

A3 Jetta TDI Intercooler Cleaning

After recently chipping my car, I decided I should attempt to tackle some preventative maintenance. The two jobs I had in mind were cleaning the intercooler and the intake. In this article, I'm focusing on cleaning the intercooler. After completing this job, I felt as if it wasn't too demanding. It did require about 2 hours of my time, so it is something that will take some time to do right. The technical reasons for cleaning the intercooler can be found all over www.tdiclub.com. I used the procedure posted on their website to walk me through the process. The original article can be found at <http://www.tdiclub.com/TDIFAQ/TDiFAQ-7.html#f>.

Here's my disclaimer - I am documenting the procedure I followed when cleaning my intercooler. Whatever you do with this information is up to you. I take no responsibility for your actions or whatever you do with your car. I think before doing any procedure, you should check out different sources of information on how to perform the action before beginning. Again, www.tdiclub.com is a great website with oodles of TDI information.

Here are some notes about my procedure and general information. When I refer to left and right, I am referring to them relative to the image shown. Usually, left refers to the passenger side of the car, and right is the driver's side. When searching for information on the intercooler in a Bentley manual, be aware it is referred to the "charge air cooler". I became even more frustrated with the CD-ROM version when I couldn't find anything on "intercooler". Just beware...

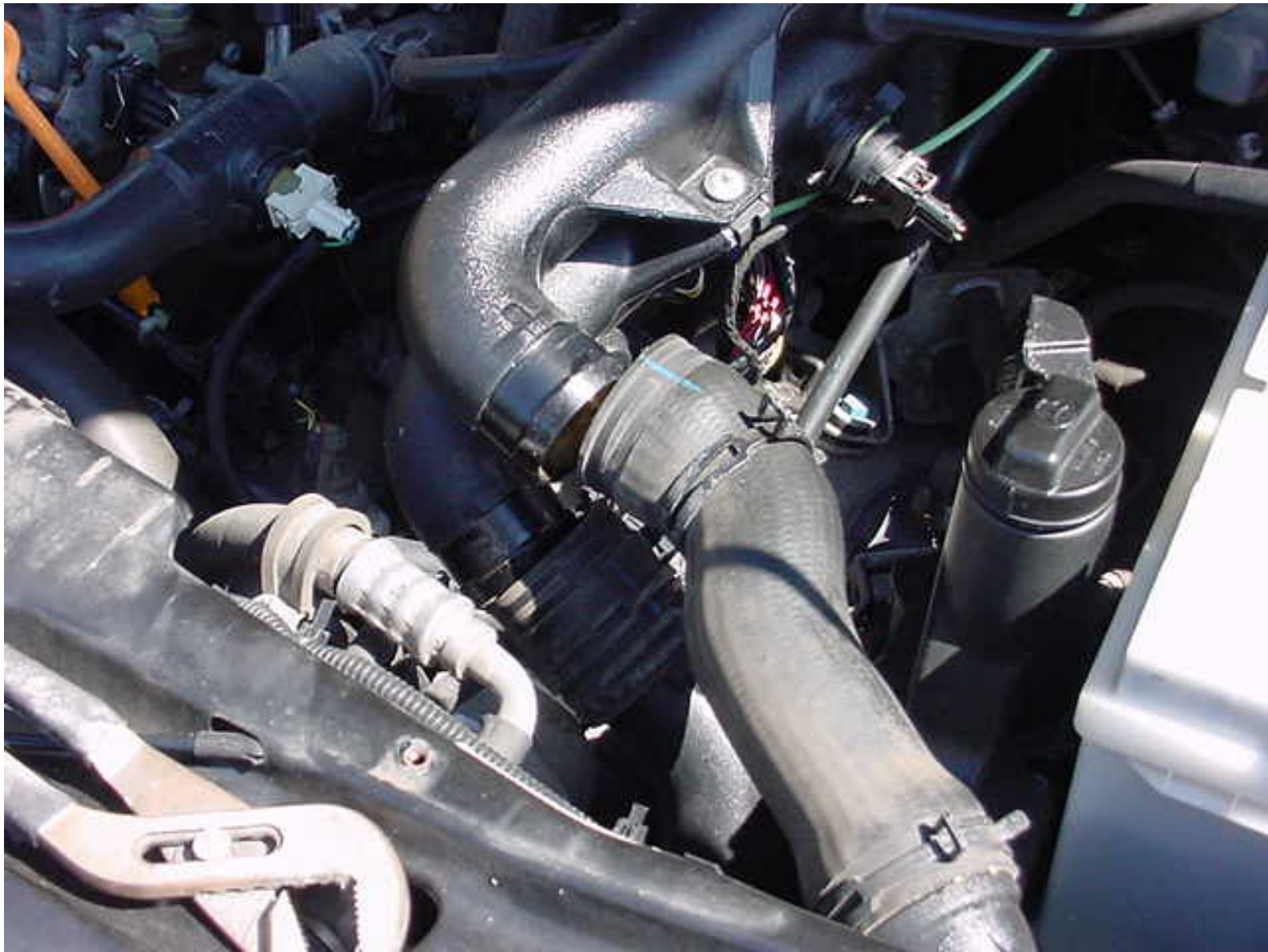
Lets get to it!



