

# Audi 5000 S



**“We believe we have created the ideal degree of luxury for driving requirements as they exist today. In the conception and its technical fulfillment, the Audi 5000 S is a thing of beauty.”**





# “The interior of the Audi 5000 S 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 S 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. The driver's seat height is adjustable.

## Interior Roominess And Safety

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

Internal safety features also offer a sense of reassurance. 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 seat. 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 S 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 S, 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 S.

#### 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 colours have been chosen for

serene and elegant beauty. The lines of the Audi 5000 S 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 S 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 S communicate a sense of quick response and high performance.”

Seated in the Audi 5000 S, 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 S 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 mirrors are aerodynamically designed so that rain or snow will blow off the front-side window and the outside mirrors can be seen more



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 27°C when the outside temperature is -20°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 S 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

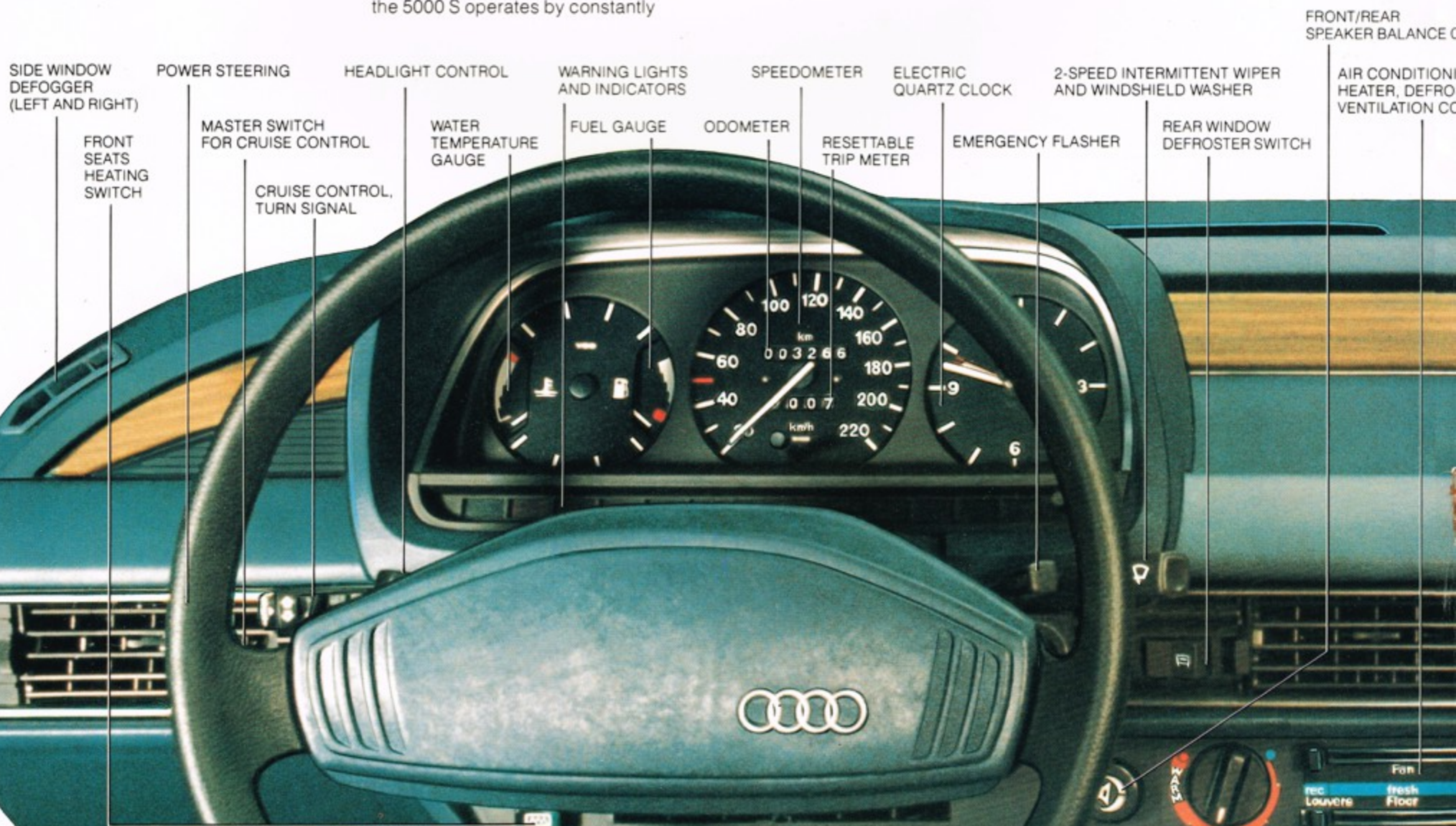
change the air in the car's interior approximately every 15 seconds (at 90 km/h and full maximum blower speed).

