DTC	B1650/32	Occupant Classification System Malfunction

DESCRIPTION

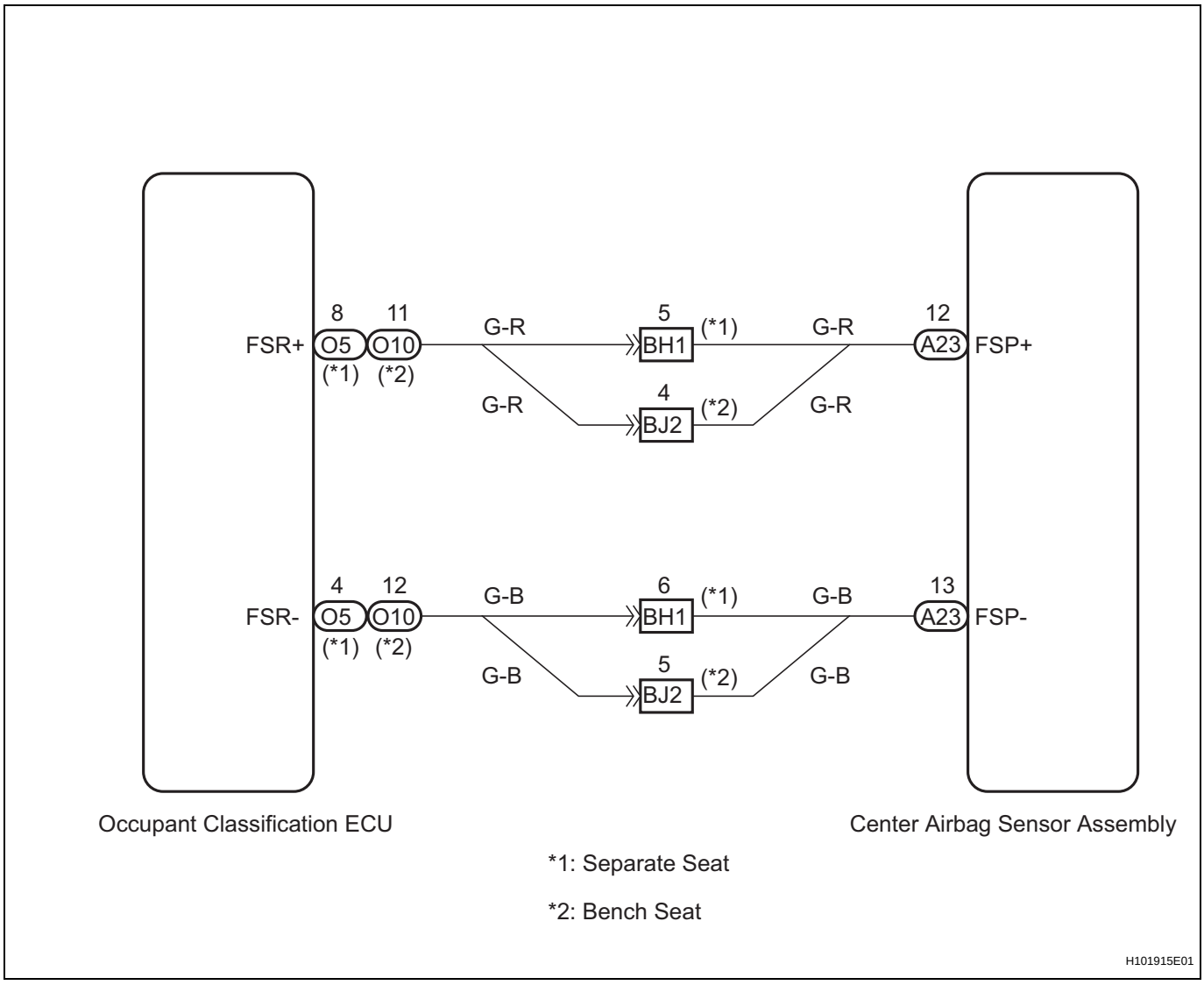
The occupant classification system circuit consists of the center airbag sensor assembly and the occupant classification system.

