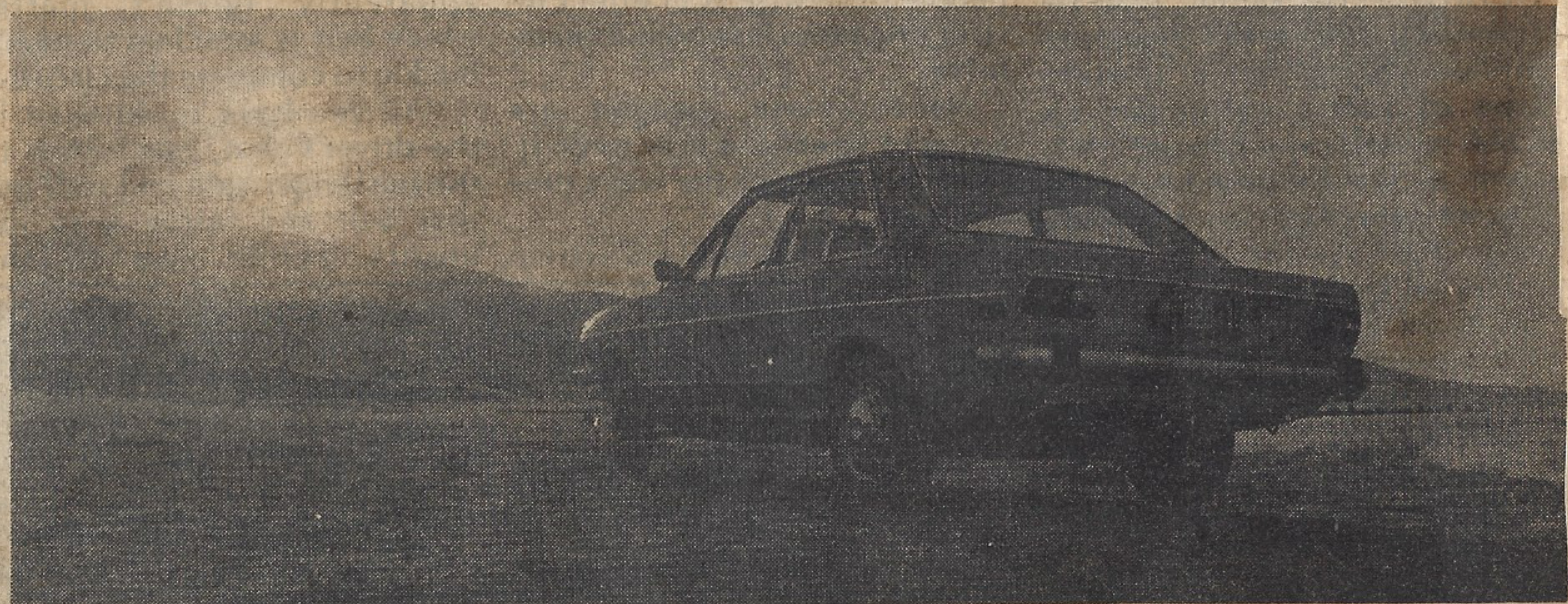


AUTOWEEK **DRIVING** **IMPRESSION** No. 10

Daimler-Benz race car designer Ludwig Klaus and his battalion of Audi engineers have scored where Chevy ultimately failed. Never letting costs stand in their way, they have succeeded in building the best reasonably priced small car in the world.

Report By Gary Witzenburg



Photography by Bill Fant

Audi

Have you seen the VW ad which suggests that maybe everyone should drive VW Beetles?

comfort and luxury. Few are designed from the ground up to be the perfect combination of all these diverse and often incompatible criteria.

Until the advent of the Fox, the best

mileage down. A cheap exhaust system combined with little or no interior sound insulation made the base Vega one of the noisier cars on the market. A few more dollars would fix that, said the

aboard, averages 22mpg or better, and meets the present emission standards without add-on paraphernalia of any kind.

