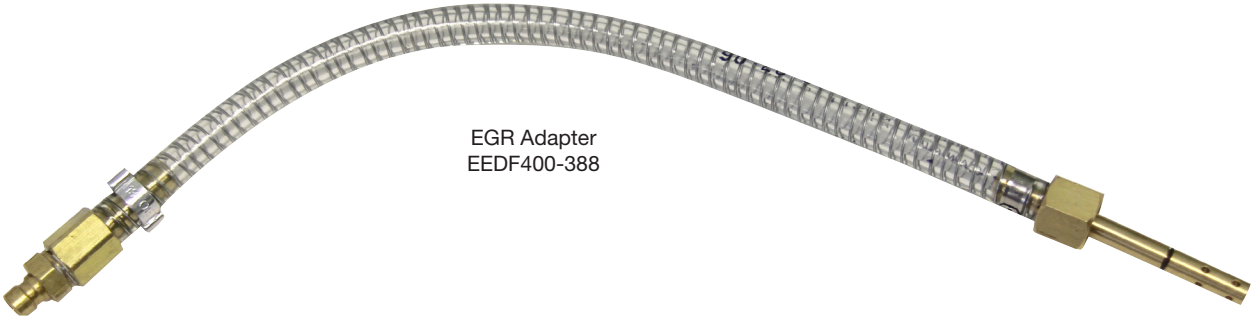
EEDF400-388

3.0L Sprinter OM642 Engine EGR Cleaning Instructions



EGR Adapter
EEDF400-388

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:

- 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)
- EGR temperature sensor (measures EGR cooler exhaust temperature and efficiency)
- Swirl flaps (control airflow under different engine speed and loads) located inside intake plenum

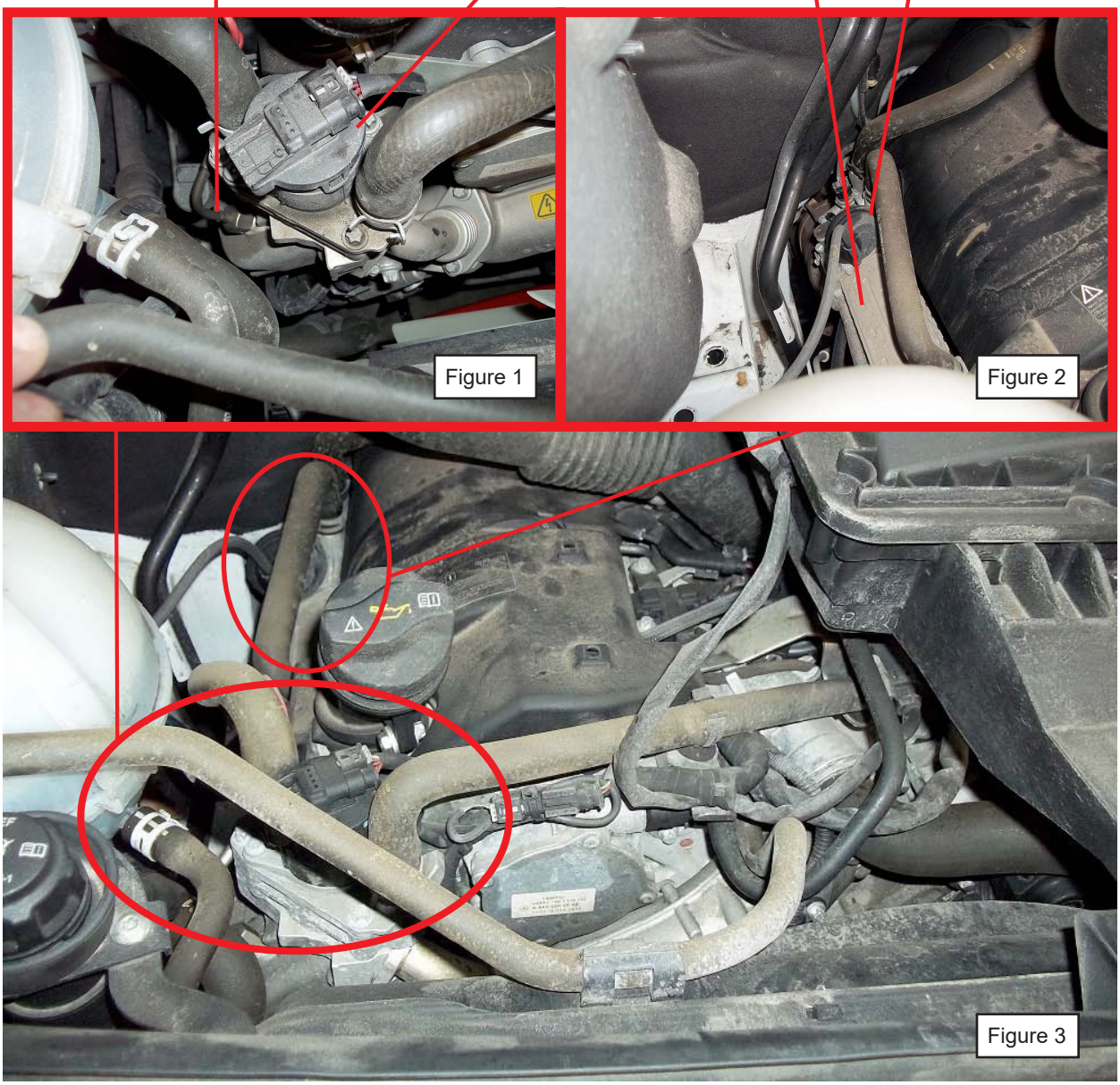
These items are critical for proper emissions management control and must be cleaned on a regular basis for optimum efficiency.

