



EGR Delete Kit

For 2017-2025 6.6L Duramax L5P

Installation Manual



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STEP 1

Disconnect the batteries before beginning installation.

STEP 2

Remove the inner fender liner on the passenger side.

STEP 3

Drain the engine coolant by removing the plastic threaded plug located at the lower passenger-side corner of the radiator.

The coolant tank cap is reverse-threaded, but we recommend leaving it on at first. Removing it too soon will cause coolant to spray out of the drain plug and all over the front suspension. Keep the cap in place and allow the coolant to drain slowly into the bucket—this will keep the process much cleaner.

STEP 4

Remove the intake pipe and the air intake box.

STEP 5

Remove the heat shield on the EGR hot-side pipe (circled in the picture), which connects the EGR valve to the cooler and the Y-bridge. Then remove the six bolts with 13 mm heads securing the pipe.



STEP 6

Remove the turbo intake horn and the PCV hose. The PCV hose uses a non-removable metal band; first loosen or rotate the clamp with a hook tool or flat-blade screwdriver. Then, while applying pulling force, use a flat-blade screwdriver or pry bar to push on the bottom of the hose until it disconnects from the horn, leaving the metal band in place. Keep the PCV hose connected to the PCV box on the driver-side upper valve cover.

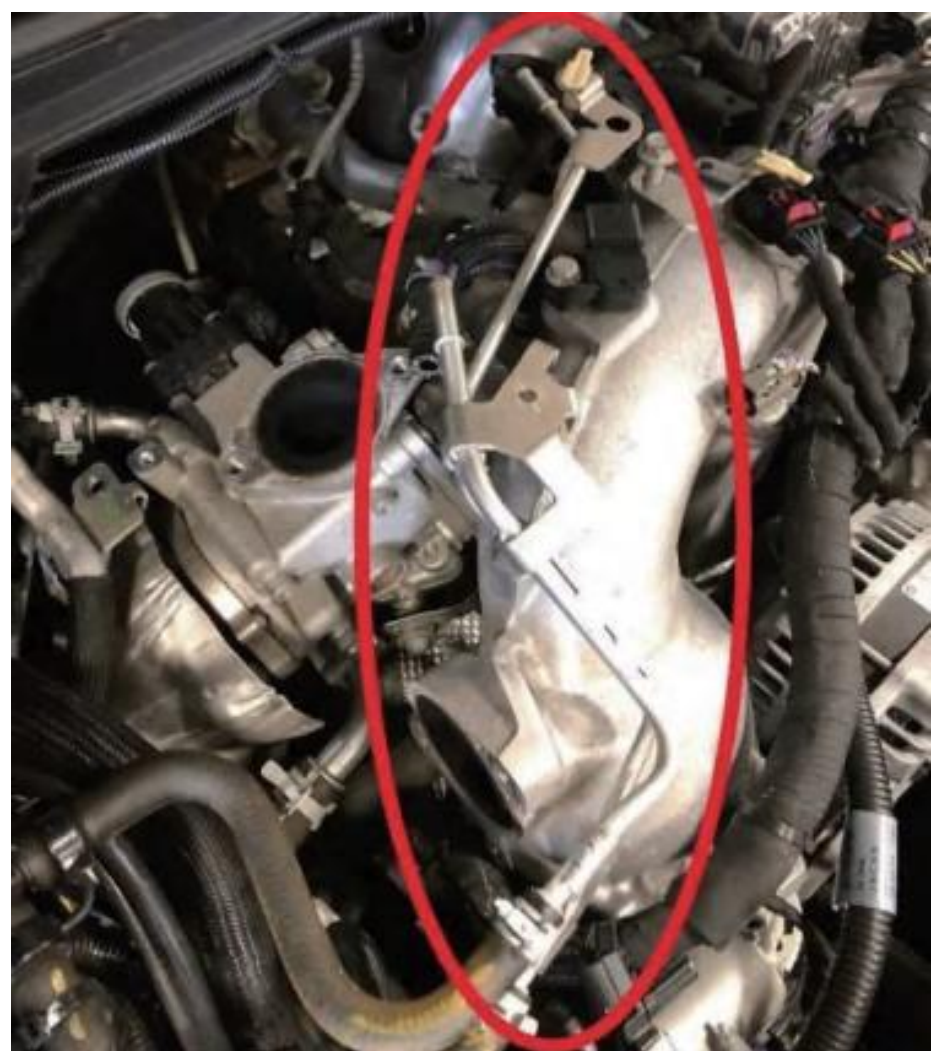
STEP 7

Two bolts secure the horn to the turbocharger. Use a 13 mm swivel socket with a ¼-inch drive and a long extension to remove them. If the bolts are dropped, don't worry—they will be easy to access later.



