

## **VW Passat (Engine Code CKRA) 2.0L TDI Diesel EGR Cleaning Instructions**

### **EGR System Consists of:**

- **1 Hot side EGR valve (no EGR cooler), a high pressure loop which controls exhaust gases for proper emissions control of No<sub>x</sub> gases**
- **1 Cold side EGR valve (after EGR cooler), a low pressure loop which controls exhaust gases for proper emissions control of No<sub>x</sub> gases located after DOC+DPF filter**
- **EGR cooler (controls temperature of exhaust gases to the air intake to the engine) – low pressure loop only**
- **EGR temperature sensor (measures EGR cooler exhaust temperature and efficiency)**
- **SCR system which controls exhaust gases for proper emissions control of No<sub>x</sub> gases**

**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 TerraDiesel Fuel Injector Cleaner to vehicle's fuel tank.**
- 2. Remove plastic engine cover.**
- 3. If engine is hot, the EGR system must be cooled – see step 8.**

ZIT13-00831  
Rev.0

## Adapters Required:

**201502**



**201504**



**201399**



## Tool Required:

- EGR Tool 201170

## Locations of EGR components:

- EGR valves – high pressure loop (figure 1)
  - EGR inlet pipe (figure 1)
    - EGR valve and cooler found after DOC+DPF filter low pressure loop
    - EGR temperature sensor on low pressure loop

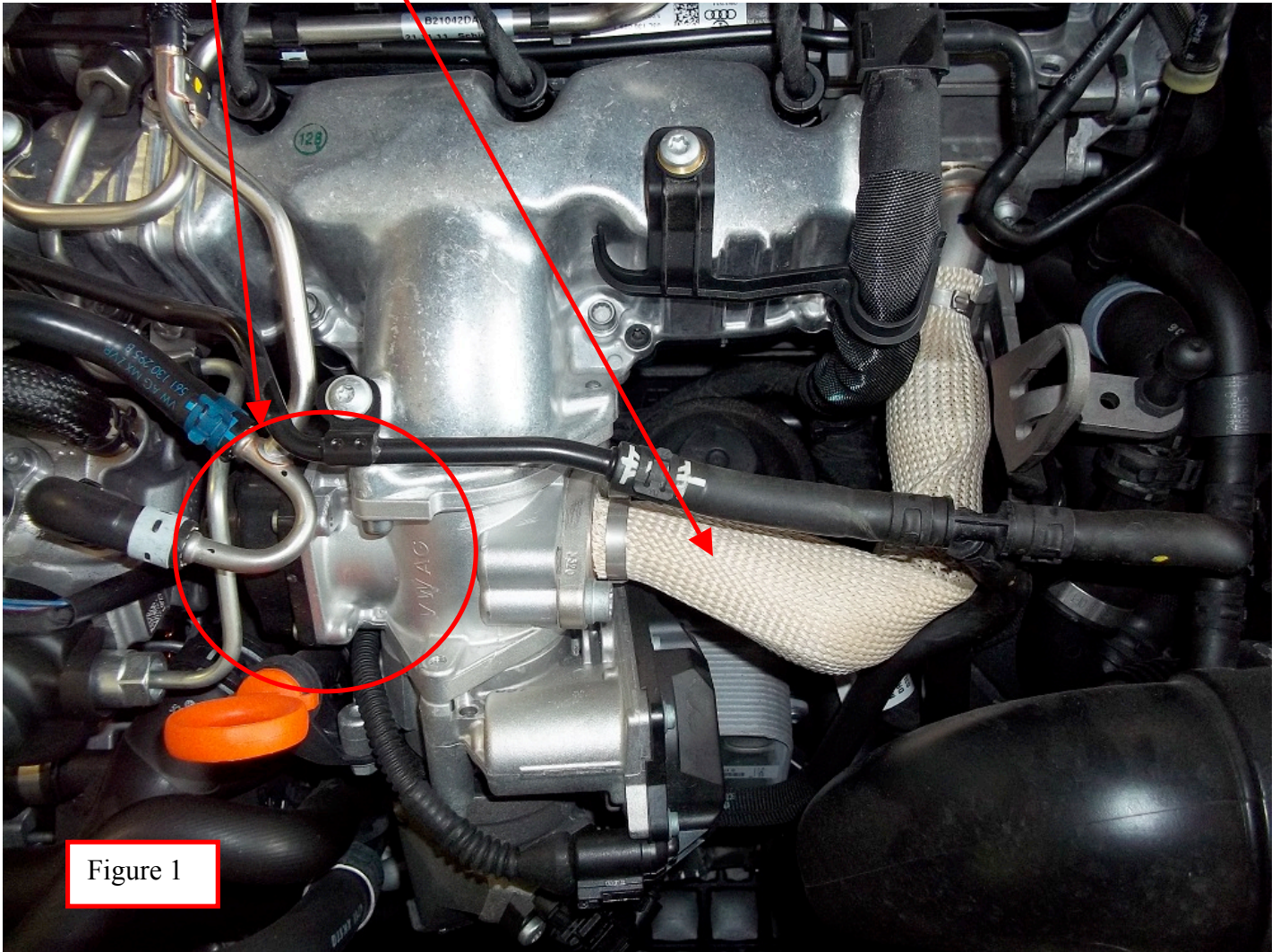
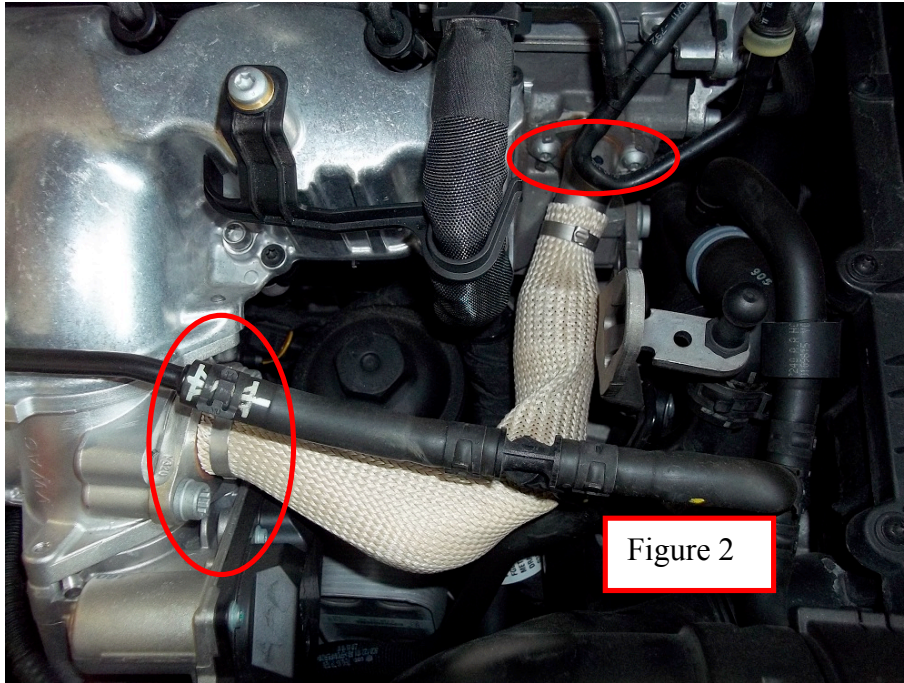


