The Audi 5000



www.audi-klassik.de

"Designing a new automobile from the ground up gave us the chance to create one of the best-engineered luxury cars in the world."

This is the team of automotive engineers who developed the new Audi 5000, a new kind of luxury car for the radically different needs of today. Starting clockwise at the bottom of the picture and ending in the centre, they are:

Ferdinand Piëch,

Project Director: I designed racing cars before coming to Audi. But the Audi 5000 was a bigger challenge. A racing car can be designed to last for a few races only. That is its job. A passenger car has to do much more. Besides performing well, it must last a very long time. I knew we had assembled remarkable engineering talent. But they surprised even me.

Werner Schulze,

Interior Design: A high-performance car doesn't have to have an interior like the cockpit of a fighter plane. I felt it was important for the Audi 5000 to have a comfortable atmosphere that was not distracting, the same as a driver would find in his home. It makes him a calmer, better driver.

Dr. Anton Wimmer, Structural Safety: A man named Timoshenko had a theory of construction which could help make safe cars. Yet no one had ever tried it. I did try it, and the results were remarkable. I believe it will take our competitors years to utilize this theory.

Dr. Franz Behles,

Assistant Director: The Audi 5000 is the largest German car for the money. Yet for all its size, it is also surprisingly lively. For the money, we feel there is no other car with our combination of room, handling, acceleration, and comfort.

Jörg Bensinger,
Prototype Evaluation: We have been testing 100 cars in North America for months before offering the first one for sale. It was the only way we could truly know how they perform in all weather conditions here.

Hartmut Warkusz,

Styling: It looks the way it does because it is functional. It is aerodynamically efficient, so it requires less machinery to move it. Beauty is one thing. But if the design had not worked in the wind-tunnel, it would have been thrown out.

Joseph Eibl,

Chassis Design: It is better to pull a car than to push it, so I insisted on front-wheel drive. You have no idea the difference this can make, especially on wet or slippery roads. When you test-drive the Audi 5000, save it for a rainy day.

Dirk Bösenberg,

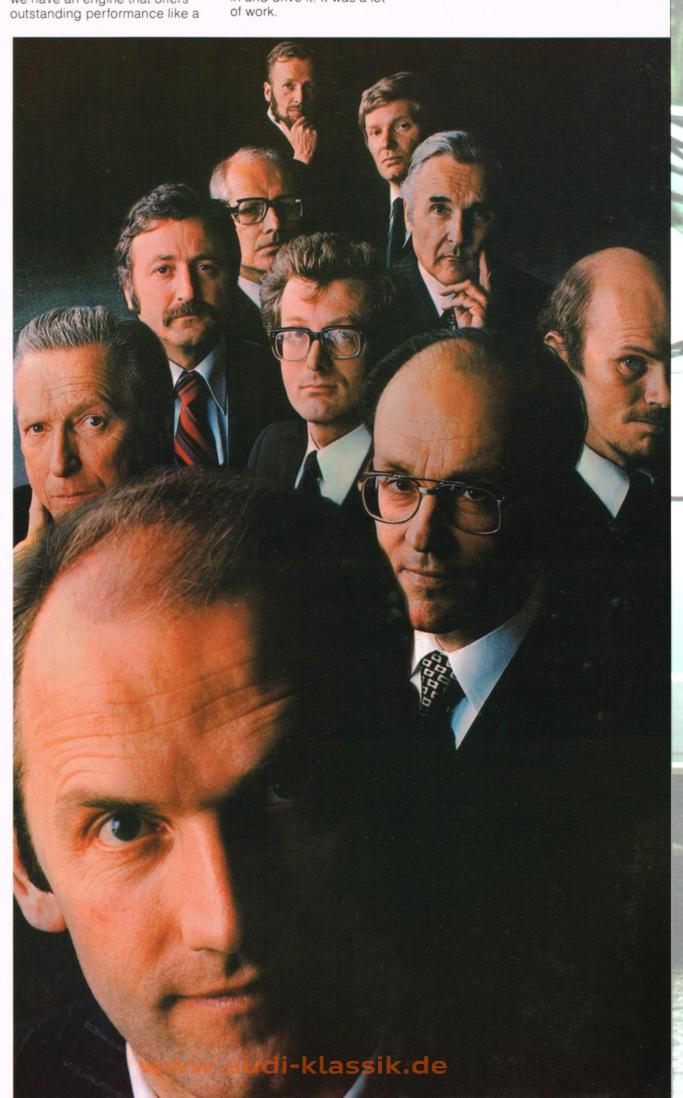
Acoustics Testing: If you have grown accustomed to noise in imported high-performance cars, you must try the Audi 5000. It gives you superb performance, yet it will surprise you with its quietness. This is why I insisted on true high fidelity equipment, instead of a simple radio.