The air conditioning system in the Audi 5000 S 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 S 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 stereo radio, Audi engineers made a basic study of the special problems of hi-fidelity sound reproduction inside an automobile. By creating acoustic chambers around the four stereo speakers, they found they could enhance sound reproduction. This new advance in automobile high fidelity is now found in the new Audi 5000 S.

Engineering improvements inside the passenger compartment 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.



SIDE WINDOW DEFOGGER (LEFT AND RIGHT)

POWER STEERING

HEADLIGHT CONTROL

WARNING LIGHTS AND INDICATORS

SPEEDOMETER

ELECTRIC QUARTZ CLOCK

2-SPEED INTERMITTENT WIPER AND WINDSHIELD WASHER

FRONT/REAR SPEAKER BALANCE

AIR CONDITIONING HEATER, DEFROSTER, VENTILATION CONTROLS

FRONT SEATS HEATING SWITCH

MASTER SWITCH FOR CRUISE CONTROL

WATER TEMPERATURE GAUGE

FUEL GAUGE

ODOMETER

RESETTABLE TRIP METER

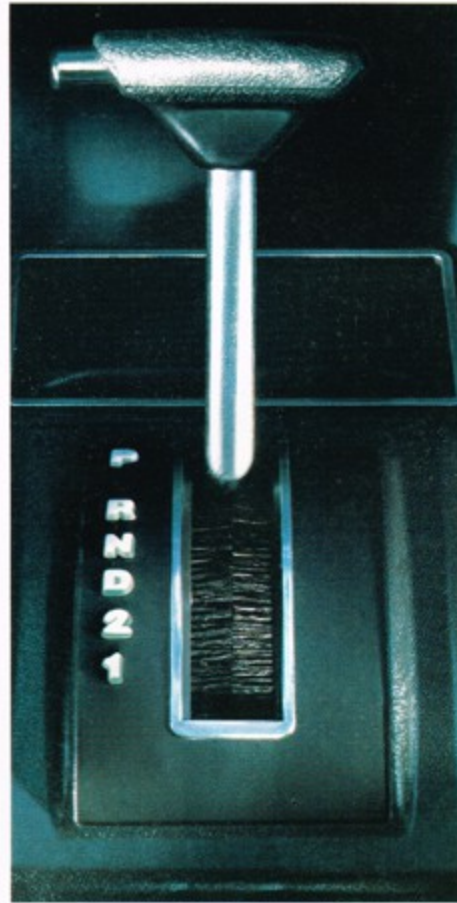
EMERGENCY FLASHER

REAR WINDOW DEFROSTER SWITCH

CRUISE CONTROL, TURN SIGNAL



Five-speed fully synchronized manual transmission together with tachometer is available at no extra cost.



Three-speed automatic transmission is standard.

Instrumentation is logically arranged for convenient scanning. Warning lights and indicators are arrayed in a single row.



