DTC	B1783	Rear Occupant Classification Sensor RH Circuit Malfunction

DESCRIPTION

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

DTC B1783 is recorded when a malfunction is detected in the rear occupant classification sensor RH circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1783	When one of following conditions is met: • Occupant classification ECU detects line short signal, open signal, short to ground signal or short to B+ signal in the rear occupant classification sensor RH circuit for 2 seconds • Rear occupant classification sensor RH malfunction • Occupant classification ECU malfunction	• Front seat wire RH • Front seat RH (Rear occupant classification sensor RH) • Occupant classification ECU

WIRING DIAGRAM

Rear Occupant Classification Sensor RH

Occupant Classification ECU

SVC4 — SVC4

SIG4 — SIG4

SGD4 — SGD4

C128670E08

RS
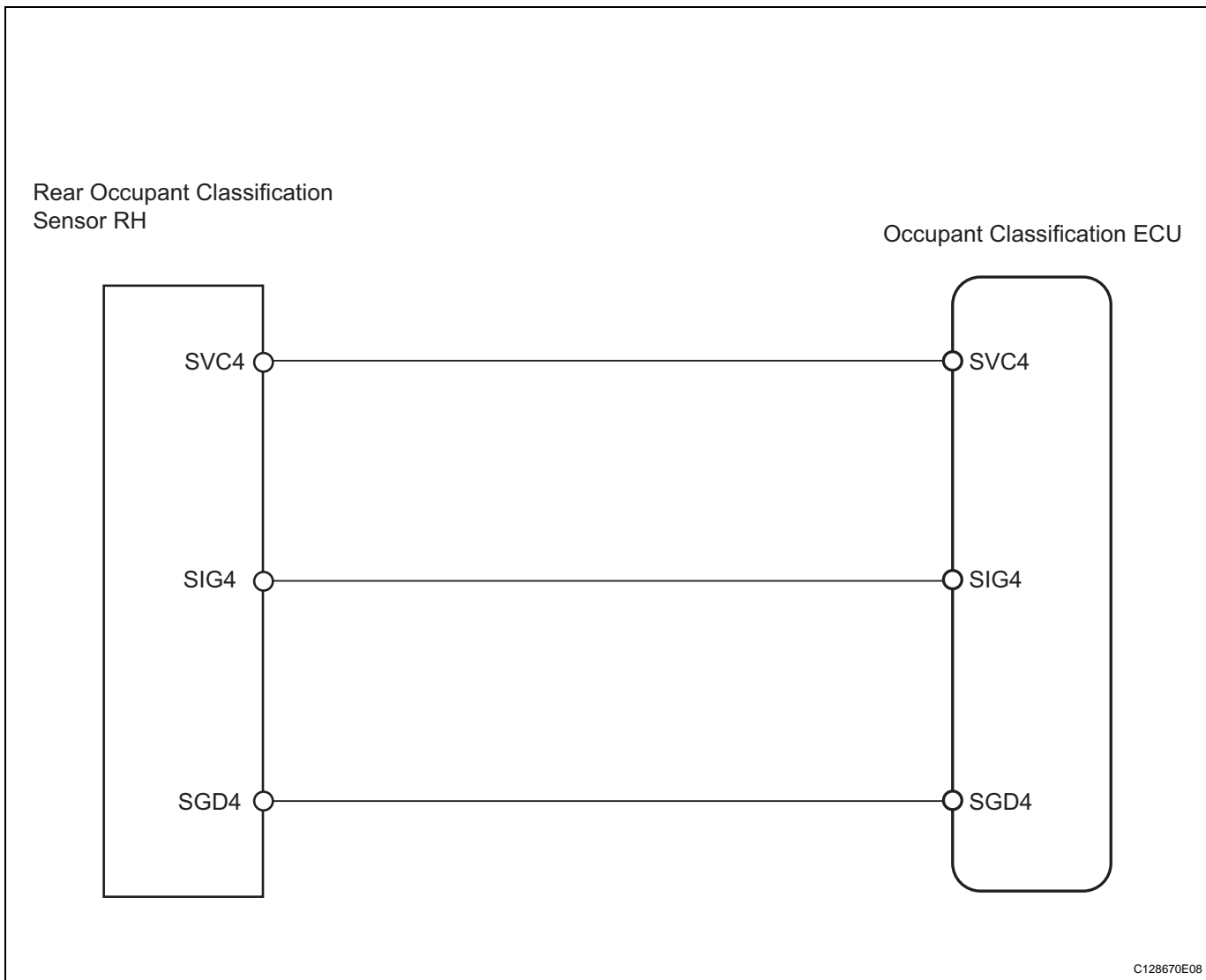
INSPECTION PROCEDURE

HINT:
- If troubleshooting (wire harness inspection) is difficult to perform, remove the front passenger seat installation bolts to see the undersurface 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 ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
OK:
DTC B1783 is not output.
HINT:
DTCs other than DTC B1783 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 CONNECTOR**

