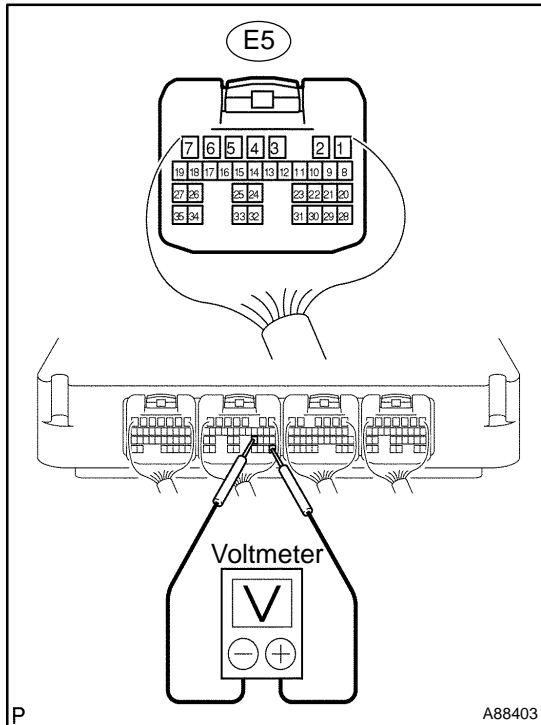


ON-VEHICLE INSPECTION



1. INSPECT AIR-FUEL RATIO SENSOR SYSTEM

- (a) Inspect the voltage.
 - (1) Turn the power switch ON (IG).
 - (2) Using a voltmeter, measure the voltage between the ECM terminals.

Standard:

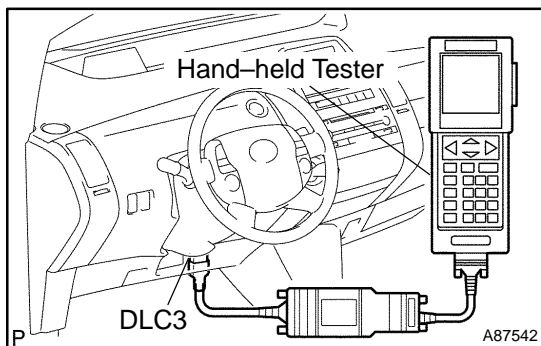
Tester Connection	Specified Condition
E5-23 (A1A+) – E5-28 (E1)	3.0 to 3.6 V
E5-22 (A1A-) – E5-28 (E1)	2.7 to 3.3 V

CAUTION:

Connect the test leads from the backside of the connector with the ECM connector connected.

HINT:

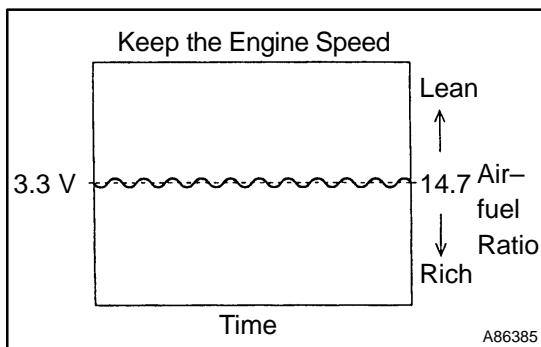
The voltage between the ECM terminals is constant regardless of the output voltage of the air-fuel ratio sensor. If the result is not as specified, check the air-fuel ratio sensor and wire harness.

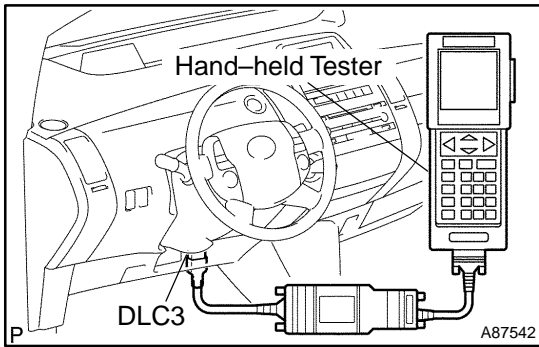


- (b) Check the output waveform.
 - (1) Set the vehicle to the "INSPECTION MOD1" (see page 01-5).
 - (2) Connect the hand-held tester to the DLC3.
 - (3) Turn the power switch ON (READY ON).
 - (4) Turn the hand-held tester ON.
 - (5) Select the item: DIAGNOSIS / ENHANCED OBD II / ENGINE AND ECT / DATA LIST / ALL / AFS B1 S1.
 - (6) Warm up the air fuel ratio sensor for approximately 2 minutes at 2,500 rpm of the engine speed.
 - (7) Maintain the engine speed at 2,500 rpm, then check that the waveform of "AFS B1 S1" is output as illustrated.

