

# Performance

## AUTO & SOUND

PASMAG.COM



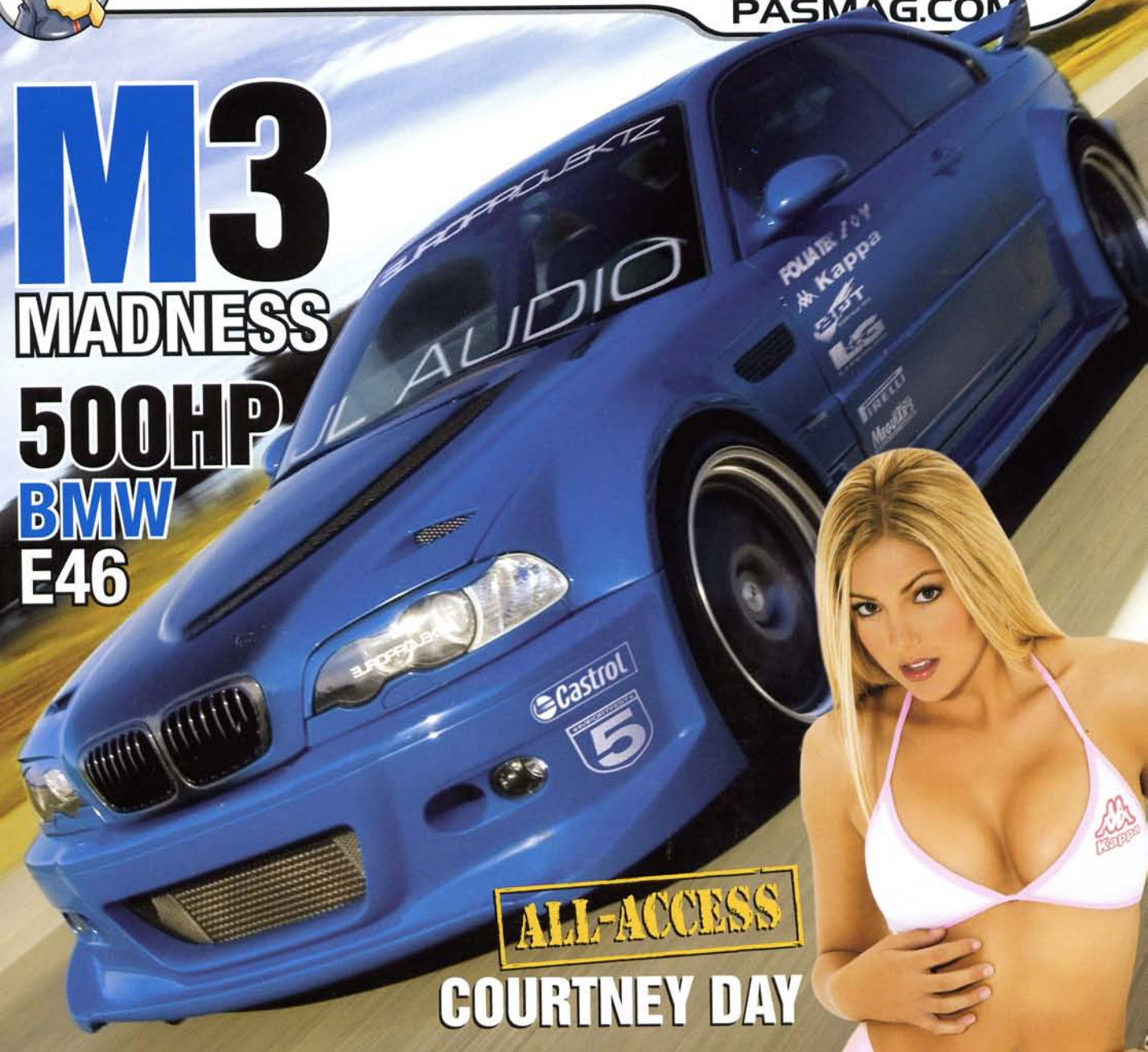
# M3

## MADNESS

### 500HP

### BMW

### E46



**ALL-ACCESS**

## COURTNEY DAY

### BUYER'S GUIDES

- AMPLIFIERS
- COOLING SYSTEMS
- VW UPGRADES
- EURO ESSENTIALS

AUGUST 05

DISPLAY UNTIL AUGUST 31/05  
\$5.95 CANADA / \$4.99 U.S.