When the center airbag sensor assembly receives signals from the occupant classification ECU, it determines whether or not the front passenger airbag assembly, front seat airbag assembly RH and seat belt pretensioner RH should be operated.

DTC B1650/32 is set when a malfunction is detected in the occupant classification system circuit.

DTC No.	DTC Detecting Conditions	Trouble Areas
B1650/32	• Occupant classification system malfunction • The center airbag sensor assembly 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 system circuit for 2 seconds • Center airbag sensor assembly malfunction	• Occupant classification system • Center airbag sensor assembly • Floor wire • No. 1 seat wire

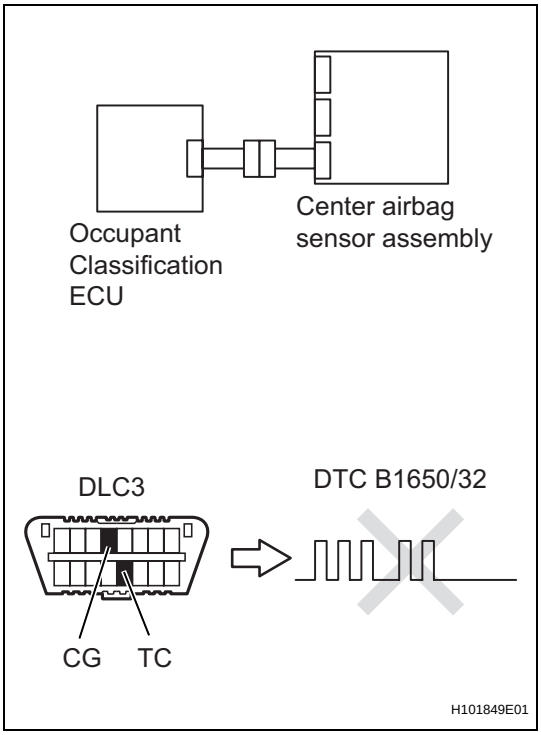
WIRING DIAGRAM



RS

CAUTION:
In order to prevent unexpected airbag deployment, disconnect the following connectors before inspecting parts such as wire harnesses, if the application of tester probes to the center airbag sensor assembly connector is necessary.
(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 center airbag sensor assembly.
(d) Disconnect the connectors from the steering pad.
(e) Disconnect the connector from the front passenger airbag assembly.
(f) Disconnect the connector from the front seat airbag assembly LH.
(g) Disconnect the connector from the front seat airbag assembly RH.
HINT:
Skip the following steps if side and curtain shield airbags are not fitted.
(h) Disconnect the connector from the curtain shield airbag assembly LH.
(i) Disconnect the connector from the curtain shield airbag assembly RH.
(j) Disconnect the connector from the front seat outer belt assembly LH.
(k) Disconnect the connector from the front seat outer belt assembly RH.

1	CHECK DTC (CENTER AIRBAG SENSOR ASSEMBLY)



(a) Turn the ignition switch to the ON position.
(b) Clear any DTCs stored in the memory (See page RS-34).
(c) Turn the ignition switch to the LOCK position.
(d) Turn the ignition switch to the ON position, and wait for at least 60 seconds.
(e) Check for DTCs (See page RS-34).
OK:
DTC B1650/32 is not output.
HINT:
DTCs other than B1650/32 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG

2	CHECK DTC (OCCUPANT CLASSIFICATION ECU)

(a) Turn the ignition switch to the ON position, and wait for at least 10 seconds.
(b) Using the intelligent tester, check for DTCs of the occupant classification ECU (See page RS-362).
OK:
DTC is not output.

RS

NG → GO TO DTC CHART

OK

3	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 center airbag sensor assembly and the occupant classification ECU.
OK:
The connectors are properly connected.

