UK PRESS RELEASE

The All-New Lexus ES: A Higher Level of Performance and Sophistication

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Please note: this press pack features international equipment and performance details and data; UK-specific specifications will be announced later.

After six generations of success in the mid-size saloon category, the new, seventh generation Lexus ES is forging a new, more ambitious path. Long renowned for its comfort, refinement and luxury appointments, the new ES builds on its strengths with an all-new chassis that allows for a more dynamic exterior design and even better driving performance.

It is a further expression of Lexus's design direction and commitment to crafting vehicles that provide more excitement, emotional connection and passion, helping bring the brand's vision for its future to a wider audience. Traditional buyers will find the new ES more spacious, quieter and safer than ever before, while a new generation of customers will be introduced to a saloon with sharpened performance, class-leading safety technology and a level of craftsmanship rarely found in this market segment.

The seventh generation ES will be the first to be introduced to markets in Western Europe. It follows the new LS flagship saloon and LC coupe in carrying forward a new chapter in Lexus design that has a much stronger emotional quality. The eye-catching styling, made possible by the use of an all-new Global Architecture – K (GA-K) platform, will have particular appeal to customers in the region, together with a more engaging driving experience and even higher safety provisions. The range will include the ES 300h, on sale from December 2018, powered by a new self-charging hybrid system, together with the ES 200, ES 250 and ES 350 petrol engine models that went on sale from September 2018 (ES 300h only in the UK market).

Lexus achieved close to 75,000 sales in Europe in 2017, its highest total yet, marking a fourth consecutive year of growth. The new ES saloon will be a core model in its line-up, contributing to the company's ambition to reach 100,000 annual new car sales in Europe by 2020.

New dimensions in ES design

The new ES is built on the all-new Global Architecture – K (GA-K) platform, giving Lexus the opportunity to explore the limits of mid-size luxury saloon design. The car is longer (+65mm), lower (-5mm) and wider (+45mm) than its predecessor. The longer wheelbase (+50mm) allows the wheels to be pushed closer to the car's corners, with wider front and rear tracks (+10 and +37mm). Its stance and proportions reflect its new-found performance capabilities and give the ES the kind of eye-catching appeal that will make owners and admirers take a second look.

Yasuo Kajino, ES Chief Designer, describes the car's new look as "provocative elegance".

"The ES has always been an elegant luxury saloon. For this generation, we have added daring design elements that challenge buyers' traditional expectations," he said.

The new GA-K platform allowed for a lower bonnet line, which gave Kajino's team the freedom to produce a distinctive silhouette with a strong downward slant, creating a dynamic yet fluid shape. Up front, the ES's face is dramatically different, according to model. The standard versions display elegant bars that radiate out from the centre of the signature Lexus spindle grille, while the F Sport models – featured for the first time in the ES range – adopt a black cross-hatch pattern of interlocking "L" shapes that corresponds with the cut-out sections at the car's front corners.

In a break with past generations, the design features a rearward-sloping fast roofline that emphasises the vehicle's lower stance and slippery aerodynamics. The rear end is clean and sharply chiselled, with LED lamps that wrap around the quarter panels to generate a continuous styling line when viewed from any angle. F Sport models add a rear spoiler, badging and a dark lower valance to add emphasis to the look. Three different 17 and 18-inch wheel designs are available for the standard ES models, with the F Sport versions running on 19-inch wheels[1] that are similar in appearance to those found on the Lexus LC coupe.

A palette of 12 colours includes new beige and green shades: Ice Ecru is designed to mimic light reflected off fresh snow, while Sunlight Green is inspired by ocean water in sunlight. Two exclusive colours – Heat Blue and F White – are available for F Sport models, complementing their high-energy design.

The future of Lexus interiors

When designing the look and feel of the ES's cabin, Kajino's team's starting point was the Lexus Future Interior concept, which blends a driver-centric cockpit with a spacious and comfortable area for the front passenger. The driver's focus is kept on the road ahead by locating the centre display screen, instrument panel and head-up display in a tight cluster within the field of view. Lexus calls this concept "Seat in Control", a simple idea that makes it clear from the moment you get in that all the controls you need are within reach and all the information you want is in plain view. Arm rests slide comfortably under your elbows and buttons can be pushed without taking your hands off the wheel.

Another means to reduce driver distraction is the optional head-up display that projects relevant vehicle information onto the windscreen. Fully adjustable to suit the driver's preferred parameters, the colour display is the largest in the luxury car class. In addition to basic functionality, such as speed, fuel level and shift position, the display can also present speed limit signs, lane keeping assist warnings and navigation directions.

