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



**BULLI CONCEPT
AT GENEVA**



**GOLF 24
NÜRBURGRING RACER**



MODIFIED GOLFS
380 BHP GTI
420 BHP GOLF R



ROAD TEST: New Passat
1.6 TDI BMT



MODEL PROFILE: Sharan
(2000-2010)



MODIFIED CAR: Superchips
Golf 1.4 TSI



modern machinery, Guy saw the need to update his business model.

Initially focusing his attention on providing an alternative to the expensive dealership servicing of the modern Volkswagen and Audi model range, Guy invested heavily in specialist equipment and tooling, and the training necessary to keep abreast of the latest developments. That went well as far as bread and butter work was concerned, but Guy very soon discovered a strong demand for performance tuning of the new models, with the increasing popularity of cars like the GTI 1.8T, Audi A4 and TT, and the company was soon renamed Harding Performance [HP].

Harding Performance is now a major development partner for the American tuning parts specialist APR. Indeed,

Guy was presented with APR's Global Distributor of the Year award for 2009. HP also imports many products from Europe and the USA, including brand names like Oettinger, Sachs Race Engineering, Carbonio, Haldex, Brembo, DMS Automotive, STaSiS, and it also distributes TPC Porsche products and works closely with Hankook Tyres. Harding Performance now also has a number of distributors based around the Australia.

But, like all good tuning companies, it's not enough just to sell parts and services. Marketing is just as important as merchandising and Guy knew the importance of developing high-quality demo cars with which to prove the overall ability of his conversions. It was also more effective to lead the market by perfecting modifications for the latest

new models, rather than just following the crowd on the secondhand circuit.

Talking of circuits, it was also important to be able to prove the true ability of any conversion against the competition and, having previously campaigned a Mk 5 GTI in quarter-mile drag racing events, producing a car capable of 12-second ETs in full road-legal trim, Harding Performance used the experience to good effect with its red four-door Mk 6 GTI.

Fitted with an APR Stage 3 turbo kit and suitable software upgrade, plus an APR RSC exhaust system, it now develops 380 bhp and 290 lb.ft. torque on the 98 RON fuel mapping, also featuring a Carbonio cold-air intake system and an uprated APR intercooler to keep the charge temperature under control.

Because this car had to prove itself on a race circuit rather than the drag strip, it not only had to be able to put the power down cleanly but also deliver the necessary handling ability. A Sachs Racing steel single-mass flywheel and heavy-duty clutch assembly, in conjunction with a custom-modified Czech SQS clutch-type racing differential, transmit the power reliably and turn it into usable traction.

The Mk 5 GTI handles superbly even in standard road-going form, but for ultimate performance on a race circuit the braking

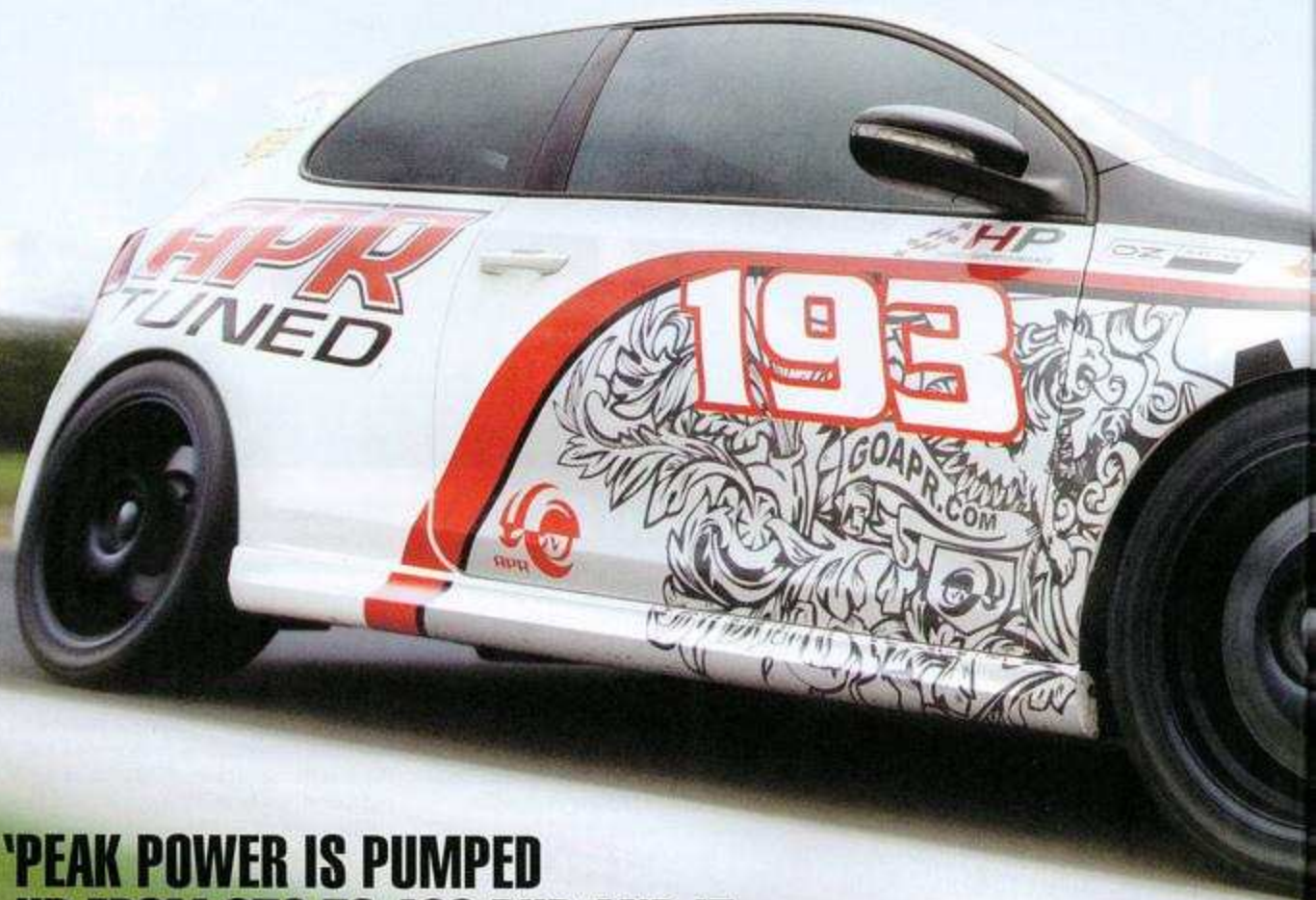
can always be improved, in this case with the combination of Alcon 370 mm discs and 4-pot monoblock callipers. A Cross Racing suspension kit and APR anti-roll bars, along with SuperPro polyurethane bushes and camber adjustment kit, add the final flourishes and the GTI now rolls on lightweight 18-inch OZ Racing Ultraleggera alloys, shod with road-legal Hankook Ventus TD Z221 rubber.

