VOLKSWAGEN SCIROCCO

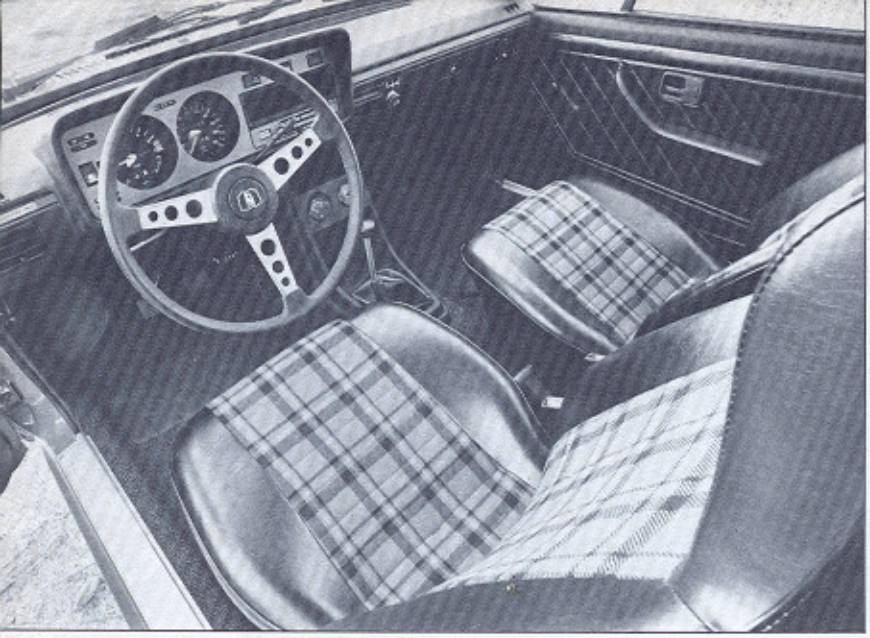
A truly remarkable new small GT

PHOTOS BY JOE RUSZ

SWEEPING REFORMS ARE underway at Volkswagen, and not a moment too soon. Dr Porsche had a remarkable conception when he designed the original VW in the mid-1930s, one that is still in production nearly 40 years later and has long since passed Henry Ford's Model T in production quantity. But sooner or later every good idea is likely to be surpassed by a newer one, and so it is with the faithful old VW Beetle. VW still builds it, but each year the new ideas cause it to be a little less attractive in a competitive market. Now the newest things are coming from Volkswagen itself, as the Volkswagenwerk musters a mighty effort to make up for lost time.

Thus we are now seeing a steady procession of new front-wheel-drive VWs and will continue to see new ones for at least two years yet. First of them was the Dasher of last year and now we have the Rabbit and Scirocco. Although for the premium versions sold in the U.S. market they use the same engine as in the Dasher, the two new cars are otherwise quite different. Whereas the Dasher's engine is in the more usual longitudinal position, in the Rabbit and Scirocco it's transverse. The rear suspension is independent instead of the beam axle of the Dasher, and the two new cars are considerably smaller. The Rabbit is generally looked upon as the successor to the Beetle even though they're both being sold this year, and it seems natural to think of the Scirocco as successor to the Karmann-Ghia since it's a sporty variation of the basic sedan with the same mechanical underpinnings.

But here the similarity between the now discontinued Karmann-Ghia and the new Scirocco ends. The Scirocco is smaller, lighter, roomier, faster, more economical of fuel and, like everything else new, more expensive—although it's hard to say just how much costlier than the K-G would have been if it were still available. The Scirocco is a modern, sophisticated car: sleek 2+2 hatchback body by Giorgetto Giugiaro, the most space-saving mechanical layout we've yet seen, a powerful yet economical engine. It effectively puts the VW name (and dealer →



The rear seat is well shaped and roomy enough of itself, but there's little headroom. The long seat tracks are visible.

organization) into a new field, that of stylish GT cars, with a car that appears to be perfectly suited for our time. But let's look at the details closely before drawing too many conclusions about it.

VW is in a unique position among the major carmakers. It is the largest in the fantastically successful West German industry, in part government-controlled and most probably rich in capital for investment. But VW's success was built on a single model that was so timeless the company was able to go for decades without major technical changes. When the company attempted to use its basic original technology on new models, things didn't work out very well; the 1500 series (later called Fastback and Squareback) never achieved great market success and the 412 was a downright flop. Something really new was needed, and yet as recently as five years ago VW didn't seem to have the capability of producing it. At one point after VW acquired another German carmaker—Audi-NSU—management changed the name of the new NSU K70 to VW K70 just to get a new front-drive car onto the European market. At another, VW had engaged Porsche to design something more radical, a mid-engine sedan with its watercooled engine under the rear passenger seat. Meanwhile the faithful old Beetle was beginning to lose sales and VW's earnings began to slip.

