



Crawford Performance
Billet Power Blocks (BPB)
2017+ Impreza 2.0i, 2018+ Crosstrek 2.0i

B0402 Parts List

Part Number	Quantity	Description
B0403	1	Block – CP Billet Power Blocks for FB20 FB25
B0240	4	Bolt – M8-1.25 80 MM Grade 10.9
B0241	2	Bolt – M8-1.25 100 MM Grade 10.9
P0399	1	Pipe – EGR to intake Manifold Pipe Replacement
F0345	1	Fitting – 3/8” straight hose fitting, black
F0369	1	Fitting – 5/8” straight glass filled nylon coupler
H0479	2”	Hose – 5/8” straight glass filled nylon coupler
H0470	2”	Hose – 3/8” straight PCV hose
H0477	13”	Hose – 5/16” Coolant line extension
O0611	4	O-Ring – Power Block seal



Crawford Performance

Hardware:



Tools Needed:



- Flathead Screw Driver
- 10 MM Ratchet Wrench
- 10 MM Deep Socket
- 6 MM Allen
- 10 MM Short Socket
- 12 MM Deep Socket
- 12 MM Short Socket
- Needle Nose Pliers
- Ratchet Driver
- Ratchet Extensions

Recommended Tools

- Magnet
- Lubricant

Installation Instructions

Crawford Performance recommends performing this installation while the vehicle is cold to avoid burns and excess fluid in cooling lines detailed later in these instructions. Before proceeding, place the vehicle in park with the parking brake engaged for your safety.

1. Disconnect Ground (-) on the Battery (10 MM Ratchet Wrench)
2. Disconnect the Mass Air Intake
 - a. Locate the hose that goes into the plastic box on the driver's side of the intake manifold, pictured below. Use pliers to open clamp, hold it open, and slide it towards you. Pull off hose off nipple.

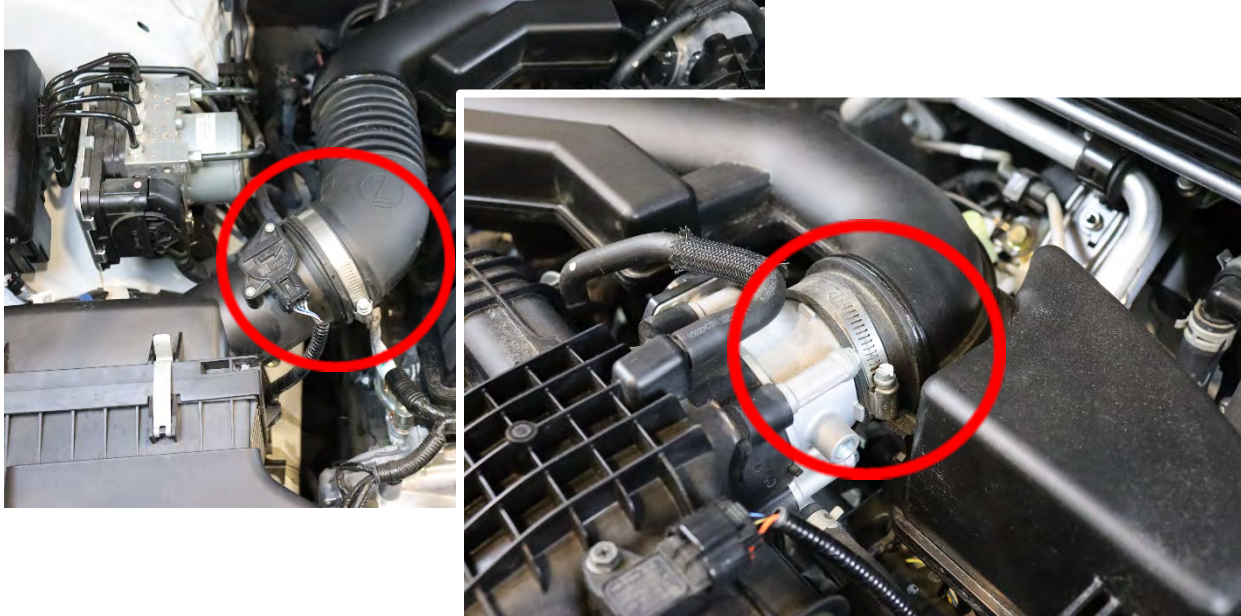


- b. Remove clip from manifold tab (flathead screwdriver)

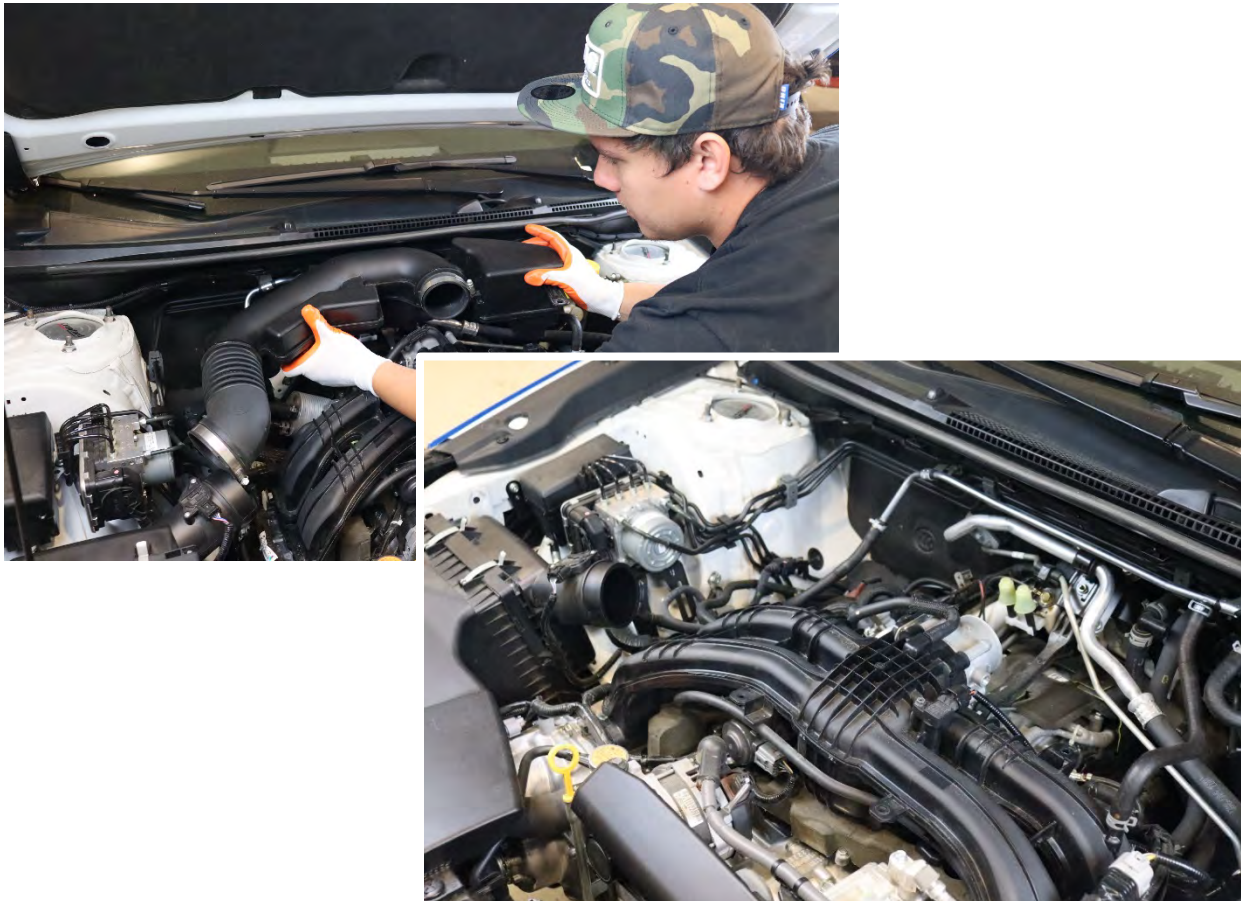


Crawford Performance

- c. Use a flathead screwdriver or 8 MM Nut Driver to loosen the 2 hose clamps.

