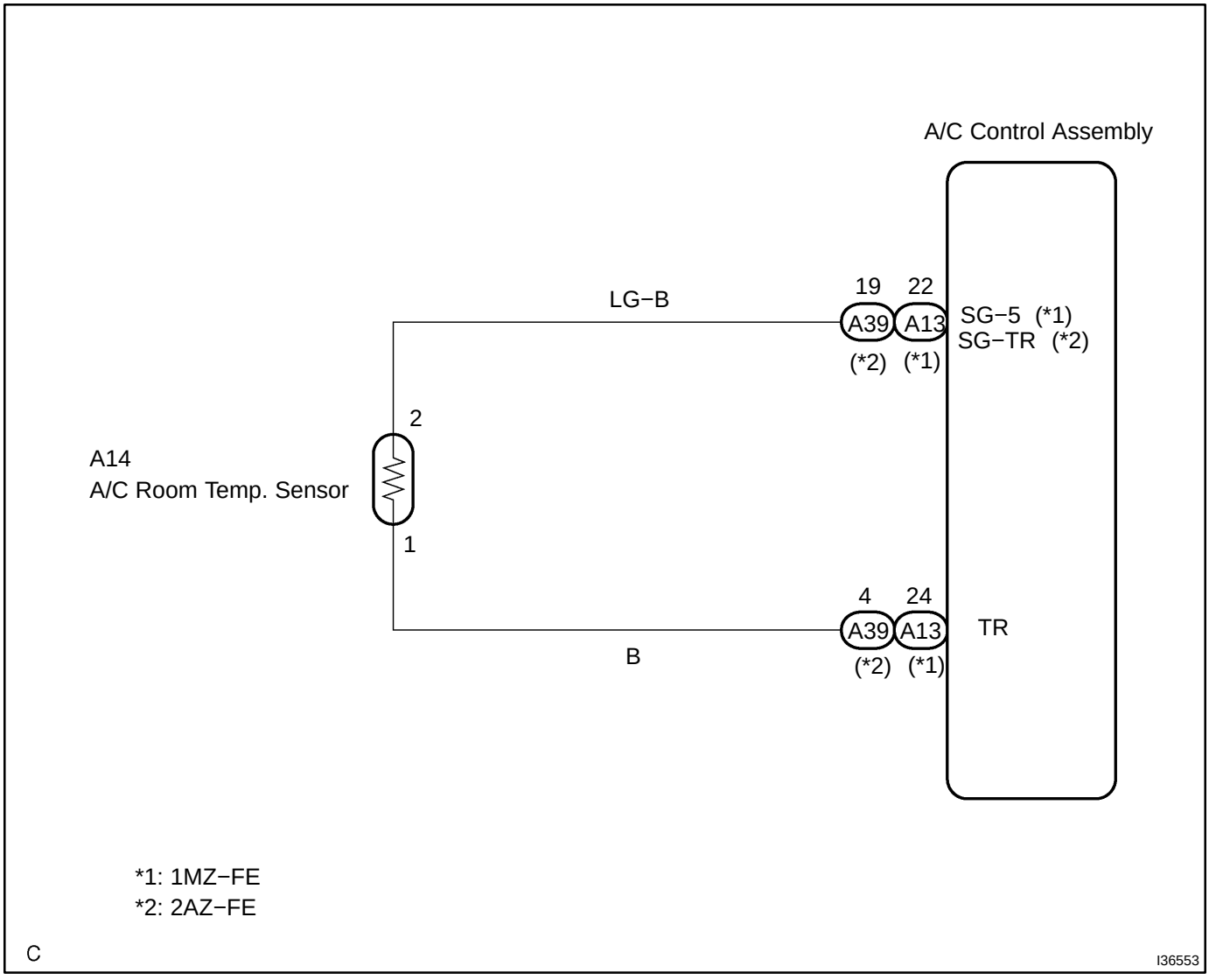
DTC 11 ROOM TEMPERATURE SENSOR CIRCUIT

CIRCUIT DESCRIPTION

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

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

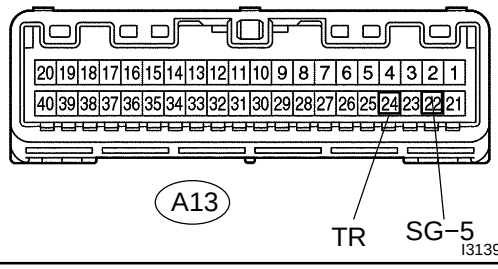
WIRING DIAGRAM



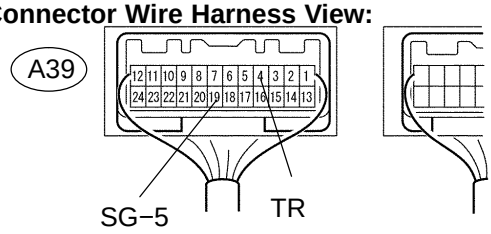
INSPECTION PROCEDURE

1	INSPECT HEATER CONTROL HOUSING SUB−ASSY(TR, SG−5)

1MZ−FE
A/C Control Assembly
Connector Wire Harness View:



2AZ−FE
A/C Control Assembly
Connector Wire Harness View:



(a) Remove A/C amplifier with connectors still connected.
(b) Turn the ignition switch to the ON position.
(c) 1MZ−FE:
Measure voltage according to the value(s) in the table below.
Standard:

Terminal No.	Condition	Specified Condition
A13−24 (TR) − A13−22 (SG−5)	at 25°C (77°F)	1.8 to 2.2 V
A13−24 (TR) − A13−22 (SG−5)	at 40°C (104°F)	1.2 to 1.6 V

HINT:
As the temperature increases, the voltage decreases.

