

DTC	B1790	Center Airbag Sensor Assembly Communication Circuit Malfunction
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DESCRIPTION

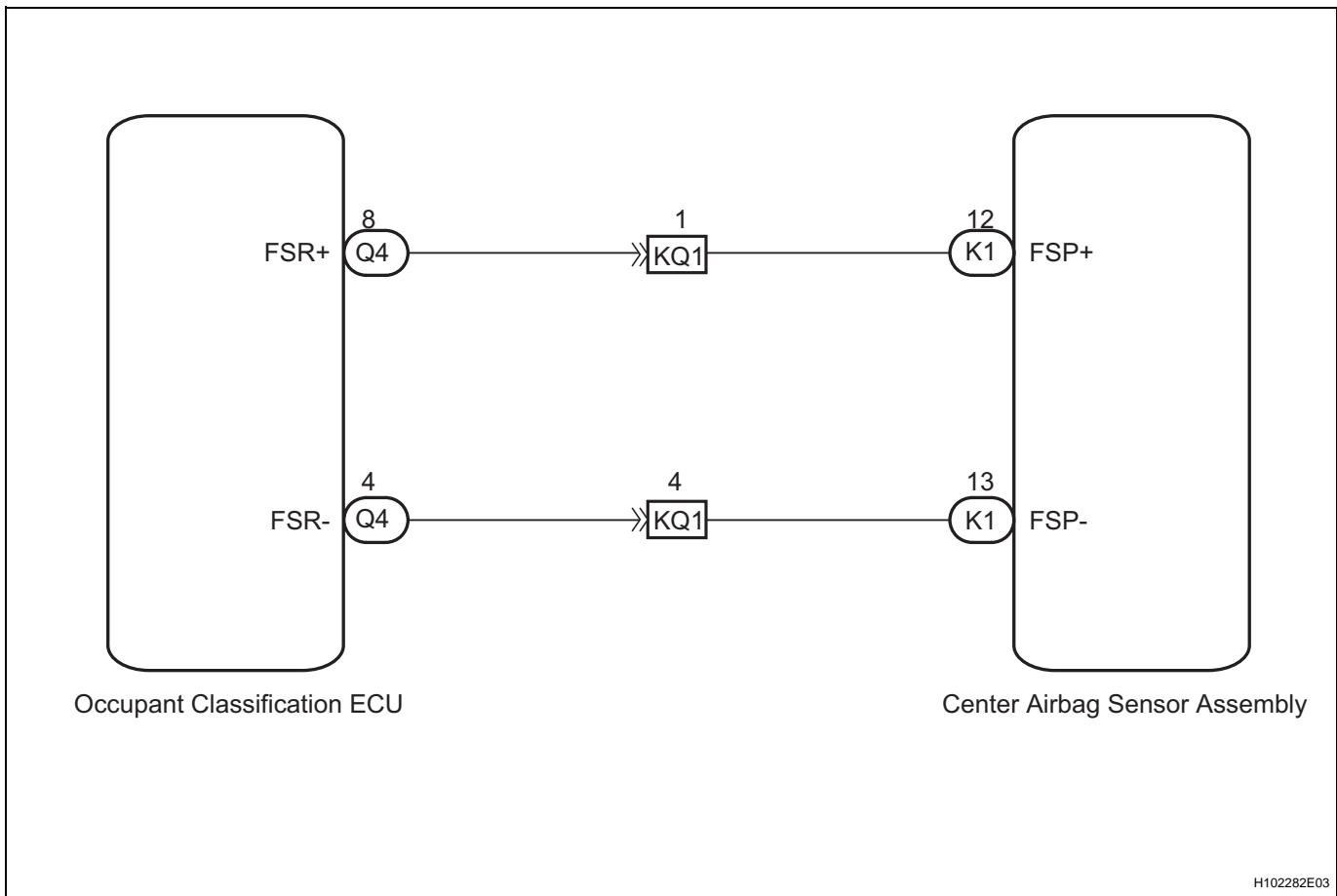
The center airbag sensor assembly communication circuit consists of the occupant classification ECU and the center airbag sensor assembly.

