

## Catch tank install part deux!

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**Post subject:** Catch tank install part deux!  
*some inaccuracies in the other one so I will delete it and do an easier one as Jazz and a few others are about to do it. This is the same as the old one but with diagrams and removal of the PCV valve included*

Breather VTA / catchtank install

This is a worthwhile mod (even on a standard car), does not cost a lot. And is something I have done during the rebuild so here goes.

Why do you want do this? All engines produce pressure in the crankcases etc. this pressure has to be vented off somewhere and for emissions reasons its normally back into the engine via the inlet system. Unfortunately it normally brings with it oil mist. If you have ever taken your intercooler off, you will see oil collecting at the outlet.

When this mist / oil gets mixed in the inlet charge, it (amongst other things) effectively lowers the octane rating of the fuel, thereby increasing the risk of detonation and engine failure. All this mod does is vent the pressure and oil to atmosphere via a catch tank to retain the oil. It also eliminates oil getting onto the MAF and the potential disaster that can happen.

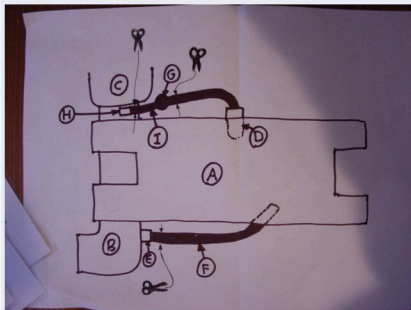
The other thing this does is maybe give you warnings of potential problems such as defunct piston rings etc cos things like this will cause your tank to fill up a lot quicker. Also if it fills up with milky condensabon it probably means you do a lot of short journeys or you drive steadily everywhere. .

And of course they look nice!

Here is the existing set up.

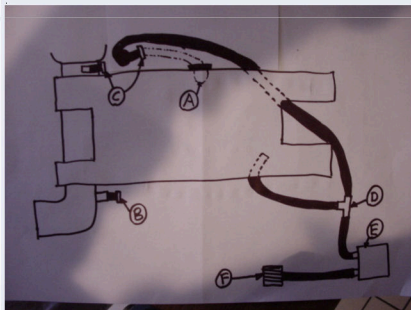
- A is the inlet manifold
- B is the inlet pipe
- C is the turbo
- D is the PCV valve
- E is cam breather spigot on inlet pipe
- F is cam breather pipe
- G is crankcase vent tube
- H is crankcase breather spigot on inlet pipe
- I is crankcase breather pipe

the scissor points are where you need to cut the pipes leaving enough room to bung the pipes with a bolt or custom bung.



Here is what you end up with!

- A is a 1/4" BSP bung to replace the PCV valve
- B is a bung for the cam breather spigot.
- C are bungs for the crankcase breather spigot and the original pipe to the PVC
- D is a T piece
- E is the catch tank
- F is a little filter



How to do it-

First you need to decide where you want to put your catch tank so you know where to feed the pipes towards.

I have put mine just in front of the battery. You have to relocate the horn a little, you can see i have just made a little ally bracket to do this.



If you remove the strut brace and intercooler you will get access to the crankcase breather. Its on the block, just to the right of the turbo. This is a pic looking from behind the engine.



one set up is the pipe running to the lower left goes to the PCV, cut this close to the crankcase vent tube and bung it as per the diagram.

Undo the 4 throttle body bolts and move the body out the way. you will then be able to pull the pipe off the PCV valve and remove the valve from the manifold. Replace it with a 3/8" BSP bung with a bit of PTFE tape on.

The other pipe on the upper left normally goes to the inlet pipe spigot at the top right. Cut this off and blank the inlet pipe bit off (I have used nice turned ally bungs as you will see in another pic but if you don't have access to a lathe a bolt and dip will do)

Replace the cut pipe on the breather with a couple of foot of 12mm or 1/2" flexible pipe. Route this pipe towards the area at the front right of the manifold just behind the oil fill pipe. Because my engine was out I have routed it through the manifold and it comes out neatly between the two legs of the manifold but this might not be easy with the engine in situ.

The cam cover breathers exit from under the front of the manifold and travel left to join the inlet pipe just after the 90 deg. Bend. Pull the pipe off the inlet pipe and feed it the other way behind the alternator and air con pump. Block the inlet pipe hole in the same way as you did for the crankcase vent (note I have used a new bit of pipe for this breather because it was easy for me to put on while I had the manifold off. It may not be as easy with it on, hence just use the original).

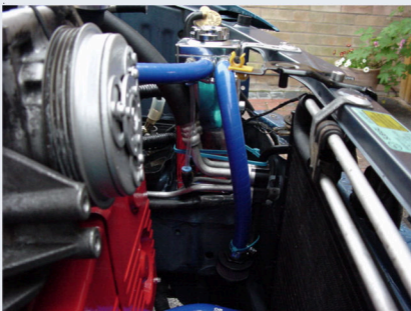


Your two pipes should now meet up somewhere behind the oil cap filler area. Put a 12mm tee piece into them, then run another piece of hose to the catch tank from the tee (the blue pipe in pic).



It would be nice if the tee and the catch tank nozzle were the same diameter but my catch tank spigots are 10mm. I could not find a tee piece with 2 X 12mm and 1 X 10mm on it so I have used 12mm pipe for this run and had to tighten it hard down onto the nozzle.

One more piece of hose running down under the car from the outlet and its job done. I have put a mini filter on the end of this to try and cut down on any potential smell in the car but that's up to you. You need a longer hose than the one in the pic so it reaches under the car.



Job done

P1 #203 - 405 BHP / 360 ft/lb STOLEN on 20/08/07. Gone but not forgotten.

Last edited by marky mark on Apr 13, 2006 - 02:51 PM; edited 1 time in total