Right, after seeing a lot of the same questions being asked about whether "is my diverter valve going" or "do I have a PCV valve problem" I thought I would contribute to the forum with what hopefully will end up as a sticky where people can quickly look, diagnose and repair their Diverter Valve or PCV. I will include party numbers so you can order either online or through the stealers although I recommend online Any traders on the forum might want to post their details if they can offer the parts for cheaper.

Right, lets beging with one of the most common weak points of the mk5 golf gti - The **Diverter Valve**

Taadaaa - for those of you who havn't say hello to the revision C diverter valve:

theoritically he's meant to be our friend, which he is, until the going gets tough and he does a bunk.

Firstly lets explain what a diverter valve is:

"Your stock valve in your car regulates your turbo power. At idle, your valve is open from vacuum pressure. When you depress the throttle, the diverter valve begins to close. When fully closed, turbo boost is allowed to be delivered to your engine. When you lift the throttle, the boost pressure is released from the valve into your air cleaner box. Inadequate/defective valves have extended lag, loss of boost, sluggish throttle response. A aftermarket diverter valve can clear up the previously mentioned problems. Also, if you have a chip, you need an aftermarket valve now. Chips simply overtax standard diverter valves."
(yup thats a copypaste job but he put it very clear compared to how I put it)

So now you know what it does your probably thinking well why would my diverter valve fail (unless your one of the clued up people who used google or the search button) well originally the german engineer who has probably shot himself according to the likes of Jeremy Clarkson decided to initially use a rubber diaphragm which would hold the boost. This rubber diaphragm would eventually tear leaving you with reduced boost or also known in some peoples mind as a boost leak.


(although i do like him - you should check out his older programme clarkson meets the neighbours probably his better stuff)

Now, the things that make the rubber diaphragm tear are simple, continuous use and higher boost meaning once your mapped on a revision c diverter valve **it will fail in a very short period of time**.

A revision G valve was released which was meant to help resolve the issue of failure and is typically found in the k04's however, it still is prone (like the revision c) to failure because the diaphragm can tear. Some people change from revision c to g because there is a slightly louder pshh noise compared to the latest revision d (we'll get onto that.)

Sooooo, now your probably thinking *"All right that's very well but how do I actually know when I have a failed Diverter Valve* well nice and easy really - check for the following symptoms:

-A busted diverter valve will generally lose boost or hold lower boost (same difference) this is most obvious when you have a boost gauge, you will typically see the needle peak lower and then the harder you accelerate the more the needle will decline.
-A decrease in MPG as the engine is generally working less efficient.
-If you have vagcom or alike you might see a 000665 error which will relate to boost pressure regulation, or a p0299 - 002 - lower limit exceeded - intermittent which is what I had
-If a small tear or hole you will get spike levels but also sudden vent.
-Some hesitant or juddery feel with the car in the low down rev range / speed.
-A whistle in 4th gear low rev and speed (although not 100%)

So those are the basic symptoms which scream "check me you bastard" so now lets go to the diagnostics, well pretty simple really there is only one way to determine whether you do infact have a boost leak because of a failed diverter valve and thats to get under the car and have a good old poke around.

When you remove your diverter valve you need to inspect it, if you see any tears or holes then you know you need to replace your valve. Mine looked like this

bad times bad, bad times.

I don't have to state the obvious but invest in some good axel stands, or like I prefer, ramps as its you're life your dicking around with by using a widow maker. Heres a nice little guide to get you going, It really isn't rocket science to change one of these bad boy's but remember its different for both k03 and k04 cars - the valve is located front top side of a k04 engine and back lower side of a k03 found on the drivers side of the turbo. If you want more details on location I would suggest looking at a forge spacer install guide on forge's website as it outlines the locations in that and frankly its easier for me that way

first of all you must use a 1/4 socket wrench, short extension, and 1/4 drive 5mm allen socket.

i feel like the removal/installation is very self explanatory, if you do not understand what to do, you SHOULD NOT BE DOING THIS. if you just need a push in the right direction, then here are the steps.

1. Secure car on jackstands/ramps. be careful and safe, as it is you and your life underneath your car.
2. locate DV, unclip solenoid plug.
3. there are 3 bolts symmetrically spaced out on the DV, 5mm allen/hex bolts. begin by removing the top

bolt. correct positioning can be seen in pictures below.

i suggest getting it loose, then using the socket extension w/o the socket wrench as you will may not have enough clearance with it on. either that, or use your hands.

4. remove the other two bolts. do not remove the 4th bolt placed unevenly between the bottom two.
5. inspect / remove diverter valve.
6. reinstall or install new DV, using Blue Locktite on the bolts

i suggest beginning with one of the bottom bolts, not tightening all the way, to get the valve secure. then replace the top bolt, and then install the 3rd bolt.

Nice, so you should replace your revision C with either the G or the latest piston revision D valve. part numbers to follow. Oh and remember to clear all codes with vagcom after replacing your broken Diverter valve. Then take her for a drive - if she feels like cat out a hot pan then you know your onto a winner. If not and your still getting the same symptoms I would suggest checking all other piping for leaks and that you replaced the valve correctly and connected the cable back properly. Some people say if you disconnect your air flow sensor on the intake pipe and your car feels fast its a indication, but personally I didn't try - its more reliable to actually take it out and inspect it visually.

