

Audi/VW 3.0 Liter Diesel EGR System

**Always wear gloves and safety glasses
when performing this service**

EGR System Consists of:

- **Cold side EGR valve (after EGR cooler) controls exhaust gases 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) – closed when engine is at idle and at low engine speeds – below 1250rpm**

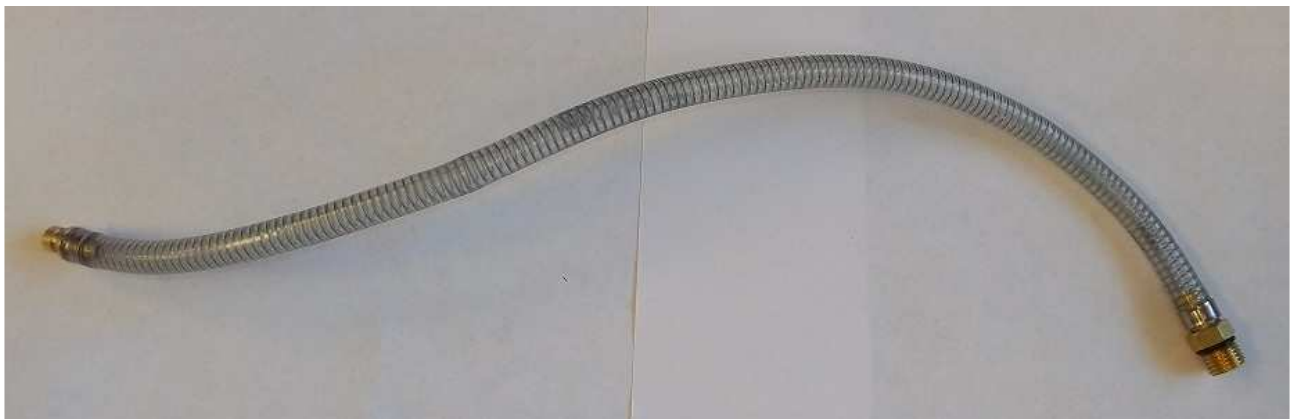
These items are critical for proper emissions management control and must be cleaned on a regular basis for optimum efficiency.

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 cooler must be cooled – see step 9.**
4. **Specialty Socket – see next page**

Adapter Required:

201391



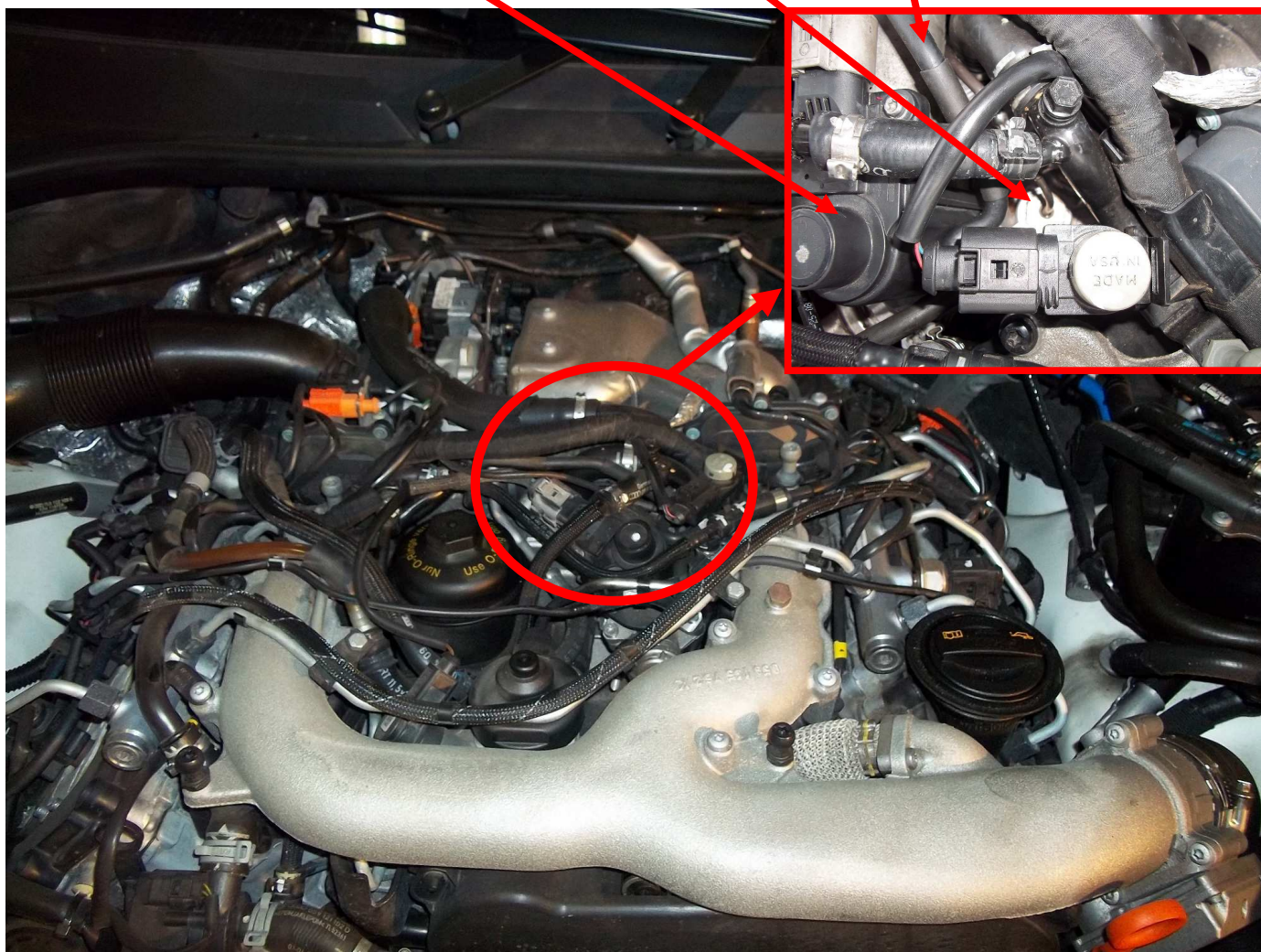
Tools Required:

