Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM00000589F000X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B16F1: Passenger Side Belt Warning Indicator Circuit (2013 FR-S)		

DTC	**B16F1**	**Passenger Side Belt Warning Indicator Circuit**

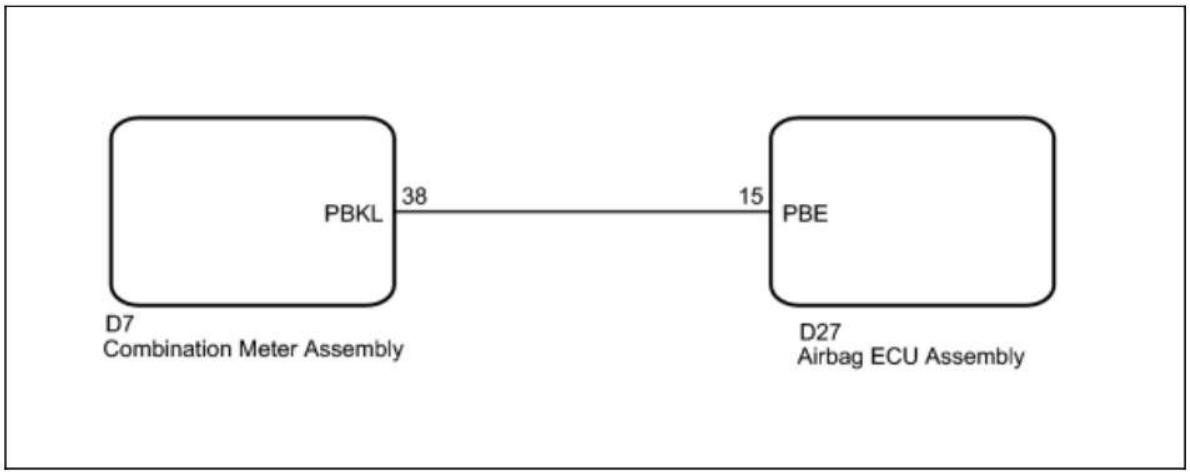
DESCRIPTION

The seat belt buckle switch RH signal circuit consists of the airbag ECU assembly and combination meter assembly.

DTC B16F1 is stored when a malfunction is detected for the seat belt buckle switch RH signal circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B16F1	• The airbag ECU assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the seat belt buckle switch RH signal circuit. • Combination meter assembly malfunction • Airbag ECU assembly malfunction	• Instrument panel wire • Combination meter assembly • Airbag ECU assembly

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

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1.	CHECK CONNECTORS

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the airbag ECU assembly and combination meter assembly.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the airbag ECU assembly and combination meter assembly.

(e) Check that the terminals of connectors are not damaged.

OK:

The connectors are not deformed or damaged.

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▼

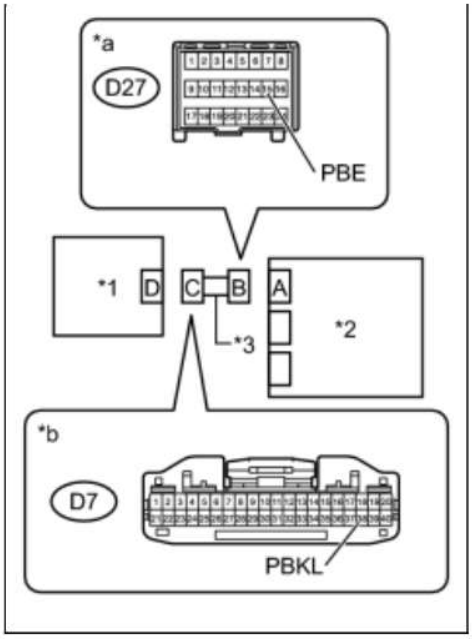
2.	CHECK INSTRUMENT PANEL WIRE (OPEN)

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D27-15 (PBE) - D7-38 (PBKL)	Always	Below 1 Ω

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Text in Illustration

*1	Combination Meter Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Combination Meter Assembly)

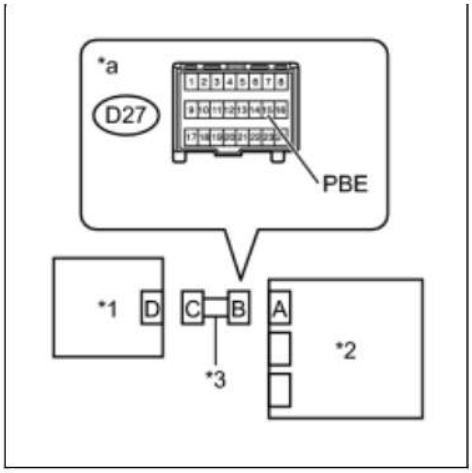
NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK
▼

3.	**CHECK INSTRUMENT PANEL WIRE (SHORT TO B+)**

(a) Connect the cable to the negative (-) battery terminal.

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(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D27-15 (PBE) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

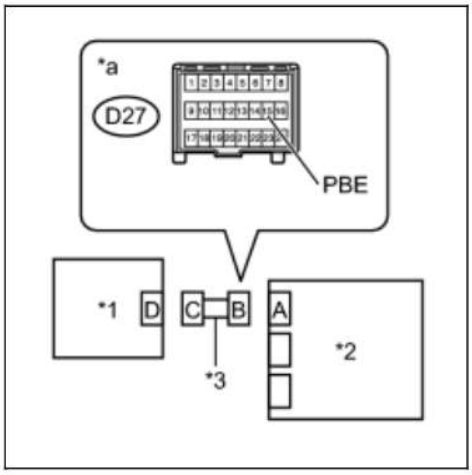
*1	Combination Meter Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▼

4.	**CHECK INSTRUMENT PANEL WIRE (SHORT TO GROUND)**

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D27-15 (PBE) - Body ground	Always	1 MΩ or higher

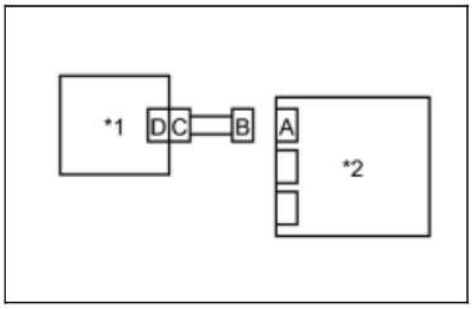
Text in Illustration

*1	Combination Meter Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▼

5.	**CHECK PASSENGER SEAT BELT WARNING LIGHT CONDITION**



(a) Connect the connectors to the combination meter assembly.

(b) Connect the cable to the negative (-) battery terminal.

(c) Check the passenger seat belt warning light operation after the ignition switch is turned to

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ON.

OK:

Blinks for 6 seconds and then goes off

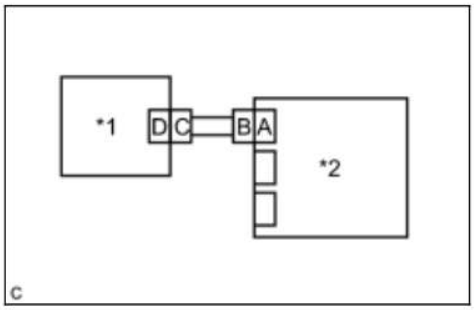
Text in Illustration

*1	Combination Meter Assembly
*2	Airbag ECU Assembly

NG ▶ **REPLACE COMBINATION METER ASSEMBLY**

OK ▼

6.	**CHECK DTC**



(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Connect the connector to the airbag ECU assembly.

(d) Connect the cable to the negative (-) battery terminal.

(e) Clear the DTCs stored in memory INFO .

(f) Turn the ignition switch off.

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

(h) Check for DTCs INFO .

OK:

DTC B16F1 is not output.

HINT:

Codes other than DTC B16F1 may be output at this time, but they are not related to this check.

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Text in Illustration

*1	Combination Meter Assembly
*2	Airbag ECU Assembly

NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000432J031X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B161A: Lost Communication with Front Satellite Sensor Bus (2013 FR-S)		

DTC	**B161A**	**Lost Communication with Front Satellite Sensor Bus**

DESCRIPTION

The front collision sensor circuit (front airbag sensor RH circuit and front airbag sensor LH circuit) is composed of the airbag ECU assembly, front airbag sensor RH and front airbag sensor LH.

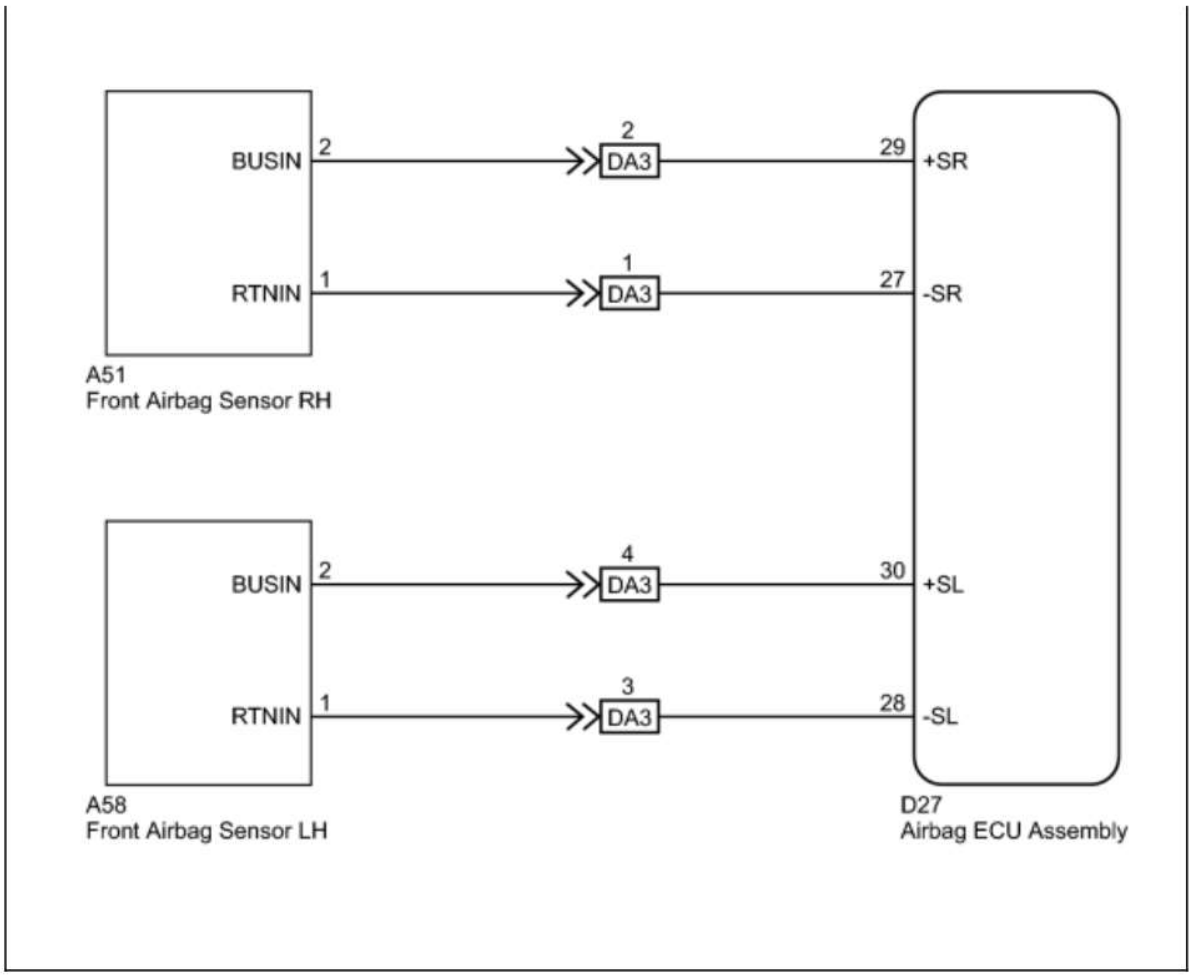
The front airbag sensor RH and front airbag sensor LH detect impacts to the vehicle and send signals to the airbag ECU assembly to determine if the airbag should be deployed.

DTC B161A is stored when a malfunction is detected in the front collision sensor circuit (front airbag sensor RH circuit and front airbag sensor LH circuit).

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B161A	• The airbag ECU assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the front collision sensor circuit (front airbag sensor RH circuit and front airbag sensor LH circuit). • Front airbag sensor RH malfunction • Front airbag sensor LH malfunction • Airbag ECU assembly malfunction	• Instrument panel wire • Engine room main wire • Front airbag sensor RH • Front airbag sensor LH • Airbag ECU assembly

WIRING DIAGRAM

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INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK DTC**

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

(b) Turn the ignition switch off.

HINT:

If a communication error occurs, DTCs for both the LH and RH sides will be stored simultaneously. To identify the malfunctioning area, turn the ignition switch off and then to ON again.

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

(d) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTCs B1613 and B1618 are not output.	A
DTC B1613 is output.	B

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DTC B1618 is output.	C

HINT:

- DTCs indicating communication errors will be changed to DTCs indicating errors in initialization by turning the ignition switch off and then to ON again.
- Codes other than DTCs B1613 and B1618 may be output at this time, but they are not related to this check.

B ▶ **GO TO DTC B1613**

C ▶ **GO TO DTC B1618**

A

2.	**CHECK DTC**

(a) Clear the DTCs stored in memory INFO .

(b) Turn the ignition switch off.

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

(d) Check for DTCs INFO .

OK:
DTC B161A is not output.

HINT:

Codes other than DTC B161A may be output at this time, but they are not related to this check.

NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000YTI0EJX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1000: Airbag ECU Assembly Malfunction (2013 FR-S)		

DTC	**B1000**	**Airbag ECU Assembly Malfunction**

DESCRIPTION

The airbag ECU assembly consists of the deceleration sensor, drive circuit, diagnosis circuit, ignition control, etc.

If the airbag ECU assembly receives signals from the deceleration sensor, it determines whether the airbag squib and pretensioner squib should be activated.

DTC B1000 is stored when a malfunction is detected in the airbag ECU assembly.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1000	Airbag ECU assembly malfunction	Airbag ECU assembly

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK DTC**

(a) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1000 is output	A
DTC B1000 and other DTCs are output	B

NOTICE:

If only DTC B1000 is output, do not clear the DTCs, replace the airbag ECU assembly.

HINT:

If any DTCs other than DTC B1000 are also output, troubleshoot those DTCs first.

B ▶ GO TO DIAGNOSTIC TROUBLE CODE CHART

A ▶ REPLACE AIRBAG ECU ASSEMBLY

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000035ZW040X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1610,B16F2: Front Airbag Sensor RH Malfunction (2013 FR-S)		

DTC	**B1610**	**Front Airbag Sensor RH Malfunction**

DTC	**B16F2**	**Front Airbag Sensor RH Mismatch**

DESCRIPTION

The front airbag sensor RH circuit consists of the airbag ECU assembly and front airbag sensor RH.

The front airbag sensor RH detects impacts to the vehicle and sends signals to the airbag ECU assembly to determine if the airbag should be deployed.

These DTCs are stored when a malfunction is detected in the front airbag sensor RH.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1610	• Front airbag sensor RH malfunction • Airbag ECU assembly malfunction	• Front airbag sensor RH • Airbag ECU assembly
B16F2	• Improper installation of front airbag sensor RH • Airbag ECU assembly malfunction	

WIRING DIAGRAM

Refer to DTCs B1612 and B1613 INFO .

INSPECTION PROCEDURE

NOTICE:

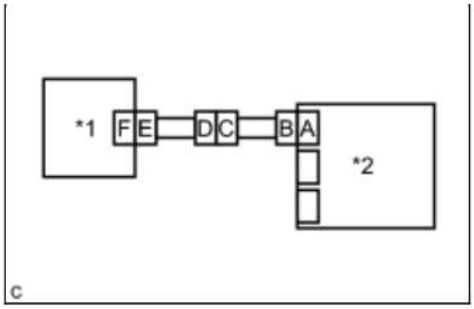
After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK FRONT AIRBAG SENSOR RH**

(a) Turn the ignition switch off.

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(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Interchange the front airbag sensor RH with LH and connect the connectors.

(d) Connect the cable to the negative (-) battery terminal.

(e) Clear the DTCs stored in memory INFO .

(f) Turn the ignition switch off.

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

(h) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTCs B1610, B1615, B16F2 and B16F3 are not output.	A
DTC B1610, B16F2 are output.	B
DTC B1615, B16F3 are output.	C

HINT:

Codes other than DTCs B1610, B1615, B16F2 and B16F3 may be output at this time, but they are not related to this check.

(i) Turn the ignition switch off.

(j) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(k) Return the front airbag sensor RH and LH to their original positions and connect the connectors.

Text in Illustration

*1	Front Airbag Sensor LH
*2	Airbag ECU Assembly

B ▶ REPLACE AIRBAG ECU ASSEMBLY

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C ▶ REPLACE FRONT AIRBAG SENSOR RH

A ▶ USE SIMULATION METHOD TO CHECK



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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000YTM08HX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1612,B1613: Front Airbag Sensor RH Lost Communication (2013 FR-S)		

DTC	**B1612**	**Front Airbag Sensor RH Lost Communication**

DTC	**B1613**	**Front Airbag Sensor RH Initialization**

DESCRIPTION

The front airbag sensor RH circuit consists of the airbag ECU assembly and front airbag sensor RH.

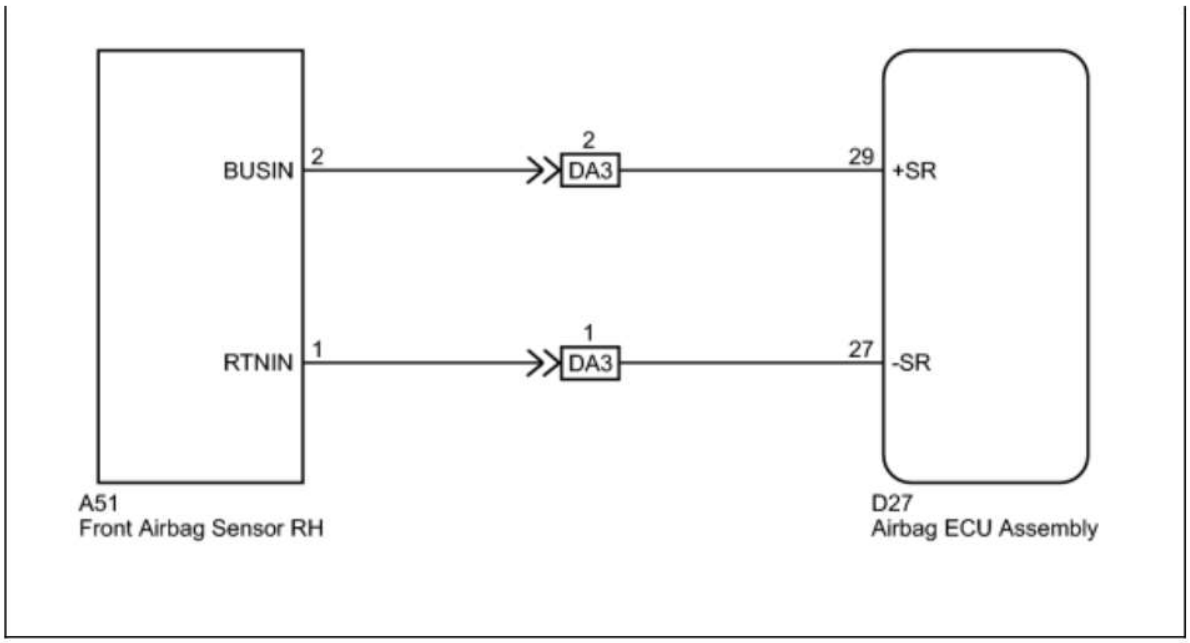
The front airbag sensor RH detects impacts to the vehicle and sends signals to the airbag ECU assembly to determine if the airbag should be deployed.

These DTCs are stored when a malfunction is detected in the front airbag sensor RH circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1612 B1613	• The airbag ECU assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the front airbag sensor RH circuit. • Front airbag sensor RH malfunction • Airbag ECU assembly malfunction	• Instrument panel wire • Engine room main wire • Front airbag sensor RH • Airbag ECU assembly

WIRING DIAGRAM

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INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the airbag ECU assembly and front airbag sensor RH. Also check that the connectors that link the engine room main wire and instrument panel wire are properly connected.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the airbag ECU assembly and front airbag sensor RH. Also disconnect the connectors that link the engine room main wire and instrument panel wire.

(e) Check that the terminals of the connectors are not damaged.

OK:

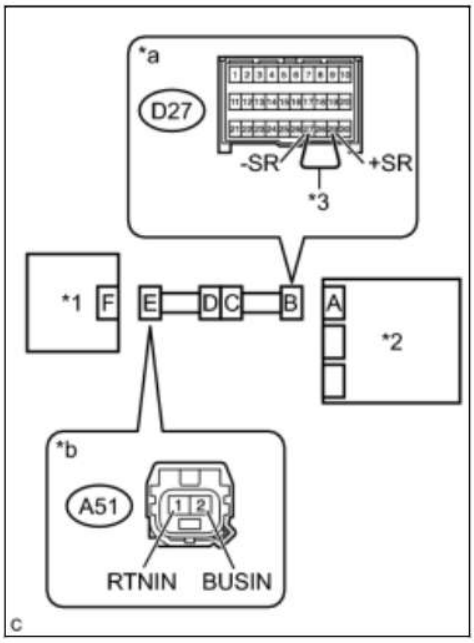
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The terminals are not deformed or damaged.

NG ▶ **REPLACE WIRE HARNESS**

OK
▼

2.	**CHECK FRONT AIRBAG SENSOR RH CIRCUIT (OPEN)**



(a) Connect the connectors that link the engine room main wire and instrument panel wire.

(b) Using a service wire, connect terminals 29 (+SR) and 27 (-SR) of connector B.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A51-2 (BUSIN) - A51-1 (RTNIN)	Always	Below 1 Ω

Text in Illustration

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

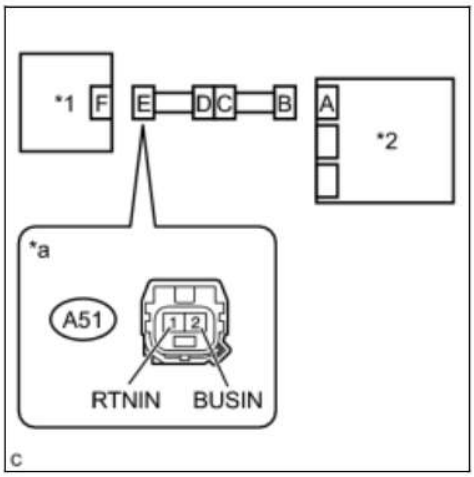
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*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Front Airbag Sensor RH)

NG ▶ **CHECK INSTRUMENT PANEL WIRE (OPEN)**

OK ▼

3.	**CHECK FRONT AIRBAG SENSOR RH CIRCUIT (SHORT)**



(a) Disconnect the service wire from connector B.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A51-2 (BUSIN) - A51-1 (RTNIN)	Always	1 MΩ or higher

Text in Illustration

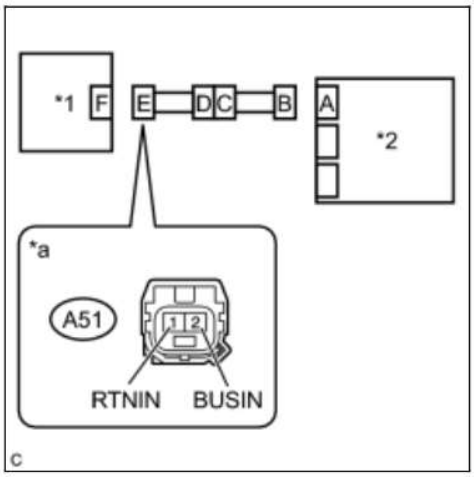
*1	Front Airbag Sensor RH
*2	Airbag ECU Assembly
*a	Front view of wire harness connector (to Front Airbag Sensor RH)

NG ▶ **CHECK INSTRUMENT PANEL WIRE (SHORT)**

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OK

4.	CHECK FRONT AIRBAG SENSOR RH CIRCUIT (SHORT TO B+)



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A51-2 (BUSIN) - Body ground	Ignition switch ON	Below 1 V
A51-1 (RTNIN) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

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

NG ▶ **CHECK INSTRUMENT PANEL WIRE (SHORT TO B+)**

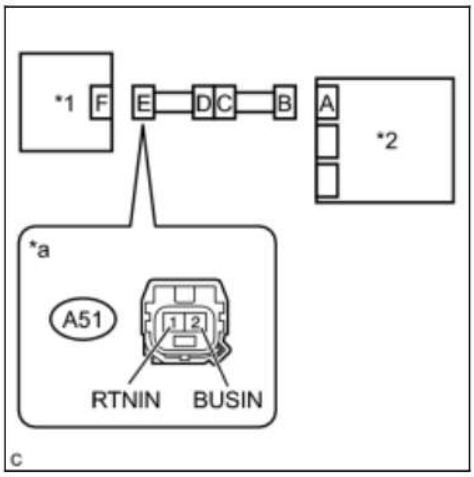
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OK

5.	**CHECK FRONT AIRBAG SENSOR RH CIRCUIT (SHORT TO GROUND)**

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

Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A51-2 (BUSIN) - Body ground	Always	1 MΩ or higher
A51-1 (RTNIN) - Body ground	Always	1 MΩ or higher

Text in Illustration

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

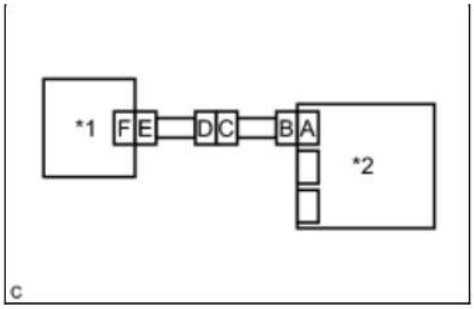
NG ▶ **CHECK INSTRUMENT PANEL WIRE (SHORT TO GROUND)**

OK

6.	**CHECK FRONT AIRBAG SENSOR RH**

(a) Connect the connector to the airbag ECU assembly.

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

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTCs B1612, B1613, B1617 and B1618 are not output.	A
DTC B1617 or B1618 is output.	B
DTC B1612 or B1613 is output.	C

HINT:

Codes other than DTCs B1612, B1613, B1617 and B1618 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Return the front airbag sensor RH and LH to their original positions and connect the connectors.

Text in Illustration

*1	Front Airbag Sensor LH
*2	Airbag ECU Assembly

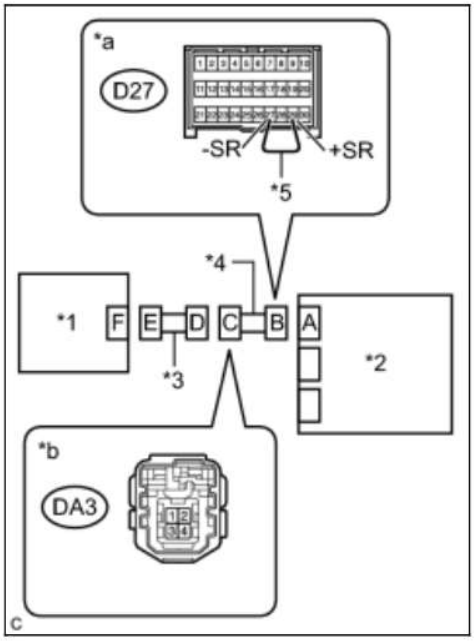
B ▶ REPLACE FRONT AIRBAG SENSOR RH

C ▶ REPLACE AIRBAG ECU ASSEMBLY

A ▶ USE SIMULATION METHOD TO CHECK

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7.	CHECK INSTRUMENT PANEL WIRE (OPEN)



(a) Disconnect the instrument panel wire connector from the engine room main wire.

HINT:

The service wire has already been inserted into connector B.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
DA3-2 - DA3-1	Always	Below 1 Ω

(c) Disconnect the service wire from connector B.

Text in Illustration

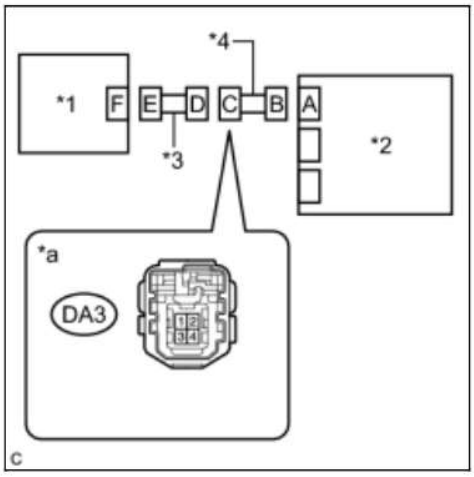
*1	Front Airbag Sensor RH
*2	Airbag ECU Assembly
*3	Engine Room Main Wire
*4	Instrument Panel Wire
*5	Service Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Engine Room Main Wire)

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

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OK ▶ REPLACE ENGINE ROOM MAIN WIRE

8.	CHECK INSTRUMENT PANEL WIRE (SHORT)



(a) Disconnect the instrument panel wire connector from the engine room main wire.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
DA3-2 - DA3-1	Always	1 MΩ or higher

Text in Illustration

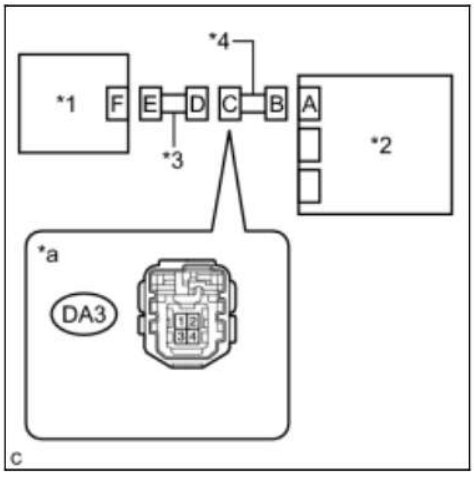
*1	Front Airbag Sensor RH
*2	Airbag ECU Assembly
*3	Engine Room Main Wire
*4	Instrument Panel Wire
*a	Front view of wire harness connector (to Engine Room Main Wire)

NG ▶ REPLACE INSTRUMENT PANEL WIRE

OK ▶ REPLACE ENGINE ROOM MAIN WIRE

9.	CHECK INSTRUMENT PANEL WIRE (SHORT TO B+)

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(a) Disconnect the instrument panel wire connector from the engine room main wire.

(b) Connect the cable to the negative (-) battery terminal.

(c) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
DA3-2 - Body ground	Ignition switch ON	Below 1 V
DA3-1 - Body ground	Ignition switch ON	Below 1 V

Text in Illustration

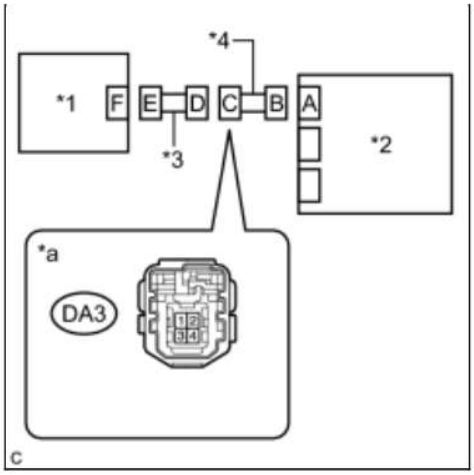
*1	Front Airbag Sensor RH
*2	Airbag ECU Assembly
*3	Engine Room Main Wire
*4	Instrument Panel Wire
*a	Front view of wire harness connector (to Engine Room Main Wire)

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▶ **REPLACE ENGINE ROOM MAIN WIRE**

10.	**CHECK INSTRUMENT PANEL WIRE (SHORT TO GROUND)**

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(a) Disconnect the instrument panel wire connector from the engine room main wire.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
DA3-2 - Body ground	Always	1 MΩ or higher
DA3-1 - Body ground	Always	1 MΩ or higher

Text in Illustration

*1	Front Airbag Sensor RH
*2	Airbag ECU Assembly
*3	Engine Room Main Wire
*4	Instrument Panel Wire
*a	Front view of wire harness connector (to Engine Room Main Wire)

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▶ **REPLACE ENGINE ROOM MAIN WIRE**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000003617040X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1615,B16F3: Front Airbag Sensor LH Malfunction (2013 FR-S)		

DTC	**B1615**	**Front Airbag Sensor LH Malfunction**

DTC	**B16F3**	**Front Airbag Sensor LH Mismatch**

DESCRIPTION

The front airbag sensor LH circuit consists of the airbag ECU assembly and front airbag sensor LH.

The front airbag sensor LH detects impacts to the vehicle and sends signals to the airbag ECU assembly to determine if the airbag should be deployed.

These DTCs are stored when a malfunction is detected in the front airbag sensor LH.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1615	• Front airbag sensor LH malfunction • Airbag ECU assembly malfunction	• Front airbag sensor LH • Airbag ECU assembly
B16F3	• Improper installation of front airbag sensor LH • Airbag ECU assembly malfunction	

WIRING DIAGRAM

Refer to DTCs B1617 and B1618 INFO .

INSPECTION PROCEDURE

NOTICE:

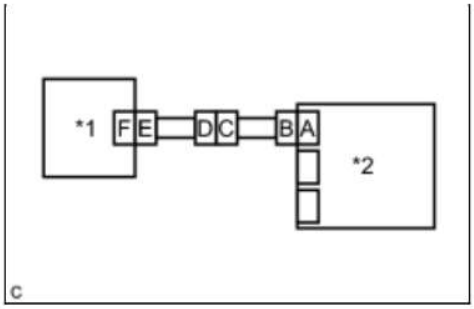
After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK FRONT AIRBAG SENSOR LH**

(a) Turn the ignition switch off.

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(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Interchange the front airbag sensor LH with RH and connect the connectors.

(d) Connect the cable to the negative (-) battery terminal.

(e) Clear the DTCs stored in memory INFO .

(f) Turn the ignition switch off.

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

(h) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTCs B1610, B1615, B16F2 and B16F3 are not output.	A
DTC B1615 and B16F3 are output.	B
DTC B1610 and B16F2 are output.	C

HINT:

Codes other than DTCs B1610, B1615, B16F2 and B16F3 may be output at this time, but they are not related to this check.

(i) Turn the ignition switch off.

(j) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(k) Return the front airbag sensor LH and RH to their original positions and connect the connectors.

Text in Illustration

*1	Front Airbag Sensor RH
*2	Airbag ECU Assembly

B ▶ REPLACE AIRBAG ECU ASSEMBLY

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C ▶ REPLACE FRONT AIRBAG SENSOR LH

A ▶ USE SIMULATION METHOD TO CHECK



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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000YTN08JX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1617,B1618: Front Airbag Sensor LH Lost Communication (2013 FR-S)		

DTC	**B1617**	**Front Airbag Sensor LH Lost Communication**

DTC	**B1618**	**Front Airbag Sensor LH Initialization**

DESCRIPTION

The front airbag sensor LH circuit consists of the airbag ECU assembly and front airbag sensor LH.

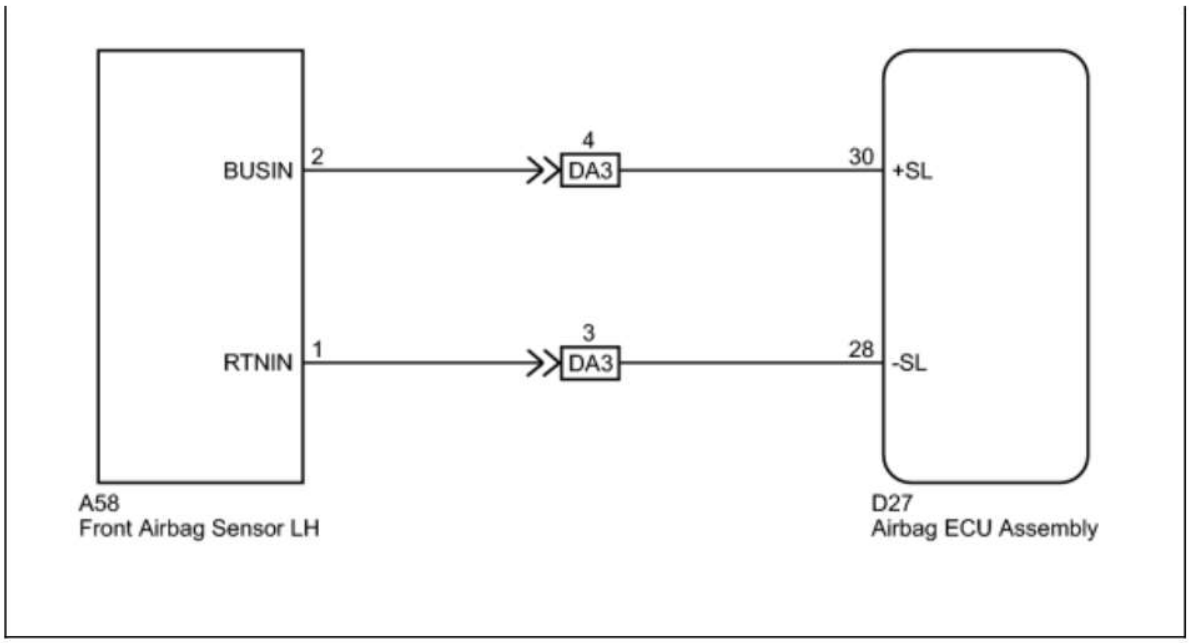
The front airbag sensor LH detects impacts to the vehicle and sends signals to the airbag ECU assembly to determine if the airbag should be deployed.

These DTCs are stored when a malfunction is detected in the front airbag sensor LH circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1617 B1618	• The airbag ECU assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the front airbag sensor LH circuit. • Front airbag sensor LH malfunction • Airbag ECU assembly malfunction	• Instrument panel wire • Engine room main wire • Front airbag sensor LH • Airbag ECU assembly

WIRING DIAGRAM

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INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the airbag ECU assembly and front airbag sensor LH. Also check that the connectors that link the engine room main wire and instrument panel wire are properly connected.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the airbag ECU assembly and front airbag sensor LH. Also disconnect the connectors that link the engine room main wire and instrument panel wire.

(e) Check that the terminals of the connectors are not damaged.

OK:

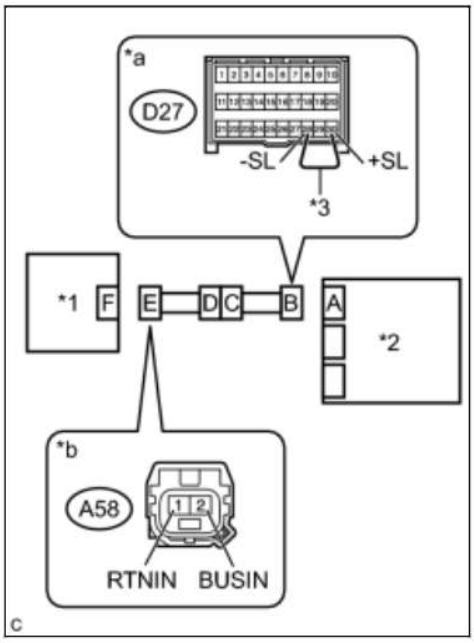
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The terminals are not deformed or damaged.

NG ▶ **REPLACE WIRE HARNESS**

OK
▼

2.	CHECK FRONT AIRBAG SENSOR LH CIRCUIT (OPEN)



(a) Connect the connectors that link the engine room main wire and instrument panel wire.

(b) Using a service wire, connect terminals 30 (+SL) and 28 (-SL) of connector B.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A58-2 (BUSIN) - A58-1 (RTNIN)	Always	Below 1 Ω

Text in Illustration

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

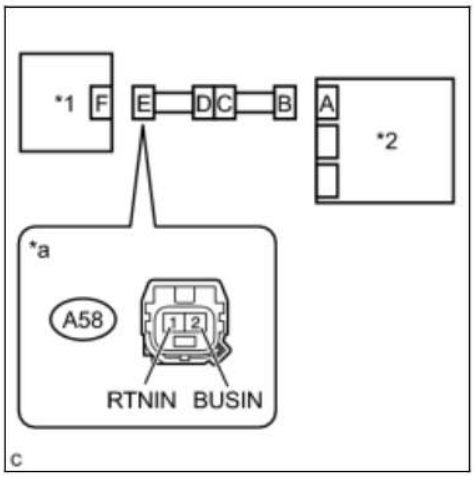
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*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Front Airbag Sensor LH)

NG ▶ **CHECK INSTRUMENT PANEL WIRE (OPEN)**

OK ▼

3.	**CHECK FRONT AIRBAG SENSOR LH CIRCUIT (SHORT)**



(a) Disconnect the service wire from connector B.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A58-2 (BUSIN) - A58-1 (RTNIN)	Always	1 MΩ or higher

Text in Illustration

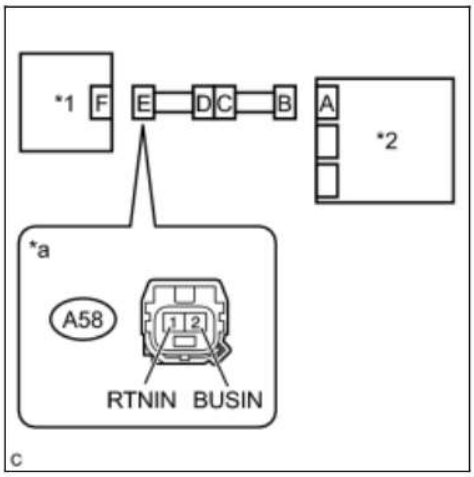
*1	Front Airbag Sensor LH
*2	Airbag ECU Assembly
*a	Front view of wire harness connector (to Front Airbag Sensor LH)

NG ▶ **CHECK INSTRUMENT PANEL WIRE (SHORT)**

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OK

4.	CHECK FRONT AIRBAG SENSOR LH CIRCUIT (SHORT TO B+)



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A58-2 (BUSIN) - Body ground	Ignition switch ON	Below 1 V
A58-1 (RTNIN) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Front Airbag Sensor LH
*2	Airbag ECU Assembly
*a	Front view of wire harness connector (to Front Airbag Sensor LH)

NG ▶ **CHECK INSTRUMENT PANEL WIRE (SHORT TO B+)**

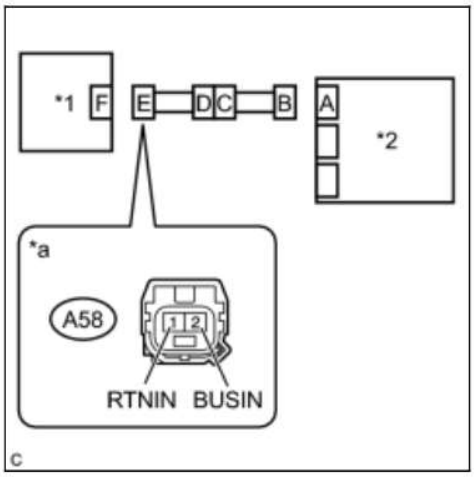
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OK

5.	**CHECK FRONT AIRBAG SENSOR LH CIRCUIT (SHORT TO GROUND)**

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

Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A58-2 (BUSIN) - Body ground	Always	1 MΩ or higher
A58-1 (RTNIN) - Body ground	Always	1 MΩ or higher

Text in Illustration

*1	Front Airbag Sensor LH
*2	Airbag ECU Assembly
*a	Front view of wire harness connector (to Front Airbag Sensor LH)

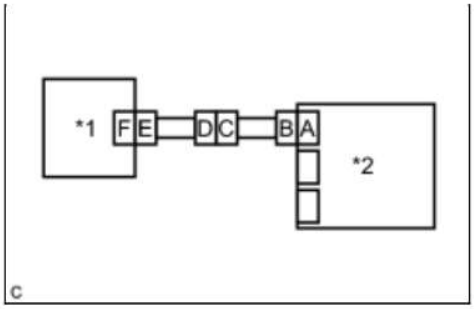
NG ▶ **CHECK INSTRUMENT PANEL WIRE (SHORT TO GROUND)**

OK

6.	**CHECK FRONT AIRBAG SENSOR LH**

(a) Connect the connector to the airbag ECU assembly.

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

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTCs B1612, B1613, B1617 and B1618 are not output.	A
DTC B1617 or B1618 is output.	B
DTC B1612 or B1613 is output.	C

HINT:

Codes other than DTCs B1612, B1613, B1617 and B1618 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Return the front airbag sensor LH and RH to their original positions and connect the connectors.

Text in Illustration

*1	Front Airbag Sensor RH
*2	Airbag ECU Assembly

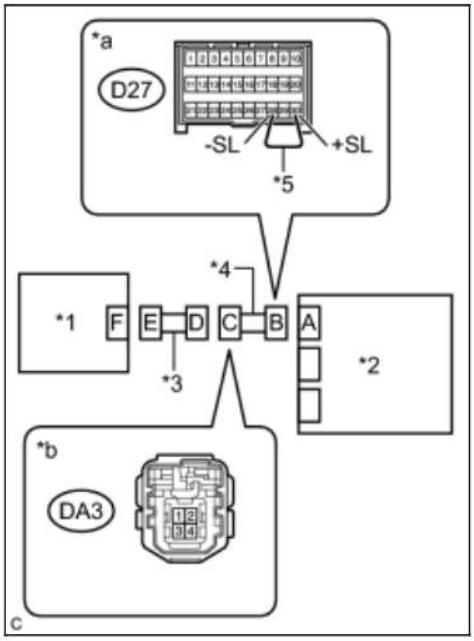
B ▶ REPLACE AIRBAG ECU ASSEMBLY

C ▶ REPLACE FRONT AIRBAG SENSOR LH

A ▶ USE SIMULATION METHOD TO CHECK

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7.	CHECK INSTRUMENT PANEL WIRE (OPEN)



(a) Disconnect the instrument panel wire connector from the engine room main wire.

HINT:

The service wire has already been inserted into connector B.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
DA3-4 - DA3-3	Always	Below 1 Ω

(c) Disconnect the service wire from connector B.

Text in Illustration

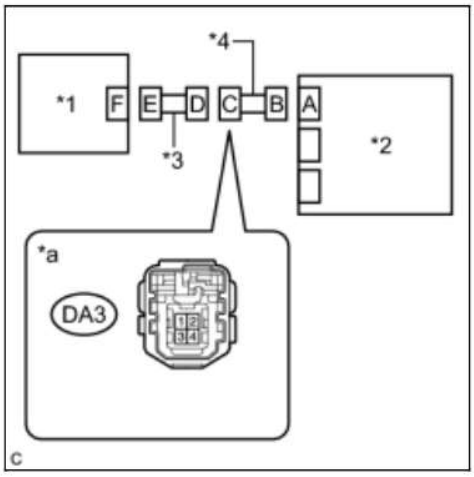
*1	Front Airbag Sensor LH
*2	Airbag ECU Assembly
*3	Engine Room Main Wire
*4	Instrument Panel Wire
*5	Service Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Engine Room Main Wire)

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

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OK ▶ REPLACE ENGINE ROOM MAIN WIRE

8.	CHECK INSTRUMENT PANEL WIRE (SHORT)



(a) Disconnect the instrument panel wire connector from the engine room main wire.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
DA3-4 - DA3-3	Always	1 MΩ or higher

Text in Illustration

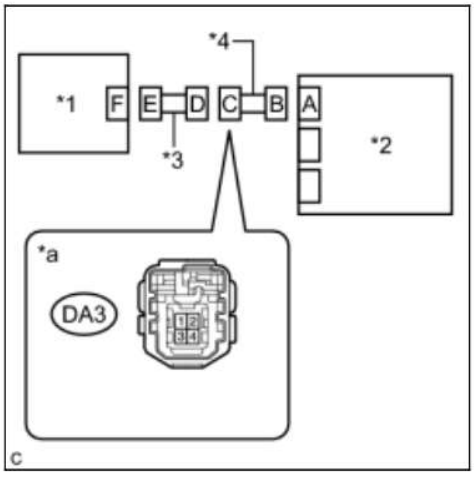
*1	Front Airbag Sensor LH
*2	Airbag ECU Assembly
*3	Engine Room Main Wire
*4	Instrument Panel Wire
*a	Front view of wire harness connector (to Engine Room Main Wire)

NG ▶ REPLACE INSTRUMENT PANEL WIRE

OK ▶ REPLACE ENGINE ROOM MAIN WIRE

9.	CHECK INSTRUMENT PANEL WIRE (SHORT TO B+)

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(a) Disconnect the instrument panel wire connector from the engine room main wire.

(b) Connect the cable to the negative (-) battery terminal.

(c) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
DA3-4 - Body ground	Ignition switch ON	Below 1 V
DA3-3 - Body ground	Ignition switch ON	Below 1 V

Text in Illustration

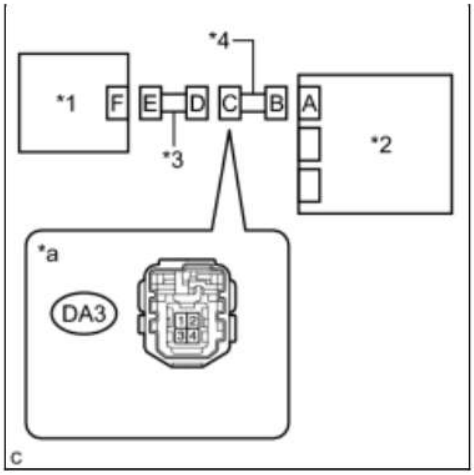
*1	Front Airbag Sensor LH
*2	Airbag ECU Assembly
*3	Engine Room Main Wire
*4	Instrument Panel Wire
*a	Front view of wire harness connector (to Engine Room Main Wire)

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▶ **REPLACE ENGINE ROOM MAIN WIRE**

10.	**CHECK INSTRUMENT PANEL WIRE (SHORT TO GROUND)**

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(a) Disconnect the instrument panel wire connector from the engine room main wire.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
DA3-4 - Body ground	Always	1 MΩ or higher
DA3-3 - Body ground	Always	1 MΩ or higher

Text in Illustration

*1	Front Airbag Sensor LH
*2	Airbag ECU Assembly
*3	Engine Room Main Wire
*4	Instrument Panel Wire
*a	Front view of wire harness connector (to Engine Room Main Wire)

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▶ **REPLACE ENGINE ROOM MAIN WIRE**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000001NZV05QX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1620,B16F4: Side Airbag Sensor RH Circuit Malfunction (2013 FR-S)		

DTC	**B1620**	**Side Airbag Sensor RH Circuit Malfunction**

DTC	**B16F4**	**Side Airbag Sensor RH Mismatch**

DESCRIPTION

The side collision sensor RH circuit (to determine deployment of the front seat airbag assembly RH, curtain shield airbag assembly RH and front seat outer belt assembly RH) is composed of the airbag ECU assembly, side airbag sensor assembly RH, side No. 2 airbag sensor assembly RH, rear airbag sensor RH and No. 2 airbag sensor assembly.

The side No. 2 airbag sensor assembly RH detects impacts to the vehicle and sends signals to the airbag ECU assembly to determine if the airbag should be deployed.

These DTCs are stored when a malfunction is detected in the side No. 2 airbag sensor assembly RH.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1620	• Side No. 2 airbag sensor assembly RH malfunction • Airbag ECU assembly malfunction	• Side No. 2 airbag sensor assembly RH • Airbag ECU assembly
B16F4	• Improper installation of side No. 2 airbag sensor assembly RH • Airbag ECU assembly malfunction	

WIRING DIAGRAM

Refer to DTCs B1622, B1623, B1632, B1633, B1642, B1692 and B1693 INFO .

INSPECTION PROCEDURE

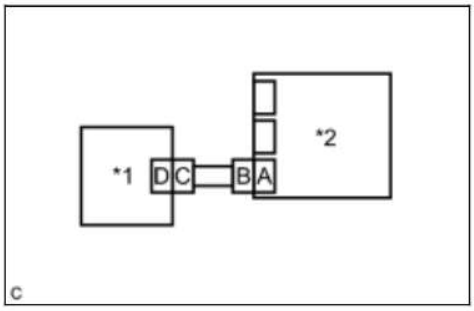
NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK SIDE NO. 2 AIRBAG SENSOR ASSEMBLY RH**

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(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Interchange the side No. 2 airbag sensor assembly RH with LH and connect the connectors.

(d) Connect the cable to the negative (-) battery terminal.

(e) Clear the DTCs stored in memory INFO .

(f) Turn the ignition switch off.

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

(h) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1620 or B16F4 is output.	A
DTC B1625 or B16F5 is output.	B
DTCs B1620, B1625, B16F4 and B16F5 are not output.	C

HINT:

Codes other than DTCs B1620,B1625,B16F4 and B16F5 may be output at this time, but they are not related to this check.

(i) Turn the ignition switch off.

(j) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(k) Return the side No. 2 airbag sensor assembly RH and LH to their original positions and connect the connectors.

Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly LH
*2	Airbag ECU Assembly

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B ▶ REPLACE SIDE NO. 2 AIRBAG SENSOR ASSEMBLY RH

C ▶ USE SIMULATION METHOD TO CHECK

A ▶ REPLACE AIRBAG ECU ASSEMBLY



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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000027E406VX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1622,B1623,B1632,B1633,B1642,B1692,B1693: Side Airbag Sensor RH Lost Communication (2013 FR-S)		

DTC	**B1622**	**Side Airbag Sensor RH Lost Communication**

DTC	**B1623**	**Side Airbag Sensor RH Initialization**

DTC	**B1632**	**Side No. 2 Airbag Sensor RH Lost Communication**

DTC	**B1633**	**Side No. 2 Airbag Sensor RH Initialization**

DTC	**B1642**	**Side Satellite Sensor Bus Lost Communication (RH)**

DTC	**B1692**	**Lost Communication with Side Airbag Sensor RH**

DTC	**B1693**	**Side Airbag Sensor RH Initialization Incomplete**

DESCRIPTION

The side collision sensor RH circuit (to determine deployment of the front seat airbag assembly RH, curtain shield airbag assembly RH and front seat outer belt assembly RH) is composed of the airbag ECU assembly, side airbag sensor assembly RH, side No. 2 airbag sensor assembly RH, rear airbag sensor RH and No. 2 airbag sensor assembly.

The side airbag sensor assembly RH, side No. 2 airbag sensor assembly RH and rear airbag sensor RH detect impacts to the vehicle and send signals to the airbag ECU assembly to determine if the airbag should be deployed.

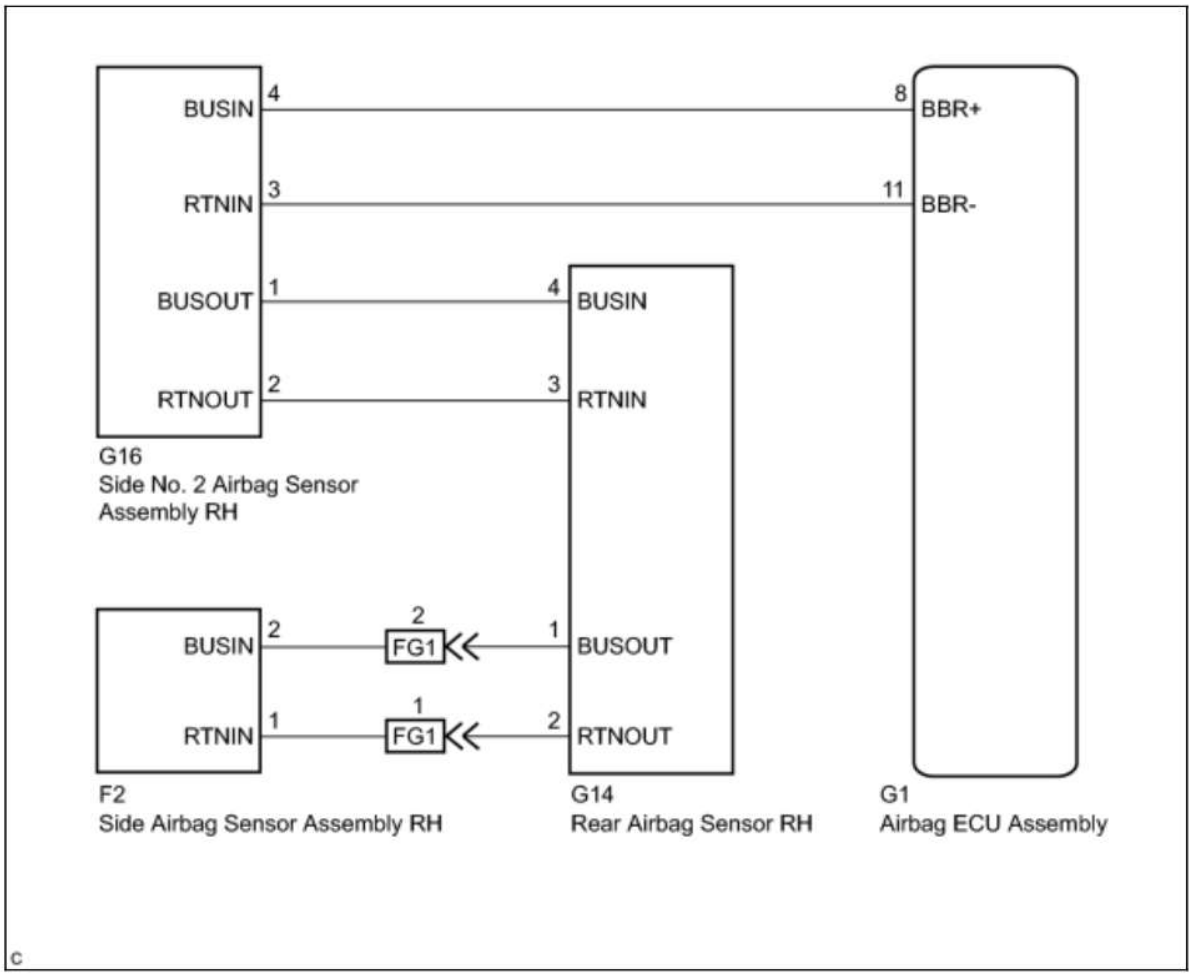
These DTCs are stored when a malfunction is detected for the side collision sensor RH circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
		• No. 2 floor wire • Front door

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B1622 B1623 B1632 B1633 B1642 B1692 B1693	• The airbag ECU assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the side collision sensor RH circuit. • Side airbag sensor assembly RH malfunction • Side No. 2 airbag sensor assembly RH malfunction • Rear airbag sensor RH malfunction • Airbag ECU assembly malfunction	wire RH • Side airbag sensor assembly RH • Side No. 2 airbag sensor assembly RH • Rear airbag sensor RH • Airbag ECU assembly

WIRING DIAGRAM



INSPECTION PROCEDURE

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NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK CURRENT DTC**

(a) Check for current DTCs INFO .

Result:

RESULT	PROCEED TO
Current DTC B1642 is output.	A
Current DTC B1623 or B1633 is output.	B
Current DTC B1692 or B1693 is output.	C
Current DTC B1622 or B1632 is output.	D
Current DTCs B1622, B1623, B1632, B1633, B1642, B1692 and B1693 are not output.	E

HINT:

- DTCs indicating communication errors will be changed to DTCs indicating errors in initialization by turning the ignition switch off and then to ON again.
- Codes other than current DTCs B1622, B1623, B1632, B1633, B1642, B1692 and B1693 may be output at this time, but they are not related to this check.

B ▶ CHECK HISTORY DTC

C ▶ CHECK CONNECTORS

D ▶ CHECK CURRENT DTC

E ▶ USE SIMULATION METHOD TO CHECK

A

▼

2.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

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(c) Check that the connectors are properly connected to the airbag ECU assembly, side airbag sensor assembly RH, side No. 2 airbag sensor assembly RH and rear airbag sensor RH. Also check that the connectors that link the No. 2 floor wire and front door wire RH are properly connected.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the airbag ECU assembly, side airbag sensor assembly RH, side No. 2 airbag sensor assembly RH and rear airbag sensor RH. Also disconnect the connectors that link the No. 2 floor wire and front door wire RH.

(e) Check that the terminals of the connectors are not damaged.

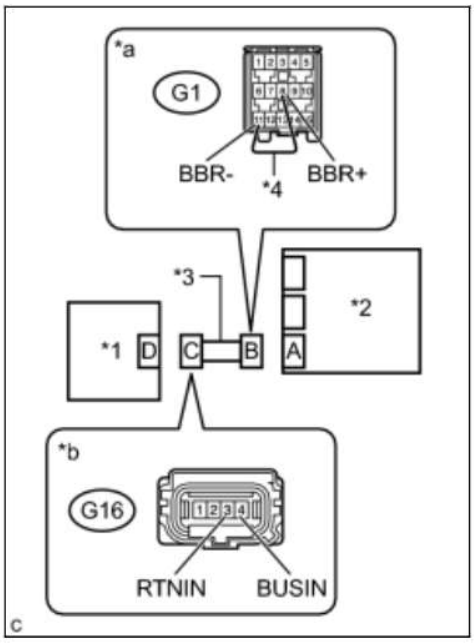
OK:

The terminals are not deformed or damaged.

NG ▶ **REPLACE WIRE HARNESS**

OK ▼

3.	**CHECK NO. 2 FLOOR WIRE (OPEN)**



(a) Using a service wire, connect terminals 8 (BBR+) and 11 (BBR-) of connector B.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-4 (BUSIN) - G16-3 (RTNIN)	Always	Below 1 Ω

(c) Disconnect the service wire from connector B.

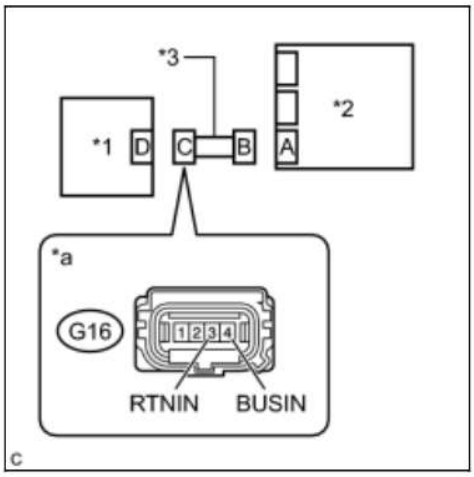
Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly RH
*2	Airbag ECU Assembly
*3	No. 2 Floor Wire
*4	Service Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

4.	**CHECK NO. 2 FLOOR WIRE (SHORT)**



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-4 (BUSIN) - G16-3 (RTNIN)	Always	1 MΩ or higher

Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly RH
*2	Airbag ECU Assembly
*3	No. 2 Floor Wire
*a	Front view of wire harness connector

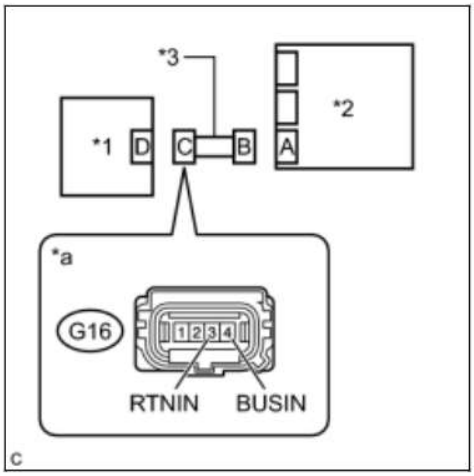
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	(to Side No. 2 Airbag Sensor Assembly RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

5.	**CHECK NO. 2 FLOOR WIRE (SHORT TO B+)**



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-4 (BUSIN) - Body ground	Ignition switch ON	Below 1 V
G16-3 (RTNIN) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly RH
*2	Airbag ECU Assembly

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*3	No. 2 Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly RH)

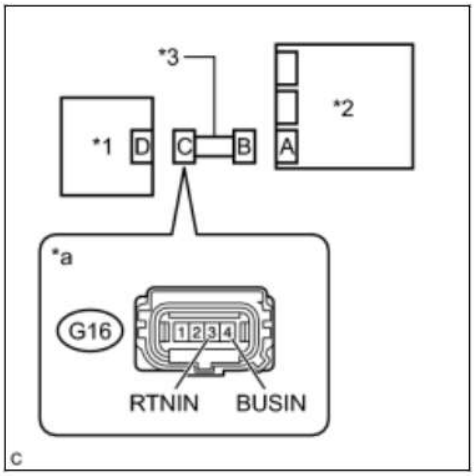
NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

6.	**CHECK NO. 2 FLOOR WIRE (SHORT TO GROUND)**

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

Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-4 (BUSIN) - Body ground	Always	1 MΩ or higher
G16-3 (RTNIN) - Body ground	Always	1 MΩ or higher

Text in Illustration

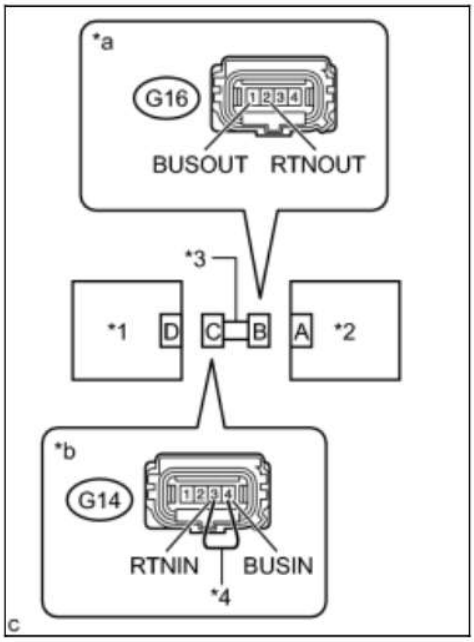
*1	Side No. 2 Airbag Sensor Assembly RH
*2	Airbag ECU Assembly
*3	No. 2 Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

7.	**CHECK NO. 2 FLOOR WIRE (OPEN)**

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(a) Using a service wire, connect terminals 3 (RTNIN) and 4 (BUSIN) of connector C.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-1 (BUSOUT) - G16-2 (RTNOUT)	Always	Below 1 Ω

(c) Disconnect the service wire from connector C.

Text in Illustration

*1	Rear Airbag Sensor RH
*2	Side No. 2 Airbag Sensor Assembly RH
*3	No. 2 Floor Wire
*4	Service Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly RH)
*b	Front view of wire harness connector (to Rear Airbag Sensor RH)

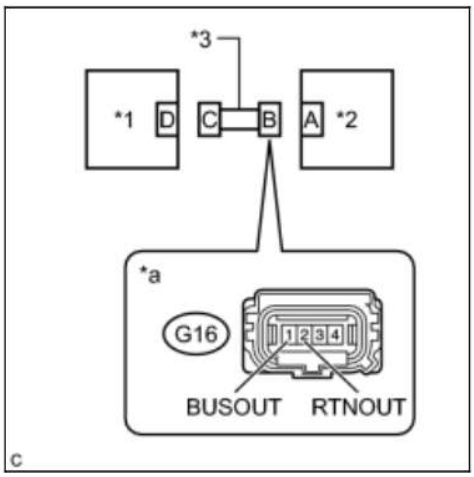
NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK

▼

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8.	CHECK NO. 2 FLOOR WIRE (SHORT)



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-1 (BUSOUT) - G16-2 (RTNOUT)	Always	1 MΩ or higher

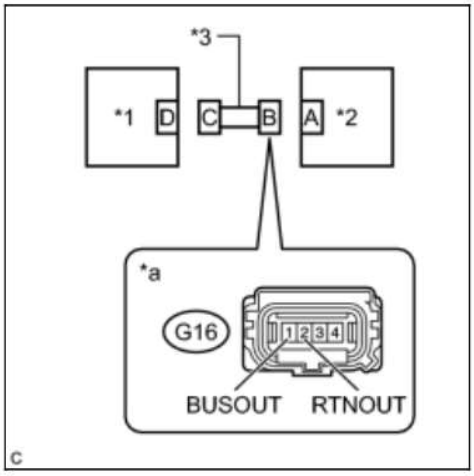
Text in Illustration

*1	Rear Airbag Sensor RH
*2	Side No. 2 Airbag Sensor Assembly RH
*3	No. 2 Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

9.	CHECK NO. 2 FLOOR WIRE (SHORT TO B+)



(a) Connect the cable to the negative (-) battery terminal.

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(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-1 (BUSOUT) - Body ground	Ignition switch ON	Below 1 V
G16-2 (RTNOUT) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Rear Airbag Sensor RH
*2	Side No. 2 Airbag Sensor Assembly RH
*3	No. 2 Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

10.	**CHECK NO. 2 FLOOR WIRE (SHORT TO GROUND)**

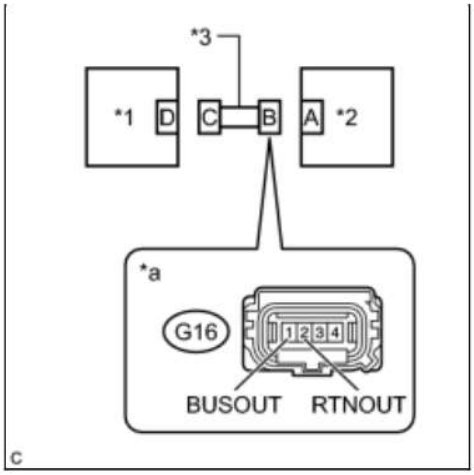
(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-1 (BUSOUT) - Body ground	Always	1 MΩ or higher
G16-2 (RTNOUT) - Body ground	Always	1 MΩ or higher

Text in Illustration

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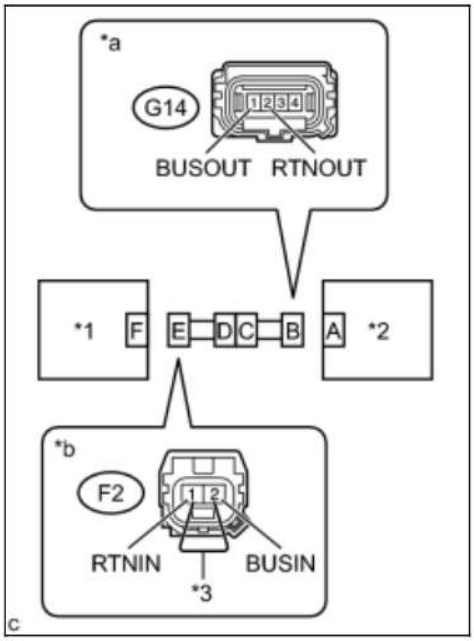


*1	Rear Airbag Sensor RH
*2	Side No. 2 Airbag Sensor Assembly RH
*3	No. 2 Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

11.	**CHECK SIDE AIRBAG SENSOR RH CIRCUIT (OPEN)**



(a) Connect the connectors that link the No. 2 floor wire and front door wire RH.

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(b) Using a service wire, connect terminals 2 (BUSIN) and 1 (RTNIN) of connector E.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G14-1 (BUSOUT) - G14-2 (RTNOUT)	Always	Below 1 Ω

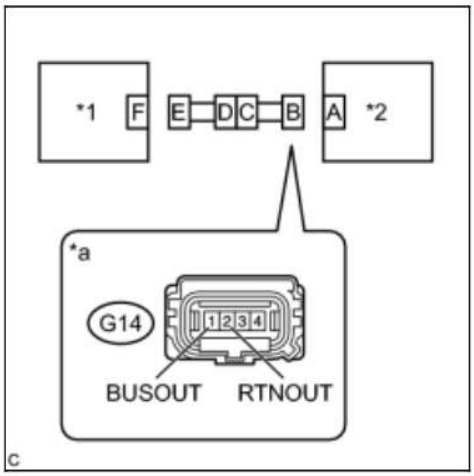
Text in Illustration

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

NG ▶ **CHECK FRONT DOOR WIRE RH (OPEN)**

OK ▼

12.	**CHECK SIDE AIRBAG SENSOR RH CIRCUIT (SHORT)**



(a) Disconnect the service wire from connector E.

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

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Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G14-1 (BUSOUT) - G14-2 (RTNOUT)	Always	1 MΩ or higher

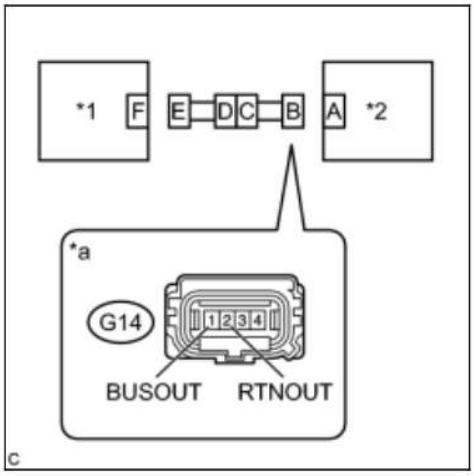
Text in Illustration

*1	Side Airbag Sensor Assembly RH
*2	Rear Airbag Sensor RH
*a	Front view of wire harness connector (to Rear Airbag Sensor RH)

NG ▶ **CHECK FRONT DOOR WIRE RH (SHORT)**

OK
▼

13.	**CHECK SIDE AIRBAG SENSOR RH CIRCUIT (SHORT TO B+)**



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G14-1 (BUSOUT) - Body ground	Ignition switch ON	Below 1 V
G14-2 (RTNOUT) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

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(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

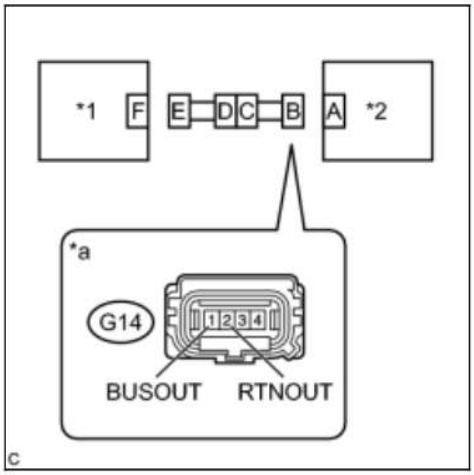
Text in Illustration

*1	Side Airbag Sensor Assembly RH
*2	Rear Airbag Sensor RH
*a	Front view of wire harness connector (to Rear Airbag Sensor RH)

NG ▶ **CHECK FRONT DOOR WIRE RH (SHORT TO B+)**

OK ▼

14.	CHECK SIDE AIRBAG SENSOR RH CIRCUIT (SHORT TO GROUND)



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G14-1 (BUSOUT) - Body ground	Always	1 MΩ or higher
G14-2 (RTNOUT) - Body ground	Always	1 MΩ or higher

Text in Illustration

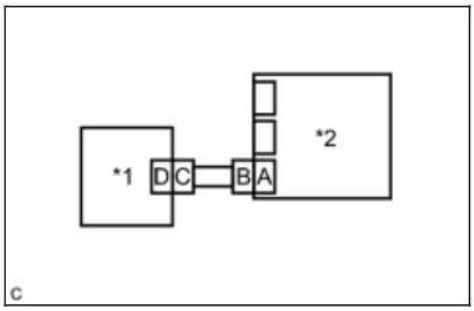
*1	Side Airbag Sensor Assembly RH
*2	Rear Airbag Sensor RH
*a	Front view of wire harness connector (to Rear Airbag Sensor RH)

NG ▶ **CHECK FRONT DOOR WIRE RH (SHORT TO GROUND)**

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OK

15.	CHECK SIDE NO. 2 AIRBAG SENSOR ASSEMBLY RH



(a) Connect the connectors to the rear airbag sensor RH, side airbag sensor assembly RH and airbag ECU assembly.

(b) Interchange the side No. 2 airbag sensor assembly RH with LH and connect the connectors.

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1642 is output.	A
DTC B1647 is output.	B
DTCs B1642 and B1647 are not output.	C

HINT:

Codes other than DTCs B1642 and B1647 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Return the side No. 2 airbag sensor assembly RH and LH to their original positions and connect the connectors.

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Text in Illustration

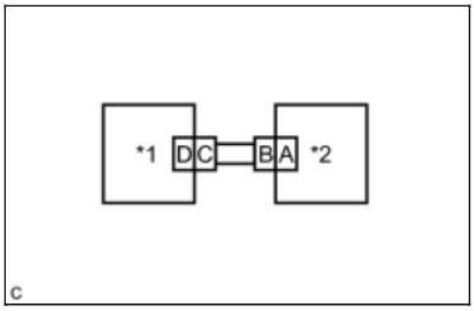
*1	Side No. 2 Airbag Sensor Assembly LH
*2	Airbag ECU Assembly

B ▶ **REPLACE SIDE NO. 2 AIRBAG SENSOR ASSEMBLY RH**

C ▶ **USE SIMULATION METHOD TO CHECK**

A

16.	**CHECK REAR AIRBAG SENSOR RH**



(a) Interchange the rear airbag sensor RH with LH and connect the connectors to them.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1642 is output.	A
DTC B1647 is output.	B
DTCs B1642 and B1647 are not output.	C

HINT:

Codes other than DTCs B1642 and B1647 may be output at this time, but they are not related to this check.

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(g) Turn the ignition switch off.

(h) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(i) Return the rear airbag sensor RH and LH to their original positions and connect the connectors.

Text in Illustration

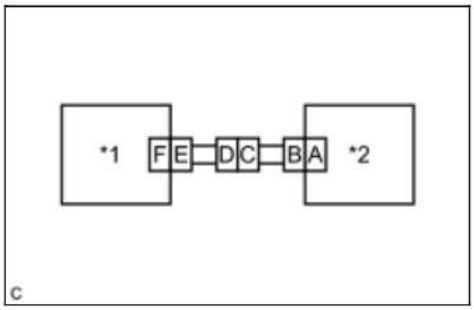
*1	Rear Airbag Sensor LH
*2	Side No. 2 Airbag Sensor Assembly RH

B ▶ **REPLACE REAR AIRBAG SENSOR RH**

C ▶ **USE SIMULATION METHOD TO CHECK**

A

17.	**CHECK SIDE AIRBAG SENSOR ASSEMBLY RH**



(a) Interchange the side airbag sensor assembly RH with LH and connect the connectors.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

Result:

RESULT	PROCEED TO

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DTC B1642 is output.	A
DTC B1647 is output.	B
DTCs B1642 and B1647 are not output.	C

HINT:

Codes other than DTCs B1642 and B1647 may be output at this time, but they are not related to this check.

(g) Turn the ignition switch off.

(h) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(i) Return the side airbag sensor assembly RH and LH to their original positions and connect the connectors.

Text in Illustration

*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor RH

B ▶ **REPLACE SIDE AIRBAG SENSOR ASSEMBLY RH**

C ▶ **USE SIMULATION METHOD TO CHECK**

A ▶ **REPLACE AIRBAG ECU ASSEMBLY**

18.	**CHECK HISTORY DTC**

(a) Check for history DTCs INFO .

Result:

RESULT	PROCEED TO
History DTCs B1622 and B1632 are not output.	A
History DTC B1622 is output.	B
History DTC B1632 is output.	C

HINT:

Codes other than history DTCs B1622 and B1632 may be output at this time, but they are not related to this check.

B ▶ **CHECK SIDE NO. 2 AIRBAG SENSOR ASSEMBLY RH**

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C ▶ CHECK REAR AIRBAG SENSOR RH

A ▼

19.	CHECK CURRENT DTC

(a) Check for current DTCs INFO .

Result:

RESULT	PROCEED TO
Current DTC B1623 is output.	A
Current DTC B1633 is output.	B

HINT:

Codes other than current DTCs B1623 and B1633 may be output at this time, but they are not related to this check.

B ▶ CHECK CONNECTORS

A ▼

20.	CHECK CONNECTORS

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the airbag ECU assembly and side No. 2 airbag sensor assembly RH.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the airbag ECU assembly and side No. 2 airbag sensor

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assembly RH.

(e) Check that the terminals of the connectors are not damaged.

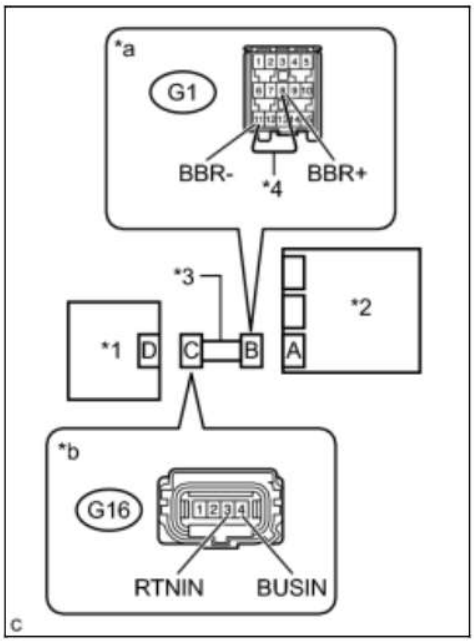
OK:

The terminals are not deformed or damaged.

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

21.	CHECK NO. 2 FLOOR WIRE (OPEN)



(a) Using a service wire, connect terminals 8 (BBR+) and 11 (BBR-) of connector B.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-4 (BUSIN) - G16-3 (RTNIN)	Always	Below 1 Ω

(c) Disconnect the service wire from connector B.

Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly RH
*2	Airbag ECU Assembly

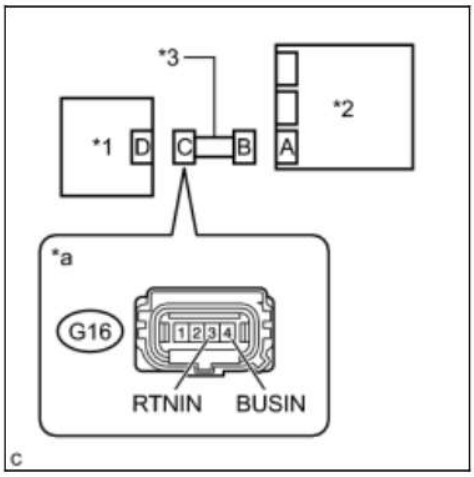
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*3	No. 2 Floor Wire
*4	Service Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

22.	**CHECK NO. 2 FLOOR WIRE (SHORT)**



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-4 (BUSIN) - G16-3 (RTNIN)	Always	1 MΩ or higher

Text in Illustration

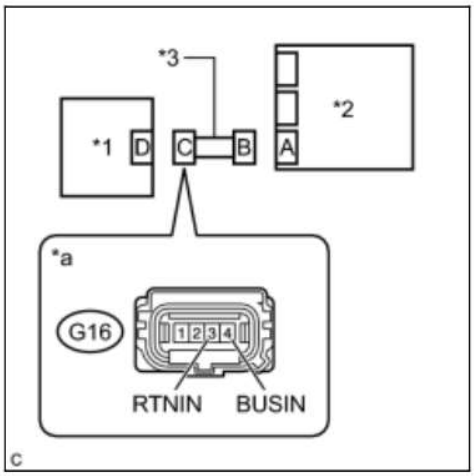
*1	Side No. 2 Airbag Sensor Assembly RH
*2	Airbag ECU Assembly
*3	No. 2 Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

23.	**CHECK NO. 2 FLOOR WIRE (SHORT TO B+)**

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(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-4 (BUSIN) - Body ground	Ignition switch ON	Below 1 V
G16-3 (RTNIN) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly RH
*2	Airbag ECU Assembly
*3	No. 2 Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

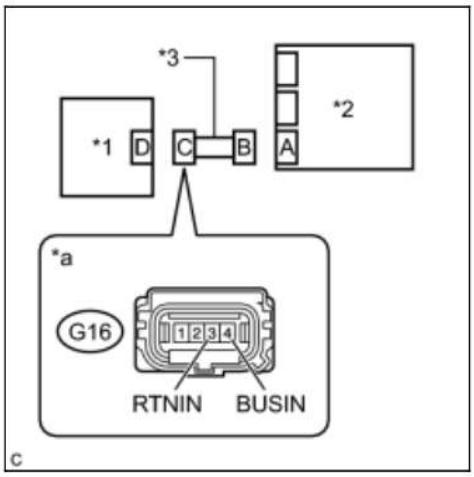
OK ▼

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24.	CHECK NO. 2 FLOOR WIRE (SHORT TO GROUND)

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

Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-4 (BUSIN) - Body ground	Always	1 MΩ or higher
G16-3 (RTNIN) - Body ground	Always	1 MΩ or higher

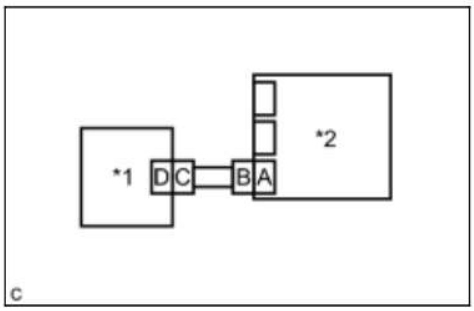
Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly RH
*2	Airbag ECU Assembly
*3	No. 2 Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

25.	CHECK SIDE NO. 2 AIRBAG SENSOR ASSEMBLY RH



(a) Connect the connector to the airbag ECU assembly.

(b) Interchange the side No. 2 airbag sensor assembly RH with LH and connect the connectors.

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(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1623 is output.	A
DTC B1628 is output.	B
DTCs B1623 and B1628 are not output.	C

HINT:

Codes other than DTCs B1623 and B1628 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Return the side No. 2 airbag sensor assembly RH and LH to their original positions and connect the connectors.

Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly LH
*2	Airbag ECU Assembly

B ▶ **REPLACE SIDE NO. 2 AIRBAG SENSOR ASSEMBLY RH**

C ▶ **USE SIMULATION METHOD TO CHECK**

A ▶ **REPLACE AIRBAG ECU ASSEMBLY**

26.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal

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to disable the SRS system.

(c) Check that the connectors are properly connected to the side No. 2 airbag sensor assembly RH and rear airbag sensor RH.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the side No. 2 airbag sensor assembly RH and rear airbag sensor RH.

(e) Check that the terminals of the connectors are not damaged.