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

CONTROL

ENGINE, MASTER CONTROL

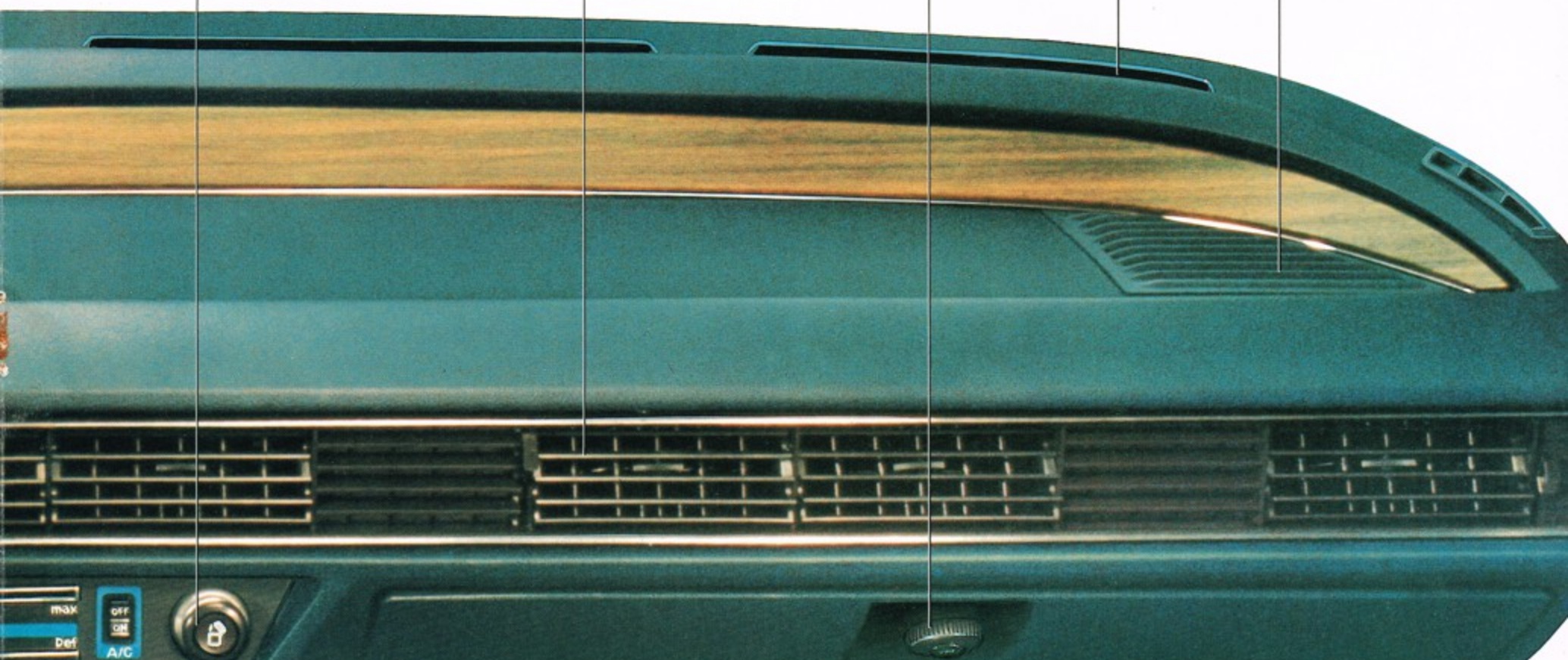
ILLUMINATED CIGARETTE LIGHTER WITH UNIVERSAL SOCKET FOR 12 VOLT APPLIANCES

ADJUSTABLE VENTILATION OUTLETS

LIGHTED LOCKABLE GLOVE COMPARTMENT

DEFROSTER OUTLETS

SPEAKER IN ACOUSTIC CHAMBER (RIGHT AND LEFT)



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

In outfitting the Audi 5000 S, the car's designers pursued the philosophy of offering a complete luxury car. Many deluxe appointments, which are either optional extras or not available on other cars, come as standard equipment on the 5000 S.

