DTC	P0141/27	OXYGEN SENSOR HEATER CIRCUIT MALFUNCTION (BANK 1 SENSOR 2)

DTC	P0161/28	OXYGEN SENSOR HEATER CIRCUIT MALFUNCTION (BANK 2 SENSOR 2)

CIRCUIT DESCRIPTION

Refer to DTC P0136 on page 05–339.

DTC No.	DTC Detecting Condition	Trouble Area
P0141/27 P0161/28	• When the heater operates, heater current exceeds 2.35 A (2 trip detection logic) • Heater current of 0.2 A or less when the heater operates (2 trip detection logic)	• Open or short in heater circuit of oxygen sensor • Oxygen sensor heater • ECM

HINT:

- Bank 1 refers to the bank that includes cylinder No. 1.
- Bank 2 refers to the bank that does not include cylinder No. 1.
- Sensor 1 refers to the sensor closer to the engine body.
- Sensor 2 refers to the sensor farther away from the engine body.

WIRING DIAGRAM

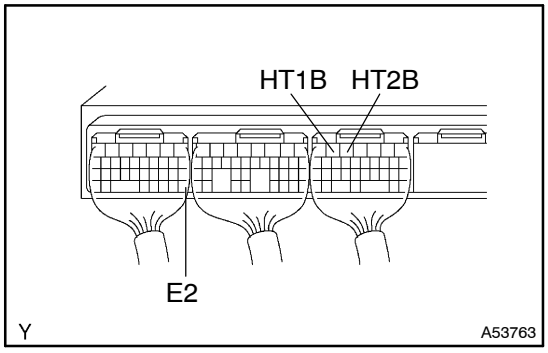
Refer to DTC P0136 on page 05–339.

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	INSPECT ECM

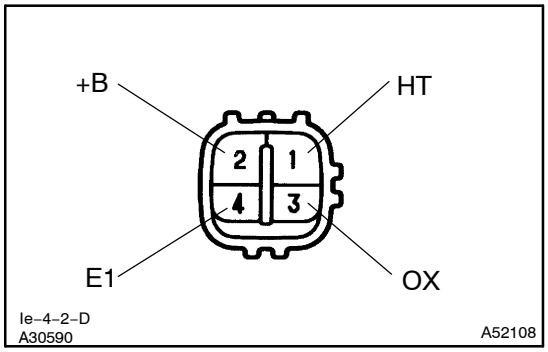


(a) Turn the ignition switch ON.
(b) Measure voltage between the terminals HT1B, HT2B and E2 of the ECM connector.
Voltage: 9 – 14 V

OK → **CHECK AND REPLACE ECM**

NG

2 INSPECT OXYGEN NO.2 SENSOR

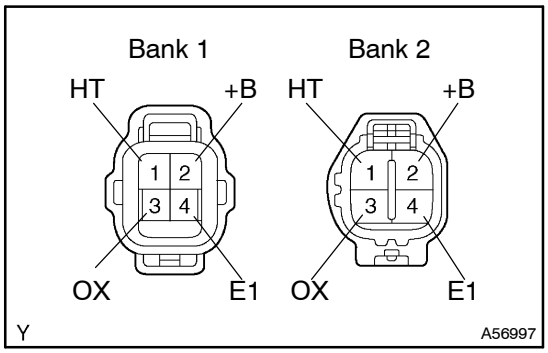


(a) Disconnect the oxygen sensor connector.
(b) Measure resistance between the terminals HT and +B of the oxygen sensor.
Resistance: 11 – 16 Ω (20°C)

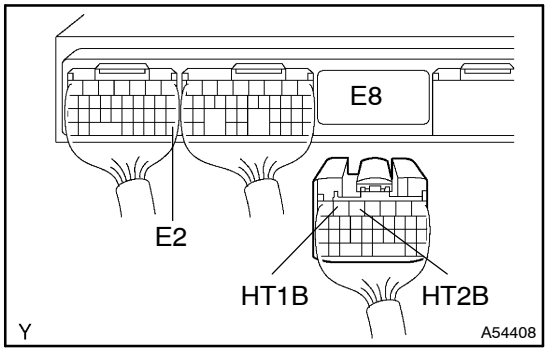
NG → **REPLACE OXYGEN NO.2 SENSOR**

OK

3 CHECK HARNESS AND CONNECTOR(ECM – OXYGEN SENSOR)



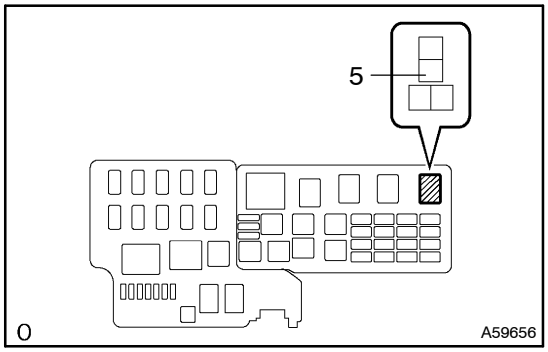
(a) Disconnect the oxygen sensor connector.
(b) Disconnect the ECM E8 connector.
(c) Check for open between the terminals HT of the oxygen sensor connector and HT1B, HT2B of the ECM connector.
Resistance: 1 Ω or less
(d) Check for short between the terminals HT1B, HT2B and E2 of the ECM connector.
Resistance: 1 MΩ or more



NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

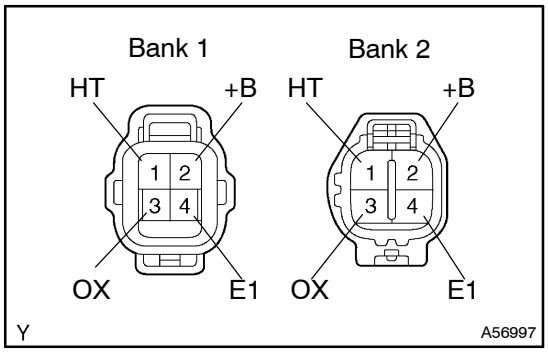
OK

4	CHECK HARNESS AND CONNECTOR(OXYGEN SENSOR – E.F.I. ECU RELAY)



(a) Disconnect the battery negative (–) terminal.
(b) Disconnect the oxygen sensor connector.
(c) Check for open between the terminals 5 of the E.F.I. ECU relay side connector and +B of the oxygen sensor connector.
Resistance: 1 Ω or less

NOTICE:
Do not insert the tester leads hard in the procedure (c), or the holder may be damaged.



NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

CHECK FOR ECM POWER SOURCE CIRCUIT