

## THE LEXUS RC

### INTRODUCTION

The Lexus RC is a premium two-door coupe that delivers an impressive design, Lexus luxury and craftsmanship and a refined and engaging driving experience. It's designed to attract new and younger customers to Lexus and is powered by a self-charging hybrid electric powertrain.

The Lexus Hybrid Drive system in the RC 300h combines a 2.5-litre, four-cylinder Atkinson cycle petrol engine with a powerful electric motor and produces maximum power of 220bhp (164kW). Acceleration from nought to 62mph can be accomplished in 8.6 seconds; top speed is 118mph. The hybrid's proven efficiency balances this performance with combined cycle fuel consumption from 57.6mpg and CO<sub>2</sub> emissions from 113g/km (with 18in wheels).

Vehicle dynamics benefit from tuned electric power steering and suspension systems to secure ride comfort and handling agility, adding to the quiet, refined and sophisticated driving experience provided by the full hybrid powertrain.

The electronic continuously variable transmission (E-CVT) has a six-step, sequential Shiftmatic gear change function to provide the kind of involving drive customers seek from a sporting coupe. As a full hybrid, the RC 300h also offers the benefit of a fully electric EV driving mode for ultra-quiet running with zero tailpipe emissions and fuel consumption.

The RC 300h F Sport amplifies the model's sporting qualities with precision tuning of the front and rear suspension and the adoption of Adaptive Variable Suspension.

From January 2018, all RC models are fitted as standard with Lexus Premium Navigation and Lexus Safety System+.

### DESIGN AND PACKAGING

The Lexus RC presents an elegant and powerful two-door exterior and a premium quality interior with a snug, driver-focused cockpit. Particular attention has been paid to providing ideal ergonomics with advanced HMI (human-machine interface) technologies that ensure

quick and clear communication of important vehicle data and controls. The area around the driver is divided into two distinct areas – an upper display zone and a lower operation zone.

The technologies available include Lexus Premium Navigation and co-ordinated control of multimedia functions between the 4.2-inch multi-information display in the instrument binnacle and the 10.3-inch screen in the centre console. The latest generation Lexus Remote Touch provides intuitive touch tracer control via a multi-function touch pad. The choice of audio packages includes a bespoke 17-speaker Mark Levinson Premium Surround system, upgraded for 2018 with ClariFi and Quantum Logic Surround to further improve sound reproduction, in particular the quality of compressed, digital audio files.

The F sport models feature grade-specific styling elements inside and out, including an individual treatment of the Lexus spindle grille with an “F” mesh pattern and exclusive alloy wheel designs, body colours, trims and detailing. New for 2018, F Sport models can be upgraded with a Premier Pack that introduces many of the sophisticated features of the Premier grade model.

## **SAFETY**

The RC is designed to provide the highest levels of active, passive and preventive safety. All versions of the coupe are fitted as standard with Lexus Safety System + and Lexus’s Vehicle Dynamics Integrated Management. The Lexus Safety System+ package provides a Pre-Collision System, Adaptive Cruise Control, Automatic High Beam and Lane Departure Alert.

Other safety technology features available include a Blind Spot Monitor, Rear Cross Traffic Alert and a tyre pressure warning system that indicates which of the car’s wheels is affected.

## **DESIGN**

- Powerful and elegant two-door coupe design reflects the RC’s refined performance and agility
- Premium quality interior with snug, driver-focused cockpit
- Ergonomically ideal driver environment with advanced HMI technologies
- Exclusive F Sport exterior and interior treatments, including grade-specific grille, alloy wheels body colours, trims and detailing

### **Exterior design**

The RC's exterior design features a compact cabin area, powerfully flared wings and contoured bodywork with deeply sweeping lines. The coupe presents a low profile and wide stance, measuring 4,695mm long, 1,840mm wide and 1,395mm high, with a 2,730mm wheelbase.

To create the RC's powerful character lines Lexus had to use advanced press technologies that go beyond conventional production line standards and which have up to now been reserved for producing concept vehicles. The resulting three-dimensional forms change in appearance and effect as you move around the car, giving the RC a striking appearance from every angle.

The trademark Lexus spindle grille is wider than on saloon models and has a longitudinal rather than lateral mesh pattern, projecting the car's wide stance and low centre of gravity.

Lexus's sporting design pedigree can be seen in the triangular headlamp design, with each element in the three-light cluster containing both high and low-beam lamps. The familiar Lexus L-shaped low-beam light design combines with the independently located LED daytime running lights to give the RC a particularly sporting front lighting signature.

The rear design features prominent, muscular wheel arches and an echo of the front spindle styling. An original twin-exhaust profile and aero-stabilising fins at the far edges of the rear bumper are a further visual expression of the car's performance and agility.

The rear combination lamps' slim and sharp design presents an evolution of Lexus's "L" motif. On previous models this motif has been used for a graphic element inside the unit, but on the new RC the tail and stop lamps are raised up to create a strong, three-dimensional shape.

In a further new approach, the seamless lighting method seen on earlier models has been replaced with a sparkling, gem-like illumination created by using an inner lens with a multi-layered, serrated surface.

The coupe's low and sleek proportions have been enhanced by achieving the narrowest possible panel gaps and the use of advanced construction technologies – a hemming treatment for the rear wheel arches and laser brazing.

The hemming process reduces the panel thickness at the lip of the wheel arch and the vertical gap between the tyre and the arch.

