

Mercedes Sprinter 3.0L 2007-2013

BG DIESEL EGR SYSTEM SERVICE INSTRUCTIONS



Wear safety goggles to protect your eyes.



Wear Nitrile,[®] Neoprene[®] or PVC gloves to protect your hands.



Wear a long-sleeved shirt to protect your arms.

IMPORTANT! Read product Safety Data Sheet before handling any BG product.

Adaptors required:



BG EF388 EGR Mercedes Sprinter adaptor
PN E101-1653

Tools required:

- BG 64 Diesel VIA[®] supply tool, PN E101-1642
- Scan tool to operate EGR valve and intake swirl flaps

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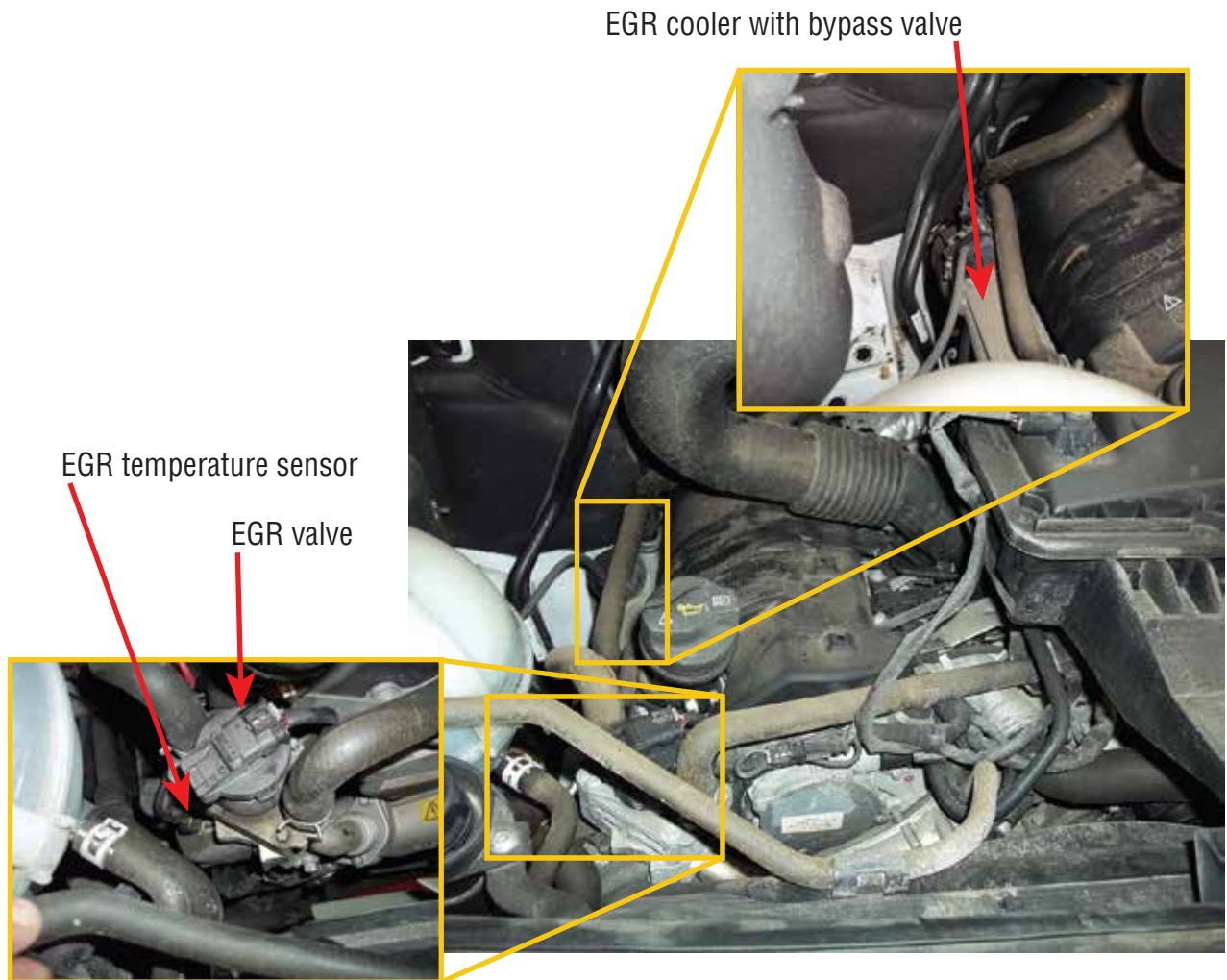


EGR system consists of:

- Cold side EGR valve (after EGR cooler) which allows for proper emissions control of NO_x 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 components are critical for proper emissions management control and must be cleaned on a regular basis for optimum efficiency.

