

EGR SYSTEM (1CD-FTV)

ON-VEHICLE INSPECTION

12023-01

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.

1. INSPECT SEATING OF EGR VALVE

- (a) Start the engine and check that the engine starts and run at idle.

2. INSPECT HOT ENGINE CONDITION (WHEN USING HAND-HELD TESTER)

- (a) Connect the hand-held tester to the DLC3.
(b) Start the engine and run it at idle.
(c) Select the ACTIVE TEST mode on the hand-held tester.

HINT:

Please refer to the hand-held tester operator's manual for further details.

- (d) Warm up the engine, the coolant temperature should be above 75°C (109°F) and below 90°C (194°F).
(e) Check that the AFM reading during idling is $4 \leq \text{ega} \leq 16$ g/s.
(f) Forcibly drive the EGR valve with a hand-held tester, make the valve opening 0, and check that the AFM reading during idling is $10 \leq \text{ega} \leq 16$ g/s.

If the AFM reading is out of range in either (b) or (c), replace the EGR valve.

If the AFM is out of range in both (b) and (c), replace the air flow meter (air cleaner) and check the EGR valve operation again.

3. INSPECT HOT ENGINE CONDITION (WHEN NOT USING HAND-HELD TESTER)

- (a) Install the vacuum gauge.
(1) Using a 3 way connector, connect a vacuum gauge to the hose between the intake manifold and turbo pressure sensor.
(b) Warm up the engine, the coolant temperature should be above 75°C (109°F) and below 90°C (194°F).
(c) Check that the vacuum gauge indicates about more than 4.5 kPa (34 mmHg 1.3 in Hg).
(d) Stop the engine (IG OFF), remove the EGR valve connector, restart the engine, and check that load during idling is less than 4.5 kPa (34 mmHg 1.3 in Hg).

If the load pressure exceeds the above value, replace the EGR valve.