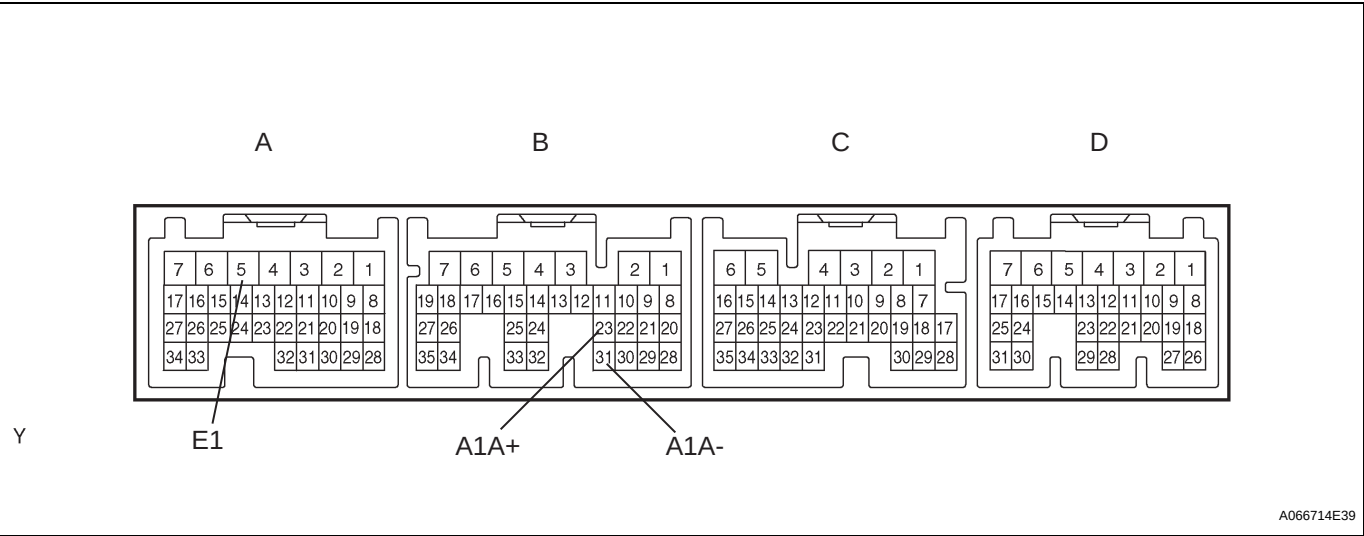


ON-VEHICLE INSPECTION

1. INSPECT AIR-FUEL RATIO COMPENSATION SYSTEM

- (a) Measure the voltage between the terminals of the ECM connectors.



Voltage

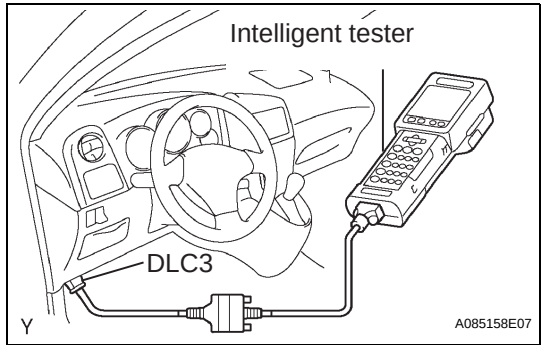
Tester Connection	Condition	Specified Condition
B23 (A1A+) - A5 (E1)	Ignition switch ON	3.3 V
B31 (A1A-) - A5 (E1)	Ignition switch ON	2.9 V

NOTICE:

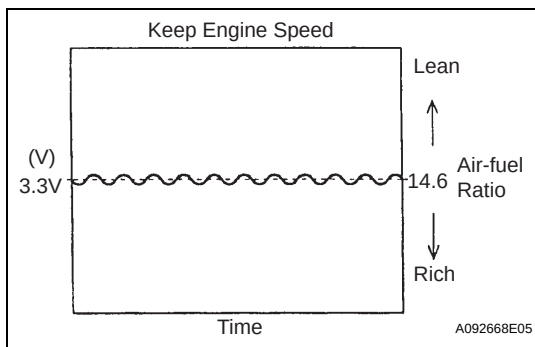
Connect test leads from the back side of the connector. The connectors should not be disconnected from the ECM.

