

# 400 bhp 4WD Jetta!



**Less its logos, this could be one of the most deceptive-looking road and track cars out there, with the subtle saloon bodysell belying its highly modified 400 bhp 2.0-litre TSI engine and 4Motion running gear...**

**VISITORS TO this year's GTI International, or to the recent Milltek Sport Volkswagen Racing Cup rounds at Donington Park will undoubtedly have admired this striking-looking track-modified Jetta GLI, and not just because of its bright red paintwork and dramatic graphics.**

At Donington, they'll have seen it leading the full field of VW Racing Cup cars around the circuit in its role as course safety car, but the reality is that it would almost certainly lead them around the circuit in a real race too, as it is not just for show. Not only does it have a full complement of race-worthy chassis and suspension components, but it also has nearly 400 bhp under the bonnet, and so packs considerably more firepower than the rule-restricted race cars.

There's another big advantage, one that might not seem at all obvious at first, but you'd certainly get a clue if you watched it leaving the start line, peeling powerfully out of the pitlane to pick up the front of the field, or hauling its way round a tight hairpin. Despite its huge power output, there would

be barely a hint of wheelspin or squeal of rubber from those front tyres, and that's because this is a very rare beast – a Jetta with four-wheel drive.

It's certainly not a standard configuration, although the common platform engineering with models like the Golf R and the Audi TT / S3 etc mean that the conversion to all-wheel drive can be a lot tidier than the sort of 'cut and shut' surgery that would typically be necessary to transplant four-wheel drive running gear into any other front-wheel drive model.



The creation of this combination is all down to Kevin Poole of KPM Racing, based in Milton Keynes, and the man responsible for preparing many top-notch race cars. It started with an insurance write-off US import 2013 Jetta GLI 2.0 TSI which had been owned by an American serviceman at the Mildenhall base in Suffolk.

The accident damage to the front end had been fairly light, in the overall scheme of things, but it was enough to ensure that the car wasn't considered an economic repair. But that was never going to be a problem for an outfit like KPM Racing who've often been known to repair far worse damage during a few hours between races!

There was another advantage in this case, and that was that the car is left-hand drive. As Kevin points out, all Volkswagen Group models are primarily intended, designed and constructed as left-hand drive models, but then reconfigured to suit RHD – inevitably with some minor technical compromises – for the UK and a few other markets. →



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It's a moot point, but a left-hand driving position is also generally considered to be a practical advantage out on the race track. That's because most circuits are clockwise, with predominantly right-hand bends, and the left-hand driving position can be a big advantage when it comes to taking the right racing line.

So, with the damaged car recovered back to KPM's workshops in Milton Keynes, it was stripped down and the chassis measured up for the installation of a full set of Audi S3 four-wheel drive running gear.

There are some dimensional differences due to the variations in wheelbase, but essentially most of the mounting points and areas of clearance in the underbody structure are close enough that only a few bespoke brackets and some minor clearancing was necessary, as well as making up a special spacer to adjust the length of the front to rear propshaft.

After all, the Jetta GLI came with the multi-link rear suspension as standard and the 4Motion rear suspension and drive assembly is virtually a straightforward swap. As always, though, the problems came with the wiring loom and electronics, which required a lot of head-scratching to make the necessary connections between the Haldex coupling and the engine ECU. At the moment, the car still has the standard Haldex control unit, but clearly there will be some advantage in using the Haldex Sport controller in due course, to provide a faster torque bias to the rear wheels.

Now that the necessary traction could be provided by a system that can effectively transfer all the torque to all four wheels, rather than just spinning the front ones furiously, a full-house engine specification could be undertaken with no holds barred.

The major boost, quite literally, to the power output of the EA888 2.0-litre TSI

engine is from the use of a Garrett GTX2876 turbocharger, with its stainless-steel ball bearing configuration capable of spooling up quickly to high boost levels for peak power output but with good response throughout the rev-range.