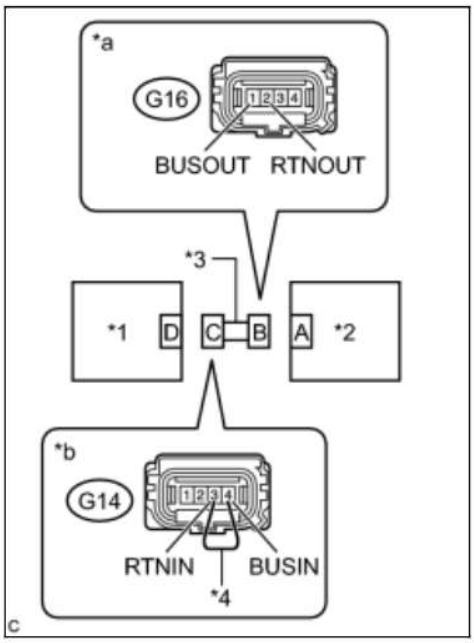
OK:

The terminals are not deformed or damaged.

NG ▶ **REPLACE WIRE HARNESS**

OK ▼

27.	CHECK NO. 2 FLOOR WIRE (OPEN)



(a) Using a service wire, connect terminals 4 (BUSIN) and 3 (RTNIN) of connector C.

NOTICE:

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

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

Standard Resistance:

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TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-1 (BUSOUT) - G16-2 (RTNOUT)	Always	Below 1 Ω

(c) Disconnect the service wire from connector C.

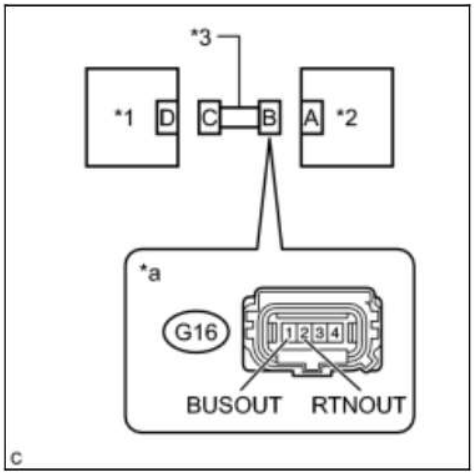
Text in Illustration

*1	Rear Airbag Sensor RH
*2	Side No. 2 Airbag Sensor Assembly RH
*3	No. 2 Floor Wire
*4	Service Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly RH)
*b	Front view of wire harness connector (to Rear Airbag Sensor RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

28.	CHECK NO. 2 FLOOR WIRE (SHORT)



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-1 (BUSOUT) - G16-2 (RTNOUT)	Always	1 MΩ or higher

Text in Illustration

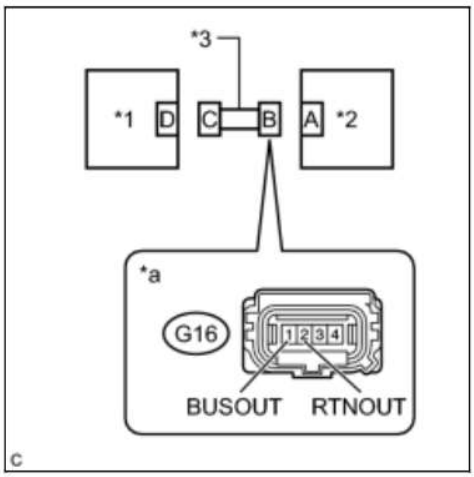
*1	Rear Airbag Sensor RH
*2	Side No. 2 Airbag Sensor Assembly RH
*3	No. 2 Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly RH)

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NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

29.	**CHECK NO. 2 FLOOR WIRE (SHORT TO B+)**



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-1 (BUSOUT) - Body ground	Ignition switch ON	Below 1 V
G16-2 (RTNOUT) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Rear Airbag Sensor RH
*2	Side No. 2 Airbag Sensor Assembly RH
*3	No. 2 Floor Wire
	Front view of wire harness connector

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*a	(to Side No. 2 Airbag Sensor Assembly RH)

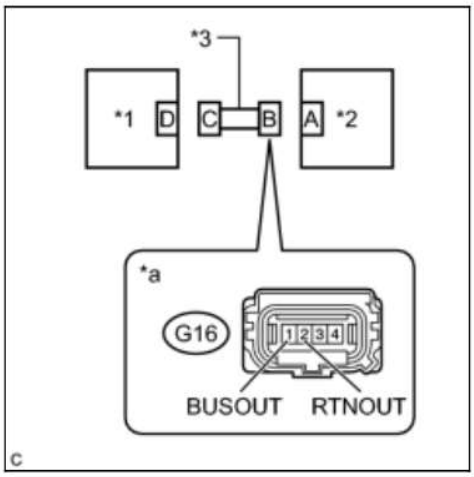
NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

30.	**CHECK NO. 2 FLOOR WIRE (SHORT TO GROUND)**

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

Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G16-1 (BUSOUT) - Body ground	Always	1 MΩ or higher
G16-2 (RTNOUT) - Body ground	Always	1 MΩ or higher

Text in Illustration

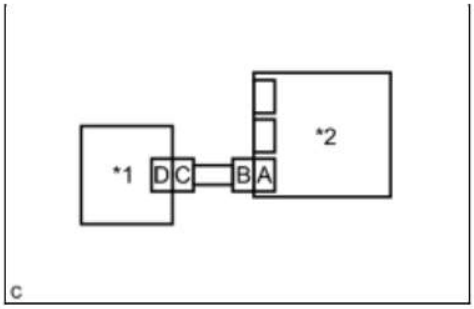
*1	Rear Airbag Sensor RH
*2	Side No. 2 Airbag Sensor Assembly RH
*3	No. 2 Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

31.	**CHECK SIDE NO. 2 AIRBAG SENSOR ASSEMBLY RH**

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(a) Connect the connector to the rear airbag sensor RH.

(b) Interchange the side No. 2 airbag sensor assembly RH with LH and connect the connectors.

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1633 is output.	A
DTC B1638 is output.	B
DTCs B1633 and B1638 are not output.	C

HINT:

Codes other than DTCs B1633 and B1638 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Return the side No. 2 airbag sensor assembly RH and LH to their original positions and connect the connectors.

Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly LH
*2	Airbag ECU Assembly

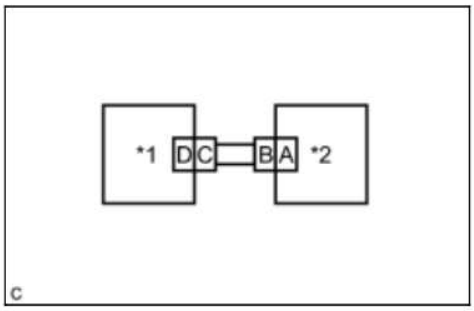
B ▶ **REPLACE SIDE NO. 2 AIRBAG SENSOR ASSEMBLY RH**

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C ▶ USE SIMULATION METHOD TO CHECK

A ▼

32.	CHECK REAR AIRBAG SENSOR RH



(a) Interchange the rear airbag sensor RH with LH and connect the connectors.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1633 is output.	A
DTC B1638 is output.	B
DTCs B1633 and B1638 are not output.	C

HINT:

Codes other than DTCs B1633 and B1638 may be output at this time, but they are not related to this check.

(g) Turn the ignition switch off.

(h) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(i) Return the rear airbag sensor RH and LH to their original positions and connect the connectors.

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Text in Illustration

*1	Rear Airbag Sensor LH
*2	Side No. 2 Airbag Sensor Assembly RH

B ▶ **REPLACE REAR AIRBAG SENSOR RH**

C ▶ **USE SIMULATION METHOD TO CHECK**

A ▶ **REPLACE AIRBAG ECU ASSEMBLY**

33.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the rear airbag sensor RH and side airbag sensor assembly RH. Also check that the connectors that link the No. 2 floor wire and front door wire RH are properly connected.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the rear airbag sensor RH and side airbag sensor assembly RH. Also disconnect the connectors that link the No. 2 floor wire and front door wire RH.

(e) Check that the terminals of the connectors are not damaged.

OK:

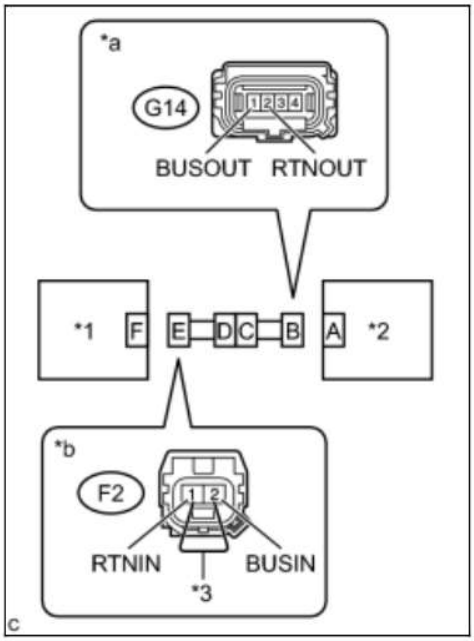
The terminals are not deformed or damaged.

NG ▶ **REPLACE WIRE HARNESS**

OK ▼

34.	**CHECK SIDE AIRBAG SENSOR ASSEMBLY RH CIRCUIT (OPEN)**

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(a) Connect the connectors that link the No. 2 floor wire and front door wire RH.

(b) Using a service wire, connect terminals 2 (BUSIN) and 1 (RTNIN) of connector E.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G14-1 (BUSOUT) - G14-2 (RTNOUT)	Always	Below 1 Ω

Text in Illustration

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

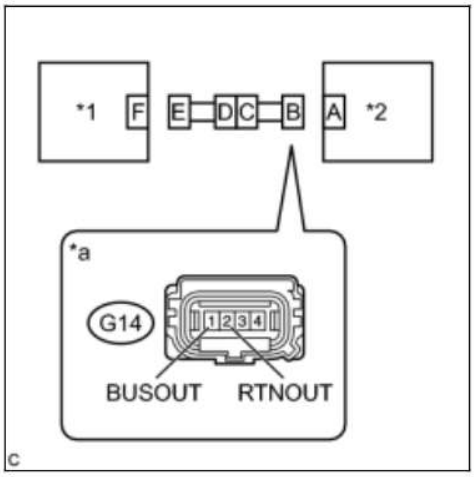
NG ▶ **CHECK FRONT DOOR WIRE RH (OPEN)**

OK

▼

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35.	CHECK SIDE AIRBAG SENSOR ASSEMBLY RH CIRCUIT (SHORT)



(a) Disconnect the service wire from connector E.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G14-1 (BUSOUT) - G14-2 (RTNOUT)	Always	1 MΩ or higher

Text in Illustration

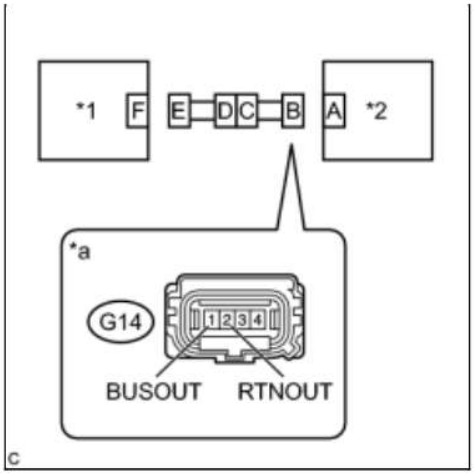
*1	Side Airbag Sensor Assembly RH
*2	Rear Airbag Sensor RH
*a	Front view of wire harness connector (to Rear Airbag Sensor RH)

NG ▶ CHECK FRONT DOOR WIRE RH (SHORT)

OK ▼

36.	CHECK SIDE AIRBAG SENSOR ASSEMBLY RH CIRCUIT (SHORT TO B+)

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(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G14-1 (BUSOUT) - Body ground	Ignition switch ON	Below 1 V
G14-2 (RTNOUT) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Side Airbag Sensor Assembly RH
*2	Rear Airbag Sensor RH
*a	Front view of wire harness connector (to Rear Airbag Sensor RH)

NG ▶ **CHECK FRONT DOOR WIRE RH (SHORT TO B+)**

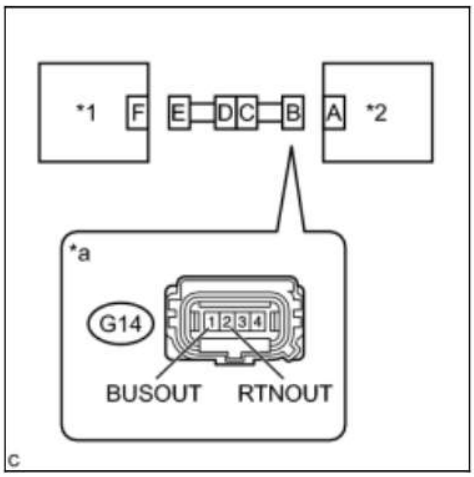
OK ▼

37.	**CHECK SIDE AIRBAG SENSOR ASSEMBLY RH CIRCUIT (SHORT TO GROUND)**

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

Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G14-1 (BUSOUT) - Body ground	Always	1 MΩ or higher
G14-2 (RTNOUT) - Body ground	Always	1 MΩ or higher

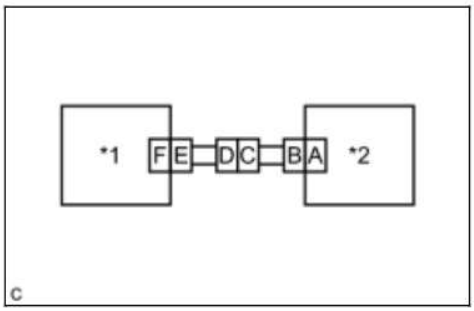
Text in Illustration

*1	Side Airbag Sensor Assembly RH
*2	Rear Airbag Sensor RH
*a	Front view of wire harness connector (to Rear Airbag Sensor RH)

NG ▶ **CHECK FRONT DOOR WIRE RH (SHORT TO GROUND)**

OK ▼

38.	**CHECK SIDE AIRBAG SENSOR ASSEMBLY RH**



(a) Connect the connectors to the rear airbag sensor RH.

(b) Interchange the side airbag sensor assembly RH with LH and connect the connectors.

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1692 or B1693 is output.	A
DTC B1697 or B1698 is output.	B
DTCs B1692, B1693, B1697 and B1698 are not output.	C

HINT:

Codes other than DTCs B1692, B1693, B1697 and B1698 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Return the side airbag sensor assembly RH and LH to their original positions and connect the connectors.

Text in Illustration

*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor RH

B ▶ **REPLACE SIDE AIRBAG SENSOR ASSEMBLY RH**

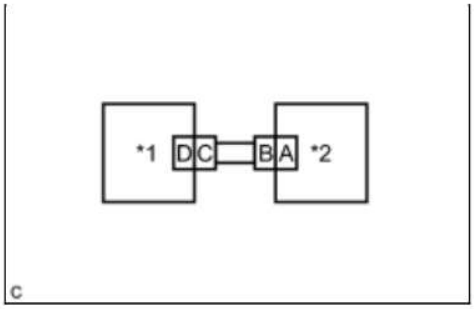
C ▶ **USE SIMULATION METHOD TO CHECK**

A ▼

39.	**CHECK REAR AIRBAG SENSOR RH**

(a) Interchange the rear airbag sensor RH with LH and connect the connectors.

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(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1692 or B1693 is output.	A
DTC B1697 or B1698 is output.	B
DTCs B1692, B1693, B1697 and B1698 are not output.	C

HINT:

Codes other than DTCs B1692, B1693, B1697 and B1698 may be output at this time, but they are not related to this check.

(g) Turn the ignition switch off.

(h) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(i) Return the rear airbag sensor RH and LH to their original positions and connect the connectors.

Text in Illustration

*1	Rear Airbag Sensor LH
*2	Side No. 2 Airbag Sensor Assembly RH

B ▶ REPLACE REAR AIRBAG SENSOR RH

C ▶ USE SIMULATION METHOD TO CHECK

A ▶ REPLACE AIRBAG ECU ASSEMBLY

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40.	CHECK CURRENT DTC

(a) Check for current DTCs INFO .

Result:

RESULT	PROCEED TO
Current DTC B1622 is output.	A
Current DTC B1632 is output.	B

HINT:

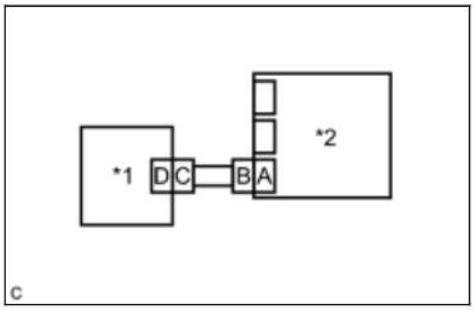
Codes other than current DTCs B1622 and B1632 may be output at this time, but they are not related to this check.

(b) Turn the ignition switch off.

B ▶ CHECK REAR AIRBAG SENSOR RH

A ▼

41.	CHECK SIDE NO. 2 AIRBAG SENSOR ASSEMBLY RH



(a) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(b) Interchange the side No. 2 airbag sensor assembly RH with LH and connect the connectors.

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

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Result:

RESULT	PROCEED TO
DTC B1622 is output.	A
DTC B1627 is output.	B
DTCs B1622 and B1627 are not output.	C

HINT:

Codes other than DTCs B1622 and B1627 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Return the side No. 2 airbag sensor assembly RH and LH to their original positions and connect the connectors.

Text in Illustration

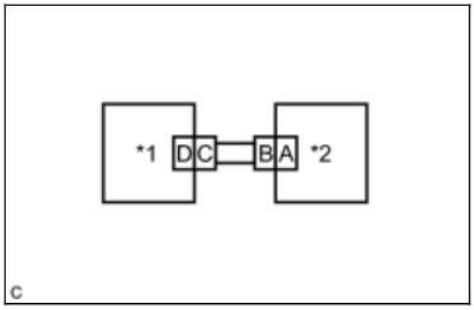
*1	Side No. 2 Airbag Sensor Assembly LH
*2	Airbag ECU Assembly

B ▶ **REPLACE SIDE NO. 2 AIRBAG SENSOR ASSEMBLY RH**

C ▶ **USE SIMULATION METHOD TO CHECK**

A ▶ **REPLACE AIRBAG ECU ASSEMBLY**

42.	CHECK REAR AIRBAG SENSOR RH



(a) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

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

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(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1632 is output.	A
DTC B1637 is output.	B
DTCs B1632 and B1637 are not output.	C

HINT:

Codes other than DTCs B1632 and B1637 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Return the rear airbag sensor RH and LH to their original positions and connect the connectors.

Text in Illustration

*1	Rear Airbag Sensor LH
*2	Side No. 2 Airbag Sensor Assembly RH

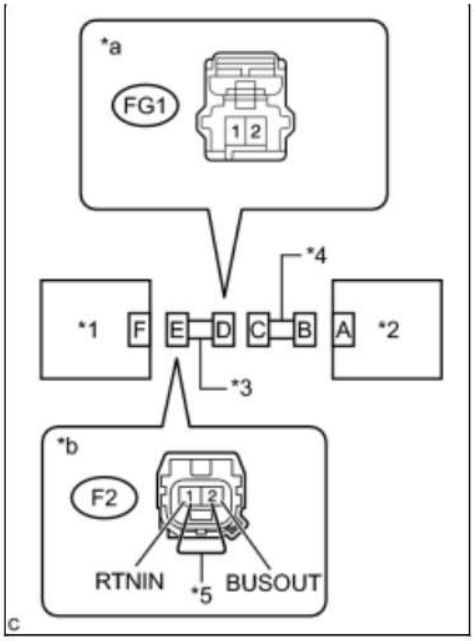
B ▶ REPLACE REAR AIRBAG SENSOR RH

C ▶ USE SIMULATION METHOD TO CHECK

A ▶ REPLACE AIRBAG ECU ASSEMBLY

43.	**CHECK FRONT DOOR WIRE RH (OPEN)**

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(a) Disconnect the front door wire RH connector from the No. 2 floor wire.

HINT:

The service wire has already been inserted into connector E.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
FG1-1 - FG1-2	Always	Below 1 Ω

(c) Disconnect the service wire from connector E.

Text in Illustration

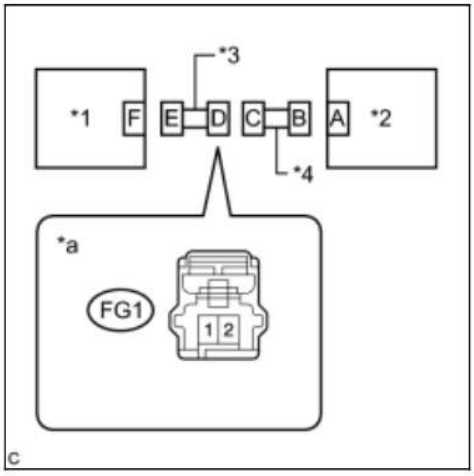
*1	Side Airbag Sensor Assembly RH
*2	Rear Airbag Sensor RH
*3	Front Door Wire RH
*4	No. 2 Floor Wire
*5	Service Wire
*a	Front view of wire harness connector (to No. 2 Floor Wire)
*b	Front view of wire harness connector (to Side Airbag Sensor Assembly RH)

NG ▶ **REPLACE FRONT DOOR WIRE RH**

OK ▶ **REPLACE NO. 2 FLOOR WIRE**

44.	**CHECK FRONT DOOR WIRE RH (SHORT)**

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(a) Disconnect the front door wire RH connector from the No. 2 floor wire.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
FG1-1 - FG1-2	Always	1 MΩ or higher

Text in Illustration

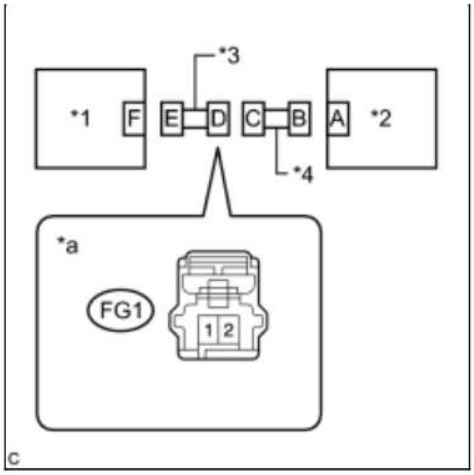
*1	Side Airbag Sensor Assembly RH
*2	Rear Airbag Sensor RH
*3	Front Door Wire RH
*4	No. 2 Floor Wire
*a	Front view of wire harness connector (to No. 2 Floor Wire)

NG ▶ **REPLACE FRONT DOOR WIRE RH**

OK ▶ **REPLACE NO. 2 FLOOR WIRE**

45.	**CHECK FRONT DOOR WIRE RH (SHORT TO B+)**

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(a) Disconnect the front door wire RH connector from the No. 2 floor wire.

(b) Connect the cable to the negative (-) battery terminal.

(c) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
FG1-1 - Body ground	Ignition switch ON	Below 1 V
FG1-2 - Body ground	Ignition switch ON	Below 1 V

Text in Illustration

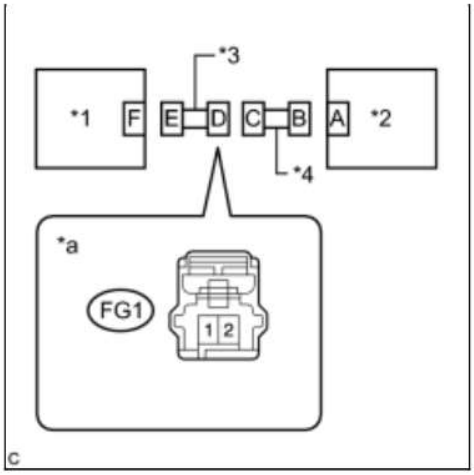
*1	Side Airbag Sensor Assembly RH
*2	Rear Airbag Sensor RH
*3	Front Door Wire RH
*4	No. 2 Floor Wire
*a	Front view of wire harness connector (to No. 2 Floor Wire)

NG ▶ **REPLACE FRONT DOOR WIRE RH**

OK ▶ **REPLACE NO. 2 FLOOR WIRE**

46.	**CHECK FRONT DOOR WIRE RH (SHORT TO GROUND)**

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(a) Disconnect the front door wire RH connector from the No. 2 floor wire.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
FG1-1 - Body ground	Always	1 MΩ or higher
FG1-2 - Body ground	Always	1 MΩ or higher

Text in Illustration

*1	Side Airbag Sensor Assembly RH
*2	Rear Airbag Sensor RH
*3	Front Door Wire RH
*4	No. 2 Floor Wire
*a	Front view of wire harness connector (to No. 2 Floor Wire)

NG ▶ **REPLACE FRONT DOOR WIRE RH**

OK ▶ **REPLACE NO. 2 FLOOR WIRE**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000001NZU05QX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1625,B16F5: Side Airbag Sensor LH Circuit Malfunction (2013 FR-S)		

DTC	**B1625**	**Side Airbag Sensor LH Circuit Malfunction**

DTC	**B16F5**	**Side Airbag Sensor LH Mismatch**

DESCRIPTION

The side collision sensor LH circuit (to determine deployment of the front seat airbag assembly LH, curtain shield airbag assembly LH and front seat outer belt assembly LH) is composed of the airbag ECU assembly, side airbag sensor assembly LH, side No. 2 airbag sensor assembly LH and rear airbag sensor LH and No. 2 airbag sensor assembly.

The side No. 2 airbag sensor assembly LH detects impacts to the vehicle and sends signals to the airbag ECU assembly to determine if the airbag should be deployed.

These DTCs are stored when a malfunction is detected in the side No. 2 airbag sensor assembly LH.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1625	• Side No. 2 airbag sensor assembly LH malfunction • Airbag ECU assembly malfunction	• Side No. 2 airbag sensor assembly LH • Airbag ECU assembly
B16F5	• Improper installation of side No. 2 airbag sensor assembly LH • Airbag ECU assembly malfunction	

WIRING DIAGRAM

Refer to DTCs B1627, B1628, B1637, B1638, B1647, B1697 and B1698 INFO .

INSPECTION PROCEDURE

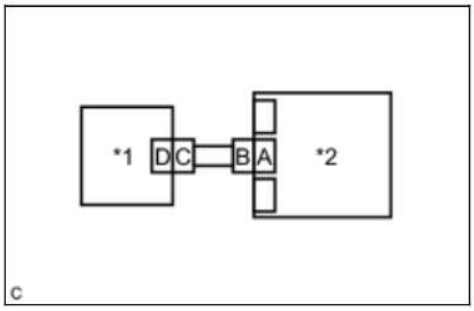
NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK SIDE NO. 2 AIRBAG SENSOR ASSEMBLY LH**

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(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Interchange the side No. 2 airbag sensor assembly LH with RH and connect the connectors.

(d) Connect the cable to the negative (-) battery terminal.

(e) Clear the DTCs stored in memory INFO .

(f) Turn the ignition switch off.

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

(h) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1625 is output.	A
DTC B1620 is output.	B
DTCs B1620 and B1625 are not output.	C

HINT:

Codes other than DTCs B1620 and B1625 may be output at this time, but they are not related to this check.

(i) Turn the ignition switch off.

(j) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(k) Return the side No. 2 airbag sensor assembly LH and RH to their original positions and connect the connectors.

Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly RH
*2	Airbag ECU Assembly

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B ▶ REPLACE SIDE NO. 2 AIRBAG SENSOR ASSEMBLY LH

C ▶ USE SIMULATION METHOD TO CHECK

A ▶ REPLACE AIRBAG ECU ASSEMBLY



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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000027E205HX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1627,B1628,B1637,B1638,B1647,B1697,B1698: Side Airbag Sensor LH Lost Communication (2013 FR-S)		

DTC	**B1627**	**Side Airbag Sensor LH Lost Communication**

DTC	**B1628**	**Side Airbag Sensor LH Initialization**

DTC	**B1637**	**Side No. 2 Airbag Sensor LH Lost Communication**

DTC	**B1638**	**Side No. 2 Airbag Sensor LH Initialization**

DTC	**B1647**	**Side Satellite Sensor Bus Lost Communication (LH)**

DTC	**B1697**	**Lost Communication with Side Airbag Sensor LH**

DTC	**B1698**	**Side Airbag Sensor LH Initialization Incomplete**

DESCRIPTION

The side collision sensor LH circuit (to determine deployment of the front seat airbag assembly LH, curtain shield airbag assembly LH and front seat outer belt assembly LH) is composed of the airbag ECU assembly, side airbag sensor assembly LH, side No. 2 airbag sensor assembly LH and rear airbag sensor LH and No. 2 airbag sensor assembly.

The side airbag sensor assembly LH, side No. 2 airbag sensor assembly LH and rear airbag sensor LH detect impacts to the vehicle and send signals to the airbag ECU assembly to determine if the airbag should be deployed.

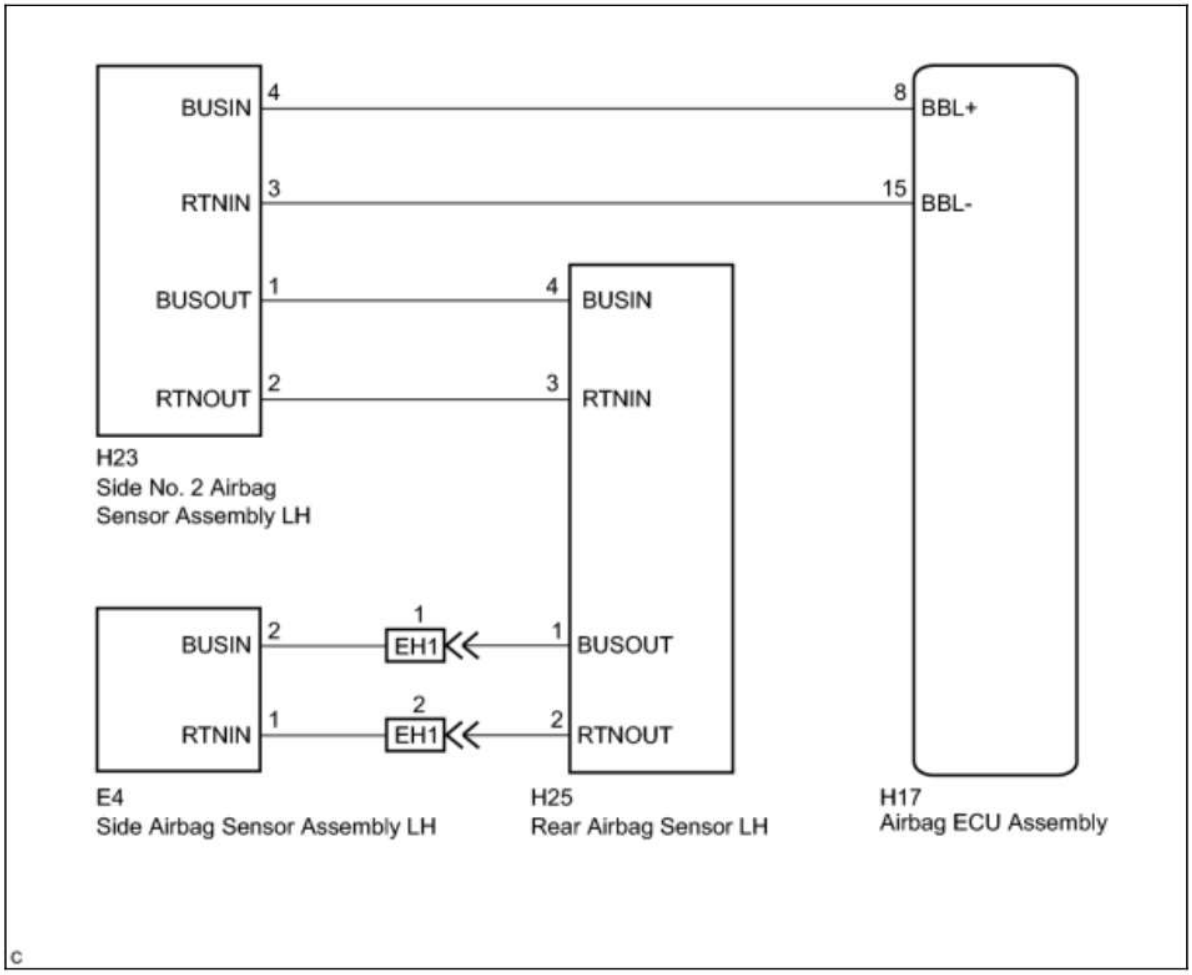
These DTCs are stored when a malfunction is detected for the side collision sensor LH circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
		• Floor wire • Front door wire LH

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B1627 B1628 B1637 B1638 B1647 B1697 B1698	• The airbag ECU assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the side collision sensor LH circuit. • Side airbag sensor assembly LH malfunction • Side No. 2 airbag sensor assembly LH malfunction • Rear airbag sensor LH malfunction • Airbag ECU assembly malfunction	• Side airbag sensor assembly LH • Side No. 2 airbag sensor assembly LH • Rear airbag sensor LH • Airbag ECU assembly

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

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After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK CURRENT DTC**

(a) Check for current DTCs INFO .

Result:

RESULT	PROCEED TO
Current DTC B1647 is output.	A
Current DTC B1628 or B1638 is output.	B
Current DTC B1697 or B1698 is output.	C
Current DTC B1627 or B1637 is output.	D
Current DTCs B1627, B1628, B1637, B1638, B1647, B1697 and B1698 are not output.	E

HINT:

- DTCs indicating communication errors will be changed to DTCs indicating errors in initialization by turning the ignition switch off and then to ON again.
- Codes other than current DTCs B1627, B1628, B1637, B1638, B1647, B1697 and B1698 may be output at this time, but they are not related to this check.

B ▶ CHECK HISTORY DTC

C ▶ CHECK CONNECTORS

D ▶ CHECK CURRENT DTC

E ▶ USE SIMULATION METHOD TO CHECK

A ▼

2.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

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(c) Check that the connectors are properly connected to the airbag ECU assembly, side airbag sensor assembly LH, side No. 2 airbag sensor assembly LH and rear airbag sensor LH. Also check that the connectors that link the floor wire and front door wire LH are properly connected.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the airbag ECU assembly, side airbag sensor assembly LH, side No. 2 airbag sensor assembly LH and rear airbag sensor LH. Also disconnect the connectors that link the floor wire and front door wire LH.

(e) Check that the terminals of the connectors are not damaged.

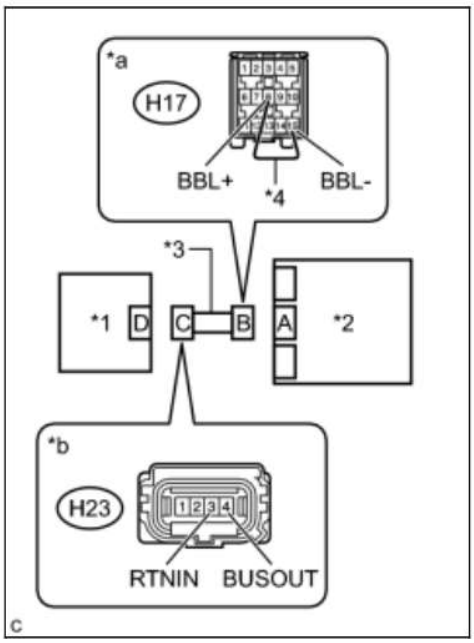
OK:

The terminals are not deformed or damaged.

NG ▶ **REPLACE WIRE HARNESS**

OK ▼

3.	CHECK FLOOR WIRE (OPEN)



(a) Using a service wire, connect terminals 8 (BBL+) and 15 (BBL-) of connector B.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-4 (BUSIN) -H23-3 (RTNIN)	Always	Below 1 Ω

(c) Disconnect the service wire from connector B.

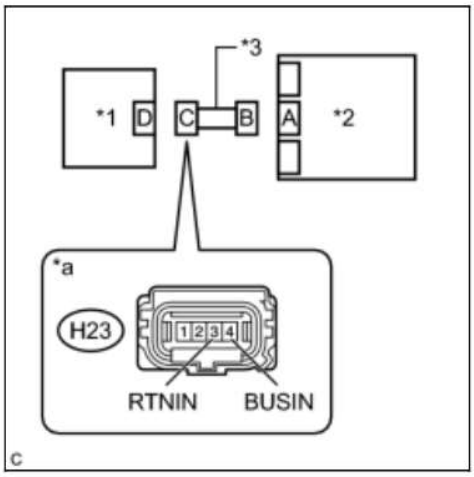
Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly LH
*2	Airbag ECU Assembly
*3	Floor Wire
*4	Service Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly LH)

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

4.	**CHECK FLOOR WIRE (SHORT)**



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-4 (BUSIN) - H23-3 (RTNIN)	Always	1 MΩ or higher

Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly LH
*2	Airbag ECU Assembly
*3	Floor Wire
*a	Front view of wire harness connector

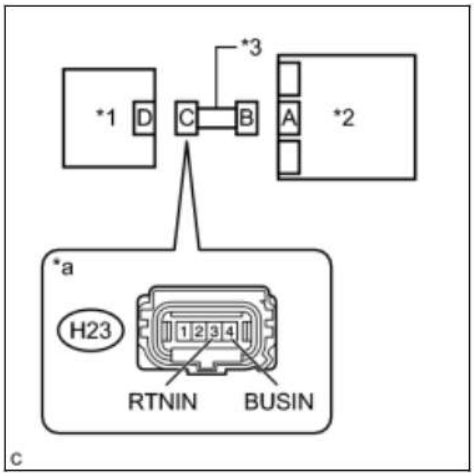
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	(to Side No. 2 Airbag Sensor Assembly LH)

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

5.	**CHECK FLOOR WIRE (SHORT TO B+)**



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-4 (BUSIN) - Body ground	Ignition switch ON	Below 1 V
H23-3 (RTNIN) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly LH
*2	Airbag ECU Assembly

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*3	Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly LH)

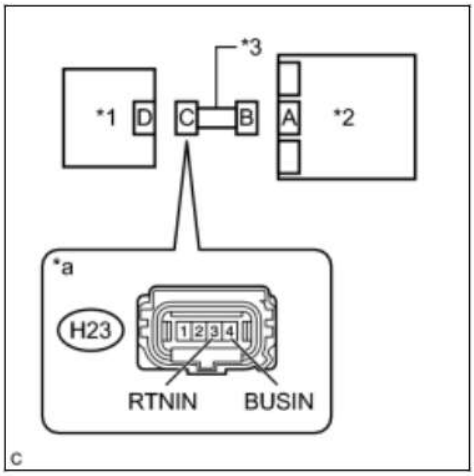
NG ▶ **REPLACE FLOOR WIRE**

OK ▼

6.	**CHECK FLOOR WIRE (SHORT TO GROUND)**

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

Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-4 (BUSIN) - Body ground	Always	1 MΩ or higher
H23-3 (RTNIN) - Body ground	Always	1 MΩ or higher

Text in Illustration

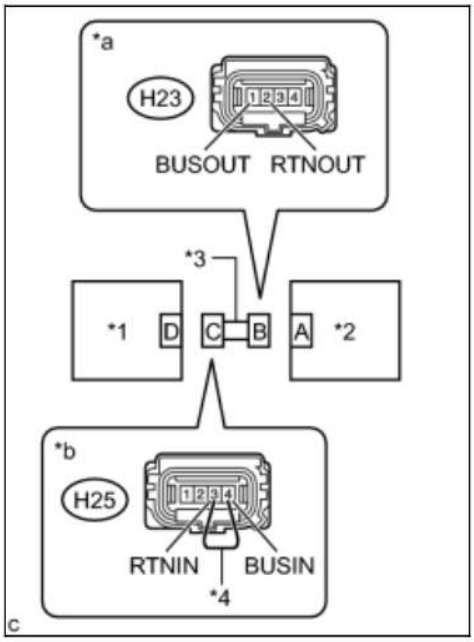
*1	Side No. 2 Airbag Sensor Assembly LH
*2	Airbag ECU Assembly
*3	Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly LH)

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

7.	**CHECK FLOOR WIRE (OPEN)**

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(a) Using a service wire, connect terminals 4 (BUSIN) and 3 (RTNIN) of connector C.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-1 (BUSOUT) - H23-2 (RTNOUT)	Always	Below 1 Ω

(c) Disconnect the service wire from connector C.

Text in Illustration

*1	Rear Airbag Sensor LH
*2	Side No. 2 Airbag Sensor Assembly LH
*3	Floor Wire
*4	Service Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly LH)
*b	Front view of wire harness connector (to Rear Airbag Sensor LH)

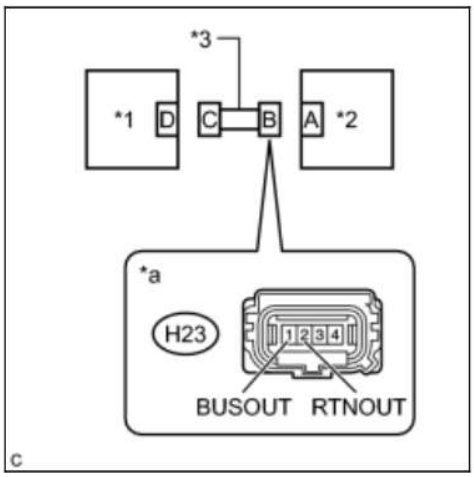
NG ▶ **REPLACE FLOOR WIRE**

OK

▼

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8.	CHECK FLOOR WIRE (SHORT)



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-1 (BUSOUT) - H23-2 (RTNOUT)	Always	1 MΩ or higher

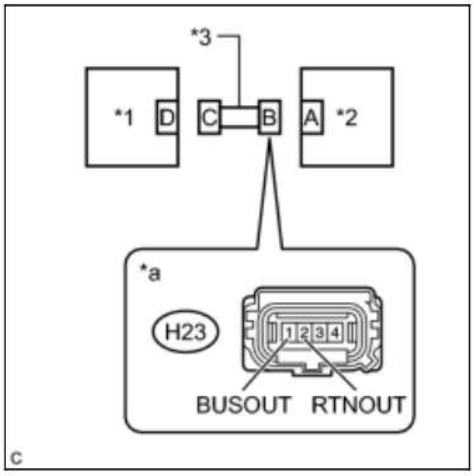
Text in Illustration

*1	Rear Airbag Sensor LH
*2	Side No. 2 Airbag Sensor Assembly LH
*3	Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly LH)

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

9.	CHECK FLOOR WIRE (SHORT TO B+)



(a) Connect the cable to the negative (-) battery terminal.

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(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-1 (BUSOUT) - Body ground	Ignition switch ON	Below 1 V
H23-2 (RTNOUT) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Rear Airbag Sensor LH
*2	Side No. 2 Airbag Sensor Assembly LH
*3	Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly LH)

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

10.	**CHECK FLOOR WIRE (SHORT TO GROUND)**

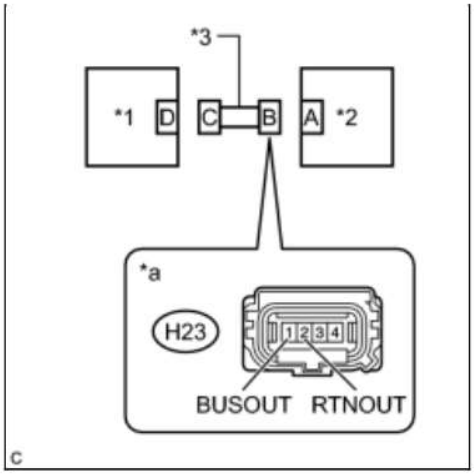
(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-1 (BUSOUT) - Body ground	Always	1 MΩ or higher
H23-2 (RTNOUT) - Body ground	Always	1 MΩ or higher

Text in Illustration

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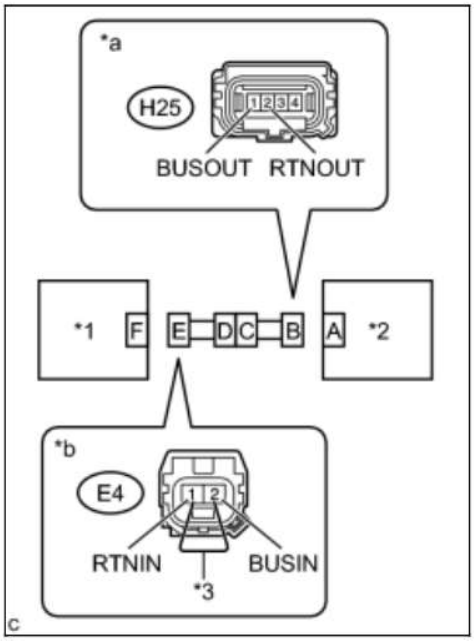


*1	Rear Airbag Sensor LH
*2	Side No. 2 Airbag Sensor Assembly LH
*3	Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly LH)

NG ▶ **REPLACE FLOOR WIRE**

OK
▼

11.	**CHECK SIDE AIRBAG SENSOR ASSEMBLY LH CIRCUIT (OPEN)**



(a) Connect the connectors that link the floor wire and front door wire LH.

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(b) Using a service wire, connect terminals 2 (BUSIN) and 1 (RTNIN) of connector E.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H25-1 (BUSOUT) - H25-2 (RTNOUT)	Always	Below 1 Ω

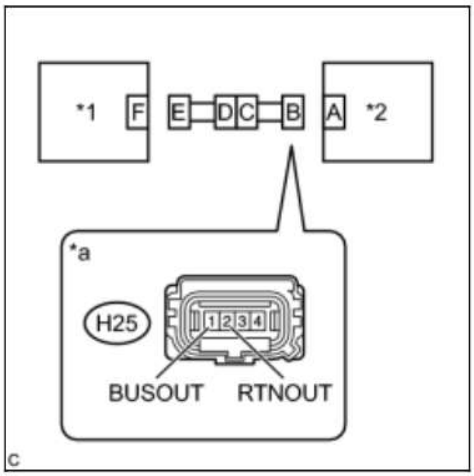
Text in Illustration

*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor LH
*3	Service Wire
*a	Front view of wire harness connector (to Rear Airbag Sensor LH)
*b	Front view of wire harness connector (to Side Airbag Sensor Assembly LH)

NG ▶ **CHECK FRONT DOOR WIRE LH (OPEN)**

OK ▼

12.	**CHECK SIDE AIRBAG SENSOR ASSEMBLY LH CIRCUIT (SHORT)**



(a) Disconnect the service wire from connector E.

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

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Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H25-1 (BUSOUT) - H25-2 (RTNOUT)	Always	1 MΩ or higher

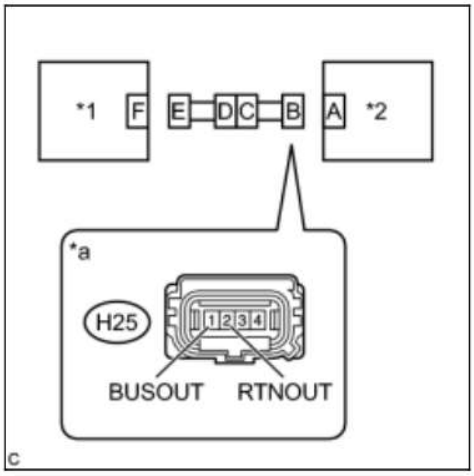
Text in Illustration

*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor LH
*a	Front view of wire harness connector (to Rear Airbag Sensor LH)

NG ▶ **CHECK FRONT DOOR WIRE LH (SHORT)**

OK
▼

13.	CHECK SIDE AIRBAG SENSOR ASSEMBLY LH CIRCUIT (SHORT TO B+)



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H25-1 (BUSOUT) - Body ground	Ignition switch ON	Below 1 V
H25-2 (RTNOUT) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

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(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

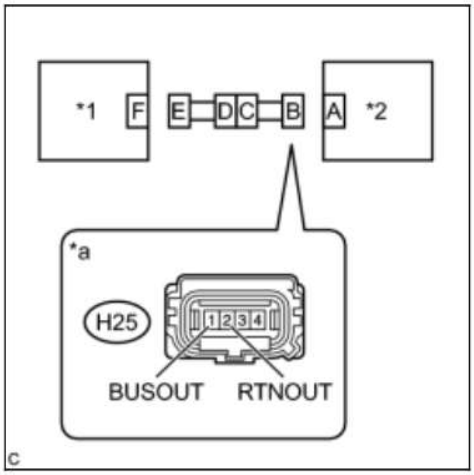
Text in Illustration

*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor LH
*a	Front view of wire harness connector (to Rear Airbag Sensor LH)

NG ▶ **CHECK FRONT DOOR WIRE LH (SHORT TO B+)**

OK ▼

14.	**CHECK SIDE AIRBAG SENSOR ASSEMBLY LH CIRCUIT (SHORT TO GROUND)**



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H25-1 (BUSOUT) - Body ground	Always	1 MΩ or higher
H25-2 (RTNOUT) - Body ground	Always	1 MΩ or higher

Text in Illustration

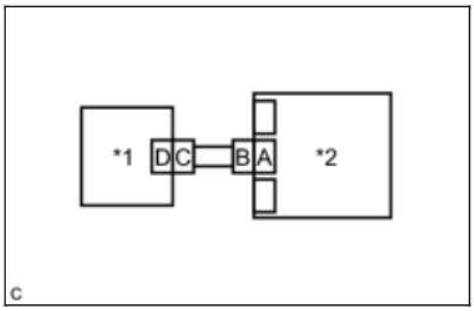
*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor LH
*a	Front view of wire harness connector (to Rear Airbag Sensor LH)

NG ▶ **CHECK FRONT DOOR WIRE LH (SHORT TO GROUND)**

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OK

15.	CHECK SIDE NO. 2 AIRBAG SENSOR ASSEMBLY LH



(a) Connect the connectors to the rear airbag sensor LH, side airbag sensor assembly LH and airbag ECU assembly.

(b) Interchange the side No. 2 airbag sensor assembly LH with RH and connect the connectors.

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1647 is output.	A
DTC B1642 is output.	B
DTCs B1642 and B1647 are not output.	C

HINT:

Codes other than DTCs B1642 and B1647 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Return the side No. 2 airbag sensor assembly LH and RH to their original positions and connect the connectors.

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Text in Illustration

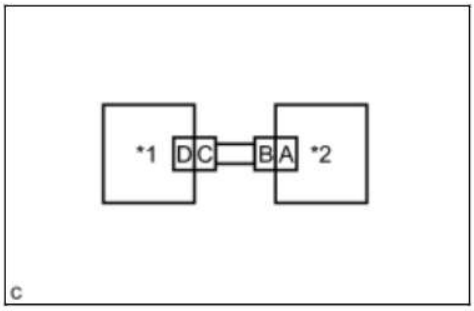
*1	Side No. 2 Airbag Sensor Assembly RH
*2	Airbag ECU Assembly

B ▶ **REPLACE SIDE NO. 2 AIRBAG SENSOR ASSEMBLY LH**

C ▶ **USE SIMULATION METHOD TO CHECK**

A

16.	**CHECK REAR AIRBAG SENSOR LH**



(a) Interchange the rear airbag sensor LH with RH and connect the connectors to them.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1647 is output.	A
DTC B1642 is output.	B
DTCs B1642 and B1647 are not output.	C

HINT:

Codes other than DTCs B1642 and B1647 may be output at this time, but they are not related to this check.

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(g) Turn the ignition switch off.

(h) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(i) Return the rear airbag sensor LH and RH to their original positions and connect the connectors.

Text in Illustration

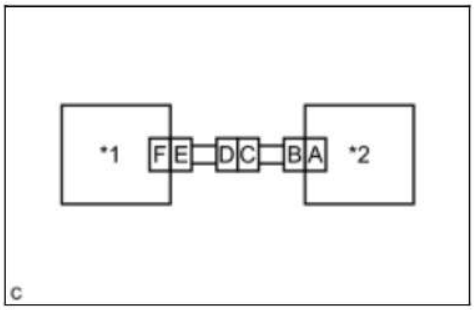
*1	Rear Airbag Sensor RH
*2	Side No. 2 Airbag Sensor Assembly LH

B ▶ **REPLACE REAR AIRBAG SENSOR LH**

C ▶ **USE SIMULATION METHOD TO CHECK**

A

17.	**CHECK SIDE AIRBAG SENSOR ASSEMBLY LH**



(a) Interchange the side airbag sensor assembly LH with RH and connect the connectors.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

Result:

RESULT	PROCEED TO

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DTC B1647 is output.	A
DTC B1642 is output.	B
DTCs B1642 and B1647 are not output.	C

HINT:

Codes other than DTCs B1642 and B1647 may be output at this time, but they are not related to this check.

(g) Turn the ignition switch off.

(h) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(i) Return the side airbag sensor assembly LH and RH to their original positions and connect the connectors.

Text in Illustration

*1	Side Airbag Sensor Assembly RH
*2	Rear Airbag Sensor LH

B ▶ **REPLACE SIDE AIRBAG SENSOR ASSEMBLY LH**

C ▶ **USE SIMULATION METHOD TO CHECK**

A ▶ **REPLACE AIRBAG ECU ASSEMBLY**

18.	**CHECK HISTORY DTC**

(a) Check for history DTCs INFO .

Result:

RESULT	PROCEED TO
History DTCs B1627 and B1637 are not output.	A
History DTC B1627 is output.	B
History DTC B1637 is output.	C

HINT:

Codes other than history DTCs B1627 and B1637 may be output at this time, but they are not related to this check.

B ▶ **CHECK SIDE NO. 2 AIRBAG SENSOR ASSEMBLY LH**

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C ▶ CHECK REAR AIRBAG SENSOR LH

A ▼

19.	CHECK CURRENT DTC

(a) Check for current DTCs INFO .

Result:

RESULT	PROCEED TO
Current DTC B1628 is output.	A
Current DTC B1638 is output.	B

HINT:

Codes other than current DTCs B1628 and B1638 may be output at this time, but they are not related to this check.

B ▶ CHECK CONNECTORS

A ▼

20.	CHECK CONNECTORS

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the airbag ECU assembly and side No. 2 airbag sensor assembly LH.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the airbag ECU assembly and side No. 2 airbag sensor

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assembly LH.

(e) Check that the terminals of the connectors are not damaged.

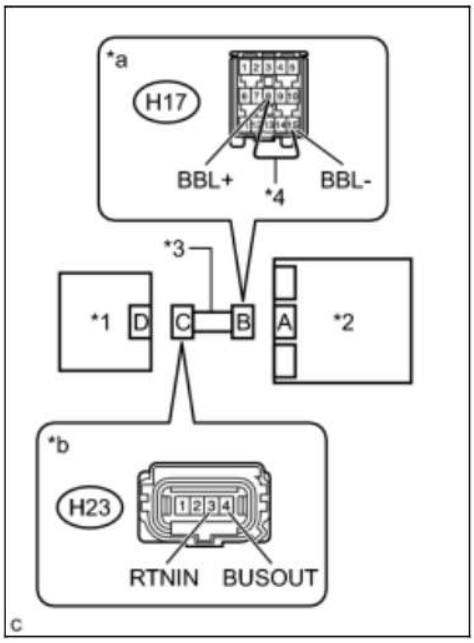
OK:

The terminals are not deformed or damaged.

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

21.	CHECK FLOOR WIRE (OPEN)



(a) Using a service wire, connect terminals 8 (BBL+) and 15 (BBL-) of connector B.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-4 (BUSIN) - H23-3 (RTNIN)	Always	Below 1 Ω

(c) Disconnect the service wire from connector B.

Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly LH
*2	Airbag ECU Assembly

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*3	Floor Wire
*4	Service Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly LH)

NG ▶ **REPLACE FLOOR WIRE**

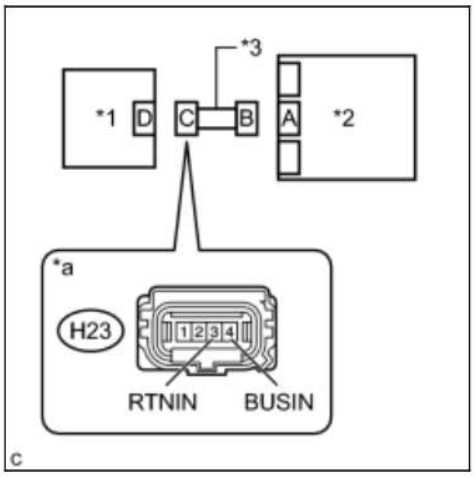
OK ▼

22.	**CHECK FLOOR WIRE (SHORT)**

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-4 (BUSIN) - H23-3 (RTNIN)	Always	1 MΩ or higher



Text in Illustration

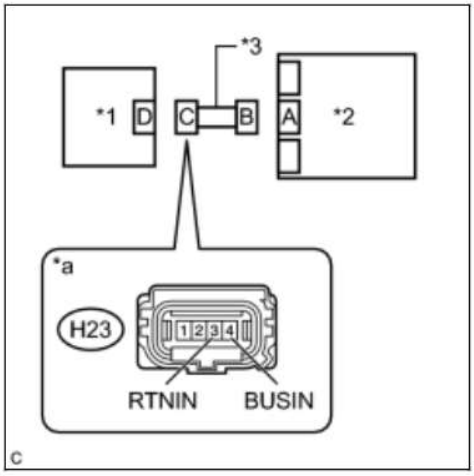
*1	Side No. 2 Airbag Sensor Assembly LH
*2	Airbag ECU Assembly
*3	Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly LH)

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

23.	**CHECK FLOOR WIRE (SHORT TO B+)**

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(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-4 (BUSIN) - Body ground	Ignition switch ON	Below 1 V
H23-3 (RTNIN) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly LH
*2	Airbag ECU Assembly
*3	Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly LH)

NG ▶ **REPLACE FLOOR WIRE**

OK

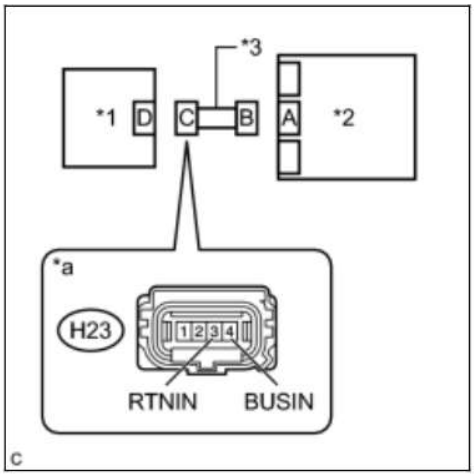
▼

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24.	CHECK FLOOR WIRE (SHORT TO GROUND)

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

Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-4 (BUSIN) - Body ground	Always	1 MΩ or higher
H23-3 (RTNIN) - Body ground	Always	1 MΩ or higher

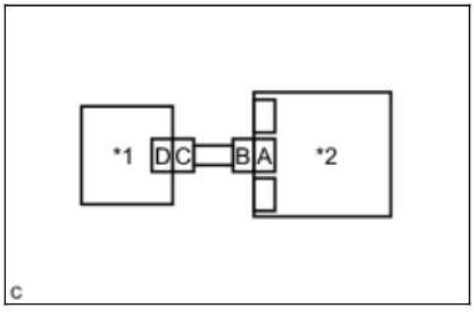
Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly LH
*2	Airbag ECU Assembly
*3	Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly LH)

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

25.	CHECK SIDE NO. 2 AIRBAG SENSOR ASSEMBLY LH



(a) Connect the connector to the airbag ECU assembly.

(b) Interchange the side No. 2 airbag sensor assembly LH with RH and connect the connectors.

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(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1628 is output.	A
DTC B1623 is output.	B
DTCs B1623 and B1628 are not output.	C

HINT:

Codes other than DTCs B1623 and B1628 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Return the side No. 2 airbag sensor assembly LH and RH to their original positions and connect the connectors.

Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly RH
*2	Airbag ECU Assembly

B ▶ REPLACE SIDE NO. 2 AIRBAG SENSOR ASSEMBLY LH

C ▶ USE SIMULATION METHOD TO CHECK

A ▶ REPLACE AIRBAG ECU ASSEMBLY

26.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal

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to disable the SRS system.

(c) Check that the connectors are properly connected to the side No. 2 airbag sensor assembly LH and rear airbag sensor LH.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the side No. 2 airbag sensor assembly LH and rear airbag sensor LH.

(e) Check that the terminals of the connectors are not damaged.

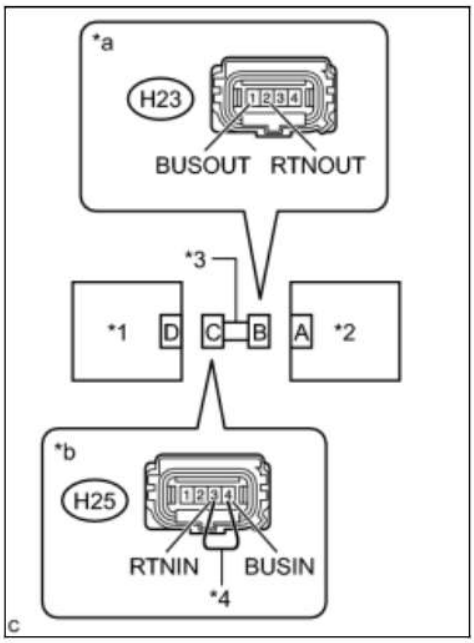
OK:

The terminals are not deformed or damaged.

NG ▶ **REPLACE WIRE HARNESS**

OK ▼

27.	CHECK FLOOR WIRE (OPEN)



(a) Using a service wire, connect terminals 4 (BUSIN) and 3 (RTNIN) of connector C.

NOTICE:

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

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

Standard Resistance:

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TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-1 (BUSOUT) - H23-2 (RTNOUT)	Always	Below 1 Ω

(c) Disconnect the service wire from connector C.

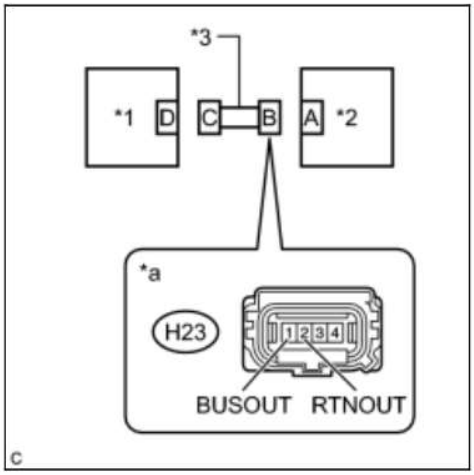
Text in Illustration

*1	Rear Airbag Sensor LH
*2	Side No. 2 Airbag Sensor Assembly LH
*3	Floor Wire
*4	Service Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly LH)
*b	Front view of wire harness connector (to Rear Airbag Sensor LH)

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

28.	**CHECK FLOOR WIRE (SHORT)**



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-1 (BUSOUT) - H23-2 (RTNOUT)	Always	1 MΩ or higher

Text in Illustration

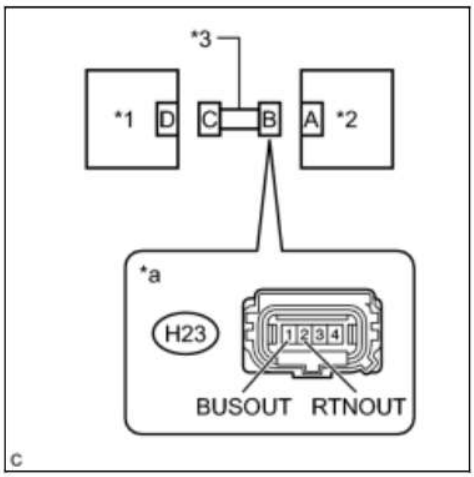
*1	Rear Airbag Sensor LH
*2	Side No. 2 Airbag Sensor Assembly LH
*3	Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly LH)

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NG ▶ **REPLACE FLOOR WIRE**

OK
▼

29.	**CHECK FLOOR WIRE (SHORT TO B+)**



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-1 (BUSOUT) - Body ground	Ignition switch ON	Below 1 V
H23-2 (RTNOUT) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Rear Airbag Sensor LH
*2	Side No. 2 Airbag Sensor Assembly LH
*3	Floor Wire
	Front view of wire harness connector

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*a	(to Side No. 2 Airbag Sensor Assembly LH)

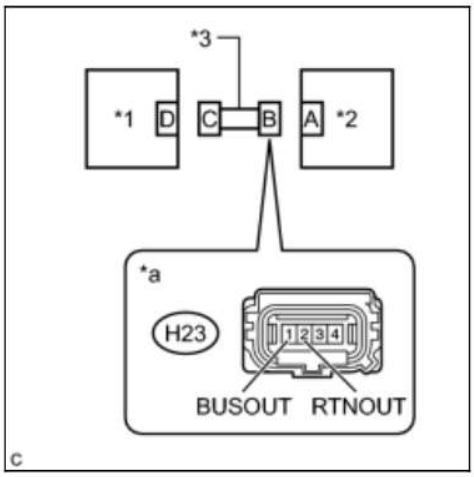
NG ▶ **REPLACE FLOOR WIRE**

OK ▼

30.	**CHECK FLOOR WIRE (SHORT TO GROUND)**

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

Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H23-1 (BUSOUT) - Body ground	Always	1 MΩ or higher
H23-2 (RTNOUT) - Body ground	Always	1 MΩ or higher

Text in Illustration

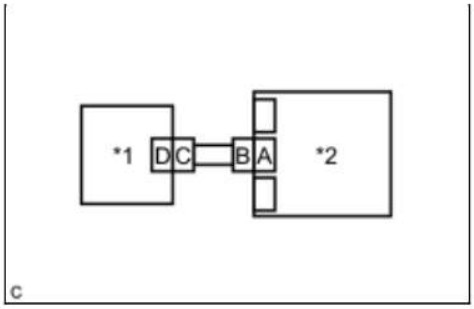
*1	Rear Airbag Sensor LH
*2	Side No. 2 Airbag Sensor Assembly LH
*3	Floor Wire
*a	Front view of wire harness connector (to Side No. 2 Airbag Sensor Assembly LH)

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

31.	**CHECK SIDE NO. 2 AIRBAG SENSOR ASSEMBLY LH**

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(a) Connect the connector to the rear airbag sensor LH.

(b) Interchange the side No. 2 airbag sensor assembly LH with RH and connect the connectors.

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1638 is output.	A
DTC B1633 is output.	B
DTCs B1633 and B1638 are not output.	C

HINT:

Codes other than DTCs B1633 and B1638 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Return the side No. 2 airbag sensor assembly LH and RH to their original positions and connect the connectors.

Text in Illustration

*1	Side No. 2 Airbag Sensor Assembly RH
*2	Airbag ECU Assembly

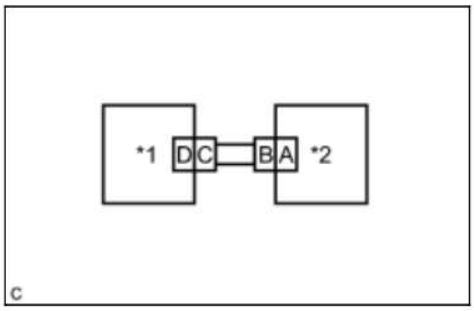
B ▶ **REPLACE SIDE NO. 2 AIRBAG SENSOR ASSEMBLY LH**

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C ▶ USE SIMULATION METHOD TO CHECK

A ▼

32.	CHECK REAR AIRBAG SENSOR LH



(a) Interchange the rear airbag sensor LH with RH and connect the connectors to them.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1638 is output.	A
DTC B1633 is output.	B
DTCs B1633 and B1638 are not output.	C

HINT:

Codes other than DTCs B1633 and B1638 may be output at this time, but they are not related to this check.

(g) Turn the ignition switch off.

(h) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(i) Return the rear airbag sensor LH and RH to their original positions and connect the connectors.

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Text in Illustration

*1	Rear Airbag Sensor RH
*2	Side No. 2 Airbag Sensor Assembly LH

B ▶ **REPLACE REAR AIRBAG SENSOR LH**

C ▶ **USE SIMULATION METHOD TO CHECK**

A ▶ **REPLACE AIRBAG ECU ASSEMBLY**

33.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the rear airbag sensor LH and side airbag sensor assembly LH. Also check that the connectors that link the floor wire and front door wire LH are properly connected.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the rear airbag sensor LH and side airbag sensor assembly LH. Also disconnect the connectors that link the floor wire and front door wire LH.

(e) Check that the terminals of the connectors are not damaged.

OK:

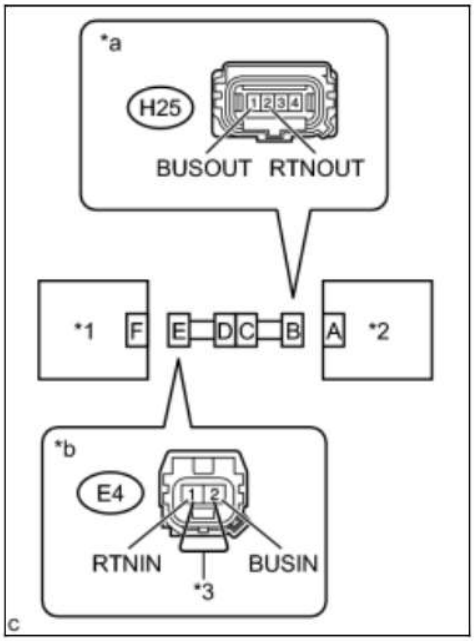
The terminals are not deformed or damaged.

NG ▶ **REPLACE WIRE HARNESS**

OK ▼

34.	**CHECK SIDE AIRBAG SENSOR ASSEMBLY LH CIRCUIT (OPEN)**

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(a) Connect the connectors that link the floor wire and front door wire LH.

(b) Using a service wire, connect terminals 2 (BUSIN) and 1 (RTNIN) of connector E.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H25-1 (BUSOUT) - H25-2 (RTNOUT)	Always	Below 1 Ω

Text in Illustration

*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor LH
*3	Service Wire
*a	Front view of wire harness connector (to Rear Airbag Sensor LH)
*b	Front view of wire harness connector (to Side Airbag Sensor Assembly LH)

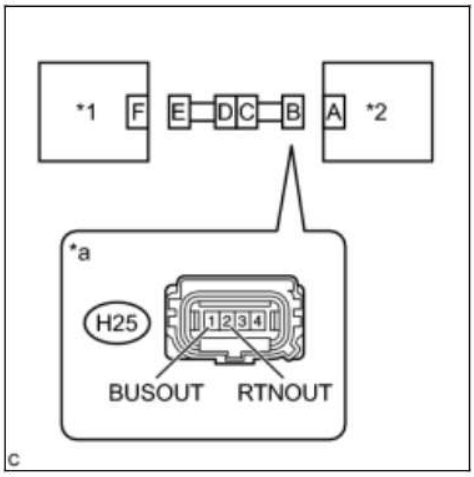
NG ▶ **CHECK FRONT DOOR WIRE LH (OPEN)**

OK

▼

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35.	CHECK SIDE AIRBAG SENSOR ASSEMBLY LH CIRCUIT (SHORT)



(a) Disconnect the service wire from connector E.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H25-1 (BUSOUT) - H25-2 (RTNOUT)	Always	1 MΩ or higher

Text in Illustration

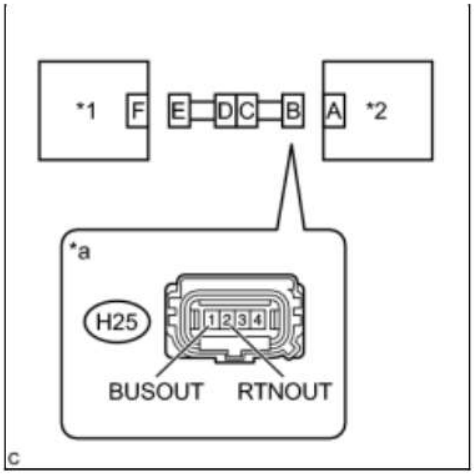
*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor LH
*a	Front view of wire harness connector (to Rear Airbag Sensor LH)

NG ▶ CHECK FRONT DOOR WIRE LH (SHORT)

OK ▼

36.	CHECK SIDE AIRBAG SENSOR ASSEMBLY LH CIRCUIT (SHORT TO B+)

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(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H25-1 (BUSOUT) - Body ground	Ignition switch ON	Below 1 V
H25-2 (RTNOUT) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor LH
*a	Front view of wire harness connector (to Rear Airbag Sensor LH)

NG ▶ **CHECK FRONT DOOR WIRE LH (SHORT TO B+)**

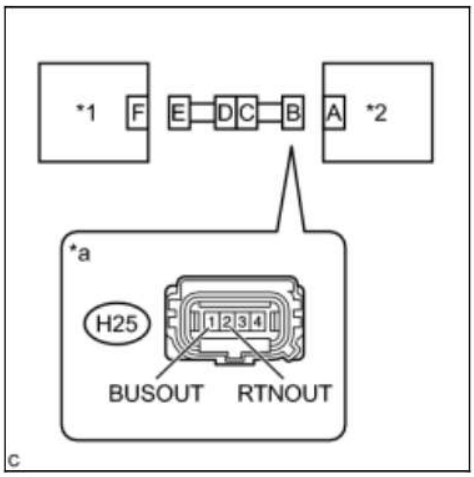
OK ▼

37.	**CHECK SIDE AIRBAG SENSOR ASSEMBLY LH CIRCUIT (SHORT TO GROUND)**

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

Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H25-1 (BUSOUT) - Body ground	Always	1 MΩ or higher
H25-2 (RTNOUT) - Body ground	Always	1 MΩ or higher

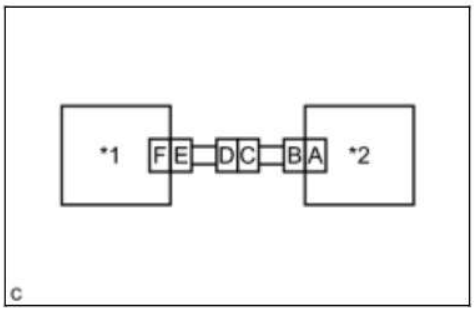
Text in Illustration

*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor LH
*a	Front view of wire harness connector (to Rear Airbag Sensor LH)

NG ▶ **CHECK FRONT DOOR WIRE LH (SHORT TO GROUND)**

OK ▼

38.	**CHECK SIDE AIRBAG SENSOR ASSEMBLY LH**



(a) Connect the connectors to the rear airbag sensor LH.

(b) Interchange the side airbag sensor assembly LH with RH and connect the connectors.

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1697 or B1698 is output.	A
DTC B1692 or B1693 is output.	B
DTCs B1692, B1693, B1697 and B1698 are not output.	C

HINT:

Codes other than DTCs B1692, B1693, B1697 and B1698 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Return the side airbag sensor assembly LH and RH to their original positions and connect the connectors.

Text in Illustration

*1	Side Airbag Sensor Assembly RH
*2	Rear Airbag Sensor LH

B ▶ **REPLACE SIDE AIRBAG SENSOR ASSEMBLY LH**

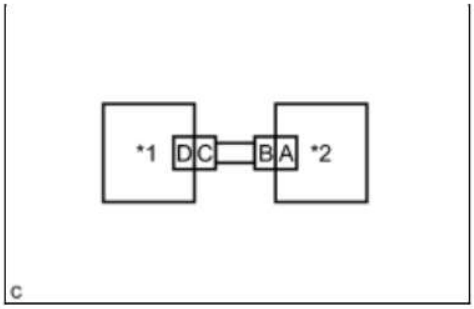
C ▶ **USE SIMULATION METHOD TO CHECK**

A

39.	**CHECK REAR AIRBAG SENSOR LH**

(a) Interchange the rear airbag sensor LH with RH and connect the connectors to them.

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(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1697 or B1698 is output.	A
DTC B1692 or B1693 is output.	B
DTCs B1692, B1693, B1697 and B1698 are not output.	C

HINT:

Codes other than DTCs B1692, B1693, B1697 and B1698 may be output at this time, but they are not related to this check.

(g) Turn the ignition switch off.

(h) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(i) Return the rear airbag sensor LH and RH to their original positions and connect the connectors.

Text in Illustration

*1	Rear Airbag Sensor RH
*2	Side No. 2 Airbag Sensor Assembly LH

B ▶ REPLACE REAR AIRBAG SENSOR LH

C ▶ USE SIMULATION METHOD TO CHECK

A ▶ REPLACE AIRBAG ECU ASSEMBLY

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40.	CHECK CURRENT DTC

(a) Check for current DTCs INFO .

Result:

RESULT	PROCEED TO
Current DTC B1627 is output.	A
Current DTC B1637 is output.	B

HINT:

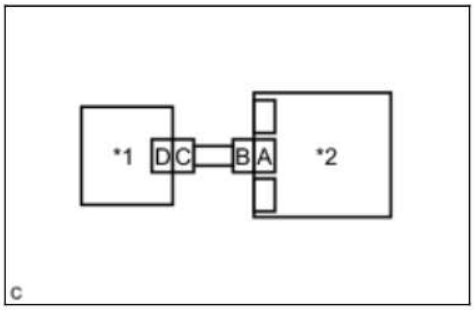
Codes other than current DTCs B1627 and B1637 may be output at this time, but they are not related to this check.

(b) Turn the ignition switch off.

B ▶ CHECK REAR AIRBAG SENSOR LH

A ▼

41.	CHECK SIDE NO. 2 AIRBAG SENSOR ASSEMBLY LH



(a) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(b) Interchange the side No. 2 airbag sensor assembly LH with RH and connect the connectors.

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

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Result:

RESULT	PROCEED TO
DTC B1627 is output.	A
DTC B1622 is output.	B
DTCs B1622 and B1627 are not output.	C

HINT:

Codes other than DTCs B1622 and B1627 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Return the side No. 2 airbag sensor assembly LH and RH to their original positions and connect the connectors.

Text in Illustration

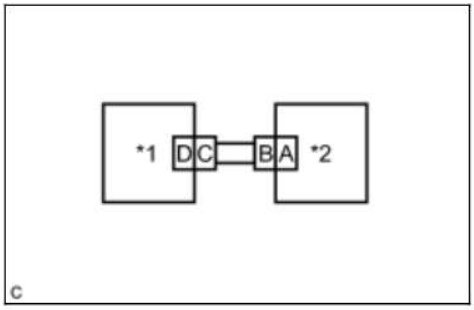
*1	Side No. 2 Airbag Sensor Assembly RH
*2	Airbag ECU Assembly

B ▶ **REPLACE SIDE NO. 2 AIRBAG SENSOR ASSEMBLY LH**

C ▶ **USE SIMULATION METHOD TO CHECK**

A ▶ **REPLACE AIRBAG ECU ASSEMBLY**

42.	**CHECK REAR AIRBAG SENSOR LH**



(a) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

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

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(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1637 is output.	A
DTC B1632 is output.	B
DTCs B1632 and B1637 are not output.	C

HINT:

Codes other than DTCs B1632 and B1637 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Return the rear airbag sensor LH and RH to their original positions and connect the connectors.

Text in Illustration

*1	Rear Airbag Sensor RH
*2	Side No. 2 Airbag Sensor Assembly LH

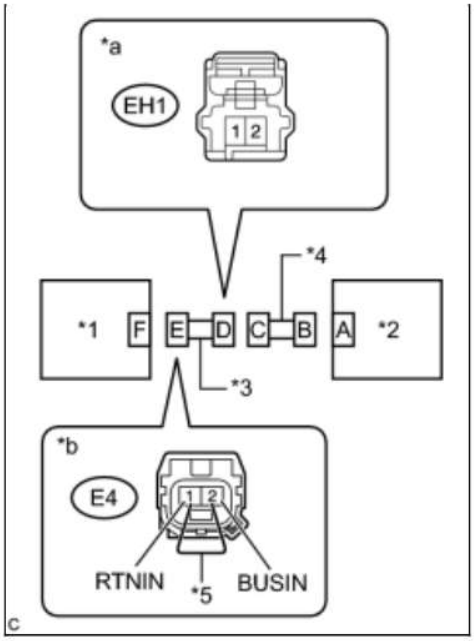
B ▶ REPLACE REAR AIRBAG SENSOR LH

C ▶ USE SIMULATION METHOD TO CHECK

A ▶ REPLACE AIRBAG ECU ASSEMBLY

43.	**CHECK FRONT DOOR WIRE LH (OPEN)**

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(a) Disconnect the front door wire LH connector from the floor wire.

HINT:

The service wire has already been inserted into connector E.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
EH1-1 - EH1-2	Always	Below 1 Ω

(c) Disconnect the service wire from connector E.

Text in Illustration

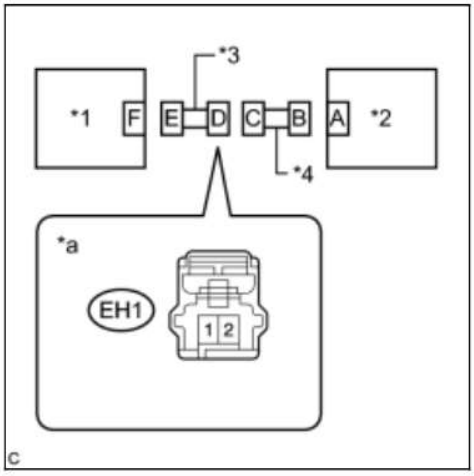
*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor LH
*3	Front Door Wire LH
*4	Floor Wire
*5	Service Wire
*a	Front view of wire harness connector (to Floor Wire)
*b	Front view of wire harness connector (to Side Airbag Sensor Assembly LH)

NG ▶ **REPLACE FRONT DOOR WIRE LH**

OK ▶ **REPLACE FLOOR WIRE**

44.	**CHECK FRONT DOOR WIRE LH (SHORT)**

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(a) Disconnect the front door wire LH connector from the floor wire.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
EH1-1 - EH1-2	Always	1 MΩ or higher

Text in Illustration

*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor LH
*3	Front Door Wire LH
*4	Floor Wire
*a	Front view of wire harness connector (to Floor Wire)

NG ▶ **REPLACE FRONT DOOR WIRE LH**

OK ▶ **REPLACE FLOOR WIRE**

45.	CHECK FRONT DOOR WIRE LH (SHORT TO B+)

(a) Disconnect the front door wire LH connector from the floor wire.

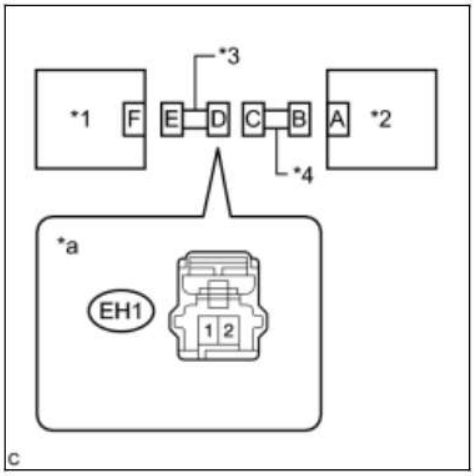
(b) Connect the cable to the negative (-) battery terminal.

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(c) Turn the ignition switch to ON.

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

Standard Voltage:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
EH1-1 - Body ground	Ignition switch ON	Below 1 V
EH1-2 - Body ground	Ignition switch ON	Below 1 V

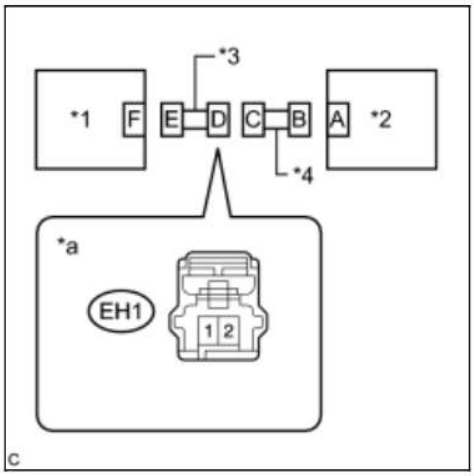
Text in Illustration

*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor LH
*3	Front Door Wire LH
*4	Floor Wire
*a	Front view of wire harness connector (to Floor Wire)

NG ▶ **REPLACE FRONT DOOR WIRE LH**

OK ▶ **REPLACE FLOOR WIRE**

46.	CHECK FRONT DOOR WIRE LH (SHORT TO GROUND)



(a) Disconnect the front door wire LH connector from the floor wire.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
EH1-1 - Body ground	Always	1 MΩ or higher
EH1-2 - Body ground	Always	1 MΩ or higher

Text in Illustration

*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor LH
*3	Front Door Wire LH
*4	Floor Wire
*a	Front view of wire harness connector (to Floor Wire)

NG ▶ **REPLACE FRONT DOOR WIRE LH**

OK ▶ **REPLACE FLOOR WIRE**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000001NZX05CX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1630,B16F6: Side No. 2 Airbag Sensor RH Malfunction (2013 FR-S)		

DTC	**B1630**	**Side No. 2 Airbag Sensor RH Malfunction**

DTC	**B16F6**	**Side No. 2 Airbag Sensor RH Mismatch**

DESCRIPTION

The side collision sensor RH circuit (to determine deployment of the front seat airbag assembly RH, curtain shield airbag assembly RH and front seat outer belt assembly RH) is composed of the airbag ECU assembly, side airbag sensor assembly RH, side No. 2 airbag sensor assembly RH and rear airbag sensor RH and No. 2 airbag sensor assembly.

The rear airbag sensor RH detects impacts to the vehicle and sends signals to the airbag ECU assembly to determine if the airbag should be deployed.

These DTCs are stored when a malfunction is detected in the rear airbag sensor RH.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1630	• Rear airbag sensor RH malfunction • Airbag ECU assembly malfunction	• Rear airbag sensor RH • Airbag ECU assembly
B16F6	• Improper installation of rear airbag sensor RH • Airbag ECU assembly malfunction	

WIRING DIAGRAM

Refer to DTCs B1622, B1623, B1632, B1633, B1642, B1692 and B1693 INFO .