STEP 8

Remove the small-diameter aluminum coolant line assembly bolted to the top of the Y-bridge. Leave all attached hoses connected—only the aluminum hardline assembly should be removed at this stage.



STEP 9

Remove the 13 mm bolt on the plastic cold-side pipe support bracket, then disconnect the plastic intercooler pipe from the cast aluminum Y-bridge/throttle blade connection. This is a twist-style connection that requires a slight clockwise rotation and downward pulling motion to disconnect. Once removed, cover the intercooler pipe with a plastic bag or shop rag to prevent debris from falling in during the rest of the project.



Image for STEP 9

STEP 10

Disconnect the wire harness located on top of the Y-bridge. The harness includes several Christmas-tree-style clips and smaller connectors. Remove everything attached to the harness on top of the Y-bridge to allow the bridge to be removed. Also, disconnect the connectors on the throttle blade.

STEP 11

Before removing the Y-bridge, the AC compressor must be unbolted. Use a ½-inch ratchet on the belt tensioner to release tension and slide the serpentine belt off the upper pulleys (full removal of the belt is not necessary).

STEP 12

Remove the bale connector bracket from the top of the AC compressor and set it aside.



STEP 13

Remove the four 15 mm bolts securing the AC compressor, then slide the compressor forward toward the fan shroud to gain better access to the Y-bridge bolts.

STEP 14

Using a ¼-inch drive 10 mm socket with a long ¼-inch extension, remove all eight bolts (four on each runner) securing the Y-bridge to the intake runners. Once removed, the Y-bridge will move forward slightly, then lift up and out. The 10 mm bolts will remain in the Y-bridge thanks to the OEM rubber inserts, but be cautious of any hardware or parts falling, as both intake runners will be open. After removing the bridge, stuff rags into the intake runner ports and set the bridge aside for later reinstallation.



STEP 15

Remove the heat shield from the shorter EGR hot-side pipe connecting the lower EGR valve to the upper EGR valve. Then remove the four 13 mm hex-head bolts securing the pipe and take the pipe out.



STEP 16

Disconnect all coolant hoses from the upper EGR valve. Then remove the four 13 mm hex bolts and nuts securing the lower EGR valve to the exhaust manifold, and take out the lower EGR valve.



STEP 17

With the lower EGR valve removed, install the included steel manifold blanking plate with new gaskets and hardware onto the exhaust manifold. Reuse the two factory studs and nuts, and torque them to the factory-specified standard.



STEP 18

Remove the two large-diameter steel coolant pipes from the thermostat crossover housing that feed the EGR cooler. This requires removing one large spring clamp next to the turbo (leave the clamp on the hose for reuse), four 10 mm hex-head bolts, and one 13 mm hex-head bolt—all shown circled in the image.



STEP 19

From the supplied parts bag in the EGR delete kit, locate the billet plug with an O-ring. Apply a light coat of grease to the O-ring, then install the plug into the coolant port on the thermostat housing, just in front of the passenger-side intake port. Secure it with the OEM bolt removed in the previous step.



