

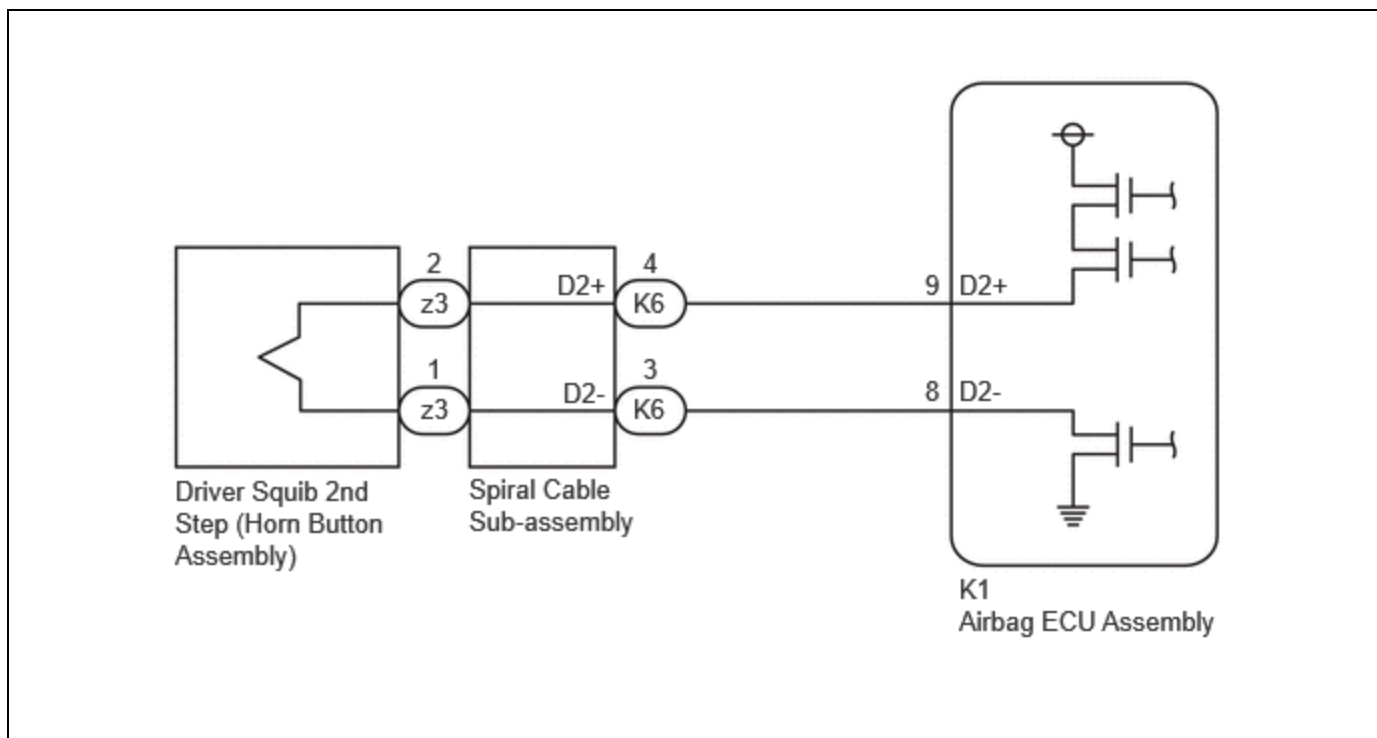
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|---|---------------------------|--------------------------------------|
| <b>Last Modified:</b> 12-04-2024  | 6.11:8.1.0                | <b>Doc ID:</b> RM1000000028UX0       |
| <b>Model Year Start:</b> 2023   | <b>Model:</b> Prius Prime | <b>Prod Date Range:</b> [12/2022 - ] |
| <b>Title:</b> SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B00021A; Driver Frontal Stage 2 Deployment Control Circuit Resistance Below Threshold; 2023 - 2024 MY Prius Prius Prime [12/2022 - ] |                           |                                      |

|            |                |   |
|------------|----------------|---|
| <b>DTC</b> | <b>B00021A</b> | <b>Driver Frontal Stage 2 Deployment Control Circuit Resistance Below Threshold</b> |
|------------|----------------|---|

