

DTC	B1790	Center Airbag Sensor Assembly Communication Circuit Malfunction
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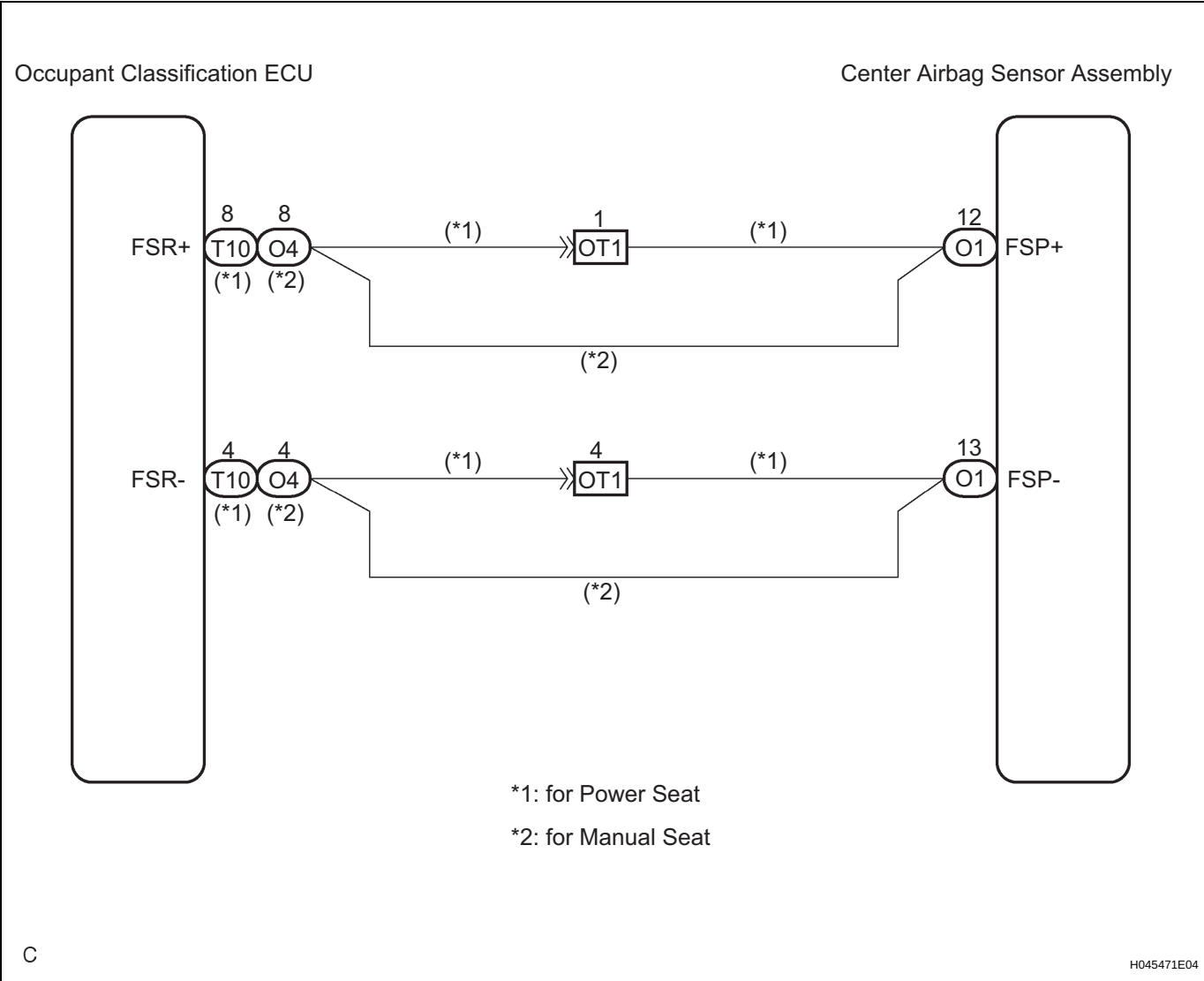
DESCRIPTION

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	- 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. - Center airbag sensor assembly malfunction - Occupant classification ECU malfunction	- Occupant classification ECU - Center airbag sensor assembly - Floor wire No. 2 - Front seat wire RH (for Power seat)

WIRING DIAGRAM



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 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 power switch on (IG).
- Clear the DTCs stored in the occupant classification ECU (See page [RS-248](#)).
- Clear the DTCs stored in the center airbag sensor assembly (See page [RS-41](#)).
- Turn the power switch off.
- Turn the power switch on (IG).
- Check the DTCs (See page [RS-248](#)).

