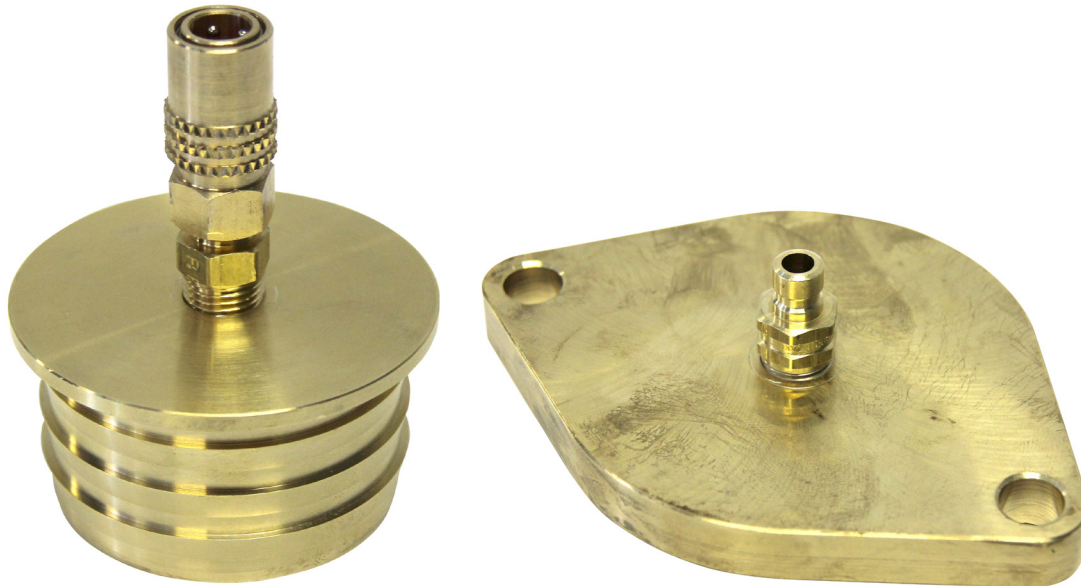




Cummins ISX14
Part No. 069-3621 & 069-3622



CAUTION:

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 Nox gases
- EGR cooler (controls temperature of exhaust gases to the air intake to the engine)
- EGR cooler bypass valve (controls exhaust flow temperature to the air intake from the exhaust through the EGR cooler) – Model year 2008 - Present
- 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 Part# 400-3012 DieselTune™ Max Strength Fuel Injector Cleaner to vehicle's fuel tank.
2. Remove plastic engine cover.
3. If engine is hot, the EGR cooler must be cooled – see note in step 9.

Tools and Adapters Required:



069-3621



069-3622



069-3399



500-0170M

Locations of EGR components:

- EGR Cooler (Right side of engine)
- EGR valve outlet hose
- EGR Temperature Sensor
- EGR valve outlet pipe
- EGR valve

