

# Sound system!



**Mike Boyd took the advice of TRD and opted for an RSC supercharger kit to boost the performance of his Mk 5 R32. It not only works very well indeed, but also makes all the right noises...**

**BIZARRE AS IT might seem, Mk 5 R32 owner Mike Boyd, a Programme Director and Consultant who lives on the Isle of Man, blames it all on the Batmobile...**

**'More specifically, it was the whistling sound it made as Adam West and Burt Ward (Batman and Robin) drew up outside Gotham City PD. Then there was the Mad Max Interceptor, with that ridiculous Scott blower poking out of the hood!'**

Quite understandably, these childhood influences all made a strong impression on the young man and, despite having grown up a lot in the intervening years, Mike still had the same desire for that distinctive supercharged engine sound, although it would take a while to achieve his ambition.

Working his way up through a succession of mildly modified cars, including a Vauxhall Viva, a Chevette, two Fiestas (one a Mk 1 XR2 with an RS pack and a fabulous-sounding Janspeed exhaust), a Mk 2 Astra GTE 16V and a Mk 3 GSi, Mike finally became able to buy a brand-new Mk 3 Golf VR6 in 1995. He still has the car, although it is now so highly modified that it is only really a Golf VR6 from the outside.

In 2007, Mike decided that it was time to

give the VR6 a well deserved retirement after 150,000 miles of hacking up and down the motorways of the UK and blasting around the limit-less country lanes on the Isle of Man, and so it was promoted to fun use only and heavily modified as a trackday car. But that's another story.

Looking around for an alternative road car, a modern-day equivalent to the Mk 3 VR6, Mike took a test drive in a Mk 5 R32 and soon reckoned that it met all his requirements. With its smooth six-cylinder engine and four-wheel drive, it provided rapid progress, was sure-footed, seated four adults in comfort, and it had a boot big enough to take scuba gear and a 4x12 guitar cabinet – clues to two of Mike's other passions. It was also relatively discreet – if you can overlook the rather 'bling' chrome grille. Which we will, for a while.

Mike even ordered his new R32 with a DSG gearbox, his first ever automatic transmission, and he drove it for three years, even taking it to Germany to experience the challenging delights of a certain toll road. But, when he brought it back, he decided that it was still missing a certain 'something'. Although the naturally-

aspirated engine had a strong voice, it needed the extra-special sound of a tuned engine, together with the increase in power and torque that comes with it.

Looking around, it soon became clear that the market for tuning conversions had grown considerably since the days when he had played with the Mk 3 VR6. Indeed, he was almost spoiled for choice, with all manner of options available, for naturally aspirated upgrades as well as forced induction.

But Mike began to think seriously about turbos and superchargers, and considered all the aspects – the extra heat, space restrictions, pipe lengths, noise and reliability, as well as the potential loss of key components like air-con which is sometimes necessary to squeeze it all in.

Having talked to a number of people, Mike eventually decided to go with a Stage 2 supercharger installation based around an RSC unit supplied through Stroud-based Turner Racing Developments (TRD).

Although perhaps not as well known in general VW tuning circles as some of the more high-profile companies, brothers Dan and Jamie Turner have quite a long pedigree in race and road-modifying VWs and Audis



and, along with their father Dave Turner of the nearby Volkswagen Audi Centre at Stonehouse, they are regular participants in our track days at Castle Combe.

Quite apart from conventional tuning and modifying, TRD also gets involved in special projects like Matt Drake's bio-diesel-engined Mk 1 TT and the electric-motored Polo sitting in the corner of the workshop, as well as Jamie Turner's own show class-winning radical resto-style Mk 1 Scirocco. TRD has also carried out much of the mechanical work on Vicky Ellison's fabulous show-stopping black Beetle 1.8T.

Between them, TRD proprietor Dan Turner and Mike Boyd discussed requirements and planned a set of improvements which would retain the relatively smooth and civilised nature of the car but also release its hidden strengths when appropriate.

