DTC	B1793	OCCUPANT CLASSIFICATION SENSOR POWER SUPPLY CIRCUIT MALFUNCTION

CIRCUIT DESCRIPTION

The occupant classification sensor power supply circuit consists of the occupant classification ECU and the occupant classification sensors.
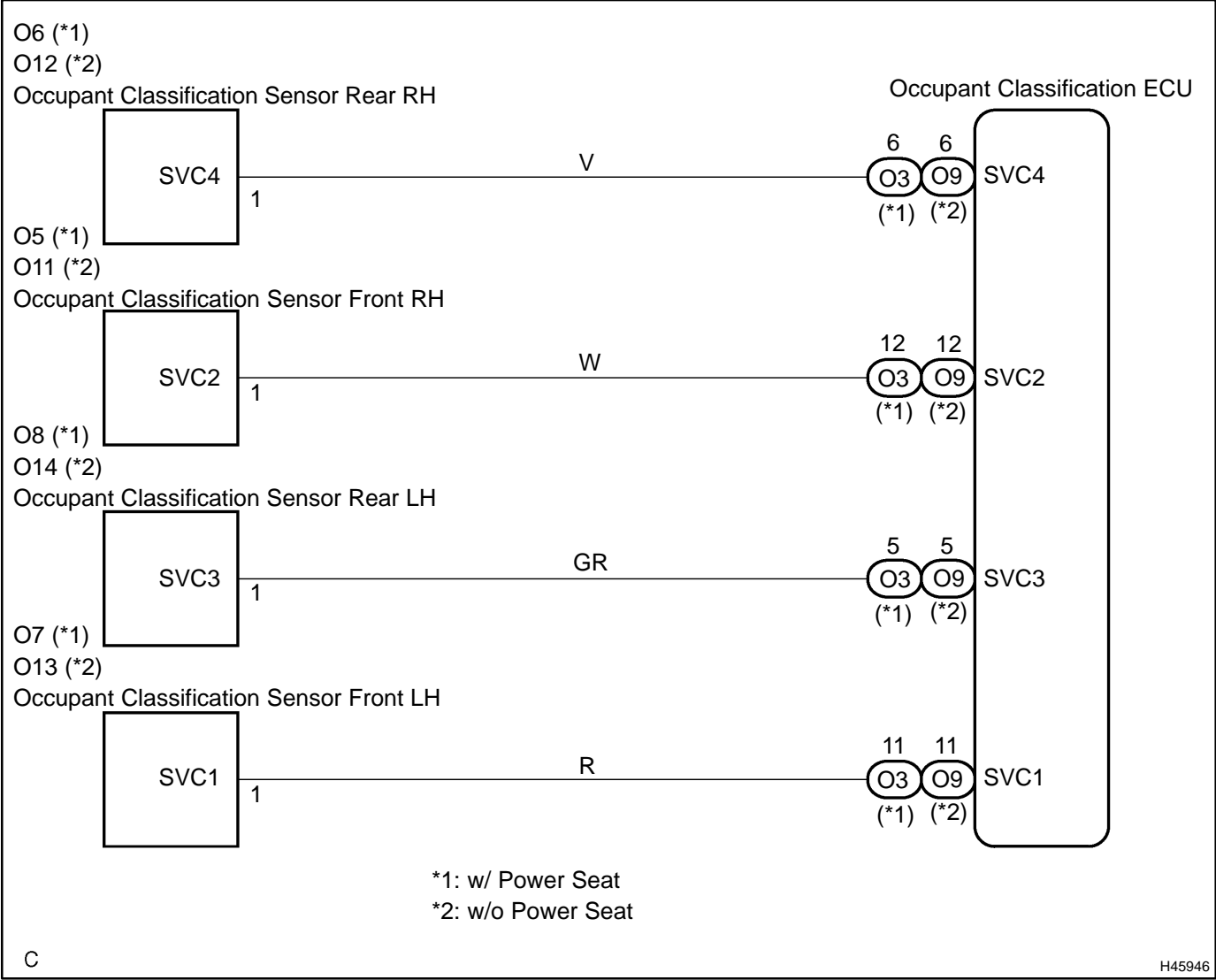
DTC B1793 is recorded when a malfunction is detected in the occupant classification sensor power supply circuit.

