution (EBD) with Brake Assist (BA)	✓	✓	✓	✓
Vehicle Stability Control (VSC)	✓	✓	✓	✓
Traction Control (TRC)	✓	✓	✓	✓
Vehicle Dynamics Integrated Management (VDIM)	✗	✗	✗	✓ (220d)
Energy absorbing steering column	✓	✓	✓	✓
Side impact beams in all doors	✓	✓	✓	✓
Energy absorbing crumple zones front and rear	✓	✓	✓	✓
Speed sensitive power steering	✓	✓	✓	✓
Electronic front seatbelt pre-tensioners with force limiters	✓	✓	✓	✓
Five three-point seatbelts and headrests	✓	✓	✓	✓
High mounted rear stop light	✓	✓	✓	✓
Seatbelt warning system	✓	✓	✓	✓
Twin front & rear fog lamps with auto-cancel function	✓	✓	✓	✓
Upper interior head impact protection	✓	✓	✓	✓
Energy absorbing side door structure	✓	✓	✓	✓
Adaptive Cruise Control (ACC) and Pre-crash Safety (PCS)	✗	✗	Opt (auto)	✗
INSTRUMENTS & CONTROLS	IS 250 IS 220D	SE	SE-L	SPORT
Optitron instrumentation	✓	✓	✓	✓
In-dash multi-information display	✓	✓	✓	✓
Outside temperature display	✓	✓	✓	✓
Automatic headlamps on/off function	✓	✓	✓	✓
Electric headlamp levelling	✓	✓	✓	✓

Rain-sensing windscreen wipers	✗	✗	✓	✓
Front and rear parking sensors	✗	✗	✓	✓
Sports pedals	✗	✗	✗	✓
LED rear lamp and stop lamp	✓	✓	✓	✓
LED sequenced interior lighting	✓	✓	✓	✓
<b>AUDIO</b>	<b>IS 250 IS 220D</b>	<b>SE</b>	<b>SE-L</b>	<b>SPORT</b>
13-speaker audio system	✓	✓	✓	✓
Six-disc in-dash CD autochanger	✓	✓	✓	✓
AUX socket	✓	✓	✓	✓
Multimedia Pack (14-speaker Mark Levinson premium audio, six-disc DVD autochanger, 5.1 surround sound, Lexus satellite navigation, Rear Park Assist monitor)	Opt	Opt	Opt	Opt
<b>COMFORT &amp; CONVENIENCE</b>	<b>IS 250 IS 220D</b>	<b>SE</b>	<b>SE-L</b>	<b>SPORT</b>
Smart keyless entry	✓	✓	✓	✓
Push-button start	✓	✓	✓	✓
Speed-sensitive Electric Power Steering (EPS)	✓	✓	✓	✓
Cruise control	✓	✓	✓	✓
Front window de-icer	✓	✓	✓	✓
Green tinted (ultraviolet-reducing) glass	✓	✓	✓	✓
Electrically adjustable, retractable heated door mirrors	✓	✓	✓	✓
Electrochromic auto-dimming rear view and door mirrors	✗	✗	✓	✓
Electrically adjustable steering column with memory settings for front seats, steering wheel and door mirrors	✗	✗	✓	✓
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	✓	✓	✓	✓
Scuff plates front and rear	✓	✓	✗	✓
Illuminated front scuff plates	✗	✗	✓	✗
Power rear screen blind	✗	✗	✓	✗
<b>VENTILATION</b>	<b>IS 250 IS220D</b>	<b>SE</b>	<b>SE-L</b>	<b>SPORT</b>
Climate control air conditioning with clean air filter	✓	✓	✓	✓
Driver's window electric one touch up and down with safety anti-trap	✓	✓	✓	✓
Electric tilt/slide glass sunroof with shade and anti-trap	✗	Opt	Opt	Opt
<b>SECURITY</b>	<b>IS 250 IS220D</b>	<b>SE</b>	<b>SE-L</b>	<b>SPORT</b>

Intrusion sensor and alarm	✓	✓	✓	✓
Remote central locking with deadlocks	✓	✓	✓	✓
Two-step double locking	✓	✓	✓	✓
Locking wheelnuts	✓	✓	✓	✓
Vehicle parts marking traceable to VIN	✓	✓	✓	✓
Security window etching linked to 24hr helpline	✓	✓	✓	✓
Visible VIN	✓	✓	✓	✓
Transponder key engine immobiliser	✓	✓	✓	✓
<b>SEATING, UPHOLSTERY AND TRIM</b>	<b>IS 250 IS220D</b>	<b>SE</b>	<b>SE-L</b>	<b>SPORT</b>
Driver's seat height adjustment	✓	✓	✓	✓
Front and rear armrests	✓	✓	✓	✓
Rear armrest with storage box and through-hatch to boot	✗	✗	✓	✓
Leather steering wheel and gear knob trim	✓	✓	✓	✓
Fabric upholstery	✓	✗	✗	✗
Leather seating pack (heated and ventilated front seats, 8-way electrically adjustable)	✗	✓	✓	✗
Cellensia seating pack (heated and ventilated front seats, 8-way electrically adjustable with memory settings for driver's seat, steering wheel and door mirrors )	✗	✗	✗	✓
Wood interior trim	✗	✗	✓	✗
Metal effect interior trim	✓	✓	✗	✓
<b>BODY EXTERIOR</b>	<b>IS 250 IS 220D</b>	<b>SE</b>	<b>SE-L</b>	<b>SPORT</b>
High Intensity Discharge (HID) headlamps with Adaptive Front-lighting System (AFS)	✗	✗	✓	✓
Headlamp washers	✗	✗	✓	✓
16in alloy wheels with locking wheel nuts	✓	✗	✗	✗
17in alloy wheels with locking wheel nuts	✗	✓	✓	✗
18in alloy wheels with locking wheel nuts	✗	✗	✗	✓
Temporary spare wheel	✓	✓	✓	✓

*The mpg figures quoted in this document are sourced from official EU-regulated test results. These are provided for comparison purposes and may not reflect an individual's actual driving experience.*