

Product and Technology Communications

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The sportiness of the Audi TT redesigned: The Audi TT Sportback concept show car

- Sporty elongated sculpture: Concept study reinterprets Audi TT*
- Board Member for Development Prof. Dr. Hackenberg: "TT Sportback concept unites two concepts to form a new member of a potential TT family"
- Four-cylinder TFSI provides 400 hp, maximum torque 450 Nm (331.9 lb-ft)

Ingolstadt/Paris, October 1, 2014 – A speedy sports car with four seats and five doors – Audi is presenting the TT Sportback concept at the Paris Motor Show. The exterior of the show car invokes the design idiom of the classic TT*, developing it into a new, elongated sculpture. It is driven by a high-powered 2.0 TFSI engine that delivers 294 kW (400 hp).

"With the TT, Audi created one of the automotive design icons of the last 20 years," says Prof. Dr. Ulrich Hackenberg, Audi Board Member for Technical Development. "In the years since, we have designed our sporty and elegant five-door Audi A5 Sportback* and Audi A7 Sportback*. In our Audi TT Sportback concept show car, we are now fusing both concepts to form a new member of a potential TT family."

The Audi TT Sportback concept captivates with the power of 294 kW (400 hp) that flows through a seven-speed S tronic to the quattro permanent all-wheel drive. The sprint from 0 to 100 km/h (62.1 mph) takes just 3.9 seconds. The sophisticated suspension and the low center of gravity ensure dynamic handling, and the body integrates a number of lightweight aluminum components. A laser spot that complements the LED high beam is featured in each of the headlights – this innovation from Audi significantly boosts safety when driving in the dark.

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



The Audi virtual cockpit dominates the elegantly designed interior of the show car, with the 12.3-inch screen replacing the conventional instruments and the MMI monitor. The screen provides top-quality graphics and enables the driver to choose between multiple display levels. In the MMI terminal, the rotary push-button features a touchpad that is used to enter characters and gestures as with a smartphone. The operation of the climate control has been relocated to the air vents.

Exterior design

The five-door Audi TT Sportback concept is 4.47 meters (14.7 ft) long, 1.89 meters (6.2 ft) wide, and 1.38 meters (4.5 ft) high, featuring a wheelbase of 2.63 meters (8.6 ft). Compared with the new production TT, it is 29 centimeters (11.4 in) longer, 6 centimeters (2.4 in) wider and has a 12 centimeter (4.7 in) larger wheelbase; its height is 3 centimeters (1.2 in) less than that of the new TT.

Featuring Mars red paintwork, the body is a statement of powerful elegance: High-precision lines border athletically domed surfaces, and a flat greenhouse is positioned on a powerful body. The design makes use of the Audi TT's formal idiom to develop a new sporty and elongated sculpture that is highly taut.

The distinctive horizontal lines at the front end of the new Audi TT Sportback concept reinforce the broad and sporty look. Bearing the quattro badge on its lower edge, the Singleframe grille is flatter and wider than on the two-door coupe and features a honeycomb grille insert with a resplendent dark aluminum look.

The lateral borders of the Singleframe are continued across the hood as swage lines, giving it a sporty contour. Typically for Audi, the design forms a coherent whole, with all the lines and surfaces of the show car being linked to one another in a logical manner.

The front of the Audi TT Sportback concept has another characteristic feature in the form of the large, striking air inlets. Framed by pronounced edges, the air inlets have the look of individual structures and feature honeycomb inserts that fill their interior. A third, flat inlet underneath the Singleframe connects them to each other. The blade that gives the Singleframe structure sharpens the look of the show car whilst boosting the aerodynamics.



Another typical TT design feature are the newly designed headlights with separators that demonstrate a unique daytime running light signature. On the Audi TT Sportback concept, the high-beam spot is provided by laser technology – in each headlight, a module comprising four powerful diodes generates a beam of light that illuminates several hundred meters. The laser spot, which is activated at 60 km/h (37.3 mph) and above, supplements the LED high beam. For the driver, this is a significant boost to visibility and safety; a camera is used to detect and blank out other road users.

The lighting concept is rounded out by the indicator with a dynamized display that is also used in the LED rear lights. It comprises a series of individual diodes that light up one after the other from the inside to the outside, indicating the direction selected by the driver.

