



# Volkswagen DRIVER

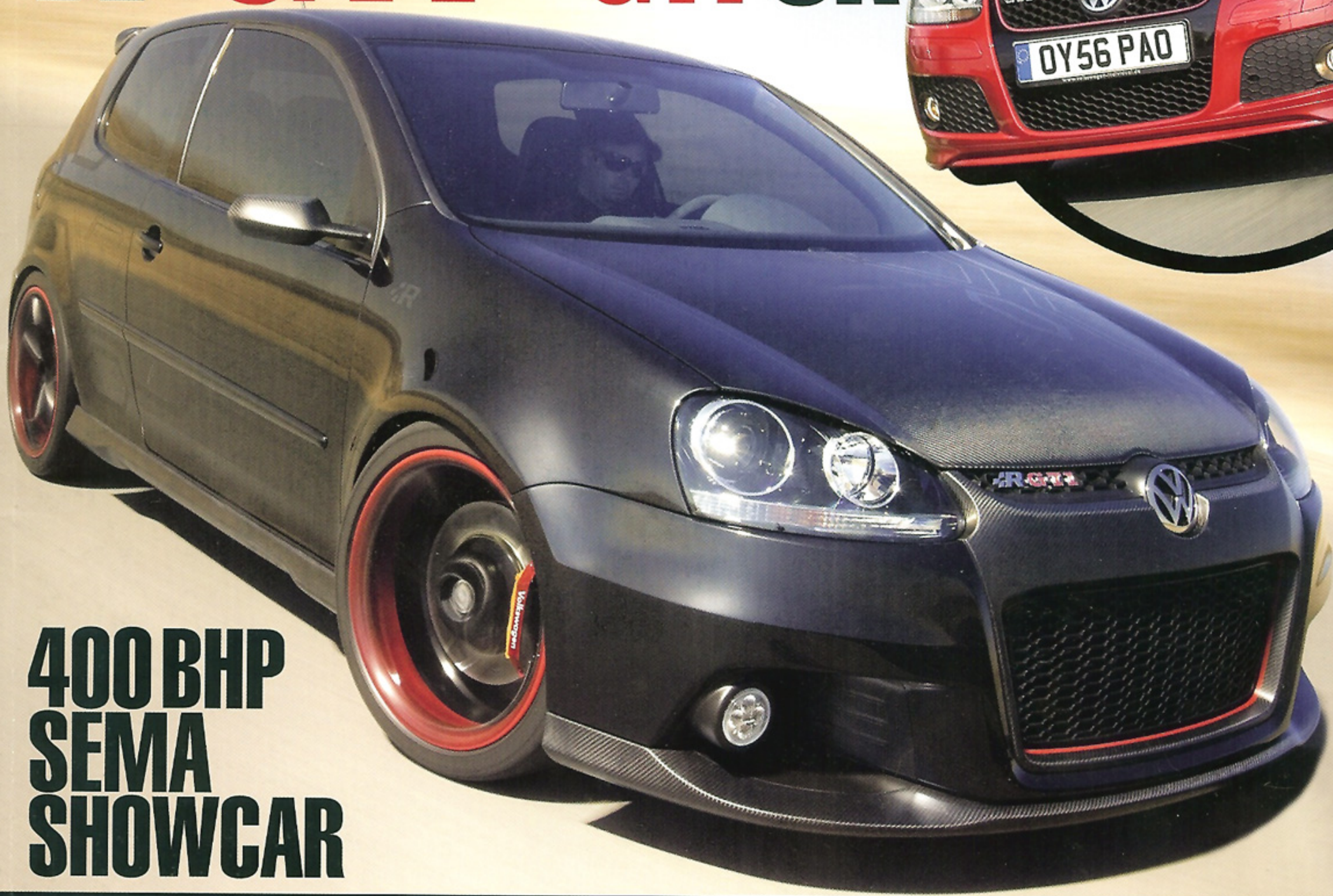
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ROAD TESTS • HERITAGE • SPORT • TUNING • TECHNOLOGY • DIY

## R-GTI EDITION 30 GTI UK



**400 BHP  
SEMA  
SHOWCAR**



**ROAD TEST:** Sharan 2.0 TDI  
Fast & frugal MPV



**MOTORHOME:** Auto-Sleepers  
T5 Trooper



**ROAD & TRACK:** West Tuning  
R32






# Super *shopper!*

**Tim Barnard's road-going R32 has been breathed upon by West Tuning at Thruxton, producing a race-worthy performance potential...**





