

Boxer beat!



Surely a Golf TDI couldn't possibly compare with an Impreza STi? Ex-Subaru owner Neil Ward upgraded his 2.0 TDI with a Tunit module and hasn't looked back.

THIS ISN'T the first time we've featured the Tunit performance module for the VW and Audi model range; where other tuning devices have come and gone, it is one of the most enduring names on the market, with an applications list which manages to keep up to date with the latest models on the market.

Like most other performance tuning techniques which are so successful on the modern TDI engines, the Tunit module is a small digital processor, fitted between the ECU and the fuel pump, which intercepts the signals and modifies the messages, changing the feedback from the sensors which record air mass and load readings. It thus tricks the ECU into modifying the signals between the engine management and the fuel pump, optimising the fuel pressure and rate of delivery and maximising the combustion pressure to produce more power and torque.

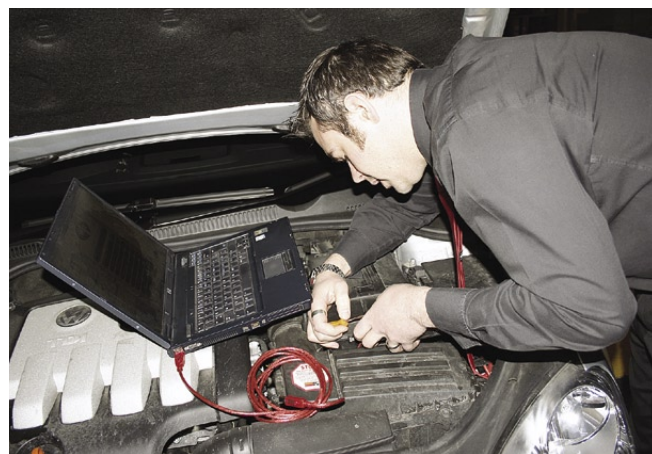
Ironically, despite often increasing power and torque by as much as 25 to 30 per cent, and doing so by burning more fuel, this type of tuning is also claimed



to have little effect on fuel economy. Indeed, it is sometimes suggested that improvements in fuel economy can be realised. It depends very much on driving style, of course, but there is some method to the madness. Producing greater torque, the 'pulling power' which manifests itself as engine response and flexibility, often allows the driver to select a higher gear than normal for a

certain road speed, thus reducing engine speed and improving fuel consumption. Only if the driver exploits the superior performance all the time, by drag-racing and power-shifting, is there usually any significant loss of economy.

Its special appeal, though, is that it can be easily installed; unlike re-mapping or 'chipping' the engine, it doesn't involve any interference with the engine



management unit itself. Supplied with adapter plugs which perfectly match those used in the original loom, it's a simple matter to disconnect the standard fuel pump plug and insert the Tunit module in-line. Usually a simple 10-minute task, even for the average DIY man, this also means that it can be easily disconnected when not required, or for transferral from one car to another.

There are, of course obvious implications for avoiding warranty issues or insurance problems with such an easily removable device, but this isn't a benefit we'd endorse. In reality, there are very few – if any – problems experienced with mechanical integrity when tuning devices are fitted, and there are plenty of specialist insurance companies who will offer proper cover, often at little extra expense.

Another appealing feature of the current Tunit module is that it allows some scope for fine-tuning. Although it comes pre-programmed to a basic setting which will give good results for the application, it is also possible to tweak it to one of nine settings on a

