Latest Mitsubishi Outlander PHEV – Road Test

Published: January 28, 2019

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Online version: https://www.wheels-alive.co.uk/latest-mitsubishi-outlander-phev-road-test/



MITSUBISHI OUTLANDER PHEV CONTINUES LEADING THE WAY FOR UK SALES.

David Miles (Miles Better News Agency) tells all...

The Mitsubishi Outlander PHEV (Plug-in Hybrid Electric Vehicle) finished another strong sales year in 2018 as the UK's best-selling plug-in hybrid vehicle with 8,701 vehicles registered, an increase of 16% over 2017. The uprated Outlander PHEV was launched last September with improved EV and petrol-engine performance and increased efficiency resulting in the new WLTP figures of 139 mpg and 46 g/km as well as a real-world EV

driving range of 28 miles.

According to the Society of Motor Manufacturers and Traders, the PHEV segment UK sales for 2018 grew by 25% to 34,401 registrations. PHEVs come under the Alternatively Fuelled Vehicle (AFV) sector which increased its sales by 21.3% to 81,156 units for non plug-in petrol electric hybrids. Sales of pure electric cars in the UK grew by 13.8% but only 15,474 were registered, just less than half of what PHEV models achieved.

The AFV classification overall includes pure electric, petrol/diesel hybrids, plug-in hybrids and hydrogen fuelled models. All these types of vehicles accounted for 141,270 sales, an increase of 21% over 2017. Unfortunately with the removal of the Government's £2,500 plug-in grant for PHEVs which took place last October, the pace of sales growth has started to slow.

In the overall 2018 UK new car market registrations fell by 6.8% with demand in private, fleet and business registrations all declining. Diesel powered car sales fell by 29.6% but petrol powered models increased by 8.7% and AFVs by 21%. As to what type of vehicle increased in demand, that was only the Dual Purpose (SUVs/Crossovers/4x4s) sector which went up by 9.1% to a total of 502,124 registrations, 21.2% of the overall new car market. All other segments showed falls in demand.

From these SMMT figures it shows that an SUV with a PHEV drivetrain combination is potentially the most popular configuration so drive forward the latest 2019 revised Mitsubishi Outlander PHEV large SUV range.



Now the Governments £2,500 plug-in vehicle grant has been stopped Outlander PHEV 2019 five seater model year on-the-road prices for the revised three variant range start at £36,755 and go up to £41,600. The revised 2019 line-up has Juro and the best selling 4h and 4hs derivatives. The previous small selling 5h and 5hs versions are not available in the 2019 line-up. The Outlander PHEV is also available as a commercial vehicle priced at £38,880.

The non hybrid Outlander 4WD range also consists of seven-seat models with the newly introduced 2.0 litre, 150 hp petrol engine in Juro and 4 spec levels priced at £27,680 and £29,680 respectively. The previous 2.2 litre DI-D 147 hp turbodiesel models are shortly being discontinued but are still briefly available priced from £28,670.

All Outlander PHEV models use a new 2.4 litre, four cylinder petrol engine which replaced

the previous 2.0 litre MIVEC variable valve timing petrol unit. The new engine produces 135 hp (up from 121 hp) with greater torque (211 Nm or 156 lb.ft versus 190 Nm or 140 lb.ft). The rear electric motor output increases to 95 hp, the Lithium-ion battery benefits from a 10% increase in output, the electric generator output is increased by 10% and the front electric motor adds another 82 hp, the overall electric power capacity is increased to 13.8 kWh. The technical changes result in the new WLTP official Combined Cycle fuel economy figure, in operation for all new cars sold from September 2018, of 139 mpg.



The Mitsubishi MIVEC variable valve timing system for the new 2.4 litre engine allows seamless switching between Otto and Atkinson combustion cycles depending on driving conditions. The Atkinson cycle mode allows the inlet valves to remain open for longer,

effectively reducing the compression volume, therefore decreasing its capacity and consequently burning less fuel under light load driving conditions. The Otto mode uses conventional valve opening times for maximum compression volume and performance.

