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NOVEMBER 1982

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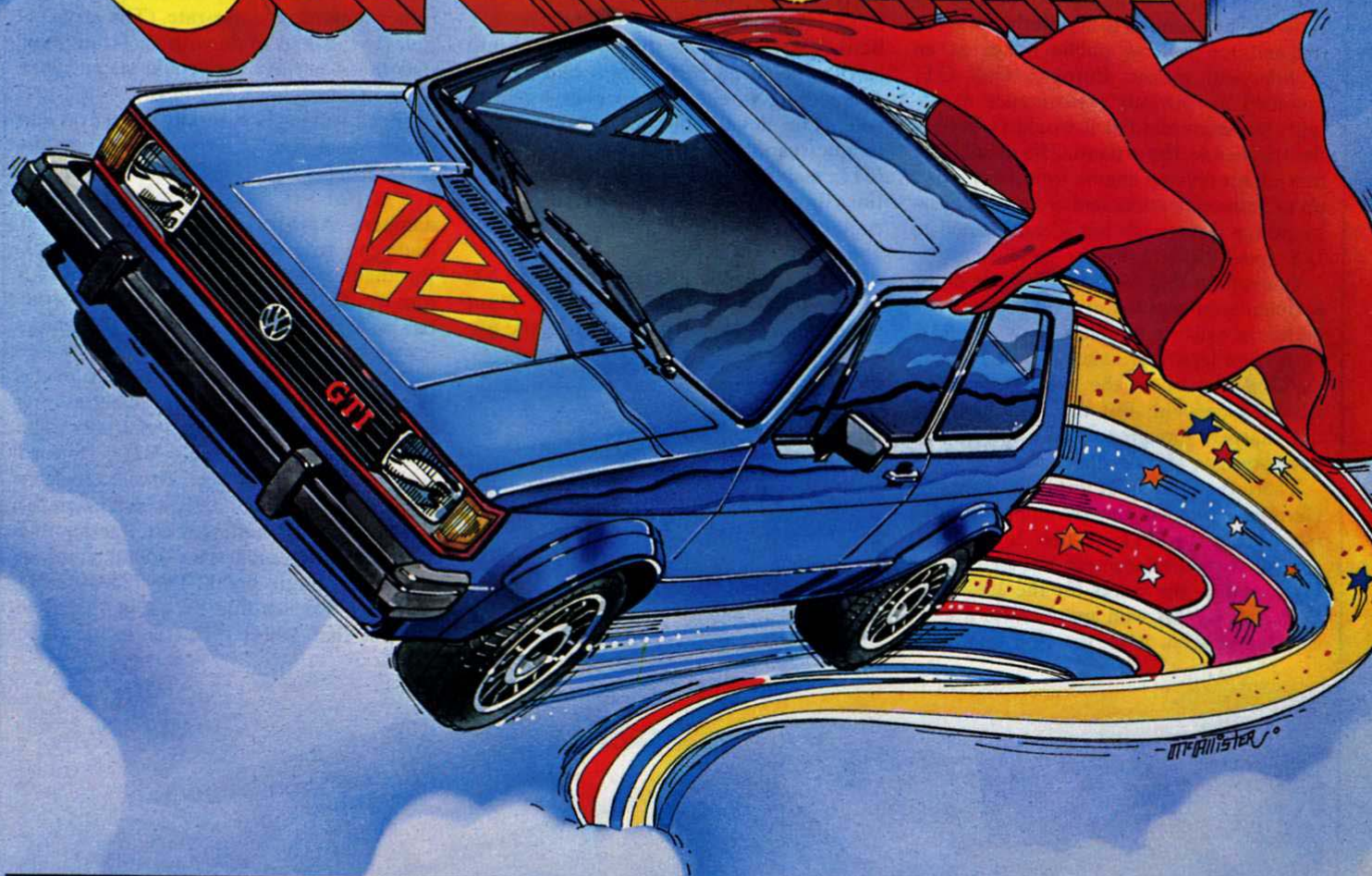
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Yeah, that's right buddy; a Rabbit. Do ya wanna make something of it? Volkswagen of America did. What it made is one of the most subtle and well-balanced automobiles you can buy.