Franz Hauk,
Engine Design: When I proposed the 5-cylinder gasoline engine, my colleagues smiled. I insisted, even though no one had ever done it before. It wasn't easy. But now, I believe we have an engine that offers outstanding performance like a

and great efficiency like a 4.They smile a different smile now.

Dr. Fritz Naumann,
Power Train Testing: We
designed the Audi 5000 with as
few moving parts as possible to
make it reliable. Parts that are
not in the car can never break. It
wasn't easy. Sometimes I think
they call the car the Audi 5000
because that's how many
dinners I missed. Please come
in and drive it. It was a lot
of work

To reach their goals, these Audi engineers broke new ground in many areas of automotive design. They successfully realized their design concept, with a car that is new in the sense of being totally newly engineered. They employed countless technical innovations. But more important, the Audi 5000 is a new automobile which is superb in total — a new kind of luxury car.









"The interior of the Audi 5000 will meet the needs of driver and passengers for two kinds of comfort...psychological as well as physiological."

The interior of this new kind of luxury car was approached with as much innovative thinking as its moving parts. Through discussions with psychologists, Audi designers determined that a car interior resembling a living room is most conducive to safe, relaxed driving. A driver moving from the restful atmosphere of his own home into similar surroundings in his automobile, tends to be a better, calmer driver.

So inside the Audi 5000, its designers have created a living room atmosphere and enhanced it with luxurious, tasteful appointments. Proven optical principles were applied to create the largest possible impression of size. Sharp contrasts, which are psychologically tension-inducing, were avoided in favor of muted surfaces, large areas of high-quality textured fabrics, and thick pile carpeting on the floor.

An End To Tiring Vibrations

Through scientific orthopedic principles, the car's interior designers

have contoured the modern all-foam seats to fit the anatomy of better than 90% of the population. The shape of the seats encourages a relaxed posture. Springs and cushioning are balanced precisely to eliminate tiring vibrations. And the exceptionally high bolsters of the seats provide side-support when cornering.

Both front seats recline to any position, and they slide far enough back to accommodate a six-foot man while still allowing sufficient room for passengers in the back seats.

Interior Roominess And Safety

A sense of roominess in the Audi 5000 is furthered by its ample storage space.

Internal safety features also offer a sense of reassurance. Front seats are securely anchored to the floor. Buckles of the inertia-reel seat belts are mounted directly on the seat frames instead of the floor, for extra passenger comfort and added emergency locking. Back-rests have unique impact protection for the

knees of passengers in the back seats. Child-proof safety locks on rear doors, an energy absorbing instrument panel and the padding and rounding of corners all contribute to the protection of the passengers.

Advances in Noise Insulation

Perhaps the most important factor affecting psychological comfort is the amount of noise in the passenger compartment. In the pursuit of silence, Audi engineers subjected the Audi 5000 to two years of acoustical testing. They developed an entirely new testing procedure to measure the level of noise reaching the driver's ear when a noise or vibration is induced into the body or through the engine mounting. This method, assisted by computer calculations, led to new advances in noise suppression.

In the 5000, suspensions for the engine, transmission and front axle are all doubly insulated against noise transmission from the engine and drive train. A subframe prevents the



transmission of engine and road noise into the body. The interior is insulated by a closed noise-absorbing shell comprised of four layers — bitumen, felt, matting and foam-backed carpeting. Thorough aerodynamics





