

CAR and DRIVER

DECEMBER 1974 · ONE DOLLAR

ROTARY RECORD AT BONNEVILLE

Car and Driver's 160-mph Mazda



HERE COMES THE DRESSERATOR

The Miracle Carburetor That Works



A BOLD NEW CHALLENGE TO THE SUPER-COUPÉ CROWD

Volkswagen's Scirocco



Road Test: Volkswagen Scirocco

A new Super Coupe to raise
the hopes of VW-lovers and to bury
the Karmann Ghia forever

• Spring cleaning at *Volkswagenwerk AG* has taken on an added intensity lately. Since Rudolf Leiding assumed the helm as chairman of the board three years ago, clean-up campaigns for the product line have stretched right past apple blossoms into summer, fall and winter. At long last, evidence is beginning to materialize in the showrooms that reveals the blueprint behind that action: a massive pitching out of the old to make way for the new.

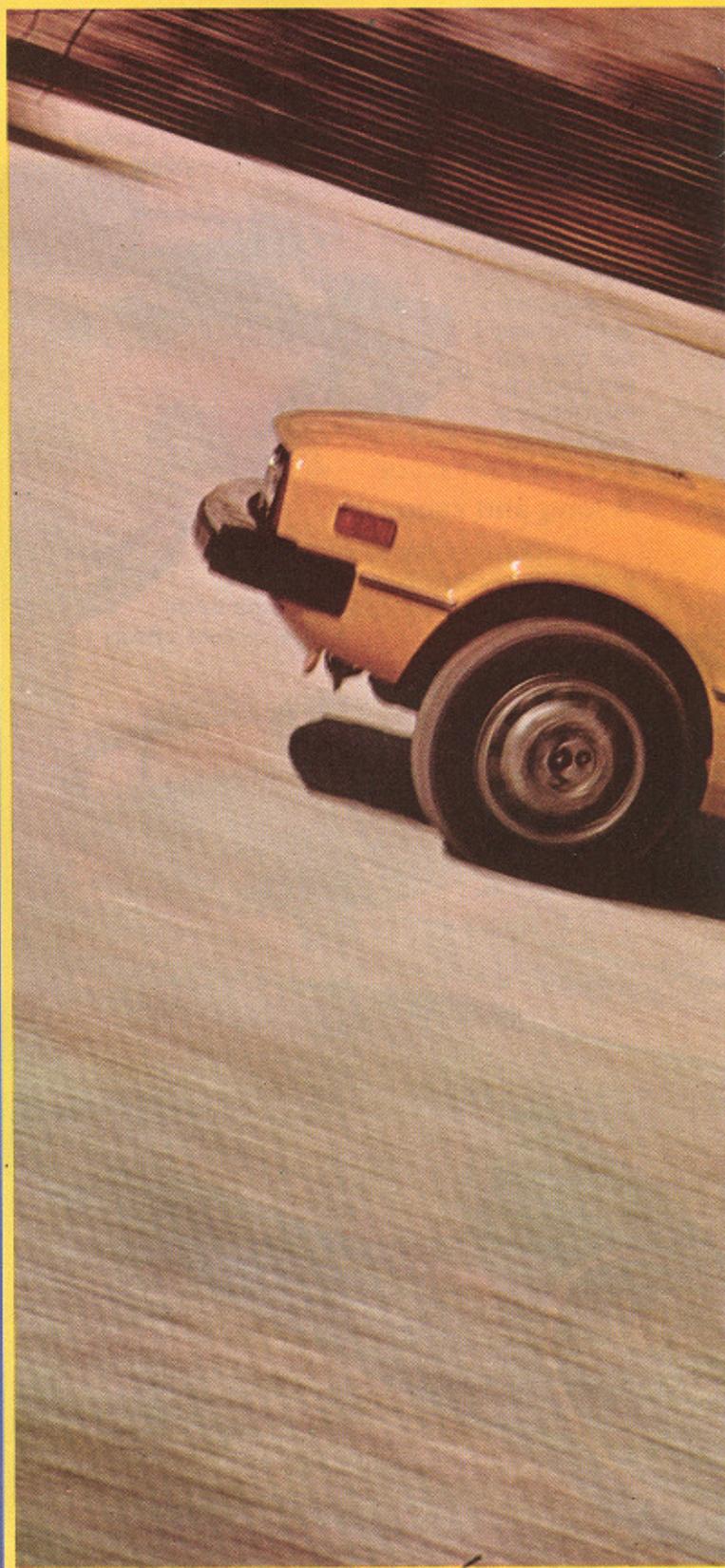
Last spring's introduction to the program was the Dasher, a machine that comes close to defying a basic law of car design . . . the one that says you can't have an interior bigger than the exterior. *Adios* Type 3 Fastbacks and Squarebacks. Now for 1975 we have the Scirocco, a torrid Mediterranean wind and also VW's first blitz on the Super Coupe establishment. The Karmann Ghia—long of tooth and by 1975 standards a veritable pterodactyl on wheels—is the casualty in this instance. VW has pulled the plug on its production line after 19 years of dutiful service to make way for the Scirocco.

