



## EEDF400-576 & EEDF400-577 & EEDF400-385 & 98821299

### Cummins ISC 8.3 L EGR Cleaning Instructions



**WARNING:** Wear gloves and safety goggles (User and bystanders) when performing this service

**IMPORTANT:** A DPF Regeneration event is required after this service. Regeneration can be initiated for many engines using one of the following Snap-on Diagnostic Tools:

- EEHD184040 Pro-Link Ultra (Snap-on)
- EEHD186030 Pocket IQ2 (Blue-Point)

#### EGR System Consists of:

- Cold side EGR valve (after EGR cooler), which controls exhaust gases for proper emissions control of  $\text{No}_x$  gases
- EGR cooler (controls temperature of exhaust gases to the air intake to the engine)
- EGR temperature sensor (measures EGR cooler exhaust temperature and efficiency)

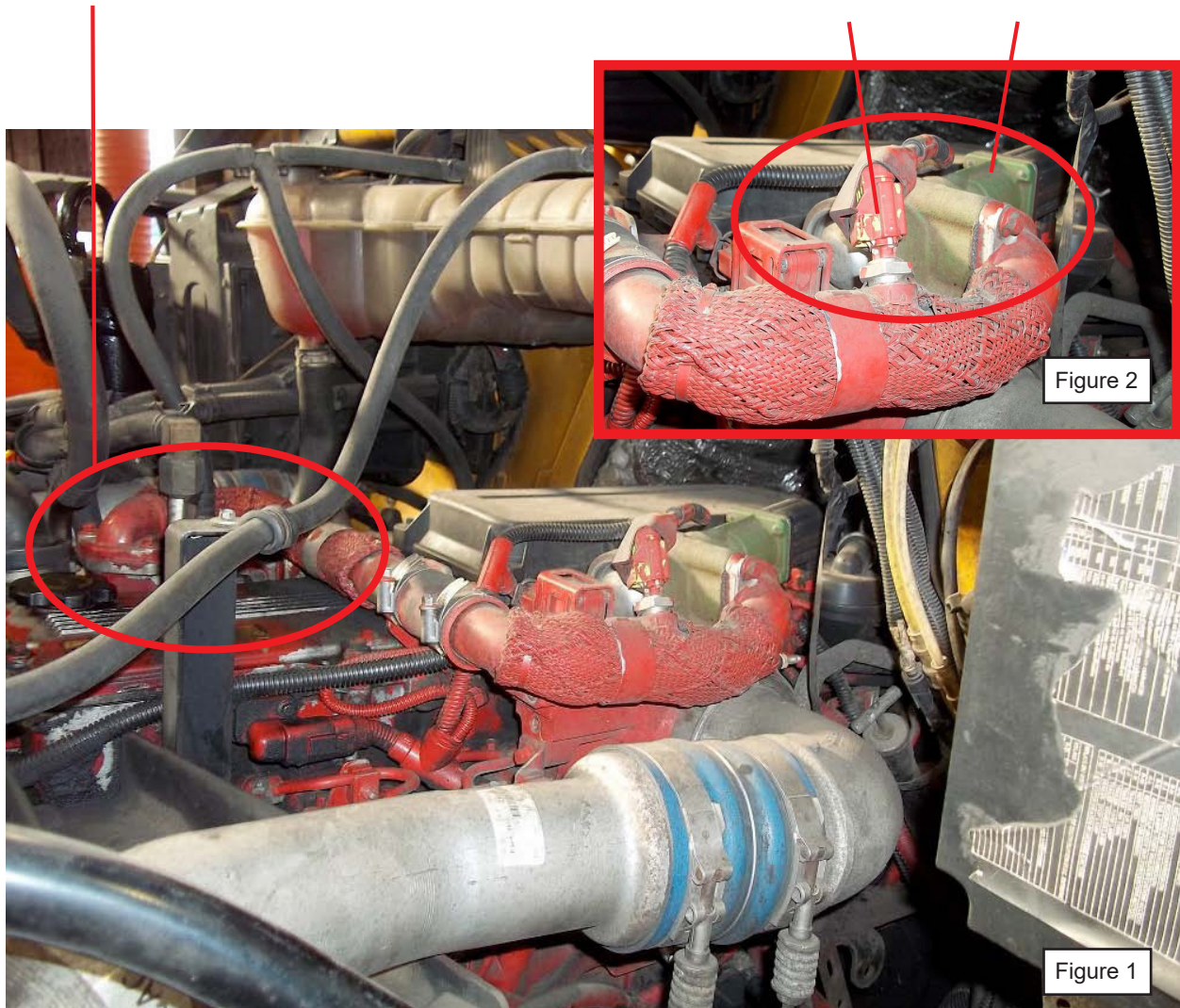
These items are critical for proper emissions management control and must be cleaned on a regular basis for optimum efficiency.

