

THE LEXUS LC COUPE

INTRODUCTION

The Lexus LC series – Coupe and Convertible has all the qualities befitting a flagship range, representing the best in Lexus design, engineering and craftsmanship.

The LC Coupe – both the LC 500h hybrid and the V8-powered LC 500 – benefits from a series of improvements and innovations for the 2021 model year, detailed below. The result is an evolution in the model's luxury motoring qualities, from its ride, handling and responsiveness to its comfort and multimedia functionality.

Even sharper, more refined driving feel

Lexus pursues linear operation that is faithful to driver's intentions, such as in the seamless transition from deceleration to steering and acceleration during cornering, in all types of driving situations. In a further evolution of the “even sharper, more refined” philosophy of the LC, the new "Lexus Driving Signature" was born. This will be the new development standard every Lexus model will reflect going forward. This aspect of driving performance was a particular focus in the rigorous vehicle testing programme, resulting in numerous, incremental dynamic improvements. It's this uncompromising attention to detail that has given the new LC models the kind of special performance quality that drivers will enjoy, even in everyday driving situations.

THE 2021 LEXUS LC COUPE

- Comfort, ride and handling improvements with suspension revisions, weight-saving measures and shock absorber adjustments
- Performance improved with changes to the LC 500h's Multi Stage Hybrid System and high-voltage hybrid battery
- Improved shift pattern for the LC 500's 10-speed Direct Shift automatic transmission
- Multimedia system gains smartphone integration functions with Apple CarPlay® and Android Auto®

“For me, the LC 500h luxury coupe is all about the emotions. It features some of the most advanced automotive technologies ever created, including the Lexus Multi Stage Hybrid System and Lexus Safety System+. Yet it's not the world-firsts that thrill me. It's watching people fall in love with the LC the first time they drive it.”

Koji Sato, LC Chief Engineer

The Lexus' flagship coupe has always aimed to provide "even sharper, more refined" performance. Changes introduced for the 2021 model year (and shared with the new LC 500 Convertible) deliver greater responsiveness, handling stability and agility, strengthening the driver's feeling of being directly connected to the car.

To achieve its goals, Lexus has revised the suspension system, saving weight and improving ride and handling quality. Changes to the high-voltage hybrid battery control have produced more useful power and torque in the LC 500h, and adjustments have improved performance of the LC 500's 10-speed automatic transmission. The steering has also been revised and the brakes tuned to communicate a better feel to the driver.

Driving dynamics

Changes to the LC Coupe's suspension system (also adopted for the Convertible) deliver greater responsiveness, handling stability and agility, strengthening the driver's feeling of being directly connected to the car and delivering an exhilarating driving experience.

A focus on weight saving has seen unsprung mass reduced by almost 10kg. This has been accomplished principally with changes to the suspension, including the use of aluminium lower arms, lighter, hollow anti-roll bars with a revised diameter and a new high-strength material for the coil springs.

Once the weight savings were secured, attention turned to updating the suspension for a smooth, softer stroke, giving the driver a stronger feel of the road. The electronic front shock absorber controls have been adjusted to give a longer stroke, and bound stopper rigidity has been optimised to help create a smoother suspension stroke overall. Rear anti-roll bar rigidity has been increased to improve front turn-in performance and provide more linear steering input, again helping make the driver feel more connected to the road.

Brakes and steering

Larger brake pads with a higher friction coefficient have been adopted to gain more effective performance and stability at high temperatures and speeds. The system continues to use front and rear ventilated discs with opposed six-piston aluminium monobloc callipers at the front and four-piston units at the rear. The black callipers are decorated with the Lexus logo in white.

In a detailed touch, even the surface of the brake pedal has been revised to provide a larger contact area, giving a more natural feel for the driver.

Adding reinforcements and bracing has increased the steering support rigidity, helping achieve better handling stability. The measures include reinforcement of the instrument panel and a higher-rigidity surface for the upper and lower steering support joints, plus changes to the bracing for the driver's seat and cowl. Software updates for the Variable Gear Ratio Steering, Dynamic Rear Steering and the electric power steering have further sharpened responsiveness.

Active Cornering Assist

For better vehicle control in mid to high-speed ranges, the LC Coupe's Vehicle Stability Control (VSC) has a new Active Cornering Assist (ACA) function. This helps control cornering by providing braking to the inner wheels in line with lateral vehicle acceleration experienced when higher G forces are generated in spirited driving (further details in the Chassis Dynamics section below).

Multimedia

All LC Coupe models are equipped as standard with Apple CarPlay® and Android Auto®, allowing for easy smartphone integration and access to popular apps for navigation, entertainment and messaging. With Android Auto, the Google Assistant can be used and tailored information can be sourced based on the user's calendar, previous activity and established preferences.

Apple CarPlay allows users to access the familiar interface from their iPhone® through the vehicle's multimedia display. An iPhone® can be connected to obtain journey directions, make calls, send and receive message via Siri®, and gain access to apps such as Spotify, Audible and Apple podcasts.

POWERTRAINS

- LC 500h Coupe powered by 3.5-litre V6 self-charging full hybrid powertrain
- First model to benefit from Lexus' Multi Stage Hybrid System
- LC 500 Coupe features 5.0-litre V8 engine, matched to Direct Shift 10-speed automatic transmission

LC 500h with Multi Stage Hybrid System

The LC 500h Coupe's self-charging full hybrid powertrain features a 295bhp/220 kW 3.5-litre V6 engine and Lexus' revolutionary Multi Stage Hybrid System. Total system output is 354bhp/264 kW.

