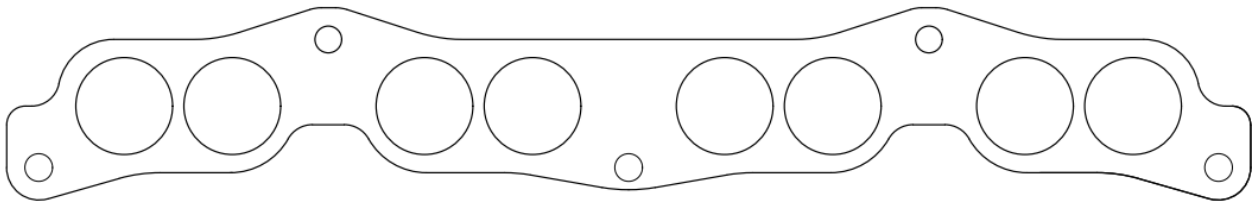


Anderson Engineering Solutions LLC

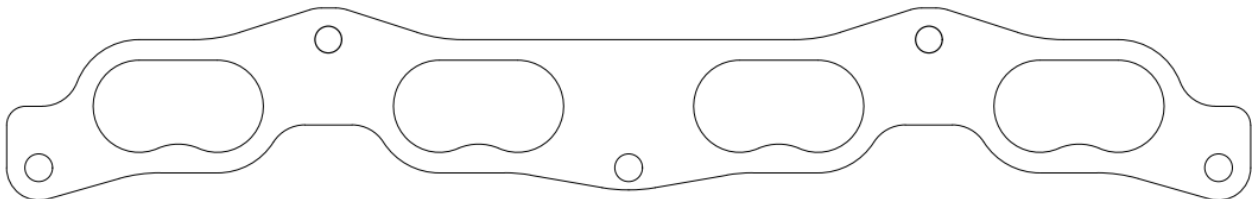
Installation Instructions

Please read instructions thoroughly before starting installation!

2RZ/3RZ Intake Manifold Runner



(1995 to 1999 Toyota Tacoma)



(2000 to 2004 Toyota Tacoma)

Thank you for buying an AES Product!

Initial Note: Installation is required after engine has been turned off and cooled. Allow for the engine to cool to a safe temperature that can be touched by hand before beginning.

Warning: Caution must be taken while working with hand tools. Install cautiously and handle all tools with care.

Required Tools for Installation

- Flat head screwdriver
- Philips’s head screwdriver
- Zip ties (provided)
- Cutters
- Vise grip pliers
- Scissors
- Ratcheting Wrench (3/8 in. drive)
- 4 inches to 10 inches - 3/8” drive extensions
- Metric Socket (compatible 3/8” drive
 - 5mm
 - 10mm
 - 12mm
 - 13mm

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Intake Manifold Runner kits contains the following:

- **CNC intake manifold (Made of Delrin (POM-C) 1.75" thick**
- **OEM Toyota gaskets**
- **20 + Count Additional Hardware**
- **1 Intake manifold support bracket spacer (ASTM Spec. A-569)**
- **2 EGR Cover plates and OEM gasket (ASTM Spec. A-569)**
- **1 of each 5.6K Ω x $\frac{1}{4}$ W / 10K Ω x $\frac{1}{4}$ W resistors**
- **1 Silicon intake tube (3.00" Diameter x 5.00" long)**
- **Additional length 1/4" ID rubber fuel hose**
- **Additional length 3/8" ID rubber hose.**
- **Additional length 5/8" ID rubber hose**

Special Note:
If you purchased the modified EGR to pass emissions requirements then you will not need the EGR cover plate nor the 5.6K Ω x $\frac{1}{4}$ W / 10K Ω x $\frac{1}{4}$ W resistors



1995 –1999
Tacoma 2.4L/2.7L



8 Port OEM gasket



2000 –2004
Tacoma 2.4L/2.7L



4 Port OEM gasket

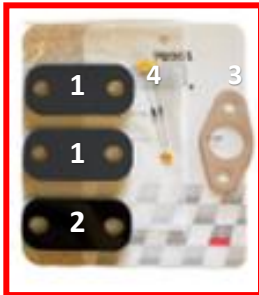
5 Bolts 8M x 1.25 thread
(70 mm long)



5 flat and lock washers



4 Jam Nuts, Hose Clamp and 3/8" hose connector



4 Ply Silicon
Extension



1. EGR Cover plates
2. Intake Support Bracket
3. EGR gasket (exhaust)
4. Resistors 5.6K and 10K

3/8 ID Rubber Hose



1/4 ID Fuel Line (Rubber)



3/8 ID Rubber Hose

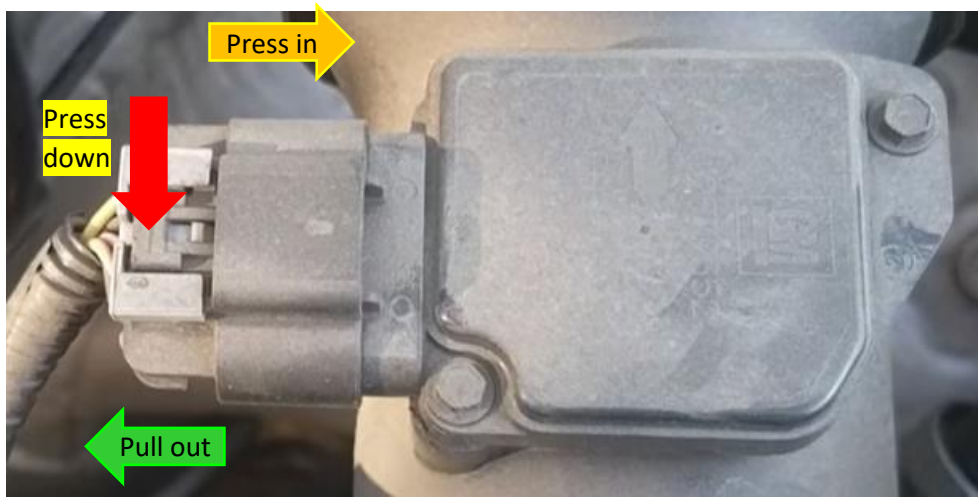


5/8 ID Rubber hose

Pro Tip for helping to disassembly all Toyota electrical plugs.

All Plugs can be disassembled easily by first pressing them into the socket, Then depressing the tabs to disengage the plug. This should release the lock on the plugs every time.

Press in → Press tab down → Pull out



Disconnecting Intake Plenum

1. Please start by removing the negative terminal on the battery and safely positioning to ensure arcing does not occur.

(Warning: Pre-caution must be taken while working with the battery as a shock hazard is present. Hand tools rated for electrical resists is highly recommended during Step 1)

2. Removing the flexible intake hose on the passenger side for the engine bay by loosening the 2 hose clamps with a Philip's head screwdriver. Also remove the hose clamp hold the plenum to the throttle body inlet.

NOTE: Unwrapping the electrical tape on the wiring harness may be needed later for manifold runner installation! DO NOT CUT or use sharp cutting devices to remove the electrical tape. Take the time to unwrap by hand!

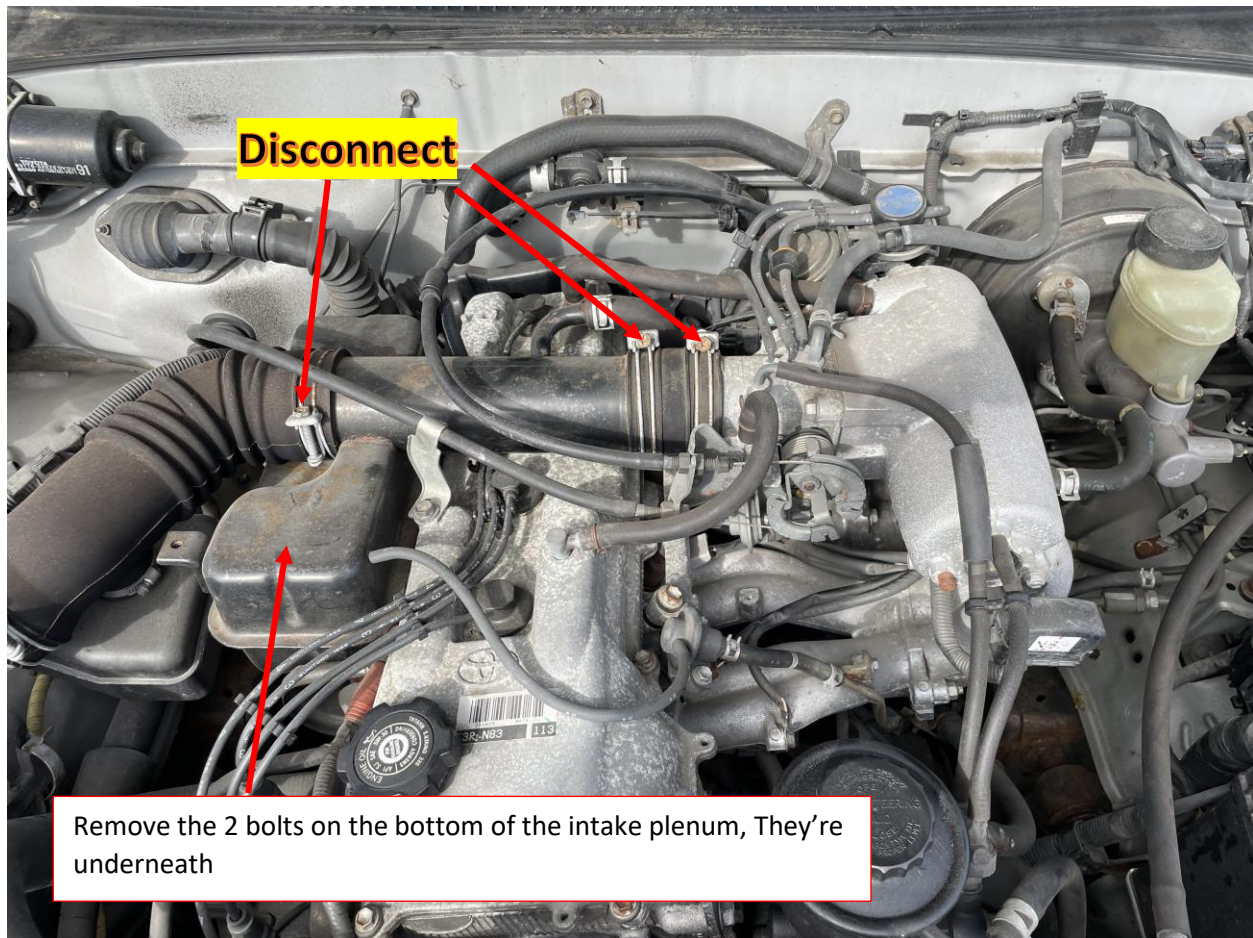
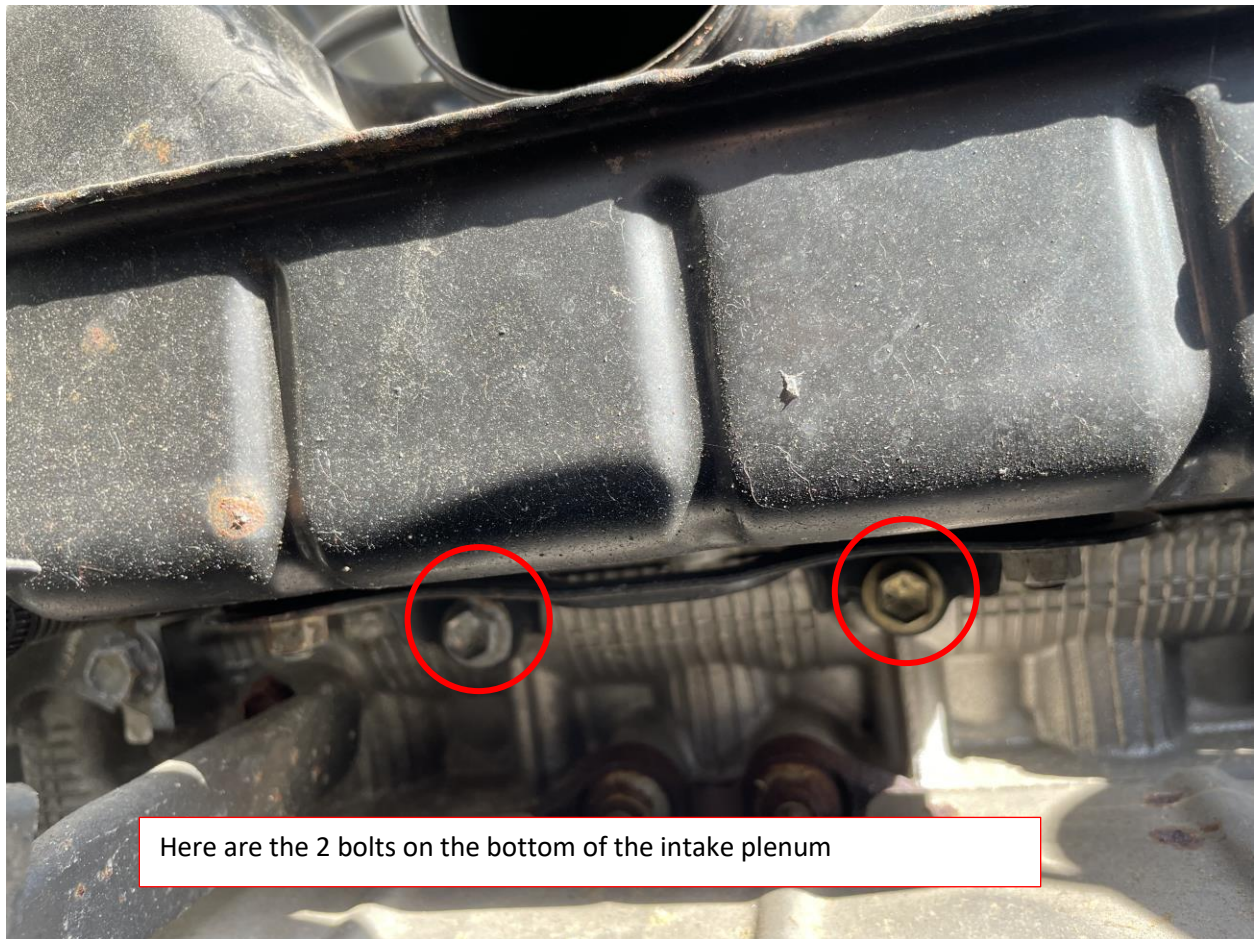


