

PACKING LIST:

- 1 X Intake Charge Pipe w/ O-Ring
- 1 X Exhaust Block Out Plate
- 1 X Support Bracket Washer
- 2 X 1-1/16" Hose Clamps
- 1 X "U" Shaped Coolant Tube
- 2 X M8x25 Socket Head Bolts
- 3 X M8x25 Hex Head Bolts
- 1 X M10x20 Hex Head Bolt



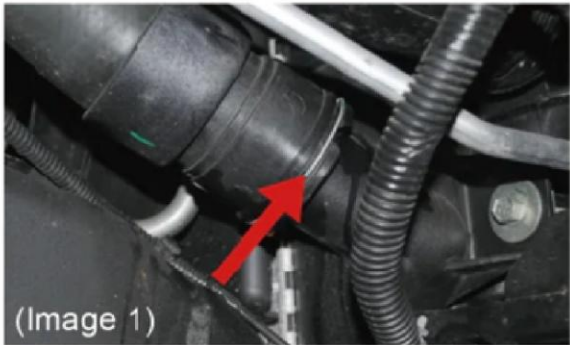
LMM EGR INSTALL

 **NOTE:** Prior to installation, please compare the parts that you have received with the bill of materials provided on this page to assure that you have all the parts necessary for the installation.

 **CAUTION!!! NEVER WORK ON A HOT VEHICLE.**
Serious injury in the form of burns can result if the vehicle has been in use. Allow vehicle to cool prior to installation.
Always wear eye protection when working on or under any vehicle.

 **NOTE:** With a used vehicle, we suggest using a penetrating spray spray lubricant to be applied liberally to all exhaust fasteners. When doing so allow a significant amount of time for the chemical to lubricate the threads before attempting to disassemble.

Step 1: Disconnect batteries.



Step 2: Drain engine coolant by removing the passenger side inner wheel well and disconnecting the lower radiator line by removing the metal clip.

(Note: The line does not need to be pulled all the way out, just enough to allow coolant to flow out.) Once coolant flow has slowed down and the overflow bottle is empty, re-connect the lower radiator line. (Image 1)

Step 3: Loosen the hose clamps on the intake and disconnect the MAF sensor connector.



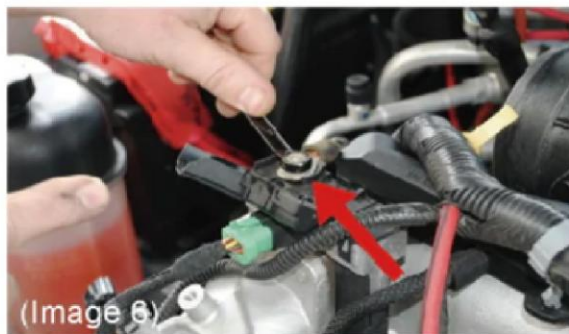
Step 4: Remove the intake tube that is routed from the filter to the plastic turbo mouthpiece. (Image 2)



Step 5: Remove the air box and filter, by gently prying out the three rubber grommets. (Image 3)



Step 6: Remove the resonator box on top of the engine by loosening the hose clamp at the base of the resonator box and remove the long bolt on the front of the resonator box. (Image 4)



Step 8: Open the plastic housing on top of the intake heater grid and disconnect the power wire. (Image 6)



Step 7: Disconnect the charge-back wire on the alternator and remove the plastic clip that holds the wiring harness to the plastic wireway. (Image 5)

