



Crawford Performance Billet Power Blocks (BPB)  
2015+ Outback 2.5i, 2015+ Legacy 2.5i, 2019+  
Forester 2.5i, 2021 Crosstrek 2.5i,

### 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 (small + regular)
- 8 MM Nut Driver
- 10 MM Ratchet Wrench
- 10 MM Deep Socket
- 10 MM Short Socket
- 12 MM Deep Socket
- 12 MM Short Socket
- 12 MM Ratchet Wrench
- Needle Nose Pliers
- Ratchet Driver
- Ratchet Extensions

## Recommended Tools

- Magnet
- Lubricant
- Wire snips

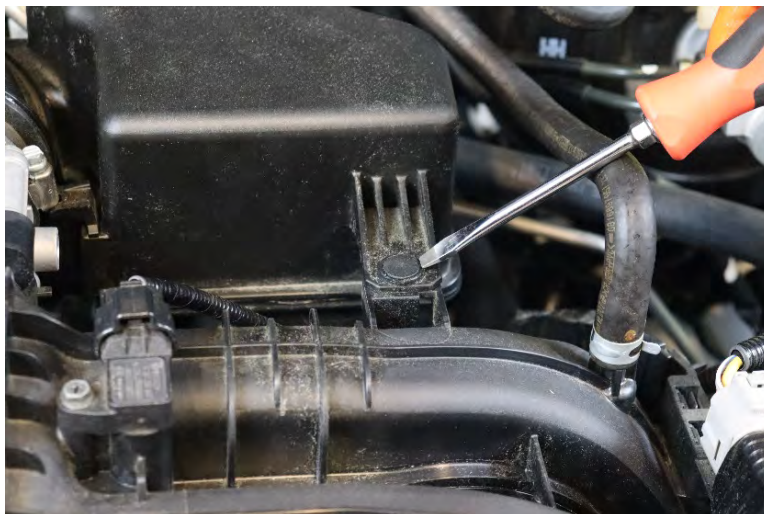
## Installation Instructions

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.



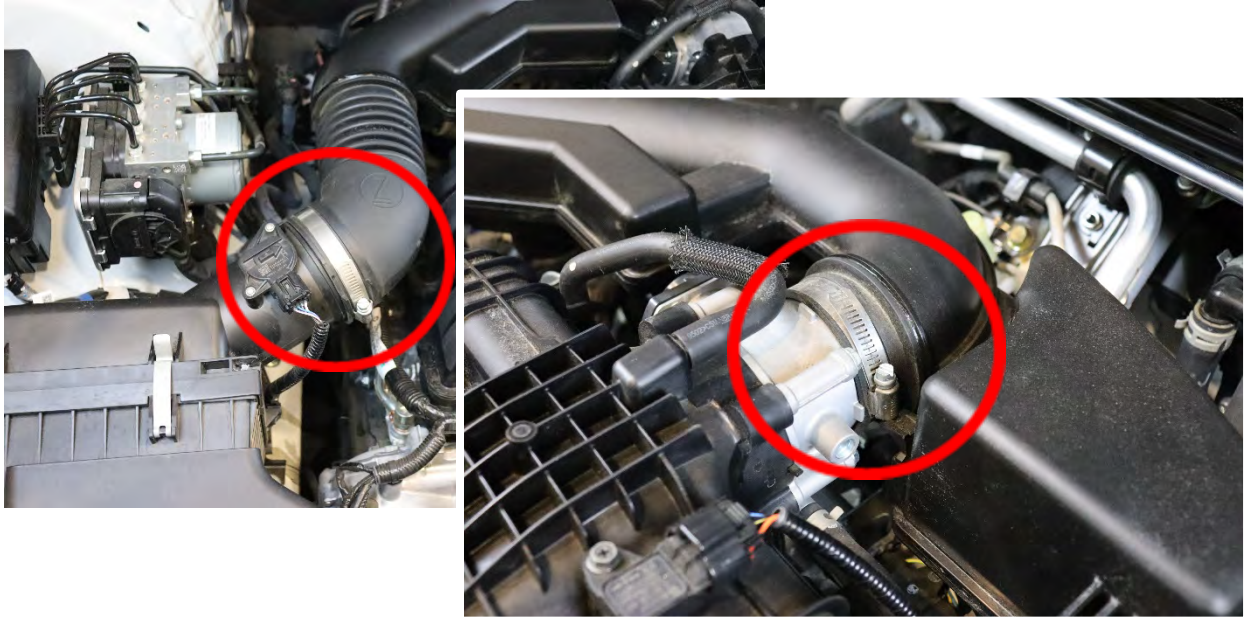
- b. Remove clip from manifold tab (flathead screwdriver)



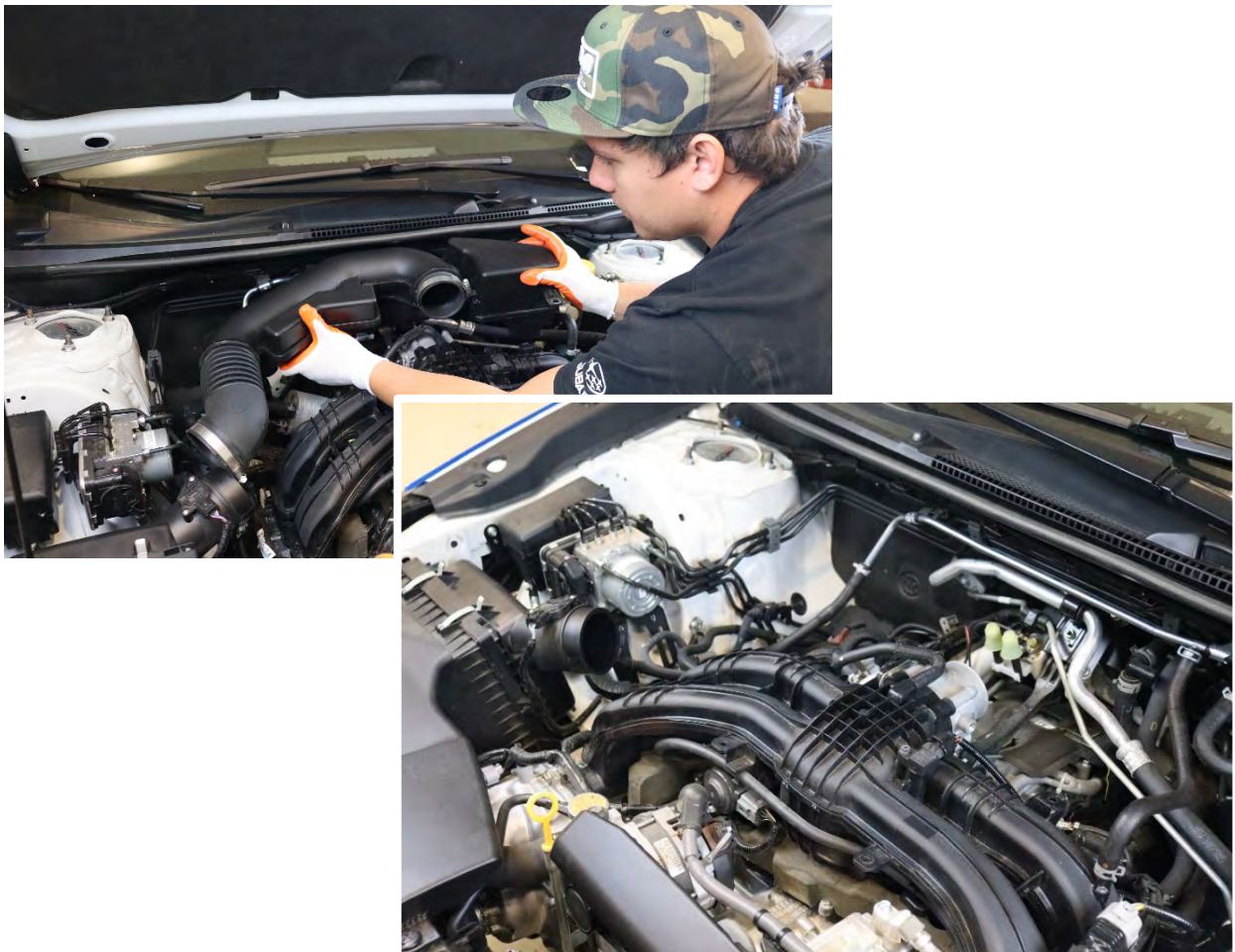


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- c. Use a flathead screwdriver or 8 MM Nut Driver to loosen the 2 hose clamps.