## DESCRIPTION

| DTC NO. | DETECTION ITEM   | DTC DETECTION CONDITION   | TROUBLE AREA   | WARNING INDICATE | DTC OUTPUT FROM | PRIORITY | TEST MODE / CHECK MODE |
|---------|--|---|--|------------------|-----------------|----------|------------------------|
| B00021A | Driver Frontal Stage 2 Deployment Control Circuit Resistance Below Threshold | <ul style="list-style-type: none"> <li>The airbag ECU assembly detects a line short in the driver squib 2nd step circuit for 2 seconds during the primary check.</li> <li>Horn button assembly malfunction</li> <li>Spiral cable sub-assembly malfunction</li> <li>Airbag ECU assembly malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Harness or connector</li> <li>Spiral cable sub-assembly</li> <li>Horn button assembly</li> <li>Airbag ECU assembly</li> </ul> | Comes on         | SRS Airbag      | A        | Applies to check mode  |

## WIRING DIAGRAM



## CAUTION / NOTICE / HINT

### NOTICE:

- After the ignition switch is turned off, there may be a waiting time before disconnecting the negative (-) auxiliary battery terminal.

[Click here](#) **INFO**

### HINT:

When disconnecting and reconnecting the auxiliary battery, there is an automatic learning function that completes learning when the respective system is used.

[Click here](#) **INFO**

- After replacing the airbag ECU assembly, refer to work procedure.

[Click here](#) **INFO**

- When installing the spiral cable sub-assembly and steering wheel, be sure to adjust the spiral cable sub-assembly as it may break if the steering wheel is turned before adjusting the spiral cable sub-assembly.

[Click here](#) **INFO**

### HINT:

- To perform the simulation method, enter check mode (signal check) with the GTS.

[Click here](#) **INFO**

- Perform the simulation method while checking the Data List.

[Click here](#) **INFO**

## PROCEDURE

### 1. CLEAR DTC

Pre-procedure1

(a) Turn the ignition switch to ON, and wait for at least 60 seconds.

Procedure1

(b) Clear the DTCs stored in memory.

**Body Electrical > SRS Airbag > Clear DTCs**

Post-procedure1

(c) Turn the ignition switch off.

**NEXT**



|           |                  |
|-----------|------------------|
| <b>2.</b> | <b>CHECK DTC</b> |
|-----------|------------------|

Pre-procedure1

(a) Turn the ignition switch to ON, and wait for at least 60 seconds.

Procedure1

(b) Check for DTCs.

**Body Electrical > SRS Airbag > Trouble Codes**

| RESULT                | PROCEED TO |
|-----------------------|------------|
| B00021A is output     | A          |
| B00021A is not output | B          |

Post-procedure1

(c) None

**B** **USE SIMULATION METHOD TO CHECK**

**A**



|           |                                       |
|-----------|---------------------------------------|
| <b>3.</b> | <b>CHECK CONNECTION OF CONNECTORS</b> |
|-----------|---------------------------------------|

Pre-procedure1

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) auxiliary battery terminal, and wait for at least 60 seconds.

Procedure1

(c) Check that the connectors are properly connected to the horn button assembly, spiral cable sub-assembly and airbag ECU assembly.

OK:

The connectors are properly connected.

Post-procedure1

(d) None

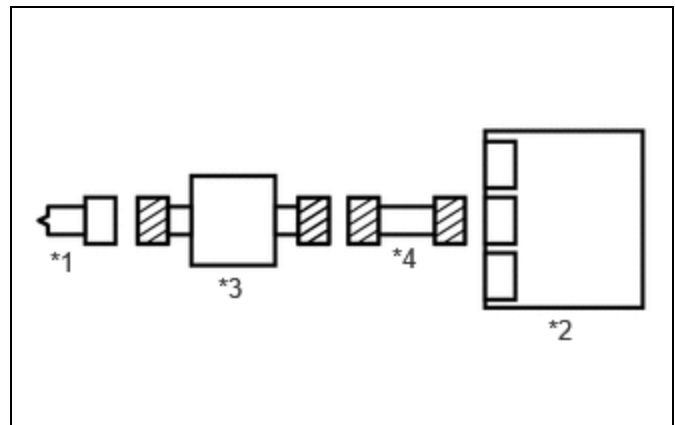
**NG**  **CONNECT CONNECTORS PROPERLY**

**OK**



**4. CHECK CONNECTORS**

Pre-procedure1



|    |                           |
|----|---------------------------|
| *1 | Horn Button Assembly      |
| *2 | Airbag ECU Assembly       |
| *3 | Spiral Cable Sub-assembly |
| *4 | Wire Harness              |

(a) Disconnect the airbag ECU assembly connector.

