

DTC	B1810/53	Short in Driver Side Squib 2nd Step Circuit
DTC	B1811/53	Open in Driver Side Squib 2nd Step Circuit
DTC	B1812/53	Short to GND in Driver Side Squib 2nd Step Circuit
DTC	B1813/53	Short to B+ in Driver Side Squib 2nd Step Circuit

DESCRIPTION

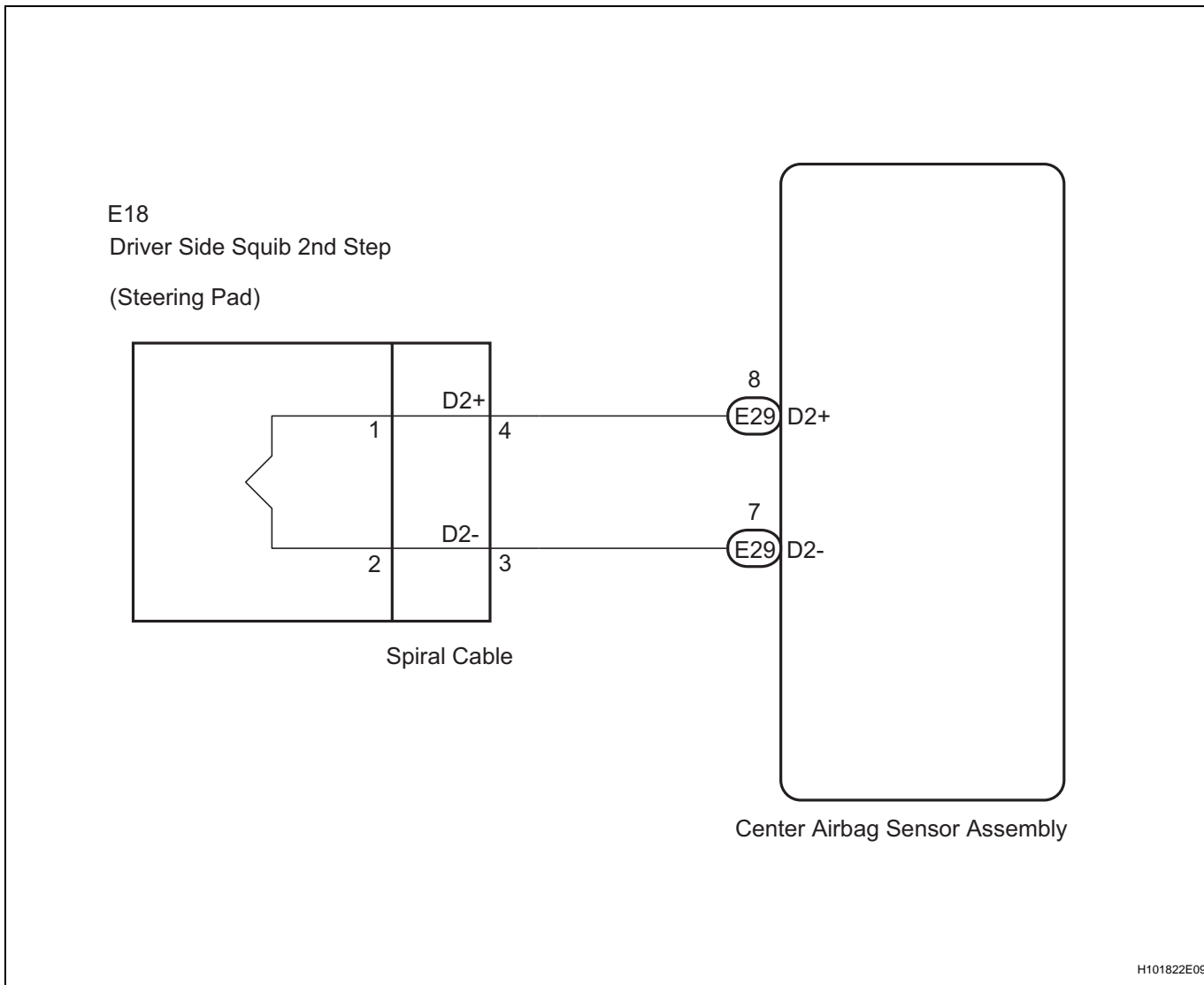
The driver side squib 2nd step circuit consists of the center airbag sensor assembly, the spiral cable and the steering pad.

The circuit signals the SRS to deploy when deployment conditions are met.

These DTCs are recorded when a malfunction is detected in the driver side squib 2nd step circuit.

