

Chrysler 3.0L Eco Diesel EGR Cleaning Instructions

**Always wear gloves and safety glasses
when performing this service**

EGR System Consists of:

- **Cold side EGR valve (After EGR cooler) controls Exhaust gases for proper emissions control of No_x gases**
- **EGR cooler (controls temperature of exhaust gases to the air Intake of the engine)**
- **EGR cooler bypass valve (controls exhaust flow temperature by directing exhaust flow either through or around the EGR Cooler)**
- **EGR temperature sensor (measures EGR cooler exhaust temperature and efficiency)**

These items are critical for proper emissions management control and must be cleaned on a regular basis for optimum efficiency.

First steps before any service can be performed.

- 1. Add TerraDiesel™ Fuel Injector Cleaner (201255) to the vehicle's fuel tank.**
- 2. Remove the plastic engine cover.**
- 3. If the engine is hot, the EGR cooler must be cooled – see note in step**

Adapters Required:

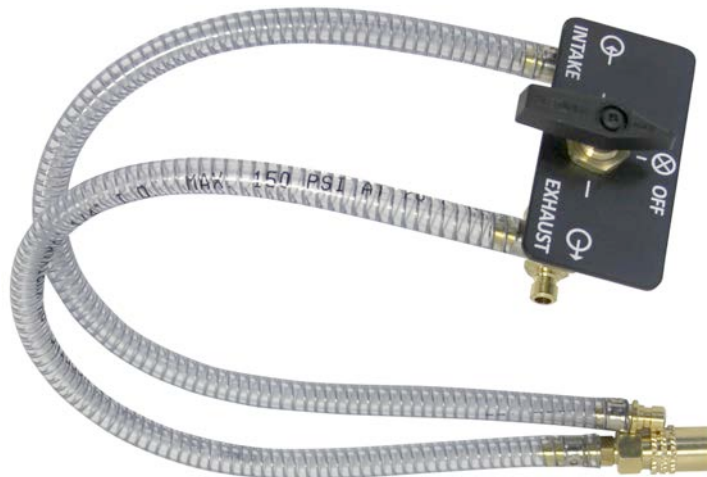
**201581
Intake**



**201528
Exhaust**



**201399
EGR Manifold**



Tools Required:

- Scan tool to operate Intake swirl flaps
- 201170 – TerraDiesel™ EGR Cleaning Tool

Locations of EGR components:

- EGR cooler bypass valve
- EGR valve outlet pipe
- EGR Cooler
- EGR temperature sensor
- EGR valve

