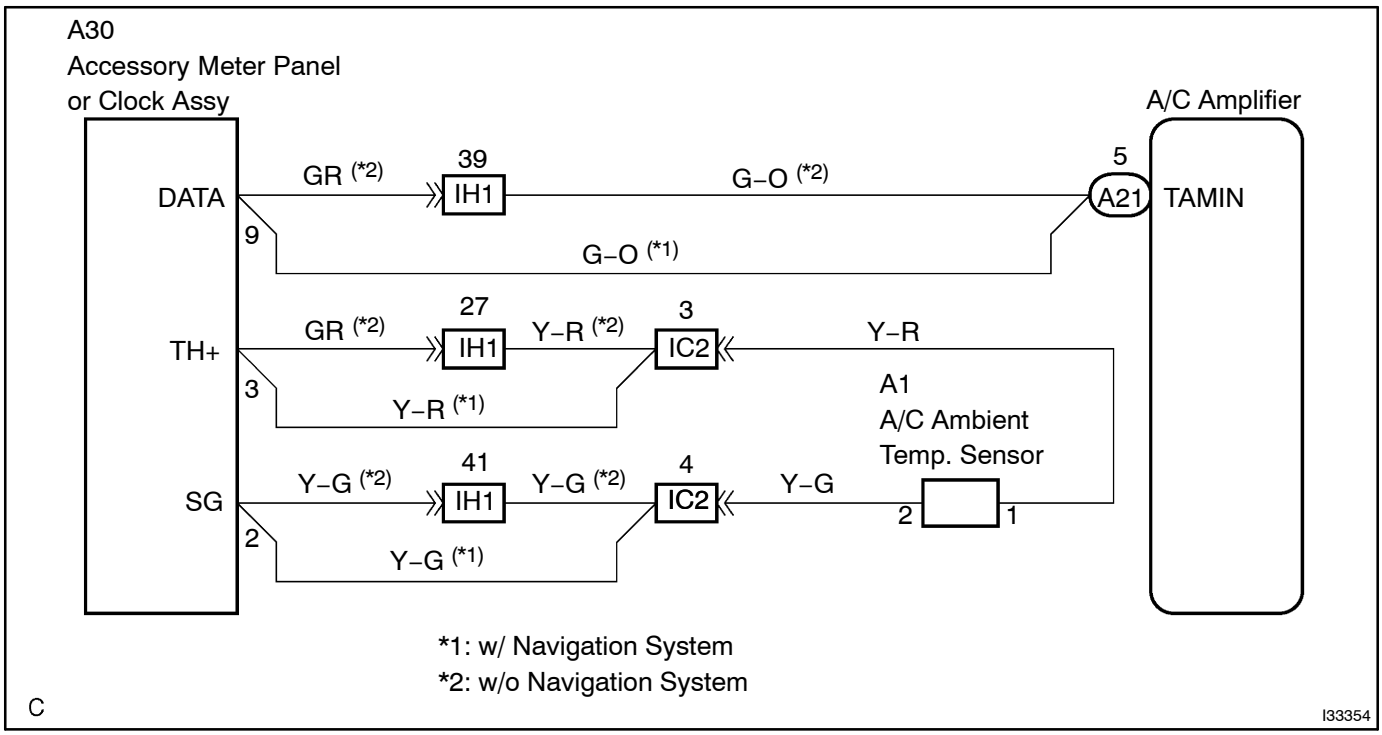
DTC 12 AMBIENT TEMPERATURE SENSOR CIRCUIT

CIRCUIT DESCRIPTION

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

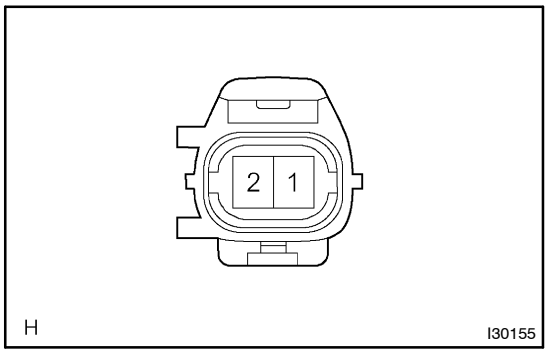
DTC No.	Detection item	Trouble Area
12	Open or short in ambient temperature sensor circuit	• Thermistor assy (ambient temp. sensor) • Harness or connector between thermistor assy (ambient temp. sensor) and accessory meter panel or clock assy • Accessory meter panel or clock assy • Harness or connector between accessory meter panel or clock assy and A/C amplifier • A/C amplifier

