

2001 4.4i BMW X5

Crankcase vacuum hose replacement

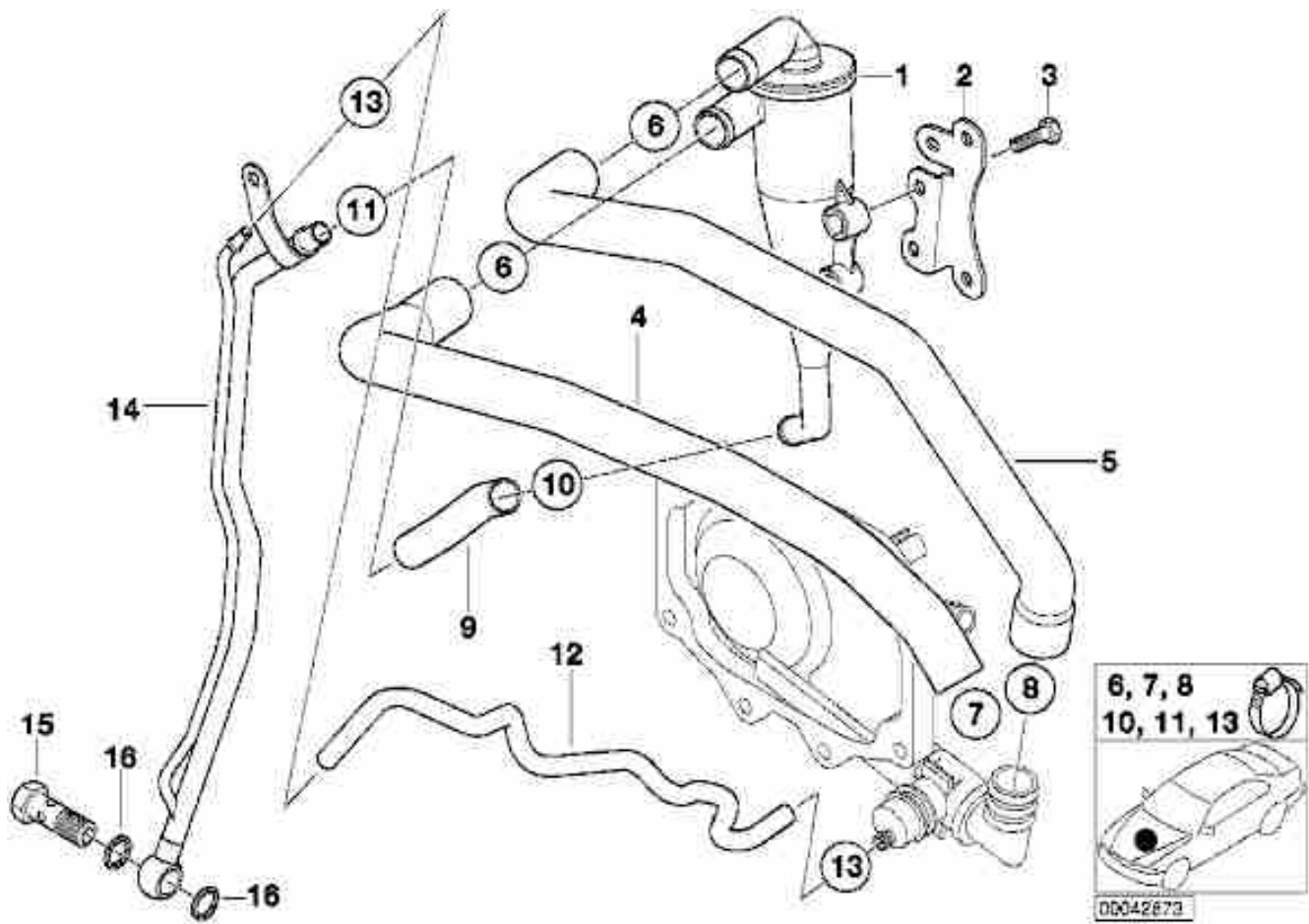
stephX5

February 18, 2008

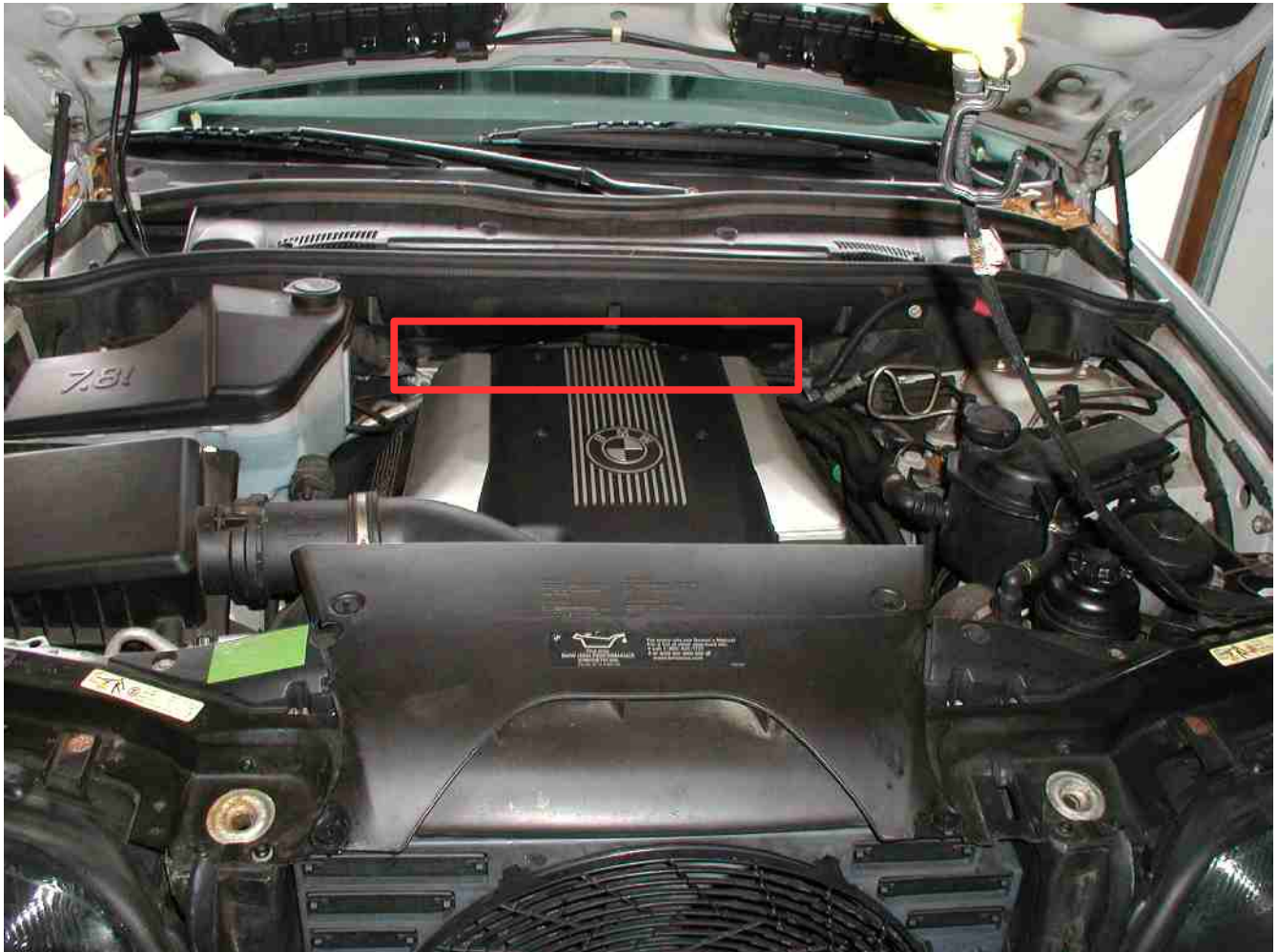
- 1) Tools that I used during this project:
 - utility knife
 - vinyl pry bars
 - allen
 - cutters
 - 13mm combination wrench
 - 1/4" ratchet
 - 1/4" hand driver
 - 1/4" extension
 - 1/4" drive 6mm socket
 - 3/8" ratchet
 - 3/8" extension
 - 3/8" drive 13mm socket
 - flat head screw drivers



- 2) The hoses and clamps necessary for the repair:
#5
#4



- 3) This is the area where the hoses are located the oil separator is on the left side of the rectangle and the crankcase connections are on the right side of the rectangle.



- 4) Use the vinyl pry tool (or carefully with a screwdriver) to pry the gasket that runs across the width of the engine compartment along the firewall.



- 5) Release the captive twist on connectors that hold the frame around the microfilter, once all of the captive connectors are released this frame should pop out.



- 6) Use the 13mm socket and combination wrench to remove the 2 nuts that hold in the firewall/microfilter assembly



- 7) Remove the 2 troughs that connect to the microfilter assembly one on each side, they simply slide out when you pull straight up on them. There is a groove on both sides that they fit into.



