

HPFP DIY

Warning: The injector fuel lines, the rail, and the HPFP are pressurized long after you turn off the car, I recommend disconnecting the battery and letting the car sit over night before performing this procedure. In performing this procedure, you do so at your own risk. **AGAIN...DISCONNECT THE BATTERY!**

- This procedure is based on an 08' 135i with an N54 motor that already has the cowling removed.
- My car does not have the stock charge pipe or intake. Removal of the stock charge pipe is virtually identical with the exception of an additional torx screw that mounts the charge pipe and my DV connections to the charge pipe are different. All pretty self explanatory.

1. Remove the cabin air filter and cowling. (No cowling on mine)



2. Remove the stock air box or DCI filters (Mine has DCI's)



3. Disconnect and remove the diverter valves

- a. Rotate the rear intake diverter line's grey connector about 1/16 of a turn counter clockwise to disconnect.



- b. Disconnect the vacuum line at the Y connector (don't disconnect manifold side to prevent breakage).



- c. Disconnect the diverter valves from the charge pipe. If you have a stock CP, you will rotate the grey connectors clockwise.



- d. Disconnect the front intake diverter valve line.



- e. After DV lines are removed, grey connectors can be rotated back to their original position to make installation easier as they will then just snap and lock in place when you push them back on.
- f. Diverter valves removed.



4. Remove charge pipe.
 - a. Remove "C-clip"





b. Loosen the hose clamp from the FMIC side of the charge pipe.



- c. Disconnect the MAP sensor from the charge pipe.



d. Another view of the Map sensor connection.

