DTC	B1411/11	Room Temperature Sensor Circuit

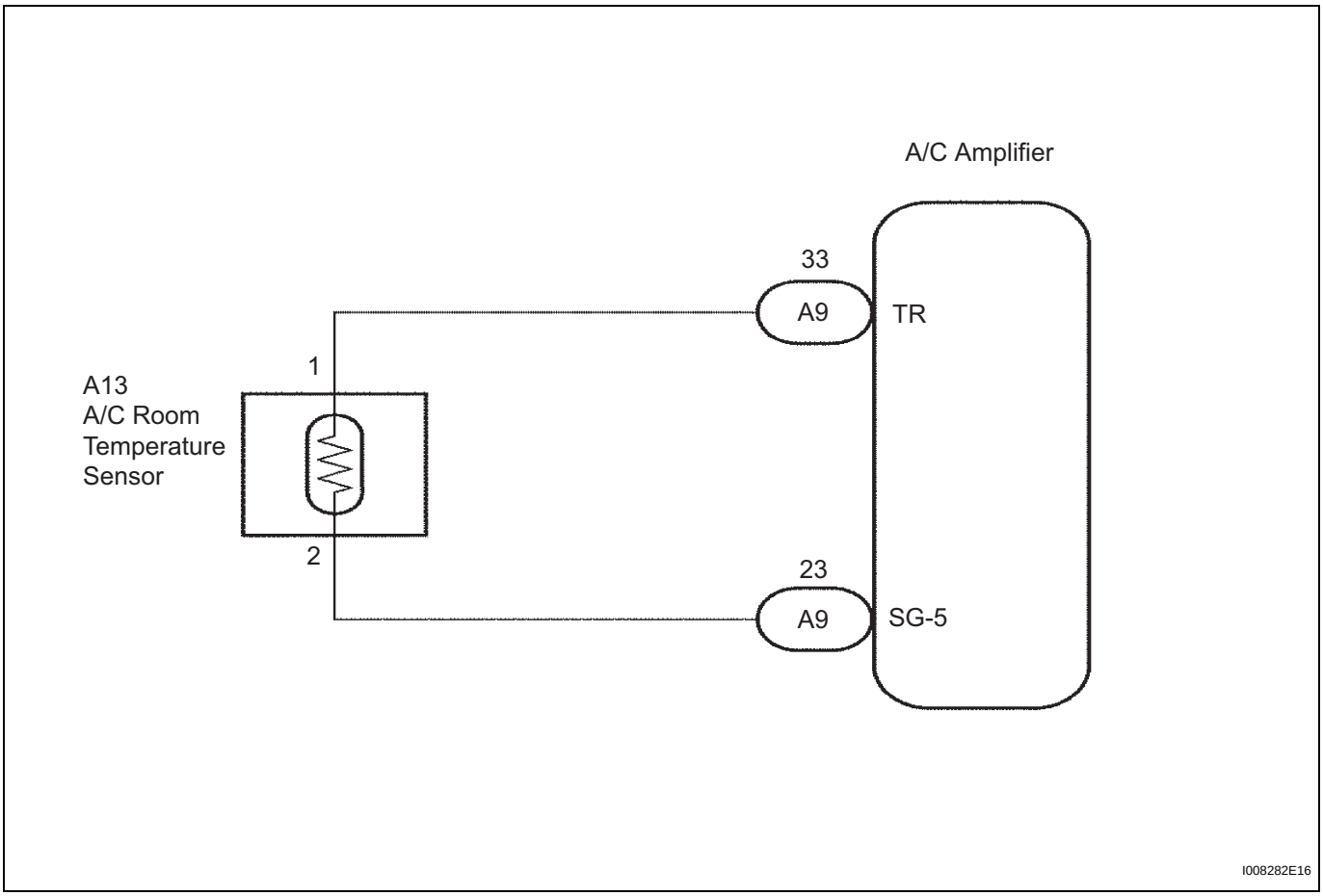
DESCRIPTION

This sensor detects the cabin temperature that is used as the basis for temperature control and sends a signal to the A/C amplifier.

DTC No.	DTC Detection Condition	Trouble Area
B1411/11	Room temperature sensor circuit (Open or short)	• A/C room temperature sensor • Harness or connector between A/C room temperature sensor and A/C amplifier • A/C amplifier

AC

WIRING DIAGRAM



INSPECTION PROCEDURE

1	READ VALUE OF INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch to the ON position and turn the intelligent tester main switch on.

(c) Select the item below in the DATA LIST, and read the display on the intelligent tester.

