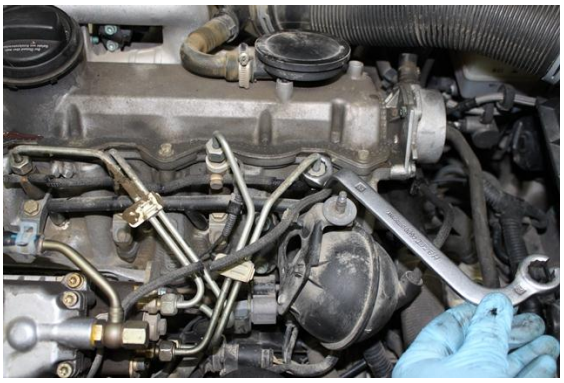
DBW Injector Removal Procedure

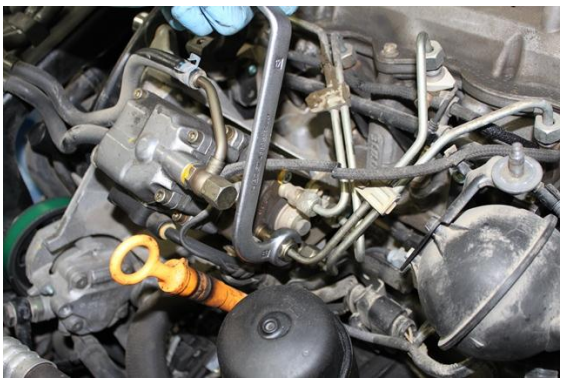
Tools required:
13mm socket
3/8 drive socket
10” 3/8 drive extension
HAZET 4560 17mm Injector line removal tool
You may substitute with a 17mm box end wrench and 17mm pipe fitting wrench
12 gauge shotgun brush (plastic bristles work best)
12” brush extension
Electric drill
Compressed air (optional)
You may substitute the air with a “can of air”
Miti-Vac hand vacuum pump
Pick tool
Torque Wrench

Materials:
Brake cleaner
Paper Towel
Moly disulfide grease or equivalent
DBW Injector install kit

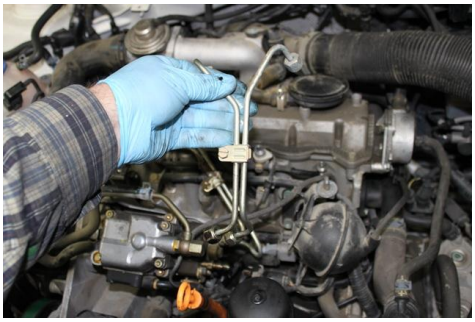
Cut the fuel return lines, these will be discarded after injector removal. Get your Hazet 4560 injector Removal wrench.



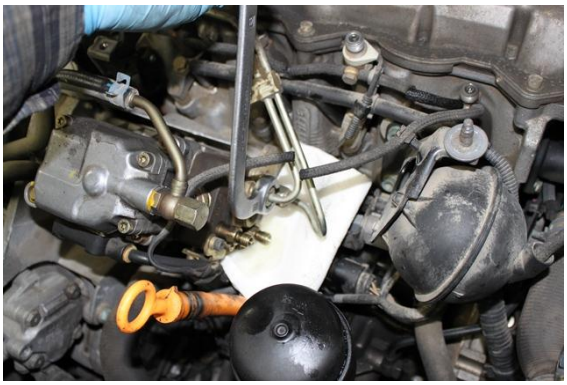
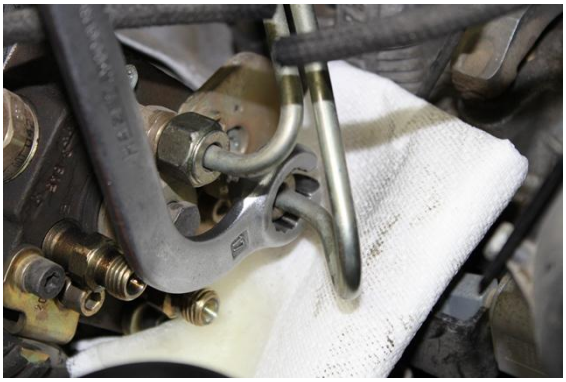
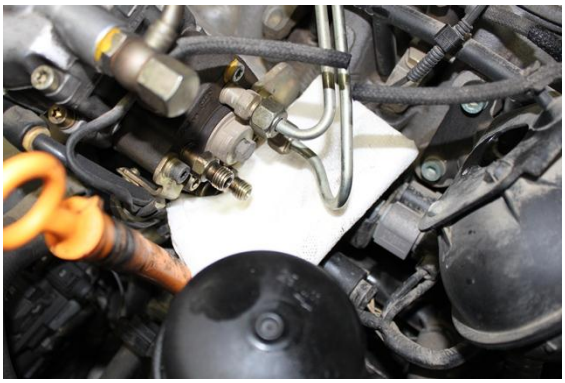
Break loose and completely loosen the (4) fittings at each of the injectors. Note that there is not (or should not be) very much torque on these.



