DTC	B1790	Center Airbag Sensor Assembly Communication Circuit Malfunction

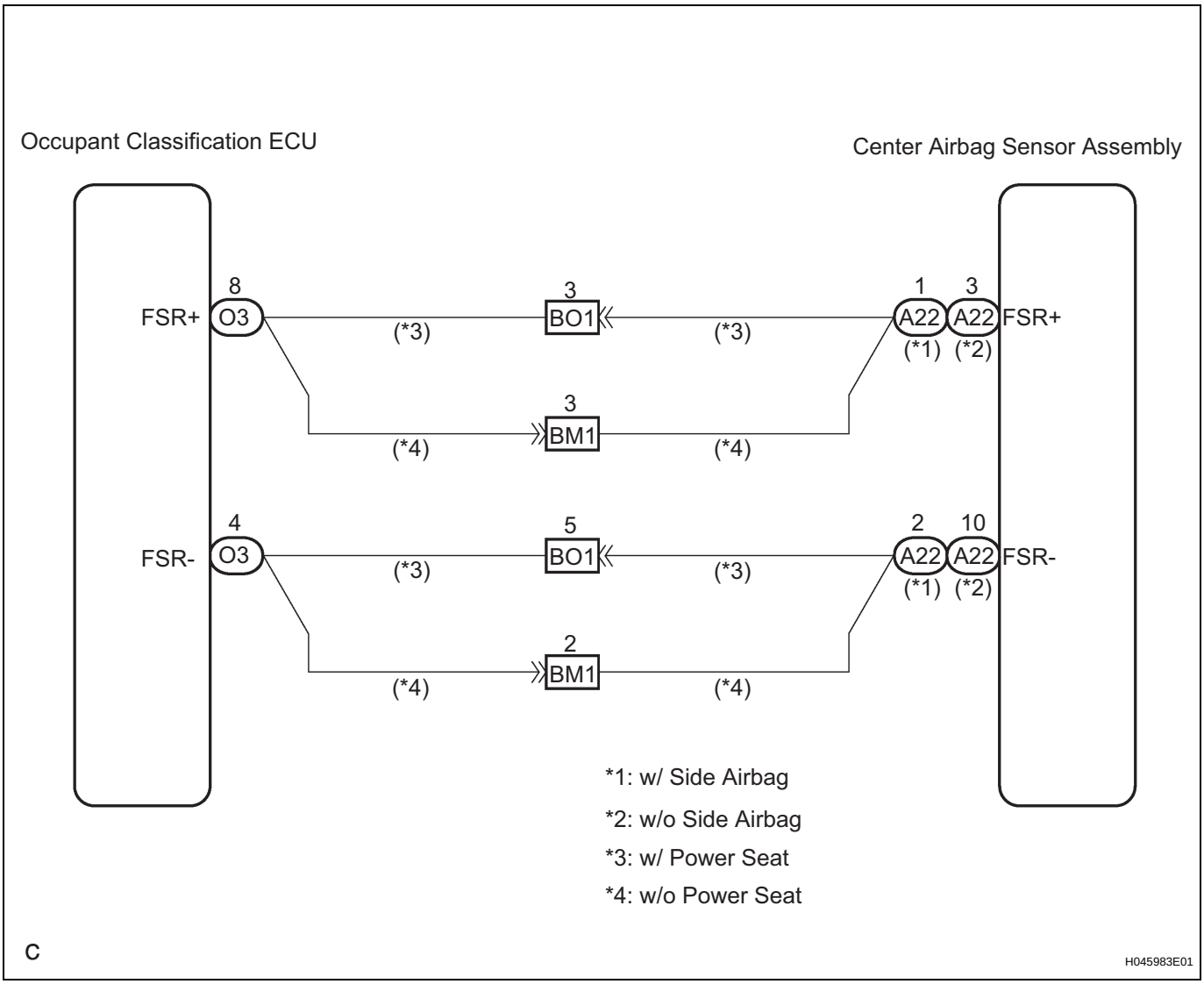
DESCRIPTION

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

RS

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 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

(a) Turn the ignition switch to the ON position.
(b) Clear the DTCs stored in the memory (See page RS-335).
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-335).
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