DATA LIST / AIR CONDITIONER:

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
ROOM TEMP (Room temperature sensor)	Room temperature sensor / min.: -6.5°C (20.3°F), max.: 57.25°C (135.05°F)	Actual cabin temperature is displayed	-

OK:

The display is as specified in the normal condition column.

AC

Result

Result	Proceed to
NG	A
OK (When troubleshooting according to the PROBLEM SYMPTOMS TABLE)	B
OK (When troubleshooting according to the DTC)	C

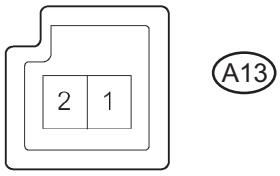
B → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

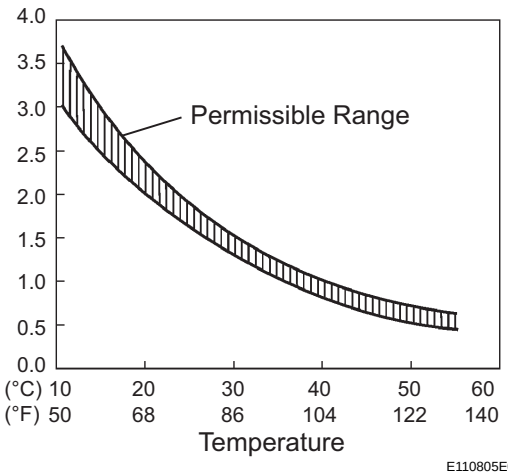
C → **REPLACE A/C AMPLIFIER**

A

2 INSPECT A/C ROOM TEMPERATURE SENSOR

Component without harness connected:
(A/C Room Temperature Sensor)





(a) Remove the A/C room temperature sensor.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
A13-1 - A13-2	10°C (50°F)	3.00 to 3.73 kΩ
A13-1 - A13-2	15°C (59°F)	2.45 to 2.88 kΩ
A13-1 - A13-2	20°C (68°F)	1.95 to 2.30 kΩ
A13-1 - A13-2	25°C (77°F)	1.60 to 1.80 kΩ
A13-1 - A13-2	30°C (86°F)	1.28 to 1.47 kΩ
A13-1 - A13-2	35°C (95°F)	1.00 to 1.22 kΩ
A13-1 - A13-2	40°C (104°F)	0.80 to 1.00 kΩ
A13-1 - A13-2	45°C (113°F)	0.65 to 0.85 kΩ
A13-1 - A13-2	50°C (122°F)	0.50 to 0.70 kΩ
A13-1 - A13-2	55°C (131°F)	0.44 to 0.60 kΩ
A13-1 - A13-2	60°C (140°F)	0.36 to 0.50 kΩ

NOTICE:

- **Hold the sensor only by its connector. Touching the sensor may change the resistance value.**
- **When measuring, the sensor temperature must be the same as the room temperature.**

HINT:

As the temperature increases, the resistance decreases (see the graph).

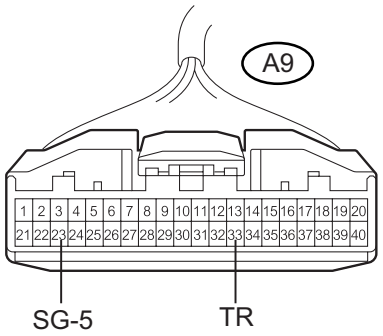
NG → **REPLACE A/C ROOM TEMPERATURE SENSOR**

OK

3	**CHECK HARNESS AND CONNECTOR (A/C ROOM TEMPERATURE SENSOR - A/C AMPLIFIER)**

AC

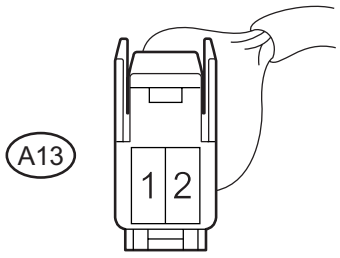
Front view of wire harness connector:
(to A/C Amplifier)



H E143742E25

(a) Disconnect the connector from the A/C amplifier.

Front view of wire harness connector:
(to A/C Room Temperature Sensor)



H E124472E08

(b) Disconnect the connector from the A/C room temperature sensor.
(c) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
A9-33 (TR) - A13-1	Always	Below 1 Ω
A9-23 (SG-5) - A13-2	Always	Below 1 Ω
A9-33 (TR) - Body ground	Always	10 kΩ or higher
A9-23 (SG-5) - Body ground	Always	10 kΩ or higher

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

OK

REPLACE A/C AMPLIFIER