

## Installation of an OilGuard Bypass filter on an A3 TDI

The filter is very compact and uses a one-micron filter element. The quality of the filter is top notch and mounts in the TDI very easily. The nice thing about this installation is it allows you to service the filter without having to get on your back or remove anything! I feel that for the TDI that this is the best bang for the buck. It cost's a bit more than other bypass filters but provides the same level of filtration and the replacement filters are 1/4 of the cost and includes new o-rings and a filter element.

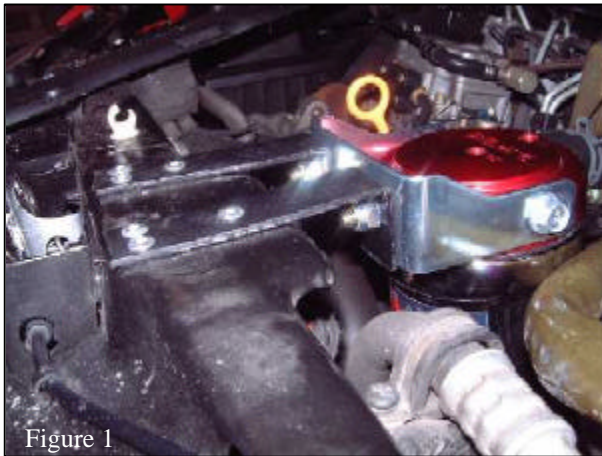


Figure 1



Figure 2

I made two brackets out of steel bar that I bought from a local hardware store. It is about the same thickness as the bracket that comes with the filter. I bent a tab about 1.5 inches in length and drilled a hole the same size as the bolts that are in the filter bracket (Figure 1). I then drilled three holes in each of the brackets and drilled and riveted them into the sheet metal on the grill of the car. Be careful to move the wiring underneath when you drill or you WILL drill into the wires. Use rivets or a few small bolts and nuts if you wish just secure it firmly (Figure 2). Now secure the filter to the brackets using two bolts and nylon lock nuts to make sure the filter does not vibrate loose.



Figure 3

Locate the oil filter/oil cooler mount...note the Allen screw on the left that is where we are going to tap into the oil supply (Figure 3). Get an Allen socket and unscrew the Allen nut on the oil filter mount. Remove the nut; no oil should spill since there is no pressure.

Put some thread sealant on the straight barbed fitting and screw it into the oil filter housing. Apply sealant to the angled fittings and screw them into the filter unit.

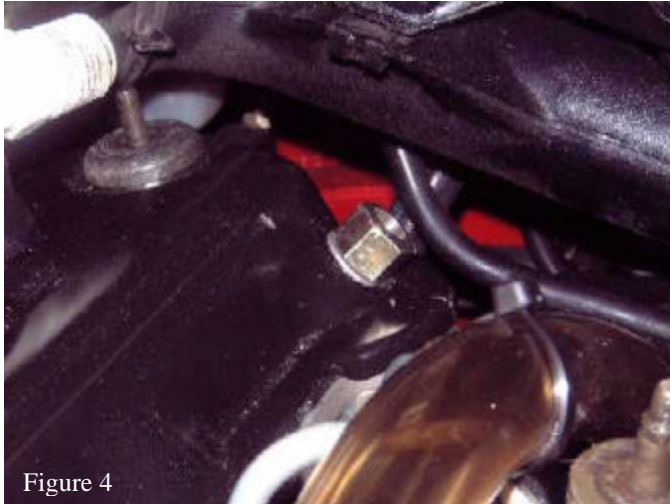


Figure 4

Remove the valve cover from the engine and drill a 1/4" hole on the very corner of the valve cover. Use a punch to widen the hole just enough to start the threads. Make sure you use the o-ring washer before screwing the insert into the valve cover and tighten. This is a departure from the normal procedure of sending the oil back to oil pan but it works every bit as well! Make sure you clean out the valve cover before reinstalling it to make sure there are no loose shavings (Figure 4).

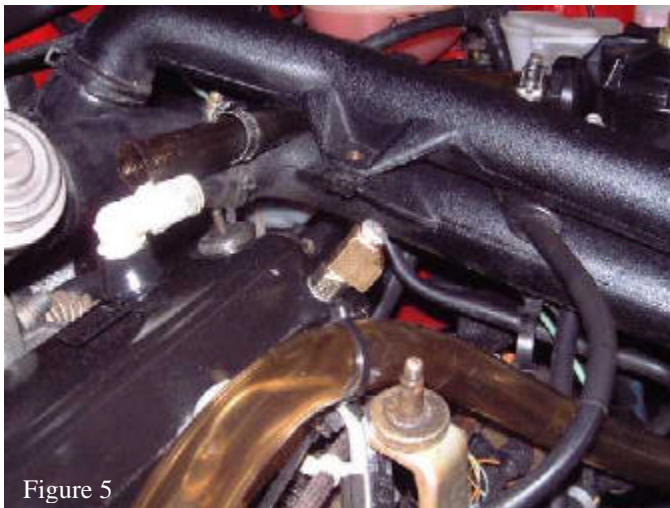


Figure 5

Screw in the T-fitting into the valve cover base, hold the base to you don't over-tighten it. Use the cap screw you removed from the oil filter housing and seal up the top end. It doesn't screw in all the way so use thread sealant on the threads to assure a drip free seal (Figure 5).