Its simple but effective McPherson

Fox



Good Lord, what a revolting thought! Beetles everywhere: crawling through the hills, lying helpless in freeway ditches, being blown off of bridges and sucked under trucks. Sure, they get good

mileage and don't take up much room, but most of us have neither the build nor the temperament for Beetles. Besides, the anti-freeze industry would be paralyzed.

But if suddenly, tomorrow, a new law were passed: if we all were allotted only 14' of parking space and were required to travel no less than 22 miles for each gallon of gas we burn—a world full of Audi Foxes would not be so bad. There are better-looking cars, more comfortable cars, faster cars, cheaper cars, smaller cars, cars that handle and brake better and are more fun to drive, and cars that get better mileage. But there is no car on the face of the earth today which offers a better compromise than the Audi Fox.

In driving the Fox, it's immediately obvious that the car is not the work of mere men. It is probably the most perfect example to date of computer technology put to use in automotive design. The man behind the engineers behind the computer is former Daimler-Benz race car designer Ludwig Kraus. Kraus has accomplished the almost-impossible: He has created the perfect car for its time. The Audi Fox will prove to be a landmark. It will be enshrined forever, under glass, in the Automotive Hall of Fame.

Some cars are designed to be economical and adequate, some for performance and handling, some for

example of computer-designed car was the Chevy Vega. Chevrolet engineers fed the computer daily doses of styling, power, fuel economy, ride, agility, comfort, cost and everything else they could think of which would make their small car irresistible to the American sub-compact buyer. The result was the 1970 Vega, a very credible near miss. The base Vega cost just over \$2000, a price target to which the engineers clung fiercely and stubbornly—and in the end, their refusal to let the cost climb was their undoing.

For all its good points, the Vega was not the perfect little car its creators envisioned. The computer said that American buyers wanted contemporary styling and big-car front seat room—but rear seat room (and comfort) and luggage space were sorely compromised. The computer said that fuel economy must be combined with performance, but the computer had not been programmed to contend with the emissions monster—and economy and power both suffered along with drivability. Properly geared and heavily optioned, the Vega was a fine-driving car—but it was necessary to spend \$3000 or more to build a good one, and its weight was then up and its gas

computer, but the bean-counters said no. So GM's hope to turn the import tide, in terms of the target criteria it was designed to hit, was a failure. It was either inadequate or too expensive, it was noisy, it was too small inside for more than 2 people, its operating economy was disappointing, and its quality was often well below what small-car buyers had come to expect. So dissatisfied owners outnumbered happy ones for a time and Vegas proliferated on the used car lots of import dealers.

The Audi Fox will suffer no such problems. Klaus' computer provided all the right answers (as computers always do when properly programed) and most importantly, his engineers believed the answers it gave them.

Because they believed, the Fox is a smashing, unqualified success. Its exterior dimensions are compact in the true sense of the word—it is about 1½" longer, ½" wider, and 5" lower than the VW Super Beetle, yet it accommodates 4 adults in elegant comfort for long periods of time, along with whatever luggage they care to bring. Its snappy 1471cc 4-cylinder engine is smaller than the Super Beetle's yet it comes on like gangbusters at most rpms, cruises in quiet comfort at freeway speeds with 4

strut suspension, rack and pinion steering, 155 SR 13 radial tires, and plenty of roll stiffness both front and rear—combined with the responsive engine, slick gearbox, and front wheel drive stability—make the Fox a genuine pleasure to drive through the hills for anyone but the most hardened sports car fanatic. As a result, the car has ended up in a higher price bracket than others its size. No matter. When people find out it's the best, they'll buy it anyway.

Klaus and his Audi engineers have scored where Chevrolet ultimately failed; they never let cost considerations stand in the way of their goal. They succeeded in building the best reasonably priced small car in the world. And they have set the standard for the rest of the industry at a price which, while not in the bargain basement category, is by no means unpalatable for the goods delivered.