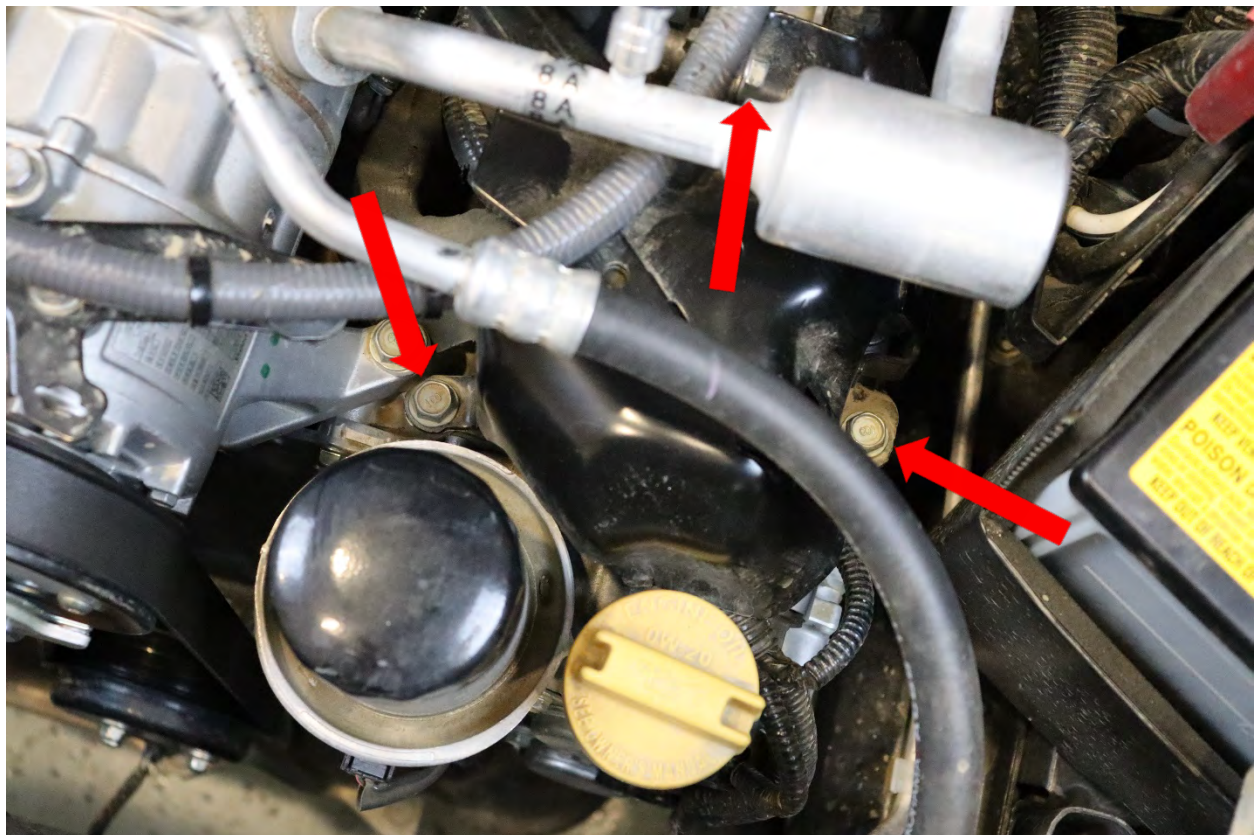
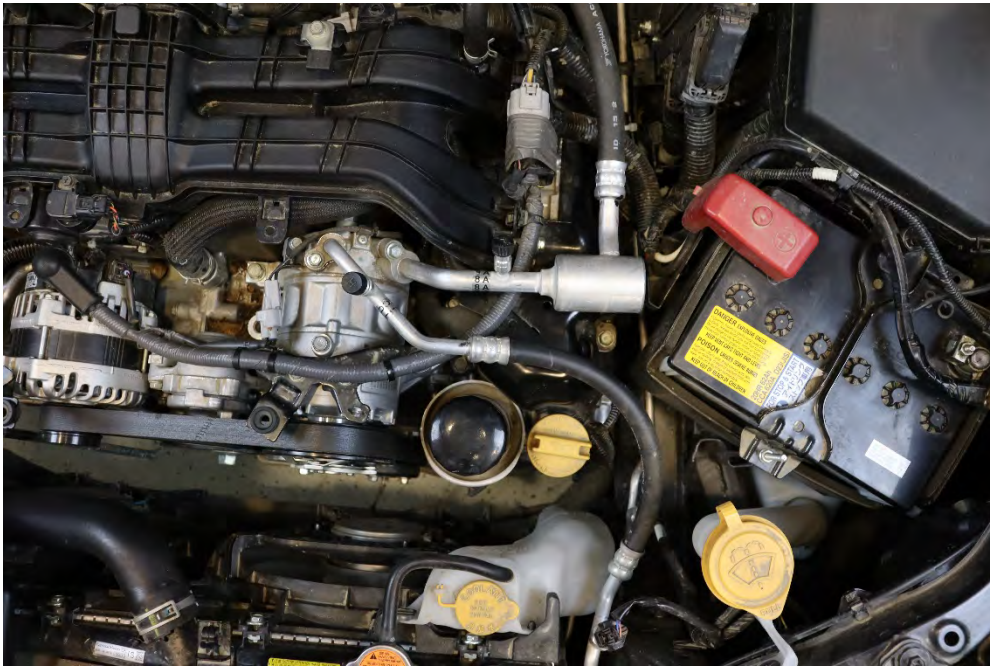
- d. Lift off the entire intake assembly and set aside.





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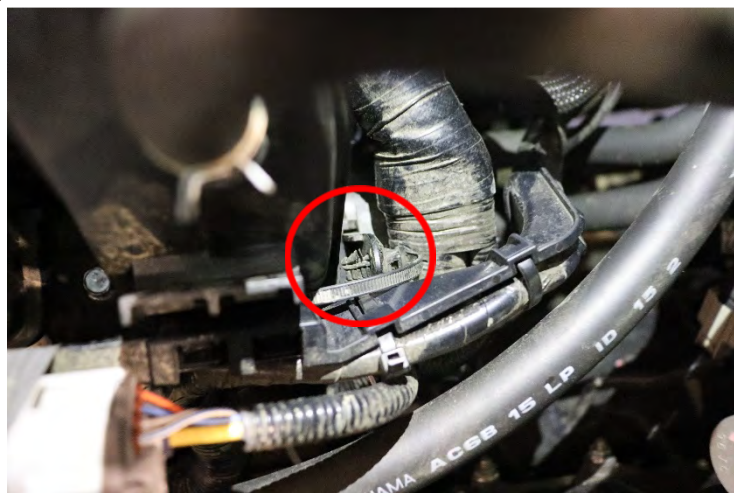
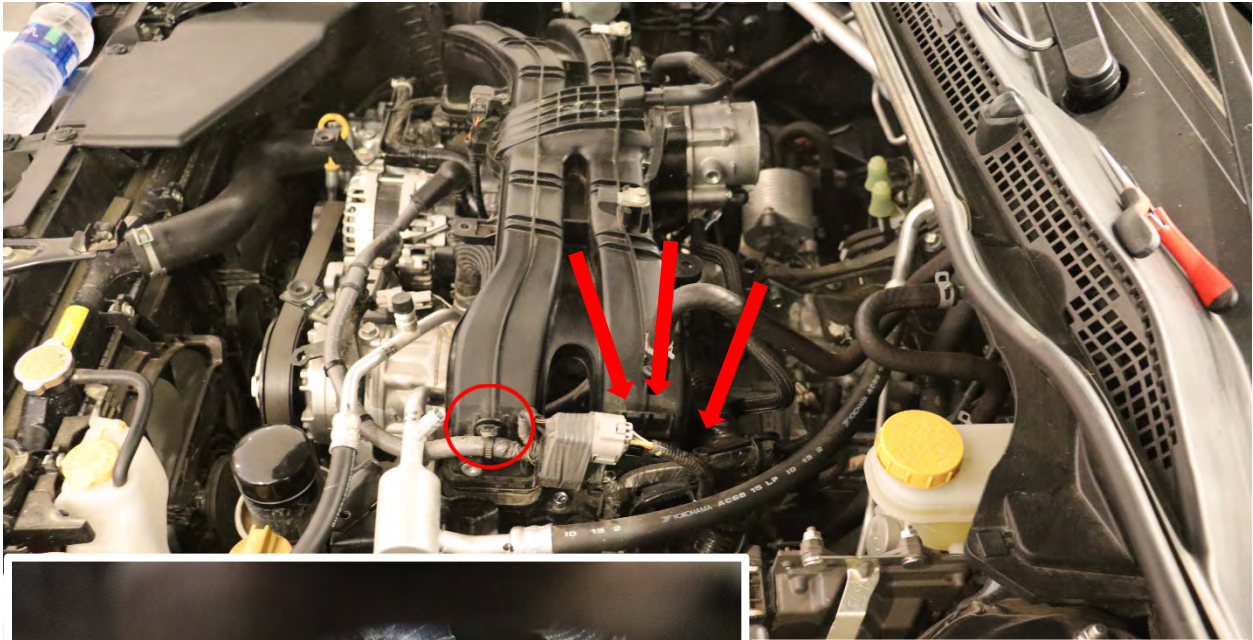
3. Remove Intake Manifold
  - a. Loosen the crash guard shielding from the driver side of the manifold by removing the 3, 12 MM bolts (12 MM Socket)





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- 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)



