

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 (Dual stage -2nd step) circuit consists of the center airbag sensor assembly, the spiral cable and the steering pad assembly.

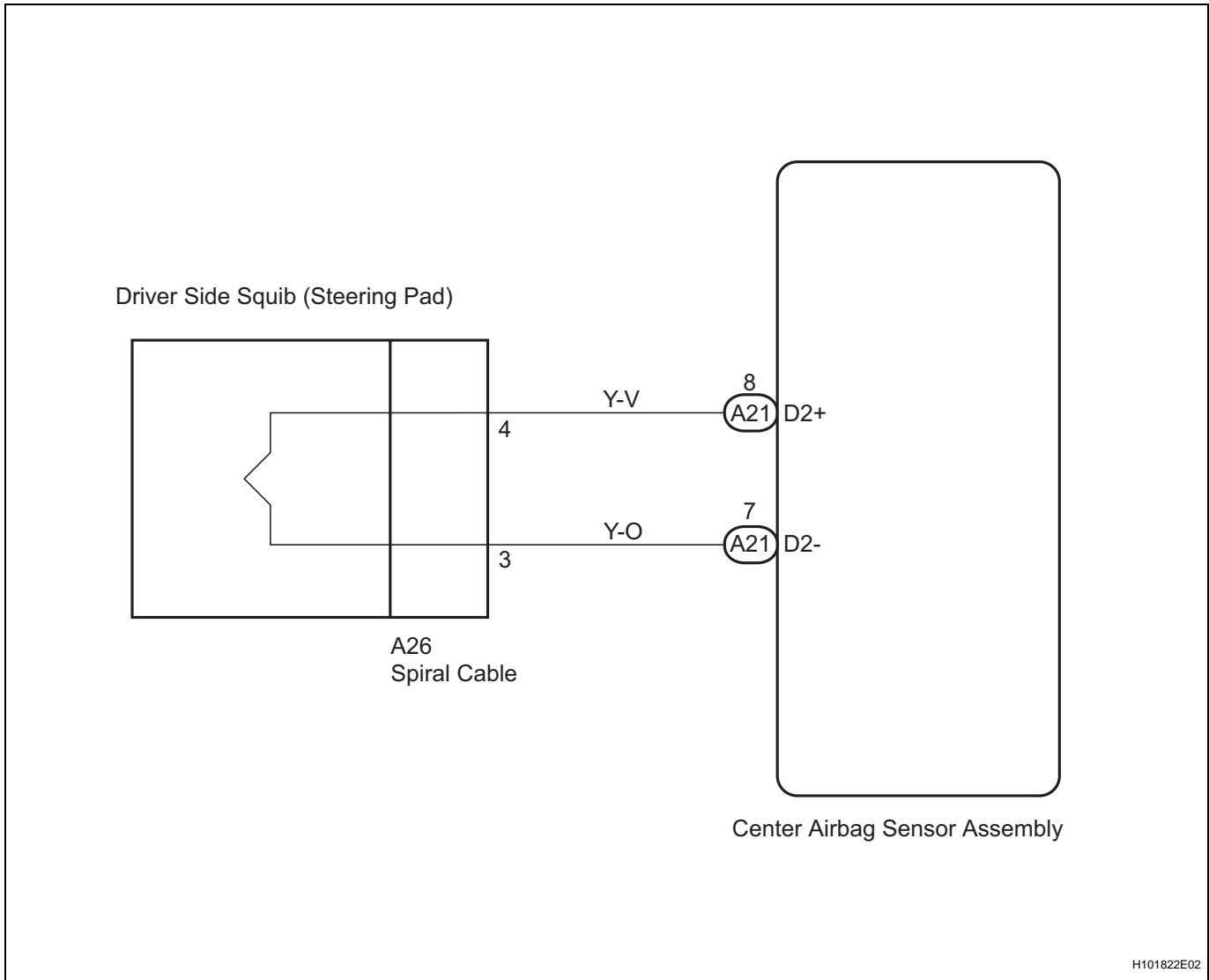
The circuit signals the SRS to deploy when airbag deployment conditions are met.

These DTCs are set when a malfunction is detected in the driver side squib (Dual stage - 2nd step) circuit.

