

DTC	B1781	OCCUPANT CLASSIFICATION SENSOR FRONT RH CIRCUIT MALFUNCTION
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CIRCUIT DESCRIPTION

The occupant classification sensor front RH circuit consists of the occupant classification ECU and the occupant classification sensor front RH.

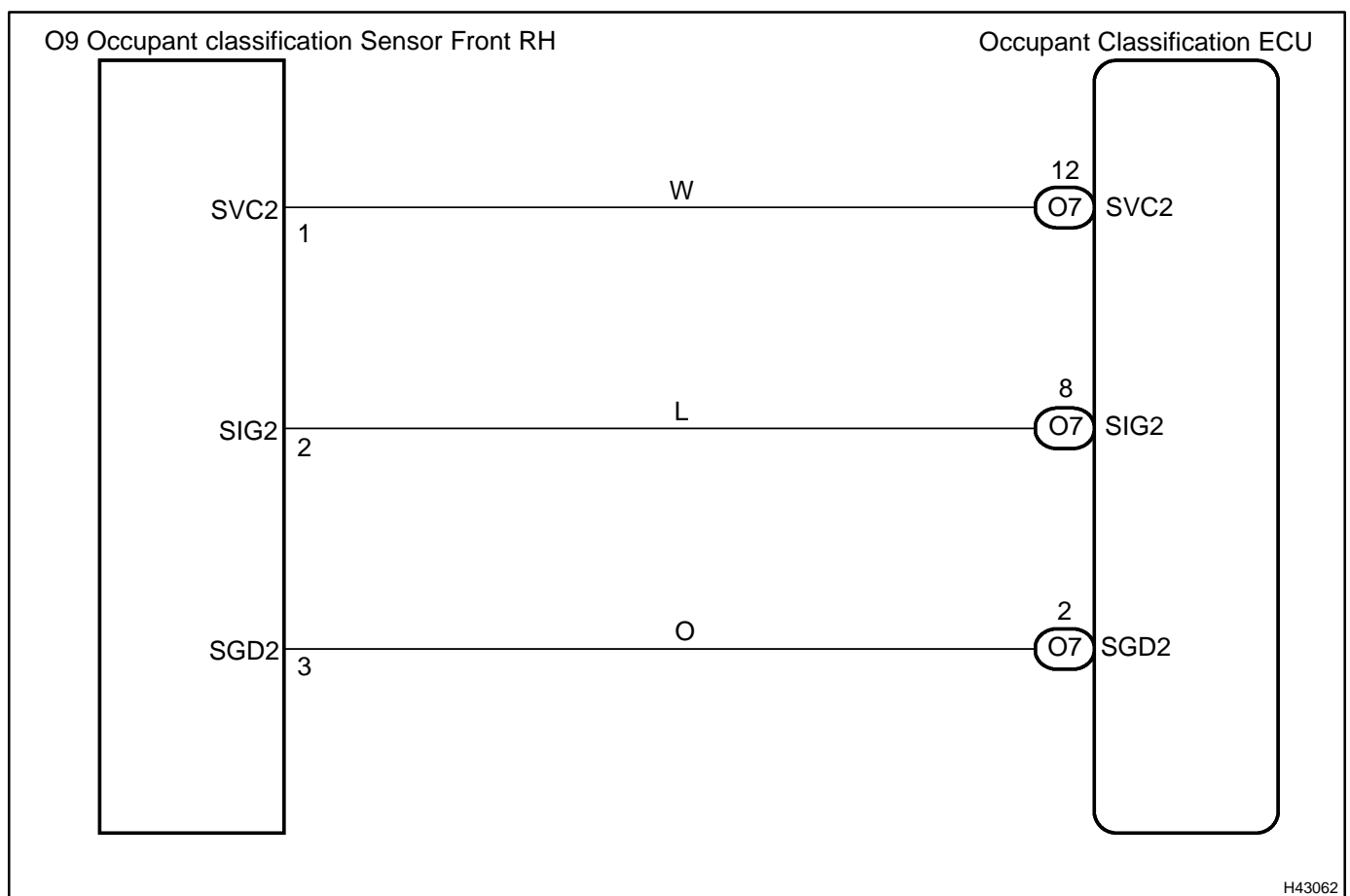
DTC B1781 is recorded when a malfunction is detected in the occupant classification sensor front RH circuit.

DTC No.	DTC Detecting Condition	Trouble Area
B1781	<ul style="list-style-type: none"> When the occupant classification ECU receives a line short signal, open signal, short to ground signal or B+ short signal in the occupant classification sensor front RH circuit for 2 seconds. Occupant classification sensor front RH malfunction Occupant classification ECU malfunction 	<ul style="list-style-type: none"> Seat adjuster frame assy (Occupant classification sensor front RH) Front seat wire RH Occupant classification ECU

HINT:

- When DTC B1150/23 is detected as a result of troubleshooting for the supplemental restraint system, perform troubleshooting for DTC B1781 of the occupant classification system.
- Use the hand-held tester to check the DTC of the occupant classification ECU, otherwise the DTC cannot be read.