Break loose and completely loosen the two front fittings on the injection pump.

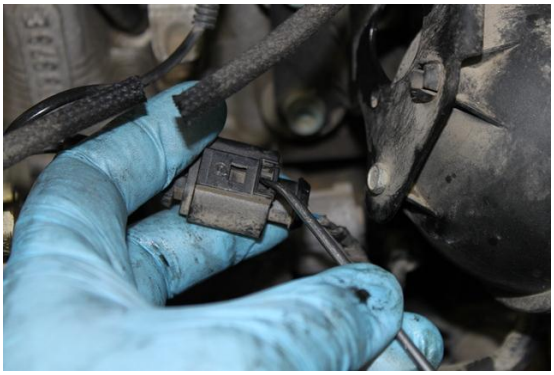
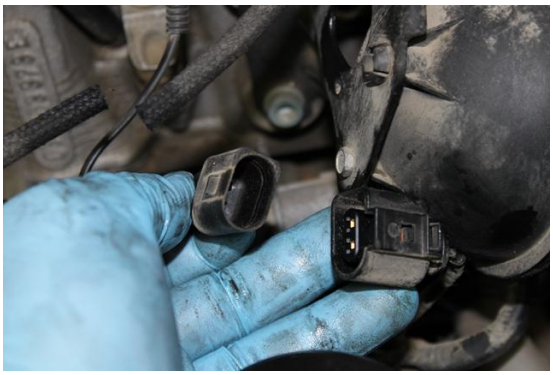


Remove the two fuel pipes and set aside in a CLEAN area.

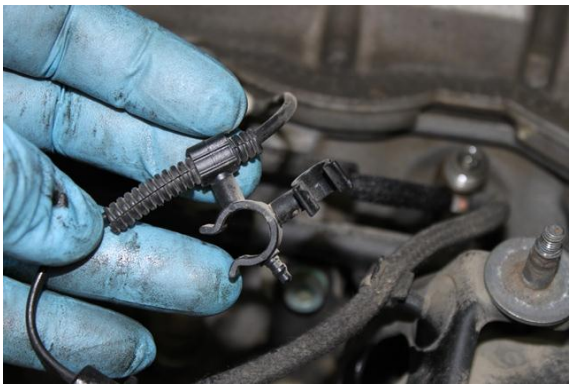




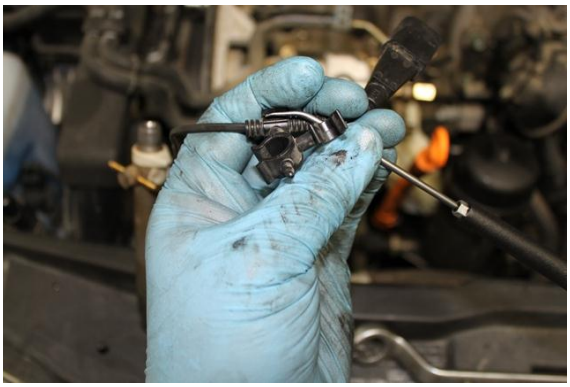

Break loose the two rear fittings and loosen. Place some paper towel underneath to catch fuel that will drip from the fittings.