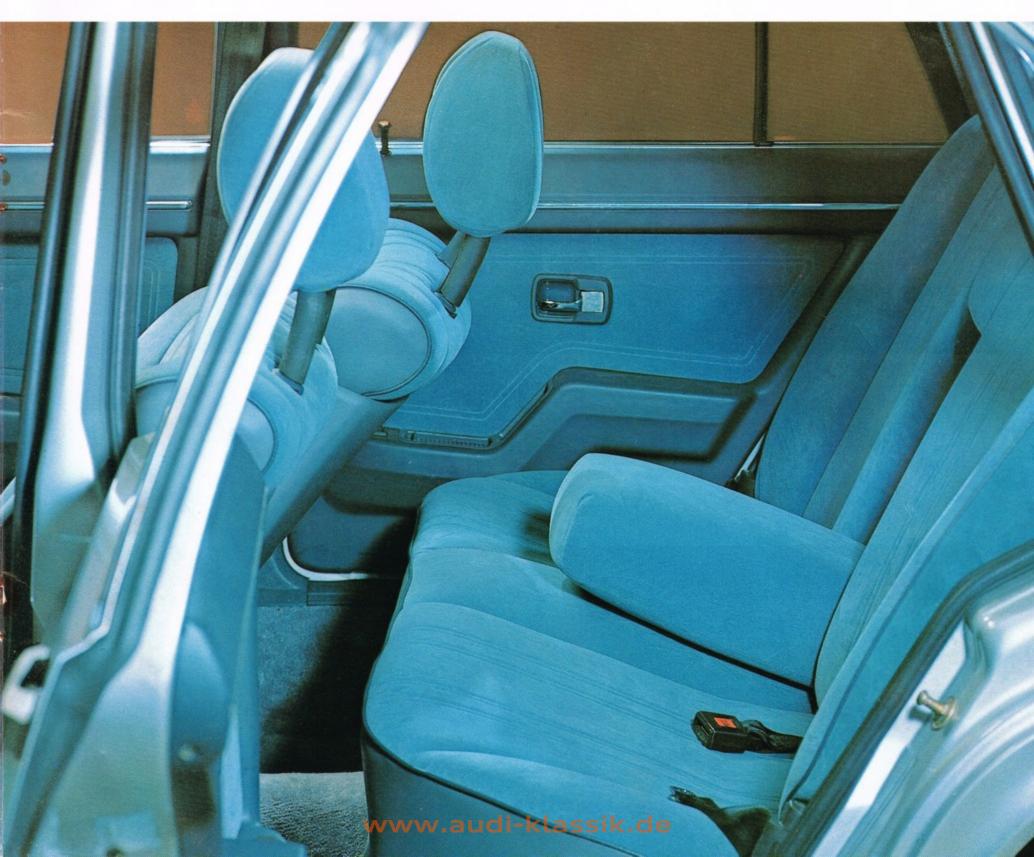
investigations led to a substantial reduction of wind noise. These innovations, combined with the low vibration level of the new 5-cylinder engine contribute to the remarkably quiet operation of the Audi 5000.

Aesthetically Pleasing Design While exterior styling is not apparent to those inside a car, awareness of its beauty certainly influences the joy of ownership. The exterior colors have been chosen for

serene and elegant beauty. The lines of the Audi 5000 follow the needs of aerodynamic design, which like mathematical curves, are also pleasing aesthetically.

Above all, a luxury car should

provide comfort. And the team of designers, stylists and engineers who created the Audi 5000 have omitted nothing that is technically feasible in delivering comfort to the car's driver and passengers.



"By uniting the car with the driver, the controls of the Audi 5000 communicate a sense of quick response and high performance."

Seated in the Audi 5000, a driver is immediately impressed with the simple, sensible arrangement of the dashboard. The car's designers have placed their emphasis on functionality rather than "show" - using the results of time-and-motion studies to position instruments and controls for maximum ease and convenience. All warning lights, for instance, are centralized. Steering column controls are grouped according to the anatomy of the hand. The Audi dashboard is intentionally designed to look unimposing - not complicated like the cockpit of an airplane. Instruments and controls are as reassuring and relaxing in appearance as the car is to drive.

Controls on the steering column are mounted on four stalks, which operate the lights, turn signals, emergency flasher, windshield wiper and washer — and the cruise control. The driver uses the cruise control stalk to set the speed for automatic cruising, which will disengage when

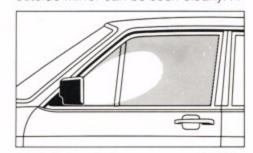


either the brake or clutch is operated.
Steering of the 5000 is easy but firm in the hands. The rack-and-pinion mechanism itself is maintenance-free and self-adjusting. Its operating rod is Teflon-coated for low-friction,

noiseless operation. Standard power steering employs an assisting device that diminishes with higher speed, automatically maintaining an even steering response.

Contours Aerodynamically Designed

The driver's line-of-vision during every kind of maneuver determines the placement of every component. Even the contours of the outside rear-view mirror are aerodynamically designed so that rain or snow will blow off the front-side window and the outside mirror can be seen clearly. A



heated rear window assures visibility in inclement weather.