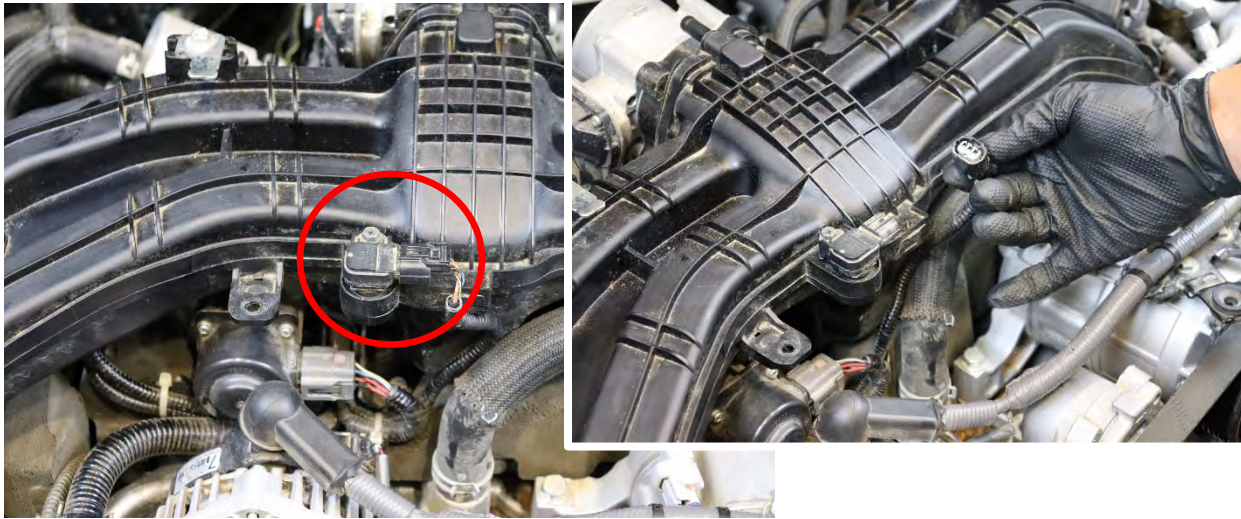
- c. Remove TGV connector



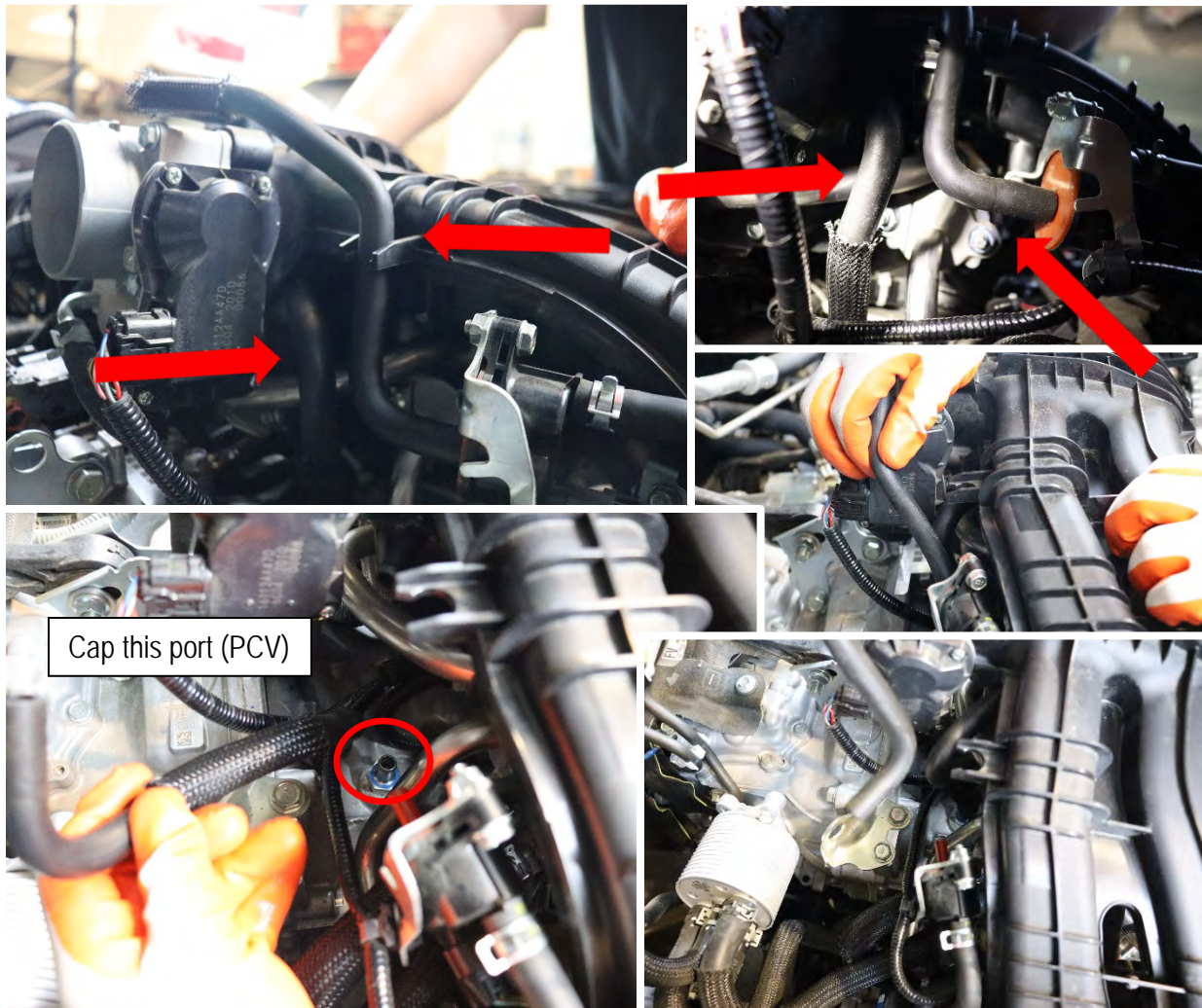


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d. Remove MAP sensor



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)



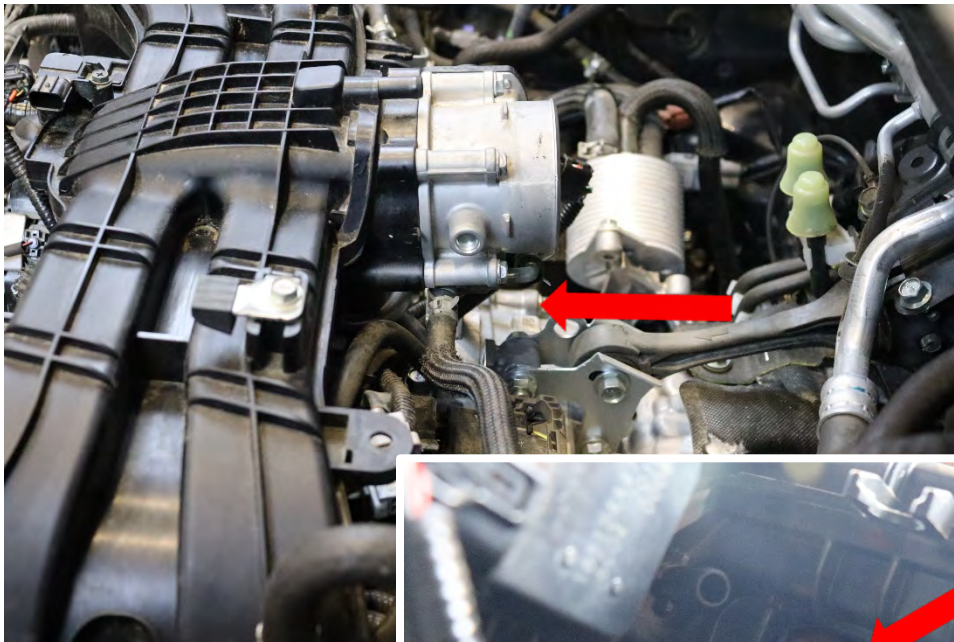


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- f. Remove throttle position sensor



- g. Remove 2 Bolts and 2 nuts from the EGR Control Solenoid (2 Bolts - 10 MM Socket, 2 Nuts - 12 MM Socket)