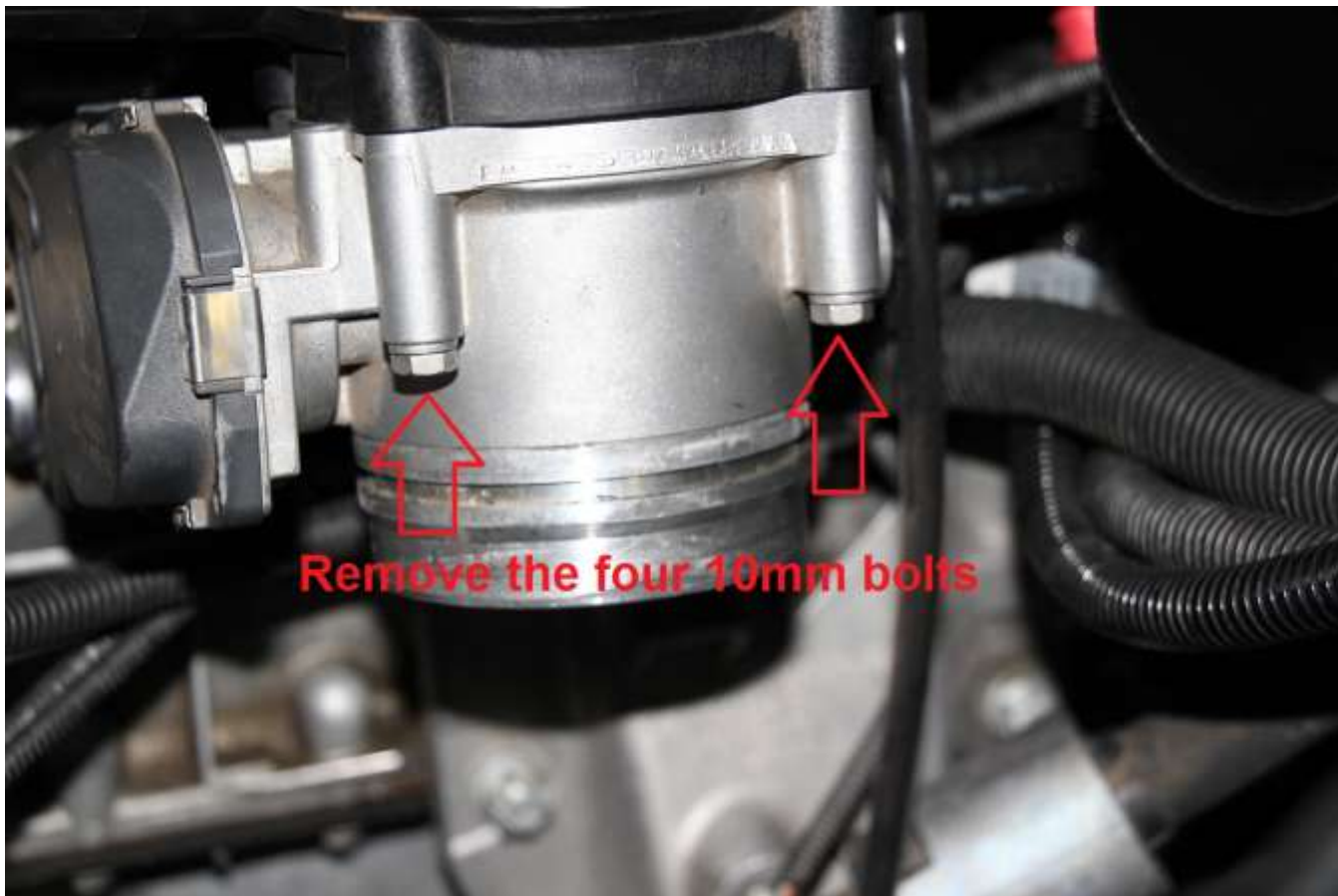


e. Remove the charge pipe (there is an o-ring inside...don't lose it and verify it's there)



5. Remove the throttle body

- a. Remove the four 10mm bolts, there are two on the top side and two on the back side.



- b. Disconnect the vent line from the throttle body. Compress front and back side of connector while pulling away from throttle body to disconnect.



c. The vent line disconnected.



d. Disconnect the electrical connection to the throttle body.



e. I use a small tweaker to lift the tab to disconnect it. (you won't have the Fuelab FPR on the right)



