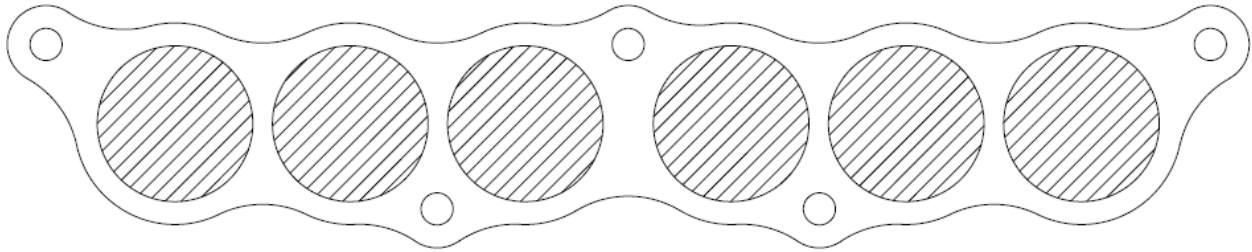


# Anderson Engineering Solutions LLC

## Installation Instructions

Please read instructions thoroughly before starting installation!

### 5VZ Intake Manifold Runner



**(1995 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**

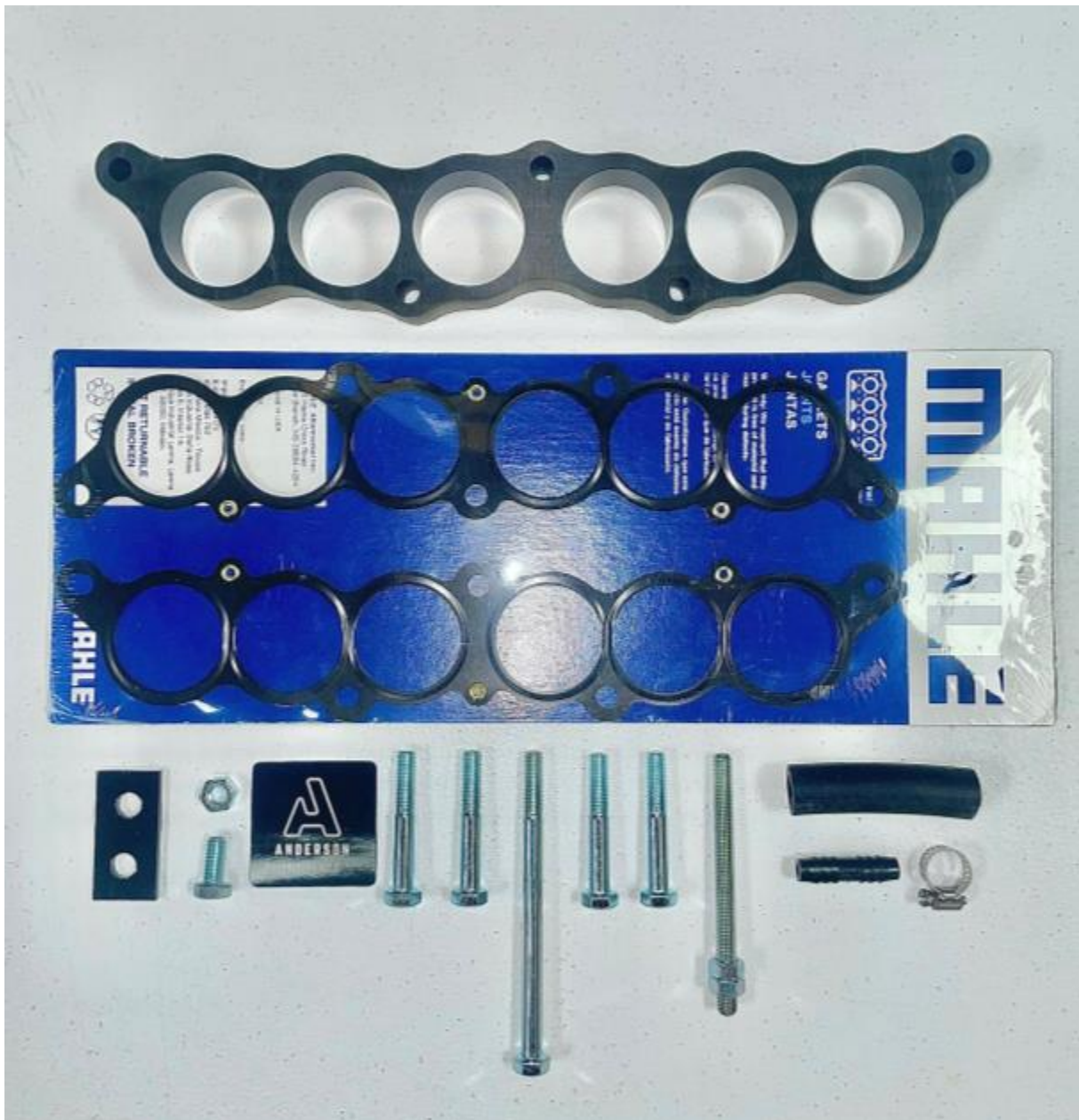
- Flat head screwdriver
- Philips’s head screwdriver
- Zip ties (provided)
- Cutters
- Vise grip pliers
- Scissors
- Ratcheting Wrench (3/8 in. drive)
- 4 inches to 10 inches - 3/8” drive extensions
- Metric Socket (compatible 3/8” drive
  - 5mm
  - 10mm
  - 12mm
  - 13mm

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Intake Manifold Runner kits contains the following:

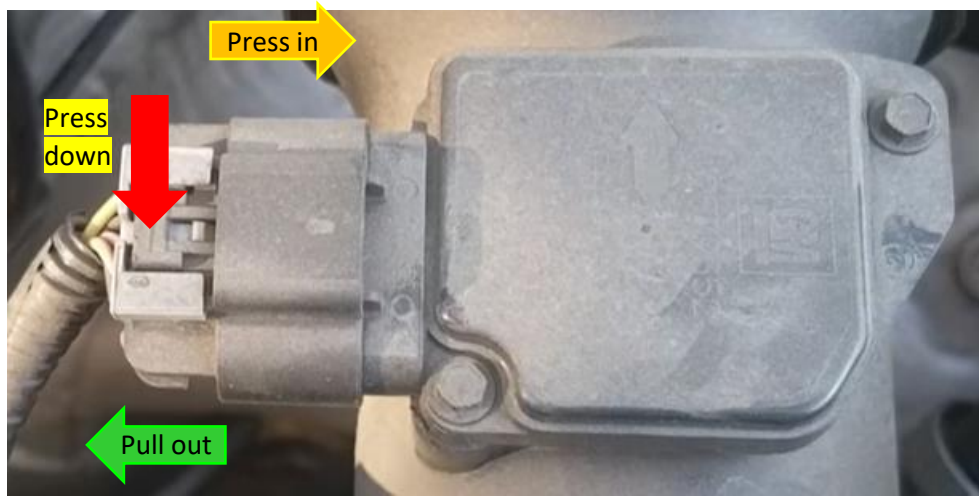
- CNC Intake manifold (Made of Delrin (POM-C) 1.00" thick
- 2 OEM Toyota gaskets
- 1 8m x 1.25 Studs
- 4 8m x 1.25 Bolts (55mm long)
- 1 8m x 1.25 Bolt (120mm long)
- 1 Additional length 1/2" ID rubber hose and attachment fitting.
- 1 Extension Bracket with hardware.



