Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM100000002910H
Model Year Start: 2023	**Model:** Prius	**Prod Date Range:** [12/2022 -]
Title: HEATING / AIR CONDITIONING: AIR CONDITIONING SYSTEM (for HEV Model): B14D215; Front Left Solar Sensor Circuit Short to Battery or Open; 2023 - 2024 MY Prius [12/2022 -]		

DTC	**B14D215**	**Front Left Solar Sensor Circuit Short to Battery or Open**

DESCRIPTION

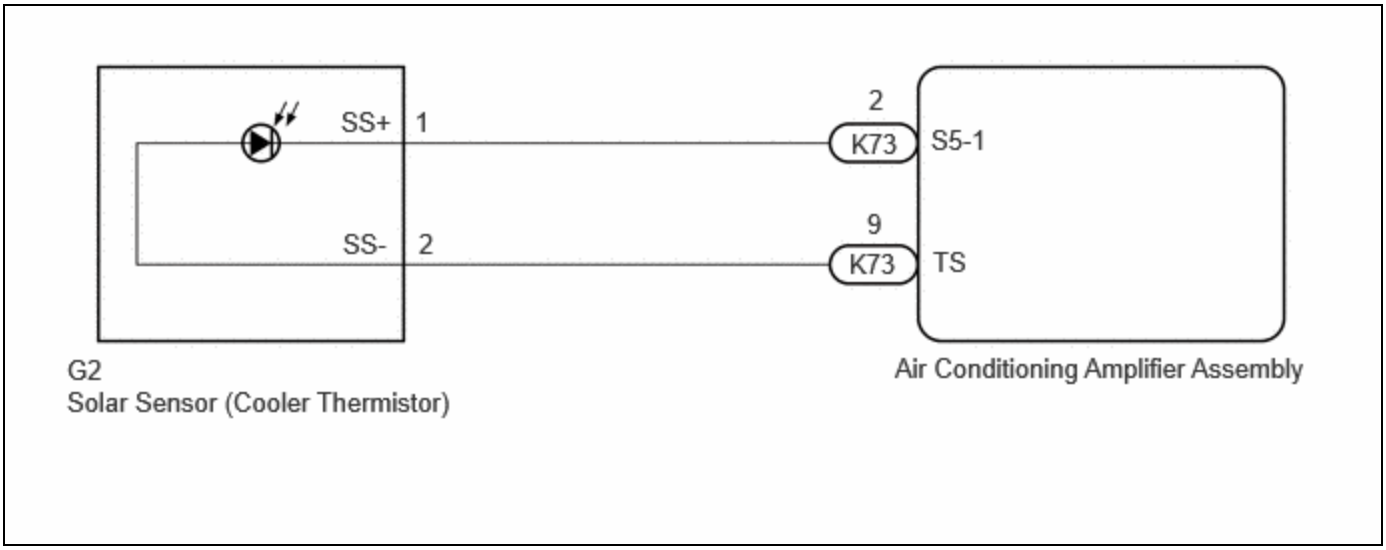
The solar sensor (cooler thermistor) is installed on the upper side of the instrument panel. It detects sunlight to control air conditioning control in AUTO mode.

The output voltage from the solar sensor (cooler thermistor) 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 assembly detects changes in the output voltage from the solar sensor (cooler thermistor).

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MEMORY	DTC OUTPUT FROM	PRIORITY
B14D215	Front Left Solar Sensor Circuit Short to Battery or Open	Diagnosis Condition: Ignition switch ON Malfunction: Short in solar sensor (cooler thermistor) circuit Detection Time: Continuously for 4 seconds or more	• Solar sensor (cooler thermistor) • Harness or connector • Air conditioning amplifier assembly	Memorized	Air Conditioner	A

WIRING DIAGRAM



PROCEDURE

1.	**READ VALUE USING GTS**

(a) Read the Data List according to the display on the GTS.

Body Electrical > Air Conditioner > Data List

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Front Left Solar Sensor	Front left side solar sensor (cooler thermistor)	0 to 6553.5 W/m^2	Front left side solar sensor (cooler thermistor) value increases as brightness increases	Solar sensor (cooler thermistor) circuit malfunction

Body Electrical > Air Conditioner > Data List

TESTER DISPLAY
Front Left Solar Sensor

OK:
The display is as specified in the normal condition column.

OK ▶ **REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY**
INFO

NG
▼

2.	**INSPECT SOLAR SENSOR (COOLER THERMISTOR)**

Click here INFO

NG ▶ **REPLACE SOLAR SENSOR (COOLER THERMISTOR)** INFO

OK ▼

3.	**CHECK HARNESS AND CONNECTOR (AIR CONDITIONING AMPLIFIER ASSEMBLY - SOLAR SENSOR (COOLER THERMISTOR))**

Pre-procedure1

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

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

Procedure1

(c) 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 (SS+) - K73-2 (S5-1)	Always	Below 1 Ω	Ω
G2-2 (SS-) - K73-9 (TS)	Always	Below 1 Ω	Ω
G2-1 (SS+) or K73-2 (S5-1) - Other terminals and body ground	Always	10 kΩ or higher	kΩ
G2-2 (SS-) or K73-9 (TS) - Other terminals and body ground	Always	10 kΩ or higher	kΩ

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

Standard Voltage:

EWD INFO

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

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
K73-2 (S5-1) - Body ground	Ignition switch ON	Below 1 V	V

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
K73-9 (TS) - Body ground	Ignition switch ON	Below 1 V	V

Post-procedure1

(e) None

OK ▶ **REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY**

INFO

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**