

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

**DESCRIPTION**

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

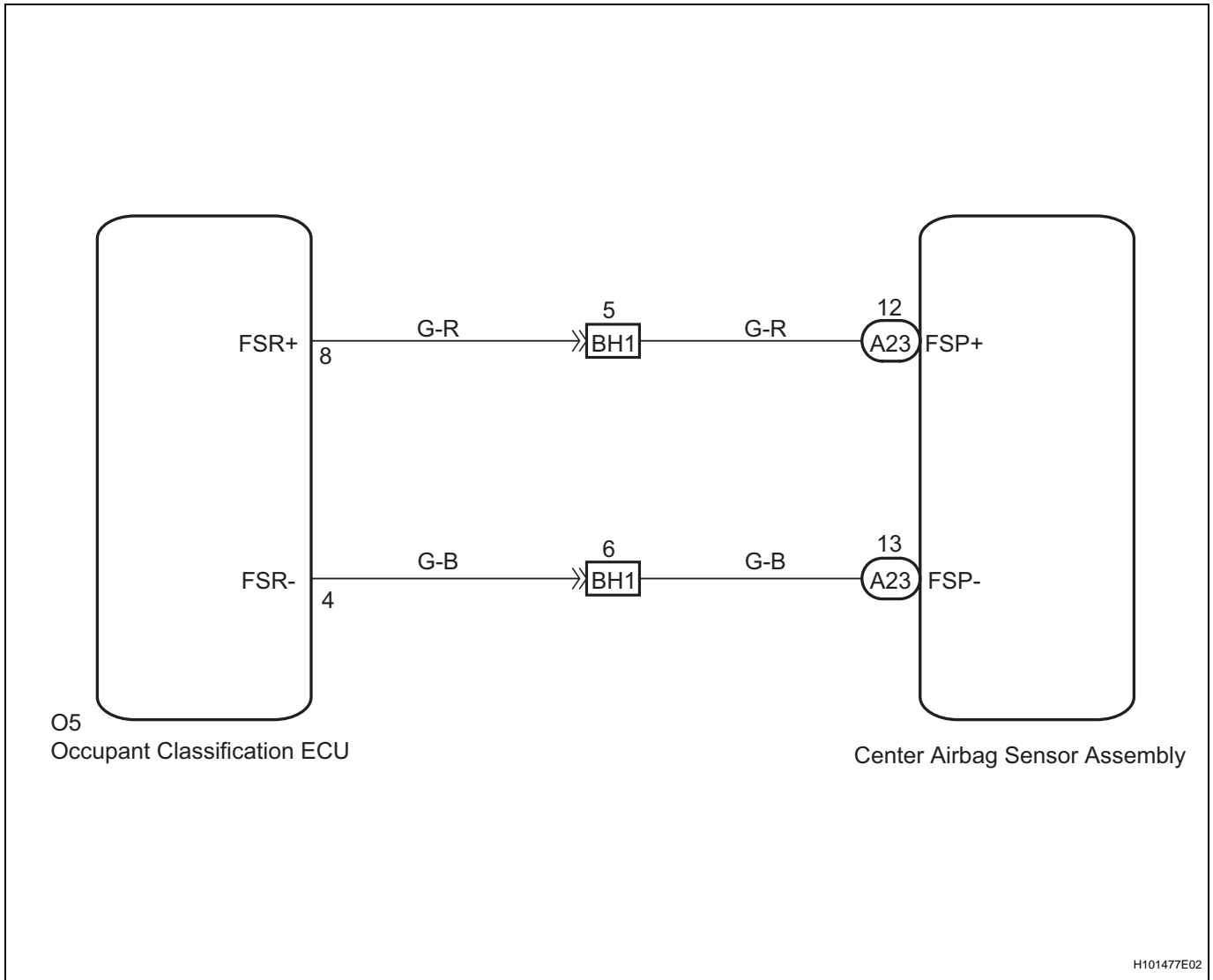
DTC B1790 is set when a malfunction is detected in the center airbag sensor assembly communication circuit.

DTC No.	DTC Detections Conditions	Trouble Areas
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>• Floor wire</li> <li>• No. 1 seat wire</li> <li>• Occupant classification ECU</li> <li>• Center airbag sensor assembly</li> </ul>

**HINT:**

- When DTC B1630/32 is detected as a result of troubleshooting the supplemental restraint system, perform troubleshooting for DTC B1790 of the occupant classification system.
- Use the intelligent tester to check for DTCs of the occupant classification ECU, otherwise the DTCs cannot be read.

