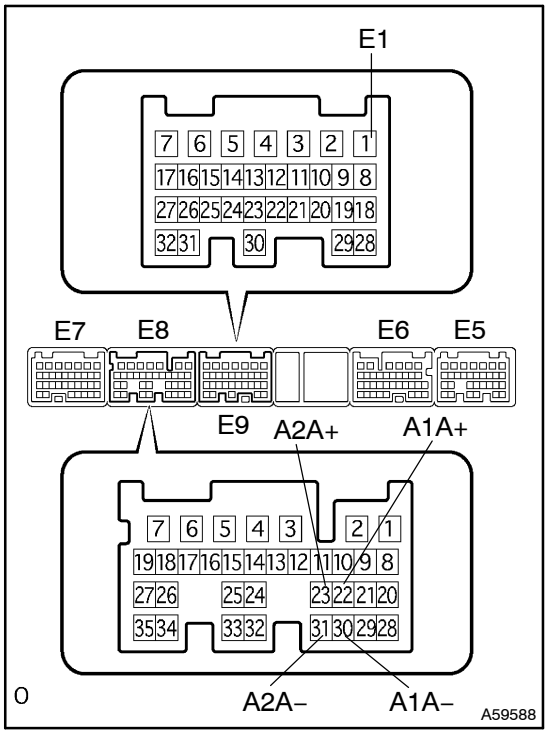
120EB–01

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
E8–22 (A1A+) – E9–1(E1)	Ignition switch ON	3.3 V
E8–30 (A1A–) – E9–1(E1)	Ignition switch ON	3.0 V
E8–23 (A2A+) – E9–1(E1)	Ignition switch ON	3.3 V
E8–31 (A2A–) – E9–1(E1)	Ignition switch ON	3.0 V

NOTICE:

Connect test leads to the connector's backside. 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.

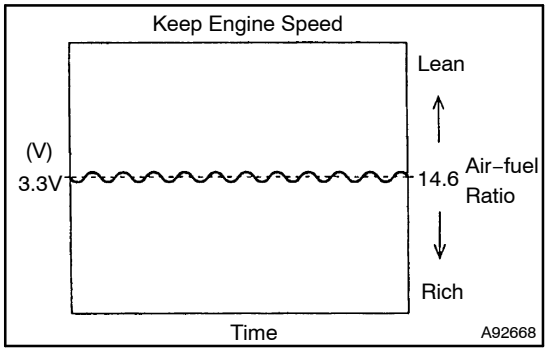
(b) Connect the hand–held tester to the DLC3.

(c) Select "DATA MONITOR". Then select "A/FS B1 S1", "A/FS B2 S1" and "O2S B1 S2" to display the monitors.

HINT:

Refer to the hand–held tester operator's manual for further detail.

(d) Warm up the A/F sensor with the engine speed at 2,500 rpm for approximately 2 minutes.



(e) Keep the engine speed at 2,500 rpm and confirm that the displays of "A/FS B1 S1" and "A/FS B2 S1" are as shown in the illustration.

HINT:

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

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

2. INSPECT FUEL CUT OFF/RESTART RPM

(a) Increase the engine speed to at least 3,500 rpm.

(b) Use a sound scope to check for the injector operating noise.

(c) When the accelerator pedal is released, the injector operating noise stops momentarily and then resumes.

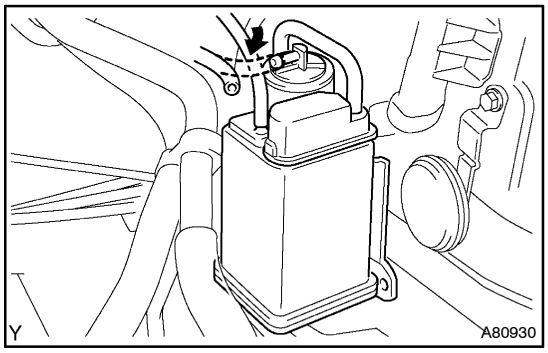
HINT:

Measure with the A/C OFF.

Standard

Item	Specified Condition
Fuel cut off rpm	2,500 rpm
Fuel injector restart rpm	1,400 rpm

If the result is not as specified, check for DTCs. If a DTC is present, follow the repair procedures according to the DTC.



3. INSPECT EVAPORATIVE EMISSION CONTROL SYSTEM

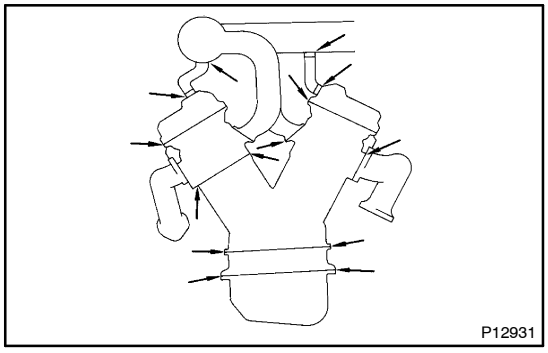
(a) Start the engine. Disconnect the vacuum hose as shown in the illustration.

(b) From the hand–held tester ACTIVE TEST mode, select PURGE VSV. Check that a vacuum occurs at the VSV port.

(c) Exit ACTIVE TEST mode, select PURGE VSV. Check that a vacuum occurs at the VSV port.

(d) From the hand–held tester ECU DATA MONITOR mode, select PURGE VSV. Check operation of the purge VSV.

(e) Warm up the engine and drive the vehicle. Confirm that the purge VSV is turned from off to on.



4. VISUALLY INSPECT HOSES, CONNECTIONS AND GASKETS

(a) Check for cracks, leaks or damage.

HINT:

Removal or problems with the engine oil dipstick, oil filler cap, PCV hose and other components 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. Be sure to check the areas indicated by the arrow marks. If necessary, replace any damaged parts.