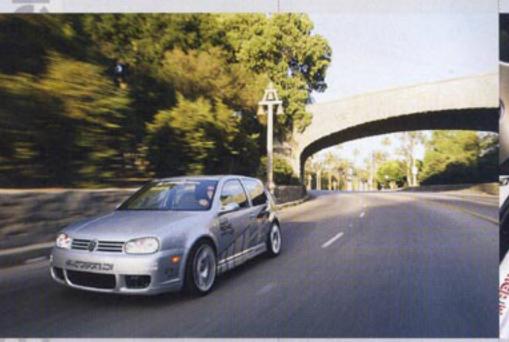


HPA has made a habit of making otherwise performance-challenged Audis and VWs trounce their well-healed Kraut Halbbruders by Zeppelin-sized margins. Most of the ingredients in HPA's speed brew were mixed in Germany with TÜV standing on the side with a clipboard. The revised powertrain uses numerous O.E. parts, and HPA is so confident in the

flow cats feed into huge 3.5-inch diameter exhaust tubing. Twin intercoolers, sized 7x7-inches, also sourced from the Audi TT, find their chilled flow merged via formed silicon and stainless tubing before dumping into the relocated throttle body.

One blessing of OBD-II computers is the ability to reflash ECUs, and HPA does so while adding boost and launch control increases flow, which is managed by an upgraded fuel pressure regulator. The VR6 uses a fairty unique, long body injector, so HPA installed a proprietary injector produced by Bosch Motorsport and available only to them.

In line with HPA's reputation for factory look, fit and function, the factory air pump—there to assist with emissions and





product that it offers an unheard-of-inthis-industry two-year warranty on the twin-turbo kit.

The stock VR6 features a detonationtaunting 11.3:1 compression ratio, so a head spacer, sandwiched on either side with a stock head gasket, knocks compression down to 8.0:1. HPA replaces the connecting rod bearings with units that better handle the more than doubling of the stock power output. The factory intake manifold is built with good runner length for torque production, and locates the throttle body at the rear of the engine. HPA provides a new intake manifold with short runners to offset the degradation of throttle response from low compression and locates the throttle body at the front of the engine for better pipe placement.

Cast turbo exhaust manifolds hang twin modified K04 turbochargers, which are derived from units Audi bolts to its 225-horse TTs. These modified units, however, feature larger exhaust housings that dump into 2.75-inch twin downpipes. Twin high-

features. Using a detonation sensor, the HPA program can deliver up to 19 psi of boost, depending on conditions. The launch program defeats the factory ESP system allowing 6000-rpm clutch drops that should make for crowd-pleasing AWD burnouts. The stock fuel pump remains. It's assisted by an inline Bosch fuel pump that

startup—remains, but it's been relocated to the rear of the engine.

The R32's stock six-speed box is geared for the fairly low-revving VR6, so HPA fitted a longer final drive that in theory will allow the flying brick to gear out at 220 mph; TÜV itself saw 212 mph in testing. Gear ratios remain otherwise



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stock, but third through sixth gears are hardened. The dual-mass flywheel, long a favorite of NVH engineers and bane of enthusiasts, is ditched for a solid unit and mated to a sintered metallic disc clutch.

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VW has perpetually refused to take weight out of the compact A5 chassis, which it seemingly forged from depleted uranium, and when combined with a heavy iron-block six and all-wheel-drive system, the 3,400-plus-pound R32 is a porker. Weight management and balance, via suspension tuning, is therefore critical. HPA enlisted KW's Variant III coil-overs that are independently adjustable for both compression and rebound. Stock anti-roll bars keep wheel travel independent and keep a modicum of street comfort when coupled with stiffly sprung springs and dampers.

Large vehicle mass and power require proportionate growth of the binders, which HPA has answered in a big way. Gigantesque 14-inch, twg-piece front rotors from the Audi RS6, clamped by Brembo six-pot calipers, comprise HPA's Stage II kit. Eighteen-inch BBS Challenge wheels fit with little to spare over the big stoppers, and are wrapped in seemingly narrow 225/40-18-inch Toyo RA1 R-compound rubber. The interior and exterior are stock R32 with the exception of Hagus mirrors.

Having clicked off supposed sub-12-second quarter miles, done 0-to-60 runs in the low 3s and run in excess of 200 mph, this near stockappearing R32 gives new meaning to the term "flying under the radar." Supercar

2004 VOLKSWAGEN GOLF R32

ENGINE

Engine Code: VR6

Type: Y6, cast-iron block and aluminum heads, twin-turbocharged and intercooled Internal Modifications: HPA connecting rod bearings and head spacer

External Modifications: HGP cast short runner intake manifold, dual side-mount 7x7-in. inter-coolers, formed silicone and stainless piping, 70 HGP exhaust manifolds, twin hybrid KD4 turbochargers, 70mm stainless downpipes, twin hi-flow catalytic converters, 3.5-in. stainless exhaust Engine Management Modifications: A*PEXi Super AFC, HKS EVC-EZII, GReddy boost cut controller, custom oxygen sensor emulator

DRIVETRAIN

Layout: Front engine, all-wheel drive Drivetrain Medifications: Lightweight flywheel, sintered metallic clutch

SUSPENSION

Front: KW Variant III coil-overs, 16-way independent compression and rebound adjustable Rear: KW Variant III coil-overs, 16-way independent compression and rebound adjustable

BRAKES

Front: HPA Stage III kit with 14-in, two-piece rotors from Audi RS6, Brembo six-piston calipers

EXTERIOR

Wheels: 18x8.5-in. BBS Challenge, 37mm offset Tires: 225/40-18 Toyo Proxes RA-1 Body: Hagus Mirrors

performance and dyno numbers will go a long way in bumping up the car's USCC scores, as will factory-like refinement and emissions. And with a two-year warranty, we expect the car will last two days. Bling be damned, HPA may be the blown one to own.

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