

Part #s 42793, 42793-PC,
42795, 42795-PC, 42797,
42797-PC, 42798, 42798-
PC, 42799, 42799-PC

Monster-Ram® Air Intake
2007-2021 Dodge/Ram 6.7L

Does Not Fit Cab & Chassis
Note: Individual components vary
based on year.

Please read through the following
instructions thoroughly before starting



Note: Individual components vary based on year.

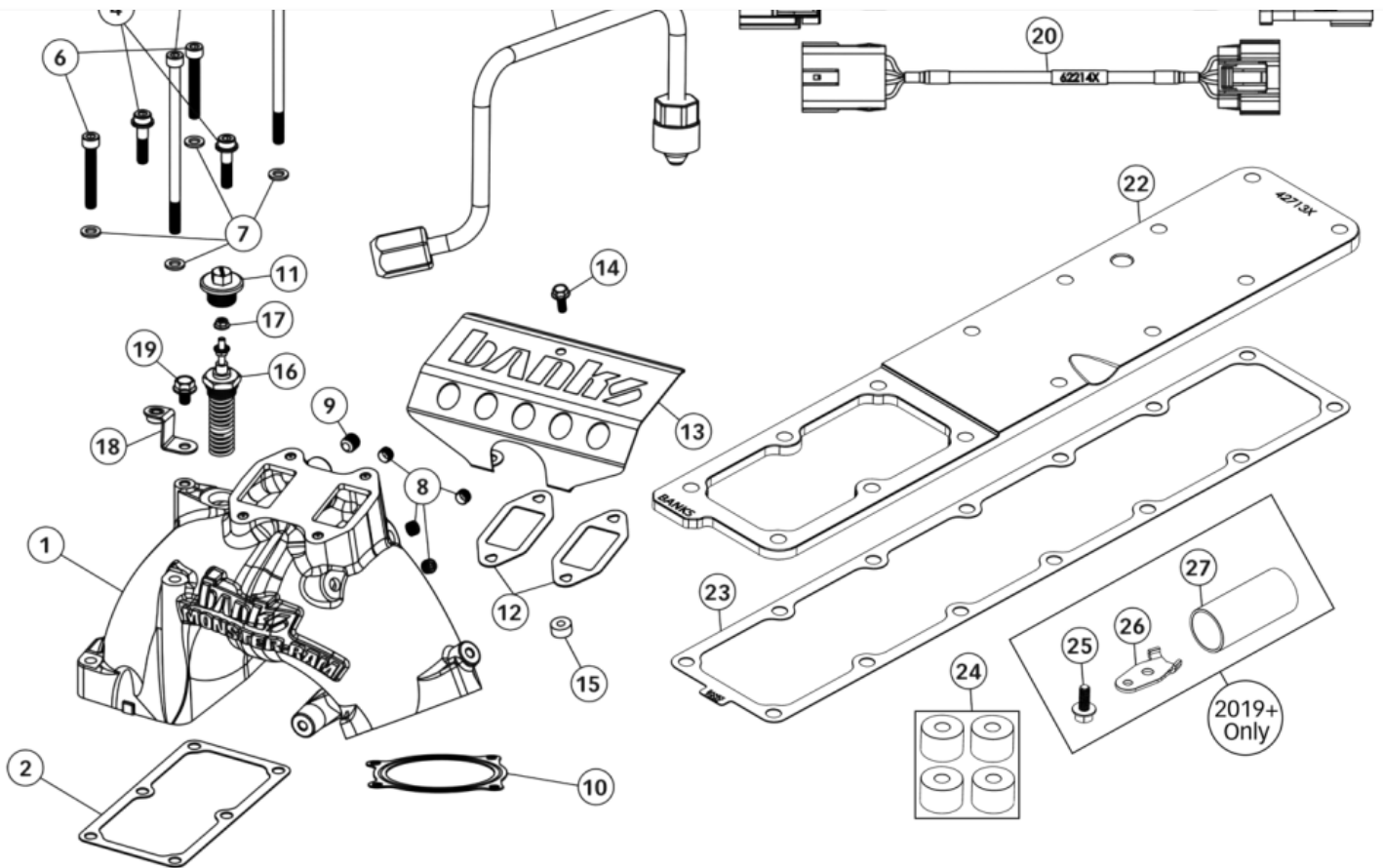
Install Videos

Monster-Ram w/Intake Plate Install

30:18



1	MONSTER-RAM Intake Manifold	42701		1
2	Gasket, Intake Manifold	93063		1
3	Fuel Line, #1 Injector	43209	43218	1
4	Flanged Socket Head Cap Screw M8-1.25 x 35mm	91559		2
5	Socket Head Cap Screw, M8-1.25 x 150mm	91560		2
6	Socket Head Cap Screw, M8-1.25 x 50mm	91561		2
7	Washer, M8	91697		4
8	Plug 1/8 NPT	13251		4
9	Plug, M12-1.25 12mm	92351		1
10	Gasket, Throttle Body	93004		1
11	Plug, M22	13277		1
12	Gasket, EGR	93006		2
13	Heat Shield, EGR Valve	53400	53401	1
14	Bolt M6-1.00	91762	91763	1
15	Spacer, EGR Valve Heat Shield	24332	24333	1
16	Heater Element	62213		1
17	Flange Nut, M5	91585		1
18	Bracket, Dipstick	72305		1
19	Flanged Hex Bolt, M8-1.25	91584		1
20	Harness Extension - EGR Valve	62214	62215	1
21	Harness Extension - Thermocouple	62212 x2	62212 x1	
22	High Flow Billet Heater Plate	42713		1
23	Gasket, Heater Plate	93062		1
24	Fuel Rail Spacers	42713-05		4
25	Bolt, Heater Wire Adapter	-	91754	1
26	Heater Wire Adapter	-	62558	1
27	Heat Shrink, Heater Wire Adapter	-	90200	1



Important Notes:

Note: Dipstick Relocation Bracket Only Used With Heater Coil

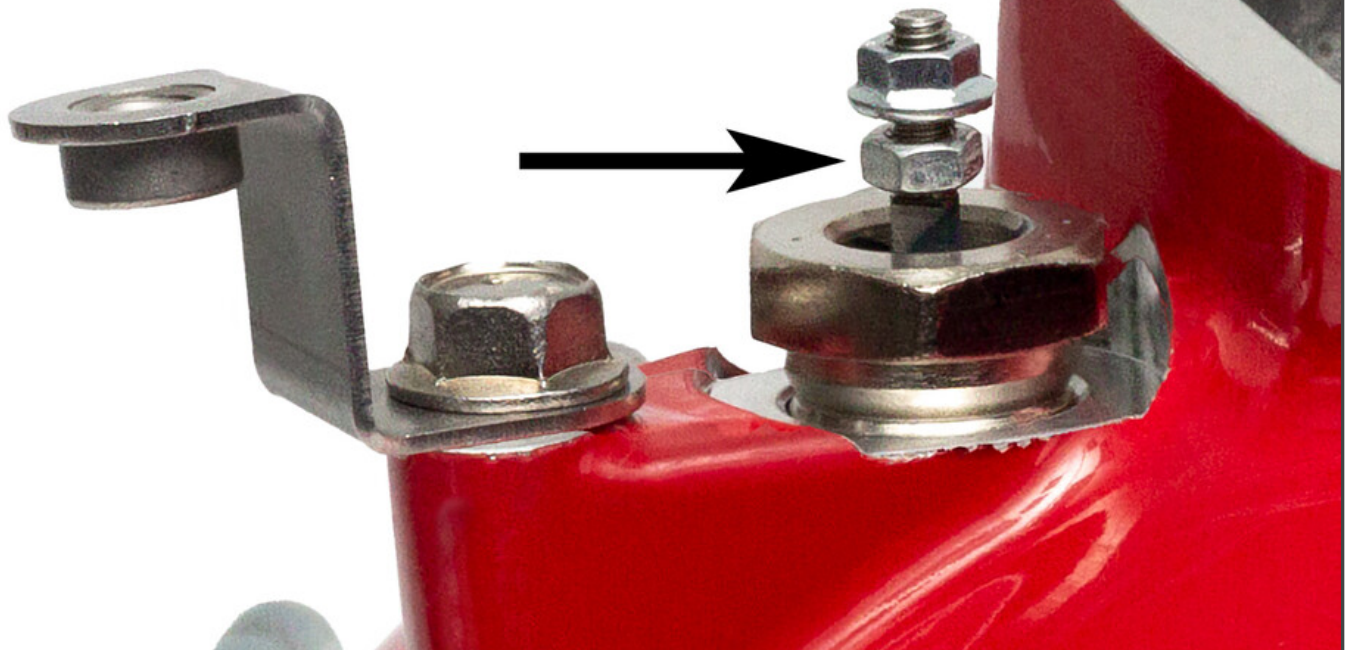


Note:

Dipstick relocation bracket is only included and needed with using the Banks High-Flow heater and Billet Plate.

Important!

Do Not Remove Lower Nut

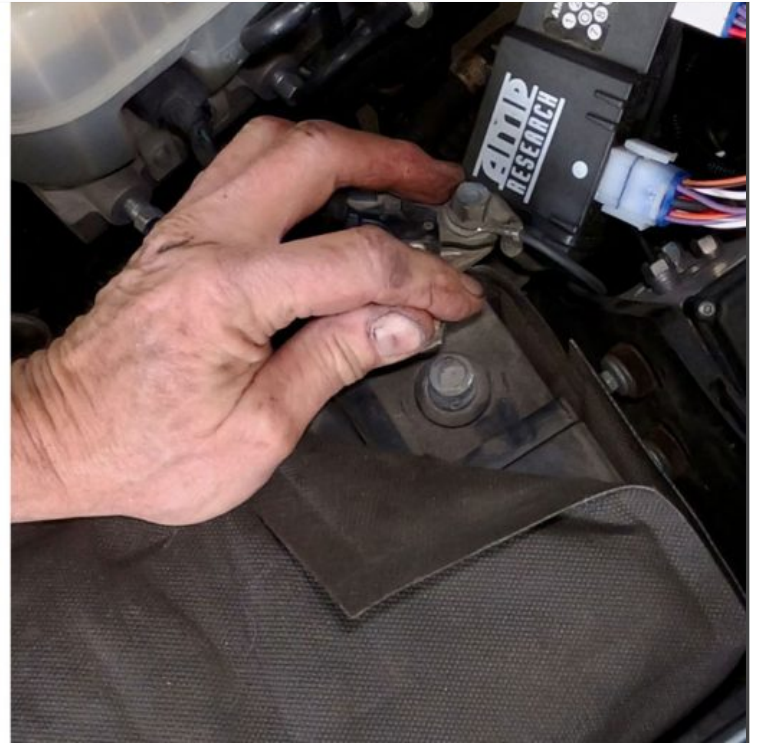


IMPORTANT!

If installing with the Banks High-Flow heater and Billet Plate, the lower locking nut must **not** be removed from the heater coil. Take care when installing OEM heater wire ring terminal, it must be sandwiched between lower and upper nut.