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

## Audi 5000 S 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

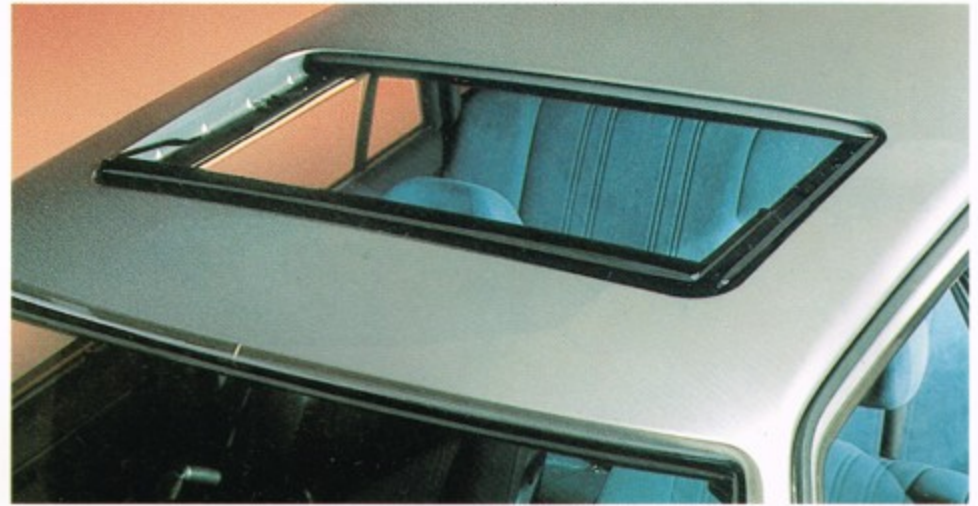
### Safety/Security

- Front wheel drive
- Diagonally linked power assisted front disc/self adjusting 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
- 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



Spacious lighted glove compartment.



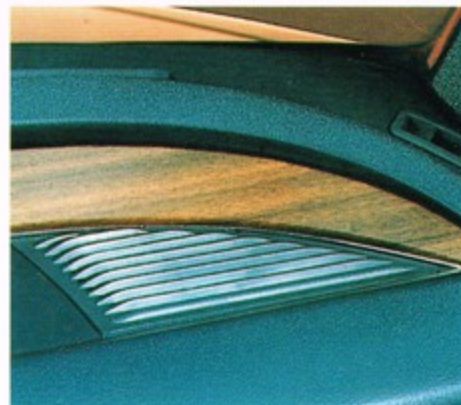
Electrically operated sunroof offers fresh air or open-air capability.



Power operated central door locking system.



Attractive light alloy wheels.



Front stereo speakers.



Rear stereo speakers.



#### Comfort/Convenience

- Automatic or 5-speed manual transmission
- Tachometer (with manual transmission)
- 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 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
- Electrically heated front seats
- Driver's seat height adjustable

- Adjustable headrests (front and rear)
- Flow-through ventilation system with 3-speed high output blower
- Front vent windows
- Passenger light contact switch on front and rear doors
- Centre console
- Quartz electric clock
- Trip odometer
- Automatic speed control
- Passenger assistance handles front and rear
- Swivel sunvisors with vanity mirror on passenger side
- Coat hooks
- Tinted glass all around
- Tinted left and right outside mirror with remote control
- Door arm rests
- Rear centre arm rest
- Cigarette lighter in each rear door panel
- Luggage compartment convenience light
- Universal sockets for 12 volt appliances in all 3 cigarette lighters

#### 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

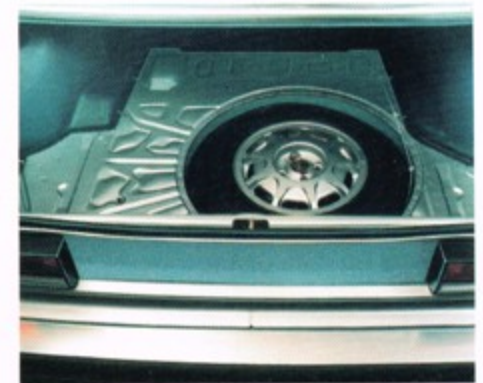
- Carpeted luggage compartment
- Metallic or non-metallic paint
- Mud flaps, front and rear



