INSTALL INSTRUCTIONS

Part #s 42797, 42797-PC, 42797-B, 42798, 42798-PC, 42798-B, 42799, 42799-PC, 42799-B

Monster-Ram® Air Intake
2007-18 Dodge/Ram 6.7L

Note: Individual components vary based on year.

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

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.

RECOMMENDED TOOLS

Metal panel popper tool
Telescoping magnet
Rubber mallet

Torque wrench
Socket wrench
Socket wrench extensions
Wobble sockets or universal joint adapter
8mm socket
10mm socket
11mm deep wall socket
13mm deep wall socket

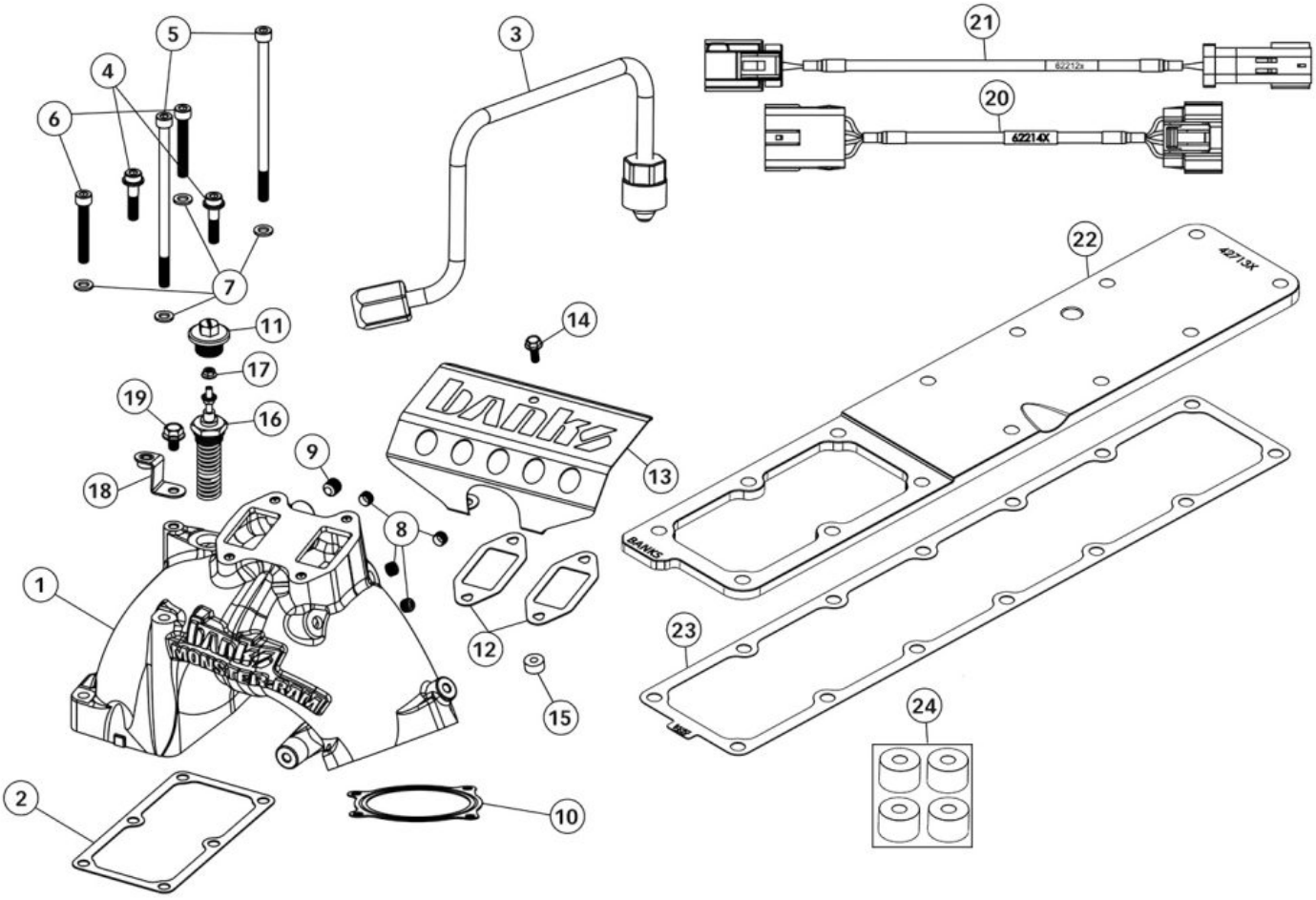
8mm open end wrench
10mm open end wrench
13mm open end wrench
17mm open end wrench
19mm open end wrench
1" or 26mm open end wrench
19mm crow's foot

T-30 Torx bit

Aero Tac LV, 3M Super 77 or other spray adhesive

Item	Description	2007-2012 Part #	2013-2018 Part #	Qty.
1	Monster-Ram Intake Manifold	42781		1
2	Gasket, Intake Manifold	93063		1
3	Fuel Line, #1 Injector	43209		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		1

14	Bolt M6-1.00	91762		1
15	Spacer, EGR Valve Heat Shield	24332		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		1
21	Harness Extension - Thermocouple	62212 (2007.5-2012)	62212 x2 (2013-2018)	
22	High Flow Billet Heater Plate	42713		1
23	Gasket, Heater Plate	93062		1
24	Fuel Rail Spacers	42713-05		4



OEM Harness & Sensor Removal

1. Disconnect Batteries

Place a rag around each of the negative battery cable ends; this will prevent them from touching the battery again and arcing during the install as you work.

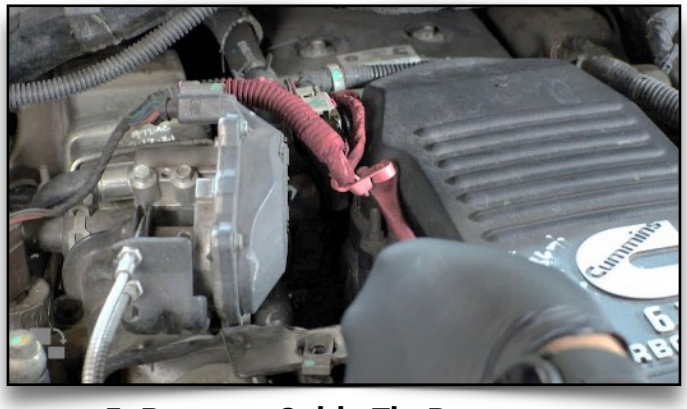
2. Remove Engine Cover

Remove engine beauty cover. Use an 8mm deep socket to remove the four bolts holding the cover down.

3. Remove Dipstick

The dipstick needs to be removed for the cover to come off.

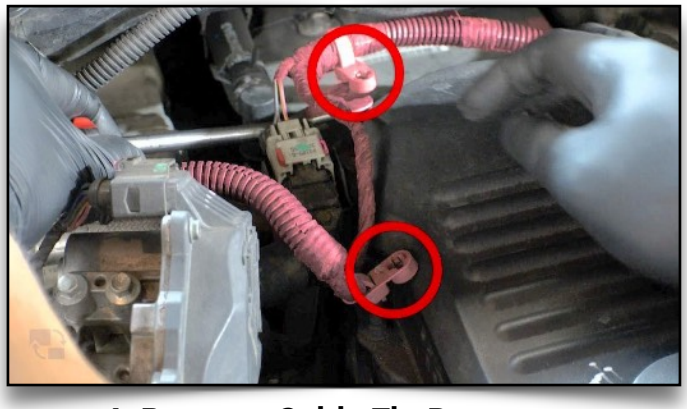
4. Remove Engine cover, Reinsert Dipstick



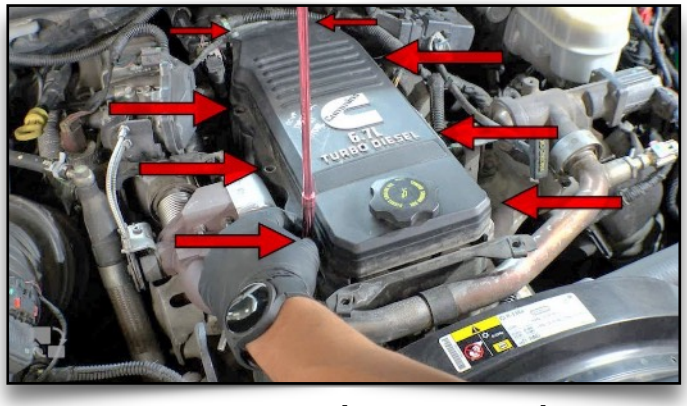
5. Remove Cable Tie Downs

Use a panel popper tool or pliers

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



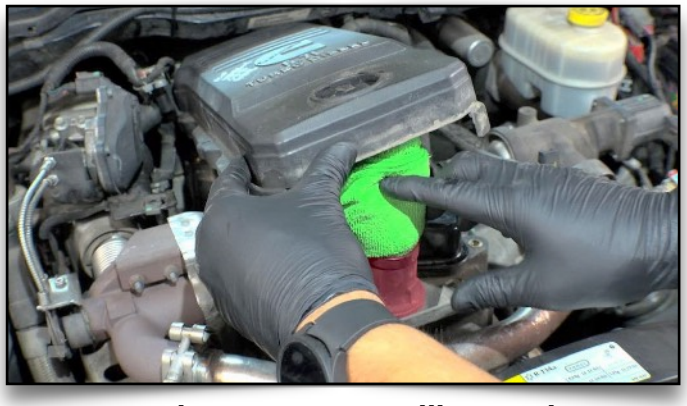
6. Remove Cable Tie Downs



7. Remove Engine Cover Bolts

There are 8 bolts holding on the cover. A wobble extension and placing the socket on the bolts first helps.

