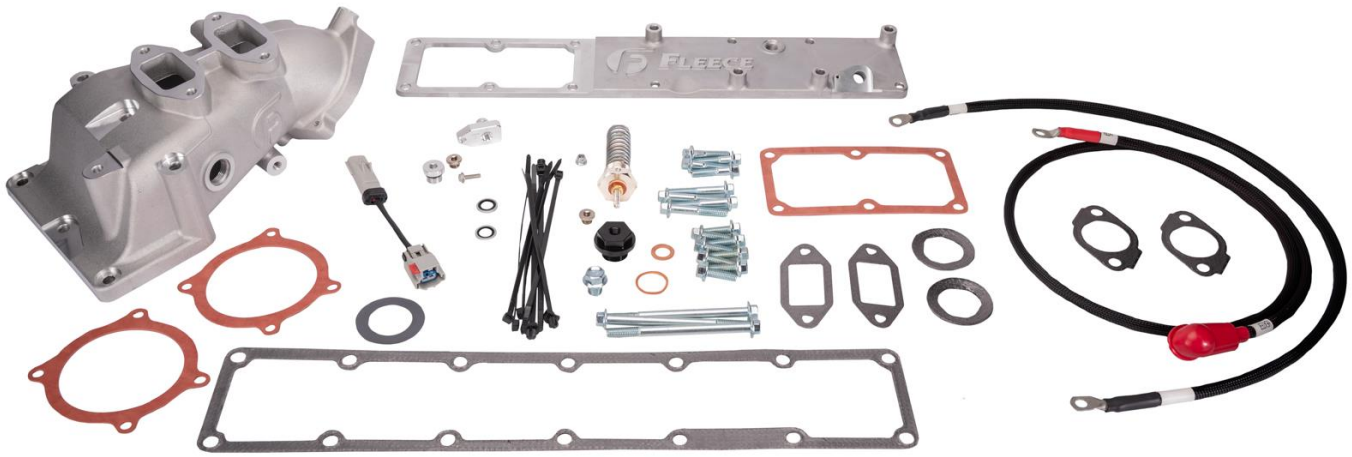
INSTALLATION INSTRUCTIONS

SUBJECT: FLEECE PERFORMANCE INTAKE AND GRID HEATER

FITMENT: 2007.5–2024 Dodge Ram Pickup and Cab and Chassis Models equipped with 6.7L Cummins
KIT P/N: FPE-CUMM-IHK-0724

ESTIMATED INSTALL TIME: 4 hours
TOOLS REQUIRED: 8MM socket or wrench, 10MM socket or wrench, 17MM socket or wrench, 19MM line wrench, clip puller, gasket scraper, 5MM Hex bit or Allen key, 1” socket or wrench, 27MM wrench.



WARNINGS:

- Use of this product may void or nullify the vehicle’s factory warranty.
- User assumes sole responsibility for the safe & proper use of the vehicle at all times.
- The purchaser and end user releases, indemnifies, discharges, and holds harmless Fleece Performance Engineering, Inc. from any and all claims, damages, causes of action, injuries, or expenses resulting from or relating to the use or installation of this product that is in violation of the terms and conditions on this page, the product disclaimer, and/or the product installation instructions. Fleece Performance Engineering, Inc. will not be liable for any direct, indirect, consequential, exemplary, punitive, statutory, or incidental damages or fines cause by the use or installation of this product.

KIT CONTENTS:

ITEM	DESCRIPTION	QUANTITY	PACKAGING COLOR KEY
1	Intake horn	1	
2	M8 x 1.25 x 25 bolt	8	GREEN
3	M8 x 1.25 x 35 bolt	4	RED
4	M8 x 1.25 x 50 bolt	4	YELLOW
5	M8 x 1.25 x 100 bolt	2	WHITE
6	M8 x 1.25 x 110 bolt	1	WHITE
7	M5 x .80 lock nut	1	
8	8” zip ties	4	
9	Fir tree zip ties	3	
10	Heater plug	1	BLACK
11	Heater	1	
12	Heater crush washer	1	PURPLE
13	M12x 1.25 plug	1	
14	M12x 1.25 plug crush washer	1	ORANGE
15	1/8” NPT plug	1	BLUE
16	Heater ground cable	1	
17	Heater power cable	1	
	Fleece Performance High Flow Intake Plenum for 2007.5-2024 Ram with 6.7L Cummins		
18	Intake runner plate	1	
19	Manifold Air Pressure (MAP) sensor plug	1	BLACK
20	Intake Air Temperature (IAT) extension harness	1	
21	1/8” NPT plug	1	BLUE
22	EGR valve gasket	2	
23	Horn / runner gasket	1	
24	Intake runner gasket	1	
25	Throttle valve gasket (only one will be used)	2	
26	EGR crossover tube gasket	1	
27	EGR crossover gasket (pickup truck application)	2	
28	EGR crossover gasket (cab & chassis application)	2	
29	M4 x 16 bolt	1	WHITE
30	M14 temperature sensor plug	1	GREEN
31	12mm Dowty washer	2	

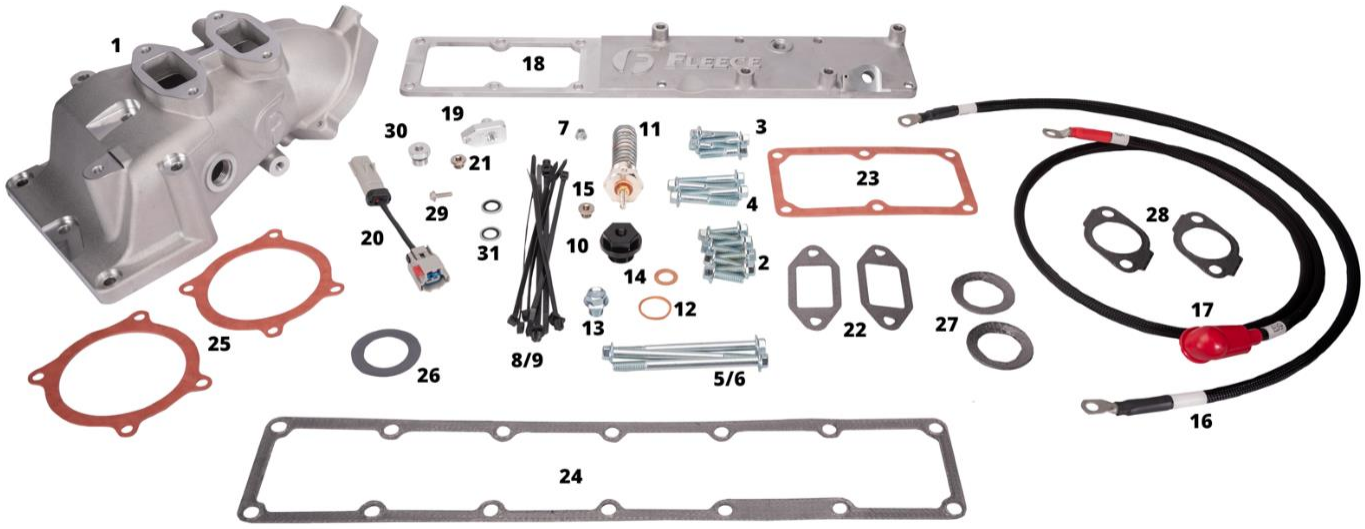
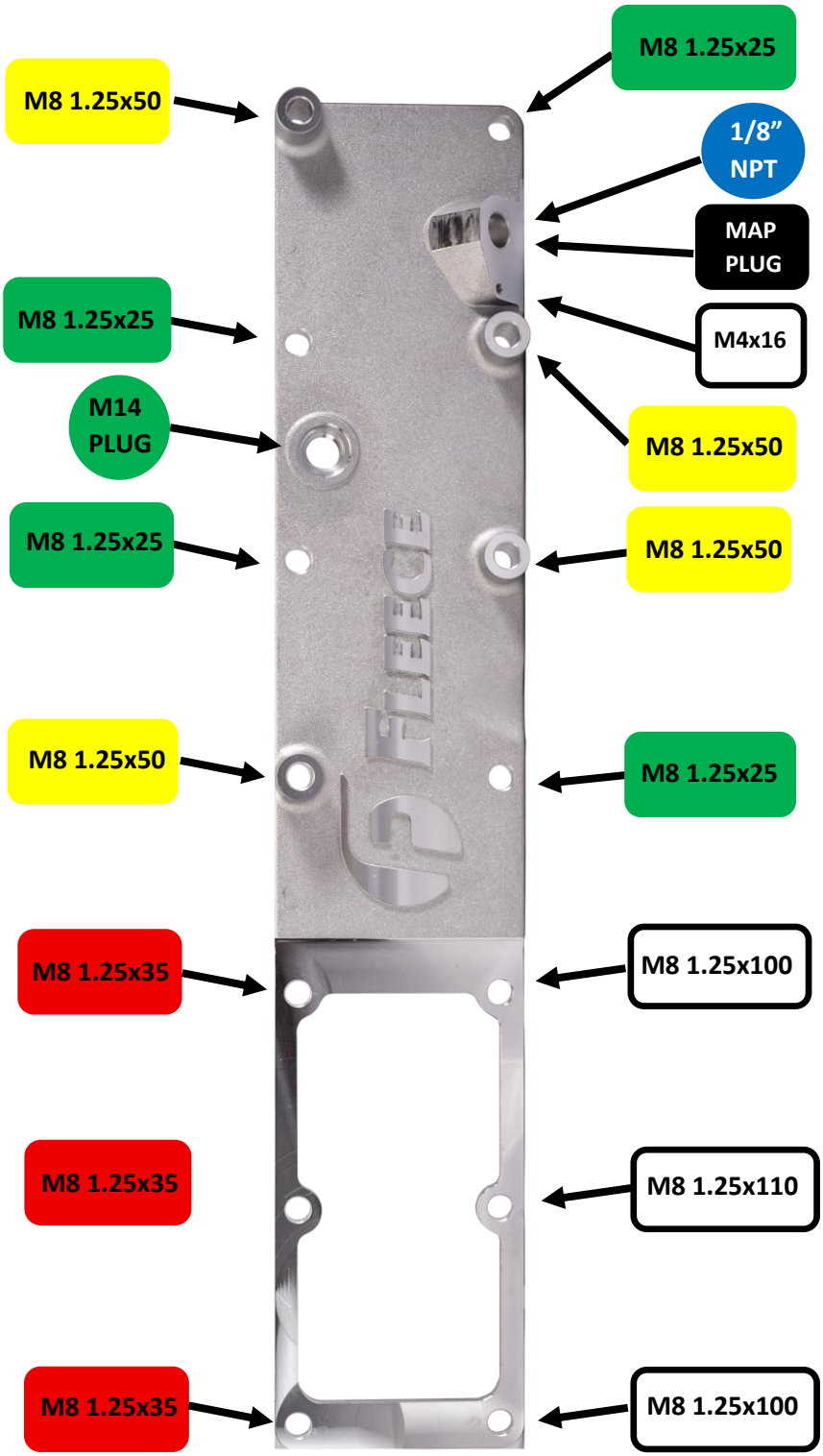