Figure 1



Here are the 2 bolts on the bottom of the intake plenum

Figure 2

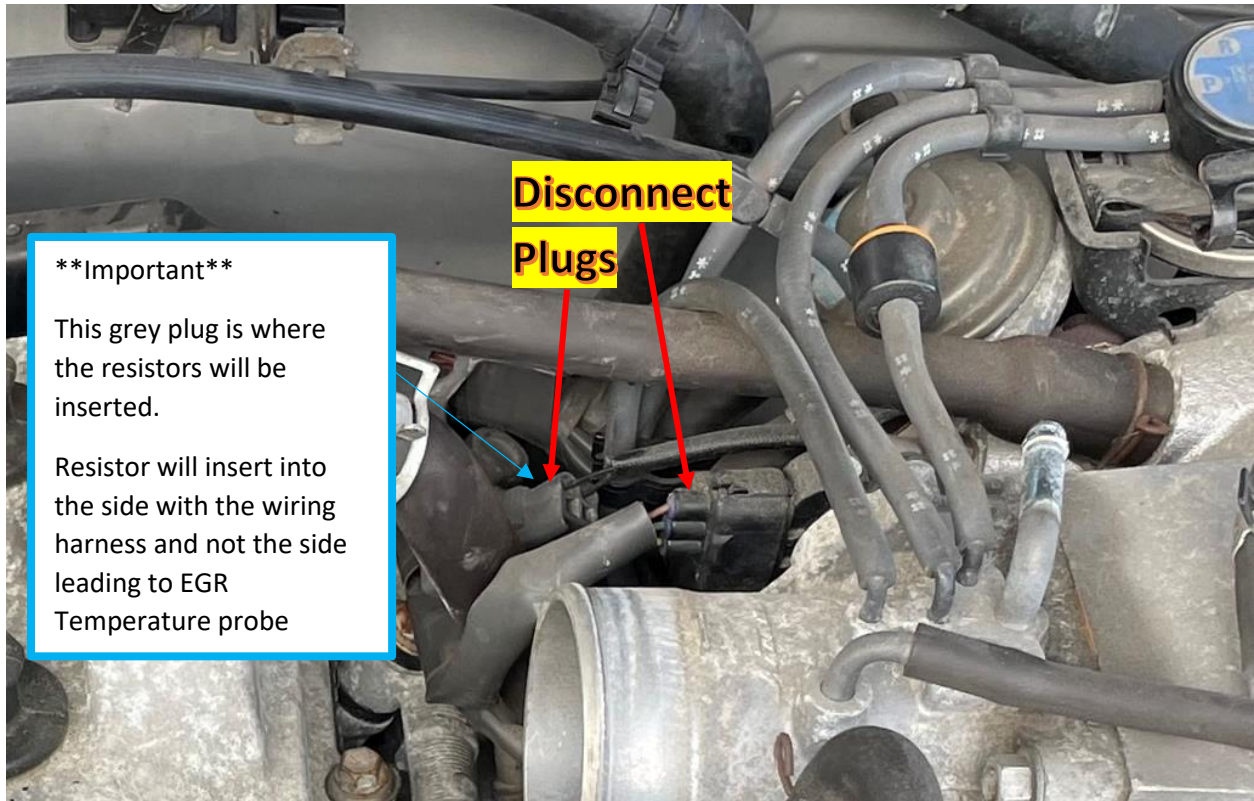


Figure 3

3. Remove the throttle wires from their brackets and disconnect the large and small vacuum hose as show below. Lastly, disconnect the module on the front of the upper intake manifold.

3.1. The throttle body plug and the EGR Temperature sensor plugs will also need to be disconnected. Their beside each other and one is a grey plug and the other is a black plug.

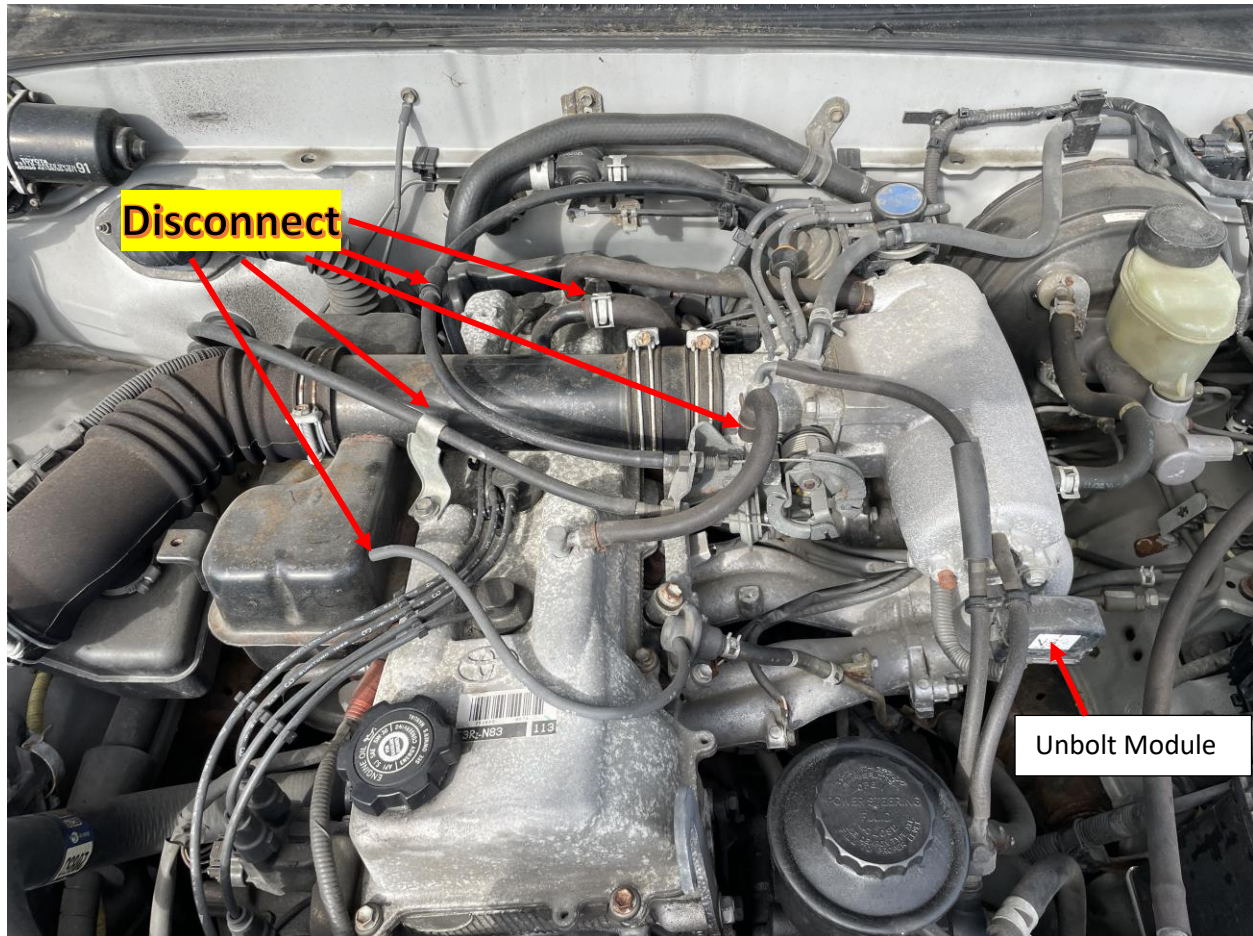
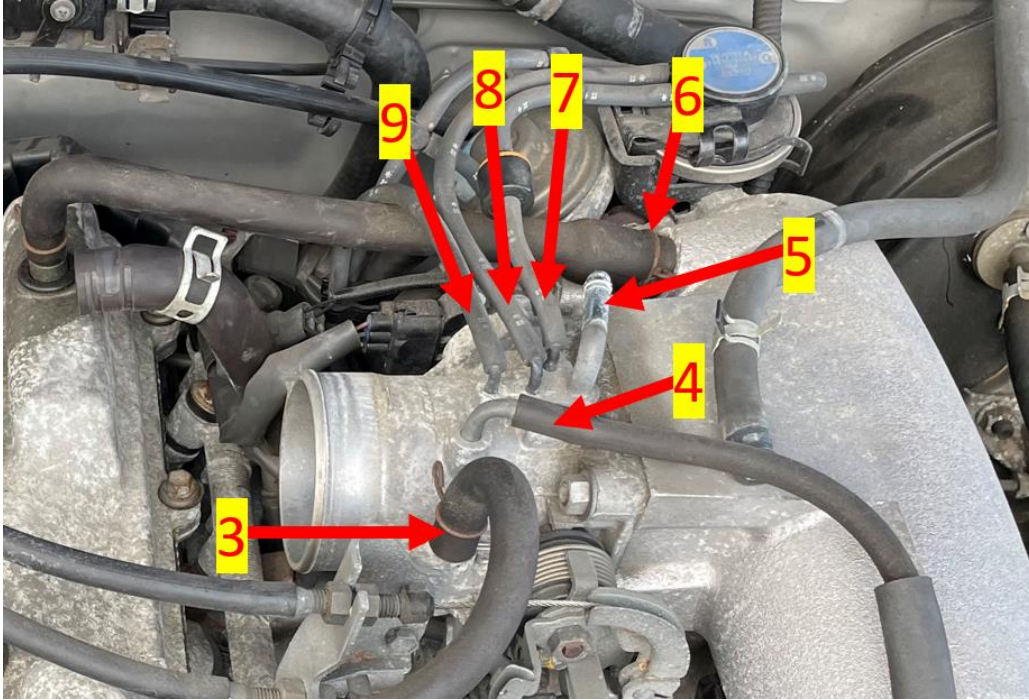