Guy is particularly enthusiastic about these tyres, describing them as 'easily the best semi-slick road-legal tyre we've

ever used on a race track. In club sprint racing you've only got a maximum of four laps to set your time. The Ventus TD is impressive in its ability to reach optimum temperature and be on the pace by lap 2'. The TD Z221 also demonstrates excellent wear characteristics, capable of lasting 75 laps at Queensland Lakeside Raceway. 'We've conducted back-to-back testing of the Hankook tyres against the leading brand of what we call 'twin-groove' race-spec tyres and the Ventus TDs are just as quick but much more durable.'



'EASILY THE BEST SEMI-SLICK ROAD-LEGAL TYRE WE'VE EVER USED ON A RACE TRACK...'



'PEAK POWER IS PUMPED UP FROM 270 TO 420 BHP AND IT DEVELOPS MAXIMUM TORQUE OF 390 LB.FT.'



The same brake set-up and wheel and tyre combination and similar suspension modifications are also used on the three-door Golf R, although this time the car uses H&R anti-roll bars. The Golf R's four-wheel drive system also benefits from the additional enhancement of a switchable Haldex controller to improve the speed of the torque transfer towards the rear axle, making it much more like a full-time four-wheel drive set-up.

As well as the superior traction of its four-wheel drive, the essential thing to remember about the Golf R is that its 2.0-litre four-cylinder TFSI engine is actually the EA113 series unit from the older Mk 5 GTI Edition 30 and Audi

S3 applications. Harding Performance already had a lot of experience of modifying this combination, both chassis and engine, from its previous work with the S3, and the addition of the Stage 3 APR turbo kit, fuel pump upgrade, APR Australia 3-inch exhaust system,



Carbonio intake and APR intercooler really delivered the goods. Peak power is pumped up from 270 to 420 bhp and it develops maximum torque of 390 lb.ft. even on the road-going 98 RON fuel mapping.

Both cars really proved their point when Guy entered them in the 2010 Hot Tuner Challenge organised by *Motor Magazine* (Australia's premier tuning title). This is a multi-discipline event, comprising a combination of acceleration tests (0-100 kph and 400-metre runs), braking from 100 kph to a standstill and timed laps on the circuit at the Eastern Creek International Raceway in Sydney, as well as power testing and skidpan and slalom tests.

The essential aspect of the event is that all the cars taking part are based on standard production vehicles available for public sale within Australia after 2008. They must be fully road-registered and street-legal, run on regular 98 RON pump



'THE HP GOLF GTI RAN A LAP TIME SOME 8 SECONDS QUICKER THAN A TUNED PORSCHE GT2...'



fuel and use components and modifications which are readily available for sale to Australian consumers at the time of testing. Crucially, the cars must also use fully road-legal performance and semi-slick tyres, so no prizes for guessing what Guy's Golfs were running on.

Overall, it's a formula which ensures that the cars taking part are all representative of what the typical road-going enthusiast can achieve, rather than the mega-expensive special race-prepared exotica which can all too easily infiltrate such contests.

Even so, the Hot Tuner Challenge inevitably attracts a host of high-performance, big-dollar tuned machines, along with expert drivers, so it's to Guy's great credit that his Golf R recorded the fastest lap of all the 30 vehicles taking part. It turned in a best time of 1.59.0, while the HP Golf GTI ran third fastest,

not far behind, with a 2.00.6 lap time, some 8 seconds quicker than a tuned Porsche GT2 and a supercharged Lotus Elise! Of course, it only helped that the cars were expertly driven by Paul Morris, a 4-time Australian Super Tourer champion. Guy reports that these results 'certainly had the entire field talking. The Porsche boys were stunned at how much quicker we were, and the EVO and STI teams have new respect for us now!'

Asked whether he'd be tempted to move into full-flight motorsport, Guy has wisely decided to keep well clear for the time being: 'Not at this stage. We'd love for there to be more life in the Australian Production Car series, but our involvement will probably stay with super sprints for the time being'.

It's clearly an area which benefits the business, not only showing the true ability of the HP-modified cars but also remaining

attainable and relevant to the main customer base, the enthusiasts who want to modify their cars reliably for fast road use and track days rather than all-out motorsport.

Guy's future plans are to develop conversions for the new Polo GTI and also work on a Golf R with DSG, as well as replacing the Golf GTI with a Scirocco R, and we'll be reporting on his progress in further articles here in the pages of *Volkswagen Driver*. 🚩

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