- **EGR Tool 201170**
- **Scan Tool – for ease of operation but not required**
- **Specialty Tool Required:**
17mm open socket to remove EGR temperature sensor Snap-
on part number FRXM17



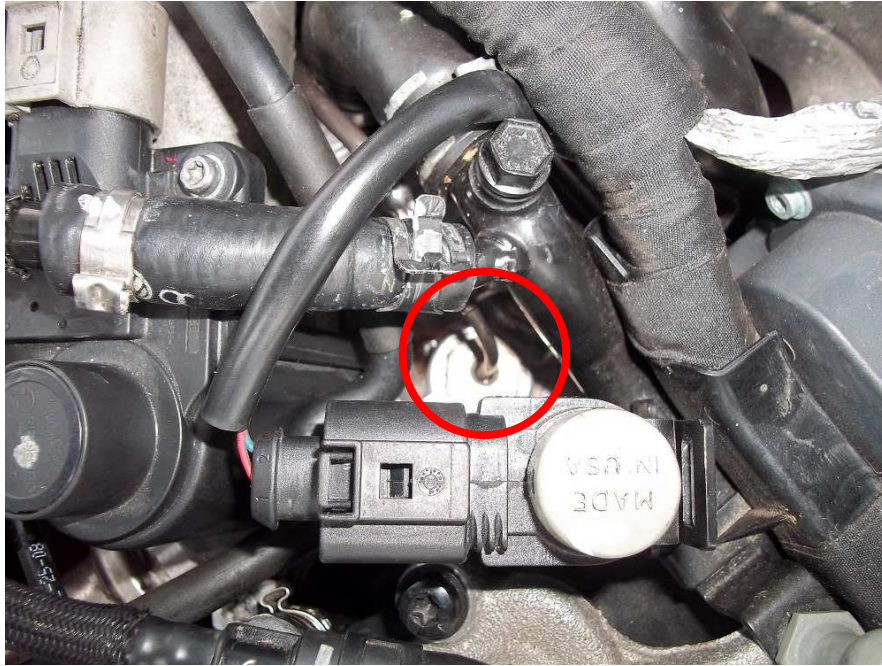
Locations of EGR components:

