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& TESTED ON OUR PROJECT GTI



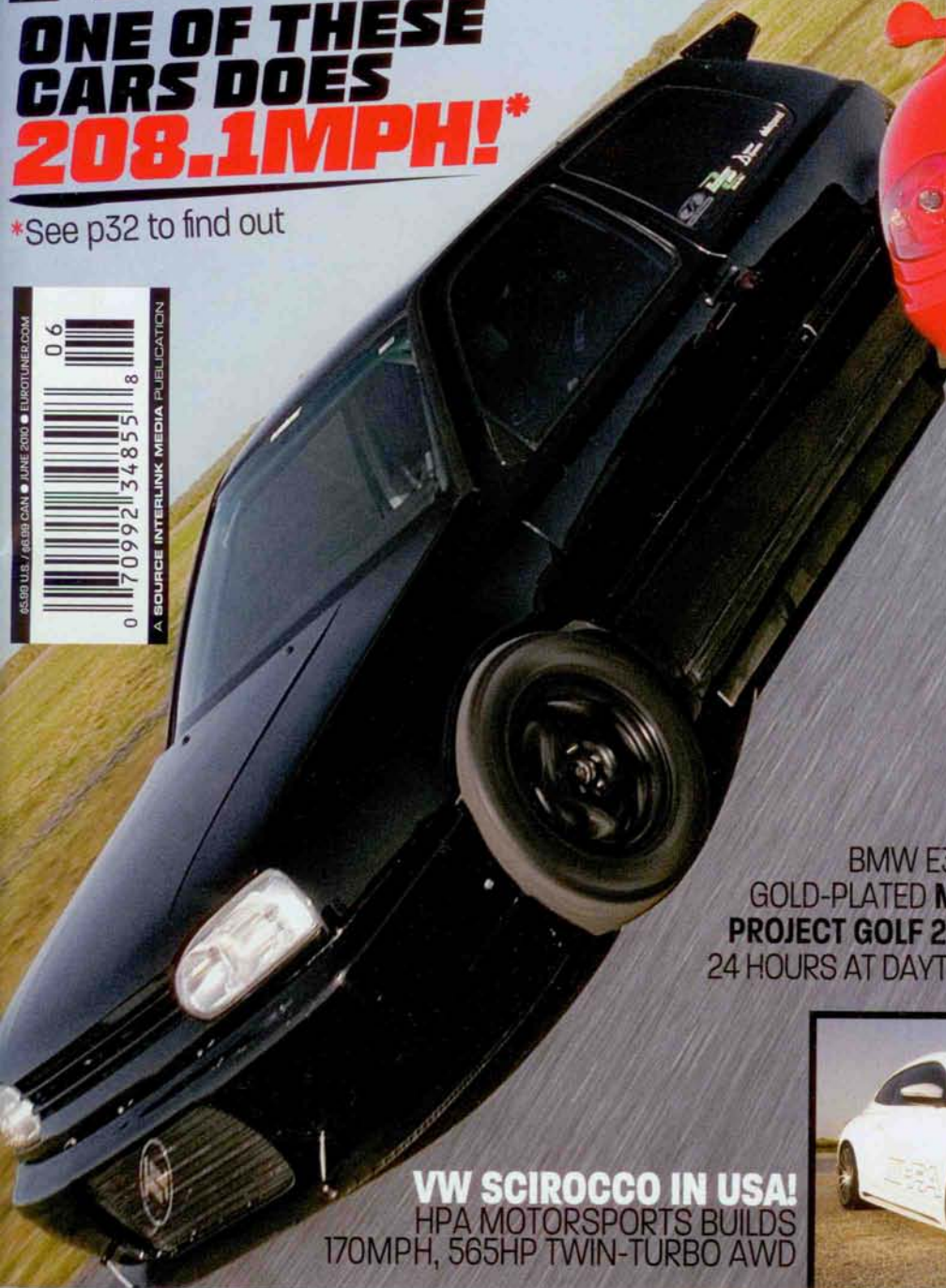
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WHO'S FASTEST?

ONE OF THESE CARS DOES
208.1MPH!*

*See p32 to find out



DRIFTING
HOME-BUILT 250HP
BMW 325i TURBO



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- BMW E30 325i **BUYER'S GUIDE** ●
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- PROJECT GOLF 2.0 CHASSIS UPGRADES** ●
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VW SCIROCCO IN USA!
HPA MOTORSPORTS BUILDS
170MPH, 565HP TWIN-TURBO AWD



FORBIDDEN

THE SCIROCCO ISN'T COMING TO AMERICA. BUT IF WE BUILD YOU A 565HP VR6 BITURBO VERSION WITH AWD



WORDS GREG EMMERSON PHOTOS SAM DU

North American VW enthusiasts may have been deprived of the new Scirocco through official channels, but there's a man in southwest Canada, within spitting distance of the Winter Olympics, who aims to put that right.