WIRING DIAGRAM



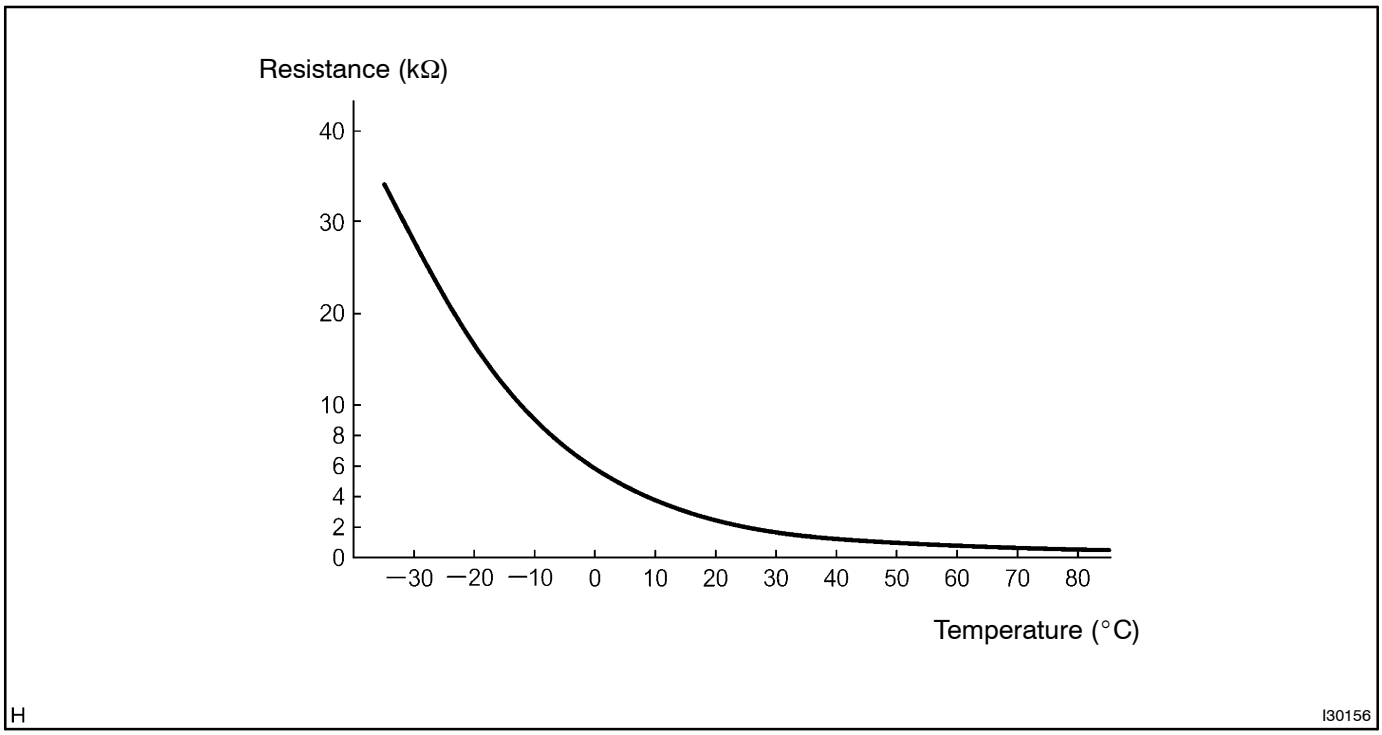
INSPECTION PROCEDURE

1	INSPECT THERMISTOR ASSY(AMBIENT TEMP. SENSOR)



(a) Remove thermistor assy (ambient temp. sensor).
(b) Measure resistance between terminal 1 and 2 of thermistor assy (ambient temp. sensor) connector at each temperature.
Resistance:
1,615 – 1,785 Ω at 25°C (77°F)

HINT:
As the temperature increases, the resistance decreases.



NG → **REPLACE THERMISTOR ASSY**

OK

2	CHECK SYSTEM

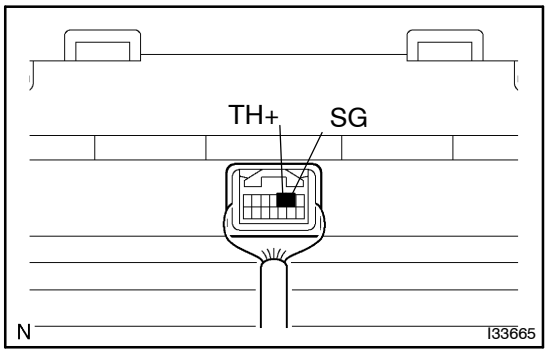
(a) Check system.

