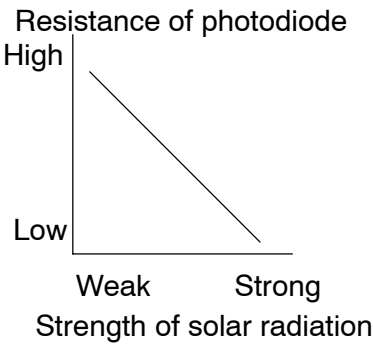


DTC	AUTO,F/D	SOLAR SENSOR CIRCUIT
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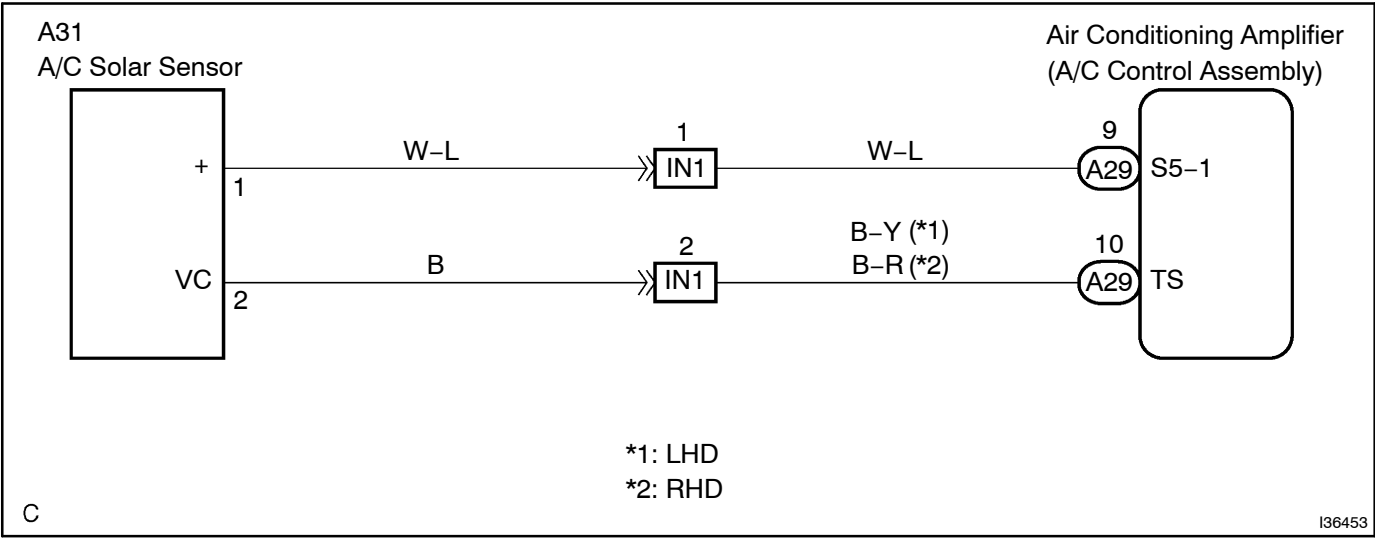
CIRCUIT DESCRIPTION



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

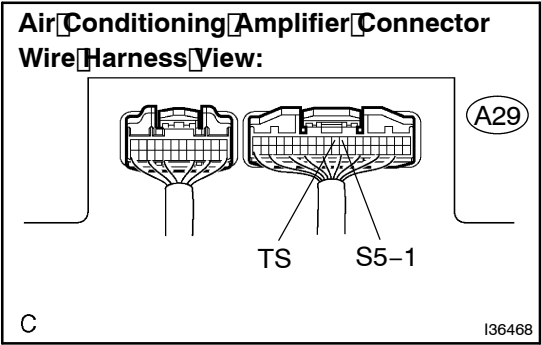
DTC No.	Detection Item	Trouble Area
AUTO, F/D	Open or short in solar sensor circuit (If the check is performed in a dark place, DTC "AUTO, F/D" may be displayed.)	<ul style="list-style-type: none"><li>• A/C solar sensor</li><li>• Harness or connector between A/C solar sensor and A/C amplifier</li><li>• A/C amplifier</li></ul>

