

New from Germany: VOLKSWAGEN SCIROCCO



New transverse-engine 2+2 to replace the Karmann Ghia, coming to the U.S. next year

BY PAUL FRÈRE

WHY HAVE TWO cars using basically the same power unit, both with front-wheel drive, but one with the engine set in line with the body shell and the other with the engine set across it? There may be several reasons for it but the most likely one is that the Dasher, which has the engine in line and is no more than an Audi Fox with a different rear treatment, was the essential move of a crash program Rudolf Leiding set rolling when he took over from Kurt Lotz as Managing Director of Volkswagen to get the company out of the red figures, whereas the new Scirocco is the first product of an entirely new line of VW models. There is, in fact, no reason at all why the Dasher should not have had its engine set across the body shell except that it was born as an Audi. But this is not likely to have any influence on its future, for except for the transmission housing most of the internal parts of the drivetrain are interchangeable with those of the Scirocco and so apparently are the MacPherson struts of the front suspension. Consequently it is perfectly suitable for integration into the standardized program planned by Volkswagen for the coming years.

If it were only a replacement for the Karmann Ghia, the Scirocco would not be very important; but obviously a giant like Volkswagenwerk does not produce a special all-new car just to replace the marginal Karmann Ghia. The significance of the Scirocco lies in the fact that it is soon to be followed by another model using basically the same platform but having a roomier and more practical body. That is the car Volkswagen management presumably thinks might at last become a successor to the Beetle. This is, more than anything else, the reason why the Scirocco is such an important car.

Forgetting this for a moment, it is also quite interesting and attractive in itself, not least because of its quite outstandingly elegant lines—the work of Giorgetto Giugiaro. In this context, however, it must be said that the Scirocco as shown here does not feature 5-mph bumpers, though the ones you see here will probably be merely pushed out on cylinders to meet U.S. regulations when it comes to America. Despite its wedge-shaped nose (in my opinion a masterpiece of the styling art), the car is very short, even for being a “2+2” rather than a real 4-seater: total length is only 151 inches, including an appropriately sized luggage locker. Access to this is obtained by a rear door which automatically raises the articulated parcel shelf behind the rear seat. The shelf can be removed instantly in case the baggage should be too high or when the little sporting coupe is turned into a miniature station wagon by folding the rear seatback forward. It is an almost perfect combination of a shopping car and a lively, sporting GT, for with the top engine option it is claimed to have a 109-mph top speed and to accelerate to 60 mph in little more than 10 seconds, curb weight being 1660 lb.

On the European market five powertrain combinations are offered, comprising three engines (1100 cc and 50 bhp DIN, 1500 cc and 70 bhp DIN, 1500 cc and 85 bhp DIN), the differences between the latter two being compression, carburetor (2-bbl for the more powerful version) and exhaust system (twin outlet manifold in the 85-hp model). All are mated to a 4-speed, all-synchro box, and the well-known VW automatic is available with either of the 1500-cc engines. The entire driveline is identical with that of the Dasher and Audi Fox, except that the differential is driven by spur gears rather than bevel gears and is on the side of the clutch housing. The entire engine is set

just ahead of the wheel centerline and slightly inclined to the rear in the case of the 1500 models, to the front in the case of the lighter 1100 to give the same weight distribution in either case.

Whereas the 1500-cc engines are inherited from the Dasher-Fox range, the smaller 1100 unit, though also having a belt-driven overhead camshaft, is entirely different and VW's own development. It features a crossflow alloy head and was originally developed under the Lotz management to power a completely different, entirely conventional car, scrapped long ago. The fact that it was chosen to power the basic version of the Scirocco hints that the future VW program may include a car of less than 1-liter capacity. Both the 1100 engine and the 70-hp version of the 1500 are intended to run on regular gasoline.

From the differential the front wheels are driven by unequal-length hollow shafts with constant-velocity joints at each end. The two shafts are of different diameter so that despite their different length they will be twisted by equal angles when the driving torque is applied. The vacuum-assisted brakes (disc front, drum rear operated by diagonal twin circuits) are outboard front and rear. Front suspension is by wide-base A-arms and MacPherson struts, the geometry featuring the now well-known "negative wheel offset" to obviate any deviation from a straight line should unequal braking forces be put through the front wheels. Steering is by rack and pinion with a universally jointed safety steering column, and there is no front anti-roll bar.

