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Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [12/2022 -]
Title: HEATING / AIR CONDITIONING: SOLAR SENSOR: ON-VEHICLE INSPECTION; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

ON-VEHICLE INSPECTION

PROCEDURE

1. INSPECT AUTOMATIC LIGHT CONTROL SENSOR (w/ Automatic Light Control System)

Pre-procedure1

(a) Disconnect the G1 automatic light control sensor connector.

Procedure1

(b) Measure the voltage and resistance according to the value(s) in the table below.

Standard Voltage:

EWD INFO

Click Location & Routing(G1)
Click Connector(G1)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
G1-1 (CLTB) - G1-2 (CLTE)	Ignition switch on (IG)	11 to 14 V	V

Standard Resistance:

EWD INFO

Click Location & Routing(G1)
Click Connector(G1)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
G1-2 (CLTE) - Body ground	Always	Below 1 Ω	Ω

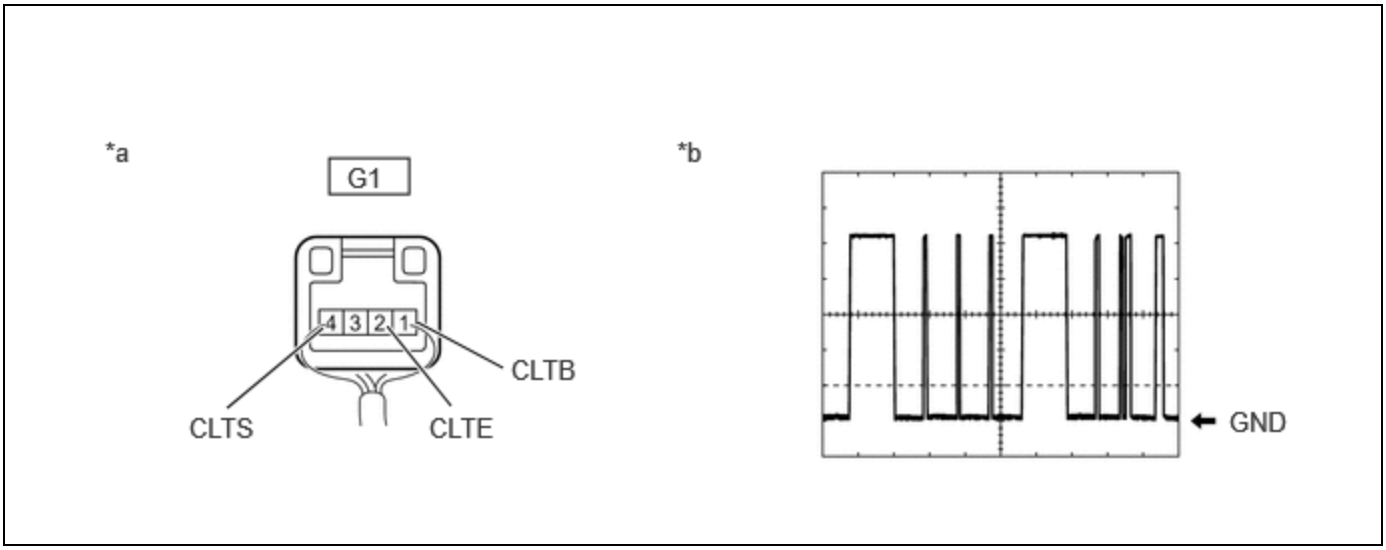
If the result is not as specified, there may be a malfunction on the wire harness side.

Post-procedure1

(c) Connect the G1 automatic light control sensor connector.

Procedure2

(d) Connect an oscilloscope to terminals G1-2 (CLTE) and G1-4 (CLTS) of the automatic light control sensor connector and check the waveform.



*a	Component with harness connected (Automatic Light Control Sensor)	*b	Waveform

OK:

EWD INFO

Click Location & Routing(G1)
Click Connector(G1)

TESTER CONNECTION	CONDITION	TOOL SETTING	SPECIFIED CONDITION
G1-2 (CLTE) - G1-4 (CLTS)	Ignition switch on (IG)	2 V/DIV., 10 ms./DIV.	Pulse generation (See waveform)

HINT:

The communication waveform changes according to the surrounding brightness.

If the result is not as specified, the automatic light control sensor may be malfunctioning.

2. INSPECT COOLER (SOLAR SENSOR) THERMISTOR (w/o Automatic Light Control System)

(a) Check the wire harness.

(1) Disconnect the G2 cooler (solar sensor) thermistor connector.

(2) Disconnect the K73 air conditioning amplifier assembly connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(G2,K73)
Click Connector(G2)
Click Connector(K73)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
G2-1 - K73-2 (S5-1)	Always	Below 1 Ω	Ω
G2-2 - K73-9 (TS)	Always	Below 1 Ω	Ω

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
G2-1 - Body ground	Always	10 kΩ or higher	kΩ
G2-2 - Body ground	Always	10 kΩ or higher	kΩ

If the resistance is not as specified, repair the wire harness.

(4) Reconnect the K73 air conditioning amplifier assembly connector.

(5) Turn the ignition switch on (IG).

(6) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

EWD INFO

Click Location & Routing(G2)
Click Connector(G2)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
G2-1 - G2-2	Ignition switch on (IG)	4.5 to 5.5 V	V

If the voltage is not as specified, replace the air conditioning amplifier assembly.

(b) Check the cooler (solar sensor) thermistor.

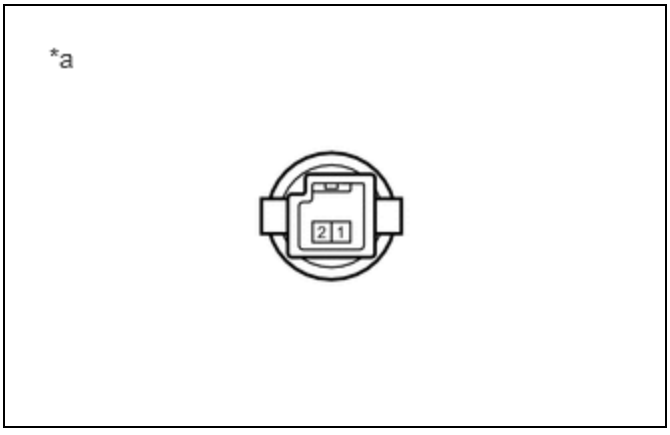
(1) Reconnect the G2 cooler (solar sensor) thermistor connector.

(2) Turn the ignition switch on (IG).

(3) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
1 - 2	Sensor subjected to electric light	0.8 to 4.3 V	V
1 - 2	Sensor covered with cloth	Below 0.8 V	V



*a	Component with harness connected (Cooler (Solar Sensor) Thermistor)

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 negative (-) lead to terminal 1 and the positive (+) lead to terminal 2 of the cooler (solar sensor) thermistor.
- Do not bring the positive and negative tester probes too close to each other as a short circuit may occur.

HINT:

- Use an incandescent light for inspection. Bring it within about 30 cm (11.8 in.) of the cooler (solar sensor) thermistor.

- As the inspection light is moved away from the sensor, the voltage decreases.
- Check from the rear of the connector while it is connected to the cooler (solar sensor) thermistor.

If the voltage is not as specified, replace the cooler (solar sensor) thermistor.