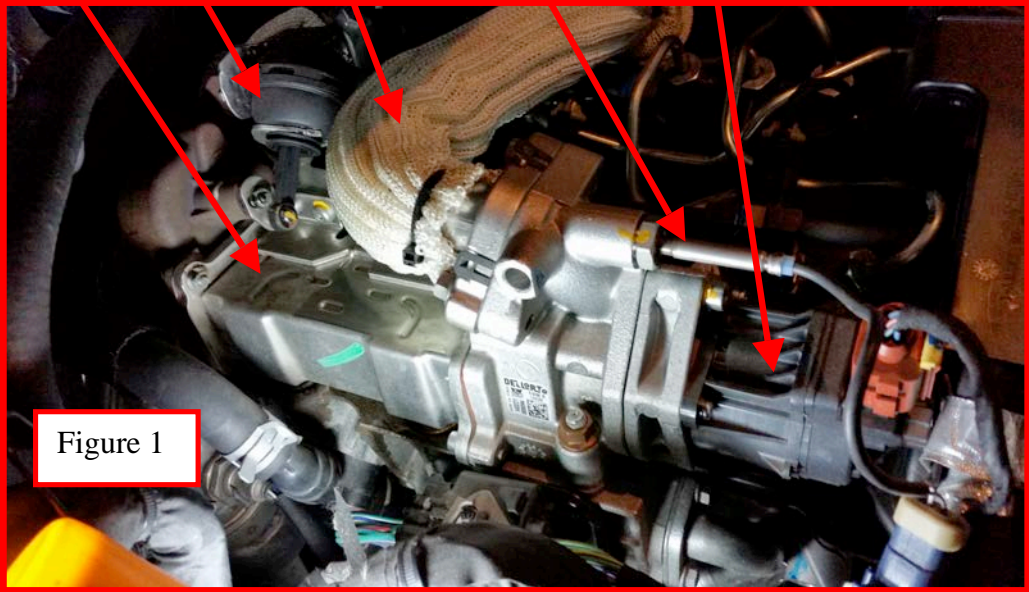
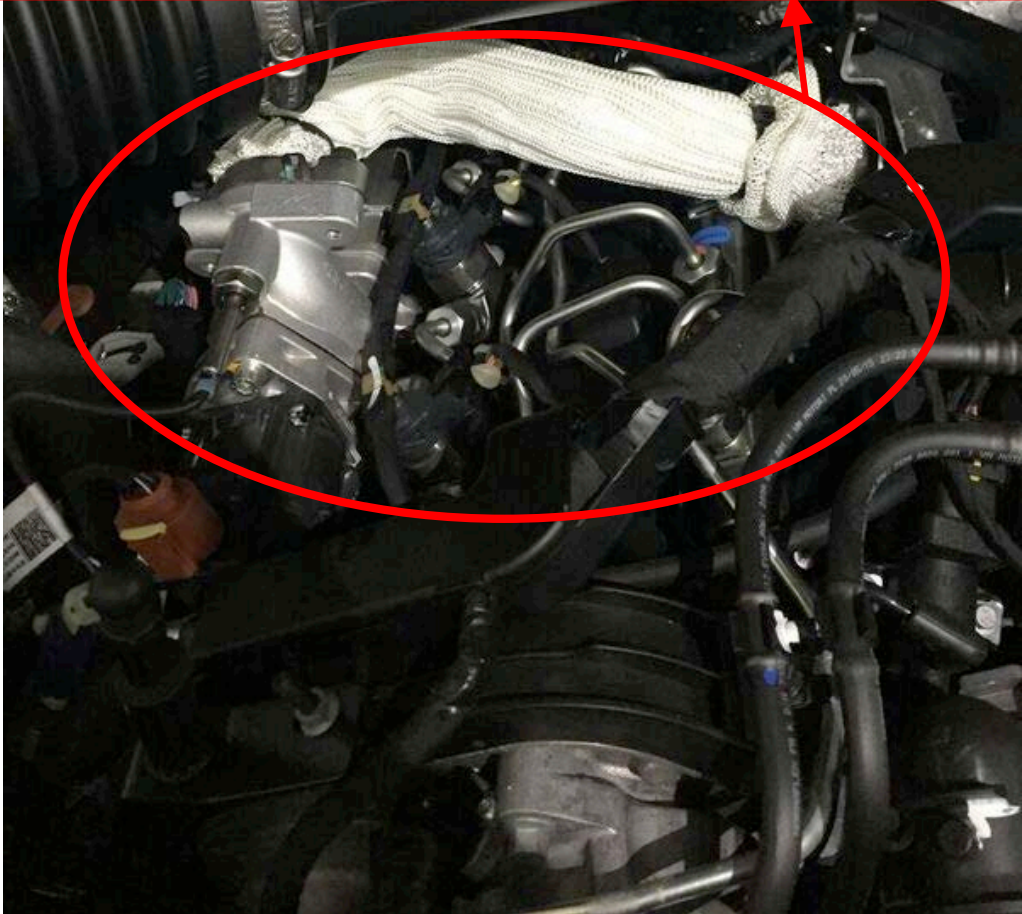