## WIRING DIAGRAM



### CAUTION:

**In order to prevent unexpected airbag deployment, disconnect the following connectors before inspecting parts such as wire harnesses, if the application of tester probes to the center airbag sensor assembly connector is necessary.**

- Turn the ignition switch to the LOCK position.
- Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- Disconnect the connectors from the center airbag sensor assembly.
- Disconnect the connectors from the steering pad assembly.
- Disconnect the connector from the front passenger airbag assembly.

### HINT:

Skip the following steps if side and curtain shield airbags are not fitted.

- Disconnect the connector from the front seat airbag assembly LH.
- Disconnect the connector from the front seat airbag assembly RH.
- Disconnect the connector from the curtain shield airbag assembly LH.
- Disconnect the connector from the curtain shield airbag assembly RH.
- Disconnect the connector from the front seat outer belt assembly LH.
- Disconnect the connector from the front seat outer belt assembly RH.

## HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front RH seat assembly 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 problems, such as seat rail deformation. Hold the seat up only for as long as necessary.

**1 CHECK DTC**

- Turn the ignition switch to the ON position.
- Clear any DTCs stored in the memory (See page [RS-365](#)).

## HINT:

- First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor assembly.
  - Use the intelligent tester to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.
- Turn the ignition switch to the LOCK position.
  - Turn the ignition switch to the ON position.
  - Using the intelligent tester, check for DTCs of the occupant classification ECU (See page [RS-365](#)).

**OK:****DTC B1790 is not output.**

## HINT:

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

**OK****USE SIMULATION METHOD TO CHECK****NG****2 CHECK CONNECT CONNECTORS**

- Turn the ignition switch to the LOCK position.
- Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- Check that the connectors are properly connected to the occupant classification ECU and the center airbag sensor assembly.

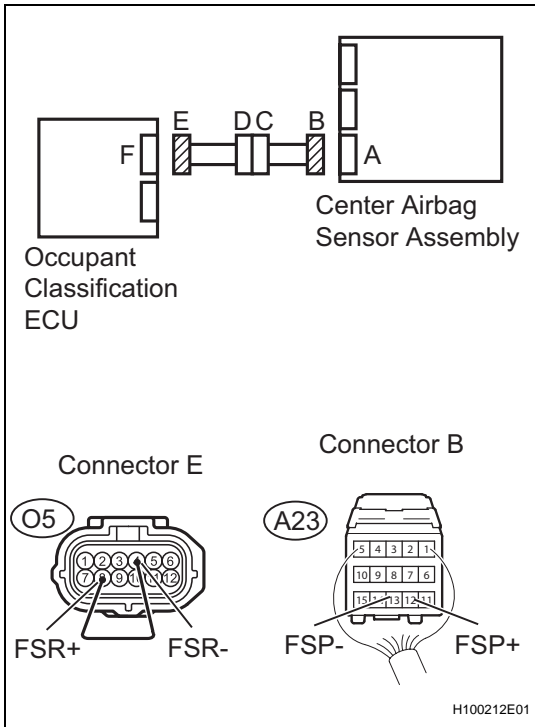
**OK:****The connectors are properly connected.****NG****CONNECT CONNECTORS****OK****3 CHECK CONNECTORS**

- Check that the connectors (on the center airbag sensor assembly side and occupant classification ECU side) are not damaged (See page [IN-34](#)).

**OK:****The connectors are not deformed or damaged.****NG****REPAIR OR REPLACE WIRE HARNESS**

OK

**4 CHECK AIRBAG SENSOR ASSEMBLY CENTER COMMUNICATION 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 O5-8 (FSR+) and O5-4 (FSR-) of connector E.

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

- (d) Measure the resistance.