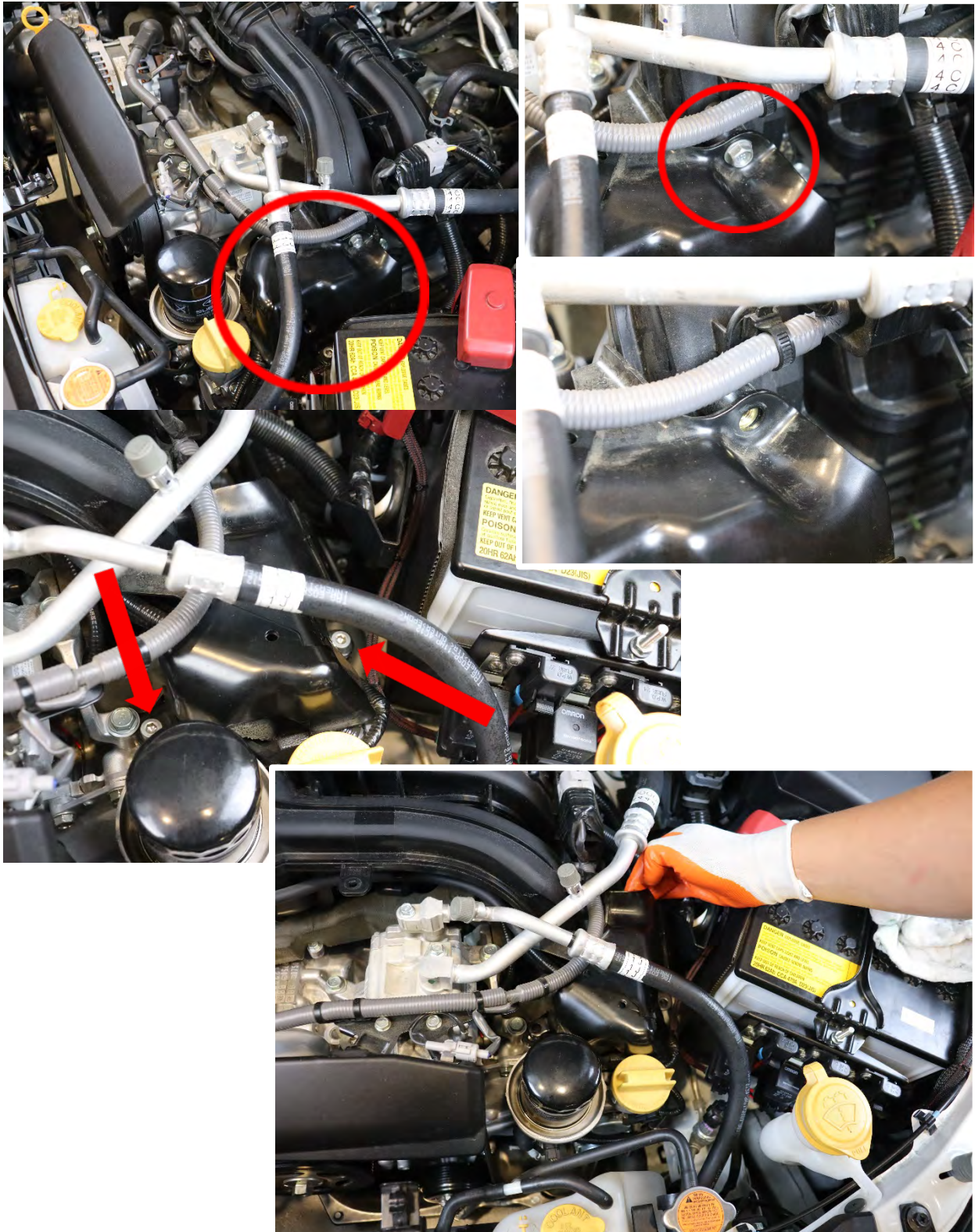


- d. Lift off the entire intake assembly and set aside.



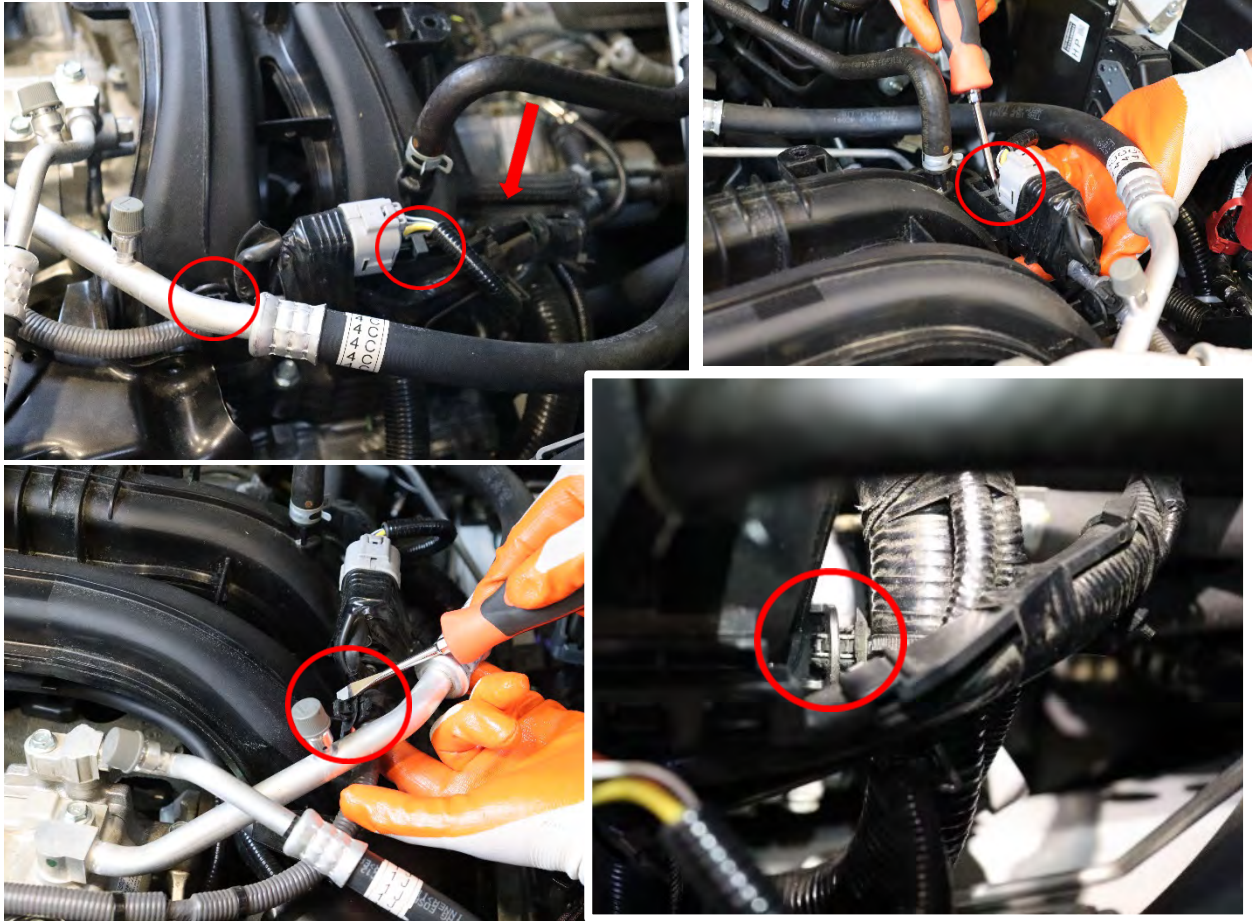
Crawford Performance

3. Remove Intake Manifold
 - a. Loosen the crash guard shielding from the driver side of the manifold by removing the 12 MM bolt and two 6 MM allen bolts (12 MM Socket, 6 MM Allen head Socket)

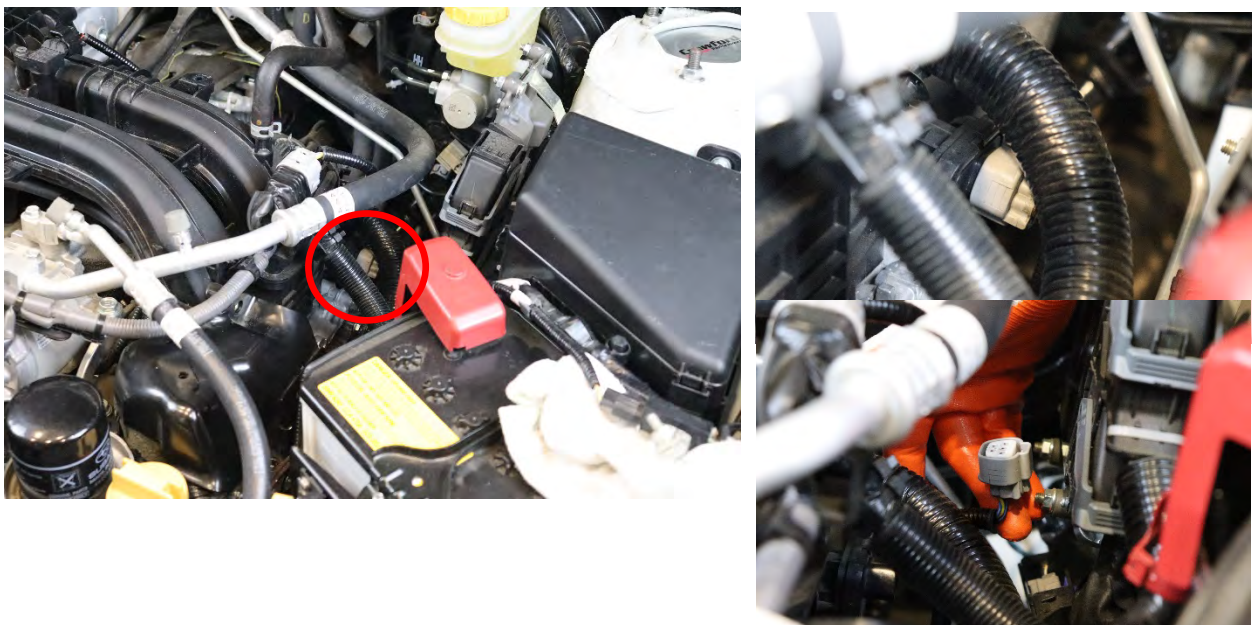


Crawford Performance

- b. Remove the wiring harness on the Driver Side of Intake Manifold by releasing the four clips shown below. Lift up on harness to release. (Flathead Screwdriver)