The Multi Stage Hybrid System, which debuted on the LC Coupe, is one of the most significant technical advances yet developed by Lexus. It overturns the traditional "eco" perception of hybrid powertrains to deliver authentic high performance, unlike anything seen before. In essence, the system uses a multi stage shift device to amplify engine and electric motor output in four stages, making use of the full range of engine speeds. This gives more direct response to driver inputs and a higher level of dynamic performance and driving pleasure.

Lexus increased maximum engine speed from 6,000 to 6,500rpm, while the 0-62mph acceleration time remains at 5.0 seconds. Changes to the Multi Stage Hybrid System's shift logic have produced smoother and more linear response, and also sharpened performance through bends with an automatic downshift to second gear when accelerating out of a turn.

Performance benefits from hybrid battery control

The LC 500h Coupe has a control programme in its high-voltage lithium-ion hybrid battery that increases its operating range and the degree of assistance provided to the electric motor. This helps provide more powerful acceleration, both when negotiating urban streets, or driving on winding roads. For example, extra power and torque are delivered sooner as the vehicle accelerates from 30 to 50mph (50 to 80km/h), even with moderate, 30 per cent pressure on the accelerator pedal.

LC 500 with 5.0-litre V8 engine

The performance heart of the LC 500 Coupe is Lexus' high-revving (maximum 7,300rpm), naturally aspirated 5.0-litre V8 petrol engine. This Atkinson cycle unit is supported by advanced D-4S fuel injection technology and its power is delivered to the rear wheels via a 10-speed close-ratio automatic transmission.

The V8 provides smooth, linear acceleration and generates a stirring engine note. Maximum power of 457bhp/341 kW is delivered at 7,100rpm, with maximum torque of 530Nm available at 4,800rpm. Acceleration from rest to 62mph can be accomplished in 4.7 seconds.

The engine is designed for durability and has a lightweight construction, with high-strength, forged connecting rods and titanium valves that allow it to flourish at high revs. A dual intake

inlet enables efficient breathing and contributes to the engine's distinctive sound. Noise and vibration have been reduced by the fitting of a double torsional damper on the crank pulley, while fuel efficiency is supported by the use of D-4S direct fuel injection, Atkinson cycle operation, optimised VVT-i intelligent valve timing and a high (12.3:1) compression ratio. Extensive measures have also been taken to reduce friction and pumping losses.

V8 sound quality

The sound generated by the LC 500's V8 powertrain is all part of the quality of the driving experience. Lexus has changed the location of the valve that determines the route of the exhaust gases in the main silencer to achieve the ideal note. This makes its presence felt at start-up and at high engine revs (from around 4,000rpm), while performance is quiet when cruising.

Transmission

Lexus has used big data to improve the drive force characteristics of the LC 500's (Coupe and Convertible) 10-speed Direct Shift automatic transmission, to achieve even more faithful responses to the driver's intentions. With more drive force generated as engine speed increases, the driver feels a real sense of powerful torque and continuous acceleration.

The focus was the "active zone" – the 50 to 70 per cent throttle range that accounts for most driving – with the transmission allowing revs to rise higher before shifting into the next gear. The effect is enhanced by the rising note of the V8 engine.

In the LC 500h the Multi Stage Hybrid System's shift logic has been adjusted to provide even smoother and more linear response. The changes improve performance when accelerating out of a bend, with an automatic downshift to second gear instead of third.

The Direct Shift automatic transmission was designed for the LC 500, a 10-speed unit with close ratios and even spacing between each gear – a Lexus world-first for a passenger car.

An extra gear was added to eliminate the feel of second and third gears being drawn out for too long, and a 10th gear allows for efficient high-speed cruising at lower engine rpm. The system provides some of the world's quickest shifts, giving a crisp feel, fast response, rhythmic shifting with no "shock" effect and a harmonised engine sound.

In another world-first for Lexus, the transmission uses an AI-SHIFT control with a drive mode switching function. This selects the optimum gear according to its estimation of the driver's preferences and intentions, based not just on vehicle speed and use of the accelerator, but also from past driving history.

DESIGN

- Distinctive LC design based on award-winning LF-LC Concept car
- Fluid interpretation of Lexus's "seduction and technology" design theme
- Luxury 2+2 coupe proportions, with authentic front engine/rear-wheel drive design characterised by low bonnet and roof lines and aerodynamically efficient surfacing

Exterior design

The LC Coupe's exterior design is immediately recognisable as being a faithful reinterpretation of the styling of the LF-LC concept, winner of an EyesOn Design Award when first revealed at the 2012 North American International Auto Show in Detroit.

Making the show car's styling a practical proposition for a full production car required a new way of working at Lexus, bringing the engineering and design teams together with an unprecedented degree of co-operation to achieve the desired results. The success of this teamwork was rewarded when the LC won two further EyesOn Design honours when it in turn was revealed at the 2016 Detroit motor show.

The LC has luxury coupe proportions with an exterior design that projects an avant-garde elegance, remaining faithful to many of the defining features of the LF-LC concept car that inspired it.

The car's athletic profile is characterised by its sweeping roofline, which tapers rearwards from above the centrally positioned cabin to create a distinctive silhouette. Chrome-plated mouldings along the side of the glass roof amplify the elegant shape, their rear edges shaped to echo the lines of a traditional Japanese sword. The blacked-out finish to the roof and rear pillars creates a floating effect that visually separates the roof from the rear spoiler.