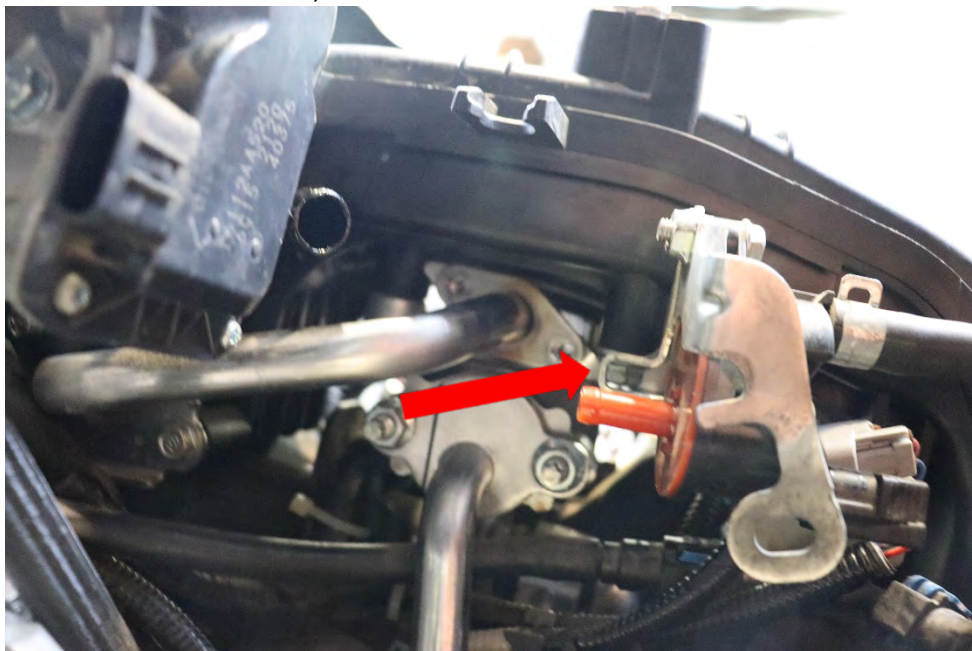


## Crawford Performance

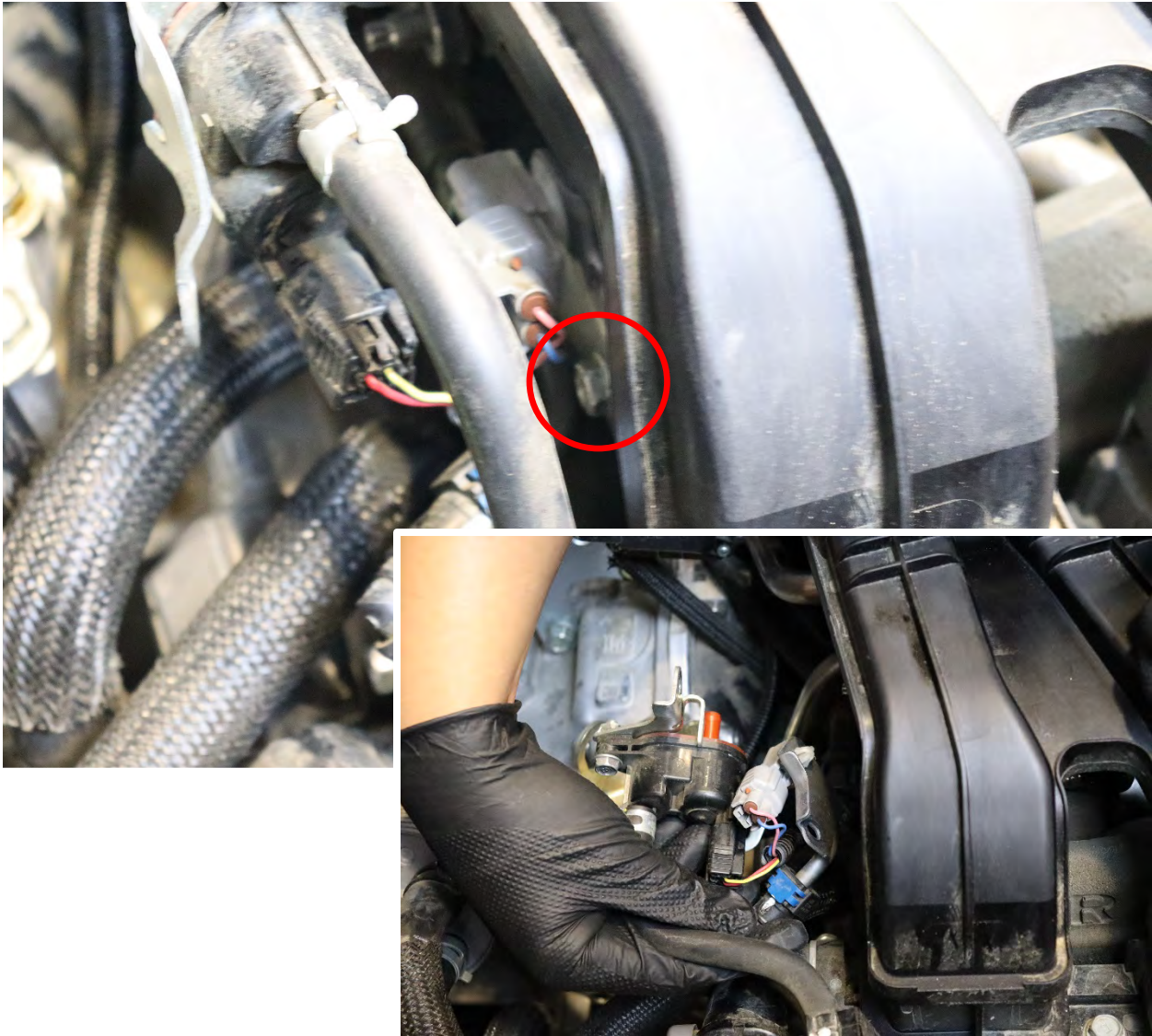
- h. Remove Lower EGR Tube mounting bolt, deep in engine bay on backside of block on the passenger side, taking care not to lose bolt. (10 MM Socket)



- i. Remove EVAP Control Solenoid mounting bolt and the fuel line bracket behind the solenoid (12 MM Socket, 10 MM Socket)







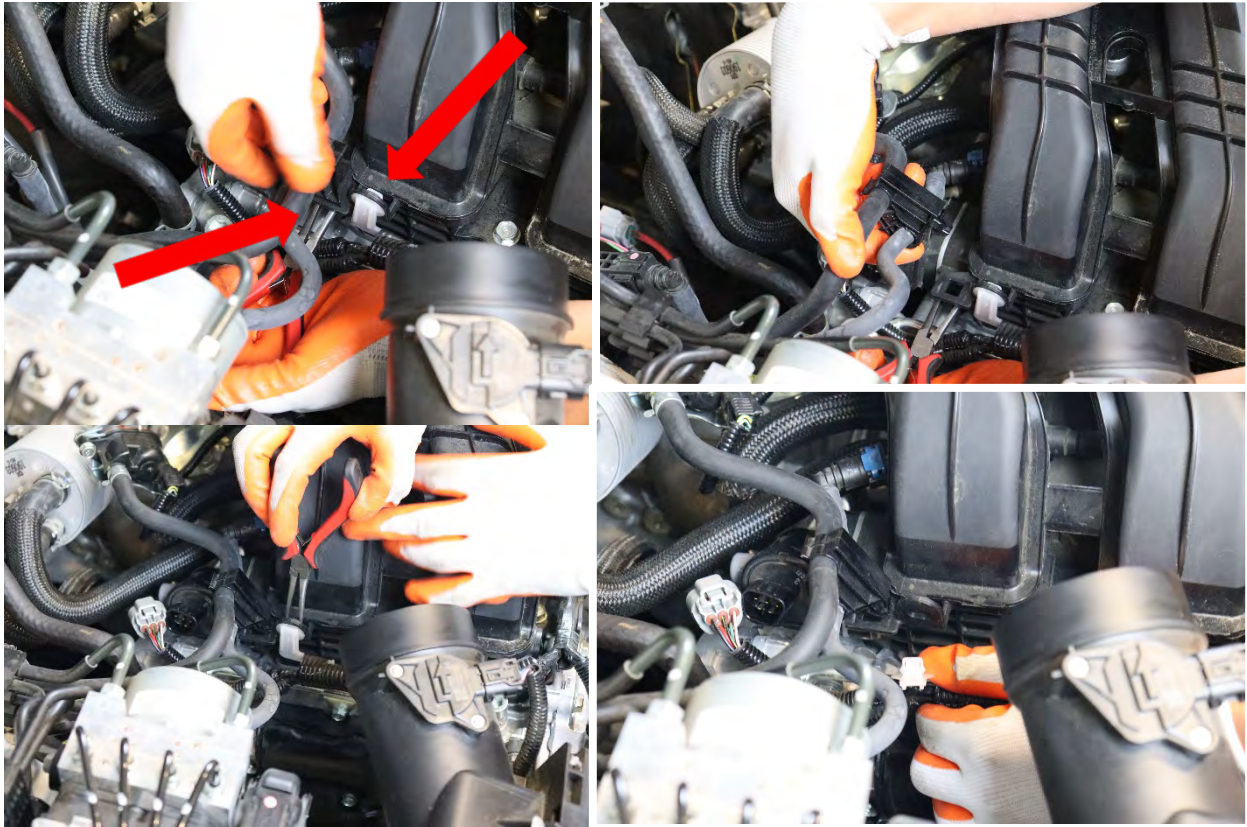
j. Remove TGV connector



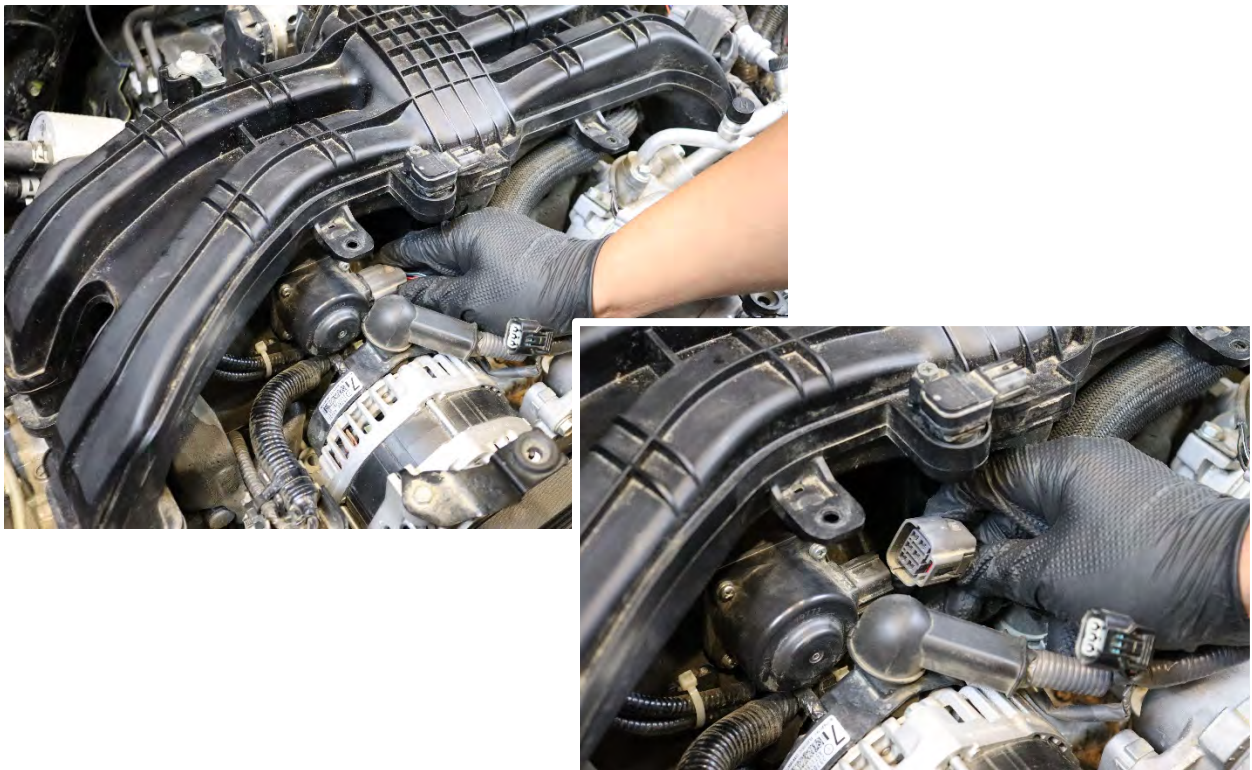


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- k. Remove wiring clips on passenger side of manifold (Needle Nose)