The side view of the four-seater show car is a particularly striking indication of the close relationship between it and the production TT. The Audi TT Sportback concept sits powerfully on the road and features short overhangs. The wide semicircles of the wheel arches, each of which protrudes by 3 centimeters (1.2 in), have a superimposed look. The front semicircle defines the edge of the hood, which runs as a sharp tornado line across the doors and to the rear end.

The trim of the side sill, which connects the wheel arches to one another, also has a broad and sporty appearance. In classic sports car style, the exterior mirrors and their angular housings are positioned on the door top shoulders. The right side part houses the circular filler cap, another classic TT icon.

The strong shoulders of the powerful vehicle body support a low greenhouse that is elongated towards the rear. This is in keeping with the Sportback line as implemented by Audi in its A5 and A7 model series. The flat C-pillar flows elegantly into the shoulder, and the rear has a compact and sleek look. The highly rounded corners of the rear window are a homage to the original TT.

The rear of the Audi TT Sportback concept is also focused and sculptural, with five horizontal lines emphasizing its width. The one-piece rear lights – which also include vertical separators inspired by the R18 – form independent structures. These are linked to one another by the handle edge of the luggage compartment, which constitutes a powerfully contoured continuous trim. The surface that bears the number plate is located in the shadow of the spoiler lip. The two large elliptical tailpipes of the exhaust system are embedded in the diffuser and linked by a trim.



Interior

The driver and the passengers enter the Audi TT Sportback concept through doors with frameless window panes. The interior fits around them with the precision of a sporty suit. In the interior, the uncompromising sportiness of the Audi TT meets the functionality of a five-door sedan. This is underlined by slimline applications on the dashboard and doors, as well as a long center console which continues through the entire interior. Handworked seams run along the center console and top shoulder from the front through to the luggage compartment, lending a sporty elegance to the interior. The headlining also features an elegant contour that accentuates the length of the interior. The super sport seats with the integrated head restraints are sharply contoured and highly adjustable.

There is space for two people in the rear, likewise on individual seats with integrated head restraints. They are separated by functional storage compartments and a comfortable armrest. The backrests can be folded down so that large objects can also be stowed in the luggage compartment beneath the tailgate.

The sinewy, taut lines created by the Audi designers in the interior of the show car are closely oriented to those of the production TT. When viewed from the top, the instrument panel resembles the wing of an airplane and the five round air vents are reminiscent of jet engines. The controls for the seat heating, air recirculation, temperature, distribution and strength of the air flow are located on their axes. The omission of the classic air conditioning control panel and the MMI monitor has made it possible to design the instrument panel within a sleek and light architecture that is fully focused on the driver.

The Audi virtual cockpit, the digital instrument cluster, replaces the conventional physical displays and the central MMI monitor. The driver can switch to the 12.3-inch display at multiple levels in order to view top quality graphics. The system is operated via the multifunction steering wheel or the MMI terminal. The touchpad located on the round rotary push-button is used to enter characters and also processes multiple finger gestures – the driver can zoom in on the map as they would on a smartphone.



In keeping with the character of sporty elegance, the interior of the Audi TT Sportback concept is defined by the use of high-quality materials. The instrument panel and the upper area of the door trims are dark granite gray in color. The door armrests, the center console and the seats see the use of a new soft leather in parchment beige – this is processed for a particularly near-natural look and has a silky sheen. The door top shoulder is upholstered in Alcantara, parchment beige. The seat upholstery features a diamond pattern. The side bolsters of the seats are trimmed with special accent strips in dark gray leather that are fixed with red thread using a special stitching technique.

The instrument panel and the door trims contain decorative surfaces with a dark aluminum look. Further accents in this look are provided by the clasps on the sides of the seats and the trim rings on the air vents. The color and material concept is rounded out by black floor mats made from the rubberized material that also covers the floor of the luggage compartment.

Drivetrain

The 2.0 TFSI engine in the Audi TT Sportback concept captivates with its performance characteristics: It generates 294 kW (400 hp) at 6,400 rpm, with a specific output of 147 kW (200 hp) per liter of displacement. The four-cylinder engine puts 450 Nm (331.9 lb-ft) of torque on the crankshaft between 2,400 and 6,000 rpm, with over 300 Nm (221.3 lb-ft) already available at just 1,900 rpm. The high-performance engine limits fuel consumption to an average of 7.0 liters per 100 kilometers (33.6 US mpg). This equates to CO_2 emissions of 162 grams per kilometer (260.7 g/mi).

