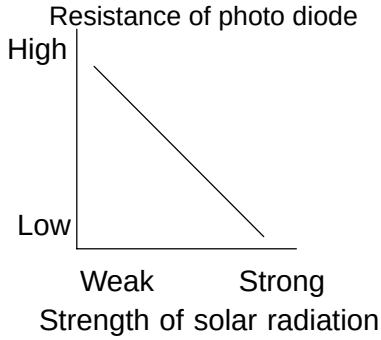
DTC 24 SOLAR SENSOR CIRCUIT (DRIVER SIDE)

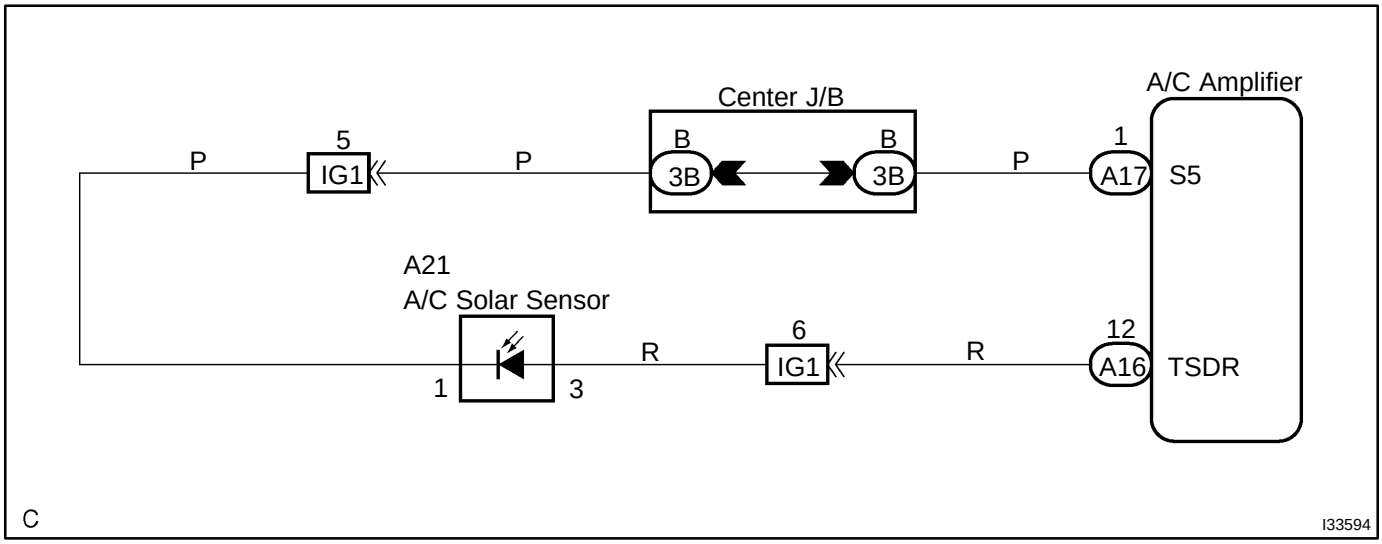
CIRCUIT DESCRIPTION



A photo diode in the solar sensor detects solar radiation and sends signals to the A/C amplifier.
HINT:
This DTC is indicated only for limited grade (right/left independent temperature control system).

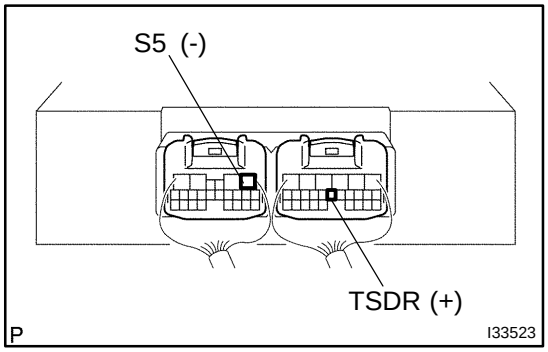
DTC No.	Detection Item	Trouble Area
24	Open or short in solar sensor circuit. (Please note that display of DTC 24 is not abnormal when the sensor is not receiving solar radiation.)	• Cooler (Solar sensor) thermistor • Harness or connector between cooler (solar sensor) thermistor and A/C amplifier • A/C amplifier

WIRING DIAGRAM



INSPECTION PROCEDURE

1 INSPECT AIR CONDITIONING AMPLIFIER(TS, S5)



(a) Remove the A/C amplifier with the connectors still connected.
(b) Turn the ignition switch to ON.
(c) Measure voltage between terminal TSDR and S5 of the A/C amplifier connector when the cooler (solar sensor) thermistor is subjected to an electric light and when the cooler (solar sensor) thermistor is covered by a cloth.

Voltage:
Sensor is subjected to electrical light: 0.8 - 3.3 V
Sensor is covered by a cloth: Below 0.8 V

OK	**PROCEED TO NEXT CIRCUIT INSPECTION SHOWN ON PROBLEM SYMPTOMS TABLE**

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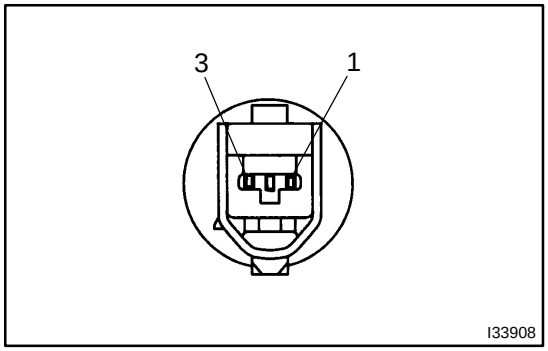
2 INSPECT COOLER (SOLAR SENSOR) THERMISTOR



(a) Remove cooler (solar sensor) thermistor.
(b) Cover the sensor with a cloth, and check the cooler (solar sensor) thermistor resistance.
  (1) Measure resistance between terminals 1 and 3 of the cooler (solar sensor) thermistor.

Resistance: ∞ Ω (No continuity)

HINT:
Connect the ohmmter positive (+) lead to terminal 3 and the ohmmeter negative (-) lead to terminal 1 of the cooler (solar sensor) thermistor.

(c) Remove the cloth from the cooler (solar sensor) thermistor, and subject the sensor to the electric light and check the cooler (solar sensor) thermistor resistance.
  (1) Measure resistance between terminal 1 and 3 of the cooler (solar sensor) thermistor.

Resistance: Approx. 10 kΩ (Continuity)

HINT:
Connect the positive (+) lead to ohmmeter to terminal 3 and negative (-) lead to terminal 1 of the cooler (solar sensor) thermistor.

NG	**REPLACE COOLER (SOLAR SENSOR) THERMISTOR**

OK

3	CHECK HARNESS AND CONNECTOR(BETWEEN COOLER (SOLAR SENSOR) THERMISTOR AND AIR CONDITONING AMPLIFIER)

(a) Check for open and short circuit in the harness and the connector between the cooler (solar sensor) thermistor and the air conditioning amplifier (See page 01-35).

NG	REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4	CHECK DIAGNOSTIC TROUBLE CODE

(a) Start up the DTC check mode.
(b) Check that DTC 24 is not output again.
Standard: DTC 24 is not output.

OK	SYSTEM OK

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CHECK AND REPLACE AIR CONDITIONING AMPLIFIER