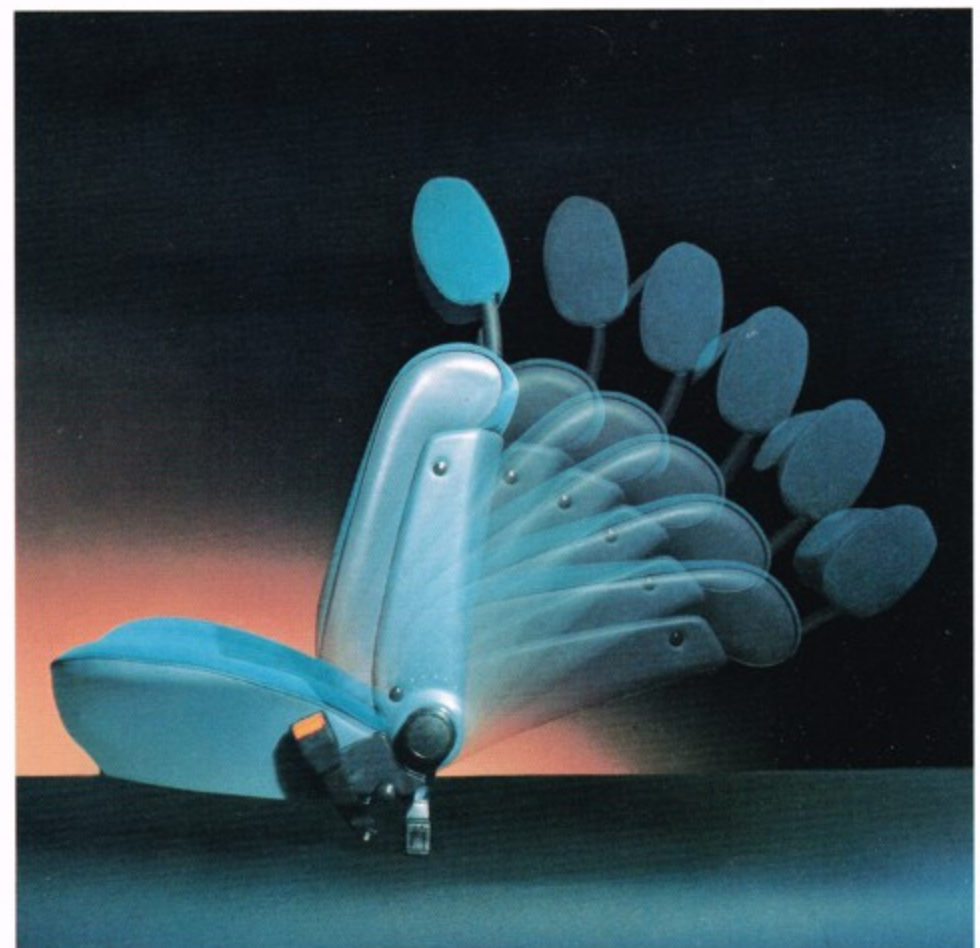
Air conditioning controls.

AM/FM stereo radio and tape cassette with recording and play-back features.

Power windows and power door lock controls on centre console.



Fully carpeted 642 litre (22.7 cu. ft.) luggage compartment with a convenience light. Spare tire recessed under compartment floor.



Fully adjustable reclining front bucket seats. Both are electrically heated.

