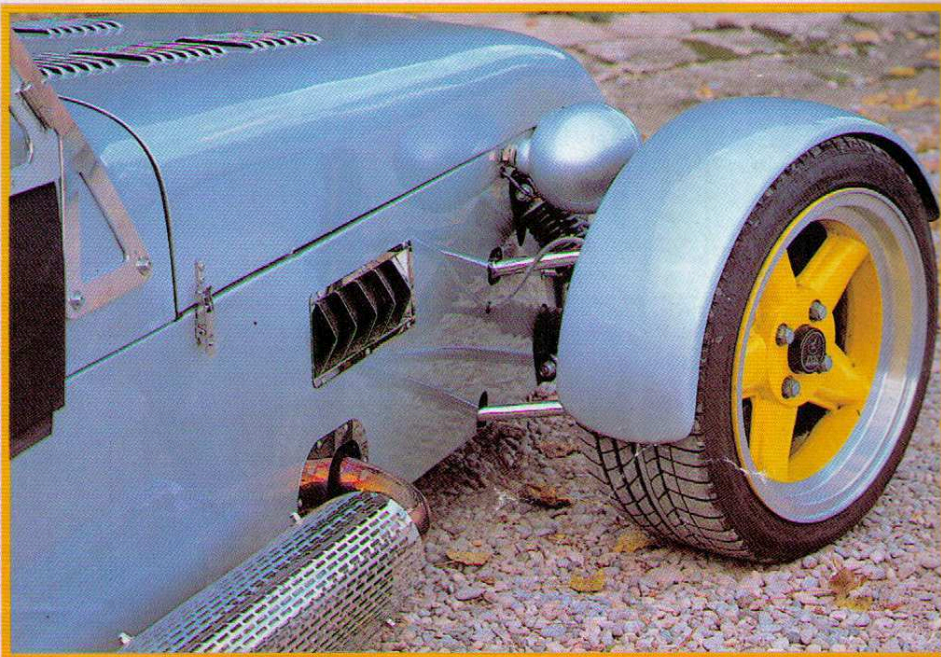
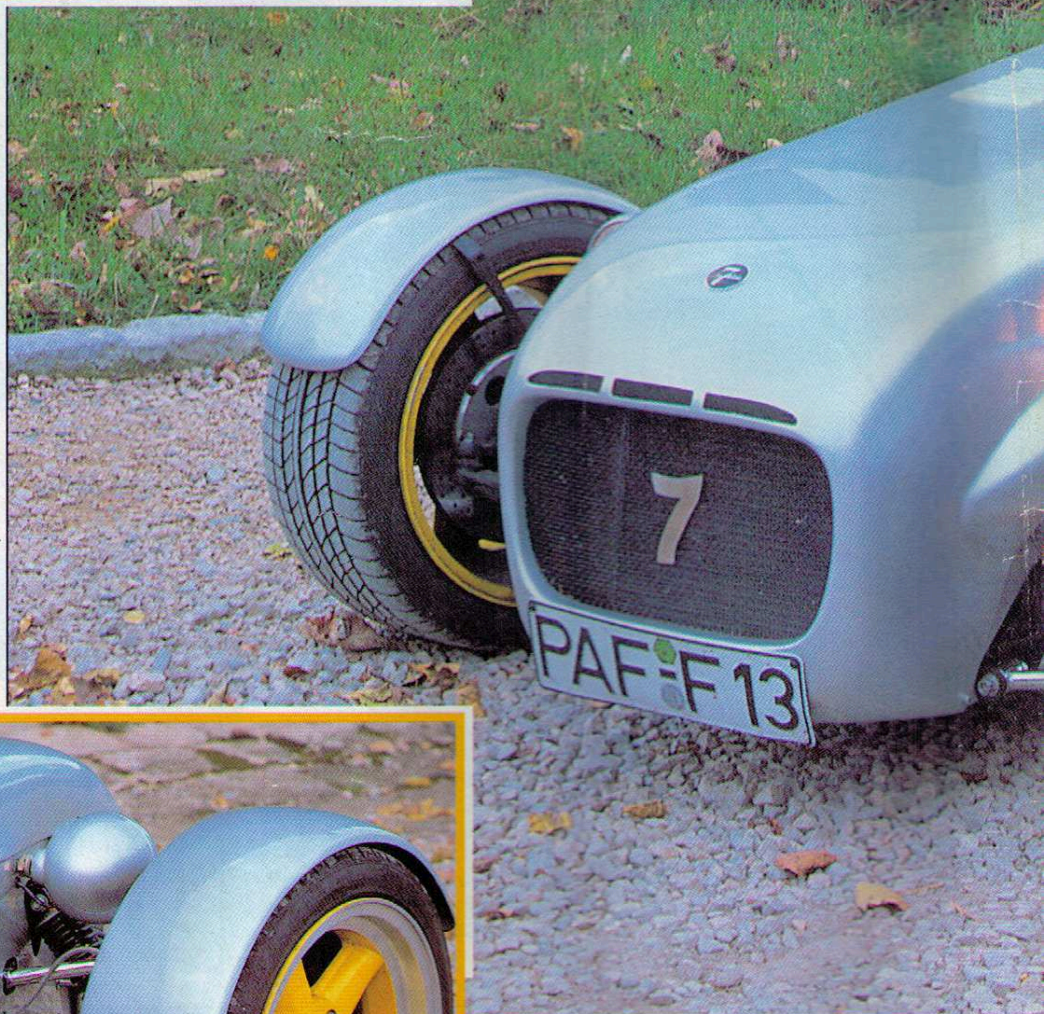