Figure 1

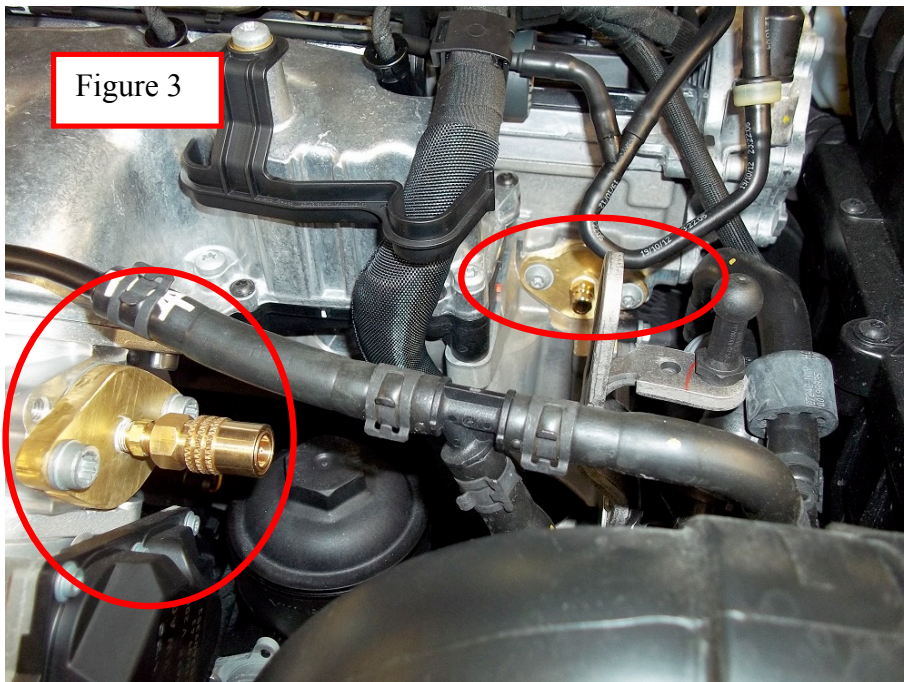
# 201502/201504 – VW Passat (Engine Code CKRA) 2.0L TDI Engine EGR Adapter Instructions