8. Remove Oil Fill Cap



9. Place Rag Over Filler Neck

10. Remove Bolts Holding Crossover Bracket

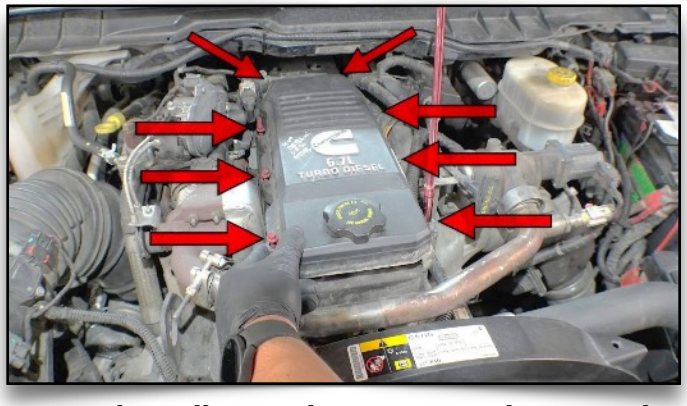
This bracket will not be reused.

11. Remove Rag, Set Down Cover

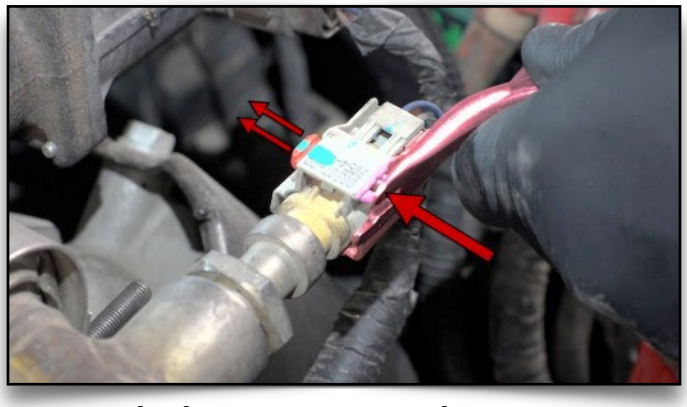
12. Install Oil Filler Cap

13. Remove Bolt Under Center of EGR Crossover Tube

14. Remove and Dispose EGR Tube P-Clamp

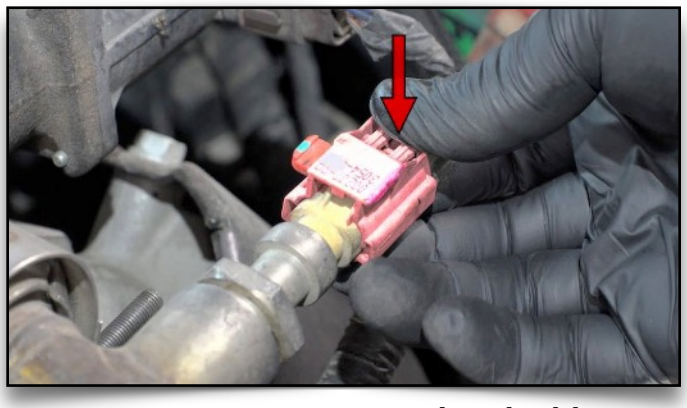


15. Reinstall 8 Engine Cover Bolts – Studs in Rear Passenger Side



16. Unlock Temp Sensor Plug From EGR Crossover

Use a flat-blade screwdriver or pry tool to push the slide-lock



17. Remove Temp Sensor by Pinching It

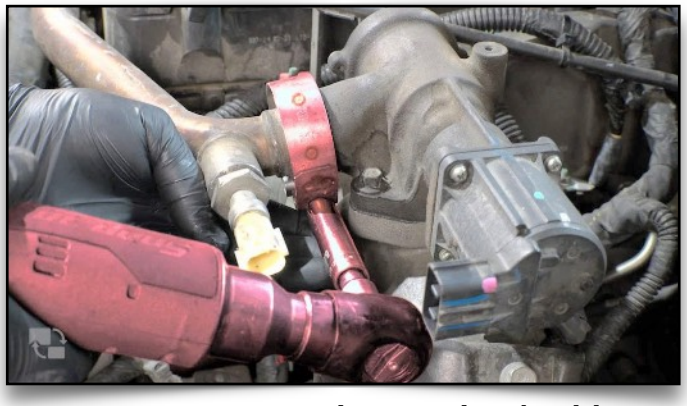
Unclip this wire clip for extra clearance.

18. Remove EGR Valve Plug

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

19. Remove EGR harness cable tie

EGR Tube Removal



20. Loosen EGR Clamp Driver's Side

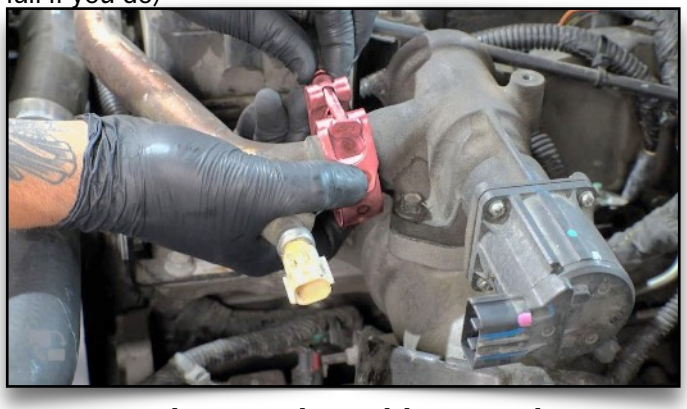
Use a small flat blade to release the clip.

21. Flip EGR Clamp Upside Down

Do not remove the clamp yet.

22. Loosen EGR Clamp Passenger Side

Do not remove this clamp yet (A gasket will slip out and fall if you do)



23. Release Driver side EGR Clamp

Keep a hand under the clamp in case the gasket comes loose.

24. Release Clamp and Remove Gasket

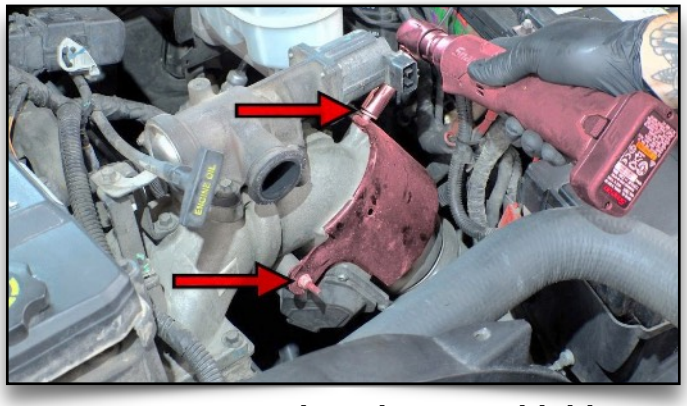
Catch the gasket and put it aside for later, this will be used again.

