

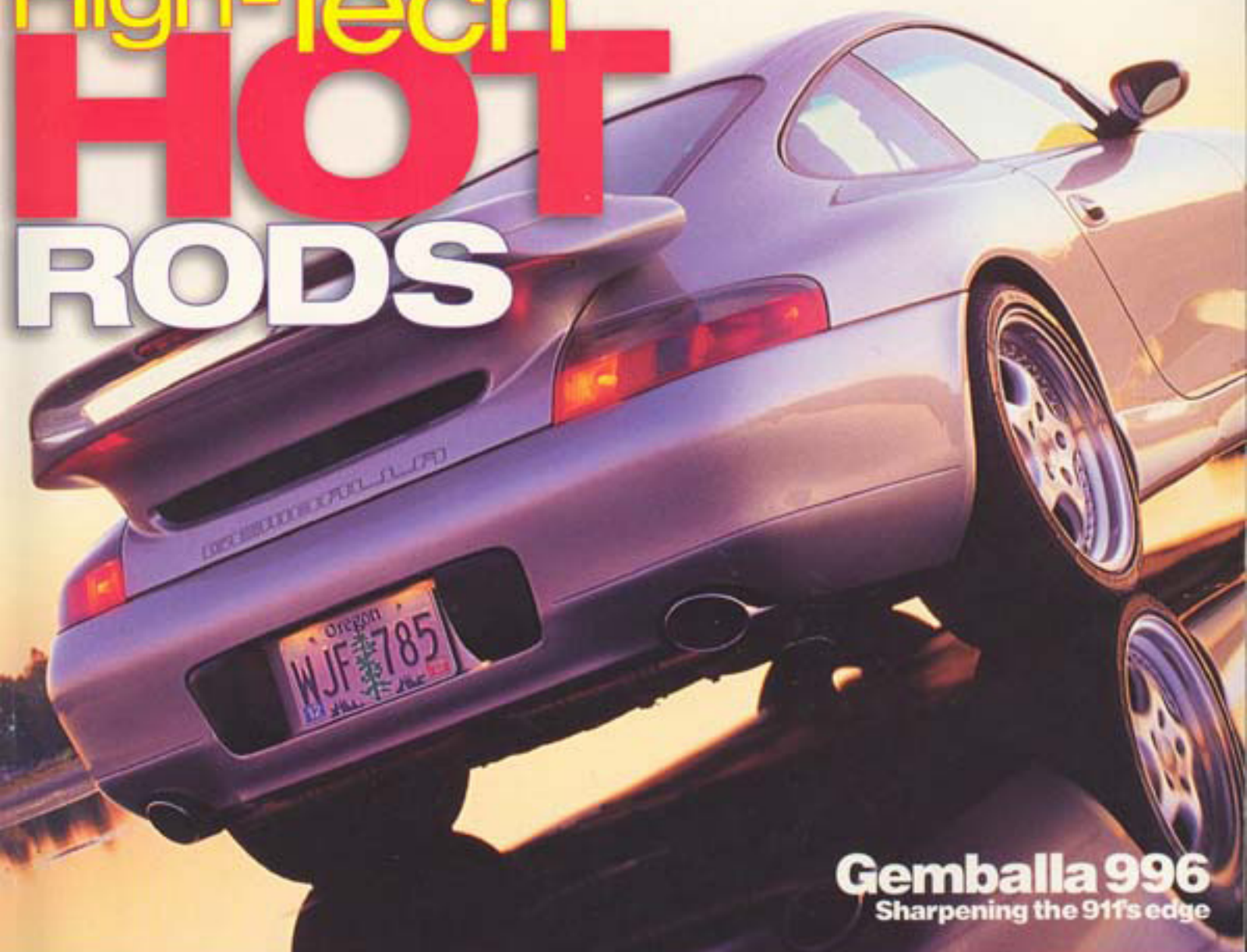
TURBODIESEL TORQUE MONSTER-HPA'S GOLF TDI



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Fire



HPA's scorching TDI Golf

by Les Bidrawn
PHOTOS BY THE AUTHOR

without

Ever wonder how to drive your cat crazy? Clip a clothespin to its tail and watch it tear-ass across the lawn while it tries to shake the thing off. Interested in tormenting the driver of a high-end sports car? Tail him mercilessly in your new diesel-powered Golf IV.

