

DTC	B1815/54	Short in Front Passenger Side Squib 2nd Step Circuit
DTC	B1816/54	Open in Front Passenger Side Squib 2nd Step Circuit
DTC	B1817/54	Short to GND in Front Passenger Side Squib 2nd Step Circuit
DTC	B1818/54	Short to B+ in Front Passenger Side Squib 2nd Step Circuit

DESCRIPTION

The front passenger side squib 2nd step circuit consists of the center airbag sensor assembly and the front passenger airbag assembly.

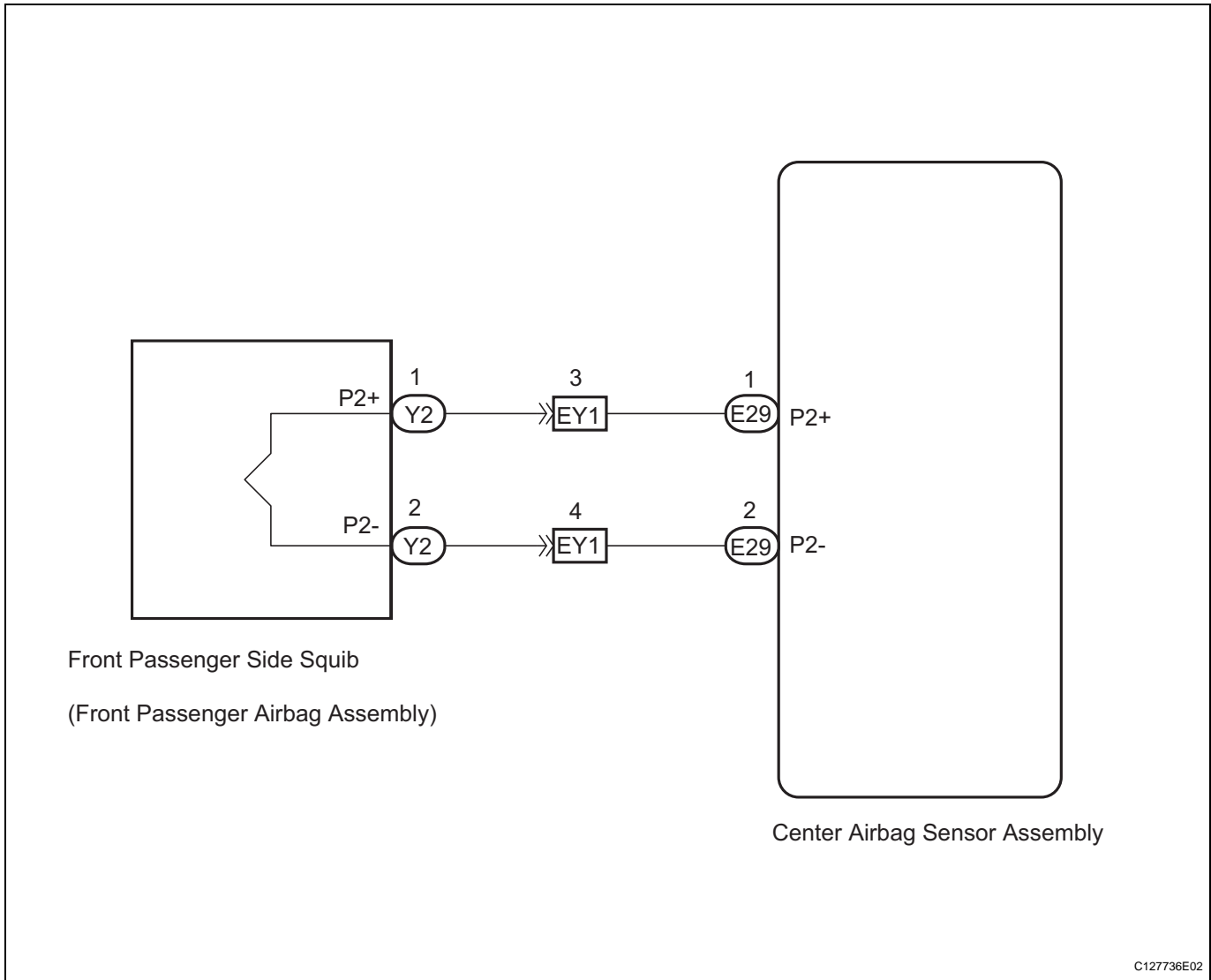
The circuit signals the SRS to deploy when deployment conditions are met.

