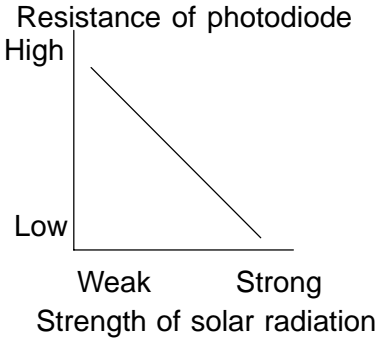


DTC	21	SOLAR SENSOR CIRCUIT(PASSENGER SIDE)
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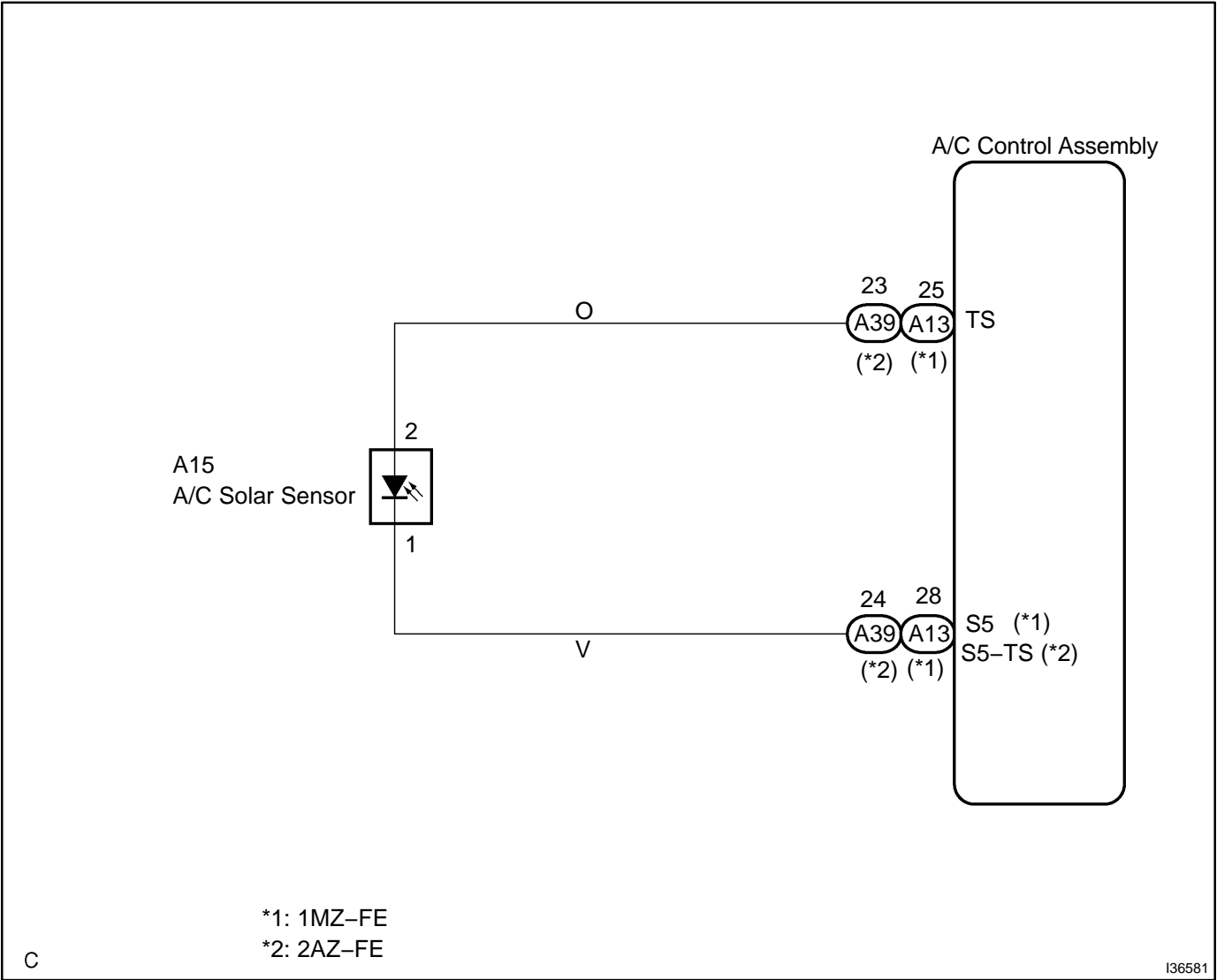
CIRCUIT DESCRIPTION



