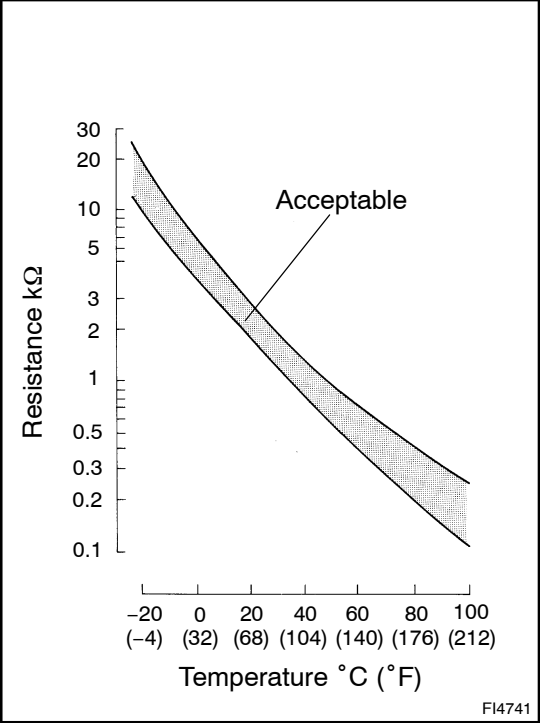


DTC	39	Fuel Temp. Sensor Circuit Malfunction
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CIRCUIT DESCRIPTION



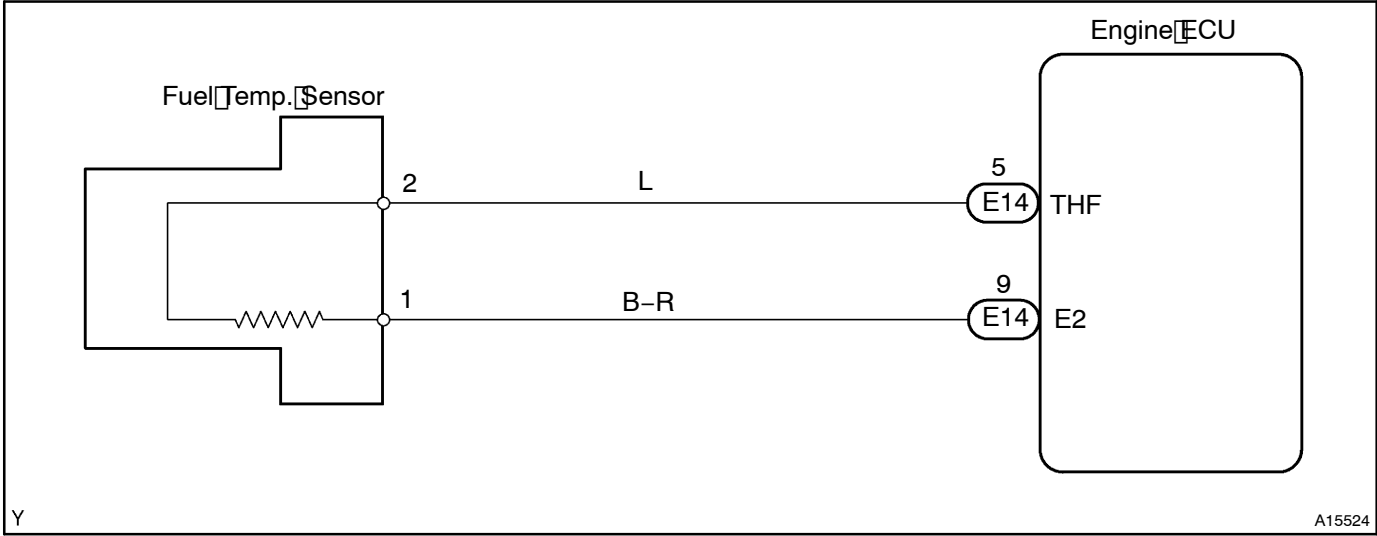
The fuel temperature sensor senses the fuel temperature. A thermistor built in the sensor changes the resistance value according to the fuel temperature as shown in the illustration. The resistance value of the fuel temperature sensor is one of the factors to decide the fuel injection volume.

DTC No.	DTC Detecting Condition	Trouble Area
39	Open or short in fuel temp. sensor circuit for 0.5 sec. or more	• Open or short in fuel temp. sensor circuit • Fuel temp. sensor • Engine ECU

HINT:
After confirming DTC 39, use the hand-held tester to confirm the water temperature from CURRENT DATA.

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

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

If DTC 22, 24, 35 and 39 are output simultaneously, E2 (sensor ground) may be open.

When using hand-held tester

1	Read value of fuel temperature on hand-held tester.
---	---

OK:

The same value as the actual fuel temperature.

HINT:

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

NG

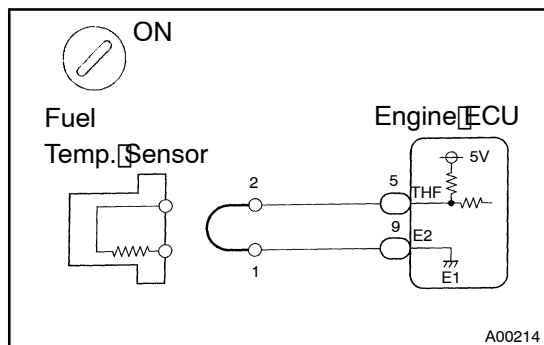
-40°C (-40°F)... Go to step 2.

140°C (284°F) or more... Go to step 4.

OK

Check for intermittent problems (See page DI-4).

2 Check for open in harness or engine ECU.



PREPARATION:

- Disconnect the fuel temperature sensor connector.
- Connect the sensor wire harness terminals together.
- Turn the ignition switch ON.

