

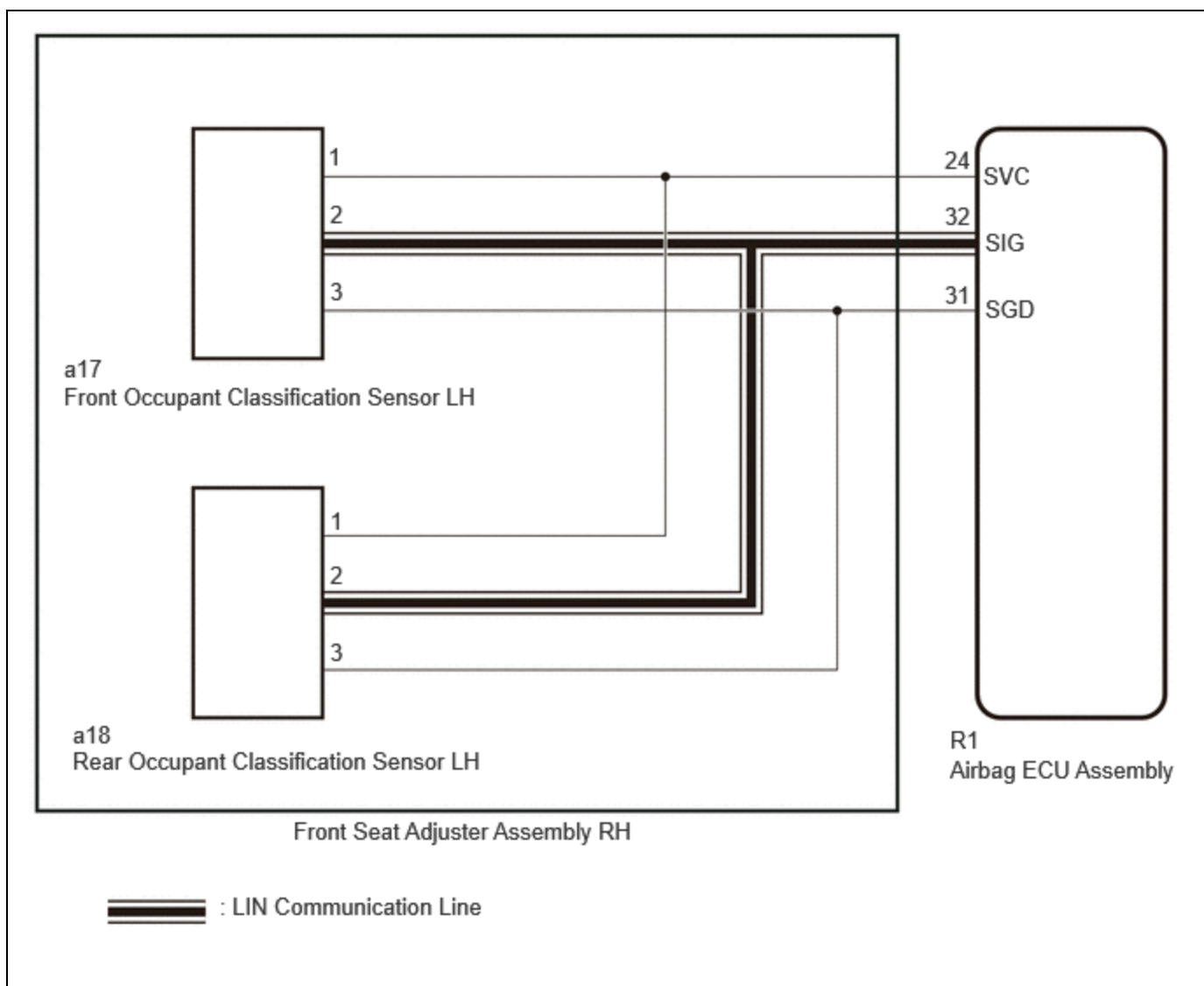
Last Modified: 12-04-2024	6.11:8.1.0	Doc ID: RM100000028UZ7
Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: LIN Communication Circuit; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

LIN Communication Circuit

DESCRIPTION

ERROR CODE	DETECTION ITEM	DETECTION CONDITION	TROUBLE AREA
17	FI LIN Communication Lost	When a communication malfunction with the load sensor is detected	<ul style="list-style-type: none"> • Harness or connector • Front seat adjuster assembly RH (front occupant classification sensor LH) • Airbag ECU assembly
18	RI LIN Communication Lost	When a communication malfunction with the load sensor is detected	<ul style="list-style-type: none"> • Harness or connector • Front seat adjuster assembly RH (rear occupant classification sensor LH) • Airbag ECU assembly

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 or front seat adjuster assembly RH, refer to work procedure.