08  
0 55113 57027 8  
PM40069655 R10760

Volume 7 Issue 4

**A**t one time or another, we've all pulled up to an intersection and witnessed some testosterone-fueled guy desperately revving his six-figure salary exotic for attention. He looks over in pity at your innocent-looking econo-box, but little does he know you're behind the wheel of a sleeper car and about to hand him the perfect view of your taillights.

This 2004 Beetle convertible was purpose-built to amaze and brings new meaning to the underground world of sleeper cars. It sports a twin-turbocharged mill under its 'cute' face flowing a supercar-like 500hp to all four wheels. The exact numbers at the wheels are 409hp and 437lb/ft of torque, as proven on a dyno sheet we received from the speed junkies at Highwater Performance Auto (HPA) Motorsports in Surrey, BC.

The shop specializes in modifying VWs and Audis, but that's an understatement. It's more like they rebuild the cars, taking parts from one high-performing VW and grafting them onto another. They offer what the Volkswagen Auto Group (VAG) doesn't; namely, extreme high-performance engine and drivetrain options.

Marcel Horn, HPA Motorsports' President and Founder, is particularly fond of their latest creation. Built for a Carolinas-area customer in the image of a 1997 Porsche twin-turbo, the drop-top belies its true nature and can kick serious butt in rain or shine.

This kind of performance comes at a price, obviously, as a perfectly good R32 had to be cannibalized in order for the Beetle monster to live. This may sound like a lot of money was wasted, but it's actually more time- and cost-effective to go this route, Horn informs

us. The six-speed transmission, wiring harnesses, Haldex-based 4Motion AWD system, brakes, suspension and the multitude of brackets, connectors and little odds and ends add up in a hurry. And at the end of the day, you get a unique drop-top that rivals or surpasses most of the performance numbers of a Porsche Turbo for about half the money. And for the smart-alecks who say: "yeah, but you don't get a warranty or peace of mind," here's an eye-opener: HPA offer a full warranty on its creations, plus the majority of the parts are OEM VW anyhow.

The 3.2L V6 from the R32 is upgraded beyond the twin turbos and air-to-air intercoolers with a spacer kit sandwiched between the head and block to drop the motor's compression ratio to be more boost friendly at 8.0:1, the ECU is remapped and hardened connecting rod bearings are installed in the bottom end. The intake and valve cover were ceramic coated and upgraded fuel pump and injectors were installed, while everything else remains standard. The KKK K04 turbos blow up to 18psi, and despite them both coming on at the same time, there is no lag. "Tip the throt-



**HPA** Motorsports  
**CRAZY CABRIO**

Text by Paul Rachwal • Photos Supplied by Dale Amy

and your sunglasses fly to the back seat," says Horn. "Just take the car, hit the gas and shoot."

Best of all, the car remains smog-legal and runs on 91-Octane pump gas. For how civil a 500hp Beetle Cabrio is, there are no loud blow-off valves (HPA uses internal re-circulation valves instead) or a coffee-can exhaust. When you do want to get rowdy, a wide open throttle and over 4,000 revs showing on the tach opens a bypass valve in the exhaust that boosts torque as well as makes a wondrous noise on par with the impact of a Ferrari 360. The custom-fabricated exhaust is a big 3.5 inches in diameter, with twin downpipes sized at 55mm (or roughly 2.2 inches).

To harness the power, the transmission was left stock (VW's traction control and ESP systems remain), but a proprietary HPA sintered metal clutch and single-mass (as opposed to the VW-issued dual-mass) flywheel were installed.

After the rear floorpan was painfully cut out (VW reinforced the topless chassis with spot and seam welds) a curvier pan from a convertible (again, for better strength) Audi TT was grafted in to make room for the rear differential and shafts. Brakes are the R32's two-piece, two-piston, 12.1-inch units up front

and 10.1-inch, single-piston binders out back, slotted and vented all around to bring this topless

UFO icon to a halt. Stainless steel lines help keep the pedal hard. While the team was at it, they also swapped in KW Variant 2 coil-overs at each corner.