**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



**It is suggest to take photos as needed of the engine bay prior to installation for reference purposes.**

## 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!**

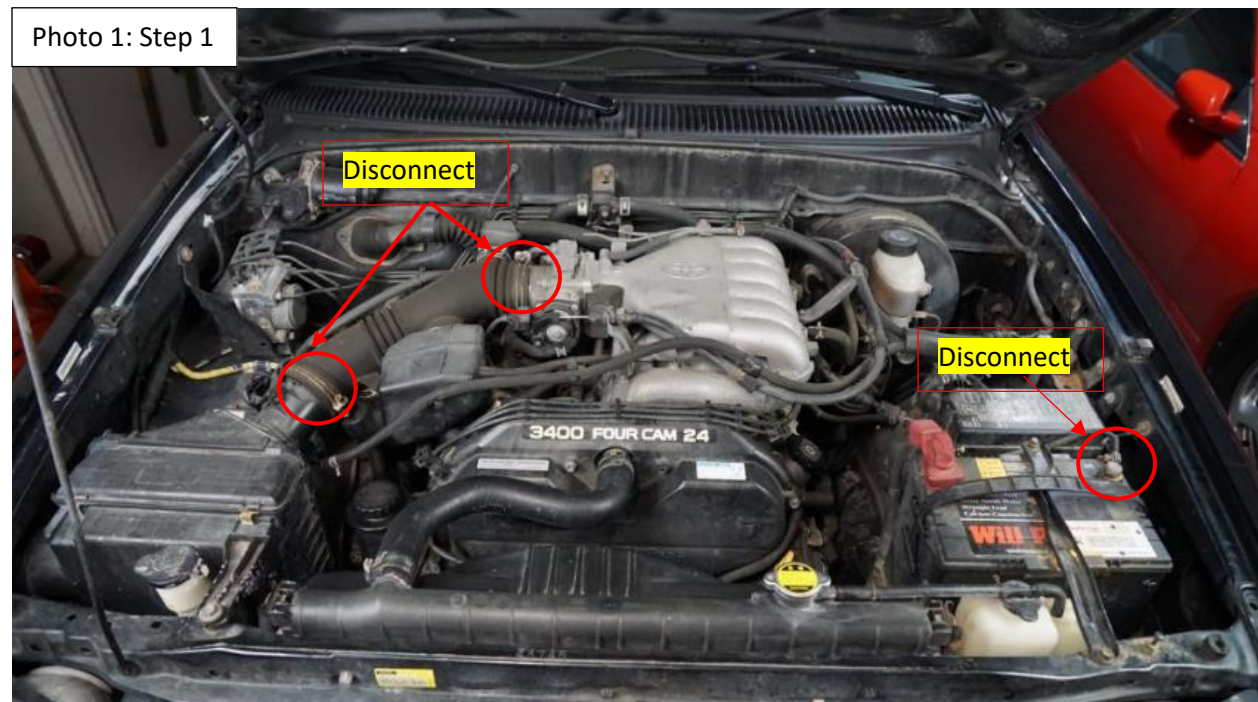
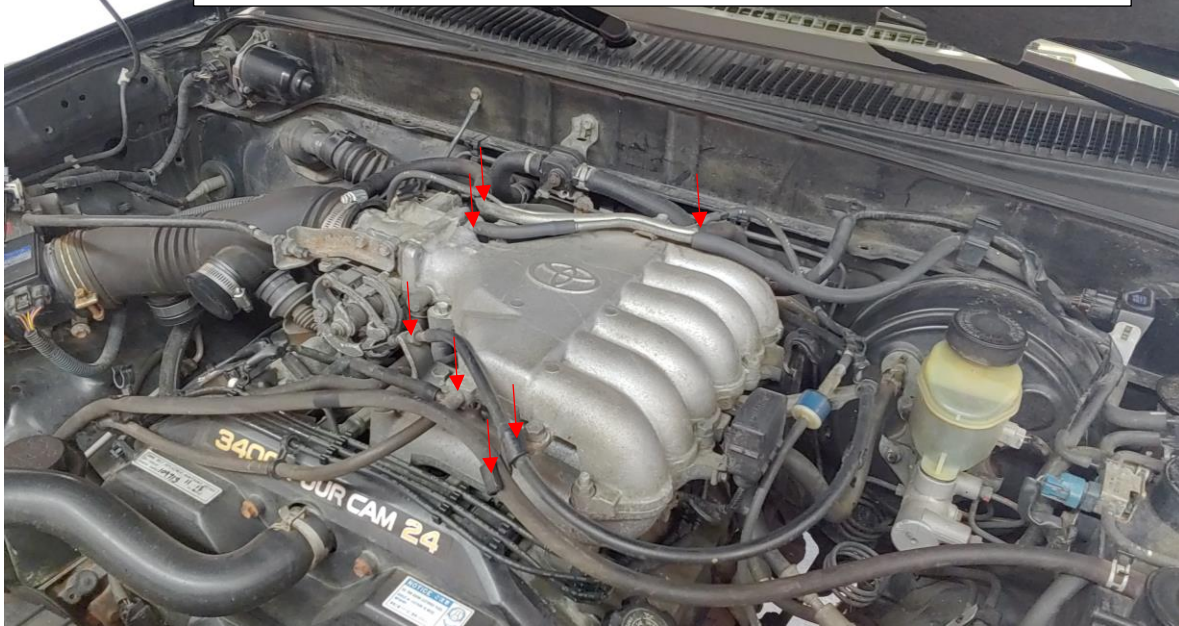


