

DESCRIPTION

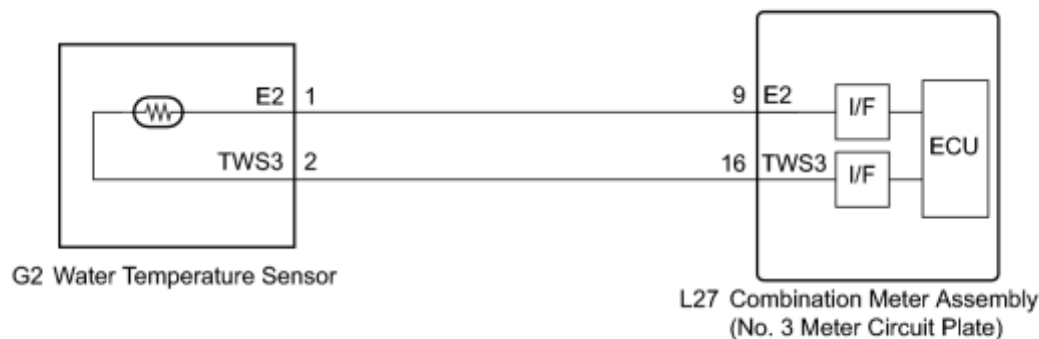
This DTC is stored when the combination meter assembly (No. 3 meter circuit plate) detects a malfunction in the water temperature sensor that is connected to the combination meter assembly (No. 3 meter circuit plate) via a direct line.

DTC No.	DTC Detection Condition	Trouble Area
B1503	<p>When IG voltage is 9.5 V or more and the following condition is detected:</p> <ol style="list-style-type: none"> 1. Water temperature sensor operation malfunction 2. Water temperature sensor circuit open or short 3. Engine coolant temperature is 120°C (248°F) or more 	<ul style="list-style-type: none"> • Harness or connector • Water temperature sensor • Combination meter assembly (No. 3 meter circuit plate)

HINT:

This DTC is for the water temperature sensor which is used to detect the engine water temperature sensor for the exhaust heat recirculation system, not for the engine coolant temperature sensor which is used for the EFI system.


WIRING DIAGRAM



INSPECTION PROCEDURE

PROCEDURE

1. READ VALUE USING TECHSTREAM

- (a) Set the vehicle in the maintenance mode using the Techstream .
- (b) Connect the Techstream to the DLC3.
- (c) Turn the power switch on (IG).
- (d) Turn the Techstream on.
- (e) Enter the following menus: Body Electrical / Combination Meter / Data List.
- (f) Check the values by referring to the table below.

Combination Meter

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Coolant Temperature	Engine coolant temperature/-40 to 127.5°C (-40 to 261.5°F)	After warming up: 80 to 100°C (176 to 212°F)	-

HINT:

- The coolant temperature value in this inspection is the data sent from the engine coolant temperature sensor for the SFI system.
- When the Data List values do not match, a signal output error of the ECM is suspected.

OK:

Engine coolant temperature displayed on the Techstream is 80 to 100°C (176 to 212°F) after warming up.

NG  GO TO EXHAUST HEAT RECIRCULATION SYSTEM

OK



2. CHECK HARNESS AND CONNECTOR (NO. 3 METER CIRCUIT PLATE - WATER TEMPERATURE SENSOR)

- (a) Disconnect the G2 connector.
- (b) Disconnect the L27 connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
G2-2 (TWS3) - L27-16 (TWS3)	Always	Below 1 Ω

Tester Connection	Condition	Specified Condition
G2-1 (E2) - L27-9 (E2)	Always	Below 1 Ω
G2-2 (TWS3) or L27-16 (TWS3) - Body ground	Always	10 k Ω or higher

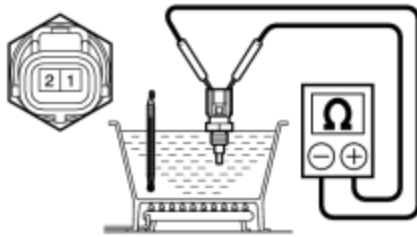
NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

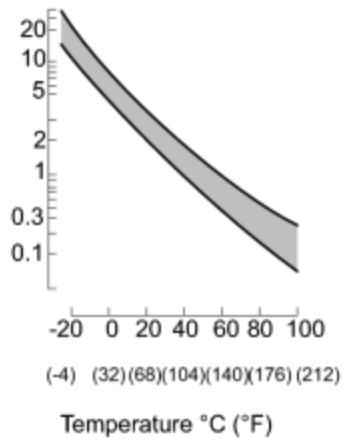


3. WATER TEMPERATURE SENSOR

*1



Resistance k Ω



(a) Remove the water temperature sensor INFO.

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
1 (E2) - 2 (TWS3)	Temperature is 20°C (68°F)	2.32 to 2.59 k Ω
1 (E2) - 2 (TWS3)	Temperature is 80°C (176°F)	0.310 to 0.326 k Ω

Text in Illustration

*1	Component without harness connected (Water Temperature Sensor)
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NG  REPLACE WATER TEMPERATURE SENSOR

OK  REPLACE COMBINATION METER ASSEMBLY (NO. 3 METER CIRCUIT PLATE)