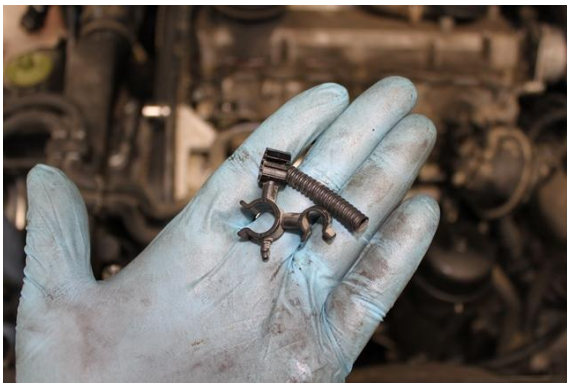


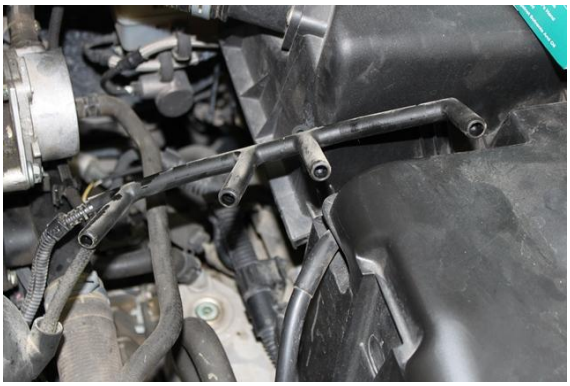
Remove #3 connector, depress tab with pick and disconnect (2003 connector pictured – Black; 2002 and earlier models use a brown “Square” connector).







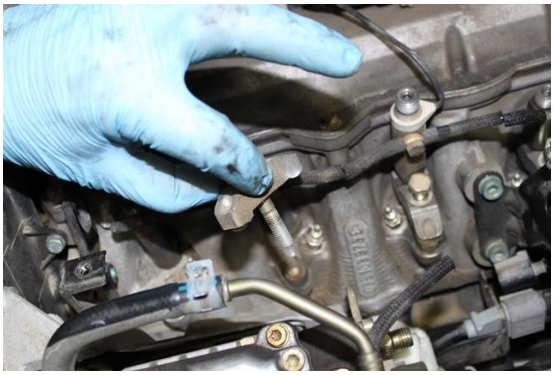
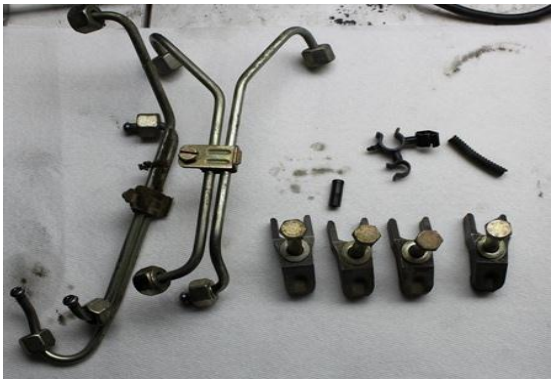
Remove and keep the wire support and protective cover for shielded wire. The support is removed by using a pick to disconnect the click lock fold over clasp.