(b) Disconnect the spiral cable sub-assembly connector.

(c) Disconnect the horn button assembly connector.

Procedure1

(d) Check that the terminals of the connectors are not deformed or damaged.

OK:

The terminals are not deformed or damaged.

(e) Check that the connectors are not loose, deformed or damaged.

OK:

The connector locking button is not disengaged, and the claw of the lock is not deformed or damaged.

(f) Check that the short springs of the activation prevention mechanisms of the spiral cable sub-assembly connector are not deformed or damaged.

OK:

The short springs are not deformed or damaged.

Post-procedure1

(g) None

**NG** ► **REPAIR OR REPLACE WIRE HARNESS OR SPIRAL CABLE SUB-ASSEMBLY**

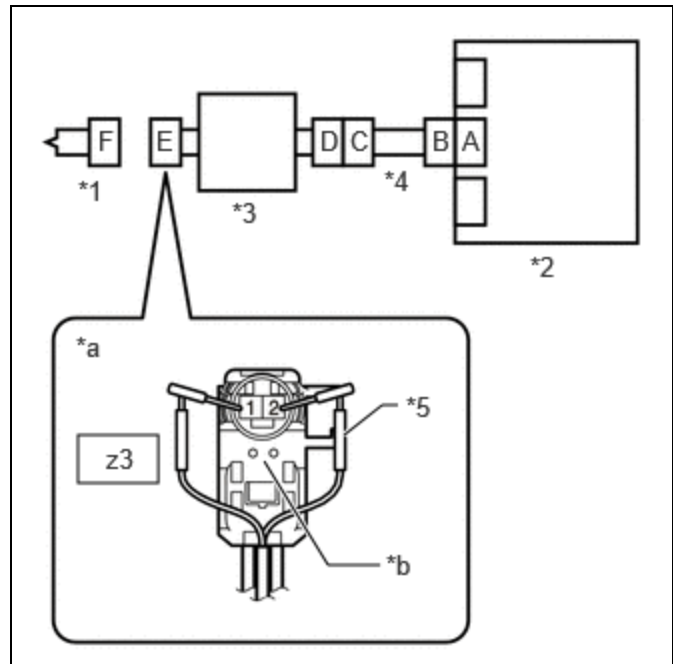
**OK**



**5. CLEAR DTC**

Pre-procedure1

(a) Connect the airbag ECU assembly connector.



|    |                           |
|----|---------------------------|
| *1 | Horn Button Assembly      |
| *2 | Airbag ECU Assembly       |
| *3 | Spiral Cable Sub-assembly |
| *4 | Wire Harness              |
| *5 | SST                       |

|    |  |
|----|--|
| *a | Front view of wire harness connector (to Horn Button Assembly) |
| *b | Color: Black   |

(b) Connect the spiral cable sub-assembly connector.

(c) Connect SST (resistance: 2.1 Ω) to connector E (black connector).

**CAUTION:**

Never connect the tester to the horn button assembly for measurement, as this may lead to a serious injury due to airbag deployment.

**NOTICE:**

- Do not forcibly insert SST into the terminals of the connector when connecting SST.
- Insert SST straight into the terminals of the connector.

**SST: 09843-18061**

(d) Connect the cable to the negative (-) auxiliary battery terminal, and wait for at least 2 seconds.

(e) Turn the ignition switch to ON, and wait for at least 60 seconds.

Procedure1

(f) Clear the DTCs stored in memory.

**Body Electrical > SRS Airbag > Clear DTCs**

Post-procedure1

(g) Turn the ignition switch off.

**NEXT**



|           |                                   |
|-----------|-----------------------------------|
| <b>6.</b> | <b>CHECK HORN BUTTON ASSEMBLY</b> |
|-----------|-----------------------------------|

Pre-procedure1

(a) Turn the ignition switch to ON, and wait for at least 60 seconds.