Enormous Heating Capacity

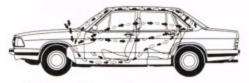
The car's heater has a heat output which can maintain the inside temperature of 30°C when the outside temperature is -40°C. While heating systems of other cars have a similar output, these conventional heaters are controlled by adjusting the flow of hot water, providing a slow response to changes in temperature setting. The interior temperature in cars with this type of heater also varies considerably with air flow (road speed) and pump pressure (engine speed).

On the other hand, the heater of the 5000 operates by constantly

passing hot water at full flow through a heat exchanger. The temperature of the air used to heat the car is varied by mixing warm and cool air. Thus the heater inside the car is virtually unaffected by engine speed and road speed. This eliminates the need for frequent temperature adjustments that are necessary with other systems.

Double The Amount of Air-Flow

Careful attention was also given to temperature distribution in the design of the ventilation system. A wide array of air outlets at dashboard height "stratify" the air flow so that the upper air layer is kept cooler and the lower layer warmer — an arrangement that promotes clear heads and warm feet. Air is also directed to the side windows to prevent misting. The circulation of air is powered by a newly developed



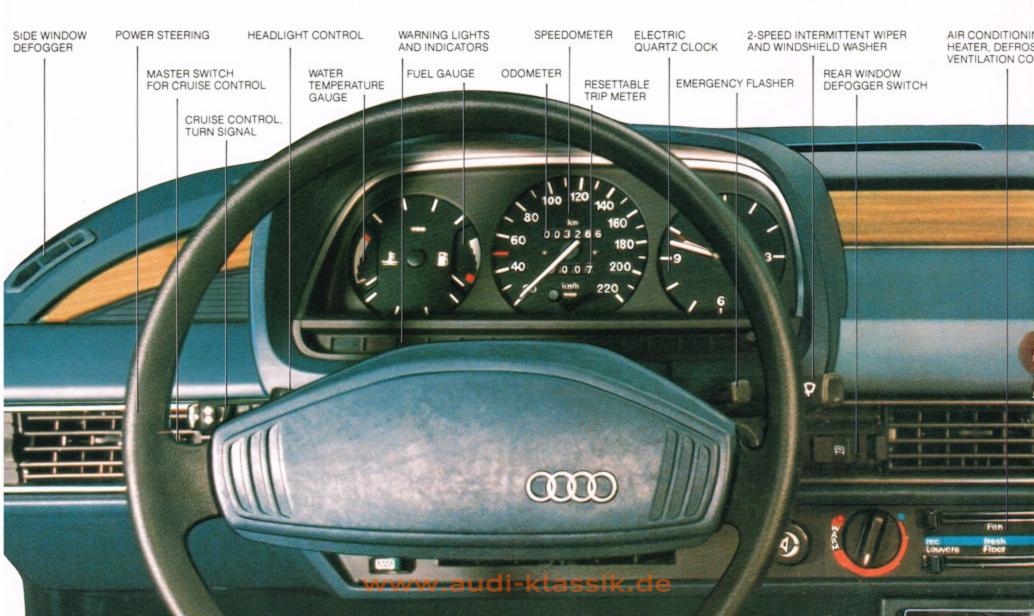
radial fan of large diameter completely encased to dampen noise. This fan develops an air flow throughout that is double the amount of earlier conventional systems, with a noise level that is 50% less. It can change the air in the car's interior approximately every 15 seconds.

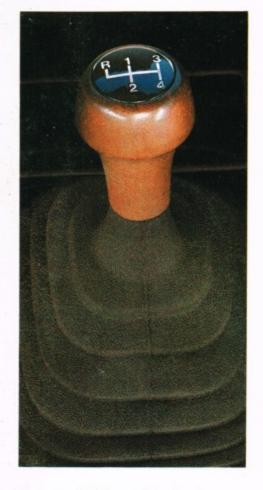
The air conditioning system in the Audi 5000 was developed as an integral part of the car's comfort concept, rather than as an "add-on" accessory. The system has numerous outlets for faster, more even cooling of the interior. It dries the air as well as cools it. As part of the hundreds of thousands of miles of road tests, Audi 5000 was driven at top speed with full air-conditioning across the Sahara Desert in summer, and its occupants remained comfortable. (Similar tests of the heating system were conducted in Finland during the winter.)

