Audi RS 5 – Operating strategy and battery management

Intelligent energy recovery: coasting and braking recouperation

The times during which the driver doesn’t have their foot on the throttle are of major importance to the plug-in hybrid’s efficiency. Energy recovery (recouperation) is controlled depending on the selected gear in accordance with a pre-defined deceleration rate. In addition, automatic recouperation can be activated via the MMI. It lets the vehicle vary regeneration automatically.

For example, they might decide to set it to a level that allows all-electric motoring near a destination that doesn’t have a charging point. Predictive operating strategies optimize energy planning for the upcoming route. The aim is to cover city driving and traffic jams on electric power – for more efficiency, lower local emissions, and a hybrid experience.

Whenever the selected state of charge (SoC) is below the current SoC, the battery is discharged to this value. As long as both values are the same, the combustion engine propels the car, saving battery charge. If the target SoC is above the current SoC, the combustion engine charges the high-voltage battery. During driving, the battery can be charged up to 80 percent. The RS 5* not only keeps the battery charged to maximize efficiency and minimize emissions, but also to enable sporty driving. While dynamic mode is active, the battery is never discharged below 20 percent to ensure sufficient reserves to deploy the boost function. In the modes RS sport and RS torque rear, the battery never goes below 90 percent. This means drivers always have access to full electric power for sporty maneuvers or dynamic acceleration.