INSPECTION PROCEDURE

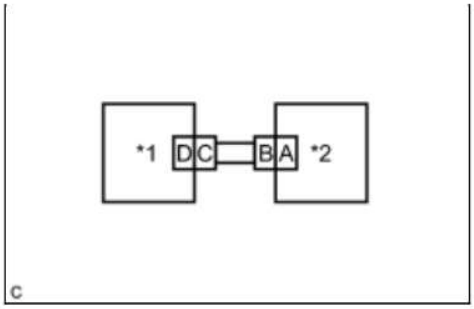
NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK REAR AIRBAG SENSOR RH**

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(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Interchange the rear airbag sensor RH with LH and connect the connectors to them.

(d) Connect the cable to the negative (-) battery terminal.

(e) Clear the DTCs stored in memory INFO .

(f) Turn the ignition switch off.

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

(h) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1630 or B16F6 is output.	A
DTC B1635 or B16F7 is output.	B
DTCs B1630, B1635, B16F6 and B16F7 are not output.	C

HINT:

Codes other than DTCs B1630, B1635, B16F6 and B16F7 may be output at this time, but they are not related to this check.

(i) Turn the ignition switch off.

(j) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(k) Return the rear airbag sensor RH and LH to their original positions and connect the connectors.

Text in Illustration

*1	Rear Airbag Sensor LH
*2	Side No. 2 Airbag Sensor Assembly RH

B ▶ **REPLACE REAR AIRBAG SENSOR RH**

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C ▶ USE SIMULATION METHOD TO CHECK

A ▶ REPLACE AIRBAG ECU ASSEMBLY

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000001NZW05CX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1635,B16F7: Side No. 2 Airbag Sensor LH Malfunction (2013 FR-S)		

DTC	**B1635**	**Side No. 2 Airbag Sensor LH Malfunction**

DTC	**B16F7**	**Side No. 2 Airbag Sensor LH Mismatch**

DESCRIPTION

The side collision sensor LH circuit (to determine deployment of the front seat airbag assembly LH, curtain shield airbag assembly LH and front seat outer belt assembly LH) is composed of the airbag ECU assembly, side airbag sensor assembly LH, side No. 2 airbag sensor assembly LH and rear airbag sensor LH and No. 2 airbag sensor assembly.

The rear airbag sensor LH detects impacts to the vehicle and sends signals to the airbag ECU assembly to determine if the airbag should be deployed.

These DTCs are stored when a malfunction is detected in the rear airbag sensor LH.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1635	• Rear airbag sensor LH malfunction • Airbag ECU assembly malfunction	• Rear airbag sensor LH • Airbag ECU assembly
B16F7	• Improper installation of rear airbag sensor LH • Airbag ECU assembly malfunction	

WIRING DIAGRAM

Refer to DTCs B1627, B1628, B1637, B1638, B1647, B1697 and B1698 INFO .

INSPECTION PROCEDURE

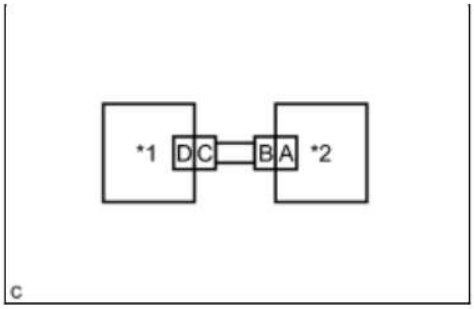
NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK REAR AIRBAG SENSOR LH**

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(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Interchange the rear airbag sensor LH with RH and connect the connectors to them.

(d) Connect the cable to the negative (-) battery terminal.

(e) Clear the DTCs stored in memory INFO .

(f) Turn the ignition switch off.

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

(h) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1635 or B16F7 is output.	A
DTC B1630 or B16F6 is output.	B
DTCs B1630, B1635, B16F6 and B16F7 are not output.	C

HINT:

Codes other than DTCs B1630, B1635, B16F6 and B16F7 may be output at this time, but they are not related to this check.

(i) Turn the ignition switch off.

(j) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(k) Return the rear airbag sensor LH and RH to their original positions and connect the connectors.

Text in Illustration

*1	Rear Airbag Sensor RH
*2	Side No. 2 Airbag Sensor Assembly LH

B ▶ **REPLACE REAR AIRBAG SENSOR LH**

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C ▶ USE SIMULATION METHOD TO CHECK

A ▶ REPLACE AIRBAG ECU ASSEMBLY

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000016WN05TX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1650: Occupant Classification System Malfunction (2013 FR-S)		

DTC	**B1650**	**Occupant Classification System Malfunction**

DESCRIPTION

The occupant classification system circuit consists of the airbag ECU assembly and occupant classification system.

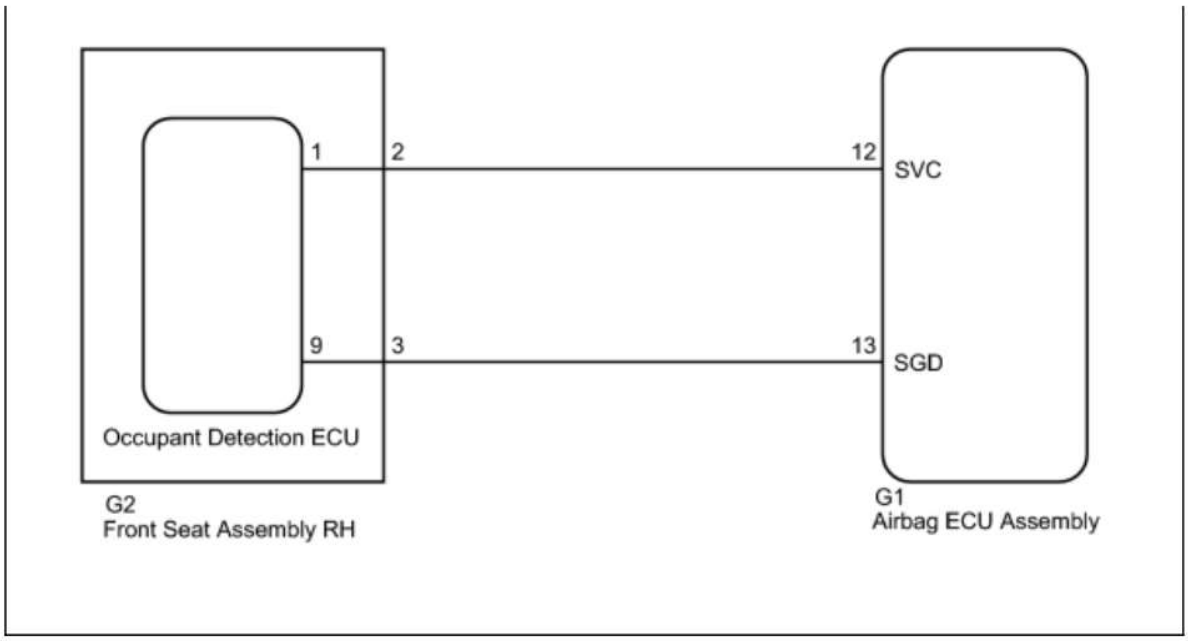
If the airbag ECU assembly receives signals from the occupant detection ECU, it determines whether the front passenger airbag and front seat belt pretensioner RH should be operated.

DTC B1650 is stored when a malfunction is detected in the occupant classification system circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1650	• The airbag ECU assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the occupant classification system circuit. • Occupant classification system malfunction • Airbag ECU assembly malfunction	• No. 2 floor wire • Front seat assembly RH • Airbag ECU assembly

WIRING DIAGRAM

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INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK DTC (OCCUPANT DETECTION ECU)**

(a) Check for DTCs of the occupant detection ECU INFO .

OK:

DTC is not output.

NG ▶ **GO TO OCCUPANT CLASSIFICATION SYSTEM**

OK ▼

2.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

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(c) Check that the connectors are properly connected to the airbag ECU assembly and front seat wire RH.

OK:
The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the airbag ECU assembly and front seat wire RH.

(e) Check that the terminals of the connectors are not damaged.

OK:
The terminals are not deformed or damaged.

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

3.	**CHECK CONNECTORS**

(a) Check that the connectors are properly connected to the occupant detection ECU.

OK:
The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(b) Disconnect the connectors from the occupant detection ECU.

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

OK:
The terminals are not deformed or damaged.

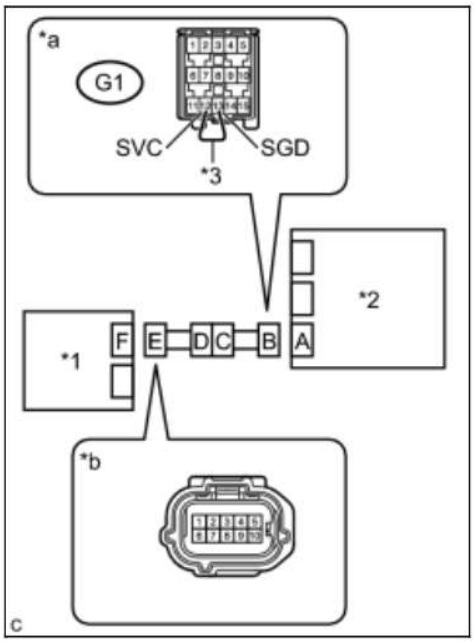
NG ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

OK ▼

4.	**CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (OPEN)**

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(a) Connect the connectors to the front seat wire RH.



(b) Using a service wire, connect terminals 12 (SVC) and 13 (SGD) of connector B.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
1 - 9	Always	Below 1 Ω

Text in Illustration

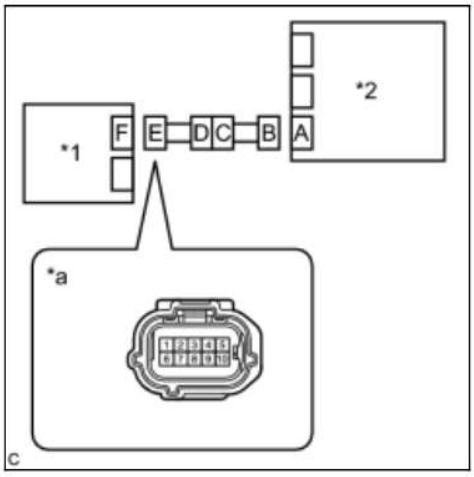
*1	Occupant Detection ECU
*2	Airbag ECU Assembly
*3	Service Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Occupant Detection ECU)

NG ▶ **CHECK NO. 2 FLOOR WIRE (OPEN)**

OK ▼

5.	**CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (SHORT)**

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(a) Disconnect the service wire from connector B.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
1 - 9	Always	1 MΩ or higher

Text in Illustration

*1	Occupant Detection ECU
*2	Airbag ECU Assembly
*a	Front view of wire harness connector (to Occupant Detection ECU)

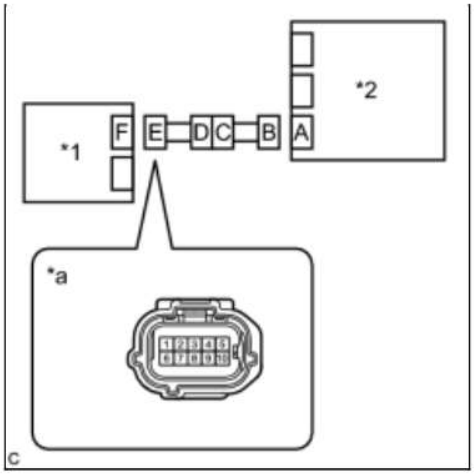
NG ▶ **CHECK NO. 2 FLOOR WIRE (SHORT)**

OK
▼

6.	**CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (SHORT TO B+)**

(a) Connect the cable to the negative (-) battery terminal.

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(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
1 - Body ground	Ignition switch ON	Below 1 V
9 - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Occupant Detection ECU
*2	Airbag ECU Assembly
*a	Front view of wire harness connector (to Occupant Detection ECU)

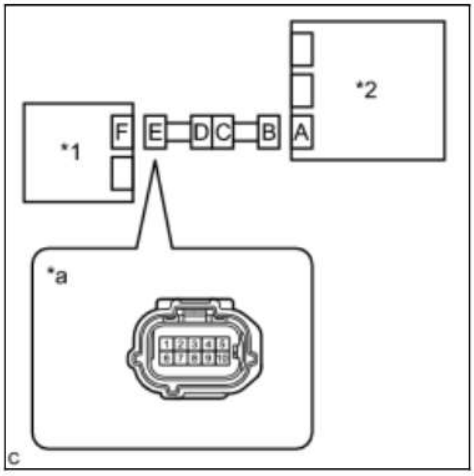
NG ▶ **CHECK NO. 2 FLOOR WIRE (SHORT TO B+)**

OK ▼

7.	**CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (SHORT TO GROUND)**

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



Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
1 - Body ground	Always	1 MΩ or higher
9 - Body ground	Always	1 MΩ or higher

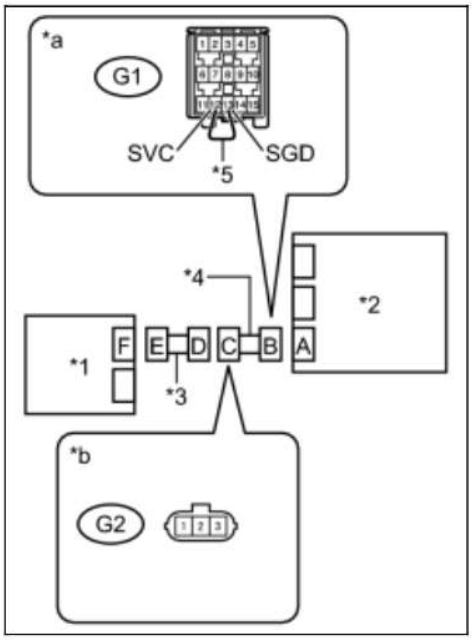
Text in Illustration

*1	Occupant Detection ECU
*2	Airbag ECU Assembly
*a	Front view of wire harness connector (to Occupant Detection ECU)

NG ▶ **CHECK NO. 2 FLOOR WIRE (SHORT TO GROUND)**

OK ▶ **REPLACE AIRBAG ECU ASSEMBLY**

8.	CHECK NO. 2 FLOOR WIRE (OPEN)



(a) Disconnect the front seat wire RH from the No. 2 floor wire.

HINT:

The service wire has already been inserted into connector B.

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

Standard Resistance:

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TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G2-2 - G2-3	Always	Below 1 Ω

(c) Disconnect the service wire from connector B.

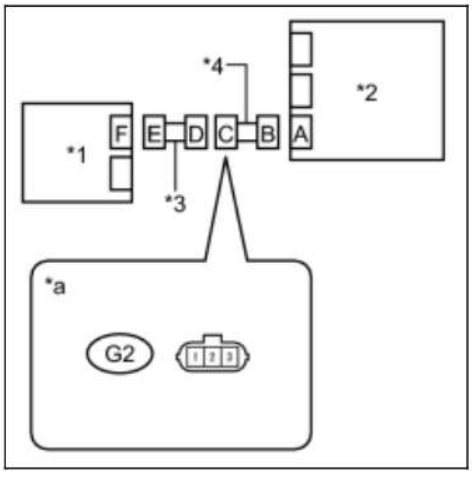
Text in Illustration

*1	Occupant Detection ECU
*2	Airbag ECU Assembly
*3	Front Seat Wire RH
*4	No. 2 Floor Wire
*5	Service Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Front Seat Wire RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

9.	**CHECK NO. 2 FLOOR WIRE (SHORT)**



(a) Disconnect the front seat wire RH from the No. 2 floor wire.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G2-2 - G2-3	Always	1 MΩ or higher

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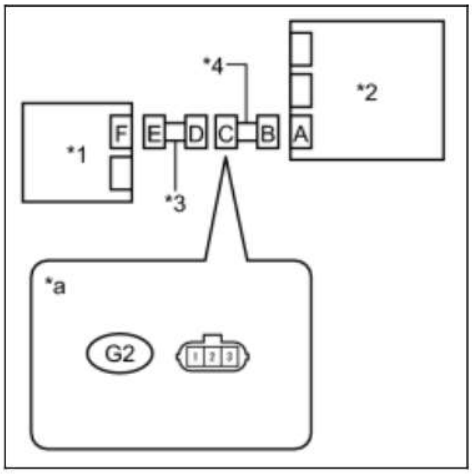
Text in Illustration

*1	Occupant Detection ECU
*2	Airbag ECU Assembly
*3	Front Seat Wire RH
*4	No. 2 Floor Wire
*a	Front view of wire harness connector (to Front Seat Wire RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

10.	**CHECK NO. 2 FLOOR WIRE (SHORT TO B+)**



(a) Disconnect the front seat wire RH from the No. 2 floor wire.

(b) Connect the cable to the negative (-) battery terminal.

(c) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G2-2 - Body ground	Ignition switch ON	Below 1 V
G2-3 - Body ground	Ignition switch ON	Below 1 V

Text in Illustration

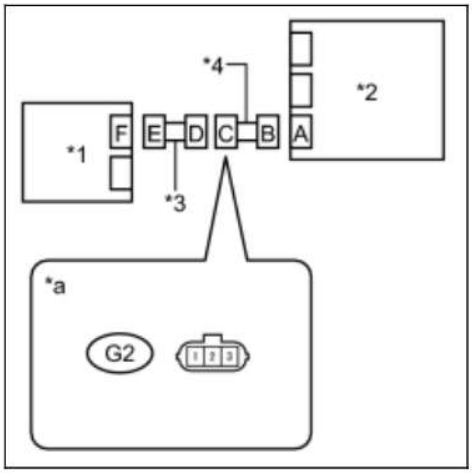
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*1	Occupant Detection ECU
*2	Airbag ECU Assembly
*3	Front Seat Wire RH
*4	No. 2 Floor Wire
*a	Front view of wire harness connector (to Front Seat Wire RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

11.	**CHECK NO. 2 FLOOR WIRE (SHORT TO GROUND)**



(a) Disconnect the front seat wire RH from the No. 2 floor wire.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G2-2 - Body ground	Always	1 MΩ or higher
G2-3 - Body ground	Always	1 MΩ or higher

Text in Illustration

*1	Occupant Detection ECU
*2	Airbag ECU Assembly
*3	Front Seat Wire RH
*4	No. 2 Floor Wire
*a	Front view of wire harness connector

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	(to Front Seat Wire RH)

NG ▶ REPLACE NO. 2 FLOOR WIRE

OK ▶ REPLACE FRONT SEAT ASSEMBLY RH

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000001NZY05LX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1655: Seat Belt Buckle Switch (RH) (2013 FR-S)		

DTC	**B1655**	**Seat Belt Buckle Switch (RH)**

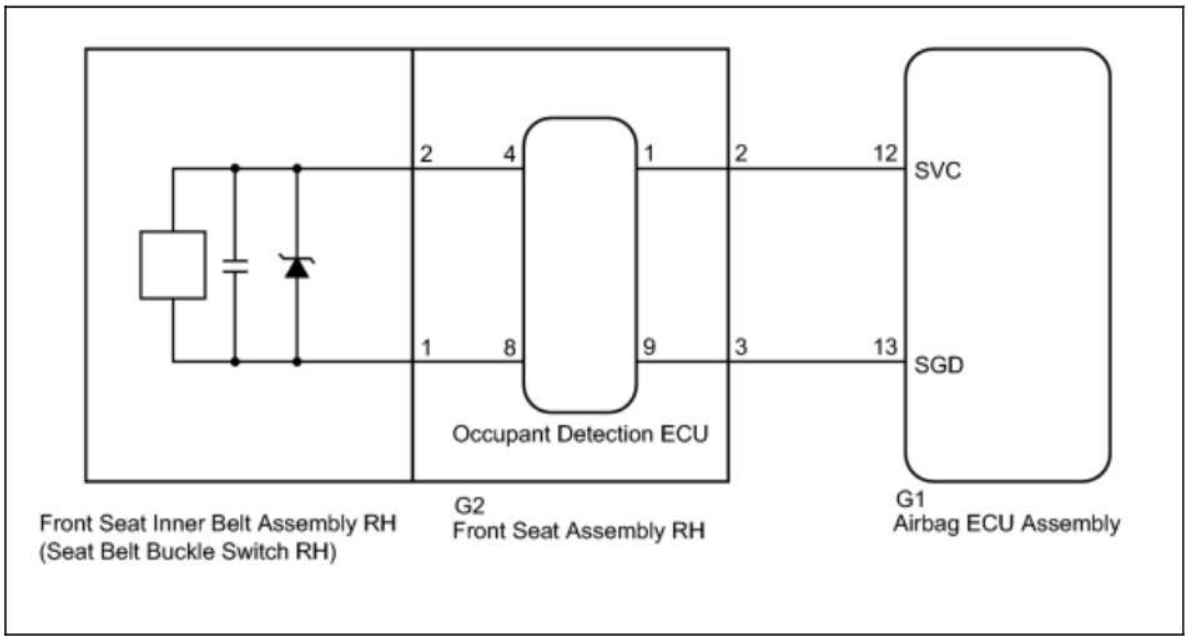
DESCRIPTION

The seat belt buckle switch RH circuit consists of the occupant detection ECU, airbag ECU assembly and front seat inner belt assembly RH.

DTC B1655 is stored when a malfunction is detected in the seat belt buckle switch RH circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1655	• The airbag ECU assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the seat belt buckle switch RH circuit. • Front seat inner belt assembly RH malfunction • Occupant detection ECU malfunction • Airbag ECU assembly malfunction	• Front seat assembly RH • Front seat inner belt assembly RH (Seat belt buckle switch RH) • Airbag ECU assembly

WIRING DIAGRAM



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INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

HINT:

If DTC B1650 has been stored, check the errors with respect to that DTC first.

PROCEDURE

1.	**CHECK DTC (OCCUPANT CLASSIFICATION SYSTEM)**

(a) Check for DTCs of the occupant classification system INFO .

Result :

RESULT	PROCEED TO
DTCs are not output	A
DTC B1760, B1761,B1771 or B1795 is output.	B

B ▶ **GO TO OCCUPANT CLASSIFICATION SYSTEM (DIAGNOSTIC TROUBLE CODE CHART)**

A ▼

2.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

(c) Check that the connectors are properly connected to the occupant detection ECU and front seat inner belt assembly RH.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the occupant detection ECU and front seat inner belt assembly RH.

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(e) Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

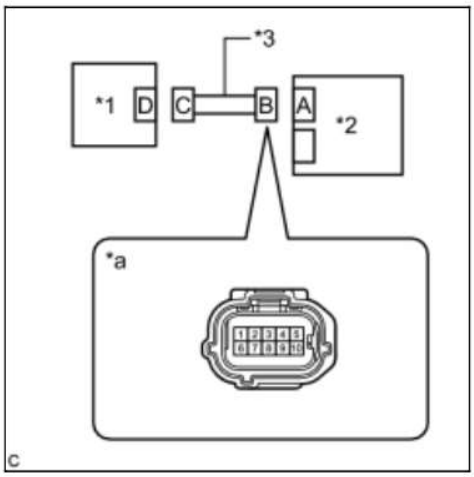
NG ▶ REPLACE FRONT SEAT ASSEMBLY RH

OK ▼

3.	CHECK FRONT SEAT WIRE RH (SHORT TO B+)

(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.



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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
4 - Body ground	Ignition switch ON	Below 1 V
8 - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Front Seat Inner Belt Assembly RH
*2	Occupant Detection ECU
*3	Front Seat Wire RH
*a	Front view of wire harness connector (to Occupant Detection ECU)

NG ▶ REPLACE FRONT SEAT ASSEMBLY RH

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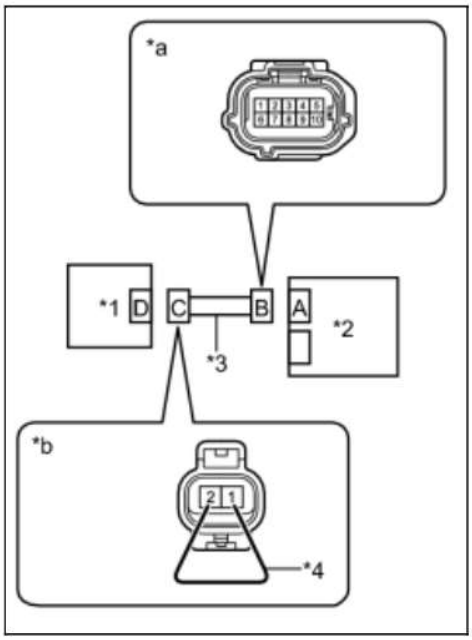
OK

4.	CHECK FRONT SEAT WIRE RH (OPEN)

(a) Using a service wire, connect terminals 1 and 2 of connector C.

NOTICE:

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



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
4 - 8	Always	Below 1 Ω

(c) Disconnect the service wire from connector C.

Text in Illustration

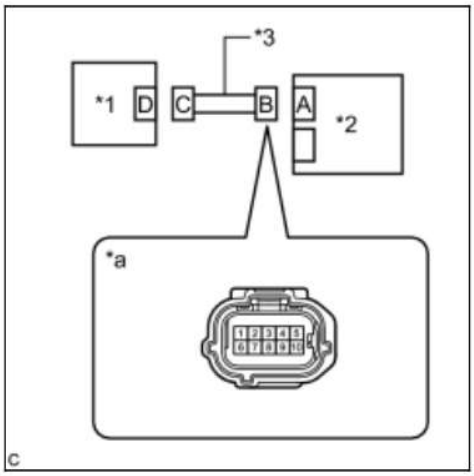
*1	Front Seat Inner Belt Assembly RH
*2	Occupant Detection ECU
*3	Front Seat Wire RH
*4	Service Wire
*a	Front view of wire harness connector (to Occupant Detection ECU)
*b	Front view of wire harness connector (to Front Seat Inner Belt Assembly RH)

NG ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

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OK

5.	CHECK FRONT SEAT WIRE RH (SHORT)



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
4 - 8	Always	1 MΩ or higher

Text in Illustration

*1	Front Seat Inner Belt Assembly RH
*2	Occupant Detection ECU
*3	Front Seat Wire RH
*a	Front view of wire harness connector (to Occupant Detection ECU)

NG ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

OK

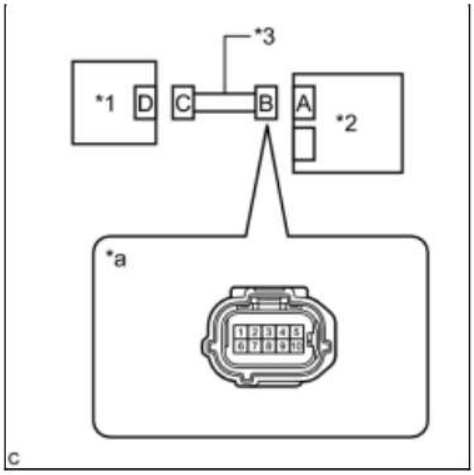
6.	CHECK FRONT SEAT WIRE RH (SHORT TO GROUND)

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION

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4 - Body ground	Always	1 MΩ or higher
8 - Body ground	Always	1 MΩ or higher

Text in Illustration

*1	Front Seat Inner Belt Assembly RH
*2	Occupant Detection ECU
*3	Front Seat Wire RH
*a	Front view of wire harness connector (to Occupant Detection ECU)

NG ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

OK ▼

7.	CHECK DTC

(a) Connect the connectors to the occupant detection ECU and front seat inner belt assembly RH.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in the occupant detection ECU INFO .

(d) Clear the DTCs stored in the airbag ECU assembly INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

OK:
DTC B1655 is not output.

HINT:

Codes other than DTC B1655 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

NG ▶ **CHECK FRONT SEAT INNER BELT ASSEMBLY LH**

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OK ▶ USE SIMULATION METHOD TO CHECK

8.	CHECK FRONT SEAT INNER BELT ASSEMBLY LH

(a) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(b) Replace the front seat inner belt assembly RH with a known good one INFO .

HINT:

Perform the following inspection using known good parts from another vehicle if possible.

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in the occupant detection ECU INFO .

(e) Clear the DTCs stored in the airbag ECU assembly INFO .

(f) Turn the ignition switch off.

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

(h) Check for DTCs INFO .

OK:

DTC B1655 is not output.

HINT:

Codes other than DTC B1655 may be output at this time, but they are not related to this check.

(i) Turn the ignition switch off.

(j) Disconnect the cable from the negative (-) battery terminal.

(k) Restore the front seat inner belt assembly RH that was installed for testing to its original location INFO .

NG ▶ CHECK FRONT SEAT ASSEMBLY RH

OK ▶ REPLACE FRONT SEAT INNER BELT ASSEMBLY LH

9.	CHECK FRONT SEAT ASSEMBLY RH

(a) Disconnect the cable from the negative (-) battery terminal.

(b) Replace the front seat assembly RH with a new one INFO .

(c) Connect the cable to the negative (-) battery terminal.

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(d) Connect the connectors to the occupant detection ECU and front seat inner belt assembly RH.

(e) Connect the cable to the negative (-) battery terminal.

(f) Clear the DTCs stored in the occupant detection ECU INFO .

(g) Clear the DTCs stored in the airbag ECU assembly INFO .

(h) Turn the ignition switch off.

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

(j) Check for DTCs INFO .

OK:
DTC B1655 is not output.

HINT:

Codes other than DTC B1655 may be output at this time, but they are not related to this check.

NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **END (FRONT SEAT ASSEMBLY RH WAS DEFECTIVE)**



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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000001W2808SX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1660: P Seat Airbag Active Mode Indicator (2013 FR-S)		

DTC	**B1660**	**P Seat Airbag Active Mode Indicator**

DESCRIPTION

The passenger airbag ON/OFF indicator circuit consists of the airbag ECU assembly and clock assembly (passenger airbag ON/OFF indicator).

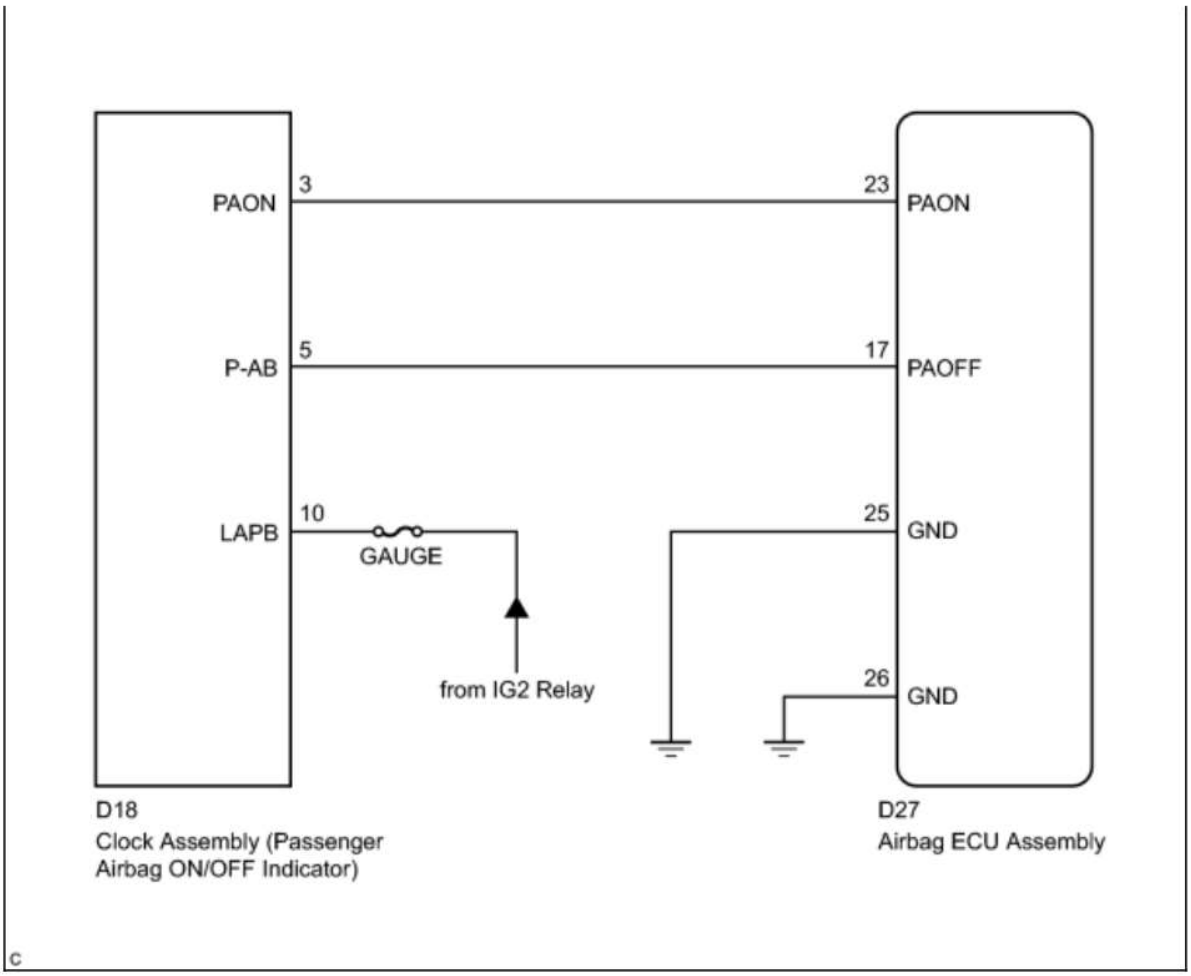
The passenger airbag ON/OFF indicator indicates the operation condition of the front passenger airbag and front seat belt pretensioner RH.

DTC B1660 is stored when a malfunction is detected in the passenger airbag ON/OFF indicator circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1660	• The airbag ECU assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the passenger airbag ON/OFF indicator circuit. • Clock assembly malfunction • Airbag ECU assembly malfunction	• Instrument panel wire • Clock assembly (Passenger airbag ON/OFF indicator) • Airbag ECU assembly

WIRING DIAGRAM

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INSPECTION PROCEDURE

NOTICE:

- After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .
- Inspect the fuses for circuits related to this system before performing the following inspection procedure.

HINT:

- Perform the simulation method by selecting check mode (Signal Check) using the Techstream INFO .
- After selecting check mode (Signal Check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city road or rough road INFO .

PROCEDURE

1.	**CHECK PASSENGER AIRBAG ON/OFF INDICATOR CONDITION**

(a) Turn the ignition switch to ON.

(b) Check the passenger airbag ON/OFF indicator operation.

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Result:

ON/OFF INDICATOR ILLUMINATION	PROCEED TO
Always ON	A
OFF	B

HINT:

Refer to the normal condition of the passenger airbag ON/OFF indicator INFO .

B ▶ **CHECK CONNECTORS**

A

2.	CHECK CONNECTORS

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the airbag ECU assembly and clock assembly.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the airbag ECU assembly and clock assembly.

(e) Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK

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3.	CHECK PASSENGER AIRBAG ON/OFF INDICATOR

(a) Connect the connector to the clock assembly.

(b) Connect the cable to the negative (-) battery terminal.

(c) Turn the ignition switch to ON.

(d) Check the passenger airbag ON/OFF indicator operation.

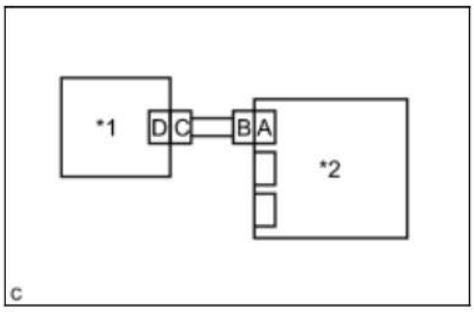
OK:

The passenger airbag ON/OFF indicator does not come on.

NG ▶ **CHECK INSTRUMENT PANEL WIRE (OPEN)**

OK ▼

4.	CHECK DTC



(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Connect the connector to the airbag ECU assembly.

(d) Connect the cable to the negative (-) battery terminal.

(e) Clear the DTCs stored in memory INFO .

(f) Turn the ignition switch off.

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

(h) Check for DTCs INFO .

OK:

DTC B1660 is not output.

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HINT:

Codes other than DTC B1660 may be output at this time, but they are not related to this check.

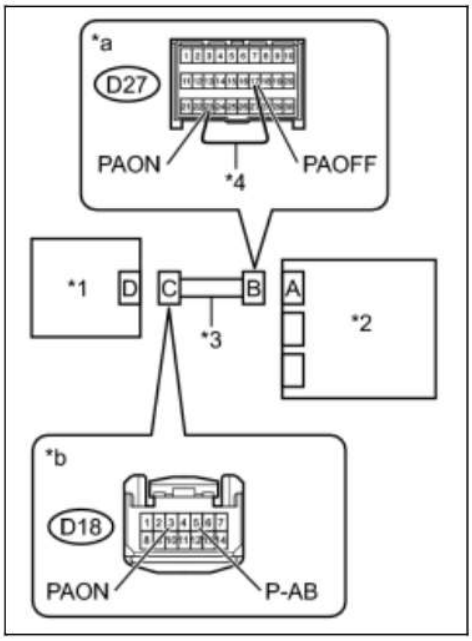
Text in Illustration

*1	Clock Assembly
*2	Airbag ECU Assembly

NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

5.	**CHECK INSTRUMENT PANEL WIRE (OPEN)**



(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Disconnect the connector from the clock assembly.

(d) Using a service wire, connect terminals 23 (PAON) and 17 (PAOFF) of connector B.

NOTICE:

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

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

Standard Resistance:

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TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D18-3 (PAON) - D18-5 (P-AB)	Always	Below 1 Ω

(f) Disconnect the service wire from connector B.

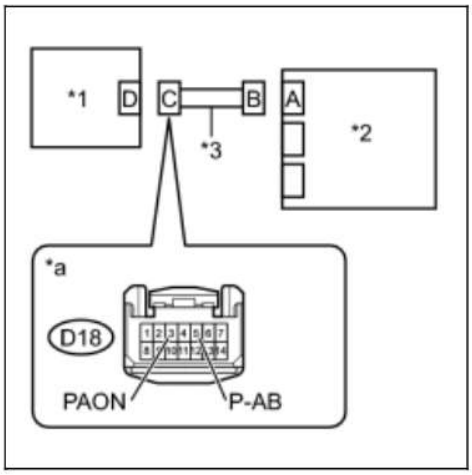
Text in Illustration

*1	Clock Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*4	Service Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Clock Assembly)

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▼

6.	CHECK INSTRUMENT PANEL WIRE (SHORT)



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D18-3 (PAON) - D18-5 (P-AB)	Always	1 MΩ or higher

Text in Illustration

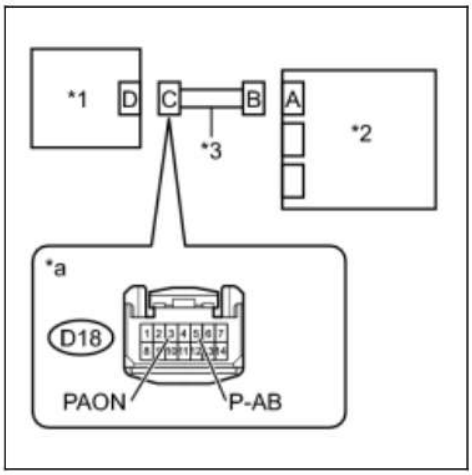
*1	Clock Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*a	Front view of wire harness connector (to Clock Assembly)

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NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▼

7.	**CHECK INSTRUMENT PANEL WIRE (SHORT TO B+)**



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D18-3 (PAON) - Body ground	Ignition switch ON	Below 1 V
D18-5 (P-AB) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Clock Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*a	Front view of wire harness connector

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	(to Clock Assembly)

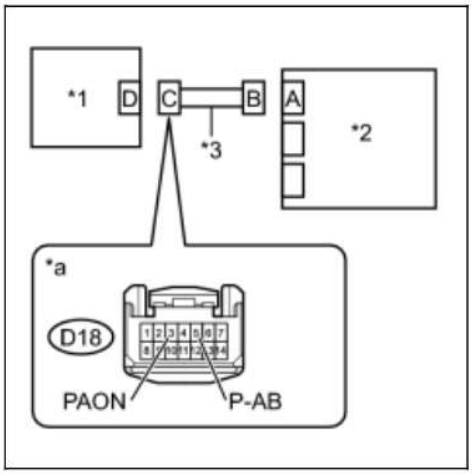
NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▼

8.	**CHECK INSTRUMENT PANEL WIRE (SHORT TO GROUND)**

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

Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D18-3 (PAON) - Body ground	Always	1 MΩ or higher
D18-5 (P-AB) - Body ground	Always	1 MΩ or higher

Text in Illustration

*1	Clock Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*a	Front view of wire harness connector (to Clock Assembly)

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▶ **REPLACE CLOCK ASSEMBLY**

9.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

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Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the airbag ECU assembly and clock assembly.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the airbag ECU assembly and clock assembly.

(e) Check that the terminals of the connectors are not damaged.

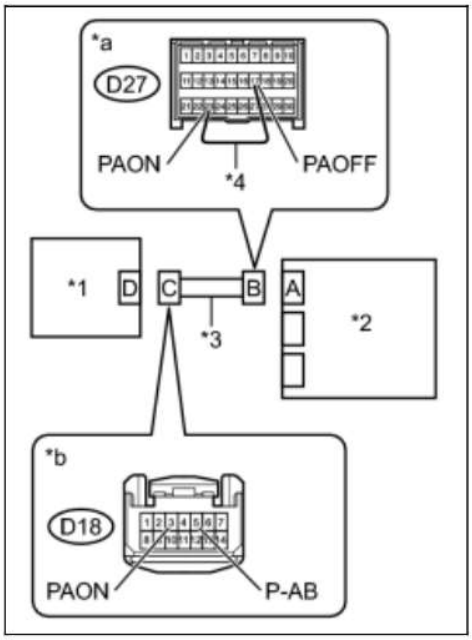
OK:

The terminals are not deformed or damaged.

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▼

10.	CHECK INSTRUMENT PANEL WIRE (OPEN)



(a) Using a service wire, connect terminals 23 (PAON) and 17 (PAOFF) of connector B.

NOTICE:

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

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

Standard Resistance:

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TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D18-3 (PAON) - D18-5 (P-AB)	Always	Below 1 Ω

(c) Disconnect the service wire from connector B.

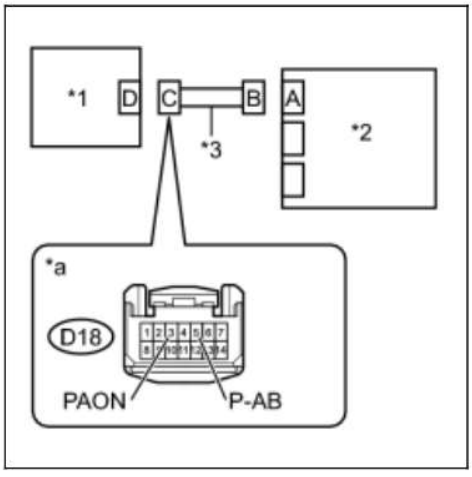
Text in Illustration

*1	Clock Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*4	Service Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to Clock Assembly)

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▼

11.	CHECK INSTRUMENT PANEL WIRE (SHORT)



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D18-3 (PAON) - D18-5 (P-AB)	Always	1 MΩ or higher

Text in Illustration

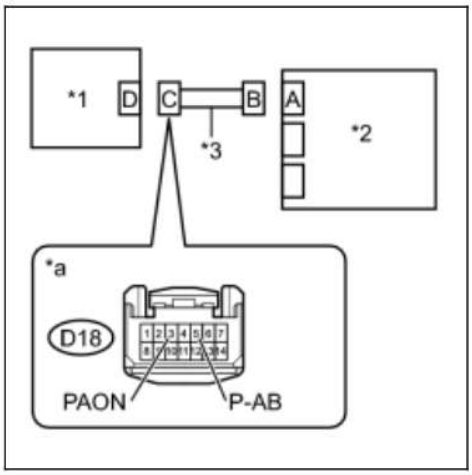
*1	Clock Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*a	Front view of wire harness connector (to Clock Assembly)

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NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK
▼

12.	CHECK INSTRUMENT PANEL WIRE (SHORT TO B+)



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D18-3 (PAON) - Body ground	Ignition switch ON	Below 1 V
D18-5 (P-AB) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Clock Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*a	Front view of wire harness connector

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	(to Clock Assembly)

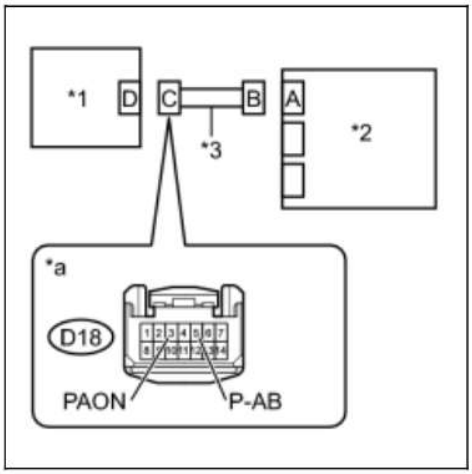
NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▼

13.	**CHECK INSTRUMENT PANEL WIRE (SHORT TO GROUND)**

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

Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D18-3 (PAON) - Body ground	Always	1 MΩ or higher
D18-5 (P-AB) - Body ground	Always	1 MΩ or higher

Text in Illustration

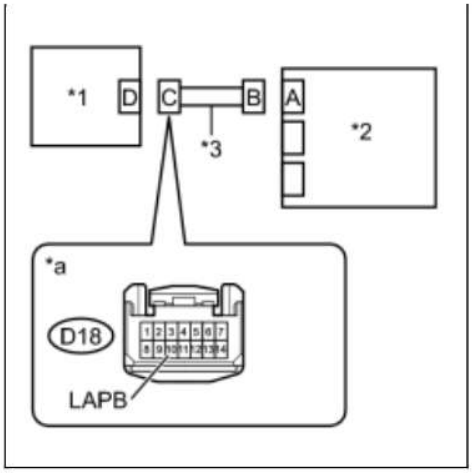
*1	Clock Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*a	Front view of wire harness connector (to Clock Assembly)

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▼

14.	**CHECK CLOCK ASSEMBLY (SOURCE VOLTAGE)**

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(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D18-10 (LAPB) - Body ground	Ignition switch ON	11 to 14 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

*1	Clock Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*a	Front view of wire harness connector (to Clock Assembly)

NG ▶ **REPLACE WIRE HARNESS OR BATTERY**

OK ▼

15.	**CHECK PASSENGER AIRBAG ON/OFF INDICATOR**

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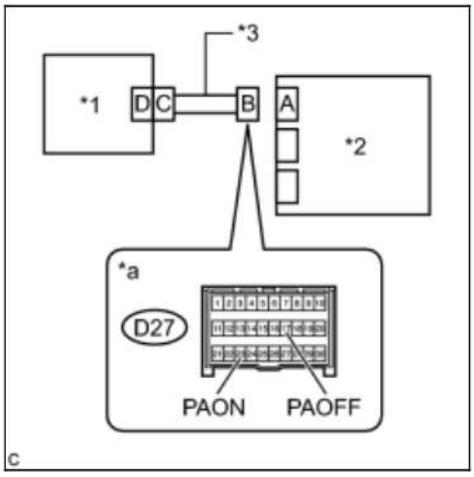
(a) Connect the connector to the clock assembly.

(b) Connect the cable to the negative (-) battery terminal.

(c) Turn the ignition switch to ON.

(d) Check the indicator according to the conditions in the table below.

OK:



TERMINAL CONNECTION	CONDITION	SPECIFIED CONDITION
D27-23 (PAON) - Body ground	Ignition switch ON	"ON" comes on
D27-17 (PAOFF) - Body ground	Ignition switch ON	"OFF" comes on

(e) Turn the ignition switch off.

(f) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

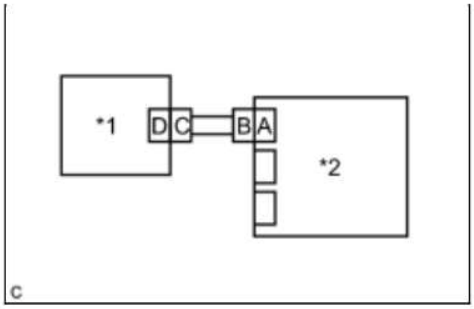
*1	Clock Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)

NG ▶ **REPLACE CLOCK ASSEMBLY**

OK ▼

16.	**CHECK DTC**

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(a) Connect the connector to the airbag ECU assembly.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

OK:
DTC B1660 is not output.

HINT:

Codes other than DTC B1660 may be output at this time, but they are not related to this check.

Text in Illustration

*1	Clock Assembly
*2	Airbag ECU Assembly

NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000038D4014X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1675,B16F8: Rear Floor Airbag Sensor (2013 FR-S)		

DTC	**B1675**	**Rear Floor Airbag Sensor**

DTC	**B16F8**	**Rear Floor Airbag Sensor RH Mismatch**

DESCRIPTION

The No. 2 airbag sensor assembly circuit is composed of the airbag ECU assembly and No. 2 airbag sensor assembly.

The No. 2 airbag sensor assembly detects impacts to the vehicle and sends signals to the airbag ECU assembly to determine if the airbag should be deployed.

These DTCs are stored when a malfunction is detected in the No. 2 airbag sensor assembly circuit.

DTC CODE	DTC DETECTION CONDITION	TROUBLE AREA
B1675	• No. 2 airbag sensor assembly malfunction. • Airbag ECU assembly malfunction.	• No. 2 airbag sensor assembly • Airbag ECU assembly
B16F8	• Improper installation of No. 2 airbag sensor assembly. • Airbag ECU assembly malfunction.	

WIRING DIAGRAM

Refer to DTCs B1678 and B1679 INFO .

INSPECTION PROCEDURE

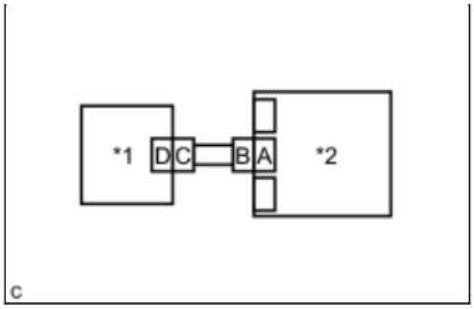
NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK NO. 2 AIRBAG SENSOR ASSEMBLY**

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(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Replace the No. 2 airbag sensor assembly with a new one.

(d) Connect the cable to the negative (-) battery terminal.

(e) Clear the DTCs stored in memory INFO .

(f) Turn the ignition switch off.

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

(h) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTCs B1675 and B16F8 are not output.	A
DTC B1675 or B16F8 is output.	B

HINT:

Codes other than DTC B1675, B16F8 may be output at this time, but they are not related to this check.

Text in Illustration

*1	No. 2 Airbag Sensor Assembly
*2	Airbag ECU Assembly

B ▶ REPLACE AIRBAG ECU ASSEMBLY

A ▶ END (NO. 2 AIRBAG SENSOR ASSEMBLY WAS DEFECTIVE)

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000038BD014X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1678,B1679: Lost Communication with Rear Floor Airbag Sensor LH (2013 FR-S)		

DTC	**B1678**	**Lost Communication with Rear Floor Airbag Sensor LH**

DTC	**B1679**	**Rear Floor Airbag Sensor LH Initialization Incomplete**

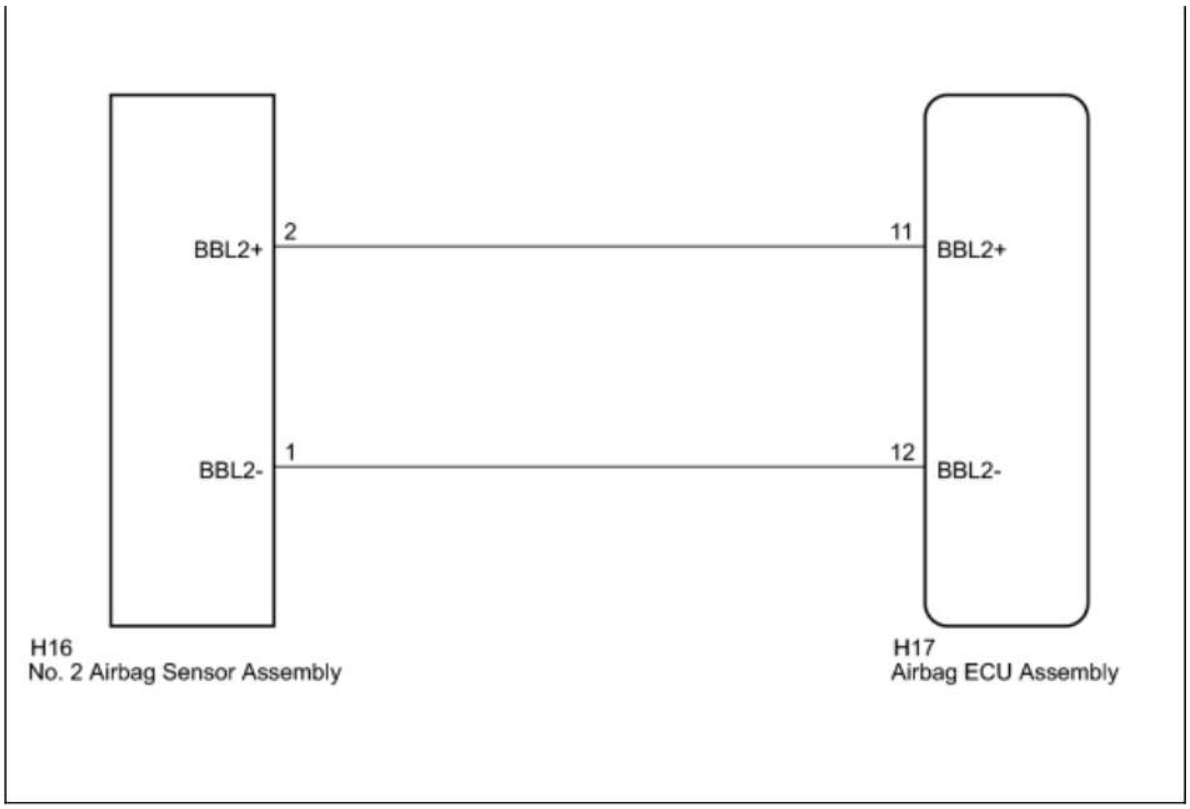
DESCRIPTION

The No. 2 airbag sensor assembly circuit consists of the airbag ECU assembly and No. 2 airbag sensor assembly.
The No. 2 airbag sensor assembly detects impacts to the vehicle and sends signals to the airbag ECU assembly to determine if the airbag should be deployed.
These DTCs are stored when a malfunction is detected in the No. 2 airbag sensor assembly circuit.

DTC CODE	DTC DETECTION CONDITION	TROUBLE AREA
B1678 B1679	• The airbag ECU assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the No. 2 airbag sensor assembly circuit. • No. 2 airbag sensor assembly malfunction. • Airbag ECU assembly malfunction.	• Floor wire • No. 2 airbag sensor assembly • Airbag ECU assembly

WIRING DIAGRAM

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INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the airbag ECU assembly and No. 2 airbag sensor assembly.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the airbag ECU assembly and No. 2 airbag sensor assembly.

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(e) Check that the terminals of connectors are not damaged.

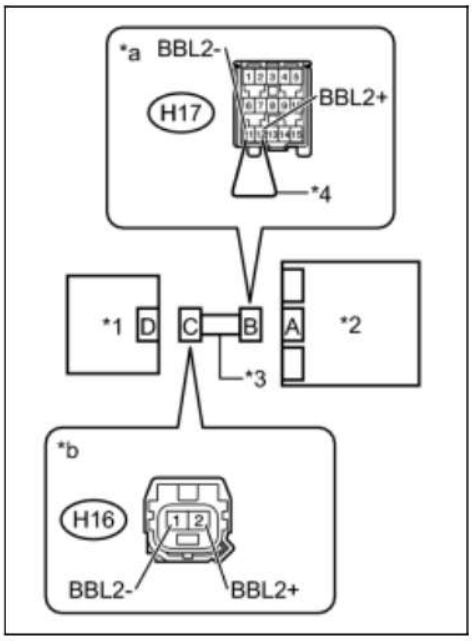
OK:

The connectors are not deformed or damaged.

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

2.	**CHECK FLOOR WIRE (OPEN)**



(a) Using a service wire, connect terminals 11 (BBL2+) and 12 (BBL2-) of connector B.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H16-1 (BBL2-) - H16-2 (BBL2+)	Always	Below 1 Ω

(c) Disconnect the service wire from connector B.

Text in Illustration

*1	No. 2 Airbag Sensor Assembly
*2	Airbag ECU Assembly
*3	Floor Wire

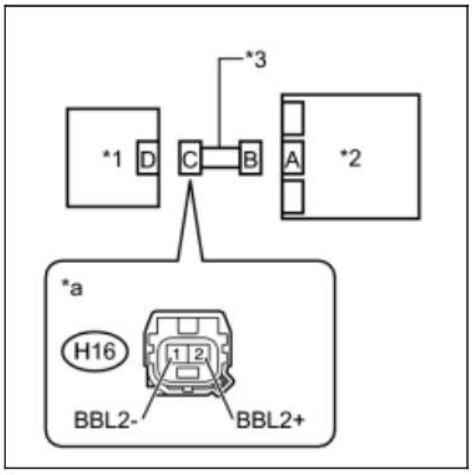
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*4	Service Wire
*a	Front view of wire harness connector (to Airbag ECU Assembly)
*b	Front view of wire harness connector (to No. 2 Airbag Sensor Assembly)

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

3.	**CHECK FLOOR WIRE (SHORT)**



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H16-1 (BBL2-) - H16-2 (BBL2+)	Always	1 MΩ or higher

Text in Illustration

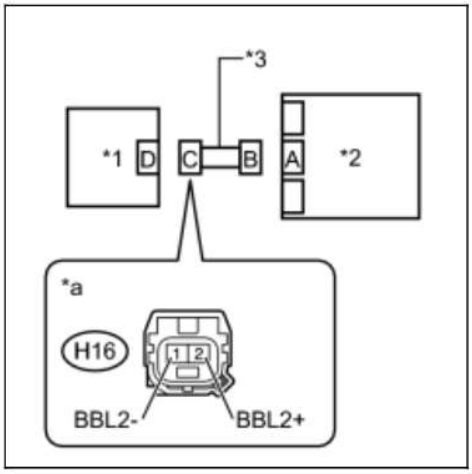
*1	No. 2 Airbag Sensor Assembly
*2	Airbag ECU Assembly
*3	Floor Wire
*a	Front view of wire harness connector (to No. 2 Airbag Sensor Assembly)

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

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4.	CHECK FLOOR WIRE (SHORT TO B+)



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H16-1 (BBL2-) - Body ground	Ignition switch ON	Below 1 V
H16-2 (BBL2+) - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

Text in Illustration

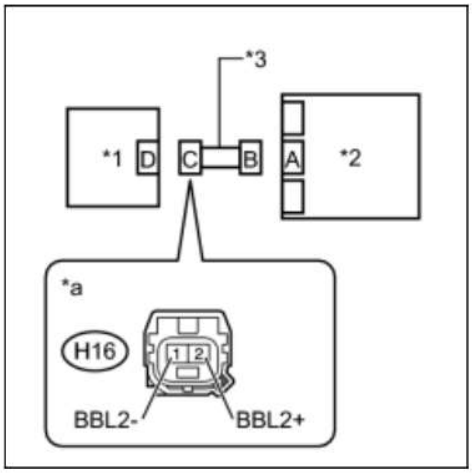
*1	No. 2 Airbag Sensor Assembly
*2	Airbag ECU Assembly
*3	Floor Wire
*a	Front view of wire harness connector (to No. 2 Airbag Sensor Assembly)

NG ▶ **REPLACE FLOOR WIRE**

OK

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5.	CHECK FLOOR WIRE (SHORT TO GROUND)



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H16-1 (BBL2-) - Body ground	Always	1 MΩ or higher
H16-2 (BBL2+) - Body ground	Always	1 MΩ or higher

Text in Illustration

*1	No. 2 Airbag Sensor Assembly
*2	Airbag ECU Assembly
*3	Floor Wire
*a	Front view of wire harness connector (to No. 2 Airbag Sensor Assembly)

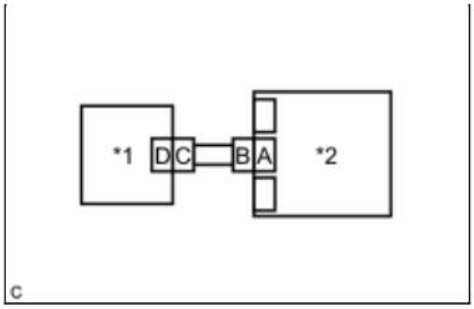
NG ▶ **REPLACE FLOOR WIRE**

OK

6.	CHECK NO. 2 AIRBAG SENSOR ASSEMBLY

(a) Connect the connectors to the No. 2 airbag sensor assembly and airbag ECU assembly.

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(b) Replace the No. 2 airbag sensor assembly with a new one.

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

:

RESULT	PROCEED TO
DTCs B1678 and B1679 are not output.	A
DTC B1678 or B1679 is output.	B

HINT:

Codes other than DTCs B1678 and B1679 may be output at this time, but they are not related to this check.

Text in Illustration

*1	No. 2 Airbag Sensor Assembly
*2	Airbag ECU Assembly

B ▶ REPLACE AIRBAG ECU ASSEMBLY

A ▶ END (NO. 2 AIRBAG SENSOR ASSEMBLY WAS DEFECTIVE)

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000003NXE012X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1690,B16F9: Side Airbag Sensor RH (2013 FR-S)		

DTC	**B1690**	**Side Airbag Sensor RH**

DTC	**B16F9**	**Door Side Airbag Sensor RH Mismatch**

DESCRIPTION

The side collision sensor RH circuit (to determine deployment of the front seat airbag assembly RH, curtain shield airbag assembly RH and front seat outer belt assembly RH) is composed of the airbag ECU assembly, side airbag sensor assembly RH, side No. 2 airbag sensor assembly RH and rear airbag sensor RH and No. 2 airbag sensor assembly.

The side airbag sensor assembly RH detects impacts to the vehicle and sends signals to the airbag ECU assembly to determine if the airbag should be deployed.

These DTCs are stored when a malfunction is detected in the side airbag sensor assembly RH.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1690	• Side airbag sensor assembly RH malfunction • Airbag ECU assembly malfunction	• Side airbag sensor assembly RH • Airbag ECU assembly
B16F9	• Improper installation of side airbag sensor assembly RH • Airbag ECU assembly malfunction	

WIRING DIAGRAM

Refer to DTCs B1622, B1623, B1632, B1633, B1642, B1692 and B1693 INFO .

INSPECTION PROCEDURE

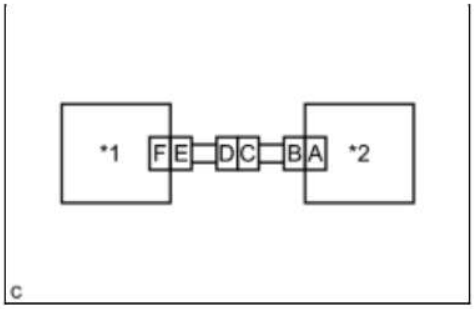
NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK SIDE AIRBAG SENSOR ASSEMBLY RH**

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(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Interchange the side airbag sensor assembly RH with LH and connect the connectors.

(d) Connect the cable to the negative (-) battery terminal.

(e) Clear the DTCs stored in memory INFO .

(f) Turn the ignition switch off.

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

(h) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1690 or B16F9 is output.	A
DTC B1695 or B16FA is output.	B
DTCs B1690, B1695, B16F9 and B16FA are not output.	C

HINT:

Codes other than DTCs B1690, B1695, B16F9 and B16FA may be output at this time, but they are not related to this check.

(i) Turn the ignition switch off.

(j) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(k) Return the side airbag sensor assembly RH and LH to their original positions and connect the connectors.

Text in Illustration

*1	Side Airbag Sensor Assembly LH
*2	Rear Airbag Sensor RH

REPLACE SIDE AIRBAG SENSOR ASSEMBLY

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B ▶ RH

C ▶ USE SIMULATION METHOD TO CHECK

A ▶ REPLACE AIRBAG ECU ASSEMBLY



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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000003NXD012X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1695,B16FA: Side Airbag Sensor LH (2013 FR-S)		

DTC	**B1695**	**Side Airbag Sensor LH**

DTC	**B16FA**	**Door Side Airbag Sensor LH Mismatch**

DESCRIPTION

The side collision sensor LH circuit (to determine deployment of the front seat airbag assembly LH, curtain shield airbag assembly LH and front seat outer belt assembly LH) is composed of the airbag ECU assembly, side airbag sensor assembly LH, side No. 2 airbag sensor assembly LH and rear airbag sensor LH and No. 2 airbag sensor assembly.

The side airbag sensor assembly LH detects impacts to the vehicle and sends signals to the airbag ECU assembly to determine if the airbag should be deployed.

These DTCs are stored when a malfunction is detected in the side airbag sensor assembly LH.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1695	• Side airbag sensor assembly LH malfunction • Airbag ECU assembly malfunction	• Side airbag sensor assembly LH • Airbag ECU assembly
B16FA	• Improper installation of side airbag sensor assembly LH • Airbag ECU assembly malfunction	

WIRING DIAGRAM

Refer to DTCs B1627, B1628, B1637, B1638, B1647, B1697 and B1698 INFO .

INSPECTION PROCEDURE

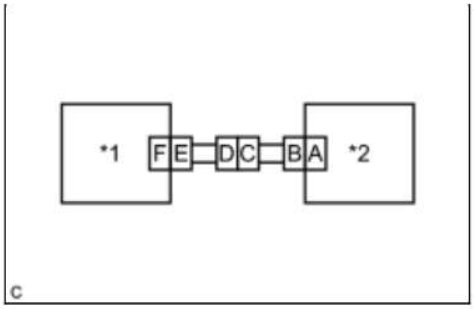
NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**CHECK SIDE AIRBAG SENSOR ASSEMBLY LH**

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(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Interchange the side airbag sensor assembly LH with RH and connect the connectors.

(d) Connect the cable to the negative (-) battery terminal.

(e) Clear the DTCs stored in memory INFO .

(f) Turn the ignition switch off.

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

(h) Check for DTCs INFO .

Result:

RESULT	PROCEED TO
DTC B1695 or B16FA is output.	A
DTC B1690 or B16F9 is output.	B
DTCs B1690, B1695, B16F9 and B16FA are not output.	C

HINT:

Codes other than DTCs B1690, B1695, B16F9 and B16FA may be output at this time, but they are not related to this check.

(i) Turn the ignition switch off.

(j) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(k) Return the side airbag sensor assembly LH and RH to their original positions and connect the connectors.

Text in Illustration

*1	Side Airbag Sensor Assembly RH
*2	Rear Airbag Sensor LH

REPLACE SIDE AIRBAG SENSOR ASSEMBLY

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B ▶ LH

C ▶ USE SIMULATION METHOD TO CHECK

A ▶ REPLACE AIRBAG ECU ASSEMBLY



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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000XFI0HWX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1800-B1803: Short in D Squib Circuit (2013 FR-S)		

DTC	**B1800**	**Short in D Squib Circuit**

DTC	**B1801**	**Open in D Squib Circuit**

DTC	**B1802**	**Short in D Squib Circuit (to Ground)**

DTC	**B1803**	**Short in D Squib Circuit (to +B)**

DESCRIPTION

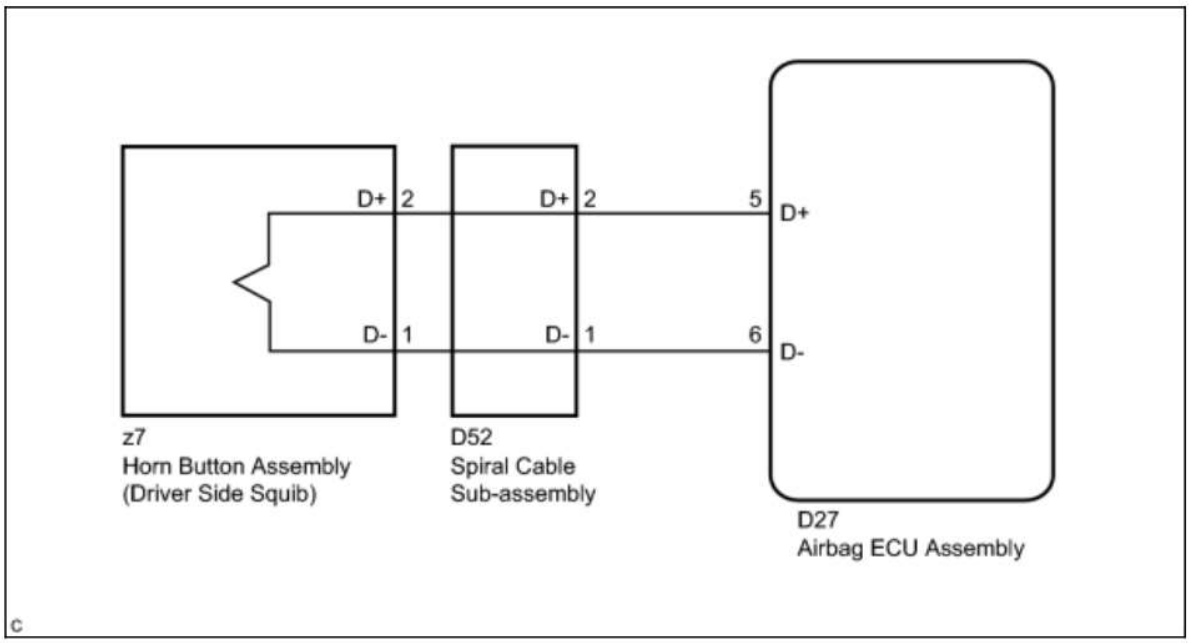
The driver side squib circuit consists of the airbag ECU assembly, spiral cable sub-assembly and horn button assembly.
The airbag ECU assembly uses this circuit to deploy the airbag when deployment conditions are met.
These DTCs are stored when a malfunction is detected in the driver side squib circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1800	• The airbag ECU assembly receives a line short circuit signal in the driver side squib circuit during primary check. • Spiral cable sub-assembly malfunction • Driver side squib malfunction • Airbag ECU assembly malfunction	• Instrument panel wire • Spiral cable sub-assembly • Horn button assembly (Driver side squib) • Airbag ECU assembly
B1801	• The airbag ECU assembly receives an open circuit signal in the driver side squib circuit. • Spiral cable sub-assembly malfunction • Driver side squib malfunction • Airbag ECU assembly malfunction	
B1802	• The airbag ECU assembly receives a short circuit to ground signal in the driver side squib circuit. • Spiral cable sub-assembly malfunction • Driver side squib malfunction • Airbag ECU assembly malfunction	
	• The airbag ECU assembly receives a short circuit to	

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B1803	B+ signal in the driver side squib circuit. • Spiral cable sub-assembly malfunction • Driver side squib malfunction • Airbag ECU assembly malfunction	

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

HINT:

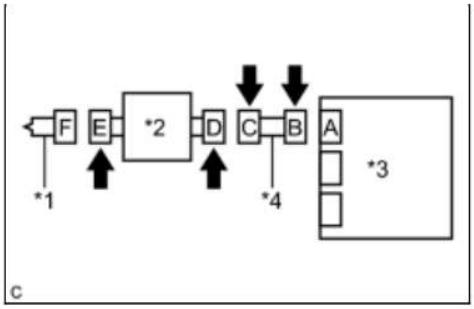
- Perform the simulation method by selecting check mode (Signal Check) using the Techstream INFO .
- After selecting check mode (Signal Check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city road or rough road INFO .

PROCEDURE

1.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

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(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(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.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the horn button assembly, spiral cable sub-assembly and airbag ECU assembly.

(e) Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

(f) Check that the spiral cable sub-assembly connector (on the horn button assembly side) is not damaged.

OK:

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

(g) Check that the short springs for the instrument panel wire and spiral cable sub-assembly with the activation prevention mechanism are not deformed or damaged.

OK:

The short springs are not deformed or damaged.

Text in Illustration

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

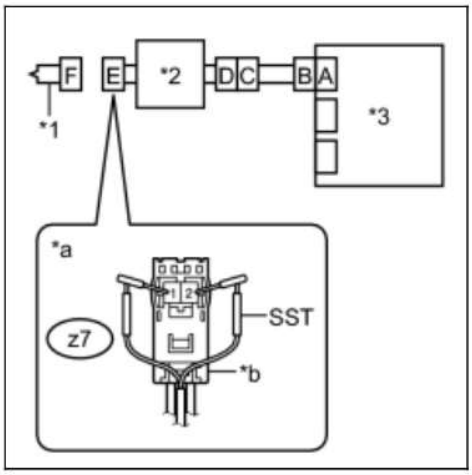
NG ▶ **REPLACE WIRE HARNESS**

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OK

▼

2.	CHECK HORN BUTTON ASSEMBLY (DRIVER SIDE SQUIB)



(a) Connect the instrument panel wire to the airbag ECU assembly and spiral cable sub-assembly.

(b) Connect SST (resistance 2.1 Ω) to connector E (orange connector).

CAUTION:

Never connect the tester to the horn button assembly (driver side squib) 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 it.
- Insert SST straight into the terminals of the connector.

SST: 09843-18061

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

OK:

DTC B1800, B1801, B1802 or B1803 is not output.

HINT:

Codes other than DTCs B1800, B1801, B1802 and B1803 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

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CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Disconnect SST from connector E.

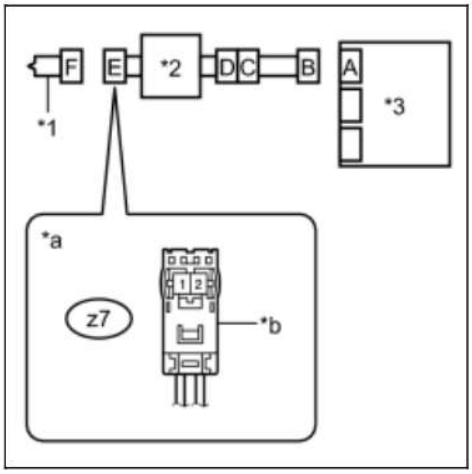
Text in Illustration

*1	Horn Button Assembly
*2	Spiral Cable Sub-assembly
*3	Airbag ECU Assembly
*a	Front view of wire harness connector (to Horn Button Assembly)
*b	Color: Orange

NG ▶ **CHECK DRIVER SIDE SQUIB CIRCUIT**

OK ▶ **REPLACE HORN BUTTON ASSEMBLY**

3.	**CHECK DRIVER SIDE SQUIB CIRCUIT**



(a) Disconnect the instrument panel wire from the airbag ECU assembly.

(b) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z7-2 (D+) - Body ground	Ignition switch ON	Below 1 V

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z7-1 (D-) - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check for an open in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z7-2 (D+) - z7-1 (D-)	Always	Below 1 Ω

(d) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z7-2 (D+) - Body ground	Always	1 MΩ or higher
z7-1 (D-) - Body ground	Always	1 MΩ or higher

(e) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector B INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z7-2 (D+) - z7-1 (D-)	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector B to the original condition.

Text in Illustration

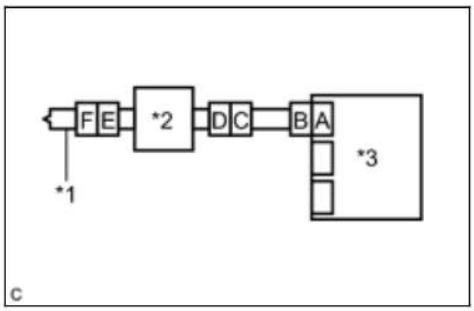
*1	Horn Button Assembly
*2	Spiral Cable Sub-assembly
*3	Airbag ECU Assembly
*a	Front view of wire harness connector (to Horn Button Assembly)
*b	Color: Orange

NG ▶ CHECK INSTRUMENT PANEL WIRE

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OK

4.	**CHECK DTC**



(a) Connect the connectors to the horn button assembly and airbag ECU assembly.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

OK:

DTC B1800, B1801, B1802 or B1803 is not output.

HINT:

Codes other than DTCs B1800, B1801, B1802 and B1803 may be output at this time, but they are not related to this check.

Text in Illustration

*1	Horn Button Assembly
*2	Spiral Cable Sub-assembly
*3	Airbag ECU Assembly

NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

5.	**CHECK INSTRUMENT PANEL WIRE**

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(a) Disconnect the instrument panel wire from the spiral cable sub-assembly.

(b) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D52-1 (D-) - Body ground	Ignition switch ON	Below 1 V
D52-2 (D+) - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

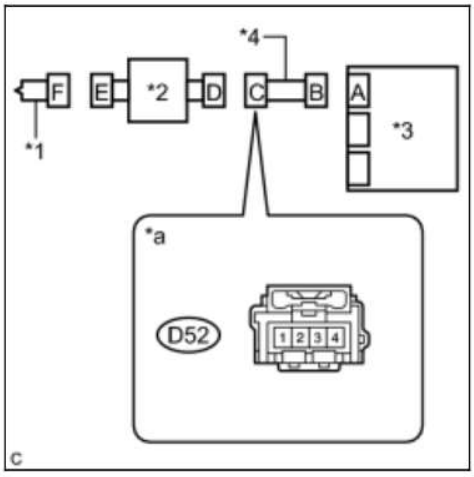
CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check for an open in the circuit.

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

Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D52-1 (D-) - D52-2 (D+)	Always	Below 1 Ω

(d) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D52-1 (D-) - Body ground	Always	1 MΩ or higher
D52-2 (D+) - Body		

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ground	Always	1 MΩ or higher

(e) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector B INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D52-1 (D-) - D52-2 (D+)	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector B to the original condition.

Text in Illustration

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

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▼

6.	**CHECK SPIRAL CABLE SUB-ASSEMBLY**

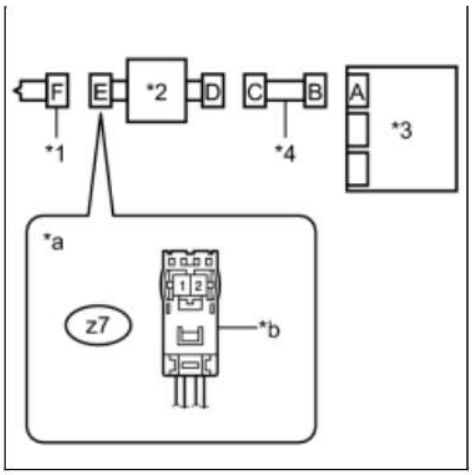
(a) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

(3) Measure the voltage according to the value(s) in

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the table below.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z7-2 (D+) - Body ground	Ignition switch ON	Below 1 V
z7-1 (D-) - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(b) Check for an open in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z7-2 (D+) - z7-1 (D-)	Always	Below 1 Ω

(c) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z7-2 (D+) - Body ground	Always	1 MΩ or higher
z7-1 (D-) - Body ground	Always	1 MΩ or higher

(d) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector D INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z7-2 (D+) - z7-1 (D-)	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector D to the original condition.

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Text in Illustration

*1	Horn Button Assembly
*2	Spiral Cable Sub-assembly
*3	Airbag ECU Assembly
*4	Instrument Panel Wire
*a	Front view of wire harness connector (to Horn Button Assembly)
*b	Color: Orange

NG ▶ **REPLACE SPIRAL CABLE SUB-ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000XFJ0INX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1805-B1808: Short in P Squib Circuit (2013 FR-S)		

DTC	**B1805**	**Short in P Squib Circuit**

DTC	**B1806**	**Open in P Squib Circuit**

DTC	**B1807**	**Short in P Squib Circuit (to Ground)**

DTC	**B1808**	**Short in P Squib Circuit (to +B)**

DESCRIPTION

The front passenger side squib circuit consists of the airbag ECU assembly and instrument panel passenger airbag assembly.

The airbag ECU assembly uses this circuit to deploy the airbag when deployment conditions are met.

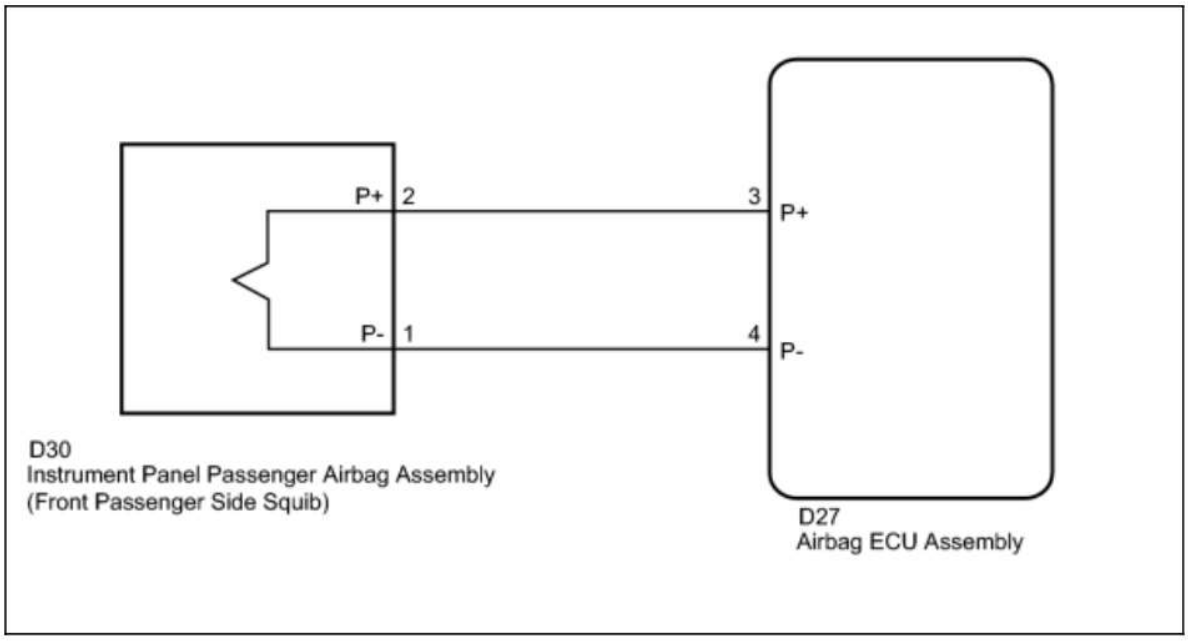
These DTCs are stored when a malfunction is detected in the front passenger side squib circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1805	• The airbag ECU assembly receives a line short circuit signal in the front passenger side squib circuit during primary check. • Front passenger side squib malfunction • Airbag ECU assembly malfunction	• Instrument panel wire • Instrument panel passenger airbag assembly (Front passenger side squib) • Airbag ECU assembly
B1806	• The airbag ECU assembly receives an open circuit signal in the front passenger side squib circuit. • Front passenger side squib malfunction • Airbag ECU assembly malfunction	
B1807	• The airbag ECU assembly receives a short circuit to ground signal in the front passenger side squib circuit. • Front passenger side squib malfunction • Airbag ECU assembly malfunction	
	• The airbag ECU assembly receives a short circuit to B+ signal in the front passenger	

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B1808	side squib circuit. • Front passenger side squib malfunction • Airbag ECU assembly malfunction	

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

HINT:

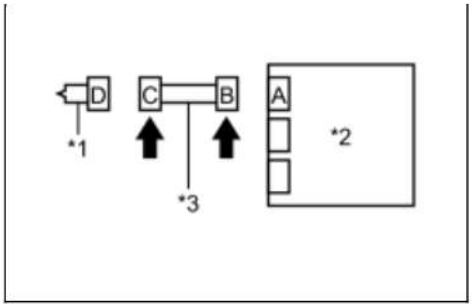
- Perform the simulation method by selecting check mode (Signal Check) using the Techstream INFO .
- After selecting check mode (Signal Check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city road or rough road INFO .

PROCEDURE

1.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

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(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the instrument panel passenger airbag assembly and airbag ECU assembly.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the instrument panel passenger airbag assembly and airbag ECU assembly.

(e) Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

(f) Check that the short spring for the instrument panel wire with the activation prevention mechanism is not deformed or damaged.

OK:

The short spring is not deformed or damaged.

Text in Illustration

*1	Instrument Panel Passenger Airbag Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire

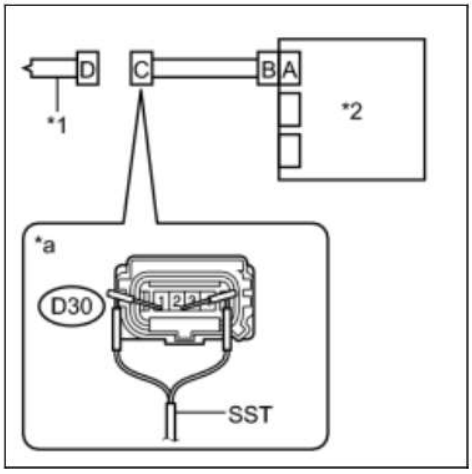
NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK
▼

2.	**CHECK INSTRUMENT PANEL PASSENGER AIRBAG ASSEMBLY (FRONT**

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	PASSENGER SIDE SQUIB)



(a) Connect the connector to the airbag ECU assembly.

(b) Connect SST (resistance 2.1 Ω) to connector C.

CAUTION:

Never connect the tester to the instrument panel passenger airbag assembly (front passenger side squib) 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 it.
- Insert SST straight into the terminals of the connector.

SST: 09843-18061

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

OK:

DTC B1805, B1806, B1807 or B1808 is not output.

HINT:

Codes other than DTCs B1805, B1806, B1807 and B1808 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Disconnect SST from connector C.