When Rudolf Leiding was promoted from managing director of Audi-NSU to the top spot at VW, he wasted no time setting VW on what he considered to be the right track. He decided quickly that the mid-engine sedan would be too costly to build and scrapped the project, shifting emphasis to other projects already underway. The Dasher, a variation on his own Audi Fox, was rushed in to fill the gap and the Rabbit and Scirocco are the first of the Leiding cars to hit the market but won't be the last. Already there's an Audi 50, still smaller than the Rabbit and later to be marketed as a VW also, and going in other directions the front-drive van and a new Wankel-powered luxury sedan aren't far off. Thus VW, though it is presently losing vast amounts of money, obviously has the capital to invest heavily in all-new models and has progressed from a technologically backward company to a highly competent one in less than a decade. New models are rarely newer than the Rabbit and Scirocco.

An eminently wise decision was choosing Giugiaro's Ital Design to do the bodies for the new cars. Giugiaro has developed a fresh, interesting shape for the sporty VW with a pronounced wedge shape, the appearance of a long hood, crisp and clean styling details and a commendable amount of space inside for a car that's fully 10 inches shorter than the Karmann-Ghia. In fact, one just doesn't realize how tightly dimensioned the Scirocco is until it's close to some other small car and turns out to be quite a bit smaller. Giugiaro has handled the tough U.S. bumper requirements masterfully too: the

Scirocco's trunk is deep and spacious, but folding the rear seatback over doesn't produce a flat cargo floor. Divider panel comes out easily.

American version has the same bumpers as the European and on their hydraulic impact cylinders they increase its length just 3.5 in. The tailgate lifts to reveal an impressively deep and spacious (8.2 cu ft, far more than in the Monza or Mustang) trunk that's hidden from view by a hinged partition. With this partition removed, the rear seatback folded over and the seat cushion removed there's an additional 7.2 cu ft of cargo space without blocking rearward vision, although the entire cargo floor is not flat. Thus a traveling couple will have more than enough capacity for a long, long vacation trip.

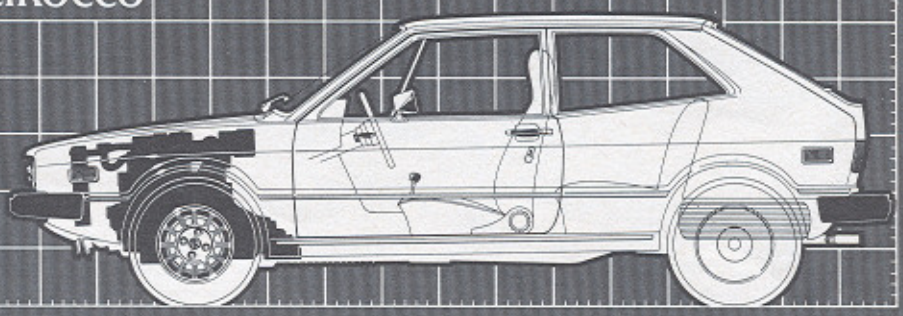
The traveling couple will be fairly comfortable up front too. The individual front seats aren't the best we've seen—most staff members found their backrests less than ideally shaped—but they follow the German philosophy of providing abundant fore-and-aft adjustment, so much that the front seats can be set almost back against the rear. Naturally the backrests are fully adjustable for rake; and they include one of the few identifiable VW items, the familiar backrest release knobs from the Beetle.

Four adults, however, will not sit comfortably in the Scirocco. The rear is tight, especially on headroom, and is adequate only for small children. So, despite the space-saving design, the Scirocco is a classical 2+2, although it does have the space of much bigger 2+2s inside its pretty shell. Compare it, for instance, to the Monza and Mustang, which weigh 65 percent more, and you'll get the idea.