Three alloy wheel designs are offered: five-spoke 18-inch for Luxury grade; dark-finished multi-spoke 19-inch for F Sport models; and 10-spoke 19-inch for Premier grade.

### **Interior design**

Lexus's approach to designing the interior of the RC was to produce a snug, driver-focused cockpit with ideal ergonomics, supported by use of the advanced HMI technologies. To help achieve this, the area around the driver is divided into two distinct zones: an upper display zone for communicating information, alerts and data, and a lower operation zone, housing all the principal controls and switchgear.

The display zone includes the instrument panel and a full-colour 10.3-inch multimedia screen. The instrument binnacle includes a large and highly legible speedometer and tachometer positioned either side of a central 4.2-inch multi-information display. The information presented on the multi-information screen can be changed using controls on the steering wheel.

The meters' backlighting changes in colour according to the drive mode selected: blue for Eco mode and red for Sport.

The layered centre console within the lower operation zone integrates the multimedia and navigation systems. All versions of the RC are fitted with Lexus Premium Navigation and the Remote Touch touchpad. The finish of the controls is like that of a high-end audio system, while the Mark Levinson Surround audio (standard on Premier grade, optional for F Sport) has machined aluminium controls, like those used by Mark Levinson's home systems.

The centre console also features electrostatic switches that allow air conditioning temperature to be adjusted with just the touch of a finger.

The highly supportive front seats are made using an integrated foaming technique. This enables large concave surfaces to be moulded with the elimination of any gaps between the upholstery and foam padding. The result is excellent comfort and lateral holding performance.

Access to the rear seats is made easier with a one-touch walk-in function using a lever mounted on the shoulder of the front seats. This automatically slides the front seat forward while folding the seatback forward. The seat returns to its original position when the seatback is raised again. For convenience and flexibility, the rear seats split-fold 60:40.

The special quality Lexus brings to its vehicle interiors is reflected in the use of contrasting colours, materials and lighting in the RC. Smooth leather upholstery is standard across the range, with a specific leather treatment for the F Sport models. Colour choices are Clove, Grey, Black, Topaz Brown and, exclusive to F Sport, Dark Rose, with contrast stitching and a quilting pattern on the seats, and matching stitching on the instrument panel and door trims.

The lighting provides upward rather than the familiar downward reflecting illumination and includes door trim lighting which automatically adjusts in brightness to suit driving conditions.

The high-contrast interior colours and sculpted, polished metal details accentuate the layered form of the centre console and door panels. Black trim inlays are featured on Luxury grade, with cool mesh-patterned aluminium on the F Sport models and luxurious grey Shimamoku wood on the RC Premier. The Shimamoku trim, with its distinctive ribbon graining, is an example of the *takumi* craftsmanship that goes into producing Lexus vehicles, being made using a painstaking layer process.

### **F Sport-exclusive design features**

The RC F Sport models are fitted with a wide, low-set spindle grille with an F-pattern mesh.

They also feature a grade-specific multi-spoke 19-inch alloy wheel design with darkened finish and F Sport badging. The colour choices include three shades specific to F Sport – F Sport White, Azure Blue and Solar Flare.

In the cabin the central meter is inspired by the instrumentation in the LFA supercar. Other F Sport-exclusive features include a new stitching pattern for the front seats, perforated leather coverings on the steering wheel and gear lever, aluminium sports pedals and scuff plates and a Dark Rose upholstery option.

### **POWERTRAIN**

- 220bhp (164kW) self-charging hybrid electric powertrain
- Combined cycle fuel consumption from 57.6mpg and CO<sub>2</sub> emissions from 113g/km
- System features 2.5-litre, four-cylinder Atkinson cycle petrol engine with a very high, 38.5 per cent thermal efficiency rating

The RC 300h is a self-charging hybrid electric car that can be driven using its petrol engine and electric motor in combination or on its electric motor alone.

Its Lexus Hybrid Drive system features a Euro 6-compliant, 2,494cc, dual injection, Atkinson cycle petrol engine that generates 178bhp (133kW) at 6,000rpm and peak torque of 221Nm between 4,200 and 5,400rpm, and a 141bhp (105kW) electric motor. Total system output (engine and electric motor combined) is 220bhp (164kW).

The engine and electric motor drive the rear wheels, either independently or in tandem, as conditions demand.

As well as the engine and motor, the hybrid system also features a generator, a high-performance nickel-metal hydride battery and a power split device which uses planetary reduction gears to re-allocate power from the engine, electric motor and generator as required. There is also a compact power control unit which governs the high-speed interaction of the system's components.

Acceleration from rest to 62mph can be accomplished in 8.6 seconds and the RC 300h's top speed is 118mph. Conversely, combined cycle fuel economy starts from 57.6mpg with tax-efficient CO<sub>2</sub> emissions from 113g/km (figures for Luxury grade with 18-inch wheels).

Advanced technologies have been used to optimise integration of the engine into the hybrid system, improving performance while minimising fuel consumption and emissions. Its Atkinson cycle timing gives an expansion stroke that is longer than the compression stroke, resulting in more efficient conversion of combustion energy into drive power. By using the Atkinson cycle, a higher compression ratio (13.0:1) and other technologies, Lexus has achieved a remarkable thermal efficiency for the engine of 38.5 per cent.

The new generation D-4S fuel injection system operates at a higher, 20MPa pressure with increased fuel flow volume. This helps produce a more homogenous air-fuel mixture which contributes to both higher power output and better fuel efficiency.