DTC No.	DTC Detecting Conditions	Trouble Areas
B1810/53	<ul style="list-style-type: none"> The center airbag sensor assembly receives a line short circuit signal in the driver side squib (Dual stage - 2nd step) circuit for 2 seconds Driver side squib (Dual stage - 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, Dual stage - 2nd step) Center airbag sensor assembly
B1811/53	<ul style="list-style-type: none"> The center airbag sensor assembly receives an open circuit signal in the driver side squib (Dual stage - 2nd step) circuit for 2 seconds malfunction Driver side squib (Dual stage - 2nd step) Spiral cable malfunction Center airbag sensor assembly malfunction 	<ul style="list-style-type: none"> Instrument panel wire Spiral cable Steering pad (Driver side squib, Dual stage - 2nd step) Center airbag sensor assembly
B1812/53	<ul style="list-style-type: none"> The center airbag sensor assembly receives a short circuit to ground signal in the driver side squib (Dual stage - 2nd step) circuit for 0.5 seconds Driver side squib (Dual stage - 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, Dual stage - 2nd step) Center airbag sensor assembly
B1813/53	<ul style="list-style-type: none"> The center airbag sensor assembly receives a short circuit to B+ signal in the driver side squib (Dual stage - 2nd step) circuit for 0.5 seconds Driver side squib (Dual stage - 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, Dual stage - 2nd step) Center airbag sensor assembly



WIRING DIAGRAM

**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

- (a) Proceed to the appropriate step according to DTC readings.
 - (1) If using the intelligent tester (read the 5-digit DTCs):
Using the intelligent tester, check for DTCs (See page RS-34).

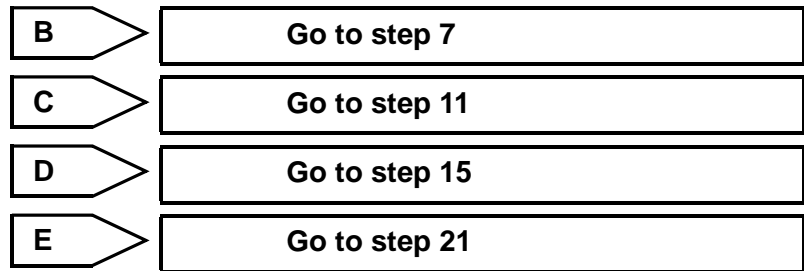
Result

Result	Proceed to
DTC B1810 is output.	A
DTC B1811 is output.	B
DTC B1812 is output.	C
DTC B1813 is output.	D

- (2) If not using the intelligent tester (read the 2-digit DTCs): Check for DTCs (See page RS-34).

Result

Result	Proceed to
DTC 53 is output.	E



A

2 CHECK CONNECTOR

- (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 spiral cable connectors (on the horn button assembly side) are not damaged.

OK:

The lock button is not disengaged, and the claw of the lock is not deformed or damaged.



OK

3 CHECK CONNECTION OF CONNECTORS

- (a) Check that the connectors are properly connected to the center airbag sensor assembly and the spiral cable.

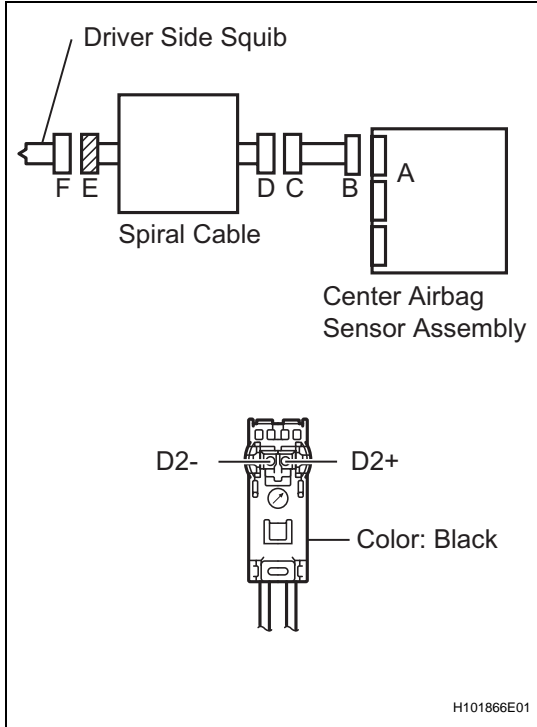
OK:

The connectors are properly connected.

NG **CONNECT CONNECTORS**

OK

4 CHECK SPIRAL CABLE (FOR SHORT)



- (a) Disconnect the spiral cable connectors from the instrument panel wire and steering pad.
- (b) Release the activation prevention mechanism built into connector D (See page [RS-28](#)).
- (c) Measure the resistance.

