ON-VEHICLE INSPECTION

1. INSPECT AIR-FUEL RATIO COMPENSATION SYSTEM

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

Standard

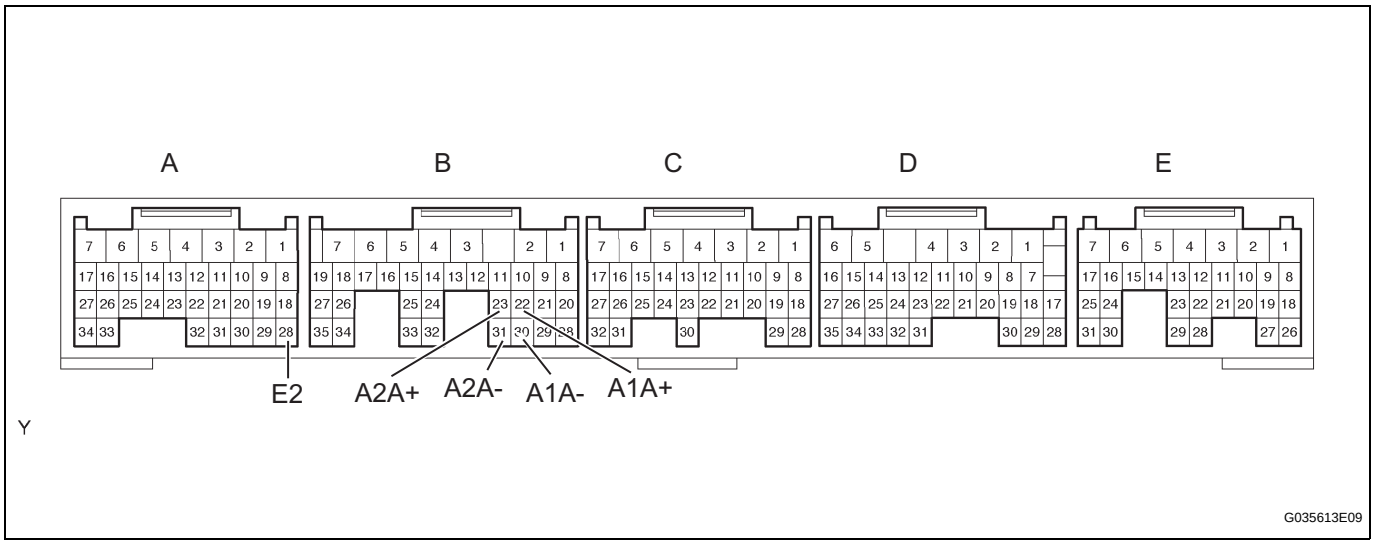
Tester Connection	Condition	Specified Condition
B22 (A1A+) - A28 (E2)	Ignition switch ON	3.3 V
B23 (A2A+) - A28 (E2)	Ignition switch ON	3.3 V
B30 (A1A-) - A28 (E2)	Ignition switch ON	2.9 V
B31 (A2A-) - A28 (E2)	Ignition switch ON	2.9 V

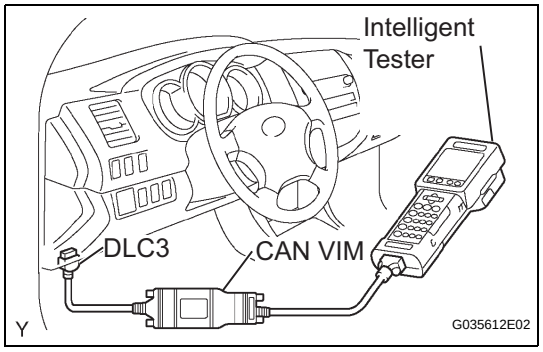
NOTICE:

Connect test leads from the back side of the connector. Do not disconnect the connectors from the ECM.

HINT:

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



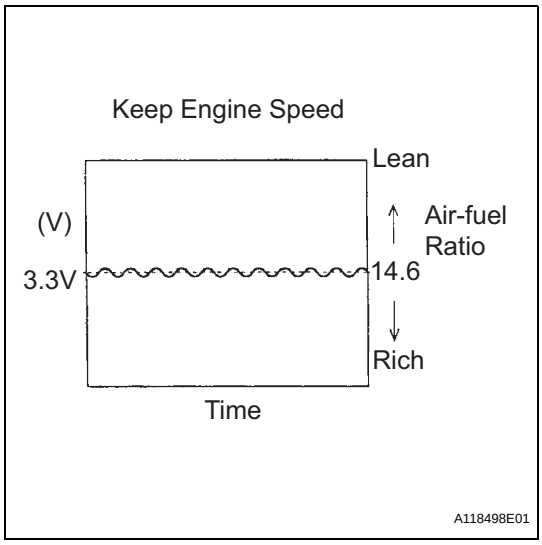


(b) Connect the intelligent tester to the DLC3.

(c) Turn the ignition switch to ON.

(d) Select the following menu items: DIAGNOSIS / ENHANCED OBD II / 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.



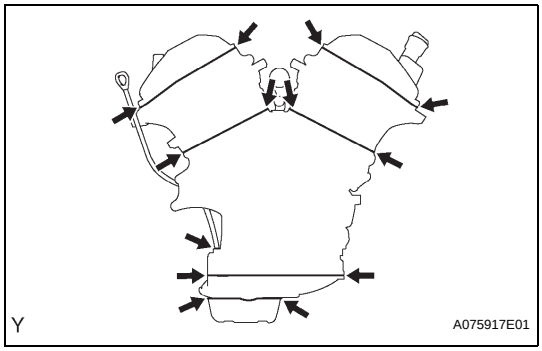
(f) Maintain the engine speed at 2,500 rpm and confirm that the display on the intelligent tester, when A/FS B1 S1 is selected, is as shown in the illustration.
HINT:
- The illustration may slightly differ from the display on the intelligent tester.
- Only the intelligent tester displays the waveform of the A/F sensor.

