

INSPECTION

1. INSPECT HEATER RESISTANCE OF AIR FUEL RATIO SENSOR

- Disconnect the air fuel ratio sensor connector.
- Using an ohmmeter, measure the resistance between terminals +B and HT.

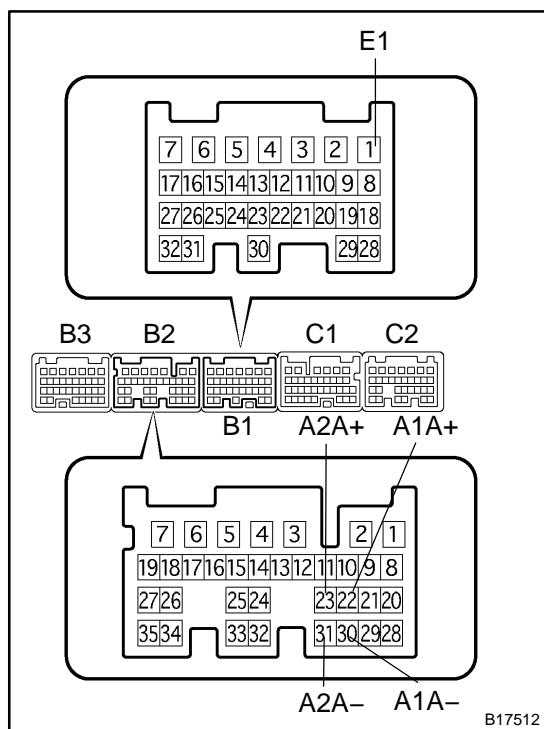
Resistance 11 to 16 k Ω at 20°C (68°F)

If the resistance is not as specified, replace the sensor.

Torque: 44 N·m (450 kgf·cm, 32 ft·lbf)

- Reconnect the air fuel ratio sensor connector.

2. INSPECT OPERATION OF AIR FUEL RATIO SENSOR (See page [DI-507](#))



3. INSPECT AIR-FUEL RATIO COMPENSATION SYSTEM

- Measure the voltage between the terminals of the ECM connectors.

Standard:

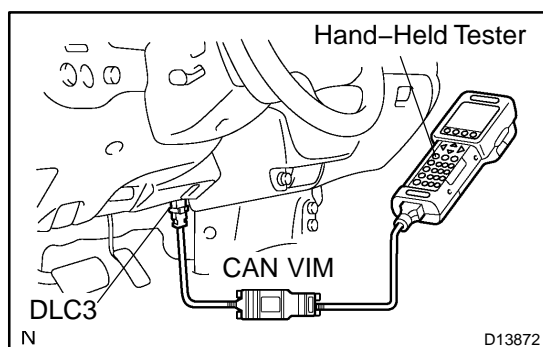
Tester Connection	Condition	Specified Condition
B2-22 (A1A+) – B1-1 (E1)	Ignition switch ON	3.3 V
B2-30 (A1A-) – B1-1 (E1)	Ignition switch ON	2.9 V
B2-23 (A2A+) – B1-1 (E1)	Ignition switch ON	3.3 V
B2-31 (A2A-) – B1-1 (E1)	Ignition switch ON	2.9 V

NOTICE:

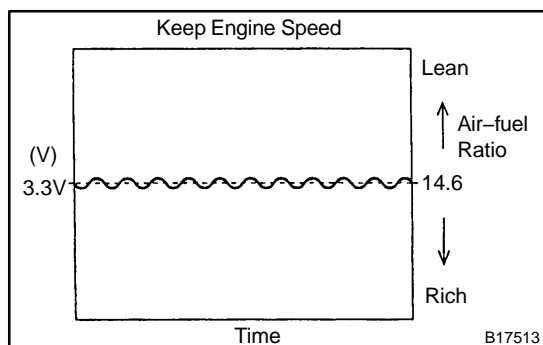
Connect test leads from the back side of the connector. The connectors should not be disconnected from the ECM.

HINT:

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



- (b) Connect a hand-held tester to the Controller Area Network Vehicle Interface Module (CAN VIM). Then connect the CAN VIM to the Data Link Connector 3 (DLC3).
- (c) Turn the ignition switch ON.
- (d) Select the following menu items : Data List / A/FS B1 S1 and O2S B1 S2.
- (e) Warm up the A/F sensor by running the engine at 2,500 rpm for approximately 2 minutes.



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

HINT:

- The illustration may slightly differ from the display on the hand-held tester.
 - The waveform of the A/F sensor is displayed only on the hand-held tester.
- (g) Confirm that the display of the "O2S B1 S2" changes between 0 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 [DI-507](#))