Figure 1: Kit breakdown

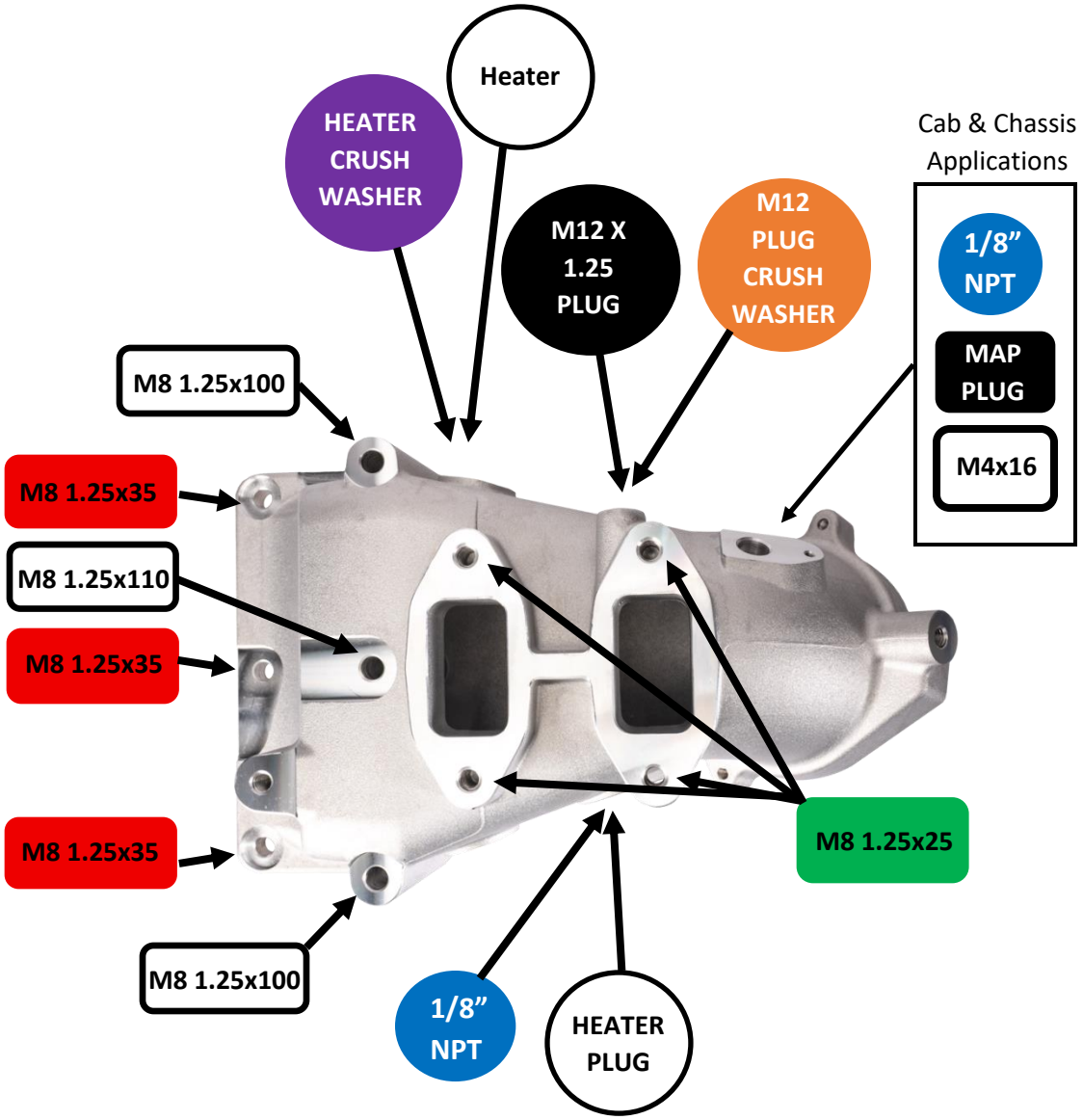
Figure 2: Intake horn hardware kit

Figure 3: Intake plenum hardware kit

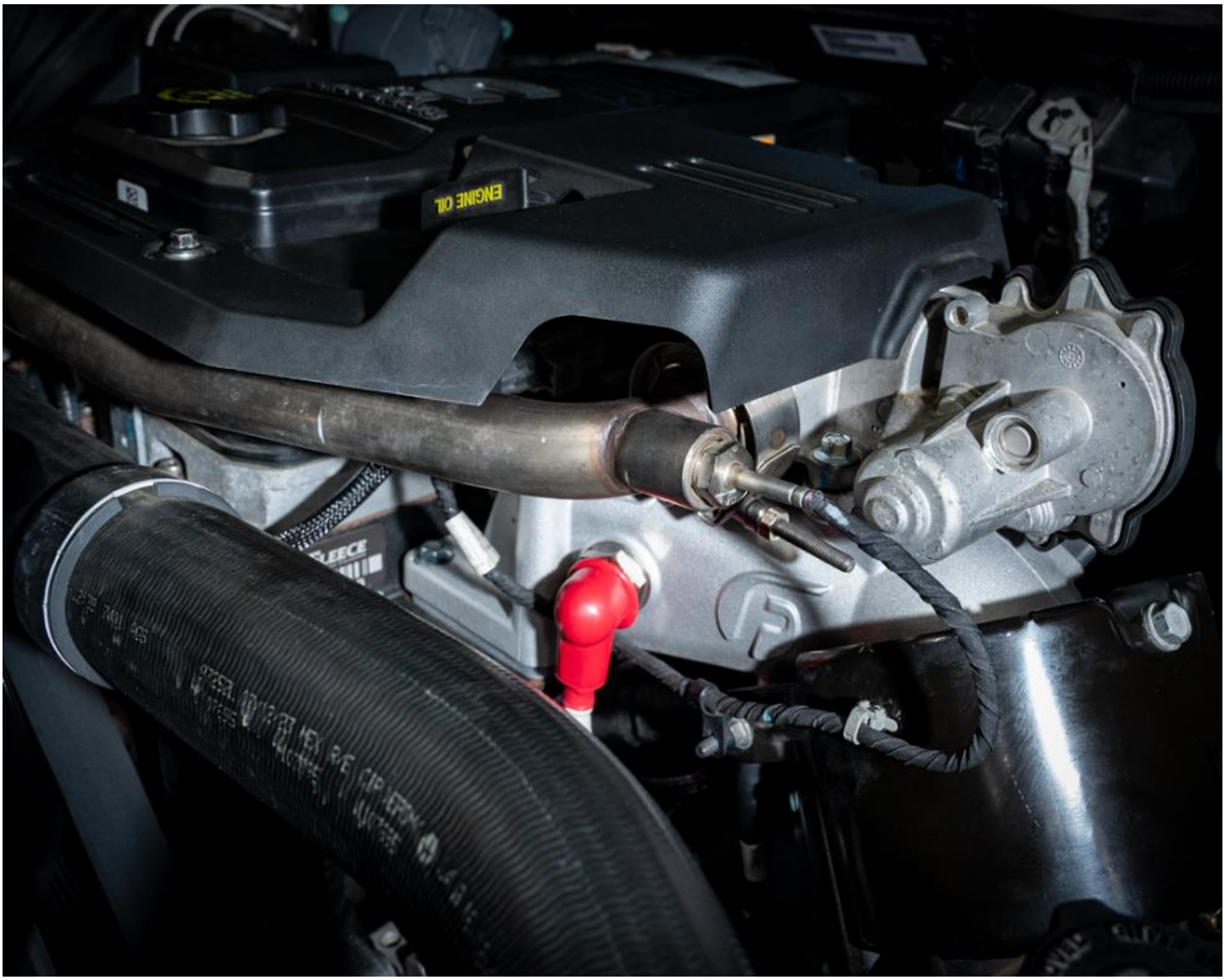
HARDWARE DIAGRAM



HARDWARE DIAGRAM



FINISHED PRODUCT WHEN INSTALLED - SHOWN WITH COLD WEATHER HEATER UPGRADE OPTION, P/N: FPE-CUMM-IAH-X2



PROCEDURE:

