Audi SQ8 – Electromechanical active roll stabilization and sport suspension

All-wheel steering is available as an alternative to the standard progressive steering. At low speed, it turns the rear wheels in the direction opposite that of the front wheels to increase agility. As from a speed of approx. 60 km/h (37.3 mph), they turn slightly in the same direction to improve stability.

The sport differential, which Audi offers in the advanced suspension package, is the ideal addition to the quattro drive. It distributes the drive torque actively between the rear wheels. When turning or accelerating in a curve, they are predominantly steered toward the wheel on the outside of the curve—the Audi SQ8 TDI is literally pressed into the curve, eliminating even the slightest hint of understeer. In case of oversteer, the sport differential stabilizes the large SUV coupe by shifting torque to the wheel on the inside of the curve.

The third high-tech element is the electromechanical active roll stabilization. There is a compact electric motor between the two halves of the stabilizer on each axle. When driving straight ahead, they largely act independently of each other, which reduces sprung mass vibrations on uneven roads. At sporty paces, however, the stabilizer halves work as a unit by being turned in opposite directions. This makes the handling of the SQ8 TDI tighter and significantly reduces its roll angle when cornering.

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