

Mercedes 3.0L BlueTEC 2012-2014

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 EF505 EGR round 1.26" intake adaptor
PN E101-1689



BG EF502 EGR 1.75" exhaust adaptor
PN E101-1686



BG EF399 EGR manifold
PN E101-1645

Tool required:

- BG 64 Diesel VIA[®] supply tool, PN E101-1642
- Scan Tool to operate the EGR valve and EGR cooler bypass valve

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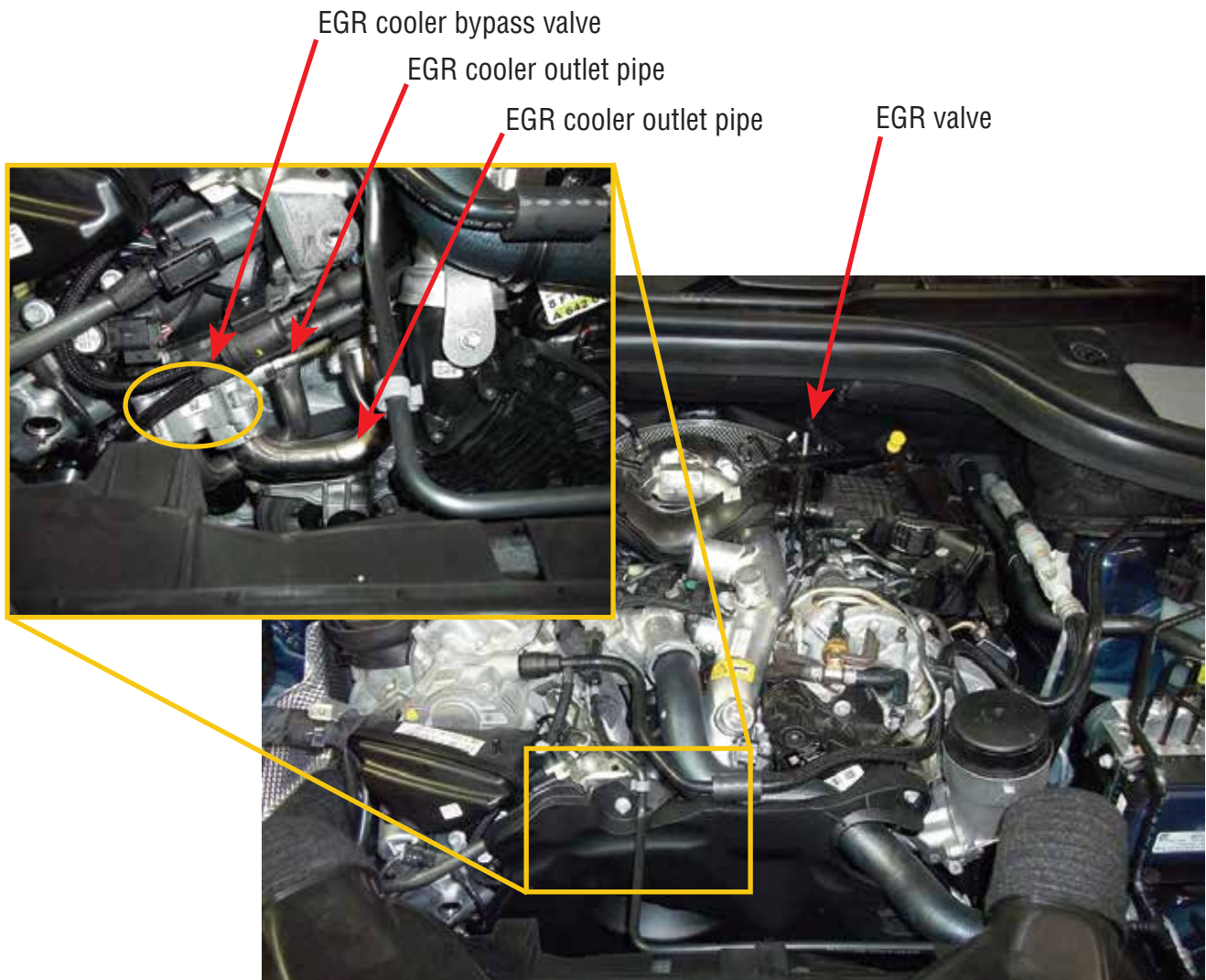