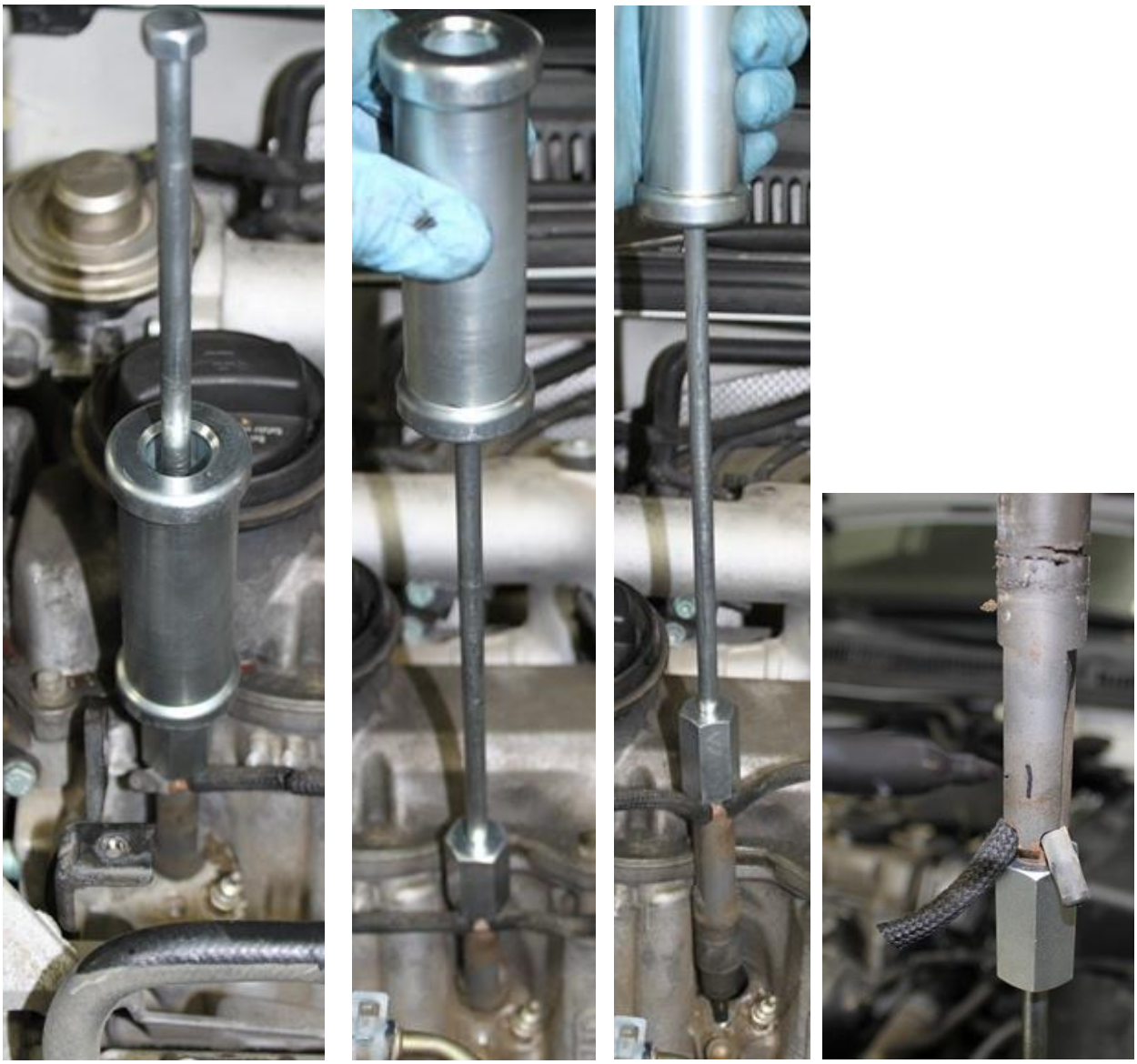
Lift up, and be careful not to bend the harness, lay over and out of the way near air-box.





Loosen and remove the four bolts and injector clamps, be careful not to lose the special washer that is under each of the bolts. Keep each fork clamp with its respective position (not critical). You can clean the bolt threads with a wire wheel or wire brush and apply moly disulfide grease to the ball pivot under each fork clamp (this can be done when the injectors come back).



Attach the extractor firmly onto the injector threads, with multiple rapid forceful blows, extract the injector up and out of each of the bores. You are breaking the carbon loose from around the nozzle.

DO NOT twist the injector fore-aft or around its axis! This can shear the internal pins that keep the nozzle aligned internally.

NOTE: Mark each injector (Left to right) #1, #2, (#3 is obvious) and #4 and keep them when they return with their respective bore. They will be stamped during processing with these numbers for future reference.

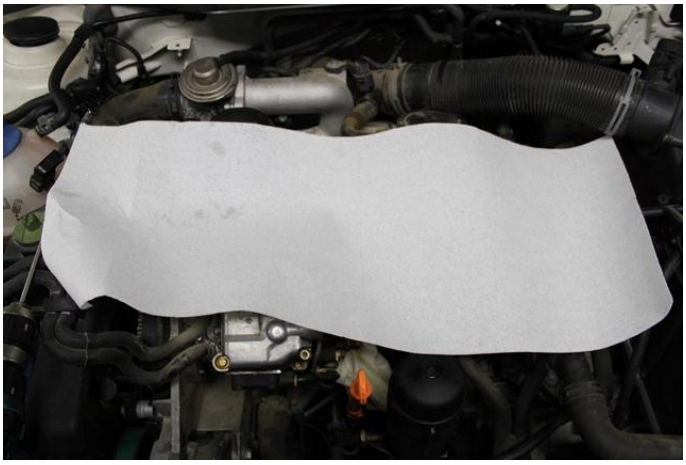
NOTE: Remove the cap plug on the #1 injector and re-use when injector are returned.