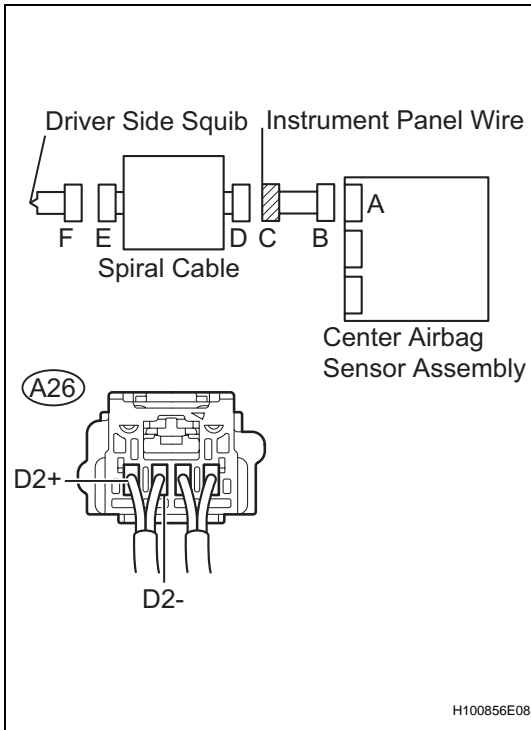
Standard resistance

Tester Connection	Condition	Specified Condition
D2+ - D2-	Always	1 MΩ or Higher

NG **REPLACE SPIRAL CABLE**

OK

5 CHECK INSTRUMENT PANEL WIRE (FOR SHORT)



- (a) Disconnect the instrument panel wire connector from the center airbag sensor assembly.
- (b) Release the activation prevention mechanism built into connector B (See page RS-28).
- (c) Measure the resistance.

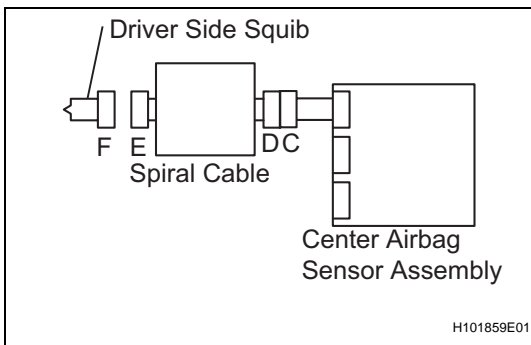
Standard resistance

Tester Connection	Condition	Specified Condition
A26-4 (D2+) - A26-3 (D2-)	Always	1 MΩ or Higher

NG REPAIR OR REPLACE INSTRUMENT PANEL WIRE

OK

6 CHECK CENTER AIRBAG SENSOR ASSEMBLY



- (a) Connect the instrument panel wire connectors to the center airbag sensor assembly and spiral cable.
- (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, and wait for at least 60 seconds
- (d) Clear any DTCs stored in the memory (See page RS-34).
- (e) Turn the ignition switch to the LOCK position.
- (f) Turn the ignition switch to the ON position, and wait for at least 60 seconds.
- (g) Check for DTCs (See page RS-34).

OK:

DTC B1810 is not output.

HINT:

DTCs other than B1810 may be output at this time, but they are not related to this check.

NG

OK Go to step 20

REPLACE CENTER AIRBAG ASSEMBLY

7 CHECK CONNECTOR

- 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 spiral cable connectors (on the steering pad side) are not damaged.

OK:

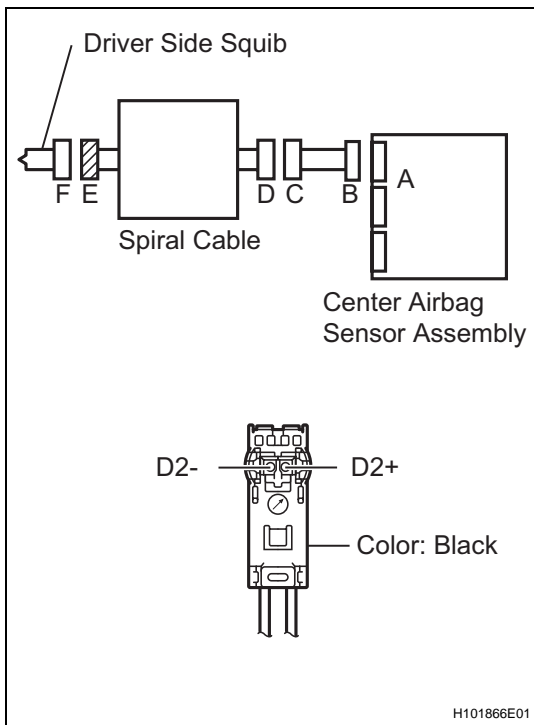
The lock button is not disengaged, and the claw of the lock is not deformed or damaged.

