EEDF400-531 & EEDF400-532

Mercedes Sprinter 2.1L EGR Cleaning Instructions

Intake
EEDF400-531

Exhaust
EEDF400-532

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

IMPORTANT: Immediately after a service, a forced regen must be completed. If a regen cannot be commanded via a scan tool (see OEM recommendations), the vehicle must be road tested at highway speeds for approximately 20-30 minutes. This is necessary to remove any remaining cleaning solution from the passages and cooler(s), and to combust any material that has reached the diesel particulate filters (DPF).
<u>This must be completed immediately after the service.</u>

EGR System Consists of:

- Hot side EGR valve (before EGR cooler) controls exhaust gases for proper emissions control of Nox gases
- EGR pre-cooler (controls temperature of exhaust gases to the EGR valve)
- EGR cooler (controls temperature of exhaust gases to the air intake to the engine)
- EGR cooler bypass valve located pre EGR cooler (controls cold exhaust gases to bypass EGR cooler)
- Exhaust back pressure sensor (measures exhaust pressure pre EGR valve)
- 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 6

Locations of EGR components:

- EGR cooler (Figure 1)
- EGR Cooler Outlet Pipe (see figure 1)
- EGR valve underneath EGR cooler (not visible)
- EGR Cooler Bypass valve (not visible)

Figure 1

Tool & Manifold Required:

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

EEDF400M

EEDF400

4. Remove EGR cooler outlet pipe by removing four bolts (see figure 2).

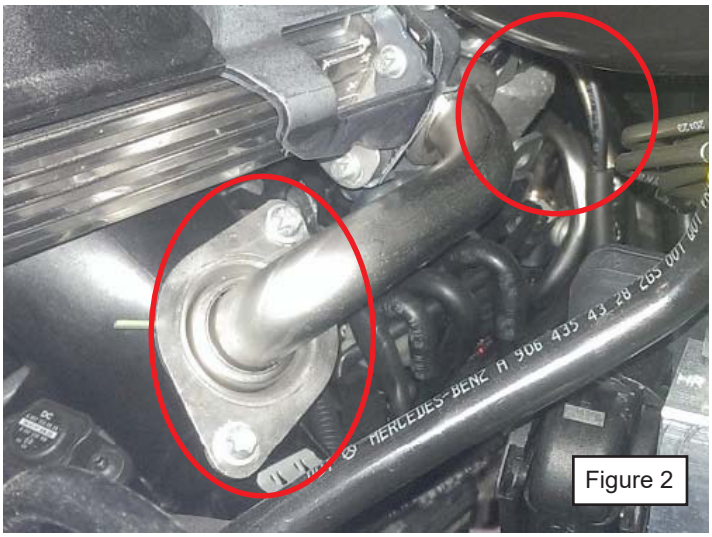

Figure 2

5. Install EGR Intake (EEDF400-531) and Exhaust (EEDF400-532) Adapters in place of above EGR cooler outlet pipe (see figure 3) using the four bolts. The notch on intake adapter must be facing towards the engine for proper alignment and function (see figure 3A).

