

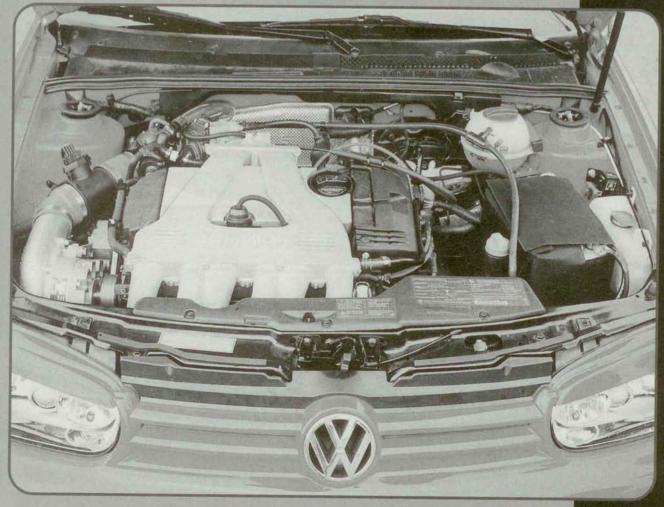
by Tom S. Guide

3.1L SC 6 SPD SYNCRO...
EVER HEARD OF IT?

The "Ultimate" VR6 Conversion

veryone loves horsepower. And everyone who wants it has to have it. The problem is—and always will be—this: Can you handle it? In automotive tuning circles, the possible answers to this question have been posed, and discovered, to certain degrees. Bigger, stickier tires, limited-slip differentials and so on, have all been used to tame the horsepower potential of a variety of Volkswagen powerplants. But no front-wheel-drive (FWD) platform has been effective and streetable at the same time except for the elusive VW Syncro all-wheel-drive (AWD) system.









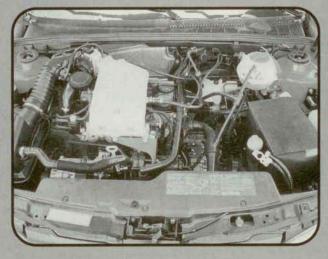
AWD theory with its World Rallye Program with great success for several years. Armed with supercharged 16v four-cylinders, Rallye Golfs have been a force to be reckoned with worldwide. Of course, as with most great European automobiles, we here in North America can only drool over them in the pages of magazines and television coverage of Rallye racing.

Now there's another option. Drop your Volkswagen off with HPA Motorsports for a Vee-Dub tuner's ultimate dream conversion: an AWD, Supercharged VR6! VWTuner cameras were present when this '99 Volkswagen Cabrio was delivered to Langly, British Columbia, Canada, home of HPA Motorsports.

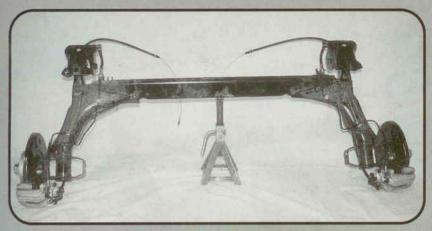
HPA commenced work the same day the car landed on its doorstep. First the 2.0L engine and FWD drivetrain was removed in favor of a stroked, 3.1L Stage III VR6 outfitted with an AMS supercharger, Schrick intake manifold, and a Quaife six-speed transmission. Then, utilizing Euro-spec Rallye Golf components,



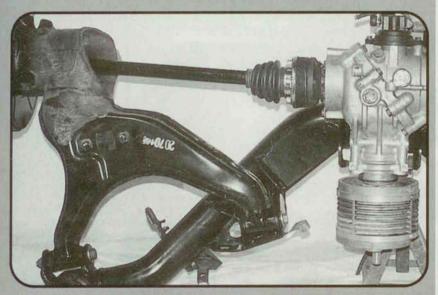
1, Here's what the '99 Cabrio looked like when it was first delivered to HPA Motorsports of Langly, British Columbia, Canada for the "ultimate" engine/drivetrain conversion.



2. The factory 2.0L engine before the HPA conversion began. Note the entire drivetrain, including shift would linkage, soon be removed.



3. Pictured is the factory rear torsion beam and disc brakes, which were removed to accommodate the new fully independent Syncro rear-drive assembly.



