

Audi A7 Sportback Plug-in Hybrid – Road Test

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plug-in hybrid TFSI e quattro variant to its line-up. This also heralds the arrival of the Q7 TFSI e quattro, A8 TFSI e quattro and A6 Saloon TFSI e quattro PHEV models plus the Q5 TFSI e quattro has also recently arrived. Together they create a formidable presence in the overall Audi line-up and they also have the e-tron all electric models arriving from now



onwards.

Manufacturers have to meet new lower global exhaust emission targets and in the UK petrol and diesel car sales could be banned from 2032 and not 2035 as agreed. So it's imperative that various forms of using alternative fuels such as electric and hydrogen to propel our cars are introduced sooner rather than later.

Currently the alternative fuel new car market offers pure electric battery models, PHEV plug-in hybrid versions, self-charging hybrids and mild hybrids. In the rather skewed registration figures until the end of May, caused by the pandemic lockdown, alternatively fuelled cars have accounted for 21% of all new cars sold in the UK. In the wider European market alternatively fuelled car sales took 15% of the new car market in May.

In the EU the hybrid/mild hybrid sector Toyota took the top three sales positions with their Corolla, C-HR and RAV4. In the plug-in sector it was the new Ford Puma in the top spot followed by the BMW X3 and VW Passat. In the pure-electric class it was the Renault Zoe followed by the VW Golf and the former long time leader – the Tesla Model 3.

Over 30 years of Audi PHEV technology









Now it may seem Audi is a minor player in the electric/hybrid car market and certainly their offerings like the new A7 Sportback TFSI e quattro are very niche models but over 30 years ago in 1989 Audi launched their first hybrid model, the 100 Avant quattro Duo.

The Audi Duo experimental vehicle was based on the 100 Avant. The Duo's 2.3 litre, five-cylinder petrol engine sent 136 hp to the front wheels and at the same time a nickel-cadmium battery mounted underneath the boot floor powered a 9 kW (12.6 hp) Siemens electric motor that drove the rear axle. Audi also experimented with a solar-panel roof for the vehicle to help charge the batteries on sunny days. It had an electric driving range of 24 miles and its on-board technology also included regenerative braking electric energy



capturing.

Only ten examples of the original Duo were built but the cars were trialled in pilot programmes including use as taxis but they were never put into full production. However, Audi continued to explore hybrid technology and a second version of the Duo based on the Audi 100 Avant arrived in 1991.

Six years after that, Audi became the first European car manufacturer to introduce a limited-edition production PHEV. Also named Duo, it was based on an A4 Avant. It featured a drivetrain incorporating a 90 hp 1.9 litre turbodiesel engine and a 29 hp water-cooled electric motor, powered by a lead gelatine battery mounted in the rear of the car. Both the engine and the electric motor were used to power the front wheels.

As with the earlier Audi hybrid studies, the production Duo featured plug-in charging and its electric motor could also recuperate energy during deceleration. In electric mode the A4 Avant Duo could reach 50 mph, and 106 mph using TDI diesel power. Ultimately the car proved to be too far ahead of its time and the market wasn't ready for it. However the hybrid technologies that were developed during the creation of the Duo models has enabled the latest generation of Audi PHEVs to come to market.

The new A7 Sportback 55 TFSI e quattro PHEV









The A7 Sportback is a four door luxury coupé, well five doors actually as it has a hatch at the rear for the executive luggage. It is effectively a coupé version of the A6 range, or look at it another way and it is a slightly shorter version of the A8 large saloon.





Anyway you get my drift; it is a top quality elegant looking, long distance touring machine with five seats but better for four adults with ample rear seat legroom plus a 380 litre (13.42 cu.ft) boot for the designer luggage. Fold down the rear seat backs and this will increase to 1,235 litres (43.63 cu.ft) for those golf clubs.





The A7 Sportback isn't new, this generation has been on sale for two years but it's only now that the tax friendly PHEV plug-in hybrid model has been introduced to the line-up. In the main the A7 Sportbacks are powered by large capacity muscular petrol and diesel engines with loads of power and grunt with exhaust soundtracks to match. But there are also now less powerful units included broadening the appeal to a wider range of customers. Power outputs range from 204 hp right up to 600 hp for the RS TFSI quattro versions and prices are wide-ranging as well, operating from just under £50k to well over £113k.

However it's the £69,140 newcomer to the line-up we are interested in for this review. The TFSI e badge identifies this model referring to the 2.0 litre turbocharged four cylinder 252 hp petrol engine while the 'e' denotes the electric motor that supports the petrol engine and can also power the car in pure electric mode.





The underbonnet view - photograph by David Miles.

The electric motor is driven by a lightweight compact efficient lithium-ion battery hidden under the boot floor, which drivers can recharge by plugging in at home, at work or at a roadside charging point. The A7 Sportback 55 TFSI e quattro offers three driving modes. Hybrid mode is the default setting when route guidance is active which enables the system to select the most efficient propulsion solution automatically, be that fully electric, petrol power on its own or a combination of both.

In EV (Electric Vehicle) mode, the car relies purely on electric power unless the accelerator is firmly pressed in which case the engine instantly fires back into life. Finally in Battery



Hold mode the battery charge is preserved at its existing level for those zero emission zones.

Despite its clear focus on efficiency the Audi A7 Sportback 55 TFSI e quattro is no sluggish 'flash-mobile'. When the TFSI engine and the electric motor work in tandem the system produces 367 hp and 500 Nm (369 lb.ft) of torque or 'grunt'. The latter is available from just 1,250 rpm.

