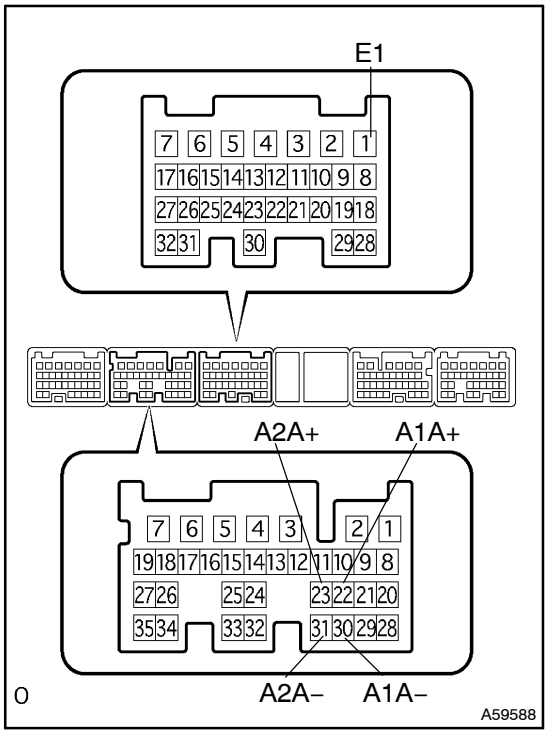
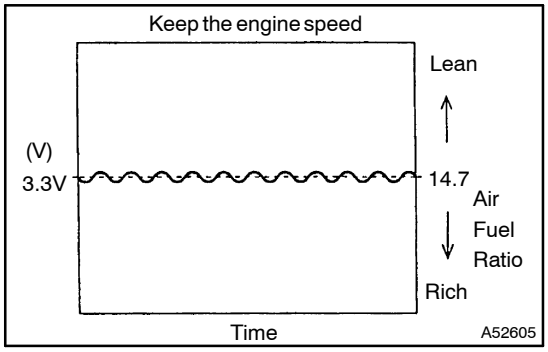
1208N–02

ON–VEHICLE INSPECTION





1. INSPECT AIR–FUEL RATIO COMPENSATION SYSTEM

(a) Measure the voltage between the terminals of the ECM.
Standard voltage:

Terminal No.	Condition	Voltage
A1A+ – E1	IG switch ON	3.3V
A1A– – E1	IG switch ON	3.0V
A2A+ – E1	IG switch ON	3.3V
A2A– – E1	IG switch ON	3.0V

CAUTION:
Connect test leads from the back side of the ECM connector.

HINT:
Voltage between the terminals of the ECM is constant regardless of the voltage output from the A/F sensor.

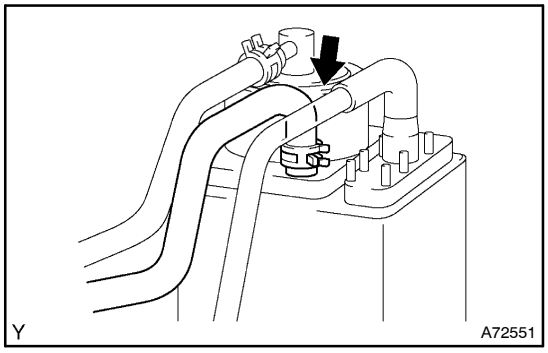
(b) Connect the hand–held tester to the DLC3.
(c) Select "DIAGNOSIS/ ENHANCED OBD II/ DATA LIST" – "AFS B1 S1" and "AFS B2 S1" to display the monitor.
(d) Warm up the A/F sensor with the engine speed at 2,500 rpm for approx. 2 minutes.
(e) Keep the engine speed at 2,500 rpm and confirm that the waveform of "AFS B1 S1" and "AFS B2 S1" are similar to the illustration on the left.

HINT:
- The waveform in the illustration is a sample.
- Only hand–held tester displays the waveform of A/F sensor.

(f) Confirm that the display of "DIAGNOSIS/ ENHANCED OBD II/ DATA LIST" – "O2S B1 S2" and "O2S B2 S2",fluctuates between 0V to 1V with the engine speed at 2,500 rpm.

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 noise.
(c) Check that when the throttle lever is released, injector operation noise stops momentarily (at 2,500 rpm) and then resumes (at 1,200 rpm).
2,500 rpm: Fuel cut off rpm
1,200 rpm: Fuel return rpm



3. INSPECT EVAPORATIVE EMISSION CONTROL SYSTEM

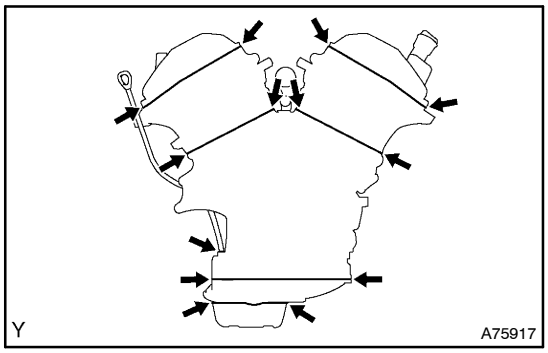
(a) After starting the engine, disconnect the vacuum hose shown in the illustration.

(b) Confirm vacuum occurs at the VSV port, when choosing "ACTIVE TEST" and "PURGE VSV" according to the display on the hand–held tester.

(c) After completing "ACTIVE TEST", connect the vacuum hose again.

(d) After entering "DATA MONITOR" on the hand–held tester, choose "PURGE VSV" to check the operation of the PURGE VSV.

(e) After warming up the engine and drive the vehicle, confirm the VSV turns from off to on.



4. VISUALLY INSPECT HOSES, CONNECTIONS AND GASKETS

(a) Check for cracks, leaks or damage.

HINT:

Separation of the engine oil dipstick, oil filler cap, PCV hose, etc. may causes 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.