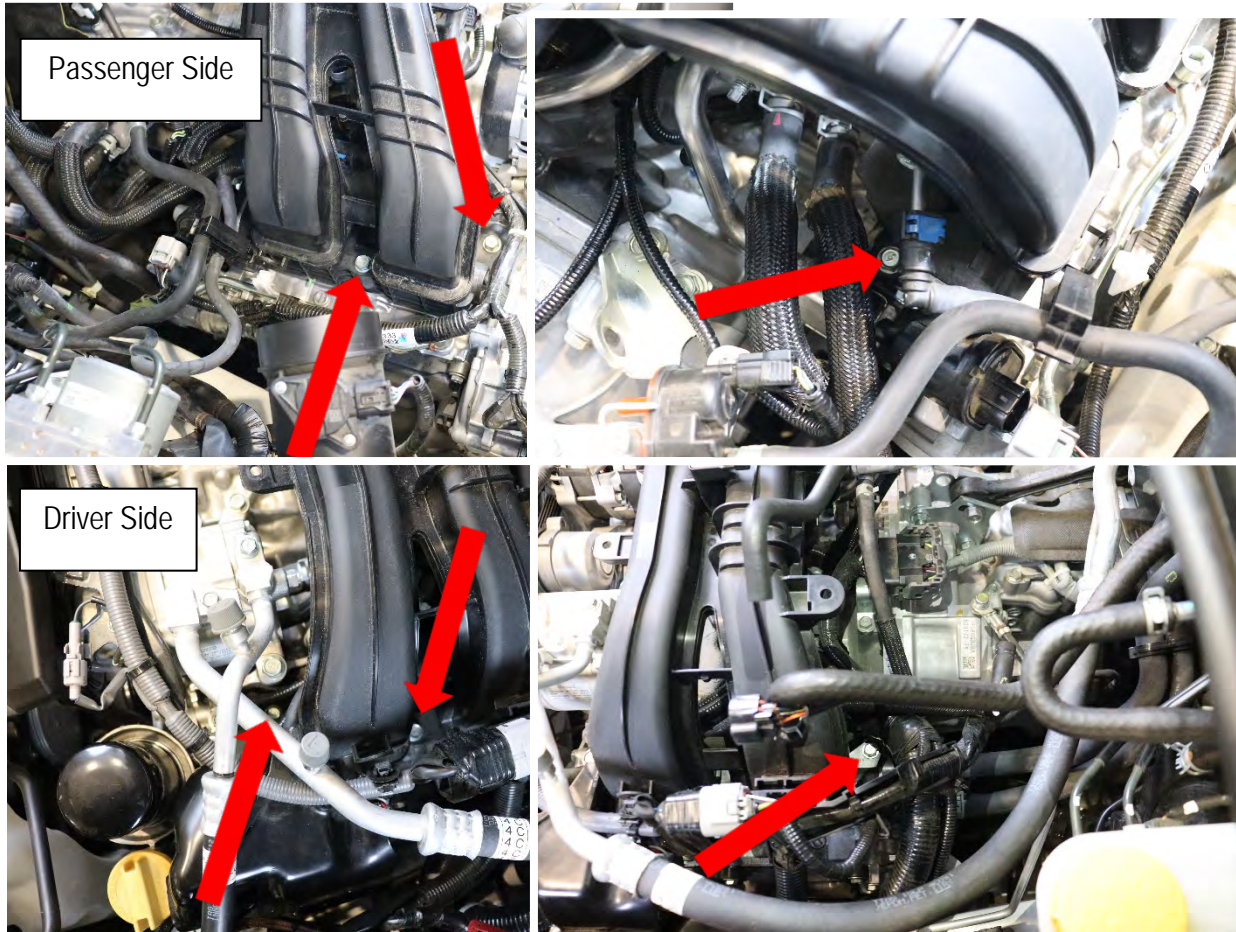
- l. Remove EGR Solenoid connector





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- 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)



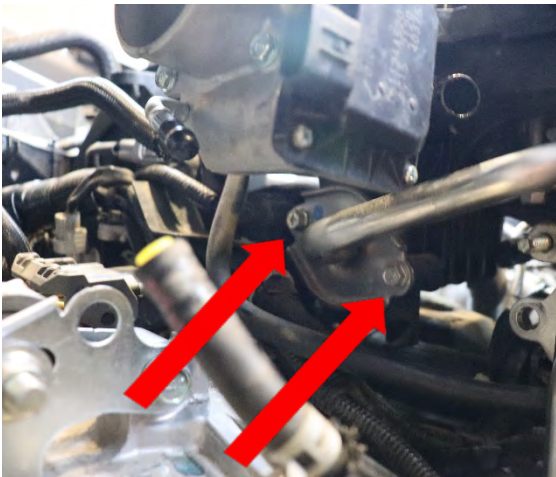


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- o. Remove coolant line leading to throttle body and cap ends



- p. Remove EGR tube bolts attached to the intake manifold under the throttle body and remove the EGR tube and gasket (10 MM Socket)



Take care not to damage or bend gasket





## Crawford Performance

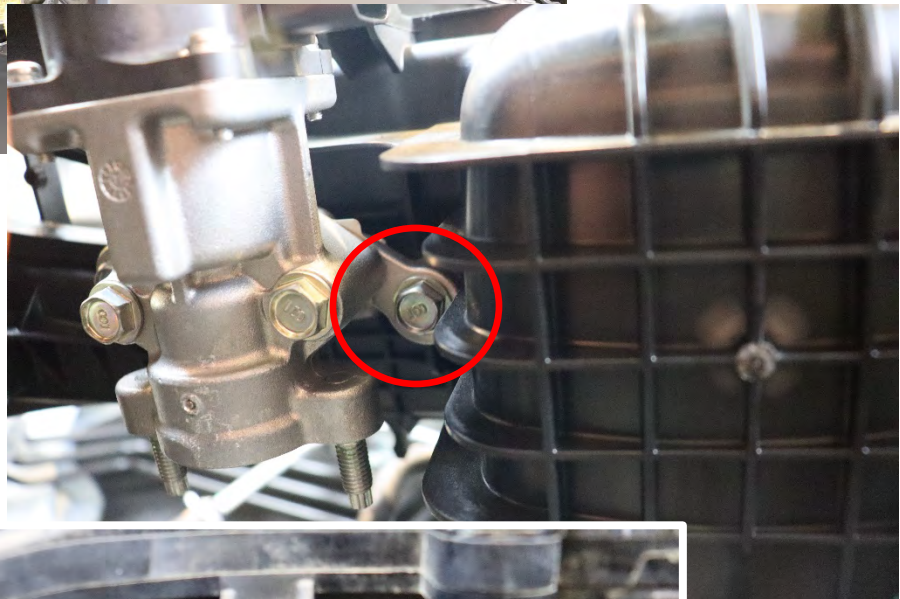
- q. Gently lift manifold away from block heads, moving wires and lines as needed. This Manifold is fit tightly onto the block through many wires and hoses. Take care and have patience when removing the Manifold so you do not damage or tear any of these lines or wires.





## Crawford Performance

- r. Remove EGR Control solenoid (2 bolts on each side of the module – 12 MM socket)



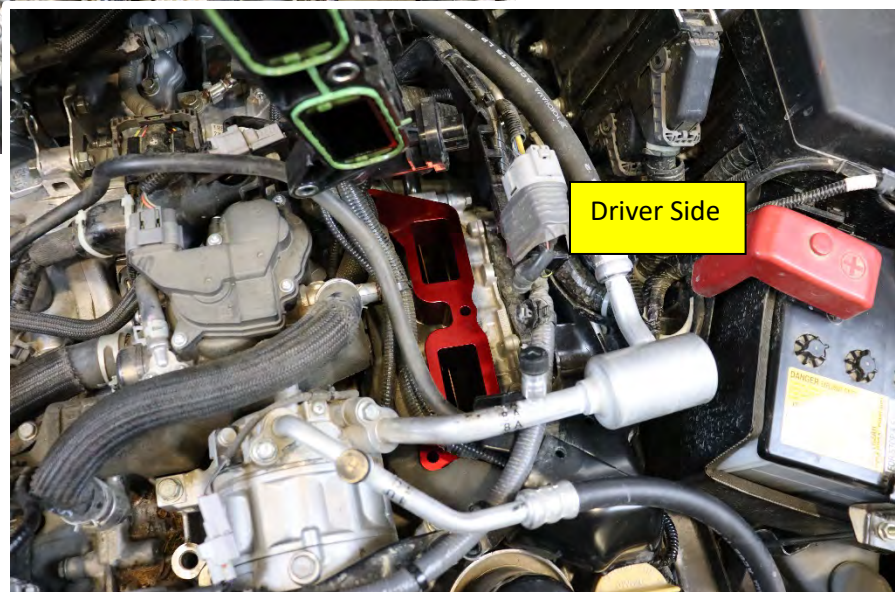
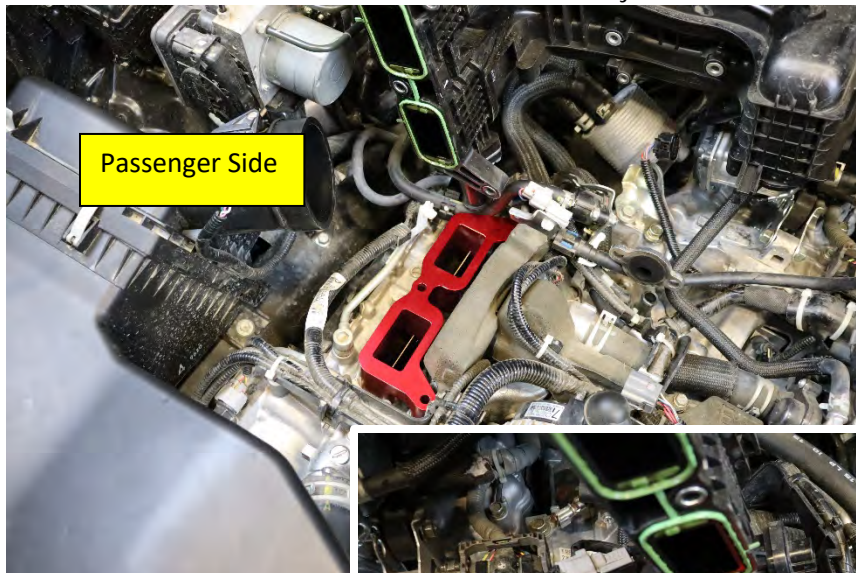