Feet on the seat, then slide into the hole!

Ian Kuah takes a look at Germany's answer to the Lotus Seven

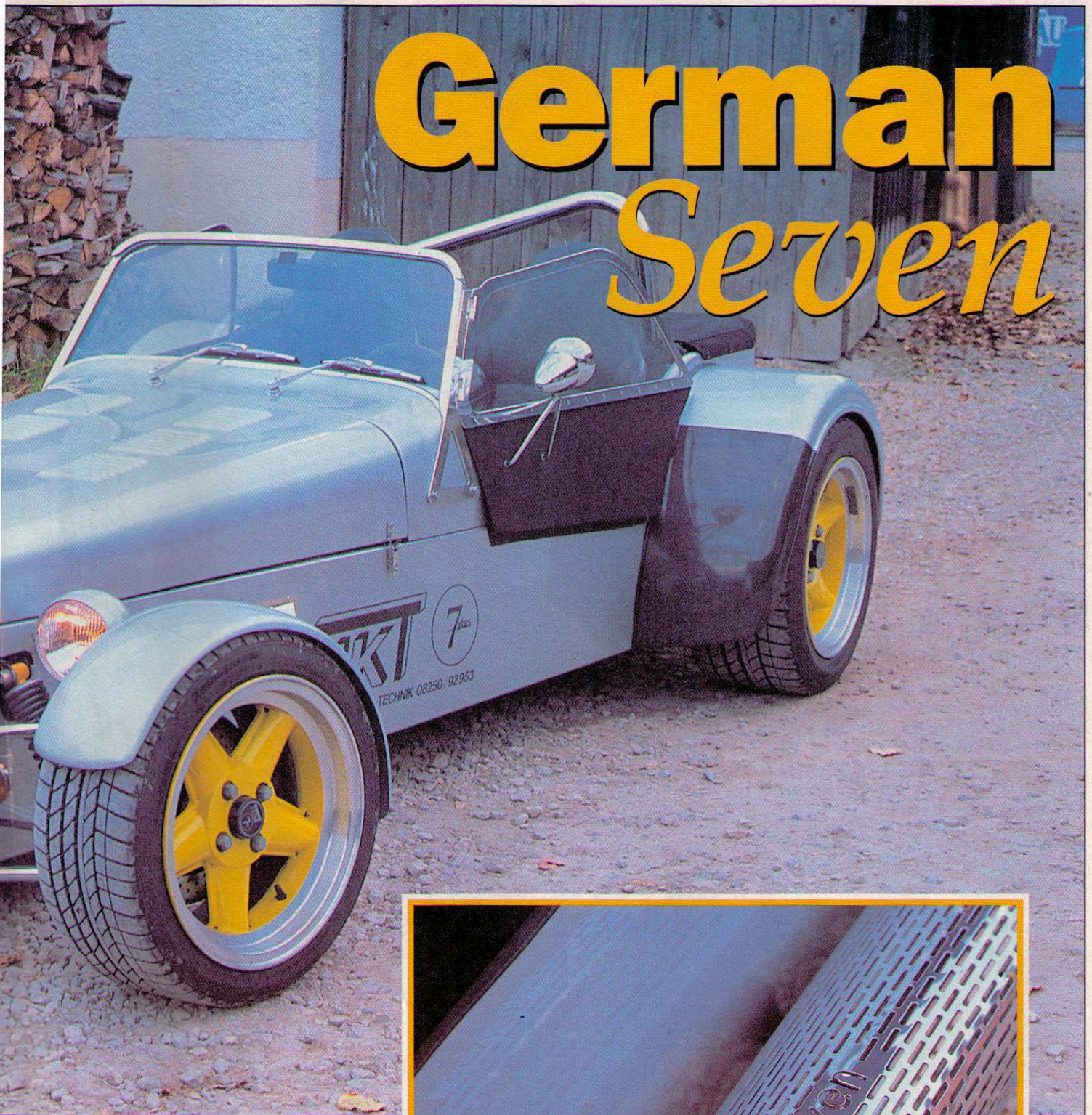
Suspension is by double wishbones and coil springs all round.