It's used in conjunction with a Wagner Tuning high-efficiency front-mounted inter-cooler and a VW Racing air filter and induction system along with a USP Motorsports low-pressure fuel pump and injectors, as well as a Superchips re-mapped ECU, to pump out

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more than double the 2.0 TSI engine's original power output. Kevin comments that it's about as far as you can safely go with this engine, before having to invest in expensive bottom-end rebuilds with a high-performance crank and bearings, conrods and pistons etc.

Needless to say, considering the bold graphics on the side of the car, the Jetta is also fitted with a full 76 mm diameter turbo-back stainless-steel Race exhaust system from Milltek Sport. Indeed, our photoshoot on this car took place at the Bruntingthorpe Proving Ground on a day when Jon Nicholson from Milltek was carrying out some track tests and video and sound-recording sessions on the system, and you can find these on *YouTube* at the references given at the end of this article.

Inevitably, with this sort of power and performance potential, the suspension and brakes are all heavily uprated, and the Jetta now runs on a set of VW Racing 4-way adjustable race coilovers, along with 3-way adjustable anti-roll bars at both front and rear, for optimum fine-tuning of the handling characteristics. Judging from the way that it lapped the Sprint circuit at Bruntingthorpe at such high speed, without any drama, it's a very effective combination while not being too uncomfortable for regular road use.

Equally capable of hauling it down from high speed at the end of Bruntingthorpe's

long runway straight, the Jetta relies on a set of VWR 352 mm floating vented and grooved discs along with 6-pot callipers from AP Racing, while at the rear it has the VWR disc upgrade and Audi S3 rear callipers, with a manual brake bias adjustment to fine-tune the braking balance from front to rear.

For track use, the Jetta rolls on set of 9 x 18-inch lightweight multispoke racing wheels from VWRacing, wrapped in 235/40-R18 Dunlop Direzza tyres, but with a set of 8.5 x 19-inch BBS Motorsport rims with 235/35 ZR 19 Dunlops reserved for display and road use, custom-painted gloss black with a neat red ring around the rim. →







**Volkswagen  
DRIVER**





**Volkswagen  
DRIVER**



These are what the car was fitted with for our photoshoot, although – for some unknown reason – we were directed towards the left-hand side of the car as it was considered to be its ‘best side’ as far as the photos were concerned. A quick peek at the other side revealed the real reason; let’s just say that the left-hand drive position might be best for track use, but it’s not always ideal for positioning when running on the road, a road with kerbs...

Inside, the interior is stripped and lightened, with a half roll cage with harness bar installed in the rear and it has a pair of matching Cobra Motorsport lightweight front racing bucket seats, decorated with custom stitching and Milltek sport logos, with all the accompanying hardware for a pair of 6-point Schroth racing harnesses.

The dashboard has been flocked, to reduce reflections in the screen, and the rear door cards replaced with carbon panels, with the

short-shift gearlever raised for easier access, but apart from that the interior still retains the original factory-fitted multifunction steering wheel and the original sound system and air-con arrangement.

That may not be the best thing for ultimate power-to-weight ratio, but the car isn’t exactly short of power anyway, and it provides much-needed comfort on the long haul when driving to and from distant track days, or while sat fully toggled up in a hot pit lane while awaiting the possibility of a safety car session to lead the racers around the circuit.

It doesn’t take much imagination to realise that, with a few more modifications – a full roll cage and fire safety systems, along with a fully stripped interior, and slick tyres – this car would make a very effective racer, but it also occurs to us that this combination could just as easily result in the ultimate road and track-going Q-car.



## CONTACTS

**KPM Racing**  
Tel: 01280 812 230  
[www.kpmracing.com](http://www.kpmracing.com)

**Milltek Sport**  
Tel: 01332 227 280  
[www.millteksport.com](http://www.millteksport.com)

**Videos**  
<http://youtu.be/86zLDDzR3zc>  
<http://youtu.be/PVbLGZsZ6PI>



Without its graphics, and maybe with a more conservative set of wheel and tyres, let alone a more modest body colour, the Jetta would hardly get a second look in the rear-view mirror, until it scorched past leaving a trail of mellifluous Milltek exhaust note in its wake! 🇧🇪