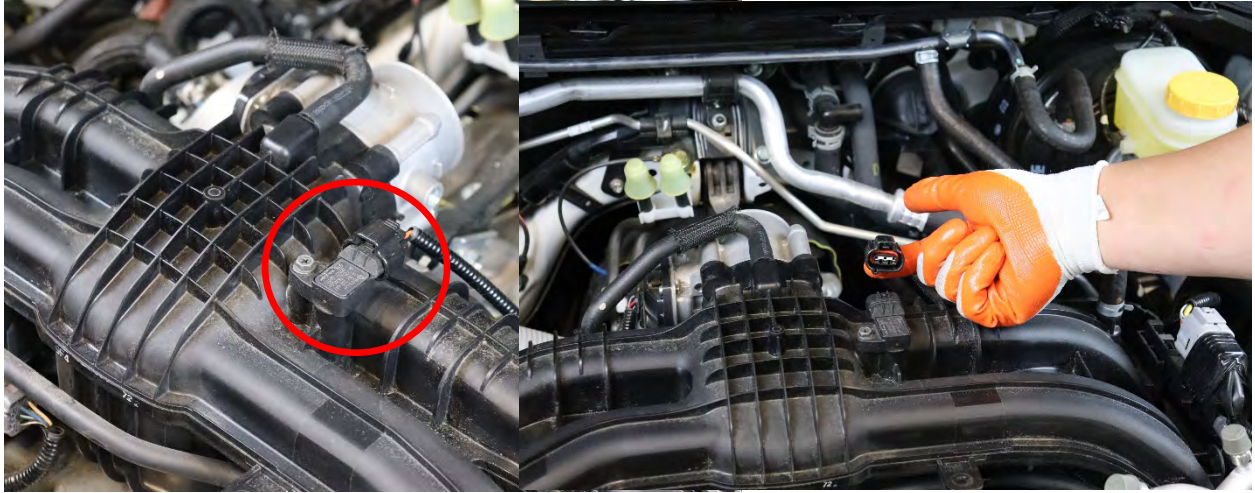


- c. Remove TGV connector

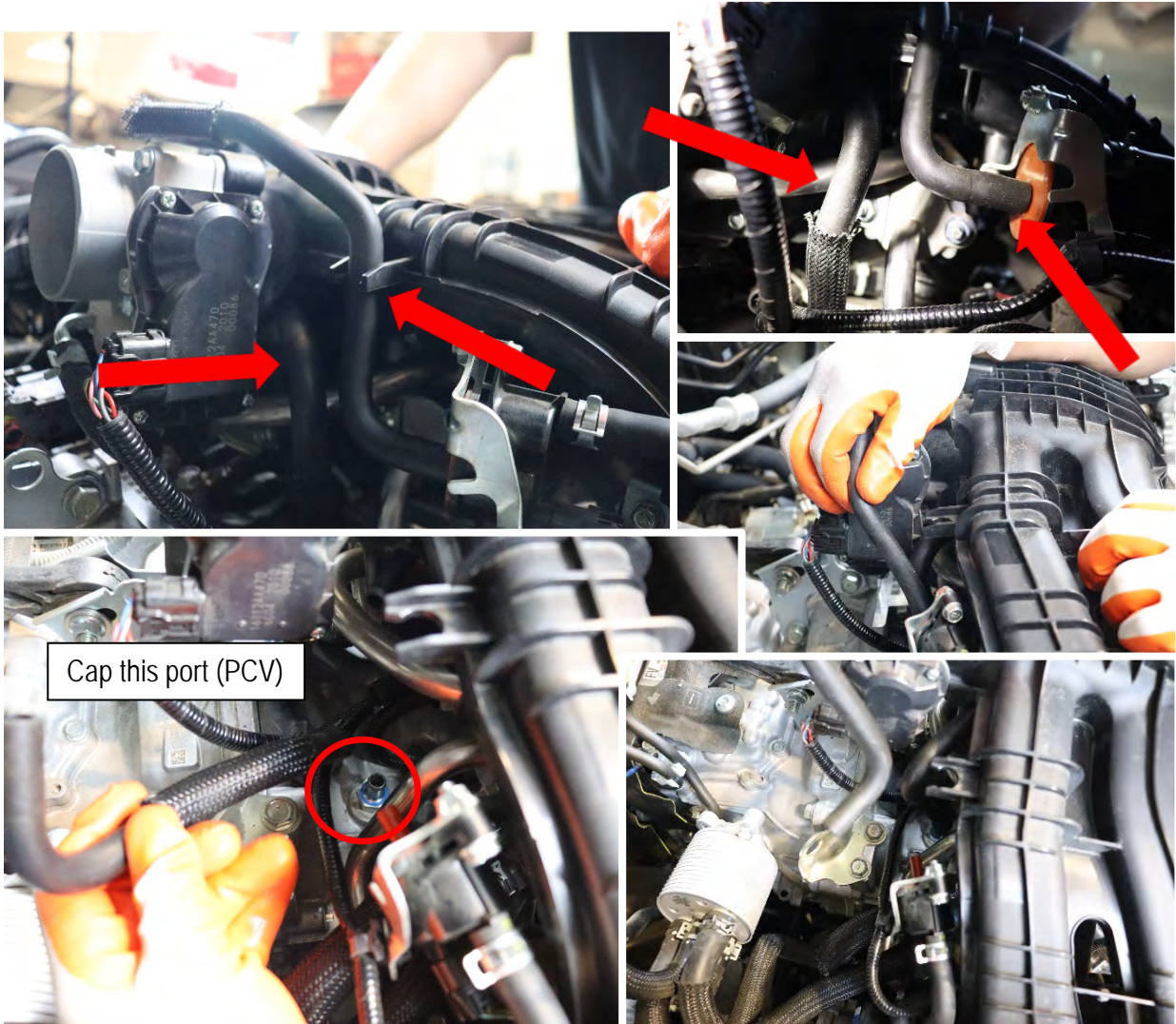


Crawford Performance

d. Remove MAP sensor



e. Remove the EVAP Purge line off the red nipple and then the PCV line behind the manifold and set to side (cap PCV Line)

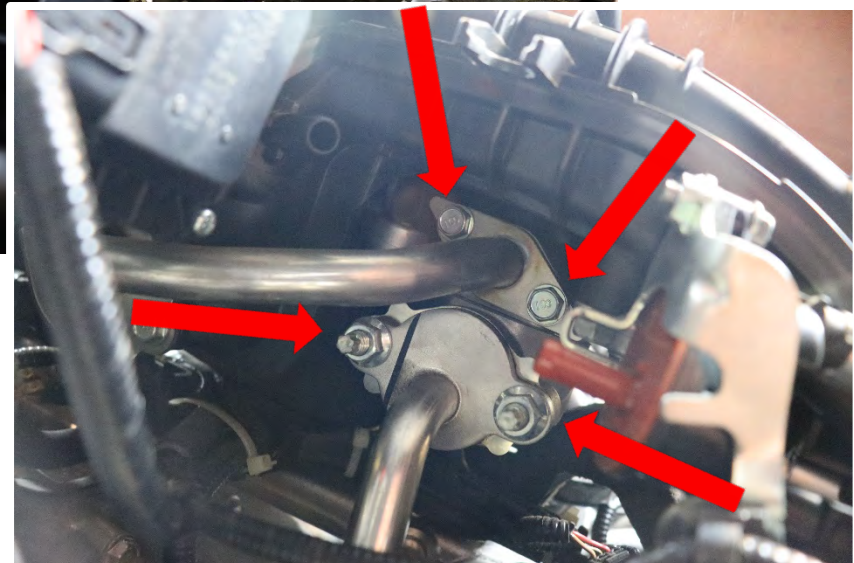
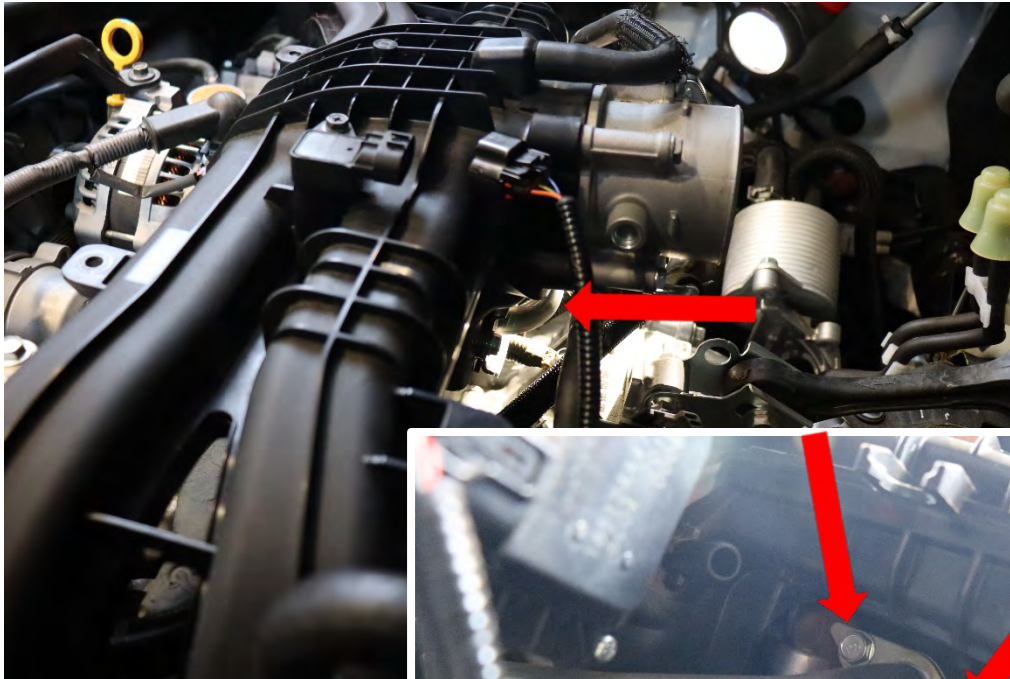