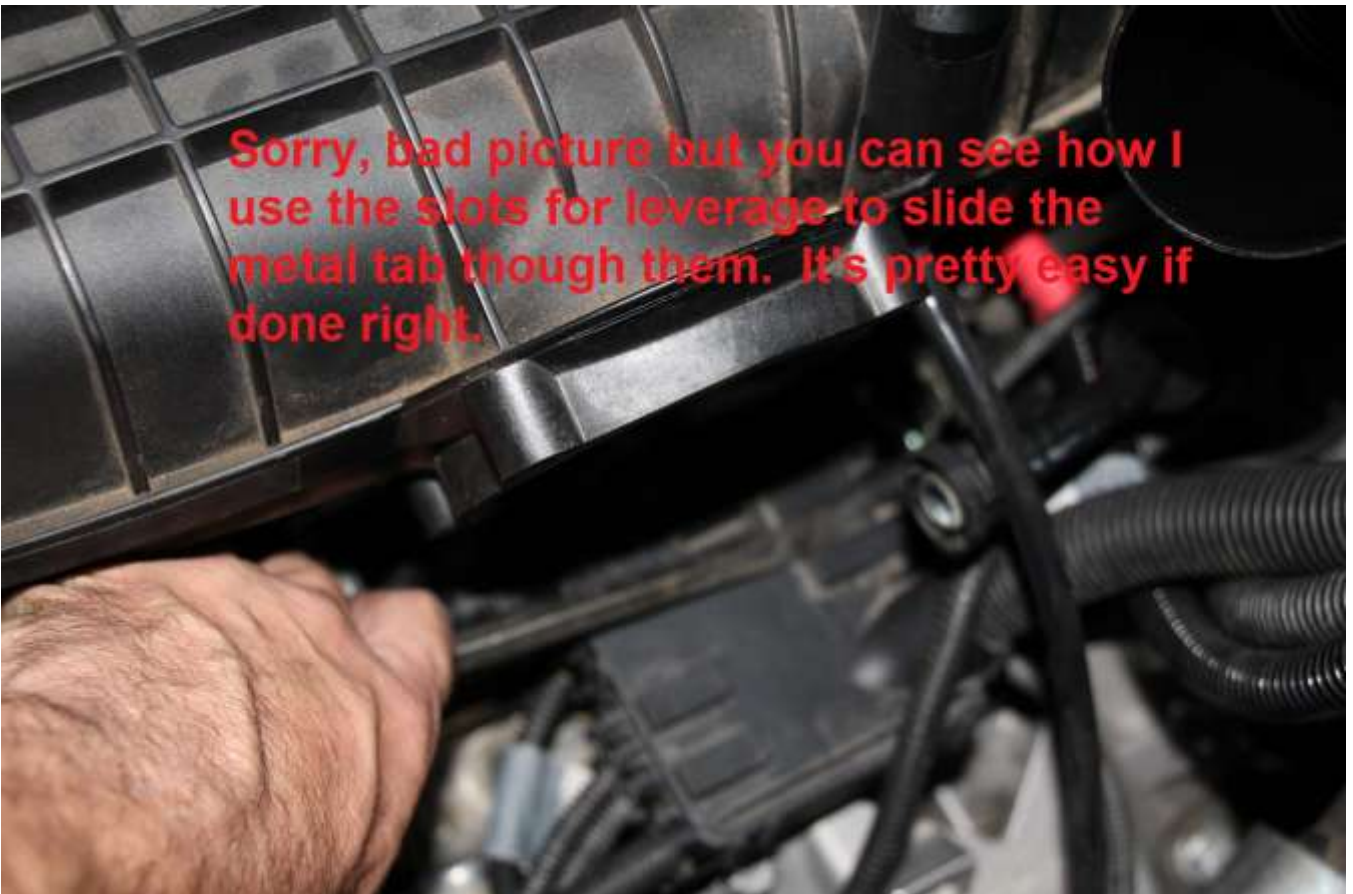


6. Disconnect the "Evil black box" from the intake manifold.

a. This is the box that everybody complains about getting loose when doing the intake cleaning.



b. Sorry...bad picture. If you use a flat head screw driver to leverage against the tabs, you can push the metal tabs through the slots. The one on the left I use two screw drivers due to the distance.





- c. Disconnect the two electrical connections on the left side of the black box to move it further out of the way. (optional but easier)