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"> Occupant classification ECU detects line short circuit signal, open circuit signal, short circuit to ground signal or short circuit to B+ signal in the center airbag sensor assembly communication circuit for 2 seconds Center airbag sensor assembly malfunction Occupant classification ECU malfunction 	<ul style="list-style-type: none"> No. 1 Seat wire Floor wire Occupant classification ECU Center airbag sensor assembly

RS

WIRING DIAGRAM



H102282E03

INSPECTION PROCEDURE

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 tip over. Holding the seat for a long period of time may cause a problem, such as seat rail deformation. Hold the seat up only for as long as necessary.

1	CHECK DTC
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- (a) Turn the ignition switch to the on position.
- (b) Clear the DTCs stored in the memory (See page [RS-254](#)).

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-254](#)).

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
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NG

2	CHECK CONNECTION OF CONNECTORS
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- (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) Check that the connectors are properly connected to the occupant classification ECU and the center airbag sensor assembly.

OK:

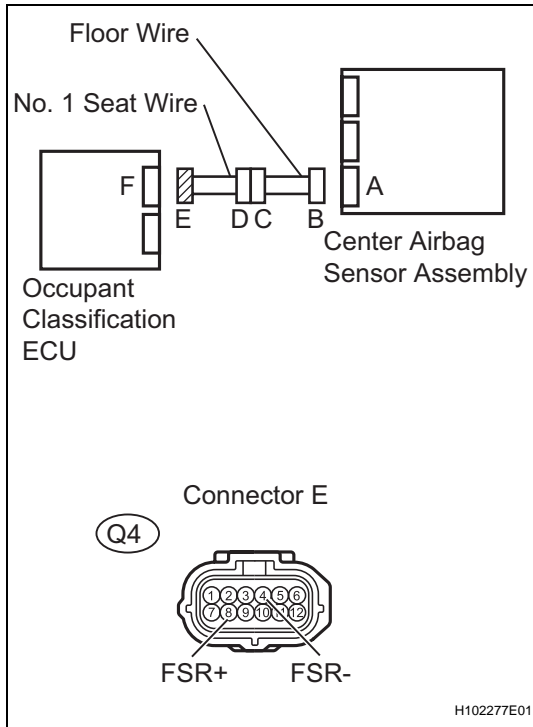
The connectors are properly connected.

NG	CONNECT CONNECTORS
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OK

RS

3 CHECK CENTER AIRBAG SENSOR CIRCUIT (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.

Standard voltage

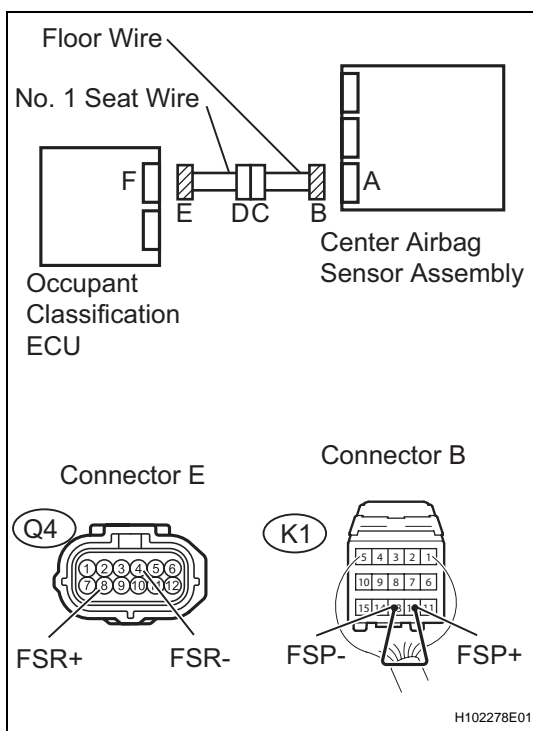
Tester connection	Condition	Specified condition
Q4-8 (FSR+) - Body ground	Ignition switch on	Below 1 V
Q4-4 (FSR-) - Body ground	Ignition switch on	Below 1 V

NG → **Go to step 12**

RS

OK

4 CHECK CENTER AIRBAG SENSOR CIRCUIT (FOR 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 K1-12 (FSP+) and K1-13 (FSP-) of connector B.