25. Release Passenger Side EGR Clamp

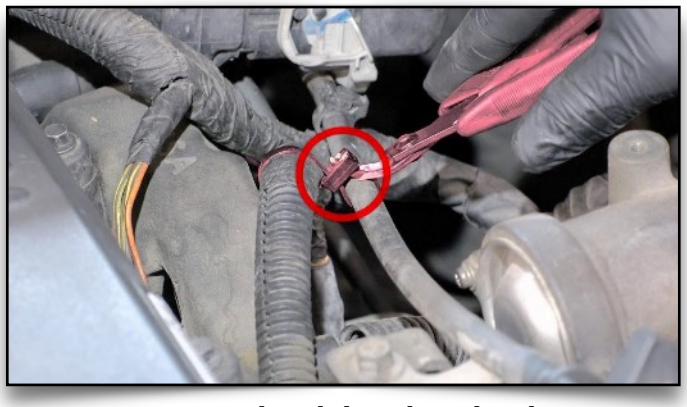
Apply pressure to keep the gasket in place and Keep your hand under the passenger side clamp to prevent the flat EGR gasket from falling into the engine bay.

26. Catch EGR Gasket From Falling

Intake Elbow Removal



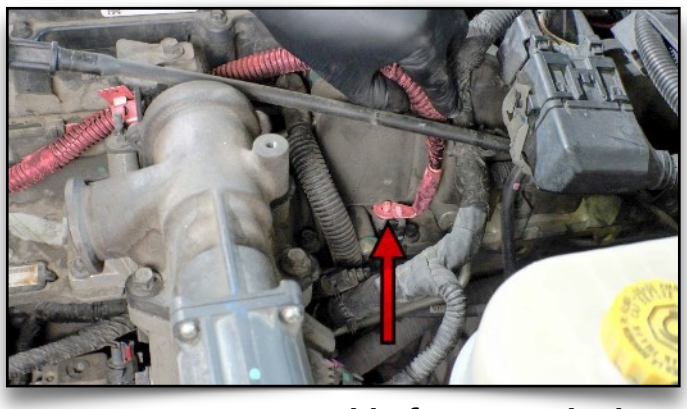
27. Remove Throttle Heat Shield



28. Cut Dipstick Tube Zip Ties

Free up the thick 12V wire for the grid heater.

29. Remove 12V Harness P-Clamp



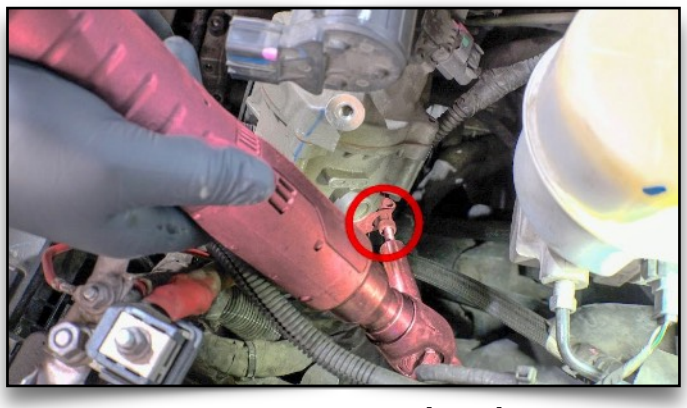
30. Remove Heater cable from Terminal

Relocate the wire out of the way once the free.

31. Remove Dipstick Tube Bracket

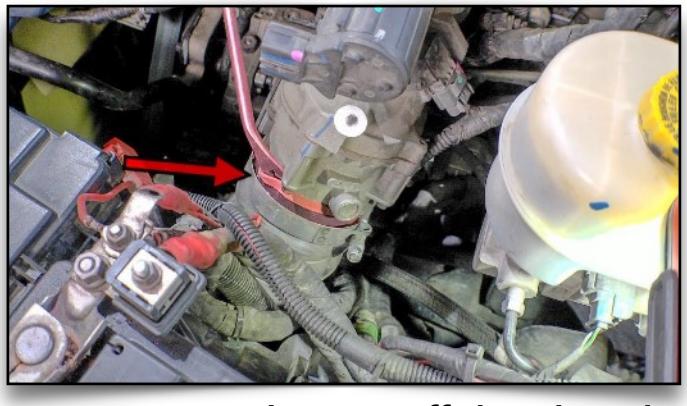
32. Bend Tube Up Slightly

The Monster-Ram is slightly taller than the factory Intake Elbow; you'll fine-tune this bend after the Monster-Ram is installed.



33. Loosen Boost Tube Clamp

This does not have to be fully removed, just release tension on the hose

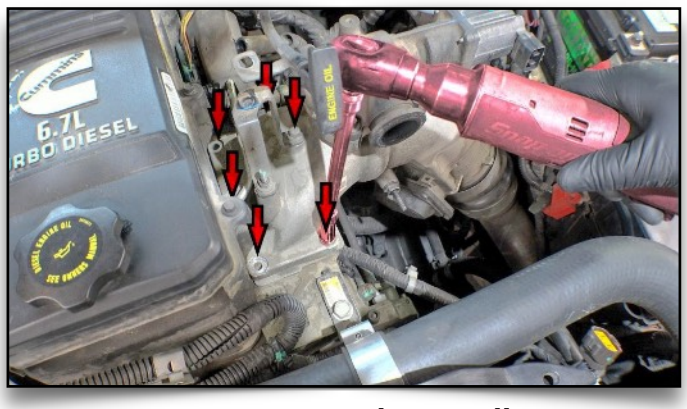


34. Pry Boost Tube Hose Off Throttle Body

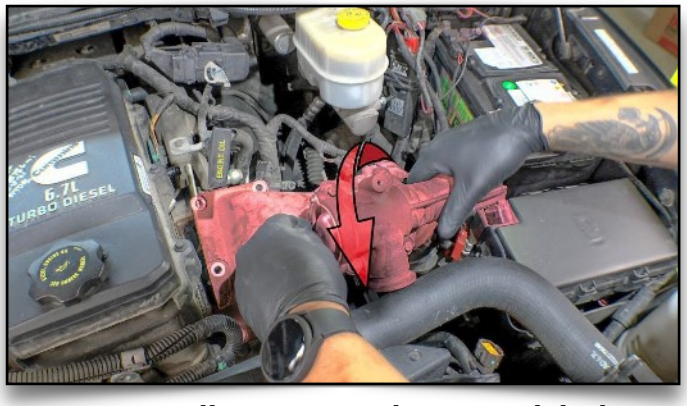
The hose may feel stuck or glued to the throttle body; carefully walk a panel popper tool around the tube to loosen its grip on the throttle body. This will make removal later on easier.

35. Remove Cable Tie Back of Elbow & Unplug MAP sensor

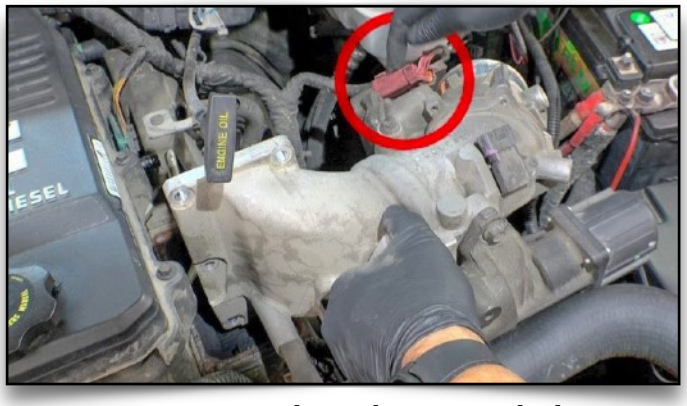
36. Remove Forward PCV Hose



37. Remove 6 Bolts on Elbow

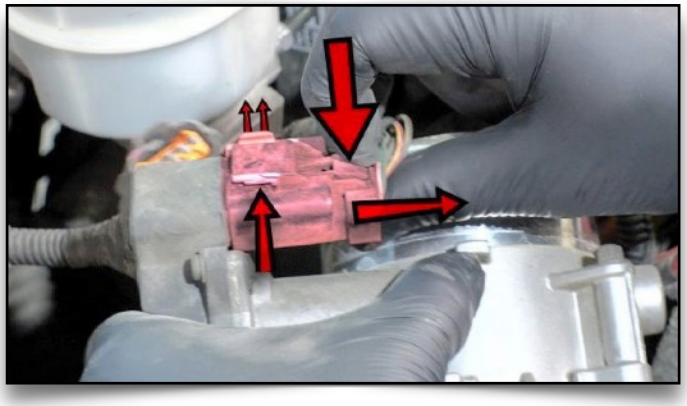


38. Lean Elbow Toward You & Dislodge Boost Tube

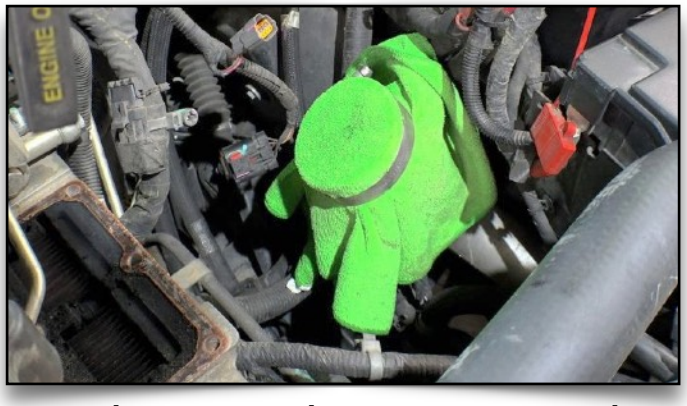


39. Remove Throttle Control Plug

Now that the elbow has been leaned forward, you can easily reach this plug.