Details in the engine's design do yet more to secure fuel efficiency, including the use of in-cylinder direct injectors with a side slit and optimised injection hole shape; a revised intake port; improved air flow; and the use of roller-arm valve gear and a roller-type D-4 pump gear.

The friction between the sliding parts within the camshafts has been greatly reduced. Using a low-friction timing chain with better wear-stretch performance and a stretch belt to reduce tension also cuts the amount of friction. Reducing friction losses in this way adds to the engine's overall fuel efficiency.

Intelligent variable valve-timing on both intake and exhaust camshafts (Dual VVT-i) significantly improves engine performance. It allows a greater overlap between intake and exhaust valve operation which delivers benefits in low and top-end torque, as well as helping reduce exhaust emissions and give better cold-start performance.

The high-efficiency exhaust gas recirculation system is water-cooled and has a step motor valve that is more responsive than conventional technology. These elements optimise EGR gas flow and help realise excellent fuel economy.

Lexus has also introduced a number of measures that further improve the quietness and smoothness that are characteristics of its hybrid powertrains.

The location of the port injectors has been optimised, together with port injection performance during idling and low-load driving, and the shape of the crankshaft. Noise and vibration levels have been reduced by increasing the rigidity of the cylinder block and intake manifold, optimising the efficiency of the balance shaft, and the use of resin gears within the balance shaft.

The electric continuously variable transmission (E-CVT) is controlled using shift-by-wire technology. It provides a six-step sequential Shiftmatic gear change function that can be operated using paddle controls on the steering wheel (more details are provided in the chapter on Driving Dynamics, below).

## **DRIVING DYNAMICS**

- High bodysHELL rigidity with aerodynamics tuned for precise steering response and high levels of mechanical grip
- Comprehensive measures to minimise noise and vibration for a quiet and comfortable cabin
- Enhanced agility for F Sport models with Adaptive Variable Suspension

The new RC's driving dynamics perfectly reflect Lexus's work to evolve the ride and handling of its vehicles to give customers a more sporting and engaging driving experience.

### **High-rigidity bodyshell**

The RC's high-rigidity bodyshell provides the foundation for its agility, precise steering response and high levels of mechanical grip. It benefits from large cross-section rockers panels (almost twice the size of those in the Lexus IS saloon), cowl side bracing, underbody brace reinforcement and even the use of high-rigidity front and rear screen glass adhesive.

Specialised Lexus manufacturing techniques add to the rigidity, including body adhesives, multi-spot welding and laser screw welding around the door apertures, quarter glass and upper back panel.

Together these measures help maximise torsional rigidity, contributing to steering response and body control when cornering.

### **Aerodynamics**

Lexus deployed tried and tested race car aerodynamics for the RC's upper and under-body surfaces to achieve stability during high-speed driving.

Air ducts in the corners of the front bumper control the speed of airflow along the sides of the body, reducing turbulence. An aero stabilising guide behind the grille suppresses vortex formation in the airflow entering the grille, improving the radiator's cooling efficiency.

Front and rear wheel arch spats improve aerodynamic performance by reducing the airflow hitting the tyres, while a grooved front wing liner helps direct the flow of air along the tyre. Beading integrated in the rear wing liner expels air generated by tyre rotation from the wheel arch.

Aero stabilising fins are located at the front tip of the door frame moulding and on the rear combination lamps, smoothing the flow of air along the side of the vehicle, promoting straight-line stability and suppressing wobble during cornering. At the rear, the profiles of the boot lip, bumper corners and bottom edge of the lower garnish plate have been shaped to funnel the airflow back and cleanly away from the vehicle.

The underbody aerodynamics is no less comprehensive. There are large undercovers for the engine, main floor and rear floor, with aero stabilising fins on each to further suppress



turbulence. Also, the underfloor angle rises towards the rear, creating a Venturi effect that increases downforce and smooths the flow of air.

### **Low noise and vibration measures**

The RC benefits from a comprehensive package of measures to minimise noise and vibration to maintain the quietest possible cabin environment. In the RC 300h, this goal is supported by the inherently quiet and refined performance of the full hybrid powertrain.

The dash panel and floorpan have been resonance-tuned and the transmission of vibrations from the underbody has been countered by optimising the thickness of the dash and centre floor panels and the shape and layout of the centre floor beading.

Sheet steel is used to form a sandwich in the dash, which incorporates a cross-member and a central brace. The dash also has an inner silencer with a thick, two-layer structure that's made from materials of different density to maximise the reduction of engine noise.

Sound-absorbing and insulating materials have been applied throughout the bodyshell, doors, dashboard and transmission tunnel, with a focus on suppressing engine and air conditioner noise in the dashboard. Widespread application of coated damping material efficiently reduces floor panel vibration.

Further steps taken to suppress noise and vibration, including wind noise, include optimising the cross-section of the front pillars; using foam and damping materials in the door and quarter window aperture; and sealing in the wings and sides of the bonnet to reduce the level of engine noise penetrating the cabin.

Wind noise is also reduced by a reduction in the difference in level between the windscreen glass and its surrounding structure and by careful positioning of the door mirrors and windscreen wipers.

### **Engaging driving dynamics**

The RC's front double wishbone and rear multi-link suspension systems have been exclusively tuned to achieve a combination of well-balanced, agile handling with superior straight-line ride comfort.

At the front this has involved fine adjustment of the upper supports, coil springs, wheel rates, anti-roll bar and bushing and lower arm number two bushings. The shock absorbers use a low-friction hydraulic fluid and a resin-free piston to reduce operating friction.

