New hybrid Panamera model unveiled

09/09/2016 Sustainability and performance – no contradiction for Porsche

The Paris Motor Show will see Porsche unveil the next model in the all-new Panamera line: the Panamera 4 E-Hybrid with standard all-wheel drive and an electric range of up to 31 miles (50 km). The plug-in hybrid vehicle generates 462 hp of total system output and delivers impressive fuel consumption of 2.5 l/100 km, which corresponds to only 56 g/km of CO_2 emissions. All figures to date are based upon the New European Driving Cycle (NEDC).

Performance Hybrid

At Porsche, the term "hybrid" is synonymous with sustainable mobility and performance – most recently displayed with the back-to-back victories of the Porsche 919 Hybrid in the 24 Hours of Le Mans in 2015 and 2016. This philosophy is now also defining the Panamera 4 E-Hybrid.

The new Porsche plug-in hybrid always starts in electric mode and continues as a zero-emission vehicle with a maximum all-electric range of 31 miles and a maximum speed on battery power of 86 mph. And yet, this Panamera is still a sports car among luxury sedans: the all-wheel drive four-door Porsche achieves a top track speed of 172 mph and delivers a total system torque of 516 pound-feet without hesitation. The torque is transferred to all four wheels, while the standard three-chamber air suspension ensures an optimum balance between comfort and performance at all times. The newest plug-in hybrid sports sedan breaks the 0-60 barrier in just 4.4 seconds.

New hybrid strategy based on the Porsche 918 Spyder

The superlative performance is no accident: the new Panamera 4 E-Hybrid features a hybrid strategy never before seen in this segment – a strategy based on the 918 Spyder. The 887-hp 918 Spyder is the fastest series-produced vehicle ever to lap the Nürburgring Nordschleife. The record lap time of 6:57 minutes is in part attributed to the additional power provided by two electric motors.

As with the 918 Spyder, the power of the Panamera electric motor – 136 hp (100 kW) and 295 pound-feet of torque – is made available as soon as the driver touches the accelerator pedal. On the predecessor model, the pedal needed to be pressed at least 80 percent of the way down to unleash the additional power of the electric drive's “E-Boost” mode. Now, the electric motor is available to deliver additional power at any time. Together with the performance characteristics of the new 2.9-liter twin-turbo V6 (330 hp and 331 lb.-ft.), this generates an impressive boost scenario based on the electric motor and turbochargers.

In the Panamera 4 E-Hybrid, the electrical energy is also used to increase the car's top track speed. At

Porsche, this new type of "E-Performance" – more power, more driving fun, lower fuel consumption – is seen as the performance kit of the future.

New hybrid module and fast-shifting eight-speed PDK

Together with the combustion engine decoupler, the electric motor heralds the next generation of the Porsche hybrid module. In contrast to the electro-hydraulic system of the previous model, the decoupler on the new Panamera is actuated electromechanically by an electric clutch actuator (ECA), resulting in even shorter response times.

Similar to the other second-generation Panamera models, a new, efficient, and extremely fast-shifting Porsche eight-speed Doppelkupplung (PDK) transmission is used to transmit the power to the wheels. This transmission replaces the eight-speed automatic torque converter transmission in the previous model.

The electric motor is supplied with power via a liquid-cooled lithium-ion battery. And despite the increase in energy content of the battery from 9.4 to 14.1 kWh (integrated under the luggage compartment floor), its weight has remained the same. The high-voltage battery takes just 12 hours to fully charge via a common 120 V, 10 amp connection. If the optional 7.2 kW on-board charger is utilized instead of the standard 3.6 kW unit, the charging times decrease to under three hours with a 240 V, 40 amp connection.

The charging process can also be initiated using a timer via Porsche Communication Management (PCM) or the Porsche Car Connect app (for smartphones and Apple® Watches). Additionally, the Panamera 4 E-Hybrid features standard auxiliary air conditioning which can cool or heat the passenger compartment during charging.

Porsche Advanced Cockpit with hybrid-specific displays

One highlight of the second-generation Panamera is the newly designed display and control concept in the form of the standard Porsche Advanced Cockpit with touch-sensitive panels and individually configurable displays. Two seven-inch screens either side of the analog tachometer form the interactive cockpit, and in contrast to the other Panamera variants, the Panamera 4 E-Hybrid features a power meter tailored to hybrid operation. The intuitive operating principle of the hybrid-specific displays is similar to that used in the Porsche 918 Spyder hypercar. The power meter provides data such as the amount of electrical energy currently being used as well as the amount recovered through recuperation.

A 12.3-inch touchscreen functions as the centralized Porsche Communication Management (PCM) control and display unit. The driver can access various items of hybrid-specific information both here on the display and in the instrument cluster. The boost assistant and hybrid assistant are both practical and informative. The former display shows the energy available for boosting, while the latter provides various visual signals for regulating the electrical drive power.

Ultimate efficiency in "Hybrid Auto" mode

The Sport Chrono Package, which integrates a mode switch into the steering wheel, forms part of the standard equipment on the Panamera 4 E-Hybrid. The mode switch and PCM are used to activate the various driving modes. These modes include the familiar "Sport" and "Sport Plus" modes from other Panamera models equipped with the Sport Chrono Package. The hybrid-specific modes are "E-Power," "Hybrid Auto," "E-Hold," and "E-Charge."

The Panamera 4 E-Hybrid always starts in "E-Power" which puts the powertrain in a pure electric mode. The "Hybrid Auto" mode is a completely new development which adjusts and combines the internal combustion and electric mode drive sources automatically for ultimate efficiency.

The "E-Hold" mode allows drivers to conserve the current state of charge of the lithium-ion battery. This will allow the driver to utilize electric mode (and therefore drive with zero emissions) in an environmental zone at their destination, for example. In "E-Charge" mode, the battery is charged by the V6 engine; to achieve this, the gasoline engine generates a higher level of power than is needed for driving.

The highest level of drive performance is made available in the "Sport" and "Sport Plus" modes. The twin-turbo V6 remains active in these modes. In "Sport" mode, the battery charge is maintained at a level to ensure there is sufficient e-boost capability when needed.

Finally, "Sport Plus" mode is all about maximum performance and allows the Panamera to reach its top track speed of 172 mph. This mode also recharges the battery as quickly as possible with the help of the twin-turbo V6 engine, while also dipping deeper into the power reserves to ensure maximum e-boost is available.

Panamera 4 E-Hybrid availability and pricing

The new 2018 Porsche Panamera 4 E-Hybrid is expected to become available in North America by the summer 2017. Pricing will be announced at a later date.

MEDIA ENQUIRIES



Luke Vandezande

Product Spokesperson 911 and 718 Boxster/Cayman, Motorsport and Brand Heritage
470-363-5001
luke.vandezande@porsche.us



Andrew Lennon

770-290-3511
andrew.lennon@porsche.us

Link Collection

Link to this article
https://newsroom.porsche.com/en_US/products/panamera-4-e-hybrid-19908.html

Media Package
https://pmdb.porsche.de/newsroomzips/010b86cc-c4b2-48be-a17a-2e58ad97e889.zip

Dr. Ing. h.c. F. Porsche Aktiengesellschaft
Porscheplatz 1
70435 Stuttgart