Figure 4

4. Disconnect the hoses Numbers 1- 9. It is recommended to take a photo of the assembly at this step to help during reassembly.



Figure 5



Here is a zoomed in photo of the 7 hoses connected to the throttle body.

Figure 4.1

5. Continue by disconnecting the EGR tube from the exhaust side and from the EGR valve. Save all hardware!

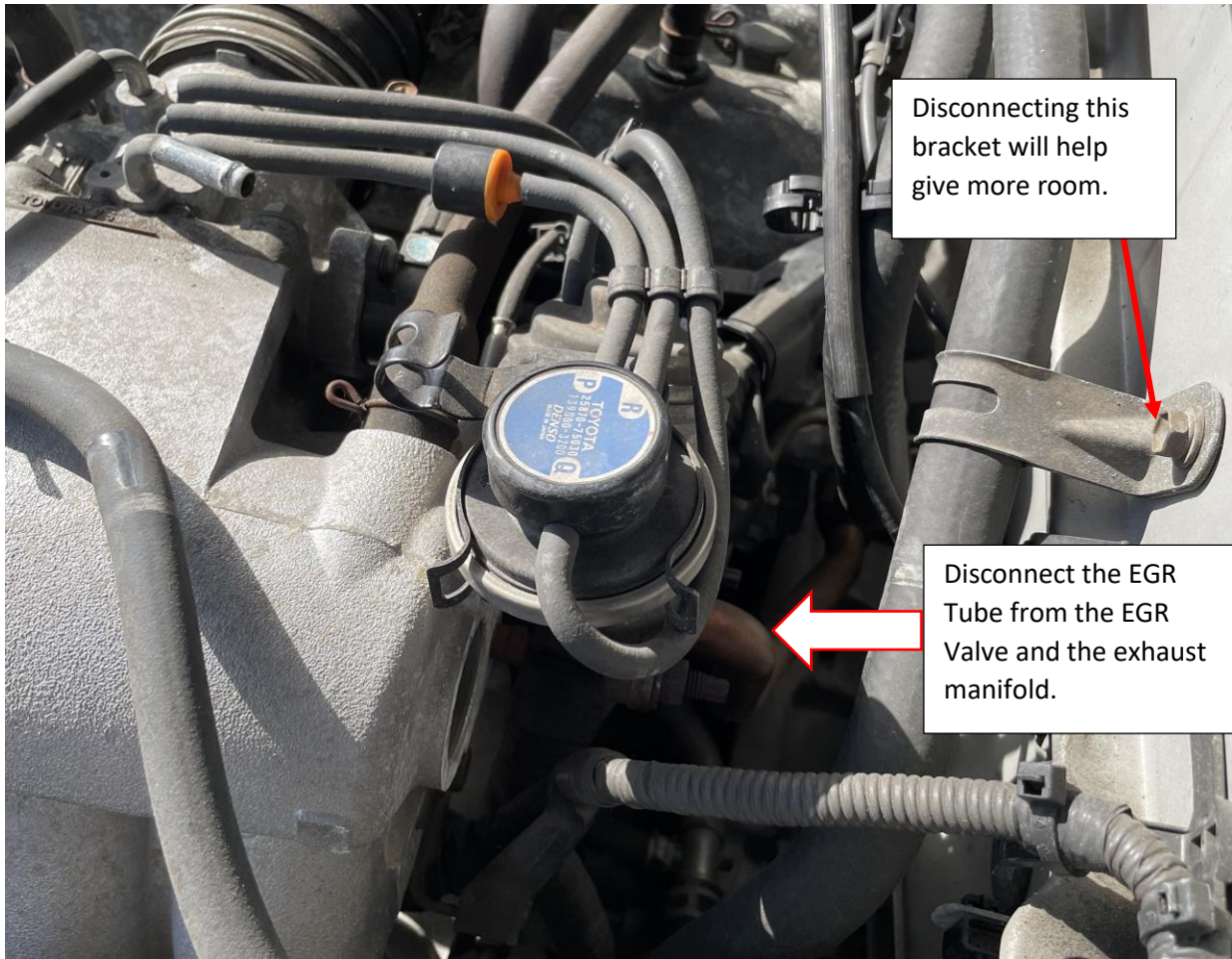


Figure 5



There are 2 nuts on EGR Valve studs (Manifold Side)

Save NUTS for later!


This will need to be removed also, Its difficult to get to, try using a wrench with a built in ratch feature (12mm)

Also 2 nuts on the exhaust manifold Studs

Save NUTS for later!

Figure 5.1

6. Disconnect the hose at points 1 and 2. This hose will be replaced later with the 1/4" hose provided in the kit. Also disconnect the Sensors at point 3 and 4. They are a little difficult to see in this photo but are approximately at the ends of the arrows. Please also disconnect the hose at position 3.

7.  At this point there are 5 bolts holding the upper and lower intake manifold halves together. Disconnect these nuts and bolts along with the upper intake mounting bracket. It will be below the intake manifold supporting the assembly.

Between step 6 and 7. A total of 6 bolts, 2 hose clips, 2 plugs, and 2 hoses will need to be removed to free the manifold

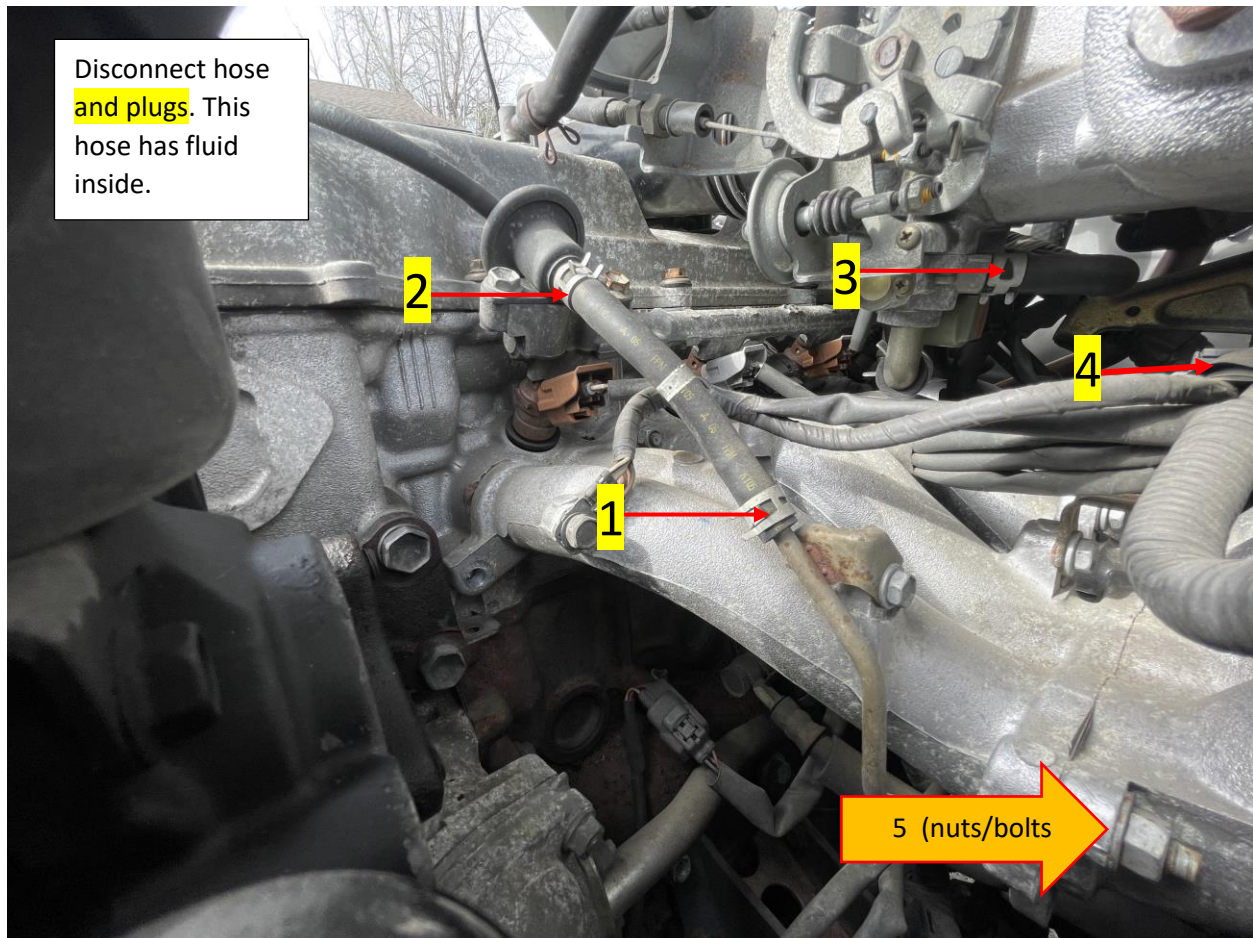


Figure 6

7.1 Disconnect the 5 bolts from the upper/lower intake plenum. You will not have to remove from engine compartment. This photo was taken to help show the 5 bolt positions.

