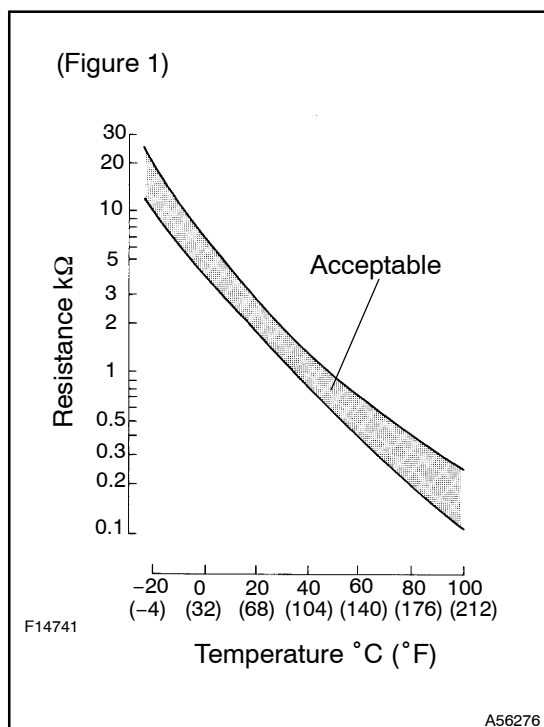


DTC	P0095	INTAKE AIR TEMPERATURE SENSOR 2 CIRCUIT
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CIRCUIT DESCRIPTION



The diesel turbo inlet air temperature sensor is built into the intake air connector and senses the intake air temperature. A built-in thermistor of the sensor changes the resistance value according to the intake air temperature. The lower the intake air temperature is, the greater the thermistor resistance value becomes, and the higher the temperature is, the lower the resistance value becomes (see figure 1).

The sensor is connected to the ECM. The 5 V power source voltage in the ECM is applied to the sensor from terminal THA via resistor R. Resistor R and the sensor are connected in series. When the resistance value of the sensor changes in accordance with changes in the intake air temperature, the potential at terminal THA also changes. Based on this signal, the ECM corrects the fuel injection volume to improve the driveability with a cold engine.

DTC No.	DTC Detection Condition	Trouble Area
P0095	Open or short in diesel turbo inlet air temperature sensor circuit for 0.5 seconds (1 trip detection logic)	<ul style="list-style-type: none"> • Open or short in diesel turbo inlet air temperature sensor circuit • Diesel turbo inlet air temperature sensor • ECM

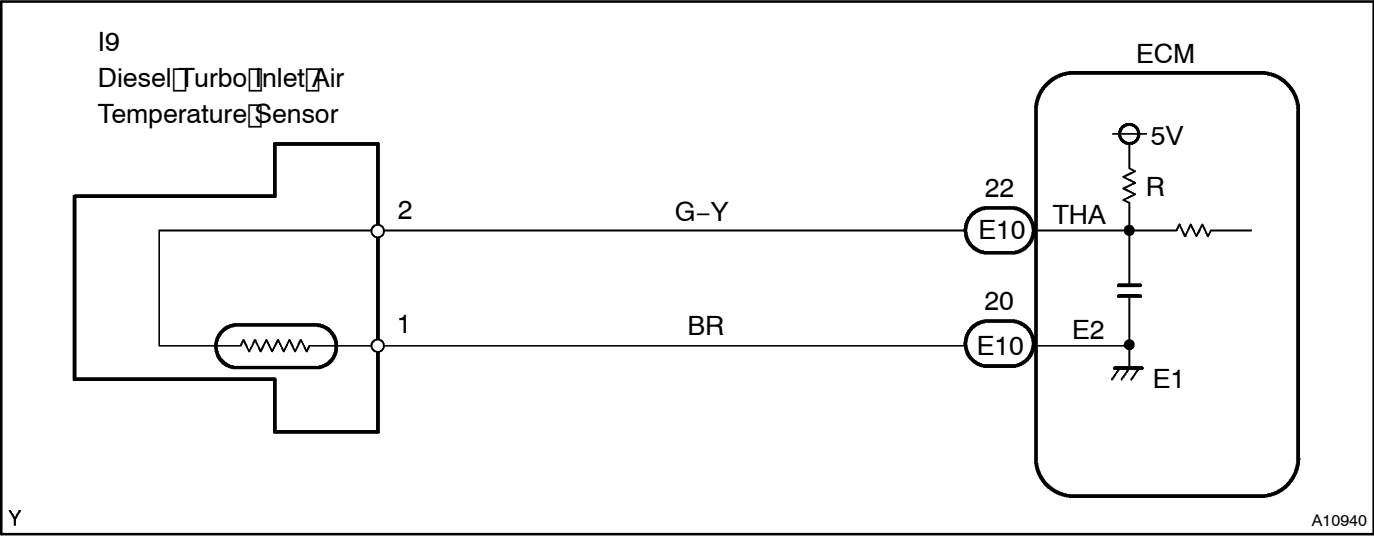
HINT:

When DTC P0095 is detected, check the intake air temperature by selecting Powertrain / Engine and ECT / Data List / Ambient Temperature on the intelligent tester II.