For a world of reasons, Volkswagen found itself in need of a super-hero, one that could remind the public of the company's German roots, establish an image of performance to go with its reputation for economy, and bring interested shoppers back into its showrooms. You see, life has grown more complicated since Volkswagen introduced the ground-breaking Rabbit in 1975. What's become a crowded international menu of modern, good-performing econocars left VW needing a grabber to convince a key segment of the consuming public that strudel is still a tasty alternative to apple pie or sushi.

To make that point, VW has taken a long-expected course and built an Ameri-

by Kevin Smith

ILLUSTRATION BY GARY McALLISTER
PHOTOGRAPHY BY JIM BROWN

can version of the Golf GTI, that Rabbit-related econosportster that's been the terror of the Continent for six years. The Rabbit GTI is manufactured right alongside its vanilla-tame brethren in Westmoreland, Pennsylvania, but it bristles with panache, European spirit, and enough genuine performance to shame pricier runners.

All of which VW decided was necessary. Calendar year 1982 has been something of a shocker for VWoA. Sure, business is slow everywhere. But through the first half of the year, VW sales were off a staggering 45%, and its traditionally strong dealers were folding or giving up their franchises at the rate of better than six a month. Some redirection was clearly in order.

For starters, James R. Fuller was brought over from the Porsche+Audi Di-

vision, and given two big tasks: to run the Volkswagen Division, and to revive the German Connection. "We're a German company that happens to build cars in the United States," emphasizes Fuller, in a clean break from the recent past, when VWoA attempted to identify itself as a domestic auto maker. Recognizing that "Made in Germany" triggers a whole flood of positive assumptions about performance and quality, Volkswagen has decided to stress—in product and in advertising—its Teutonic nature to try to renew consumer enthusiasm.

A sports-variant Rabbit is a natural champion for that cause. The GTI name and its Q-ship philosophy are already pretty well known in this country, at least among the driving devotees who matter. And the brand of balanced economical performance that established that car's reputation in Europe is precisely the sort of face Volkswagen now wants to wear in the U.S.

With more roll stiffness to go with its serious Pirelli boots, the GTI becomes a skidpad terror

As insiders tell it, the story begins over two years ago when company head scratchers started thinking about a sportier Rabbit. They wanted to counter a burgeoning and too narrow public image as an economy-car maker. Europe's Golf GTI provided an obvious performance archetype, but engineers felt it wouldn't survive the trip across the Atlantic. Its small (1.6-liter), high-revving engine would not stand up to desmogification, and anyway, its peaky power traits were not ideally suited to U.S. (read "slow") driving conditions.

One option that reached the stage of experimentation was to put a GTI suspension under the existing Rabbit S. Now, the Rabbit is considerably heavier than its European Golf cousin so the results were not wholly successful. But the car's handling did sharpen enough to make the lack of horsepower a glaring deficiency.

There the matter sat until two events in Germany enabled the development of a true American GTI. A new high-output engine, with displacement bumped to 1.8 liters, was in the works for the 1983 Golf GTI, and VWoA won approval for a U.S.-certified version. Also, the 14 x 6-in. alloy

wheels created for the Quantum program presented a convenient way to get bigger performance tires on the Rabbit. With those classic hot-rodding techniques as a basis, VW could refine the Rabbit GTI into just the balanced performer it had to be.

Handling would have to play a central role. The development team created a unique suspension package for the Rabbit GTI, melding Golf GTI parts, modifications on same, and various new pieces. The engineers got what they wanted: tautness and greater roll control.

Due to a weight differential of up to 200 lb (fully 10% of this 1-ton car), front springing is stiffer even than that in the Eu-

ropean GTI. Rear springs are stiffer than in the current Rabbit—about the same as the Golf GTI's in rate but straight-wound rather than progressive-rate. (The explanation for this had to do with an assumption that the American car would spend more of its life carrying a full load.)

Shock valving is naturally tighter on this performance Rabbit. Front struts come directly from the Golf GTI, and rear shocks are stiffer-yet versions of the Golf's dampers. Anti-roll bars have sprouted at each end (the normal Rabbit has none). Bar diameters match the Golf GTI's—16.5 mm front, 20.5 mm rear—though the front bar is shaped differently to clear the American exhaust plumbing.

A big tire footprint—compliments of the factory's Plus One parts bin conversion— aids the Rabbit GTI immeasurably. The last Rabbit we tested (July '82) performed well on 175/70R13 tires. But particularly with its extra roll stiffness, which keeps the inside tires contributing more traction in a turn, the GTI becomes a skidpad terror on its serious Pirelli boots. The 185/60HR14 P6s are lower profile by about the same margin that wheel diameter is increased



(the point of Plus One and Plus Two arrangements), so overall tire diameter remains little changed.

