

Installation Instructions

2.0T FSI Intake Manifold With Flapper:



Featuring better flow, higher boost capacity, 40% larger plenum volume, this product will take your 2.0L VW TSI and FSI to the next level. A direct replacement for your OEM plastic intake manifold.

Once installed, the finished result should look like this before installation of the engine cover:

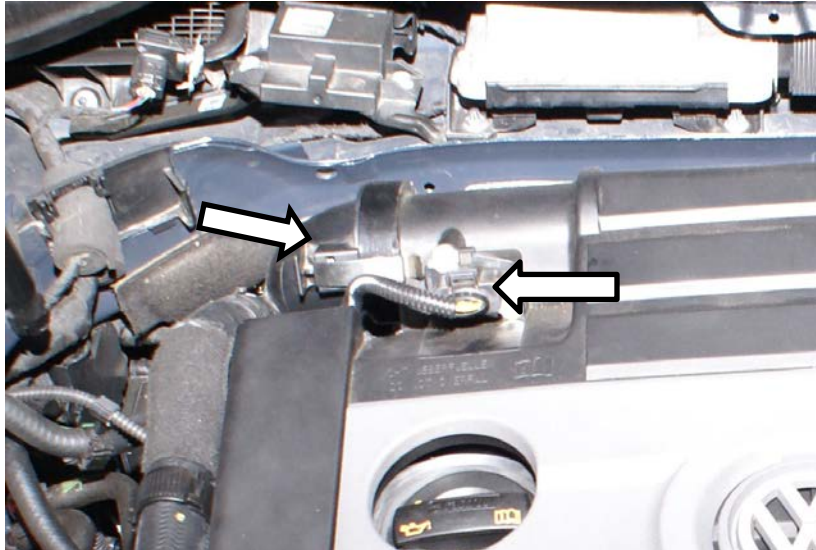


PLEASE NOTE:

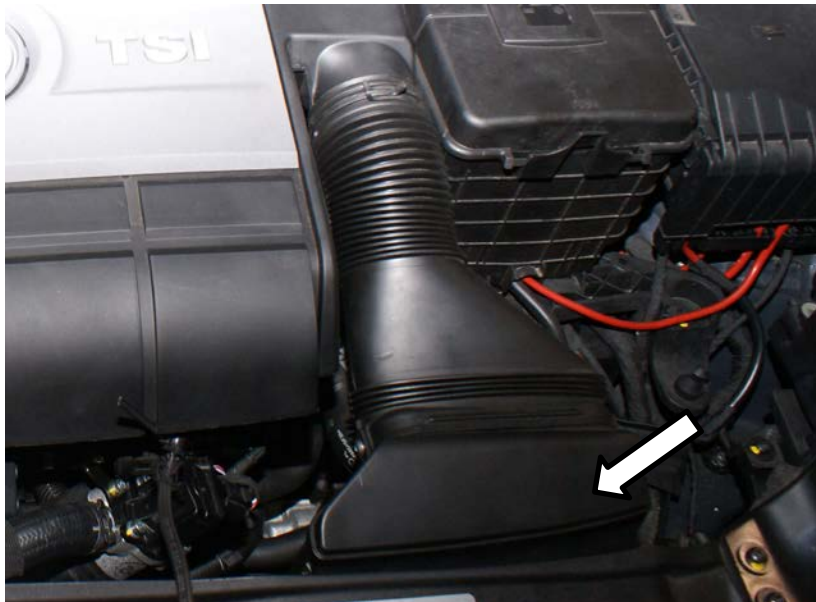
- **Disconnect battery negative terminal before installation.**
- **Cool down the engine before installation.**
- **Please note placement of parts and bolts during removal.**

INSTRUCTIONS:

- 1) Remove engine cover including duct to rad support.
 - a. Remove clamp and unplug connector



- b. Remove duct from radiator support



- 2) Disconnect quick connect fuel lines near coolant reservoir.