Don't damage the gasket in between the upper and lower intake halves

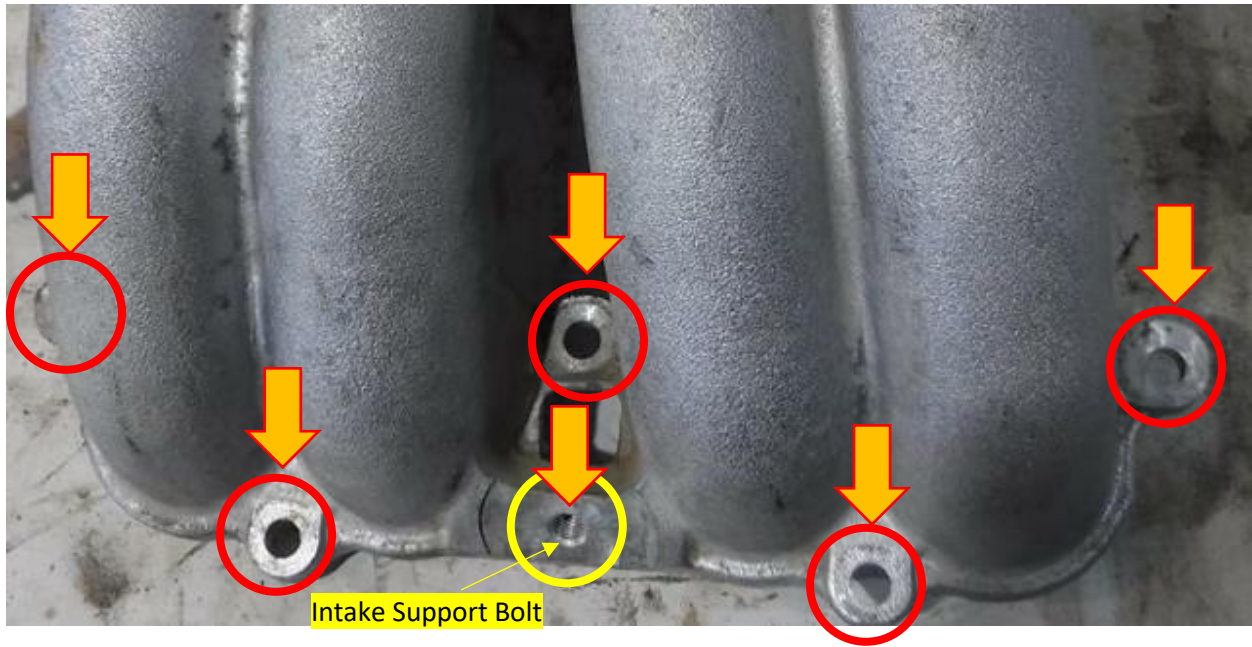


Figure 6.1

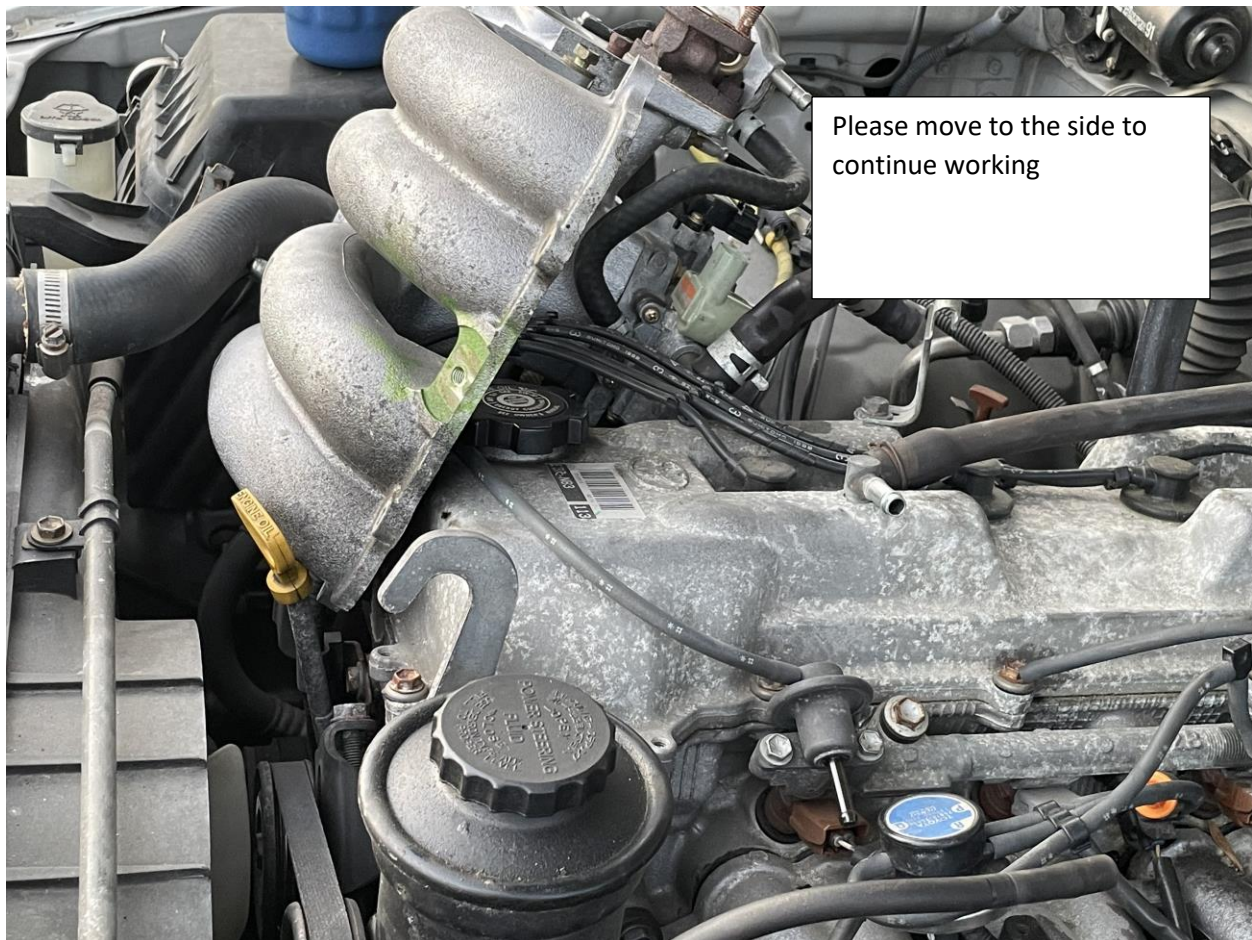


Figure 6.2

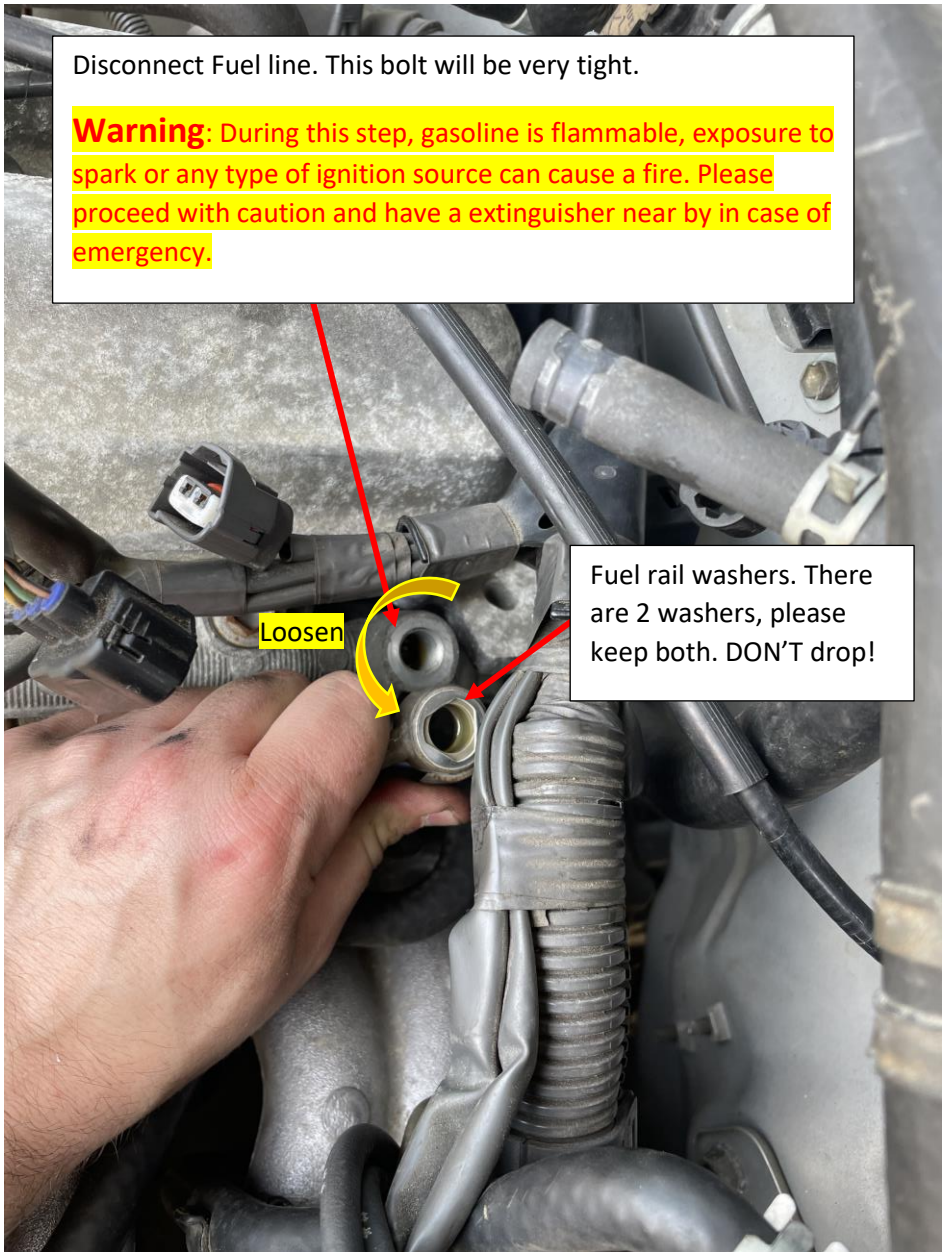


Figure 7



Mark a Line on the top of the bolt that is parallel to the hole direction.

In the following Step: minor adjustments to the disconnected fuel line are necessary for fitment. Ensure to place fuel rail washer to the side to prevent damaging them.

