

FOR IMMEDIATE RELEASE
Monday, August 14, 2006

CONTACT: Jeff Kuhlman
(248) 754-5147
Jeff.kuhlman@audi.com

Patrick Hespen
(248) 754-4838
Patrick.hespen@audi.com

AUDI S8 – THE LUXURY-CLASS SPORTS MODEL

AUBURN HILLS, Mich. - Distinct sports appeal, elegant style and supreme comfort – these are the characteristic features of the Audi A8. At the time of its market launch three years ago, this large sedan shot straight to the top of the luxury segment thanks to its dynamic qualities. The Ingolstadt brand is now unveiling a sporty top model of the very highest caliber: the Audi S8 stands for exceptional dynamism, as expressed by its engine, transmission, suspension and design, as well as for exclusiveness and luxury.

The Audi S8 is equipped with a new V10 FSI engine that delivers 450 hp at 7,000 rpm and 398 ft.-lbs. of torque – the latter available from just 3,500 rpm – from a capacity of 5.2 liters. As on the Le Mans winning R8, the most successful racing car in the world, FSI gasoline direct injection assures superior power output in the Audi S8. This luxury sedan sprints from 0 to 60 in 4.9 seconds, and is electronically governed to a top speed of 155 mph.

The advantages are clear to see:

- very spontaneous response, short reaction time
- shorter shift points, quick gear changes
- sporty, throaty sound when accelerating
- beefy torque curve even at low engine speeds
- sporty behavior thanks to engine speeds up to 7,000 rpm
- perfect synthesis of sporty driving pleasure and comfort on long journeys

The driveline and aluminum chassis of the S8 have been modified to suit the engine's power. The latest generation of quattro® permanent four-wheel drive with asymmetric/dynamic torque split transmits this power to all four wheels. The firmer settings of the sport-tuned adaptive air suspension and a more direct steering ratio ensure that the power and dynamism of the drivetrain are put to the road with precision.

Engine

New V10 with FSI technology from the world of motor racing

For the first time in its history, the Audi brand is presenting a ten-cylinder engine for the S8 – the V10. The S8 also features FSI direct gasoline injection. This combination of ten cylinders and FSI technology gives Audi a unique position on the market.

A ten-cylinder engine is the ideal power plant for realizing sporting aspirations. It has the edge on a comparable twelve-cylinder unit thanks to the smaller number of components, resulting in lower moving masses and less internal friction; the fuel is consequently put to very efficient use. A V10 is moreover considerably lighter and more compact than a conventional 12-cylinder engine – including all its add-on components, the engine of the Audi S8 is just 26.9-in. long, 31.5-in. wide, and 28.0-in tall. The bare engine measures 22.0-in. in length.

Although an eight-cylinder engine would be even more compact, to make it into the five-liter class it would need large, heavy pistons and connecting rods, so its ability to rev freely would be impaired as a result. It is no coincidence that many competitors have generally concentrated simply on high torque with their large-capacity V8 engines, rather than attempting to squeeze sporty performance out of them too.

The 450 bhp V10 in the Audi S8 belongs to the next generation of Audi V-engines, all of which have a 90-degree included angle and a spacing of

90 millimeters between cylinder centers. Its two banks of cylinders are offset by 18.5 mm. The bore measures 84.5 mm, stroke is 92.8 mm, and its displacement is 5,204 cc.

The crankcase of the Audi ten-cylinder engine is produced by low-pressure die-casting, from a hypereutectic aluminum alloy. This technology renders separate cylinder liners superfluous; the liners are instead honed directly from the material by exposing the hard silicon crystals. A so-called bedplate design – an intermediate frame – gives the crankcase extremely high torsional rigidity and improves its vibrational behavior. The cast-in grey cast iron bearing bridges reduce the thermal expansion of the aluminum casing; they simultaneously keep the amount of play at the main crankshaft bearings within tight tolerances.

The connecting rods are made from forged steel, and the pistons from an aluminum alloy. At the rated engine speed, each of them covers an average distance of 71.1 ft. per second; oil-jet cooling prevents temperature peaks from occurring. With its crankpin offset of 18 degrees, the V10 fires at the ideal spacing of 72 degrees crankshaft angle. A balancing shaft located within the “vee” eliminates the free inertial forces of the first degree and also contributes towards the engine’s notable refinement.

All four camshafts of the ten-cylinder engine can be adjusted continuously by 42 degrees crankshaft angle via hydraulic camshaft adjusters, depending on the load and engine speed, to modify the valve opening overlap. They thus optimise filling of the combustion chambers and improve engine response.