R&T

ROAD TEST

VOLKSWAGEN SCIROCCO



SCALE: 10" DIVISIONS

PRICE

List price, all POE $4450
Price as tested, west coast....$4672
Price as tested includes alloy wheels ($140, mandatory option), dealer & port prep (typically about $82)

IMPORTER

Volkswagen of America
600 Sylvan Ave
Englewood Cliffs, N.J. 07631

GENERAL

Curb weight, lb 1930
Test weight 2420
Weight distribution (with driver), front/rear, % 64/36
Wheelbase, in. 94.5
Track, front/rear 54.7/53.1
Length 155.7
Width 64.0
Height 51.5
Ground clearance 5.3
Overhang, front/rear 33.7/27.5
Usable trunk space, cu ft....8.2+7.2
Fuel capacity, U.S. gal. 11.9

ENGINE

Type ..... ohc inline 4
Bore x stroke, mm ..... 76.5 x 80.0
Equivalent in. ..... 3.01 x 3.15
Displacement, cc/cu in.....1471/89.7
Compression ratio 8.2:1
Bhp @ rpm, net.....70 @ 6000
Equivalent mph 103
Torque @ rpm, lb-ft....81 @ 3500
Equivalent mph 60
Carburetion ..... one Zenith (2V)
Fuel requirement:..unleaded, 91-oct
Exhaust-emission control equipment: air injection, exhaust-gas recirculation, catalytic converter

DRIVETRAIN

Transmission ..... 4-speed manual
Gear ratios: 4th (0.97) 3.78:1
3rd (1.37) 5.34:1
2nd (1.94) 7.57:1
1st (3.45) 13.46:1
Final drive ratio 3.90:1

CHASSIS & BODY

Layout ..... front engine/front drive
Body/frame ..... unit steel
Brake system.....9.4-in. disc front, 7.1 x 1.19-in. drum rear
Swept area, sq in. 239
Wheels ..... cast alloy, 13 x 5J
Tires..Continental TS, 175/70SR-13
Steering type ..... rack & pinion
Overall ratio 17.4:1
Turns, lock-to-lock 3.3
Turning circle, ft 32.2
Front suspension: MacPherson struts, lower A-arms, coil springs, tube shocks
Rear suspension: trailing arms interconnected by L-beam anti-roll bar; coil springs, tube shocks

INSTRUMENTATION

Instruments: 110-mph speedometer, 7000-rpm tachometer, 999,999 odo, 999.9 trip odo, coolant temp, fuel level, voltmeter, clock
Warning lights: oil pressure, handbrake/brake system, EGR & catalyst replacement, seatbelts, hazard flasher, high beam, directionals

ACCOMMODATION

Seating capacity, persons ..... 2+2
Seat width, f/r ..... 2 x 21.0/50.0
Head room, f/r 37.0/33.0
Seat back adjustment, deg 60

MAINTENANCE

Service intervals, mi:
Oil change 5000
Filter change 15,000
Chassis lube ..... none
Tuneup 15,000
Warranty, mo/mi 12/12,000

CALCULATED DATA

Lb/bhp (test weight) 34.1
Mph/1000 rpm (4th gear) 17.1
Engine revs/mi (60 mph) 3500
Piston travel, ft/mi 1840
R&T steering index 1.06
Brake swept area, sq in./ton .. 198

RELIABILITY

It is not yet possible to predict the reliability of the VW Scirocco with confidence.

ROAD TEST RESULTS

ACCELERATION

Time to distance, sec:
0-100 ft 3.8
0-500 ft 10.7
0-1320 ft (¼ mi) 19.4
Speed at end of ¼ mi, mph....73.0
Time to speed, sec:
0-30 mph 4.1
0-40 mph 6.4
0-50 mph 9.1
0-60 mph 12.7
0-70 mph 17.4
0-80 mph 25.3

SPEEDS IN GEARS

4th gear (5900) 102
3rd (6250) 78
2nd (6250) 54
1st (6250) 31

FUEL ECONOMY

Normal driving, mpg 29.5
Cruising range, mi (1-gal. res)....322

HANDLING

Speed on 100-ft radius, mph....32.8
Lateral acceleration, g 0.720
Speed thru 700-ft slalom, mph..58.2

BRAKES

Minimum stopping distances, ft:
From 60 mph 140
From 80 mph 259
Control in panic stop ..... fair
Pedal effort for 0.5g stop, lb 42
Fade: percent increase in pedal effort to maintain 0.5g deceleration in 6 stops from 60 mph 36
Parking: hold 30% grade? ..... yes
Overall brake rating ..... good

