

<b>DTC</b>	<b>B1790</b>	<b>Center Airbag Sensor Assembly Communication Circuit Malfunction</b>
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**DESCRIPTION**

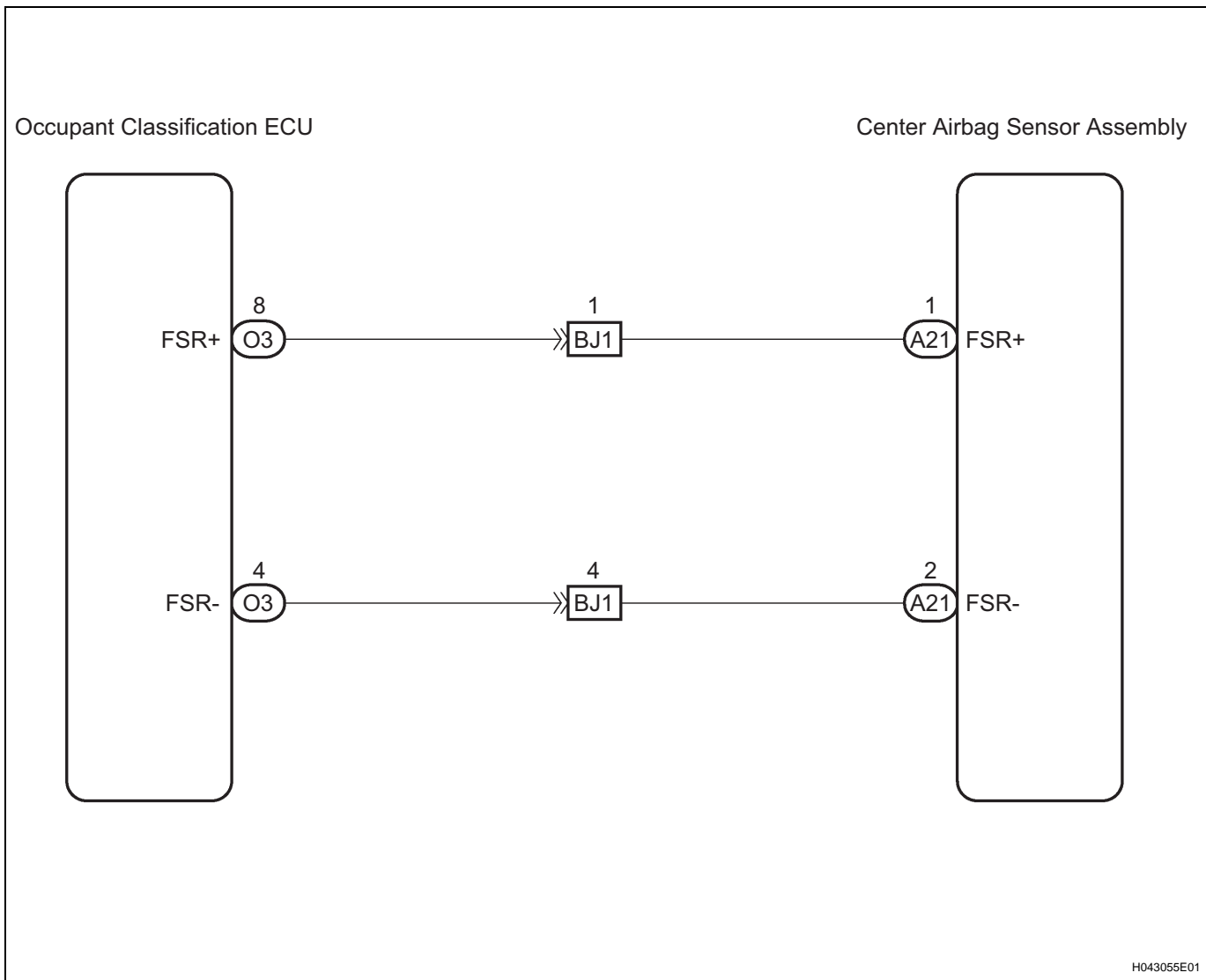
The center airbag sensor assembly communication circuit consists of the occupant classification ECU and the center airbag sensor assembly.

DTC B1790 is recorded when a malfunction is detected in the center airbag sensor assembly communication circuit.