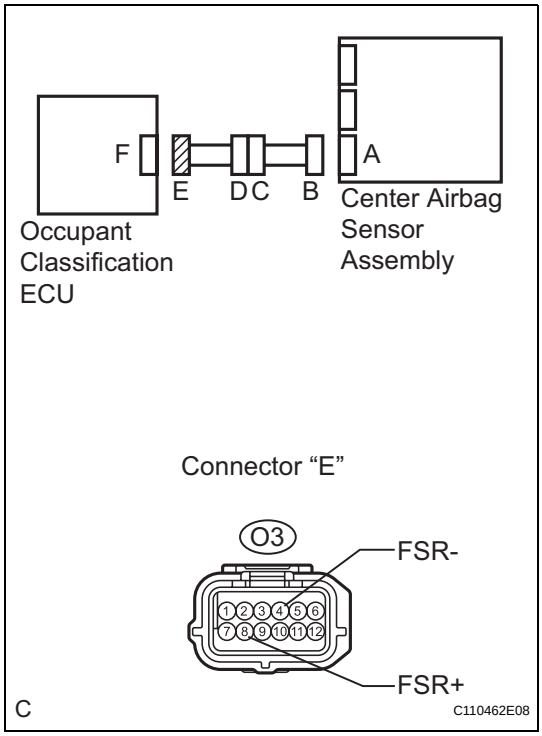
2	CHECK CONNECTION OF CONNECTORS

(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, THEN GO TO STEP 1**

OK

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.

Standard voltage

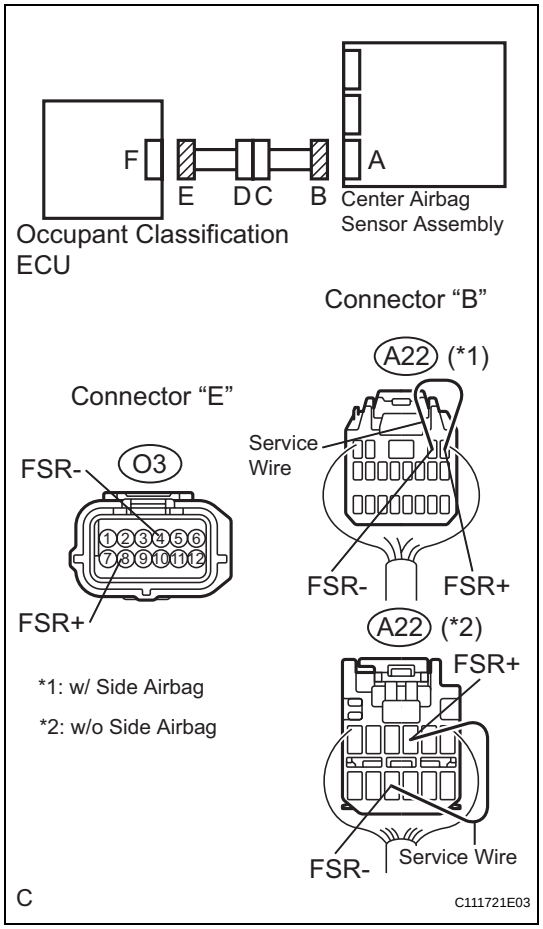
Tester connection	Condition	Specified condition
O3-8 (FSR+) - Body ground	Ignition switch ON	Below 1 V
O3-4 (FSR-) - Body ground	Ignition switch ON	Below 1 V

NG → **Go to step 12**

OK

RS

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) w/ Side airbag:
Using a service wire, connect A22-1 (FSR+) and A22-2 (FSR-) of connector "B".
NOTICE:
Do not forcibly insert a service wire into the terminals of the connector when connecting.

(d) w/o Side airbag:
Using a service wire, connect A22-3 (FSR+) and A22-10 (FSR-) of connector "B".
NOTICE:
Do not forcibly insert a service wire into the terminals of the connector when connecting.

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

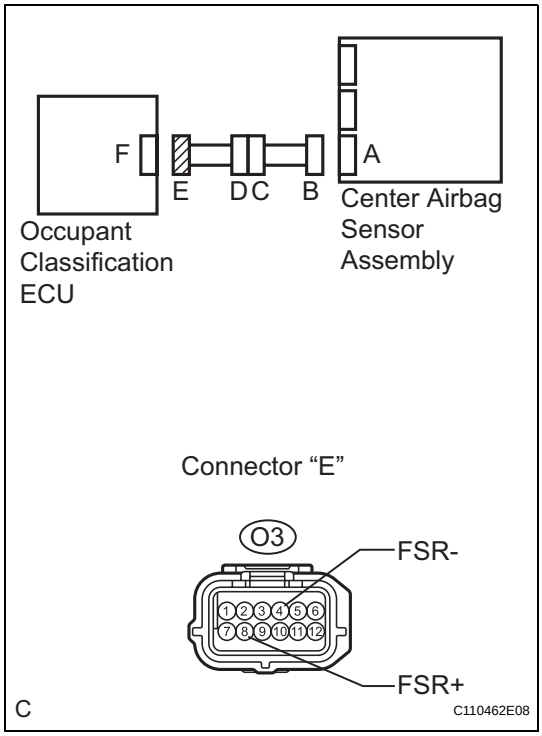
Tester connection	Condition	Specified condition
O3-8 (FSR+) - O3-4 (FSR-)	Always	Below 1 Ω

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.

