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Audi News

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The equipment and data specified in this document refer to the model range offered in Germany. Subject to change without notice; errors and omissions excepted.

The Audi R8 Spyder 5.2 FSI quattro – Breathtakingly dynamic open-top driving

- **Audi high-performance sports car with lightweight cloth top**
- **Distinctive styling, carbon fiber body parts**
- **Mid-mounted V10 engine producing 386 kW (525 hp) and exceptional performance**

Exceptional performance and breathtaking dynamism coupled with the intense sensations of open-top driving: Audi presents the R8 Spyder 5.2 FSI quattro. Its lightweight cloth top opens and closes fully automatically; several body parts are made of a carbon fiber composite material.

The V10 engine produces 386 kW (525 hp) and launches the open-top two-seater to 100 km/h (62.14 mph) in 4.1 seconds on its way to a top speed of 313 km/h (194.49 mph). Featuring technologies such as the Audi Space Frame (ASF), quattro permanent all-wheel drive, full-LED headlights and with an innovative seatbelt microphone available as an option, the R8 Spyder 5.2 FSI quattro is the new top-of-the-range Audi.

The Audi R8 Spyder 5.2 FSI quattro makes a powerful statement. The sculptured lines of the emotion-packed, high-performance sports car are a fascinating and unique interpretation of its dynamism. Unlike the Coupé, the Spyder does not have sideblades behind the doors. The side panels and the large cover over the storage compartment for the cloth top are made of a carbon fiber composite. Two arched cowls, which extend to the spoiler lip and include large, integrated air vents, give the rear of the open-top two-seater a powerful profile.

Like every open-top Audi, the R8 Spyder 5.2 FSI quattro has a cloth top – an uncompromising solution for a high-performance sports car. The soft top's approximate weight is a mere 30 kilograms (66.14 lb); it thus keeps the vehicle's total weight and center of gravity low. The top takes up little space when open and is a harmonious design element when closed. It tapers off to two slim fins extending to the trailing edge of the car, emphasizing the elongated silhouette.

The electrohydraulic soft top opens and closes in 19 seconds, even while driving at speeds up to 50 km/h (*31.07 mph*). When opened, it folds like a Z into its storage compartment over the V10 engine. The compartment cover opens and closes automatically. The heated glass window, which is separate from the cloth top, is lowered into the bulkhead. It can be independently raised and lowered at the press of a switch, with the top up or down. An additional net-like wind deflector comes standard and can be latched into the bulkhead behind the seats in two easy steps.

The top, which comprises an outer skin of a leakproof textile fabric and the headliner, is fully compatible with high-speed driving. When driving at moderate speeds with the top up, interior noise levels in the R8 Spyder are barely higher than in the Coupé. The bulkhead includes integrated rollover protection in the form of two strong, spring-tensioned plates. Head/thorax side bags in the backrests protect the passengers in the event of a side impact. Full-size airbags stand at the ready in the event of a head-on collision. In a rear-end collision, the integral head restraint system reduces the risk of whiplash injuries.

In the version with manual transmission, the R8 Spyder 5.2 FSI quattro weighs only 1,720 kilograms thanks primarily to its aluminum Audi Space Frame (ASF) body. Despite reinforcements in the area of the sills, the center tunnel, the rear wall, the floor pan and the A- and B-pillars, the body weighs only 216 kilograms (*476.2 lb*) – just 6 kilograms (*13.23 lb*) more than that of the R8 Coupé. The high stiffness of the ASF body, which includes an integrated engine frame of ultra-lightweight magnesium, provides the foundation for the car's dynamic handling and superior safety.

Close attention to detail: the design

Numerous details demonstrate that the Audi designers put their hearts into the design of the R8 Spyder 5.2 FSI quattro. The air inlets in the nose, which direct air across the three radiators, and the lip of the front skirt are painted high-gloss black. The struts in the broad, low, single-frame grille are finely coated with chrome. The standard full-LED headlights are technical works of art. Their reflectors resemble open mussel shells; the daytime running lights appear to be a homogeneous strip, but actually comprise 24 individual LEDs that form a curve at the lower edge of the headlight.

The full-LED headlights from Audi are unmatched by its international competitors. Light-emitting diodes are used for the low beams, the high beams, the daytime running lights and the turn signals. With a color temperature of 6,000 Kelvin, the LED light is very similar to daylight, making it easier on the eyes when driving at night. Additional strengths include excellent light distribution, long service life and extremely low energy consumption.

