DTC	P0135/21	Oxygen Sensor Heater Circuit Malfunction (Bank 1 Sensor 1)

DTC	P0141/21	Oxygen Sensor Heater Circuit Malfunction (Bank 1 Sensor 2)

CIRCUIT DESCRIPTION

Refer to DTC P0125/91 (Insufficient Coolant Temp. for Closed Loop Fuel Control) on page DI–53.

DTC No.	DTC Detecting Condition	Trouble Area
P0135/21 P0141/21	When the heater operates, heater current exceeds 2 A (2 trip detection logic)	• Open or short in heater circuit of oxygen sensor • Oxygen sensor heater • Engine ECU
	Heater current of 0.2 A or less when the heater operates (2 trip detection logic)	

WIRING DIAGRAM

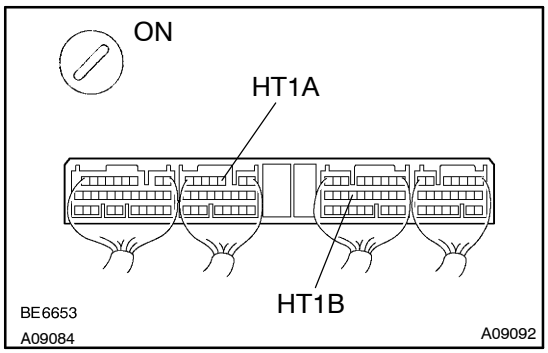
Refer to DTC P0125/91 (Insufficient Coolant Temp. for Closed Loop Fuel Control) on page DI–53.

INSPECTION PROCEDURE

HINT:

Read freeze frame data using hand–held tester. Because freeze frame records the engine conditions when the malfunction is detected, when troubleshooting it is useful for determining whether the vehicle was running or stopped, the engine warmed up or not, the air–fuel ratio lean or rich, etc. at the time of the malfunction.

1	**Check voltage between terminals HT1A, HT1B of engine ECU connector and body ground.**



PREPARATION:

(a) Remove the engine ECU cover.

(b) Turn the ignition switch ON.

CHECK:

Measure voltage between terminals HT, HT2 of the engine ECU connector and body ground.

HINT:

- Connect terminal HT1A to bank 1 sensor 1.
- Connect terminal HT1B to bank 1 sensor 2.

OK:

Voltage: 9 – 14 V

OK	**Check and replace engine ECU (See page IN–20).**

NG

2	Check resistance of oxygen sensor heater (See page FI–60).

NG → Replace oxygen sensor.

OK

Check and repair harness or connector between main relay and oxygen sensor and engine ECU (See page IN–20).