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 (See page [RS-245](#))

NG

2 CHECK CONNECTION OF CONNECTORS

- Turn the power switch off.
- 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 properly connected.

NG

CONNECT CONNECTORS PROPERLY, THEN GO TO STEP 1

OK

3 CHECK VEHICLE CONDITION

- Check the passenger seat type.

Result:

A:
for Manual seat

B:
for Power seat

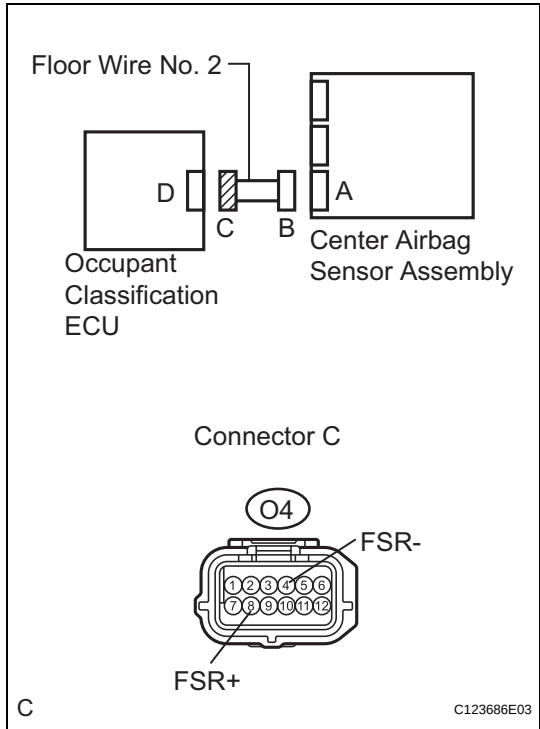
A

B

Go to step 13

4

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



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

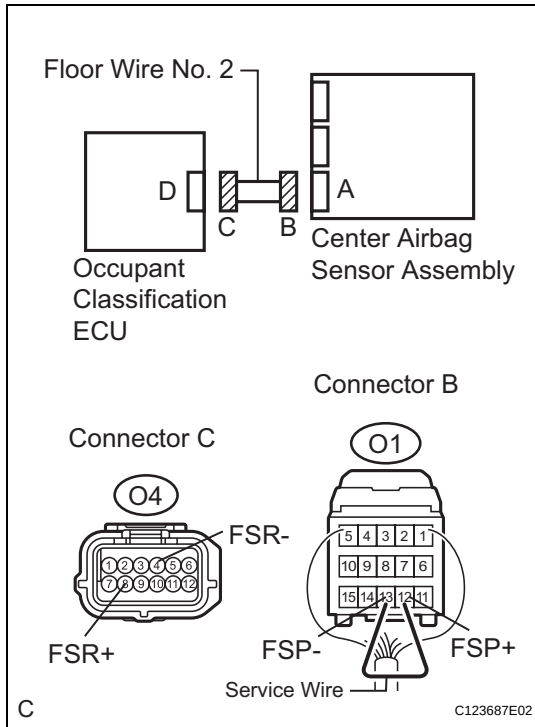
Standard voltage

Tester connection	Condition	Specified condition
O4-8 (FSR+) - Body ground	Power switch on (IG)	Below 1 V
O4-4 (FSR-) - Body ground	Power switch on (IG)	Below 1 V

NG

REPAIR OR REPLACE FLOOR WIRE NO. 2

OK

5 CHECK FLOOR WIRE NO. 2 (OPEN)

- Turn the power switch off.
- Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- Using a service wire, connect terminals 12 (FSP+) and 13 (FSP-) of connector B.