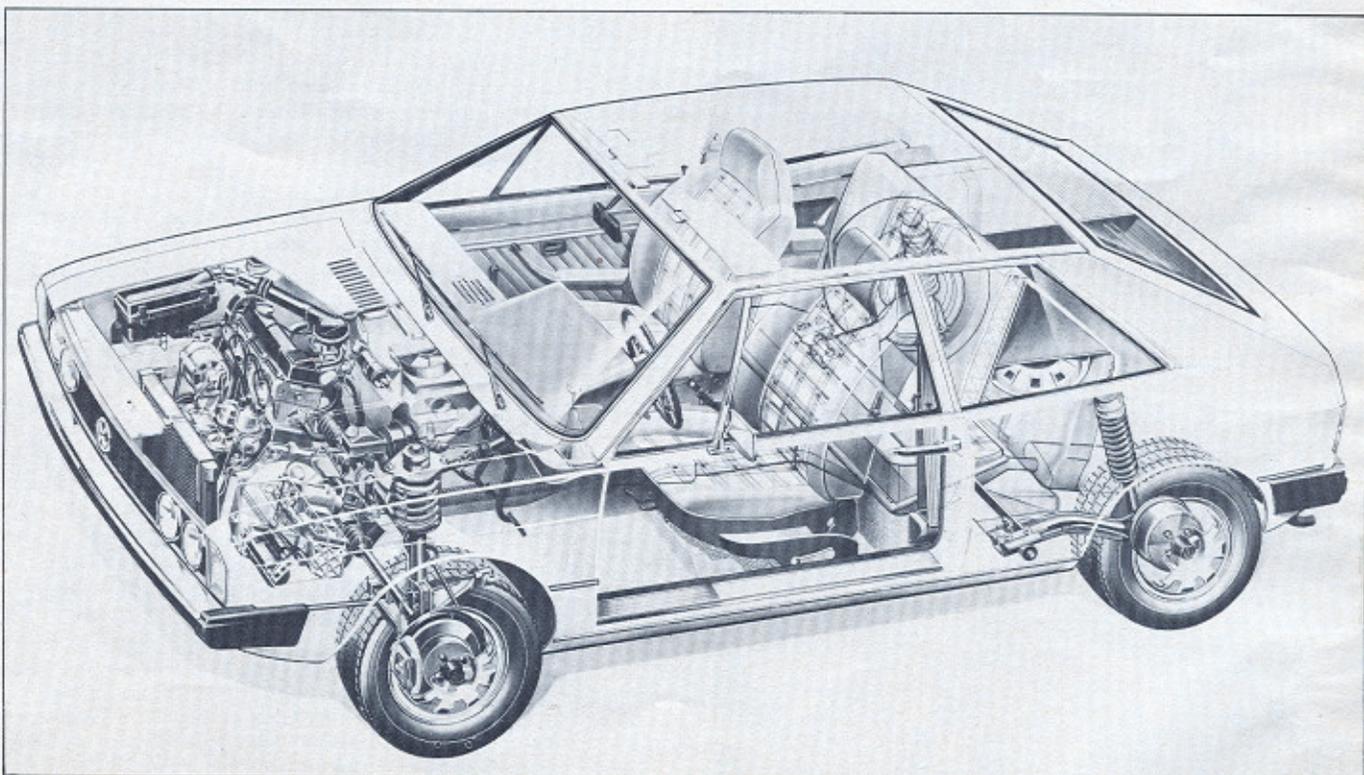
In contrast to the Dasher-Fox range's beam axle, the Scirocco's rear suspension is independent and is both very simple and very clever. The wheels are carried by pure trailing arms, suspension movements being controlled by spring/diagonal shock absorber units. The clever thing about the suspension is that the rear trailing arms are joined by a welded crossmember of L-shaped cross section with a gusset providing additional stiffness. The whole unit is carried in one thick rubber bushing on each side, providing excellent road-noise insulation at practically no penalty to the accuracy of the trailing-arm location, the two pivot points being spread across the entire width of the platform. The gussets effectively assist the trailing arms in resisting side loads, but as the L-section crossmember into