STEP 1: To ensure safety, park the vehicle on a flat and level surface. Using a 10MM socket or wrench, disconnect the negative battery terminals from each battery, then isolate each terminal with a shop towel to prevent accidental arcing or sparks during the installation process (*Figure 4*).

Figure 4: Use of shop towel to isolate negative terminal.

STEP 2: Remove the dipstick and plastic engine shroud. First, remove the dipstick from the tube. Using an 8MM socket, remove the four 8MM bolts retaining the plastic shroud on the top of the engine (*Figure 5*). Set both the shroud and bolts to the side for reinstallation.

Figure 5: Engine cover with four 8MM bolts.

STEP 3: **Remove the dipstick tube mount.** Using a 10MM socket, loosen the three 10MM bolts securing the engine oil dipstick bracket. Remove the bracket and three bolts, along with a fourth 10MM bolt or nut (not pictured) retaining the middle of the dipstick tube to the fuel rail (*Figure 6*). Once this is completed, carefully turn the oil dipstick tube toward the driver's side of the vehicle. Retain bolts for reinstallation.

NOTE: The oil dipstick tube becomes fragile overtime due to corrosion from moisture and road salt. If the tube shows signs of corrosion or excessive wear, use extreme caution when repositioning it. DO NOT force movement, as this will crack or break the tube.

Figure 6: three 10MM bolts and bracket retaining oil dipstick tube.

STEP 4: Disconnect the EGR temperature sensor and EGR control valve.

Note: Cab and chassis model pictured at right

For 2013-2018 pick-up and cab and chassis models: Disconnect the EGR temperature sensor electrical connector by releasing the red tab, and while pressing the grey push tab down, pull the connector toward the driver's side of the vehicle.

To remove the EGR control valve electrical connector, press the push tab down and pull it back towards the front of the vehicle (*Circled in Figure 7*).

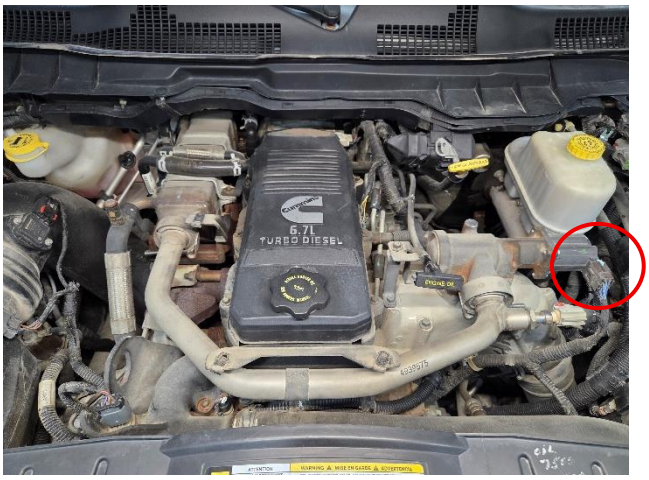


Figure 7: Engine cover removed. EGR control valve connector is circled. The EGR temperature sensor is pictured off to the left of it.

For 2019-2024 pick-up and cab and chassis models: The connector for the EGR temperature sensor in these models has been relocated underneath the oil dipstick. The connector will be removed in the same fashion as the previous model. Release the red tab on the gray connector, then press the gray push tab down, and pull the connector back toward the front of the vehicle.

To remove the EGR valve connector, disconnect the red electrical connector by pulling the yellow locking tab out toward the front of the vehicle then, while pushing the red tab down, pull the connector away from the EGR valve (*Figure 8*).

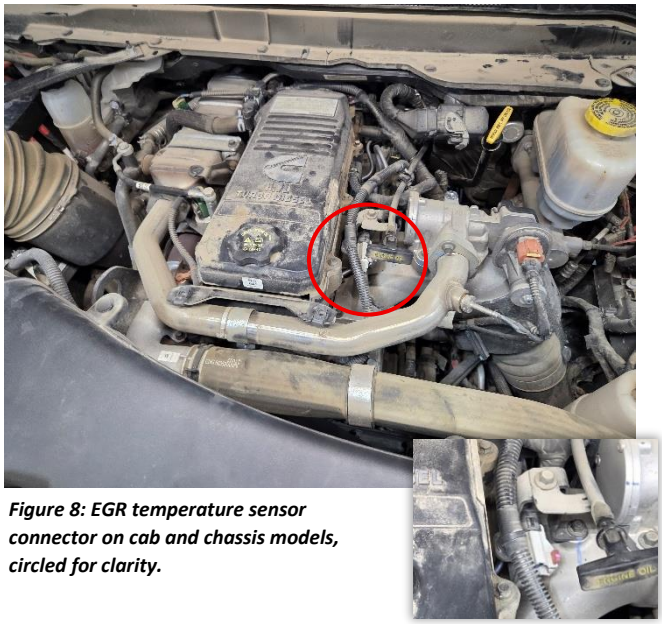


Figure 8: EGR temperature sensor connector on cab and chassis models, circled for clarity.

STEP 5: Remove the EGR crossover tube and gaskets.

For pick-up truck and cab and chassis models 2013-2018:

Starting with the innermost clamp in the center of the EGR crossover tube**,** use an 8 MM socket to loosen and remove the bolt that retains the clamp to the block. Set it off to the side for reinstallation. With an 11MM socket, disconnect and remove the two outermost clamps retaining the EGR crossover tube. Set each clamp to the side for reinstallation. **Once all clamps have been removed, lift the EGR Crossover tube up and out of the engine bay. As the tube is being removed, remove each gasket at each end of the tube and discard (*Figure 9*).**

Figure 9: Retaining clamps on EGR crossover tube, pick-up model years 2013-2018.

For pick-up and cab and chassis models 2019-2024:

Starting with the center clamp retaining the EGR crossover tube, use an 8MM socket to loosen the bolt that retains the clamp to the block. Set it off to the side for reinstallation. Using a 10MM socket remove each of the 10MM bolts retaining both ends of the EGR crossover tube. Set the bolts off to the side for reinstallation, then lift **the EGR Crossover tube up and out of the engine bay. As the tube is being removed, remove each gasket from each end of the tube.**

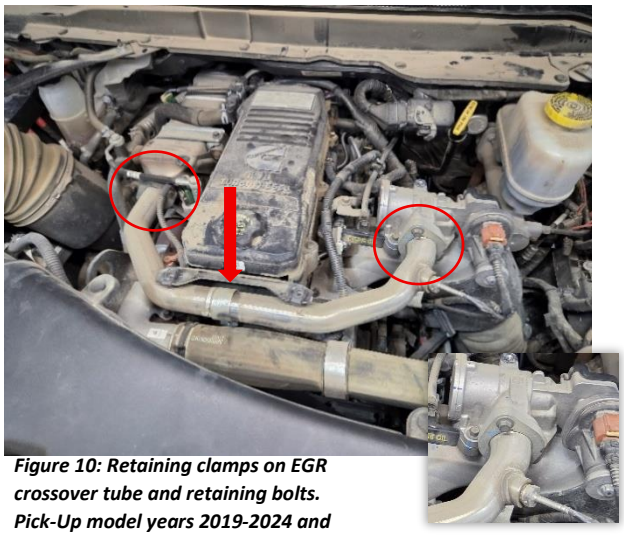


Figure 10: Retaining clamps on EGR crossover tube and retaining bolts. Pick-Up model years 2019-2024 and cab and chassis models.

<u>2019-2024 cab and chassis models require the reuse of the crossover tube gaskets.</u> Collect each gasket from each end of the tube and set to the side. For pick-up models, discard each gasket at each end of the crossover tube (*Figure 10*).