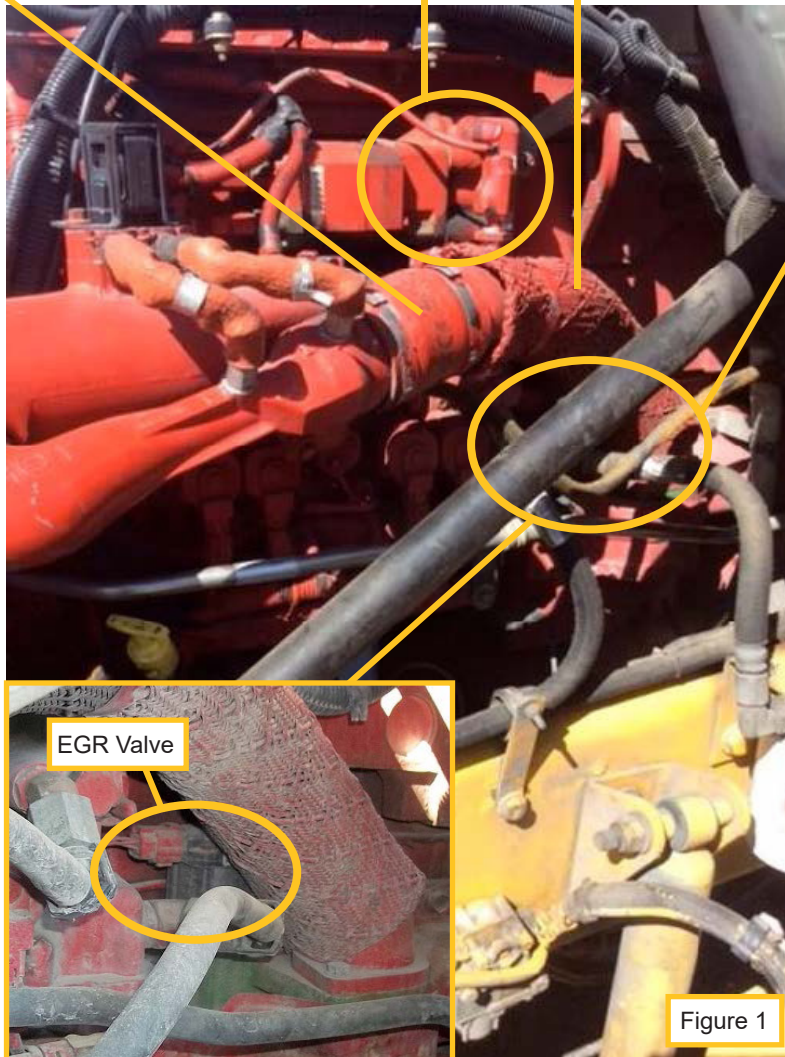
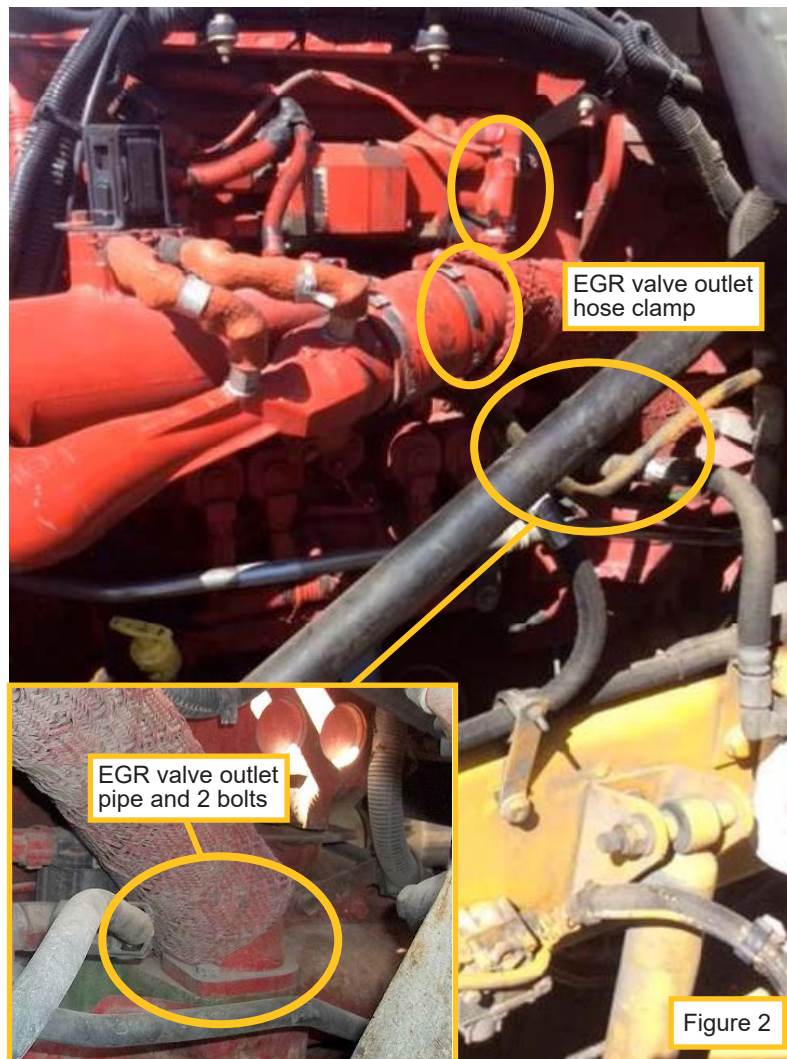


Figure 1

4. Disconnect EGR temperature sensor electrical connector. Remove EGR temperature sensor from EGR valve outlet pipe and reconnect to electrical connector. Remove 2 bolts on the EGR valve outlet pipe (see Figure 2) and loosen 1 clamp on EGR valve outlet hose. Remove EGR valve outlet pipe and set aside. Location is on left side of engine bay.



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.

5. Install the EGR Intake Adapter (069-3621) using existing clamps (see Figure 3) and Exhaust Adapter (069-3622) using existing bolts into EGR Valve outlet hose (see Figure 4)



6. Attach the EGR Manifold (069-3399) to EGR intake and exhaust adapters. Attach The EGR Cleaning Tool (500-0170M) to the EGR Manifold. Ensure that the air valve and fluid valve are closed – see the EGR Cleaning Tool user guide.

7. Unscrew the fill cap and fill with 64oz of EGR System Cleaner (400-0280). For first application or severe coking, 128 oz. may be required.

NOTE: When using 128 oz, use 64 oz on exhaust side first then use 64 oz on intake side. In between exhaust and intake cleaning the air pressure must first be set to zero before adding the remaining 64 oz.

8. 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 50-60 psi.

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

9. Start the vehicle engine. Set the EGR manifold to exhaust. The EGR valve will open when the engine is operating.
10. Open the air valve on the EGR Cleaning Tool, adjust the regulator to maintain initial pressure and then open the fluid valve on the EGR Cleaning Tool.

NOTE: If no flow is observed then increase engine RPM to 1000 in order to open the EGR valve as engine may be cold.

11. After 32oz 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.
12. Set valve on the EGR Manifold to intake, open fluid valve and continue service until the EGR Cleaning Tool is empty.

NOTE: At any time during the intake service you hear a diesel knock sound, turn the EGR Manifold valve to off for 2 minutes. After 2 minutes, turn the EGR Manifold valve to intake and continue service.

13. Let the vehicle operate for an additional 5 minutes and rev the engine several times to clear all residual fluid.
14. Turn the fluid and air valve on the EGR Cleaning Tool to the closed position. Turn the vehicle off. Detach shop airline and depressurize the EGR Cleaning Tool by rotating the regulator knob counter clockwise.
15. 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.
16. Remove the EGR adapters and reassemble vehicle components in the reverse order of removal.
17. Add one bottle of Part# 400-3022 DieselTune™ Complete Fuel Supplement to vehicle's fuel tank.
18. 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.



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