DTC No.	DTC Detecting Condition	Trouble Area
B1810/53	<ul style="list-style-type: none"> Center airbag sensor assembly detects line short circuit signal in driver side squib 2nd step circuit 5 times during primary check. Driver side squib 2nd step malfunction Spiral cable malfunction Center airbag sensor assembly malfunction 	<ul style="list-style-type: none"> Instrument panel wire Spiral cable Steering pad (Driver side squib 2nd step) Center airbag sensor assembly
B1811/53	<ul style="list-style-type: none"> Center airbag sensor assembly detects open circuit signal in driver side squib 2nd step circuit for 2 seconds. Driver side squib 2nd step malfunction Spiral cable malfunction Center airbag sensor assembly malfunction 	<ul style="list-style-type: none"> Instrument panel wire Spiral cable Steering pad (Driver side squib 2nd step) Center airbag sensor assembly
B1812/53	<ul style="list-style-type: none"> Center airbag sensor assembly detects short circuit to ground signal in driver side 2nd step circuit for 0.5 seconds. Driver side squib 2nd step malfunction Spiral cable malfunction Center airbag sensor assembly malfunction 	<ul style="list-style-type: none"> Instrument panel wire Spiral cable Steering pad (Driver side squib 2nd step) Center airbag sensor assembly
B1813/53	<ul style="list-style-type: none"> Center airbag sensor assembly detects short circuit to B+ signal in driver side squib 2nd step circuit for 0.5 seconds. Driver side squib 2nd step malfunction Spiral cable malfunction Center airbag sensor assembly malfunction 	<ul style="list-style-type: none"> Instrument panel wire Spiral cable Steering pad (Driver side squib 2nd step) Center airbag sensor assembly

WIRING DIAGRAM



RS

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting CHECK MODE (signal check) with the intelligent tester (See page RS-39).
- After selecting CHECK MODE (signal check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (See page RS-29).

1 CHECK CONNECTOR (DRIVER SIDE SQUIB - SPIRAL CABLE)

- Turn the ignition switch off.
- Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- Disconnect the connectors from the steering pad.
- Check the spiral cable connector and terminals (on the steering pad side) and check that the connector is properly connected to the steering pad.

Result

Result	Proceed to
No problem.	A
Connector or terminals incorrect.	B
Connector connected improperly.	C

B

REPLACE SPIRAL CABLE

C

CONNECT CONNECTOR PROPERLY

A

2

CHECK STEERING PAD (DRIVER SIDE SQUIB 2ND STEP)

SST 09843-18060

- Disconnect the connectors from the steering pad.
- Connect the white wire side of SST (resistance 2.1 Ω) to connector E (black connector).

CAUTION:

Never connect a tester to the steering pad (driver side squib 2nd step) for measurement, as this may lead to a serious injury due to airbag deployment.

NOTICE:

- Do not forcibly insert the SST into the terminals of the connector when connecting.
 - Insert the SST straight into the terminals of the connector.
- Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
 - Turn the ignition switch on, and wait for at least 60 seconds.
 - Clear the DTCs stored in the memory (See page RS-36).
 - Turn the ignition switch off.
 - Turn the ignition switch on, and wait for at least 60 seconds.
 - Check the DTCs (See page RS-36).

OK:

DTC B1810/53, B1811/53, B1812/53 and B1813/53 are not output.

HINT:

DTCs other than DTC B1810/53, B1811/53, B1812/53 and B1813/53 may be output at this time, but they are not related to this check.

OK

REPLACE STEERING PAD

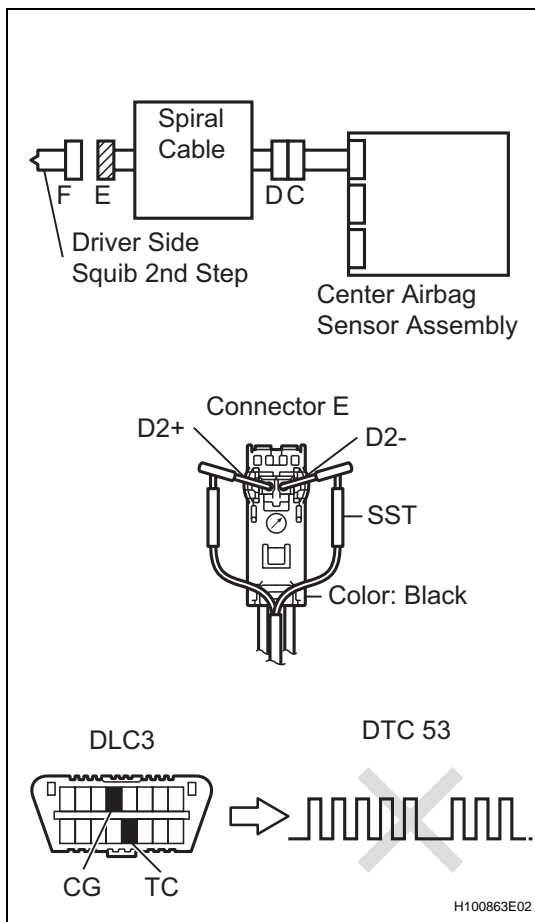
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3