Figure 1



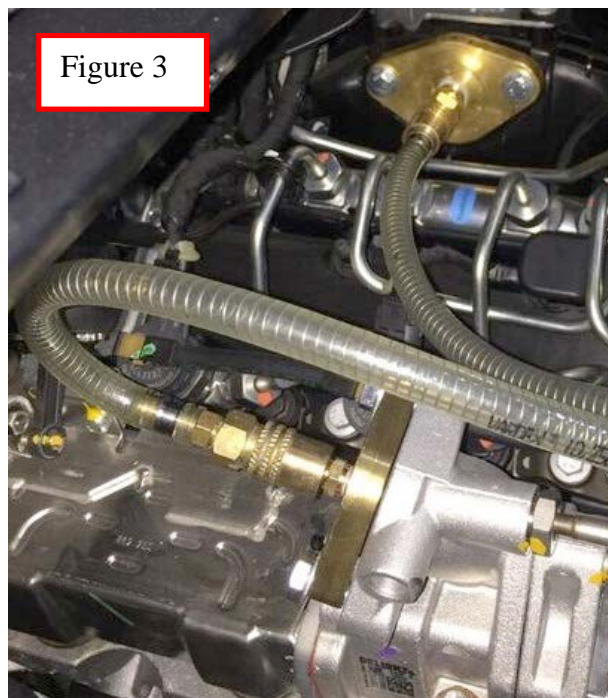
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1. Remove the EGR valve outlet pipe to Intake plenum (4 screws) (see Figure 2).



Quick Tip: Place the EGR valve outlet pipe into a bucket/container and pour EGR fluid into the outlet pipe. This will aid in the dislodging of soot from the pipe while the EGR cleaning procedure is performed.

2. Install the EGR Intake Adapter (201581) and Exhaust Adapter (201528) (see Figure 3) in place of the above EGR valve outlet pipe using the existing 4 screws.