The sporting appearance can be heightened with an optional CFRP composite roof and an active rear spoiler.

The LC Coupe has a 2,870mm wheelbase, very compact overhangs (930mm front, 970mm rear) and a notably low bonnet line. Overall length is 4,770mm, width is 2,168mm and the height 1,345mm. The prominent front and rear wings flare away from the centre of the car, housing wide, large-diameter wheels, while the door panels are pulled inwards, creating a powerful three-dimensional form that mirrors the spindle shape of the Lexus grille.

The LC Coupe is available with a choice of 20-inch cast aluminium or optional 21-inch forged aluminium alloy wheels.

Frontal design

The spindle grille is finished in chrome and has a mesh design with a visual tension that changes as it spreads across the front of the car. The unique LC lighting signature is created by independent daytime running lights in an arrowhead configuration and ultra-compact triple LED headlamp units. Achieving this remarkably slim headlight design played an important role in helping the designers achieve a low bonnet line and short front overhang.

Rear styling

At the rear the Coupe's roof tapers down between muscular wheel arches, reinforcing the car's wide and stable stance. The Lexus spindle shape is visible here in a three-dimensional form that is generated by lines flowing from the front of the car and along the sides, before cutting back around the inner edge of the rear combination lamps. The line of the spindle then moves outwards, following the shape of the licence plate mounting and outer edges of the tailpipes.

The rear combination lamps, set vertically at the outermost edge of the bumper, have a graphic that accentuates the flow along the sides of the body and emphasises the vehicle's strong, planted look.

Aerodynamics

Lexus worked to introduce a high level of aerodynamic performance to improve handling stability and ride quality and to suppress wind noise. The aim was to achieve a smooth, unbroken front to rear airflow, both over and beneath the body. Design elements that help control and direct the airflow include small but critical aero stabilising fins on the front pillars, just forward of the door mirrors.

The Coupe's optional (Sport+ Pack) active rear spoiler is automatically deployed when vehicle speed rises above 50mph (80km/h). This suppresses lift at the rear to give a high degree of stability when driving at speed.

Aero ducts are featured just forward of the rear wheel arches. These feed air into the wheel arch, which then exits smoothly across the sidewall of the tyre. This contributes to the car's high-speed straight-line stability and steering responsiveness. It also generates improved grip feel from the rear tyres.

The treatment of the underbody has been given equally close attention, with an almost completely smooth finish. Parts are aligned with the aero line, which kicks up towards the rear – notably the silencer is angled upwards, like a diffuser.

Interior design

The LC Coupe's 2+2 cabin combines elegance, superb comfort, sophistication and intricate attention to detail with a driver-focused cockpit. The area around the front passenger spreads outwards to create a comfortable and welcoming space. The line of the door trim is an extension of an exterior line that flows from the bonnet and through the windscreen, building a sense of continuity between the outside and inside of the car.

The driver's cockpit is designed to instil confidence with intuitive layout of the controls and an excellent seating position. The driver's hip point has been located as close as possible to the car's centre of gravity, maximising direct feedback of the vehicle's dynamic behaviour. The driver also has a clear view of the road, uncompromised by the seating position thanks to the low bonnet line, the low-profile instrument panel and the location and narrow width of the front pillars.

Ease of access

Getting in and out of the LC Coupe is easy and comfortable thanks to generous legroom beneath the instrument panel, a reduction in the height difference between the rocker panel and the vehicle floor and enlargement of the door aperture to provide comfortable head space.

Steering wheel and controls

Particular attention has been paid to the steering wheel design, with a change in the cross-section around its circumference to allow for variations in grip and twisting of the wrist. The magnesium alloy paddle shifts have been profiled for easier hooking with the fingertips and have a positive and satisfying click action.

The information displays are arranged in order of importance, with the most critical positioned closest to the driver's sightline, within the dashboard's upper display zone. All are positioned at the same height, to reduce the degree of eye movement required for the driver to read them. The instrument binnacle features the latest development of the TFT (thin film transistor) meter technology introduced in the Lexus LFA supercar, including a moving central ring.

Driving-related switches and controls are arrayed in a control zone that is concentrated

immediately around the steering wheel. These include the paddle shifts, steering wheel combination switches, Drive Mode Select switch, starter button and shift lever, each located for the best ergonomic performance, focusing on easy reach and operation that allow the driver to concentrate on the road ahead with least distraction.

Seat Design

Providing the driver with a seat with the best possible combination of support and comfort was a focus point in the development of the cabin. The aim was to deliver an advanced design with excellent holding performance and superb comfort. Lexus has achieved this with a new two-part construction technique in which the main part of the seatback drapes over the shoulder area of the seat and wraps around the back. To ensure superior lateral support, additional bolstering is provided for the driver's shoulder blade area; resin inserts improve the holding performance of the side bolsters. On the Coupe's optional sports seats, the bolsters are even more substantial, with a focus on keeping the driver's back in place during high-speed cornering.

CHASSIS DYNAMICS

- LC Coupe constructed on Lexus' GA-L front engine/rear-wheel drive platform
- Low centre of gravity and superb body rigidity
- Multi-link front and rear suspension
- Lexus Dynamic Handling and limited-slip differential

Global Architecture – Luxury platform

The quality of the GA-L platform allowed Lexus to craft a highly rigid body with excellent noise and vibration characteristics. It plays a pivotal role in the LC Coupe's dynamic performance, giving the car a low centre of gravity and enabling the design of a new driving position. Control of vehicle mass, ideal weight distribution and new multi-link suspension systems add to the platform's essential qualities.