WIRING DIAGRAM



INSPECTION PROCEDURE

1 INSPECT AIR CONDITIONING AMPLIFIER (S5-1 – TS)



- (a) Remove the A/C amplifier with the connectors 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
A29-9 (S5-1) – A29-10 (TS)	Sensor is subject to electric light	0.8 to 4.3 V
A29-9 (S5-1) – A29-10 (TS)	Sensor is covered with 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 05-862)

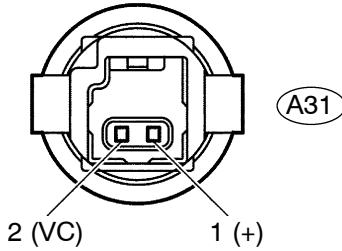
C

REPLACE AIR CONDITIONING AMPLIFIER  
(SEE PUB. NO. RM864E ON PAGE 55-96)

A

2 INSPECT A/C SOLAR SENSOR

A/C Solar Sensor Connector Front View:



- (a) Remove the A/C solar sensor.
- (b) Measure the resistance according to the value(s) in the table below.
- (c) Connect the positive (+) lead from the ohmmeter to terminal 2 and negative (-) lead to terminal 1 of the A/C solar sensor.

**Standard:**

Tester connection	Condition	Specified condition
A31-1 (+) - A31-2 (VC)	Sensor is subject to electric light	Except $\infty \Omega$
A31-1 (+) - A31-2 (VC)	Sensor is covered with a cloth	$\infty \Omega$ (No continuity)

**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 1 and negative (-) lead to terminal 2 of the A/C 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 A/C solar sensor.

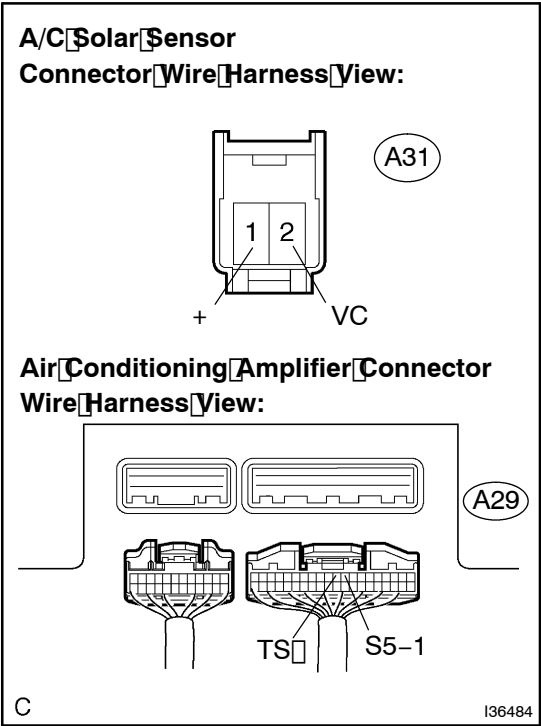
NG

REPLACE A/C SOLAR SENSOR

OK

3

CHECK HARNESS AND CONNECTOR (A/C SOLAR SENSOR - AIR CONDITIONING AMPLIFIER) (SEE PAGE 01-32)



- (a) Disconnect the connectors from the A/C solar sensor and A/C amplifier.
- (b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
A29-9 (S5-1) - A31-1 (+)	Always	Below 1 $\Omega$
A29-10 (TS) - A31-2 (VC)	Always	Below 1 $\Omega$
A29-9 (S5-1) - Body ground	Always	10 k $\Omega$ or higher
A29-10 (TS) - Body ground	Always	10 k $\Omega$ or higher

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE AIR CONDITIONING AMPLIFIER (SEE PUB. NO. RM864E ON PAGE 55-96)