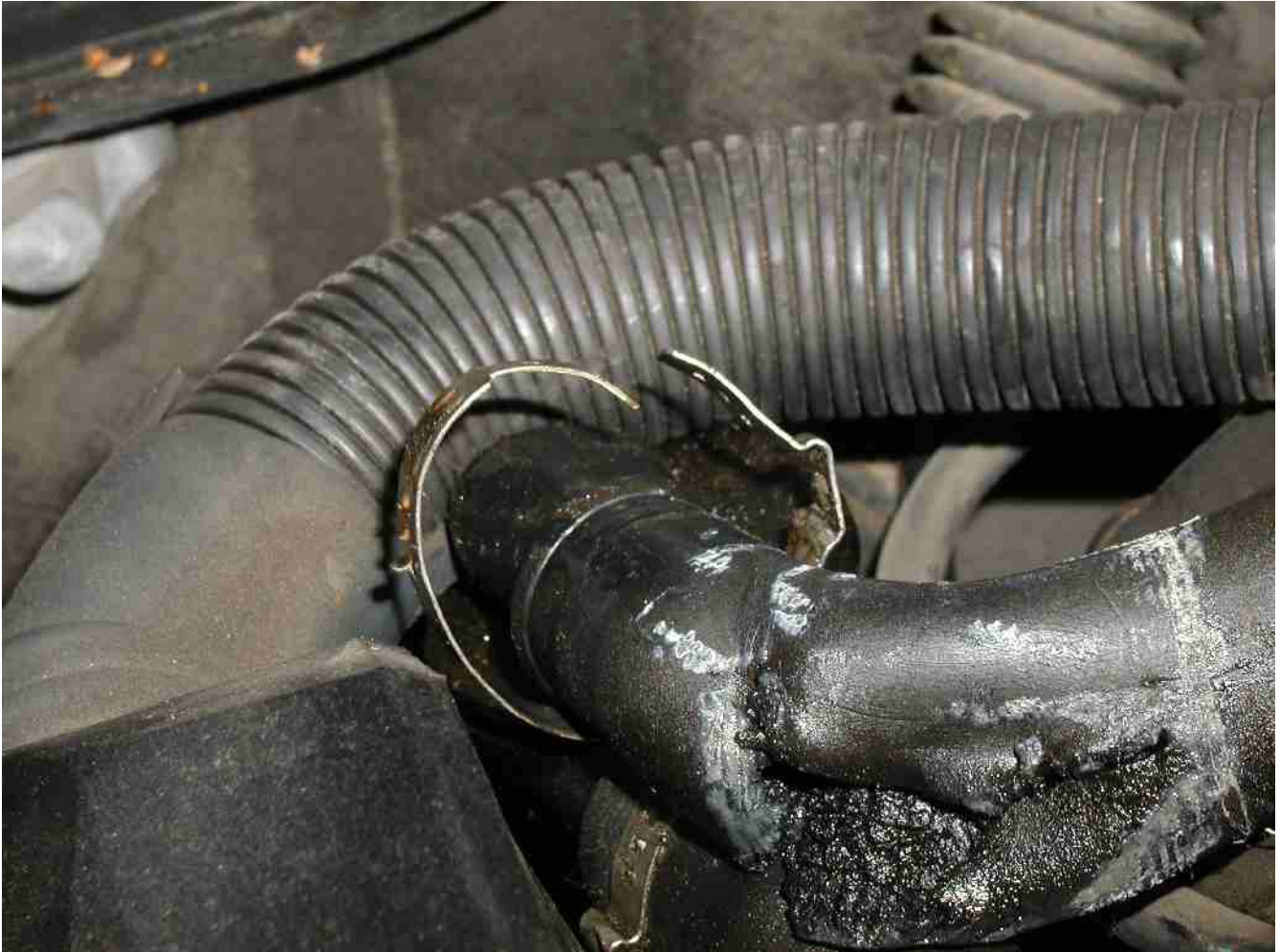
- 8) Pull the microfilter assembly straight out of the engine compartment it should come out easily without excessive force needed. The bolts on either side where the 13mm nuts from step 6 were removed will stay in place.



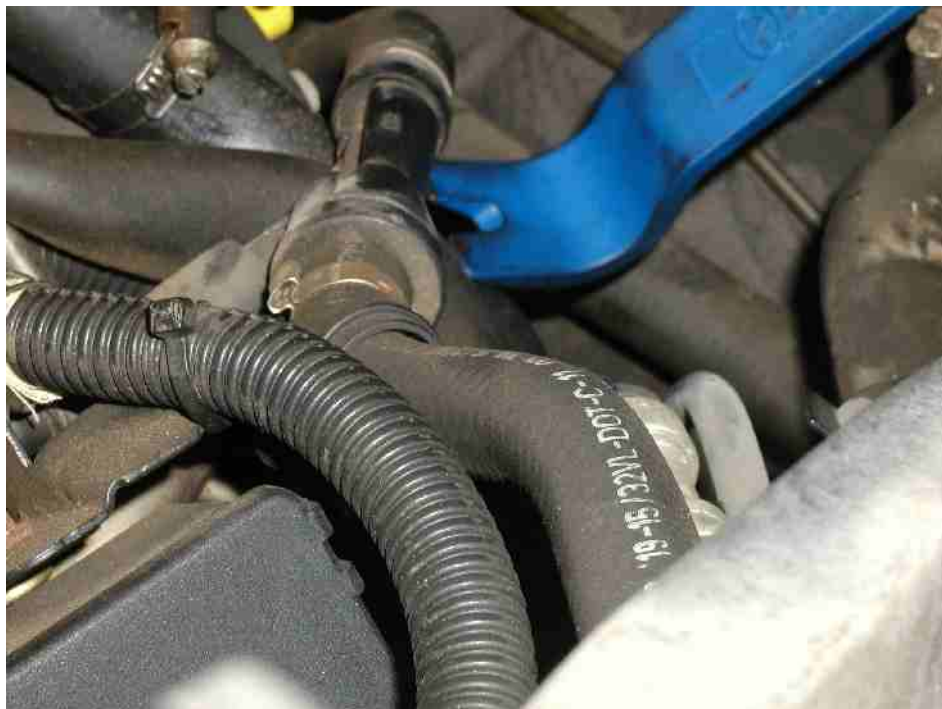
- 9) Remove the engine cover loosen the 4 hex captive bolts that hold the cover in place and pull up on the cover.