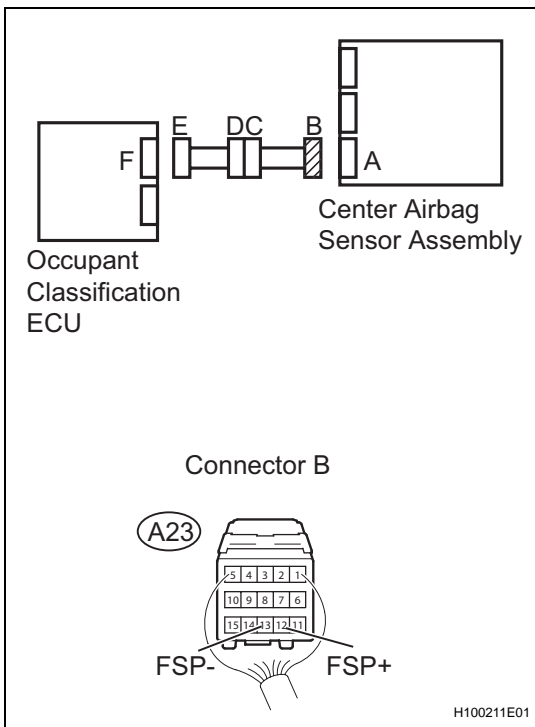
**Standard resistance**

Tester Connection	Condition	Specified Condition
A23-12 (FSP+) - A23-13 (FSP-)	Always	Below 1 Ω

**NG** → **Go to step 13**

OK

**5 CHECK AIRBAG SENSOR ASSEMBLY CENTER COMMUNICATION CIRCUIT (FOR SHORT)**



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

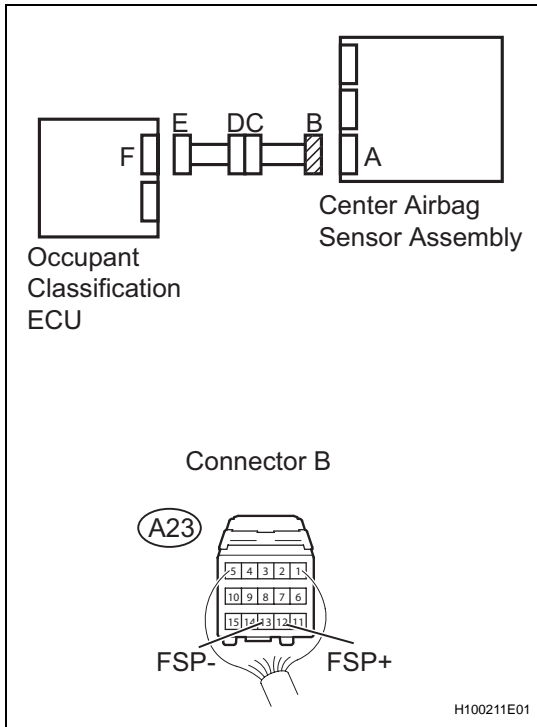
**Standard resistance**

Tester Connection	Condition	Specified Condition
A23-12 (FSP+) - A23-13 (FSP-)	Always	1 MΩ or higher

**NG** → **Go to step 14**

OK

**6 CHECK AIRBAG SENSOR ASSEMBLY CENTER COMMUNICATION CIRCUIT (TO B+)**



- (a) Connect the negative (-) terminal cable to the battery.
- (b) Turn the ignition switch to the ON position.
- (c) Measure the voltage.

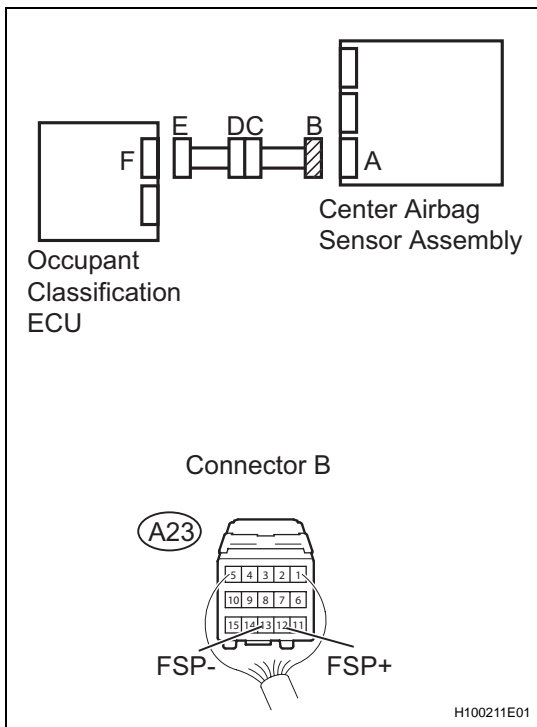
**Standard voltage**

Tester Connection	Condition	Specified Condition
A23-12 (FSP+) - Body ground	Ignition switch ON	Below 1 V
A23-13 (FSP-) - Body ground	Ignition switch ON	Below 1 V

NG **Go to step 15**

OK

**7 CHECK AIRBAG SENSOR ASSEMBLY CENTER COMMUNICATION CIRCUIT (TO GROUND)**



- (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) Measure the resistance.

