Volvo XC40 Recharge PHEV – Road Test

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ELECTRIFICATION AND SUVS – ARE THESE THE WAY FORWARD IN 2021?

Volvo XC40 Recharge plug-in hybrid urban SUV tried and tested…

…by David Miles (Miles Better News Agency).

Although overall new car sales stalled globally in 2020 due to Covid-19, sales of electrified models grew substantially. In Europe electrified models outsold diesel powered cars for the first time and the demand for SUVs continues.

Now by electrified I mean, plug-in pure electric powered models, PHEV plug-in hybrid petrol/diesel electric vehicles, self charging hybrids and mild hybrids with petrol or diesel engines coupled with starter/generator electric motors.

Specifically in the UK, in 2020 diesel new car sales dropped to 261,772 whilst pure electric, plug-in hybrids and hybrid models outsold them with 285,199 registrations. Times are changing but petrol car sales still dominated with over 1.023 million registrations.

Trying to cover all bases many car manufacturers now offer most of these electrified options and petrol and diesel options in their model range line-ups and Volvo with their XC40 compact SUV range is typical. The XC40 is Volvo's best selling model range because of this wide spread of power units and it seems to be the right size for these troubled times.

Figures for new car sales in the UK show the Volvo XC40 finished the year in the top ten sales chart in 10th position with 25,023 sales, just behind the new Ford Puma Crossover/SUV with 26,294 sales. The best selling SUV for the year was still the Nissan Qashqai with 33,972 registrations.

The Volvo XC40 compact 5-seater, 5-door SUV was launched in 2017 and the following year it was judged as European Car of the Year, and deliveries began to UK customers the same year. The awards have kept coming for the XC40 and the latest is the UK's Alternatively Fuelled Towcar of the Year trophy for the T5 Recharge PHEV FWD version which I have recently tried and tested but without a caravan. The XC40 range has very recently picked up the What Car? magazine's Family SUV of the Year award for the third time and Company Car Today media group made the XC40 range their Premium Crossover award winner 2021.

The XC40 range is built in Ghent, Belgium and follows the design language of the mid-sized Volvo XC60 and large XC90 SUVs. The XC40's key competitors are the Audi Q3, BMW X1/X3, Mercedes GLA and Range Rover Evoque, all available with a variety of powertrain options. Volvo has just announced it is tripling electric car production capacity at its Ghent plant following the doubling of sales for their Recharge models in 2020.

The XC40 is available in Recharge pure electric, Recharge petrol-electric plug-in hybrid or petrol forms. The very new XC40 Recharge Pure Electric P8 is Volvo's first ever fully electric car, while the plug-in hybrid and petrol versions are powered exclusively by Volvo's own range of powerful yet efficient Drive-E powertrains. Sadly no diesel engine option is now included in the range as Volvo says the XC40 is designed primarily for urban environments.

The XC40 is available in two and all-wheel-drive forms and with manual or automatic gearboxes. Who'd think with a 4WD/AWD option there must be some country folk who would appreciate a strong diesel engine option or certainly a high mileage company car driver who doesn't have time to stop and charge up his PHEV petrol-electric model on a long journey.

The XC40 prices, like the engine options and specification choices, are wide ranging. They start from £25,420 for the lowest powered petrol 2WD manual with the base spec and rise through 32 derivatives to £59,985 for the latest addition to the range – the P8 Pure Electric Recharge AWD automatic with First Edition spec.

Depending on the powertrain choice the spec levels are Momentum Core, Momentum, the sportier spec R-Design and R-Design Pro, First Edition for the P8 pure electric model and the luxurious spec Inscription and Inscription Pro. The R-Design/R-Design Pro levels are the most popular taking 50% of UK sales.

