

## EXHAUST GAS RECIRCULATION (EGR) SYSTEM (Europe) ON-VEHICLE INSPECTION

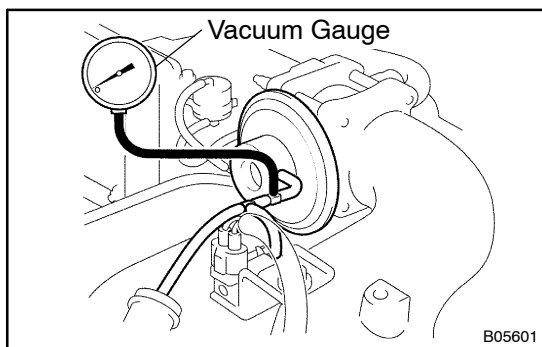
EC09F-01

**HINT:**

In a malfunction where the EGR system is always on, black smoke or white smoke may be output from the exhaust pipe. If this occurs, inspect the EGR system also.

**NOTICE:**

**Always stop the engine when installing or removing the vacuum gauges, or removing the vacuum hoses.**

**1. INSTALL VACUUM GAUGE**

Using a 3 way connector, connect a vacuum gauge to the hose between the EGR valve and E-VRV.

**2. INSPECT SEATING OF EGR VALVE**

Start the engine and check that the engine starts and run at idle.

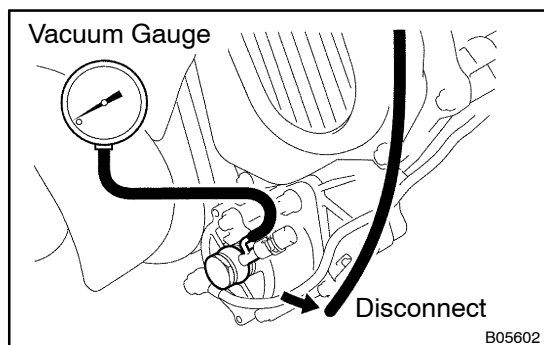
**3. INSPECT COLD ENGINE CONDITION**

- (a) The coolant temperature should be below 20°C (64°F).
- (b) Check that the vacuum gauge indicates 0 at idle.

**4. INSPECT HOT ENGINE CONDITION**

- (a) Warm up the engine, the coolant temperature should be above 70°C (104°F) and below 96°C (205°F).
- (b) Check that the vacuum gauge indicates about more than 28.0 kPa (210 mmHg, 8.3 in.Hg) at idle.
- (c) Check that the vacuum gauge indicator increases about more than 28.0 kPa (210 mm Hg, 8.3 in.Hg) at 1,500 rpm.
- (d) When the accelerator pedal is quickly depress to the full open, check that the vacuum gauge indicator drops momentarily.
- (e) Keep the engine speed at more than 4,000 rpm.
- (f) Check that the vacuum gauge indicates 0.
- (g) When the accelerator pedal is released, check that the vacuum gauge indicator drops momentarily while the engine speed decreases from more than 4,000 rpm to idle.

**5. REMOVE VACUUM GAUGE**



## 6. CHECK OUTPUT VACUUM WITH VACUUM GAUGE

- (a) Connect a vacuum gauge to the output pipe.
- (b) Warm up the engine and check that the vacuum gauge indicates above 86.7 kPa (650 mmHg, 25.59 in.Hg).

If a problem is found, repair the vacuum pump.