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Lexus RX450h Road Test

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Author: David Miles

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New Lexus RX450h Luxury Crossover Wafts into the UK



By David Miles (Miles Better News Agency)

The fourth generation luxury crossover Lexus 450 range has arrived in the UK – in fact when deliveries started in January.

Prices start at £39,995 for the RX 200t S 2.0 litre petrol with two wheel drive, rising to £57,995 for the 3.5 litre V6 petrol hybrid with four wheel drive – and the top Premier specification version. My test model was probably the most popular model – the RX 450h Luxury with its standard 4WD, priced at £49,995. Spec choices, depending on the powertrain chosen, are S, SE, Luxury, F Sport and Premier.

Since its introduction in 1989, close to 43,000 RX models have been sold in the UK with an average of 1,500 registrations a year. The RX range is Lexus's best selling model worldwide, especially popular in the USA, Arab States and increasingly in Russia and China.

The latest changes include more interior space, especially with its longer wheelbase giving more rear seat legroom for passengers. There is a re-engineered hybrid powertrain and a new 2.0 litre turbo petrol engine for less expensive versions. The safety and driver assistance functions have also been improved. Overall it's faster, more efficient, more luxurious, very comfortable and quiet. The only obvious technology missing from the hybrid versions is the now must-have plug-in (PHEV) which dramatically improves fuel economy and lowers emissions. These in turn reduces VED road tax and company car Benefit-in-Kind tax charges, as well as potentially being eligible for the Government's plug-in vehicle grant towards the purchase price and again potentially making them free of the London Congestion Charge.

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The Lexus RX 450hs main competitors include the Volvo XC90 T8, BMW X5 40e and the Porsche Cayenne E-Hybrid SUVs, with petrol engines boosted by plug-in hybrid technology versions in their ranges. Of course the Mitsubishi Outlander 2.0 litre petrol PHEV has been a huge sales success, particularly with business users in the UK and Europe, due to its low



taxes and running costs. Toyota, the parent company of Lexus, will later this year introduce a plug-in electric PHEV hybrid version of their Prius, so there is potential for this technology to be used in other Lexus and Toyota hybrid models – when there is sufficient demand, they say. However PHEV technology does add a significant cost to a vehicle in terms of the purchase price – but the UK and other European markets are relatively small in terms of RX sales. Their main oil-rich sales regions have no such issues with low running costs, fuel consumption or Congestion Charges.

The new Lexus RX has a bold and larger five door, five seater body with its coupe side profile. There has been a 120 mm (4.7 in) increase in the vehicle's length which is now 4,890 mm (16.04 ft). This allows for a longer wheelbase and the width has been increased by 10 mm (0.4 in) to 1,895 mm (6.22 ft) making it feel and look much roomier.

At the rear is a 453 litre (16.00 cu.ft) boot with a bumper level rear load floor, and by folding the split rear seats, cargo space can go up to 924 litres (32.63 cu.ft).

At the front is a huge gaping grille, flanked by sleek headlights. Front, side and rear of the body are sharply creased origami styling lines and chamfered body panels. It is worth taking a few minutes just to look at the detail in how the body panels, tiny and large, are creased and pressed into aerodynamically efficient shapes. The Lexus brand is not alone in this sort of design, Toyota models also have the origami styling theme.

Inside there is leather trim and upholstery beautifully shaped and very luxurious. The dash is greatly improved and designed to give a 'cockpit' effect for the driver's side with a large centre console housing the radio, heating and ventilation controls. There is a hallmark design analogue clock and this leads down to the lower centre console home to the auto gearshift lever, the driving mode selector of Eco, Normal, Sport and Sport+, electronic handbrake and the very fiddly and erratic 'mouse' style controller for the widescreen information and sat-nav system. Standard specification for the Luxury version includes a pre-collision system, adaptive cruise control, lane departure alert, lane keep assist, traffic sign recognition, automatic high beam, dual zone air-con, Bluetooth, auto lights/wipers,



front and rear parking sensors, LED lights all round, power operated tailgate and 20-inch alloy wheels. My test vehicle also had a power operated panoramic sunroof costing £1,295.