DTC No.	DTC Detecting Condition	Trouble Area
B1790	<ul style="list-style-type: none"> <li>• The occupant classification 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 center airbag sensor assembly communication circuit for 2 seconds.</li> <li>• Center airbag sensor assembly malfunction</li> <li>• Occupant classification ECU malfunction</li> </ul>	<ul style="list-style-type: none"> <li>• Occupant classification ECU</li> <li>• Center airbag sensor assembly</li> <li>• Floor wire</li> <li>• Front seat wire RH</li> </ul>

**RS**

**WIRING DIAGRAM**



## HINT:

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

**1** CHECK DTC

- Turn the ignition switch to the ON position.
- Clear the DTCs stored in memory (See page [RS-310](#)).

## HINT:

First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor assembly.

- Turn the ignition switch to the LOCK position.
- Turn the ignition switch to the ON position.
- Check the DTCs (See page [RS-310](#)).

**OK:**

**DTC B1790 is not output.**

## HINT:

Codes other than DTC B1790 may be output at this time, but they are not related to this check.

**OK****USE SIMULATION METHOD TO CHECK****NG****2** CHECK CONNECTION OF CONNECTORS

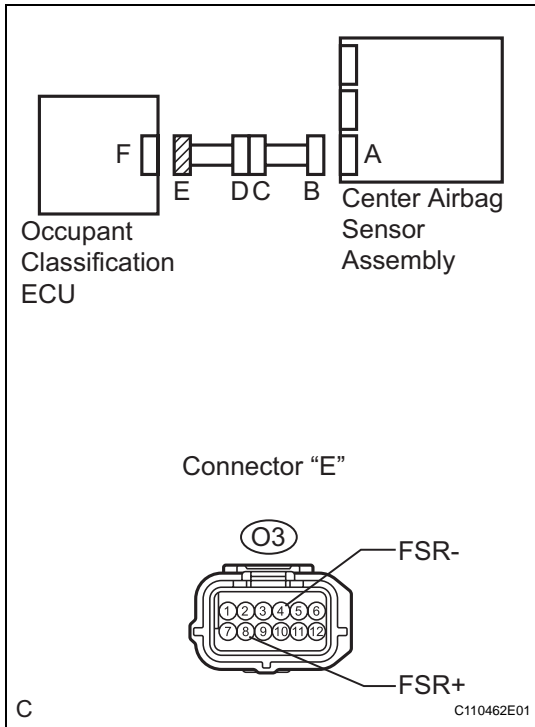
- Turn the ignition switch to the LOCK position.
- Disconnect the negative (-) terminal cable from the battery.
- Check that the connectors are properly connected to the occupant classification ECU and the center airbag sensor assembly.

**OK:**

**The connectors are connected.**

**NG****CONNECT CONNECTORS, THEN GO TO STEP 1****OK****RS**

**3 CHECK OCCUPANT CLASSIFICATION ECU CIRCUIT (SHORT TO B+)**



- (a) Disconnect the connectors from the occupant classification ECU and the center airbag sensor assembly.
- (b) Connect the negative (-) terminal cable to the battery.
- (c) Turn the ignition switch to the ON position.
- (d) Measure the voltage according to the value(s) in the table below.

**Voltage**

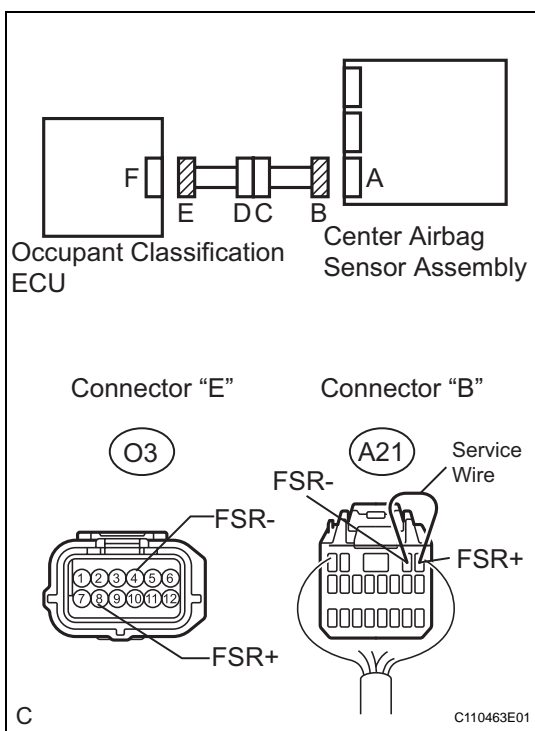
Tester connection	Condition	Specified condition
O3-8 (FSR+) - Body ground	Ignition switch ON	Below 1 V
O3-4 (FSR-) - Body ground	Ignition switch ON	Below 1 V

**NG**

**Go to step 12**

**OK**

**4 CHECK OCCUPANT CLASSIFICATION ECU CIRCUIT (OPEN)**



- (a) Turn the ignition switch to the LOCK position.
- (b) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- (c) Using a service wire, connect A21-1 (FSR+) and A21-2 (FSR-) of connector "B".