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

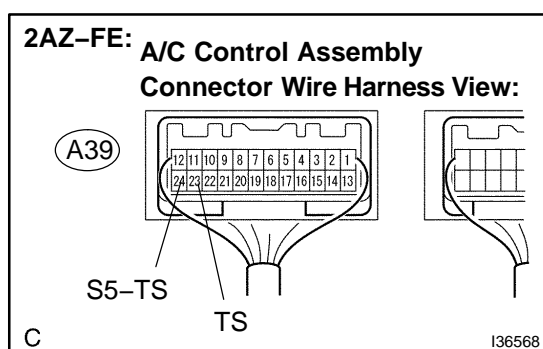
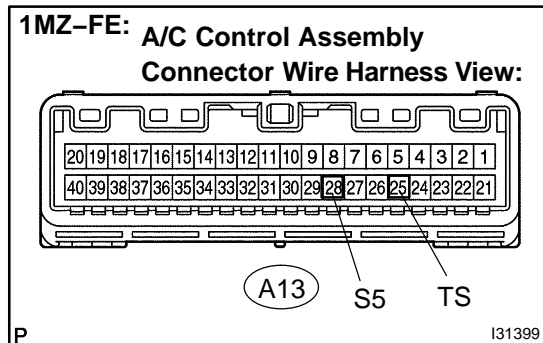
DTC No.	Detection Item	Trouble Area
21	Open or short in solar sensor circuit. (Please note that display of DTC 21 is not abnormal when the sensor is not receiving solar radiation.)	<ul style="list-style-type: none"><li>• Solar sensor</li><li>• Harness or connector between solar sensor and A/C amplifier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

WIRING DIAGRAM



## INSPECTION PROCEDURE

## 1 INSPECT HEATER CONTROL HOUSING SUB-ASSY(TS, S5)



- (a) Remove A/C amplifier assy with connectors still connected.
- (b) Turn the ignition switch to the ON position.
- (c) 1MZ-FE:  
Measure voltage according to the value(s) in the table below.

**Standard:**

Terminal No.	Condition	Specified Condition
A13-25 (TS) – Body ground	Sensor subject to electric light	0.8 to 3.3 V
A13-25 (TS) – Body ground	Sensor is covered by a cloth	Below 0.8 V
A13-28 (S5) – Body ground	Ignition switch: ON	4.5 to 5.5 V

**HINT:**

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

- (d) 2AZ-FE:  
Measure voltage according to the value(s) in the table below.

**Standard:**

Terminal No.	Condition	Specified Condition
A39-23 (TS) – Body ground	Sensor subject to electric light	0.8 to 3.3 V
A39-23 (TS) – Body ground	Sensor is covered by a cloth	Below 0.8 V
A39-24 (S5-TS) – Body ground	Ignition switch: ON	4.5 to 5.5 V

**HINT:**

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

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

**B**

**PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

**C**

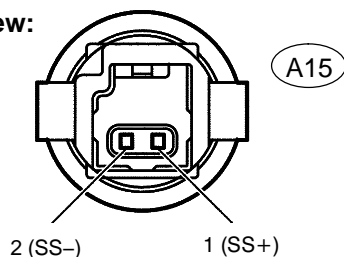
**CHECK AND REPLACE HEATER CONTROL HOUSING SUB-ASSY**

**A**

## 2 INSPECT COOLER (SOLAR SENSOR) THERMISTOR

A/C Solar Sensor Connector

Front View:



- Remove cooler (solar sensor) thermistor.
- Disconnect the connector from cooler (solar sensor) thermistor.
- Measure the resistance according to the value(s) in the table below.
- 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
A15-1 - A15-2	Sensor is subject to electric light	Except $\infty \Omega$
A15-1 - A15-2	Sensor is covered with a cloth	$\infty \Omega$ (No continuity)

**NOTICE:**

The connection procedure for using a digital tester such as an 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 COOLER (SOLAR SENSOR) THERMISTOR**

OK

## 3 CHECK HARNESS AND CONNECTOR(COOLER (SOLAR SENSOR) THERMISTOR - HEATER CONTROL HOUSING SUB-ASSY)

NG

**REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

**CHECK AND REPLACE HEATER CONTROL HOUSING SUB-ASSY**