The camshafts – complete with the balancing shaft, the oil and water pump and the auxiliaries – are driven by maintenance-free chains running on the reverse side of the engine. They actuate the 40 valves via roller cam followers with hydraulic valve-play compensation. The diameter of the valves on the intake side is 32.5 mm, and 28.0 mm on the exhaust valves. The exhaust valves are sodium-filled, for a cooling effect.

The V10 in the new Audi S8 uses the gasoline direct injection principle known as FSI; this permits a high compression ratio of 12.5:1 and a correspondingly effective combustion process based on a homogeneous lambda value of 1.

FSI technology has impressively demonstrated its dynamic potential in motor sport – the R8 racing car equipped with it participated in the Le Mans 24 Hours five times for Audi, emerging as winner on four of those occasions. In the Audi S8, the FSI system is managed by a highly advanced Bosch Motronic bearing the designation MED 9.1, operating with ten individual pencil coils and two control units according to the master/slave principle.

The common rail injection system delivers the fuel directly to the combustion chambers in precisely metered amounts, at a pressure of up to 1,470 psi. The variable intake manifold incorporates electronically controlled tumble flaps that induce a swirling movement in the air drawn in at low engine speeds and load, making the internal combustion process more efficient as a result. The two-stage layout of the magnesium intake manifold serves the same purpose. Depending on load and engine speed, at around 4,000 rpm an electronically controlled valve switches from the long intake paths – measuring 26.6 in. – to the short paths that are 12.1 in. long. From that point on, the emphasis is on output rather than torque.

The design of the single-pipe manifolds likewise contributes to the dynamically optimised charge cycle; it is matched precisely to the firing order of the V10. On each cylinder bank, the manifolds for the first and second cylinder, and also for the fourth and fifth cylinder, are combined; they only converge with the manifold for the third cylinder relatively far down. Four close-coupled main catalytic converters take charge of exhaust emission control.

The powerful ten-cylinder engine has been optimised for high torque as well as high engine power. It achieves 450 bhp at 7,000 rpm, and musters 398 ft.-lbs. of torque at between just 3,000 and 4,000 rpm. More than 90 percent of the torque is available from as low as 2,300 rpm.

The V10 exhibits spontaneous throttle response and very refined running, and under load it also produces a sonorous, musical acoustic backdrop, as befits a dynamic vehicle. It is a far cry from a rough-diamond sports engine: for all its sporty character, this ten-cylinder engine is very low-vibration and has plenty of refinement.

The V10 imparts the luxury sedan with the road performance of a high-caliber sports car. The Audi S8 races from 0 to 60 mph in 4.9 seconds. It effortlessly reaches its electronically governed top speed of 155 mph, thanks also to its low drag coefficient of Cd 0.29.

Drivetrain

Typically for an Audi, the new Audi S8 also relies on quattro permanent four-wheel drive and the superior traction that it offers in all conditions. 25 years of expertise acquired in this domain by the brand with the four-ring logo have led to the development of a new quattro generation with asymmetric/dynamic torque split – further evidence of Audi’s philosophy of “Vorsprung durch Technik” (“Progress Through Technology”).

A center differential, installed longitudinally in the driveline, distributes power between the front and rear wheels according to the prevailing situation. Normally, 40 percent is routed to the front wheels and 60 percent to the rear – this slight emphasis on the rear end underlines the dynamic character of the Audi S8.

If the road conditions change, the purely mechanical differential responds without any delay; it can divert up to 85 percent of power to the rear wheels, and as much as 65 percent to the front wheels. If a wheel on one axle should happen to spin, the electronic differential lock EDL controls it by applying the brakes. As far as the driver is concerned, this newly compiled package of technologies means greater agility, a more spontaneous response to steering movements and even more stable handling.

The new S8 is equipped with a six-speed Tiptronic® transmission as standard. In keeping with the character of this sporty top-of-the-line model, the final ratio of the automatic transmission is lower than on the A8 – the sedan is still capable of forceful acceleration even in sixth gear. The electronic transmission control is optimised to change gear more dynamically. The driver can call up the transmission’s Sport mode on the selector lever. In this mode, upshifts are performed at even higher engine speeds, as high as 7,000 rpm, which is both the V10’s nominal and maximum engine speed. It is in addition possible to change

gear manually with the aluminum-look shift paddles located behind the steering wheel.