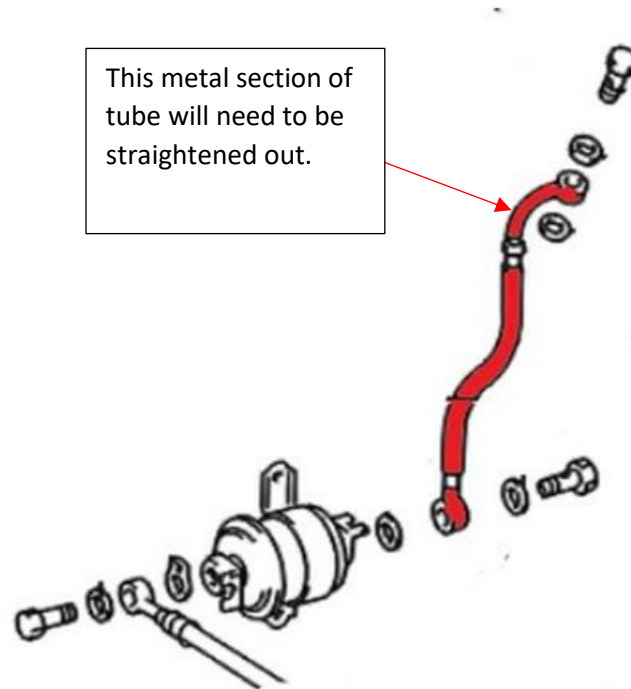
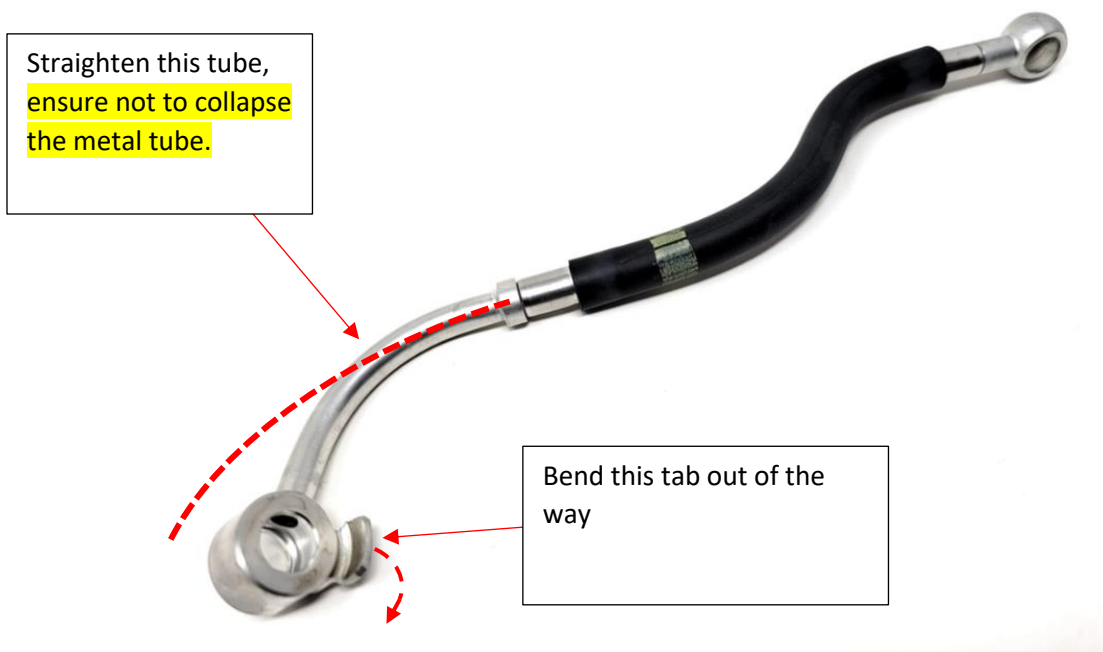


Figure 7.1



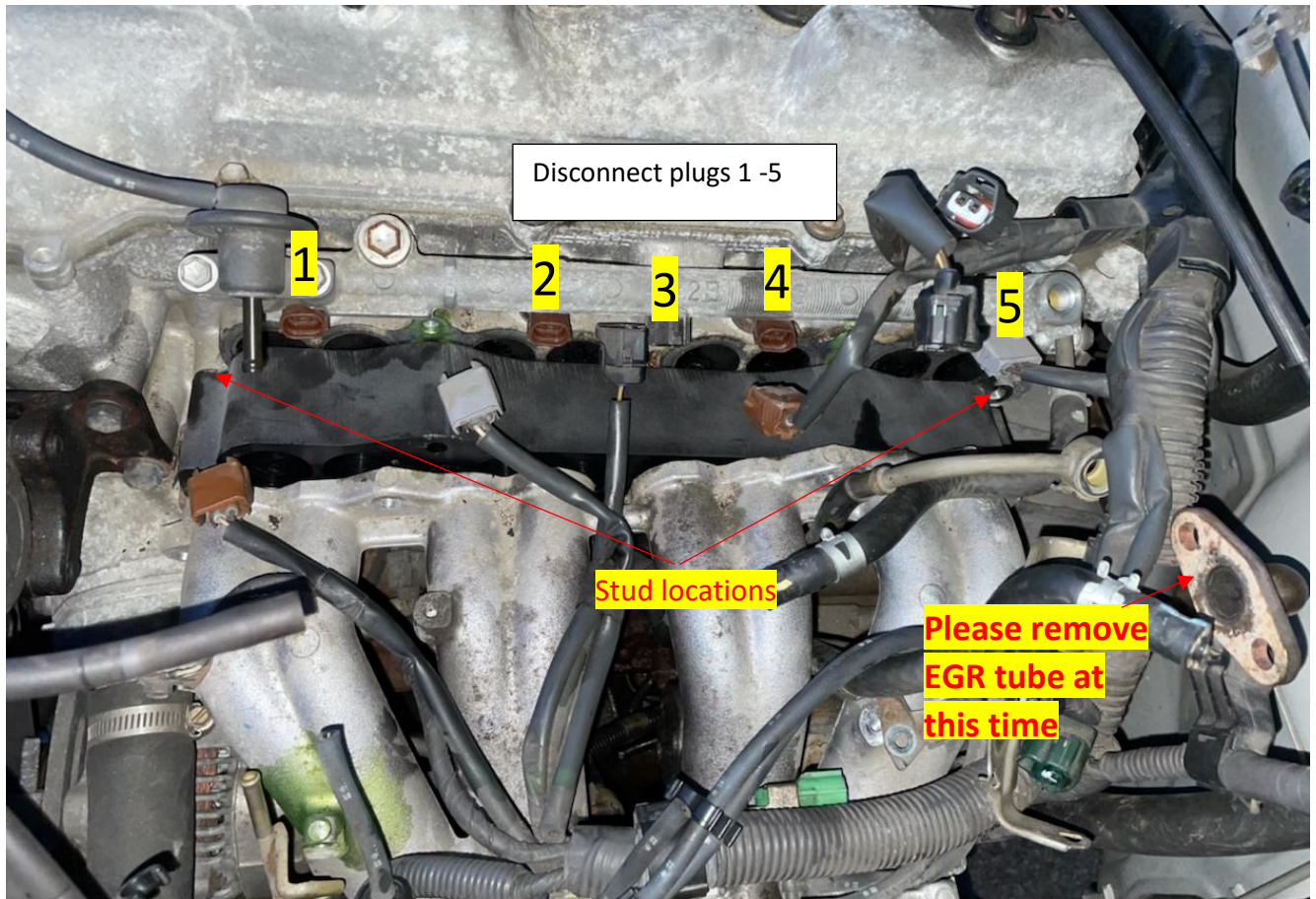


Figure 8

Re-assembly

Spacer Installation: Remove the 5 total bolts holding the lower intake to the engine and the 2 studs at the ends. After studs are removed, please save for later.

The intake manifold spacer along with the new/old gasket can FINALLY be installed into the engine. Ensure the gasket are placed before and after the spacer.

(Step 1 reassembly) Using the provided bolts assemble the intake spacer in place.

Do not over torque the bolts due to the engine block being aluminum. 10 -12 FT.LBS is recommended. All you need is a snug fit to compress the gasket.

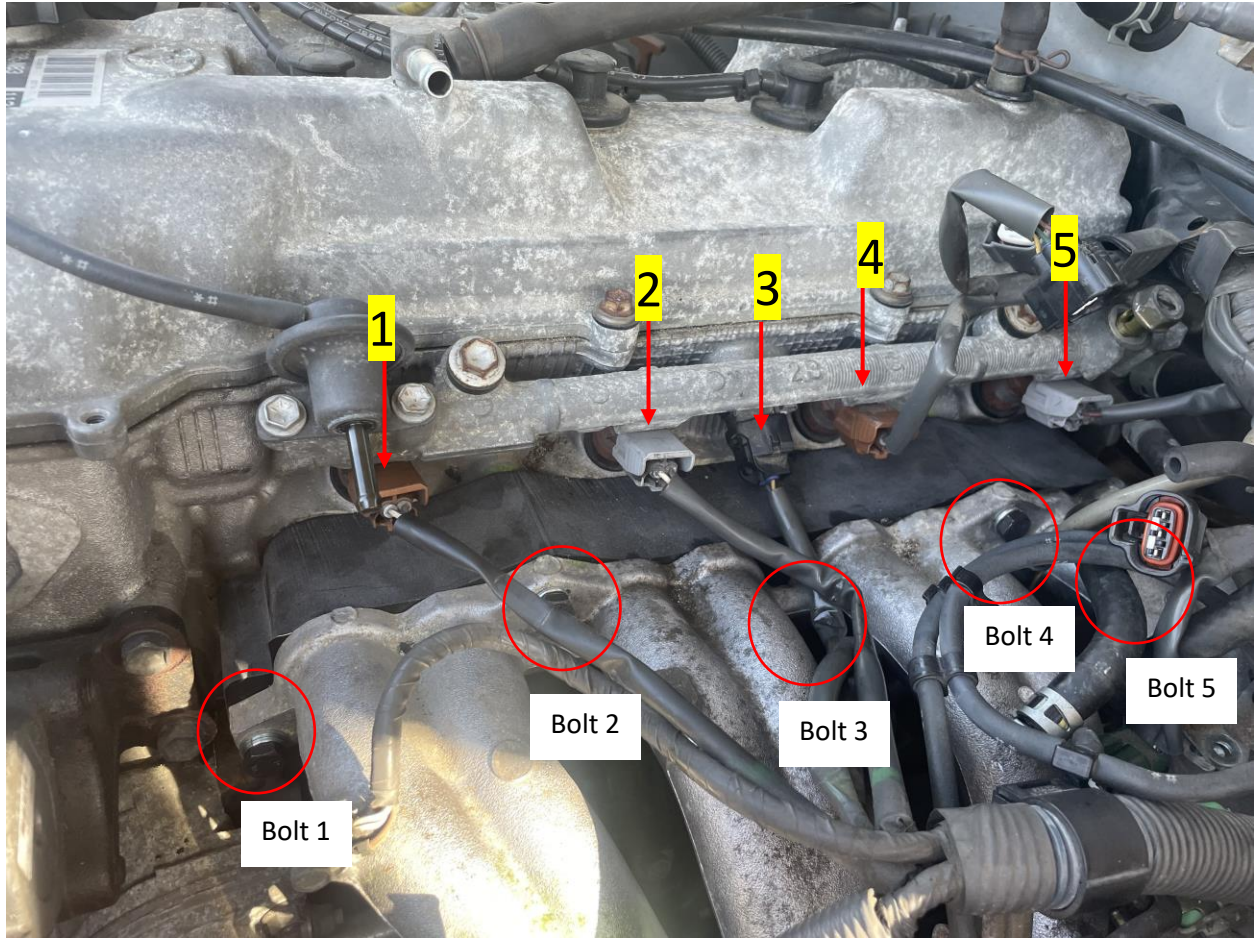
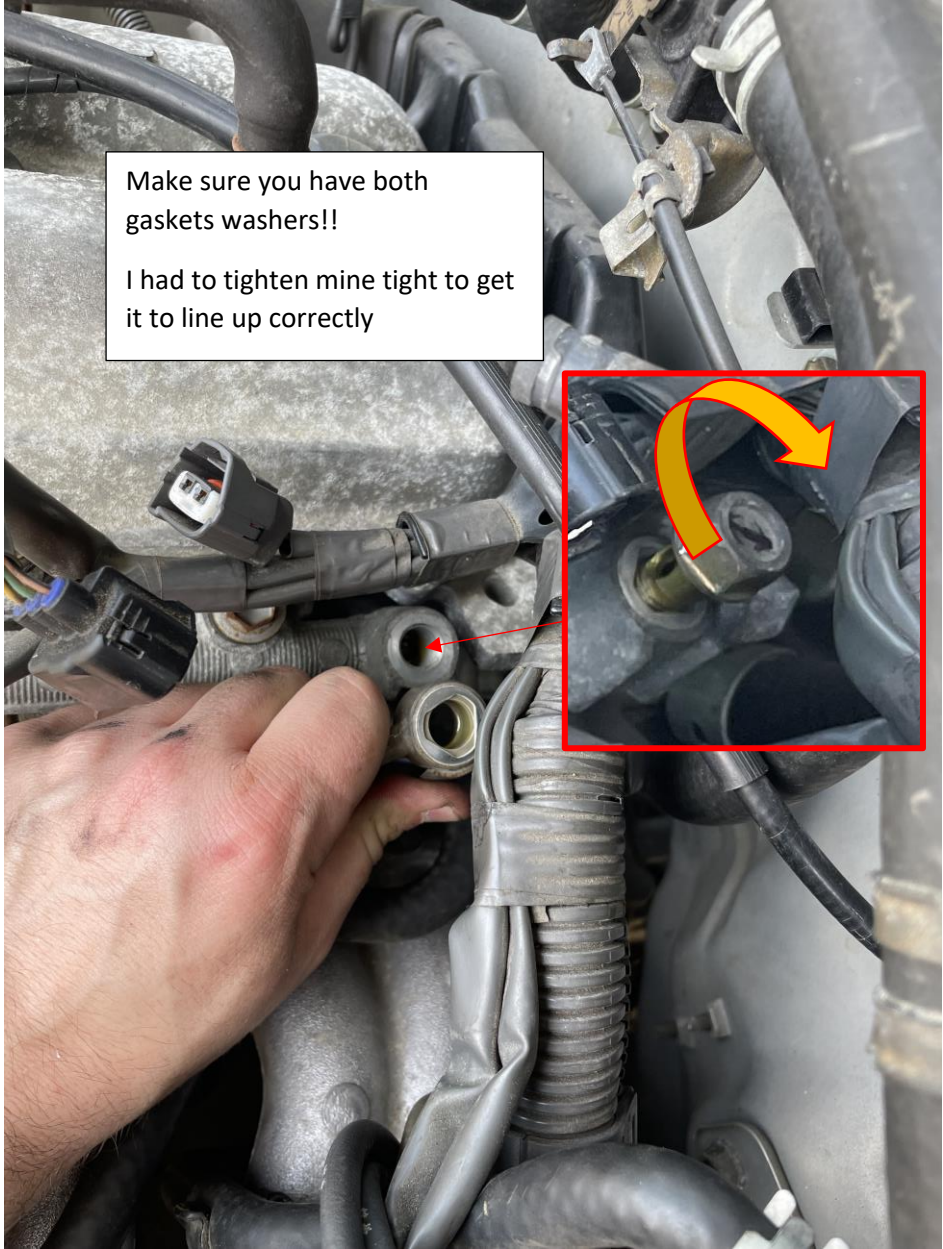


