DEFI Blue Racer 52 mm Boost Gauge / OPOD Mono OSIR pod inc fitting

The diverter valve is prone to failure on both
std GTI (K03 dv cited nr turbo)
and
Edition 30 / Pirelli (K04 dv relocated to front of engine) models *

Often this can go undetected.
Having an accurate working vacuum/boost gauge allows you to continuously monitor your engine.

* - VW have now produced a new verson of the DV with a completely new design to hopefully eliminate failure

My main focus was on the quality of the gauge as a priority which is why I chose DEFI.

Sourcing

1. OSIR RHD opod mono gauge pod

>> OPOD link <<
Vented single gauge pod for all MKV Golf and Jetta*
Angled towards your sight
No cut no special skill needed
Simply plug & play
Fit 60mm & 52mm gauge (52mm step down ring included)
*Demonstrated with Defi BF TURBO gauge (gauge not included)
Available in LHD and RHD

2. DEFI Blue Racer 52 mm Boost Gauge

>> DEFI link <<
display in -30inHg to +30PSI (you can get -100kPa to +200kPa i.e. bar)

3. Forge Motorsport Boost gauge Fitting Kit

[>> Forge link <<]
note this is for the 2.0TFSI , theres another kit for the newer TSI cars

1+2 are from the TT shop , 3 from forge direct.

theTTshop = superb , no hassle , ordered and (as expected) it arrives sometime later.
[>> TT shop link <<]

forge direct = ordered online and arrived in 1 day.

Number 3 is useful as it is very neat and provides 3 feeds as required , all tubing etc is supplied.
Its not cheap but in my opinion worth getting.
If you have the Forge dump valve, then you dont need this kit as it already has a boost takeoff point that the OE part doesnt have.

Cost
Ã‚Â£40 for the OPOD mono
Ã‚Â£140 for the DEFI 52mm gauge
Ã‚Â£40 for the forge fitting kit
Ã‚Â£? probably not that cheap if you get a garage to fit one

Fitting

I chose to fit this myself, as it was a good opportunity to get the engine cover off for the first time.

[if you have the OE diverter valve]
1a. Fit the forge fitting kit. I only needed 1 takeoff so the rest were filled with the supplied screws (NB: removable loctite applied)
Plumb the pipe you have from forge fitting kit takeoff to boost sensor from defi kit.

[if you have the forge replacement diverter valve]
1b. Plumb the pipe you have from diverter valve nipple to boost sensor from defi kit.
(I put the sensor hanging from the screw holding the air intake on)
Ensure they are zip tied as they are under boost!

2. Now feed the cable that connects boost sensor to gauge from inside engine bay into cabin through grommet down near battery
You do it this way as the connector at gauge end is much smaller than sensor end.
Be careful you dont break/yank out the connector wires!

3. Feed wires from grommet through dash into vent by any means possible
(Hint : I used wire coathanger + taped wire to that to feed wires throgh various bits)

4. Fit gauge electrical connections
Take panel off right hand side (bit hidden by door being closed) of dash.
Voila the fuse box
One of the top connections should be free but still powered with ign on (use multimeter)
I chose to connect all live,switched live and ilum wires together then use a spare fuse to hold the wire into the connection.
The only other wire left is ground (strip wire back and undo a bolt , wrap it round + tighten)

5. Attach adapter ring to gauge (its a specific way round)
fit gauge to pod
attach 2 connectors (1 for sensor , 1 for power) to gauge

6. stand back + admire.
Check for boost leaks, go on the forums and work out the expected boost levels for your car.

I configured mine to run on switched 12V feed only
I configured mine to run in permanent 'night illumination mode' as my preference.
I removed outer plastic needle position indicator to leave polished edge , looks better imho
All power taken from free position in fusebox behind RHD panel in door shut.

If you wish to use the dimming function with your lights,
there will be an additional step to wire the dimming cable into the roller dimmer switch.
[as noted I preferred NOT to do this, both because it was too light non dimmed AND I didnt want to cut OE wires]

So a few pics

1st pic is the stuff that came , note the OSIR 52mm adaptor on the gauge,wiring harness,boost sensor etc
2nd pic is gauge without the plastic bit on the outside , which I like better than 4th pic
3rd pic is gauge without the plastic bit on the outside
4th pic is gauge in the pod supplied by DEFI which is actually very discreet

Actual dash shots for day and night

(may 2009 : added pic of the 'easy' wiring lol)
Note : earth is black wire attached to screw
all other three (switched live/permanent live and illumination) are together into 1 switched live free point.

Other versions

alternative gauges
52mm gauge is your choice, theres plenty out there
60mm DEFI versions require the link pod for even more cost (but may fit your needs if you wish to fit more than 1 gauge)

alternative pods

AWE kit inc guage : >> AWE link <<
SWG Vent Pod : >> SWG link << : keeps a working vent but non angled and expensive
Pods above steering wheel are available as well.

Plus Points

Accurate and responsive
Quality gauge
Gauge has a black face when powered down
Sensor based, no pipe runs to cabin (just electrical), far better design imho
detachable connectors on back of gauge, easy to remove and put old vent back for dealer servicing if reqd
Excellent diagnostic tool with consistent feedback on engine parameters for vacuum/boost during all driving conditions
Easy to review whats normal and changes that might occur.
The way I have fitted it means all parts can be returned to stock and no OE components or wires damaged.
Looks cool

Minus Points

not a perfect match for OEM dials
too bright on normal day setting
partial loss of vent use
non std and therefore highlights to dealer of a modification (but can be removed easily see plus point)

Example Vacuum and Boost Data values

Boost wise my standard Edition 30 :

Vacuum
22 inHg idle
24 inHg in gear deceleration

Boost
12 psi peak (Tesco 99 RON, lower peak on other fuels)
3rd gear runs to 6.5 k rpm = approx 7.5 psi (0.5 bar)

Interestingly it highlights what I've always felt, that under some conditions the car does not deliver the full 12 psi on full throttle.
Often backing off and re-applying it then delivers 12 !
Seen this in other cars where progressive application to full throttle rather than slamming pedal down achieves more acceleration.
Car also seems to never deliver 12psi when applying WOT in 6th

Boost wise the remapped APR stg1 Edition 30 :
initial 20-22 psi peak on WOT , dropping to 15 psi consistent.
not checked what it is at 6.5k rpm as its a bit rapid now

Boost for other related cars

Audi S3 8P is 1.2 bar = 17.4 psi for 265 hp
ED30 Oettinger is 1.55 bar for 330 bhp

Extra info : Symptoms of DV issues

-A failing diverter valve will generally lose boost.
-The boost can be checked either via a boost gauge, or the vag-com (mb 115).
You will see a huge drop in boost when the dv goes bad.
-Pin-hole DV failures usually allow boost to spike, but will then suddenly vent boost.
Tearing in the DV usually only allows 6-7 PSI. Boost will not spike.
-You may see 000665 - Boost Pressure Regulation: Control Range Not Reached
p0299 - 002 - Lower Limit Exceeded - Intermittent

Summary

I consider this as something VW should have fitted as an OE part.
Useful for standard cars and almost mandatory for tuned ones.
For me its DEFI for quality, the blue racer series so its self contained (other DEFI products need the link box).
Pod wise I have considered changing to the SWG version.
Its very much a personal preference on the actual gauge and pod chosen
, but whatever you choose you are going to benefit from it every day.

A must have mod for every GTI owner.