CHECK CONNECTOR (SPIRAL CABLE - INSTRUMENT PANEL WIRE)

- Turn the ignition switch off.
- Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

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- (c) Disconnect the SST from connector E.
- (d) Check the instrument panel wire connector and terminals (on the spiral cable side) and check that the connector is properly connected to the spiral cable.

Result

Result	Proceed to
No problem.	A
Connector or terminals incorrect.	B
Connector connected improperly.	C

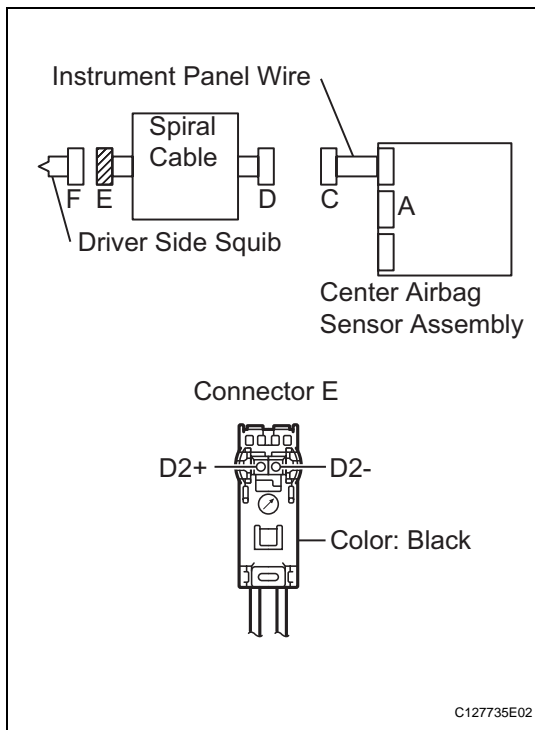
B REPAIR OR REPLACE INSTRUMENT PANEL WIRE

C CONNECT CONNECTOR PROPERLY

A

RS

4 CHECK SPIRAL CABLE



- (a) Disconnect the instrument panel wire connector from the spiral cable.
- (b) Check for short to B+ in the circuit.
 - (1) Connect the negative (-) terminal cable from the battery, and wait for at least 2 seconds.
 - (2) Turn the ignition switch on.
 - (3) Measure the voltage.

Standard voltage

Tester Connection	Condition	Specified Condition
1 (D2+) - Body ground	Ignition switch on	Below 1 V
2 (D2-) - Body ground	Ignition switch on	Below 1 V

- (c) Check for open in the circuit.
 - (1) Turn the ignition switch off.
 - (2) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
 - (3) Measure the resistance.

Standard resistance

Tester Connection	Condition	Specified Condition
1 (D2+) - 2 (D2-)	Always	Below 1 Ω

- (d) Check for short to ground in the circuit.
 - (1) Measure the resistance.

Standard resistance

Tester Connection	Condition	Specified Condition
1 (D2+) - Body ground	Always	1 MΩ or higher
2 (D2-) - Body ground	Always	1 MΩ or higher

- (e) Check for short in the circuit.
 - (1) Release the activation prevention mechanism built into connector D (See page RS-29).
 - (2) Measure the resistance.

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Standard resistance

Tester Connection	Condition	Specified Condition
1 (D2+) - 2 (D2-)	Always	1 MΩ or higher

- (3) Restore the released activation prevention mechanism of connector D to the original condition.

NG → **REPLACE SPIRAL CABLE**

OK

5 CHECK CONNECTOR (CENTER AIR BAG SENSOR ASSEMBLY - INSTRUMENT PANEL WIRE)

- (a) Check the instrument panel wire connector and terminals (on the center airbag sensor assembly side) and check that the connector is properly connected to the center airbag sensor assembly.