For Audi, lightweight design is a philosophy that has implications for every area of a vehicle. As in motorsport, the engineers developing the S8 fought to save every gram of weight possible. Thanks to its compact design and thinner walls, the V10 weighs just 485 lbs. – 40 lbs. less than a well-known competitor's engine. Good axle load distribution and impressive road behavior are the result. For the same reason, the battery and the power management are housed in the luggage compartment.

Chassis

The basic version of the Audi A8's air suspension, known as adaptive air suspension, already possesses distinctly sporty attributes thanks to its elaborate design. The axle links are made of aluminum. The front suspension consists of a four-link structure with two upper and two lower wishbones, and there is self-tracking trapezoidal-link suspension at the rear of the car.

Various details of the setup have been revised on the S8. The basis is the sport-tuned adaptive air suspension, the sports suspension that is available for the A8 as an option. On the S8, the characteristics of the air springs and the shock absorbers integrated into the air-spring bellows are somewhat firmer.

With a further reduction in rolling and pitching movements, the sporty top model behaves with even greater agility and maneuverability, but is as stable and safe as ever. The elastokinematics of the rubber mounts in the axles have likewise been modified in keeping with the character of the S8. The rack-and-pinion power steering with its variable ratio is roughly ten percent more direct in the straight-ahead position, for even more spontaneous handling.

Drawing information from seven special sensors and a number of other parameters, the damping responds adaptively to the prevailing requirements in a fraction of a second.

Its control system features four driving modes – automatic, comfort, dynamic and lift – which the driver can call up via the terminal of the MMI

operating system. The body's ride height is the same as with the sport-tuned adaptive air suspension, which is up to .78-inch lower depending on mode. On the S8, ground clearance is varied in three stages between 4.9-inches in the comfort mode and 3.7-inches at consistently high motorway speeds; this low level optimises the air flow and reduces fuel consumption as a result.

The Audi S8 is factory fitted with newly developed S-design cast aluminum wheels. Their dimension is 9 x 20-inches, the wide tires are size 265/35. The brake system features ventilated discs measuring 15.2 inch front and 13.2 inch rear, assuring a superlative braking performance. The brake calipers are painted black, and adorned with a titanium gray S8 badge at the front.

Body

As the sporty top model in the A8 line, the new S8 makes use of the entire expertise that Audi has acquired in the body manufacturing sector. Since the debut of the previous generation in 1994, the Ingolstadt brand has made consistent progress in the field of aluminum construction.

It all started with a revolutionary new approach – the Audi Space Frame ASF[®]. This is a high-strength aluminum frame structure into which the large aluminum panels are integrated, thus assuming a supporting function. The space frame consists of a combination of aluminum extruded sections and castings that are positively connected to each other. Its central elements are the roof frame, side sills, seat cross members, roof posts and floor panels.

Innovative casting techniques and alloys are used for the current A8 series. Multifunctional large castings, long continuous profiles and a high proportion of straight extruded sections reduce the number of parts used. Just 29 elements are used now instead of 50 castings, while the proportion of large castings has increased from 22 to 34 percent of structural weight compared with the predecessor. This progress improves comfort decisively because a lower number of connections between components make it possible to increase body rigidity. At the same time, the fact that there are fewer components has a positive effect on production processes and, consequently, on quality. The side panel, for example,

consists of a single section which extends from the A-post to the rear end of the body.

The connections are formed by riveting as well as various welding techniques including MIG and laser welding and, for the first time, the laser-hybrid welding process. Laser welding allows large-area panels to be connected to the body structure particularly efficiently thanks to the fact that the resulting linear joints achieve superior strength and rigidity values to punctual ones. The body of the new Audi S8 includes a total of 65 feet of laser connecting seams.

One of the two great strengths of the Audi Space Frame ASF is its outstanding rigidity. Its static torsional rigidity, a critical measure of dynamic potential, is around 60 percent higher than on the previous model. On the current A8, the natural frequency of torsion – the primary determining factor behind vibrational comfort – has increased by 38 percent. The ASF meets all current passive safety standards as well as plenty that have not yet come into force.

Despite all these excellent qualities, the body structure weight of the Audi S8 is only about half as much as that of a conventional sheet-steel body. It weighs in at 474 lbs. – a figure otherwise usually to be found in the upper midsize class. This weight-saving has two advantages: it improves handling characteristics and reduces fuel consumption.

