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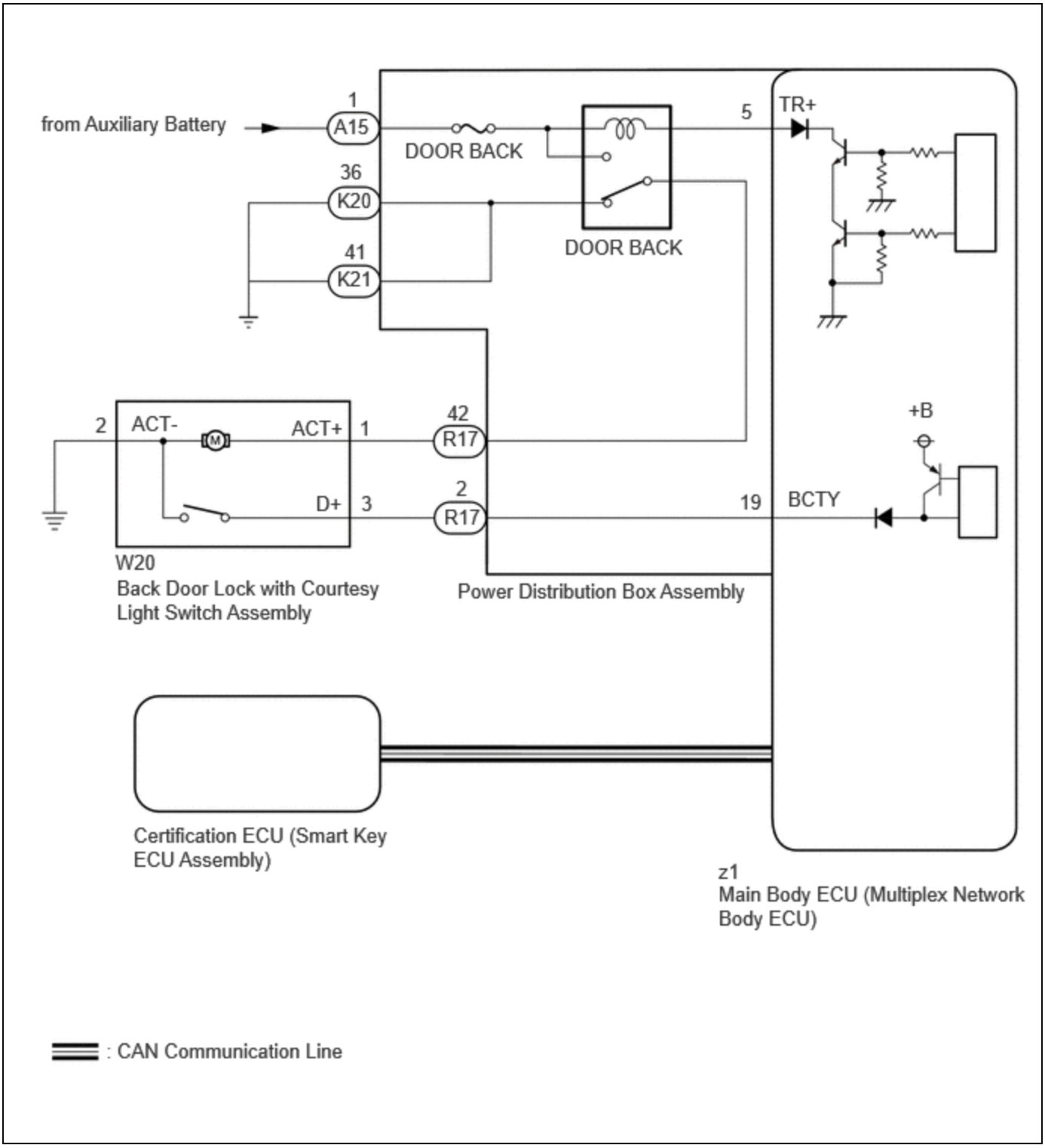
|---|---|---|
| **Last Modified:** 12-04-2024 | 6.11:8.1.0 | **Doc ID:** RM1000000029B9S |
| **Model Year Start:** 2023 | **Model:** Prius Prime | **Prod Date Range:** [12/2022 - ] |
| **Title:** DOOR LOCK: POWER DOOR LOCK CONTROL SYSTEM: Only Back Door cannot be Opened; 2023 - 2024 MY Prius Prius Prime [12/2022 - ] | | |

**Only Back Door cannot be Opened**

## DESCRIPTION

The main body ECU (multiplex network body ECU) receives signals from the back door opener switch assembly. Then, the main body ECU (multiplex network body ECU) activates the back door lock motor.

