**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.

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>DTC Detecting Condition</th>
<th>Trouble Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1790</td>
<td>• 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&lt;br&gt;• Center airbag sensor assembly malfunction&lt;br&gt;• Occupant classification ECU malfunction</td>
<td>• No. 1 Seat wire&lt;br&gt;• Floor wire&lt;br&gt;• Occupant classification ECU&lt;br&gt;• Center airbag sensor assembly</td>
</tr>
</tbody>
</table>

**WIRING DIAGRAM**

(INCLUDE DIAGRAM OF WIRING SCHEMATIC)

**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

(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

## 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

- OK
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

<table>
<thead>
<tr>
<th>Tester connection</th>
<th>Condition</th>
<th>Specified condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4-8 (FSR+) -</td>
<td>Ignition switch on</td>
<td>Below 1 V</td>
</tr>
<tr>
<td>Body ground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4-4 (FSR-) -</td>
<td>Ignition switch on</td>
<td>Below 1 V</td>
</tr>
<tr>
<td>Body ground</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NG > Go to step 12

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

<table>
<thead>
<tr>
<th>Tester connection</th>
<th>Condition</th>
<th>Specified condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4-8 (FSR+) -</td>
<td>Always</td>
<td>Below 1 Ω</td>
</tr>
<tr>
<td>Q4-4 (FSR-) -</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Tester connection</th>
<th>Condition</th>
<th>Specified condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4-8 (FSR+) - Q4-4 (FSR-)</td>
<td>Always</td>
<td>1 MΩ or higher</td>
</tr>
</tbody>
</table>

NG  Go to step 14

OK

6 CHECK CENTER AIRBAG SENSOR CIRCUIT (TO GROUND)

(a) Measure the resistance.

**Standard resistance**

<table>
<thead>
<tr>
<th>Tester connection</th>
<th>Condition</th>
<th>Specified condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4-8 (FSR+) - Body ground</td>
<td>Always</td>
<td>1 MΩ or higher</td>
</tr>
<tr>
<td>Q4-4 (FSR-) - Body ground</td>
<td>Always</td>
<td>1 MΩ or higher</td>
</tr>
</tbody>
</table>

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-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
PERFORM SENSITIVITY CHECK

(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).

CHECK DTC

(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.

NG
   REPLACE CENTER AIRBAG SENSOR ASSEMBLY

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**

<table>
<thead>
<tr>
<th>Tester connection</th>
<th>Condition</th>
<th>Specified condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>KQ1-1 (FSR+) -</td>
<td>Ignition switch on</td>
<td>Below 1 V</td>
</tr>
<tr>
<td>KQ1-4 (FSR-) -</td>
<td>Ignition switch on</td>
<td>Below 1 V</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Tester connection</th>
<th>Condition</th>
<th>Specified condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>KQ1-1 (FSR+) - KQ1-4 (FSR-)</td>
<td>Always</td>
<td>Below 1 Ω</td>
</tr>
</tbody>
</table>

NG REPAIR OR REPLACE FLOOR WIRE

OK

REPLACE NO.1 SEAT WIRE
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**

<table>
<thead>
<tr>
<th>Tester connection</th>
<th>Condition</th>
<th>Specified condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>KQ1-1 (FSR+) - KQ1-4 (FSR-)</td>
<td>Always</td>
<td>1 MΩ or higher</td>
</tr>
</tbody>
</table>

**NG** REPAIR OR REPLACE FLOOR WIRE

**OK**

REPLACE NO. 1 SEAT WIRE
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**

<table>
<thead>
<tr>
<th>Tester connection</th>
<th>Condition</th>
<th>Specified condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>KQ1-1 (FSR+) - Body ground</td>
<td>Always</td>
<td>1 MΩ or higher</td>
</tr>
<tr>
<td>KQ1-4 (FSR-) - Body ground</td>
<td>Always</td>
<td>1 MΩ or higher</td>
</tr>
</tbody>
</table>

**NG**  REPAIR OR REPLACE FLOOR WIRE

**OK**

REPLACE NO.1 SEAT WIRE