Design

The Audi S models have always epitomised high performance and refined sports appeal. The same applies to the S8 – it lends the design of the A8 a dynamic edge. This prestigious sedan is already inherently light and elegant in character – its aesthetic appeal reflects its exceptional position as a sports model in the luxury class. And because good design is always functional, the styling of Audi models always enhances drivability – there is extremely little lift at the rear axle, for example.

The S8 cuts a supremely athletic figure, but never looks aggressive. The most striking changes are to be found at its front end. The eye-catching single-frame grille bearing the S8 badge is in platinum grey, and its vertical struts have a

chrome-look finish. Beneath the grille there are three low air inlets cut into the front apron. The two large air inlets beneath the headlights are filled with honeycomb grilles.

Down the sides, in addition to the 20-inch wheels and the special brakes, four details hint at the potential of the V10 engine: emblems on the wings and the front brake calipers, door handles with aluminum trim strips and the aluminum-look exterior mirror housings. At the rear, the S8 badge, an integrated rear spoiler, a subtle light-refracting edge in the apron and an exhaust system with four oval tailpipes complete the range of optical modifications. The S8 is the only model in the A8 range to be available in the exclusive color Daytona Grey, pearl effect.

The interior

In common with the exterior, the interior design of the Audi A8 reflects a character of dynamic elegance and high quality. This also applies to the lavish amount of space resulting from the sedan's 115.9-in. wheelbase, to the smoothly flowing line of the cockpit and to the MMI (Multi Media Interface) control interface. With its clear ergonomics and intuitive, logical operating principle, this Audi system is still unequalled by the competition.

The S8 adds various specific accents to this luxurious interior. The standard specification includes sports seats with Valcona leather upholstery, with electrical adjustment and memory function, heating and lumbar support. The seat surfaces can be extended via a rail that slides forwards, without producing the usual gap in the cushion.

The S8 sports seats, which have a wide range of adjustment features, have two-color upholstery with stitching in a contrasting color. The three possible color combinations – Silver/Black, Espresso Brown/Black, and Silver/Gray - underscore the ambience of luxurious sportiness; the colors for the seat center sections are different from those of the side sections and head restraints. An all-Black interior is also available. The headlining is black together with a range of interior color combinations, but the characteristic “S” interior color silver is also available.

Further details of the interior distinguish the sporty top model from the A8. The highly polished door sill trims are adorned with S8 logos, and the inlays are in brushed aluminum and Birch Gray wood. The three-spoke leather multifunction sports steering wheel with the S logo features color-contrasting stitching and aluminum-look shift paddles. Leather and aluminum-look trim are used for the selector lever knob; the parking brake and air vent surrounds also have an aluminum-look finish. The needles on the instrument dials are in white, their scales in light gray and their digits in the characteristic S italic script.

Safety

quattro drive is one of Audi's core areas of expertise. It gives Audi drivers decisively more safety by assuring optimum traction in critical situations. The asymmetric/dynamic torque split that is possible on the new Audi S8 builds on this already significant advantage. The high-performance brake system, too, makes a substantial contribution towards active safety.

The S8 is equipped with a dynamic stability system that can be deactivated if required. The control strategy of the Bosch 5.7 is tailored specifically to the dynamics of the S8; it intervenes slightly later and more briefly. The system keeps the brake discs dry in wet conditions by lightly applying the pads to the discs at regular intervals – a process that goes unnoticed by the driver.

In common with all Audi A8 models, the sporty top model comes complete with a package of restraint systems that are perfectly matched to its highly rigid aluminum body. The package includes two front airbags that are activated in two stages, four side airbags integrated into the seat backs and Sideguard[®] head airbags. All five three-point belts in the Audi S8 are fitted with belt tensioners. Active head restraints for the front seats reduce the risk of whiplash injuries in the event of a rear-end collision.

The innovative lighting technology known as adaptive light, including LED daytime running lights, is standard equipment on every Audi S8. In this case, the xenon plus headlights are equipped with static turning lights and dynamic cornering lights and coupled with separate LED daytime running lights.

Located in a cloverleaf-shaped reflector and each consisting of five white light-emitting diodes, the daytime running lights on the Audi S8 consume a minimum, barely perceptible amount of energy.

Each diode has an output of just one watt – conventional dipped headlights have an output of up to 300 watts. This white color of this light, which is similar to daylight, not only illuminates the road ahead, it also makes the driver's own car immediately visible to all other road users. At the same time, it emphasises the striking design of the Audi front end.