NG → CONNECT CONNECTORS

OK

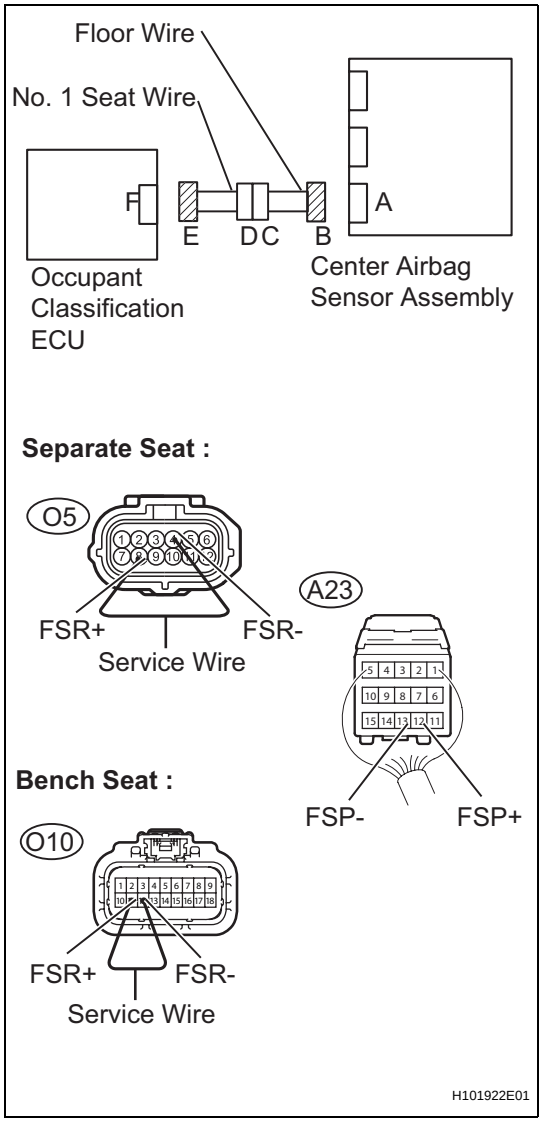
4	CHECK CONNECTORS

(a) Check that the connectors (on the center airbag sensor assembly side and occupant classification ECU side) are not damaged (See page IN-34).
OK:
The connectors are not deformed or damaged.

NG → REPAIR OR REPLACE WIRE HARNESS

OK

5	CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (FOR OPEN)



(a) Disconnect the connectors from the center airbag sensor assembly and the occupant classification ECU.

(b) Separate Seat :
Using a service wire, connect O5-8 (FSR+) and O5-4 (FSR-) of connector E.

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

(c) Bench Seat :
Using a service wire, connect O10-11 (FSR+) and O10-12 (FSR-) of connector E.

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

(d) Measure the resistance.
Standard resistance

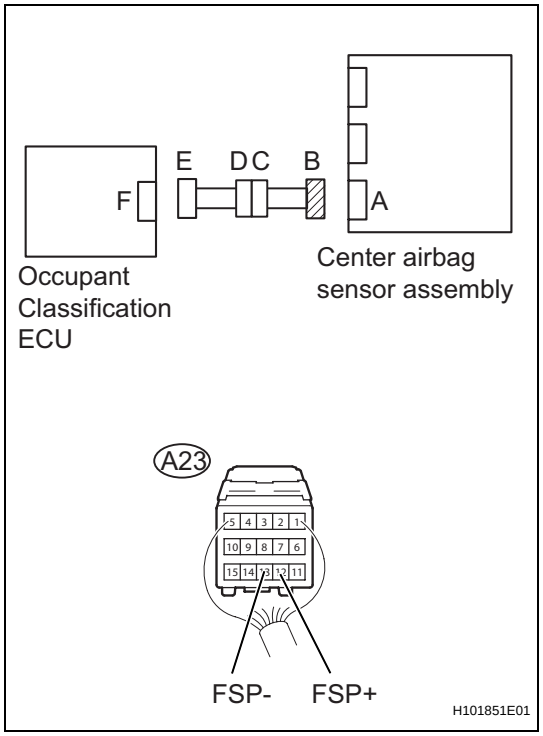
Tester Connection	Condition	Specified Condition
A23-12 (FSP+) - A23-13 (FSP-)	Always	Below 1 Ω

