

DTC	B1773	Belt Tension Sensor Circuit Malfunction
DTC	B1776	Seat Belt Tension Sensor Power Source Circuit Malfunction

DESCRIPTION

The belt tension sensor circuit consists of the occupant classification ECU and the belt tension sensor. The belt tension sensor sends the belt tension signal to the occupant classification ECU to control the occupant classification system.

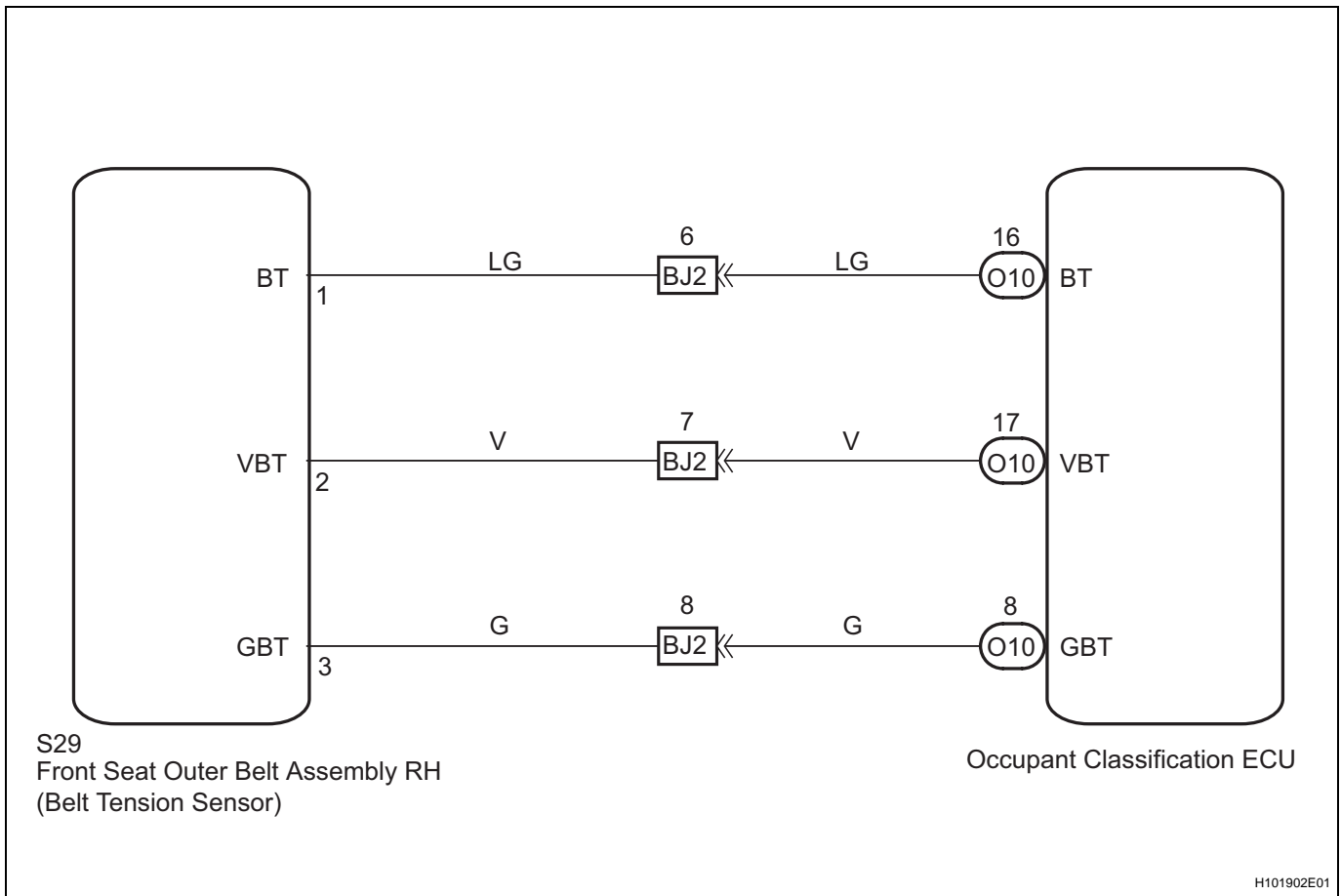
DTCs B1773 and B1776 are recorded when a malfunction is detected in the belt tension sensor circuit.