Powertrain/engine choices are turbo petrol T2 129 hp, T3 163 hp, B4 197 hp, B5 250 hp then petrol/electric Recharge PHEV T4 180+82 hp, Recharge PHEV T5 180+82 hp and P8 Recharge Pure Electric twin electric motors 408 hp with an all electric driving range of up to 260 miles with zero CO2 emissions. The T2, T3 and Recharge PHEV T4 and T5 versions use a 1.5 litre, 3-cylinder petrol engine whilst the B4 and B5 engines are 2.0 litre, 4-cylinder petrol units. The most popular engine is the non-hybrid T3 163 hp turbo petrol unit taking 30% of overall XC40 UK sales. Six speed manual gearboxes are made by Gertrag with the 7 and 8-speed auto boxes supplied by Aison-Warner. The P8 pure electric has a single forward speed + reverse auto transmission.

More figures of note are its length of 4,425 mm (14.52 ft), width of 1,910 mm (6.27 ft), height of 1,658 mm (5.44 ft), wheelbase of 2,702 mm (8.86 ft) with boot space of 452 litres (15.96 cu.ft) with the split rear seats in use increasing to 1,328 litres (46.90 cu.ft) with the rear seats folded down.

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I was scheduled to test drive the new XC40 Recharge petrol-electric PHEV model a while ago but one of the Covid lockdowns got in the way and the schedule for test cars was halted. Recently I did however get a XC40 Recharge plug-in hybrid T5 with FWD with R-Design Pro spec and with its standard fit 7-speed auto gearbox. The price is £42,530 for this version which has an excellently smooth 1.5 litre, 3-cylinder 180 hp turbo petrol engine assisted by an 82 hp electric motor. But the best selling XC40 T3 1.5 litre turbo petrol 163 hp, auto with FWD and the same R-Design Pro spec costs £35,595, which is a big price difference but of course with no hybrid support the fuel and tax costs will be higher.

But with PHEV petrol-electric plug-in models of any make the issue is always the same, plug them in daily and use them for short journeys and the technology works, just use the petrol engine and the fuel economy is no better than a conventional petrol engine, probably worse because the car weighs more with the dormant unused electric gubbins still being carried in the vehicle. Of course if it's a company car driver they only want to get the low Benefit-in-Kind tax costs PHEVs provide. A big plus point for most drivers of PHEVs is they never need to have range anxieties about getting stuck without electric power as happens with pure electric cars. Another bonus of PHEVs is a petrol fill-up only takes a few minutes, the battery of a pure electric vehicle needing a recharge takes much longer.

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Now I had the XC40 Recharge over the Christmas and New Year holiday period and part of that time we were under the Tier 4 stay at home instructions so driving was limited mainly to local shopping trips. I did legally manage one 160 mile long run with the petrol-electric hybrid system fully charged at start of and that resulted in a figure of 88.8 mpg for the first half of the journey which was mainly motorway driving. The second part of the journey, with only regenerative braking left to charge the battery, the figure dropped to 35.2 mpg for the overall round trip. Back home and able to recharge the battery in around 4-hours from a domestic 13 amp socket and the overall figure for the test driving loan period was a

disappointing 46.8 mpg given the official Combined Cycle 117 mpg plus figure. By comparison the T3, 1.5 litre turbo petrol auto FWD non hybrid model should return 35 to 38 mpg according to official WLTP figures and that costs a lot less to buy.

Officially the XC40 Recharge T5 FWD has a WLTP Combined Cycle figure of 117.7 to 134.5 mpg with CO2 emissions of 49 g/km, First Year VED road tax is £0, Standard Rate £140 + £325 annually for 5-years as it costs over £40k and BiK company car tax is 12%. The electric power only driving range is officially 28 miles but even after I had fully charged the battery pack it never showed more than 24 miles and on average it was around 17 miles the vehicle actually covered before the electric power ran out. I suppose if your daily round trip commute is that figure or less you could get away without using petrol at all which is why Volvo class the XC40 as an urban SUV. What it all goes to prove is there is a powertrain to suit most people's needs or wants in the latest Volvo XC40 range as long as you don't want diesel power.