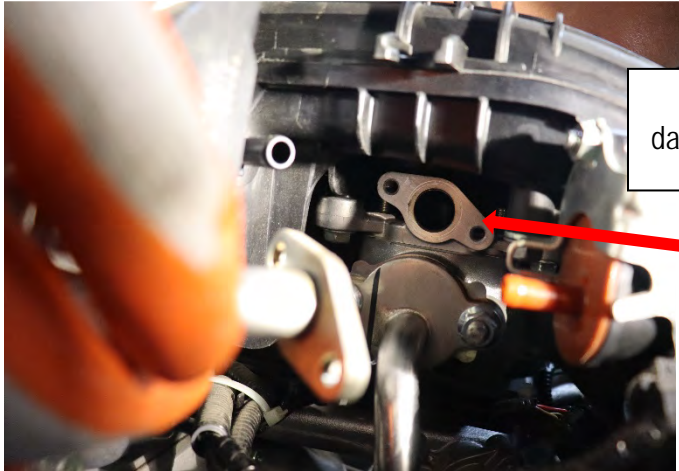
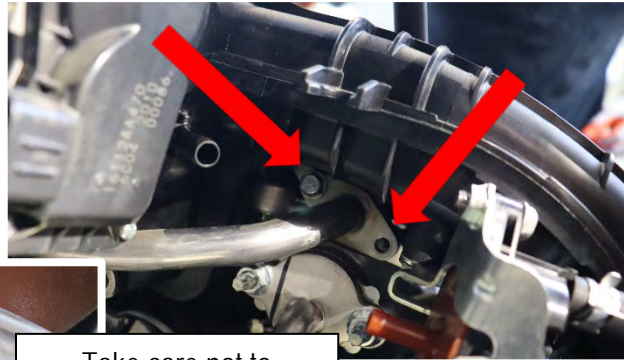
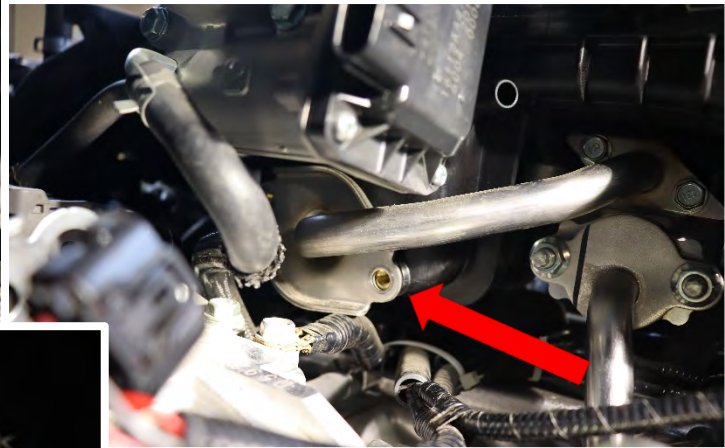
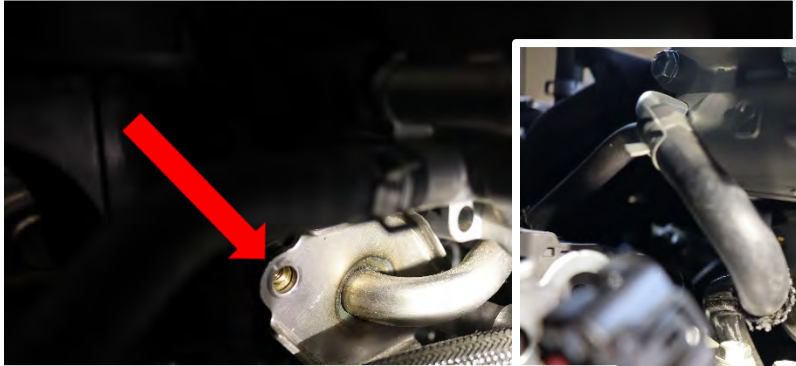
Crawford Performance

- f. Remove throttle position sensor



- g. Remove 4 Bolts from EGR Tube off EGR control solenoid to underside of throttle body, and two nuts off lower EGR solenoid inlet (4 Bolts - 10 MM Socket, 2 Nuts - 12 MM Socket)



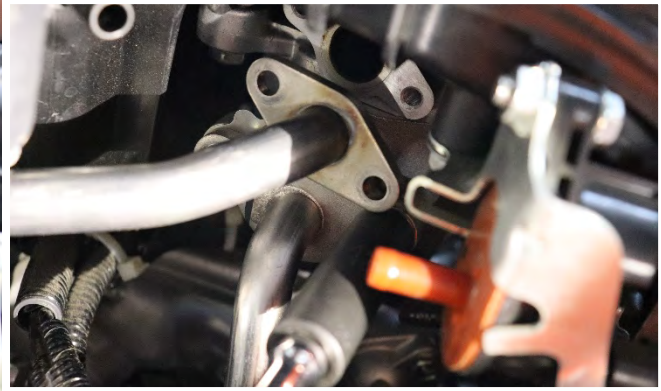


Take care not to damage or bend gasket

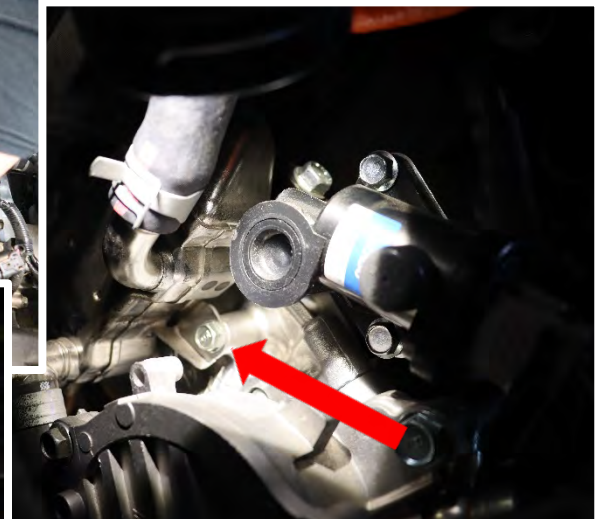
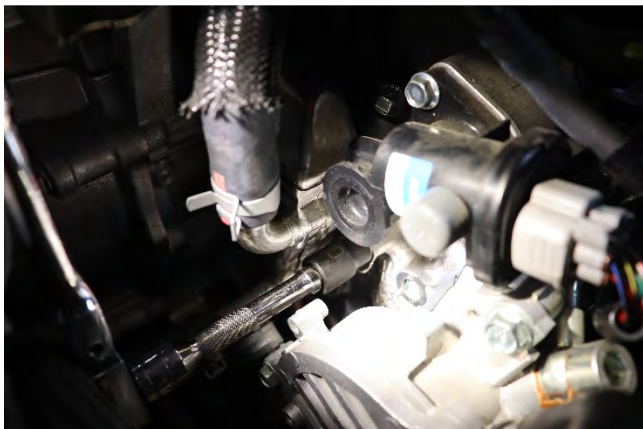


Crawford Performance

Remove nuts but do not remove line, leave loose. (12 MM Socket)

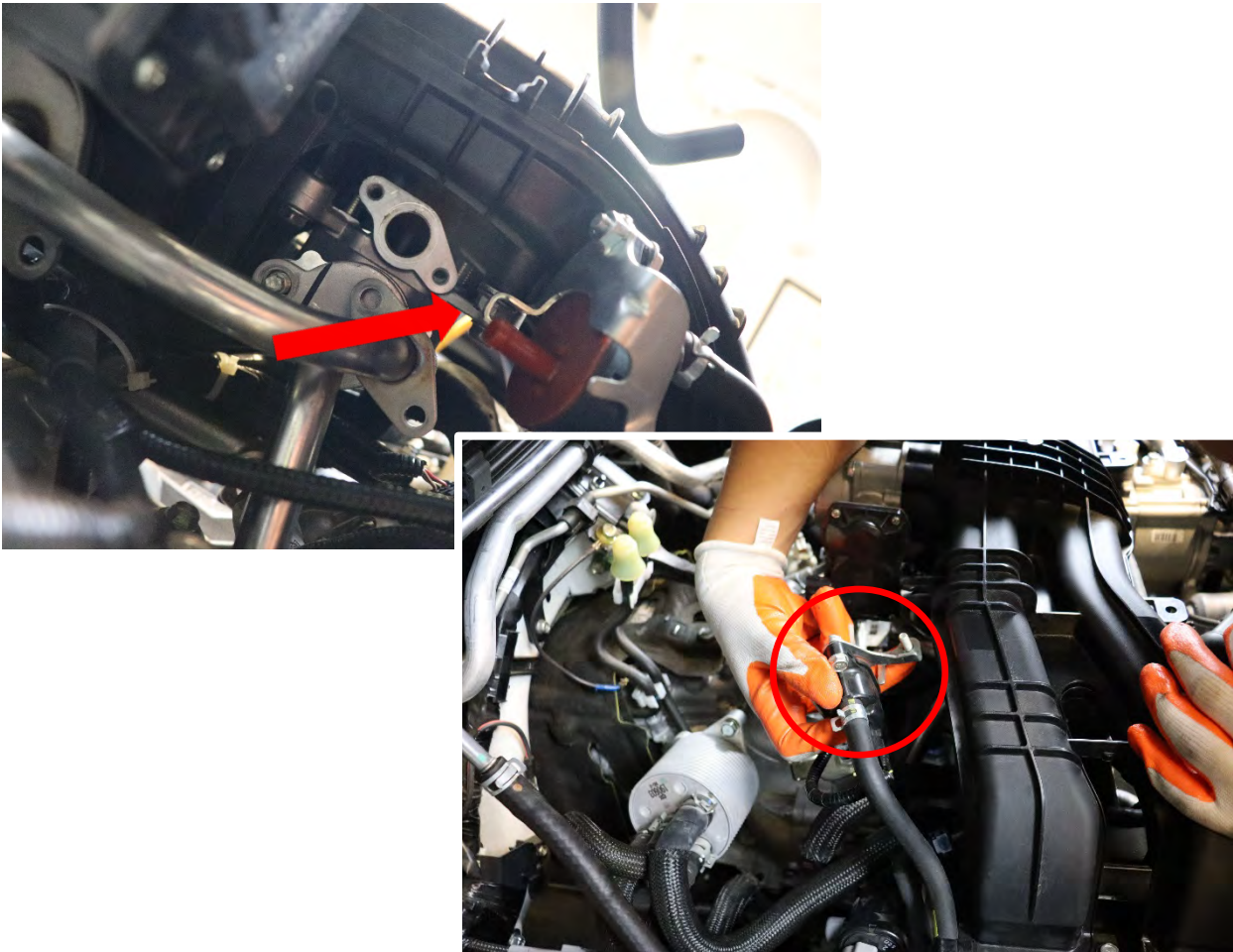


- h. Remove Lower EGR Tube mounting bolt, deep in engine bay on backside of block on the passenger side, taking care not to lose bolt. (10 MM Socket)

