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The
race-bred
Audi R8
hits the
streets



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Audi R8

A DEAD SERIOUS 911 CHALLENGER IN THE FAMILY

Audi has incorporated the name and the genes of the five-time Le Mans winner, the Audi R8, into a spectacular sports car. Three years after the unveiling of the Audi Le Mans quattro concept car, the production version made its debut at the Paris Motor Show as the new Audi R8 mid-engined sports car. It is a fascinating driving machine and the performance-gearred pinnacle of the Audi brand. A mid-mounted 420 hp V8 FSI engine, quattro permanent all-wheel drive and Audi Space Frame aluminum body form the basis for truly outstanding driving dynamics.

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Audi is entering the most discerning segment of the car market with its R8 mid-engine sports car—and immediately taking up a position among the leaders: equipped with the expertise that Audi has gathered from its involvement in motor sport and from building sporty premium-class cars, the R8 is the embodiment of superlative road behavior, pioneering technology and fascinating design. The 420 hp V8 FSI engine, quattro permanent four-wheel drive and the aluminum space-frame body endow the R8 with outstanding qualities to challenge for leadership of this segment, as do its excellent everyday suitability and Audi's typical standards of perfection in quality and finish. Deliveries will commence in the fall of 2007.

Following on from rally success with the revolutionary Audi quattro and the triumphs of its touring car, Audi has added another chapter to the history of motor sport with the R8 racing car: with five wins to its name in the Le Mans 24 Hours, the R8 is the most successful model ever to have competed on the legendary circuit at Le Mans. In a total of 79 starts at venues all over the world, this exceptional athlete has emerged victorious on a total of 62 occasions.

The genes of the winner

The repeat winner was thus the ideal role model for the new production sports car. The genes of the triumphant racing car were also passed on to the passenger car—which admittedly feels distinctly at home on the racetrack, too—in the model designation R8. The mid-engine concept is as integral to this genetic stock as the high-revving V8 engine with FSI petrol direct injection and the sequential gearbox with steering-wheel control. Whereas the use of quattro permanent four-wheel drive was prohibited on the racing version, the new R8 can of course now be equipped with it, for superior road behavior and safety in all conditions.

There are even design parallels—not just in functional terms—in how it cuts its way through the air even at very high speeds. The same design team that had previously styled the racing car was given the task of styling the R8 roadgoing sports car. The striking wing structure of the Le Mans



version did, however, have to be abandoned. After all, the roadgoing version was meant to express its sports qualities through a typically Audi quality of elegant styling.

With power and elegance

The wide, full shape of the R8 seems to hug the road. It demonstrates its potential through its imposing proportions, accentuated wheel arches and substantial air apertures. It is like no other Audi before it—with the unmistakable proportions of a mid-engine car. These proportions are dictated by the forward position of the cabin and the clearly separate engine compartment behind it. A characteristic feature of the side view of the R8 is the "sideblade", which visually accentuates the engine's position as well as acting as an air deflector.

And yet the R8 is undeniably first and foremost an Audi, not just because of the characteristic single-frame grille at its front end. For the first time, the four rings are positioned not on the grille, but on the lid above it. The sparing but always very precise use of lines is another typical Audi characteristic, as is the curved arc of the roof. And the continuous line running from the front apron across the wheel arches and flanks to the tail end, then back down the other side, is significant for the brand. This "loop" naturally encompasses the air apertures, the headlights and the

rear lights.

Unmistakable face by day and night

The passion expressed through the elaborate design of the lights is another typical Audi trait. The R8 already acquires an unmistakable frontal aspect through the standard bi-xenon headlights and daytime running lights comprising twelve light-emitting diodes—day and night alike. Nor is anyone likely to overlook this Audi sports car from behind: for the very first time, LED tail lights with a three-dimensional effect have successfully been used.

But the absolute highlight will be the all-LED headlights, available for the Audi R8 as an option from the end of 2007 (not available in North America), and making their first ever appearance worldwide on a production car. With their lenses and reflectors, these innovative light sources not only look progressive; they also have an enormous functional advantage: with its color temperature of 6,000 Kelvin, LED light resembles daylight much more closely than xenon or even halogen light. Drivers will consequently suffer much less fatigue when driving at night.