HINT:

Voltage between the terminals of the ECM is kept constant regardless of the voltage of the A/F sensor.



- (b) Connect the intelligent tester to the DLC3.
- (c) Turn the ignition switch to ON.
- (d) Select the following menu items: Data List / A/FS B1 S1 and O2S B1 S2.
- (e) Warm up the A/F sensor with the engine speed at 2,500 rpm for approximately 2 minutes.



- (f) Keep the engine speed at 2,500 rpm and confirm that the display of "A/FS B1 S1" is as shown in the illustration.

HINT:

- The illustration may slightly differ from the display on the intelligent tester.
- Only the intelligent tester displays the waveform of the A/F sensor.

- (g) Confirm that the display of "O2S B1 S2" changes between 0 V and 1 V with the engine speed at 2,500 rpm.

OK:

The voltage output oscillates more than 8 times in 10 seconds.

CAUTION:

- Perform the check immediately after warming the engine up.
- If the voltage variation could not be verified, warm up the heated oxygen sensor again. If it could not be verified even after warming up the sensor again, check the DTC No. (See page [ES-38](#)).

2. INSPECT FUEL CUT-OFF RPM

- Increase the engine speed to at least 3,500 rpm.
- Use a sound scope to check for injector operating sounds.
- Check that injector operating sounds stop momentarily and then resume when the accelerator pedal is released.

3. VISUALLY INSPECT HOSES, CONNECTIONS AND GASKETS

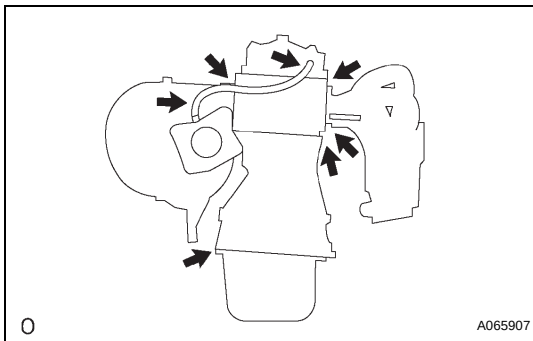
- Check the appearance.

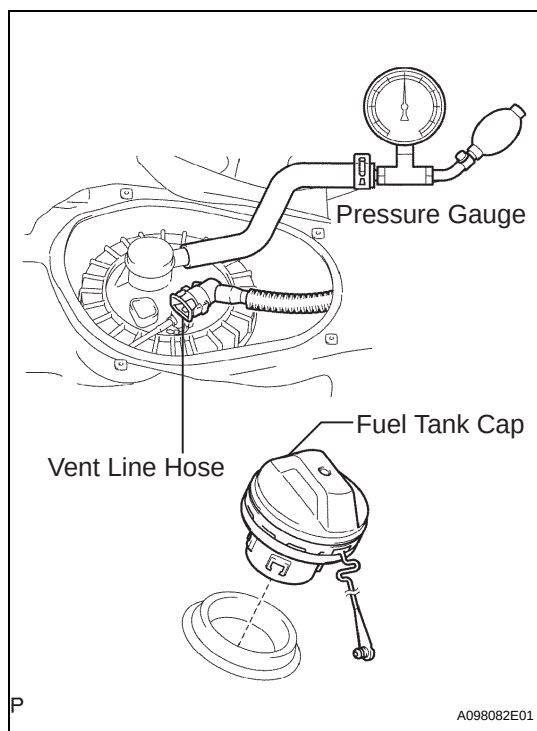
- Check if the indicated portions of the engine assembly are cracked, leaking or damaged.

HINT:

Disconnection of the engine oil level gage, oil filler cap, PCV hose, etc. may cause the engine to run improperly. Disconnection, looseness or cracks in the parts of the air induction system between the throttle body and cylinder head will allow air suction and cause the engine to run improperly.

If necessary, repair the engine assembly.