NOTICE:

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

- (d) Measure the resistance.

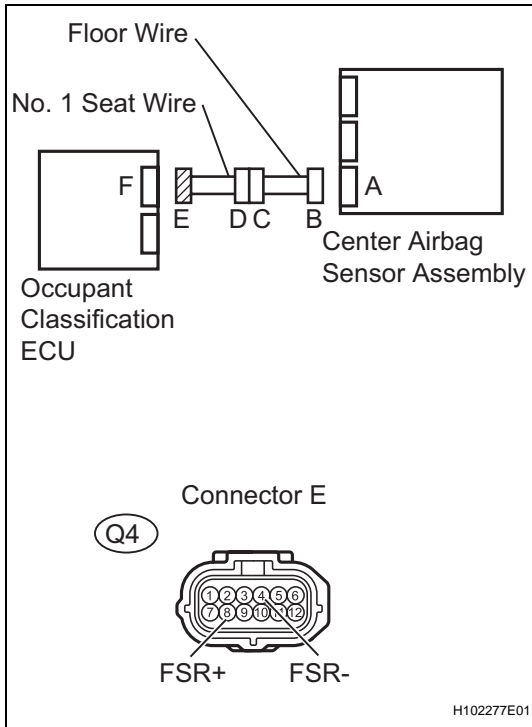
Standard resistance

Tester connection	Condition	Specified condition
Q4-8 (FSR+) - Q4-4 (FSR-)	Always	Below 1 Ω

NG → **Go to step 13**

OK

5 CHECK CENTER AIRBAG SENSOR CIRCUIT (FOR SHORT)



- (a) Disconnect the service wire from connector B.
- (b) Measure the resistance.

Standard resistance

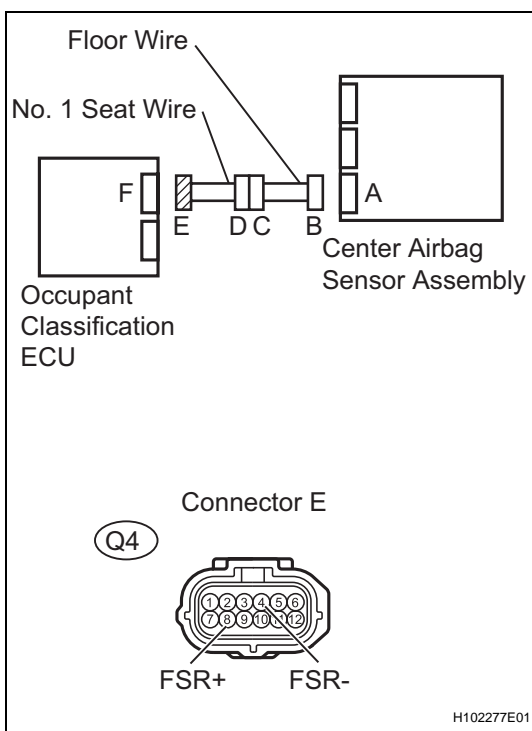
Tester connection	Condition	Specified condition
Q4-8 (FSR+) - Q4-4 (FSR-)	Always	1 MΩ or higher

NG

Go to step 14

OK

6 CHECK CENTER AIRBAG SENSOR CIRCUIT (TO GROUND)



- (a) Measure the resistance.

Standard resistance

Tester connection	Condition	Specified condition
Q4-8 (FSR+) - Body ground	Always	1 MΩ or higher
Q4-4 (FSR-) - Body ground	Always	1 MΩ or higher

NG

Go to step 15

OK

RS

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 the memory (See page [RS-254](#)).

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-254](#)).

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, and wait for at least 90 seconds.
- (c) Replace the occupant classification ECU (See page [RS-412](#)).

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 the zero point calibration (See page [RS-246](#)).

OK:

COMPLETED is displayed.