The side sills of the R8 Spyder 5.2 FSI quattro are broad and angular. V10 badges on the flanks allude to the power of the engine. A dark surface between the rear lights emphasizes the car's width. The chambers of the lights are colored dark red, with LEDs generating a three-dimensional light pattern. The exhaust system ends in two large, oval tailpipes, and the fully lined underbody ends in an upturned diffuser. The rear spoiler extends automatically at higher speeds.

Audi offers the R8 Spyder 5.2 FSI quattro with a choice of three colors for the top. The body is available in eleven paint finishes, with metallic and pearl effect finishes standard. The windshield frame is coated with anodized aluminum.

Sporty luxury: the interior

The open-top two-seater from Audi features a generously spacious interior. The three-spoke leather multifunction sport steering wheel is flattened at the bottom as in a race car, and the low-mounted, electrically adjustable seats guide and support the body perfectly.

Quality of fit and finish is extraordinary and the controls are clear and logical. The standard driver information system includes a lap timer for recording lap times. The instruments and the gear lever knob feature red rings. The pedals, the footrests and the shift paddles of the optional R tronic are in aluminum look. Highlighting the list of standard equipment are a generous full-leather package featuring Fine Nappa leather, an excellent sound system from Bang & Olufsen, a deluxe automatic air conditioning system and heated seats. Six different interior colors are available.

Many additional fine features documents the top status of the Audi R8 Spyder 5.2 FSI quattro. The leather for the seats are colored with pigments that reflect the infrared component of sunlight, which keeps the seats up to 20 degrees Celsius cooler.

Door sill strips coated with aluminum and adorned with black satin finish applications impart an air of luxurious sportiness. Three storage compartments are integrated into the rear bulkhead, one of which contains the optional CD changer or Audi music interface, if desired. There is a front compartment for 100 liters (*3.53 cu ft*) of luggage.

The latest version of the navigation system plus with MMI operating logic is also standard in the R8 Spyder 5.2 FSI quattro. It features higher resolution and particularly fast route calculation. The system's most visible new feature is the high-resolution, 6.5-inch display. The topographic view can be scrolled in any direction. The system can be combined optionally with a rearview camera that serves as a parking aid.

Audi offers custom extras, such as exclusive leather packages and special inlays. A worldwide first is the optional seatbelt microphone for the hands-free unit, which makes it possible to talk on the phone even with the top down on the highway. Three small, flat microphones are integrated into both seatbelts. At least one of them is ideally positioned relative to the speaker when the belt is on. There is a fourth microphone in the windshield frame.

Uncompromising power: the engine

The Audi R8 Spyder 5.2 FSI quattro, which was developed in cooperation with quattro GmbH, dazzles with uncompromising performance. The V10 engine with the aluminum crankcase, much of which is hand-built, follows in the grand motorsports tradition at Audi. The normally aspirated engine produces 530 Nm (*390.91 lb-ft*) of torque at 6,500 rpm. Peak output of 386 kW (525 hp) is reached at 8,000 rpm, and the rev limit is not reached until 8,700 rpm. Specific power output is 100.9 hp per liter of displacement; each hp only needs to move 3.3 kilograms (*7.28 lb*) of weight.

Performance reflects this awesome potential: 0 – 100 km/h (*62.14 mph*) in 4.1 seconds; 0 – 200 km/h (*124.27 mph*) in 12.7 seconds; top speed is 313 km/h (*194.49 mph*) with the six-speed manual transmission. As load and revs increase, the engine unfolds the rich, unmistakable Audi ten-cylinder sound – a powerful, throaty roar with musical undertones.

The 5.2-liter engine features FSI direct fuel injection. The high 12.5:1 compression ratio that this enables contributes to the high performance and good fuel efficiency. Equipped with a manual transmission, the R8 Spyder 5.2 FSI quattro consumes an average of 14.9 liters of fuel per 100 km (*15.79 US mpg*) – a good figure given its power. With R tronic, this figure improves to 13.9 liters (*16.92 US mpg*). Dry sump lubrication, another motorsports technology, ensures that the supply of oil is maintained even at the maximum lateral acceleration of 1.2 *g*.

The Audi R8 Spyder 5.2 FSI is also available with an optional automatic six-speed transmission. The R tronic offers a normal and a sport program as well as a fully automatic and a manual mode. The manual mode allows the driver to make lightning-fast gear changes using the joystick on the center tunnel or with the paddles on the steering wheel. The open-air sports car also comes with “Launch Control” – a program that manages engagement of the clutch perfectly to maximize acceleration at start.

The quattro permanent all-wheel drive features a central viscous coupling and distributes power to all four wheels with a heavy rear bias. It works together with the locking differential on the rear axle to provide significantly greater traction, stability, cornering speed and precision. It is the superior technology – in particular for a high-performance sports car.

