

# Mercedes GLK250 2.1L (2013–2015)

## 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 EF535 EGR M12 x 1.5 sensor port adaptor, PN E101-1695



BG EF535 EGR adaptor, PN E101-1695

### Tools required:

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

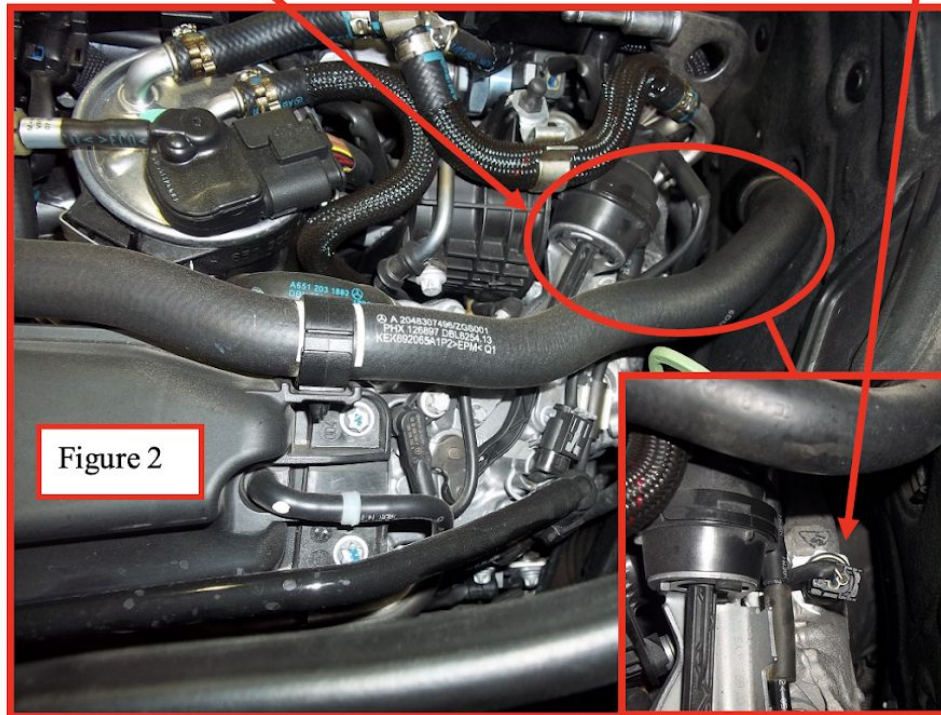
### EGR System Consists of:

- Hot side EGR valve (before EGR cooler) which allows for proper emissions control of No<sub>x</sub> 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 components are critical for proper emissions control and must be cleaned on a regular basis for optimum efficiency.

## Locations of EGR components:

- EGR cooler bypass valve (Figure 2)
  - EGR valve underneath EGR cooler (not visible)
    - Exhaust back pressure sensor (Figure 2)

