# INTAKE AIR CONTROL SYSTEM (1MZ–FE) ON–VEHICLE INSPECTION



# INSPECT INTAKE AIR CONTROL SYSTEM

- (a) Using a 3–way connector, connect vacuum gauge to the actuator hose.
- (b) Connect the hand-held tester to the DLC 3.
- (c) Start the engine.
- (d) Select the active test mode according to the message on the hand-held tester.

#### Vacuum:

VSV ON	Approx. 27 kPa (200 mm Hg, 7.9 in. Hg)
VSV OFF	0 kPa (0 mm Hg, 0 in. Hg.)



- (e) Shift transmission into P range and control the accelerator pedal.
- (f) Check the data monitor operation according to the illustration.

#### HINT:

The value in the illustration is only for reference; the throttle valve may operate diversely depend on the running condition.

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# **INSPECTION**







# INTAKE AIR CONTROL VALVE ASSY

(a) With 26.7 kPa (200 mm Hg, 7.9 in. Hg) of vacuum applied to the actuator, check that the actuator rod moves.

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- (b) One minute after applying the vacuum, check that the actuator rod does not return.
- (c) If the operation is not as specified, replace the intake air control valve assembly.

### NOTICE:

1.

#### Do not adjust the adjust screw.

#### 2. INTAKE AIR CONTROL VALVE ASSY NO.3

- (a) Inspect actuator operation
  - (1) With 26.7 kPa (200 mm Hg, 7.9 in. Hg) of vacuum applied to the actuator, check that the actuator rod moves.
  - (2) One minute after applying the vacuum, check that the actuator rod does not return.
  - (3) If the operation is not as specified, replace the intake air control valve No.3.
- (b) Inspect VSV operation
  - (1) Using an ohmmeter, check that there is continuity between each terminals.

#### Resistance: 37 – 44 $\Omega$ at 20°C (68°F)

- (2) Check that air flows form port E to the filter.
- (3) Apply battery voltage across the terminals.
- (4) Check that air flows from port E to port F.

#### 3. AIR CLEANER CAP SUB-ASSY

- (a) Cover port C with finger, and check that air flows form port B to port A.
- (b) Cover port C with finger, and check that air does not flow from port A to port B.
- (c) Cover port A and C with fingers, and apply 60 kPa (450 mm Hg, 18 in. Hg) of vacuum to port B, and check that there is no change of vacuum after one minute.

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### VACUUM SWITCHING VALVE ASSY NO.1

- (a) Using an ohmmeter, check that there is continuity between each terminals.
  - Resistance: 33 39  $\Omega$  at 20°C (68°F)
- (b) Check that air flows form port B to the filter.
- (c) Apply battery voltage across the terminals.
- (d) Check that air flows from port B to port A.

# INTAKE AIR CONTROL VALVE ASSY (1MZ–FE) REPLACEMENT



# REMOVE INTAKE AIR CONTROL VALVE ASSY

- (a) Disconnect the vacuum hose.
- (b) Remove the 4 nuts and the intake air control valve assembly by prying a screwdriver between intake air control valve and intake air surge tank.

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# INSTALL INTAKE AIR CONTROL VALVE ASSY

- (a) Apply seal packing to the intake air control valve assembly as shown in the illustration.
  - Seal packing: Part No. 08226–00080 or equivalent.
- (b) Install a new gasket and intake air control valve assembly. **Torque: 15 N·m (153 kgf·cm, 11 ft·lbf)**