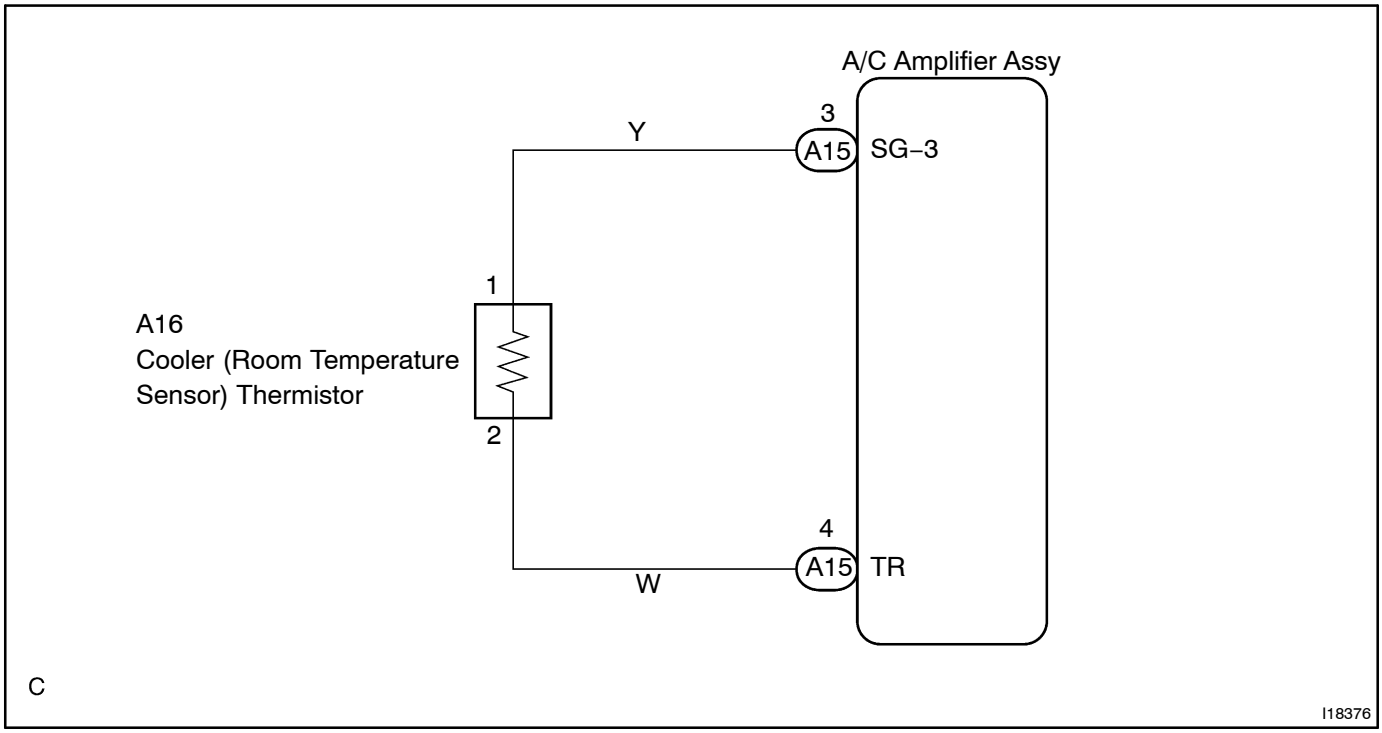
DTC B1411/11 ROOM TEMPERATURE SENSOR CIRCUIT

CIRCUIT DESCRIPTION

This sensor detects the temperature inside the cabin and sends the appropriate signals to the A/C amplifier assy.

DTC No.	Detection item	Trouble Area
B1411/11	Open or short in room temperature sensor circuit	• Cooler (room temperature sensor) thermistor • Harness or connector between cooler (room temperature sensor) thermistor and A/C amplifier assy • A/C amplifier assy

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:
In case of using the intelligent tester II, start the inspection from step 1, and in case of not using the intelligent tester II, start from step 2.

1 READ VALUE ON INTELLIGENT TESTER II

(a) Connect the intelligent tester II to the DLC3.
(b) Turn the ignition switch ON and push the intelligent tester II main switch on.
(c) Select the item below in the DATA LIST, and read the display on the intelligent tester II.

A C:

Item	Measurement Item/Display (Range)	Normal Condition	Diagnostic Note
Room temperature sensor (Room Temp)	Room temperature sensor /min.: −6.5°C (20.3°F) max.: 57.25°C (135.05°F)	Actual room temperature	–

Result:

NG	A
OK (Checking from the DTC)	B
OK (Checking from the PROBLEM SYMPTOM TABLE)	C

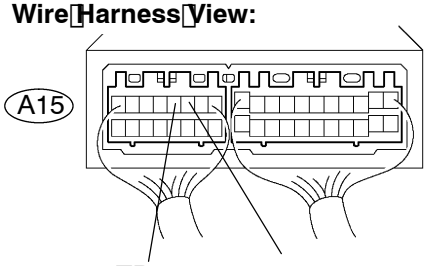
B → **REPLACE AIRCONDITIONER AMPLIFIER ASSY**

C → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05–435)**

A

2 INSPECT AIRCONDITIONER AMPLIFIER ASSY(TR, SG–3)

A/C Amplifier Connector Wire Harness View:



(a) Remove A/C amplifier assy with connectors still connected.
(b) Turn the ignition switch to the ON position.
(c) Measure the voltage according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
A15–3 (SG–3) – A15–4 (TR)	at 25°C (77°F)	1.8 to 2.2 V
A15–3 (SG–3) – A15–4 (TR)	at 40°C (104°F)	1.2 to 1.6 V

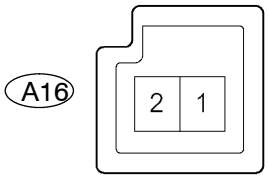
HINT:
As the temperature increases, the voltage decreases.