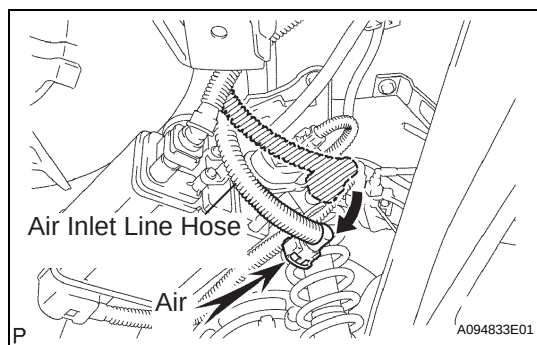
4. INSPECT FUEL CUTOFF VALVE AND FILL CHECK VALVE

- (a) Disconnect the vent line hose from the fuel tank (See page [FU-19](#)).
- (b) Connect the pressure gauge to the fuel tank.
- (c) Fill the fuel tank with fuel.
- (d) Apply pressure at 4 kPa (41 gf/cm², 0.58 psi) to vent port of the fuel tank.

HINT:

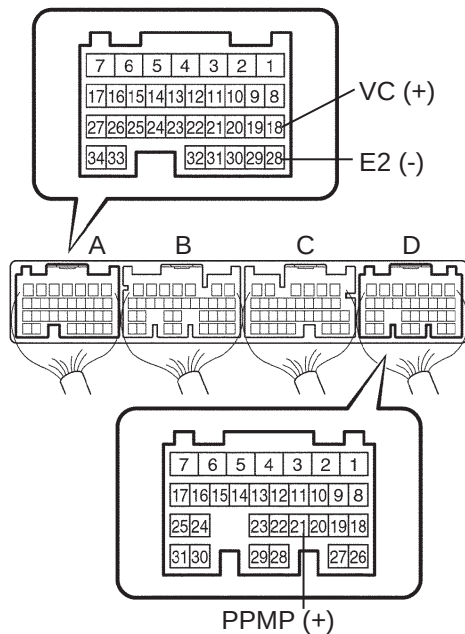
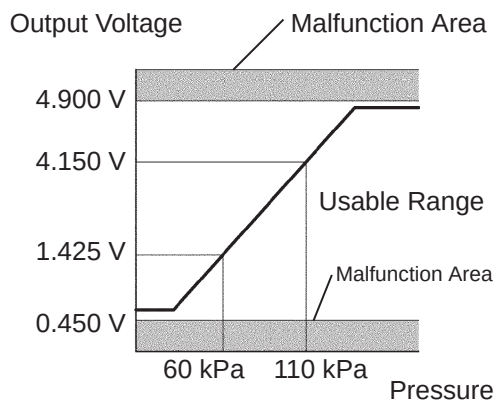
It is necessary to check the amount of fuel in the fuel tank.

- (e) Remove the fuel tank cap, and check that pressure drops.
If the pressure does not drop, replace the fuel tank assembly.
- (f) Reconnect the vent line hose to the fuel tank.



5. CHECK AIR INLET LINE

- (a) Disconnect the air inlet line hose from the charcoal canister.
- (b) Check that air can flow freely into the air inlet line.
If air cannot flow freely into the air inlet line, repair or replace it.
- (c) Reconnect the air inlet line hose to the charcoal canister.

**Pressure Sensor Specification**

HINT:

Atmospheric Pressure at altitude: 0 is 101.3 kPa

P

A097210E01

6. INSPECT PUMP MODULE (PRESSURE SENSOR)

- (a) Measure the power source voltage of the ECM connectors.

Voltage

Tester Connection	Condition	Specified Condition
A18 (VC) - A28 (E2)	Ignition switch ON	4.5 to 5.5 V

If the voltage is not as specified, check the ECM, leak detection pump and wire harness.

- (b) Measure the power output of the ECM connectors.

- (1) Remove the fuel tank cap.

Voltage

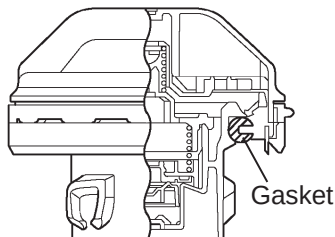
Tester Connection	Condition	Specified Condition
D21 (PPMP) - A28 (E2)	Ignition switch ON	1.425 to 4.150 V

If the voltage is not as specified, check the ECM, leak detection pump and wire harness.

- (2) Install the fuel tank cap.

INSPECTION**1. INSPECT FUEL TANK CAP ASSEMBLY**

- (a) Check the appearance.
- (1) Visually check whether the fuel tank cap and gasket are deformed or damaged. If necessary, repair or replace the cap and / or gasket.



Y

A097988E04