NG → **Go to step 13**

OK

RS

6 CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (FOR SHORT)



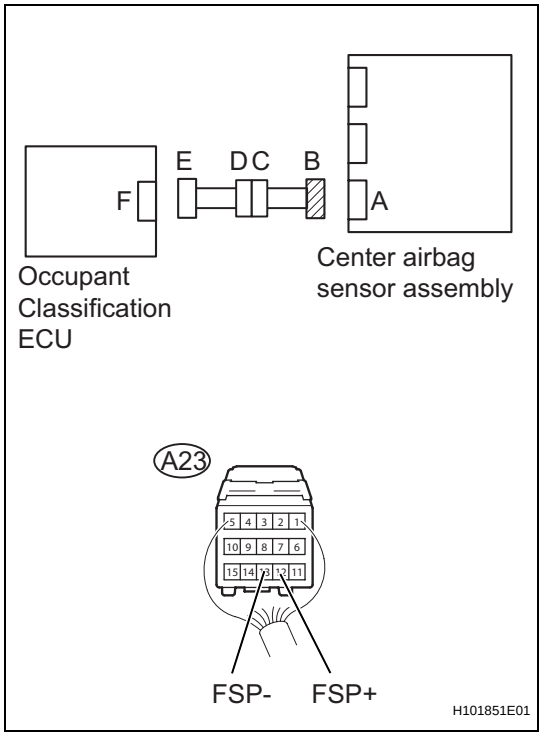
(a) Disconnect the service wire from connector E.
(b) Measure the resistance.
Standard resistance

Tester Connection	Condition	Specified Condition
A23-12 (FSP+) - A23-13 (FSP-)	Always	1 MΩ or Higher

NG → **Go to step 14**

OK

7 CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (TO B+)



(a) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
(b) Turn the ignition switch to the ON position.
(c) Measure the voltage.
Standard voltage

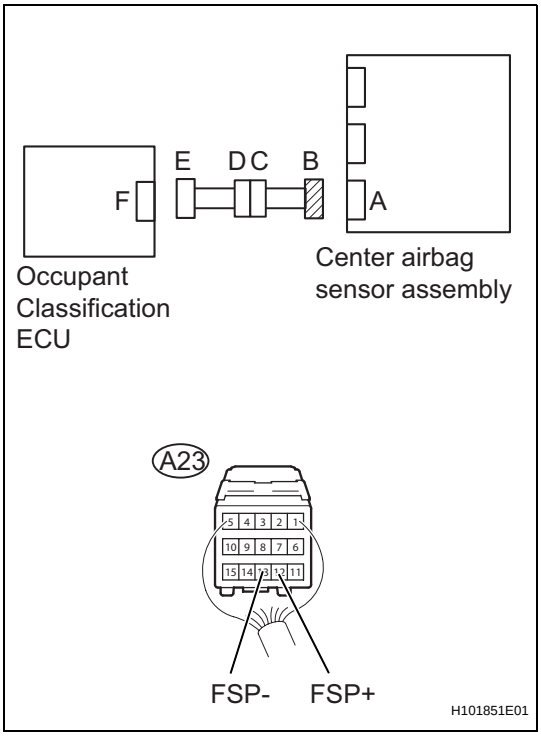
Tester Connection	Condition	Specified Condition
A23-12 (FSP+) - Body ground	Ignition switch ON	Below 1 V
A23-13 (FSP-) - Body ground	Ignition switch ON	Below 1 V

NG → **Go to step 15**

OK

RS

8 CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (TO GROUND)



(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.