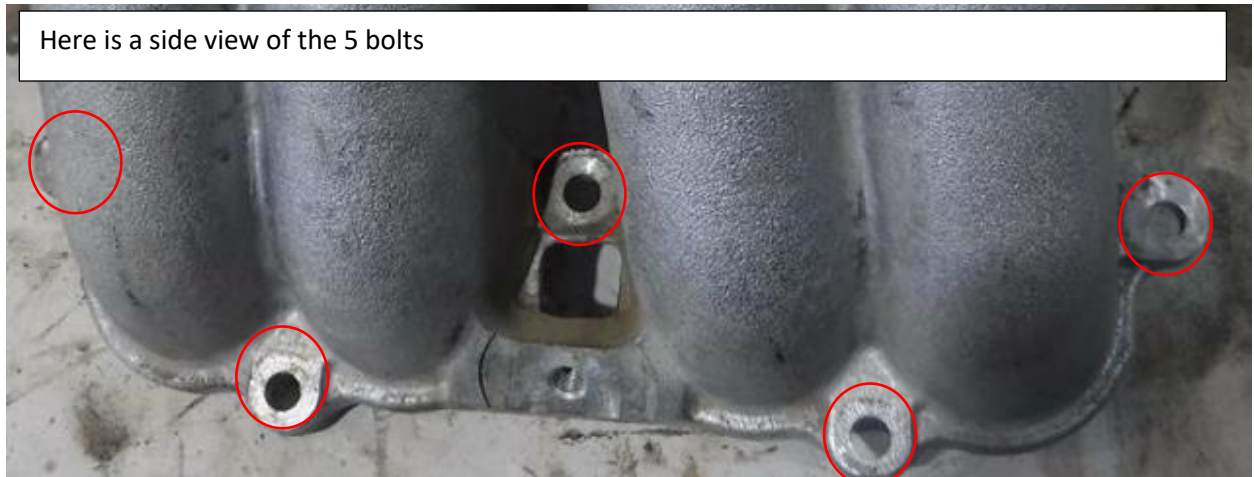
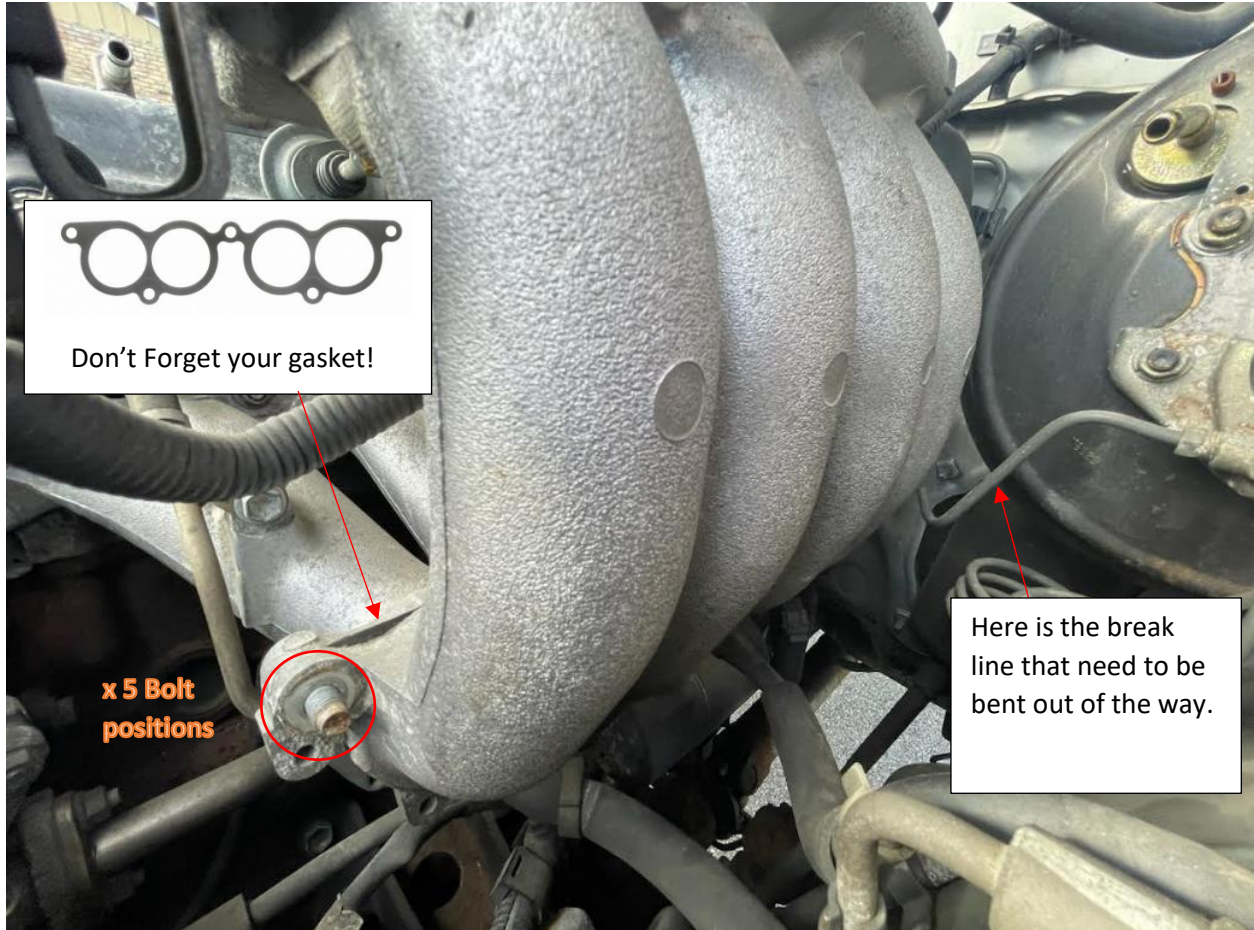
Figure 9

(Step 2 reassembly) Connecting the fuel line. This step required the side hole in the bolt to be inline with the tube in which it connects to. Not positioning correctly will result in no gas being supplied to the engine. If the threads tighten but the hole is not lined up continue to tighten until the line (drawn) on top the bolt is in line for the connect fuel line.