HINT:

- The waveform of illustration is a sample.
 - Only the hand-held tester shows the waveform of the air fuel ratio sensor.
- (8) Check that "O2S B1 S2" fluctuates between 1 and 0 V with the engine speed at 2,500 rpm.

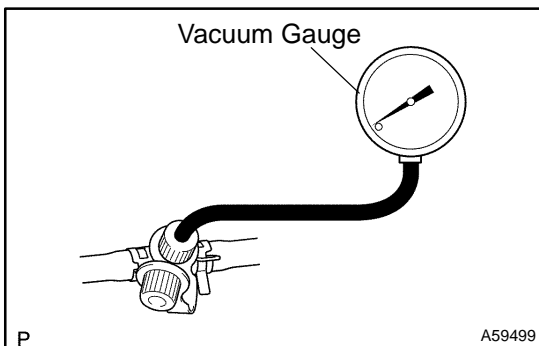




2. INSPECT FUEL CUT OFF RPM

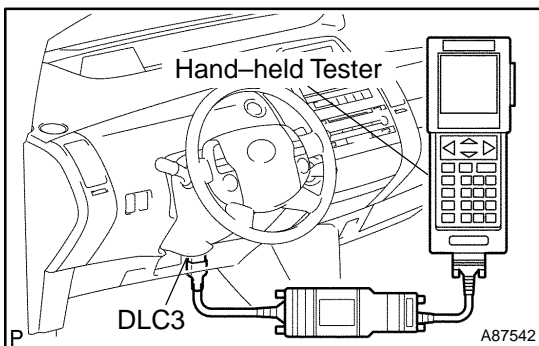
- (a) Check the operation.
 - (1) Start the engine, then warm up.
 - (2) Connect the hand-held tester to the DLC3.
 - (3) Turn the hand-held tester ON.
 - (4) Select the item: DIAGNOSIS / ENHANCED OBD II / ENGINE AND ECT / DATA LIST / ALL / INJECTOR.
 - (5) Drive the vehicle. When releasing the accelerator pedal after the driving speed is 28 to 37 mph (45 to 60 km/h), read "INJECTOR" of the hand-held tester.

Standard: 0 ms

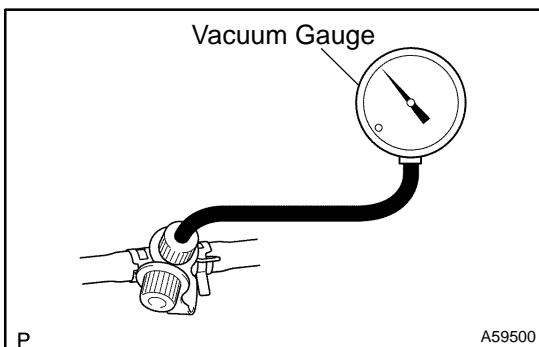


3. INSPECT EVAP SYSTEM LINE

- (a) Set the vehicle to the "INSPECTION MOD1" (see page 01-5).
- (b) Warm up the engine to the normal operating temperature, then stop the engine.
- (c) Connect a vacuum gauge (EVAP control system test equipment vacuum gauge) to the EVAP service port on the purge line.



- (d) Connect the hand-held tester to the DLC3.
- (e) Start the engine.
- (f) Turn the hand-held tester ON.
- (g) Select the item: DIAGNOSIS / ENHANCED OBD II / ENGINE AND ECT / ACTIVE TEST / EVAP VSV / ON.

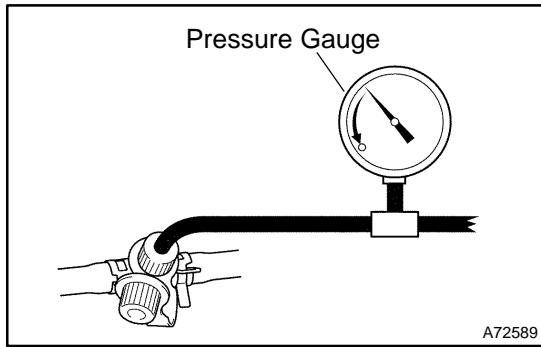


- (h) Check the vacuum at idle.