7. Remove old HPFP

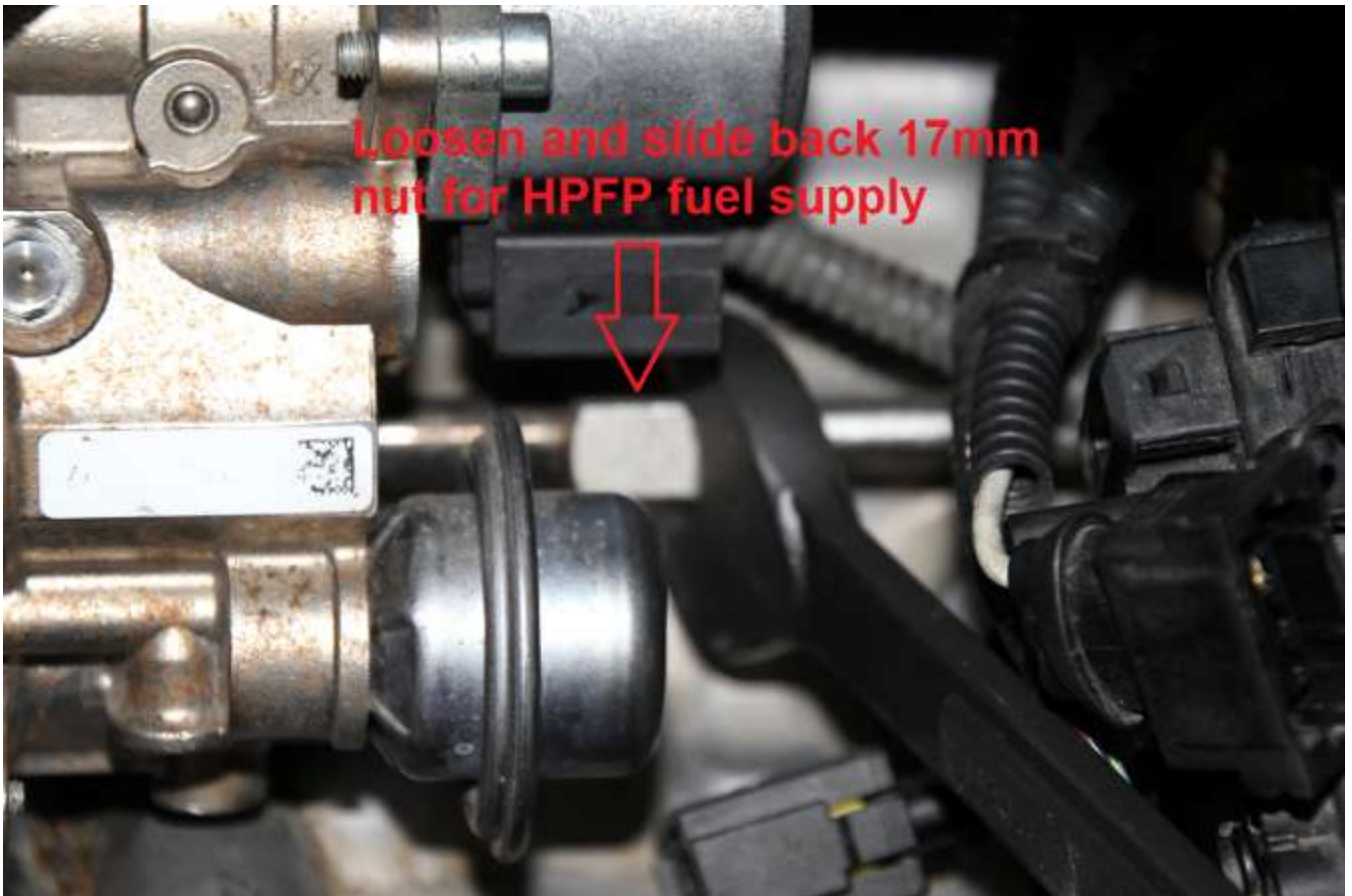
- a. Disconnect electrical connector from HPFP's fuel flow control valve.



b. Here is a picture of the LPFP sensor for reference...we won't be doing anything with it.



c. Disconnect the inlet supply to the HPFP with a 17mm wrench. Rotate the wrench downward to loosen.



d. Sorry, bad picture of nut removed.



e. After the inlet line is disconnected, there should be enough flex and room to push the inlet line away from the HPFP and toward the block to disconnect it from the HPFP. If it's too tight, you can loosen the clamp near the LPFP sensor so the line can slide. Sorry didn't get the size of the torx nut.