Text in Illustration

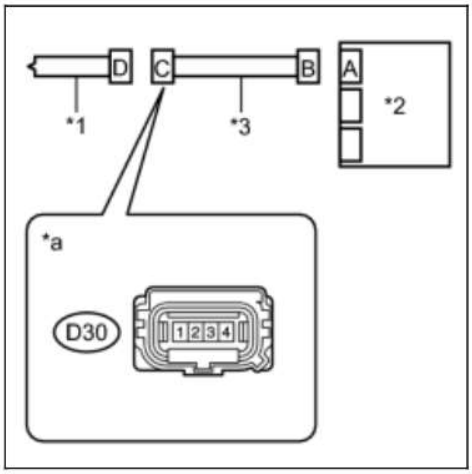
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*1	Instrument Panel Passenger Airbag Assembly
*2	Airbag ECU Assembly
*a	Front view of wire harness connector (to Instrument Panel Passenger Airbag Assembly)

NG ▶ **CHECK INSTRUMENT PANEL WIRE**

OK ▶ **REPLACE INSTRUMENT PANEL PASSENGER AIRBAG ASSEMBLY**

3.	**CHECK INSTRUMENT PANEL WIRE**



(a) Disconnect the instrument panel wire from the airbag ECU assembly.

(b) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D30-2 (P+) - Body ground	Ignition switch ON	Below 1 V
D30-1 (P-) - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

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(c) Check for an open in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D30-2 (P+) - D30-1 (P-)	Always	Below 1 Ω

(d) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D30-2 (P+) - Body ground	Always	1 MΩ or higher
D30-1 (P-) - Body ground	Always	1 MΩ or higher

(e) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector B INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D30-2 (P+) - D30-1 (P-)	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector B to the original condition.

Text in Illustration

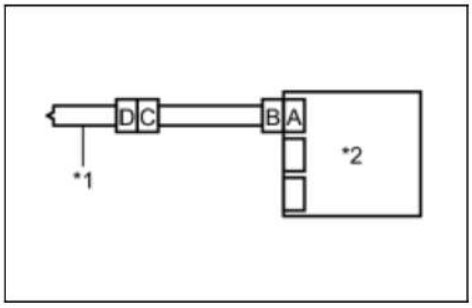
*1	Instrument Panel Passenger Airbag Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*a	Front view of wire harness connector (to Instrument Panel Passenger Airbag Assembly)

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK
▼

4.	**CHECK DTC**

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(a) Connect the connectors to the instrument panel passenger airbag assembly and airbag ECU assembly.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

OK:

DTC B1805, B1806, B1807 or B1808 is not output.

HINT:

Codes other than DTCs B1805, B1806, B1807 and B1808 may be output at this time, but they are not related to this check.

Text in Illustration

*1	Instrument Panel Passenger Airbag Assembly
*2	Airbag ECU Assembly

NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000XFI0HXX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1810-B1813: Short in D Squib (Dual Stage - 2nd Step) Circuit (2013 FR-S)		

DTC	**B1810**	**Short in D Squib (Dual Stage - 2nd Step) Circuit**

DTC	**B1811**	**Open in D Squib (Dual Stage - 2nd Step) Circuit**

DTC	**B1812**	**Short in D Squib (Dual Stage - 2nd Step) Circuit (to Ground)**

DTC	**B1813**	**Short in D Squib (Dual Stage - 2nd Step) Circuit (to +B)**

DESCRIPTION

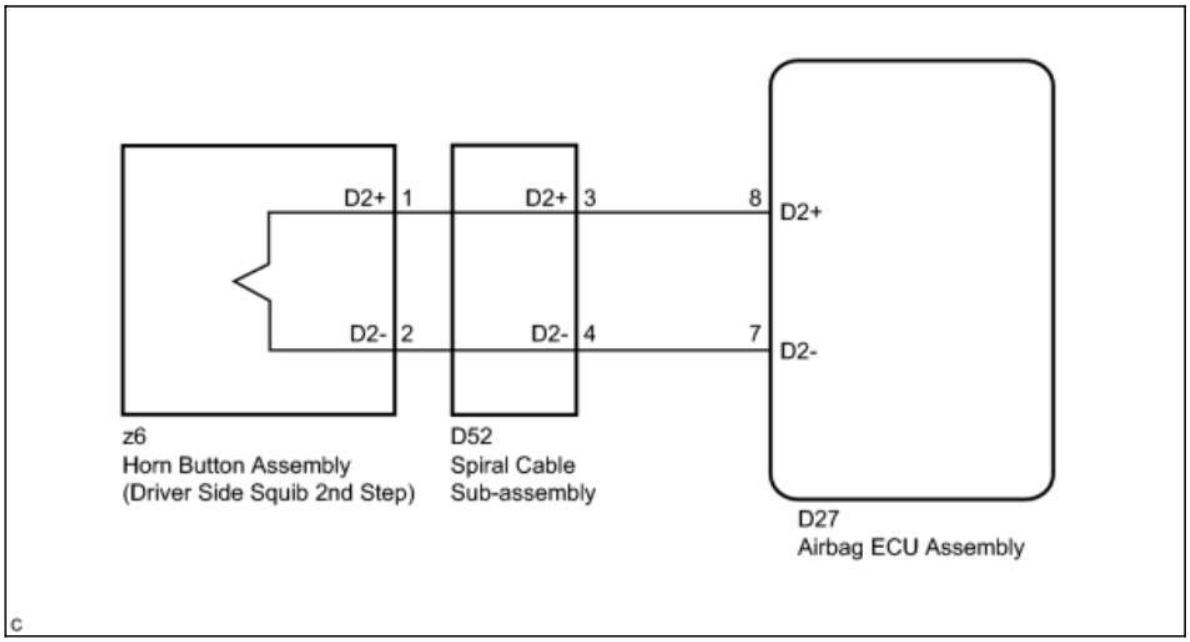
The driver side squib 2nd step circuit consists of the airbag ECU assembly, spiral cable sub-assembly and horn button assembly.
The airbag ECU assembly uses this circuit to deploy the airbag when deployment conditions are met.
These DTCs are stored when a malfunction is detected in the driver side squib 2nd step circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1810	• The airbag ECU assembly receives a line short circuit signal in the driver side squib 2nd step circuit during primary check. • Spiral cable sub-assembly malfunction • Driver side squib 2nd step malfunction • Airbag ECU assembly malfunction	• Instrument panel wire • Spiral cable sub-assembly • Horn button assembly (Driver side squib 2nd step) • Airbag ECU assembly
B1811	• The airbag ECU assembly receives an open circuit signal in the driver side squib 2nd step circuit. • Spiral cable sub-assembly malfunction • Driver side squib 2nd step malfunction • Airbag ECU assembly malfunction	
B1812	• The airbag ECU assembly receives a short circuit to ground signal in the driver side squib 2nd step circuit. • Spiral cable sub-assembly malfunction • Driver side squib 2nd step malfunction • Airbag ECU assembly malfunction	

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B1813	• The airbag ECU assembly receives a short circuit to B+ signal in the driver side squib 2nd step circuit. • Spiral cable sub-assembly malfunction • Driver side squib 2nd step malfunction • Airbag ECU assembly malfunction	

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

HINT:

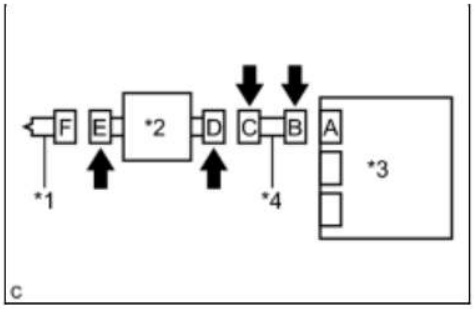
- Perform the simulation method by selecting check mode (Signal Check) using the Techstream INFO .
- After selecting check mode (Signal Check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city road or rough road INFO .

PROCEDURE

1.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

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(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(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.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the horn button assembly, spiral cable sub-assembly and airbag ECU assembly.

(e) Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

(f) Check that the spiral cable sub-assembly connector (on the horn button assembly side) is not damaged.

OK:

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

(g) Check that the short springs for the instrument panel wire and spiral cable sub-assembly with the activation prevention mechanism are not deformed or damaged.

OK:

The short springs are not deformed or damaged.

Text in Illustration

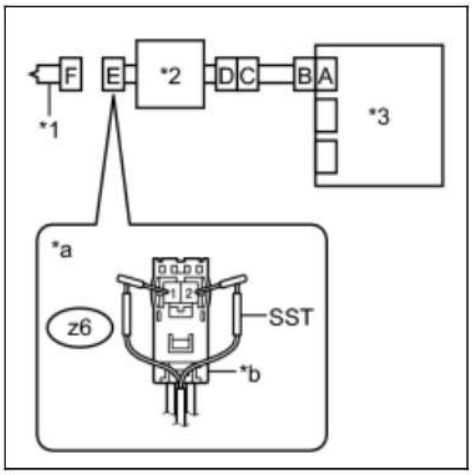
*1	Horn Button Assembly
*2	Spiral Cable Sub-assembly
*3	Airbag ECU Assembly
*4	Instrument Panel Wire

NG ▶ **REPLACE WIRE HARNESS**

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OK

2.	CHECK HORN BUTTON ASSEMBLY (DRIVER SIDE SQUIB 2ND STEP)



(a) Connect the instrument panel wire to the airbag ECU assembly and spiral cable sub-assembly.

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

CAUTION:

Never connect the tester to the horn button assembly (driver side squib 2nd step) 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 it.
- Insert SST straight into the terminals of the connector.

SST: 09843-18061

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

OK:

DTC B1810, B1811, B1812 or B1813 is not output.

HINT:

Codes other than DTCs B1810, B1811, B1812 and B1813 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

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CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Disconnect SST from connector E.

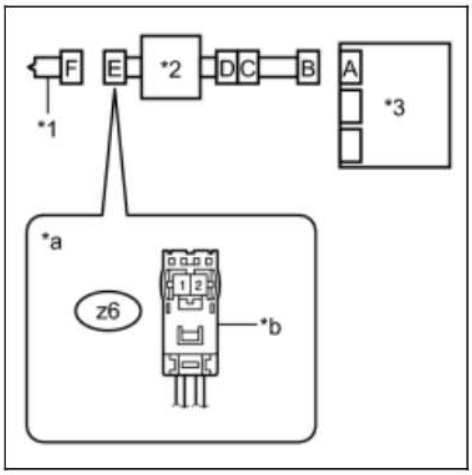
Text in Illustration

*1	Horn Button Assembly
*2	Spiral Cable Sub-assembly
*3	Airbag ECU Assembly
*a	Front view of wire harness connector (to Horn Button Assembly)
*b	Color: Black

NG ▶ **CHECK DRIVER SIDE SQUIB 2ND STEP CIRCUIT**

OK ▶ **REPLACE HORN BUTTON ASSEMBLY**

3.	**CHECK DRIVER SIDE SQUIB 2ND STEP CIRCUIT**



(a) Disconnect the instrument panel wire from the airbag ECU assembly.

(b) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z6-1 (D2+) - Body ground	Ignition switch ON	Below 1 V

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z6-2 (D2-) - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check for an open in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z6-1 (D2+) - z6-2 (D2-)	Always	Below 1 Ω

(d) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z6-1 (D2+) - Body ground	Always	1 MΩ or higher
z6-2 (D2-) - Body ground	Always	1 MΩ or higher

(e) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector B INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z6-1 (D2+) - z6-2 (D2-)	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector B to the original condition.

Text in Illustration

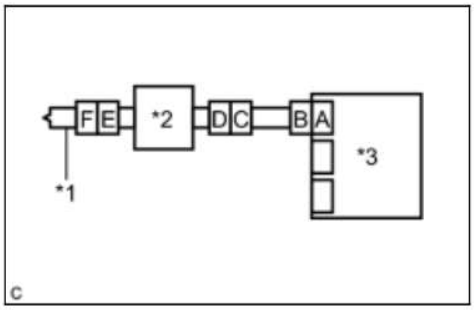
*1	Horn Button Assembly
*2	Spiral Cable Sub-assembly
*3	Airbag ECU Assembly
*a	Front view of wire harness connector (to Horn Button Assembly)
*b	Color: Black

NG ▶ CHECK INSTRUMENT PANEL WIRE

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OK

4.	**CHECK DTC**



(a) Connect the connectors to the horn button assembly and airbag ECU assembly.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

OK:

DTC B1810, B1811, B1812 or B1813 is not output.

HINT:

Codes other than DTCs B1810, B1811, B1812 and B1813 may be output at this time, but they are not related to this check.

Text in Illustration

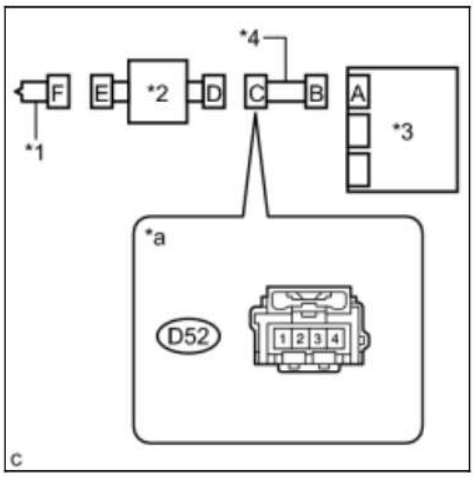
*1	Horn Button Assembly
*2	Spiral Cable Sub-assembly
*3	Airbag ECU Assembly

NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

5.	**CHECK INSTRUMENT PANEL WIRE**

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(a) Disconnect the instrument panel wire from spiral cable sub-assembly.

(b) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D52-3 (D2+) - Body ground	Ignition switch ON	Below 1 V
D52-4 (D2-) - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check for an open in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D52-3 (D2+) - D52-4 (D2-)	Always	Below 1 Ω

(d) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D52-3 (D2+) - Body ground	Always	1 MΩ or higher

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D52-4 (D2-) - Body ground	Always	1 MΩ or higher

(e) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector B INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D52-3 (D2+) - D52-4 (D2-)	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector B to the original condition.

Text in Illustration

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

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▼

6.	**CHECK SPIRAL CABLE SUB-ASSEMBLY**

(a) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

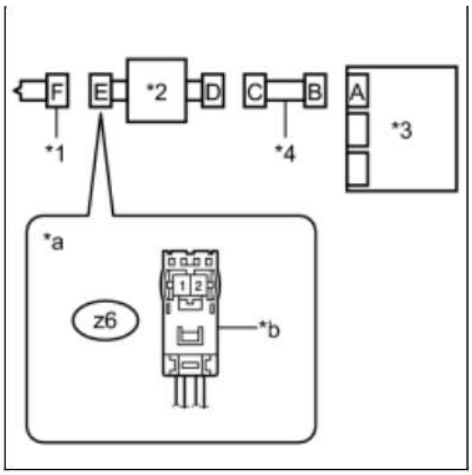
(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION

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z6-1 (D2+) - Body ground	Ignition switch ON	Below 1 V
z6-2 (D2-) - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(b) Check for an open in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z6-1 (D2+) - z6-2 (D2-)	Always	Below 1 Ω

(c) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z6-1 (D2+) - Body ground	Always	1 MΩ or higher
z6-2 (D2-) - Body ground	Always	1 MΩ or higher

(d) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector D INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z6-1 (D2+) - z6-2 (D2-)	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector D to the original condition.

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Text in Illustration

*1	Horn Button Assembly
*2	Spiral Cable Sub-assembly
*3	Airbag ECU Assembly
*4	Instrument Panel Wire
*a	Front view of wire harness connector (to Horn Button Assembly)
*b	Color: Black

NG ▶ **REPLACE SPIRAL CABLE SUB-ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000XFJ0IOX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1815-B1818: Short in P Squib (Dual Stage - 2nd Step) Circuit (2013 FR-S)		

DTC	**B1815**	**Short in P Squib (Dual Stage - 2nd Step) Circuit**

DTC	**B1816**	**Open in P Squib (Dual Stage - 2nd Step) Circuit**

DTC	**B1817**	**Short in P Squib (Dual Stage - 2nd Step) Circuit (to Ground)**

DTC	**B1818**	**Short in P Squib (Dual Stage - 2nd Step) Circuit (to +B)**

DESCRIPTION

The front passenger side squib 2nd step circuit consists of the airbag ECU assembly and instrument panel passenger airbag assembly.

The airbag ECU assembly uses this circuit to deploy the airbag when deployment conditions are met.

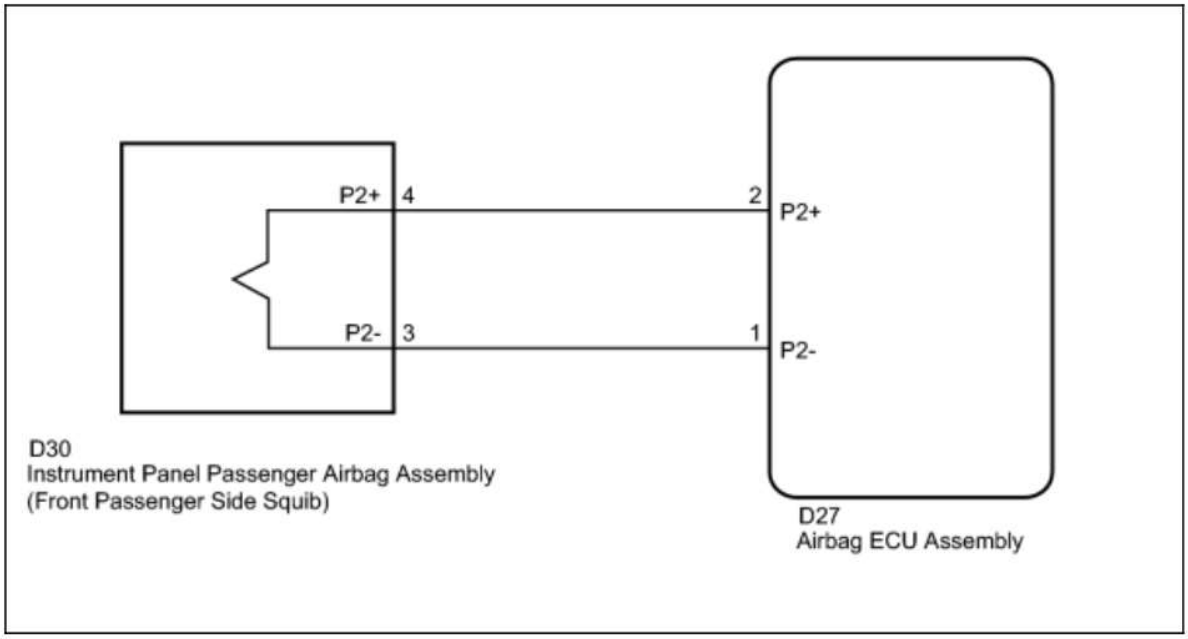
These DTCs are stored when a malfunction is detected in the front passenger side squib 2nd step circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1815	• The airbag ECU assembly receives a line short circuit signal in the front passenger side squib 2nd step circuit during primary check. • Front passenger side squib 2nd step malfunction • Airbag ECU assembly malfunction	• Instrument panel wire • Instrument panel passenger airbag assembly (Front passenger side squib 2nd step) • Airbag ECU assembly
B1816	• The airbag ECU assembly receives an open circuit signal in the front passenger side squib 2nd step circuit. • Front passenger side squib 2nd step malfunction • Airbag ECU assembly malfunction	
B1817	• The airbag ECU assembly receives a short circuit to ground signal in the front passenger side squib 2nd step circuit. • Front passenger side squib 2nd step	

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	malfunction • Airbag ECU assembly malfunction	
B1818	• The airbag ECU assembly receives a short circuit to B+ signal in the front passenger side squib 2nd step circuit. • Front passenger side squib 2nd step malfunction • Airbag ECU assembly malfunction	

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

HINT:

- Perform the simulation method by selecting check mode (Signal Check) using the Techstream INFO .
- After selecting check mode (Signal Check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city road or rough road INFO .

PROCEDURE

1.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

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(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

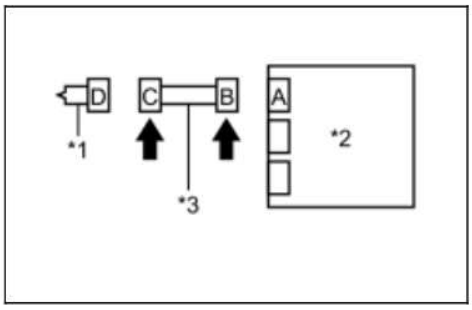
Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the instrument panel passenger airbag assembly and airbag ECU assembly.

OK:

The connectors are properly connected.

HINT:



If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the instrument panel passenger airbag assembly and airbag ECU assembly.

(e) Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

(f) Check that the short spring for the instrument panel wire with the activation prevention mechanism is not deformed or damaged.

OK:

The short spring is not deformed or damaged.

Text in Illustration

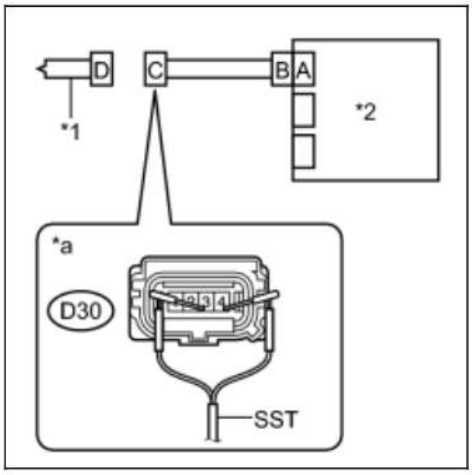
*1	Instrument Panel Passenger Airbag Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▼

2.	**CHECK INSTRUMENT PANEL PASSENGER AIRBAG ASSEMBLY (FRONT PASSENGER SIDE SQUIB 2ND STEP)**

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(a) Connect the connector to the airbag ECU assembly.

(b) Connect SST (resistance 2.1 Ω) to connector C.

CAUTION:

Never connect the tester to the instrument panel passenger airbag assembly (front passenger side squib 2nd step) 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 it.
- Insert SST straight into the terminals of the connector.

SST: 09843-18061

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

OK:

DTC B1815, B1816, B1817 or B1818 is not output.

HINT:

Codes other than DTCs B1815, B1816, B1817 and B1818 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Disconnect SST from connector C.

Text in Illustration

*1	Instrument Panel Passenger Airbag Assembly

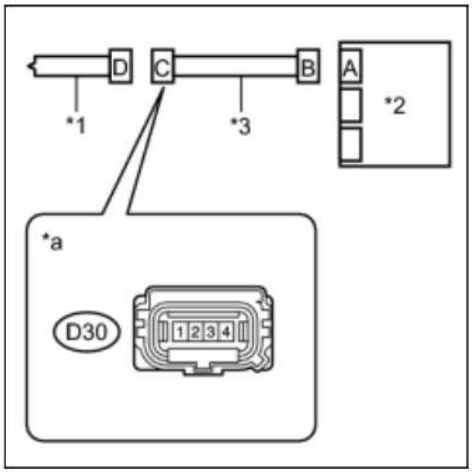
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*2	Airbag ECU Assembly
*a	Front view of wire harness connector (to Instrument Panel Passenger Airbag Assembly)

NG ▶ **CHECK FRONT PASSENGER SIDE SQUIB 2ND STEP CIRCUIT**

OK ▶ **REPLACE INSTRUMENT PANEL PASSENGER AIRBAG ASSEMBLY**

3.	**CHECK FRONT PASSENGER SIDE SQUIB 2ND STEP CIRCUIT**



(a) Disconnect the instrument panel wire from the airbag ECU assembly.

(b) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D30-4 (P2+) - Body ground	Ignition switch ON	Below 1 V
D30-3 (P2-) - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check for an open in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D30-4 (P2+) - D30-3 (P2-)	Always	Below 1 Ω

(d) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D30-4 (P2+) - Body ground	Always	1 MΩ or higher
D30-3 (P2-) - Body ground	Always	1 MΩ or higher

(e) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector B INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D30-4 (P2+) - D30-3 (P2-)	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector B to the original condition.

Text in Illustration

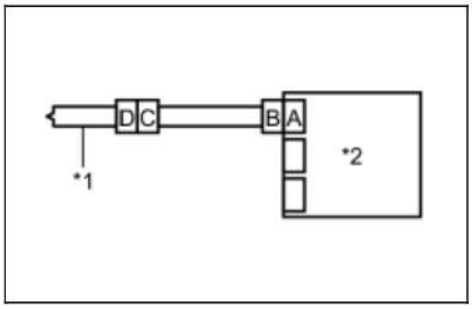
*1	Instrument Panel Passenger Airbag Assembly
*2	Airbag ECU Assembly
*3	Instrument Panel Wire
*a	Front view of wire harness connector (to Instrument Panel Passenger Airbag Assembly)

NG ▶ **REPLACE INSTRUMENT PANEL WIRE**

OK ▼

4.	**CHECK DTC**

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(a) Connect the connectors to the instrument panel passenger airbag assembly and airbag ECU assembly.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

OK:
DTC B1815, B1816, B1817 or B1818 is not output.

HINT:

Codes other than DTCs B1815, B1816, B1817 and B1818 may be output at this time, but they are not related to this check.

Text in Illustration

*1	Instrument Panel Passenger Airbag Assembly
*2	Airbag ECU Assembly

NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000001NZQ08IX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1820-B1823: Short in Side Squib (RH) Circuit (2013 FR-S)		

DTC	**B1820**	**Short in Side Squib (RH) Circuit**

DTC	**B1821**	**Open in Side Squib (RH) Circuit**

DTC	**B1822**	**Short in Side Squib (RH) Circuit (to Ground)**

DTC	**B1823**	**Short in Side Squib (RH) Circuit (to +B)**

DESCRIPTION

The front side squib RH circuit consists of the airbag ECU assembly and front seat airbag assembly RH.

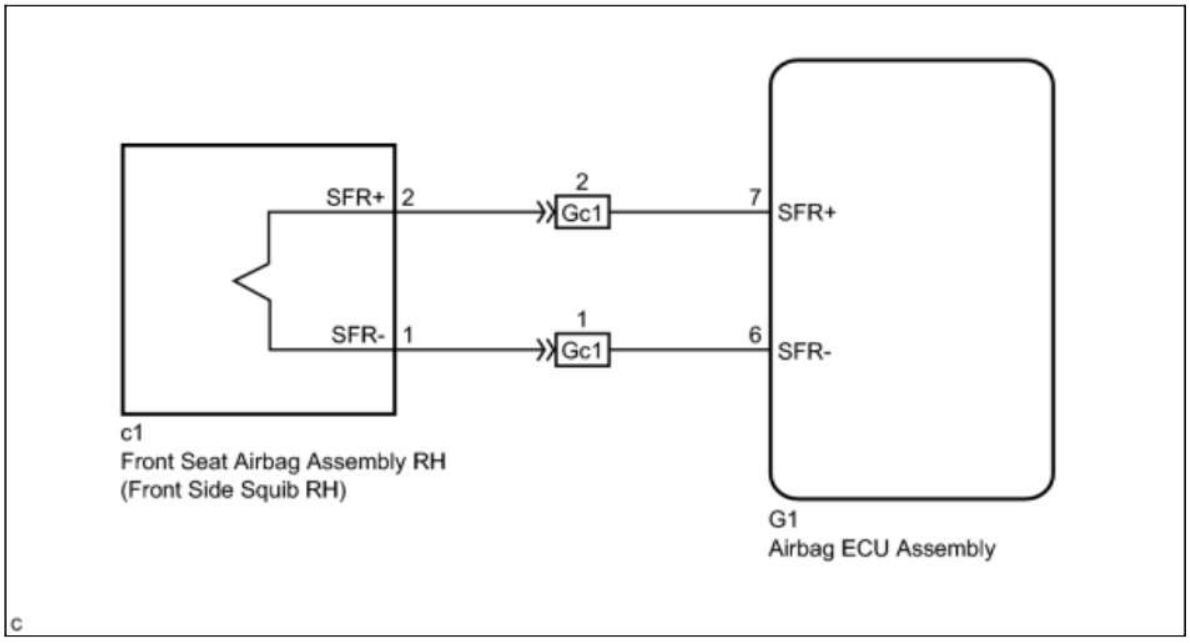
The airbag ECU assembly uses this circuit to deploy the airbag when deployment conditions are met.

These DTCs are stored when a malfunction is detected in the front side squib RH circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1820	• The airbag ECU assembly receives a line short circuit signal in the front side squib RH circuit during primary check. • Front side squib RH malfunction • Airbag ECU assembly malfunction	• No. 2 floor wire • Front seat assembly RH (Front seat wire RH) • Front seat airbag assembly RH (Front side squib RH) • Airbag ECU assembly
B1821	• The airbag ECU assembly receives an open circuit signal in the front side squib RH circuit. • Front side squib RH malfunction • Airbag ECU assembly malfunction	
B1822	• The airbag ECU assembly receives a short circuit to ground signal in the front side squib RH circuit. • Front side squib RH malfunction • Airbag ECU assembly malfunction	
B1823	• The airbag ECU assembly receives a short circuit to B+ signal in the front side squib RH circuit. • Front side squib RH malfunction • Airbag ECU assembly malfunction	

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WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

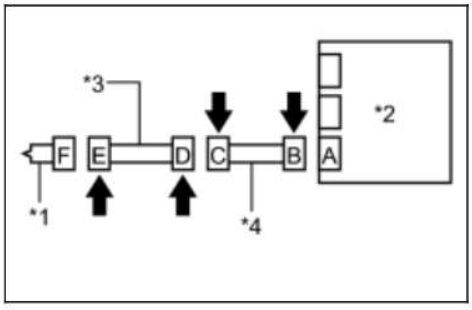
After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

HINT:

- Perform the simulation method by selecting check mode (Signal Check) using the Techstream INFO .
- After selecting check mode (Signal Check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city road or rough road INFO .

PROCEDURE

1.	**CHECK CONNECTORS**



(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

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CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the front seat airbag assembly RH and airbag ECU assembly. Also check that the connectors that link the No. 2 floor wire and front seat wire RH are properly connected.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the front seat airbag assembly RH and airbag ECU assembly. Also disconnect the No. 2 floor wire from the front seat wire RH.

(e) Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

(f) Check that the front seat wire RH connector (on the front seat airbag assembly RH side) is not damaged.

OK:

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

(g) Check that the short springs for the No. 2 floor wire and the front seat wire RH with the activation prevention mechanism are not deformed or damaged.

OK:

The short springs are not deformed or damaged.

Text in Illustration

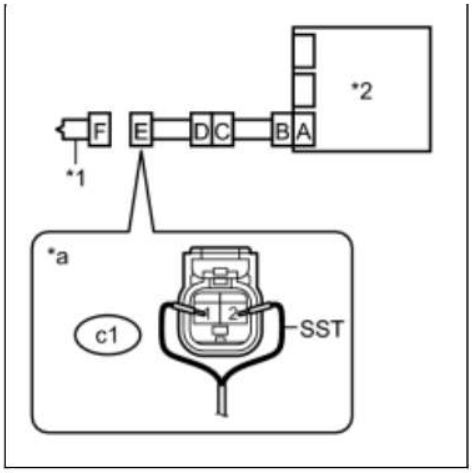
*1	Front Seat Airbag Assembly RH
*2	Airbag ECU Assembly
*3	Front Seat Wire RH
*4	No. 2 Floor Wire

NG ▶ **REPLACE WIRE HARNESS**

OK ▼

2.	**CHECK FRONT SEAT AIRBAG ASSEMBLY RH (FRONT SIDE SQUIB RH)**

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(a) Connect the No. 2 floor wire to the front seat wire RH and airbag ECU assembly.

(b) Connect SST (resistance 2.1 Ω) to connector E.

CAUTION:

Never connect the tester to the front seat airbag assembly RH (front side squib RH) 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 it.
- Insert SST straight into the terminals of the connector.

SST: 09843-18061

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

OK:

DTC B1820, B1821, B1822 or B1823 is not output.

HINT:

Codes other than DTCs B1820, B1821, B1822 and B1823 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Disconnect SST from connector E.

Text in Illustration

*1	Front Seat Airbag Assembly RH
*2	Airbag ECU Assembly

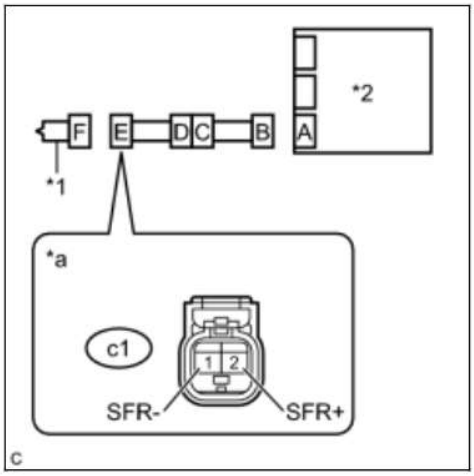
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*a	Front view of wire harness connector (to Front Seat Airbag Assembly RH)

NG ▶ **CHECK FRONT SIDE SQUIB RH CIRCUIT**

OK ▶ **REPLACE FRONT SEAT AIRBAG ASSEMBLY RH**

3.	**CHECK FRONT SIDE SQUIB RH CIRCUIT**



(a) Disconnect the No. 2 floor wire from the airbag ECU assembly.

(b) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
c1-1 (SFR-) - Body ground	Ignition switch ON	Below 1 V
c1-2 (SFR+) - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check for an open in the circuit.

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

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Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
c1-1 (SFR-) - c1-2 (SFR+)	Always	Below 1 Ω

(d) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
c1-1 (SFR-) - Body ground	Always	1 MΩ or higher
c1-2 (SFR+) - Body ground	Always	1 MΩ or higher

(e) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector B INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
c1-1 (SFR-) - c1-2 (SFR+)	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector B to the original condition.

Text in Illustration

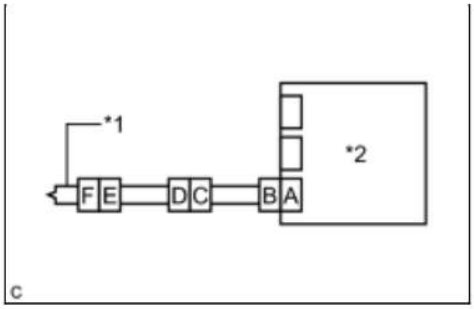
*1	Front Seat Airbag Assembly RH
*2	Airbag ECU Assembly
*a	Front view of wire harness connector (to Front Seat Airbag Assembly RH)

NG ▶ **CHECK NO. 2 FLOOR WIRE**

OK ▼

4.	**CHECK DTC**

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(a) Connect the connectors to the front seat airbag assembly RH and airbag ECU assembly.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

OK:

DTC B1820, B1821, B1822 or B1823 is not output.

HINT:

Codes other than DTCs B1820, B1821, B1822 and B1823 may be output at this time, but they are not related to this check.

Text in Illustration

*1	Front Seat Airbag Assembly RH
*2	Airbag ECU Assembly

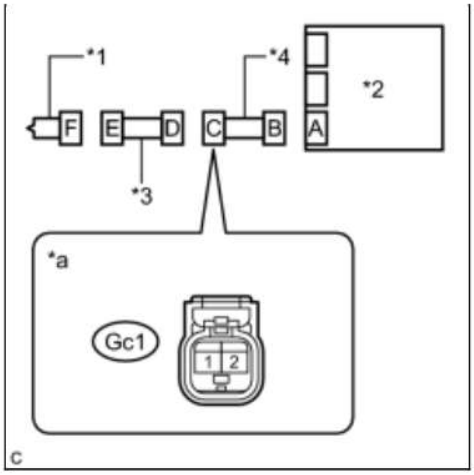
NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

5.	**CHECK NO. 2 FLOOR WIRE**

(a) Disconnect the front seat wire RH from the No. 2 floor wire.

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(b) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
Gc1-1 - Body ground	Ignition switch ON	Below 1 V
Gc1-2 - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

NOTICE:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check for an open in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
Gc1-1 - Gc1-2	Always	Below 1 Ω

(d) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
Gc1-1 - Body ground	Always	1 MΩ or higher
Gc1-2 - Body ground	Always	1 MΩ or higher

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(e) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector B INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
Gc1-1 - Gc1-2	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector B to the original condition.

Text in Illustration

*1	Front Seat Airbag Assembly RH
*2	Airbag ECU Assembly
*3	Front Seat Wire RH
*4	No. 2 Floor Wire
*a	Front view of wire harness connector (to Front Seat Wire RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

6.	**CHECK FRONT SEAT WIRE RH**

(a) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

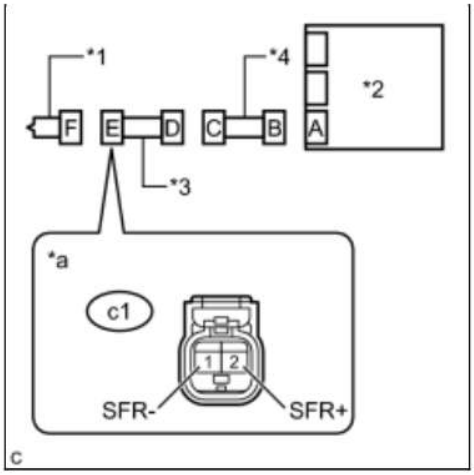
(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
c1-1 (SFR-) - Body ground	Ignition switch ON	Below 1 V

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c1-2 (SFR+) - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

NOTICE:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(b) Check for an open in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
c1-1 (SFR-) - c1-2 (SFR+)	Always	Below 1 Ω

(c) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
c1-1 (SFR-) - Body ground	Always	1 MΩ or higher
c1-2 (SFR+) - Body ground	Always	1 MΩ or higher

(d) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector D INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
c1-1 (SFR-) - c1-2 (SFR+)	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector D to the original condition.

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Text in Illustration

*1	Front Seat Airbag Assembly RH
*2	Airbag ECU Assembly
*3	Front Seat Wire RH
*4	No. 2 Floor Wire
*a	Front view of wire harness connector (to Front Seat Airbag Assembly RH)

NG ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

OK ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000001O0208HX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1825-B1828: Short in Side Squib (LH) Circuit (2013 FR-S)		

DTC	**B1825**	**Short in Side Squib (LH) Circuit**

DTC	**B1826**	**Open in Side Squib (LH) Circuit**

DTC	**B1827**	**Short in Side Squib (LH) Circuit (to Ground)**

DTC	**B1828**	**Short in Side Squib (LH) Circuit (to +B)**

DESCRIPTION

The front side squib LH circuit consists of the airbag ECU assembly and front seat airbag assembly LH.

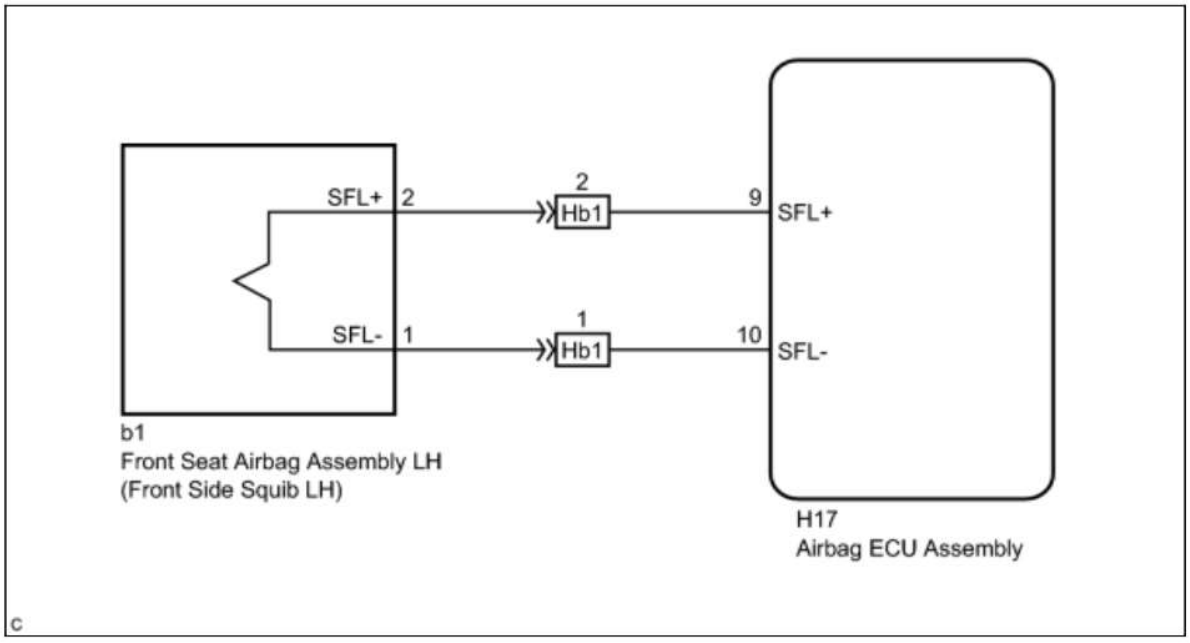
The airbag ECU assembly uses this circuit to deploy the airbag when deployment conditions are met.

These DTCs are stored when a malfunction is detected in the front side squib LH circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1825	• The airbag ECU assembly receives a line short circuit signal in the front side squib LH circuit during primary check. • Front side squib LH malfunction • Airbag ECU assembly malfunction	• Floor wire • Front seat assembly LH (Front seat wire LH) • Front seat airbag assembly LH (Front side squib LH) • Airbag ECU assembly
B1826	• The airbag ECU assembly receives an open circuit signal in the front side squib LH circuit. • Front side squib LH malfunction • Airbag ECU assembly malfunction	
B1827	• The airbag ECU assembly receives a short circuit to ground signal in the front side squib LH circuit. • Front side squib LH malfunction • Airbag ECU assembly malfunction	
B1828	• The airbag ECU assembly receives a short circuit to B+ signal in the front side squib LH circuit. • Front side squib LH malfunction • Airbag ECU assembly malfunction	

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WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

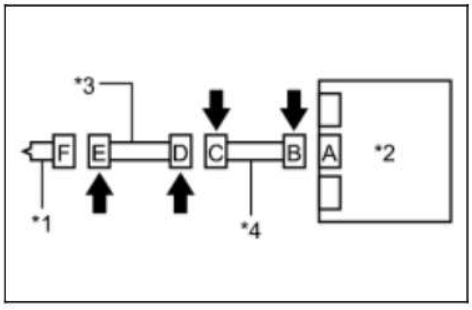
After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

HINT:

- Perform the simulation method by selecting check mode (Signal Check) using the Techstream INFO .
- After selecting check mode (Signal Check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city road or rough road INFO .

PROCEDURE

1.	**CHECK CONNECTORS**



(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

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CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the front seat airbag assembly LH and airbag ECU assembly. Also check that the connectors that link the floor wire and front seat wire LH are properly connected.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the front seat airbag assembly LH and airbag ECU assembly. Also disconnect the floor wire from the front seat wire LH.

(e) Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

(f) Check that the front seat wire LH connector (on the front seat airbag assembly LH side) is not damaged.

OK:

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

(g) Check that the short springs for the floor wire and the front seat wire LH with the activation prevention mechanism are not deformed or damaged.

OK:

The short springs are not deformed or damaged.

Text in Illustration

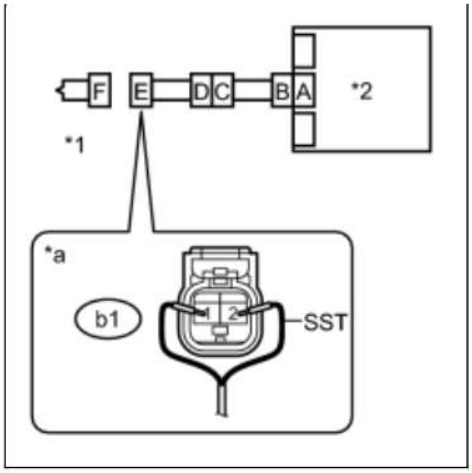
*1	Front Seat Airbag Assembly LH
*2	Airbag ECU Assembly
*3	Front Seat Wire LH
*4	Floor Wire

NG ▶ **REPLACE WIRE HARNESS**

OK ▼

2.	**CHECK FRONT SEAT AIRBAG ASSEMBLY LH (FRONT SIDE SQUIB LH)**

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(a) Connect the floor wire to the front seat wire LH and airbag ECU assembly.

(b) Connect SST (resistance 2.1 Ω) to connector E.

CAUTION:

Never connect the tester to the front seat airbag assembly LH (front side squib LH) 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 it.
- Insert SST straight into the terminals of the connector.

SST: 09843-18061

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

OK:

DTC B1825, B1826, B1827 or B1828 is not output.

HINT:

Codes other than DTCs B1825, B1826, B1827 and B1828 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Disconnect SST from connector E.

Text in Illustration

*1	Front Seat Airbag Assembly LH
*2	Airbag ECU Assembly

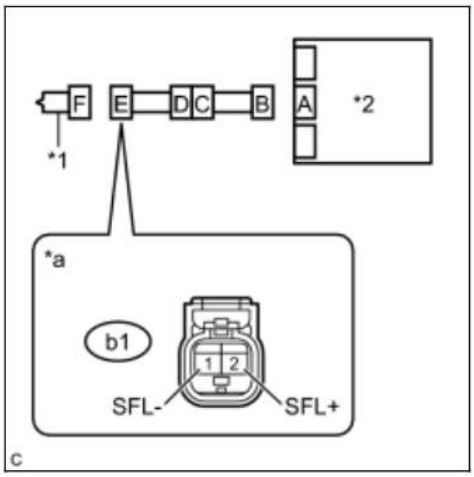
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*a	Front view of wire harness connector (to Front Seat Airbag Assembly LH)

NG ▶ **CHECK FLOOR WIRE**

OK ▶ **REPLACE FRONT SEAT AIRBAG ASSEMBLY LH**

3.	**CHECK FLOOR WIRE**



(a) Disconnect the floor wire from the airbag ECU assembly.

(b) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
b1-1 (SFL-) - Body ground	Ignition switch ON	Below 1 V
b1-2 (SFL+) - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check for an open in the circuit.

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

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Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
b1-1 (SFL-) - b1-2 (SFL+)	Always	Below 1 Ω

(d) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
b1-1 (SFL-) - Body ground	Always	1 MΩ or higher
b1-2 (SFL+) - Body ground	Always	1 MΩ or higher

(e) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector B INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
b1-1 (SFL-) - b1-2 (SFL+)	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector B to the original condition.

Text in Illustration

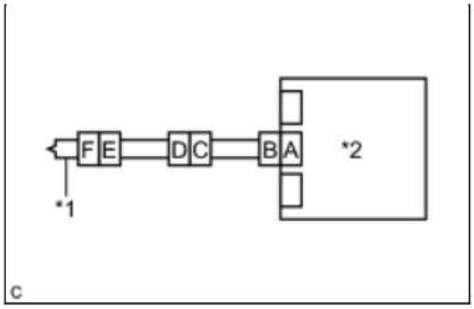
*1	Front Seat Airbag Assembly LH
*2	Airbag ECU Assembly
*a	Front view of wire harness connector (to Front Seat Airbag Assembly LH)

NG ▶ **CHECK FLOOR WIRE**

OK ▼

4.	**CHECK DTC**

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(a) Connect the connectors to the front seat airbag assembly LH and airbag ECU assembly.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

OK:

DTC B1825, B1826, B1827 or B1828 is not output.

HINT:

Codes other than DTCs B1825, B1826, B1827 and B1828 may be output at this time, but they are not related to this check.

Text in Illustration

*1	Front Seat Airbag Assembly LH
*2	Airbag ECU Assembly

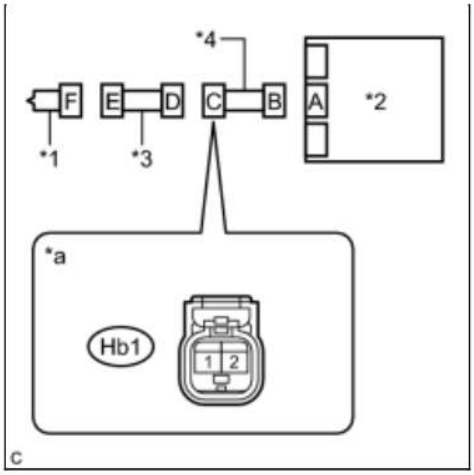
NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

5.	**CHECK FLOOR WIRE**

(a) Disconnect the front seat wire LH from the floor wire.

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(b) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
Hb1-1 - Body ground	Ignition switch ON	Below 1 V
Hb1-2 - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check for an open in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
Hb1-1 - Hb1-2	Always	Below 1 Ω

(d) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
Hb1-1 - Body ground	Always	1 MΩ or higher
Hb1-2 - Body ground	Always	1 MΩ or higher

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(e) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector B INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
Hb1-1 - Hb1-2	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector B to the original condition.

Text in Illustration

*1	Front Seat Airbag Assembly LH
*2	Airbag ECU Assembly
*3	Front Seat Wire LH
*4	Floor Wire
*a	Front view of wire harness connector (to Front Seat Wire LH)

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

6.	**CHECK FRONT SEAT WIRE LH**

(a) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

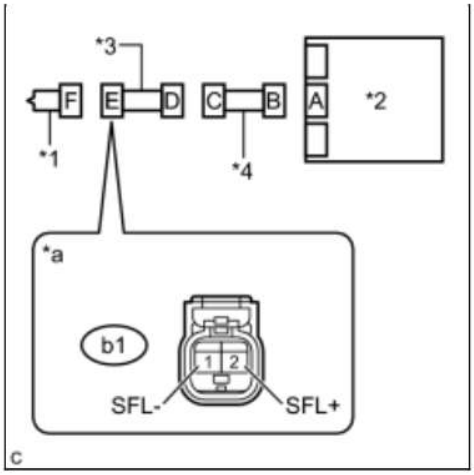
(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
b1-1 (SFL-) - Body ground	Ignition switch ON	Below 1 V

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b1-2 (SFL+) - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(b) Check for an open in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
b1-1 (SFL-) - b1-2 (SFL+)	Always	Below 1 Ω

(c) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
b1-1 (SFL-) - Body ground	Always	1 MΩ or higher
b1-2 (SFL+) - Body ground	Always	1 MΩ or higher

(d) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector D INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
b1-1 (SFL-) - b1-2 (SFL+)	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector D to the original condition.

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Text in Illustration

*1	Front Seat Airbag Assembly LH
*2	Airbag ECU Assembly
*3	Front Seat Wire LH
*4	Floor Wire
*a	Front view of wire harness connector (to Front Seat Airbag Assembly LH)

NG ▶ **REPLACE FRONT SEAT ASSEMBLY LH**

OK ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000001O0307EX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1830-B1833: Short in Curtain Shield Airbag (RH) Squib Circuit (2013 FR-S)		

DTC	**B1830**	**Short in Curtain Shield Airbag (RH) Squib Circuit**

DTC	**B1831**	**Open in Curtain Shield Airbag (RH) Squib Circuit**

DTC	**B1832**	**Short in Curtain Shield Airbag (RH) Squib Circuit (to Ground)**

DTC	**B1833**	**Short in Curtain Shield Airbag (RH) Squib Circuit (to +B)**

DESCRIPTION

The curtain shield squib RH circuit consists of the airbag ECU assembly and curtain shield airbag assembly RH.

The airbag ECU assembly uses this circuit to deploy the airbag when deployment conditions are met.

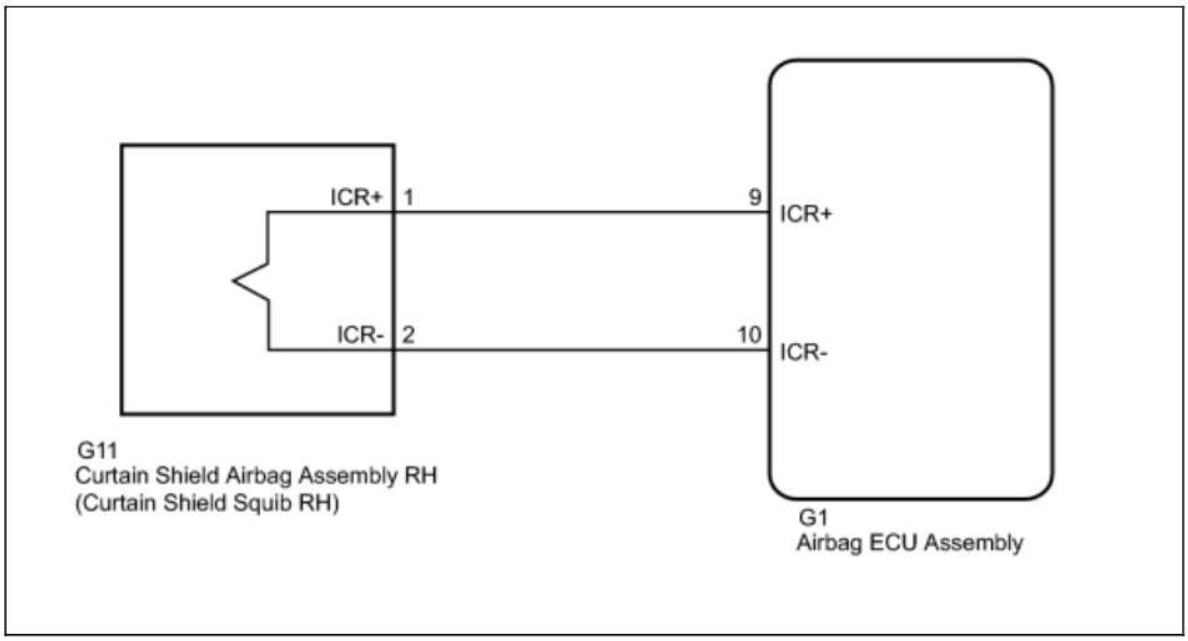
These DTCs are stored when a malfunction is detected in the curtain shield squib RH circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1830	• The airbag ECU assembly receives a line short circuit signal in the curtain shield squib RH circuit during primary check. • Curtain shield squib RH malfunction • Airbag ECU assembly malfunction	• No. 2 floor wire • Curtain shield airbag assembly RH (Curtain shield squib RH) • Airbag ECU assembly
B1831	• The airbag ECU assembly receives an open circuit signal in the curtain shield squib RH circuit. • Curtain shield squib RH malfunction • Airbag ECU assembly malfunction	
B1832	• The airbag ECU assembly receives a short circuit to ground signal in the curtain shield squib RH circuit. • Curtain shield squib RH malfunction • Airbag ECU assembly malfunction	
B1833	• The airbag ECU assembly receives a short circuit to B+ signal in the curtain shield squib RH circuit.	

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	• Curtain shield squib RH malfunction • Airbag ECU assembly malfunction	

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

HINT:

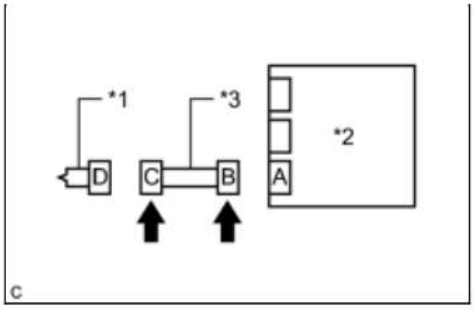
- Perform the simulation method by selecting check mode (Signal Check) using the Techstream INFO .
- After selecting check mode (Signal Check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city road or rough road INFO .

PROCEDURE

1.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

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(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the curtain shield airbag assembly RH and airbag ECU assembly.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the curtain shield airbag assembly RH and airbag ECU assembly.

(e) Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

(f) Check that the No. 2 floor wire connector (on the curtain shield airbag assembly RH side) is not damaged.

OK:

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

(g) Check that the short spring for the No. 2 floor wire with the activation prevention mechanism is not deformed or damaged.

OK:

The short spring is not deformed or damaged.

Text in Illustration

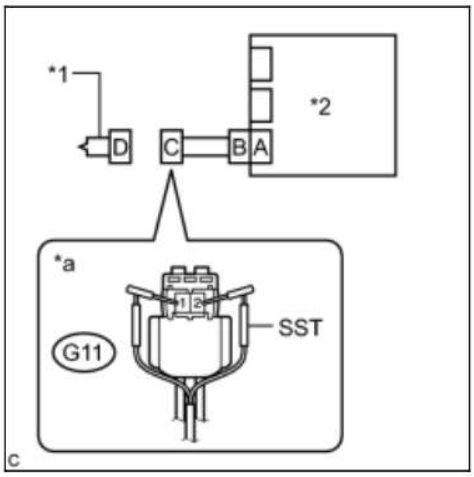
*1	Curtain Shield Airbag Assembly RH
*2	Airbag ECU Assembly
*3	No. 2 Floor Wire

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK

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2.	CHECK CURTAIN SHIELD AIRBAG ASSEMBLY RH (CURTAIN SHIELD SQUIB RH)



(a) Connect the connector to the airbag ECU assembly.

(b) Connect SST (resistance 2.1 Ω) to connector C.

CAUTION:

Never connect the tester to the curtain shield airbag assembly RH (curtain shield squib RH) 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 it.
- Insert SST straight into the terminals of the connector.

SST: 09843-18061

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

OK:

DTC B1830, B1831, B1832 or B1833 is not output.

HINT:

Codes other than DTCs B1830, B1831, B1832 and B1833 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal

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to disable the SRS system.

(j) Disconnect SST from connector C.

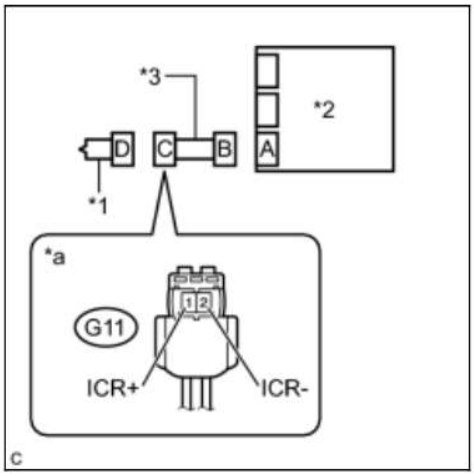
Text in Illustration

*1	Curtain Shield Airbag Assembly RH
*2	Airbag ECU Assembly
*a	Front view of wire harness connector (to Curtain Shield Airbag Assembly RH)

NG ▶ **CHECK NO. 2 FLOOR WIRE**

OK ▶ **REPLACE CURTAIN SHIELD AIRBAG ASSEMBLY RH**

3.	**CHECK NO. 2 FLOOR WIRE**



(a) Disconnect the No. 2 floor wire from the airbag ECU assembly.

(b) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G11-1 (ICR+) - Body ground	Ignition switch ON	Below 1 V
G11-2 (ICR-) - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

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(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check for an open in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G11-1 (ICR+) - G11-2 (ICR-)	Always	Below 1 Ω

(d) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G11-1 (ICR+) - Body ground	Always	1 MΩ or higher
G11-2 (ICR-) - Body ground	Always	1 MΩ or higher

(e) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector B INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G11-1 (ICR+) - G11-2 (ICR-)	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector B to the original condition.

Text in Illustration

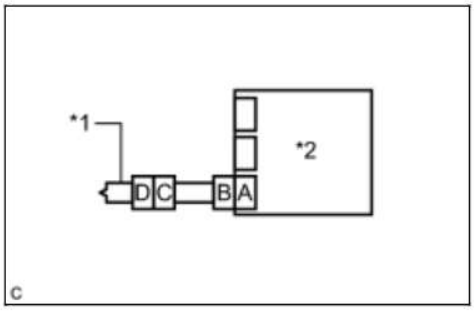
*1	Curtain Shield Airbag Assembly RH
*2	Airbag ECU Assembly
*3	No. 2 Floor Wire
*a	Front view of wire harness connector (to Curtain Shield Airbag Assembly RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

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4.	CHECK DTC



(a) Connect the connectors to the curtain shield airbag assembly RH and airbag ECU assembly.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

OK:

DTC B1830, B1831, B1832 or B1833 is not output.

HINT:

Codes other than DTCs B1830, B1831, B1832 and B1833 may be output at this time, but they are not related to this check.

Text in Illustration

*1	Curtain Shield Airbag Assembly RH
*2	Airbag ECU Assembly

NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000001O0407EX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1835-B1838: Short in Curtain Shield Airbag (LH) Squib Circuit (2013 FR-S)		

DTC	**B1835**	**Short in Curtain Shield Airbag (LH) Squib Circuit**

DTC	**B1836**	**Open in Curtain Shield Airbag (LH) Squib Circuit**

DTC	**B1837**	**Short in Curtain Shield Airbag (LH) Squib Circuit (to Ground)**

DTC	**B1838**	**Short in Curtain Shield Airbag (LH) Squib Circuit (to +B)**

DESCRIPTION

The curtain shield squib LH circuit consists of the airbag ECU assembly and curtain shield airbag assembly LH.

The airbag ECU assembly uses this circuit to deploy the airbag when deployment conditions are met.

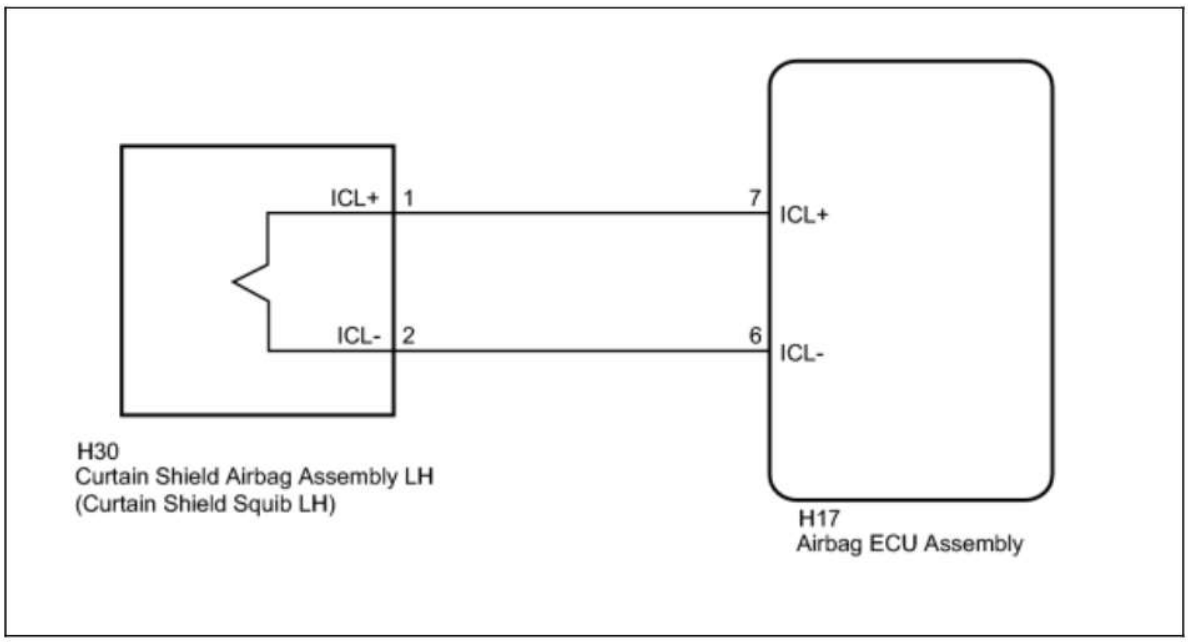
These DTCs are stored when a malfunction is detected in the curtain shield squib LH circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1835	• The airbag ECU assembly receives a line short circuit signal in the curtain shield squib LH circuit during primary check. • Curtain shield squib LH malfunction • Airbag ECU assembly malfunction	• Floor wire • Curtain shield airbag assembly LH (Curtain shield squib LH) • Airbag ECU assembly
B1836	• The airbag ECU assembly receives an open circuit signal in the curtain shield squib LH circuit. • Curtain shield squib LH malfunction • Airbag ECU assembly malfunction	
B1837	• The airbag ECU assembly receives a short circuit to ground signal in the curtain shield squib LH circuit. • Curtain shield squib LH malfunction • Airbag ECU assembly malfunction	
B1838	• The airbag ECU assembly receives a short circuit to B+ signal in the curtain shield squib LH circuit. • Curtain shield squib LH malfunction	

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	• Airbag ECU assembly malfunction	

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

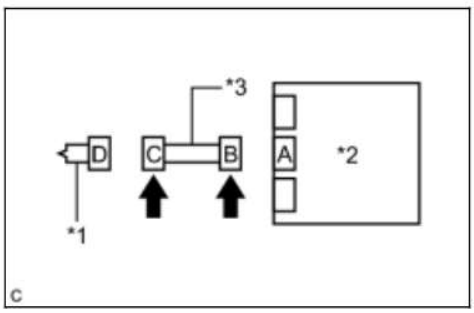
After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

HINT:

- Perform the simulation method by selecting check mode (Signal Check) using the Techstream INFO .
- After selecting check mode (Signal Check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city road or rough road INFO .

PROCEDURE

1.	**CHECK CONNECTORS**



(a) Turn the ignition switch off.

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(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the curtain shield airbag assembly LH and airbag ECU assembly.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the curtain shield airbag assembly LH and airbag ECU assembly.

(e) Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

(f) Check that the floor wire connector (on the curtain shield airbag assembly LH side) is not damaged.

OK:

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

(g) Check that the short spring for the floor wire with the activation prevention mechanism is not deformed or damaged.

OK:

The short spring is not deformed or damaged.

Text in Illustration

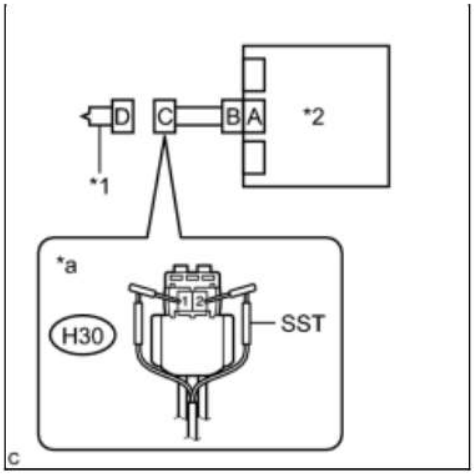
*1	Curtain Shield Airbag Assembly LH
*2	Airbag ECU Assembly
*3	Floor Wire

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

2.	**CHECK CURTAIN SHIELD AIRBAG ASSEMBLY LH (CURTAIN SHIELD SQUIB LH)**

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(a) Connect the connector to the airbag ECU assembly.

(b) Connect SST (resistance 2.1 Ω) to connector C.

CAUTION:

Never connect the tester to the curtain shield airbag assembly LH (curtain shield squib LH) 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 it.
- Insert SST straight into the terminals of the connector.

SST: 09843-18061

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

OK:

DTC B1835, B1836, B1837 or B1838 is not output.

HINT:

Codes other than DTCs B1835, B1836, B1837 and B1838 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Disconnect SST from connector C.

Text in Illustration

*1	Curtain Shield Airbag Assembly LH
*2	Airbag ECU Assembly
	Front view of wire harness connector

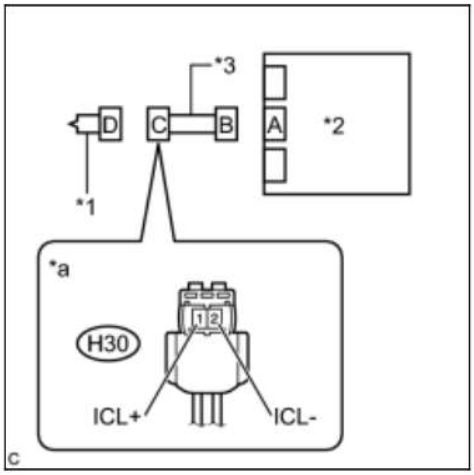
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*a	(to Curtain Shield Airbag Assembly LH)

NG ▶ CHECK FLOOR WIRE

OK ▶ REPLACE CURTAIN SHIELD AIRBAG ASSEMBLY LH

3.	CHECK FLOOR WIRE



(a) Disconnect the floor wire from the airbag ECU assembly.

(b) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H30-1 (ICL+) - Body ground	Ignition switch ON	Below 1 V
H30-2 (ICL-) - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check for an open in the circuit.

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

Standard Resistance:

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TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H30-1 (ICL+) - H30-2 (ICL-)	Always	Below 1 Ω

(d) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H30-1 (ICL+) - Body ground	Always	1 MΩ or higher
H30-2 (ICL-) - Body ground	Always	1 MΩ or higher

(e) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector B INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H30-1 (ICL+) - H30-2 (ICL-)	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector B to the original condition.

Text in Illustration

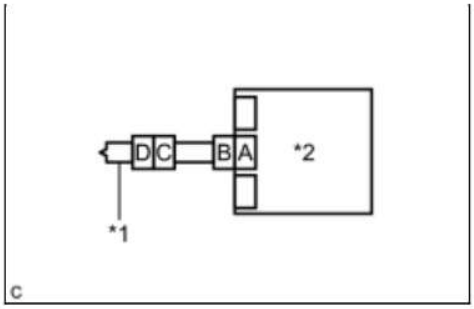
*1	Curtain Shield Airbag Assembly LH
*2	Airbag ECU Assembly
*3	Floor Wire
*a	Front view of wire harness connector (to Curtain Shield Airbag Assembly LH)

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

4.	**CHECK DTC**

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(a) Connect the connectors to the curtain shield airbag assembly LH and airbag ECU assembly.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

OK:

DTC B1835, B1836, B1837 or B1838 is not output.

HINT:

Codes other than DTCs B1835, B1836, B1837 and B1838 may be output at this time, but they are not related to this check.

Text in Illustration

*1	Curtain Shield Airbag Assembly LH
*2	Airbag ECU Assembly

NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000001O0509EX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1900-B1903: Short in P/T Squib (RH) Circuit (2013 FR-S)		

DTC	**B1900**	**Short in P/T Squib (RH) Circuit**

DTC	**B1901**	**Open in P/T Squib (RH) Circuit**

DTC	**B1902**	**Short in P/T Squib (RH) Circuit (to Ground)**

DTC	**B1903**	**Short in P/T Squib (RH) Circuit (to +B)**

DESCRIPTION

The front pretensioner squib RH circuit consists of the airbag ECU assembly and front seat outer belt assembly RH.

The airbag ECU assembly uses this circuit to deploy the seat belt pretensioner when deployment conditions are met.

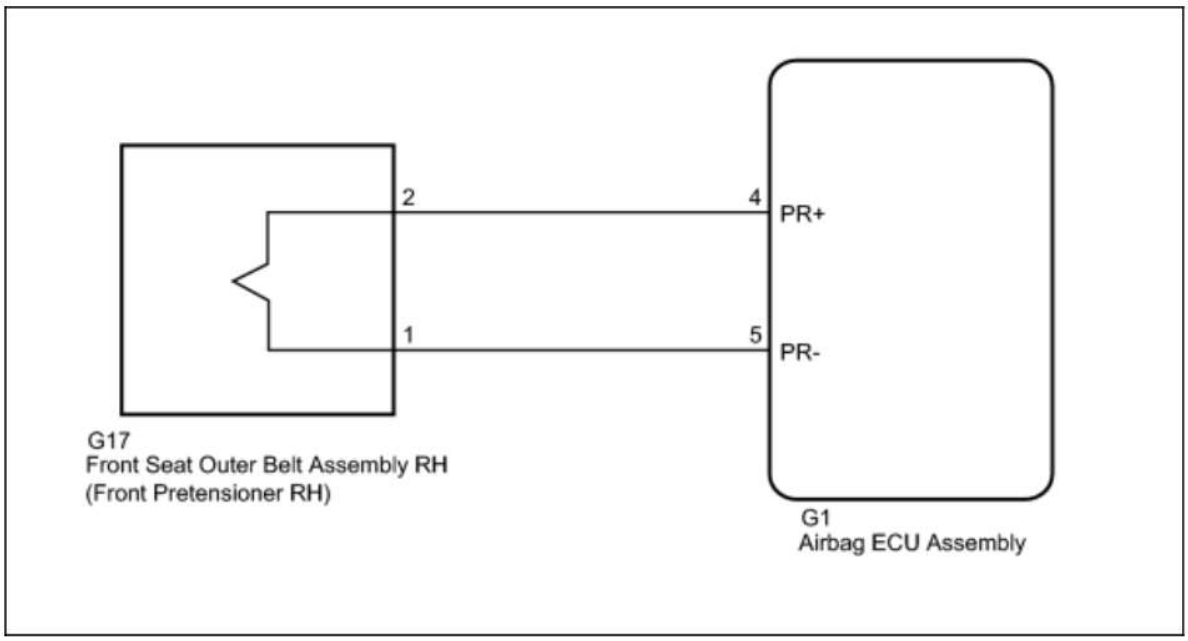
These DTCs are stored when a malfunction is detected in the front pretensioner squib RH circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1900	• The airbag ECU assembly receives a line short circuit signal in the front pretensioner squib RH circuit during primary check. • Front pretensioner squib RH malfunction • Airbag ECU assembly malfunction	• No. 2 floor wire • Front seat outer belt assembly RH (Front pretensioner squib RH) • Airbag ECU assembly
B1901	• The airbag ECU assembly receives an open circuit signal in the front pretensioner squib RH circuit. • Front pretensioner squib RH malfunction • Airbag ECU assembly malfunction	
B1902	• The airbag ECU assembly receives a short circuit to ground signal in the front pretensioner squib RH circuit. • Front pretensioner squib RH malfunction • Airbag ECU assembly malfunction	
	• The airbag ECU assembly receives a short circuit	

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B1903	to B+ signal in the front pretensioner squib RH circuit. • Front pretensioner squib RH malfunction • Airbag ECU assembly malfunction	

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

HINT:

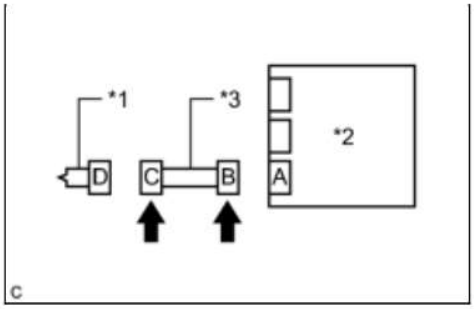
- Perform the simulation method by selecting check mode (Signal Check) using the Techstream INFO .
- After selecting check mode (Signal Check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city road or rough road INFO .

PROCEDURE

1.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

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(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the front seat outer belt assembly RH and airbag ECU assembly.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the front seat outer belt assembly RH and airbag ECU assembly.

(e) Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

(f) Check that the No. 2 floor wire connector (on the front seat outer belt assembly RH side) is not damaged.

OK:

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

(g) Check that the short spring for the No. 2 floor wire with the activation prevention mechanism is not deformed or damaged.

OK:

The short spring is not deformed or damaged.

Text in Illustration

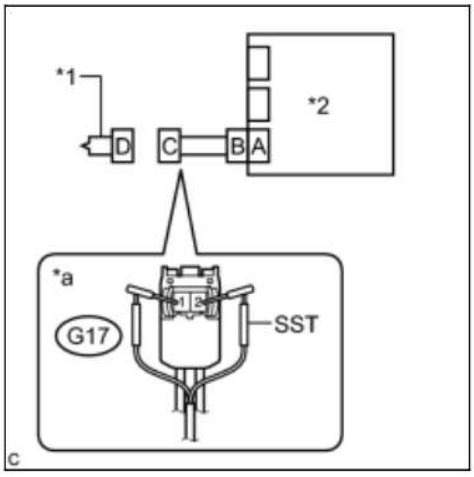
*1	Front Seat Outer Belt Assembly RH
*2	Airbag ECU Assembly
*3	No. 2 Floor Wire

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK

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2.	**CHECK FRONT SEAT OUTER BELT ASSEMBLY RH (FRONT PRETENSIONER SQUIB RH)**



(a) Connect the connector to the airbag ECU assembly.

(b) Connect SST (resistance 2.1 Ω) to connector C.

CAUTION:

Never connect the tester to the front seat outer belt assembly RH (front pretensioner squib RH) for measurement, as this may lead to a serious injury due to pretensioner deployment.

NOTICE:

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

SST: 09843-18061

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

OK:
DTC B1900, B1901, B1902 or B1903 is not output.

HINT:

Codes other than DTCs B1900, B1901, B1902 and B1903 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

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Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Disconnect SST from connector C.

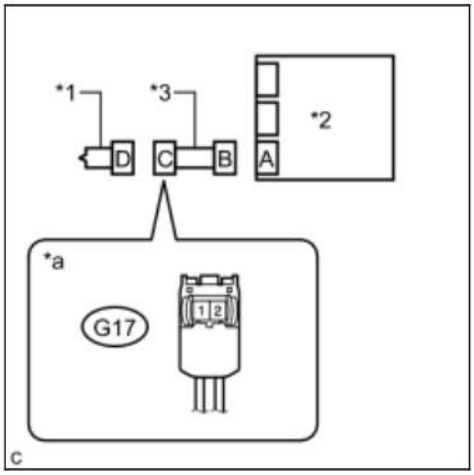
Text in Illustration

*1	Front Seat Outer Belt Assembly RH
*2	Airbag ECU Assembly
*a	Front view of wire harness connector (to Front Seat Outer Belt Assembly RH)

NG ▶ **CHECK NO. 2 FLOOR WIRE**

OK ▶ **REPLACE FRONT SEAT OUTER BELT ASSEMBLY RH**

3.	**CHECK NO. 2 FLOOR WIRE**



(a) Disconnect the No. 2 floor wire from the airbag ECU assembly.

(b) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G17-1 - Body ground	Ignition switch ON	Below 1 V
G17-2 - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

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(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check for an open in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G17-1 - G17-2	Always	Below 1 Ω

(d) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G17-1 - Body ground	Always	1 MΩ or higher
G17-2 - Body ground	Always	1 MΩ or higher

(e) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector B INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G17-1 - G17-2	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector B to the original condition.

Text in Illustration

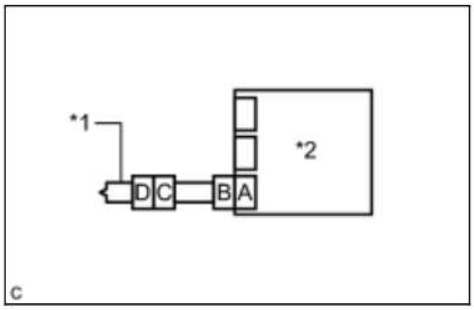
*1	Front Seat Outer Belt Assembly RH
*2	Airbag ECU Assembly
*3	No. 2 Floor Wire
*a	Front view of wire harness connector (to Front Seat Outer Belt Assembly RH)

NG ▶ **REPLACE NO. 2 FLOOR WIRE**

OK ▼

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4.	CHECK DTC



(a) Connect the connectors to the front seat outer belt assembly RH and airbag ECU assembly.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

OK:
DTC B1900, B1901, B1902 or B1903 is not output.

HINT:

Codes other than DTCs B1900, B1901, B1902 and B1903 may be output at this time, but they are not related to this check.

Text in Illustration

*1	Front Seat Outer Belt Assembly RH
*2	Airbag ECU Assembly

NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000001O0609CX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: B1905-B1908: Short in P/T Squib (LH) Circuit (2013 FR-S)		

DTC	**B1905**	**Short in P/T Squib (LH) Circuit**

DTC	**B1906**	**Open in P/T Squib (LH) Circuit**

DTC	**B1907**	**Short in P/T Squib (LH) Circuit (to Ground)**

DTC	**B1908**	**Short in P/T Squib (LH) Circuit (to +B)**

DESCRIPTION

The front pretensioner squib LH circuit consists of the airbag ECU assembly and front seat outer belt assembly LH.

The airbag ECU assembly uses this circuit to deploy the seat belt pretensioner when deployment conditions are met.

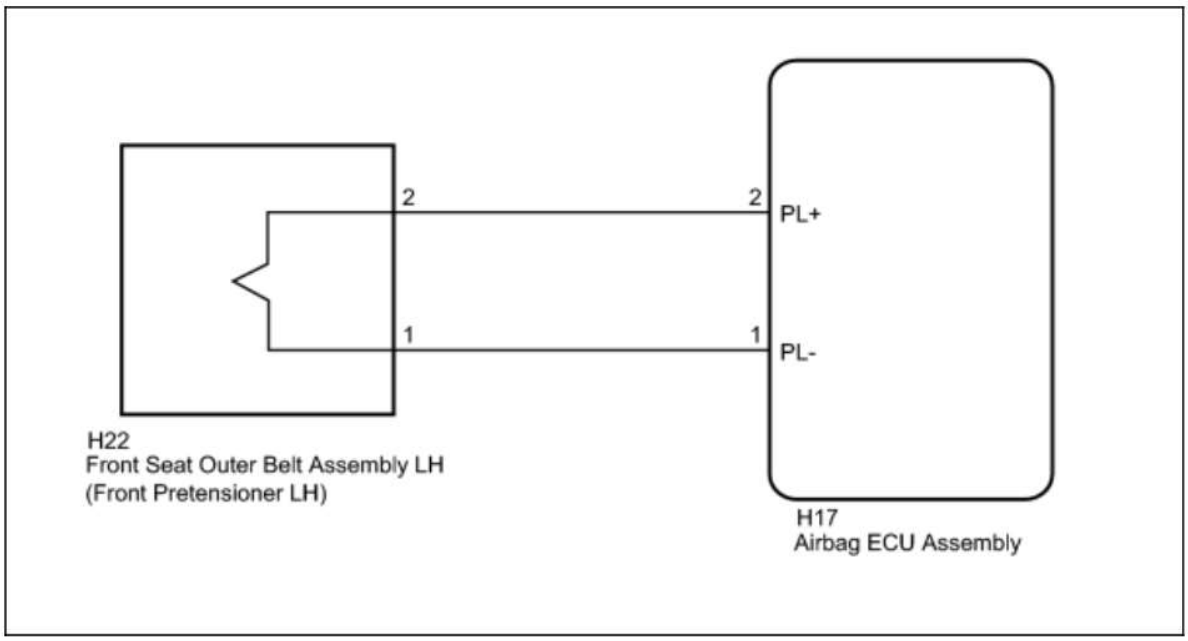
These DTCs are stored when a malfunction is detected in the front pretensioner squib LH circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1905	• The airbag ECU assembly receives a line short circuit signal in the front pretensioner squib LH circuit during primary check. • Front pretensioner squib LH malfunction • Airbag ECU assembly malfunction	• Floor wire • Front seat outer belt assembly LH (Front pretensioner squib LH) • Airbag ECU assembly
B1906	• The airbag ECU assembly receives an open circuit signal in the front pretensioner squib LH circuit. • Front pretensioner squib LH malfunction • Airbag ECU assembly malfunction	
B1907	• The airbag ECU assembly receives a short circuit to ground signal in the front pretensioner squib LH circuit. • Front pretensioner squib LH malfunction • Airbag ECU assembly malfunction	
	• The airbag ECU assembly receives a short circuit	

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B1908	to B+ signal in the front pretensioner squib LH circuit. • Front pretensioner squib LH malfunction • Airbag ECU assembly malfunction	

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

HINT:

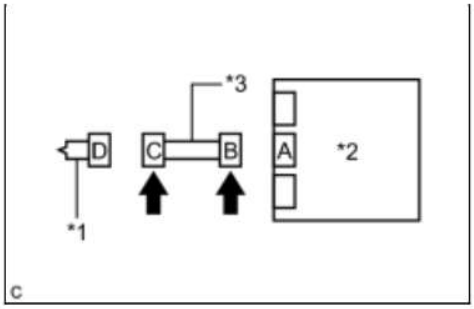
- Perform the simulation method by selecting check mode (Signal Check) using the Techstream INFO .
- After selecting check mode (Signal Check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city road or rough road INFO .

PROCEDURE

1.	**CHECK CONNECTORS**

(a) Turn the ignition switch off.

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(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connectors are properly connected to the front seat outer belt assembly LH and airbag ECU assembly.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the front seat outer belt assembly LH and airbag ECU assembly.

(e) Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

(f) Check that the floor wire connector (on the front seat outer belt assembly LH side) is not damaged.

OK:

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

(g) Check that the short spring for the floor wire with the activation prevention mechanism is not deformed or damaged.

OK:

The short spring is not deformed or damaged.

Text in Illustration

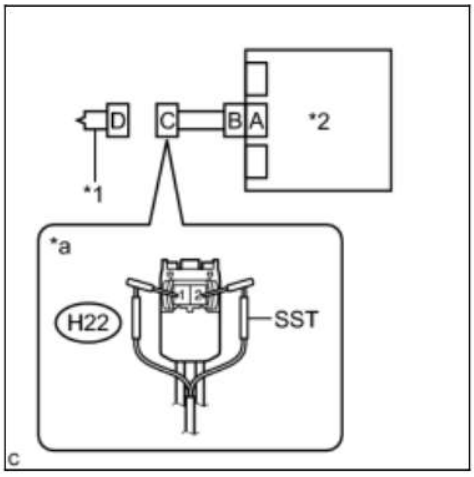
*1	Front Seat Outer Belt Assembly LH
*2	Airbag ECU Assembly
*3	Floor Wire

NG ▶ **REPLACE FLOOR WIRE**

OK

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2.	**CHECK FRONT SEAT OUTER BELT ASSEMBLY LH (FRONT PRETENSIONER SQUIB LH)**



(a) Connect the connector to the airbag ECU assembly.

(b) Connect SST (resistance 2.1 Ω) to connector C.

CAUTION:

Never connect the tester to the front seat outer belt assembly LH (front pretensioner squib LH) for measurement, as this may lead to a serious injury due to pretensioner deployment.

NOTICE:

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

SST: 09843-18061

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in memory INFO .

(e) Turn the ignition switch off.

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

(g) Check for DTCs INFO .

OK:
DTC B1905, B1906, B1907 or B1908 is not output.