**NOTICE:**

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

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

**Resistance**

Tester connection	Condition	Specified condition
O3-8 (FSR+) - O3-4 (FSR-)	Always	Below 1 Ω

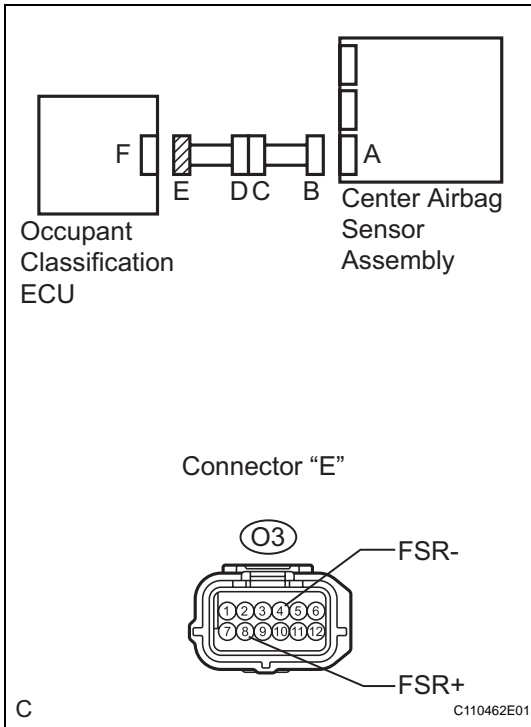
**NG**

**Go to step 13**

**OK**

**RS**

**5 CHECK OCCUPANT CLASSIFICATION ECU CIRCUIT (SHORT)**



- (a) Disconnect the service wire from connector "B".
- (b) Measure the resistance according to the value(s) in the table below.

**Resistance**

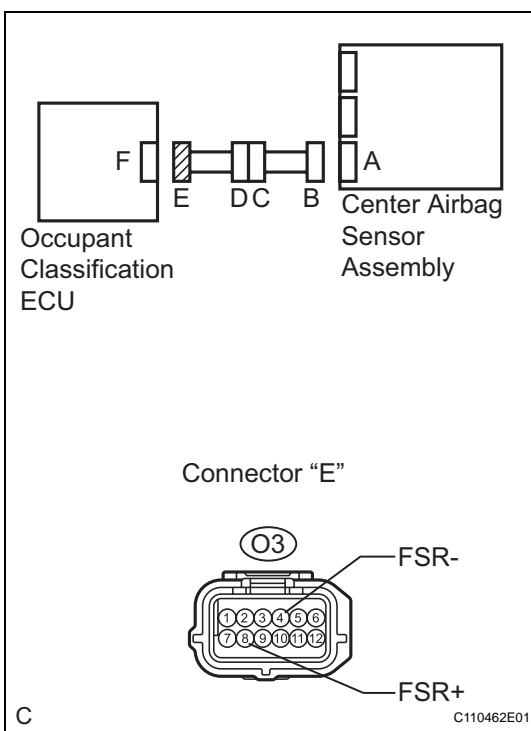
Tester connection	Condition	Specified condition
O3-8 (FSR+) - O3-4 (FSR-)	Always	1 MΩ or higher

**NG** → **Go to step 14**

**OK**

**RS**

**6 CHECK OCCUPANT CLASSIFICATION ECU CIRCUIT (SHORT TO GROUND)**



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

**Resistance**

Tester connection	Condition	Specified condition
O3-8 (FSR+) - Body ground	Always	1 MΩ or higher
O3-4 (FSR-) - Body ground	Always	1 MΩ or higher

**NG** → **Go to step 15**

**OK**

**7 CHECK DTC**

- (a) Connect the connectors to the occupant classification ECU and the center airbag sensor assembly.
- (b) Connect the negative (-) terminal cable to the battery.
- (c) Turn the ignition switch to the ON position.
- (d) Clear the DTCs stored in memory (See page [RS-310](#)).

**HINT:**

First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor assembly.

- (e) Turn the ignition switch to the LOCK position.
- (f) Turn the ignition switch to the ON position.
- (g) Check the DTCs (See page [RS-310](#)).

**OK:**

**DTC B1790 is not output.**

**HINT:**

Codes other than DTC B1790 may be output at this time, but they are not related to this check.

