Audi A6 Avant - 3.0 V6 TFSI with MHEV plus technology

Fuel-efficient and high-performance: MHEV plus technology

At its launch, the new A6 Avant will be available with three different engines – two gasoline and one diesel. Two of these three power units will feature mild hybrid technology (MHEV plus) and are therefore partially electrified.

The MHEV plus system supports the combustion-engine vehicle, enhances performance and ride quality, and reduces CO2 emissions. It consists of three main components: a 48-volt battery, a belt alternator starter, and the new powertrain generator with integrated power electronics. The lithium-ion battery, made of lithium iron phosphate, has a storage capacity of 1.7 kWh. The belt alternator starter's primary function is to start the engine and supply the battery with electrical energy. The powertrain generator enables partially electric driving, provides additional torque, and feeds energy back into the battery during deceleration.

Partially electric driving: MHEV plus technology leverages the advantages of electric driving when parking and maneuvering. The electric driving components can also be used when driving slowly in the city, in slow-moving traffic, or outside city limits when coasting to the next village. In these situations, the A6 Avant* runs solely on the powertrain generator, making it particularly efficient.

A boost of up to 18 kW: MHEV plus technology supports the combustion-engine vehicle, for example when starting up in stop-and-go traffic or when passing. To do this, the powertrain generator produces additional torque up to 230 newton meters and up to 18 kW (24 PS) of power.

Regeneration of up to 25 kW: When decelerating, the powertrain generator recovers energy and feeds it – up to 25 kW of power – back into the battery (regeneration). The integrated, blending-capable brake control system ensures pressure-free braking and the best possible regeneration, in most cases without the use of the friction brake.

The 48-volt system also enables the use of an electrically driven air-conditioning compressor. The major advantage here is that even when the engine is switched off – for example when coasting or at a red light – the air-conditioning continues to operate at full power, keeping the interior at a comfortable temperature.

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