Acoustic Chambers For Stereo

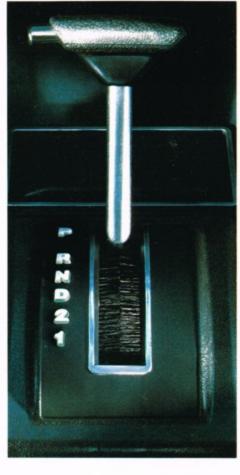
Before designing the sound system for the Audi 5000's stereo radio, Audi engineers made a basic study of the special problems of hi-fidelity sound reproduction inside an automobile. They found that the superiority of high fidelity systems in the home is largely due to the resonance chambers in full-sized stereo speakers. By creating acoustic chambers around the four stereo speakers, they found they could enhance sound reproduction enormously. This new advance in automobile high fidelity is now found in the new Audi 5000.

Engineering improvements inside the passenger compartment of the Audi 5000 actually rival the technical advances made in the car's power train. Only behind the wheel will a driver fully appreciate the interior atmosphere its designers have created — for safe and relaxed, yet exciting driving experience.

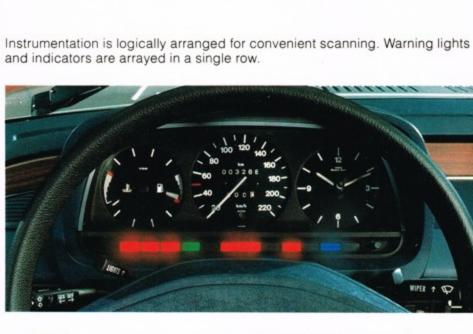




Four-speed fully synchronized manual transmission is available at no extra cost.



Three-speed automatic transmission is standard.



Both driver and passenger side view mirrors are tinted and adjustable from the inside.





"A luxury car ought to deliver all its refinements to the owner as basic equipment." With this Audi 5000 there are no options.

In outfitting the 5000, the car's designers pursued the philosophy of offering a complete luxury car. Many deluxe appointments, which are optional extras on other cars, come as standard equipment on the 5000.

When comparing the Audi 5000 with other luxury sedans, be sure to take into account the many features of the car which are included in the

Audi 5000 Standard Equipment

Economy/Durability

- 5-cylinder fuel injected engine
 Heavy duty battery
 Factory undercoating
 Heat and sound insulation
 Thermostatically controlled radiator cooling fan
 Aluminum wrap-around bumpers
 with rubber inserts front and rear
 Protective bodyside mouldings
 Transistorized breakerless ignition system

Safety/Security

- Safety/Security

 Front wheel drive
 Diagonally linked power assisted front disc/rear drum brakes
 Electric front brake wear indicators
 Wide steel belted radial tires
 Electric rear window defroster
 Side window defoggers
 Unitized, safety-cell body construction
 Kick-down gear for rapid merging/passing ability (automatic transmission)
 Steering column mounted wiper/washer controls with intermittent control
 Headlight flasher with dimmer switch on turn signal lever
 Four-way hazard warning lights
 Collapsible steering column

- Padded steering wheel
 Instrument panel made of flexible material
 Safety day/night inside rear view mirror
 Floor-mounted hand brake
 Inside release for front hood gas spring
 supported
 Lockable glove compartment

- supported

 Lockable glove compartment
 Inertia type front seat belts

 Negative steering roll radius
 Illuminated ashtray, cigarette lighter, glove compartment and heater control
 Energy absorbing bumpers

 Locking gas cap
 Power operated central door locking system





Electrically operated sunroof offers fresh air or open-air capability.



Spacious lighted glove compartment.



Lockable gas cap.



Power operated central door locking system.



Illuminated cigarette lighter.



Attractive light alloy wheels.



Rear stereo speakers.

Comfort/Convenience

- Automatic or manual transmission
 Electrically heated front seats
 AM/FM stereo radio and tape cassette with
 recording and play-back features
 Power antenna
 Four stereo speakers (two front/two rear) with
 front-to-rear balance control
 Air conditioner
 Electric sup roof

- Air conditioner
 Electric sun roof
 Power windows
 Leatherette or cloth upholstery
 Power assisted rack and pinion steering
 Independent MacPherson strut front suspension
 Independent coil spring rear suspension with
 torsion crank axle and telescopic shock absorbers Front door storage pockets
- Fully reclining anatomically designed front seats
 Adjustable headrests (front and rear)
- Flow-through ventilation system with 3-speed high output blower Centre console

