

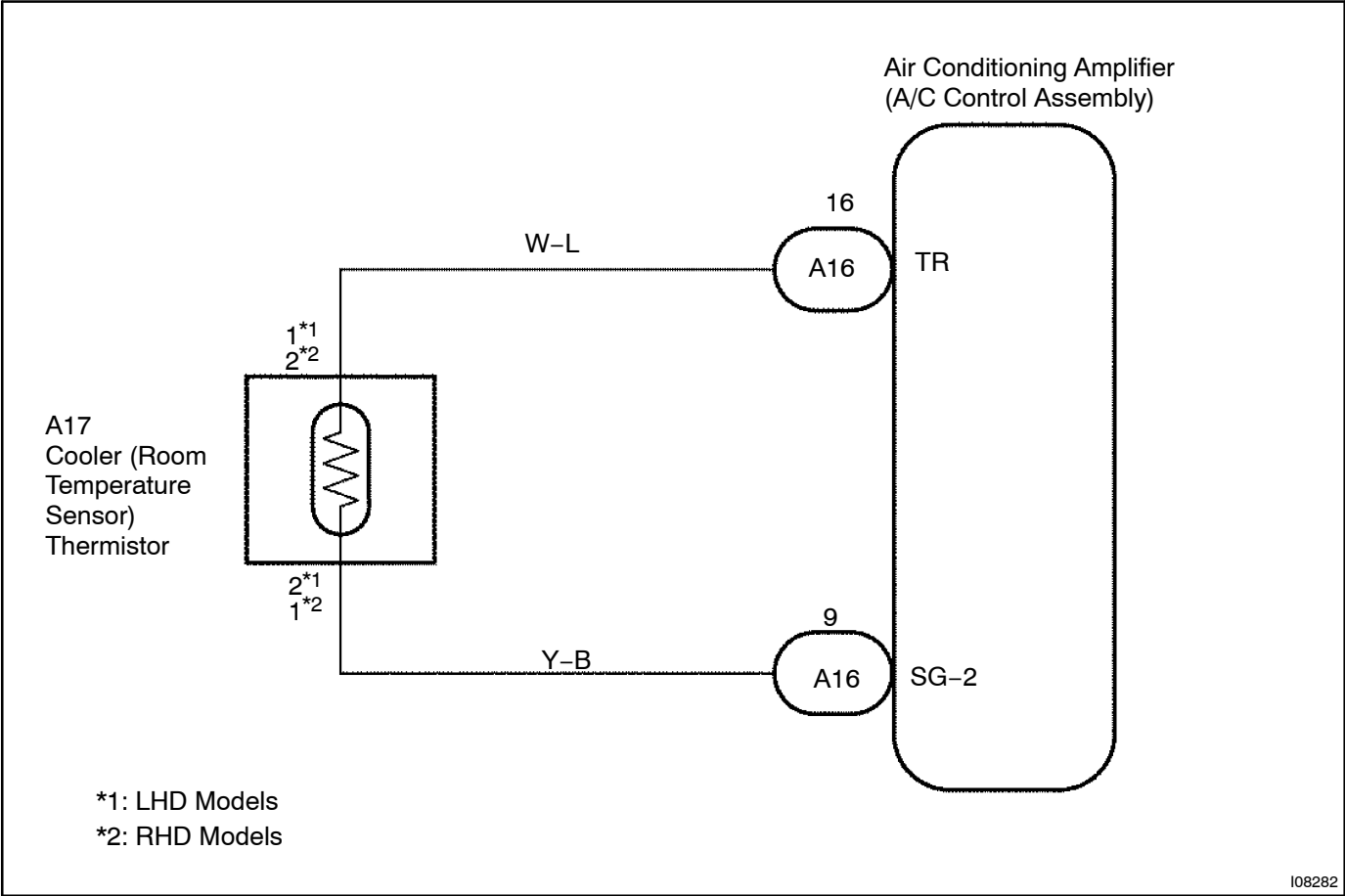
DTC	B1411	ROOM TEMPERATURE SENSOR CIRCUIT
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CIRCUIT DESCRIPTION

This sensor detects the interior temperature that is used as the basis for temperature control and sends appropriate signals to the A/C amplifier.