Reference:

Temperature Displayed	Malfunction
-40°C (-40°F)	Open circuit
140°C (284°F) or more	Short circuit

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

- If different DTCs related to different systems that have terminal E2 as the ground terminal are output simultaneously, terminal E2 may have an open circuit.
- Read freeze frame data using the intelligent tester II. Freeze frame data record the engine condition when malfunctions are detected. When troubleshooting, freeze frame data can help determine if the vehicle was moving or stationary, if the engine was warmed up or not, and other data from the time the malfunction occurred.

1 READ VALUE OF INTELLIGENT TESTER II (INTAKE AIR TEMPERATURE)

- (a) Connect the intelligent tester II to the DLC3.
- (b) Turn the ignition switch to ON and turn the intelligent tester II ON.
- (c) Select the following menu items: Powertrain / Engine and ECT / Data List / Ambient Temperature.
- (d) Read the value.

Standard: Same value as the air temperature at the intake manifold.

Result:

Temperature Displayed	Proceed To
-40°C (-40°F)	A
140°C (284°F) or more	B
OK (Same as air temperature near to intake manifold)	C

HINT:

- If there is an open circuit, the intelligent tester II indicates -40°C (-40°F).
- If there is a short circuit, the intelligent tester II indicates 140°C (284°F) or more.

B

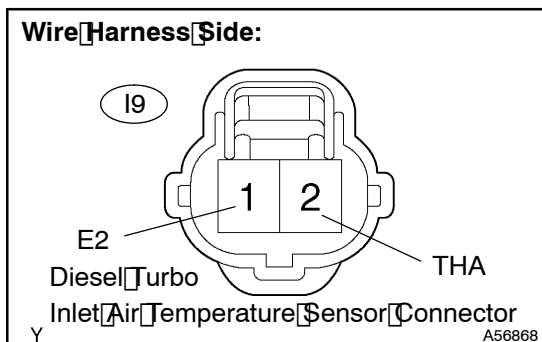
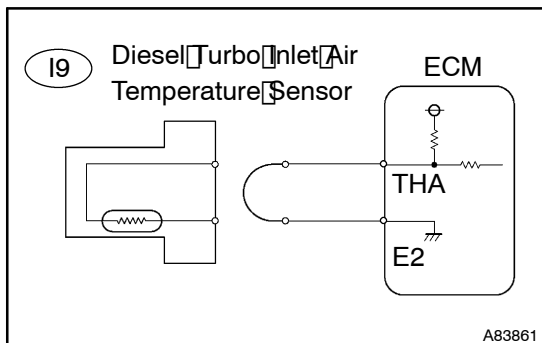
Go to step 4

C

CHECK FOR INTERMITTENT PROBLEMS
(See page 05-440)

A

2 READ VALUE OF INTELLIGENT TESTER (CHECK FOR OPEN IN WIRE HARNESS)



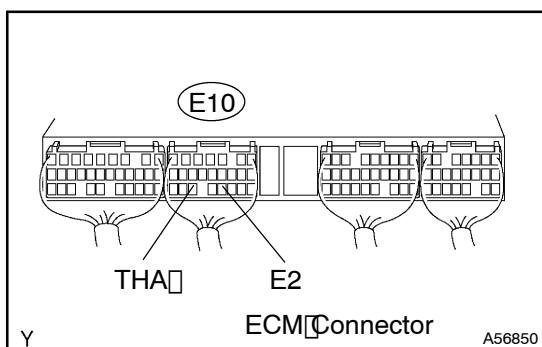
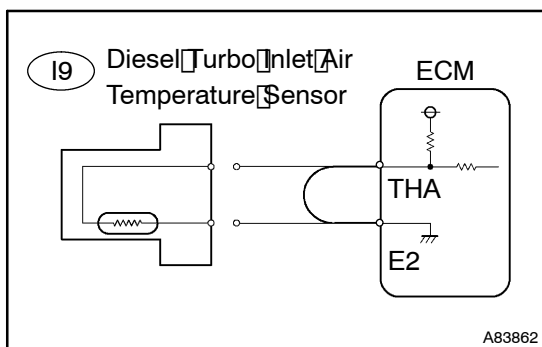
- Disconnect the I9 diesel turbo inlet air temperature sensor connector.
 - Connect terminals 1 and 2 of the diesel turbo inlet air temperature sensor wire harness side connector.
 - Connect the intelligent tester to the DLC3.
 - Turn the ignition switch to ON and turn the intelligent tester ON.
 - Select the following menu items: Powertrain / Engine and ECT / Data List / Ambient Temperature.
 - Read the value.
- Standard: 140°C (284°F) or more**
- Reconnect the diesel turbo inlet air temperature sensor connector.