WHEN Colin Chapman designed the Lotus 7 back in the Sixties, little did he suspect that his minimalist concept "for speed, add lightness" would still be so popular and widely copied as the motoring world approaches the Millennium.

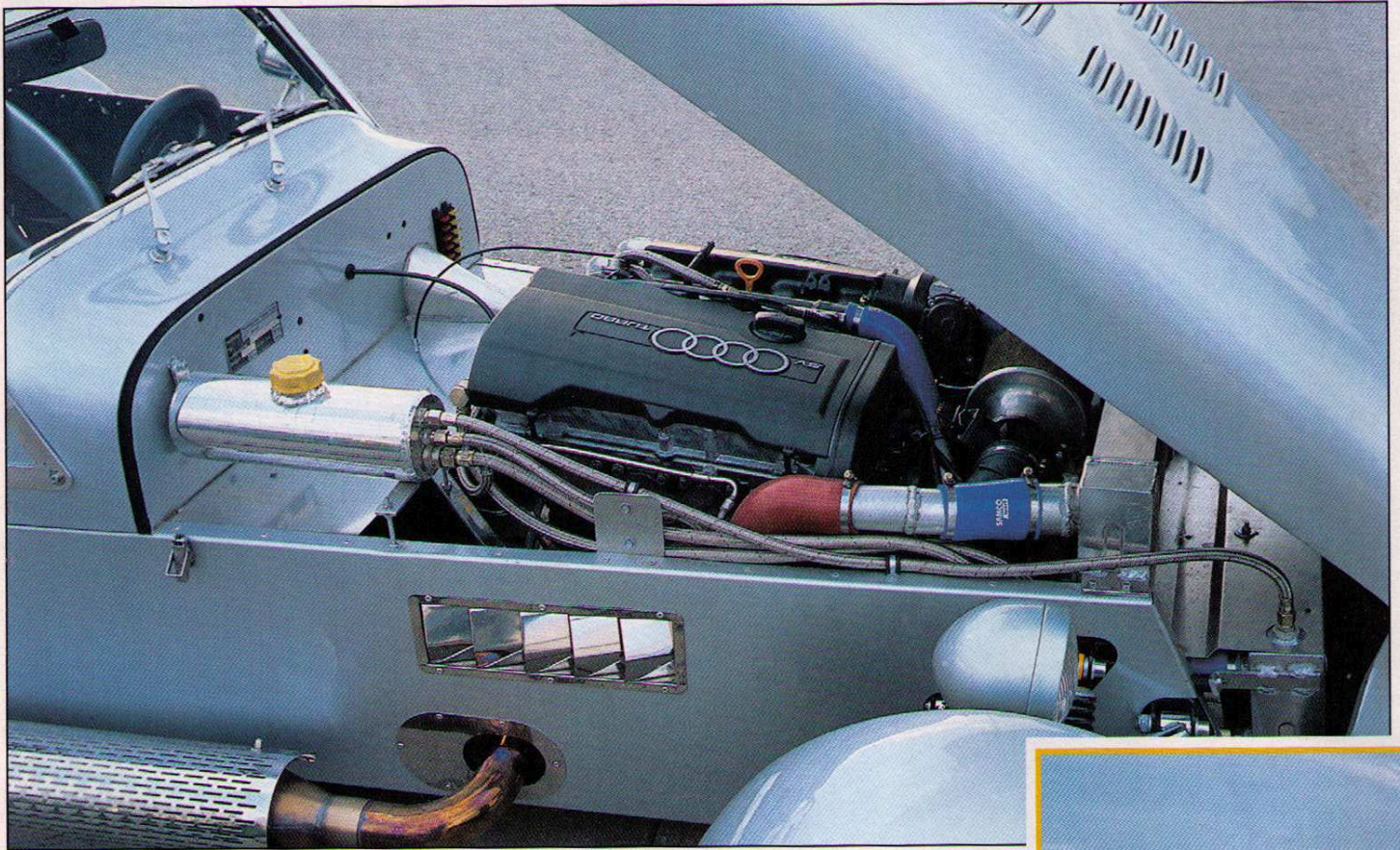
The latest car of this genre comes from Germany and is powered by the five-valve, turbocharged Audi 1.8 litre-engine, familiar to owners of Audi A3, A4 and A6s.