Figure 1

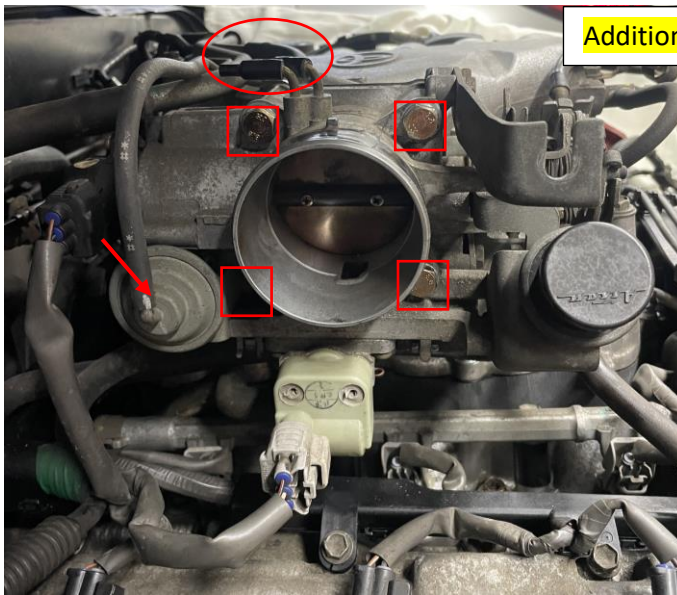
Photo 2

Step 2: The red arrow below show which vacuum hose are required to be disconnected. And remove the Throttle body and Gasket.

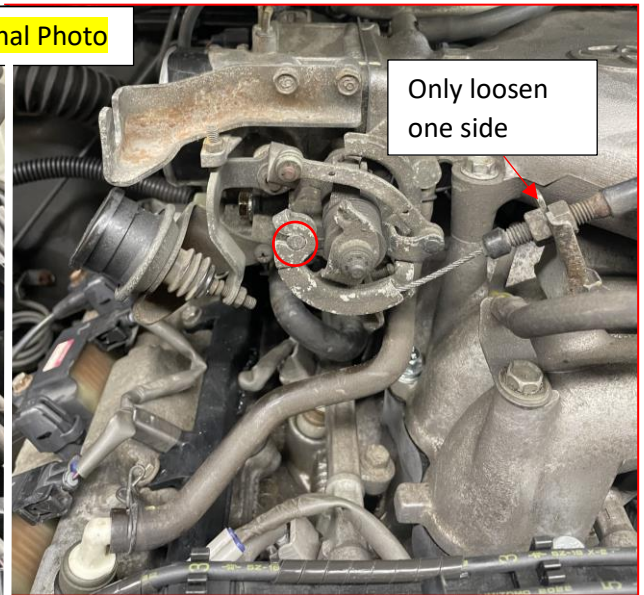
See additional photos for more clarity



Additional Photo



Only loosen one side



If you'd like to fully remove the throttle body, There are 2 coolant rubber hoses located underneath the throttle body held on by hose clamps.

Remove these and the throttle body will be able to be fully removed.

Additional Photo

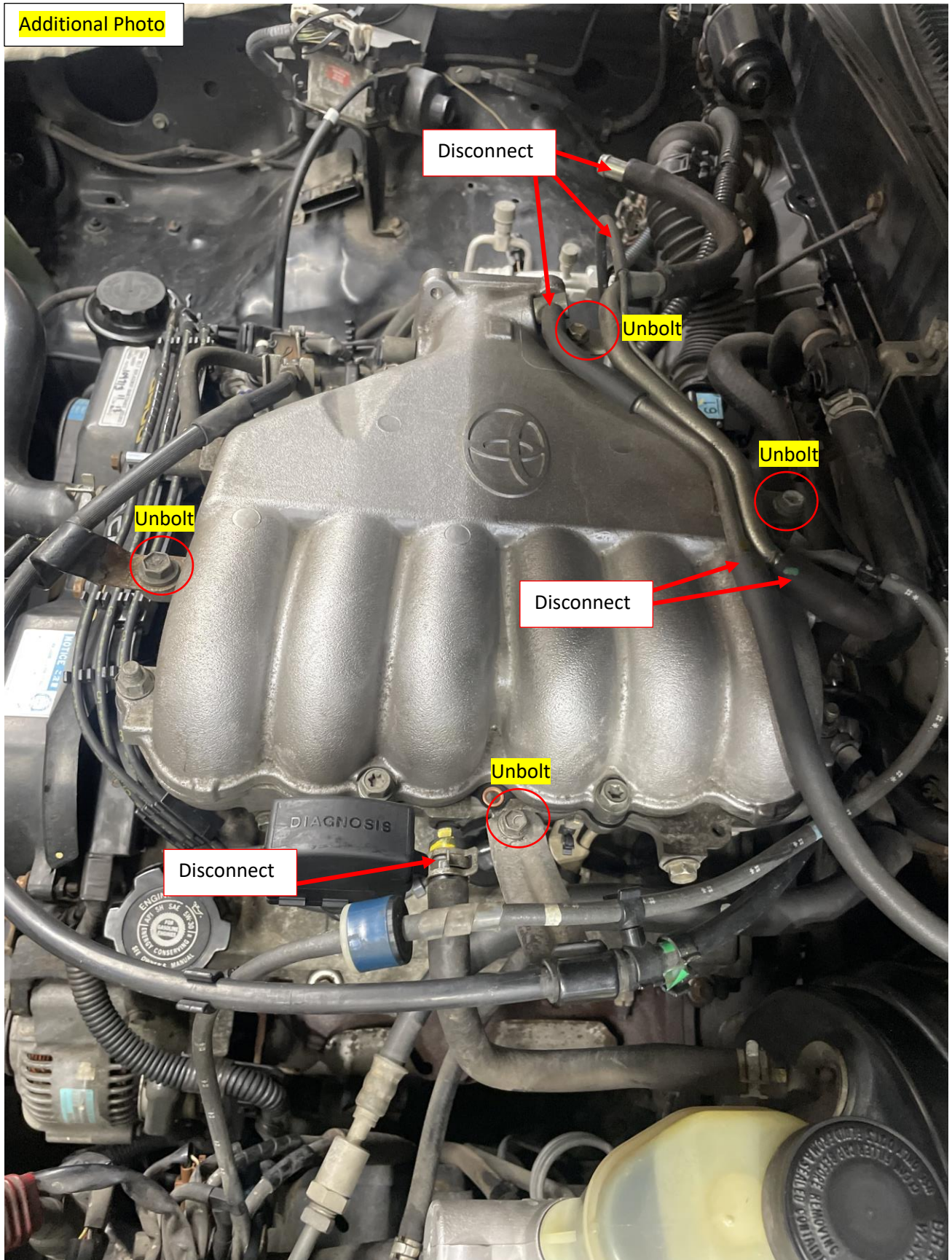
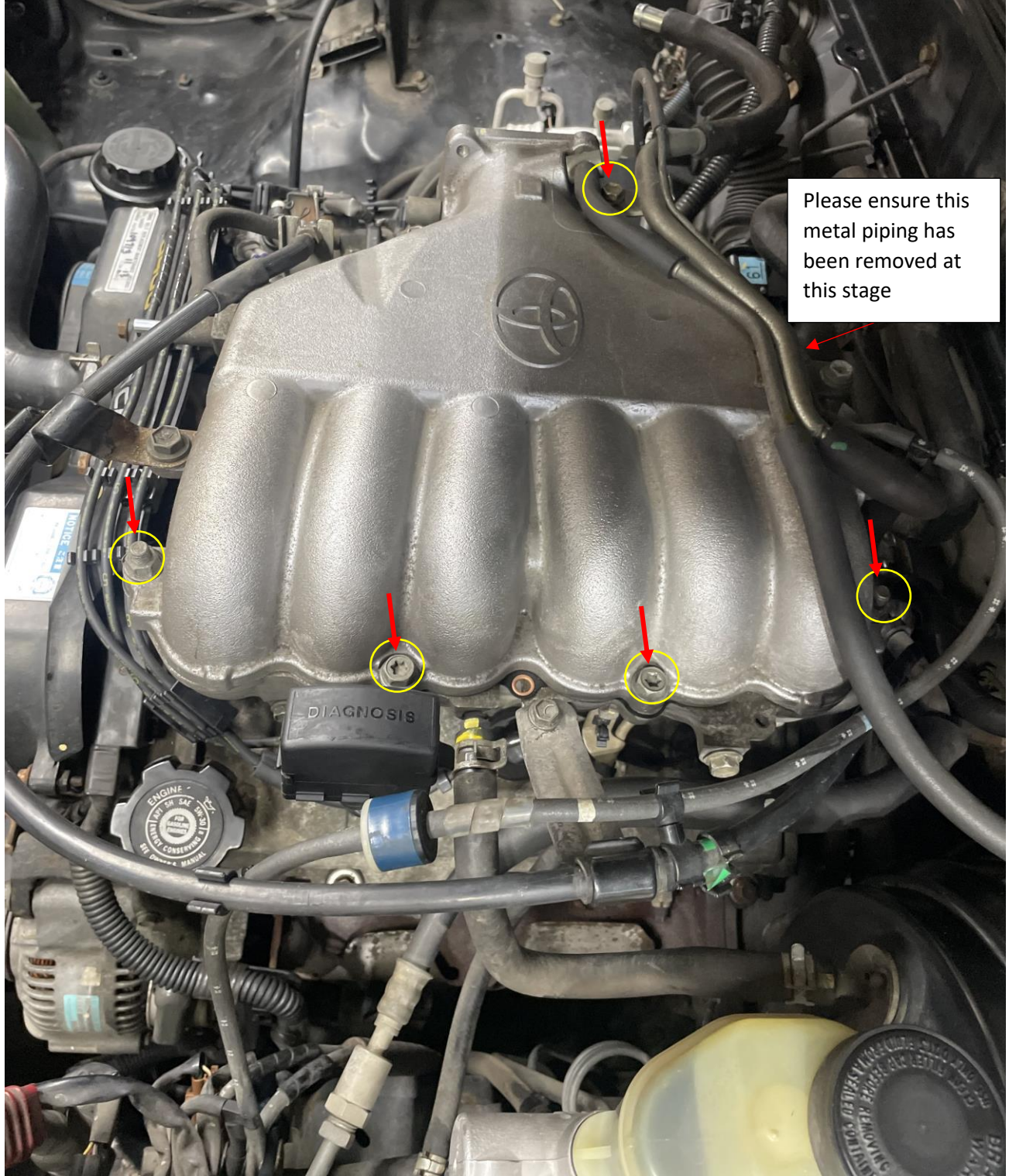