The mourners will be few, we feel, because the Scirocco fills the Ghia's shoes with plenty of virtue left over. First of all, it's totally un-Volkswagen-like if you recognize the VW image as air-cooled, rear-engine variations on the original Beetle theme. The Scirocco marches down the road in a purposeful manner with its clean-cut lines and modern day chassis, shunning any heritage with the pre-Dasher (and pre-Leiding) way of doing things at Volkswagen. It is a gem of function and at the same time fun to drive. There is no secret technology involved, no revolutionary inspiration from the engineering department. Just the coming around of VW to what has been a proven fact for decades: The most efficient package for pocket-sized automobiles is a transversely mounted engine driving the front wheels followed directly by a box for the people.

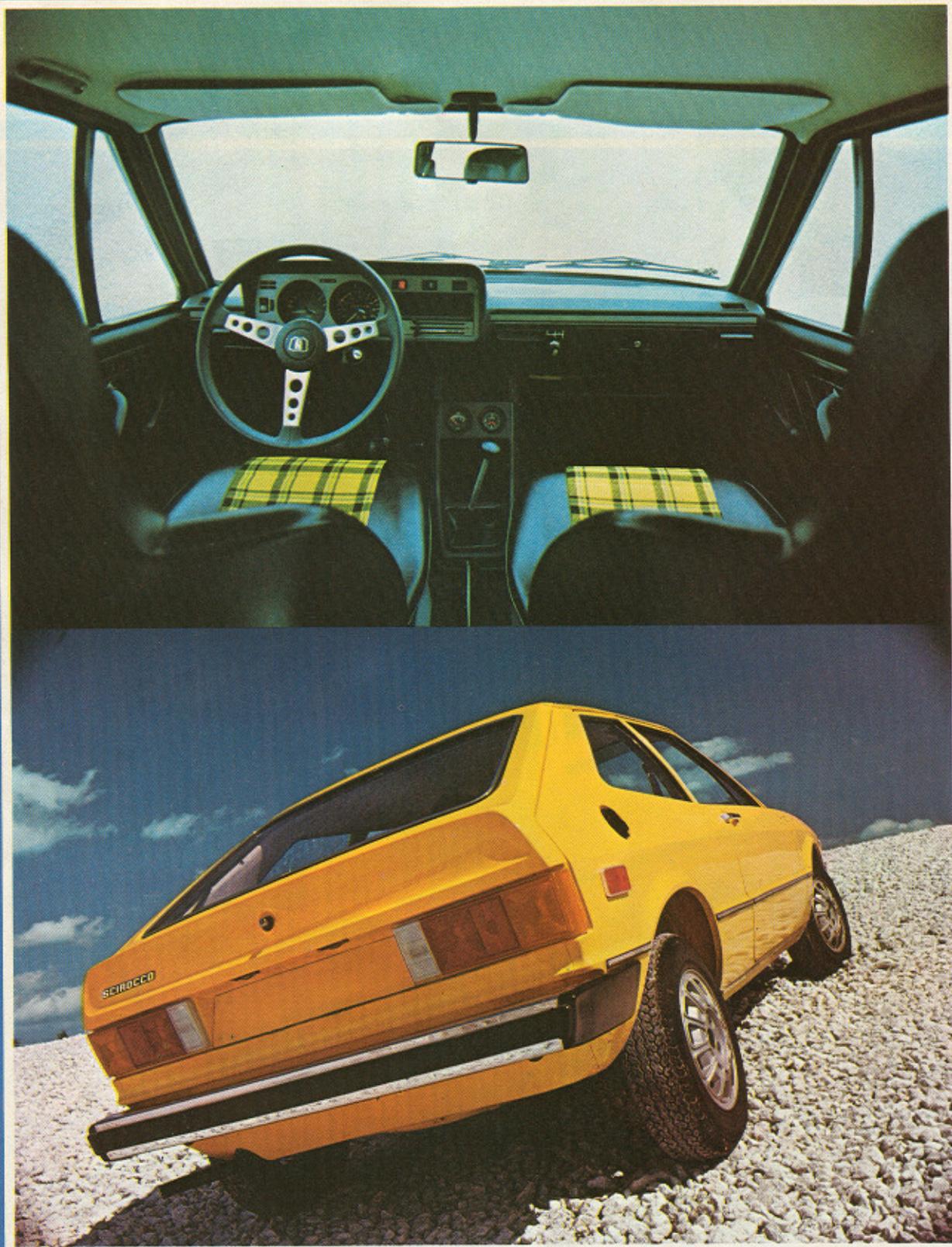
Alex Issigonis originated the layout in his brainchild, the Austin Mini, which remains England's favorite mode of transportation. Chrysler France (Simca) and Fiat followed suit with the 1204 and 128 respectively, both becoming mainstays of travel in their respective countries. And Honda recently added its Civic to the growing throng. The Scirocco, you might say, joined the ranks of convention.