CAUTION FUEL UNDER PRESSURE

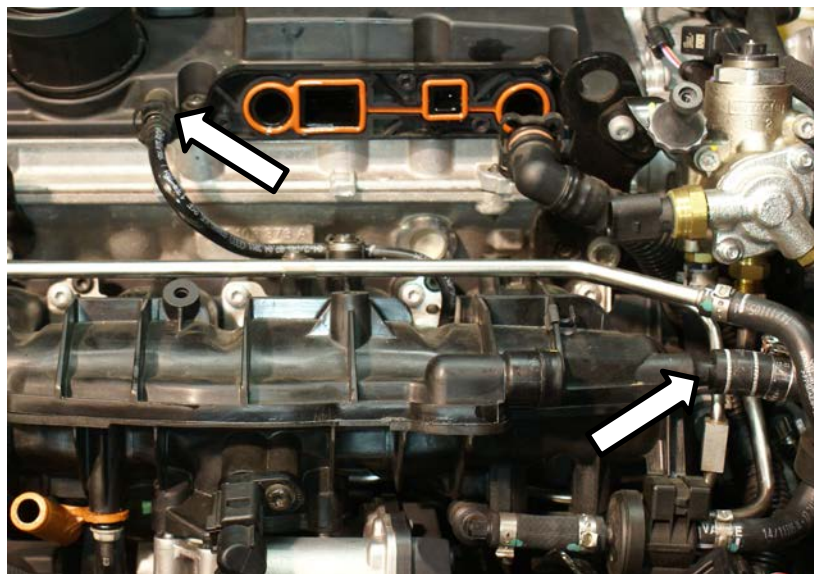
- 3) Remove PVC Hose



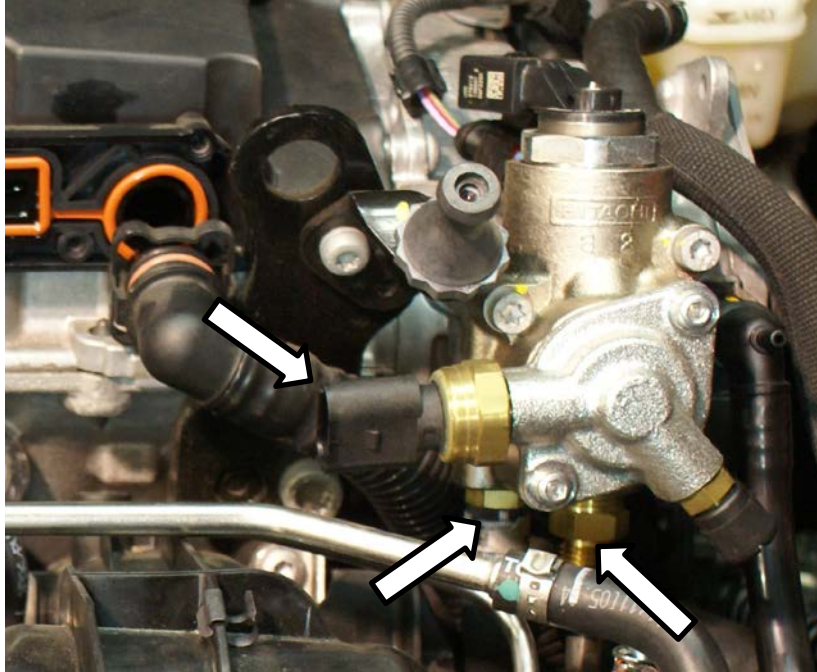
- 4) Remove bolt holding coolant pipe to intake manifold and move coolant pipe aside.



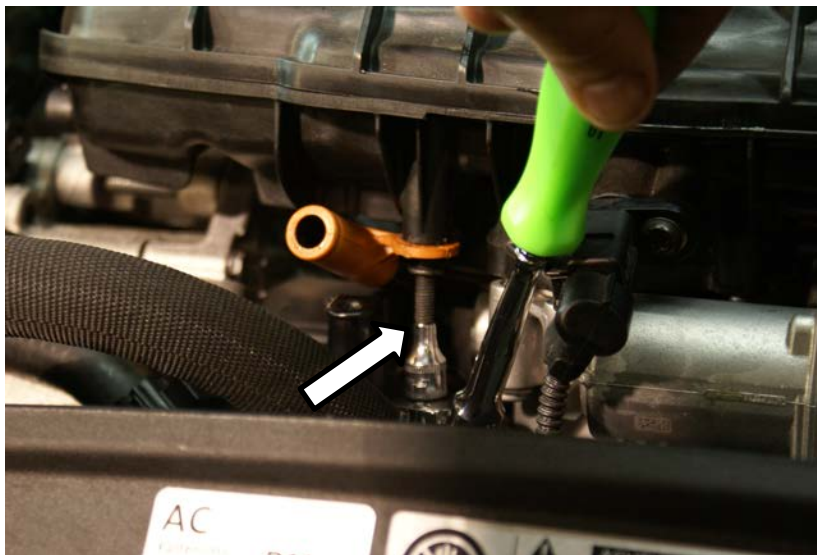
- 5) Remove both vacuum hoses from crankcase breather and valve cover.