DTC No.	Detection item	Trouble Area
B1411	Room temperature sensor circuit (Open or short)	<ul style="list-style-type: none">•Cooler (room temperature sensor) thermistor•Harness or connector between cooler (room temperature sensor) thermistor and A/C amplifier•A/C amplifier

WIRING DIAGRAM



INSPECTION PROCEDURE

1 READ VALUE ON INTELLIGENT TESTER

- (a) Connect the Intelligent Tester II to the DLC3.
- (b) Turn the Ignition switch to the ON position 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.

DATA LIST / AIR CONDITIONER:

Item	Measure 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 (126.95°F)	Actual room temperature is displayed	-

OK:
The display is as specified in the normal condition.

Result:

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

B

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05-778)

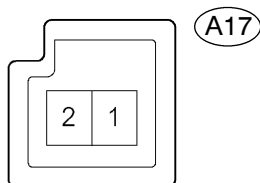
C

REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55-16)

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2 INSPECT COOLER (ROOM TEMPERATURE SENSOR) THERMISTOR

Cooler (Room Temperature Sensor Thermistor) Connector Front View:



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

Standard:

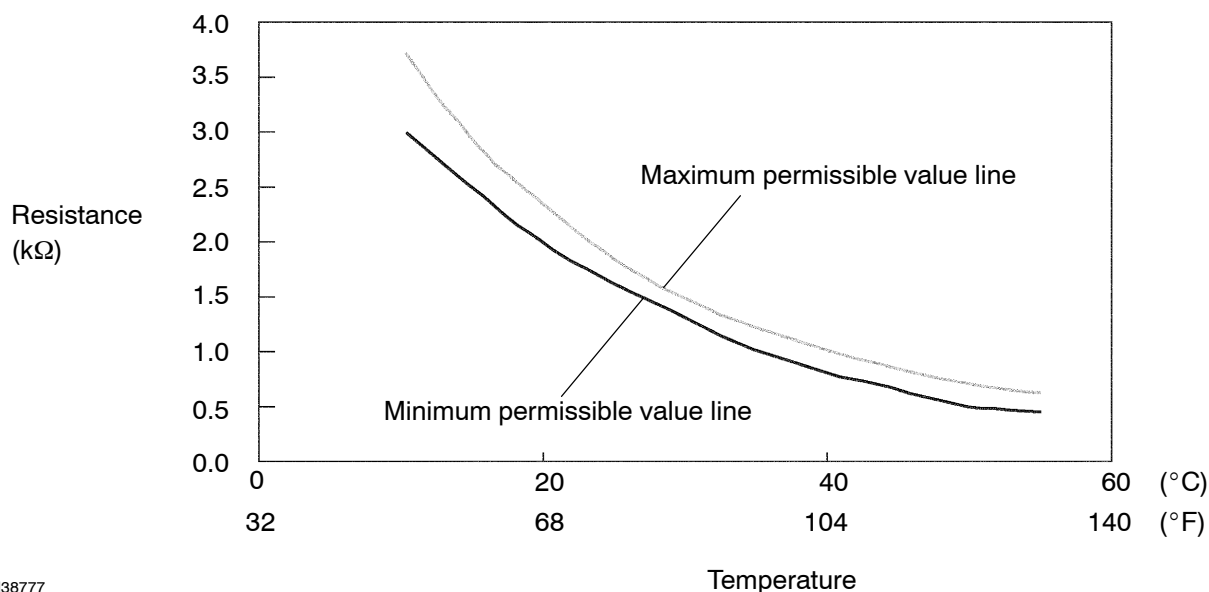
Tester connection	Condition	Specified condition
A17-1 - A17-2	10°C (50°F)	3.00 to 3.73 kΩ
A17-1 - A17-2	15°C (59°F)	2.45 to 2.88 kΩ
A17-1 - A17-2	20°C (68°F)	1.95 to 2.30 kΩ
A17-1 - A17-2	25°C (77°F)	1.60 to 1.80 kΩ
A17-1 - A17-2	30°C (86°F)	1.28 to 1.47 kΩ
A17-1 - A17-2	35°C (95°F)	1.00 to 1.22 kΩ
A17-1 - A17-2	40°C (104°F)	0.80 to 1.00 kΩ
A17-1 - A17-2	45°C (113°F)	0.65 to 0.85 kΩ
A17-1 - A17-2	50°C (122°F)	0.50 to 0.70 kΩ
A17-1 - A17-2	55°C (131°F)	0.44 to 0.60 kΩ
A17-1 - A17-2	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 must be the same as the ambient temperature.