Perhaps most important is the hybrid powertrain system. This uses a re-worked 3.5 litre, V6 direct injection normally aspirated petrol engine which combines with front and rear electric motors to give a total power output of 308 bhp, with 335 Nm (247 lb.ft) of torque delivered at 4,600 rpm. The Combined Cycle fuel consumption is officially 51.4 mpg and CO2 emissions are 127 g/km. This means VED road tax is now £0 for the First Year rate and £110 thereafter. Company car executives will now pay 22% Benefit-in-Kind tax - far more than the 7 to 15% paid by business users for most other PHEV petrol/electric plug-in hybrid SUVs available.





The Lexus hybrid system uses twin electric motors to reduce the load on the large petrol engine and to boost acceleration. The motors work all the time and the petrol unit will stop and start at any vehicle speed, depending on a variety of conditions, to maintain a balance between performance and fuel efficiency. The battery is recharged during de-acceleration or on the overrun, going down hills or slowing to a slower speed or to a stop. The rear electric motor also acts as a generator to charge the battery in regenerative braking mode. It will also pull away from standstill in silence and cover a couple of miles on electric power only. The four wheel drive system is an on-demand function and only comes into use when extra traction is needed.

Without the plug-in recharge system which the RX 450h doesn't have, real-life fuel economy isn't that great but it does reduce the amount of petrol used to some extent. Driven mostly in Eco mode my road test, covering 200 miles of motorways, some A/B roads and some in-town driving, was a disappointing 31.5 mpg overall and the best figure according to the vehicles computer was one short journey when 35.8 mpg was recorded. Long journeys take a serious toll on fuel economy, although the driving refinement is superb.

A big improvement has been made to the CVT automatic gearbox. It feels less strained and power-sapping than before during acceleration, so the engine sounds less stressed and it provides a healthy shove of acceleration with a zero to 62 mph acceleration time of just 7.7 seconds, and with a top speed of 124 mph. As I wrote before, the electric motors enhance the performance but do less to reduce fuel consumption during real-life driving conditions, something a plug-in hybrid will do over a longer driving range.

VERDICT

As for driveability and ride comfort the RX 450h is generally very good for such a large vehicle. The ride is really comfortable as the suspension is set-up on the soft side, so there is some body-roll during cornering. Only the F-Sport specification includes adjustable rate air-suspension which would sharpen the handling when needed. Noise intrusion from both wind and the road surfaces is minimal, so with a low engine tone the Lexus RX 450h gives a relaxing drive. I just wish it was a more fuel and CO2 efficient in real-life driving conditions.



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For: Superb quality, great road presence, luxurious and roomy interior, comfortable ride, strong and smooth power delivery, high spec.

Against: Expensive, no fuel and CO2 efficient plug-in hybrid PHEV function (so it misses out on the PHEV vehicle purchase grant, London Congestion Charge exemption, lower VED road and BIK company car taxes), the poor real-life fuel economy fell well below the official figure.



MILESTONES AND WHEELS-ALIVE TECH. SPEC. IN BRIEF:



Lexus RX 450h Luxury 5-door Crossover.

Powertrain: 3.5 litre, V6 petrol engine plus front and rear electric motors, total power output of 308 bhp, E-CVT electric controlled auto transmission with 4WD.

Performance:

0-62 mph: 7.7 seconds.

Top speed: 124 mph.

Fuel consumption: Combined Cycle 51.4 mpg (31.5 mpg on test).

Emissions and taxation: CO2 127 g/km, VED road tax £0/£110, BIK company car tax 22%. Insurance Group: 41E.

Warranty: 3 years/60,000 miles.

Dimensions/capacities: L 4,890 mm (16.04 ft), W 1,895 mm (6.22 ft), H 1,685 mm (5.53 ft), boot/load area 453 to 924 litres (16.00 to 32.63 cu.ft), 5 doors/5 seats.

Price: £49,995.