Click here [INFO](#)

HINT:

- If it is difficult to perform troubleshooting (wire harness inspection), remove the front passenger seat installation bolts to see under the seat cushion.
- In the above case, lift and hold the seat so that it does not fall down. Hold the seat only as necessary because holding the seat for a long period of time may cause seat rail deformation.

PROCEDURE

1. CHECK ERROR CODE

(a) Check the Error Code.

RESULT	PROCEED TO
Error code 17 is output	A
Error code 18 is output	B
Error code 17 and 18 are output	C

B ► GO TO STEP 7

C ► GO TO STEP 12

A

**2. CHECK CONNECTION OF CONNECTORS**

- (a) Turn the ignition switch off.
- (b) Disconnect the cable from the negative (-) auxiliary battery terminal, and wait for at least 60 seconds.
- (c) Check that the connectors are properly connected to the airbag ECU assembly and front seat adjuster assembly RH (front occupant classification sensor LH).

OK:

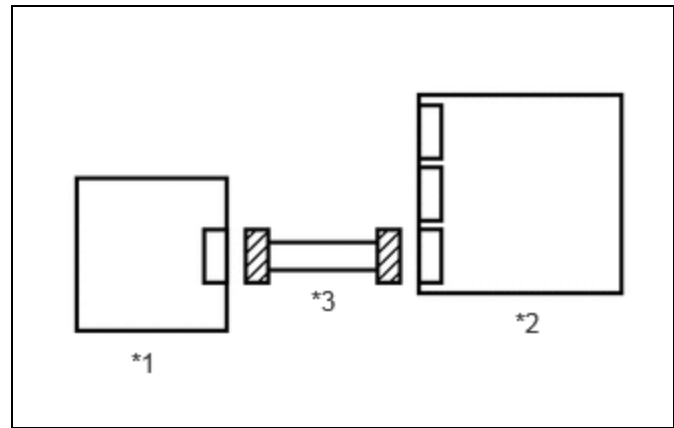
The connectors are properly connected.

NG ► CONNECT CONNECTORS PROPERLY

OK

**3. CHECK CONNECTORS**

- (a) Disconnect the airbag ECU assembly connector.



*1	Front Seat Adjuster Assembly RH (Front Occupant Classification Sensor LH)
*2	Airbag ECU Assembly
*3	Wire Harness

(b) Disconnect the front seat adjuster assembly RH (front occupant classification sensor LH) connector.

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

OK:

The terminals are not deformed or damaged.

NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



4.	CHECK HARNESS AND CONNECTOR (AIRBAG ECU ASSEMBLY - FRONT SEAT ADJUSTER ASSEMBLY RH)
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(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

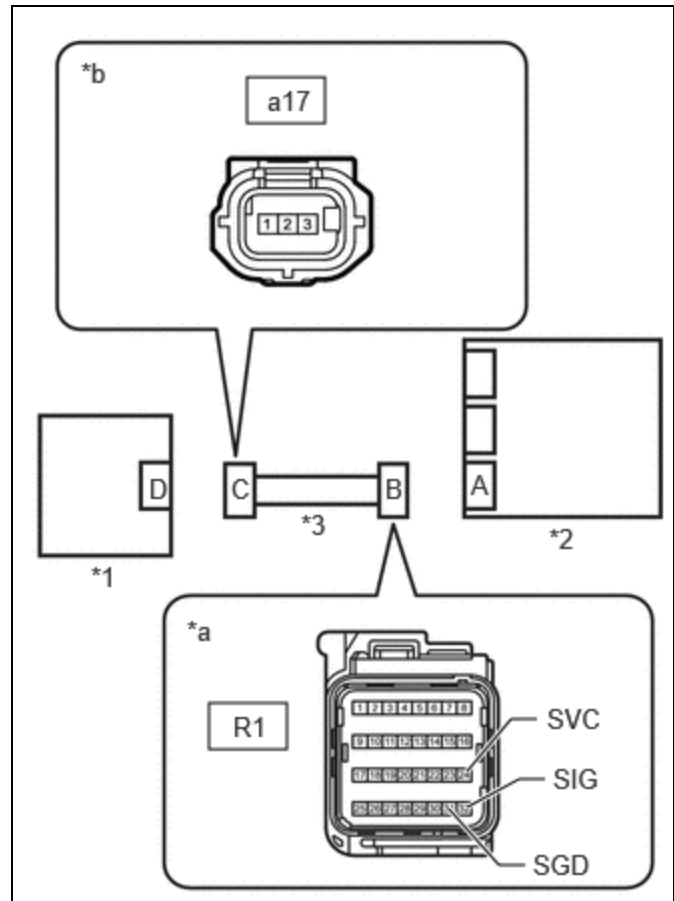


[Click Location & Routing\(R1,a17\).](#)

