Audi RS 7 Sportback - Dynamic ride control – DRC

Agility as standard: the suspension

Five-link front and rear axles handle the lateral and longitudinal forces independently on the new RS 7 Sportback. The linkages and the subframes are made largely of aluminum. The track is 1,668 millimeters (65.7 in) at the front and 1,650 millimeters (65 in) at the rear.

The standard RS adaptive air suspension with controlled damping has been tuned specifically to suit the RS and now allows the new RS 7 Sportback to reach a top speed of 305 km/h (189.5 mph) thanks to a new air spring module with a spring rate 50% higher. The sport air suspension can be set to three modes and includes automatic level control. In the normal position, the body of the new RS 7 Sportback sits 20 millimeters (0.8 in) lower than an Audi A7 Sportback with standard suspension. At speeds above 120 km/h (74.6 mph), it will drop by a further 10 millimeters (0.4 in) and offer a lift mode enabling the vehicle to be raised by 20 millimeters (0.8 in) if requested. The pronounced kingpin inclination of the RS sport air suspension offers the driver a free choice between long-distance comfort and top performance.

The optional RS sport suspension plus with Dynamic Ride Control (DRC) holds the RS 7 Sportback (combined fuel consumption in l/100 km: 11.6 – 11.4 (20.3 – 20.6 US mpg); combined CO_2 emissions in g/km: 265 – 261 (426.5 – 420.0 g/mi))even more tightly to the road and improves handling. Pitching and rolling movements are significantly reduced during spirited driving. A new generation of dampers with integrated valves provides for a distinct spread between the various Audi drive select modes.

Progressive steering with sporty and direct ratios is a standard feature of the new RS 7 Sportback. The sporty grand tourer can optionally be fitted with dynamic all-wheel steering. This combines dynamic steering at the front axle, which uses an infinitely variable strain wave gearing, with a separate rear axle steering system with a spindle drive and track rods. At low speeds, the rear wheels turn as much as five degrees in the opposite direction relative to the front wheels. This reduces the turning circle by as much as one meter (3.3 ft), and the RS 7 Sportback (combined fuel consumption in l/100 km: 11.6 – 11.4 (20.3 – 20.6 US mpg); combined CO_2 emissions in g/km: 265 – 261 (426.5 – 420.0 g/mi)) is thus even more agile in city traffic and tight curves. At intermediate and high speeds, the rear wheels turn by as much as two degrees in the same direction, keeping the car steady in its lane.

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A driver can determine the character of an RS 7 Sportback using the Audi drive select dynamic handling system. There are six profiles available: comfort, auto, dynamic, efficiency and the customizable RS-specific RS1 and RS2 modes, which can be enabled directly via an RS MODE button on the steering wheel. Audi drive select influences factors including engine and transmission management, steering assistance, the suspension, dynamic all-wheel steering, the quattro sport differential, the exhaust flaps, and the way in which the automatic air conditioning works. In RS2 mode, customers can switch the Electronic Stabilization Control (ESC) to sport mode at the touch of a button.

The new RS 7 Sportback is fitted as standard with 21-inch cast aluminum wheels with a 10-spoke star design and 275/35 tires. Audi Sport offers optional RS-specific wheels with a 22-inch 5-V-spoke design with 285/30 tires in silver, matt titanium look, gloss turned finish, and gloss turned anthracite black finish. The calipers of the RS brake system with internally ventilated and perforated discs (420 millimeters (16.5 in) at the front, 370 millimeters (14.6 in) at the rear) are painted black as standard or red upon request. On the optional RS ceramic brakes, the calipers can be gray, red or blue. The discs measure 440 millimeter (17.3 in) at the front and 370 millimeters (14.6 in) at the rear. The new RS ceramic brake system tips the scales at 34 kilograms (75 lb) less than its steel counterpart, which cuts down on unsprung mass.

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