Truck: Year/Model	Gasket Type
07.5-2024 Pick Up	Included Round Gaskets
07.5-12 Cab and Chassis	Included Round Gaskets
13-18 Cab and Chassis	Included Two Bolt Fiber Gaskets
19-24 Cab and Chassis	Not Provided, Use Mopar- 68447575AA

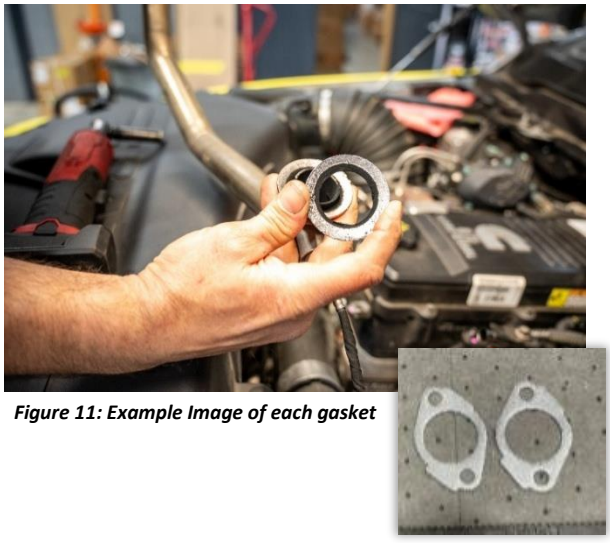


Figure 11: Example Image of each gasket

STEP 6: Remove the EGR valve.

With a 10MM socket, remove the four, 10 MM bolts retaining the EGR Valve. Pull the EGR valve up and off the intake horn. Discard the two EGR valve gaskets that sit underneath the valve and on top of the factory intake horn (*Figure 12*).

Figure 12: Removal of the four 10MM bolts retaining the EGR Valve. Discard stock gaskets.

STEP 7: Remove the CAC boot shroud and clamp.

On select vehicles, a shroud may be present on the stock intake horn which will limit access to the clamp on the CAC boot. **This shroud will need to be removed.** Using a 10MM and 13MM socket, remove the two bolts that retain the shroud. (*Figure 13A*).

Using an 11MM socket, loosen the hose clamp on the CAC boot, then pull the boot downward to remove it from the throttle valve. Disconnect the throttle valve connector by pressing the push tab down, then pushing back toward the rear of the vehicle. Leave the throttle valve attached to the intake horn (*Figure 13B*).

Figure 13A: Throttle valve with CAC boot attached.

Figure 13B: Throttle valve with CAC boot attached.

STEP 8: Using a clip puller, remove the harness that is attached to the stock intake horn. The type of fastener will vary depending on the vehicle year and model (*Figure 7A and 7B)*.

Figure 7A: One of two types of retainers used on harness attached to intake horn. This type is more commonly used in Model Years 2007.5-2012.

Figure 7B: One of two types of retainers used on harness attached to intake horn. This type is more commonly used in Model Years 2013-2024.

STEP 9: Disconnect the MAP Sensor. The location of the MAP sensor will vary depending on the model and year of the vehicle. The sensor will be located either on the back of the OE intake plenum or on the back side of the OE intake horn.

If the sensor is located on the OE intake horn, disconnect it by pressing the push tab and pulling the connector down from the sensor toward the bottom of the vehicle (*Figure 8A*).

If the sensor is located at the back of the intake, it will be disconnected in the same fashion as the sensor located on the Intake Horn. Press the push tab down, then pull the connector toward the bottom of the vehicle (*Figure 8B*). For ease of service, this step can be delayed until **STEP 22**, when the stock intake plenum is removed.

Figure 8A: MAP sensor location on intake horn.

Figure 8B: MAP sensor Location on intake plenum.

STEP 10: Using a 10MM socket, remove the remaining bolts used to retain the stock intake horn.

Verify all necessary components are disconnected (*Figure 9*), remove the stock intake horn and throttle valve assembly from the engine bay. *(For ease of removal, both items are removed as one unit.)*

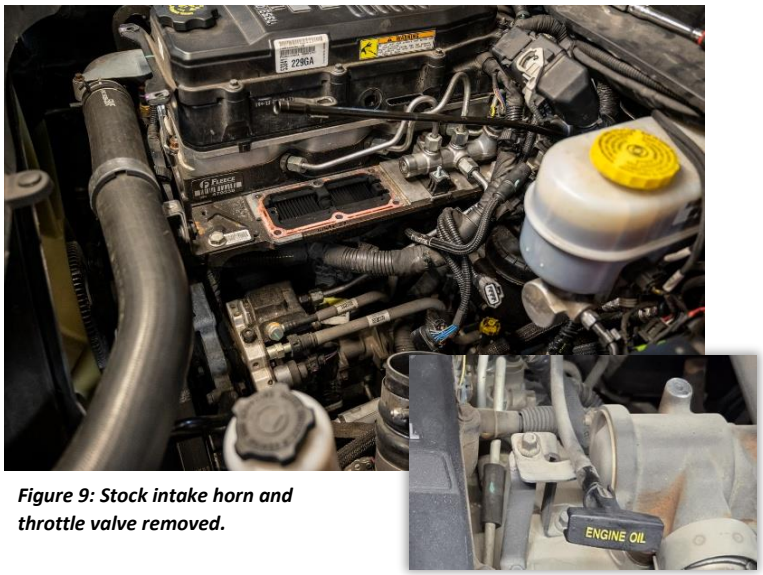


Figure 9: Stock intake horn and throttle valve removed.

STEP 11: To prevent debris from entering the charge air system, cover the CAC Boot with a shop towel and place the clamp over the top to hold it in place (*Figure 10*).

Figure 10: CAC boot covered with shop towel; clamp placed over top to secure.

STEP 12: Using a clip puller, remove any remaining harness retainers from the stock intake plenum (*Figure 11*). The quantity and type of retainer across model years will vary.

Figure 11: Clip retaining harness on top of the stock intake plenum.

STEP 13: Disconnect the crankcase vent lines from the valve cover by pulling the line off the plastic ports. To improve access to the injection lines, remove each plastic port from the valve cover by loosening and turning the port counterclockwise. Use caution when removing to prevent damage.

NOTE: If present, remove the injection line foam cover that is utilized on some models for sound dampening.

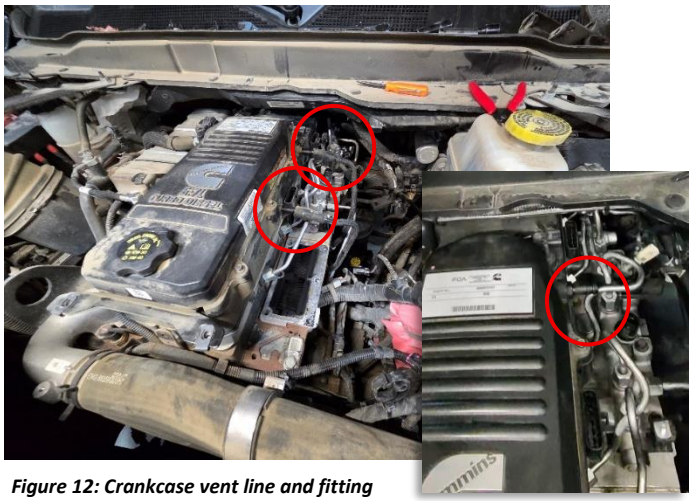


Figure 12: Crankcase vent line and fitting

STEP 14: Remove grid heater power supply cable. Utilizing a 10MM socket, remove the 10MM nut that retains the grid heater cable located directly behind the fuel return (*Figure 13A*). Once the nut is removed, lift the cable up and off the grid heater.

The factory grid heater cable will no longer be necessary after this step. Trace the OE grid heater cable back to the passenger side battery, then with a 13MM socket remove the 13MM nut retaining the cable to the grid heater relay. **Discard the stock cable**. Set the 13MM nut to the side, this will be used to install the new heater cable at a later point (*Figure 13B*).

Figure 13A: 10MM bolt retaining the grid heater power supply harness on intake plenum.

Figure 13B: 13MM nut retaining grid heater power supply harness.

STEP 15: Disconnect both injector harness connectors from the driver's side of the valve cover by pressing the gray push tab then pulling upward and away from the engine. Disconnect the EGR temperature sensor. The location of this sensor will depend on the model and year of the vehicle. Most **pick-up** truck models will have the EGR temperature sensor on the stock intake plenum, and in most **cab and chassis** models the sensor will be located on the stock intake horn.

STEP 16: Remove the high-pressure fuel feed line using a 19MM wrench (*Circled in Figure 14*).