DTC No.	DTC Detecting Condition	Trouble Area
B1773 B1776	<ul style="list-style-type: none"> Occupant classification ECU receives line short circuit signal, open circuit signal, short circuit to ground signal or short circuit to B+ signal in belt tension sensor circuit for 2 seconds. Belt tension sensor malfunction Occupant classification ECU malfunction 	<ul style="list-style-type: none"> No. 1 seat wire Front seat outer belt RH (Belt tension sensor) Occupant classification ECU

HINT:

- When DTC B1650/32 is detected as a result of troubleshooting the supplemental restraint system, check the DTCs stored in the occupant classification ECU, and perform troubleshooting for those DTCs first.
- Use the intelligent tester to check for DTCs of the occupant classification ECU, otherwise the DTC cannot be read.

WIRING DIAGRAM



RS

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the passenger seat installation bolts to see the under surface of the seat cushion.
- In the above case, hold the seat so that it does not tip over. Holding the seat up for a long period of time may cause problems, such as seat rail deformation. Hold the seat up only for as long as necessary.

1

CHECK DTC

- Turn the ignition switch to the ON position.
- Clear the DTCs stored in the memory (See page [RS-487](#)).

HINT:

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

- Turn the ignition switch to the LOCK position.
- Turn the ignition switch to the ON position.
- Check the DTCs (See page [RS-487](#)).

OK:

DTC B1773 and B1776 are not output.

HINT:

DTCs other than B1773 and B1776 may be output at this time, but they are not related to this check.

OK

USE SIMULATION METHOD TO CHECK

NG

2

CHECK 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 belt tension sensor.

OK:

The connectors are properly connected.

- Disconnect the connectors from the occupant classification ECU and the belt tension sensor.
- Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

HINT:

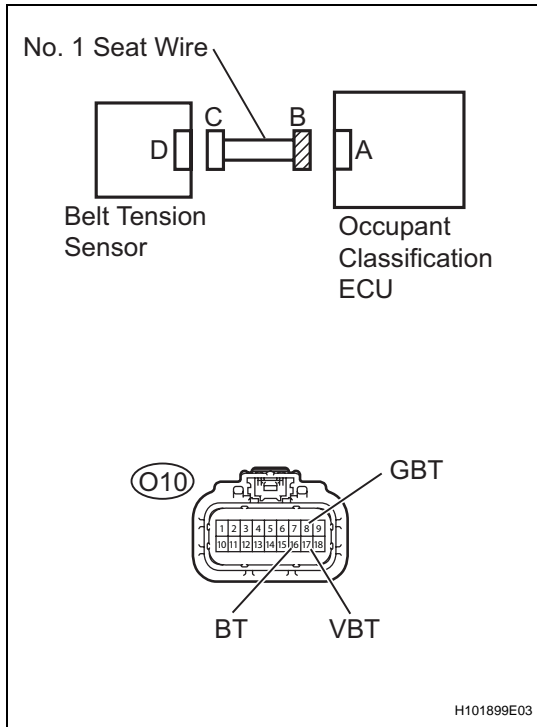
If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

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REPAIR OR REPLACE HARNESS OR
CONNECTOR

OK

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



- Disconnect the connectors from the occupant classification ECU and belt tension sensor.
 - Connect the negative (-) terminal cable to the battery.
 - Turn the ignition switch to the ON position.
 - Measure the voltage.
- Standard voltage**