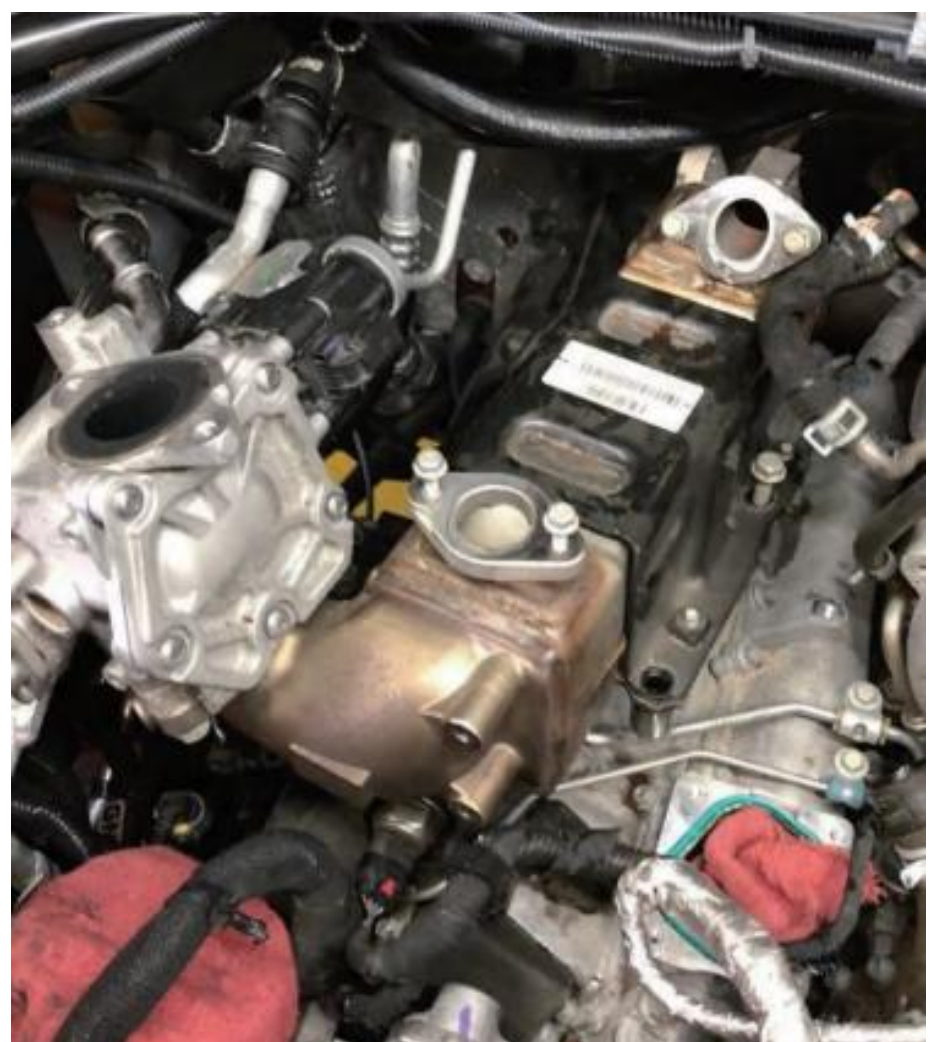
STEP 20

Disconnect the small coolant line from the turbocharger to the top of the EGR cooler.



STEP 21

Remove the five 13 mm hex-head bolts securing the EGR cooler to the engine, then remove the cooler assembly.



STEP 22

Remove the passenger-side aluminum coolant tube that connects the firewall heater-core hose to the lower radiator hose. At the end of the heater-core hose (circled in the picture), use a flathead screwdriver to loosen the clamp securing the quick connector, then pull the tube upward. Once disconnected, slide the small clamp back down into position.



At the bottom of the tube, just in front of the upper control arm, disconnect the hose from the tube and keep the spring clamp on the hose for reuse. Then, remove the bolts securing the tube to the engine.



A smaller-diameter line is welded to this tube to deliver coolant to the urea injector. Disconnect the attached small rubber tubes from this line to allow complete removal. The picture on the right shows the removed components.



STEP 23

Install the 20-inch long, 5/8-inch hose assembly in place of the previously removed hardline. Attach the brass barb fitting to the OEM hose at the bottom using the OEM spring clamp, as shown in the picture.



STEP 24

Connect the upper end of the new hose assembly to the heater-core hose fitting as the OEM hardline did, pushing it together until it clips into place.



STEP 25

Disconnect the small rubber hoses from the urea injector located in the front elbow of the exhaust system, just below the downpipe. Then remove the hose/hardline assembly from the side of the engine block, which was connected to the previously removed line and the lower radiator hose.