Photo 3

Step 3: Once the throttle body has been removed, Unbolt the Upper Intake section by removing the 5 bolts below

Keep All Hardware removed, it will be reused



Please ensure this metal piping has been removed at this stage

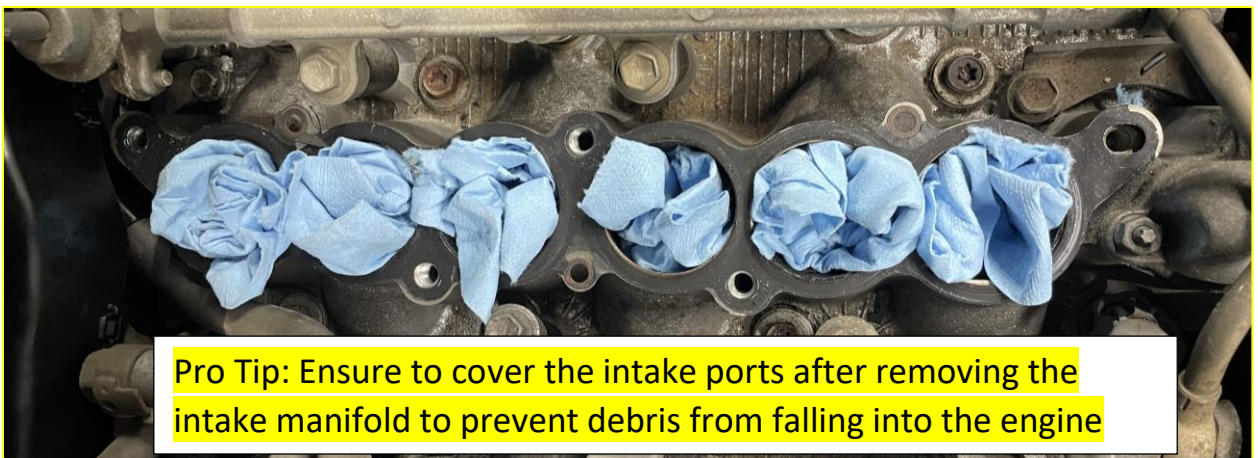
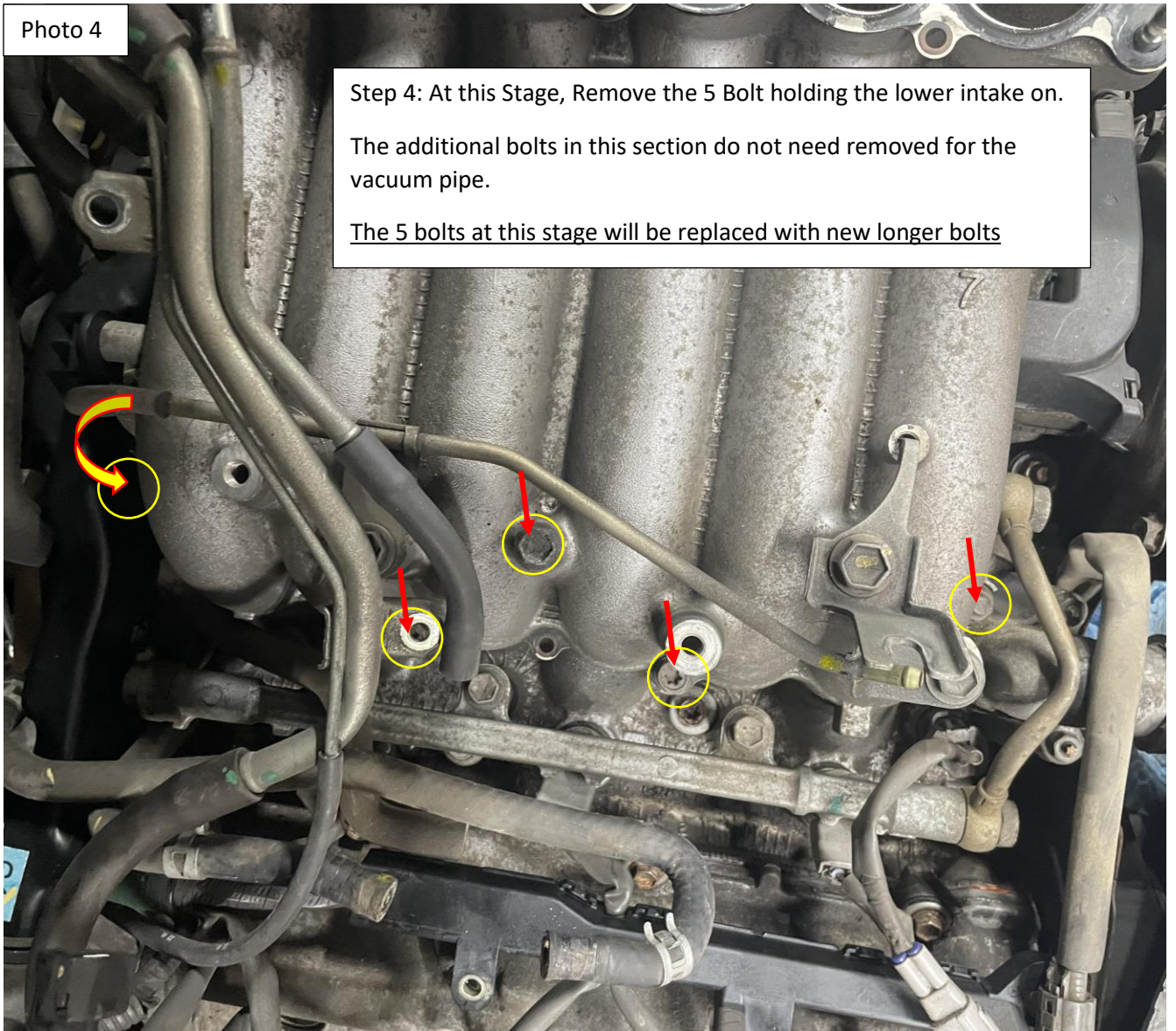


Photo 4

Step 4: At this Stage, Remove the 5 Bolt holding the lower intake on.

The additional bolts in this section do not need removed for the vacuum pipe.

The 5 bolts at this stage will be replaced with new longer bolts



**Pro Tip: Ensure to cover the intake ports after removing the intake manifold to prevent debris from falling into the engine**

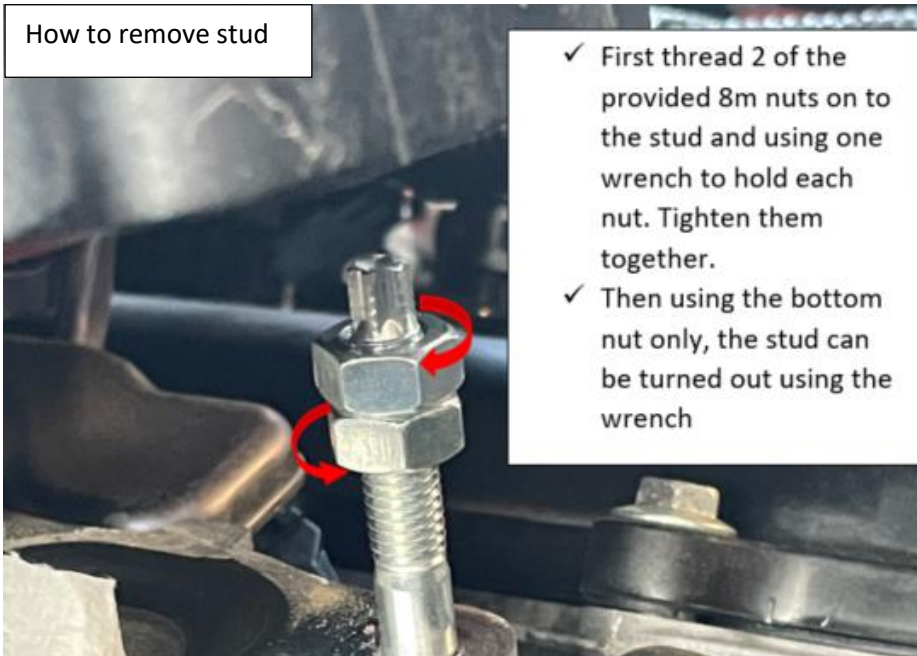
Photo 5



Step 5: Remove the 2 Studs shown below and clean the gasket surface

2 new gasket provide in the kit will be use for the both side of the intake spacer

How to remove stud



- ✓ First thread 2 of the provided 8m nuts on to the stud and using one wrench to hold each nut. Tighten them together.
- ✓ Then using the bottom nut only, the stud can be turned out using the wrench

Photo 6

Step 6: Using a gasket on each side of the intake spacer. Align all using the provided studs approximately 4 inches long.

