

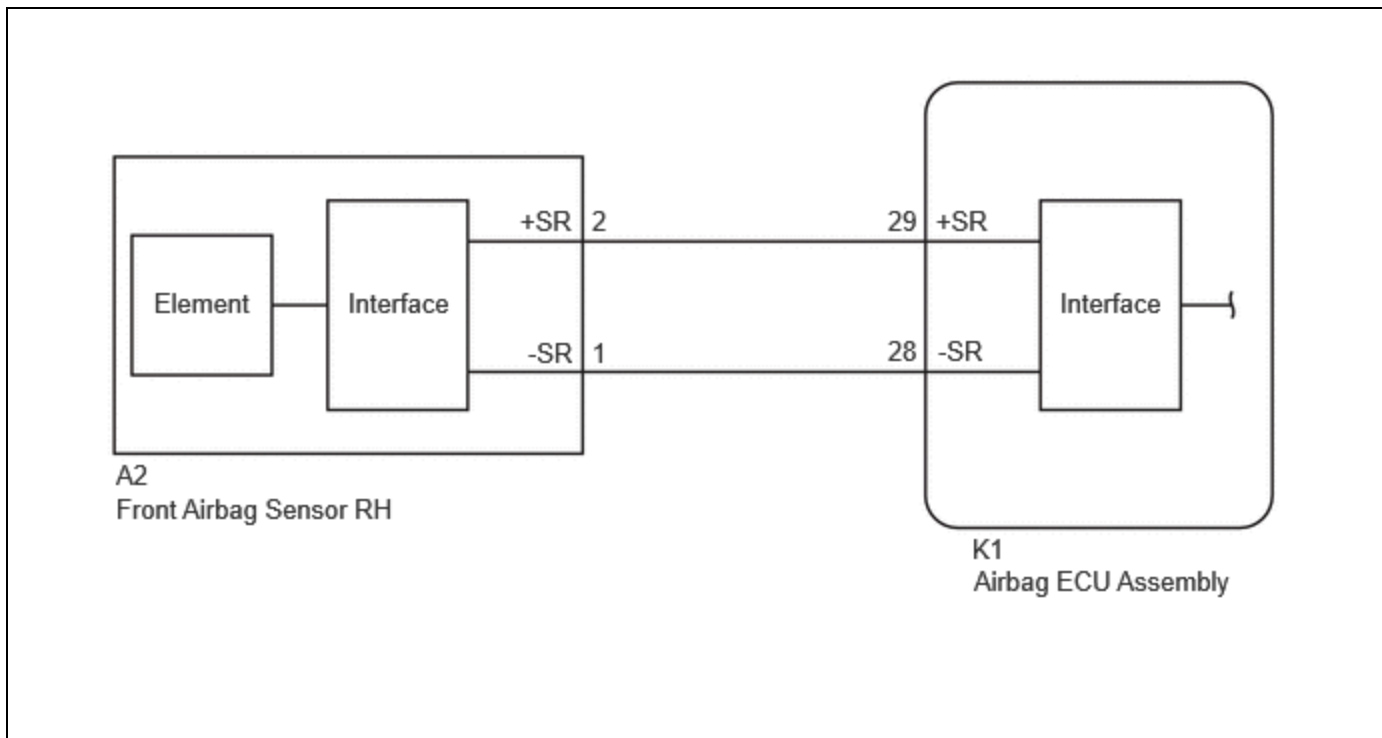
Last Modified: 12-04-2024	6.11:8.1.0	Doc ID: RM100000028UWG
Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B009587; Right Frontal Restraints Sensor Missing Message; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	B009587	Right Frontal Restraints Sensor Missing Message
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DESCRIPTION

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	TEST MODE / CHECK MODE
B009587	Right Frontal Restraints Sensor Missing Message	<ul style="list-style-type: none"> The airbag ECU assembly detects a line short circuit signal, open circuit signal, short circuit to ground signal or short circuit to +B signal in the front airbag sensor RH circuit for 2 seconds. Front airbag sensor RH malfunction Airbag ECU assembly malfunction 	<ul style="list-style-type: none"> Harness or connector Front airbag sensor RH Airbag ECU assembly 	Comes on	SRS Airbag	A	Does not apply to test/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](#)

PROCEDURE

1. CHECK CONNECTION OF CONNECTORS

Pre-procedure1

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

Procedure1

- Check that the connectors are properly connected to the airbag ECU assembly and front airbag sensor RH.