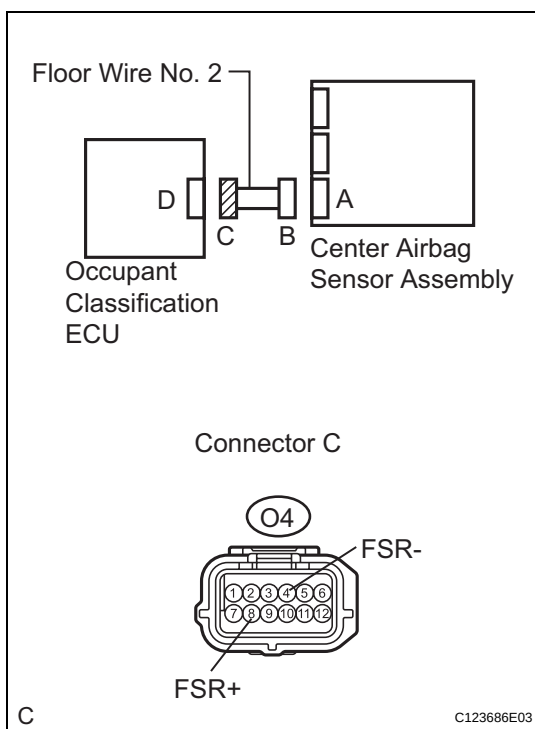
NOTICE:

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

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

Standard resistance

Tester connection	Condition	Specified condition
O4-8 (FSR+) - O4-4 (FSR-)	Always	Below 1 Ω

NG**REPAIR OR REPLACE FLOOR WIRE NO. 2****OK****6 CHECK FLOOR WIRE NO. 2 (SHORT)**

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

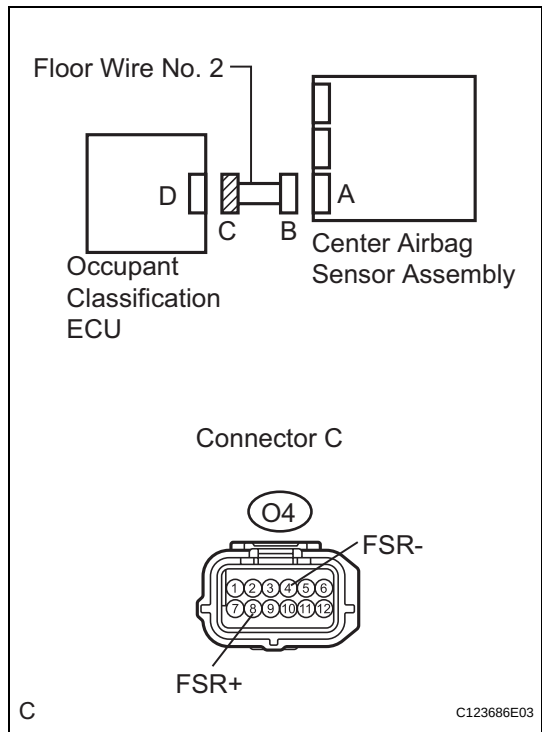
Standard resistance

Tester connection	Condition	Specified condition
O4-8 (FSR+) - O4-4 (FSR-)	Always	1 M Ω or Higher

NG**REPAIR OR REPLACE FLOOR WIRE NO. 2****OK**

7

CHECK FLOOR WIRE NO. 2 (SHORT TO GROUND)



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

Standard resistance

Tester connection	Condition	Specified condition
O4-8 (FSR+) - Body ground	Always	1 MΩ or Higher
O4-4 (FSR-) - Body ground	Always	1 MΩ or Higher

NG

REPAIR OR REPLACE FLOOR WIRE NO. 2

OK

8

RECHECK DTC

- (a) Connect the connectors to the occupant classification ECU and the center airbag sensor assembly.
- (b) Connect the intelligent tester to the DLC3.
- (c) Connect the negative (-) terminal cable to the battery.
- (d) Turn the power switch on (IG).
- (e) Clear the DTCs stored in the occupant classification ECU (See page RS-248).
- (f) Clear the DTCs stored in the center airbag sensor assembly (See page RS-248).
- (g) Turn the power switch off.
- (h) Turn the power switch on (IG).
- (i) Using the intelligent tester, check the DTCs of the occupant classification ECU (See page RS-41).

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 (See page RS-245)

9 REPLACE OCCUPANT CLASSIFICATION ECU

- (a) Turn the power switch off.
 - (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-445](#)).
- HINT:
Perform the inspection using parts from a normal vehicle if possible.