Power is transferred to the road through a smooth-changing, double-clutch seven-speed S tronic auto transmission and quattro all-wheel drive. The hybrid A7 is capable of sprinting from 0–62 mph in just 5.7 seconds and reaches a restricted top speed of 155 mph. In electric-power only mode it can travel for around 25 miles and reach speeds of up to 83.9 mph.

Officially the coupé will return 141.2 mpg in the new WLTP Combined Cycle with CO2 emissions of 46 g/km. During my week of test driving occasionally recharging the battery and leaving the vehicle in its default Hybrid mode the figure was 63.9 mpg but at times it was as low as 44 mpg and as high as 132 mpg. PHEVs do not give their best fuel economy for long motorway journeys, the battery power runs out and the engine does all the work. Commuter urban stop-start travelling is its most efficient arena and winding country roads with lots of opportunities for topping up the battery using the regenerative braking energy capture function also works well.

That all important company car Benefit-in-Kind tax rate is just 12% whilst most other petrol/diesel A7 Sportback variants are rated at 37%. The VED road tax First Year rate of £0 is followed by £140 Standard rate BUT as the coupé costs over £40k it incurs the dreaded £325 annual supplement for five years. Insurance is Group 49E.

The Intelligent Route Management Technology such as predictive efficiency assist (PEA) and predictive operating strategy (PBS) ensures optimum use of the battery's charge. Different aspects of the journey, including roundabouts, hills, speed limits and traffic further



along the route ahead, are taken into account to ensure the correct driving mode for each situation. This enables the final urban stretch of a chosen course to be driven electrically, during which the car produces no emissions. That's the theory anyway.

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All Audi TFSI e models have two 'fuel filler' flaps, one on each side of the car. The one on the right is for petrol while the one on the left houses the connector for the electric charging cable. Using a connection with an output of 7.4 kW, such as a home wall box or a roadside charger in town the charging time takes two-and-a-half hours but much longer using a domestic 13-amp socket. Using the myAudi smartphone app drivers can check the battery and range status remotely as well as starting and monitoring the charging process.

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So what's it like to live with? That's down to your motoring conscience. If you are an eco warrior or a dedicated tax saver then the new TFSI e variant is for you. If on the other hand you want your A7 to have a soul then pay the considerable extra tax costs and sit back and enjoy the thrust of a multi-cylinder large engine which still predominates in the latest range.

That isn't to say the 2.0 litre, four cylinder engine and electric motor powertrain comes up short on power or torque – it doesn't as the performance figures show. But for long legged cruising on motorway journeys and countryside roads it just lacks that depth of performance, that ease of high speed progress and probably most of all the theatre of sound from the exhaust system. The A7 Sportback e variant is great for local travel using all-electric power but for it to remain efficient it must be charged from the mains more or less daily and in all honesty how many company car drivers in real-life actually do that? They just go the PHEV route to considerably reduce their personal tax costs and in doing so actually use more petrol and increase the car's running costs, no doubt paid for by the company.





VERDICT

In all other respects this 55 TFSI e quattro PHEV version of the A7 Sportback has the same rock-solid build quality and high specification throughout as other posh Audis. The iCockpit functions through to the Audi Drive Select functions are all included as is the new and really clever Intelligent Route Management Technology function which automatically controls the engine and electric motor's optimum use during a journey.

Route Management is another element of autonomous driving we will have to get used to and it didn't appear to be intrusive on longer journeys. I just pushed the start button, set the



sat-nav destination, selected Drive and pressed the accelerator and let the technology do its own thing. It all seemed to work well enough but without providing much driving pleasure. It felt very efficient and clinical rather than pleasurable and rewarding. Tax scrimpers might not agree though.

For: Plug-in hybrid technology does away with driving range anxiety of a pure electric car, low tax costs for company car executives, clever auto Route Management power usage system, impeccable build quality, stunning kerb appeal, easy to drive, having four doors makes coupé living easy.

Against: Costly to buy/lease, clinically efficient hybrid powertrain rather than the pleasurable experience of a multi-cylinder petrol or diesel engine, ungenerous warranty.





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

Audi A7 Sportback 55 TFSI e quattro Sport S tronic 4-door coupé.

Price: £69,140.

Powertrain: 2.0 litre, four cylinder, direct injection petrol with turbocharger and intercooler, 105 kW electric motor, 367 hp and 500 Nm (369 lb.ft) total power/torque output, lithium-ion battery pack, seven speed S tronic auto transmission with quattro



all wheel drive. Performance: Restricted to 155 mph, 0-62 mph 5.7 seconds.

Fuel consumption: WLTP Combined Cycle 141.2 mpg (63.9 mpg on test), all-electric driving range 25 miles.

Emissions and taxation: CO2 46 g/km, VED road tax £0 First Year rate, Standard rate £140 plus £325 annual supplement for five years as the vehicle costs over £40k, BiK company car tax 12%.

Insurance Group: 49E.

Warranty: Three years/60,000 miles.

Dimensions/capacities: L 4,969 mm (16.30 ft), W 1,908 mm (6.26 ft), H 1,421 mm (4.66 ft), wheelbase 2,926 mm (9.60 ft), boot/load space 380 to 1,235 litres (13.42 to 43.63 cu.ft), four passenger doors + tailgate, four to five seats.