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 step 8.

Locations of EGR components:

- EGR temperature sensor
- EGR valve
- EGR cooler and bypass valve



Tool & Manifold Required:

- EGR Tool (EEDF400)

EEDF400

4. Remove EGR temperature sensor (see figure 1). Do not disconnect wire connector.
5. Install EGR Adapter (EEDF400-388) in its place (see figure 4).

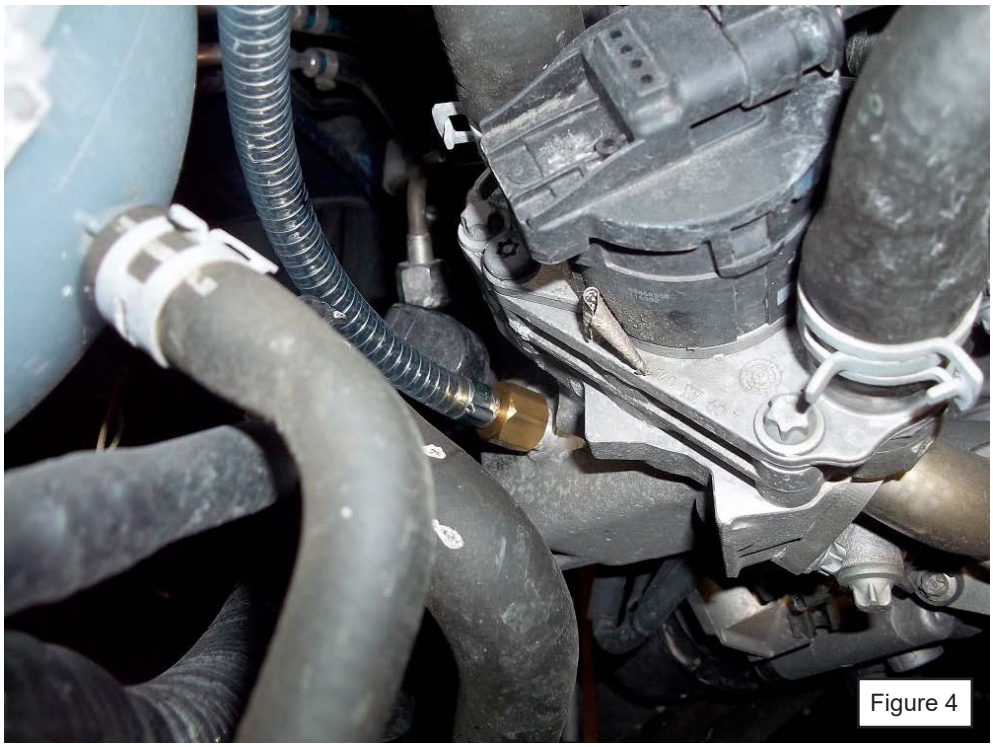


Figure 4

6. Attach aerator assembly to EGR Adapter. Ensure air valve and fluid valve are closed.
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 10 can proceed, ignition must be off for the EGR to be closed. Open canister air valve, close canister fluid valve and flush cooler with air for 2 minutes.

9. Start vehicle engine. Using the scan tool, command the EGR closed. Disconnect EGR cooler bypass valve vacuum hose (see figure 5) this will close the EGR bypass valve.

Figure 5

Note: If no scan tool is available disconnect the EGR wire connector (see figure 6) this will close the EGR valve.