The rear shock absorbers, coil springs and upper number one bushings have similarly been fine-tuned.

These measures are designed to work together to reduce understeer, ensure accurate yaw response when steering, effect a smooth transition in cornering attitude and help achieve an integrated feel between the driver's steering input and the vehicle's behaviour.

Special attention has been paid to the feel, feedback and accuracy of the electric power steering, which is designed to clearly communicate the interaction between the tyres and road surface to the driver. A highly rigid column mounting and a damper-less intermediate shaft help secure smooth, accurate and instantaneous vehicle response to even the smallest inputs.

The RC's Drive Mode Select system lets the driver choose between Snow, Eco, Normal, and Sport (additionally Sport S+ on F Sport models) modes. When Sport is selected, engine output, throttle opening and steering assistance are adjusted to sharpen throttle response and add steering weight to create a more powerful and dynamic driving experience.

### **Quiet and refined**

The RC 300h adds to the comfort and agility benefits provided by the high-rigidity bodyshell and steering and suspension tuning with the quiet, refined and sophisticated drive offered by its full hybrid powertrain.

In the course of any journey, the Lexus Hybrid Drive will operate in different modes to maximise the vehicle's overall efficiency.

At rest, the engine stops automatically to conserve fuel. In low engine efficiency conditions, such as when starting up and driving at low to mid-range engine speeds, the vehicle will run on its electric motor alone, with no CO<sub>2</sub>, Nox or particulate tailpipe emissions.

In normal driving conditions, the system automatically allocates power from the petrol engine and electric motor to achieve optimum performance with maximum fuel efficiency.

During deceleration and under braking, the electric motor works as a high-output generator to provide regenerative braking. This captures kinetic energy that would normally be lost as heat and stores it as electricity in the high-performance battery.

The smooth electronic continuously variable transmission has a six-step, sequential Shiftmatic override gear change function, which lets the driver enjoy the kind of performance expected of a sporting coupe, but with the excellent fuel economy that's a hallmark of Lexus's hybrid power technology.

The RC 300h's Drive Mode Select provides four selectable modes to help the driver exploit the potential of the full hybrid powertrain, including an EV mode which allows for ultra-quiet running on electric motor power alone, with zero fuel consumption and tailpipe emissions. There is an additional Custom mode, which allows the driver to save their preferred settings. On F Sport models with Adaptive Variable Suspension a further Sport S+ mode is available.

### **RC F Sport – enhanced handling and agility**

The front and rear suspension systems on the RC F Sport models are equipped with Adaptive Variable Suspension, enhancing handling performance with no detriment to ride quality.

AVS automatically activates adjustable damping force in the shock absorbers, independently at all four wheels to give the best combination of straight line ride comfort and cornering stability.

When the driver selects Sport S+ mode, the AVS increases the difference between the damping force on the inner and outer wheels through corners, further reducing body roll.

### **ON-BOARD TECHNOLOGY**

- Advanced multimedia systems with co-ordinated control via 4.2-inch multi-information display and seven-inch centre console screen
- Second generation of the Lexus Remote Touch Interface with touch tracer control
- Six and 10-speaker audio packages and 17-speaker Mark Levinson Premium Surround system

### **Advanced multimedia systems**

All RC models are equipped with the sophisticated Lexus Premium Navigation, included in an infotainment package that provides 10-speaker audio with DAB, single-disc DVD player,

reversing camera with reversing guide lines and the Remote Touch touch tracer control. Premier models are fitted as standard with a Mark Levinson 17-speaker 7.1 surround audio system.

Lexus Premium Navigation has been developed to provide excellent connectivity and improved HMI features, including a link function that lets the driver operate the system using either the centre console screen, or the multi-information display in the instrument binnacle. This includes viewing navigation directions, audio data, mobile phone reception and incoming call information. A cross-switch on the steering wheel can be used to select audio tracks and make outgoing calls. The display menus can be customised according user preference.

The integrated navigation system's CPU has high processing power to provide smooth, fast and accurate operation. Its advanced functions include an automatic screen zoom at intersections; digital terrain modelling; replication of motorway signage; speed limit information; a traffic bar showing congestion information on a planned route; and urgent traffic event notifications.

The system can also provide access to a number of useful on-line information sources, using Bluetooth internet connection via compatible smartphones. These include a points-of-interest search facility using the Google Local Search database. Addresses from the Google Maps website can be added as navigation destinations. The Google link also gives access to Google Street View and Panoramio.

### **Second generation Remote Touch Interface**

Lexus has produced a second generation Remote Touch Interface, designed to be easier and more intuitive to use. It is featured in the new RC as part of the Lexus Premium Navigation package.

Operation is by means of a touch tracer control: the user moves their fingers over an electrostatic pad, pressing or double-tapping to select their desired function. The feel is like using a smartphone. As the cursor moves close to the different on-screen icons, the user senses pulsation feedback through the surface of the pad. They can also use pinch-in and flick motions, again like a smartphone.

The touch pad has a wide operating area and has a textured surface that allows smooth movement without feeling sticky or rough.

For ease of use and comfort, the pad surface has ambient lighting and the difference in height between the control and the armrest has been minimised.

### **Premium sound systems**

Luxury and F Sport versions of the RC are equipped as standard with a 256W 10-speaker Pioneer audio system which provides distortion-free, clear sound quality with natural sound dynamics.