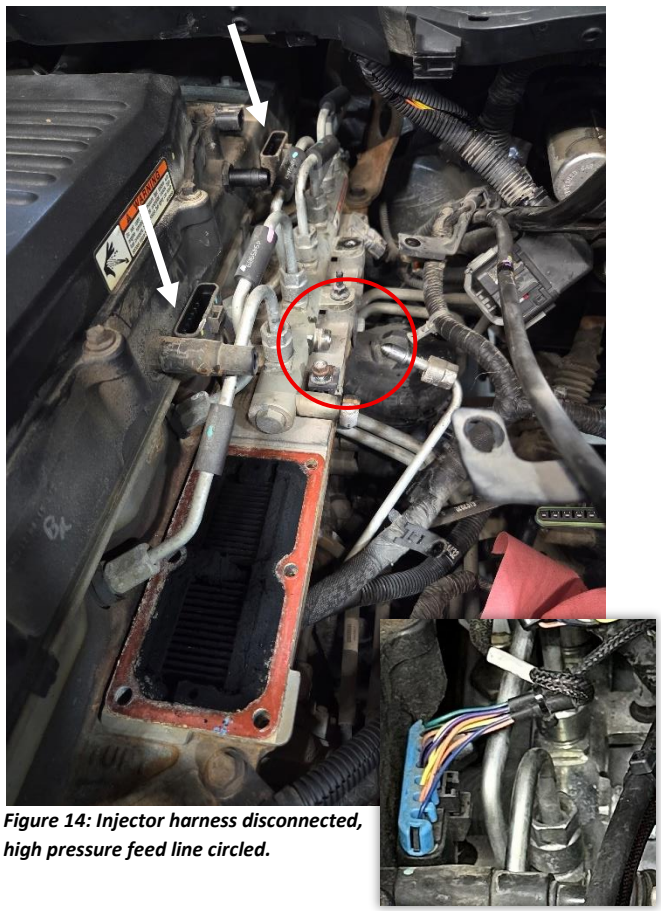


Figure 14: Injector harness disconnected, high pressure feed line circled.

STEP 17: To improve access to the rear injection lines, remove the main electrical bulkhead at the firewall. This can be done with a small flathead screwdriver by lifting the main retaining clip up (*Figure 15*). Once the clip has been pulled upward the connector can be pulled towards the passenger side of the vehicle to completely disconnect the bulkhead. Tuck each side of the connector underneath the plastic windshield cowl.

Figure 15: Removal of bulkhead at fire wall.

STEP 18: Using a 19MM wrench, remove all six injection lines starting with line #1. As each line is removed, set them to the side in the same order they are removed. To aid in reinstallation, label each line.

STEP 19: Using a 17MM socket or wrench, remove the 17MM banjo bolt retaining the high-pressure fuel return line (*Figure 16*). **For Model Years 2019 and newer** the banjo bolt will be located on the back of the engine block directly on top of the fuel rail.

STEP 20: Disconnect the rail pressure sensor connector that is located on the back of the fuel rail near the firewall. **For model years 2019-2024** disconnect the rail pressure sensor located towards the center of the rail along with the high-pressure regulator located at the rear of the rail.

Figure 16: Injection lines removed, fuel return line circled.

STEP 21: Remove the four 10MM bolts from the fuel rail with a 10MM socket or wrench, then remove the rail itself. There will be four remaining 10MM bolts that hold the intake plenum in place (*Figure 17*).

STEP 22: Remove the four remaining 10MM bolts on the intake plenum. Lift the stock intake plenum up and off the vehicle. **Discard** the OE gasket. Remove the temperature sensor from the plate and set aside for reinstallation. For cab and chassis models, remove the MAP sensor from the back of the intake plenum and set aside for reinstallation.

Figure 17: Fuel rail fully removed.

STEP 23: Scrape any gasket material off the intake shelf (*Figure 18*). **Thoroughly clean the intake shelf gasket mating surfaces and remove any debris present. The best manner to remove debris after cleaning the mating surfaces is with a shop vacuum. Vacuum the entirety of the shelf and inside of the intake to remove any gasket debris and soot buildup.**

STEP 24: Using brake clean, clean the mating surface of the intake shelf, then install the new intake plenum gasket (*Item 24*).

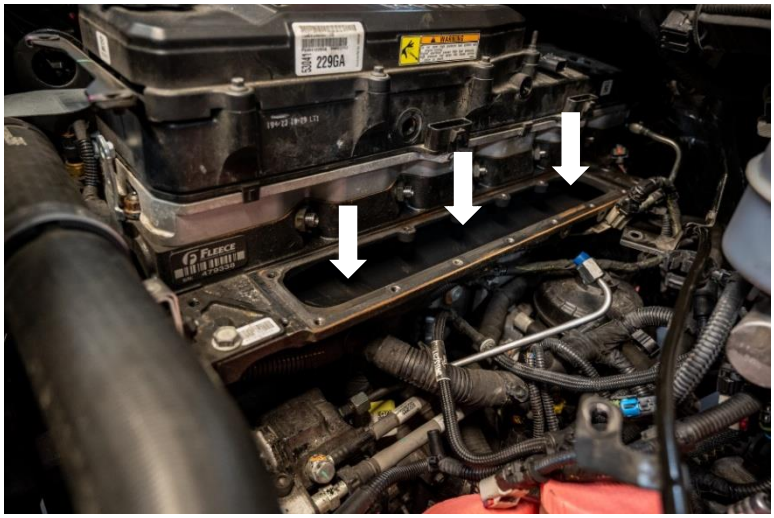


Figure 18: Intake plenum and gasket fully removed

STEP 25: Preassemble the new Fleece intake plenum.

For pick-up truck models, reinstall the temperature sensor into the appropriate port on the new intake plenum (*Figure 19*). Install the MAP sensor adapter (*item 19*) into the rear most port on the intake plenum. Secure the adapter by threading the included M4 screw (*item 29*) into place and tighten with a 7MM socket. Next, thread the included 1/8" NPT plug (*item 21*) into the MAP sensor adapter, then with a 5MM Hex bit or Allen key, torque the plug to 80 IN LBS (*Circled in Figure 19*).

For cab and chassis models, install the MAP sensor into the port on the back of the intake plenum. Secure the sensor using the original fastener. If the intake air temperature sensor is not utilized, install the included M14 plug. Set the MAP Sensor adapter and 1/8" NPT Plug to the side for use during intake horn assembly.

Figure 19: Intake temp sensor installed into new Fleece intake plenum. MAP sensor plug installed.

STEP 26: Position the new intake runner gasket onto the intake shelf. Ensure the non-cutout section of the gasket is installed towards the outside of the engine.

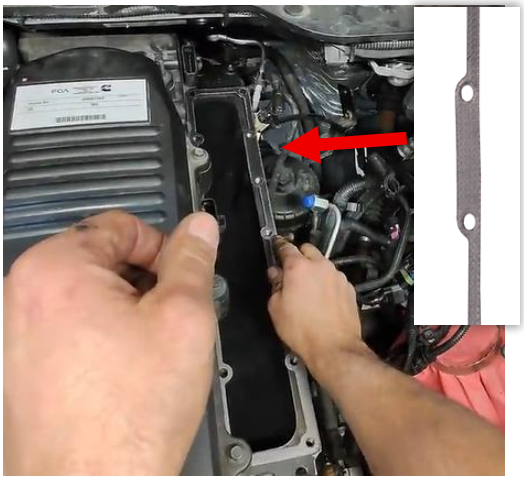


Figure 20: Intake runner gasket installed.

STEP 27: Lay the assembled intake plenum in place onto the cylinder head shelf. Thread four of the provided M8 1.25x25 (*figure 2*) into place, then with a 10MM socket, torque each bolt to 18 FTLBS.

NOTE: To ensure alignment of the gasket, temporarily install a bolt in the front right bolt location. Remove the bolt after the plenum bolts are tightened.

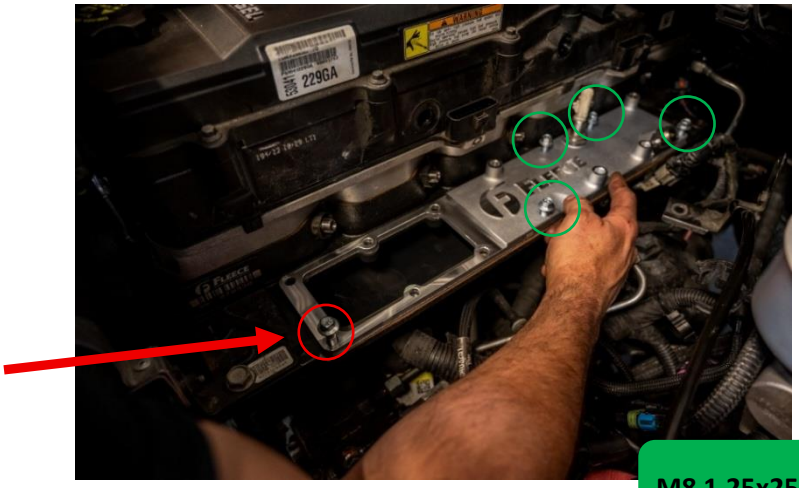


Figure 21: Intake plenum installed, M8 1.25x25 bolts circled.

STEP 28: Re-install the fuel rail.

IMPORTANT: Prior to installation, clean out the fuel rail with brake clean and verify it is free of contaminants.

After the fuel rail has been cleaned, re-install the rail in its designated location on the new intake plenum plate. Thread the remaining four included M8 1.25x50 bolts into the mounting holes for the fuel rail. Using a 10MM socket, torque the mounting bolts to 18 FTLBS.