What the driver sees is also enhanced by what they feel. The driving position in the ES has been refined with a more natural steering wheel angle, revised pedal positions and even an optional 10-way adjustable seat. The steering wheel itself is borrowed directly from the LS and features an ergonomically shaped rim and optional wood trim and integral heating elements. Heated seats are also available for the driver and front passenger, along with a new suction-type ventilation system that draws directly from the air conditioning system for a quicker cooling effect.

The cabin is a connected space, too, with the availability of a navigation system with a range

of connected services. The navigation also provides a 12.3-inch multimedia display and second generation Remote Touch touchpad control; its voice recognition capabilities extend to a mobile assistant, allowing contactless driver's smartphone control.

Rear passenger comfort has long been a hallmark of the ES and the new model upholds this quality, in spite of the sleeker exterior roof line. A lower hip point and carefully configured headlining preserve headroom while the longer wheelbase ensures generous legroom.

The interior colour options include a new combination that reflects the "provocative elegance" design theme. The Rich Cream option matches cream upholstery with a brown headlining to give the cabin a modern, yet warm look and feel. Other choices include Black, Chateau and Topaz Brown.

To create an entirely different appearance for the interior of the new F Sport models, a new kind of metallic cabin trim was developed, unlike anything Lexus has used before. Inspired by traditional Japanese sword-making, the *Hadori* trim has fluctuating wave patterns that give it a three-dimensional look that varies depending on the viewing angle. The effect is subtle, but indicative of the level of detail and craftsmanship invested in giving the F Sport a unique place in the line-up. The standard ES models will continue to make use of traditional materials such as bamboo and Shimamoku wood, which give the ES the kind of hand-crafted appearance that luxury customers expect and appreciate.

A new era of performance

The engineering team, led by Chief Engineer Yasuhiro Sakakibara, had a clear goal: transform the image of the ES. That meant turning a saloon known primarily for comfort and quietness into one that is equally capable of delivering class-leading handling and power that you can feel and hear.

According to Sakakibara, this ES has been built to deliver a fundamentally higher level of performance than any of its predecessors. He said: "We knew that this ES had to feel responsive and easy to drive, no matter what kind of road it was on. That can only be achieved with a solid foundation."

The starting point was the new GA-K platform. It is an exceptionally rigid, front-wheel drive chassis that rivals the GA-L rear-wheel drive platform used for the LC coupe and LS saloon in terms of torsional stiffness. Various grades of high-tensile steel reduce weight compared to previous platforms, while enhancements such as an all-new multi-link rear suspension design, rack-mounted electric power steering and a V-brace behind the rear seat gave the engineers the flexibility to tune the ES with a new-found precision.

The chassis team sought to create a sense of comforting predictability coupled with a feeling of quick response to every movement.

Suspension that adapts to its surroundings

With a solid base to build upon, Sakikabara's team turned its efforts to designing a suspension that could be tuned to deliver both exceptional comfort and precise handling. The resulting design uses MacPherson struts at the front and a trailing arm, multilink setup at the rear, with anti-roll bars at each end.

Yoshiaki Ito, chief test driver, described the ES's heightened level and refined definition of

comfort: “We want every kind of driver to feel a sense of complete control when they are behind the wheel of the ES. It’s a level of comfort that goes beyond merely delivering a smooth ride.”

Although the design of the front suspension is similar to the previous ES, several changes have been made to improve overall responsiveness. The angle of the strut itself has been revised to better align it with the load path from the wheel for improved ride quality, while an increase in caster angle (+2 degrees) and caster trail (+8mm) help to improve straight line stability. New Dynamic Control Shocks are capable of responding to even the smallest movements thanks to a non-overlapping auxiliary valve that allows damper oil to flow in either direction before entering the main valve.

The rear suspension design has a trailing arm, multilink setup that also benefits from the responsiveness of the new Dynamic Control shocks. Higher placement of the trailing arm mounting point and a larger bushing size result in improved control over road irregularities. Wider spacing of the anti-roll bar bushing mounts also contributes to overall roll reduction.

More precise steering inputs are delivered by a new rack-assist type electric power steering (EPS) system. Unlike the previous ES which used an assist motor mounted on the steering column, the new EPS set-up puts the assist motor directly on the steering rack, which returns more precise feedback to the steering wheel. The new lay-out also allows for additional steering wheel adjustability with 30mm of additional tilt and 40mm of additional telescopic range.