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

RS

DTC No.	DTC Detecting Condition	Trouble Area
B1815/54	<ul style="list-style-type: none"> Center airbag sensor assembly detects line short circuit signal in front passenger side squib 2nd step circuit 5 times during primary check. Front passenger side squib 2nd step malfunction Center airbag sensor assembly malfunction 	<ul style="list-style-type: none"> Instrument panel wire Instrument panel wire assembly Front passenger airbag assembly (Front passenger side squib 2nd step) Center airbag sensor assembly
B1816/54	<ul style="list-style-type: none"> Center airbag sensor assembly detects open circuit signal in front passenger side squib 2nd step circuit for 2 seconds. Front passenger side squib 2nd step malfunction Center airbag sensor assembly malfunction 	<ul style="list-style-type: none"> Instrument panel wire Instrument panel wire assembly Front passenger airbag assembly (Front passenger side squib 2nd step) Center airbag sensor assembly
B1817/54	<ul style="list-style-type: none"> Center airbag sensor assembly detects short circuit to ground signal in front passenger side squib 2nd step circuit for 0.5 seconds. Front passenger side squib 2nd step malfunction Center airbag sensor assembly malfunction 	<ul style="list-style-type: none"> Instrument panel wire Instrument panel wire assembly Front passenger airbag assembly (Front passenger side squib 2nd step) Center airbag sensor assembly
B1818/54	<ul style="list-style-type: none"> Center airbag sensor assembly detects short circuit to B+ signal in front passenger side squib 2nd step circuit for 0.5 seconds. Front passenger side squib 2nd step malfunction Center airbag sensor assembly malfunction 	<ul style="list-style-type: none"> Instrument panel wire Instrument panel wire assembly Front passenger airbag assembly (Front passenger side squib 2nd step) Center airbag sensor assembly

WIRING DIAGRAM



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 (FRONT PASSENGER AIRBAG - INSTRUMENT PANEL WIRE ASSEMBLY)
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- Turn the ignition switch off.
- Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- Check the instrument panel wire assembly connector and terminals (on the front passenger airbag side) and the connector is properly connected to the front passenger airbag.

Result

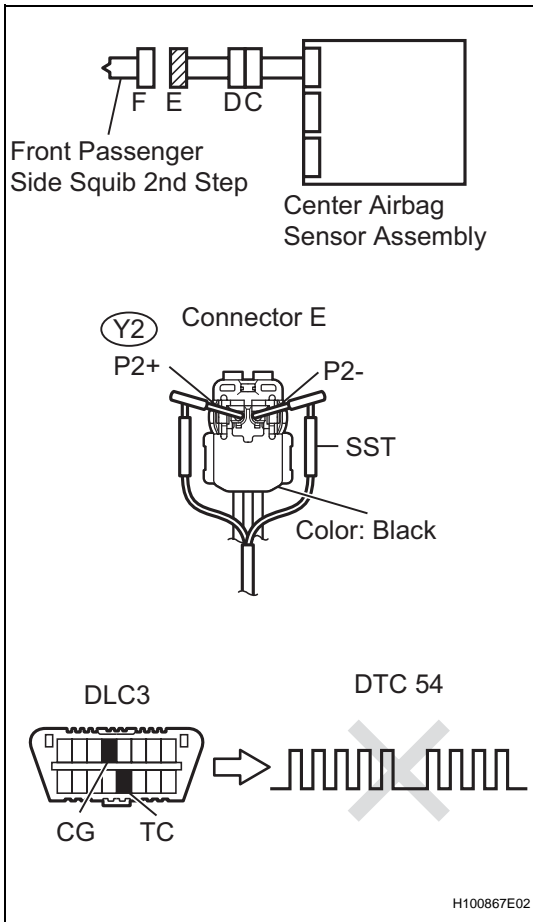
Result	Proceed to
No problem.	A
Connector or terminals incorrect.	B
Connector connected improperly.	C