(Step 3 reassembly) Connect the disassembly upper intake manifold to the lower intake but reusing the 5 bolts removed during disassembly. Depending on the year of Tacoma the break line closest to the intake may need to be slightly bent out of the way. They are easy to bend but if needed reposition brake line so they don't rub

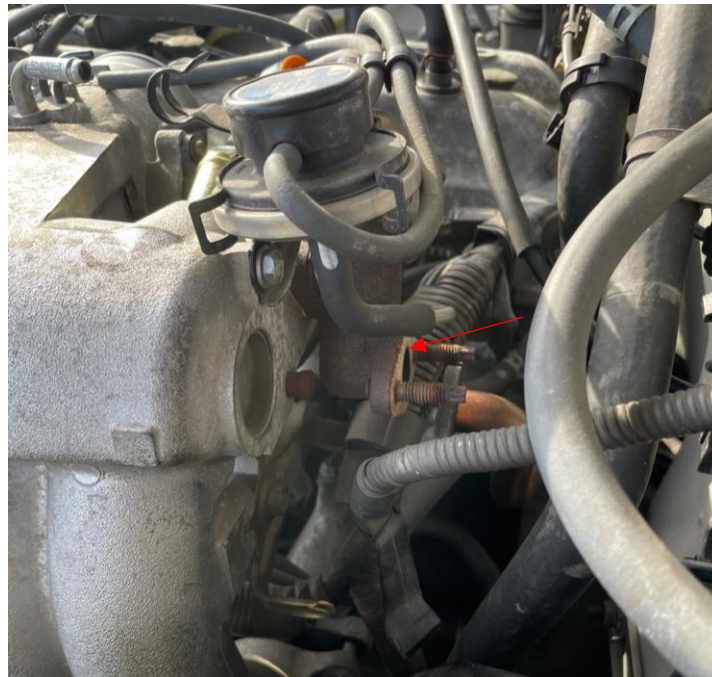
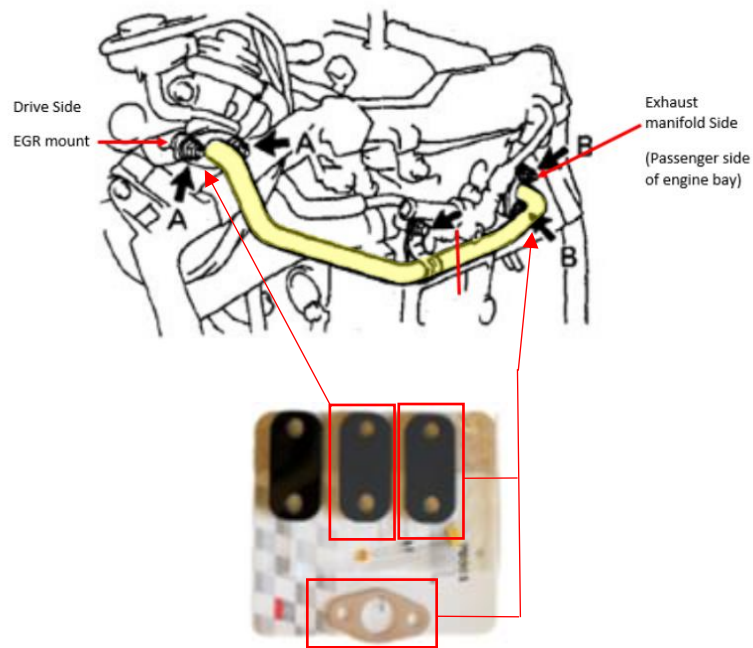
Pro Tip! Using the extra stud that have been removed from other stud hole can be inserted into the low intake to help position the upper intake!



(Step 4 Reassembly)

Using the EGR delete plates and the additional gasket provided in the kit, Remove the metal gasket on the Exhaust manifold side and place new gasket and EGR cover plate on the exhaust manifold. Torque to a minimum of 15 Ft.Lbs.

Using the second EGR cover plate and the OLD gasket, cover the port on the EGR. This will block all air flow from entering the intake manifold.



Reference photo to show the EGR valve side where the cover plate goes.

Use the old gasket to cover this side shown

(Step 5 Reassembly)

Connect the last and final support bracket in place on the bottom side of the Intake manifold using the additional provided nuts and bolts. The thread in the intake is 8M-1.25 for reference.



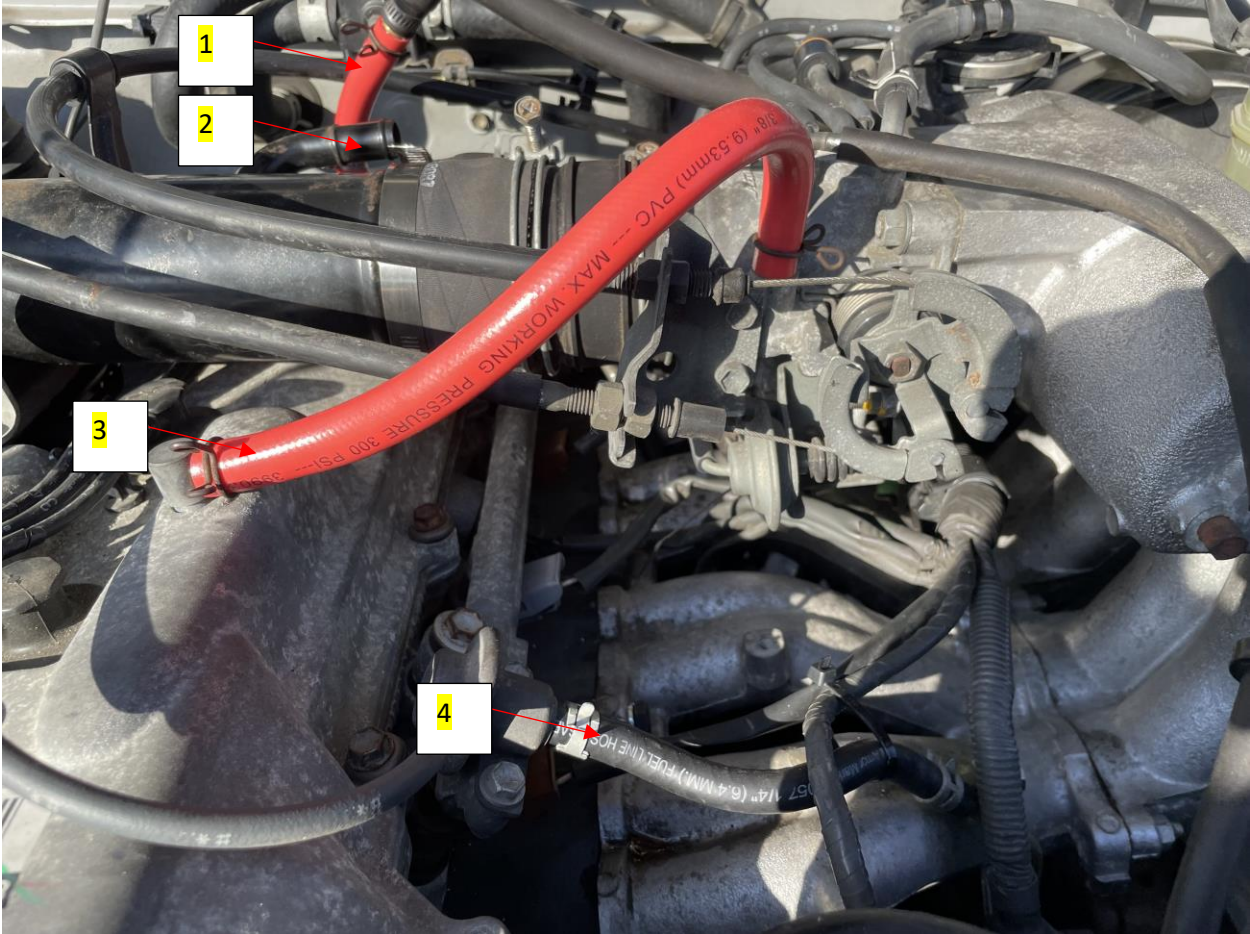
(Step 6 Reassembly)

EGR resistor installs into the grey plug for the EGR temperature sensor. Most will use the 10K ohm x ¼ resistor but if needed the 5.6K Ohm resistor may be used. Ensure to cover the resistor plug with tape or another type of cover to prevent the resistor from coming out.



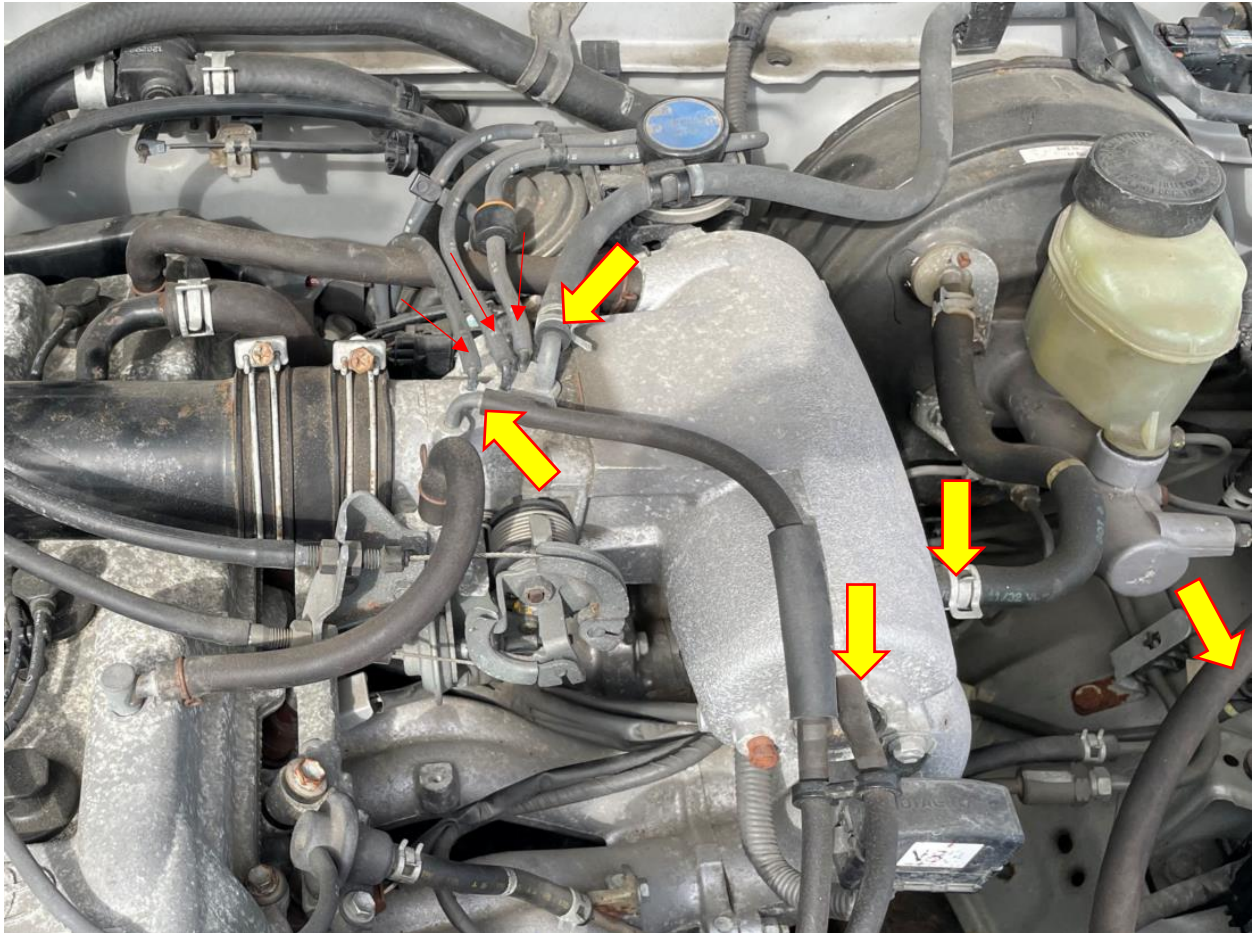
(Step 7 Reassembly)

Using the provided hoses. Replace 1 – 4 positions as shown in the photo below. A connector 3/8 connector was provided for the position 1 along with additional hose clamps.