The threaded terminal is insulated, if the OEM heater wire touches other metal components, an open short will occur.

OEM Intake Elbow Removal



1. Disconnect Batteries

Disconnect the negative cables from both batteries.



Remove the engine oil dipstick. Then remove the 4 bolts retaining the plastic engine surround cover using a 10mm socket. Reinsert the dipstick.



3. Remove Engine Cover

Remove the center engine cover. Use an 8mm deep socket to remove the eight bolts holding the cover down. Remove the oil cap before pulling the cover off. The cover will be reinstalled after the next step.



4. Remove Bolts

Use an 8mm socket to remove the 2 bolts holding the engine surround cover bracket onto the valve cover. Remove the bracket. It will not be reused.



Replace the center engine cover. Replace the eight bolts.

Note: *The 2 bolts with studs extending up past the head are to be located on the left rear of the cover.*



6. Unplug EGR Valve

Unplug the EGR valve, EGR Temperature thermocouple d, throttle body connector, and MAP sensor connector.



Forward EGR Temperature Sensor Location.
If sensor is mounted to rear of Intake Elbow, refer to Step 6a



MAP Sensor and throttle body connector location.



6a. Rear Thermocouple.

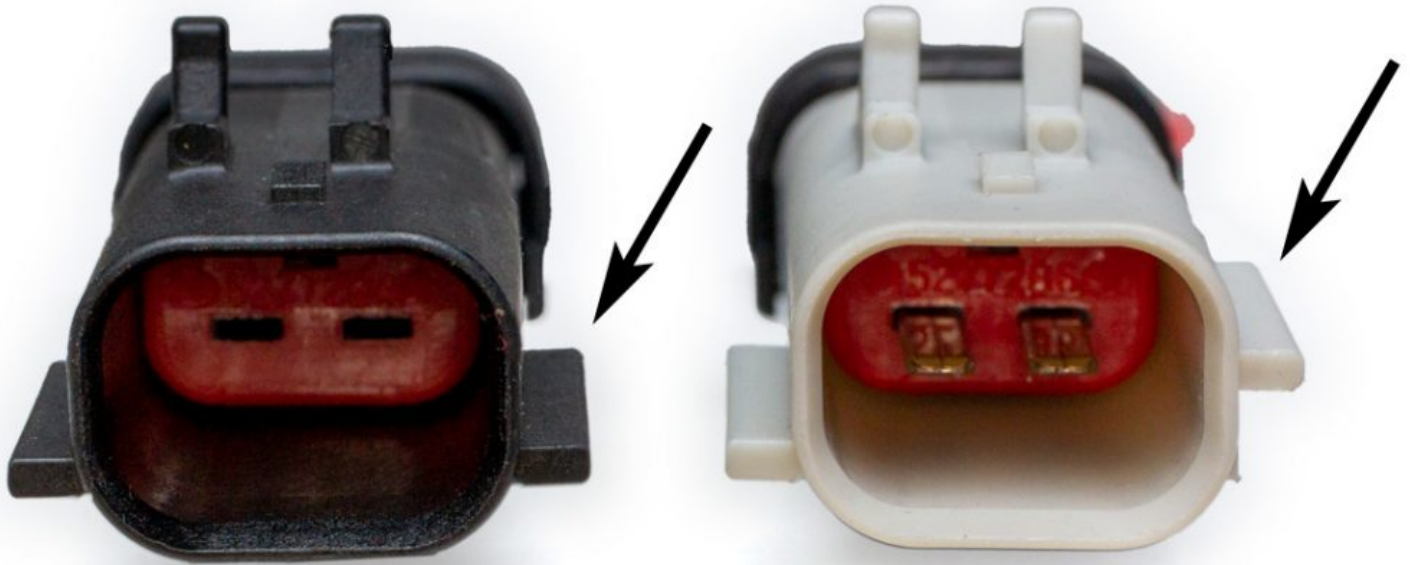
Some models have a thermocouple installed in the back of the intake elbow instead of the EGR tube. If you have one of these vehicles, unplug the sensor at the harness.



Location of connector for rear intake elbow mounted thermocouple.

Note:

**If your OEM plug is black
Grind this side off both connectors**

**Note:**

If your vehicle is equipped with a rear mounted thermocouple and the plugs are black, you will need to shave off the keys on both the sensor connector and the supplied harness extension. Use a file or Dremel to modify them.



7. Remove Harness Clips

Remove the two harness clips from the studs on the stock intake elbow to allow the harness to be pulled away from the intake elbow.



Prep the EGR tube by loosening the two V-band clamps on the ends of the tube using a 7/16 or 11 mm deep socket. Using an 8mm socket, remove the bolt retaining the tube at the center of the tube. The radiator hose may need to be pushed down to allow access to this screw.

The tube does not have to be fully removed, just loose enough to provide clearance for the Monster-Ram installation.



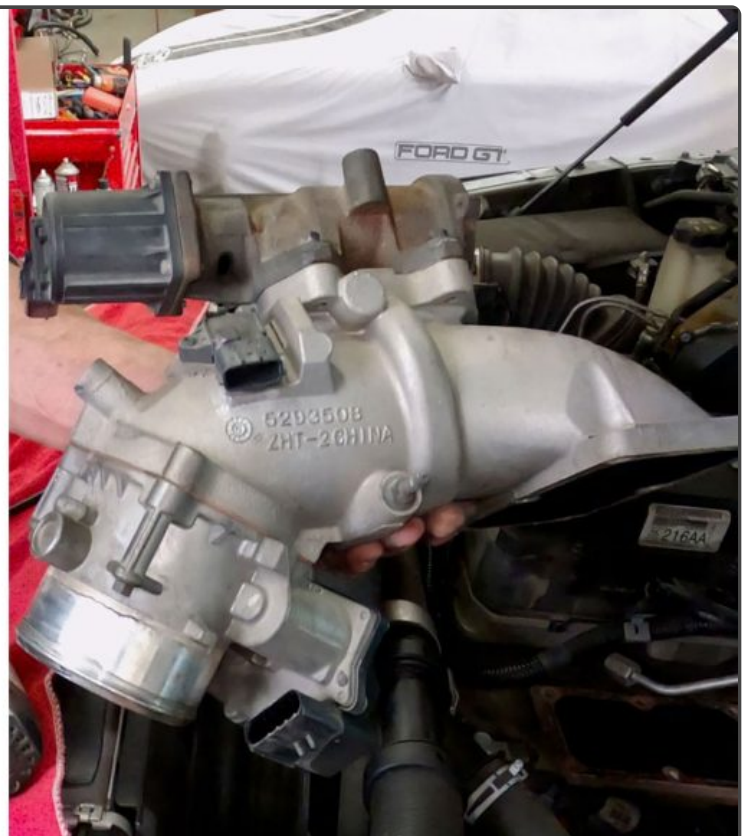
9. Move Dipstick Tube

Remove the bolt that holds the dipstick on the intake. Gently push and move the dipstick tube out of the way as needed.



10. Loosen Clamp

Loosen the clamp holding the hose to the throttle body and slide the hose free of the throttle body.



Remove the 6 bolts at the base of the stock intake elbow and remove the intake elbow from the intake manifold, being careful to not knock any debris into the intake through the electric grid heater.

12. Remove Gasket

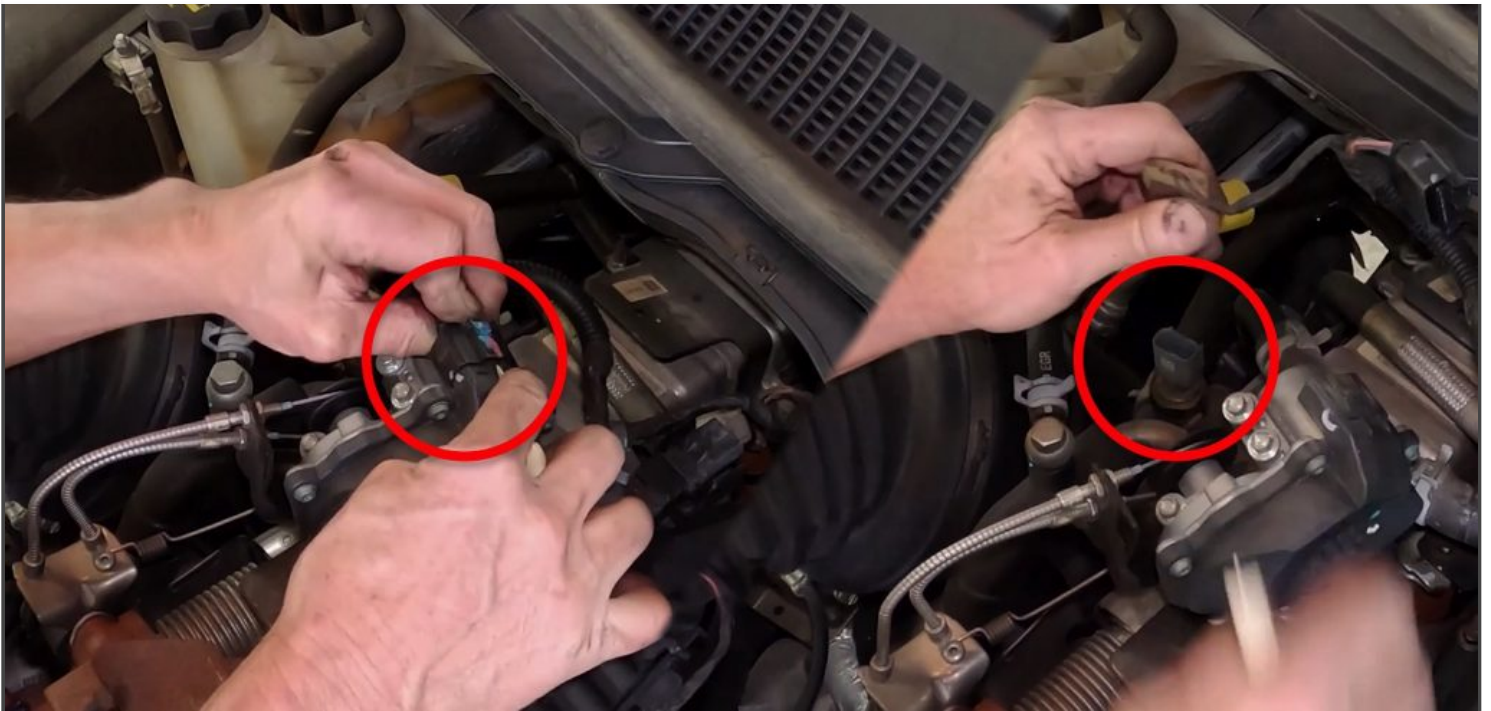
Remove the gasket from the OEM heater plate.

Removal of Injector Lines & Intake Manifold Plate



1. Cover OEM Heater

Use a shop towel to cover the OEM heater location & prevent debris from entering the intake.



2. Disconnect Sensors

Remove the EGR cooler bypass valve & exhaust pressure sensor.



Pull the foam aside for extra clearance.