High body rigidity

Exceptional body rigidity and careful management of the car's inertia specifications have delivered just the kind of engaging driving dynamics Lexus sought for its flagship coupe. To gain the best results, materials with different properties have been used in different areas, giving strength, rigidity and light weight in the appropriate measure and in the right place. To create a strong frame, the non-deforming parts are made of ultra-high-tensile strength steel, while high-tensile steel with good elastic properties is adopted for elements that are designed to deform in an impact. The rigidity of the frame is supported by general steel with

a high degree of stiffness, and aluminium is used strategically for its energy-absorbing performance and for external bodywork where its lightness and tensile rigidity are of value. Finally, strong yet lightweight Carbon Fibre Reinforced Plastic (CFRP) is featured inside and out.

Inertia specifications

Precise control of the inertia specifications played an important part in securing the essential “even sharper, more refined” quality. This included giving the car a low centre of gravity, balanced front-to-rear weight distribution and a good moment of inertia. The GA-L platform allowed the packaging to be reconsidered, to improve the inertia specifications and achieve the best combination of handling stability and ride comfort. Measures included moving the tyres outwards to the corners of the vehicle, reducing overall weight, lowering the driver’s hip point and moving the engine 50mm rearwards. The removal of the spare tyre in favour of run-flat tyres and relocation of the battery to the luggage compartment further helped balance the car’s weight distribution.

By achieving a low centre of gravity, Lexus was able to reduce the roll angle without stiffening the springs and detracting from ride comfort. Overall, the LC Coupe displays controlled body motion and precise, linear response, creating a rhythmical and smooth driving experience, notably when cornering and making lane changes.

Multilink suspension

The high-mount front suspension system has an optimal arm design to secure the required level of steering feedback. Conversely, the rear suspension has a low-mount configuration, with precisely defined arm locations to achieve high-stability steering characteristics. For the 2022 model year, Lexus initiated modifications, fine-tuning the suspension for even better handling and ride comfort.

Double ball joints are featured on each of the two upper and two lower control arms, allowing for control of the smallest movements from driver inputs and the road surface. This arrangement helps optimise the suspension geometry and create more precise steering response with better initial effort. The driver can appreciate the effectiveness of the suspension designs in the car’s immediate response at initial turn-in, with the tyres quickly developing lateral force, delivering stability, controllability and ride comfort.

The LC Coupe uses run-flat tyres as standard. Tyre sizes are 245/45RF20 front and 275/40RF20 rear with 20-inch wheels, and 245/40RF21 front and 275/35RF21 rear with the

optional 21-inch wheels.

Lexus Dynamic Handling

The LC Coupe is available with the Lexus Dynamic Handling system (included in the Sport+ Pack specification), which delivers a higher level of handling in all driving scenarios. It provides four-wheel steering, integrating Dynamic Rear Steering (DRS) with the car's Variable Gear Ratio Steering (VGRS), the Adaptive Variable Suspension and the Vehicle Dynamics Integrated Management (VDIM) to ensure controlled co-operation between the front and rear wheels at all times.

The system allows the rear wheels to turn slightly, in the opposite direction to the front wheels at low speeds, giving increased agility, and in the same direction at high speed, for increased stability. The result is excellent steering response in everyday driving, true to the driver's inputs, with a high feeling of rear tyre grip and instantaneous response in high-speed cornering that give a greater feeling of security.

Torsen limited-slip differential

A Torsen limited-slip differential is also included in the LC 500 Coupe specification. This allows the driver to enjoy secure acceleration while cornering. When used in conjunction with DRS, it will simultaneously control power to the wheels in co-operation with the vehicle stability control, while the DRS controls the steering angle. The LSD will counteract over or understeer and help keep the car to its intended line. At the same time, a natural driving feel is communicated to the driver, even at the limit of performance.

Active Cornering Assist

The standard (non-Sport+ Pack) LC 500h Coupe features Active Cornering Assist (ACA), which functions within the Vehicle Stability Control to help keep the car faithful to the driver's intended line when cornering at higher speeds. The VSC applies brake control to the wheels on the inner side of the curve to help prevent the car from spinning out. The ACA suppresses the tendency to understeer that occurs when the accelerator is pressed in high-G cornering, to achieve superior performance.

The operation of the VSC is co-ordinated with other handling and stability systems through the LC's Vehicle Dynamics Integrated Management (VDIM) and Lexus Dynamic Handling. This allows control of rear-wheel torque and steering torque in addition to braking, in over and understeer conditions. ACA is not compatible with a limited-slip differential.

Rear performance damper

The LC 500 Coupe is fitted with a performance damper, located at the rear bumper reinforcement, optimising the attachment point structure and the damping force. This quickly absorbs twists and small vibrations, enhancing the car's handling stability and ride comfort.

