

SPANISH

SEAT is the latest to jump on the Kit Car bandwagon, with its new Ibiza. Martin Holmes reports.

After months of waiting, during which time teasing official pictures of the car were released to the press, SEAT finally showed the concept

Kit Car project to the public at the Catalunya Rally, and arranged for its number one driver Erwin Weber to use the car as a course-opening 'zero car'.

This project is a bold step forward for the Spanish car manufacturer, a commitment of faith in the future of top-level two-wheel-drive competition, and came 19 years after SEAT launched its equally revolutionary Group 5 car, also at the Catalunya Rally of that year.

Vicente Aguilera, as Product Engineering Director of SEAT SA and Vice President of SEAT Sport is the father of the project and was proud to explain the concepts behind the car.

The decision to make a SEAT Ibiza Kit Car was taken 10 to 11 months ago, because the Kit Car formula matches our production car concept very well," he



flyer

says. "We have products with engines up to 2 litres and two-wheel drive, while the Ibiza model itself is designed to accept components for higher performance.

"The Kit Car regulations underline this philosophy completely. We at SEAT are very happy with these regulations! At the moment the Spanish national rally championship does not admit Kit Cars, but we are waiting to see if this will change. The main reason behind the Kit Car is to use it outside Spain. As a brand we are basically an exporter — we export 75 per cent of our production.

"Our image and brand awareness outside Spain are very important. We went

ahead with the Kit Car after receiving a positive opinion from overseas markets."

What were the most attractive opportunities of the Kit Car regulations? "One of the most important steps for us was to increase the capacity of the engine up to 2 litres, which was essential to reach competition performance levels," points out Aguilera.

"We are now satisfied with the engine's performance, having increased both the bore and the stroke, and I think for a 2-litre it's now a well balanced engine. We can take it to 9000 rpm, although we set the rev limiter on events at 8600 or 8700 rpm, and we have had no problems so far.

"The engine is basically the same as that used in the 1.8-litre Ibiza GTi rally car. The block is the same, but instead of producing 200 bhp like the existing F2 car, with the Kit Car we're looking for 260 bhp without complicated engineering changes."

As far as the chassis engineering is concerned, what has been the biggest work?

"We have redesigned the geometry of the front suspension to achieve better

traction. There is a completely new set-up at the front, and we are still developing a new rear axle, which we haven't yet fitted to the car.

"We are continuing to work hard on improving the chassis, as this is the area with the greatest potential. The body, but not yet the track, has been widened to the maximum extent allowed by the regulations. We are trying to find the ideal compromise dimensions between the wheelbase and the track, to avoid making the car too nervous. We need more testing experience to discover an ideal solution for all kinds of weather and surface conditions."

How much testing has already been carried out? "We have already driven over 1000 km in high-speed testing, twice the length of a World Championship rally — 60 or 70 per cent on asphalt and the rest on gravel. We are getting better all the time, and are quite optimistic about the results we have, when we compare them with the performance of current GpA cars.

"Our chance to use the car as a zero car on the Catalunya Rally gave a much



more accurate guide to how the car is improving than private testing has done."

Which conditions are expected to be the strongest opportunities for the SEAT Kit Car — asphalt or gravel? "We are developing the car for both surfaces, because the 1996 World 2-Litre Championship is mostly gravel-based. We have a good gravel road test track at SEAT, which is over 25 km long.

"We have already decided to build a different engine for each of the different surfaces. We are developing different camshafts for example, for each type of rally. The absolute power output is not so important, but it is more important to aim for high torque and good engine response — these are far more important than squeezing out the last 5 bhp.

"For gravel especially, you need high torque, and you can't get the highest torque with the most powerful engine. The capacity is fixed at 2 litres for both engines with the same bore and stroke, but we will develop alternative camshafts and injection settings."

How has the Ibiza reacted to the increased performance opportunities available from the Kit Car rules? "We are very happy that the Ibiza has accepted so much additional power. We had