Procedure1

(b) Check for DTCs.

**Body Electrical > SRS Airbag > Trouble Codes**

| RESULT                | PROCEED TO |
|-----------------------|------------|
| B00021A is not output | A          |
| B00021A is output     | B          |

**HINT:**

Codes other than DTC B00021A may be output at this time, but they are not related to this check.

Post-procedure1

- (c) Turn the ignition switch off.
- (d) Disconnect the cable from the negative (-) auxiliary battery terminal, and wait for at least 60 seconds.
- (e) Disconnect SST from connector E.

**A** **REPLACE HORN BUTTON ASSEMBLY** INFO

**B**



**7. CHECK DRIVER SIDE 2ND SQUIB CIRCUIT**

Pre-procedure1

- (a) Disconnect the airbag ECU assembly connector.

Procedure1

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

Standard Resistance:



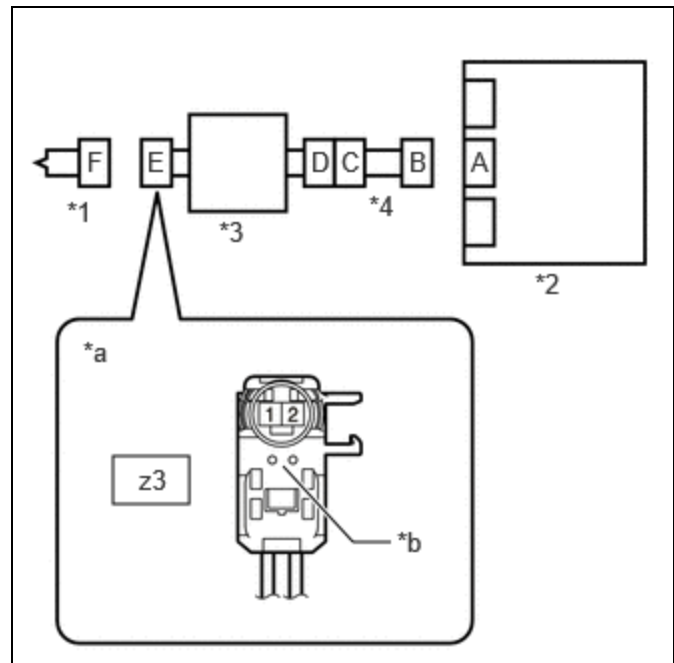
[Click Location & Routing\(z3\)](#)

[Click Connector\(z3\)](#)

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION | RESULT |
|-------------------|-----------|---------------------|--------|
| z3-1 - z3-2       | Always    | 1 MΩ or higher      | MΩ     |

Result:

|            |
|------------|
| PROCEED TO |
| OK         |
| NG         |



|    |  |
|----|--|
| *1 | Horn Button Assembly   |
| *2 | Airbag ECU Assembly  |
| *3 | Spiral Cable Sub-assembly                                      |
| *4 | Wire Harness   |
| *a | Front view of wire harness connector (to Horn Button Assembly) |

|    |              |
|----|--------------|
| *b | Color: Black |
|----|--------------|

Post-procedure1

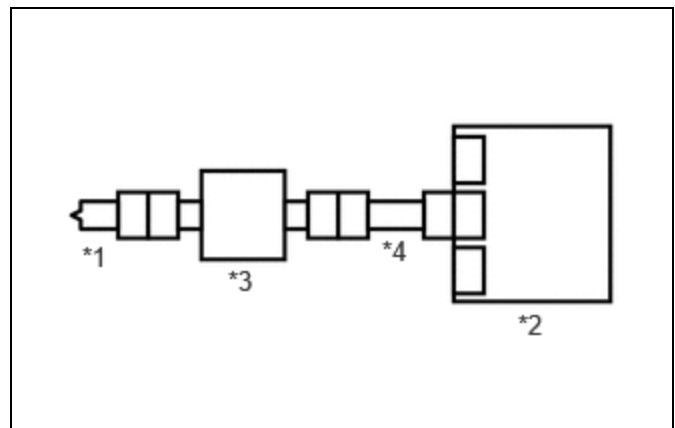
(c) None

**NG**  **GO TO STEP 10**

**OK**  


|           |                  |
|-----------|------------------|
| <b>8.</b> | <b>CLEAR DTC</b> |
|-----------|------------------|

Pre-procedure1



|    |                           |
|----|---------------------------|
| *1 | Horn Button Assembly      |
| *2 | Airbag ECU Assembly       |
| *3 | Spiral Cable Sub-assembly |
| *4 | Wire Harness              |

(a) Connect the airbag ECU assembly connector.