- EGR cooler bypass valve vacuum hose
- EGR temperature sensor
- EGR valve

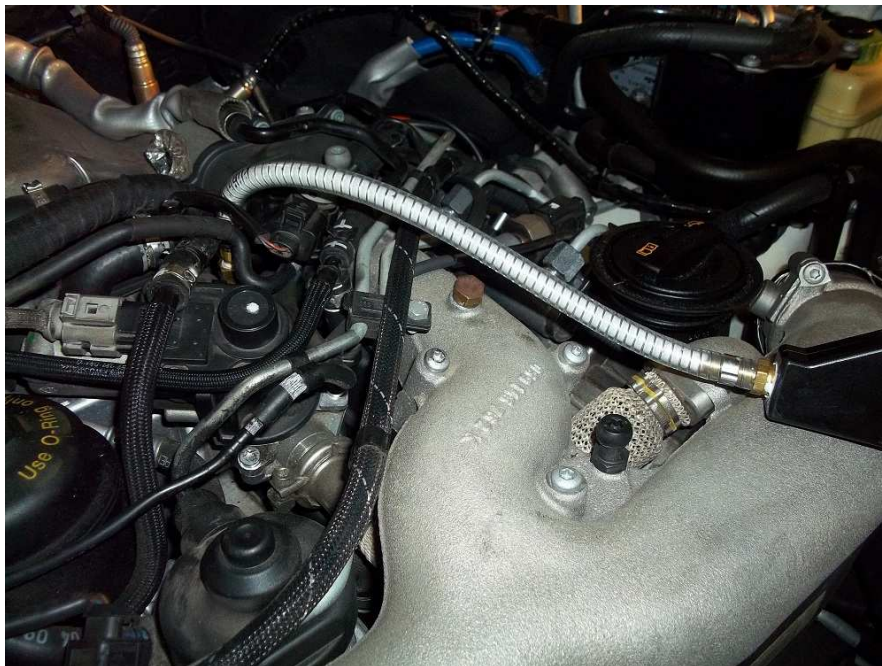


201391 - Audi 3.0 Liter Engine EGR Adapter Instructions

5. Remove EGR temperature sensor (see figure below) using a special 17mm socket. Do not disconnect wire connector.



6. Install 201391 in its place (see figure below).
7. Attach EGR tool to EGR adapter 201391. Ensure air valve and fluid valve are closed – see EGR tool user guide.

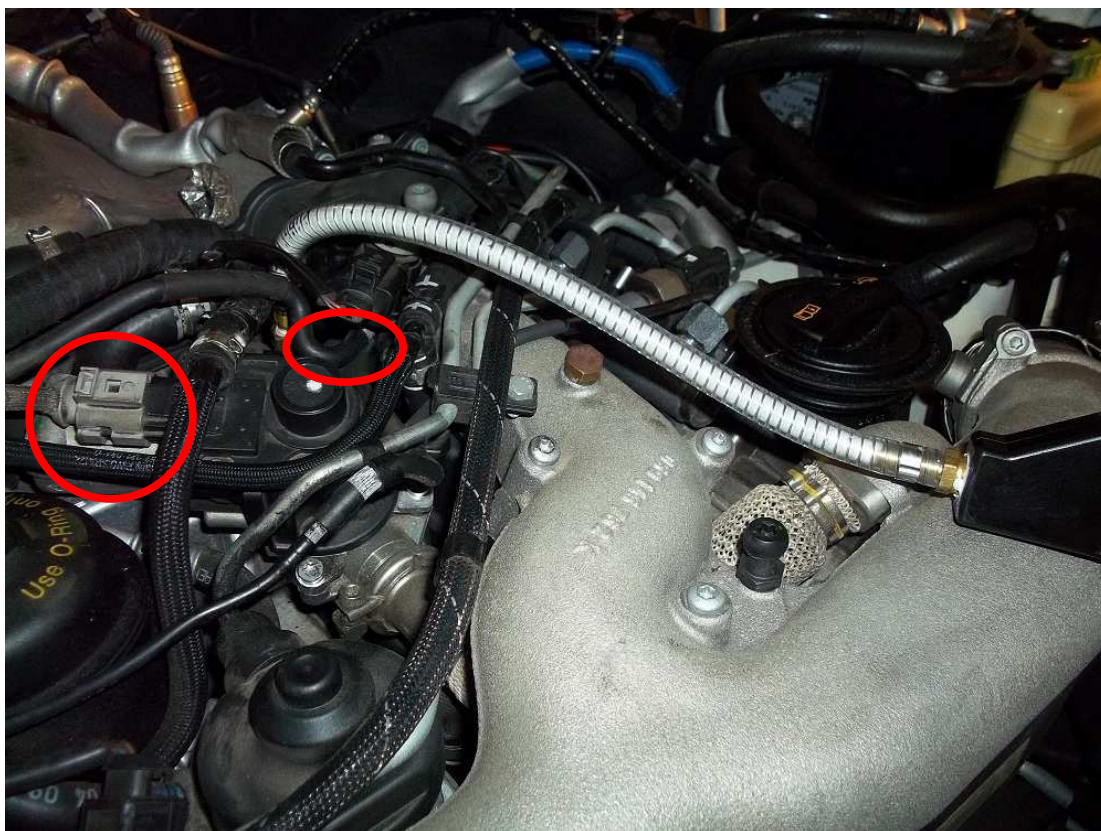


8. Unscrew fill cap and fill with 32oz (950ml) of EGR Cleaner. For first application or severe coking, 64 oz. may be required.
9. Reinstall the fill cap and hang tool from the hood latch. Connect shop air. Set air pressure on EGR tool to 40-50 psi.

NOTE: If engine is hot, the EGR 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.

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

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



11. Open Air valve, adjust regulator to maintain initial pressure, then open the fluid valve on the tool.
12. 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.
13. Repeat step 10-12 allowing another 1/4 of the fluid to be consumed. **Note:** During this step cycle the EGR cooler bypass valve (see figure 2) several times 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 below) several times through out this step.



14. Using a scan tool, command the EGR valve and swirl flaps open.

Note: If no scan is available reconnect the EGR wire connector, raise engine rpm to 1500 this will allow the EGR and the swirl flaps to open.

15. Open fluid valve. Continue service until EGR tool is empty.

Note: At any time during the intake service (step 15) 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.

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.

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

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.