HINT:

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



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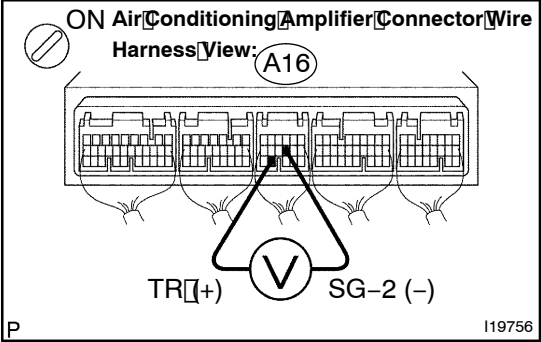
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NG

REPLACE COOLER (ROOM TEMPERATURE SENSOR) THERMISTOR

OK

3 INSPECT AIR CONDITIONING AMPLIFIER (TR - SG-2)



- (a) Remove the A/C amplifier 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
A16-16 (TR) - A16-9 (SG-2)	Ignition switch ON at 25°C (77°F)	1.8 to 2.2 V
A16-16 (TR) - A16-9 (SG-2)	Ignition switch ON at 40°C (104°F)	1.2 to 1.6 V

HINT:
As the temperature increases, the voltage decreases.

Result:

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

B

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05-778)

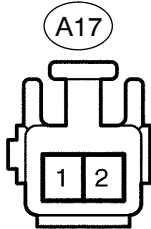
C

REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55-16)

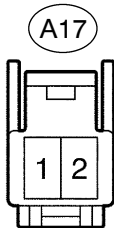
A

4 CHECK HARNESS AND CONNECTOR (AIR CONDITIONING AMPLIFIER - COOLER (ROOM TEMPERATURE SENSOR) THERMISTOR) (SEE PAGE 01-44)

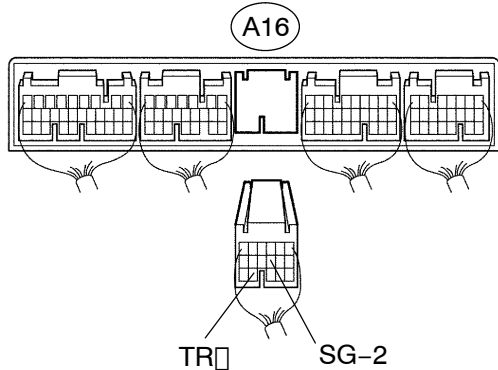
Cooler (Room Temperature Sensor) Thermistor Connector Front View (LHD):



Cooler (Room Temperature Sensor) Thermistor Connector Front View (RHD):



Air Conditioning Amplifier Connector Wire Harness View:



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

Standard:

Tester Connection	Condition	Specified Condition
A16-16 (TR) - A17-1*1	Always	Below 1 Ω
A16-9 (SG-2) - A17-2*1	Always	Below 1 Ω
A16-16 (TR) - A17-2*2	Always	Below 1 Ω
A16-9 (SG-2) - A17-1*2	Always	Below 1 Ω
A16-16 (TR) - Body ground	Always	10 k Ω or higher
A16-9 (SG-2) - Body ground	Always	Below 1 Ω

*1: LHD Models

*2: RHD Models

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REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55-16)