Handling features in summary

FEATURE	LC COUPE		LC COUPE SPORT+ PACK	
	500	500h	500	500h
Lexus Dynamic Handling	x	x	✓	✓
Rear performance damper	✓	x	✓	x
Torsen limited-slip differential	✓	x	✓	✓
Active Cornering Assist	x	✓	x	x

TAKUMI CRAFTSMANSHIP

- Quality and performance benefit from the precision skills of Lexus's takumi master craftspeople
- Motomachi factory provides ideal environment for luxury coupe manufacturing
- High-quality interior materials benefit from hand-finishing and stitching
- Continuous, detailed refinement of driving dynamics

The skills of Lexus's master craftspeople – the famous *takumi* – are central to the exceptional quality Lexus delivers in every car it builds. The LC Coupe and Convertible benefit from this precision approach, not just in the intricate details of its fittings and finishes, but also in the way the car rides and performs.

Motomachi: home of the Lexus LFA and the LC series

The LC Coupe and Convertible are built at Lexus's Motomachi plant, famously home to production of the hand-crafted LFA supercar. The factory's lay-out and its facilities have been tailored to LC series production, to ensure the highest quality levels.

Many of the *takumi* and skilled workers who built the LFA transferred to the LC project, bringing with them a wealth of knowledge and experience, particularly in areas such as the handling of carbon fibre components and hand-finishing.

Interior finishing

The skills of the *takumi* can be seen in precise stitching that maintains a flawless finish where the upholstery spreads across complex surfaces. The draping effect of the Alcantara in the door panels and the arrangement of the perforations in the leather seat upholstery are further hallmarks of the attention to detail.

The shape and feel of the steering wheel – a critical link in communicating the quality of the car's performance to the driver – were defined through hours of testing and re-testing by a *takumi* master driver. His exhaustive analysis produced a highly complex cross-section design and the ideal shape to suit the driver's changing grip and hand position as they steer. The same process was applied to developing the shape and action of the paddle shifters for manual gear selection, crafted in cool-to-the-touch magnesium alloy.

High-speed Resin Transfer Moulding (RTM)

The finish of the LC Coupe's Carbon Fibre Reinforced Plastic (CFRP) roof has a twill weave effect, made possible by a new, high-speed resin transfer moulding (RTM) process, developed at the Motomachi factory from a technique originally used in production of the Lexus LFA. Raw carbon fibre material is inserted into a mould and clamped in place before the insertion of the resin material. As a result, the process has been made suitable for volume production. The use of the CFRP roof makes a major contribution to the LC Coupe's low centre of gravity and reduces overall weight.

Self-piercing rivets

Lexus has adopted a new technique for combining aluminium with steel to help save weight in key areas, notably the construction of the front suspension towers. Using self-piercing rivets allows these different metals to be securely joined where traditional welding methods are unsuitable: in place of spot-welding, the material is pierced on its upper side only.

Testing by *takumi*

The skills and experience of the *takumi* were further invested in securing excellent driving dynamics.

The sharpness and responsiveness of the steering, the strong, rhythmic progress of the transmission, the supportiveness and comfort of the seats and the position of the driver's feet and the pedals – all these elements and more were scrutinised to produce the best possible combination, with the goal of not just a rewarding drive, but performance that actively makes

you want to drive.

Prototypes were assessed on all kinds of roads, including in Europe and the USA, to ensure that ride and handling meet the different demands of drivers and driving conditions around the world. A *takumi* master driver worked exclusively on the LC Coupe to maintain a complete focus, making fine adjustments to achieve the best results, right up to the start of production.

LEXUS SAFETY SYSTEM+

- All models equipped with Lexus Safety System+
- Package of active safety features includes Pre-Collision System, Dynamic Radar Cruise Control, Lane-Keep Assist with Lane Departure Alert, Automatic High Beam and Road Sign Assist
- Lexus Safety System+ helps reduce the risk of an accident, alerts the driver to potential hazards and can help reduce the consequences should an impact be unavoidable

All versions of the LC Coupe are equipped as standard with Lexus Safety System+, a collection of active safety and driver assistance features that can help the driver avoid an accident, or help lessen the consequences of a collision.

Pre-collision System

The Pre-Collision System (PCS) detects the risk of an impact. Working in unison with warning and braking systems, it can help lessen the damage sustained in a collision. It can recognise both vehicles and pedestrians in the vehicle's path, using data from a forward recognition camera and a millimetre-wave radar sensor.

If it determines that the possibility of a collision is high, pre-collision warning control and pre-collision brake assist control are initiated. If a collision is imminent, pre-collision braking control will be engaged to help reduce the severity of the collision, or avoid it altogether. If the driver fails to react and the system judges a collision to be imminent, the brakes are automatically applied to reduce vehicle speed by up to 40 km/h, which could potentially bring the car to a stop, to help mitigate the force of an impact.

Dynamic Radar Cruise Control

The same radar unit used by the PCS provides all-speed Dynamic Radar Cruise Control (DRCC). This helps the driver maintain a safe distance from the vehicle in front, down to very low speeds, even to a standstill. Once the way ahead is clear, the vehicle automatically and smoothly accelerates to its pre-set cruising speed. If the car has been brought to a halt, the

driver simply needs to press the accelerator briefly to reactivate the system.

Lane Keep Assist, Lane Departure Alert and Vehicle Sway Warning

Advanced Lane Keep Assist recognises when the vehicle is deviating from its lane on the highway. It helps the driver steer the vehicle safely back to its correct path, automatically providing steering inputs to keep the car within its lane. Working with the DRCC, it can operate even at very low vehicle speeds. 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.

Lane Departure Alert (LDA) 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 triggers a light on the multi-information display and sounds a warning buzzer. It will also apply appropriate steering control force to help bring the vehicle back on course.