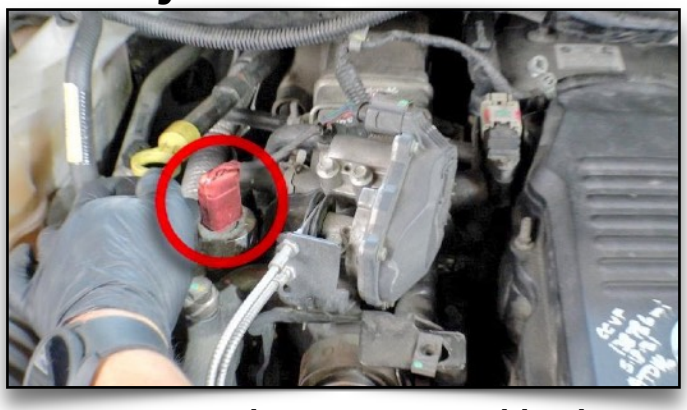


Slide tab over and depress the end to remove the plug.

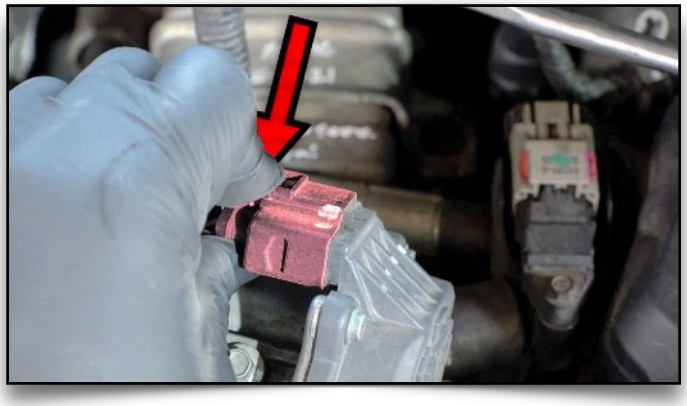


40. Place Rag & Clamp Over Boost Tube

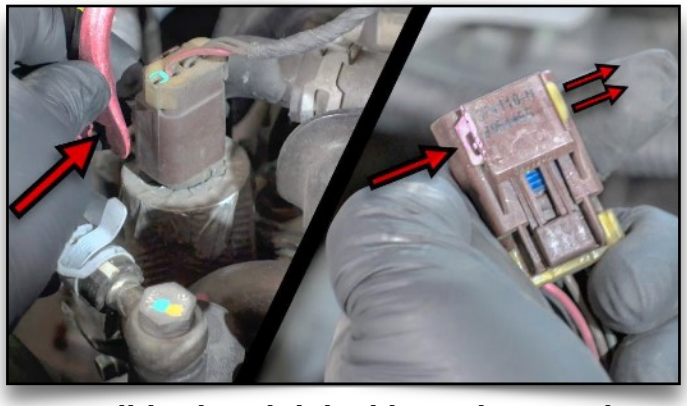
Factory Heater Plate Removal



41. Locate First Passenger Side Plug

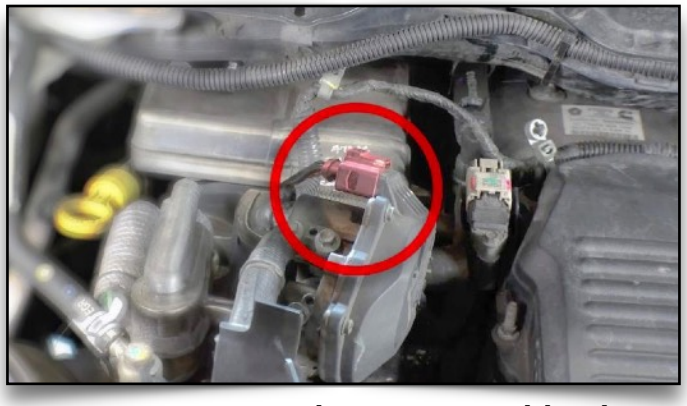


Depress button to release clip

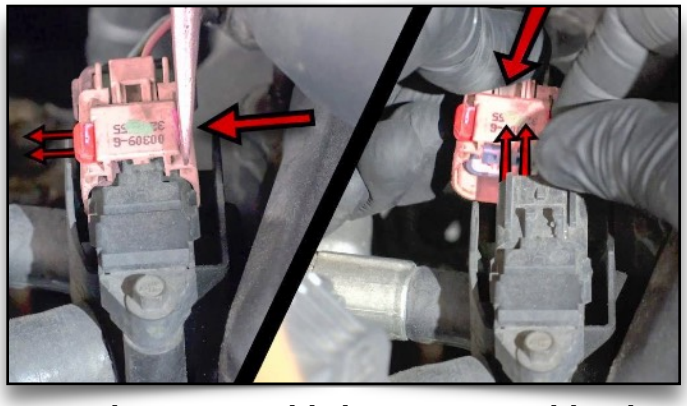


41a. Slide the pink locking tab over, then pull to release

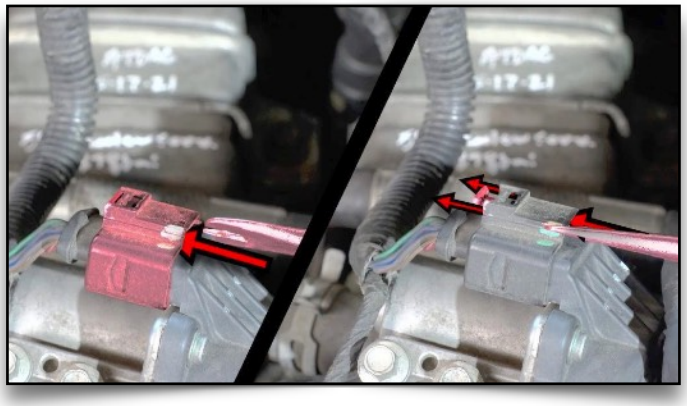
43. Locate Third Passenger Side Plug



42. Locate Second Passenger Side Plug

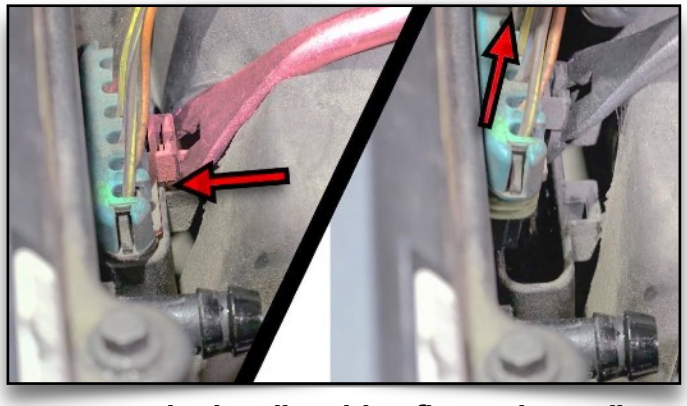


43a. Disconnect Third Passenger Side Plug

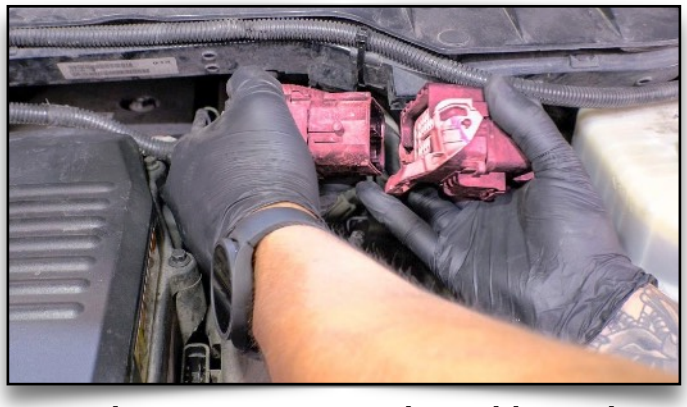


Slide Lock In

44. Locate Flat Blue Driver Side Plug

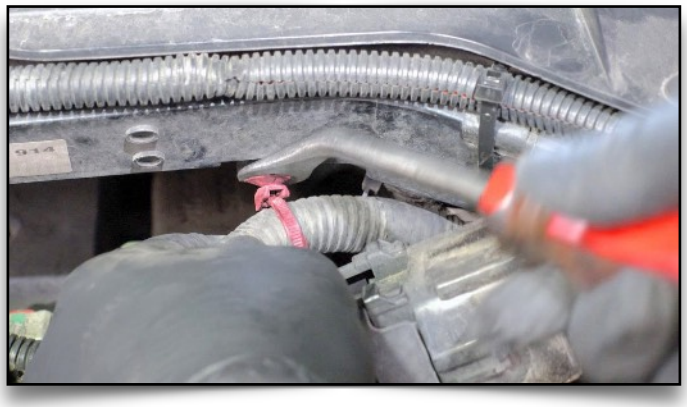


44a. Press in the clip with a flat tool, & pull up.