OK:

The connectors are properly connected.

Post-procedure1

(d) None

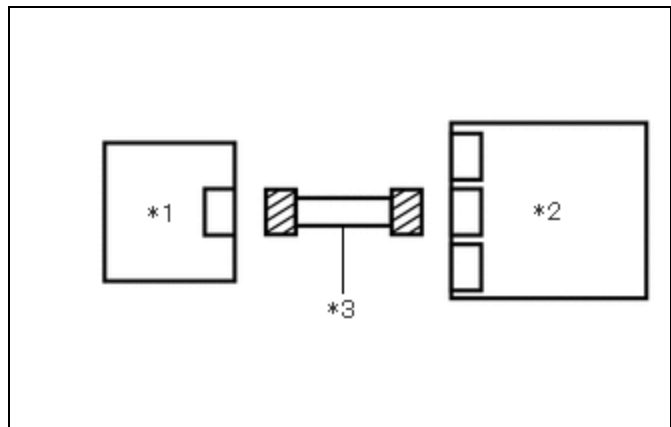
NG  **CONNECT CONNECTORS PROPERLY**

OK



2.	CHECK CONNECTORS
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Pre-procedure1



*1	Front Airbag Sensor RH
*2	Airbag ECU Assembly
*3	Wire Harness

(a) Disconnect the airbag ECU assembly connector.

(b) Disconnect the front airbag sensor RH connector.

Procedure1

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

OK:

The terminals are not deformed or damaged.

Post-procedure1

(d) None

NG  **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



3. CHECK HARNESS AND CONNECTOR (CHECK FOR SHORT IN THE CIRCUIT)

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

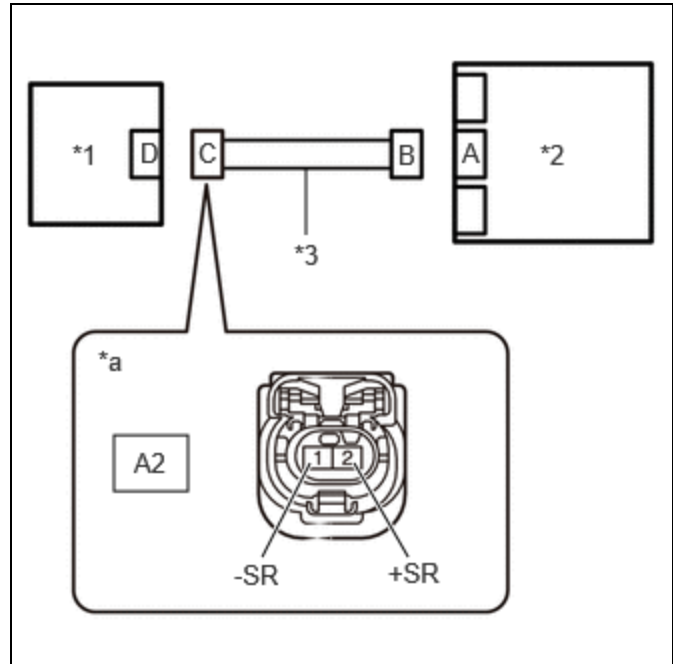
Standard Resistance:



[Click Location & Routing\(A2\).](#)

[Click Connector\(A2\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A2-2 (+SR) - A2-1 (-SR)	Always	1 MΩ or higher	MΩ



*1	Front Airbag Sensor RH
*2	Airbag ECU Assembly
*3	Wire Harness
*a	Front view of wire harness connector (to Front Airbag Sensor RH)

NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK
▼

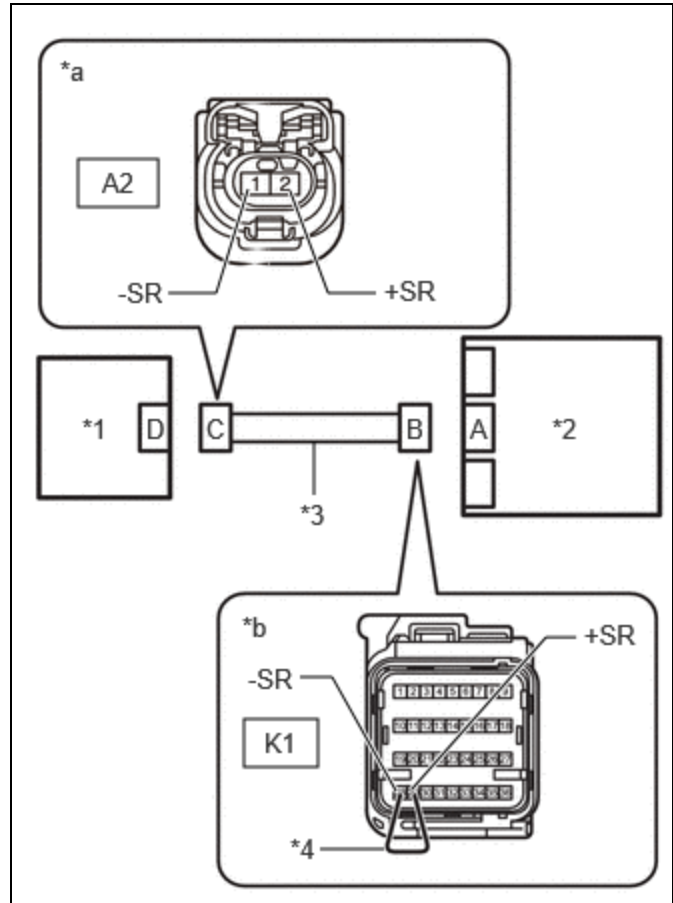
4. CHECK HARNESS AND CONNECTOR (CHECK FOR OPEN IN THE CIRCUIT)

Pre-procedure1

(a) Using a service wire, connect terminals 29 (+SR) and 28 (-SR) of connector B.

NOTICE:

Do not forcibly insert the service wire into the terminals of the connector when connecting a service wire.



*1	Front Airbag Sensor RH
*2	Airbag ECU Assembly
*3	Wire Harness
*4	Service Wire
*a	Front view of wire harness connector (to Front Airbag Sensor RH)
*b	Front view of wire harness connector (to Airbag ECU Assembly)

Procedure1

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

Standard Resistance:



[Click Location & Routing\(A2\)](#)

[Click Connector\(A2\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A2-2 (+SR) - A2-1 (-SR)	Always	Below 1 Ω	Ω

Post-procedure1

(c) Disconnect the service wire from connector B.

NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



5. CHECK HARNESS AND CONNECTOR (CHECK FOR SHORT TO GROUND IN THE CIRCUIT)

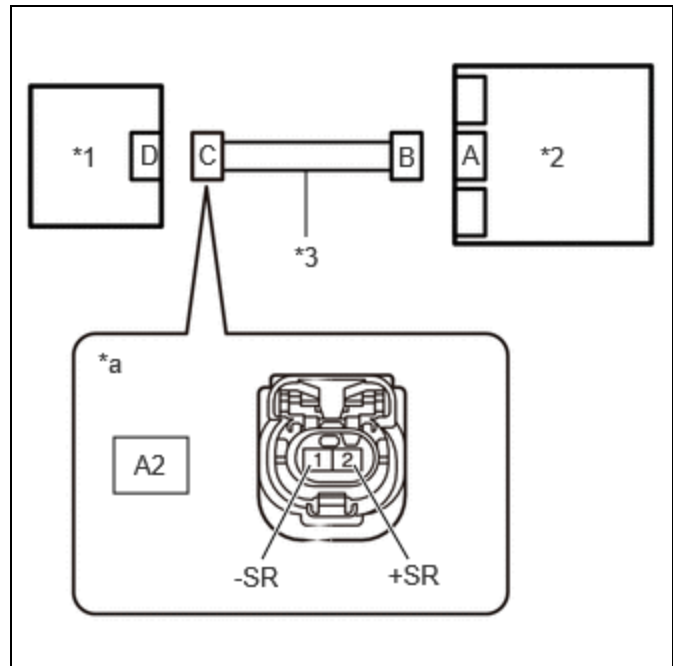
(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(A2\)](#)

[Click Connector\(A2\)](#)



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A2-2 (+SR) - Body ground	Always	1 MΩ or higher	MΩ
A2-1 (-SR) - Body ground	Always	1 MΩ or higher	MΩ

*1	Front Airbag Sensor RH
*2	Airbag ECU Assembly
*3	Wire Harness
*a	Front view of wire harness connector (to Front Airbag Sensor RH)

NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



6. CHECK HARNESS AND CONNECTOR (CHECK FOR SHORT TO +B IN THE CIRCUIT)

Pre-procedure1

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

(b) Turn the ignition switch to ON.