[Click Connector\(R1\).](#)

[Click Connector\(a17\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R1-24 (SVC) - a17-1	Always	Below 1 Ω
R1-32 (SIG) - a17-2	Always	Below 1 Ω
R1-31 (SGD) - a17-3	Always	Below 1 Ω



*1	Front Seat Adjuster Assembly RH
*2	Airbag ECU Assembly
*3	Wire Harness
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Front Seat Adjuster Assembly RH (Front Occupant Classification Sensor LH))

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



5. REPLACE FRONT SEAT ADJUSTER ASSEMBLY RH

- (a) Connect the airbag ECU assembly connector.
- (b) Replace the front seat adjuster assembly RH with a new one.

Click here [INFO](#)

NEXT



6. PERFORM ZERO POINT CALIBRATION

(a) Using the GTS, perform "Occupant Detection Sensor Zero Point Calibration".

Click here [INFO](#)

NEXT **END**

7. CHECK CONNECTION OF CONNECTORS

- Turn the ignition switch off.
- Disconnect the cable from the negative (-) auxiliary battery terminal, and wait for at least 60 seconds.
- Check that the connectors are properly connected to the airbag ECU assembly and front seat adjuster assembly RH (rear occupant classification sensor LH).

OK:

The connectors are properly connected.

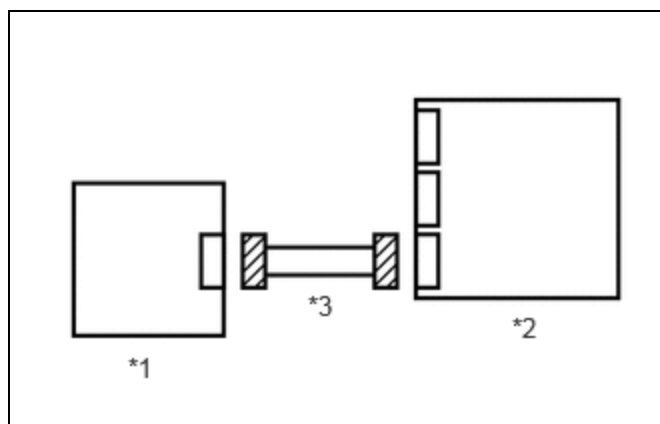
NG **CONNECT CONNECTORS PROPERLY**

OK



8. CHECK CONNECTORS

(a) Disconnect the airbag ECU assembly connector.



*1	Front Seat Adjuster Assembly RH (Rear Occupant Classification Sensor LH)
*2	Airbag ECU Assembly
*3	Wire Harness

(b) Disconnect the front seat adjuster assembly RH (rear occupant classification sensor LH) connector.

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

OK:

The terminals are not deformed or damaged.

NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



9.	CHECK HARNESS AND CONNECTOR (AIRBAG ECU ASSEMBLY - FRONT SEAT ADJUSTER ASSEMBLY RH)
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(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

