



AT €20,000 OR nearly £14,000, the price tag for MTM's K540 supercharger conversion may seem a bit steep for most RS4 owners. This is why MTM Boss, Roland Mayer does not expect to sell more than a handful.

In the context of the £70,000+ Audi R8, however, the price tag seems more reasonable, and will give the new Audi supercar the grunt to fend off advances from pushy Ferrari and Porsche drivers. "I fully expect the greatest response to come from R8 owners, and that is the car we will be concentrating on with this supercharger conversion," Roland told us.

Given that the V10-powered R8 is expected to follow some months behind the V8 model, MTM has a good chance of fulfilling this prophesy. And for some, the fact that the lighter and more compact V8 makes a nicer noise while promising a better handling balance makes it far more than just the entry-level model.

No full production R8s are yet available, but when Roland rang to say that his prototype RS4 K540 was ready to drive, we simply could not hold back.

Even in bog standard form, the RS4 is one of the most inspirational performance cars of any type we have driven for a long time, and is definitely one of our all-time favourites. The idea of giving it another 120 PS and 130 Nm of torque is therefore very appealing.

MTM offers more than one flavour of RS4. In recent months, we have driven a car with a sports exhaust, uprated chassis and lightweight carbon-fibre bonnet, which was just a bit harder edged than the factory car. But the supercharged K540 is the one we were really waiting for.

The engine conversion uses a variation of the very efficient Swedish-made Lysholm Technologies twin screw compressor. Boosting at just 0.4 bar, this is a bolt-on conversion which does not require the compression ratio of the engine to be lowered.

The intercooler arrangements are similarly efficient, with a Swedish-made Laminova intercooler providing the charge-air temperature control. This is a self-contained water-cooled system built into the intake manifold between the supercharger and cylinder-heads.

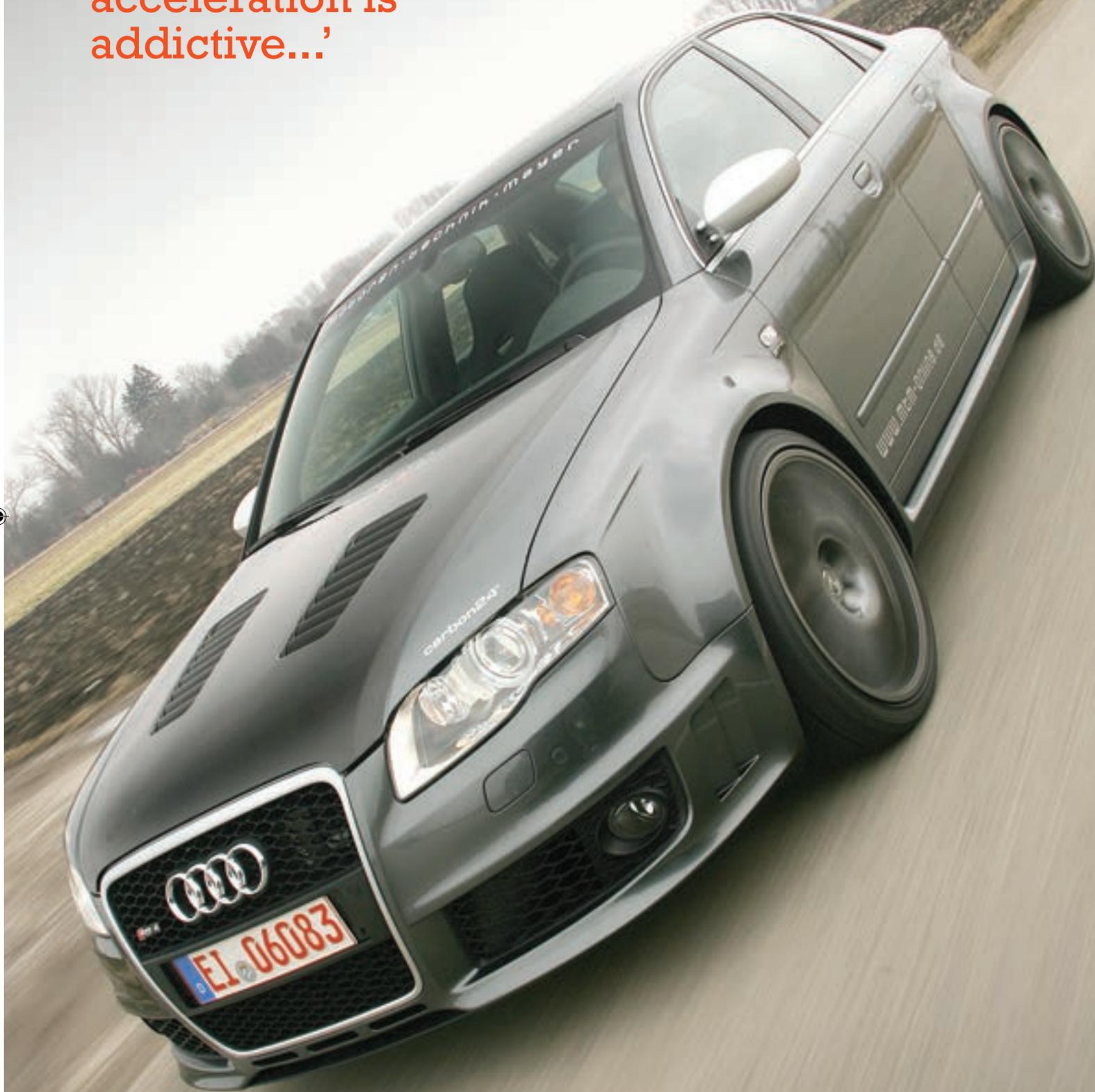
The advantage of this configuration is extremely short flow length and no long pipes running around the engine, so the chance of pressure drop and loss of charge pressure are minimised. Importantly, mounting the kit is also less of a challenge in an engine bay already strapped for space. →

