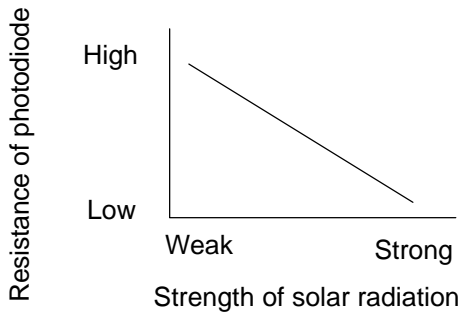


DTC	B1421/21	Solar Sensor Circuit (Passenger side)
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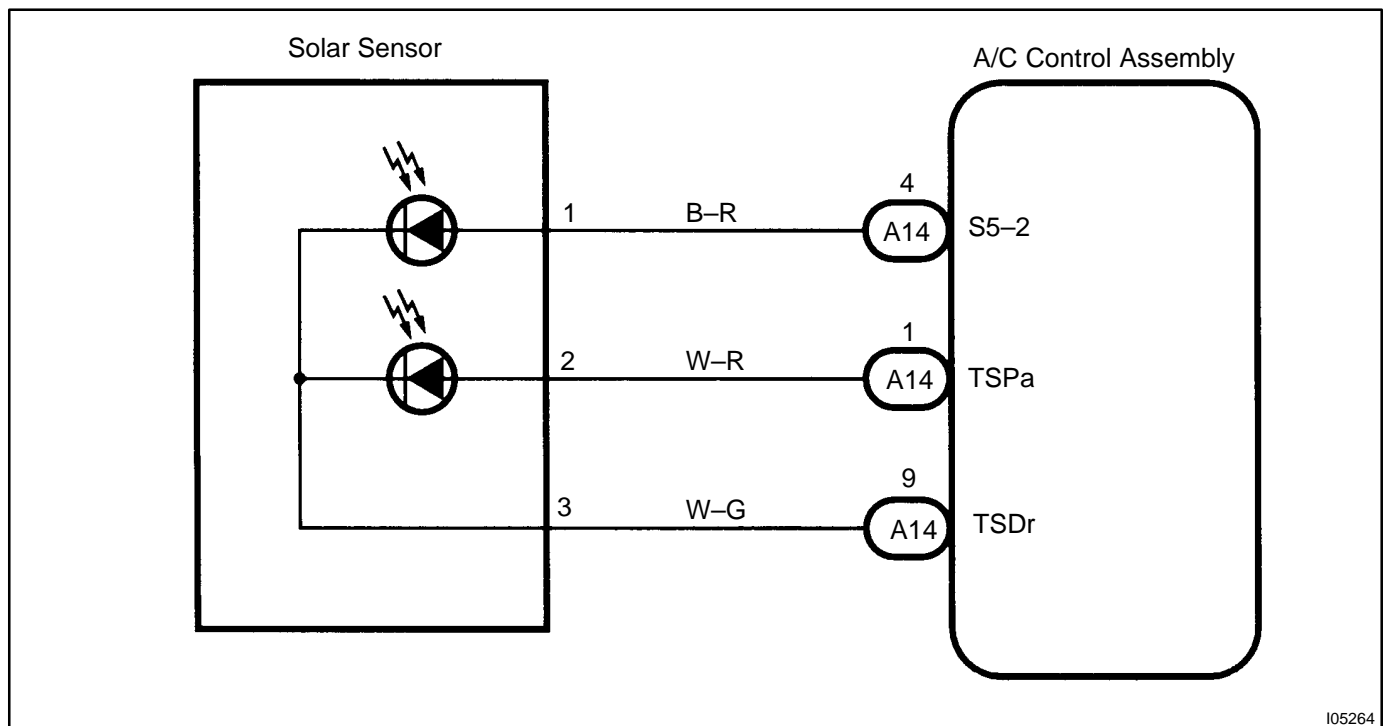
## CIRCUIT DESCRIPTION



A photo diode in the solar sensor detects solar radiation and sends signals to the A/C control assembly.

