Audi A3 Sportback 45 TFSI e Plug-in hybrid with DC charging technology

More powerful and efficient than ever: the new A3 Sportback TFSI e

With a higher battery capacity, DC charging at fast-charging stations, and an electric range of up to 143 kilometers, the Audi A3 Sportback TFSI e* is undergoing a comprehensive technology upgrade. Its intelligent drive management ensures outstanding efficiency, high recuperation performance, and locally emission-free driving over long distances in everyday life. The plug-in hybrid combines dynamic handling with increased comfort.

The new turbocharged petrol engine and the electric motor with increased power density are at the heart of the drive system. The 1.5 TFSI evo2 replaces the previous 1.4 TFSI and boasts a wide range of high-tech features. In addition to optimizing combustion chamber cooling, the symbiosis of the turbocharger with variable turbine geometry and the Miller cycle, as well as the early closing of the intake valves, ensures a higher compression ratio. The ratio is now 11.5:1, compared to 10:1 in the 1.4 TFSI. Thanks to this combustion process, the new unit operates with a high degree of efficiency, reducing fuel consumption and emissions. Injection takes place at a pressure of up to 350 bar. By comparison, the 1.4 TFSI reached a maximum of 200 bar. Plasma-coated cylinder liners reduce internal friction in the new engine. Pistons with cast-in cooling channels optimize combustion.

The electric drive is provided by a permanently excited synchronous motor, which now delivers 85 kW and 330 Nm of torque. As with its predecessor, it is integrated into the housing of the six-speed S tronic, which is now equipped with a more robust gearbox bearing to cope with the higher system output.

It transfers the torque from the two engines to the front axle. The dual-clutch transmission has an electric oil pump that ensures the change of gears and oil supply even when the TFSI is temporarily deactivated.

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