Dazzling performance: the chassis

The Audi R8 Spyder 5.2 FSI quattro has a 2.65-meter (*8.69-ft*) wheelbase and a 43:57 axle load distribution. Like in a race car, there are double triangular wishbones made of aluminum at all four wheels. The hydraulic rack-and-pinion power steering conveys highly precise road contact.

The chassis is tuned for good comfort, thanks in part to standard Audi magnetic ride technology. This uses magnetic fields in the shock absorbers to adjust their response to road conditions within milliseconds and adapt to the driver's style. The driver can choose between two base characteristics. A sports suspension with conventional shock absorbers is available as an option.

The R8 Spyder 5.2 FSI quattro rolls on 19-inch wheels of 10-spoke Y design. The front rims are shod with 235/35 tires, with 295/30 tires at the back. 305/30 tires are optionally available. The brakes offer impressive performance: The four discs are internally ventilated and perforated, with eight-piston calipers up front and four-piston calipers at the back. Optionally available from Audi are oversized carbon fiber-ceramic discs that are extremely lightweight, robust and long-lived. The ESP stabilization system has a Sport mode and can also be completely deactivated. The brake system includes an assist function that facilitates starting on gradients.

The Audi R8 Spyder 5.2 FSI quattro is built by quattro GmbH at the Neckarsulm plant. The vehicle, including the ASF, is largely hand-built. The open-top two-seater will be launched in Germany in the first quarter of 2010; sales will start in the coming days. Its base price will be 156,400 euros.

The Audi S5 Sportback – particularly elegant sportiness

- **Supercharger and FSI direct fuel injection are a powerful combination**
- **245 kW (333 hp), 440 Nm (324.53 lb-ft) of torque and exemplary efficiency**
- **S tronic and quattro drive standard; quattro with sport differential optional**

The abbreviation “S” stands for sports and also high efficiency – characteristic Audi features. The S5 Sportback is the top model of the new Sportback model series. The five-door coupe is powered by a highly efficient, supercharged V6 engine with an output of 245 kW (333 hp). Power is delivered to the wheels via the seven-speed S tronic and quattro drive; the innovative sport differential is available as an option.

The Audi S5 Sportback is powered by a three-liter V6 with a mechanically driven supercharger. The supercharger sits in the 90 degree V formed by the banks of the cylinders and produces up to 0.8 bar of pressure. Two downstream intercoolers lower the temperature of the compressed intake air for improved filling of the combustion chambers.

The six-cylinder unit, which displaces 2,995 cc, embodies the Audi philosophy that performance and efficiency are not mutually exclusive but rather complement each other perfectly. The engine delivers a constant 440 Nm (324.53 lb-ft) of torque between 2,900 and 5,300 rpm. The S5 Sportback sprints from zero to 100 km/h (62.14 mph) in only 5.4 seconds (provisional figure) and accelerates up to an electronically governed top speed of 250 km/h (155.34 mph). The spontaneous response, the powerful thrust and sonorous sound make for a thrilling driving experience.

The supercharged V6 unit consumes only 9.7 liters (provisional figure) of fuel per 100 km (24.25 US mpg) on average – a top figure in this performance class.

The leading position of the S5 Sportback is further underscored by its drivetrain technology. The top model comes standard with the seven-speed dual-clutch S tronic transmission and quattro permanent all-wheel drive with a slight rear wheel bias. Optionally available is the sport differential.

The high-end rear-axle differential transfers the forces at the rear axle between the wheels as needed for even greater dynamism and stability.

The Audi S5 Sportback has a sports-tuned chassis. The S-design 18-inch cast aluminum wheels are shod with 245/40 tires. Wheels up to 20 inches are available as options. The black brake calipers are emblazoned with S5 emblems. Servotronic speed-sensitive steering is also standard, with dynamic steering optionally available. A strut brace provides the front section of the car with additional rigidity.

A number of features also provide visual cues to the A5 Sportback's sporty nature. The front blade and the diffuser, the single-frame grille, the air intakes, the sill strip, the spoiler lip at the rear and the four-tailpipe exhaust system all sport an exclusive design. The side mirror housings shine in aluminum look and the xenon plus headlights with LED daytime running lights and rear lights are standard.

Inside, electrically adjustable S-design sport seats covered in Silk Nappa leather, a black or silver headliner and brushed aluminum inlays underscore the dynamic style of the high-end model. The pointers in the instrument cluster are illuminated white, and the color driver information system presents the S5 logo when the car is started. A leather multifunction sport steering wheel with aluminum-look shift paddles and a sport selection switch for the S tronic underscore the sporty aspect of this model. S5 badges adorn the door sill trims, the key, the steering wheel and the instruments.