(b) Connect the horn button assembly connector.

(c) Connect the cable to the negative (-) auxiliary battery terminal, and wait for at least 2 seconds.

(d) Turn the ignition switch to ON, and wait for at least 60 seconds.

Procedure1

(e) Clear the DTCs stored in memory.

**Body Electrical > SRS Airbag > Clear DTCs**

Post-procedure1

(f) Turn the ignition switch off.



**NEXT****9. CHECK DTC**

Pre-procedure1

(a) Turn the ignition switch to ON, and wait for at least 60 seconds.

Procedure1

(b) Check for DTCs.

**Body Electrical > SRS Airbag > Trouble Codes**

| RESULT                | PROCEED TO |
|-----------------------|------------|
| B00021A is not output | A          |
| B00021A is output     | B          |

**HINT:**

Codes other than DTC B00021A may be output at this time, but they are not related to this check.

Post-procedure1

(c) None

**A**  **USE SIMULATION METHOD TO CHECK****B**  **REPLACE AIRBAG ECU ASSEMBLY** **10. CHECK HARNESS AND CONNECTOR**

Pre-procedure1

(a) Disconnect the spiral cable sub-assembly connector.

Procedure1

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

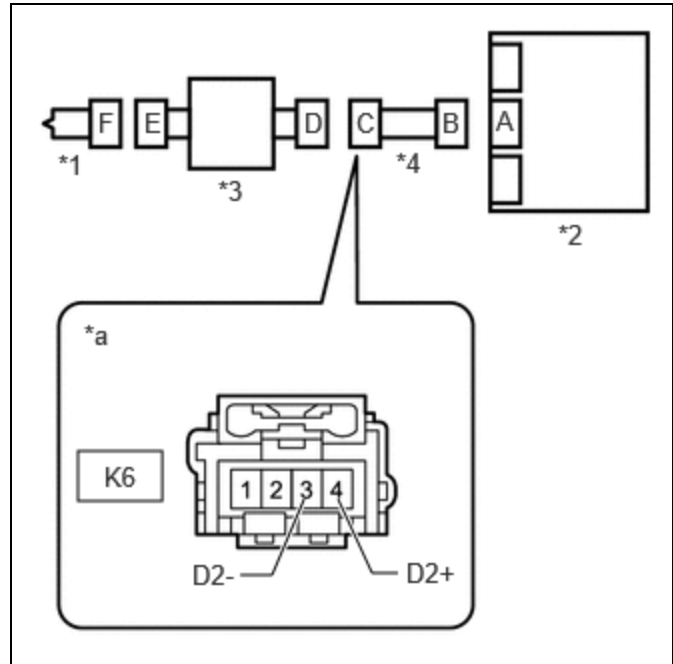
Standard Resistance:

[Click Location & Routing\(K6\)](#)[Click Connector\(K6\)](#)

| TESTER CONNECTION       | CONDITION | SPECIFIED CONDITION | RESULT |
|-------------------------|-----------|---------------------|--------|
| K6-3 (D2-) - K6-4 (D2+) | Always    | 1 MΩ or higher      | MΩ     |

Result:

|            |
|------------|
| PROCEED TO |
| OK         |
| NG         |



|    |   |
|----|---|
| *1 | Horn Button Assembly  |
| *2 | Airbag ECU Assembly   |
| *3 | Spiral Cable Sub-assembly   |
| *4 | Wire Harness  |
| *a | Front view of wire harness connector (to Spiral Cable Sub-assembly) |

Post-procedure1

(c) None

**OK** ► REPLACE SPIRAL CABLE SUB-ASSEMBLY INFO

**NG** ► REPAIR OR REPLACE HARNESS OR CONNECTOR