4. Rear Crankcase Sensor

Unplug the rear crankcase sensor to free up slack in the wire harness.



5. Remove Clip

Unclip this wire clip for extra clearance.



Slide lever back until it clicks, then separate.



7. Dipstick Wire Clip

Use a small flat blade to release the clip.



8. Heater Cable

Use an 8mm socket or wrench to remove the nut.
Re install the nut to keep from loosing it.



Pull and disconnect rear crank case vent line.



Unscrew and remove the vent housing.



10. Remove Foam

On 2013+ model year trucks, remove the sound deadening foam rubber covering the fuel lines.

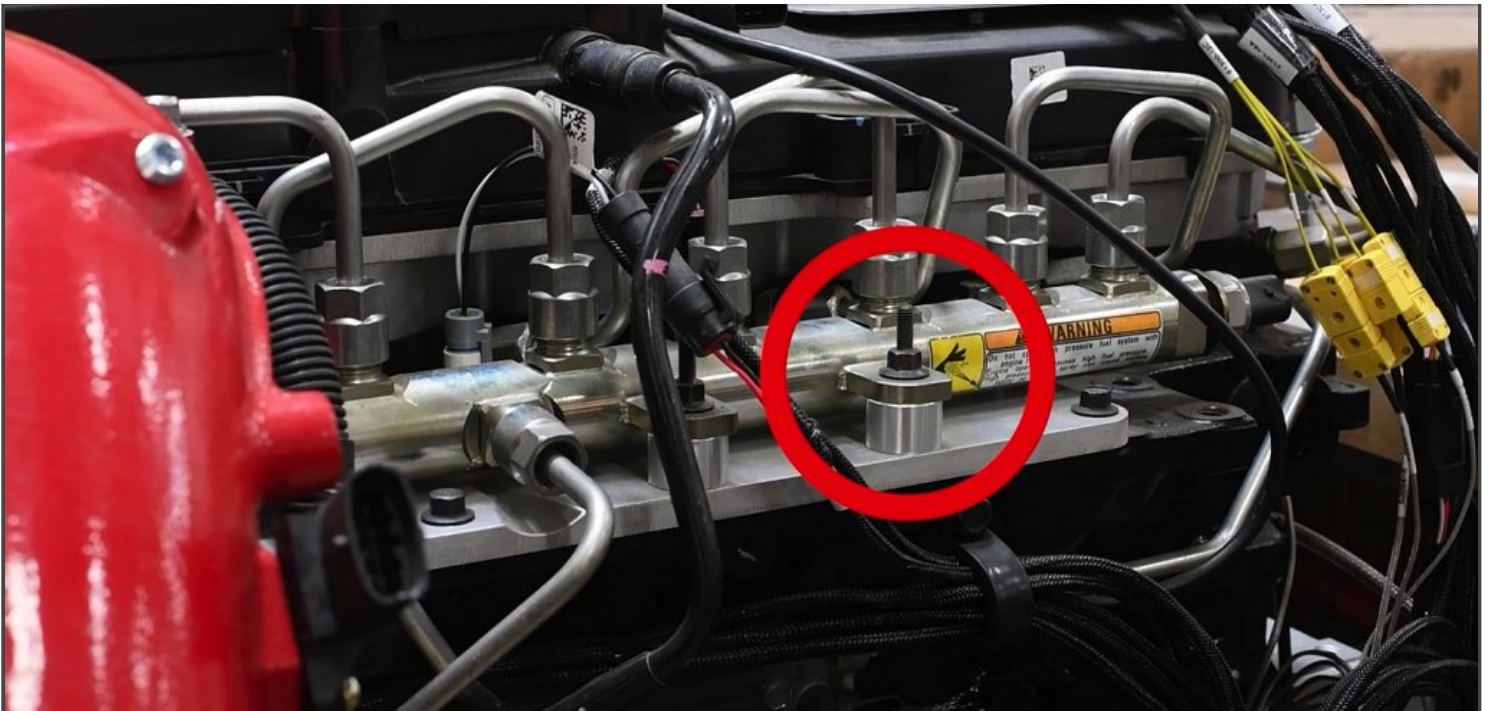


Disconnect plug from the housing, and stow it to the side.



12. Rear Fuel Rail Sensor

Disconnect the Fuel Rail Sensor on the back of the rail, and stow aside.



13. Fuel Rail Stud

Remove the threaded stud that holds the wire harness, as seen here.

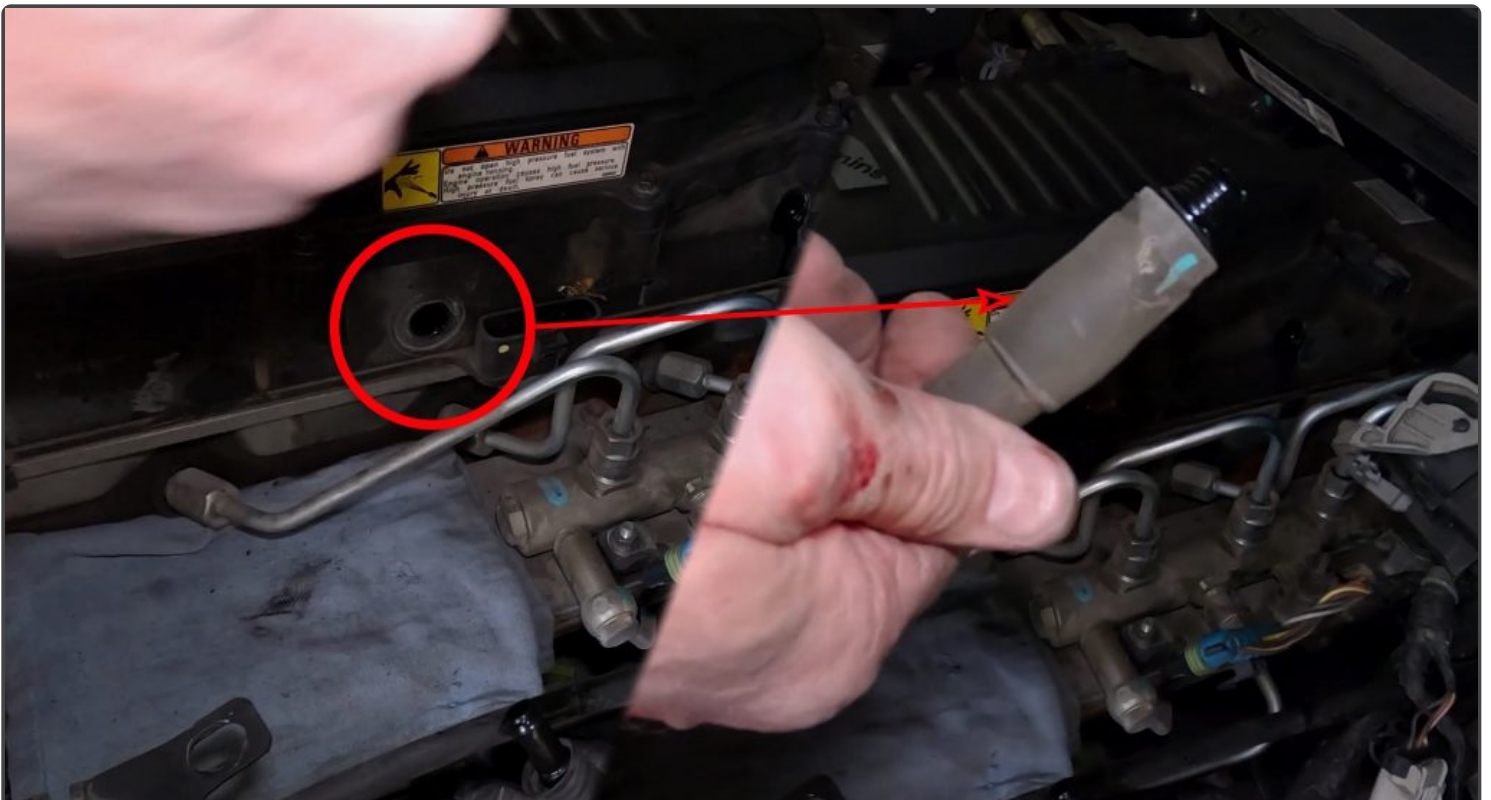


Use a 10mm deep socket to remove the stud.

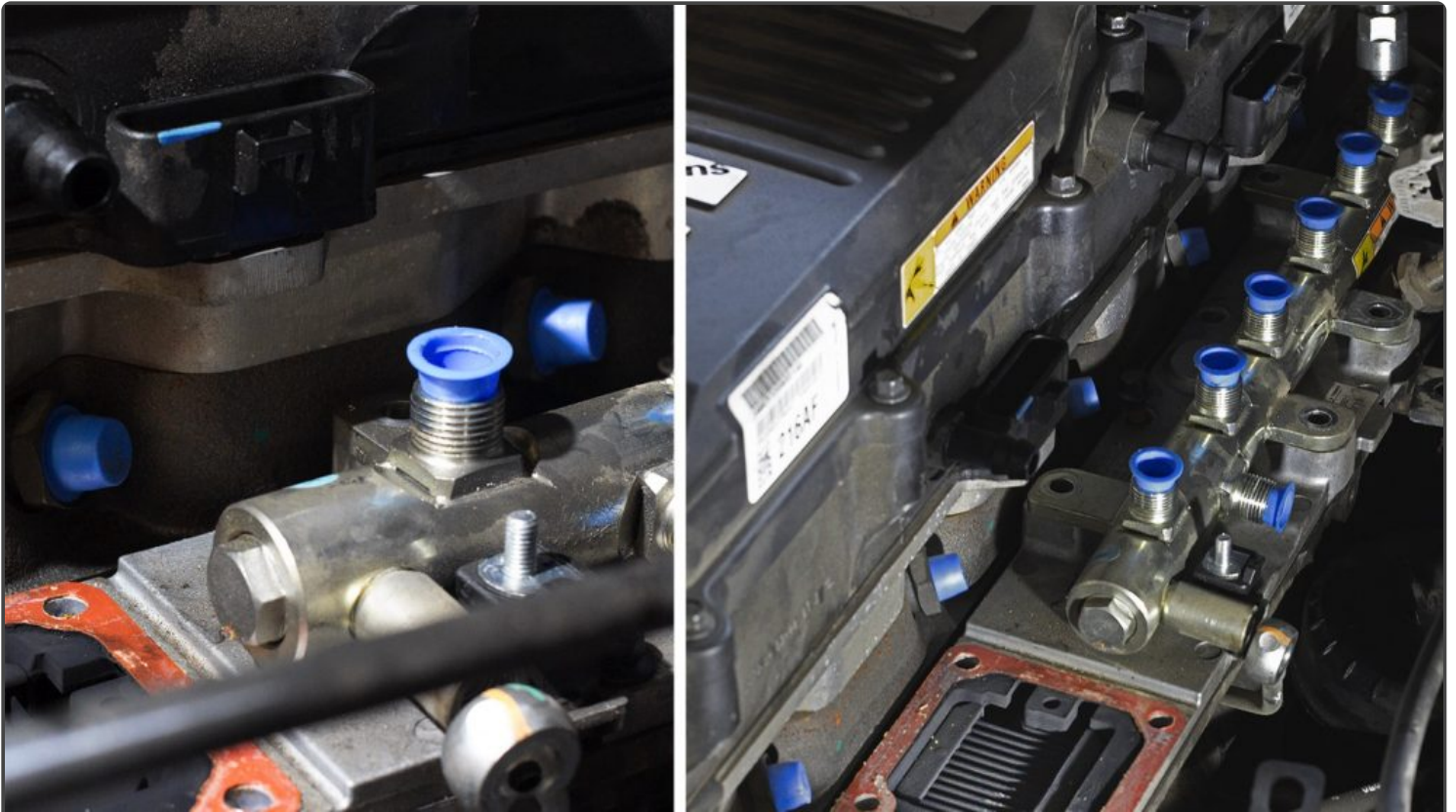


14. Fuel Rail Pressure Sensor

Press the locking tab, press the sensor forward to release tension, then pull back to remove.