10) Cut the crimp clamps on the oil separator side and pry the hoses off of the oil separator. This is the easy side the oil separator is fairly easy to get to in this state and the clamps and hoses can be worked fairly easily.



11) Use the vinyl pry-tool and or a screw driver to remove the other side of the hoses that connect to the crankcase.

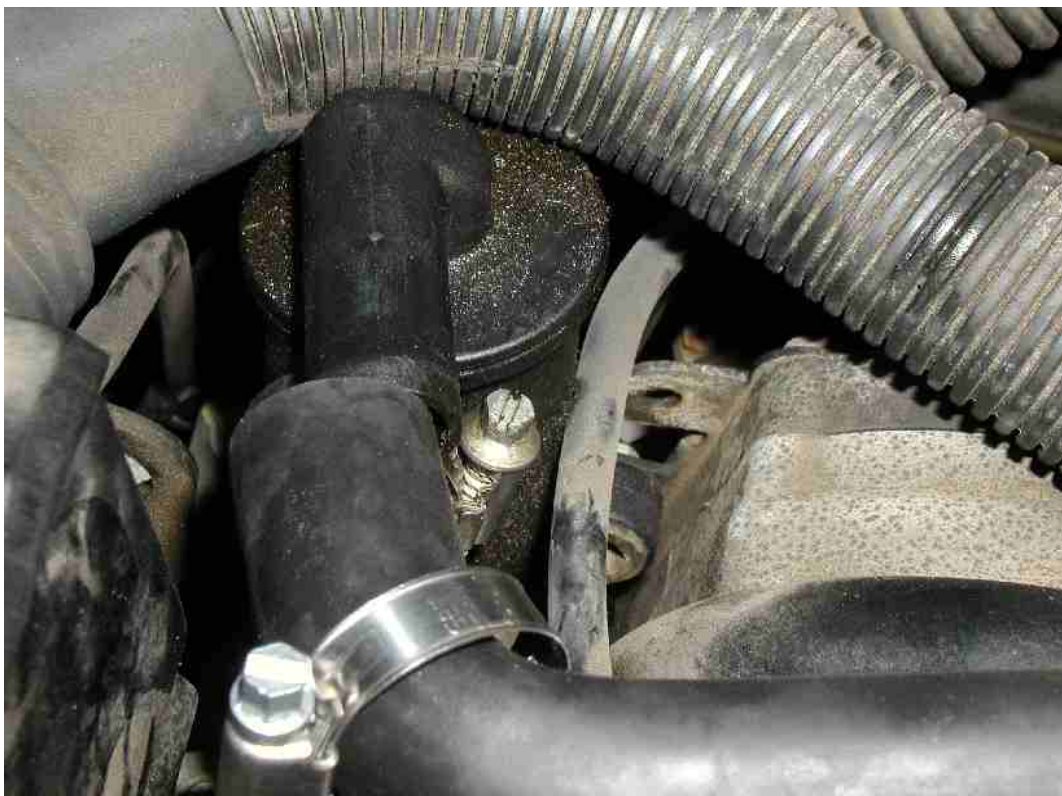




I had to split the ends of one hose with a utility knife to be able to pry it off of the connection point.



12) Dry fit the new hoses and clamps into place. Since the oil separator side hoses had crimp type clamps take extra care to position the new screw type clamps for a good fit, then tighten everything into place.



13) Replace the microfilter/firewall assembly bac into place.



14) Replace the micro-filter troughs on each side.



15) Tighten the 13mm nuts on to the bolts that connect the micro-filter assembly to the firewall. Be sure to remember to include the cable holder for the positive battery cable on right side bolt.



16) Replace the firewall gasket.



17) Replace the engine cover.