The added control of F Sport

On F Sport models, an Adaptive Variable Suspension (AVS) is offered that replaces the Dynamic Control Shocks with adjustable dampers. Similar to the systems offered on the LC coupe and LS saloon, the AVS system on the ES is capable of 650 levels of adjustment to deliver optimal ride quality and precise control. Adjustments are based on information from sensors that measure both linear and vertical G loads, vehicle speed, steering angle, yaw rate and master cylinder pressure, in addition to information from the engine control computer and skid control computer.

All versions of the ES have a Drive Mode Select system that allows the driver to tailor the car’s settings to suit different road conditions. Models without AVS offer Eco, Normal and Sport modes while AVS-equipped cars replace Sport mode with Sport S and add Sport S+ and Custom modes.

In Eco mode, fuel consumption is prioritised by reducing the engine responses to the throttle and suppressing use of the climate control system. On non-AVS cars, Sport mode quickens throttle responses, changes the transmission shift program and alters the steering assist for added control, while AVS-equipped cars only adjust the throttle and transmission settings when in Sport S mode. For even sportier driving, Sport S+ mode adjusts the throttle, transmission and steering parameters along with the adaptive dampers. In Custom mode, drivers can choose their preference from three engine and transmission programs (Eco, Normal, Sport), two steering and suspension programs (Normal, Sport) and two climate programs (Eco, Normal).

Fourth generation hybrid drive system

The ES 300h – to be launched in Western and Central Europe – is equipped with a new, fourth

generation self-charging hybrid drive system that can deliver exceptional fuel efficiency, responsive performance and minimal emissions for a mid-size luxury saloon. It couples an ultra-efficient 2.5-litre Atkinson cycle four-cylinder petrol engine with a lighter, more compact and more power-dense electric motor. Total system power is 218 DIN hp/160kW and combined cycle fuel economy is from 60.1mpg.

The 2.5-litre engine is all-new and incorporates fast-burn combustion technology that makes it one of the most thermally efficiency engines to feature in a production vehicle. The result is more power without increasing emissions or fuel consumption. Features that help achieve such impressive results include straight intake ports, increased valve angles and laser-clad valve seats. A variable-capacity oil pump, multi-hole injectors, VVT-iE on the intake valves and a variable cooling system also contribute to the engine's impressive heat and combustion management.

Designed specifically to work with the 2.5-litre engine, the new transaxle has a multi-axle arrangement of the electric motors in place of the previous coaxial set-up which reduces the overall length of the package by nearly 30 mm. The traditional planetary gear set has been replaced by a parallel shaft gear and a multi-function gear that incorporates a power split planetary ring gear, parking gear and counter drive gear into one compact unit.

The nickel metal-hydride battery that powers the electric motor has been relocated from the boot to underneath the back seat. This was made possible by a 120mm reduction in the height of the battery and the adoption of a more compact cooling system. Moving the battery under the seat not only frees up boot space, it also improves the car's front-to-rear weight distribution for better handling.

Several new features have been incorporated into the ES 300h to improve overall driving satisfaction and engagement. The hybrid control system is now designed to deliver a more linear acceleration feel by aligning engine speed more closely with vehicle speed, reducing the "rubber band" feel commonly associated with hybrid systems. Engaging the Sport drive mode further enhances acceleration by boosting torque at lower speeds while paddle shifters can be used to move through six simulated gears for more precise control.

Petrol powertrains and new eight-speed Direct Shift automatic transmission

In Russia and other Eastern markets, ES will be available with a range of petrol powertrains (not available in the UK).

The ES 350 is powered by a 3.5-litre V6 petrol engine that is designed to deliver commanding acceleration and a stirring note. This impressively smooth engine benefits from an update to the D4-S fuel injection system and now develops 250 DIN hp/183kW, marking significant increases on the performance of the previous generation V6 unit.

As well as the boost in power and torque, the ES 350 also gains a new eight-speed Direct Shift automatic transmission. This uses an ultra-thin torque converter and a multi-plate lock-up clutch to transfer power to the front wheels more efficiently. It is tuned to deliver crisp, precisely timed shifts with quick pedal responses. With a wider spread of ratios, it can use high-torque gears at the low end for quick starts, and tall gearing at the high end of optimum efficiency.