German *Seven*



Just over ten years ago, master mechanic Simon Lydea saw a Lotus Super Seven at a classic car show and realised that no other car had excited him as much. His enthusiasm grew and, after much thought, he decided to get a dealership for a replica Seven.

The replica was not as good as he expected and he knew that he could do much better himself. Not, though, as a dealer for the replica Seven, so he gave that up and opened his own workshop. ♦



MTM 1.8T engine develops 210bhp.

And so Hockmayer KFZ Technik GmbH, or HKT for short, was born. The car, naturally enough, was given the model designation "Seven". To date, Simon has built about 160 cars at a rate of between 17 and 20 a year, good going for a small operation like this.

In the beginning, a Ford Pinto 2.0-litre carburettor engine served as the power plant for the Seven. This was nothing out of the ordinary as most of the Lotus Super Seven replicas of this era were similarly powered.

Then, two years ago, an automotive engineering student doing his year out with MTM was given the task of re-engineering the car to take the new Audi A4 1.8-litre Turbo engine as his degree graduation project. Cheaper versions are still available with Ford 2.0 or 2.3-litre power.

Thanks to good induction, a small turbo and good cylinder filling, the 1.8T starts off as a torquey engine with crisp throttle response, and if you are used to its smooth and refined pull in an Audi, you will be amazed at its transformation in this application. In a car with around half the weight of an A3, it goes like a rocket. And that is just the standard version with an off-the-shelf 150bhp engine!

Serious action in a Lotus Seven-style car is usually accompanied by lots of engine and exhaust noise and plenty of g-forces. HKT's demonstrator is the very

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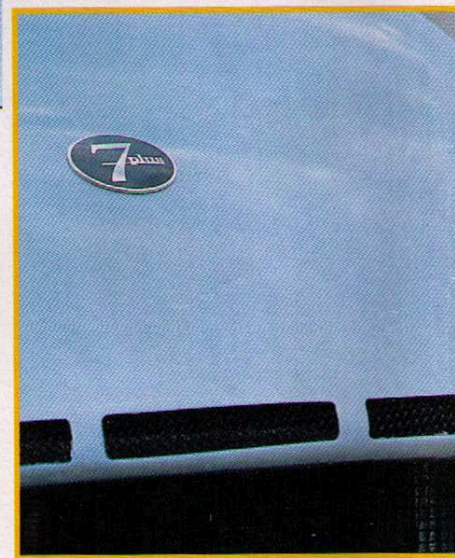
best that they can do, and that means the Stage 2 engine conversion from Motoren-Technik-Mayer (MTM). With relatively small modifications to the turbo, exhaust and ECU to raise boost pressure, provide more fuel and tailor the ignition curve, power shoots up to 210bhp at 6,000rpm.