B REPAIR OR REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

C CONNECT CONNECTOR PROPERLY

A

2 CHECK FRONT PASSENGER AIRBAG (FRONT PASSENGER SIDE SQUIB 2ND STEP)



SST 09843-18060

- (a) Disconnect the connectors from the front passenger airbag assembly.
- (b) Connect the white wire side of SST (resistance 2.1 Ω) to connector E (black connector).

CAUTION:

Never connect a tester to the front passenger airbag assembly (front passenger 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.
- (c) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
 - (d) Turn the ignition switch on, and wait for at least 60 seconds.
 - (e) Clear the DTCs stored in the memory (See page RS-36).
 - (f) Turn the ignition switch off.
 - (g) Turn the ignition switch on, and wait for at least 60 seconds.
 - (h) Check the DTCs (See page RS-36).

OK:

DTC B1815/54, B1816/54, B1817/54 and B1818/54 are not output.

HINT:

DTCs other than DTC B1815/54, B1816/54, B1817/54 and B1818/54 may be output at this time, but they are not related to this check.

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OK REPLACE FRONT PASSENGER AIRBAG

RS

3 CHECK CONNECTOR (INSTRUMENT PANEL WIRE ASSEMBLY - INSTRUMENT PANEL WIRE)

- (a) Turn the ignition switch off.
- (b) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- (c) Disconnect the SST from connector E.
- (d) Check the instrument panel wire assembly connector and terminals (on the instrument panel wire side) and check the connector is properly connected to the instrument panel wire.

Result

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

B

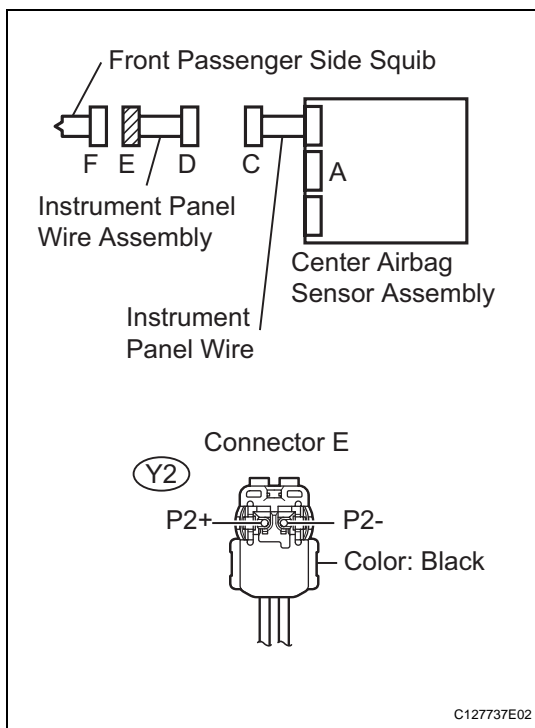
REPAIR OR REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

C

CONNECT CONNECTOR PROPERLY

A

4 CHECK INSTRUMENT PANEL WIRE ASSEMBLY



- (a) Disconnect the instrument panel wire connector from the instrument panel wire 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
Y2-2 (P2-) - Body ground	Ignition switch on	Below 1 V
Y2-1 (P2+) - 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
Y2-2 (P2-) - Y2-1 (P2+)	Always	Below 1 Ω

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

Standard resistance

Tester Connection	Condition	Specified Condition
Y2-2 (P2-) - Body ground	Always	1 MΩ or higher
Y2-1 (P2+) - 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.