NG**REPLACE SPIRAL CABLE****OK****8 CHECK CONNECTION OF CONNECTORS**

- Check that the spiral cable connectors (on the steering pad side) are properly connected.

OK:

The connectors are properly connected.

NG**CONNECT CONNECTORS****OK****9 CHECK SPIRAL CABLE (FOR OPEN)**

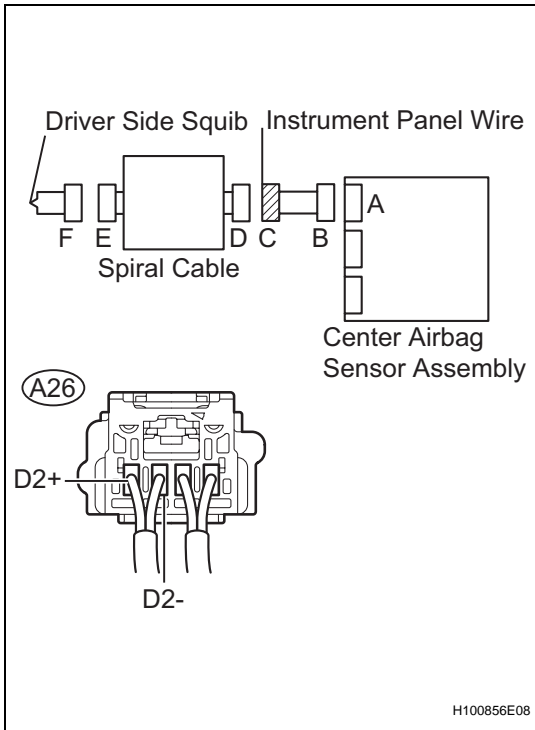
- Disconnect the spiral cable connectors from the instrument panel wire and steering pad.
- Measure the resistance.

Standard resistance

Tester Connection	Condition	Specified Condition
D2+ - D2-	Always	Below 1 Ω

NG**REPLACE SPIRAL CABLE****OK**

10 CHECK INSTRUMENT PANEL WIRE (FOR OPEN)



- (a) Disconnect the instrument panel wire connector from the center airbag sensor assembly.
- (b) Measure the resistance.
Standard resistance

Tester Connection	Condition	Specified Condition
A26-4 (D2+) - A26-3 (D2-)	Always	Below 1 Ω

OK → **Go to step 19**

NG

REPAIR OR REPLACE INSTRUMENT PANEL WIRE

11 CHECK CONNECTOR

- (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 spiral cable connectors (on the steering pad side) are not damaged.

OK:

The lock button is not disengaged, or the claw of the lock is not deformed or damaged.

NG → **REPLACE SPIRAL CABLE**

OK

12 CHECK CONNECTION OF CONNECTORS

- (a) Check that the spiral cable connectors (on the steering pad side) are properly connected.

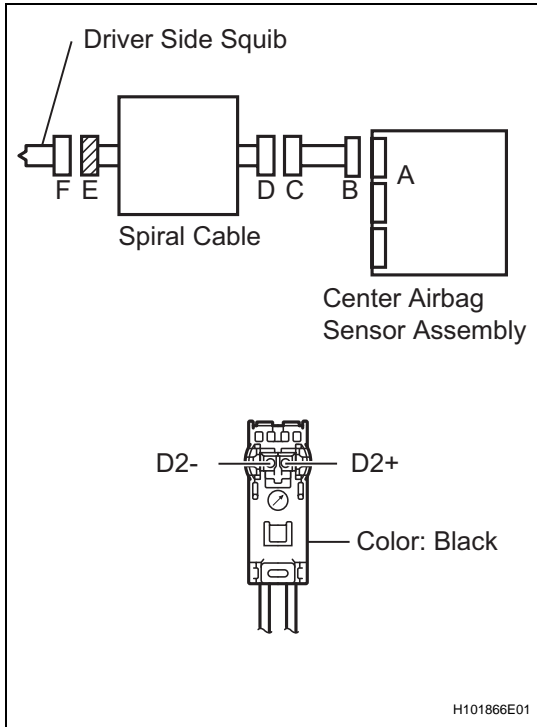
OK:

The connectors are properly connected.