4. Here is the Syncro rear differential, viscous coupler, and control arms that will be fitted into the Cabrio.



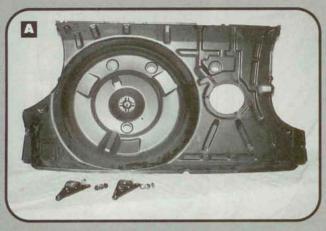
5. With the rear axle out, HPA next removed the factory gas tank, which will be exchanged for one that can accommodate the presence of the rear differential. This picture displays the vast difference between the factory tank and the AWD Rallye tank. This photo also acts as a good visual reference as to how much trunk space is lost via the conversion.

Hottest Import Ever?

is...

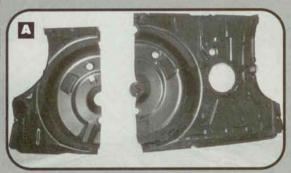
Another popular trend that began in the U.K. but...

than
Beatlemania
before the hippee
burnout years >>>>>



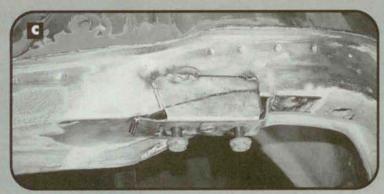


6. Here is the new trunk floorpan and rear control arm mounts that are necessary to complete the adaptation of the rear-drive assembly.

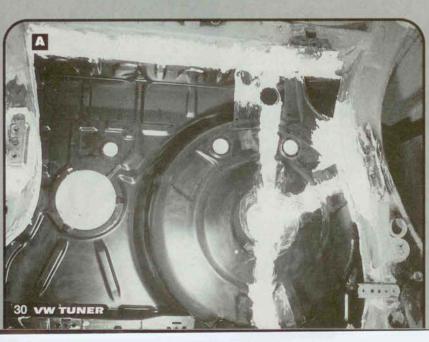




7. Changing the trunk pan is an involved job but is one that does not require framework attention. Seeing as it is merely the floorpan that is being changed and not the framerails, careful use of an air-operated metal saw is all that is needed to extract the factory floor. The only spot-welds to be drilled

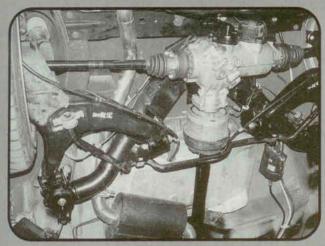


are those on the mounting braces for the convertible roof motor and exhaust hangers. An additional brace is required to support the rear of the new differential assembly and so the factory mounts were welded in place to accommodate this. Due to the small trunk opening, the new floorpan had to be cut into sections to allow its installation into the Cabrio.

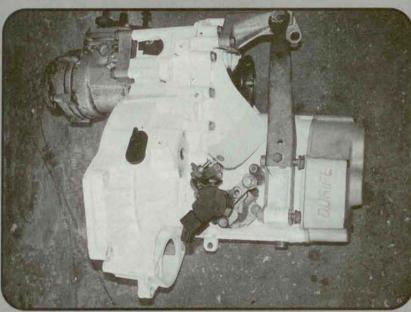


8. With the cuts in the floor TIG-welded together and the rest of the mating surfaces MIG-welded (A), factory seam sealer and undercoating is applied. The belly of the Cabrio is now uniform in texture and color (B).





9. The rear preassembled Syncro drivetrain is next to be bolted in place using Euro-spec Rallye Golf hardware. **HPA** stresses that no modifications alterations were required to the tunnel to accommodate the driveshaft that now travels down the center of the Cabrio.