A Sway Warning function monitors the car's position in its lane and the driver's steering inputs. If it detects degrees of vehicle swaying, it will sound an alert and display a warning on the multi-information display, recommending the driver takes a break.

Automatic High Beam

Automatic High Beam (AHB) detects oncoming traffic and vehicles ahead and automatically switches the headlights between high and low beam. This helps maximise illumination and give the driver the best possible field of vision when the road ahead is clear, while minimising the risk of dazzling other road users.

Road Sign Assist

With Road Sign Assist the driver gains a "second set of eyes" when it comes to important road signs on motorways and major routes. The system uses a front camera which recognises principal warning and command signs; these are then replicated on the multi-information display, reducing the risk of the driver not being aware of speed limits, lane closures and other important information.

If the system detects the driver is not respecting no overtaking, no entry and speed limit commands, it will give visual and audible alerts. The driver can customise the system's operation via the multi-information display, using switches on the steering wheel.

AUDIO SYSTEMS

- Thirteen-speaker Mark Levinson Reference Product audio system option
- Twelve-speaker Pioneer premium audio surround system for real-life immersive soundscape

Mark Levinson

The LC Coupe maintains Lexus's auto-industry exclusive partnership with Mark Levinson, offering customers option equipment from the audio specialist's top-of-the-range Reference Product.

The 13-speaker speaker system was designed specifically to achieve the best results within the LC Coupe's cabin. Mark Levinson engineers also supported Lexus requirements for low vehicle weight, achieving an overall 30 per cent reduction in speaker weight, without compromising performance.

The speakers use advanced materials and construction techniques to achieve the best results, including the first application of Direct Drive Unity, a speaker-within-a-speaker concept that allows sound quality and pressure level to be maximised in a compact design. The system also uses Clari-Fi music restoration that automatically analyses and improves the quality of all types of compressed, digital music sources.

Pioneer

The LC Coupe is equipped as standard with a 12-speaker Pioneer premium audio surround system. Specifically designed for the LC, this system includes four 9cm CST (Coherent Source Transducer) double speakers, combining tweeter and mid-range functions, located at the base of the front pillars and in the rear cabin side panels. The two 16cm woofers in the front doors are contained in a special housing to reduce vibrations, resulting in excellent low-frequency sound generation. Other elements include a 9cm midrange speaker in the centre of the instrument panel, a 25cm subwoofer in the back of the rear seats, and an eight-channel Class-D amplifier under the luggage compartment floor.

UK MODEL RANGE

- LC 500 and 500h Coupe features include Lexus Safety System+, fine leather upholstery, Lexus Premium Navigation and Climate Concierge
- Optional Sport Pack adds sports front seats, Alcantara upholstery, carbon fibre roof and 21-inch forged alloy wheels

- Sport+ Pack further adds active rear spoiler, carbon fibre scuff plates, Alcantara headlining and cabin trim and Lexus Dynamic Handling with Rear Steering, Variable Gear Ratio Steering and Torsen limited-slip differential
- Options include Mark Levinson Reference Product audio system and colour head-up display

The Lexus LC 500 and 500h Coupe share a specification that is rich in advanced technologies and luxurious comfort and convenience features.

Standard equipment for the exterior includes 20-inch cast alloy wheels, metallic paint, a glass roof with sunshade, LED lights front and rear, rain-sensing wipers and power door mirrors with auto-folding and reverse tilt functions.

Cabin comfort is maintained with Lexus's Climate Concierge system with nanoe technology to maintain optimum air quality and temperature. The leather-upholstered front seats are electrically adjustable and have integrated heating and ventilation functions.

Lexus Navigation is provided, together with a 12-speaker Pioneer audio system, DVD player and 10.3-inch display. The instrumentation includes LFA-style meters with a central moving ring and an eight-inch colour TFT multi-information display. Aluminium sports pedals, an auto-dimming, frameless rear-view mirror, LED cabin lighting and draped Alcantara door trims are also standard.

The optional Sport Pack adds sports front seats, Alcantara upholstery, carbon fibre roof and 21-inch forged alloy wheels. The Sport+ Pack further equipping the LC with an active rear spoiler, carbon fibre scuff plates, Alcantara headlining and cabin trim and Lexus Dynamic Handling with Rear Steering, Variable Gear Ratio Steering and Torsen limited-slip differential.

There are just five equipment options (according to grade): 21-inch forged alloy wheels, semi-aniline leather, the 13-speaker Mark Levinson Reference Product audio system, a colour head-up display (plus card key) and special metallic paint finishes.

Up to 10 years/100,000 miles warranty

In common with every new Lexus, the LC is eligible for Lexus warranty protection for up to 10 years or 100,000 miles (whichever comes first). This comprises an initial three-year manufacturer warranty, followed by up to a further seven years of service-activated warranty.

For the first three years of the car's life, owners can have it serviced at a place of their choice. When the new car warranty period expires, they can then benefit from an additional 12 months

(or 10,000 miles) warranty when their vehicle has a qualifying service at an authorised Lexus workshop. The warranty is provided at no extra cost, up to a limit of 10 years/100,000 miles. Terms and conditions apply; full details are available at www.lexus.co.uk.

