

DTC

B1421/21

Solar Sensor Circuit (Passenger Side)

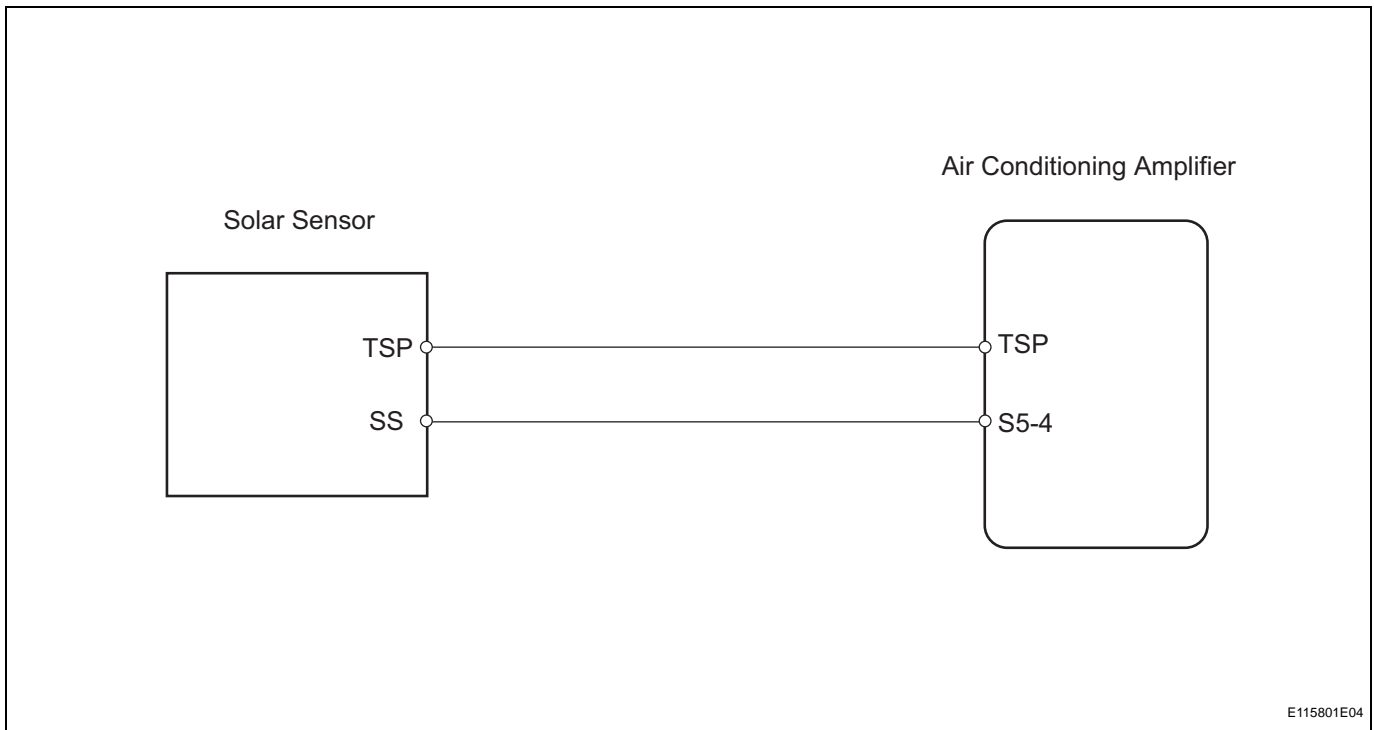
DESCRIPTION

The solar sensor, which is installed on the upper side of the instrument panel, detects sunlight and controls the air conditioning AUTO mode. The output voltage from the solar sensor varies in accordance with the amount of sunlight. When the sunlight increases, the output voltage increases. As the sunlight decreases, the output voltage decreases.

The air conditioning amplifier detects changes in the output voltage from the solar sensor.

DTC No.	DTC Detection Condition	Trouble Area
B1421/21	Open or short in passenger side solar sensor circuit	<ul style="list-style-type: none"> Solar sensor Harness and connector between solar sensor and air conditioning amplifier Air conditioning amplifier

WIRING DIAGRAM



AC

INSPECTION PROCEDURE

1

READ VALUE OF INTELLIGENT TESTER (SOLAR SENS-P)

- Connect the intelligent tester (with CAN VIM) to the DLC3.
- Turn the ignition switch ON and turn the intelligent tester main switch ON.
- Select the item below in the DATA LIST, and read the value displayed on the intelligent tester.

Air conditioning amplifier

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
SOLAR SENS-P	Passenger side solar sensor / Min.: 0, Max.: 255	Passenger side temperature increases as brightness increases	-

OK:

The display is as specified in the normal condition column.

Result

Result	Proceed to
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

C

REPLACE AIR CONDITIONING AMPLIFIER

A

2

INSPECT COOLER (SOLAR SENSOR) THERMISTOR

- Remove the solar sensor.
- Measure the resistance of the sensor.
- Connect the ohmmeter's positive (+) lead to terminal 1 and the negative (-) lead to terminal 2 of the solar sensor.

Standard resistance

Tester Connection	Condition	Specified Condition
1 (SS) - 2 (TSP)	Sensor exposed to electric light	Except $\infty \Omega$
1 (SS) - 2 (TSP)	Sensor covered with cloth	$\infty \Omega$ (No continuity)

NOTICE:

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

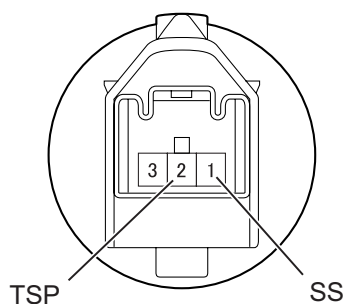
HINT:

- As the inspection light is moved away from the sensor, the voltage decreases.
- Use an incandescent light for the inspection. Position it about 30 cm (11.8 in.) from the solar sensor.

NG

REPLACE COOLER (SOLAR SENSOR) THERMISTOR

OK

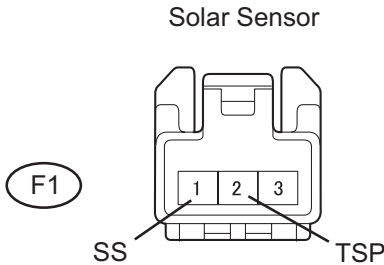


G

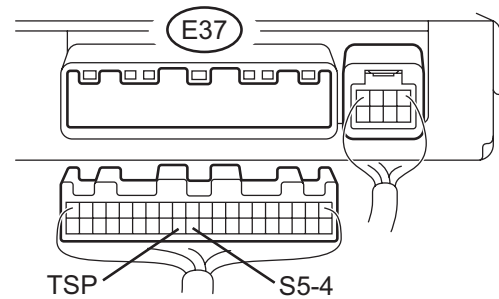
E123521E01

3 CHECK WIRE HARNESS (SOLAR SENSOR - AIR CONDITIONING AMPLIFIER)

Wire Harness Side



Air Conditioning Amplifier



E123522E01

- (a) Disconnect the F1 sensor connector.
- (b) Disconnect the E37 amplifier connector.
- (c) Measure the resistance of the wire harness side connectors.

Standard resistance

Tester Connection	Specified Condition
E37-32 (TSP) - F1-2 (TSP)	Below 1 Ω
E37-31 (S5-4) - F1-1 (SS)	Below 1 Ω
E37-32 (TSP) - Body ground	1 M Ω or higher
E37-31 (S5-4) - Body ground	1 M Ω or higher

NG

REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

AC

REPLACE AIR CONDITIONING AMPLIFIER