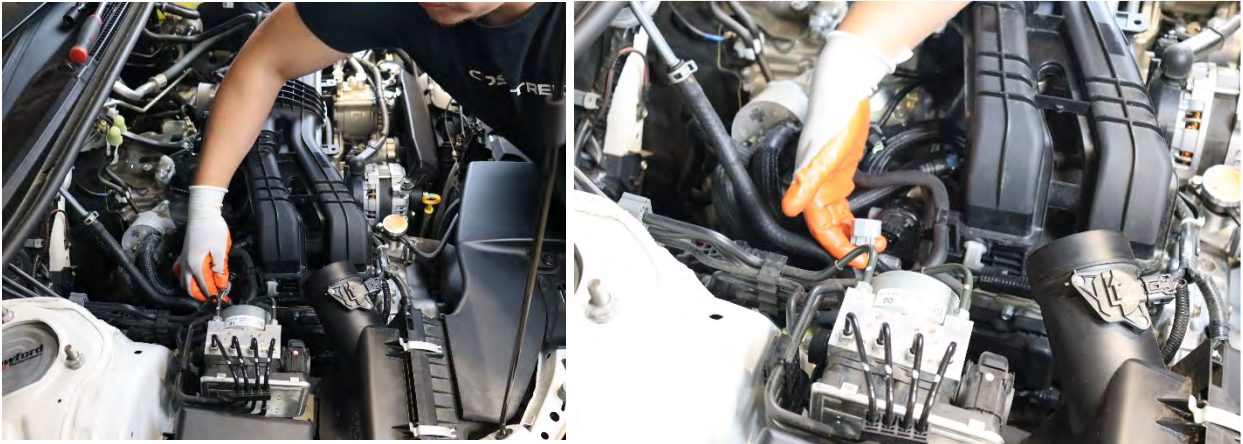


Crawford Performance

- i. Remove EVAP Control Solenoid mounting bolt (12 MM Socket)

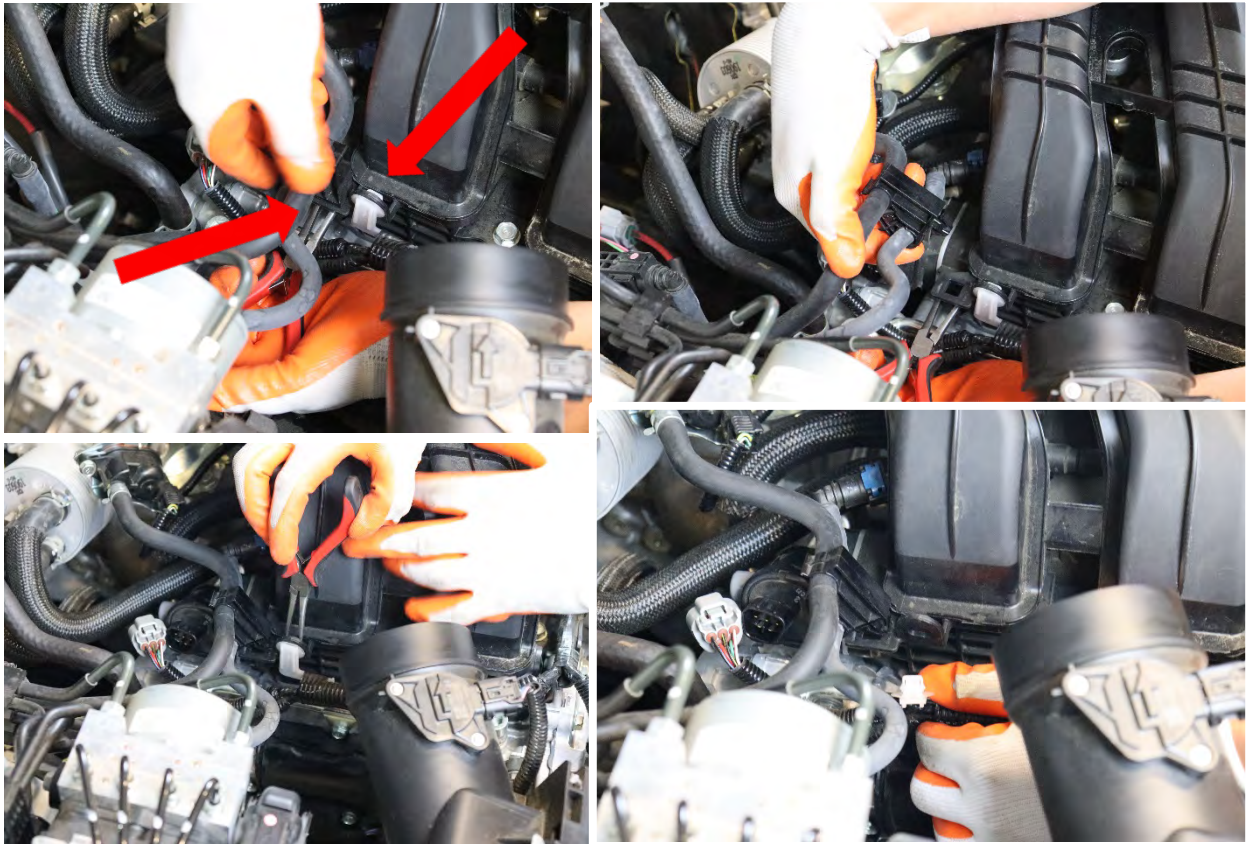


- j. Remove TGV connector



Crawford Performance

- k. Remove wiring clips on passenger side of manifold (Needle Nose)

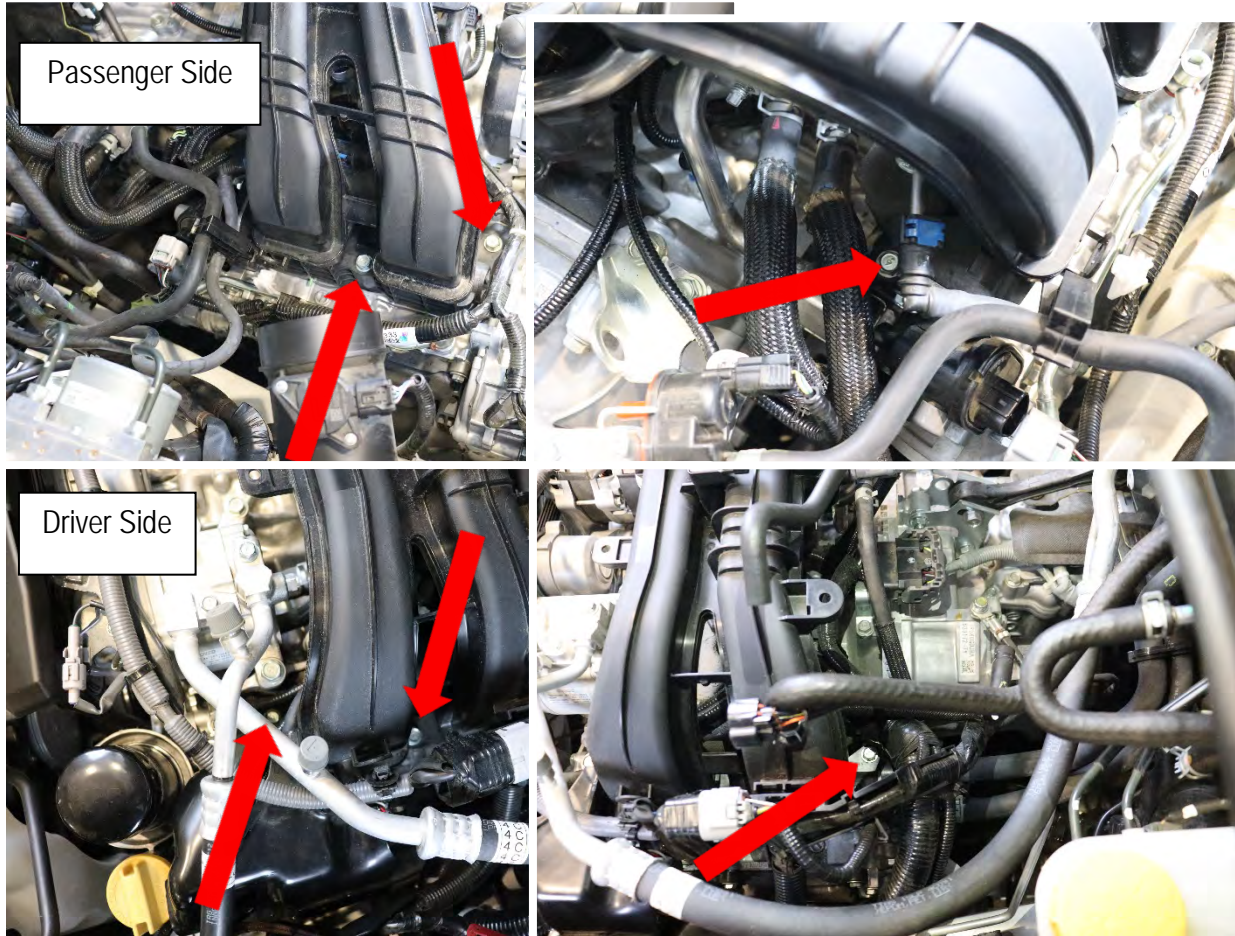


- l. Remove EGR Solenoid connector

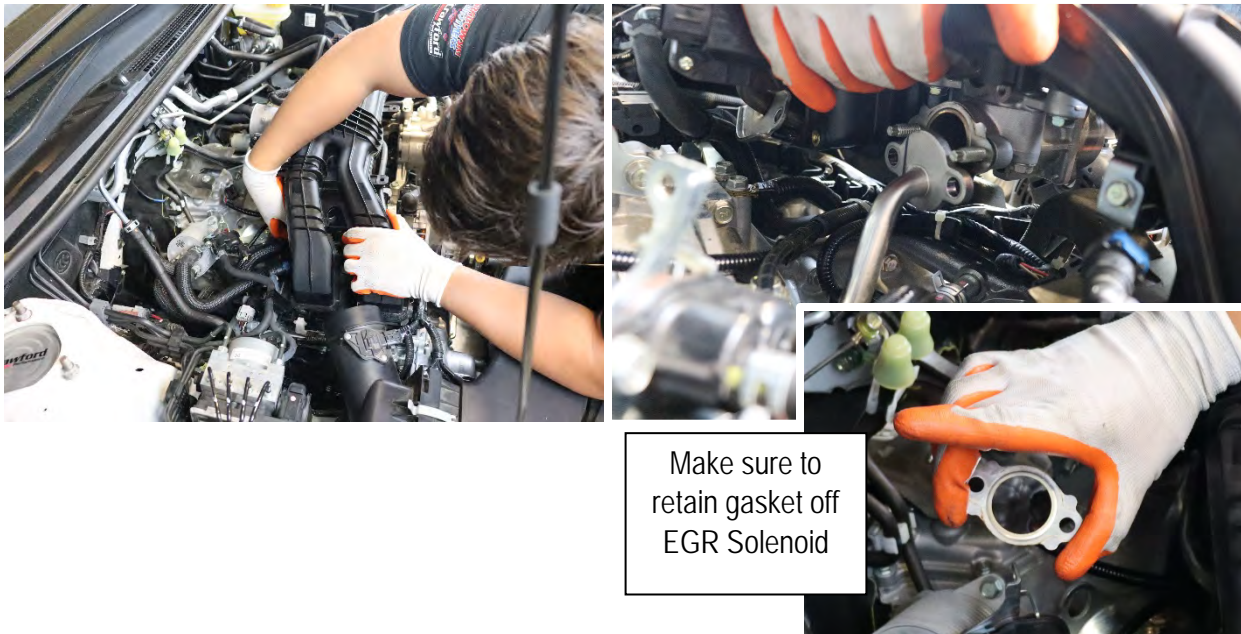


Crawford Performance

m. Remove 6 Manifold Bolts – 2 Long, 4 short (12 MM Socket)