Procedure1

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

Standard Voltage:



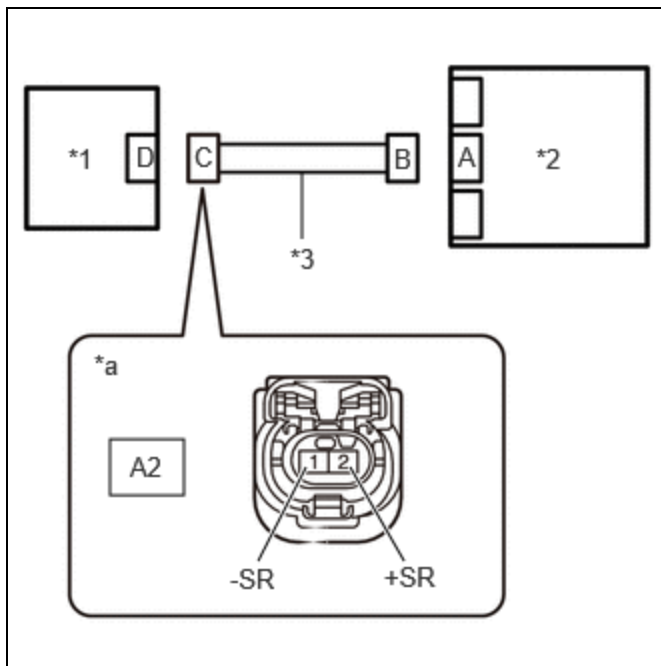
[Click Location & Routing\(A2\).](#)

[Click Connector\(A2\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A2-2 (+SR) - Body ground	Ignition switch ON	Below 1 V	V
A2-1 (-SR) - Body ground	Ignition switch ON	Below 1 V	V

Result:

PROCEED TO
OK
NG



*1	Front Airbag Sensor RH
*2	Airbag ECU Assembly
*3	Wire Harness
*a	Front view of wire harness connector (to Front Airbag Sensor RH)

Post-procedure1

(d) Turn the ignition switch off.

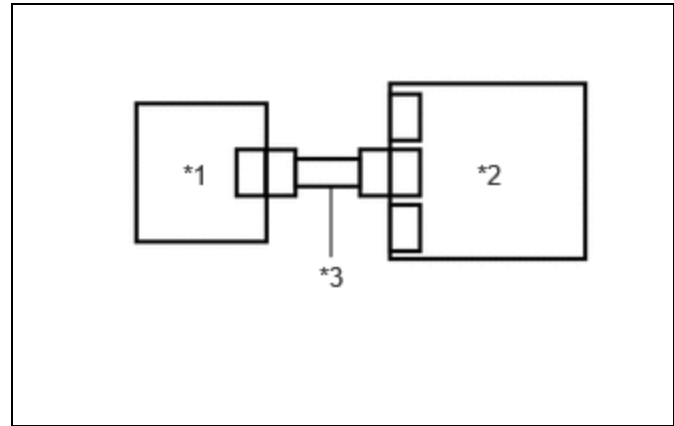
(e) Disconnect the cable from the negative (-) auxiliary battery terminal, and wait for at least 60 seconds.

NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK
▼

7.	CLEAR DTC
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Pre-procedure1



(a) Connect the airbag ECU assembly connector.

*1	Front Airbag Sensor LH
*2	Airbag ECU Assembly
*3	Wire Harness

(b) Interchange the front airbag sensor RH with LH and connect the connectors to them.

(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



8. CHECK FRONT AIRBAG SENSOR RH

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
B009587 is output	A
B009087 is output	B
B009087 and B009587 are not output	C

HINT:

Codes other than DTCs B009087 and B009587 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) Return the front airbag sensor LH and RH to their original positions and connect the connectors to them.

A ► REPLACE AIRBAG ECU ASSEMBLY [INFO](#)

B ► REPLACE FRONT AIRBAG SENSOR RH [INFO](#)

C ► USE SIMULATION METHOD TO CHECK

