Audi RS 5 – Chassis technology

**Agile: the chassis**

The accurate interplay between all suspension components defines the driving characteristics of the Audi RS 5*. The standouts: optimized and RS-specific front and rear axles, RS sport suspension with innovative twin-valve shock absorbers, RS-tuned steering, large 20-inch and 21-inch wheels shod in specifically tailored tires, and powerful steel or ceramic brakes. The unibody is ten percent stiffer than the base model's, reducing flex under high load and ensuring an even tighter and more controlled driving feel – the connection with the road is perceptibly more direct.

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In order to optimally handle longitudinal and lateral forces, the Audi RS 5* uses five-link suspension front and rear. The front axle went through targeted redevelopment: new joints,
links, and rubber bushings noticeably improve suspension tuning. More precise and agile handling with higher comfort is the result. Furthermore, the improvements make for more stable road holding, more direct reactions to steering inputs, and more effective damping of vibrations and bumps. quattro all-wheel drive with Dynamic Torque Control necessitated sweeping changes at the back. As a result, Audi developed the rear axle of the RS 5* from a clean sheet. Compared to the predecessors, the elastokinematic properties have significantly improved. Elastic deformations ensure the wheels perfectly follow the road under high load – such as during acceleration, braking, or cornering. Since they remain in constant stable contact with the road, the vehicle drives in a more precise, safe, and agile way, with more grip and control, remaining composed during sporty driving. The new RS sport suspension with twin-valve shock absorbers plays a major role in the muscular models balanced handling. Twin-valve technology allows the shock absorbers to provide both a very comfortable ride and an extremely sporty driving experience, as both compression and rebound can be controlled independently. It also noticeably reduces pitch and roll, and means the dampers respond very quickly to changing road conditions. The RS 5* stays on track, even in dynamic situations, and offers high everyday comfort. The Audi drive select modes mean drivers can tailor the suspension to their liking, from extremely compliant to maximally sporty. The RS sport suspension's dampers weren't just tested on the road and the racetrack. Audi Sport also put them on a hydro pulse system – a special test facility – to optimally tune them under extreme conditions. Variations in wheel loads are minimal, even under conditions way beyond anything seen on the road. The system simulates drastic shocks from the road surface, such as potholes, hard weight transfers, and high speeds on uneven terrain – precisely, repeatably, and with higher

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forces than real driving. This enables Audi to design a suspension setup that doesn’t just allow for controlled dynamics in day-to-day driving but also offers full control, stability, and feedback under extreme conditions.

The RS sport driving mode was tuned for maximum traction and speed using this facility. As a result, the RS 5* – with its curb weight of 2.355 kilograms (Sedan) or 2.370 kilograms (Avant) – delivers pure performance with precise handling, impressive stability, and feels quick on its feet. The steering in the RS 5* has been RS-tuned. It reacts instantly and precisely to inputs. At 13:1, the steering ratio is much more direct than the base model’s and offers particularly exact feedback as well as rapid reactions to small steering inputs. Close integration with the electronic stability control (ESC) delivers stability and control, while reduced steering weight guarantees effortless handling. For confident inputs during fast cornering, steering weight is reduced further – a perfect combination of power, feeling, and technique.

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