HINT:

Codes other than DTCs B1905, B1906, B1907 and B1908 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

(i) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

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Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(j) Disconnect SST from connector C.

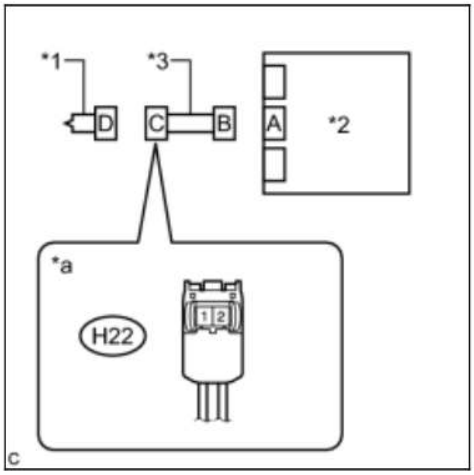
Text in Illustration

*1	Front Seat Outer Belt Assembly LH
*2	Airbag ECU Assembly
*a	Front view of wire harness connector (to Front Seat Outer Belt Assembly LH)

NG ▶ **CHECK FLOOR WIRE**

OK ▶ **REPLACE FRONT SEAT OUTER BELT ASSEMBLY LH**

3.	**CHECK FLOOR WIRE**



(a) Disconnect the floor wire from the airbag ECU assembly.

(b) Check for a short to B+ in the circuit.

(1) Connect the cable to the negative (-) battery terminal.

(2) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H22-1 - Body ground	Ignition switch ON	Below 1 V
H22-2 - Body ground	Ignition switch ON	Below 1 V

(4) Turn the ignition switch off.

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(5) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check for an open in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H22-1 - H22-2	Always	Below 1 Ω

(d) Check for a short to ground in the circuit.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H22-1 - Body ground	Always	1 MΩ or higher
H22-2 - Body ground	Always	1 MΩ or higher

(e) Check for a short in the circuit.

(1) Release the activation prevention mechanism built into connector B INFO .

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
H22-1 - H22-2	Always	1 MΩ or higher

(3) Restore the released activation prevention mechanism of connector B to the original condition.

Text in Illustration

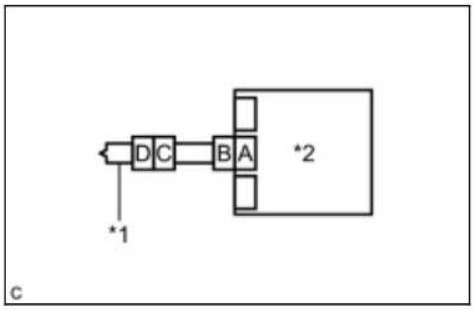
*1	Front Seat Outer Belt Assembly LH
*2	Airbag ECU Assembly
*3	Floor Wire
*a	Front view of wire harness connector (to Front Seat Outer Belt Assembly LH)

NG ▶ **REPLACE FLOOR WIRE**

OK ▼

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4.	CHECK DTC



(a) Connect the connectors to the front seat outer belt assembly LH and airbag ECU assembly.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in memory INFO .

(d) Turn the ignition switch off.

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

(f) Check for DTCs INFO .

OK:
DTC B1905, B1906, B1907 or B1908 is not output.

HINT:

Codes other than DTCs B1905, B1906, B1907 and B1908 may be output at this time, but they are not related to this check.

Text in Illustration

*1	Front Seat Outer Belt Assembly LH
*2	Airbag ECU Assembly

NG ▶ **REPLACE AIRBAG ECU ASSEMBLY**

OK ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 D	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000XFF0BYX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: CHECK MODE PROCEDURE (2013 FR-S)		

CHECK MODE PROCEDURE

1. CHECK MODE (SIGNAL CHECK): DTC CHECK

(a) Turn the ignition switch off.

(b) Connect the Techstream to the DLC3.

(c) Turn the ignition switch to ON.

(d) Turn the Techstream on.

(e) Enter the following menus: Body Electrical / SRS Airbag / Utility / Signal Check, and proceed with checking using the Techstream.

NOTICE:

Select Signal Check screen on the Techstream to clear the output DTCs (both current and history).

HINT:

- DTCs can be detected more sensitively in check mode than in normal diagnosis mode.
- Perform check mode inspection when a malfunction in a squib circuit is suspected even after the normal system code is output through normal diagnosis mode inspection.

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Last Modified: 3-27-2012	6.4 U	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000XFH0BDX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: DATA LIST / ACTIVE TEST (2013 FR-S)		

DATA LIST / ACTIVE TEST

HINT:

Using the Techstream to read the Data List allows the values or states of switches, sensors, actuators and other items to be read without removing any parts. This non-intrusive inspection can be very useful because intermittent conditions or signals may be discovered before parts or wiring is disturbed. Reading the Data List information early in troubleshooting is one way to save diagnostic time.

NOTICE:

In the table below, the values listed under "Normal Condition" are reference values. Do not depend solely on these reference values when deciding whether a part is faulty or not.

1. DATA LIST FOR AIRBAG ECU ASSEMBLY

(a) Turn the ignition switch off.

(b) Connect the Techstream to the DLC3.

(c) Turn the ignition switch to ON.

(d) Turn the Techstream on.

(e) Enter the following menus: Body Electrical / SRS Airbag / Data List.

(f) Check the values by referring to the table below.

SRS Airbag

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Passenger Classification	Passenger Classification/ NG: Date is not determined OFF: Vacant Child: Child (less than 32 kg (70.6 lb)) is seated AF05: Adult (36 to 54 kg (79.4 to 119.1 lb)) is seated AM50: Adult (more than 54 kg (119.1 lb)) is seated Fail: A failure is detected	OFF/Child/AF05/AM50	-
Driver Buckle SW	Driver Buckle SW/ Unset: The seat belt is not fastened Set: The seat belt is fastened NG: Data is not determined	Unset/Set	-
Number of DTC	Number of DTC/ Min.: 0, Max.: 255	0	-

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Last Modified: 3-27-2012	6.4 D	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000XFD0FVX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: DIAGNOSIS SYSTEM (2013 FR-S)		

DIAGNOSIS SYSTEM

1. FUNCTION OF SRS WARNING LIGHT

(a) Primary check

(1) Turn the ignition switch off. Wait for at least 2 seconds, then turn the ignition switch to ON. The SRS warning light comes on for approximately 6 seconds and the diagnosis of the airbag system (including the seat belt pretensioners) is performed.

HINT:

If malfunctions are detected during the primary check, the SRS warning light remains on even after the primary check period of approximately 6 seconds.

(b) Constant check

(1) After the primary check, the airbag ECU assembly constantly monitors the airbag system for malfunctions.

HINT:

If malfunctions are detected during the constant check, the airbag ECU assembly functions as follows:

- The SRS warning light comes on.
- The SRS warning light goes off, and then comes on. This indicates a source voltage drop. The SRS warning light goes off 10 seconds after the source voltage returns to normal.

(c) Review

(1) When the airbag system is normal:

The SRS warning light comes on only during the primary check period of approximately 6 seconds after the ignition switch is turned to ON.

(2) When the airbag system is malfunctioning:

- The SRS warning light remains on even after the primary check period.
- The SRS warning light goes off after the primary check, but comes on again during the constant check.
- The SRS warning light does not come on when turning the ignition switch from off to ON.

HINT:

The airbag ECU assembly keeps the SRS warning light on if airbags have been deployed.

2. SRS WARNING LIGHT CHECK

(a) Turn the ignition switch to ON, and check that the SRS warning light comes on for approximately 6 seconds (primary check).

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(b) Check that the SRS warning light goes off approximately 6 seconds after the ignition switch is turned to ON (constant check).

HINT:

When any of the following symptoms occur, refer to Problem Symptoms Table INFO .

- The SRS warning light comes on occasionally after the primary check period.
- The SRS warning light comes on, but a DTC is not output.
- The ignition switch is turned from off to ON, but the SRS warning light does not come on.

3. FUNCTION OF PASSENGER AIRBAG ON/OFF INDICATOR

(a) Initial check

(1) Turn the ignition switch to ON.

(2) The passenger airbag ON/OFF indicator comes on for approximately 6 seconds, then goes off for approximately 2 seconds.

(3) Approximately 6 seconds after the ignition switch is turned to ON, the passenger airbag ON/OFF indicator will indicate ON/OFF depending on the conditions listed below.

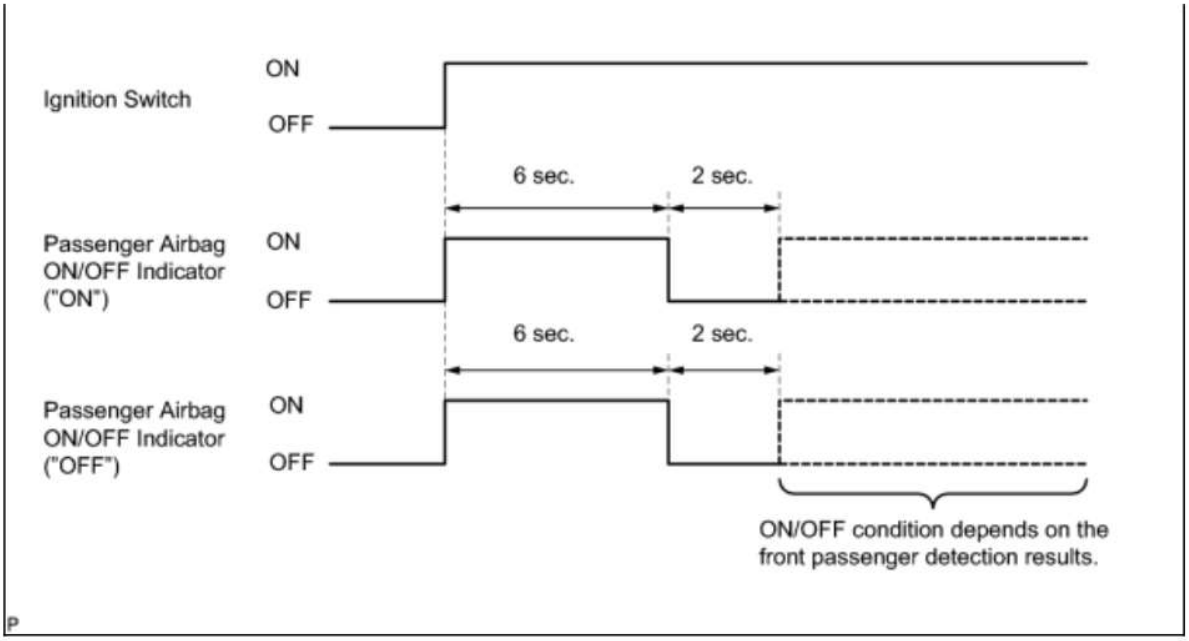
Indicator Operation

FRONT PASSENGER SEAT CONDITION	PASSENGER AIRBAG ON/OFF INDICATOR		SRS WARNING LIGHT
	ON INDICATOR	OFF INDICATOR	
Vacant	OFF	OFF	OFF
Adult is seated.	ON	OFF	OFF
Child is seated.	OFF	ON	OFF
Child restraint system is installed.			
Front passenger occupant classification failure	OFF	ON	ON

HINT:

- The passenger airbag ON/OFF indicator illuminates based on the timing chart below in order to check the indicator light circuit.
- When the occupant classification system has trouble, both the SRS warning light and passenger airbag ON/OFF indicator ("OFF") come on. In this case, check the DTCs in the airbag system first.

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4. PASSENGER AIRBAG ON/OFF INDICATOR CHECK



(a) Turn the ignition switch to ON.

(b) Check that the passenger airbag ON/OFF indicator ("ON" and "OFF") comes on for approximately 6 seconds, then goes off for approximately 2 seconds.

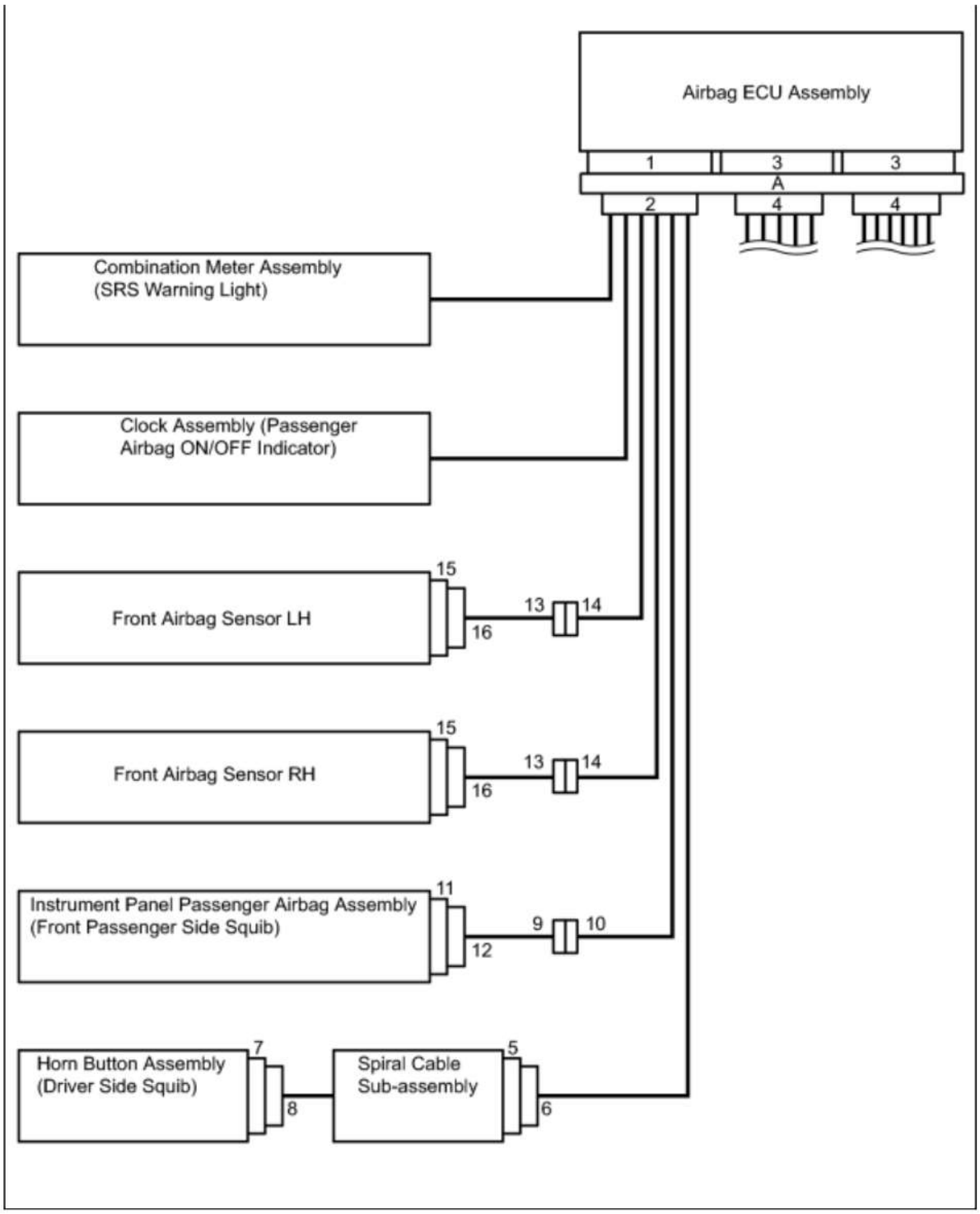
HINT:

Refer to the indicator operation table in the preceding step regarding the passenger airbag ON/OFF indicator when the ignition switch is turned to ON and approximately 6 seconds elapse.

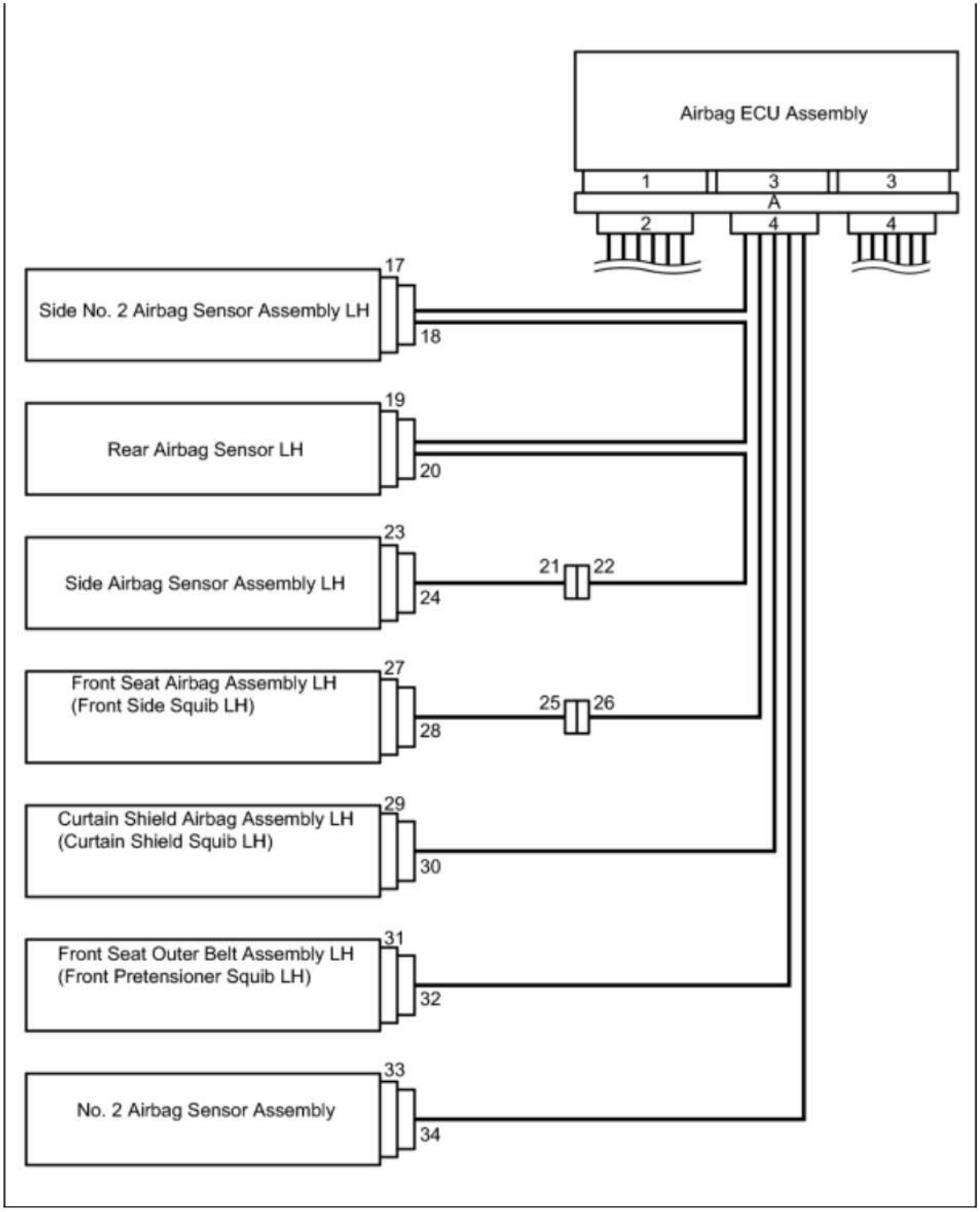
5. FUNCTION OF SRS CONNECTORS

(a) The SRS connectors are located as shown in the illustration.

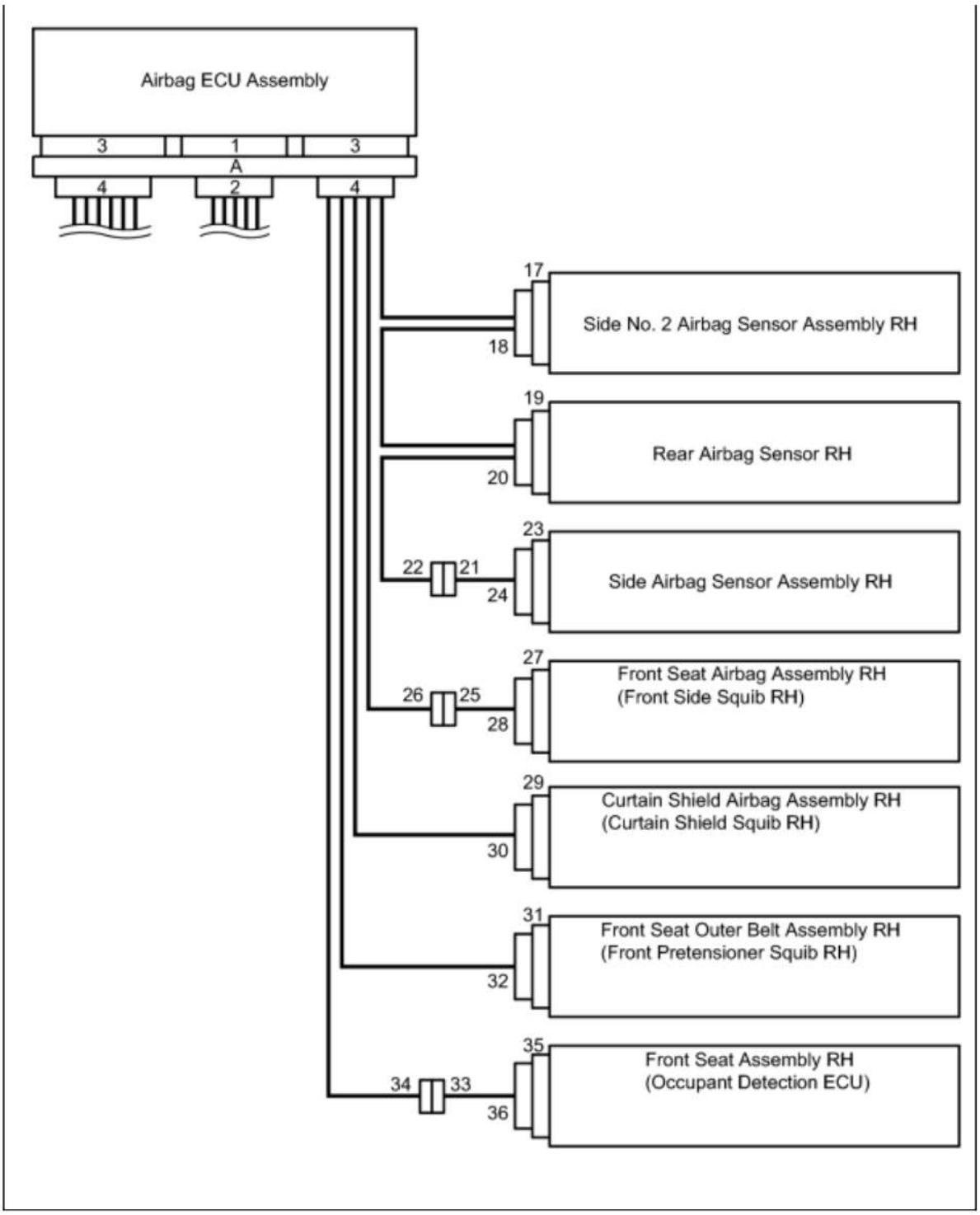
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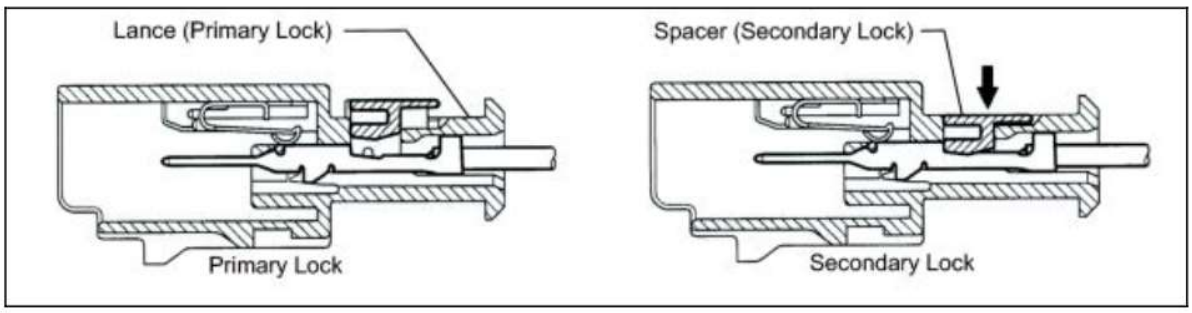


CONNECTOR TYPE	APPLICATION
Terminal Twin-lock Mechanism	Connectors 2, 4, 6, 9, 13, 21
Half Connection Prevention Mechanism	Connectors 6, 10
Activation Prevention Mechanism	Connectors 2, 4, 5, 7, 9, 11, 25, 27, 29, 31
Connector Lock Mechanism (1)	Connectors 8, 12, 30, 32
Connector Position Assurance Mechanism	Connectors 14, 16, 18, 20, 21, 24
Connector Lock Mechanism (2)	Connector A

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Improper Connection Prevention Lock Mechanism	Connector A

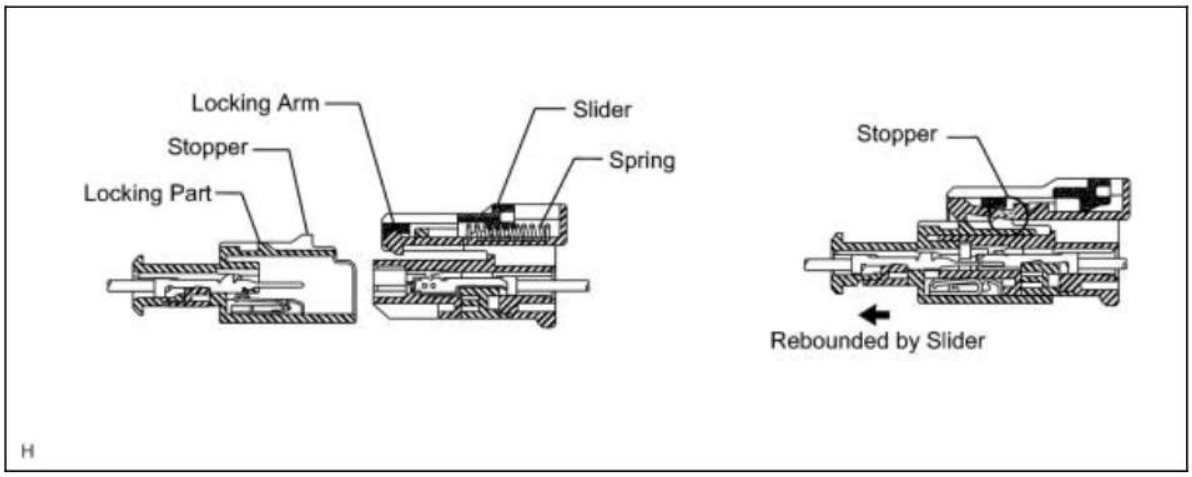
(b) Terminal twin-lock mechanism



(1) This mechanism is designed to increase the ability of the terminal to remain connected and prevent it from accidentally being disconnected.

(2) The connector has a two-piece construction consisting of the housing and spacer to securely lock the terminal using both the lance (primary lock) and spacer (secondary lock).

(c) Half connection prevention mechanism

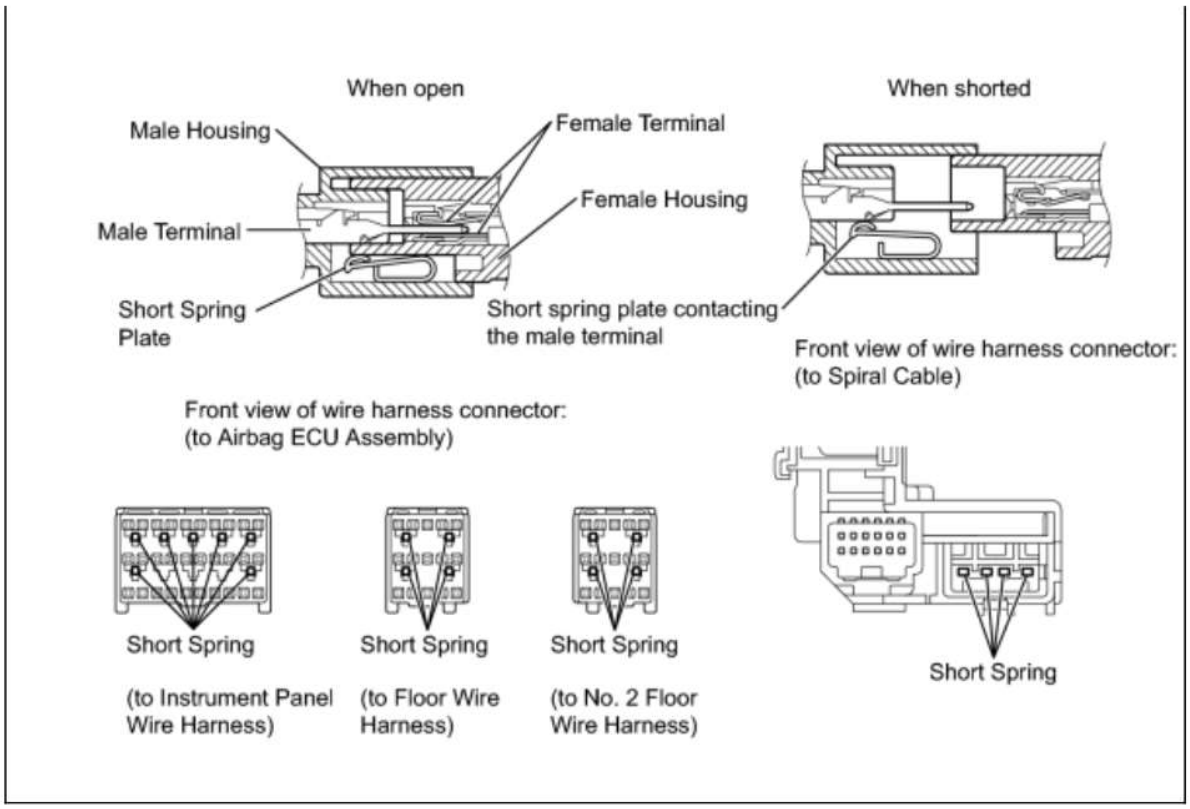


(1) This mechanism is designed to prevent the connector from being connected only halfway.

(2) If the connector is not completely connected, the connector is disconnected due to the spring force so that no continuity exists.

(d) Activation prevention mechanism

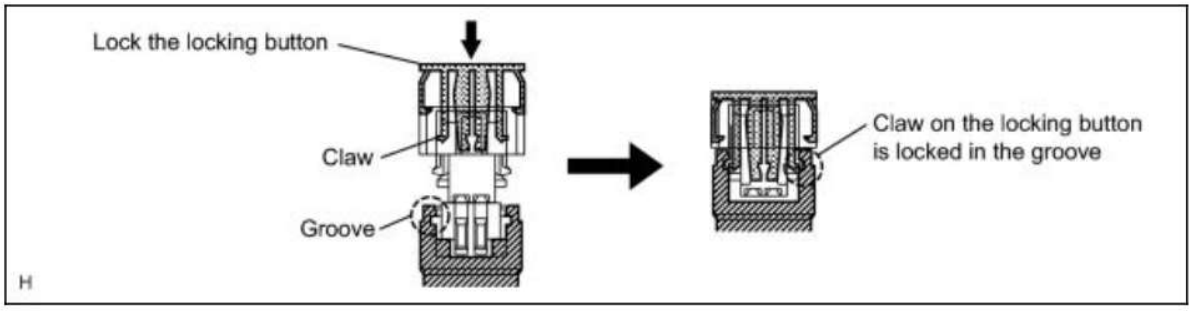
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(1) The activation prevention mechanism is designed to create a short circuit automatically between the positive and negative terminals of an airbag power source connector when disconnected.

(2) The short spring plate contained in the connector creates a closed circuit on the airbag side (no potential difference can occur between both terminals), preventing accidental airbag deployment when servicing.

(e) Connector lock mechanism (1)

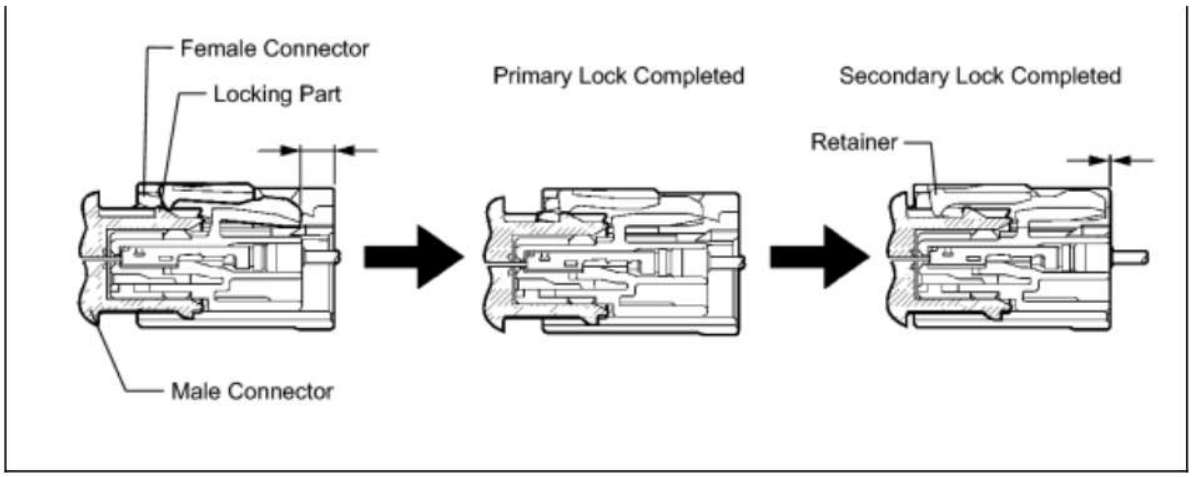


(1) This mechanism is designed to prevent the connector from accidentally being disconnected.

(2) Locking the connector lock button engages the locking button claw to the groove on the other side connector to connect the connector securely.

(f) Connector Position Assurance (CPA) mechanism

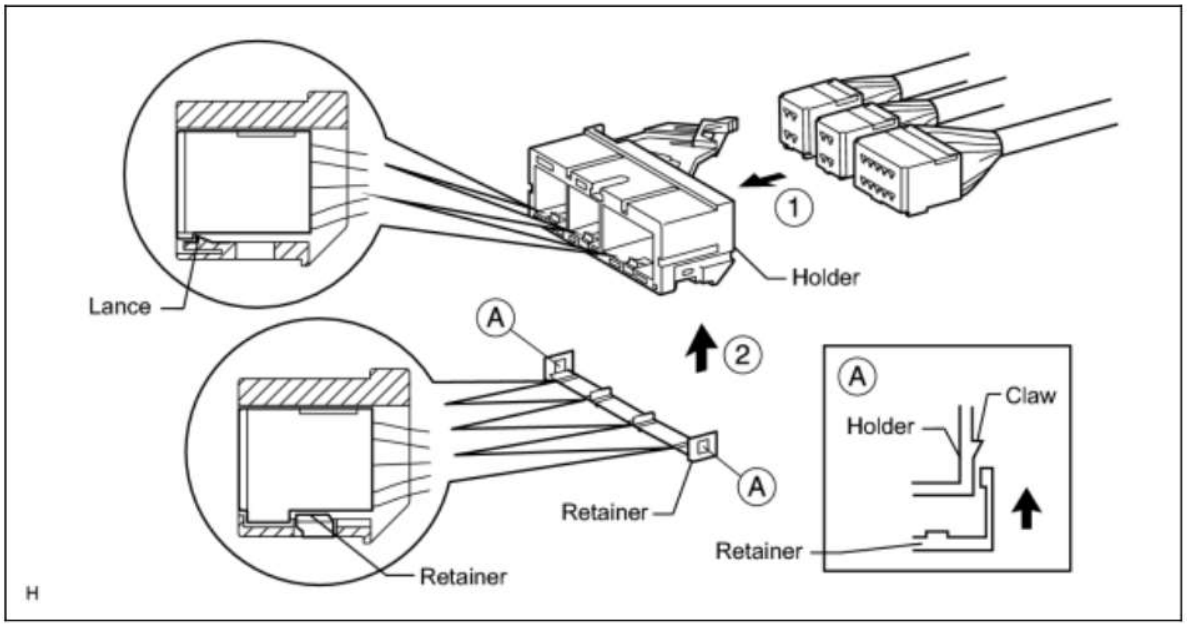
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(1) This mechanism is designed to detect when the connector is connected only halfway.

(2) The CPA and female connector slide to the male connector side at the same time and the primary lock is completed when the female connector is engaged with the male connector. From this point, only the CPA slides to the male connector side and secondary lock is completed when the CPA retainer is engaged with the female connector. When the CPA and female connector ends are aligned, they are completely engaged.

(g) Connector lock mechanism (2)



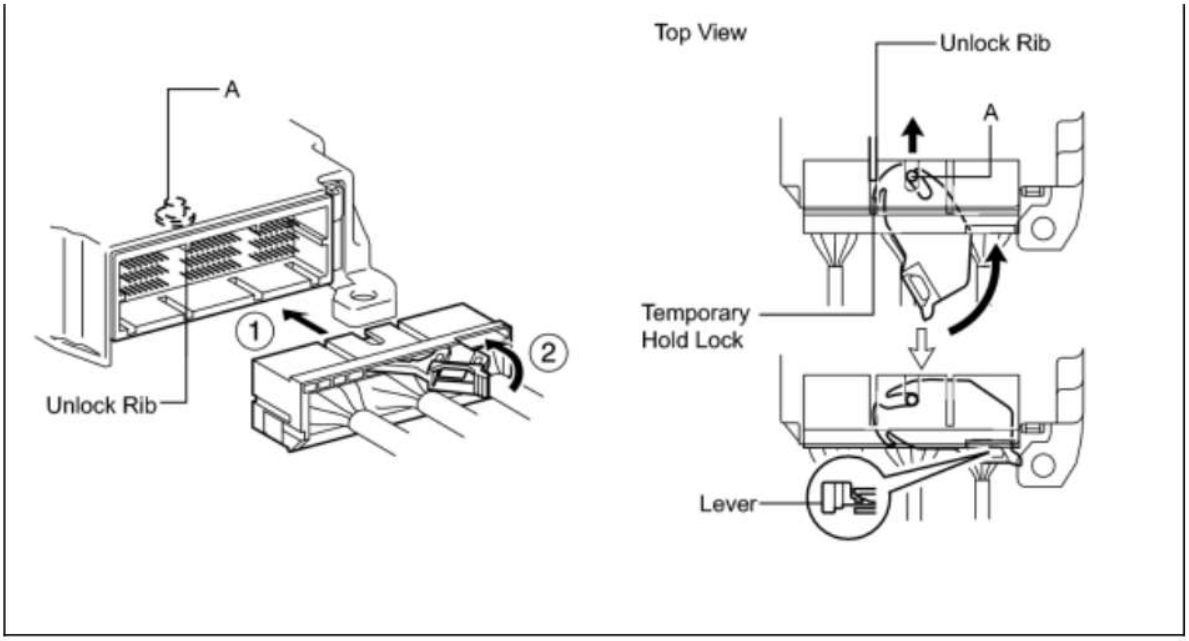
(1) This mechanism is designed to prevent the connector from accidentally being disconnected.

(2) Sliding the connector all the way into the holder and locking the lance completes the primary lock.

(3) Engaging the retainer to the holder as shown in the illustration completes the secondary lock, preventing the connector from accidentally being disconnected.

(h) Improper connection prevention lock mechanism

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(1) This mechanism is designed to prevent the connector from being connected only halfway.

(2) When the holder is connected to the airbag ECU assembly, the unlock rib unlocks the temporary hold lock, allowing the lever to be pushed in by rotating around the axis A.

(3) Locking the lever to the holder locks the holder securely.

6. ACTIVATION PREVENTION MECHANISM

(a) Function of activation prevention mechanism

(1) An activation prevention mechanism is built into the connector (on the airbag ECU assembly side) of the airbag system squib circuit to prevent accidental airbag activation.

(2) This mechanism closes the circuit when the connector is disconnected by bringing the short spring into contact with the terminals and insulating the circuit from external power sources to prevent accidental airbag activation.

(b) Releasing of activation prevention mechanism

(1) To release the activation prevention mechanism, insert a piece of paper with the same thickness as the male terminal (approximately 0.5 mm (0.0197 in.)) between the terminals and short spring to break the connection.

(2) Refer to the following illustrations concerning connectors utilizing the activation prevention mechanism and its release method.

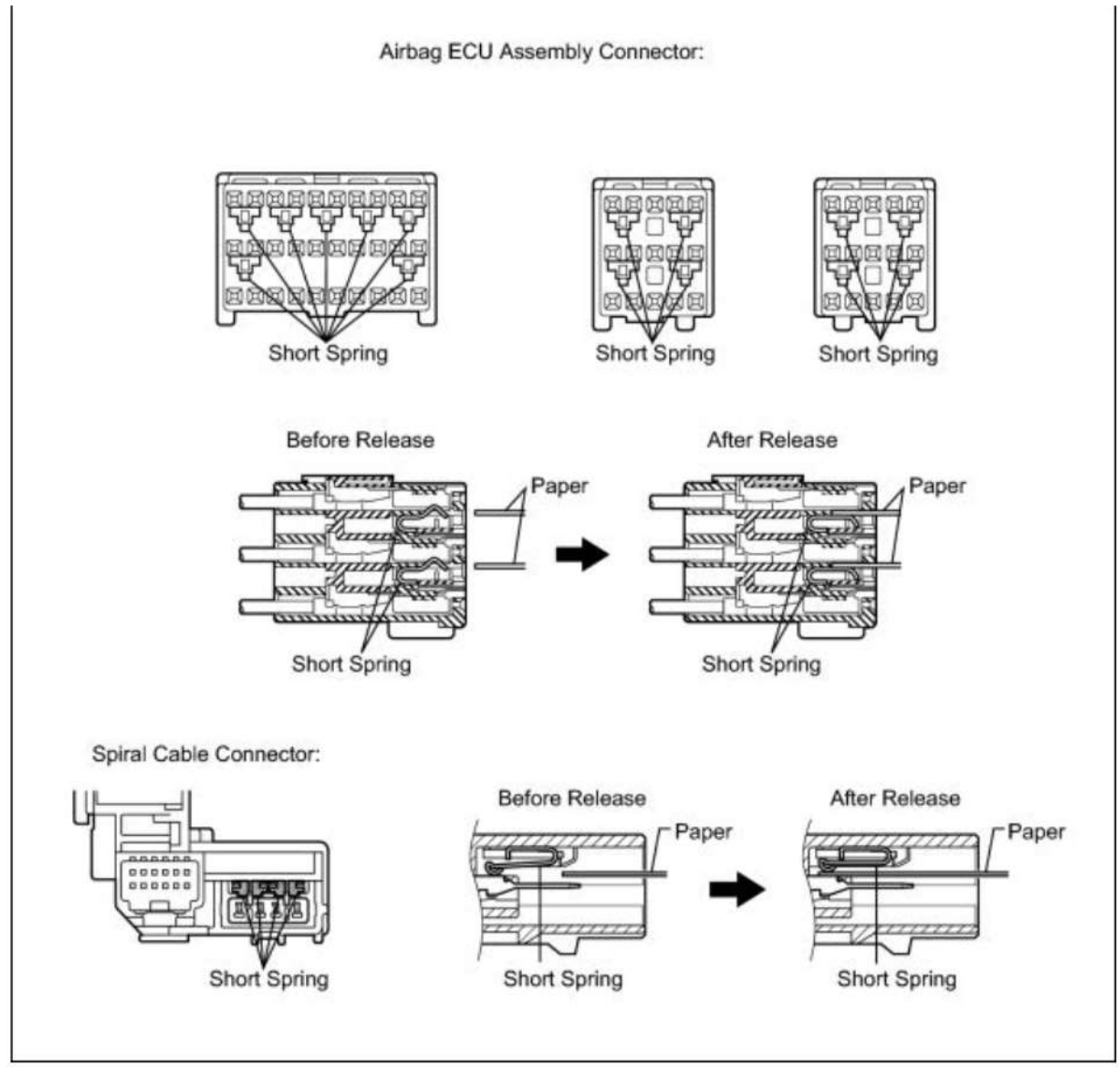
CAUTION:

Never release the activation prevention mechanism on the squib connector even when inspecting with the squib disconnected.

NOTICE:

- Do not release the activation prevention mechanism unless specially directed by the troubleshooting procedure.
- To prevent the terminal and short spring from being damaged, always use a piece of paper with the same thickness as the male terminal.

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Last Modified: 3-27-2012	6.4 S	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000XF70C2X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: DIAGNOSTIC TROUBLE CODE CHART (2013 FR-S)		

DIAGNOSTIC TROUBLE CODE CHART

If a trouble code is displayed during the DTC check, check the trouble areas listed for the code in the table below (refer to the appropriate page).

HINT:

- When the SRS warning light remains on and the DTC is output (or the normal system code is output), this may be due to a source voltage drop. This malfunction is not stored in memory by the airbag ECU assembly. If the power source voltage returns to normal, the SRS warning light will automatically go off.
- When 2 or more codes are indicated, the code with the lower number appears first.
- If a code is not listed on the display chart, the airbag ECU assembly may have failed.
- In the case of any malfunction concerning an open circuit, short to ground, or short to B+ due to a squib, other trouble codes may not be detected. In this case, repair the malfunction currently indicated and then perform malfunction diagnosis again.
- Mark in the check mode column:

  *1: DTC does not apply to check mode.

  *2: DTC applies to check mode.

Airbag System

DTC CODE	DETECTION ITEM	CHECK MODE	SEE PAGE
B1000	Airbag ECU Assembly Malfunction	*1	INFO
B1610	Front Airbag Sensor RH Malfunction	*1	INFO
B1612	Front Airbag Sensor RH Lost Communication	*1	INFO
B1613	Front Airbag Sensor RH Initialization	*1	INFO
B1615	Front Airbag Sensor LH Malfunction	*1	INFO
B1617	Front Airbag Sensor LH Lost Communication	*1	INFO
B1618	Front Airbag Sensor LH Initialization	*1	INFO
B161A	Lost Communication with Front Satellite Sensor Bus	*1	INFO
B1620	Side Airbag Sensor RH Circuit Malfunction	*1	INFO
B1622	Side Airbag Sensor RH Lost Communication	*1	INFO
B1623	Side Airbag Sensor RH Initialization	*1	INFO
B1625	Side Airbag Sensor LH Circuit Malfunction	*1	INFO
B1627	Side Airbag Sensor LH Lost Communication	*1	INFO
B1628	Side Airbag Sensor LH Initialization	*1	INFO
B1630	Side No. 2 Airbag Sensor RH Malfunction	*1	INFO

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B1632	Side No. 2 Airbag Sensor RH Lost Communication	*1	INFO
B1633	Side No. 2 Airbag Sensor RH Initialization	*1	INFO
B1635	Side No. 2 Airbag Sensor LH Malfunction	*1	INFO
B1637	Side No. 2 Airbag Sensor LH Lost Communication	*1	INFO
B1638	Side No. 2 Airbag Sensor LH Initialization	*1	INFO
B1642	Side Satellite Sensor Bus Lost Communication (RH)	*1	INFO
B1647	Side Satellite Sensor Bus Lost Communication (LH)	*1	INFO
B1650	Occupant Classification System Malfunction	*1	INFO
B1655	Seat Belt Buckle Switch (RH)	*1	INFO
B1660	P Seat Airbag Active Mode Indicator	*1	INFO
B1675	Rear Floor Airbag Sensor	*1	INFO
B1678	Lost Communication with Rear Floor Airbag Sensor LH	*1	INFO
B1679	Rear Floor Airbag Sensor LH Initialization Incomplete	*1	INFO
B1690	Side Airbag Sensor RH	*1	INFO
B1692	Lost Communication with Side Airbag Sensor RH	*1	INFO
B1693	Side Airbag Sensor RH Initialization Incomplete	*1	INFO
B1695	Side Airbag Sensor LH	*1	INFO
B1697	Lost Communication with Side Airbag Sensor LH	*1	INFO
B1698	Side Airbag Sensor LH Initialization Incomplete	*1	INFO
B16F1	Passenger Side Belt Warning Indicator Circuit	*1	INFO
B16F2	Front Airbag Sensor RH Mismatch	*1	INFO
B16F3	Front Airbag Sensor LH Mismatch	*1	INFO
B16F4	Side Airbag Sensor RH Mismatch	*1	INFO
B16F5	Side Airbag Sensor LH Mismatch	*1	INFO
B16F6	Side No. 2 Airbag Sensor RH Mismatch	*1	INFO
B16F7	Side No. 2 Airbag Sensor LH Mismatch	*1	INFO
B16F8	Rear Floor Airbag Sensor RH Mismatch	*1	INFO
B16F9	Door Side Airbag Sensor RH Mismatch	*1	INFO
B16FA	Door Side Airbag Sensor LH Mismatch	*1	INFO
B1800	Short in D Squib Circuit	*2	INFO
B1801	Open in D Squib Circuit	*2	INFO
B1802	Short in D Squib Circuit (to Ground)	*2	INFO
B1803	Short in D Squib Circuit (to +B)	*2	INFO
B1805	Short in P Squib Circuit	*2	INFO
B1806	Open in P Squib Circuit	*2	INFO

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B1807	Short in P Squib Circuit (to Ground)	*2	INFO
B1808	Short in P Squib Circuit (to +B)	*2	INFO
B1810	Short in D Squib (Dual Stage - 2nd Step) Circuit	*2	INFO
B1811	Open in D Squib (Dual Stage - 2nd Step) Circuit	*2	INFO
B1812	Short in D Squib (Dual Stage - 2nd Step) Circuit (to Ground)	*2	INFO
B1813	Short in D Squib (Dual Stage - 2nd Step) Circuit (to +B)	*2	INFO
B1815	Short in P Squib (Dual Stage - 2nd Step) Circuit	*2	INFO
B1816	Open in P Squib (Dual Stage - 2nd Step) Circuit	*2	INFO
B1817	Short in P Squib (Dual Stage - 2nd Step) Circuit (to Ground)	*2	INFO
B1818	Short in P Squib (Dual Stage - 2nd Step) Circuit (to +B)	*2	INFO
B1820	Short in Side Squib (RH) Circuit	*2	INFO
B1821	Open in Side Squib (RH) Circuit	*2	INFO
B1822	Short in Side Squib (RH) Circuit (to Ground)	*2	INFO
B1823	Short in Side Squib (RH) Circuit (to +B)	*2	INFO
B1825	Short in Side Squib (LH) Circuit	*2	INFO
B1826	Open in Side Squib (LH) Circuit	*2	INFO
B1827	Short in Side Squib (LH) Circuit (to Ground)	*2	INFO
B1828	Short in Side Squib (LH) Circuit (to +B)	*2	INFO
B1830	Short in Curtain Shield Airbag (RH) Squib Circuit	*2	INFO
B1831	Open in Curtain Shield Airbag (RH) Squib Circuit	*2	INFO
B1832	Short in Curtain Shield Airbag (RH) Squib Circuit (to Ground)	*2	INFO
B1833	Short in Curtain Shield Airbag (RH) Squib Circuit (to +B)	*2	INFO
B1835	Short in Curtain Shield Airbag (LH) Squib Circuit	*2	INFO
B1836	Open in Curtain Shield Airbag (LH) Squib Circuit	*2	INFO
B1837	Short in Curtain Shield Airbag (LH) Squib Circuit (to Ground)	*2	INFO
B1838	Short in Curtain Shield Airbag (LH) Squib Circuit (to +B)	*2	INFO
B1900	Short in P/T Squib (RH) Circuit	*2	INFO
B1901	Open in P/T Squib (RH) Circuit	*2	INFO
B1902	Short in P/T Squib (RH) Circuit (to Ground)	*2	INFO
B1903	Short in P/T Squib (RH) Circuit (to +B)	*2	INFO
B1905	Short in P/T Squib (LH) Circuit	*2	INFO
B1906	Open in P/T Squib (LH) Circuit	*2	INFO
B1907	Short in P/T Squib (LH) Circuit (to Ground)	*2	INFO
B1908	Short in P/T Squib (LH) Circuit (to +B)	*2	INFO

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U0073	Control Module Communication Bus OFF	*1	INFO



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Last Modified: 3-27-2012	6.4 D	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000XFE0G0X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: DTC CHECK / CLEAR (2013 FR-S)		

DTC CHECK / CLEAR

1. DTC CHECK (USING TECHSTREAM)

(a) Turn the ignition switch off.

(b) Connect the Techstream to the DLC3.

(c) Turn the ignition switch to ON, and wait for approximately 60 seconds.

(d) Turn the Techstream on.

(e) Enter the following menus: Body Electrical / SRS Airbag / Trouble Codes.

(f) Check for DTCs by following the prompts on the Techstream screen.

HINT:

Refer to the Techstream operator's manual for further details.

2. DTC CLEAR (USING TECHSTREAM)

(a) Turn the ignition switch off.

(b) Connect the Techstream to the DLC3.

(c) Turn the ignition switch to ON, and wait for approximately 60 seconds.

(d) Turn the Techstream on.

(e) Enter the following menus: Body Electrical / SRS Airbag / Trouble Codes.

(f) Clear the DTCs by following the prompts on the Techstream screen.

HINT:

Refer to the Techstream operator's manual for further details.

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Last Modified: 3-27-2012	6.4 D	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000XF60F7X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: HOW TO PROCEED WITH TROUBLESHOOTING (2013 FR-S)		

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

- Use the following procedure to troubleshoot the airbag system.
- *: Use the Techstream.

1.	**VEHICLE BROUGHT TO WORKSHOP**

NEXT

2.	**CUSTOMER PROBLEM ANALYSIS**

(a) Confirm problem symptoms INFO .

NEXT

3.	**CHECK CAN COMMUNICATION SYSTEM***

(a) Use the Techstream to check if the CAN communication system is functioning normally.

HINT:

- Refer to Bus Check for the CAN communication system INFO .
- The airbag ECU assembly is connected to the CAN communication system. Therefore, before starting troubleshooting, make sure to check that there is no trouble in the CAN communication system.

Result:

RESULT	PROCEED TO
CAN communication DTC is not output.	A
CAN communication DTC is output.	B

B GO TO CAN COMMUNICATION SYSTEM

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A

4.	**SRS WARNING LIGHT CHECK**

(a) Proceed to Diagnosis System INFO .

NEXT

5.	**CHECK FOR DTC***

(a) Proceed to DTC Check / Clear INFO .

Result:

RESULT	PROCEED TO
DTC is output.	A
DTC is not output.	B

B ▶ **Go to step 7**

A

6.	**DIAGNOSTIC TROUBLE CODE CHART**

(a) Proceed to Diagnostic Trouble Code Chart INFO .

NEXT ▶ **Go to step 9**

7.	**SYMPTOM SIMULATION**

(a) Proceed to How to Proceed with Troubleshooting INFO .

NEXT

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8.	PROBLEM SYMPTOMS TABLE

(a) Proceed to Problem Symptoms Table INFO .

NEXT

9.	CIRCUIT INSPECTION*

NEXT

10.	IDENTIFICATION OF PROBLEM

NEXT

11.	REPAIR OR REPLACEMENT

NEXT

12.	CONFIRMATION TEST

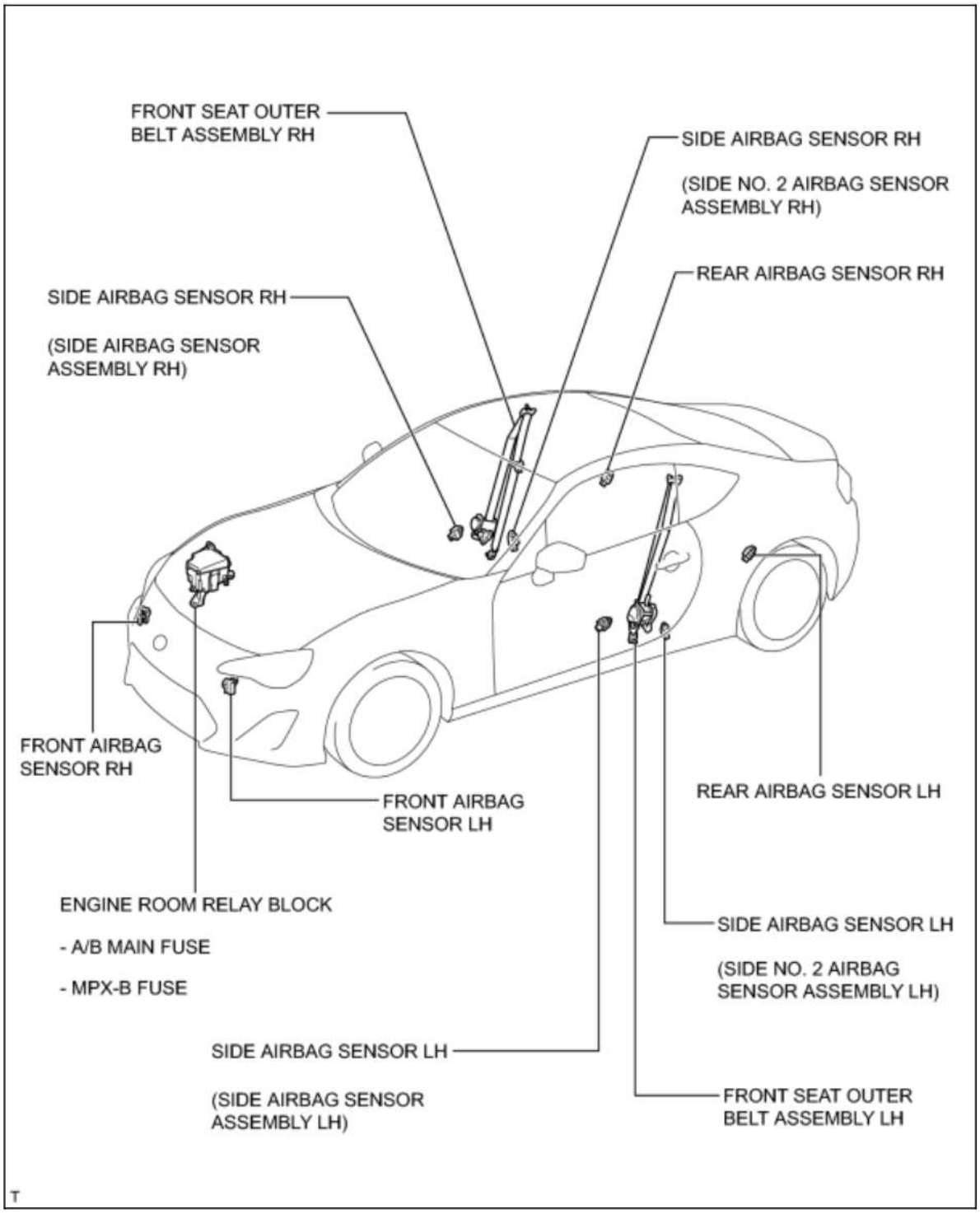
NEXT END

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Last Modified: 3-27-2012	6.4 R	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000003XTA014X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: PARTS LOCATION (2013 FR-S)		

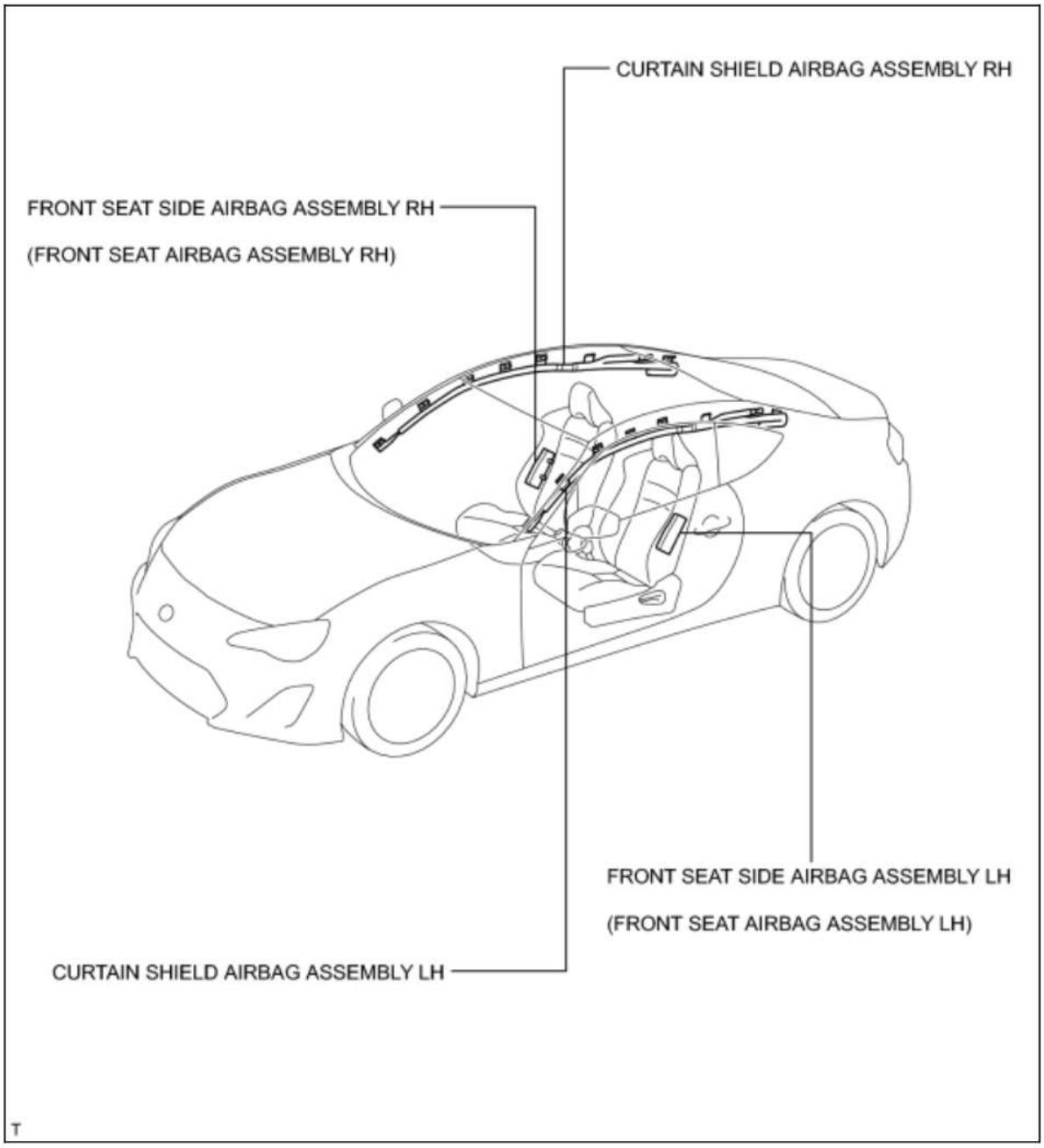
PARTS LOCATION

ILLUSTRATION



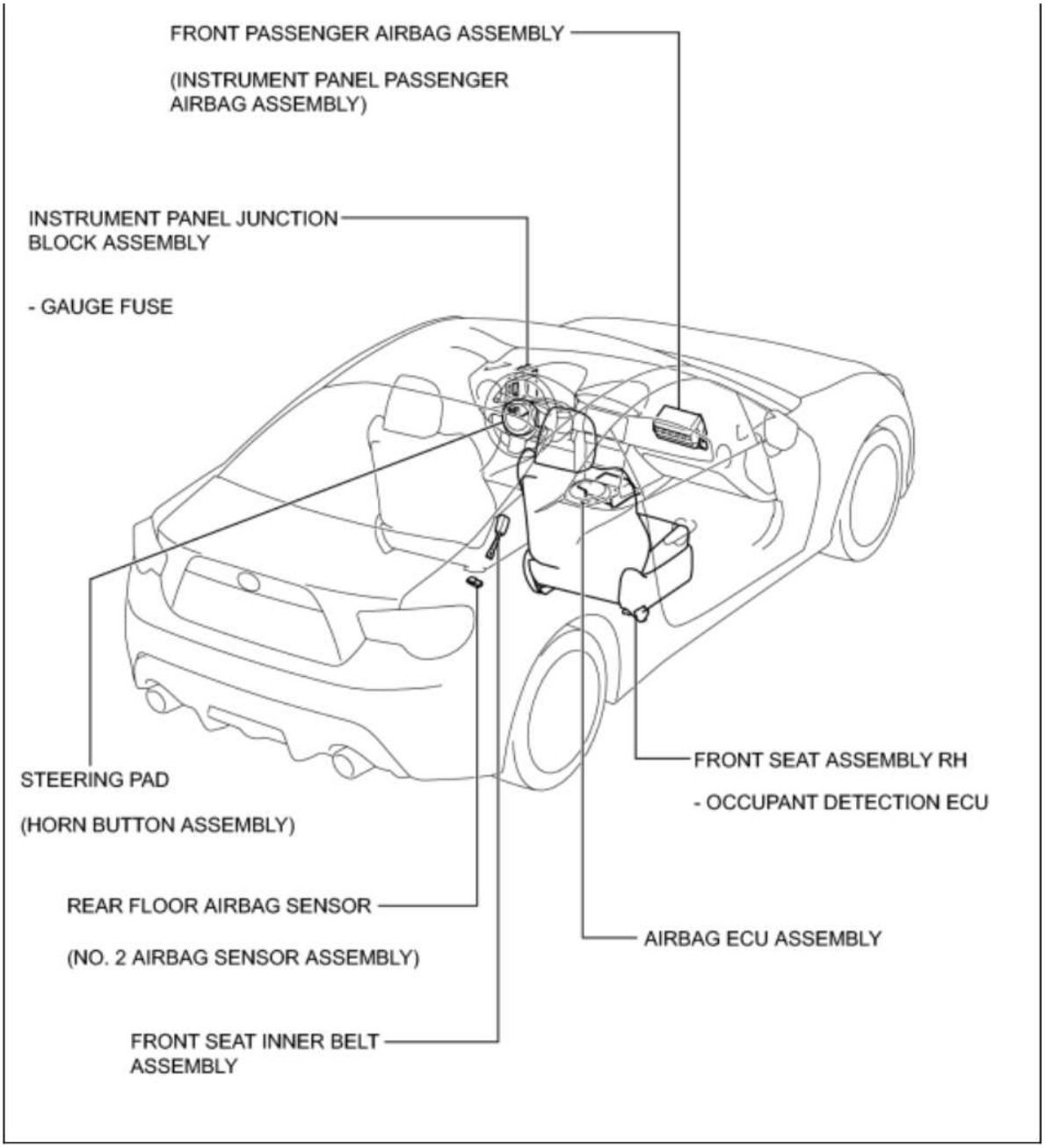
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ILLUSTRATION



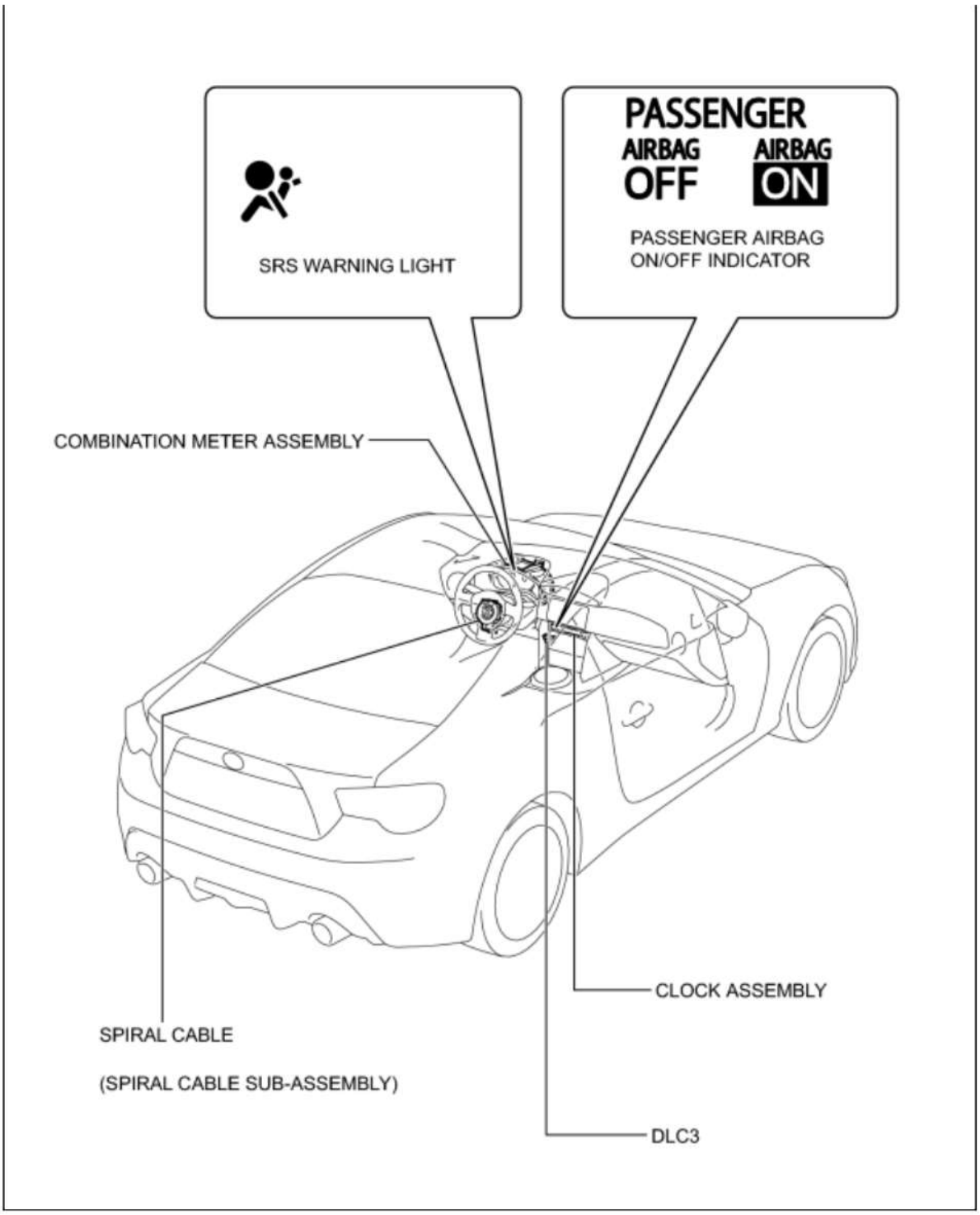
ILLUSTRATION

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ILLUSTRATION

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Last Modified: 3-27-2012	6.4 L	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000KT10FZX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: PRECAUTION (2013 FR-S)		

PRECAUTION

HINT:

In the airbag system, the following parts listed below are collectively referred to as the airbag sensors.

- Airbag ECU assembly
- Front airbag sensors
- Side airbag sensor assemblies
- Side No. 2 airbag sensor assemblies
- Rear airbag sensors
- No. 2 airbag sensor assembly

HINT:

The following parts listed below are collectively referred to as the SRS parts.

- Horn button assembly
- Instrument panel passenger airbag assembly
- Curtain shield airbag assemblies
- Front seat airbag assemblies
- Front seat outer belt assemblies

1. PRECAUTION FOR HANDLING SRS SYSTEM

(a) Failure to carry out service operations in the correct sequence could cause the SRS to unexpectedly deploy during servicing, possibly leading to a serious accident. Furthermore, if a mistake is made when servicing the SRS, it is possible that the SRS may fail to operate when required. Before servicing (including removal or installation of parts, inspection or replacement), be sure to read the following items carefully, then follow the procedures exactly as indicated in the repair manual.

2. PRECAUTION FOR DISCONNECTING CABLE FROM NEGATIVE BATTERY TERMINAL

(a) As SRS malfunctions are difficult to confirm, the Diagnostic Trouble Codes (DTCs) become the most important source of information when troubleshooting. When troubleshooting the SRS, always check for DTCs before disconnecting the cable from the negative (-) battery terminal.

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO **.**

(b) When the cable is disconnected from the negative (-) battery terminal, the memory of various systems will be cleared. Because of this, be sure to make a record of the contents memorized in each system before starting work. When work is finished, adjust each system to its previous state.

3. GENERAL PRECAUTION

(a) Use a voltmeter/ohmmeter with high impedance (minimum = 10 kΩ) for troubleshooting electrical circuits.

(b) Information labels are attached to the SRS parts. Follow the instructions on the labels.

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(c) Never disassemble or attempt to repair any of the SRS parts.

(d) If any of the SRS parts are dropped, or if any cracks, dents or other defects are found, replace them with new parts.

(e) Never use SRS parts from another vehicle. When replacing parts, use new parts.

(f) Do not expose any of the SRS parts directly to high temperatures or flames.

(g) If the vehicle has been involved in a minor collision where the SRS does not deploy, the SRS parts should be inspected before further use of the vehicle.

(h) Do not apply grease, detergent, oil or water to the SRS parts. If applied, immediately wipe it off with a dry cloth.

(i) When deploying or storing the SRS parts, avoid places with a high temperature (ambient temperature of 93°C (199°F) or higher for an airbag and 80°C (176°F) or higher for a pretensioner) and high humidity, and keep them away from electrical noise.

(j) Do not stack or place anything on top of the SRS parts.

(k) When disposing of the vehicle or an SRS part by itself, deploy it using SST before disposal. Deploy the SRS parts in a safe place away from electrical noise.

HINT:

- Horn button assembly INFO
- Instrument panel passenger airbag assembly INFO
- Curtain shield airbag assemblies INFO
- Front seat airbag assemblies INFO
- Front seat outer belt assemblies INFO

(l) Never inspect the resistance of the SRS parts.

CAUTION:

Never measure the resistance of the SRS parts because current from the tester may cause the SRS parts to deploy.

4. PRECAUTION FOR DISPOSAL OF SRS PARTS (NOT DEPLOYED)

(a) Before performing pre-disposal deployment of any SRS parts, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.

(b) Never dispose of any SRS parts that are not deployed.

(c) Deploy the SRS parts outdoors in a safe and level place where it will not disturb nearby residents.

(d) As the SRS parts produce a loud sound when deployed, be sure to inform nearby residents before deployment.

(e) When deploying the SRS parts, always use SST and keep people at least 10 m (32.8 ft.) away.

(f) The SRS parts may be accidentally deployed by static electricity. To prevent this, be sure to touch a grounded metal surface with your bare hands to discharge any static electricity before handling the SRS parts.

(g) Do not face the airbag deployment side down when deploying an airbag.

5. PRECAUTION FOR DISPOSAL OF SRS PARTS (DEPLOYED)

(a) As the SRS parts are very hot after being deployed, allow at least 30 minutes for them to cool down sufficiently before disposal.

(b) Do not apply water etc. to any deployed SRS parts.

(c) Use gloves and safety glasses when handling any deployed SRS parts.

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(d) Seal the deployed SRS parts in a thick clear plastic bag when disposing them.

(e) Always wash your hands with water after disposing of deployed SRS parts.

6. PRECAUTION FOR HORN BUTTON ASSEMBLY, INSTRUMENT PANEL PASSENGER AIRBAG ASSEMBLY, CURTAIN SHIELD AIRBAG ASSEMBLY AND FRONT SEAT AIRBAG ASSEMBLY

(a) Keep the airbag deployment side facing upward even when the airbag is temporarily removed during an operation.

CAUTION:

Always place a removed or new airbag with the deployment surface facing upward. Placing the airbag with the deployment surface facing downward could cause a serious accident if the airbag deploys.

7. PRECAUTION FOR FRONT SEAT OUTER BELT ASSEMBLY (PRETENSIONER)

(a) Do not touch the area around the retractor even when the pretensioner is temporarily removed during an operation.

CAUTION:

If the retractor unexpectedly operates and the belt is retracted during an operation, it could cause a serious accident.

8. PRECAUTION FOR SPIRAL CABLE SUB-ASSEMBLY

(a) Do not replace the spiral cable sub-assembly with the battery connected and the ignition switch ON.

(b) Do not rotate the spiral cable sub-assembly without the steering wheel with the battery connected and the ignition switch ON.

(c) Ensure that the steering wheel is installed and aligned straight when inspecting the steering sensor.

(d) When rotating the spiral cable sub-assembly, make sure to push on the interlock to release the interlock mechanism.

(e) Removing the steering sensor from the spiral cable sub-assembly without using a lock pin may result in a misaligned center position of the steering sensor. Therefore, make sure to use the lock pin provided with a new spiral cable sub-assembly or steering sensor when removing the steering sensor from the spiral cable sub-assembly.

(f) Be sure that the spiral cable is in the neutral position during installation and when removing and installing the steering wheel INFO .

CAUTION:

If the steering wheel is turned without the spiral cable installed in the neutral position, the cable may break.

9. PRECAUTION FOR AIRBAG SENSORS

(a) Perform a diagnostic system check.

(b) When the SRS parts are deployed (including when only an airbag or pretensioner is deployed) due to a collision, be sure to replace all sensors in the damaged areas (anywhere in need of repair) and Airbag ECU assembly.

(c) Visually check the airbag sensors in undamaged areas for defects.

(1) The defects are as follows:

- Cracks on the sensor housing
- Dents on the sensor housing
- Chips on the sensor housing
- Cracks or other damage to the connector

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- Damage to the serial number

OK:

No defects are found.

If any of the defects is found or an airbag sensor has detected a major collision, replace the airbag sensor with a new one.

10. PRECAUTION FOR WIRE HARNESS AND CONNECTOR

(a) All wire harnesses except unexposed harnesses in the engine room are colored yellow.

(b) As special connectors are used, be careful when handling them.

11. WHEN SERVICING DAMAGED VEHICLE

(a) Before using an electric welder on the vehicle, remove any SRS parts around the area being repaired.

CAUTION:

Make sure to remove any SRS parts as necessary to prevent them from accidentally deploying.

(b) Before repairs, remove the airbag sensor assemblies if impacts are likely to be applied to the sensor during repairs.

(c) Never expose an airbag sensor directly to high temperatures.

(d) As the SRS parts are very hot after being deployed, ensure that all wire harnesses and connectors around deployed SRS parts are not damaged.

12. CONDITIONS WHEN INSPECTION OF SRS PARTS IS NECESSARY

(a) When the vehicle is damaged in a collision even when the SRS parts are not deployed.

(b) When an SRS system DTC is output.

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Last Modified: 3-27-2012	6.4 T	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000XFA09MX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: PROBLEM SYMPTOMS TABLE (2013 FR-S)		

PROBLEM SYMPTOMS TABLE

HINT:

- Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.
- Inspect the fuses and relays related to this system before inspecting the suspected areas below.

Airbag System

SYMPTOM	SUSPECTED AREA	SEE PAGE
The SRS warning light goes off after the primary check, but then comes on.	SRS Warning Light Remains ON	INFO
When the ignition switch is turned to ON, the SRS warning light sometimes comes on after approximately 6 seconds.	SRS Warning Light Remains ON	INFO
The SRS warning light always comes on even when a DTC is not output.	SRS Warning Light Remains ON	INFO
When the ignition switch is turned to ON, the SRS warning light does not come on.	SRS Warning Light does not Come ON	INFO

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Last Modified: 3-27-2012	6.4 J	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000YE30EQX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: SRS Warning Light does not Come ON (2013 FR-S)		

SRS Warning Light does not Come ON

DESCRIPTION

The SRS warning light is located on the combination meter assembly.

When the SRS is normal, the SRS warning light comes on for approximately 6 seconds after the ignition switch is turned from off to ON, and then goes off automatically.

If there is a malfunction in the SRS, the SRS warning light comes on to inform the driver of a problem.

The SRS is equipped with a voltage-increase circuit (DC-DC converter) in the airbag ECU assembly in case the source voltage drops.

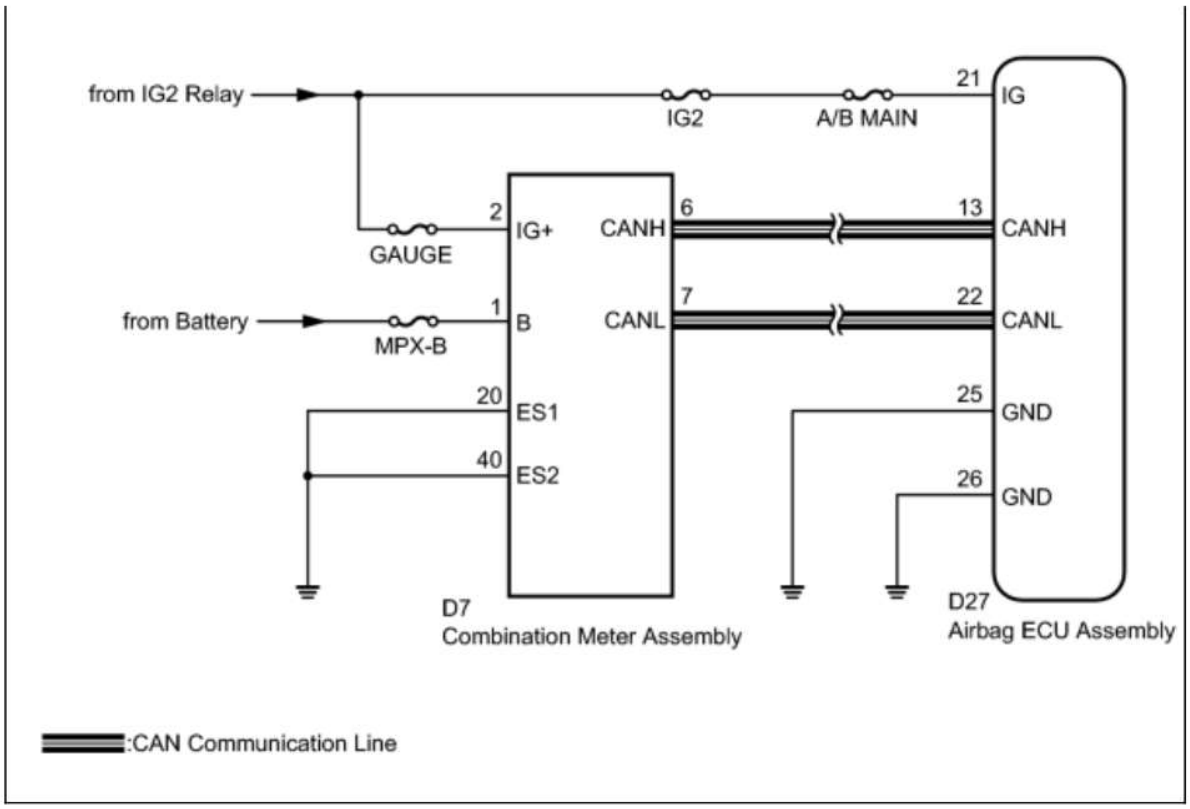
When the battery voltage drops, the voltage-increase circuit (DC-DC converter) functions to increase the voltage of the SRS to normal voltage.

A malfunction in this circuit is not stored in the airbag ECU assembly. The SRS warning light automatically goes off when the source voltage returns to normal.

The signal to illuminate the SRS warning light is transmitted from the airbag ECU assembly to the combination meter assembly through the CAN communication system.

WIRING DIAGRAM

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INSPECTION PROCEDURE

NOTICE:

- After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .
- Inspect the fuses for circuits related to this system before performing the following inspection procedure.

PROCEDURE

1.	**CHECK BATTERY VOLTAGE**

(a) Measure the voltage of the battery.

Standard Voltage:
11 to 14 V

NG ▶ **INSPECT CHARGING SYSTEM AND BATTERY**

OK
▼

2.	**CHECK CONNECTOR**

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(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connector is properly connected to the combination meter assembly.

OK:

The connector is properly connected.

HINT:

If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

(d) Disconnect the connector from the combination meter assembly.

(e) Check that the terminal of the connector is not damaged.

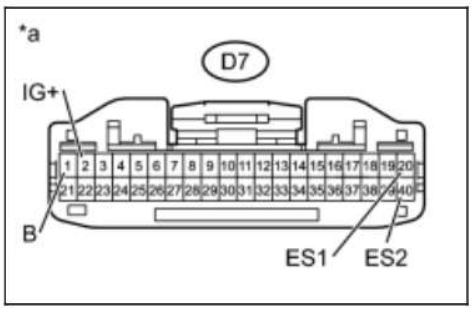
OK:

The terminal is not deformed or damaged.

NG ▶ **REPAIR OR REPLACE CONNECTOR**

OK ▼

3.	CHECK WIRE HARNESS (COMBINATION METER ASSEMBLY - BODY GROUND)



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION

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D7-1 (B) - Body ground	Always	11 to 14 V
D7-2 (IG+) - Body ground	Ignition switch ON	11 to 14 V

(d) Turn the ignition switch off.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D7-20 (ES1) - Body ground	Always	Below 1 Ω
D7-40 (ES2) - Body ground	Always	Below 1 Ω

Text in Illustration

*a	Front view of wire harness connector (to Combination Meter Assembly)

NG ▶ **REPAIR OR REPLACE WIRE HARNESS**

OK ▼

4.	**CHECK SRS WARNING LIGHT**

(a) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(b) Connect the connector to the combination meter assembly.

(c) Disconnect the connector from the airbag ECU assembly.

(d) Connect the cable to the negative (-) battery terminal.

(e) Turn the ignition switch to ON.

(f) Check the SRS warning light condition.

OK:

After the primary check period, the SRS warning light goes off for approximately 10 seconds and turns back on.

HINT:

The primary check period is approximately 6 seconds after the ignition switch is turned to ON.

NG ▶ **REPLACE COMBINATION METER**

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ASSEMBLY

OK ▶ REPLACE AIRBAG ECU ASSEMBLY



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Last Modified: 3-27-2012	6.4 J	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000YE20F6X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: SRS Warning Light Remains ON (2013 FR-S)		

SRS Warning Light Remains ON

DESCRIPTION

The SRS warning light is located on the combination meter assembly.

