



2009 Audi A6/S6 Product Improvement

Quick Reference: USA Data (sedan and Avant)

VERSION DATE: March 10, 2009

INFO IS SUBJECT TO CHANGE

Key Highlights

- Design: New front/rear lighting and front bumper/grille design; LED lighting technology for both front DRL and side mirror lighting; new wheel program, and interior accent updates.
 - Engines: All-new powertrain: 3.0 TFSI V6 with 300 hp for the USA; A6 is the only car in its class to continue to offer 100% direct injection engines.
 - All-wheel drive: newly implemented 40/60 asymmetric rear-biased quattro all-wheel drive on A6 models.
 - Suspension/handling: Upgraded suspension for optimizing comfort and dynamic handling.
 - Safety: New optional Audi side assist (blind spot detection).
 - Industry's first NHTSA-approved indirect tire pressure monitoring system.
 - A6 is sales leader worldwide vs. BMW 5 series and Mercedes E class.
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Market

- The A6 sedan and Avant sell more than 12,000 units per annum in the USA.
- Key competitors are BMW 5-series and Mercedes-Benz E class.

Design

- New front headlamps with optional LED daytime running lights.
- New foglamp, front bumper, and single-frame grille design.
- New rear 2-piece rear LED lighting for the sedan with special night-time optical view.
- Typical Audi interior design is modern and sophisticated, with clear attention to detail; now enhanced with aluminum interior accents.
- All-new wheel program.
- New aluminum accents on steering wheel and other interior controls.
- Soft armrests of the doors to increase comfort.

Technology

- New 3rd Generation MMI comes to the USA for model year 10 in Fall 2009.
- Instrument cluster uses higher resolution graphics.
- Energy recuperating alternator and high-efficiency steering pump for improved fuel efficiency.

Dynamics

- Suspension upgrades for maximum comfort and dynamic handling.
- New large-diameter, front-axle shock absorbers operating within an optimized valve system.
- Every other aspect of the suspension set-up has been improved, including the automotive spring response.
- Available 19" Sport Package with 19" wheels, performance tires, sport suspension and 3-spoke sport steering wheel with shift paddles.
- No air suspension for the USA.

Safety

- A6 has been an IIHS Top Safety Pick three years running (top front/side/rear crash ratings); Audi has the most "Top Safety Pick" ratings compared to its German and Japanese competitors (source: iihs.org).
- The A6 is equipped with a new and innovative tire pressure monitoring system that reliably warns the driver in case tire under-inflation takes place; at the same time, it does not require any maintenance cost over the lifetime of the vehicle - another valuable customer benefit in the long run.
- New optional Audi side assist blind spot detection now available.
- Integrated headrests decrease the chances of whiplash.

Powertrain

- Sedan will be offered with the following drivetrains:
 - A6 3.2 FSI V6 front wheel drive and multitronic (CVT); 255 hp continues; sedan only
 - A6 3.0 TFSI V6 (all-new) and newly-implemented 40/60 asymmetric rear-biased quattro all-wheel drive; Tiptronic only; 300 hp for USA.
 - A6 4.2 FSI V8 and newly-implemented 40/60 asymmetric rear-biased quattro all-wheel drive; Tiptronic only; 350 hp continues.
 - S6 5.2 FSI V10 continues with current setup with 40/60 asymmetric rear-biased quattro all-wheel drive and Tiptronic; 435 hp continues.
- Avant will be offered exclusively with 3.0 TFSI V6 (all-new) with newly implemented 40/60 asymmetric rear-biased quattro all-wheel drive; Tiptronic only; 300 hp for USA.
- 3.2L V6 specifications:
 - FSI direct injection
 - 255hp (6500 rpm) / 243 lb-ft (3000-5000 rpm)
 - 0-60 mph in 6.9 seconds
 - Only available with multitronic (CVT) and front-wheel drive; sedan only
- 3.0 TFSI (supercharged) V6 specifications:
 - All-new engine
 - FSI direct injection
 - 300 hp for USA / 310 lb-ft (2500-4850 rpm)
 - 0-60 mph: 5.9 seconds
 - Tiptronic quattro only
 - Fuel economy: 18 city / 26 highway / 21 combined (class leading)
 - Powerful, spontaneous and ultra-efficient: this is the new top version in Audi's V6 engine range. The 3.0 TFSI develops 300 hp (for USA) and a huge 310 lb-ft of torque. It combines two state-of-the-art technologies in perfect style – gasoline direct injection and compressor supercharging.