45. Disconnect Large Driver Side Engine Harness

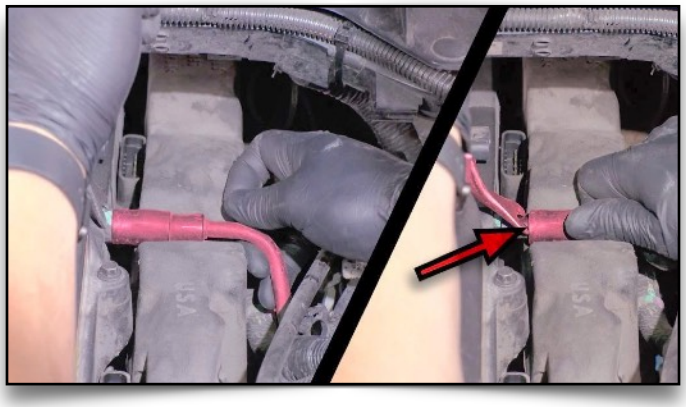
Depress clip and fully rotate the white lock, then pull to disengage. May need some force due to dust, grime, etc.



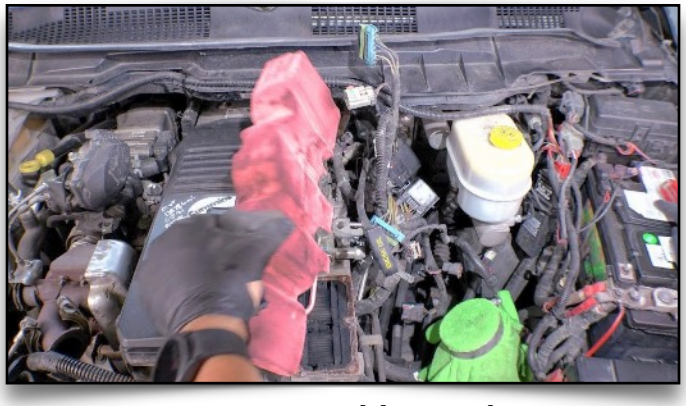
Release cable tie

46. Remove Rear Driver Side Plug

47. Remove Rear Driver Side Flat Blue Plug

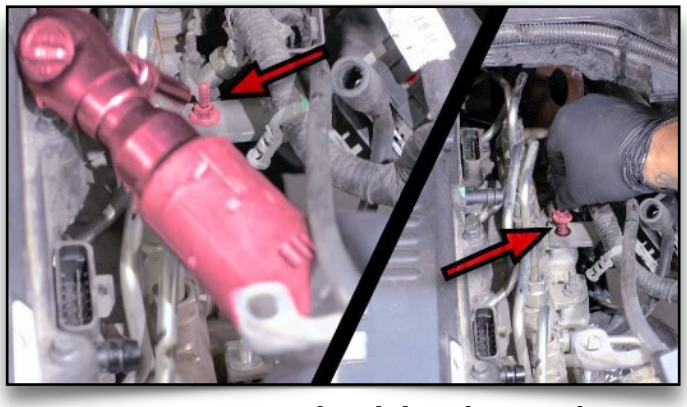


48. Remove Rear PCV Hose

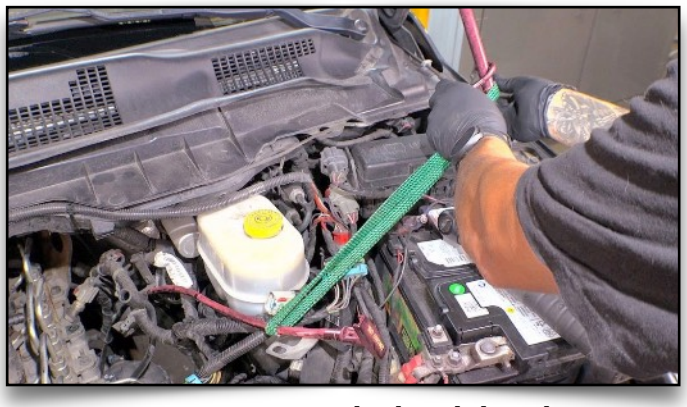


49. Remove Rubber Isolator

50. Remove Cable Ties from Driver Side Studs

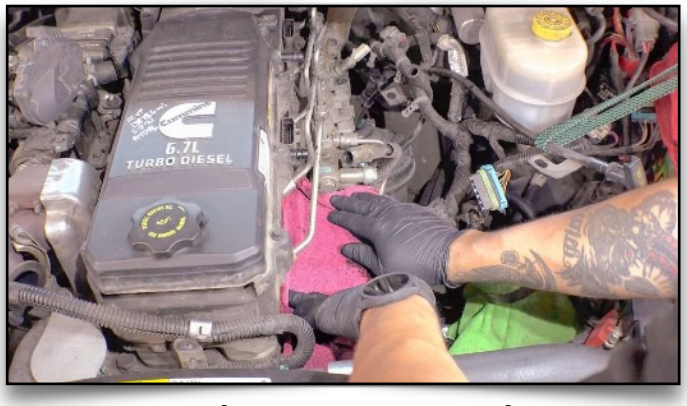


51. Remove Dipstick Tube Stud

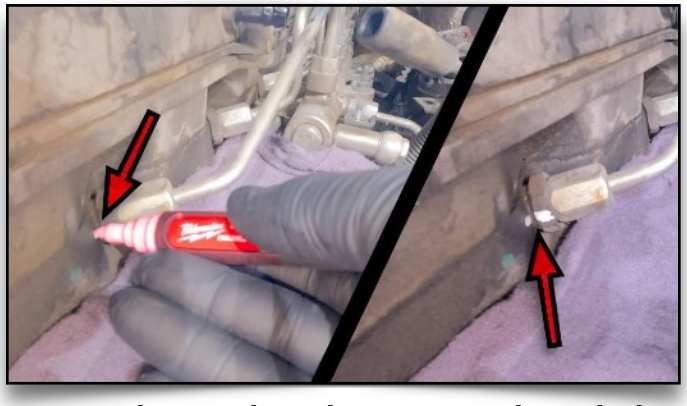


52. Bungee Cord Dipstick Tube

53. Remove Manifold Temp Sensor Plug



54. Place Rag Over Intake

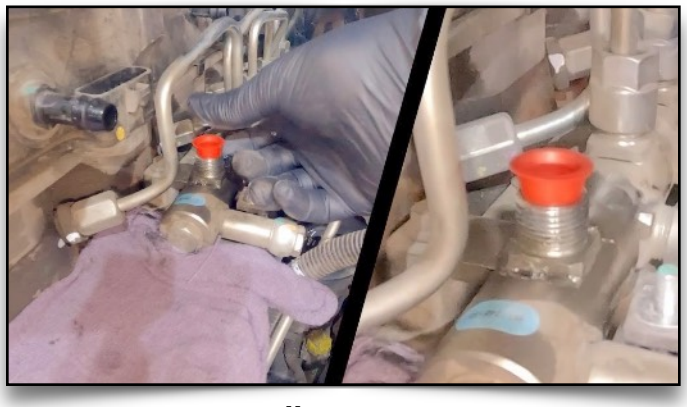


55. Paint Marker Line Across Threaded Insert & Cylinder head

This will allow you to see if the threaded inserts into the head start to turn when loosening the fuel lines. You do not want the insert to spin loose, as this will cause a fuel leak.

56. Remove Fuel Lines

If the inserts in the head start to move, use an open ended wrench to hold them in place.