This system benefits from Coherent Source Transducer technology, which integrates the mid-range speaker and the tweeter of the left and right-hand instrument panel speakers to give more natural sound reproduction. It also automatically compensates for the loss of high frequency sound and other musical detail that is inherent in the use of compressed sound sources, such as MP3 players, to create a fuller, richer sound.

Two USB ports and iPod connectivity are also provided. Album cover art can be shown on the centre console display when using both iPod and USB port connection.

### **Mark Levinson Premium Surround System**

A 17-speaker Mark Levinson Premium Surround System is part of the standard equipment for the RC Premier models and is part of the Premier Pack for F Sport grade. It has been developed with an emphasis on achieving high resolution and musicality with the delivery of excellent natural dynamics and rich harmonies.

In spite of its compact size, the 835W system delivers high power and sound quality, with five-channel playback. The location of the speakers around the cabin ensures the best possible sound consistency for all occupants.

For 2018, performance was further improved with the addition of ClariFi and Quantum Logic Surround, providing even greater reproduction quality, particularly of compressed, digital audio files.

### **SAFETY**

- Lexus Safety System+ as standard
- Vehicle Dynamics Integrated Management
- Other preventive safety features include Dive Start Control, Blind Spot Monitor, Rear Cross Traffic Alert and Auto Location Tyre Pressure Warning System

- High-tensile steel body structure
- Pop-up Hood

Every Lexus is designed to offer the highest levels of active, passive and preventive safety. For 2018, provisions were upgraded across the range with the introduction of Lexus Safety System+. This equipped every model with a Pre-Collision System, Adaptive Cruise Control, Automatic High Beam, Lane Departure Alert and Road Sign Assist.

The RC also features Lexus's Vehicle Integrated Dynamics Management, for co-ordinated operation of the car's braking, stability and traction control and steering.

The high-rigidity body structure provides excellent car-to-car impact performance. Eight airbags are fitted as standard and a Pop-up Hood provides pedestrian impact protection while keeping a low bonnet profile.

## **LEXUS SAFETY SYSTEM+**

### **Pre-Collision System**

The Pre-Collision System uses a millimetre-wave radar to detect vehicles and pedestrians on the road ahead. If it calculates a risk of a collision, it automatically warns the driver with a buzzer and alert on the multi-information display, and the Pre-Collision Brake Assist engages to provide extra braking force the moment the brake pedal is pressed. If the driver fails to react and the system judges a collision to be imminent, the brakes are automatically applied to reduce vehicle speed and the force of any impact.

### **Adaptive Cruise Control**

The Adaptive Cruise Control uses the same radar as the PCS (above) to help the driver maintain a safe distance from the vehicle in front.

It can be used like a conventional cruise control system to maintain a constant speed, or it can provide vehicle-to-vehicle distance control to automatically slow the RC to match the speed of the vehicle ahead. Once the way is clear, it will smoothly accelerate the car back to its pre-selected cruising speed.

### **Lane Keep Assist**

The package includes Lane Keep Assist, which recognises when the car is deviating from its lane on the highway and helps the driver steer the vehicle safely back to its correct path. It

uses a camera on the windscreen to track the vehicle's course between lane markings painted on the road surface. If it judges that the vehicle is about to move out of its lane without the turn indicator being used, the system lights up a warning on the multi-information display and vibrates the steering wheel. It will also apply appropriate steering control force to help bring the vehicle back on course.

It provides an extra layer of assistance, automatically providing steering inputs to keep the car safely within its lane, notably when the Adaptive Cruise Control is being used. It can be used even at very low speed, when the Adaptive Cruise Control is operating. The driver can also choose which alert they prefer (warning sound or vibrating steering wheel) and the sensitivity of the warning, via the multi-information display. The system can also be switched off, if desired.

The system also includes a Sway Warning function. This monitors the car's position in its lane and the driver's steering inputs. If it detects degrees of vehicle swaying, caused by driver distraction or drowsiness, it will sound an alert and display a warning on the multi-information display, recommending the driver takes a break.

### **Automatic High Beam**

The Automatic High Beam system that uses a camera to detect the lights of on-coming traffic and vehicles ahead, automatically switching the headlights to low beam to avoid dazzling other drivers. This maximises the use of high-beam, improving night-time illumination.

### **Road Sign Assist**

Road Sign Assist recognises traffic signs using the windscreen-mounted camera, repeating the information on the multi-information display. This helps prevent the risk of the driver failing to notice important warnings or commands on major routes, including speed limits and lane closures. The system can detect signs that are designed according to the international standards of the Vienna Convention on Road Signs and Signals.

## **VEHICLE DYNAMICS INTEGRATED MANAGEMENT**

All versions of the RC are equipped with Lexus's Vehicle Dynamics Integrated Management to provide superior performance, traction control and vehicle stability.

VDIM gathers comprehensive vehicle status data from sensors through the car to provide integrated operation of the ABS, Electronic Brakeforce Distribution, traction control, vehicle

stability control and electric power steering. On F Sport models, the system also embraces the Adaptive Variable Suspension.

The integrated control of all the elements related to vehicle movement, including motor torque, braking and steering not only optimises braking, stability and traction control, it also helps improve the vehicle's overall kinetic performance.

Conventionally, active safety systems are only triggered immediately after a vehicle reaches the limit of its dynamic performance; VDIM activates control before that limit is reached, thereby extending the car's dynamic threshold. The result is less obtrusive intervention, smoother vehicle behaviour and a more enjoyable drive.