#### First steps before any service can be performed.

1. Add Blue-Point® Diesel Fuel Injector Cleaner (EEDF400-INJ) 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 9.

### Locations of EGR components:

- EGR cooler (figure 1)
- EGR Temperature Sensor (figure 2)
- EGR valve (figure 2)



### Tool & Manifold Required:

- EGR Tool (EEDF400)
- EGR Manifold (EEDF400M)

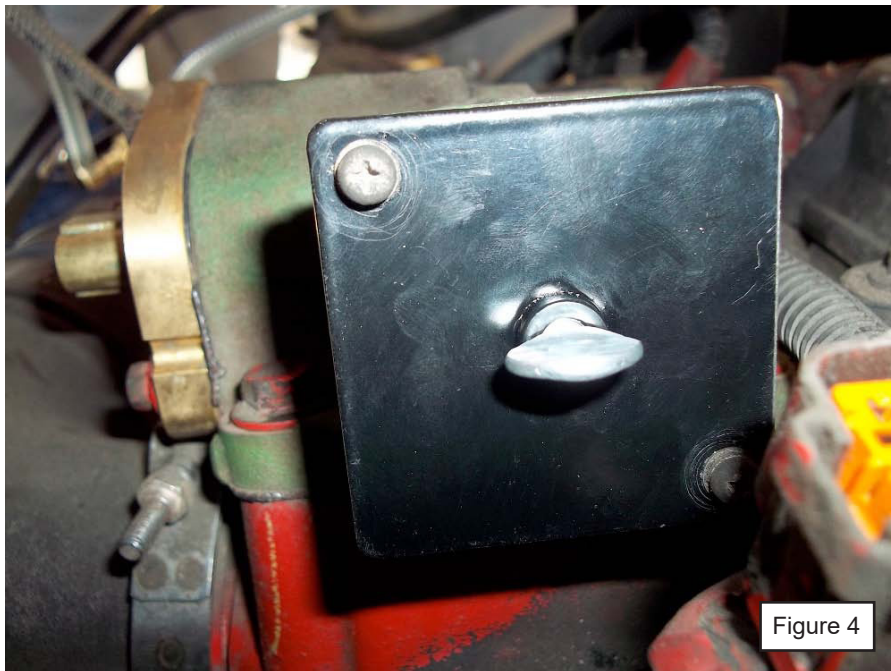




4. Remove both bolts on the EGR cooler outlet where connected at the EGR valve (see figure 3). Loosen clamp on EGR cooler outlet pipe and rotate EGR outlet cooler pipe 90° or 180° towards front of engine bay (see figure 3).



5. Turn thumbscrew on EGR Manual Opener (EEDF400-385) fully counterclockwise but do not remove it from the adapter. Remove EGR valve solenoid (4 screws) and set aside, install EGR Manual Opener in its place using only two screws. Disconnect EGR valve solenoid electrical connector. Rotate thumb screw fully clockwise, EGR valve is now open (see figure 4).



**Note:** For easier installation of the EGR manual valve opener, it is best to remove EGR valve assembly first (4 bolts). Install EGR Manual Opener and then reinstall EGR valve assembly.

6. Install EGR intake adapter (EEDF400-576) using the existing bolts at the EGR valve and install the EGR exhaust adapter (EEDF400-577) using the two nuts and bolts (98821299) supplied on the EGR cooler outlet pipe. Tighten EGR cooler outlet pipe clamp (see figure 5).



Figure 5

7. Attach EGR manifold (EEDF400M) to EGR intake and exhaust adapters. Attach EGR tool (EEDF400) to the EGR Manifold. Ensure air valve and fluid valve are closed – see EGR tool user guide.
8. Unscrew fill cap and fill with 64oz (1892mL) of EGR and Induction System Cleaner (EEDF400-EGR). For first application or severe coking, 128 oz. or more 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.**

9. Reinstall the fill cap and hang tool from the hood latch. Connect shop air. Set air pressure on EGR tool to 40-50 psi.

**NOTE: If engine is hot, the EGR cooler must be cooled before treatment can start. Before step 10 can proceed, open EGR tool air valve, keeping the fluid valve closed, turn valve on the EGR manifold to exhaust and flush cooler with air for 2 minutes.**

10. Start vehicle engine. Set EGR manifold to exhaust.
11. Open air valve on EGR tool, adjust regulator to maintain initial pressure and then open the fluid valve on the EGR tool.
12. 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.
13. Repeat step 11-12 allowing another 1/4 of the fluid to be consumed.
14. Set valve on the EGR Manifold to intake, open fluid valve and continue service until EGR tool is empty.

**Note: At any time during the intake service you hear a diesel knock sound, turn manifold valve to off for 2 minutes. After two minutes then turn manifold valve to intake and continue service.**

**Let the vehicle operate for an additional 5 minutes and rev the engine several times to clear all residual fluid.**

15. Turn the fluid and air valve on tool to the closed position. Turn Vehicle off. Detach shop air line and depressurize the tool by rotating the regulator knob counter clockwise.
16. Remove adapters and reassemble vehicle components in the reverse order of removal.

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17. Otherwise the vehicle must 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 must be completed immediately after the service.**

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Snap-on, 2801 80th St., Kenosha, WI 53143  
[www.snapon.com](http://www.snapon.com)

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