For model years 2007.5 to 2018, plug in the rail pressure sensor connector at this time.

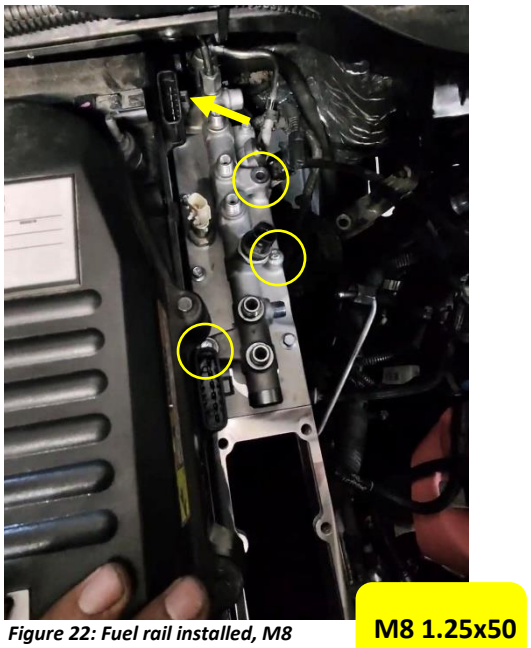


Figure 22: Fuel rail installed, M8 1.25x50 bolts circled.

STEP 29: Re-install the fuel rail feed line.

IMPORTANT: Prior to installation, clean the fuel feed line with brake clean.

After the fuel feed line has been cleaned and it has been verified **that the mating end is clean and free of contaminants**, install the fuel feed line then tighten using a 19MM wrench.

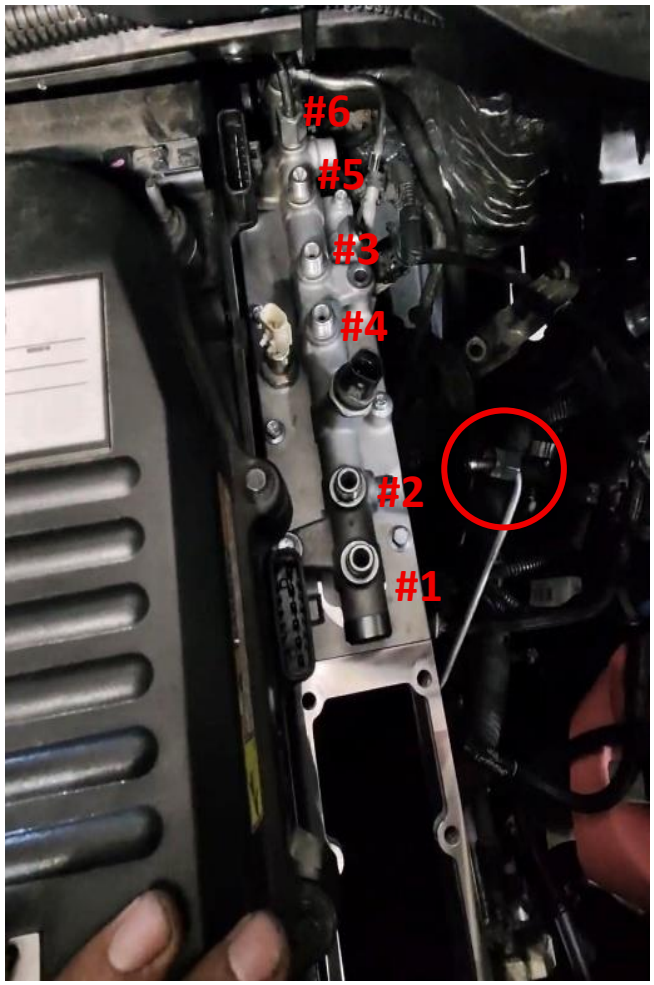


Figure 23: Fuel rail installed, injection line installation order. Fuel feed line circled.

STEP 30: Re-install all injection lines.

IMPORTANT: Prior to installation, clean all six injection lines with brake clean.

Beginning with injection line # 6, **install** each injection line in the reverse order of their removal. Once all injection lines are installed, tighten each with a 19MM wrench.

STEP 31: For model years 2013-2018, reconnect the factory fuel return line by threading the banjo fitting into place on the driver's side of the fuel rail, then tighten with a 17mm wrench. **For model years 2019-2024**, reconnect the fuel return line at the back of the fuel rail in the same manner.

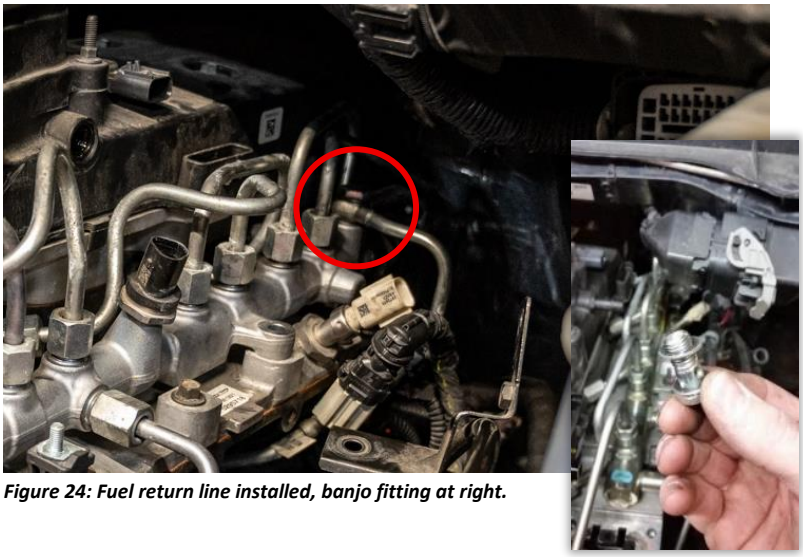


Figure 24: Fuel return line installed, banjo fitting at right.

STEP 32: For 2019-2024 models, reconnect the rail pressure sensor on the center of the rail.

STEP 33: Reconnect the temperature sensor. **For model years 2013 to 2024**, install the included harness extension (item 20) and reconnect the truck side harness.

Figure 25: Rail pressure sensor and charge air harness.

STEP 34: Plug in the fuel injector harness. Reinstall the two removed barb fittings back into the valve cover then push each CCV line back onto each CCV tube (*Figure 26*).

NOTE: Use caution when reinstalling the barb fittings. The fittings are plastic and can be brittle.

STEP 35: Using brake clean, clean the mating surface between the new intake plenum and the new intake horn. Install the new intake horn gasket (*item 23*).

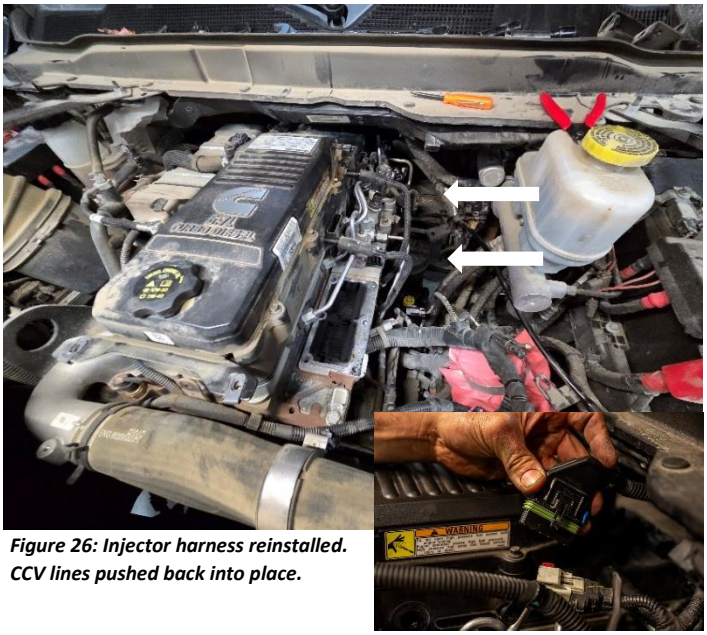


Figure 26: Injector harness reinstalled. CCV lines pushed back into place.

STEP 36: Disassemble the stock intake horn.

For proper configuration of the new Fleece intake horn, note the orientation of the throttle valve and stock intake horn prior to disassembly. Using a 10mm socket, remove each of the four bolts that hold the throttle valve and stock intake horn together, set each bolt to the side for reuse. Separate the stock intake horn and throttle valve, discard the old throttle valve gasket.