## **ADDITIONAL SAFETY TECHNOLOGIES**

### **Drive Start Control**

Drive Start Control is a standard feature on the RC which helps prevent abrupt starts and suppresses excessive acceleration when using the shift lever.

If the driver operates the shift lever while depressing the accelerator, Drive Start Control regulates power output from the engine to keep speed and acceleration below a pre-determined level. At the same time, a warning will light up in the instrument panel. The system does not operate when the car's traction control is switched off.

### **Blind Spot Monitor**

The Blind Spot Monitor (Premier and F Sport Premier Pack) uses rear-facing radars with a range of up to 60 metres to detect vehicles in the driver's blind spot and any approaching rapidly in adjacent traffic lanes. It warns the driver by illuminating an icon in the corresponding door mirror. If the turn indicator is being used, the icon will flash.

### **Rear Cross Traffic Alert**

The Rear Cross Traffic Alert (Premier and F Sport Premier Pack) uses the same radars as the Blind Spot Monitor to warn the driver of any traffic approaching from either side when reversing out of a parking space. If it detects a hazard, it sounds a buzzer and flashes the warning icons in the door mirrors.

### **Auto Location Tyre Pressure Warning system**



The Auto Location Tyre Pressure Warning system uses a sensor integrated in each tyre's air valve to monitor pressure, with values shown on the multi-information display in the instrument binnacle. When low pressure is detected, the value for the affected tyre is highlighted in amber and a warning is shown in the main combination meter.

Conventional systems do not indicate which tyre is affected, but the Lexus system clearly shows which tyre requires attention.

The data is shown from the moment the ignition is turned on, so the driver can check tyre pressures before starting off. This supports fuel economy and improved tyre wear, and also safety with reduced risk of a flat or failing tyre.

## **PASSIVE SAFETY**

### **Body structure**

The fundamental strength of the RC's bodyshell reflects Lexus's commitment to achieving the best possible impact performance in head-on, offset, side-on and rear collisions.

Extensive use of high-tensile steel ensures impact loads are transferred and dispersed, minimising deformation of the cabin in a collision.

Features that improve the dispersal of frontal impact forces include a number two member, an enlarged rocker cross section, a forward-projecting rocker structure and front pillar and rail structures made from high-tensile steel. Further protection is provided in the event of off-set collisions by the use of torque box and A-shaped brace, protecting occupants from impacts from the tyre side.

The side impact-absorbing structure includes reinforcements for the instrument panel, front header, roof and rear header and the provision of several floor cross-members.

Anti-rollover performance is assured by extensive use of high-tensile steel in the front pillars, roof rail and front header construction, combining strength with light weight and helping preserve the coupe's low profile.

In the cabin there are additional head, abdomen and hip impact-absorbing structures, built into the headlining, pillars, door trims and door armrests.

### **Pedestrian protection**

The Pop-Up Hood provides pedestrian impact protection while still allowing for a low bonnet profile.

A sensor in the front bumper detects when a person has collided with the front of the vehicle. Actuators immediately raise the bonnet to increase the space between the bonnet and the engine, allowing the bonnet to deform and absorb the impact forces from the contact with the pedestrian's head.

The high-precision sensors and control systems ensure that the system will not deploy in the event of a collision with a bollard, lamp-post or other street furniture.

### **Airbags**

All versions of the RC are fitted with eight airbags: driver and front passenger front, knee and side airbags and full-length curtain airbags. The front airbags deploy in line with the severity of impact force, as determined by sensors.

## **UK MODEL RANGE AND EQUIPMENT FEATURES**

- Three equipment grades: Luxury, F Sport and Premier, plus F Sport Premier Pack
- Lexus Safety System+, Lexus Premium Navigation, LED headlights, parking sensors, Smart Entry and push button start, Drive Mode Select, dual-zone climate control, power-adjustable heated and ventilated front seats and leather upholstery all standard across the range
- F Sport models feature powerful external styling elements, 19-inch alloys, F Sport front seats, steering wheel and trim and Adaptive Variable Suspension
- Premier grade includes Mark Levinson sound system, Blind Spot Monitor and Rear Cross Traffic Alert
- Premier Pack for F Sport provides Mark Levinson audio, Blind Spot Monitor, Rear Cross Traffic Alert and a sunroof

In the UK the RC range comprises Luxury, F Sport and Premier grades, plus F Sport with Premier Pack.

### **Luxury**

Although Luxury grade marks the entry point to the coupe range, it delivers a wealth of features true to Lexus's reputation for combining premium, on-board comfort, useful advanced technologies and excellent safety provisions.

Key specifications include 18-inch alloys, folding/heated door mirrors, rain-sensing windscreen wipers, LED headlamps and daytime running lights, front and rear parking sensors, dual-zone automatic air conditioning, a 10-speaker audio system with DVD player, DAB, Bluetooth and two USB ports, Lexus Premium Navigation with 10.3-inch multimedia screen with Remote Touch touch pad control, power-adjustable heated and ventilated front seats with driver's side memory setting, smooth leather upholstery, split-folding rear seat, electric steering column adjustment, reversing camera and an auto-dimming rear-view mirror. The safety and driver assistance features include Lexus Safety System+, Vehicle Dynamics Integrated Management, eight airbags, Pop-up Hood and Hill Assist Control with Brake Hold.

The RC further benefits from Lexus's Drive Mode Select, which adjusts performance to suit conditions or driver preference, with Eco, Normal and Sport modes.