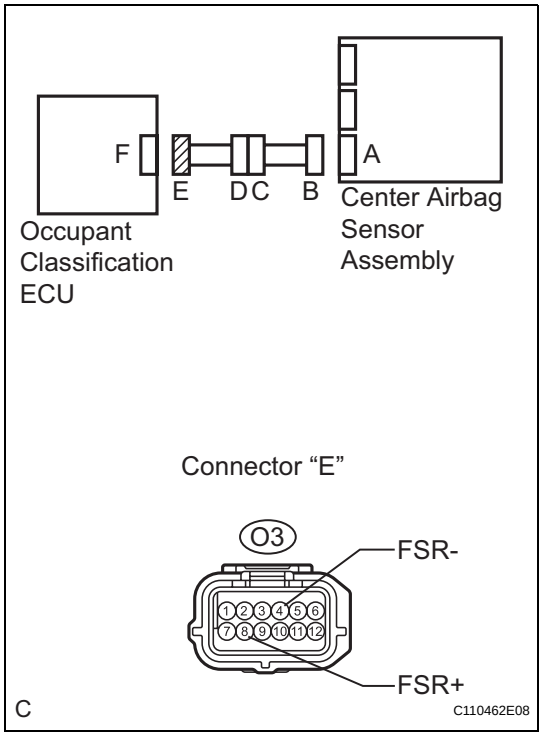
Standard resistance

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

NG → **Go to step 14**

OK

6 CHECK OCCUPANT CLASSIFICATION ECU CIRCUIT (SHORT TO GROUND)



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

Standard 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 the memory (See page RS-335).
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-335).
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-487).
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-328).
OK:
"COMPLETED" is displayed.

NEXT

10	PERFORM SENSITIVITY CHECK

(a) Using the intelligent tester, perform "Sensitivity check" (See page RS-328).
Standard value:
27 to 33 kg (59.52 to 72.75 lb)

NEXT

RS

11	CHECK DTC

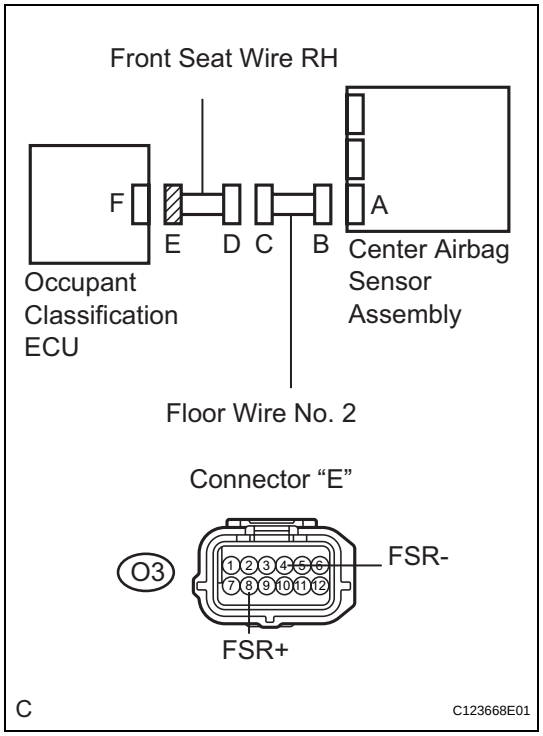
(a) Turn the ignition switch to the ON position.
(b) Clear the DTCs stored in the memory (See page RS-335).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor assembly.
(c) Turn the ignition switch to the LOCK position.
(d) Turn the ignition switch to the ON position.
(e) Check the DTCs (See page RS-335).
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 FRONT SEAT WIRE RH (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 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 ignition switch to the ON position.
(f) Measure the voltage according to the value(s) in the table below.

Standard 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

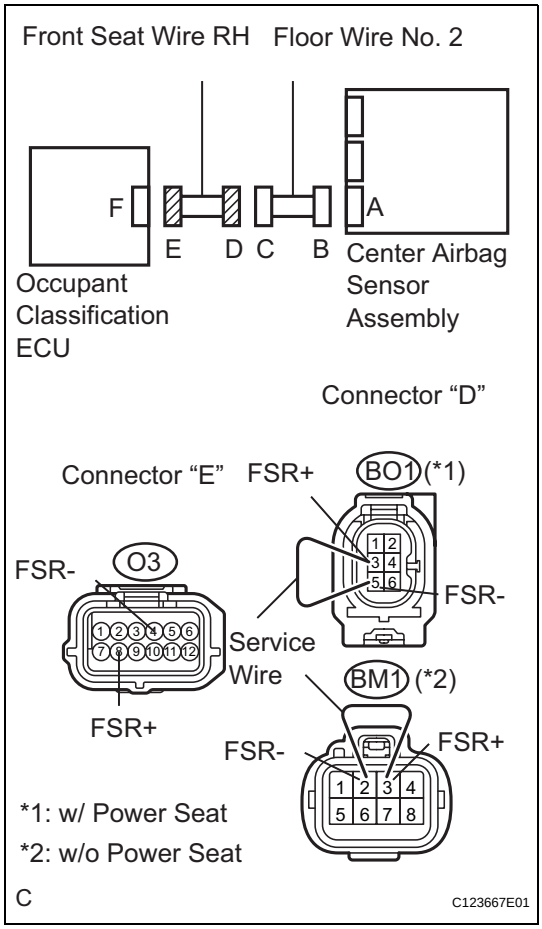
NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