These are used for alignment only and will be replaced with bolts after all other bolts are in the lower intake manifold

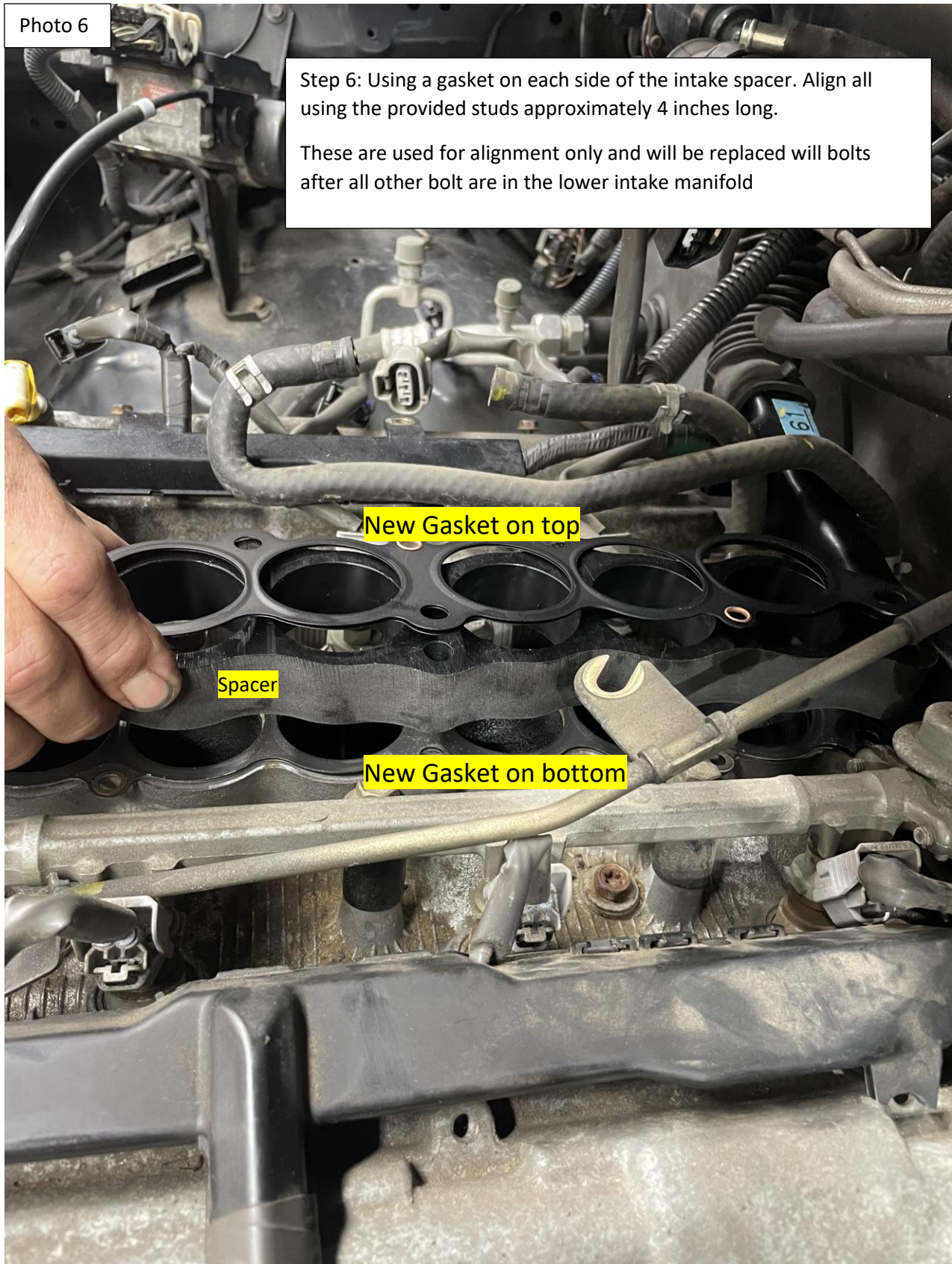


Photo 7

Step 7: Attach the lower intake manifold with the new gasket and spacer using the 4 55mm long bolts and 1 120mm long bolt.

Tighten to 10 – 12 lbs.ft

Afterwards attached the vacuum hose back into position indicated with the red arrow.