- 6) Unplug fuel pressure sender connector and disconnect fuel lines underneath high pressure fuel pump.



- 7) Remove nut and stud holding oil dipstick tube under intake manifold and remove dip-stick and tube.

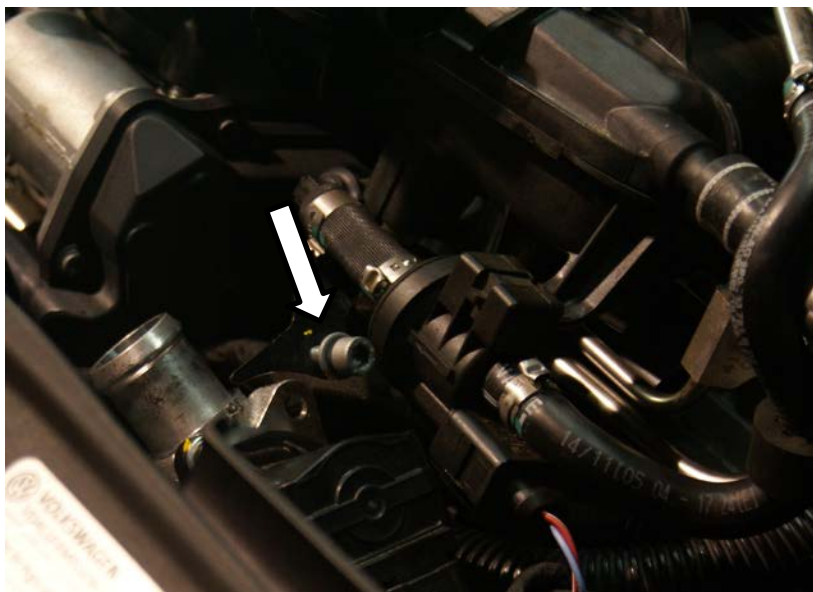


8) Remove engine under cover (belly pan). For more access, remove 4 screws for electric fan shroud and pull fan shroud out from underneath.

9) Disconnect hose on left side of N249 and fold out of way.



10) Remove torx screw holding N249 recirculation valve bracket.



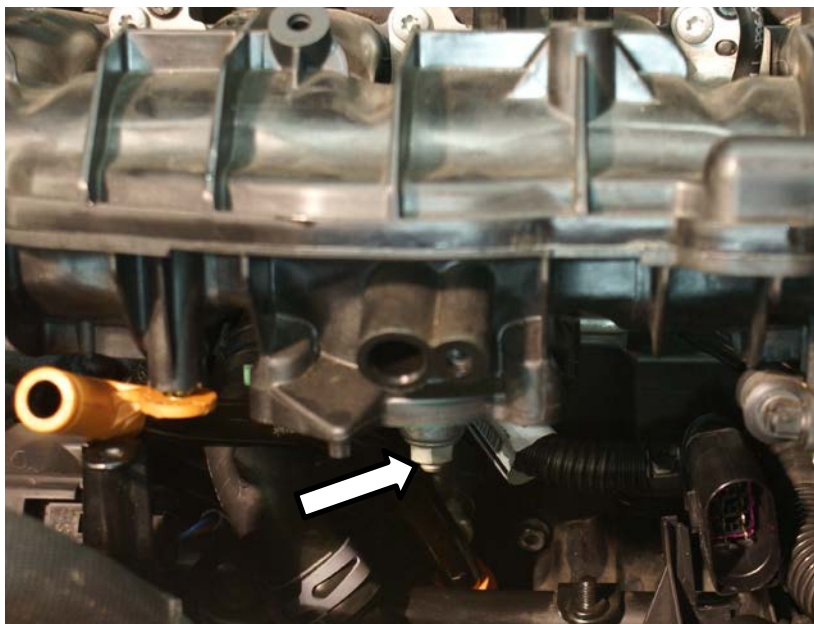
11) Remove 2 screws from charge air pipe and remove out through bottom of car.