First things first - pop the hood. To make things easier for me, I elected to remove the engine cover (three 10mm bolts).



Here's a view of the area we will be working with on the top of the car. I also removed the plastic cover (still in place in this picture) directly behind the hood latch (8mm nuts holding this in place). The two circled hoses need to be disconnected.

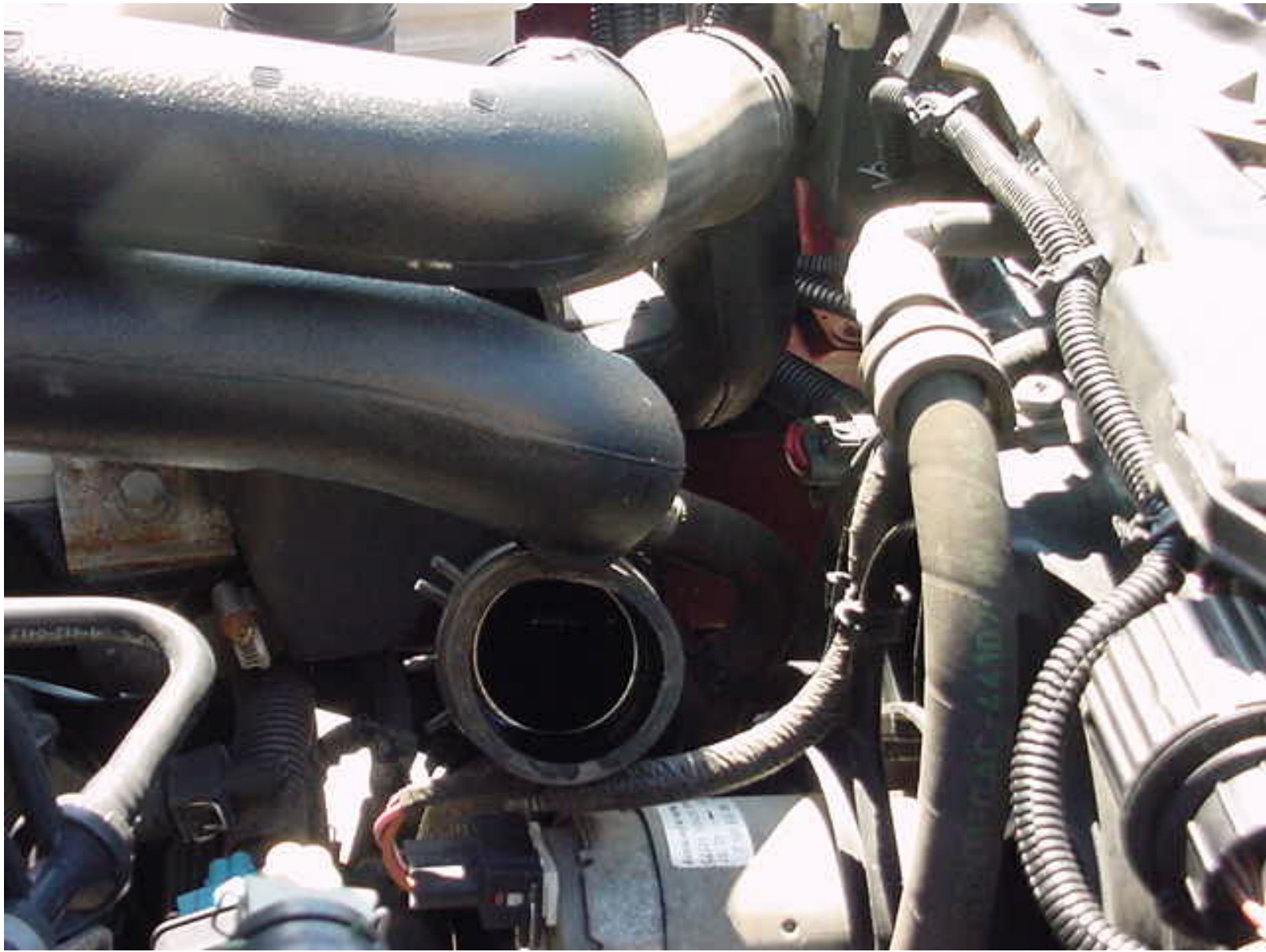


Viewing from the front of the car... Remove the rubber hoses from their mating plastic ones. Spring clamps are used here. Use some channel locks to open the spring clamps and slide them down the hoses. For future reference, we will be dumping all our liquids in the bottom hose.