DTC No.	DTC Detecting Condition	Trouble Area
B1793	• 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 occupant classification sensor power supply circuit for 2 seconds. • Occupant classification ECU malfunction	• Seat adjuster frame assy (Occupant classification sensors) • Front seat wire RH • Occupant classification ECU

HINT:

- When DTC B1650/32 is detected as a result of troubleshooting for the supplemental restraint system, perform troubleshooting for DTC B1793 of the occupant classification sensor.
- Use the hand–held tester to check the DTC of the occupant classification ECU, otherwise the DTC cannot be read.

WIRING DIAGRAM

O6 (*1)
O12 (*2)
Occupant Classification Sensor Rear RH

Occupant Classification ECU

SVC4	V	6 6
1		O3 O9 SVC4
		(*1) (*2)

O5 (*1)
O11 (*2)
Occupant Classification Sensor Front RH

SVC2	W	12 12
1		O3 O9 SVC2
		(*1) (*2)

O8 (*1)
O14 (*2)
Occupant Classification Sensor Rear LH

SVC3	GR	5 5
1		O3 O9 SVC3
		(*1) (*2)

O7 (*1)
O13 (*2)
Occupant Classification Sensor Front LH

SVC1	R	11 11
1		O3 O9 SVC1
		(*1) (*2)

*1: w/ Power Seat
*2: w/o Power Seat

C

H45946

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

(a) Turn the ignition switch to the ON position.
(b) Clear the DTCs stored in memory (see page 05–1464).

HINT:

- First clear DTCs stored in the occupant classification ECU and then in the airbag sensor assy center.
- Use the hand–held tester to clear the DTC of the occupant classification ECU, otherwise the DTC cannot be cleared.

(c) Turn the ignition switch to the LOCK position.
(d) Turn the ignition switch to the ON position.
(e) Using the hand–held tester, check the DTCs of the occupant classification ECU (see page 05–1464).
   OK:
   DTC B1793 is not output.

HINT:

Codes other than code B1793 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 05–1456)

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 occupant classification sensors.
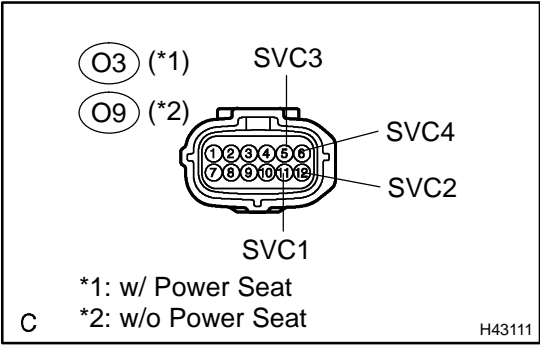   **OK:**
   The connectors are connected.

NG >	CONNECT CONNECTORS, THEN GO TO STEP 1

OK

| 3 | CHECK FRONT SEAT WIRE RH (TO B+) |

O3 (*1) SVC3
O9 (*2)
SVC4
①②③④⑤⑥
⑦⑧⑨⑩⑪⑫ SVC2
SVC1
*1: w/ Power Seat
C *2: w/o Power Seat   H43111

(a) Disconnect the occupant classification ECU connector and the 4 occupant classification sensor connectors.
(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:

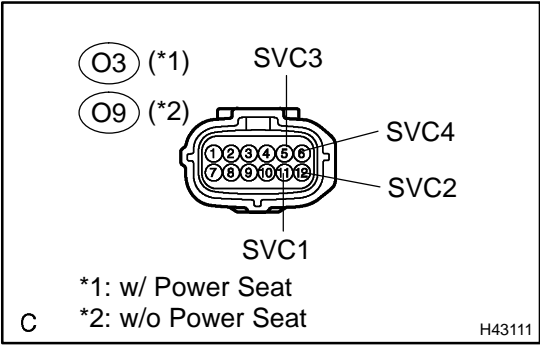| Tester connection	Condition	Specified condition
O3–5 (SVC3) – Body ground (*1)	Ignition switch ON	Below 1 V
O3–6 (SVC4) – Body ground (*1)	Ignition switch ON	Below 1 V
O3–11 (SVC1) – Body ground (*1)	Ignition switch ON	Below 1 V
O3–12 (SVC2) – Body ground (*1)	Ignition switch ON	Below 1 V
O9–5 (SVC3) – Body ground (*2)	Ignition switch ON	Below 1 V
O9–6 (SVC4) – Body ground (*2)	Ignition switch ON	Below 1 V
O9–11 (SVC1) – Body ground (*2)	Ignition switch ON	Below 1 V
O9–12 (SVC2) – Body ground (*2)	Ignition switch ON	Below 1 V