Result

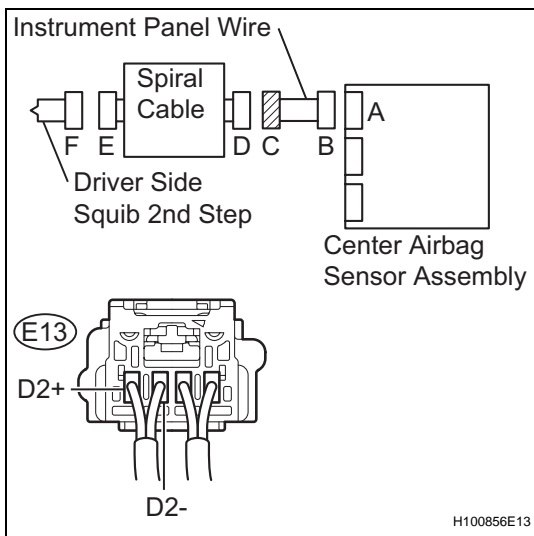
Result	Proceed to
No problem.	A
Connector or terminals incorrect.	B
Connector connected improperly.	C

B → **REPAIR OR REPLACE INSTRUMENT PANEL WIRE**

C → **CONNECT CONNECTOR PROPERLY**

A

6 CHECK INSTRUMENT PANEL WIRE



- (a) Disconnect the instrument panel wire connector from the center airbag sensor assembly.
- (b) Check for short to B+ in the circuit.
 - (1) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
 - (2) Turn the ignition switch on.
 - (3) Measure the voltage.

Standard voltage

Tester Connection	Condition	Specified Condition
E13-4 (D2+) - Body ground	Ignition switch on	Below 1 V
E13-3 (D2-) - Body ground	Ignition switch on	Below 1 V

- (c) Check for open in the circuit.
 - (1) Turn the ignition switch off.
 - (2) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
 - (3) Measure the resistance.

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Standard resistance

Tester Connection	Condition	Specified Condition
E13-4 (D2+) - E13-3 (D2-)	Always	Below 1 Ω

(d) Check for short to ground in the circuit.

(1) Measure the resistance.

Standard resistance

Tester Connection	Condition	Specified Condition
E13-4 (D2+) - Body ground	Always	1 MΩ or higher
E13-3 (D2-) - Body ground	Always	1 MΩ or higher

(e) Check for short in the circuit.

(1) Release the activation prevention mechanism built into connector B (See page RS-29).

(2) Measure the resistance.

Standard resistance

Tester Connection	Condition	Specified Condition
E13-4 (D2+) - E13-3 (D2-)	Always	1 MΩ or higher

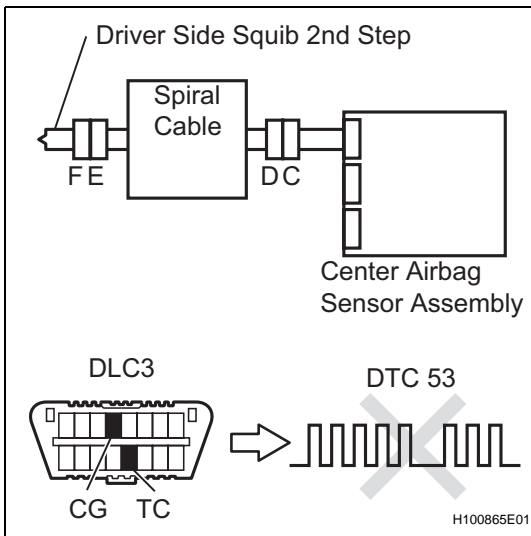
(3) Restore the released activation prevention mechanism of connector B to the original condition.

NG → **REPAIR OR REPLACE INSTRUMENT PANEL WIRE**

RS

OK

7 CHECK CENTER AIRBAG SENSOR ASSEMBLY



- (a) Connect the connectors to the steering pad, spiral cable and the center airbag sensor assembly.
- (b) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
- (c) Turn the ignition switch on (IG), and wait for at least 60 seconds.
- (d) Clear the DTCs stored in the memory (See page RS-36).
- (e) Turn the ignition switch off.
- (f) Turn the ignition switch on (IG), and wait for at least 60 seconds.
- (g) Check the DTCs (See page RS-36).

OK:

DTC B1810/53, B1811/53, B1812/53 and B1813/53 are not output.

HINT:

DTCs other than DTC B1810/53, B1811/53, B1812/53 and B1813/53 may be output at this time, but they are not related to this check.

NG → **REPLACE CENTER AIRBAG SENSOR ASSEMBLY**

OK

USE SIMULATION METHOD TO CHECK