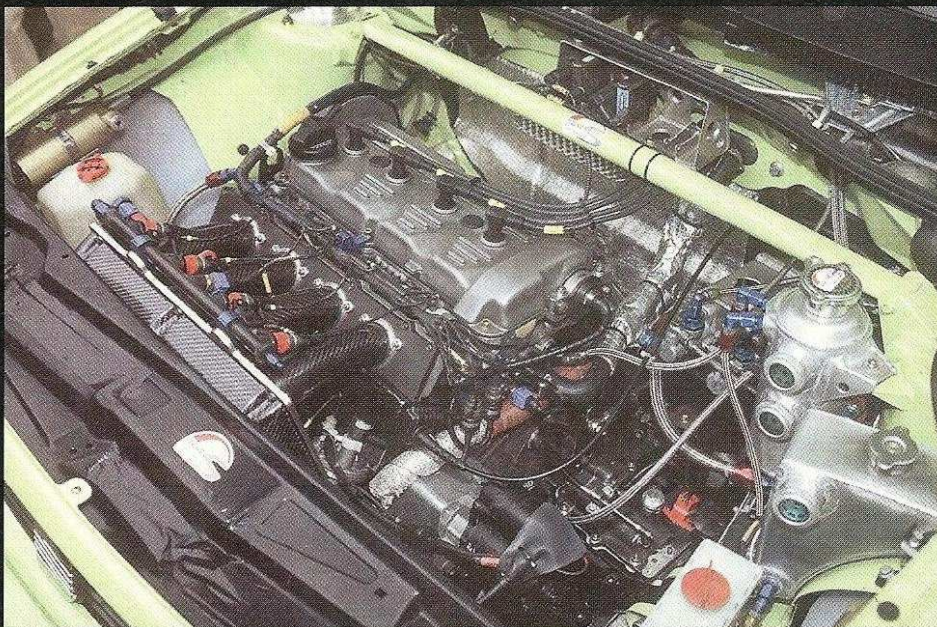


Above: Interior of the SEAT Kit Car is largely to the same specification as already used on the GpA Ibiza GTI rally cars.

originally thought that the basic Ibiza design would be near the limit of its performance capability, but this hasn't been the case.

"We have been able to go further with the car than we imagined we could. The basic dimensions and layout of the design have suited our work. The rear wing was designed in a wind tunnel, as was the front panel, to give extra downforce. On high-speed events, the car might be too nervous without the wing."

The Kit Car rules allow more air to pass into the engine compartment and the cooling system on this car is new. "We've been able to relocate the cooling system in such a way that it is not only better-protected against damage but fits in with the aerodynamics of the car better as well," claims Aguilera.



Above: The Kit Car regulations allowed SEAT to bore and stroke the engine to 2 litres — the team is aiming for 260 bhp.

The rules also allow bigger wheels. "The larger wheels are an advantage — they are a must on asphalt. The smaller wheels which we have had to use on the current GpA car were a severe limitation for us and we reached the point on asphalt where we could not run more than 12 to 15 km on a set of tyres!

"We definitely needed those bigger wheels. We are testing the latest tyres from Michelin for 1996, using the new dimensions which will be available for next year, but basically the tyres are the same as those used on other Kit Cars."

In the transmission department, SEAT has been working on two solutions — a normal six-speed H-type gearbox which is an evolution of the GpA Ibiza GTi gearbox, and a sequential gearbox, which Aguilera says the team would prefer to use. "Sequential gearbox systems are becoming better accepted by drivers, since they reduce the time it takes to change gear and so they make the car faster," he points out.

"At the moment it is mechanical, but later on we shall consider making it electronic — for the time being we're keeping things simple! We are looking to upgrade our differential to an electronic system, but these are plans for the future.

"The Kit Car project has also given us new ideas for developing small but very important things, such as a carbon clutch, water-cooled brakes, a sequential gearbox and a new fuel injection system."

SEAT is aiming for homologation of the car by January 1 1996, in time for Monte Carlo. "We are testing the car with our current team drivers, Erwin Weber and Antonio Rius. We are also planning our 1996 season, but we have yet to decide our precise programme.

"I hope we will know this within the next three or four weeks. Our hope is to be in the World Championship for 2-litre cars, but we know that some rallies are very expensive. As car companies go, SEAT is pretty small and our competition budgets reflect this.

"We are looking to compete with this new car for the next two years, and we shall then look at the next steps later on. Looking at the 1995 season when the only team to take F2 seriously was Skoda, it's clear that there is a lot of opportunity in F2 rallying."

SEAT is part of the Volkswagen group in which every company has its own image in individual markets so when they're making plans for next year's programme, Aguilera and his team have to consider what is strictly appropriate for the SEAT image and avoid clashing with the plans of fellow VAG companies.

"I am still very excited about the 1996 World Rally Championship though,"



Above: Rear wing helps make the car less nervous at speed — important if the track is widened in future.

he admits. "The Kit Car is a good starting point, but we know there's still a lot of work left to do."