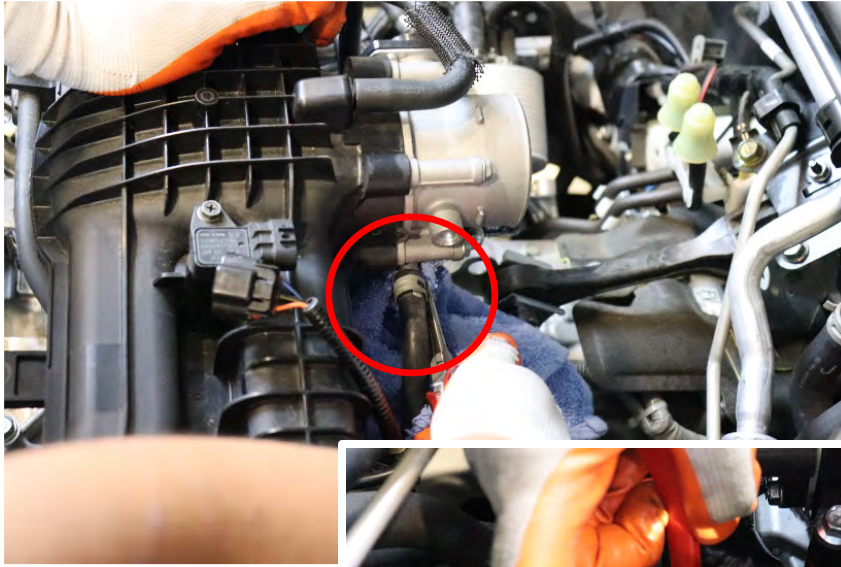


n. Lift manifold from passenger side up and towards the front of the vehicle to provide room to remove the Lower EGR Tube and gasket (should be loose from step 3.g)



Crawford Performance

- o. Remove coolant line leading to throttle body and cap nipples to prevent leakage



- p. Remove the Crash guard



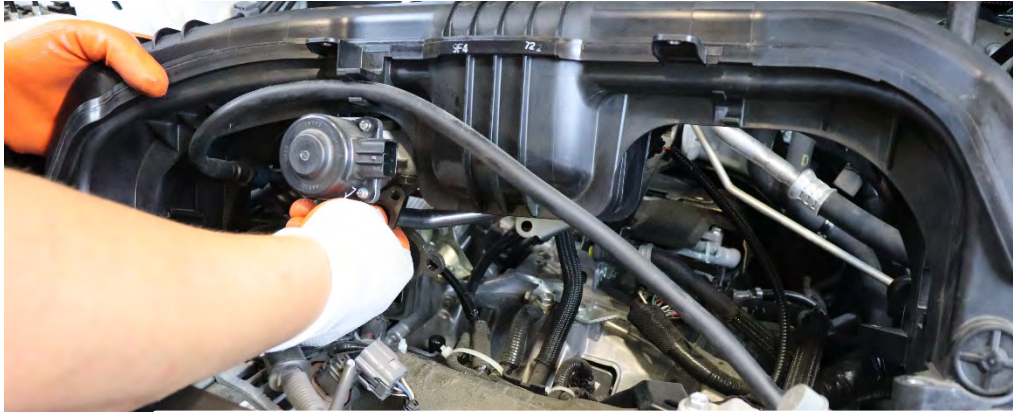
Crawford Performance

- q. Gently lift manifold away from block heads, moving wires and lines as needed



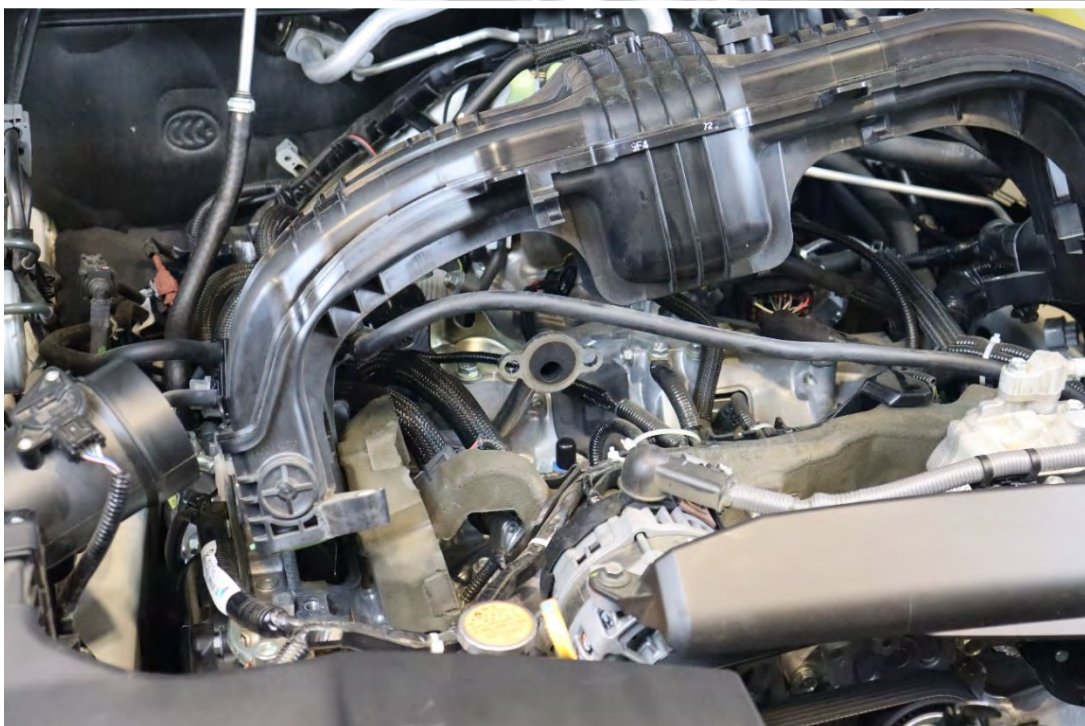
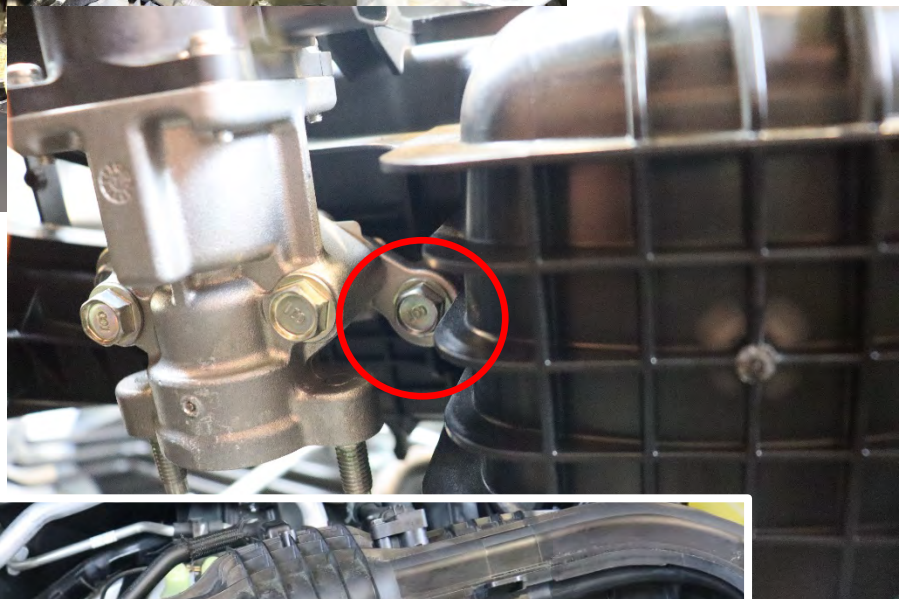
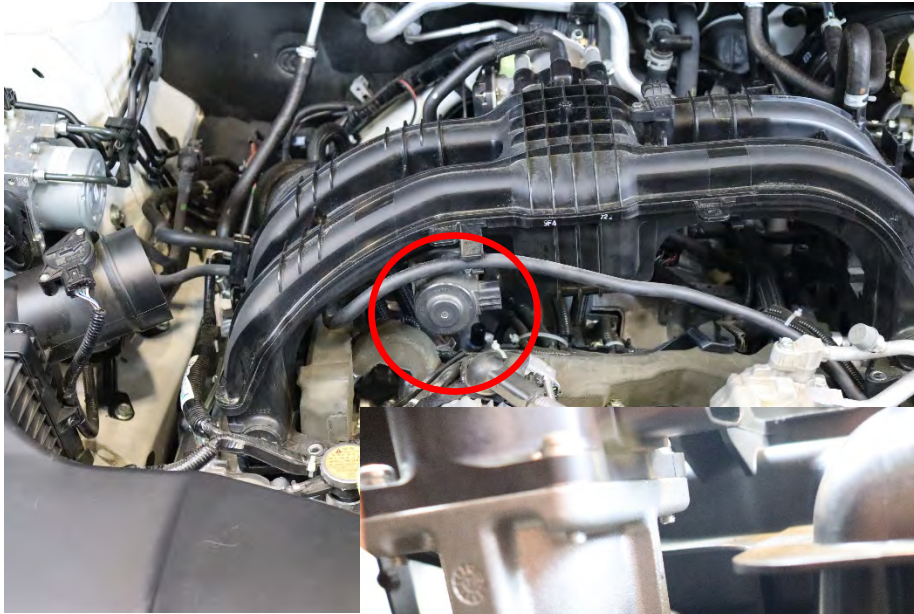
Crawford Performance