Now gain access to the bottom of the intercooler. I choose to jack up the driver's side of the car to make it easier. To remove the panel blocking access to the bottom of the intercooler, remove the two 7mm bolts on the inside of the wheel well (shown here) and also two Philips head screws under the car and along the front plastic valance.

Now its time to prepare the first batch of liquids to dump into the intercooler. I found it easiest to use a gallon milk jug and a siphon that normally accompanies a kerosene heater to fill the gallon jug just over half way with kerosene. That's right, kerosene - not gas or diesel.



Now, take your gallon jug filled half way with kerosene and your siphon and pump the kerosene into the lower pipe (shown here - side view again). Attempt to get it all in there. Now you want to let it set for fifteen minutes.



During the fifteen minutes, attempt to agitate the kerosene. The method I used involved the same siphon with the flexible part shoved down the lower pipe, with a rag sealing the gap. Make sure the valve on the red handle/pump is closed. You can squeeze the pump handle to force air into the lower pipe. You should be able to hear gurgling out the top pipe. To get more forced air in there, cup your hand around the straight piece of the siphon (sticking in the air in this photo) and blow GENTLY. If you blow too hard, the kerosene will just fly back out the lower pipe and soak your rag and squirt everywhere. (if you have your siphon inverted, you won't be able to blow at all - the internal valve will block it).



After the fifteen minutes are up, get a drain pan and crawl underneath the car to access the bottom of the intercooler. You will find a pipe (already disconnected here) with another spring clamp on it. Slide the spring clamp on to the plastic pipe and pull them apart. Watch out, though; the kerosene will go flying everywhere. To avoid getting the kerosene all over yourself, you can pull this pipe loose from the top of the engine compartment (its the lower one we were dumping stuff into). The liquid still goes everywhere, but at least its not all over your arm.



Now take a look in the drain pan - I bet you'll see something like this. The kerosene I dumped in was as clear as water, and it came out as dark as oil. This is to be expected - that's why we're cleaning it out!

Now, reconnect the hose at the bottom of the intercooler. It may not be necessary to refasten the spring clamp at this point.

You now need to repeat this procedure of dumping liquid into the intercooler at least one more time. In the next cleaning, take a teaspoon or less of dish detergent and a half gallon of hot water and dump down the bottom pipe again. Repeat the procedure for agitating the liquid and dumping it out. The dish detergent water I dumped out was still pretty dark.

The original procedure only called for only two cleanings (kerosene then water), but I choose to rinse out the system one last time with just clean hot water. Again use a half gallon of hot water (this time by itself), agitate and dump it out. On the last rinse, the water was cleaner than the other two, but I still wouldn't drink it. That being said, I was satisfied with my cleaning.

We're not done yet... At this time, you want to rid the system of any standing water. I suggest removing the lower hose we were dumping stuff into. When it is disconnected at the top and bottom, it will just pull out from the top. Swing it around a few times to remove any water inside. Before you stick it back in place, try removing any liquids from the top pipe. I choose to remove it by disconnecting the pipe directly behind the driver's headlight. Again, there is a spring clamp, and this one can be a bit tricky to get in to. Pull out that pipe and swing it around a couple times, then put it back in place and reattach the spring clip behind the headlight. Now place the lower pipe back in the engine compartment. You'll want to attach it at the bottom of the intercooler first, but before doing that, take a clean rag and soak up any liquids standing in the short rubber hose still attached to the bottom of the intercooler. Now replace the spring clamp on the bottom of the car. Back on top of the car, attach the lower hose to the mating plastic tube and fasten the spring clip. Likewise, attach the top one and reseal the spring clamp back to its original position. Finally, replace the engine cover, plastic piece behind the hood latch, and reattach the plastic panel covering the bottom of the intercooler.

That's it! You're all set. I suggest letting the car idle for a few minutes to help evaporate any of the liquids still in the system. After that, take it for an easy drive (below 2500 rpm) until it warms up to operating temperature. After that, you're all set! Enjoy the new clean intercooler!