Equipment

As well as adaptive light technology, 20-inch wheels and an impressive brake system, the standard specification incorporates other comfort and convenience equipment items. These include sound-insulating double glazing for the windows, automatically dipping and electrically folding exterior mirrors, seat heating with six settings for all seats, a navigation system with high-performance DVD drive and a Bose surround audio system with CD changer. The door armrests and the center console in the S8 are upholstered in leather, together with the seats.

One particular highlight available to customers for the S8 is the Bang & Olufsen Advanced Sound System. The fully digital system from the Danish high-end manufacturer redefines the standard yet again for demanding music lovers. This system incorporates 14 speakers, each energized by its own output stage. The output stages are grouped together in two amplifiers, which supply an output of more than 1,000 watts if required. The general rule is: the higher the output, the better the freedom from distortion in poor acoustic conditions – inside the car, there is already a basic background noise level of around 60 dB.

The dynamics of the frequency response is calculated such that the music has the perfect tone. When programming the digital sound processor and selecting and positioning the speakers, consideration was given not only to driving noise, but also to spatial conditions and the properties of materials in the S8 interior.

The speakers are housed in enclosed capsules so that their vibration behavior can be precisely controlled. Their anodised aluminum grilles underscore

Audi's expertise with this material. The front tweeters use what is known as Acoustic Lens Technology: with their coated silk diaphragm domes, they act as perfect point sound sources. When the system is switched on, they extend out of the dashboard automatically.

With all its qualities put together, the S8 – along with the rest of the A8 model line – is positioned as a luxurious and sporty sedan in the top car class. Its aluminum body based on the ASF principle, aluminum chassis, adaptive air suspension and quattro permanent four-wheel drive combine to produce its dynamic character.

A six-speed Tiptronic transmission, three-spoke leather multifunction steering wheel and deluxe automatic air conditioning with moisture sensor and sun sensor provide maximum comfort and convenience. The luxury impression is also enhanced by the luggage compartment lid with power-assisted closing, the light and rain sensor and cruise control.

The front seats can be adjusted electrically. Innovative technologies such as the Multi Media Interface MMI, battery power management, the electromechanical parking brake including auto release function and the light-emitting diodes in the rear lights underpin Audi's proverbial "Vorsprung durch Technik".

Sporty components and high-tech systems also play the leading role in the list of optional extras. The radar-controlled adaptive cruise control, for example, represents a major advance on conventional cruise control systems. This intelligent system permanently calculates the distance to the vehicle ahead and adjusts the car's own speed accordingly by actively controlling the accelerator and brakes.

An optional Premium package is available to make the S8 even more luxurious and exclusive. The package consists of power rear and manual side sunshades, Advanced Key, power open and close trunk, heated rear seats, Advanced Parking system with rearview camera, and power door close assist.

Other exclusive stand alone options include carbon fiber interior trim, Sirius® satellite radio, dual rear-seat climate control, and a full leather upgrade.

S models

The forefather of all Audi S models was the 1985 S1, the last and technically most advanced evolution model of the revolutionary rally competition car. 224 of its homologation version, the Sport quattro, were built. 1991 saw the first S model purely for use on public roads enter the showrooms – the Coupé S2, the designated successor to the “Ur-quattro” (original quattro). In characteristic Audi style, the S2 was equipped with permanent four-wheel drive. Its sophisticated character was a combination of sportiness and refinement. Inspired by the success of the S2, a self-contained family of S models grew over the years, from the S3 to the S4, S6, all the way up to the S8.

From 1996, the S8 took the philosophy of luxurious sportiness into the top car class with a 340 bhp (later 360 bhp) 4.2-liter V8. With its exceedingly sporty and luxurious character, it accounted for almost 11 percent of sales in its model line. This figure was much higher than that achieved by the competition’s comparable models, and confirmed the dynamic orientation of A8 customers. With sales of around 10,500 models during its six-year production cycle, the Audi S8 captured an average market share of 31 percent in the category of luxury sports sedans. Sales of all S models together up to the present day amount to almost 140,000 models.

Like its predecessor, the new Audi S8 has been developed for people wishing to express their individuality through the car they drive. They want it to communicate the message of their success and symbolise their high performance level.

Warranty

The 2007 Audi S8 will be backed by an outstanding combination of warranties and protection that includes:

- Four-year/50,000 mile new vehicle limited warranty
- 12-year limited warranty against corrosion perforation

- 24-hour Roadside Assistance for four years provided by Road America

More information on all Audi models can be found at www.media.audiusa.com.

#

"quattro", "Sideguard", "Audi", and the four rings logo are registered trademarks of AUDI AG. All other trademarks used in this document are the property of their respective owners.