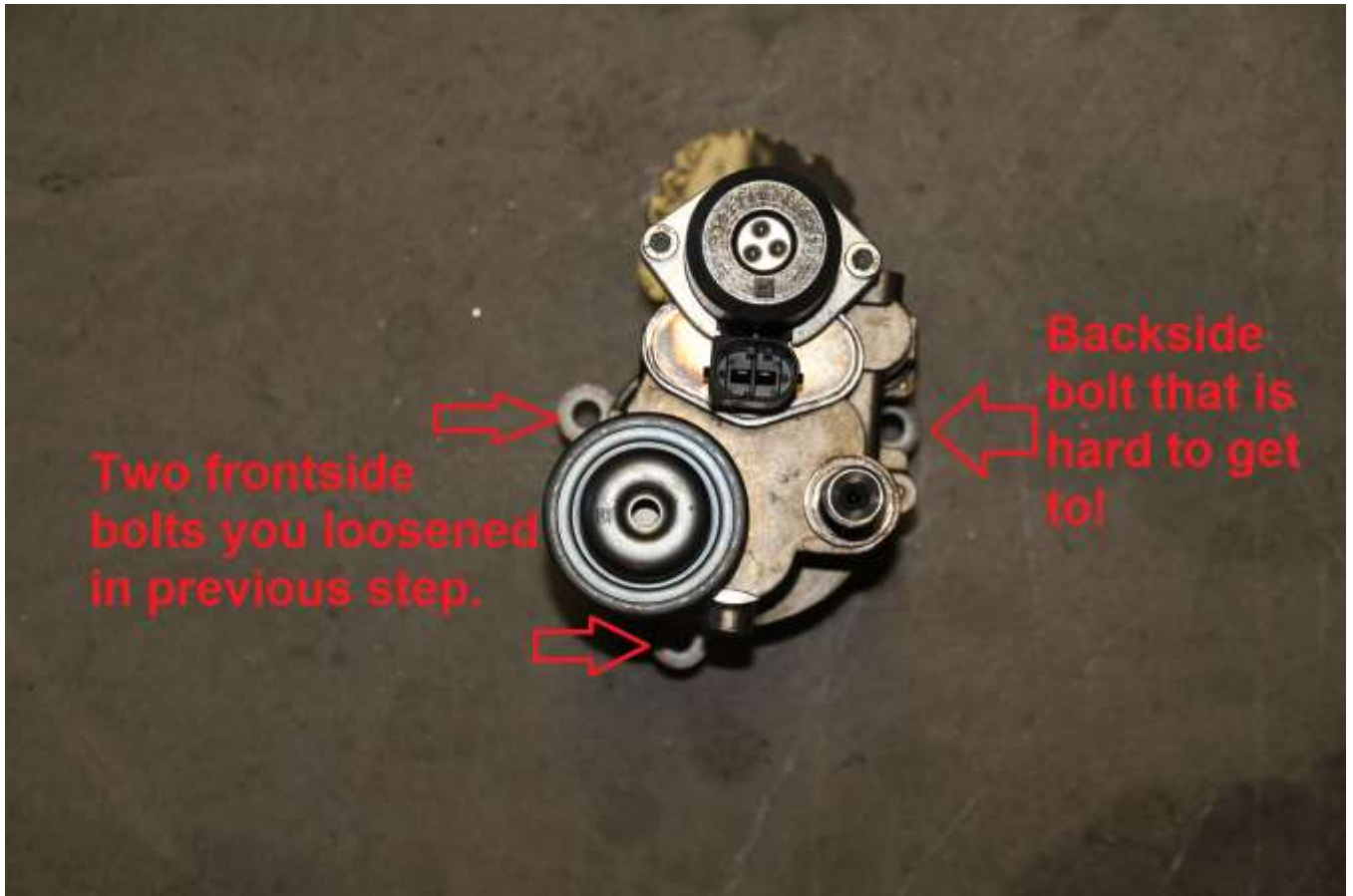
- f. Loosen and slide the 17mm nut for the HPFP outlet up to disconnect. Turn wrench to the right.



- g. Loosen but do not remove the two 5mm allen bolts on the front side of the HPFP. Rotate CCW to loosen.