- Centre console
 Quartz electric clock
 Trip odometer
 Automatic speed control
 Passenger assistance handles front and rear
 Swivel sunvisors with vanity mirror on passenger
 side
 Tinted class all around
- side

 Tinted glass all around

 Tinted left and right outside mirror with remote control

 Door arm rests

 Rear centre arm rest

- Decor/Trim
 Light alloy wheels
 Dual headlights
 Dual-tone horn
 Bright moulding around all windows
 Roof drip moulding
 Rocker panel moulding
 Bright moulding on rear trunk lid
 Bright moulding on front grill
 Thick cut pile wall-to-wall carpeting
 Wood applique on dashboard
 Bright moulding on:
 window sill trim
 inside door window slots
 top of fresh-air and heater outlets
 lower edge of wood grain applique
 dashboard

- Chrome tailpipe extension
 Lever for door locks chrome plated
 Bright Audi emblem on steering wheel
 Wooden shift lever knob
 (on manual transmission lever)

- Hand brake lever chrome plated
 Aluminum moulding on door sill
 Leatherette covered steering wheel
 Colour co-ordinated carpet on rear window deck
 Carpeted luggage compartment
 Metallic or non-metallic paint



Luxurious door panels with storage pockets.



Air conditioning controls.

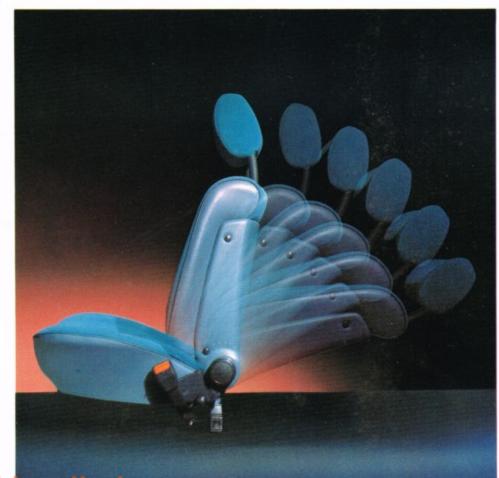
Blaupunkt electronic station-seeking AM/FM stereo radio and tape cassette with recording and play-back

Power windows and power door lock controls on centre console.





Fully carpeted 642 litre (22.7 cu. ft.) luggage compartment with spare tire recessed under compartment floor.



Fully adjustable reclining front bucket seats. Both are

www.audi-klassik.de

"Starting with the advantages of front wheel drive and negative roll radius, we went on with the same high standards of engineering in the rest of this automobile."



Working for an auto maker that devotes a good deal of its research and development efforts in the improvement of safety, the Audi 5000 engineering team were naturally motivated to explore a new technology in this area. Their work led them into both facets of this field—active safety (the ability to avoid accidents) and passive safety (the ability to minimize injuries when they cannot be avoided).

Preventive safety depends primarily on a car's performance. And the front wheel drive of the Audi 5000, with its favorable weight distribution over the front axle, gives it improved road traction, better cornering, and superior stability even in strong cross winds. And when braking on uneven surfaces, the Audi 5000 will help maintain direction — because of its negative steering roll radius.



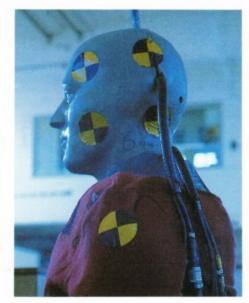
An Advance in Pillar Design

The high degree of stability, excellent maneuverability and precision steering response of the 5000 are combined with its brisk acceleration rate - 0-80 km/h (0-50 mph) in 9.8 seconds, to give it a high degree of active safety. Large window areas - actually 15% larger than a Cadillac Seville - give the driver a high degree of visibility. Audi engineers have further increased visibility through the design of the rigid pillars supporting the roof. They are slim in the direction of the driver's sight-line and wide (for strength and rigidity) in the other direction.

The Audi 5000 is equipped with radial ply steel-belted tires, size 185/70 HR 14. This size of tire, usually used on cars of considerably greater weight, improves the road behavior of the 5000 even further.

High Safety Standards

In the design of the 5000, Audi engineers demonstrated that a luxury sedan need not be excessively heavy to achieve a high standard in passive safety.