## EGR Cooler Cleaning Procedure

4. Remove the 4 EGR inlet pipe bolts (see figure 2). Remove EGR inlet pipe and gaskets.



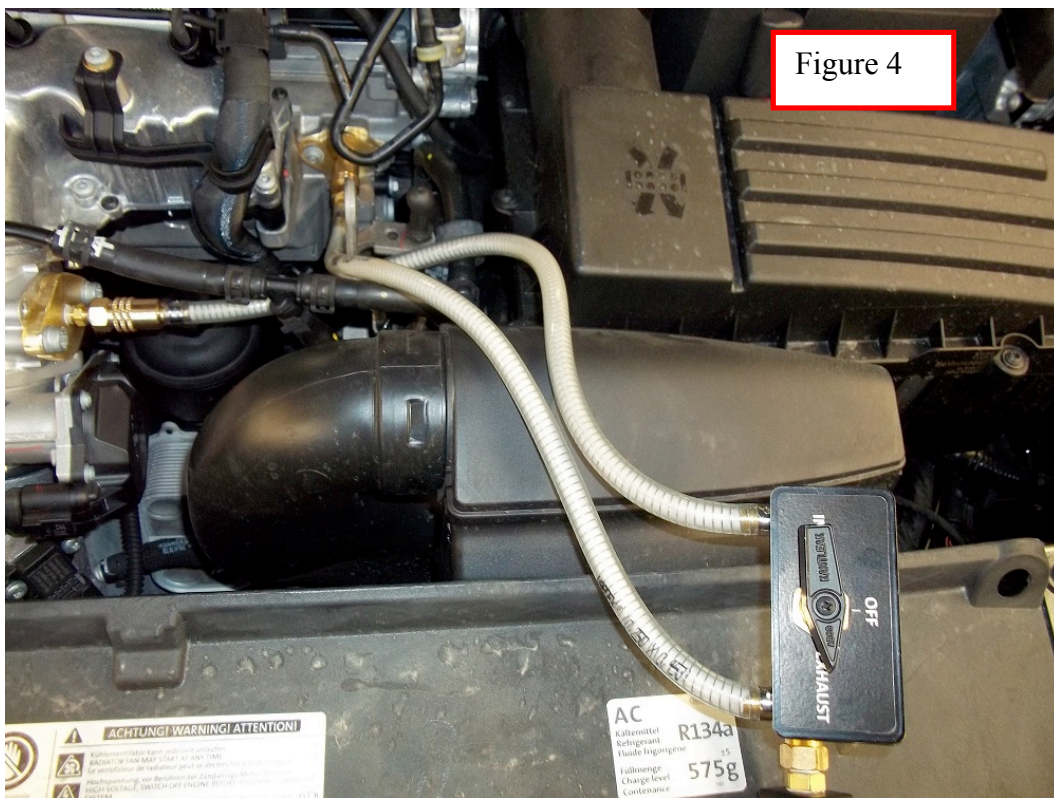
5. Install EGR adapters 201502 and 201504 in its place (see figure 3) using existing bolts and tighten hand tight.



6. Attach EGR manifold adapter (201399) to EGR adapters 201502 and 201504. Attach EGR tool to 201399. Ensure air valve and fluid valve are closed – see EGR tool user guide.
7. Unscrew fill cap and fill with 32oz (950ml) of EGR Cleaner. 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 40-50 psi.