Fuel economy was a concern, but perhaps not at the very top of Mike's list of priorities: 'The sweet growling note of the V6 is already worth visiting petrol pumps a little more often for!' says Mike. He knew that the supercharger would only result in more frequent forecourt forays, but was ready to accept this in order to unleash more of the engine's

true potential. 'I'm even willing to cruise at 55 on the motorways occasionally, in order to redress the balance a bit, for the good of the planet as well as the wallet, you know!'

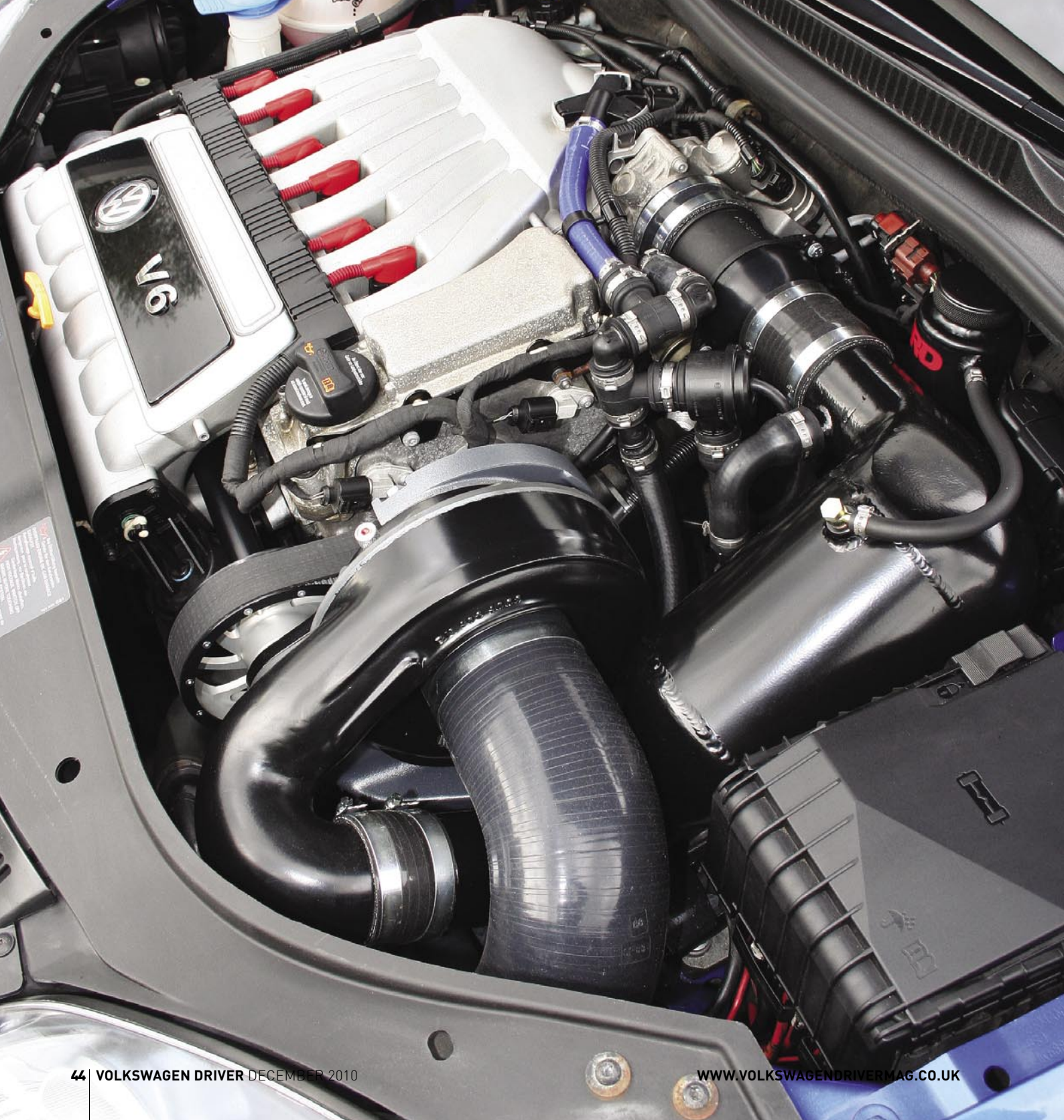
Mike also wanted to keep the inherently hot-running 24-valve engine supplied with cooler intake air, so a water-to-air charge cooler and a BMC cold-air induction system