There are, however, distinct advantages to being the last on the scene: You can profit from everyone else's mistakes. Instead of the Simca 1204's costly torsion bars, the Scirocco

PHOTOGRAPHY: DOUG MESNEY







With its clean lines, modern chassis
and efficient interior,
the Scirocco shuns any association
with the pre-Dasher way
of doing things at Volkswagen

has a less expensive coil spring at each wheel. Hatchbacks weren't so essential when the Fiat 128 was born, so it has none. The Scirocco does. Five-mph bumpers are add-on devices to the Honda Civic and Fiat 128 models shipped to the U.S. at some penalty in weight and appearance. But parking-lot protection was a known requirement during the conceptual stages of the Scirocco, so its bumpers are tightly integrated to the car both structurally and visually.

Still, packaging efficiency is not the Scirocco's main thrust. Yet another new VW—the Rabbit (*C/D*, September)—is waiting in the wings as Wolfsburg's strictly practical subcompact entry. Meanwhile the Scirocco has been carefully groomed for the sporty role. It's true that both cars share almost every piece of running gear and some interior components, but the bodywork is unique to each. In the Scirocco's case, the coachbuilder Karmann will produce the sheetmetal structure from an original design by Giorgetto Giugiaro.

There is no mistaking the Scirocco's crisp wedge shape as a Giugiaro original, even after the wind tunnel refinement by VW's design studios prior to production. His latest work looks like a Dasher (also Giugiaro's design) that's been trimmed with a meat cleaver: two inches chopped from the roof, three inches out of the wheelbase, and a thick slice pared from each end. The bobbed sportster that remains will slide into a parking space shorter by 17 inches, but since the Scirocco is wider by an inch, the Dasher has a slight edge in snaking through traffic. In any case, the Scirocco is a small car, halfway between the Honda Civic and Super Beetle in length.