This gasket can be reused if needed

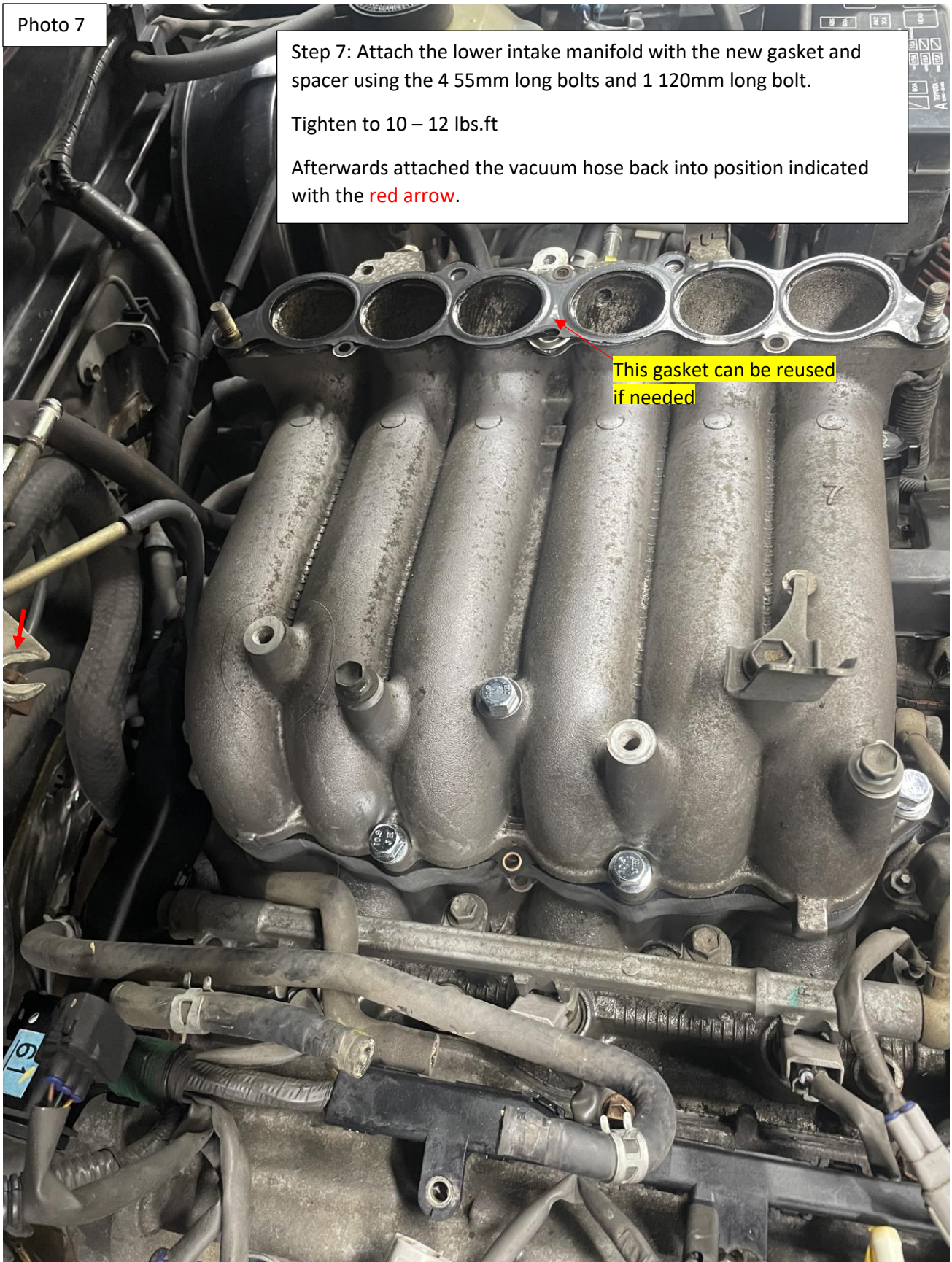
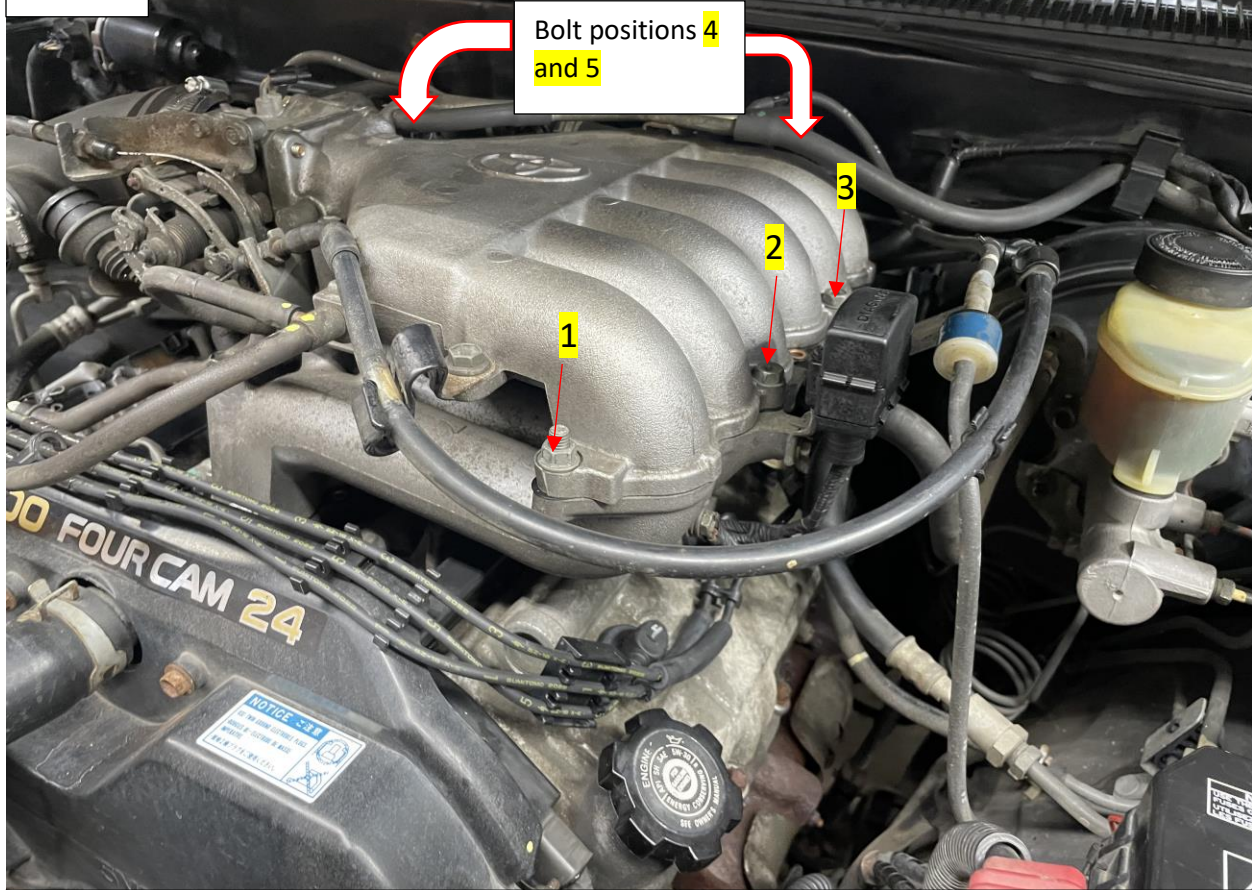


Photo 8



Step 8: Attached the upper intake manifold to the lower intake section ensure to tight all nuts and bolts to 10-12 Lbs.ft

All vacuum hoses previous disassembled can start to be put back on the engine.