Lexus LC Coupe and Convertible timeline and sales

2012	January	LF-LC sports coupe concept debuts at the Detroit motor show.
2016	January	Production-ready LC 500 is presented at Detroit and wins EyesOn Design awards.
	February	The LC 500h with new Multi Stage Hybrid System is announced and revealed at the Geneva motor show in March.
	June	LC 500 makes first UK appearance at the Goodwood Festival of Speed.
2017	May	LC production begins for European markets.
	August	Official UK launch of the LC Coupe.
2018	May	LC 500 wins its class on first appearance at the Nürburgring 24 Hours.
2019	January	LC 500 Convertible Concept revealed at the Detroit motor show.
	July	Convertible prototype runs at the Goodwood Festival of Speed.
2020	September	UK debut for the revised LC Coupe and the all-new LC Convertible.
2021	September	LC Coupe and Convertible gain suspension modifications for the 2022 model year and announcement of Regatta Inspiration (convertible) and Black Inspiration (coupe and convertible) limited edition versions.

LC Coupe and Convertible sales in UK markets in 2022: 48

LC Coupe and Convertible sales in UK markets since launch (2017): 552

LEXUS LC COUPE TECHNICAL SPECIFICATIONS

ENGINE	LC 500
Engine code	2UR-GSE
Engine type	5.0-litre V8
Valve mechanism	32-valve DOHC with Dual VVT-i
Displacement (cc)	4,969
Bore x stroke (mm)	94 x 89.5
Compression ratio	12.3:1
Max. power (bhp/DIN hp/kW @ rpm)	457/464/341 @ 7,100
Max. torque (Nm @ rpm)	530 @ 4,800
ENGINE AND HYBRID SYSTEM	LC 500h
Engine code	8GR-FXS
Engine type	3.5-litre V6
Valve mechanism	24-valve DOHC with VVT-iW (intake) and VVT-i (exhaust)
Displacement (cc)	3,456
Bore x stroke (mm)	94 x 83
Compression ratio	13.0:1
Total system output (bhp/DIN hp/kW)	354/359/264
Max. engine power (bhp/DIN hp/kW @ rpm)	295/298/220 @ 6,600
Max. engine torque (Nm @ rpm)	347 @ 4,900 348 @ 4,900 (Sport Pack/Sport Pack+/Limited Edition)
MOTOR GENERATOR	
Type	A/C permanent magnet, synchronous motor
Max. voltage	650
Max. power (bhp/kW)	177/132
Max. torque (Nm)	300

HYBRID BATTERY		
Type	Lithium-ion	
Nominal voltage	310.8	
Number of cells	84	
System voltage	650	
PERFORMANCE	LC 500	LC 500h
0-62mph (sec)	4.7	5.0
Max. speed (mph)	168	155
DIMENSIONS	LC 500	LC 500h
Overall length (mm)	4,770	
Overall width - without mirrors (mm)	1,920	
Overall width - with mirrors (mm)	2,168	
Overall height (mm)	1,345	
Wheelbase (mm)	2,870	
Track front (mm)	1,630	
Track rear (mm)	1,635	
Overhang front (mm)	930	
Overhang rear (mm)	970	
Coefficient of Drag (Cd)	0.33	
Fuel tank capacity (litres)	82	
INTERIOR DIMENSIONS		
Interior length (mm)	1,868	
Interior width (mm)	1,550	
Interior height (mm)	1,080	
Luggage capacity (litres)	197	172
WEIGHTS (kg)	LC 500	LC 500h
Kerb weight	1,930 – 1,965	1,980 – 2,015
Gross vehicle weight	2,375	2,445

TRANSMISSION		10AT	Multi Stage Hybrid
Gear ratios	1 st	4.923	3.538
	2 nd	3.153	1.888
	3 rd	2.349	1.000
	4 th	1.879	0.650
	5 th	1.462	Variable
	6 th	1.193	Variable
	7 th	1.000	Variable
	8 th	0.792	Variable
	9 th	0.640	Variable
	10 th	0.598	Variable
	Reverse	5.169	Variable
Differential ratio		2.337	3.357
FUEL CONSUMPTION (WLTP)		LC 500	LC 500h
Combined (mpg)		24.3 – 24.3	34.8 – 34.8
Fuel tank capacity (l)		82	82
EMISSIONS (WLTP), INSURANCE, SERVICING & WARRANTY		LC 500	LC 500h
CO ₂ emissions - combined (g/km)		262	184
Insurance groups		48E-50E	47E-50E
Service intervals		10,000 miles/annually	
Comprehensive new vehicle warranty		3 years/60,000 miles	
Hybrid warranty		n/a	5 years/60,000 miles (whichever comes first)
Corrosion/perforation warranty		12 years/unlimited mileage	
Surface rust/paintwork		3 years/unlimited mileage	
SUSPENSION			
Front		Multilink	
Rear		Multilink	

BRAKES		LC 500	LC 500h
Front		Ventilated discs with 6-pot callipers	
Rear		Ventilated discs with 4-pot callipers	
Front disc size (diameter x thickness mm)		337.8 x 36	
Rear disc size (diameter x thickness mm)		308.2 x 30	
STEERING			
Type		Rack and pinion, electric power steering	
Ratio		13.0:1	
Turns (lock to lock)		2.6	
Min. turning radius (m)	Tyre	5.4	
	Body	5.91	
WHEELS & TYRES			
Wheel sizes		20-inch cast alloy 21-inch forged alloy	
Tyre sizes		245/45RF20 front/275/40RF20 rear 245/40RF21 front/275/35RF21 rear	

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LEXUS LC COUPE EQUIPMENT SPECIFICATIONS