NEXT**RS**

10	PERFORM SENSITIVITY CHECK
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- (a) Using the intelligent tester, perform the sensitivity check (See page [RS-246](#)).
- (1) Confirm that nothing is placed on the passenger seat.
 - (2) Confirm that the beginning sensor reading is within the standard range.
Standard range:
-3.2 to 3.2 kg (-7 to 7 lb)
 - (3) Place a 30 kg (66.14 lb) weight (e.g. a lead mass) onto the front passenger seat.
 - (4) Confirm that the sensitivity is within the standard range.
Standard range:
27 to 33 kg (59.52 to 72.75 lb)
- HINT:
When performing the sensitivity check, use a solid metal weight (the check result may not be accurate if a liquid weight is used).

NEXT

11	CHECK DTC
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- (a) Turn the ignition switch to the on position.
 - (b) Clear the DTCs stored in the memory (See page [RS-254](#)).
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-254](#)).
- 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.

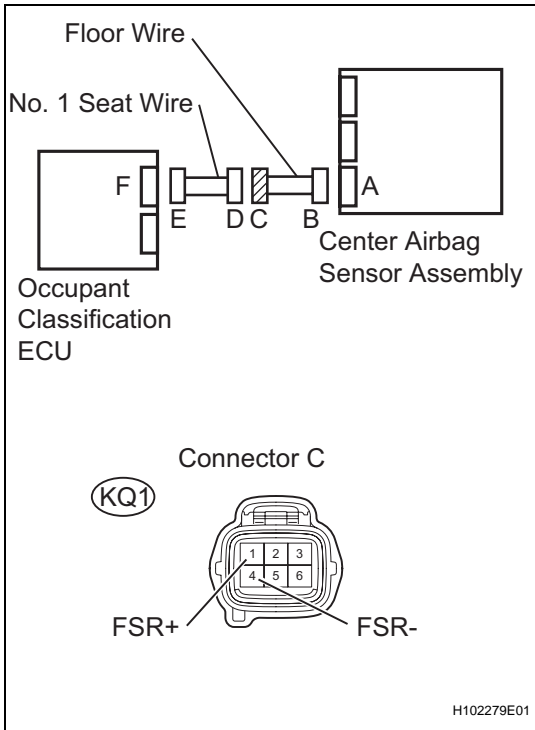
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REPLACE CENTER AIRBAG SENSOR ASSEMBLY

OK

END

12 CHECK FLOOR WIRE (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 connectors from the floor wire and the No. 1 seat wire.
- (d) Connect the negative (-) terminal cable to the battery.
- (e) Turn the ignition switch to the on position.
- (f) Measure the voltage.

Standard voltage

Tester connection	Condition	Specified condition
KQ1-1 (FSR+) - Body ground	Ignition switch on	Below 1 V
KQ1-4 (FSR-) - Body ground	Ignition switch on	Below 1 V

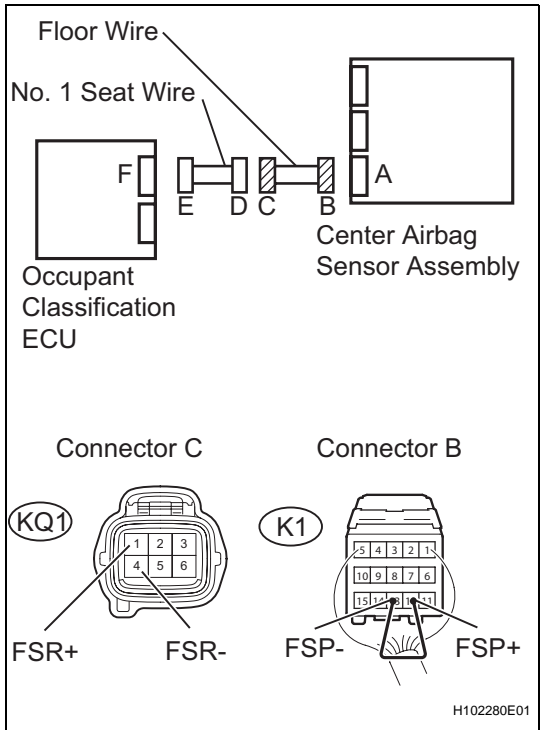
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NG REPAIR OR REPLACE FLOOR WIRE

