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Efficient and Powerful: The New Plug-In Hybrid Models Audi Q5, A6, A7 and A8

- **Audi A8, A7 Sportback, A6 and Q5 as plug-in hybrids with a strong electric motor, high battery capacity and a new drive strategy**
- **An electric range of more than 40 km according to WLTP**
- **Convenient and networked charging with myAudi app**

Ingolstadt, February 25, 2019 – In electric-only mode not just free of local emissions but also efficient and sporty – Audi is consistently pursuing its electrification strategy with its comprehensive plug-in hybrid offensive. Audi is presenting the hybrid variants of the models A8, A7 Sportback, A6 and Q5 with an electric range of more than 40 kilometers in the WLTP cycle at the Geneva Motor Show. Thanks to different output levels, the customer has the choice between a comfort variant and a performance variant with a sporty design, depending on the model series. The new plug-in hybrid models will be available for order during the course of the year 2019.

Wide selection of models: The plug-in hybrid strategy of Audi
Plug-in hybrids from medium-size SUV to luxury sedan – with Q5, A6, A7 and A8 TFSI e, Audi is expanding its range of plug-in-hybrids for sustainable mobility. Depending on the model series, there is a choice of two variants with different performance and equipment: A comfort model and a variant with a sporty configuration with S line scopes, a more tightly tuned suspension and drive setup with higher boost performance of the electric motor for more dynamic handling. From now on, the new plug-in hybrid models carry the “TFSI e” signet. In the future, the “e-tron” label will remain reserved exclusively for electrically driven cars.

Power from two hearts: the versatile drive concept
The plug-in hybrid electric vehicles (PHEV) create enthusiasm thanks to their versatile character. In electric-only mode, for example, free of local emissions in the city, no range anxiety when driving long distances, sporty and dynamic with the with the power of two hearts from the combustion engine and electric motor: The drive concept offers a wide range.

* The collective fuel consumption values of all models named and available on the German market can be found in the list provided at the end of this MediaInfo.

The electric-only range of the PHEVs will account for more than 40 kilometers in the WLTP cycle for every model. The hybrid drive concept is designed so that customers can travel on around a third of their usual routes in electric-only mode during day-to-day driving.

All new plug-in-hybrids by Audi use a turbo-charged gasoline engine with direct injection that works together with an electric motor that is integrated in the transmission. A lithium-ion battery beneath the luggage compartment floor supplies the electrical energy. As a result, the electric motor can support the combustion engine during acceleration. The result: high start-off performance and powerful acceleration.

At the same time, with regard to recuperation, the drive system resembles that of the new purely electrically driven Audi e-tron*. It is designed for high efficiency and maximum recuperation performance. When breaking, the new Audi PHEV models recover up to 80 kW of energy. The electric motor handles slight decelerations, i.e. the majority in everyday traffic. For medium brake applications, the task is divided between the hydraulic wheel brakes, which perform this task alone only with a deceleration of more than 0.4 g.

The lithium-ion battery for the A6, A7 and A8 is made up of 104 pouch cells, which are combined in eight modules. It stores 14.1 kWh of energy at a voltage of 385 V. The lithium-ion battery in the Q5 comprises prismatic cells and has the same capacity. In each case, the cooling circuit of the battery is integrated in the low-temperature circuit, which supplies the electric motor and the power electronics. The power electronics transform the direct current of the high voltage-battery into a three-phase current for the electric motor; when recuperating, it does the opposite. The standard heat pump ensures efficient vehicle climate control and can generate up to 3 kW of heat energy from 1 kW of electrical energy with the waste heat occurring in the vehicle.

The powertrain: efficient combustion engine, high-performance electric motor and large lithium-ion battery capacity

The A8 with plug-in hybrid drive has a combustion engine and a permanently excited synchronous motor as an electric motor. It is integrated together with the clutch in the eight-gear tiptronic, which passes the torques to the quattro permanent all-wheel drive. The luxury liner drives as a 5.3-meter long A8 L variant with an extended wheelbase.

The Audi A7 and A6 models with plug-in hybrid drive use the same powertrain. The battery capacity is identical to that of the Audi A8 PHEV. Together with the electric motor that is integrated in the dual clutch transmission, a gasoline engine ensures that there is ample output and torque. Both models are available in two output levels with different boost performance.

The powertrain in the Audi Q5 PHEV follows the same concept as the Audi A6 and A7.

Drive modes and drive control: Maximum comfort and high electric range
The hybrid management of the plug-in-models is designed for maximum efficiency and customer comfort and automatically selects the optimum operation strategy. Start takes place electrically in “EV” mode as standard; the combustion engine is switched on depending on the situation.

The plug-in hybrid models have the following drive modes: “EV,” “Auto,” and “Hold.” With the operating mode button, the driver can select from these three basic settings: Priority for the electric drive, fully automatic hybrid mode or save power for a later phase of the journey. In “Auto” mode, the PHEVs use the intelligent interaction of the electric motor and the combustion engine for maximum efficiency. In “Hold” mode, the drive management controls the powertrain so that the current charge status of the battery is maintained, e.g. for driving later in electric-only mode in urban areas.

The predictive efficiency assist makes an essential contribution to increasing the electric range and ensuring maximum customer comfort. For this purpose, the intelligent drive management integrates the route profile into the control of the powertrain. The predictive operation strategy assesses both the navigation data during active route guidance and the information of the predictive efficiency assist as well as of the vehicle sensor system. Using this information, it creates rough planning for the entire route and fine planning for the upcoming kilometers. As a result, situations are recognized in which the driver should take their foot off the right pedal. The driver receives a corresponding visual indication on the display and haptic feedback via the active accelerator pedal. At the same time, anticipatory recuperation is initiated.