## Crawford Performance

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



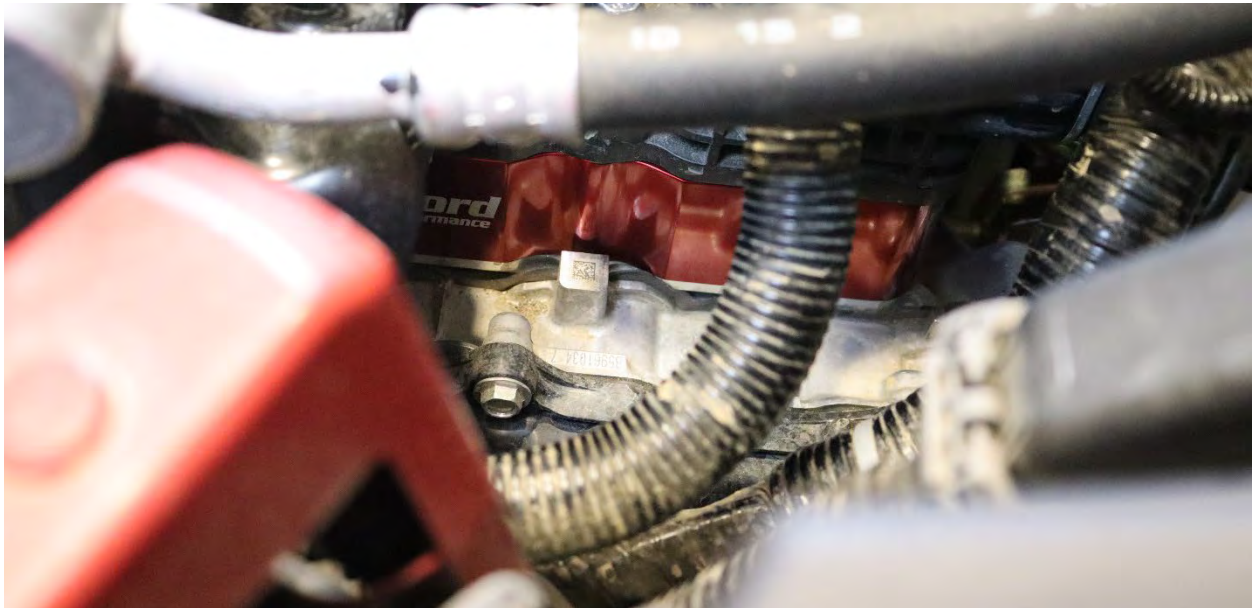
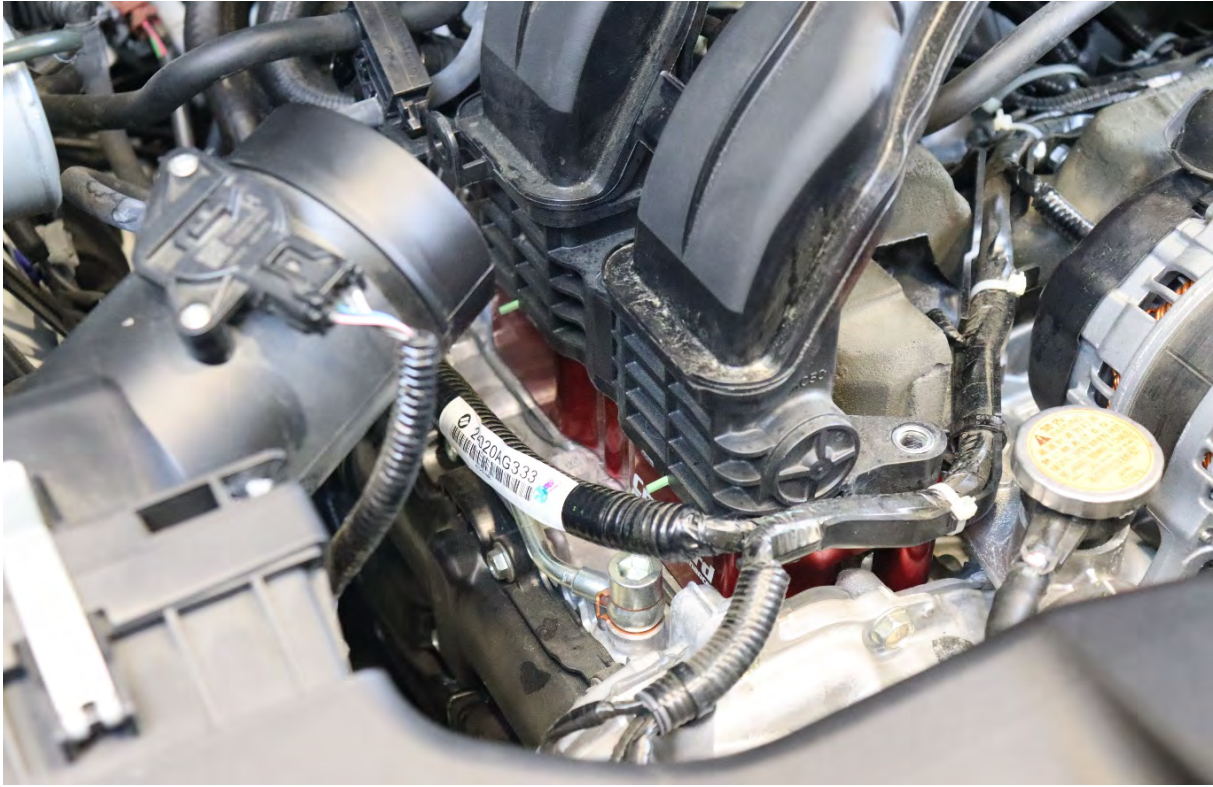
- b. Identify the Driver and Passenger side blocks and install them into the vehicle gasket side down by placing the blocks on top of the block intake ports. The Crawford logo should be towards the front of the vehicle when installed correctly





## Crawford Performance

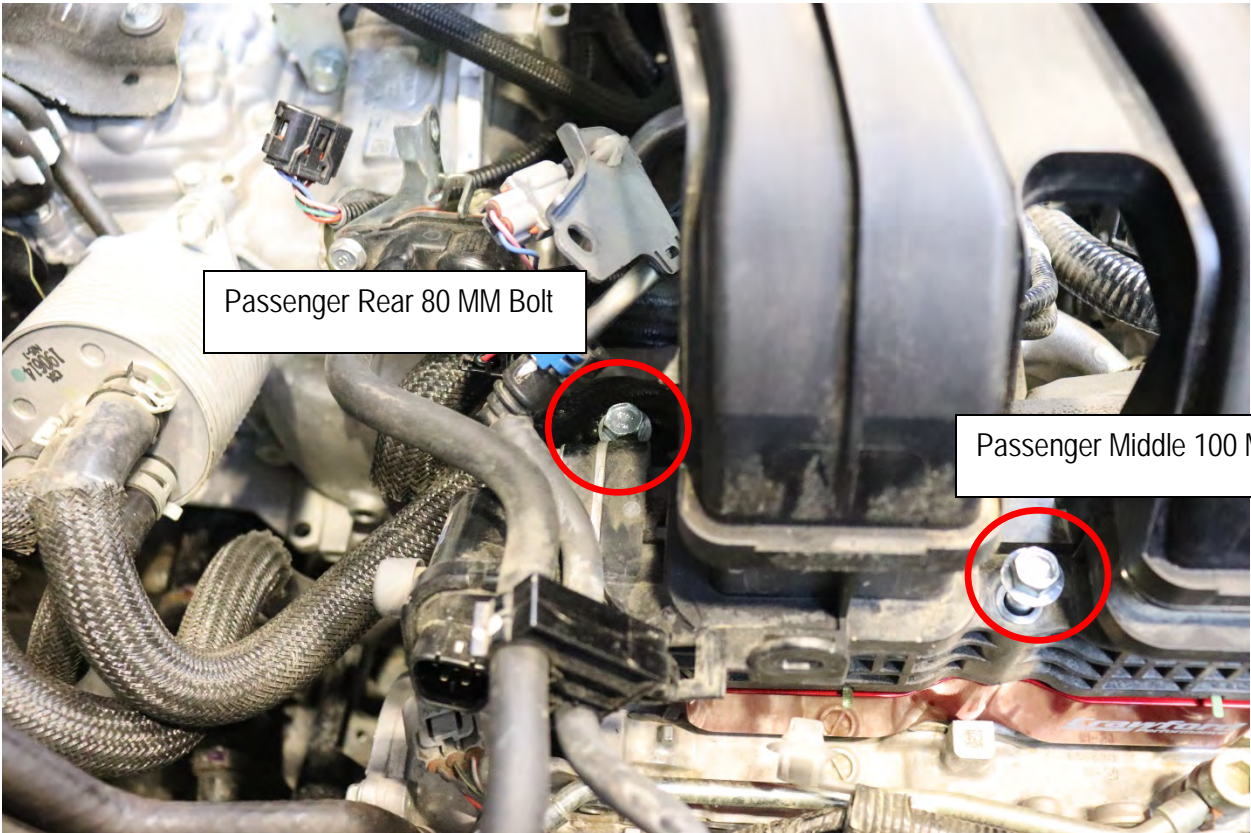
- c. Seat manifold over Billet power Blocks and insert provided manifold bolts, use caution not to pinch or tear on any wires or lines on driver side of manifold (2 - 100 MM bolts, 4 - 80 MM bolts)