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Check that the connectors are properly connected to the occupant classification ECU and the rear occupant classification sensor RH.
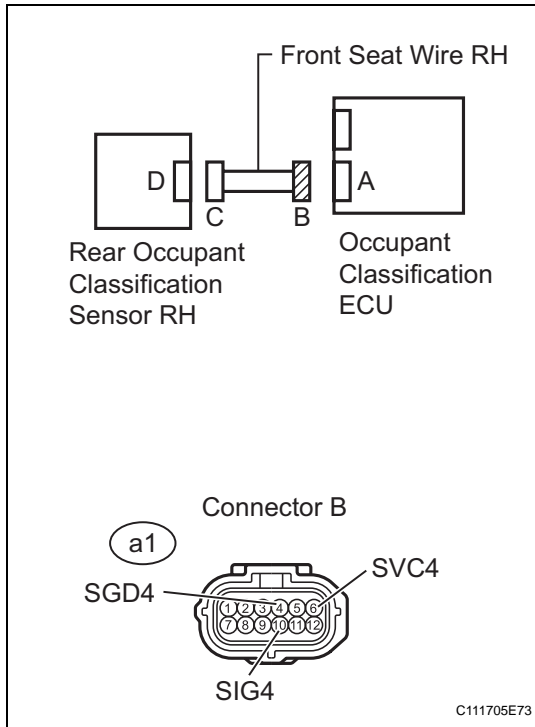**OK:**
The connectors are properly connected.
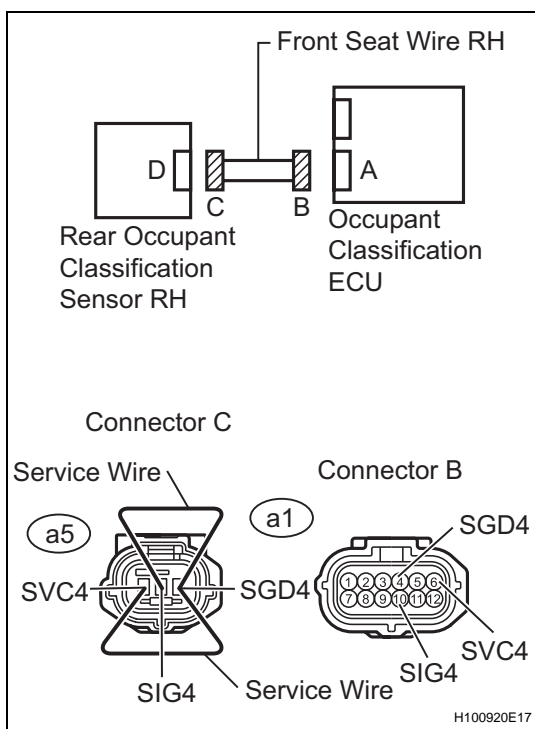
NG >	CONNECT CONNECTOR

OK ▽

RS

3	CHECK FRONT SEAT WIRE RH (TO B+)

(a) Disconnect the connectors from the occupant classification ECU and the rear occupant classification sensor RH.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Measure the voltage of the wire harness side connector.
Standard voltage

Tester Connection	Specified Condition
a1-4 (SGD4) - Body ground	Below 1 V
a1-6 (SVC4) - Body ground	Below 1 V
a1-10 (SIG4) - Body ground	Below 1 V

NG	REPAIR OR REPLACE FRONT SEAT WIRE RH

Front Seat Wire RH

Rear Occupant Classification Sensor RH

Occupant Classification ECU

Connector B

a1

SGD4

SVC4

SIG4

C111705E73

OK

4	CHECK FRONT SEAT WIRE RH (FOR OPEN)

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Using a service wire, connect terminals a5-1 (SVC4) and a5-3 (SGD4), and connect terminals a5-2 (SIG4) and a5-3 (SGD4) of connector C.
NOTICE:
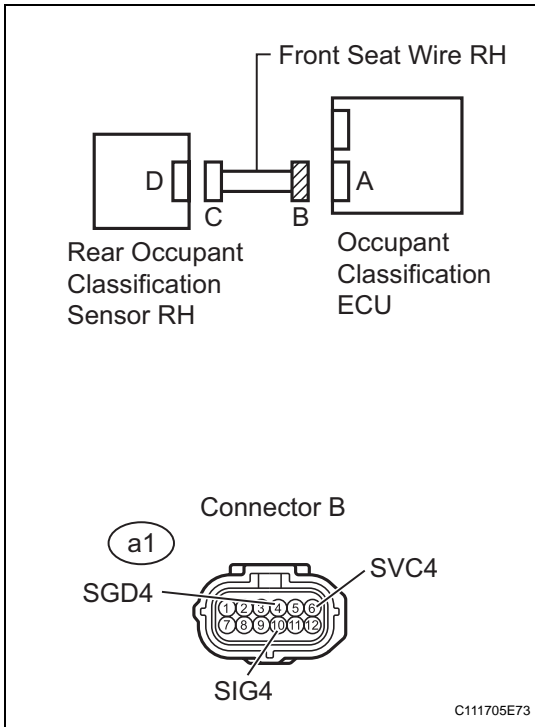**Do not forcibly insert a service wire into the terminals of the connector when connecting them.**
(d) Measure the resistance of the wire harness side connector.
Standard resistance