In a car weighing just 640kg, this sort of power is pure dynamite. I have driven some very powerful generic cars in the past, the super-light Caterham JPE with 250bhp for instance. But sheer power is one thing, stump-pulling torque quite another. A 2.0-litre naturally-aspirated engine has to be very highly tuned to produce this sort of output, and both power and torque tend to be developed fairly high up in the rev band. A turbocharged engine, on the other hand, produces good torque low down and can be designed so

that it maintains its peak across a fair portion of the rev range. In the case of the MTM engine, 214lb-ft of torque is reached at 1,950rpm and maintained all the way to 6480rpm.

No surprise, then, that performance is electrifying, with 60mph coming up in 4.7 seconds and a top speed of 144mph. In such a light and low machine, that is quite frightening. The beefy torque curve also means that you don't have to change gears often if you don't want to, and there is always plenty of grunt on tap for sweeping past slower traffic. Even left in fourth, the HKT Seven will swiftly and effortlessly gobble up three or four cars in an overtaking manoeuvre between 50 and 100mph.

Using the gears though, is how many will choose to drive the Seven. Then, its



terrific mid-range punch means that you don't have to red-line the motor in every gear to get the best out of it, even if its smooth responses make that no chore.

Another advantage the HKT Seven has over its Audi donor is the great soundtrack that accompanies your engine workout regime. While major manufacturers have to produce cars that comply with the very tight Swiss and German drive-by noise regulations, the small volume specialists are allowed more leeway.

Punch the throttle in an Audi A3 1.8T, and, while the g-forces and the rate at which the scenery is passing tell you that the motor is earning its keep, the engine note is flat and uninspiring. With its short sidewinder exhaust, the Seven's installation gains crisper throttle response and glorious growling noises that rise to a crescendo as the needle on the rev counter chases the red paint.

The most elegant way to get into the Seven is to open the door, step on the seat and drop yourself into the narrow cockpit. Then the figure-hugging bucket seat clamps you in position and you are ready

for action. And lots of fun. Oh, and you had better be on good terms with your passenger because you will be rubbing elbows all the way.

As you would expect in a car whose *raison d'être* is unadulterated fun, the Seven's steering is pin-sharp and the rest of its reflexes as well honed as a champion boxer's. Its very stiff structure also helps keep the handling consistent and pure. The car is basically a tubular steel perimeter chassis with centre backbone and a rollover bar behind the seats, clad in a GRP body. You can buy the car complete, as a rolling chassis or even without an engine.

Aim the Seven at a corner, and from your low and laid back driving position, you can see the mud-guards over the front wheels respond. It gives you a sense of being directly connected to the action, like in a single-seater racing car. It attacks bends like a hungry tiger and, as you apply throttle to bring it into a neutral stance, you realise that body roll is almost non-existent and the g-forces you are feeling are almost purely lateral. The steering loads up as you try harder, but with its quick rack, you don't actually have to move the wheel too much anyway. When the corner opens up and you can go full bore again, the fabulous torque coupled to the low weight catapults you down the straight. This car lives to go fast!

Double wishbone and coil suspension is used all round in the best racing style. The car is probably over-braked for its weight with 310mm cross-drilled vented discs with four-pot callipers in front and 280mm discs at the rear. You can see these giant brakes through the British-made 8J and 9Jx16 five-spoke Revolution alloy wheels which are shod with 205/45ZR16 and 245/45ZR16 rubber.

Apply too much power in a tight bend and the big rear tyres will promptly relinquish their grip on the tarmac. But the limited slip differential helps to keep the slide progressive. In fast sweepers, the car can feel twitchy until you learn to just relax and think it round with gentle and precise movements. Listen to the car, feel its movements and go with the flow. Do this, and you will quickly learn to be quick and smooth. Like all good drivers' cars, the Seven will give you an education in driving enjoyment if you are just prepared to listen.

Traditionally, cars of this type have always been powered by Ford, GM and even Rover engines. But as German companies have started to build such cars, it is natural that they should look to their own car makers for power units. The choice of the very tuneable Audi 1.8T engine has proved a good one for HKT, endowing its car with extremely good performance and manners. ■