As a maverick businessman, Marcel Horn from HPA Motorsports is endowed with equal parts insight, marketing and engineering. In the past, he was the genius behind cars like the first Beetle VR6T AWD and VW's Jetta R GT project car.

Now he wants to sell you a Scirocco; but not just any Scirocco. His FT565 version is converted to 3.2 VR6, twin-turboed, given 4Motion all-wheel drive and a DSG transmission to

deliver uncompromising performance in a unique package.

The company hopes to build ten a year for two years and is developing three configurations. The car you see here was captured at the Texas Mile – an event you can read about in our cover feature, and somewhere HPA Motorsports likes to use

EN FRUIT

YOU FIND THAT STATEMENT UNACCEPTABLE, HPA WILL
AND DSG CAPABLE OF 170MPH IN A STANDING MILE.



for its product development. It was testing a number of different power, transmission and electronics packages on the three cars it took on the 2500-mile journey from its Vancouver HQ. "You drove 5000 miles to drive one mile?" questioned Marcel's aggravatingly logical wife...

"Where else can you legally drive a car at

170 or 180mph?" asked Marcel. "The Texas Mile is like our outdoor laboratory. We use it to test our technology to the limit."

THE CONCEPT

Of the first six VWs Marcel owned, four of them were Sciroccos, and he's currently restoring an '81 Rocco at work. "I love these

cars, so when we heard about the IROC Concept car back in '06, we immediately started asking questions about the new car," he explained.

The IROC was VW's headline-grabbing design study that first indicated Wolfsburg was considering the Scirocco's re-introduction. And in the years since it first surfaced, Marcel



Water/meth reservoir in trunk allows owner to use any pump fuel that's available



HPA uses the Texas Mile for product development, with its Scirocco hitting 170mph in the standing-mile. It's also capable of a mid-11sec quarter mile and 0-60mph in the very low 3sec bracket

persisted in trying to establish its specification and whether it was coming to North America.

As we now know, VW of America didn't feel the Mk3 Scirocco would generate sufficient sales to justify its expensive US homologation, so we're not getting it. But Marcel doesn't even hear bad news. He simply ordered one of the first cars off the production line and began brainstorming with his team.

They decided that America's loss would be HPA's gain. If customers couldn't buy a car from VW dealers, they could get it from him. However, he wasn't going to sell any old Scirocco; it had to be HPA's.

Before the car had even arrived, the technicians assembled powertrains from a FWD Eos VR6 DSG, a European Passat R36 and a Mk5 Golf R32. "We couldn't find the specifications and dimensions of the new car, so we simply got everything that might fit and waited for our Scirocco to arrive. As it turns out, it uses a little bit of everything. It's much

wider than a Golf and is the ideal platform for tuning," Marcel confirmed.

To his delight, the fenders accommodated 265/30 R19 tires and his eight-piston brakes without modification. That would give him the grip he needed, now they just had to swap the 2.0T for a 3.2 VR6, twin-turbocharge it, add 4Motion and a DSG tranny.

"The real problem was getting all the components to talk to one another," Marcel explained. "We'd already built an engine and transmission before the car arrived, but we had no idea about the Scirocco's management system. As it turns out, the new car is on the MED17 system, which is light years ahead of the 3.2's MED7.1.1 or even the DSG's operating system. Communications with the car's systems was totally different, but we had to get them talking."

HPA's Darren Scharsenberg worked alongside Marcel and Darryl Scot from HPA's Versatile Automotive Diagnostics division. "It was a constant battle," Marcel remembered.

"We needed all the convenience functions to work as stock and we eventually cracked it so that everything works – the ABS, the steering, radio, wipers, etc – except now our car is AWD and VR6. In fact, the only fault code we get is because the system sees a fuel relay open as a result of our fuel pump changes.

"We even managed to reprogram the telephone circuit of the driver's information system in the dash display. We now have a boost readout, oil temp and digital MPH because the car is capable of more than the stock speedo can register!"