**NOTE: If engine is hot, the EGR system must be cooled before treatment can start. Before step 9 can proceed, ignition must be off for the EGR system to be cooled. Turn valve to exhaust on EGR manifold adapter, open canister air valve, close canister fluid valve and flush cooler with air for 2 minutes.**

9. Start vehicle engine. Set EGR manifold adapter to exhaust (see figure 4).

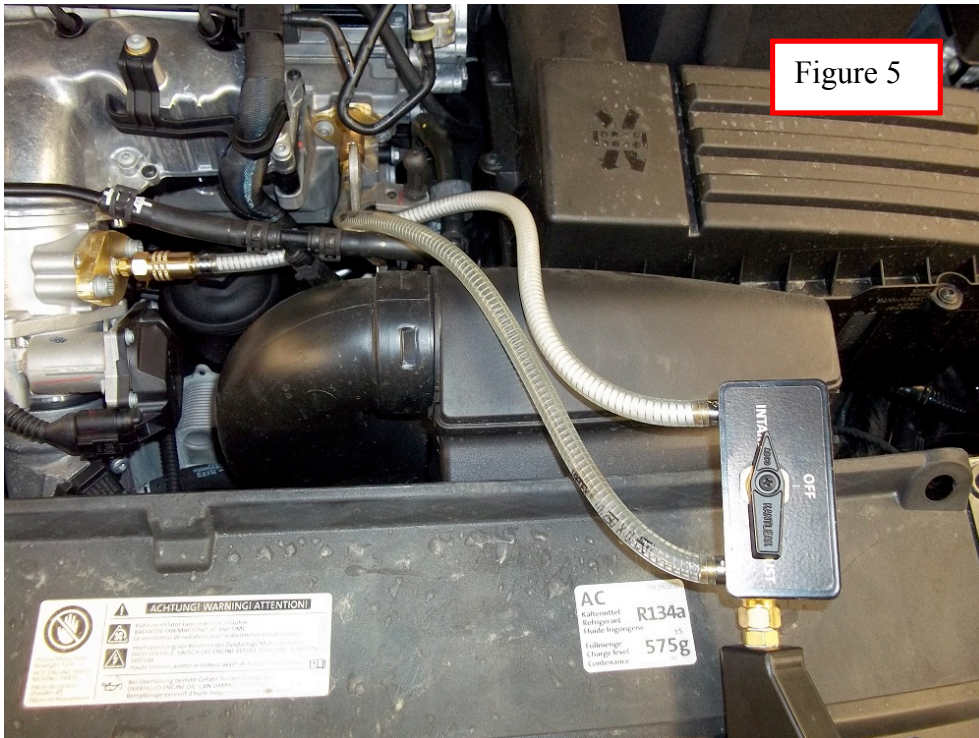


10. Open Air valve, adjust regulator to maintain initial pressure, then open the fluid valve on the tool.
11. After 1/4 of the fluid has been consumed, close the fluid valve and let the air flow for an additional 2 minutes to flush deposits into exhaust stream.
12. Raise engine rpm to 1200 as this will open the EGR valve, turn adapter valve to intake (see figure 5), open fluid valve and continue service until another 1/4 of the fluid is consumed.

**Note: If at any time during the intake service you hear a diesel knock sound, turn manifold adapter valve to off for 2 minutes. After two minutes then turn manifold adapter valve to intake and continue service.**

13. Close the fluid valve and turn manifold adapter valve to exhaust (see figure 4) and let the air flow for an additional 2 minutes to cool off the exhaust stream.
14. Open fluid valve and continue service until another ¼ of the fluid is consumed.
15. Raise engine rpm to 1200 as this will open the EGR valve, turn adapter valve to intake (see figure 5), open fluid valve and continue service until EGR tool is empty.

**Note: If at any time during the intake service you hear a diesel knock sound, turn manifold adapter valve to off for 2 minutes. After two minutes then turn manifold adapter valve to intake and continue service.**



**Note: 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. Turn Vehicle off. Detach shop air line and depressurize the tool by rotating the regulator knob counter clockwise.

**Note : Clean EGR outlet pipe using EGR cleaning fluid and a flexible 1” round brush inside a bucket or waste container. Fluid can be saved to be used on other EGR cooler outlet pipes.**

17. Remove adaptor and reassemble vehicle components in the reverse order of removal.
18. Add one bottle of TerraDiesel Multi-function Fuel Treatment to vehicle’s fuel tank.
19. After service, reset any engine codes and perform a road test to clear any residual fluid from the system. Vehicle may go through Regen cycle during road test.