Photo 9

Step 9: Attached the Vacuum piping on top the engine and add rubber hose extension to allow for reach to positive crank ventilation hose.

Attached

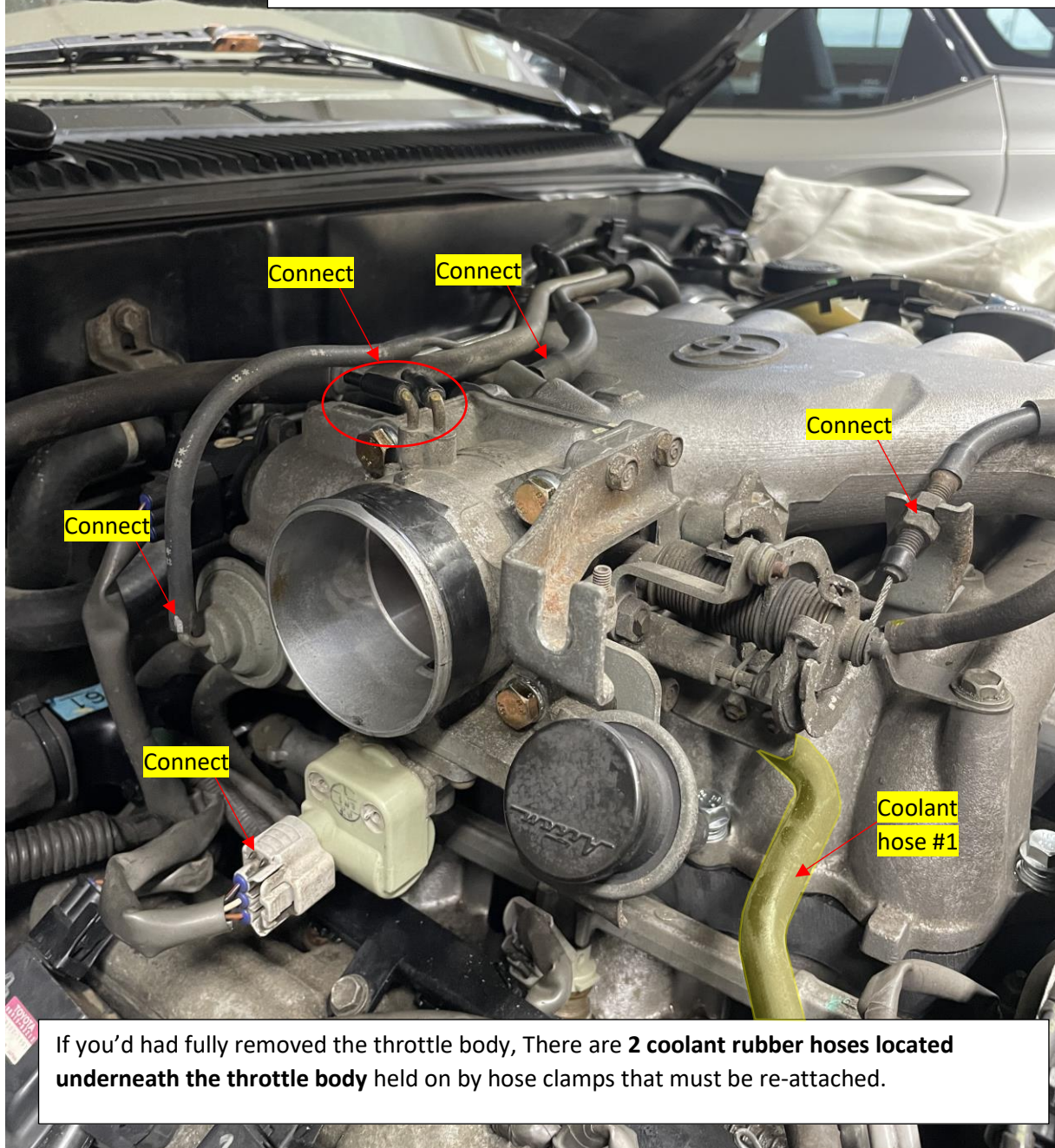
Add hose extension to the base of the existing hose to allow for it to be connected