STEP 26

Locate the 5/16-inch barbed plug and clamp, and insert the plug into the rubber hose disconnected in Step 25 (this hose connects to the main, large lower radiator hose). Secure the clamp and use a zip tie to hold the line in place.



STEP 27

The photo shows where to install the supplied ¼-inch silicone cap and hose clamp to seal the now-unused coolant port on the coolant supply line (below) leading to the turbine center section.



STEP 28

Locate the heater hose assembly, which has a quick-connect fitting on one end and a 1.3-inch diameter aluminum barb on the other end. Install the hose by clipping the quick-connect end onto the heater core fitting on the firewall and inserting the barbed end into the hose from the thermostat housing next to the turbo, using the OEM spring clamp retained from earlier.



STEP 29

1. For 2017–2019 models
Install the supplied 15-inch long, 3/8-inch diameter coolant line onto the upper turbo coolant line using the OEM spring clamp. Connect the brass barb end to the OEM coolant line that tees into the coolant tank hose near the battery.

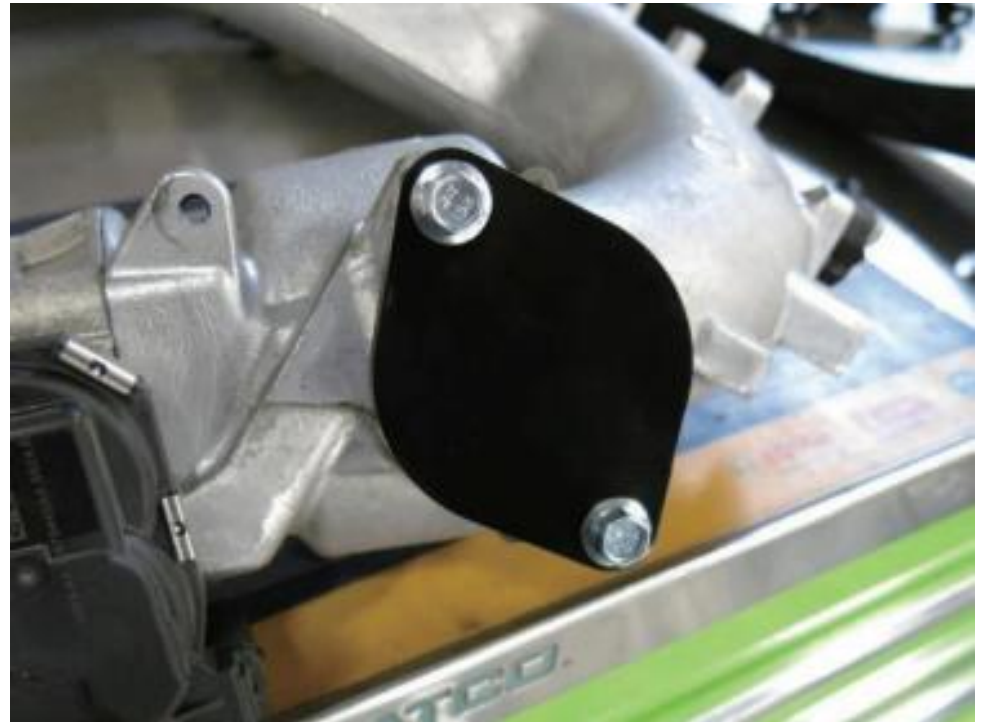


2. For 2022 and newer models
Reroute the turbocharger coolant line to the coolant overflow tank as shown.



STEP 30

Locate the bridge fender. The kit includes 8 mm flange-head bolts and washers. Install the fender onto the Y-bridge and torque the flange bolts to the factory specification.



STEP 31

Reinstall the radiator coolant drain plug and refill the coolant.

Note that the coolant tank cap is reverse-threaded.

STEP 32

Reinstall the intake assembly.

STEP 33

Reinstall the fender liner.

STEP 34

Start the truck and check for leaks after a short idle period. The coolant system may take a few heat cycles to purge all air, so you may need to top off the coolant once or twice.



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