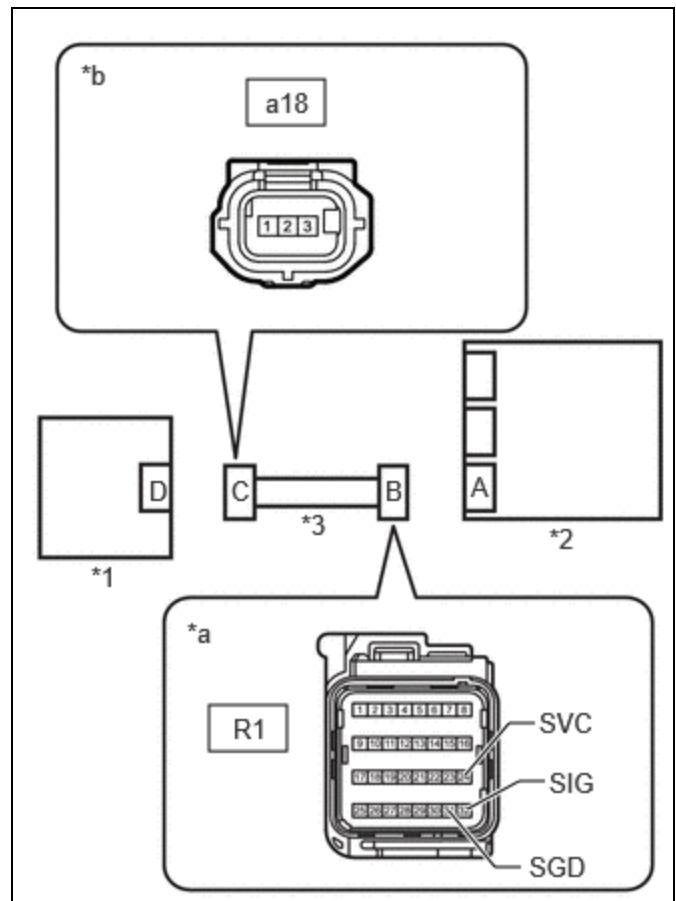


[Click Location & Routing\(R1,a18\).](#)

[Click Connector\(R1\).](#)

[Click Connector\(a18\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R1-24 (SVC) - a18-1	Always	Below 1 Ω
R1-32 (SIG) - a18-2	Always	Below 1 Ω
R1-31 (SGD) - a18-3	Always	Below 1 Ω



*1	Front Seat Adjuster Assembly RH
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*2	Airbag ECU Assembly
*3	Wire Harness
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Front Seat Adjuster Assembly RH (Rear Occupant Classification Sensor LH))

NG  **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



10.	REPLACE FRONT SEAT ADJUSTER ASSEMBLY RH
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- (a) Connect the airbag ECU assembly connector.
- (b) Replace the front seat adjuster assembly RH with a new one.

Click here [INFO](#)

NEXT



11.	PERFORM ZERO POINT CALIBRATION
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- (a) Using the GTS, perform "Occupant Detection Sensor Zero Point Calibration".

Click here [INFO](#)

NEXT  **END**

12.	CHECK CONNECTION OF CONNECTORS
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- (a) Turn the ignition switch off.
- (b) Disconnect the cable from the negative (-) auxiliary battery terminal, and wait for at least 60 seconds.
- (c) Check that the connectors are properly connected to the airbag ECU assembly and front seat adjuster assembly RH.

OK:

The connectors are properly connected.

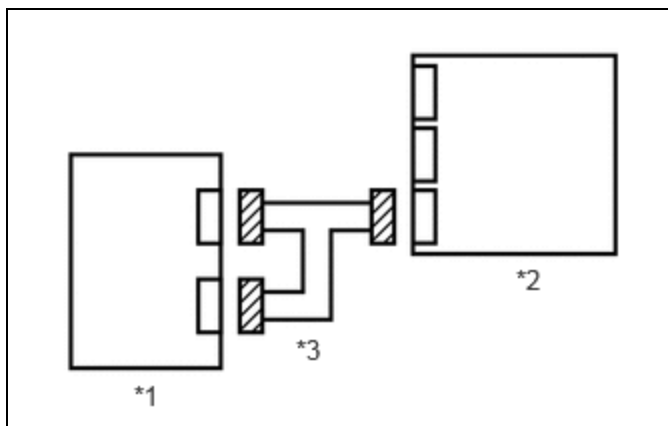
NG  **CONNECT CONNECTORS PROPERLY**

OK



13.	CHECK CONNECTORS
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(a) Disconnect the airbag ECU assembly connector.



*1	Front Seat Adjuster Assembly RH
*2	Airbag ECU Assembly
*3	Wire Harness

(b) Disconnect the front seat adjuster assembly RH connector.

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

OK:

The terminals are not deformed or damaged.

NG  **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



14.	CHECK HARNESS AND CONNECTOR (AIRBAG ECU ASSEMBLY - FRONT SEAT ADJUSTER ASSEMBLY RH)
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(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