**Standard resistance**

Tester Connection	Condition	Specified Condition
A23-12 (FSP+) - Body ground	Always	1 MΩ or higher
A23-13 (FSP-) - Body ground	Always	1 MΩ or higher

NG **Go to step 16**

RS

OK

**8 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 any DTCs stored in the memory (See page [RS-365](#)).

HINT:

- First clear any DTCs stored in the occupant classification ECU and then in the center airbag sensor assembly.
- Use the intelligent tester to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.
- (e) Turn the ignition switch to the LOCK position.
- (f) Turn the ignition switch to the ON position.
- (g) Using the intelligent tester, check for DTCs of the occupant classification ECU (See page [RS-365](#)).

**OK:**

**DTC B1790 is not output.**

HINT:

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

NG

**USE SIMULATION METHOD TO CHECK**

NG

**9 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-631](#)).

HINT:

Perform the inspection using parts from a normal vehicle when 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 ignition switch to the ON position.
- (d) Using the intelligent tester, perform the zero point calibration (See page [RS-357](#)).

**OK:**

**COMPLETED is displayed on the tester.**

NEXT

**11** PERFORM SENSITIVITY CHECK

- (a) Using the intelligent tester, perform the sensitivity check (See page [RS-357](#)).

**Standard value:****27 to 33 kg (59.52 to 72.75 lb)**

NEXT

**12** CHECK DTC

- (a) Connect the connector to the occupant classification ECU.  
(b) Connect the negative (-) terminal cable to the battery.  
(c) Turn the ignition switch to the ON position.  
(d) Clear any DTCs stored in the memory (See page [RS-365](#)).

**HINT:**

- First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor assembly.
  - Use the intelligent tester to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.
- (e) Turn the ignition switch to the LOCK position.  
(f) Turn the ignition switch to the ON position.  
(g) Using the intelligent tester, check for DTCs of the occupant classification ECU (See page [RS-365](#)).

**OK:****DTC B1790 is not output.****HINT:**

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

NG

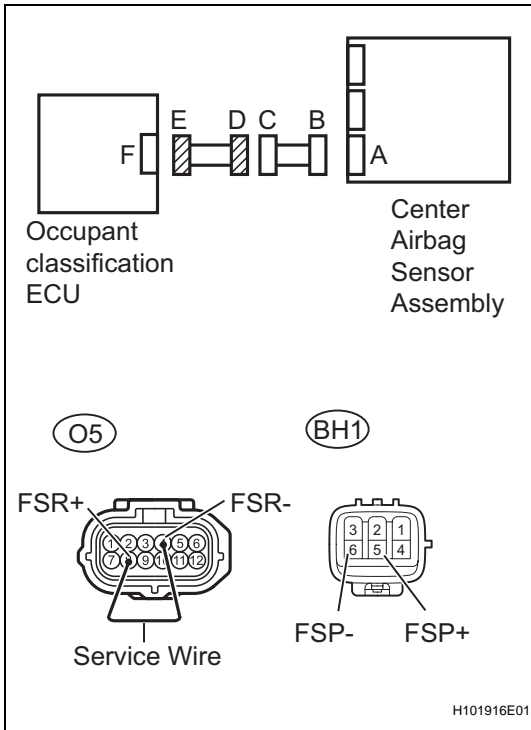
**REPLACE AIRBAG SENSOR ASSEMBLY  
CENTER**

OK

RS

END

**13 CHECK NO. 1 SEAT WIRE (FOR OPEN)**



(a) Disconnect the No.1 seat wire connector from the occupant classification ECU.

HINT:

The service wire has already been inserted into connector E.

(b) Measure the resistance.

**Standard resistance**

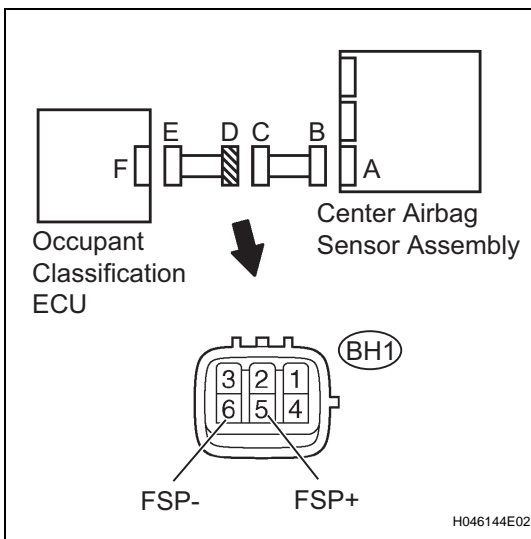
Tester Connection	Condition	Specified Condition
BH1-5 (FSP+) - BH1-6 (FSP-)	Always	Below 1 Ω