12) unplug connector on throttle body

13) Remove 4 bolts holding throttle body to intake manifold. Remove throttle body.

14) Remove upper bolt from intake manifold brace.



15) Remove lower bolt from intake manifold brace and remove brace. Not to be re-installed.

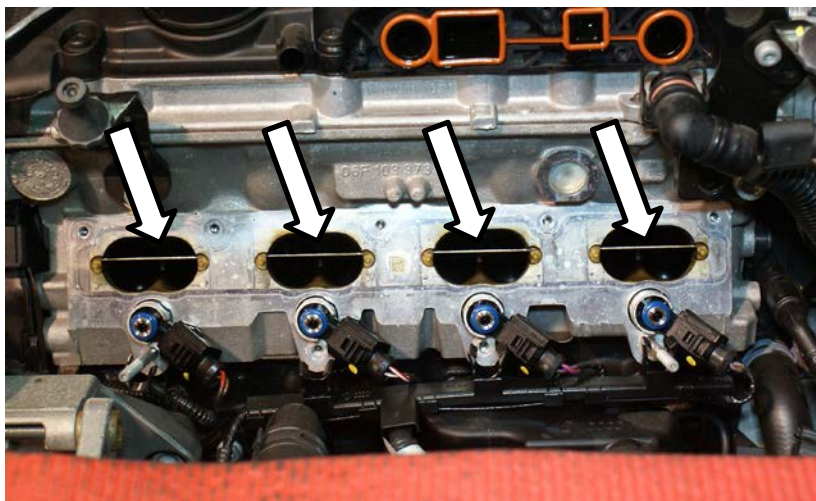


16) Remove nuts/bolts holding intake manifold to cylinder head.

17) Remove fuel pressure sensor connector off of fuel rail.

18) Carefully pull intake manifold and fuel rail off cylinder head.

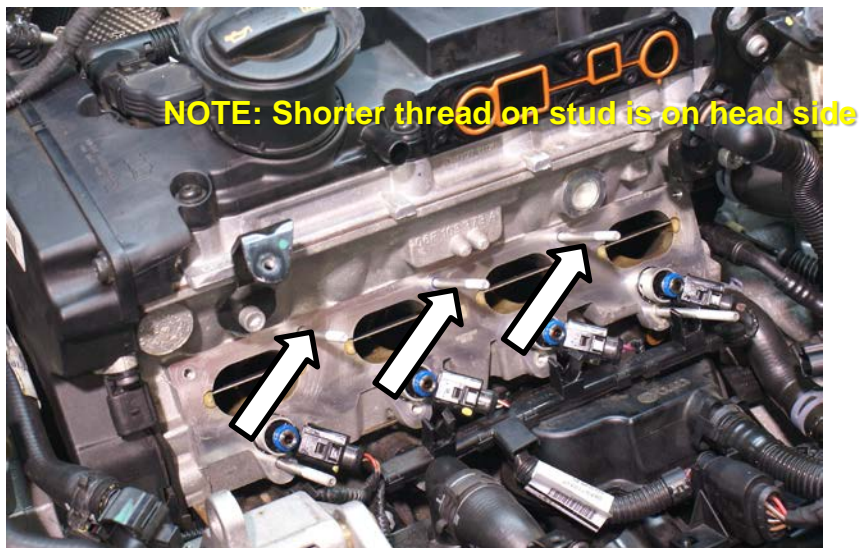
19) Remove air diverter plates from cylinder heads.



20) File down plastic guide pins until flush, then reinstall.