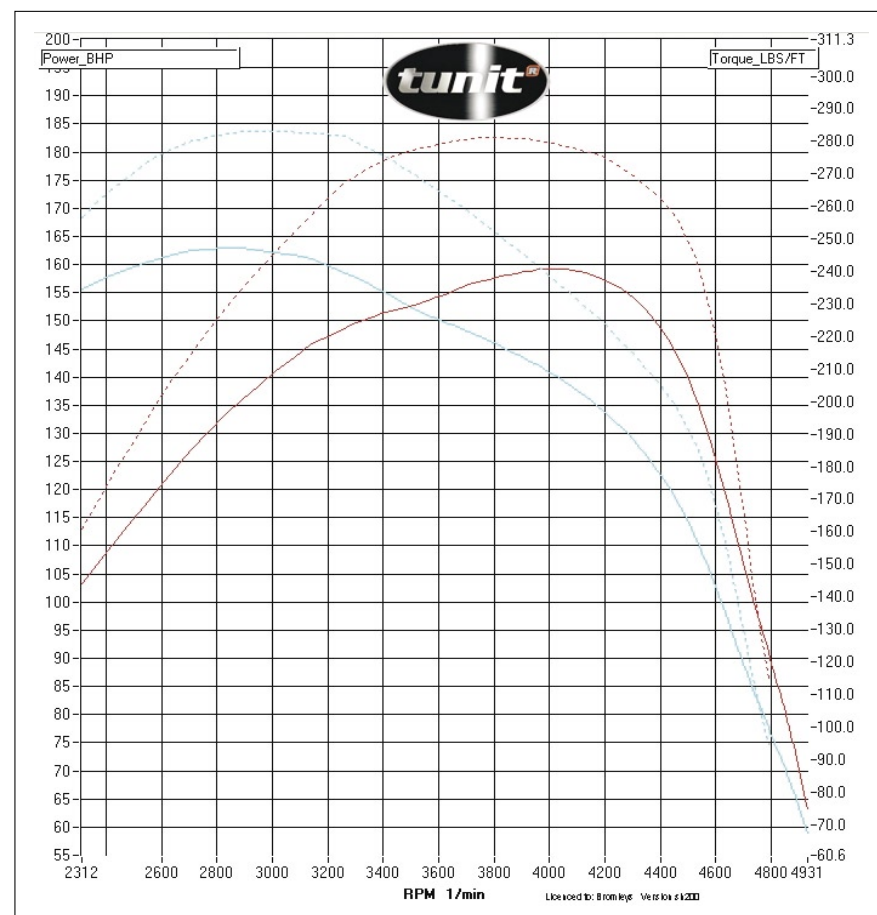


'IT'S A SIMPLE MATTER TO DISCONNECT THE STANDARD FUEL PUMP PLUG AND INSERT THE TUNIT MODULE IN-LINE'

rotary switch. While the discerning driver will probably be able to adjust it to his requirements simply by road-testing and assessing the driving response, this is obviously best carried out using the consistency provided by a rolling-road dynamometer test.

For a more specialised requirement, such as a modified engine or one which is used within a limited range for towing, for instance, the Tunit technician can also plug in and analyse the settings on a laptop computer and fine-tune the settings even further.

Having just driven the new Golf GT with the 170 PS DPF engine, we were particularly interested to be invited along to Tunit's premises in Chorley, Lancs to see the installation on a customer's car. On the face of the figures published in the Tunit catalogue, the simple installation of one of its V-PD models was capable of increasing the power output from 140 to 170 PS and improving torque from 237 to 270 lb.ft.



Owner's opinion

'My previous cars have tended to come from similar stables, namely high-performance sports machines. Most recently before the Golf was a Subaru Impreza STi, with the P1 version before that. There has also been an Integra Type R, Honda CRX, an Audi quattro and a 1961 Series II Land Rover, but we won't go down that one.

'The switch to the Golf was brought about initially by necessity as I am now travelling 50 miles or more every day in city traffic, so I wanted something which was easy to drive without the need to tow a fuel trailer behind.

'Even in standard form, what I got was a real surprise – an involving, dynamic drive with effortless low-down power allowing rapid progress but without the stress. Gone was the heavy clutch and embarrassing stalls if not enough revs were used, being replaced with tickover take-offs.

'Fitting the Tunit module, though, gave a noticeable improvement in power. Its in-gear acceleration, especially when overtaking, now feels like a GTI and the huge amounts of torque allow this to be done in almost any gear. Most surprisingly is that the fuel consumption

doesn't seem to have been affected – I have checked the most recent fuel consumption by brim-to-brim methods at the pump and it worked it out to be 46 mpg. Older receipts / mileages were indicating between 46 and 50 from mixed driving.

'Suffice it to say that I've developed a strong affection for this car, especially when the money I have saved on fuel, servicing and tyres, compared with running the Subaru, has just paid for a family holiday to Canada!'

Neil Ward, Manchester

Something which always needs be borne in mind when rolling-road testing power outputs is that the standard engine often produces figures higher than those claimed by the factory. In this case, the standard baseline run for the 2.0 TDI, with the Tunit module disconnected, produced figures of 159 bhp at 4055 rpm and peak torque of 247 lb.ft at 2830 rpm, although with the module installed and set at level 5 of the 9 possible settings, it also surpassed Tunit's claims by returning 183 bhp at 3830 rpm and 283 lb.ft at 2970 rpm.

It's particularly interesting to note that the higher power output was produced at a lower engine speed, endorsing the previous comments about being able to drive the car at lower speeds without

losing power and response. Although the peak torque was recorded at higher speeds, the Tunit-modified engine still produces significantly greater pulling power throughout the rev range. Bear in mind, too, that there are still four settings to go in the pursuit of greater power, although experience suggests that the even higher power outputs which would result would almost certainly incur greater smoke production.

Interestingly, although the commercial conversion is still pending, Tunit had

previously dyno tested a standard TDI 170 on the same rolling-road and had recorded 188 bhp at 4320 rpm and 273 lb.ft. torque at 3125 rpm, so it would appear that the simple installation of a Tunit module can produce performance very similar to the much more expensive GT TDI model. At a current retail price of £479 inc VAT and delivery, that makes it a very attractive upgrade, especially as the Tunit-modified car seems to be even smoother and more tractable than the standard factory-built 170 PS engine. 🇩🇪

'WHAT I GOT WAS A REAL SURPRISE — AN INVOLVING, DYNAMIC DRIVE WITH EFFORTLESS LOW-DOWN POWER ALLOWING RAPID PROGRESS BUT WITHOUT THE STRESS...'