Passenger Front 80 MM Bolt



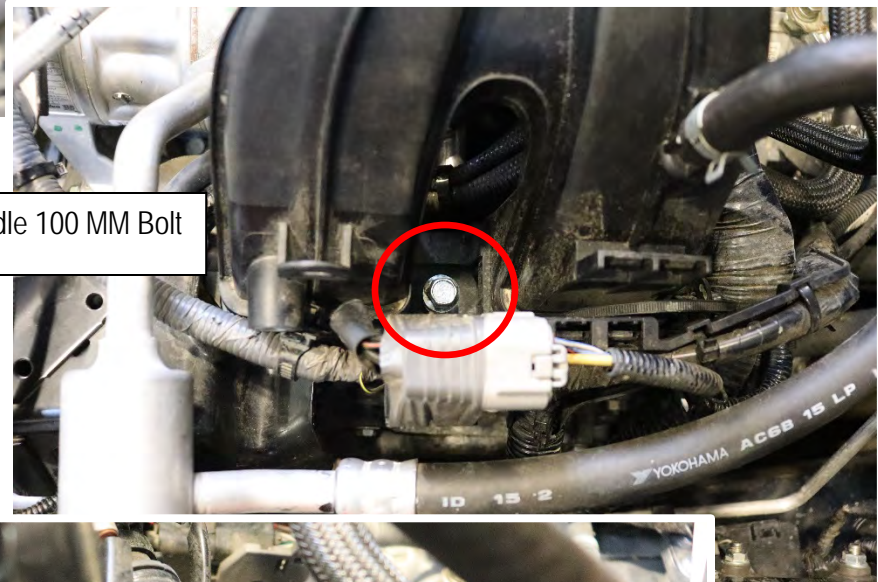
Passenger Rear 80 MM Bolt

Passenger Middle 100 MM Bolt





Driver Front 80 MM Bolt



Driver Middle 100 MM Bolt

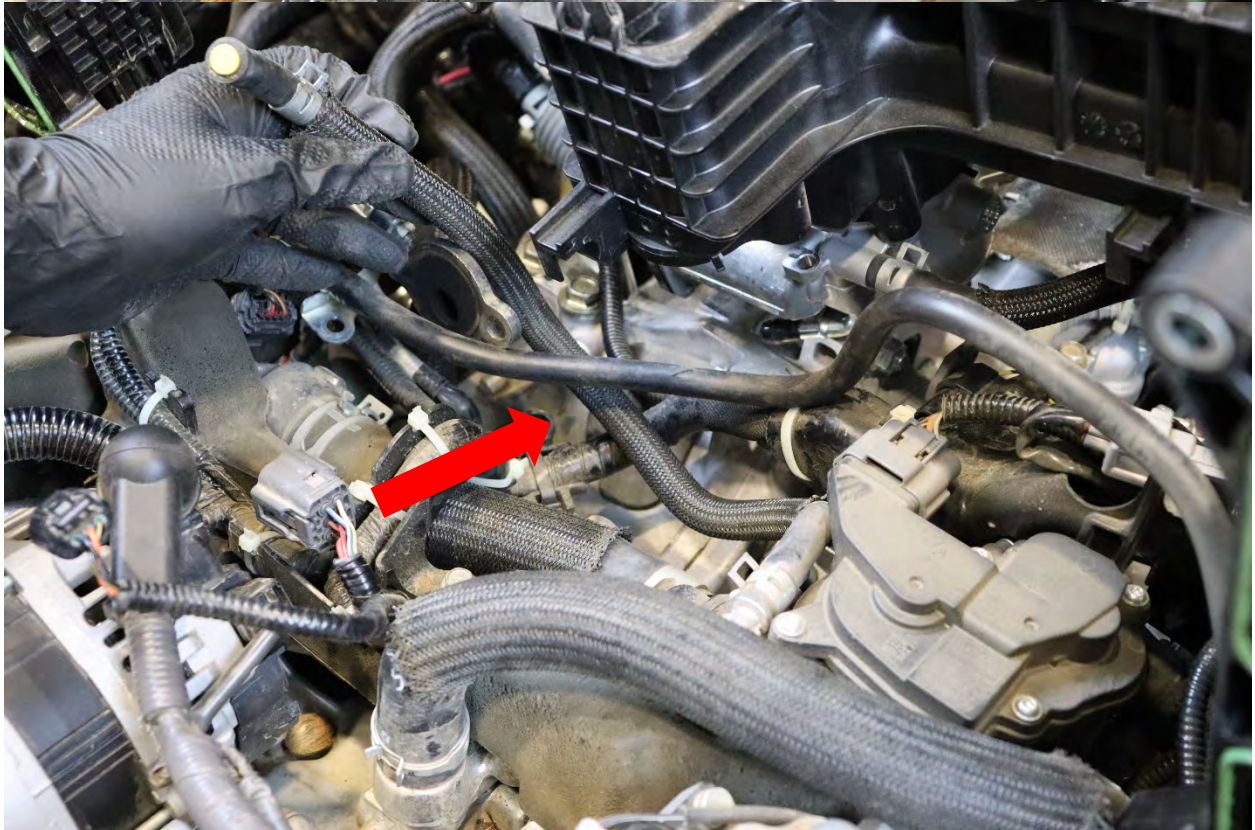


Driver Rear 80 MM Bolt



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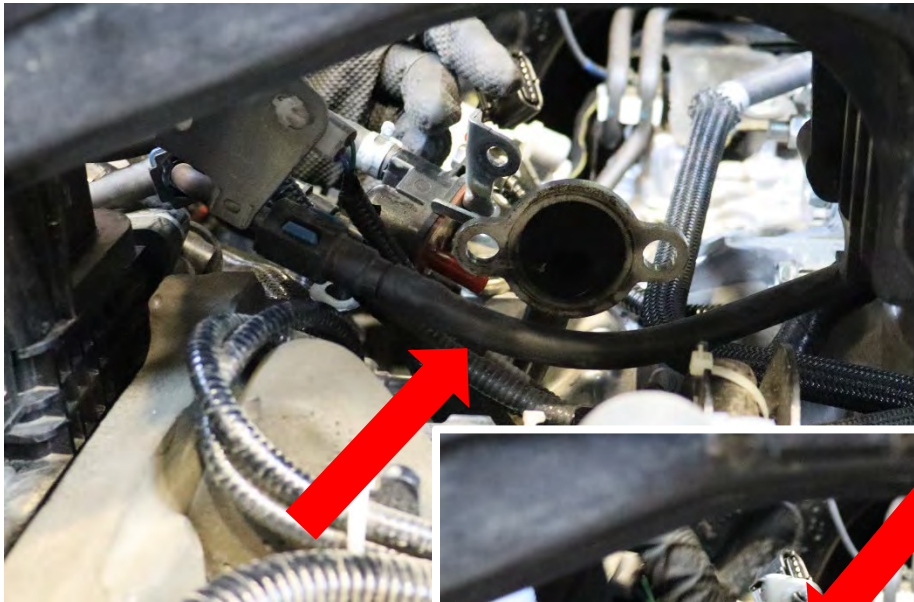
- d. Tighten manifold bolts by hand (12 MM Socket)
- e. Move coolant line below manifold so it is routed above the wiring harness and below the fuel line.





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- f. Move the fuel line routed under the EGR tube so that it is over the EGR tube



- g. Disconnect the plastic clip and wiring harness from the fuel line bracket and remove the plastic clip from the connector and leave loose for now.





## Crawford Performance



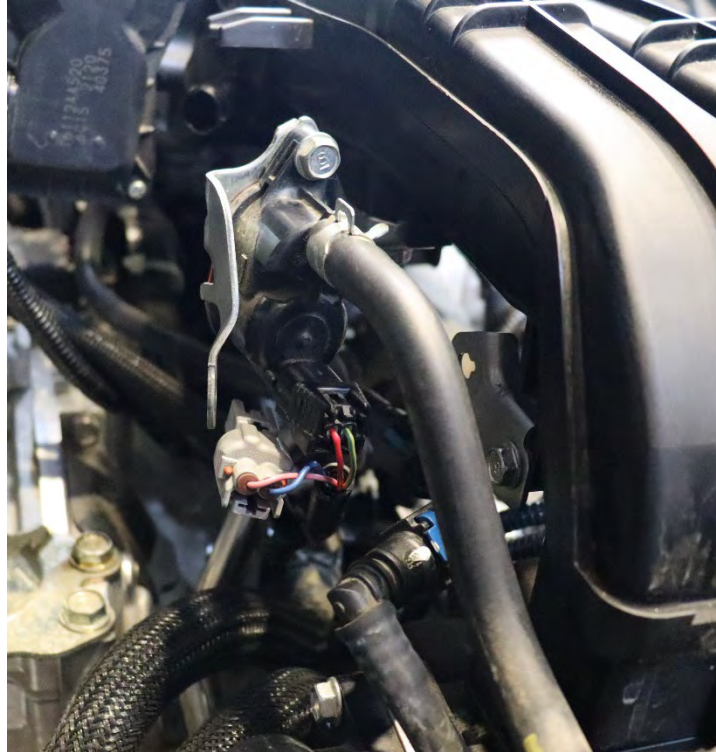
- h. Mount the fuel line bracket back into its original position. (10 MM Socket)



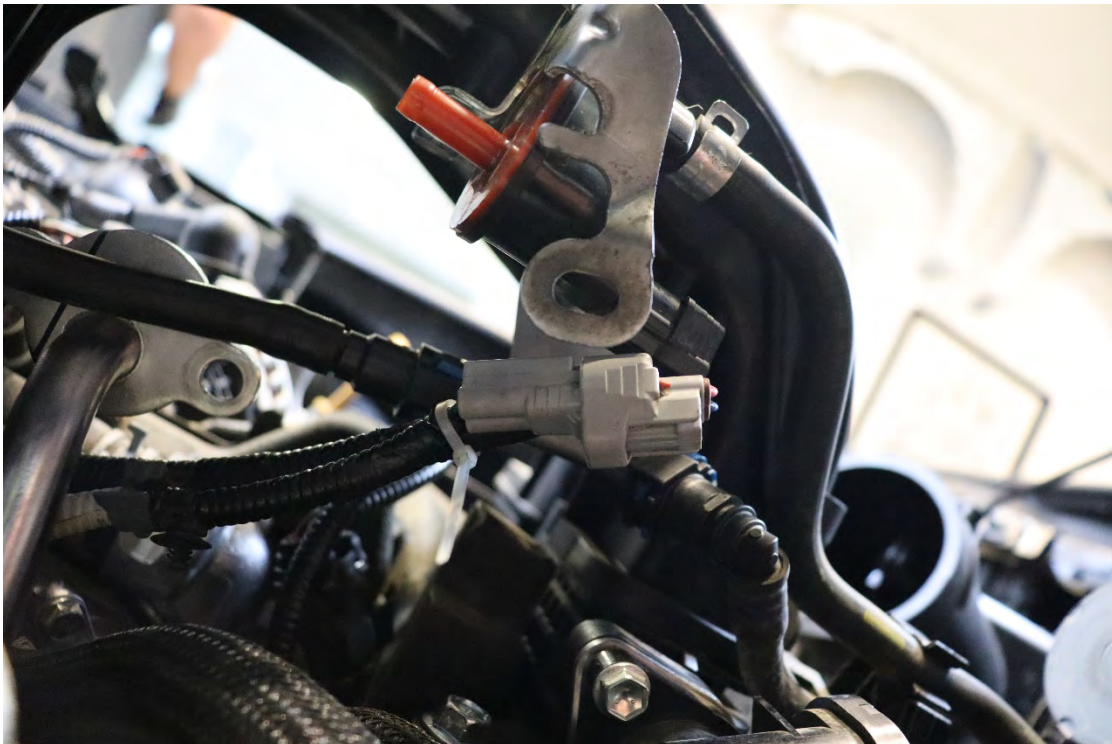


## Crawford Performance

- i. Remount EVAP control solenoid to its original location using OEM 12 MM bolt (12 MM Socket)