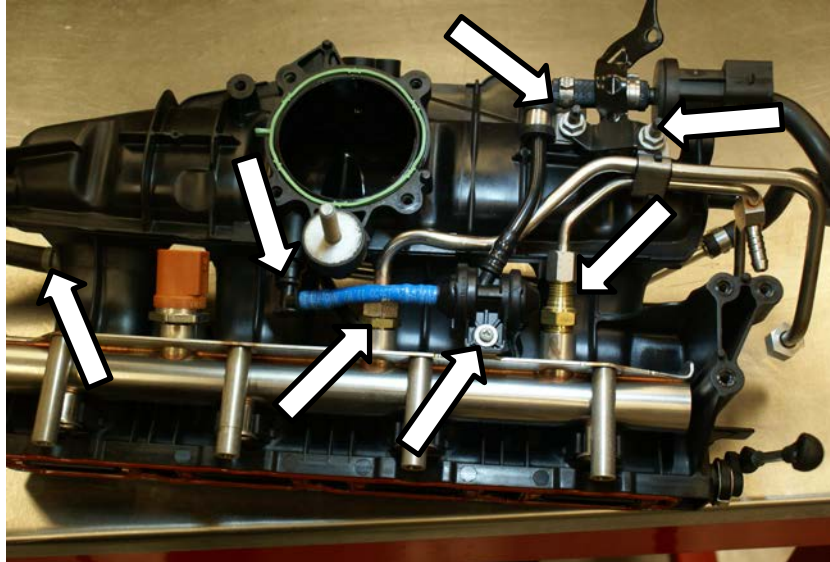


21) Install the 3 supplied extended studs to top center holes.



22) Clean gasket surface of the head.

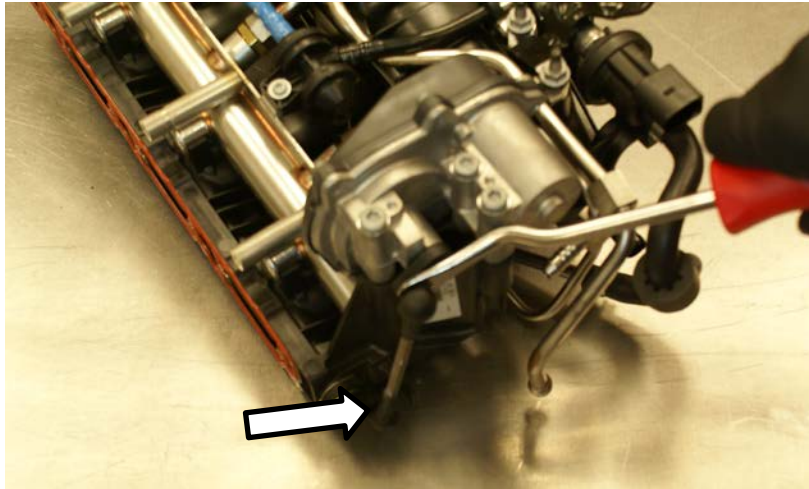
23) Remove breather pipe and fuel hard lines from intake manifold and fuel rail.



24) Make sure all connections are loosened and ensure the fuel rail is free from intake manifold, connectors, and lines. Remove fuel rail from intake manifold.



25) Remove flapper motor and retain rod on original manifold.



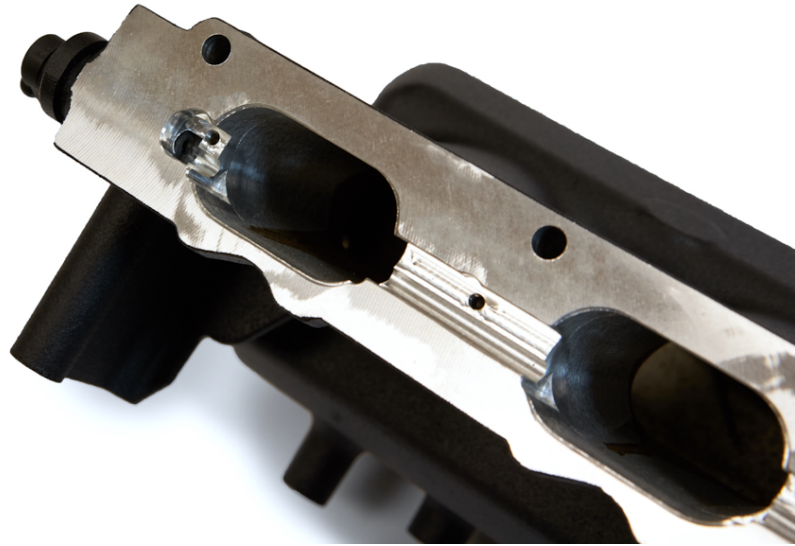
26) Re-fit parts to HPA Intake Manifold with supplied bolts and washers and torque to 10 Nm. Fuel rail is no longer bolted directly to the intake manifold. Please be patient in fitting the fuel rail to the manifold as tolerances may be tight.





