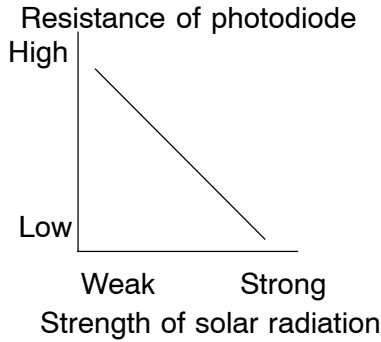


DTC	B1421	SOLAR SENSOR CIRCUIT (PASSENGER SIDE)
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CIRCUIT DESCRIPTION



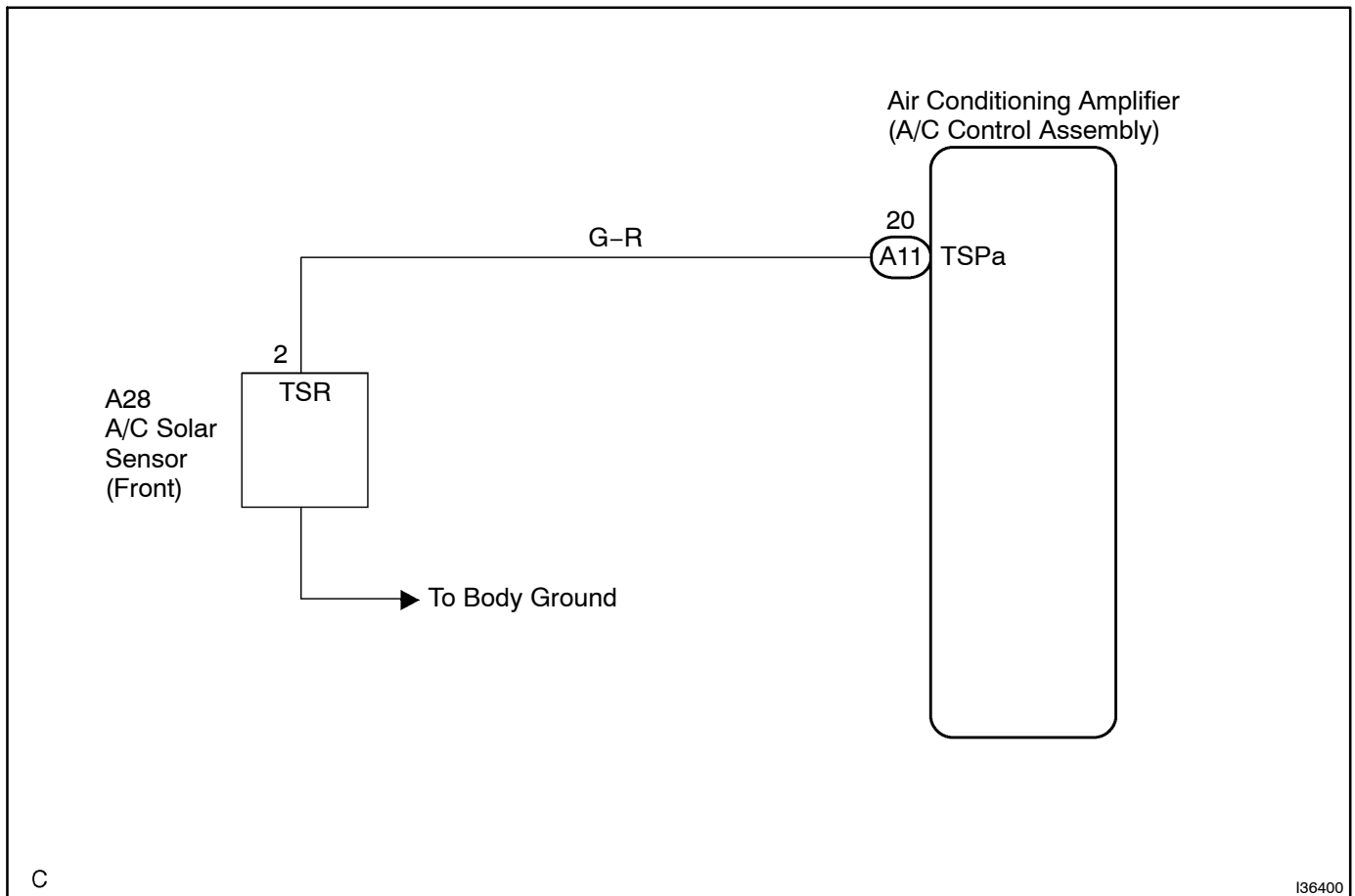
A photodiode in the A/C solar sensor detects solar radiation and sends signals to the A/C amplifier.

DTC No.	Detection Item	Trouble Area
B1421	Solar sensor circuit (Passenger side) (Open or short)	<ul style="list-style-type: none"> • A/C solar sensor • Harness or connector between A/C solar sensor and A/C amplifier • A/C amplifier

HINT:

If DTC B1244 is output at the same time, troubleshoot DTC B1244 first (see page 05-1507).