REPAIR OR REPLACE FLOOR WIRE NO.2

RS

13	CHECK FRONT SEAT WIRE RH (OPEN)



(a) Disconnect the service wire from connector "B".
(b) Disconnect the front seat wire RH connector from the floor wire No. 2.
(c) w/ Power seat:
Using a service wire, connect BO1-3 (FSR+) and BO1-5 (FSR-) of connector "D".
NOTICE:
Do not forcibly insert a service wire into the terminals of the connector when connecting.
(d) w/o Power seat:
Using a service wire, connect BM1-3 (FSR+) and BM1-2 (FSR-) of connector "D".
NOTICE:
Do not forcibly insert a service wire into the terminals of the connector when connecting.
(e) Measure the resistance according to the value(s) in the table below.
Standard resistance

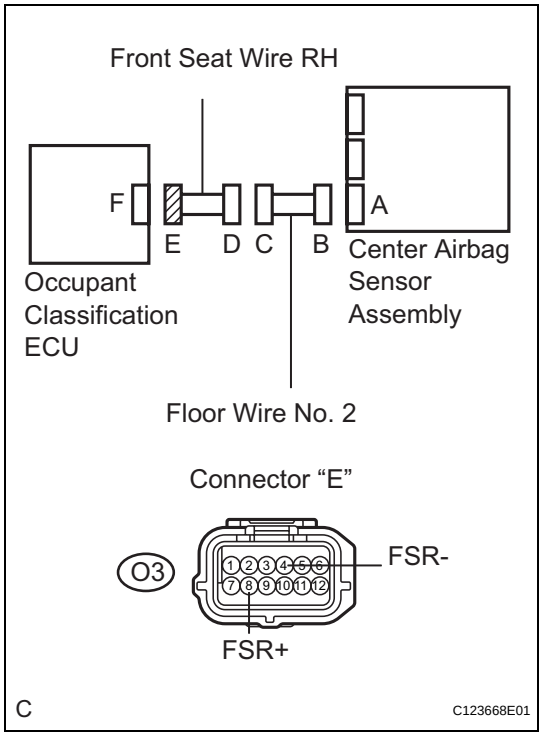
Tester connection	Condition	Specified condition
O3-8 (FSR+) - O3-4 (FSR-)	Always	Below 1 Ω

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

REPAIR OR REPLACE FLOOR WIRE NO.2

14	CHECK FRONT SEAT WIRE RH (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
O3-8 (FSR+) - O3-4 (FSR-)	Always	1 MΩ or higher

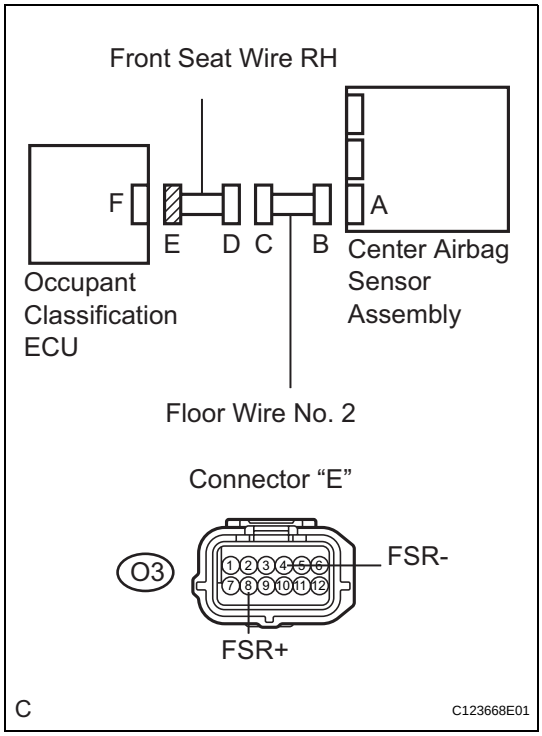
RS

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

REPAIR OR REPLACE FLOOR WIRE NO.2

15	CHECK FRONT SEAT WIRE RH (SHORT 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
O3-8 (FSR+) - Body ground	Always	1 MΩ or higher
O3-4 (FSR-) - Body ground	Always	1 MΩ or higher

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

REPAIR OR REPLACE FLOOR WIRE NO.2