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front RH seat assy 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 ignition switch to the ON position.
- Clear the DTCs stored in memory (see page 05-1215).

HINT:

- First clear DTCs stored in the occupant classification ECU memory and then in the airbag sensor assy center memory.
 - Use the hand-held tester to clear the DTC of the occupant classification ECU, otherwise the DTC cannot be cleared.
- Turn the ignition switch to the LOCK position.
 - Turn the ignition switch to the ON position.
 - Using the hand-held tester, check the DTCs (see page 05-1215).

OK:

DTC B1781 is not output.

HINT:

Codes other than code B1781 may be output at this time, but they are not related to this check.

NG

Go to step 2

OK

USE SIMULATION METHOD TO CHECK (SEE PAGE 05-1207)

2 CHECK CONNECTION OF 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 occupant classification sensor front RH.

OK:

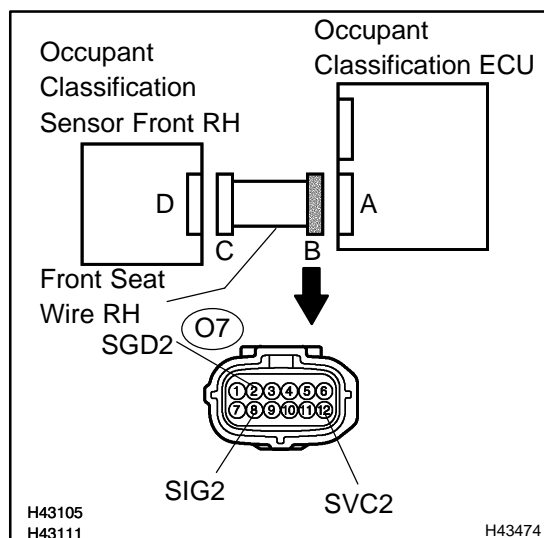
The connectors are connected.

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CONNECT CONNECTORS, THEN GO TO STEP 1

OK

3 CHECK FRONT SEAT WIRE RH (TO B+)



- (a) Disconnect the connectors from the occupant classification ECU and the occupant classification sensor front RH.
- (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:

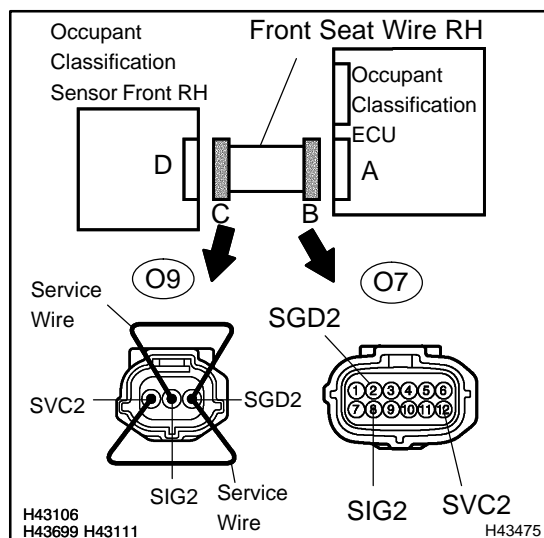
Tester connection	Condition	Specified condition
O7-2 (SGD2) - Body ground	Ignition switch ON	Below 1 V
O7-8 (SIG2) - Body ground	Ignition switch ON	Below 1 V
O7-12 (SVC2) - Body ground	Ignition switch ON	Below 1 V

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REPAIR OR REPLACE FRONT SEAT WIRE RH

OK

4	CHECK FRONT SEAT WIRE RH (OPEN)
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- (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 O9-1 (SVC2) and O9-3 (SGD2), and connect O9-2 (SIG2) and O9-3(SGD2) of connector "C".

NOTICE:

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

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

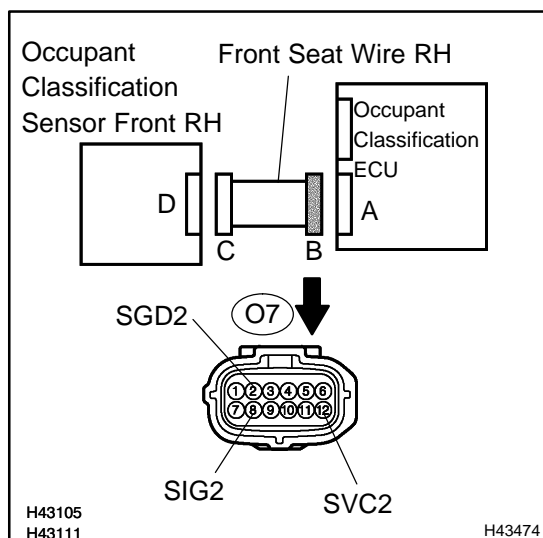
Standard:

Tester connection	Condition	Specified condition
O7-8 (SIG2) - O7-2 (SGD2)	Always	Below 1 Ω
O7-12 (SVC2) - O7-2 (SGD2)	Always	Below 1 Ω