# “When we built our new car from the ground up, we took nothing for granted.”

## Active and passive safety.

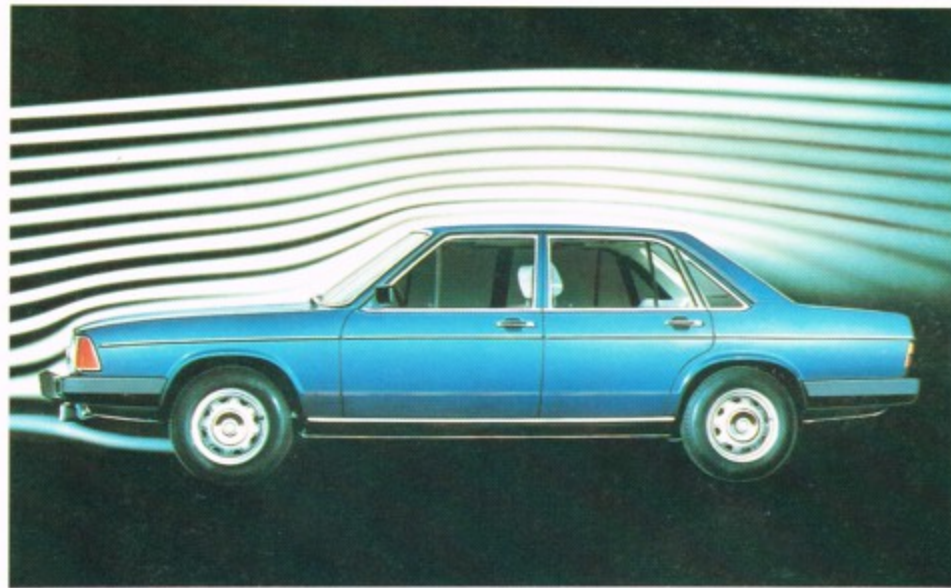
Safety engineering is a long standing Audi tradition. And in designing a completely new sedan, Audi engineers thoroughly explored both facets of this field—*active* safety features of the vehicle that help the driver avoid accidents, and *passive* safety design elements that help minimize injuries when an accident cannot be avoided.



Preventative or active safety depends greatly on a car's performance. Here the front wheel drive of the Audi 5000 S, with its favorable weight placement over the front axle, greatly improves road traction, aids in controlled cornering, and results in superior directional control under such adverse conditions as buffeting cross winds.

Audi 5000's negative steering roll radius, in conjunction with its dual diagonal brake system, promotes controlled braking in the event of a front tire blowout or stopping on uneven surfaces.

Also contributing to active safety are such factors as precision rack and pinion steering, a brisk acceleration rate (0-80 km/h in 9.8 seconds\*), and the vehicle's steel-belted radial ply tires that serve to further improve road behavior and adhesion.



Large window areas and an advanced pillar design increase clear visibility.

One of the most critical areas in which a car's design can help drivers

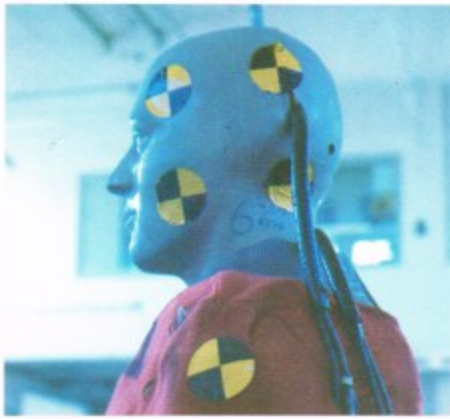
avoid accidents is visibility—not just in front, but also to the sides and in back.

Audi 5000 S has vast expanses of glass, giving the driver a high degree of visibility. Audi engineers made important further strides in this area 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.

## Meeting and exceeding safety standards without excessive weight.

Audi engineers have clearly demonstrated through the design of the 5000 S that a luxury sedan need not be excessively heavy to achieve its goal in passive safety.

Audi 5000's performance in crash tests can best be understood by examining the vehicle's construction. A rigid "passenger cell" is located between two impact or "crumple zones" in front and in back. These



impact areas are designed to help absorb energy in a collision, while the integrity of the passenger cell is maintained.