With the new drivetrain and 4WD the new 2019 models have lower CO2 emissions of 46 g/km and an EV electric only driving range of 28 miles or 35 miles for city driving. The low emissions also mean the vehicles attract the lowest Benefit-in-Kind tax rate of 13% for company car drivers. As for VED road tax costs, classed as an Alternative Fuel Discount vehicle, the First Year rate is currently a compelling £0 and the Standard rate for year two onwards is £130 rather than the conventional diesel/petrol cost of £140. However new VED rates and BiK tax costs for all new cars come into force in April this year. For the Outlander PHEV the VED First Year charge remains a £0 cost but the Second Year VED rate goes up to £135 and BiK tax goes up to 16%. Like other new cars costing over £40k, an Outlander PHEV version costing over that figure will incur the annual £310 supplement for five years from the second year of taxation onwards.

In addition to the powertrain changes the latest Outlander PHEV models have a number of other improvements in terms of specification and driving refinement. The front and rear shock absorbers have been revised to improve its low-speed ride and a new “Sport Mode” brings with it sharper throttle responses and more grip via the Super All-Wheel Control system. The steering ratio has also been revised and the power steering ECU re-mapped to offer more responsiveness and feel, while larger front brake discs boost stopping power. There’s also a new Snow mode to improve low-grip start-offs.



There is a general improvement in overall refinement and lower noise intrusion levels. The front seats are more comfortable and supportive, there is new switchgear, a revised instrument cluster, the addition of rear ventilation vents and more convenient USB ports. In terms of exterior styling, there's a new front end with a redesigned grille with honeycomb mesh, new bumper extension and revised headlamp design. The rear end gets a new lower bumper extension and a large roof spoiler while fresh two-tone 18-inch multi-spoke alloys complete the exterior revisions.

The Outlander PHEV features Smartphone Link Display Audio which includes Apple CarPlay and Android Auto compatibility. Unfortunately no integrated sat-nav system is offered for any version; instead navigation has to be done by linking a mobile phone to the connectivity system, not very user-friendly and practical. But fitted as standard is an electronic pre-

heater (and air-con) plus heated front seats, heated windscreen and dual-zone climate control. An electronic parking brake with brake auto hold is located in the centre console, along with the Sport Mode and the EV priority switch. Other key features include keyless operation system with Start/Stop button, front fog lamps, LED daytime running lamps and remote Smartphone app compatibility. All of these features are standard in the entry-level Juro model.

Going up a grade the best-selling 4h version's additions include added safety equipment such as a 360-degree camera, blind-spot warning, and rear-cross traffic alert. Other additions include the all new black headlining which complements the black leather interior, an 8-way electric powered driver's seat, heated steering wheel and power tailgate. Lighting is enhanced with LED headlamps, LED High Beam and LED front fog lamps.

The 4hs spec level includes Adaptive Cruise Control, Forward Collision Mitigation and Lane Departure Warning, front and rear parking sensors, Auto High-Beam and an Unintended Acceleration Mitigation System.

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But core to all versions is the PHEV impressive drivetrain in its latest upgraded and more powerful form. There's no range anxiety with this vehicle as with pure electric cars. It can run on petrol only, or petrol-electric power via the hybrid system, or electric only and to maximise the fuel economy it has that all important plug-in facility where the battery can be charged from a mains supply from home/office or any other public charging points. Using a quick charge electricity supply outlet 80% of the battery's capacity can be charged in 25 minutes. Using a domestic 13-amp plug socket a full charge takes five hours. The vehicle also has the function for the petrol engine to be used as a generator to charge the battery and the system includes regenerative braking which harvests electric power into the battery whilst on the move. This element is adjustable so on steep downhill road/off-road sections the driver can adjust the harvesting power from light to heavy via the gearshift paddles.

But to be most effective in terms of low fuel consumption and low emissions the plug-in facility must be used and that is the driver's choice. It has to be said that some company car drivers are attracted to the Outlander PHEV, not just because it's the current desirability of fashionable SUVs, but because of the official homologated low CO2 figures which give it the lowest Benefit-in-Kind tax charge whether they plug it in or not. It's the official figures that determine tax rates, not the figures actually produced during its use. The same applies with low VED road tax costs for business/fleet and retail customers who all benefit, but it's retail owners who are more likely to use the plug-in element to maximise on the fuel economy potential.

For a week's driving of the 2019 Outlander PHEV over winding and hilly Cotswold roads, despite the cold weather, regularly 25 to 28 miles was covered in electric power only from a full charge which was reassuringly accurate with the official new WLTP Combined Cycle figure. With a full battery and using the vehicle in its petrol-electric hybrid mode I saw a figure as high as 204 mpg on the computer readout after a 40 mile stint. But as soon as the battery power had run out, and then with some motorway driving which isn't the most efficient type of driving as there is little chance to harvest power into the battery, the figure dropped to 46.2 mpg for a round trip of 100 miles. Further driving using the plug-in hybrid as it is meant to be used to be its most efficient by charging from the mains electricity and with some petrol-electric hybrid driving, the vehicle returned an overall average for my week of motoring of 54.4 mpg. This was well short of the official figure but better than could be achieved by pure petrol or diesel powered large SUV models. In theory no petrol will be used at all for short journeys if the driving is kept in EV mode all the time and the vehicle is charged from the mains supply on a regular basis.