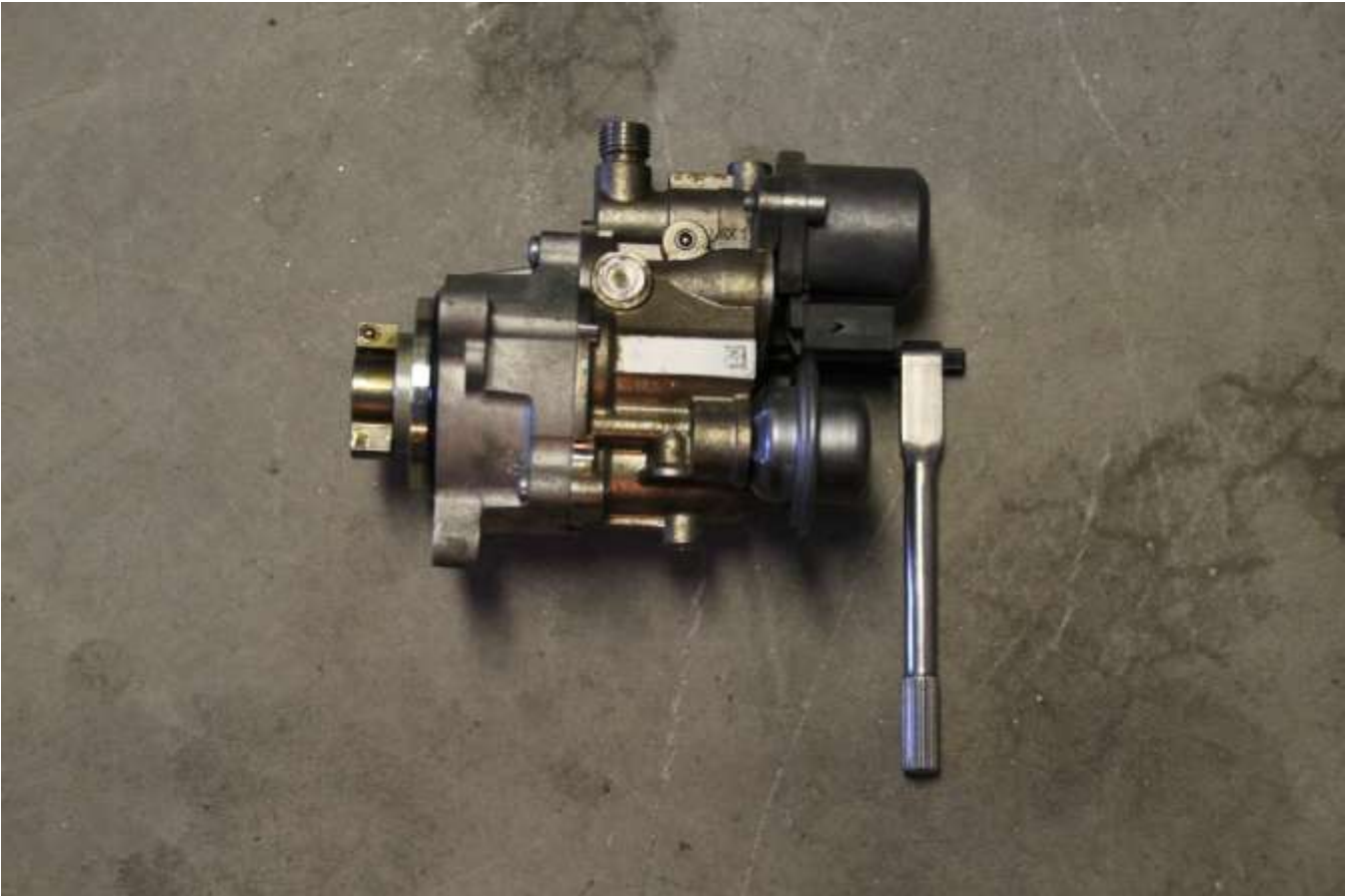
- h. Now the hardest part...there is one 5mm allen bolt on the back side of the pump. In this picture you can see the locations of the bolts.