Priced at \$3499 POE, the Fox finds its competition among the likes of the Capri V6, the Datsun 610, the Mazda RX-3, the Opel Manta Luxus, the Renault 16, and the Toyota Mark II. It will also compete head-to-head with well-optioned Vegas, Pintos, and Gremlins, and is very likely to put a dent in the American sub-compact market as well as stealing buyers from its European and Japanese counterparts. Like its foreign competitors, it was originally intended to sell for around \$3000 in this country, but was driven into the next bracket by the recent dollar devaluations. Even at nearly \$4000 delivered, we find it no less attractive.

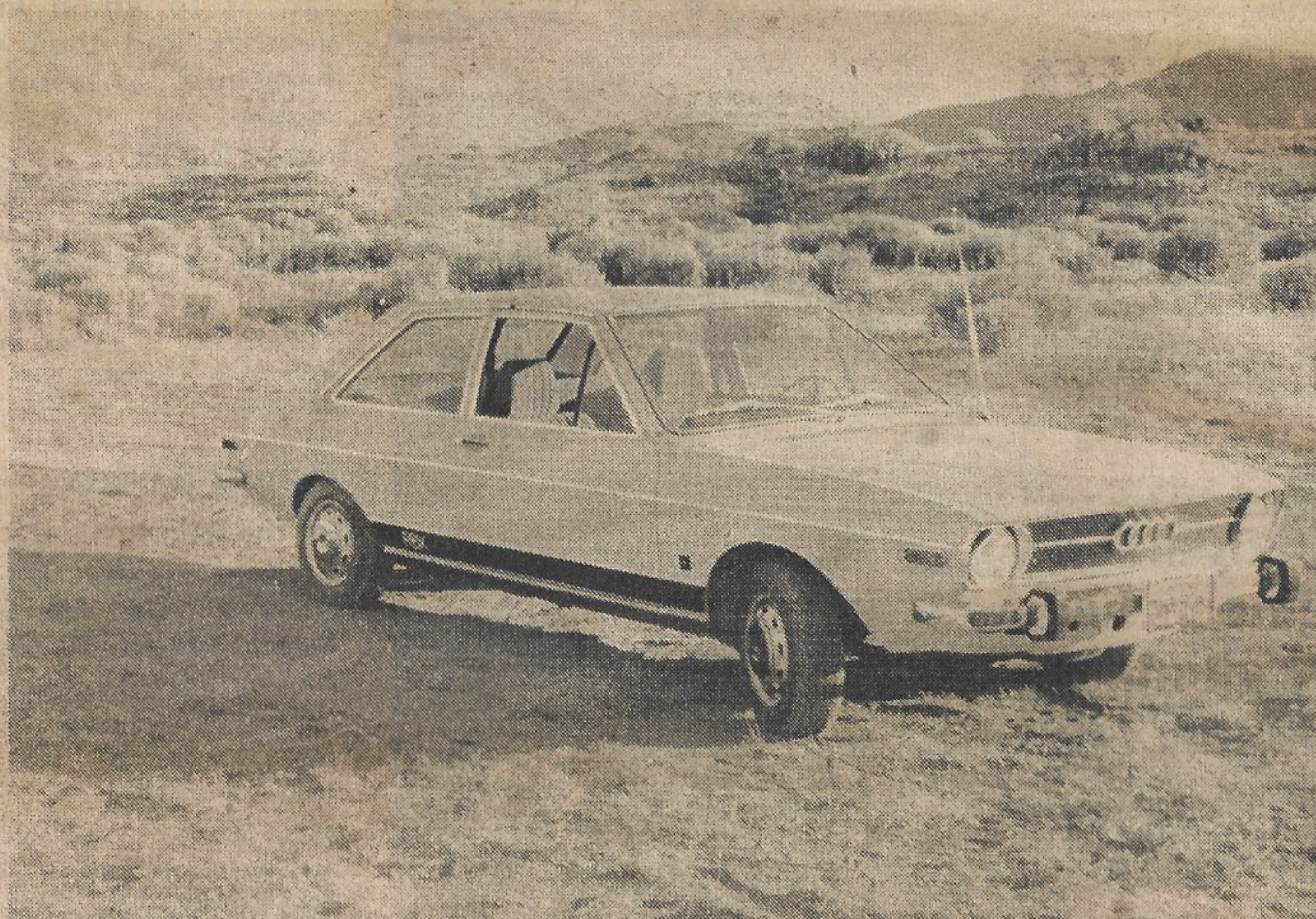
Mechanically, the little Audi is no revolutionary—it merely combines all the best technology from a variety of sources into one neat package. The



