Plug-in technology and all-wheel drive

Next level in hybrid performance

Following in the tracks of the Panamera 4 E-Hybrid, which is powered by a V6 biturbo engine and an electric motor, Porsche is once again showcasing the huge performance potential of hybrid technology in the new Panamera Turbo S E-Hybrid. In this top model in the line, Porsche combines a 100 kW (136 hp) electric motor with a 404 kW (550 hp) V8 biturbo engine. With both engines working in tandem, the car has a system power of 500 kW (680 hp) and 850 Nm of system torque at its disposal. The boost strategy deployed in the drive was taken from the 918 Spyder: The electric drive not only delivers exceptional energy efficiency, but also additional thrust – creating an additional electric turbo that enables Porsche to rightfully position the Panamera sports car in the same class as its large touring counterparts.

Electric clutch actuator and rapid eight-speed PDK

The electric motor and the petrol engine are connected via a decoupler in the Porsche hybrid module. This electromechanically actuated Electric Clutch Actuator (ECA) guarantees fast response times and exceptional comfort. The fast-shifting, eight-speed Porsche Doppelkupplung (PDK) is used to transmit power to the standard active all-wheel drive system Porsche Traction Management (PTM). The plug-in hybrid drive takes the new Panamera top model to 100 km/h in 3.4 seconds (Panamera Turbo S E-Hybrid Executive: 3.5 seconds); the Gran Turismo has a top speed of 310 km/h.

Liquid-cooled lithium-ion battery

The electric motor is supplied with power via a liquid-cooled lithium-ion battery with an energy capacity of 14.1 kWh. The high-voltage battery integrated in the rear is fully charged within six hours at 10 A via a 230 V connection. If the Panamera uses the optional 7.2-kW on-board charger and a 230-V, 32-A connection instead of the standard 3.6-kW charger, the battery is fully charged in just 2.4 hours. The charging process can also be started using a timer via Porsche Communication Management or the Porsche Connect app (for smartphones and Apple® Watch). Moreover, the Panamera Turbo S E-Hybrid is fitted with auxiliary air conditioning to cool or heat the passenger compartment even during charging using energy from the power grid.

Start with “E-Power” and A+ energy efficiency rating

The Panamera Turbo S E-Hybrid starts in the purely electric “E-Power” mode as standard. The four-door sports car drives up to 50 kilometres locally with zero emissions. When a specific pressure point is passed in the accelerator pedal, or when the battery charge level drops below a minimum value, the Panamera switches to “Hybrid Auto” mode, at which point the power from both engines is available. Consumption in the New European Driving Cycle (NEDC) for plug-in hybrid models amounts to 2.9 l/100 km for super-grade petrol (66 g/km of CO_2) and 16.2 kWh/100 km for electric power. The fact that the Porsche Panamera Turbo S E-Hybrid has been awarded Germany’s top energy efficiency rating of A+ proves how efficiently the car converts energy into motion.

“Hybrid Auto” mode uses topology and navigation to save energy

The Sport Chrono Package, including the mode switch integrated into the steering wheel,

forms part of the standard equipment on the Panamera Turbo S E-Hybrid. The mode switch and the Porsche Communication Management system are used to select the various driving modes. These modes include the familiar “Sport” and “Sport Plus” modes from the other Panamera models equipped with the Sport Chrono Package. The hybrid-specific modes are “E-Power”, “Hybrid Auto”, “E-Hold” and “E-Charge”.

E-Power

In “E-Power” mode, the Panamera Turbo S E-Hybrid drives up to 50 kilometres on electricity alone for emissions-free local journeys.

Hybrid Auto

The “Hybrid Auto” mode is a completely new development. When this mode is selected, the Panamera changes and combines the drive sources automatically for ultimate efficiency.

E-Hold

The “E-Hold” mode allows drivers to consciously conserve the current state of charge to enable them to switch to electric and therefore zero-emissions mode in an environmental zone at their destination, for example.

E-Charge

In “E-Charge” mode, the battery is charged by the eight-cylinder engine; to achieve this, the petrol engine generates a higher level of power than is actually needed just for driving.

Sport and Sport Plus

The highest level of drive performance is made available in the “Sport” and “Sport Plus” modes. The V8 biturbo is active continuously in these modes. In “Sport” mode, the battery charge is always maintained at a minimum level to ensure that sufficient boost reserve capacity is available when needed. “Sport Plus” mode is all about maximum performance. In addition, the battery is charged as quickly as possible to ensure maximum performance.