

<b>DTC</b>	<b>P0A38/257</b>	<b>GENERATOR TEMPERATURE SENSOR CIRCUIT LOW</b>
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<b>DTC</b>	<b>P0A39/259</b>	<b>GENERATOR TEMPERATURE SENSOR CIRCUIT HIGH</b>
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**CIRCUIT DESCRIPTION**

The motor temperature sensor No. 2 detects the temperature of the transaxle fluid. The resistance of the thermistor installed in the motor temperature sensor No. 2 varies with the changes in the transaxle fluid temperature. The construction in the motor temperature sensor No. 2 and how it is connected to the HV control ECU are the same as those of the motor temperature sensor No. 1 (see the circuit description on page 05-529).

Based on the signal provided by the motor temperature sensor No. 2, the HV control ECU limits the load to prevent the motor from overheating. Furthermore, the HV control ECU checks the motor temperature sensor No. 2 for a wiring malfunction and the sensor for malfunction.

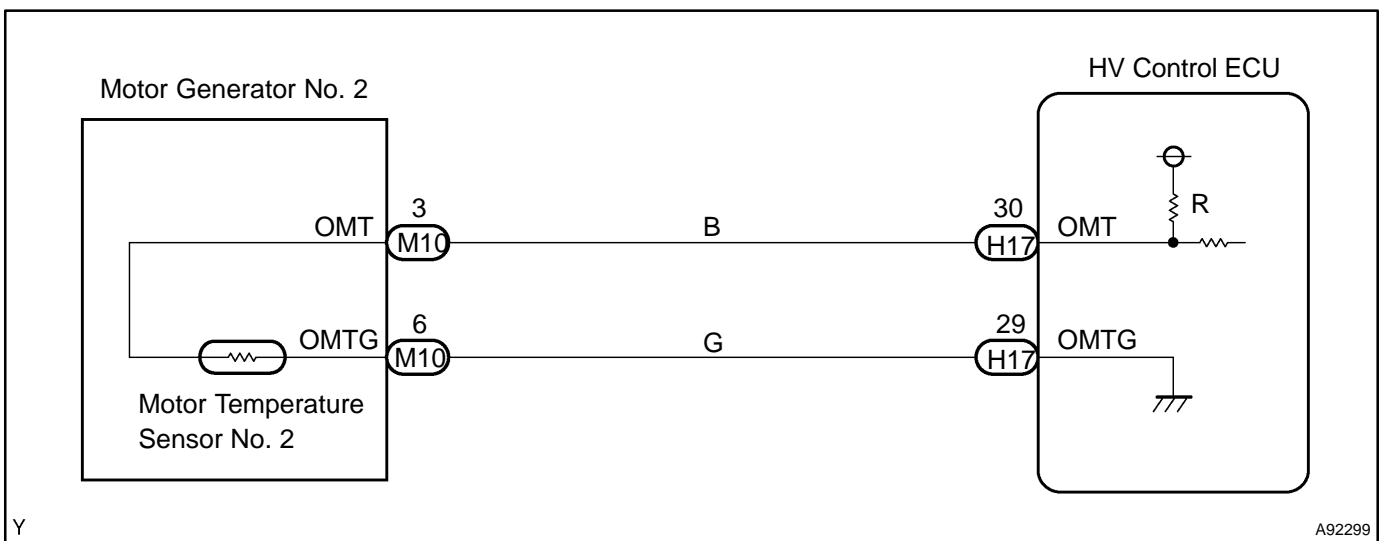
DTC No.	INF Code	DTC Detection Condition	Trouble Area
P0A38	257	GND short in motor temperature sensor No. 2 circuit	<ul style="list-style-type: none"> <li>• Wire harness or connector</li> <li>• Hybrid vehicle motor</li> <li>• HV control ECU</li> </ul>
P0A39	259	Open or +B short in motor temperature sensor No. 2 circuit	<ul style="list-style-type: none"> <li>• Wire harness or connector</li> <li>• Hybrid vehicle motor</li> <li>• HV control ECU</li> </ul>

**HINT:**

After confirming DTC P0A38 (INF 257) or P0A39 (INF 259), confirm MOTOR 2 TEMP in DIAGNOSIS / ENHANCED OBD II / HV ECU / DATA LIST using the hand-held tester.