# MTM RS4 K540

Ian Kuah reports  
on MTM's latest  
supercar.

www.mtm-online.de

**'If there is any problem at all with this car, it is the fact that its manic acceleration is addictive...'**





One of the benefits of the Opcon/Lysholm supercharger is the low mechanical drag it imposes on the engine. This means that both the sharp throttle response and free-revving character of the RS4 engine remain unsullied, its explosive power delivery simply enhanced.

The greater outputs from the 4.2-litre engine now compare favourably with those of a well-tuned 6.2-litre normally aspirated engine like AMG's new V8. In its most powerful form in the new CL63 AMG, this has 525 PS at 6800 rpm and 630 Nm of torque at 5400 rpm. The lighter MTM RS4 does well with 540 PS at 8220 rpm and 560 Nm of torque at 3700 rpm.

It is easy to make a tuned engine go well on full throttle, but the trick is to make it behave in as civilised a manner as the standard article in all other situations, especially on part-throttle and in traffic. So the drive along the country roads from MTM's Wettstetten base to the autobahn, a journey of a few kilometres, is useful for assessing a car's behaviour on the warm-up cycle.

We had been driving other MTM cars for most of the day. The RS4 had been tucked away in a corner all that time and so was stone cold. When MTM's workshop chief, Michael Weber, pulled it out from its resting place, it was most definitely on cold start cycle, and

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the deeper, more menacing V8 rumble it made from the four 76 mm diameter outlets of its free-flow sports exhaust immediately caught our attention.

As we drove along the country roads, carefully warming the vital fluids, we were impressed by the smooth running of an engine which already sounded strong enough to pull down the walls of Jericho. Despite the bad attitude of the monster straining away under the vented carbon-fibre bonnet, there were no signs of hunting or misbehaviour.

By the time we reached the short stretch of dual carriageway leading to the autobahn, all the moving parts were fully warmed and felt ready and willing to start World War 3. The A9 Autobahn which runs from Ingolstadt toward Munich to the south and Nürnberg to the north is de-restricted, so the traffic moves along at a fair clip. Joining an autobahn is always easier with a fast car and a heavy right foot. We certainly had both, so as soon as we spotted a gap in the traffic, it was time to see what this supercharged RS4 could really do.