But what about interior room? In essence, the Scirocco is a 2-passenger, front-seat-only car. It has a rear bench, to be sure, advertising a spot for two people. And there is no hindrance getting back there since the front seat belts neatly retract out of the way. The rear seat bottom is a long, wide cushion that offers good thigh support and hip room. But the problem arises in headroom—it's been bisected by the roofline. Half the headroom you need to actually sit back there lies outside the car, so the rear area should be considered kid space.

Fortunately there has been no compromise in front room. The Scirocco's individual buckets (quite becoming in the plaid cloth covering, a little stark in all-vinyl) have nearly a foot of travel on their tracks, so there is plenty of leg room for the lankiest of drivers. You don't feel the drawing-room expansiveness of the Dasher because the windshield arcs back much closer to your forehead and the ceiling is fashionably dropped. But the Scirocco's instrument panel is unobtrusively forward out of the way and floor space is flat and wide except for a narrow tunnel housing the shift linkage and catalytic converter. So for two people, no forfeitures are required to be comfortable in the Scirocco, even though it is a tiny car.

The rear compartment comes into its own for non-passenger hauling. The hatchback door opens wide over a deep trunk compartment that can be easily expanded to a short station wagon. The flat package shelf is first disconnected from the hatch and then unhooked from its pivot pins for removal. This allows the rear seat back to be unlatched and folded forward, extending load space into the main interior compartment. For really serious moving projects, the rear seat back and cushion both can be removed entirely to open up a larger volume. In this configuration, the Scirocco's cargo hold is almost big enough to cut into U-Haul business.

Even though the Scirocco swallows up large objects like a truck, it doesn't drive like one. To the contrary, it's probably the peppiest and most agile VW to roll down the pike . . . ever. The rack and pinion steering is tight and precise and re-

sponse is immediate. The typical front-wheel-drive vices are noticeably absent—more pressure on the throttle will widen your cornering line somewhat, but there is no fight transmitted back through the steering wheel.

MacPherson struts and coil springs support the Scirocco in front (as in the Dasher), but the rear suspension is new. Each rear wheel is sprung by a progressively wound coil and is independently suspended on a trailing arm. The two arms are linked at their pivot axis with a long T-section beam. This beam stiffly resists lateral deflection of the wheels, but it does twist to allow up and down movement of each trailing arm as the body rolls in a turn. In that manner it acts as an anti-sway bar and VW engineers have tuned its stiffness to deliver the handling they desired.

It's a job well done. Our only suggestion would be to add more roll stiffness at both ends of the car (there is no anti-sway bar in front). Even so, the 175/70SR-13 low-profile steel-belted radials grab the road tenaciously. The steering is so quick that you don't have to change your grip on the wheel for most turns. And heavy understeer doesn't frustrate your exit ramp speeds unless you push the Scirocco right up to its limit of adhesion; by then the body has leaned over to an awkward list. With plenty of warning, the rubber scrubs sideways, your path widens and the speed falls off somewhat. The Scirocco isn't as agile as a Vega GT or Opel Manta—particularly exiting a turn—but it won't fall far behind.

Nor does it lose much ground to bigger Super Coupes in acceleration. The engine is a rather conventional in-line Four (shared with the Dasher). And it has most of the expected contemporary equipment—a belt-driven overhead cam, 2-barrel carburetor and an aluminum cylinder head. But its displacement is on the small side (1471cc) and the stroke is unfashionably long. Also, the cylinder head design suffers from a horsepower standpoint: All the valves are neatly aligned and it's not a cross-flow design. All in all, not so impressive to look at.