The 4Motion conversion alone took 200 hours for HPA's Lead Tech Darren Scharfenberg, Master Tech Colin Branch and in-house fabricator Randy Derkson.

One of the few hints that this car means business is the rolling stock. Serious in every dimension (18 x 8.5 front and 18 x 10 rear) the RH Turbo Twist rims look just like the German supercar's and are a literal warning to all. The tires surrounding the foreboding alloys are Bridgestone Potenza S-02s, sized at 225 / 35 up front and 255 / 40 out back. The upgraded brakes peeking through the spokes also give a hint of the beast lurking within. A subtle but significant change involved widening the rump of the Beetle by fitting a modified Dietrich kit only devoted aficionados will notice. The front end features a smooth fascia from a US-market Beetle S.

The interior sports a few VDO gauges to display boost and coolant temperature in HPA's pod on the expansive dash, some painted trim and custom seats. The Recaros are heated with adjustable lumbar supports and were reupholstered in leather and Alcantara, as was the modified rear seat. The roll bar serves as permanent rollover protection, as the rear headrests that shoot out during a rollover had to be nixed due to space issues.

The HPA guys have certainly created one mean jellybean here, all in only a six-month period. Last year, HPA performed about a dozen 4Motion conversions and twice as many 24 twin-turbo swaps with no sign of slowing down.

Recently HPA brought a couple of its 550hp R32s to the Barrett Jackson Auction. Each fetched around \$60,000USD. Also, more recently, an 'R28' took the highest bid on the eBay



# Clean Injectors, More Power!

Designed with  
the most powerful  
high temperature  
detergents.

Improves fuel  
economy.

Concentrated.

Also cleans  
Carburetors.

Available at:



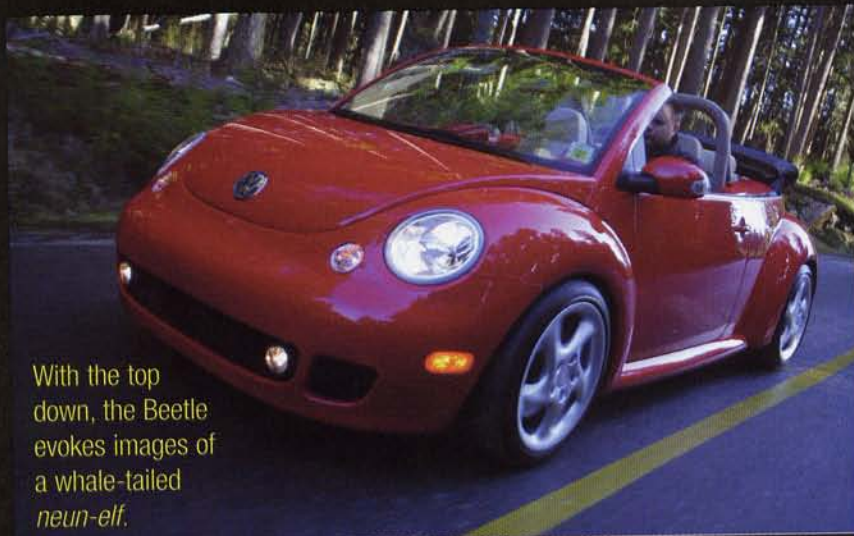
RedLineOil.com

800-624-7958



## CRAZY CABRIO

2004 BEETLE CONVERTIBLE



With the top  
down, the Beetle  
evokes images of  
a whale-tailed  
neun-elf.

Editor's Challenge that pitted various magazines against each other to build high-performance vehicles and sell them on the bidding site.

HPA is gaining international recognition as a maker of world-class performance cars. Heck, the HPA R32 is one of the best bang-for-the-buck buys in *Gran Turismo 4*'s Tuner Dome or the entire game for that matter.

The fact HPA cars can sell for more than their stock counterparts (unlike other 'tuner' cars) is solid proof the aftermarket, Horn and HPA are doing something right. **PAS**

// For more visit [www.pasmag.com](http://www.pasmag.com)