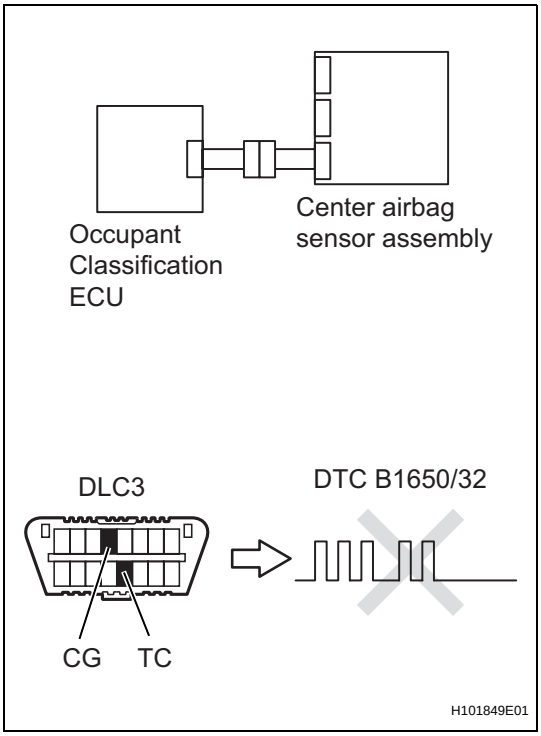
Standard resistance

Tester Connection	Condition	Specified Condition
A23-12 (FSP+) - Body ground	Always	1 MΩ or Higher
A23-13 (FSP-) - Body ground	Always	1 MΩ or Higher

NG → **Go to step 16**

OK

9 CHECK CENTER AIRBAG SENSOR ASSEMBLY



(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 center airbag sensor assembly (See page RS-602).

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

(d) Connect the connectors to the center airbag sensor assembly.
(e) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
(f) Turn the ignition switch to the ON position, and wait for at least 60 seconds.
(g) Clear any DTCs stored in the memory (See page RS-34).
(h) Turn the ignition switch to the LOCK position.
(i) Turn the ignition switch to the ON position, and wait for at least 60 seconds.
(j) Check for DTCs (See page RS-34).

Result

Result	Proceed to
DTC B1650/32 is output (for separate seat)	A

RS

Result	Proceed to
DTC B1650/32 is not output (for bench seat)	B
DTC B1650/32 is not output	C

HINT:
DTCs other than B1650/32 may be output at this time, but they are not related to this check.

B	Go to step 17
C	END

A

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-631).

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-357).
OK:
COMPLETED is displayed on the tester.

NEXT

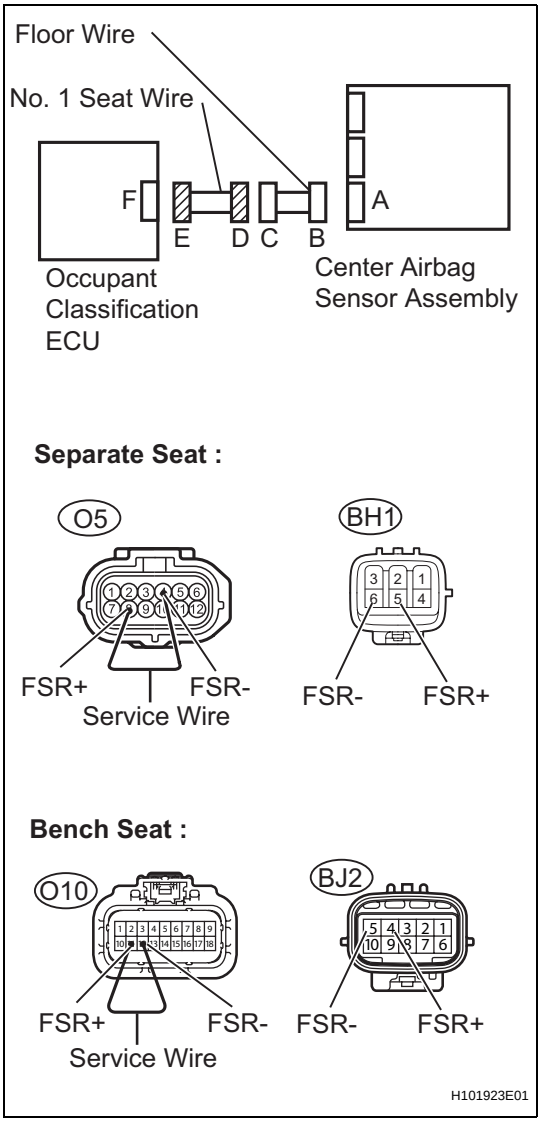
12 PERFORM SENSITIVITY CHECK

(a) Using the intelligent tester, perform the sensitivity check (See page RS-357).
Standard Value:
27 to 33 kg (59.52 to 72.75 lb)

NEXT

END

13	CHECK NO. 1 SEAT WIRE (FOR OPEN)



(a) Disconnect the No. 1 seat wire connector from the instrument panel wire.