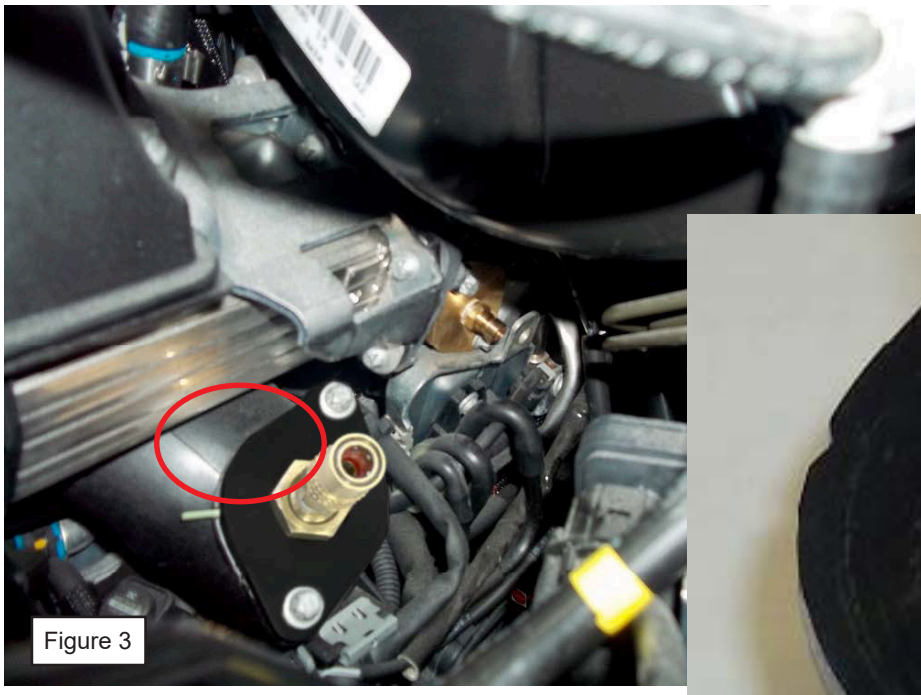
Figure 3


Figure 3A

Quick Tip: Place the EGR cooler outlet pipe into a bucket/container and fill container with EGR fluid until submerged, this will aid in the dislodging of soot from the pipe while the EGR cleaning procedure is performed see step 14.

6. Attach aerator assembly to the EGR Intake and Exhaust Adapters. Attach EGR tool to the EGR Manifold. Ensure air valve and fluid valve are closed – see EGR tool user guide.
7. Unscrew fill cap and fill with 32oz (946mL) of EGR and Induction System Cleaner (EEDF400-EGR). For first application or severe coking, 64 oz. may be required.
8. Reinstall the fill cap and hang tool from the hood latch. Connect shop air. Set air pressure on EGR tool to 40-45 psi.

NOTE: If engine is hot, the EGR cooler must be cooled before treatment can start. Before step 6 can proceed, ignition must be on and using a scan tool, command the EGR open. Open EGR tool air valve, keeping the fluid valve closed and flush cooler and pre-cooler with air for 2 minutes.

9. Start vehicle engine. Using the scan tool command EGR valve open (80% max). The EGR valve will operate normally for 30 seconds. Command the EGR valve open again and again throughout steps 8-10.
10. Set valve on EGR Manifold to exhaust (see figure 4).

Figure 4

11. Open Air valve, adjust regulator to maintain initial pressure, then open the fluid valve on the 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. Using the scan tool command EGR cooler bypass actuator close (0%). The EGR cooler bypass will operate normally after 30 seconds. Command EGR bypass actuator close again and again throughout this step until another 1/4 of the fluid to be consumed.
14. 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.
15. Set valve on EGR Manifold to intake, open fluid valve and continue service until EGR tool is empty (see figure 5).

Figure 5

Note: If at any time during the intake service you hear a diesel knock sound, turn air and liquid valve on EGR tool closed for 2 minutes. After two minutes then turn air and liquid valve open and continue service.

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

16. Turn the fluid and air valve on tool to the closed position. Detach shop air line and depressurize the tool by rotating the regulator knob counter clockwise.
17. Clean the EGR cooler outlet pipe (as seen in figure 1 and 2) by soaking the pipe for 15 minutes in cleaning fluid and then brushing the interior of the pipe.
18. Remove the EGR adapters and reassemble vehicle components in the reverse order of removal.

19. Immediately after a service, a forced regen must be completed. If a regen cannot be commanded via a scan tool (see OEM recommendations), the vehicle must be road tested at highway speeds for approximately 20-30 minutes. This is necessary to remove any remaining cleaning solution from the passages and cooler(s), and to combust any material that has reached the diesel particulate filters (DPF).
<u>This must be completed immediately after the service.</u>