As a member of the Audi EA 888 engine family, there is a comprehensive package of high-end technology on board for the turbocharged direct-injection unit. The camshaft adjustment on the intake and exhaust sides and the Audi valvelift system, which varies the stroke of the exhaust valves in two stages, ensure good filling of the combustion chambers. At part load, indirect injection complements the FSI direct injection. The exhaust manifold embedded in the cylinder head is an important component of the thermal management. The flow of coolant is managed by a powerful rotary slide module.



In order to generate the high power output, the 2.0 TFSI has undergone profound modifications, including special aluminum pistons with an integrated cooling channel and a crankshaft made from ultra-high-strength forged steel. The crankcase consists of a new, high-strength casting alloy and the cylinder head has been designed for the increased gas flow rate. The turbocharger has also been redeveloped and builds up a maximum relative boost pressure of 1.8 bar. It contains a mixed flow turbine wheel that is noted for its particularly fast start-up performance.

When driving, the four-cylinder unit's extreme dynamics are breathtaking. The turbocharged direct-injection engine accelerates the Audi TT Sportback concept from 0 to 100 km/h (62.1 mph) in 3.9 seconds, demonstrating excellent response characteristics and running at 7,200 rpm up to the maximum rated speed. The sporty sound is made even more resonant as the load and engine speed increase.

The force of the engine flows into a compact seven-speed S tronic with a three-shaft layout that performs direct gear changes in a few hundredths of a second. The driver can let the dual-clutch transmission operate in two automatic programs or take control using the paddles on the steering wheel.

Power is delivered to the road via quattro permanent all-wheel drive. For optimal weight distribution, the hydraulically actuated and electronically controlled multiplate clutch is located on the rear axle. The quattro drive actively controls the distribution of torque between the axles in milliseconds, thus adding to the car's dynamic handling.

Chassis

The suspension also reflects the technological expertise behind the Audi TT Sportback concept. The front suspension is based on a McPherson system; aluminum components reduce the weight of the unsprung chassis masses. The four-link rear suspension can process the longitudinal and transverse forces separately.

The large wheels have a 21-inch diameter and a tire format of 255/30. The four brake discs in 18-inch format feature a weight-saving wave design.



The Electronic Stabilization Control (ESC) adds the final touch to the handling. A sub-function of the ESC is enabled at the cornering threshold – through minimal application of the brakes at the wheels on the inside of the curve, which are reduced of load, the wheel-selective torque control diverts the drive torque to the wheels on the outside of the curve. For the driver, this means a further boost in terms of neutrality, stability and traction.

Body

The body plays a leading role in the lightweight construction concept of the Audi TT Sportback concept on the basis of the modular transverse matrix (MQB). The entire front section is made from steel. The passenger compartment floor comprises high-strength, hot-shaped steel components which, thanks to their outstanding strength properties, feature thin walls and are correspondingly light. The compartment's structure, the outer skin, and the doors and lids are made of the classic Audi semi-finished aluminum products cast node, extruded profile and sheet metal.

With its composite concept, the body represents the latest evolution of the Audi Space Frame (ASF). Its hybrid construction ensures that the show car has a low center of gravity – ideal for sporty driving.

- End -

Fuel consumption of the models named above:

Audi TT:

Combined fuel consumption in l/100 km: $7.5 - 4.2 (31.3 - 56.0 \text{ US mpg})^{**}$; Combined CO_2 emissions in g/km: $174 - 110 (280.0 - 177.0 \text{ g/mi})^{**}$

Audi A5 Sportback:

Combined fuel consumption in l/100 km: $7.7 - 4.2 (30.5 - 56.0 \text{ US mpg})^{**}$; Combined CO_2 emissions in g/km: $179 - 109 (288.1 - 175.4 \text{ g/mi})^{**}$

Audi A7 Sportback:

Combined fuel consumption in l/100 km: 9.5 – 4.7 (24.8 – 50.0 US mpg)**; Combined CO₂ emissions in g/km: 221 – 122 (355.7 – 196.3 g/mi)**

**The fuel consumption and the CO_2 emissions of a vehicle vary due to the choice of wheels and tires. They not only depend on the efficient utilization of the fuel by the vehicle, but are also influenced by driving behavior and other non-technical factors.