## WIRING DIAGRAM




# CAUTION / NOTICE / HINT

**NOTICE:**

- When using the GTS with the vehicle ignition switch off, connect the GTS to the DLC3 and turn a 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.
- Inspect the fuses for circuits related to this system before performing the following procedure.
- The power door lock control system uses the CAN communication system. Inspect the communication function by following How to Proceed with Troubleshooting. Troubleshoot the power door lock control system after confirming that the communication systems are functioning properly.

Click here INFO

- If the main body ECU (multiplex network body ECU) is replaced, refer to registration.

Click here INFO

## PROCEDURE

| | |
|---|---|
| 1. | **PERFORM ACTIVE TEST USING GTS (Trunk Lid / Back Door Open)** |

(a) Perform the Active Test according to the display on the GTS.

**Body Electrical > Main Body > Active Test**

| TESTER DISPLAY | MEASUREMENT ITEM | CONTROL RANGE | DIAGNOSTIC NOTE |
|---|---|---|---|
| Trunk Lid / Back Door Open | Back door lock motor | OFF or ON | - |

**Body Electrical > Main Body > Active Test**

| TESTER DISPLAY |
|---|
| Trunk Lid / Back Door Open |

OK:
The back door lock with courtesy light switch assembly unlatches when ON is selected.

**OK** ▶ **GO TO SMART KEY SYSTEM (for Entry Function)**

**NG**
▼

| | |
|---|---|
| 2. | **INSPECT BACK DOOR LOCK WITH COURTESY LIGHT SWITCH ASSEMBLY** |

Click here INFO

**NG** ▶ **REPLACE BACK DOOR LOCK WITH COURTESY LIGHT SWITCH ASSEMBLY**

**OK**
▼

| | |
|---|---|
| 3. | **CHECK HARNESS AND CONNECTOR (BACK DOOR LOCK WITH COURTESY LIGHT SWITCH ASSEMBLY - POWER DISTRIBUTION BOX ASSEMBLY AND BODY GROUND)** |

(a) Disconnect the W20 back door lock with courtesy light switch assembly connector.

(b) Disconnect the R17 power distribution box assembly connector.

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

Standard Resistance:

EWD INFO

**Click Location & Routing(W20,R17)**
**Click Connector(W20)**
**Click Connector(R17)**

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION |
|---|---|---|
| W20-1 (ACT+) - R17-42 | Always | Below 1 Ω |
| W20-3 (D+) - R17-2 | Always | Below 1 Ω |
| W20-2 (ACT-) - Body ground | Always | Below 1 Ω |
| W20-1 (ACT+) or R17-42 - Other terminals and body ground | Always | 10 kΩ or higher |
| W20-3 (D+) or R17-2 - Other terminals and body ground | Always | 10 kΩ or higher |

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

**OK** ▼

| | |
|---|---|
| **4.** | **INSPECT POWER DISTRIBUTION BOX ASSEMBLY** |

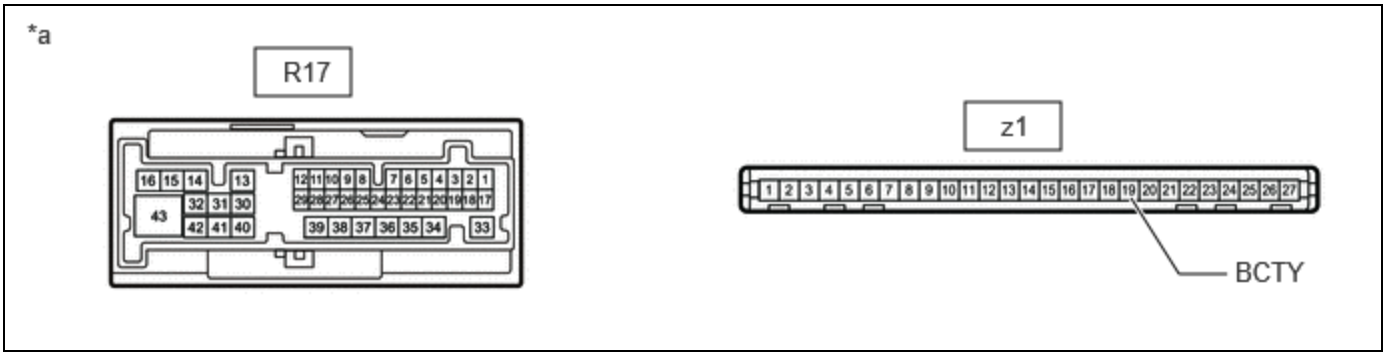
(a) Remove the power distribution box assembly.

Click here

(b) Remove the main body ECU (multiplex network body ECU) from the power distribution box assembly.