engine is a brand new design, combining a cast-iron block and aluminum head with in-line valves and a belt-driven overhead cam. Its crankshaft is forged and has no less than 8 counterweights. Karl Ludvigsen called it "a jewel" after driving a pre-release Fox for a few hours this spring. Our test car was a demonstrator supplied by a local dealer; it was not a "press car" specially prepared for our test. We lived with it for 2 weeks, flogged it up and down mountain trails that the dealer would have died to see his precious demo anywhere near, and we can only agree. It's a jewel. It's 2-bbl. Solex carburetor and tuned exhaust are partly responsible for the car's rather remarkable performance, and a curb weight of only 1840lbs (144 lbs less than the Super Beetle) doesn't hurt a bit either.

If the engine is a jewel, the car is its platinum setting. When it's not being driven, perhaps it should be worn around the neck, on a long, braided chain. It may be an econobox, but it has the endearing personality of a beloved pet or a small, very bright and charming child. If you get the feeling we loved it, you're right. When we can take a car on a quick side trip, 96 miles over a mountain pass, 1000ft elevation up to 7200ft and down again, with 3 people aboard and a female driving, average 87.3mph, and get 22.42mpg, how can we help but love it? Driven more conservatively, the Fox will get 27mpg, and we have heard tales of 30 or better from our friendly dealer.

Pushed to its cornering limit, the Fox



Klaus' computer provided all the right answers — as computers do when properly programmed. And most importantly, his engineers believed the answers it gave them.



fore-aft travel to comfortably position almost anyone. Lights and rear window defroster are actuated by push-buttons on either side of the instrument cluster.

