

BHW Tandem Pump Replacement

Tools required: small hands, 1/4 drive 5 mm hex bit, short extension, 1/4 drive ratchet, 6mm hex bit (either 1/4 or 3/8 drive) and ratchet for same, hose clamp pliers, 10mm hex socket with appropriate drive, flat blade screwdriver. Suitable hex keys might be used, but not as easily for the hard to get to bolt (see below). You might have to make them a custom length.

Note: the subject vehicle had an engine replacement. Not all clamps and wiring positioning are as you will find on an original fresh-from-the-factory Passat. Make a note of how yours is for reference during reassembly.

- Start by disconnecting the electrical connector at the pressure sensor in the rigid tubing. Release the fuel lines from the clips on the rigid pipe.



- Disconnect the large flex tubing from the rigid tubing near the oil dipstick.



- Use the 10mm socket to unbolt the rigid pipe (in the area of the engine cover holding post).



- Use hose clamp pliers, loosen the clamp for the rigid pipe at the intake coupling and pull out the rigid pipe. Remove the pipe from the engine compartment.



- Disconnect the electrical connector from the intake flap motor.



- Disconnect the electrical connector from the EGR valve.



(The wiring is easier to move out of the way with these disconnected.)

- Use a screwdriver to push the retaining clip for the intake coupling into service position and remove the right angle intake coupling from the intake. This gives access to the vacuum line.



- (optional) Pull the brake vacuum line out of the rubber piece on the back wall. I recommend this to be able to move that line completely out of the way.
- Remove the large vacuum line from the tandem pump.



- Now disconnect the fuel lines from the center nipple of the filter, and the return line from the tandem pump at the T on the filter. Have a rag under them to catch any fuel. I prefer to clamp the feed line into the filter to limit drain back to the tank.



- Using a hand vacuum (or other vacuum source), with an intermediate container, suck the fuel from the disconnected return line. This should suck out most of the fuel from the fuel lines and tandem pump.



- Using hose clamp pliers, release the feed line from the tandem pump.



- Disconnect the electrical connector at the large round injector connector at the back of the engine. There should be a small red locking tab that needs to be picked out a short distance before you can turn the connector. It may have been lost if picked out too far before.



- Now there are four bolts to remove. Two 5mm internal hex bolts, and two 6mm internal hex bolts.
- Start with the hardest 5mm one first. It is down below where the return fuel line attaches to the pump. You might need to use a mirror to see where it is. Access to it is from below the coolant flange that is inconveniently causing an obstruction. The bolt has a washer so be sure to remove both of them together without dropping either one.



- Now remove the easier to see 5mm bolt and washer.



- Next remove the 6mm bolt below the large vacuum line nipple.



- Finally remove the remaining, easiest to get to, 6mm bolt that attaches the pump to the cylinder head.



- Release the pump from the head and angle it so you can get to the return fuel line clamp.
- Use hose clamp pliers to release that clamp and remove the return line.



- Now you can lift out the pump and its gasket.
- Installation is the reverse of removal. Tighten 6mm hex bolts to 20 Nm, the smaller bolts to 10 Nm.
- After connecting the fuel feed line to the pump and filter, and before connecting the return line to the T, cap the T and hand vacuum fuel through the system until fuel starts to come out of the return line.
- Connect the fuel line to the T.