NEXT**10 PERFORM ZERO POINT CALIBRATION**

- (a) Connect the negative (-) terminal cable to the battery.
 - (b) Connect the intelligent tester to the DLC3.
 - (c) Turn the power switch on (IG).
 - (d) Using the intelligent tester, perform "zero point calibration" (See page [RS-239](#)).
- OK:**
"COMPLETED" is displayed.

NEXT**11 PERFORM SENSITIVITY CHECK**

- (a) Using the intelligent tester, perform "sensitivity check" (See page [RS-239](#)).
- Standard value:**
27 to 33 kg (59.52 to 72.75 lb)

NEXT**12 RECHECK DTC**

- (a) Turn the power switch on (IG).
 - (b) Clear the DTCs stored in the occupant classification ECU (See page [RS-248](#)).
 - (c) Clear the DTCs stored in the center airbag sensor assembly (See page [RS-248](#)).
 - (d) Turn the power switch off.
 - (e) Turn the power switch on (IG).
 - (f) Using the intelligent tester, check the DTCs of the occupant classification ECU (See page [RS-41](#)).
- 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

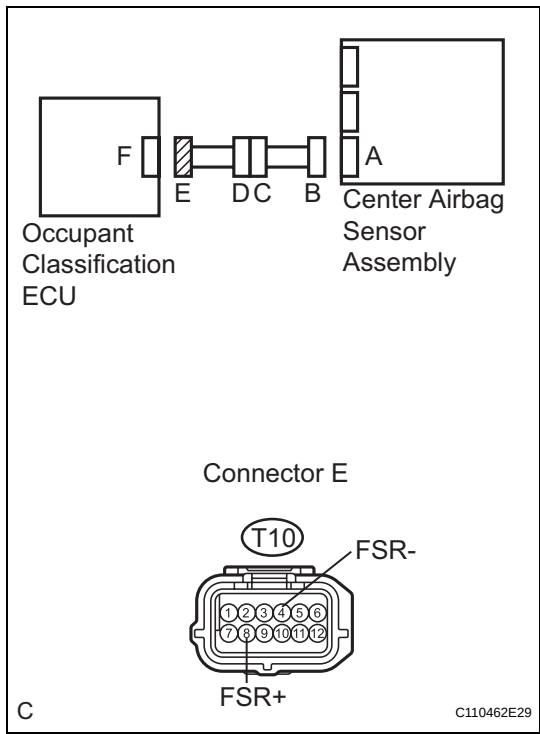
REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See page RS-423)

OK

END

13

CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (TO B+)



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

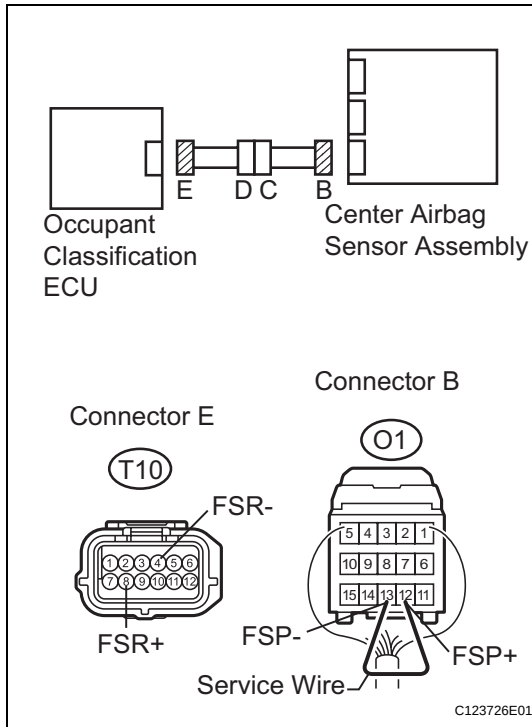
Standard voltage

Tester connection	Condition	Specified condition
T10-8 (FSR+) - Body ground	Power switch on (IG)	Below 1 V
T10-4 (FSR-) - Body ground	Power switch on (IG)	Below 1 V

NG

Go to step 22

OK

14 CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (OPEN)

- Turn the power switch off.
- Disconnect the negative (-) terminal cable from the battery.
- Using a service wire, connect terminals 12 (FSP+) and 13 (FSP-) of connector B.