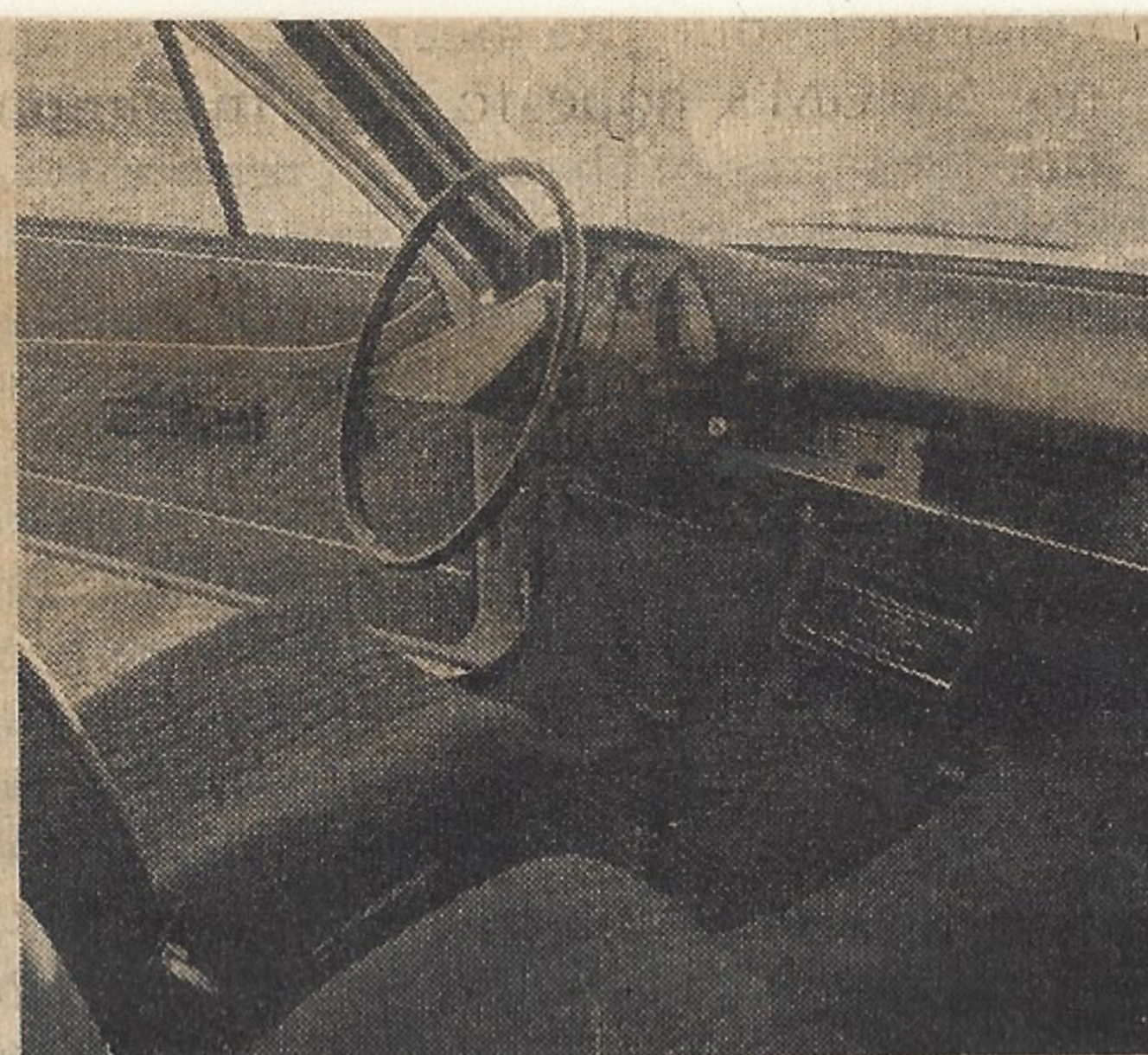
One of the most innovative features of the Fox is the way in which Audi engineers achieved a negative "scrub radius," essential for braking stability when one front wheel has more retarding force than the other. The Fox's steering axes are arranged so that when one front wheel is experiencing more braking force, the steering will be pulled slightly toward the other side. This characteristic is essential to a car with its dual braking system split diagonally which the Fox's is, and also comes in very handy when trying to stop with one front wheel on a slipperier surface than the other. The rear suspension is not independent, but well laid out nevertheless. Its U-section solid axle has trailing arms and a Panhard rod to provide the locating forces and roll stiffness necessary for good tracking and stability.

The Fox is available in 2-door and 4-door form, with a wagon coming soon. The word is already getting out since dealers seem to be selling all they can get their hands on, and the car has already had excellent reception in Europe as the Audi 80. Yet to be seen in this country is the Fox's blood brother (and soon to be toughest competitor), the VW Passat. The Passat is identical mechanically to the Fox but has a trio of neat-looking Italian-designed semi-fastback bodies and might even cost a few dollars less.