Watch the color drain from his face while he watches an oil-burner overtake him through the corners and blow by on the straights. See his nose wrinkle as the TDI farts a victorious exhaust note from a pair of petulant, upturned tips.

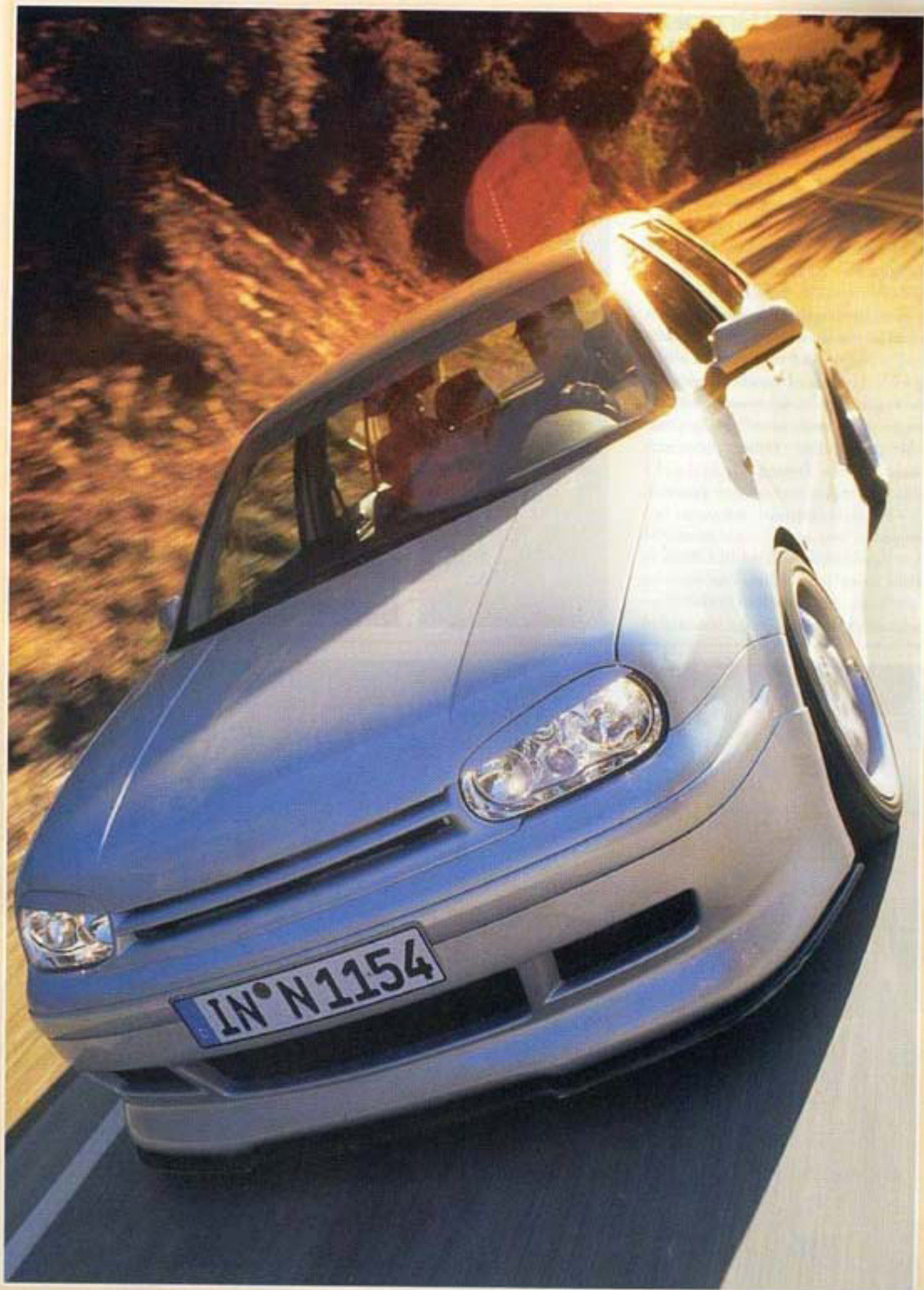
Few drivers worth their salt would admit to such abject humiliation; I know I certainly didn't. The facts

remain, however—Volkswagen's diesel technology poses a formidable challenge to gas-powered automobiles.