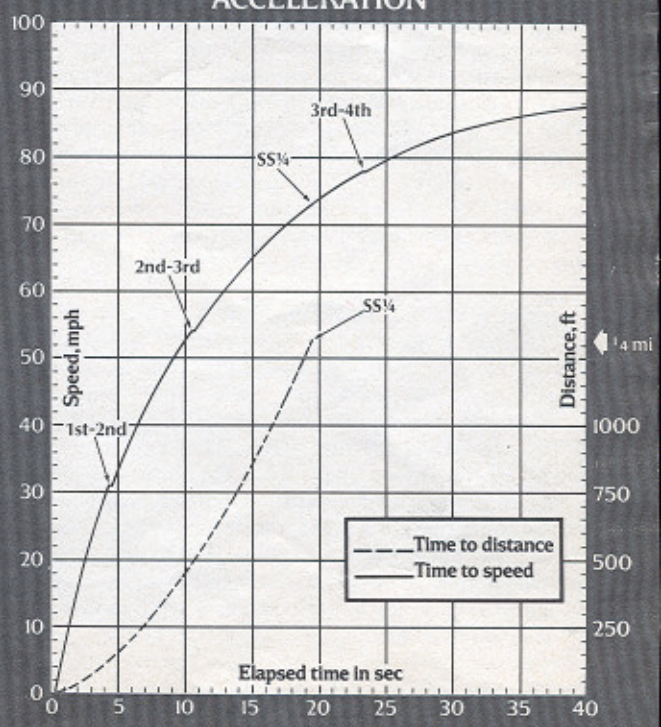
INTERIOR NOISE

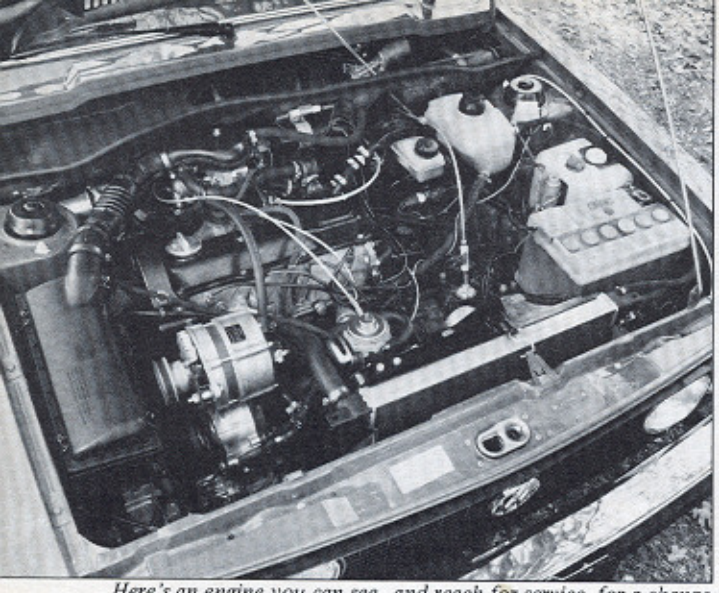
All noise readings in dBA:
Idle in neutral 53
Maximum, 1st gear 85
Constant 30 mph 65
50 mph 72
70 mph 78
90 mph 83

SPEEDOMETER ERROR

30 mph indicated is actually....27.5
50 mph 47.0
60 mph 56.5
70 mph 66.0
80 mph 76.0
Odometer, 10.0 mi 10.0

ACCELERATION





Here's an engine you can see—and reach for service, for a change. The 1.5-liter unit used in U.S. version leans toward the rear.

The driver will find the Scirocco's instruments and controls legible and logical. The speedometer and tachometer are large and side-by-side, with the fuel and temperature gauges at the bottom of the tach face. A clock and a voltmeter live in the central console, rather out of the normal line of vision, and soon after we picked up the Scirocco the voltmeter began to drop into the red as the voltage regulator had stopped regulating. Two stalks under the nice padded-rim steering wheel control washers, wipers, high and low headlight beams and directional signals, and the heating-ventilating controls are well arranged and close at hand. In short, there are no particular problems with controls in the Scirocco, and an enthusiastic driver can even indulge in good old-fashioned throttle-blipping while downshifting with ease because the brake and accelerator pedals are placed just right for it.

The good driving environment and esthetics of the Scirocco prepare us for the real treat: its performance, ride and handling. This new VW is the state of the art in 1975 and will surely set standards for others to meet over the next few years. The engine, for example, is a familiar quantity with which we were already impressed in the Audi Fox and VW Dasher when it produced lively acceleration with remarkable fuel economy. It was, however, quite noisy in those cars. In the Scirocco it is better on all counts. Though our test car didn't quite match the performance of the more powerful 1973 Fox (which we tested at a lighter weight even though the Scirocco is lighter at the curb), it will certainly outdo today's Dasher or Fox in both performance and economy because of its lighter weight. That's no surprise. What is, however, is how quiet this engine is in the Scirocco. Whereas the same engine gets uncomfortably noisy at highway speed in the larger car, in the Scirocco it remains impressively quiet and smooth up to 4300 rpm or 74 mph, and above that a typical 4-cylinder "boom" sets in but not obtrusively. Driveability, never an Audi strong point (and this is an Audi engine), was only fair in the California-version Scirocco we tested. It didn't do badly while warming up, nor did it hesitate when asked to accelerate; but at steady speeds even up to 70-plus it surged badly, feeling as if it didn't know what speed it wanted to run.