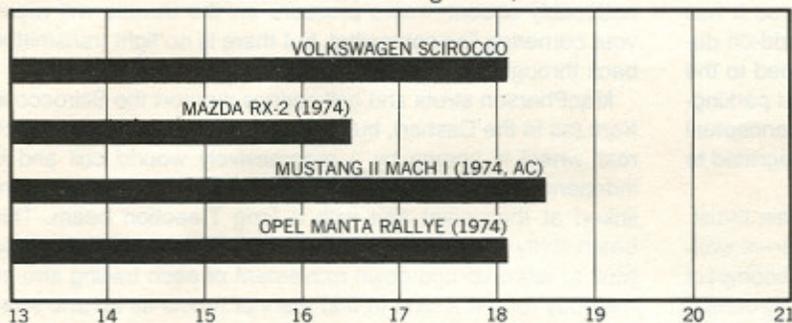
But to drive, it seems like a different engine. Seventy horsepower are on tap according to the specifications sheet, but it feels more like twice that. The power curve smoothly swells up from idle to press you against the seat springs well past the 6700 rpm redline. A quarter-mile of acceleration in the Scirocco will deliver 75.4 mph in 18.1 seconds—performance nearly identical to that measured in the 1900cc Opel Manta Rallye tested last year and a good deal faster than the V-6 Mustang II Mach I. The comparisons are particularly impressive in light of the Scirocco's 1975 emissions hardware: Every clean-up device in the book is under the hood, from a heated choke to a catalytic converter.

Somehow it all works. Driveability was good in the early sample we tested and fuel economy was remarkable. During one trip at a steady 55 mph, we measured a staggering 48 mpg. Hard city driving will drop that substantially—to the low twenties in our testing. But careful city and highway driving should deliver fuel economy averaging close to thirty mpg.

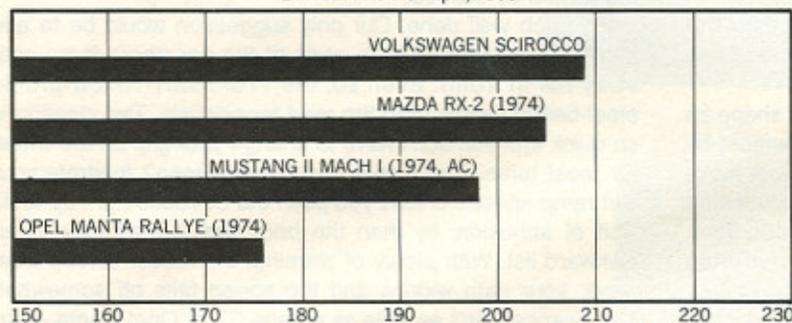
That all-around impressive performance—strong acceleration, good fuel economy and 1975 legal emissions levels—doesn't happen by accident. Rather, it is the fruit of a very careful design approach. Light weight is the best indicator of the care involved. And we completely agree with VW's priorities in this matter. Every phase of performance—braking, acceleration, fuel economy, emissions and even bumper effectiveness—benefits from weight control. The Scirocco weighs in at 1892 lbs., one of the lightest cars on the road today. It benefits from a compact design and materials often specified

(Text continued on page 84, specifications overleaf)