HINT:

The service wire has already been inserted into connector E.

(b) Measure the resistance.

Standard resistance

Tester Connection	Condition	Specified Condition
BH1-5 (FSR+) - BH1-6 (FSR-) *1	Always	Below 1 Ω
BJ2-4 (FSR+) - BJ2-5 (FSR-) *2	Always	Below 1 Ω

*1 : Separate Seat

*2 : Bench Seat

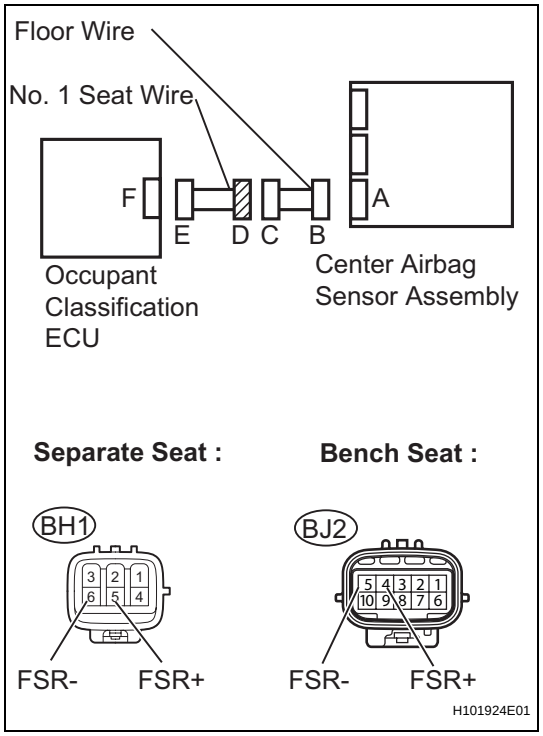
NG → **REPAIR OR REPLACE NO. 1 SEAT WIRE**

OK

RS

REPAIR OR REPLACE FLOOR WIRE

14 **CHECK NO. 1 SEAT WIRE (FOR SHORT)**



(a) Disconnect the No. 1 seat wire connector from the instrument panel wire.
(b) Measure the resistance.
Standard resistance

Tester Connection	Condition	Specified Condition
BH1-5 (FSR+) - BH1-6 (FSR-) *1	Always	1 MΩ or Higher
BJ2-4 (FSR+) - BJ2-5 (FSR-) *2	Always	1 MΩ or Higher

*1 : Separate Seat
*2 : Bench Seat

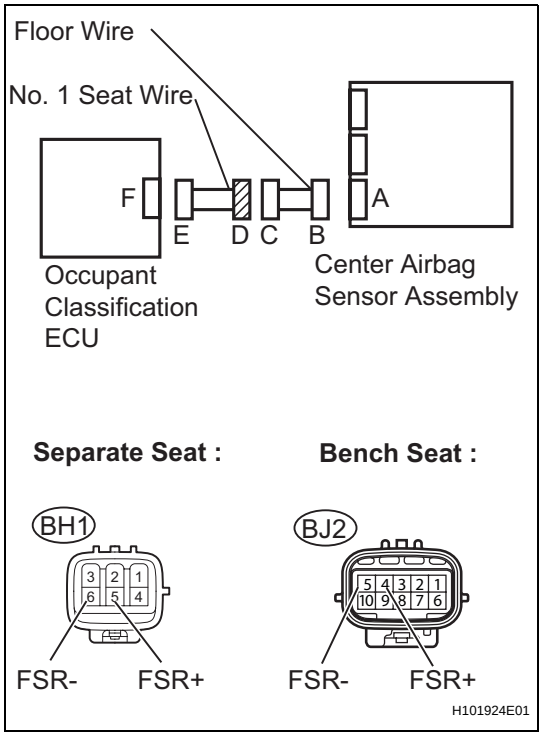
NG → **REPAIR OR REPLACE NO. 1 SEAT WIRE**

OK

REPAIR OR REPLACE FLOOR WIRE

RS

15	CHECK NO. 1 SEAT WIRE (TO B+)



(a) Disconnect the No. 1 seat wire connector from the instrument panel wire.
(b) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
(c) Turn the ignition switch to the ON position.
(d) Measure the voltage.