Temperature Displayed	Malfunction
-50°C (-58°F)	Open or +B short circuit
205°C (401°F)	GND short circuit

**WIRING DIAGRAM**



# INSPECTION PROCEDURE

## 1 READ VALUE OF HAND-HELD TESTER(MOTOR 2 TEMP)

- (a) Connect the hand-held tester to the DLC3.
- (b) Turn the power switch ON (IG).
- (c) Turn the hand-held tester ON.
- (d) On the hand-held tester, enter the following menus: DIAGNOSIS / ENHANCED OBD II / HV ECU / DATA LIST.
- (e) Read the MOTOR 2 TEMP value on the hand-held tester.

**Result:**

Temperature Displayed	Proceed to
-50°C (-58°F)	A
205°C (401°F)	B
-49°C to 204°C (-57°F to 400°F)	C

**HINT:**

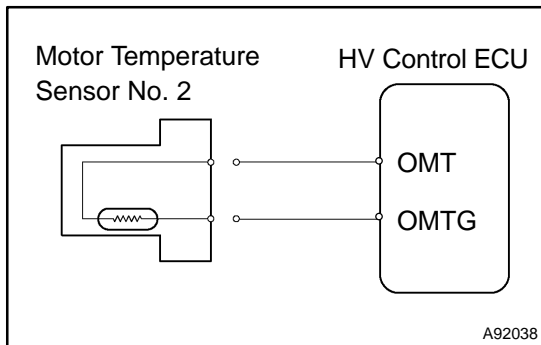
- If there is an open or +B short circuit, the hand-held tester indicates -50°C (-58°F).
- If there is a GND short circuit, the hand-held tester indicates 205°C (401°F).

**B** Go to step 5

**C** CHECK FOR INTERMITTENT PROBLEMS  
(See page 05-407)

**A**

## 2 INSPECT HYBRID VEHICLE MOTOR ASSY(CHECK FOR OPEN OR +B SHORT)



- (a) Disconnect the M10 motor temperature sensor No. 2 connector.
- (b) Turn the power switch ON (IG).
- (c) Measure the voltage between the terminals of the motor temperature sensor No. 2 connector.

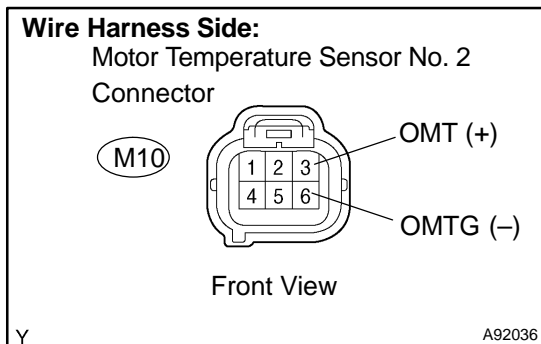
**Result:**

Tester Connection	Voltage	Proceed to
OMT (M10-3) – OMTG (M10-6)	Approximately 5 V	A
OMT (M10-3) – OMTG (M10-6)	9 to 14V	B
OMT (M10-3) – OMTG (M10-6)	Approximately 0 V	C

**HINT:**

The motor temperature sensor No. 2 is unavailable as an individual service part. Therefore, when replacing it, the hybrid vehicle motor must be replaced.

- (d) Reconnect the motor temperature sensor No. 2 connector.