NG **CONNECT CONNECTORS**

OK

13 CHECK SPIRAL CABLE (TO GROUND)



- (a) Disconnect the spiral cable connector from the instrument panel wire and steering pad.
- (b) Measure the resistance.

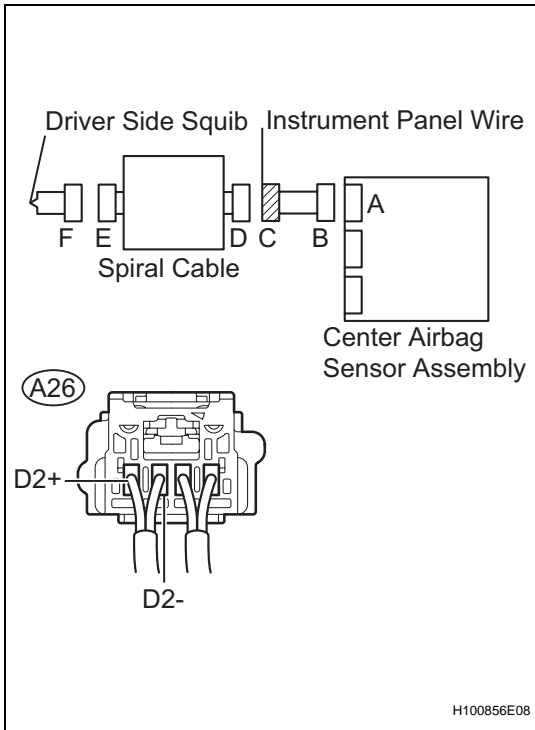
Standard resistance

Tester Connection	Condition	Specified Condition
D2+ - Body ground	Always	1 MΩ or Higher
D2- - Body ground	Always	1 MΩ or Higher

NG **REPLACE SPIRAL CABLE**

OK

14 CHECK INSTRUMENT PANEL WIRE (TO GROUND)



- (a) Disconnect the instrument panel wire connector from the center airbag sensor assembly.
 - (b) Measure the resistance.
- Standard resistance**

Tester Connection	Condition	Specified Condition
A26-4 (D2+) - Body ground	Always	1 MΩ or Higher
A26-3 (D2-) - Body ground	Always	1 MΩ or Higher

OK → **Go to step 19**

NG

REPAIR OR REPLACE INSTRUMENT PANEL WIRE

15 CHECK CONNECTOR

- (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 spiral cable connectors (on the steering pad side) are not damaged.
- OK:**
The lock button is not disengaged, and the claw of the lock is not deformed or damaged.

RS

NG → **REPLACE SPIRAL CABLE**

OK

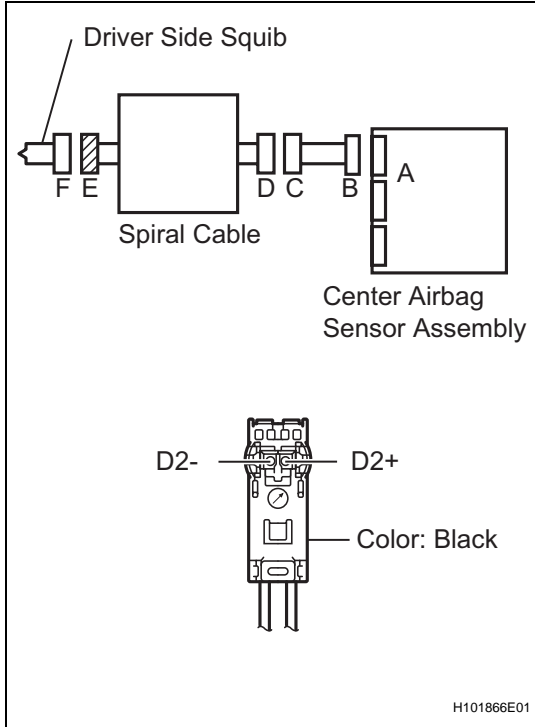
16 CHECK CONNECTION OF CONNECTORS

- (a) Check that the spiral cable connectors (on the steering pad side) are properly connected.
- OK:**
The connectors are properly connected.