With the combination of the petrol engine and one electric motor driving the front wheels and the rear electric motor driving the rear wheels, all done seamlessly and automatically, via an automatic Multimode eTransmission with hydraulic clutch, the response from the powertrain was strong. Thanks to the torque provided initially by the electric motors from instant start-off speeds and for outright acceleration it was smooth and acceptably fast enough. Using the larger new 2.4 litre petrol engine has reduced the noise intrusion into the

vehicle, it sounds less stressed during acceleration and at higher cruising speeds. The driver can select electric power only for silent start-offs and trips into town for instance and of course the electric battery power can be stored for use in zero emission zones. In EV only mode the top speed is 84 mph, in the petrol-electric hybrid configuration it's a stately 106 mph and zero to 62 mph takes 10.5 seconds.

Ride comfort due to the suspension changes has been improved but there were noticeable thumps and bumps felt more through the rear suspension units than the front, but overall the ride was generally compliant and comfortable. The Mitsubishi All-Wheel Control system reduces cornering body roll and felt surefooted and well-balanced – although it's not as agile with a kerb weight of 1880 kg (4,145 lb) because of its electric motors and lithium-ion battery pack.

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Being an SUV with all wheel drive the Outlander PHEV does have some off road abilities but it's better to say it's more competent on rough tracks than deep mud. Just as with driving on-road, away from the tarmac the twin electric motors, petrol engine and 4WD system are all controlled by a computer which works out what traction is needed where at each axle and wheel. Of course the 4WD system does provide added traction on-road during adverse conditions. It also helps for towing, giving extra grip when need for pulling a trailer, boat or caravan and has a braked towing capacity of 1,500 kg (3,307 lb), less than its petrol and diesel stablemates due to its substantial kerb weight.

VERDICT

The Mitsubishi Outlander PHEV has been a significant sales success for the brand and the automotive industry. It has pioneered public acceptance and popularity of such petrol electric plug-in hybrid vehicles and most other mainstream manufacturers either now have, or will soon have, PHEV offerings in their line-ups. They are not always bought for environmental reasons but more for lower tax and running costs and who can blame today's harshly treated motorists for looking for tax efficiency rather than cleaner air efficiency.

For: Huge global sales success in its PHEV SUV class, low cost taxes, good real-life fuel economy potential providing the plug-in facility is used, improved higher technical specification and interior quality, comfortable ride, surefooted well balanced handling, 4WD traction.

Against: The Governments £2,500 plug-in vehicle purchase grant for PHEVs has been stopped, this 4hs version attracts the VED Standard rate £310 supplement for five years as its costs over £40k, only five seats whilst diesel/petrol models have seven, no integrated sat-nav system.



Milestones and Wheels-Alive Tech. Spec. in Brief:

2019 Mitsubishi Outlander PHEV 4hs SUV.

Price: £41,600.

Drivetrain: 2.4 litre, four cylinder 135 hp, 211 Nm (156 lb.ft), petrol engine + 82 hp front and 95 hp rear electric motors, automatic Multimode eTransmission with 4WD.

Performance: 106 mph, 0–62mph 10.5-seconds.

Fuel consumption and emissions: New WLTP Combined Cycle 139 mpg, CO2 46 g/km, EV driving range 28 miles, City Driving 35 miles, (46.2 to 204 mpg on test with an overall average of 54.4 mpg).

Taxation: VED First Year road tax £0, Standard rate £130 + £310 supplement for five years as this model costs over £40k, BiK company car tax 13%.

Insurance Group: 31A.

Warranty: Five years/62,500 miles.

Dimensions/capacities: L 4,695 mm (15.40 ft), W 1,800 mm (5.91 ft), H 1,710 mm (5.61 ft), wheelbase 2,670 mm (8.76 ft), kerb weight 1,880 kg (4,145 lb), boot space 463 to 1,602 litres (16.35 to 56.57 ft), braked towing weight 1,500 kg (3,307 lb), five doors/five seats.