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The XC40's standard equipment is pretty comprehensive for most people. The standard level includes the Sensus nine-inch tablet style touchscreen, 12.3-inch TFT driver's information screen, voice-activated control systems, LED headlights, satellite navigation, climate control, rear parking sensors, City Safety front end collision warning, fully automatic braking for pedestrian and large animal detection, Oncoming Lane Mitigation and Auto Guidance, Run Off-Road protection in an accident, data SIM card with 100 GB of data for 12 months and the Volvo On Call connected services platform. The R-Design Pro level adds items such as sports suspension, sports seats, leather upholstery, sports pedals, heated front seats, heated steering wheel, heated washer nozzles, heated windscreen and 20-inch alloys.

And it measures up for size with good interior front space, enough legroom in the rear for adults and a good sized boot. Visibility is good all round, the seating positions are high and access is good. I can see why customers are moving from larger SUVs to these more

affordable, easier to live with compact versions. Certainly in my area of The Cotswolds I see more XC40s now than more expensive XC60/XC90 larger Volvo SUVs.

Despite its sports suspension the ride was compliant thanks to the multi-link rear suspension, and the handling was precise. Top speed is a modest but ample 112 mph with the zero to 62 mph acceleration time of 7.3 seconds. The various driving modes and the 7-speed auto gearbox were very useable as was the B setting operated via the gearshift which allows the driver to select and adjust regenerative braking harvesting. But star of the show was the 3-cylinder, all aluminium turbo petrol engine. If you didn’t know it was a triple you

wouldn't distinguish it from a 4-cylinder petrol engine. There was no off-beat 3-cylinder growl, no vibration, no lack of grunt and the 265 Nm (195 lb.ft) of torque from just 1,500 rpm was of real driving benefit so with seven gears the response and power delivery was impressive.

VERDICT

If this T5 Recharge PHEV version of the X40 doesn't suit you be sure, if the size is ok, there is another one in the line-up that will, unless of course you must have a diesel engine. Overall the Volvo XC40 really impressed me but I'm not quite so sure the Recharge PHEV offers enough benefits over a non plug-in petrol model. Going for a 1.5 litre petrol version would be cheaper to buy or lease, certainly cheaper for Standard rate VED road tax as it doesn't incur the over £40k annual £325 penalty for 5-years and I wouldn't need to continually find somewhere to plug it into the mains electricity. But today's new car motoring is just like the tide, electrification is coming in and it won't stop.

For: XC40 well sized for family/business transport, wide range of power units, classy styling and quality inside and out, lots of driving support and safety systems, high spec – but at a price, refined 3-cylinder petrol engine and strong responsive performance aided by the electric motor, compliant ride, well balanced handling for an SUV.

Against: High Standard rate VED tax costs as it costs over £40k, even with regular electric charging from the mains it was never anywhere near giving the official fuel efficiency figures, too many functions operated via the sluggish touchscreen, no diesel engine option, ungenerous warranty.

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

Volvo XC40 Recharge PHEV T5 FWD auto, R-Design Pro.

Price: £42,530.

Engine/transmission: 1.5 litre, 3-cylinder turbo petrol with electric motor, 180 hp + 82 hp, 265 Nm (195 lb.ft) of torque from 1,500 rpm, 7-speed auto, FWD.

Performance: 112 mph, 0 – 62 mph 7.3 seconds.

Fuel consumption: WLTP Combined Cycle 117.7 to 134.5 mpg (on a long run test 88.8 mpg with engine/electric motor working together then 35.2 mpg overall when battery support ran out, giving an overall total of 46.8 mpg using petrol and regular electric power charge-ups), pure electric driving range 28 miles (17 miles on test).

Emissions and taxation: CO2 49 g/km, Alternative Fuel VED First Year road tax £0

then £140 Standard rate + £325 annually for 5-years as it costs over £40k, BiK company car tax 12%.

Insurance Group: 32.

Warranty: 3-years/60,000 miles, battery pack 8-years/100,000 miles.

Dimensions/capacities: L 4,425 mm (14.52 ft), W 1,910 mm (6.27 ft), H 1,658 mm (5.44 ft), wheelbase 2,702 mm (8.86 ft) boot/load space 452 to 1,328 litres (15.96 to 46.90 cu.ft), braked towing weight 1,800 kg (3,968 lb), 5-doors/5-seats.