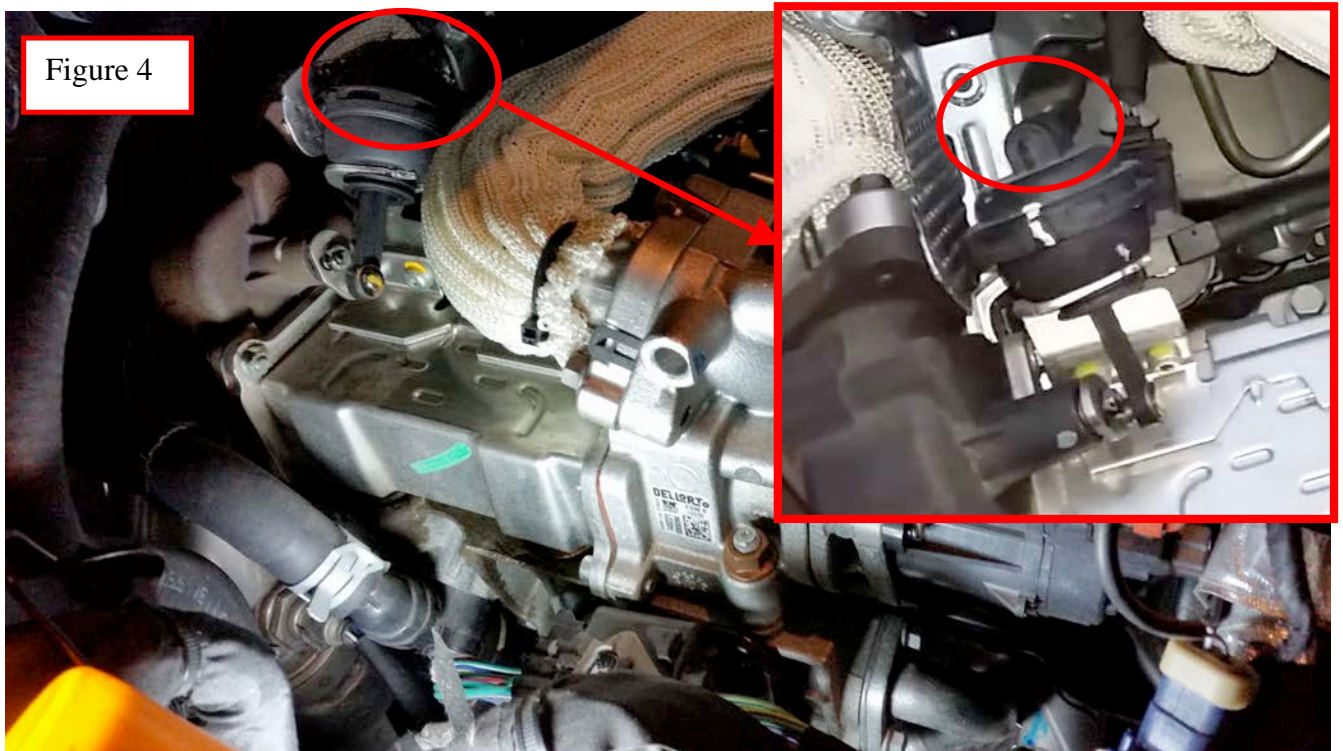


3. Attach the EGR Manifold (201399) to the EGR Intake and Exhaust adapters. Attach the EGR Cleaning Tool (201170) to the EGR Manifold. Ensure that the air valve and fluid valve on the EGR Cleaning Tool are closed – see the EGR Cleaning Tool user guide.
4. Unscrew the fill cap and fill with 32 oz (946 mL) of TerraDiesel™ EGR System Cleaner (201278, 201279 or 201280). For the first application or severe coking, 64 oz. may be required.
5. Reinstall the fill cap and hang the EGR Cleaning Tool from the hood latch. Connect shop air. Set air pressure on the EGR Cleaning Tool to 40-50 psi.

NOTE: If the engine is hot, the EGR cooler must be cooled before treatment can start. Before step 6 can proceed, start engine, open the EGR Cleaning Tool air valve, keeping the fluid valve closed, turn valve on the EGR manifold to exhaust and flush the EGR Cooler with air for 2 minutes.

If no flow is observed then increase engine RPM to 1000 in order to open the EGR valve as engine may be cold or use scan tool.

6. Start the vehicle engine. Disconnect the EGR cooler bypass valve vacuum hose (see Figure 4). This will close the EGR bypass valve, allowing flow through the EGR Cooler.