Click here

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




| | | | |
|---|---|---|---|
| *a | Component without harness connected | - | - |

| | | | |
|---|---|---|---|
| | (Power Distribution Box Assembly) | | |

Standard Resistance:

EWD INFO

Click Location & Routing(z1,R17)
Click Connector(z1)
Click Connector(R17)

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION |
|---|---|---|
| z1-19 (BCTY) - R17-2 | Always | Below 1 Ω |

Click here INFO

**NG** ▶ **REPLACE POWER DISTRIBUTION BOX ASSEMBLY** INFO

**OK** ▼

| | |
|---|---|
| **5.** | **CHECK HARNESS AND CONNECTOR (POWER DISTRIBUTION BOX ASSEMBLY - AUXILIARY BATTERY AND BODY GROUND)** |

(a) Disconnect the power distribution box assembly connectors.

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

Standard Voltage:

EWD INFO

Click Location & Routing(A15)
Click Connector(A15)

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION |
|---|---|---|
| A15-1 - Body ground | Always | 11 to 14 V |

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

Standard Resistance:

EWD INFO

Click Location & Routing(K20,K21)
Click Connector(K20)
Click Connector(K21)

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION |
|---|---|---|
| K20-36 - Body ground | Always | Below 1 Ω |

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION |
|---|---|---|
| K21-41 - Body ground | Always | Below 1 Ω |

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

**OK** ▼

| 6. | CHECK POWER DISTRIBUTION BOX ASSEMBLY (DOOR BACK RELAY) |
|---|---|

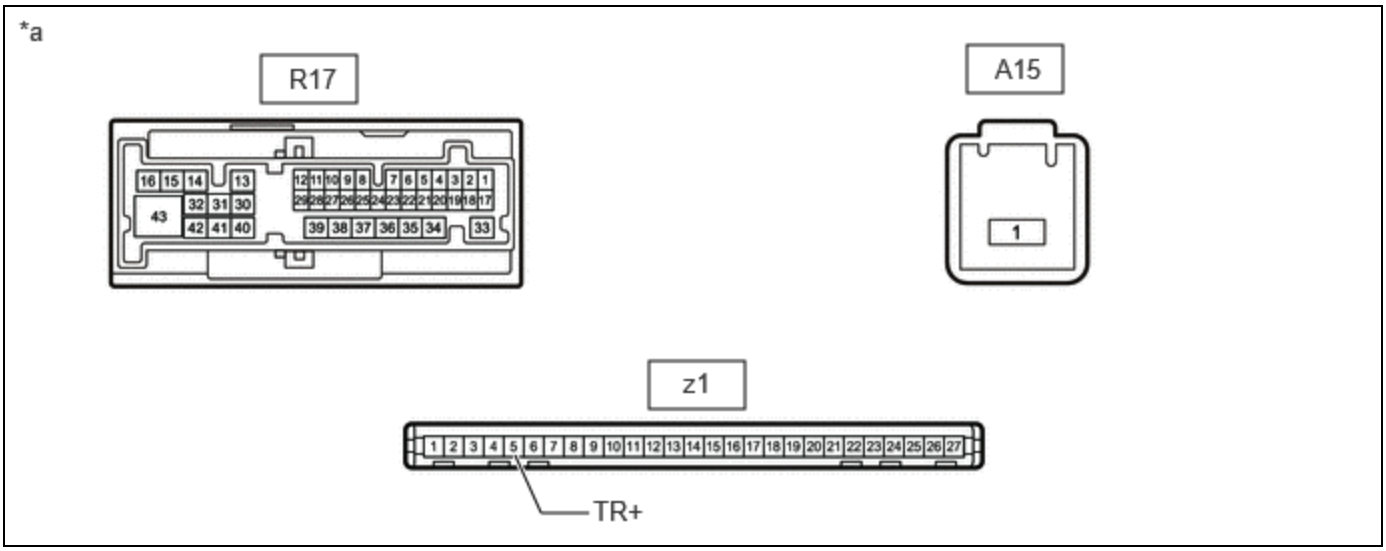
(a) Remove the power distribution box assembly.

Click here INFO

(b) Remove the main body ECU (multiplex network body ECU) from the power distribution box assembly.

Click here INFO

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




| | | | |
|---|---|---|---|
| *a | Component without harness connected (Power Distribution Box Assembly) | - | - |

Standard Resistance:

EWD INFO

Click Location & Routing(R17)
Click Connector(R17)

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION |
|---|---|---|
| R17-42 - Body ground | Auxiliary battery voltage applied to terminals A15-1 and z1-5 (TR+) | 10 kΩ or higher |
| R17-42 - Body ground | Auxiliary battery voltage not applied to terminals A15-1 and z1-5 (TR+) | Below 1 Ω |

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

Standard Voltage:


**Click Location & Routing(R17)**
**Click Connector(R17)**

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION |
|---|---|---|
| R17-42 - Auxiliary battery negative (-) terminal | Auxiliary battery voltage applied to terminals A15-1 and z1-5 (TR+) | 11 to 14 V |

**OK** ▶ **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)** INFO

**NG** ▶ **REPLACE POWER DISTRIBUTION BOX ASSEMBLY** INFO