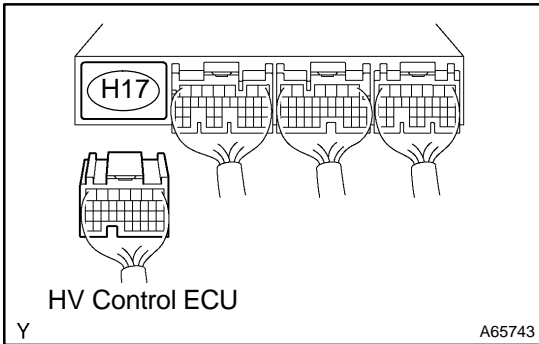
**B** Go to step 3

**C** Go to step 4

**A**

**REPLACE HYBRID VEHICLE MOTOR ASSY**

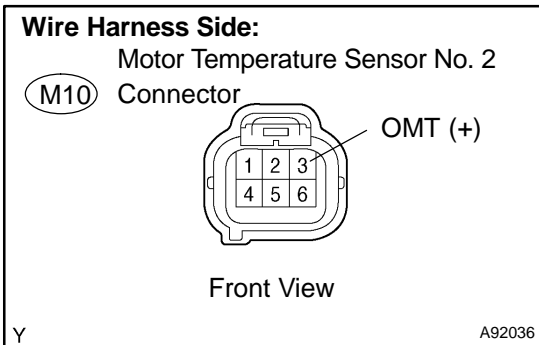
**3 CHECK HARNESS AND CONNECTOR(CHECK FOR +B SHORT)**



- (a) Disconnect the H17 HV control ECU connector.
- (b) Disconnect the M10 motor temperature sensor No. 2 connector.
- (c) Turn the power switch ON (IG).
- (d) Measure the voltage between the terminal of the motor temperature sensor No. 2 connector and body ground.

**Standard:**

tester Connection	Specified Condition
OMT (M10-3) - Body ground	Approximately 0 V



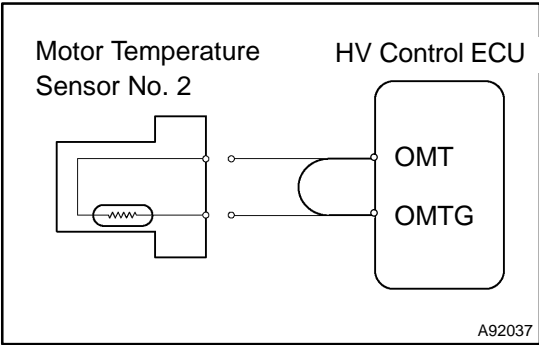
- (e) Reconnect the HV control ECU connector.
- (f) Reconnect the motor temperature sensor No. 2 connector.

**NG** REPAIR OR REPLACE HARNESS OR CONNECTOR

**OK**

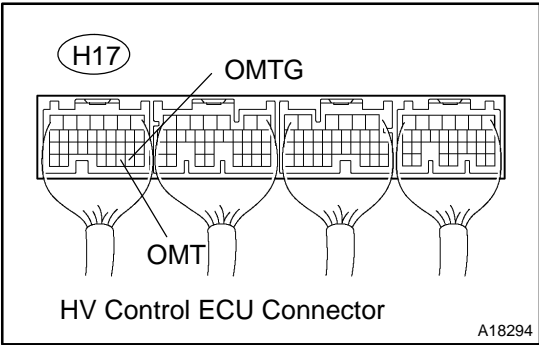
**REPLACE HYBRID VEHICLE CONTROL ECU (See page 21-124)**

**4 READ VALUE OF HAND-HELD TESTER(CHECK FOR OPEN IN HYBRID VEHICLE CONTROL ECU)**



- (a) Disconnect the M10 motor temperature sensor No. 2 connector.
- (b) Connect terminals OMT and OMTG of the H17 HV control ECU connector.
- (c) Turn the power switch ON (IG).
- (d) On the hand-held tester, enter the following menus: DIAGNOSIS / ENHANCED OBD II / HV ECU / DATA LIST.
- (e) Read the MOTOR 2 TEMP value.  
**Standard: 205°C (401°F)**

**HINT:**  
If the hand-held tester indicates a temperature of -50°C (-58°F), check the connection of the HV control ECU. If it is connected normally, replace the HV control ECU.