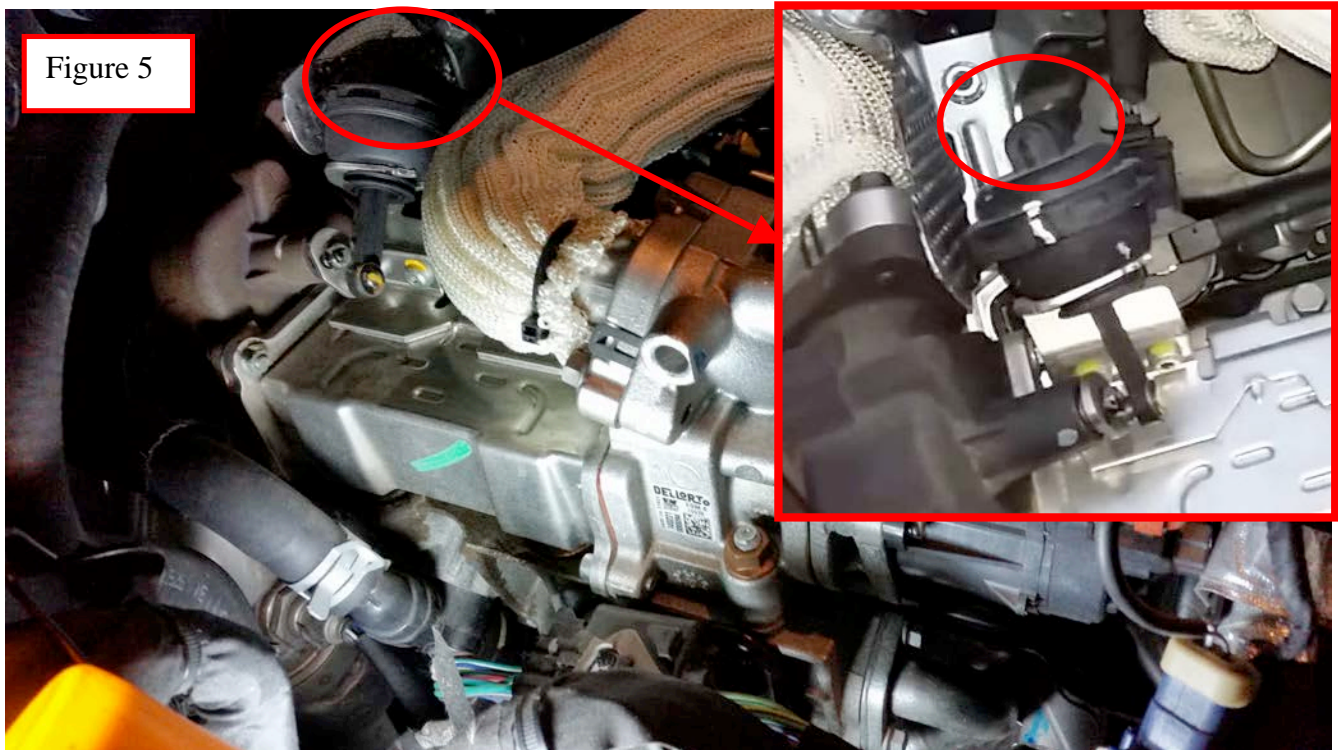


7. Set the EGR Manifold to exhaust.
8. Open the EGR Cleaning Tool air valve. Adjust the regulator to maintain the initial pressure, and then open the EGR Cleaning Tool fluid valve.

NOTE: If no flow is observed, the EGR valve may be closed until the engine heats up. Increase engine RPM to 1000 in order to heat up the engine or use scan tool to open the valve.

9. After 1/4 of the fluid has been consumed, turn the fluid valve off and let the air flow for an additional 2 minutes to flush deposits into Exhaust stream.
10. Repeat step 8-9 allowing another 1/4 of the fluid to be consumed.

NOTE: During this step cycle the EGR cooler bypass valve by unplugging and reconnecting the EGR Cooler bypass valve vacuum hose (see Figure 5) several times throughout this step. This will allow cleaning of the EGR cooler bypass port.



11. Turn the EGR Manifold to intake, open the EGR Cleaning Tool fluid valve. Using a scan tool, command the swirl flaps open and closed several times throughout this step. Continue service until the EGR Cleaning Tool is empty.

NOTE: If, at any time during the Intake service you hear a diesel knock sound, turn the EGR Manifold to off for 2 minutes. After two minutes then turn the EGR Manifold to intake and continue service.

After service is complete, let the vehicle operate for an additional 5 minutes and rev the engine several times to clear all residual fluid.

12. Turn the fluid and air valve on the EGR Cleaning Tool to the closed position. Turn the vehicle off. Detach shop air line and depressurize the EGR Cleaning Tool by rotating the regulator knob counter clockwise.
13. After EGR cooler outlet pipe has soaked for at least 15 minutes, clean the pipe using EGR cleaning fluid and a flexible 1" round brush inside a bucket or waste container. Fluid can be saved to be used on other EGR components if required.
14. Remove the EGR adapters and reassemble the vehicle's components in the reverse order of removal.
15. Add one bottle of TerraDiesel™ Multi-function Fuel Treatment (201250) to the vehicle's fuel tank.
16. After service, reset any engine codes. The vehicle should then be set to run a manual regeneration cycle or if that is not possible, the vehicle should be driven at highway speeds (or in the case of non-highway equipment operated under a load) for approximately 30 minutes. This is necessary to remove all of the cleaning solution from the passages and cooler(s) and to combust any material that has reached the diesel oxidation catalyst (DOC) and diesel particulate filters (DPF).

This should be done as soon as possible after the service.