Whatever else it does, this 1.5-liter single-cam engine goes. It revs freely and smoothly to its 6250-rpm redline and seems to say to the driver, "let's go." The shift linkage cooperates pretty well too, with short throws and reasonably precise action considering the difficulties of designing shift linkage for a transverse-engine layout. Getting it into reverse, however, is another matter; it is vague and recalcitrant in the extreme and we often had to let the clutch out a little to tell whether we were in gear or not before backing up. Usually we weren't.

With the brisk performance one expects crisp handling in a sporting coupe like this, and the Scirocco doesn't disappoint. Gone are the days when it was assumed a front-drive car would understeer in the extreme or its steering would tighten with a jerk when the gas pedal was pushed down; hardly any of the old drawbacks are to be noticed in the VW package. The steering is light, although not particularly quick, and stays light no matter how the car is flogged though there is some increase in effort when the power is on. The car responds nicely to the steering even at low speeds, and in a hard bend at medium or high speed the cornering attitude is light understeer. Back off the throttle and the nose tucks in ever so gently. The designers have obviously taken great pains not only to minimize the fwd disadvantages but also to make the car utterly safe, and a run through our slalom course confirmed this further. Cornering power is well into the sports-car range too. A Society of Automotive Engineers paper (No. 741041) is available to explain how it was done for those interested in the fine details.

A very unusual rear suspension is important to the handling characteristics. Described in detail in the June 1973 R&T, it is a pure trailing-arm setup: the rear wheels move up and down vertically relative to the body. Interconnecting the two trailing arms is a lateral L-section beam that acts as the anti-roll bar, and the trailing arms act on tube shocks and highly variable-rate springs. The simple motion of the wheels allows the smallest possible wheelwells to be used and the suspension pieces take very little space for themselves, so this system is also largely responsible for the wide, deep trunk in so compact a car. Up front, a MacPherson-strut system also takes minimum space, and it's significant that there's no anti-roll bar there: by concentrating the roll stiffness at the rear the VW engineers minimized understeer.

This suspension system also achieves what might have been considered impossible a few years ago: a very good ride in a car weighing less than a ton. Over a variety of road surfaces we found the Scirocco impressively competent and well controlled; it has sufficient suspension travel to handle large dips at a good clip, and very little road noise gets through to the body shell. It rolls a fair amount when being cornered hard, but with the high cornering power it has this is merely a comment, not a complaint. And take note, Detroit: it has lots of ground clearance.

The brakes are a disc-drum combination that deal with the Scirocco's performance in a satisfactory but not outstanding manner. Stopping distances are quite short from highway speeds, although to get them our test driver had to work the brake pedal and steering wheel a bit as the rear wheels tended to lock unevenly. There's some fade but certainly not enough to cause trouble even in brisk mountain driving.

Our test car was a very early U.S. version, and before we got it a large group of journalists (including two of our staff) had manhandled it and other Sciroccos and Golfs around Orange County International Raceway for the better part of two days in a national press introduction of the cars. It may be that the stubborn shift linkage, a chattering on hard right-hand turns and a rattle or squeak here and there had something to do with the test car's vintage and previous use. Even with these faults, though, it was a most impressive car.

One thing about the Scirocco's emission-control system needs to be mentioned. At 30,000 odometer miles a warning light on the dash will light, telling the owner to replace the catalytic converter (on the California version only). This is going to offset some, but not much, of the savings in fuel costs over those 30,000 miles for the Scirocco versus a domestic car of comparable performance and accommodation. The converters on domestics are assumed to last for 50,000 mi.

But this is a small matter compared to the Scirocco's attractions. Any way you look at it, this slick little coupe makes far more sense as an enjoyable 2+2 for the late 1970s than anything we've seen yet. There is no waste, not an ounce of fat on it; and yet it's exciting to look at, delightful to drive and technically fascinating. Perhaps most important of all, it seems to be the product of people sincerely striving to create better cars for a world of dwindling resources and space.