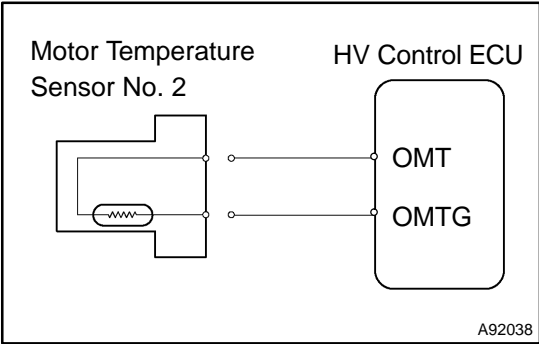


**NG** → **REPLACE HYBRID VEHICLE CONTROL ECU (See page 21-124)**

**OK**

**REPAIR OR REPLACE HARNESS OR CONNECTOR**

**5 READ VALUE OF HAND-HELD TESTER(CHECK FOR GND SHORT IN WIRE HARNESS)**



- (a) Disconnect the M10 motor temperature sensor No. 2 connector.
- (b) Turn the power switch ON (IG).
- (c) On the hand-held tester, enter the following menus: DIAGNOSIS / ENHANCED OBD II / HV ECU / DATA LIST.
- (d) Read the MOTOR 2 TEMP value.  
**Standard: -50°C (-58°F)**
- (e) Reconnect the motor temperature sensor No. 2 connector.

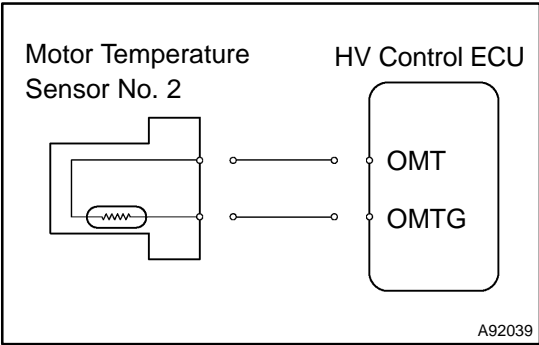
**HINT:**  
The motor temperature sensor No. 2 is unavailable as an individual service part. Therefore, when replacing it, the hybrid vehicle motor must be replaced.

**NG** → **Go to step 6**

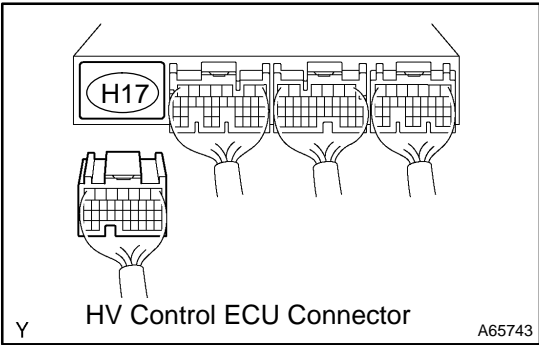
**OK**

**REPLACE HYBRID VEHICLE MOTOR ASSY**

**6 READ VALUE OF HAND-HELD TESTER(CHECK FOR GND SHORT IN HYBRID VEHICLE CONTROL ECU)**



- (a) Disconnect the H17 HV control ECU connector.
- (b) Turn the power switch ON (IG).
- (c) On the hand-held tester, enter the following menus: DIAGNOSIS / ENHANCED OBD II / HV ECU / DATA LIST.
- (d) Read the MOTOR 2 TEMP value.  
**Standard: -50°C (-58°F)**
- (e) Reconnect the HV control ECU connector.



**NG** REPLACE HYBRID VEHICLE CONTROL ECU (See page 21-124)

**OK**

**REPAIR OR REPLACE HARNESS OR CONNECTOR**