Trouble in Passenger Airbag ON / OFF Indicator

DESCRIPTION
The occupant classification system detects the front passenger seat condition and then indicates whether the front passenger airbag is activated or not through the passenger airbag ON/OFF indicator illumination. The passenger airbag ON/OFF indicator illumination changes depending on the front passenger seat condition as shown in the table below.

<table>
<thead>
<tr>
<th>Front passenger seat condition</th>
<th>ON Indicator</th>
<th>OFF Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult is seated</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>Child is seated</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>Vacant</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>Occupant classification system failure</td>
<td>OFF</td>
<td>ON</td>
</tr>
</tbody>
</table>
WIRING DIAGRAM

E32
Occupant Classification ECU

Passenger Airbag ON/OFF Indicator
(Integration Control and Panel Assembly)

Center Airbag Sensor Assembly

Front Occupant Classification Sensor LH
Front Occupant Classification Sensor RH
Rear Occupant Classification Sensor LH
Rear Occupant Classification Sensor RH
INSPECTION PROCEDURE

1 CHECK SRS WARNING LIGHT

(a) Turn the ignition switch to the on position, and check the SRS warning light condition.

OK: The SRS warning light does not come on.

NG Go to step 9

2 CHECK PASSENGER AIRBAG ON/OFF INDICATOR CONDITION

(a) Turn the ignition switch to the on position.
(b) Check if the passenger airbag ON/OFF indicator correctly indicates the front passenger seat condition.

OK

<table>
<thead>
<tr>
<th>Front passenger seat condition</th>
<th>ON Indicator</th>
<th>OFF Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult is seated</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>Child is seated</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>Vacant</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>Occupant classification system failure</td>
<td>OFF</td>
<td>ON</td>
</tr>
</tbody>
</table>

NG END

3 PERFORM ZERO POINT CALIBRATION

(a) Turn the ignition switch to the lock position.
(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.

NG Go to step 5

4 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).

NG  Go to step 5

OK

END

5  RETIGHTEN FRONT SEAT ASSEMBLY RH BOLT

(a) Turn the ignition switch to the lock position.
(b) Loosen the 4 installation bolts of the front seat assembly RH.
(c) Tighten the 4 installation bolts of the front seat assembly RH to the specified torque.
Torque: 37 N*m (380 kgf*cm, 27 ft.*lb)

NEXT

6  PERFORM ZERO POINT CALIBRATION

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch to the on position.
(c) Using the intelligent tester, perform the zero point calibration (See page RS-246).

OK:
COMPLETED is displayed.

NG  Go to step 8

OK

7  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).

NG

Go to step 8

OK

END

8 CHECK 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 4 occupant classification sensors.

OK:
The connectors are properly connected.

(d) Disconnect the connectors from the occupant classification ECU and the 4 occupant classification sensors.
(e) Check that the connectors are not damaged or deformed.

OK:
The connectors are normal.

NG

REPAIR OR REPLACE WIRE HARNESS AND CONNECTOR

OK

9 CHECK DTC

(a) Connect the connectors to the occupant classification ECU and the 4 occupant classification sensors.
(b) Connect the negative (-) terminal cable to the battery.
(c) Turn the ignition switch to the on position, and wait for at least 60 seconds.
(d) Turn the ignition switch to the lock position.
(e) Clear the DTCs stored in the memory (See page RS-254).
(f) Turn the ignition switch to the on position, and wait for at least 60 seconds.
(g) Check the DTCs (See page RS-254).

OK:
DTC is not output.

NG
REPLACE CENTER AIRBAG SENSOR ASSEMBLY

10 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

11 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.

NG
Go to step 13

OK

12 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)
When performing the sensitivity check, use a solid metal weight (the check result may not be accurate if a liquid weight is used).

NG

Go to step 13

END

13 REPLACE FRONT SEAT ASSEMBLY RH

(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 front seat assembly RH (See page SE-5).

HINT:
Perform the inspection using parts from a normal vehicle if possible.

14 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.

15 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).