DTC No.	Detection Item	Trouble Area
B1421/21	Open or short in solar sensor circuit. Please note that display of diagnostic trouble code 21 is not abnormal when the sensor is not receiving solar radiation.	<ul style="list-style-type: none"> <li>• Solar sensor.</li> <li>• Harness or connector between solar sensor and A/C control assembly.</li> <li>• A/C control assembly.</li> </ul>

## WIRING DIAGRAM



I05264

## INSPECTION PROCEDURE

### HINT:

In case of using the LEXUS hard-held tester, start the inspection step 1 and in case of not using the LEXUS hard-held tester, start from step 2.

**1 Check solar sensor (Passenger Side) using LEXUS hard-held tester.**

### PREPARATION:

Connect the LEXUS hard-held tester to the DLC3.

### CHECK:

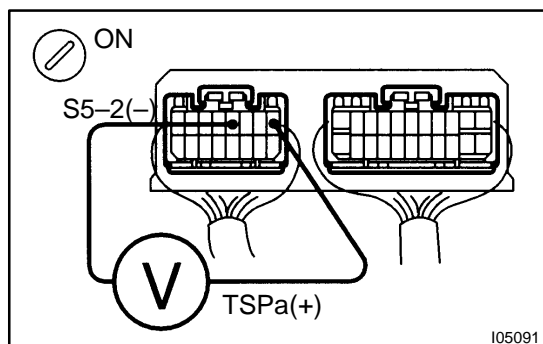
Check the solar sensor (Passenger Side) using DATA LIST.

**OK**

**Check and replace A/C control assembly.**

**NG**

**2 Check voltage between terminals S5-2 and TSPa of A/C control assembly connector.**



### PREPARATION:

Remove A/C control assembly with connectors still connected.

### CHECK:

- Turn ignition switch ON.
- Measure voltage between terminals S5-2 and TSPa of A/C control assembly connector when the solar sensor is subjected to an electric light, and when the sensor is covered by a cloth.

### OK:

Condition	Voltage
Sensor subjected to electric light	0.8 – 4.3 V
Sensor covered by a cloth	Below 0.8 V

### HINT:

As the inspection light is moved away from the sensor, the voltage increases.

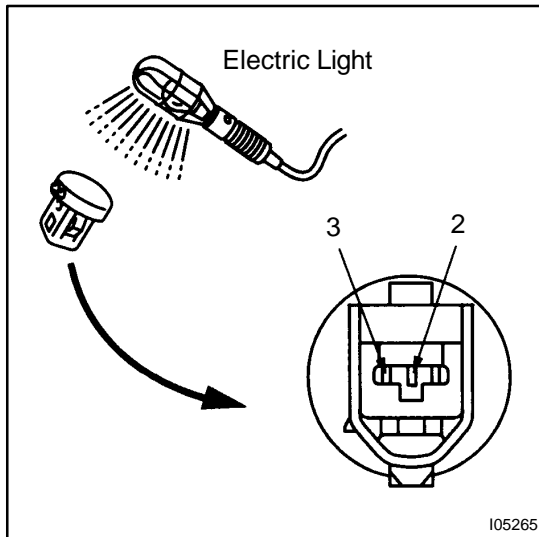
**NG**

**go to step 3.**

**OK**

**Proceed to next circuit inspection shown on problem symptoms table (See page DI-1309). However, if DTC B1421/21 is displayed, check and replace A/C control assembly.**

### 3 Check solar sensor.



#### **PREPARATION:**

Remove solar sensor.

#### **CHECK:**

- Cover the sensor by a cloth.
- Measure resistance between terminals 1 and 2 of solar sensor connector.

#### **HINT:**

Connect positive (+) lead of ohmmeter to terminal 1 and negative (–) lead to terminal 2 of the solar sensor.

#### **OK:**

**Resistance :  $\infty \Omega$  (no continuity)**

#### **PREPARATION:**

- Remove the cloth from the solar sensor and subject the sensor to electric light.
- Measure resistance.

#### **OK:**

**Resistance : Approx. 4 k $\Omega$  (continuity)**

#### **HINT:**

As the electric light is moved away from the sensor, the resistance increases.

**NG**

**Replace solar sensor.**

**OK**

### 4 Check harness and connector between A/C control assembly and solar sensor (See page [IN-32](#)).

**NG**

**Repair or replace harness or connector.**

**OK**

**Check and replace A/C control assembly.**