EGR system consists of:

- Hot side EGR valve (before 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 located at intake plenum (controls cold exhaust gases to bypass EGR cooler)
- EGR temperature sensor (measures EGR cooler exhaust temperature and efficiency)

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



continued



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 the two bolts securing the front engine cover along with the air intake snorkel (Figure 1).



Figure 1

4. Remove EGR cooler outlet pipe with gasket by removing two bolts. Then rotate and wiggle the pipe downward to remove. Remove one bolt from EGR blend housing (Figure 2).

Quick Tip: Place the EGR cooler outlet pipe into a bucket/container and fill the container with BG Diesel EGR System Cleaner, PN PD10, until submerged. This will aid in the dislodging of soot from the pipe while the EGR cleaning procedure is performed.



Figure 2

continued



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5. Install the BG EF505 intake and BG EF502 exhaust adaptors in place of the EGR cooler outlet pipe.

NOTE: Lubricate the O-ring on the BG EF505 intake adaptor before installation (Figure 3). This will avoid pinching the O-ring when installing the adaptor.

6. Reinstall the bolt from the EGR blend housing and tighten as per manufacturer specification (Figure 4).



Figure 3



Figure 4

7. Attach the BG EF399 manifold to the BG EF505 intake and BG EF502 exhaust adaptors. Attach the BG 64 Diesel VIA® supply tool to the BG EF399 manifold. Ensure that the air valve and fluid valve on the supply tool are closed (see supply tool instructions).

8. If the engine is hot, the EGR cooler must be cooled before treatment can start. Ignition must be on and, using a scan tool, command the EGR open. Open the supply tool air valve, keeping the fluid valve closed. Turn valve on the BG EF399 manifold to exhaust and flush the EGR cooler with air for two minutes.

9. Unscrew fill cap and fill supply tool with 64 oz. (1.8 L) of BG Diesel EGR System Cleaner, PN PD10.

10. Reinstall the fill cap and hang supply tool from the hood latch. Connect shop air. Set air pressure on the tool to 40–50 psi.

11. Start vehicle engine. Using the scan tool, command the EGR open.

12. Turn the BG EF399 manifold to “EXHAUST” (Figure 5).



Figure 5

continued



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13. 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.
14. 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.
15. Dispense another ¼ of the fluid. Using a scan tool, command the EGR bypass valve to open. (Bypass valve will close after 30 seconds, then you must command it to open again). Do this several times throughout this step.
16. Turn the BG EF399 manifold to “INTAKE” (Figure 6). Continue service until the supply tool is empty.

NOTE: If at any time during the intake service you hear a diesel knock sound, turn the BG EF399 manifold to “OFF” for two minutes. After two minutes, turn the BG EF399 manifold to “INTAKE” and continue service.



Figure 6

17. When supply tool is empty, let the vehicle operate for an additional 5 minutes and rev the engine several times to clear all residual fluid.
18. Repeat steps 9–17 using 32 oz. (946 mL) of BG Diesel EGR System Rinse, PN PD11.
19. 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.
20. After the EGR cooler outlet pipe has soaked for 15 minutes, clean the pipe using the BG Diesel EGR System Cleaner (Figure 7). Fluid can be saved for use on other EGR components if required.



Figure 7

21. Remove adaptors and reassemble vehicle components in the reverse order of removal.

NOTE: Lubricate the O-ring to aid in reassembly when reinstalling the EGR outlet pipe.



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22. 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.**