OK

CONFIRM GOOD CONNECTION AT SENSOR. IF OK, REPLACE DIESEL TURBO INLET AIR TEMPERATURE SENSOR

NG

3 READ VALUE OF INTELLIGENT TESTER (CHECK FOR OPEN IN ECM)



- Disconnect the I9 diesel turbo inlet air temperature sensor connector.
 - Connect terminals THA and E2 of the E10 ECM connector.
- HINT:
Before checking, do a visual and contact pressure check on the ECM connector.
- Connect the intelligent tester to the DLC3.
 - Turn the ignition switch to ON and turn the intelligent tester ON.
 - Select the following menu items: Powertrain / Engine and ECT / Data List / Ambient Temperature.
 - Read the value.
- Standard: 140°C (284°F) or more**
- Reconnect the diesel turbo inlet air temperature sensor connector.

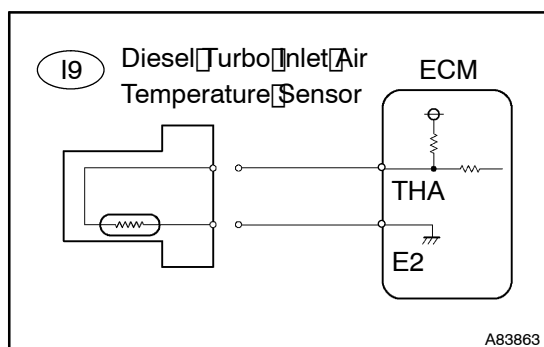
OK

REPAIR OR REPLACE HARNESS OR CONNECTOR

NG

CONFIRM GOOD CONNECTION AT ECM. IF OK, REPLACE ECM (See page 10-30)

4 READ VALUE OF INTELLIGENT TESTER (CHECK FOR SHORT IN WIRE HARNESS)



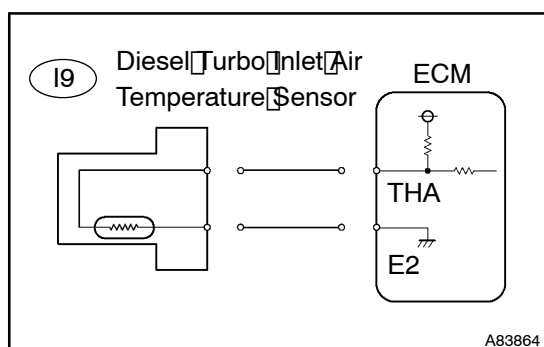
- Disconnect the I9 diesel turbo inlet air temperature sensor connector.
- Connect the intelligent tester to the DLC3.
- Turn the ignition switch to ON and turn the intelligent tester ON.
- Select the following menu items: Powertrain / Engine and ECT / Data List / Ambient Temperature.
- Read the value.
Standard: -40°C (-40°F)
- Reconnect the diesel turbo inlet air temperature sensor connector.

OK

REPLACE DIESEL TURBO INLET AIR TEMPERATURE SENSOR

NG

5 READ VALUE OF INTELLIGENT TESTER (CHECK FOR SHORT IN ECM)



- Disconnect the I9 diesel turbo inlet air temperature sensor connector.
- Disconnect the E10 ECM connector.
- Connect the intelligent tester to the DLC3.
- Turn the ignition switch to ON and turn the intelligent tester ON.
- Select the following menu items: Powertrain / Engine and ECT / Data List / Ambient Temperature.
- Read the value.
Standard: -40°C (-40°F)
- Reconnect the diesel turbo inlet air temperature sensor connector.
- Reconnect the ECM connector.

OK

REPAIR OR REPLACE HARNESS OR CONNECTOR

NG

REPLACE ECM (See page 10-30)