EWD INFO

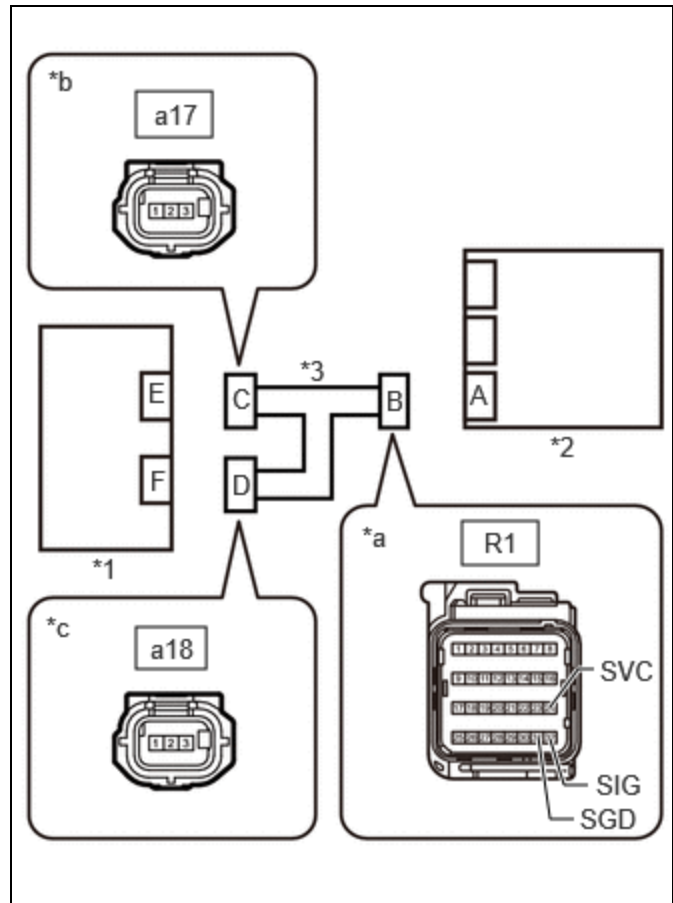
[Click Location & Routing\(R1,a17,a18\).](#)

[Click Connector\(R1\).](#)

[Click Connector\(a17\).](#)

[Click Connector\(a18\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R1-24 (SVC) - a17-1	Always	Below 1 Ω
R1-24 (SVC) - a18-1	Always	Below 1 Ω
R1-32 (SIG) - a17-2	Always	Below 1 Ω
R1-32 (SIG) - a18-2	Always	Below 1 Ω
R1-31 (SGD) - a17-3	Always	Below 1 Ω
R1-31 (SGD) - a18-3	Always	Below 1 Ω



*1	Front Seat Adjuster Assembly RH
*2	Airbag ECU Assembly
*3	Wire Harness
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Front Seat Adjuster Assembly RH (Front Occupant Classification Sensor LH))
*c	Front view of wire harness connector (to Front Seat Adjuster Assembly RH (Rear Occupant Classification Sensor LH))

NG **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



15.	CHECK HARNESS AND CONNECTOR (AIRBAG ECU ASSEMBLY - FRONT SEAT ADJUSTER ASSEMBLY RH)
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(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



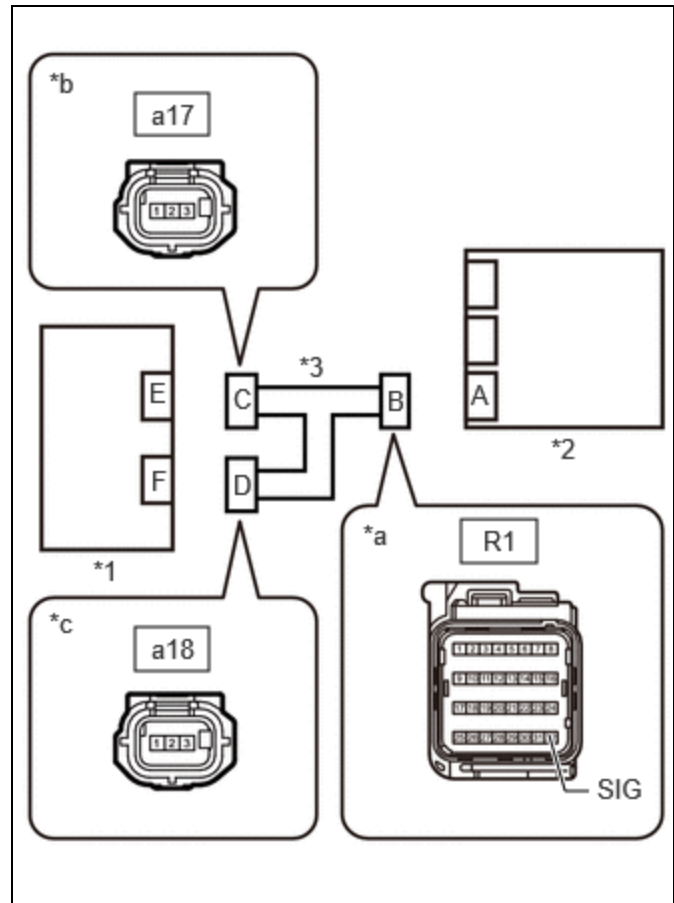
[Click Location & Routing\(R1,a17,a18\)](#)