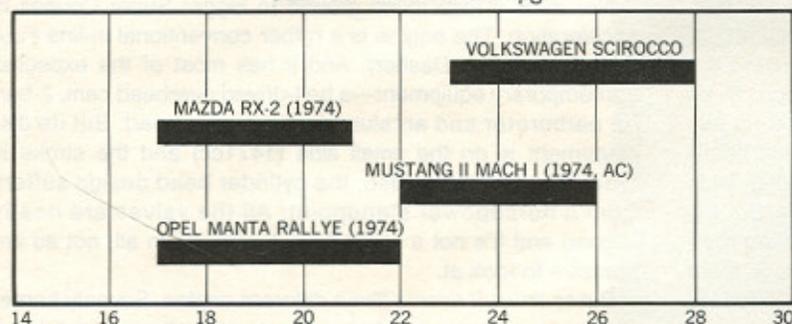
ACCELERATION standing 1/4 mile, seconds



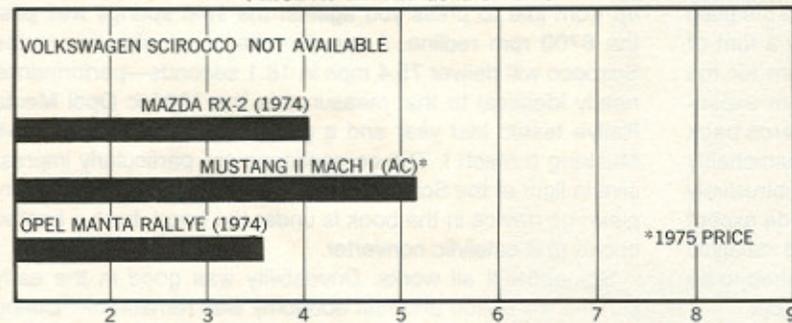
BRAKING 70-0 mph, feet



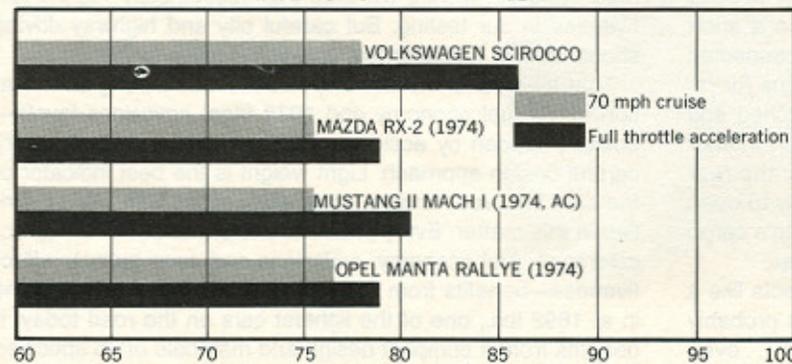
FUEL ECONOMY RANGE mpg



PRICE AS TESTED dollars x 1000



INTERIOR SOUND LEVEL dBA



VOLKSWAGEN SCIROCCO

Importer: Volkswagen of America, Inc.
818 Sylvan Avenue
Englewood Cliffs, N.J. 07632

Vehicle type: front engine, front-wheel-drive, 4-passenger, 2-door coupe

Price as tested: NA
(Manufacturer's suggested retail price, including all options listed below, dealer preparation and delivery charges, does not include state and local taxes, license or freight charges)

Options on test car: cast aluminum wheels

ENGINE

Type: Four-in-line, water-cooled, cast iron block and aluminum head, 5 main bearings

Bore x stroke 3.01x3.13 in, 76.5x8.0mm
Displacement 89.9 cu in, 1471 cc
Compression ratio 8.2 to one
Carburetion 1x2-bbl, Zenith
Valve gear belt-driven single overhead cam
Power (SAE net) 70 bhp @ 6000 rpm
Torque (SAE net) 81 lbs-ft @ 3500 rpm
Specific power output 0.78 bhp/cu in, 47.6 bhp/liter
Max. recommended engine speed 6700 rpm

DRIVE TRAIN

Transmission 4-speed, all-synchro
Final drive ratio 3.90 to one

Gear	Ratio	Mph/1000 rpm	Max. test speed
I	3.45	4.8	32 mph (6700 rpm)
II	1.94	8.5	57 mph (6700 rpm)
III	1.37	12.0	81 mph (6700 rpm)
IV	0.97	17.0	98 mph (5800 rpm)

DIMENSIONS AND CAPACITIES

Wheelbase 94.5 in
Track, F/R 54.7/53.1 in
Length 155.7 in
Width 64.0 in
Height 51.5 in
Ground clearance 5.3 in
Curb weight 1892 lbs
Weight distribution, F/R 63.7/36.3%
Battery capacity 12 volts, 54 amp-hr
Alternator capacity 770 watts
Fuel capacity 11.9 gal
Oil capacity 3.7 qts
Water capacity 6.9 qts

SUSPENSION

F: ind., MacPherson strut, coil springs
R: ind., trailing arm, coil springs, anti-sway bar

STEERING

Type rack and pinion
Turns lock-to-lock 3.3
Turning circle curb-to-curb 32.2 ft

BRAKES

F: 9.4-in. dia. solid disc, power assisted
R: 7.8x1.8-in. cast iron drum, power assisted