**NG REPAIR OR REPLACE NO. 1 SEAT WIRE**

**OK**

**REPAIR OR REPLACE FLOOR WIRE**

**14 CHECK NO. 1 SEAT WIRE (FOR SHORT)**



(a) Disconnect the No.1 seat wire connector from the occupant classification ECU.

(b) Measure the resistance.

**Standard resistance**

Tester Connection	Condition	Specified Condition
BH1-5 (FSP+) - BH1-6 (FSP-)	Always	1 MΩ or higher

**NG REPAIR OR REPLACE NO. 1 SEAT WIRE**

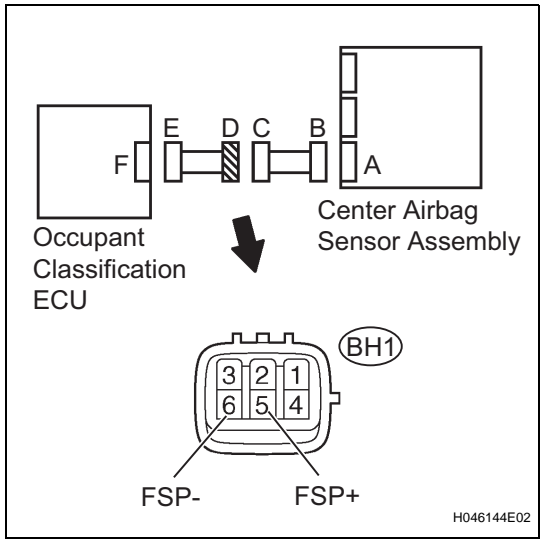
**OK**

**REPAIR OR REPLACE FLOOR WIRE**

**RS**



**15 CHECK NO. 1 SEAT 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 No. 1 seat wire connector from the occupant classification ECU.
- (d) Disconnect the connector from the occupant classification ECU.
- (e) Connect the negative (-) terminal cable to the battery.
- (f) Turn the ignition switch to the ON position.
- (g) Measure the voltage.

**Standard voltage**

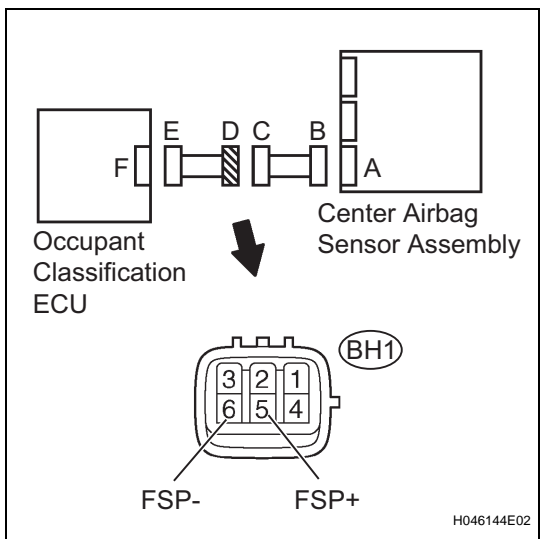
Tester Connection	Condition	Specified Condition
BH1-5 (FSP+) - Body ground	Ignition switch ON	Below 1 V
BH1-6 (FSP-) - Body ground	Ignition switch ON	Below 1 V

**NG** REPAIR OR REPLACE NO. 1 SEAT WIRE

**OK**

**REPAIR OR REPLACE FLOOR WIRE**

**16 CHECK NO. 1 SEAT WIRE (TO GROUND)**



- (a) Disconnect the No. 1 seat wire connector from the occupant classification ECU.
- (b) Measure the resistance.

**Standard resistance**

Tester Connection	Condition	Specified Condition
BH1-5 (FSP+) - Body ground	Always	1 MΩ or higher
BH1-6 (FSP-) - Body ground	Always	1 MΩ or higher

**NG** REPAIR OR REPLACE NO. 1 SEAT WIRE

**OK**

**REPAIR OR REPLACE FLOOR WIRE**

**RS**