Remove the forward breather tube and housing.



Note: Blue Caps

As a precaution to prevent debris from entering the fuel system, plastic caps are included to plug the open fuel lines during installation.

14 (2+12) Plugs come with the Heater-Plate Combo for all fuel injector hard lines, fuel feed, and return line.



16. Injector Line Removal

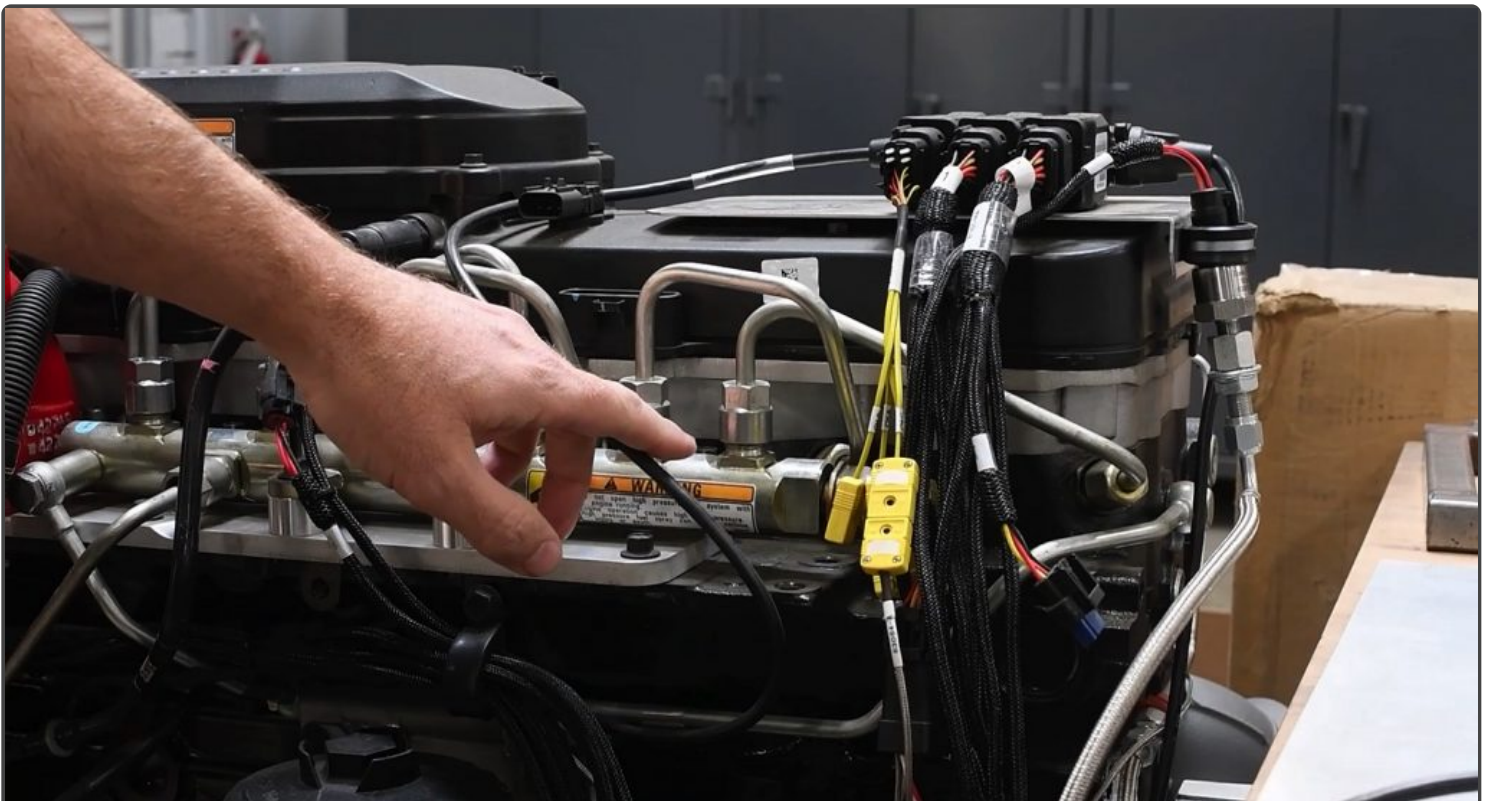
Remove the fuel injector hard lines using a 19mm flanged wrench.



Use the supplied plugs to block off the exposed injector and fuel rail ports.



Using a crows foot or similar wrench can make this easier as the rear injector lines are tucked under the firewalll



The rear injector hard line will not be fully removed.



Loosen the fuel rail side, and gently bend the line up.

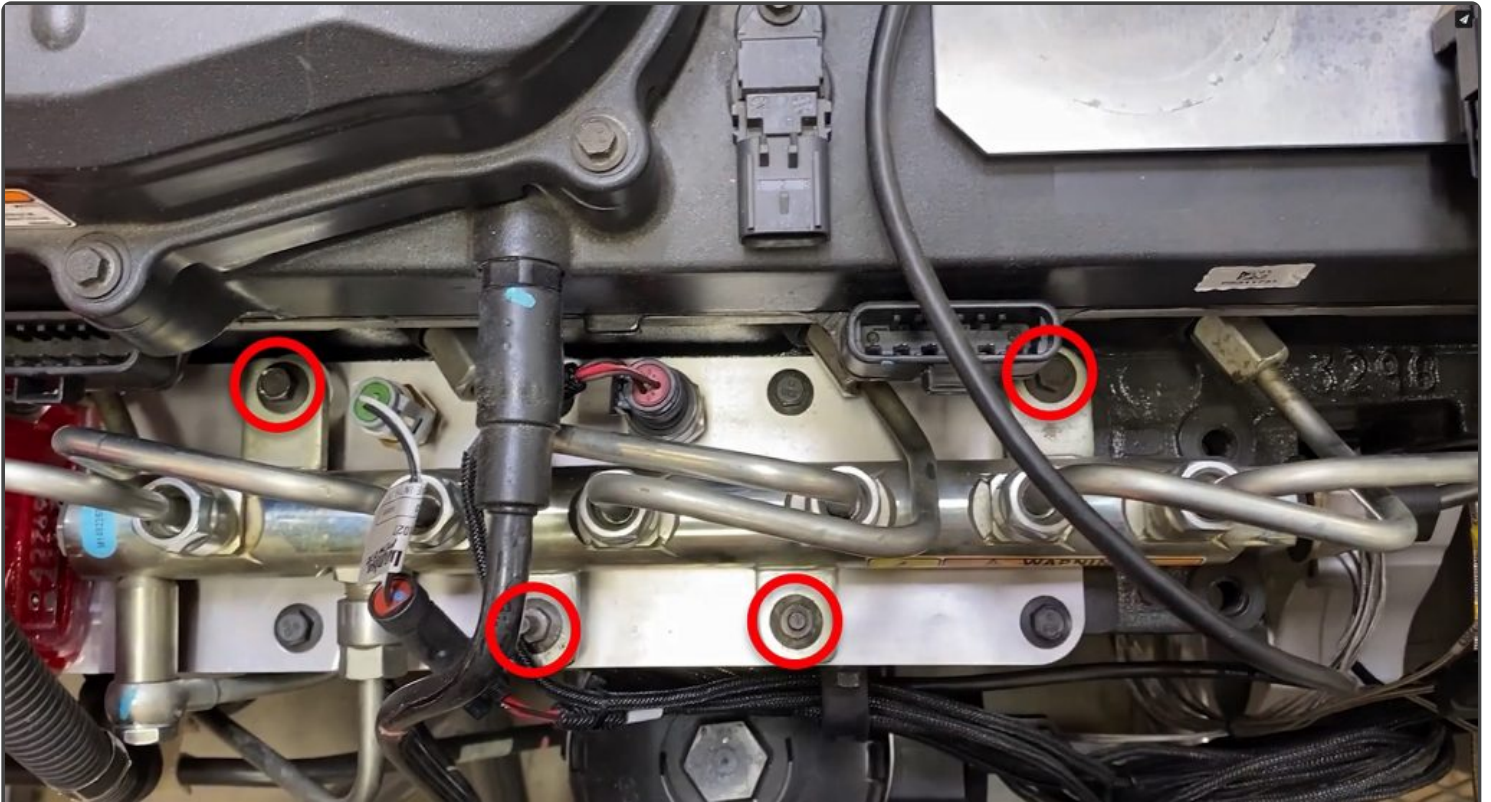


18. Fuel Feed Line

Remove the fuel feed line, and gently bend it out of the way.



Use a 17mm socket to remove the banjo bolt. Make sure not loose the two washers that come with the banjo bolt.



20. Fuel Rail Removal

Remove the 4 bolts holding the fuel rail onto the manifold plate. These are 10mm bolts.



The rear bolt is the hardest to get to and may require a crows foot or wobble socket.



Once the four bolts are removed, you can remove the fuel rail.



Set the fuel rail aside for now, making sure to keep debris out of the ports.



21. OEM Intake Manifold Plate

Remove the last 4 bolts holding down the OEM intake manifold plate.



Use a 10mm socket to remove the bolts.



Remove the OEM plate from the truck.



22. Remove Gasket

Remove the factory intake manifold gasket.



Clean out any debris along the mating surface as well as inside the manifold.