The scenario described took place in my hood on a serpentine stretch of pavement I know better than my children's faces. Marcel Horn of HPA was piloting a four-door Golf TDI while I was seated behind one of Ingolstadt's finest *ren-*

nusagen. I figured after the first few blind corners Marcel would be reduced to a mere speck in the rearview mirror, but such was not the case. Although I'm certain Marcel's racing experience played a part in the performance equation, the lion's share of the credit belongs to the bowel-squeezing torque and balanced chassis of the Golf TDI.

Smoke



Fire without Smoke

HPA's latest project started life with as much fanfare as popping open a bottle of Molsen Ale: It was just another four-door VW hatchback that comprises the robust backbone of Volkswagen's Canadian sales. The contents of this particular car are special, however; the brew more potent than the 90-hp TDI we get stateside. The TDI mill was upgraded by the factory to 110 hp with 173 ft-lb of twist, a trim level recognizable by the red "1" in TDI. Internally the two engines are largely the same—1.9 liters of displacement with a bore of 79.7mm and stroke of 95.5mm. The big difference is the turbo. Instead of a standard wastegate, the more powerful 81kW engine has been fitted with a larger, variable-vane turbo. Other differences include a freer flowing manifold and a different engine management program.

VW press material refers to this engine as "very sporty"—and when's the last time anyone referred to a diesel in those terms? In truth, however, this is no idle boast, and European tuning firms were quick to recognize the potential of



the TDI engine. It's a win-win situation across the pond, where gasoline remains significantly more expensive than diesel. And while fuel economy is important, ultimately it comes down to the TDI's impressive torque—every ft-lb of it is available from 1900 rpm. Of course, it all ends just above five grand, but by that time the opposition is behind you, choking on tire smoke—and just tire smoke: This new generation of direct injection diesel burns so efficiently, nasty black smoke is a thing of the past.

Volkswagen Motorsport has used a similar engine for its race applications and managed to wring 270 hp from its nominal displacement. This was encouraging news to HPA, and it began an ambitious TDI program with the help of the crew at KW Tuning in Germany.

The stock suspension was replaced with KW's MK IV Variant 2 coilover kit, which is ride-height adjustable up to a full 3.0 in. The inserts feature specially valved Koni dampers that are externally adjustable—the fronts are accessed from the top strut mount and the rears by removing and rotating the

dampers themselves. Running gear is deep-dish KW Cup wheels measuring 8.5x17 up front and 10x17 at the rear. The KW wheels feature a unique, machined aluminum adapter that bolts to the hub, which in turn serves as the wheel mounting surface. This mounting system allows the sizable Yokohama A520 rubber (215/45ZR-17 front and 235/40ZR-17 rear) to clear the wells without rubbing.

Surprisingly, Marcel was running the car without the front anti-roll bar, a factor that made little difference as he blazed through the canyon. The tremendous adhesion of the Yokes more than made up for the geometric changes up front.

Although motor modifications are limited to a revised computer and custom exhaust, the results are staggering. The little Golf spun the big wheel on the KW chassis dyno to the tune of 142 hp with a whopping 225 ft-lb of torque—at the front wheels! In true, diesel-like fashion, the power is available virtually the moment the throttle is depressed. The Golf sounds surprisingly

good, too—something like a blender full of nuts, bolts and adrenaline.

The TDI is clad in the outrageous togs of Tony Rieger. The ensemble includes a front spoiler with a carbon-fiber splitter, side skirts and a rear valence panel that encloses the dual 3.5-in. exhaust tips. The front grille is a new, badgeless unit, and the front headlamps have been treated with subtle eyelids.

Getting trounced by HPA's latest project was bad for my ego; that the Golf was powered by diesel fuel made the results even harder to swallow. However, through my shame came a revelation. Until Volkswagen comes up with a much-needed replacement for its aging, less than impressive 2.0-liter motor, I'd go for the TDI every time. ☞

HPA Motorsports

5763 198th St.
Langley, B.C. V3A 1G5
Canada

(888) 530-1433

Fax: (604) 530-1970

www.hpamotorsport.com