**'THE NATURALLY-ASPIRATED 3.2-LITRE V6 DOESN'T RESPOND QUITE AS READILY TO TUNING AS THE TURBOCHARGED ENGINES'**

EVERY NOW and then we come across particular working relationships between companies with different specialities, and a prime example is the continuing co-operation between South Coast Wheels, based in Southampton, and West Tuning at Thruxton. We've previously featured the track-day Mk 5 GTI which Ray West prepared for Tim Barnard of SCW, just one of a long line of special VWs and Audis which Tim has owned, including exotica like an Audi RS6 and Beetle RSi. Most recently we've

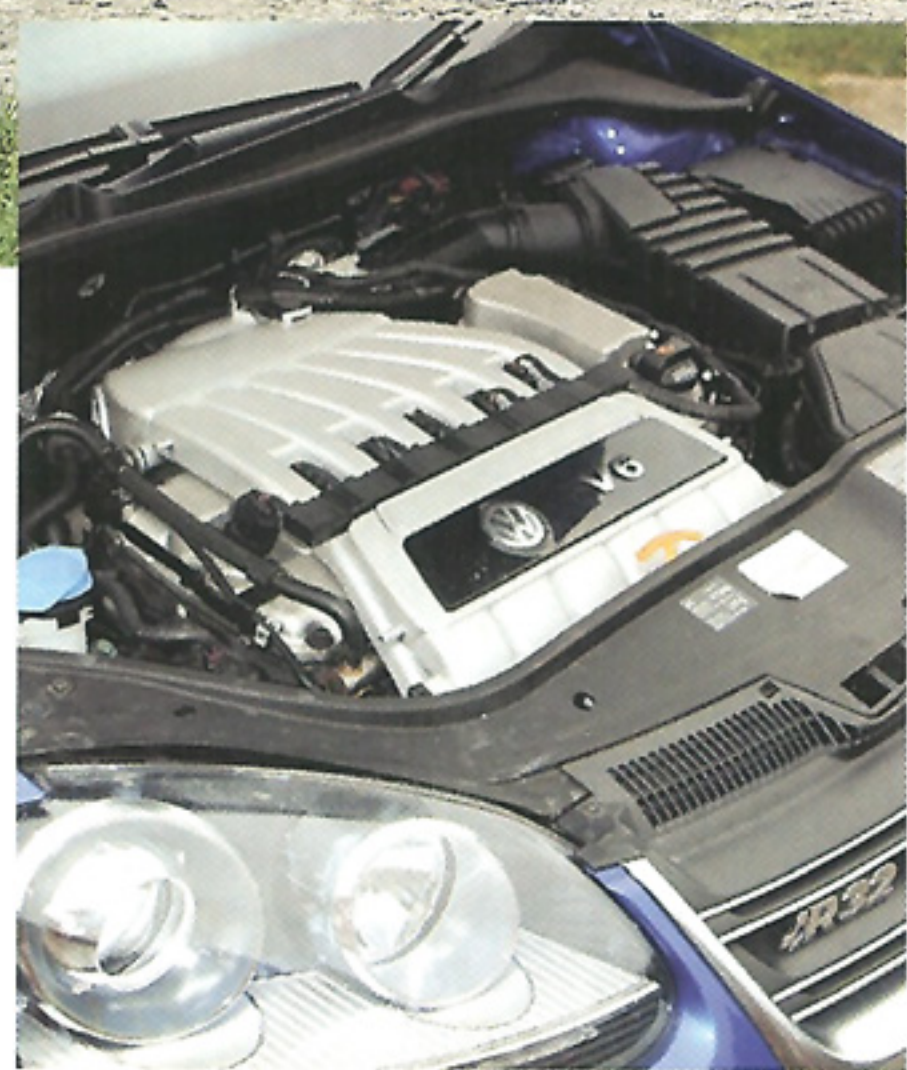
sampled the new R32 which West Tuning has worked on for Tim's wife, but it's now far from the proverbial shopping car.

Interestingly, and it's not the first time we've heard this from respected tuners, in its standard form the R32 was found to be well down on power. Initial rolling-road tests showed figures only around the 220 mark, when the engine is supposed to produce 250 PS as standard. It's well known that engines only produce their best after a decent mileage, when everything has loosened

up and run-in properly, but a 30 PS deficit is extraordinary and it takes a lot of extra tuning work to restore the status quo.

Of course, the naturally-aspirated 3.2-litre V6 doesn't respond quite as readily to tuning as the turbocharged engines; it's not simply a matter of cranking up the boost and fuelling. As well as spending a lot of time custom-modifying the engine management software, in conjunction with extensive testing on the West Tuning Dyno Dynamics rolling road, Ray has also bored out the throttle body, increasing





the internal diameter by about 10 per cent and reprofiling it to improve its induction ability. He also installed a full-length free-flow Milltek Sport stainless-steel exhaust system, incorporating high-flow catalytic converters. Not only does the Milltek system allow the engine to breathe more easily, but it also gives it a beautiful engine note, even more purposeful and sonorous than the standard system, without any of the loud, rorty noises so commonly associated with big-bore sports systems.