- The brand with the four rings has a long tradition of supercharged engines. The legendary Grand Prix racing cars built by Auto Union in the 1930s already featured compressors, which coaxed as much as 440 kW (approximately 600 hp) out of the mighty 16-cylinder and 12-cylinder engines. From the late 1970s on, Audi focused its attention on the exhaust turbocharger, which helped it to a succession of noteworthy triumphs in the world of motor sport. It was at this time that Audi's turbo engines began to enjoy resounding market success.
- The compressor now is staging a comeback. It is the ideal supercharging technology for the new three-liter V6, the 3.0 TFSI; the T in Audi engine designations consequently no longer exclusively denotes turbo versions.
- All of the components are contained within the "V," providing packaging benefits that cause the mechanical supercharger to be superior to a biturbo concept for this engine. In conjunction with direct injection, its packaging, low-speed performance and dynamic response were far superior. The compressor is so compact that it easily fits inside the 90-degree V of the cylinder banks, in place of the intake manifold. Because it is driven by the engine via a poly-V belt, its full thrust is available from idle speed upward, producing huge pulling power when driving off. The 3.0 TFSI delivers its maximum 310 lb-ft at only 2,500 rpm and maintains this constantly until 4,850 rpm.
- The gas paths after the compressor are very short; this means that the torque is built up extremely quickly, even more dynamically than on a naturally aspirated engine of the same displacement. The 3.0 TFSI responds sportily to the throttle, with exceptional agility and bite. It also revs up to the maximum of 6,500 rpm with playful ease, achieving its rated output of 300 hp in the United States at just under 5,000 rpm.
- The 3.0 TFSI without question earns top marks for fuel efficiency, too. Its pulling power enables it to extend the transmission ratio, further adding to its already superior efficiency.
- The Audi technology of gasoline direct injection according to the FSI principle was what made this trailblazing efficiency possible in the first place. Unlike conventional concepts, it allows the compressor to be located behind the throttle valve. In view of the low density of the intake air at loads below supercharging level and when coasting, its rotors are free-running and the amount of power required to drive them is low.
- The engine's high compression ratio of 10.5:1 also plays a big part in its efficiency. The direct injection principle is once again the key, because the intensively swirled fuel cools the combustion chamber, reducing the tendency to knock.
- The compressor of the new 3.0 TFSI is what is known as a Roots blower. Inside it, two four-vane rotary pistons counter-rotate at a speed of up to 23,000 rpm, with an air gap between them measuring just a few thousandths of a millimeter. The rotors can deliver 1,000 kilograms (2,204.62 lb) of air per hour and force it into the combustion chambers at a boost pressure of up to 0.8 bar (11.6 psi).
- Two water-to-air intercoolers made from aluminum and connected to a separate coolant circuit are integrated into the housing. Here, the compressed and therefore heated intake air is cooled down again in order to boost its oxygen content for the combustion process. An extensive package of measures reduces the noise level generated by the compressor to a minimum.

- The engine itself belongs to Audi's family of ultramodern V engines. In addition to the standard cylinder angle of 90 degrees, their attributes include systematic lightweight construction. The three-liter version's crankcase, which is made from cast aluminum/silicon, tips the scales at just 33 kilograms (72.75 lb). The entire engine, including the compressor, weighs 189 kilograms (416.67 lb). The bore measures 84.5 millimeters (3.33 in), and the stroke measures 89.0 millimeters (3.5 in).
- Audi has included a whole array of refined hi-tech features on the 3.0 TFSI. The crankcase has been adapted to the higher prevailing pressures, and all components are frictionally optimized. The two intake camshafts can be adjusted through 42 degrees of crankshaft angle. In the intake ports, tumble flaps induce movement in the incoming air to promote optimum mixture preparation.
- The injection system is a fundamentally new design. A common rail system with six-hole injectors injects the fuel directly into the combustion chambers at a pressure of up to 150 bar (2,175 psi). The injectors' highly dynamic response permits up to three fuel injections per operating cycle across an extensive range of the characteristic map. They, too, optimize the combustion process and therefore contribute to the impressive performance of the new 3.0 TFSI.
- 4.2L FSI V8 FSI specifications for A6 sedan (this engine will continue to be exclusively available in A6 sedan for USA):
 - FSI direct injection
 - 350 hp (6800 rpm) / 325 lb-ft (3500 rpm)
 - 0-60 remains at 5.8 seconds
 - Tiptronic quattro only
- 5.2L FSI V10 specifications for S6 sedan in the USA:
 - FSI direct injection
 - 435 hp (6800 rpm) / 398 lb-ft (3000-5000 rpm)
 - 0-60 remains at 5.1 seconds
 - Tiptronic quattro only
- quattro® AWD – latest generation with asymmetric rear-biased torque split (40% front / 60% rear under nominal conditions)

Innovations and available features

- MMI operating logic standard (with central display screen)
- Advanced Key keyless entry and starting
- Bluetooth hands-free telephone interface
- New design bi-xenon headlamps with LED daytime running lights
- Rearview parking camera
- Electromechanical parking brake
- DVD-based Navigation system with voice control
- Audi Side Assist lane change assistant
- 19" Sport Package

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