OK

REPLACE NO.1 SEAT WIRE

13 CHECK FLOOR WIRE (FOR OPEN)



- (a) Disconnect the connectors from the floor wire and the No. 1 seat wire.
HINT:
The service wire has already been inserted into connector B.
- (b) Measure the resistance.
Standard resistance

Tester connection	Condition	Specified condition
KQ1-1 (FSR+) - KQ1-4 (FSR-)	Always	Below 1 Ω

NG REPAIR OR REPLACE FLOOR WIRE

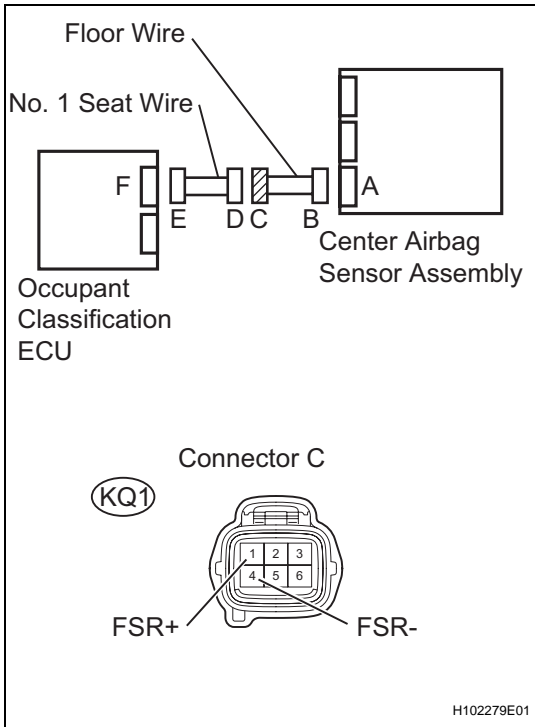
OK

REPLACE NO.1 SEAT WIRE

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14 CHECK FLOOR WIRE (FOR SHORT)



- (a) Disconnect the connectors from the floor wire and the No. 1 seat wire.
- (b) Measure the resistance.

Standard resistance

Tester connection	Condition	Specified condition
KQ1-1 (FSR+) - KQ1-4 (FSR-)	Always	1 MΩ or higher

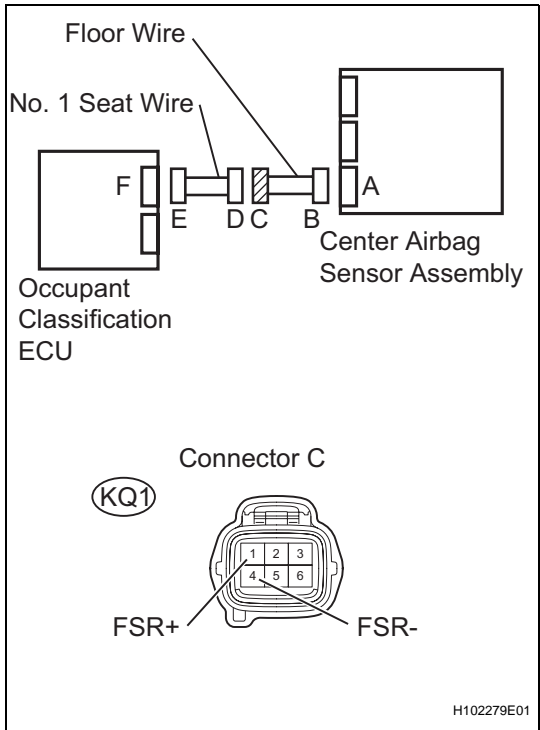
NG REPAIR OR REPLACE FLOOR WIRE

OK

REPLACE NO.1 SEAT WIRE

RS

15 CHECK FLOOR WIRE (TO GROUND)



- (a) Disconnect the connectors from the floor wire and the No. 1 seat wire.
 - (b) Measure the resistance.
- Standard resistance**

Tester connection	Condition	Specified condition
KQ1-1 (FSR+) - Body ground	Always	1 MΩ or higher
KQ1-4 (FSR-) - Body ground	Always	1 MΩ or higher

NG REPAIR OR REPLACE FLOOR WIRE

OK

REPLACE NO.1 SEAT WIRE

RS