NG **CONNECT CONNECTORS**

OK

17 CHECK SPIRAL CABLE (TO B+)



- (a) Disconnect the spiral cable connectors from the instrument panel wire and steering pad.
- (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.

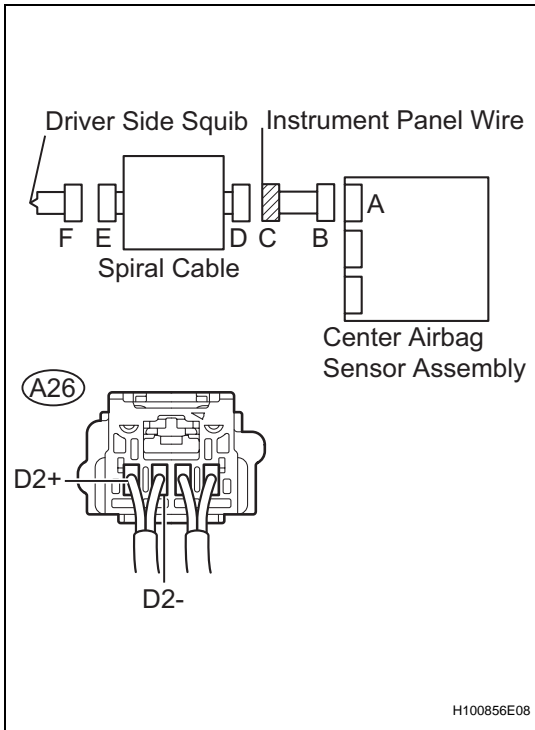
Standard voltage

Tester Connection	Condition	Specified Condition
D2+ - Body ground	Ignition switch ON	Below 1 V
D2- - Body ground	Ignition switch ON	Below 1 V

NG **REPLACE SPIRAL CABLE**

OK

18 CHECK INSTRUMENT PANEL WIRE (TO B+)



- (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 instrument panel wire connector from the center airbag sensor assembly.
- (d) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
- (e) Turn the ignition switch to the ON position.
- (f) Measure the voltage.

Standard voltage

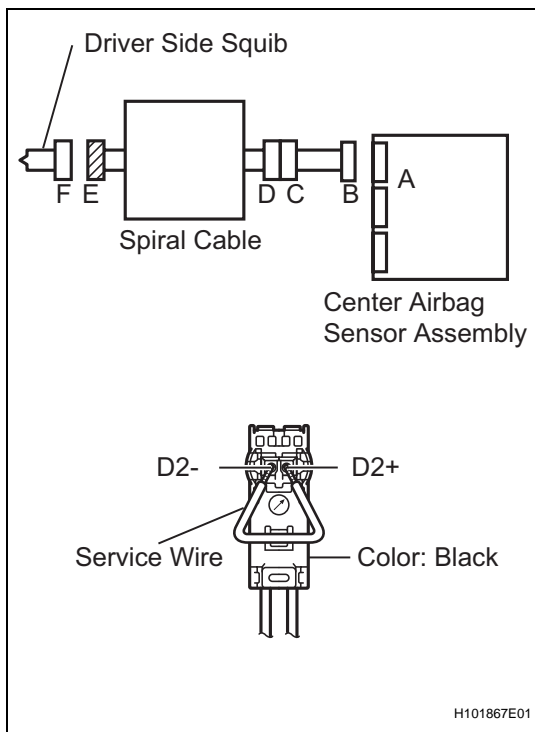
Tester Connection	Condition	Specified Condition
A26-4 (D2+) - Body ground	Ignition switch ON	Below 1 V
A26-3 (D2-) - Body ground	Ignition switch ON	Below 1 V

NG REPAIR OR REPLACE INSTRUMENT PANEL WIRE

OK

19 REPLACE CENTER AIRBAG SENSOR ASSEMBLY

HINT:
If continuing from step 18, begin from (a). If continuing from any other step, begin from (c).



- (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) Connect the connectors to the center airbag sensor assembly.
- (d) Using a service wire, connect D2+ and D2- of connector E.