The luxurious, climate-controlled comfort seats are available as an option. The seat coverings are available in black, brown and three two-color combinations. Inlays are available in carbon, fine-grained birch wood and stainless steel mesh. The metallic structure comprising countless steel fibers feels slightly rough – an extraordinary haptic experience.

The Audi S5 Sportback will be arriving at German dealerships in spring 2010 with a base price of 57,900 euros.

The Audi A4 3.0 TDI clean diesel quattro – Highly efficient and extremely clean

- **The world's cleanest diesel technology now also in the A4**
- **Midsize sedan consumes only 6.7 liters per 100 km (35.11 US mpg)**
- **Powerful engine with 240 hp and 500 Nm (368.78 lb-ft) of torque**

Using the world's cleanest diesel technology, the 3.0 TDI clean diesel already meets the Euro 6 emission standard not scheduled to enter into force until 2014. Having debuted in the Audi Q7, the innovative engine is now coming to the A4. The powerful TDI is not only extremely clean, it is also highly efficient, using only 6.7 liters of fuel per 100 km (35.11 US mpg) in the EU cycle.

The technology package of the 3.0 TDI clean diesel quattro comprises the engine itself and the highly efficient exhaust gas after-treatment system. A new common rail injection system that develops pressures of up to 2,000 bar, innovative combustion chamber pressure sensors and an ultra-high-performance exhaust gas recirculation system ensure highly efficient combustion which produces minimal raw emissions.

A novel DeNO_x catalytic converter at the end of the exhaust system reduces nitrogen oxides. Just upstream of it, a pump injects an aqueous additive named AdBlue into the hot exhaust flow, where this solution decomposes into ammonia, which splits the nitrogen oxides into nitrogen and water. The tank is large enough that the driver never has to refill it. This is done instead by the Audi dealership during scheduled maintenance.

Using the world's cleanest diesel technology, the Audi A4 3.0 TDI clean diesel quattro meets the Euro 6 emission standard announced for 2014. It is also very fuel-efficient, averaging only 6.7 liters (Avant: 6.8 liters) of fuel per 100 km (35.11 and 34.59 US mpg).

The innovative V6 TDI engine makes the A4 a powerful performer, needing only 6.2 seconds (Avant: 6.3 seconds) to go from zero to 100 km/h (62.14 mph). Top speed is electronically governed to 250 km/h (155.34 mph). The combination with the six-speed tiptronic and quattro permanent all-wheel drive ensures a high degree of comfort and superior traction.

The Audi A4 and the A4 Avant 2.0 TFSI flexible fuel – bioethanol as fuel

- **2.0 TFSI with 180 hp now also suitable for operation with E85**
- **Biofuel with significantly better CO₂ balance**
- **Cost advantages for customers**

Audi has added a new, particularly economical version to its A4 model series: The A4 and A4 Avant 2.0 TFSI flexible fuel can be operated on bioethanol. The fuel, designated E85, lowers operating costs and features a good CO₂ balance.

The 2.0 TFSI flexible fuel engine is based on the 2.0 TFSI with Audi valvelift and start-stop system. Like that engine, it produces 320 Nm (*236.02 lb-ft*) of torque between 1,500 and 4,200 rpm and puts out 132 kW (180 hp).

The four-cylinder engine is designed for operation on E85 – the typical European mixture of 85 percent ethanol and 15 percent gasoline. E85 is currently available at nearly 300 gas stations in Germany, with Norway and Sweden having the densest network of E85 filling stations in Europe.

Today bioethanol is produced via the alcoholic fermentation of energy crops such as wheat, corn and sugar cane. Thanks to the high renewable fraction, its CO₂ balance in the total vehicle is as much as 75 percent more favorable than that of conventional petroleum-based fuel. The Volkswagen Group is actively participating in the research and development of new ethanol production processes from crop wastes for an even better energy balance in the future.

Audi takes advantage of the higher RON 110 octane rating of bioethanol to operate the engine at optimal efficiency. This significantly reduces the roughly 40 percent greater consumption by volume that is a consequence of the lower energy content of ethanol and thus decreases the loss in range.

The advantage of the Audi concept is that the engine can be operated on fuel with any concentration of up to 85 percent ethanol with no noticeable differences in drivability or performance.

The flexible fuel philosophy requires a series of technical modifications. One of the chemical properties of E85 is that it is highly corrosive to certain metals. The base engine had already been designed with these properties in mind, so no modifications to the fuel lines or seals were required.

A different material was required only for the valve seat rings due to the lower lubricating action of the ethanol. A sensor in the fuel line reports the ethanol concentration to the engine management system, which adjusts injection and ignition accordingly.