WHEELS AND TIRES

Wheel size 13x5.0-in
Wheel type cast aluminum, 4 bolt
Tire make and size Continental TS 771, 175/70SR-13
Tire type steel belted, rayon cord, radial ply tubeless
Test inflation pressures, F/R 26/26 psi
Tire load rating 1025 lbs per tire @ 36 psi

PERFORMANCE

Zero to	Seconds
30 mph	3.1
40 mph	5.1
50 mph	7.6
60 mph	11.2
70 mph	15.5
80 mph	21.0
90 mph	30.0

Standing 1/4-mile 18.1 sec @ 75.4 mph
Top speed (observed) 98 mph
70-0 mph 209 ft (0.78 G)
Fuel mileage 23-28-mpg on no-lead fuel
Cruising range 270-330 mi



Car Buckles

Choose from our large selection of hand finished, brass plated car buckles. Each buckle is antiqued in the Tiffany tradition.

To: Sheffield Farms Enterprises
P.O. Box 2286, Chapel Hill, NC 27514

PLEASE SEND ME:

BELT BUCKLES

- Volkswagen
- Cord
- Mercedes Benz
- Porsche
- Rolls-Royce
- Maxwell
- Bugatti
- 1921 Buick
- 1929 Dodge

BELTS:

- 30 32
- 34 36
- 38 40
- 42 44
- Add \$4.95 for leather belt.

Total @ \$4.95 each.

Gold Plate @ \$19.95

Add \$1 for postage.

Catalog \$1, refundable with first purchase.

Name _____

Address _____

City _____ State _____ Zip _____

Planning to move?

Let us know 8 weeks in advance so that you won't miss a single issue of **CAR AND DRIVER**.

Attach old label where indicated and print new address in space provided. Also include your mailing label whenever you write concerning your subscription. It helps us serve you promptly.

Write to: P.O. Box 2770, Boulder, CO 80302, giving the following information:

- Change address only.
- Extend subscription. Enter new subscription.
- 1 year \$7.98
- Payment enclosed (1 extra BONUS issue)
- Bill me later

AFFIX LABEL

If you have no label handy, print OLD address here.

name _____ please print _____

address _____

city _____ state _____ zip-code _____

name _____ please print _____

address _____

city _____ state _____ zip-code _____

Add'l postage: \$2 per year outside U.S., its poss. & Can.

VOLKSWAGEN SCIROCCO

(Continued from page 29)

to save weight rather than money. The engine block is the only major piece of cast iron in the car. Nearly every other casting is aluminum. Plastic materials are also used as weight-savers. Under the hood, the Scirocco looks like a display booth at a plastics convention: Even the radiator end tanks are molded to save pounds.

Aerodynamics is another area optimized in the Scirocco that most manufacturers neglect. Wind tunnel development proved the merit of the sheetmetal spoiler lip in the front and the subtly upturned edge at the rear. Also, the radiator opening is carefully ducted and rubber seals fill sheet metal gaps around the doors. The air cleaner is remotely located from the engine (by plastic ducting) to allow the lowest possible hood line and side window glass is fitted nearly flush with the body's outer surface to cut turbulence. Subtle details all, but each contributes to efficiency.

There are a couple of shortcuts to be aware of. While Detroit loads in sound-deadening material by the ton to quiet its cars, there is practically none in the Scirocco. Wind noise is blocked by tight seals, but at high engine rpm exhaust resonance thunders through the floorpan to raise the interior sound level to a noisy 86 dbA. (In comparison, the Opel Manta has a sound level of 79 dbA during acceleration.) Also, the body structure is not as rigid as we've come to expect from VW after the Beetle. Hard bumps flex the chassis enough to creak the Scirocco's interior trim.

Braking could be better also. The hardware—solid discs in front with aluminum floating calipers and cast iron drums in the rear—has plenty of stopping capacity, but front-to-rear distribution is biased strongly towards the front. The front brakes lock early even with the lightest possible load of the driver only. This stretches stopping distances from seventy to 209 feet (0.78G), longer than all the six Super Coupes tested last year.