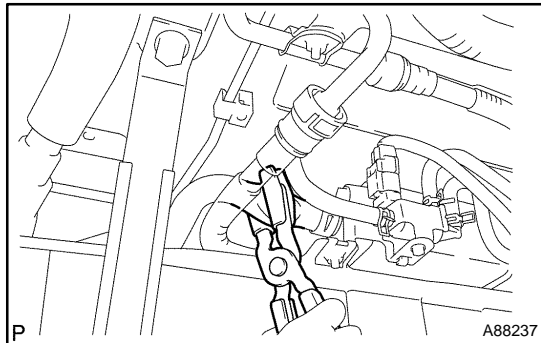
Vacuum:
Maintain at 0.368 to 19.713 in.Hg (5 to 268 in.Aq) for over 5 seconds.

If the vacuum does not change, it is suspected that the hose which connects the VSV for EVAP to the service port is loose or blocked, or that the VSV is abnormally operating.

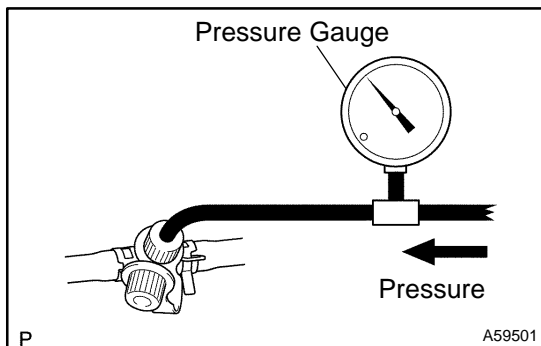
- (i) Stop the engine.
- (j) Disconnect the hand-held tester from the DLC3.
- (k) Disconnect the vacuum gauge (EVAP control system test equipment vacuum gauge) from the EVAP service port on the purge line.



- (l) Connect a pressure gauge to the EVAP service port on the purge line.



- (m) Inspect the pressure.
 - (1) Using a hose clipper and similar instrument, clip the outlet hose No. 1 of the charcoal canister.

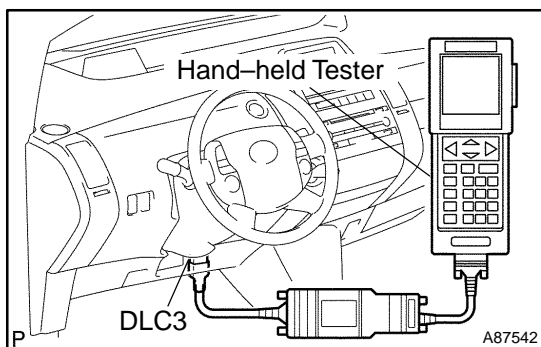


- (2) Apply pressure (13.5 to 15.5 in.Aq) from the EVAP service port.

Pressure:

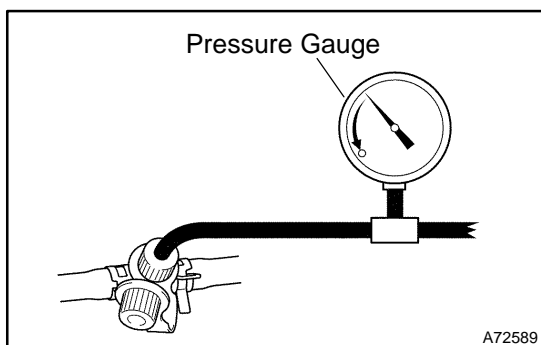
2 minutes after the pressure is added, the gauge should be over 7.7 to 8.8 in.Aq.

If pressure cannot be applied, it is suspected that the hose which connects the VSV for purge flow switching valve is loose, or that the VSV for purge flow switching valve is open.



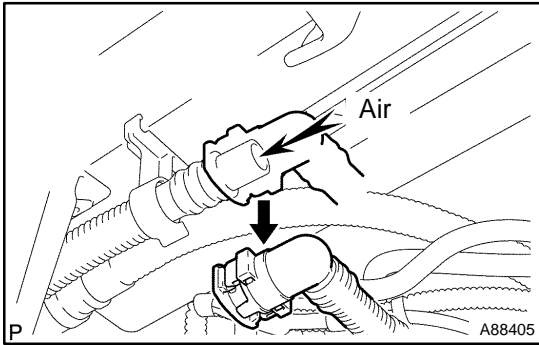
4. INSPECT AIRTIGHTNESS IN FUEL TANK AND FILLER PIPE

- (a) Connect the hand-held tester to the DLC3.
- (b) Turn the power switch ON (IG).
- (c) Turn the hand-held tester ON.
- (d) Select the item: DIAGNOSIS / ENHANCED OBD II / ENGINE AND ECT / ACTIVE TEST / CAN CTRL VSV / ON.