Holding the loud pedal to the carpet in third and fourth gears provides the sort of slingshot acceleration you would expect from a major league supercar. Although the RS4 weighs in at a hefty 1,650 kg, the mountain of torque on tap from the blown motor feels fully capable of neutralising the laws of physics.

If there is any problem at all with this car, it is the fact that its manic acceleration is addictive. If you love the way the standard RS4 revs though the gears to its 8250 rpm limiter, think of that grunt amplified by 25 per cent with no loss of its free-revving nature. This should create enough adrenalin to keep any acceleration junkie going for a while.

The numbers on MTM's performance chart read out at 3.9 sec for the 0-100 kph (0-62 mph) sprint, 0-200 kph (125 mph) in 11.3 sec and a top speed of 320 kph thanks to deletion of the 250 kph speed limiter. This is a genuine 200 mph, making this the fastest street-legal four-door Audi in current production.

The rest of the car can be beefed up as much or as little as you want. There is not



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much wrong with the brakes or handling of the standard RS4, but many MTM customers want the complete conversion anyway.

MTM's race suspension kit replaces the factory springs and dampers. Developed at Hockenheim and the Nurburgring with KW, this fully adjustable set-up has dampers with race-style external fluid reservoirs. For road use, the wishbone bushes remain stock, but if you are a dedicated trackday junkie, you can have these replaced with Uniball joints. In either case, MTM uses new top mounts which allow more negative camber to be dialled in.

For normal road use, MTM suggest a 25 to 30 mm drop from standard ride height. For dedicated track use, the maximum 60 mm drop is optimum. The damper tubes are specially designed with a shorter housing so that spring travel is not compromised too much, even with the suspension at the lowest setting.

We drove the car with its suspension set 25 mm lower and the dampers backed off to fast-road position and were impressed with the secondary ride at low speeds. It is firmer than standard, but still takes the edge off bumps nicely.

At high speeds, body control is noticeably better, and with the lower ride height and tighter damper rebound control, body roll in fast cornering is minimised. Importantly, the tendency for the tail of the standard car to weave slightly as a result of weight transfer

under hard braking is banished. This makes the overall handling envelope more homogenous, expanding your confidence when pushing on.

MTM's massive 380 x 34 mm cross-drilled vented floating discs with enormous eight-pot callipers replace the 360 mm Audi front stoppers, while 320 x 22 mm discs with four-pot callipers replace the factory 312 mm rear discs and provide balanced retardation.

9.5J x 19-inch MTM Bimoto alloys, shod with 265/30ZR19 Michelin Pilot Sport Cup tyres, using spacers to achieve the correct offsets, create both a slightly wider track and significantly more mechanical grip.

With the 40/60 torque split dialled into the RS4's quattro chassis and the sticky Michelin Cup tyres hungrily gripping the tarmac, it is easy to believe that this car will never run out of grip, at least on a dry road.

From experience with the BMW M3 CSL, we know that while the quattro system is supreme on slippery surfaces, trackday tyres are not. Today, however, is warm and sunny, so putting the power down coming out of any bend is not an issue. You only have to remember that you cannot change the laws of physics on the way in.

On the other hand, with so much power and torque on tap, regaining speed after slowing for a bend is easy, and since the experience of accelerating is so much



fun, you can sometimes find yourself slowing down just to accelerate again for the sheer hell of it, especially when going through a tunnel!

Back in the early 1980s when the only superchargers being used by European tuners were heavy, inefficient and noisy Roots-type units, a blower conversion was very much a compromise. These days, superchargers are lighter, more efficient, noise free and, thanks to advanced electronics, seamless in the way they integrate with a car's other systems.

MTM's K540 conversion is so good in this respect that, if it were not for the rorty sports exhaust, you would be hard pressed to tell in normal driving that anything had been done to the engine at all. But once the open road beckons, throttle position is directly linked to the width of your grin. In the ideal world of the car enthusiast, that is just how things should be. 🇩🇪