- r. Remove EGR Tube by rotating 180 degrees from stock position and angle up to release from throttle body



Crawford Performance

- s. Remove EGR Solenoid mounting bolts and set bolts aside (2 bolts on each side of module - 12 MM socket)

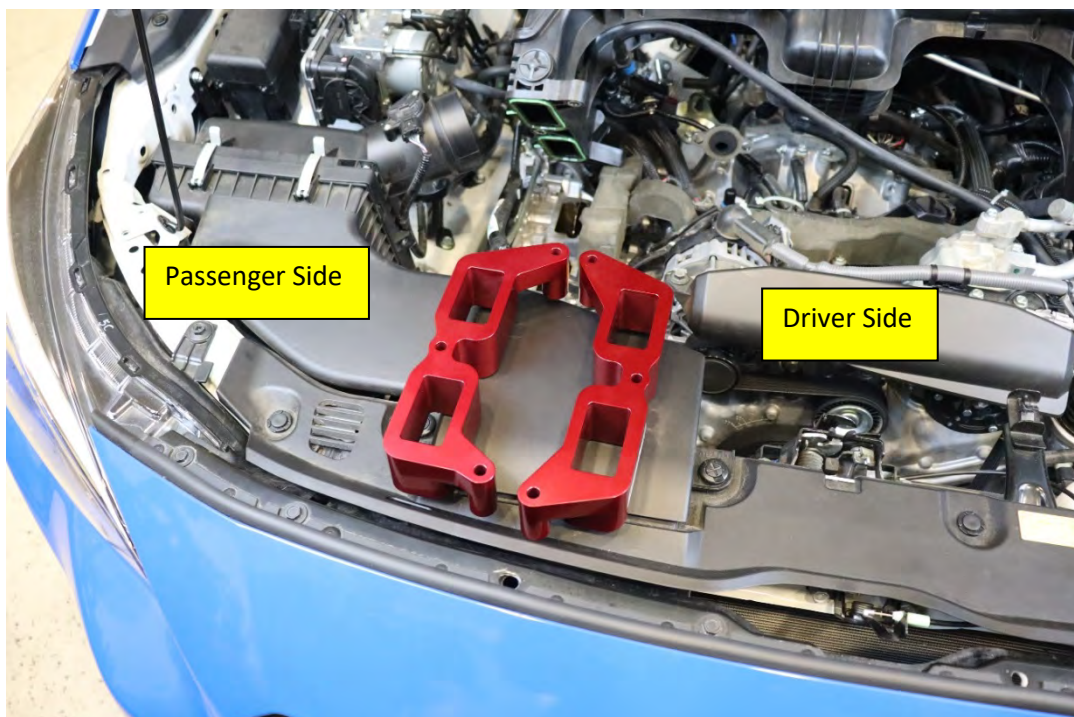


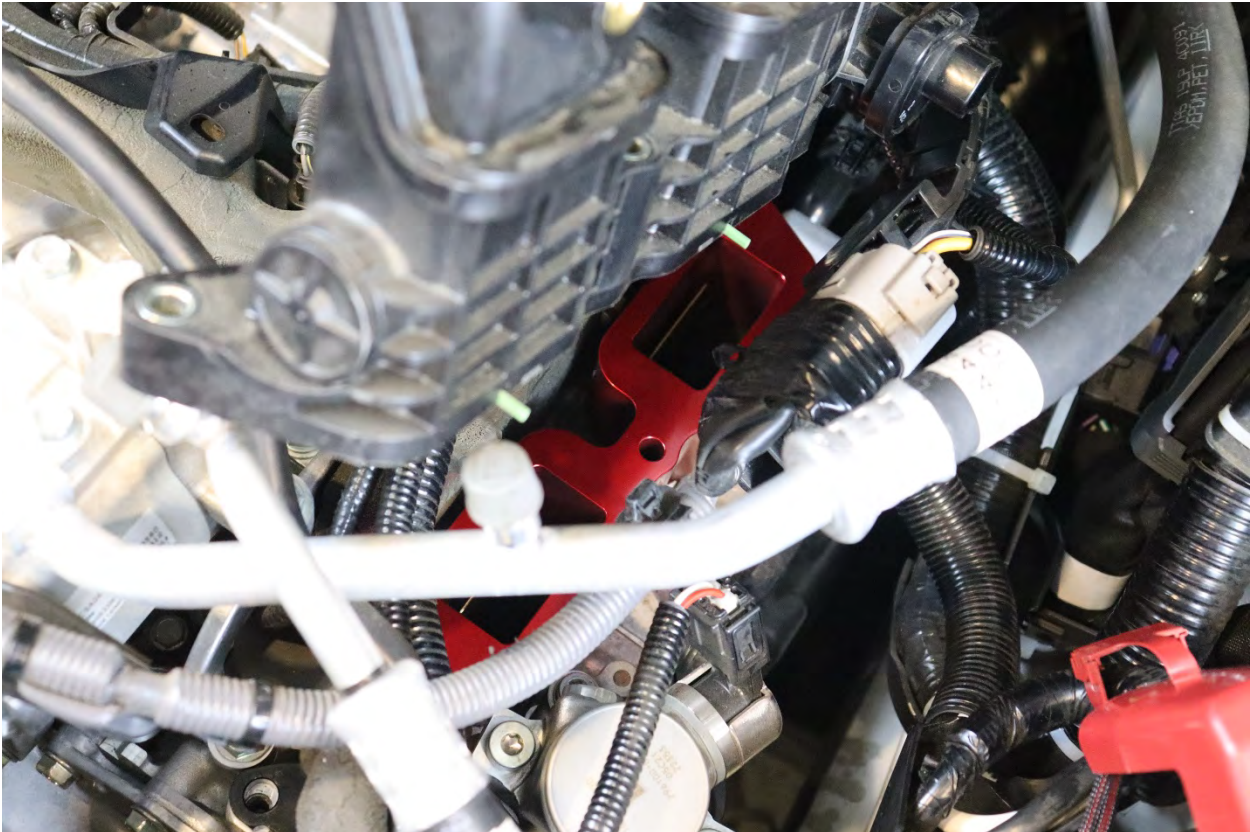
Crawford Performance

4. Install Crawford Performance Billet Power blocks
 - a. Install 4 provided O-rings into power blocks as shown



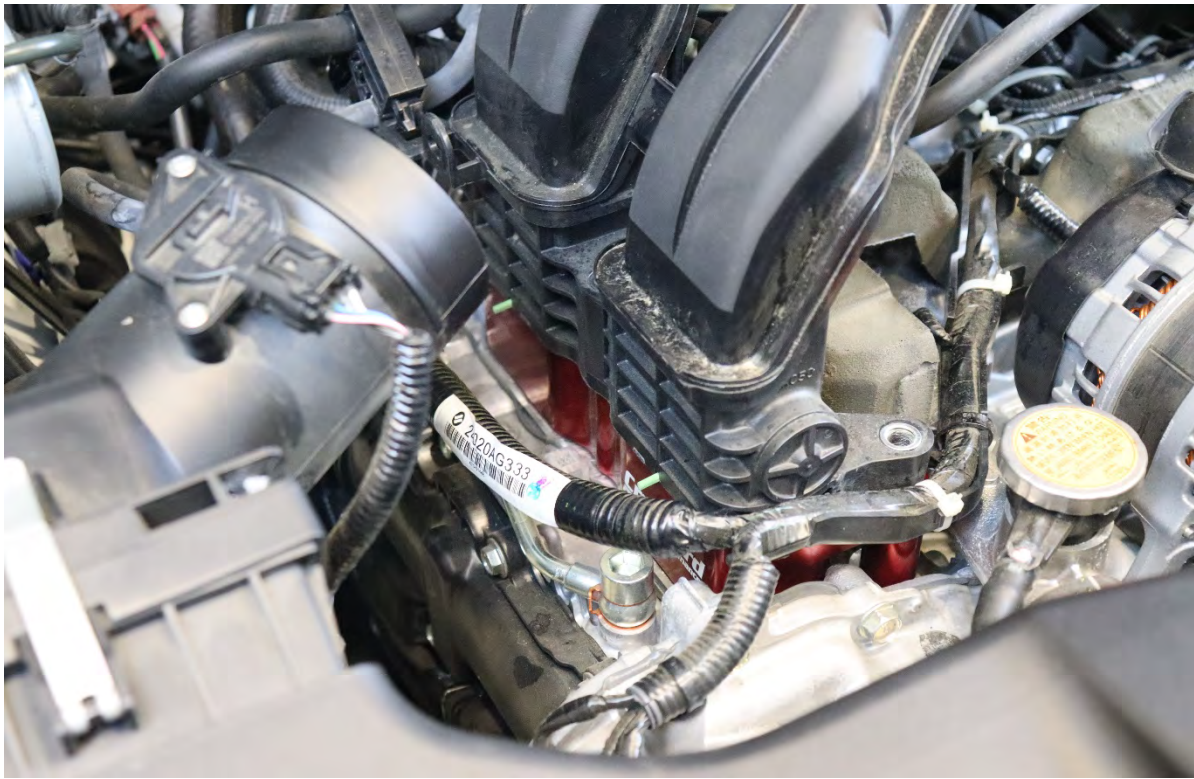
- b. Identify Driver and Passenger side blocks and install into vehicle gasket side down by placing blocks on top of block intake ports