The interior offers a luxurious standard of motor racing atmosphere. Its design is as sporty and exclusive as the exterior: the characteristic element here is the monoposto—an expansive arc running

around the steering wheel and instruments, connecting the driver to the car. The interior consequently picks up on the dynamism of the R8 and gives it tactile expression in a form that is accessible the moment you climb in.

Exceptionally spacious

For a sports car, the exceptional everyday suitability of the R8 is highlighted by the large amount of space, due in no small measure to the generous wheelbase of 104.3 inches. Whatever the build of the driver and passenger, they will always be able to find their perfect seated position. The view is also very good for a mid-engine vehicle. Narrow A-posts optimize the field of view to the front and sides.

The luggage compartment is an important aspect of everyday suitability: approximately 3.5 cu. ft. fit beneath the front lid, and there is room for bags with a total volume of approximately 3.2 cu. ft. behind the seats. And even passionate golfers need not forgo their sport when driving the R8: two full-size golf bags can be stowed behind the seats.

The impression of quality in the interior is striking: even in the basic specification, the surfaces of the driving area and door trims are meticulously trimmed, with

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neatly finished decorative seams. And the scope for customization is as diverse as the preferences of the R8's future owners could conceivably be: piano finish, carbon fiber and a wide variety of leathers are just some of the options.

Light but highly rigid body

The body of a sports car needs to be particularly light and rigid: low weight permits superior road performance, and rigidity is the crucial starting point for an agile driving feel allied to high precision. The Audi Space Frame body, made from aluminum, provides the ideal basis for this. Audi has more expertise than any

other manufacturer worldwide in the designing and production of cars based on aluminum technology, and has channelled its accumulated know-how into the R8.

The entire bodyshell of the R8 weighs just 462 pounds (European spec), the pinnacle of achievement among sports cars in terms of lightweight design quality. It comprises extruded sections, aluminum panels and highly complex cast nodes, joined together by 325 feet of weld seams, 782 punch rivets and 382 self-tapping screws.

Superlative production precision

This structure is created largely by hand at the R8 production shop in Neckarsulm, but

with precision measuring and machining methods keeping a watchful eye over the whole business: a laser measuring system checks 220 points on each body to within one-tenth of a millimeter, and a special computer tomograph can investigate the quality of every join with micron precision. A central processing plant cuts and drills all 52 connecting points on the running gear and steering in a single pass. This assures maximum precision in the axle geometry.

The aerodynamics experts at Audi have done their work so thoroughly on the R8 that, as an added benefit of its elegant shape, the body actually produces a downforce—unlike many other sports cars.

This promotes directional stability at high speeds. It is achieved by means of the extending rear spoiler, but above all thanks to the fully clad diffuser underbody.

Enormous propulsive power

The heart of the sports car is of course the engine. As well as being exceptionally compact, the eight-cylinder power unit of the R8 runs lustily and effortlessly up to very high engine speeds, peaking at 8,250 rpm. The reward is 420 hp and an even buildup of torque that produces enormous propulsion across a wide range of engine speeds. The engine's dry sump lubrication, typical of a race engine, permits a

particularly low installed location and assures a constant oil supply in even the toughest of driving conditions—for instance on a racetrack. The FSI direct injection underpins the very good full-load performance with a highly efficient combustion process.

The road performance is correspondingly impressive: the R8 dashes from 0 to 62 mph in just 4.6 seconds, whether with manual gearbox or with R tronic sequential gearshifting. The needle hits 125 mph after only 14.9 seconds, and the engine's propulsion is only finally held in check by rolling resistance and drag at 188 mph.

However, the captivating character of

the V8 stems not just from its effortless propulsion, but equally from its ample, versatile sound characteristics. Thanks to ingenious fine-tuning measures, Audi's engineers isolated disagreeable frequencies and then orchestrated an impressive opus from the intake and exhaust sound.

Launch Control: Lightning start

The R8's transmission comes with six well-spaced ratios that can be operated either manually, in conjunction with the clutch, or automatically via the R tronic. The R tronic is an entirely new development that operates faster than even the most adept of drivers and offers racing-style thrills

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with the shift paddles on the steering wheel. The R tronic accomplishes lightning-fast starts worthy of the racetrack thanks to Launch Control. The quattro permanent four-wheel drive provides that decisive extra dose of traction and driving safety. The system was adapted to the mid-engine concept, with its ideal axle load distribution of 44:56 percent, and directs between 10 and 35 percent of the engine's power to the front wheels as necessary.