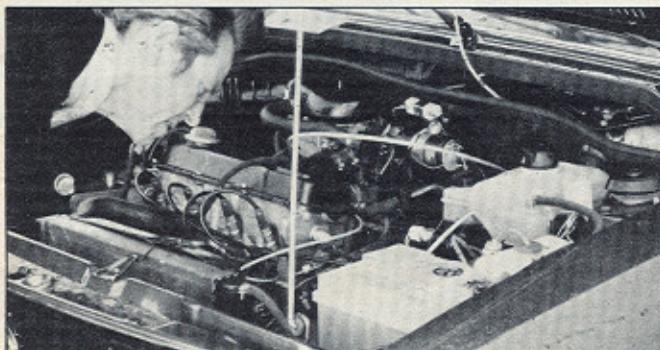
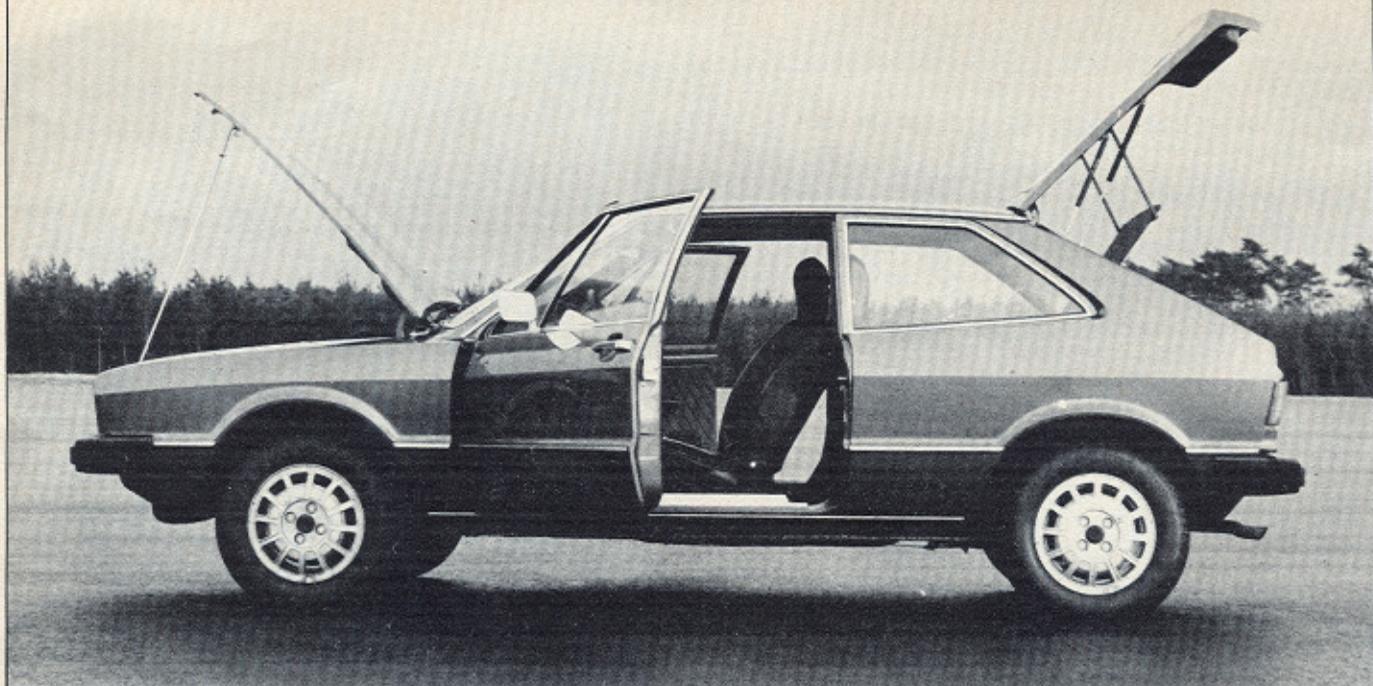
Paul Frère inspects the Scirocco's tailgate, which takes a divider between trunk cavity and rear package shelf up with it à la Renault 16.

which the side loads are fed is rigid only in beam but has very little torsional stiffness, it effectively acts as a rear anti-roll bar. Steel-belted radial tires are fitted all around (155SR-13 except 85-hp models, which have 175/70SR-13 tires) on 5J rims.