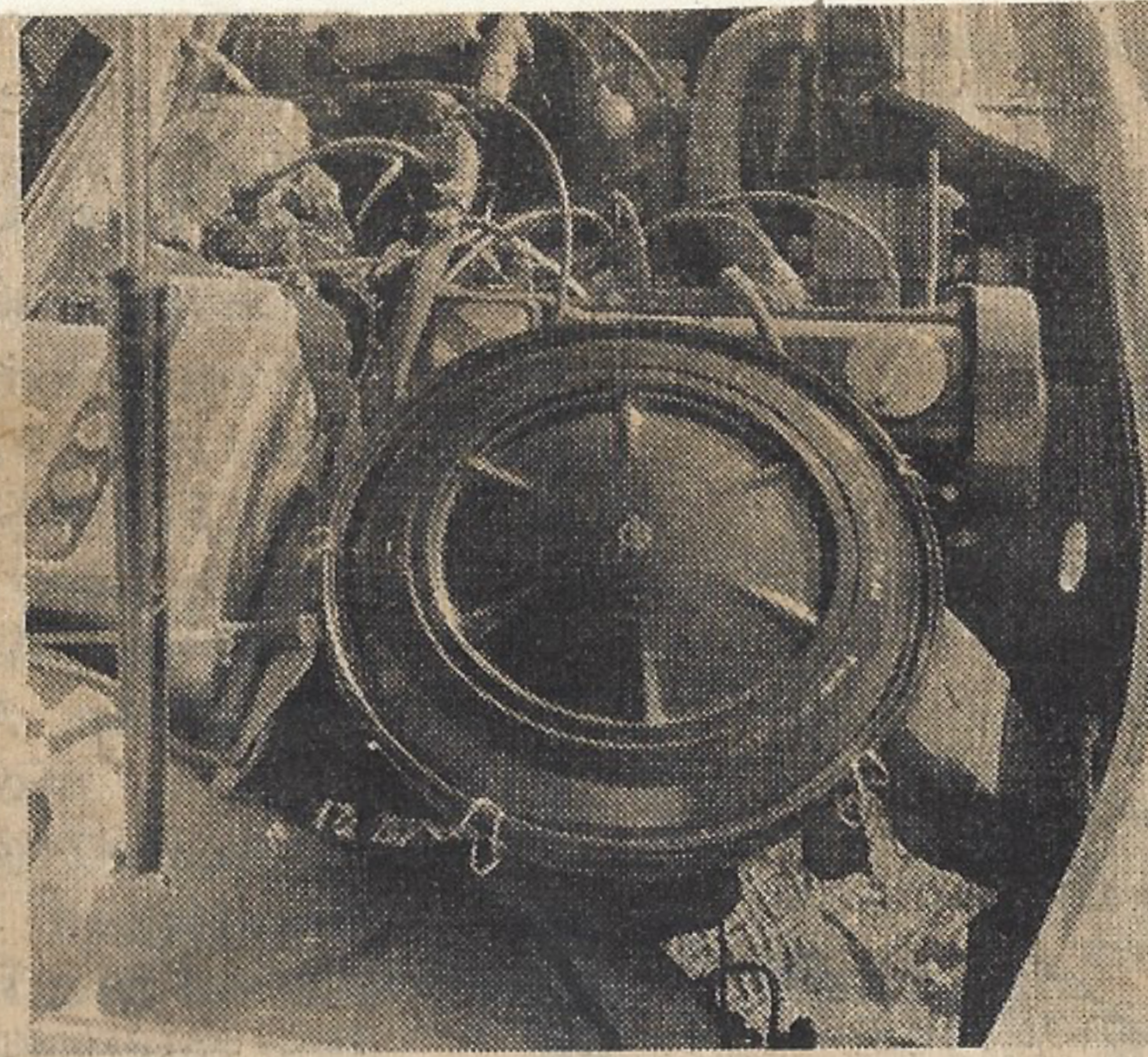
exhibits the classic front-wheel-drive characteristics of understeer under power and oversteer when the power is lifted. This is not to say that the car doesn't handle well—it's as sure-footed and agile as a family sedan can be. We're merely saying that it *is* a family sedan, not a sports car. It's certainly more stable than some front-wheel-drive sedans we've driven, and besides, Audi buyers for the most part won't be the type to push them to their limits anyway.

The engine is mounted in line with the wheelbase, rather than transversely as in many front-wheel-drive cars. It's canted 20 degrees to lower its profile, and it sits ahead of the transaxle to increase the forward weight bias to 60% (great for stability, not so great for understeer). You can choose the Audi 3-speed automatic if you like (in California, due to emissions, you get automatic like it or not), but our test car had the lovely, well-synchronized, standard 4-speed, which we found very much to our liking.

