

Twin-engined Scirocco

Could this competition-only VW become a production model?

By Olaf Fersen

CARS WITH an engine at each end are not all that new. In the 1930s Auto Union engineer Gerhard Macher competed in the Monte Carlo Rally with a streamlined coupé propelled by twin-cylinder DKW engines for each pair of wheels and Alfa Romeo raced the "Bimotore" in 1935 which might have become a winner, if its twice 265 bhp from eight cylinders had been designed to drive all four wheels instead of loosing all their torque on the poor rear wheels only. In our time the advantages of transverse engines tempted Sir Alec Issigonis to assemble the famous twin-engined Mini Moke...

Now Volkswagen — or more correctly "Volkswagen Motorsport", a semi-independent

branch of the company at Hannover — have taken up the theme again. They have followed their twin-engined Jetta (Autocar, 26 September 1981) with a highly potent Scirocco coupé with power from eight cylinders: Four in their legal place under the front bonnet and another four under the rear hatch. Each has its own close-ratio five speed gearbox, servo-assisted and hydraulically operated clutch and self-locking differential.

Although the power units look quite normal from the outside their internals are far from production specification. With a bore of 81.25 and a stroke of 86.4mm, capacity has been increased to 1,791 c.c. Thus the volume where the power is generated adds up to 3,582 c.c. A compression ratio of 10.9 to 1, and sophisticated fuel-injection and ignition systems help to extract 180 bhp

at 7,200 rpm from each engine. Thus a combined output of 360 bhp is available and an imposing maximum torque of 296 lb. ft. (2 x 148 lb. ft.) comes in at 5,800 rpm. The throttles of both engines are

electronically synchronized and the driver is able to vary the ratio of power delivery front and rear.

To cope with the increased power, the braking system had to be redesigned. There are 10in. ventilated disc brakes at all four wheels with two pairs of pistons in light alloy calipers, servo operated. The braking ratio between front and rear is adjustable and the handbrake is also hydraulically operated.

Suspension is independent at both ends by spring struts and gas dampers. The lower wishbones for the front wheels follow production style fabricated arms: at the rear inverted tubular wishbones and short tension stays are used.

The 73 x 15 light alloy wheels carry 205/50VR-15in. tyres.

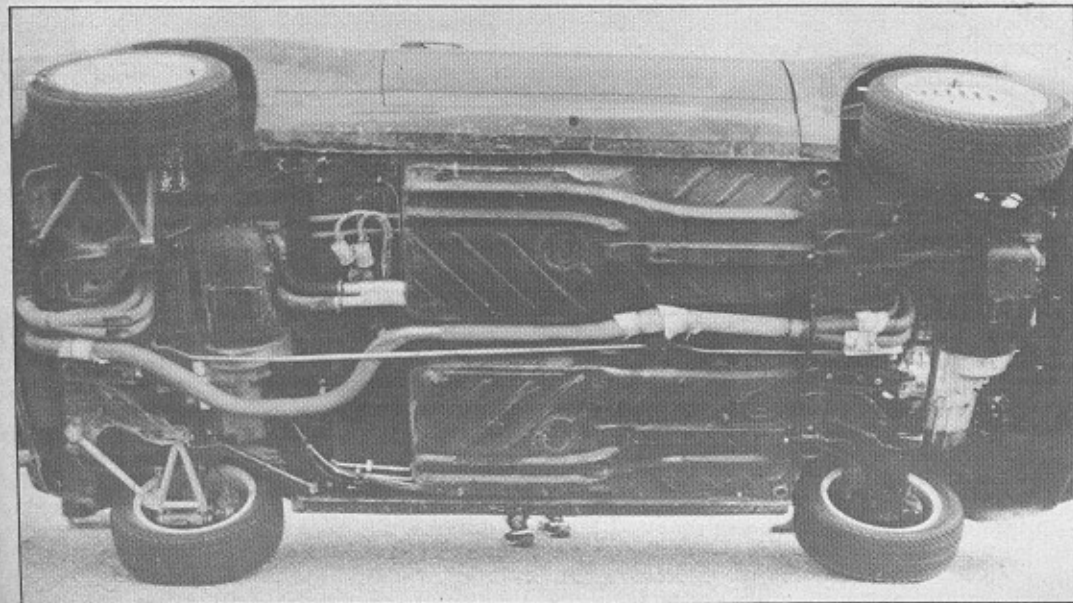
The basic dimensions are: wheelbase 94.3in., track 57in.; length 159.4in.; width 66.5in.; height 50.7in.; weight (without fuel) 2,557lb (weight on front wheels 1,344lb; on rear 1,213lb).

With a power-to-weight ratio of 315 bhp per ton, an exciting performance could be expected. The Twin-Scirocco accelerates in 4.6sec from 0 to 100 kph (62 mph) and needs a mere 14.1sec to reach 180 kph (111 mph) from a standstill. This beats the Porsche 911 Turbo handsomely (0-100 kph 5.4sec; 0-180 kph 15.1sec).

The engine modifications were



To get the axle line in the right place, the rear engine is located in what would be the load space of a normal Scirocco. The gear linkage running fore and aft can be clearly seen underneath the floor pan, as can the new, tubular, fabricated rear wishbones



carried out by Eckart Berg, formerly chief of the Solex/Pierburg racing service, who now runs his own tuning business at Ratingen near Düsseldorf (mostly doing wonders to Alfasud engines). In the construction of the car the well-known racing car constructor Kurt Bergmann of Vienna played a leading part.

It appears that the twin-engined Scirocco could become more than just an interesting experiment and another means of gaining experience with four-wheel-drive. There seems to be a chance for a limited "production" for such a Super-Scirocco as an image-builder for Volkswagen. VW-Motorsport boss Klaus-Peter Rosorius seems sure that the car would cost no more than Audi's Quattro — if engines with a slightly lower stage of tune were used. □