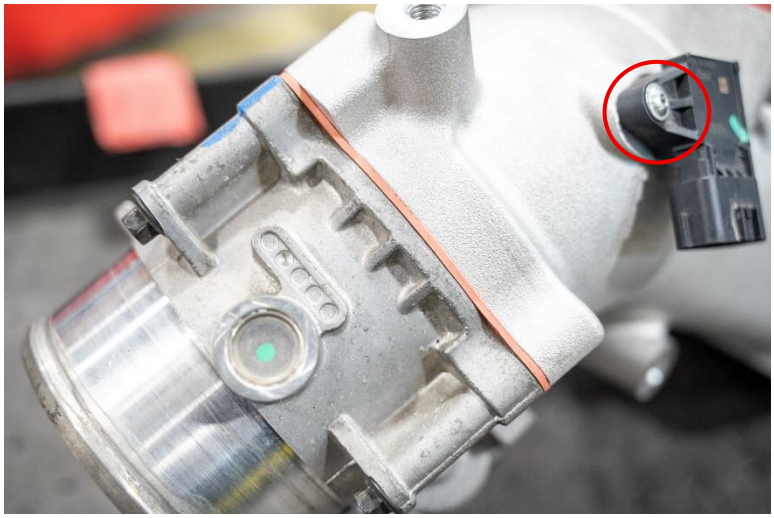


Figure 27: Throttle valve assembly and intake horn prior to disassembly.

Remove the MAP sensor and the temperature sensor on the stock intake horn if present. Using a T15 bit, remove the T15 screw retaining the sensor (*circled in figure 27*), then pull the MAP/temp sensor out of the intake horn. Set both the sensor and retaining bolt to the side for reinstallation on the new intake horn. Inspect the sensor then clean or replace the sensor if necessary.

Some models are equipped with a threaded stud on the factory intake horn. If your application incorporates this stud, use a 13MM deep well socket or wrench to remove it from the front of the intake horn. This threaded stud will be reinstalled in the new Fleece intake horn (*Figure 28*).

Figure 28: Removal of threaded stud on factory intake horn.

For model years 2007.5-2009 applications, remove the temperature sensor from stock intake horn with a 14MM socket or wrench and set to the side for reinstallation (*Figure 29*).

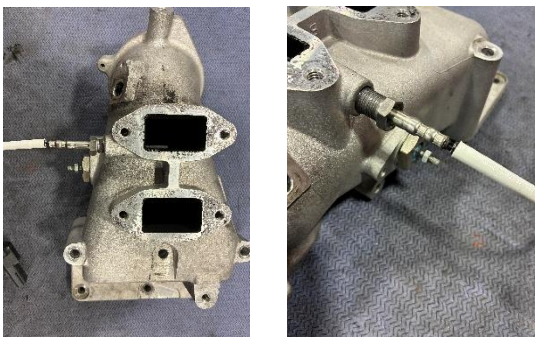


Figure 29: Removal of temperature sensor on stock intake horn, Model Years 2007.5-2009.

STEP 37: Assemble the new Fleece intake horn.

With the throttle valve removed, clean the throttle valve assembly and mating surfaces. Place one of the new throttle valve gaskets onto the cleaned surface of the throttle valve, then align the new Fleece intake horn with the throttle valve in the same orientation as originally present on the factory intake horn.

Thread each of the 10MM bolts back into place, then with a 10MM socket, torque each bolt to 50 IN LBS in a crisscross pattern.

Figure 30: Installation of new throttle valve gasket. New intake horn and throttle valve assembled.

On the back side of the intake horn, install the MAP sensor into the new Fleece intake horn. Secure the MAP sensor by threading the T15 screw into place and tighten with a T15 bit.

NOTE: In cab and chassis applications, install the MAP sensor adapter and plug into the Intake horn. Follow the same process as outlined in **STEP 25**.

Install the new coil heater (*item 11*) and heater crush washer (*item 12*). Tighten the heater with a 27MM socket or wrench. Install the provided M12x1.25 plug (*black circle)* and M12 plug crush washer *(orange circle)*. Install the washer onto the plug, then install the plug with a socket, and torque to 12 FTLBS.

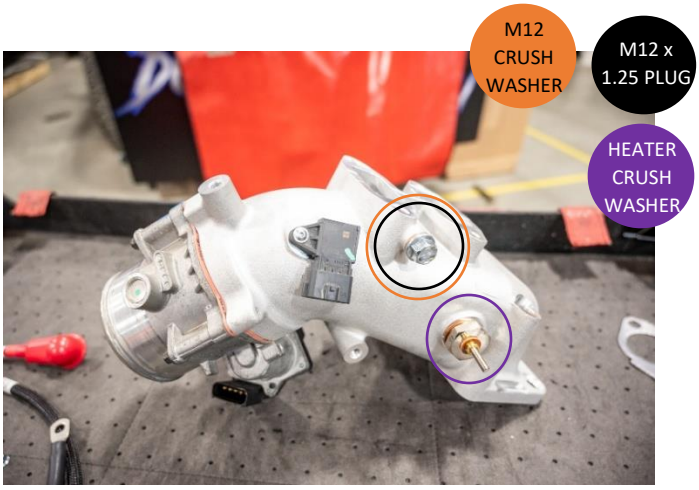


Figure 31: M12 plug and washer installed. New heater and crush washer installed.

For model year 2007.5-2009 applications, re-install the temperature sensor and tighten with a 14MM socket.

On the front side of the intake horn, install the included heater plug and tighten with a 27MM socket or wrench. Install the included 1/8” NPT plug and tighten with a 5MM hex bit or Allen key.

NOTE: For applications utilizing the cold weather upgrade kit, install the secondary heater and crush washer in place of the heater plug and 1/8” NPT plug.

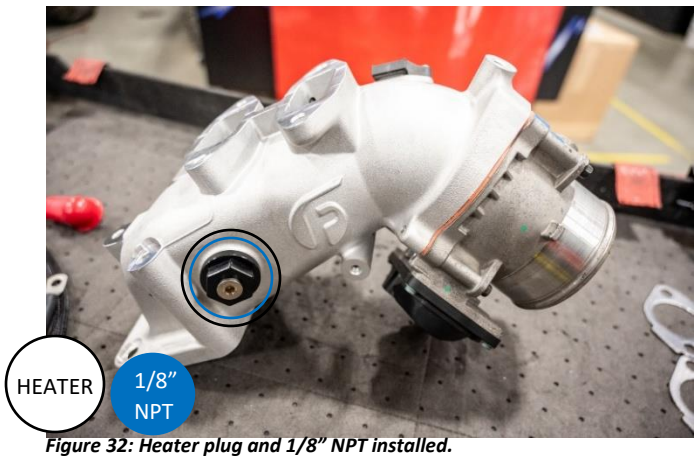


Figure 32: Heater plug and 1/8” NPT installed.

STEP 38: Install the new Fleece intake horn.

Clean the mating gasket surface of the new intake horn with brake clean. Place the new intake horn into position on the new intake plenum.

Starting with this centermost bolt hole on the intake horn, align the oil dipstick bracket with the hole, and install the included M8 1.25x110 bolt. Leave this bolt hand tight

IMPORTANT: DO NOT attempt to install a 100MM-length bolt in this position. Doing so will result in damage to threads in the cylinder head.

In the two remaining bolt holes on either side of the oil dipstick bracket, start the included M8 1.25x100 bolts by hand. In the remaining three bolt holes on the inner side of the intake horn, start three of the included M8 1.25x35 bolts by hand, leaving the bolts hand tight.

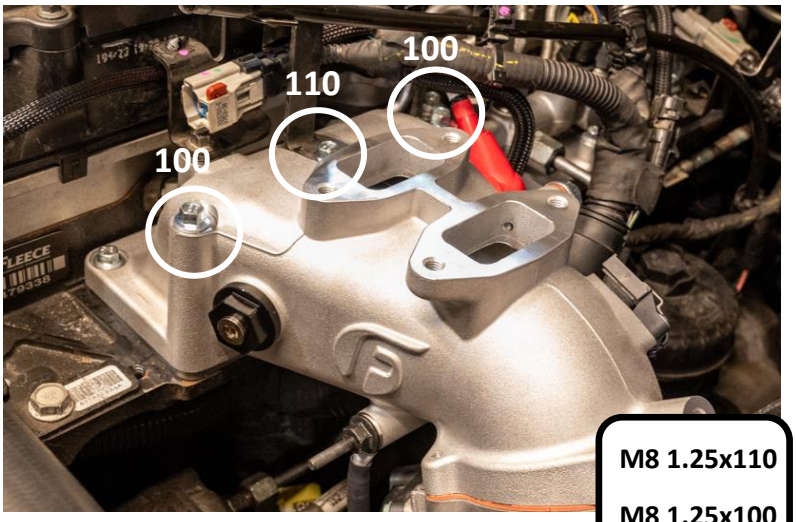


Figure 33: Provided 110 length and 100 length bolts installed.

