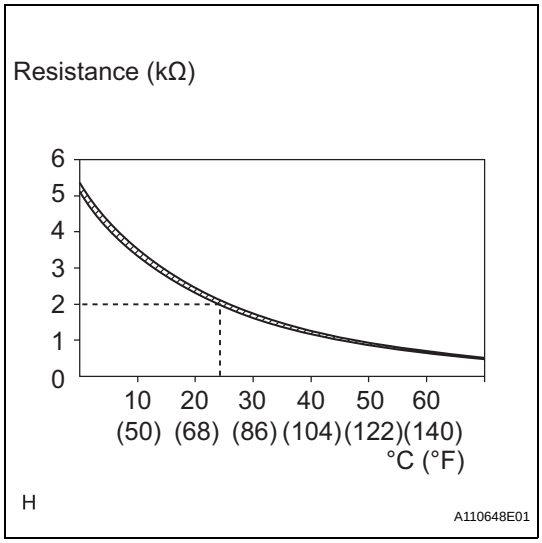
DTC	P0516	Battery Temperature Sensor Circuit Low

DTC	P0517	Battery Temperature Sensor Circuit High

DESCRIPTION



The battery temperature sensor installed on the battery current sensor detects battery temperature.
A thermistor is integrated into the battery temperature sensor, and the resistance in the battery temperature sensor changes according to the battery temperature.
The resistance of the thermistor in the battery temperature sensor decreases as the battery temperature increases. The resistance increases as the temperature decreases.
The battery temperature sensor is connected to the ECM. The ECM supplies 5 V from the THB terminal to the battery temperature sensor through resistor R.
The battery temperature sensor and resistor R are connected in series. This results in fluctuations in the voltage supplied from the THB terminal when the resistance changes according to the battery temperature.
The ECM determines the battery temperature according to fluctuations in voltage. When the battery temperature is high, the ECM determines to reduce the amount of current supplied from the generator in order to protect the battery.

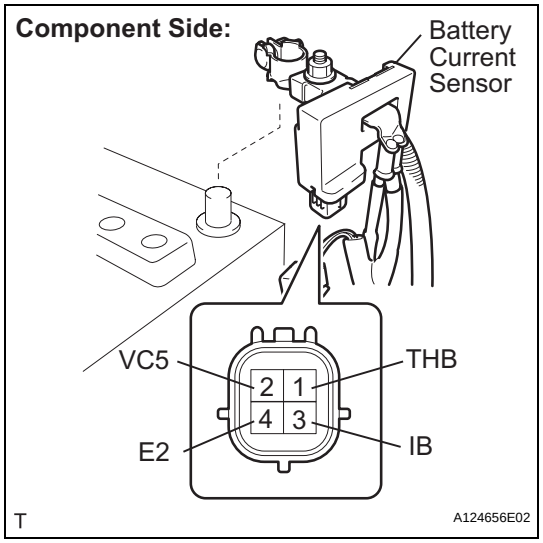
DTC No.	DTC Detection Condition	Trouble Area
P0516	Battery temperature sensor output value is 0.2 V or less for 0.5 seconds or more with the ignition switch ON (1 trip detection logic)	• Battery temperature sensor • Short in battery temperature sensor circuit • ECM
P0517	Battery temperature sensor output value is 4.8 V or more for 0.5 seconds or more with the ignition switch ON (1 trip detection logic)	• Battery temperature sensor • Open in battery temperature sensor circuit • ECM

WIRING DIAGRAM

Refer to DTC P1550 (see page ES-262)

INSPECTION PROCEDURE

1 INSPECT BATTERY CURRENT SENSOR



(a) Disconnect the B29 battery current sensor connector.
(b) Measure the resistance.

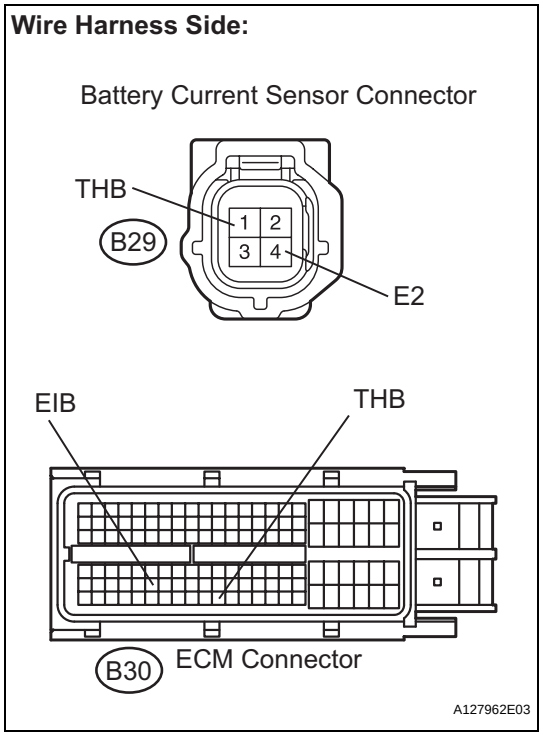
Standard resistance

Tester Connection	Condition	Specified Condition
1 (THB) - 4 (E2)	24 to 26°C (75.2 to 78.8°F)	1.91 to 2.065 kΩ

NG → **REPLACE BATTERY CURRENT SENSOR**

OK

2 CHECK HARNESS AND CONNECTOR (BATTERY CURRENT SENSOR - ECM)



(a) Disconnect the B29 battery current sensor connector.
(b) Disconnect the B30 ECM connectors.
(c) Measure the resistance of the wire harness side connectors.

Standard resistance (Check for open)

Tester Connection	Specified Condition
B29-1 (THB) - B30-120 (THB)	Below 1 Ω
B29-4 (E2) - B30-92 (EIB)	Below 1 Ω

Standard resistance (Check for short)

Tester Connection	Specified Condition
B29-1 (THB) or B30-120 (THB) - Body ground	10 kΩ or higher

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

OK

REPLACE ECM

ES