**OK****USE SIMULATION METHOD TO CHECK****NG****8 REPLACE OCCUPANT CLASSIFICATION ECU**

- (a) Turn the ignition switch to the LOCK position.
- (b) Disconnect the negative (-) terminal cable from the battery.
- (c) Replace the occupant classification ECU (See page [RS-457](#)).

**HINT:**

Perform the inspection using parts from a normal vehicle if possible.

**NEXT****9 PERFORM ZERO POINT CALIBRATION**

- (a) Connect the negative (-) terminal cable to the battery.
- (b) Connect the intelligent tester to the DLC3.
- (c) Turn the ignition switch to the ON position.
- (d) Using the intelligent tester, perform "Zero point calibration" (See page [RS-303](#)).

**OK:**

**The "COMPLETED" is displayed.**

**NEXT****10 PERFORM SENSITIVITY CHECK**

- (a) Using the intelligent tester, perform "Sensitivity check" (See page [RS-303](#)).

Standard values:  
27 to 33 kg (59.52 to 72.75 lb)

NEXT

**11 CHECK DTC**

- (a) Turn the ignition switch to the ON position.
- (b) Clear the DTCs stored in memory (See page RS-310).  
HINT:  
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor assembly.
- (c) Turn the ignition switch to the LOCK position.
- (d) Turn the ignition switch to the ON position.
- (e) Check the DTCs (See page RS-310).

**OK:**

**DTC B1790 is not output.**

HINT:

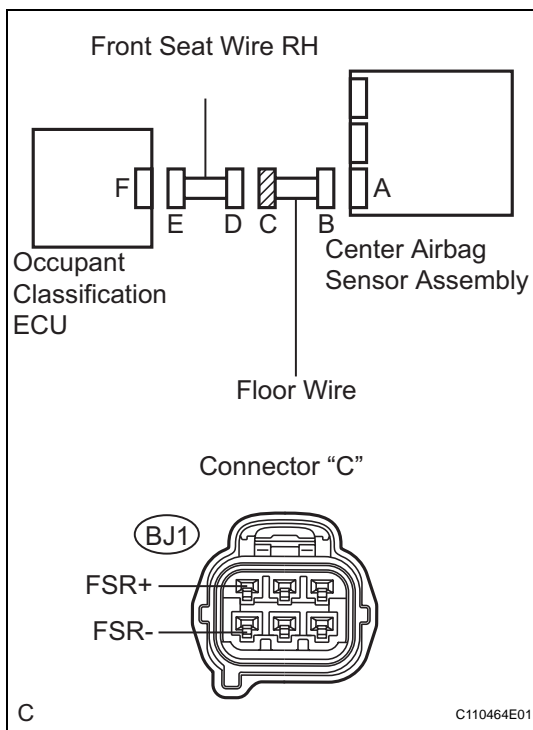
Codes other than DTC B1790 may be output at this time, but they are not related to this check.

**NG** **REPLACE CENTER AIRBAG SENSOR ASSEMBLY**

OK

END

**12 CHECK FLOOR WIRE (SHORT TO B+)**



- (a) Turn the ignition switch to the LOCK position.
- (b) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- (c) Disconnect the floor wire connector from the front seat wire RH.
- (d) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
- (e) Turn the ignition switch to the ON position.
- (f) Measure the voltage according to the value(s) in the table below.

**Voltage**

Tester connection	Condition	Specified condition
BJ1-1 (FSR+) - Body ground	Ignition switch ON	Below 1 V
BJ1-4 (FSR-) - Body ground	Ignition switch ON	Below 1 V

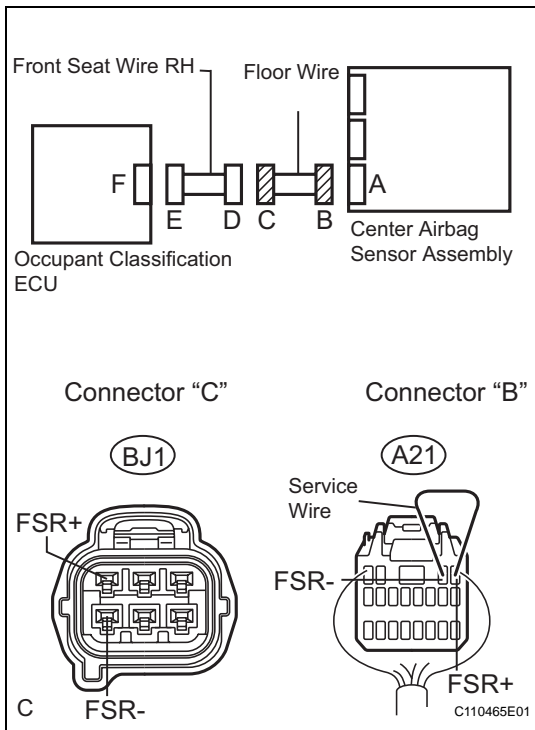
**NG** **REPAIR OR REPLACE FLOOR WIRE**

OK

REPAIR OR REPLACE FRONT SEAT WIRE RH

**13 CHECK FLOOR WIRE (OPEN)**

RS



(a) Disconnect the floor wire connector from the front seat wire RH.