WIRING DIAGRAM



INSPECTION PROCEDURE

1 READ VALUE ON HAND-HELD TESTER

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

DATA LIST / AIR CONDITIONER:

Item	Measure Item/Display (Range)	Normal Condition	Diagnostic Note
SOLAR SENS-P	Solar sensor (Passenger side) / min.: 0 max.: 255	Increases as brightness increases	-

OK:

The display is as specified in the normal condition.

Result:

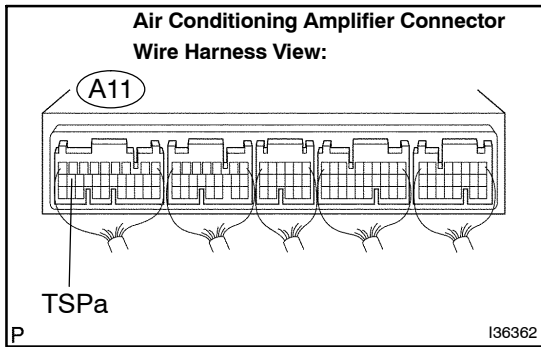
NG	A
OK (Checking from the PROBLEM SYMPTOM TABLE)	B
OK (Checking from the DTC)	C

B PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE [05-885](#))

C REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE [55-16](#))

A

2 INSPECT AIR CONDITIONING AMPLIFIER(TSPa)



- (a) Remove the A/C amplifier with connector 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
A11-20 (TSPa) - Body ground	Sensor is subjected to electric light	4.0 to 4.6 V
A11-20 (TSPa) - Body ground	Sensor is covered by a cloth	Below 0.8 V

HINT:

- As the inspection light is moved away from the sensor, the voltage increases.
- Use an incandescent lamp for inspection. Bring it within 30 cm (11.8 in.) of the A/C solar sensor.

Result:

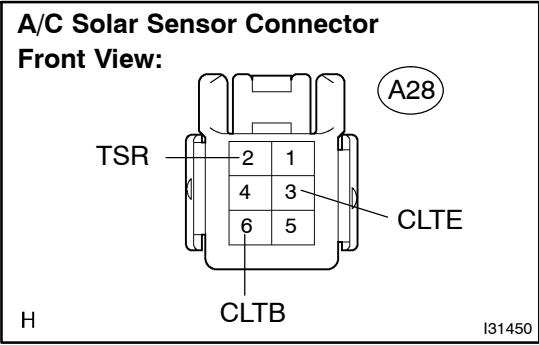
NG	A
OK (Checking from the PROBLEM SYMPTOMS TABLE)	B
OK (Checking from the DTC)	C

B PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05-885)

C REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55-16)

A

3 INSPECT A/C SOLAR SENSOR



- (a) Remove the A/C solar sensor.
- (b) Apply battery voltage between terminals A28-6 (CLTB) and A28-3 (CLTE) of the A/C solar sensor.
- (c) Measure the voltage according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
A28-2 (TSR) - A28-3 (CLTE)	Sensor is subjected to electric light	4.0 to 4.6 V
A28-2 (TSR) - A28-3 (CLTE)	Sensor is covered by a cloth	Below 0.8 V

NOTICE:

The connection procedure for using a digital tester such as a TOYOTA electrical tester is shown above. When using an analog tester, connect the positive (+) lead to terminal 2 and negative (-) lead to terminal 1 of the solar sensor.

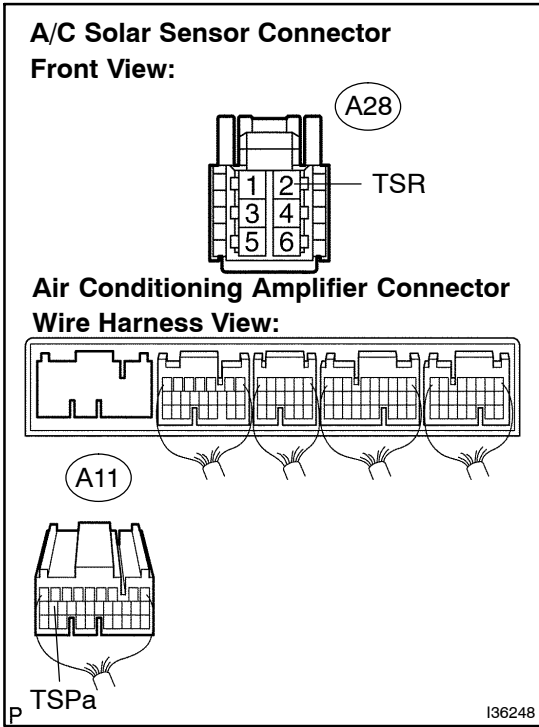
HINT:

- As the inspection light is moved away from the sensor, the voltage increases.
- Use an incandescent lamp for inspection. Bring it within 30 cm (11.8 in.) of the solar sensor.

NG **REPLACE A/C SOLAR SENSOR**

OK

4 CHECK HARNESS AND CONNECTOR(A/C SOLAR SENSOR - AIR CONDITIONING AMPLIFIER) (SEE PAGE 01-42)



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

Standard:

Tester connection	Condition	Specified condition
A11-20 (TSPa) - A28-2 (TSR)	Always	Below 1 Ω
A11-20 (TSPa) - Body ground	Always	10 kΩ or higher

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55-16)