OK → **REPLACE AIRCONDITIONER AMPLIFIER ASSY**

NG

3 INSPECT COOLER (ROOM TEMP. SENSOR) THERMISTOR

Cooler Thermistor Connector
Front View:



H I30111

(a) Remove cooler (room temperature sensor) thermistor.
(b) Measure the resistance according to the value(s) in the table below.

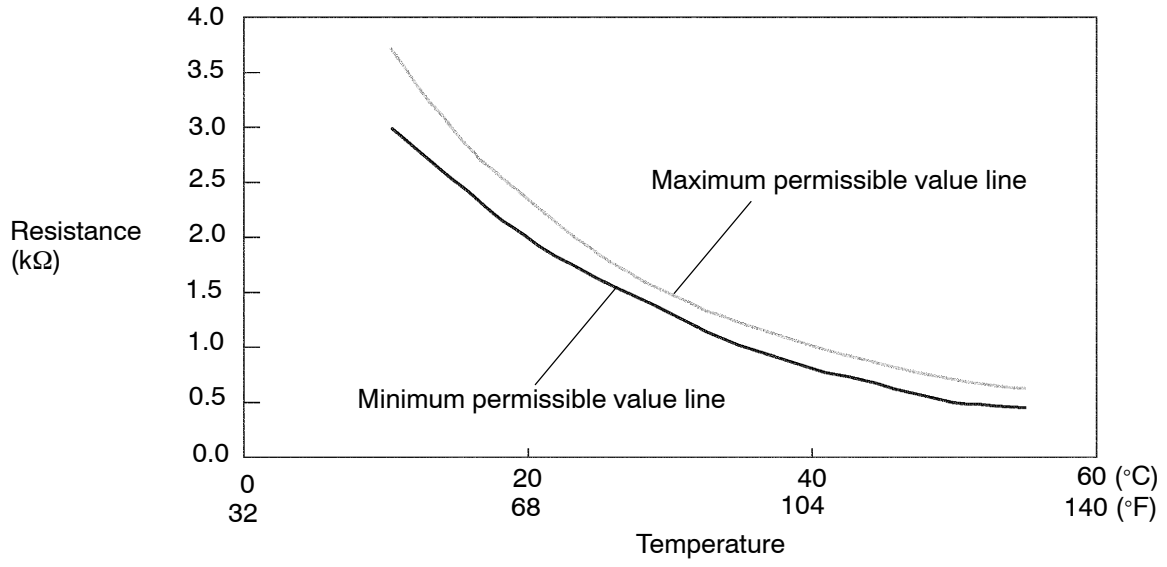
Standard:

Tester connection	Condition	Specified condition
A16–1 – A16–2	10°C (50°F)	3.00 to 3.73 kΩ
A16–1 – A16–2	15°C (59°F)	2.45 to 2.88 kΩ
A16–1 – A16–2	20°F (68°F)	1.95 to 2.30 kΩ
A16–1 – A16–2	25°C (77°F)	1.60 to 1.80 kΩ
A16–1 – A16–2	30°C (86°F)	1.28 to 1.47 kΩ
A16–1 – A16–2	35°C (95°F)	1.00 to 1.22 kΩ
A16–1 – A16–2	40°C (104°F)	0.80 to 1.00 kΩ
A16–1 – A16–2	45°C (113°F)	0.65 to 0.85 kΩ
A16–1 – A16–2	50°C (122°F)	0.50 to 0.70 kΩ
A16–1 – A16–2	55°C (131°F)	0.44 to 0.60 kΩ
A16–1 – A16–2	60°C (140°F)	0.36 to 0.50 kΩ

NOTICE:

- **Even slightly touching the sensor may change the resistance value. Be sure to hold the connector of the sensor.**
- **When measuring the sensor temperature, it must be the same as the ambient temperature.**

HINT:
As the temperature increases, the resistance decreases (see the chart below).



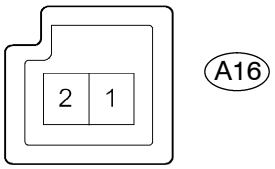
I38777
H I40673

NG	**REPLACE COOLER (ROOM TEMP. SENSOR) THERMISTOR**

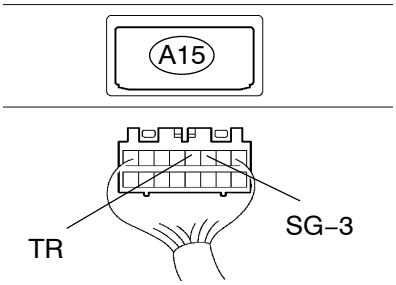
OK

4	**CHECK HARNESS AND CONNECTOR(COOLER (ROOM TEMPERATURE SENSOR) THERMISTOR – A/C AMPLIFIER ASSY)**

Cooler (Room Temperature Sensor) Thermistor Connector Front View:



A/C Amplifier Connector Wire Harness View:



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

Standard:

Tester connection	Condition	Specified condition
A15–4 (TR) – A16–2	Always	Below 1 Ω
A15–3 (SG–3) – A16–1	Always	Below 1 Ω
A15–4 (TR) – Body ground	Always	10 kΩ or higher
A15–3 (SG–3) – Body ground	Always	10 kΩ or higher

NG	**REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE AIRCONDITIONER AMPLIFIER ASSY