INSTALL BANKS HEADLET FILE

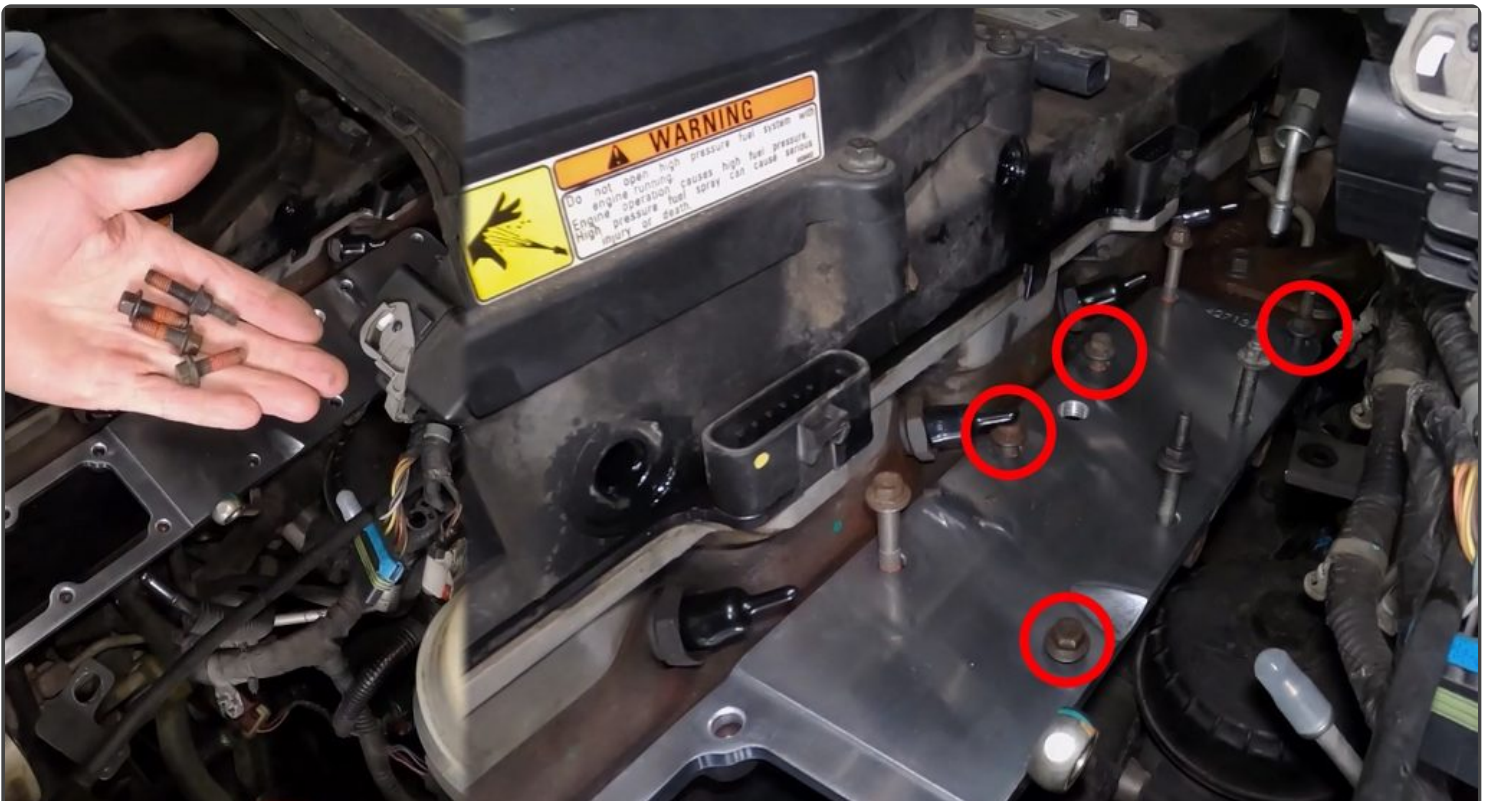


1. Install New Gasket

Place the new intake manifold gasket.



2. Install Banks Billet Plate



Using the OEM bolts, reinstall the plate. The threaded stud goes on the furthest back corner. Use the other fuel rail bolts as guides to help keep the gasket in place.



Tighten down the 4 main bolts to 18 ft-lbs with your 10mm socket.



Don't forget to remove the fuel rail bolts when done.



3. Thermocouple

Disconnect the thermocouple from the OEM intake plate.



Transfer it to the newly installed Banks Billet Plate. Don't over torque this, snug will do.



4. Fuel Rail Install

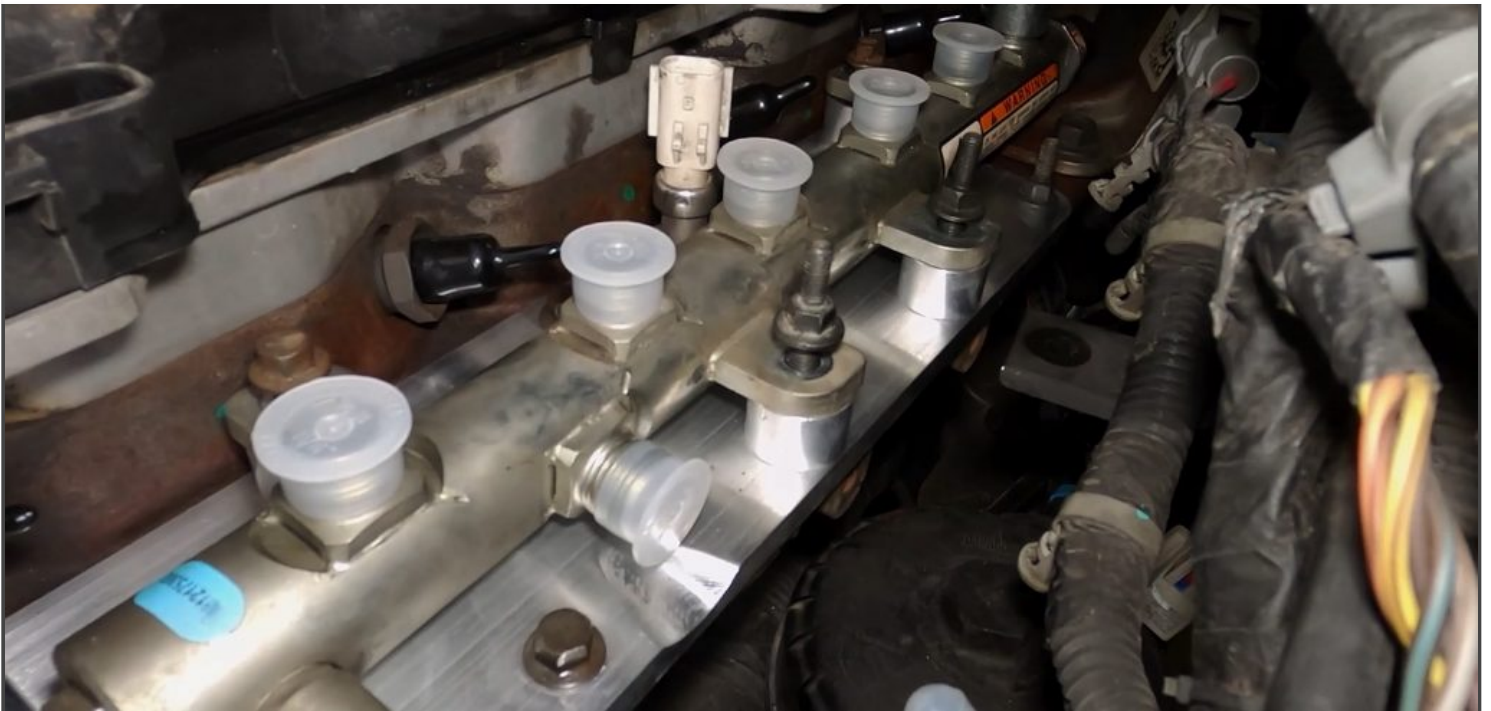
Gently line up the fuel rail and remove the plugs as you install the injector hard lines.





5. Spacer Install

Line up the 4 spacers between the billet plate and fuel rail.
Then install the fuel rail bolts finger tight.



Don't forget the threaded studs go on the outside.



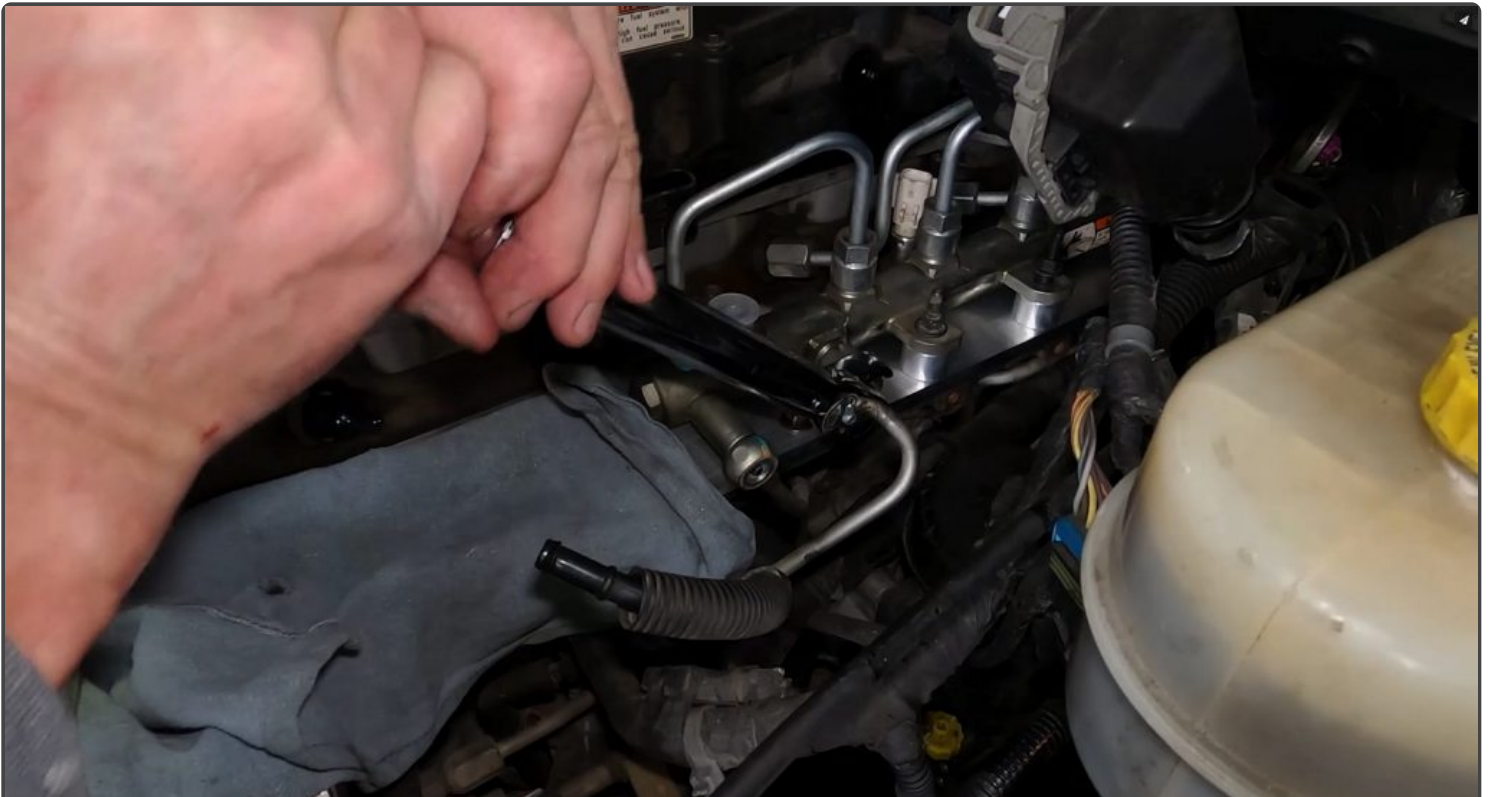
Using a 10mm socket, torque them down to 18 ft-lbs.