Standard voltage

Tester Connection	Condition	Specified Condition
BH1-5 (FSR+) - Body ground *1	Ignition switch ON	Below 1 V
BH1-6 (FSR-) - Body ground *1	Ignition switch ON	Below 1 V
BJ2-4 (FSR+) - Body ground *2	Ignition switch ON	Below 1 V
BJ2-5 (FSR-) - Body ground *2	Ignition switch ON	Below 1 V

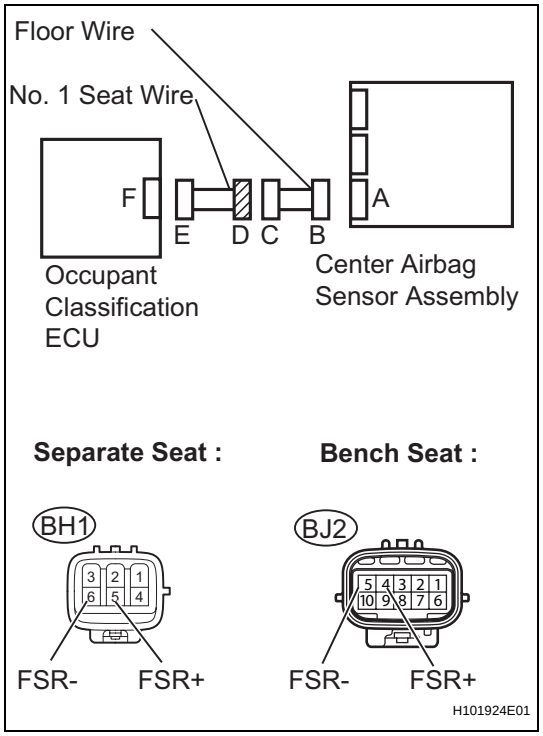
*1 : Separate Seat
*2 : Bench Seat

NG → **REPAIR OR REPLACE NO. 1 SEAT WIRE**

OK

REPAIR OR REPLACE FLOOR WIRE

16 CHECK NO. 1 SEAT WIRE (TO GROUND)



(a) Disconnect the No. 1 seat wire connector from the instrument panel wire.
(b) Measure the resistance.
Standard resistance

Tester Connection	Condition	Specified Condition
BH1-5 (FSR+) - Body ground *1	Always	1 MΩ or Higher
BH1-6 (FSR-) - Body ground *1	Always	1 MΩ or Higher
BJ2-4 (FSR+) - Body ground *2	Always	1 MΩ or Higher
BJ2-5 (FSR-) - Body ground *2	Always	1 MΩ or Higher

*1 : Separate Seat
*2 : Bench Seat

NG → **REPAIR OR REPLACE NO. 1 SEAT WIRE**

OK

REPAIR OR REPLACE FLOOR WIRE

17 REPLACE OCCUPANT CLASSIFICATION ECU

(a) Turn the ignition switch to the ON position.
(b) Using the intelligent tester, read the current setting data stored in the occupant classification ECU (See page RS-476).
HINT:
If the previous ECU data cannot be stored in the intelligent tester, replace the front seat cushion assembly (with occupant classification ECU, occupant classification sensor).
(c) Turn the ignition switch to the LOCK position.
(d) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
(e) Replace the occupant classification ECU (See page RS-634).
(f) Connect the negative (-) terminal cable to the battery.
(g) Turn the ignition switch to the ON position.
(h) Using an intelligent tester, write the setting data read from the previously installed occupant classification ECU into the newly installed occupant classification ECU (See page RS-476).

RS

NEXT

18	PERFORM SENSITIVITY CHECK

(a) Perform the sensitivity check (See page RS-480).

NEXT

END