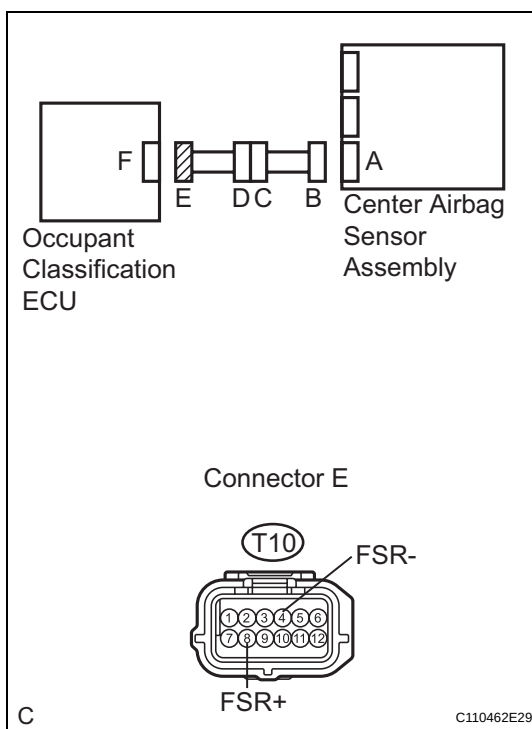
NOTICE:

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

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

Standard resistance

Tester connection	Condition	Specified condition
T10-8 (FSR+) - T10-4 (FSR-)	Always	Below 1 Ω

NG**Go to step 23****OK****15 CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (SHORT)**

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

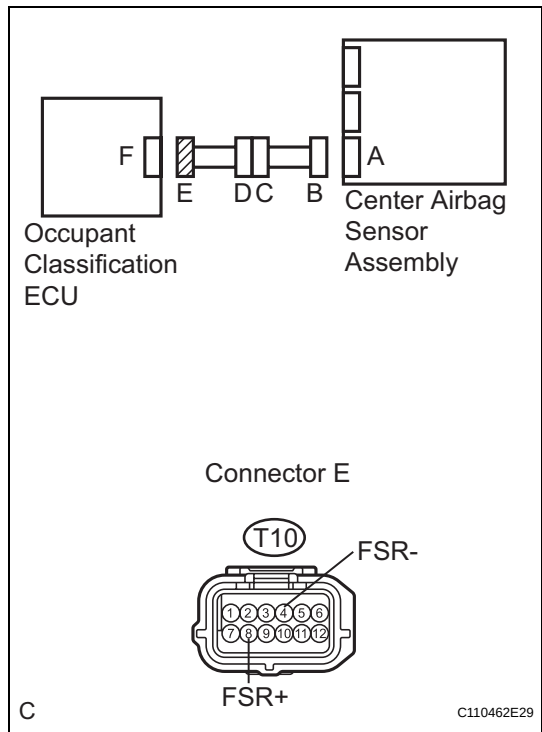
Standard resistance

Tester connection	Condition	Specified condition
T10-8 (FSR+) - T10-4 (FSR-)	Always	1 M Ω or Higher

NG**Go to step 24****OK**

16

CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (TO GROUND)



OK

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

Standard resistance

Tester connection	Condition	Specified condition
T10-8 (FSR+) - Body ground	Always	1 MΩ or Higher
T10-4 (FSR-) - Body ground	Always	1 MΩ or Higher

NG

Go to step 25

17

RECHECK DTC

- (a) Connect the connectors to the occupant classification ECU and the center airbag sensor assembly.
- (b) Connect the intelligent tester to the DLC3.
- (c) Connect the negative (-) terminal cable to the battery.
- (d) Turn the power switch on (IG).
- (e) Clear the DTCs stored in the occupant classification ECU (See page RS-248).
- (f) Clear the DTCs stored in the center airbag sensor assembly (See page RS-248).
- (g) Turn the power switch off.
- (h) Turn the power switch on (IG).
- (i) Using the intelligent tester, check the DTCs of the occupant classification ECU (See page RS-41).

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 (See page RS-245)

18 REPLACE OCCUPANT CLASSIFICATION ECU

- (a) Turn the power switch off.
 - (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-445](#)).
- HINT:
Perform the inspection using parts from a normal vehicle if possible.