6. Install Fuel Injector Lines

Next, reinstall the injector hard lines into the fuel rail.

Hand tighten first, then torque down to 30 ft-lbs with a 19mm flanged wrench.





7. Fuel Return Line

Reinstall the fuel return line with the banjo bolt. Don't forget to use the original washers that go on both sides of the banjo bolt.

With a 17mm socket, torque to 30 ft-lbs.



8. Banks #1 Fuel Line



With your 19mm flanged wrench, torque to 30 ft-lbs.



Plug back in the fuel rail pressure sensor.



9. Banks Thermocouple Extension



Plug the banks thermocouple extension wire into the sensor, and back into the OEM harness.



10. Harness Studs

Reconnect the wire harness to the two studs.



11. Reinstall Foam

Reinstall the sound deadening foam covering the fuel lines.



Reinstall the rear breather hose and tube.

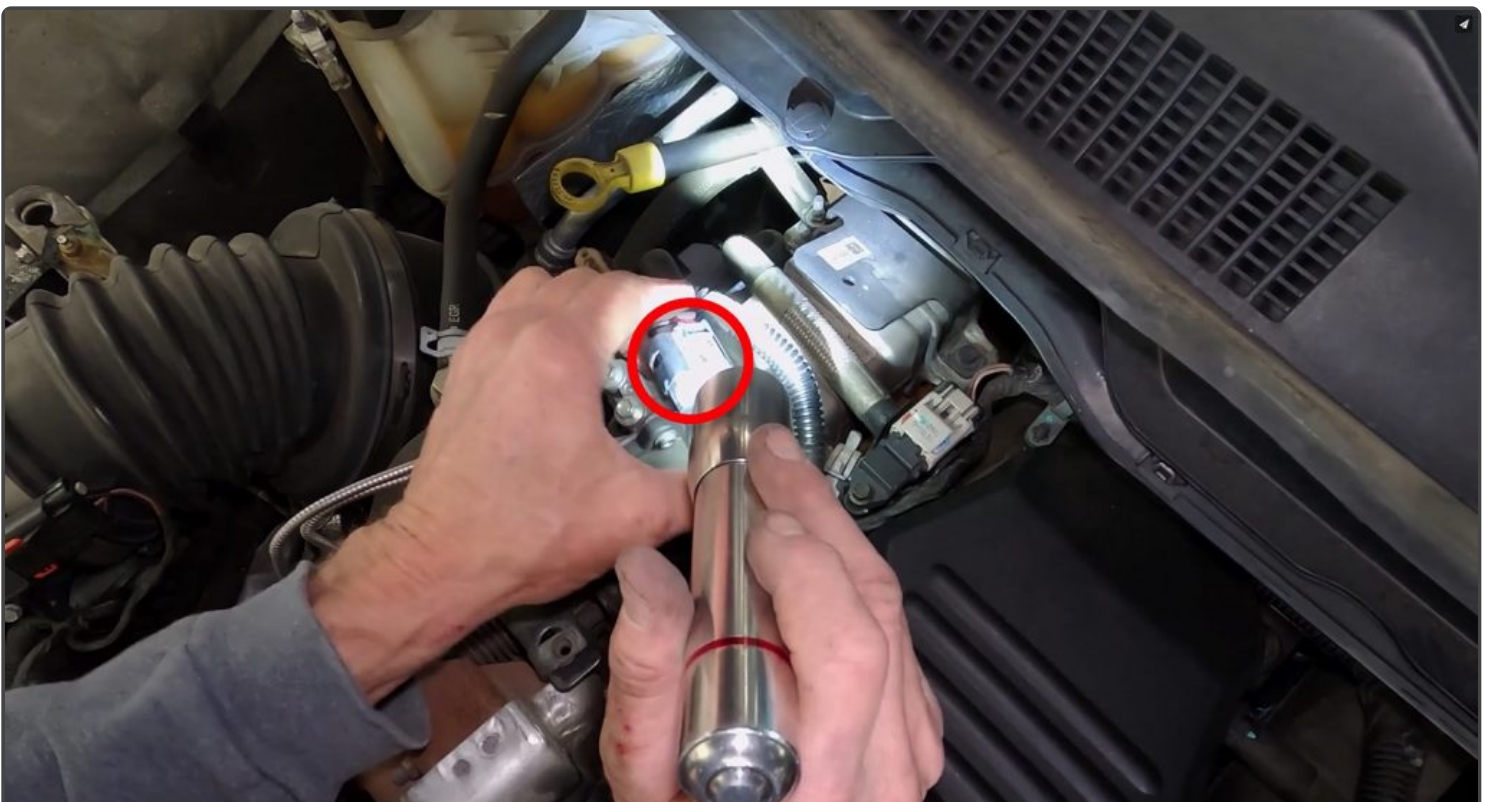


13. Connect Wire Harness

Start with the rear crank case pressure sensor.



Next install the pressure sensor on the opposite side of the engine.



Then install the EGR cooler bypass valve connector.



Last install the exhaust pressure sensor connector.



14. Install Forward Fuel Injector Connector



Reinstall the wire clip back to the dipstick tube.



15. Bulkhead Connector

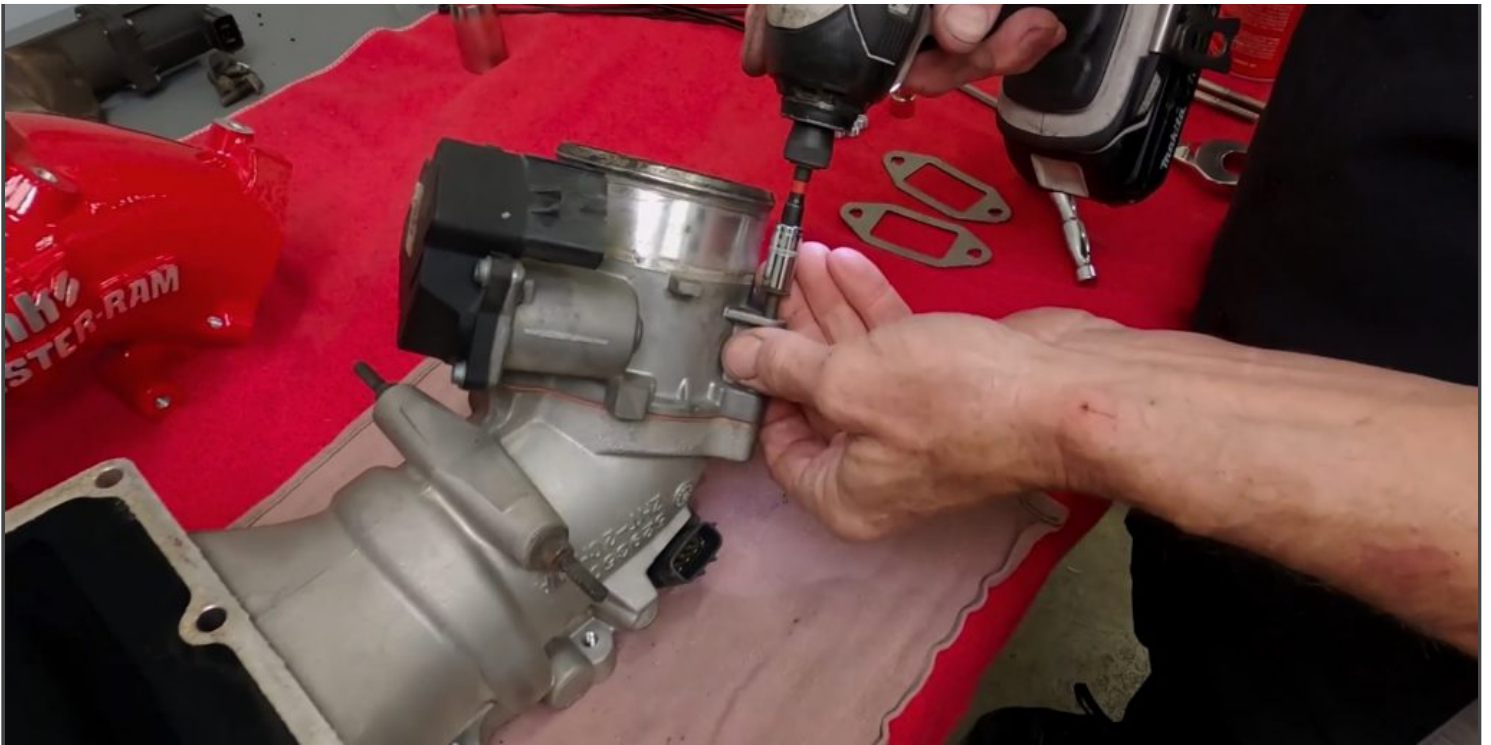
Slide together, and secure it with the locking arm.

Installation of Monster-Ram



3. Remove EGR Valve & Throttle

Remove the EGR valve from the OEM elbow. This will be reinstalled later on the Monster-Ram. Two new EGR gaskets are provided in the kit.



Remove the throttle assembly, there are 4 bolts holding it on.



4. Transfer MAP Sensor



Transfer the MAP sensor to the Monster-Ram.
Cleaning with some MAP cleaner is advised, this is available at your local auto store.



5. Transfer Stud

Remove one of the wire harness studs & transfer it to the Monster-Ram. You do not need both.