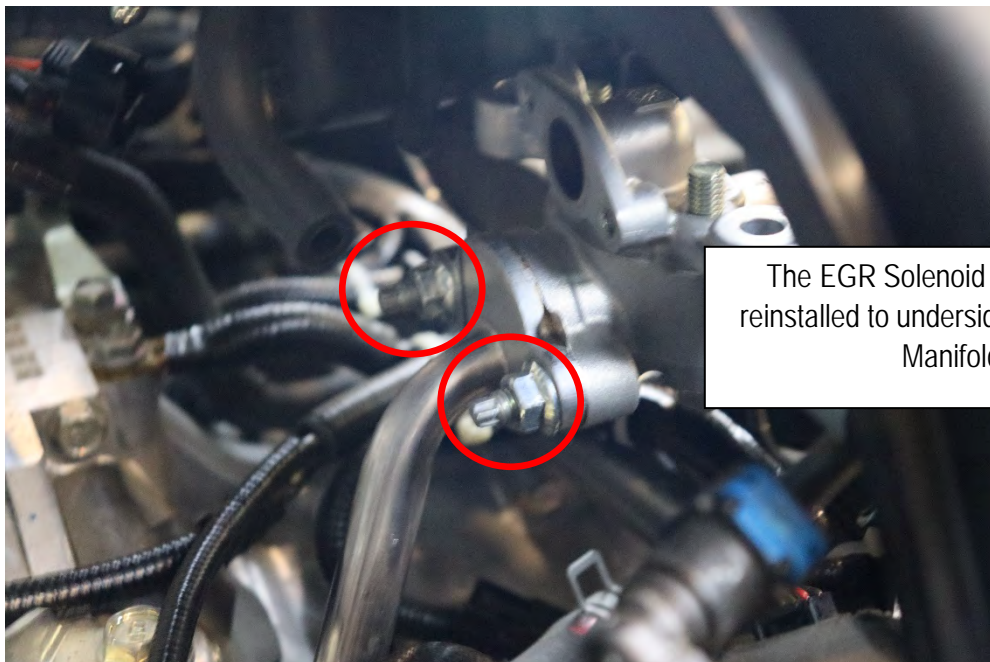
- j. Wire Tie the wiring harness removed from the fuel line bracket in step 4.g to the EVAP wiring and clip ends together





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- k. Reinstall EGR Solenoid with 2 OEM 12 MM Nuts removed in step 3.r 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)

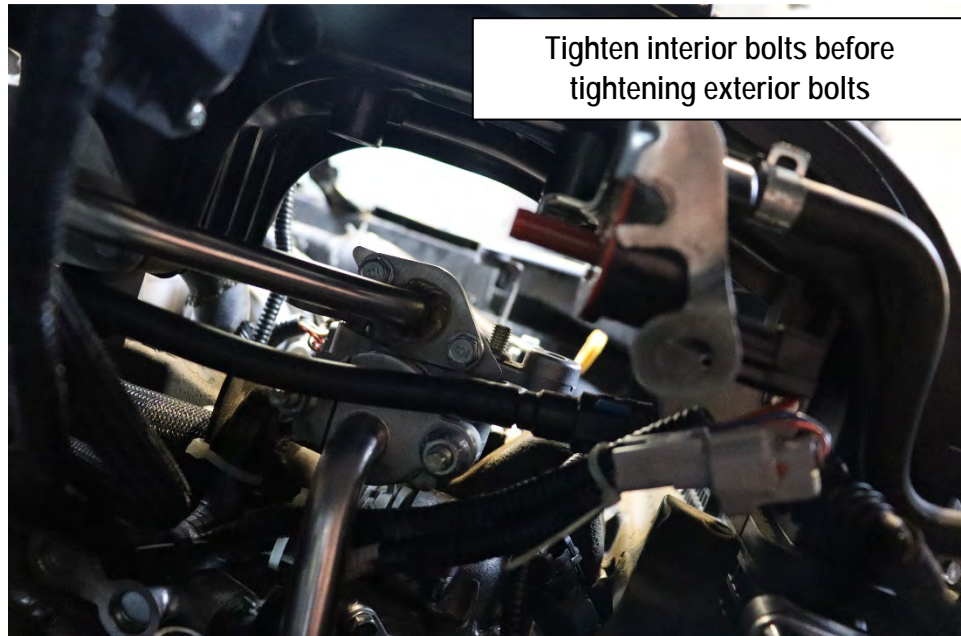


The EGR Solenoid does not get reinstalled to underside of the Intake Manifold

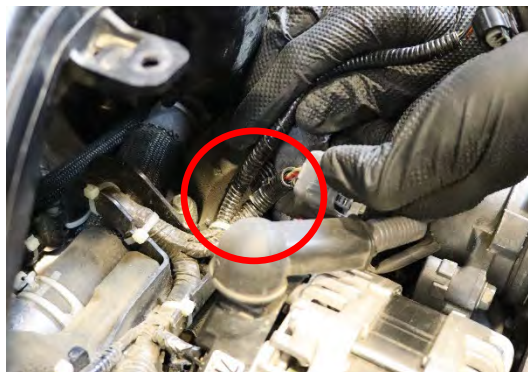


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- l. Reinstall the 10 MM bolt removed in step 3.h
- m. Install the provided EGR tube from the EGR Solenoid to the Manifold using OEM hardware (4 - 10 MM bolts) . Remember to place gasket between EGR tube and EGR Solenoid and hand thread bolts to the EGR Solenoid before threading to the Manifold. Tighten once threaded. (10 MM Socket)



- n. 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.**
- o. Cut tape securing MAP sensor wire to EGR solenoid connector





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- p. Install provided 5/8" PCV line and 5/8" coupler to PCV line leading from intake manifold to capped PCV port from step 3.f.



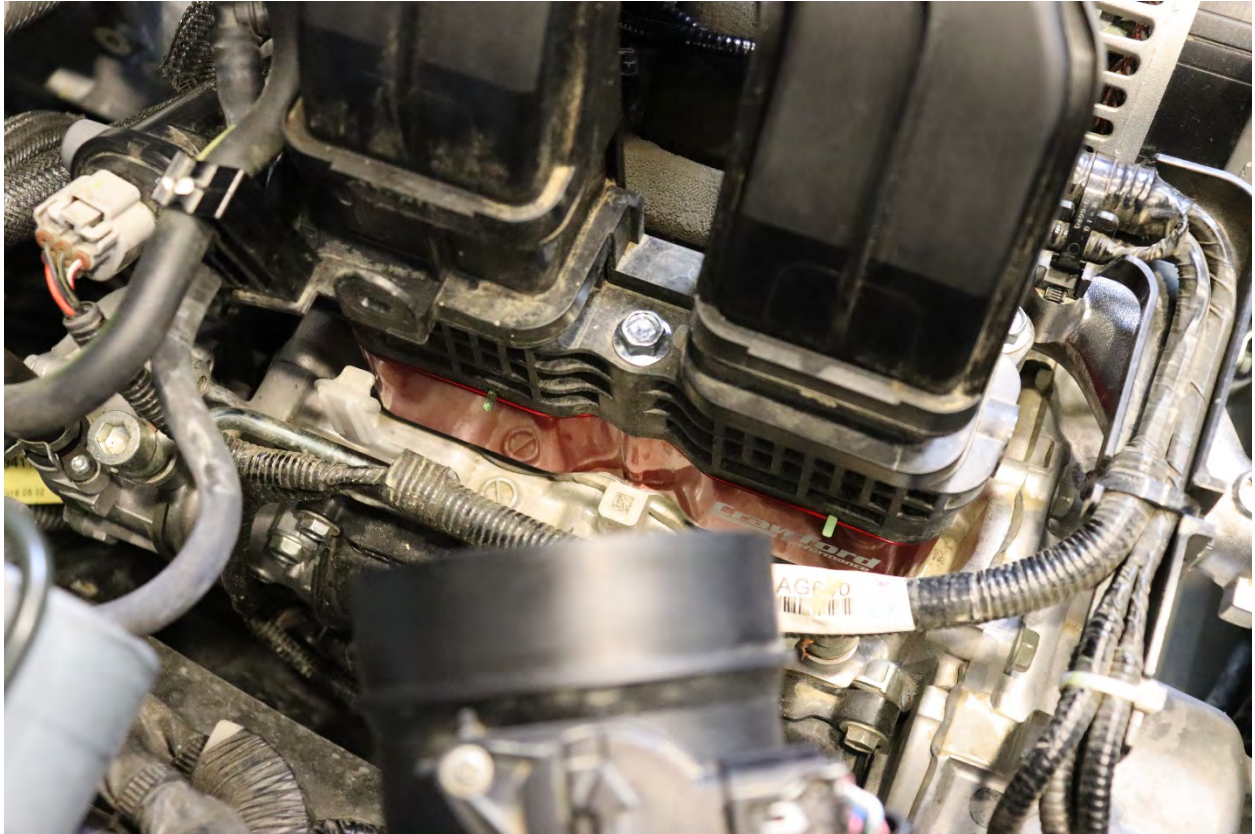


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- q. Reinstall the Crash guard. Refer to step 3.a for guidance.
  - r. Reinstall the lower EGR bolt on the backside of the engine block. Refer to step 3.h
  - s. Reinstall the vacuum line leading from the EVAP control solenoid to the manifold. Refer to step 3.e.
  - t. Reinstall MAP sensor. Refer to step 3.d for guidance
  - u. Reinstall EGR Solenoid connector. Refer to step 3.l. for reference
  - v. Reinstall TGV Connectors. Refer to step 3.c. and 3.j. for reference
  - w. Reinstall the Throttle position sensor. Refer to step 3.f for reference
  - x. Reinstall the cooling line leading to the throttle body. Refer to step 3.o for reference
  - y. Reinstall the Mass Air Intake. Refer to step 2 for guidance
1. 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.**

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