27) Retain the OEM flapper motor and trim down the flapper actuator arm as shown in the photo below so that it sits flush with the opening.

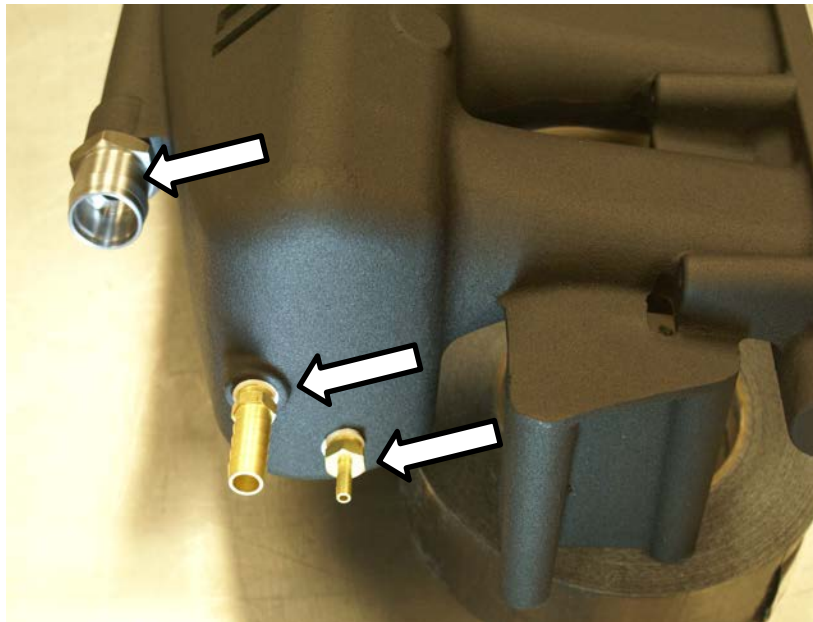




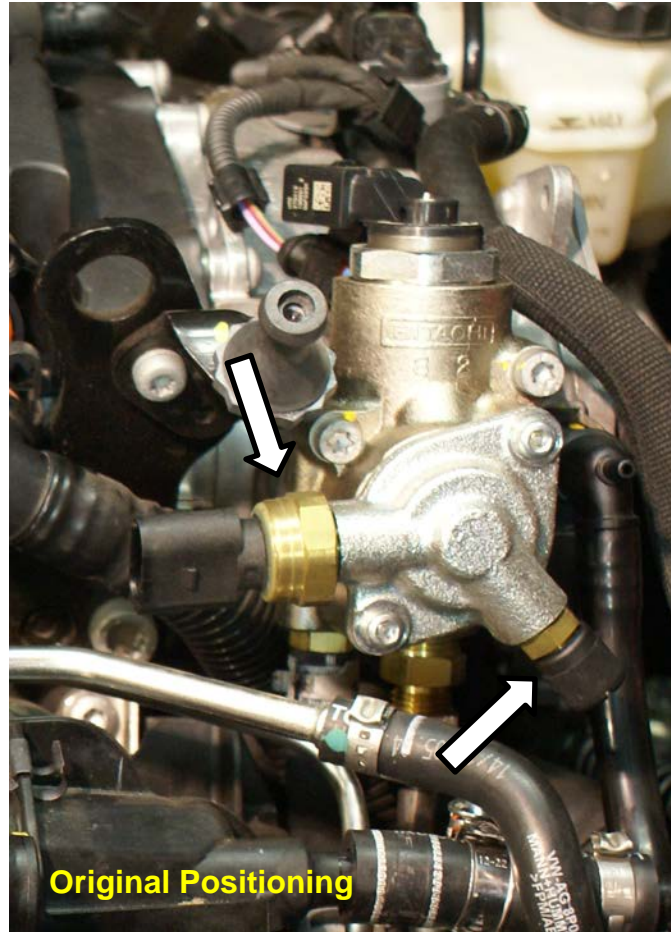
28) Install flappers as shown below using the provided hardware.