- (e) Connect the pressure gauge to the EVAP service port on the purge line.
- (f) Apply pressure (1.6 kPa (16.3 gf/cm², 0.23 psi) from the EVAP service port.
- (g) Check that the pressure is maintained for over 30 seconds.
- (h) Visually check that the fuel tank and fuel tank inlet pipe.

- (i) Check that the fuel hose and fuel tank inlet pipe are connected.
- If there are any defects, replace the fuel tank and fuel tank inlet pipe.

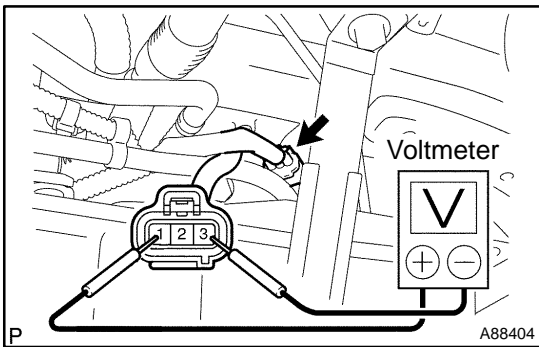


5. CHECK AIR INLET LINE

- (a) Check the ventilation.
 - (1) Disconnect the ventilation hose (see page 11-24).
 - (2) Check that there is ventilation from the charcoal canister filter to the fuel tank inlet pipe when air is applied to the vent hose of the charcoal canister filter.

If there is no ventilation, replace the charcoal canister filter.

- (3) Connect the ventilation hose (see page 11-24).



6. INSPECT VAPOR PRESSURE SENSOR ASSY

- (a) Inspect the voltage.
 - (1) Turn the power switch ON (IG).
 - (2) Using a voltmeter, measure the voltage between the terminals.

Standard:

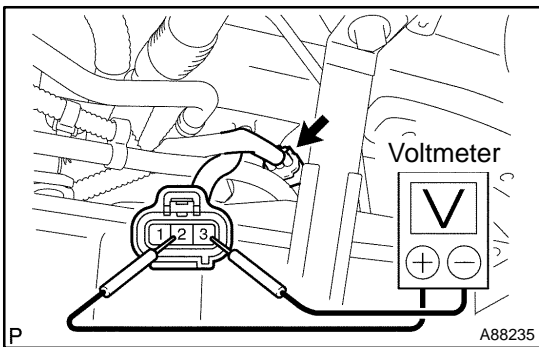
Tester Connection	Specified Condition
1 – 3	4.5 to 5.5 V

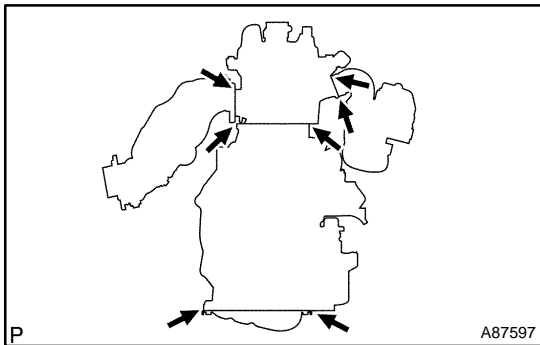
- (3) Remove the fuel tank cap.
- (4) Using a voltmeter, measure the voltage between the terminals.

Standard:

Tester Connection	Specified Condition
2 – 3	3.0 to 3.6 V

- (5) Reinstall the fuel tank cap.
- (6) Turn the power switch OFF.





7. VISUALLY INSPECT HOSES, CONNECTIONS AND GASKETS

(a) Check the appearance.

- (1) Visually check that there are no cracks, leaks or damage on the indicated portions in the illustration.

HINT:

- Removing the oil level gauge , oil filler cap or ventilation hoses may cause the engine malfunction or engine stall.
- If the parts between the mass air flow meter and cylinder head are disconnected, loose or cracked, secondary air may be sucked. It could cause the engine malfunction or engine stall.