[Click Connector\(R1\)](#)

[Click Connector\(a17\)](#)

[Click Connector\(a18\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R1-32 (SIG) - Other terminals and body ground	Always	10 kΩ or higher
a17-2 - Other terminals and body ground	Always	10 kΩ or higher
a18-2 - Other terminals and body ground	Always	10 kΩ or higher



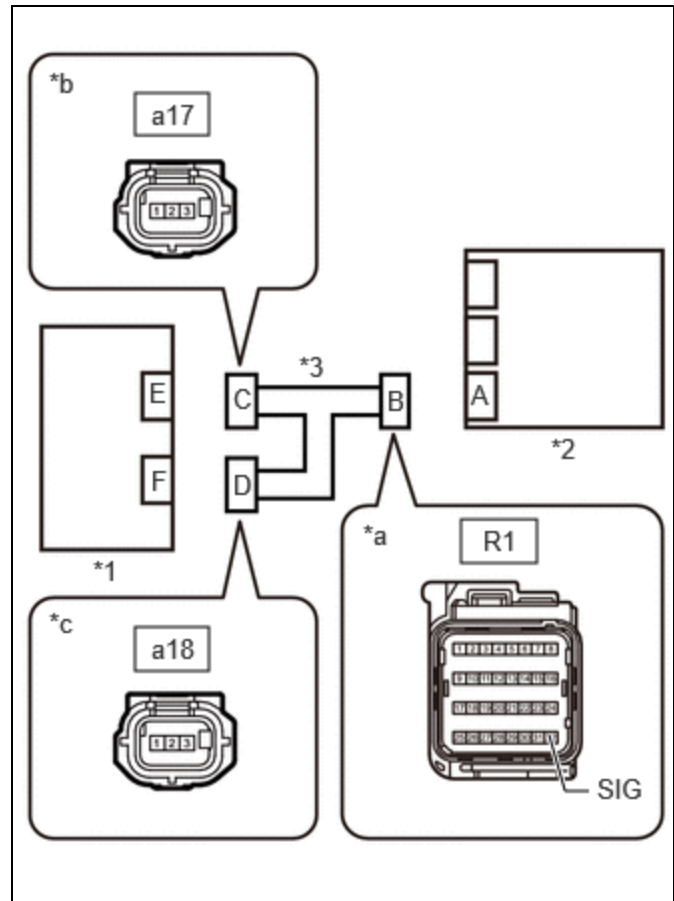
*1	Front Seat Adjuster Assembly RH
*2	Airbag ECU Assembly
*3	Wire Harness
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Front Seat Adjuster Assembly RH (Front Occupant Classification Sensor LH))
*c	Front view of wire harness connector (to Front Seat Adjuster Assembly RH (Rear Occupant Classification Sensor LH))

NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



16.	CHECK HARNESS AND CONNECTOR (AIRBAG ECU ASSEMBLY - FRONT SEAT ADJUSTER ASSEMBLY RH)
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(a) Connect the cable to the negative (-) auxiliary battery terminal, and wait for at least 2 seconds.

*1	Front Seat Adjuster Assembly RH
*2	Airbag ECU Assembly
*3	Wire Harness
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Front Seat Adjuster Assembly RH (Front Occupant Classification Sensor LH))
*c	Front view of wire harness connector (to Front Seat Adjuster Assembly RH (Rear Occupant Classification Sensor LH))

(b) Turn the ignition switch to ON.

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

Standard Voltage:



[Click Location & Routing\(R1,a17,a18\)](#)

[Click Connector\(R1\)](#)

[Click Connector\(a17\)](#)

[Click Connector\(a18\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R1-32 (SIG) - Body ground	Ignition switch ON	Below 1 V
a17-2 - Body ground	Ignition switch ON	Below 1 V
a18-2 - Body ground	Ignition switch ON	Below 1 V

NG  **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



17. REPLACE AIRBAG ECU ASSEMBLY

- (a) Connect the front seat adjuster assembly RH connector.
- (b) Replace the airbag ECU assembly with a new one.

Click here 

NEXT



18. PERFORM ZERO POINT CALIBRATION

- (a) Using the GTS, perform "Occupant Detection Sensor Zero Point Calibration".

Click here 

NEXT  **END**