The Scirocco is still a fun piece, rakishly unique in styling, compact enough for the most congested city and yet comfortable for a cross-country trip. It embodies some of the old—a classic flat 3-spoke steering wheel with lightening holes, big round white-on-black instruments and spoked alloy wheels—matched to plenty of the new: a catchy name, bold interior colors, a high-revving low-emissions engine and the final touch... a freshly styled Wolfsburg crest. ●

AUTO RACING FILMS AND BOOKS

IT'S STILL TIME TO ORDER the 1973 Indy "500" Color Film for Christmas—a 200' reel in either Super or Standard 8. \$16.95 + 50 cents each for delivery (add \$1.50 for airmail). ATTENTION COLLECTORS: You can order the 1974 Indy "500" in Color, \$17.95 each, Standard or Super 8, 200' reel, for late December or early January 1975 delivery. Write Now! STILL TIME FOR BOOKS: Mario Andretti: The Unbelievable Unsers; and Jackie Stewart—Hard covers, with photos; \$4.95 each delivered while supply lasts. SPORTLITE, CAR-12 Dept., Box 24-500, Speedway, Indiana 46224.

GOVERNMENT SURPLUS

GOVERNMENT SURPLUS—How and where to buy in your area. Send \$2.00. Surplus Headquarters Bldg., Box 30177-CD, Washington, D.C. 20014.

INSTRUCTION

DRIVING TAPES—8 track cassette. \$9.00 each. Check, Money Order. JWE, 1936 S. Racine Ave., Chicago, Ill. 60608.

INVENTIONS WANTED

INVENTORS: Protect your ideas! Free "Recommended Procedure." Washington Inventors Service, 422N Washington Building, Washington, D.C. 20005.

FREE! LATEST DIRECTORY OF 500 CORPORATIONS Seeking New Products. For information on Development, Sale, Licensing of your invention or idea, write for FREE "INVENTORS KIT NO. A-71." It tells how ideas become a reality! RAYMOND LEE ORGANIZATION, 230 Park Avenue, New York, N.Y. 10017.

MUSICAL INSTRUMENTS

30% + DISCOUNTS. Name Brand Musical Instruments. Free Catalog. Continental Music, Dept. L, P.O. Box 3001, Garden City, New York 11530.

REAL ESTATE

EXCEPTIONAL 5-ACRE RANCH. Lake Conchas. New Mexico. Only \$995 per acre. Vacation Paradise. Good long term investment. Easy Terms. Free brochure. Ranchos, Box 2004CR, Alameda, California 94501. This advertisement does not constitute an offer in any state where an offer cannot be made.

RECORDS, HI FI & ELECTRONICS

LEARN HOW fine audio equipment works. Add knowledge to your pleasure. Order "Reproduction of Sound," P.Pd. \$3.50. Audio Knowledge, Box 961-C, Lancaster, Ohio 43130.

FREE!
SPECIAL
INTEREST
RECORD
CATALOG

Spectacular sound! Stereo testing! Background music and sound effects! Special Interest Records available exclusively from Ziff-Davis. Send for your free Record Catalog — Ziff-Davis Publishing Co., Dept. 23, One Park Ave., New York, N.Y. 10016.

MISCELLANEOUS

WANTED Quicksilver, Platinum, Silver, Gold, Ores Analyzed. Free circular. Mercury Terminal, Norwood, Massachusetts 02062.

IDENTIFICATION Cards, send stamped self-addressed envelope for samples. NIPCOF, 727 North Main, Las Vegas, Nevada 89101.

MAKE FRIENDS WORLDWIDE through international correspondence. Illustrated brochure free. Hermes, Berlin 11, Germany.

SLEEP LEARNING. Hypnotic Method. 92% effective. Details free. ASR Foundation, Box 7566 EG, Fort Lauderdale, Florida 33304.

FIRE EXTINGUISHERS—lowest prices anywhere. Free literature. Lawrence Hartman, Dept. C, 1637 East Pleasant Valley Blvd., Altoona, PA 16602.