NOTICE:

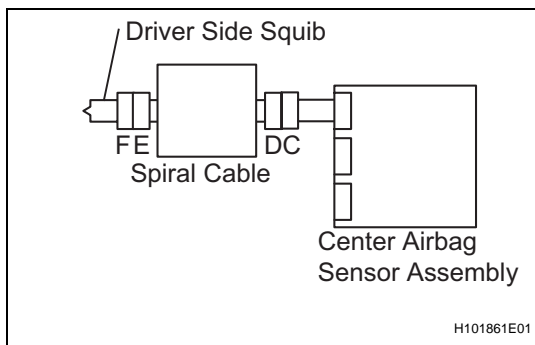
- **Twist the end of the service wire in order to insert it into the connector.**
 - **Do not forcibly insert the twisted service wire into the terminals of the connector when connecting.**
- (e) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
 - (f) Turn the 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](#)).

OK:

DTCs B1811, B1812 and B1813 are not output.

HINT:

DTCs other than B1811, B1812 or B1813 may be output at this time, but they are not related to this check.

NG**REPLACE CENTER AIRBAG ASSEMBLY****OK****20 CHECK STEERING PAD (DRIVER SIDE SQUIB)****HINT:**

If continuing from step 19, begin from (c). If continuing from any other step, begin from (a).

- (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 service wire from connector E.
- (d) Connect the connectors to the steering pad.
- (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](#)).

RS

OK:

DTCs B1810, B1811, B1812 and B1813 are not output.

HINT:

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

NG

REPLACE STEERING PAD

OK

USE SIMULATION METHOD TO CHECK

21 CHECK CONNECTOR

- (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 spiral cable connectors (on the steering pad side) are not damaged.

OK:

The lock button is not disengaged, and the claw of the lock is not deformed or damaged.

NG

REPLACE SPIRAL CABLE

OK

22 CHECK CONNECTION OF CONNECTORS

- (a) Check that the spiral cable connectors (on the steering pad side) are properly connected.

OK:

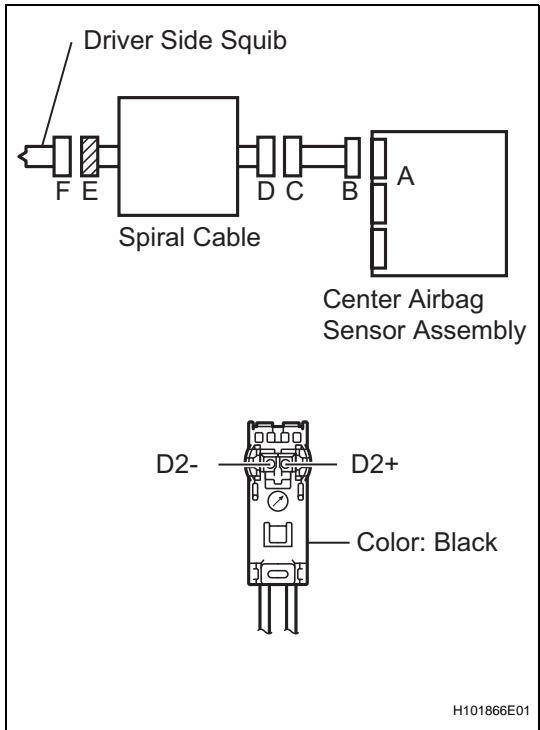
The connectors are properly connected.

NG

CONNECT CONNECTORS

OK

23 CHECK SPIRAL CABLE



- (a) Disconnect the spiral cable connectors from the instrument panel wire and steering pad.
- (b) Connect the negative (-) terminal cable from 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
D2+ - Body ground	Ignition switch ON	Below 1 V
D2- - Body ground	Ignition switch ON	Below 1 V

- (e) Turn the ignition switch to the LOCK position.
- (f) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- (g) Measure the resistance.

Standard resistance

Tester Connection	Condition	Specified Condition
D2+ - D2-	Always	Below 1 Ω
D2+ - Body ground	Always	1 MΩ or Higher
D2- - Body ground	Always	1 MΩ or Higher

- (h) Release the activation prevention mechanism built into connector D (See page RS-28).
- (i) Measure the resistance.