were installed. With the uprated intake and forced induction, the engine also needed to breathe out more freely and this was catered for with a Milltek Sport cat-back system, 'the quieter resonated option, though, to keep it sensible for everyday use'.

The layout of the RSC supercharger kit is particularly interesting. Whereas most



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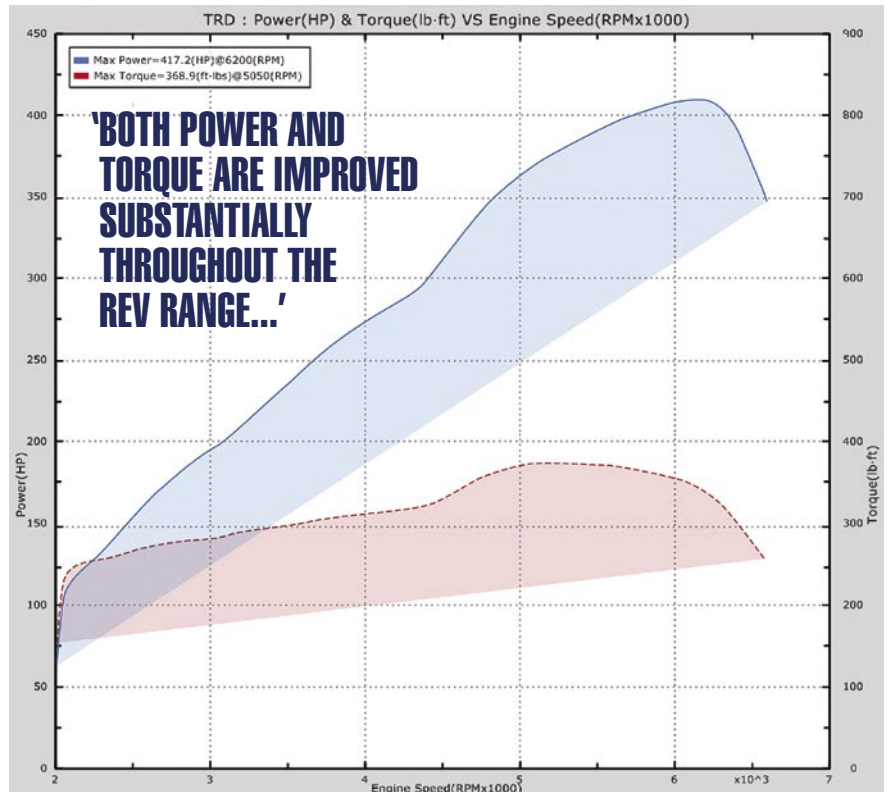


installations mount the supercharger on the left-hand side of the engine bay, with a drive belt running directly from the crank pulley, there's not a lot of room here and the RSC alternative is to take drive from the pulley but then run a transfer shaft across the front of the engine, in the void underneath the intake manifold, and mount the supercharger in the large space between the engine block and the standard air cleaner.

With the charge cooler also mounted nearby, directly downstream of the supercharger, with its own cooling system independent of the main radiator, the whole installation is very neat and orderly. With its own fully independent oil supply, the supercharger can boost away to pump up the power output without overworking any of the standard engine systems.

Tested on the dyno, this conversion produced 328 bhp at the wheels, which equates to figures at the flywheel of 417 bhp at 6200 rpm and 369 lb.ft torque at 5050 rpm, a very substantial improvement on the standard engine, but with a very progressive delivery and linear characteristics. If the numbers sound at all 'peaky' then have a look at the graph and you'll see that both power and torque are improved substantially throughout the rev range, all the way from idle.