NEXT**19 PERFORM ZERO POINT CALIBRATION**

- (a) Connect the negative (-) terminal cable to the battery.
 - (b) Connect the intelligent tester to the DLC3.
 - (c) Turn the power switch on (IG).
 - (d) Using the intelligent tester, perform "zero point calibration" (See page [RS-239](#)).
- OK:**
"COMPLETED" is displayed.

NEXT**20 PERFORM SENSITIVITY CHECK**

- (a) Using the intelligent tester, perform "sensitivity check" (See page [RS-239](#)).
- Standard value:**
27 to 33 kg (59.52 to 72.75 lb)

NEXT**21 RECHECK DTC**

- (a) Turn the power switch on (IG).
 - (b) Clear the DTCs stored in the occupant classification ECU (See page [RS-248](#)).
 - (c) Clear the DTCs stored in the center airbag sensor assembly (See page [RS-248](#)).
 - (d) Turn the power switch off.
 - (e) Turn the power switch on (IG).
 - (f) Using the intelligent tester, check the DTCs of the occupant classification ECU (See page [RS-41](#)).
- 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

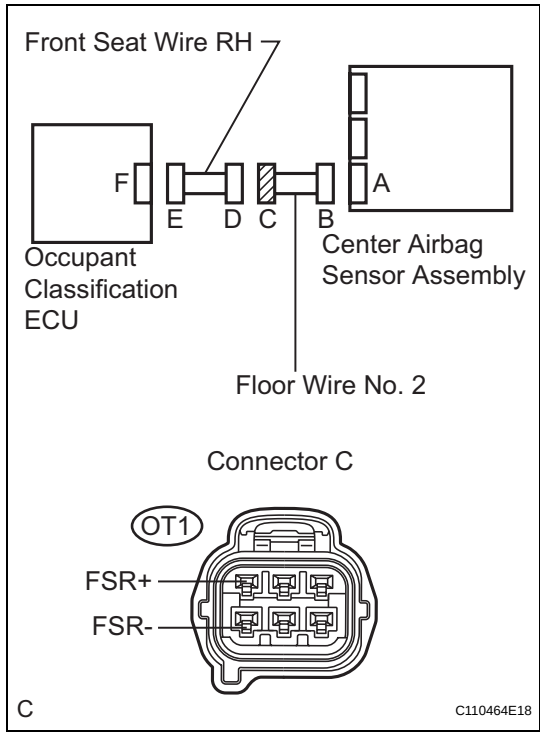
REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See page RS-423)

OK

END

22

CHECK FLOOR WIRE NO. 2 (TO B+)



- (a) Turn the power switch off.
- (b) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- (c) Disconnect the front seat wire RH connector from the floor wire No. 2.
- (d) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
- (e) Turn the power switch on (IG).
- (f) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester connection	Condition	Specified condition
OT1-1 (FSR+) - Body ground	Power switch on (IG)	Below 1 V
OT1-4 (FSR-) - Body ground	Power switch on (IG)	Below 1 V

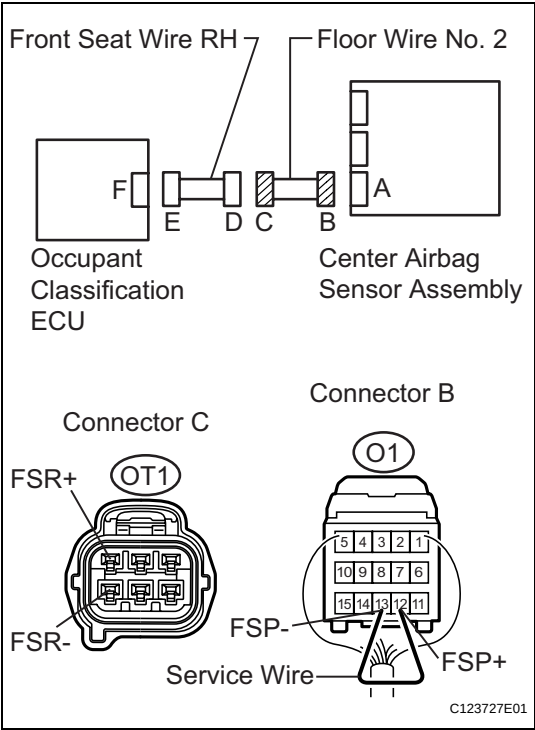
NG

REPAIR OR REPLACE FLOOR WIRE NO. 2

OK

REPAIR OR REPLACE FRONT SEAT WIRE RH

23 CHECK FLOOR WIRE NO. 2 (OPEN)



- (a) Disconnect the front seat wire RH connector from the floor wire No. 2.
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
OT1-1 (FSR+) - OT1-4 (FSR-)	Always	Below 1 Ω