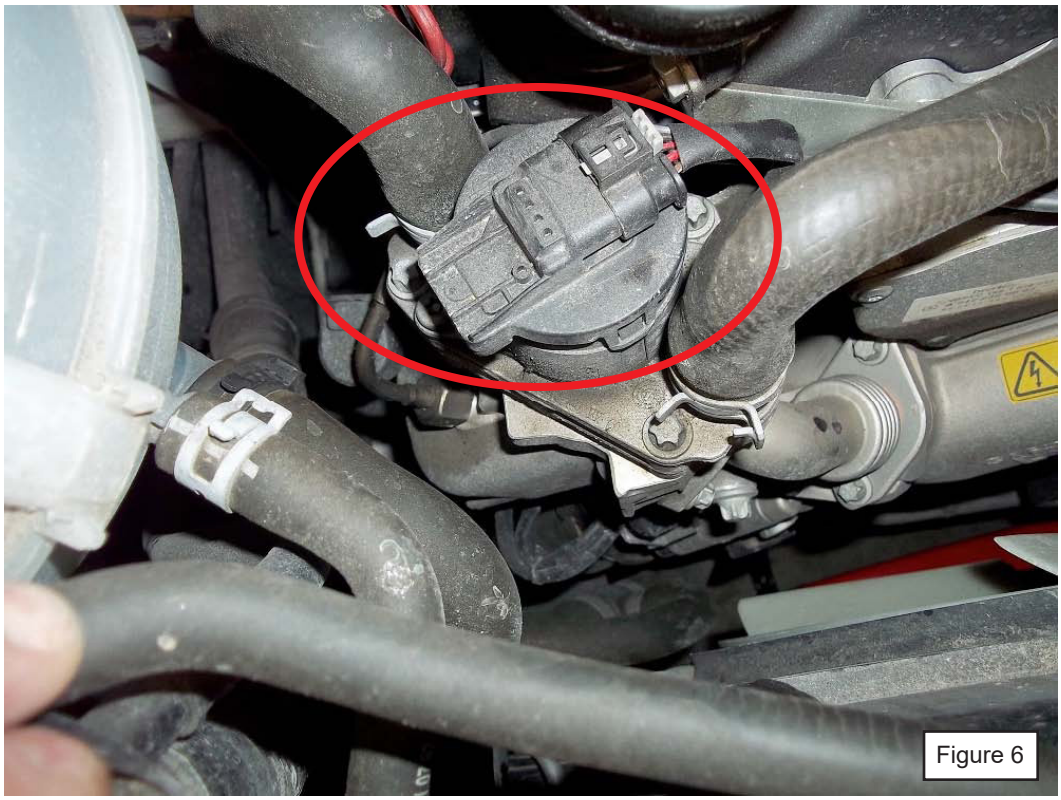


Figure 6

10. Open air valve, adjust regulator to maintain initial pressure, then open the fluid valve on the tool.

11. 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.
12. Repeat step 9-12 allowing another ¼ of the fluid to be consumed. Note: During this step cycle the EGR cooler bypass valve using the scan tool. This will allow cleaning of the EGR cooler bypass port.

    Note: If no scan tool available unplug and reconnect the EGR bypass valve actuator vacuum hose (see figure 7) several times through out this step.

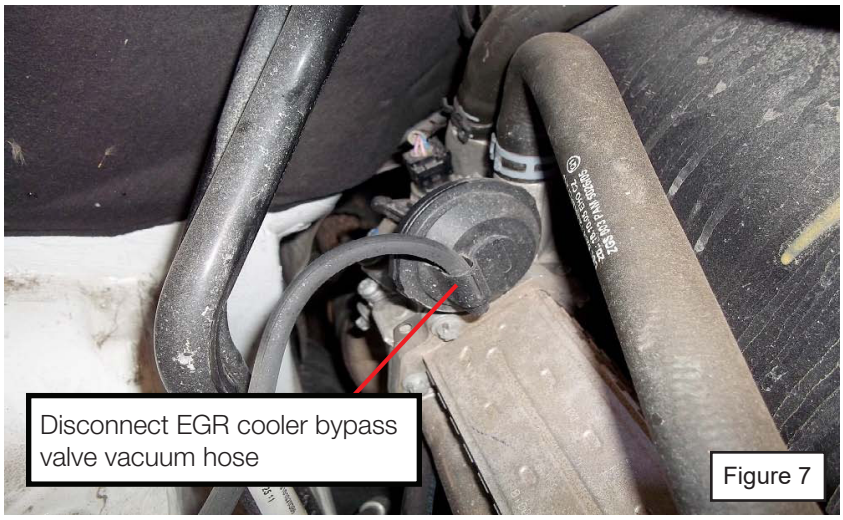


Figure 7

13. Reconnect EGR cooler bypass vacuum and EGR wire connector, open fluid valve.
14. Using a scan tool, command the EGR to perform a self test. This will cycle the EGR to open and close in order to clean the EGR valve.

    Note: If no scan tool is available, rev engine to 1200-1500 rpm. Disconnect and reconnect EGR valve wire connector several times in order to cycle the EGR valve open and closed (see figure 6).

15. Using a scan tool, command the swirl flaps open and close throughout step. Make sure the EGR valve wire is reconnected and the rev the engine to 1200-1500 rpm this will allow the EGR valve to open.
16. Continue service until EGR tool is empty.

    Note: At any time during the intake service (step 14-16) you hear a diesel knock sound, turn fluid valve to closed position for 2 minutes. After two minutes then turn fluid valve to open position and continue service.

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

17. 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.
18. Remove the adapter and reassemble vehicle components in the reverse order of removal. Wipe off EGR temperature sensor using the EGR cleaning fluid before installing.

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>