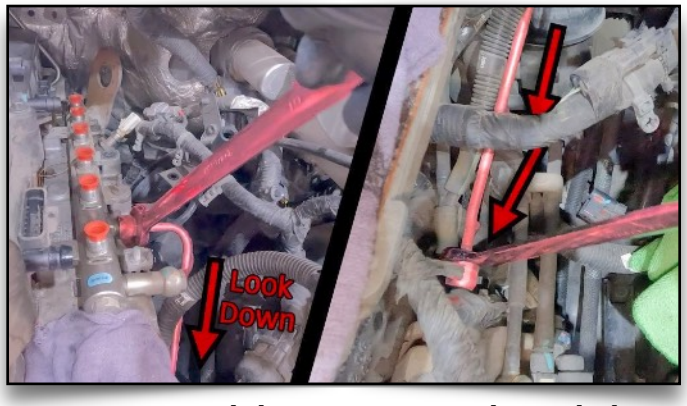


57. Install Dust Covers

Insert the covers, open end facing out. The caps should fit (inside) each blocked port.

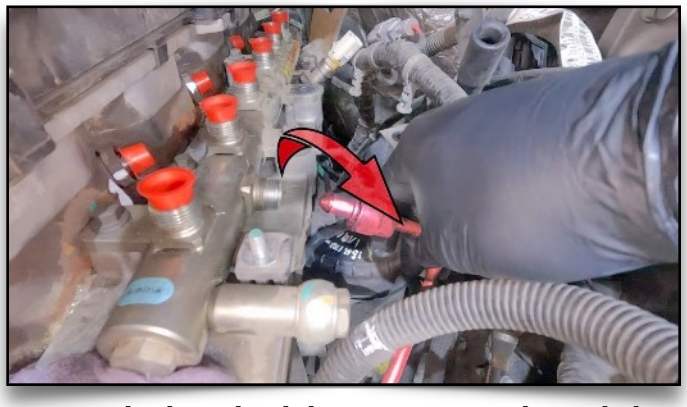
58. Loosen #6 Fuel Line, Rotate Out of Way

Do not fully remove the rear fuel rail. It is difficult to reach and only needs to be moved out of the way as shown.

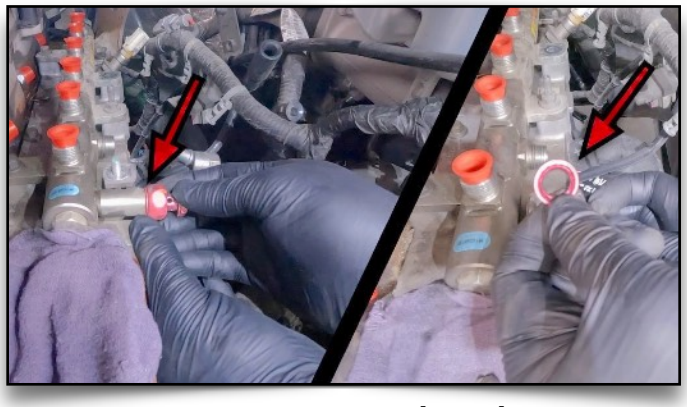


59. Loosen High Pressure Fuel Feed Line

Both the upper and lower ends

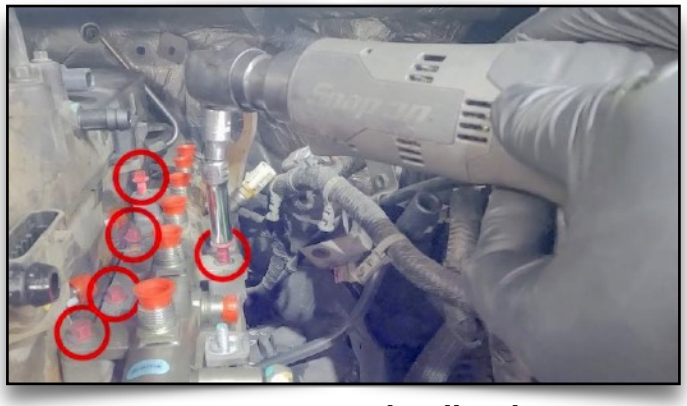


59a. Swivel Back High Pressure Fuel Feed Line



60. Remove Banjo Bolt

Take care not to loose the washer between the fuel rail & banjo bolt.



61. Remove Fuel Rail Bolts

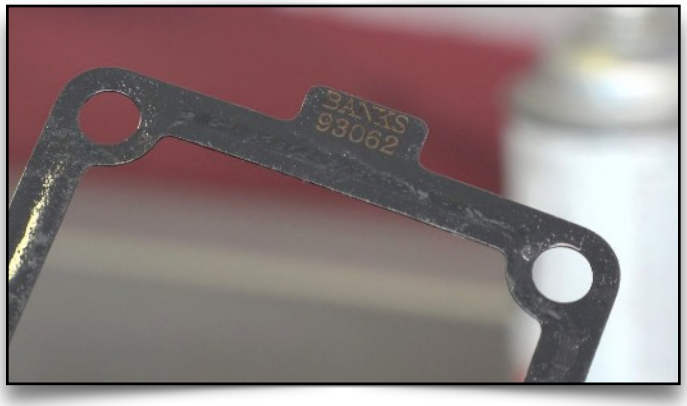
61a. Place Rag At Rear of Fuel Rail

There will still be fuel in the rail, and it'll leak out in the next step if you don't do this.

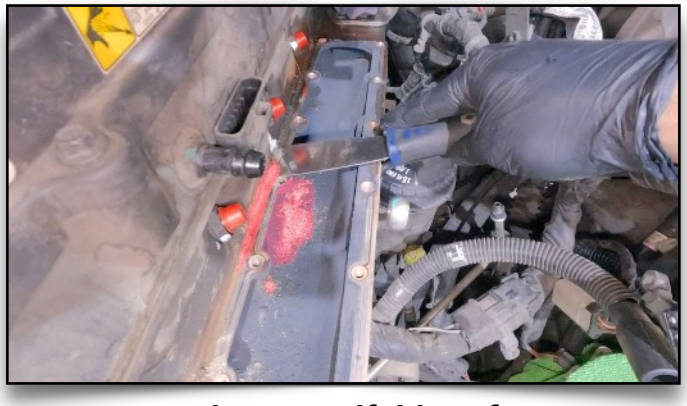
62. Bungee Fuel Rail

Be sure that rag stays at the rear of the fuel rail, it will leak when you tilt it back.

63. Remove Factory Grid Heater



Side that says Banks, should be the side with the adhesive. Let it sit for about 3 min for the glue to tack up.



64. Clean Manifold Surface

Take care not to scratch the surface, and vacuum out any debris that fall into the manifold.
A rag with some solvent can clean up the finer material.

66. Align Gasket & Stick On

Line up all of the bolt holes, and stick the gasket to the flat side of the billet plate.

65. Spray Adhesive to Gasket (Banks Side)

67. Transfer Temp Sensor to Banks Plate

Take care when removing the sensor and give it a clean with some scotch brite.

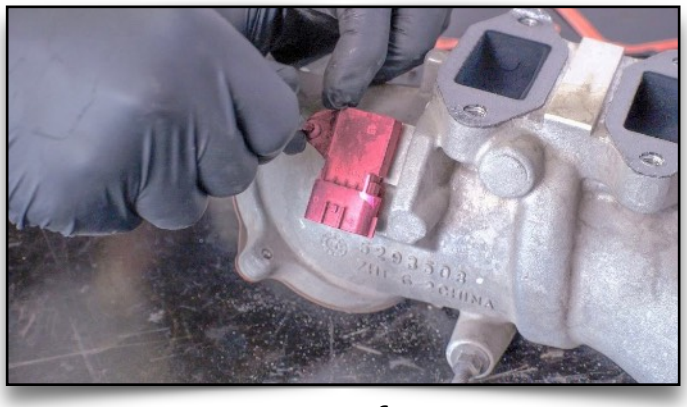
Don't over-tighten the sensor into the billet plate as the aluminum is softer than the steel threads on the sensor. It will bottom out so you'll know when to stop.

Installation of Monster-Ram

68. Remove EGR Valve & Throttle

69. Remove Throttle Body

The throttle will be stuck onto the gasket, so use a rubber mallet to help tap it free from the elbow.



70. Remove & Transfer MAP Sensor

71. Remove & Transfer Elbow Stud

72. Clean EGR Gasket Surface

Take care not to nick the surface. Do the same for the throttle body gasket mating surface.

73. Place New EGR Gasket On Monster-Ram

74. Fasten EGR Bolts

Apply a small amount of medium strength thread locker.