A	B
Accessory meter panel	Clock assy

B → **Go to step 6**

A

3	INSPECT ACCESSORY METER PANEL(TH+, SG)



(a) Remove accessory meter panel with being connected.
(b) Turn ignition switch ON.
(c) Measure voltage between terminal TH+ and SG of accessory meter panel connector at each temperature.
Voltage:
At 25°C (77°F): 1.35 – 1.75 V
At 40°C (104°F): 0.85 – 1.25 V

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

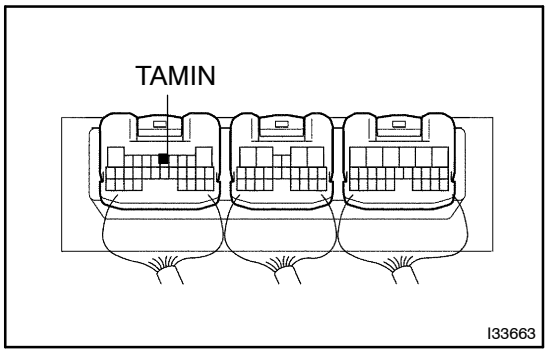
OK

4	CHECK HARNESS AND CONNECTOR(ACCESSORY METER PANEL – A/C AMPLIFIER)

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

OK

5	INSPECT AIR CONDITIONING AMPLIFIER(TAMIN)



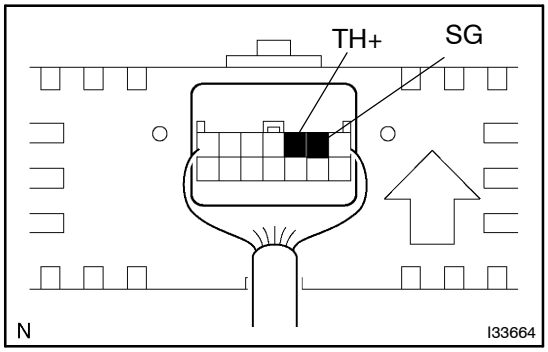
(a) Remove A/C amplifier with being connected.
(b) Turn the ignition switch ON.
(c) Measure the waveform between terminal TAMIN of the A/C amplifier connector and body ground.
OK:
Pulse generation

NG → **CHECK AND REPLACE AIR CONDITIONING AMPLIFIER**

OK

CHECK AND REPLACE ACCESSORY METER PANEL

6	INSPECT CLOCK ASSY(TH+, SG)



(a) Remove clock assy with being connected.
(b) Turn ignition switch ON.
(c) Measure voltage between terminal TH+ and SG of clock assy connector at each temperature.
Voltage:
At 25°C (77°F): 1.35 – 1.75 V
At 40°C (104°F): 0.85 – 1.25 V

OK	REPAIR OR REPLACE HARNESS OR CONNECTOR

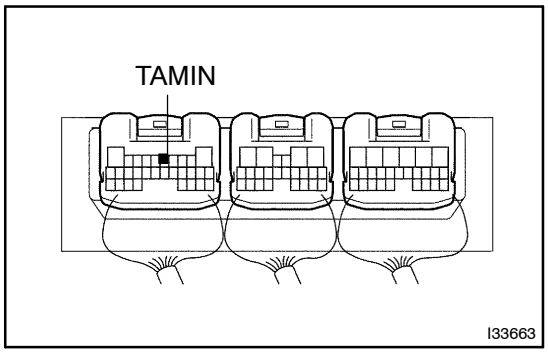
OK

7	CHECK HARNESS AND CONNECTOR(CLOCK ASSY – A/C AMPLIFIER)

NG	REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

8	INSPECT AIR CONDITIONING AMPLIFIER(TAMIN)



(a) Remove A/C amplifier with being connected.
(b) Turn the ignition switch ON.
(c) Measure the waveform between terminal TAMIN of the A/C amplifier connector and body ground.
OK:
Pulse generation

NG	CHECK AND REPLACE AIR CONDITIONING AMPLIFIER

OK

CHECK AND REPLACE CLOCK ASSY