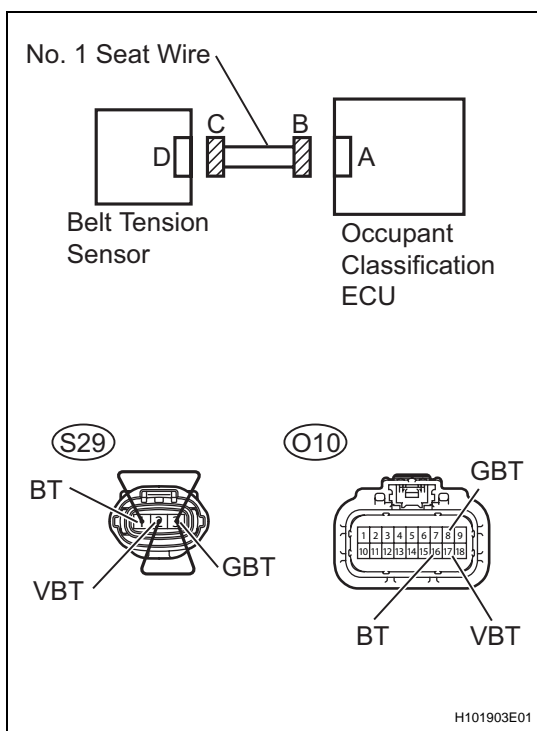
Tester Connection	Condition	Specified Condition
O10-8 (GBT) - Body ground	Ignition switch ON	Below 1 V
O10-16 (BT) - Body ground	Ignition switch ON	Below 1 V
O10-17 (VBT) - Body ground	Ignition switch ON	Below 1 V

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REPAIR OR REPLACE NO. 1 SEAT WIRE

OK

4 CHECK NO. 1 SEAT WIRE (FOR OPEN)



- Turn the ignition switch to the LOCK position.
- Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- Using a service wire, connect S29-1 (BT) and S29-3 (GBT), and connect S29-2 (VBT) and S29-3 (GBT) of connector C.

NOTICE:

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

- Measure the resistance.

Standard resistance

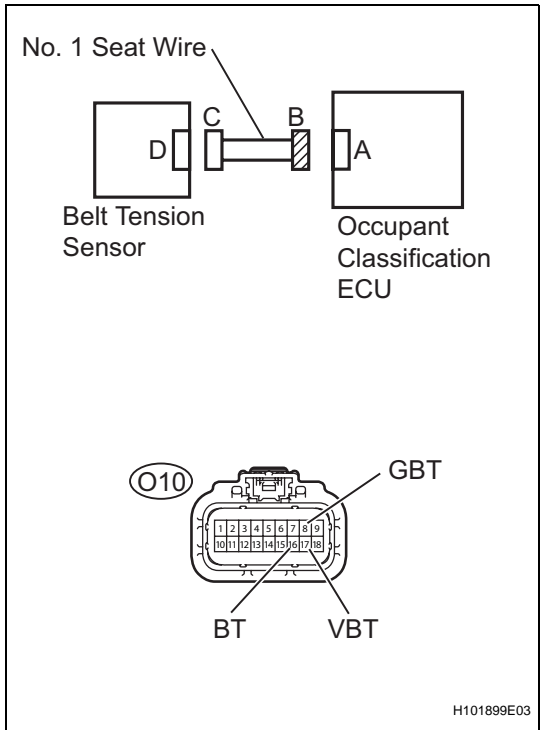
Tester Connection	Condition	Specified Condition
O10-16 (BT) - O10-8 (GBT)	Always	Below 1 Ω
O10-17 (VBT) - O10-8 (GBT)	Always	Below 1 Ω

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REPAIR OR REPLACE NO. 1 SEAT WIRE

OK

5 CHECK NO. 1 SEAT WIRE (TO GROUND)



- (a) Disconnect the service wire from connector C.
- (b) Measure the resistance.