When the SRS is normal, the SRS warning light comes on for approximately 6 seconds after the ignition switch is turned from off to ON, and then goes off automatically.

If there is a malfunction in the SRS, the SRS warning light comes on to inform the driver of a problem.

The SRS is equipped with a voltage-increase circuit (DC-DC converter) in the airbag ECU assembly in case the source voltage drops.

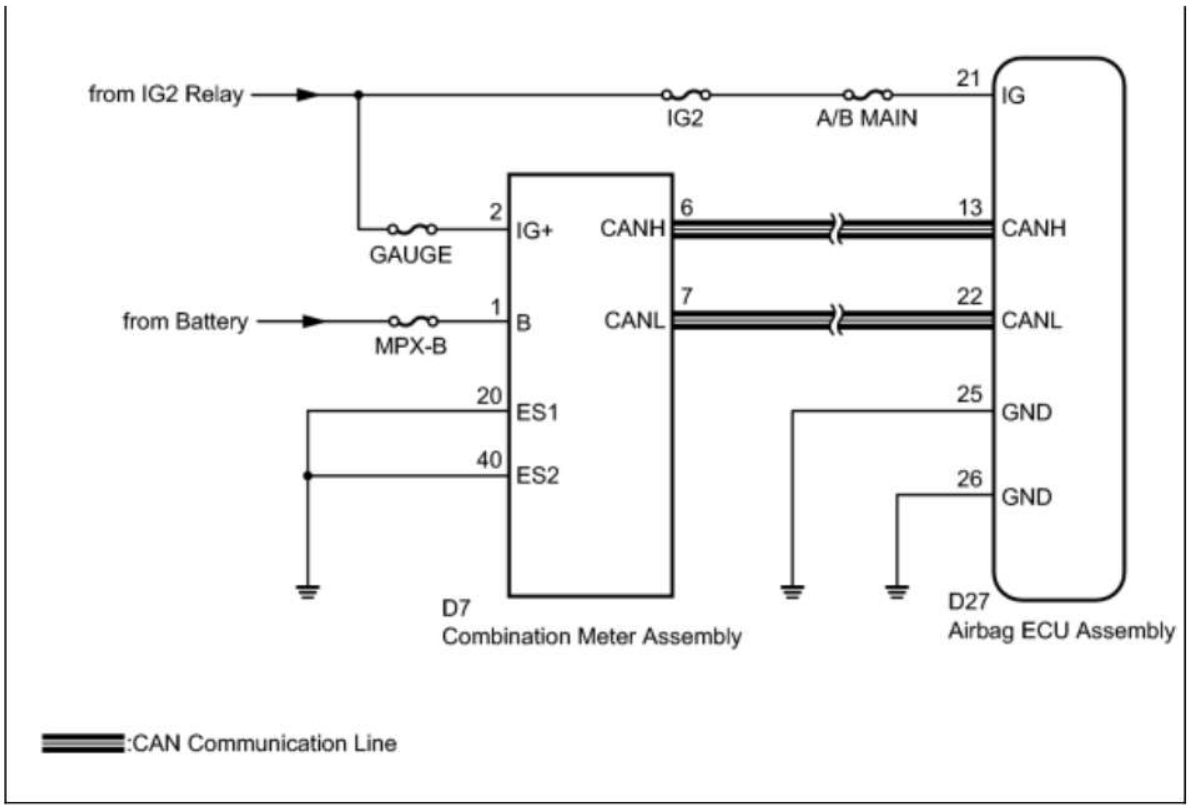
When the battery voltage drops, the voltage-increase circuit (DC-DC converter) functions to increase the voltage of the SRS to normal voltage. In addition, when the voltage drops, the SRS warning light will illuminate.

A malfunction in this circuit is not stored in the airbag ECU assembly. The SRS warning light automatically goes off when the source voltage returns to normal.

The signal to illuminate the SRS warning light is transmitted from the airbag ECU assembly to the combination meter assembly through the CAN communication system.

WIRING DIAGRAM

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INSPECTION PROCEDURE

NOTICE:

- After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .
- Inspect the fuses for circuits related to this system before performing the following inspection procedure.

PROCEDURE

1.	**CHECK SRS WARNING LIGHT OPERATION**

(a) Check the SRS warning light operation approximately 6 seconds after the ignition switch is turned to ON.

Result:

SRS WARNING LIGHT ILLUMINATION	PROCEED TO
Remains on	A
Goes off and then comes on again	B

B ▶ **CHECK CAN COMMUNICATION SYSTEM**

A

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2.	CHECK BATTERY VOLTAGE

(a) Measure the voltage of the battery.

Standard Voltage:
11 to 14 V

NG ▶ INSPECT CHARGING SYSTEM AND BATTERY

OK ▼

3.	CHECK CONNECTOR

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connector is properly connected to the airbag ECU assembly.

OK:
The connector is properly connected.

HINT:

If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

(d) Disconnect the connector from the airbag ECU assembly.

(e) Check that the terminal of the connector is not damaged.

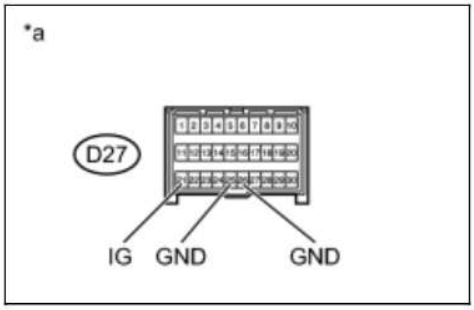
OK:
The terminal is not deformed or damaged.

NG ▶ REPLACE WIRE HARNESS

OK ▼

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4.	CHECK WIRE HARNESS (AIRBAG ECU ASSEMBLY - BODY GROUND)



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

(c) Operate all components of the electrical system (defogger, wipers, headlights, heater blower, etc.).

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D27-21 (IG) - Body ground	Ignition switch ON	8 to 16 V

(e) Turn the ignition switch off.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D27-25 (GND) - Body ground	Always	Below 1 Ω
D27-26 (GND) - Body ground	Always	Below 1 Ω

Text in Illustration

*a	Front view of wire harness connector (to Airbag ECU Assembly)

NG ▶ **REPLACE WIRE HARNESS**

OK ▼

5.	CHECK SRS WARNING LIGHT

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(a) Turn the ignition switch to ON.

(b) Check the SRS warning light condition.

OK:
After the primary check period, the SRS warning light goes off for approximately 10 seconds and turns back on.

HINT:

The primary check period is approximately 6 seconds after the ignition switch is turned to ON.

NG ▶ **REPLACE COMBINATION METER ASSEMBLY**

OK ▶ **REPLACE AIRBAG ECU ASSEMBLY**

6.	CHECK CAN COMMUNICATION SYSTEM

(a) Use the Techstream to check if the CAN communication system is functioning normally.

HINT:

- Refer to Bus Check for the CAN communication system INFO .
- The airbag ECU assembly is connected to the CAN communication system. Therefore, before starting troubleshooting, make sure to check that there is no trouble in the CAN communication system.

Result:

RESULT	PROCEED TO
DTC is not output	A
DTC is output	B

B ▶ **GO TO CAN COMMUNICATION SYSTEM**

A ▼

7.	CHECK BATTERY VOLTAGE

(a) Measure the voltage of the battery.

Standard Voltage:
11 to 14 V

NG ▶ **INSPECT CHARGING SYSTEM AND**

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BATTERY

OK

8.	**CHECK CONNECTOR**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the connector is properly connected to the airbag ECU assembly.

OK:

The connector is properly connected.

HINT:

If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

(d) Disconnect the connector from the airbag ECU assembly.

(e) Check that the terminal of the connector is not damaged.

OK:

The terminal is not deformed or damaged.

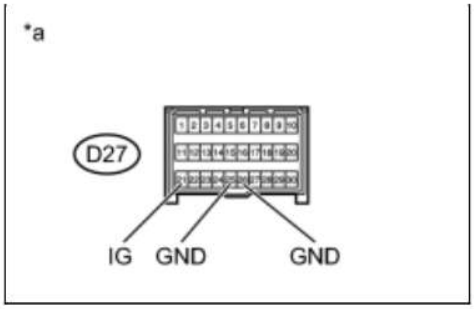
NG ▶ **REPLACE WIRE HARNESS**

OK

9.	**CHECK WIRE HARNESS (AIRBAG ECU ASSEMBLY - BODY GROUND)**

(a) Connect the cable to the negative (-) battery terminal.

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(b) Turn the ignition switch to ON.

(c) Operate all components of the electrical system (defogger, wipers, headlights, heater blower, etc.).

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D27-21 (IG) - Body ground	Ignition switch ON	8 to 16 V

(e) Turn the ignition switch off.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D27-25 (GND) - Body ground	Always	Below 1 Ω
D27-26 (GND) - Body ground	Always	Below 1 Ω

Text in Illustration

*a	Front view of wire harness connector (to Airbag ECU Assembly)

NG ▶ **REPLACE WIRE HARNESS**

OK ▼

10.	**CHECK CONNECTOR**

(a) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

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Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(b) Check that the connector is properly connected to the combination meter assembly.

OK:
The connector is properly connected.

HINT:

If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

(c) Disconnect the connector from the combination meter assembly.

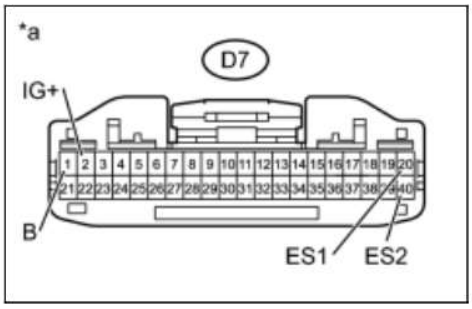
(d) Check that the terminal of the connector is not damaged.

OK:
The terminal is not deformed or damaged.

NG ▶ **REPAIR OR REPLACE CONNECTOR**

OK ▼

11.	CHECK WIRE HARNESS (COMBINATION METER ASSEMBLY - BODY GROUND)



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D7-1 (B) - Body ground	Always	11 to 14 V
D7-2 (IG+) - Body ground	Ignition switch ON	11 to 14 V

(d) Turn the ignition switch off.

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

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Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D7-20 (ES1) - Body ground	Always	Below 1 Ω
D7-40 (ES2) - Body ground	Always	Below 1 Ω

Text in Illustration

*a	Front view of wire harness connector (to Combination Meter Assembly)

NG ▶ **REPAIR OR REPLACE WIRE HARNESS**

OK
▼

12.	CHECK SRS WARNING LIGHT

(a) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(b) Connect the connector to the combination meter assembly.

(c) Connect the cable to the negative (-) battery terminal.

(d) Turn the ignition switch to ON.

(e) Check the SRS warning light condition.

OK:

After the primary check period, the SRS warning light goes off for approximately 10 seconds and turns back on.

HINT:

The primary check period is approximately 6 seconds after the ignition switch is turned to ON.

NG ▶ **REPLACE COMBINATION METER ASSEMBLY**

OK ▶ **REPLACE AIRBAG ECU ASSEMBLY**

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Last Modified: 3-27-2012	6.4 D	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000XFC0BZX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: SYSTEM DESCRIPTION (2013 FR-S)		

SYSTEM DESCRIPTION

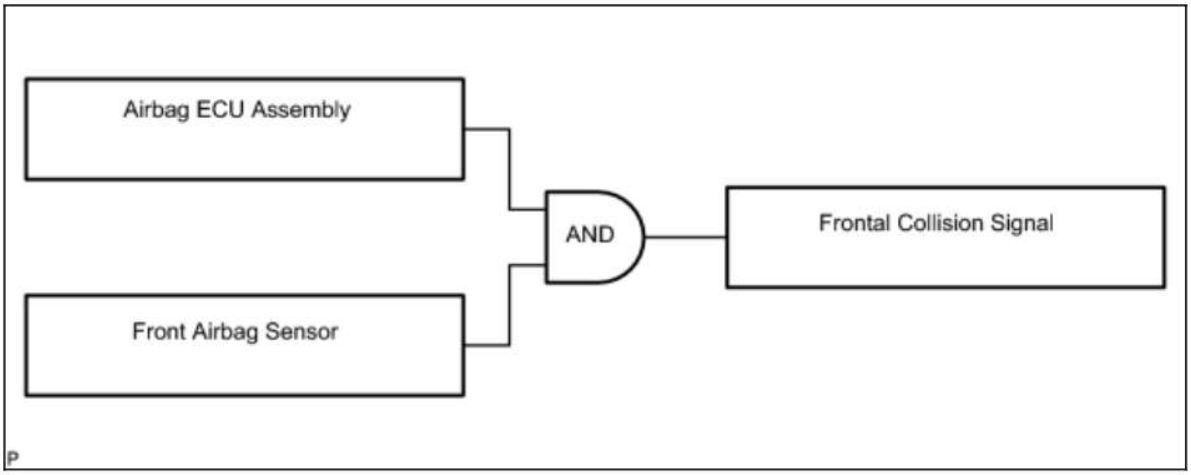
1. GENERAL

(a) Deceleration sensors used for the airbag system are installed on various parts on the vehicle and calculate the deceleration rate of each part during a collision.

(b) Depending on the situation, the airbag ECU assembly sends a deployment signal to each airbag based on the information from each sensor.

2. DEPLOYMENT CONDITION

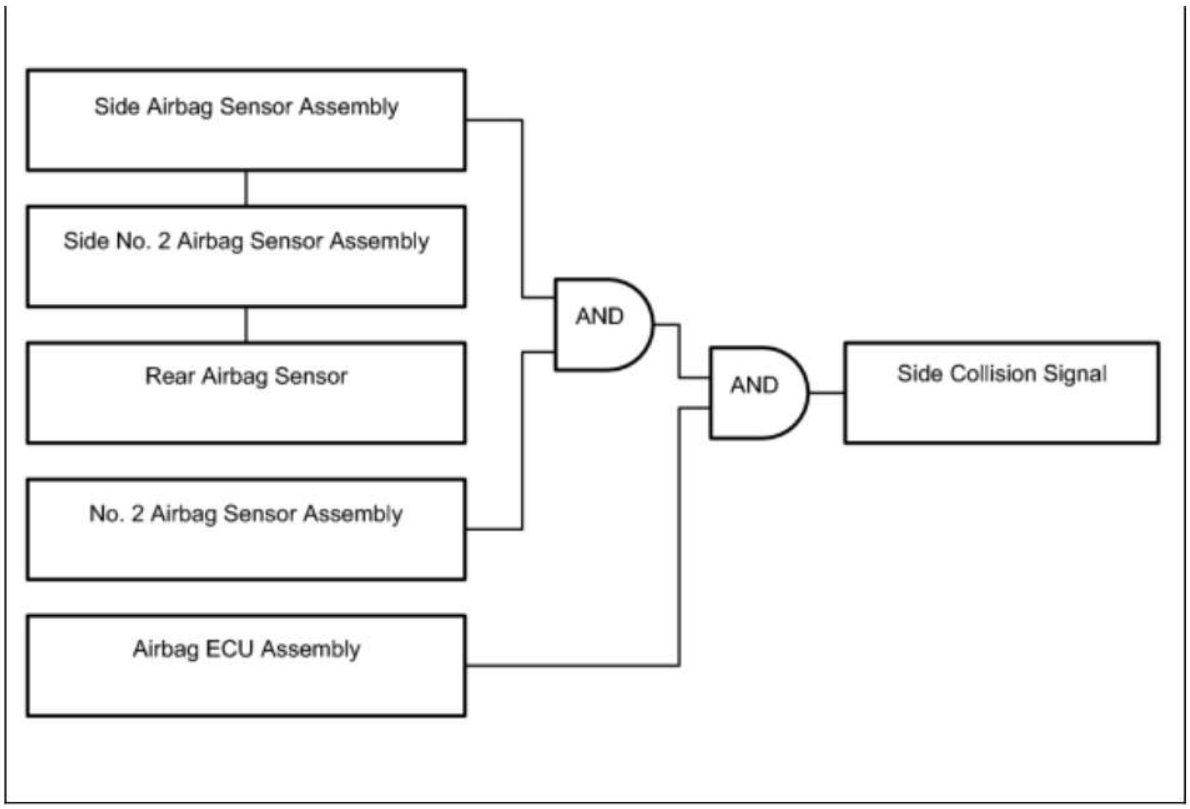
(a) FRONTAL COLLISION



(1) Frontal collision signals are produced based on the information from the airbag ECU assembly and front airbag sensors.

(b) SIDE COLLISION

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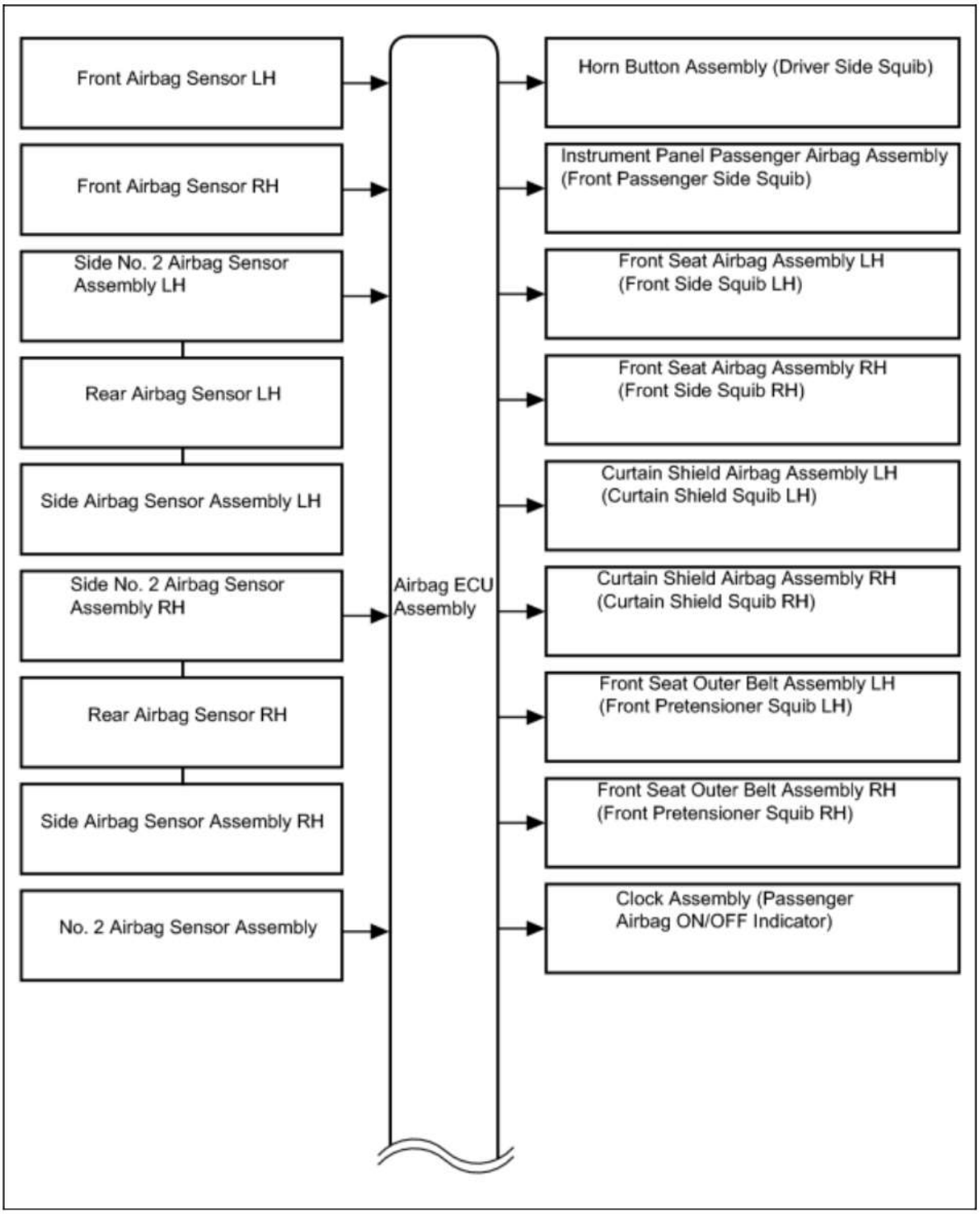


(1) Side collision signals are produced based on the information from the airbag ECU assembly, side airbag sensor assembly, side No. 2 airbag sensor assembly, rear airbag sensor and No. 2 airbag sensor assembly.

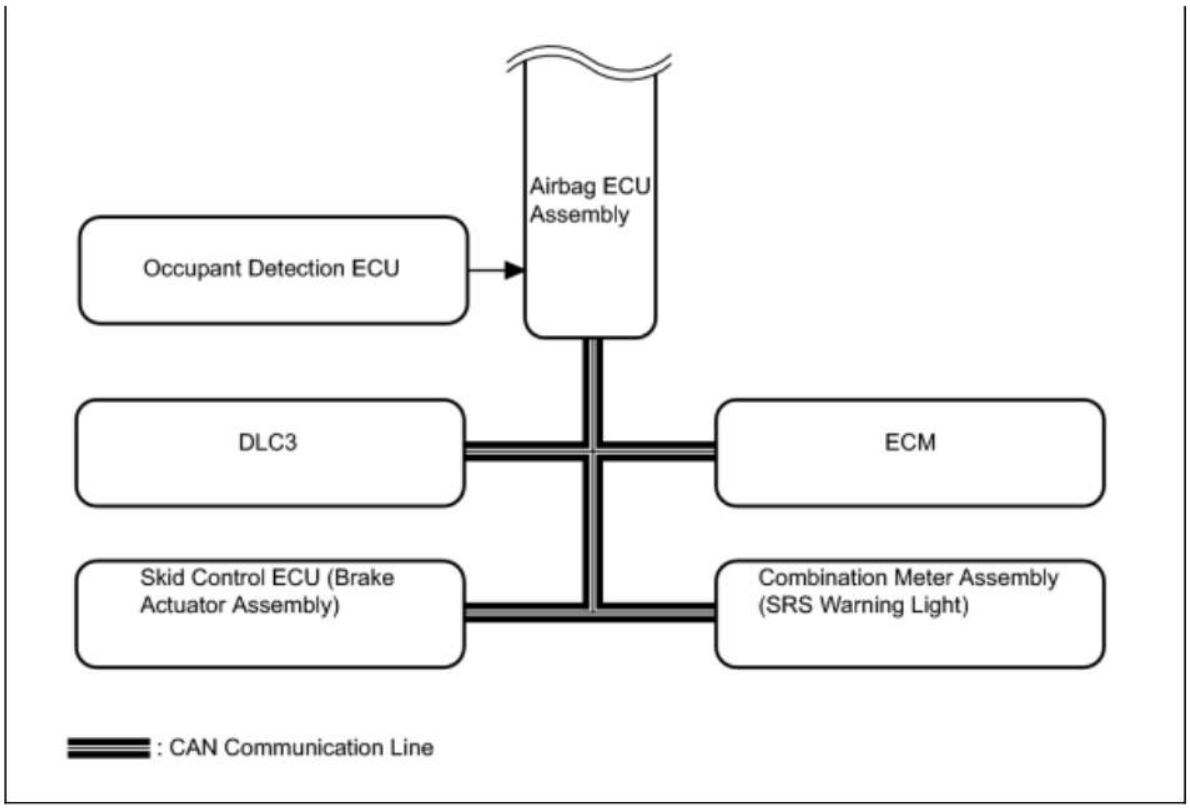
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Last Modified: 3-27-2012	6.4 U	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000XFG0BTX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: SYSTEM DIAGRAM (2013 FR-S)		

SYSTEM DIAGRAM



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Communication Table

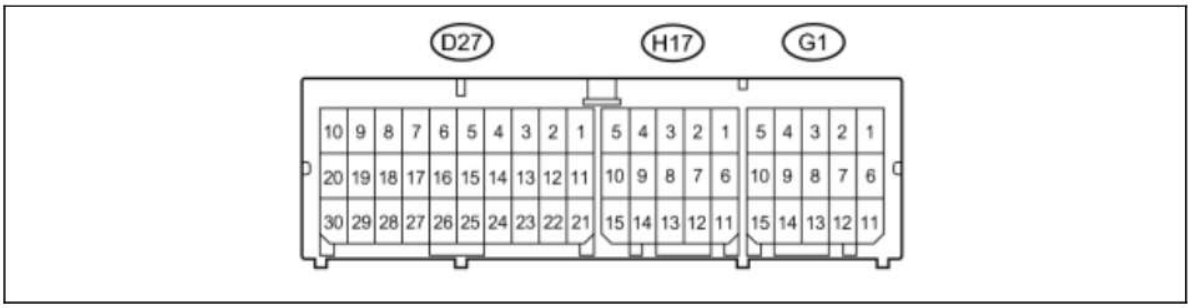
TRANSMITTING ECU (TRANSMITTER)	RECEIVING ECU	SIGNAL	COMMUNICATION METHOD
Airbag ECU Assembly	ECM	Crash detection signal	CAN
	Combination Meter Assembly	• SRS warning light ON demand signal • Passenger seat occupant detection signal • Diagnosis signal (DTC)	
ECM	Airbag ECU Assembly	• Engine speed signal • Accelerator opening angle signal • Shift position signal • Test mode signal	
Skid Control ECU (Brake Actuator Assembly)		• Vehicle speed signal • Stop signal	
Combination Meter Assembly		Driver seat buckle switch signal	

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Last Modified: 3-27-2012	6.4 U	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000XF90AYX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: TERMINALS OF ECU (2013 FR-S)		

TERMINALS OF ECU

1. AIRBAG ECU ASSEMBLY



TERMINAL NO.	TERMINAL SYMBOL	DESTINATION
D27-1	P2-	Instrument panel passenger airbag assembly (Front passenger side squib 2nd step)
D27-2	P2+	Instrument panel passenger airbag assembly (Front passenger side squib 2nd step)
D27-3	P+	Instrument panel passenger airbag assembly (Front passenger side squib)
D27-4	P-	Instrument panel passenger airbag assembly (Front passenger side squib)
D27-5	D+	Horn button assembly (Driver side squib)
D27-6	D-	Horn button assembly (Driver side squib)
D27-7	D2-	Horn button assembly (Driver side squib 2nd step)
D27-8	D2+	Horn button assembly (Driver side squib 2nd step)
D27-13	CANH	CAN communication line
D27-15	PBE	Combination meter assembly
D27-17	PAOFF	Clock assembly (Passenger airbag ON/OFF indicator)
D27-21	IG	A/B MAIN fuse
D27-22	CANL	CAN communication line
D27-23	PAON	Clock assembly (Passenger airbag ON/OFF indicator)
D27-25	GND	Ground
D27-26	GND	Ground
D27-27	-SR	Front airbag sensor RH
D27-28	-SL	Front airbag sensor LH
D27-29	+SR	Front airbag sensor RH

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D27-30	+SL	Front airbag sensor LH
H17-1	PL-	Front seat outer belt assembly LH (Front pretensioner squib LH)
H17-2	PL+	Front seat outer belt assembly LH (Front pretensioner squib LH)
H17-6	ICL-	Curtain shield airbag assembly LH (Curtain shield squib LH)
H17-7	ICL+	Curtain shield airbag assembly LH (Curtain shield squib LH)
H17-8	BBL+	Side No. 2 airbag sensor assembly LH
H17-9	SFL+	Front seat airbag assembly LH (Front side squib LH)
H17-10	SFL-	Front seat airbag assembly LH (Front side squib LH)
H17-11	BBL2+	No. 2 airbag sensor assembly
H17-12	BBL2-	No. 2 airbag sensor assembly
H17-15	BBL-	Side No. 2 airbag sensor assembly LH
G1-4	PR+	Front seat outer belt assembly RH (Front pretensioner squib RH)
G1-5	PR-	Front seat outer belt assembly RH (Front pretensioner squib RH)
G1-6	SFR-	Front seat airbag assembly RH (Front side squib RH)
G1-7	SFR+	Front seat airbag assembly RH (Front side squib RH)
G1-8	BBR+	Side No. 2 airbag sensor assembly RH
G1-9	ICR+	Curtain shield airbag assembly RH (Curtain shield squib RH)
G1-10	ICR-	Curtain shield airbag assembly RH (Curtain shield squib RH)
G1-11	BBR-	Side No. 2 airbag sensor assembly RH
G1-12	SVC	Front seat assembly RH (Occupant detection ECU)
G1-13	SGD	Front seat assembly RH (Occupant detection ECU)



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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000003VCK008X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: AIRBAG SYSTEM: U0073: Control Module Communication Bus OFF (2013 FR-S)		

DTC	**U0073**	**Control Module Communication Bus OFF**

DESCRIPTION

These DTCs are stored when the self-diagnosis of the airbag ECU assembly determines that the CAN communication system is malfunctioning.

DTC CODE	DTC DETECTION CONDITION	TROUBLE AREA
U0073	Control Module Communication Bus OFF	CAN communication System

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK FOR DTC (CAN COMMUNICATION SYSTEM)**

(a) Use the Techstream to check if the CAN communication system is functioning normally.

Result

RESULT	PROCEED TO
DTC U0073 is not output	A
DTC U0073 is output	B

B ▶ **GO TO CAN COMMUNICATION SYSTEM**

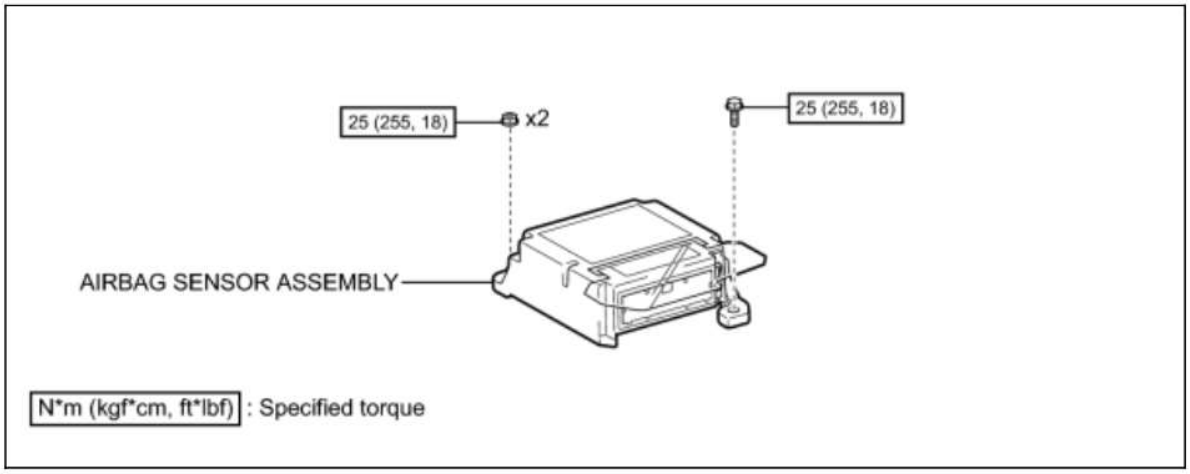
A ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 K	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWU063X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: CENTER AIRBAG SENSOR ASSEMBLY: COMPONENTS (2013 FR-S)		

COMPONENTS

ILLUSTRATION



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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000003VVI025X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: CENTER AIRBAG SENSOR ASSEMBLY: INSTALLATION (2013 FR-S)		

INSTALLATION

1. INSTALL AIRBAG SENSOR ASSEMBLY

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

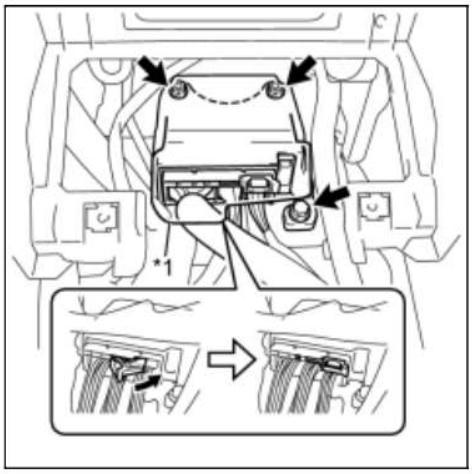
CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

(c) Install the airbag sensor assembly with the bolt and 2 nuts.



Text in Illustration

*1	Waterproof Sheet

Torque: 25 N·m (255 kgf·cm, 18ft·lbf)

NOTICE:

- If the airbag sensor assembly has been dropped, or there are any cracks, dents or other defects in the case or connector, replace it with a new one.
- When installing the airbag sensor assembly, be careful that the SRS wiring does not interfere with or is not pinched between other parts.
- When the ignition switch is first turned on (IG) after the airbag sensor assembly has been replaced, make sure that no one is in the vehicle.

(d) Connect the connectors to the airbag sensor assembly as shown in the illustration.

NOTICE:

When connecting any airbag connector, take care not to damage the airbag wire harness.

(e) Check that the waterproof sheet is properly set.

(f) Check that there is no looseness in the installation parts of the airbag sensor assembly.

2. INSTALL AIR CONDITIONING CONTROL ASSEMBLY

INFO

3. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

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Torque: 6.0 N·m (61 kgf·cm, 53in·lbf)

4. PERFORM DIAGNOSTIC SYSTEM CHECK

INFO

5. INSPECT SRS WARNING LIGHT

INFO



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Last Modified: 3-27-2012	6.4 G	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000VPT09IX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: CENTER AIRBAG SENSOR ASSEMBLY: ON-VEHICLE INSPECTION (2013 FR-S)		

ON-VEHICLE INSPECTION

CAUTION:

Be sure to correctly follow the removal and installation procedures for the airbag sensor assembly.

1. INSPECT AIRBAG SENSOR ASSEMBLY (for Vehicle not Involved in Collision)

(a) Perform a diagnostic system check. INFO

2. INSPECT AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)

(a) Perform a diagnostic system check. INFO

(b) Visually check for defects with the airbag sensor assembly installed on the vehicle.

(1) The defects are as follows:

- Cracks on the sensor housing
- Dents on the sensor housing
- Chips on the sensor housing
- Cracks or other damage to the connector
- Peeling of the label

OK:

No defects are found.

If any of the defects is found, replace the airbag sensor assembly with a new one.

3. INSPECT AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag is Deployed)

(a) Replace the airbag sensor assembly.

HINT:

The airbag sensor assembly should be replaced after any of the airbags has deployed, as it has been subjected to an impact.

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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000003VVJ025X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: CENTER AIRBAG SENSOR ASSEMBLY: REMOVAL (2013 FR-S)		

REMOVAL

1. PRECAUTION

CAUTION:

Be sure to read Precaution thoroughly before servicing. INFO

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

3. REMOVE AIR CONDITIONING CONTROL ASSEMBLY

INFO

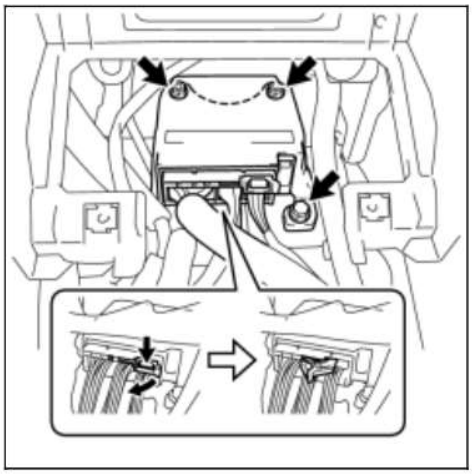
4. REMOVE AIRBAG SENSOR ASSEMBLY

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.



(c) Disconnect the connectors from the airbag sensor assembly as shown in the illustration.

NOTICE:

When disconnecting any airbag connector, take care not to damage the airbag wire harness.

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(d) Remove the bolt, 2 nuts and airbag sensor assembly.

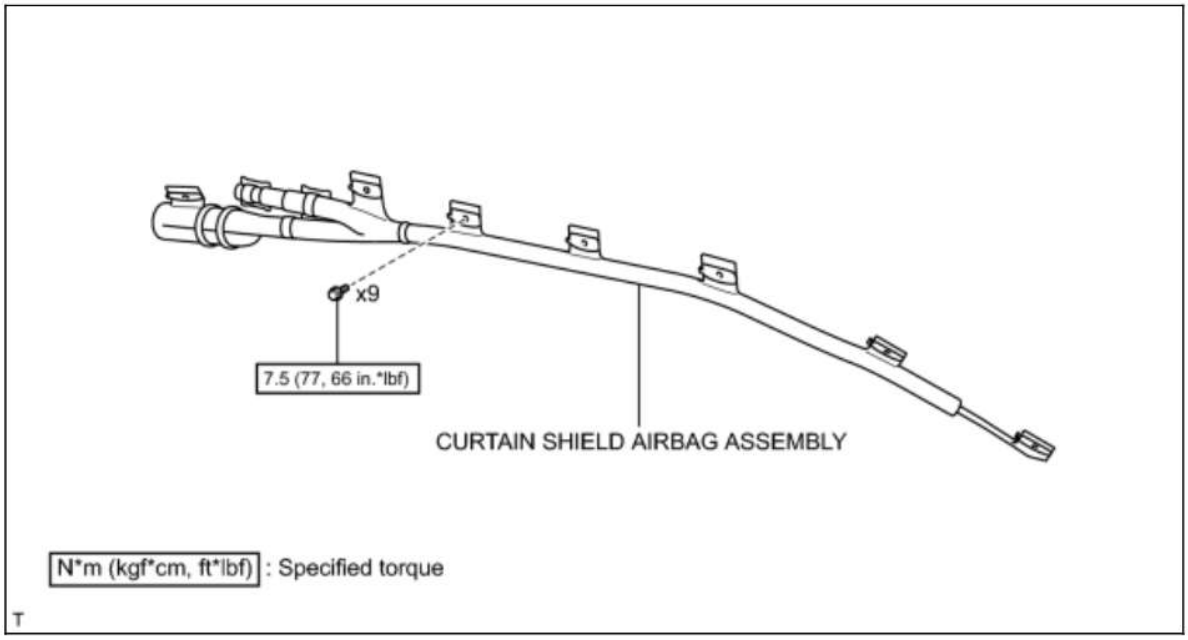


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Last Modified: 3-27-2012	6.4 K	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UXF06DX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: CURTAIN SHIELD AIRBAG ASSEMBLY: COMPONENTS (2013 FR-S)		

COMPONENTS

ILLUSTRATION



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Last Modified: 3-27-2012	6.4 N	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UXC09ZX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: CURTAIN SHIELD AIRBAG ASSEMBLY: DISPOSAL (2013 FR-S)		

DISPOSAL

CAUTION:

Before performing pre-disposal deployment of any SRS part, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.

1. PRECAUTION

CAUTION:

- An airbag or pretensioner may be activated by static electricity. To prevent this, be sure to touch a metal surface with your bare hands to discharge static electricity before performing this procedure.
- Never dispose of a curtain shield airbag assembly with an undeployed airbag.
- The airbag produces an exploding sound when it is deployed, so perform the operation outdoors and where it will not create a nuisance to nearby residents.
- When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electrical noise.
- When deploying the airbag, perform the operation at least 10 m (32.8 ft.) away from the curtain shield airbag assembly.
- The curtain shield airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling a curtain shield airbag assembly with a deployed airbag.
- Do not apply water etc. to a curtain shield airbag assembly with a deployed airbag.
- Always wash your hands with water after completing the operation.

HINT:

When scrapping a vehicle equipped with an SRS or disposing of the curtain shield airbag assembly, be sure to deploy the airbag first in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the Service Dept. of TOYOTA MOTOR SALES, U.S.A., INC.

2. DISPOSE OF CURTAIN SHIELD AIRBAG ASSEMBLY (When Installed in Vehicle)

NOTICE:

- When disposing of the curtain shield airbag assembly, never use the customer's vehicle to deploy the airbag.
- Be sure to observe the following procedure when deploying the airbag.

HINT:

Prepare a battery as the power source to deploy the airbag.

(a) Refer to Precaution INFO .

(b) Disconnect the cable from the negative (-) battery terminal.

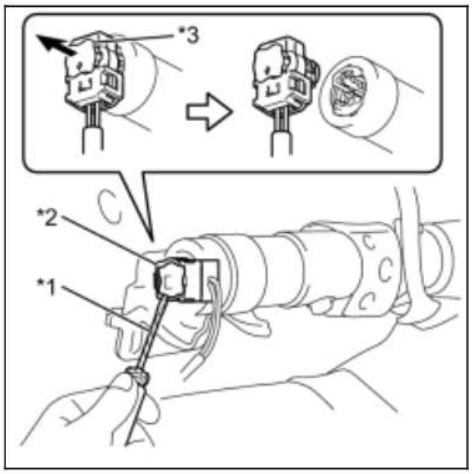
CAUTION:

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Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Remove the rid cover INFO .

(d) Disconnect the curtain shield airbag assembly connector.



(1) Using a screwdriver with the tip wrapped with protective tape, release the airbag connector lock and disconnect the curtain shield airbag connector.

Text in Illustration

*1	Protective Tape
*2	Airbag Connector
*3	Airbag Connector Lock

NOTICE:

When disconnecting the airbag connector, take care not to damage the airbag wire harness.

(e) Install SST.

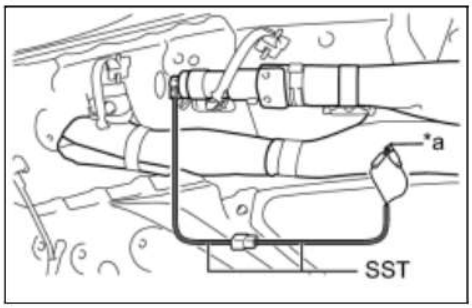
SST: 09082-18010

SST: 09082-18020

CAUTION:

Check that there is no looseness in the curtain shield airbag assembly.

(1) Connect the clip and terminal of SST.



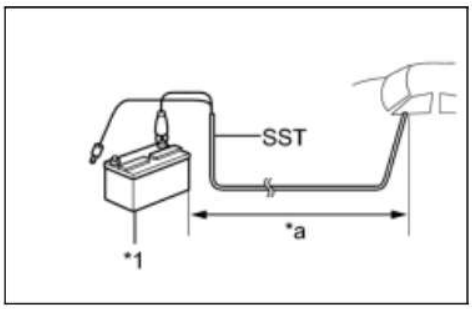
(2) After connecting the following SST to each other, connect them to the curtain shield airbag assembly.

Text in Illustration

*a	Connect the clip and terminal

NOTICE:

To avoid damaging the SST connector or wire harness, do not lock the secondary lock of the twin lock.



(3) Move SST at least 10 m (32.8 ft.) away from the rear side window.

Text in Illustration

*1	Battery
*a	10 m (32.8 ft.) or more

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(4) Maintaining sufficient clearance for the SST wire harness in the rear side window, close all doors and windows of the vehicle.

NOTICE:

Take care not to damage the SST wire harness.

(5) Connect the clip of SST to the positive (+) battery terminal.

(6) Connect the terminal of SST to the negative (-) battery terminal to deploy the curtain shield airbag assembly.

(f) Deploy the airbag.

(1) Check that no one is inside the vehicle or within a 10 m (32.8 ft.) radius of the vehicle.

(2) Connect the clip of SST to the positive (+) battery terminal.

(3) Connect the terminal of SST to the negative (-) battery terminal to deploy the curtain shield airbag assembly.

CAUTION:

- Before deployment, make sure that no one is near the vehicle.
- The curtain shield airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling a curtain shield airbag assembly with a deployed airbag.
- Do not apply water etc. to a curtain shield airbag assembly with a deployed airbag.
- Always wash your hands with water after completing the operation.

3. DISPOSE OF CURTAIN SHIELD AIRBAG ASSEMBLY (When not Installed in Vehicle)

NOTICE:

Be sure to observe the following procedure when deploying the airbag.

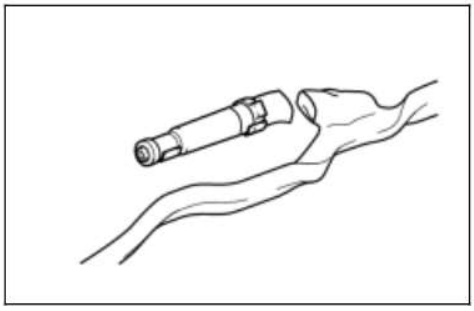
HINT:

Prepare a battery as the power source to deploy the airbag.

(a) Remove the curtain shield airbag assembly INFO .

CAUTION:

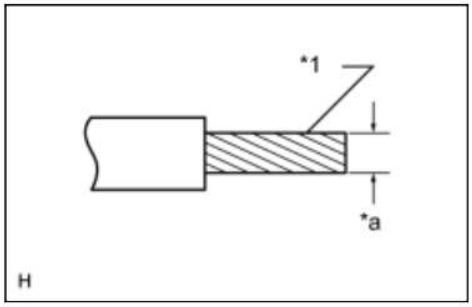
- Before removing the curtain shield airbag assembly, wait at least 90 seconds after turning the ignition switch off and disconnecting the cable from the negative (-) battery terminal.
- When storing the curtain shield airbag assembly, keep the airbag deployment side facing upward.



(b) Cut off the deployment section of the curtain shield airbag assembly.

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(c) Using braided wire, tie down the curtain shield airbag assembly to an unneeded tire.



Text in Illustration

*1	Stripped Wire Section
*a	Wire Diameter

Wire:

Stripped wire section

1.25 mm ^{2} (0.0019 in. ^{2}) or more

CAUTION:

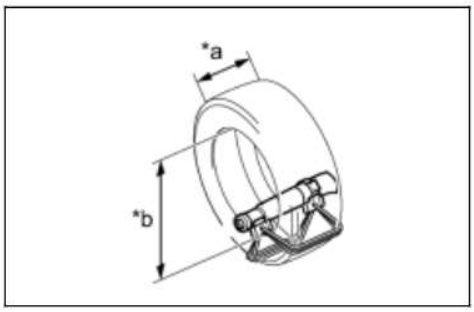
If the wire is too thin or an alternative object is used to tie down the curtain shield airbag assembly, it may snap when the airbag is deployed. Always use a wire for vehicle use with an area of at least 1.25 mm ^{2} (0.0019 in. ^{2}).

HINT:

To calculate the area of the stripped wire section:

Area = 3.14 x (Diameter) ^{2} / 4

(1) Position the curtain shield airbag assembly inside the tire as shown in the illustration.



Text in Illustration

*a	Width
*b	Inner Diameter

Minimum tire size:

Width

185 mm (7.28 in.)

Inner diameter

360 mm (1.18 ft.)

CAUTION:

Make sure that the wires are tight. If there is slack in the wires, the curtain shield airbag assembly may break loose when the airbag is deployed.

NOTICE:

The tire may be damaged by the airbag deployment, so use an unneeded tire.

(d) Install SST.

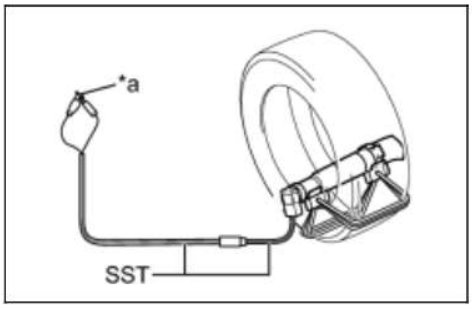
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SST: 09082-18010

SST: 09082-18020

NOTICE:

To avoid damaging the SST connector or wire harness, do not lock the secondary lock of the twin lock. Also, secure some slack for the SST wire harness inside the tire.



(1) Connect the clip and terminal of SST.

Text in Illustration

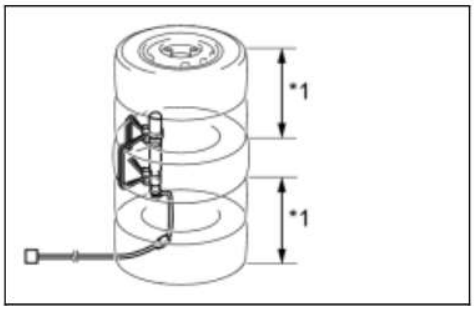
*a	Connect the clip and terminal

(2) After connecting the following SST to each other, connect them to the curtain shield airbag assembly.

(e) Place the tires.

CAUTION:

Do not face the deployment side of the curtain shield airbag assembly toward the ground.



(1) Place at least 2 tires under the tire to which the curtain shield airbag assembly is tied.

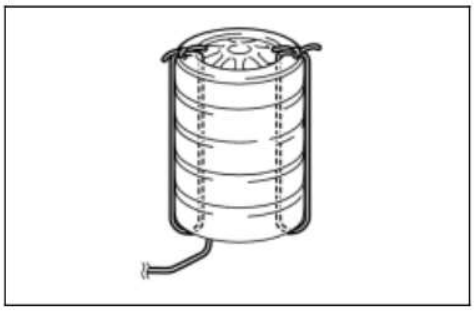
Text in Illustration

*1	Tires (2 or more)

NOTICE:

- Do not place the SST connector under the tire because it could be damaged.
- The tires and wheel may be damaged by the airbag deployment, so use unneeded tires and wheel.

(2) Place at least 2 tires onto the tire to which the curtain shield airbag assembly is tied. The top tire should have a wheel installed.



(3) Tie the tires together with the 2 wires.

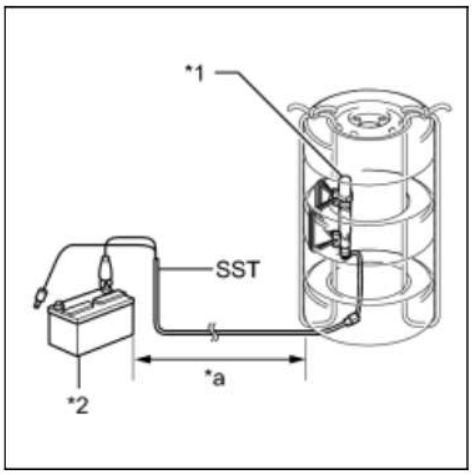
CAUTION:

Make sure that the wires are tight. Looseness in the wires results in the tires breaking loose when the airbag is deployed.

(f) Deploy the airbag.

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Text in Illustration



*1	Curtain Shield Airbag Assembly
*2	Battery
*a	10 m (32.8 ft.) or more

(1) Move SST at least 10 m (32.8 ft.) away from the airbag tied down to the tire.

(2) Check that no one is within a 10 m (32.8 ft.) radius of the tire to which the curtain shield airbag assembly is tied.

(3) Connect the clip of SST to the positive (+) battery terminal.

(4) Connect the terminal of SST to the negative (-) battery terminal to deploy the curtain shield airbag assembly.

CAUTION:

Before deployment, make sure that no one is near the airbag.

(g) Dispose of the curtain shield airbag assembly.

CAUTION:

- The curtain shield airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling a curtain shield airbag assembly with a deployed airbag.
- Do not apply water etc. to a curtain shield airbag assembly with a deployed airbag.
- Always wash your hands with water after completing the operation.

(1) Remove the curtain shield airbag assembly from the tire.

(2) Place the curtain shield airbag assembly in a plastic bag, tie it tightly, and dispose of it according to local regulations.

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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UXD08UX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: CURTAIN SHIELD AIRBAG ASSEMBLY: INSTALLATION (2013 FR-S)		

INSTALLATION

HINT:

- Use the same procedure for the RH side and LH side.
- The procedure listed below is for the LH side.

1. INSTALL CURTAIN SHIELD AIRBAG ASSEMBLY

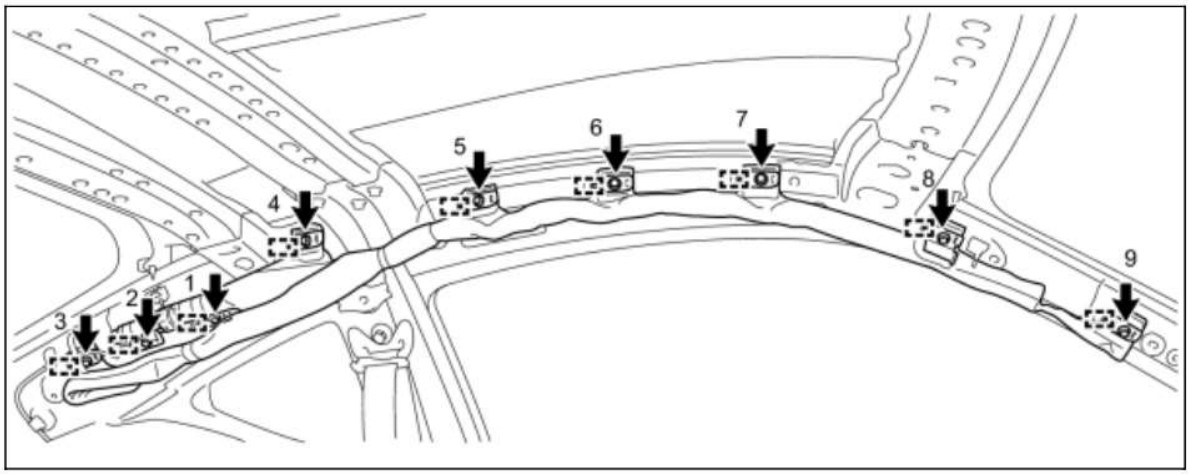
(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Engage the 9 guides and install the curtain shield airbag assembly with the 9 bolts in the sequence shown in the illustration.



NOTICE:

- When installing the curtain shield airbag assembly, have assistants hold it to prevent it from bending.
- Do not twist the curtain shield airbag assembly when installing it.

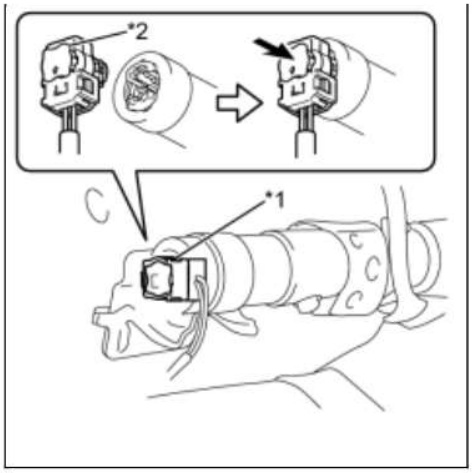
HINT:

Install the bolts and guides in order, from the rear.

Torque: 7.5 N·m (77 kgf·cm, 66in·lbf)

(d) Connect the curtain shield airbag connector.

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Text in Illustration

*1	Airbag Connector
*2	Airbag Connector Lock

NOTICE:

When connecting any airbag connector, take care not to damage the airbag wire harness.

(e) Push in the lock to install the curtain shield airbag connector.

2. INSTALL ROOF HEADLINING ASSEMBLY

INFO

3. PERFORM DIAGNOSTIC SYSTEM CHECK

INFO

4. INSPECT SRS WARNING LIGHT

INFO

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Last Modified: 3-27-2012	6.4 G	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UXH09EX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: CURTAIN SHIELD AIRBAG ASSEMBLY: ON-VEHICLE INSPECTION (2013 FR-S)		

ON-VEHICLE INSPECTION

CAUTION:

Be sure to correctly follow the removal and installation procedures for the curtain shield airbag assemblies.

1. INSPECT CURTAIN SHIELD AIRBAG ASSEMBLY (for Vehicle not Involved in Collision)

(a) Perform a diagnostic system check INFO .

(b) Visually check for defects with the curtain shield airbag assemblies installed on the vehicle.

HINT:

The defects are as follows:

- Cuts on each pillar garnish or the roof headlining assembly around the curtain shield airbag assemblies
- Small cracks on each pillar garnish or the roof headlining assembly around the curtain shield airbag assemblies
- Significant discoloration on each pillar garnish or the roof headlining assembly around the curtain shield airbag assemblies

OK:

No defects are found.

If any of the defects is found, replace each pillar garnish or the roof headlining assembly with a new one.

2. INSPECT CURTAIN SHIELD AIRBAG ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)

(a) Perform a diagnostic system check INFO .

(b) Visually check for defects with the curtain shield airbag assemblies removed from the vehicle.

HINT:

The defects are as follows:

- Cuts
- Small cracks
- Significant discoloration
- Cracks or other damage to the connector

OK:

No defects are found.

If any of the defects is found, replace the curtain shield airbag assembly with a new one.

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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UXG08MX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: CURTAIN SHIELD AIRBAG ASSEMBLY: REMOVAL (2013 FR-S)		

REMOVAL

HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

1. PRECAUTION

CAUTION:

Be sure to read Precaution thoroughly before servicing. INFO

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

2. REMOVE ROOF HEADLINING ASSEMBLY

INFO

3. REMOVE CURTAIN SHIELD AIRBAG ASSEMBLY

CAUTION:

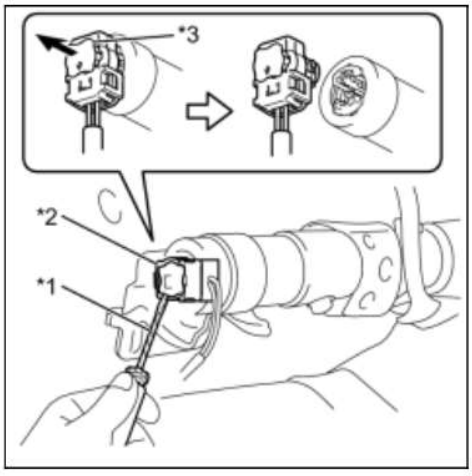
When storing the curtain shield airbag assembly, keep the airbag deployment side facing upward.

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.



(c) Using a screwdriver with the tip wrapped with protective tape, release the airbag connector lock and disconnect the curtain shield airbag connector.

Text in Illustration

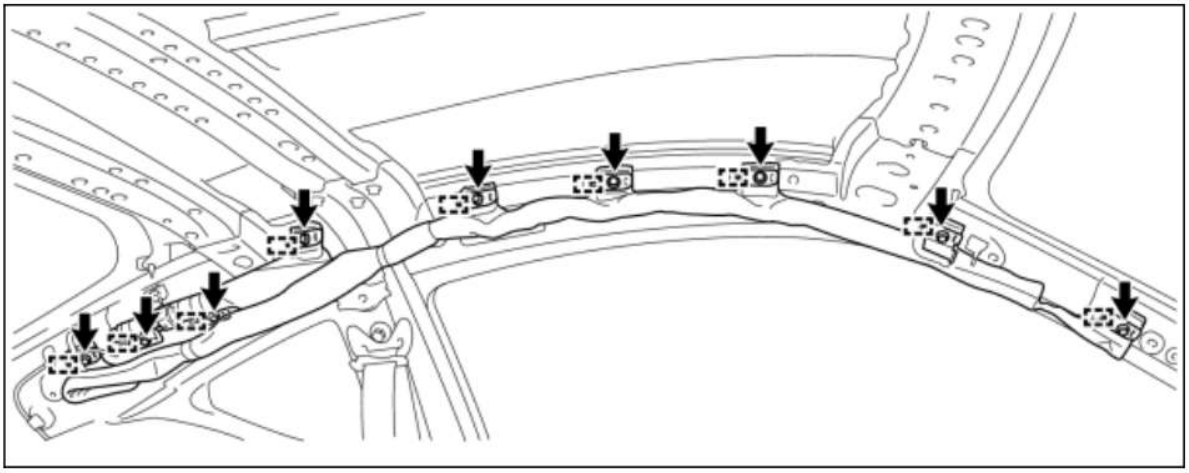
*1	Protective Tape
*2	Airbag Connector
*3	Airbag Connector Lock

NOTICE:

When disconnecting any airbag connector, take care not to damage the airbag wire harness.

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(d) Remove the 9 bolts and engage the 9 guides to remove the curtain shield airbag assembly.



NOTICE:

When removing the curtain shield airbag assembly, have assistants hold it to prevent it from bending.

HINT:

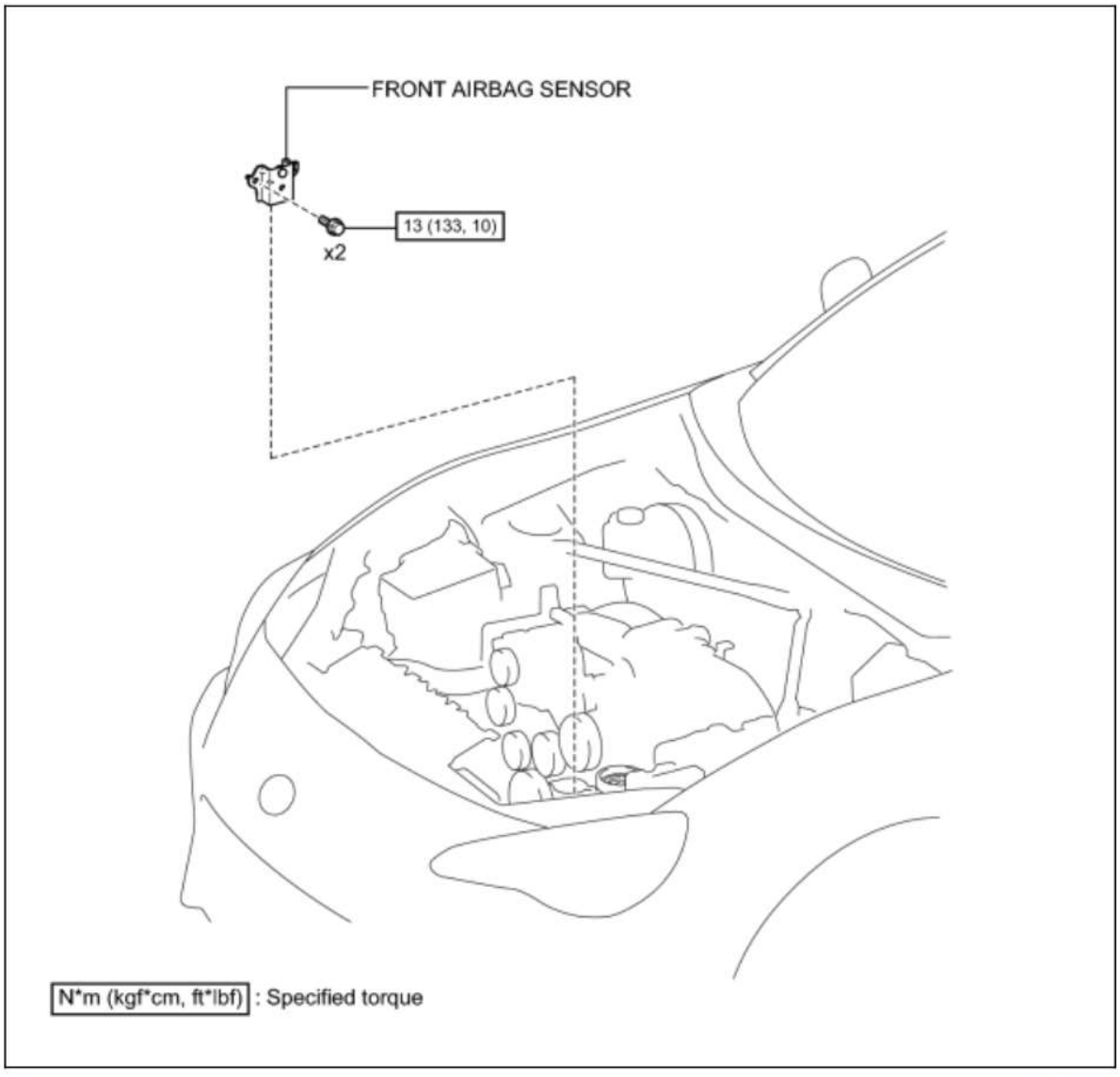
Remove the bolts and guides in order, from the front.

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Last Modified: 3-27-2012	6.4 K	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWY05ZX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: FRONT AIRBAG SENSOR: COMPONENTS (2013 FR-S)		

COMPONENTS

ILLUSTRATION



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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWW08RX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: FRONT AIRBAG SENSOR: INSTALLATION (2013 FR-S)		

INSTALLATION

HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

1. INSTALL FRONT AIRBAG SENSOR

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

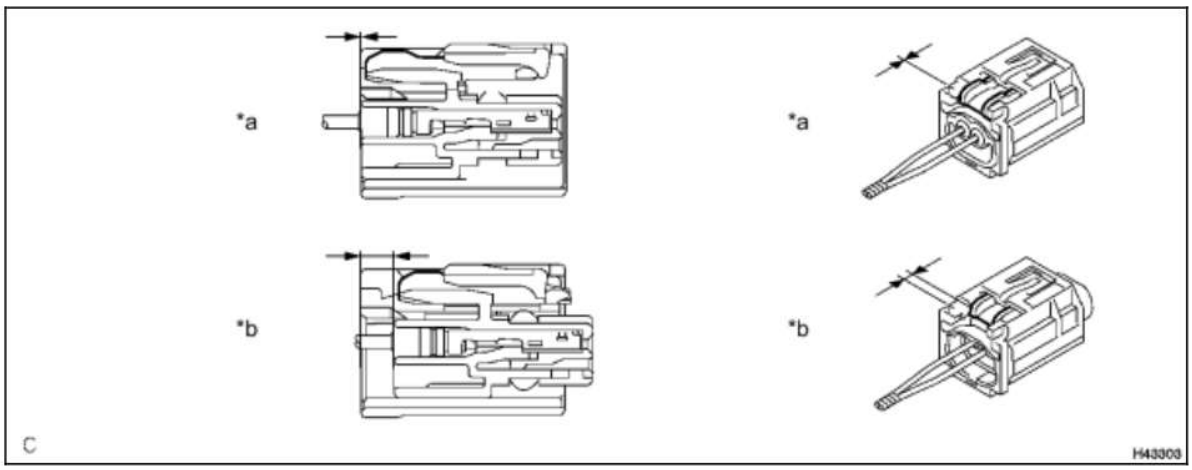
CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

(c) Before connecting the connector, check that the position of the white housing lock is correct as shown in the illustration.



Text in Illustration

*a	Incorrect	*b	Correct

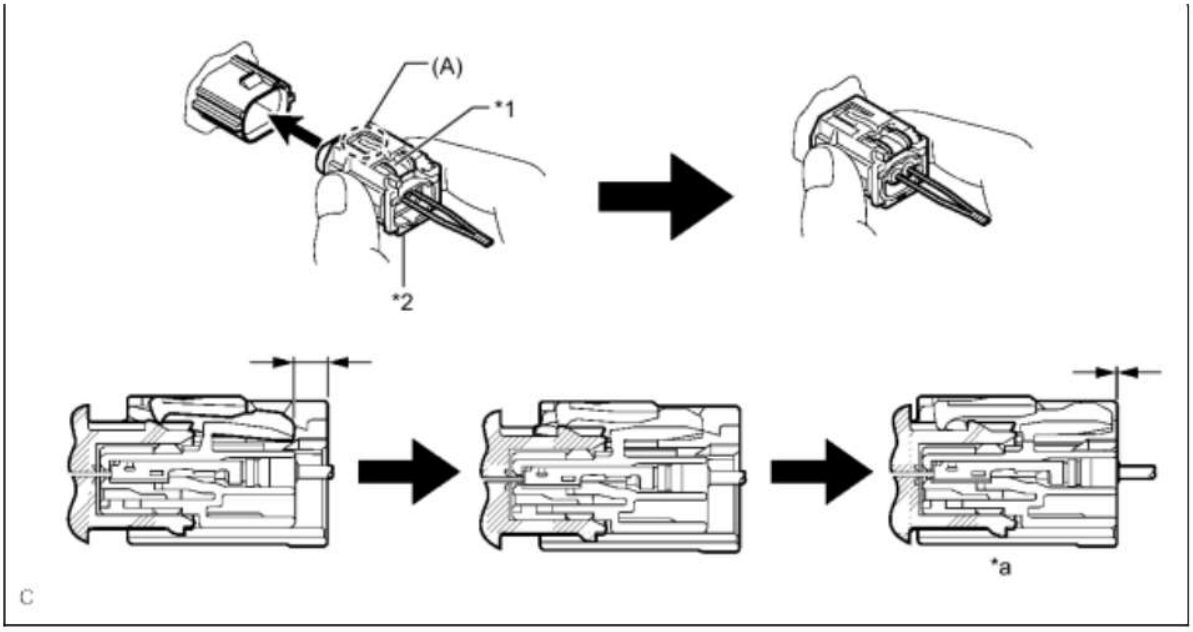
(d) Connect the connector to the front airbag sensor.

NOTICE:

When connecting any airbag connector, take care not to damage the airbag wire harness.

(1) Be sure to engage the connectors until they are locked (when locking, make sure that a click sound can be heard).

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Text in Illustration

*1	White Housing Lock	*2	Yellow CPA
*a	Connection is Completed	-	-

HINT:

When engaged, the white housing lock will slide. Be sure not to hold the white housing lock and part (A), as it may result in an insecure fit.

(e) Engage the 2 hooks and install the front airbag sensor with the 2 bolts.

Torque: 13 N·m (133 kgf·cm, 10ft·lbf)

NOTICE:

- If the front airbag sensor has been dropped, or there are any cracks, dents or other defects in the case or connector, replace it with a new one.
- When installing the front airbag sensor, be careful that the SRS wiring does not interfere with or is not pinched between other parts.

(f) Check that there is no looseness in the installation parts of the front airbag sensor.

2. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

Torque: 6.0 N·m (61 kgf·cm, 53in·lbf)

3. PERFORM DIAGNOSTIC SYSTEM CHECK

INFO

4. INSPECT SRS WARNING LIGHT

INFO

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Last Modified: 3-27-2012	6.4 G	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000VPU08KX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: FRONT AIRBAG SENSOR: ON-VEHICLE INSPECTION (2013 FR-S)		

ON-VEHICLE INSPECTION

CAUTION:

Be sure to correctly follow the removal and installation procedures for the front airbag sensors.

1. INSPECT FRONT AIRBAG SENSOR (for Vehicle not Involved in Collision)

(a) Perform a diagnostic system check INFO .

2. INSPECT FRONT AIRBAG SENSOR (for Vehicle Involved in Collision and Airbag not Deployed)

(a) Perform a diagnostic system check INFO .

(b) Visually check the front airbag sensors for defects if the front bumper of the vehicle or the area around the bumper is damaged.

HINT:

The defects are as follows:

- Cracks on the sensor housing
- Dents on the sensor housing
- Chips on the sensor housing
- Cracks or other damage to the connector
- Damage to the serial number

OK:

No defects are found.

If any of the defects is found, replace the front airbag sensor with a new one.

3. INSPECT FRONT AIRBAG SENSOR (for Vehicle Involved in Collision and Airbag is Deployed)

(a) When airbags have deployed as the result of a collision, be sure to replace all front airbag sensors in the damaged areas (anywhere in need of repair).

(b) Visually check the front airbag sensors in undamaged areas for defects.

HINT:

The defects are as follows:

- Cracks on the sensor housing
- Dents on the sensor housing
- Chips on the sensor housing
- Cracks or other damage to the connector
- Damage to the serial number

OK:

No defects are found.

If any of the defects is found or a front airbag sensor has detected a major collision, replace the

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front airbag sensor with a new one.



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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWZ08RX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: FRONT AIRBAG SENSOR: REMOVAL (2013 FR-S)		

REMOVAL

HINT:

- Use the same procedure for the RH side and LH side.
- The procedure listed below is for the LH side.

1. PRECAUTION

CAUTION:

Be sure to read Precaution thoroughly before servicing. INFO

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO **.**

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

3. REMOVE FRONT AIRBAG SENSOR

(a) Check that the ignition switch is off.

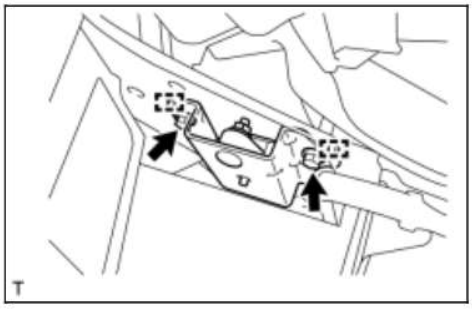
(b) Check that the cable is disconnected from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.



(c) Remove the 2 bolts and disengage the 2 hooks.

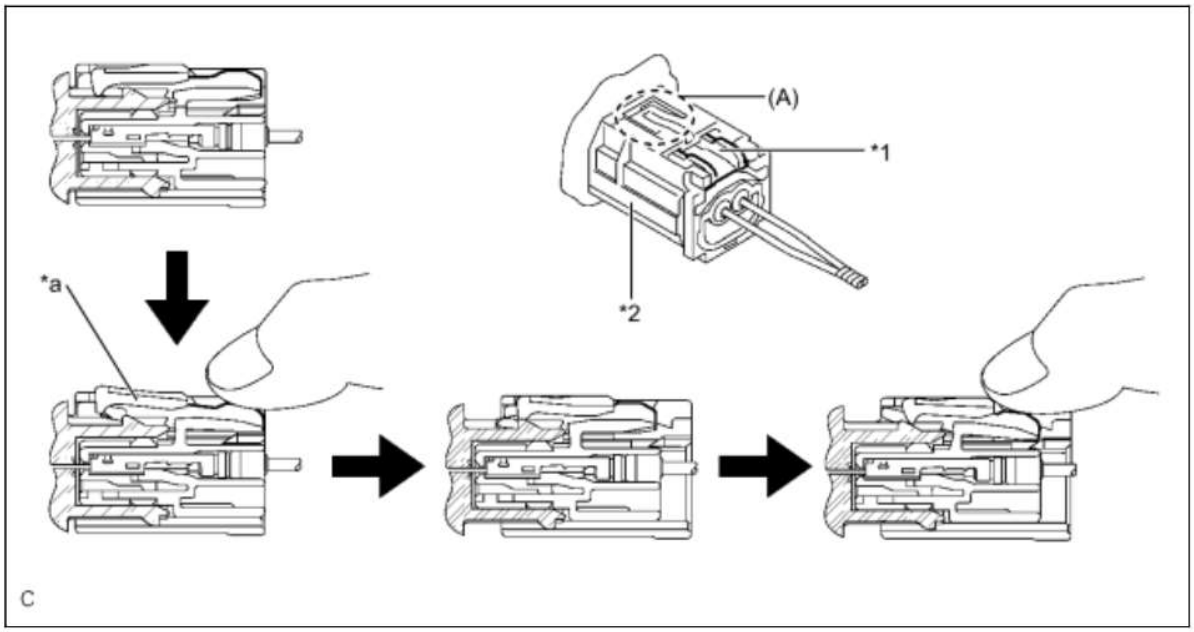
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(d) Disconnect the connector to remove the front airbag sensor.

NOTICE:

When disconnecting any airbag connector, take care not to damage the airbag wire harness.

(1) Push down the white housing lock and slide the yellow CPA. (At this time, the connector cannot be disconnected yet.)



Text in Illustration

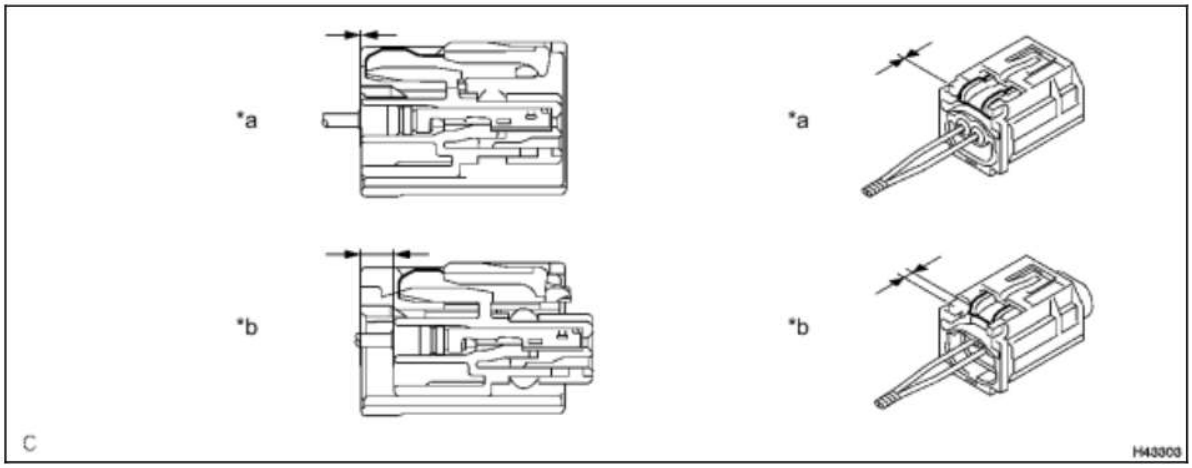
*1	White Housing Lock	*2	Yellow CPA
*a	Connector Lock is Released	-	-

(2) Push down the white housing lock again and disconnect the connector.

NOTICE:

Do not push down the part (A) shown in the illustration when disconnecting.

(e) After disconnecting the connector, check that the position of the white housing lock is correct as shown in the illustration.



Text in Illustration

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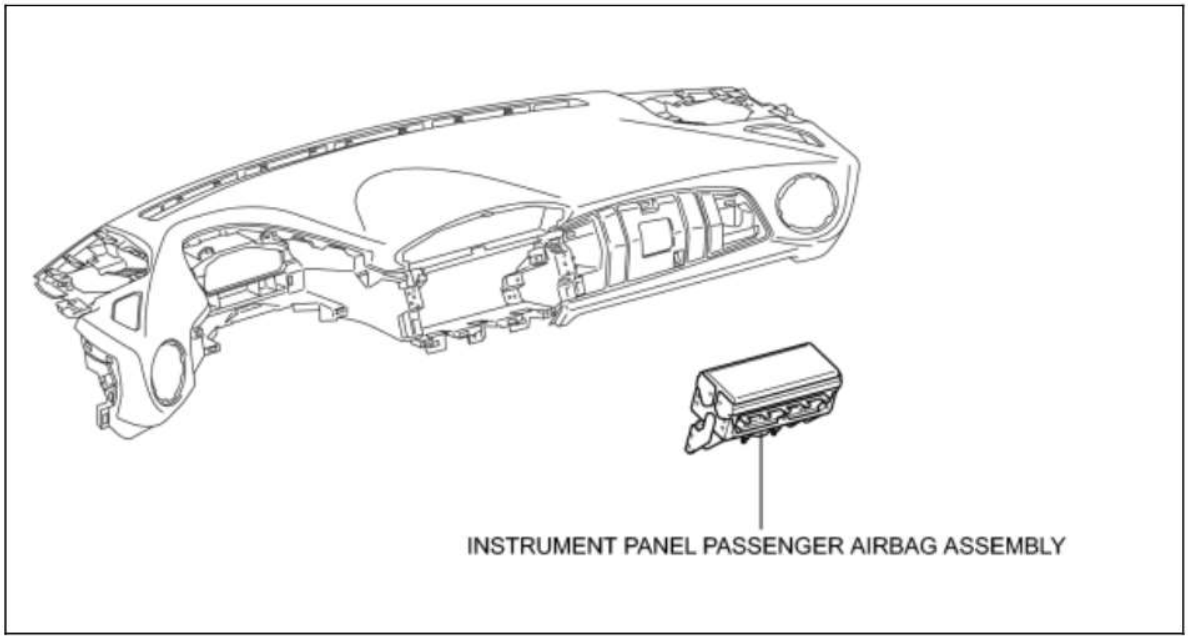
*a	Incorrect	*b	Correct

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Last Modified: 3-27-2012	6.4 K	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UX906GX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: FRONT PASSENGER AIRBAG ASSEMBLY: COMPONENTS (2013 FR-S)		

COMPONENTS

ILLUSTRATION



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Last Modified: 3-27-2012	6.4 N	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UX60A3X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: FRONT PASSENGER AIRBAG ASSEMBLY: DISPOSAL (2013 FR-S)		

DISPOSAL

CAUTION:

Before performing pre-disposal deployment of any SRS part, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.

1. PRECAUTION

CAUTION:

- An airbag or pretensioner may be activated by static electricity. To prevent this, be sure to touch a metal surface with bare hands to discharge static electricity before performing this procedure.
- Never dispose of an instrument panel passenger airbag assembly with an undeployed airbag.
- The airbag produces an exploding sound when it is deployed, so perform the operation outdoors and where it will not create a nuisance to nearby residents.
- When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electrical noise.
- When deploying the airbag, perform the operation at least 10 m (32.8 ft.) away from the instrument panel passenger airbag assembly.
- The instrument panel passenger airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling an instrument panel passenger airbag assembly with a deployed airbag.
- Do not apply water etc. to an instrument panel passenger airbag assembly with a deployed airbag.
- Always wash your hands with water after completing the operation.

HINT:

When scrapping a vehicle equipped with an SRS or disposing of the instrument panel passenger airbag assembly, be sure to deploy the airbag first in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the Service Dept. of TOYOTA MOTOR SALES, U.S.A., INC.

2. DISPOSE OF INSTRUMENT PANEL PASSENGER AIRBAG ASSEMBLY (When Installed in Vehicle)

NOTICE:

- When disposing of the instrument panel passenger airbag assembly, never use the customer's vehicle to deploy the airbag.
- Be sure to observe the following procedure when deploying the airbag.

HINT:

Prepare a battery as the power source to deploy the airbag.

(a) Refer to Precaution INFO .

(b) Disconnect the cable from the negative (-) battery terminal.

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CAUTION:

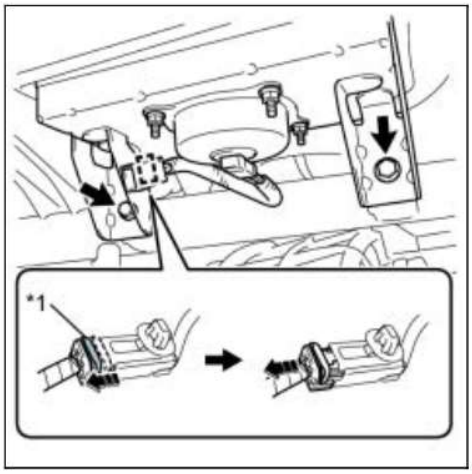
Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Remove the lower instrument panel sub-assembly INFO .

(d) Disconnect the No. 2 instrument panel wire.

NOTICE:

When disconnecting any airbag connector, take care not to damage the airbag wire harness.



(1) Slide the slider to release the lock, and then disconnect the connector.

Text in Illustration

*1	Slider

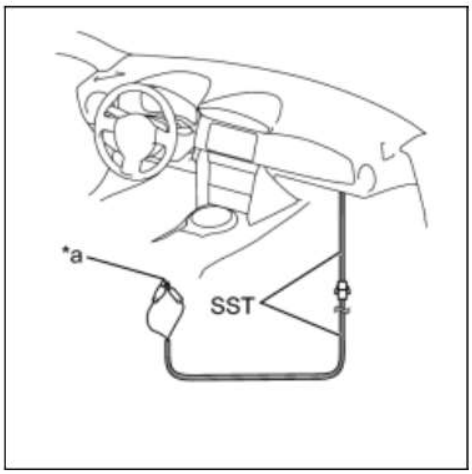
(e) Install SST.

SST: 09082-18010

SST: 09082-18030

CAUTION:

Check that there is no looseness in the instrument panel passenger airbag assembly and instrument panel safety pad.



(1) Connect the clip and terminal of SST.

Text in Illustration

*a	Connect the clip and terminal

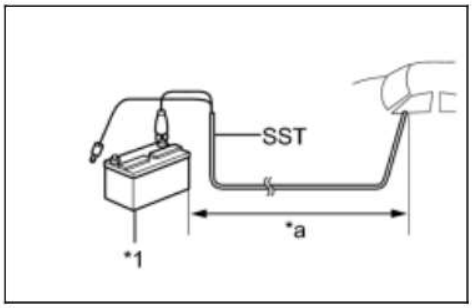
(2) After connecting the following SST to each other, connect them to the instrument panel passenger airbag assembly.

(3) Connect the SST connector to the No. 2 instrument panel wire.

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NOTICE:

To avoid damaging the SST connector or wire harness, do not lock the secondary lock of the twin lock.



(4) Move SST at least 10 m (32.8 ft.) away from the front side window of the vehicle.

Text in Illustration

*1	Battery
*a	10 m (32.8 ft.) or more

(5) Maintaining sufficient clearance for the SST wire harness in the front side window, close all doors and windows of the vehicle.

NOTICE:

Take care not to damage the SST wire harness.

(f) Deploy the airbag.

(1) Check that no one is inside the vehicle or within a 10 m (32.8 ft.) radius of the vehicle.

(2) Connect the clip of SST to the positive (+) battery terminal.

(3) Connect the terminal of SST to the negative (-) battery terminal to deploy the instrument panel passenger airbag assembly.

CAUTION:

- Before deployment, make sure that no one is near the vehicle.
- The instrument panel passenger airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling an instrument panel passenger airbag assembly with a deployed airbag.
- Do not apply water etc. to an instrument panel passenger airbag assembly with a deployed airbag.
- Always wash your hands with water after completing the operation.

3. DISPOSE OF INSTRUMENT PANEL PASSENGER AIRBAG ASSEMBLY (When not Installed in Vehicle)

NOTICE:

Be sure to observe the following procedure when deploying the airbag.

HINT:

Prepare a battery as the power source to deploy the airbag.

(a) Remove the instrument panel passenger airbag assembly INFO .

CAUTION:

- Before removing the instrument panel passenger airbag assembly, wait at least 90 seconds after turning the ignition switch off and disconnecting the cable from the negative (-) battery terminal.
- When storing the instrument panel passenger airbag assembly, keep the airbag deployment side facing upward.

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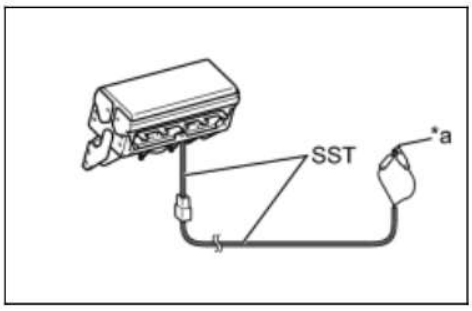
(b) Install SST.