6. NPT Ports & Plug

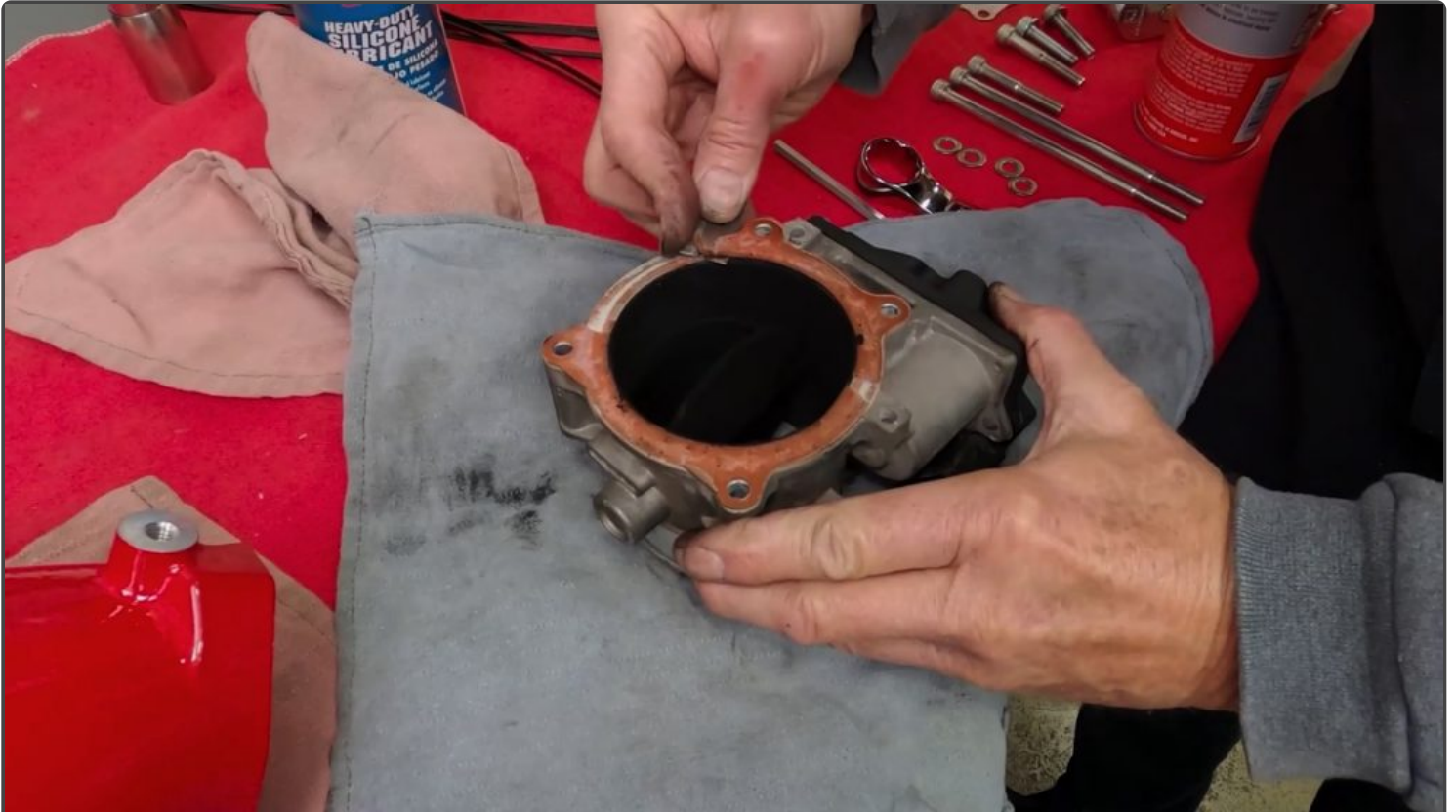
The Banks Monster-Ram comes with four 1/8" NPT ports that can be used for Banks sensor and expansion ports. If any of these ports are not to be used, install the supplied 1/8" NPT plugs with thread sealant to plug the unused ports.

IMPORTANT NOTICE:

The 1/8" NPT ports shall only be used for installing sensors for measuring air temperature, pressure, or flow. Sensors installed to these ports shall have a fitting of 1/8" NPT and shall not be connected to the vehicle's electronic control units. In addition, factory sensors that come equipped on the vehicle shall not be disconnected and shall not be relocated to the ports. The ports, when not used, shall be closed off with the supplied plugs.



If your vehicle is equipped with a rear thermocouple, transfer it from the OEM elbow to the Banks Monster-Ram. If the vehicle does not have the rear thermocouple, use the supplied M12 plug to plug this opening. Apply medium-strength thread lock when installing this plug.



8. Transfer Throttle Body

Remove old gasket from throttle body surface.

Take care not to scrape or gauge the aluminum and make sure it is free of all residual material.



Transfer the throttle body from the OEM elbow to the Banks Monster-Ram. Take care to not over-torque the bolts.

Torque to 7-7.5 lb-ft (89 lb-in)



5. HEATER PLATE

Remove the covering over the opening in the heater plate. Chase the treads of the six M8x1.25 tapped holes in the intake plenum to ensure they are clean. Remove any remnants of the stock gasket from the intake plenum being careful to not allow any debris into the intake plenum. Clean and dry all sealing surfaces thoroughly. Place the Intake Gasket onto the heater plate.



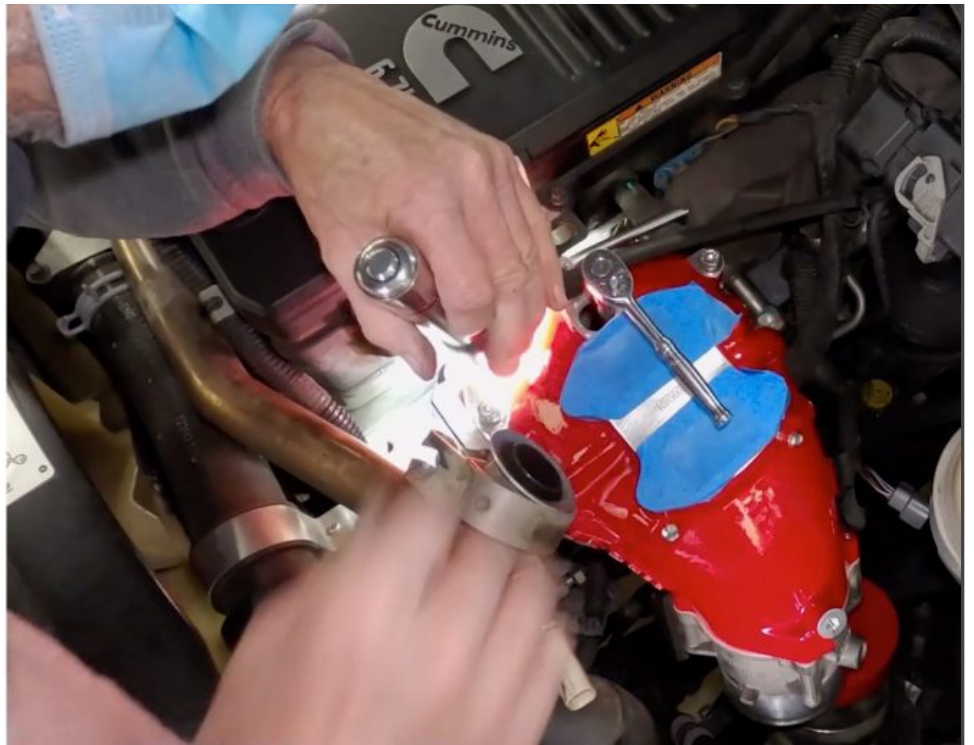
10. Installing the Monster-Ram

Bring the Monster-Ram over the gasket, taking care not to move the gasket. Use a bolt to keep everything in-place while you square it up. But don't tightening everything yet.



11. Thread Flanged Screw Inside Monster-Ram

Apply some thread lock to the 35mm flanged bolt that goes **inside** the Monster-Ram. Carefully, use a telescoping magnet to engage the bolt a few threads through the M22 port on the top of the Monster-Ram. This step can be challenging but it is critical that the bolt does not drop into the intake plenum.



Once the bolt has engaged a few threads using a hex extension. You'll torque it shortly.



12. Apply Thread Lock

screws with washers and the two 55 mm long screws with washers in the other 4 holes in the Monster-Ram and get all screws started in their holes. Make sure the gasket remains in place. Adjust the gasket position as needed to get all six screws started.



13. Tighten Hex Bolts

Tighten the 6 hex bolts to 18 lb-ft. Take care to not over tighten and strip out the treads. Tighten in a star pattern to ensure even clamping force.

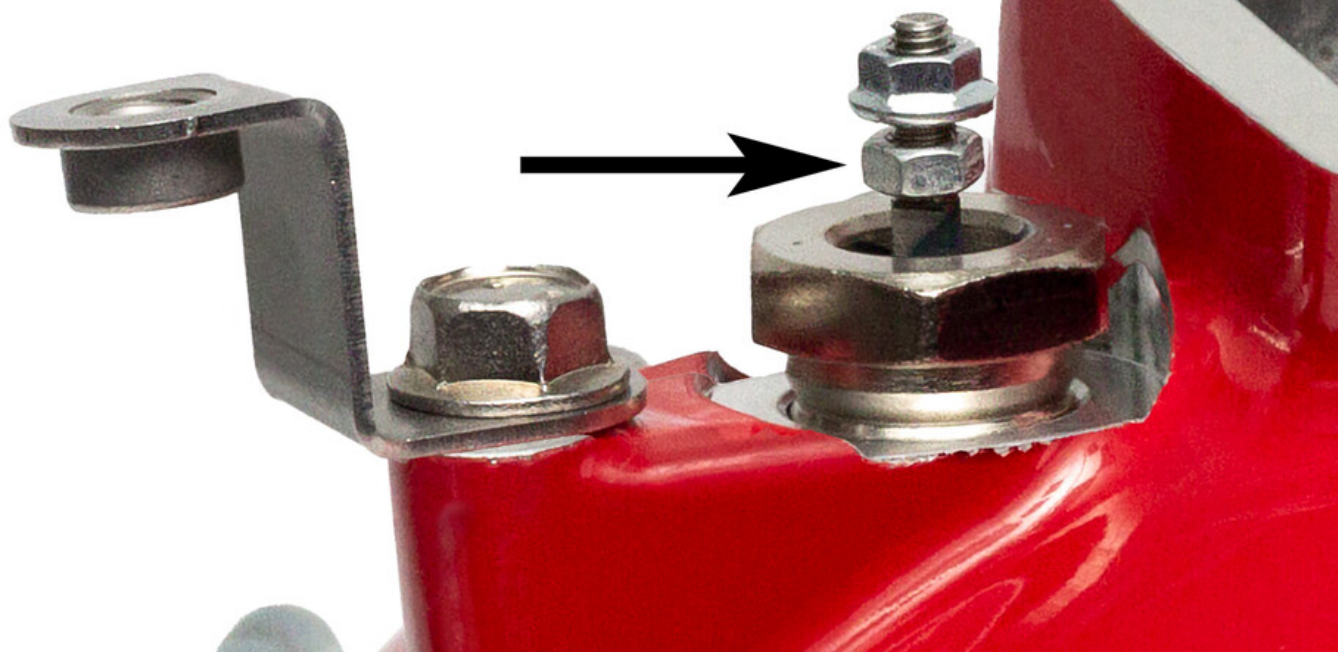


14. Install M22 Plug or Heater

If kit is not using the Banks High-Flow Heater coil, install the top M22 plug.

Important!

Do Not Remove Lower Nut



IMPORTANT!

If using the High-Flow Heater Coil, the lower locking nut must not be removed from the heater coil. Take care when installing OEM heater wire ring terminal, it must be sandwiched between lower and upper nut.

The threaded terminal is insulated, if OEM heater wire touches other metal components, an open short will occur.



15. Move Stock Dipstick

Move the stock dipstick tube over the Monster-Ram and align the hole in the bracket on the tube with the boss on the top of the Monster-Ram. Reusing the stock bolt, secure the dipstick tube to the Monster-Ram. Tighten to 14 lb-ft.