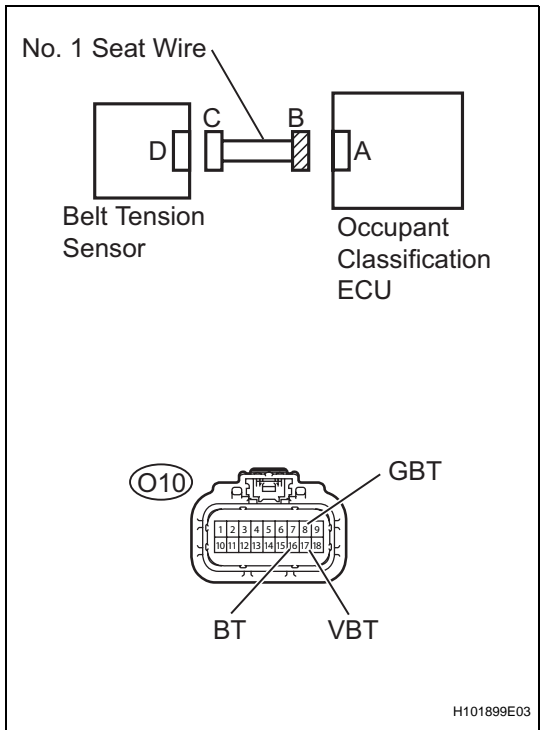
Standard resistance

Tester Connection	Condition	Specified Condition
O10-8 (GBT) - Body ground	Always	1 MΩ or higher
O10-16 (BT) - Body ground	Always	1 MΩ or higher
O10-17 (VBT) - Body ground	Always	1 MΩ or higher

NG REPAIR OR REPLACE NO. 1 SEAT WIRE

OK

6 CHECK NO. 1 SEAT WIRE (FOR SHORT)



- (a) Measure the resistance.
- Standard resistance**

Tester Connection	Condition	Specified Condition
O10-16 (BT) - O10-8 (GBT)	Always	1 MΩ or higher
O10-17 (VBT) - O10-8 (GBT)	Always	1 MΩ or higher

NG REPAIR OR REPLACE NO. 1 SEAT WIRE

OK

7	CHECK DTC
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- (a) Connect the connectors to the occupant classification ECU and the belt tension sensor.
- (b) Connect the negative (-) terminal cable to the battery.
- (c) Turn the ignition switch to the ON position.
- (d) Clear the DTCs stored in the memory (See page [RS-487](#)).

HINT:

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

- (e) Turn the ignition switch to the LOCK position.
- (f) Turn the ignition switch to the ON position.
- (g) Check the DTCs (See page [RS-487](#)).

OK:

DTCs B1773 and B1776 are not output.

HINT:

DTCs other than B1773 and B1776 may be output at this time, but they are not related to this check.

OK	USE SIMULATION METHOD TO CHECK
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NG

8	REPLACE BELT TENSION SENSOR (FRONT SEAT OUTER BELT ASSEMBLY RH)
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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) Replace the belt tension sensor (See page [SB-27](#)).
- HINT:
Perform the inspection using parts from a normal vehicle if possible.
- (d) Connect the negative (-) terminal cable to the battery.
 - (e) Turn the ignition switch to the ON position.
 - (f) Clear the DTCs stored in the memory (See page [RS-487](#)).

HINT:

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

- (g) Turn the ignition switch to the LOCK position.
- (h) Turn the ignition switch to the ON position.
- (i) Check the DTCs (See page [RS-487](#)).

OK:

DTCs B1773 and B1776 are not output.

HINT:

DTCs other than B1773 and B1776 may be output at this time, but they are not related to this check.

OK	END
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9 REPLACE OCCUPANT CLASSIFICATION ECU

- (a) Connect the intelligent tester to the DLC3.
 - (b) Turn the ignition switch to the ON position.
 - (c) Store the occupant classification ECU data into the intelligent tester (See page [RS-476](#)).
- HINT:
If the ECU data cannot be stored in the intelligent tester, replace the front seat cushion assembly (with occupant classification ECU and occupant classification sensor).
- (d) Turn the ignition switch to the LOCK position.
 - (e) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
 - (f) Replace the occupant classification ECU (See page [RS-634](#)).
 - (g) Connect the negative (-) terminal cable to the battery.
 - (h) Turn the ignition switch to the ON position.
 - (i) Load the data from the previous ECU stored in the tester, into the newly installed ECU (See page [RS-476](#)).
 - (j) Turn the ignition switch to the LOCK position.
 - (k) Turn the ignition switch to the ON position.
 - (l) Clear the DTCs stored in the memory (See page [RS-487](#)).

HINT:

If DTC is not cleared at this time, past DTC will remain.

NEXT

10 PERFORM SENSITIVITY CHECK

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

NEXT

END