There is plenty of room under the



hood, with fuses, relays and other important electricals neatly arranged under a transparent plastic cover. The radiator, which looks a little small, is set off to the left of the engine and cooled by an electric fan. The fan rarely has to work with a non-air conditioned car, and at one point we wondered if it was hooked up at all. Careful inspection on a hot day with the engine idling proved that it worked—and nearly lost us a



finger for our curiosity. When it comes on, it does so with a vengeance and does its job well. We cruised flat-out at 100-plus temperatures and the engine never showed any sign of overheating.

Inside, the Fox is simple and practical and at the same time attractive and lush for a car its size. The contoured front bucket seats are soft, comfortable, and luxurious cloth; they recline to a fully horizontal position and have plenty of

You can bet that Porsche-Audi dealers will not appreciate having the wind stolen from their sails with the arrival of the Passat. But they did get the car first, they're benefitting from a huge and beautifully designed advertising campaign, and there will probably be more than enough demand to take care of the total Fox/Passat supply anyway.

The masterminds at VW/Porsche/Audi/NSU in Germany obviously know what they're doing—they usually do. The practice of peddling near-identical cars in different clothing has worked well for the domestic industry, so why not for imports. Some people buy Firebirds instead of Camaros, Comets instead of Mavericks, and Apollos instead of Novas, Venturas or Omegas. They prefer one car over another because they like one particular marque, or one dealer, or the looks of one better than the other. So if you can't get a quick, sly, crafty, cunning Fox, maybe you'll go for the passionate, pretty, popular, precocious Passat.

Test car supplied by Ray Kelbch, Stremmel Porsche-Audi, Reno, Nevada.

Audi Fox Specifications

ENGINE

Type: In line 4, single overhead cam
Displacement: 1471cc (89.7cid)
Bore/Stroke: 3.01/3.15 in.
(76.5/80.0mm)
Compression Ratio: 8.2:1
Induction: one 2-stage downdraft carburetor
Ignition: Battery, coil, and distributor
Horsepower: 75 SAE net at 5800rpm
Torque: 81.5 ft. lb. at 4000rpm

DRIVE TRAIN

Type: Front engine, front wheel drive
Transmission: 4 speed manual—1st, 3.454; 2nd, 2.055; 3rd, 1.370; 4th, 0.968; reverse, 3.166
Axle Ratio: 4.111.

SUSPENSION

Front: Independent, McPherson Strut (coil springs over tubular shocks)
Rear: Solid axle, McPherson Strut.

BRAKES

Vacuum-assisted, front 9.4" disc, rear 7.85" drum

WHEELS

Steel, 5JX 13

TIRES

155 SR 13 Radial ply

STEERING

Type: Rack and pinion
Ratio: 20.2:1

GENERAL DIMENSIONS

Curb Weight: 1840 pounds
Wheelbase: 97.2 inches
Track (front/rear): 52.7/52.6 inches
Overall Length: 164.4 inches
Height: 53.9 inches (unladen)
Width: 63.0 inches

MISCELLANEOUS

Fuel Tank Capacity: 12.0 U.S. gallons
Engine Oil Capacity: Approx. 3 U.S. quarts
Octane Requirement: Regular grade, 91RON
Fuel economy (observed): 22-24 mpg
Luggage space: rear trunk, 15.5 cubic feet

STANDARD EQUIPMENT

Flow-through ventilation, rear window

defogger, carpeting, electric clock, full-reclining front bucket seats, lockable illuminated glove compartment, undercoating, inertia-reel belt and harness system, coat hooks, cigarette lighter.

OPTIONAL EQUIPMENT

3-speed automatic transmission, custom fitted air conditioning, sliding steel sunroof, leatherette upholstery, vinyl roof, AM or AM/FM radio, metallic paint, tinted glass.

PRICE

Retail Price: (2-door, 4-speed) \$3499 plus \$29.50 transportation, \$135 dealer preparation, local tax.
Price as tested: \$3867.50 plus tax (including tinted glass and AM radio)