Location of EGR system components



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EGR inspection

Before starting the EGR cleaning service, inspect the EGR components for severe deposits or clogging. Manual cleaning may be required (by scraping, sucking, wiping, etc.) before performing the service.

Service procedure

1. Add BG 245 Premium Diesel Fuel System Cleaner, PN 245, to vehicle's fuel tank.
2. Remove plastic engine cover.
3. Remove EGR temperature sensor (Figure 1). Do not disconnect wire connector.
4. Install BG EF388 adaptor in its place (Figure 2).



Figure 1



Figure 2

5. Attach BG 64 Diesel VIA® supply tool to BG EF388 adaptor. Ensure that the air valve and fluid valve on the supply tool are closed (see supply tool instructions).
6. If engine is hot, the EGR cooler must be cooled before treatment can start. Ignition must be off for the EGR to be closed. Open supply tool air valve, keeping the fluid valve closed, and flush EGR cooler with air for two minutes.
7. Unscrew fill cap and fill supply tool with 64 oz. (1.8 L) of BG Diesel EGR System Cleaner, PN PD10.
8. Reinstall the fill cap and hang supply tool from the hood latch. Connect shop air. Set air pressure on tool to 40–50 psi.

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9. Start vehicle engine. Using the scan tool, command the EGR closed. Disconnect EGR cooler bypass valve vacuum hose (Figure 3). This will close the EGR bypass valve.

Note: If no scan tool is available, disconnect the EGR wire connector to close the EGR valve (Figure 4).



Figure 3



Figure 4

10. Open the air valve on the supply tool. Adjust the regulator to maintain the initial pressure of 40–50 psi. Then open the supply tool fluid valve.
11. After ¼ of the fluid has been dispensed, close the fluid valve and let the air flow for an additional two minutes to flush deposits into the exhaust stream.
12. Reconnect EGR bypass valve vacuum line previously disconnected in step 10. Open the supply tool fluid valve using the scan tool. Cycle the EGR valve and bypass valve while dispensing another ¼ of cleaner.

Note: If no scan tool is available, rev engine to 1,200–1,500 rpm and disconnect and reconnect the EGR bypass valve vacuum hose and EGR valve wire connector several times throughout this step (Figure 3).

13. Reconnect EGR wire connector.
14. To perform intake portion of the service, rev engine to 1,200–1,500 rpm. Open supply tool fluid valve. Use the scan tool to command the intake swirl flaps to cycle throughout this step. This will allow the EGR valve to open and cleaner to flow through EGR induction path.
15. Perform intake portion of the service until supply tool is empty.

Note: If you hear a diesel knock sound at any time during the intake portion of the service, close the fluid valve for two minutes. After two minutes, open the fluid valve and continue service.

16. When supply tool is empty, let the vehicle operate for an additional five minutes and rev the engine several times to clear all residual fluid.
17. Repeat steps 7–16 using 32 oz. (946 mL) of BG Diesel EGR System Rinse, PN PD11.

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18. Turn the fluid and air valves on the supply tool to the closed position. Turn the vehicle off. Detach shop air line and depressurize the supply tool by rotating the regulator knob counter-clockwise.
19. Remove adaptor and reassemble vehicle components in the reverse order of removal. Wipe off EGR temperature sensor using the BG Diesel EGR System Cleaner before reinstalling.
20. After service, reset any engine codes. The vehicle should then be set to run a manual regeneration cycle. 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 residual fluid from the passages and cooler(s) and to combust any material that has reached the diesel oxidation catalyst (DOC) and diesel particulate filter (DPF). **This should be done as soon as possible after the service.**