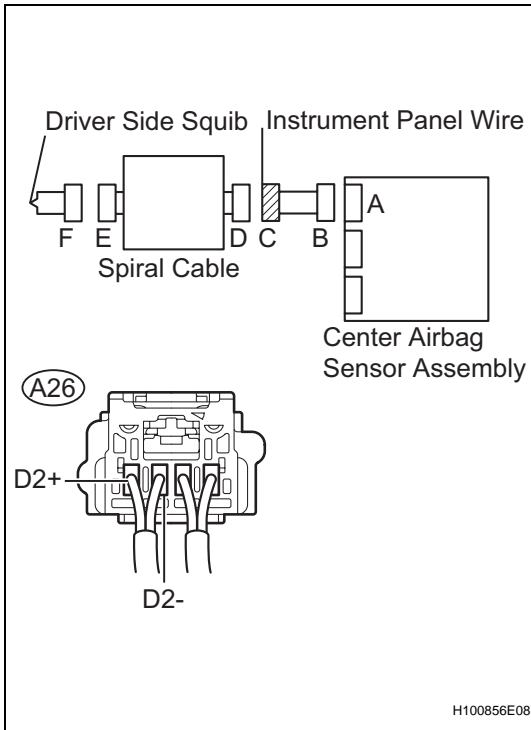
Standard resistance

Tester Connection	Condition	Specified Condition
D2+ - D2-	Always	1 MΩ or Higher

NG → **REPLACE SPIRAL CABLE**

OK

24 CHECK INSTRUMENT PANEL WIRE



- (a) Restore the released activation prevention mechanism of connector B to the original condition.
- (b) Disconnect the instrument panel wire connector from the center airbag sensor assembly.
- (c) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
- (d) Turn the ignition switch to the ON position.
- (e) Measure the voltage.

Standard voltage

Tester Connection	Condition	Specified Condition
A26-4 (D2+) - Body ground	Ignition switch ON	Below 1 V
A26-3 (D2-) - Body ground	Ignition switch ON	Below 1 V

- (f) Turn the ignition switch to the LOCK position.
- (g) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- (h) Measure the resistance.

Standard resistance

Tester Connection	Condition	Specified Condition
A26-4 (D2+) - A26-3 (D2-)	Always	Below 1 Ω
A26-4 (D2+) - Body ground	Always	1 MΩ or Higher
A26-3 (D2-) - Body ground	Always	1 MΩ or Higher

- (i) Release the activation prevention mechanism built into connector B (See page RS-28).
- (j) Measure the resistance.

Standard resistance

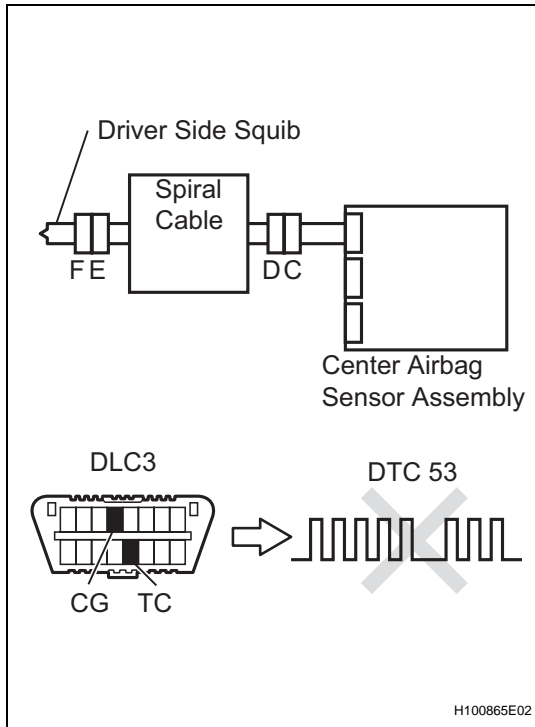
Tester Connection	Condition	Specified Condition
A26-4 (D2+) - A26-3 (D2-)	Always	1 MΩ or Higher

NG REPAIR OR REPLACE INSTRUMENT PANEL WIRE

OK

RS

25 CHECK CENTER AIRBAG ASSEMBLY



(a) Replace the steering pad (See page [RS-557](#)).

HINT:

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

(b) Connect the instrument panel wire to the center airbag sensor assembly and spiral cable.

(c) Connect the connectors to the center airbag sensor assembly.

(d) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

(e) Turn the ignition switch to the ON position, and wait for at least 60 seconds.

(f) Clear any DTCs stored in the memory (See page [RS-34](#)).

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

(h) Turn the ignition switch to the ON position, and wait for at least 60 seconds.

(i) Check for DTCs (See page [RS-34](#)).

OK:

DTC 53 is not output.

HINT:

DTCs other than 53 may be output at this time, but they are not related to this check.

NG

REPLACE CENTER AIRBAG ASSEMBLY

OK

USE SIMULATION METHOD TO CHECK