Mike's initial impressions were very favourable. 'The standard naturally-aspirated car really didn't produce anything special in the power band between 4000 and 6500 rpm, which is a shame given the fabulous sound the engine makes at those



revs.' But with the supercharger on song, it spools up quickly to provide the boost required and the car just keeps accelerating strongly through the gears until it tops out, so we calculate – local laws permitting, of course – at somewhere near 190 mph!

The extra power is comfortably transferred through the DSG box, which

has also been suitably re-mapped. Mike reports that 'its behaviour when driving normally is still very civilized, but just press the pedal and, after a nano-pause, suddenly the scenery is disappearing rapidly in the mirror. Acceleration in the middle gears provides a similar experience'.

All that power means that some serious modifications to the suspension and braking were required, although – not wishing to go overboard – instead of the customary 'big-brake kit', a pair of standard-sized TRD custom two-piece vented discs were fitted, using Mintex M1155 brake pads, and the standard rear discs were drilled to match. Goodridge steel-braided brake hoses and high-performance R600 brake fluid also helps to keep the pressure up when the going gets hot.

Suitable suspension upgrades consist of a set of Bilstein B14 PSS coilovers, providing a range of ride height adjustment, plus Eibach anti-roll bars, front and rear, with an upgraded Haldex Gen II controller providing a





Main photo: John Gaisford



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little more adjustability in the way the four-wheel drive system responds to input from the road and ECU. With more torque bias to the rear wheels, it provides greater agility and enhanced turn-in. A full four-wheel geometry check and careful alignment, carried out at Chris Mullins Tyres in Gloucester, also ensure that the car tracks straight and true at high speed.

Mike is clearly the kind of driver who prefers to adopt a more discreet presence on the road. No flash wheels, spoiler or body kits to be found here. Indeed, since our photoshoot, just after the supercharger kit was fitted, he has had the standard chrome grille removed and replaced with a painted panel, toning down the appearance.

It's a personal thing, but I never did like either the honeycomb Mk 5 GTI grille or the R's shiny snout much. We've taken the chrome – yes it really is chrome, not special coated plastic – back on the grille and painted it in body colour. It now looks more like a normal Mk 5 Golf, but to those who are more observant the heat exchanger for

the charge cooler and the slightly lowered stance will still make a discerning motorist wonder what it is as it whistles up in your rear-view mirror!

I'm still not sure about debadging the rear, but the front R32 badge is already removed, for safety and discretion. The car does arguably look less intimidating from the front at first sight. It's surprising how other driver's reactions seem to change when your car is discreet, I've found that I'm less likely to get waved into a queue for example, or have those irritating centre lane sitters move over. Psychologists could have a field day about the perceptions of power radiated by cars, I rather think that many car marketing people already rely on it!

Some last-minute tweaks before a track day at the local Castle Combe race track and a re-map of the ECU has resulted in a very smooth power band all the way to the redline. 'The thing I love about the DSG in the Golf is that if you are pressing on you can just let it change up automatically at the redline and then change down manually as you wish.

In S mode it evens noticeably blips the throttle for you to match the revs properly on change down. Now the power is smooth and usable all the way to the redline and progress is extremely rapid even in D-mode. But to really make use of the full power in S-mode, British roads need some serious pothole and manhole cover attention, speed limit changes and less traffic in general! This car is ideal for the Isle of Man, though, occasional bumpy roads excepted, where sensible fast road driving is still understood, as well the occasional circuit visit and, of course, German autobahns, where in some places you can still experience the exhilaration of fast motoring'.

Since meeting Mike, we've put him in touch with fellow Isle of Man resident Tim Slingsby, whose JBS turbo'd Mk 5 R32 was featured in the May 2010 issue of *Volkswagen Driver*. With such similar backgrounds and interests, the pair are already planning a joint excursion to Germany where they can explore the full performance of their boosted R32s on both road and track. It should be quite a trip! 🇩🇪