As we saw the car nearly a month before its announcement, it could be driven only on a limited part of the VW proving ground, so some aspects could not be judged; and only the 2-bbl 1500 version was available. When the factory introduces



Disposition of mechanical components, seating and trunk achieves efficient space utilization. Details of unusual rear suspension can be seen here.



Familiar Fox-Dasher 1.5-liter sohc engine leans rearward; the smaller 1.1-liter VW unit leans forward for same overall weight distribution.

SPECIFICATIONS

	Scirocco, Scirocco L	Scirocco S & LS	Scirocco TS*
ENGINE & DRIVETRAIN			
Type	inline 4 with belt-driven overhead camshaft		
Bore x stroke, mm	69.5 x 72.0	76.5 x 80.0	76.5 x 80.0
Displacement, cc/cu in.	1093/66.7	1471/89.7	1471/89.7
Compression ratio	8.0:1	8.2:1	9.7:1
Bhp @ rpm, DIN	50 @ 6000	70 @ 5800	85 @ 5800
Torque @ rpm, lb-ft.	59 @ 3500	82 @ 3000	89 @ 3200
Fuel requirement	regular	regular	premium
Carburetion	Solex IV	Solex IV	Solex 2V
Transmission	4-sp manual; 3-sp automatic opt on S, LS & TS		
CHASSIS & BODY			
Body/frame	unit steel		
Brake system	disc front, drum rear, vacuum assisted		
Wheels	steel disc, 13 X 5J		
Tires	steel radial, 155SR-13	155SR-13	175/70SR-13
Steering	rack & pinion		
GENERAL			
Curb weight, lb	1660	1710	1710
Wheelbase, in.	94.2		
Track, front/rear	54.7/53.1		
Length	151.0	152.2 (LS & TS)	
Width	60.0		
Height	51.4		

*TS available also with 70-hp engine

the car in the United States [next year—Ed.] it would most likely come with the 2-bbl 1500-cc unit in the same state of tune (75 bhp SAE Net or about 78 DIN) as the current U.S. version of the Dasher. The "top" version provided for driving proved extremely lively—as could well be expected with only 20 lb per hp—and very safe to handle, with final understeer under power turning to just about neutral on lifting off. Handling is responsive and there is comparatively little roll on bends. The steering is geared slightly on the low side but is very accurate and practically devoid of power-steer effects, though pulling to the right under full acceleration, because of the slightly different angles (in front view) of the unequal-length halfshafts, can just be detected when accelerating hard, hands off, in 1st or 2nd gear. It cannot be felt when one is not actually looking for it; neither has it any noticeable effect on the return of the steering when coming out of tight left or right bends.

The not easy problem of providing a pleasant gearchange with a cross-mounted engine has been successfully solved and noises from the three-point-mounted engine remain pleasantly subdued, even when pulling hard—though it is not by any means silent when getting near 6000 rpm. Road-noise insulation is very good and wind noise never becomes objectionable.

In the rear compartment head room is rather scarce and leg room not much better, but journeys up to one hour's duration would be acceptable. For children up to 12–13 years, however, the room provided is more than enough. I found the driving position excellent and it also suited a very tall gentleman present quite well.

Except for the mechanical units, the Scirocco is not made in the Wolfsburg factory or any of its subsidiaries, but rolls off an assembly line installed at the Karmann factory, where the body is made. The reason for putting a sporting coupe into production before the bread-and-butter car based on the same basic design is obviously to get a widespread service experience of the model before starting to produce several thousand cars daily using similar units.

What is a scirocco? The name is the German spelling for the more familiar word *sirocco*, a hot and dry wind blowing from the African coast to Italy, Sicily and Spain. As the European name for the Dasher is *Passat*, another wind name, it seems that VW is off on a new style of model names. In the U.S. the new car's name will be *Blizzard*—yet another wind.—Ed.