75. Align Throttle Body Gasket

76. Fasten Throttle Body to Monster-Ram

IMPORTANT NOTICE:

The 1/8" NPT ports shall only be used for installing sensors for measuring air temperature, pressure, or flow.

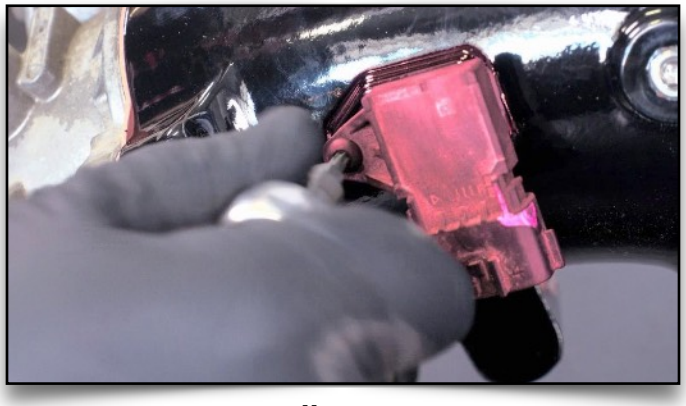
Sensors installed to these ports shall have a fitting of 1/8" NPT and shall not be connected to the vehicle's electronic control units. In addition, factory sensors that come equipped on the vehicle shall not be disconnected and shall not be relocated to the ports.

The ports, when not used, shall be closed off with the supplied plugs.

77. Install Sensor Plugs

Inspect the threaded holes, and be sure there is no powder coat in the holes.

78. Install Rear Thermocouple Plug



79. Install MAP Sensor

Now is a good time to clean the sensor with some MAF/MAP cleaner spray.

80. Spray Gasket With Adhesive

81. Place Washers On Hex Cap Crews. Apple Some Blue Thread-locker As You Install Them

82. Hold Billet Plate In Place w/ Stock Bolt

83. Place Fuel Rail Standoffs

84. Release Bungee Cord. Place Fuel Rail & Studs in Place

85. Install Banjo Bolt & Washer

86. Tighten Fuel Rail

Torque Bolts to 18-20 ft/lbs

87. Tighten Fuel Lines to 41 ft/lbs

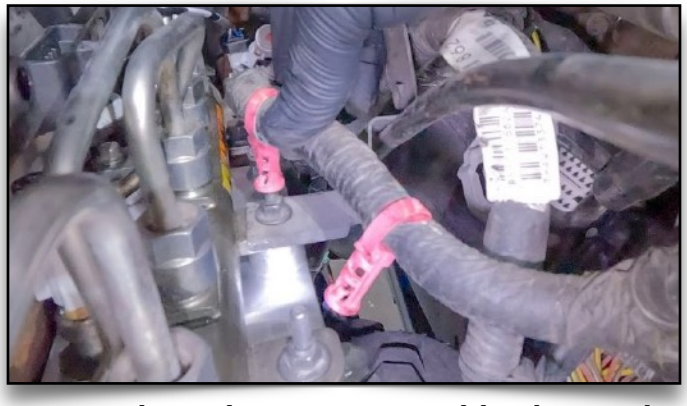
88. Tighten Fuel Supply Line Banjo Bolt Hand Tight.
Tighten Fuel Feed Line to 41ft/lb

89. Connect Temp Sensor Extension Harness

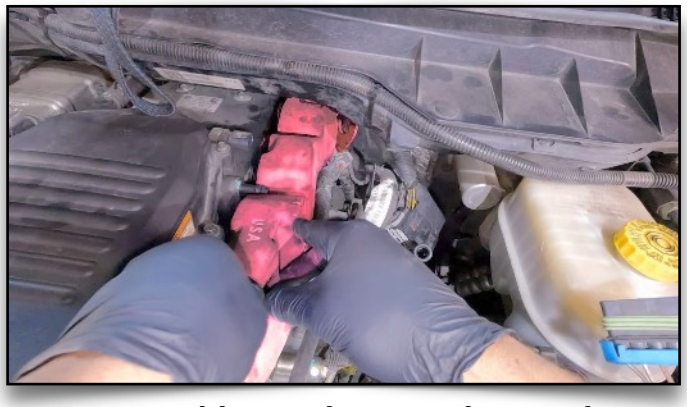
Be sure to lock the plug once connected.

90. Remove Middle Right Stud For Dipstick Tube

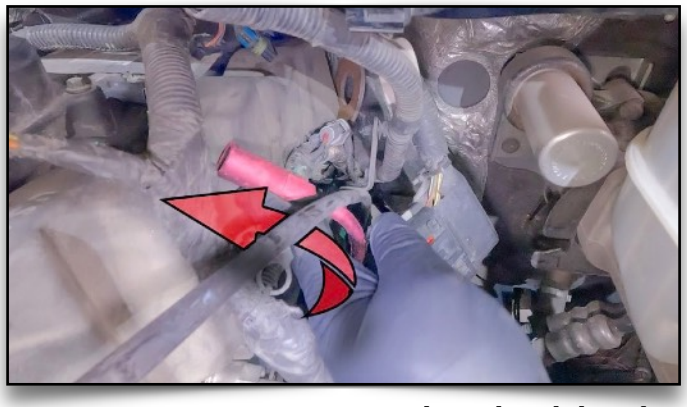
Slide Dipstick Bracket Over & Reinstall Stud



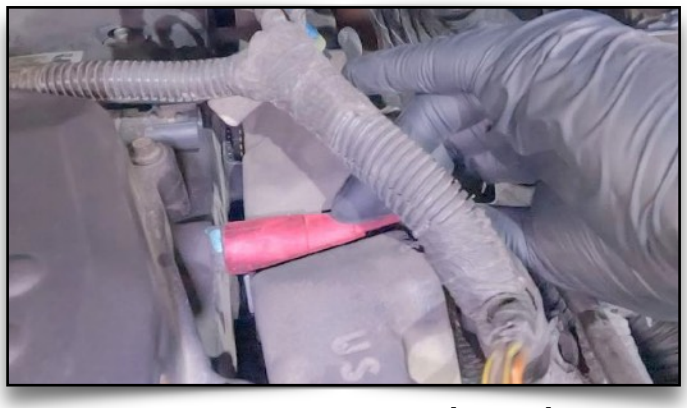
91. Push Engine Harness Cable Ties Back Onto Studs



92. Put Rubber Isolator Back Into Place



93. Run Rear RCV Hose Under Dipstick Tube



94. Connect Rear PCV Hose Back To Valve Cover

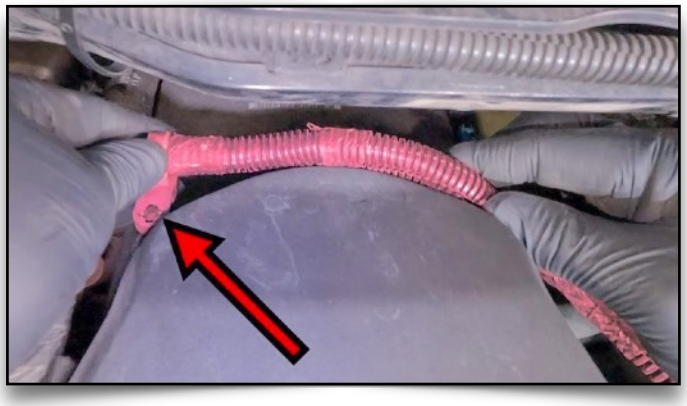
95. Connect Rear Flat Blue Injector Plug

96. Connect Rear White Plug

Be sure to slide the pink lock back into position.