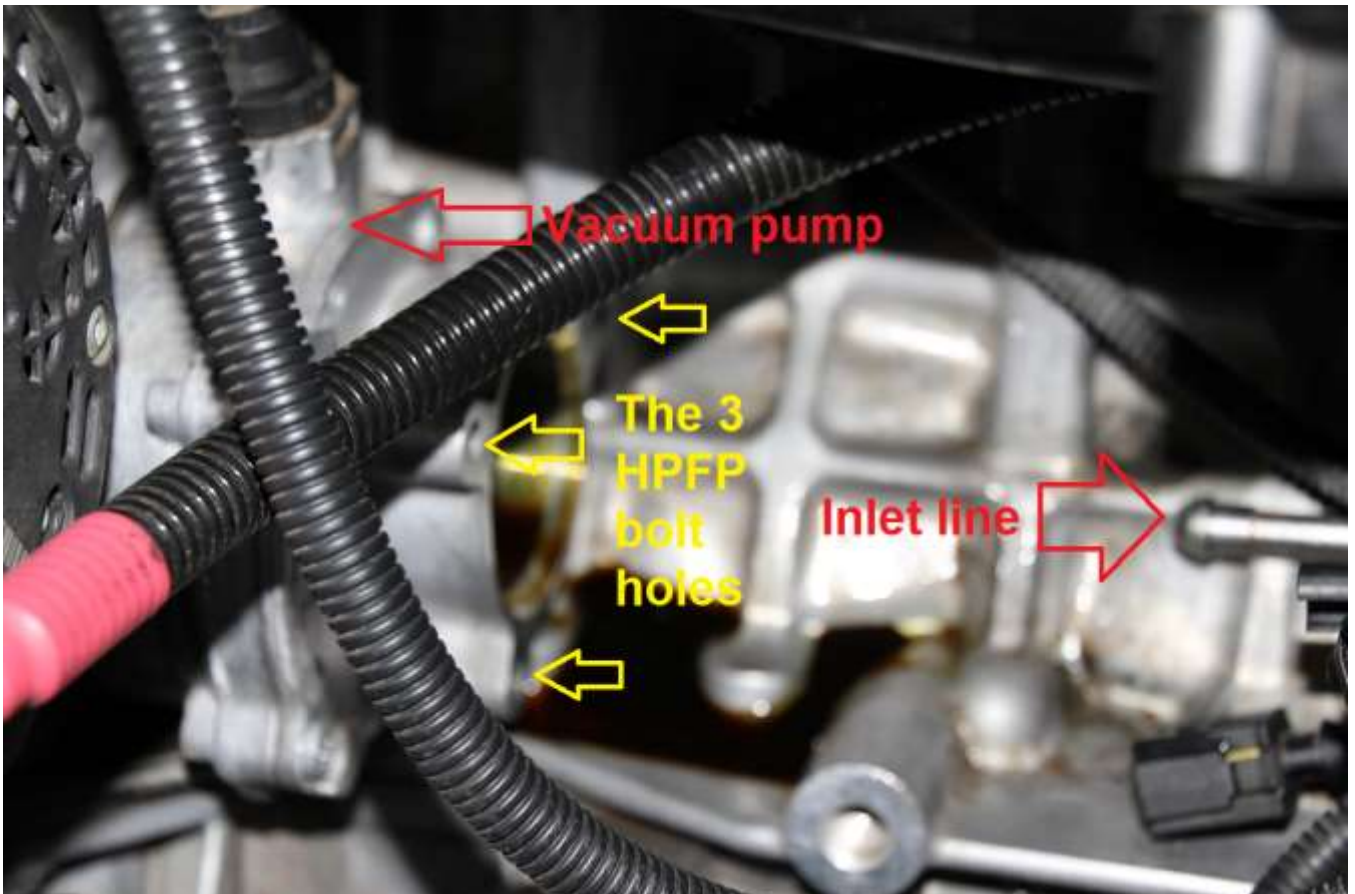
- i. I use the following tool to reach behind and get to the bolt.



- j. Picture of the location of bolt as seen from front side of HPFP.



- k. After you remove the rear bolt, then you can remove the two front bolts.
- l. Here is a picture of the HPFP removed, as you can see you will get some oil that comes out...perfectly normal.



8. To install the new HPFP, reverse the process. A couple tips...
 - a. You need to align the HPFP spline with the one inside the vacuum pump before trying to insert it, as long as it's close, you'll be able to twist the pump to line them up. Make sure the pump is able to fit flush.
 - b. After the pump is aligned, tilt the back of the pump down slightly and rotate it back to align the pump with the fuel outlet line to the rail. After doing so, start the fuel line nut and then put in the front 2 allen bolts in finger tight.
 - c. After that is complete, then put the back bolt in and tighten it all the way before tightening the front two bolts.
 - d. Then attach the fuel inlet line and tighten all the connections to the HPFP and the LPFP sensor bracket if you loosened it.
 - e. After doing any fuel system work, I like to cycle the accessories power to the car without starting it a few times to pressurize the system and inspect for leaks. After starting the car, inspect for leaks again.