(d) 2AZ−FE:
Measure voltage according to the value(s) in the table below.
Standard:

Terminal No.	Condition	Specified Condition
A39−4 (TR) − A39−19 (SG−5)	at 25°C (77°F)	1.8 to 2.2 V
A39−4 (TR) − A39−19 (SG−5)	at 40°C (104°F)	1.2 to 1.6 V

HINT:
As the temperature increases, the voltage decreases.

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

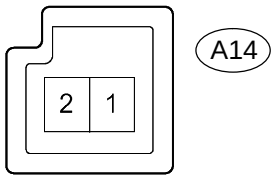
B → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

C → **CHECK AND REPLACE HEATER CONTROL HOUSING SUB−ASSY**

A

2 INSPECT COOLER (ROOM TEMP. SENSOR) THERMISTOR

A/C Room Temperature Sensor Connector Front View:



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

Standard:

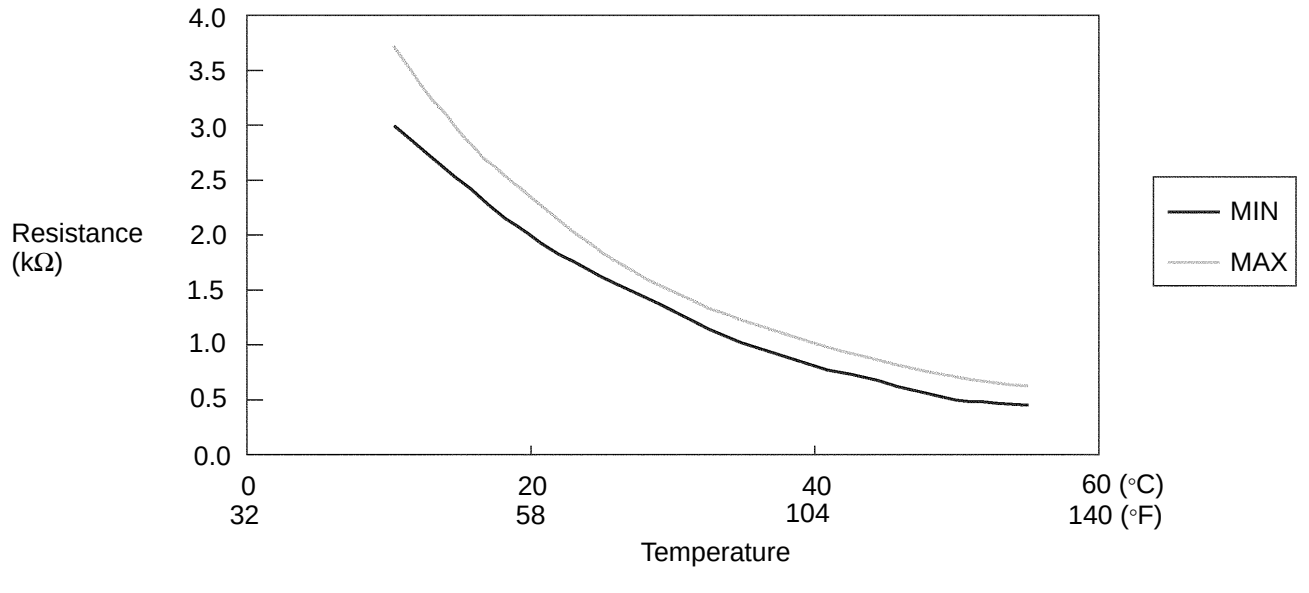
Tester connection	Condition	Specified condition
A14−1 − A14−2	10°C (50°F)	3.00 to 3.73 kΩ
A14−1 − A14−2	15°C (59°F)	2.45 to 2.88 kΩ
A14−1 − A14−2	20°F (68°F)	1.95 to 2.30 kΩ
A14−1 − A14−2	25°C (77°F)	1.60 to 1.80 kΩ
A14−1 − A14−2	30°C (86°F)	1.28 to 1.47 kΩ
A14−1 − A14−2	35°C (95°F)	1.00 to 1.22 kΩ
A14−1 − A14−2	40°C (104°F)	0.80 to 1.00 kΩ
A14−1 − A14−2	45°C (113°F)	0.65 to 0.85 kΩ
A14−1 − A14−2	50°C (122°F)	0.50 to 0.70 kΩ
A14−1 − A14−2	55°C (131°F)	0.44 to 0.60 kΩ
A14−1 − A14−2	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.

HINT:

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



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

OK

3	**CHECK HARNESS AND CONNECTOR(COOLER (ROOM TEMPERATURE SENSOR) THERMISTOR − HEATER CONTROL HOUSING SUB−ASSY)**

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

OK

CHECK AND REPLACE HEATER CONTROL HOUSING SUB−ASSY