Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM100000002909S
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [12/2022 -]
Title: THEFT DETERRENT / KEYLESS ENTRY: SMART KEY SYSTEM (for Start Function): B228B00; Battery Circuit or Ground Circuit Energization Malfunction; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	**B228B00**	**Battery Circuit or Ground Circuit Energization Malfunction**

DESCRIPTION

This DTC is stored when there is a malfunction in the certification ECU (smart key ECU assembly) auxiliary battery power supply circuit or ground circuit.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	DTC OUTPUT FROM	PRIORITY	NOTE
B228B00	Battery Circuit or Ground Circuit Energization Malfunction	A malfunction is detected in the certification ECU (smart key ECU assembly) auxiliary battery power supply circuit or ground circuit. (1-trip detection logic*)	• AM2 fuse • Wire harness or connector	Power Source Control	A	**DTC Output Confirmation Operation:** Drive the vehicle.

*: Only detected while a malfunction is present.

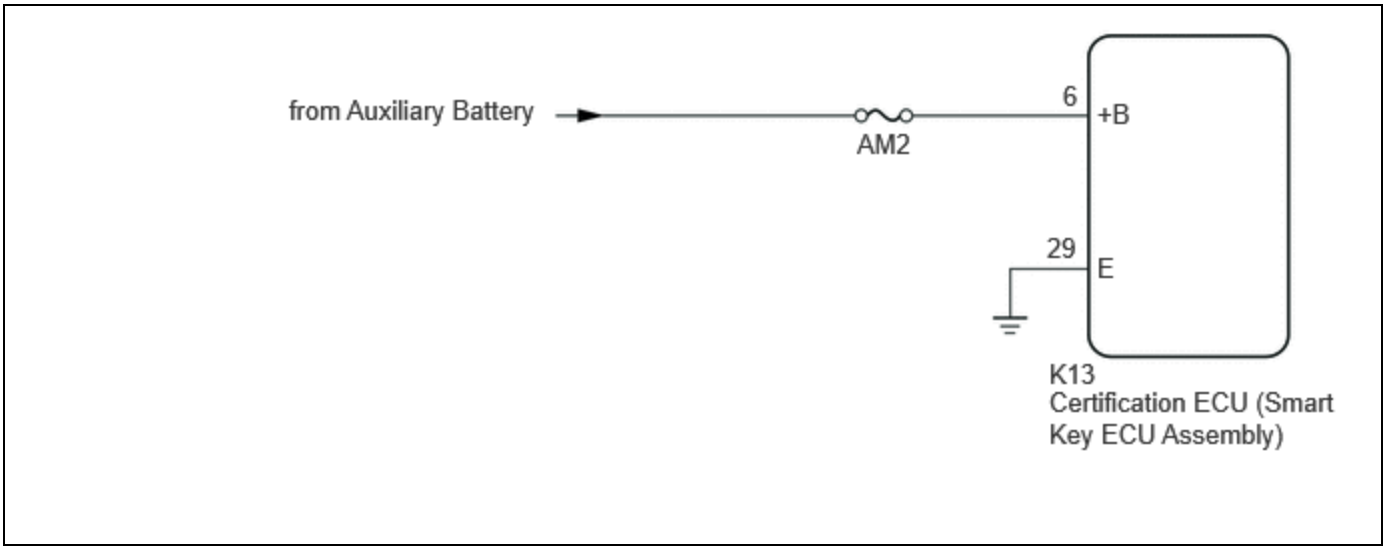
Vehicle Condition and Fail-safe Function when Malfunction Detected

VEHICLE CONDITION WHEN MALFUNCTION DETECTED	FAIL-SAFE FUNCTION WHEN MALFUNCTION DETECTED
The hybrid control system stopped while driving.	-

Related Data List and Active Test Items

DTC NO.	DATA LIST AND ACTIVE TEST
B228B00	-

WIRING DIAGRAM



CAUTION / NOTICE / HINT

NOTICE:

- When using the GTS with the ignition switch off, perform lock and unlock operations using the door control switch of the multiplex network master switch assembly at intervals of 1.5 seconds or less until communication between the GTS and the vehicle begins, and then select the vehicle model manually.

  Then select Model Code "KEY REGIST" under manual mode and enter the following menus: Body Electrical / Smart Key(CAN). While using the GTS, periodically perform lock and unlock operations using the door control switch of the multiplex network master switch assembly at intervals of 1.5 seconds or less to maintain communication between the GTS and the vehicle.
- The smart key system (for Start Function) uses the LIN communication system and CAN communication system. Inspect the communication function by following How to Proceed with Troubleshooting. Troubleshoot the smart key system (for Start Function) after confirming that the communication systems are functioning properly.

  Click here INFO
- Inspect the fuses for circuits related to this system before performing the following procedure.
- After repair, confirm that no DTCs are output by performing "DTC Output Confirmation Operation".

PROCEDURE

1.	**CHECK HARNESS AND CONNECTOR (POWER SOURCE)**

Pre-procedure1

(a) Disconnect the K13 certification ECU (smart key ECU assembly) connector.

Procedure1

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

Standard Voltage:

EWD INFO

Click Location & Routing(K13)
Click Connector(K13)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
K13-6 (+B) - Body ground	Ignition switch off	11 to 14 V	V

Post-procedure1

(c) None

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR IN CIRCUIT CONNECTED TO POWER SOURCE**

OK ▼

2.	**CHECK HARNESS AND CONNECTOR (GROUND)**

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

Standard Resistance:

EWD INFO

Click Location & Routing(K13)
Click Connector(K13)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
K13-29 (E) - Body ground	Always	Below 1 Ω	Ω

OK ▶ **END (TEMPORARY CONNECTION FAILURE IS SUSPECTED)**

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR IN CIRCUIT CONNECTED TO POWER SOURCE**