Attach the hose from the bypass filter inlet to the engines oil filter mounting fitting. Now run another piece of hose from the bypass outlet to the valve cover. Check that all of the fittings have

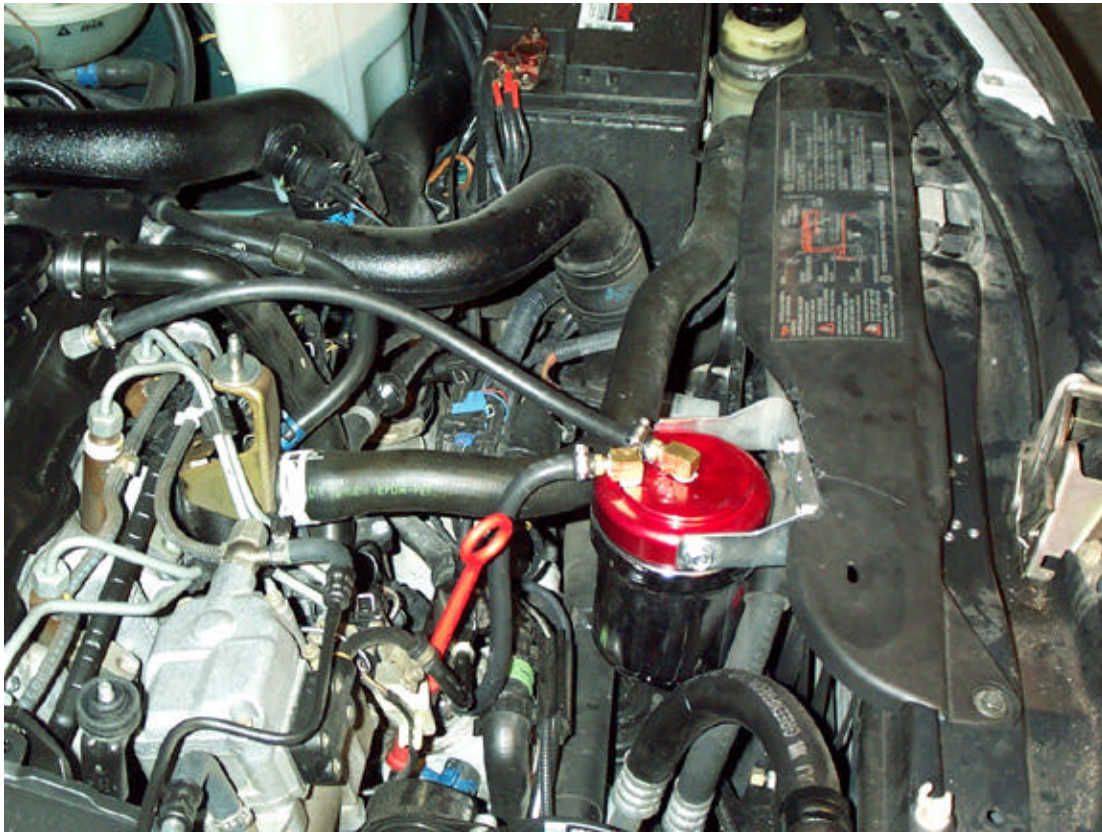
a hose clamp and that it is tight!!!! However do not over-tighten.

I suggest before starting your engine, to change the oil and full flow filter and put some good quality oil in. I suggest using the Delvac-1 5w40 since it meets the VW viscosity requirement and is designed for extended oil change intervals.

The reason I inserted the oil return on the very corner of the valve cover is because of the internal baffle. The driver's side corner does not have the baffle so the thread goes straight in. I started with a 1/4" bit and enlarged the hole with a punch. This way I kept the threads tight. The cover is pretty thick steel so it does require a pretty good whack.



I finished the OilGuard installation late last night on my 96 Passat. I've got a couple of observations that may be of interest to others planning an installation.



First, the valve cover. I was surprised to learn that the valve cover has a sheet metal liner tack welded to the inside that more closely follows the shape of the cams and bearing blocks. There are plenty of points for oil to drain from above this shield so that isn't a problem. My concern was that it was impossible to be absolutely certain that all the metal shavings from the hole were cleanout. You can't see the hole from the inside of the cover. I stuck the tube from the WD40 can between the cover and the liner and sprayed generously. Also, 1/4 inch isn't quite big enough to get the threaded adapter started. I partially beveled the hole with my 5/16 inch bit. This might not have been a good idea since the threaded piece started to strip as I tightened it against the o-ring. Install the barb in the fitting before screwing into the valve cover. The o-ring isn't compressed much but it doesn't leak either. The threaded piece sticks into the valve cover about 1/2 inch and the liner prevents any splash or spray from hitting the hole. No sign of seepage after 100 miles. Fingers crossed.

Second the oil pressure tap. The 96 Passat has a low and a high pressure switch and the 3rd port is in the back and pretty much unreachable. I removed the left side switch (high pressure, I think) and threaded in the brass tee. The rub is that the pressure switch has a straight machine thread and the tee and barb is a tapered 1/8 inch NPT. Not ideal. The thread pitch and size seems about the same though. In fact I had some seepage from the switch to tee connection at first. Tightening didn't help so I removed the switch and applied some Teflon tape instead of paste. The

instructions are pretty adamant about not using tape probably for fear that a piece might get loose and plug up a gravity oil drain. I figured that this was on the inlet to the filter and that I didn't need to worry about a piece smaller than 1 micron.

Third the support. Other pictures I've seen such as DBW's show a nice wide spot to rivet the brackets to. On a Passat the equivalent area is about 1 inch wide. I space the holes as far apart as I could and so far so good. I did buy some steel rivets to use instead on aluminum. I'm thinking of adding a brace on the top side of the support. Keep your drill bit short -- you go through the support piece pretty easily and the air conditioning condenser is directly underneath.

All in all I'm really happy with the way it turned out. Here are some pictures.