Moving on to the PCV valve

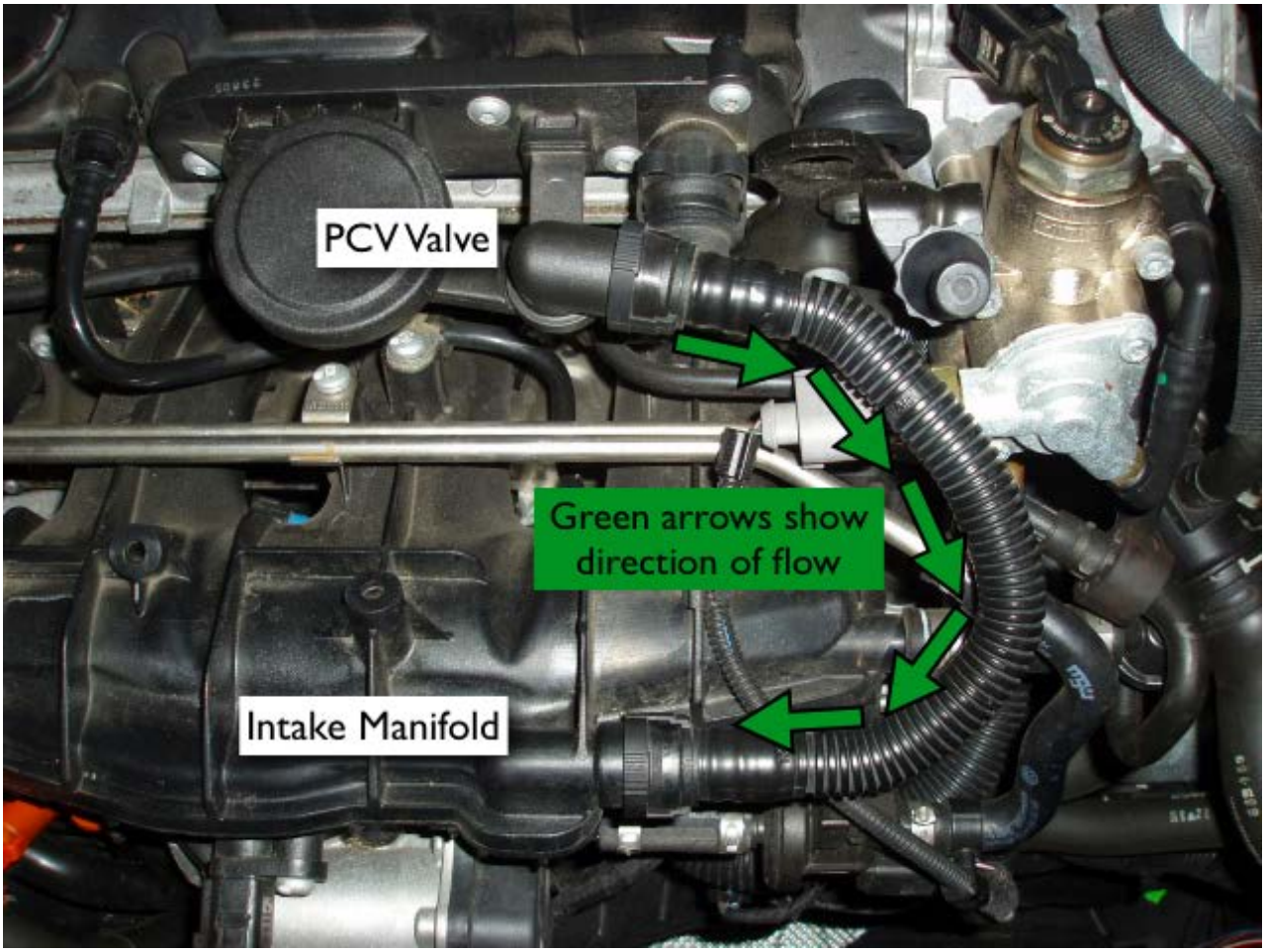
This is also known asssss The positive crankcase ventilation valve, learn something new everyday? What does it do? well its meant to allow for gases to escape the crankcase into the intake manifold when there is a vaccum present (or boost or essentially when your driving) When this fails it can cause a few problems which thankfully I havn't had but will replace my PCV valve.

So what happens when this little bugger goes wrong? well symptoms include the following

-A drop in boost with some people claiming 2-3psi
-A decrease in MPG
-Oil found in or around the diverter valve, oil cap, valve cover, engine cover and I've hear coil packs.

Now, you might have some of those symptoms or all of them which means quite probably you have a PCV valve failure. The diagnosis for a failed PCV valve is simple, there are two ways. The first is to remove the oil cap or the dip stick for a very brief moment as you don't want to screw up the pressure. If the engine retains its ideal as normal then you have a failed PCV valve (or so the saying goes) but if your engine suddenly runs rough and splutters a little then everything sounds gravy baby. remember you only want to do this briefly, not sit there with a brew saying "oh just one more minute we'll see if it starts to smooth out"  The other way is to check by actually removing the PCV valve and blowing through it on the intake manifold side, if air goes through it without any resistance then your valve sounds dead. Or you could take the hose off intake manifold side to the pcv valve and blow through that.

Heres a nice image to demonstrate the PCV valve



The solution is simple like the Diverter valve, replace it. You can replace it with a few different pieces but Im not going to discuss which is better and which is worse because there are tonnes of threads already based around the BSH 'bullet proof' pcv fix although I doupt it would stand up to any form of bullet. I personally would just replace it with the latest revision parts which aaaree:

06F 129 101 G for the New breather valve PCV
06F 103 215 A for the pipe with checkvalve
06F 103 483 E for the Gasket

removal and install guides are everrrywhere so do a little hunting, plus I didnt want to post anything in

particular as you might decide to opt for a catchcan route..

I hope this has shed some light on the situation for people. I realise there are other guides out there and other threads based on the symptoms, diag and repair of both these issues. But Im constantly seeing threads started for diverter valve or pcv valve issues when the answers are already out there. SO hopefully if anyone has to ask in a new thread now people can just direct them to this page and let them make a brew and have a read. Plus I've enjoyed writing it and its distracted me from work for a bit which is what I needed