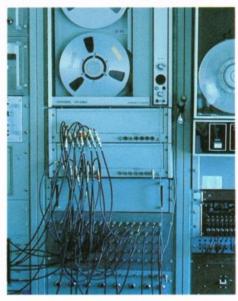
Key to the Audi 5000's performance in crash tests is a type of body construction that places a rigid "passenger cell" between two impact areas, or "crumple zones," front and back. These impact areas are designed to absorb the energy of a collision while the passenger cell remains intact.



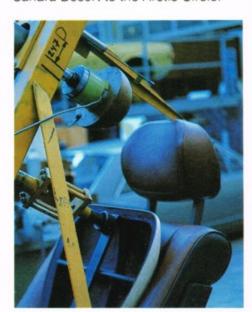
Doors and sides have also been designed to provide impact areas between inner and outer shells for added passenger safety.

Durability of Components Tested

The impact areas of the new Audi 5000 ield in crash tests according to computer-calculated data. The front and rear end of the vehicle has been designed to collapse at a controlled rate to protect the passenger compartment.



Strength and durability of materials are also extremely vital to a car's safety. In the Audi 5000, components were not only tested under laboratory conditions but in proving ground tests and driving endurance expeditions from the Sahara Desert to the Arctic Circle.



Steering Column Precautions

To minimize the rearward displacement of the steering column into the passenger compartment, it is mounted on a deformable bracket and connected to the front axle with a coupling that is designed to detach on impact.

The rear-door locks can be placed in a child-proof position so that they open from the outside only.



Safety-belt buckles on the front seat are attached to the frames so that each seat and safety belt can only move as a unit — a more comfortable arrangement than is possible when the buckle is attached to the floor.



In sum, the Audi 5000 has been designed with safety as a consideration throughout the engineering process.

"The new five-cylinder engine in the Audi 5000 is the best answer yet to the modern need for a luxury car with good fuel economy."

In pursuing the goal of the ideal modern luxury car - light in weight, economical to operate, yet performing like a larger, more powerful car - the most difficult question Audi engineers had to face was the choice of an engine.

Initially, they were torn between the need for lightness and economy, which four cylinders could provide, and the need for the more powerful and quiet performance of six cylinders. The debate was resolved with a revolutionary new approach: they determined to develop the first five-cylinder gasoline engine.

Why Five Cylinders?

Audi engineers were challenged by the possibilities of five cylinders.



They hoped to combine the advantages of four- and six-cylinder designs. Their calculations showed that five cylinders would provide ample power, yet generate less vibration than four. And, of course, five cylinders would mean less weight and fewer moving parts than six.

But what was attractive in theory had to be proven in practice. After four years of intensive development, a new five-cylinder engine evolved, which more than lived up to the expectations of its designers. (While a five-cylinder design had been

trucks, and cars, Audi is the first to apply it in a gasoline engine.)

Compared with an in-line six-cylinder type, the engine of the Audi 5000 is lighter in weight and more efficient because it has fewer moving parts.

A Minimum of Vibration

Advantages of the new engine over four cylinders are even more dramatic. The noise of an engine is primarily a function of the amount of vibration transmitted through the engine mountings.

In designing the engine from the ground up, Audi engineers were able to incorporate every important new feature of modern engine technology. The shape of the combustion chamber, the helical inlet ports, and the preheating system - every detail is of the most advanced and efficient

cell, front and rear ends designed to absorb impact energy

The new engine is a 2.2 litre, 103 hp overhead cam type with CIS (Continuous Injection System) fuel injection. This method of fuel injection is the most reliable, because it has fewer moving parts than earlier systems. (An airflow sensor connected to an hydraulic valve mechanically controls injection quantities.) It is a highly dependable system particularly suited to easy startups and quick response in cold winter weather.

Remarkable Acceleration Rate

While fuel injection, in general, is superior in many respects to carburetion, the CIS type is noted for

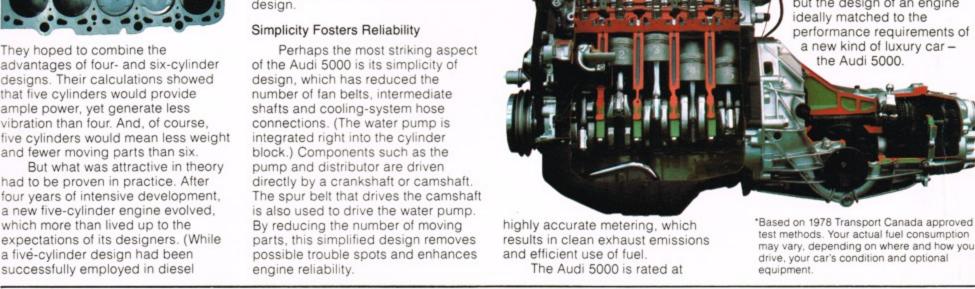
46 km/gal. (29 mpg) on the highway and 32 km/gal. (20 mpg) in the city* with automatic transmission. Yet it accelerates from 0 to 80 km/h in 9.8 seconds and has a top speed of 160 km/h (100 mph).