*1: w/ Power seat
*2: w/o Power seat

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

OK

4   CHECK FRONT SEAT WIRE RH (TO GROUND)

O3 (*1)   SVC3

O9 (*2)

SVC4

①②③④⑤⑥
⑦⑧⑨⑩⑪⑫

SVC2

SVC1

*1: w/ Power Seat
C *2: w/o Power Seat

H43111

(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 according to the value(s) in the table below.
    Standard:

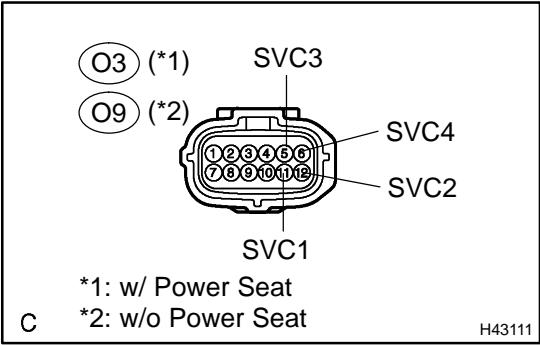| Tester connection	Condition	Specified condition
O3–5 (SVC3) – Body ground (*1)	Always	1 MΩ or Higher
O3–6 (SVC4) – Body ground (*1)	Always	1 MΩ or Higher
O3–11 (SVC1) – Body ground (*1)	Always	1 MΩ or Higher
O3–12 (SVC2) – Body ground (*1)	Always	1 MΩ or Higher
O9–5 (SVC3) – Body ground (*2)	Always	1 MΩ or Higher
O9–6 (SVC4) – Body ground (*2)	Always	1 MΩ or Higher
O9–11 (SVC1) – Body ground (*2)	Always	1 MΩ or Higher
O9–12 (SVC2) – Body ground (*2)	Always	1 MΩ or Higher

*1: w/ Power seat
*2: w/o Power seat

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

OK

5 | CHECK FRONT SEAT WIRE RH (OPEN)

O3 (*1)
O9 (*2)
SVC3
SVC4
SVC2
SVC1

*1: w/ Power Seat
*2: w/o Power Seat

C   H43111

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

Standard:

Tester connection	Condition	Specified condition
O3–5 (SVC3) – O8–1 (SVC3) (*1)	Always	Below 1 Ω
O3–6 (SVC4) – O6–1 (SVC4) (*1)	Always	Below 1 Ω
O3–11 (SVC1) – O7–1 (SVC1) (*1)	Always	Below 1 Ω
O3–12 (SVC2) – O5–1 (SVC2) (*1)	Always	Below 1 Ω
O9–5 (SVC3) – O14–1 (SVC3) (*2)	Always	Below 1 Ω
O9–6 (SVC4) – O12–1 (SVC4) (*2)	Always	Below 1 Ω
O9–11 (SVC1) – O13–1 (SVC1) (*2)	Always	Below 1 Ω
O9–12 (SVC2) – O11–1 (SVC2) (*2)	Always	Below 1 Ω