NG

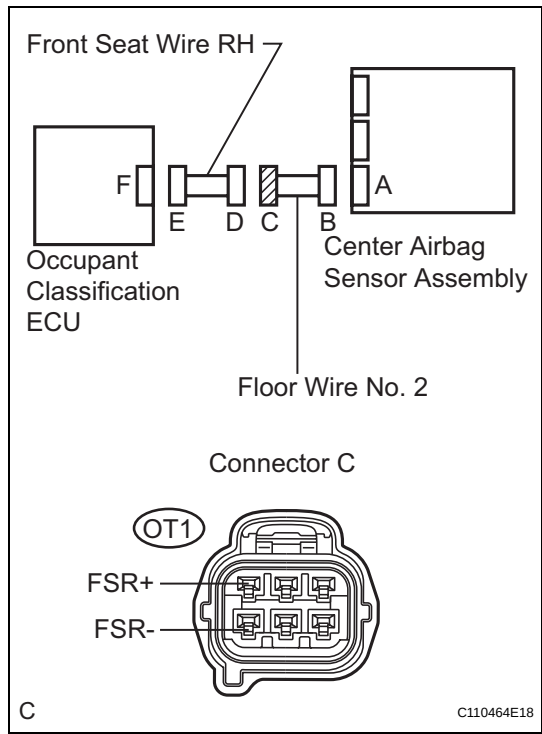
REPAIR OR REPLACE FLOOR WIRE NO. 2

OK

REPAIR OR REPLACE FRONT SEAT WIRE RH

24

CHECK FLOOR WIRE NO. 2 (SHORT)



- (a) Disconnect the front seat wire RH connector from the floor wire No. 2.
- (b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Condition	Specified condition
OT1-1 (FSR+) - OT1-4 (FSR-)	Always	1 MΩ or Higher

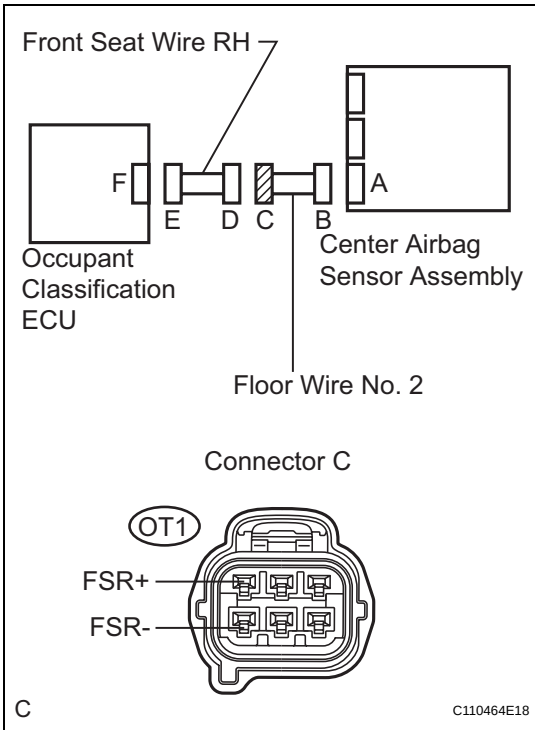
NG

REPAIR OR REPLACE FLOOR WIRE NO. 2

OK

REPAIR OR REPLACE FRONT SEAT WIRE RH

25 CHECK FLOOR WIRE NO. 2 (TO GROUND)



- (a) Disconnect the front seat wire RH connector from the floor wire No. 2.
- (b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Condition	Specified condition
OT1-1 (FSR+) - Body ground	Always	1 MΩ or Higher
OT1-4 (FSR-) - Body ground	Always	1 MΩ or Higher

NG

REPAIR OR REPLACE FLOOR WIRE NO. 2

OK

REPAIR OR REPLACE FRONT SEAT WIRE RH