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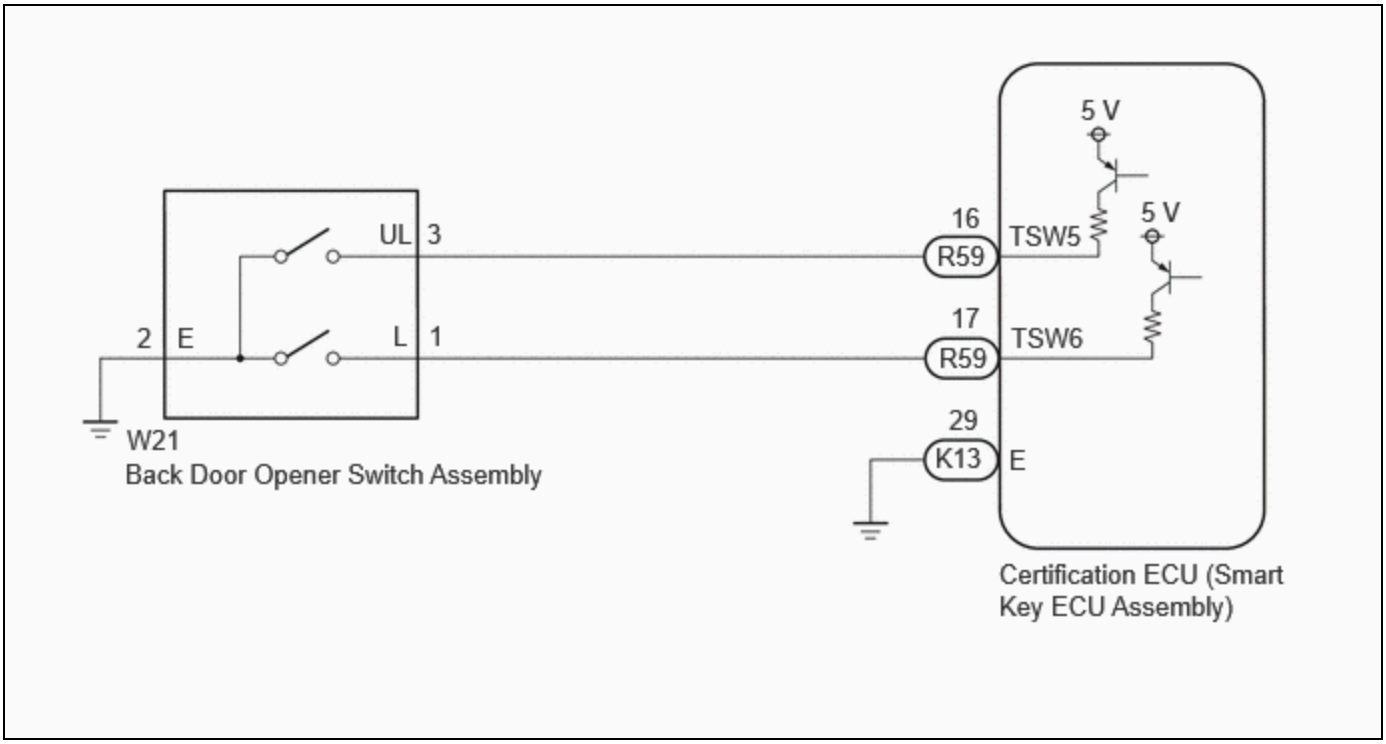
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [12/2022 -]
Title: THEFT DETERRENT / KEYLESS ENTRY: SMART KEY SYSTEM (for Entry Function): Back Door Entry Lock Function does not Operate; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

Back Door Entry Lock Function does not Operate

DESCRIPTION

If the entry lock function does not operate for the back door only, but the entry unlock function operates, the request code is being transmitted properly from the back door. In this case, there may be a problem related to the lock switch (connection between the back door opener switch assembly and certification ECU (smart key ECU assembly)).

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 Entry Function) uses the CAN communication system. Inspect the communication function by following How to Proceed with Troubleshooting. Troubleshoot the smart key system (for Entry Function) after confirming that the communication systems are functioning properly.

  Click here INFO

- Before replacing the certification ECU (smart key ECU assembly), refer to Precaution.

Click here INFO

- Check that there are no electrical key transmitter sub-assemblies in the vehicle.
- After repair, confirm that no DTCs are output.

PROCEDURE

1.	**CHECK POWER DOOR LOCK SYSTEM**

(a) When the door control switch on the multiplex network master switch assembly is operated, check that the back door lock and unlock according to the switch operation.

Click here INFO

OK:

Back door lock/unlock operate normally.

NG ▶ **GO TO POWER DOOR LOCK SYSTEM** INFO

OK ▼

2.	**INSPECT GTS (TRUNK LID/BACK DOOR LOCK SWITCH)**

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

Body Electrical > Smart Key > Data List

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Trunk Lid/Back Door Lock Switch	Back door opener switch assembly (lock switch)	OFF or ON	OFF: Back door opener switch assembly (lock switch) not pressed ON: Back door opener switch assembly (lock switch) pressed	• Displays whether the back door opener switch assembly (lock switch) is on or off. • Use this Data List item to help determine if there is a switch malfunction when the back door lock function does not operate.

Body Electrical > Smart Key > Data List

TESTER DISPLAY
Trunk Lid/Back Door Lock Switch

HINT:

When checking the operation of the entry lock function several times, it can be operated up to 2 times consecutively. To operate the function 3 times or more consecutively, the doors need to be unlocked once. However, this is only for the entry lock function, other door lock operations, such as a wireless door lock operation can be performed consecutively.

OK:

The GTS display changes correctly in response to the operation of the back door opener switch assembly.

OK ▶ **REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)** INFO

NG

▼

3.	**CHECK HARNESS AND CONNECTOR (BACK DOOR OPENER SWITCH ASSEMBLY - CERTIFICATION ECU (SMART KEY ECU ASSEMBLY))**

(a) Disconnect the R59 certification ECU (smart key ECU assembly) connector.

(b) Disconnect the W21 back door opener switch assembly connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(R59,W21)
Click Connector(R59)
Click Connector(W21)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R59-17 (TSW6) - W21-1 (L)	Always	Below 1 Ω
R59-17 (TSW6) or W21-1 (L) - Other terminals and body ground	Always	10 kΩ or higher

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

OK

▼

4.	**INSPECT BACK DOOR OPENER SWITCH ASSEMBLY (LOCK SWITCH)**

Click here INFO

OK ▶ **REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)** INFO

NG ▶ **REPLACE BACK DOOR OPENER SWITCH ASSEMBLY**