SAFETY & DRIVING DYNAMICS	LC 500/500h	SPORT PACK	SPORT+ PACK
Lexus Safety System +: Adaptive Cruise Control, Pre-Collision Safety, Traffic Sign Recognition, Advanced Lane Keep Assist, Sway Warning System, Automatic High Beam	✓	✓	✓
ABS with Brake Assist	✓	✓	✓
Traction control	✓	✓	✓
Vehicle Stability Control	✓	✓	✓
Vehicle Dynamics Integrated Management (VDIM)	✓	✓	✗
Lexus Dynamic Handling with Dynamic Rear Steering	✗	✗	✓
Hill-start Assist Control with hold switch	✓	✓	✓
Electric Power Steering	✓	✓	✗
Electric Power Steering with Variable Gear Ratio Steering (VGRS)	✗	✗	✓
Dynamic Rear Steering	✗	✗	✓
Blind Spot Monitor with Rear Cross Traffic Alert	✓	✓	✓
Adaptive Variable Suspension (AVS)	✓	✓	✓
Torsen Limited-Slip Differential	✗	✗	✓
Auto-locate tyre pressure warning system	✓	✓	✓
Driver and front passenger front, side and knee airbags	✓	✓	✓
Curtain airbags	✓	✓	✓
Isofix child seat mounts x2	✓	✓	✓
Pop-up hood	✓	✓	✓

INSTRUMENTS & CONTROLS	LC 500/500h	SPORT PACK	SPORT+ PACK
Heated three-spoke steering wheel	✓	✓	✓
Smart entry and push-button start	✓	✓	✓
Adaptive instrument display with G sensor display	✓	✓	✓
Rain-sensing wipers	✓	✓	✓
Power front windows with auto up/down	✓	✓	✓
8in TFT colour multi-information display	✓	✓	✓
Analogue clock	✓	✓	✓
Colour head-up display and card key	Opt	Opt	Opt
AUDIO, NAVIGATION & ENTERTAINMENT	LC 500/500h	SPORT PACK	SPORT+ PACK
Lexus Premium Navigation: Pioneer 12-speaker audio, 10.3in display, DVD player, access to connected services, full European mapping, Street View, reversing camera	✓	✓	✓
13-speaker Mark Levinson Reference Product audio	Opt	Opt	Opt
DAB reception	✓	✓	✓
USB port x2	✓	✓	✓
Aux-in socket	✓	✓	✓
Bluetooth	✓	✓	✓
Smartphone integration with Apple CarPlay/Android Auto	✓	✓	✓
COMFORT & CONVENIENCE	LC 500/500h	SPORT PACK	SPORT+ PACK
Dual-zone climate control with nanoe technology and climate concierge	✓	✓	✓
Electrically adjustable steering column	✓	✓	✓
Auto-dimming, frameless rear-view mirror	✓	✓	✓
LED interior lighting	✓	✓	✓
Touch-operated map lights	✓	✓	✓

Electric fuel filler release	✓	✓	✓
Electric boot lid release	✓	✓	✓
Instrument panel and door trim illumination	✓	✓	✓
Aluminium sports pedals	✓	✓	✓
Centre arm rest with storage	✓	✓	✓
Cup holder in centre console	✓	✓	✓
SECURITY	LC 500/500h	SPORT PACK	SPORT+ PACK
Alarm	✓	✓	✓
Intrusion sensor	✓	✓	✓
Glass breakage sensor	✓	✓	✓
Tilt sensor	✓	✓	✓
Window etching with VIN	✓	✓	✓
Locking wheel nuts	✓	✓	✓
SEATING, UPHOLSTERY & TRIM	LC 500/500h	SPORT PACK	SPORT+ PACK
Leather upholstery	✓	x	x
Semi-aniline leather upholstery	Opt	x	x
Sports front seats with Alcantara upholstery and leather bolsters	x	✓	✓
Alcantara headlining, parcel shelf, sun visors and front and centre pillar trim	x	x	✓
8-way electrically adjustable front seats	x	✓	✓
10-way electrically adjustable front seats (inc. head restraint adjustment)	✓	x	x
Front seat heating and ventilation	✓	✓	✓
2-way front seat electric lumbar adjustment	✓	✓	✓
Memory setting for driver's seat	✓	✓	✓
2 rear seats (fixed)	✓	✓	✓
Carpet mats	✓	✓	✓

Draped Alcantara door trims	✓	✓	✓
Leather gear lever trim	✓	✓	✓
Aluminium scuff plates	✓	✓	✗
Carbon fibre scuff plates	✗	✗	✓
EXTERIOR	LC 500/500h	SPORT PACK	SPORT+ PACK
LED headlights with Automatic High Beam and follow-me-home function	✓	✓	✓
LED daytime running lights	✓	✓	✓
LED cornering lights	✓	✓	✓
Multi-LED turn indicators	✓	✓	✓
LED rear combination lights	✓	✓	✓
Heated, auto-dimming, auto-folding door mirrors with memory and reverse-tilt functions	✓	✓	✓
Rear privacy glass	✓	✓	✓
LED door illumination	✓	✓	✓
Glass roof with manual sunshade	✓	✗	✗
Carbon fibre roof	✗	✓	✓
Retractable rear spoiler	✗	✗	✓
20in cast alloy wheels	✓	✗	✗
21in forged alloy wheels	Opt	✓	✓
Metallic paint	✓	✓	✓
Special metallic paint finishes	Opt	Opt	Opt

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