### **F Sport**

The elegantly powerful lines of the RC are given added visual urgency on the F Sport models, with a stronger iteration of the Lexus spindle grille, plus multi-spoke 19-inch alloy wheels, deep front and rear bumpers, LED headlights in a signature "triple L" arrangement and LED front turn indicators. In the cabin there are F Sport front seats, aluminium scuff plates and sports pedals, a rear-view camera and LFA-style meters.

Going beyond style features, the F Sport models increase the driver rewards with Adaptive Variable Suspension. The Drive Mode Select system adds a fourth, Sport S+ mode which introduces additional chassis control for an even sportier drive.

The F Sport model can be specified with a Premier Pack which adds Mark Levinson sound system, Blind Spot Monitor, Rear Cross Traffic Alert and a sunroof.

### **Premier**

At the top of the RC range the Premier grade models add to the standard features of Luxury with 19-inch alloys, 17-speaker Mark Levinson surround audio system, "triple-L" LED headlights, Blind Spot Monitor, Rear Cross Traffic Alert, rain-sensing wipers, LED front turn indicators and a memory setting for the driver's seat, steering column and door mirror..

### **RC Timeline and UK sales**

2013	November	World premier for the RC coupe at the Tokyo Motor Show.
2014	February	The Lexus RC makes its European debut at the Geneva motor

		show.
2015	October	UK RC prices and specifications are announced.
2016	January	First deliveries of the new RC to UK customers
2017	May	The RC completes the Nürburgring 24-hour race.
	September	The 2.0-litre turbo engine is deleted from the range.
2018	January	Equipment upgrades for 2018 RC, including standard provision of Lexus Safety System+ on all versions.

RC Sales in 2017: 473

Cumulative sales since launch (2016): 1,410

(Figures include RC F)

## LEXUS RC TECHNICAL SPECIFICATIONS

<b>ENGINE</b>	
Engine code	2AR-FSE
Engine type	4 cylinders in-line
Valve mechanism	16 valve DOHC, dual VVT-i
Displacement (cc)	2,494
Bore x stroke (mm)	90.0 x 98.0
Compression ratio	13.0:1
Max. engine power (bhp/kW @ rpm)	178/133 @ 6,000
<b>Total hybrid system output (bhp/kW)</b>	<b>220/164</b>
Max. engine torque (Nm @ rpm)	221 @ 4,200-5,400
<b>HYBRID SYSTEM</b>	
<b>Motor generator</b>	
Type	Permanent magnet, synchronous motor
Max. voltage	650
Max. power (bhp/kW)	141/105
Max. torque (Nm)	300
<b>Hybrid battery</b>	
Type	Nickel metal-hydride
Nominal voltage	230.4
Number of cells	192
System voltage	650
<b>PERFORMANCE</b>	
0-62mph (sec)	8.6
Max. speed (mph)	118
<b>DIMENSIONS</b>	
Overall length (mm)	4,695
Overall width –mirrors folded (mm)	1,840
Overall width – including mirrors (mm)	2,069
Overall height (mm)	1,395
Wheelbase (mm)	2,730
Track front (mm)	1,580
Track rear (mm)	1,600 (18in wheels)

		1,570 (19in wheels)
Overhang front (mm)		930
Overhang rear (mm)		1,035
Coefficient of Drag (Cd)		0.285
Fuel tank capacity (litres)		66
<b>INTERIOR DIMENSIONS</b>		
Interior length (mm)		1,875
Interior width (mm)		1,520
Interior height (mm)		1,120 1,110 (with sunroof)
Luggage capacity (litres)		340
<b>WEIGHTS (kg)</b>		
Kerb weight		1,736 – 1,775
Gross vehicle weight		2,170
Towing capacity (braked)		N/A
Towing capacity (unbraked)		N/A
<b>TRANSMISSION</b>		<b>E-CVT</b>
Gear ratios	Forward	3.333
	Reverse	3.333
Differential Gear Ratio		2.764
<b>FUEL CONSUMPTION</b>		
Combined (mpg)	Luxury	57.6
	F Sport	56.5
	Premier	56.5
Urban (mpg)	Luxury	57.6
	F Sport	55.3
	Premier	55.3
Extra Urban (mpg)	Luxury	57.6
	F Sport	56.5
	Premier	56.5
<b>EMISSIONS &amp; INSURANCE</b>		
CO <sub>2</sub> (g/km)	Luxury	113
	F Sport	116
	Premier	116
Insurance groups	Luxury	34E
	F Sport	35E
	Premier	36E

<b>SUSPENSION</b>		
Front	Double wishbones Adaptive Variable Suspension (F Sport)	
Rear	Multilink Adaptive Variable Suspension (F Sport)	
<b>BRAKES</b>		
Front (diameter x thickness, mm)	Ventilated discs 334 x 30	
Rear (diameter x thickness, mm)	Ventilated discs 310 x 18	
Parking brake	Foot pedal	
<b>STEERING</b>		
Type	Rack and pinion, electric power steering	
Ratio	13.2	
Turns (lock to lock)	2.84	
Min. turning radius (m)	Tyre	5.2
	Body	5.6
<b>TYRES AND WHEELS</b>		
Tyre & wheel size	Luxury	Front 235/45R18 Rear 235/45R18
	F Sport/ Premier	Front 235/40R19 Rear 265/35R19