OILY BITS

The 3.2-liter 24v motor, which is a few blue hoses away from looking factory in the Scirocco bay, boasts a pair of Garrett GT28RS turbos and HPA short-runner inlet manifold. It uses dual side-mount intercoolers since there wasn't room under the low hood to fit the preferred water-cooled chargecooler. As always, the internals are stock but the

et TECH SPEC

2010 VW SCIROCCO

owner: Marcel Horn

Location: Surrey, BC, Canada

Occupation: VW tuner/builder

ENGINE: 3.2-liter VR6 24v transplant with two Garrett GT28RS turbos, HPA short-runner inlet manifold, dual side-mount intercoolers, head spacer plate, 3.5" dual exhaust system, Labonte water/methanol injection system

DRIVETRAIN: '08 R32 DSG transmission with HPA clutch packs and software, R32 4Motion AWD system, custom fuel tanks

BRAKES: 365mm front rotors with eight-piston monoblock calipers, 335mm rears rotors with two-piston floating calipers

SUSPENSION: KW Club Sport coilovers

WHEELS & TIRES: 18x9.5" BBS CM wheels, 265/30 R19 Michelin Pilot Sport 2 tires

EXTERIOR: Rieger front spoiler, side skirts and rear apron

INTERIOR: modified display with boost, oil temp and speed readouts

CONTACT: hpamotorsports.com

Remove its blue silicone hoses and this Mk3 Scirocco VR6 could have left the factory that way

compression ratio was lowered to less than 8:1 with a head spacer plate. The team also TIG-welded a custom 3.5" dual exhaust system routed to a single muffler with a 50mm flap system.

Mounted in the trunk is a Labonte water/methanol injection system used to compensate for poor fuel. It's operated by the factory ECU based on the fuel injector duty cycle, delivering up to 18% water/meth depending on fuel quality.

As part of the car's development, HPA Motorsports invested in a new Superflow AWD dyno to ensure the most accurate readings. According to Marcel, they could even record the power transfer as the diffs were operating. It also helped with the programming of the '08 R32 DSG transmission. Armed with HPA's uprated clutch packs and shifting software, the team limited torque output from the 565hp engine to 500 lb-ft to preserve the tranny. They also used software to reduce the torque hit during gear shifts, thereby aiding reliability.

Although torque is limited, it arrives from 2800rpm and peaks at 4300rpm. Peak power also comes at 4200rpm, giving tremendous mid-range punch.

One of the more complex procedures in fitting the Mk5 R32 4Motion system was accommodating the rear diff. It meant raising the trunk floor and fitting saddlebag fuel tanks, modified from OE VW parts. However, they were able to retain the stock suspension mounting points for the KW Club Sport coilovers, which were recalibrated to compensate for the additional weight both

front and rear.

"Don't forget, we previously built 20 AWD conversions on the Mk4 chassis, so this wasn't our first time doing it," Marcel joked as he explained the 4Motion transplant.

Those big brakes we mentioned earlier use colossal 365mm (14.4") cross-drilled rotors with eight-piston monoblock calipers up front, while the rears utilize 335mm (13.2") rotors and two-piston floating calipers.

They sit behind a set of 19x9.5" BBS CM wheels imported from Germany because they're unavailable in the US - their 14-spoke design certainly suits the Scirocco and sets off the Rieger body kit perfectly.

"We were surrounded by Lamborghinis, Porsches and Corvettes at the Texas Mile, but every single person came over to take a photo of our VW," Marcel laughed. It certainly attracts attention, and with this being one of a kind at present, there's nothing scarcer than an HPA Scirocco FT565.

ROAD LEGAL

The interior on car #001 remained totally stock, in part because HPA didn't want to mess with its safety systems and possibly interfere with its registration process.

"We're registered as a vehicle manufacturer in Canada," Marcel explained. "So we fit an EPA-compliant powertrain in the Scirocco and hope to sell it like a kit car. All the diagnostic and emissions systems operate, but we're still trying to establish which states will recognize it. We're talking to the specialty vehicle registration people now."

To aid the process, HPA has decided

to offer three models. The first will be a California-friendly FT300. Retailing at \$80,000 it will be a FWD model with a naturally aspirated 3.6-liter motor and DSG. It will also have CARB-pleasing factory inlet, exhaust, etc to ease its passage through the paperwork process. If an owner subsequently wishes to turbocharge that engine, it would be their decision...

The FT565 seen here costs \$135,000 as a turnkey car complete with 3.2 VR6 biturbo, AWD and DSG. Then there will be a flagship FT640 with a 640hp 3.6-liter biturbo motor with AWD and DSG that sells for \$165k.

All three models get the Rieger body kit, 19" wheels and big brakes as standard, while further customization is obviously possible, according to preference and budget.

To date, #001 was sold to a customer in Texas and there are two on order from Russia and two for Australia. So whether the project hits, or remains under, its 20-car target remains to be seen. But after 19 years in business, this Scirocco marks the pinnacle of HPA's development, and possibly a highpoint in the European tuning scene.

Of course, they're not done yet. Marcel reeled off a list of projects that would take most of us a lifetime to complete. However, his AWD, R32-powered '77 Rabbit sounded interesting, especially since he hopes to create subframes to allow other owners to follow suit. And then there was a twin-engined Mk5 GTI: "With a pair of 2.0T motors we should be able to hit 220mph on the Texas Mile!" he proclaimed. And if we're honest, we wouldn't doubt him. **et**