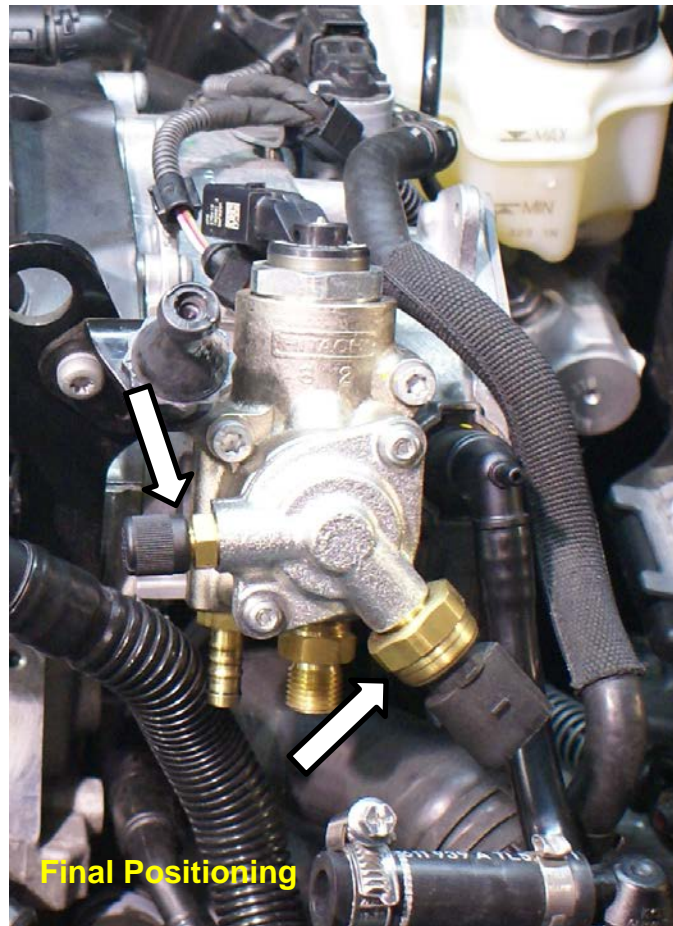


29) Install provided breather fittings with crush washers and threaded brass fittings/plugs with supplied thread sealant to HPA Intake Manifold.

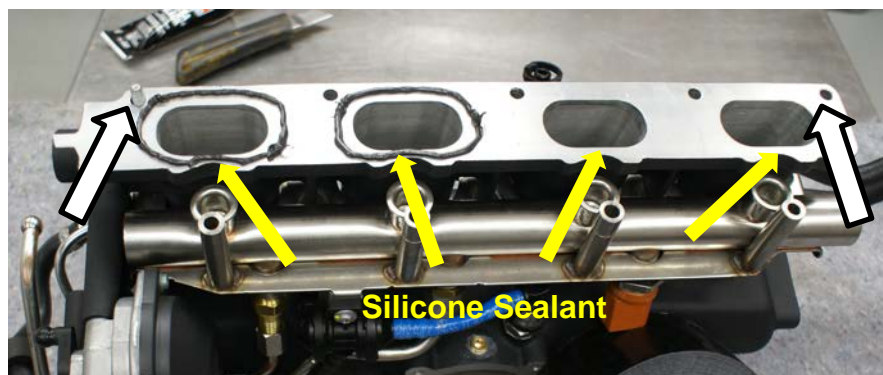


30) Remove G410 – low pressure switch and Schrader valve port and install in opposite positions.