Still, the wide Pirellis did interfere slightly with some bodywork in the rear of the Rabbit. The corrective production change was minor, but no modification on a massive production line is ever inexpen-

sive. The engineers tell with a smile of the time they coerced the VP of production into driving their prototype home one night. The next morning, they had their production change approval.

VWoA people express great satisfaction with the GTI's chassis. They speak of strong linear-range handling (when tire slip

angles and cornering force are building apace) as well as forgiving limit behavior (when higher slip angles no longer generate more lateral load, and the tires begin to slide). We can echo their enthusiasm. The car's cute econobox act completely belies its stability and predictability under full flog. It still understeers more than our en-

How Does the Real Thing Compare?

Last November we road tested a European Golf GTI that was imported into California by a non-resident. At that time we wrote an open letter to Volkswagen asking why they couldn't build a U.S. version of the car. Now (in answer to our pleas?), one year later—almost to the day—Volkswagen is introducing the Rabbit GTI. But is it as good as the Golf GTI? To answer our questions we had John Rettie, the owner of the Golf GTI, update us on his car and give his views.—Ed.

After my Golf GTI had been in the country for a year, it had to be federalized. Other than federalizing the car, the only changes that have been made are the installation of a Spar-komatic digital radio and the addition of 15-in. Centra wheels (imported by CRP Industries Inc., Carteret, NJ 07008) shod with the latest 195/50VR15 BF Goodrich Comp T/As. This Plus Two configuration (the stock Golf GTI has only 13-in. wheels) helped improve the looks and the handling, especially in the wet.

It is almost impossible to do the required emission control work oneself, so I took the car to Rarewala Enterprises in Torrance, California, which is run by Jas Rarewala, reckoned by many to be the best federalizer in the country.

A preliminary emission check at Olson Labs showed that the car was quite clean but not clean enough for the EPA. The figures indicate that it would have been good enough to meet the requirements for a 1976 vehicle without modification. Ironically, that was the year the GTI first went on sale in Europe. However, my GTI is a 1981 model, so work had to be done.

By fitting a fuel-evaporative canister, a 3-way catalytic converter from a BMW 528e, a warmup catalyst from a Ford, a Lambda sensor unit, and a new fuel distributor (with feedback loop to the Lambda sensor) from a BMW 320i, the emissions came down well within the limit. Fortunately, no modifications had to be done to the engine or the ignition. Now I am awaiting an emissions certificate from the EPA in Washington, D.C.

How does the federalized car run? Not quite as well as before. Its performance is marginally down—in the quarter mile it runs 17.2 sec, some .6 sec

slower than the figure obtained in the MT road test last November (but exactly the same as VWoA's Rabbit GTI). Actually, it is difficult to feel the performance difference in everyday driving, but the biggest disappointment is in the exhaust note. The beautiful throaty GTI sound has been drowned out by the catalytic converter.

As an added bonus in running the emissions test, I obtained my own, official, personalized, EPA urban cycle fuel economy reading. Before federalization it was 28.127 mpg; after, it was 24.882 mpg (identical to the Rabbit GTI). In real driving I was obtaining 30 mpg, and now it has dropped a bit to 29 mpg.

As far as the DOT safety standards are concerned, that is a much easier job, and I carried out part of the conversion myself. From a wrecked Rabbit I was able to obtain a pair of rear seat belts that bolted into holes already tapped in the floor of the GTI. I was able to keep the neat Golf bumpers by utilizing the brackets with shock absorbers from a Rabbit. Rather than use

RABBIT RUN-OFF

	Rabbit GTI	Rabbit S	Golf GTI (European)
0-60 mph	9.71 sec	11.65 sec	8.65 sec
Quarter mile	17.21 sec/ 78.9 mph	18.16 sec/ 72.3 mph	16.59 sec/ 82.6 mph



JOHN G. RETTIE

they've more than equaled the German GTI

engineering editor likes (as does virtually every automobile ever offered for public consumption), but the GTI is eminently more pitchable than its standard Rabbit forebear—which is no slouch on a mountain road. The American development guys figure they have more than equaled the capabilities of the German GTI. Their car's

weight is a disadvantage through a slalom, but they claim greater ultimate cornering power. We confirmed factory reports of 0.8 g plus with a 0.81 g figure on our skidpad.