Precision suspension safety boost

The precision suspension of the Audi R8 remains in control of the sporty performance, but is equally capable of assuring relaxed driving pleasure over long distances. The sports car obeys steering movements with spontaneous agility, always demonstrating exceptionally good driving safety. The suspension, with double wishbones at both the front and rear, is optimized for a neutral self-steering response and maximum ease of control.

A particularly innovative damping technology is available for the R8 as an option: Audi magnetic ride adapts the suspension characteristic to the profile of the road and the driver's style within milliseconds. A generously-dimensioned brake system supplies the necessary braking force. It applies a total of 24 pistons to the four studded brake discs.

Standard equipment (Euro spec)

The Audi R8 combines its superior performance with both a surprising measure of everyday suitability and an exclusive equipment specification. It comes ready-equipped for example with a 140 watt audio system, an alarm system, deluxe automatic air conditioning and the driver information system with integral stopwatch for taking lap times. The sports seats are trimmed in combined Alcantara/Leather and the 18-inch wheels are fitted on cast alloy wheels.

The list of optional extras nevertheless includes a couple more highlights: for example, the wide range of customization options, the Audi parking system advanced with integral rearview camera, and the superb Bang & Olufsen sound system. Surround sound from twelve high-end speakers with a 465 watt music output delivers an exceptional music experience.

The standard equipment and options lists should be fairly similar in the US. ■



ONE IN THREE IS QUATTRO

One in three Audi models is fitted with quattro four-wheel drive: in 2006 Audi recorded an all-time highest quattro installation rate of 33.1 percent. Having produced a total of 306,318 quattro vehicles in 2006 (2005: 219,288), the Ingolstadt-based car manufacturer has now risen to become the market leader for four-wheel drive in the premium segment. Approximately 72% of all Audi vehicles sold in the U.S. have quattro, making the U.S. Audi's largest seller of quattro-equipped vehicles.

According to Audi boss Rupert Stadler: "quattro means more than traction—the word represents emotion, driving safety and performance, it stands for engineering competence and a dynamic spirit. Over 2.3 million quattro models have rolled off the production line at Audi so far—a figure that speaks for itself."

The launch of the new Audi Q7 played a major role in the rise in the proportion of quattro models by six percentage points compared to the previous year. In total 72,188 of the sports utility vehicles, which are 100-percent four-wheel drive, were produced in 2006. Production of the RS 4 model family was also well up on the previous year at 7,639 units (2005: 569).

"Audi equips a greater proportion of its vehicles with four-wheel drive than any other manufacturer", said Ralph Weyler, Member of the Board of Management for Marketing and Sales. "That is especially true of our sedan and Avant models. We have the unique selling proposition that all of the models in our current range are available with four-wheel drive."

quattro—a success story in brief

The idea: on a car that distributes its power over all four wheels, each wheel can provide a greater lateral force than with just rear- or front-wheel drive; the car has superior traction and cornering.

In the spring of 1977 the four-wheel drive project was started which had the objective of developing a high-powered sports coupe with permanent four-wheel drive.

On 3 March 1980 the first Audi quattro took centre stage at the Geneva Motor Show; at the end of the same year the first Audi with four-wheel drive went on sale—and became an instant bestseller.

From 1982 Audi gradually added a further five vehicles with four-wheel drive to its model range—the Audi 80/90, the Audi Coupe and the Audi 100/200.

From 1990 the dynamic image Audi had acquired was further enhanced by its S models with their quattro drivetrains.

The latest generation of quattro four-wheel drive is fitted in the RS 4 and the Audi Q7. It distributes the engine torque between the front and rear axles at a 40:60 ratio. That means even more agility, with virtually no noticeable effects of power application on steering.

On the rally track the quattro won four world championship titles between 1982 and 1984.

Permanent four-wheel drive technology also scored major successes on the racing circuit: the Audi touring car drivers won the most prestigious trophies the USA and Europe had to offer.

In total Audi has built 2.3 million vehicles with quattro four-wheel drive. ■