HINT:

The service wire has already been inserted into the connector "B".

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

**Resistance**

Tester connection	Condition	Specified condition
BJ1-1 (FSR+) - BJ1-4 (FSR-)	Always	Below 1 Ω

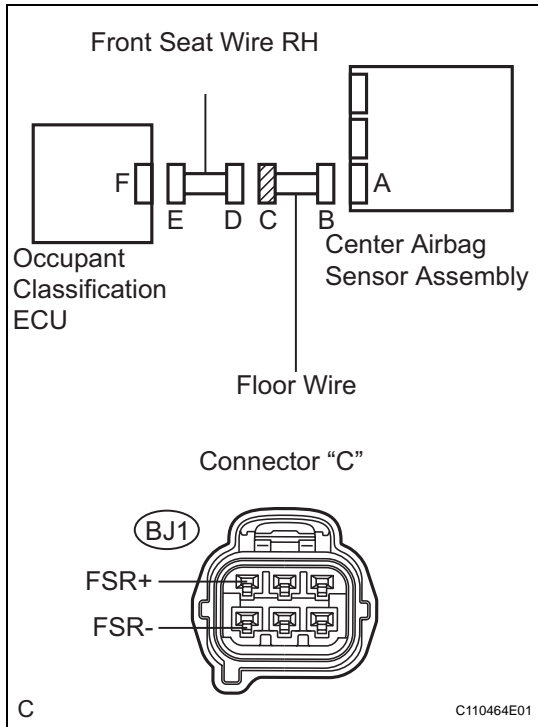
NG

REPAIR OR REPLACE FLOOR WIRE

OK

REPAIR OR REPLACE FRONT SEAT WIRE RH

**14** CHECK FLOOR WIRE (SHORT)



- (a) Disconnect the floor wire connector from the front seat wire RH.
- (b) Measure the resistance according to the value(s) in the table below.

**Resistance**

Tester connection	Condition	Specified condition
BJ1-1 (FSR+) - BJ1-4 (FSR-)	Always	1 MΩ or higher

**NG** REPAIR OR REPLACE FLOOR WIRE

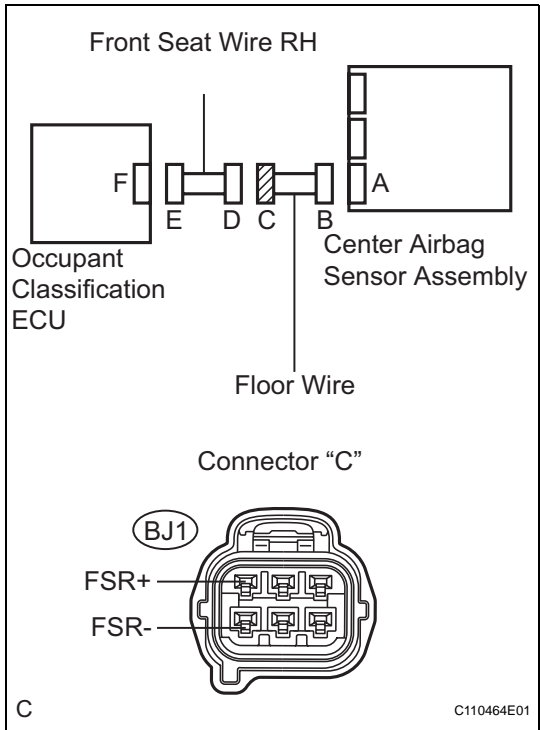
**RS**

**OK**

**REPAIR OR REPLACE FRONT SEAT WIRE RH**



**15 CHECK FLOOR WIRE (SHORT TO GROUND)**



- (a) Disconnect the floor wire connector from the front seat wire RH.
- (b) Measure the resistance according to the value(s) in the table below.

**Resistance**

Tester connection	Condition	Specified condition
BJ1-1 (FSR+) - Body ground	Always	1 MΩ or higher
BJ1-4 (FSR-) - Body ground	Always	1 MΩ or higher

**NG** REPAIR OR REPLACE FLOOR WIRE

**OK**

**REPAIR OR REPLACE FRONT SEAT WIRE RH**

**RS**

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