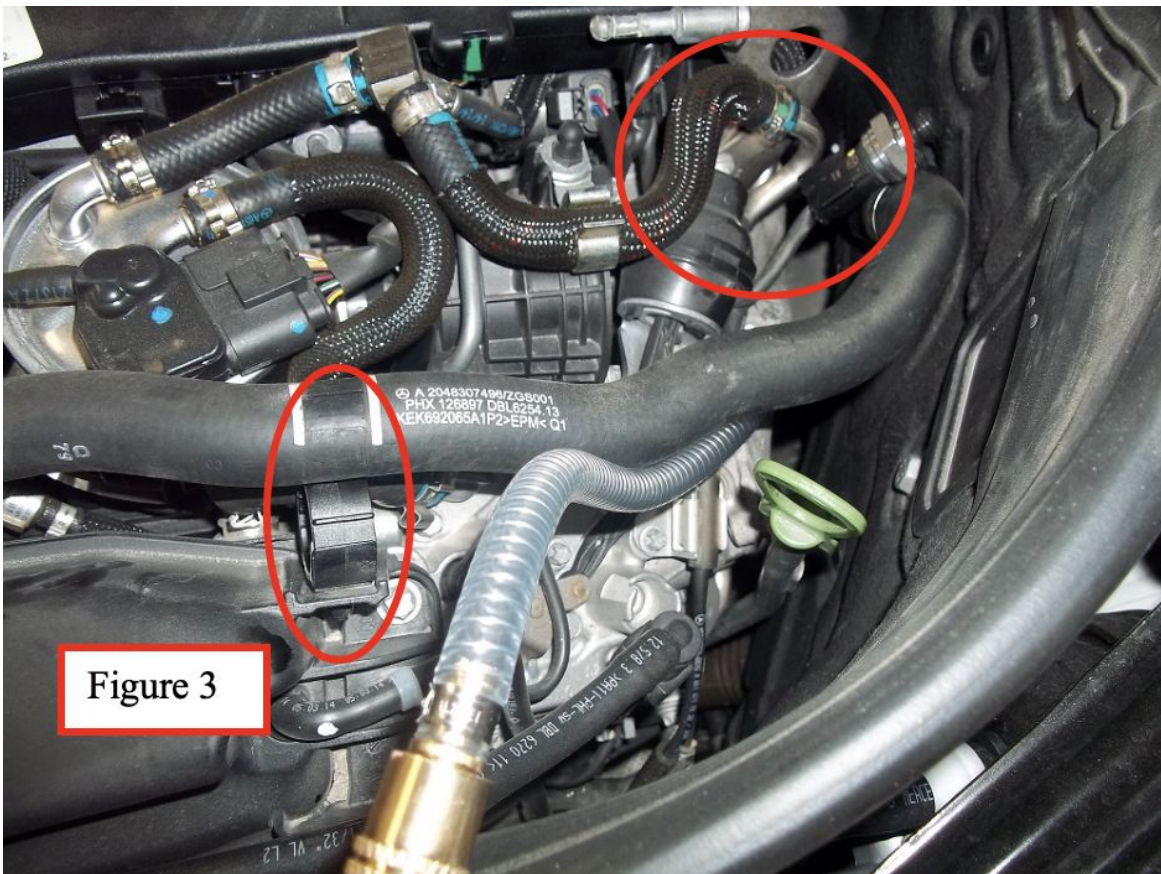


## EGR Inspection

**NOTE:** 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. Unclip hose clamp for easier moving of hose. Disconnect exhaust back pressure electrical connector and remove the exhaust back pressure sensor. Reconnect electrical connector (Figure 3).
4. Install the BG EF535 adaptor in place of the exhaust back pressure sensor and tighten hand tight to secure the adaptor (Figure 3).



5. Attach BG 64 Diesel VIA® supply tool to the BG EF535 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 pre-cooler must be cooled before treatment can start. Ignition must be off to cool the EGR pre-cooler. Open supply tool air valve, keeping fluid valve closed, and flush pre-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 tool from the hood latch. Connect shop air. Set air pressure on the supply tool to 40–50 psi.
  9. Start the vehicle engine.
  10. Using the scan tool, command the EGR closed as this will allow cleaning of the EGR pre-cooler.
  11. 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.
  12. After  $\frac{1}{4}$  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.
  13. Repeat steps 11 and 12.
  14. Open the supply tool fluid valve. Using the scan tool, command the EGR valve open (80% max). The EGR valve will operate normally for 30 seconds. Command the EGR valve open repeatedly throughout this step, dispensing another  $\frac{1}{4}$  of the fluid.
  15. Close the fluid valve and let the air flow for an additional two minutes to flush deposits into the exhaust stream.
  16. Using the scan tool, command the EGR cooler bypass actuator closed (0%). The EGR cooler bypass will operate normally after 30 seconds. Command EGR bypass actuator closed repeatedly throughout this step. Open the supply tool fluid valve and continue service until the supply tool is empty.
- NOTE: If you hear a diesel knock sound at any time during the intake portion of the service (with the EGR valve open), close the fluid and air valves on the supply tool for two minutes. After two minutes, open the fluid and air valves and continue service.**
17. 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.
  18. Repeat steps 7–17 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 tool by rotating the regulator knob counterclockwise.
  20. Remove adaptor and reassemble vehicle components in the reverse order of removal.
  21. 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.**