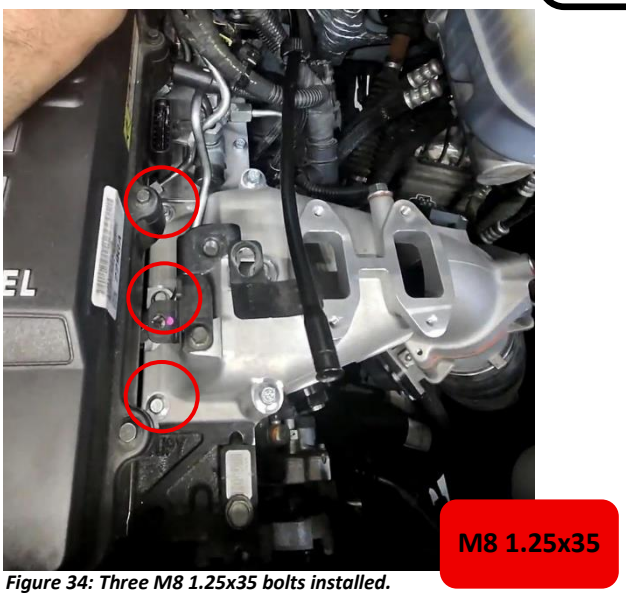


Figure 34: Three M8 1.25x35 bolts installed.

STEP 39: Verify proper positioning of the new Fleece horn and tighten all hardware.

Verify the new intake horn is in proper position in relation to injection line number 1. Verify the two **do not touch**. If the injection line is touching the intake horn, **STOP** and adjust either the intake horn or fuel rail to maintain proper clearance.

Once proper positioning has been verified, tighten all six intake horn bolts with a 10MM socket to 18 FT LBS.

STEP 40: Reconnect CAC boot to the throttle valve, tighten the clamp with an 11MM socket, then plug in the throttle valve electrical connector.

Figure 35: Throttle valve with CAC Boot attached.

STEP 41: Reconnect the factory bulkhead at the fire wall and begin routing all harnesses to their original factory position.

Figure 36: Factory bulkhead reassembled.

STEP 42: Install new heater cable.

Starting with the cable labeled “relay” and “heater” (*item 17*), connect the end of the new heater cable labelled “relay” to the stock grid heater relay post. Thread the 13MM retaining nut into place and tighten with a 13MM socket.

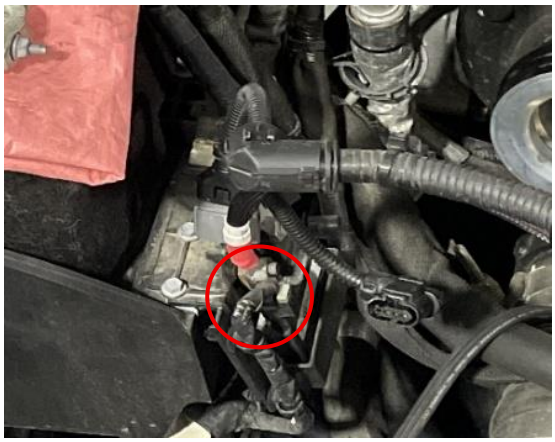


Figure 37: New heater harness installed on grid heater relay. 13mm nut reinstalled to retain new harness.

Route the new heater cable in the same orientation as the stock grid heater cable. Using the included cable ties, secure the new grid heater cable in the same locations as the original factory cable. Two types of cable ties have been included in the kit, standard cable ties and cable ties with fir tree fasteners. The type of cable tie necessary will be dependent on the year and model of vehicle.

Figure 38: New heater with included M5 nut, used to retainer new heater harness.

Once the heater cable has been routed back to the heater on the intake horn, secure the end labeled “heater” with the included M5 nut (*Figure 38*). Using an 8MM socket tighten the nut, then place the insulation boot over the top of the heater (*Figure 39*).

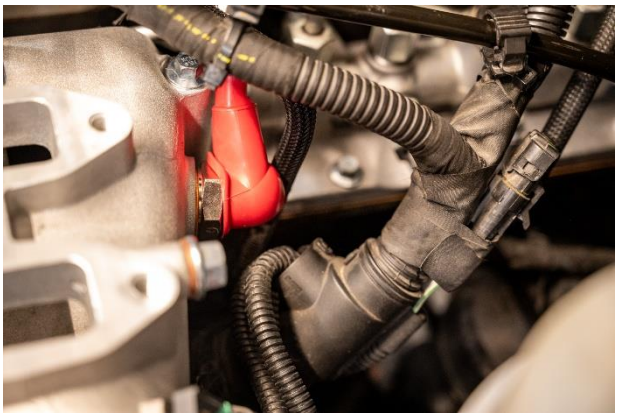


Figure 39: New heater with insulation boot.

STEP 43: Install the heater ground cable.

Begin routing the cable labelled “Battery-NEG” and “intake” (*item 16*). Starting at the driver’s side battery, remove the 10MM nut on the **negative terminal** with a 10MM wrench. Once the nut is removed, install the end of the cable labeled “Battery-NEG” onto the terminal. Reinstall the nut over top of the cable and tighten the nut with a 10MM wrench.

Figure 40: Heater ground cable installed onto battery (-) negative terminal.

Route the other end of the harness towards the front of the horn, using the included cable ties to tie the harness up and out of the way. Once routed back to the horn, attach the intake labelled side of cable using the front studded bolt or a M8x1.25 – 25 supplied bolt.

Figure 41: Heater ground cable installed at intake horn.

STEP 44: Reinstall the EGR valve.

Clean the mating surface on the top of the new intake horn with brake clean, then install the supplied EGR valve gaskets (*item 22*). Clean the mating surface on the bottom of the EGR valve, then set the EGR valve onto the intake horn. Thread the remaining four M8 1.25x 25 bolts into place. For ease of service, leave these bolts hand tight for proper alignment of the EGR crossover tube (*Figure 42*).

STEP 34: Reinstall the EGR crossover tube. This process will be the reverse of what is outlined in **STEP 4**. Verify that all **mating surfaces are clean** and install the appropriate supplied gasket on each side of EGR crossover tube.

Figure 42: EGR Valve reinstalled, M8 1.25x25 bolts hand tight.

For all pick-up models: After cleaning all mating surfaces, install the passenger side crossover tube gasket (*item 26*). Push the tube back into alignment with the EGR cooler, then reinstall the retaining clamp and tighten the clamp with an 11MM socket. Reinstall the center retaining clamp and tighten with and 8MM socket. On the driver side of the crossover tube install the remaining gasket (*item 27).* Bring the tube back into alignment with the EGR valve, then install the last retaining clamp, and tighten with an 11MM socket.

Figure 43: EGR Crossover tube reinstalled Model Years 2013-2018.

For cab and chassis models: After cleaning all mating surfaces, install the crossover tube gaskets onto the passenger side of the tube (*item 28*). Cab and Chassis models will reuse the gaskets set to the side in **STEP 5**. Bring the tube back into alignment with the EGR cooler, then thread each of the 10MM retaining bolts back into place and tighten with a 10mm socket. Reinstall the center retaining clamp and tighten with an 8mm socket. Install the remaining crossover tube gasket onto the driver's side of the tube, then align the tube with the EGR valve. Thread each of the 10MM retaining bolts into place, then tighten with a 10MM socket.

Figure 44: EGR Crossover tube reinstalled Model Years 2019-2024

STEP 45: Tighten the EGR valve bolts with a 10MM socket and torque the bolts to 18 FT LBS.

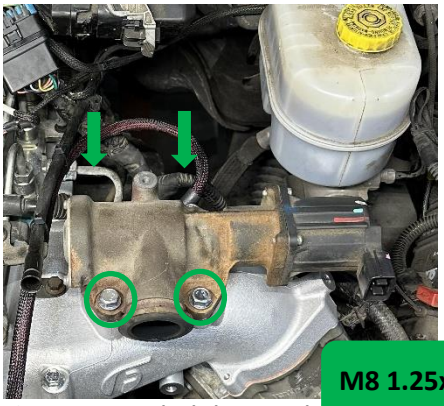


Figure 45: EGR valve bolts torqued to 18 FT LBS.

STEP 46: Reconnect the EGR valve electrical connector and the EGR crossover tube temp sensor connector.

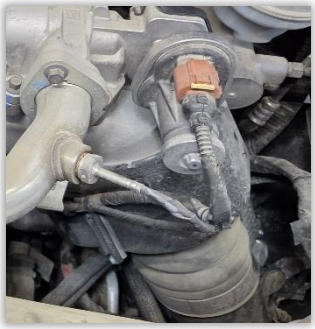


Figure 46: Example image of EGR Valve electrical connector reinstalled.

Figure 47: Example image of EGR Valve electrical connector and crossover tube temperature sensor, reinstalled.

STEP 47: Properly reseat the engine oil dipstick tube with the retaining bracket, then with an 10MM socket or wrench, reinstall and tighten the 10mm bolt including the bolt removed from fuel rail.

STEP 48: Reconnect the MAP/IAT sensor on the back of the intake horn. Reconnect the battery connections.

Figure 48: Example image of EGR crossover tube temperature sensor reinstalled.

STEP 49: Perform a boost pressure down leak test to verify the integrity of the installation and confirm no leaks are present. *Reference our turbocharger installation instructions for further information on this procedure.*

Turbocharger Installation Instructions

Figure 49: New Fleece Intake Horn and all necessary components

STEP 50: Start the engine and bring it up to operating temperature. Inspect and verify that no leaks are present.