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REPAIR OR REPLACE FRONT SEAT WIRE RH

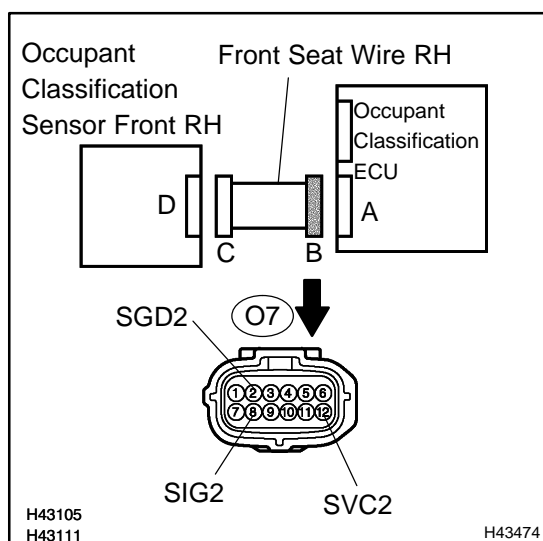
OK

5 CHECK FRONT SEAT WIRE RH (SHORT)

- (a) Disconnect the service wire from connector "C".
- (b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
O7-8 (SIG2) - O7-2 (SGD2)	Always	1 MΩ or Higher
O7-12 (SVC2) - O7-2 (SGD2)	Always	1 MΩ or Higher
O7-8 (SIG2) - O7-12 (SVC2)	Always	1 MΩ or Higher

NG**REPAIR OR REPLACE FRONT SEAT WIRE RH****OK****6 CHECK FRONT SEAT WIRE RH (TO GROUND)**

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

Standard:

Tester connection	Condition	Specified condition
O7-2 (SGD2) - Body ground	Always	1 MΩ or Higher
O7-8 (SIG2) - Body ground	Always	1 MΩ or Higher
O7-12 (SVC2) - Body ground	Always	1 MΩ or Higher

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

7 RECHECK DTC

- (a) Connect the connectors to the occupant classification ECU and the occupant classification sensor front RH.
- (b) Connect the negative (-) terminal cable to the battery.
- (c) Turn the ignition switch to the ON position.
- (d) Clear the DTCs stored in memory (see page [05-1215](#)).

HINT:

- First clear DTCs stored in the occupant classification ECU memory and then in the airbag sensor assy center memory.
 - Use the hand-held tester to clear the DTC of the occupant classification ECU, otherwise the DTC cannot be cleared.
- (e) Turn the ignition switch to the LOCK position.
 - (f) Turn the ignition switch to the ON position.
 - (g) Using the hand-held tester, check the DTCs (see page [05-1215](#)).

OK:

DTC B1781 is not output.

HINT:

Codes other than code B1781 may be output at this time, but they are not related to this check.

NG

Go to step 8

OK

USE SIMULATION METHOD TO CHECK (SEE PAGE [05-1207](#))

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 [60-64](#)).

HINT:

Perform the inspection using parts from a normal vehicle when possible.

9 PERFORM ZERO POINT CALIBRATION

- (a) Using the hand-held tester, perform "Zero point calibration" (see page [05-1203](#)).

OK:

The "COMPLETED" is displayed.

NG

Go to step 12

OK

10 PERFORM SENSITIVITY CHECK

- (a) Using the hand-held tester, perform "Sensitivity check" (see page [05-1203](#)).
Standard value: 27 to 33 kg (59.52 to 72.75 lb)

NG **Go to step 12**

OK

11 RECHECK DTC

- (a) Connect the negative (-) terminal cable to the battery.
 (b) Turn the ignition switch to the ON position.
 (c) Clear the DTCs stored in memory (see page [05-1215](#)).

HINT:

- First clear DTCs stored in the occupant classification ECU memory and then in the airbag sensor assy center memory.
 - Use the hand-held tester to clear the DTC of the occupant classification ECU, otherwise the DTC cannot be cleared.
- (d) Turn the ignition switch to the LOCK position.
 (e) Turn the ignition switch to the ON position.
 (f) Using the hand-held tester, check the DTCs (see page [05-1215](#)).

OK:

DTC B1781 is not output.

HINT:

Codes other than code B1781 may be output at this time, but they are not related to this check.

NG **Go to step 12**

OK

END

12 REPLACE SEAT ADJUSTER FRAME ASSY

- (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 seat adjuster frame assy (see page [72-11](#), [72-19](#)).

13 PERFORM ZERO POINT CALIBRATION

- (a) Using the hand-held tester, perform "Zero point calibration" (see page [05-1203](#)).

OK:

The "COMPLETED" is displayed.

14	PERFORM SENSITIVITY CHECK
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- (a) Using the hand-held tester, perform "Sensitivity check" (see page [05-1203](#)).
Standard value: 27 to 33 kg (59.52 to 72.75 lb)



END