## LEXUS RC EQUIPMENT SPECIFICATIONS

<b>SAFETY</b>	<b>LUXURY</b>	<b>F SPORT</b>	<b>PREMIER</b>
Lexus Safety System+: Pre-Collision System, Adaptive Cruise Control, Lane Keep Assist, Automatic High Beam, Road Sign Assist	✓	✓	✓
Driver & front passenger airbags	✓	✓	✓
Driver & front passenger side airbags	✓	✓	✓
Driver & front passenger knee airbags	✓	✓	✓
Curtain Shield airbags	✓	✓	✓
Front passenger airbag cut-off switch	✓	✓	✓
ABS	✓	✓	✓
Electronic Brakeforce Distribution (EBD) with Brake Assist System (BAS)	✓	✓	✓
Vehicle Stability Control (VSC)	✓	✓	✓
Traction Control (TRC)	✓	✓	✓
Vehicle Dynamics Integrated Management (VDIM)	✓	✓	✓
Hill-start Assist Control (HAC)	✓	✓	✓
Blind Spot Monitor and Rear Cross Traffic Alert	x	Opt*	✓
Pop-up Hood	✓	✓	✓
Auto Location Tyre Pressure Monitoring System	✓	✓	✓
Speed sensitive power steering	✓	✓	✓
Electronic front seatbelt pretensioners with force limiters	✓	✓	✓
Five three-point seatbelts and headrests	✓	✓	✓
High mounted rear stop light	✓	✓	✓
<b>INSTRUMENT &amp; CONTROLS</b>	<b>LUXURY</b>	<b>F SPORT</b>	<b>PREMIER</b>
Drive Mode Select	✓	✓	✓
Front and rear parking sensors	✓	✓	✓
Speed-sensitive electric power steering	✓	✓	✓
Reversing camera	✓	✓	✓



<b>AUDIO, NAVIGATION &amp; INFORMATION</b>	<b>LUXURY</b>	<b>F SPORT</b>	<b>PREMIER</b>
Lexus Premium Navigation with Remote Touch touch tracer control and 10.3-inch display	✓	✓	✓
10-speaker audio with DAB and DVD player	✓	✓	✘
17-speaker Mark Levinson 7.1-channel surround sound system with DVD player and DAB tuner	✘	Opt*	✓
2x USB ports and Aux-in socket	✓	✓	✓
Bluetooth	✓	✓	✓
<b>COMFORT &amp; CONVENIENCE</b>	<b>LUXURY</b>	<b>F SPORT</b>	<b>PREMIER</b>
Auto-dimming rear view mirror	✓	✓	✓
Electrically adjustable steering column	✓	✓	✓
Electric front windows	✓	✓	✓
Memory function for driver's seat, steering wheel and door mirrors	✘	✓	✓
"Auto-away" function -driver's seat/ steering column	✓	✓	✓
<b>VENTILATION</b>	<b>LUXURY</b>	<b>F SPORT</b>	<b>PREMIER</b>
Dual-zone climate control air conditioning with electrostatic temperature switches	✓	✓	✓
<b>SECURITY</b>	<b>LUXURY</b>	<b>F SPORT</b>	<b>PREMIER</b>
Alarm with intrusion and inclination sensors	✓	✓	✓
Smart Entry and Start system	✓	✓	✓
Remote central locking with deadlocks	✓	✓	✓
Two-step double locking	✓	✓	✓
Security VIN etching	✓	✓	✓
Engine immobiliser	✓	✓	✓
<b>SEATING, UPHOLSTERY &amp; TRIM</b>	<b>LUXURY</b>	<b>F SPORT</b>	<b>PREMIER</b>
60:40 split-folding rear seat	✓	✓	✓
Front and rear armrests with storage	✓	✓	✓
Smooth leather upholstery	✓	✘	✓
Smooth leather upholstery with stitched quilting	✘	✓	✘
Front seats with heating/ventilation	✓	✘	✓
F Sport 8-way power adjustable seats with heating/ventilation	✘	✓	✘

8-way electrically adjustable front sports seats with leather upholstery	Opt	x	✓
3-spoke steering wheel with paddle shifts	✓	x	✓
F Sport 3-spoke leather-trimmed steering wheel with paddle shifts	x	✓	x
Leather gear lever trim	✓	x	✓
F Sport leather gear lever trim	x	✓	x
F Sport aluminium interior trim	x	✓	x
F Sport aluminium sports pedals	x	✓	x
F Sport aluminium scuff plates	x	✓	x
Aluminium scuff plates	x	✓	✓
Gloss black trim detail	✓	x	x
Grey Shimamoku wood trim detail	x	x	✓
60:40 split-folding rear seat	✓	✓	✓
<b>EXTERIOR</b>	<b>LUXURY</b>	<b>F SPORT</b>	<b>PREMIER</b>
LED headlights	✓	x	x
LED headlights in triple-L configuration *	x	✓	✓
LED front turn indicators	x	✓	✓
LED daytime running lights	✓	✓	✓
LED rear lights	✓	✓	✓
Headlamp cleaners	✓	✓	✓
Power adjustable, heated door mirrors	✓	x	x
Power auto-folding, heated, auto-dimming door mirrors with memory setting	x	✓	✓
Doorhandles with integrated illumination	✓	✓	✓
Rain-sensing windscreen wipers	x	✓	✓
Sunroof	x	Opt*	Opt
F Sport mesh grille	x	✓	x
18in 5-spoke alloy wheels	✓	x	x
F Sport 19in multi-spoke dark-finish alloy wheels	x	✓	x
19in 10-spoke alloy wheels	x	x	✓
Tyre repair kit	✓	✓	✓

\*Items included in Premier Pack for F Sport.

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