SST: 09082-18010

SST: 09082-18030

NOTICE:

To avoid damaging the SST connector or wire harness, do not lock the secondary lock of the twin lock. Also, secure some slack for the SST wire harness inside the tire.



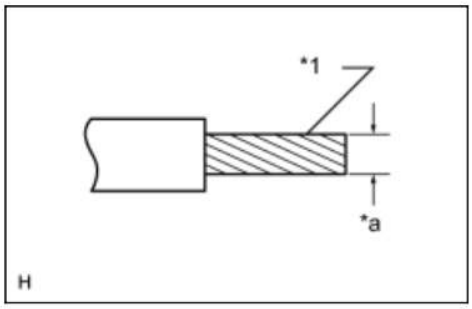
(1) Connect the clip and terminal of SST.

Text in Illustration

*a	Connect the clip and terminal

(2) After connecting the following SST to each other, connect them to the instrument panel passenger airbag assembly.

(c) Using braided wire, tie down the instrument panel passenger airbag assembly to an unneeded tire.



Text in Illustration

*1	Stripped Wire Section
*a	Wire Diameter

Wire:

Stripped wire section

1.25 mm ^{2} (0.0019 in. ^{2}) or more

CAUTION:

If the wire is too thin or an alternative object is used to tie down the instrument panel passenger airbag assembly, it may snap when the airbag is deployed. Always use a wire for vehicle use with an area of at least 1.25 mm ^{2} (0.0019 in. ^{2}).

HINT:

To calculate the area of the stripped wire section:

Area = 3.14 x (Diameter) ^{2} / 4

(1) Position the instrument panel passenger airbag assembly inside the tire with the airbag deployment side facing inside.

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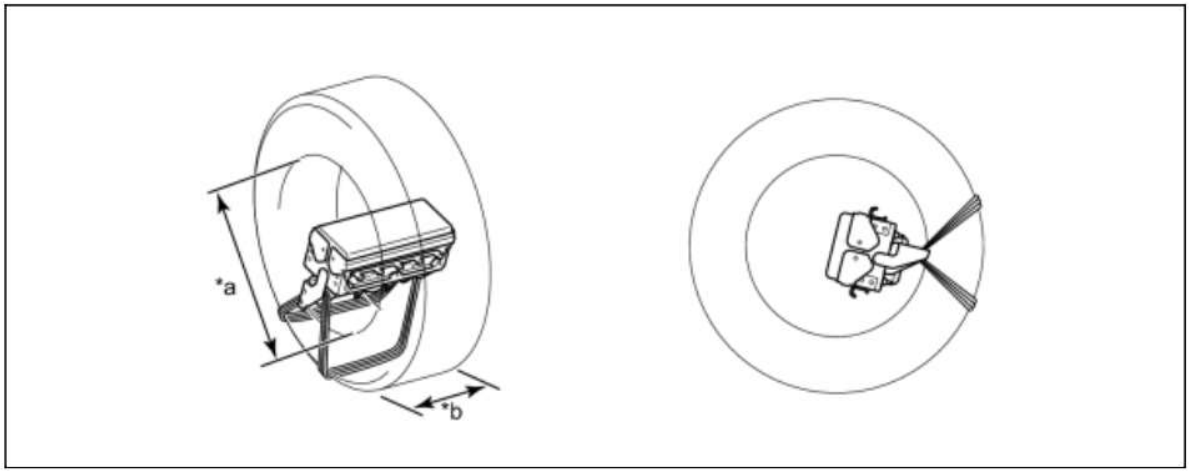
Minimum tire size:

Width

185 mm (7.28 in.)

Inner diameter

360 mm (1.18 ft.)



Text in Illustration

*a	Inner Diameter	*b	Width

CAUTION:

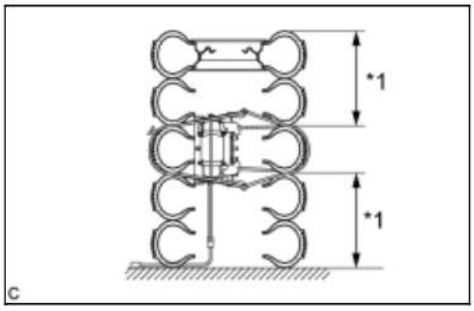
- Make sure that the wires are tight. If there is slack in the wires, the instrument panel passenger airbag assembly may break loose when the airbag is deployed.
- Always tie down the instrument panel passenger airbag assembly with the airbag deployment side facing inside the tire as shown in the illustration.

NOTICE:

The tire may be damaged by the airbag deployment, so use an unneeded tire.

(d) Place the tires.

(1) Place at least 2 tires under the tire to which the instrument panel passenger airbag assembly is tied.



Text in Illustration

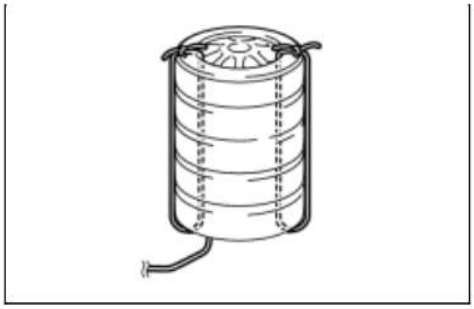
*1	Tires (2 or more)

NOTICE:

- Do not place the SST connector under the tire because it could be damaged.
- The tires and wheel may be damaged by the airbag deployment, so use unneeded tires and wheel.

(2) Place at least 2 tires onto the tire to which the instrument panel passenger airbag assembly is tied. The top tire should have a wheel installed.

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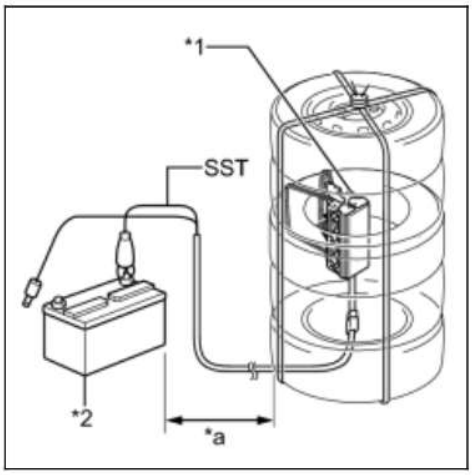
(3) Tie the tires together with the 2 wires.

CAUTION:

Make sure that the wires are tight. Looseness in the wires results in the tires breaking loose when the airbag is deployed.

(e) Deploy the airbag.

Text in Illustration



*1	Instrument Panel Passenger Airbag Assembly
*2	Battery
*a	10 m (32.8 ft.) or more

(1) Move SST at least 10 m (32.8 ft.) away from the airbag tied down to the tire.

(2) Check that no one is within a 10 m (32.8 ft.) radius of the tire to which the instrument panel passenger airbag assembly is tied.

(3) Connect the clip of SST to the positive (+) battery terminal.

(4) Connect the terminal of SST to the negative (-) battery terminal to deploy the instrument panel passenger airbag assembly.

CAUTION:

Before deployment, make sure that no one is near the airbag.

(f) Dispose of the instrument panel passenger airbag assembly.

CAUTION:

- The instrument panel passenger airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling an instrument panel passenger airbag assembly with a deployed airbag.
- Do not apply water etc. to an instrument panel passenger airbag assembly with a deployed airbag.
- Always wash your hands with water after completing the operation.

(1) Remove the instrument panel passenger airbag assembly from the tire.

(2) Place the instrument panel passenger airbag assembly in a plastic bag, tie it tightly, and dispose of it according to local regulations.

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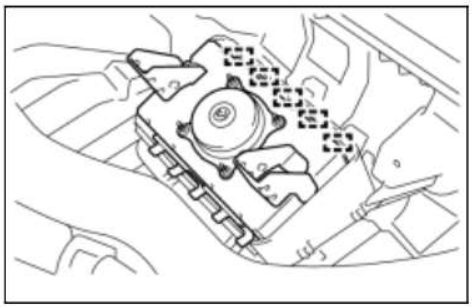
Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UX709MX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: FRONT PASSENGER AIRBAG ASSEMBLY: INSTALLATION (2013 FR-S)		

INSTALLATION

1. INSTALL INSTRUMENT PANEL PASSENGER AIRBAG ASSEMBLY

NOTICE:

If the hooks are not engaged in the correct order, the deployment part of the instrument panel passenger airbag assembly may be damaged.



(a) Engage the 5 hooks as shown in the illustration to temporarily install the instrument panel passenger airbag assembly.

(b) Push the instrument panel passenger airbag assembly to engage the 5 hooks.

2. INSTALL INSTRUMENT PANEL SUB-ASSEMBLY

INFO

3. PERFORM DIAGNOSTIC SYSTEM CHECK

INFO

4. INSPECT SRS WARNING LIGHT

INFO

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Last Modified: 3-27-2012	6.4 G	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UXB09DX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: FRONT PASSENGER AIRBAG ASSEMBLY: ON-VEHICLE INSPECTION (2013 FR-S)		

ON-VEHICLE INSPECTION

CAUTION:

Be sure to correctly follow the removal and installation procedures for the instrument panel passenger airbag assembly.

1. INSPECT INSTRUMENT PANEL PASSENGER AIRBAG ASSEMBLY (for Vehicle not Involved in Collision)

(a) Perform a diagnostic system check INFO .

(b) Visually check for defects with the instrument panel passenger airbag assembly installed on the vehicle.

HINT:

The defects are as follows:

- Cuts on the instrument panel sub-assembly around the instrument panel passenger airbag assembly
- Small cracks on the instrument panel sub-assembly around the instrument panel passenger airbag assembly
- Significant discoloration on the instrument panel sub-assembly around the instrument panel passenger airbag assembly

OK:

No defects are found.

If any of the defects is found, replace the instrument panel sub-assembly with a new one.

2. INSPECT INSTRUMENT PANEL PASSENGER AIRBAG ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)

(a) Perform a diagnostic system check INFO .

(b) Visually check for defects with the instrument panel passenger airbag assembly removed from the vehicle.

HINT:

- Cuts
- Small cracks
- Significant discoloration
- Cracks or other damage to the connector
- Deformation or cracks on the instrument panel sub-assembly or instrument panel reinforcement

OK:

No defects are found.

If any of the defects is found, replace the instrument panel passenger airbag assembly, instrument panel sub-assembly or instrument panel reinforcement with a new one.

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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UXA09JX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: FRONT PASSENGER AIRBAG ASSEMBLY: REMOVAL (2013 FR-S)		

REMOVAL

1. PRECAUTION

CAUTION:

Be sure to read Precaution thoroughly before servicing INFO .

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

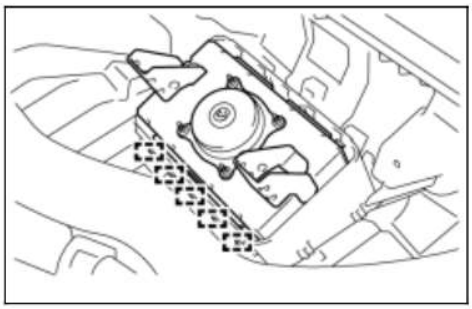
2. REMOVE INSTRUMENT PANEL SUB-ASSEMBLY

INFO

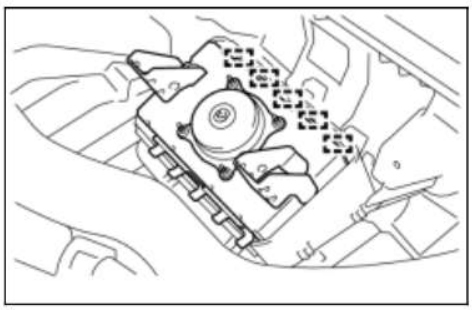
3. REMOVE INSTRUMENT PANEL PASSENGER AIRBAG ASSEMBLY

CAUTION:

When storing the instrument panel passenger airbag assembly, keep the airbag deployment side facing upward.



(a) Lean the instrument panel safety pad assembly and disengage the 5 hooks.



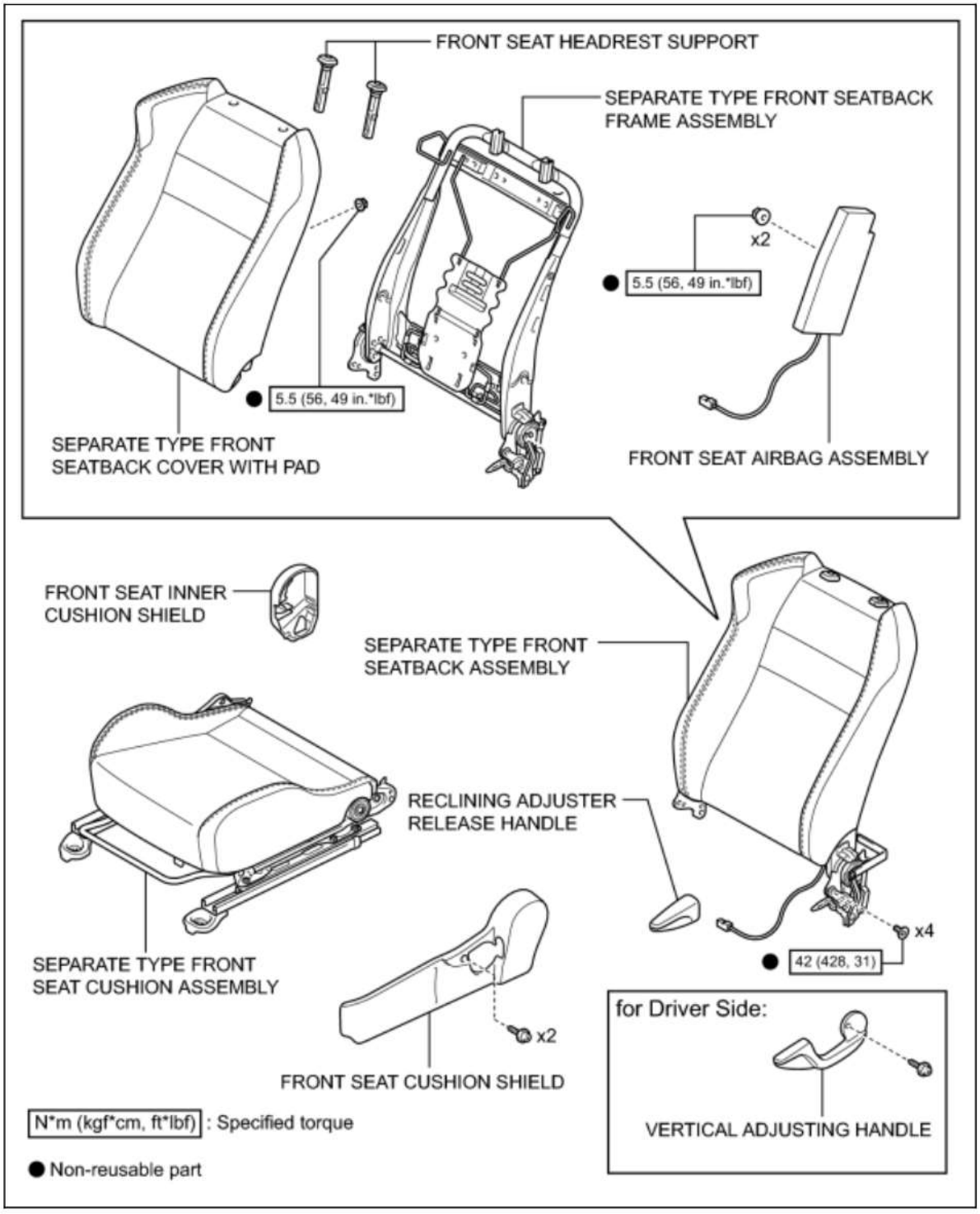
(b) Disengage the 5 hooks to remove the instrument panel passenger airbag assembly from the upper instrument panel sub-assembly.

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Last Modified: 3-27-2012	6.4 K	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000004N2600QX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: FRONT SEAT SIDE AIRBAG ASSEMBLY: COMPONENTS (2013 FR-S)		

COMPONENTS

ILLUSTRATION



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Last Modified: 3-27-2012	6.4 N	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UX00DAX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: FRONT SEAT SIDE AIRBAG ASSEMBLY: DISPOSAL (2013 FR-S)		

DISPOSAL

CAUTION:

Before performing pre-disposal deployment of any SRS part, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.

1. PRECAUTION

CAUTION:

- An airbag or pretensioner may be activated by static electricity. To prevent this, be sure to touch a metal surface with your bare hands to discharge static electricity before performing this procedure.
- Never dispose of a front seat airbag assembly with an undeployed airbag.
- The airbag produces an exploding sound when it is deployed, so perform the operation outdoors and where it will not create a nuisance to nearby residents.
- When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electrical noise.
- When deploying the airbag, perform the operation at least 10 m (32.8 ft.) away from the front seat airbag assembly.
- The front seat airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling a front seat airbag assembly with a deployed airbag.
- Do not apply water etc. to a front seat airbag assembly with a deployed airbag.
- Always wash your hands with water after completing the operation.

HINT:

When scrapping a vehicle equipped with an SRS or disposing of the front seat airbag assembly, be sure to deploy the airbag first in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the Service Dept. of TOYOTA MOTOR SALES, U.S.A., INC.

2. DISPOSE OF FRONT SEAT AIRBAG ASSEMBLY (When Installed in Vehicle)

NOTICE:

- When disposing of the front seat airbag assembly, never use the customer's vehicle to deploy the airbag.
- Be sure to observe the following procedure when deploying the airbag.

HINT:

Prepare a battery as the power source to deploy the airbag.

(a) Refer to Precaution INFO .

(b) Disconnect the cable from the negative (-) battery terminal.

CAUTION:

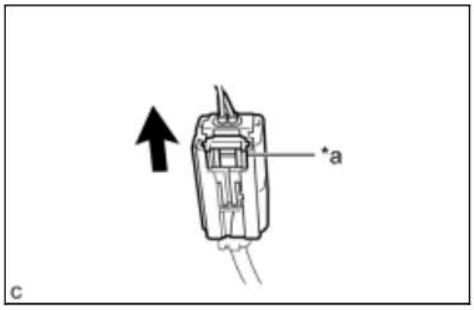
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Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Disconnect the connector from the front seat airbag assembly under the front seat assembly.

NOTICE:

When disconnecting any airbag connector, take care not to damage the airbag wire harness.



(1) Slide the slider to release the lock, and then disconnect the yellow airbag connector as shown in the illustration.

Text in Illustration

*a	Slider

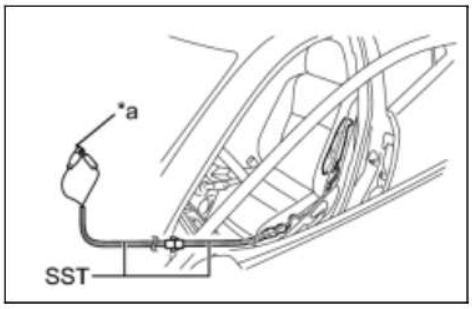
(d) Install SST.

SST: 09082-18010

SST: 09082-18040

CAUTION:

Check that there is no looseness in the front seat assembly.



(1) Connect the clip and terminal of SST.

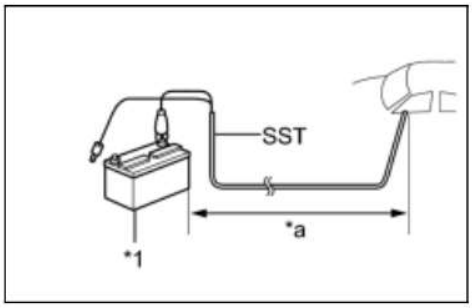
Text in Illustration

*a	Connect the clip and terminal

(2) Connect the SST connector to the front seat airbag assembly connector.

NOTICE:

To avoid damaging the SST connector or wire harness, do not lock the secondary lock of the twin lock.



(3) Move SST at least 10 m (32.8 ft.) away from the front side window.

Text in Illustration

*1	Battery
*a	10 m (32.8 ft.) or more

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(4) Maintaining sufficient clearance for the SST wire harness in the front side window, close all doors and windows of the vehicle.

NOTICE:

Take care not to damage the SST wire harness.

(e) Deploy the airbag.

(1) Check that no one is inside the vehicle or within a 10 m (32.8 ft.) radius of the vehicle.

(2) Connect the clip of SST to the positive (+) battery terminal.

(3) Connect the terminal of SST to the negative (-) battery terminal to deploy the front seat airbag assembly.

CAUTION:

- Before deployment, make sure that no one is near the vehicle.
- The front seat airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling a front seat airbag assembly with a deployed airbag.
- Do not apply water etc. to a front seat airbag assembly with a deployed airbag.
- Always wash your hands with water after completing the operation.

3. DISPOSE OF FRONT SEAT AIRBAG ASSEMBLY (When not Installed in Vehicle)

SST: 09082-18010
SST: 09082-18040

NOTICE:

Be sure to observe the following procedure when deploying the airbag.

HINT:

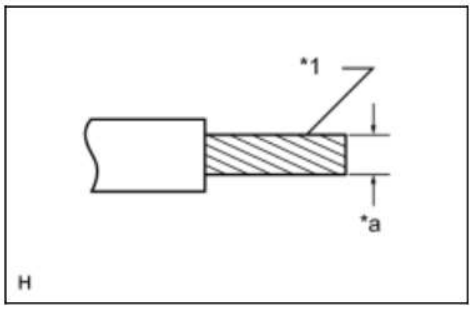
Prepare a battery as the power source to deploy the airbag.

(a) Remove the front seat airbag assembly INFO .

CAUTION:

- Before removing the front seat assembly, wait at least 90 seconds after turning the ignition switch off and disconnecting the cable from the negative (-) battery terminal.
- When storing the front seat airbag assembly, keep the airbag deployment side facing upward.

(b) Using braided wire, tie down the front seat airbag assembly to an unneeded tire.



Text in Illustration

*1	Stripped Wire Section
*a	Wire Diameter

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Wire:

Stripped wire section

1.25 mm ^{2} (0.0019 in. ^{2}) or more

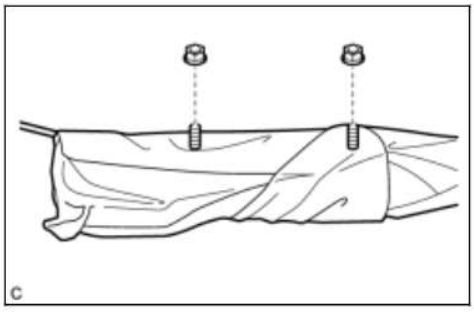
CAUTION:

If the wire is too thin or an alternative object is used to tie down the front seat airbag assembly, it may snap when the airbag is deployed. Always use a wire for vehicle use with an area of at least 1.25 mm ^{2} (0.0019 in. ^{2}).

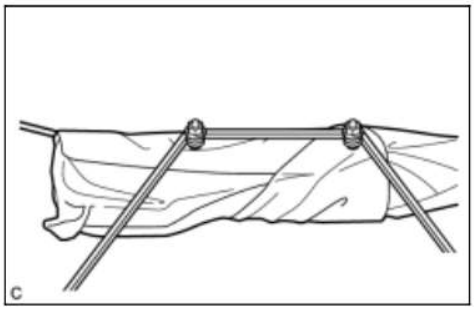
HINT:

To calculate the area of the stripped wire section:

Area = 3.14 x (Diameter) ^{2} / 4



(1) Install the 2 nuts to the front seat airbag assembly.



(2) Wind the wires around the stud bolts of the front seat airbag assembly as shown in the illustration.

(3) Position the front seat airbag assembly inside the tire.

Text in Illustration

*a	Width
*b	Inner Diameter

Minimum tire size:

Width

185 mm (7.28 in.)

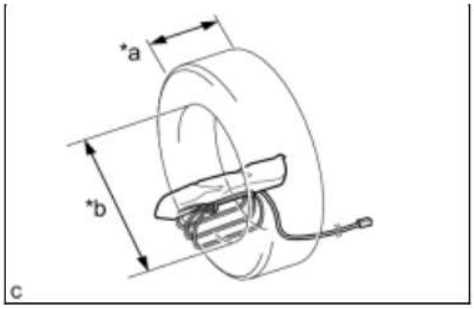
Inner diameter

360 mm (1.18 ft.)

CAUTION:

- Make sure that the wires are tight. If there is slack in

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the wires, the front seat airbag assembly may break loose when the airbag is deployed.

- Face the front seat airbag assembly deployment surface toward the inside the tire to evenly distribute the force of deployment.

NOTICE:

The tire may be damaged by the airbag deployment, so use an unneeded tire.

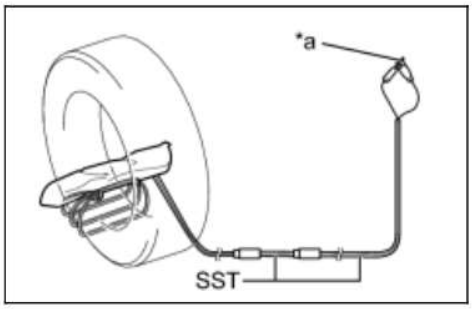
(c) Install SST.

SST: 09082-18010

SST: 09082-18040

NOTICE:

To avoid damaging the SST connector or wire harness, do not lock the secondary lock of the twin lock. Also, secure some slack for the SST wire harness inside the tire.



(1) Connect the clip and terminal of SST.

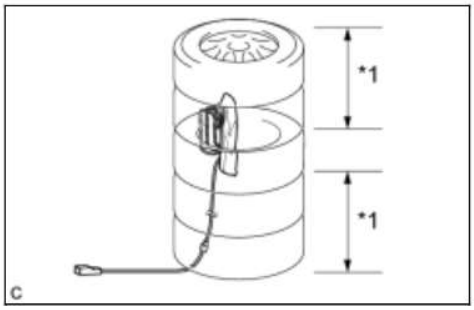
Text in Illustration

*a	Connect the clip and terminal

(2) After connecting the following SST to each other, connect them to the front seat airbag assembly.

(d) Place the tires.

(1) Place at least 2 tires under the tire to which the front seat airbag assembly is tied.



Text in Illustration

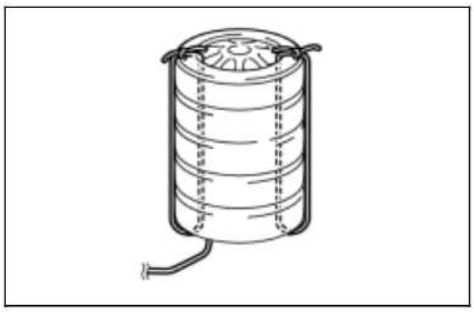
*1	Tires (2 or more)

NOTICE:

- Do not place the SST connector under the tire because it could be damaged.
- The tires and wheel may be damaged by the airbag deployment, so use unneeded tires and wheel.

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(2) Place at least 2 tires onto the tire to which the front seat airbag assembly is tied. The top tire should have a wheel installed.



(3) Tie the tires together with the 2 wires.

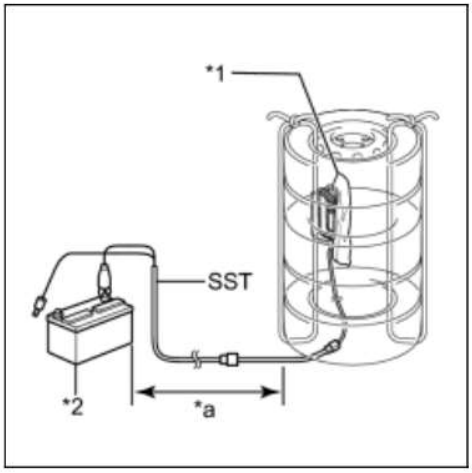
CAUTION:

Make sure that the wires are tight. Looseness in the wires results in the tires breaking loose when the airbag is deployed.

(e) Deploy the airbag.

Text in Illustration

*1	Front Seat Airbag Assembly
*2	Battery
*a	10 m (32.8 ft.) or more



(1) Move SST at least 10 m (32.8 ft.) away from the airbag tied down to the tire.

(2) Check that no one is within a 10 m (32.8 ft.) radius of the tire to which the front seat airbag assembly is tied.

(3) Connect the clip of SST to the positive (+) battery terminal.

(4) Connect the terminal of SST to the negative (-) battery terminal to deploy the front seat airbag assembly.

CAUTION:

Before deployment, make sure that no one is near the airbag.

(f) Dispose of the front seat airbag assembly.

CAUTION:

- The front seat airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling a front seat airbag assembly with a deployed airbag.
- Do not apply water etc. to a front seat airbag assembly with a deployed airbag.
- Always wash your hands with water after completing the operation.

(1) Remove the front seat airbag assembly from the tire.

(2) Place the front seat airbag assembly in a plastic bag, tie it tightly, and dispose of it according to local regulations.

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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000004N2500QX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: FRONT SEAT SIDE AIRBAG ASSEMBLY: INSTALLATION (2013 FR-S)		

INSTALLATION

1. INSTALL FRONT SEAT AIRBAG ASSEMBLY

CAUTION:

- The nuts must not be reused.
- Make sure that the separate type front seatback spring assembly is not deformed. If it is, replace it with a new one.

(a) Install the front seat airbag assembly with 2 new nuts.

Torque: 5.5 N·m (56 kgf·cm, 49in·lbf)

(b) Engage the 2 clamps.

2. INSTALL SEPARATE TYPE FRONT SEATBACK COVER WITH PAD INFO

3. INSTALL SEPARATE TYPE FRONT SEATBACK ASSEMBLY INFO

4. INSTALL FRONT SEAT INNER CUSHION SHIELD INFO

5. INSTALL FRONT SEAT CUSHION SHIELD INFO

6. INSTALL VERTICAL ADJUSTING HANDLE (for Driver Side) INFO

7. INSTALL RECLINING ADJUSTER RELEASE HANDLE INFO

8. INSTALL FRONT SEAT ASSEMBLY

INFO

9. PERFORM DIAGNOSTIC SYSTEM CHECK

INFO

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Last Modified: 3-27-2012	6.4 G	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000VPS0CKX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: FRONT SEAT SIDE AIRBAG ASSEMBLY: ON-VEHICLE INSPECTION (2013 FR-S)		

ON-VEHICLE INSPECTION

CAUTION:

Be sure to correctly follow the removal and installation procedures for the front seat airbag assemblies.

1. INSPECT FRONT SEAT AIRBAG ASSEMBLY (for Vehicle not Involved in Collision)

(a) Perform a diagnostic system check INFO .

(b) Visually check for defects with the front seat airbag assemblies installed on the vehicle.

HINT:

The defects are as follows:

- Cuts on the front seatback assembly around the front seat airbag assemblies
- Small cracks on the front seatback assembly around the front seat airbag assemblies
- Significant discoloration on the front seatback assembly around the front seat airbag assemblies

OK:

No defects are found.

If any of the defects is found, replace the separate type front seatback pad or separate type front seatback cover with a new one.

2. INSPECT FRONT SEAT AIRBAG ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)

(a) Perform a diagnostic system check INFO .

(b) Visually check for defects with the front seat airbag assemblies removed from the vehicle.

HINT:

The defects are as follows:

- Make sure that there are no scratches, broken or frayed threads on the surface of the front seat airbag assemblies base fabric
- Marks from being dropped
- Deformation on the installation part of the front seat airbag assemblies
- Cracks or other damage to the wire harness or connector

OK:

No defects are found.

If any of the defects is found, replace the front seat airbag assembly with a new one.

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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000004N2700RX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: FRONT SEAT SIDE AIRBAG ASSEMBLY: REMOVAL (2013 FR-S)		

REMOVAL

CAUTION:

- Be sure to read Precaution thoroughly before servicing. INFO
- Wear protective gloves. Sharp areas on the parts may may injure your hands.
- If the side airbag was deployed, replace the front seat airbag assembly, separate type front seatback spring assembly, separate type front seatback cover and separate type front seatback pad with the necessary parts in accordance with the extent of the collision damage. INFO

HINT:

Use the same procedure for the LH and RH sides.

1. REMOVE FRONT SEAT ASSEMBLY

INFO

2. REMOVE RECLINING ADJUSTER RELEASE HANDLE INFO

3. REMOVE VERTICAL ADJUSTING HANDLE (for Driver Side) INFO

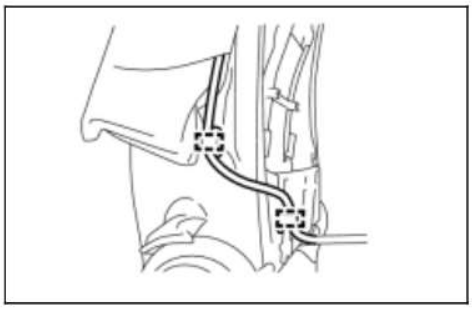
4. REMOVE FRONT SEAT CUSHION SHIELD INFO

5. REMOVE FRONT SEAT INNER CUSHION SHIELD INFO

6. REMOVE SEPARATE TYPE FRONT SEATBACK ASSEMBLY INFO

7. REMOVE SEPARATE TYPE FRONT SEATBACK COVER WITH PAD INFO

8. REMOVE FRONT SEAT AIRBAG ASSEMBLY

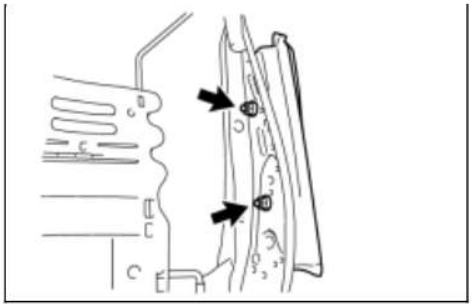


(a) Disengage the 2 clamps.

(b) Remove the 2 nuts and the front seat airbag assembly.

CAUTION:

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- The nuts must not be reused.
- Make sure that the separate type front seatback spring assembly is not deformed. If it is, replace it with a new one.

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000057WN000X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: B1760: Occupant Classification Sensor Circuit (2013 FR-S)		

DTC	**B1760**	**Occupant Classification Sensor Circuit**

DESCRIPTION

The occupant detection sensor circuit consists of the occupant detection ECU and occupant detection sensor.

DTC B1760 is stored when a malfunction is detected in the occupant detection sensor circuit.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1760	• The occupant detection ECU receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the occupant detection sensor circuit. • Occupant detection sensor malfunction • Occupant detection ECU malfunction	Front seat assembly RH

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK CONNECTOR**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

(c) Check that the connector is properly connected to the occupant detection ECU.

OK:
The connector is properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connector from the occupant detection ECU.

(e) Check that the terminal of the connector is not damaged.

OK:
The terminal is not deformed or damaged.

NG ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

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OK

2.	**CHECK DTC**

(a) Connect the connector to the occupant detection ECU.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in the occupant detection ECU INFO .

(d) Clear the DTCs stored in the airbag ECU assembly INFO .

(e) Turn the ignition switch off.

(f) Turn the ignition switch to ON.

(g) Check for DTCs INFO .

OK:
DTC B1760 is not output.

HINT:

Codes other than DTC B1760 may be output at this time, but they are not related to this check.

NG ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

OK ▶ **USE SIMULATION METHOD TO CHECK**

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000057WO000X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: B1761: Occupant Classification Sensor Soaked (2013 FR-S)		

DTC	**B1761**	**Occupant Classification Sensor Soaked**

DESCRIPTION

DTC B1761 is stored when the occupant detection sensor is wet.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1761	• The occupant detection sensor is wet. • Occupant detection sensor malfunction • Occupant detection ECU malfunction	Front seat assembly RH

INSPECTION PROCEDURE

PROCEDURE

1.	**DRYING FRONT SEAT ASSEMBLY RH**

(a) Open the car windows inside a well-ventilated room and let the sheet dry for 24 hours.

NEXT

2.	**CHECK DTC**

(a) Clear the DTCs stored in the occupant detection ECU INFO .

(b) Clear the DTCs stored in the airbag ECU assembly INFO .

(c) Turn the ignition switch off.

(d) Turn the ignition switch to ON.

(e) Check for DTCs INFO .

OK:

DTC B1761 is not output.

HINT:

Codes other than DTC B1761 may be output at this time, but they are not related to this check.

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NG ▶ REPLACE FRONT SEAT ASSEMBLY RH

OK ▶ END

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000010V6088X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: B1771: Seat Belt Buckle SW (2013 FR-S)		

DTC	**B1771**	**Seat Belt Buckle SW**

DESCRIPTION

The passenger side buckle switch circuit consists of the occupant detection ECU and front seat inner belt assembly RH.

DTC B1771 is stored when a malfunction is detected in the passenger side buckle switch circuit.

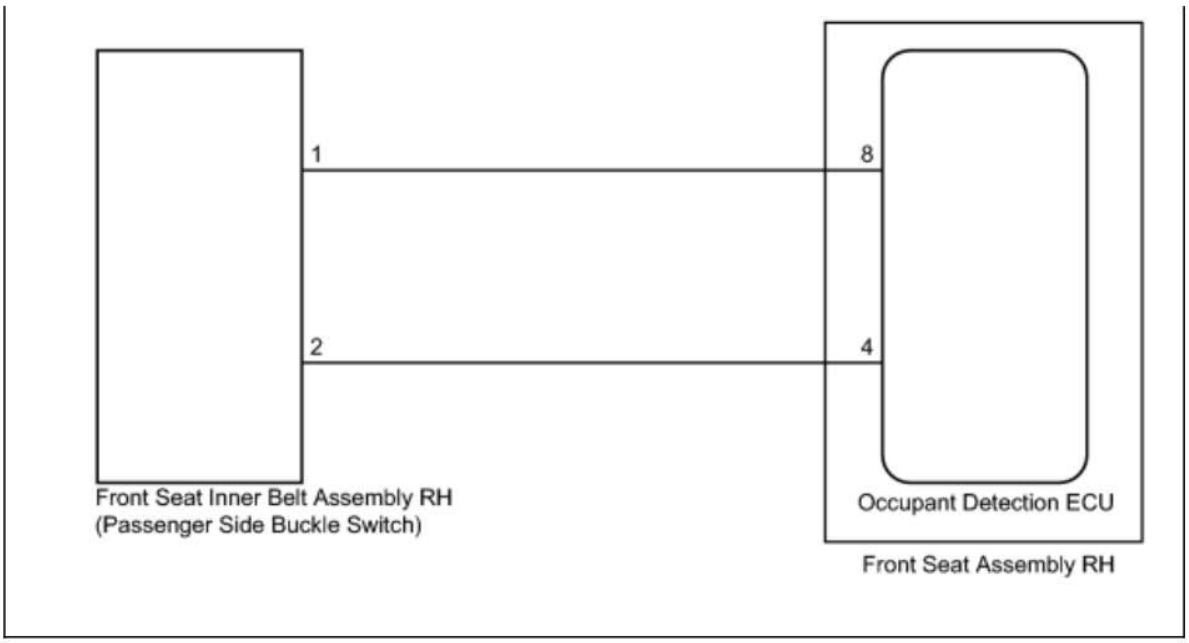
DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1771	• The occupant detection ECU receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the passenger side buckle switch circuit. • Passenger side buckle switch malfunction • Occupant detection ECU malfunction	• Front seat inner belt assembly RH (Passenger side buckle switch) • Front seat assembly RH

HINT:

When DTC B1650 is detected as a result of troubleshooting for the airbag system, check the DTCs stored in the occupant detection ECU. When DTC B1771 is output, perform troubleshooting for the DTC.

WIRING DIAGRAM

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INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO **.**

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, 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 CONNECTORS**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

(c) Check that the connectors are properly connected to the occupant detection ECU and front seat inner belt assembly RH.

OK:

The connectors are properly connected.

HINT:

If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

(d) Disconnect the connectors from the occupant detection ECU and front seat inner belt assembly RH.

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(e) Check that the terminals of the connectors are not damaged.

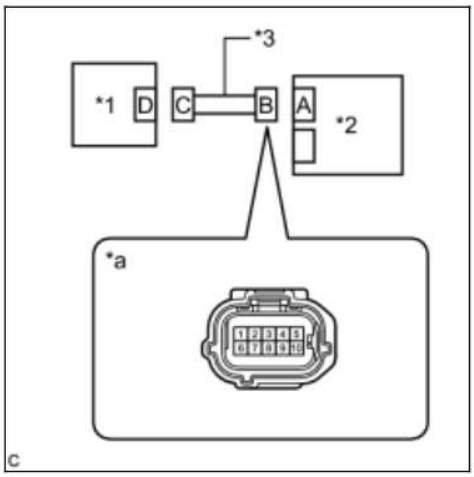
OK:

The terminals are not deformed or damaged.

NG ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

OK ▼

2.	**CHECK FRONT SEAT WIRE RH (SHORT TO B+)**



(a) Connect the cable to the negative (-) battery terminal.

(b) Turn the ignition switch to ON.

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

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
4 - Body ground	Ignition switch ON	Below 1 V
8 - Body ground	Ignition switch ON	Below 1 V

(d) Turn the ignition switch off.

(e) Disconnect the cable from the negative (-) battery terminal.

Text in Illustration

*1	Front Seat Inner Belt Assembly RH
*2	Occupant Detection ECU
*3	Front Seat Wire RH
	Front view of wire harness connector

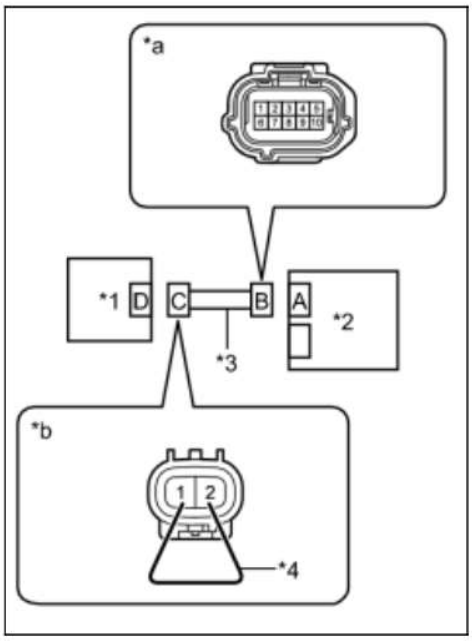
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*a	(to Occupant Detection ECU)

NG ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

OK ▼

3.	**CHECK FRONT SEAT WIRE RH (OPEN)**



(a) Using a service wire, connect terminals 1 and 2 of connector C.

NOTICE:

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

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
4 - 8	Always	Below 1 Ω

(c) Disconnect the service wire from connector C.

Text in Illustration

*1	Front Seat Inner Belt Assembly RH
*2	Occupant Detection ECU
*3	Front Seat Wire RH
*4	Service Wire

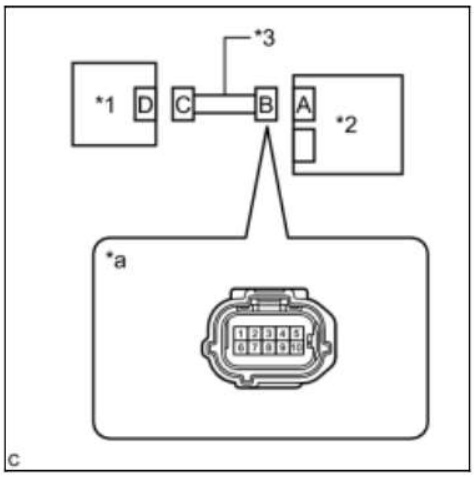
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*a	Front view of wire harness connector (to Occupant Detection ECU)
*b	Front view of wire harness connector (to Front Seat Inner Belt Assembly RH)

NG ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

OK ▼

4.	**CHECK FRONT SEAT WIRE RH (SHORT)**



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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
4 - 8	Always	1 MΩ or higher

Text in Illustration

*1	Front Seat Inner Belt Assembly RH
*2	Occupant Detection ECU
*3	Front Seat Wire RH
*a	Front view of wire harness connector (to Occupant Detection ECU)

NG ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

OK ▼

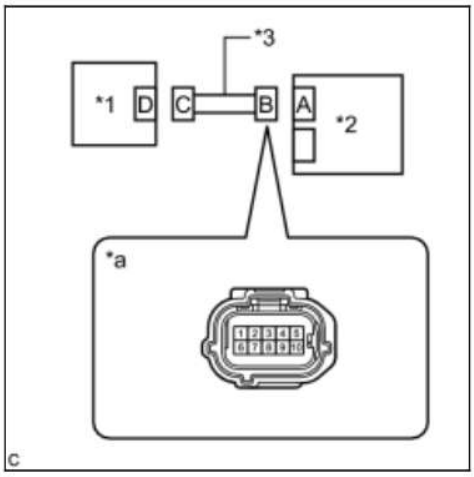
5.	**CHECK FRONT SEAT WIRE RH (SHORT TO GROUND)**

(a) Measure the resistance according to the value(s) in

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the table below.

Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
4 - Body ground	Always	1 MΩ or higher
8 - Body ground	Always	1 MΩ or higher

Text in Illustration

*1	Front Seat Inner Belt Assembly RH
*2	Occupant Detection ECU
*3	Front Seat Wire RH
*a	Front view of wire harness connector (to Occupant Detection ECU)

NG ▶ **REPLACE FRONT SEAT ASSEMBLY RH**

OK
▼

6.	CHECK DTC

(a) Connect the connectors to the occupant detection ECU and front seat inner belt assembly RH.

(b) Connect the cable to the negative (-) battery terminal.

(c) Clear the DTCs stored in the occupant detection ECU INFO .

(d) Clear the DTCs stored in the airbag ECU assembly INFO .

(e) Turn the ignition switch off.

(f) Turn the ignition switch to ON.

(g) Check for DTCs INFO .

OK:
DTC B1771 is not output.

HINT:

Codes other than DTC B1771 may be output at this time, but they are not related to this check.

(h) Turn the ignition switch off.

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NG ▶ CHECK FRONT SEAT INNER BELT ASSEMBLY RH

OK ▶ USE SIMULATION METHOD TO CHECK

7.	CHECK FRONT SEAT INNER BELT ASSEMBLY RH

(a) Disconnect the cable from the negative (-) battery terminal.

(b) Replace the front seat inner belt assembly RH INFO .

HINT:

Perform the inspection using parts from a normal vehicle if possible.

(c) Connect the cable to the negative (-) battery terminal.

(d) Clear the DTCs stored in the occupant detection ECU INFO .

(e) Clear the DTCs stored in the airbag ECU assembly INFO .

(f) Turn the ignition switch off.

(g) Turn the ignition switch to ON.

(h) Check for DTCs INFO .

OK:
DTC B1771 is not output.

HINT:

Codes other than DTC B1771 may be output at this time, but they are not related to this check.

NG ▶ REPLACE FRONT SEAT ASSEMBLY RH

OK ▶ END (FRONT SEAT INNER BELT ASSEMBLY RH WAS DEFECTIVE)

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Last Modified: 3-27-2012	6.4 C	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000010VH03WX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: B1795: ECU Fault Status (2013 FR-S)		

DTC	**B1795**	**ECU Fault Status**

DESCRIPTION

DTC B1795 is stored when a malfunction is detected in the occupant detection ECU.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
B1795	Occupant detection ECU malfunction	Front seat assembly RH

HINT:

When DTC B1650 is detected as a result of troubleshooting for the airbag system, check the DTCs stored in the occupant detection ECU. When DTC B1795 is output, perform troubleshooting for the DTC.

INSPECTION PROCEDURE

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

PROCEDURE

1.	**REPLACE FRONT SEAT ASSEMBLY RH**

(a) Turn the ignition switch off.

(b) Disconnect the cable from the negative (-) battery terminal.

(c) Replace the front seat assembly RH INFO .

(d) Connect the cable to the negative (-) battery terminal.

NEXT END

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Last Modified: 3-27-2012	6.4 U	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000010VM07KX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: DATA LIST / ACTIVE TEST (2013 FR-S)		

DATA LIST / ACTIVE TEST

1. DATA LIST

HINT:

Using the Techstream to read the Data List allows the values or states of switches, sensors, actuators and other items to be read without removing any parts. This non-intrusive inspection can be very useful because intermittent conditions or signals may be discovered before parts or wiring is disturbed. Reading the Data List information early in troubleshooting is one way to save diagnostic time.

NOTICE:

In the table below, the values listed under "Normal Condition" are reference values. Do not depend solely on these reference values when deciding whether a part is faulty or not.

(a) Turn the ignition switch off.

(b) Connect the Techstream to the DLC3.

(c) Turn the ignition switch to ON.

(d) Turn the Techstream on.

(e) Enter the following menus: Body Electrical / Occupant Detection / Data List.

(f) Check the values by referring to the table below.

Occupant Detection

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Passenger Detection	Passenger detection status/ ON / OFF	ON/OFF	-
Status of Passenger Side Buckle SW	Passenger side buckle switch/ Set / Unset / NG	Set/Unset	-
Number of Present DTC	Number of present DTC recorded/ Min.: 0, Max.: 255	0	-

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Last Modified: 3-27-2012	6.4 D	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000010VJ07PX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: DIAGNOSIS SYSTEM (2013 FR-S)		

DIAGNOSIS SYSTEM

1. FUNCTION OF PASSENGER AIRBAG ON/OFF INDICATOR

(a) Initial check

(1) Turn the ignition switch to ON.

(2) The passenger airbag ON/OFF indicator comes on for approximately 6 seconds, then goes off for approximately 2 seconds.

(3) Approximately 6 seconds after the ignition switch is turned to ON, the passenger airbag ON/OFF indicator will indicate ON/OFF depending on the conditions listed below.

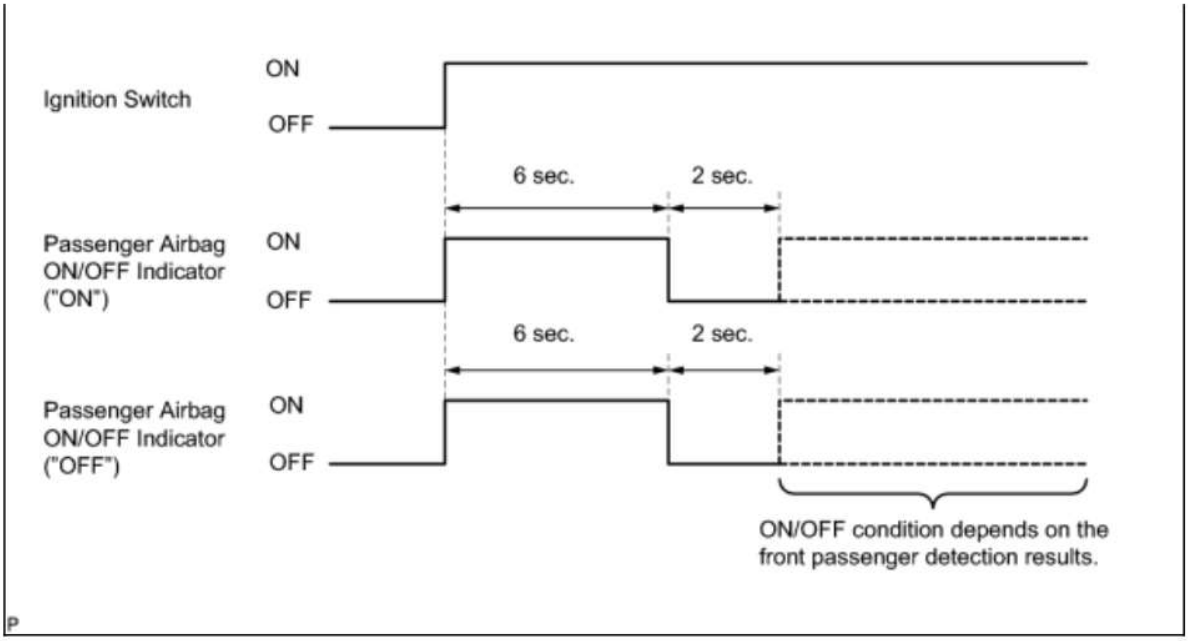
Indicator Operation

FRONT PASSENGER SEAT CONDITION	PASSENGER AIRBAG ON/OFF INDICATOR		SRS WARNING LIGHT
	ON INDICATOR	OFF INDICATOR	
Vacant	OFF	OFF	OFF
Adult is seated.	ON	OFF	OFF
Child is seated. Child restraint system is installed.	OFF	ON	OFF
Occupant classification system failure	OFF	ON	ON

HINT:

- The passenger airbag ON/OFF indicator illuminates based on the timing chart below in order to check the indicator light circuit.
- When the occupant classification system has trouble, both the SRS warning light and passenger airbag ON/OFF indicator ("OFF") come on. In this case, check the DTCs in the airbag system first.

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2. CHECK PASSENGER AIRBAG ON/OFF INDICATOR



(a) Turn the ignition switch to ON.

(b) Check that the passenger airbag ON/OFF indicator ("ON" and "OFF") comes on for approximately 6 seconds, then goes off for approximately 2 seconds.

HINT:

Refer to the indicator operation table in the preceding step regarding the passenger airbag ON/OFF indicator when the ignition switch is turned to ON and approximately 6 seconds elapse.

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Last Modified: 3-27-2012	6.4 S	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000010V2031X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: DIAGNOSTIC TROUBLE CODE CHART (2013 FR-S)		

DIAGNOSTIC TROUBLE CODE CHART

If a trouble code is displayed during the DTC check, check the circuit listed for the code in the table below (proceed to the page listed for that DTC).

HINT:

When DTC B1650 is detected as a result of troubleshooting for the airbag system, perform troubleshooting for the occupant classification system as shown in the chart below.

Occupant Classification System

DTC CODE	DETECTION ITEM	PASSENGER AIRBAG (OFF INDICATOR)	SEE PAGE
B1760	Occupant Classification Sensor Circuit	ON	INFO
B1761	Occupant Classification Sensor Soaked	ON	INFO
B1771	Seat Belt Buckle SW	ON	INFO
B1795	ECU Fault Status	ON	INFO

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Last Modified: 3-27-2012	6.4 D	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000010VK07LX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: DTC CHECK / CLEAR (2013 FR-S)		

DTC CHECK / CLEAR

1. DTC CHECK

(a) Turn the ignition switch off.

(b) Connect the Techstream to the DLC3.

(c) Turn the ignition switch to ON.

(d) Turn the Techstream on.

(e) Enter the following menus: Body Electrical / Occupant Detection / Trouble Codes.

(f) Check for DTCs by following the prompts on the Techstream screen.

HINT:

Refer to the Techstream operator's manual for further details.

2. DTC CLEAR

(a) Turn the ignition switch off.

(b) Connect the Techstream to the DLC3.

(c) Turn the ignition switch to ON.

(d) Turn the Techstream on.

(e) Enter the following menus: Body Electrical / Occupant Detection / Trouble Codes.

(f) Clear the DTCs by following the prompts on the Techstream screen.

HINT:

Refer to the Techstream operator's manual for further details.

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Last Modified: 3-27-2012	6.4 U	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000039SE01YX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: FAIL-SAFE CHART (2013 FR-S)		

FAIL-SAFE CHART

1. FAIL SAFE FUNCTION

(a) The following chart shows the status of the controls when the system is normal and malfunctioning.

- The passenger airbag ON/OFF indicator ("ON" and "OFF") comes on for approximately 6 seconds, then goes off for approximately 2 seconds.
- Approximately 6 seconds after the ignition switch is turned to ON, the passenger airbag ON/OFF indicator will indicate ON or OFF depending on the conditions listed below.

CONDITION	ON INDICATOR	OFF INDICATOR	FRONT PASSENGER AIRBAG	FRONT SEAT SIDE AIRBAG RH	CURTAIN SHIELD AIRBAG RH	FRONT SEAT BELT PRETENSIONER RH
Adult is seated.	ON	OFF	○	○	○	○
Child is seated.	OFF	ON	X	○	○	○
Child restraint system is installed.	OFF	ON	X	○	○	○
Vacant	OFF	OFF	X	○	○	X
Failure	OFF	ON	X	○	○	○

○: Deployable
X: Not deployable

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Last Modified: 3-27-2012	6.4 D	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000010V107TX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: HOW TO PROCEED WITH TROUBLESHOOTING (2013 FR-S)		

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

- Use the following procedure to troubleshoot the occupant classification system.
- *: Use the Techstream.

1.	**VEHICLE BROUGHT TO WORKSHOP**

NEXT

2.	**CUSTOMER PROBLEM ANALYSIS**

(a) Confirm problem symptoms INFO .

NEXT

3.	**PASSENGER AIRBAG ON/OFF INDICATOR CHECK**

(a) Proceed to Diagnosis System INFO .

NEXT

4.	**DTC CHECK (Present and History DTCs)***

(a) Proceed to DTC Check / Clear INFO .

Result:

RESULT	PROCEED TO
DTC is output.	A

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DTC is not output.	B

B ▶ GO TO PROBLEM SYMPTOMS TABLE

A

▼

5.	DTC CHART

(a) Proceed to Diagnostic Trouble Code Chart INFO .

NEXT

▼

6.	CIRCUIT INSPECTION*

NEXT

▼

7.	REPAIR

NEXT

▼

8.	CLEAR DTCS (Present and History DTCs)*

(a) Proceed to DTC Check / Clear INFO .

NEXT

▼

9.	DTC CHECK*

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(a) Proceed to DTC Check / Clear INFO .

Result:

RESULT	PROCEED TO
DTC is not output.	A
DTC is output.	B

B ▶ GO TO DIAGNOSTIC TROUBLE CODE CHART

A ▼

10.	SYMPTOM SIMULATION

(a) Check the passenger airbag ON/OFF indicator condition.

Result:

RESULT	PROCEED TO
Passenger airbag ON/OFF indicator operates normally.	A
Passenger airbag ON/OFF indicator ("OFF") and SRS warning light come on.	B

B ▶ GO TO DIAGNOSTIC TROUBLE CODE CHART

A ▼

11.	CONFIRMATION TEST

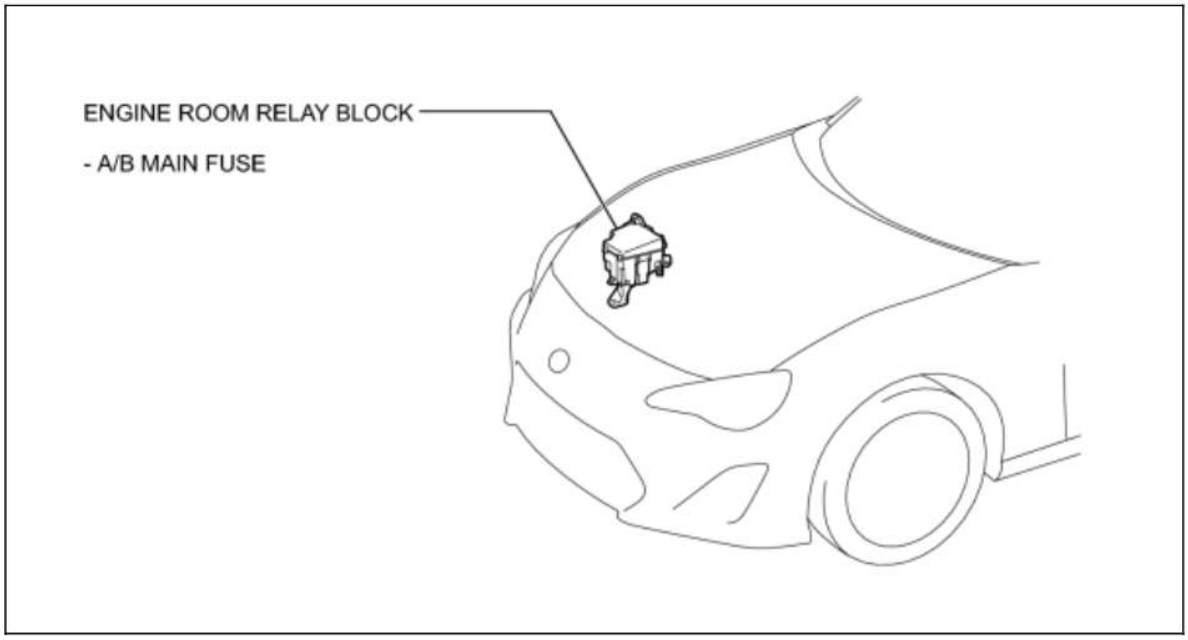
NEXT ▶ END

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Last Modified: 3-27-2012	6.4 R	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000010V303KX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: PARTS LOCATION (2013 FR-S)		

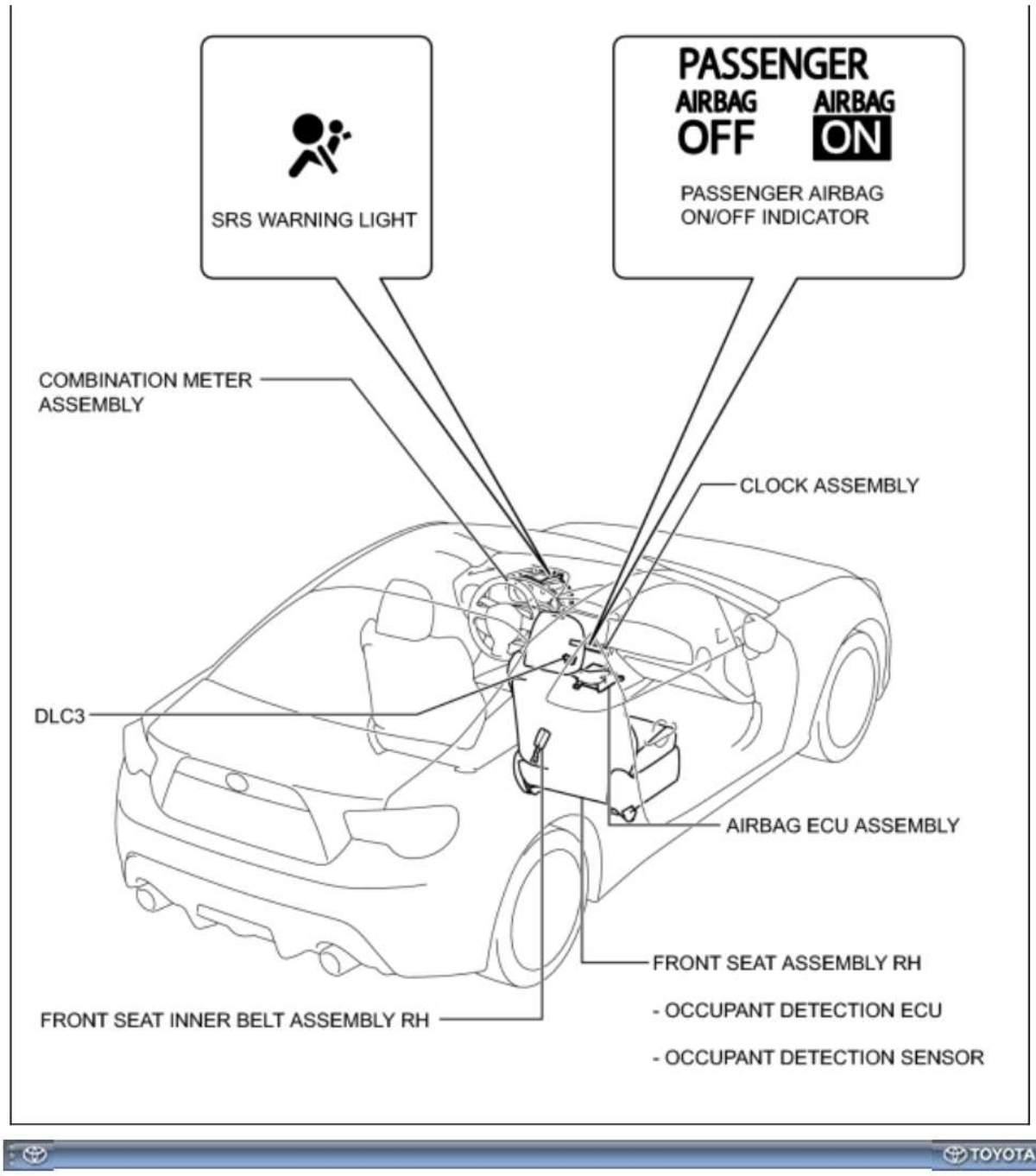
PARTS LOCATION

ILLUSTRATION



ILLUSTRATION

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Last Modified: 3-27-2012	6.4 L	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000010V007MX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: PRECAUTION (2013 FR-S)		

PRECAUTION

1. PRECAUTION FOR OCCUPANT CLASSIFICATION SYSTEM REPLACEMENT

(a) The occupant sensing control unit of the occupant sensing system (passenger seat only) and the occupant sensor are secured to the seat cushion frame and therefore, never remove the occupant sensing control unit or occupant sensor from the seat cushion frame.

(b) Do not replace the seat cushion pad by itself. Make sure to replace it in a unit of the seat cushion pad and frame assembly. In the production line, the seat cushion pad and cushion frame are adjusted as a set and therefore, the occupant sensing system may not work properly if these were paired with a cushion or frame from another vehicle or different set.

(c) If the seat cushion cover is removed, make sure to replace the hang wire on the seat cushion side with a new wire.

(d) Do not connect the battery to the opposite terminal. Ignoring this may damage the occupant sensing system instantaneously.

(e) Do not disconnect the battery cable while the engine is running. Ignoring this may damage the electronic components such as in the occupant sensing control unit because of the large negative surge yielded in the alternator.

(f) Before disconnecting the connector between each sensor and control unit, always turn off the ignition switch first and then wait at least 60 seconds. Ignoring this may damage the occupant sensing control unit.

(g) All of the parts associated with the occupant sensing system are precision components. Do not drop them.

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Last Modified: 3-27-2012	6.4 T	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000010V505QX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: PROBLEM SYMPTOMS TABLE (2013 FR-S)		

PROBLEM SYMPTOMS TABLE

HINT:

- Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.
- Inspect the fuses and relays related to this system before inspecting the suspected areas below.

Occupant Classification System

SYMPTOM	SUSPECTED AREA	SEE PAGE
The front passenger seat condition differs from the indication by the passenger airbag ON/OFF indicator (DTC is not output).	Front seat assembly RH	INFO
	Front seat inner belt assembly RH	INFO
	Harness or connector	-

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Last Modified: 3-27-2012	6.4 D	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000010VI03WX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: SYSTEM DESCRIPTION (2013 FR-S)		

SYSTEM DESCRIPTION

1. GENERAL

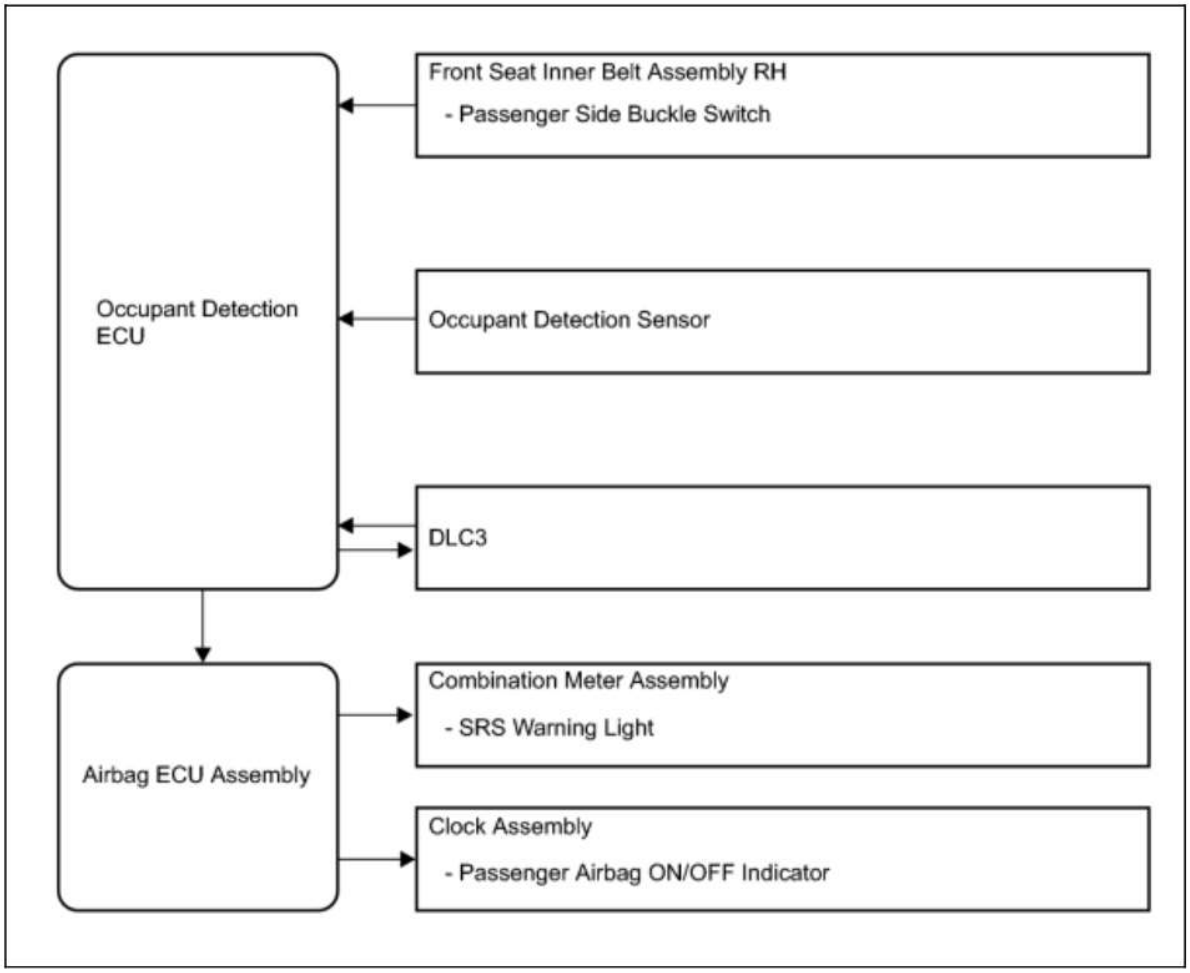
(a) In the occupant classification system, the occupant detection ECU calculates the weight of the occupant based on signals from the occupant detection sensor. This system recognizes the occupant as a child if it detects a weight of less than 36 kg (79.4 lb) on the front passenger seat, and then disables the front passenger airbag and front seat belt pretensioner RH.

(b) This system is mainly composed of the occupant detection sensor that detects the load on the front passenger seat. The occupant detection ECU controls the system, and the passenger airbag ON/OFF indicator indicates the ON/OFF condition of the front passenger airbag assembly and front seat belt pretensioner RH.

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Last Modified: 3-27-2012	6.4 U	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000010VL04XX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: SYSTEM DIAGRAM (2013 FR-S)		

SYSTEM DIAGRAM

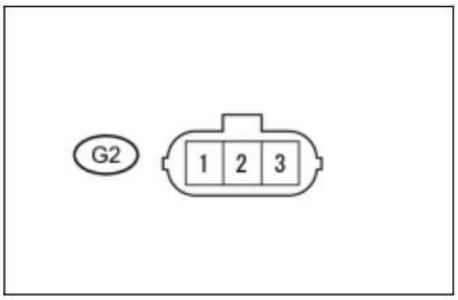


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Last Modified: 3-27-2012	6.4 U	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000010V404WX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: OCCUPANT CLASSIFICATION SYSTEM: TERMINALS OF ECU (2013 FR-S)		

TERMINALS OF ECU

1. OCCUPANT DETECTION ECU



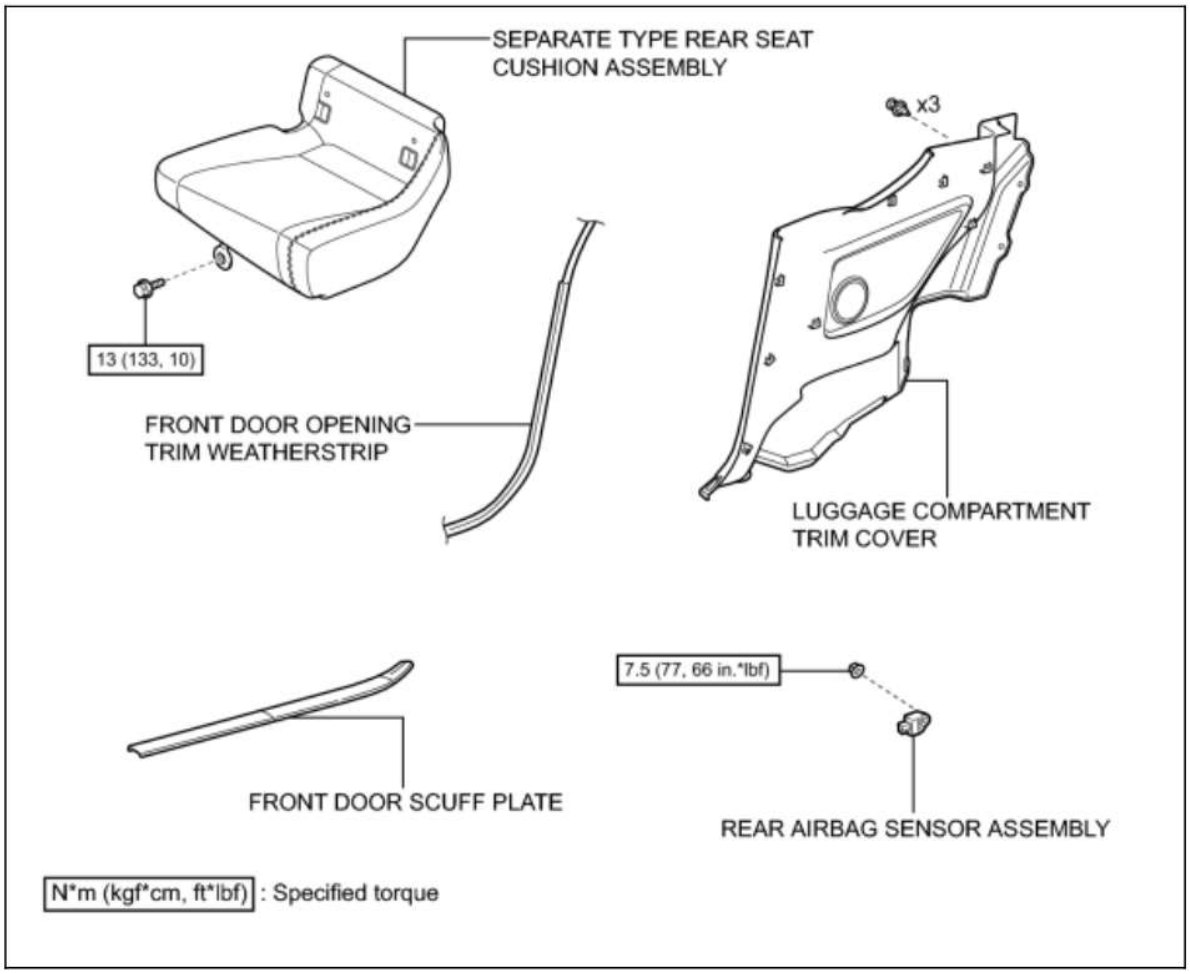
TERMINAL NO. (SYMBOL)	WIRING COLOR	TERMINAL DESCRIPTION	CONDITION	SPECIFICATION
G2-2 - G2-3	Y-G - Y	Airbag ECU assembly communication line	Ignition switch ON	Pulse generation
G2-1 - Body ground	G - Body ground	Power source	Ignition switch ON	11 to 14 V

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Last Modified: 3-27-2012	6.4 K	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWQ05UX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: REAR AIRBAG SENSOR: COMPONENTS (2013 FR-S)		

COMPONENTS

ILLUSTRATION



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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWO08DX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: REAR AIRBAG SENSOR: INSTALLATION (2013 FR-S)		

INSTALLATION

HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

1. INSTALL REAR AIRBAG SENSOR ASSEMBLY

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

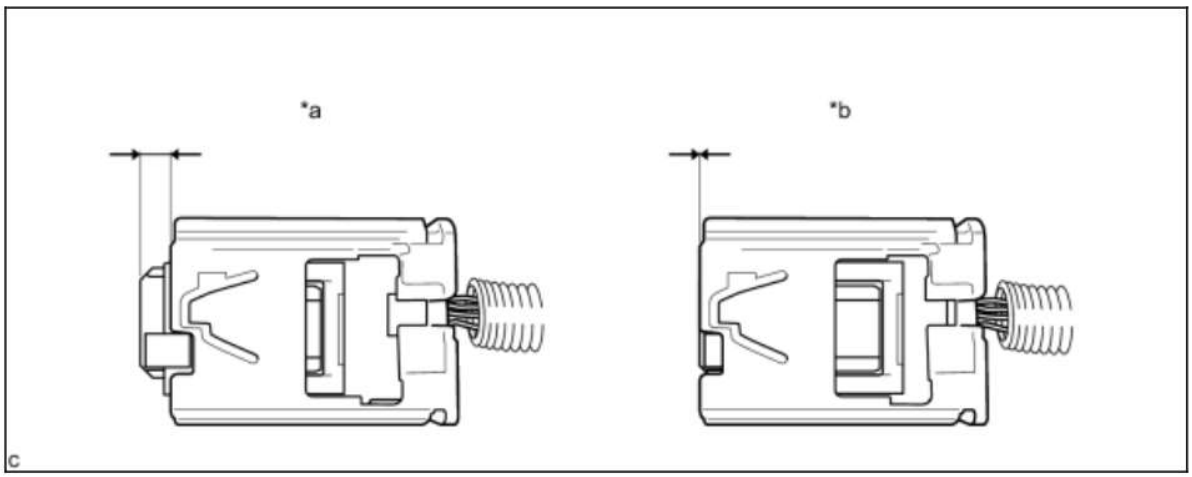
CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

(c) Before connecting the connector, check that the position of the white housing lock is correct as shown in the illustration.

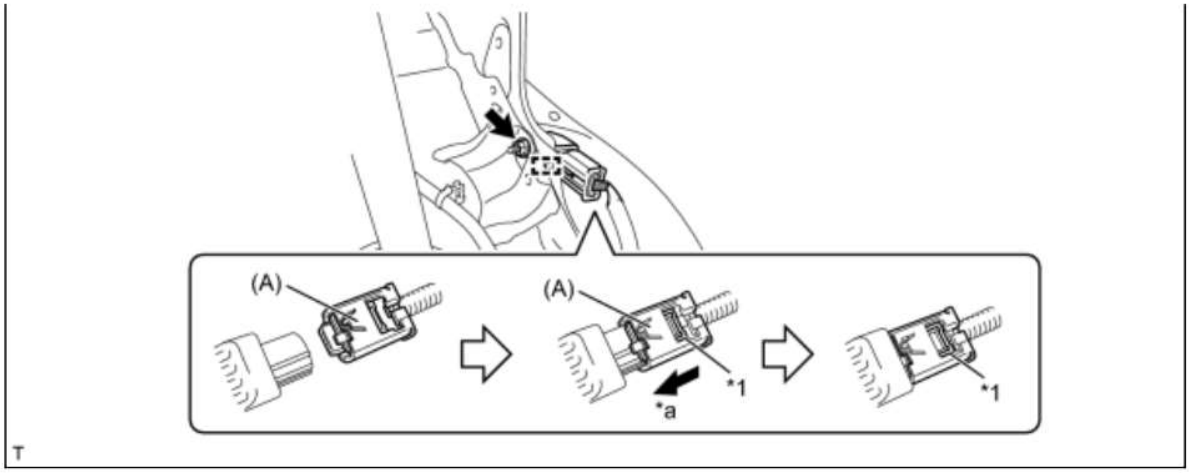


Text in Illustration

*a	Correct	*b	Incorrect

(d) Connect the connector to the rear airbag sensor assembly.

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Text in Illustration

*1	White housing lock	-	-
*a	Slide	-	-

NOTICE:

When connecting any airbag connector, take care not to damage the airbag wire harness.

(1) Be sure to engage the connectors until they are locked (when locking, make sure that a click sound can be heard).

HINT:

When engaged, the white housing lock will slide. Be sure not to hold the white housing lock and part (A), as it may result in an insecure fit.

(e) Insert the pin (stopper) into the body hole and install the rear airbag sensor assembly to the vehicle body with the nut.

Torque: 7.5 N·m (77 kgf·cm, 66in·lbf)

NOTICE:

- If the rear airbag sensor assembly has been dropped, or there are any cracks, dents or other defects in the case or connector, replace it with a new one.
- When installing the rear airbag sensor assembly, be careful that the SRS wiring does not interfere with or is not pinched between other parts.
- Make sure that the pin (stopper) is securely inserted into the body hole.
- Tighten the nut while holding the rear airbag sensor assembly because the rear airbag sensor assembly pin (stopper) is easily damaged.

(f) Check that there is no looseness in the installation parts of the rear airbag sensor assembly.

2. INSTALL LUGGAGE COMPARTMENT TRIM COVER INFO

3. INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP INFO

4. INSTALL FRONT DOOR SCUFF PLATE INFO

5. INSTALL SEPARATE TYPE REAR SEAT CUSHION ASSEMBLY INFO

6. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

Torque: 6.0 N·m (61 kgf·cm, 53in·lbf)

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7. PERFORM DIAGNOSTIC SYSTEM CHECK

INFO

8. INSPECT SRS WARNING LIGHT

INFO



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Last Modified: 3-27-2012	6.4 G	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000VPW08YX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: REAR AIRBAG SENSOR: ON-VEHICLE INSPECTION (2013 FR-S)		

ON-VEHICLE INSPECTION

CAUTION:

Be sure to correctly follow the removal and installation procedures for the rear airbag sensor assemblies.

1. INSPECT REAR AIRBAG SENSOR ASSEMBLY (for Vehicle not Involved in Collision)

(a) Perform a diagnostic system check INFO .

2. INSPECT REAR AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)

(a) Perform a diagnostic system check INFO .

(b) Visually check the rear airbag sensor assemblies for defects if a quarter panel of the vehicle or the area around a quarter panel is damaged.

HINT:

The defects are as follows:

- Cracks on the sensor housing
- Dents on the sensor housing
- Chips on the sensor housing
- Cracks or other damage to the connector
- Damage to the serial number

OK:

No defects are found.

If any of the defects is found, replace the rear airbag sensor assembly with a new one.

3. INSPECT REAR AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag is Deployed)

(a) When airbags have deployed as the result of a collision, be sure to replace all rear airbag sensor assemblies in the damaged areas (anywhere in need of repair).

(b) Visually check the rear airbag sensor assemblies in undamaged areas for defects.

HINT:

The defects are as follows:

- Cracks on the sensor housing
- Dents on the sensor housing
- Chips on the sensor housing
- Cracks or other damage to the connector
- Damage to the serial number

OK:

No defects are found.

If any of the defects is found or a rear airbag sensor assembly has detected a major collision,

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replace the rear airbag sensor assembly with a new one.



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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWR08CX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: REAR AIRBAG SENSOR: REMOVAL (2013 FR-S)		

REMOVAL

HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

1. PRECAUTION

CAUTION:

Be sure to read Precaution thoroughly before servicing INFO .

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

3. REMOVE SEPARATE TYPE REAR SEAT CUSHION ASSEMBLY INFO

4. REMOVE FRONT DOOR SCUFF PLATE INFO

5. DISCONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP

HINT:

Disconnect the front door opening trim weatherstrip to the extent that allows the removal of the luggage compartment trim cover.

6. REMOVE LUGGAGE COMPARTMENT TRIM COVER INFO

7. REMOVE REAR AIRBAG SENSOR ASSEMBLY

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

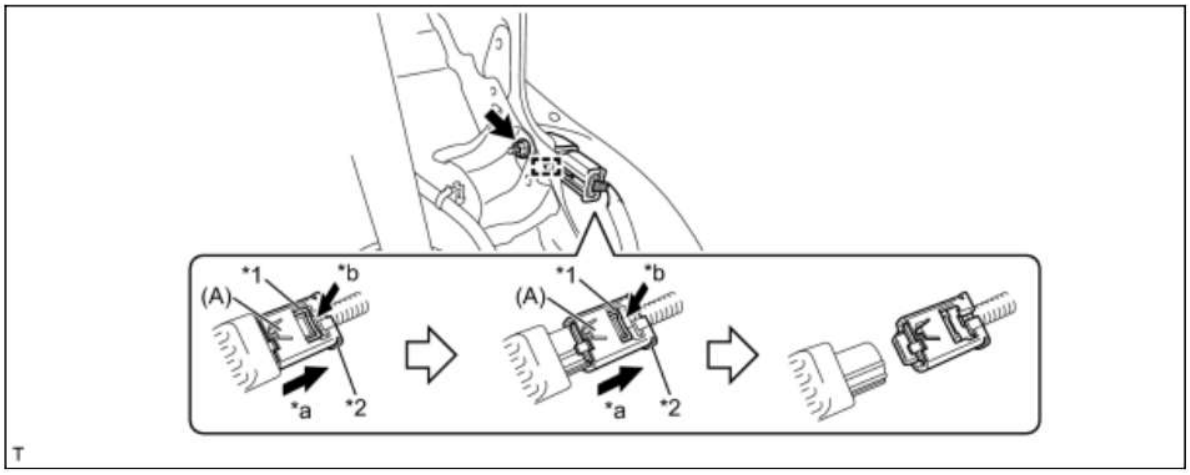
The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

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(c) Remove the nut and separate the rear airbag sensor assembly from the vehicle body.

NOTICE:

Loosen the nut while holding the rear airbag sensor assembly because the rear airbag sensor assembly pin (stopper) is easily damaged.



Text in Illustration

*1	White Housing Lock	*2	Yellow CPA
*a	Slide	*b	Push

(d) Disconnect the connector to remove the rear airbag sensor assembly.

NOTICE:

When disconnecting any airbag connector, take care not to damage the airbag wire harness.