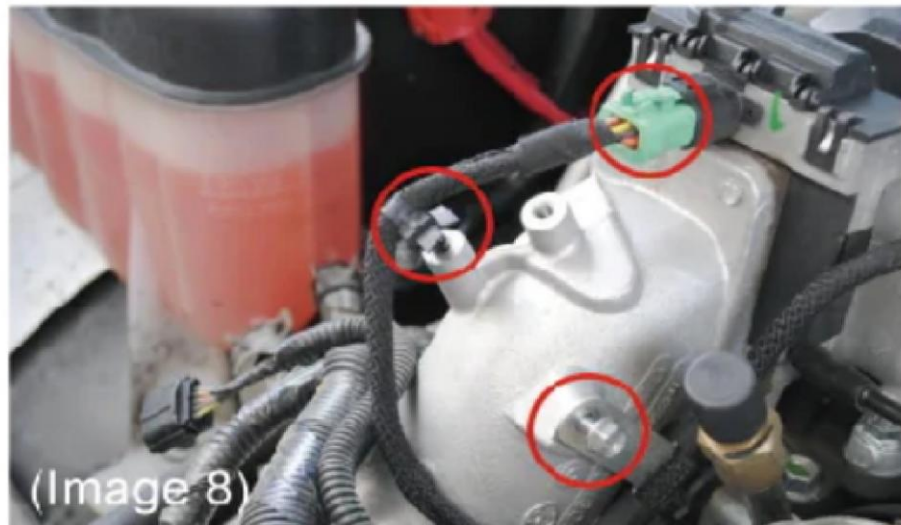


Step 9: Remove the two bolts and one nut that secure the plastic wire way in place. (Image 7)

Step 10: Disconnect the wire connector on the front of the intake heater grid and remove the bolt that secures the connector wire to the side of the intake. (Image 8)

Step 11: Remove the plastic clip that is also holding part of the wire in place. (Image 8)

Step 12: Pop out the metal retaining clip on the plastic intercooler piping and disconnect the plastic piece from the cast aluminum piece. (Image 9)





Step 13: Remove the wire connector and the four bolts that hold the forward most section of the cast intercooler piping on to the intermediate section. on the bottom of the forward most piece, there is a fifth bolt that secures it to a support bracket. (Circled in Image 9)



Step 14: Carefully remove the forward most piece of the cast intercooler piping. As well as the butterfly valve and hard plastic tubing shown in image. Cover the flexible boot with bag to keep debris and coolant out of the intercooler. (Image10)



Step 15: Remove the small tube that is attached to the cast intake, next to the intake heater grid. (Image 11)



Step 16: Remove the four nuts and two bolts that hold the main section of the cast intake in place. It may be easier to remove the intake from the truck if you remove the two studs with a reversed torx socket. (Note: two bolts are located on the back side of the main section of the cast intake.) (Image 12)



Step 17: Remove the PCV tube from the driver and passenger side valve covers as well as the plastic turbo mouthpiece. (Image 13)

Step 18: Remove the plastic turbo mouthpiece by loosening the hose clamp that secures the mouthpiece to the turbo.

Step 19: Remove the two temperature sensors from the EGR cooler on the passenger side.
(Image 14 and 15)



Step 20: Disconnect all of the coolant lines that are running to the EGR cooler.

Step 21: Remove the EGR cooler that is secured by six bolts. Four at the back of the cooler (two bolts are facing forward and two are facing downward) and two rear facing bolts at the front of the cooler.

Step 22: Once the cooler is out, disconnect the temperature sensors at the electrical connectors and remove them from the vehicle.



Step 23: Remove the EGR valve that is held in place with two bolts, keep one of these bolts as it will be used during installation. (Image 16)

Step 24: Remove the coolant lines that previously ran from the EGR cooler to the firewall.



Step 25: Install the new exhaust block ou plate using the factory gasket and the supplied hardware. Two M8 x 20 hex head bolts will bolt in from the back and one M10 x 20 hex head bolt will hold the bracket in place. (Image 17)

Step 26: Using the supplied hose clamps install the supplied "U" shaped coolant tube from one port on the firewall back to the other port on the firewall. Both of these ports previously had coolant lines that ran to the EGR cooler. (Image 17)



Step 27: Remove plastic cover from wiring harness to tuck harness under new charge pipe. (Image18)



Step 28: Install new intake tube. It helps to slide the tube into the rubber tube first. Then bolt the flanged end on after. (Image 19)



Step 29: Transfer the pressure sensor from the stock charge pipe over to the new charge pipe. The mounting bracket will need to be turned 180° on the sensor to allow mounting to the new charge pipe. (image20 and 21)





Step 30: Re-connect the charge-back wire to the top of the alternator. (Image 22)



Step 31: Install the intake resonator box on top of the plastic turbo mouthpiece and secure it with the hose clamp on the bottom and the long bolt at the front of the resonator box. (Image 23)



Step 32: Re-install the air intake and plug in the mass air flow sensor. (Image 24)

Step 33: After everything is tight, refill the vehicle with coolant through the overflow bottle.

Step 34: Re-connect batteries.

Step 35: Start the engine and let it run for a few minutes. Check for any leaks and if needed top up the coolant.

NOTE: Check coolant after driving, add coolant as necessary.