High-speed combustion is a core element of the new engine's ability to provide the most efficient use of fuel. To achieve this, the cylinder bores have been narrowed slightly (from

90mm to 87.5mm) and the stroke lengthened (from 98mm to 103.4mm) to create an optimal 1:1.2 bore-to-stroke ratio and reduce the distance the fuel must travel to reach the edges of the cylinder. The angle between the valves was also increased to create a more direct path for the incoming air, while the intake valve seats use a laser cladding process that allows for a larger valve seat area, reduced seat face temperatures and a smoother transition from the intake port to the combustion chamber. The result is an optimised swirl pattern and the ability to run more ignition advance in lean conditions without approaching knock limits.

The ES 250 will be available with an all-new, high-efficiency 2.5-litre four-cylinder petrol engine and a new eight-speed Direct Shift automatic transmission. Constructed in lightweight aluminium, it has a long-stroke design, laser-clad intake valve seats and advanced intelligent variable valve timing (VVT-i) to achieve high-speed combustion. It has a high overall thermal efficiency of 38 per cent.

Like the V6, the D-4S injection system in the 2.5-litre engine is used to provide high-pressure direct fuel injection and low-pressure port injection for low-load, Atkinson cycle operation. Additional efficiencies are realised by a continuously variable oil pump and a variable cooling system, both of which adjust their operation to work only when needed. For instance, when the engine is cold, the piston oil cooling jets are disengaged to allow for quicker warm up and reduced exhaust gases. In the same situation, the electric water pump reduces the overall coolant flow rate as well as redirecting coolant from the engine block to the heater core for quicker cabin heating and engine warm up.

A More flexible transmission for maximum driveability and mileage

Both the 3.5-litre V6 and the 2.5-litre in-line four-cylinder engines deliver power to the front wheels through a new eight-speed Direct Shift automatic transmission. This new transmission uses an ultra-thin torque converter and a multi-plate lock up clutch to maintain a direct connection in almost all situations other than take off. The result is dual clutch-type feel in most situations along with the smooth application of power from a stop like a traditional automatic.

Compared to the previous six-speed automatic, the eight-speed Direct Shift transmission has a wider range of ratios, designed to return improve fuel consumption and more responsive performance. For instance, the previous first gear ratio in the six-speed automatic was 3.30:1 while the new eight-speed offers a 5.51 first gear when coupled to the V6 and a 5.25 first gear for the four-cylinder. At the high-end, the new transmission allows the engine to run between 250 and 300rpm lower at 62mph compared to the six-speed.

Unparalleled safety provisions

The seventh generation ES is available with the latest Lexus Safety System+ (standard on all models in Western Europe, available as an option in Eastern Europe markets). This package of active safety technologies provides new capabilities and expands the driving scenarios in which it can provide added protection for driver and passengers and help prevent an accident from happening.

The new features include daytime cyclist detection which is part of the comprehensive Pre-Collision System (PCS). Already capable of detecting oncoming vehicles and pedestrians, the Pre-Collision System's ability to detect cyclists addresses one of the most common accident scenarios on the road today. PCS has also been enhanced to detect pedestrians at night by increasing the radar's sensitivity and dynamic range.

Another new safety advance offered in the ES is a two-stage adaptive high beam system (AHS). This system not only turns the headlight high beams on and off automatically for the driver, its 24 individual LED light array is capable of adapting the light pattern to provide enhanced illumination while reducing glare for oncoming drivers.

The world's most immersive audio experience with Mark Levinson PurePlay

The 17-speaker Mark Levinson PurePlay system makes its debut on the 2019 Lexus ES. Its world's first design architecture was created to immerse each individual in the most powerful, precise and pure audio experience yet.

PurePlay leverages multiple unique approaches to deliver outstanding in-vehicle performance: precision staging, world-class speaker design and placement, and unparalleled tuning and decompression technology. Speakers are placed at shoulder level around the cabin, enhancing acoustics and creating a tonal synergy. These perfectly timbre-matched locations deliver a consistent tonal colour between all mid-range speakers and all tweeters, effectively creating two identical sound stages for the front and rear passengers. As a result, each individual is enveloped in sound, creating a listening experience that is consistent in every seating location.

The next chapter in the ES story

The seventh generation Lexus ES will usher in a new era for one of the brand's longest-established and most popular models. In common with the Lexus flagship LS, the new ES saloon aims to engage a wider range of customers. It delivers everything traditional Lexus buyers expect, together with qualities that will draw in those who have not considered the brand before. Stronger styling, more dynamic performance, high-quality interior finishes and the latest safety technology will help recast the image of the ES into one that is new and unexpected.

1 Specifications vary per market

ENDS