Ship to: DBW LLC
Attn: Injector/Core Returns
2151 S CENTURY WAY
Boise, ID 83709-2863
(208) 863-7496

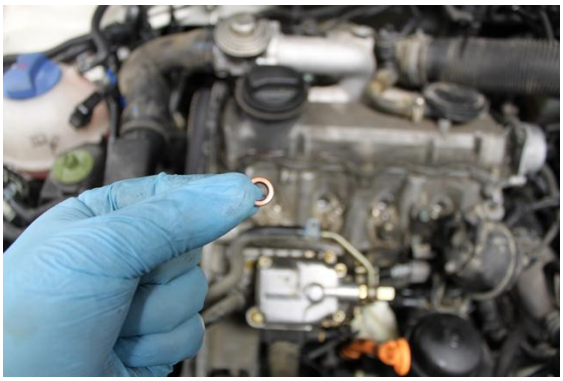
-Include (1) copy of the Injector Repair order filled out (on your computer) then print it.
-DO NOT require a signature (USPS, FedEx, UPS) deliveries are made to a drop box and the box CANNOT Sign for your package.
-Delivery confirmation will work
-Insured mail WILL NOT be delivered (this requires a signature), this may be returned to you without delivery being attempted by the Post Office. The post office will ALWAYS try to sell this to you, DO NOT sign up for this!

Get a can of Chlorinated Brake Cleaner, this breaks down the deposits and residues best. Non-Chlorinated will work, just not as well. Use a plastic bristle 12ga Shotgun brush (copper will also work) DO NOT use steel! Attach to a brush extension rod, insert in a drill and thoroughly clean each bore until you have perfectly clean aluminum showing. After cleaning the bore, use some brake cleaner to wash the bore, the cleaner will go into the cylinder, just use light short bursts (1/2 second) and you won't have any issues. It is recommended to blow out the bore (compressed air works best) to allow a clean and dry inspection to check for imperfections of the high pressure sealing surfaces.

Note: The brake cleaner will evaporate quickly, and will not hurt the motor. Just use common sense and don't flood the cylinder with the stuff. Any carbon that fall is will be digested by the motor in the same way Soot is digested from the EGR system.



Cover things up if you are waiting on your injectors to be returned.

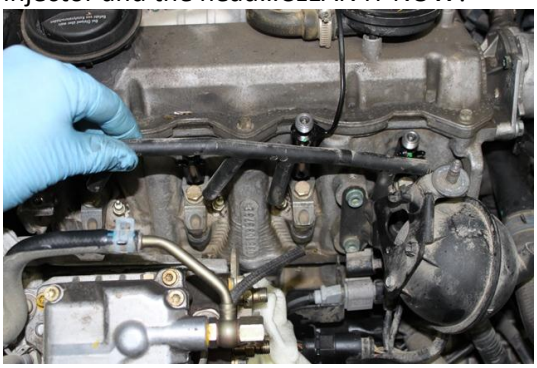
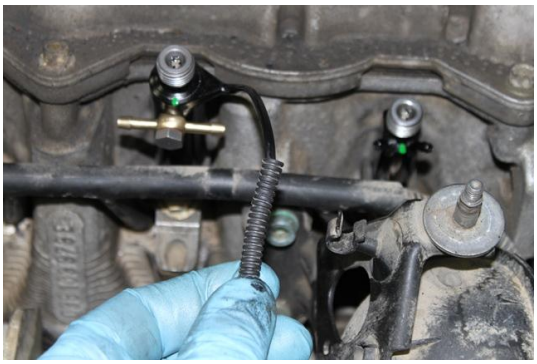


Remove the plastic protector from each injector. Remove the copper sealing washer on the injector and drop it into the cylinder.

Look at each injector, on the injector is a stamped number; from Left to right are cylinders #1, #2, #3, #4. Insert the injectors so the number corresponds with the original cylinder.