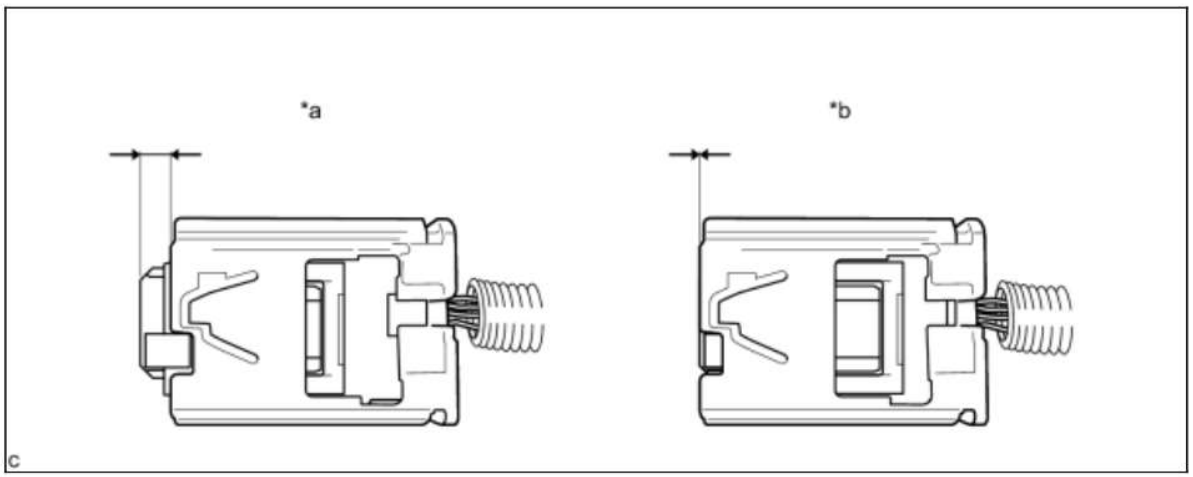
(1) Push down the white housing lock and slide the yellow CPA. (At this time, the connector cannot be disconnected yet.)

(2) Push down the white housing lock again and disconnect the connector.

NOTICE:

Do not push down the part (A) shown in the illustration when disconnecting.

(e) After disconnecting the connector, check that the position of the white housing lock is correct as shown in the illustration.



Text in Illustration

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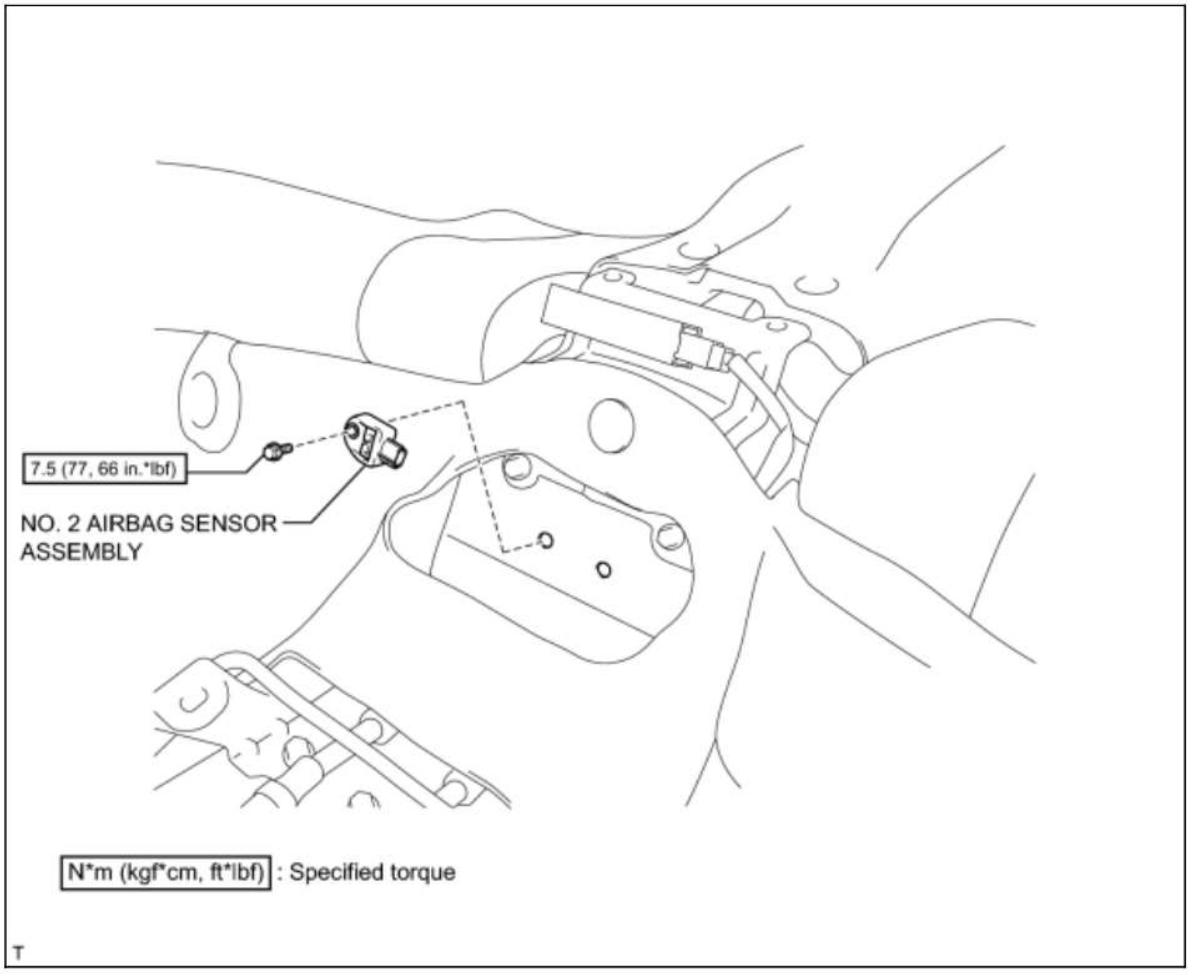
*a	Correct	*b	Incorrect

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Last Modified: 3-27-2012	6.4 K	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000038MV00TX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: REAR FLOOR AIRBAG SENSOR: COMPONENTS (2013 FR-S)		

COMPONENTS

ILLUSTRATION



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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000038MU00ZX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: REAR FLOOR AIRBAG SENSOR: INSTALLATION (2013 FR-S)		

INSTALLATION

1. INSTALL NO. 2 AIRBAG SENSOR ASSEMBLY

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

(c) Connect the connector to the No. 2 airbag sensor assembly.

NOTICE:

When connecting airbag connector, take care not to damage the airbag wire harness.

(1) Be sure to engage the connectors until they are locked (when locking, make sure that a click sound can be heard).

(d) Insert the pin (stopper) into the rear floor hole and install the No. 2 airbag sensor assembly to the rear floor panel with the nut.

Torque: 7.5 N·m (77 kgf·cm, 66in·lbf)

NOTICE:

- If the No. 2 airbag sensor assembly has been dropped, or there are any cracks, dents or other defects in the case or connector, replace it with a new one.
- When installing the No. 2 airbag sensor assembly, be careful that the SRS wiring does not interfere with or is not pinched between other parts.
- Make sure that the pin (stopper) is securely inserted into the body hole.
- Tighten the nut while holding the No. 2 airbag sensor assembly because the No. 2 airbag sensor assembly pin (stopper) is easily damaged.

(e) Check that there is no looseness in the installation parts of the rear floor airbag sensor.

2. INSTALL CONSOLE BOX ASSEMBLY

INFO

3. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

Torque: 6.0 N·m (61 kgf·cm, 53in·lbf)

4. PERFORM DIAGNOSTIC SYSTEM CHECK

INFO

5. CHECK SRS WARNING LIGHT

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INFO



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Last Modified: 3-27-2012	6.4 G	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000038MX00XX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: REAR FLOOR AIRBAG SENSOR: ON-VEHICLE INSPECTION (2013 FR-S)		

ON-VEHICLE INSPECTION

CAUTION:

Be sure to correctly follow the removal and installation procedures for the rear floor side airbag sensor.

1. CHECK NO. 2 AIRBAG SENSOR ASSEMBLY (for Vehicle not Involved in Collision)

(a) Perform a diagnostic system check INFO .

2. CHECK NO. 2 AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)

(a) Perform a diagnostic system check INFO .

(b) Visually check for defects with the No. 2 airbag sensor assembly installed on the vehicle.

HINT:

The defects are as follows:

- Cracks on the sensor housing
- Dents on the sensor housing
- Chips on the sensor housing
- Cracks or other damage to the connector
- Damage to the serial number

OK:

No defects are found.

If any of the defects is found, replace the No. 2 airbag sensor assembly with a new one.

3. CHECK NO. 2 AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag is Deployed)

(a) When front seat airbags or curtain shield airbags have deployed as the result of a collision, be sure to replace No. 2 airbag sensor assembly.

(b) Visually check the No. 2 airbag sensor assembly in undamaged areas for defects.

HINT:

The defects are as follows:

- Cracks on the sensor housing
- Dents on the sensor housing
- Chips on the sensor housing
- Cracks or other damage to the connector
- Damage to the serial number

OK:

No defects are found.

If any of the defects is found, replace the No. 2 airbag sensor assembly with a new one.

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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM0000038MW00ZX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: REAR FLOOR AIRBAG SENSOR: REMOVAL (2013 FR-S)		

REMOVAL

1. PRECAUTION

CAUTION:

Be sure to read Precaution thoroughly before servicing. INFO

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO **.**

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

3. REMOVE CONSOLE BOX ASSEMBLY

INFO

4. REMOVE NO. 2 AIRBAG SENSOR ASSEMBLY

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

(c) Remove the bolt.

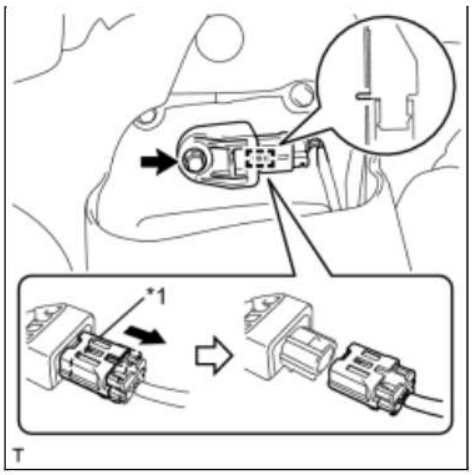
NOTICE:

Loosen the bolt while holding the No. 2 airbag sensor assembly because the No. 2 airbag sensor assembly pin (stopper) is easily damaged.

Text in Illustration

*1	Outer Housing

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(d) Slide the outer housing to release the lock, and then disconnect the connector to remove the No. 2 airbag sensor assembly.

NOTICE:

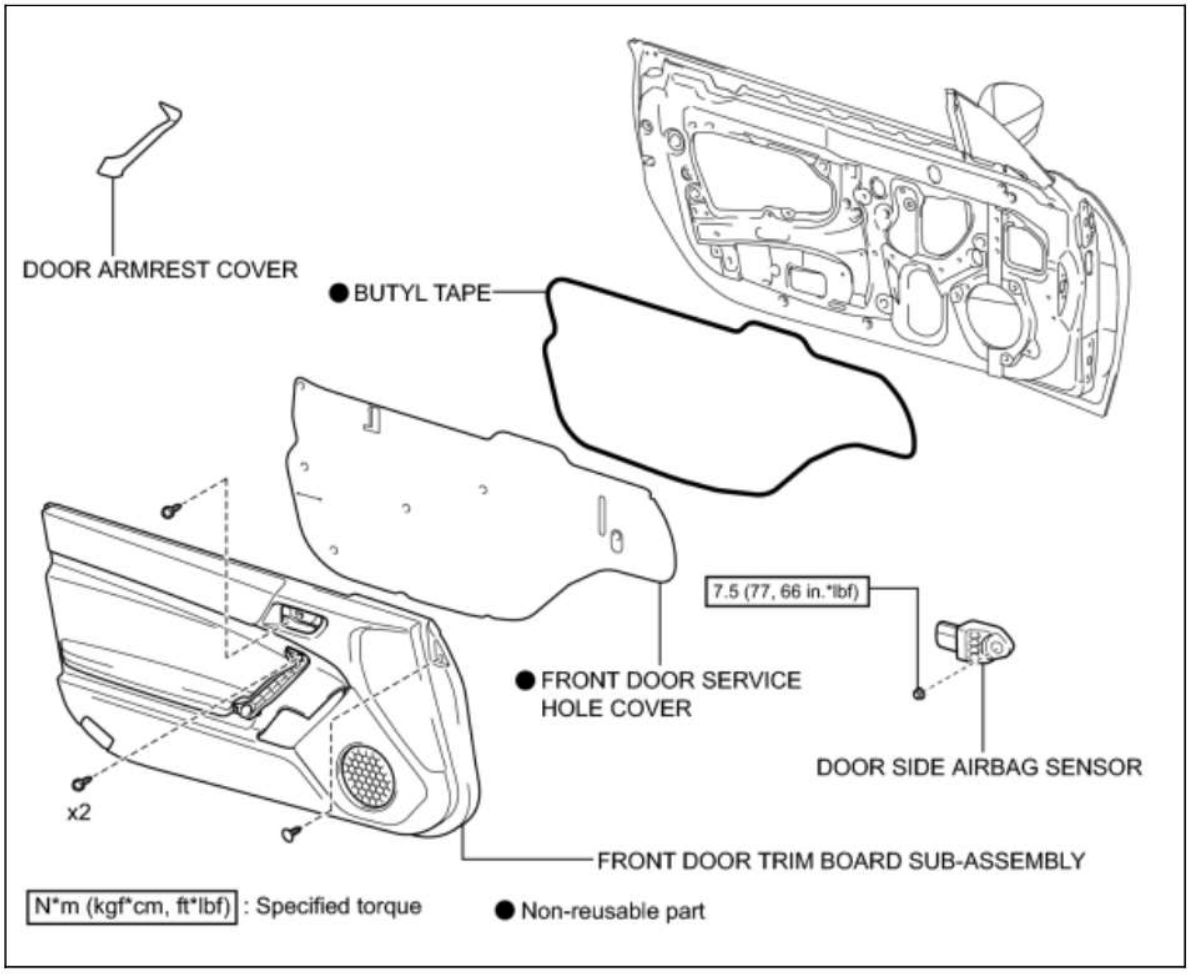
When disconnecting airbag connector, take care not to damage the airbag wire harness.

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Last Modified: 3-27-2012	6.4 K	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWM06SX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: SIDE AIRBAG SENSOR (for Front Side): COMPONENTS (2013 FR-S)		

COMPONENTS

ILLUSTRATION



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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWK094X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: SIDE AIRBAG SENSOR (for Front Side): INSTALLATION (2013 FR-S)		

INSTALLATION

HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

1. INSTALL DOOR SIDE AIRBAG SENSOR

(a) Check that the ignition switch is off.

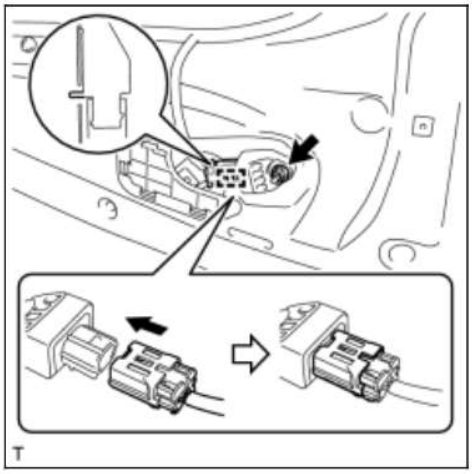
(b) Check that the cable is disconnected from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.



(c) Connect the connector to the door side airbag sensor.

NOTICE:

When connecting any airbag connector, take care not to damage the airbag wire harness.

(1) Be sure to engage the connectors until they are locked (when locking, make sure that a click sound can be heard).

(d) Insert the pin (stopper) into the door hole and install the door side airbag sensor to the front door panel with the nut.

Torque: 7.5 N·m (77 kgf·cm, 66in·lbf)

NOTICE:

- If the door side airbag sensor has been dropped, or there are any cracks, dents or other defects in the case or connector, replace it with a new one.
- When installing the door side airbag sensor, be careful that the SRS wiring does not interfere with or is not pinched between other parts.
- Make sure that the pin (stopper) is securely inserted into the body hole.
- Tighten the nut while holding the door side airbag sensor because the door side airbag sensor

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pin (stopper) is easily damaged.

(e) Check that there is no looseness in the installation parts of the door side airbag sensor.

2. INSTALL FRONT DOOR SERVICE HOLE COVER INFO

3. INSTALL FRONT DOOR TRIM BOARD SUB-ASSEMBLY INFO

4. INSTALL DOOR ARMREST COVER INFO

5. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

Torque: 6.0 N·m (61 kgf·cm, 53in·lbf)

6. PERFORM DIAGNOSTIC SYSTEM CHECK

INFO

7. INSPECT SRS WARNING LIGHT

INFO



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Last Modified: 3-27-2012	6.4 G	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000VPV0ACX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: SIDE AIRBAG SENSOR (for Front Side): ON-VEHICLE INSPECTION (2013 FR-S)		

ON-VEHICLE INSPECTION

CAUTION:

Be sure to correctly follow the removal and installation procedures for the door side airbag sensors.

1. INSPECT DOOR SIDE AIRBAG SENSOR (for Vehicle not Involved in Collision)

(a) Perform a diagnostic system check INFO .

2. INSPECT DOOR SIDE AIRBAG SENSOR (for Vehicle Involved in Collision and Airbag not Deployed)

(a) Perform a diagnostic system check INFO .

(b) Visually check the door side airbag sensors for defects if a front door of the vehicle or the area around a front door is damaged.

HINT:

The defects are as follows:

- Cracks on the sensor housing
- Dents on the sensor housing
- Chips on the sensor housing
- Cracks or other damage to the connector
- Damage to the serial number

OK:

No defects are found.

If any of the defects is found, replace the door side airbag sensor with a new one.

3. INSPECT DOOR SIDE AIRBAG SENSOR (for Vehicle Involved in Collision and Airbag is Deployed)

(a) When airbags have deployed as the result of a collision, be sure to replace all door side airbag sensors in the damaged areas (anywhere in need of repair).

(b) Visually check the door side airbag sensors in undamaged areas for defects.

HINT:

The defects are as follows:

- Cracks on the sensor housing
- Dents on the sensor housing
- Chips on the sensor housing
- Cracks or other damage to the connector
- Damage to the serial number

OK:

No defects are found.

If any of the defects is found or a door side airbag sensor has detected a major collision, replace

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the door side airbag sensor with a new one.



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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWN092X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: SIDE AIRBAG SENSOR (for Front Side): REMOVAL (2013 FR-S)		

REMOVAL

HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

1. PRECAUTION

CAUTION:

Be sure to read Precaution thoroughly before servicing INFO .

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

3. REMOVE DOOR ARMREST COVER INFO

4. REMOVE FRONT DOOR TRIM BOARD SUB-ASSEMBLY INFO

5. REMOVE FRONT DOOR SERVICE HOLE COVER INFO

6. REMOVE DOOR SIDE AIRBAG SENSOR

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

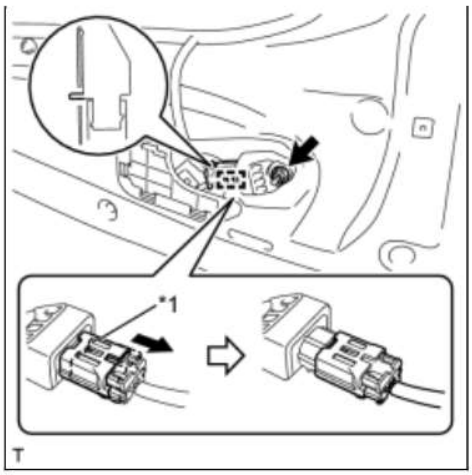
CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

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(c) Remove the nut and separate the door side airbag sensor from the front door panel.

NOTICE:

Loosen the bolt while holding the door side airbag sensor because the door side airbag sensor pin (stopper) is easily damaged.

(d) Slide the outer housing to release the lock, and then disconnect the connector to remove the door side airbag sensor.

NOTICE:

When disconnecting any airbag connector, take care not to damage the airbag wire harness.

Text in Illustration

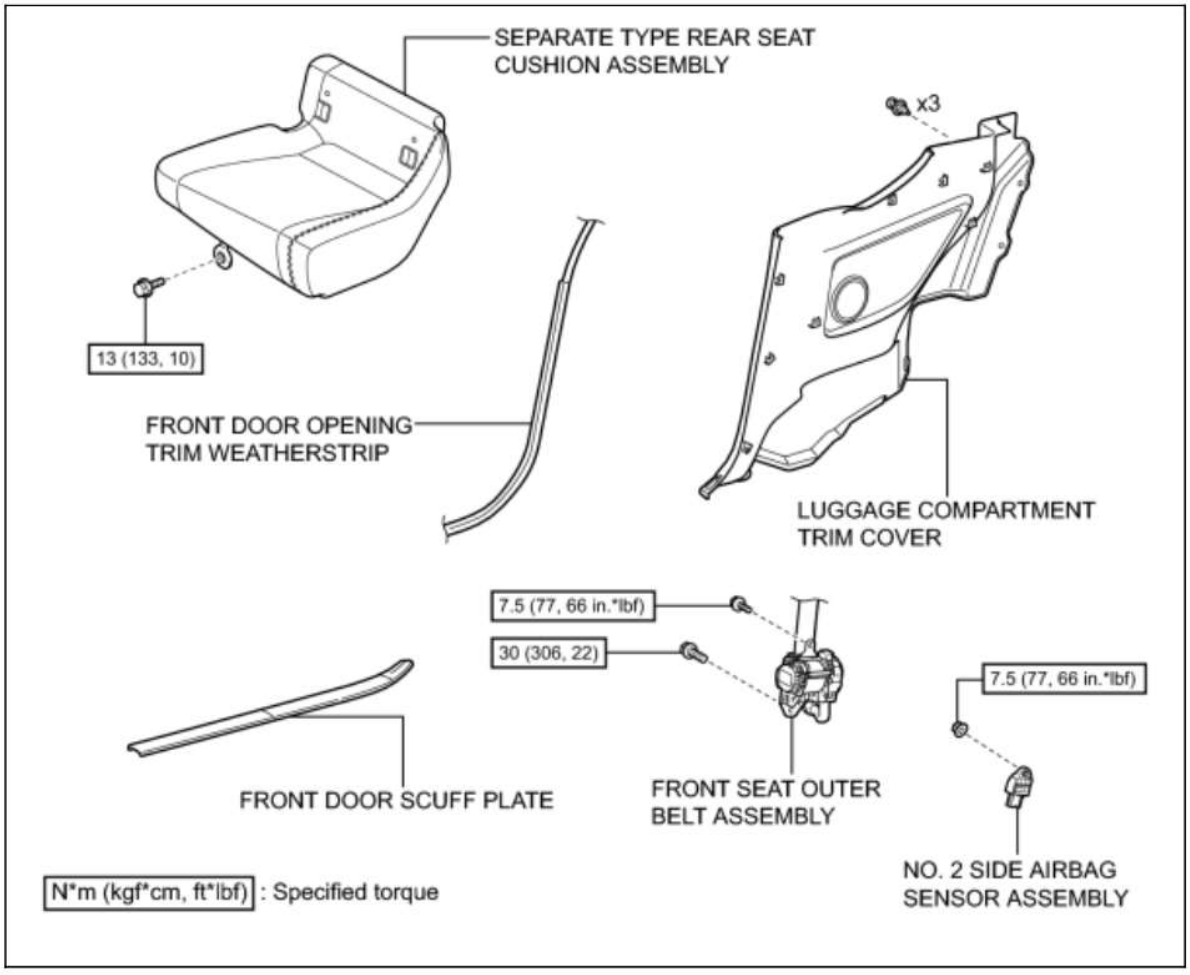
*1	Outer Housing

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Last Modified: 3-27-2012	6.4 K	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWM06TX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: SIDE AIRBAG SENSOR (for Rear Side): COMPONENTS (2013 FR-S)		

COMPONENTS

ILLUSTRATION



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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWK095X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: SIDE AIRBAG SENSOR (for Rear Side): INSTALLATION (2013 FR-S)		

INSTALLATION

HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

1. INSTALL NO. 2 SIDE AIRBAG SENSOR ASSEMBLY

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

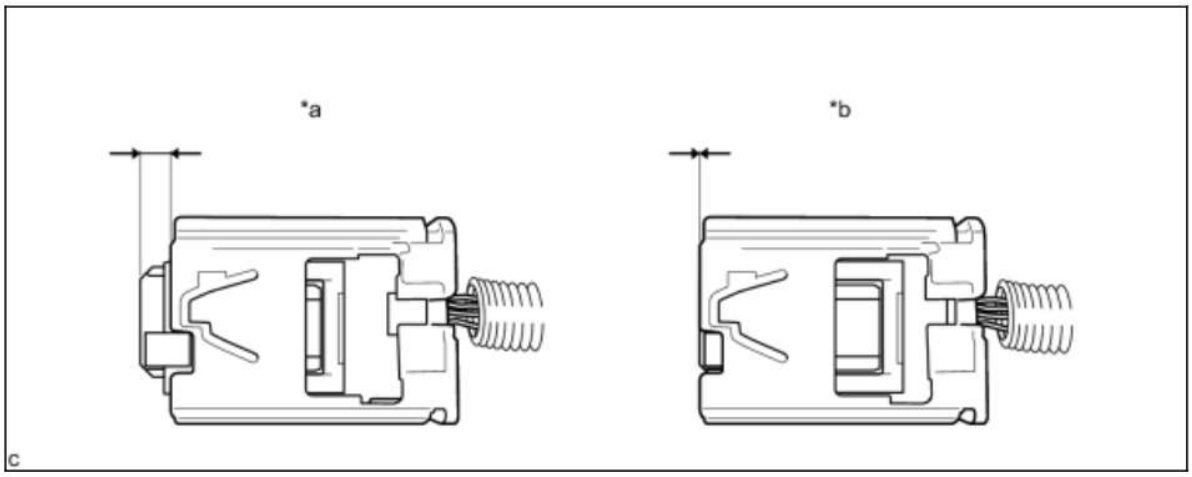
CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

(c) Before connecting the connector, check that the position of the white housing lock is correct as shown in the illustration.



Text in Illustration

*a	Correct	*b	Incorrect

(d) Connect the connector to the No. 2 side airbag sensor assembly.

NOTICE:

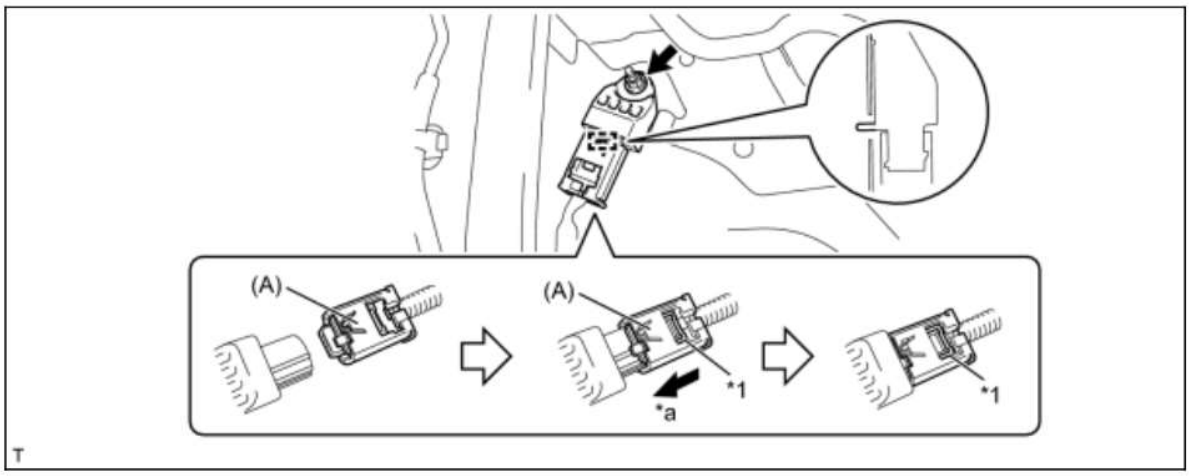
When connecting any airbag connector, take care not to damage the airbag wire harness.

(1) Be sure to engage the connectors until they are locked (when locking, make sure that a click sound can be heard).

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HINT:

When engaged, the white housing lock will slide. Be sure not to hold the white housing lock and part (A), as it may result in an insecure fit.



Text in Illustration

*1	White housing lock	-	-
*a	Slide	-	-

(e) Insert the pin (stopper) into the body hole and install the No. 2 side airbag sensor assembly to the vehicle body with the nut.

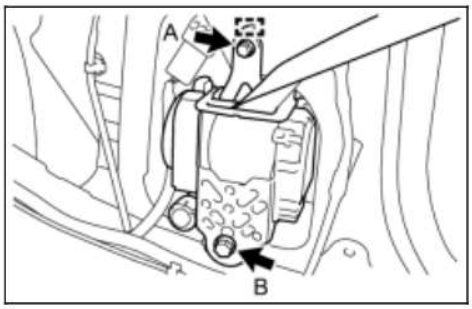
Torque: 7.5 N·m (77 kgf·cm, 66in·lbf)

NOTICE:

- If the No. 2 side airbag sensor assembly has been dropped, or there are any cracks, dents or other defects in the case or connector, replace it with a new one.
- When installing the No. 2 side airbag sensor assembly, be careful that the SRS wiring does not interfere with or is not pinched between other parts.
- Make sure that the pin (stopper) is securely inserted into the body hole.
- Tighten the nut while holding the No. 2 side airbag sensor assembly because the No. 2 side airbag sensor assembly pin (stopper) is easily damaged.

(f) Check that there is no looseness in the installation parts of the No. 2 side airbag sensor assembly.

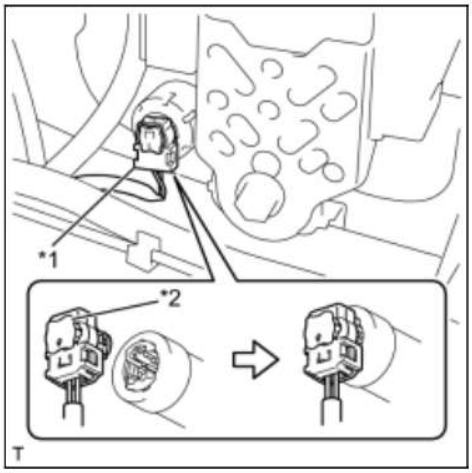
2. INSTALL FRONT SEAT OUTER BELT ASSEMBLY



(a) Engage the guide and install the front seat outer belt assembly with the 2 bolts.

Bolt A - Torque: 7.5 N·m (77 kgf·cm, 66in·lbf)
Bolt B - Torque: 30 N·m (306 kgf·cm, 22ft·lbf)

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(b) Connect the pretensioner connector.

Text in Illustration

*1	Pretensioner Connector
*2	Pretensioner Connector Lock

(c) Push in the lock to install the pretensioner connector.

3. INSTALL LUGGAGE COMPARTMENT TRIM COVER INFO

4. INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP INFO

5. INSTALL FRONT DOOR SCUFF PLATE INFO

6. INSTALL SEPARATE TYPE REAR SEAT CUSHION ASSEMBLY INFO

7. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

Torque: 6.0 N·m (61 kgf·cm, 53in·lbf)

8. PERFORM DIAGNOSTIC SYSTEM CHECK

INFO

9. INSPECT SRS WARNING LIGHT

INFO

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Last Modified: 3-27-2012	6.4 G	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000VPV0ADX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: SIDE AIRBAG SENSOR (for Rear Side): ON-VEHICLE INSPECTION (2013 FR-S)		

ON-VEHICLE INSPECTION

CAUTION:

Be sure to correctly follow the removal and installation procedures for the No. 2 side airbag sensor assemblies.

1. INSPECT NO. 2 SIDE AIRBAG SENSOR ASSEMBLY (for Vehicle not Involved in Collision)

(a) Perform a diagnostic system check INFO .

2. INSPECT NO. 2 SIDE AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)

(a) Perform a diagnostic system check INFO .

(b) Visually check the No. 2 side airbag sensor assemblies for defects if a center pillar of the vehicle or the area around a center pillar is damaged.

HINT:

The defects are as follows:

- Cracks on the sensor housing
- Dents on the sensor housing
- Chips on the sensor housing
- Cracks or other damage to the connector
- Damage to the serial number

OK:

No defects are found.

If any of the defects is found, replace the No. 2 side airbag sensor assembly with a new one.

3. INSPECT NO. 2 SIDE AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag is Deployed)

(a) When airbags have deployed as the result of a collision, be sure to replace all No. 2 side airbag sensor assemblies in the damaged areas (anywhere in need of repair).

(b) Visually check the No. 2 side airbag sensor assemblies in undamaged areas for defects.

HINT:

The defects are as follows:

- Cracks on the sensor housing
- Dents on the sensor housing
- Chips on the sensor housing
- Cracks or other damage to the connector
- Damage to the serial number

OK:

No defects are found.

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If any of the defects is found or a No. 2 side airbag sensor assembly has detected a major collision, replace the No. 2 side airbag sensor assembly with a new one.



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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWN093X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: SIDE AIRBAG SENSOR (for Rear Side): REMOVAL (2013 FR-S)		

REMOVAL

HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

1. PRECAUTION

CAUTION:

Be sure to read Precaution thoroughly before servicing. INFO

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO .

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

3. REMOVE SEPARATE TYPE REAR SEAT CUSHION ASSEMBLY INFO

4. REMOVE FRONT DOOR SCUFF PLATE INFO

5. DISCONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP

HINT:

Disconnect the front door opening trim weatherstrip to the extent that allows the removal of the luggage compartment trim cover.

6. REMOVE LUGGAGE COMPARTMENT TRIM COVER INFO

7. REMOVE FRONT SEAT OUTER BELT ASSEMBLY

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

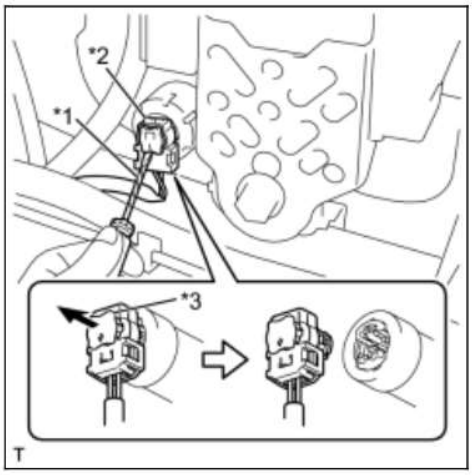
CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

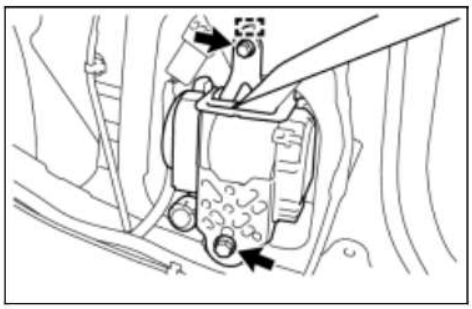
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(c) Using a screwdriver with the tip wrapped with protective tape, release the pretensioner connector lock and disconnect the pretensioner connector.

Text in Illustration

*1	Protective Tape
*2	Pretensioner Connector
*3	Pretensioner Connector Lock



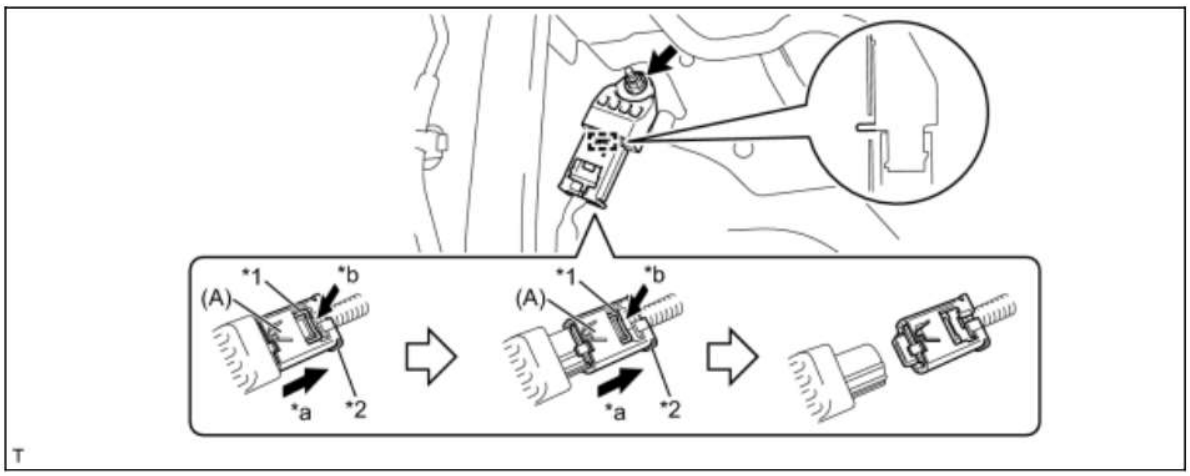
(d) Remove the 2 bolts and disengage the guide to remove front seat outer belt assembly.

8. REMOVE NO. 2 SIDE AIRBAG SENSOR ASSEMBLY

(a) Remove the nut and separate the No. 2 side airbag sensor assembly from the vehicle body.

NOTICE:

Loosen the nut while holding the No. 2 side airbag sensor assembly because the No. 2 side airbag sensor assembly pin (stopper) is easily damaged.



Text in Illustration

*1	White Housing Lock	*2	Yellow CPA

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*a	Slide	*b	Push

(b) Disconnect the connector to remove the No. 2 side airbag sensor assembly.

NOTICE:

When disconnecting any airbag connector, take care not to damage the airbag wire harness.

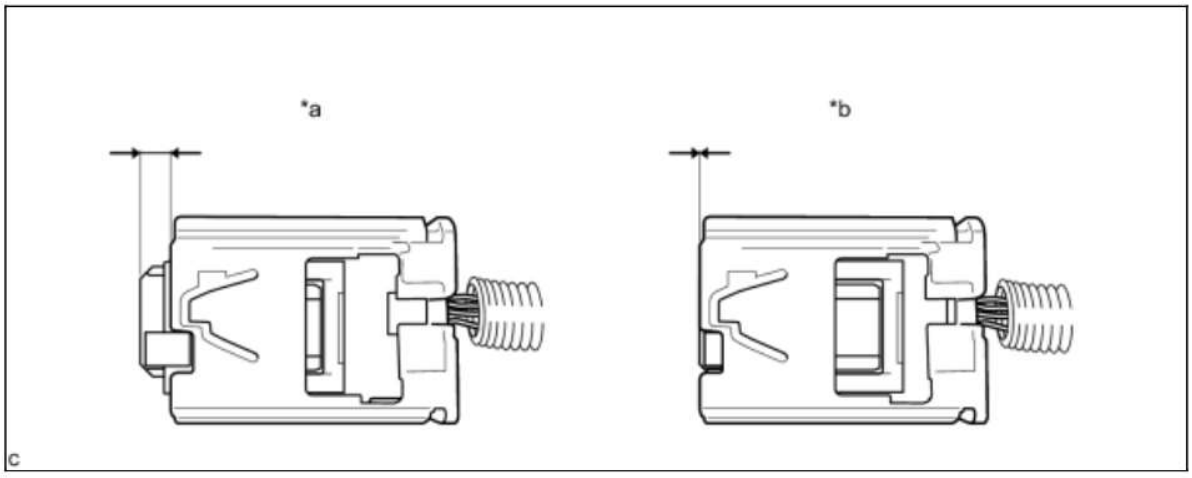
(1) Push down the white housing lock and slide the yellow CPA. (At this time, the connector cannot be disconnected yet.)

(2) Push down the white housing lock again and disconnect the connector.

NOTICE:

Do not push down the part (A) shown in the illustration when disconnecting.

(c) After disconnecting the connector, check that the position of the white housing lock is correct as shown in the illustration.



Text in Illustration

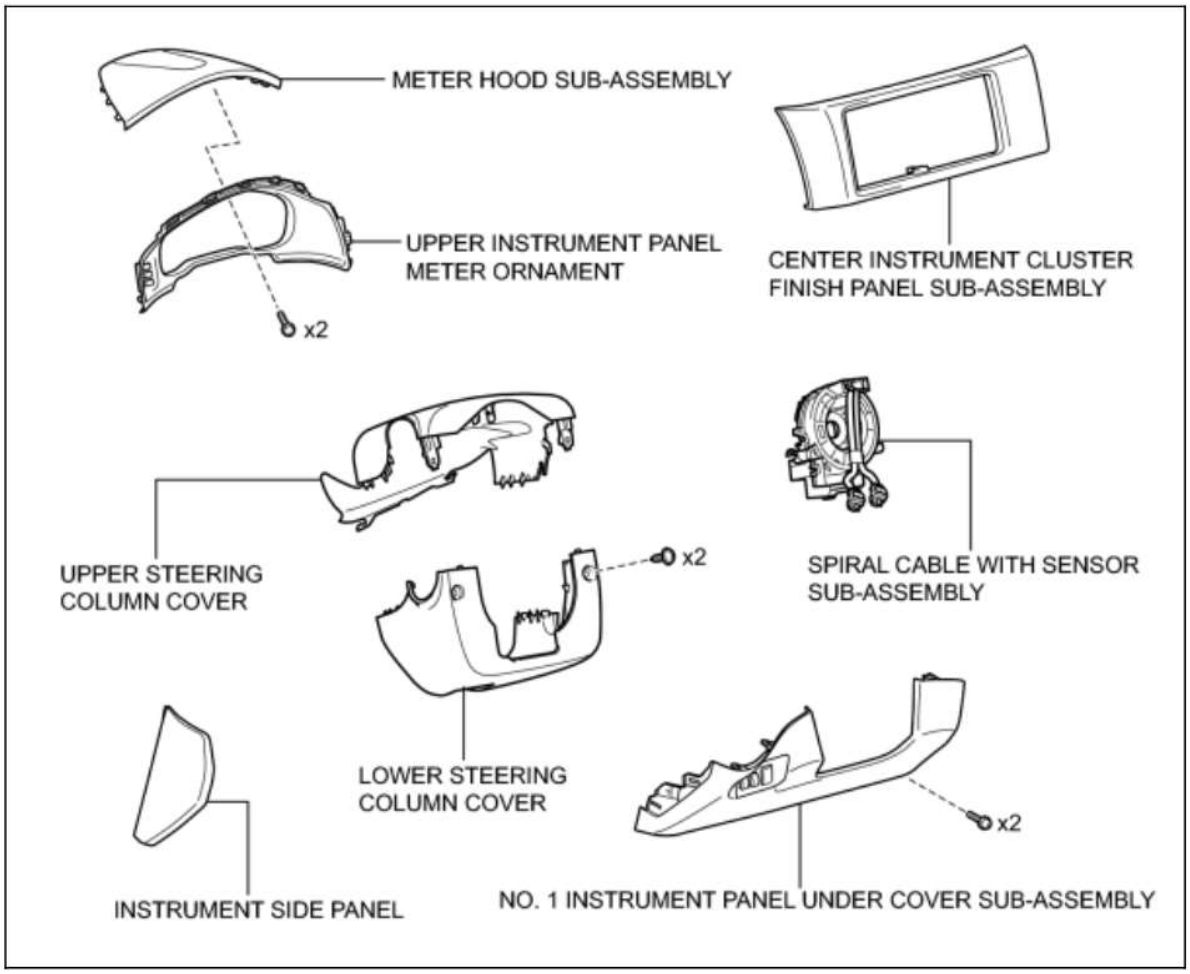
*a	Correct	*b	Incorrect

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Last Modified: 3-27-2012	6.4 K	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWC05SX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: SPIRAL CABLE: COMPONENTS (2013 FR-S)		

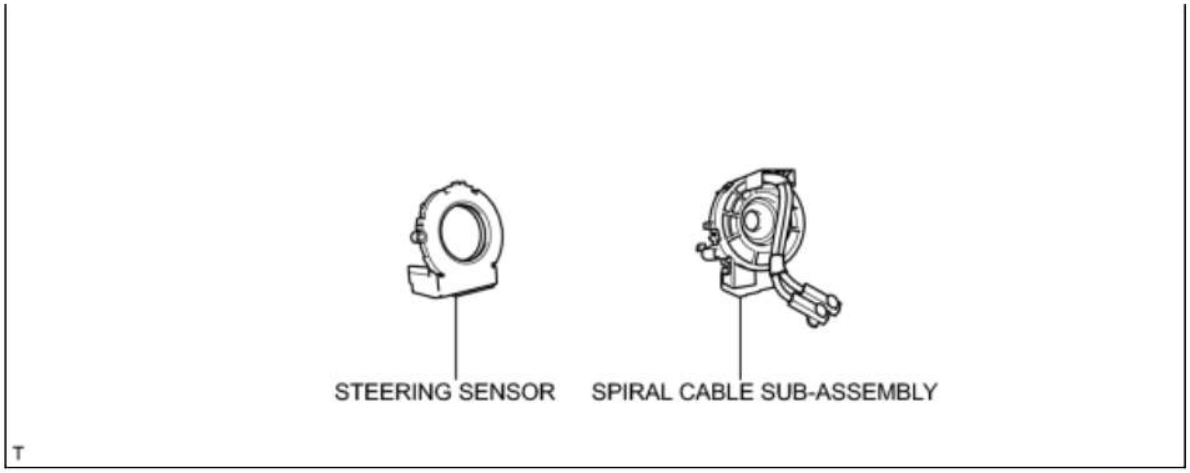
COMPONENTS

ILLUSTRATION



ILLUSTRATION

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Last Modified: 3-27-2012	6.4 G	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWB08EX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: SPIRAL CABLE: INSPECTION (2013 FR-S)		

INSPECTION

1. INSPECT SPIRAL CABLE SUB-ASSEMBLY

NOTICE:

- Do not remove the steering sensor from the spiral cable sub-assembly.
- As the spiral cable sub-assembly may break, do not rotate the spiral cable sub-assembly more than the specified amount.

(a) Remove the spiral cable with sensor sub-assembly from the vehicle INFO .

(b) Visually check for defects with the spiral cable sub-assembly.

(1) The defects are as follows:

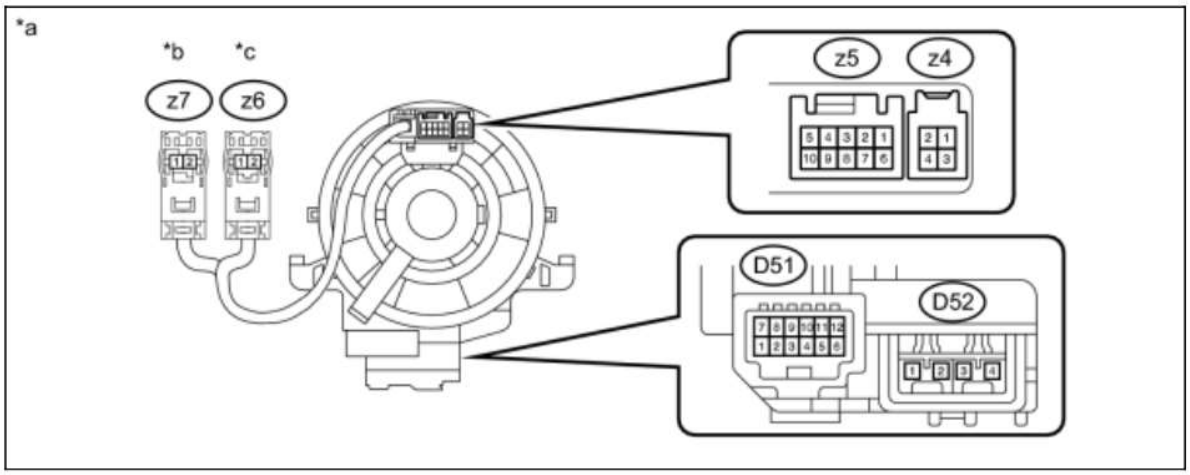
- Scratches
- Small cracks
- Dents
- Chips
- Cracks or other damage to the connector

OK:

No defects are found.

If any of the defects is found, replace the spiral cable sub-assembly with a new one.

(c) Check the spiral cable sub-assembly.



Text in Illustration

*a	Component without harness connected (Spiral Cable Sub-assembly)	*b	Color: Orange
*c	Color: Black	-	-

(1) Set the spiral cable sub-assembly to the center position INFO .

(2) Measure the resistance between each terminal of the spiral cable sub-assembly according to

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the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D51-1 - z4-3	Always	3 Ω or less
D51-2 - z4-4	Always	3 Ω or less
D51-2 - z5-6	Always	3 Ω or less
D51-8 - z4-2	Always	3 Ω or less
D51-8 - z5-1	Always	3 Ω or less
D51-10 - z5-3	Always	3 Ω or less
D51-11 - z5-4	Always	3 Ω or less
D51-12 - z5-5	Always	3 Ω or less
D52-1 - z7-2	Always	Below 1 Ω
D52-2 - z7-1	Always	Below 1 Ω
D52-3 - z6-1	Always	Below 1 Ω
D52-4 - z6-2	Always	Below 1 Ω

(3) After setting the spiral cable sub-assembly to the center position, rotate the spiral cable sub-assembly 2.5 times clockwise, and measure the resistance as shown in the table below. Then rotate the spiral cable sub-assembly 5 times counterclockwise, and measure the resistance as shown in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D51-1 - z4-3	Always	3 Ω or less
D51-2 - z4-4	Always	3 Ω or less
D51-2 - z5-6	Always	3 Ω or less
D51-8 - z4-2	Always	3 Ω or less
D51-8 - z5-1	Always	3 Ω or less
D51-10 - z5-3	Always	3 Ω or less
D51-11 - z5-4	Always	3 Ω or less
D51-12 - z5-5	Always	3 Ω or less
D52-1 - z6-2	Always	Below 1 Ω
D52-2 - z6-1	Always	Below 1 Ω
D52-3 - z7-1	Always	Below 1 Ω
D52-4 - z7-2	Always	Below 1 Ω

(4) After setting the spiral cable sub-assembly to the center position, rotate the spiral cable sub-assembly 2.5 times clockwise. Then while rotating the spiral cable sub-assembly 5 times counterclockwise, measure the resistance as shown in the table below.

Standard Resistance:

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TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D51-1 - z4-3	Always	3 Ω or less
D51-2 - z4-4	Always	3 Ω or less
D51-2 - z5-6	Always	3 Ω or less
D51-8 - z4-2	Always	3 Ω or less
D51-8 - z5-1	Always	3 Ω or less
D51-10 - z5-3	Always	3 Ω or less
D51-11 - z5-4	Always	3 Ω or less
D51-12 - z5-5	Always	3 Ω or less
D52-1 - z6-2	Always	Below 1 Ω
D52-2 - z6-1	Always	Below 1 Ω
D52-3 - z7-1	Always	Below 1 Ω
D52-4 - z7-2	Always	Below 1 Ω

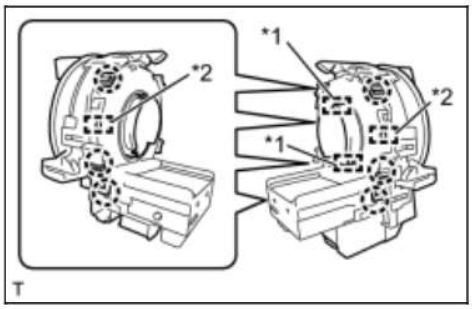
If the result is not as specified, replace the spiral cable with sensor sub-assembly.

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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWA096X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: SPIRAL CABLE: INSTALLATION (2013 FR-S)		

INSTALLATION

1. INSTALL SPIRAL CABLE SUB-ASSEMBLY



(a) Align the 2 pins and 2 guides, and engage the 6 claws to install the spiral cable sub-assembly to the steering sensor.

Text in Illustration

*1	Guide
*2	Pin

NOTICE:

Do not rotate the steering sensor until the spiral cable has been attached to it.

2. ALIGN FRONT WHEELS TO FACE STRAIGHT AHEAD

3. INSTALL SPIRAL CABLE WITH SENSOR SUB-ASSEMBLY

NOTICE:

- Do not replace the spiral cable sub-assembly with the battery connected and the ignition switch on (IG).
- Do not rotate the spiral cable sub-assembly without the steering wheel with the battery connected and the ignition switch on (IG).
- Ensure that the steering wheel is installed and aligned straight when inspecting the steering sensor.

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check that the front wheels are facing straight ahead.

(d) Set the turn signal switch to the neutral position.

NOTICE:

If it is not in the neutral position, the turn signal switch pin may snap.

(e) Engage the 3 claws to install the spiral cable with sensor sub-assembly.

(f) Connect the each connector.

4. INSTALL UPPER STEERING COLUMN COVER INFO

5. INSTALL LOWER STEERING COLUMN COVER INFO

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6. INSTALL UPPER INSTRUMENT PANEL METER ORNAMENT INFO

7. INSTALL METER HOOD SUB-ASSEMBLY INFO

8. INSTALL CENTER INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY INFO

9. INSTALL NO. 1 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY INFO

10. INSTALL INSTRUMENT SIDE PANEL INFO

11. INSPECT AND ADJUST SPIRAL CABLE WITH SENSOR SUB-ASSEMBLY

NOTICE:

Do not adjust the spiral cable sub-assembly with the battery connected and the ignition switch on (IG).

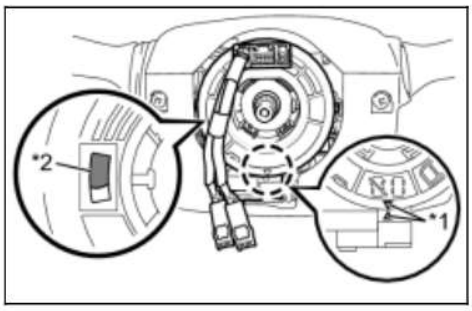
(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

(c) Check if the spiral cable sub-assembly is centered.



Text in Illustration

*1	Matching Mark
*2	Colored Part

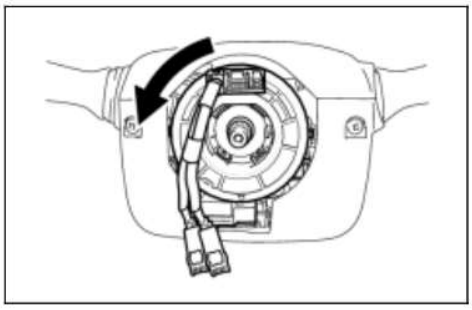
HINT:

When the spiral cable is attached in a central position, it will align with the matching mark, allowing the colored area indicated in the illustration to be checked.

(d) If the spiral cable sub-assembly is not centered, center it.

NOTICE:

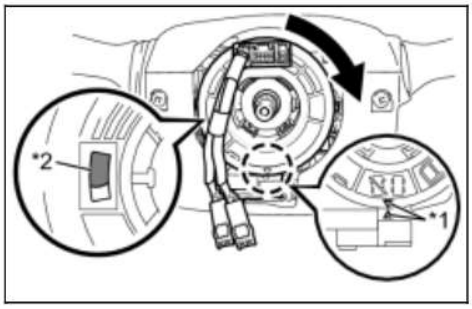
Do not turn the spiral cable sub-assembly using the airbag wire harness.



(1) Rotate the spiral cable sub-assembly counterclockwise slowly by hand until it stops.

(2) Rotate the spiral cable sub-assembly clockwise approximately 2.5 turns to the position where the matching mark is matched.

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Text in Illustration

*1	Matching Mark
*2	Colored Part

HINT:

- The spiral cable sub-assembly will rotate approximately 2.5 turns to both the left and right from the center.
- When centering is not possible, there may be an open circuit in the spiral cable. Replace the spiral cable and steering sensor with new ones.

12. INSTALL STEERING WHEEL ASSEMBLY

INFO

13. PERFORM MEMORIZATION

HINT:

Perform VSC sensor neutral memorization INFO .

14. INSPECT SRS WARNING LIGHT

INFO

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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UWD095X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: SPIRAL CABLE: REMOVAL (2013 FR-S)		

REMOVAL

1. REMOVE STEERING WHEEL ASSEMBLY

INFO

2. REMOVE INSTRUMENT SIDE PANEL INFO

3. REMOVE NO. 1 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY INFO

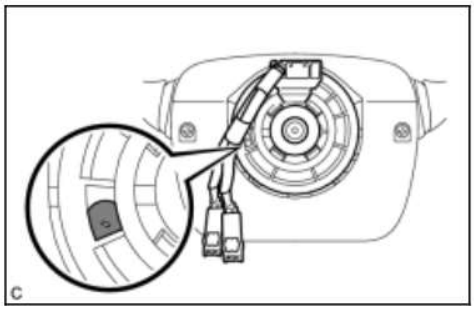
4. REMOVE CENTER INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY INFO

5. REMOVE METER HOOD SUB-ASSEMBLY INFO

6. REMOVE UPPER INSTRUMENT PANEL METER ORNAMENT INFO

7. INSPECT SPIRAL CABLE SUB-ASSEMBLY

(a) Check the colored part as shown in the illustration.



Text in Illustration

	Colored Part

If the colored part shown in the illustration cannot be confirmed, it is possible that the spiral cable sub-assembly is broken. Replace the spiral cable with sensor sub-assembly with a new one.

8. REMOVE LOWER STEERING COLUMN COVER INFO

9. REMOVE UPPER STEERING COLUMN COVER INFO

10. REMOVE SPIRAL CABLE WITH SENSOR SUB-ASSEMBLY

NOTICE:

- Do not replace the spiral cable sub-assembly with the battery connected and turn the ignition switch to ON.

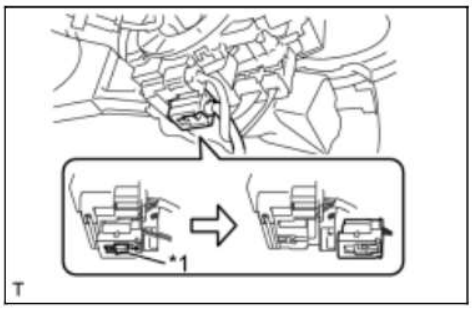
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- Do not rotate the spiral cable sub-assembly without the steering wheel with the battery connected and turn the ignition switch to ON.
- Ensure that the steering wheel is installed and aligned straight when inspecting the steering sensor.

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

(c) Check that the front wheels are facing straight ahead.



(d) Slide the slider to release the lock, and then disconnect the yellow airbag connector from the spiral cable with sensor sub-assembly.

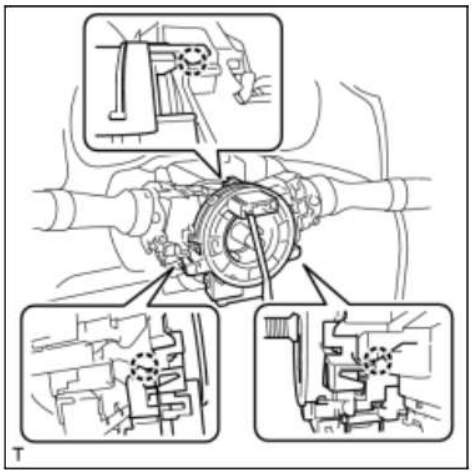
Text in Illustration

*1	Slider

NOTICE:

When disconnecting any airbag connector, take care not to damage the airbag wire harness.

(e) Disconnect the other connector from the spiral cable with sensor sub-assembly.



(f) Disengage the 3 claws to remove the spiral cable with sensor sub-assembly.

11. REMOVE SPIRAL CABLE SUB-ASSEMBLY

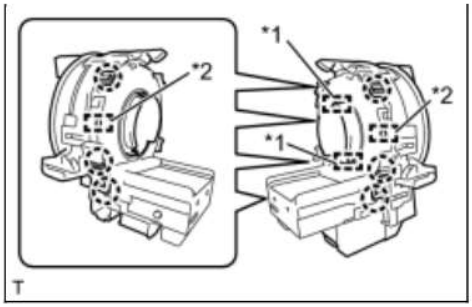
NOTICE:

- Remove the spiral cable sub-assembly from the steering sensor only when replacing it or the steering sensor.
- Do not rotate the center section of the steering sensor, as it may deviate from the steering sensor neutral point.
- When replacing the steering sensor: INFO

(a) Disengage the 6 claws, 2 pins and 2 guides to remove the spiral cable sub-assembly from the steering sensor.

NOTICE:

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Do not damage the guide and claw.

Text in Illustration

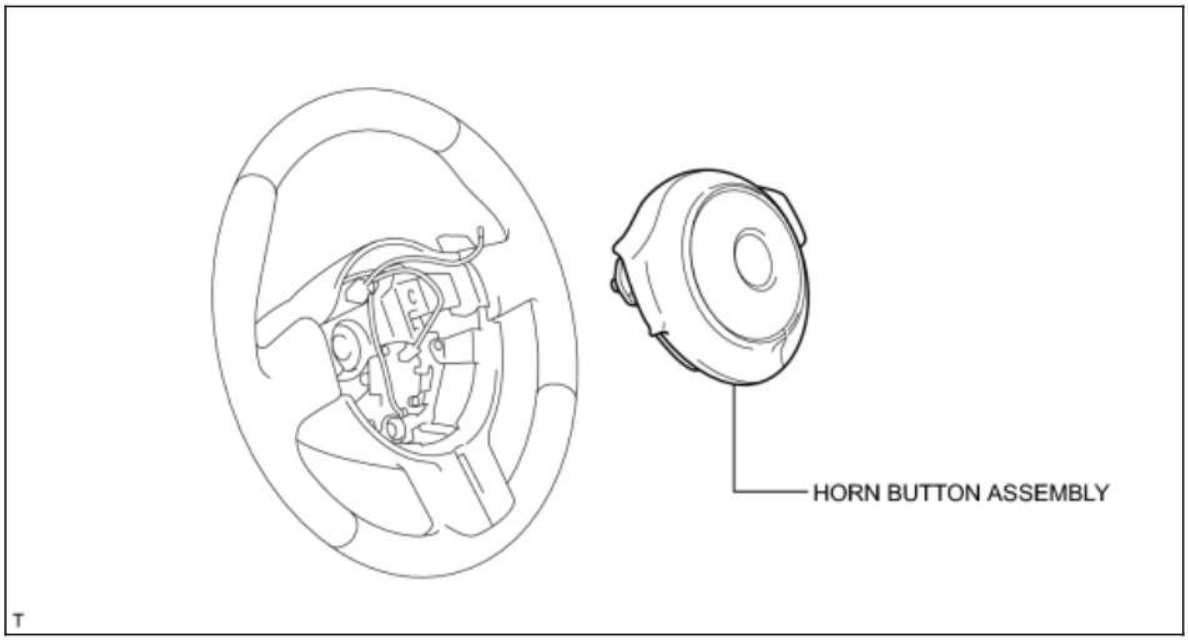
*1	Guide
*2	Pin

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Last Modified: 3-27-2012	6.4 K	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UW406AX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: STEERING PAD: COMPONENTS (2013 FR-S)		

COMPONENTS

ILLUSTRATION



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Last Modified: 3-27-2012	6.4 N	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UW509ZX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: STEERING PAD: DISPOSAL (2013 FR-S)		

DISPOSAL

CAUTION:

Before performing pre-disposal deployment of any SRS part, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.

1. PRECAUTION

CAUTION:

- An airbag or pretensioner may be activated by static electricity. To prevent this, be sure to touch a metal surface with your bare hands to discharge static electricity before performing this procedure.
- Never dispose of a horn button assembly with an undeployed airbag.
- The airbag produces an exploding sound when it is deployed, so perform the operation outdoors and where it will not create a nuisance to nearby residents.
- When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electrical noise.
- When deploying the airbag, perform the operation at least 10 m (32.8 ft.) away from the horn button assembly.
- The horn button assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling a horn button assembly with a deployed airbag.
- Do not apply water etc. to a horn button assembly with a deployed airbag.
- Always wash your hands with water after completing the operation.

HINT:

When scrapping a vehicle equipped with an SRS or disposing of the horn button assembly, be sure to deploy the airbag first in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the Service Dept. of TOYOTA MOTOR SALES, U.S.A., INC.

2. DISPOSE OF HORN BUTTON ASSEMBLY (When not Installed in Vehicle)

NOTICE:

Be sure to observe the following procedure when deploying the airbag.

HINT:

Prepare a battery as the power source to deploy the airbag.

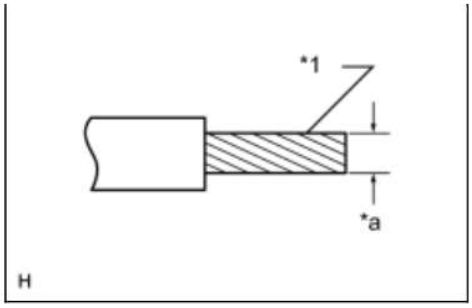
(a) Remove the horn button assembly INFO .

CAUTION:

- Before removing the horn button assembly, wait at least 90 seconds after turning the ignition switch off and disconnecting the cable from the negative (-) battery terminal.
- When storing the horn button assembly, keep the airbag deployment side facing upward.

(b) Using braided wire, tie down the horn button assembly to an unneeded wheel.

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Text in Illustration

*1	Stripped Wire Section
*a	Wire Diameter

Wire:
Stripped wire section
1.25 mm ^{2} (0.0019 in. ^{2}) or more

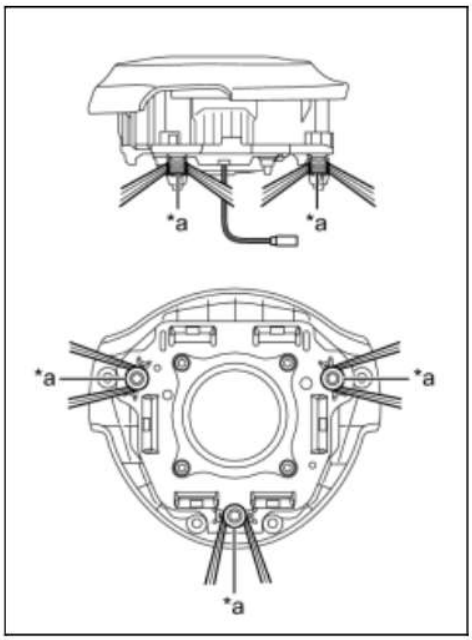
CAUTION:

If the wire harness is too thin or an alternative object is used to tie down the horn button assembly, it may snap when the airbag is deployed. Always use a wire for vehicle use with an area of at least 1.25 mm ^{2} (0.0019 in. ^{2}).

HINT:

To calculate the area of the stripped wire section:

Area = 3.14 x (Diameter) ^{2} / 4



(1) Wind 3 wires at least 2 times each around each of the snap pins.

Text in Illustration

*a	2 times or more

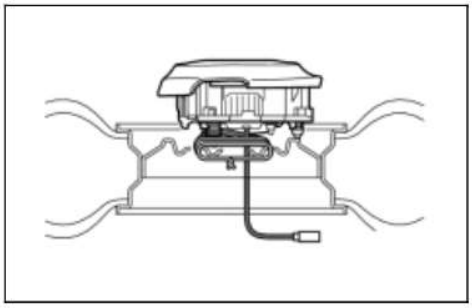
CAUTION:

- Tightly wind the wires around the snap pins without any slack.
- Make sure that the wires are tight. If there is slack in the wires, the horn button assembly may break loose when the airbag is deployed.

(2) Face the airbag deployment side of the horn button assembly upward on top of an unneeded tire and wheel set. Separately tie the each sides of the horn button assembly to the wheel through the

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hub nut holes. Position the SST connector so that it hangs downward through the hub hole of the wheel.



Minimum tire size:

Width

185 mm (7.28 in.)

Inner diameter

360 mm (1.18 ft.)

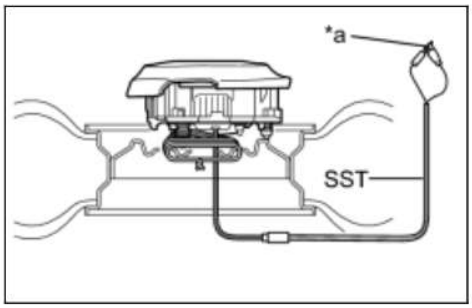
CAUTION:

- Make sure that the wires are tight. If there is slack in the wires, the horn button assembly may break loose when the airbag is deployed.
- Always tie down the horn button assembly with the airbag deployment side facing upward.

NOTICE:

The tire and wheel may be damaged by the airbag deployment, so use unneeded tire and wheel.

(c) Install SST.



(1) Connect the clip and terminal of SST.

SST: 09082-18010

Text in Illustration

*a	Connect the clip and terminal

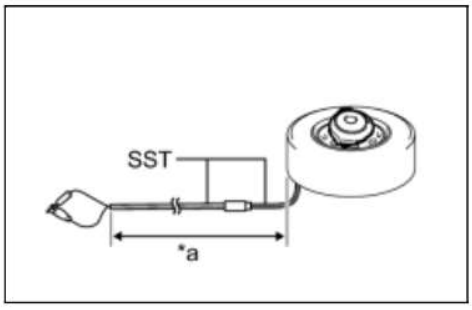
CAUTION:

Place the wheel on level ground.

(2) Connect the SST connector.

NOTICE:

To avoid damaging the SST connector or wire harness, do not lock the secondary lock of the twin lock. Also, secure some slack for the SST wire harness inside the disc wheel.



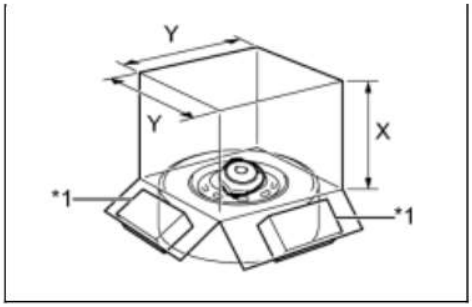
(3) Move SST at least 10 m (32.8 ft.) away from the airbag tied down to the wheel.

Text in Illustration

*a	10 m (32.8 ft.) or more

(d) Cover the horn button assembly (Using a cardboard box).

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(1) Cover the horn button assembly with a cardboard box.

Text in Illustration

*1	Weight

(2) Place weights on the cardboard box in 4 places totaling at least 190 N (19 kg, 42.7 lb).

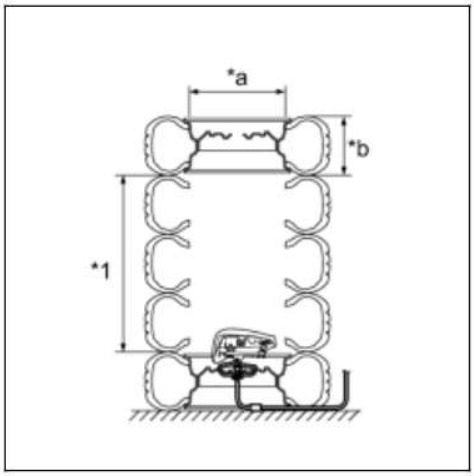
Minimum cardboard box size:
Must exceed the following dimensions
X
460 mm (1.51 ft.)
Y
650 mm (2.13 ft.)

NOTICE:

- When dimension Y of the cardboard box exceeds the diameter of the wheel and tire to which the horn button assembly is tied, X should be the following size.

  X = 460 mm (1.51 ft.) + width of tire
- If a cardboard box smaller than the specified size is used, it may be broken by the shock from the airbag deployment.

(e) Cover the horn button assembly (Using tires).



(1) Place at least 3 tires without wheels onto the wheel and tire to which the horn button assembly is tied.

Text in Illustration

*1	Tires (3 or more)
*a	Inner Diameter
*b	Width

(2) Place a wheel and tire on top.

Minimum tire size:
Width
185 mm (7.28 in.)
Inner diameter
360 mm (1.18 ft.)

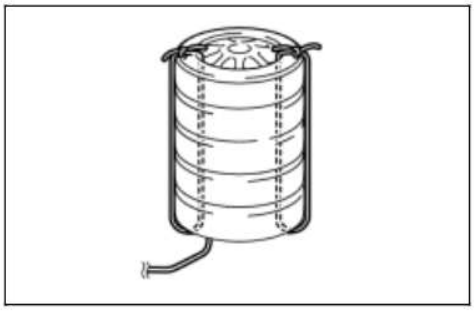
CAUTION:

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Do not use tires with wheels except for on the top and bottom.

NOTICE:

- The tires may be damaged by the airbag deployment, so use unneeded tires.
- Do not place the SST connector under the tire because it could be damaged.



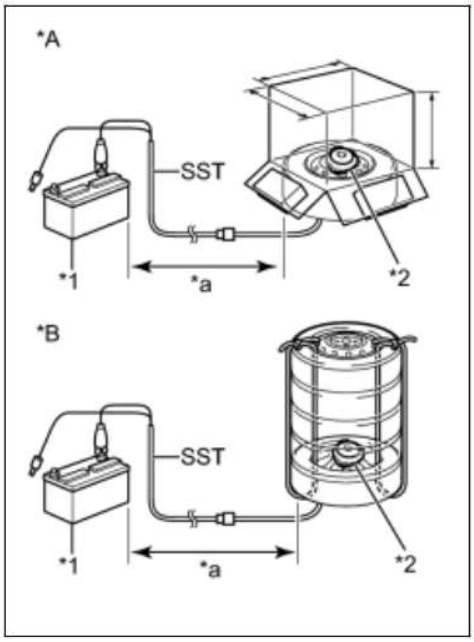
(3) Tie the tires together with the 2 wires.

CAUTION:

Make sure that the wires are tight. Looseness in the wires results in the tires breaking loose when the airbag is deployed.

(f) Deploy the airbag.

(1) Check that no one is within a 10 m (32.8 ft.) radius of the wheel to which the horn button assembly is tied.



(2) Connect the clip of SST to the positive (+) battery terminal.

Text in Illustration

*A	Using a Cardboard Box
*B	Using Tires
*1	Battery
*2	Horn Button Assembly
*a	10 m (32.8 ft.) or more

(3) Connect the terminal of SST to the negative (-) battery terminal to deploy the horn button assembly.

CAUTION:

Before deployment, make sure that no one is near the airbag.

(g) Dispose of the horn button assembly.

CAUTION:

- The horn button assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.

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- Use gloves and safety glasses when handling a horn button assembly with a deployed airbag.
- Do not apply water etc. to a horn button assembly with a deployed airbag.
- Always wash your hands with water after completing the operation.

(1) Remove the horn button assembly from the wheel.

(2) Place the horn button assembly in a plastic bag, tie it tightly and dispose of it according to local regulations.



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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UW609OX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: STEERING PAD: INSTALLATION (2013 FR-S)		

INSTALLATION

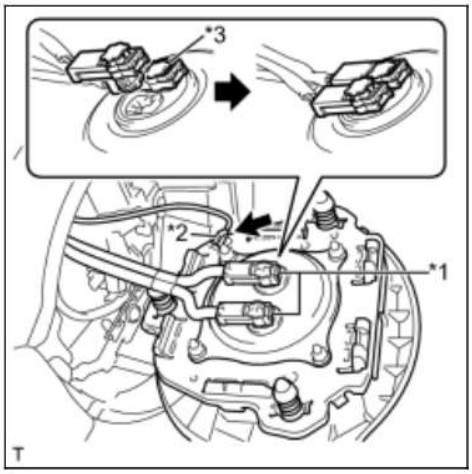
1. INSTALL HORN BUTTON ASSEMBLY

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.



(c) Connect the 2 airbag connectors to the horn button assembly.

Text in Illustration

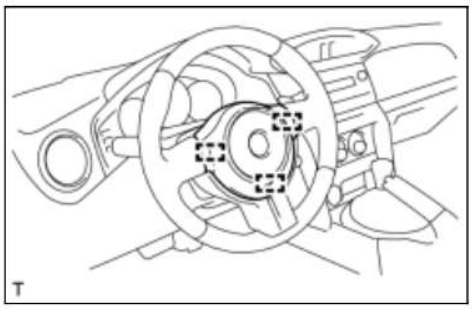
*1	Airbag Connector
*2	Horn Connector
*3	Airbag Connector Lock

NOTICE:

- When connecting any airbag connector, take care not to damage the airbag wire harness.
- Be sure to only connect the connectors to each corresponding color.

(d) Push in the 2 locks to install the 2 airbag connectors.

(e) Connect the horn connector to the horn button assembly.



(f) Push the horn button assembly to engage the 3 pins carefully.

NOTICE:

- Make sure that the pins are securely inserted into the steering holes.
- Make sure to engage the 2 upper pins first.
- Make sure that the horn button assembly is securely installed.

2. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

Torque: 6.0 N·m (61 kgf·cm, 53in·lbf)

3. INSPECT HORN BUTTON ASSEMBLY

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(a) Make sure that the horn sounds.

If the horn does not sound, inspect the horn system INFO .

4. PERFORM DIAGNOSTIC SYSTEM CHECK

INFO

5. INSPECT SRS WARNING LIGHT

INFO

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Last Modified: 3-27-2012	6.4 G	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UW909DX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: STEERING PAD: ON-VEHICLE INSPECTION (2013 FR-S)		

ON-VEHICLE INSPECTION

CAUTION:

Be sure to correctly follow the removal and installation procedures for the horn button assembly.

1. INSPECT HORN BUTTON ASSEMBLY (for Vehicle not Involved in Collision)

(a) Perform a diagnostic system check INFO .

(b) Visually check for defects with the horn button assembly installed on the vehicle.

HINT:

The defects are as follows:

- Cuts on the surface or in the grooves
- Small cracks on the surface or in the grooves
- Significant discoloration on the surface or in the grooves

OK:

No defects are found.

If any of the defects is found, replace the horn button assembly with a new one.

2. INSPECT HORN BUTTON ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)

(a) Perform a diagnostic system check INFO .

(b) Visually check for defects with the horn button assembly removed from the vehicle.

HINT:

The defects are as follows:

- Cuts on the surface or in the grooves
- Small cracks on the surface or in the grooves
- Significant discoloration on the surface or in the grooves
- Cracks or other damage to the connector
- Deformation of the steering wheel assembly
- Deformation of the horn button sub-assembly of the horn button assembly
- Interference or uneven clearance between the horn button assembly and steering wheel assembly when the new horn button assembly is installed on the steering wheel assembly

OK:

No defects are found.

If any of the defects is found, replace the horn button assembly or steering wheel assembly with a new one.

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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000000UW809KX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: STEERING PAD: REMOVAL (2013 FR-S)		

REMOVAL

1. PRECAUTION

CAUTION:

Be sure to read Precaution thoroughly before servicing. INFO

NOTICE:

After turning the ignition switch off, waiting time may be required before disconnecting the cable from the negative (-) battery terminal. Therefore, make sure to read the disconnecting the cable from the negative (-) battery terminal notices before proceeding with work INFO **.**

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

The power window system utilizes a mechanism that the door glass moves down slightly when the door is opened, and that the glass moves up when closing the door in order to prevent the door molding from being damaged. When the battery negative (-) terminal needs to be disconnected for servicing, fully open the driver and passenger door glasses in advance.

3. REMOVE HORN BUTTON ASSEMBLY

CAUTION:

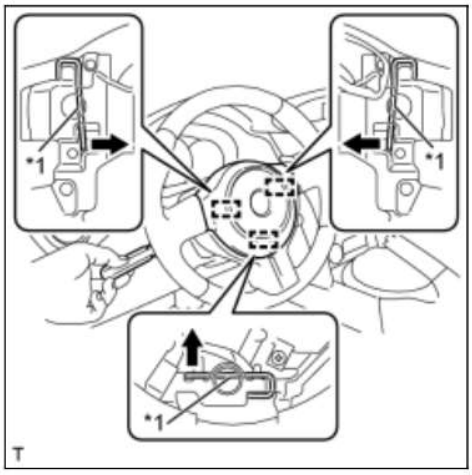
When storing the horn button assembly, keep the airbag deployment side facing upward.

(a) Check that the ignition switch is off.

(b) Check that the cable is disconnected from the negative (-) battery terminal.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.



(c) Using a screwdriver, push in the 3 torsion springs to disengage the 3 pins.

Text in Illustration

*1	Torsion Spring

NOTICE:

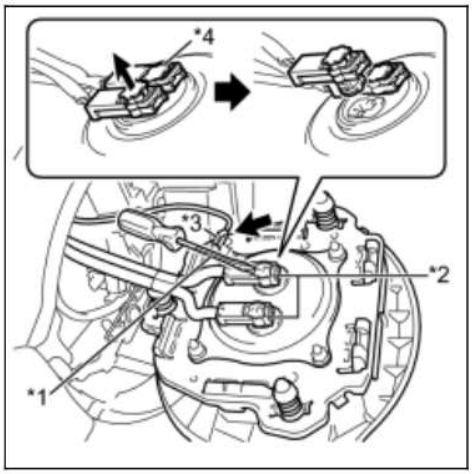
Do not drop the horn button assembly.

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(d) Pull out the horn button assembly from the steering wheel assembly and support the horn button assembly with one hand.

NOTICE:

When removing the horn button assembly, do not pull the airbag wire harness.



(e) Using a screwdriver with its tip wrapped with protective tape, release the 2 airbag connector locks.

Text in Illustration

*1	Protective Tape
*2	Airbag Connector
*3	Horn Connector
*4	Airbag Connector Lock

(f) Disconnect the 2 airbag connectors to remove the horn button assembly.

NOTICE:

When disconnecting any airbag connector, take care not to damage the airbag wire harness.

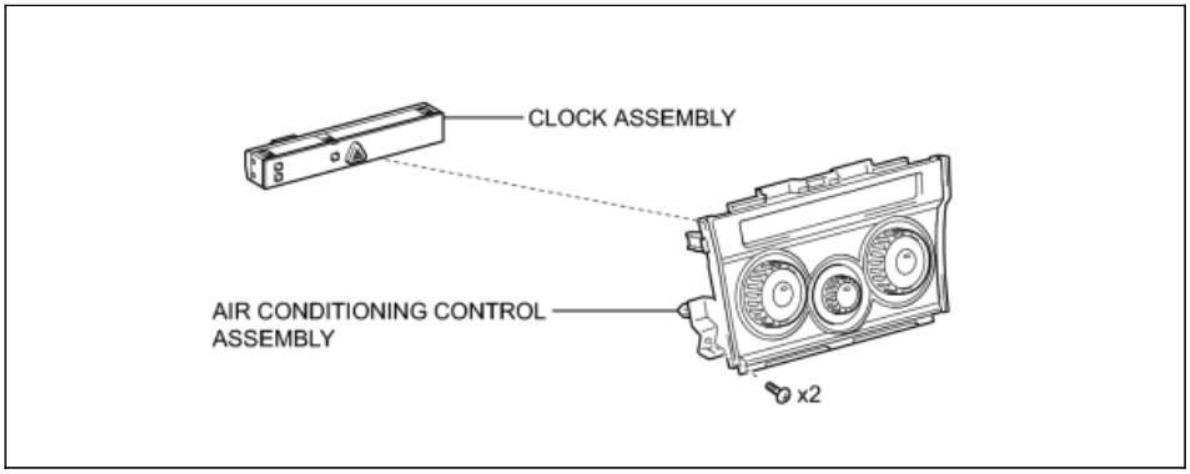
(g) Disconnect the horn connector from the horn button assembly.

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Last Modified: 3-27-2012	6.4 K	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000003WZK005X
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: TELLTALE LIGHT ASSEMBLY: COMPONENTS (2013 FR-S)		

COMPONENTS

ILLUSTRATION



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Last Modified: 3-27-2012	6.4 G	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000003WZJ00HX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: TELLTALE LIGHT ASSEMBLY: INSPECTION (2013 FR-S)		

INSPECTION

1. INSPECT CLOCK ASSEMBLY

(a) Apply battery voltage to the connector and check the LED illumination condition.

OK:

CONDITION	SPECIFIED CONDITION
Battery positive (+) → 10 Battery negative (-) → 3	LED illuminates (AIRBAG ON)
Battery positive (+) → 10 Battery negative (-) → 5	LED illuminates (AIRBAG OFF)

*a



Text in Illustration

*a	Component without harness connected (Clock Assembly)

If the result is not as specified, replace the clock assembly.

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Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000003WZI00BX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: TELLTALE LIGHT ASSEMBLY: INSTALLATION (2013 FR-S)		

INSTALLATION

1. INSTALL CLOCK ASSEMBLY

(a) Attach the 4 claws to install the clock assembly.

2. INSTALL AIR CONDITIONING CONTROL ASSEMBLY

INFO

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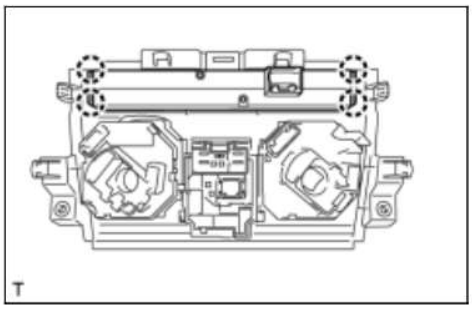
Last Modified: 3-27-2012	6.4 A	**From:** 201203
Model Year: 2013	**Model:** FR-S	**Doc ID:** RM000003WZL00BX
Title: SUPPLEMENTAL RESTRAINT SYSTEMS: TELLTALE LIGHT ASSEMBLY: REMOVAL (2013 FR-S)		

REMOVAL

1. REMOVE AIR CONDITIONING CONTROL ASSEMBLY

INFO

2. REMOVE CLOCK ASSEMBLY



(a) Detach the 4 claws and remove the clock assembly.

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