(Step 8 Reassembly)

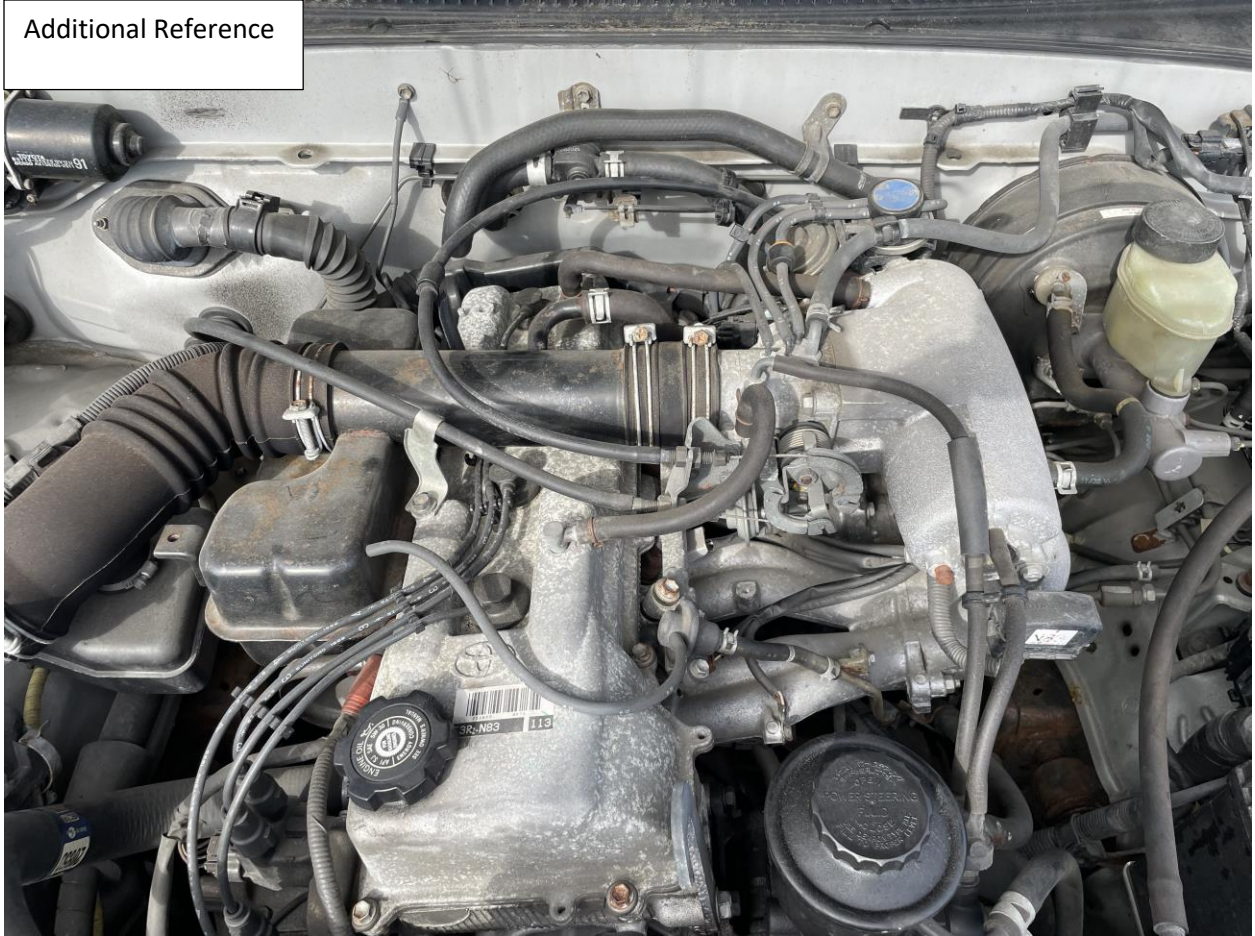
Reassembly the vacume hoses on top the engine



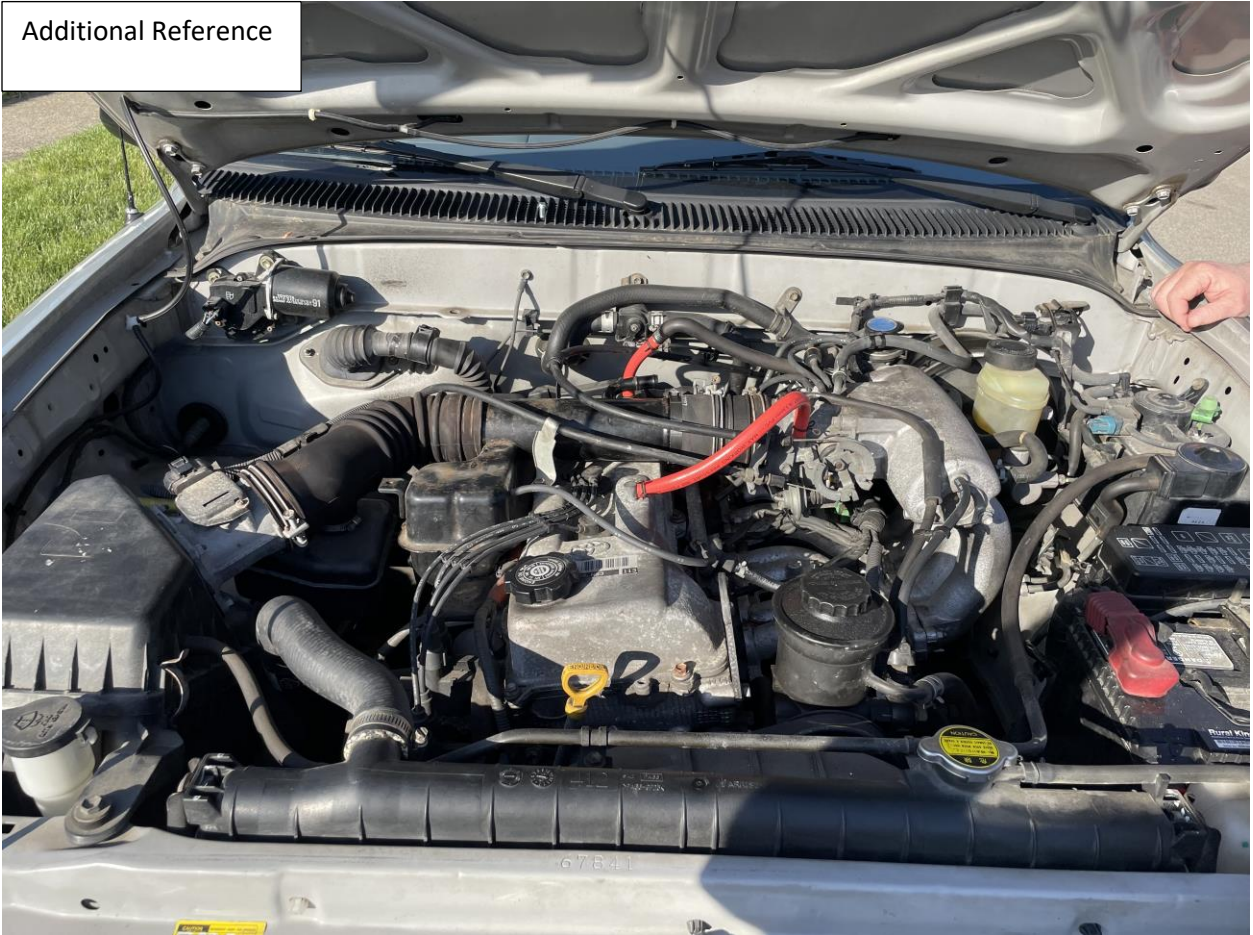
(Step 9 Reassembly) Reassembly the intake piping with the new silicon sleeve.



Additional Reference



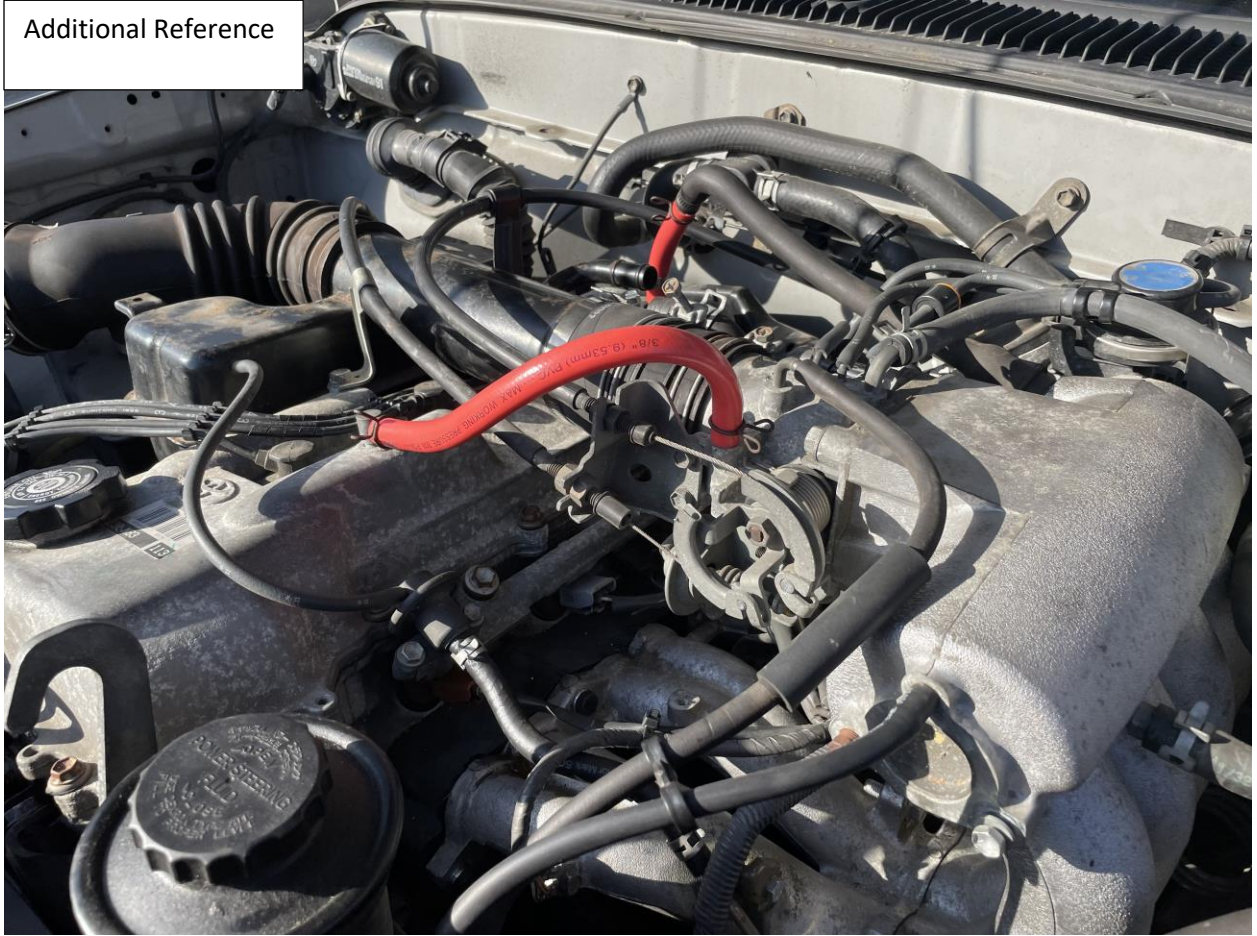
Additional Reference



Additional Reference



Additional Reference



Additional Reference



Additional Reference