Moreover, the driver can select between the “comfort,” “efficiency,” “auto” and “dynamic” drive modes via the familiar switches in the Audi drive select dynamic handling system and thus influence the setup of the drive, suspension and steering. Depending on the setting, the thresholds from which both drives work together or the electric motor supplies the boost and thus the maximum torque change when accelerating. In “dynamic” mode, the electric motor supports the combustion engine more intensively with its electric boost performance for maximum dynamic handling.

The active accelerator pedal with variable pressure point for driving in electric-only mode supports the drive with haptic feedback for operation that is as efficient as possible. When the driver removes their foot from the accelerator, the vehicle glides freely in the automatic gear D and in the Audi drive select profiles “auto” and “efficiency” (under 160 km/h), where both the combustion engine and the electric motor are decoupled and switched off. On the other hand, in the S gear and in the “dynamic” profile, the electric motor remains active in deceleration mode and recuperates, i.e. it converts the kinetic energy into electrical energy.

The optional Audi virtual cockpit and the MMI display present all important notifications concerning electric driving: a power meter, the range and all energy flows.

Versatile – not only with regard to the drive: Model strategy and equipment lines
Audi offers the A6, A7, and Q5 each as comfort models and sporty and dynamic variants. The latter are being launched with particularly sporty equipment: Apart from the increased boost of the electric motor, they have an S line exterior package as standard. In addition, the A6 and A7 have a black styling package with darkened trims, brake calipers painted in red, and privacy window glazing in the rear compartment. The performance hybrids also place sporty touches in the interior. The A6 and A7 have a sport suspension as standard.

Convenient: Charging with the e-tron Charging Service
The compact charging system is also part of the standard equipment of the new Audi plug-in hybrids. It comprises cables for the domestic and industrial sockets and a control panel.
As an option, Audi supplies the wall-holder clip and a mode 3 cable for public charging stations. At a charge connector with an output of 7.2 kW, a full charge of the battery takes a good two hours.

While on the go, customers can charge the new plug-in hybrid models conveniently. A charging service owned by Audi, the e-tron Charging Service, grants access to a large number of public charging stations in 16 European countries on request. Preparations are being made to introduce this in other countries. Just one card is sufficient to begin charging with numerous providers. Customers have to register one time on the myAudi portal and conclude a charging contract that is subject to a fee. Invoicing always takes place at the end of the month using the stored method of payment.

At the market launch of the Audi e-tron*, Audi customers can supply their house and their garage with eco-electricity, generated free of CO_2 emissions, from the “Volkswagen Naturstrom” brand. It is generated 100% from renewable sources, such as hydroelectric power plants, and its origin is certified by TÜV every year. In addition, if necessary, Audi supports customers in getting them in contact with an electrician for implementing a suitable charging solution in their own garage.

Charge Management from the Couch: The myAudi app
The myAudi app is also a practical tool for dealing with the vehicle. The app brings services from the Audi connect portfolio to the customer’s smartphone. Using the app, the customer can remotely check the battery and range status, start the charging process, program the charge timer and view the charge and consumption statistics.

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Another function of the myAudi app is the pre-entry climate control even before setting off. It is made possible because the compressor of the air conditioning and the auxiliary heater in the vehicle work on a high-voltage basis. The customer can determine exactly how the interior should be heated or cooled while the vehicle is parked or the battery is being charged. Depending on the respective vehicle equipment, heating of the steering wheel, seats, mirror, windshield and rear window as well as the seat ventilation can be activated via the pre-entry climate control. Rapid start of the climate components is also possible when unlocking the vehicle with the key.

– End –

Fuel consumption of the models named above
(Information on fuel/power consumption and CO_2 emission figures given in ranges depend on the equipment selected)

Audi e-tron:
Combined electrical consumption in kWh/100 km: 26.2–22.6 (WLTP); 24.6–23.7 (NEDC);
Combined CO_2 emissions in g/km: 0

Further information on official fuel consumption figures and the official specific CO_2 emissions of new passenger cars can be found in the "Guide on the fuel economy, CO_2 emissions and power consumption of all new passenger car models," which is available free of charge at all sales dealerships and from DAT Deutsche Automobil Treuhand GmbH, Hellmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen, Germany (www.dat.de).

The **Audi Group**, with its brands Audi, Ducati and Lamborghini, is one of the most successful manufacturers of automobiles and motorcycles in the premium segment. It is present in more than 100 markets worldwide and produces at 18 locations in 13 countries. 100 percent subsidiaries of AUDI AG include Audi Sport GmbH (Neckarsulm), Automobili Lamborghini S.p.A. (Sant'Agata Bolognese, Italy) and Ducati Motor Holding S.p.A. (Bologna, Italy).

In 2018, the Audi Group delivered to customers about 1.812 million automobiles of the Audi brand, 5,750 sports cars of the Lamborghini brand and 53,004 motorcycles of the Ducati brand. In the 2017 fiscal year, AUDI AG achieved total revenue of €60.1 billion and an operating profit of €5.1 billion. At present, approximately 90,000 people work for the company all over the world, more than 60,000 of them in Germany. Audi focuses on sustainable products and technologies for the future of mobility.