CHECK:

Read the temperature value on the hand-held tester.

OK:

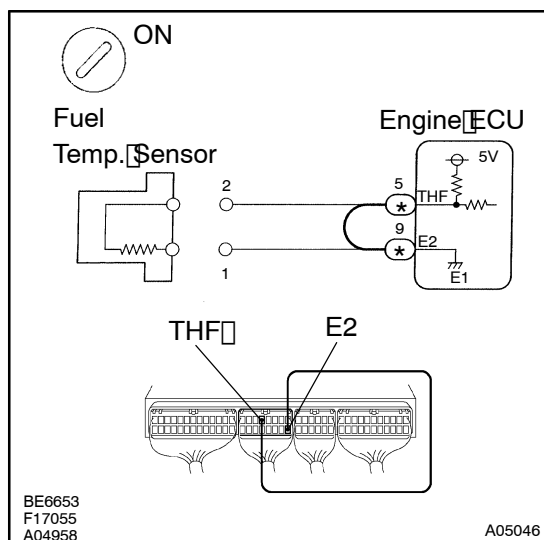
Temperature value: 140°C (284°F) or more

OK

Confirm good connection at sensor. If OK, replace fuel temperature sensor.

NG

3 Check for open in harness or engine ECU.



PREPARATION:

- Remove the glove compartment door.
- Connect terminals THF and E2 of the engine ECU connector.
- Disconnect the fuel temperature sensor connector.

HINT:

Before checking, do a visual and contact pressure check for the engine ECU connector (See page N-19).

- Turn the ignition switch ON.

CHECK:

Read the temperature value on the hand-held tester.

OK:

Temperature value: 140°C (284°F) or more

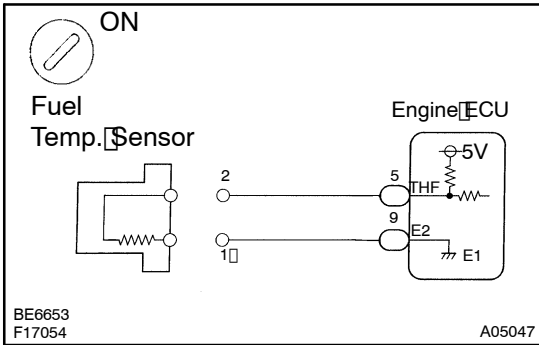
OK

Open in harness between terminal E2 or THF, repair or replace harness.

NG

Confirm good connection at engine ECU. If OK, replace engine ECU.

4 Check for short in harness or engine ECU.



PREPARATION:

- Disconnect the fuel temperature sensor connector.
- Turn the ignition switch ON.

CHECK:

Read the temperature value on the hand-held tester.

OK:

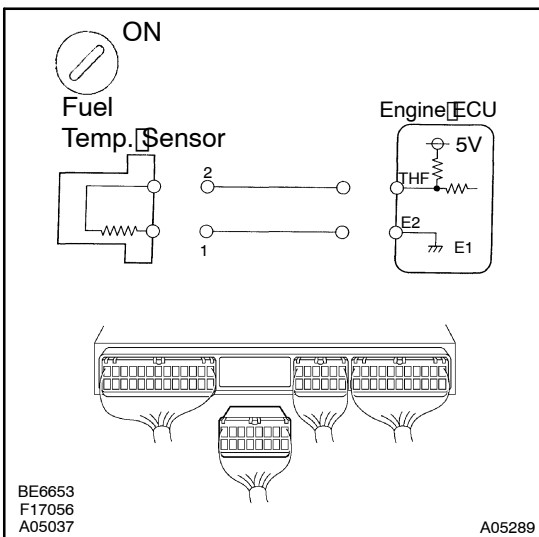
Temperature value: -40°C (-40°F)

OK

Replace fuel temp. sensor.

NG

5 Check for short in harness or engine ECU.



PREPARATION:

- Remove the glove compartment door.
- Disconnect the connector of the engine ECU.
- Disconnect the fuel temperature sensor connector.
- Turn the ignition switch ON.

CHECK:

Read the temperature value on the hand-held tester.

OK:

Temperature value: -40°C (-40°F)

OK

Repair or replace harness or connector.

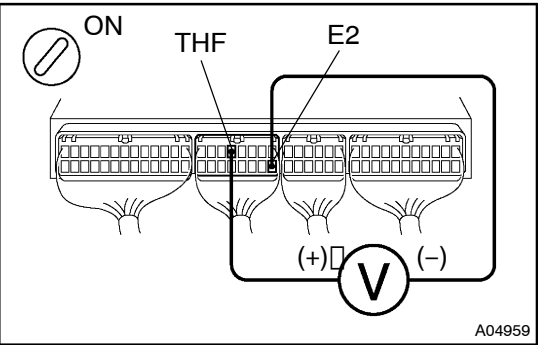
NG

Check and replace engine ECU (See page IN-19).

When not using hand-held tester

1

Check voltage between terminals THF and E2 of engine ECU connector.



PREPARATION:
(a) Remove the glove compartment door.
(b) Turn the ignition switch ON.

CHECK:
Measure the voltage between terminals THF and E2 of the engine ECU connector.

OK:

Fuel temperature	Standard voltage
20 °C (68 °F)	2.2 – 2.6 V
80 °C (176 °F)	0.4 – 0.6 V

OK

Check for intermittent problems
(See page DI-4)

NG

2

Check fuel temperature sensor (See page ED-11)

NG

Replace fuel temperature sensor.

OK

3

Check for open and short in harness and connector between engine ECU and fuel temperature sensor (See page IN-19)

NG

Repair or replace harness or connector.

OK

Check and replace engine ECU (See page IN-19)