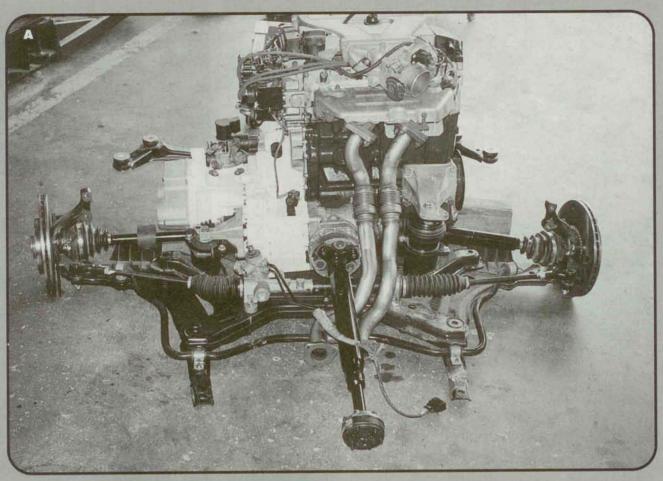
10. The standard Volkswagen O2A transmission is used together with a Rallye Golf bell housing, which enables the installation of the front transfer case. During this process, HPA installed the Quaife six-speed gearbox.

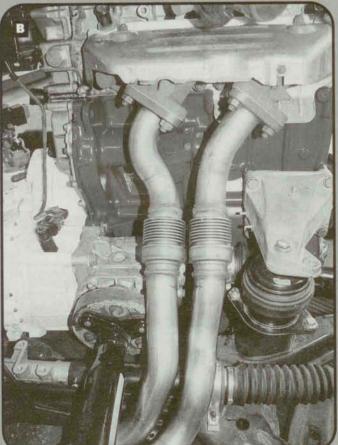
including the main driveshaft, fuel tank, and trunk floor, along with factory bracketing and mounts, the drivetrain was skillfully placed into the awaiting Cabrio. To keep the power to the ground, KW Variant 2 height and ride adjustable coilovers were installed together with the newly acquired suspension components from the Volkswagen Syncro drivetrain.

Once the transplant was complete a handcrafted 2.5-inch exhaust system was fabricated utilizing a high-flow muffler topped off by a stainless 4-inch round tip. This combination gave the AWD monster a hearty growl and plenty of flow.

With the mechanics finished, styling became the main focus. First, HPA installed a Rieger Tuning spoiler package, including headlamp eyebrows. Then, KW Cup wheels, measuring 17x8.5 inches, with Yokohama 215/40-17 A520 rubber were added. HPA 3.1L Syncro six-speed badging was the last to be installed to subtly let

As outrageous as it is funny but... than **Austin Powers** and his new nemesis >>>> **Fat Bastard**



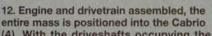


11. With the transmission prepped for the third driveshaft, it is mated to the HPA stroked 3.1L VR6 together with the factory Rallye downpipe (A). Note the extent of the bends in the downpipe (B) that allow the third driveshaft to coexist.



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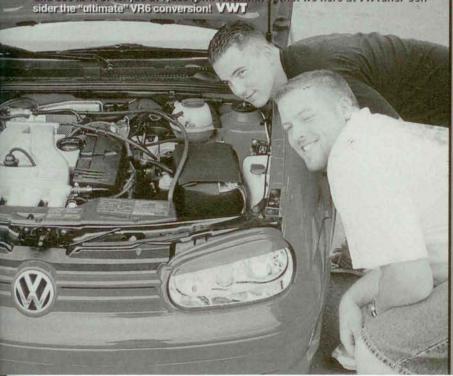
(A). With the driveshafts occupying the majority of the center tunnel, the standard VR6 catalytic converter would not fit. Thanks to the Rallye Program, a factory twin-cat setup was employed, thus allowing the exhaust to track under the driveshafts that are shielded from the heat with tin fairings (B).

passerby's know what now lives beneath the hood.

HPA offers a variety of budget-minded engine conversions and bolt-on performance products that can be custom-tailored to any Volkswagen. For additional information, contact HPA Motorsports at 888/530-1433. SOURCE **HPA MOTORSPORTS**

Dept. VWTuner 101-5763 198th St., Ste. 101 Langly, BC Canada V3A 1G5 604/530-3715 888/530-1433 www.hpamotorsports.com

13. Completed, the HPA Motorsports crew steps in for a final engine bay photograph. Ready for the read, this Cabrio is now capable of 375 inp at 7,2000 rpm and 350 lb-ft of torque at 7,200 rpm! Now that's what we here at VWTaner consider the "ultimate" VR6 conversion! VWT



As visually stunning as it is entertaining but...

than the Spice Girls

even when they had Geri "Ginger" Haliwell >>>>