The owner of an Audi 5000 has the satisfaction of driving a car equipped with a technically advanced engine of a new five-cylinder design. Yet far from experimental, the engine has been thoroughly proven in thousands of hours on the test stand, and thousands more of test-driving under the most extreme conditions.

The engineers who developed this new engine are naturally excited by the interest stirred in the automotive design community by the

> idea of five cylinders. But they quickly remind any inquiring reporter that it is not the novelty that is important but the design of an engine ideally matched to the performance requirements of a new kind of luxury car the Audi 5000.

test methods. Your actual fuel consumption may vary, depending on where and how you drive, your car's condition and optional



Technical Data 1978		AUDI 5000			
ENGINE	Type and No. of cylinders	Four-stroke, five cylinders in line, in front of front axle tilted 27°, 30° to right, crankshaft with six	Front suspension	Independent, coil shock absorber struts with negative steering roll radius, stabilizer bar	
		main bearings, spur-belt overhead camshaft Water cooling, thermostatically controlled with electric fan Pressure oil feed with gear-type	Rear suspension	Torsion crank axle with Panhard rod for lateral stability, progres- sive coil springs, telescopic shock absorbers	
		pump and full flow filter	Braking system	Power assisted, dual diagonal	
	Bore & stroke	79.5 mm x 86.4 mm, 3.13 in x 3.40 in		hydraulic system, disc brakes with brake wear indicators at front.	
	Displacement	2144 cc, 130.8 cu in		drum brakes at rear, brake pres-	
	SAE net hp @ rpm	103 hp @ 5300 rpm		sure regulator for the rear wheels	
SAE net torque Compression ratio Fuel system Fuel requirement Fuel capacity Oil capacity		110.3 ft lbs @ 4000 rpm	Parking brake	Mechanical, effective on rear wheels	
		8.0:1	Rim size	5½J x 14	
		CIS injection system		Steel belted radial tires 185/70 HR14	
		Regular			
		60 ℓ, 13.2 imp. gal.	Steering system Rac ass	Rack and pinion steering, power assisted, with maintenance-free tie rods	
		5 ℓ, 4.4 imp. qts.			
	Battery	12V/63 Amp/h	Turning circle	10.3 m, 33.8 ft (curb to curb)	
14	Alternator	75 Amp	Curb weight	1222 kg, 2695 lbs	
Type of ignition		Transistorized (breaker-less)	Permissible trailer weights	Braked: 1050 kg, 2315 lbs	
DRIVE TRAIN	Туре	Front wheel drive, with two constant velocity joints per drive shaft		Unbraked: 600 kg 1323 lbs Trailer tongue load: 50 kg, 110 lbs.	
	Clutch	Hydraulic, single disc	FUEL ECONOMY AND PERFORMANCE		
	Transmission Automatic	Hydrodynamic torque converter and planetary gearing with three forward gears and one reverse	Fuel Economy * Manual Automatic	Hwy. 43 km/gal 27 mpg City 29 km/gal 18 mpg Comb. 34 km/gal 21 mpg Hwy. 46 km/gal 29 mpg	
(Manual)		Bulk synchronized four-speed and Bevel gear differential in one	100000000000000000000000000000000000000	City 32 km/gal 20 mpg Comb. 37 km/gal 23 mpg	
	Gear Ratios	(auto.) 2.552/1.448/1.000/R.2.462 (manual) 3.600/2.125/1.360/ 0.966/R.3.500	Top Speed Manual Automatic	160 km/h 100 mph	
	Final Drive	(auto.) 3.909 (manual) 4.111	Acceleration Manual Automatic		
CHASSIS		All steel unitized, passenger	*Based on Transport Canada Approved Test Met		
011/0010	body	compartment designed as safety	Volkswagen Canada Ltd. reserves the right to discontinue or ch		

wassing de

Volkswagen Canada Ltd. reserves the right to discontinue or change at any time specifications or design, without notice.