(g) Confirm that the waveform displayed on the intelligent tester, when O2S B1 S2 is selected, 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 up the engine.**
- **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 05-498).**

EC

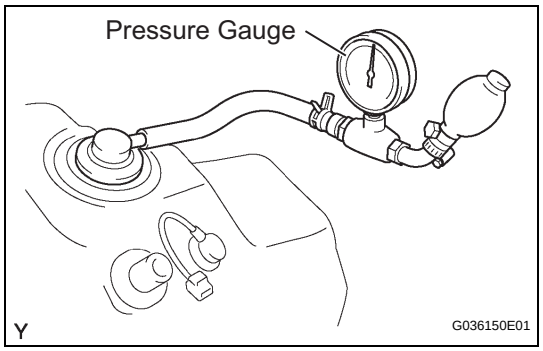
2. INSPECT FUEL CUT OFF RPM

(a) Increase the engine speed to at least 3,500 rpm.
(b) Use a sound scope to check for injector operating sounds.
(c) Check that injector operating sounds stop momentarily and then resume when the accelerator pedal is released.
Fuel cut off rpm:
2,500 rpm
Fuel return rpm:
1,400 rpm



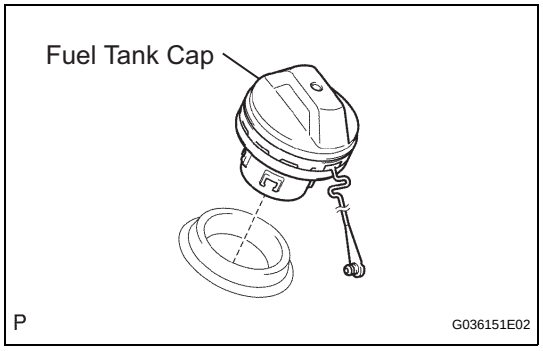
3. VISUALLY INSPECT HOSES, CONNECTIONS AND GASKETS

(a) Check the appearance.
(1) Check if the indicated portions of the engine assembly are cracked, leaking or damaged.
HINT:
Disconnection of the engine oil level gauge, oil filler cap, PCV hose, etc. may cause the engine to run improperly. Disconnected, loose or cracked parts in 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.

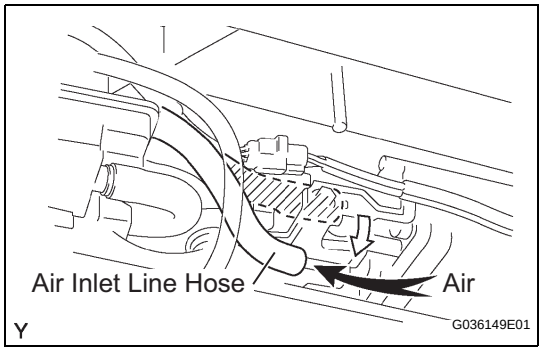


4. INSPECT FUEL CUTOFF VALVE AND FILL CHECK VALVE

(a) Remove the fuel tank (see page FU-30).
(b) Connect the pressure gauge to the vent hose port.
(c) Install the fuel tank with the vent hose disconnected.
(d) Fill the fuel tank with fuel.
(e) Apply pressure at 4 kPa (41 gf/cm2, 0.58 psi) to the vent port of the fuel tank.
HINT:
Check the amount of fuel left in the fuel tank.



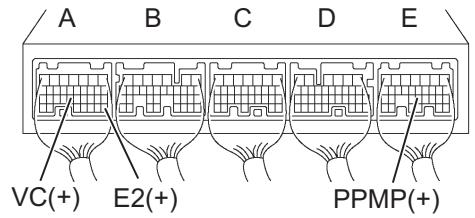
(f) Remove the fuel tank cap, and check that the pressure decreases.
If the pressure does not decrease, replace the fuel tank assembly.
(g) Reconnect the vent line hose to the fuel tank.



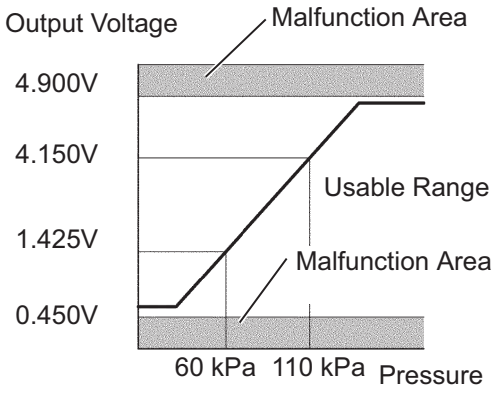
5. CHECK AIR INLET LINE

(a) Disconnect the air inlet line hose from the charcoal canister.
(b) Check that air flows freely into the air inlet line.
If air does not flow freely into the air inlet line, repair or replace the air inlet line.
(c) Reconnect the air inlet line hose to the charcoal canister.

EC



Y **Pressure Sensor Specification**



HINT:
Standard Atmospheric Pressure:101.3 kPa

P G036145E01

EC

6. INSPECT LEAK DETECTION PUMP (Pressure Sensor)

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

Standard

Tester Connection	Condition	Specified Condition
A23 (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.

Standard

Tester Connection	Condition	Specified Condition
E22 (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.