Standard resistance

Tester Connection	Condition	Specified Condition
Y2-2 (P2-) - Y2-1 (P2+)	Always	1 MΩ or higher

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

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

RS

OK

5 CHECK CONNECTOR (INSTURMENT PANEL WIRE - CENTER AIRBAG SENSOR ASSEMBLY)

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

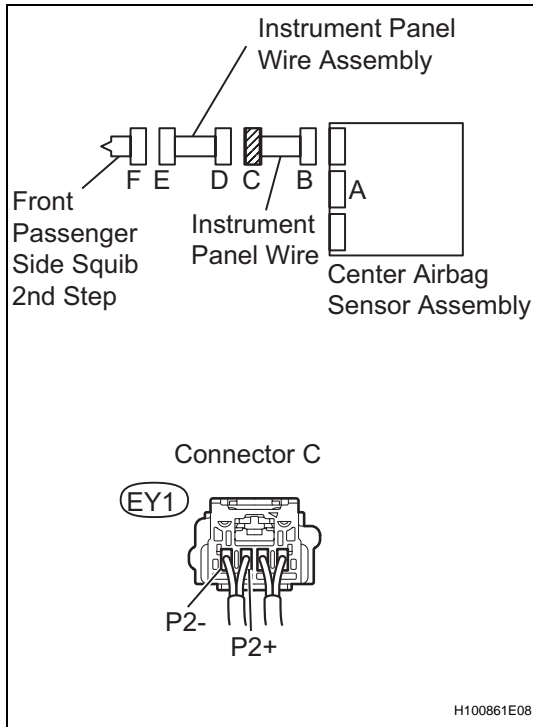
Result

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) 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
EY1-3 (P2+) - Body ground	Ignition switch on	Below 1 V
EY1-4 (P2-) - Body ground	Ignition switch on	Below 1 V

- (b) 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
EY1-3 (P2+) - EY1-4 (P2-)	Always	Below 1 Ω

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

Standard resistance

Tester Connection	Condition	Specified Condition
EY1-3 (P2+) - Body ground	Always	1 M Ω or higher
EY1-4 (P2-) - Body ground	Always	1 M Ω or higher

- (d) Check for short in the circuit.
- (1) Release the activation prevention mechanism built into connector B (See page [RS-29](#)).
 - (2) Measure the resistance.

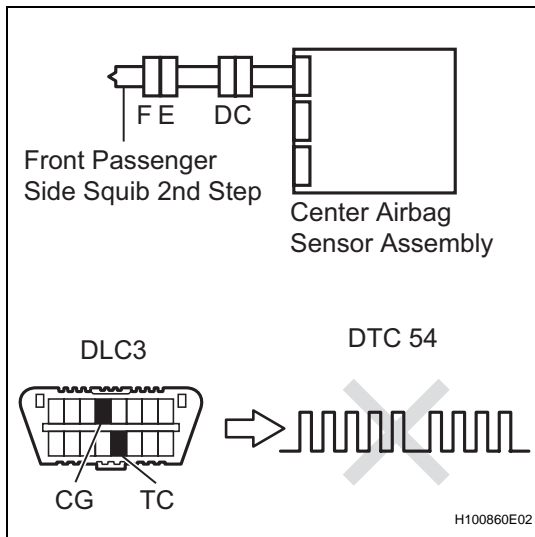
Standard resistance

Tester Connection	Condition	Specified Condition
EY1-3 (P2+) - EY1-4 (P2-)	Always	1 M Ω or higher

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

NG**REPAIR OR REPLACE INSTRUMENT PANEL WIRE****OK****7 CHECK CENTER AIRBAG SENSOR ASSEMBLY**

- (a) Connect the instrument panel wire connector to the instrument panel wire assembly.



- (b) Connect the connectors to the front passenger airbag assembly and 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 on, and wait for at least 60 seconds.
- (e) Clear the DTCs stored in the memory (See page RS-36).
- (f) Turn the ignition switch off.
- (g) Turn the ignition switch on, and wait for at least 60 seconds.
- (h) Check the DTCs (See page RS-36).

OK:

DTC B1815/54, B1816/54, B1817/54 and B1818/54 are not output.

HINT:

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RS

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REPLACE CENTER AIRBAG SENSOR ASSEMBLY

OK

USE SIMULATION METHOD TO CHECK