Impact reinforcements have also been provided between the inner and outer shells of the doors and sides to guard against intrusion and further

promote passenger safety.

Impact areas of the Audi 5000 S yield in simulated and controlled crash tests according to computer-calculated

data. The front and rear ends are designed to collapse at a controlled rate, decelerating the vehicle in a way that does not create excessive or



severe strain on occupants.

Strength and durability of materials and components, also a prime factor in the area of passive



safety, was demonstrated in the Audi 5000 S through exhaustive testing under laboratory conditions, in proving ground tests, and in driving



expeditions from the Sahara Desert to the Arctic Circle.



## Engineered interior safety features.

Examples of the "safety consciousness" of Audi engineers can be found throughout the interior of the 5000 S.

The steering column, for example, is attached to the body with a deformable bracket and connected to the rack and pinion steering with a coupling designed to separate on impact. This is done to minimize rearward displacement of the steering column into the passenger compartment in the event of a collision. Even the centre hub is padded and extremely wide to distribute impact forces over a large area.

Rear-door locks are specially designed so that they can be placed in a child-proof position in which doors can only be opened from the outside. On the front seats, safety belt buckles are attached to the frames. With this arrangement, the seat and safety belt move together as a unit—far more comfortable and easier for occupants to locate than conventional systems where the buckle is attached to the floor.



In sum, the Audi 5000 S was designed with safety as a primary consideration at every step in the engineering process.



\*With automatic transmission. 0-80 km/h in 8.5 seconds with manual transmission.

# "The new five-cylinder engine in the Audi 5000 S 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 has been successfully employed in diesel 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 S 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 design.

## Simplicity Fosters Reliability

Perhaps the most striking aspect of the Audi 5000 S is its simplicity of design, which has reduced the number of fan belts, intermediate shafts and cooling-system hose connections. (The water pump is integrated right into the cylinder block.) Components such as the pump and distributor are driven directly by a crankshaft or camshaft. The spur belt that drives the camshaft is also used to drive the water pump. By reducing the number of moving parts, this simplified design removes possible trouble spots and enhances engine reliability.

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 a hydraulic valve mechanically controls injection quantities.) It is a highly dependable system particularly suited to easy startups and quick response in cold winter weather.

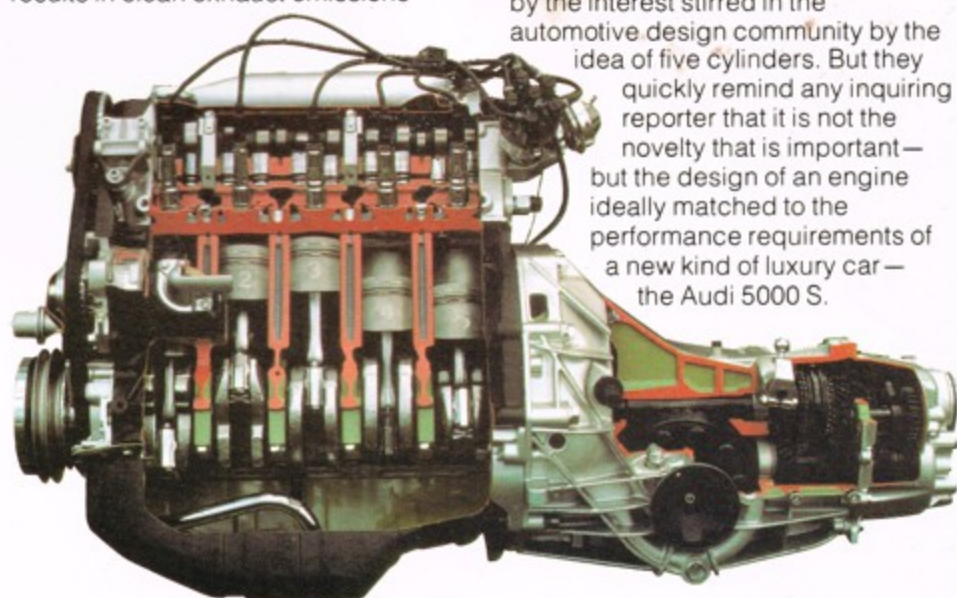
## Remarkable Acceleration Rate

While fuel injection, in general, is superior in many respects to carburetion, the CIS type is noted for highly accurate metering, which results in clean exhaust emissions

(46 km/g) on the highway and 15.1 L/100 km (30 km/g) urban, 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.