Stopping performance has also been upgraded, partially as another happy consequence of those meaty Pirelli tires. Further aiding the cause is a pair of front brake ro-

tors from the Golf GTI. These pieces are the same diameter as the base Rabbit's but internally vented—instead of solid—for better temperature control under hard use.

In a car that can generate the kind of forces this new GTI can, the major points of body contact between man and machine rightfully become handling considerations.

the rather ugly Rabbit side markers I elected to use ones from a Fiat. It was a harrowing experience, drilling the holes for them in nice shiny fenders! Replacing the doors was straightforward, and necessary, as the European Golf does not have the required door beams inside. It worked out cheaper to replace them with used doors than to insert door beams. Replacing the quartz halogen headlights with sealed beams was a 5-min bolt-on job. An 85-mph speedo is no longer required, so all I had to do was use pressure-sensitive numbers to add mph figures to the kph speedo.

The worst job, and in most people's opinion the least sensible of the regulations, was the fitting of buzzers to the ig-

nitiation and seat belt interlock. It required adding a new wiring harness with the necessary cables and putting in an auxiliary fuse box panel. The crying shame is that once I have obtained the DOT certificate, the buzzers will undoubtedly come out as they are so annoying. How many people keep the buzzers anyway and what do they add to safety? The other safety and emission equipment I can live with, as it is more or less worthwhile.

Federalization of the GTI costs about \$5000, including parts and the emission tests, which run over \$1000 alone. My actual cost was a bit lower as I did some of the DOT work myself.

How does the federalized Golf GTI compare to the Rabbit GTI? They are

almost identical, in my opinion. The Rabbit has better torque thanks to the bigger engine, its handling is the same, and its fuel consumption is only marginally worse. Overall the Rabbit is just as well-finished; in fact, in some aspects such as the carpeted trunk, more instrumentation, and the neater looking front grille, the Rabbit is actually better. All in all, I would not complain if I had to swap my federalized Golf GTI for a Rabbit GTI.

Well done, Volkswagen. You have produced a U.S.-made car that is as good as the European GTI. And in Europe the GTI is still rated as the best small sports sedan on the market, even after being available for six years.

—John Rettie

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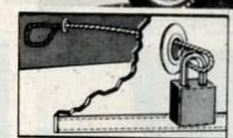
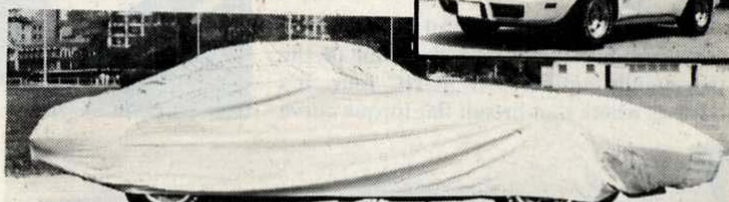
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It bristles with panache, European spirit, and enough performance to shame pricier runners

The occupants' centers of gravity are nicely held in place by sport seats that recall the Scirocco's (and the Golf GTI's) excellent buckets. (In fact, the cushions are sent over from Germany.) And one of the three or four best standard-equipment steering wheels anywhere comes on the sporting Rabbit, a soft and seamless 4-spoke again identical to the Scirocco's but for "GTI" identification. Getting a grip on this car, staying with it through fast corners, and reading the signals the chassis sends up are greatly facilitated by these interior fitments.

No matter what else it did well, a Rabbit would not be a GTI without horsepower. VWoA's new offering boasts some pretty good muscles, though they're a mite softer—or at least trained differently—than the Golf GTI's. At 90 hp, the Rabbit GTI engine approximately splits the difference between the standard Rabbit's 74 and the Euro-GTI's 110. More meaningful, the Rabbit GTI's maximum torque of 105 lb-ft eclipses its German cousin's 103, and comes in at a more useable 3250 rpm rather than 5000. With the lighter mass it propels, the Golf GTI engine can produce superior wide-open acceleration (8.65 sec from 0-60, compared to 9.71), but the Rabbit GTI's more flexible power translates into lustier throttle roll-ons from typical street speeds.