With E85, the ultra-modern four-cylinder unit achieves a fuel consumption of 9.0 liters per 100 km (*26.13 US mpg*) in the A4 Sedan and 9.2 liters per 100 km (*25.57 US mpg*) in the A4 Avant. With super unleaded gasoline it records figures of 6.4 liters per 100 km (*36.75 US mpg*) in the Sedan and 6.6 liters per 100 km (*35.64 US mpg*) in the Avant. Because taxes on ethanol are significantly lower than on fossil fuels, however, its use reduces operating costs.

The Audi A4 and the A4 Avant 2.0 TFSI flexible fuel offer the sporty driving enjoyment that characterizes Audi. The sedan accelerates from zero to highway speed in 7.9 seconds on its way to a top speed of 236 km/h (*146.64 mph*); for the Avant these figures are 8.1 seconds and 228 km/h (*141.67 mph*). Both models transfer power to the road via the front wheels and a six-speed manual transmission.

The Audi A3 and A3 Sportback 1.2 TFSI: Efficient Downsizing

- **New high-tech engine for Audi's line of compact models**
- **105 hp of output and 175 Nm (129.07 lb.-ft.) of torque from displacement of 1.2 liters (73.23 cu. in.)**
- **Robust performance and superior efficiency**

Audi is resolutely continuing its commitment to downsizing as part of its efficiency strategy. The brand has introduced a new turbocharged gasoline engine featuring low displacement in the A3 model line. The 1.2 TFSI delivers maximum performance despite minimum consumption. This engine generates 77 kW (105 hp), yet sips a mere 5.5 liters of fuel per 100 km (42.77 miles per U.S. gallon).

Downsizing entails the replacement of engine displacement with turbocharging. The wholly redesigned 1.2 TFSI — which produces a specific power output of 87.7 hp per liter from 1,197 cc (73.05 cu. in.) of displacement — uses the very same technologies as its renowned brothers with 1.8 and 2.0 liters respectively. Turbocharging and direct gasoline injection are a perfect combination for the 1.2 TFSI too, and facilitate a compression ratio of 10.0:1. This high value benefits the vehicle's thermodynamics, and boosts performance as well as economic efficiency.

This engine's extremely low weight of just 89.5 kilograms (197.31 lbs.) not only enhances the efficiency of this four-cylinder marvel, but also improves the axle load distribution of the Audi A3. The crankcase is made of cast aluminum and integrates reinforcing cylinder liners made of cast gray iron and a cutting-edge oil separator. The split timing cover consists of ultralight die-cast magnesium and plastic.

The undersquare 1.2 TFSI (bore x stroke 71.0 x 75.6 millimeters [2.80 x 2.98 inches]) has been rigorously optimized to minimize friction; this applies to the piston rings and the compact oil pump alike. The crankshaft's main bearings and connecting-rod bearings are a mere 42 millimeters (1.65 inches) in diameter; the eight slanted valves are actuated by a single camshaft driven via a chain.

Due to the valves' design and complex dimensional characteristics, swirling arises in the intake ports — which facilitates good charging efficiency in the combustion chambers.

A common-rail system injects the fuel; up to 3,000 rpm, many instances allow for dual injection, which also optimizes combustion. Behind the turbocharger, which generates up to 0.9 bar of relative boost pressure, a water-cooled intercooler reduces the temperature of the intake air.

An electric control valve operates the turbocharger's wastegate valve precisely, powerfully, and quickly; boost pressure builds up spontaneously and scavenging losses drop.

A typical turbocharged engine, this small four-cylinder unit operates at low rpm's. Its impressive 175 Nm (*129.07 lb.-ft.*) of torque are readily available between 1,500 and 3,500 rpm; 77 kW (105 hp) of output are available at 5,000 rpm, allowing smooth and efficient driving. The three-door Audi A3 1.2 TFSI accelerates from 0 to 100 km/h (*0 to 62.14 mph*) in 11.1 seconds (A3 Sportback: 11.3 seconds). The A3 and the A3 Sportback reach a top speed of 190 km/h (*118.06 mph*) and, on average, sip just 5.5 liters of fuel per 100 km (*42.77 mpg*) — emitting just 127 grams of CO₂ per kilometer (*204.39 g/mile*). Compared with the predecessor engine generating 75 kW (102 hp), fuel consumption has dropped by more than 1 liter per 100 kilometers!

Sales of the A3 and A3 Sportback 1.2 TFSI will begin in the first quarter of 2010. The new four-cylinder engine will initially be paired with front-wheel drive and a six-speed manual transmission.