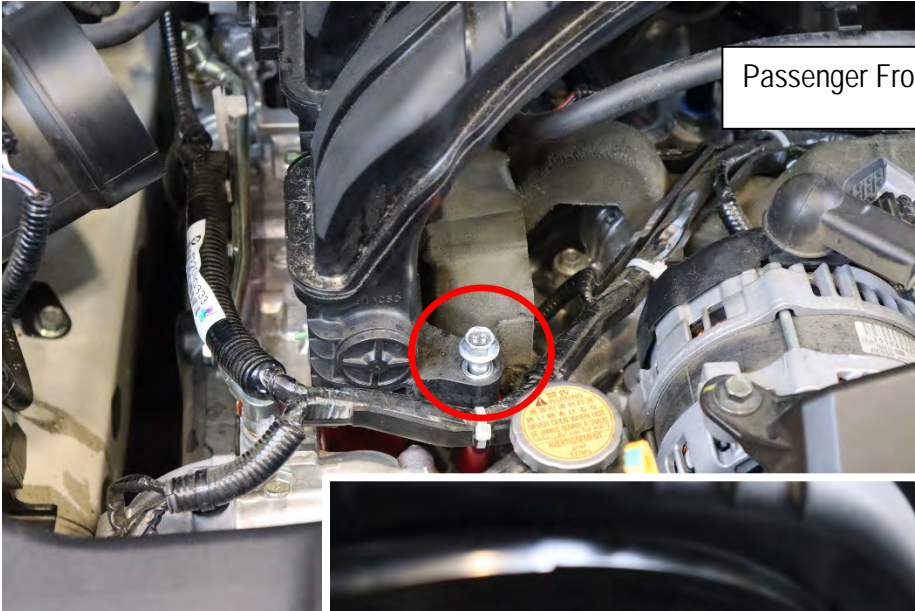




Crawford Performance

- c. Seat manifold over Billet power Blocks and insert provided manifold bolts, use caution not to pinch or tear on any wires or lines on driver side of manifold (2 - 100 MM bolts, 4 - 80 MM bolts)





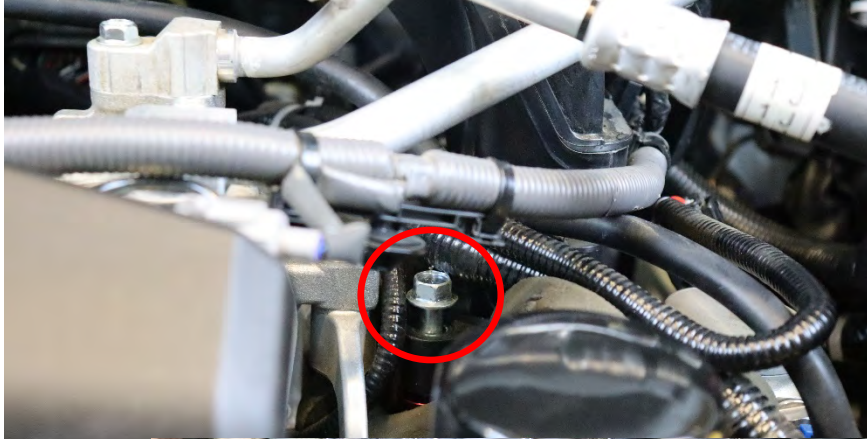
Passenger Front 80 MM Bolt

Passenger Rear 80 MM Bolt



Passenger Middle 100 MM Bolt

Crawford Performance



Driver Front 80 MM Bolt



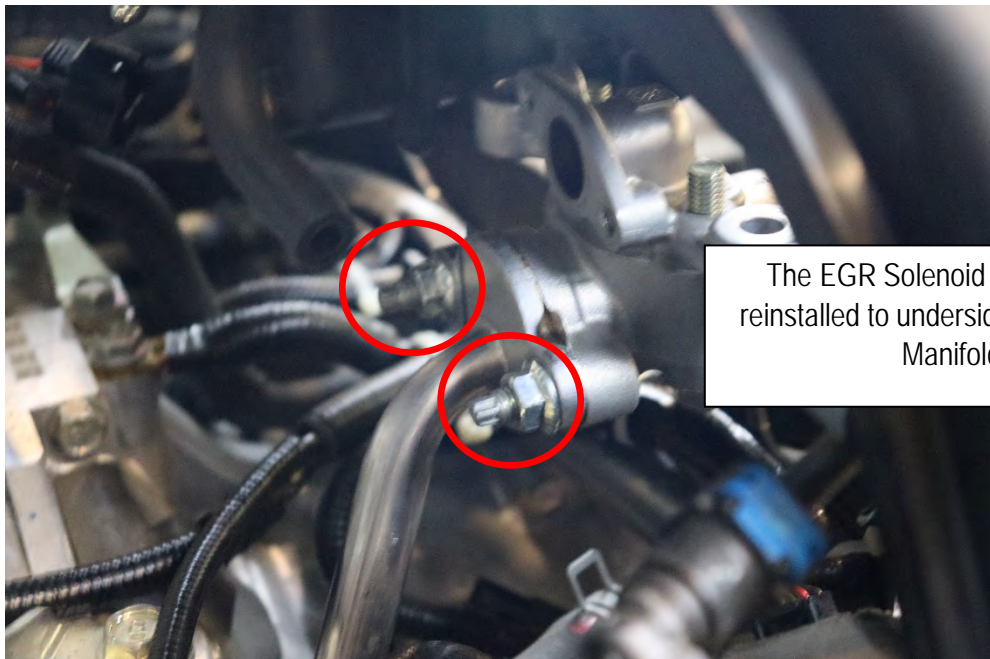
Driver Middle 100 MM Bolt



Driver Rear 80 MM Bolt

Crawford Performance

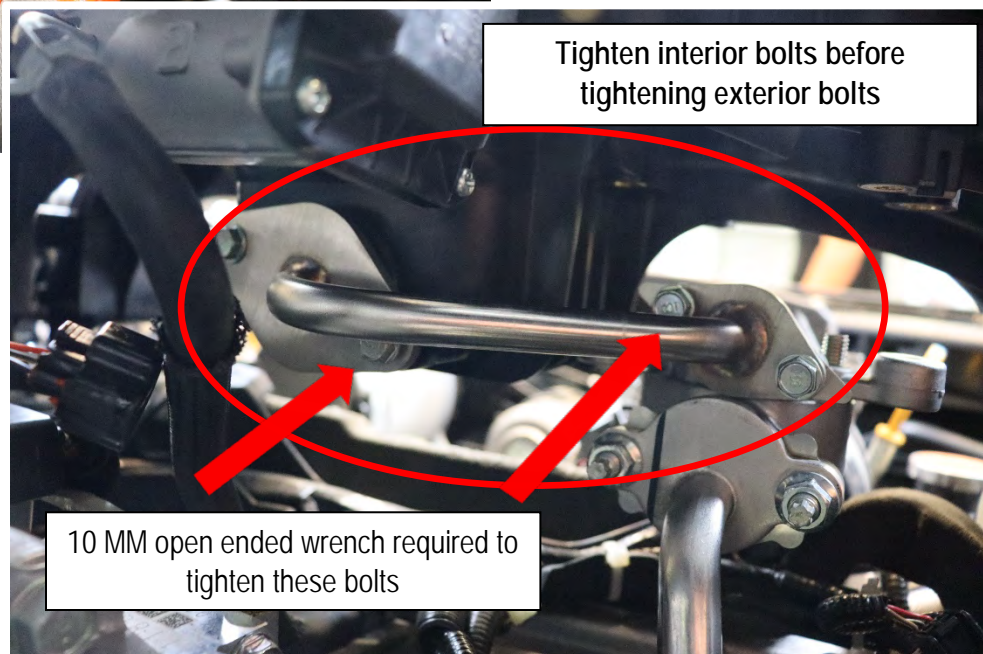
- d. Tighten inserted manifold bolts by hand
- e. Reinstall EGR Solenoid with 2 OEM 12 MM Nuts removed in step 3.g to the EGR exhaust line leading up from engine block. Do not overtighten, get the nuts snug so EGR Solenoid is tight against EGR tube. Remember to insert gasket before reinstalling (12 MM Socket)



The EGR Solenoid does not get reinstalled to underside of the Intake Manifold

Crawford Performance

- f. Install the provided EGR tube from the EGR Solenoid to the Manifold using OEM hardware (4 - 10 MM bolts) . Remember to place gasket between EGR tube and EGR Solenoid. (10 MM socket)



- g. Once the EGR Pipe is securely in place, go back around and tighten all 6 manifold bolts completely. (12 MM Socket) **Torque to 18 ft lbs.**

Crawford Performance

- h. Install provided 3/8" PCV line and 3/8" coupler to PCV line leading from intake manifold to capped PCV port from step 3.e.



- i. Install provided coolant line (13") removed in step 3.o to replace OEM hose
- j. Reinstall Crash Guards. Refer to step 3.a for guidance. (12 MM bolt will not be used)
- k. Reinstall lower EGR bolt. Refer to step 3.h for guidance
- l. Reinstall EVAP Control Solenoid removed in step 3.i and the vacuum line removed in step 3.e
- m. Reinstall Mass Air Intake. Refer to step 2 for guidance
- n. Reinstall the Throttle Position Sensor. Refer to step 3.f for guidance
- o. Reinstall MAP sensor connectors. Refer to step 3.d for guidance
- p. Reinstall TGV connectors. Refer to steps 3.c and 3.j for guidance

Crawford Performance

5. Before finishing installation, double check that everything is tight and secure, reconnect ground on battery, and enjoy the gains!
 - **NOTE:** Due to the extra height gained from the installation of the Billet Power Blocks to the Intake manifold, the wiring harnesses removed will not necessarily reinstall to their OEM clips/positions after the installation. Secure these using wire ties and make sure they are not loosely hanging where they can be damaged.



THANK YOU FOR CHOOSING CRAWFORD PERFORMANCE!

**PLEASE FEEL FREE TO CONTACT US FOR ANY QUESTIONS OR COMMENTS! WE ARE HERE TO HELP.
WE UNDERSTAND THIS IS A DIFFICULT INSTALL AND WE COMMEND YOU FOR YOUR EFFORTS.
CELEBRATE BY CRACKING A BEER AND POURING ONE OUT FOR YOUR CHEWED-UP ARMS.**

**2319 E LOCUST CT. SUITE A
ONTARIO, CALIFORNIA 91761**

FOR QUESTIONS OR TECHNICAL HELP, CONTACT:

TECHNICAL@CRAWFORDPERFORMANCE.COM

(855) 677-8243