This all-around delightful performance comes from a further development of the thoroughly familiar VW SOHC four. It's obvious where that broad, flat torque curve

comes from: A 1.5mm overbore increases displacement from 1715 cc to 1780, and the engine gets a little more compression (8.5:1 rather than 8.2) and a big-tube, free-flow exhaust system (35% less back pressure than even the converterless Golf pipe, and a pleasant tone besides). To help keep things flowing smoothly as the revs build, the valves are enlarged from 34 to 40 mm on the intake side, 31 to 33 mm on the exhaust. Camshaft lift, duration, and timing are unaltered.

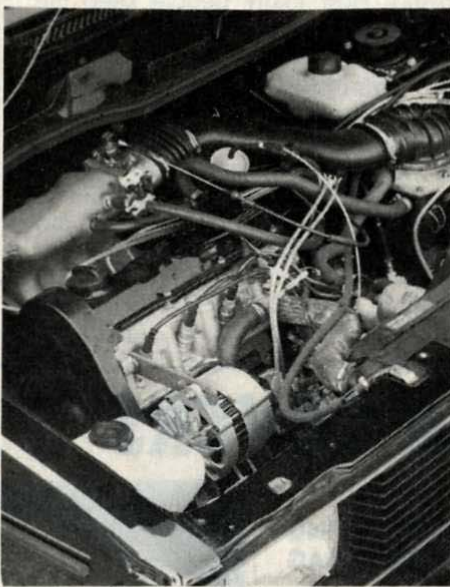
Though only a little larger in actual piston displacement, the new 1.8 could have had some added vibration. Longer con-

necting rods (to reduce angularity) and lighter pistons ensure it doesn't.

Beyond these changes, the GTI engine is standard Rabbit fare until the clutch; a stouter 210mm unit replaces the regular 190mm item. From there, torque and speed are mixed in a transaxle almost identical to the close-ratio box in the Golf GTI. Internal ratios are virtually the same at 3.49, 2.12, 1.44, 1.13, and 0.91:1, and the axle ratio, 3.94:1, is just fractionally tighter than the 3.89 gears in the Golf (and most all other VW applications).

Note that this transmission gives overdrive in top gear only rather than having both 4th and 5th be long-legged economy cogs as in the standard Rabbit. In fact, the GTI's 0.91 high-gear ratio is the same as the normal gearbox's 4th speed, so the GTI spans in five gears the same range the normal gearbox covers with but four. This is a proper sporting 5-speed: short ratio steps and no ultra-tall freeway gear that sacrifices all for a couple tenths of a mile per gallon. The vehicle's top speed (about 108) comes up in top gear, just the way it should.

Running at that kind of speed on the public thoroughfares will likely attract more attention than you can stand, but not much else about the Rabbit GTI will catch the eye of the laymen (or lawmen). The 2-door hatchback coupe (only body style used) comes in your choice of just four no-nonsense colors: red, white, black, and silver. Most of the trim has had the blackout treatment, and the only real identification



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SuperBunny

on the car—a watchword for the faithful—is a red GTI badge and matching grille outline. A nicely integrated front air dam, in body color, is the only other distinguishing characteristic, aside from the obviously oversize tires and wheels.

Inside the GTI is more subtlety. Only two interior colors are available, dark blue and cordovan, and except for a unique bronze gauge panel and the goofy golf ball shifter, it could all be in any ol' Rabbit. That means sensible function, uncluttered if uninspired styling, and a few small knobs—for the lights and radio, specifically—that look notably cheap.

It all works effectively, however, and even the dimples in the shift knob offer fingertips a decent hold. The action at the other end of that lever is more than decent. Velvety shifts between ratios that are perfectly matched to engine power contribute to the thrill of whipping the Rabbit GTI down the road or through traffic. Its small size, strong response, and general maneu-



verability make it a classic street fighter in the decisive 20-60-mph range; from 2800 or 3000 rpm, the engine is a killer. Or maybe you like wheelspin—there's plenty of that on tap, too. And through it all there's that pervasive sense of refinement and balance, the sure knowledge that the people who created this car knew how to make a fine performance automobile.

Also, though it all is the fun of being in what most of the world thinks is a plain econocar. The utilitarian Rabbit proportions continue as they have for nearly a decade, and remain thoroughly practical even if the sheet metal is no longer striking. Some of us like our sports cars longer and sleeker than this upright little runabout (a Scirocco GTI is not far away). But prowling about the streets in disguise is a kick, too.

It's a little like being Clark Kent, with your superpower leotard hiding under 3-pipe pinstripes.

Oh, better make that Klaus Kent. The new company image, you know.