Photo 10

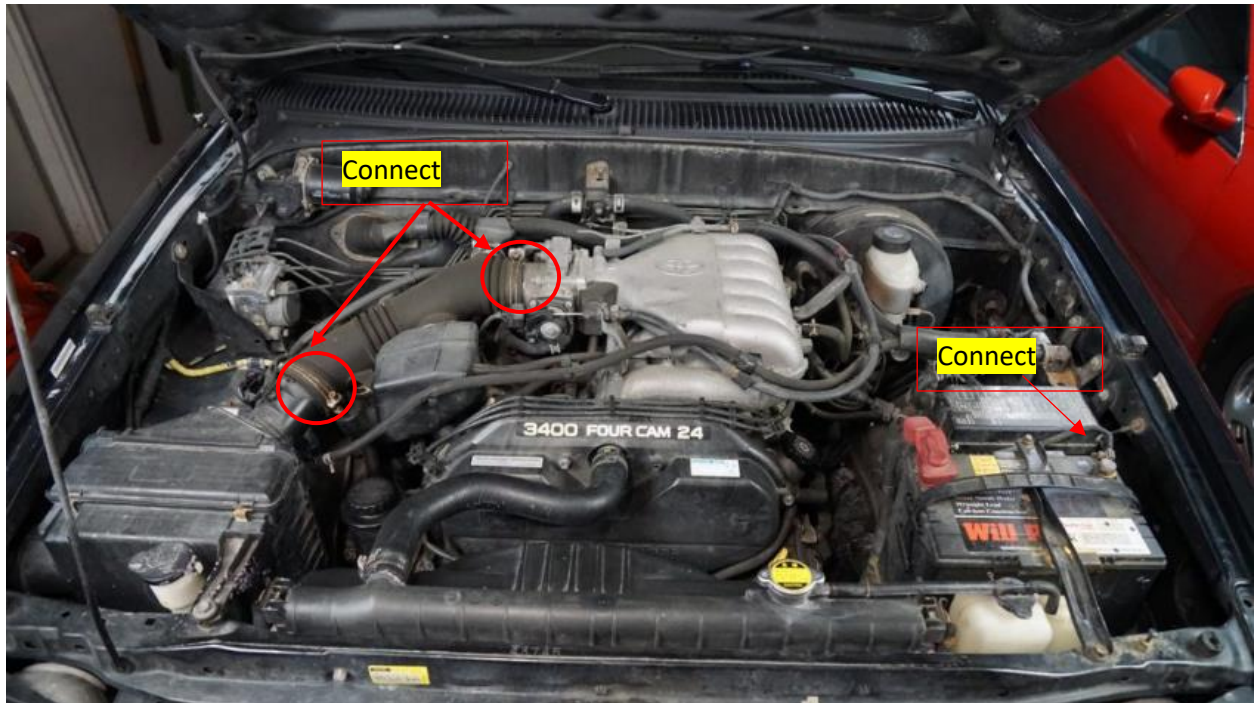
Step 10: Attach throttle body back to the intake manifold and **don't forget the gasket !!**

Attached all rubber hoses and vacuum lines to the throttle body and attach the throttle body cable.

Throttle body bolts are tightened 10 – 12 ft.lbs also.



If you'd had fully removed the throttle body, There are **2 coolant rubber hoses located underneath the throttle body** held on by hose clamps that must be re-attached.



Great work! You're done!



## Fitment verification

After all is complete, connect the battery and start the truck. If installed incorrectly and issue come up, double check these couple items below to help trouble shoot any issues.

This list has been compiled from customer interaction regarding the most common issues:

<b>Symptom:</b>	<b>Correction</b>
Code P0410 or P0411 found	Ensure all hoses from the manifold is connected to their associated ports.
Rough Idle	Verify all vacuum ports at attached to the corresponding hoses. Please read through document to ensure all is covered.  Also verify that both OEM gaskets (original and new) are oriented in the correct direct to ensure proper seal.



## Warranty Information

### Service as It Should Be

In today's online shopping market, we believe that honesty is the best policy. That's why we designed the most generous, fair and transparent store policy for our customers. Read the following sections to find out more about our warranty information. Please don't hesitate to contact us if you have any questions!

- All manufactured products sold by Anderson Engineering Solutions LLC have a 120 day limited warranty from the date of sale.
  - This warranty does not cover minor defects as a result of naturally occurring elements and shipping damages including, but not limited to oxidation or corrosion, paint flakes, and burrs or high metal.
- This limited warranty applies to all products and requires an inspection by Anderson Engineering Solutions LLC at its Franklin, OH location to verify if a product defect exists in either the material or workmanship if claim arises.

For all remaining warranty information. Please visit our "Store Policies", webpage at [AESinnovate.com](http://AESinnovate.com).

**Technical assistance phone number: 937-823-5541**