Tester Connection	Specified Condition
a1-6 (SVC4) - a1-4 (SGD4)	Below 1 Ω
a1-10 (SIG4) - a1-4 (SGD4)	Below 1 Ω

NG	REPAIR OR REPLACE FRONT SEAT WIRE RH

Front Seat Wire RH

Rear Occupant Classification Sensor RH

Occupant Classification ECU

Connector C

Service Wire

Connector B

a5

a1

SGD4

SVC4

SGD4

SVC4

SIG4

SIG4

Service Wire

H100920E17

OK

RS

5	CHECK FRONT SEAT WIRE RH (FOR SHORT)

Front Seat Wire RH

D — C — B — A

Rear Occupant Classification Sensor RH

Occupant Classification ECU

Connector B

a1

SGD4 — SVC4

SIG4

C111705E73

(a) Disconnect the service wire from connector C.
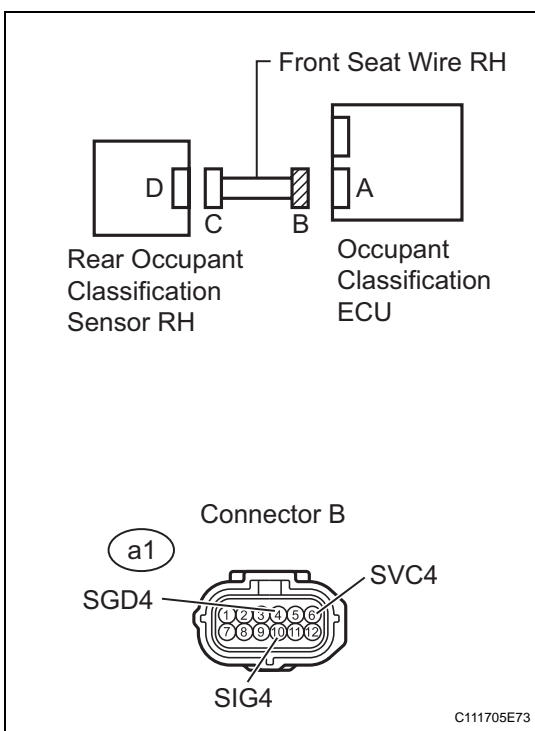(b) Measure the resistance of the wire harness side connector.

Standard resistance

Tester Connection	Specified Condition
a1-6 (SVC4) - a1-4 (SGD4)	1 MΩ or higher
a1-10 (SIG4) - a1-4 (SGD4)	1 MΩ or higher
a1-6 (SVC4) - a1-10 (SIG4)	1 MΩ or higher

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

OK

6	CHECK FRONT SEAT WIRE RH (TO GROUND)

Front Seat Wire RH

D — C — B — A

Rear Occupant Classification Sensor RH

Occupant Classification ECU

Connector B

a1

SGD4 — SVC4

SIG4

C111705E73

(a) Measure the resistance of the wire harness side connector.

Standard resistance

Tester Connection	Specified Condition
a1-4 (SGD4) - Body ground	1 MΩ or higher
a1-6 (SVC4) - Body ground	1 MΩ or higher
a1-10 (SIG4) - Body ground	1 MΩ or higher

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

OK

RS

7	CHECK FOR DTC

(a) Connect the connectors to the occupant classification ECU and the rear occupant classification sensor RH.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Clear the DTCs (see page RS-249).
   HINT:
   First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(e) Turn the ignition switch OFF.
(f) Turn the ignition switch ON.
(g) Check the DTCs (see page RS-249).
   OK:
     DTC B1783 is not output.
   HINT:
   DTCs other than DTC B1783 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 OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page RS-392).
   HINT:
   Perform the inspection using parts from a normal vehicle if possible.

NEXT

9	PERFORM ZERO POINT CALIBRATION

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
   OK:
     COMPLETED is displayed.

NG >	Go to step 12

OK

RS

10	PERFORM SENSITIVITY CHECK

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
   Standard value:
   27 to 33 kg (59.52 to 72.75 lb)

NG	Go to step 12

OK

11	CHECK FOR DTC

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Turn the ignition switch ON.
(c) Clear the DTCs (see page RS-249).
   HINT:
   First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(d) Turn the ignition switch OFF.
(e) Turn the ignition switch ON.
(f) Check the DTCs (see page RS-249).
   OK:
   DTC B1783 is not output.
   HINT:
   DTCs other than DTC B1783 may be output at this time, but they are not related to this check.

OK	END

NG

RS

12	REPLACE FRONT SEAT ASSEMBLY RH

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the front seat RH (see page SE-8).

NEXT

13	PERFORM ZERO POINT CALIBRATION

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
   OK:
   COMPLETED is displayed.

NEXT

| 14 | PERFORM SENSITIVITY CHECK |

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
Standard value:
  27 to 33 kg (59.52 to 72.75 lb)

NEXT

END

RS