*1: w/ Power seat

*2: w/o Power seat

NG ⟩ REPAIR OR REPLACE FRONT SEAT WIRE RH

OK

| 6 | CHECK FRONT SEAT WIRE RH (SHORT) |
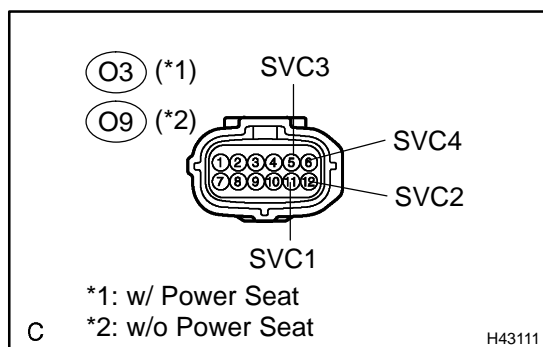
O3 (*1)   SVC3
O9 (*2)
SVC4
①②③④⑤⑥
⑦⑧⑨⑩⑪⑫
SVC2
SVC1

*1: w/ Power Seat
*2: w/o Power Seat

C   H43111

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

Standard:

Tester connection	Condition	Specified condition
O3–5 (SVC3) – O3–6 (SVC4) (*1)	Always	1 MΩ or Higher
O3–6 (SVC4) – O3–11 (SVC1) (*1)	Always	1 MΩ or Higher
O3–11 (SVC1) – O3–12 (SVC2) (*1)	Always	1 MΩ or Higher
O3–12 (SVC2) – O3–5 (SVC3) (*1)	Always	1 MΩ or Higher
O3–12 (SVC2) – O3–6 (SVC4) (*1)	Always	1 MΩ or Higher
O3–11 (SVC1) – O3–5 (SVC3) (*1)	Always	1 MΩ or Higher
O9–5 (SVC3) – O9–6 (SVC4) (*2)	Always	1 MΩ or Higher
O9–6 (SVC4) – O9–11 (SVC1) (*2)	Always	1 MΩ or Higher
O9–11 (SVC1) – O9–12 (SVC2) (*2)	Always	1 MΩ or Higher
O9–12 (SVC2) – O9–5 (SVC3) (*2)	Always	1 MΩ or Higher
O9–6 (SVC4) – O9–12 (SVC2) (*2)	Always	1 MΩ or Higher
O9–11 (SVC1) – O9–5 (SVC3) (*2)	Always	1 MΩ or Higher

*1: w/ Power seat

*2: w/o Power seat

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

OK

7	RECHECK DTC

(a) Connect the occupant classification ECU connector and the 4 occupant classification sensor connectors.

(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).

HINT:

• First clear DTCs stored in the occupant classification ECU and then in the airbag sensor assy center.

• 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 of the occupant classification ECU (see page).
   OK:
   DTC B1793 is not output.

HINT:

Codes other than code B1793 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 05–1456)

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 60–72).
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 hand–held tester to the DLC3.
(c) Turn the ignition switch to the ON position.
(d) Using the hand–held tester, perform "Zero point calibration" (see page 05–1452).
    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 05–1452).
    Standard value: 27 to 33 kg (59.52 to 72.75 lb)

NG ➤ **Go to step 12**

OK

11	RECHECK DTC

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

(b) Clear the DTCs stored in memory (see page 05–1464).

HINT:

• First clear DTCs stored in the occupant classification ECU and then in the airbag sensor assy center.

• Use the hand–held tester to clear the DTC of the occupant classification ECU, otherwise the DTC cannot be cleared.

(c) Turn the ignition switch to the LOCK position.

(d) Turn the ignition switch to the ON position.

(e) Using the hand–held tester, check the DTCs of the occupant classification ECU (see page 05–1464).

OK:

DTC B1793 is not output.

HINT:

Codes other than code B1793 may be output at this time, but they are related to this check.

NG >	Go to step 12

OK

USE SIMULATION METHOD TO CHECK (SEE PAGE 05–1456)

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 72–23, 72–15).

NEXT

13	PERFORM ZERO POINT CALIBRATION

(a) Connect the negative (–) terminal cable to the battery.

(b) Connect the hand–held tester to the DLC3.

(c) Turn the ignition switch to the ON position.

(d) Using the hand–held tester, perform "Zero point calibration" (see page 05–1452).

OK:

The "COMPLETED" is displayed.

NEXT

14	PERFORM SENSITIVITY CHECK

(a) Using the hand–held tester, perform "Sensitivity check" (see page 05–1452).

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

NEXT

END