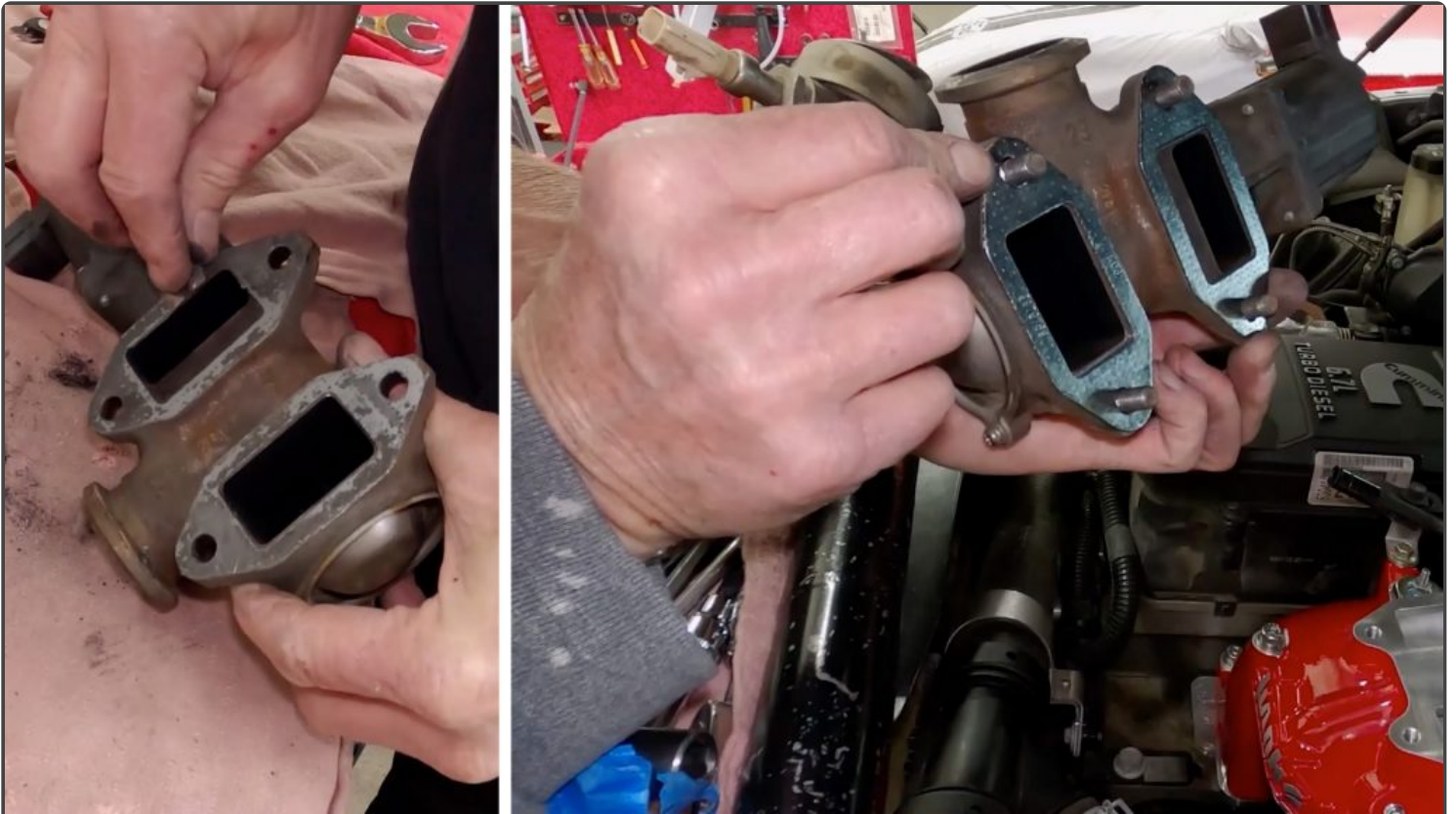
There is an offset bracket supplied for kits with the coil, otherwise the dipstick bolts back up with the factory bolt and location.



16. Reconnect the MAP and Throttle

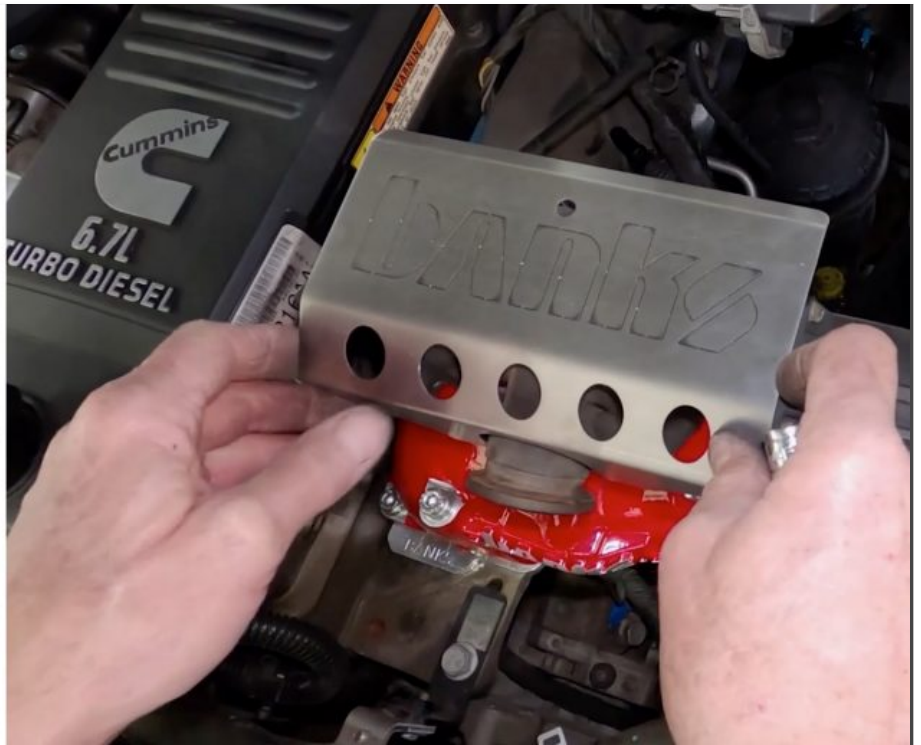


Slide the OEM hose over the throttle body and tighten the hose clamp.



18. Prep & Reinstall EGR

Now you can finally reinstall the EGR Valve. Clean the gasket mating surface with a blade carefully. Using the bolts as a guide while you move it into position.



Loosely tighten the two rear bolts. Then line up the heat shield on top of the other two front bolt holes before loosely tightening them too.



Use the supplied extension to reconnect the EGR pipe and tube sensor.



20. Reconnect

Reconnect the EGR valve, throttle Body, MAP connector and thermocouple connector (if equipped) to the sensors.



Note for 19+ Vehicles

2019+ Rams have a permanently attached nut to the OEM heater harness.

Use the supplied adapter, nut, and heat shrink to adapt your 2019+ OEM heater harness. Attach it to the High-Flow Heater Coil.



Bend the end of the factory wire for a better fit, and make sure the bolt securing the factory

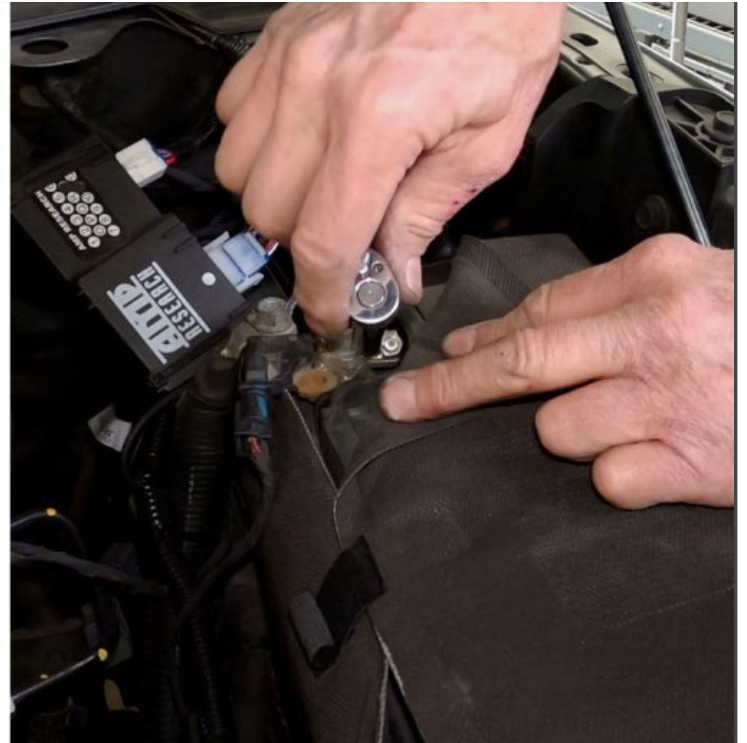


20a. Reconnect Heater

If you are using the Banks High-Flow Heater Coil, make sure its power cable is properly installed now.

Sandwich the ring terminal between the lower & upper nuts. Take care to not have the terminal touch any other piece of metal or the base of the coil.

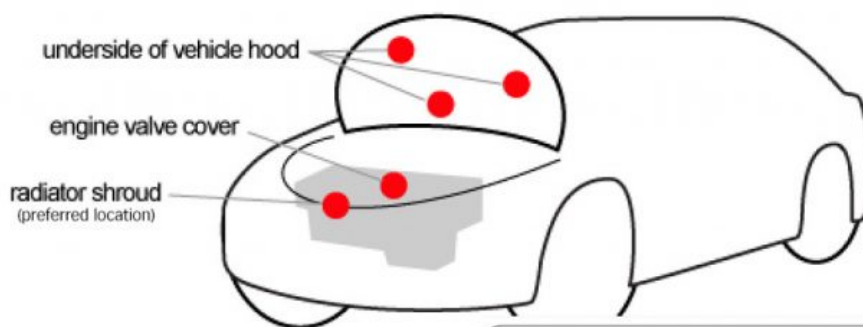
See "IMPORTANT!" note at the beginning of install guide for more information.



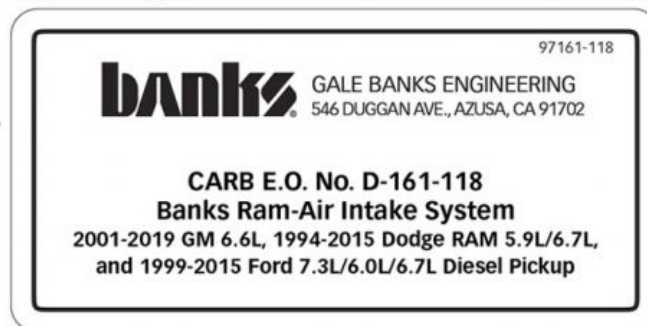
21. Reconnect Batteries

Reconnect the batteries. Go over the installation making sure that all fasteners are tight and the harnesses and hoses are secure and out of the way of rotating components and sources of heat.

locations



sample label



CARB EO Label

For smog check purposes, affix the CARB E.O. Label on a visible location under the hood. Banks recommends using the radiator shroud location.

← [97704 – Banks Dana M275 Ram-Air Rear Differential Cover](#)

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