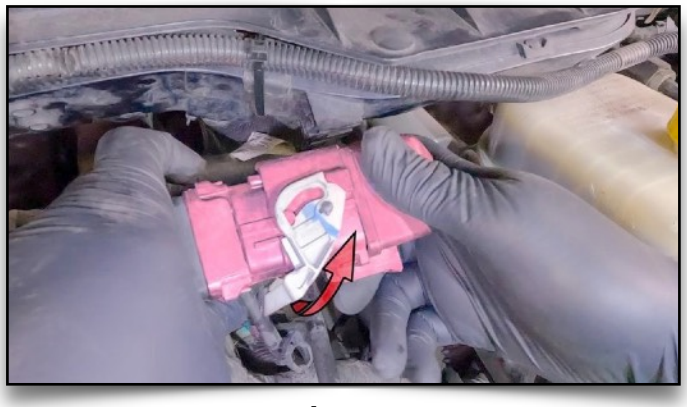
97. Route Engine Harness Under Dipstick & Around Valve Cover

97a. Plug In 3 Remaining Plugs



98. Push Cable Ties Onto Studs

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

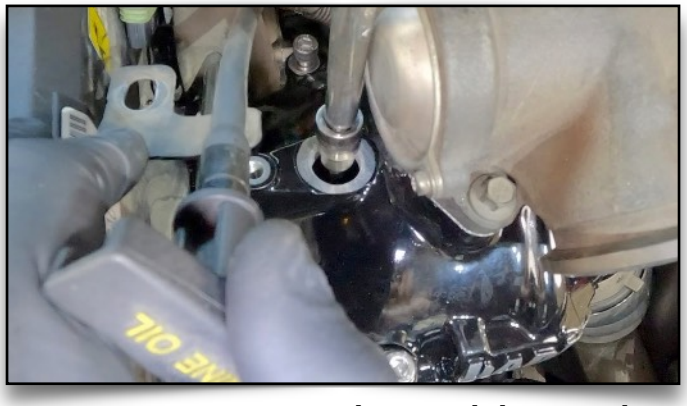


99. Reconnect Engine Harness Connector

100. Do Not Connect Front Blue Injector Plug Yet

101. Remove Rag From Boost Tube, Put Clamp Back On

102. Insert Monster-Ram Into Boost Tube



Use Hex Key Extension to Tighten Bolt

103. Put Long Bolt Into Front Corner by Hand

This will help hold the Monster-Ram in place. Then do the same for the long bolt on the backside. Followed by the two smaller bolts.

Tighten All Bolts to 18-20 ft/lbs

Start with the bolt that's inside the Monster-Ram, then work in a cross pattern to torque to spec.

104. Use Telescoping Magnet to Start Bolts in the Middle of the Monster-Ram

This is useful for the small bolt in the middle where it is hard to reach., and **mandatory** for the one that goes through the top coil heater hole. Be sure to use Medium strength thread locker.

105. Apple Sealant To Heater Coil

Start with the bolt that's inside the Monster-Ram, then work in a cross pattern to torque to spec.

106. Tighten Coil Heater By Hand

Should be right, but don't over do it.

107. Install Dipstick Tube Bracket

108. Now Install Forward Flat Blue Injector Plug

Be sure it clicks.

109. Connect Forward PCV Hose to Valve Cover

This is a tight fit, but doable. Wiggle the rubber hose on the nipple a quarter inch, then use a pry tool as a lever to help slide it on.

110. Plug In MAP Sensor (Rear of Monster-Ram)

Secure the slide lock back into position.

111. Plug In Throttle Plug

112. Tighten Boost Tubes Clamp

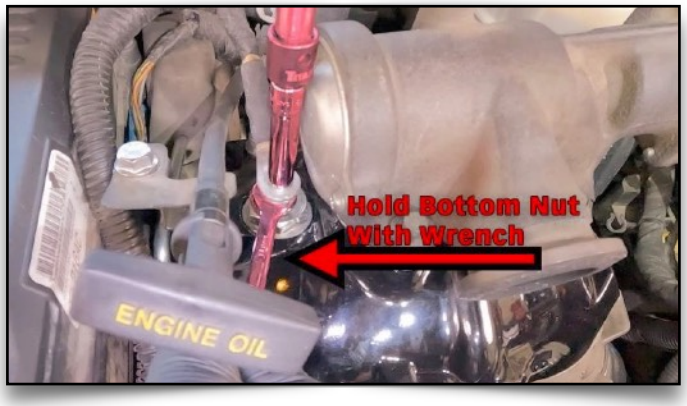
113. Remove & Discard 12V Heater Cable P-Clamp

114. Apply Red Thread Locker to Coil Heater

Remove nut from the coil heater, apply a drop of red thread locker, then spin the nut back 2 or 3 threads from the bottom of the stud.

Bend 12V Cable around as shown over the stud.

12V cable should be sandwiched in-between both nuts, away from metal contract.

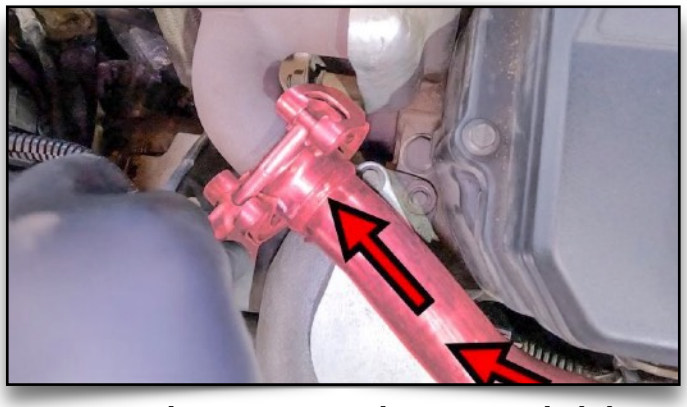


115. Tighten 12V Heater Nut

Be sure to use a wrench to hold the lower nut when tightening the top nut.

Failure to do this can cause the stud to break off, or cause the nuts to walk potentially touching the body of the truck.

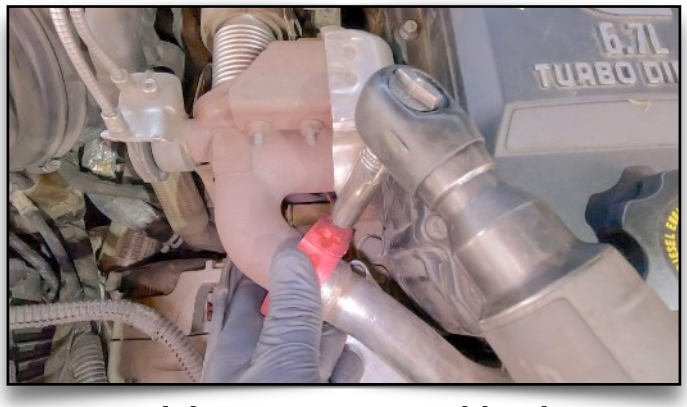
116. Flat Washer Goes on Passenger Side of EGR Tube



117. Put Clamp Over Union & Hand Tighten

118. Conical Gasket Goes On Driver Side of EGR Tube

119. Tighten Driver Side Clamp



120. Tighten Passenger Side Clamp

121. Loosen Front Bolts on EGR Cover

123. Place Rear Heat-shield Spacer & Screw

Use a drop of thread locker on the screw to prevent it from vibrating out.

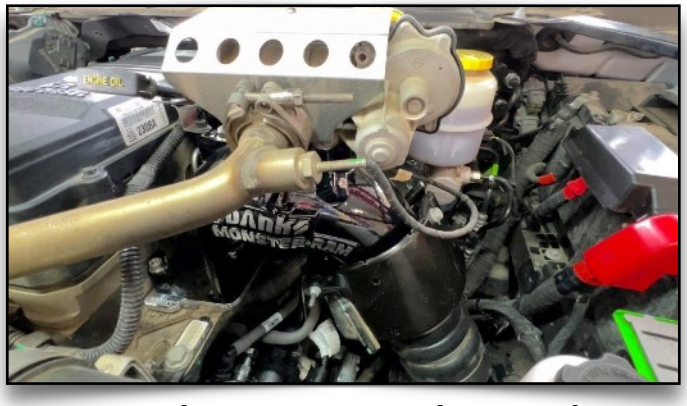
124. Tighten Torx Head Screw

125. Install Throttle Heat Shield Bolt & Nuts

126. Connect EGR Temp Sensor

127. Connect EGR Extension & Harness

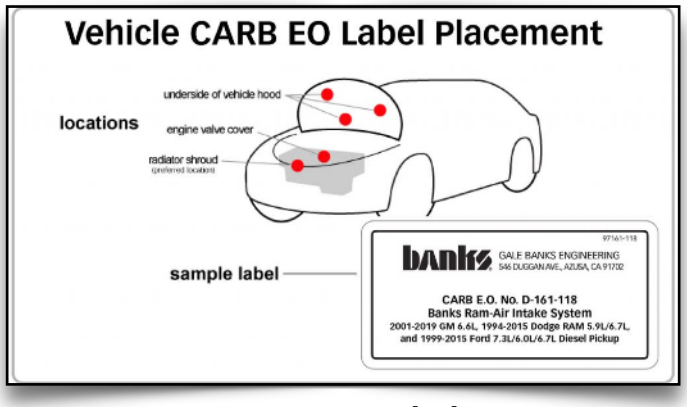
128. Reconnect Batteries



129. First Start May Take 1-2 Min Of Engine Turnover

This is normal. The fuel system, rail, and lines need to re-pressurize.

Install Complete



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.