Make sure the threads of the bolts are clean, apply the grease to the ball on the retaining fork and install the fork clamp. Torque to 20Nm! DO NOT over-torque these! When the head expands this could shatter the retaining fork or stretch the bolt causing the injector to be ejected from the cylinder. Cylinder pressures in a stock car are around 3000 psi, just like a high pressure nitrogen cylinder that has been known to propel itself thru a brick wall.

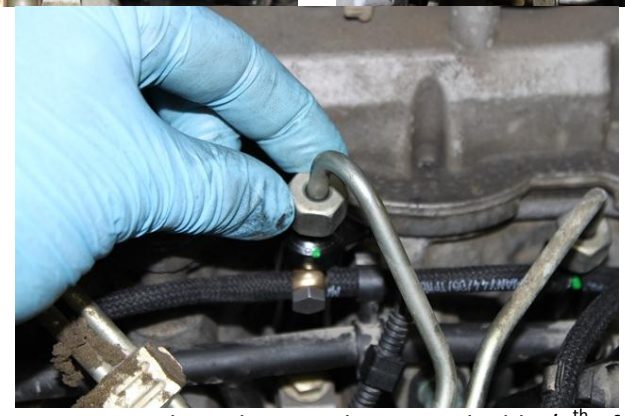
If you think there is ANY dirt or debris that may prevent a high pressure seal from forming between the injector and the head…CLEAN IT NOW!

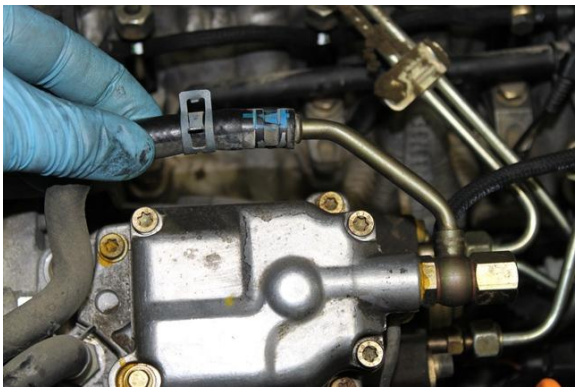


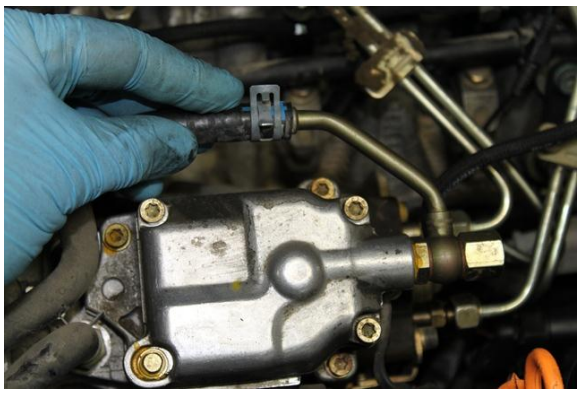


Reconnect the glow plug harness, connect the new fuel return lines. DO NOT re-use the return line, this will leak causing a fire hazard. The line has a shrink characteristic that seals it to the nipples. Always use new return line that comes in our kits.
Reinstall the #1 nipple and make absolutely sure the #3 injector wire is CORRECTLY supported! Reconnect it and secure it in its steel support below the vacuum accumulator.



Reconnect all the lines, DO NOT over tighten, bottom the nut and add 1/8th of a turn. Leave ONLY the #3 fitting on top of the injector loose, this is to allow an air purge for the needle lift sensor when starting the first time.





Remove the fuel return line from the pump, use a Miti-Vac to suction out air inside the pump. This requires about 25”hg for about 2-3 minutes. Once you have fuel coming from the top of the pump the evacuation is complete. Reconnect the fitting and install the clamp.

Double check everything!!!

Get in the car, crank the motor until you see fuel spurt from the #3 injector fitting.
Tighten the fitting (bottom nut +1/8th of a turn).
Crank car until it starts. This will require about 30 seconds of cranking to purge all the air.
In some cases you may need to crack loose one of the other injectors to help it start. Just crank until fuel spurts from the top of the injector.

Once the engine is running, check all fittings and tighten as needed to stop any leaks. Blow dry with compressed air to insure no fuel is leaking from any fitting.

Adjust the Injection Quantity now using the Hammer Mod followed by adjusting the injection timing. These steps are required to insure the engine is working perfectly with the new injectors and nozzles.

Congratulations!