The *piece de resistance* is a pair of special high-lift camshafts from Schrick in Germany, which not only improve mid-range torque, but also add a useful boost to the top-end performance, increasing peak power output and extending the rev range. With the help of a few more miles under its belt, and some further reworking of the software it now

pumps out a peak 271 bhp at 6900 rpm and develops a maximum of 244 lb.ft. torque from 3300-5700 rpm, providing a major improvement over the standard performance.

As with the Mk 5 GTI, West Tuning also worked its magic on the brakes and suspension of the R32. Indeed, it has developed its own big-brake conversion for the Mk 5 chassis, using 380 mm diameter Performance Friction drilled and slotted discs. In conjunction with Porsche GT3 RS four-pot monoblock callipers and Pagid RS29 pads, they really haul the car down well from high speed, but without the rattling and clanking you sometimes get with race-bred braking systems. A set of steel-braided hoses and Ate Racing blue high-performance fluid also help enhance the braking effect, by improving line pressure and reducing fade at high temperatures.

The suspension too is a well tried and tested combination, using Bilstein's excellent PSS-9 height-adjustable coilover set-up. With its wide range of damping adjustments, it allows Ray to achieve a major improvement in handling, without making the car too stiff and uncomfortable. Of course, with the four-wheel-drive car, it's especially important to have everything in exact alignment and Ray makes good use of his extensive motorsport experience, spending a lot of time on the in-house



**'WEST TUNING ALSO WORKED ITS MAGIC ON THE BRAKES AND SUSPENSION...'**

four-wheel alignment rig to set up the suspension and steering geometry to perfection.

The choice of tyres is interesting. While recognising that top brand-name track-day tyres offer a significant advantage in handling and roadholding, compared with fast-road tyres, Ray also knows how quickly they wear out on track days and how expensive they are to replace. Instead, he's found that a set of good-quality Kumho road and track-day tyres can be much more cost-effective,





Photo: Jim Gaisford

**'LIKE ALL THE BEST MODIFIED CARS – THIS R32 ALSO REMAINS ENTIRELY CIVILISED AND PRACTICAL FOR EVERYDAY USE...'**

coming close in terms of lap times, while remaining practical and affordable.

So, instead of exotic racing tyres, the R32 runs on Kumho ECSTA KU15 MX in size 235/35 ZR19. Featuring a competition-like silica compound developed by Kumho for its V700 race tyre, it provides excellent cornering stability and smooth progression on the limit. It also features a useful rim protector, a thick bead on the sidewall, to help protect the rims of those expensive 8.5 x 19-inch River five-spoke alloys. Priced at around £160 each from specialist suppliers, Ray is certainly happy with these tyres, in fact his actual comment included the word 'amazing!' Judging from the speeds he was carrying around Castle Combe at our track day there in July, they're clearly not short on performance. We enjoyed a passenger ride in the R32 on one session, and

in Ray's skilled hands it was running rings around just about everything on the circuit, including a couple of fully prepared VW Racing Cup cars.

There's one other feature which helps the handling of the R32 considerably. Ray has also fitted the Sports-type Haldex electronic controller, which governs the transfer of torque to the rear axle. Not everyone realises that the R32 is predominantly front-wheel drive in most situations; only when the front wheels spin or slide is drive transferred to the rear axle. Although it doesn't affect the basic distribution of power, the sports-type controller acts more aggressively, reacting more rapidly and almost anticipating the throttle input, so that the transmission has a greater tendency to transfer drive to the rear.

While most obvious when driving in wet or slippery conditions, the new Haldex controller also has a marked effect when driving really hard on the circuit. Instead of the front tyres slipping and running wide before the rear axle is engaged to share the load, the earlier drive transfer makes the rear work more readily and the car feels much more agile, almost oversteering at times. The addition of a simple switching device means that the response rate can be reverted to normal, for ordinary road use.

And that's the crux of the conversion, because – like all the best modified cars



– the West Tuning R32 also remains entirely civilised and practical for everyday use. The day after a circuit session it can be found cruising down to the car park at Sainsbury's to collect the weekend shopping, only stopping en route to reduce the tyre pressures by a few psi.

Indeed, the principle has been so successful that Tim Barnard has also had West Tuning attend to his 2.0 TDI Passat Estate, but that's another story... 🇩🇪

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