The owner of an Audi 5000 S 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 S.



and efficient use of fuel.

The Audi 5000 S is Transport Canada rated at 12.1 Litres per 100 km (38 km/g) 9.9 L/100 km

## Technical Data 1979

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 main bearings, spur-belt overhead camshaft Water cooling, thermostatically controlled with electric fan Pressure oil feed with gear-type pump and full flow filter
	Bore & stroke	79.5 mm x 86.4 mm, 3.13 in x 3.40 in
	Displacement	2.2 L, 130.8 cu in
	SAE net hp @ rpm	103 hp @ 5300 rpm
	SAE net torque	110.3 ft lbs @ 4000 rpm
	Compression ratio	8.0:1
	Fuel system	CIS injection system
	Fuel requirement	Regular
	Fuel capacity	75 L, 16.5 imp. gal.
	Oil capacity	5 L, 4.4 imp. qts.
	Battery	12V/63 Amp/h
	Alternator	75 Amp
	Type of ignition	Transistorized (breaker-less)
DRIVE TRAIN		Type
		Front wheel drive, with two constant velocity joints per drive shaft
	Clutch	Hydraulic, single disc
	Automatic Transmission	Hydrodynamic torque converter and planetary gearing with three forward gears and one reverse
	Manual Transmission	Bulk synchronized five-speed and Bevel gear differential in one housing with separate final drive
	Gear Ratios	(auto.) 2.552/1.448/1.000/R.2.462 (manual) 3.600/2.125/1.360/0.966/0.778/R.3.500
	Final Drive	(auto.) 3.909 (manual) 4.111
CHASSIS		Body
		All steel unitized, passenger compartment designed as safety cell, front and rear ends designed to absorb impact energy

## AUDI 5000 S

Front suspension	Independent, coil shock absorber struts with negative steering roll radius, stabilizer bar
Rear suspension	Torsion crank axle with Panhard rod for lateral stability, progressive coil springs, telescopic shock absorbers
Braking system	Power assisted, dual diagonal hydraulic system, disc brakes with brake wear indicators at front, self adjusting drum brakes at rear, brake pressure regulator for the rear wheels
Parking brake	Mechanical, effective on rear wheels
Rim size	5½J x 14
Tire type/size	Steel belted radial tires 185/70 SR14
Steering system	Rack and pinion steering, power assisted, with maintenance-free tie rods
Turning circle	10.3 m, 33.8 ft (curb to curb)
Curb weight	1222 kg, 2695 lbs
Permissible trailer weights	Braked: 1050 kg, 2315 lbs Unbraked: 600 kg 1323 lbs Trailer tongue load: 50 kg, 110 lbs.

## FUEL ECONOMY AND PERFORMANCE

	5-Speed Manual	Automatic
Fuel Economy*		
Rating L/100 km	12.1 (37.5 km/g)	12.1 (37.7 km/g)
Urban L/100 km	16.0 (28.5 km/g)	15.1 (30.0 km/g)
Highway L/100 km	9.1 (49.9 km/g)	9.9 (45.8 km/g)
Top Speed	165 km/h	160 km/h
Acceleration 0-80 km/h	8.5 sec.	9.8 sec.

\*Estimates, based on laboratory tests using approved Transport Canada test methods. Your fuel consumption will vary depending on how and where you drive, optional equipment and condition of your car. However, these estimates do provide a fuel consumption guide for comparison purposes.

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