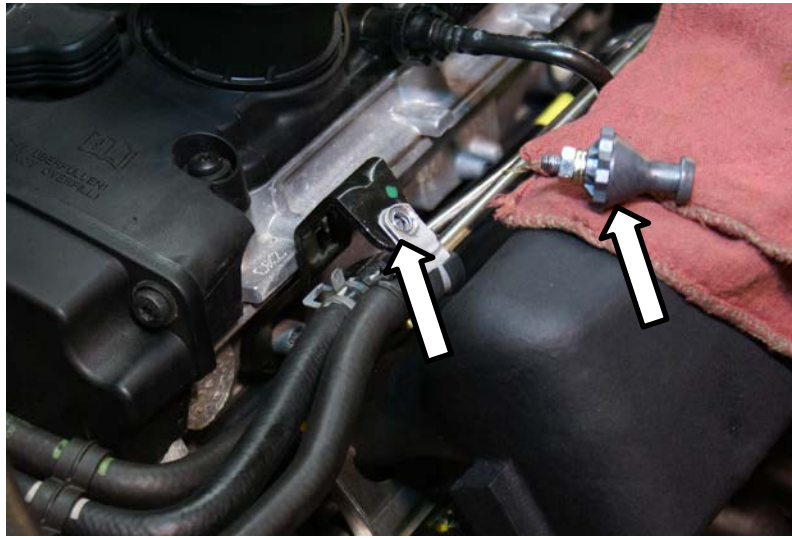
31) Insert OEM outer intake manifold to cylinder head bolts to loosely hold the fuel rail brackets to the intake manifold in preparation for mounting. Apply a 2-3mm bead of silicone sealant around each intake port. Make sure the mating surface of the intake manifold is cleaned with brake cleaner prior to application.



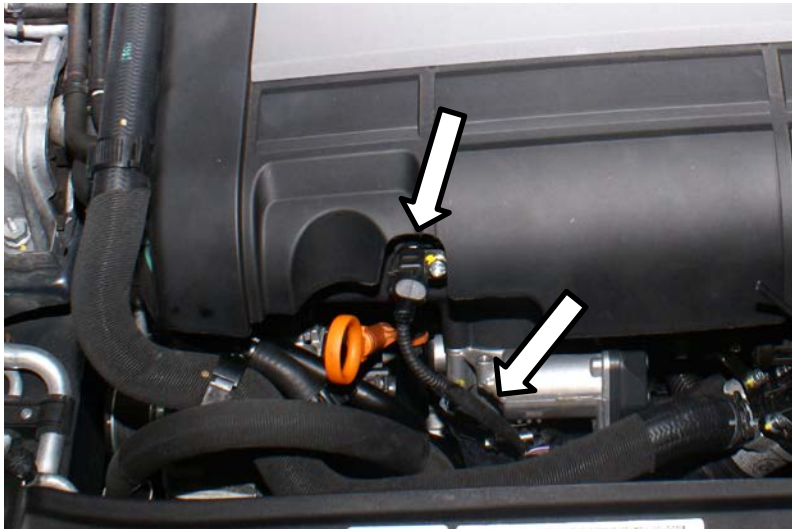
- 32) Apply a light film of synthetic engine oil to injector o-rings. Slide HPA Intake Manifold onto installed studs on the cylinder head and tighten OEM bolts and supplied nuts to 10 Nm.
- 33) Apply 2-3 mm bead of silicone sealant to cleaned throttle body surface and install throttle body to intake manifold with supplied bolts and washers. Torque to 10 Nm.



- 34) Reconnect previously removed fuel lines, PCV pipes, breather pipes.
- 35) Install oil dip stick tube with supplied bolt and washers and torque to 10 Nm.
- 36) Install charge air pipe in reverse steps of removal.
- 37) Install radiator fan shroud if previously removed.
- 38) Install engine under cover (belly pan).
- 39) Remove engine cover mounting studs and add supplied hardware to the threaded end (2 x washers, 1 x nut). Repeat for all 4 mounting studs. Re-install studs after spacing is complete.



40) Trim notch in engine cover to provide clearance for oil dipstick and install engine cover. Add 2 inches of wire to intake air temperature sensor wiring with supplied butt connectors. After crimping connectors, please heat with heat gun or lighter to seal connections.



41) Connect battery ground and start engine and check installation for leaks.
a. Recommended to use a professional smoke test machine for best testing results.



HPA Motorsports Inc.

100 - 10185 199B Street
Langley, BC Canada V1M 3W9
P: 604-888-7274 F: 604-888-7276
www.hpamotorsport.com

NOTES: