AIRBAG SYSTEM

DTC B1000/31: CENTER AIRBAG SENSOR ASSEMBLY MALFUNCTION

DESCRIPTION

The center airbag sensor assembly consists of a deceleration sensor, safing sensor, drive circuit, diagnosis circuit, ignition control, etc.

If the center airbag sensor assembly receives signals from the deceleration sensor, it determines whether or not the SRS should be activated.

DTC B1000/31 is stored when a malfunction is detected in the center airbag sensor assembly.

DTC No.	DTC Detection Condition	Trouble Area
B1000/31	Center airbag sensor assembly malfunction	Center airbag sensor assembly

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK DTC**
   a. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1000/31 is output	A
DTC B1000/31 and other DTCs are output	B

NOTE: **If only DTC B1000/31 is output, do not clear the DTCs, replace the center airbag sensor assembly.**

HINT:

If any DTCs other than DTC B1000/31 are also output, troubleshoot those DTCs first.

B --> See step 3

A --> See step 2

2. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
3. **GO TO DIAGNOSTIC TROUBLE CODE CHART. Refer to DIAGNOSTIC TROUBLE CODE CHART**

DTC B1610/13: FRONT AIRBAG SENSOR RH MALFUNCTION

DESCRIPTION

The front airbag sensor RH consists of the diagnostic circuit, the frontal deceleration sensor, etc.

If the center airbag sensor assembly receives signals from the frontal deceleration sensor, it determines whether the SRS should be activated.

DTC B1610/13 is recorded when a malfunction is detected in the front airbag sensor RH circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1610/13	When one of following conditions is met: • Front airbag sensor RH malfunction • Center airbag sensor assembly malfunction	• Front airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

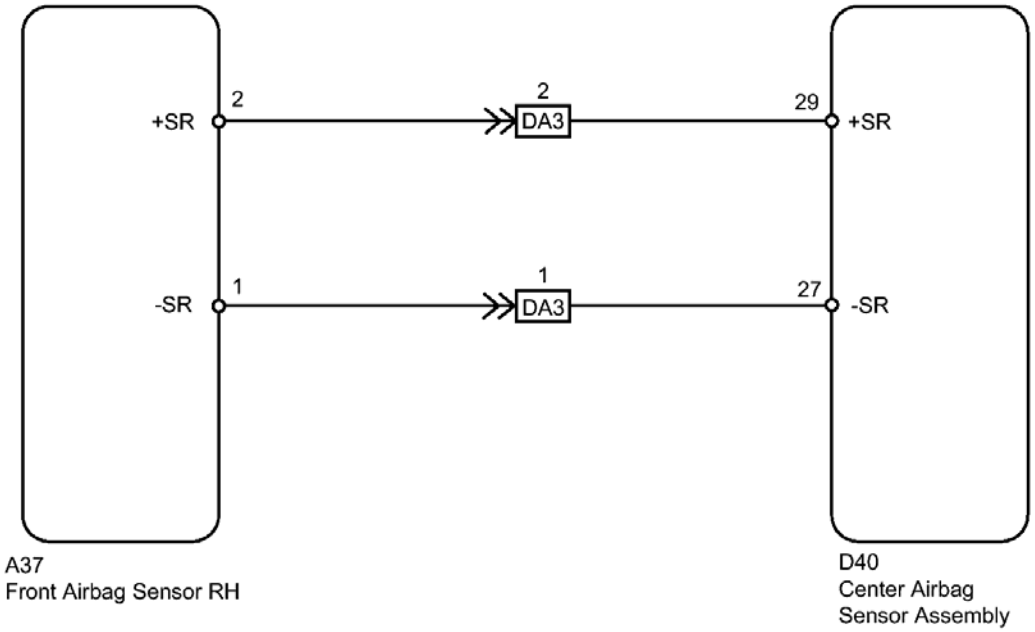


Fig. 1: Front Airbag Sensor RH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK FRONT AIRBAG SENSOR RH**
    a. Turn the ignition switch off.

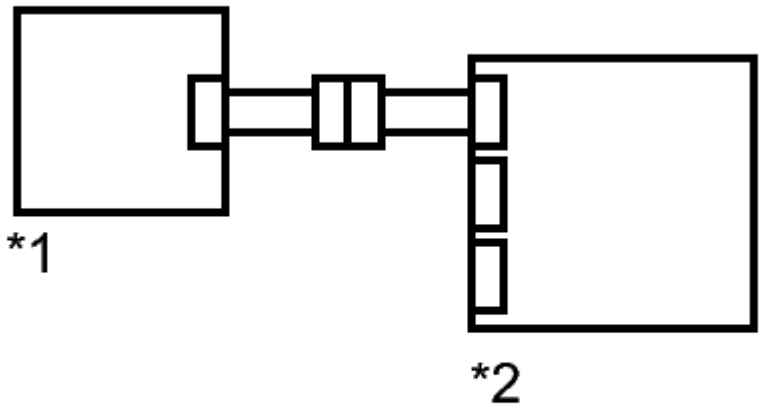


Fig. 2: Identifying Front Airbag Sensor RH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
c. Interchange the front airbag sensor LH with RH and connect the connectors to them.
d. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
e. Turn the ignition switch to ON, and wait for at least 60 seconds.
f. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
g. Turn the ignition switch off.
h. Turn the ignition switch to ON, and wait for at least 60 seconds.
i. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1610/13 is output.	A
DTC B1615/14 is output.	B
DTC B1610/13 and B1615/14	C

are not output.	

TEXT IN ILLUSTRATION

*1	Front Airbag Sensor LH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1610/13 and B1615/14 may be output at this time, but they are not related to this check.

B --> See step 3

C --> See step 4

A --> See step 2

2. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
3. **REPLACE FRONT AIRBAG SENSOR RH. Refer to REMOVAL**
4. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**

DTC B1612/83: LOST COMMUNICATION WITH FRONT AIRBAG SENSOR RH; DTC B1613/83: FRONT AIRBAG SENSOR RH INITIALIZATION INCOMPLETE

DESCRIPTION

The front airbag sensor RH circuit consists of the center airbag sensor assembly and front airbag sensor RH.

The front airbag sensor RH detects impacts to the vehicle and sends signals to the center airbag sensor assembly to determine if the airbag should be deployed.

DTC B1612/83 or B1613/83 is recorded when a malfunction is detected in the front airbag sensor RH circuit.

DTC No.	DTC Detection Condition	Trouble Area
	When one of following conditions is met: • The center airbag sensor assembly receives a line short circuit signal, an open circuit signal, a short	• Instrument panel wire

B1612/83 B1613/83	circuit to ground signal or a short circuit to B+ signal in the front airbag sensor RH circuit for 2 seconds. • Front airbag sensor RH malfunction • Center airbag sensor assembly malfunction	• Engine room main wire • Front airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

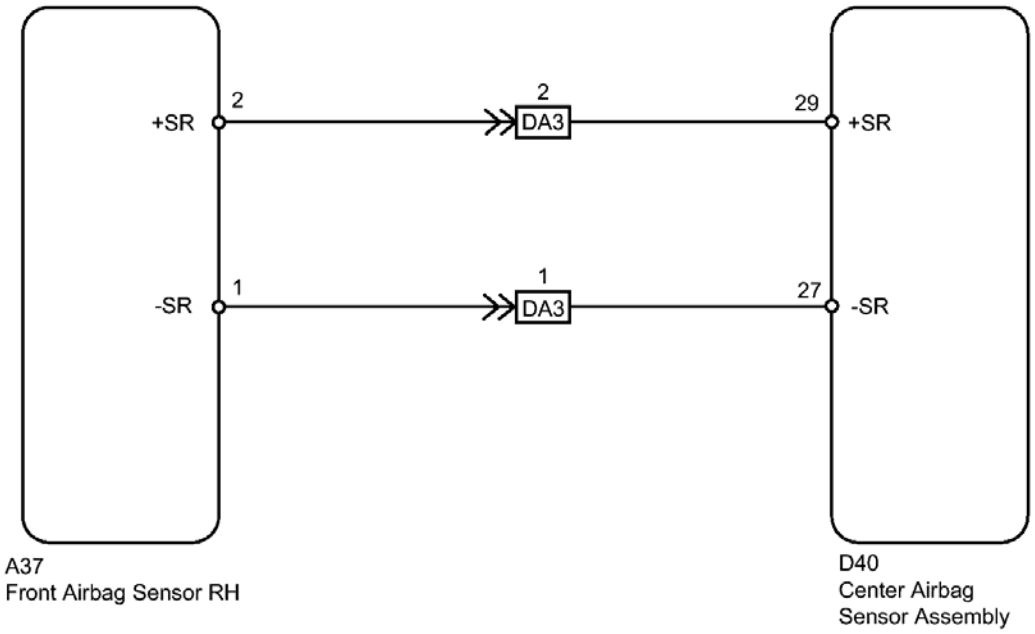


Fig. 3: Front Airbag Sensor RH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK FOR DTC**
   a. Turn the ignition switch off.
   b. Turn the ignition switch to ON, and wait for at least 60 seconds.
   c. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

   OK

   DTC B161A/8A is not output.

NG --> See step 7

OK: Go to next step

2. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connectors are properly connected to the center airbag sensor assembly and the front airbag sensor RH.

      OK

      The connectors are properly connected.

NG --> CONNECT CONNECTORS PROPERLY

OK: Go to next step

3. **CHECK CONNECTORS**
   a. Disconnect the connectors from the center airbag sensor assembly and front airbag sensor RH.
   b. Check that the connectors (on the center airbag sensor assembly side and front airbag sensor RH side) are not damaged.

      OK

      The connectors are not deformed or damaged.

NG --> REPLACE HARNESS AND CONNECTOR

OK: Go to next step

4. **CHECK FRONT AIRBAG SENSOR RH CIRCUIT**

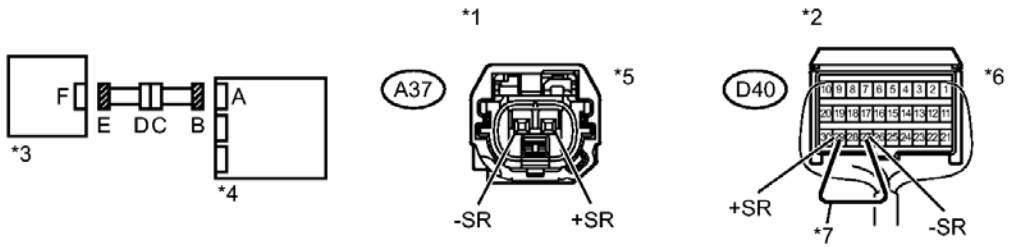


Fig. 4: Checking Front Airbag Sensor RH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

	Front		

*1	view of wire harness connector (to Front Airbag Sensor RH)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Front Airbag Sensor RH	*4	Center Airbag Sensor Assembly
*5	Connector E	*6	Connector B
*7	Service Wire	-	-

a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
A37-2 (+SR) - Body ground	Ignition switch ON	Below 1 V
A37-1 (-SR) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch off.
e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
f. Using a service wire, connect terminals 29 (+SR) and 27 (-SR) of connector B.

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

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
A37-2 (+SR) - A37-1 (-SR)	Always	Below 1 ohms

h. Disconnect the service wire from connector B.

i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
A37-2 (+SR) - A37-1 (-SR)	Always	1 Mohms or higher
A37-2 (+SR) - Body ground	Always	1 Mohms or higher
A37-1 (-SR) - Body ground	Always	1 Mohms or higher

NG --> See step 6

OK: Go to next step

5. **CHECK FRONT AIRBAG SENSOR RH**

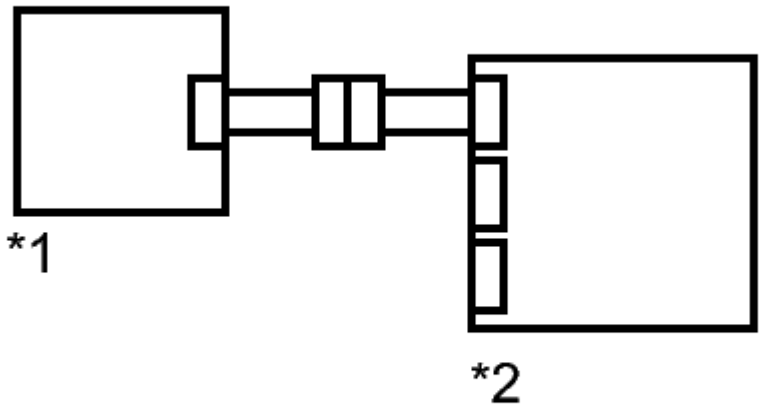


Fig. 5: Identifying Front Airbag Sensor RH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the connectors to the center airbag sensor assembly.
b. Interchange the front airbag sensor LH with RH and connect the connectors to them.
c. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
f. Turn the ignition switch off.
g. Turn the ignition switch to ON, and wait for at least 60 seconds.
h. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1612/83, B1613/83, B1617/84 and B1618/84 are not output	A
DTC B1617/84	

or B1618/84 is output	B
DTC B1612/83 or B1613/83 is output	C

TEXT IN ILLUSTRATION

*1	Front Airbag Sensor LH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1612, B1613, B1617, B1618, 83 and 84 may be output at this time, but they are not related to this check.

A --> See step 9

B --> See step 10

C --> See step 8

6. **CHECK INSTRUMENT PANEL WIRE (CENTER AIRBAG SENSOR ASSEMBLY - ENGINE ROOM MAIN WIRE)**

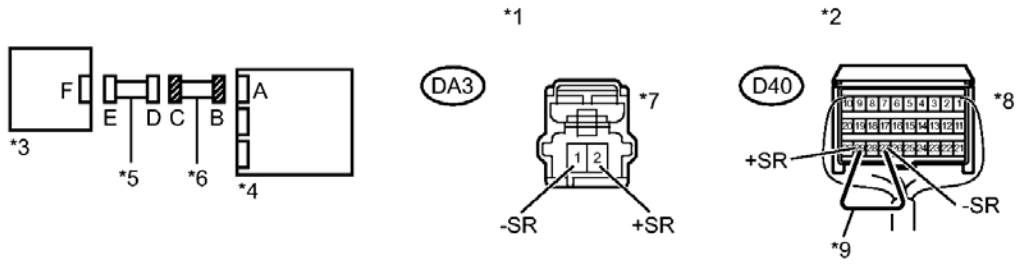


Fig. 6: Checking Instrument Panel Wire (Center Airbag Sensor Assembly - Engine Room Main Wire)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Engine Room Main Wire)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Front Airbag Sensor RH	*4	Center Airbag Sensor Assembly
*5	Engine Room Main Wire	*6	Instrument Panel Wire
*7	Connector C	*8	Connector B
*9	Service Wire	-	-

a. Disconnect the instrument panel wire connector from the engine room main wire.
b. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
DA3-2 (+SR) - Body ground	Ignition switch ON	Below 1 V
DA3-1 (-SR) - Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch off.
f. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
g. Using a service wire, connect terminal 27 (-SR) and 29 (+SR) of connector B.

NOTE: Do not forcibly insert a service wire into the terminals of the

connector when connecting the wire.

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
DA3-2 (+SR) - DA3-1 (-SR)	Always	Below 1 ohms

i. Disconnect the service wire from connector B.

j. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
DA3-2 (+SR) - DA3-1 (-SR)	Always	1 Mohms or higher
DA3-2 (+SR) - Body ground	Always	1 Mohms or higher
DA3-1 (-SR) - Body ground	Always	1 Mohms or higher

NG --> REPLACE INSTRUMENT PANEL WIRE

OK --> REPLACE ENGINE ROOM MAIN WIRE

7. **GO TO DTC B161A/8A. Refer to DTC B161A/8A: Lost Communication with Front Satellite Sensor Bus**
8. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
9. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
10. **REPLACE FRONT AIRBAG SENSOR RH. Refer to REMOVAL**

DTC B1615/14: FRONT AIRBAG SENSOR LH MALFUNCTION

DESCRIPTION

The front airbag sensor LH consists of the diagnostic circuit and the frontal deceleration sensor, etc.

If the center airbag sensor assembly receives signals from the frontal deceleration sensor, it determines whether the SRS should be activated.

DTC B1615/14 is recorded when a malfunction is detected in the front airbag sensor LH circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1615/14	When one of following conditions is met: • Front airbag sensor LH malfunction • Center airbag sensor assembly malfunction	• Front airbag sensor LH • Center airbag sensor assembly

WIRING DIAGRAM

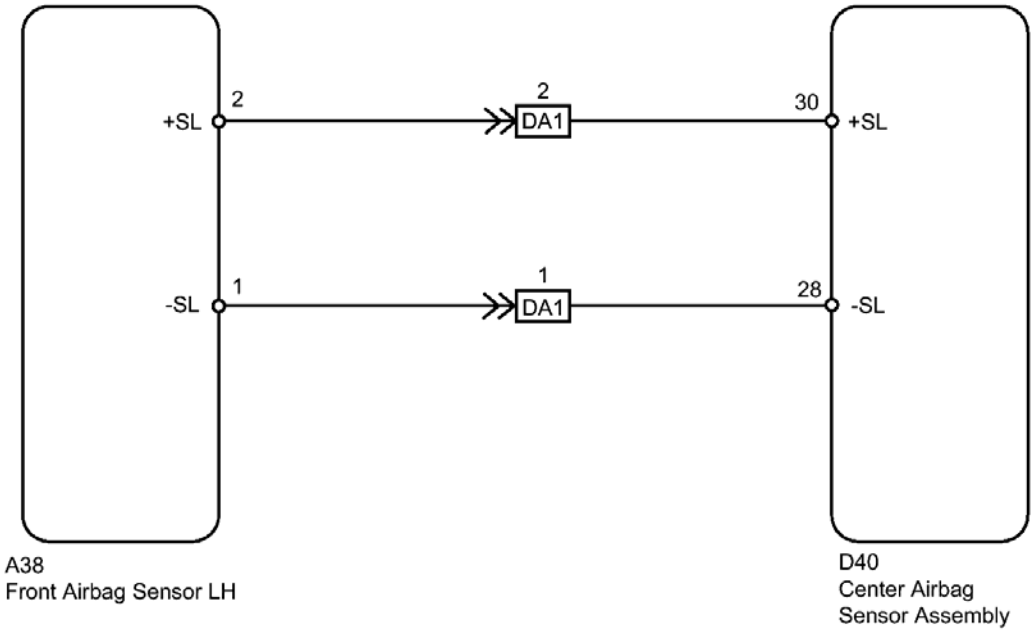


Fig. 7: Front Airbag Sensor LH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK FRONT AIRBAG SENSOR LH**
    a. Turn the ignition switch off.

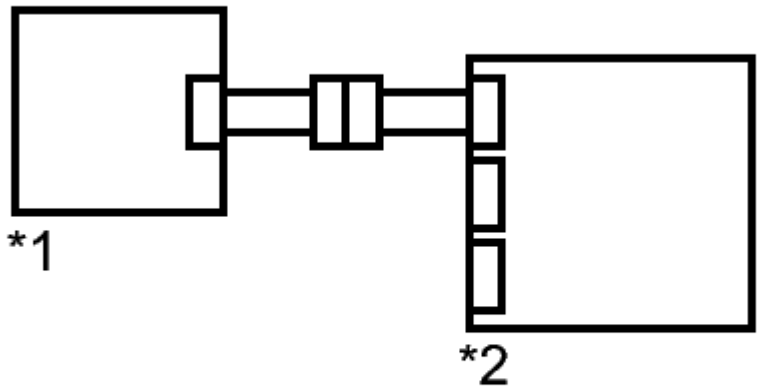


Fig. 8: Identifying Front Airbag Sensor LH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
c. Interchange the front airbag sensor RH with LH and connect the connectors to them.
d. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
e. Turn the ignition switch to ON, and wait for at least 60 seconds.
f. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
g. Turn the ignition switch off.
h. Turn the ignition switch to ON, and wait for at least 60 seconds.
i. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1615/14 is output.	A
DTC B1610/13 is output.	B
DTC B1610/13 and B1615/14	C

are not output.	

TEXT IN ILLUSTRATION

*1	Front Airbag Sensor RH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1610/13 and B1615/14 may be output at this time, but they are not related to this check.

B --> See step 3

C --> See step 4

A --> See step 2

2. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
3. **REPLACE FRONT AIRBAG SENSOR LH. Refer to REMOVAL**
4. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**

DTC B1617/84: LOST COMMUNICATION WITH FRONT AIRBAG SENSOR LH; DTC B1618/84: FRONT AIRBAG SENSOR LH INITIALIZATION INCOMPLETE

DESCRIPTION

The front airbag sensor LH circuit consists of the center airbag sensor assembly and front airbag sensor LH.

The front airbag sensor LH detects impacts to the vehicle and sends signals to the center airbag sensor to determine if the airbag should be deployed.

DTC B1617/84 or B1618/84 is recorded when a malfunction is detected in the front airbag sensor LH circuit.

DTC No.	DTC Detection Condition	Trouble Area
	When one of following conditions is met: • The center airbag sensor assembly receives a line short circuit signal, an open circuit signal, a short	• Instrument panel wire

B1617/84 B1618/84	circuit to ground signal or a short circuit to B+ signal in the front airbag sensor LH circuit for 2 seconds. • Front airbag sensor LH malfunction • Center airbag sensor assembly malfunction	• Engine room main wire • Front airbag sensor LH • Center airbag sensor assembly

WIRING DIAGRAM

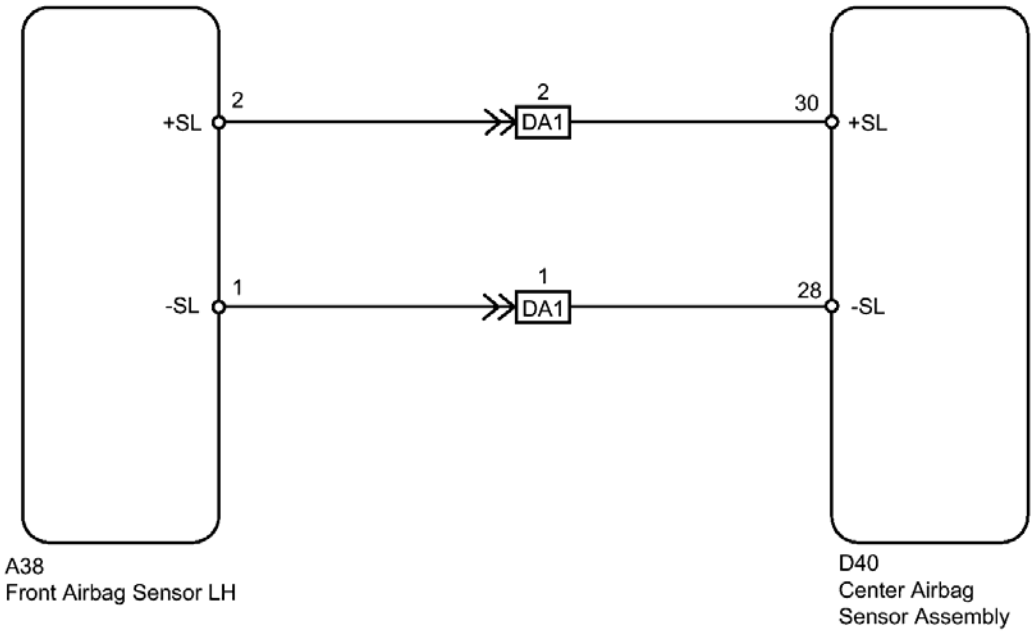


Fig. 9: Front Airbag Sensor LH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK FOR DTC**
   a. Turn the ignition switch off.
   b. Turn the ignition switch to ON, and wait for at least 60 seconds.
   c. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

   OK

   DTC B161A/8A is not output.

NG --> See step 7

OK: Go to next step

2. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connectors are properly connected to the center airbag sensor assembly and the front airbag sensor LH.

      OK

      The connectors are properly connected.

NG --> CONNECT CONNECTORS PROPERLY

OK: Go to next step

3. **CHECK CONNECTORS**
   a. Disconnect the connectors from the center airbag sensor assembly and front airbag sensor LH.
   b. Check that the connectors (on the center airbag sensor assembly side and front airbag sensor LH side) are not damaged.

      OK

      The connectors are not deformed or damaged.

NG --> REPLACE HARNESS AND CONNECTOR

OK: Go to next step

4. **CHECK FRONT AIRBAG SENSOR LH CIRCUIT**

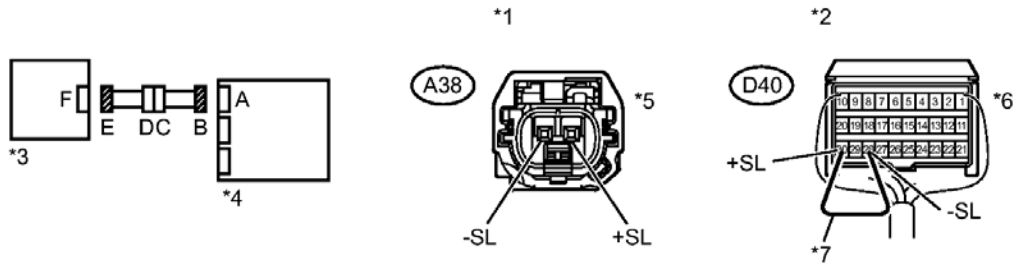


Fig. 10: Checking Front Airbag Sensor LH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

	Front		

*1	view of wire harness connector (to Front Airbag Sensor LH)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Front Airbag Sensor LH	*4	Center Airbag Sensor Assembly
*5	Connector E	*6	Connector B
*7	Service Wire	-	-

a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
A38-2 (+SL) - Body ground	Ignition switch ON	Below 1 V
A38-1 (-SL) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch off.
e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
f. Using a service wire, connect terminals 30 (+SL) and 28 (-SL) of connector B.

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

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
A38-2 (+SL) - A38-1 (-SL)	Always	Below 1 ohms

h. Disconnect the service wire from connector B.

i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
A38-2 (+SL) - A38-1 (-SL)	Always	1 Mohms or higher
A38-2 (+SL) - Body ground	Always	1 Mohms or higher
A38-1 (-SL) - Body ground	Always	1 Mohms or higher

NG --> See step 6

OK: Go to next step

5. **CHECK FRONT AIRBAG SENSOR LH**

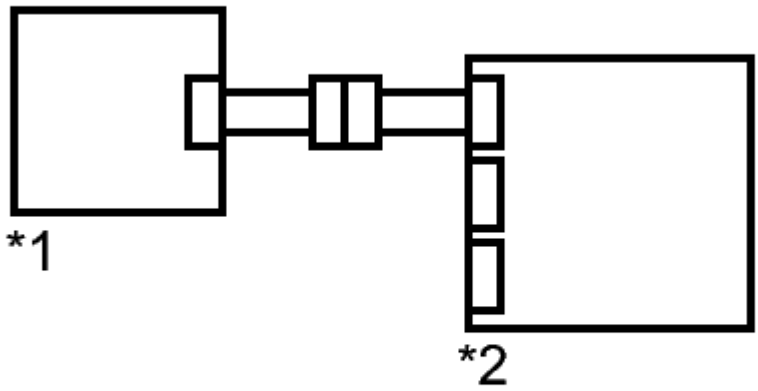


Fig. 11: Identifying Front Airbag Sensor LH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the connectors to the center airbag sensor assembly.
b. Interchange the front airbag sensor LH with RH and connect the connectors to them.
c. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
f. Turn the ignition switch off.
g. Turn the ignition switch to ON, and wait for at least 60 seconds.
h. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1617/84 or B1618/84 is output	A
DTC B1612/83 or B1613/83 is output	B

DTC B1612/83, B1613/83, B1617/84 and B1618/84 are not output	C

TEXT IN ILLUSTRATION

*1	Front Airbag Sensor RH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1612, B1613, B1617, B1618, 83 and 84 may be output at this time, but they are not related to this check.

A --> See step 8

B --> See step 9

C --> See step 10

6. **CHECK INSTRUMENT PANEL WIRE (CENTER AIRBAG SENSOR ASSEMBLY - ENGINE ROOM MAIN WIRE)**

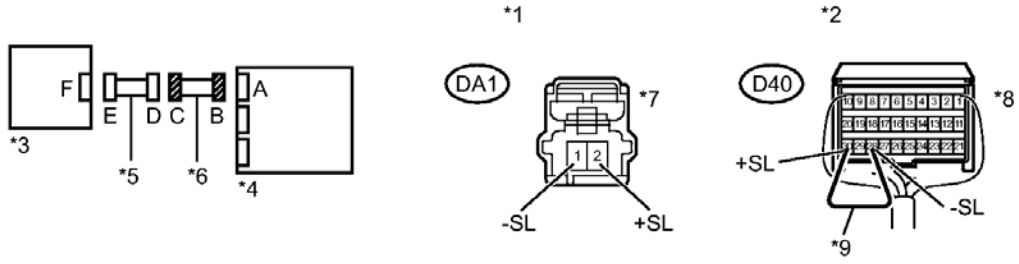


Fig. 12: Checking Instrument Panel Wire (Center Airbag Sensor Assembly - Engine Room Main Wire)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Engine Room Main Wire)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Front Airbag Sensor LH	*4	Center Airbag Sensor Assembly
*5	Engine Room Main Wire	*6	Instrument Panel Wire
*7	Connector C	*8	Connector B
*9	Service Wire	-	-

a. Disconnect the instrument panel wire connector from the engine room main wire.
b. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
DA1-2 (+SL) - Body ground	Ignition switch ON	Below 1 V
DA1-1 (-SL) - Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch off.
f. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
g. Using a service wire, connect terminals 30 (+SL) and 28 (-SL) of connector B.

NOTE: Do not forcibly insert a service wire into the terminals of the

connector when connecting the wire.

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
DA1-2 (+SL) - DA1-1 (-SL)	Always	Below 1 ohms

i. Disconnect the service wire from connector B.

j. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
DA1-2 (+SL) - DA1-1 (-SL)	Always	1 Mohms or higher
DA1-2 (+SL) - Body ground	Always	1 Mohms or higher
DA1-1 (-SL) - Body ground	Always	1 Mohms or higher

NG --> REPLACE INSTRUMENT PANEL WIRE

OK --> REPLACE ENGINE ROOM MAIN WIRE

7. **GO TO DTC B161A/8A. Refer to DTC B161A/8A: Lost Communication with Front Satellite Sensor Bus**
8. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
9. **REPLACE FRONT AIRBAG SENSOR LH. Refer to REMOVAL**
10. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**

DTC B161A/8A: LOST COMMUNICATION WITH FRONT SATELLITE SENSOR BUS

DESCRIPTION

The front collision sensor circuit (front airbag sensor RH circuit and front airbag sensor LH circuit) is composed of the center airbag sensor assembly, front airbag sensor RH and front airbag sensor LH.

The front airbag sensor RH or front airbag sensor LH detect impacts to the vehicle and send signals to the center airbag sensor assembly to determine if the airbag should be deployed.

DTC B161A/8A is stored when a malfunction is detected in the front collision sensor circuit (front airbag sensor RH circuit and front airbag sensor LH circuit).

DTC No.	DTC Detection Condition	Trouble Area
B161A/8A	When one of following conditions is met: • 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 front collision sensor circuit (front airbag sensor RH circuit and front airbag sensor LH circuit). • Front airbag sensor RH malfunction • Front airbag sensor LH malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Engine room main wire • Front airbag sensor RH • Front airbag sensor LH • Center airbag sensor assembly

WIRING DIAGRAM

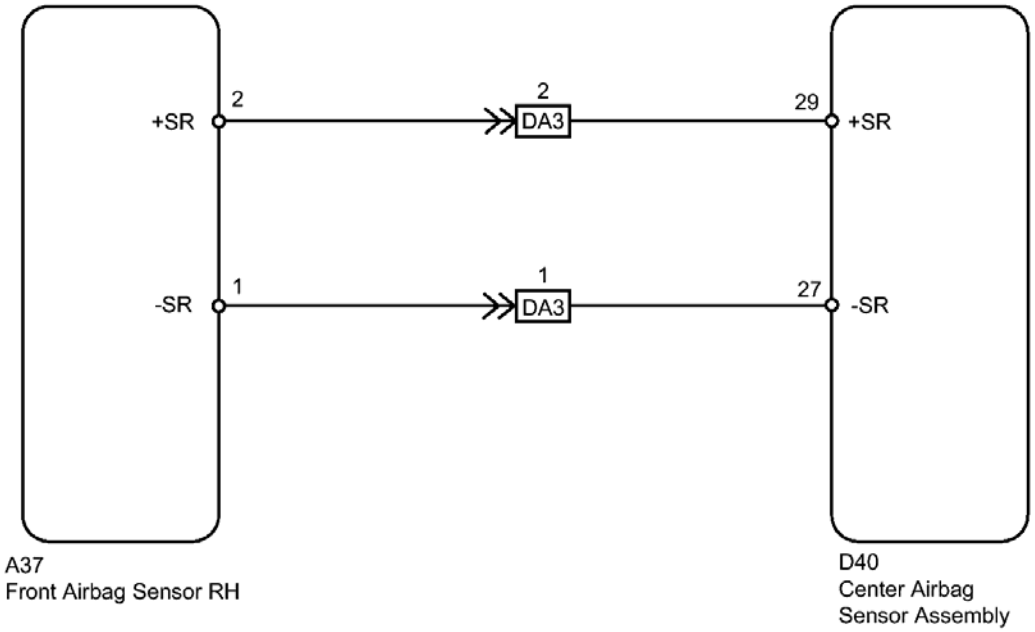


Fig. 13: Front Airbag Sensor RH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

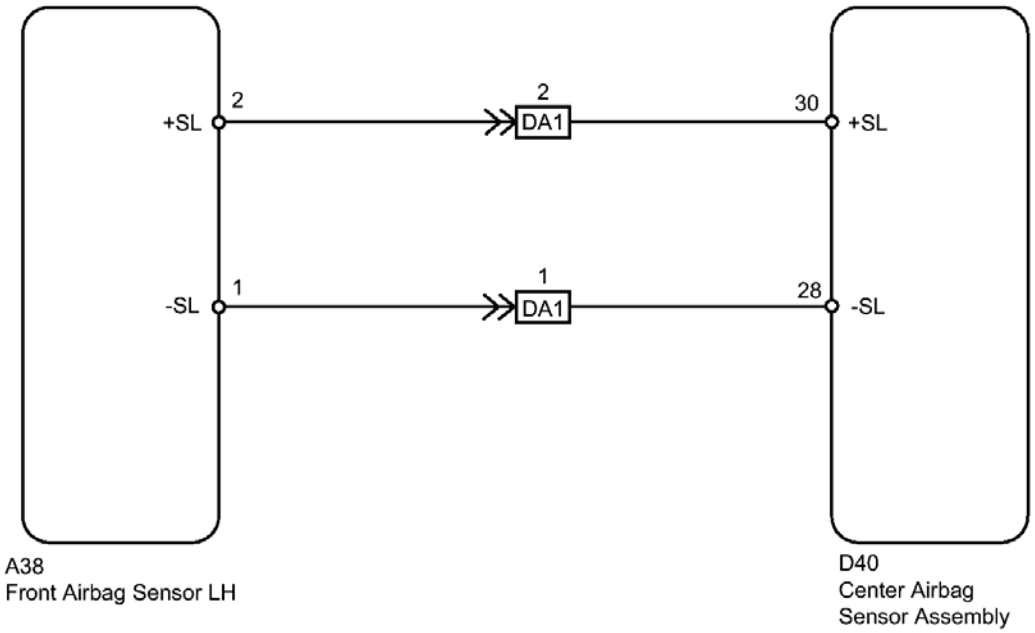


Fig. 14: Front Airbag Sensor LH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK FOR DTC**
   a. Turn the ignition switch off.
   b. Turn the ignition switch to ON, and wait for at least 60 seconds.
   c. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

   RESULT

Result	Proceed to
DTCs B1613/83 and B1618/84 are not output	A
DTC B1613/83 is output	B
DTC B1618/84 is output	C

   B --> See step 3

   C --> See step 4

   A: Go to next step

2. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Turn the ignition switch to ON, and wait for at least 60 seconds.
   b. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
   c. Turn the ignition switch off.
   d. Turn the ignition switch to ON, and wait for at least 60 seconds.
   e. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

   OK

   DTC B161A/8A is not output.

   HINT:

   Codes other than DTC B161A/8A may be output at this time, but they are not related to this check.

NG --> See step 5

OK --> See step 6

3. **GO TO DTC B1613/83. Refer to DTC B1612/83: Lost Communication with Front Airbag Sensor RH; DTC B1613/83: Front Airbag Sensor RH Initialization Incomplete**
4. **GO TO DTC B1618/84. Refer to DTC B1617/84: Lost Communication with Front Airbag Sensor LH; DTC B1618/84: Front Airbag Sensor LH Initialization Incomplete**
5. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
6. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**

DTC B1630/23: REAR AIRBAG SENSOR RH CIRCUIT MALFUNCTION

DESCRIPTION

The rear airbag sensor RH consists of the safing sensor, the diagnostic circuit, the lateral deceleration sensor, etc.

If the center airbag sensor assembly receives signals from the lateral deceleration sensor, it determines whether the SRS should be activated.

DTC B1630/23 is recorded when a malfunction is detected in the rear airbag sensor RH circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1630/23	When one of following conditions is met: • Rear airbag sensor RH malfunction • Center airbag sensor assembly malfunction	• Rear airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

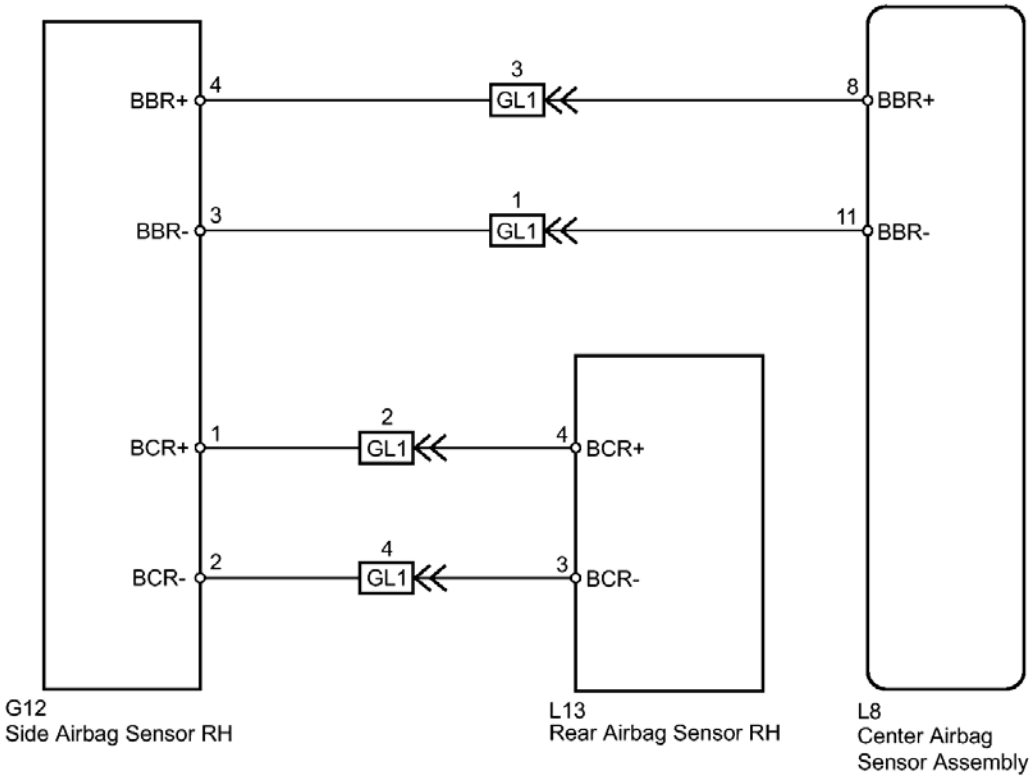


Fig. 15: RH Side & Rear Airbag Sensor Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK REAR AIRBAG SENSOR RH**

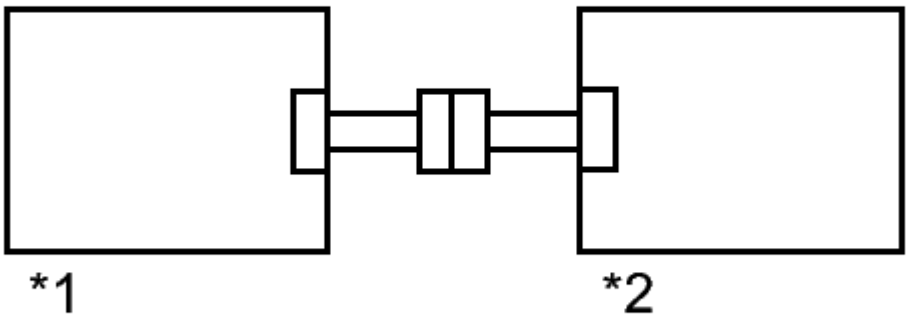


Fig. 16: Identifying Rear Airbag Sensor Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Turn the ignition switch off.
b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
c. Interchange the rear airbag sensor RH with LH and connect the connectors to them.
d. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
e. Turn the ignition switch to ON, and wait for at least 60 seconds.
f. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
g. Turn the ignition switch off.
h. Turn the ignition switch to ON, and wait for at least 60 seconds.
i. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1630/23 and B1635/24 are not output	A
DTC B1635/24 is output	B

DTC B1630/23 is output	C

TEXT IN ILLUSTRATION

*1	Rear Airbag Sensor LH
*2	Side Airbag Sensor RH

HINT:

DTCs other than B1630/23 and B1635/24 may be output at this time, but they are not related to this check.

j. Turn the ignition switch off.
k. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
l. Return the rear airbag sensor RH and LH to their original positions and connect the connectors to them.

A --> See step 2

B --> See step 3

C --> See step 4

2. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
3. **REPLACE REAR AIRBAG SENSOR RH. Refer to REMOVAL**
4. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**

DTC B1632/81: LOST COMMUNICATION WITH REAR AIRBAG SENSOR RH

DESCRIPTION

The circuit for the side collision sensor RH (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH) is composed of the center airbag sensor assembly, side airbag sensor RH and rear airbag sensor RH.

The side airbag sensor RH and rear airbag sensor RH detect impacts to the vehicle and send signals to the center airbag sensor assembly to determine if the airbag should be deployed.

DTC B1632/81 is recorded when a malfunction is detected in the circuit for the side collision sensor RH (to

determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH).

DTC No.	DTC Detection Condition	Trouble Area
B1632/81	When one of following conditions is met: • 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 circuit for the side collision sensor RH (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH) for 2 seconds. • Side airbag sensor RH malfunction • Rear airbag sensor RH malfunction • Center airbag sensor assembly malfunction	• No. 2 floor wire • Front door wire RH • Side airbag sensor RH • Rear airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

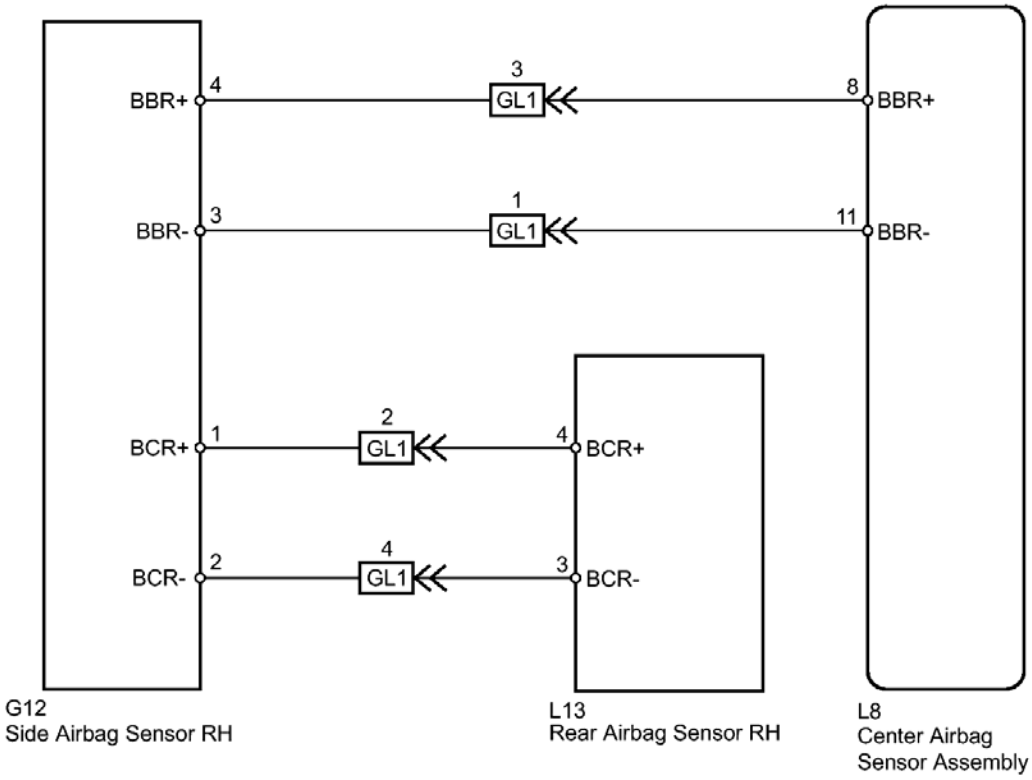


Fig. 17: RH Side & Rear Airbag Sensor Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   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, side airbag sensor RH and rear airbag sensor RH.

      OK

      The connectors are properly connected.

   NG --> CONNECT CONNECTORS PROPERLY

   OK: Go to next step

2. **CHECK CONNECTORS**
   a. Disconnect the connectors from the center airbag sensor assembly, side airbag sensor RH and rear airbag sensor RH.
   b. Check that the connectors (on the center airbag sensor assembly side, side airbag sensor RH side and rear airbag sensor RH side) are not damaged.

      OK

      The connectors are not deformed or damaged.

   NG --> REPLACE HARNESS AND CONNECTOR

   OK: Go to next step

3. **CHECK SIDE AIRBAG SENSOR RH**
   a. Interchange the side airbag sensor RH with LH and connect the connectors to them.

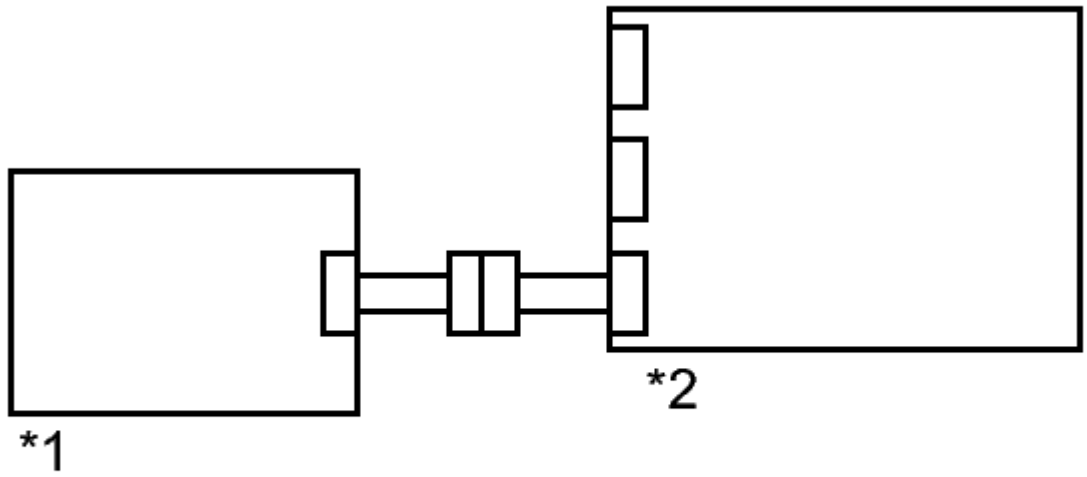


Fig. 18: Identifying Side Airbag Sensor RH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   c. Turn the ignition switch to ON, and wait for at least 60 seconds.
   d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
   e. Turn the ignition switch off.
   f. Turn the ignition switch to ON, and wait for at least 90 seconds.

g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1637/82 is output	A
DTC B1632/81 and B1637/82 are not output	B
DTC B1632/81 is output	C

TEXT IN ILLUSTRATION

*1	Side Airbag Sensor LH
*2	Center Airbag Sensor Assembly

h. Turn the ignition switch off.

i. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

j. Return the side airbag sensor RH and LH to their original positions and connect the connectors to them.

A --> See step 7

B --> See step 8

C: Go to next step

4. **CHECK REAR AIRBAG SENSOR RH CIRCUIT**

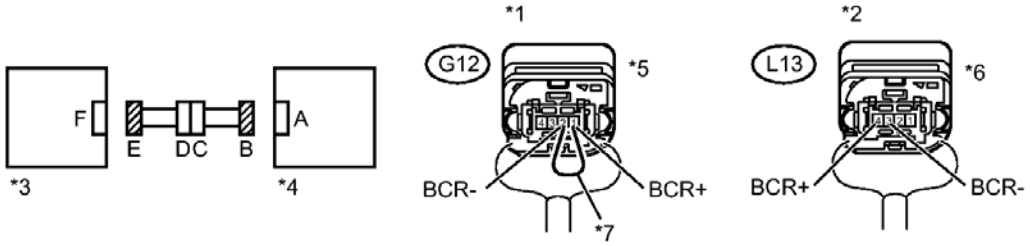


Fig. 19: Checking Rear Airbag Sensor RH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear view of wire harness connector (to Side Airbag Sensor RH)	*2	Rear view of wire harness connector (to Rear Airbag Sensor RH)
*3	Side Airbag Sensor RH	*4	Rear Airbag Sensor RH
*5	Connector E	*6	Connector B
*7	Service Wire	-	-

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
L13-4 (BCR+) - Body ground	Ignition switch ON	Below 1 V
L13-3 (BCR-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch off.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Using a service wire, connect terminals 1 (BCR+) and 2 (BCR-) of connector E.

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

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
L13-4 (BCR+) - L13-3 (BCR-)	Always	Below 1 ohms

h. Disconnect the service wire from connector E.
i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
L13-4 (BCR+) - L13-3 (BCR-)	Always	1 Mohms or higher
L13-4 (BCR+) - Body ground	Always	1 Mohms or higher
L13-3 (BCR-) - Body ground	Always	1 Mohms or higher

NG --> See step 6

OK: Go to next step

5. **CHECK REAR AIRBAG SENSOR RH**

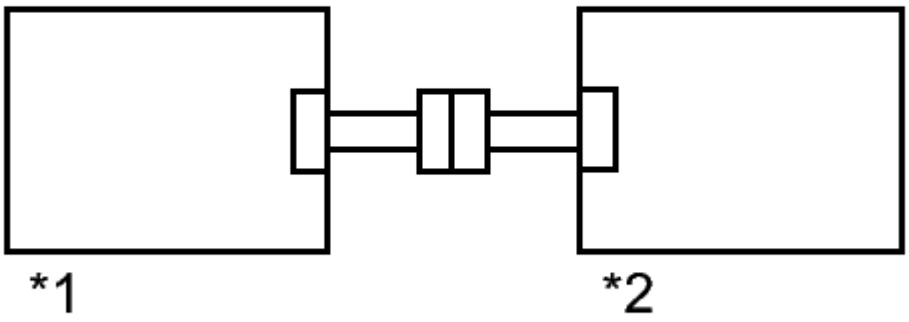


Fig. 20: Identifying Rear Airbag Sensor Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Interchange the rear airbag sensor LH with RH and connect the connectors to them.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 90 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1632/81 is output	A
DTC B1637/82 is output	B
DTC B1632/81 and B1637/82 are not	C

output	

TEXT IN ILLUSTRATION

*1	Rear Airbag Sensor LH
*2	Side Airbag Sensor RH

HINT:

DTCs other than B1632/81 and B1637/82 may be output at this time, but they are not related to this check.

h. Turn the ignition switch off.

i. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

j. Return the rear airbag sensor LH and RH to their original positions and connect the connectors to them.

A --> See step 9

B --> See step 10

C --> See step 8

6. **CHECK NO. 2 FLOOR WIRE (REAR AIRBAG SENSOR RH - FRONT DOOR WIRE RH)**

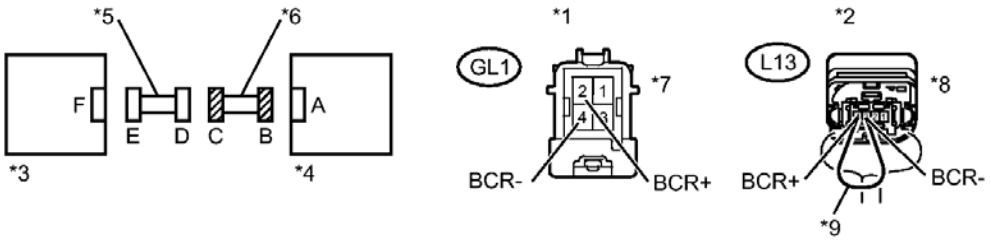


Fig. 21: Checking No. 2 Floor Wire (Rear Airbag Sensor RH - Front Door Wire RH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

	Front view of wire harness		Rear view of wire harness connector

*1	connector (to Front Door Wire RH)	*2	(to Rear Airbag Sensor RH)
*3	Side Airbag Sensor RH	*4	Rear Airbag Sensor RH
*5	Front Door Wire RH	*6	No. 2 Floor Wire
*7	Connector C	*8	Connector B
*9	Service Wire	-	-

a. Disconnect the No. 2 floor wire connector from the front door wire RH.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
GL1-2 (BCR+) - Body ground	Ignition switch ON	Below 1 V
GL1-4 (BCR-) - Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch off.
f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
g. Using a service wire, connect terminals 3 (BCR-) and 4 (BCR+) of connector B.

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

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
GL1-2 (BCR+) - GL1-4 (BCR-)	Always	Below 1 ohms

i. Disconnect the service wire from connector B.
j. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
GL1-2 (BCR+) - GL1-4 (BCR-)	Always	1 Mohms or higher
GL1-2 (BCR+) - Body ground	Always	1 Mohms or higher
GL1-4 (BCR-) - Body ground	Always	1 Mohms or higher

NG --> REPLACE NO. 2 FLOOR WIRE

OK --> REPLACE FRONT DOOR WIRE RH

7. **REPLACE SIDE AIRBAG SENSOR RH. Refer to REMOVAL**
8. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
9. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
10. **REPLACE REAR AIRBAG SENSOR RH. Refer to REMOVAL**

DTC B1633/81: REAR AIRBAG SENSOR ASSEMBLY RH INITIALIZATION INCOMPLETE

DESCRIPTION

The circuit for the side collision sensor RH (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH) is composed of the center airbag sensor assembly, side airbag sensor RH and rear airbag sensor RH.

The side airbag sensor RH and rear airbag sensor RH detect impacts to the vehicle and send signals to the center

airbag sensor assembly to determine if the airbag should be deployed.

DTC B1633/81 is recorded when a malfunction is detected in the circuit for the side collision sensor RH (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH).

DTC No.	DTC Detection Condition	Trouble Area
B1633/81	When one of following conditions is met: • 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 circuit for the side collision sensor RH (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH) for 2 seconds. • Side airbag sensor RH malfunction • Rear airbag sensor RH malfunction • Center airbag sensor assembly malfunction	• No. 2 floor wire • Front door wire RH • Side airbag sensor RH • Rear airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

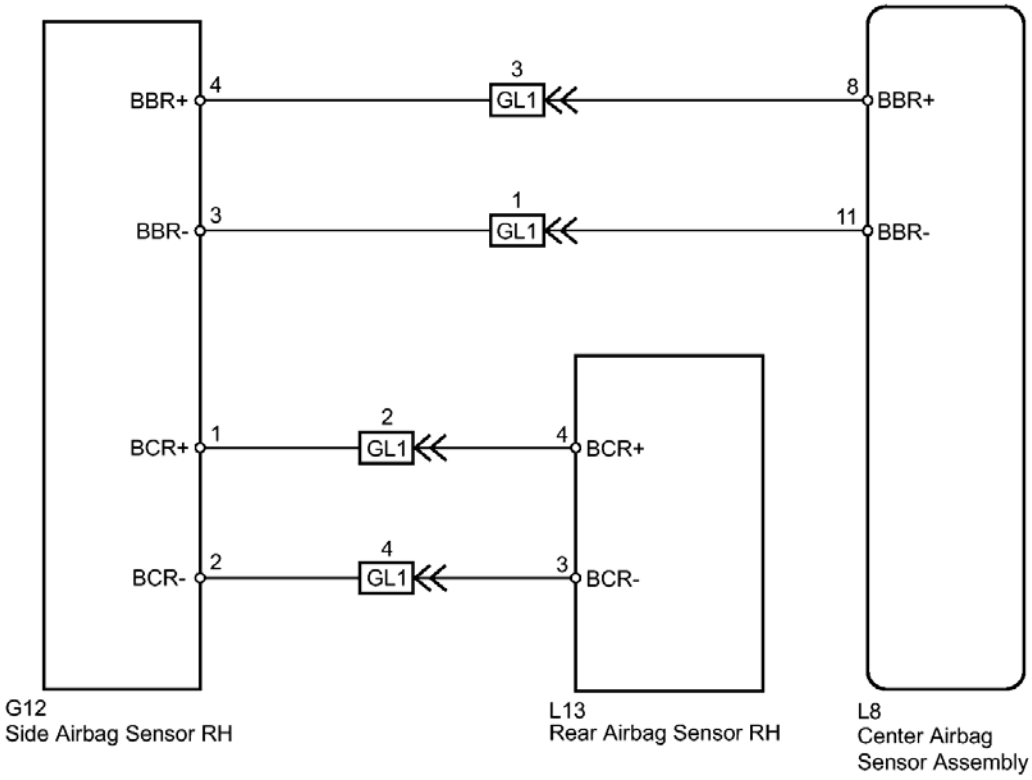


Fig. 22: RH Side & Rear Airbag Sensor Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK PAST DTC**
   a. Turn the ignition switch off.
   b. Turn the ignition switch to ON, and wait for at least 60 seconds.
   c. Check the past DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1632/81 is output	A
DTC B1637/82 is output	B

DTC B1632/81 and B1637/82 are not output	C

A --> See step 8

B --> See step 9

C: Go to next step

2. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   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, side airbag sensor RH and rear airbag sensor RH.

      OK

      The connectors are properly connected.

   NG --> CONNECT CONNECTORS PROPERLY

   OK: Go to next step

3. **CHECK CONNECTORS**
   a. Disconnect the connectors from the center airbag sensor assembly, side airbag sensor RH and rear airbag sensor RH.
   b. Check that the connectors (on the center airbag sensor assembly side, side airbag sensor RH side and rear airbag sensor RH side) are not damaged.

      OK

      The connectors are not deformed or damaged.

   NG --> REPLACE HARNESS AND CONNECTOR

   OK: Go to next step

4. **CHECK SIDE AIRBAG SENSOR RH**
   a. Interchange the side airbag sensor RH with LH and connect the connectors to them.

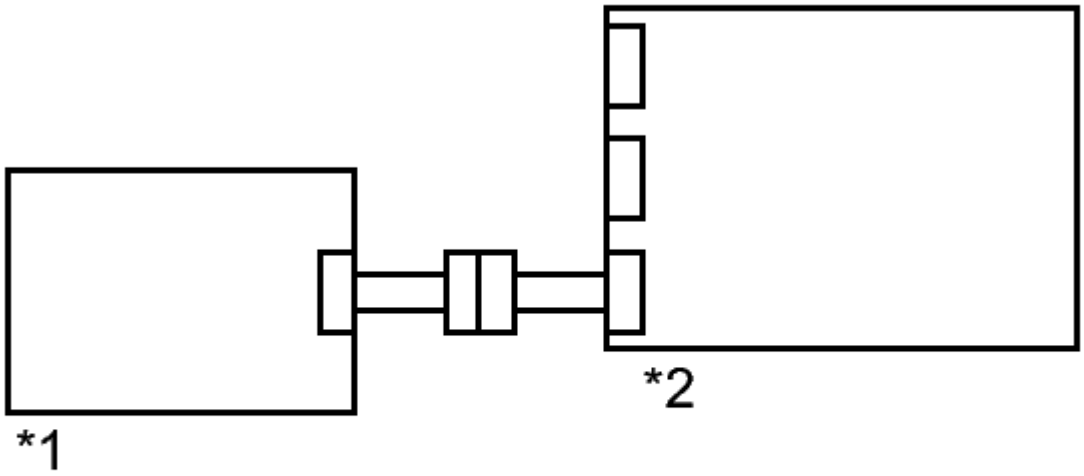


Fig. 23: Identifying Side Airbag Sensor RH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 90 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1638/82 is output	A
DTC B1633/81 and B1638/82 are not output	B
DTC B1633/81 is output	C

TEXT IN ILLUSTRATION

*1	Side Airbag Sensor LH
*2	Center Airbag Sensor Assembly

h. Turn the ignition switch off.

i. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

j. Return the side airbag sensor RH and LH to their original positions and connect the connectors to them.

A --> See step 10

B --> See step 11

C: Go to next step

5. **CHECK REAR SIDE AIRBAG SENSOR RH CIRCUIT**

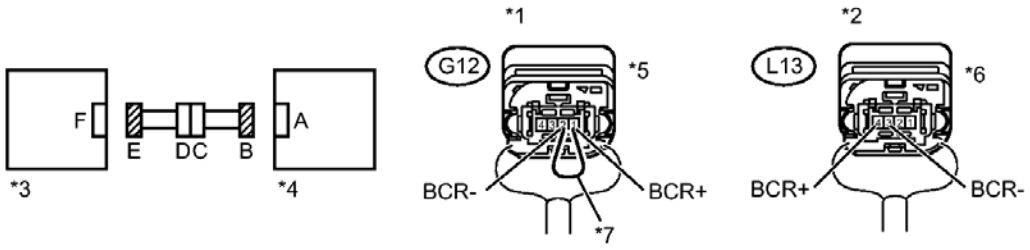


Fig. 24: Checking Rear Airbag Sensor RH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear view of wire harness connector (to Side Airbag Sensor RH)	*2	Rear view of wire harness connector (to Rear Airbag Sensor RH)
*3	Side Airbag Sensor	*4	Rear Airbag Sensor

	RH		RH
*5	Connector E	*6	Connector B
*7	Service Wire	-	-

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
L13-4 (BCR+) - Body ground	Ignition switch ON	Below 1 V
L13-3 (BCR-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch off.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Using a service wire, connect terminals 1 (BCR+) and 2 (BCR-) of connector E.

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

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
L13-4 (BCR+) - L13-3 (BCR-)	Always	Below 1 ohms

h. Disconnect the service wire from connector E.
i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
L13-4 (BCR+) - L13-3 (BCR-)	Always	1 Mohms or higher
L13-4 (BCR+) - Body ground	Always	1 Mohms or higher
L13-3 (BCR-) - Body ground	Always	1 Mohms or higher

NG --> See step 7

OK: Go to next step

6. **CHECK REAR AIRBAG SENSOR RH**

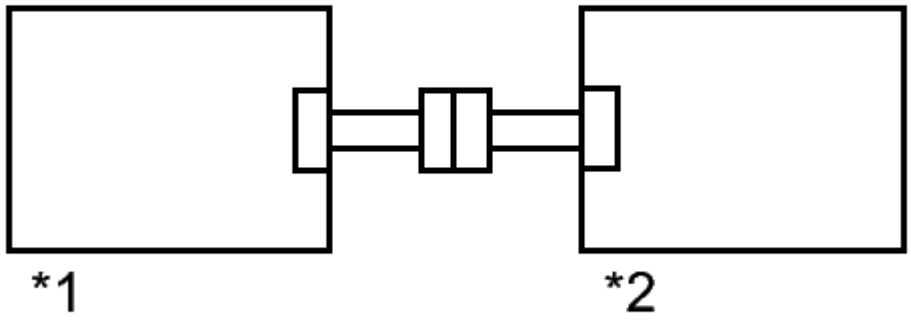


Fig. 25: Identifying Rear Airbag Sensor Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Interchange the rear airbag sensor RH with the LH and connect the connectors to them.

b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 90 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1638/82 is output	A
DTC B1633/81 is output	B
DTC B1633/81 and B1638/82 are not output	C

TEXT IN ILLUSTRATION

*1	Rear Airbag Sensor LH
*2	Side Airbag Sensor RH

HINT:

DTCs other than B1633/81 and B1638/82 may be output at this time, but they are not related to this check.

h. Turn the ignition switch off.
i. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
j. Return the rear airbag sensor LH and RH to their original positions and connect the connectors to them.

A --> See step 12

B --> See step 13

C --> See step 11

7. **CHECK NO. 2 FLOOR WIRE (REAR AIRBAG SENSOR RH - FRONT DOOR WIRE RH)**

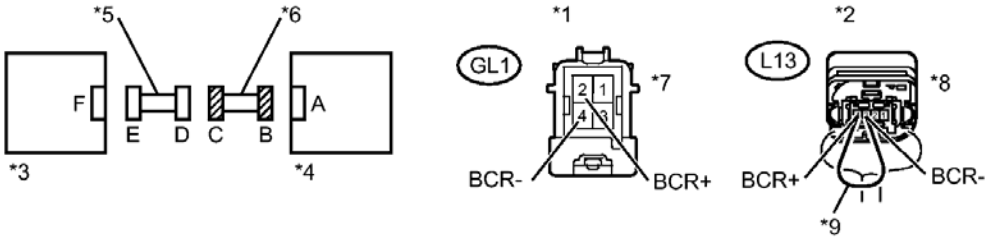


Fig. 26: Checking No. 2 Floor Wire (Rear Airbag Sensor RH - Front Door Wire RH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Front Door Wire RH)	*2	Rear view of wire harness connector (to Rear Airbag Sensor RH)
*3	Side Airbag Sensor RH	*4	Rear Airbag Sensor RH
*5	Front Door Wire RH	*6	No. 2 Floor Wire
*7	Connector C	*8	Connector B
*9	Service Wire	-	-

a. Disconnect the No. 2 floor wire connector from the front door wire RH.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
GL1-2 (BCR+) - Body ground	Ignition switch ON	Below 1 V
GL1-4 (BCR-) - Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch off.

f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

g. Using a service wire, connect terminals 3 (BCR-) and 4 (BCR+) of connector B.

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

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
GL1-2 (BCR+) - GL1-4 (BCR-)	Always	Below 1 ohms

i. Disconnect the service wire from connector B.

j. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
GL1-2 (BCR+) - GL1-4 (BCR-)	Always	1 Mohms or higher
GL1-2 (BCR+) - Body ground	Always	1 Mohms or higher
GL1-4		

(BCR-) - Body ground	Always	1 Mohms or higher

NG --> REPLACE NO. 2 FLOOR WIRE

OK --> REPLACE FRONT DOOR WIRE RH

8. **GO TO DTC B1632/81. Refer to DTC B1632/81: Lost Communication with Rear Airbag Sensor RH**
9. **GO TO DTC B1637/82. Refer to DTC B1637/82: Lost Communication with Rear Airbag Sensor LH**
10. **REPLACE SIDE AIRBAG SENSOR RH. Refer to REMOVAL**
11. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
12. **REPLACE REAR AIRBAG SENSOR RH. Refer to REMOVAL**
13. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**

DTC B1635/24: REAR AIRBAG SENSOR LH CIRCUIT MALFUNCTION

DESCRIPTION

The rear airbag sensor LH consists of the safing sensor, the diagnostic circuit, the lateral deceleration sensor, etc.

If the center airbag sensor assembly receives signals from the lateral deceleration sensor, it determines whether the SRS should be activated.

DTC B1635/24 is recorded when a malfunction is detected in the rear airbag sensor LH circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1635/24	When one of following conditions is met: • Rear airbag sensor LH malfunction • Center airbag sensor assembly malfunction	• Rear airbag sensor LH • Center airbag sensor assembly

WIRING DIAGRAM

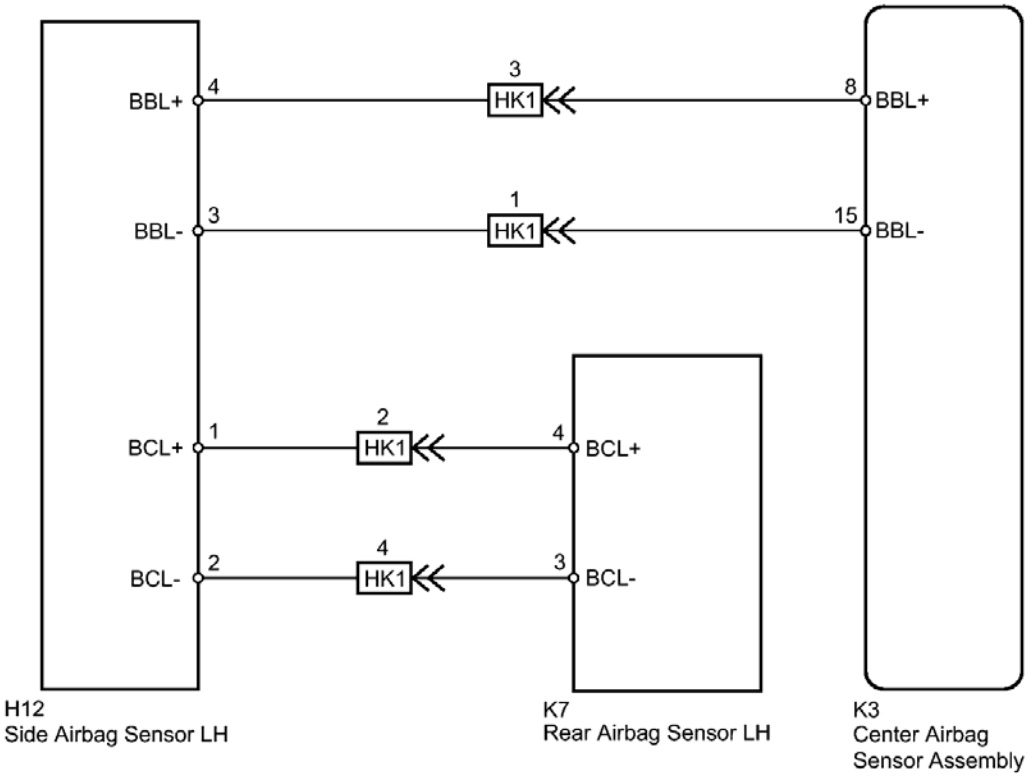


Fig. 27: LH Side & Rear Airbag Sensors Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK REAR AIRBAG SENSOR LH**

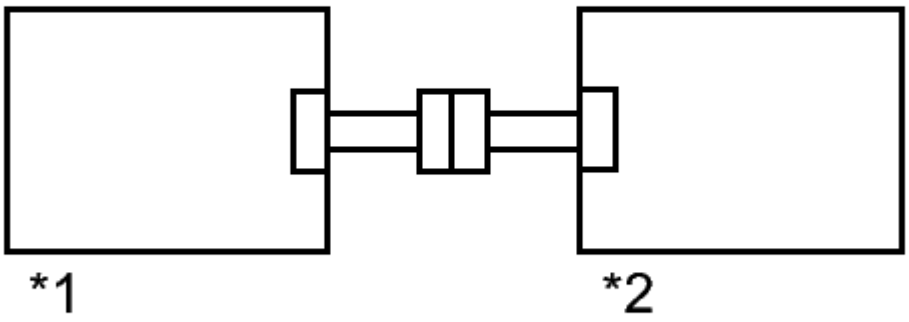


Fig. 28: Identifying Rear Airbag Sensor Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Turn the ignition switch off.
b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
c. Interchange the rear airbag sensor RH with LH and connect the connectors to them.
d. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
e. Turn the ignition switch to ON, and wait for at least 60 seconds.
f. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
g. Turn the ignition switch off.
h. Turn the ignition switch to ON, and wait for at least 60 seconds.
i. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1630/23 and B1635/24 are not output	A
DTC B1630/23 is output	B

DTC B1635/24 or is output	C

TEXT IN ILLUSTRATION

*1	Rear Airbag Sensor RH
*2	Side Airbag Sensor LH

HINT:

DTCs other than B1630/23 and B1635/24 may be output at this time, but they are not related to this check.

j. Turn the ignition switch off.
k. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
l. Return the rear airbag sensor RH and LH to their original positions and connect the connectors to them.

A --> See step 2

B --> See step 3

C --> See step 4

2. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
3. **REPLACE REAR AIRBAG SENSOR LH. Refer to REMOVAL**
4. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**

DTC B1637/82: LOST COMMUNICATION WITH REAR AIRBAG SENSOR LH

DESCRIPTION

The circuit for the side collision sensor LH (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH) is composed of the center airbag sensor assembly, side airbag sensor LH and rear airbag sensor LH.

The side airbag sensor LH and rear airbag sensor LH detect impacts to the vehicle and send signals to the center airbag sensor assembly to determine if the airbag should be deployed.

DTC B1637/82 is recorded when a malfunction is detected in the circuit for the side collision sensor LH (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH).

DTC No.	DTC Detection Condition	Trouble Area
B1637/82	When one of following conditions is met: • 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 circuit for the side collision sensor LH (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH) for 2 seconds. • Side airbag sensor LH malfunction • Rear airbag sensor LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front door wire LH • Side airbag sensor LH • Rear airbag sensor LH • Center airbag sensor assembly

WIRING DIAGRAM

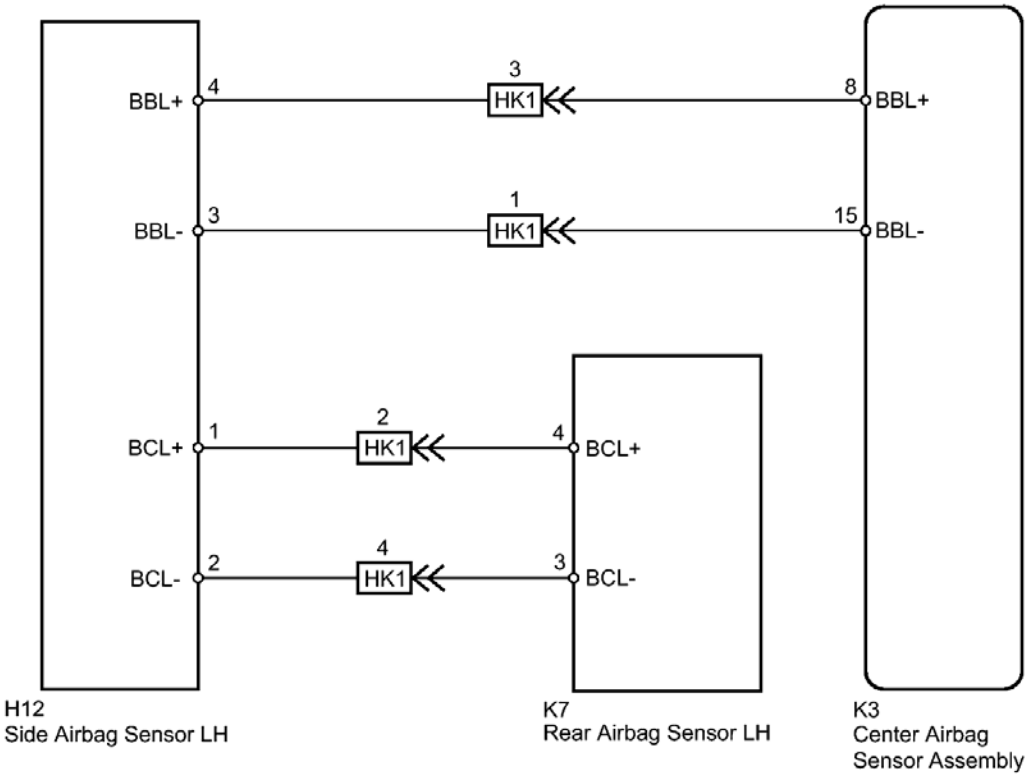


Fig. 29: LH Side & Rear Airbag Sensors Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   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, side airbag sensor LH and rear airbag sensor LH.

      OK

      The connectors are properly connected.

   NG --> CONNECT CONNECTORS PROPERLY

   OK: Go to next step

2. **CHECK CONNECTORS**
   a. Disconnect the connectors from the center airbag sensor assembly, side airbag sensor LH and rear airbag sensor LH.
   b. Check that the connectors (on the center airbag sensor assembly side, side airbag sensor LH side and rear airbag sensor LH side) are not damaged.

      OK

      The connectors are not deformed or damaged.

   NG --> REPLACE HARNESS AND CONNECTOR

   OK: Go to next step

3. **CHECK SIDE AIRBAG SENSOR LH**
   a. Interchange the side airbag sensor RH with LH and connect the connectors to them.

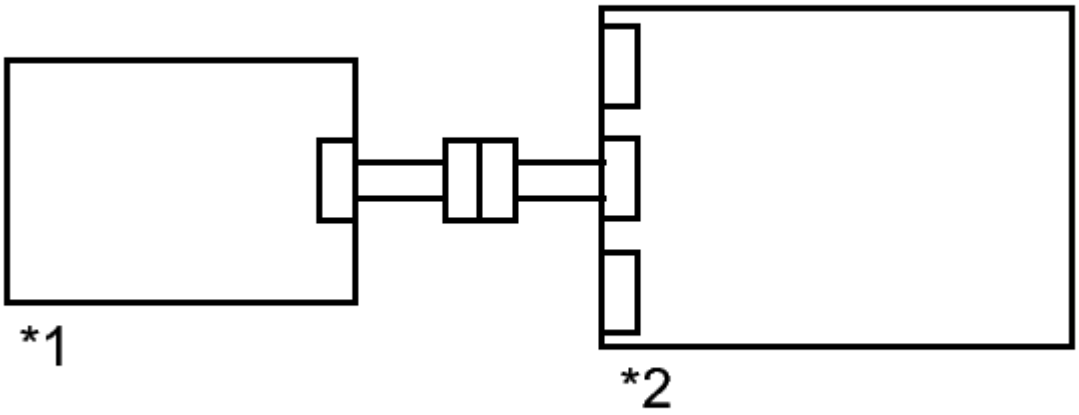


Fig. 30: Identifying Side Airbag Sensor LH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   c. Turn the ignition switch to ON, and wait for at least 60 seconds.
   d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
   e. Turn the ignition switch off.
   f. Turn the ignition switch to ON, and wait for at least 90 seconds.

g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1632/81 is output	A
DTC B1632/81 and B1637/82 are not output	B
DTC B1637/82 is output	C

TEXT IN ILLUSTRATION

*1	Side Airbag Sensor RH
*2	Center Airbag Sensor Assembly

h. Turn the ignition switch off.

i. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

j. Return the side airbag sensor RH and LH to their original positions and connect the connectors to them.

A --> See step 7

B --> See step 8

C: Go to next step

4. **CHECK REAR AIRBAG SENSOR LH CIRCUIT**

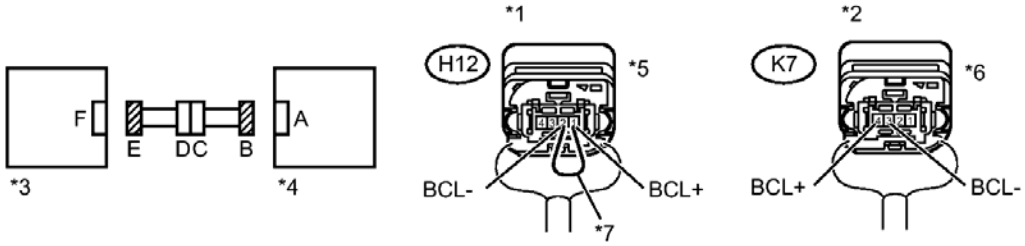


Fig. 31: Checking Rear Airbag Sensor LH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear view of wire harness connector (to Side Airbag Sensor LH)	*2	Rear view of wire harness connector (to Rear Airbag Sensor LH)
*3	Side Airbag Sensor LH	*4	Rear Airbag Sensor LH
*5	Connector E	*6	Connector B
*7	Service Wire	-	-

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
K7-4 (BCL+) - Body ground	Ignition switch ON	Below 1 V
K7-3 (BCL-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch off.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Using a service wire, connect terminals 1 (BCL+) and 2 (BCL-) of connector E.

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

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
K7-4 (BCL+) - K7-3 (BCL-)	Always	Below 1 ohms

h. Disconnect the service wire from connector E.
i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
K7-4 (BCL+) - K7-3 (BCL-)	Always	1 Mohms or higher
K7-4 (BCL+) - Body ground	Always	1 Mohms or higher
K7-3 (BCL-) - Body ground	Always	1 Mohms or higher

NG --> See step 6

OK: Go to next step

5. **CHECK REAR AIRBAG SENSOR LH**

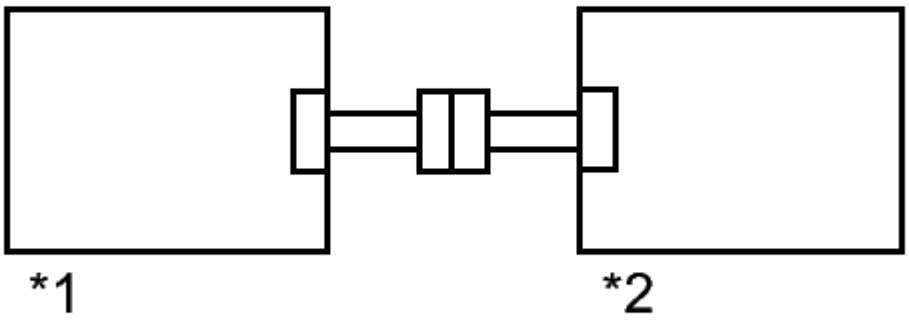


Fig. 32: Identifying Rear Airbag Sensor Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Interchange the rear airbag sensor LH with RH and connect the connectors to them.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 90 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1637/82 is output	A
DTC B1632/81 is output	B
DTC B1632/81 and B1637/82 are not	C

output	

TEXT IN ILLUSTRATION

*1	Rear Airbag Sensor RH
*2	Side Airbag Sensor LH

HINT:

DTCs other than B1632/81 and B1637/82 may be output at this time, but they are not related to this check.

h. Turn the ignition switch off.

i. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

j. Return the rear airbag sensor LH and RH to their original positions and connect the connectors to them.

A --> See step 9

B --> See step 10

C --> See step 8

6. **CHECK FLOOR WIRE (REAR AIRBAG SENSOR LH - FRONT DOOR WIRE LH)**

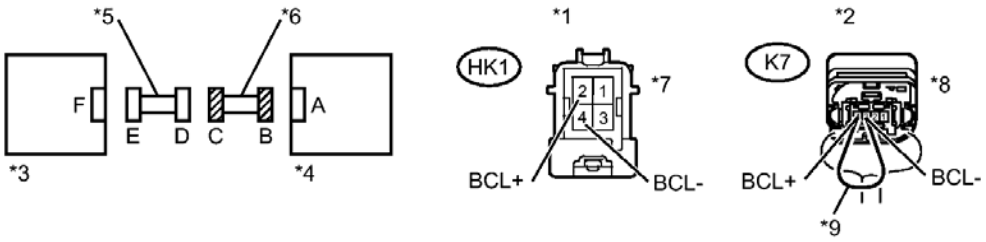


Fig. 33: Checking Floor Wire (Rear/Side Airbag Sensor LH - Front Door Wire LH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

	Front view of wire harness		Rear view of wire harness connector

*1	connector (to Front Door Wire LH)	*2	(to Rear Airbag Sensor LH)
*3	Side Airbag Sensor LH	*4	Rear Airbag Sensor LH
*5	Front Door Wire LH	*6	Floor Wire
*7	Connector C	*8	Connector B
*9	Service Wire	-	-

a. Disconnect the floor wire connector from the front door wire LH.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
HK1-2 (BCL+) - Body ground	Ignition switch ON	Below 1 V
HK1-4 (BCL-) - Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch off.
f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
g. Using a service wire, connect terminals 3 (BCL-) and 4 (BCL+) of connector B.

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

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
HK1-2 (BCL+) - HK1-4 (BCL-)	Always	Below 1 ohms

i. Disconnect the service wire from connector B.
j. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
HK1-2 (BCL+) - HK1-4 (BCL-)	Always	1 Mohms or higher
HK1-2 (BCL+) - Body ground	Always	1 Mohms or higher
HK1-4 (BCL-) - Body ground	Always	1 Mohms or higher

NG --> REPLACE FLOOR WIRE

OK --> REPLACE FRONT DOOR WIRE LH

7. **REPLACE SIDE AIRBAG SENSOR LH. Refer to REMOVAL**
8. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
9. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
10. **REPLACE REAR AIRBAG SENSOR LH. Refer to REMOVAL**

DTC B1638/82: REAR AIRBAG SENSOR ASSEMBLY LH INITIALIZATION INCOMPLETE

DESCRIPTION

The circuit for the side collision sensor LH (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH) is composed of the center airbag sensor assembly, side airbag sensor LH and rear airbag sensor LH.

The side airbag sensor LH and rear airbag sensor LH detect impacts to the vehicle and send signals to the center

airbag sensor assembly to determine if the airbag should be deployed.

DTC B1638/82 is recorded when a malfunction is detected in the circuit for the side collision sensor LH (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH).

DTC No.	DTC Detection Condition	Trouble Area
B1638/82	When one of following conditions is met: • 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 circuit for the side collision sensor LH (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH) for 2 seconds. • Side airbag sensor LH malfunction • Rear airbag sensor LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front door wire LH • Side airbag sensor LH • Rear airbag sensor LH • Center airbag sensor assembly

WIRING DIAGRAM

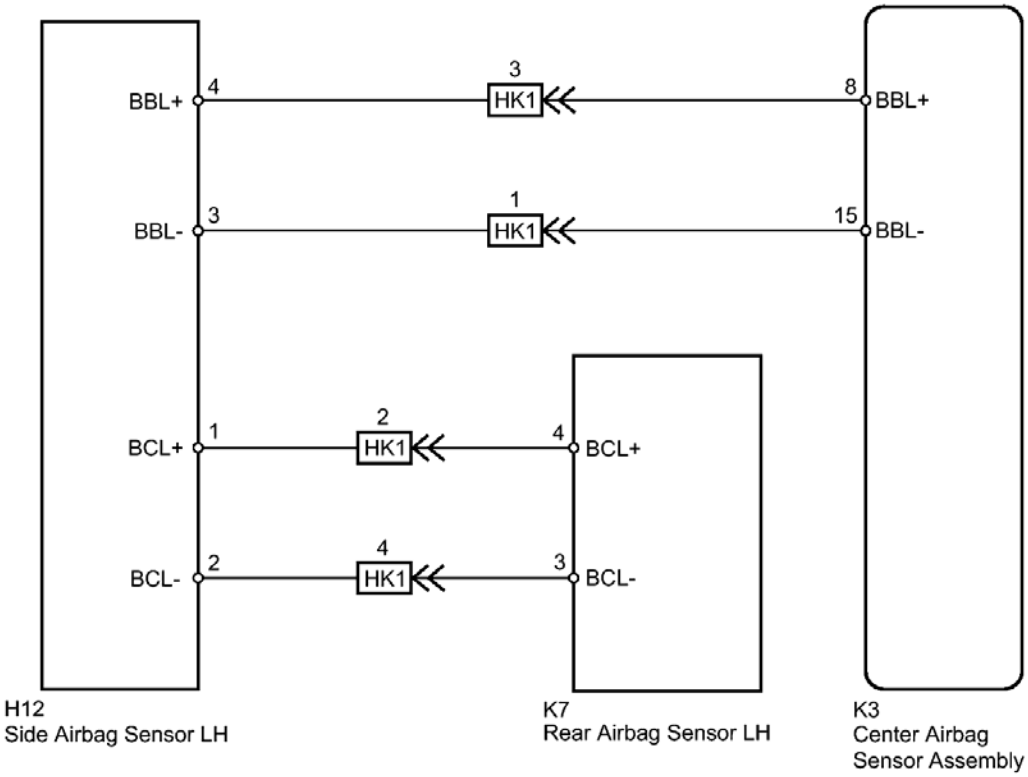


Fig. 34: LH Side & Rear Airbag Sensors Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK PAST DTC**
   a. Turn the ignition switch off.
   b. Turn the ignition switch to ON, and wait for at least 60 seconds.
   c. Check the past DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1632/81 is output	A
DTC B1637/82 is output	B

DTC B1632/81 and B1637/82 are not output	C

A --> See step 8

B --> See step 9

C: Go to next step

2. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   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, side airbag sensor LH and rear airbag sensor LH.

      OK

      The connectors are properly connected.

   NG --> CONNECT CONNECTORS PROPERLY

   OK: Go to next step

3. **CHECK CONNECTORS**
   a. Disconnect the connectors from the center airbag sensor assembly, side airbag sensor LH and rear airbag sensor LH.
   b. Check that the connectors (on the center airbag sensor assembly side, side airbag sensor LH side and rear airbag sensor LH side) are not damaged.

      OK

      The connectors are not deformed or damaged.

   NG --> REPLACE HARNESS AND CONNECTOR

   OK: Go to next step

4. **CHECK SIDE AIRBAG SENSOR LH**
   a. Interchange the side airbag sensor LH with RH and connect the connectors to them.

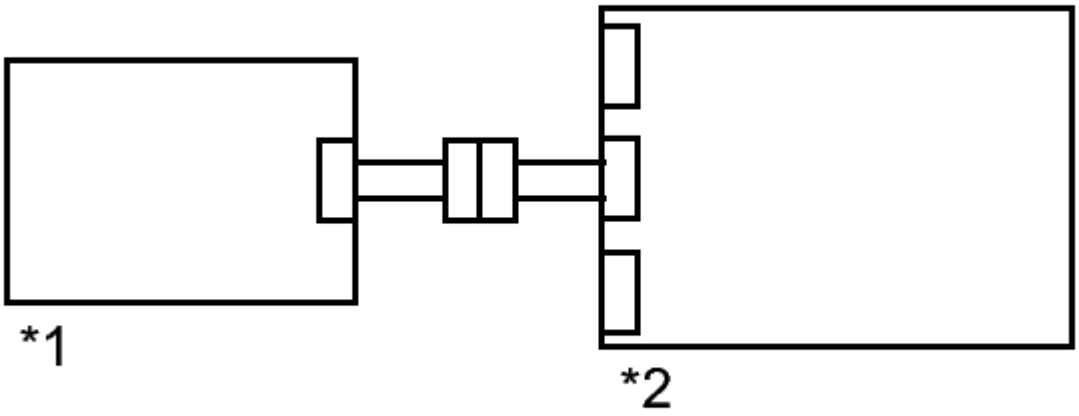


Fig. 35: Identifying Side Airbag Sensor LH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 90 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1633/81 is output	A
DTC B1633/81 and B1638/82 are not output	B
DTC B1638/82 is output	C

TEXT IN ILLUSTRATION

*1	Side Airbag Sensor RH
*2	Center Airbag Sensor Assembly

h. Turn the ignition switch off.

i. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

j. Return the side airbag sensor RH and LH to their original positions and connect the connectors to them.

A --> See step 10

B --> See step 11

C: Go to next step

5. **CHECK REAR SIDE AIRBAG SENSOR LH CIRCUIT**

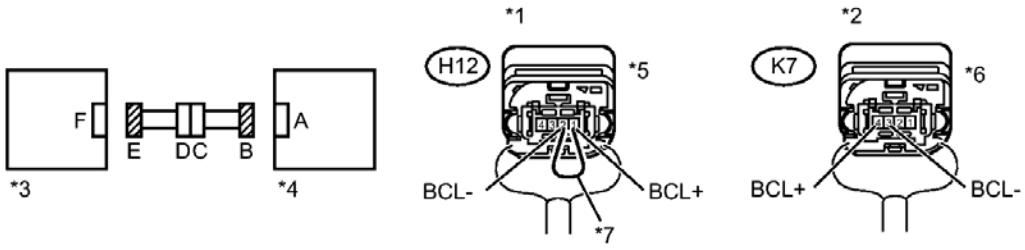


Fig. 36: Checking Rear Airbag Sensor LH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear view of wire harness connector (to Side Airbag Sensor LH)	*2	Rear view of wire harness connector (to Rear Airbag Sensor LH)
*3	Side Airbag Sensor	*4	Rear Airbag Sensor

	LH		LH
*5	Connector E	*6	Connector B
*7	Service Wire	-	-

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
K7-4 (BCL+) - Body ground	Ignition switch ON	Below 1 V
K7-3 (BCL-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch off.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Using a service wire, connect terminals 1 (BCL+) and 2 (BCL-) of connector E.

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

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
K7-4 (BCL+) - K7-3 (BCL-)	Always	Below 1 ohms

h. Disconnect the service wire from connector E.
i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
K7-4 (BCL+) - K7-3 (BCL-)	Always	1 Mohms or higher
K7-4 (BCL+) - Body ground	Always	1 Mohms or higher
K7-3 (BCL-) - Body ground	Always	1 Mohms or higher

NG --> See step 7

OK: Go to next step

6. **CHECK REAR AIRBAG SENSOR LH**

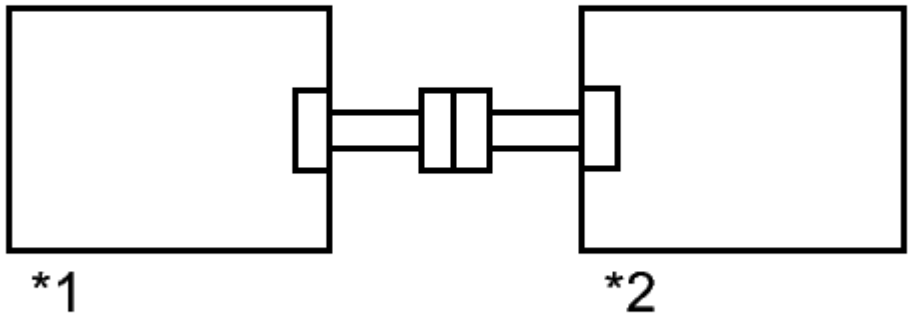


Fig. 37: Identifying Rear Airbag Sensor Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Interchange the rear airbag sensor LH with RH and connect the connectors to them.

b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 90 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1638/82 is output	A
DTC B1633/81 is output	B
DTC B1633/81 and B1638/82 are not output	C

TEXT IN ILLUSTRATION

*1	Rear Airbag Sensor RH
*2	Side Airbag Sensor LH

HINT:

DTCs other than B1633/81 and B1638/82 may be output at this time, but they are not related to this check.

h. Turn the ignition switch off.
i. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
j. Return the rear airbag sensor LH and RH to their original positions and connect the connectors to them.

A --> See step 12

B --> See step 13

C --> See step 11

7. **CHECK FLOOR WIRE (SIDE AIRBAG SENSOR LH - FRONT DOOR WIRE LH)**

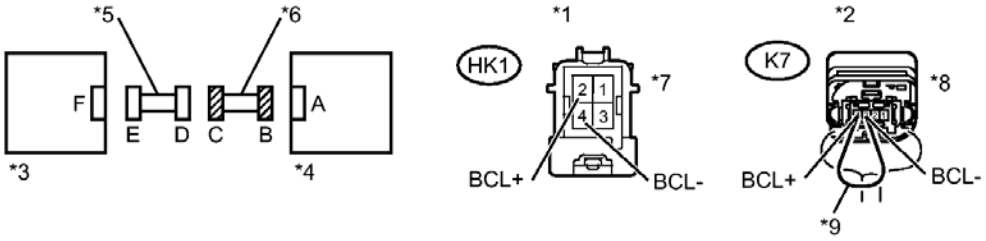


Fig. 38: Checking Floor Wire (Rear/Side Airbag Sensor LH - Front Door Wire LH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Front Door Wire LH)	*2	Rear view of wire harness connector (to Rear Airbag Sensor LH)
*3	Side Airbag Sensor LH	*4	Rear Airbag Sensor LH
*5	Front Door Wire LH	*6	Floor Wire
*7	Connector C	*8	Connector B
*9	Service Wire	-	-

a. Disconnect the floor wire connector from the front door wire LH.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
HK1-2 (BCL+) - Body ground	Ignition switch ON	Below 1 V
HK1-4 (BCL-) - Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch off.

f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

g. Using a service wire, connect terminals 3 (BCL-) and 4 (BCL+) of connector B.

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

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
HK1-2 (BCL+) - HK1-4 (BCL-)	Always	Below 1 ohms

i. Disconnect the service wire from connector B.

j. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
HK1-2 (BCL+) - HK1-4 (BCL-)	Always	1 Mohms or higher
HK1-2 (BCL+) - Body ground	Always	1 Mohms or higher
HK1-4		

(BCL-) - Body ground	Always	1 Mohms or higher

NG --> REPLACE FLOOR WIRE

OK --> REPLACE FRONT DOOR WIRE LH

8. **GO TO DTC B1632/81. Refer to DTC B1632/81: Lost Communication with Rear Airbag Sensor RH**
9. **GO TO DTC B1637/82. Refer to DTC B1637/82: Lost Communication with Rear Airbag Sensor LH**
10. **REPLACE SIDE AIRBAG SENSOR LH. Refer to REMOVAL**
11. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
12. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
13. **REPLACE REAR AIRBAG SENSOR LH. Refer to REMOVAL**

DTC B1642/81: LOST COMMUNICATION WITH SIDE SATELLITE SENSOR BUS RH

DESCRIPTION

The circuit for the side collision sensor RH (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH) is composed of the center airbag sensor assembly, side airbag sensor RH and rear airbag sensor RH.

The side airbag sensor RH and rear airbag sensor RH detect impacts to the vehicle and send signals to the center airbag sensor assembly to determine if the airbag should be deployed.

DTC B1642/81 is recorded when a malfunction is detected in the circuit for the side collision sensor RH (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH).

DTC No.	DTC Detection Condition	Trouble Area
B1642/81	When one of following conditions is met: • The center airbag sensor 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 circuit for the side collision sensor RH (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH) for 2 seconds. • Side airbag sensor RH malfunction	• No. 2 floor wire • Front door wire RH • Side airbag sensor RH • Rear airbag sensor RH • Center airbag sensor assembly

	• Rear airbag sensor RH malfunction • Center airbag sensor assembly malfunction	

WIRING DIAGRAM

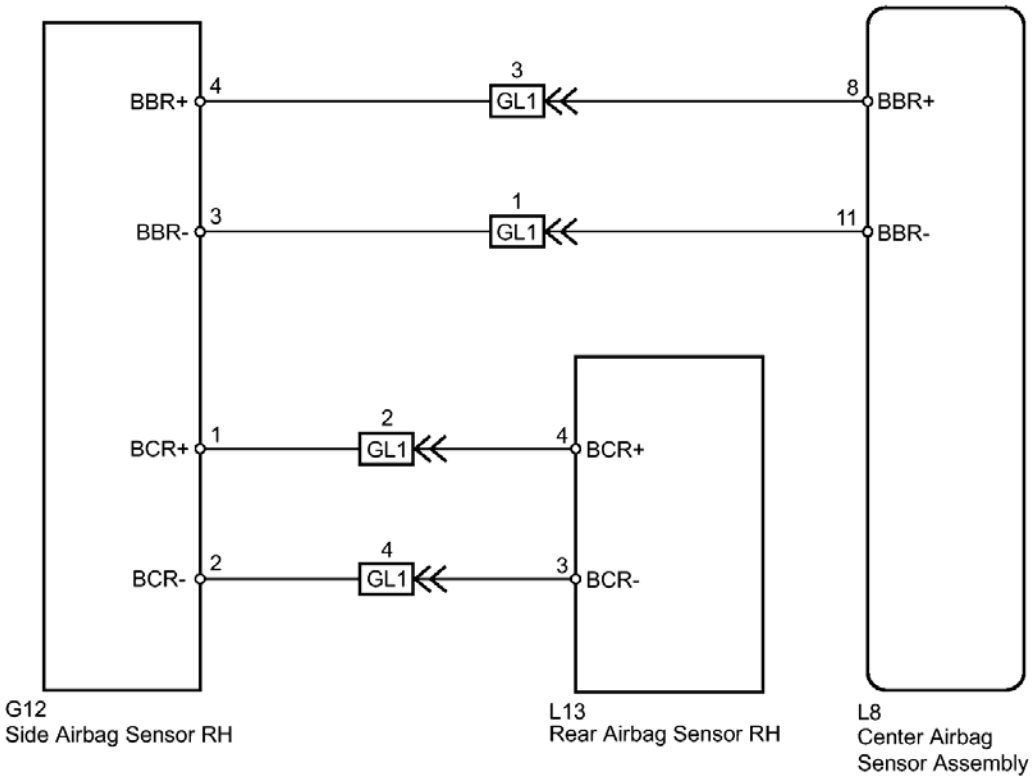


Fig. 39: RH Side & Rear Airbag Sensor Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   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, side airbag sensor RH and rear airbag sensor RH.

      OK

The connectors are properly connected.

NG --> CONNECT CONNECTORS PROPERLY

OK: Go to next step

2. **CHECK CONNECTORS**
   a. Disconnect the connectors from the center airbag sensor assembly, side airbag sensor RH and rear airbag sensor RH.
   b. Check that the connectors (on the center airbag sensor assembly side, side airbag sensor RH side and rear airbag sensor RH side) are not damaged.

      OK

      The connectors are not deformed or damaged.

NG --> REPLACE HARNESS AND CONNECTOR

OK: Go to next step

3. **CHECK SIDE AIRBAG SENSOR RH CIRCUIT (CENTER AIRBAG SENSOR - SIDE AIRBAG SENSOR RH)**

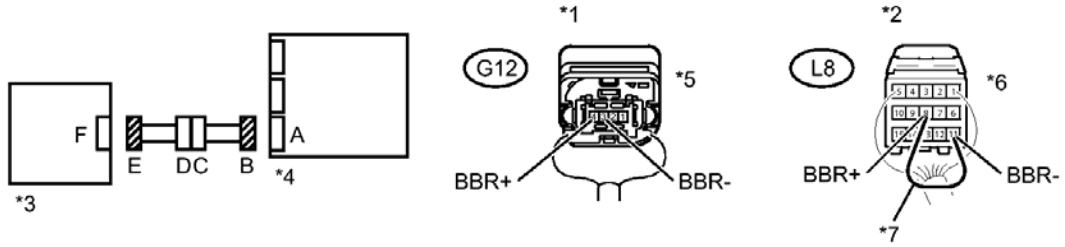


Fig. 40: Checking Side Airbag Sensor RH Circuit (Center Airbag Sensor - Side Airbag Sensor RH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear view of wire harness connector (to Side Airbag Sensor RH)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Side Airbag Sensor	*4	Center Airbag Sensor

	RH		Assembly
*5	Connector E	*6	Connector B
*7	Service Wire	-	-

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
G12-4 (BBR+) - Body ground	Ignition switch ON	Below 1 V
G12-3 (BBR-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch off.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Using a service wire, connect terminals 8 (BBR+) and 11 (BBR-) of connector B.

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

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
G12-4 (BBR+) - G12-3 (BBR-)	Always	Below 1 ohms

h. Disconnect the service wire from connector B.
i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
G12-4 (BBR+) - G12-3 (BBR-)	Always	1 Mohms or higher
G12-4 (BBR+) - Body ground	Always	1 Mohms or higher
G12-3 (BBR-) - Body ground	Always	1 Mohms or higher

NG --> See step 7

OK: Go to next step

4. **CHECK REAR AIRBAG SENSOR RH CIRCUIT (SIDE AIRBAG SENSOR RH - REAR AIRBAG SENSOR RH)**

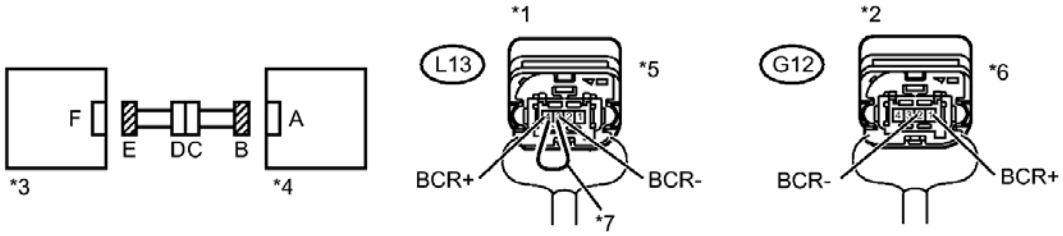


Fig. 41: Checking Rear Airbag Sensor RH Circuit (Side Airbag Sensor RH - Rear Airbag Sensor RH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear view of wire harness connector (to Rear Airbag Sensor RH)	*2	Rear view of wire harness connector (to Side Airbag Sensor RH)
	Rear		Side

*3	Airbag Sensor RH	*4	Airbag Sensor RH
*5	Connector E	*6	Connector B
*7	Service Wire	-	-

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
G12-1 (BCR+) - Body ground	Ignition switch ON	Below 1 V
G12-2 (BCR-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch off.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Using a service wire, connect terminals 4 (BCR+) and 3 (BCR-) of connector E.

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

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
G12-1 (BCR+) - G12-2 (BCR-)	Always	Below 1 ohms

h. Disconnect the service wire from connector E.

i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
G12-1 (BCR+) - G12-2 (BCR-)	Always	1 Mohms or higher
G12-1 (BCR+) - Body ground	Always	1 Mohms or higher
G12-2 (BCR-) - Body ground	Always	1 Mohms or higher

NG --> See step 8

OK: Go to next step

5. **CHECK SIDE AIRBAG SENSOR RH**

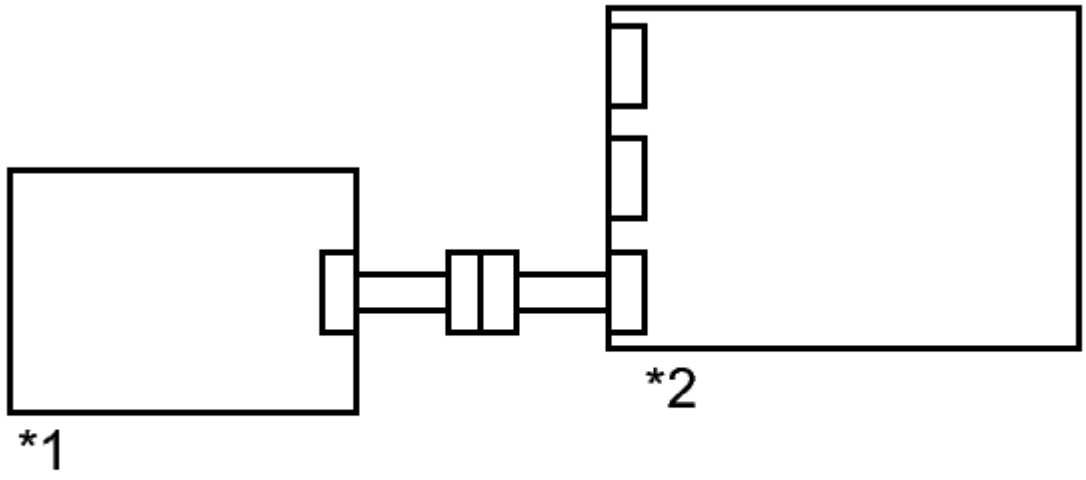


Fig. 42: Identifying Side Airbag Sensor RH Circuit

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Interchange the side airbag sensor LH with RH and connect the connectors to them.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 90 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1647/82 is output	A
DTC B1642/81 and B1647/82 are not output	B
DTC B1642/81 is output	C

TEXT IN ILLUSTRATION

*1	Side Airbag Sensor LH
*2	Center Airbag Sensor Assembly

h. Turn the ignition switch off.
i. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
j. Return the side airbag sensor RH and LH to their original positions and connect the connectors to them.

A --> See step 9

B --> See step 10

C: Go to next step

6. **CHECK REAR AIRBAG SENSOR RH**

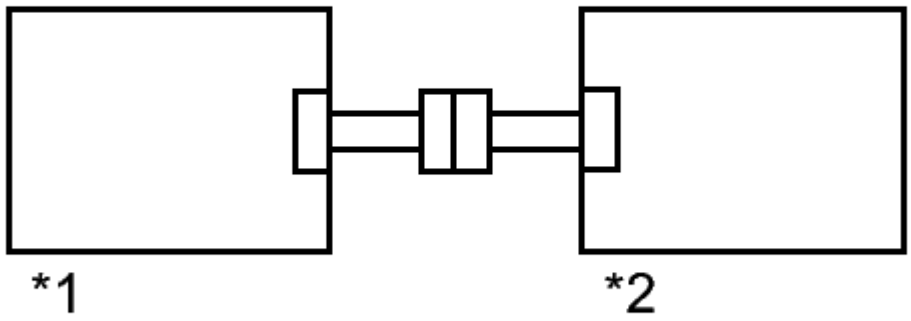


Fig. 43: Identifying Rear Airbag Sensor Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Interchange the rear airbag sensor LH with RH and connect the connectors to them.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 90 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1642/81 is output	A
DTC B1647/82 is output	B
DTC	

B1642/81 and B1647/82 are not output	C

TEXT IN ILLUSTRATION

*1	Rear Airbag Sensor LH
*2	Side Airbag Sensor RH

HINT:

DTCs other than B1642/81 and B1647/82 may be output at this time, but they are not related to this check.

h. Turn the ignition switch off.

i. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

j. Return the rear airbag sensor RH and LH to their original positions and connect the connectors to them.

A --> See step 11

B --> See step 12

C --> See step 10

7. **CHECK NO. 2 FLOOR WIRE (CENTER AIRBAG SENSOR ASSEMBLY - FRONT DOOR WIRE RH)**

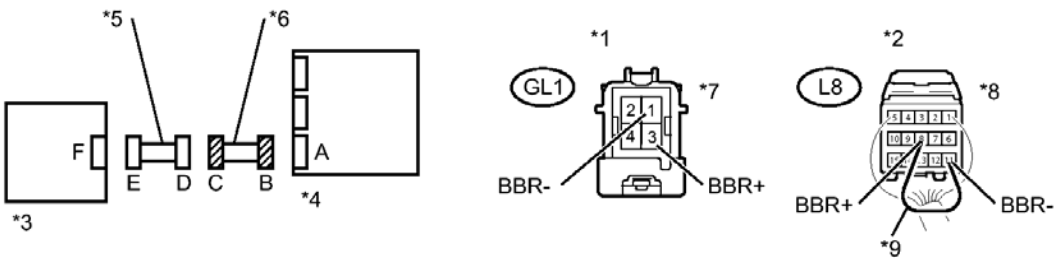


Fig. 44: Checking No. 2 Floor Wire (Center Airbag Sensor Assembly - Front Door Wire RH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Front Door Wire RH)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Side Airbag Sensor RH	*4	Center Airbag Sensor Assembly
*5	Front Door Wire RH	*6	No. 2 Floor Wire
*7	Connector C	*8	Connector B
*9	Service Wire	-	-

a. Disconnect the No. 2 floor wire connector from the front door wire RH.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
GL1-1 (BBR-) - Body ground	Ignition switch ON	Below 1 V
GL1-3 (BBR+) - Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch off.
f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
g. Using a service wire, connect terminals 8 (BBR+) and 11 (BBR-) of connector B.

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

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
GL1-1 (BBR-) - GL1-3 (BBR+)	Always	Below 1 ohms

i. Disconnect the service wire from connector B.

j. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
GL1-1 (BBR-) - GL1-3 (BBR+)	Always	1 Mohms or higher
GL1-1 (BBR-) - Body ground	Always	1 Mohms or higher
GL1-3 (BBR+) - Body ground	Always	1 Mohms or higher

NG --> REPLACE NO. 2 FLOOR WIRE

OK --> REPLACE FRONT DOOR WIRE RH

8. **CHECK NO. 2 FLOOR WIRE (REAR AIRBAG SENSOR RH - FRONT DOOR WIRE RH)**

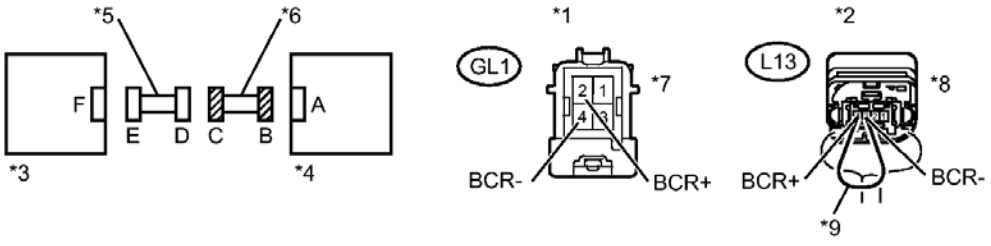


Fig. 45: Checking No. 2 Floor Wire (Rear Airbag Sensor RH - Front Door Wire RH)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Front Door Wire RH)	*2	Rear view of wire harness connector (to Rear Airbag Sensor RH)
*3	Side Airbag Sensor RH	*4	Rear Airbag Sensor RH
*5	Front Door Wire RH	*6	No. 2 Floor Wire
*7	Connector C	*8	Connector B
*9	Service Wire	-	-

a. Disconnect the No. 2 floor wire connector from the front door wire RH.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
GL1-2 (BCR+) - Body ground	Ignition switch ON	Below 1 V
GL1-4 (BCR-) - Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch off.
f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
g. Using a service wire, connect terminals 3 (BCR-) and 4 (BCR+) of connector B.

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

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
GL1-2 (BCR+) - GL1-4 (BCR-)	Always	Below 1 ohms

i. Disconnect the service wire from connector B.

j. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
GL1-2 (BCR+) - GL1-4 (BCR-)	Always	1 Mohms or higher
GL1-2 (BCR+) - Body ground	Always	1 Mohms or higher
GL1-4 (BCR-) - Body ground	Always	1 Mohms or higher

NG --> REPLACE NO. 2 FLOOR WIRE

OK --> REPLACE FRONT DOOR WIRE RH

9. **REPLACE SIDE AIRBAG SENSOR RH. Refer to REMOVAL**
10. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
11. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
12. **REPLACE REAR AIRBAG SENSOR RH. Refer to REMOVAL**

DTC B1647/82: LOST COMMUNICATION WITH SIDE SATELLITE SENSOR BUS LH

DESCRIPTION

The circuit for the side collision sensor LH (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH) is composed of the center airbag sensor assembly, side airbag sensor LH and rear airbag sensor LH.

The side airbag sensor LH and rear airbag sensor LH detect impacts to the vehicle and send signals to the center airbag sensor assembly to determine if the airbag should be deployed.

DTC B1647/82 is recorded when a malfunction is detected in the circuit for the side collision sensor LH (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH).

DTC No.	DTC Detection Condition	Trouble Area
B1647/82	When one of following conditions is met: • The center airbag sensor 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 circuit for the side collision sensor LH (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH) for 2 seconds. • Side airbag sensor LH malfunction • Rear airbag sensor LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front door wire LH • Side airbag sensor LH • Rear airbag sensor LH • Center airbag sensor assembly

WIRING DIAGRAM

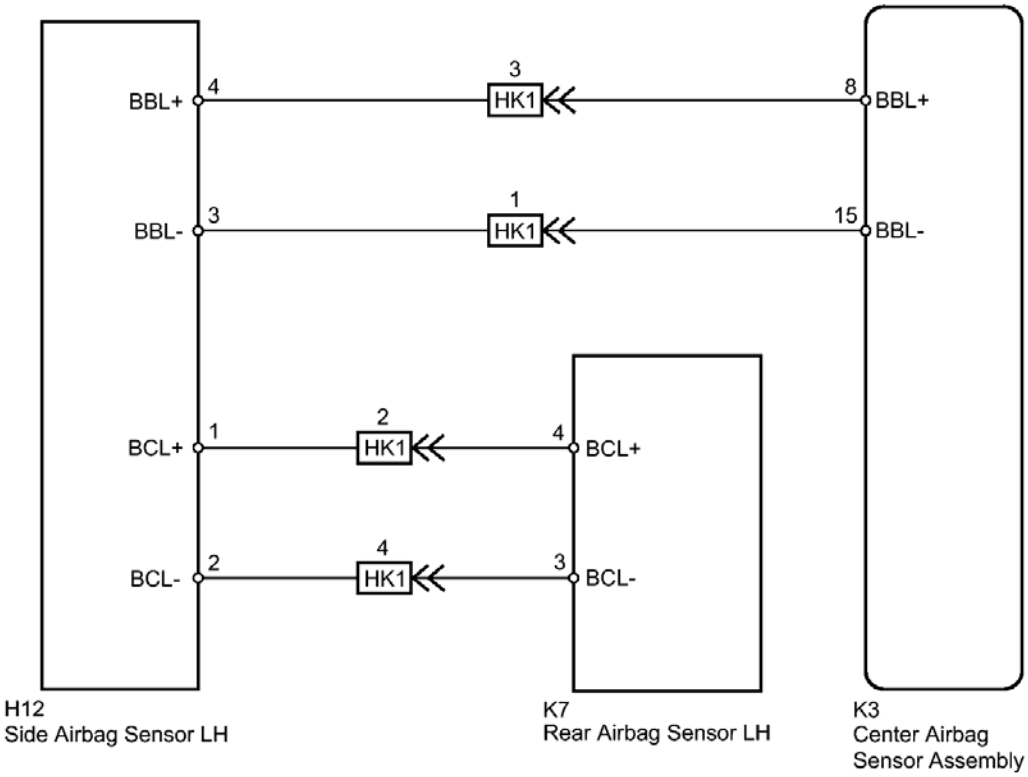


Fig. 46: LH Side & Rear Airbag Sensors Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   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, side airbag sensor LH and rear airbag sensor LH.

      OK

      The connectors are properly connected.

   NG --> CONNECT CONNECTOR PROPERLY

   OK: Go to next step

2. **CHECK CONNECTORS**
   a. Disconnect the connectors from the center airbag sensor assembly, side airbag sensor LH and rear airbag sensor LH.
   b. Check that the connectors (on the center airbag sensor assembly side, side airbag sensor LH side and rear airbag sensor LH side) are not damaged.

      OK

      The connectors are not deformed or damaged.

   NG --> REPLACE HARNESS AND CONNECTOR

   OK: Go to next step

3. **CHECK SIDE AIRBAG SENSOR LH CIRCUIT (CENTER AIRBAG SENSOR ASSEMBLY - SIDE AIRBAG SENSOR LH)**

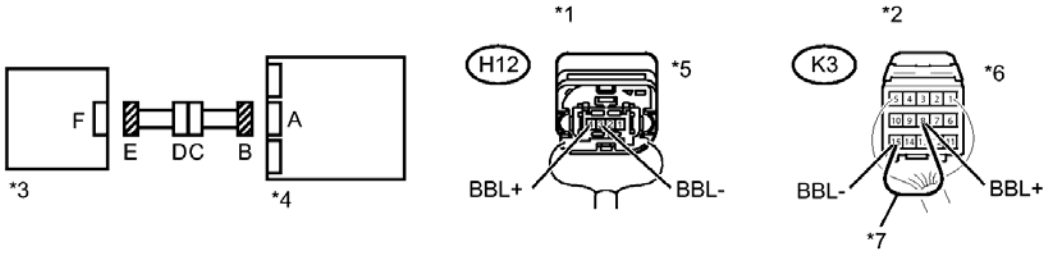


Fig. 47: Checking Side Airbag Sensor LH Circuit (Center Airbag Sensor Assembly - Side Airbag Sensor LH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear view of wire harness connector (to Side Airbag Sensor LH)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Side Airbag Sensor LH	*4	Center Airbag Sensor Assembly
*5	Connector E	*6	Connector B
*7	Service Wire	-	-

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
H12-4 (BBL+) - Body ground	Ignition switch ON	Below 1 V
H12-3 (BBL-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch off.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Using a service wire, connect terminals 8 (BBL+) and 15 (BBL-) of connector B.

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

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
H12-4 (BBL+) - H12-3 (BBL-)	Always	Below 1 ohms

h. Disconnect the service wire from connector B.
i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
H12-4 (BBL+) -		1 Mohms

H12-3 (BBL-)	Always	or higher
H12-4 (BBL+) - Body ground	Always	1 Mohms or higher
H12-3 (BBL-) - Body ground	Always	1 Mohms or higher

NG --> See step 7

OK: Go to next step

4. **CHECK REAR AIRBAG SENSOR LH CIRCUIT (SIDE AIRBAG SENSOR LH - REAR AIRBAG SENSOR LH)**

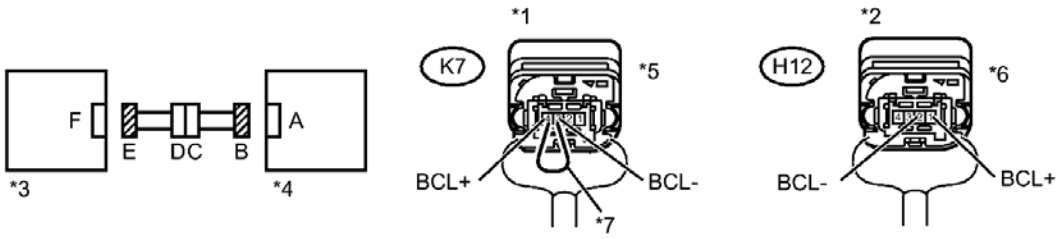


Fig. 48: Checking Rear Airbag Sensor LH Circuit (Side Airbag Sensor LH - Rear Airbag Sensor LH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear view of wire harness connector (to Rear Airbag Sensor LH)	*2	Rear view of wire harness connector (to Side Airbag Sensor LH)
*3	Rear Airbag Sensor LH	*4	Side Airbag Sensor LH
*5	Connector E	*6	Connector B
*7	Service	-	-

Wire			

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
H12-1 (BCL+) - Body ground	Ignition switch ON	Below 1 V
H12-2 (BCL-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch off.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Using a service wire, connect terminals 4 (BCL+) and 3 (BCL-) of connector E.

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

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
H12-1 (BCL+) - H12-2 (BCL-)	Always	Below 1 ohms

h. Disconnect the service wire from connector E.
i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition

H12-1 (BCL+) - H12-2 (BCL-)	Always	1 Mohms or higher
H12-1 (BCL+) - Body ground	Always	1 Mohms or higher
H12-2 (BCL-) - Body ground	Always	1 Mohms or higher

NG --> See step 8

OK: Go to next step

5. **CHECK SIDE AIRBAG SENSOR LH**

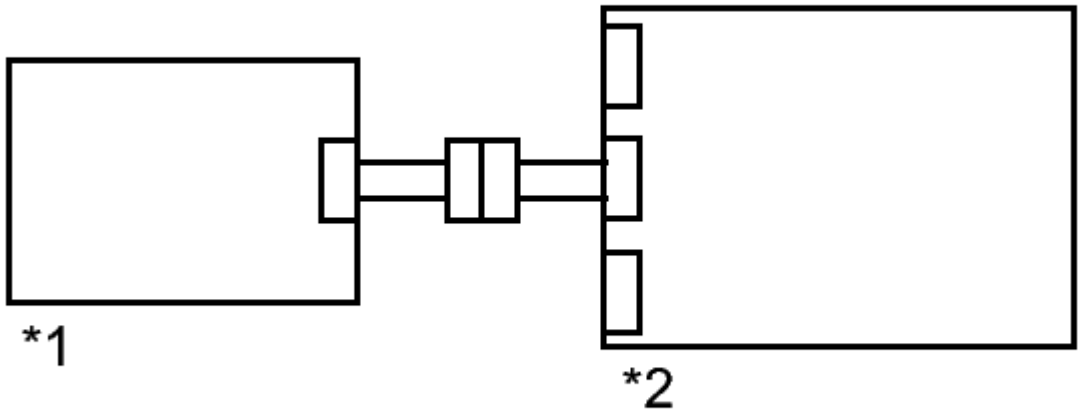


Fig. 49: Identifying Side Airbag Sensor LH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Interchange the side airbag sensor LH with RH and connect the connectors to them.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .

e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 90 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1642/81 and B1647/82 are not output	A
DTC B1642/81 is output	B
DTC B1647/82 is output	C

TEXT IN ILLUSTRATION

*1	Side Airbag Sensor RH
*2	Center Airbag Sensor Assembly

h. Turn the ignition switch off.
i. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
j. Return the side airbag sensor RH and LH to their original positions and connect the connectors to them.

A --> See step 9

B --> See step 10

C: Go to next step

6. **CHECK REAR AIRBAG SENSOR LH**

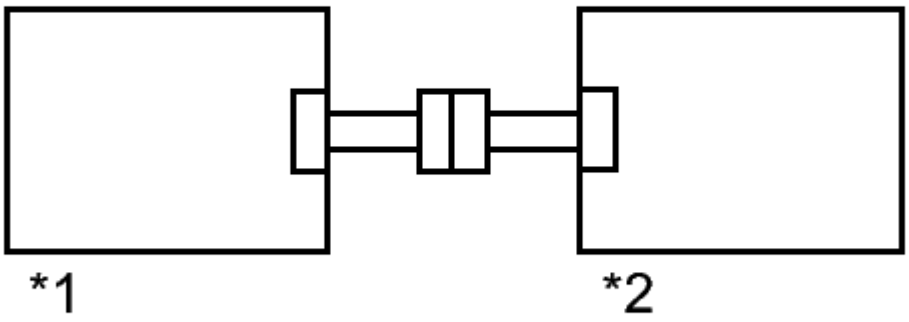


Fig. 50: Identifying Rear Airbag Sensor Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Interchange the rear airbag sensor LH with RH and connect the connectors to them.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 90 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1642/81 is output	A
DTC B1647/82 is output	B
DTC B1642/81 and B1647/82 are not	C

output	

TEXT IN ILLUSTRATION

*1	Rear Airbag Sensor RH
*2	Side Airbag Sensor LH

HINT:

DTCs other than B1642/81 and B1647/82 may be output at this time, but they are not related to this check.

h. Turn the ignition switch off.

i. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

j. Return the rear airbag sensor LH and RH to their original positions and connect the connectors to them.

A --> See step 11

B --> See step 12

C --> See step 9

7. **CHECK FLOOR WIRE (CENTER AIRBAG SENSOR ASSEMBLY - FRONT DOOR WIRE LH)**

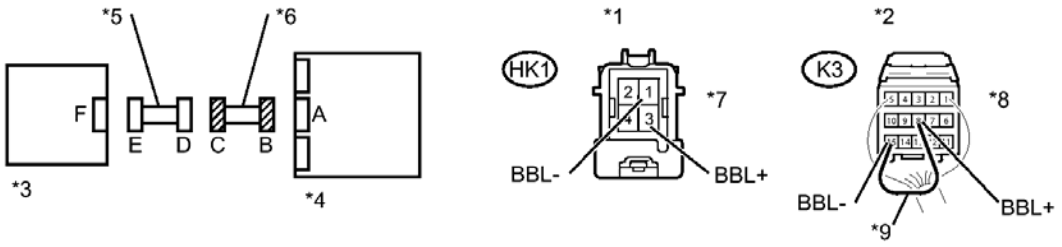


Fig. 51: Checking Floor Wire (Center Airbag Sensor Assembly - Front Door Wire LH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

	Front view of wire harness		Rear view of wire harness connector

*1	connector (to Front Door Wire LH)	*2	(to Center Airbag Sensor Assembly)
*3	Side Airbag Sensor LH	*4	Center Airbag Sensor Assembly
*5	Front Door Wire LH	*6	Floor Wire
*7	Connector C	*8	Connector B
*9	Service Wire	-	-

a. Disconnect the floor wire connector from the front door wire LH.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
HK1-1 (BBL-) - Body ground	Ignition switch ON	Below 1 V
HK1-3 (BBL+) - Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch off.
f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
g. Using a service wire, connect terminals 8 (BBL+) and 15 (BBL-) of connector B.

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

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
HK1-1 (BBL-) - HK1-3 (BBL+)	Always	Below 1 ohms

i. Disconnect the service wire from connector B.

j. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
HK1-1 (BBL-) - HK1-3 (BBL+)	Always	1 Mohms or higher
HK1-1 (BBL-) - Body ground	Always	1 Mohms or higher
HK1-3 (BBL+) - Body ground	Always	1 Mohms or higher

NG --> REPLACE FLOOR WIRE

OK --> REPLACE FRONT DOOR WIRE LH

8. **CHECK FLOOR WIRE (REAR AIRBAG SENSOR LH - FRONT DOOR WIRE LH)**

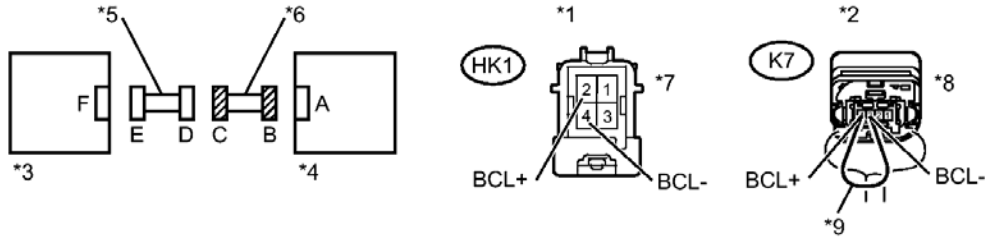


Fig. 52: Checking Floor Wire (Rear/Side Airbag Sensor LH - Front Door Wire LH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

	Front		Rear view

*1	view of wire harness connector (to Front Door Wire LH)	*2	of wire harness connector (to Rear Airbag Sensor LH)
*3	Side Airbag Sensor LH	*4	Rear Airbag Sensor LH
*5	Front Door Wire LH	*6	Floor Wire
*7	Connector C	*8	Connector B
*9	Service Wire	-	-

a. Disconnect the floor wire connector from the front door wire LH.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
HK1-2 (BCL+) - Body ground	Ignition switch ON	Below 1 V
HK1-4 (BCL-) - Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch off.
f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
g. Using a service wire, connect terminals 3 (BCL-) and 4 (BCL+) of connector B.

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

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
HK1-2 (BCL+) - HK1-4 (BCL-)	Always	Below 1 ohms

i. Disconnect the service wire from connector B.
j. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
HK1-2 (BCL+) - HK1-4 (BCL-)	Always	1 Mohms or higher
HK1-2 (BCL+) - Body ground	Always	1 Mohms or higher
HK1-4 (BCL-) - Body ground	Always	1 Mohms or higher

NG --> REPLACE FLOOR WIRE

OK --> REPLACE FRONT DOOR WIRE LH

9. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
10. **REPLACE SIDE AIRBAG SENSOR LH. Refer to REMOVAL**
11. **REPLACE REAR AIRBAG SENSOR LH. Refer to REMOVAL**
12. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**

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.

If the center airbag sensor assembly receives signals from the occupant classification ECU, it determines whether the front passenger airbag, the front seat side airbag RH and front seat outer belt should be operated.

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

DTC No.	DTC Detection Condition	Trouble Area
B1650/32	When one of following conditions is met: • 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	• No. 2 Floor wire • Front seat wire RH • Occupant classification system • Center airbag sensor assembly

WIRING DIAGRAM

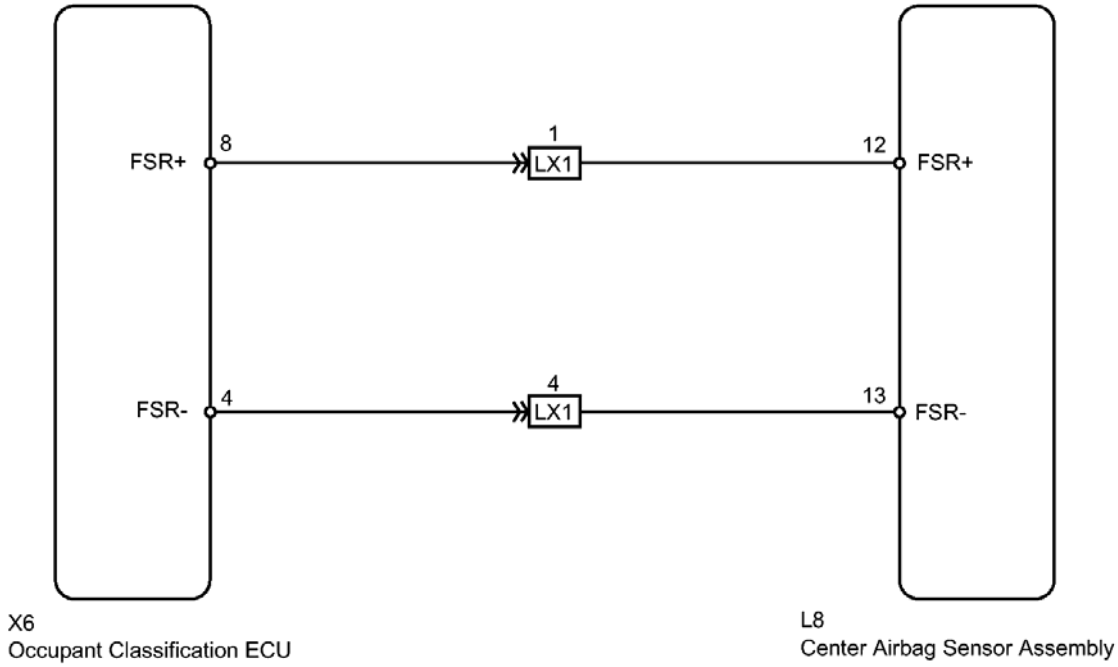


Fig. 53: Occupant Classification ECU Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK FOR DTC (OCCUPANT CLASSIFICATION ECU)**
   a. Turn the ignition switch to ON, and wait for at least 10 seconds.
   b. Check for the DTCs of the occupant classification ECU. Refer to **DTC CHECK / CLEAR** .

      OK

      DTC is not output.

   NG --> See step 7

   OK: Go to next step

2. **CHECK FOR DTC (CENTER AIRBAG SENSOR)**
   a. Turn the ignition switch to ON, and wait for at least 60 seconds.

b. Clear the DTCs. Refer to **DTC CHECK / CLEAR** .
c. Turn the ignition switch off.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1650/32 is not output.

HINT:

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

NG --> See step 3

OK --> See step 8

3. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, 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 PROPERLY

   OK: Go to next step

4. **CHECK CONNECTORS**
   a. Disconnect the connectors from the center airbag sensor assembly and the occupant classification ECU.
   b. Check that the connectors (on the center airbag sensor assembly side and occupant classification ECU side) are not damaged.

   OK

   The connectors are not deformed or damaged.

   NG --> REPLACE HARNESS AND CONNECTOR

   OK: Go to next step

5. **CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT**

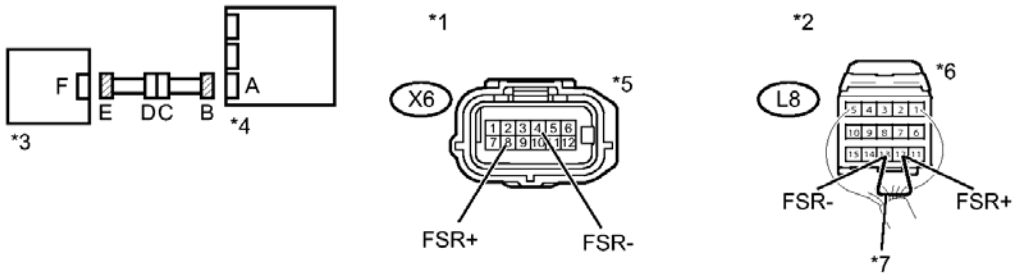


Fig. 54: Checking Occupant Classification ECU Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Occupant Classification ECU)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Occupant Classification ECU	*4	Center Airbag Sensor Assembly
*5	Connector E	*6	Connector B
*7	Service Wire	-	-

a. Using a service wire, connect terminals 12 (FSR+) and 13 (FSR-) of connector B.

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

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition

X6-8 (FSR+) - X6-4 (FSR-)	Always	Below 1 ohms

c. Disconnect the service wire from connector B.
d. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
X6-8 (FSR+) - X6-4 (FSR-)	Always	1 Mohms or higher
X6-8 (FSR+) - Body ground	Always	1 Mohms or higher
X6-4 (FSR-) - Body ground	Always	1 Mohms or higher

e. Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
f. Turn the ignition switch to ON.
g. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
X6-8 (FSR+) - Body ground	Ignition switch ON	Below 1 V
X6-4 (FSR-) - Body ground	Ignition switch ON	Below 1 V

NG --> See step 6

OK --> See step 9

6. **CHECK NO. 2 FLOOR WIRE**

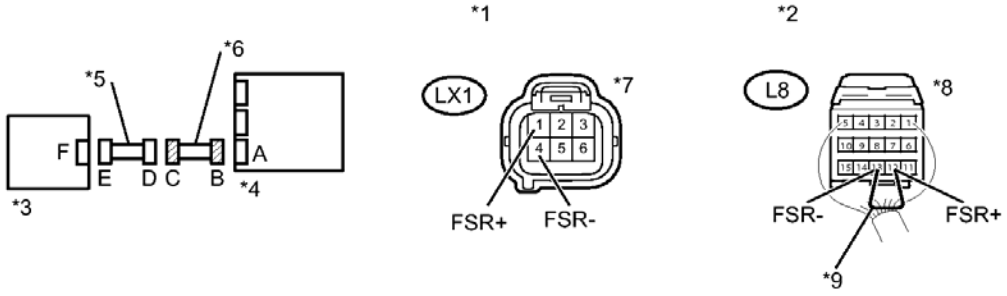


Fig. 55: Checking No. 2 Floor Wire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Front Seat Wire RH)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Occupant Classification ECU	*4	Center Airbag Sensor Assembly
*5	Front Seat Wire RH	*6	No. 2 Floor Wire
*7	Connector C	*8	Connector B
*9	Service Wire	-	-

a. Turn the ignition switch off.
b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
c. Disconnect the front seat wire RH connector from the No. 2 floor wire.
d. Using a service wire, connect terminal 12 (FSR+) and 13 (FSR-) of connector B.
e. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition

LX1-1 (FSR+) - LX1-4 (FSR-)	Always	Below 1 ohms

f. Disconnect the service wire from connector B.

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
LX1-1 (FSR+) - LX1-4 (FSR-)	Always	1 Mohms or higher
LX1-1 (FSR+) - Body ground	Always	1 Mohms or higher
LX1-4 (FSR-) - Body ground	Always	1 Mohms or higher

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

i. Turn the ignition switch to ON.

j. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
LX1-1 (FSR+) - Body ground	Ignition switch ON	Below 1 V
LX1-4 (FSR-) - Body ground	Ignition switch ON	Below 1 V

NG --> REPLACE NO. 2 FLOOR WIRE

OK --> REPLACE FRONT SEAT WIRE RH

7. **REPAIR CIRCUITS INDICATED BY OUTPUT DTCS. Refer to DIAGNOSTIC TROUBLE CODE CHART**
8. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
9. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**

DTC B1653/35: SEAT POSITION AIRBAG SENSOR CIRCUIT MALFUNCTION

DESCRIPTION

The seat position sensor circuit consists of the center airbag sensor assembly and the seat position sensor.

DTC B1653/35 is stored when a malfunction is detected in the seat position sensor circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1653/35	When one of following conditions is met: • 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 seat position sensor circuit for 2 seconds. • Seat position sensor malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat inner belt assembly LH • Seat position sensor • Center airbag sensor assembly

WIRING DIAGRAM

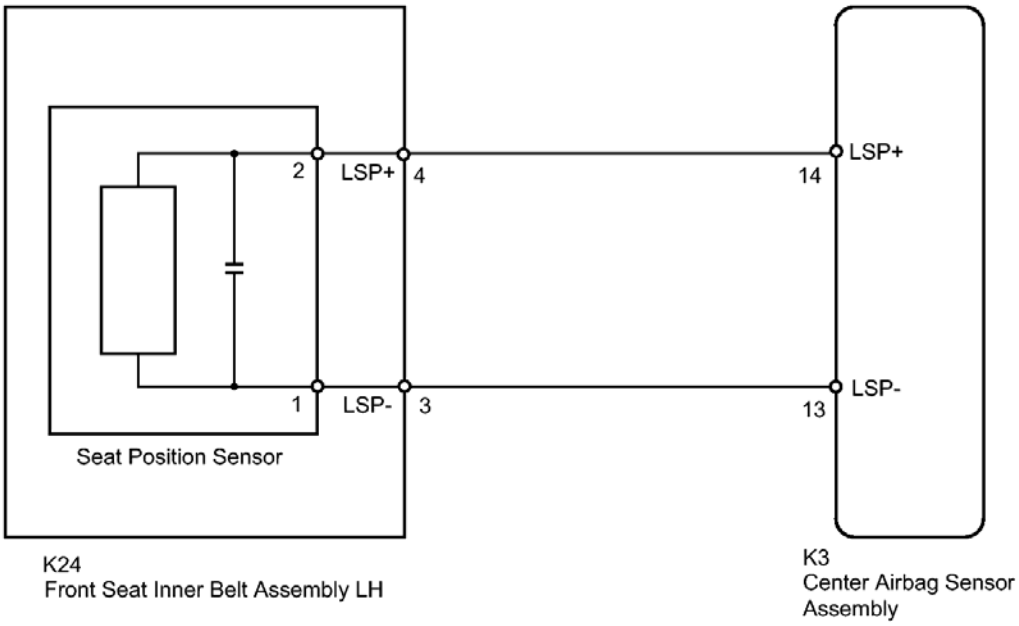


Fig. 56: Seat Position Sensor Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connectors are properly connected to the center airbag sensor assembly and the seat position sensor.

      OK

      The connectors are properly connected.

   NG --> CONNECT CONNECTORS PROPERLY

   OK: Go to next step

2. **CHECK CONNECTORS**
   a. Disconnect the connectors from the center airbag sensor assembly and the seat position sensor.
   b. Check that the connectors (on the center airbag sensor assembly side and seat position sensor side) are not damaged.

OK

The connectors are not deformed or damaged.

NG --> REPLACE HARNESS AND CONNECTOR

OK: Go to next step

3. **CHECK SEAT POSITION SENSOR CIRCUIT (CENTER AIRBAG SENSOR ASSEMBLY - SEAT POSITION SENSOR)**

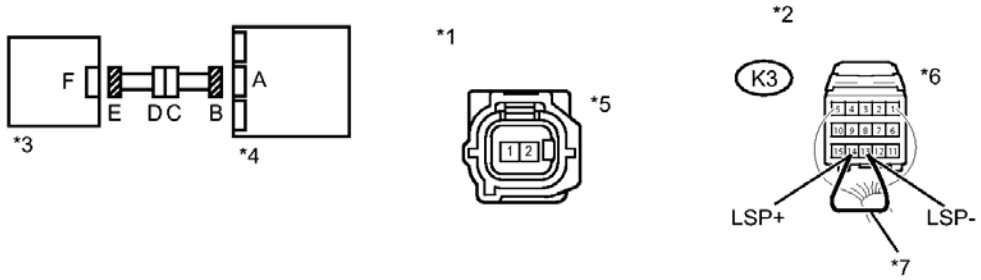


Fig. 57: Checking Seat Position Sensor Circuit (Center Airbag Sensor Assembly - Seat Position Sensor)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Seat Position Sensor)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Seat Position Sensor	*4	Center Airbag Sensor Assembly
*5	Connector E	*6	Connector B
*7	Service Wire	-	-

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

b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
1 - Body ground	Ignition switch ON	Below 1 V
2 - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch off.
e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
f. Using a service wire, connect terminals 13 (LSP-) and 14 (LSP+) of connector B.

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

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
1 - 2	Always	Below 1 ohms

h. Disconnect the service wire from connector B.
i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
1 - 2	Always	1 Mohms or higher
1 - Body ground	Always	1 Mohms or higher
2 - Body ground	Always	1 Mohms or higher

NG --> See step 7

OK: Go to next step

4. **CHECK SEAT POSITION SENSOR**
   a. Connect the connectors to the center airbag sensor assembly and the seat position sensor.

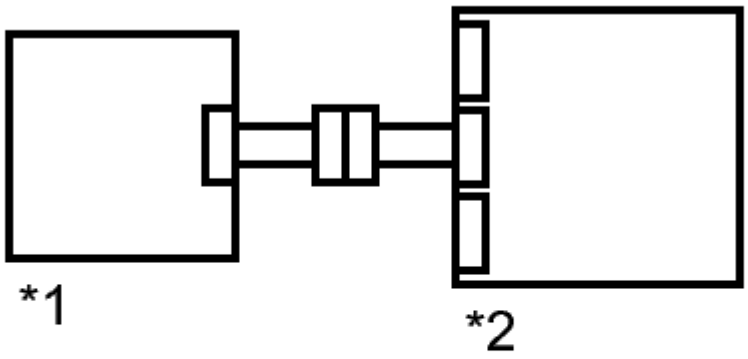


Fig. 58: Identifying Seat Position Sensor Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   b. Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
   c. Turn the ignition switch to ON, and wait for at least 60 seconds.
   d. Clear the DTCs stored. Refer to **DTC CHECK / CLEAR** .
   e. Turn the ignition switch off.
   f. Turn the ignition switch to ON, and wait for at least 60 seconds.
   g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

   OK

   DTC B1653/35 is not output.

TEXT IN ILLUSTRATION

*1	Seat Position Sensor

*2	Center Airbag Sensor Assembly

HINT:

Codes other than DTC B1653/35 may be output at this time, but they are not related to this check.

NG --> See step 5

OK --> See step 8

5. **REPLACE SEAT POSITION SENSOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Replace the seat position sensor. Refer to **REMOVAL** .

   HINT:

   Perform inspection using parts from a normal vehicle if possible.

   NEXT: Go to next step

6. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.

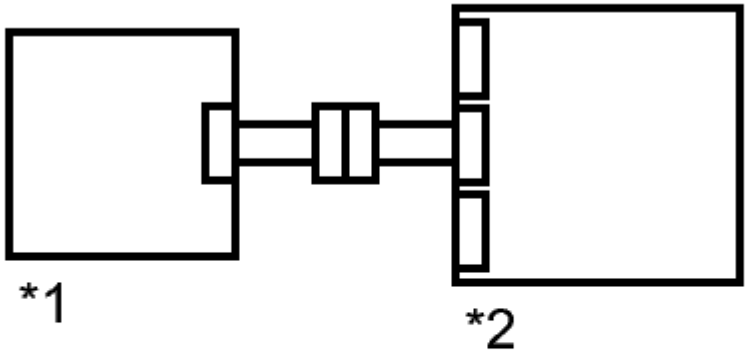


Fig. 59: Identifying Seat Position Sensor Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Turn the ignition switch to ON, and wait for at least 60 seconds.
c. Clear the DTCs. Refer to **DTC CHECK / CLEAR** .
d. Turn the ignition switch off.
e. Turn the ignition switch to ON, and wait for at least 60 seconds.
f. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1653/35 is not output.

TEXT IN ILLUSTRATION

*1	Seat Position Sensor
*2	Center Airbag Sensor Assembly

HINT:

Codes other than DTC B1653/35 may be output at this time, but they are not related to this check.

NG --> See step 9

OK --> END

7. **CHECK FLOOR WIRE (CENTER AIRBAG SENSOR - FRONT SEAT INNER BELT LH)**

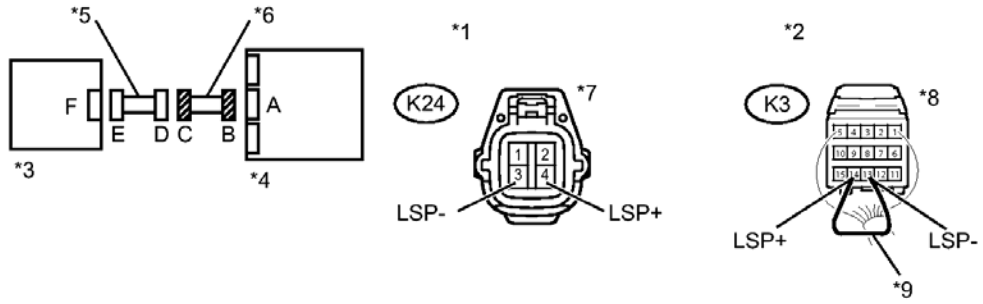


Fig. 60: Checking Floor Wire (Center Airbag Sensor - Front Seat Inner Belt LH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Front Seat Inner Belt Assembly LH)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Seat Position Sensor	*4	Center Airbag Sensor Assembly
*5	Front Seat Inner Belt Assembly LH	*6	Floor Wire
*7	Connector C	*8	Connector B
*9	Service Wire	-	-

a. Disconnect the floor wire connector from the front seat inner belt assembly LH.

b. Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
K24-4 (LSP+) - Body ground	Ignition switch ON	Below 1 V
K24-3 (LSP-) - Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch off.
f. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
g. Using a service wire, connect terminals 13 (LSP-) and 14 (LSP+) of connector B.

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

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
K24-4 (LSP+) - K24-3 (LSP-)	Always	Below 1 ohms

i. Disconnect the service wire from connector B.
j. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
K24-4 (LSP+) -		1 Mohms

K24-3 (LSP-)	Always	or higher
K24-4 (LSP+) - Body ground	Always	1 Mohms or higher
K24-3 (LSP-) - Body ground	Always	1 Mohms or higher

NG --> REPLACE FLOOR WIRE

OK --> See step 10

8. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
9. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
10. **REPLACE FRONT SEAT INNER BELT ASSEMBLY LH. Refer to REMOVAL**

DTC B1656/38: SEAT BELT BUCKLE SWITCH LH CIRCUIT MALFUNCTION

DESCRIPTION

The seat belt buckle switch LH circuit consists of the center airbag sensor assembly and the front seat inner belt assembly LH.

DTC B1656/38 is recorded when a malfunction is detected in the seat belt buckle switch LH circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1656/38	When one of following conditions is met: • 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 seat belt buckle switch LH circuit for 2 seconds. • Front seat inner belt assembly LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat inner belt assembly LH (Seat belt buckle switch LH) • Center airbag sensor assembly

WIRING DIAGRAM

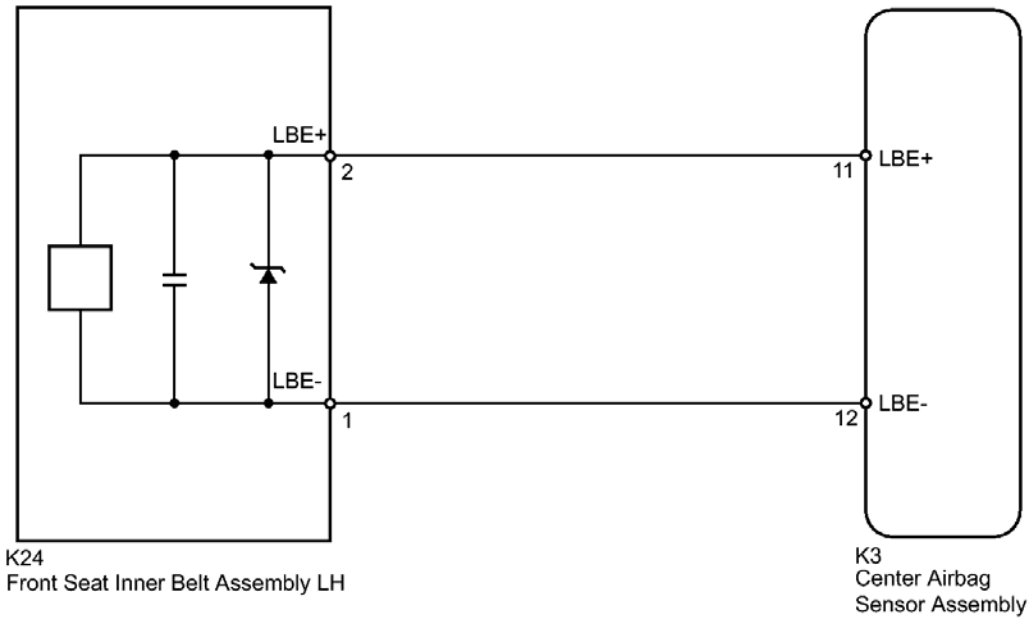


Fig. 61: Seat Belt Buckle Switch LH Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   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 front seat inner belt assembly LH.

      OK

      The connectors are properly connected.

   NG --> CONNECT CONNECTORS PROPERLY

   OK: Go to next step

2. **CHECK CONNECTORS**
   a. Disconnect the connectors from the center airbag sensor assembly and the front seat inner belt assembly LH.
   b. Check that the connectors (on the center airbag sensor assembly side and front seat inner belt

assembly LH side) are not damaged.

OK

The connectors are not deformed or damaged.

NG --> REPLACE FLOOR WIRE

OK: Go to next step

3. **CHECK FLOOR WIRE (CENTER AIRBAG SENSOR ASSEMBLY - FRONT SEAT INNER BELT LH)**

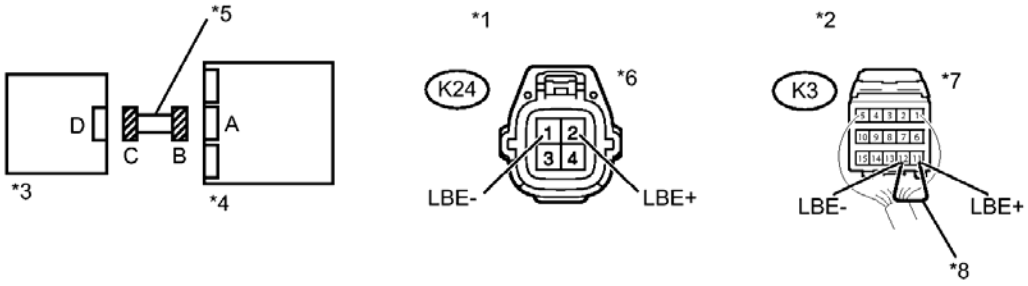


Fig. 62: Checking Floor Wire (Center Airbag Sensor Assembly - Front Seat Inner Belt LH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Front Seat Inner Belt Assembly LH)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Front Seat Inner Belt Assembly LH	*4	Center Airbag Sensor Assembly
*5	Floor Wire	*6	Connector C
*7	Connector	*8	Service

B		Wire	

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
K24-2 (LBE+) - Body ground	Ignition switch ON	Below 1 V
K24-1 (LBE-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch off.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Using a service wire, connect terminals 11 (LBE+) and 12 (LBE-) of connector B.

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

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
K24-2 (LBE+) - K24-1 (LBE-)	Always	Below 1 ohms

h. Disconnect the service wire from connector B.
i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition

K24-2 (LBE+) - K24-1 (LBE-)	Always	1 Mohms or higher
K24-2 (LBE+) - Body ground	Always	1 Mohms or higher
K24-1 (LBE-) - Body ground	Always	1 Mohms or higher

NG --> REPLACE FLOOR WIRE

OK: Go to next step

4. **CHECK FRONT SEAT INNER BELT ASSEMBLY LH (DRIVER SIDE)**

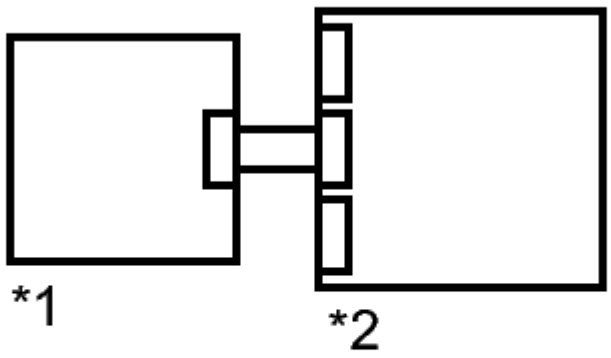


Fig. 63: Identifying Front Seat Inner Belt Assembly LH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the connector to the center airbag sensor assembly and the front seat inner belt assembly LH.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.

d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1656/38 is not output.

TEXT IN ILLUSTRATION

*1	Front Seat Inner Belt Assembly LH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1656/38 may be output at this time, but they are not related to this check.

NG --> See step 5

OK --> See step 7

5. **REPLACE FRONT SEAT INNER BELT ASSEMBLY LH**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Replace the front seat inner belt assembly LH. Refer to **REMOVAL** .

   HINT:

   Perform inspection using parts from a normal vehicle if possible.

   NEXT: Go to next step

6. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**

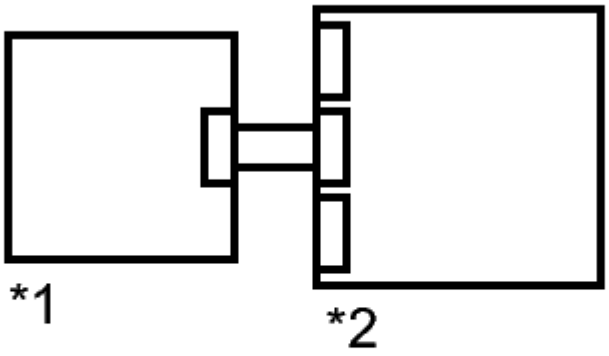


Fig. 64: Identifying Front Seat Inner Belt Assembly LH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
b. Turn the ignition switch to ON, and wait for at least 60 seconds.
c. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
d. Turn the ignition switch off.
e. Turn the ignition switch to ON, and wait for at least 60 seconds.
f. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1656/38 is not output.

TEXT IN ILLUSTRATION

*1	Front Seat Inner Belt Assembly LH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1656/38 may be output at this time, but they are not related to this check.

NG --> See step 8

OK --> END

7. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
8. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**

DTC B1660/43: PASSENGER AIRBAG ON/OFF INDICATOR CIRCUIT MALFUNCTION

DESCRIPTION

The passenger airbag ON/OFF indicator circuit consists of the center airbag sensor assembly and the passenger airbag ON/OFF indicator.

The passenger airbag ON/OFF indicator indicates the operation condition of the front passenger airbag assembly.

DTC B1660/43 is recorded when a malfunction is detected in the passenger airbag ON/OFF indicator circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1660/43	When one of following conditions is met: • The center airbag sensor assembly receives an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the passenger airbag ON/OFF indicator circuit for 2 seconds. • Passenger airbag ON/OFF indicator malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Telltale light assembly (Passenger airbag ON/OFF indicator) • Center airbag sensor assembly

WIRING DIAGRAM

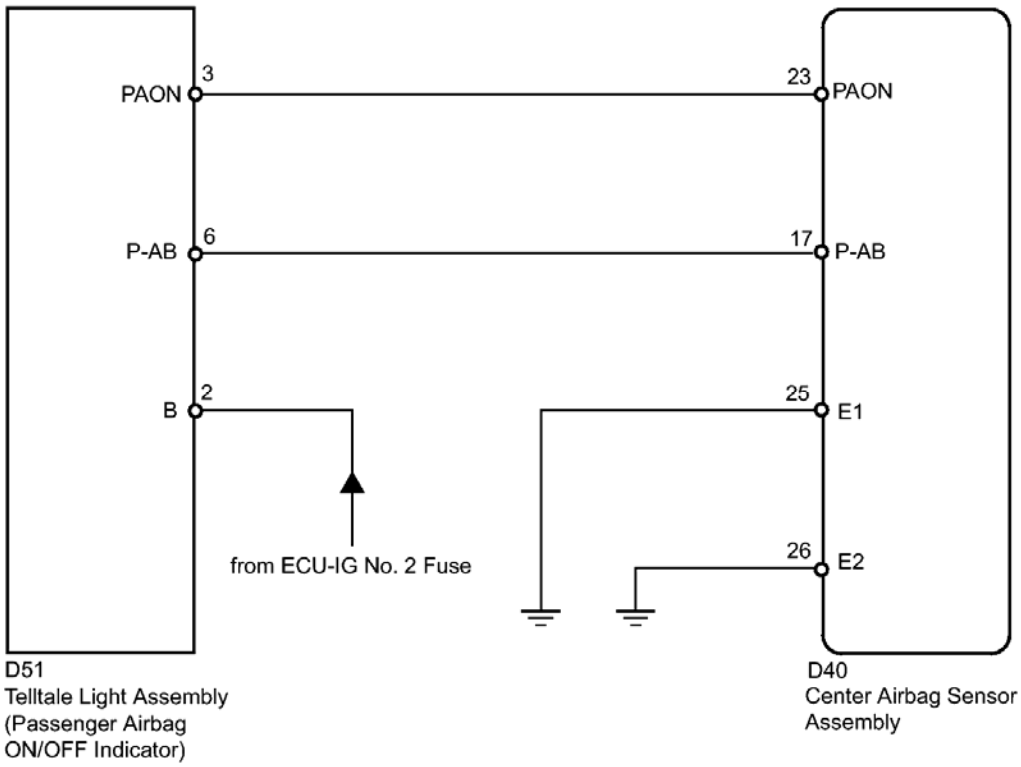


Fig. 65: Passenger Airbag ON/OFF Indicator Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

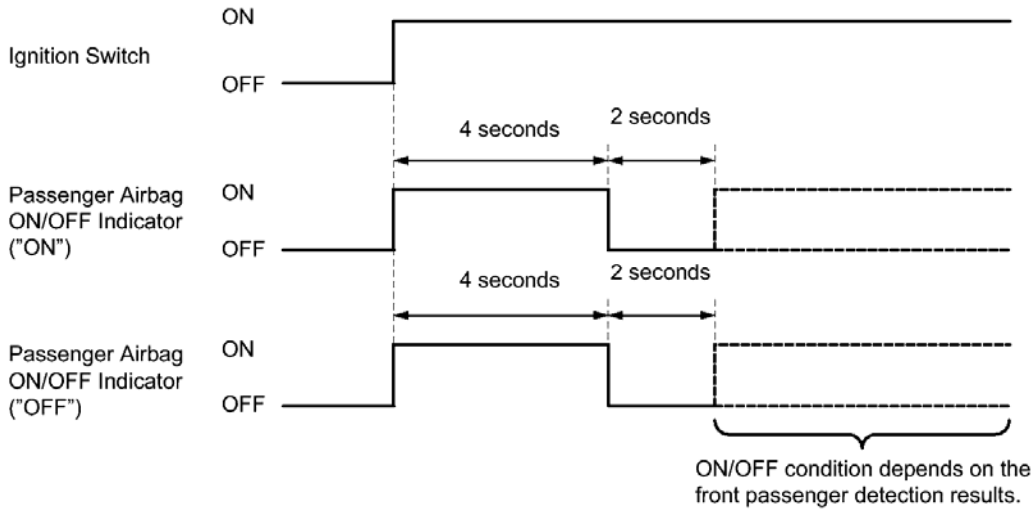
INSPECTION PROCEDURE

PROCEDURE

1. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR CONDITION**
   a. Turn the ignition switch to ON.
   b. Check the passenger airbag ON/OFF indicator operation.

      HINT:

      Refer to the normal condition of the passenger airbag ON/OFF indicator. Refer to **DIAGNOSIS SYSTEM** .



P

Fig. 66: Passenger Airbag ON/OFF Indicator Timing Chart
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

RESULT

ON/OFF Indicator Illumination	Proceed to
Always ON	A
OFF	B

B --> See step 7

A: Go to next step

2. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   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 telltale light assembly.

   OK

   The connectors are properly connected.

NG --> CONNECT CONNECTORS PROPERLY

OK: Go to next step

3. **CHECK CONNECTORS**

a. Disconnect the connectors from the center airbag sensor assembly and the telltale light assembly.
b. Check that the connectors (on the center airbag sensor assembly side and telltale light assembly side) are not damaged.

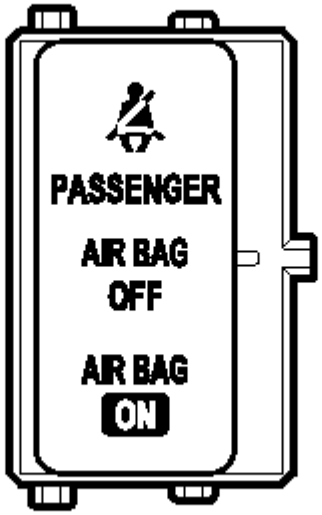
OK

The connectors are not deformed or damaged.

NG --> REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

4. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR**



P

Fig. 67: Identifying Passenger Airbag On/Off Indicator
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the connector to the telltale light assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Check the passenger airbag ON/OFF indicator operation.

OK

The passenger airbag ON/OFF indicator does not come on.

NG --> See step 6

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**

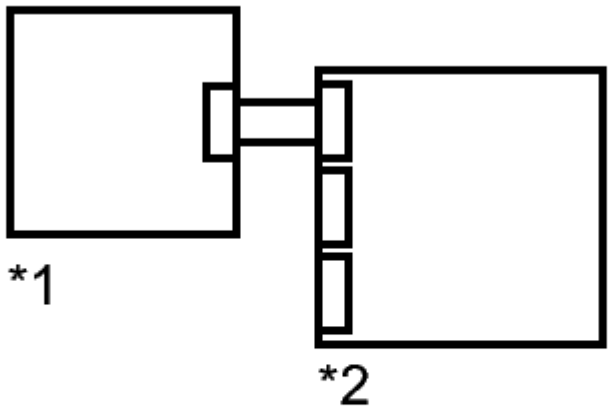


Fig. 68: Identifying Center Airbag Sensor Assembly Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the connector to 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 to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1660/43 is not output.

TEXT IN ILLUSTRATION

*1	Telltale Light Assembly

*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1660/43 may be output at this time, but they are not related to this check.

NG --> See step 13

OK --> See step 14

6. **CHECK INSTRUMENT PANEL WIRE (CENTER AIRBAG SENSOR ASSEMBLY - TELLTALE LIGHT ASSEMBLY)**

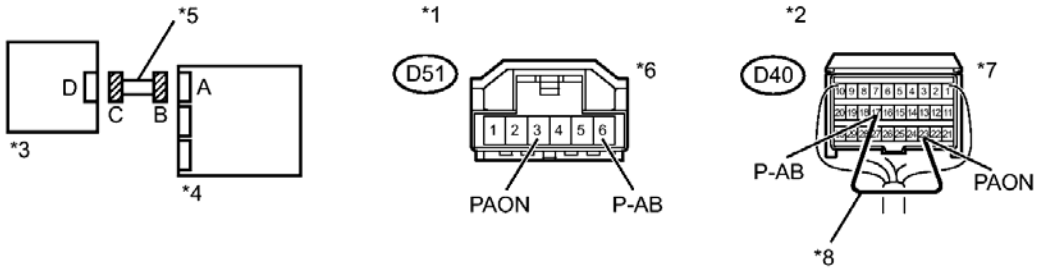


Fig. 69: Checking Instrument Panel Wire (Center Airbag Sensor Assembly - Telltale Light Assembly)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Telltale Light Assembly)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Telltale Light Assembly	*4	Center Airbag Sensor Assembly

*5	Instrument Panel Wire	*6	Connector C
*7	Connector B	*8	Service 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 connectors from the telltale light assembly and center airbag sensor assembly.
d. Using a service wire, connect terminals 23 (PAON) and 17 (P-AB) of connector B.

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

e. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
D51-3 (PAON) - D51-6 (P-AB)	Always	Below 1 ohms

f. Disconnect the service wire from connector B.
g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
D51-3 (PAON) - D51-6 (P-AB)	Always	1 Mohms or higher
D51-3 (PAON) - Body ground	Always	1 Mohms or higher
D51-6 (P-AB) - Body ground	Always	1 Mohms or higher

h. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
i. Turn the ignition switch to ON.
j. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
D51-3 (PAON) - Body ground	Ignition switch ON	Below 1 V
D51-6 (P-AB) - Body ground	Ignition switch ON	Below 1 V

NG --> REPLACE INSTRUMENT PANEL WIRE

OK --> See step 15

7. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   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 telltale light assembly.

      OK

      The connectors are properly connected.

   NG --> CONNECT CONNECTORS PROPERLY

   OK: Go to next step

8. **CHECK CONNECTORS**
   a. Disconnect the connectors from the center airbag sensor assembly and the telltale light assembly.
   b. Check that the connectors (on the center airbag sensor assembly side and telltale light assembly side) are not damaged.

      OK

      The connectors are not deformed or damaged.

   NG --> REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

9. **CHECK INSTRUMENT PANEL WIRE (CENTER AIRBAG SENSOR ASSEMBLY - TELLTALE LIGHT ASSEMBLY)**

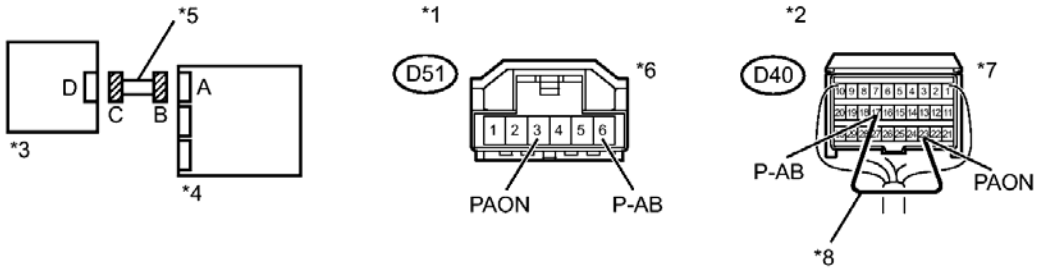


Fig. 70: Checking Instrument Panel Wire (Center Airbag Sensor Assembly - Telltale Light Assembly)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Telltale Light Assembly)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Telltale Light Assembly	*4	Center Airbag Sensor Assembly
*5	Instrument Panel Wire	*6	Connector C
*7	Connector B	*8	Service 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 connectors from the telltale light assembly and center airbag sensor assembly.
d. Using a service wire, connect terminals 23 (PAON) and 17 (P-AB) of connector B.

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

e. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
D51-3 (PAON) - D51-6 (P-AB)	Always	Below 1 ohms

f. Disconnect the service wire from connector B.

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
D51-3 (PAON) - D51-6 (P-AB)	Always	1 Mohms or higher
D51-3 (PAON) - Body ground	Always	1 Mohms or higher
D51-6 (P-AB) - Body ground	Always	1 Mohms or higher

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

i. Turn the ignition switch to ON.

j. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
D51-3 (PAON) - Body ground	Ignition switch ON	Below 1 V

D51-6 (P-AB) - Body ground	Ignition switch ON	Below 1 V

NG --> REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

10. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR (SOURCE VOLTAGE)**

*1

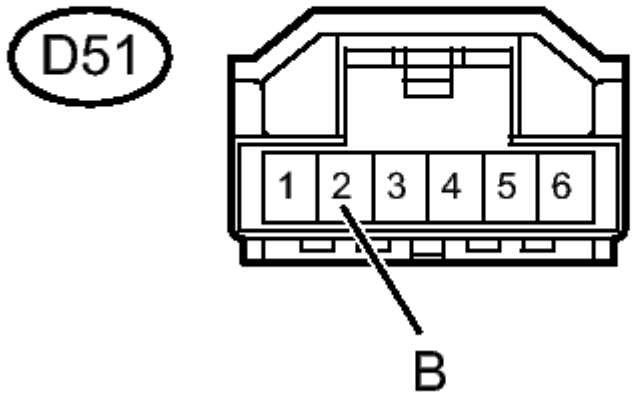


Fig. 71: Checking Passenger Airbag ON/OFF Indicator (Source Voltage)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the connectors to 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 to ON.
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
D51-2 (B) - Body ground	Ignition switch ON	11 to 14 V

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Telltale Light Assembly)

NG --> REPLACE HARNESS AND CONNECTOR (TELLTALE LIGHT ASSEMBLY - BATTERY)

OK: Go to next step

11. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR**

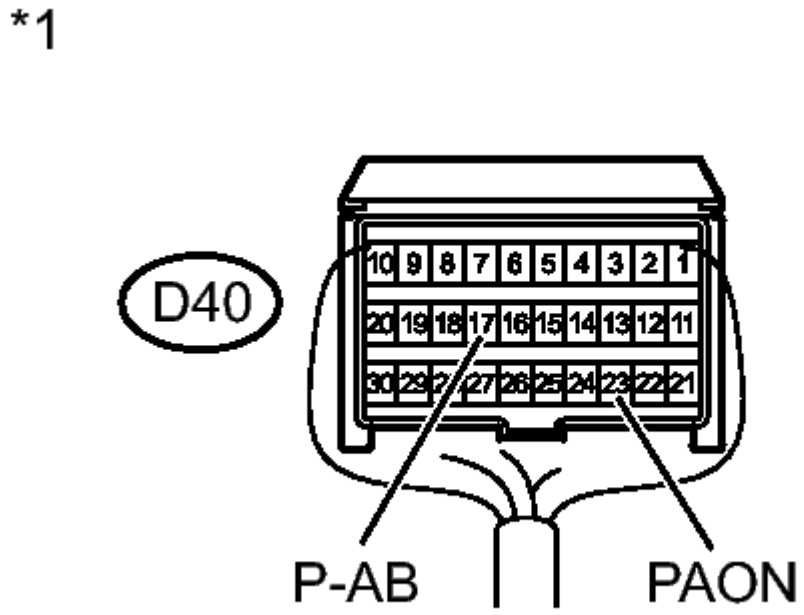


Fig. 72: Telltale Light Assembly Connector End View
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Turn the ignition switch off.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Connect the connector to the telltale light assembly.
d. Disconnect the connectors from 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 ON.

g. Check the indicator according to the value(s) in the table below.

OK

Tester Connection	Switch Condition	Passenger airbag ON/OFF indicator
D40-23 (PAON) - Body ground	Ignition switch ON	"ON" comes on
D40-17 (P-AB) - Body ground	Ignition switch ON	"OFF" comes on

TEXT IN ILLUSTRATION

*1	Rear view of wire harness connector (to Center Airbag Sensor Assembly)

NG --> See step 16

OK: Go to next step

12. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**

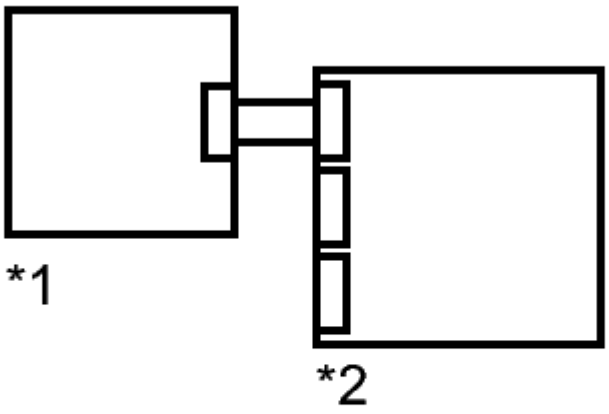


Fig. 73: Identifying Center Airbag Sensor Assembly Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Turn the ignition switch off.
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. Connect the negative (-) terminal cable to the battery and wait for at least 2 seconds.
e. Turn the ignition switch to ON, and wait for at least 60 seconds.
f. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
g. Turn the ignition switch off.
h. Turn the ignition switch to ON, and wait for at least 60 seconds.
i. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1660/43 is not output.

TEXT IN ILLUSTRATION

*1	Telltale Light Assembly
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1660/43 may be output at this time, but they are not related to this check.

NG --> See step 17

OK --> See step 18

13. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
14. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
15. **REPLACE TELLTALE LIGHT ASSEMBLY. Refer to REMOVAL**
16. **REPLACE TELLTALE LIGHT ASSEMBLY. Refer to REMOVAL**
17. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
18. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**

DTC B1690/15: DOOR SIDE AIRBAG SENSOR RH MALFUNCTION; DTC B1692/81: LOST COMMUNICATION WITH DOOR SIDE AIRBAG SENSOR RH

DESCRIPTION

for DTC B1690/15:

The side airbag sensor RH consists of the safing sensor, the diagnostic circuit, the lateral deceleration sensor, etc.

If the center airbag sensor assembly receives signals from the lateral deceleration sensor, it determines whether the SRS should be activated.

DTC B1690/15 is recorded when a malfunction is detected in the side airbag sensor RH circuit.

for DTC B1692/81:

The circuit for the side collision sensor RH (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH) is composed of the center airbag sensor assembly, side airbag sensor RH and rear airbag sensor RH.

The side airbag sensor RH and rear airbag sensor RH detect impacts to the vehicle and send signals to the center airbag sensor assembly to determine if the airbag should be deployed.

DTC B1692/81 is recorded when a malfunction is detected in the circuit for the side collision sensor RH (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH).

DTC No.	DTC Detection Condition	Trouble Area
B1690/15	When one of following conditions is met: • Side airbag sensor RH malfunction	• Side airbag sensor RH

B1692/81	• Center airbag sensor assembly malfunction	• Center airbag sensor assembly

WIRING DIAGRAM

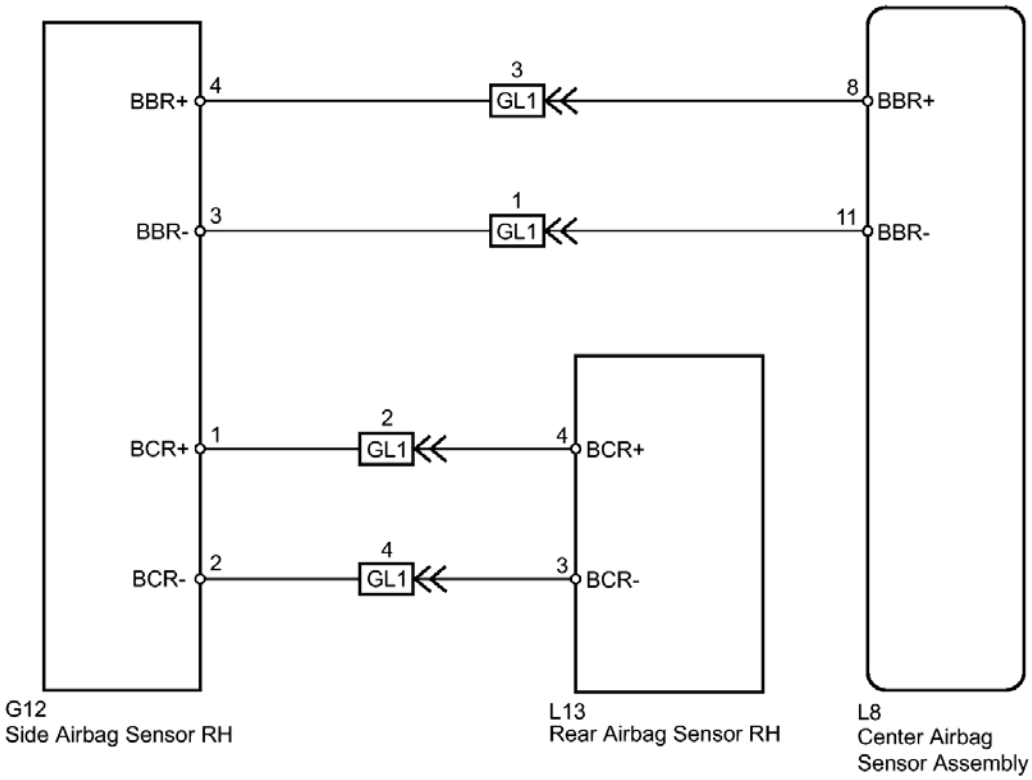


Fig. 74: RH Side & Rear Airbag Sensor Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK SIDE AIRBAG SENSOR RH**

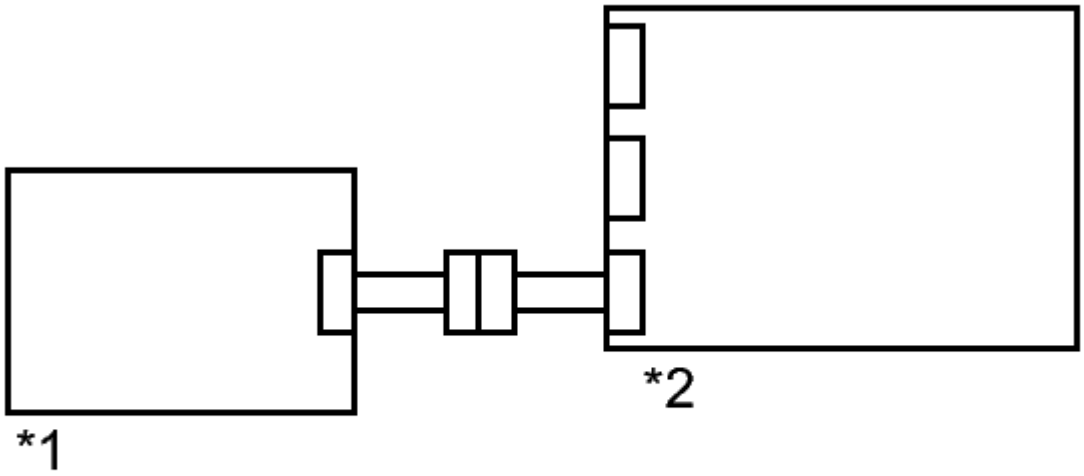


Fig. 75: Identifying Side Airbag Sensor RH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Turn the ignition switch off.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Interchange the side airbag sensor LH with RH and connect the connectors to them.
d. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
e. Turn the ignition switch to ON, and wait for at least 60 seconds.
f. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
g. Turn the ignition switch off.
h. Turn the ignition switch to ON, and wait for at least 60 seconds.
i. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1690/15, B1692/81, B1695/16 and B1697/82 are not output.	A
DTC	

B1695/15 or B1697/82 is output.	B
DTC B1690/16 or B1692/81 is output.	C

TEXT IN ILLUSTRATION

*1	Side Airbag Sensor LH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1690/15, B1692/81, B1695/16 and B1697/82 may be output at this time, but they are not related to this check.

j. Turn the ignition switch off.

k. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

l. Return the side airbag sensor RH and LH to their original positions and connect the connectors to them.

A --> See step 2

B --> See step 3

C --> See step 4

2. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
3. **REPLACE SIDE AIRBAG SENSOR RH. Refer to REMOVAL**
4. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**

DTC B1693/81: DOOR SIDE AIRBAG SENSOR RH INITIALIZATION INCOMPLETE

DESCRIPTION

The circuit for the side collision sensor RH (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH) is composed of the center airbag sensor assembly, side airbag sensor

RH and rear airbag sensor RH.

The side airbag sensor RH and rear airbag sensor RH detect impacts to the vehicle and send signals to the center airbag sensor assembly to determine if the airbag should be deployed.

DTC B1693/81 is recorded when a malfunction is detected in the circuit for the side collision sensor RH (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH).

DTC No.	DTC Detection Condition	Trouble Area
B1693/81	When one of following conditions is met: • 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 circuit for the side collision sensor RH (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH) for 2 seconds. • Side airbag sensor RH malfunction • Rear airbag sensor RH malfunction • Center airbag sensor assembly malfunction	• No. 2 floor wire • Front door wire RH • Side airbag sensor RH • Rear airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

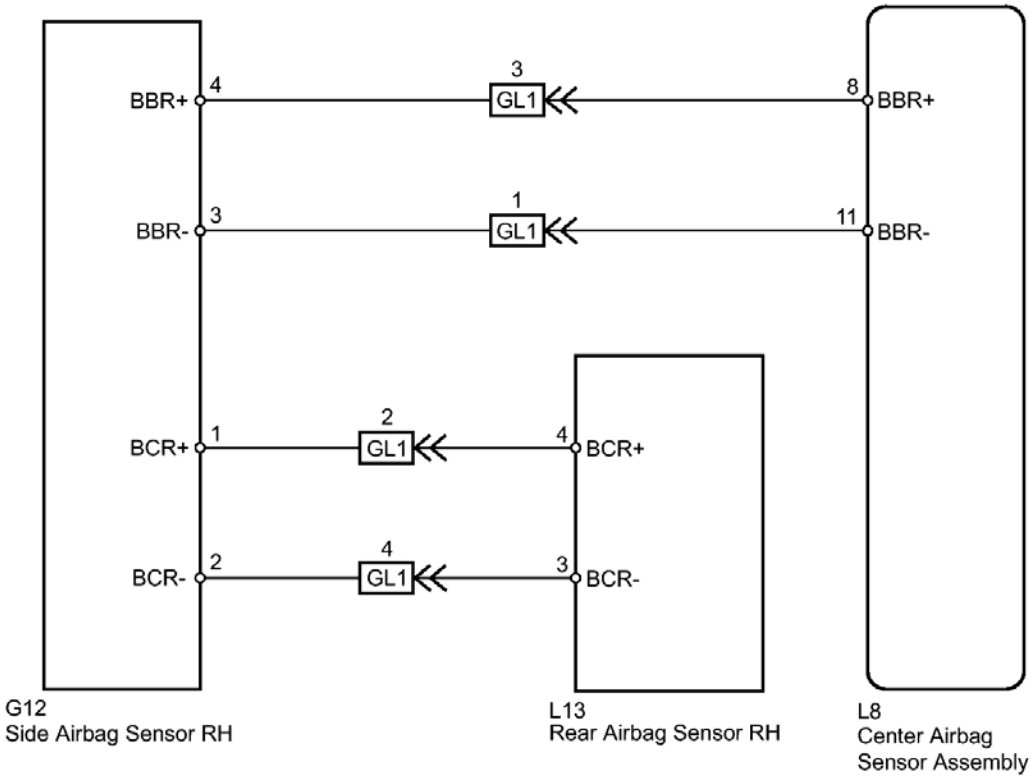


Fig. 76: RH Side & Rear Airbag Sensor Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK PAST DTC**
   a. Turn the ignition switch off.
   b. Turn the ignition switch to ON, and wait for at least 60 seconds.
   c. Check the past DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1692/81 is output	A
DTC B1697/82 is output	B

DTC B1692/81 and B1697/82 are not output	C

A --> See step 7

B --> See step 8

C: Go to next step

2. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   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 side airbag sensor RH.

      OK

      The connectors are properly connected.

   NG --> CONNECT CONNECTORS PROPERLY

   OK: Go to next step

3. **CHECK CONNECTORS**
   a. Disconnect the connectors from the center airbag sensor assembly and side airbag sensor RH.
   b. Check that the connectors (on the center airbag sensor assembly side and side airbag sensor RH side) are not damaged.

      OK

      The connectors are not deformed or damaged.

   NG --> REPLACE HARNESS AND CONNECTOR

   OK: Go to next step

4. **CHECK SIDE AIRBAG SENSOR RH CIRCUIT (CENTER AIRBAG SENSOR ASSEMBLY - SIDE AIRBAG SENSOR RH)**

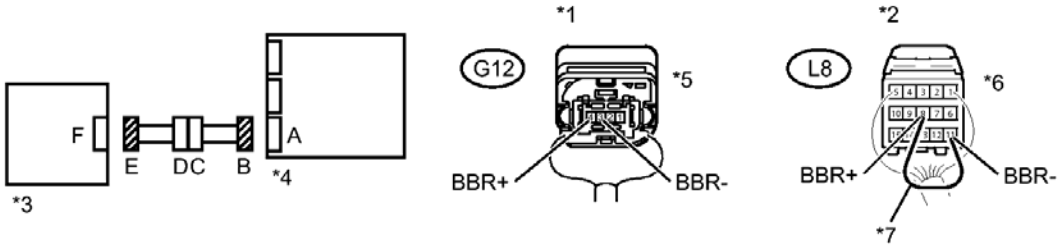


Fig. 77: Checking Side Airbag Sensor RH Circuit (Center Airbag Sensor - Side Airbag Sensor RH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear view of wire harness connector (to Side Airbag Sensor RH)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Side Airbag Sensor RH	*4	Center Airbag Sensor Assembly
*5	Connector E	*6	Connector B
*7	Service Wire	-	-

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
G12-4 (BBR+) - Body ground	Ignition switch ON	Below 1 V
G12-3 (BBR-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch off.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Using a service wire, connect terminals 8 (BBR+) and 11 (BBR-) of connector B.

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

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
G12-4 (BBR+) - G12-3 (BBR-)	Always	Below 1 ohms

h. Disconnect the service wire from connector B.
i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
G12-4 (BBR+) - G12-3 (BBR-)	Always	1 Mohms or higher
G12-4 (BBR+) - Body ground	Always	1 Mohms or higher
G12-3 (BBR-) - Body ground	Always	1 Mohms or higher

NG --> See step 6

OK: Go to next step

5. **CHECK SIDE AIRBAG SENSOR RH**

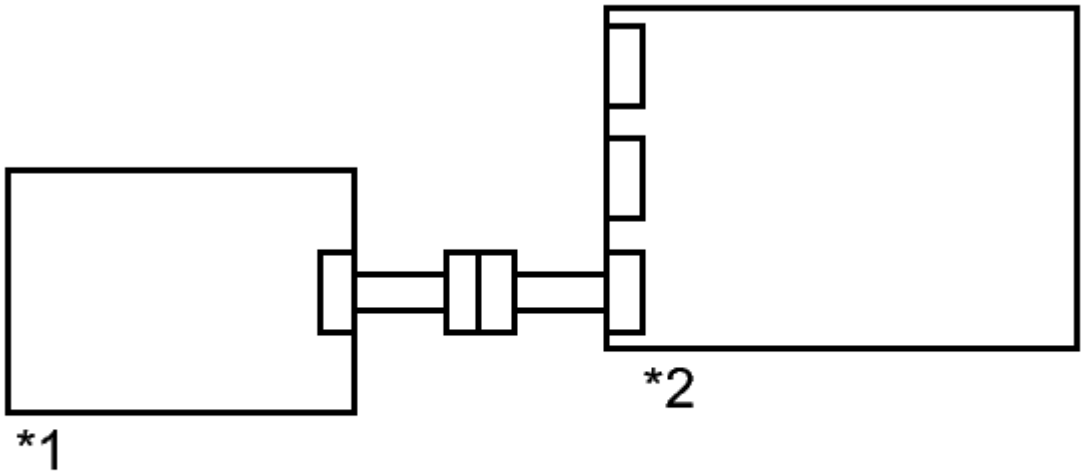


Fig. 78: Identifying Side Airbag Sensor RH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Interchange the side airbag sensor LH with RH and connect the connectors to them.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 90 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1693/81 is output	A
DTC B1698/82 is output	B
DTC B1693/81 and B1698/82 are not	C

output	

TEXT IN ILLUSTRATION

*1	Side Airbag Sensor LH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1693/81 and B1698/82 may be output at this time, but they are not related to this check.

h. Turn the ignition switch off.

i. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

j. Return the side airbag sensor RH and LH to their original positions and connect the connectors to them.

A --> See step 10

B --> See step 11

C --> See step 9

6. **CHECK NO. 2 FLOOR WIRE (CENTER AIRBAG SENSOR ASSEMBLY - FRONT DOOR WIRE RH)**

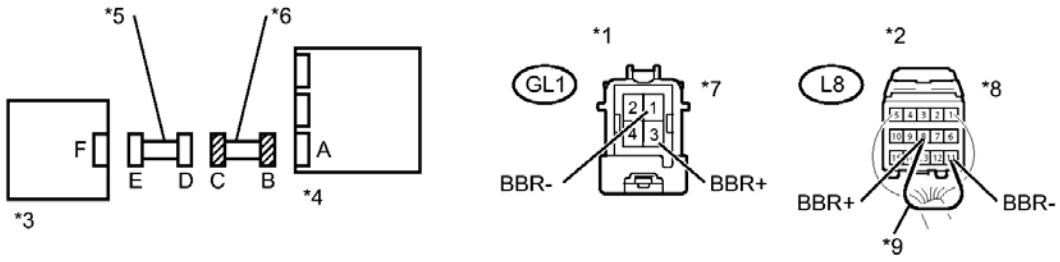


Fig. 79: Checking No. 2 Floor Wire (Center Airbag Sensor Assembly - Front Door Wire RH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

	Front view of wire		Rear view of wire harness

*1	harness connector (to Front Door Wire RH)	*2	connector (to Center Airbag Sensor Assembly)
*3	Side Airbag Sensor RH	*4	Center Airbag Sensor Assembly
*5	Front Door Wire RH	*6	No. 2 Floor Wire
*7	Connector C	*8	Connector B
*9	Service Wire	-	-

a. Disconnect the No. 2 floor wire connector from the front door wire RH.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
GL1-1 (BBR-) - Body ground	Ignition switch ON	Below 1 V
GL1-3 (BBR+) - Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch off.
f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
g. Using a service wire, connect terminals 8 (BBR+) and 11 (BBR-) of connector B.

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

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
GL1-1 (BBR-) - GL1-3 (BBR+)	Always	Below 1 ohms

i. Disconnect the service wire from connector B.
j. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
GL1-1 (BBR-) - GL1-3 (BBR+)	Always	1 Mohms or higher
GL1-1 (BBR-) - Body ground	Always	1 Mohms or higher
GL1-3 (BBR+) - Body ground	Always	1 Mohms or higher

NG --> REPLACE NO. 2 FLOOR WIRE

OK --> REPLACE FRONT DOOR WIRE RH

7. **GO TO DTC B1692/81. Refer to DTC B1690/15: Door Side Airbag Sensor RH Malfunction; DTC B1692/81: Lost Communication with Door Side Airbag Sensor RH**
8. **GO TO DTC B1697/82. Refer to DTC B1695/16: Door Side Airbag Sensor LH Malfunction; DTC B1697/82: Lost Communication with Door Side Airbag Sensor LH**
9. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
10. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
11. **REPLACE SIDE AIRBAG SENSOR RH. Refer to REMOVAL**

DTC B1695/16: DOOR SIDE AIRBAG SENSOR LH MALFUNCTION; DTC B1697/82: LOST COMMUNICATION WITH DOOR SIDE AIRBAG SENSOR LH

DESCRIPTION

for DTC B1695/16:

The side airbag sensor LH consists of the safing sensor, the diagnostic circuit, the lateral deceleration sensor, etc.

If the center airbag sensor assembly receives signals from the lateral deceleration sensor, it determines whether the SRS should be activated.

DTC B1695/16 is recorded when a malfunction is detected in the side airbag sensor LH circuit.

for DTC B1697/82:

The circuit for the side collision sensor LH (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH) is composed of the center airbag sensor assembly, side airbag sensor LH and rear airbag sensor LH.

The side airbag sensor LH and rear airbag sensor LH detect impacts to the vehicle and send signals to the center airbag sensor assembly to determine if the airbag should be deployed.

DTC B1697/82 is recorded when a malfunction is detected in the circuit for the side collision sensor LH (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH).

DTC No.	DTC Detection Condition	Trouble Area
B1695/16 B1697/82	When one of following conditions is met: • Side airbag sensor LH malfunction • Center airbag sensor assembly malfunction	• Side airbag sensor LH • Center airbag sensor assembly

WIRING DIAGRAM

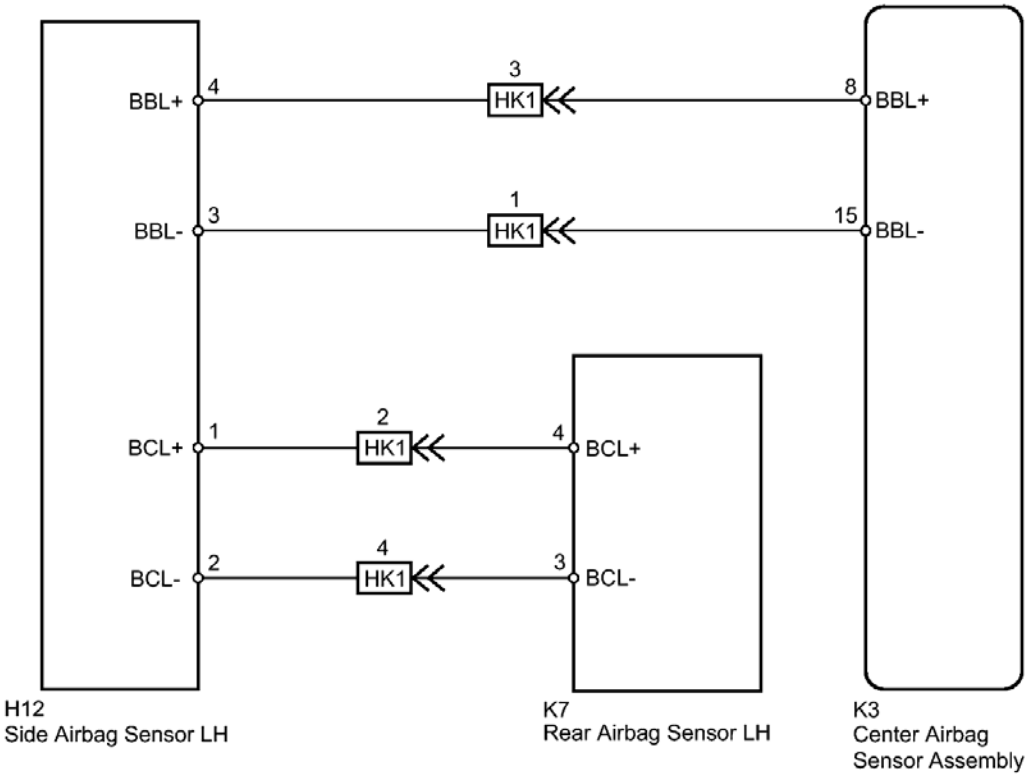


Fig. 80: LH Side & Rear Airbag Sensors Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK SIDE AIRBAG SENSOR LH**

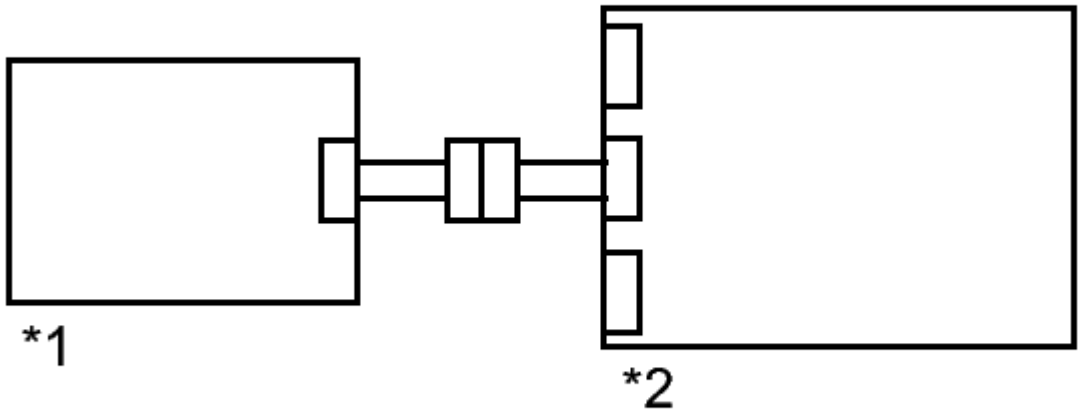


Fig. 81: Identifying Side Airbag Sensor LH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Turn the ignition switch off.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Interchange the side airbag sensor LH with RH and connect the connectors to them.
d. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
e. Turn the ignition switch to ON, and wait for at least 60 seconds.
f. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
g. Turn the ignition switch off.
h. Turn the ignition switch to ON, and wait for at least 60 seconds.
i. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1690/15, B1692/81, B1695/16 and B1697/82 are not output.	A
DTC	

B1695/16 or B1697/82 is output.	B
DTC B1690/15 or B1692/81 is output.	C

TEXT IN ILLUSTRATION

*1	Side Airbag Sensor RH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1690/15, B1692/81, B1695/16 and B1697/82 may be output at this time, but they are not related to this check.

j. Turn the ignition switch off.
k. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
l. Return the side airbag sensor RH and LH to their original positions and connect the connectors to them.

A --> See step 2

B --> See step 3

C --> See step 4

2. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
3. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
4. **REPLACE SIDE AIRBAG SENSOR LH. Refer to REMOVAL**

DTC B1698/82: DOOR SIDE AIRBAG SENSOR LH INITIALIZATION INCOMPLETE

DESCRIPTION

The circuit for the side collision sensor LH (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH) is composed of the center airbag sensor assembly, side airbag sensor LH

and rear airbag sensor LH.

The side airbag sensor LH and rear airbag sensor LH detect impacts to the vehicle and send signals to the center airbag sensor assembly to determine if the airbag should be deployed.

DTC B1698/82 is recorded when a malfunction is detected in the circuit for the side collision sensor LH (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH).

DTC No.	DTC Detection Condition	Trouble Area
B1698/82	When one of following conditions is met: • 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 circuit for the side collision sensor LH (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH) for 2 seconds. • Side airbag sensor LH malfunction • Rear airbag sensor LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front door wire LH • Side airbag sensor LH • Rear airbag sensor LH • Center airbag sensor assembly

WIRING DIAGRAM

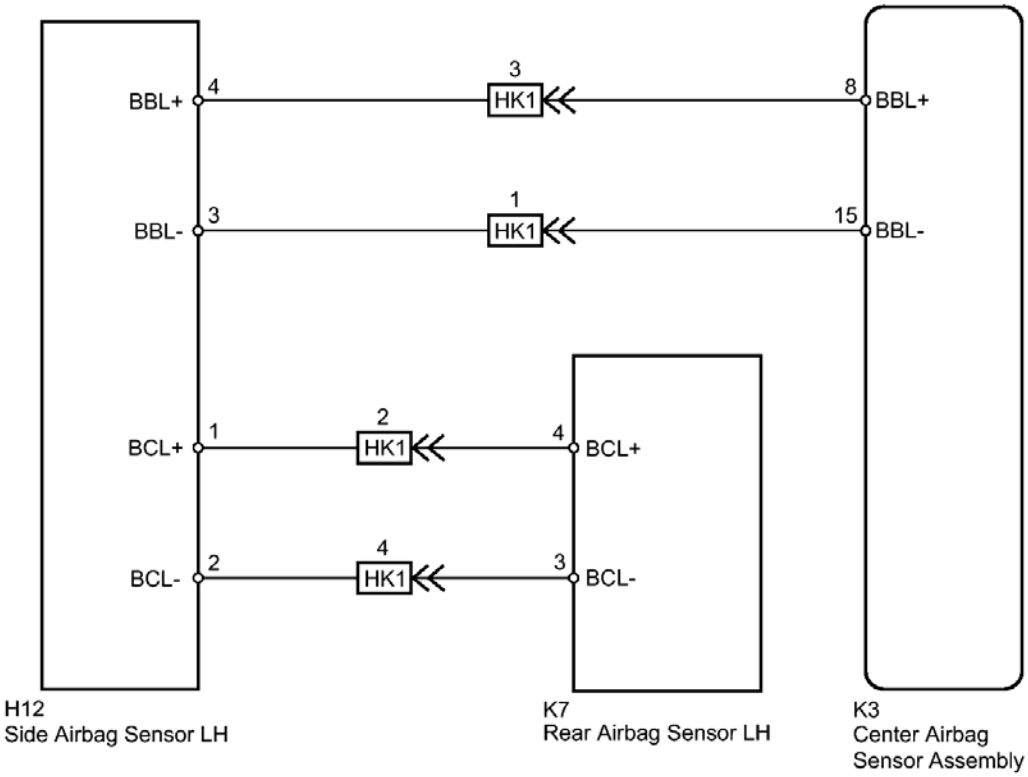


Fig. 82: LH Side & Rear Airbag Sensors Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK PAST DTC**
   a. Turn the ignition switch off.
   b. Turn the ignition switch to ON, and wait for at least 60 seconds.
   c. Check the past DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1692/81 is output	A
DTC B1697/82 is output	B

DTC B1692/81 and B1697/82 are not output	C

A --> See step 7

B --> See step 8

C: Go to next step

2. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   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 side airbag sensor LH.

      OK

      The connectors are properly connected.

   NG --> CONNECT CONNECTORS PROPERLY

   OK: Go to next step

3. **CHECK CONNECTORS**
   a. Disconnect the connectors from the center airbag sensor assembly and side airbag sensor LH.
   b. Check that the connectors (on the center airbag sensor assembly side and side airbag sensor LH side) are not damaged.

      OK

      The connectors are not deformed or damaged.

   NG --> REPLACE HARNESS AND CONNECTOR

   OK: Go to next step

4. **CHECK SIDE AIRBAG SENSOR LH CIRCUIT (CENTER AIRBAG SENSOR ASSEMBLY - SIDE AIRBAG SENSOR LH)**

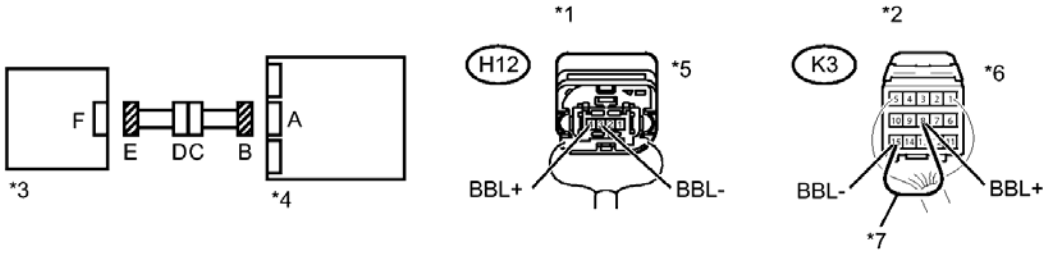


Fig. 83: Checking Side Airbag Sensor LH Circuit (Center Airbag Sensor Assembly - Side Airbag Sensor LH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear view of wire harness connector (to Side Airbag Sensor LH)	*2	Rear view of wire harness connector (to Center Airbag Sensor Assembly)
*3	Side Airbag Sensor LH	*4	Center Airbag Sensor Assembly
*5	Connector E	*6	Connector B
*7	Service Wire	-	-

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
H12-4 (BBL+) - Body ground	Ignition switch ON	Below 1 V
H12-3 (BBL-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch off.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Using a service wire, connect terminals 8 (BBL+) and 15 (BBL-) of connector B.

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

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
H12-4 (BBL+) - H12-3 (BBL-)	Always	Below 1 ohms

h. Disconnect the service wire from connector B.
i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
H12-4 (BBL+) - H12-3 (BBL-)	Always	1 Mohms or higher
H12-4 (BBL+) - Body ground	Always	1 Mohms or higher
H12-3 (BBL-) - Body ground	Always	1 Mohms or higher

NG --> See step 6

OK: Go to next step

5. **CHECK SIDE AIRBAG SENSOR LH**

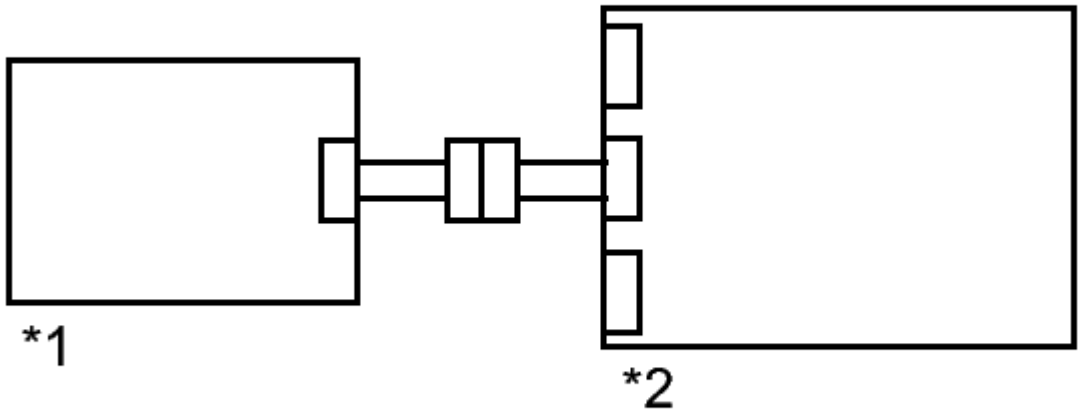


Fig. 84: Identifying Side Airbag Sensor LH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Interchange the side airbag sensor LH with RH and connect the connectors to them.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 90 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

RESULT

Result	Proceed to
DTC B1698/82 is output	A
DTC B1693/81 is output	B
DTC B1693/81 and B1698/82 are not	C

output	

TEXT IN ILLUSTRATION

*1	Side Airbag Sensor RH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1693/81 and B1698/82 may be output at this time, but they are not related to this check.

h. Turn the ignition switch off.

i. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

j. Return the side airbag sensor RH and LH to their original positions and connect the connectors to them.

A --> See step 10

B --> See step 11

C --> See step 9

6. **CHECK FLOOR WIRE (CENTER AIRBAG SENSOR ASSEMBLY - FRONT DOOR WIRE LH)**

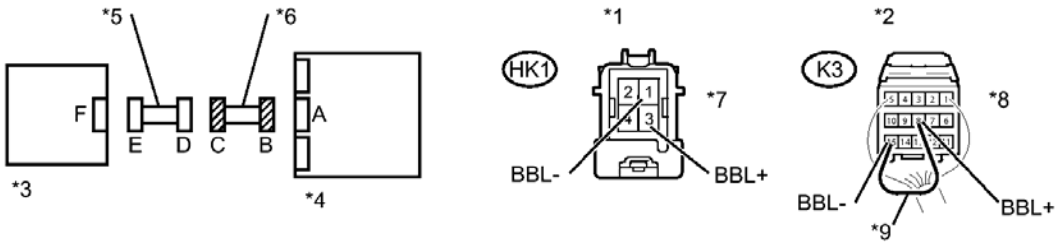


Fig. 85: Checking Floor Wire (Center Airbag Sensor Assembly - Front Door Wire LH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

	Front view of wire harness		Rear view of wire harness connector

*1	connector (to Front Door Wire LH)	*2	(to Center Airbag Sensor Assembly)
*3	Side Airbag Sensor LH	*4	Center Airbag Sensor Assembly
*5	Front Door Wire LH	*6	Floor Wire
*7	Connector C	*8	Connector B
*9	Service Wire	-	-

a. Disconnect the floor wire connector from the front door wire LH.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
HK1-1 (BBL-) - Body ground	Ignition switch ON	Below 1 V
HK1-3 (BBL+) - Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch off.
f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
g. Using a service wire, connect terminals 8 (BBL+) and 15 (BBL-) of connector B.

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

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
HK1-1 (BBL-) - HK1-3 (BBL+)	Always	Below 1 ohms

i. Disconnect the service wire from connector B.
j. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
HK1-1 (BBL-) - HK1-3 (BBL+)	Always	1 Mohms or higher
HK1-1 (BBL-) - Body ground	Always	1 Mohms or higher
HK1-3 (BBL+) - Body ground	Always	1 Mohms or higher

NG --> REPLACE FLOOR WIRE

OK --> REPLACE FRONT DOOR WIRE LH

7. **GO TO DTC B1692/81. Refer to DTC B1690/15: Door Side Airbag Sensor RH Malfunction; DTC B1692/81: Lost Communication with Door Side Airbag Sensor RH**
8. **GO TO DTC B1697/82. Refer to DTC B1695/16: Door Side Airbag Sensor LH Malfunction; DTC B1697/82: Lost Communication with Door Side Airbag Sensor LH**
9. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
10. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
11. **REPLACE SIDE AIRBAG SENSOR LH. Refer to REMOVAL**

DTC B1800/51: SHORT IN DRIVER SIDE SQUIB CIRCUIT; DTC B1801/51: OPEN IN DRIVER SIDE SQUIB CIRCUIT; DTC B1802/51: SHORT TO GND IN DRIVER SIDE SQUIB CIRCUIT; DTC B1803/51: SHORT TO B+ IN DRIVER SIDE SQUIB CIRCUIT

DESCRIPTION

The driver side squib 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 circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1800/51	When one of following conditions is met: • Center airbag sensor assembly detects line short circuit signal in driver side squib circuit 5 times during primary check. • Driver side squib malfunction • Spiral cable malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib) • Center airbag sensor assembly
B1801/51	When one of following conditions is met: • Center airbag sensor assembly detects open circuit signal in driver side squib circuit for 2 seconds. • Driver side squib malfunction • Spiral cable malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib) • Center airbag sensor assembly
B1802/51	When one of following conditions is met: • Center airbag sensor assembly detects short circuit to ground signal in driver side squib circuit for 0.5 seconds. • Driver side squib malfunction • Spiral cable malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib) • Center airbag sensor assembly
B1803/51	When one of following conditions is met: • Center airbag sensor assembly detects short circuit to B+ signal in driver side squib circuit for 0.5 seconds. • Driver side squib malfunction • Spiral cable malfunction	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib) • Center airbag sensor assembly

	• Center airbag sensor assembly malfunction	

WIRING DIAGRAM

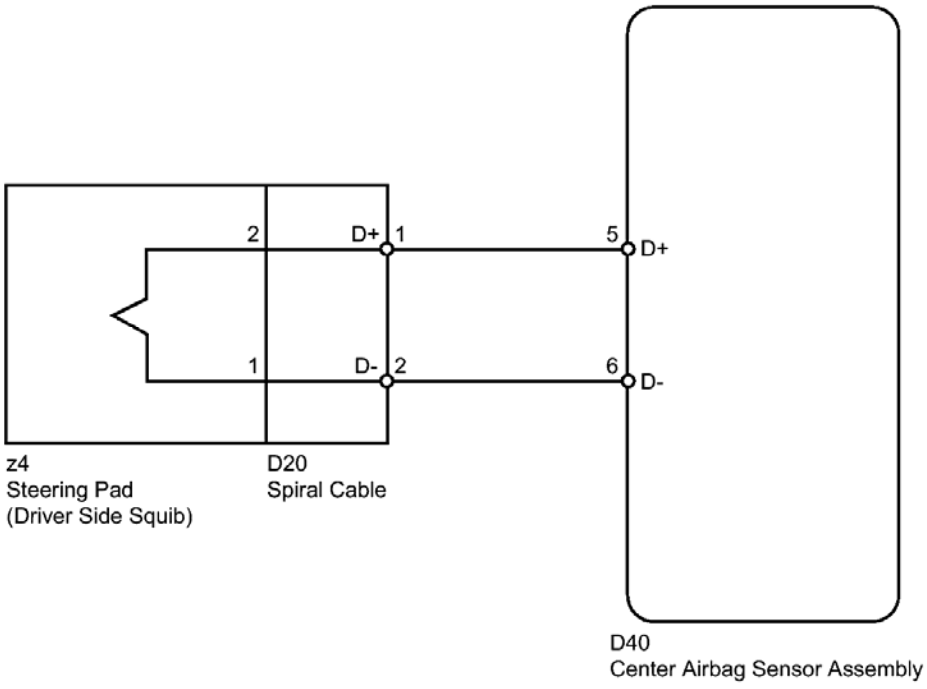


Fig. 86: Driver Side Squib Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting Check Mode (signal check) with the Techstream. Refer to **CHECK MODE PROCEDURE** .
- 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 street or rough road. Refer to **DIAGNOSIS SYSTEM** .

PROCEDURE

1. **CHECK CONNECTOR**

a. Turn the ignition switch off.
b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
c. Check that the connector is properly connected to the steering pad.

OK

The connector is properly connected.

HINT:

If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

d. Disconnect the connector from the steering pad.
e. Check that the spiral cable connector (on the steering pad side) is not damaged.

OK

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

NG --> See step 9

OK: Go to next step

2. **INSPECT STEERING PAD (DRIVER SIDE SQUIB)**
   - **SST: 09843-18061**

   a. Disconnect the connector from the steering pad.

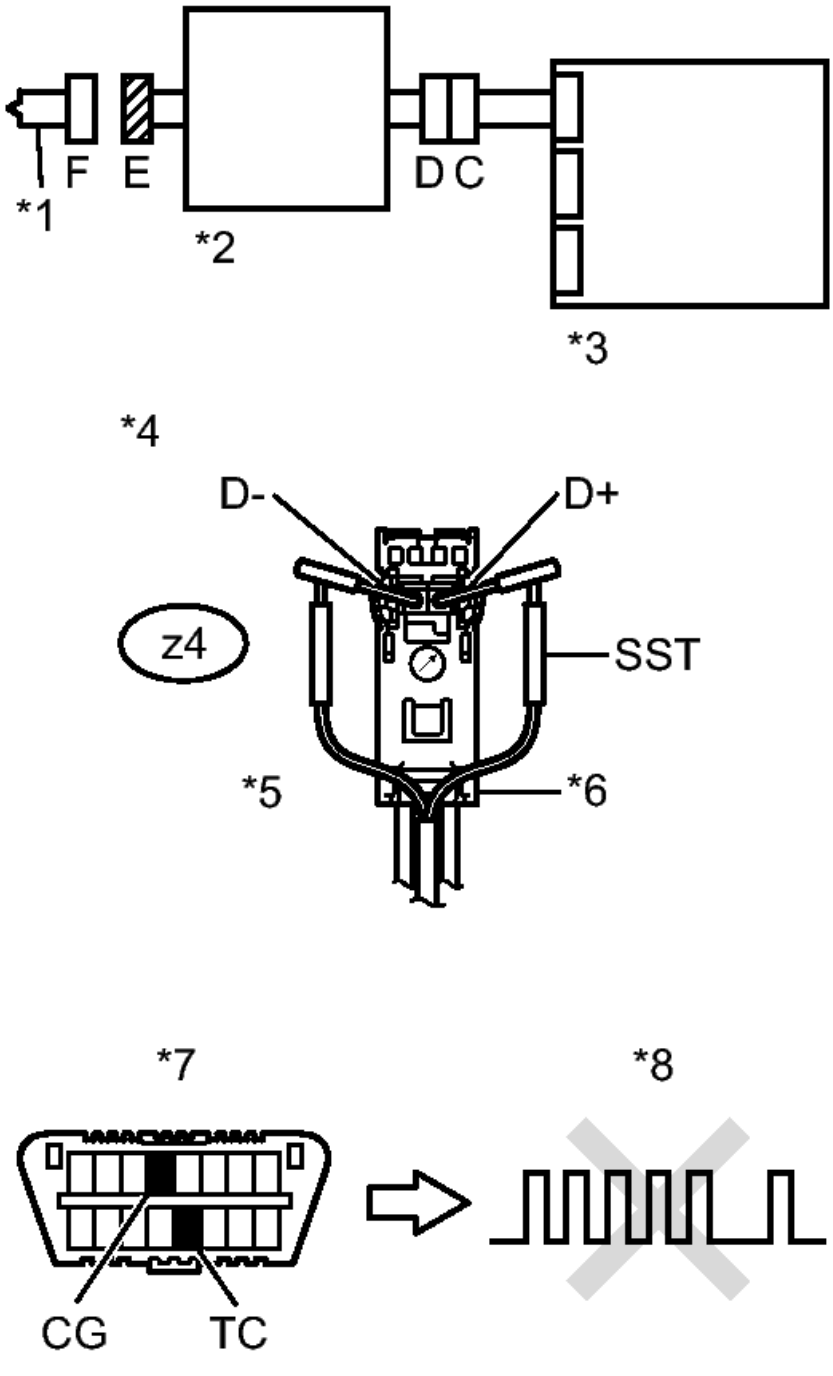


Fig. 87: Inspecting Steering Pad (Driver Side Squib) Using SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Connect SST (resistance 2.1 ohms) to connector E (orange connector).

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

NOTE:

- **Do not forcibly insert SST into the terminals of the connector when connecting.**
- **Insert SST straight into the terminals of the connector.**

c. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
f. Turn the ignition switch off.
g. Turn the ignition switch to ON, and wait for at least 60 seconds.
h. Turn the steering wheel lock to lock 5 times or more.
i. Check the DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1800, B1801, B1802, B1803 or 51 is not output.

TEXT IN ILLUSTRATION

*1	Driver Side Squib
*2	Spiral Cable
*3	Center Airbag Sensor Assembly
*4	Front view of wire harness connector (to Driver Side Squib)
*5	Connector E
*6	Color: Orange
*7	Front view of

	DLC3
*8	DTC 51

HINT:

DTCs other than B1800, B1801, B1802, B1803 and 51 may be output at this time, but they are not related to this check.

NG --> See step 3

OK --> See step 8

3. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Disconnect the SST from connector E.
   d. Check that the connectors that link the spiral cable and instrument panel wire harness are properly connected.

      OK

      The connectors are properly connected.

      HINT:

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

   e. Disconnect the connectors that link the spiral cable and instrument panel wire.
   f. Check that the terminals of the connectors are not damaged.

      OK

      The terminals are not deformed or damaged.

   g. Check that the short spring for the spiral cable connector with the activation prevention mechanism is not deformed or damaged.

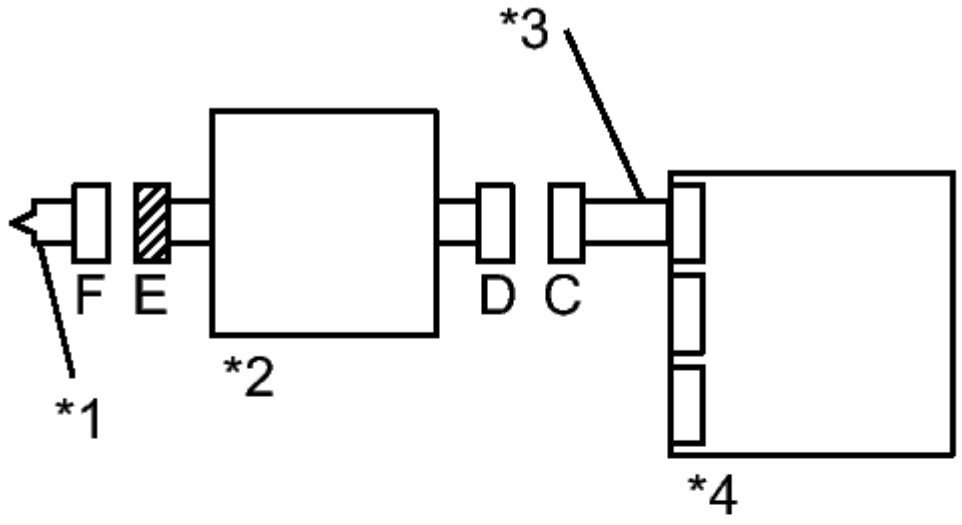
      OK

      The short spring is not deformed or damaged.

NG --> REPLACE SPIRAL CABLE OR INSTRUMENT PANEL WIRE

OK: Go to next step

4. **CHECK SPIRAL CABLE (DRIVER SIDE SQUIB - INSTRUMENT PANEL WIRE)**
   a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.



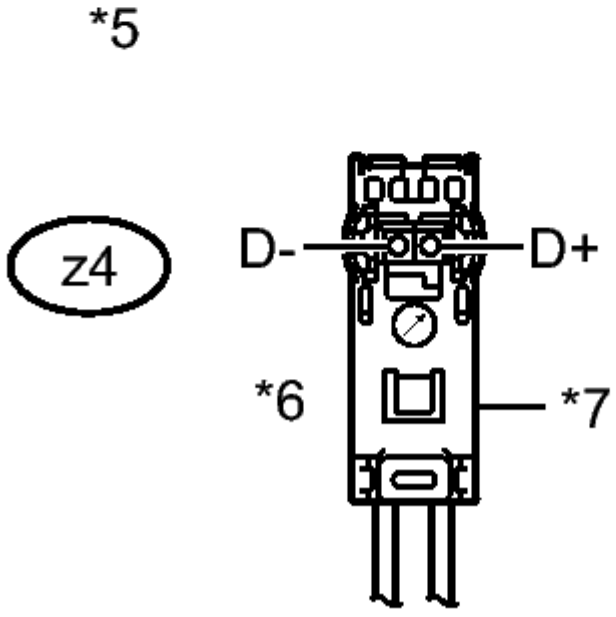


Fig. 88: Checking Spiral Cable (Driver Side Squib - Instrument Panel Wire)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Turn the ignition switch to ON.

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
z4-1 (D-) - Body ground	Ignition switch ON	Below 1 V
z4-2 (D+) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Driver Side Squib
*2	Spiral Cable
*3	Instrument Panel Wire
*4	Center Airbag Sensor Assembly
*5	Front view of wire harness connector (to Driver Side Squib)
*6	Connector E
*7	Color: Orange

d. Turn the ignition switch off.

e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

f. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
z4-1 (D-) - z4-2 (D+)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector D. Refer to **DIAGNOSIS SYSTEM** .

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
z4-1 (D-) - z4-2 (D+)	Always	1 Mohms or higher
z4-1 (D-) - Body ground	Always	1 Mohms or higher
z4-2 (D+) - Body ground	Always	1 Mohms or higher

i. Restore the released activation prevention mechanism of connector D to the original condition.

NG --> See step 9

OK: Go to next step

5. **CHECK CONNECTOR**

a. Check that the connector is properly connected to the center airbag sensor assembly.

OK

The connector is properly connected.

HINT:

If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

b. Disconnect the connector from the center airbag sensor assembly.

c. Check that the terminal of the connector is not damaged.

OK

The terminal is not deformed or damaged.

d. Check that the short spring for the instrument panel wire connector with the activation prevention mechanism is not deformed or damaged.

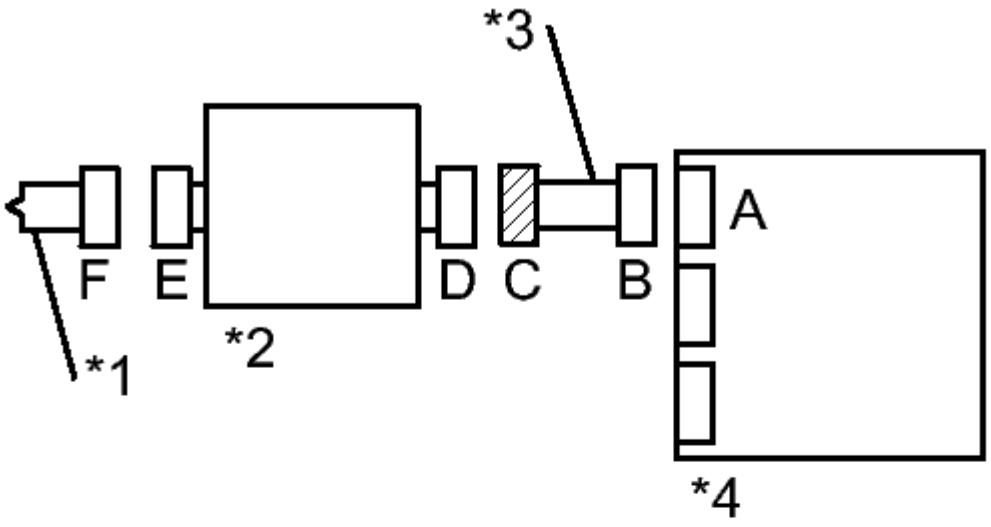
OK

The short spring is not deformed or damaged.

NG --> REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

6. **CHECK INSTRUMENT PANEL WIRE (SPIRAL CABLE - CENTER AIRBAG SENSOR ASSEMBLY)**
   a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.



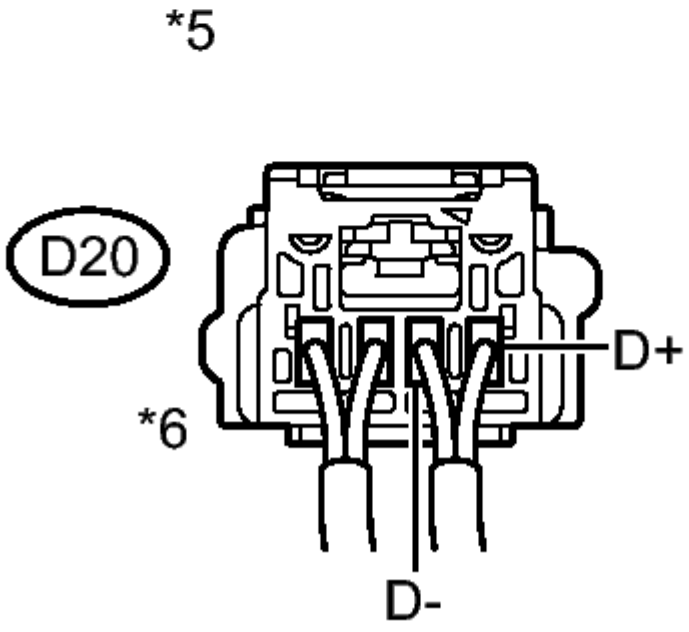


Fig. 89: Checking Instrument Panel Wire (Spiral Cable - Center Airbag Sensor Assembly)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
D20-1 (D+) - Body ground	Ignition switch ON	Below 1 V
D20-2 (D-) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Driver Side Squib
*2	Spiral Cable
*3	Instrument Panel Wire
*4	Center Airbag Sensor Assembly
*5	Rear view of wire harness connector (to Spiral Cable)
*6	Connector C

d. Turn the ignition switch off.
e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
D20-1 (D+) - D20-2 (D-	Always	Below 1 ohms

)		

g. Release the activation prevention mechanism built into connector B. Refer to **DIAGNOSIS SYSTEM** .

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
D20-1 (D+) - D20-2 (D-)	Always	1 Mohms or higher
D20-1 (D+) - Body ground	Always	1 Mohms or higher
D20-2 (D-) - Body ground	Always	1 Mohms or higher

i. Restore the released activation prevention mechanism of connector B to the original condition.

NG --> REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

7. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**

a. Connect the connectors to the steering pad, spiral cable and the center airbag sensor assembly.

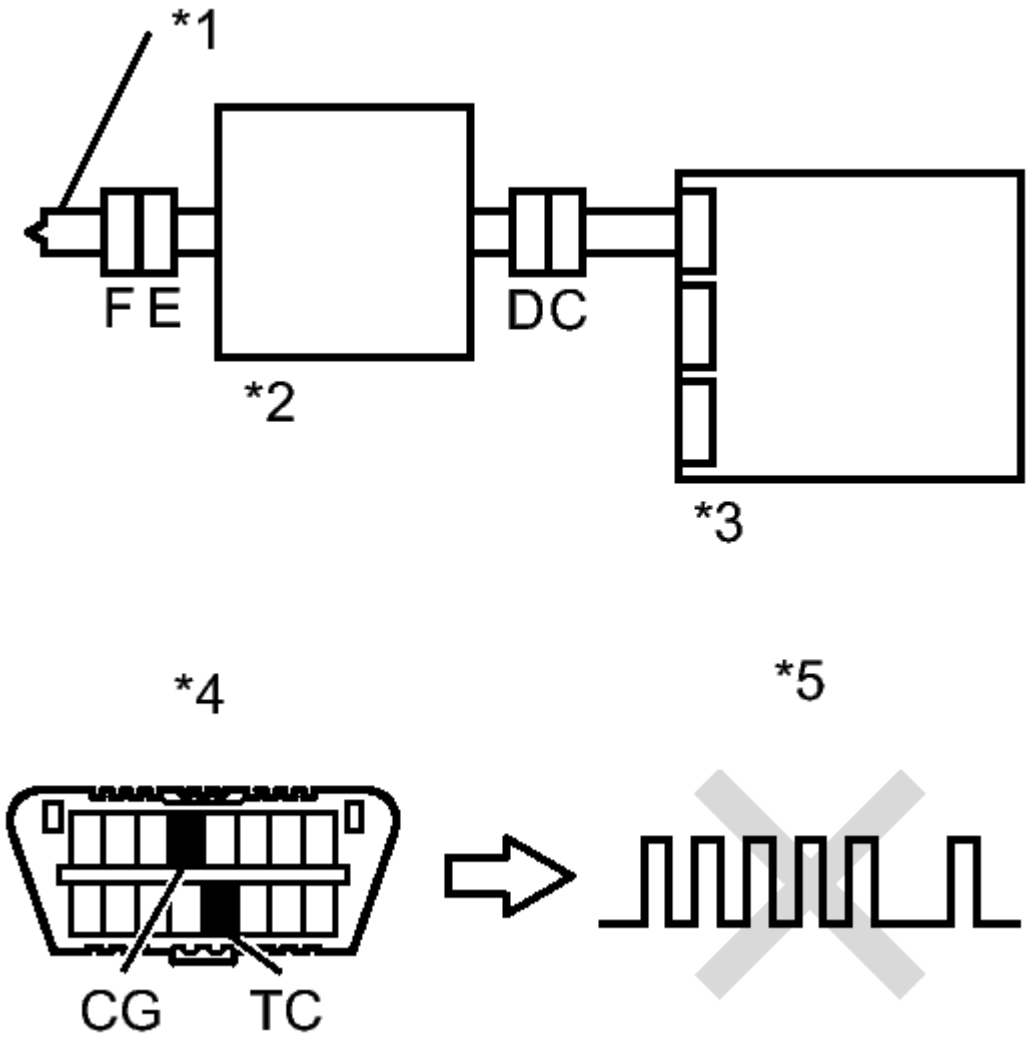


Fig. 90: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check the DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1800, B1801, B1802, B1803 or 51 is not output.

TEXT IN ILLUSTRATION

*1	Driver Side Squib
*2	Spiral Cable
*3	Center Airbag Sensor Assembly
*4	Front view of DLC3
*5	DTC 51

HINT:

DTCs other than B1800, B1801, B1802, B1803 and 51 may be output at this time, but they are not related to this check.

NG --> See step 10

OK --> See step 11

8. **REPLACE STEERING PAD. Refer to REMOVAL**
9. **REPLACE SPIRAL CABLE. Refer to REMOVAL**
10. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
11. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**

DTC B1805/52: SHORT IN FRONT PASSENGER SIDE SQUIB CIRCUIT; DTC B1806/52: OPEN IN FRONT PASSENGER SIDE SQUIB CIRCUIT; DTC B1807/52: SHORT TO GND IN FRONT PASSENGER SIDE SQUIB CIRCUIT; DTC B1808/52: SHORT TO B+ IN FRONT PASSENGER SIDE SQUIB CIRCUIT

DESCRIPTION

The front passenger side squib 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 circuit.

DTC No.	DTC Detection Condition	Trouble Area
	When one of following conditions is met:	

B1805/52	• Center airbag sensor assembly detects line short circuit signal in front passenger side squib circuit 5 times during primary check. • Front passenger side squib malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • No. 2 instrument panel wire • Front passenger airbag assembly (Front passenger side squib) • Center airbag sensor assembly
B1806/52	When one of following conditions is met: • Center airbag sensor assembly detects open circuit signal in front passenger side squib circuit for 2 seconds. • Front passenger side squib malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • No. 2 instrument panel wire • Front passenger airbag assembly (Front passenger side squib) • Center airbag sensor assembly
B1807/52	When one of following conditions is met: • Center airbag sensor assembly detects short circuit to ground signal in front passenger side squib circuit for 0.5 seconds. • Front passenger side squib malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • No. 2 instrument panel wire • Front passenger airbag assembly (Front passenger side squib) • Center airbag sensor assembly
B1808/52	When one of following conditions is met: • Center airbag sensor assembly detects short circuit to B+ signal in front passenger side squib circuit for 0.5 seconds. • Front passenger side squib malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • No. 2 instrument panel wire • Front passenger airbag assembly (Front passenger side squib) • Center airbag sensor assembly

WIRING DIAGRAM

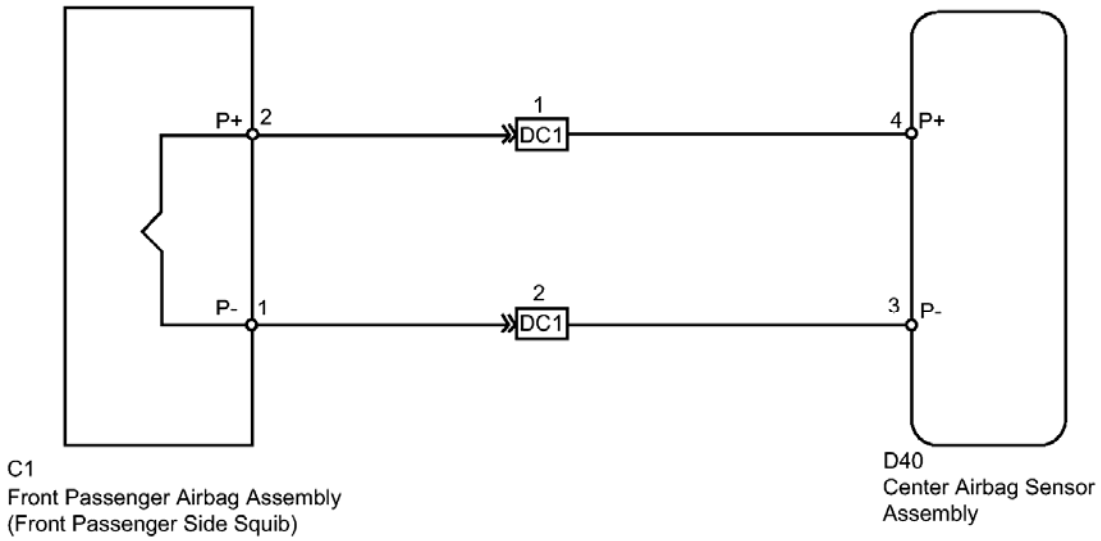


Fig. 91: Front Passenger Side Squib Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting Check Mode (signal check) with the Techstream. Refer to **CHECK MODE PROCEDURE** .
- 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 street or rough road. Refer to **DIAGNOSIS SYSTEM** .

PROCEDURE

1. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the front passenger airbag assembly.

   OK

   The connector is properly connected.

   HINT:

If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

d. Disconnect the connector from the front passenger airbag assembly.
e. Check that the No. 2 instrument panel wire connector (on the front passenger airbag assembly side) is not damaged.

OK

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

NG --> REPLACE NO. 2 INSTRUMENT PANEL WIRE

OK: Go to next step

2. **CHECK FRONT PASSENGER AIRBAG ASSEMBLY (FRONT PASSENGER SIDE SQUIB)**
   - **SST: 09843-18061**

   a. Disconnect the connector from the front passenger airbag assembly.

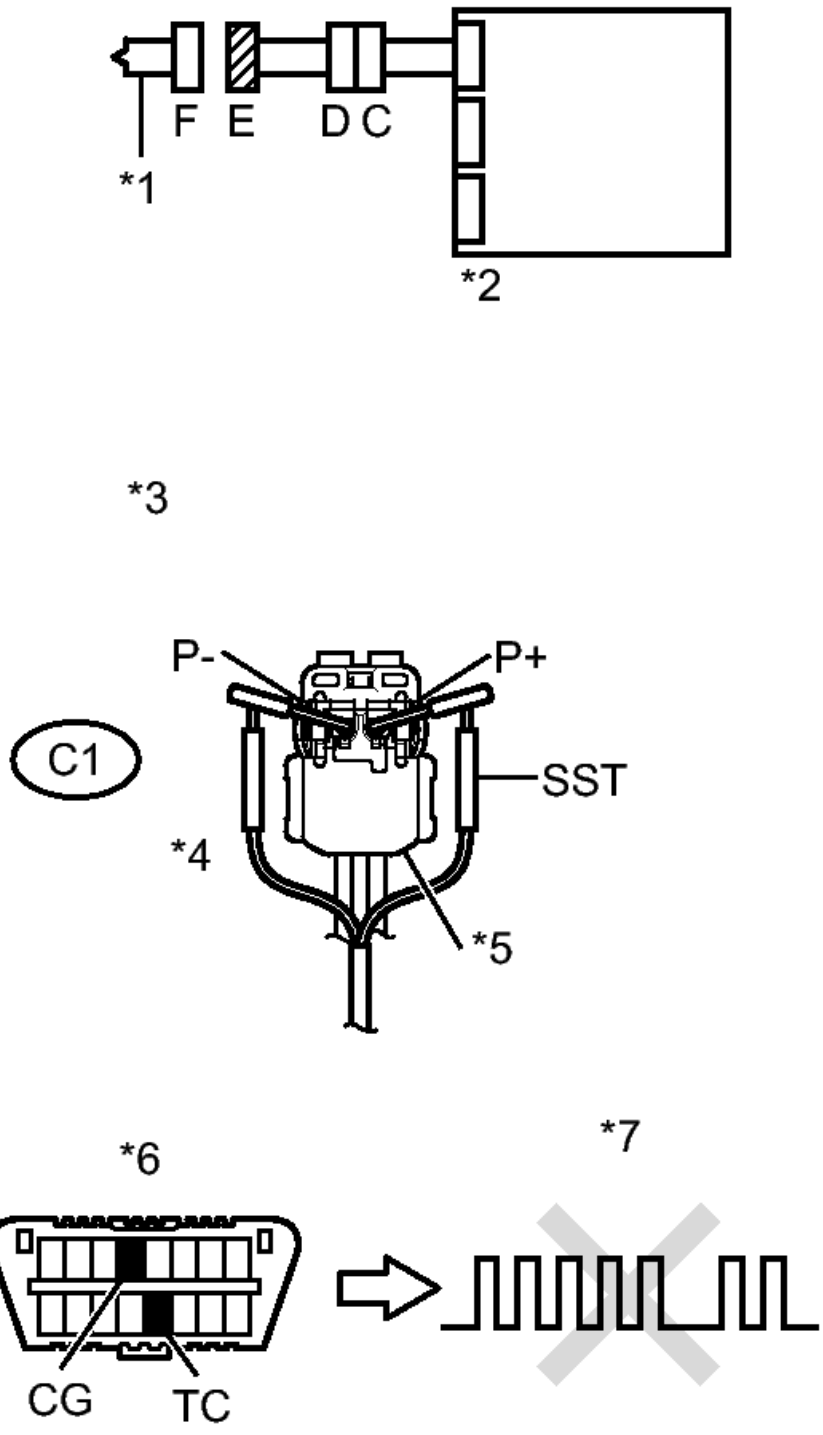


Fig. 92: Checking Front Passenger Airbag Assembly (Front Passenger Side Squib) Using SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Connect SST (resistance 2.1 ohms) to connector E (orange connector).

WARNING: **Never connect a tester to the front passenger airbag assembly (front passenger side squib) for measurement, as this may lead to a serious injury due to airbag deployment.**

NOTE:

- **Do not forcibly insert SST into the terminals of the connector when connecting.**
- **Insert SST straight into the terminals of the connector.**

c. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
f. Turn the ignition switch off.
g. Turn the ignition switch to ON, and wait for at least 60 seconds.
h. Check the DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1805, B1806, B1807, B1808 or 52 is not output.

TEXT IN ILLUSTRATION

*1	Front Passenger Side Squib
*2	Center Airbag Sensor Assembly
*3	Front view of wire harness connector (to Front Passenger Side Squib)
*4	Connector E
*5	Color: Orange
*6	Front view of DLC3

*7	DTC 52

HINT:

DTCs other than B1805, B1806, B1807, B1808 and 52 may be output at this time, but they are not related to this check.

NG --> See step 3

OK --> See step 8

3. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Disconnect the SST from connector E.
   d. Check that the connector is properly connected to the center airbag sensor assembly.

      OK

      The connector is properly connected.

      HINT:

      If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

   e. Disconnect the connector from the center airbag sensor assembly.
   f. Check that the terminal of the connector is not damaged.

      OK

      The terminal is not deformed or damaged.

   g. Check that the short spring for the instrument panel wire connector with the activation prevention mechanism is not deformed or damaged.

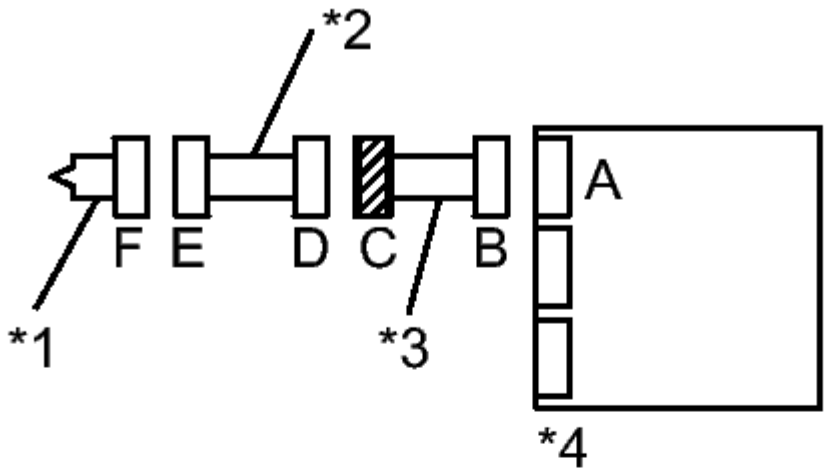
      OK

      The short spring is not deformed or damaged.

   NG --> REPLACE INSTRUMENT PANEL WIRE

   OK: Go to next step

4. **CHECK INSTRUMENT PANEL WIRE (NO. 2 INSTRUMENT PANEL WIRE - CENTER AIRBAG SENSOR ASSEMBLY)**



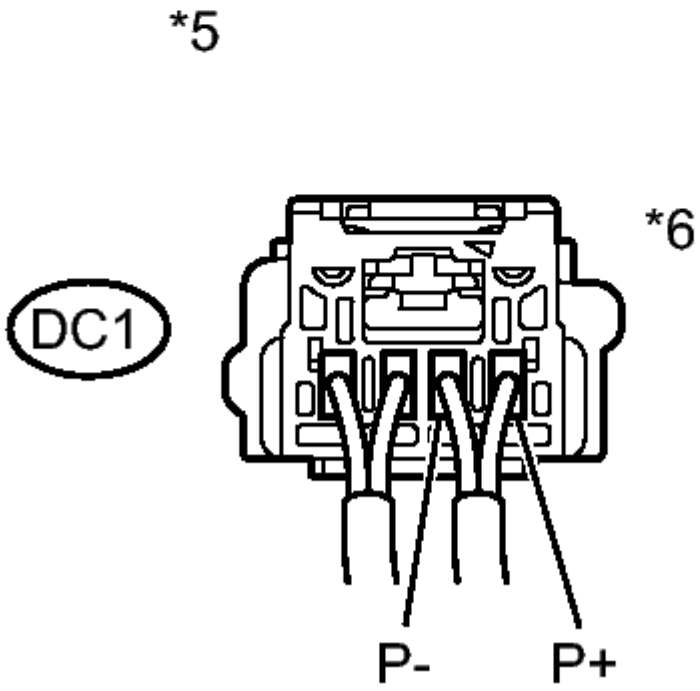


Fig. 93: Checking Instrument Panel Wire (No. 2 Instrument Panel Wire - Center Airbag Sensor Assembly)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.

b. Turn the ignition switch to ON.

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
DC1-1 (P+) - Body ground	Ignition switch ON	Below 1 V
DC1-2 (P-) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Front Passenger Side Squib
*2	No. 2 Instrument Panel Wire
*3	Instrument Panel Wire
*4	Center Airbag Sensor Assembly
*5	Rear view of wire harness connector (to No. 2 Instrument Panel Wire)
*6	Connector C

d. Turn the ignition switch off.

e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

f. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
DC1-1 (P+) - DC1-2 (P-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B. Refer to **DIAGNOSIS SYSTEM** .

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
DC1-1 (P+) - DC1-2 (P-)	Always	1 Mohms or higher
DC1-1 (P+) - Body ground	Always	1 Mohms or higher
DC1-2 (P-) - Body ground	Always	1 Mohms or higher

i. Restore the released activation prevention mechanism of connector B to the original condition.

NG --> REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

5. **CHECK CONNECTOR**

a. Check that the connectors that link the instrument panel wire and No. 2 instrument panel wire harness are properly connected.

OK

The connectors are properly connected.

HINT:

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

b. Disconnect the connectors that link the instrument panel wire and No. 2 instrument panel wire.

c. Check that the terminals of the connectors are not damaged.

OK

The terminals are not deformed or damaged.

d. Check that the short spring for the No. 2 instrument panel wire connector with the activation prevention mechanism is not deformed or damaged.

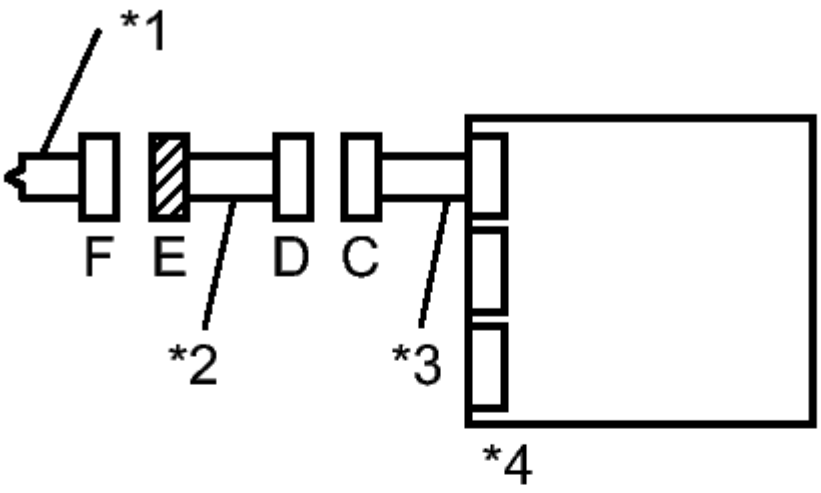
OK

The short spring is not deformed or damaged.

NG --> REPLACE NO. 2 INSTRUMENT PANEL WIRE OR INSTRUMENT PANEL WIRE

OK: Go to next step

6. **CHECK NO. 2 INSTRUMENT PANEL WIRE (FRONT PASSENGER SIDE SQUIB - INSTRUMENT PANEL WIRE)**
   a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.



*5

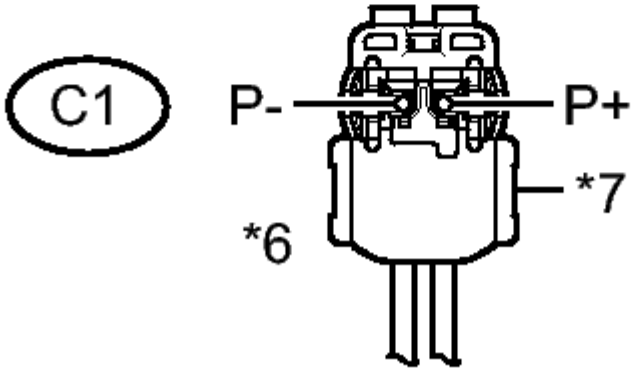


Fig. 94: Checking No. 2 Instrument Panel Wire (Front Passenger Side Squib - Instrument Panel Wire)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Turn the ignition switch to ON.

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
C1-1 (P-) - Body ground	Ignition switch ON	Below 1 V
C1-2 (P+) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Front Passenger Side Squib
*2	No. 2 Instrument Panel Wire
*3	Instrument Panel Wire
*4	Center Airbag Sensor Assembly
*5	Front view of wire harness connector (to Front Passenger Side Squib)
*6	Connector E
*7	Color: Orange

d. Turn the ignition switch off.

e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

f. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
C1-1 (P-) - C1-2 (P+)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector D. Refer to **DIAGNOSIS SYSTEM** .

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
C1-1 (P-) - C1-2 (P+)	Always	1 Mohms or higher
C1-1 (P-) - Body ground	Always	1 Mohms or higher
C1-2 (P+) - Body ground	Always	1 Mohms or higher

i. Restore the released activation prevention mechanism of connector D to the original condition.

NG --> REPLACE NO. 2 INSTRUMENT PANEL WIRE

OK: Go to next step

7. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**

a. Connect the connectors to the front passenger airbag assembly, the No. 2 instrument panel wire, the instrument panel wire and the center airbag sensor assembly.

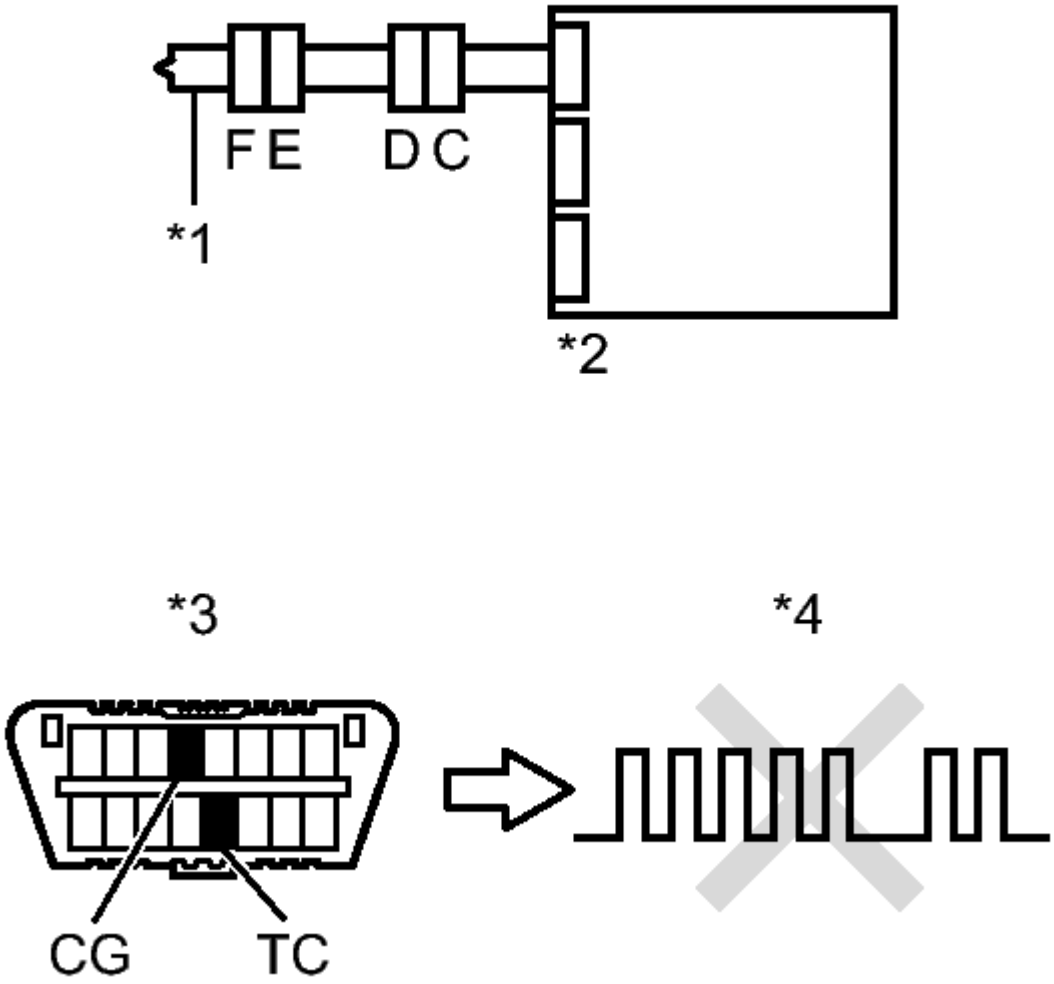


Fig. 95: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check the DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1805, B1806, B1807, B1808 or 52 is not output.

TEXT IN ILLUSTRATION

*1	Front Passenger Side Squib
*2	Center Airbag Sensor Assembly
*3	Front view of DLC3
*4	DTC 52

HINT:

DTCs other than B1805, B1806, B1807, B1808 and 52 may be output at this time, but they are not related to this check.

NG --> See step 9

OK --> See step 10

8. **REPLACE FRONT PASSENGER AIRBAG ASSEMBLY. Refer to REMOVAL**
9. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
10. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**

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 Detection Condition	Trouble Area
B1810/53	When one of following conditions is met: • Center airbag sensor assembly detects line short circuit signal in driver side squib 2nd step circuit 5 times during primary check.	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib

	• Driver side squib 2nd step malfunction • Spiral cable malfunction • Center airbag sensor assembly malfunction	2nd step) • Center airbag sensor assembly
B1811/53	When one of following conditions is met: • 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	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib 2nd step) • Center airbag sensor assembly
B1812/53	When one of following conditions is met: • Center airbag sensor assembly detects short circuit to ground 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	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib 2nd step) • Center airbag sensor assembly
B1813/53	When one of following conditions is met: • 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	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib 2nd step) • Center airbag sensor assembly

WIRING DIAGRAM

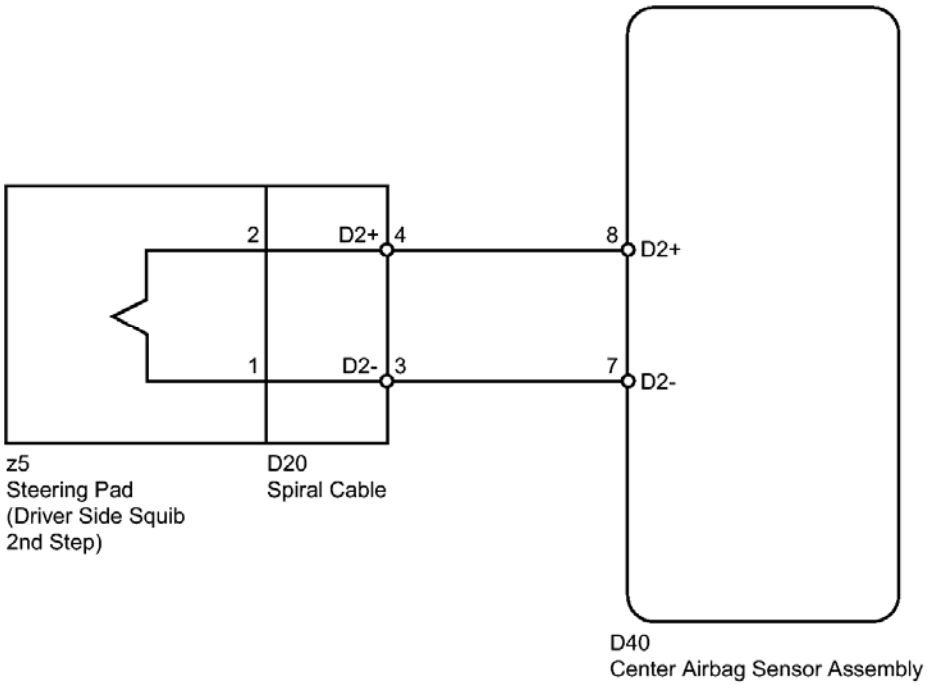


Fig. 96: Driver Side Squib 2nd Step Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting Check Mode (signal check) with the Techstream. Refer to **CHECK MODE PROCEDURE** .
- 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 street or rough road. Refer to **DIAGNOSIS SYSTEM** .

PROCEDURE

1. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the steering pad.

      OK

The connector is properly connected.

HINT:

If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

d. Disconnect the connector from the steering pad.
e. Check that the spiral cable connector (on the steering pad side) is not damaged.

OK

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

NG --> See step 9

OK: Go to next step

2. **INSPECT STEERING PAD (DRIVER SIDE SQUIB 2ND STEP)**
   - **SST: 09843-18061**

   a. Disconnect the connector from the steering pad.

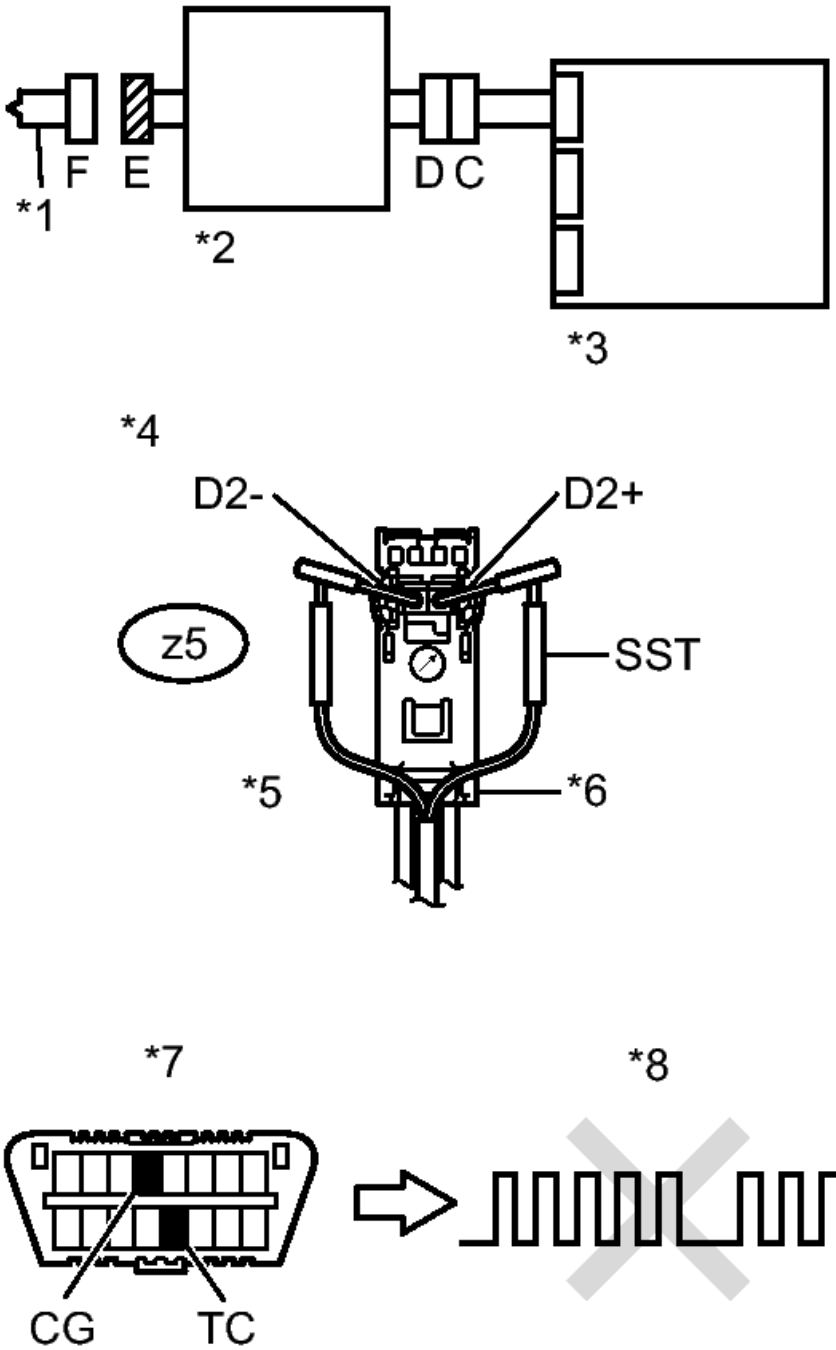


Fig. 97: Inspecting Steering Pad (Driver Side Squib 2nd Step) Using SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Connect SST (resistance 2.1 ohms) to connector E (black connector).

WARNING: 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.

NOTE:

- **Do not forcibly insert SST into the terminals of the connector when connecting.**
- **Insert SST straight into the terminals of the connector.**

c. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Clear the DTCs stored in the memory. Refer to **CHECK MODE PROCEDURE** .
f. Turn the ignition switch off.
g. Turn the ignition switch to ON, and wait for at least 60 seconds.
h. Turn the steering wheel lock to lock 5 times or more.
i. Check the DTCs. Refer to **CHECK MODE PROCEDURE** .

OK

DTC B1810, B1811, B1812, B1813 or 53 is not output.

TEXT IN ILLUSTRATION

*1	Driver Side Squib 2nd Step
*2	Spiral Cable
*3	Center Airbag Sensor Assembly
*4	Front view of wire harness connector (to Driver Side Squib 2nd Step)
*5	Connector E
*6	Color: Black

*7	Front view of DLC3
*8	DTC 53

HINT:

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

NG --> See step 3

OK --> See step 8

3. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Disconnect the SST from connector E.
   d. Check that the connectors that link the spiral cable and instrument panel wire harness are properly connected.

      OK

      The connectors are properly connected.

      HINT:

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

   e. Disconnect the connectors that link the spiral cable and instrument panel wire.
   f. Check that the terminals of the connectors are not damaged.

      OK

      The terminals are not deformed or damaged.

   g. Check that the short spring for the spiral cable connector with the activation prevention mechanism is not deformed or damaged.

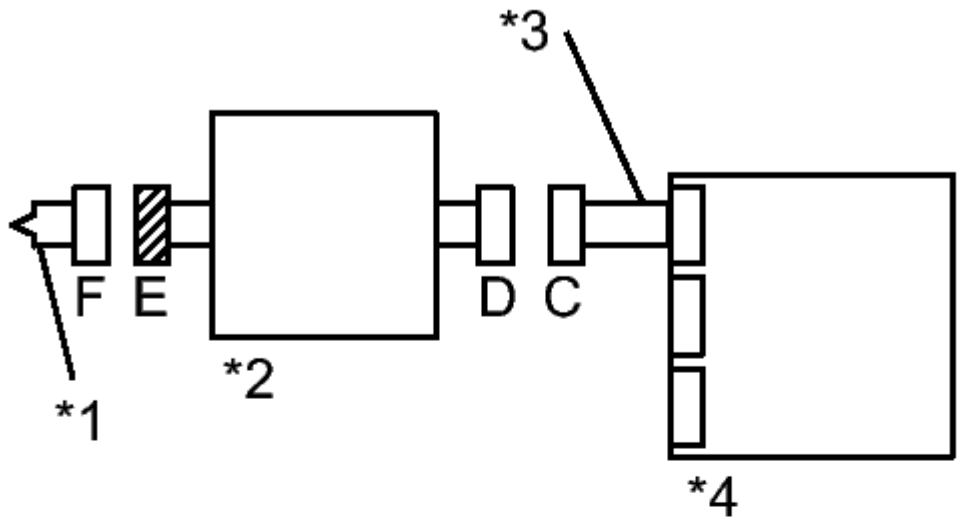
      OK

      The short spring is not deformed or damaged.

NG --> REPLACE SPIRAL CABLE OR INSTRUMENT PANEL WIRE

OK: Go to next step

4. **CHECK SPIRAL CABLE (DRIVER SIDE SQUIB 2ND STEP - INSTRUMENT PANEL WIRE)**
   a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.



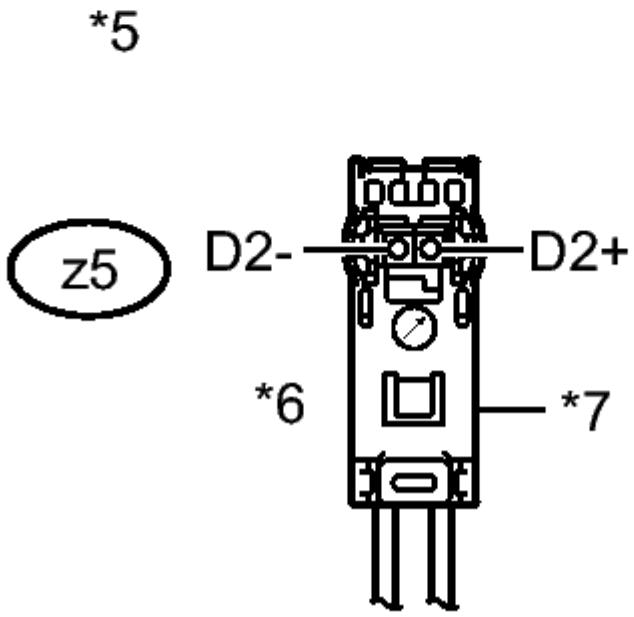


Fig. 98: Checking Spiral Cable (Driver Side Squib 2nd Step - Instrument Panel Wire)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
z5-1 (D2-) - Body ground	Ignition switch ON	Below 1 V
z5-2 (D2+) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Driver Side Squib 2nd Step
*2	Spiral Cable
*3	Instrument Panel Wire
*4	Center Airbag Sensor Assembly
*5	Front view of wire harness connector (to Driver Side Squib 2nd Step)
*6	Connector E
*7	Color: Black

d. Turn the ignition switch off.

e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

f. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
z5-1 (D2-) - z5-2 (D2+)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector D. Refer to **DIAGNOSIS SYSTEM** .

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
z5-1 (D2-) - z5-2 (D2+)	Always	1 Mohms or higher
z5-1 (D2-) - Body ground	Always	1 Mohms or higher
z5-2 (D2+) - Body ground	Always	1 Mohms or higher

i. Restore the released activation prevention mechanism of connector D to the original condition.

NG --> See step 9

OK: Go to next step

5. **CHECK CONNECTOR**

a. Check that the connector is properly connected to the center airbag sensor assembly.

OK

The connector is properly connected.

HINT:

If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

b. Disconnect the connector from the center airbag sensor assembly.

c. Check that the terminal of the connector is not damaged.

OK

The terminal is not deformed or damaged.

d. Check that the short spring for the instrument panel wire connector with the activation prevention mechanism is not deformed or damaged.

OK

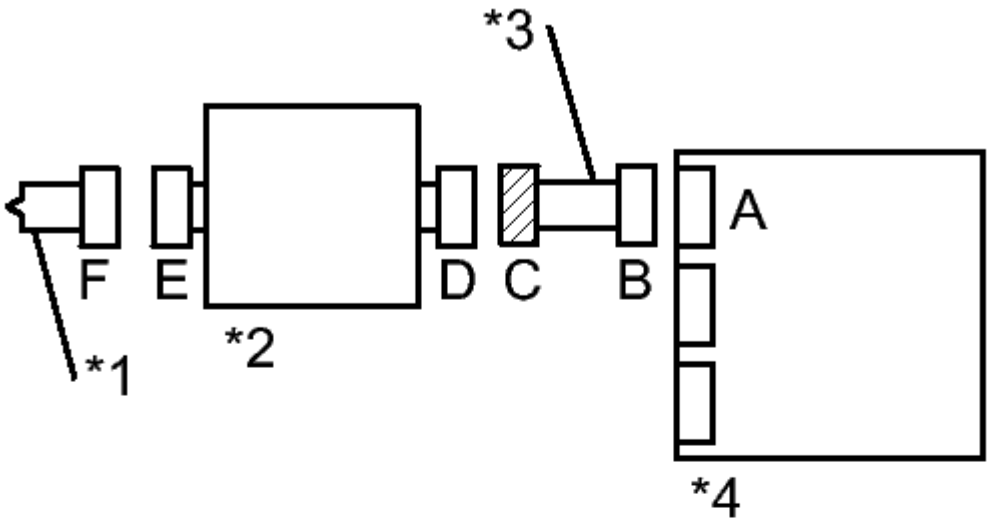
The short spring is not deformed or damaged.

NG --> REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

6. **CHECK INSTRUMENT PANEL WIRE (SPIRAL CABLE - CENTER AIRBAG SENSOR ASSEMBLY)**

a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.



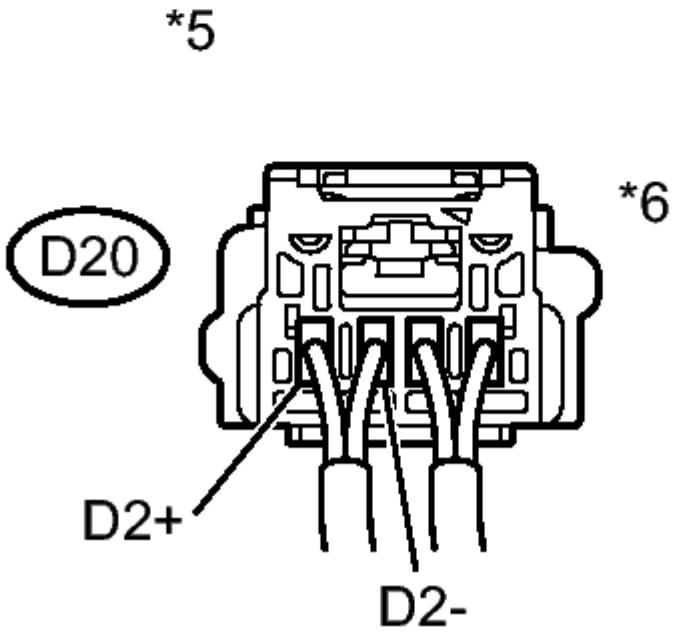


Fig. 99: Checking Instrument Panel Wire (Spiral Cable - Center Airbag Sensor Assembly)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
D20-3 (D2-) - Body ground	Ignition switch ON	Below 1 V
D20-4 (D2+) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Driver Side Squib 2nd Step
*2	Spiral Cable
*3	Instrument Panel Wire
*4	Center Airbag Sensor Assembly
*5	Rear view of wire harness connector (to Spiral Cable)
*6	Connector C

d. Turn the ignition switch off.
e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
D20-3 (D2-		Below 1

) - D20-4 (D2+)	Always	ohms

g. Release the activation prevention mechanism built into connector B. Refer to **DIAGNOSIS SYSTEM** .

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
D20-3 (D2-) - D20-4 (D2+)	Always	1 Mohms or higher
D20-3 (D2-) - Body ground	Always	1 Mohms or higher
D20-4 (D2+) - Body ground	Always	1 Mohms or higher

i. Restore the released activation prevention mechanism of connector B to the original condition.

NG --> REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

7. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**

a. Connect the connectors to the steering pad, spiral cable and the center airbag sensor assembly.

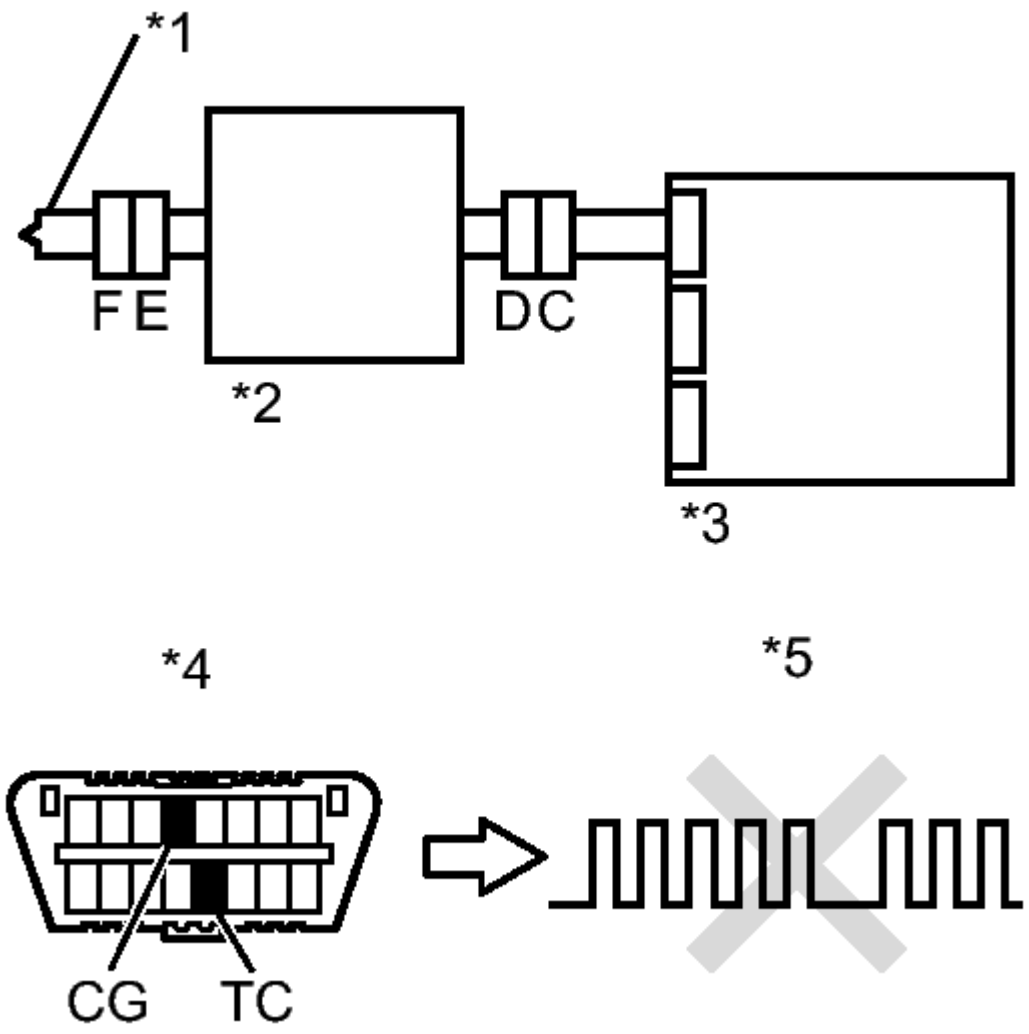


Fig. 100: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check the DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1810, B1811, B1812, B1813 or 53 is not output.

TEXT IN ILLUSTRATION

*1	Driver Side Squib 2nd Step
*2	Spiral Cable
*3	Center Airbag Sensor Assembly
*4	Front view of DLC3
*5	DTC 53

HINT:

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

NG --> See step 10

OK --> See step 11

8. **REPLACE STEERING PAD. Refer to REMOVAL**
9. **REPLACE SPIRAL CABLE. Refer to REMOVAL**
10. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
11. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**

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.

DTC No.	DTC Detection Condition	Trouble Area
	When one of following conditions is met:	

B1815/54	• 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	• Instrument panel wire • No. 2 instrument panel wire • Front passenger airbag assembly (Front passenger side squib 2nd step) • Center airbag sensor assembly
B1816/54	When one of following conditions is met: • 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	• Instrument panel wire • No. 2 instrument panel wire • Front passenger airbag assembly (Front passenger side squib 2nd step) • Center airbag sensor assembly
B1817/54	When one of following conditions is met: • 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	• Instrument panel wire • No. 2 instrument panel wire • Front passenger airbag assembly (Front passenger side squib 2nd step) • Center airbag sensor assembly
B1818/54	When one of following conditions is met: • 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	• Instrument panel wire • No. 2 instrument panel wire • Front passenger airbag assembly (Front passenger side squib 2nd step) • Center airbag sensor assembly

WIRING DIAGRAM

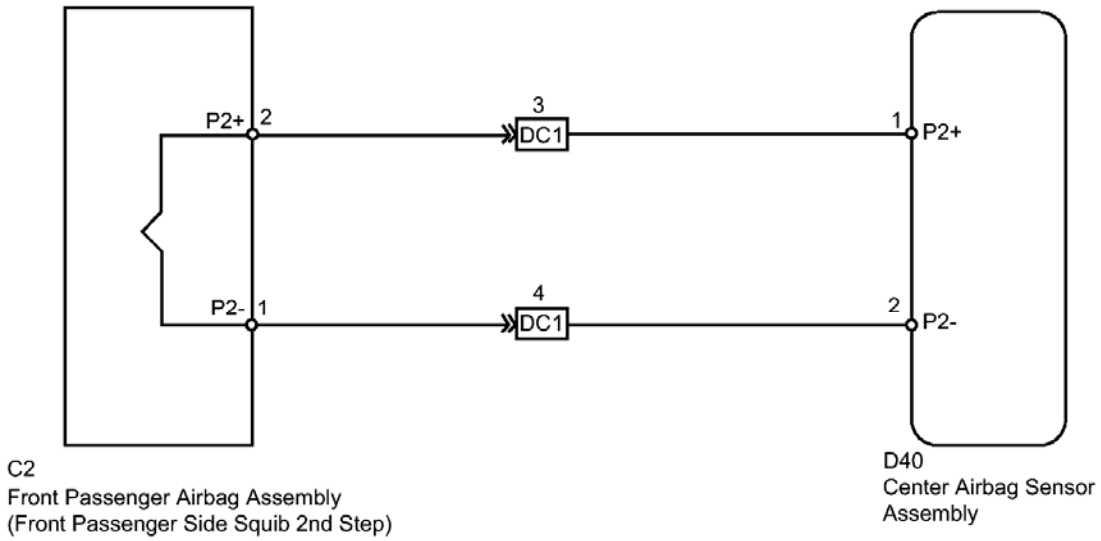


Fig. 101: Front Passenger Side Squib 2nd Step Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting Check Mode (signal check) with the Techstream. Refer to **CHECK MODE PROCEDURE** .
- 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 street or rough road. Refer to **DIAGNOSIS SYSTEM** .

PROCEDURE

1. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the front passenger airbag assembly.

   OK

   The connector is properly connected.

   HINT:

If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

d. Disconnect the connector from the front passenger airbag assembly.
e. Check that the No. 2 instrument panel wire connector (on the front passenger airbag assembly side) is not damaged.

OK

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

NG --> REPLACE NO. 2 INSTRUMENT PANEL WIRE

OK: Go to next step

2. **CHECK FRONT PASSENGER AIRBAG ASSEMBLY (FRONT PASSENGER SIDE SQUIB 2ND STEP)**
   - **SST: 09843-18061**
   a. Disconnect the connector from the front passenger airbag assembly.

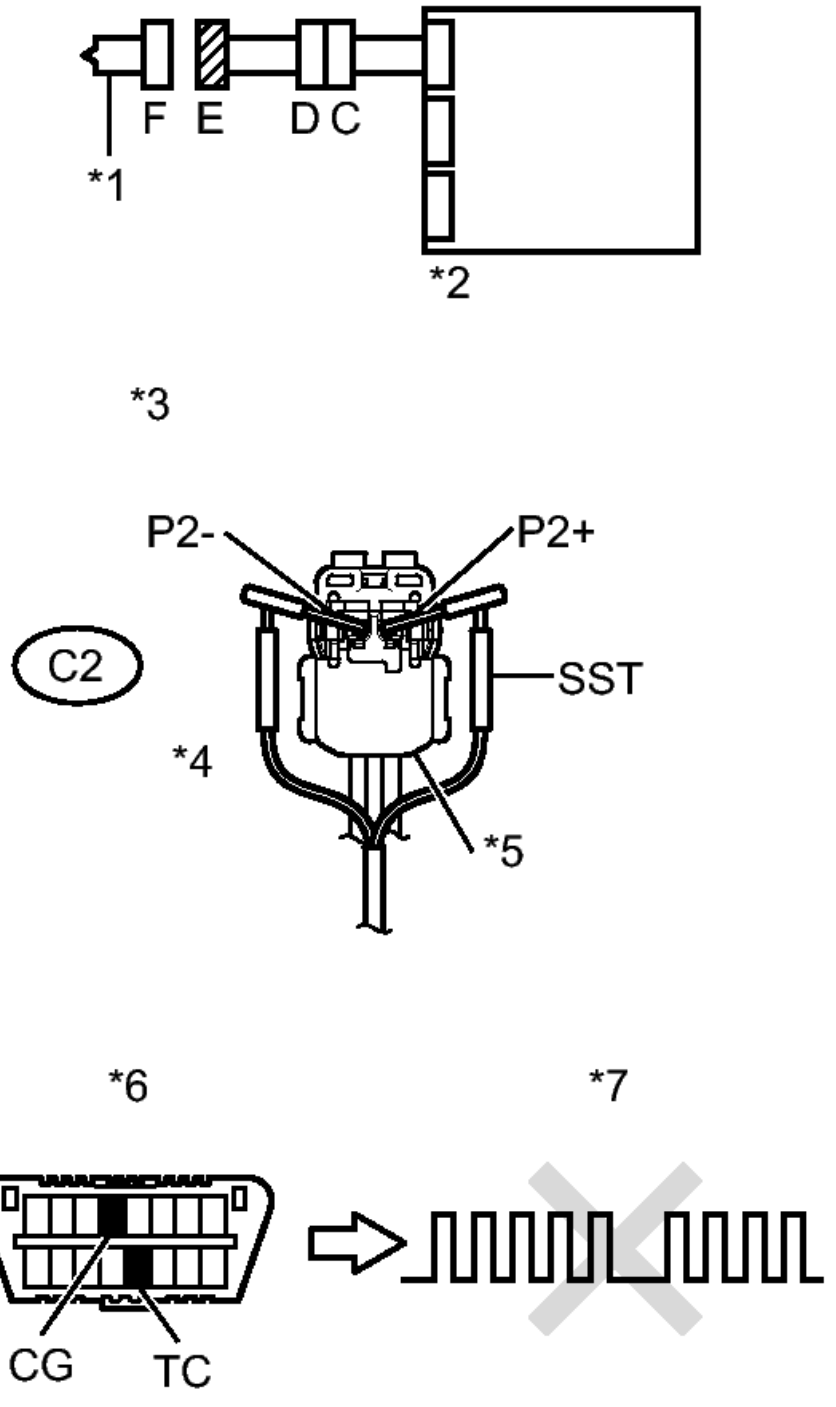


Fig. 102: Checking Front Passenger Airbag Assembly (Front Passenger Side Squib 2nd Step) Using SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Connect SST (resistance 2.1 ohms) to connector E (black connector).

WARNING: 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.

NOTE:

- **Do not forcibly insert SST into the terminals of the connector when connecting.**
- **Insert SST straight into the terminals of the connector.**

c. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
f. Turn the ignition switch off.
g. Turn the ignition switch to ON, and wait for at least 60 seconds.
h. Check the DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1815, B1816, B1817, B1818 or 54 is not output.

TEXT IN ILLUSTRATION

*1	Front Passenger Side Squib 2nd Step
*2	Center Airbag Sensor Assembly
*3	Front view of wire harness connector (to Front Passenger Side Squib 2nd Step)
*4	Connector E
*5	Color: Black
	Front

*6	view of DLC3
*7	DTC 54

HINT:

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

NG --> See step 3

OK --> See step 8

3. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Disconnect the SST from connector E.
   d. Check that the connector is properly connected to the center airbag sensor assembly.

      OK

      The connector is properly connected.

      HINT:

      If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

   e. Disconnect the connector from the center airbag sensor assembly.
   f. Check that the terminal of the connector is not damaged.

      OK

      The terminal is not deformed or damaged.

   g. Check that the short spring for the instrument panel wire connector with the activation prevention mechanism is not deformed or damaged.

      OK

      The short spring is not deformed or damaged.

NG --> REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

4. **CHECK INSTRUMENT PANEL WIRE (NO. 2 INSTRUMENT PANEL WIRE - CENTER AIRBAG SENSOR ASSEMBLY)**

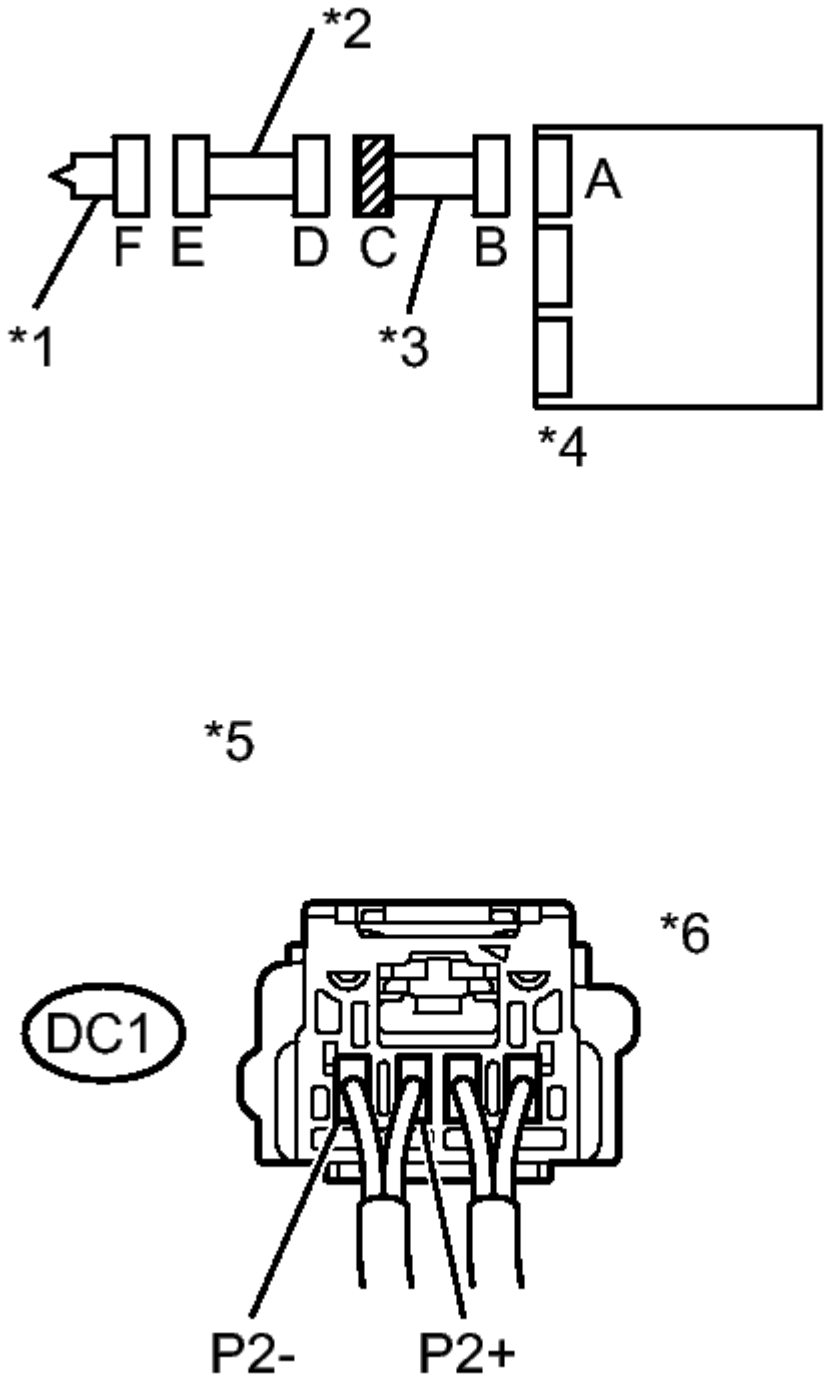


Fig. 103: Checking Instrument Panel Wire (No. 2 Instrument Panel Wire - Center Airbag Sensor Assembly)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.
c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
DC1-3 (P2+) - Body ground	Ignition switch ON	Below 1 V
DC1-4 (P2-) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Front Passenger Side Squib 2nd Step
*2	No. 2 Instrument Panel Wire
*3	Instrument Panel Wire
*4	Center Airbag Sensor Assembly
*5	Rear view of wire harness connector (to No. 2 Instrument Panel Wire)
*6	Connector C

d. Turn the ignition switch off.
e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
DC1-3 (P2+) - DC1-4 (P2-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B. Refer to **DIAGNOSIS SYSTEM** .
h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
DC1-3 (P2+) - DC1-4 (P2-)	Always	1 Mohms or higher
DC1-3 (P2+) - Body ground	Always	1 Mohms or higher
DC1-4 (P2-) - Body ground	Always	1 Mohms or higher

i. Restore the released activation prevention mechanism of connector B to the original condition.

NG --> REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

5. **CHECK CONNECTOR**
   a. Check that the connectors that link the instrument panel wire and No. 2 instrument panel wire harness are properly connected.

      OK

The connectors are properly connected.

HINT:

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

b. Disconnect the connectors that link the instrument panel wire and No. 2 instrument panel wire.
c. Check that the terminals of the connectors are not damaged.

OK

The terminals are not deformed or damaged.

d. Check that the short spring for the No. 2 instrument panel wire assembly connector with the activation prevention mechanism is not deformed or damaged.

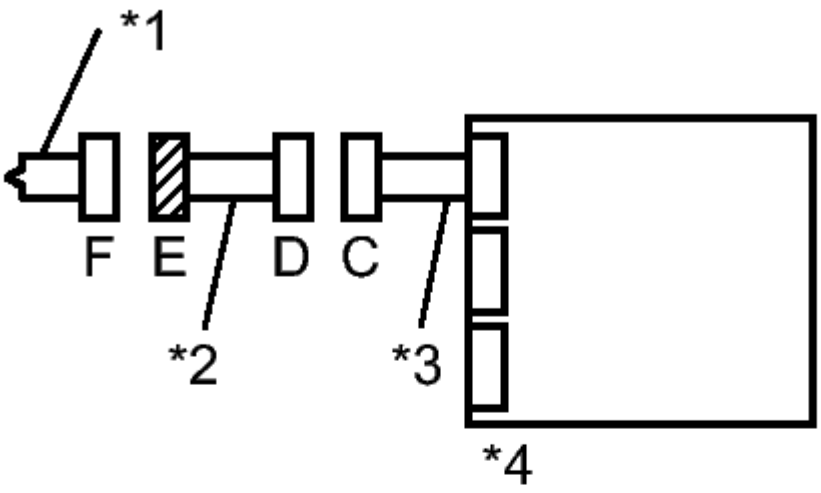
OK

The short spring is not deformed or damaged.

NG --> REPLACE NO. 2 INSTRUMENT PANEL WIRE OR INSTRUMENT PANEL WIRE

OK: Go to next step

6. **CHECK NO. 2 INSTRUMENT PANEL WIRE (FRONT PASSENGER SIDE SQUIB - INSTRUMENT PANEL WIRE)**
   a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.



*5

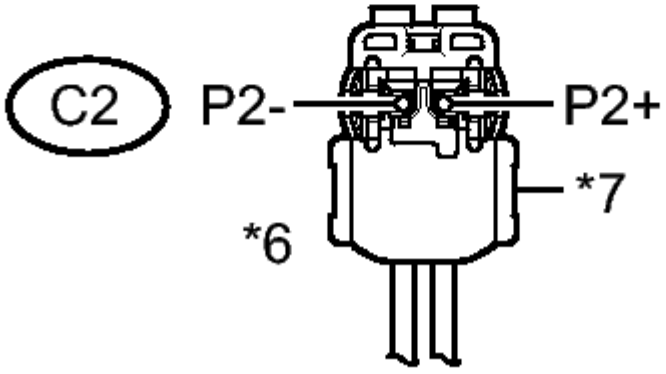


Fig. 104: Checking No. 2 Instrument Panel Wire (Front Passenger Side Squib - Instrument Panel Wire)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Turn the ignition switch to ON.

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
C2-2 (P2+) - Body ground	Ignition switch ON	Below 1 V
C2-1 (P2-) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Front Passenger Side Squib 2nd Step
*2	No. 2 Instrument Panel Wire
*3	Instrument Panel Wire
*4	Center Airbag Sensor Assembly
*5	Front view of wire harness connector (to Front Passenger Side Squib 2nd Step)
*6	Connector E
*7	Color: Black

d. Turn the ignition switch off.

e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

f. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
C2-2 (P2+) - C2-1 (P2-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector D. Refer to **DIAGNOSIS SYSTEM** .

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
C2-2 (P2+) - C2-1 (P2-)	Always	1 Mohms or higher
C2-2 (P2+) - Body ground	Always	1 Mohms or higher
C2-1 (P2-) - Body ground	Always	1 Mohms or higher

i. Restore the released activation prevention mechanism of connector D to the original condition.

NG --> REPLACE NO. 2 INSTRUMENT PANEL WIRE

OK: Go to next step

7. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**

a. Connect the connectors to the front passenger airbag assembly, the No. 2 instrument panel wire, the instrument panel wire and the center airbag sensor assembly.

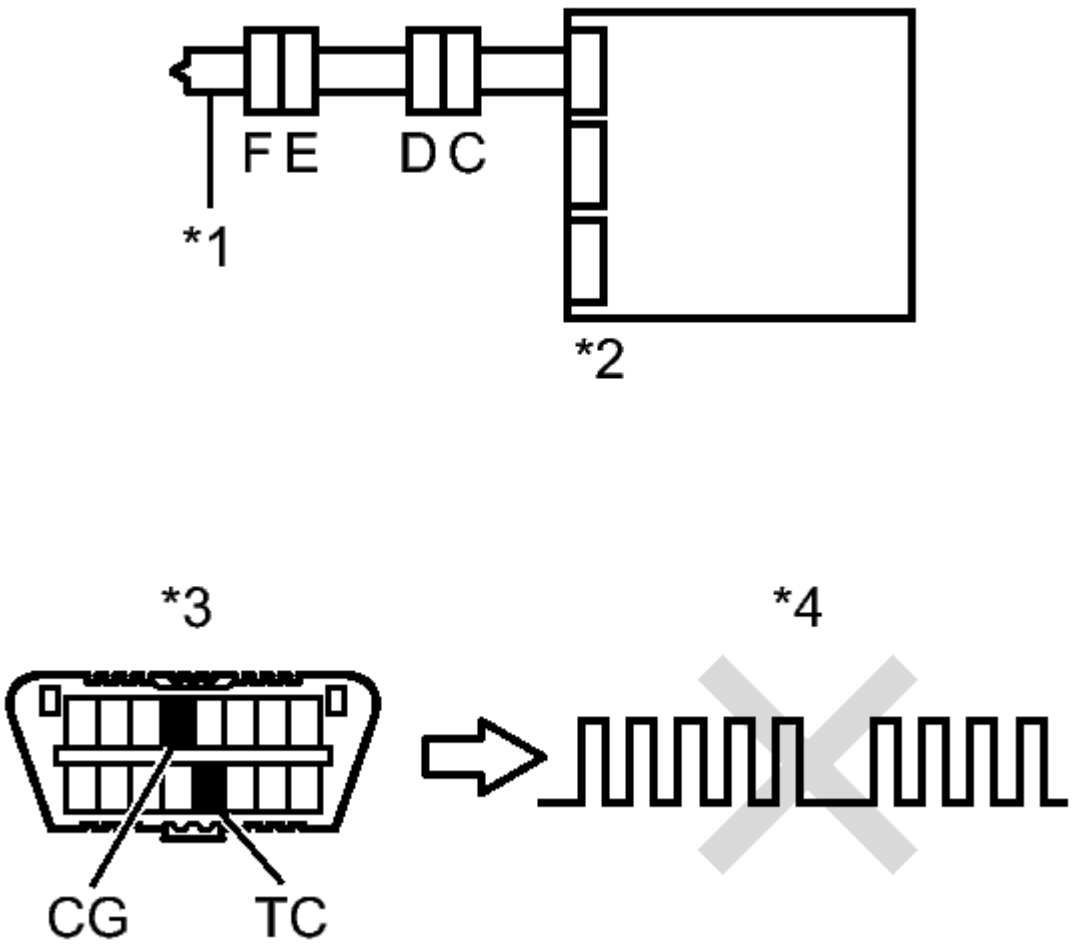


Fig. 105: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check the DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1815, B1816, B1817, B1818 or 54 is not output.

TEXT IN ILLUSTRATION

*1	Front Passenger Side Squib 2nd Step
*2	Center Airbag Sensor Assembly
*3	Front view of DLC3
*4	DTC 54

HINT:

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

NG --> See step 9

OK --> See step 10

8. **REPLACE FRONT PASSENGER AIRBAG ASSEMBLY. Refer to REMOVAL**
9. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
10. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**

DTC B1820/55: SHORT IN SIDE SQUIB RH CIRCUIT; DTC B1821/55: OPEN IN SIDE SQUIB RH CIRCUIT; DTC B1822/55: SHORT TO GND IN SIDE SQUIB RH CIRCUIT; DTC B1823/55: SHORT TO B+ IN SIDE SQUIB RH CIRCUIT

DESCRIPTION

The side squib RH circuit consists of the center airbag sensor assembly and the front seat side airbag assembly RH.

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

These DTCs are recorded when a malfunction is detected in the side squib RH circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1820/55	When one of following conditions is met: • The center airbag sensor assembly receives a line short circuit signal 5 times in the side squib RH circuit	• No. 2 floor wire • Front seat side airbag

	during primary check. • Side squib RH malfunction • Center airbag sensor assembly malfunction	assembly RH (Side squib RH) • Center airbag sensor assembly
B1821/55	When one of following conditions is met: • The center airbag sensor assembly receives an open circuit signal in the side squib RH circuit for 2 seconds. • Side squib RH malfunction • Center airbag sensor assembly malfunction	• No. 2 floor wire • Front seat side airbag assembly RH (Side squib RH) • Center airbag sensor assembly
B1822/55	When one of following conditions is met: • The center airbag sensor assembly receives a short circuit to ground signal in the side squib RH circuit for 0.5 seconds. • Side squib RH malfunction • Center airbag sensor assembly malfunction	• No. 2 floor wire • Front seat side airbag assembly RH (Side squib RH) • Center airbag sensor assembly
B1823/55	When one of following conditions is met: • The center airbag sensor assembly receives a short circuit to B+ signal in the side squib RH circuit for 0.5 seconds. • Side squib RH malfunction • Center airbag sensor assembly malfunction	• No. 2 floor wire • Front seat side airbag assembly RH (Side squib RH) • Center airbag sensor assembly

WIRING DIAGRAM

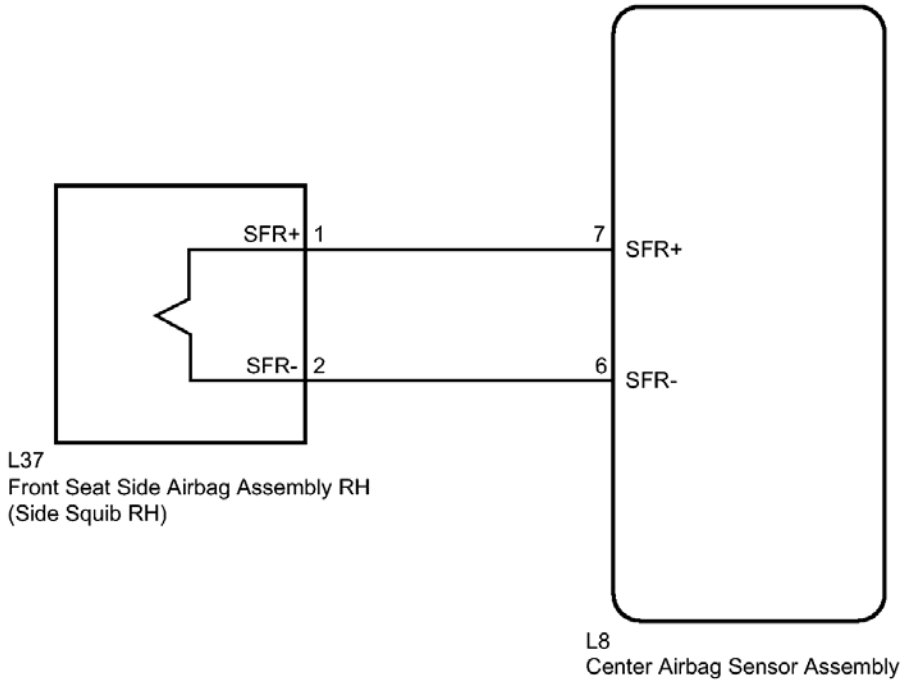


Fig. 106: Side Squib RH Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting Check Mode (signal check) with the Techstream. Refer to **CHECK MODE PROCEDURE** .
- After selecting Check Mode (signal check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on various types of roads. Refer to **DIAGNOSIS SYSTEM** .

PROCEDURE

1. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the front seat side airbag assembly RH.

   OK

The connector is properly connected.

HINT:

If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

d. Disconnect the connector from the front seat side airbag assembly RH.
e. Check that the terminal of the connector is not damaged.

OK

The terminal is not deformed or damaged.

NG --> REPLACE NO. 2 FLOOR WIRE

OK: Go to next step

2. **CHECK FRONT SEAT SIDE AIRBAG ASSEMBLY RH (SIDE SQUIB RH)**
   - **SST: 09843-18061**

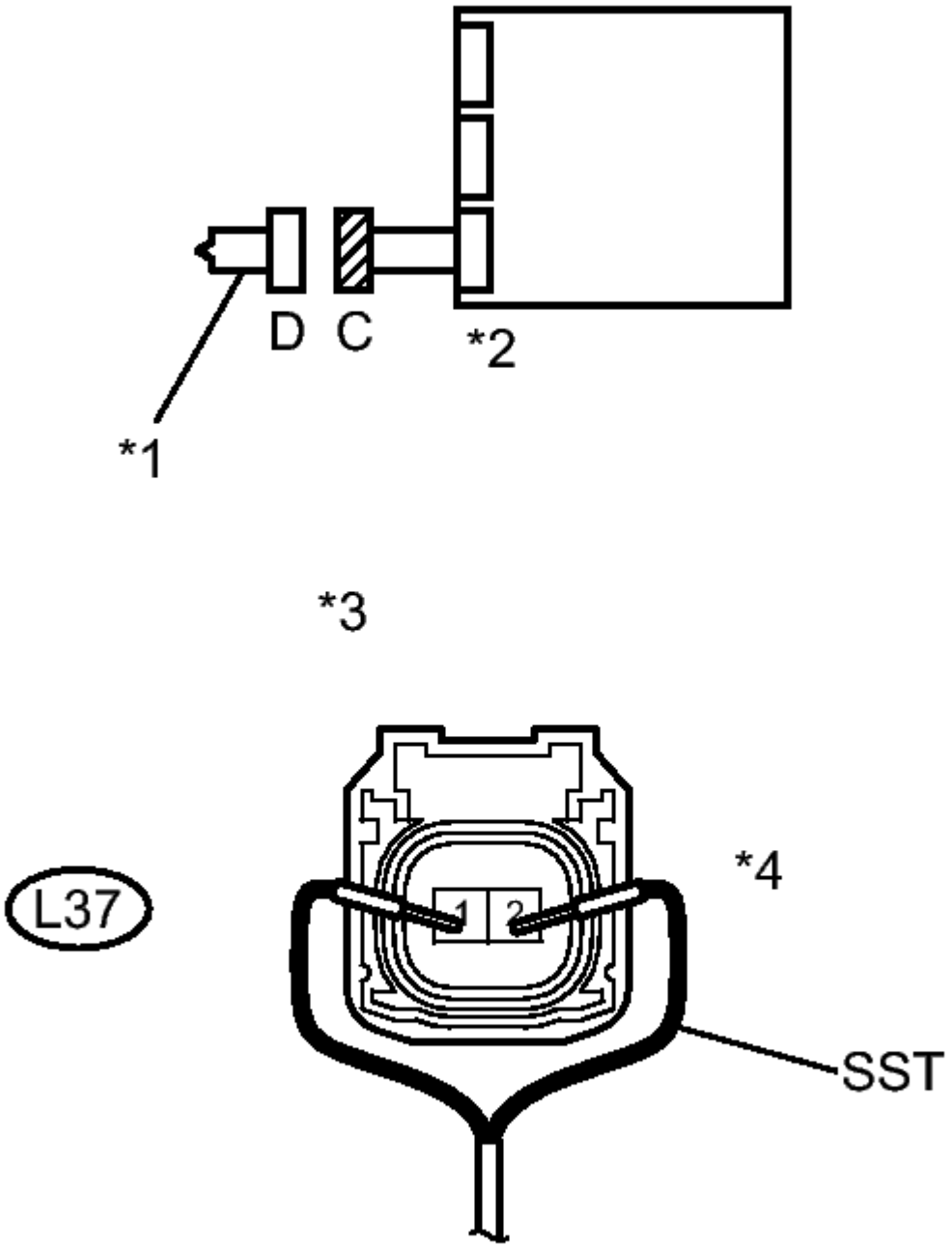


Fig. 107: Checking Front Seat Side Airbag Assembly RH (Side Squib RH) Using SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect SST (resistance: 2.1 ohms) to connector C.

WARNING: Never connect the tester to the front seat side airbag assembly RH (side squib RH) for measurement, as this may lead to a serious injury due to airbag deployment.

NOTE:

- **Do not forcibly insert SST into the terminals of the connector when connecting SST.**
- **Insert SST straight into the terminals of the connector.**

b. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1820, B1821, B1822, B1823 or 55 is not output.

TEXT IN ILLUSTRATION

*1	Side Squib RH
*2	Center Airbag Sensor Assembly
*3	Front view of wire harness connector (to Side Squib RH)
*4	Connector C

HINT:

DTCs other than B1820, B1821, B1822, B1823 and 55 may be output at this time, but they are not related to this check.

NG --> See step 3

OK --> REPLACE FRONT SEAT SIDE AIRBAG ASSEMBLY RH (SIDE SQUIB RH)

3. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Disconnect SST from connector C.
   d. Check that the connector is properly connected to the center airbag sensor assembly.

      OK

      The connector is properly connected.

   e. Disconnect the connector from the center airbag sensor assembly.
   f. Check that the terminal of the connector is not damaged.

      OK

      The terminal is not deformed or damaged.

   g. Check that the short spring for the No. 2 floor wire connector with the activation prevention mechanism is not deformed or damaged.

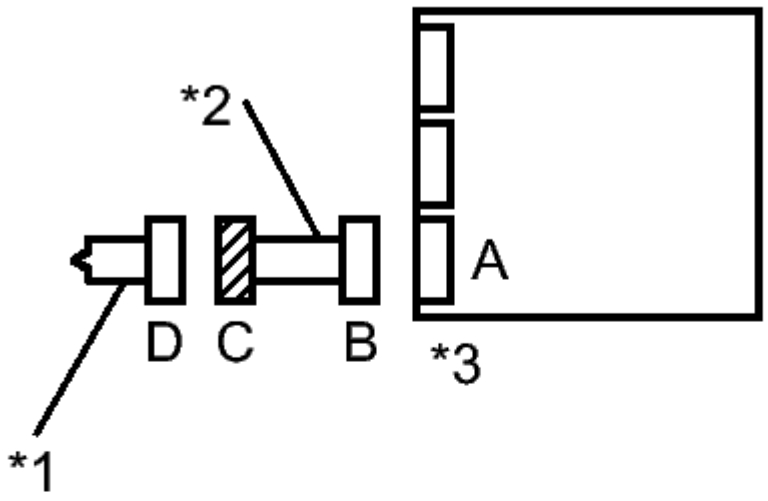
      OK

      The short spring is not deformed or damaged.

   NG --> REPLACE NO. 2 FLOOR WIRE

   OK: Go to next step

4. **CHECK NO. 2 FLOOR WIRE (SIDE SQUIB RH - CENTER AIRBAG SENSOR ASSEMBLY)**



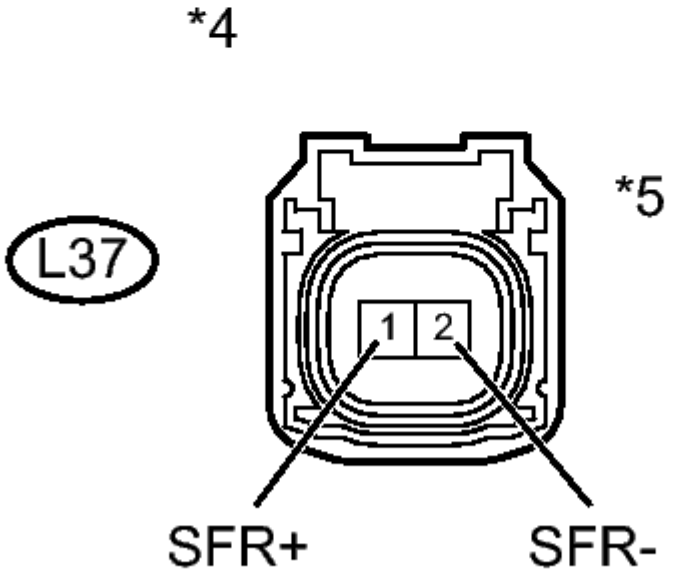


Fig. 108: Checking No. 2 Floor Wire (Side Squib RH - Center Airbag Sensor Assembly)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
L37-1 (SFR+) - Body ground	Ignition switch ON	Below 1 V
L37-2 (SFR-) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Side Squib RH
*2	No. 2 Floor Wire
*3	Center Airbag Sensor Assembly
*4	Front view of wire harness connector (to Side Squib RH)
*5	Connector C

d. Turn the ignition switch off.
e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
L37-1		

(SFR+) - L37-2 (SFR-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B. Refer to **DIAGNOSIS SYSTEM** .

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
L37-1 (SFR+) - L37-2 (SFR-)	Always	1 Mohms or higher
L37-1 (SFR+) - Body ground	Always	1 Mohms or higher
L37-2 (SFR-) - Body ground	Always	1 Mohms or higher

NG --> REPLACE NO. 2 FLOOR WIRE

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**

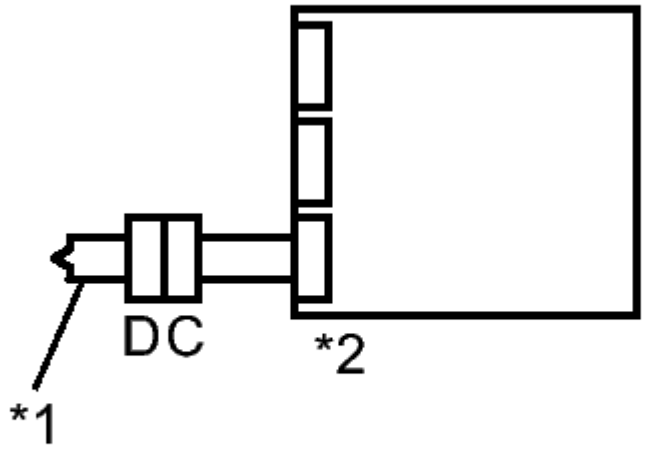


Fig. 109: Identifying Center Airbag Sensor Assembly Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Restore the released activation prevention mechanism of connector B to the original condition.
b. Connect the connectors to the front seat side airbag assembly RH and the center airbag sensor assembly.
c. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
f. Turn the ignition switch off.
g. Turn the ignition switch to ON, and wait for at least 60 seconds.
h. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1820, B1821, B1822, B1823 or 55 is not output.

TEXT IN ILLUSTRATION

*1	Side Squib RH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1820, B1821, B1822, B1823 and 55 may be output at this time, but they are not related to this check.

NG --> See step 6

OK --> See step 7

6. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
7. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**

DTC B1825/56: SHORT IN SIDE SQUIB LH CIRCUIT; DTC B1826/56: OPEN IN SIDE SQUIB LH CIRCUIT; DTC B1827/56: SHORT TO GND IN SIDE SQUIB LH CIRCUIT; DTC B1828/56: SHORT TO B+ IN SIDE SQUIB LH CIRCUIT

DESCRIPTION

The side squib LH circuit consists of the center airbag sensor assembly and the front seat side airbag assembly LH.

This circuit instructs the SRS to deploy when deployment conditions are met.

These DTCs are recorded when a malfunction is detected in the side squib LH circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1825/56	When one of following conditions is met: • The center airbag sensor assembly receives a line short circuit signal 5 times in the side squib LH circuit during primary check. • Side squib LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat side airbag assembly LH (Side squib LH) • Center airbag sensor assembly
B1826/56	When one of following conditions is met: • The center airbag sensor assembly receives an open circuit signal in the side squib LH circuit for 2 seconds. • Side squib LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat side airbag assembly LH (Side squib LH) • Center airbag sensor assembly
	When one of following conditions is met:	

B1827/56	• The center airbag sensor assembly receives a short circuit to ground signal in the side squib LH circuit for 0.5 seconds. • Side squib LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat side airbag assembly LH (Side squib LH) • Center airbag sensor assembly
B1828/56	When one of following conditions is met: • The center airbag sensor assembly receives a short circuit to B+ signal in the side squib LH circuit for 0.5 seconds. • Side squib LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat side airbag assembly LH (Side squib LH) • Center airbag sensor assembly

WIRING DIAGRAM

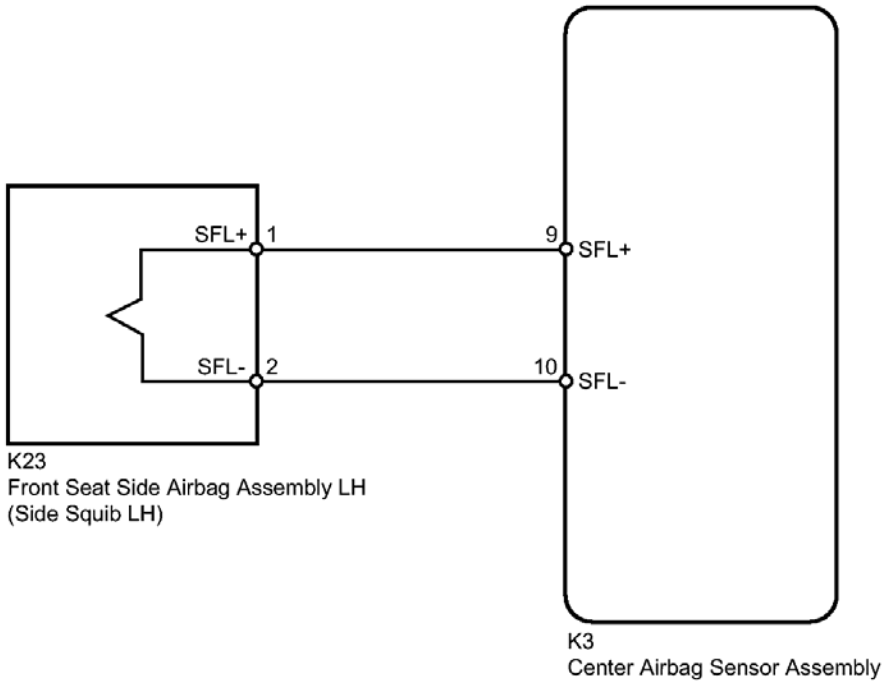


Fig. 110: Front Seat Side Airbag Assembly LH (Side Squib LH) - Wiring Diagram

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting Check Mode (signal check) with the Techstream. Refer to **CHECK MODE PROCEDURE** .
- After selecting Check Mode (signal check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on various types of roads. Refer to **DIAGNOSIS SYSTEM** .

PROCEDURE

1. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the front seat side airbag assembly LH.

      OK

      The connector is properly connected.

      HINT:

      If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

   d. Disconnect the connector from the front seat side airbag assembly LH.
   e. Check that the terminal of the connector is not damaged.

      OK

      The terminal is not deformed or damaged.

   NG --> REPLACE FLOOR WIRE

   OK: Go to next step

2. **CHECK FRONT SEAT SIDE AIRBAG ASSEMBLY LH (SIDE SQUIB LH)**
   - **SST: 09843-18061**

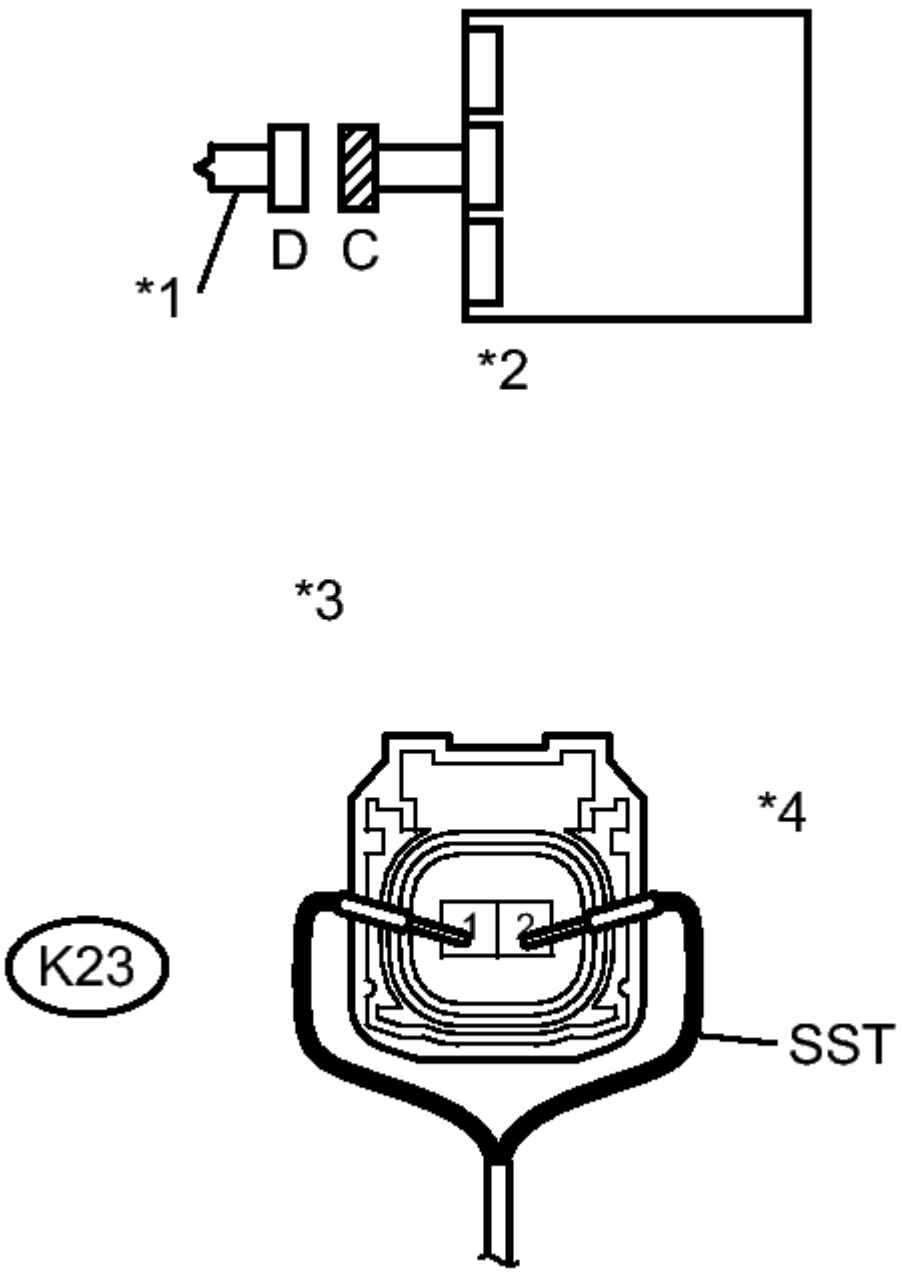


Fig. 111: Checking Front Seat Side Airbag Assembly LH (Side Squib LH) Using SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect SST (resistance: 2.1 ohms) to connector C.

WARNING: Never connect the tester to the front seat side airbag assembly LH (side squib LH) for measurement, as this may lead to a serious injury due to airbag deployment.

NOTE:

- **Do not forcibly insert SST into the terminals of the connector when connecting SST.**
- **Insert SST straight into the terminals of the connector.**

b. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1825, B1826, B1827, B1828 or 56 is not output.

TEXT IN ILLUSTRATION

*1	Side Squib LH
*2	Center Airbag Sensor Assembly
*3	Front view of wire harness connector (to Side Squib LH)
*4	Connector C

HINT:

DTCs other than B1825, B1826, B1827, B1828 and 56 may be output at this time, but they are not related to this check.

NG --> See step 3

OK --> REPLACE FRONT SEAT SIDE AIRBAG ASSEMBLY LH (SIDE SQUIB LH)

3. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Disconnect SST from connector C.
   d. Check that the connector is properly connected to the center airbag sensor assembly.

      OK

      The connector is properly connected.

   e. Disconnect the connector from the center airbag sensor assembly.
   f. Check that the terminal of the connector is not damaged.

      OK

      The terminal is not deformed or damaged.

   g. Check that the short spring for the floor wire connector with the activation prevention mechanism is not deformed or damaged.

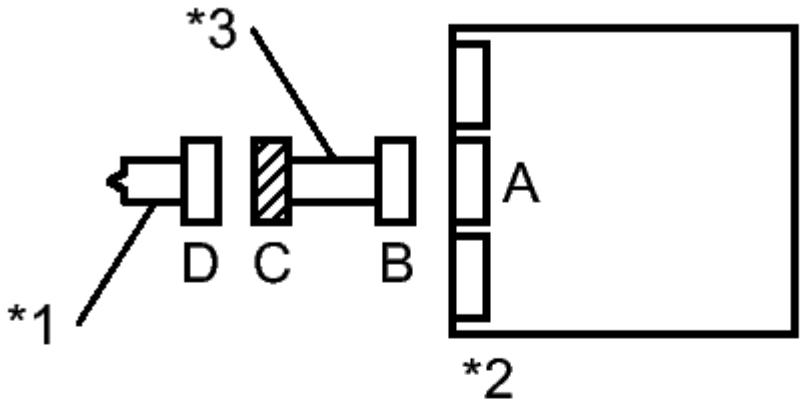
      OK

      The short spring is not deformed or damaged.

   NG --> REPLACE FLOOR WIRE

   OK: Go to next step

4. **CHECK FLOOR WIRE (SIDE SQUIB LH - CENTER AIRBAG SENSOR ASSEMBLY)**



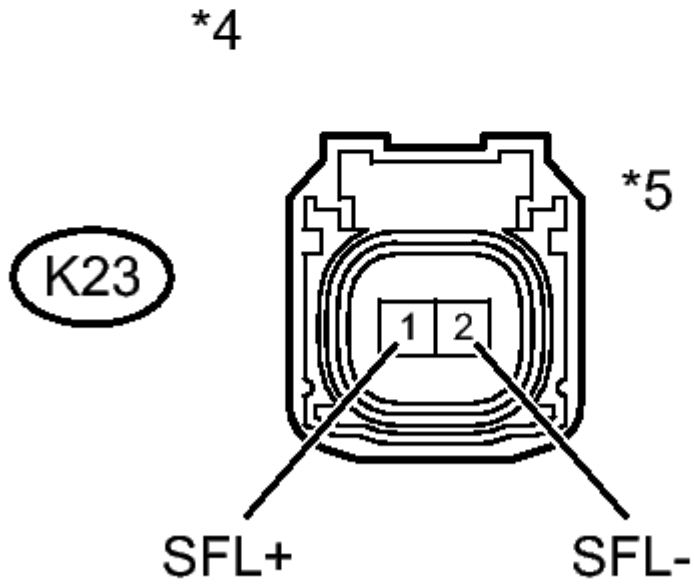


Fig. 112: Checking Floor Wire (Side Squib LH - Center Airbag Sensor Assembly)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
K23-1 (SFL+) - Body ground	Ignition switch ON	Below 1 V
K23-2 (SFL-) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Side Squib LH
*2	Center Airbag Sensor Assembly
*3	Floor Wire
*4	Front view of wire harness connector (to Side Squib LH)
*5	Connector C

d. Turn the ignition switch off.
e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
K23-1 (SFL+) -		Below 1

K23-2 (SFL-)	Always	ohms

g. Release the activation prevention mechanism built into connector B. Refer to **DIAGNOSIS SYSTEM** .

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
K23-1 (SFL+) - K23-2 (SFL-)	Always	1 Mohms or higher
K23-1 (SFL+) - Body ground	Always	1 Mohms or higher
K23-2 (SFL-) - Body ground	Always	1 Mohms or higher

NG --> REPLACE FLOOR WIRE

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**

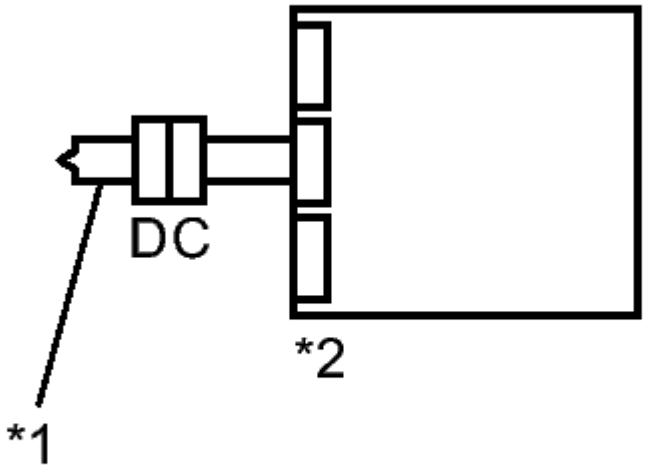


Fig. 113: Identifying Center Airbag Sensor Assembly Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Restore the released activation prevention mechanism of connector B to the original condition.
b. Connect the connectors to the front seat side airbag assembly LH and the center airbag sensor assembly.
c. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
f. Turn the ignition switch off.
g. Turn the ignition switch to ON, and wait for at least 60 seconds.
h. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1825, B1826, B1827, B1828 or 56 is not output.

TEXT IN ILLUSTRATION

*1	Side Squib LH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1825, B1826, B1827, B1828 and 56 may be output at this time, but they are not related to this check.

NG --> See step 6

OK --> See step 7

6. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
7. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**

DTC B1830/57: SHORT IN CURTAIN SHIELD SQUIB RH CIRCUIT; DTC B1831/57: OPEN IN CURTAIN SHIELD SQUIB RH CIRCUIT; DTC B1832/57: SHORT TO GND IN CURTAIN SHIELD SQUIB RH CIRCUIT; DTC B1833/57: SHORT TO B+ IN CURTAIN SHIELD SQUIB RH CIRCUIT

DESCRIPTION

The curtain shield squib RH circuit consists of the center airbag sensor assembly and the curtain shield airbag assembly RH.

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

These DTCs are recorded when a malfunction is detected in the curtain shield squib RH circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1830/57	When one of following conditions is met: • The center airbag sensor assembly receives a line short circuit signal 5 times in the curtain shield squib RH circuit during primary check. • Curtain shield squib RH malfunction • Center airbag sensor assembly malfunction	• No. 2 floor wire • Curtain shield airbag assembly RH (Curtain shield squib RH) • Center airbag sensor assembly
B1831/57	When one of following conditions is met: • The center airbag sensor assembly receives an open circuit signal in the curtain shield squib RH circuit for 2 seconds. • Curtain shield squib RH malfunction • Center airbag sensor assembly malfunction	• No. 2 floor wire • Curtain shield airbag assembly RH (Curtain shield squib RH) • Center airbag sensor assembly
	When one of following conditions is met:	

B1832/57	• The center airbag sensor assembly receives a short circuit to ground signal in the curtain shield squib RH circuit for 0.5 seconds. • Curtain shield squib RH malfunction • Center airbag sensor assembly malfunction	• No. 2 floor wire • Curtain shield airbag assembly RH (Curtain shield squib RH) • Center airbag sensor assembly
B1833/57	When one of following conditions is met: • The center airbag sensor assembly receives a short circuit to B+ signal in the curtain shield squib RH circuit for 0.5 seconds. • Curtain shield squib RH malfunction • Center airbag sensor assembly malfunction	• No. 2 floor wire • Curtain shield airbag assembly RH (Curtain shield squib RH) • Center airbag sensor assembly

WIRING DIAGRAM

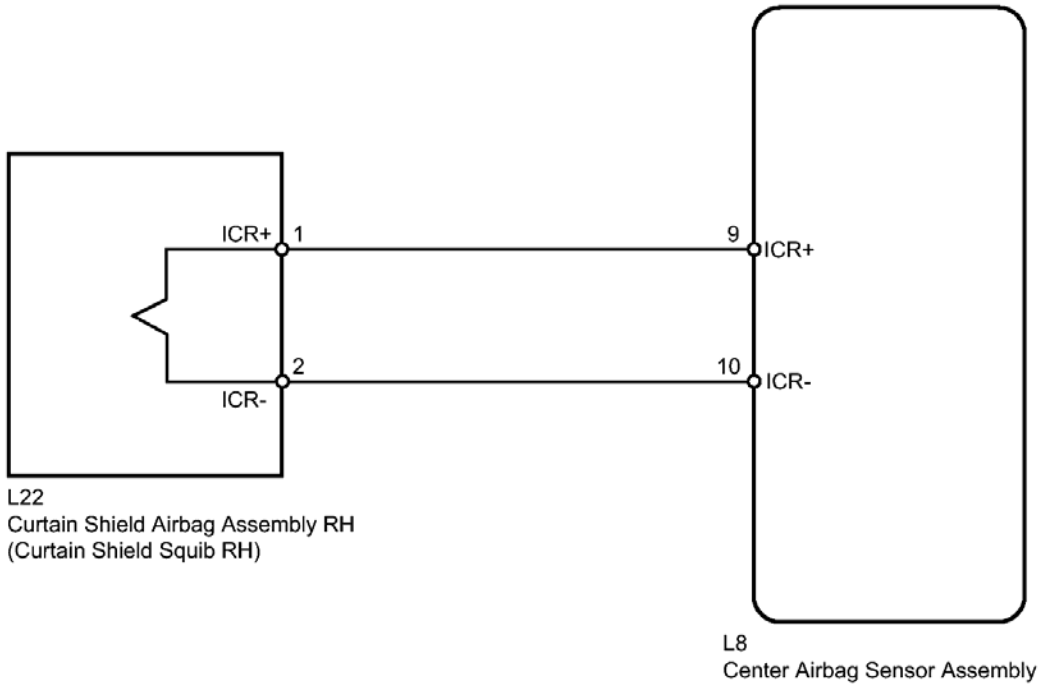


Fig. 114: Curtain Shield Airbag Assembly RH (Curtain Shield Squib RH) - Wiring Diagram

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting Check Mode (signal check) with the Techstream. Refer to **CHECK MODE PROCEDURE** .
- After selecting Check Mode (signal check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on various types of roads. Refer to **DIAGNOSIS SYSTEM** .

PROCEDURE

1. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the curtain shield airbag assembly RH.

      OK

      The connector is properly connected.

      HINT:

      If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

   d. Disconnect the connector from the curtain shield airbag assembly RH.
   e. Check that the No. 2 floor wire connector (on the curtain shield airbag assembly RH side) is not damaged.

      OK

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

   NG --> REPLACE NO. 2 FLOOR WIRE

   OK: Go to next step

2. **CHECK CURTAIN SHIELD AIRBAG ASSEMBLY RH (CURTAIN SHIELD SQUIB RH)**
   - **SST: 09843-18061**

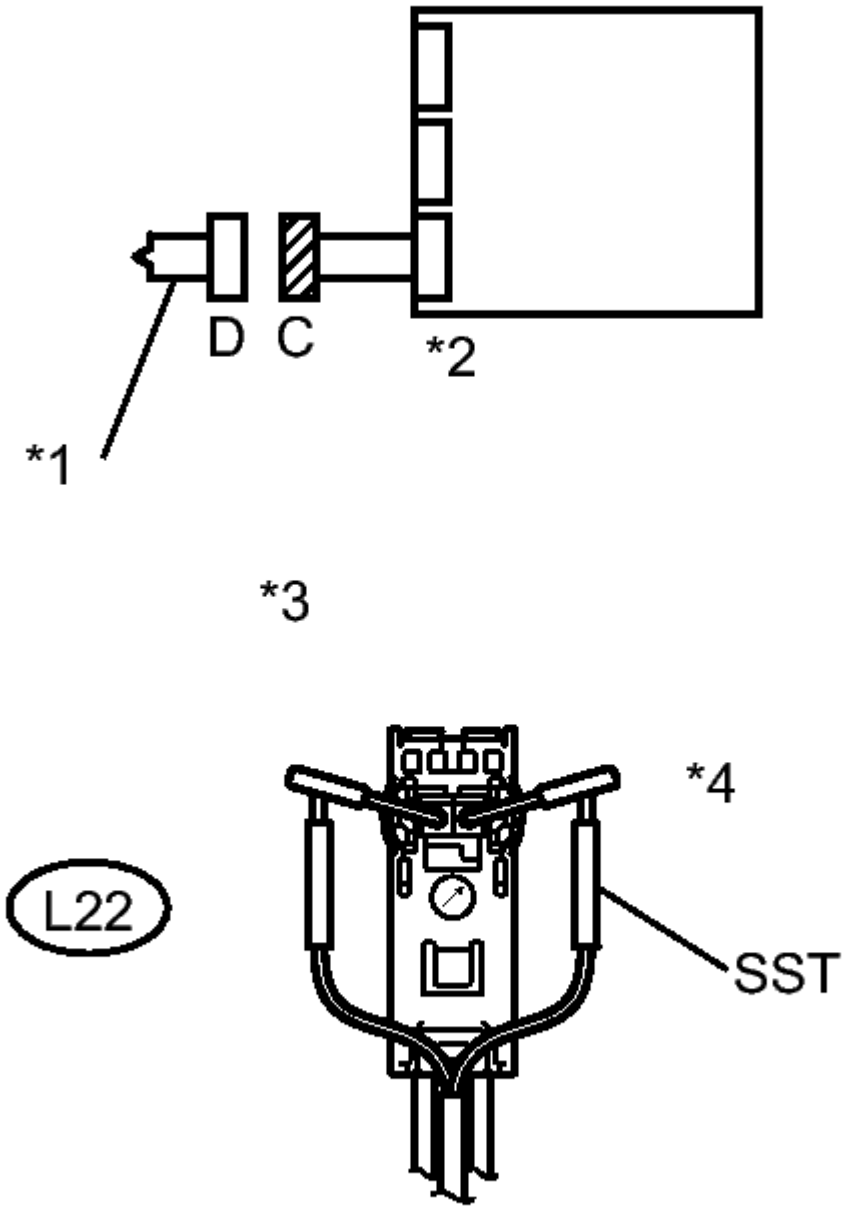


Fig. 115: Checking Curtain Shield Airbag Assembly RH (Curtain Shield Squib RH) Using SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect SST (resistance: 2.1 ohms) to connector C.

WARNING: Never connect the tester to the curtain shield airbag assembly RH (curtain shield squib RH) for measurement, as this may lead to a serious injury due to airbag deployment.

NOTE:

- **Do not forcibly insert SST into the terminals of the connector when connecting SST.**
- **Insert SST straight into the terminals of the connector.**

b. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1830, B1831, B1832, B1833 or 57 is not output.

TEXT IN ILLUSTRATION

*1	Curtain Shield Squib RH
*2	Center Airbag Sensor Assembly
*3	Front view of wire harness connector (to Curtain Shield Squib RH)
*4	Connector C

HINT:

DTCs other than B1830, B1831, B1832, B1833 and 57 may be output at this time, but they are not related to this check.

NG --> See step 3

OK --> See step 6

3. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Disconnect SST from connector C.
   d. Check that the connector is properly connected to the center airbag sensor assembly.

      OK

      The connector is properly connected.

      HINT:

      If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

   e. Disconnect the connector from the center airbag sensor assembly.
   f. Check that the terminal of the connector is not damaged.

      OK

      The terminal is not deformed or damaged.

   g. Check that the short spring for the No. 2 floor wire connector with the activation prevention mechanism is not deformed or damaged.

      OK

      The short spring is not deformed or damaged.

NG --> REPLACE NO. 2 FLOOR WIRE

OK: Go to next step

4. **CHECK NO. 2 FLOOR WIRE (CURTAIN SHIELD SQUIB RH - CENTER AIRBAG SENSOR ASSEMBLY)**

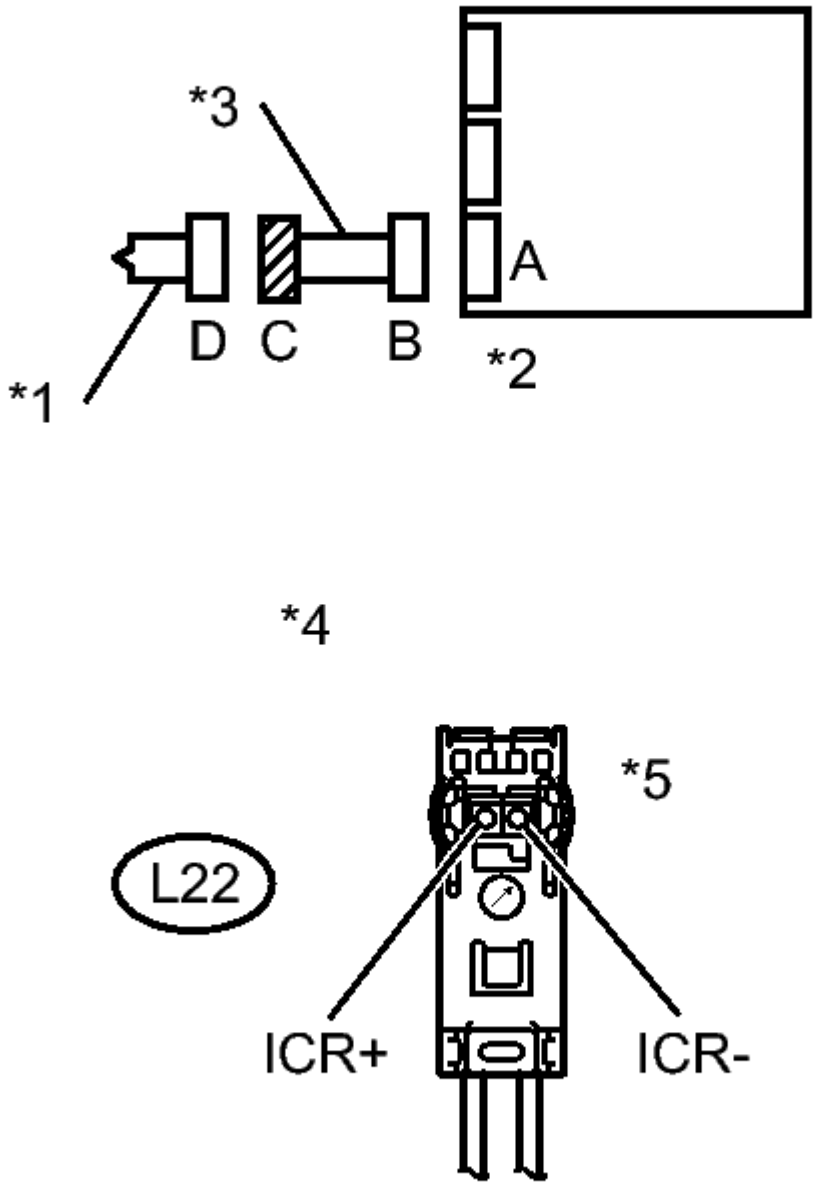


Fig. 116: Checking No. 2 Floor Wire (Curtain Shield Squib RH - Center Airbag Sensor Assembly)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
L22-2 (ICR-) - Body ground	Ignition switch ON	Below 1 V
L22-1 (ICR+) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Curtain Shield Squib RH
*2	Center Airbag Sensor Assembly
*3	No. 2 Floor Wire
*4	Front view of wire harness connector (to Curtain Shield Squib RH)
*5	Connector C

d. Turn the ignition switch off.
e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
L22-2 (ICR-) - L22-1 (ICR+)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B. Refer to **DIAGNOSIS SYSTEM** .

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
L22-2 (ICR-) - L22-1 (ICR+)	Always	1 Mohms or higher
L22-2 (ICR-) - Body ground	Always	1 Mohms or higher
L22-1 (ICR+) - Body ground	Always	1 Mohms or higher

NG --> REPLACE NO. 2 FLOOR WIRE

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**

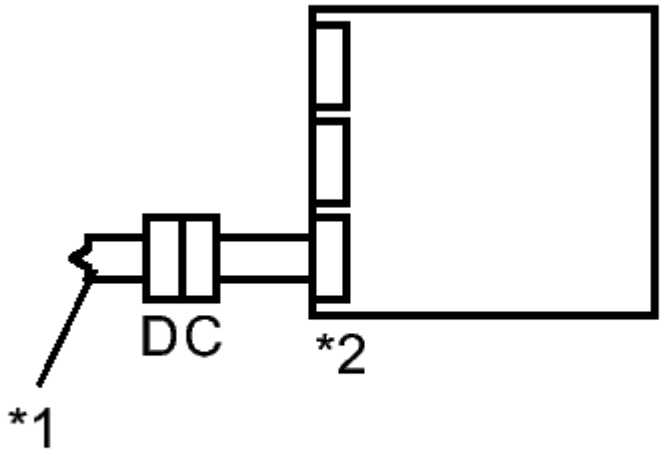


Fig. 117: Identifying Curtain Shield Airbag Assembly RH Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Restore the released activation prevention mechanism of connector B to the original condition.
b. Connect the connectors to the curtain shield airbag assembly RH and the center airbag sensor assembly.
c. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
f. Turn the ignition switch off.
g. Turn the ignition switch to ON, and wait for at least 60 seconds.
h. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1830, B1831, B1832, B1833 or 57 is not output.

TEXT IN ILLUSTRATION

*1	Curtain Shield Squib RH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1830, B1831, B1832, B1833 and 57 may be output at this time, but they are not related to this check.

NG --> See step 7

OK --> See step 8

6. **REPLACE CURTAIN SHIELD AIRBAG ASSEMBLY RH. Refer to REMOVAL**
7. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
8. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**

DTC B1835/58: SHORT IN CURTAIN SHIELD SQUIB LH CIRCUIT; DTC B1836/58: OPEN IN CURTAIN SHIELD SQUIB LH CIRCUIT; DTC B1837/58: SHORT TO GND IN CURTAIN SHIELD SQUIB LH CIRCUIT; DTC B1838/58: SHORT TO B+ IN CURTAIN SHIELD SQUIB LH CIRCUIT

DESCRIPTION

The curtain shield squib LH circuit consists of the center airbag sensor assembly and the curtain shield airbag assembly LH.

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

These DTCs are recorded when a malfunction is detected in the curtain shield squib LH circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1835/58	When one of following conditions is met: • The center airbag sensor assembly receives a line short circuit signal 5 times in the curtain shield squib LH circuit during primary check. • Curtain shield squib LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Curtain shield airbag assembly LH (Curtain shield squib LH) • Center airbag sensor assembly
B1836/58	When one of following conditions is met: • The center airbag sensor assembly receives an open circuit signal in the curtain shield squib LH circuit for 2 seconds. • Curtain shield squib LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Curtain shield airbag assembly LH (Curtain shield squib LH) • Center airbag sensor assembly

B1837/58	When one of following conditions is met: • The center airbag sensor assembly receives a short circuit to ground signal in the curtain shield squib LH circuit for 0.5 seconds. • Curtain shield squib LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Curtain shield airbag assembly LH (Curtain shield squib LH) • Center airbag sensor assembly
B1838/58	When one of following conditions is met: • The center airbag sensor assembly receives a short circuit to B+ signal in the curtain shield squib LH circuit for 0.5 seconds. • Curtain shield squib LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Curtain shield airbag assembly LH (Curtain shield squib LH) • Center airbag sensor assembly

WIRING DIAGRAM

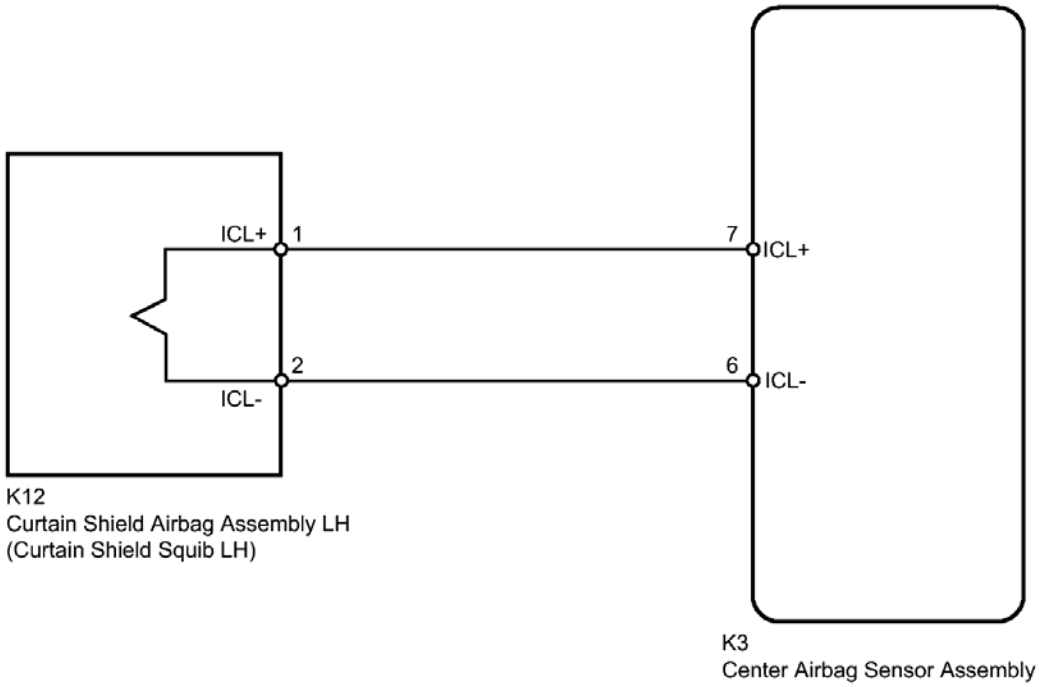


Fig. 118: Curtain Shield Airbag Assembly LH (Curtain Shield Squib LH) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting Check Mode (signal check) with the Techstream. Refer to **CHECK MODE PROCEDURE** .
- After selecting Check Mode (signal check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on various types of roads. Refer to **DIAGNOSIS SYSTEM** .

PROCEDURE

1. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the curtain shield airbag assembly LH.

      OK

      The connector is properly connected.

      HINT:

      If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

   d. Disconnect the connector from the curtain shield airbag assembly LH.
   e. Check that the floor wire connector (on the curtain shield airbag assembly LH side) is not damaged.

      OK

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

   NG --> REPLACE FLOOR WIRE

   OK: Go to next step

2. **CHECK CURTAIN SHIELD AIRBAG ASSEMBLY LH (CURTAIN SHIELD SQUIB LH)**
   - **SST: 09843-18061**

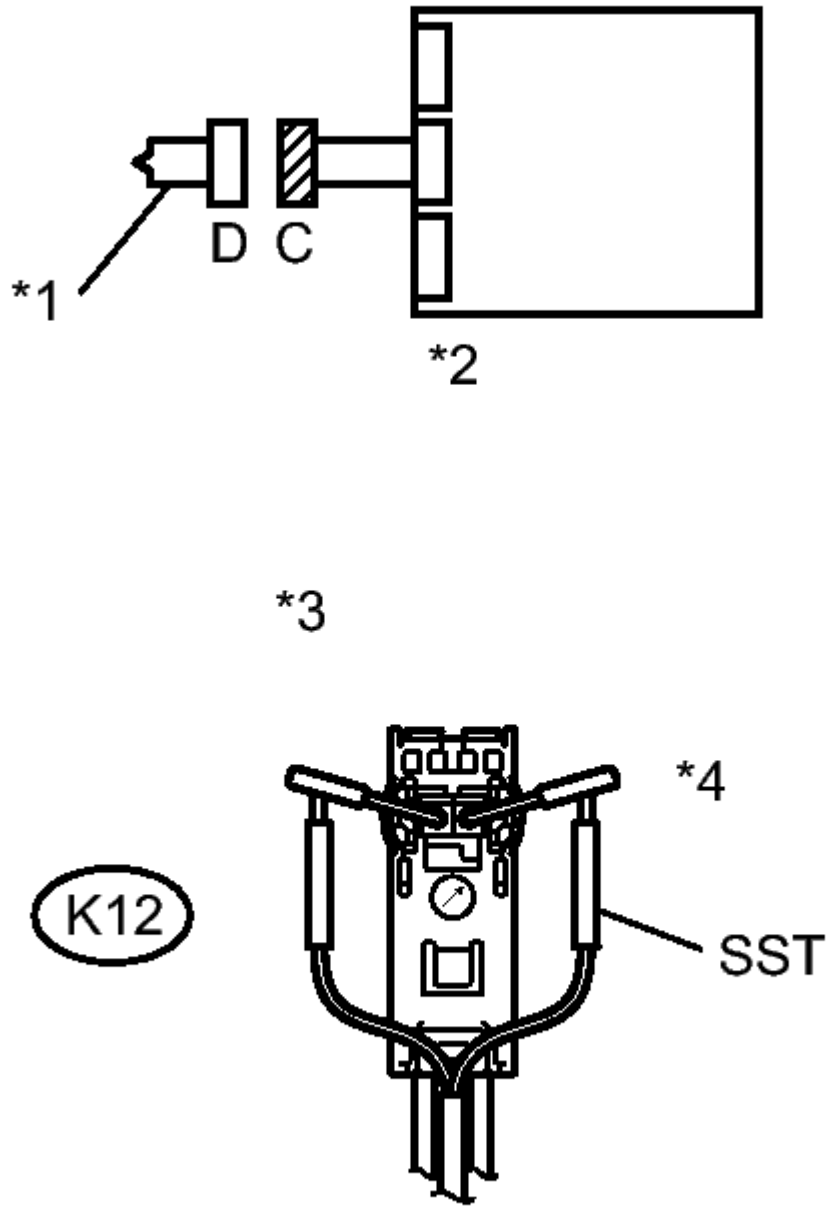


Fig. 119: Checking Curtain Shield Airbag Assembly LH (Curtain Shield Squib LH) Using SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect SST (resistance: 2.1 ohms) to connector C.

WARNING: Never connect the tester to the curtain shield airbag assembly LH (curtain shield squib LH) for measurement, as this may lead to a serious injury due to airbag deployment.

NOTE:

- **Do not forcibly insert SST into the terminals of the connector when connecting SST.**
- **Insert SST straight into the terminals of the connector.**

b. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1835, B1836, B1837, B1838 or 58 is not output.

TEXT IN ILLUSTRATION

*1	Curtain Shield Squib LH
*2	Center Airbag Sensor Assembly
*3	Front view of wire harness connector (to Curtain Shield Squib LH)
*4	Connector C

HINT:

DTCs other than B1835, B1836, B1837, B1838 and 58 may be output at this time, but they are not related to this check.

NG --> See step 3

OK --> See step 6

3. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Disconnect SST from connector C.
   d. Check that the connector is properly connected to the center airbag sensor assembly.

      OK

      The connector is properly connected.

      HINT:

      If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

   e. Disconnect the connector from the center airbag sensor assembly.
   f. Check that the terminal of the connector is not damaged.

      OK

      The terminal is not deformed or damaged.

   g. Check that the short spring for the floor wire connector with the activation prevention mechanism is not deformed or damaged.

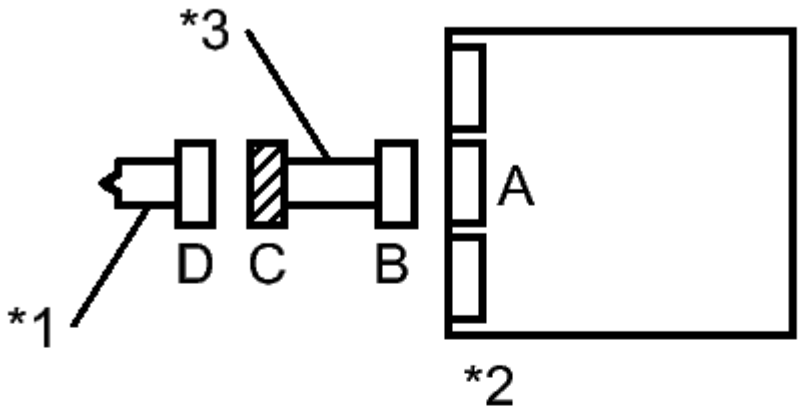
      OK

      The short spring is not deformed or damaged.

NG --> REPLACE FLOOR WIRE

OK: Go to next step

4. **CHECK FLOOR WIRE (CURTAIN SHIELD SQUIB LH - CENTER AIRBAG SENSOR ASSEMBLY)**



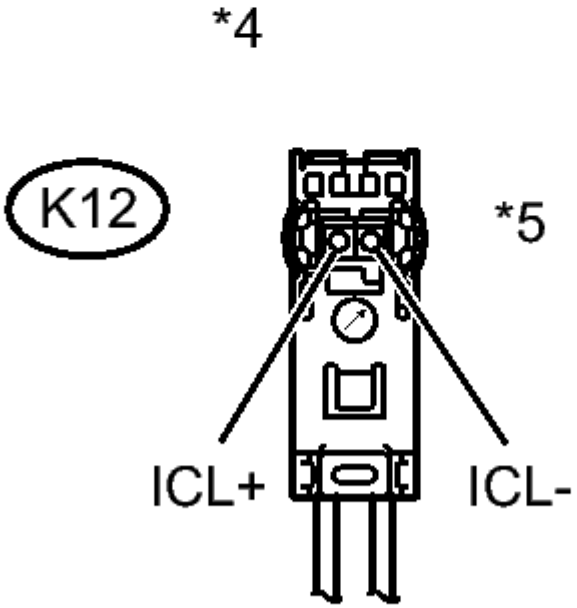


Fig. 120: Checking Floor Wire (Curtain Shield Squib LH - Center Airbag Sensor Assembly)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
K12-2 (ICL-) - Body ground	Ignition switch ON	Below 1 V
K12-1 (ICL+) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Curtain Shield Squib LH
*2	Center Airbag Sensor Assembly
*3	Floor Wire
*4	Front view of wire harness connector (to Curtain Shield Squib LH)
*5	Connector C

d. Turn the ignition switch off.
e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester	Condition	Specified

Connection		Condition
K12-2 (ICL-) - K12-1 (ICL+)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B. Refer to **DIAGNOSIS SYSTEM** .

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
K12-2 (ICL-) - K12-1 (ICL+)	Always	1 Mohms or higher
K12-2 (ICL-) - Body ground	Always	1 Mohms or higher
K12-1 (ICL+) - Body ground	Always	1 Mohms or higher

NG --> REPLACE FLOOR WIRE

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**

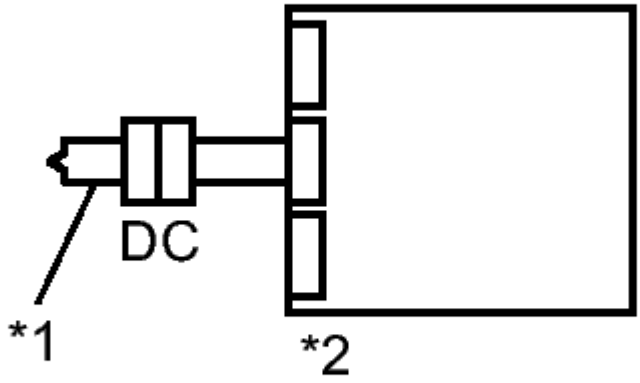


Fig. 121: Identifying Curtain Shield Airbag Assembly LH And Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Restore the released activation prevention mechanism of connector B to the original condition.
b. Connect the connectors to the curtain shield airbag assembly LH and the center airbag sensor assembly.
c. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
f. Turn the ignition switch off.
g. Turn the ignition switch to ON, and wait for at least 60 seconds.
h. Check for DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1835, B1836, B1837, B1838 or 58 is not output.

TEXT IN ILLUSTRATION

*1	Curtain Shield Squib LH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1835, B1836, B1837, B1838 and 58 may be output at this time, but they are not related to this check.

NG --> See step 7

OK --> See step 8

6. **REPLACE CURTAIN SHIELD AIRBAG ASSEMBLY LH. Refer to REMOVAL**
7. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
8. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**

DTC B1860/64: SHORT IN DRIVER SIDE KNEE AIRBAG SQUIB CIRCUIT; DTC B1861/64: OPEN IN DRIVER SIDE KNEE AIRBAG SQUIB CIRCUIT; DTC B1862/64: SHORT TO GND IN DRIVER SIDE KNEE AIRBAG SQUIB CIRCUIT; DTC B1863/64: SHORT TO B+ IN DRIVER SIDE KNEE AIRBAG SQUIB CIRCUIT

DESCRIPTION

The knee airbag squib circuit consists of the center airbag sensor assembly and the knee airbag assembly.

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

These DTCs are recorded when a malfunction is detected in the knee airbag squib circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1860/64	• Center airbag sensor assembly detects line short circuit signal 5 times in knee airbag squib circuit during primary check. • Knee airbag squib malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Knee airbag assembly (Knee airbag squib) • Center airbag sensor assembly
B1861/64	• Center airbag sensor assembly detects open circuit signal in knee airbag squib circuit for 2 seconds. • Knee airbag squib malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Knee airbag assembly (Knee airbag squib) • Center airbag sensor assembly
B1862/64	• Center airbag sensor assembly detects short circuit to ground signal in knee airbag squib circuit for 0.5 seconds.	• Instrument panel wire • Knee airbag assembly (Knee airbag squib)

	• Knee airbag squib malfunction • Center airbag sensor assembly malfunction	• Center airbag sensor assembly
B1863/64	• Center airbag sensor assembly detects short circuit to B+ signal in knee airbag squib circuit for 0.5 seconds. • Knee airbag squib malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Knee airbag assembly (Knee airbag squib) • Center airbag sensor assembly

WIRING DIAGRAM

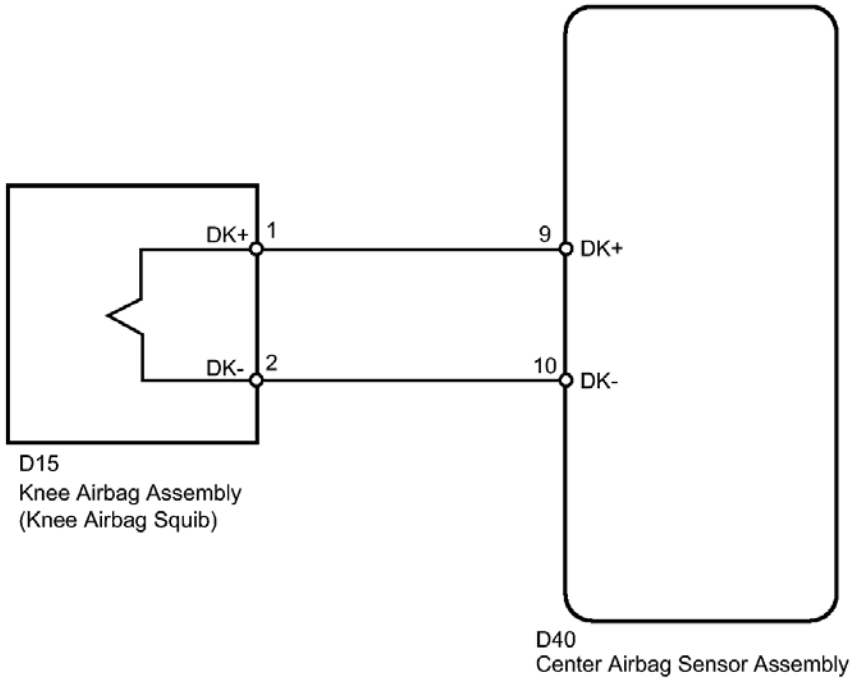


Fig. 122: Knee Airbag Assembly (Knee Airbag Squib) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting CHECK MODE (signal check) with the Techstream. Refer to **CHECK MODE PROCEDURE** .
- 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. Refer to **DIAGNOSIS SYSTEM** .

PROCEDURE

1. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the knee airbag assembly.

      OK

      The connector is properly connected.

      HINT:

      If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

   d. Disconnect the connector from the knee airbag assembly.
   e. Check that the instrument panel wire connector (on the knee airbag assembly side) is not damaged.

      OK

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

   NG --> REPLACE INSTRUMENT PANEL WIRE

   OK: Go to next step

2. **CHECK KNEE AIRBAG ASSEMBLY (KNEE AIRBAG SQUIB)**
   - **SST: 09843-18061**
   a. Connect SST (resistance 2.1 ohms) to connector C.

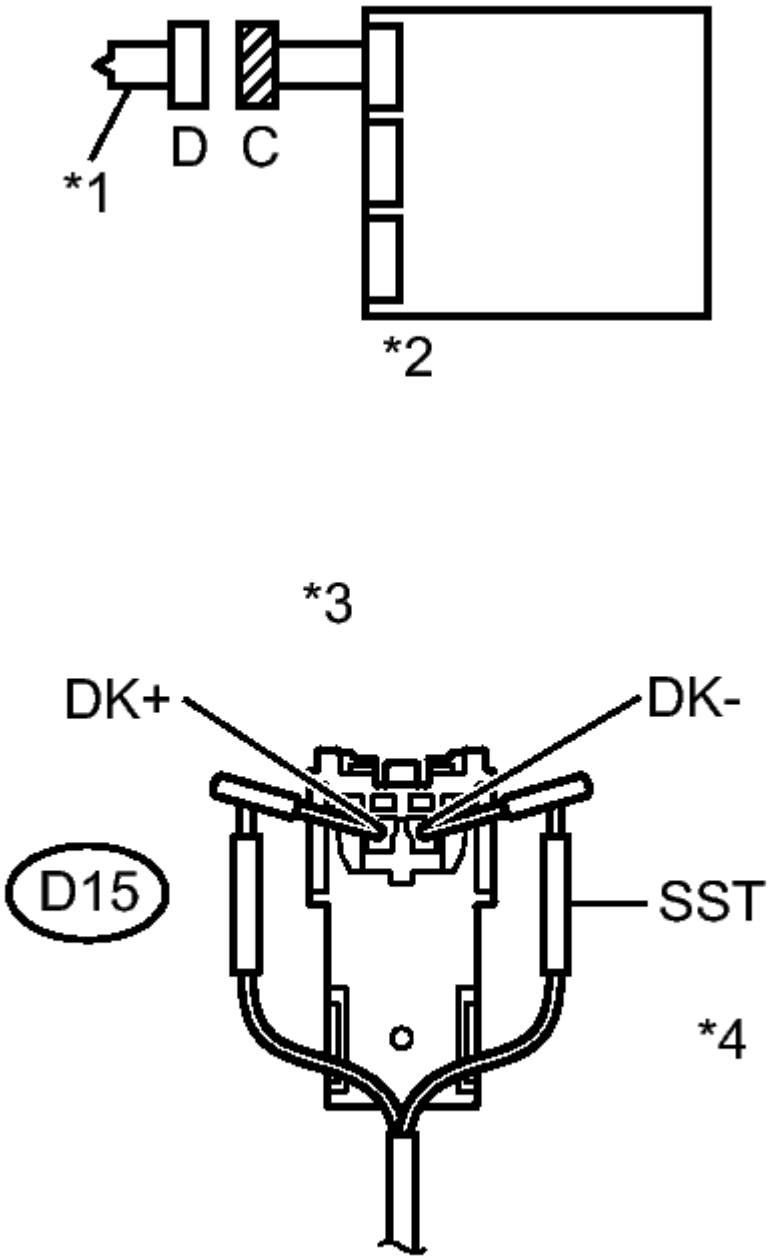


Fig. 123: Checking Knee Airbag Assembly (Knee Airbag Squib)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING: Never connect a tester to the knee airbag assembly (knee airbag squib) for measurement, as this may lead to a serious

injury due to airbag deployment.

NOTE:

- **Do not forcibly insert SST into the terminals of the connector when connecting.**
- **Insert SST straight into the terminals of the connector.**

b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check the DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1860, B1861, B1862, B1863 or 64 is not output.

TEXT IN ILLUSTRATION

*1	Knee Airbag Squib
*2	Center Airbag Sensor Assembly
*3	Front view of wire harness connector (to Knee Airbag Squib)
*4	Connector C

HINT:

DTCs other than B1860, B1861, B1862, B1863 and 64 may be output at this time, but they are not related to this check.

NG --> See step 3

OK --> See step 6

3. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Disconnect SST from connector C.
   d. Check that the connector is properly connected to the center airbag sensor assembly.

      OK

      The connector is properly connected.

      HINT:

      If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

   e. Disconnect the connector from the center airbag sensor assembly.
   f. Check that the terminal of the connector is not damaged.

      OK

      The terminal is not deformed or damaged.

   g. Check that the short spring for the instrument panel wire connector with the activation prevention mechanism is not deformed or damaged.

      OK

      The short spring is not deformed or damaged.

   NG --> REPLACE INSTRUMENT PANEL WIRE

   OK: Go to next step

4. **CHECK INSTRUMENT PANEL WIRE (KNEE AIRBAG SQUIB - CENTER AIRBAG SENSOR ASSEMBLY)**
   a. Disconnect the connectors from the center airbag sensor assembly.

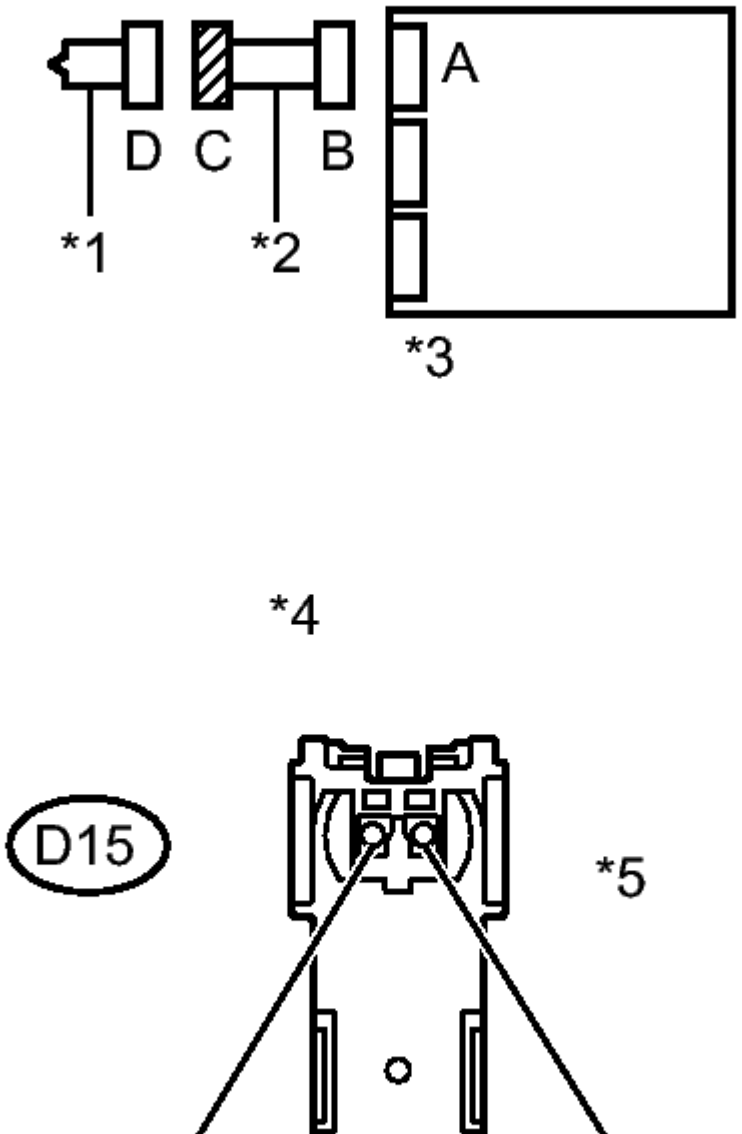


Fig. 124: Checking Instrument Panel Wire (Knee Airbag Squib - Center Airbag Sensor Assembly)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

c. Turn the ignition switch to ON.

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
D15-1 (DK+) - Body ground	Ignition switch ON	Below 1 V
D15-2 (DK-) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Knee Airbag Squib
*2	Instrument Panel Wire
*3	Center Airbag Sensor Assembly
*4	Front view of wire harness connector (to Knee Airbag Squib)
*5	Connector C

e. Turn the ignition switch off.

f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

g. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester		Specified

Connection	Condition	Condition
D15-1 (DK+) - D15-2 (DK-)	Always	Below 1 ohms

h. Release the activation prevention mechanism built into connector B. Refer to **DIAGNOSIS SYSTEM** .

i. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
D15-1 (DK+) - D15-2 (DK-)	Always	1 Mohms or higher
D15-1 (DK+) - Body ground	Always	1 Mohms or higher
D15-2 (DK-) - Body ground	Always	1 Mohms or higher

NG --> REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**

a. Restore the released activation prevention mechanism of connector B to the original condition.

b. Connect the connectors to the knee airbag assembly and the center airbag sensor assembly.

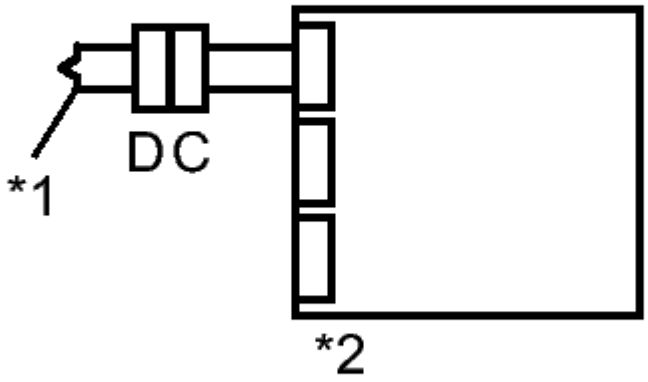


Fig. 125: Identifying Knee Airbag Assembly Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
f. Turn the ignition switch off.
g. Turn the ignition switch to ON, and wait for at least 60 seconds.
h. Check the DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1860, B1861, B1862, B1863 or 64 is not output.

TEXT IN ILLUSTRATION

*1	Knee Airbag Squib
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1860, B1861, B1862, B1863 and 64 may be output at this time, but they are not

related to this check.

NG --> See step 7

OK --> See step 8

6. **REPLACE KNEE AIRBAG ASSEMBLY. Refer to REMOVAL**
7. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
8. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**

DTC B1900/73: SHORT IN FRONT PRETENSIONER SQUIB RH CIRCUIT; DTC B1901/73: OPEN IN FRONT PRETENSIONER SQUIB RH CIRCUIT; DTC B1902/73: SHORT TO GND IN FRONT PRETENSIONER SQUIB RH CIRCUIT; DTC B1903/73: SHORT TO B+ IN FRONT PRETENSIONER SQUIB RH CIRCUIT

DESCRIPTION

The front pretensioner squib RH circuit consists of the center airbag sensor assembly and the front seat outer belt assembly RH.

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

These DTCs are recorded when a malfunction is detected in the front pretensioner squib RH circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1900/73	When one of following conditions is met: • Center airbag sensor assembly detects line short circuit signal in front pretensioner squib RH circuit 5 times during primary check. • Front pretensioner squib RH malfunction • Center airbag sensor assembly malfunction	• No. 2 floor wire • Front seat outer belt assembly RH (Front pretensioner squib RH) • Center airbag sensor assembly
B1901/73	When one of following conditions is met: • Center airbag sensor assembly detects open circuit signal in front pretensioner squib RH circuit for 2 seconds. • Front pretensioner squib RH malfunction	• No. 2 floor wire • Front seat outer belt assembly RH (Front pretensioner squib RH) • Center airbag sensor assembly

	• Center airbag sensor assembly malfunction	
B1902/73	When one of following conditions is met: • Center airbag sensor assembly detects short circuit to ground signal in front pretensioner squib RH circuit for 0.5 seconds. • Front pretensioner squib RH malfunction • Center airbag sensor assembly malfunction	• No. 2 floor wire • Front seat outer belt assembly RH (Front pretensioner squib RH) • Center airbag sensor assembly
B1903/73	When one of following conditions is met: • Center airbag sensor assembly detects short circuit to B+ signal in front pretensioner squib RH circuit for 0.5 seconds. • Front pretensioner squib RH malfunction • Center airbag sensor assembly malfunction	• No. 2 floor wire • Front seat outer belt assembly RH (Front pretensioner squib RH) • Center airbag sensor assembly

WIRING DIAGRAM

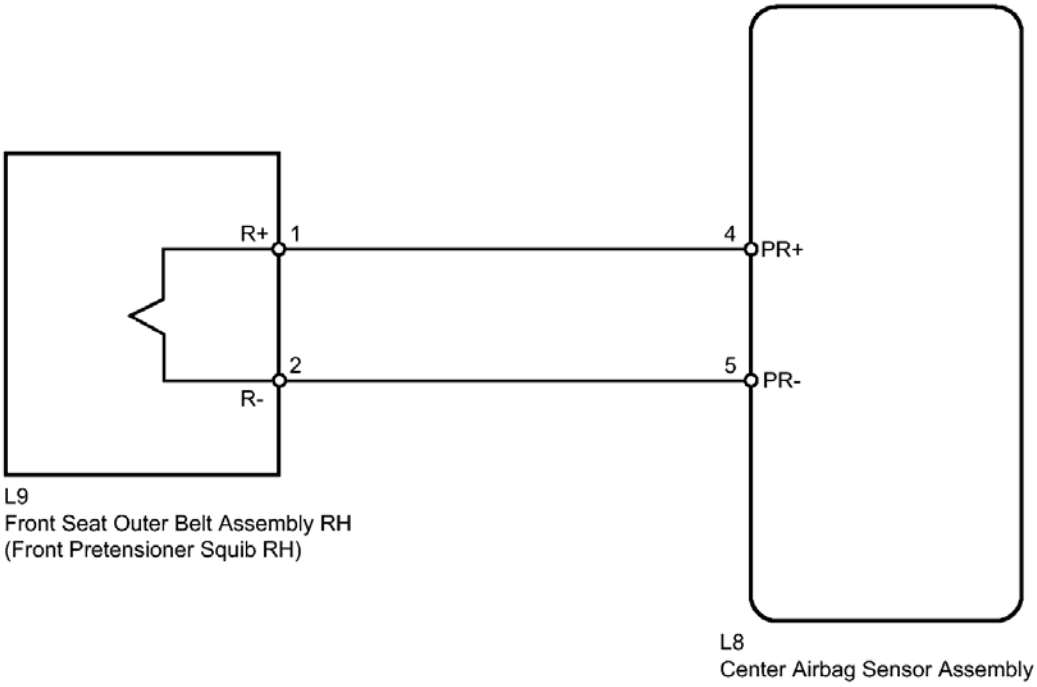


Fig. 126: Front Seat Outer Belt Assembly RH (Front Pretensioner Squib RH) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting Check Mode (signal check) with the Techstream. Refer to **CHECK MODE PROCEDURE** .
- 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 street or rough road. Refer to **DIAGNOSIS SYSTEM** .

PROCEDURE

1. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the front seat outer belt assembly RH.

      OK

The connector is properly connected.

HINT:

If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

d. Disconnect the connector from the front seat outer belt assembly RH.
e. Check that the No. 2 floor wire connector (on the front seat outer belt assembly RH) is not damaged.

OK

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

NG --> REPLACE NO. 2 FLOOR WIRE

OK: Go to next step

2. **CHECK FRONT SEAT OUTER BELT ASSEMBLY RH (FRONT PRETENSIONER SQUIB RH)**
   - **SST: 09843-18061**

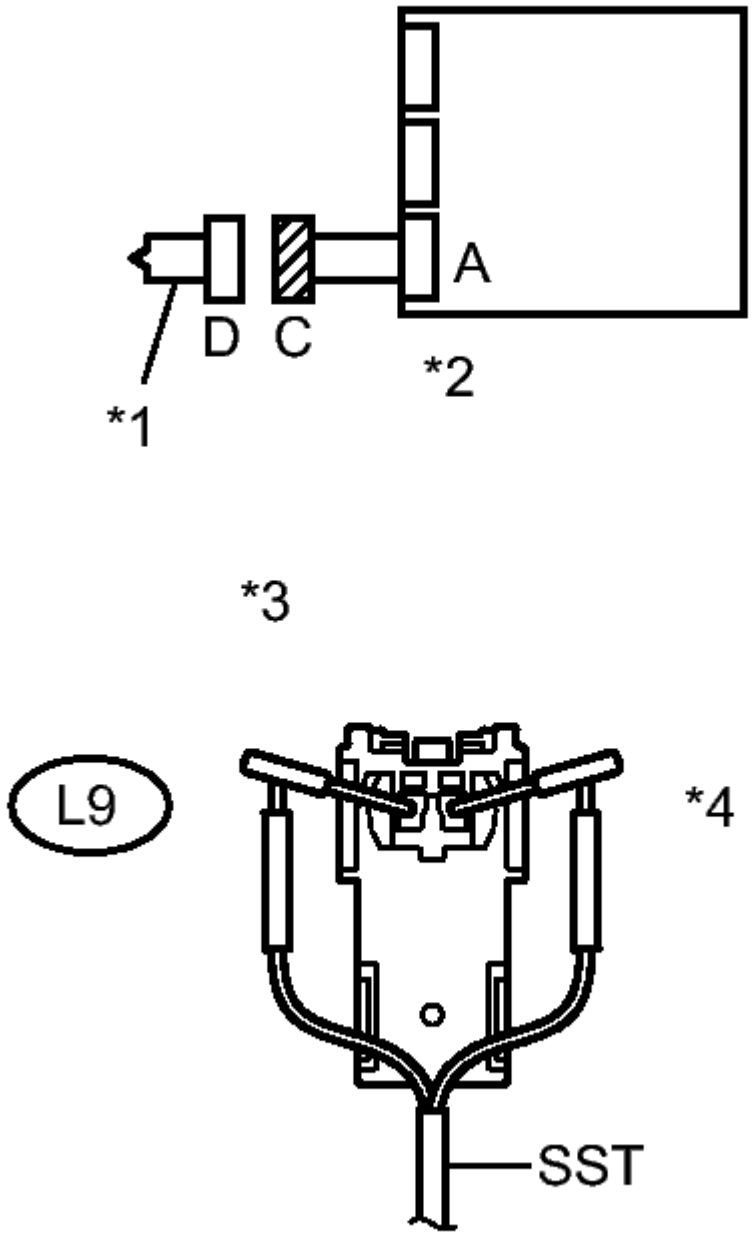


Fig. 127: Checking Front Seat Outer Belt Assembly RH (Front Pretensioner Squib RH) Using SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Disconnect the connector from the front seat outer belt assembly RH.
b. Connect SST (resistance 2.1 ohms) to connector C.

WARNING: Never connect a tester to the front seat outer belt assembly RH for measurement, as this may lead to a serious injury due to airbag deployment.

NOTE:

- **Do not forcibly insert SST into the terminals of the connector when connecting.**
- **Insert SST straight into the terminals of the connector.**

c. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
f. Turn the ignition switch off.
g. Turn the ignition switch to ON, and wait for at least 60 seconds.
h. Check the DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1900, B1901, B1902, B1903 or 73 is not output.

TEXT IN ILLUSTRATION

*1	Front Pretensioner Squib RH
*2	Center Airbag Sensor Assembly
*3	Front view of wire harness connector (to Front Pretensioner Squib RH)
*4	Connector C

HINT:

DTCs other than B1900, B1901, B1902, B1903 and 73 may be output at this time, but they are not related to this check.

NG --> See step 3

OK --> See step 7

3. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Disconnect the SST from connector C.
   d. Check that the connector is properly connected to the center airbag sensor assembly.

      OK

      The connector is properly connected.

      HINT:

      If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

   e. Disconnect the connector from the center airbag sensor assembly.
   f. Check that the terminal of the connector is not damaged.

      OK

      The terminal is not deformed or damaged.

   g. Check that the short spring for the No. 2 floor wire connector with the activation prevention mechanism is not deformed or damaged.

      OK

      The short spring is not deformed or damaged.

NG --> REPLACE NO. 2 FLOOR WIRE

OK: Go to next step

4. **CHECK NO. 2 FLOOR WIRE (FRONT PRETENSIONER SQUIB RH - CENTER AIRBAG SENSOR ASSEMBLY)**

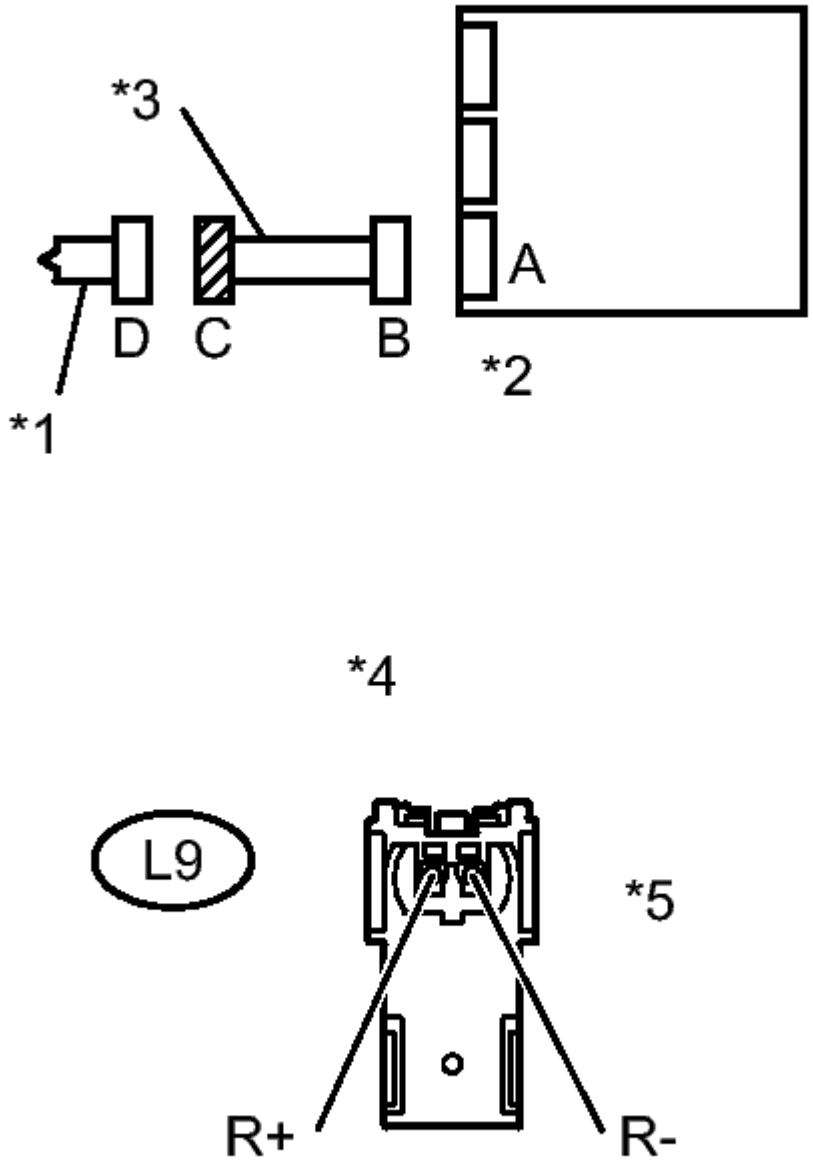


Fig. 128: Checking No. 2 Floor Wire (Front Pretensioner Squib RH - Center Airbag Sensor Assembly)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.

b. Turn the ignition switch to ON.

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
L9-1 (R+) - Body ground	Ignition switch ON	Below 1 V
L9-2 (R-) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Front Pretensioner Squib RH
*2	Center Airbag Sensor Assembly
*3	No. 2 Floor Wire
*4	Front view of wire harness connector (to Front Pretensioner Squib RH)
*5	Connector C

d. Turn the ignition switch off.

e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

f. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
L9-1 (R+) - L9-2 (R-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B. Refer to **DIAGNOSIS SYSTEM** .

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
L9-1 (R+) - L9-2 (R-)	Always	1 Mohms or higher
L9-1 (R+) - Body ground	Always	1 Mohms or higher
L9-2 (R-) - Body ground	Always	1 Mohms or higher

i. Restore the released activation prevention mechanism of connector B to the original condition.

NG --> REPLACE NO. 2 FLOOR WIRE

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**

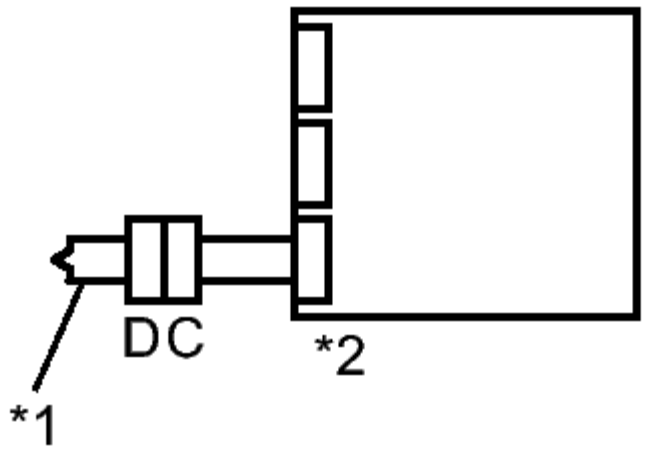


Fig. 129: Identifying Center Airbag Sensor Assembly Circuit

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the connectors to the front seat outer belt assembly RH and the center airbag sensor assembly.
b. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check the DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1900, B1901, B1902, B1903 or 73 is not output.

TEXT IN ILLUSTRATION

*1	Front Pretensioner Squib RH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1900, B1901, B1902, B1903 and 73 may be output at this time, but they are not related to this check.

NG --> See step 8

OK --> See step 6

6. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
7. **REPLACE FRONT SEAT OUTER BELT ASSEMBLY RH (FRONT PRETENSIONER SQUIB RH). Refer to REMOVAL**
8. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**

DTC B1905/74: SHORT IN FRONT PRETENSIONER SQUIB LH CIRCUIT; DTC B1906/74: OPEN IN FRONT PRETENSIONER SQUIB LH CIRCUIT; DTC B1907/74: SHORT TO GND IN FRONT PRETENSIONER SQUIB LH CIRCUIT; DTC B1908/74: SHORT TO B+ IN FRONT PRETENSIONER SQUIB LH CIRCUIT

DESCRIPTION

The front pretensioner squib LH circuit consists of the center airbag sensor assembly and the front seat outer belt assembly LH.

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

These DTCs are recorded when a malfunction is detected in the front pretensioner squib LH circuit.

DTC No.	DTC Detection Condition	Trouble Area
B1905/74	When one of following conditions is met: • Center airbag sensor assembly detects line short circuit signal in front pretensioner squib LH circuit 5 times during primary check. • Front pretensioner squib LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat outer belt assembly LH (Front pretensioner squib LH) • Center airbag sensor assembly
B1906/74	When one of following conditions is met: • Center airbag sensor assembly detects open circuit signal in front pretensioner squib LH circuit for 2 seconds. • Front pretensioner squib LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat outer belt assembly LH (Front pretensioner squib LH) • Center airbag sensor assembly
B1907/74	When one of following conditions is met: • Center airbag sensor assembly detects short circuit to ground signal in front pretensioner squib LH circuit for 0.5 seconds. • Front pretensioner squib LH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat outer belt assembly LH (Front pretensioner squib LH) • Center airbag sensor assembly
	When one of following conditions is met: • Center airbag sensor assembly	• Floor wire

B1908/74	detects short circuit to B+ signal in front pretensioner squib LH circuit for 0.5 seconds. • Front pretensioner squib LH malfunction • Center airbag sensor assembly malfunction	• Front seat outer belt assembly LH (Front pretensioner squib LH) • Center airbag sensor assembly

WIRING DIAGRAM

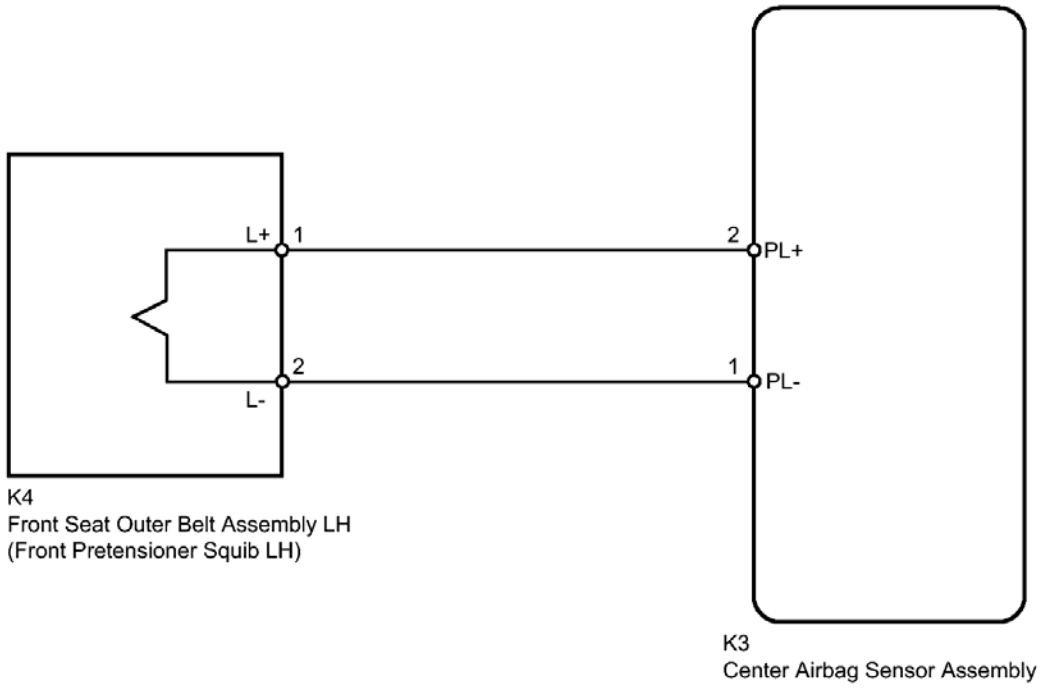


Fig. 130: Front Seat Outer Belt Assembly LH (Front Pretensioner Squib LH) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting Check Mode (signal check) with the Techstream. Refer to **CHECK MODE PROCEDURE** .
- 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 street or rough road. Refer to **DIAGNOSIS**

SYSTEM .

PROCEDURE

1. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the front seat outer belt assembly LH.

      OK

      The connector is properly connected.

      HINT:

      If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

   d. Disconnect the connector from the front seat outer belt assembly LH.
   e. Check that the floor wire connector (on the front seat outer belt assembly LH side) is not damaged.

      OK

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

   NG --> REPLACE FLOOR WIRE

   OK: Go to next step

2. **CHECK FRONT SEAT OUTER BELT ASSEMBLY LH (FRONT PRETENSIONER SQUIB LH)**

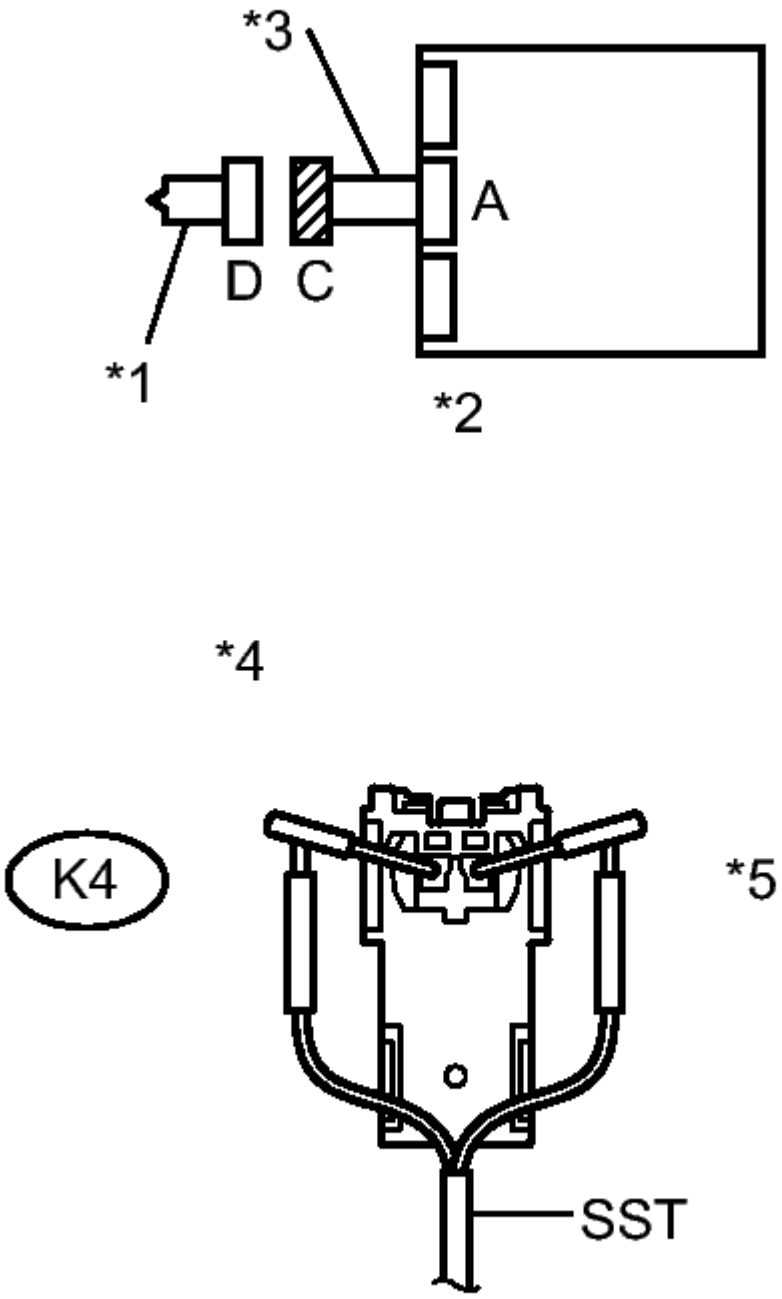


Fig. 131: Checking Front Seat Outer Belt Assembly LH (Front Pretensioner Squib LH) Using SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09843-18061**

a. Disconnect the connectors from the front seat outer belt assembly LH.

b. Connect SST (resistance 2.1 ohms) to connector C.

WARNING: Never connect a tester to the front seat outer belt assembly LH for measurement, as this may lead to a serious injury due to airbag deployment.

NOTE:

- **Do not forcibly insert SST into the terminals of the connector when connecting.**
- **Insert SST straight into the terminals of the connector.**

c. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
f. Turn the ignition switch off.
g. Turn the ignition switch to ON, and wait for at least 60 seconds.
h. Check the DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1905, B1906, B1907, B1908 or 74 is not output.

TEXT IN ILLUSTRATION

*1	Front Pretensioner Squib LH
*2	Center Airbag Sensor Assembly
*3	Floor Wire
*4	Front view of wire harness connector (to Front Pretensioner Squib LH)
*5	Connector C

HINT:

DTCs other than B1905, B1906, B1907, B1908 and 74 may be output at this time, but they are not related to this check.

NG --> See step 3

OK --> See step 7

3. **CHECK CONNECTOR**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Disconnect the SST from connector C.
   d. Check that the connector is properly connected to the center airbag sensor assembly.

      OK

      The connector is properly connected.

      HINT:

      If the connector is not connected securely, reconnect the connector and proceed to the next inspection.

   e. Disconnect the connector from the center airbag sensor assembly.
   f. Check that the terminal of the connector is not damaged.

      OK

      The terminal is not deformed or damaged.

   g. Check that the short spring for the floor wire connector with the activation prevention mechanism is not deformed or damaged.

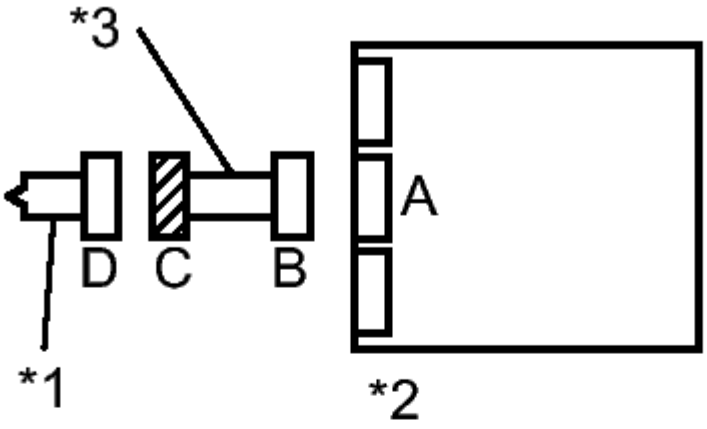
      OK

      The short spring is not deformed or damaged.

NG --> REPLACE FLOOR WIRE

OK: Go to next step

4. **CHECK FLOOR WIRE (FRONT PRETENSIONER SQUIB LH - CENTER AIRBAG SENSOR ASSEMBLY)**



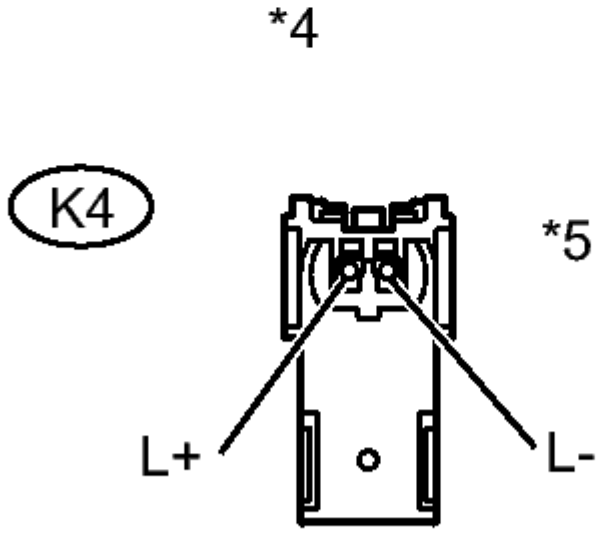


Fig. 132: Checking Floor Wire (Front Pretensioner Squib LH - Center Airbag Sensor Assembly)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
b. Turn the ignition switch to ON.

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
K4-1 (L+) - Body ground	Ignition switch ON	Below 1 V
K4-2 (L-) - Body ground	Ignition switch ON	Below 1 V

TEXT IN ILLUSTRATION

*1	Front Pretensioner Squib LH
*2	Center Airbag Sensor Assembly
*3	Floor Wire
*4	Front view of wire harness connector (to Front Pretensioner Squib LH)
*5	Connector C

d. Turn the ignition switch off.
e. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
K4-1 (L+) - K4-2 (L-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B. Refer to **DIAGNOSIS SYSTEM** .

h. Measure the resistance according to the value(s) in the table below.

Standard Resistance

Tester Connection	Condition	Specified Condition
K4-1 (L+) - K4-2 (L-)	Always	1 Mohms or higher
K4-1 (L+) - Body ground	Always	1 Mohms or higher
K4-2 (L-) - Body ground	Always	1 Mohms or higher

i. Restore the released activation prevention mechanism of connector B to the original condition.

NG --> REPLACE FLOOR WIRE

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**

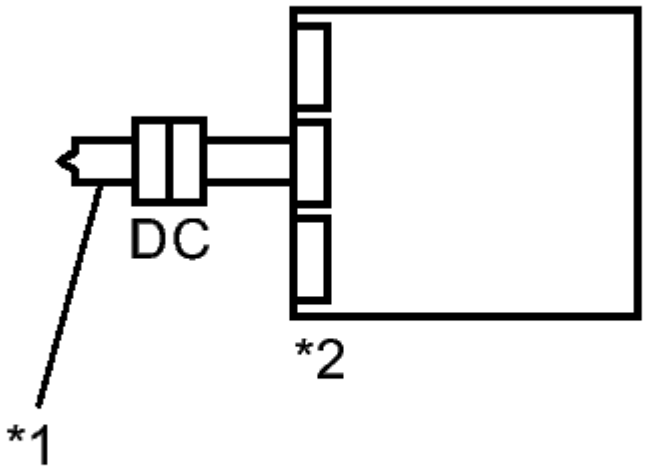


Fig. 133: Identifying Center Airbag Sensor Assembly Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Connect the connectors to the front seat outer belt assembly LH and the center airbag sensor assembly.
b. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
c. Turn the ignition switch to ON, and wait for at least 60 seconds.
d. Clear the DTCs stored in the memory. Refer to **DTC CHECK / CLEAR** .
e. Turn the ignition switch off.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check the DTCs. Refer to **DTC CHECK / CLEAR** .

OK

DTC B1905, B1906, B1907, B1908 or 74 is not output.

TEXT IN ILLUSTRATION

*1	Front Pretensioner Squib LH
*2	Center Airbag Sensor Assembly

HINT:

DTCs other than B1905, B1906, B1907, B1908 and 74 may be output at this time, but they are not related to this check.

NG --> See step 8

OK --> See step 6

6. **USE SIMULATION METHOD TO CHECK. Refer to DIAGNOSIS SYSTEM**
7. **REPLACE FRONT SEAT OUTER BELT ASSEMBLY LH (FRONT PRETENSIONER SQUIB LH). Refer to REMOVAL**
8. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**

SYMPTOM TESTS

SRS Warning Light Remains ON

DESCRIPTION

The SRS warning light is located on the combination meter.

When the SRS condition is normal, the SRS warning light illuminates for approximately 6 seconds after the

ignition switch is turned from off to ON, and then goes off automatically.

If there is a malfunction in the SRS, the SRS warning light illuminates or blinks to inform the driver of the problem. When terminals TC and CG of the DLC3 are connected, the SRS warning light blinks to indicate DTCs.

The center airbag sensor assembly is equipped with a voltage-increase circuit (DC-DC converter) in case the source voltage decreases. When the battery voltage decreases, the voltage-increase circuit (DC-DC converter) boosts the SRS voltage up to the normal level.

Malfunctions relating to battery voltage decreases cause the SRS warning light to illuminate. However, no DTCs are recorded in the center airbag sensor assembly. The SRS warning light goes off automatically when the source voltage returns to normal.

Signals to illuminate the SRS warning light are transmitted from the center airbag sensor assembly to the combination meter through the CAN communication system.

WIRING DIAGRAM

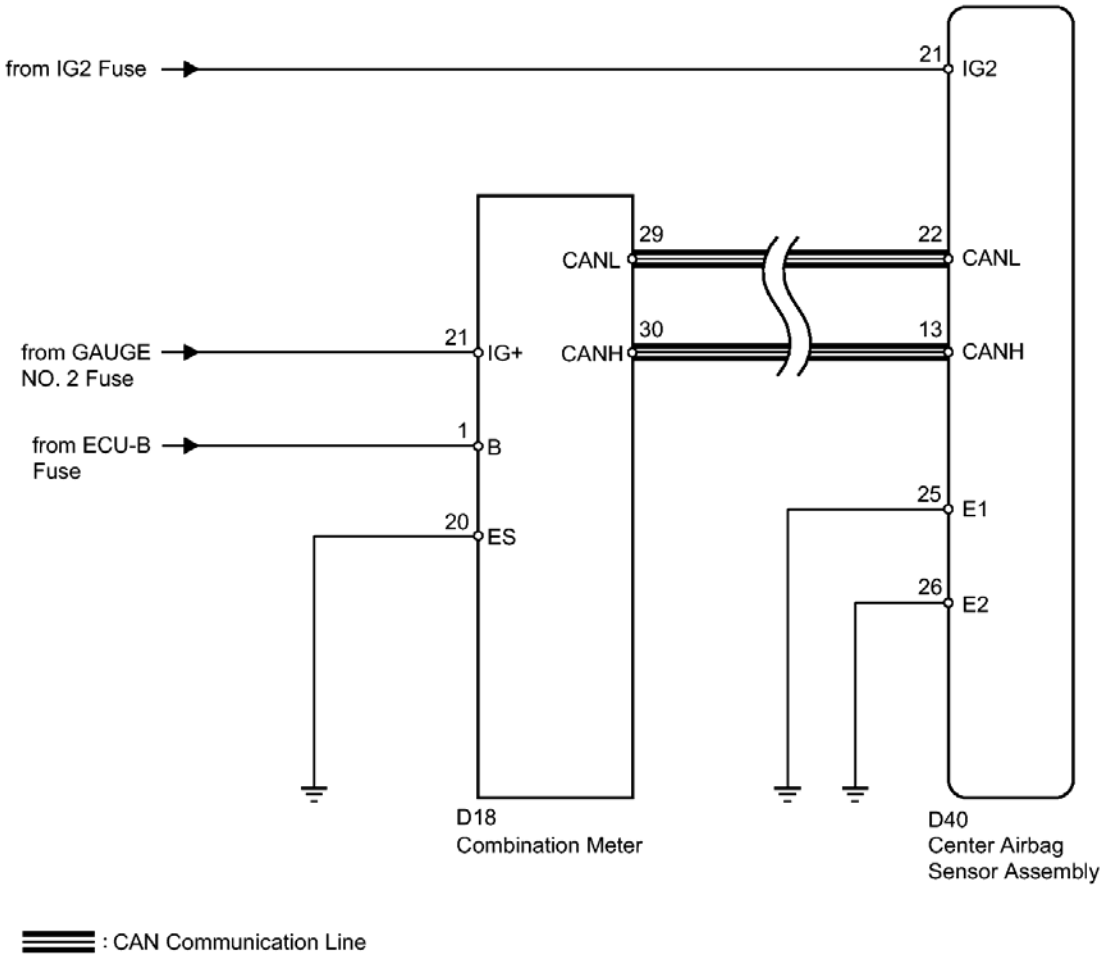


Fig. 134: SRS Warning Light - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

NOTE: Inspect the fuses for circuits related to this system before performing the following inspection procedure.

PROCEDURE

1. **CHECK FOR DTC (CAN COMMUNICATION SYSTEM)**
   a. Turn the ignition switch to ON.
   b. Check the DTCs. Refer to **DTC CHECK / CLEAR** .

      OK

      DTC is not output.

NG --> See step 8

OK: Go to next step

2. **INSPECT BATTERY**
   a. Measure the voltage of the battery.

      Standard Voltage

Tester Connection	Condition	Specified Condition
Battery	Always	11 to 14 V

NG --> CHECK AND REPLACE BATTERY OR CHARGING SYSTEM

OK: Go to next step

3. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connectors are properly connected to the center airbag sensor assembly and combination meter.

      OK

      The connectors are properly connected.

NG --> CONNECT CONNECTORS PROPERLY

OK: Go to next step

4. **CHECK HARNESS AND CONNECTOR (SOURCE VOLTAGE OF CENTER AIRBAG SENSOR ASSEMBLY)**
   a. Disconnect the connectors from the center airbag sensor assembly.

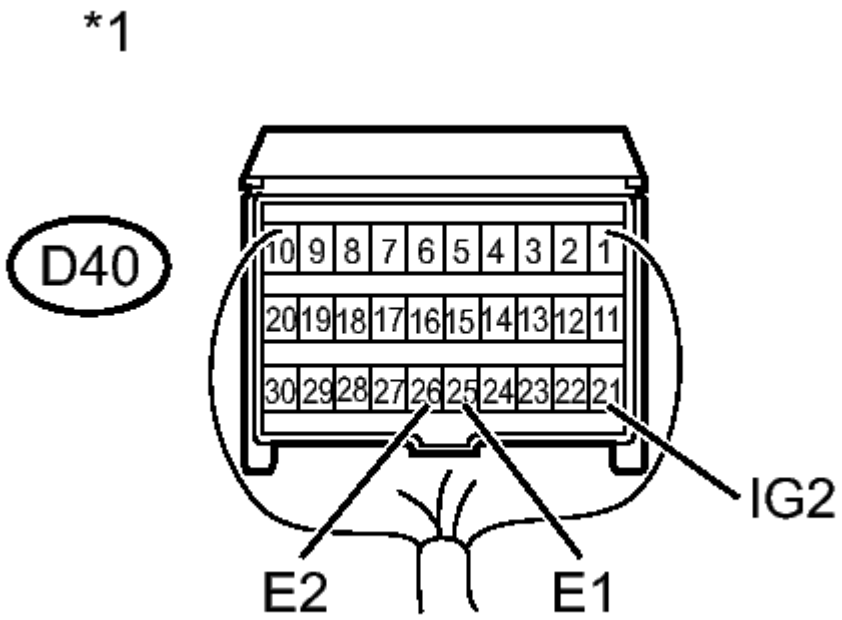


Fig. 135: Checking Harness And Connector (Source Voltage Of Center Airbag Sensor Assembly)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
c. Turn the ignition switch to ON.
d. Operate all components of the electrical system (defogger, wipers, headlights, heater blower, etc.).
e. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
D40-21 (IG2) - D40-25 (E1)	Ignition switch ON	11 to 14 V
D40-21 (IG2) - D40-26 (E2)	Ignition switch ON	11 to 14 V

TEXT IN ILLUSTRATION

	Rear view of wire harness

*1	connector (to Center Airbag Sensor Assembly)

NG --> REPLACE HARNESS AND CONNECTOR

OK: Go to next step

5. **CHECK HARNESS AND CONNECTOR (SOURCE VOLTAGE OF COMBINATION METER)**
   a. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

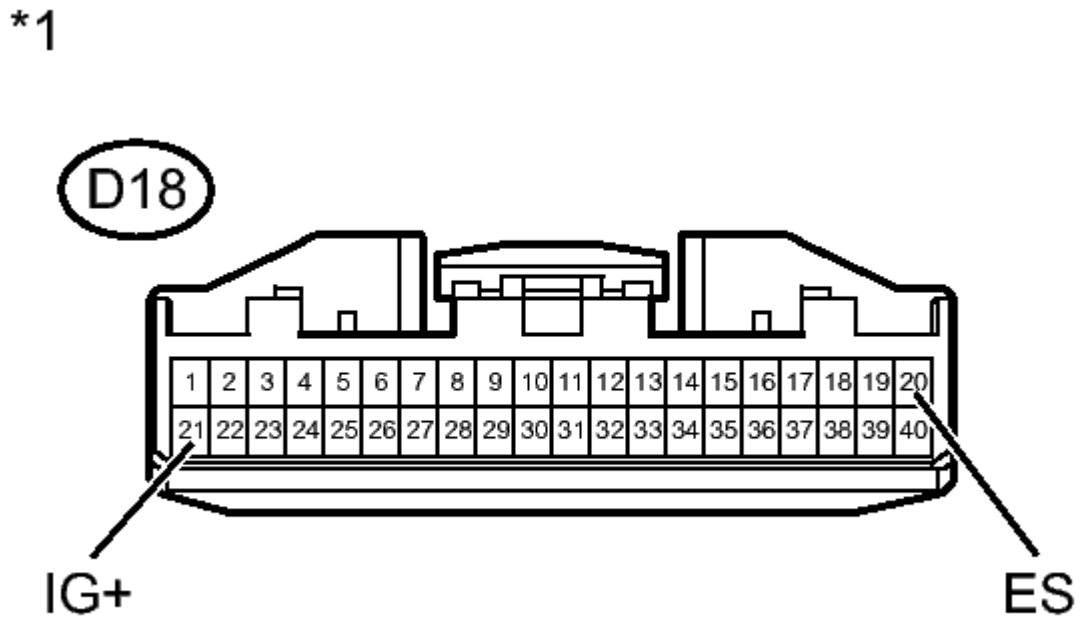


Fig. 136: Measuring Voltage Of Source Voltage Of Combination Meter
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   b. Disconnect the connector from the combination meter.
   c. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
   d. Turn the ignition switch to ON.
   e. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
D18-21		

(IG+) - D18-20 (ES)	Ignition switch ON	11 to 14 V

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Combination Meter)

NG --> REPAIR OR REPLACE HARNESS OR CONNECTOR

OK: Go to next step

6. **CHECK SRS WARNING LIGHT**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Connect the connector to the combination meter.
   d. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
   e. Turn the ignition switch to ON.
   f. Check the SRS warning light condition.

      OK

      The SRS warning light goes off after the primary check period and comes on again after approximately 10 seconds.

      HINT:

      The primary check period lasts for approximately 6 seconds after the ignition switch is turned to ON.

NG --> See step 9

OK --> See step 7

7. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
8. **GO TO CAN COMMUNICATION SYSTEM. Refer to DIAGNOSTIC TROUBLE CODE CHART**
9. **REPLACE COMBINATION METER. Refer to REMOVAL**

SRS Warning Light does not Come ON

DESCRIPTION

Refer to **DESCRIPTION**.

WIRING DIAGRAM

Refer to **WIRING DIAGRAM**.

INSPECTION PROCEDURE

NOTE: Inspect the fuses for circuits related to this system before performing the following inspection procedure.

PROCEDURE

1. **INSPECT BATTERY**
   a. Measure the voltage of the battery.

      Standard Voltage

Tester Connection	Condition	Specified Condition
Battery	Always	11 to 14 V

   NG --> CHECK AND REPLACE BATTERY OR CHARGING SYSTEM

   OK: Go to next step

2. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Check that the connectors are properly connected to the center airbag sensor assembly and the combination meter.

      OK

      The connectors are properly connected.

   NG --> CONNECT CONNECTORS PROPERLY

   OK: Go to next step

3. **CHECK HARNESS AND CONNECTOR (SOURCE VOLTAGE OF COMBINATION METER)**
   a. Turn the ignition switch off.

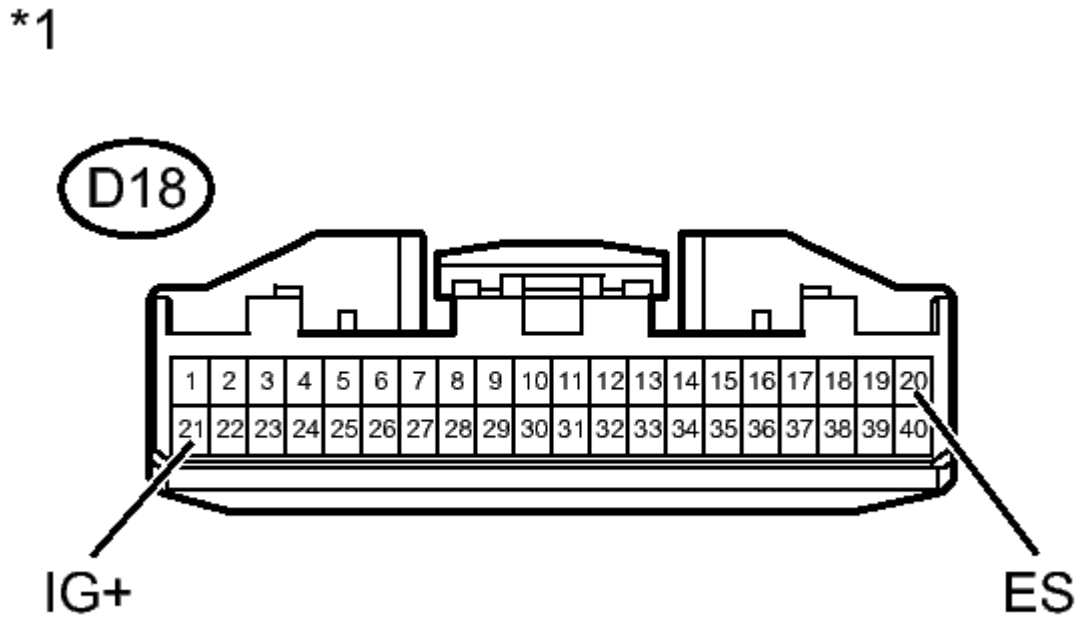


Fig. 137: Measuring Voltage Of Source Voltage Of Combination Meter
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
c. Disconnect the connectors from the combination meter and center airbag sensor assembly.
d. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
e. Turn the ignition switch to ON.
f. Measure the voltage according to the value(s) in the table below.

Standard Voltage

Tester Connection	Switch Condition	Specified Condition
D18-21 (IG+) - D18-20 (ES)	Ignition switch ON	11 to 14 V

TEXT IN ILLUSTRATION

*1	Front view of wire harness connector (to Combination Meter)

NG --> REPAIR OR REPLACE HARNESS OR CONNECTOR

OK: Go to next step

4. **CHECK SRS WARNING LIGHT**
   a. Turn the ignition switch off.
   b. Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
   c. Connect the connector to the combination meter.
   d. Connect the cable to the negative battery terminal, and wait for at least 2 seconds.
   e. Turn the ignition switch to ON.
   f. Check the SRS warning light condition.

      OK

      The SRS warning light goes off after the primary check period and comes on again after approximately 10 seconds.

      HINT:

      The primary check period lasts for approximately 6 seconds after the ignition switch is turned to ON.

   NG --> See step 6

   OK --> See step 5

5. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**
6. **REPLACE COMBINATION METER. Refer to REMOVAL**

CIRCUIT TESTS

TC and CG Terminal Circuit

DESCRIPTION

DTC output mode is set by connecting terminals TC and CG of the DLC3.

The DTCs are displayed by blinking the SRS warning light.

HINT:

- Make sure that DTCs which relate to the CAN communication system are not output. If any of these DTCs are output, check the CAN communication system. Refer to **DIAGNOSIS SYSTEM** .
- When a warning light keeps blinking, a short to ground in the wiring of terminal TC of the DLC3 or an internal ground short in an ECU is suspected.

- The DTC output mode signal is transmitted through the CAN to each ECU including the center airbag sensor assembly. Thus if no systems enter DTC output mode, the ECM may have a malfunction.

WIRING DIAGRAM

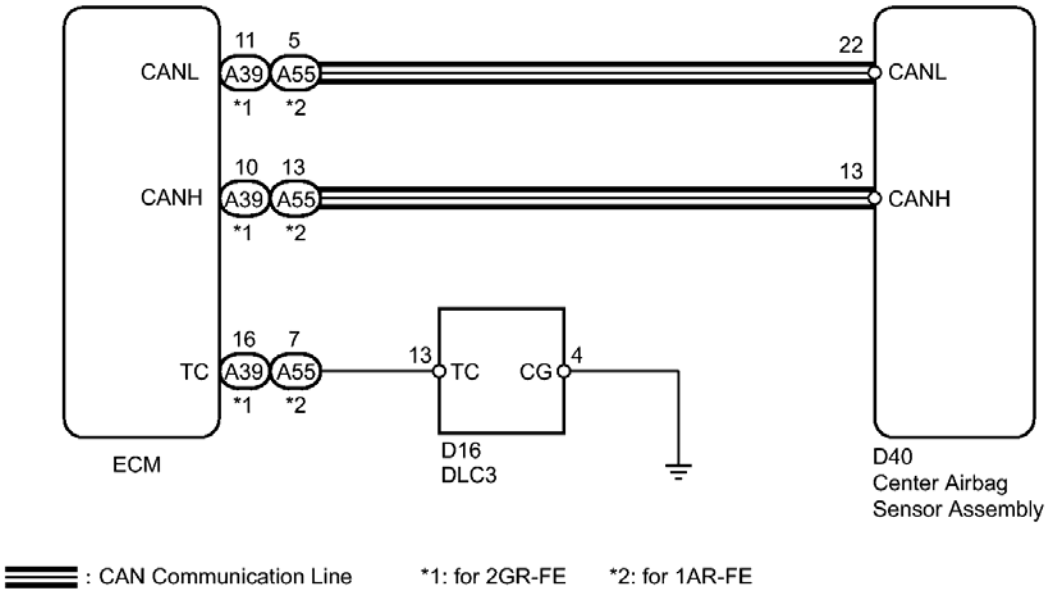


Fig. 138: TC and CG Terminal Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **CHECK HARNESS AND CONNECTOR (DLC3 - ECM)**

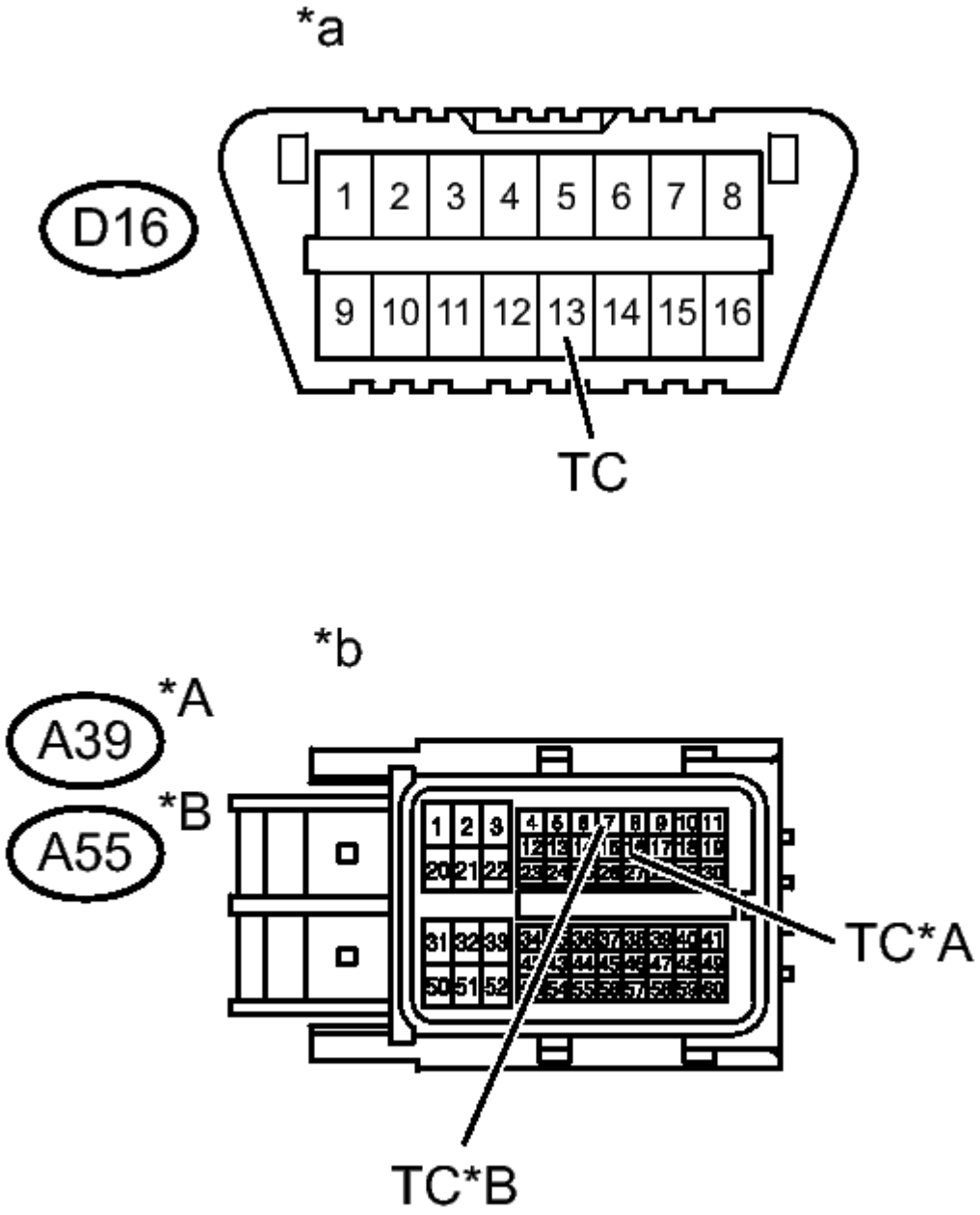


Fig. 139: Measuring Resistance Between DLC3 & ECM
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Turn the ignition switch off.
b. Disconnect the connector from the ECM.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance

for 2GR-FE

for 1AR-FE

Tester Connection	Condition	Specified Condition
D16-13 (TC) - A39-16 (TC)	Always	Below 1 ohms

Tester Connection	Condition	Specified Condition
D16-13 (TC) - A55-7 (TC)	Always	Below 1 ohms

TEXT IN ILLUSTRATION

*A	for 2GR-FE
*B	for 1AR-FE
*a	Front view of DLC3
*b	Front view of wire harness connector (to ECM)

NG --> REPAIR OR REPLACE HARNESS OR CONNECTOR

OK: Go to next step

2. **CHECK HARNESS AND CONNECTOR (CG OF DLC3 - BODY GROUND)**
   a. Measure the resistance according to the value(s) in the table below.

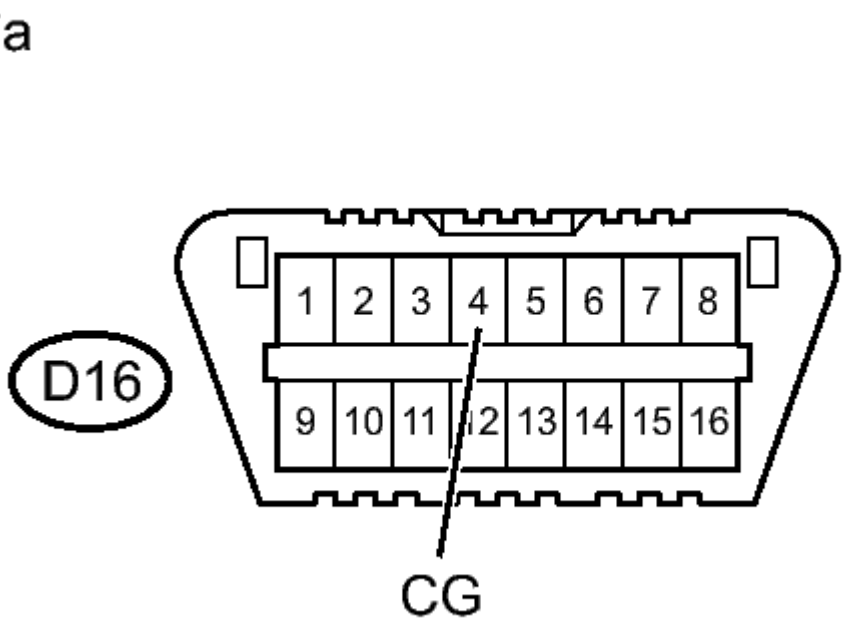


Fig. 140: DLC3 Connector End View
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard Resistance

Tester Connection	Condition	Specified Condition
D16-4 (CG) - Body ground	Always	Below 1 ohms

TEXT IN ILLUSTRATION

*a	Front view of DLC3

NG --> REPAIR OR REPLACE HARNESS OR CONNECTOR

OK: Go to next step

3. **CHECK HARNESS AND CONNECTOR (TC OF ECM)**
   a. Measure the resistance according to the value(s) in the table below.

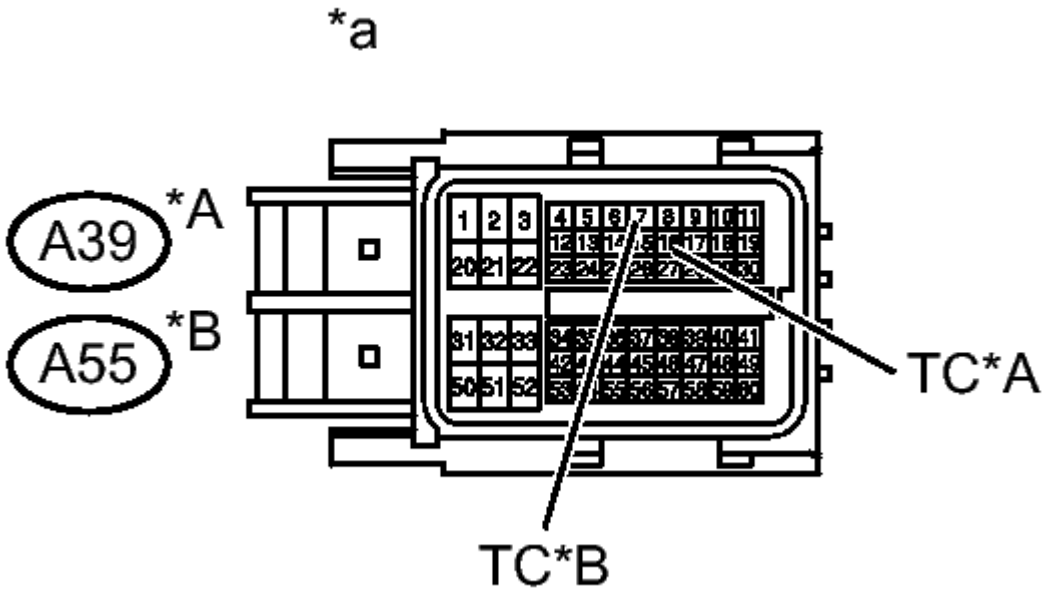


Fig. 141: Checking Harness And Connector (TC Of ECM)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard Resistance

for 2GR-FE

for 1AR-FE

Tester Connection	Condition	Specified Condition
A39-16 (TC) - Body ground	Always	1 Mohms or higher

Tester Connection	Condition	Specified Condition
A55-7 (TC) - Body ground	Always	1 Mohms or higher

TEXT IN ILLUSTRATION

*A	for 2GR-FE

*B	for 1AR-FE
*a	Front view of wire harness connector (to ECM)

NG --> REPAIR OR REPLACE HARNESS OR CONNECTOR

OK: Go to next step

4. **REPLACE ECM**
   a. Replace the ECM.
      - for 2GR-FE. Refer to **REMOVAL**
      - for 1AR-FE. Refer to **REMOVAL**
   b. Check for DTCs of the ECM.

RESULT

Result	Proceed to
Normal system code is output.	A
DTC is output (for 2GR-FE).	B
DTC is output (for 1AR-FE).	C
DTC output mode is set (center airbag sensor assembly).	D

B --> See step 5

C --> See step 6

D --> See step 7

A --> END

5. **GO TO INSPECTION PROCEDURE OF DTC OUTPUT. Refer to DIAGNOSTIC TROUBLE CODE CHART**
6. **GO TO INSPECTION PROCEDURE OF DTC OUTPUT. Refer to DIAGNOSTIC TROUBLE CODE CHART**
7. **REPLACE CENTER AIRBAG SENSOR ASSEMBLY. Refer to REMOVAL**

Supplemental Restraint System (Diagnostics - Introduction) - Sienna

AIRBAG SYSTEM

PRECAUTION

PRECAUTION

HINT:

- In the airbag system, the center airbag sensor assembly, front airbag sensors, side airbag sensors and rear airbag sensors are collectively referred to as the airbag sensors.
- The steering pad, knee airbag assembly, front passenger airbag assembly, curtain shield airbag assemblies and front seat side airbag assemblies are collectively referred to as the SRS parts.

1. **PRECAUTION FOR HANDLING SRS SYSTEM**
   a. Failure to carry out service operations in the correct sequence could cause the SRS to unexpectedly deploy during servicing, possibly leading to a serious accident. Furthermore, if a mistake is made when servicing the SRS, it is possible that the SRS may fail to operate when required. Before servicing (including removal or installation of parts, inspection or replacement), be sure to read the following items carefully, then follow the procedures exactly as indicated in the repair information.
2. **PRECAUTION FOR DISCONNECTING CABLE FROM NEGATIVE BATTERY TERMINAL**
   a. As SRS malfunctions are difficult to confirm, the Diagnostic Trouble Codes (DTCs) become the most important source of information when troubleshooting. When troubleshooting the SRS, always check for DTCs before disconnecting the battery.
   b. Work must be started at least 90 seconds after the ignition switch is turned off and the cable is disconnected from the negative (-) battery terminal.

WARNING:

- **The SRS is equipped with a back-up power source. If work is started within 90 seconds after disconnecting the cable from the negative (-) battery terminal, the SRS may deploy.**
- **Never use a back-up power source (battery or other) to avoid clearing the system memory. The back-up power source may inadvertently power the SRS and cause it to deploy.**

   c. When the cable is disconnected from the negative (-) battery terminal, the memory of various systems will be cleared. Because of this, be sure to make a record of the contents memorized in each system before starting work. When work is finished, adjust each system to its previous state.
3. **GENERAL PRECAUTION**
   a. Use a voltmeter/ohmmeter with high impedance (minimum = 10 kohms) for troubleshooting electrical circuits.

b. Information labels are attached to the SRS parts. Follow the instructions on the labels.

c. Never disassemble or attempt to repair any of the SRS parts.

d. If any of the SRS parts are dropped, or if any cracks, dents or other defects are found, replace them with new parts.

e. Never use SRS parts from another vehicle. When replacing parts, use new parts.

f. Do not expose any of the SRS parts directly to high temperatures or flames.

g. If the vehicle has been involved in a minor collision where the SRS does not deploy, the SRS parts should be inspected before further use of the vehicle.

h. Do not apply grease, detergent, oil or water to the SRS parts. If applied, immediately wipe it off with a dry cloth.

i. When deploying or storing the SRS parts, avoid places with a high temperature (ambient temperature of 93°C (199°F) or higher for an airbag and 80°C (176°F) or higher for a pretensioner) and high humidity, and keep them away from electrical noise.

j. Do not stack or place anything on top of the SRS parts.

k. When disposing of the vehicle or an SRS part by itself, deploy it using SST before disposal. Deploy the SRS parts in a safe place away from electrical noise.

HINT:

- Disposal of the steering pad. Refer to **DISPOSAL**
- Disposal of the knee airbag assembly. Refer to **DISPOSAL**
- Disposal of the front passenger airbag assembly. Refer to **DISPOSAL**
- Disposal of the curtain shield airbag assemblies. Refer to **DISPOSAL**
- Disposal of the front seat side airbag assemblies. Refer to **DISPOSAL**
- Disposal of the front seat outer belt assemblies. Refer to **DISPOSAL**

l. Never inspect the resistance of the SRS parts.

WARNING: Never measure the resistance of the SRS parts because current from the tester may cause the SRS parts to deploy.

4. **PRECAUTION FOR DISPOSAL OF SRS PARTS (NOT DEPLOYED)**

a. Before performing pre-disposal deployment of any SRS parts, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.

b. Never dispose of any SRS parts that are not deployed.

c. Deploy the SRS parts outdoors in a safe and level place where it will not disturb nearby residents.

d. As the SRS parts produce a loud sound when deployed, be sure to inform nearby residents before deployment.

e. When deploying the SRS parts, always use SST and keep people at least 10 m (32.8 ft.) away.

f. The SRS parts may be accidentally deployed by static electricity. To prevent this, be sure to touch a grounded metal surface with your bare hands to discharge any static electricity before handling the

SRS parts.

g. Do not face the airbag deployment side down when deploying an airbag.

5. **PRECAUTION FOR DISPOSAL OF SRS PARTS (DEPLOYED)**
   a. As the SRS parts are very hot after being deployed, allow at least 30 minutes for them to cool down sufficiently before disposal.
   b. Do not apply water etc. to any deployed SRS parts.
   c. Use gloves and safety glasses when handling any deployed SRS parts.
   d. Seal the deployed SRS parts in a thick clear plastic bag when disposing of them.
   e. Always wash your hands with water after disposing of deployed SRS parts.
6. **PRECAUTION FOR STEERING PAD (DRIVER AIRBAG), KNEE AIRBAG ASSEMBLY, FRONT PASSENGER AIRBAG ASSEMBLY, CURTAIN SHIELD AIRBAG ASSEMBLY AND FRONT SEAT SIDE AIRBAG ASSEMBLY**
   a. Keep the airbag deployment side facing upward even when the airbag is temporarily removed during an operation.

WARNING: Always place a removed or new airbag with the deployment surface facing upward. Placing the airbag with the deployment surface facing downward could cause a serious accident if the airbag deploys.

7. **PRECAUTION FOR FRONT SEAT OUTER BELT ASSEMBLY (PRETENSIONER)**
   a. Do not touch the area around the retractor even when the pretensioner is temporarily removed during an operation.

WARNING: If the retractor unexpectedly operates and the belt is retracted during an operation, it could cause a serious accident.

8. **PRECAUTION FOR SPIRAL CABLE**
   a. Do not replace the spiral cable with the battery connected and the ignition switch to ON.
   b. Do not rotate the spiral cable with the battery connected and the ignition switch to ON.
   c. Ensure that the steering wheel is installed and aligned straight when inspecting the steering sensor.
   d. Do not remove the steering sensor from the spiral cable.
   e. Be sure the spiral cable is in the neutral position during installation and when removing and installing the steering wheel. Refer to **INSTALLATION** .

WARNING: If the steering wheel is turned without the spiral cable installed in the neutral position, the cable may break.

9. **PRECAUTION FOR AIRBAG SENSORS**
   a. When any of the airbags have deployed due to the collision, be sure to replace all sensors in the damaged areas and center airbag sensor assembly.

10. **PRECAUTION FOR WIRE HARNESS AND CONNECTOR**
    a. All wire harnesses except unexposed harnesses in the engine room are colored yellow.
    b. As special connectors are used, be careful when handling them.
11. **WHEN SERVICING DAMAGED VEHICLE**
    a. Before using an electric welder on the vehicle, remove any SRS parts around the area being repaired.

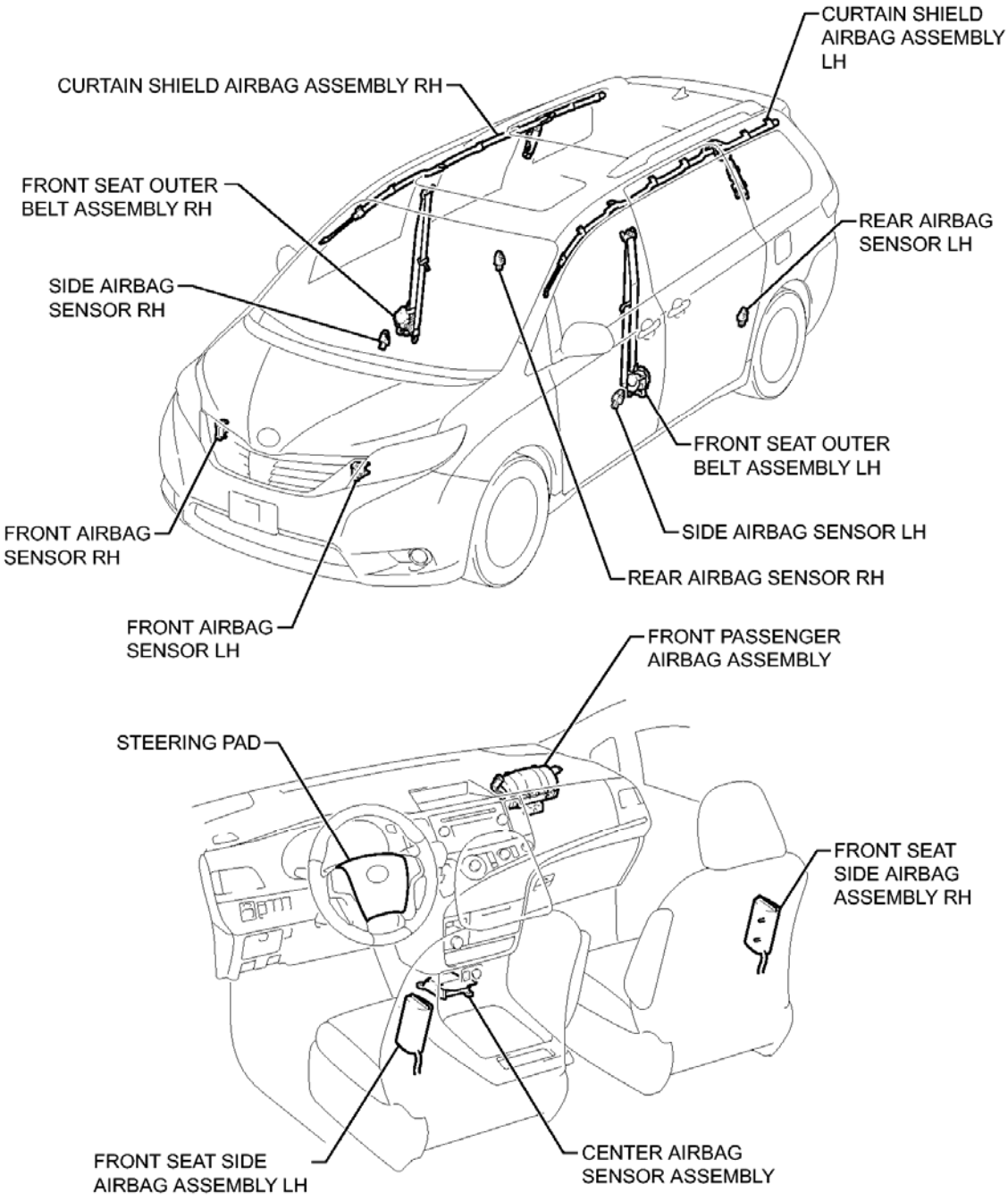
> **WARNING: Make sure to remove any SRS parts as necessary to prevent them from accidentally deploying.**

    b. Before repairs, remove the airbag sensor assemblies if impacts are likely to be applied to the sensor during repairs.
    c. Never expose an airbag sensor directly to high temperatures.
    d. As the SRS parts are very hot after being deployed, ensure that all wire harnesses and connectors around deployed SRS parts are not damaged.
12. **CONDITIONS WHEN INSPECTION OF SRS PARTS IS NECESSARY**
    a. When the vehicle is damaged in a collision even when the SRS parts are not deployed.
    b. When an SRS system DTC is output.
13. **IGNITION SWITCH EXPRESSIONS**
    a. The type of ignition switch used on this model differs according to the specifications of the vehicle. The expressions listed in the table below are used in this information.

Expression	Ignition Switch (Position)	Engine Switch (Condition)
Ignition switch off	LOCK	Off
Ignition switch ACC	ACC	On (ACC)
Ignition switch ON	ON	On (IG)
Engine start	START	Start

PARTS LOCATION

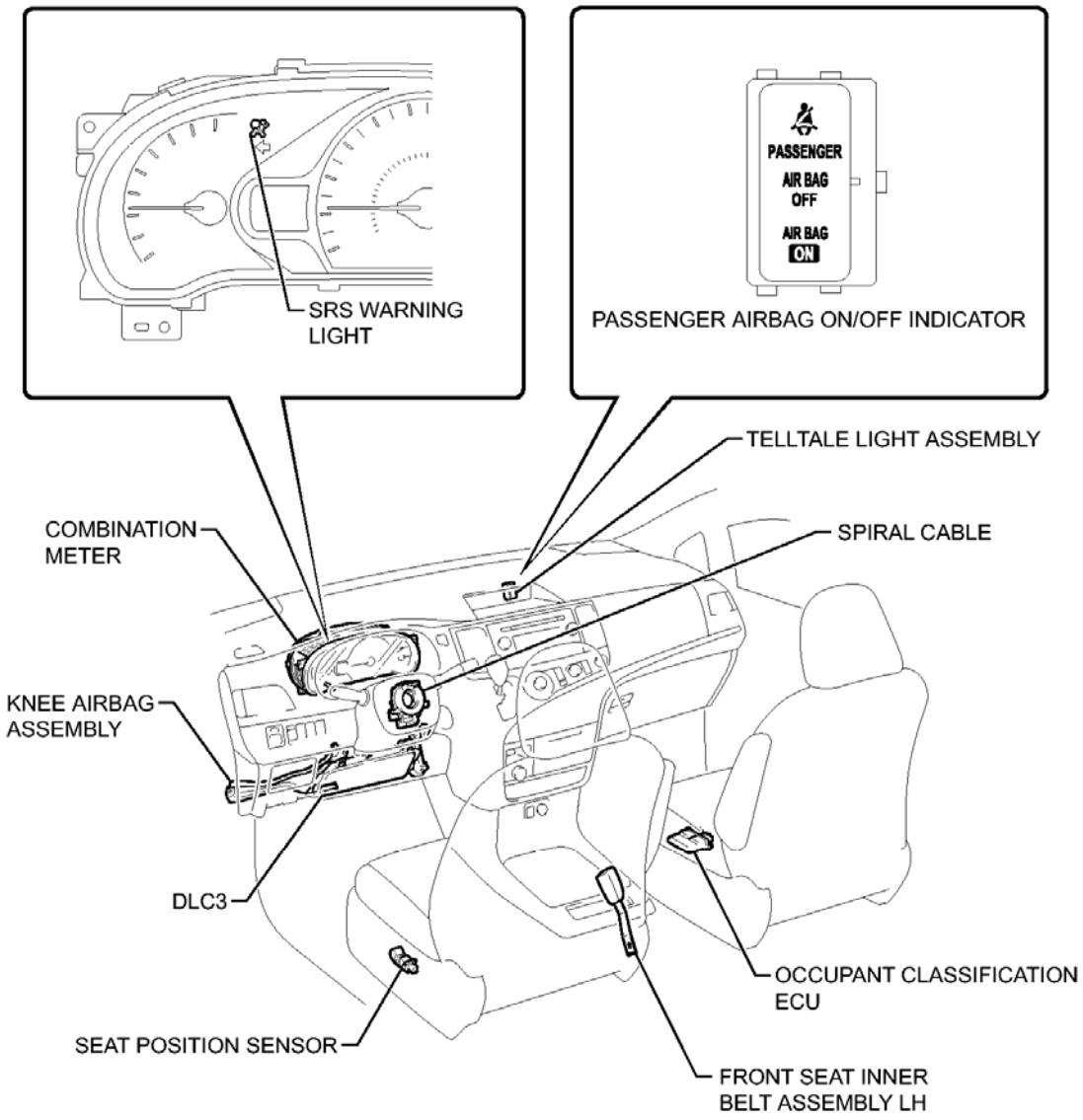
ILLUSTRATION



P

Fig. 1: SRS Components Location (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ILLUSTRATION



P

Fig. 2: SRS Components Location (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SYSTEM DIAGRAM

SYSTEM DIAGRAM

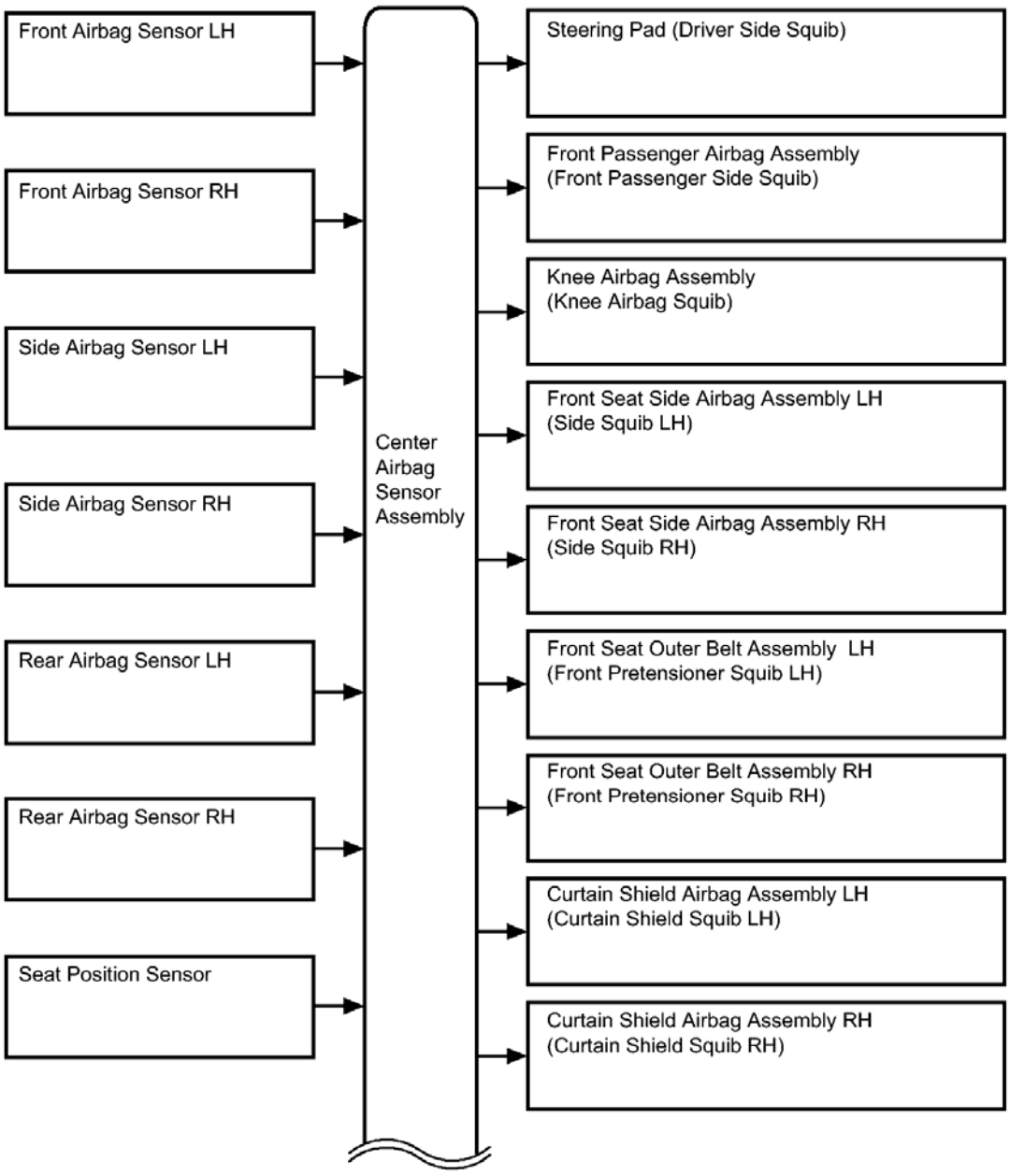


Fig. 3: SRS System Diagram (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

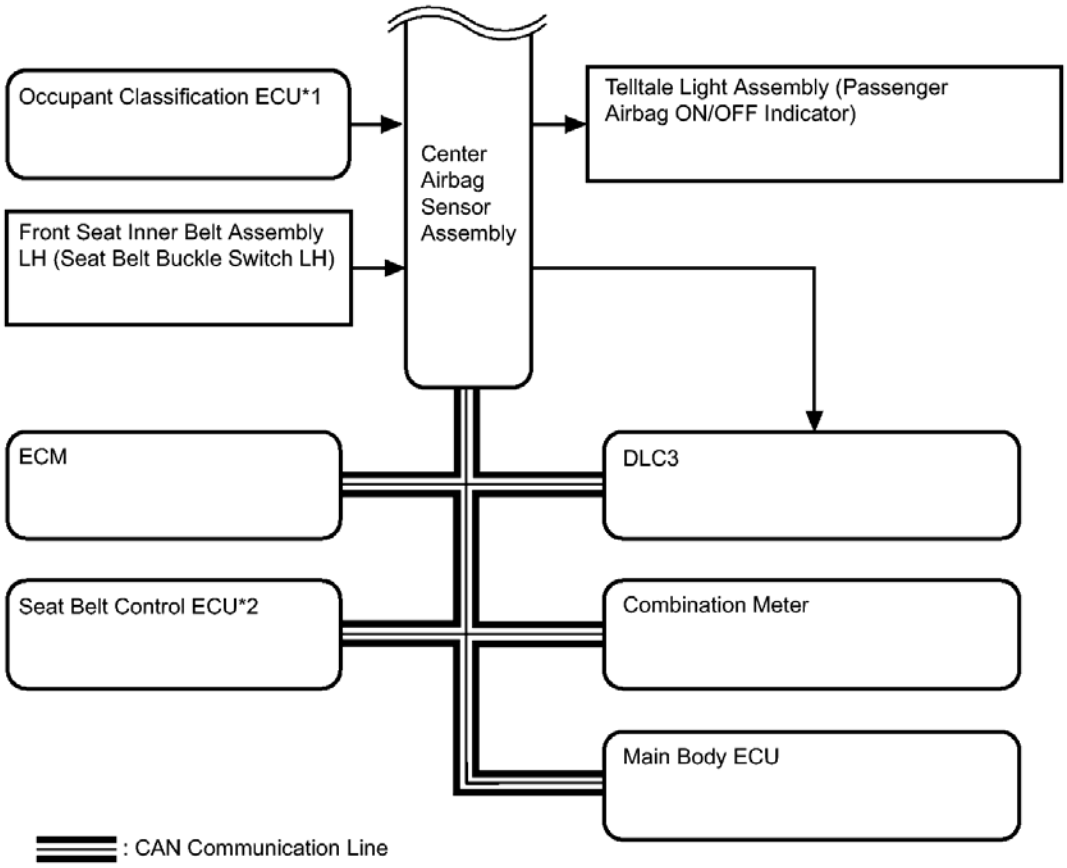


Fig. 4: SRS System Diagram (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Transmitting ECU (Transmitter)	Receiving ECU	Signal	Communication Method
Center Airbag Sensor Assembly	ECM	Crash detection signal	CAN
Center Airbag Sensor Assembly	Seat Belt Control ECU*	• Driver seat buckle switch signal • Passenger seat buckle switch signal	CAN
Center Airbag Sensor Assembly	Main Body ECU	Driver seat buckle switch signal	CAN
		• SRS warning light ON demand signal	

Center Airbag Sensor Assembly	Combination Meter	• Passenger seat buckle switch signal • Passenger seat occupant detection signal • Diagnosis signal (DTC)	CAN
Combination Meter	Center Airbag Sensor Assembly	Vehicle speed signal	CAN
ECM	Center Airbag Sensor Assembly	• Engine speed signal • Accelerator opening angle information • Accelerator opening angle signal • Shift position signal • Test mode signal • Stop signal	CAN

*: w/ Dynamic Radar Cruise Control System

SYSTEM DESCRIPTION

SYSTEM DESCRIPTION

1. **GENERAL**
    a. FRONTAL COLLISION
        1. The driver airbag, front passenger airbag and knee airbag are designed to supplement seat belts in the event of a front collision in order to help reduce shock to the head, chest and knees of the driver and front passenger.
        2. Frontal collisions are detected by the center airbag sensor and two front airbag sensors. The driver airbag, front passenger airbag, knee airbag and seat belt pretensioners then operate simultaneously.
    b. SIDE COLLISION
        1. The front seat side airbag and curtain shield airbag are designed to help reduce shock to the driver, front passenger and rear outer passengers in the event of a side collision.
        2. Side collisions are detected by the side airbag sensor installed in the bottom of the front door and the rear airbag sensor installed in the bottom of the rear pillar.
        3. Front side collisions are detected by the side airbag sensor, causing the front seat side airbag and curtain shield airbag to deploy simultaneously. Rear side collisions are detected by the rear airbag sensor to deploy only the curtain shield airbag.
2. **CONSTRUCTION AND OPERATION**
    a. FRONT AIRBAG SENSOR

1. The front airbag sensors are installed on the right and left radiator supports respectively.
2. The front airbag sensor uses an electrical type deceleration sensor.
3. The deceleration sensor is built into the front airbag sensor, and the distortion that is created in the sensor is converted into an electric signal based on the vehicle deceleration rate during a frontal collision. Accordingly, the extent of the initial collision can be detected in detail.

b. SIDE AIRBAG SENSOR

1. The side airbag sensors are installed on the bottom of the right and left front doors respectively.
2. The side airbag sensor uses an electrical type deceleration sensor.
3. The deceleration sensor is built into the side airbag sensor, and the distortion that is created in the sensor is converted into an electric signal based on the vehicle deceleration rate during a front side collision. Accordingly, the extent of the initial collision can be detected in detail.

c. REAR AIRBAG SENSOR

1. The rear airbag sensors are installed on the right and left rear pillars respectively.
2. The rear airbag sensor uses an electrical type deceleration sensor.
3. The deceleration sensor is built into the rear airbag sensor, and the distortion that is created in the sensor is converted into an electric signal based on the vehicle deceleration rate during a rear side collision. Accordingly, the extent of the initial collision can be detected in detail.

d. CENTER AIRBAG SENSOR

1. General
   - The center airbag sensor assembly is installed on the center floor under the instrument panel.
   - The center airbag sensor assembly consists of a deceleration sensor, safing sensor, ignition control circuit, and diagnostic circuit, etc.
   - The center airbag sensor assembly receives signals from the deceleration sensor and safing sensor built into the center airbag sensor assembly and front airbag sensor, and determines whether the driver airbag, front passenger airbag, knee airbag and front seat belt pretensioner should be activated, and diagnoses system malfunctions.
   - The center airbag sensor assembly receives signals from the deceleration sensor and the safing sensor built into the center airbag sensor, side airbag sensor and rear airbag sensor, and determines whether the front seat side airbag and the curtain shield airbag should be activated, and diagnoses system malfunctions.
2. Deceleration sensor and ignition control circuit
   - The deceleration sensor is built into the center airbag sensor assembly, front airbag sensor, side airbag sensor and rear airbag sensor, and the distortion created based on the deceleration of the vehicle during a frontal, front side or rear side collision is converted into an electric signal.
   - The ignition control circuit performs calculations based on the signal output from the deceleration sensors of the center airbag sensor assembly, front airbag sensor, side airbag sensor and rear airbag sensor. If the calculated values are greater than the specified values, it activates an ignition operation.
3. Safing sensor

The safing sensor is built into the center airbag sensor assembly. During a frontal, front side and rear side collision, the sensor turns on and outputs an ON signal to the center airbag sensor if a deceleration rate sent to the safing sensor is greater than the specified value.

4. Back-up power source

   The back-up power source consists of a power supply capacitor and a DC-DC converter. When the power system does not function during a collision, the power supply capacitor discharges and supplies electric power to the system. The DC-DC converter operates as a boosting transformer when the battery voltage falls below a predetermined level.

5. Diagnostic circuit

   This circuit constantly diagnoses system malfunctions. When a malfunction is detected, it turns on the SRS warning light on the combination meter assembly to inform the driver.

6. Memory circuit

   When a malfunction is detected in the diagnostic circuit, it is coded and stored in the memory circuit.

e. SRS WARNING LIGHT

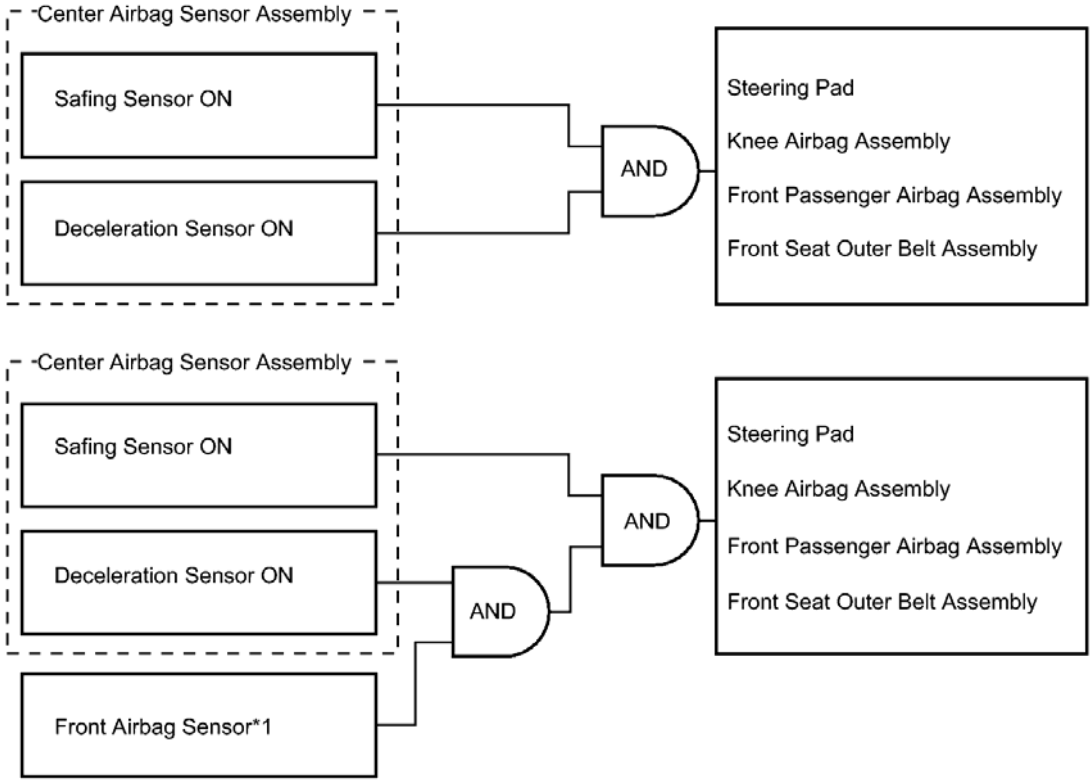
   1. The SRS warning light is located on the combination meter. It comes on to inform the driver of system trouble when a malfunction is detected in self-diagnosis of the center airbag sensor. Under normal operating conditions, when the ignition switch is turned to ON, it comes on for approximately 6 seconds and then goes off.

3. **DEPLOYMENT CONDITION**

If the vehicle collides and the shock is greater than the specified value, the SRS is activated automatically. The center airbag sensor assembly includes the safing sensor and deceleration sensor. The safing sensor is designed to turn on at a lower deceleration rate than the deceleration sensor.

a. The center airbag sensor assembly determines whether ignition is necessary based on signals from the deceleration sensor and the front airbag sensor*1.

   If the safing sensor turns on simultaneously, current flows to the squibs to deploy the SRS as shown in the illustration below.



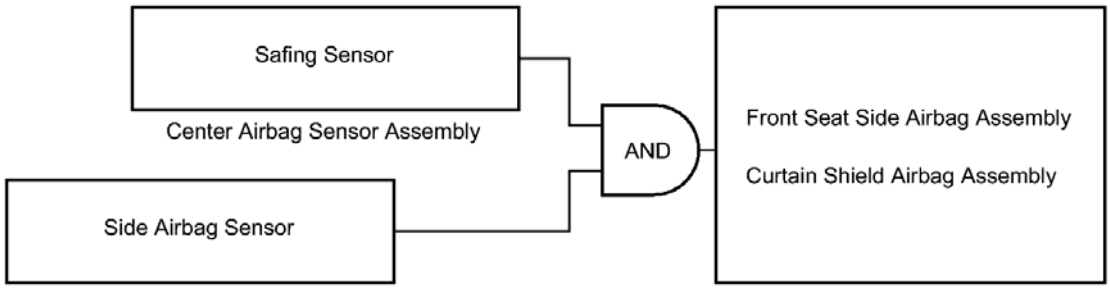
C

Fig. 5: Deployment Condition - Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

*1: In case of a front collision, the ignition signal could be output with the deceleration sensor ON signal even without a signal from the front airbag sensor.

b. The center airbag sensor assembly determines whether ignition is necessary based on signals from the side airbag sensor. If the safing sensor turns on simultaneously, current flows to the squib to deploy the SRS as shown in the illustration below.

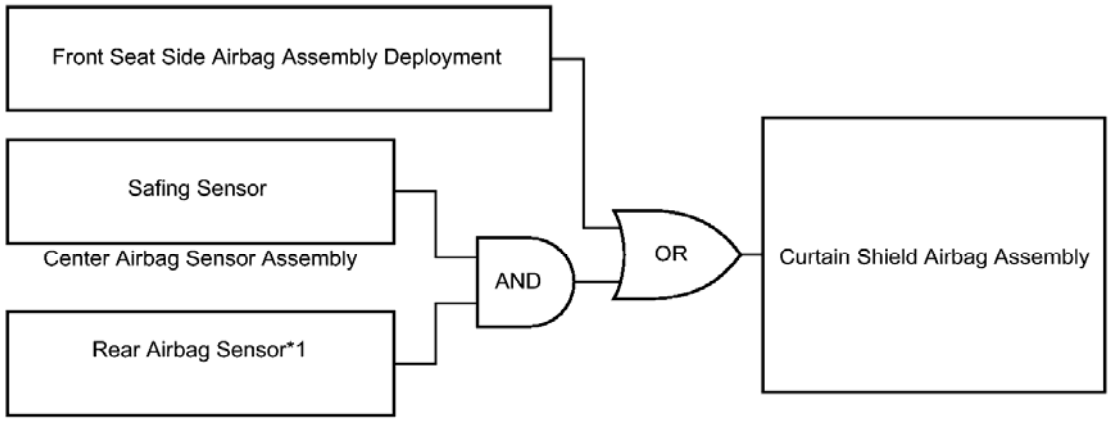


C

Fig. 6: Deployment Condition - Center/Rear Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. The center airbag sensor assembly determines whether ignition is necessary based on signals from the rear airbag sensor.

If the safing sensor turns on simultaneously, current flows to the squib to deploy the SRS as shown in the illustration below*1.



C

Fig. 7: Deployment Condition - Curtain Shield Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

*1: If the front seat side airbag assembly deploys, the curtain shield airbag assembly will also deploy, regardless of whether the signal is output from the rear airbag sensor.

HOW TO PROCEED WITH TROUBLESHOOTING

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

*: Use the Techstream.

1. **VEHICLE BROUGHT TO WORKSHOP**

   NEXT: Go to next step

2. **CUSTOMER PROBLEM ANALYSIS. Refer to HOW TO PROCEED WITH TROUBLESHOOTING**
   a. Confirm problem symptoms.

      NEXT: Go to next step

3. **CHECK CAN COMMUNICATION SYSTEM*. Refer to DIAGNOSIS SYSTEM**

   RESULT

Result	Proceed to
DTCs not output	A
DTCs output	B

   B --> CHECK CAN COMMUNICATION CIRCUIT

   A: Go to next step

4. **WARNING LIGHT CHECK. Refer to DIAGNOSIS SYSTEM**

   NEXT: Go to next step

5. **DTC CHECK (Present and Past DTCs)*. Refer to DTC CHECK / CLEAR**

   RESULT

Result	Proceed to
DTCs output	A
DTCs not output	B

B --> PROBLEM SYMPTOMS TABLE. Refer to PROBLEM SYMPTOMS TABLE

A: Go to next step

6. **DTC CHART. Refer to DIAGNOSTIC TROUBLE CODE CHART**

   NEXT: Go to next step

7. **CIRCUIT INSPECTION**

   NEXT: Go to next step

8. **REPAIR OR REPLACEMENT**

   NEXT: Go to next step

9. **DTC CLEARANCE (Present and Past DTCs)*. Refer to DTC CHECK / CLEAR**

   NEXT: Go to next step

10. **DTC CHECK (Present and Past DTCs)*. Refer to DTC CHECK / CLEAR**

    RESULT

Result	Proceed to
DTCs not output	A
DTCs output	B

    B --> DIAGNOSTIC TROUBLE CODE CHART. Refer to DIAGNOSTIC TROUBLE CODE CHART

    A: Go to next step

11. **CONFIRMATION TEST**

    NEXT --> END

PROBLEM SYMPTOMS TABLE

PROBLEM SYMPTOMS TABLE

HINT:

- Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are

listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.

- Inspect the fuses and relays related to this system before inspecting the suspected areas below.

Symptom	Suspected Area	See
The SRS warning light goes off after the primary check, but comes on again.	SRS Warning Light Remains ON	Refer to **SRS Warning Light Remains ON**
With the ignition switch to ON, the SRS warning light sometimes comes on after approximately 6 seconds.	SRS Warning Light Remains ON	Refer to **SRS Warning Light Remains ON**
The SRS warning light always comes on even when no DTCs are output.	SRS Warning Light Remains ON	Refer to **SRS Warning Light Remains ON**
With the ignition switch to ON the SRS warning light does not come on.	SRS Warning Light does not Come ON	Refer to **SRS Warning Light does not Come ON**
Although an SRS warning light operates normally, DTC or a normal system code is not displayed.	TC and CG Terminal Circuit	Refer to **TC and CG Terminal Circuit**
Although terminals TC and CG of the DLC3 are not connected, DTC or a normal system code is displayed.	TC and CG Terminal Circuit	Refer to **TC and CG Terminal Circuit**

TERMINALS OF ECU

TERMINALS OF ECU

1. **CENTER AIRBAG SENSOR ASSEMBLY**

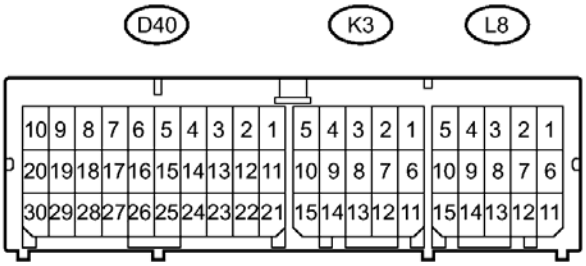


Fig. 8: Center Airbag Sensor Assembly Connector Terminal Identification
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Terminal No.	Terminal Symbol	Destination

D40-1	P2+	Front passenger airbag assembly (Front passenger side squib 2nd step)
D40-2	P2-	Front passenger airbag assembly (Front passenger side squib 2nd step)
D40-3	P-	Front passenger airbag assembly (Front passenger side squib)
D40-4	P+	Front passenger airbag assembly (Front passenger side squib)
D40-5	D+	Steering pad (Driver side squib)
D40-6	D-	Steering pad (Driver side squib)
D40-7	D2-	Steering pad (Driver side squib 2nd step)
D40-8	D2+	Steering pad (Driver side squib 2nd step)
D40-9	DK+	Knee airbag assembly (Knee airbag squib)
D40-10	DK-	Knee airbag assembly

		(Knee airbag squib)
D40-13	CANH	CAN communication line
D40-17	P-AB	Front passenger seat belt warning light (Passenger airbag ON/OFF indicator)
D40-21	IG2	IG2 fuse
D40-22	CANL	CAN communication line
D40-23	PAON	Front passenger seat belt warning light (Passenger airbag ON/OFF indicator)
D40-24	GSW3	Telematics Transceiver
D40-25	E1	Ground
D40-26	E2	Ground
D40-27	-SR	Front airbag sensor RH
D40-28	-SL	Front airbag sensor LH
D40-29	+SR	Front airbag sensor RH
D40-30	+SL	Front airbag sensor LH
K3-1	PL-	Front seat outer belt assembly LH (Front pretensioner squib LH)
		Front seat outer belt assembly LH

K3-2	PL+	(Front pretensioner squib LH)
K3-6	ICL-	Curtain shield airbag assembly LH (Curtain shield squib LH)
K3-7	ICL+	Curtain shield airbag assembly LH (Curtain shield squib LH)
K3-8	BBL+	Side airbag sensor LH
K3-9	SFL+	Front seat side airbag assembly LH (Side squib LH)
K3-10	SFL-	Front seat side airbag assembly LH (Side squib LH)
K3-11	LBE+	Front seat inner belt assembly LH (Seat belt buckle switch LH)
K3-12	LBE-	Front seat inner belt assembly LH (Seat belt buckle switch LH)
K3-13	LSP-	Seat position sensor
K3-14	LSP+	Seat position sensor
K3-15	BBL-	Side airbag sensor LH
L8-4	PR+	Front seat outer belt assembly RH

		(Front pretensioner squib RH)
L8-5	PR-	Front seat outer belt assembly RH (Front pretensioner squib RH)
L8-6	SFR-	Front seat side airbag assembly RH (Side squib RH)
L8-7	SFR+	Front seat side airbag assembly RH (Side squib RH)
L8-8	BBR+	Side airbag sensor RH
L8-9	ICR+	Curtain shield airbag assembly RH (Curtain shield squib RH)
L8-10	ICR-	Curtain shield airbag assembly RH (Curtain shield squib RH)
L8-11	BBR-	Side airbag sensor RH
L8-12	FSR+	Occupant classification ECU
L8-13	FSR-	Occupant classification ECU

DIAGNOSIS SYSTEM

DIAGNOSIS SYSTEM

1. **CHECK DLC3**
2. **SYMPTOM SIMULATION**

HINT:

The most difficult case in troubleshooting is when no problem symptoms occur. In such a case, a thorough problem analysis must be carried out. A simulation of the same or similar conditions and environment in which the problem occurred in the customer's vehicle should be carried out. No matter how much skill or experience a technician has, troubleshooting without confirming the problem symptoms will lead to important repairs being overlooked and mistakes or delays.

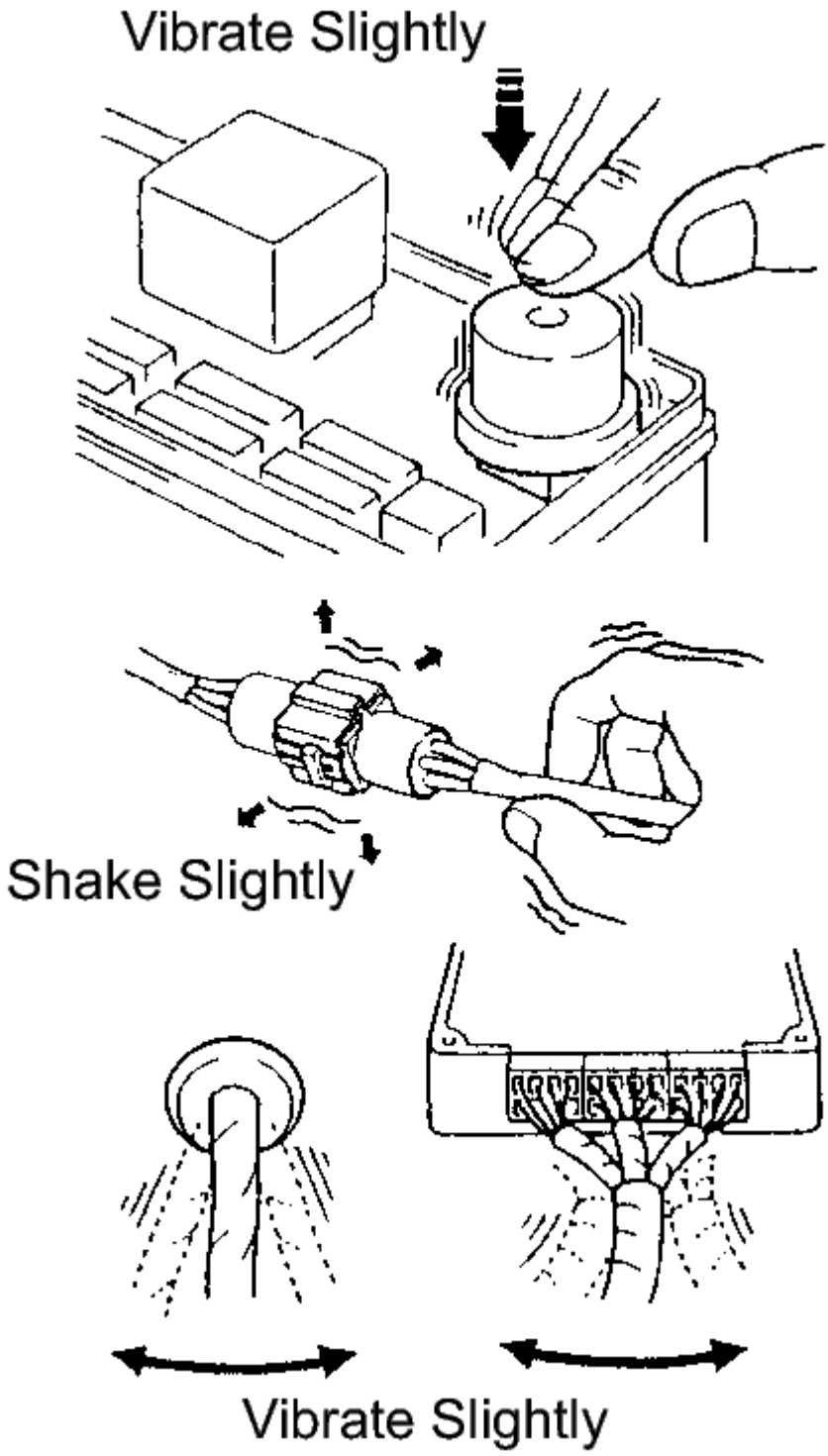


Fig. 9: Identifying Vibration Method
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Vibration method: When vibration seems to be the major cause.

HINT:

Perform the simulation method only during the primary check period (for approximately 6 seconds after the ignition switch is turned to ON).

1. Slightly vibrate the part of the sensor considered to be the problem cause with your fingers and check whether the malfunction occurs.

NOTE: Shaking the relays too strongly may result in open relays.

2. Slightly shake the connector vertically and horizontally.
3. Slightly shake the wire harness vertically and horizontally.

HINT:

The connector joint and fulcrum of the vibration are the major areas to be checked thoroughly.

3. **FUNCTION OF SRS WARNING LIGHT**

a. Primary check.

1. Turn the ignition switch off. Wait for at least 2 seconds and then turn the ignition switch to ON. The SRS warning light comes on for approximately 6 seconds and the diagnosis of the airbag system (including the seat belt pretensioners) is performed.

HINT:

If trouble is detected during the primary check, the SRS warning light remains on even after the primary check period (of approximately 6 seconds) has elapsed.

b. Constant check.

1. After the primary check, the center airbag sensor constantly monitors the airbag system for trouble.

HINT:

If trouble is detected during the constant check, the center airbag sensor functions as follows:

- The SRS warning light comes on.
- The SRS warning light goes off, and then comes on. This blinking pattern indicates a source voltage drop. The SRS warning light goes off 10 seconds after the source voltage returns to normal.

c. Review.

1. When the airbag system is normal:

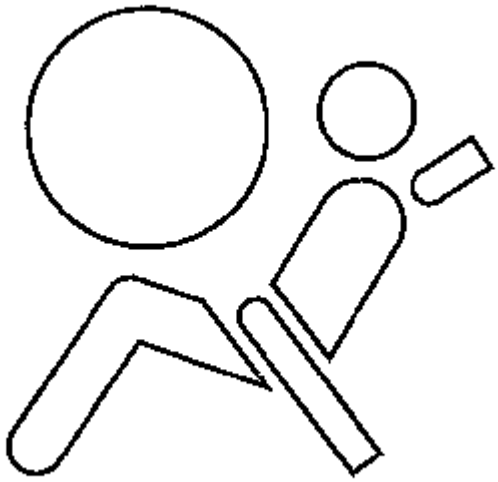
The SRS warning light comes on only during the primary check period (for approximately 6 seconds after the ignition switch is turned to ON).

2. When the airbag system has trouble:
    - The SRS warning light remains on even after the primary check period has elapsed.
    - The SRS warning light goes off after the primary check, but comes on again during the constant check.
    - The SRS warning light does not come on when turning the ignition switch from off to ON.

    HINT:

    The center airbag sensor functions to keep the SRS warning light on if the airbag has been deployed.

4. **CHECK SRS WARNING LIGHT**



P

Fig. 10: Identifying SRS Warning Light
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Turn the ignition switch to ON, and check that the SRS warning light comes on for approximately 6 seconds (primary check).
b. Check that the SRS warning light goes off approximately 6 seconds after the ignition switch is turned to ON (constant check).

    HINT:

    When any of the following symptoms occur, refer to "Problem Symptoms Table". Refer to **PROBLEM SYMPTOMS TABLE**.

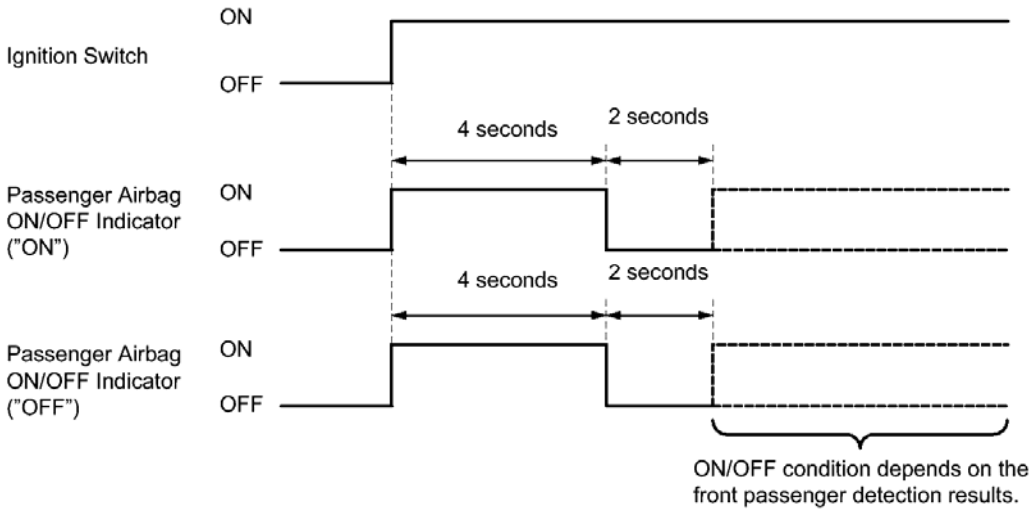
- The SRS warning light comes on occasionally, after the primary check period has elapsed.
- The SRS warning light comes on, but a DTC is not output.
- The ignition switch is turned from off to ON, but the SRS warning light does not come on.

5. **FUNCTION OF PASSENGER AIRBAG ON/OFF INDICATOR**
   a. Initial check
      1. Turn the ignition switch to ON.
      2. The passenger airbag ON/OFF indicator (ON and OFF) comes on for approximately 4 seconds, and then goes off for approximately 2 seconds.
      3. Approximately 6 seconds after the ignition switch is turned to ON, the passenger airbag ON/OFF indicator will be ON/OFF depending on the conditions listed below.

Front Seat Passenger	Passenger Airbag ON/OFF Indicator		SRS Warning Light
	ON Indicator	OFF Indicator	
Adult seated	ON	OFF	OFF
Child seated/Child restraint system set	OFF	ON	OFF
Vacant	OFF	OFF	OFF
Passenger occupant classification system failure	OFF	ON	ON

HINT:

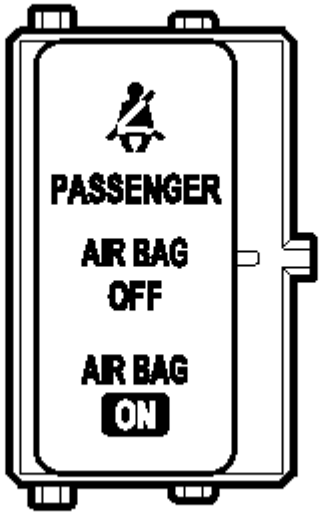
- The passenger airbag ON/OFF indicator operates based on the timing chart below in order to check the indicator light circuit.
- When the occupant classification system has trouble, both the SRS warning light and the passenger airbag ON/OFF indicator (OFF) come on. In this case, check the DTCs in Airbag System first. Then troubleshoot the occupant classification system if DTC B1650/32 is detected, and troubleshoot the passenger airbag ON/OFF indicator if DTC B1660/43 is detected.



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Fig. 11: Passenger Airbag ON/OFF Indicator Timing Chart
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

6. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR**
   a. Turn the ignition switch to ON.



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Fig. 12: Identifying Passenger Airbag On/Off Indicator
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   b. Check that the passenger airbag ON/OFF indicator (ON and OFF) comes on for approximately 4

seconds, and then goes off for approximately 2 seconds.

HINT:

Refer to the table in the previous step regarding the passenger airbag ON/OFF indicator when approximately 6 seconds have elapsed after the ignition switch is turned to ON.

7. **SRS CONNECTORS**
   a. SRS connectors are located as shown in the following illustration.

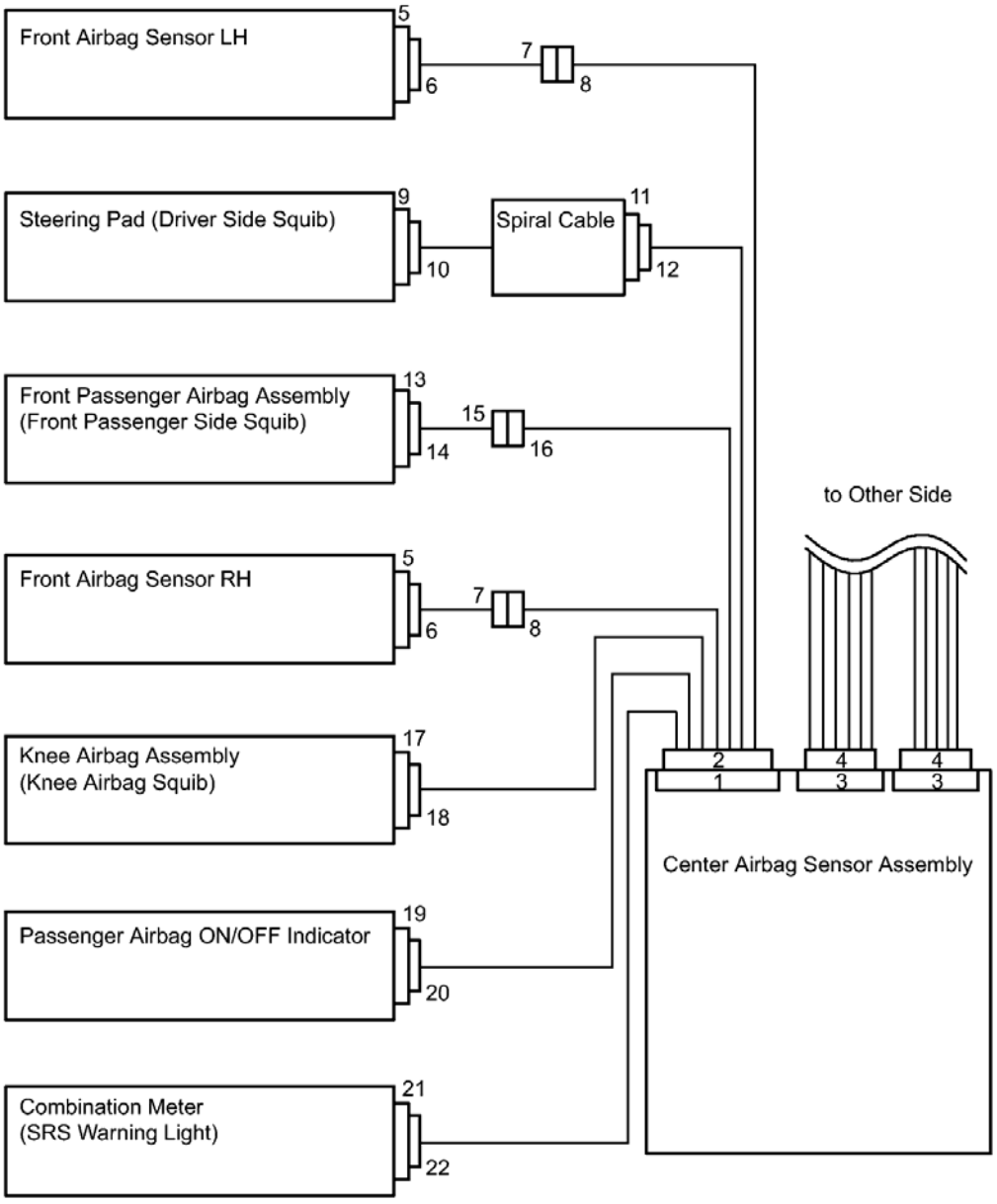


Fig. 13: Identifying SRS Connectors (1 Of 3)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

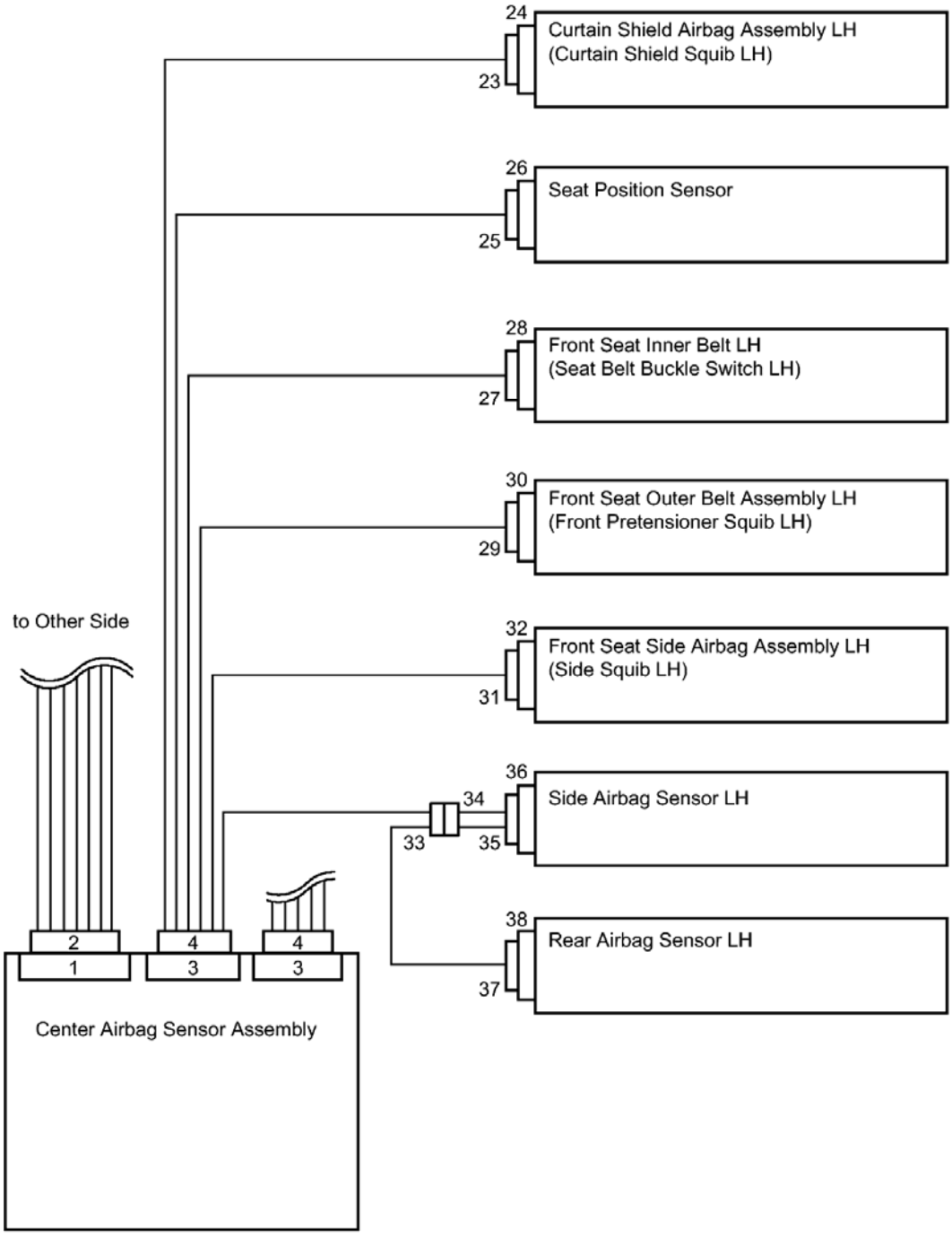


Fig. 14: Identifying SRS Connectors (2 Of 3)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

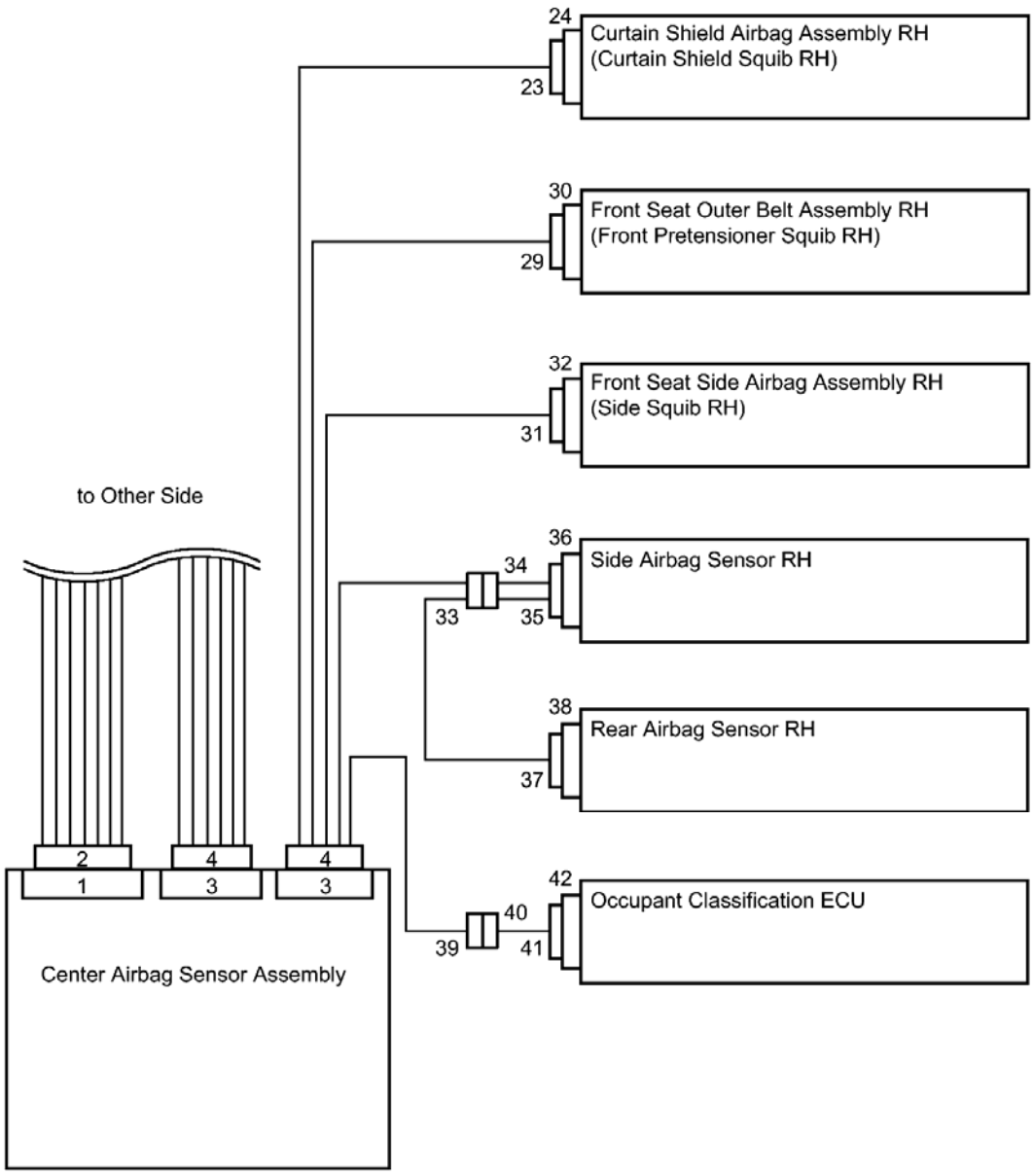


Fig. 15: Identifying SRS Connectors (3 Of 3)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Item	Application
Terminal Twin-Lock Mechanism	Connectors 7, 8, 12, 16, 31, 33, 34, 35, 37

Activation Prevention Mechanism	Connectors 2, 4, 9, 11, 13, 15, 17, 24, 30, 32
Half Connection Prevention Mechanism	Connectors 8, 12, 16, 34
Connector Position Assurance Mechanism	Connectors 6, 31, 35, 37
Connector Lock Mechanism (1)	Connectors 10, 14, 18, 23, 29
Connector Lock Mechanism (2)	Connectors 2, 4
Improper Connection Prevention Lock Mechanism	Connectors 1, 3

b. All connectors in the SRS are colored yellow to distinguish them from other connectors. These connectors have special functions, and are specially designed for the SRS. All SRS connectors use durable gold-plated terminals, and are placed in the locations shown below to ensure high reliability.

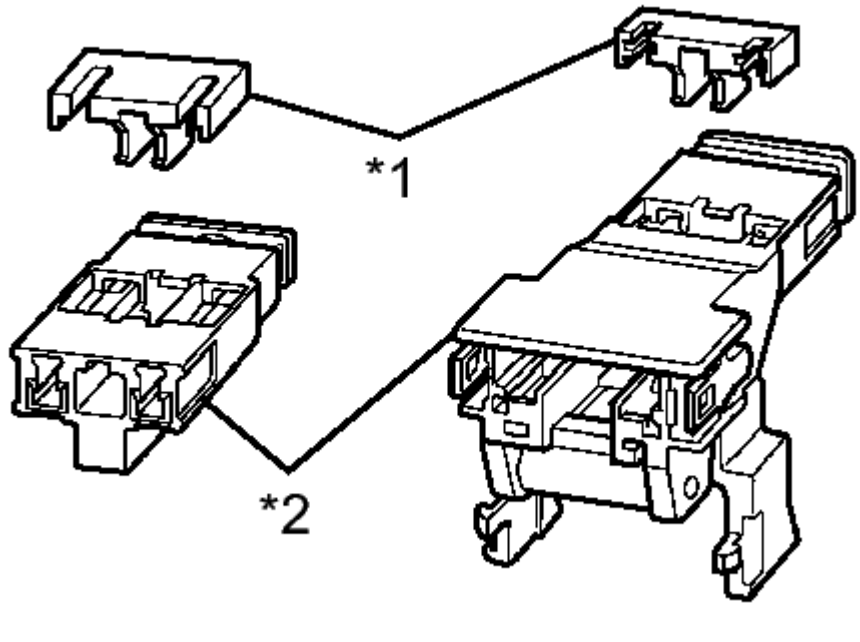


Fig. 16: Identifying Terminal Twin-Lock Mechanism
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Spacer
*2	Housing

1. Terminal twin-lock mechanism:

   All connectors with a terminal twin-lock mechanism have a two-piece component consisting of a housing and a spacer. This design enables the terminal to be locked securely by two locking devices (the retainer and the lance) to prevent terminals from coming out.

2. Activation prevention mechanism:

   All connectors with an activation prevention mechanism contain a short spring plate. When these connectors are disconnected, the short spring plate creates a short circuit by automatically connecting the positive (+) and negative (-) terminals of the squib.

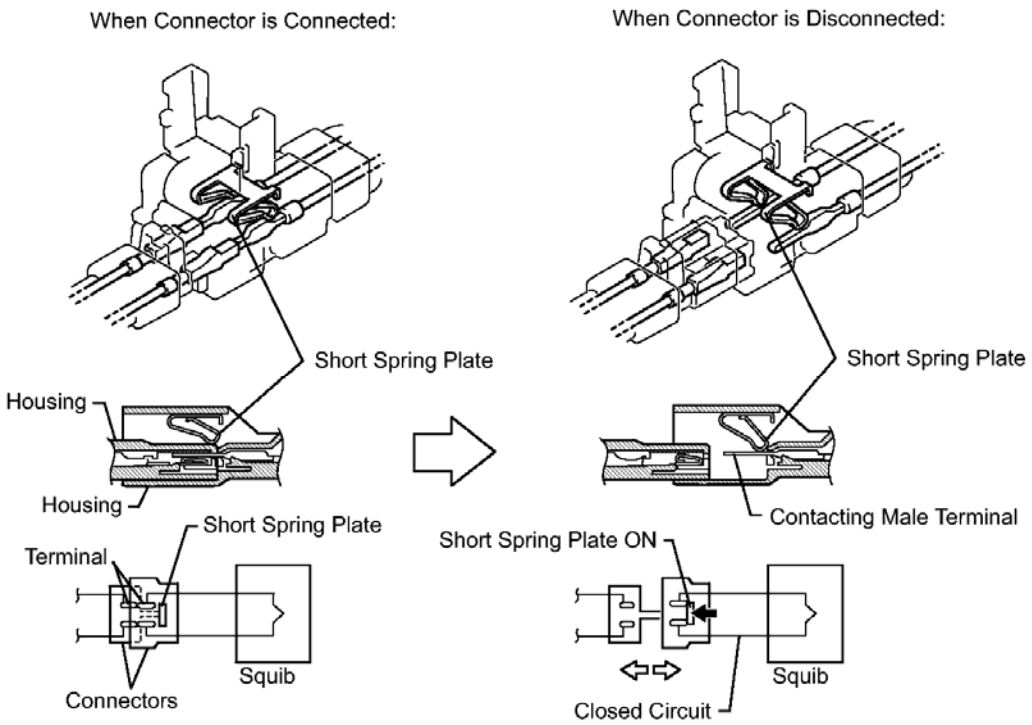
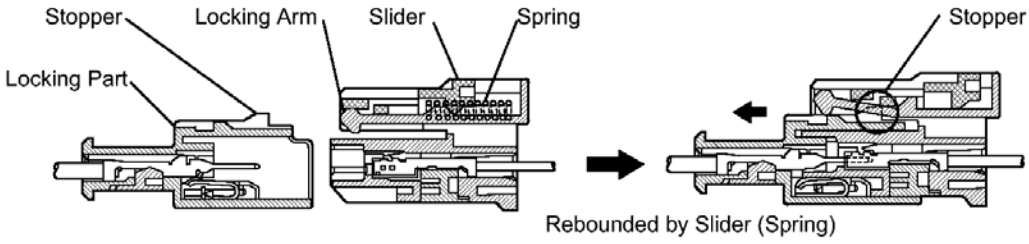


Fig. 17: Identifying Activation Prevention Mechanism
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Half connection prevention mechanism:

   If the connector is not completely connected, the connector is disconnected by the spring force so that no continuity exists.

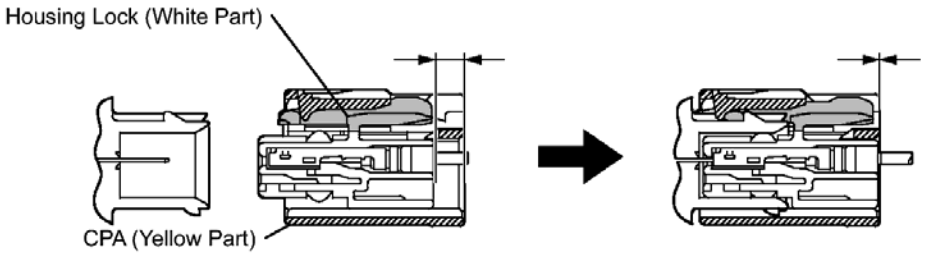


Y

Fig. 18: Identifying Half Connection Prevention Mechanism
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

4. Connector position assurance mechanism:

   Only when the housing lock (white part) is completely engaged, the CPA (yellow part) slides, which completes the connector engagement.

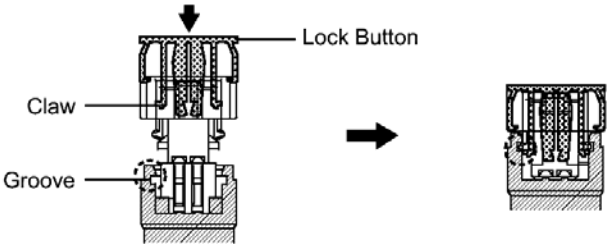


Y

Fig. 19: Identifying Connector Position Assurance Mechanism
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. Connector lock mechanism (1):

   Locking the connector lock button connects the connector securely.

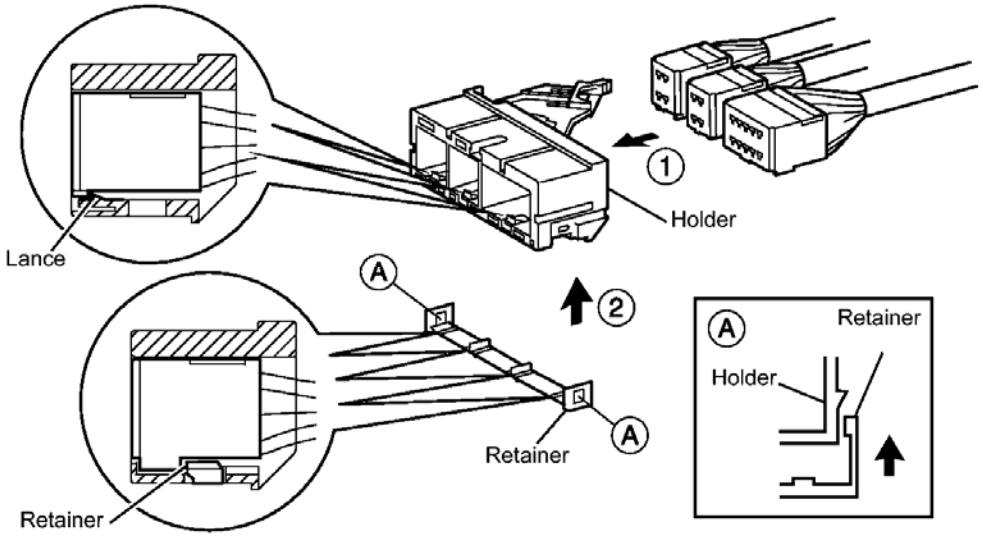


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Fig. 20: Identifying Connector Lock Mechanism
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

6. Connector lock mechanism (2):

   Both the primary lock with holder lances and the secondary lock with retainer prevent the connectors from becoming disconnected.

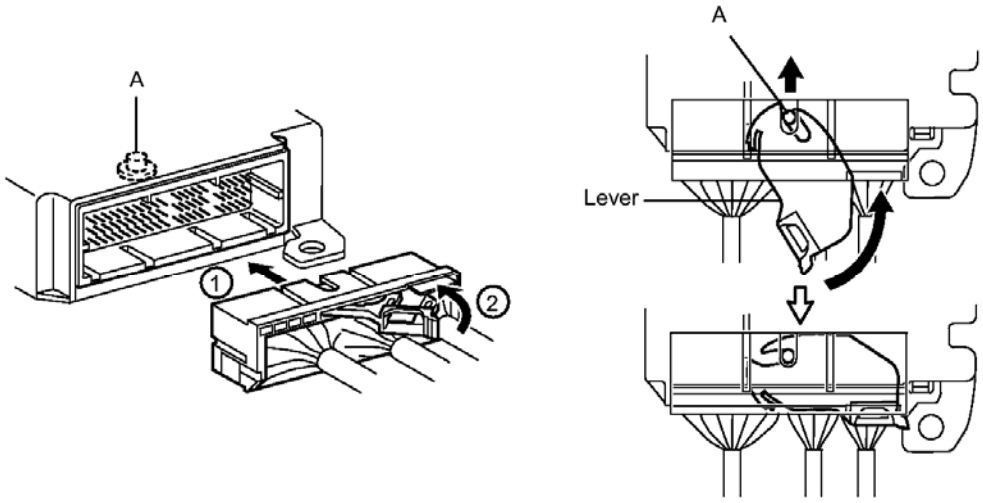


H

Fig. 21: Identifying Connector Lock Mechanism
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

7. Improper connection prevention lock mechanism:

   When connecting the holder, the lever is pushed into the lock position by rotating around the A axis to lock the holder securely.



Y

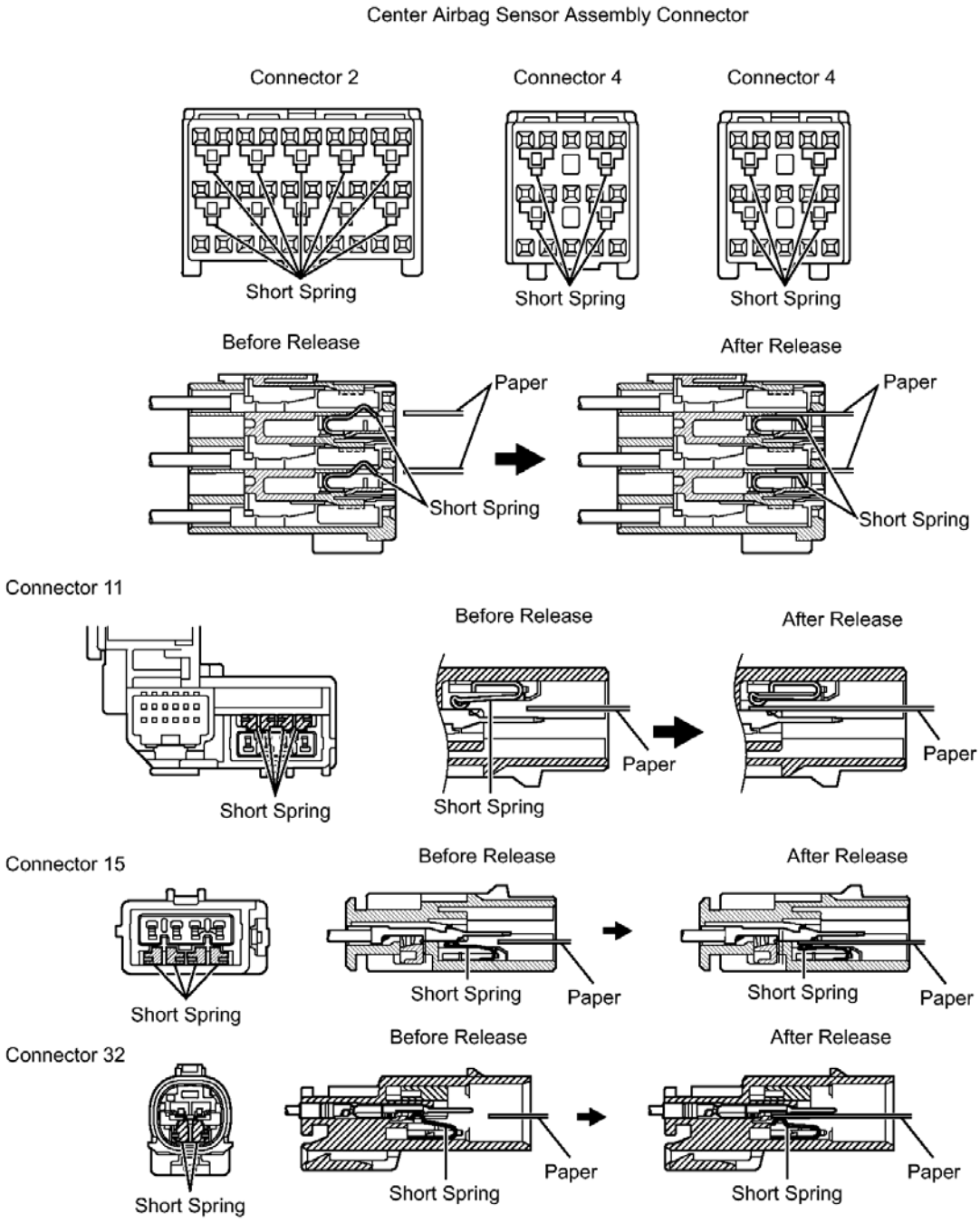
Fig. 22: Identifying Improper Connection Prevention Lock Mechanism
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

8. **ACTIVATION PREVENTION MECHANISM**
   a. FUNCTION OF ACTIVATION PREVENTION MECHANISM
      1. An activation prevention mechanism is built into the connector (on the center airbag sensor assembly side) of the airbag system squib circuit to prevent accidental airbag activation.
      2. This mechanism closes the circuit when the connector is disconnected by bringing the short spring into contact with the terminals and shutting off external electricity to prevent accidental airbag activation.
   b. RELEASING OF ACTIVATION PREVENTION MECHANISM
      1. To release the activation prevention mechanism, insert a piece of paper with the same thickness as the male terminal (approximately 0.5 mm (0.020 in.)) between the terminals and the short spring to break the connection.
      2. Refer to the following illustrations concerning connectors utilizing the activation prevention mechanism and its release method.

WARNING: Never release the activation prevention mechanism on the squib connector even when inspecting with the squib disconnected.

NOTE:

- **Do not release the activation prevention mechanism unless specially directed by the troubleshooting procedure.**
- **To prevent the terminal and the short spring from being damaged, always use a piece of paper with the same thickness as the male terminal.**



Y

Fig. 23: Identifying Center Airbag Assembly Connectors

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

DTC CHECK / CLEAR

DTC CHECK / CLEAR

1. **DTC CHECK (USING SST CHECK WIRE)**
   a. Check for DTCs (Present DTC).

*1

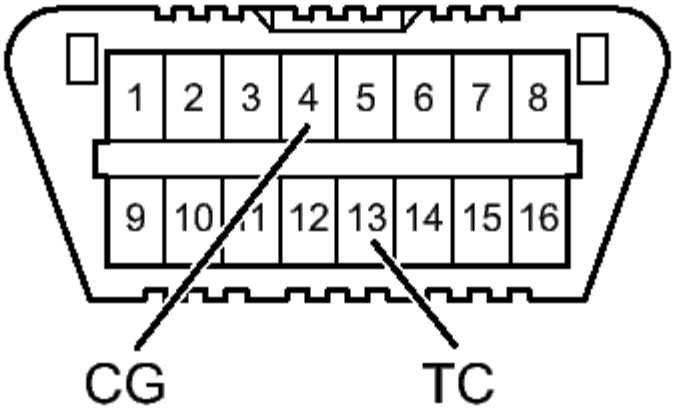


Fig. 24: Checking For DTC (Using SST Check Wire)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Turn the ignition switch to ON, and wait for approximately 60 seconds.
2. Using SST, connect terminals TC and CG of the DLC3.

TEXT IN ILLUSTRATION

*1	Front view of DLC3

- **SST: 09843-18040**

NOTE: **Connect the terminals to the correct positions to avoid a malfunction.**

b. Check for DTCs (Past DTC).

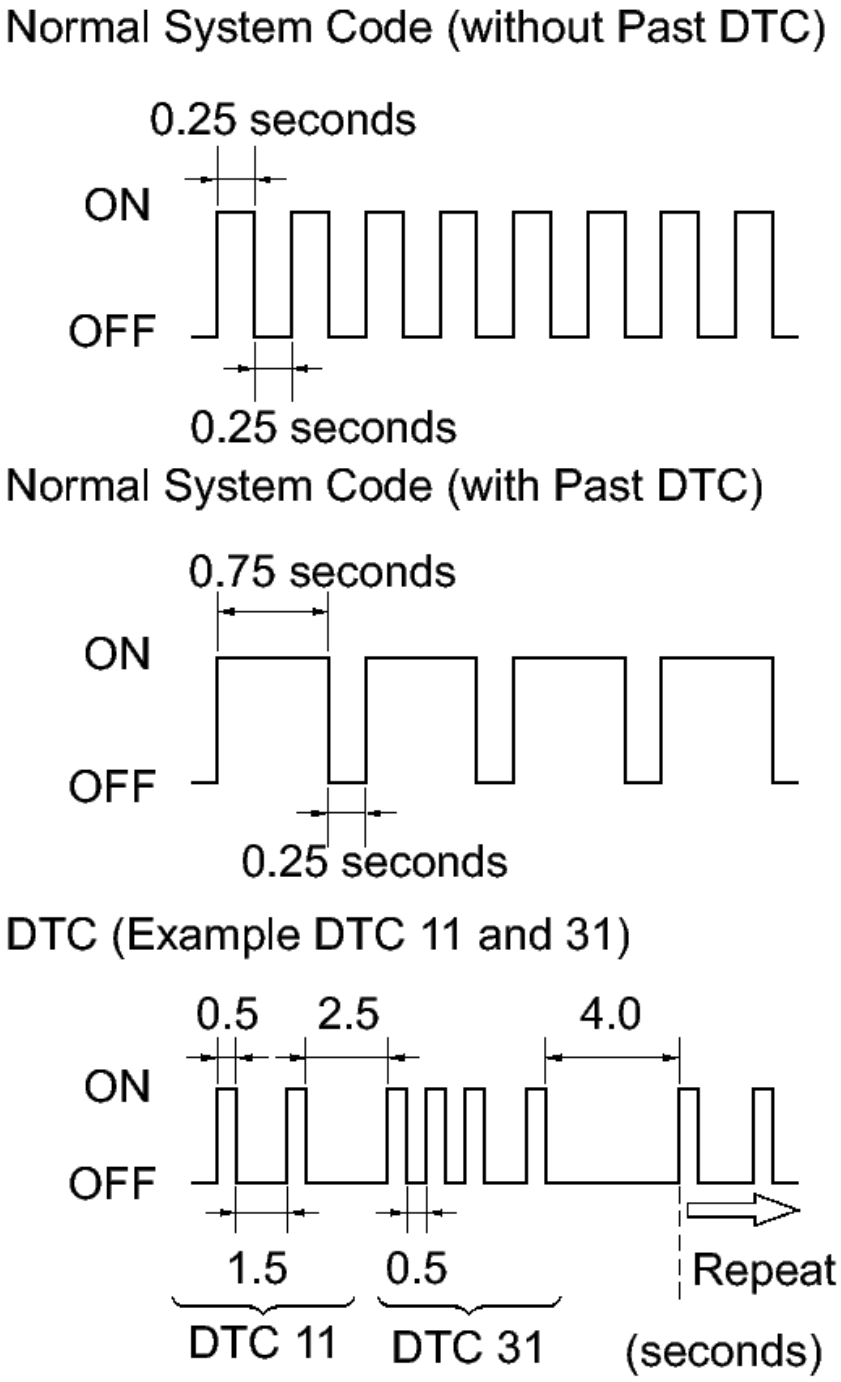
1. Using SST, connect terminals TC and CG of the DLC3.

- **SST: 09843-18040**

NOTE: Connect the terminals to the correct positions to avoid a malfunction.

2. Turn the ignition switch to ON, and wait for approximately 60 seconds.

c. Read the DTCs.



N

Fig. 25: Identifying SRS Warning Light Blinking Patterns (Normal System Code Indication (Without Past DTC))
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Observe the SRS warning light and read the blinking patterns of the DTCs. As examples, the

blinking patterns for the normal system code and DTCs 11 and 31 are shown in the illustration above.

- Normal system code indication (without past DTC)

  The SRS warning light blinks twice per second.

- Normal system code indication (with past DTC)

  When the past DTC is stored in the center airbag sensor assembly, the light blinks once per second.

- DTC indication

  The first blinking pattern indicates the first digit DTC. The second blinking pattern occurs after a 1.5-second pause.

If there are two or more DTCs, there is a 2.5-second pause between each DTC. After all DTCs are shown, there is a 4.0-second pause, and they are all repeated.

HINT:

- If 2 or more malfunctions are found, the indication begins with the lowest numbered DTC.
- If DTCs are indicated without connecting the terminals, proceed to the "TC and CG Terminal Circuit". Refer to **TC and CG Terminal Circuit** .

2. **DTC CLEAR (USING SST CHECK WIRE)**
   a. Clear the DTCs.
      1. When the ignition switch is turned off, the DTCs are cleared.

         HINT:

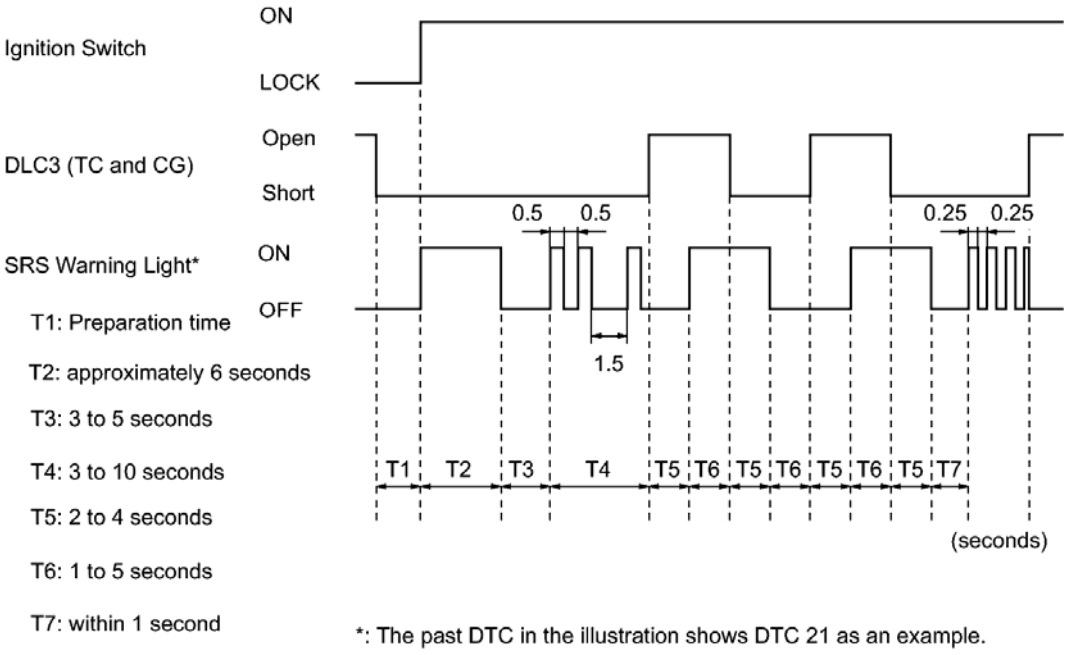
         Depending on the DTCs, the DTCs may not all be cleared by turning off the ignition switch. In this case, proceed to the next operation.

      2. Using SST, connect terminals TC and CG of the DLC3, and then turn the ignition switch to ON.
         - **SST: 09843-18040**
      3. Disconnect terminal TC of the DLC3 within 3 to 10 seconds of the DTCs being output, and check that the SRS warning light comes on after 3 seconds.
      4. Within 2 to 4 seconds of the SRS warning light coming on, connect terminals TC and CG of the DLC3.
      5. The SRS warning light goes off within 2 to 4 seconds of connecting terminals TC and CG of the DLC3. Then, disconnect terminal TC within 2 to 4 seconds of the SRS warning light going off.
      6. The SRS warning light comes on again within 2 to 4 seconds of disconnecting terminal TC.

Then, reconnect terminals TC and CG within 2 to 4 seconds of the SRS warning light coming on.

7. Check that the SRS warning light goes off within 2 to 4 seconds of connecting terminals TC and CG of the DLC3. Also check that the normal system code is output within 1 second of the SRS warning light going off.

   If DTCs are not cleared, repeat these procedures until the DTCs are cleared.



C

Fig. 26: Identifying SRS Warning Light Blinking Patterns (Normal System Code Indication (With Past DTC))
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. **DTC CHECK (USING TECHSTREAM)**
   a. Connect the Techstream to the DLC3.
   b. Turn the ignition switch to ON.
   c. Turn the Techstream on.
   d. Enter the following menus: Body Electrical / SRS Airbag / Trouble Codes.
4. **DTC CLEAR (USING TECHSTREAM)**
   a. Connect the Techstream to the DLC3.
   b. Turn the ignition switch to ON.
   c. Turn the Techstream on.
   d. Enter the following menus: Body Electrical / SRS Airbag / Trouble Codes.
   e. Erase the DTCs.

CHECK MODE PROCEDURE

CHECK MODE PROCEDURE

1. **CHECK MODE (SIGNAL CHECK): DTC CHECK**
   a. Connect the Techstream to the DLC3.
   b. Turn the ignition switch to ON.
   c. Select Signal Check, and proceed with checking using the tester.

NOTE: **Select Signal Check from the DTC Check screen displayed on the Techstream to clear the output DTCs (both present and past).**

HINT:

- DTCs can be detected more sensitively in check mode than in normal diagnosis mode.
- Perform the check mode inspection when a malfunction in each squib circuit is suspected even after the normal system code is output through the normal diagnosis mode inspection.

DATA LIST / ACTIVE TEST

DATA LIST / ACTIVE TEST

1. **READ DATA LIST**

HINT:

Using the Techstream to read the Data List allows the values or states of switches, sensors, actuators and other items to be read without removing any parts. This non-intrusive inspection can be very useful because intermittent conditions or signals may be discovered before parts or wiring is disturbed. Reading the Data List information early in troubleshooting is one way to save diagnostic time.

NOTE: **In the table below, the values listed under "Normal Condition" are reference values. Do not depend solely on these reference values when deciding whether a part is faulty or not.**

a. Warm up the engine.
b. Turn the ignition switch off.
c. Connect the Techstream to the DLC3.
d. Turn the ignition switch to ON.
e. Turn the Techstream on.
f. Enter the following menus: Body Electrical / SRS Airbag / Data List.
g. According to the display on the tester, read the Data List.

SRS AIRBAG

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Driver Seat Position	Driver Seat Position/ Forward: Seat position is forward Bkward: Seat position is backward Fail: Failure detected	Forward/Bkward	-
Passenger Classification	Passenger Classification/ NG: Data is not determined OFF: Vacant Child: Child (less than 32 kg (70.6 lb)) is seated AF05: Adult (36 to 54 kg (79.4 to 119.1 lb)) is seated AM50: Adult (more than 54 kg (119.1 lb)) is seated Fail: A failure is detected	OFF/Child/AF05/AM50	-
Left side Buckle SW	LH Side Buckle SW/ Unset: The seat belt is not fastened Set: The seat belt is fastened NG: Data is not determined	Unset/Set	-
Right side Buckle SW	RH Side Buckle SW/ Unset: The seat belt is not fastened Set: The seat belt is fastened	Unset/Set	-

	NG: Data is not determined		
Display Type Information	Display type identification information/ LR: Display indicated by LH/RH DP: Display indicated by Driver/Passenger	LR	-
Number of Past DTC	Number of past DTCs/ Min.: 0, Max.: 255	0	-

DIAGNOSTIC TROUBLE CODE CHART

DIAGNOSTIC TROUBLE CODE CHART

If a DTC is displayed during the DTC check, check the circuit listed for the DTC in the table below. Refer to the appropriate reference listed for that circuit.

HINT:

- When the SRS warning light remains on and the normal system code is output, a decrease in the source voltage is likely to occur. This malfunction is not stored in the memory of the center airbag sensor assembly. If the power source voltage returns to normal, the SRS warning light will automatically go off.
- When 2 or more DTCs are indicated, the DTC with the lowest number appears first.
- If a DTC is not listed on the DTC chart, the center airbag sensor assembly may have malfunctioned.
- In the case of any malfunctions concerning open circuits, shorts to ground, or shorts to B+ due to squibs, other DTCs may not be stored. In this case, repair the malfunction currently indicated and then perform the malfunction diagnosis again.
- Mark in the check mode column:

  *1: DTC does not correspond to check mode.

  *2: DTC corresponds to check mode.

AIRBAG SYSTEM

DTC Code	Detection Item	Trouble Area	Check Mode	See
B1000/31	Center Airbag Sensor Assembly Malfunction	- Center airbag sensor assembly	*1	Refer to **DTC B1000/31: Center Airbag Sensor Assembly Malfunction**

B1610/13	Front Airbag Sensor RH Malfunction	- Front airbag sensor RH - Center airbag sensor assembly	*1	Refer to **DTC B1610/13: Front Airbag Sensor RH Malfunction**
B1612/83	Lost Communication with Front Airbag Sensor RH	- Instrument panel wire - Engine room main wire - Front airbag sensor RH - Center airbag sensor assembly	*1	Refer to **DTC B1612/83: Lost Communication with Front Airbag Sensor RH; DTC B1613/83: Front Airbag Sensor RH Initialization Incomplete**
B1613/83	Front Airbag Sensor RH Initialization Incomplete	- Instrument panel wire - Engine room main wire - Front airbag sensor RH - Center airbag sensor assembly	*1	Refer to **DTC B1612/83: Lost Communication with Front Airbag Sensor RH; DTC B1613/83: Front Airbag Sensor RH Initialization Incomplete**
B1615/14	Front Airbag Sensor LH Malfunction	- Front airbag sensor LH - Center airbag sensor assembly	*1	Refer to **DTC B1615/14: Front Airbag Sensor LH Malfunction**
B1617/84	Lost Communication with Front Airbag Sensor LH	- Instrument panel wire - Engine room main wire - Front airbag sensor LH - Center airbag sensor assembly	*1	Refer to **DTC B1617/84: Lost Communication with Front Airbag Sensor LH; DTC B1618/84: Front Airbag Sensor LH Initialization Incomplete**
B1618/84	Front Airbag Sensor LH Initialization Incomplete	- Instrument panel wire - Engine room main wire - Front airbag sensor LH - Center airbag sensor assembly	*1	Refer to **DTC B1617/84: Lost Communication with Front Airbag Sensor LH; DTC B1618/84: Front Airbag Sensor LH Initialization Incomplete**
B161A/8A	Lost Communication with Front Satellite Sensor Bus	- Instrument panel wire - Engine room main wire - Front airbag sensor RH - Front airbag sensor	*1	Refer to **DTC B161A/8A: Lost Communication with Front Satellite Sensor Bus**

		LH - Center airbag sensor assembly		
B1630/23	Rear Airbag Sensor RH Circuit Malfunction	- Rear airbag sensor RH - Center airbag sensor assembly	*1	Refer to **DTC B1630/23: Rear Airbag Sensor RH Circuit Malfunction**
B1632/81	Lost Communication with Rear Airbag Sensor RH	- No. 2 floor wire - Front door wire RH - Side airbag sensor RH - Rear airbag sensor RH - Center airbag sensor assembly	*1	Refer to **DTC B1632/81: Lost Communication with Rear Airbag Sensor RH**
B1633/81	Rear Airbag Sensor Assembly RH Initialization Incomplete	- No. 2 floor wire - Front door wire RH - Side airbag sensor RH - Rear airbag sensor RH - Center airbag sensor assembly	*1	Refer to **DTC B1633/81: Rear Airbag Sensor Assembly RH Initialization Incomplete**
B1635/24	Rear Airbag Sensor LH Circuit Malfunction	- Rear airbag sensor LH - Center airbag sensor assembly	*1	Refer to **DTC B1635/24: Rear Airbag Sensor LH Circuit Malfunction**
B1637/82	Lost Communication with Rear Airbag Sensor LH	- Floor wire - Front door wire LH - Side airbag sensor LH - Rear airbag sensor LH - Center airbag sensor assembly	*1	Refer to **DTC B1637/82: Lost Communication with Rear Airbag Sensor LH**
B1638/82	Rear Airbag Sensor Assembly LH Initialization Incomplete	- Floor wire - Front door wire LH - Side airbag sensor LH - Rear airbag sensor LH - Center airbag sensor assembly	*1	Refer to **DTC B1638/82: Rear Airbag Sensor Assembly LH Initialization Incomplete**
	Lost Communication	- No. 2 floor wire - Front door wire RH - Side airbag sensor RH		Refer to **DTC B1642/81: Lost Communication**

B1642/81	with Side Satellite Sensor Bus RH	- Rear airbag sensor RH - Center airbag sensor assembly	*1	**with Side Satellite Sensor Bus RH**
B1647/82	Lost Communication with Side Satellite Sensor Bus LH	- Floor wire - Front door wire LH - Side airbag sensor LH - Rear airbag sensor LH - Center airbag sensor assembly	*1	Refer to **DTC B1647/82: Lost Communication with Side Satellite Sensor Bus LH**
B1650/32	Occupant Classification System Malfunction	- No. 2 Floor wire - Front seat wire RH - Occupant classification system - Center airbag sensor assembly	*1	Refer to **DTC B1650/32: Occupant Classification System Malfunction**
B1653/35	Seat Position Airbag Sensor Circuit Malfunction	- Floor wire - Front seat inner belt assembly LH - Seat position sensor - Center airbag sensor assembly	*1	Refer to **DTC B1653/35: Seat Position Airbag Sensor Circuit Malfunction**
B1656/38	Seat Belt Buckle Switch LH Circuit Malfunction	- Floor wire - Front seat inner belt assembly LH (Seat belt buckle switch LH) - Center airbag sensor assembly	*1	Refer to **DTC B1656/38: Seat Belt Buckle Switch LH Circuit Malfunction**
B1660/43	Passenger Airbag ON/OFF Indicator Circuit Malfunction	- Instrument panel wire - Telltale light assembly (Passenger airbag ON/OFF indicator) - Center airbag sensor assembly	*1	Refer to **DTC B1660/43: Passenger Airbag ON/OFF Indicator Circuit Malfunction**
B1690/15	Door Side Airbag Sensor RH Malfunction	- Side airbag sensor RH - Center airbag sensor assembly	*1	Refer to **DTC B1690/15: Door Side Airbag Sensor RH Malfunction; DTC B1692/81: Lost Communication with Door Side Airbag Sensor RH**

B1692/81	Lost Communication with Door Side Airbag Sensor RH	- Side airbag sensor RH - Center airbag sensor assembly	*1	Refer to **DTC B1690/15: Door Side Airbag Sensor RH Malfunction; DTC B1692/81: Lost Communication with Door Side Airbag Sensor RH**
B1693/81	Door Side Airbag Sensor RH Initialization Incomplete	- No. 2 floor wire - Front door wire RH - Side airbag sensor RH - Rear airbag sensor RH - Center airbag sensor assembly	*1	Refer to **DTC B1693/81: Door Side Airbag Sensor RH Initialization Incomplete**
B1695/16	Door Side Airbag Sensor LH Malfunction	- Side airbag sensor LH - Center airbag sensor assembly	*1	Refer to **DTC B1695/16: Door Side Airbag Sensor LH Malfunction; DTC B1697/82: Lost Communication with Door Side Airbag Sensor LH**
B1697/82	Lost Communication with Door Side Airbag Sensor LH	- Side airbag sensor LH - Center airbag sensor assembly	*1	Refer to **DTC B1695/16: Door Side Airbag Sensor LH Malfunction; DTC B1697/82: Lost Communication with Door Side Airbag Sensor LH**
B1698/82	Door Side Airbag Sensor LH Initialization Incomplete	- Floor wire - Front door wire LH - Side airbag sensor LH - Rear airbag sensor LH - Center airbag sensor assembly	*1	Refer to **DTC B1698/82: Door Side Airbag Sensor LH Initialization Incomplete**
B1800/51	Short in Driver Side Squib Circuit	- Instrument panel wire - Spiral cable - Steering pad (Driver side squib) - Center airbag sensor assembly	*2	Refer to **DTC B1800/51: Short in Driver Side Squib Circuit; DTC B1801/51: Open in Driver Side Squib Circuit; DTC B1802/51: Short to GND in Driver Side Squib Circuit; DTC B1803/51: Short to B+ in Driver Side Squib Circuit**

B1801/51	Open in Driver Side Squib Circuit	- Instrument panel wire - Spiral cable - Steering pad (Driver side squib) - Center airbag sensor assembly	*2	Refer to **DTC B1800/51: Short in Driver Side Squib Circuit; DTC B1801/51: Open in Driver Side Squib Circuit; DTC B1802/51: Short to GND in Driver Side Squib Circuit; DTC B1803/51: Short to B+ in Driver Side Squib Circuit**
B1802/51	Short to GND in Driver Side Squib Circuit	- Instrument panel wire - Spiral cable - Steering pad (Driver side squib) - Center airbag sensor assembly	*2	Refer to **DTC B1800/51: Short in Driver Side Squib Circuit; DTC B1801/51: Open in Driver Side Squib Circuit; DTC B1802/51: Short to GND in Driver Side Squib Circuit; DTC B1803/51: Short to B+ in Driver Side Squib Circuit**
B1803/51	Short to B+ in Driver Side Squib Circuit	- Instrument panel wire - Spiral cable - Steering pad (Driver side squib) - Center airbag sensor assembly	*2	Refer to **DTC B1800/51: Short in Driver Side Squib Circuit; DTC B1801/51: Open in Driver Side Squib Circuit; DTC B1802/51: Short to GND in Driver Side Squib Circuit; DTC B1803/51: Short to B+ in Driver Side Squib Circuit**
B1805/52	Short in Front Passenger Side Squib Circuit	- Instrument panel wire - No. 2 instrument panel wire - Front passenger airbag assembly (Front passenger side squib) - Center airbag sensor assembly	*2	Refer to **DTC B1805/52: Short in Front Passenger Side Squib Circuit; DTC B1806/52: Open in Front Passenger Side Squib Circuit; DTC B1807/52: Short to GND in Front Passenger Side Squib Circuit; DTC B1808/52: Short to B+ in Front Passenger Side Squib Circuit**
		- Instrument panel wire - No. 2 instrument panel wire		Refer to **DTC B1805/52: Short in Front Passenger Side Squib Circuit; DTC B1806/52: Open in Front Passenger Side Squib**

B1806/52	Open in Front Passenger Side Squib Circuit	- Front passenger airbag assembly (Front passenger side squib) - Center airbag sensor assembly	*2	**Circuit; DTC B1807/52: Short to GND in Front Passenger Side Squib Circuit; DTC B1808/52: Short to B+ in Front Passenger Side Squib Circuit**
B1807/52	Short to GND in Front Passenger Side Squib Circuit	- Instrument panel wire - No. 2 instrument panel wire - Front passenger airbag assembly (Front passenger side squib) - Center airbag sensor assembly	*2	Refer to **DTC B1805/52: Short in Front Passenger Side Squib Circuit; DTC B1806/52: Open in Front Passenger Side Squib Circuit; DTC B1807/52: Short to GND in Front Passenger Side Squib Circuit; DTC B1808/52: Short to B+ in Front Passenger Side Squib Circuit**
B1808/52	Short to B+ in Front Passenger Side Squib Circuit	- Instrument panel wire - No. 2 instrument panel wire - Front passenger airbag assembly (Front passenger side squib) - Center airbag sensor assembly	*2	Refer to **DTC B1805/52: Short in Front Passenger Side Squib Circuit; DTC B1806/52: Open in Front Passenger Side Squib Circuit; DTC B1807/52: Short to GND in Front Passenger Side Squib Circuit; DTC B1808/52: Short to B+ in Front Passenger Side Squib Circuit**
B1810/53	Short in Driver Side Squib 2nd Step Circuit	- Instrument panel wire - Spiral cable - Steering pad (Driver side squib 2nd step) - Center airbag sensor assembly	*2	Refer to **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**
		- Instrument panel wire		Refer to **DTC B1810/53: Short in Driver Side Squib 2nd Step Circuit; DTC B1811/53: Open in**

B1811/53	Open in Driver Side Squib 2nd Step Circuit	- Spiral cable - Steering pad (Driver side squib 2nd step) - Center airbag sensor assembly	*2	**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**
B1812/53	Short to GND in Driver Side Squib 2nd Step Circuit	- Instrument panel wire - Spiral cable - Steering pad (Driver side squib 2nd step) - Center airbag sensor assembly	*2	Refer to **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**
B1813/53	Short to B+ in Driver Side Squib 2nd Step Circuit	- Instrument panel wire - Spiral cable - Steering pad (Driver side squib 2nd step) - Center airbag sensor assembly	*2	Refer to **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**
B1815/54	Short in Front Passenger Side Squib 2nd Step Circuit	- Instrument panel wire - No. 2 instrument panel wire - Front passenger airbag assembly (Front passenger side squib 2nd step) - Center airbag sensor assembly	*2	Refer to **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**
		- Instrument panel		Refer to **DTC B1815/54: Short in Front Passenger**

		wire - No. 2 instrument panel wire - Front passenger airbag assembly (Front passenger side squib 2nd step) - Center airbag sensor assembly		**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**
B1816/54	Open in Front Passenger Side Squib 2nd Step Circuit		*2	
B1817/54	Short to GND in Front Passenger Side Squib 2nd Step Circuit	- Instrument panel wire - No. 2 instrument panel wire - Front passenger airbag assembly (Front passenger side squib 2nd step) - Center airbag sensor assembly	*2	Refer to **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**
B1818/54	Short to B+ in Front Passenger Side Squib 2nd Step Circuit	- Instrument panel wire - No. 2 instrument panel wire - Front passenger airbag assembly (Front passenger side squib 2nd step) - Center airbag sensor assembly	*2	Refer to **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**
B1820/55	Short in Side Squib RH Circuit	- No. 2 floor wire - Front seat side airbag assembly RH (Side squib RH) - Center airbag sensor assembly	*2	Refer to **DTC B1820/55: Short in Side Squib RH Circuit; DTC B1821/55: Open in Side Squib RH Circuit; DTC B1822/55: Short to GND in Side Squib RH Circuit; DTC B1823/55: Short to B+ in Side Squib RH Circuit**
				Refer to **DTC B1820/55:**

B1821/55	Open in Side Squib RH Circuit	- No. 2 floor wire - Front seat side airbag assembly RH (Side squib RH) - Center airbag sensor assembly	*2	**Short in Side Squib RH Circuit; DTC B1821/55: Open in Side Squib RH Circuit; DTC B1822/55: Short to GND in Side Squib RH Circuit; DTC B1823/55: Short to B+ in Side Squib RH Circuit**
B1822/55	Short to GND in Side Squib RH Circuit	- No. 2 floor wire - Front seat side airbag assembly RH (Side squib RH) - Center airbag sensor assembly	*2	Refer to **DTC B1820/55: Short in Side Squib RH Circuit; DTC B1821/55: Open in Side Squib RH Circuit; DTC B1822/55: Short to GND in Side Squib RH Circuit; DTC B1823/55: Short to B+ in Side Squib RH Circuit**
B1823/55	Short to B+ in Side Squib RH Circuit	- No. 2 floor wire - Front seat side airbag assembly RH (Side squib RH) - Center airbag sensor assembly	*2	Refer to **DTC B1820/55: Short in Side Squib RH Circuit; DTC B1821/55: Open in Side Squib RH Circuit; DTC B1822/55: Short to GND in Side Squib RH Circuit; DTC B1823/55: Short to B+ in Side Squib RH Circuit**
B1825/56	Short in Side Squib LH Circuit	- Floor wire - Front seat side airbag assembly LH (Side squib LH) - Center airbag sensor assembly	*2	Refer to **DTC B1825/56: Short in Side Squib LH Circuit; DTC B1826/56: Open in Side Squib LH Circuit; DTC B1827/56: Short to GND in Side Squib LH Circuit; DTC B1828/56: Short to B+ in Side Squib LH Circuit**
B1826/56	Open in Side Squib LH Circuit	- Floor wire - Front seat side airbag assembly LH (Side squib LH) - Center airbag sensor assembly	*2	Refer to **DTC B1825/56: Short in Side Squib LH Circuit; DTC B1826/56: Open in Side Squib LH Circuit; DTC B1827/56: Short to GND in Side Squib LH Circuit; DTC B1828/56: Short to B+ in Side Squib LH Circuit**
		- Floor wire - Front seat side		Refer to **DTC B1825/56: Short in Side Squib LH Circuit; DTC B1826/56:**

B1827/56	Short to GND in Side Squib LH Circuit	airbag assembly LH (Side squib LH) - Center airbag sensor assembly	*2	**Open in Side Squib LH Circuit; DTC B1827/56: Short to GND in Side Squib LH Circuit; DTC B1828/56: Short to B+ in Side Squib LH Circuit**
B1828/56	Short to B+ in Side Squib LH Circuit	- Floor wire - Front seat side airbag assembly LH (Side squib LH) - Center airbag sensor assembly	*2	Refer to **DTC B1825/56: Short in Side Squib LH Circuit; DTC B1826/56: Open in Side Squib LH Circuit; DTC B1827/56: Short to GND in Side Squib LH Circuit; DTC B1828/56: Short to B+ in Side Squib LH Circuit**
B1830/57	Short in Curtain Shield Squib RH Circuit	- No. 2 floor wire - Curtain shield airbag assembly RH (Curtain shield squib RH) - Center airbag sensor assembly	*2	Refer to **DTC B1830/57: Short in Curtain Shield Squib RH Circuit; DTC B1831/57: Open in Curtain Shield Squib RH Circuit; DTC B1832/57: Short to GND in Curtain Shield Squib RH Circuit; DTC B1833/57: Short to B+ in Curtain Shield Squib RH Circuit**
B1831/57	Open in Curtain Shield Squib RH Circuit	- No. 2 floor wire - Curtain shield airbag assembly RH (Curtain shield squib RH) - Center airbag sensor assembly	*2	Refer to **DTC B1830/57: Short in Curtain Shield Squib RH Circuit; DTC B1831/57: Open in Curtain Shield Squib RH Circuit; DTC B1832/57: Short to GND in Curtain Shield Squib RH Circuit; DTC B1833/57: Short to B+ in Curtain Shield Squib RH Circuit**
B1832/57	Short to GND in Curtain Shield Squib RH Circuit	- No. 2 floor wire - Curtain shield airbag assembly RH (Curtain shield squib RH) - Center airbag sensor assembly	*2	Refer to **DTC B1830/57: Short in Curtain Shield Squib RH Circuit; DTC B1831/57: Open in Curtain Shield Squib RH Circuit; DTC B1832/57: Short to GND in Curtain Shield Squib RH Circuit; DTC B1833/57: Short to B+ in Curtain Shield**

				Squib RH Circuit
B1833/57	Short to B+ in Curtain Shield Squib RH Circuit	- No. 2 floor wire - Curtain shield airbag assembly RH (Curtain shield squib RH) - Center airbag sensor assembly	*2	Refer to **DTC B1830/57: Short in Curtain Shield Squib RH Circuit; DTC B1831/57: Open in Curtain Shield Squib RH Circuit; DTC B1832/57: Short to GND in Curtain Shield Squib RH Circuit; DTC B1833/57: Short to B+ in Curtain Shield Squib RH Circuit**
B1835/58	Short in Curtain Shield Squib LH Circuit	- Floor wire - Curtain shield airbag assembly LH (Curtain shield squib LH) - Center airbag sensor assembly	*2	Refer to **DTC B1835/58: Short in Curtain Shield Squib LH Circuit; DTC B1836/58: Open in Curtain Shield Squib LH Circuit; DTC B1837/58: Short to GND in Curtain Shield Squib LH Circuit; DTC B1838/58: Short to B+ in Curtain Shield Squib LH Circuit**
B1836/58	Open in Curtain Shield Squib LH Circuit	- Floor wire - Curtain shield airbag assembly LH (Curtain shield squib LH) - Center airbag sensor assembly	*2	Refer to **DTC B1835/58: Short in Curtain Shield Squib LH Circuit; DTC B1836/58: Open in Curtain Shield Squib LH Circuit; DTC B1837/58: Short to GND in Curtain Shield Squib LH Circuit; DTC B1838/58: Short to B+ in Curtain Shield Squib LH Circuit**
B1837/58	Short to GND in Curtain Shield Squib LH Circuit	- Floor wire - Curtain shield airbag assembly LH (Curtain shield squib LH) - Center airbag sensor assembly	*2	Refer to **DTC B1835/58: Short in Curtain Shield Squib LH Circuit; DTC B1836/58: Open in Curtain Shield Squib LH Circuit; DTC B1837/58: Short to GND in Curtain Shield Squib LH Circuit; DTC B1838/58: Short to B+ in Curtain Shield Squib LH Circuit**
				Refer to **DTC B1835/58: Short in Curtain Shield**

				Squib LH Circuit; DTC B1836/58: Open in Curtain Shield Squib LH Circuit; DTC B1837/58: Short to GND in Curtain Shield Squib LH Circuit; DTC B1838/58: Short to B+ in Curtain Shield Squib LH Circuit
B1838/58	Short to B+ in Curtain Shield Squib LH Circuit	- Floor wire - Curtain shield airbag assembly LH (Curtain shield squib LH) - Center airbag sensor assembly	*2	
B1860/64	Short in Driver Side Knee Airbag Squib Circuit	- Instrument panel wire - Knee airbag assembly (Knee airbag squib) - Center airbag sensor assembly	*2	Refer to **DTC B1860/64: Short in Driver Side Knee Airbag Squib Circuit; DTC B1861/64: Open in Driver Side Knee Airbag Squib Circuit; DTC B1862/64: Short to GND in Driver Side Knee Airbag Squib Circuit; DTC B1863/64: Short to B+ in Driver Side Knee Airbag Squib Circuit**
B1861/64	Open in Driver Side Knee Airbag Squib Circuit	- Instrument panel wire - Knee airbag assembly (Knee airbag squib) - Center airbag sensor assembly	*2	Refer to **DTC B1860/64: Short in Driver Side Knee Airbag Squib Circuit; DTC B1861/64: Open in Driver Side Knee Airbag Squib Circuit; DTC B1862/64: Short to GND in Driver Side Knee Airbag Squib Circuit; DTC B1863/64: Short to B+ in Driver Side Knee Airbag Squib Circuit**
B1862/64	Short to GND in Driver Side Knee Airbag Squib Circuit	- Instrument panel wire - Knee airbag assembly (Knee airbag squib) - Center airbag sensor assembly	*2	Refer to **DTC B1860/64: Short in Driver Side Knee Airbag Squib Circuit; DTC B1861/64: Open in Driver Side Knee Airbag Squib Circuit; DTC B1862/64: Short to GND in Driver Side Knee Airbag Squib Circuit; DTC B1863/64: Short to B+ in Driver Side Knee Airbag Squib Circuit**
				Refer to **DTC B1860/64: Short in Driver Side Knee**

B1863/64	Short to B+ in Driver Side Knee Airbag Squib Circuit	- Instrument panel wire - Knee airbag assembly (Knee airbag squib) - Center airbag sensor assembly	*2	**Airbag Squib Circuit; DTC B1861/64: Open in Driver Side Knee Airbag Squib Circuit; DTC B1862/64: Short to GND in Driver Side Knee Airbag Squib Circuit; DTC B1863/64: Short to B+ in Driver Side Knee Airbag Squib Circuit**
B1900/73	Short in Front Pretensioner Squib RH Circuit	- No. 2 floor wire - Front seat outer belt assembly RH (Front pretensioner squib RH) - Center airbag sensor assembly	*2	Refer to **DTC B1900/73: Short in Front Pretensioner Squib RH Circuit; DTC B1901/73: Open in Front Pretensioner Squib RH Circuit; DTC B1902/73: Short to GND in Front Pretensioner Squib RH Circuit; DTC B1903/73: Short to B+ in Front Pretensioner Squib RH Circuit**
B1901/73	Open in Front Pretensioner Squib RH Circuit	- No. 2 floor wire - Front seat outer belt assembly RH (Front pretensioner squib RH) - Center airbag sensor assembly	*2	Refer to **DTC B1900/73: Short in Front Pretensioner Squib RH Circuit; DTC B1901/73: Open in Front Pretensioner Squib RH Circuit; DTC B1902/73: Short to GND in Front Pretensioner Squib RH Circuit; DTC B1903/73: Short to B+ in Front Pretensioner Squib RH Circuit**
B1902/73	Short to GND in Front Pretensioner Squib RH Circuit	- No. 2 floor wire - Front seat outer belt assembly RH (Front pretensioner squib RH) - Center airbag sensor assembly	*2	Refer to **DTC B1900/73: Short in Front Pretensioner Squib RH Circuit; DTC B1901/73: Open in Front Pretensioner Squib RH Circuit; DTC B1902/73: Short to GND in Front Pretensioner Squib RH Circuit; DTC B1903/73: Short to B+ in Front**

				Pretensioner Squib RH Circuit
B1903/73	Short to B+ in Front Pretensioner Squib RH Circuit	- No. 2 floor wire - Front seat outer belt assembly RH (Front pretensioner squib RH) - Center airbag sensor assembly	*2	Refer to **DTC B1900/73: Short in Front Pretensioner Squib RH Circuit; DTC B1901/73: Open in Front Pretensioner Squib RH Circuit; DTC B1902/73: Short to GND in Front Pretensioner Squib RH Circuit; DTC B1903/73: Short to B+ in Front Pretensioner Squib RH Circuit**
B1905/74	Short in Front Pretensioner Squib LH Circuit	- Floor wire - Front seat outer belt assembly LH (Front pretensioner squib LH) - Center airbag sensor assembly	*2	Refer to **DTC B1905/74: Short in Front Pretensioner Squib LH Circuit; DTC B1906/74: Open in Front Pretensioner Squib LH Circuit; DTC B1907/74: Short to GND in Front Pretensioner Squib LH Circuit; DTC B1908/74: Short to B+ in Front Pretensioner Squib LH Circuit**
B1906/74	Open in Front Pretensioner Squib LH Circuit	- Floor wire - Front seat outer belt assembly LH (Front pretensioner squib LH) - Center airbag sensor assembly	*2	Refer to **DTC B1905/74: Short in Front Pretensioner Squib LH Circuit; DTC B1906/74: Open in Front Pretensioner Squib LH Circuit; DTC B1907/74: Short to GND in Front Pretensioner Squib LH Circuit; DTC B1908/74: Short to B+ in Front Pretensioner Squib LH Circuit**
	Short to GND in Front	- Floor wire - Front seat outer belt assembly LH		Refer to **DTC B1905/74: Short in Front Pretensioner Squib LH Circuit; DTC B1906/74: Open in Front Pretensioner Squib LH**

B1907/74	Pretensioner Squib LH Circuit	(Front pretensioner squib LH) - Center airbag sensor assembly	*2	**Circuit; DTC B1907/74: Short to GND in Front Pretensioner Squib LH Circuit; DTC B1908/74: Short to B+ in Front Pretensioner Squib LH Circuit**
B1908/74	Short to B+ in Front Pretensioner Squib LH Circuit	- Floor wire - Front seat outer belt assembly LH (Front pretensioner squib LH) - Center airbag sensor assembly	*2	Refer to **DTC B1905/74: Short in Front Pretensioner Squib LH Circuit; DTC B1906/74: Open in Front Pretensioner Squib LH Circuit; DTC B1907/74: Short to GND in Front Pretensioner Squib LH Circuit; DTC B1908/74: Short to B+ in Front Pretensioner Squib LH Circuit**

SUPPLEMENTAL RESTRAINT SYSTEMS

SST

SST

	09082-00700	SRS Airbag Deployment Tool	
	09082-00770	Airbag Deployment Wire Sub-harness No. 5	
	09082-00780	Airbag Deployment Wire Sub-harness No. 6	
	09082-00802	Airbag Deployment Wire Sub-Harness No. 8	
	(09082-10801)	Wire A	
	(09082-20801)	Wire B	
	(09082-30801)	Wire C	
	09082-00820	Airbag Deployment Wire Sub-Harness No. 10	
	09843-18061	SRS Check Wire	

RECOMMENDED TOOLS

RECOMMENDED TOOLS

	09010-3C120	Set, "TORX" Socket Wrench	
	(09013-1C120)	"TORX" Socket Wrench T-type T30	
	09080-1C110	Toyota Electrical Tester Set	
	09080-2C100	Test Lead Set	

EQUIPMENT

EQUIPMENT

Torque wrench	-
Battery	-
Protective tape	-
Feeler gauge	-
Clip remover	-
Bolt	

Length: 35.0 mm (1.38 in.) Diameter: 6.0 mm (0.236 in.) Pitch: 1.0 mm (0.0394 in.)	Airbag disposal
Tire Width: 185 mm (7.28 in.) or more Inner diameter: 360 mm (14.17 in.) or more	Airbag disposal
Tire with disc wheel Width: 185 mm (7.28 in.) or more Inner diameter: 360 mm (14.17 in.) or more	Airbag disposal
Wire harness Stripped wire section: 1.25 mm^2 (0.0019 $in.^2$) or more	Airbag disposal
Cardboard Box	Airbag disposal
Plastic bag	Airbag disposal

STEERING PAD

COMPONENTS

ILLUSTRATION

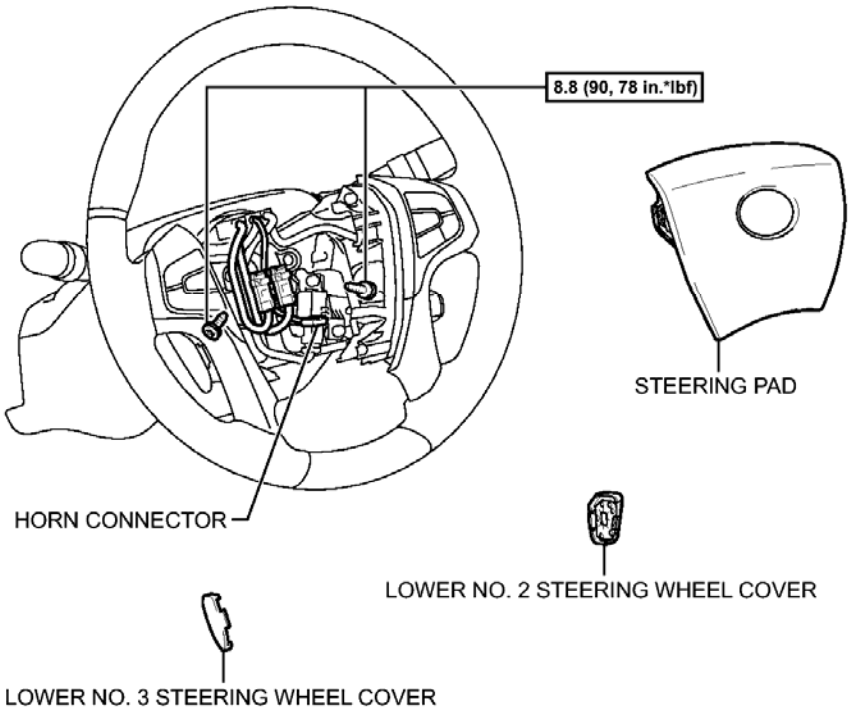


Fig. 1: Steering Pad Replacement Components With Torque Specifications
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

ON-VEHICLE INSPECTION

1. **INSPECT STEERING PAD (for Vehicle not Involved in Collision)**

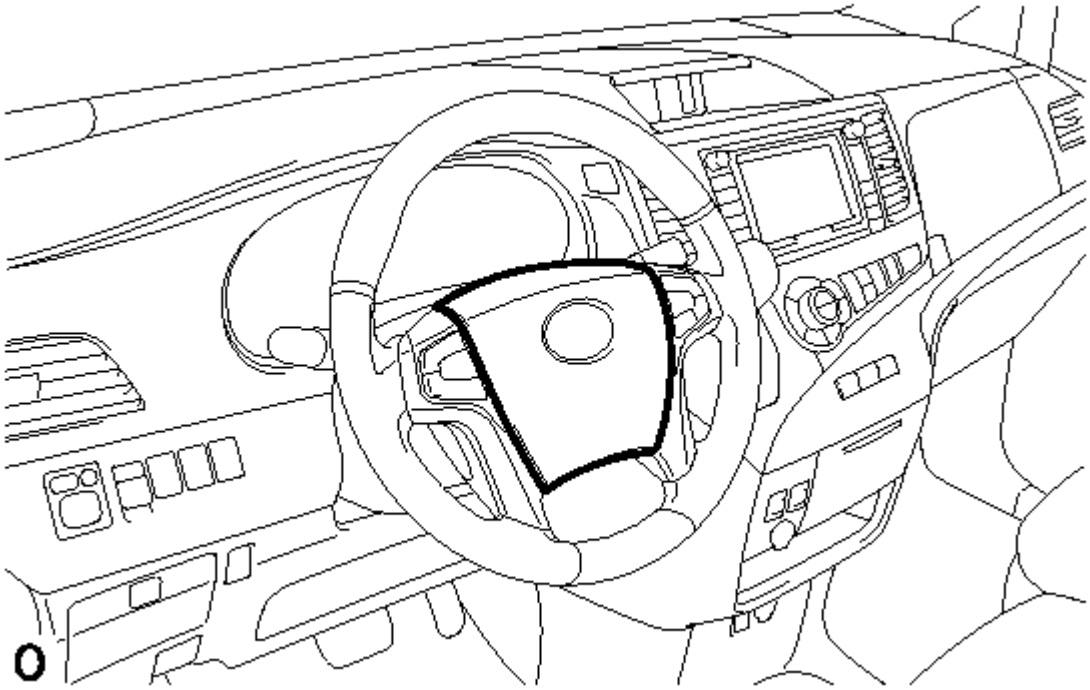


Fig. 2: Identifying Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .
   b. With the steering pad installed on the vehicle, perform a visual check. If there are any defects, such as those mentioned below, replace the steering pad with a new one:

      Any cuts, minute cracks or marked discoloration on the steering pad top surface or in the grooved portion.

2. **INSPECT STEERING PAD (for Vehicle Involved in Collision and Airbag not Deployed)**

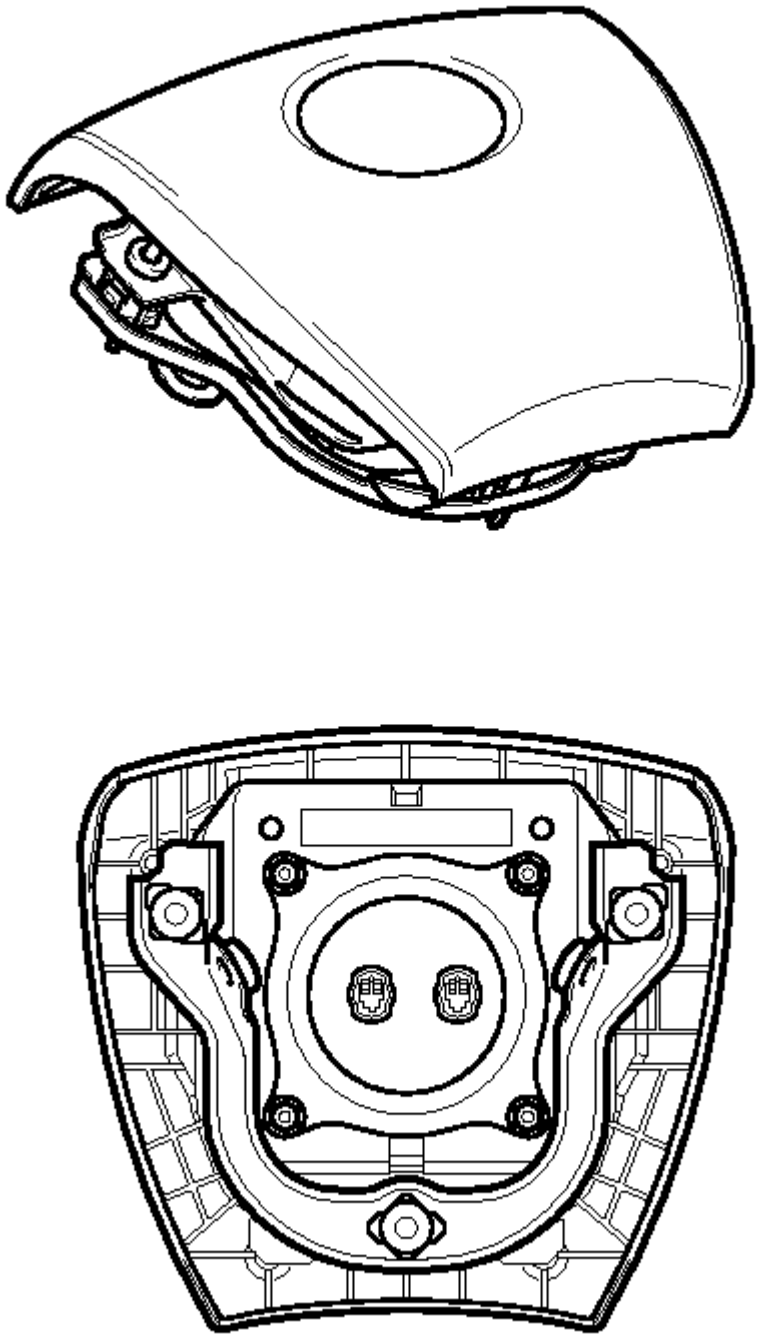


Fig. 3: Inspecting Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING: For steering pad removal and installation procedures. Refer to REMOVAL and Refer to INSTALLATION, and carefully follow the

correct procedure.

a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .
b. With the steering pad removed from the vehicle, perform a visual check. If there are any defects, such as those mentioned below, replace the steering pad or steering wheel with a new one:
   - Any cuts, minute cracks or marked discoloration on the steering pad top surface or in the grooved portion.
   - Any cracks or other damage to the connectors.
   - Deformation of the steering wheel.
   - Deformation of the horn button contact plate of the steering pad.
   - There should be no interference between the steering pad and steering wheel, and the clearance should be uniform all the way around when a new steering pad is installed on the steering wheel.

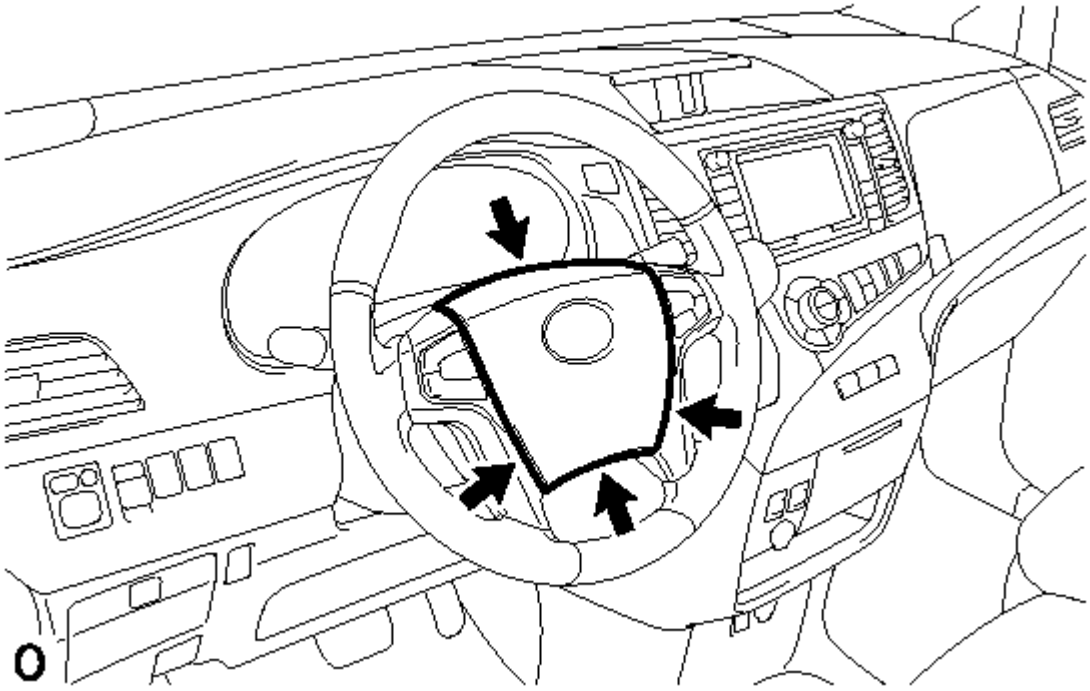


Fig. 4: Identifying Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

REMOVAL

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

2. **REMOVE LOWER NO. 3 STEERING WHEEL COVER**
   a. Using a screwdriver with its tip wrapped with protective tape, disengage the 2 claws to remove the lower No. 3 steering wheel cover.

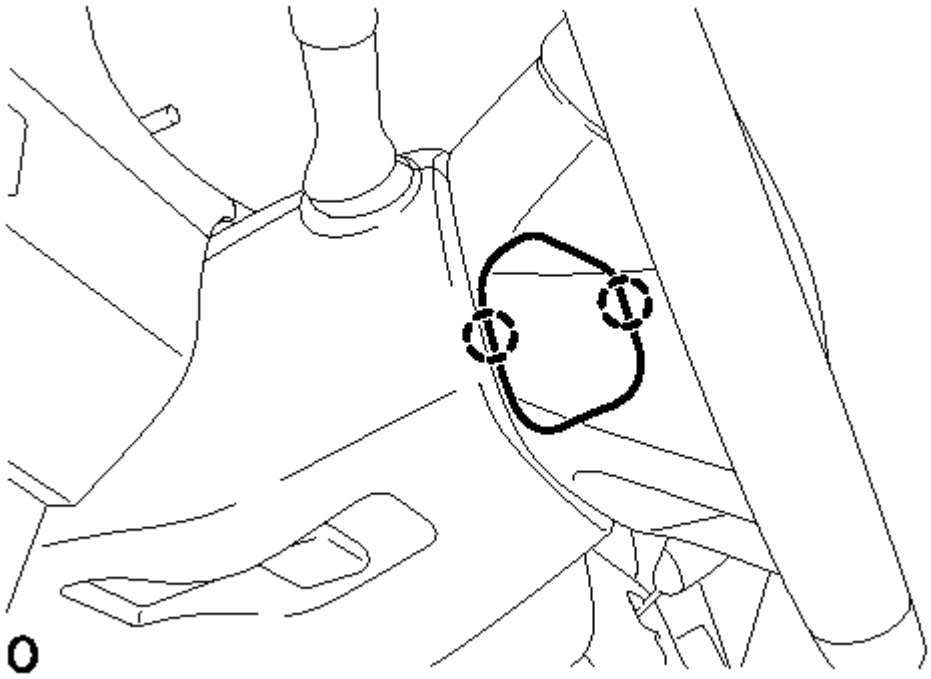


Fig. 5: Identifying Lower No. 3 Steering Wheel Cover & Claws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. **REMOVE LOWER NO. 2 STEERING WHEEL COVER**
   a. Using a screwdriver with its tip wrapped with protective tape, disengage the 2 claws to remove the lower No. 2 steering wheel cover.

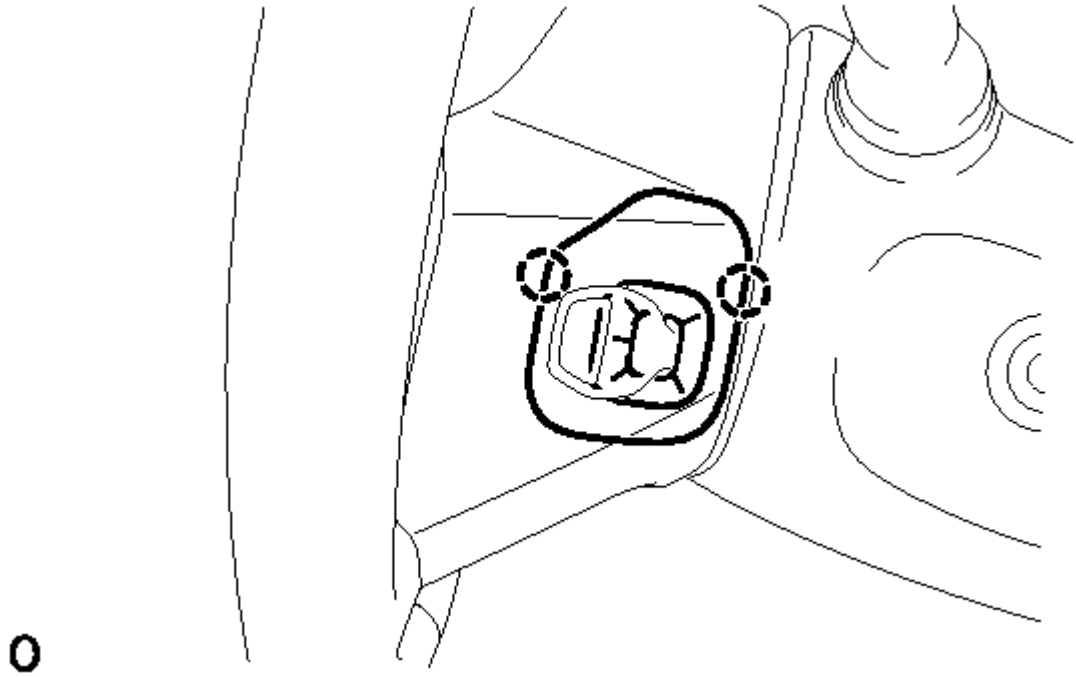


Fig. 6: Identifying Lower No. 2 Steering Wheel Cover & Claws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

4. **REMOVE STEERING PAD**

WARNING: When storing the steering pad, keep the airbag deployment side facing upward.

a. Using a T30 "TORX" socket wrench, loosen the 2 screws until the groove along the screw circumference catches on the screw case.

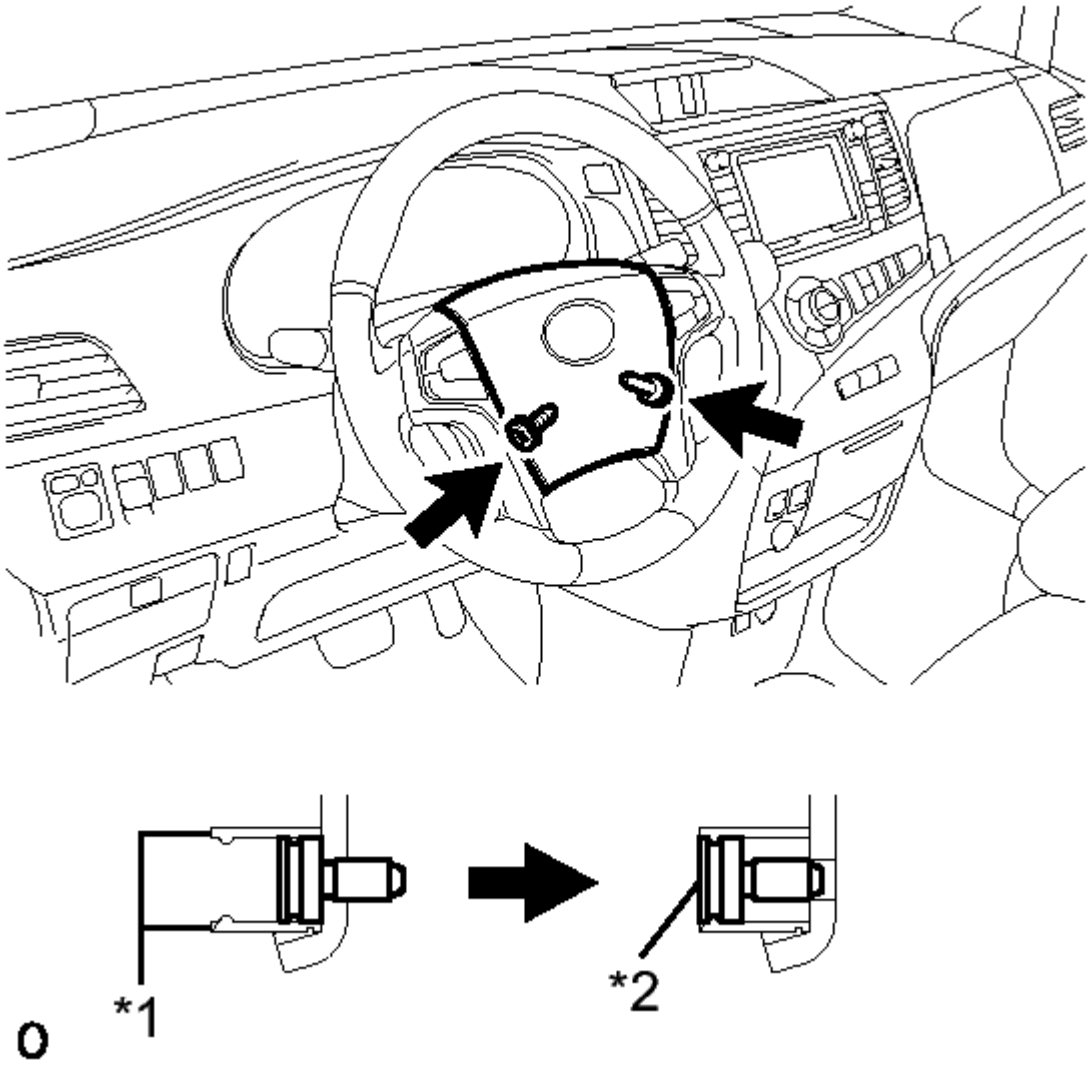


Fig. 7: Identifying Steering Pad & Screws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Screw Case
*2	Screw

b. Using a thin-bladed screwdriver with its tip wrapped with protective tape, release the locking button.

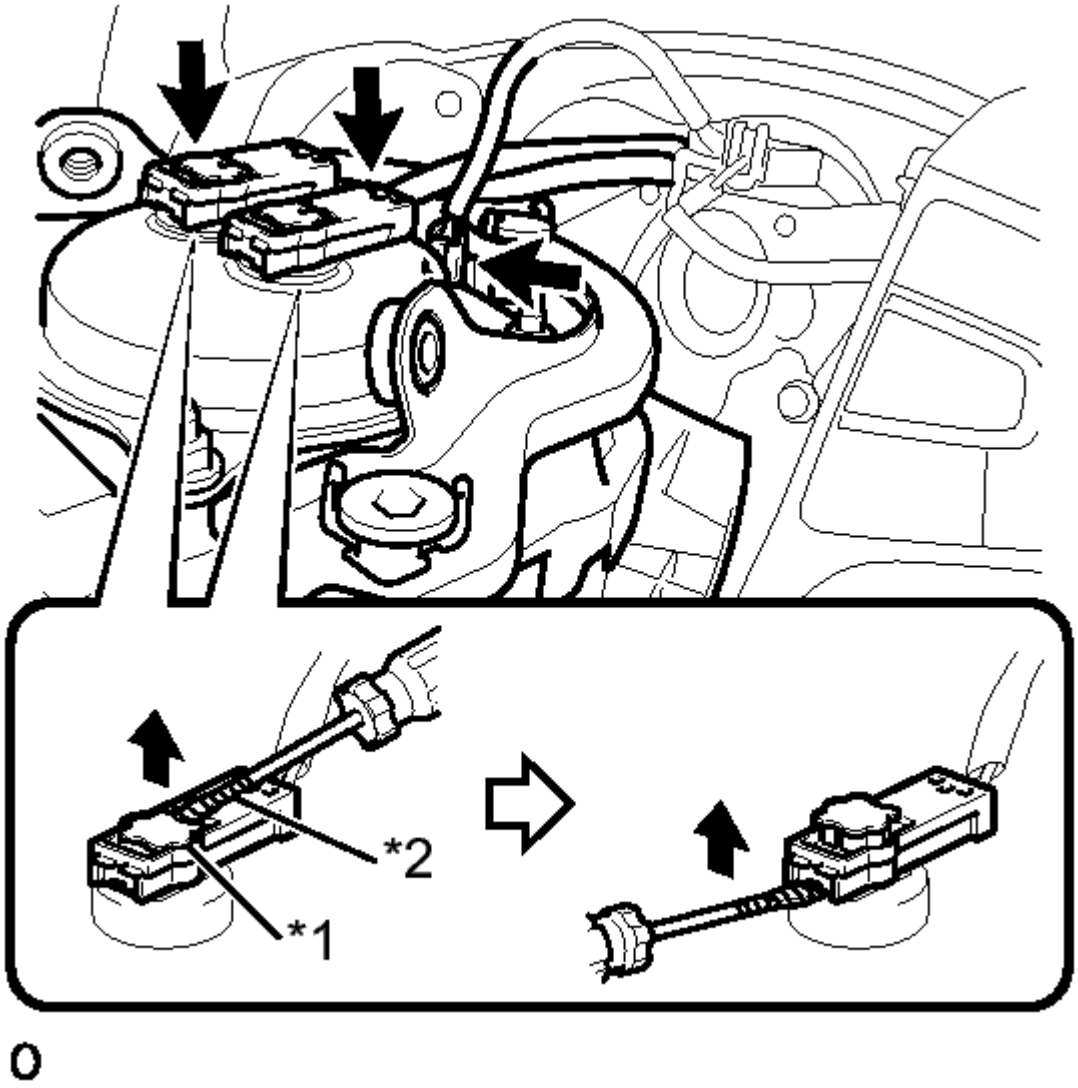


Fig. 8: Disconnecting Steering Pad Horn & Airbag Connectors Using A Screwdriver
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Locking Button
*2	Protective Tape

c. Using a thin-bladed screwdriver with its tip wrapped with protective tape, disconnect the 2 airbag connectors.
d. Disengage the horn terminal.

INSTALLATION

INSTALLATION

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **INSTALL STEERING PAD**

NOTE: Do not use a steering pad that has been dropped.

a. Check that the ignition switch is off.
b. Check that the cable is disconnected from the negative (-) battery terminal.

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

c. Connect the horn terminal.

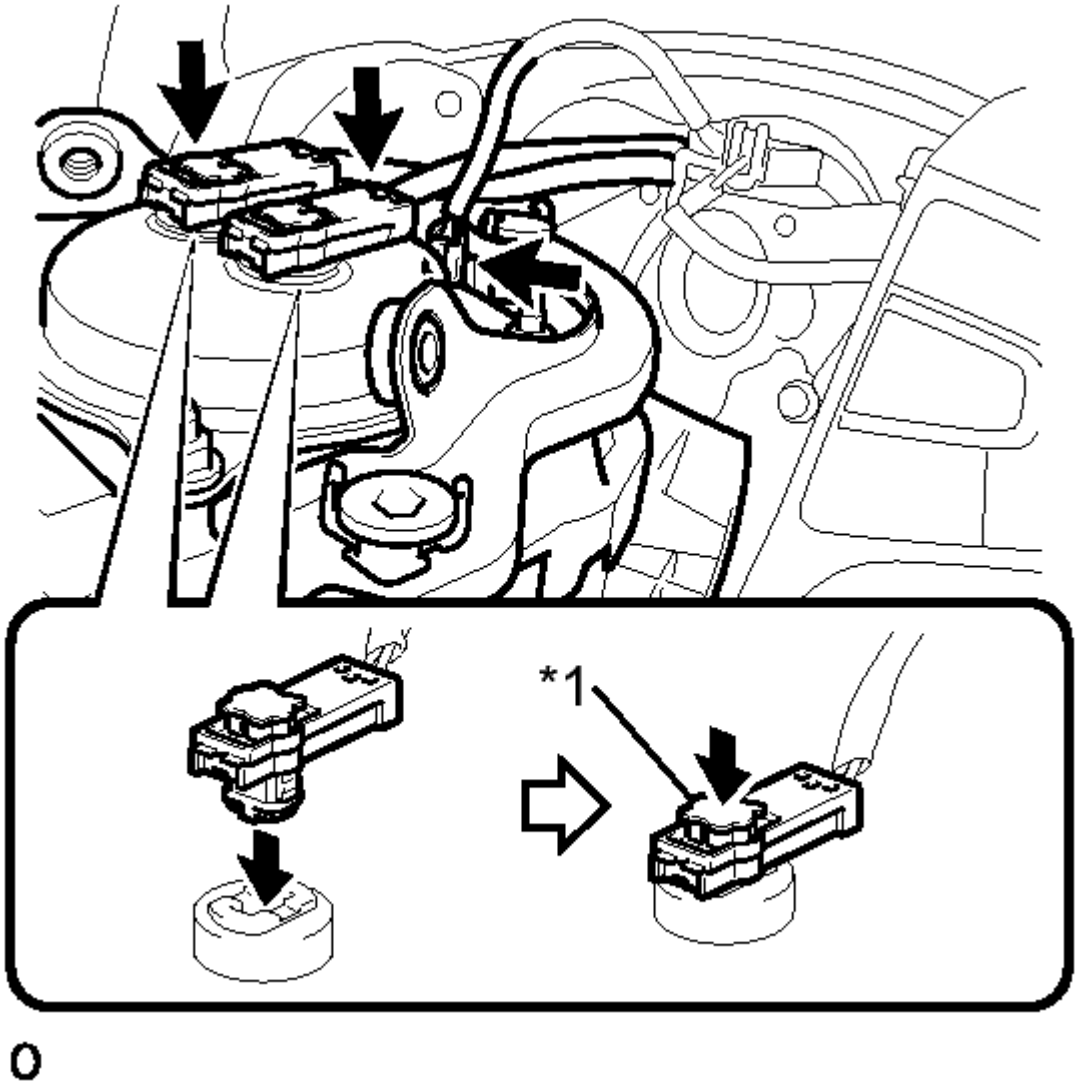


Fig. 9: Installing Steering Pad Horn & Airbag Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Locking Button

d. Connect the 2 airbag connectors to the steering pad.

NOTE:

- **When connecting any airbag connector, take care not to damage the airbag wire harness.**
- **Be sure to only connect the connectors to each corresponding color.**
- **Securely lock the locking button.**

e. Confirm that the circumference groove of each screw fits in the screw case, and place the steering pad onto the steering wheel assembly.

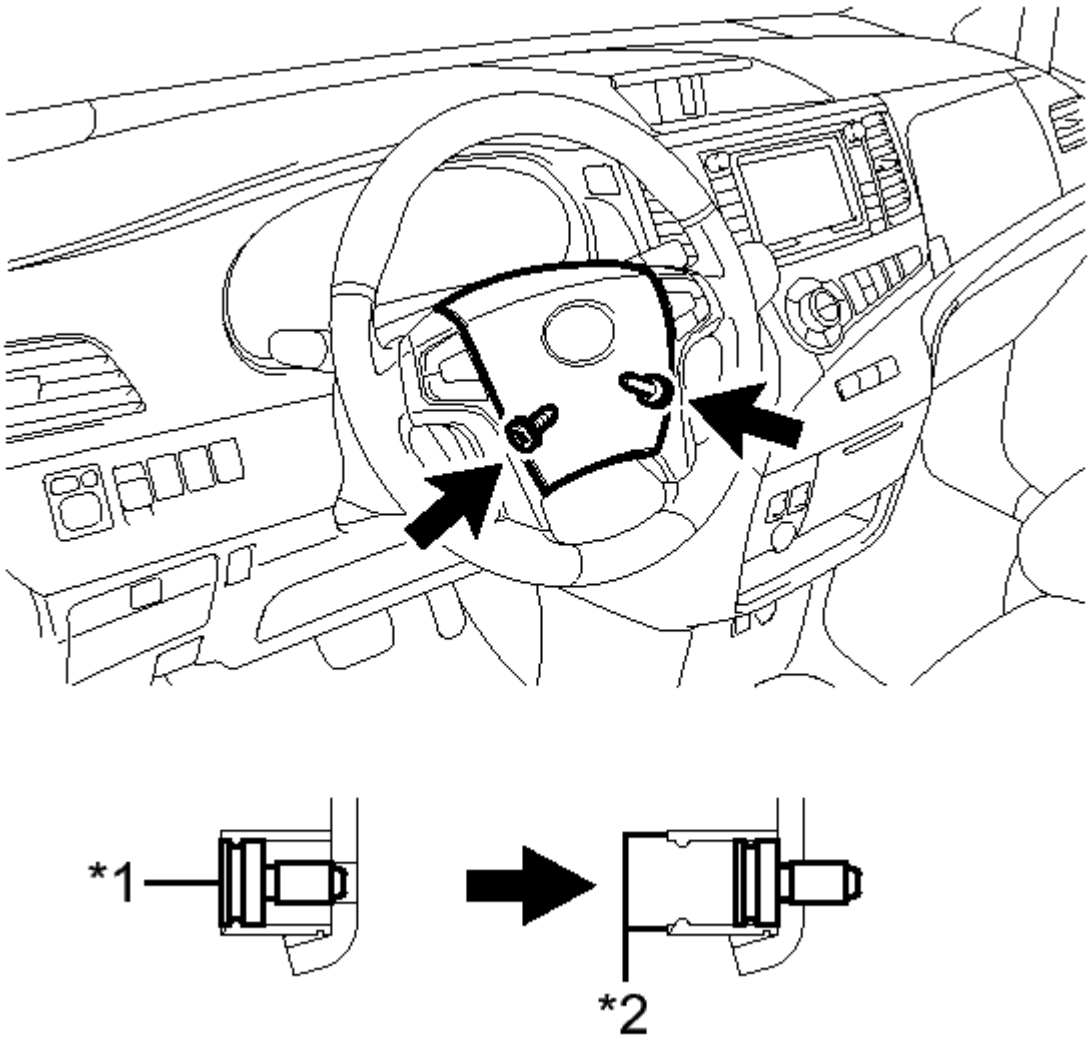


Fig. 10: Identifying Steering Pad & Screws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Screw
*2	Screw Case

f. Using a T30 "TORX" socket wrench, tighten the 2 screws.

Torque: 8.8 N*m (90 kgf*cm, 78 in.*lbf)

2. **INSTALL LOWER NO. 3 STEERING WHEEL COVER**
   a. Engage the 2 claws to install the lower No. 3 steering wheel cover.
3. **INSTALL LOWER NO. 2 STEERING WHEEL COVER**
   a. Engage the 2 claws to install the lower No. 2 steering wheel cover.
4. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

5. **INSPECT STEERING PAD**
   a. Inspect the steering pad, See step 1.
   b. Make sure that the horn sounds.

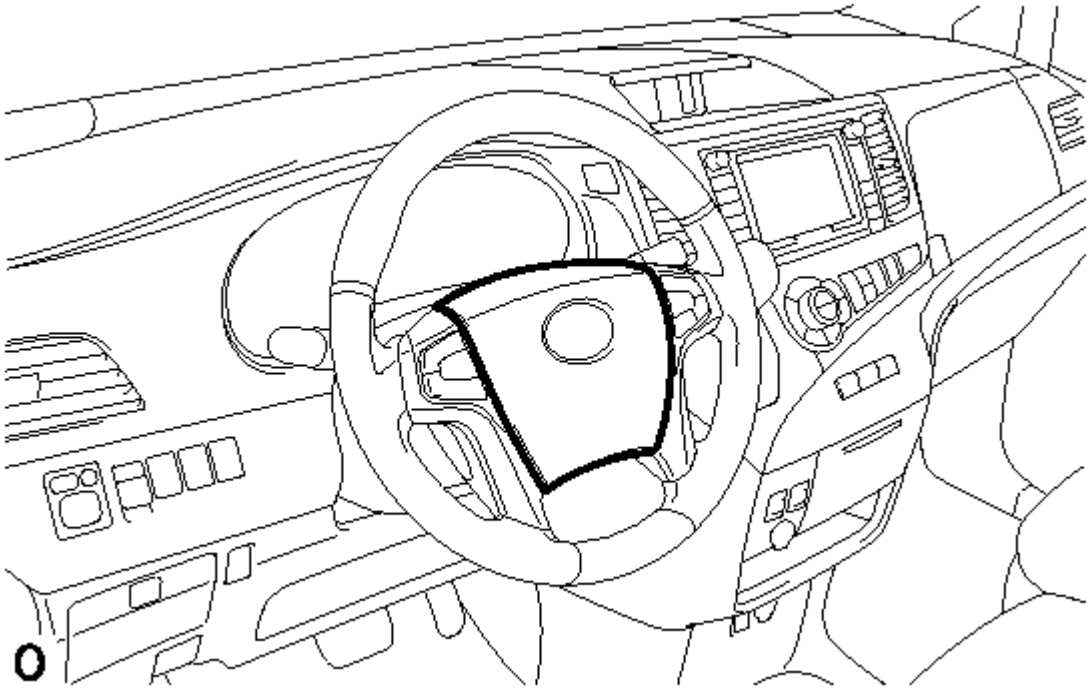


Fig. 11: Identifying Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

If the horn does not sound, inspect the horn system. Refer to **INSPECTION** .

6. **INSPECT SRS WARNING LIGHT**

Refer to **DIAGNOSIS SYSTEM**

DISPOSAL

DISPOSAL

HINT:

When scrapping a vehicle equipped with the SRS or disposing of a steering pad, deploy the airbag first in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the SERVICE DEPT. of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING:

- **Before performing pre-disposal deployment of any SRS component, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.**
- **Never dispose of a steering pad that has an undeployed airbag.**
- **The airbag emits an exploding sound when it is deployed, so perform operation outdoors, and where it will not create a nuisance to nearby residents.**
- **When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electric noise.**

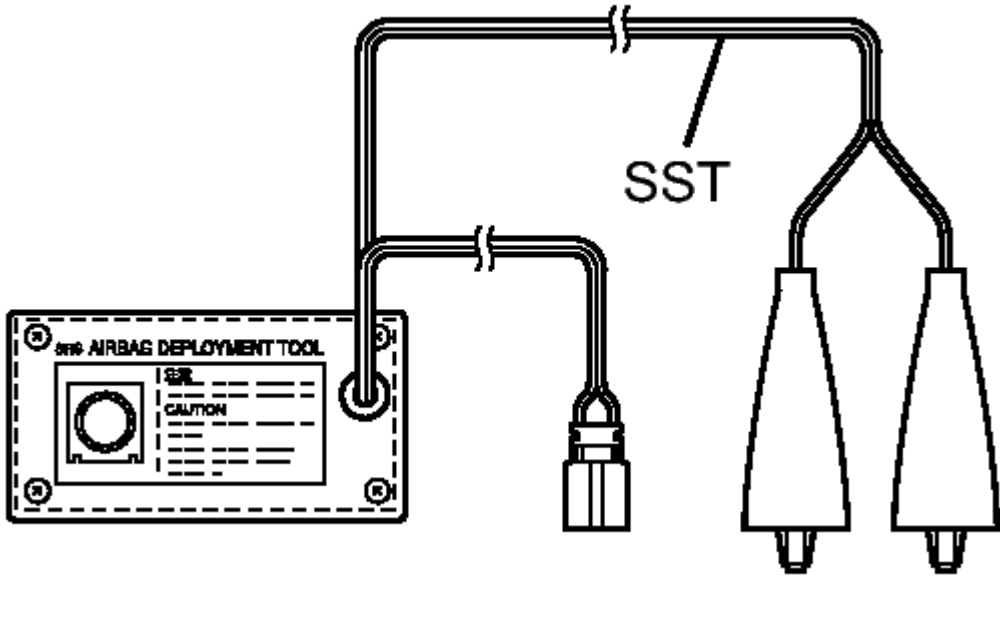


Fig. 12: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **When deploying the airbag, perform the operation at least 10 m (32.8 f**

away from the steering pad.

- **The steering pad becomes extremely hot when the airbag is deployed do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a steering pad with a deployed airbag.**
- **Do not apply water, etc. to a steering pad with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**
- **An airbag or pretensioner may be activated by static electricity. To prevent this, be sure to touch a metal surface with bare hands to discharge static electricity before performing this procedure.**

DISPOSAL

1. **DISPOSE OF STEERING PAD (WHEN INSTALLED IN VEHICLE)**

   HINT:

   Prepare a battery as the power source to deploy the airbag.

   a. Check the function of SST.

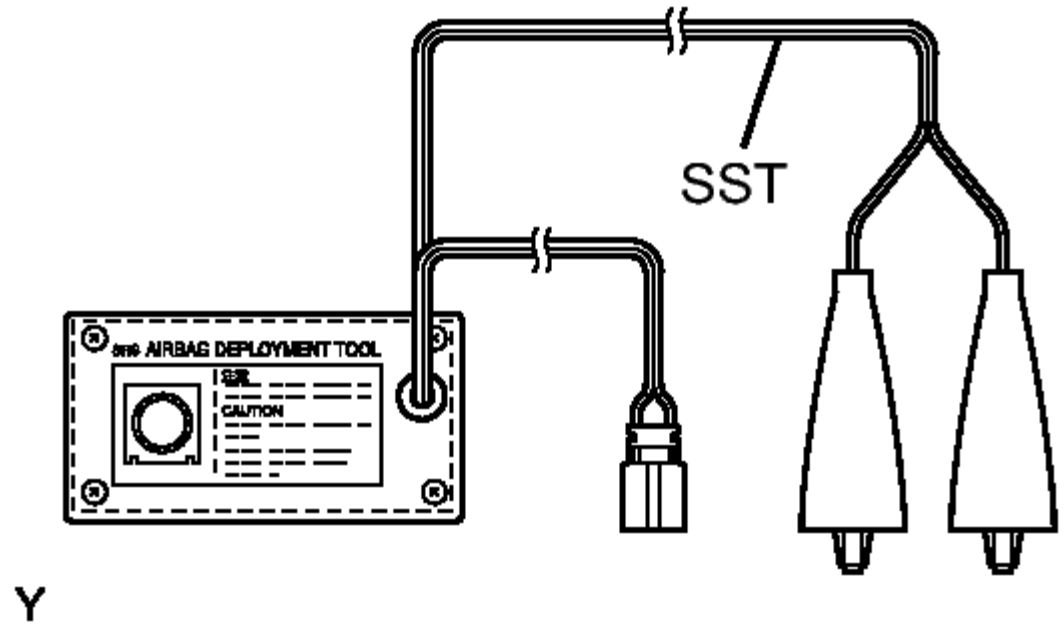


Fig. 13: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00700**

WARNING: Always use the specified SST (SRS Airbag Deployment Tool) when deploying the airbag.

1. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.

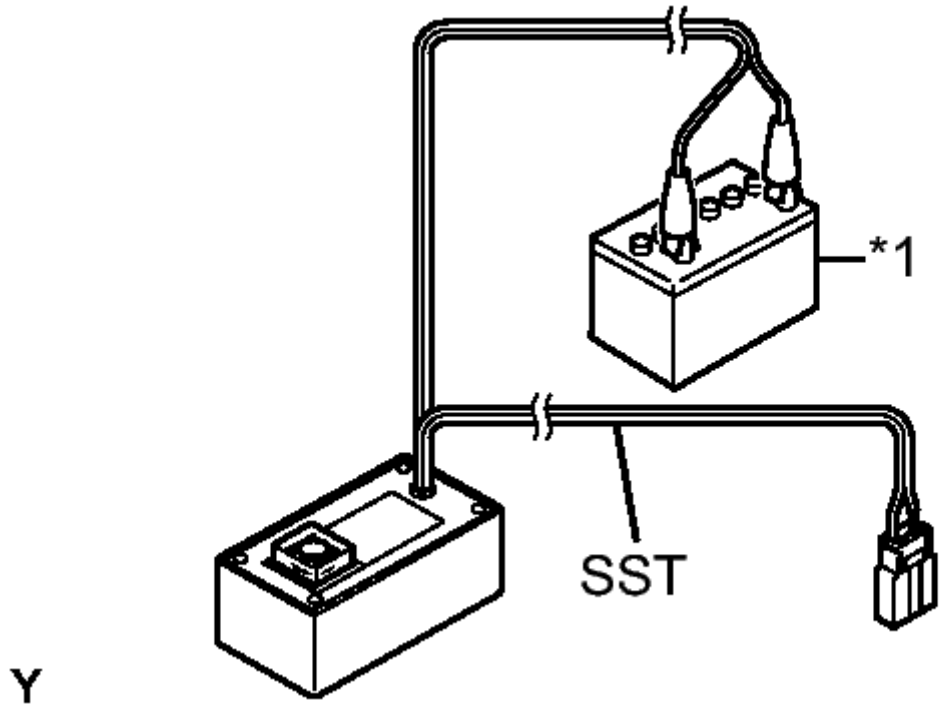
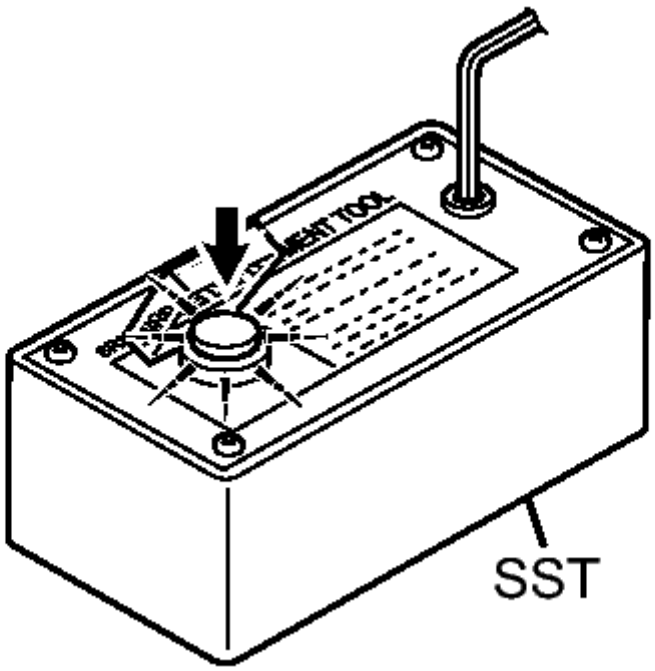


Fig. 14: Identifying SST & Battery
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Battery

2. Press the SST activation switch, and check that the LED on the SST activation switch illuminates.



Y

Fig. 15: Pressing SST Activation Switch
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING:

- **Do not connect the SST connector (yellow colored one) to the airbag.**
- **If the LED illuminates when the activation switch is not being pressed, SST may be malfunctioning. Do not use SST.**

3. Disconnect SST from the battery.

b. Read the precaution. Refer to **PRECAUTION** .

c. Disconnect the cable from the negative battery terminal.

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTE: Some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

d. Remove the lower steering column cover.

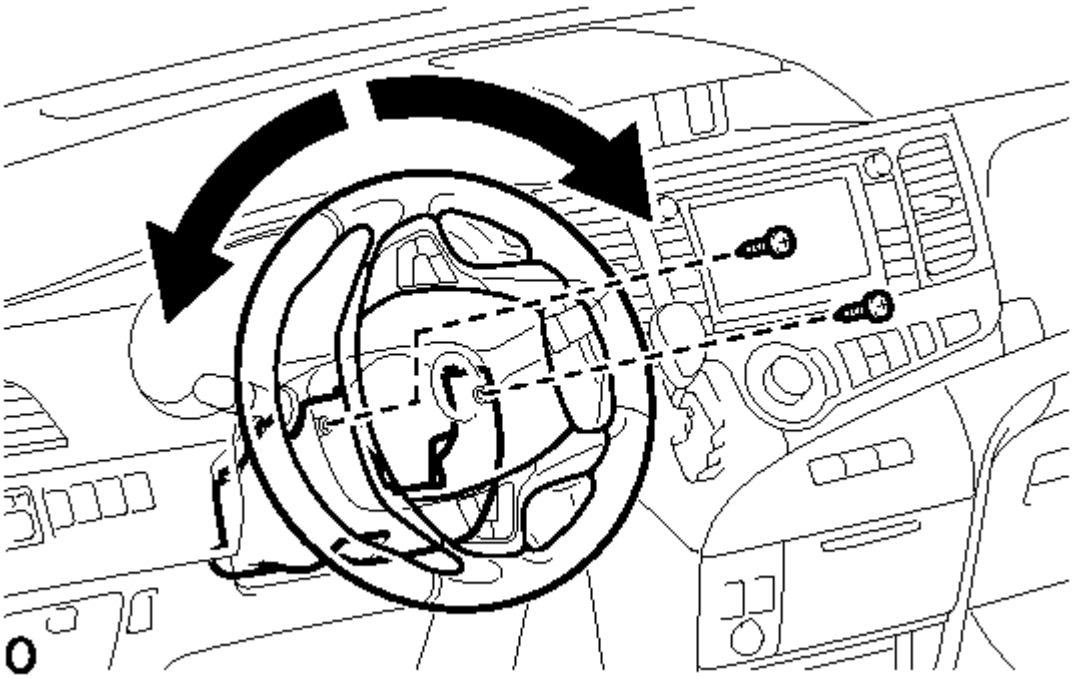


Fig. 16: Rotating Steering Wheel Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. While turning the steering wheel assembly to the right and left, remove the 2 screws and the lower steering column cover.

e. Connect SST.

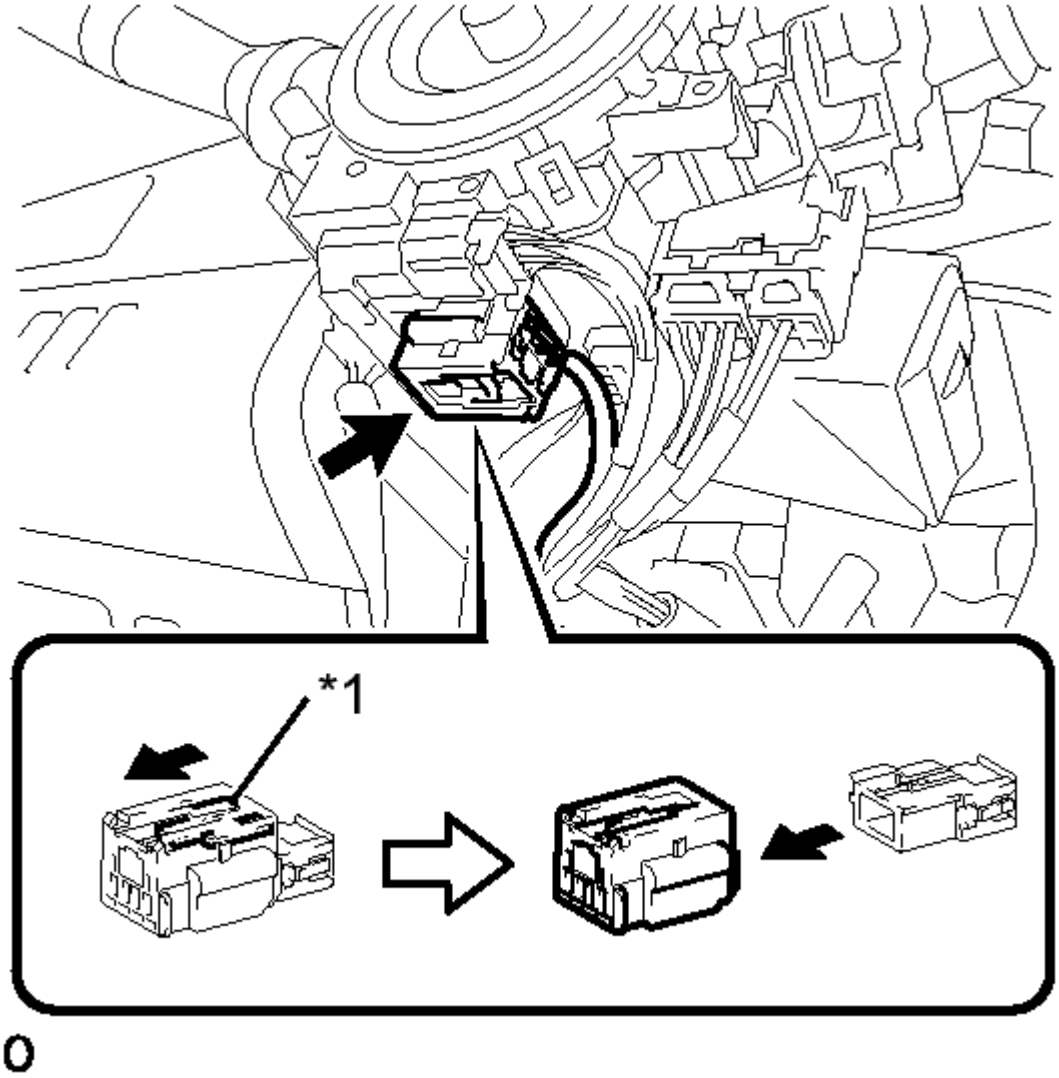


Fig. 17: Identifying Airbag Slider Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING: Check that there is no slack in the steering wheel and steering pad.

TEXT IN ILLUSTRATION

*1	Slider

1. Slide the slider to release the lock, and then disconnect the connector.

NOTE: Do not damage the airbag wire harness when handling the airbag connector.

2. Connect the SST connector to the spiral cable.

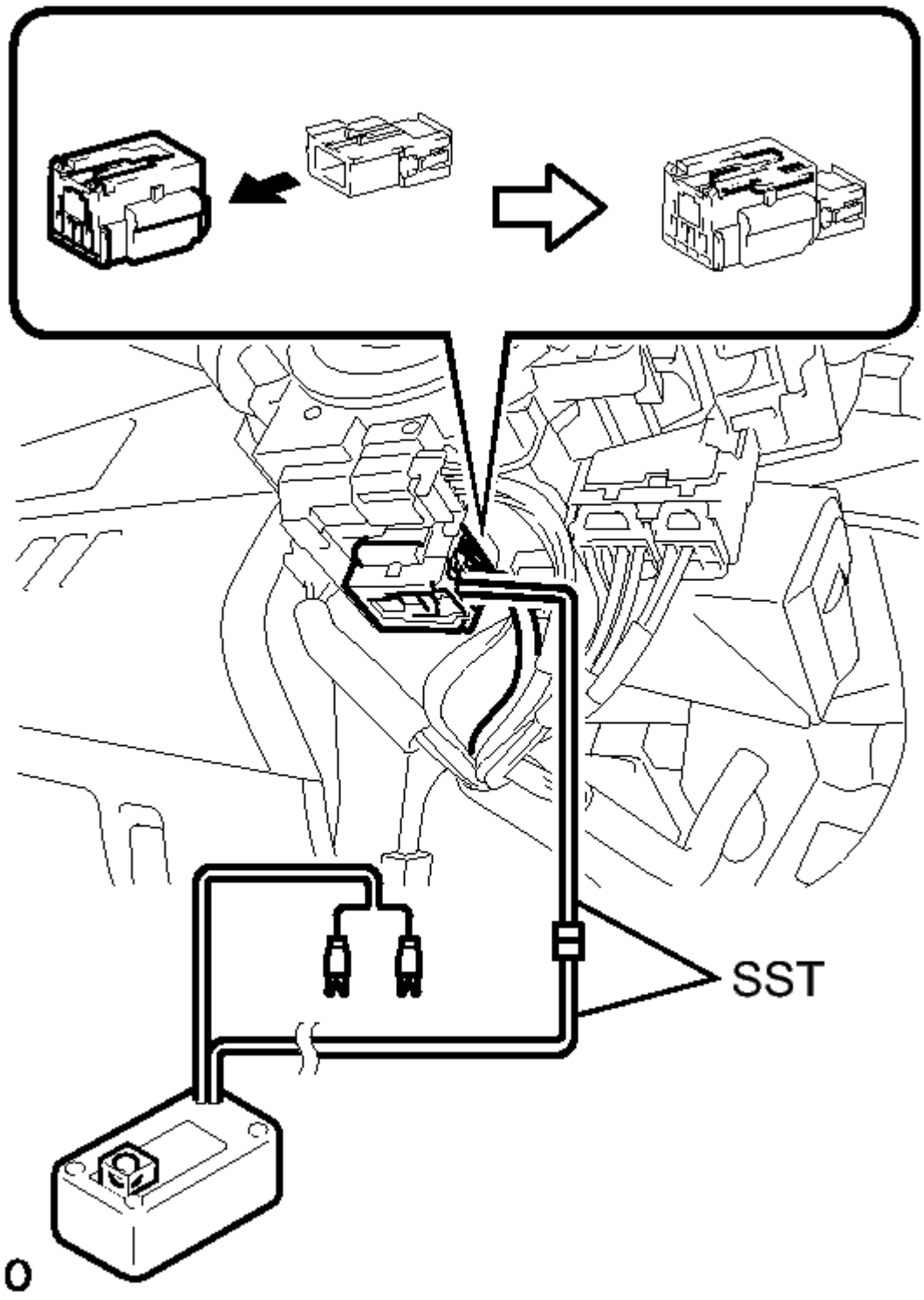


Fig. 18: Identifying SST Connector & Spiral Cable
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00700**
- **SST: 09082-00780**

NOTE: **Do not lock the secondary lock on the twin lock to avoid damaging the SST connector and wire harness.**

3. Move SST to at least 10 m (32.8 ft.) away from the vehicle front side window.

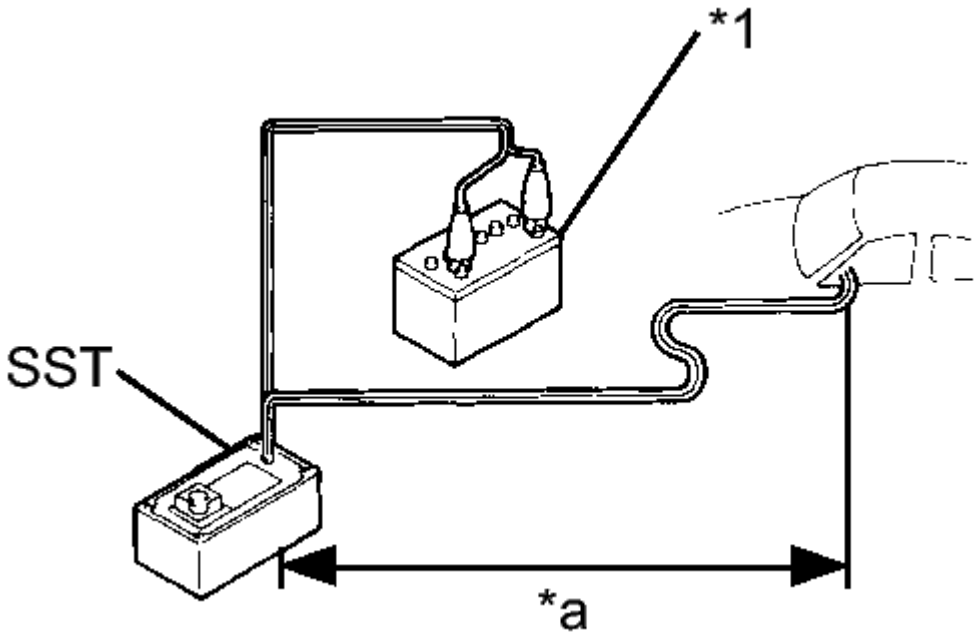


Fig. 19: Identifying Battery & SST Wire Harness Clearance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Battery
*a	10 m or more

4. Maintaining enough clearance for the SST wire harness in the front side window, close all doors and windows of the vehicle.

NOTE: **Do not damage SST wire harness.**

5. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.

f. Deploy the airbag.
   1. Check that no one is inside the vehicle or within a 10 m (32.8 ft.) radius of the vehicle.
   2. Press the SST activation switch and deploy the airbag.

WARNING:

- **Make sure that no one is near the vehicle when deploying the airbag.**
- **The steering pad becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a steering pad with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

HINT:

The airbag is deployed as the LED of the SST activation switch illuminates.

2. **DISPOSE OF STEERING PAD (WHEN NOT INSTALLED IN VEHICLE)**

NOTE: Be sure to observe the following procedure when deploying the airbag.

HINT:

Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST.

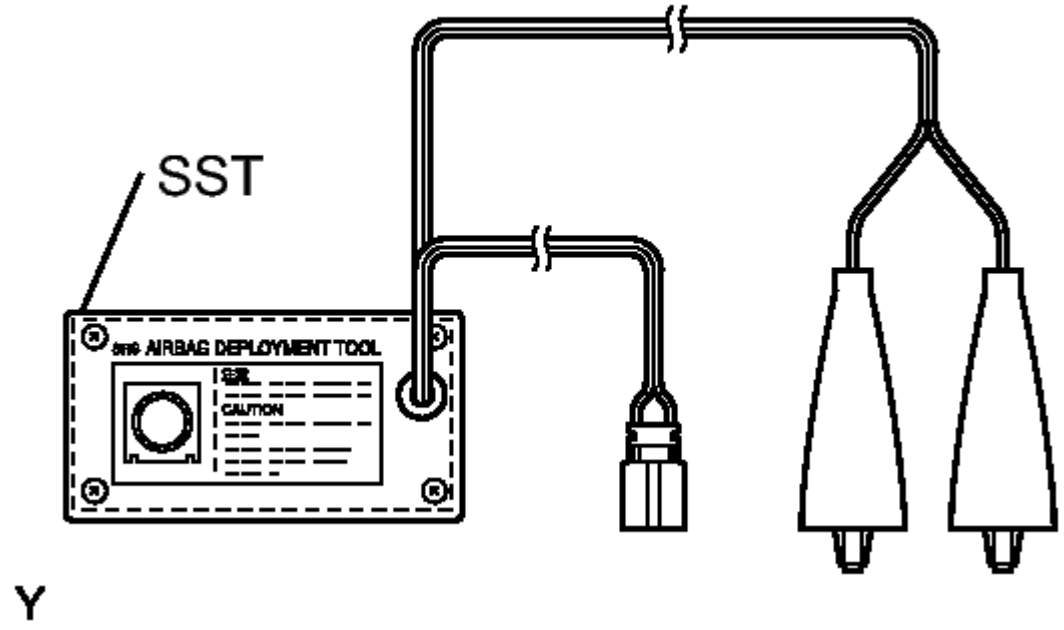


Fig. 20: Identifying SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00700**

WARNING: When deploying the airbag, always use the specified SST:

SRS Airbag Deployment Tool

1. Connect SST to the battery.

   Connect the red clip of SST to the positive (+) battery terminal and the black clip of SST to the negative (-) battery terminal.

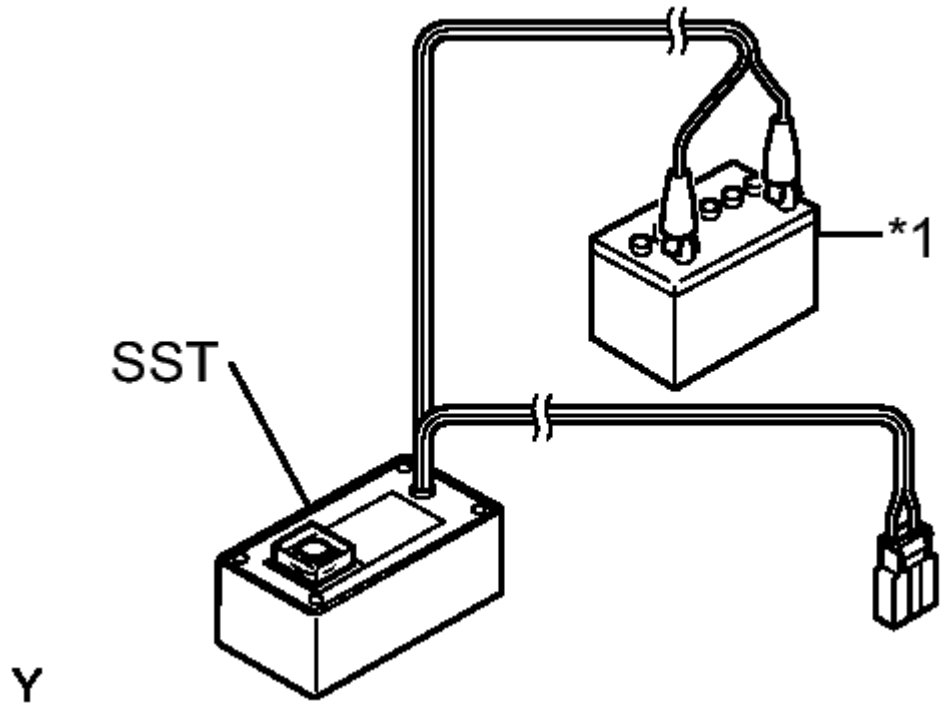


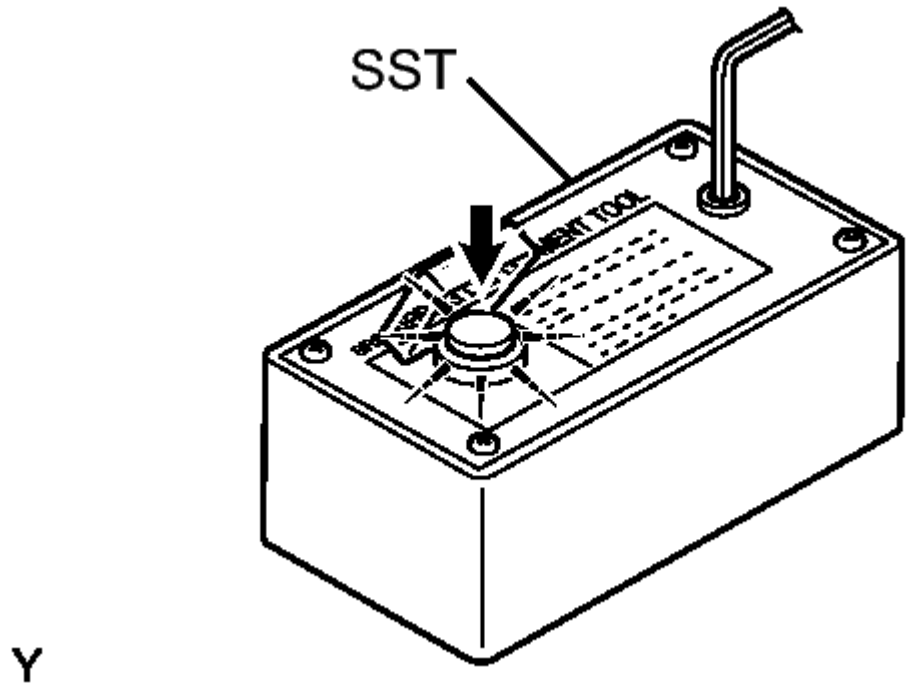
Fig. 21: Identifying SST & Battery
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Battery

2. Check the function of SST.

   Press the SST activation switch and check that the LED of the SST activation switch comes on.



Y

Fig. 22: Pressing SST Activation Switch
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING:

- **Do not connect the yellow SST connector to the airbag.**
- **If the LED comes on when the activation switch is not being pressed, SST is malfunctioning. Replace SST.**

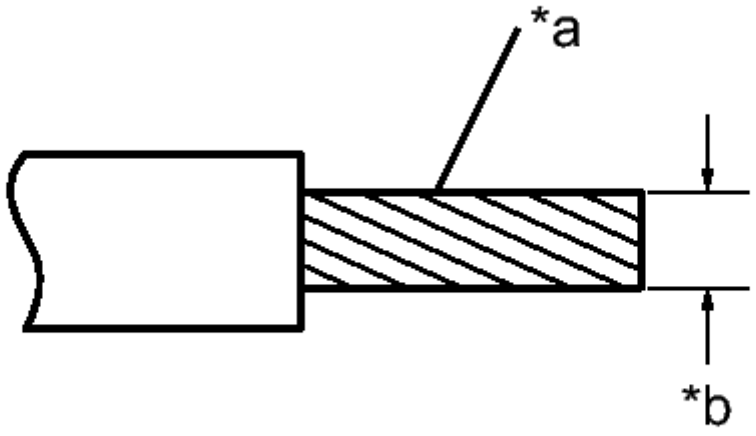
3. Disconnect SST from the battery.

b. Remove the steering pad. Refer to **REMOVAL**.

WARNING:

- **Before removing the steering pad, wait at least 90 seconds after turning the power switch off and disconnecting the cable from the negative (-) battery terminal.**
- **When storing the steering pad, keep the airbag deployment side facing upward.**

c. Using braided wire, tie down the steering pad to an unneeded wheel.



H

Fig. 23: Identifying Stripped Wire Section & Diameter
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*a	Stripped Wire Section
*b	Wire Diameter

Wire

Stripped wire section

1.25 mm^2 (0.0019 $in.^2$) or more

WARNING: If the wire harness is too thin or an alternative object is used to tie down the steering pad, it may snap when the airbag is deployed. Always use a wire for vehicle use with an area of at least 1.25 mm^2 (0.0019 $in.^2$).

HINT:

To calculate the area of the stripped wire section:

Area = 3.14 x $(Diameter)^2$ / 4

1. Install the 2 bolts with the washers into the 2 bolt holes on the steering pad.

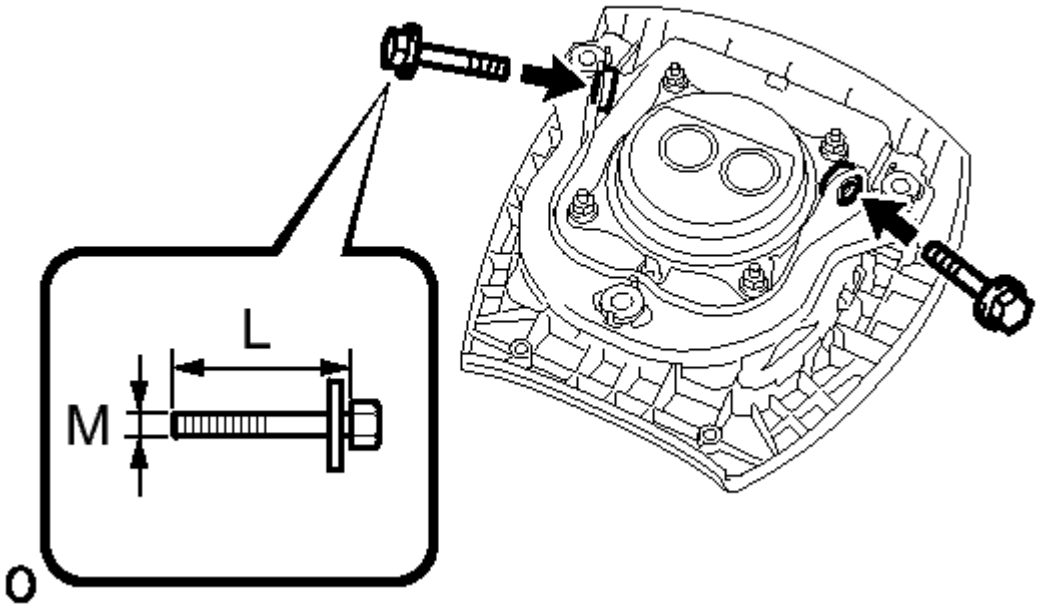


Fig. 24: Identifying Steering Pad Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

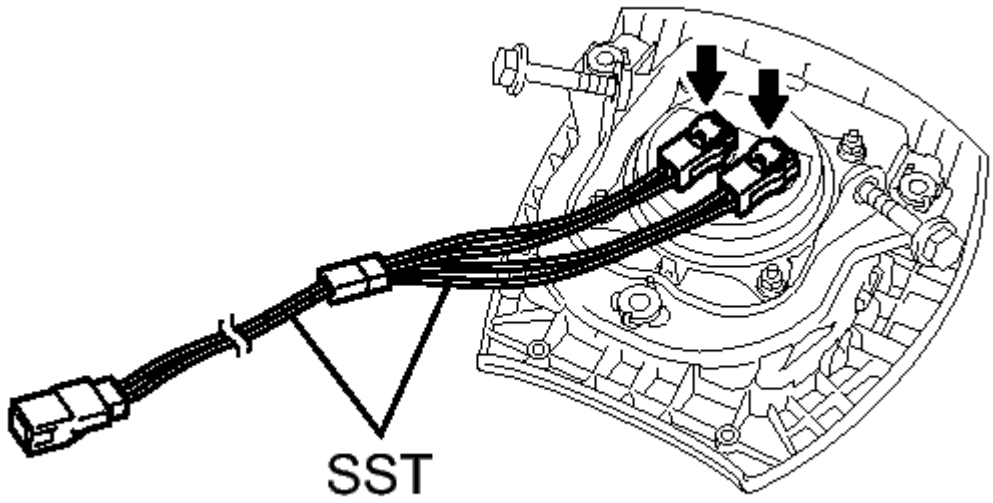
Bolt

Area	Measurement
L	35.0 mm (1.38 in.)
M	6.0 mm (0.236 in.)
Pitch	1.0 mm (0.0394 in.)

NOTE:

- **Tighten the bolts by hand until they become difficult to turn.**
- **Do not tighten the bolts excessively.**

2. After connecting the following SST to each other, connect them to the steering pad.



0

Fig. 25: Identifying Steering Pad SST & Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00802**
  09082-10801
  09082-30801

3. Wind 3 wires at least 2 times each around each of the bolts installed on the left and right sides of the steering pad.

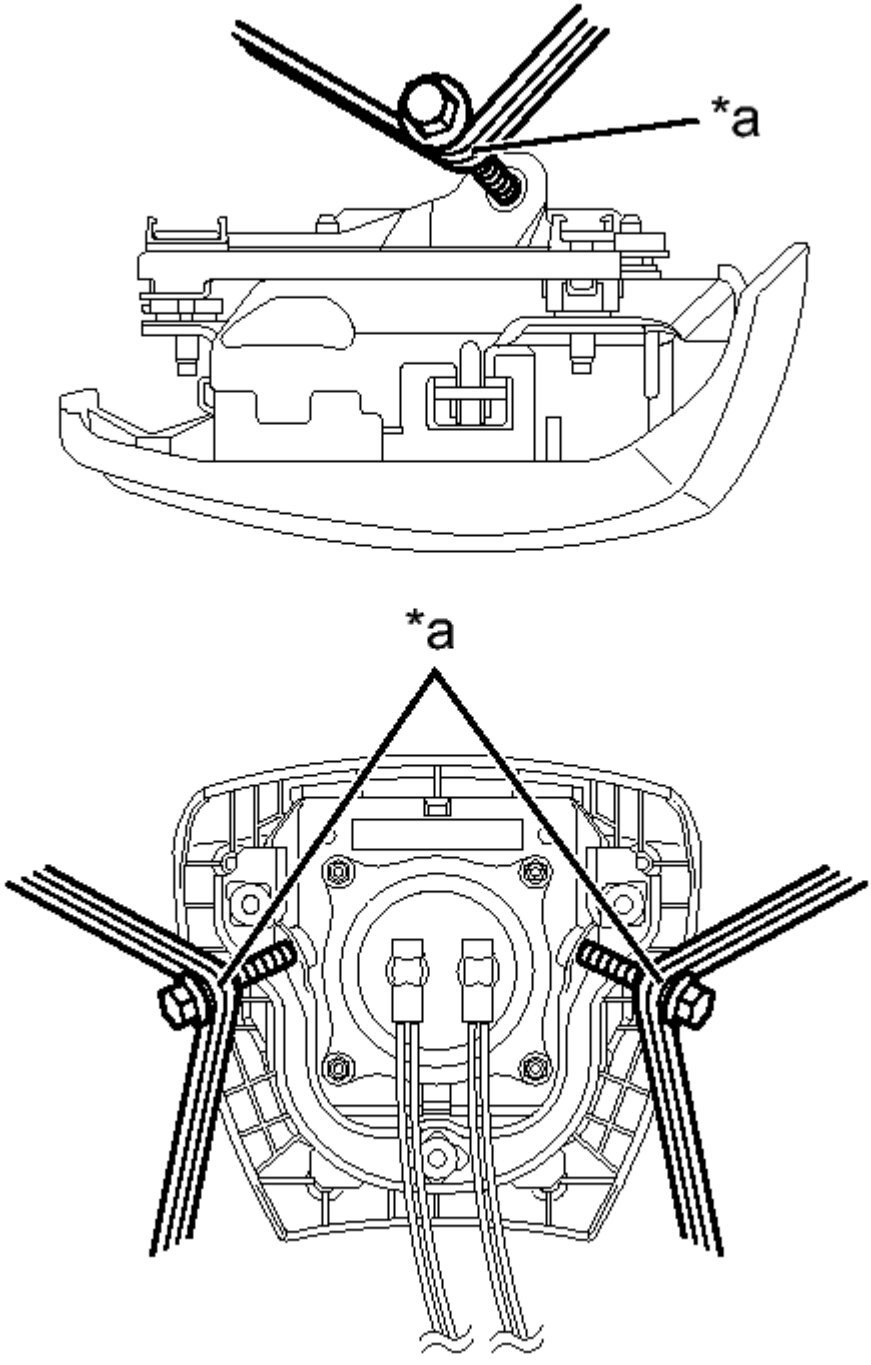


Fig. 26: Identifying Steering Pad Bolts & Wires
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

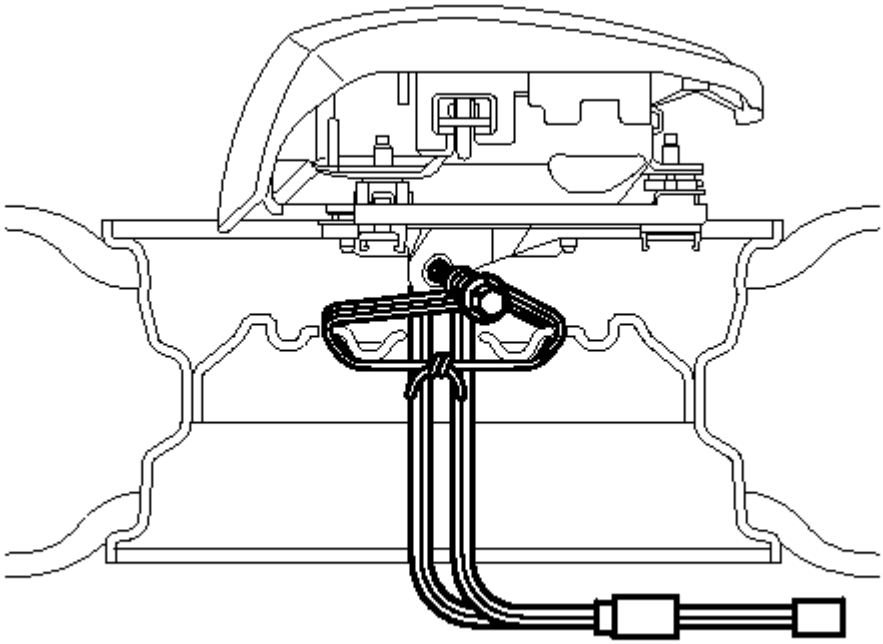
2	

*a	times or more

WARNING:

- **Tightly wind the wires around the bolts without any slack.**
- **Make sure that the wires are tight. If there is slack in the wires, the steering pad may break loose when the airbag is deployed.**

4. Face the airbag deployment side of the steering pad upward on top of an unneeded tire and wheel set. Separately tie the left and right sides of the steering pad to the wheel through the hub nut holes. Position the SST connector so that it hangs downward through the hub hole of the wheel.



0

Fig. 27: Identifying Upward Position Of Steering Pad, Tire/Wheel Set & SST Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

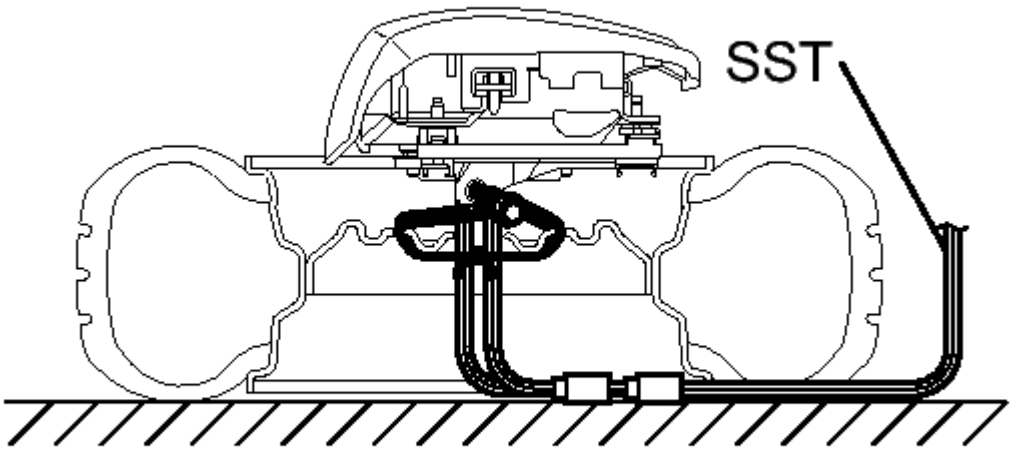
WARNING:

- **Make sure that the wires are tight. If there is slack in the wires, the steering pad may break loose when the airbag is deployed.**
- **Always tie down the steering pad with the airbag deployment side facing upward.**

NOTE: **The wheel will be damaged by the airbag deployment, so use an**

unneeded wheel.

d. Connect SST.



0

Fig. 28: Identifying Steering Pad & Wheel/Tire On Level Ground
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

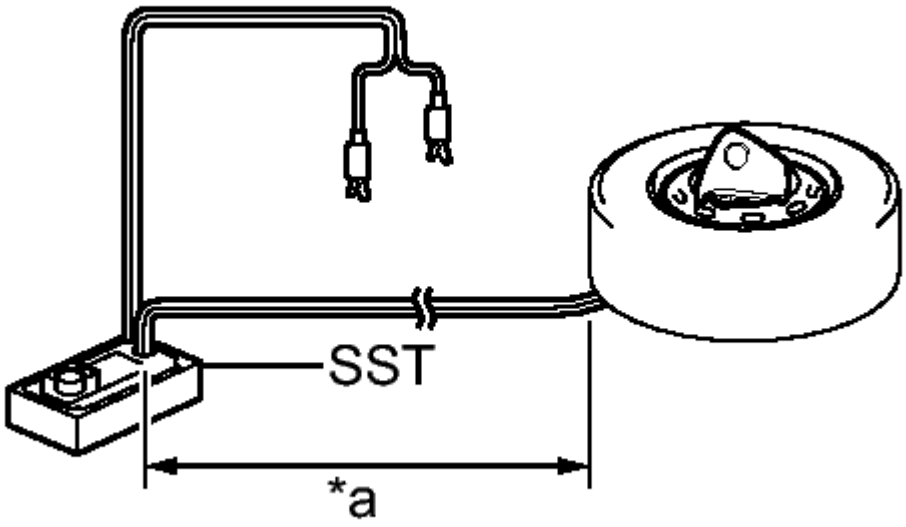
- **SST: 09082-00700**

WARNING: Place the wheel on level ground.

1. Connect the SST connector.

NOTE: To avoid damaging the SST connector or wire harness, do not lock the secondary lock of the twin lock. Also, secure some slack for the SST wire harness inside the disc wheel.

2. Move SST at least 10 m (32.8 ft.) away from the airbag tied down to the wheel.



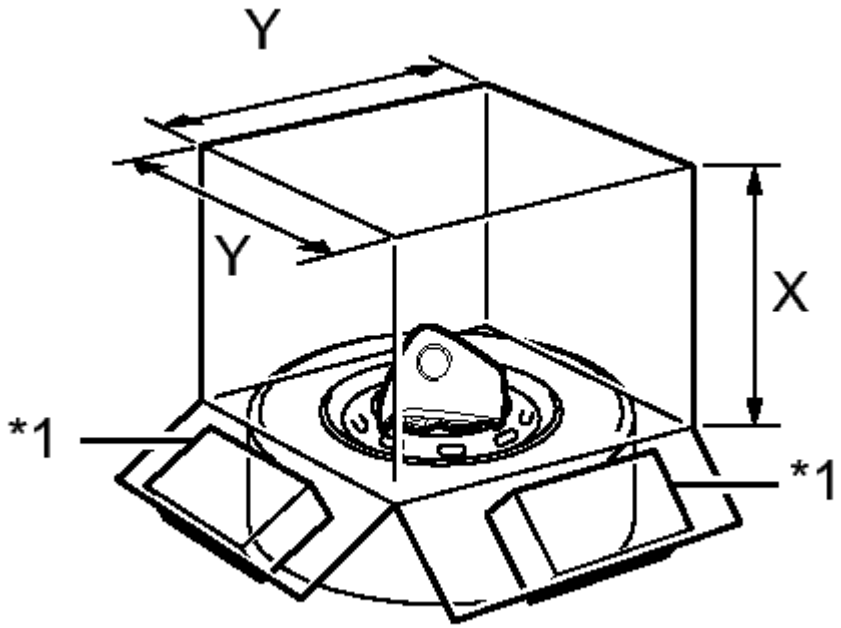
c

Fig. 29: Identifying SST & Airbag Distance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*a	10 m or more

e. Cover the steering pad (using a cardboard box).



C

Fig. 30: Covering Steering Pad With Cardboard Box
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Weight

1. Cover the steering pad with a cardboard box.
2. Place weights on the cardboard box in 4 places totaling at least 190 N (19 kg, 42.7 lb).

   Minimum cardboard box size

   Must exceed the following dimensions

Area	Measurement
X	460 mm (1.51 ft.)
Y	650 mm (2.13 ft.)

NOTE:

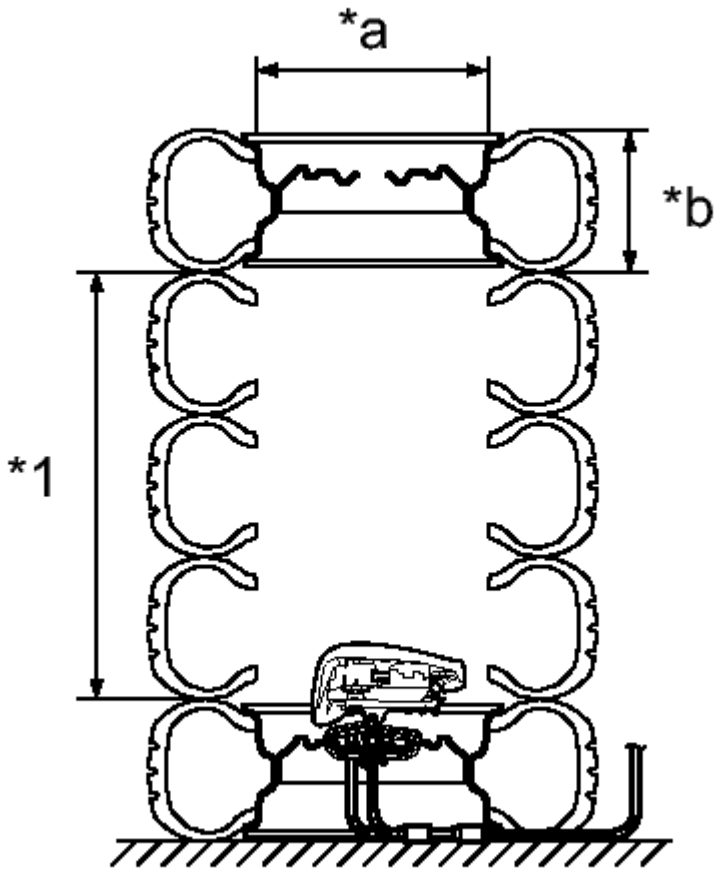
- **When dimension Y of the cardboard box exceeds the diameter of the wheel and tire to which the steering pad is tied, X should be the following size.**

  X = 460 mm (1.51 ft.) + width of tire

- **If a cardboard box smaller than the specified size is used,**

it may be broken by the shock from the airbag deployment.

f. Cover the steering pad (using tires).
   1. Place at least 3 tires without wheels onto the wheel and tire to which the steering pad is tied.



C

Fig. 31: Identifying Width, Inner Diameter & Tires (3 Or More)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Tires (3 or more)
*a	Inner Diameter
*b	Width

2. Place a wheel and tire on top.

   Minimum tire size

   Must exceed the following dimensions

   Width

   185 mm (7.28 in.)

   Inner diameter

   360 mm (1.18 ft.)

WARNING: Do not use tires with wheels except for on the top and bottom.

NOTE:

- **The tires may be damaged by the airbag deployment, so use unneeded tires.**
- **Do not place the SST connector under the tire because it could be damaged.**

3. Tie the tires together with the 2 wires.

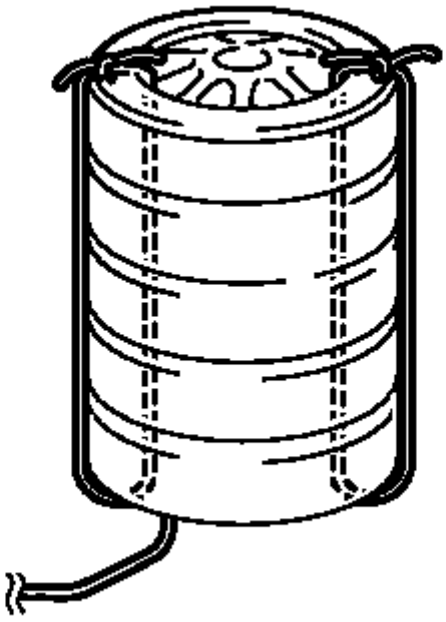


Fig. 32: Tying Tires Together With Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING: Make sure that the wires are tight. Looseness in the wires results in the tires breaking loose when the airbag is deployed.

g. Deploy the airbag.

1. Connect the red clip of SST to the positive (+) battery terminal and the black clip of SST to the negative (-) battery terminal.

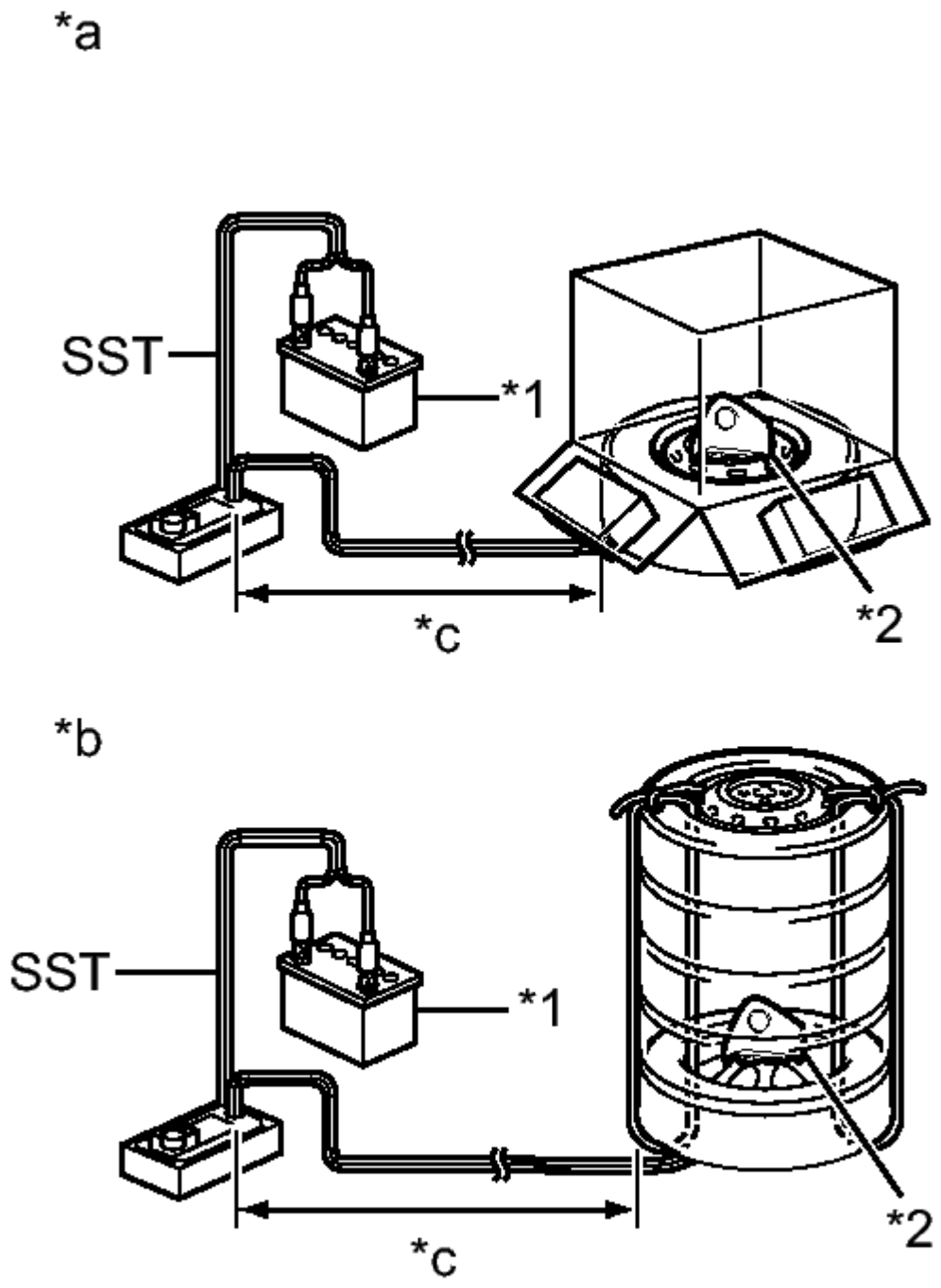


Fig. 33: Identifying Distance Between SST & Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Battery

*2	Steering Pad
*a	Using a Cardboard Box
*b	Using Tires
*c	10 m or more

2. Check that no one is within a 10 m (32.8 ft.) radius of the wheel to which the steering pad is tied.
3. Press the SST activation switch and deploy the airbag.

WARNING: Before deployment, make sure that no one is near the airbag.

HINT:

The airbag is deployed as the LED of the SST activation switch comes on.

h. Dispose of the steering pad.

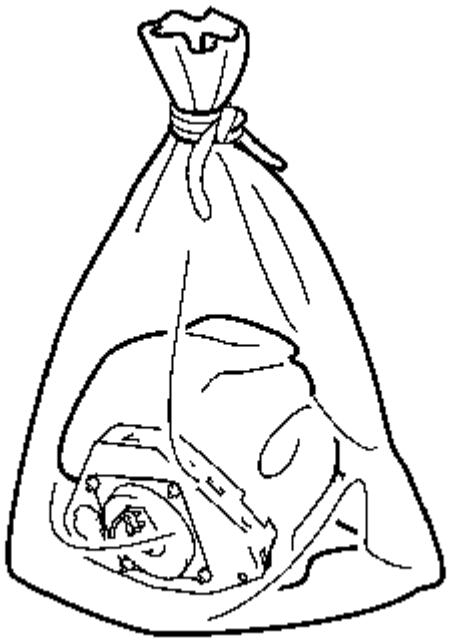


Fig. 34: Placing Steering Pad In Plastic Bag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING:

- **The steering pad becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a steering pad with a deployed airbag.**
- **Do not apply water etc. to a steering pad with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

1. Remove the steering pad from the wheel.
2. Place the steering pad in a plastic bag, tie it tightly and dispose of it according to local regulations.

SPIRAL CABLE

COMPONENTS

ILLUSTRATION

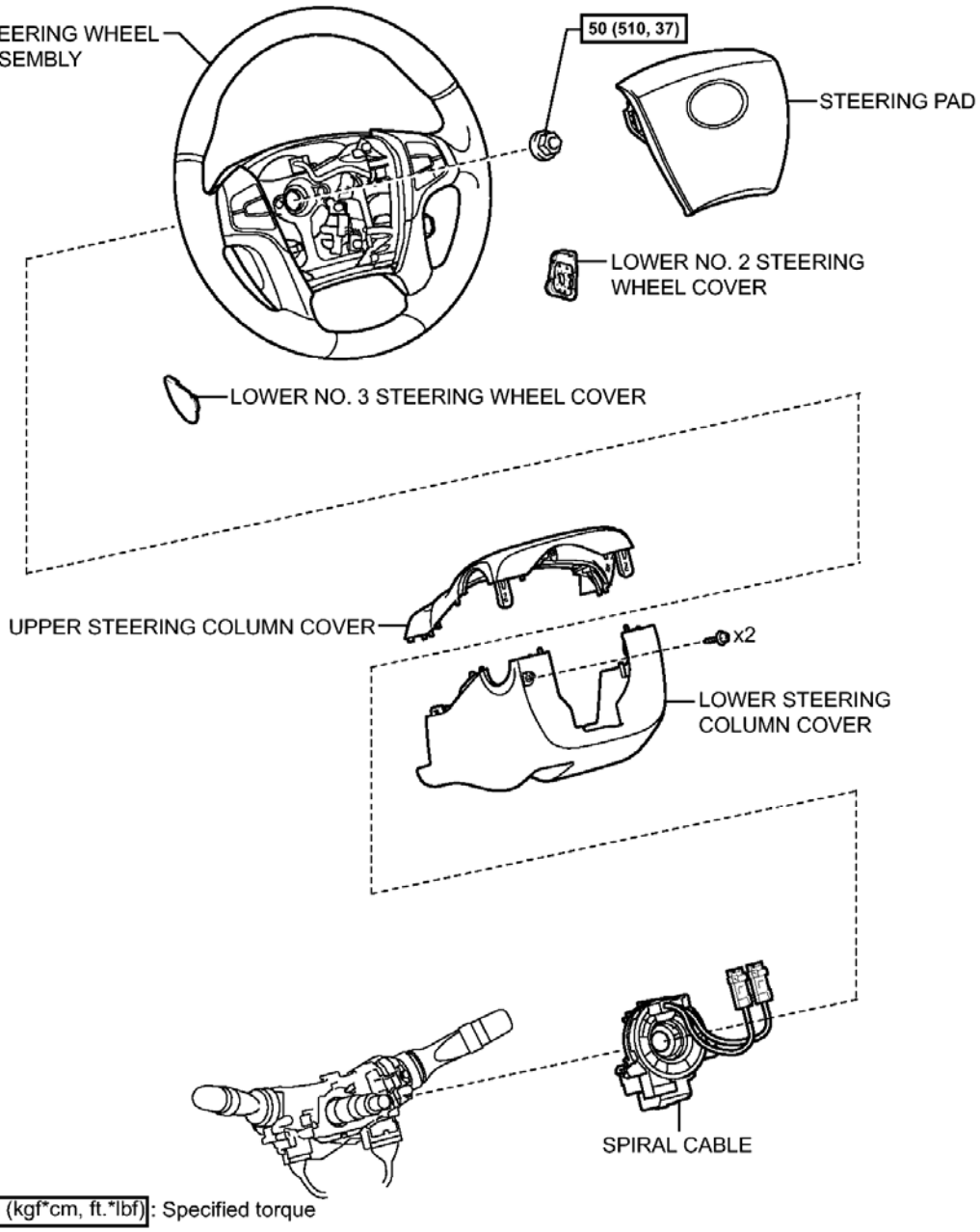


Fig. 35: Spiral Cable Replacement Components With Torque Specifications
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

REMOVAL

WARNING: Some of these service operations affect the SRS airbag system. Read the

precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **POSITION FRONT WHEELS FACING STRAIGHT AHEAD**
2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

3. **REMOVE LOWER NO. 3 STEERING WHEEL COVER** See step 2
4. **REMOVE LOWER NO. 2 STEERING WHEEL COVER** See step 3
5. **REMOVE STEERING PAD** See step 4
6. **REMOVE STEERING WHEEL ASSEMBLY** . Refer to **REMOVAL - Step 6**
7. **REMOVE LOWER STEERING COLUMN COVER** . Refer to **REMOVAL - Step 10**
8. **REMOVE UPPER STEERING COLUMN COVER** . Refer to **REMOVAL - Step 11**
9. **REMOVE SPIRAL CABLE**

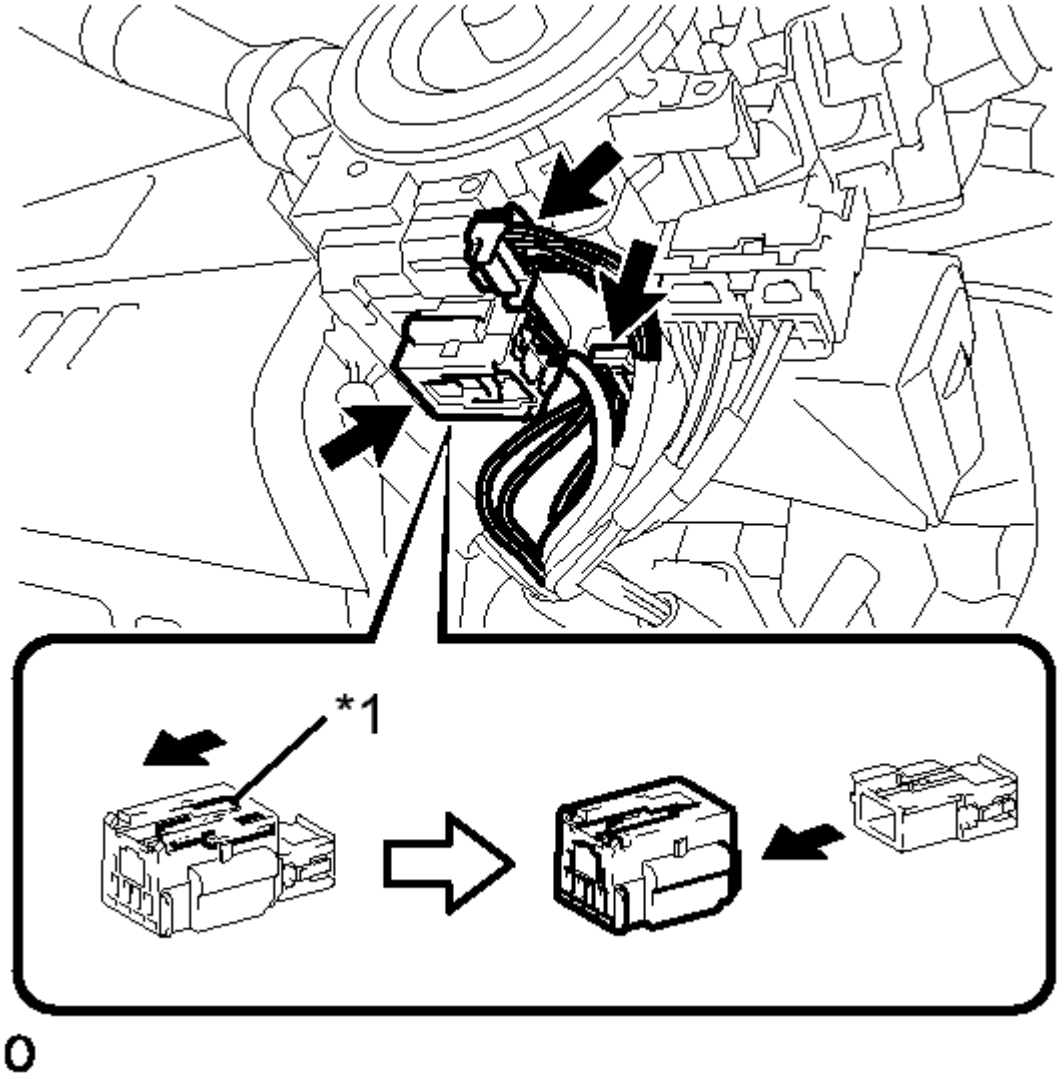


Fig. 36: Removing Horn Connector From Spiral With Sensor Cable Sub-Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Slider

a. Disconnect the horn connector.
b. Slide the slider and disengage the airbag connector.
c. Disconnect the steering angle sensor connector.
d. Disengage the 3 claws and remove the spiral cable.

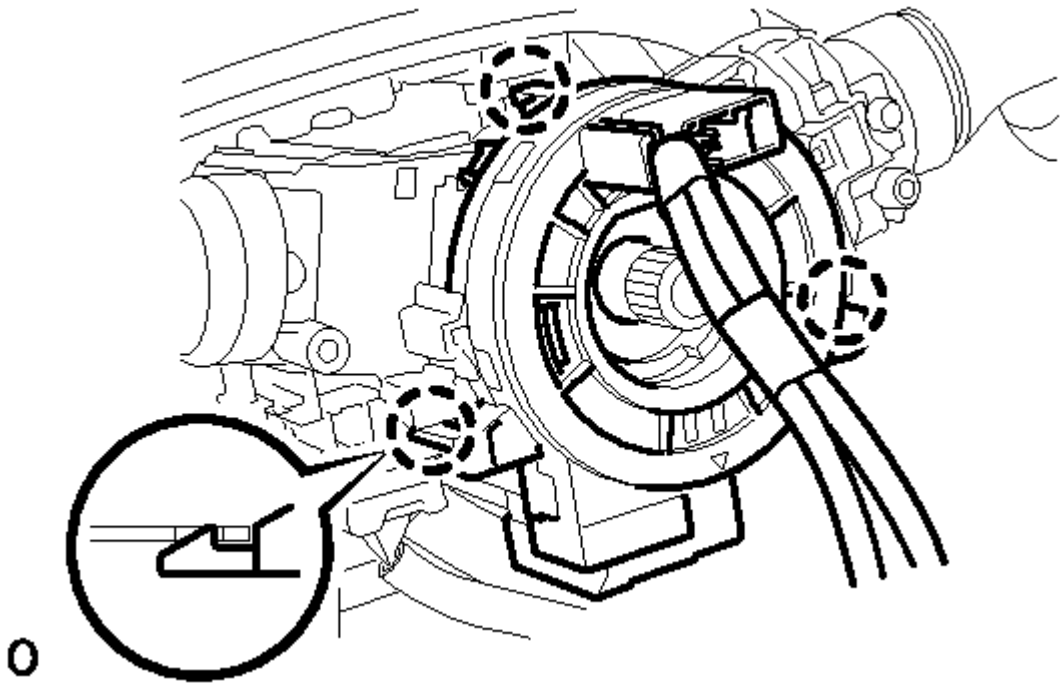


Fig. 37: Identifying Spiral With Sensor Cable Sub-Assembly Claws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING:

- **Do not replace the spiral cable when the ignition switch is ON and the battery cable is connected.**
- **Do not rotate the spiral cable when the ignition switch is ON and the battery cable is connected.**
- **Make sure the steering wheel is installed and centered before rotating the steering angle sensor when performing steering angle sensor operation inspections (inspecting for abnormal noise, diagnosis inspections, etc.).**
- **Do not remove the steering angle sensor from the spiral cable.**
- **If there is a malfunction in the steering angle sensor, replace the spiral cable.**

INSPECTION

INSPECTION

1. **INSPECT SPIRAL CABLE**
   a. If there are any defects as mentioned below, replace the spiral cable with a new one:
      Scratches, cracks, dents or chips on the connector or the spiral cable.

NOTE:

- **Do not remove the steering sensor from the spiral cable.**
- **If there is a malfunction in the steering sensor, replace the spiral cable.**

b. Inspect the spiral cable.

*a

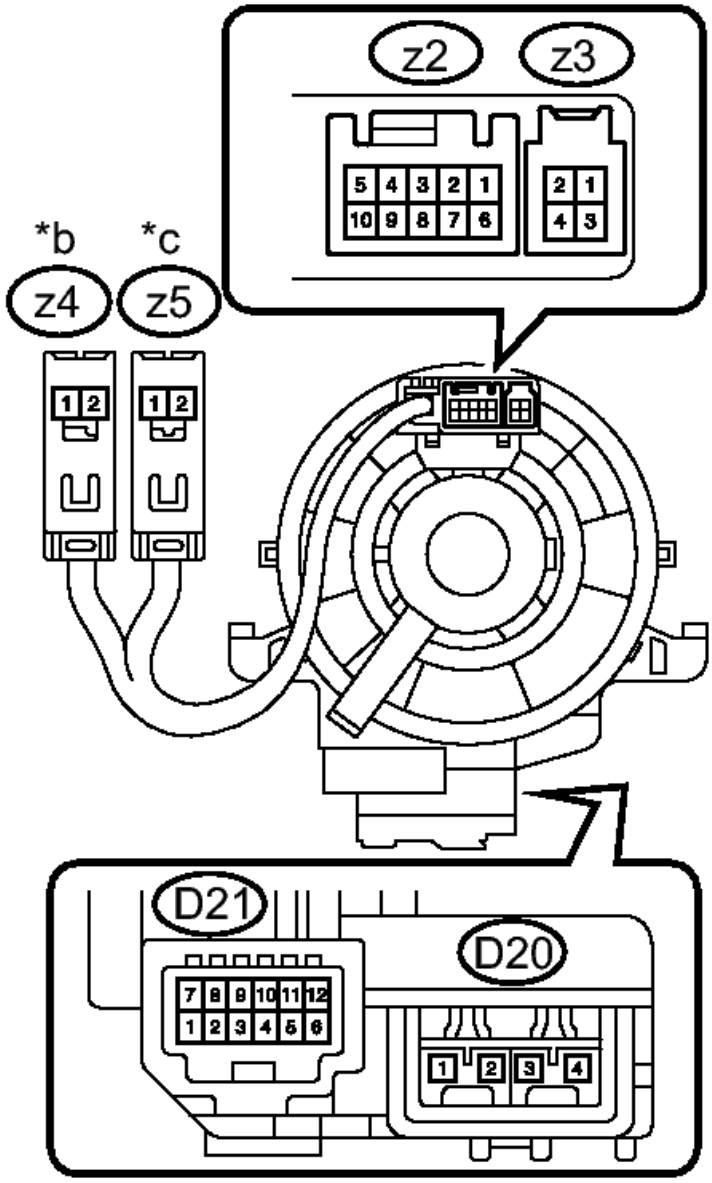


Fig. 38: Identifying Spiral Cable Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Measure the resistance according to the value(s) in the table below.

TEXT IN ILLUSTRATION

*a	Component without harness connected (Spiral Cable)
*b	Orange
*c	Black

NOTE: **To avoid breaking the spiral cable, do not turn the spiral with sensor cable sub-assembly more than necessary.**

If the value is not within the specified range, replace the spiral cable.

Standard Resistance

Tester Connection	Condition	Specified Condition
z2-1 - D21-8 (HO)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
z2-4 - D21-11 (DIST)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
z2-5 - D21-12 (IL+2)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
	Center	
	2.5	

z2-6 - D21-2 (ECC)	rotations to the left 2.5 rotations to the right	Below 1 ohms
z2-8 - D21-4 (EAU)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z2-9 - D21-5 (AU2)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z2-10 - D21-6 (AU1)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z3-1 - D21-7 (R/N)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z3-3 - D21-1 (CCS)	Center 2.5 rotations to the left 2.5 rotations to the	Below 1 ohms

	right	
z3-4 - D21-2 (ECC)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
z4-1 - D20-2 (D-)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
z4-2 - D20-1 (D+)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
z5-1 - D20-3 (D2-)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
z5-2 - D20-4 (D2+)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	

INSTALLATION

INSTALLATION

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **INSTALL SPIRAL CABLE**
   a. Check that the ignition switch is off.
   b. Check that the cable is disconnected from the negative (-) battery terminal.

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

   c. Confirm that the front tires face straight forward.
   d. Confirm that the turn signal switch is in the neutral position.

NOTE: Perform the operation when the turn signal switch is in the neutral position. Otherwise, the turn signal pin will break.

   e. Engage the 3 claws and install the spiral cable.

NOTE: Pull the lock pin out before installing the steering wheel when replacing the spiral cable with a new one.

   f. Connect the airbag connector.

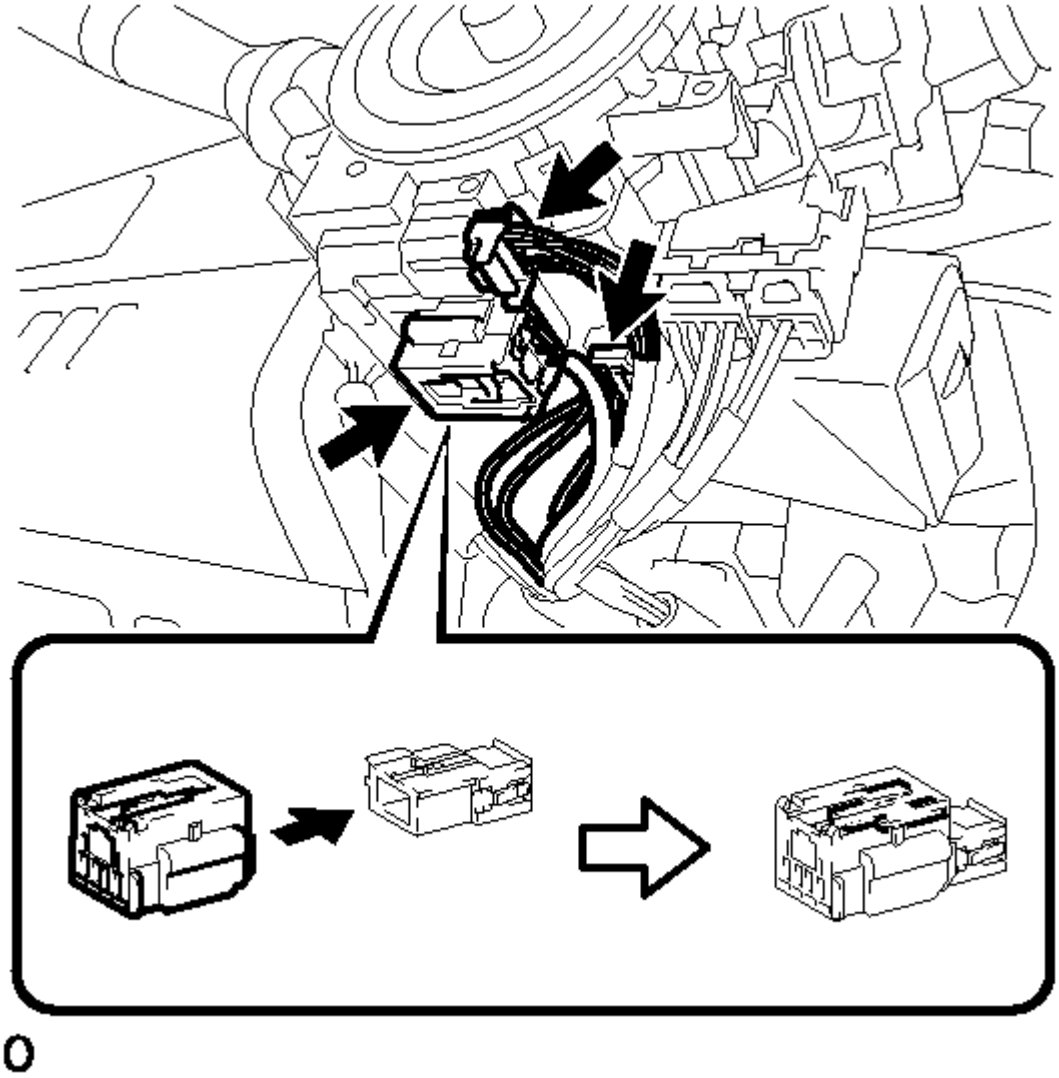


Fig. 39: Identifying Spiral Cable Horn, Airbag & Steering Angle Sensor Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

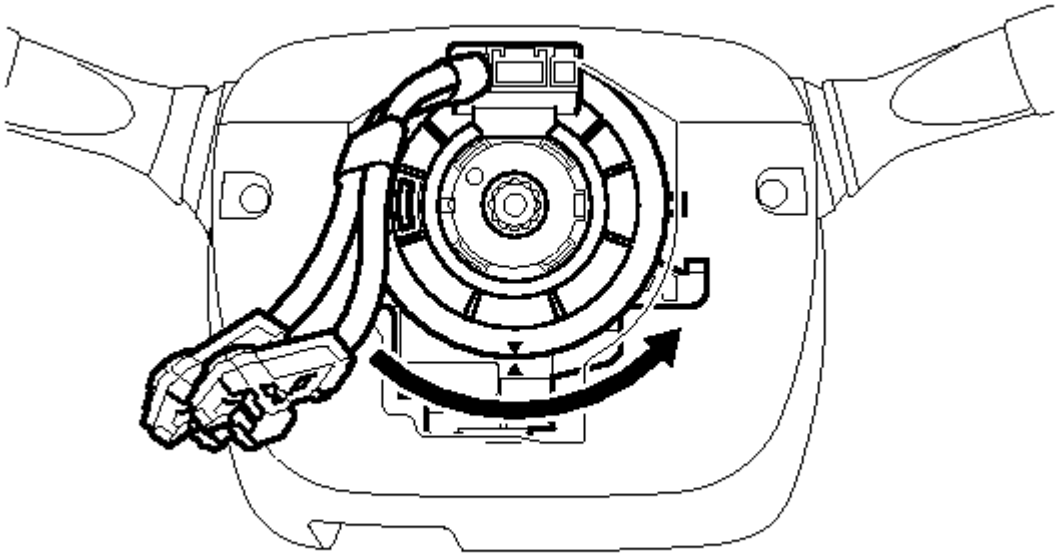
g. Connect the horn connector.
h. Connect the steering angle sensor connector.

WARNING:

- **Do not remove the steering angle sensor from the spiral cable.**
- **If there is a malfunction in the steering angle sensor, replace the spiral cable.**

2. **INSTALL UPPER STEERING COLUMN COVER** . Refer to **INSTALLATION - Step 6**
3. **INSTALL LOWER STEERING COLUMN COVER** . Refer to **INSTALLATION - Step 7**
4. **ADJUST SPIRAL CABLE SUB-ASSEMBLY**

a. Center the spiral cable.



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Fig. 40: Rotating Spiral Cable Sub-Assembly Counterclockwise
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Turn the spiral cable counterclockwise until it locks.

   HINT:

   The spiral cable turns a maximum of approximately 5 times.

2. Turn the spiral cable 2.5 times clockwise from its locked position and align the center marks.

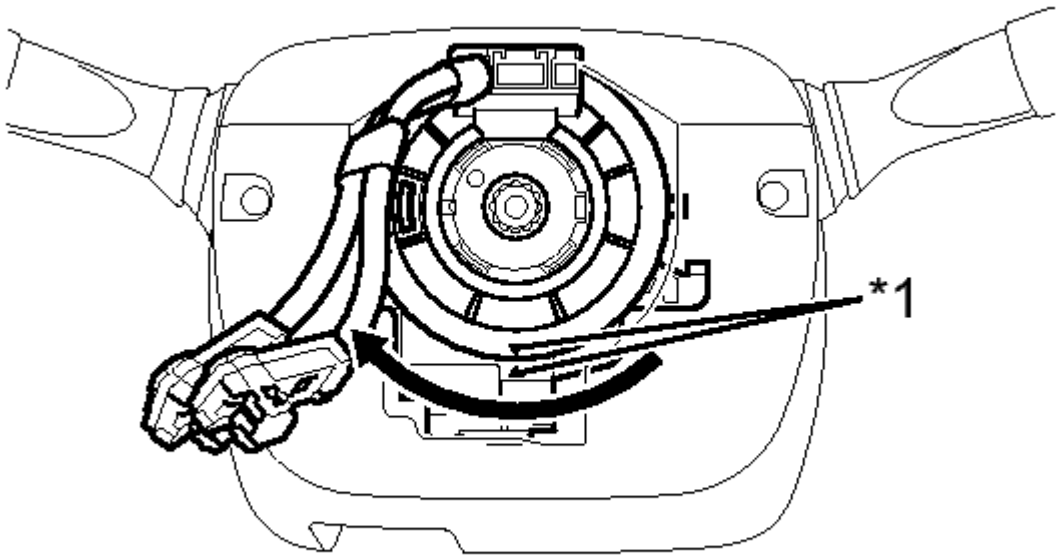


Fig. 41: Rotating Spiral Cable Sub-Assembly Clockwise
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Alignment mark

5. **INSTALL STEERING WHEEL ASSEMBLY** . Refer to **INSTALLATION - Step 12**
6. **INSPECT STEERING WHEEL CENTER POINT**
7. **INSTALL STEERING PAD** See step 1
8. **INSTALL LOWER NO. 2 STEERING WHEEL COVER** See step 3
9. **INSTALL LOWER NO. 3 STEERING WHEEL COVER** See step 2
10. **POSITION FRONT WHEELS FACING STRAIGHT AHEAD**
11. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: **When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .**

Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

12. **INSPECT STEERING PAD** See step 5
13. **INSPECT SRS WARNING LIGHT**

Refer to **DIAGNOSIS SYSTEM**

KNEE AIRBAG ASSEMBLY

COMPONENTS

ILLUSTRATION

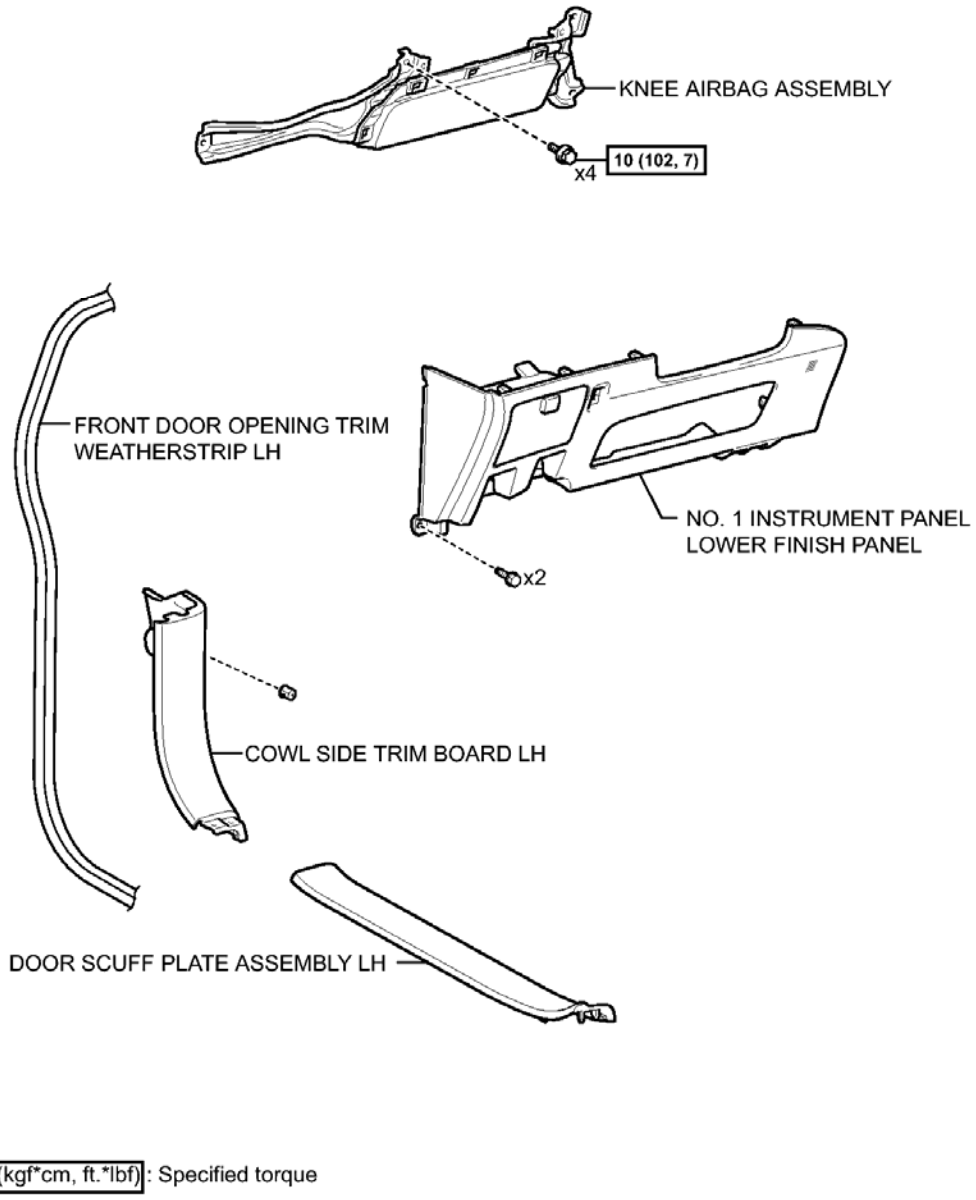


Fig. 42: Knee Airbag Assembly Replacement Components With Torque Specifications
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

ON-VEHICLE INSPECTION

1. **INSPECT KNEE AIRBAG ASSEMBLY (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .

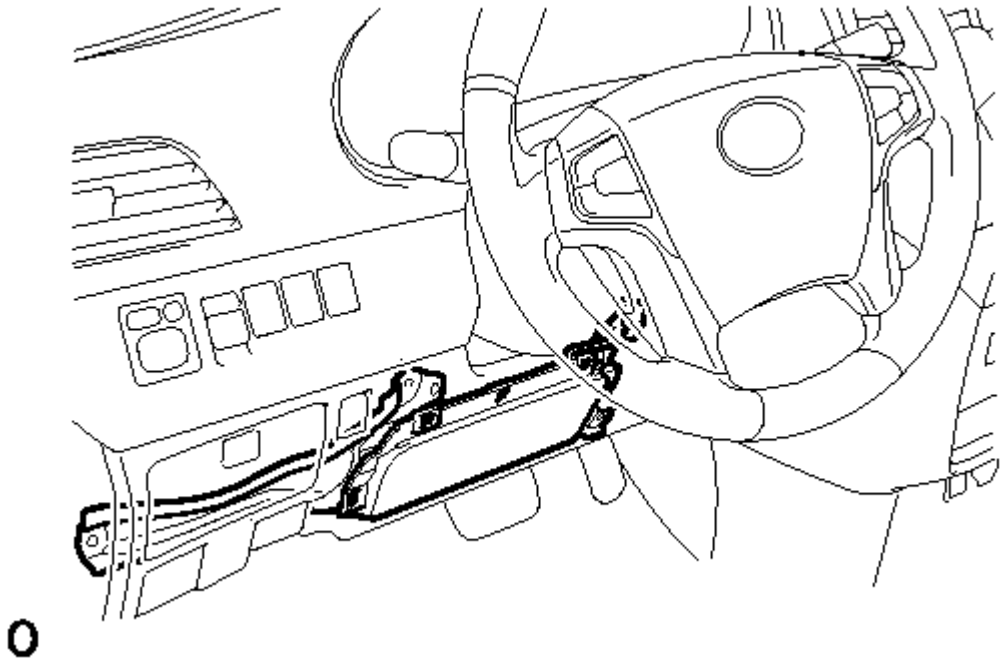


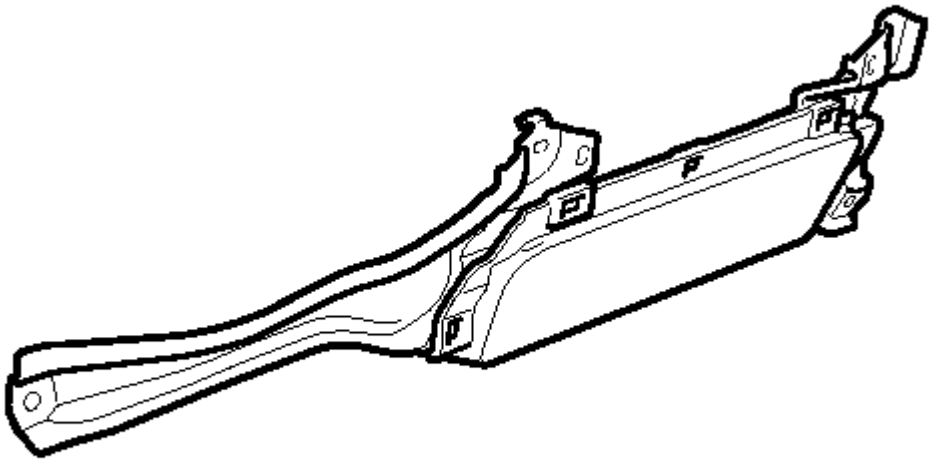
Fig. 43: Identifying Knee Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   b. With the driver side knee airbag assembly installed on the vehicle, perform a visual check. If there are any defects, such as those mentioned below, replace the instrument panel with a new one: Any cuts, minute cracks or marked discoloration on the instrument panel around the driver side knee airbag.

2. **INSPECT KNEE AIRBAG ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)**

WARNING: For driver side knee airbag removal and installation procedures. Refer to REMOVAL and Refer to INSTALLATION, and carefully follow the correct procedure.

   a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .



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Fig. 44: Inspecting Removed Knee Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. With the driver side knee airbag removed from the vehicle, perform a visual check. If there are any defects, such as those mentioned below, replace the driver side knee airbag, instrument panel or instrument panel reinforcement with new ones:
   - Any cuts, minute cracks or marked discoloration on the driver side knee airbag.
   - Any cracks or other damage to the connector.
   - Deformation or cracks on the instrument panel or instrument panel reinforcement.

REMOVAL

REMOVAL

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

2. **REMOVE DOOR SCUFF PLATE ASSEMBLY LH** . Refer to **REMOVAL - Step 3**
3. **REMOVE COWL SIDE TRIM BOARD LH** . Refer to **REMOVAL - Step 5**
4. **SEPARATE FRONT DOOR OPENING TRIM WEATHERSTRIP LH**
5. **REMOVE NO. 1 INSTRUMENT PANEL LOWER FINISH PANEL** . Refer to **REMOVAL - Step 19**
6. **REMOVE KNEE AIRBAG ASSEMBLY**
   a. Remove the 4 bolts.

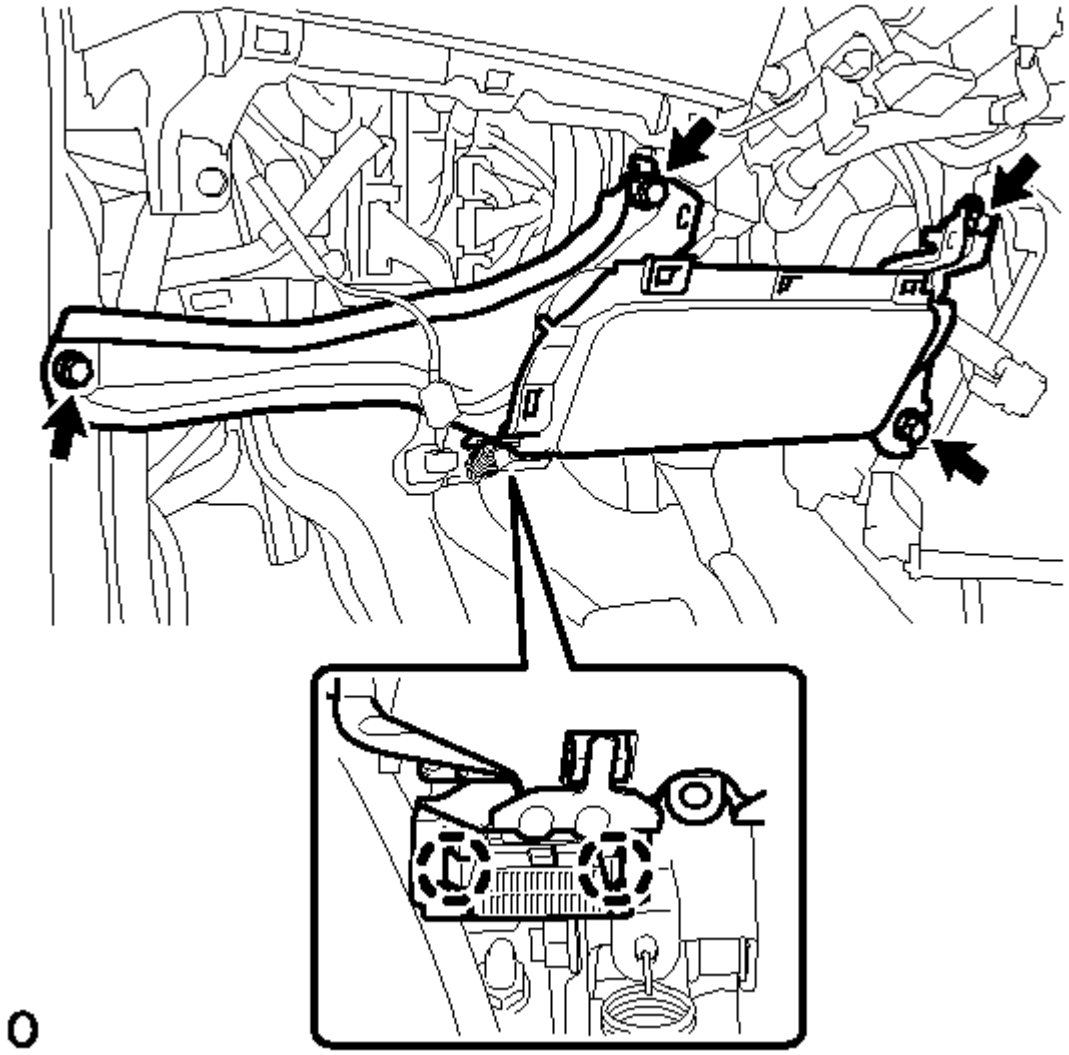


Fig. 45: Identifying Knee Airbag Assembly & Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   b. Disengage the 2 claws to separate the DLC3.
   c. Remove the knee airbag assembly.
   d. Using a thin-bladed screwdriver with its tip wrapped with protective tape, release the locking

button.

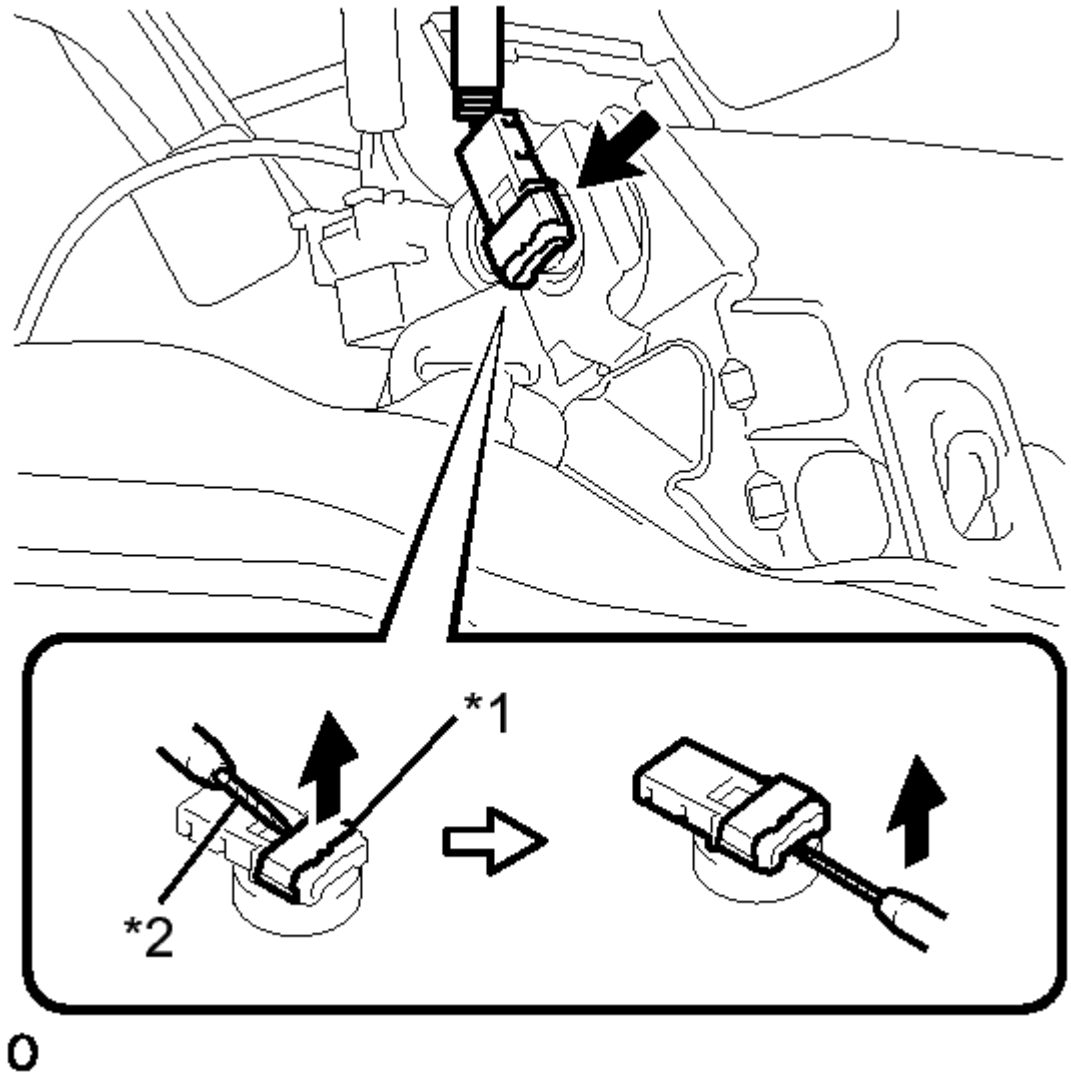


Fig. 46: Removing Knee Airbag Assembly Connector Using A Screwdriver
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Locking Button
*2	Protective Tape

e. Using a thin-bladed screwdriver with its tip wrapped with protective tape, disconnect the airbag connector.

INSTALLATION

INSTALLATION

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **INSTALL KNEE AIRBAG ASSEMBLY**
   a. Check that the ignition switch is off.
   b. Check that the cable is disconnected from the negative (-) battery terminal.

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

   c. Connect the airbag connector.

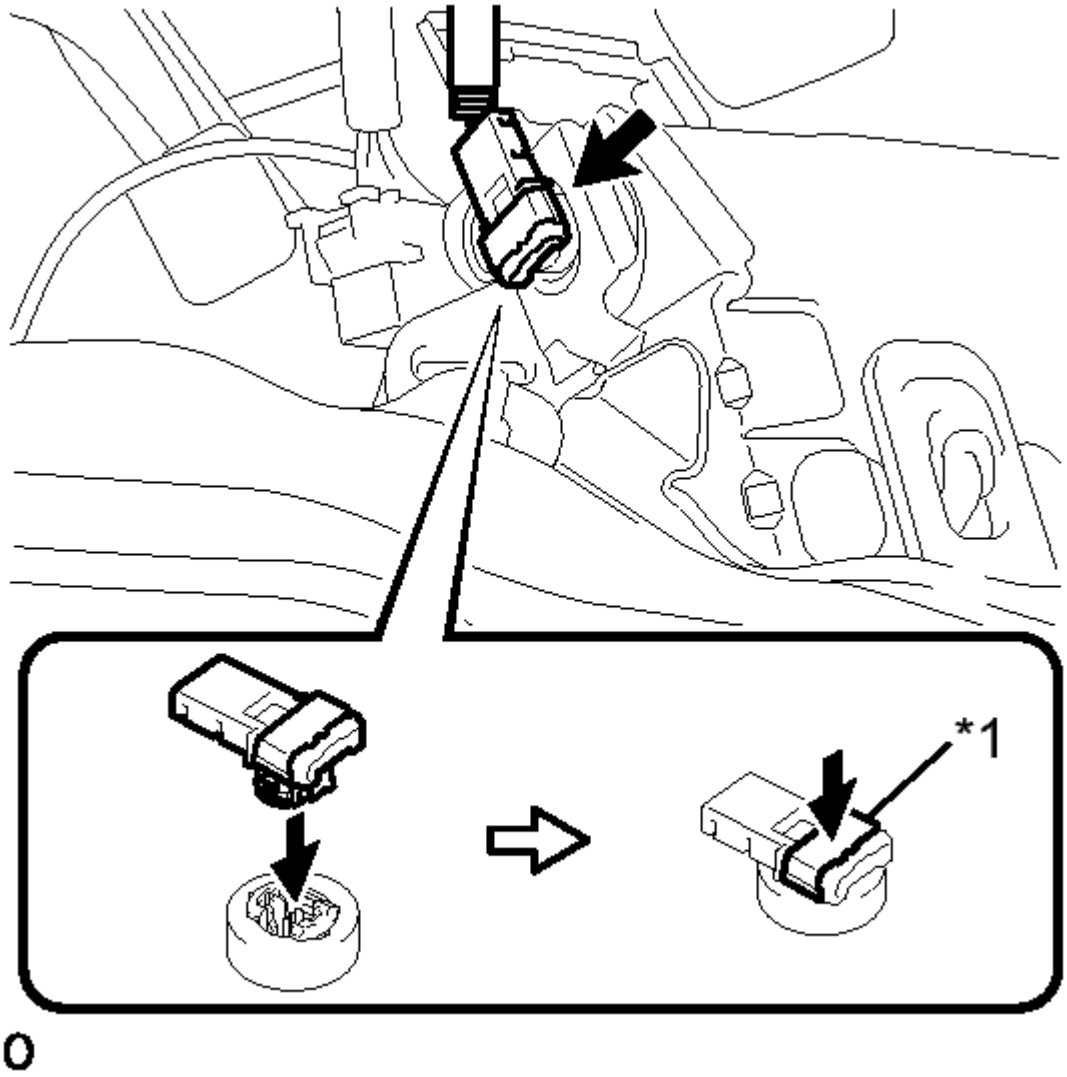


Fig. 47: Installing Knee Airbag Assembly Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Locking Button

NOTE: Securely lock the locking button.

d. Connect the DLC3.
e. Install the knee airbag assembly with the 4 bolts.

Torque: 10 N*m (102 kgf*cm, 7 ft.*lbf)

2. **INSTALL NO. 1 INSTRUMENT PANEL LOWER FINISH PANEL** . Refer to **INSTALLATION - Step 39**
3. **INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP LH**
4. **INSTALL COWL SIDE TRIM BOARD LH** . Refer to **INSTALLATION - Step 35**
5. **INSTALL DOOR SCUFF PLATE ASSEMBLY LH** . Refer to **INSTALLATION - Step 37**
6. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

7. **INSPECT SRS WARNING LIGHT**

Refer to **DIAGNOSIS SYSTEM**

DISPOSAL

DISPOSAL

HINT:

When scrapping a vehicle equipped with the SRS or disposing of the knee airbag assembly, deploy the airbag first in accordance with the procedure described below. If any abnormality occurs with airbag deployment, contact the SERVICE DEPT. of the TOYOTA MOTOR SALES, U.S.A., INC.

WARNING:

- **Before performing pre-disposal deployment of any SRS component, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.**

- **Never dispose of a knee airbag assembly that has an undeployed airbag.**
- **The airbag produces an exploding sound when it is deployed, so perform the operation outdoors and where it will not create a nuisance to nearby residents.**
- **When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electrical noise.**
- **When deploying the airbag, perform the operation at least 10 m (32.8 ft.) away from the knee airbag assembly.**
- **The knee airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a knee airbag assembly with a deployed airbag.**
- **Do not apply water, etc. to a knee airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**
- **An airbag or pretensioner may be activated by static electricity. To prevent this, be sure to touch a metal surface with bare hands to discharge static electricity before performing this procedure.**

DISPOSAL

1. **DISPOSE OF KNEE AIRBAG ASSEMBLY (WHEN INSTALLED IN VEHICLE)**

   HINT:

   Prepare a battery as the power source to deploy the airbag.

   a. Check the function of SST. See step 1.

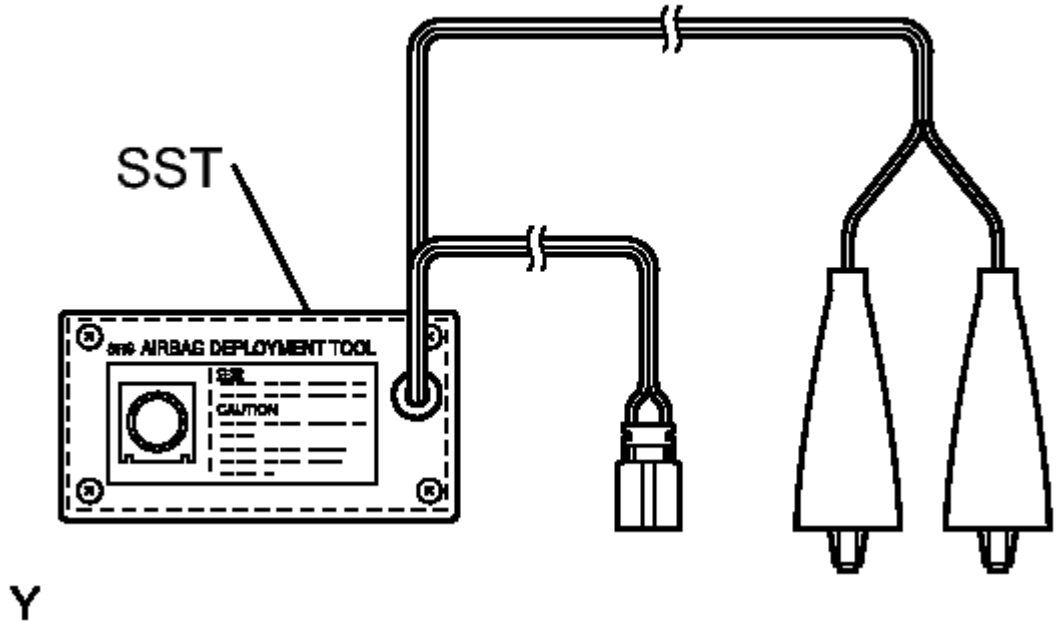


Fig. 48: Identifying SRS Air Bag Deployment SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00700**

b. Read the precaution. Refer to **PRECAUTION** .
c. Disconnect the cable from the negative battery terminal.
   - **SST: 09082-00700**

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

d. Remove the knee airbag assembly. Refer to **REMOVAL**.
e. Connect SST.
   1. Disconnect the connector from the knee airbag assembly.

NOTE: Do not damage the airbag wire harness when handling the airbag connector.

   2. Connect the SST connector to the knee airbag assembly.

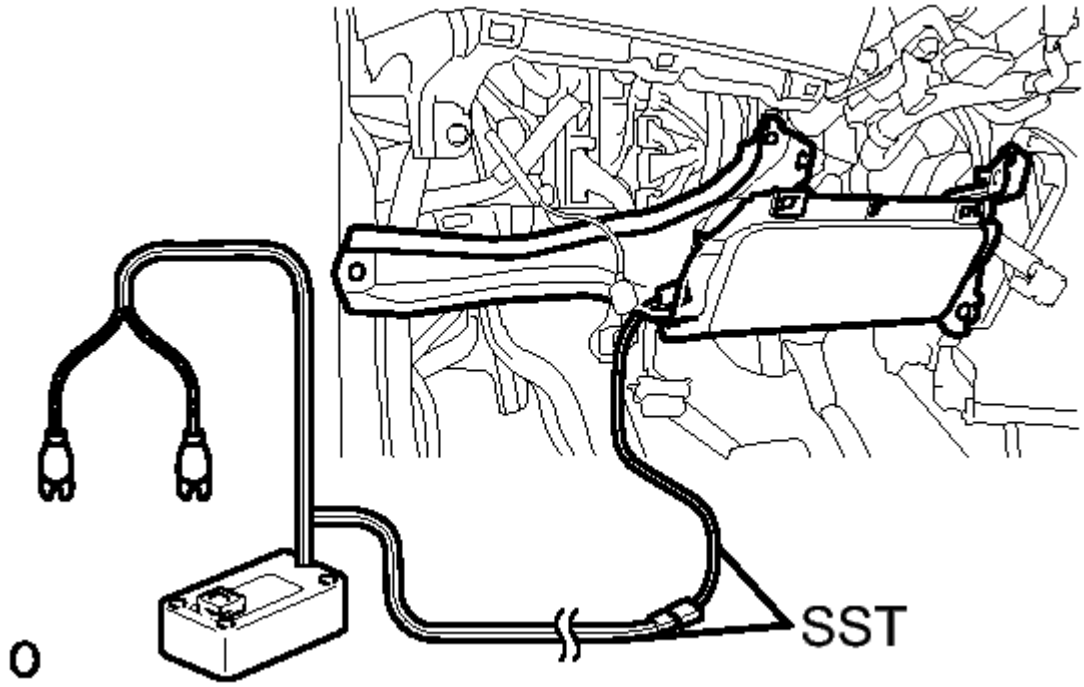


Fig. 49: Identifying Knee Airbag Assembly & SST Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00700**
- **SST: 09082-00770**

NOTE: Do not lock the secondary lock of the twin lock to avoid damaging the SST connector and wire harness.

3. Move SST at least 10 m (32.8 ft.) away from the vehicle front side window.

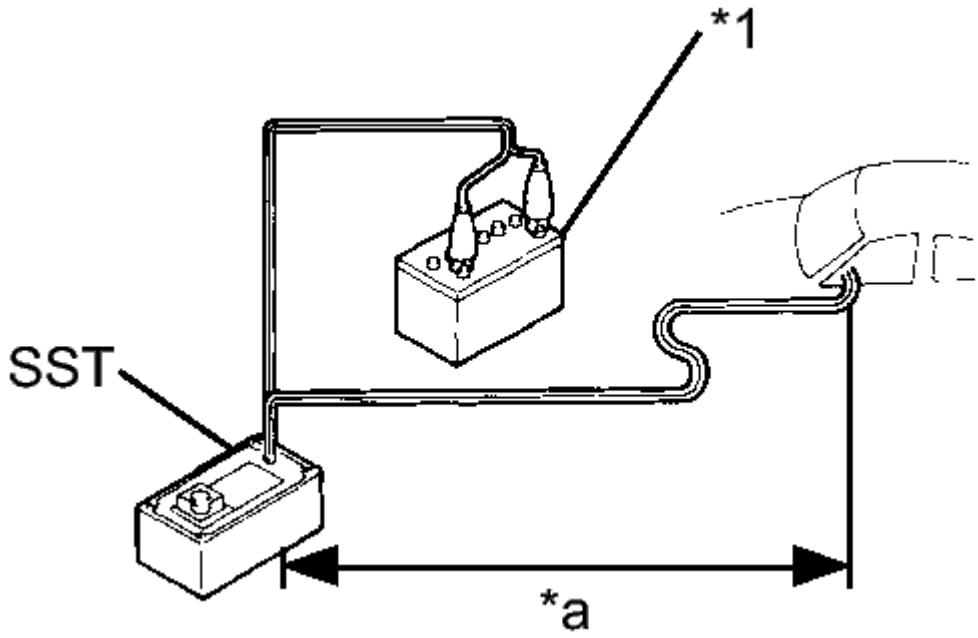


Fig. 50: Identifying Battery & SST Wire Harness Clearance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Battery
*a	10 m or more

4. Maintaining enough clearance for the SST wire harness in the front side window, close all doors and windows of the vehicle.

NOTE: Do not damage the SST wire harness.

5. Connect the red clip of SST to the positive (+) battery terminal and the black clip of the SST to the negative (-) terminal.

f. Deploy the airbag.

1. Check that no one is inside the vehicle or within a 10 m (32.8 ft.) radius of the vehicle.
2. Press the SST activation switch and deploy the airbag.

WARNING:

- **Make sure that no one is near the vehicle when deploying the airbag.**
- **The knee airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**

- **Use gloves and safety glasses when handling a knee airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

HINT:

The airbag is deployed as the LED of the SST activation switch illuminates.

2. **DISPOSE OF KNEE AIRBAG ASSEMBLY (WHEN NOT INSTALLED IN VEHICLE)**

HINT:

Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST. See step 2.

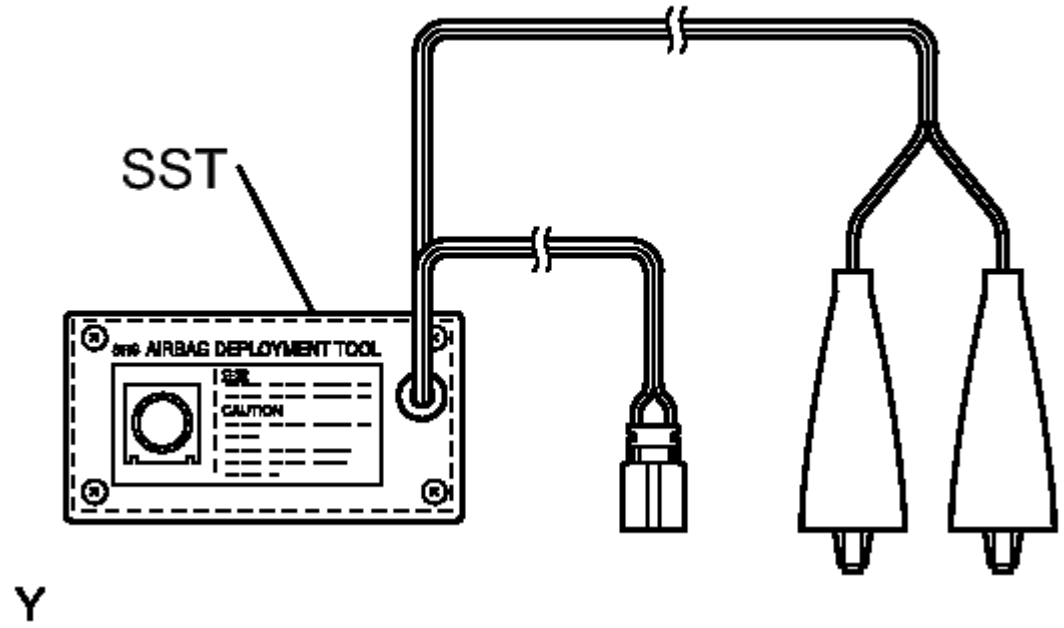


Fig. 51: Identifying SRS Air Bag Deployment SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00700**

b. Remove the knee airbag assembly. Refer to **REMOVAL**.

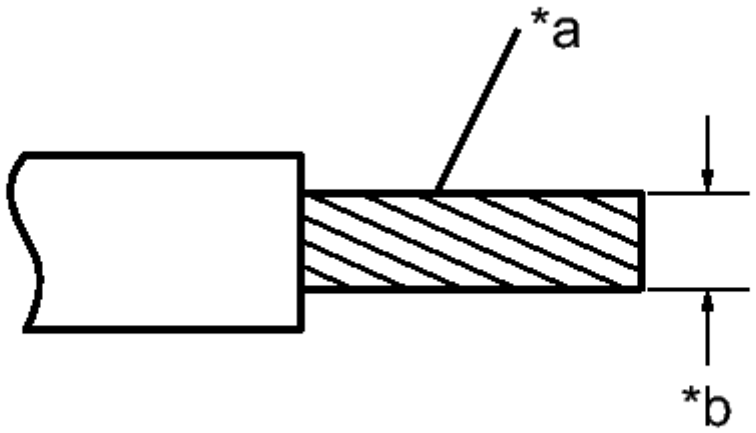
WARNING:

- **When removing the knee airbag assembly, work must be started 90 seconds after the ignition switch is turned off and the negative (-) terminal cable is disconnected from**

the battery.

- **When storing the knee airbag assembly, keep the airbag deployment side facing upward.**

c. Using a service-purpose wire harness for the vehicle, tie down the knee airbag assembly to the tire.



H

Fig. 52: Identifying Stripped Wire Section & Diameter
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*a	Stripped Wire Section
*b	Wire Diameter

Wire

Stripped wire section

1.25 mm^2 (0.0019 $in.^2$) or more

WARNING: Do not use a wire harness that is too thin or any other object to tie the knee airbag assembly because they may snap due to the shock when the airbag is deployed. Always use a wire harness for vehicle use with an area of at least 1.25 mm^2 (0.0019 $in.^2$).

HINT:

To calculate the area of the stripped wire harness section:

Area = 3.14 x (Diameter)^2 divided by 4

1. Position the knee airbag assembly inside the tire with the airbag deployment side facing inside.

TIRE SIZE

Area	Measurement
A	185 mm (7.28 in.)
B	360 mm (14.17 in.)

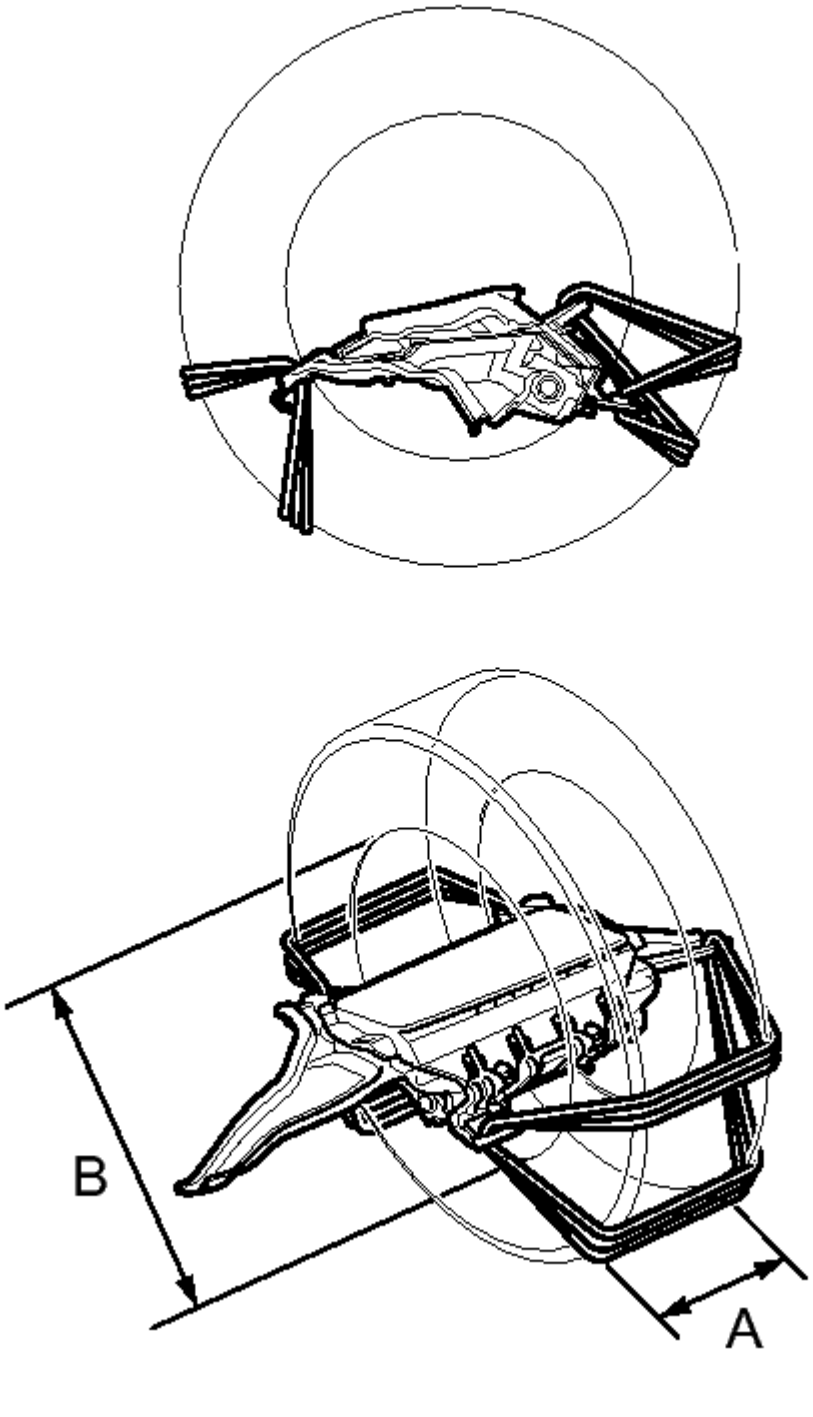


Fig. 53: Identifying Knee Airbag Assembly Position Inside Tire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING:

- **Make sure that the wire harness is tight. If there is slack in the wire harness, the knee airbag assembly**

may become loose due to the shock when the airbag is deployed.

- **Always tie down the knee airbag assembly with the airbag deployment side facing inside the tire.**

NOTE: The tire will be damaged by the airbag deployment, so use an unneeded tire.

d. Connect SST.

1. Connect the SST connector to the knee airbag assembly.

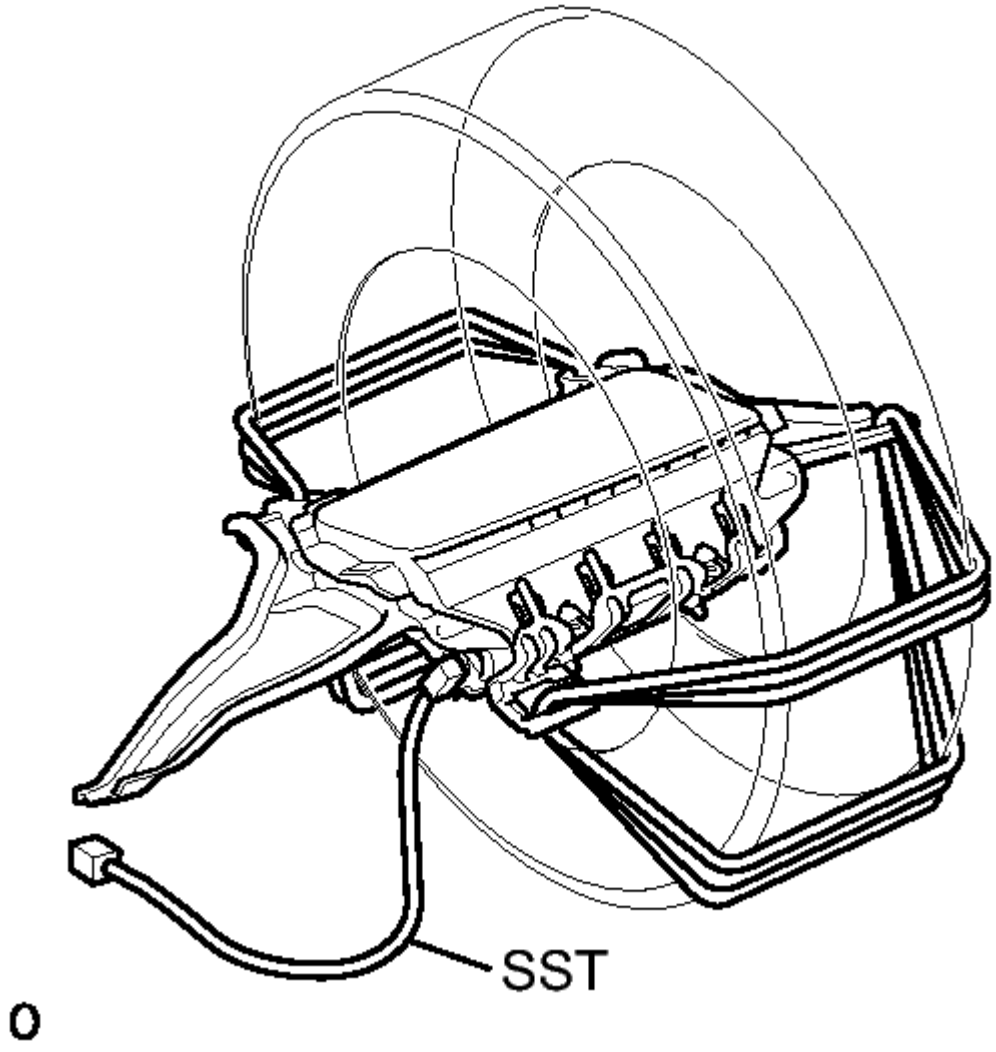
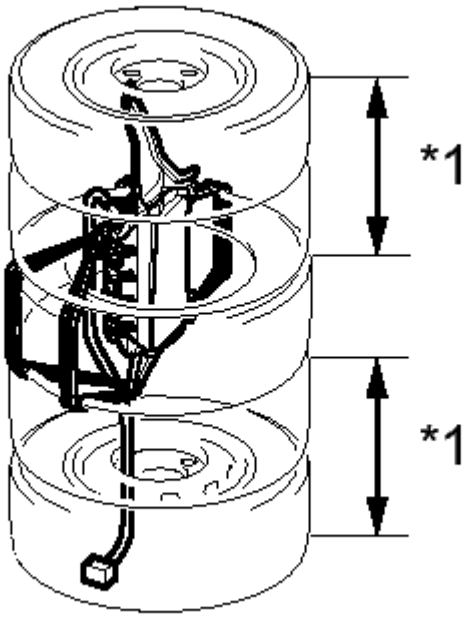


Fig. 54: Identifying Knee Airbag Assembly, SST Connector & Wires
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00770**

e. Place the tires.

1. Place at least 2 tires under the tire which the knee airbag assembly is tied to.



0

Fig. 55: Identifying Knee Airbag Assembly & Tires (2 Or More)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Tire (2 or more)

2. Place at least 2 tires over the tire which the knee airbag assembly is tied to. The top tire should have a disc wheel installed.

NOTE: Do not place the SST connector under the tire because it could be damaged.

3. Tie the tires together with 2 wire harnesses.

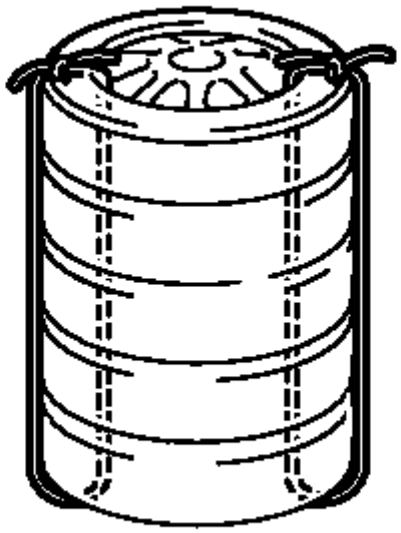


Fig. 56: Tying Tires Together With Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING: Make sure that the wire harnesses are tight. It is highly dangerous when a loose wire harness results in the tires coming free due to the shock when the airbag is deployed.

f. Connect SST.
    1. Connect the SST connector.

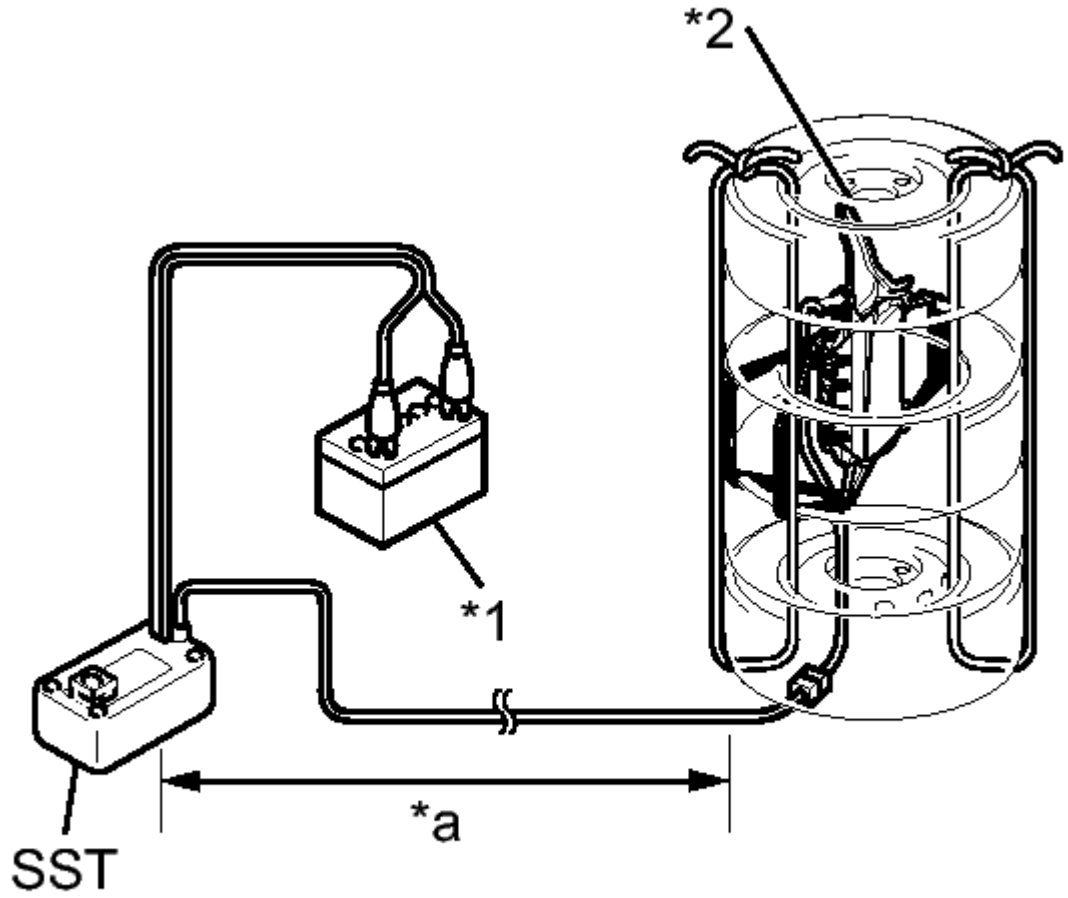


Fig. 57: Identifying SST & Airbag Distance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Battery
*2	Knee Airbag Assembly
*a	10 m or more

- **SST: 09082-00700**

NOTE: To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock. Also, secure some

slack for the SST wire harness inside the tire.

2. Move the SST at least 10 m (32.8 ft.) away from the airbag tied down to the tires.

g. Deploy the airbag.

1. Connect the red clip of the SST to the positive (+) battery terminal and the black clip of the SST to the negative (-) terminal.
2. Check that no one is within a 10 m (32.8 ft.) radius of the tire which the knee airbag assembly is tied to.
3. Press the SST activation switch and deploy the airbag.

WARNING: Make sure that no one is near the tire when deploying the airbag.

HINT:

The airbag is deployed as the LED of the SST activation switch illuminates.

h. Dispose of the knee airbag assembly.

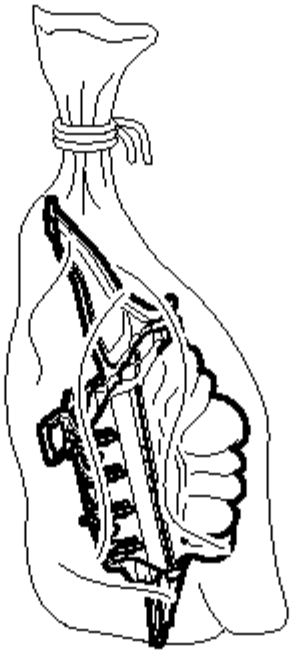


Fig. 58: Placing Knee Airbag Assembly In Plastic Bag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING:

- **The knee airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**

- **Use gloves and safety glasses when handling a knee airbag assembly with a deployed airbag.**
- **Do not apply water, etc. to a knee airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

1. Remove the knee airbag assembly from the tire.
2. Place the knee airbag assembly in a plastic bag, tie it tightly and dispose of it according to local regulations.

FRONT PASSENGER AIRBAG ASSEMBLY

COMPONENTS

ILLUSTRATION

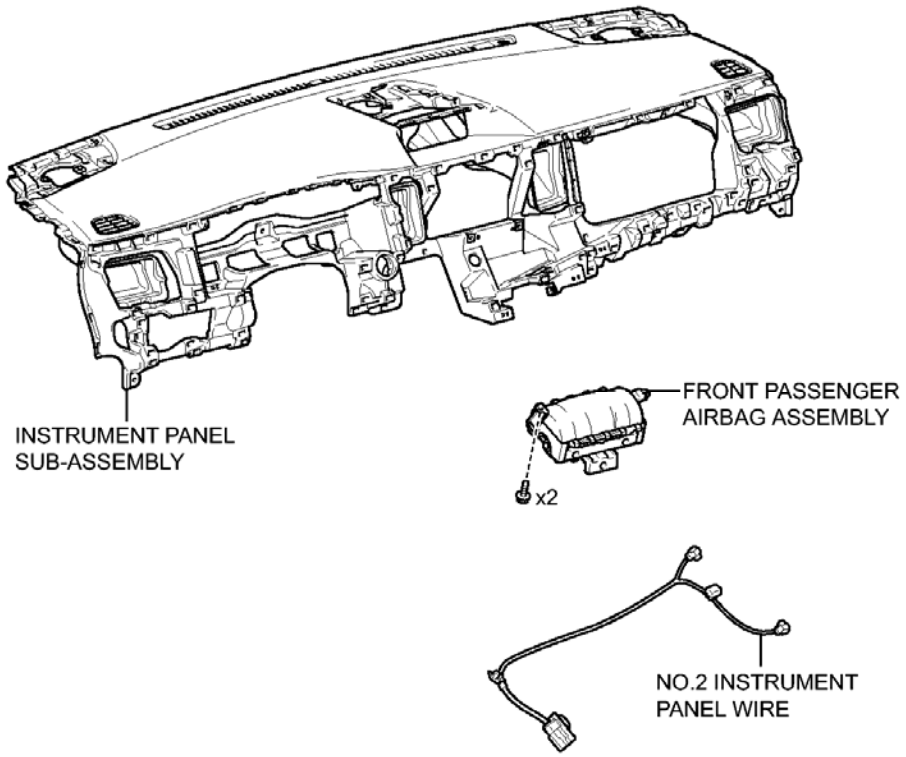


Fig. 59: Front Passenger Airbag Assembly Replacement Components
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

ON-VEHICLE INSPECTION

1. **INSPECT FRONT PASSENGER AIRBAG ASSEMBLY (for Vehicle not Involved in Collision)**

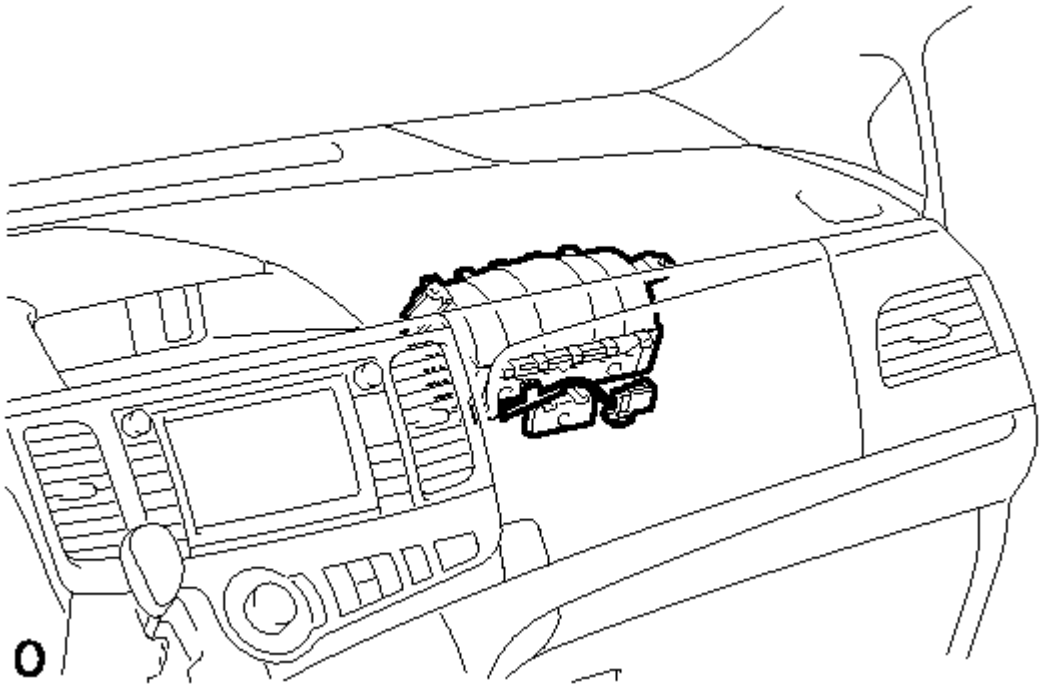


Fig. 60: Identifying Front Passenger Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .
   b. With the front passenger airbag installed on the vehicle, perform a visual check. If there are any defects, such as those mentioned below, replace the instrument panel with a new one:

      Any cuts, minute cracks or marked discoloration on the instrument panel around the front passenger airbag.

2. **INSPECT FRONT PASSENGER AIRBAG ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)**

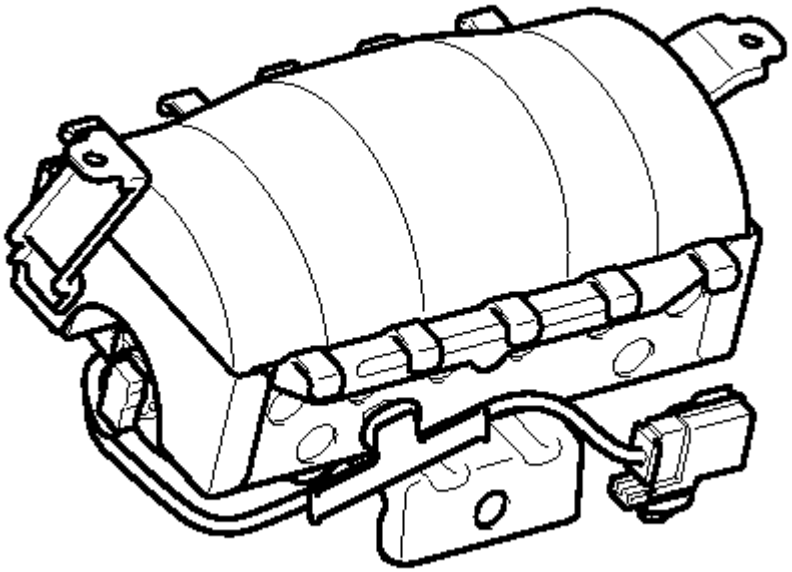


Fig. 61: Inspecting Removed Front Passenger Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING: For front passenger airbag removal and installation procedures. Refer to REMOVAL and Refer to INSTALLATION, and carefully follow the correct procedure.

a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .
b. With the front passenger airbag removed from the vehicle, perform a visual check. If there are any defects, such as those mentioned below, replace the front passenger airbag, instrument panel or instrument panel reinforcement with new ones:
   - Any cuts, minute cracks or marked discoloration on the front passenger airbag.
   - Any cracks or other damage to the connector.
   - Deformation or cracks on the instrument panel or instrument panel reinforcement.

REMOVAL

REMOVAL

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

WARNING: **Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.**

NOTE: **When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .**

2. **REMOVE INSTRUMENT PANEL SUB-ASSEMBLY**

   Refer to **REMOVAL**

3. **REMOVE FRONT PASSENGER AIRBAG ASSEMBLY**

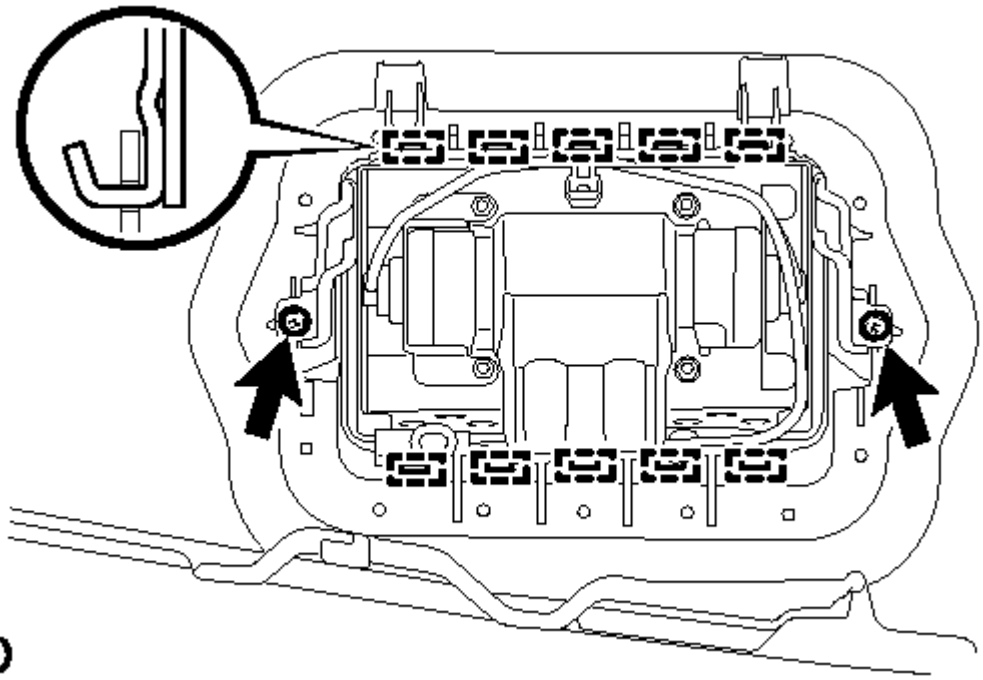


Fig. 62: Identifying Front Passenger Airbag Assembly & Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   a. Remove the 2 screws.
   b. Disengage the 10 hooks and remove the front passenger airbag.

4. **REMOVE NO. 2 INSTRUMENT PANEL WIRE**
   a. Disengage the 2 clamps.

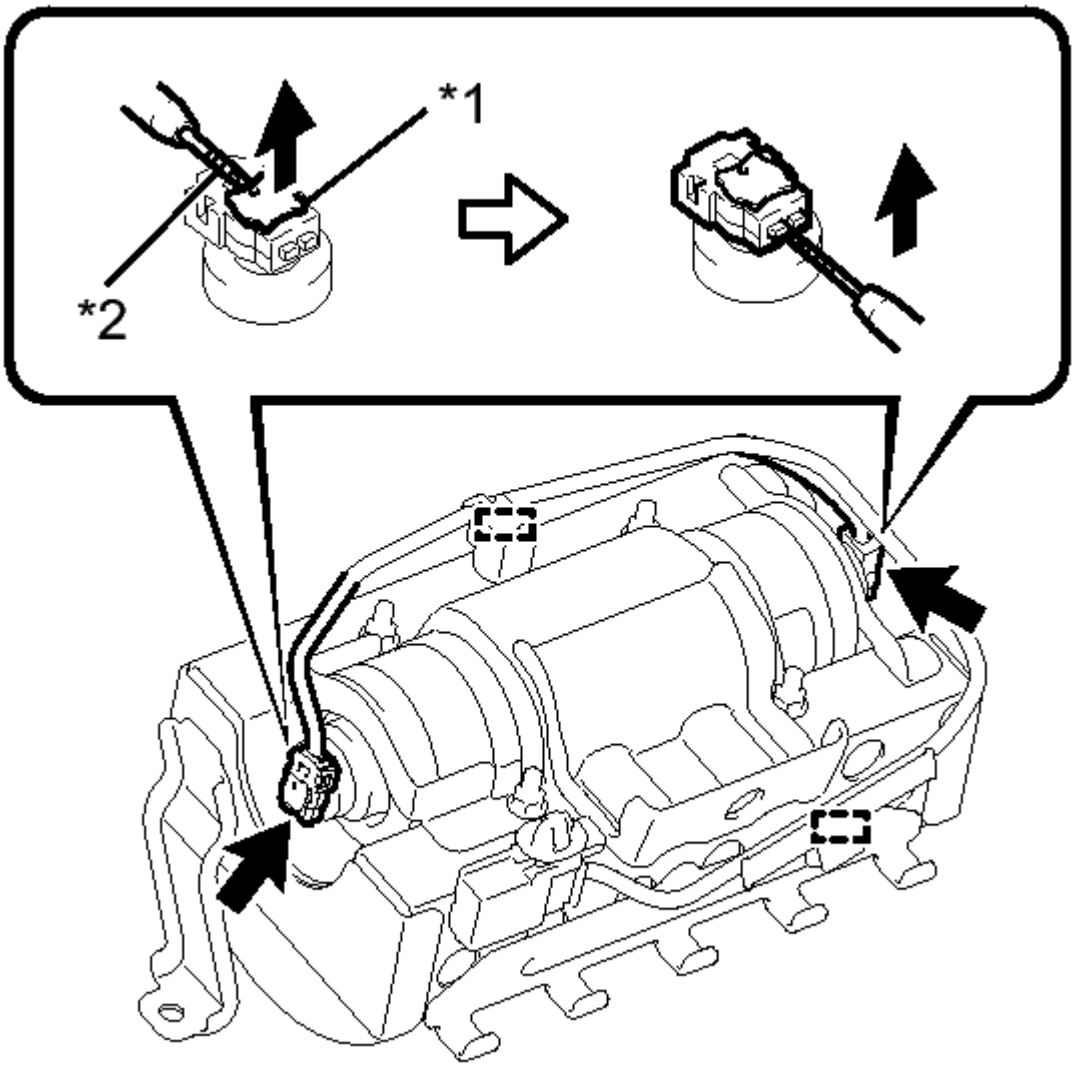


Fig. 63: Removing No. 2 Instrument Panel Wire & Airbag Connectors Using A Screwdriver
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Locking Button
*2	Protective Tape

b. Using a thin-bladed screwdriver with its wrapped with protective tape, release the locking button.
c. Using a thin-bladed screwdriver with its wrapped with protective tape, disconnect the 2 airbag connectors and remove the No. 2 instrument panel wire.

INSTALLATION

INSTALLATION

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **INSTALL NO. 2 INSTRUMENT PANEL WIRE**
   a. Check that the ignition switch is off.
   b. Check that the cable is disconnected from the negative (-) battery terminal.

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

   c. Connect the 2 airbag connectors.

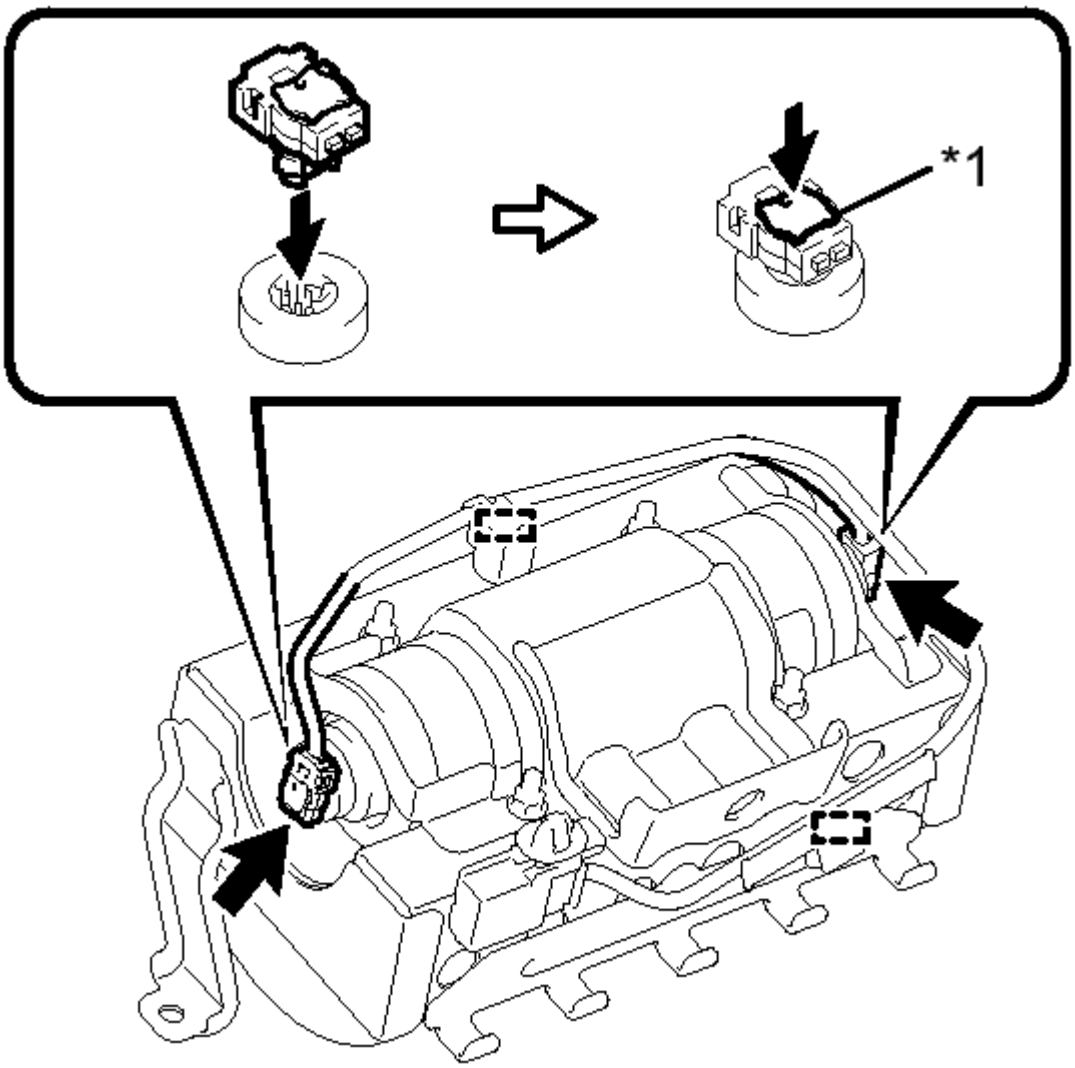


Fig. 64: Installing No. 2 Instrument Panel Wire Airbag Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Locking Button

NOTE: Lock the locking button securely.

d. Engage the 2 clamps.

2. **INSTALL FRONT PASSENGER AIRBAG ASSEMBLY**
   a. Engage the 10 hooks so that the connector side faces the outside of the vehicle, and install the front passenger airbag.
   b. Install the 2 screws.
3. **INSTALL INSTRUMENT PANEL SUB-ASSEMBLY**

   Refer to **INSTALLATION**

4. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

   NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

   Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

5. **INSPECT SRS WARNING LIGHT**

   Refer to **DIAGNOSIS SYSTEM**

DISPOSAL

DISPOSAL

HINT:

When scrapping a vehicle equipped with the SRS or disposing of an instrument panel passenger airbag, deploy the airbag first in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the SERVICE DEPT. of the TOYOTA MOTOR SALES, U.S.A., INC.

WARNING:

- **Before performing pre-disposal deployment of any SRS component, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.**
- **Never dispose of a front passenger airbag that has an undeployed airbag.**
- **The airbag emits an exploding sound when it is deployed, so perform operation outdoors and where it will not create a nuisance to nearby**

residents.

- **When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electric noise.**

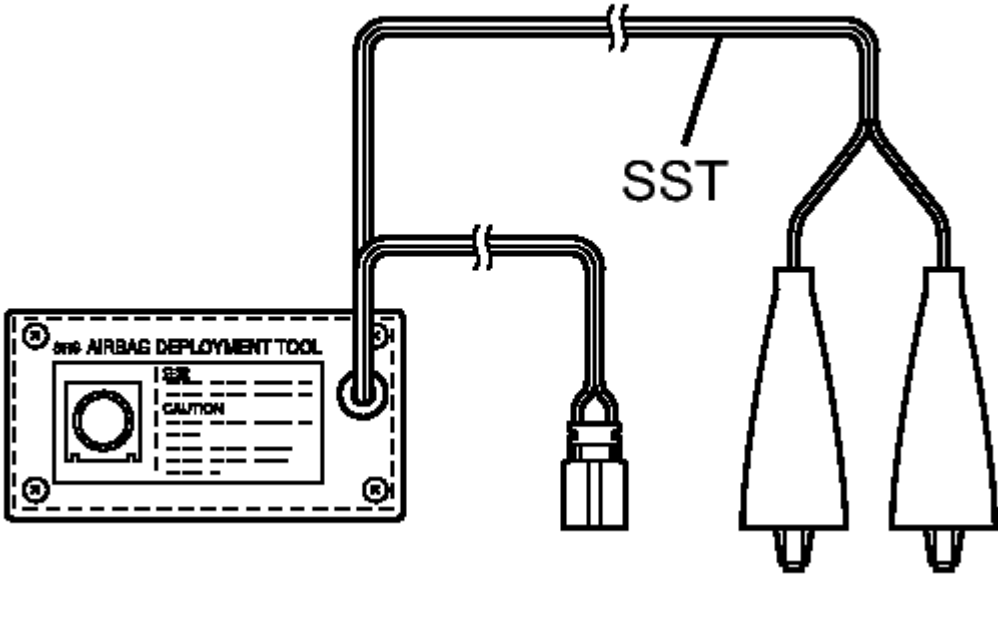


Fig. 65: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **When deploying the airbag, perform the operation at least 10 m (32.8 f away from the front passenger airbag.**
- **The front passenger airbag becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a front passenger airba which has been deployed.**
- **Always wash your hands with water after completing the operation.**
- **An airbag or pretensioner may be activated by static electricity. To prevent this, be sure to touch a metal surface with bare hands to discharge static electricity before performing this procedure.**

DISPOSAL

1. **DISPOSE OF FRONT PASSENGER AIRBAG ASSEMBLY (WHEN INSTALLED IN VEHICLE)**

   HINT:

   Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST. See step 1.

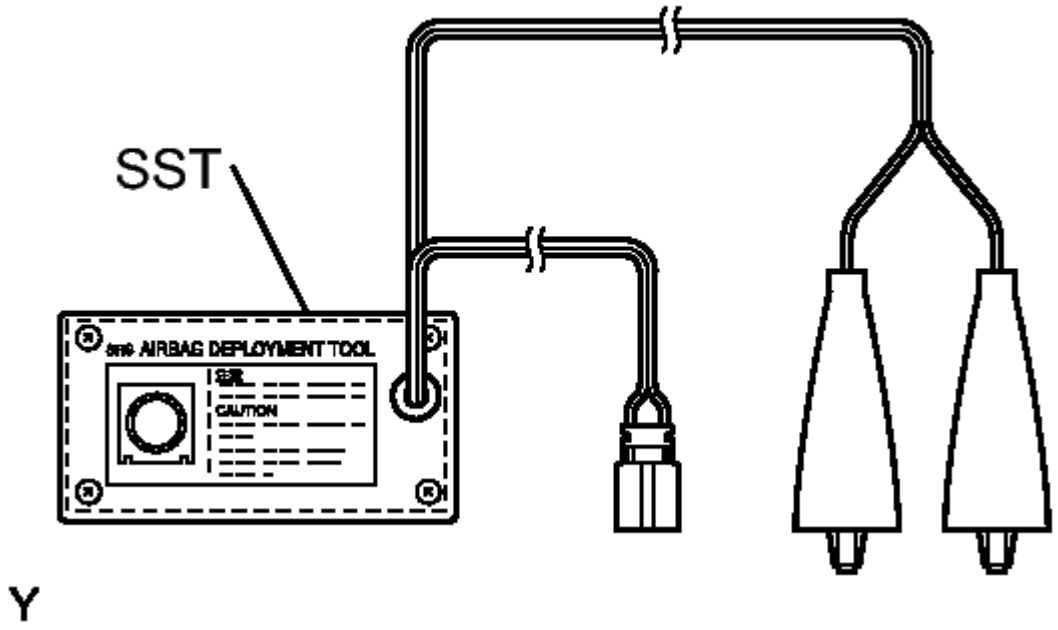


Fig. 66: Identifying SRS Air Bag Deployment SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00700**

b. Read the precaution. Refer to **PRECAUTION** .
c. Disconnect the cable from the negative battery terminal.

> **WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.**

d. Disconnect the airbag connector.
    1. Disconnect cable from negative battery terminal.
    2. Remove the No. 4 instrument panel register assembly. Refer to **REMOVAL - Step 37** .
    3. Remove the No. 2 instrument cluster finish panel garnish. Refer to **REMOVAL - Step 23** .
    4. Remove the instrument cluster finish center panel assembly. Refer to **REMOVAL - Step 45** .
    5. Remove the No. 2 instrument panel box door sub-assembly. Refer to **REMOVAL - Step 38** .
    6. Slide the slider to release the lock, and then disconnect the connector.

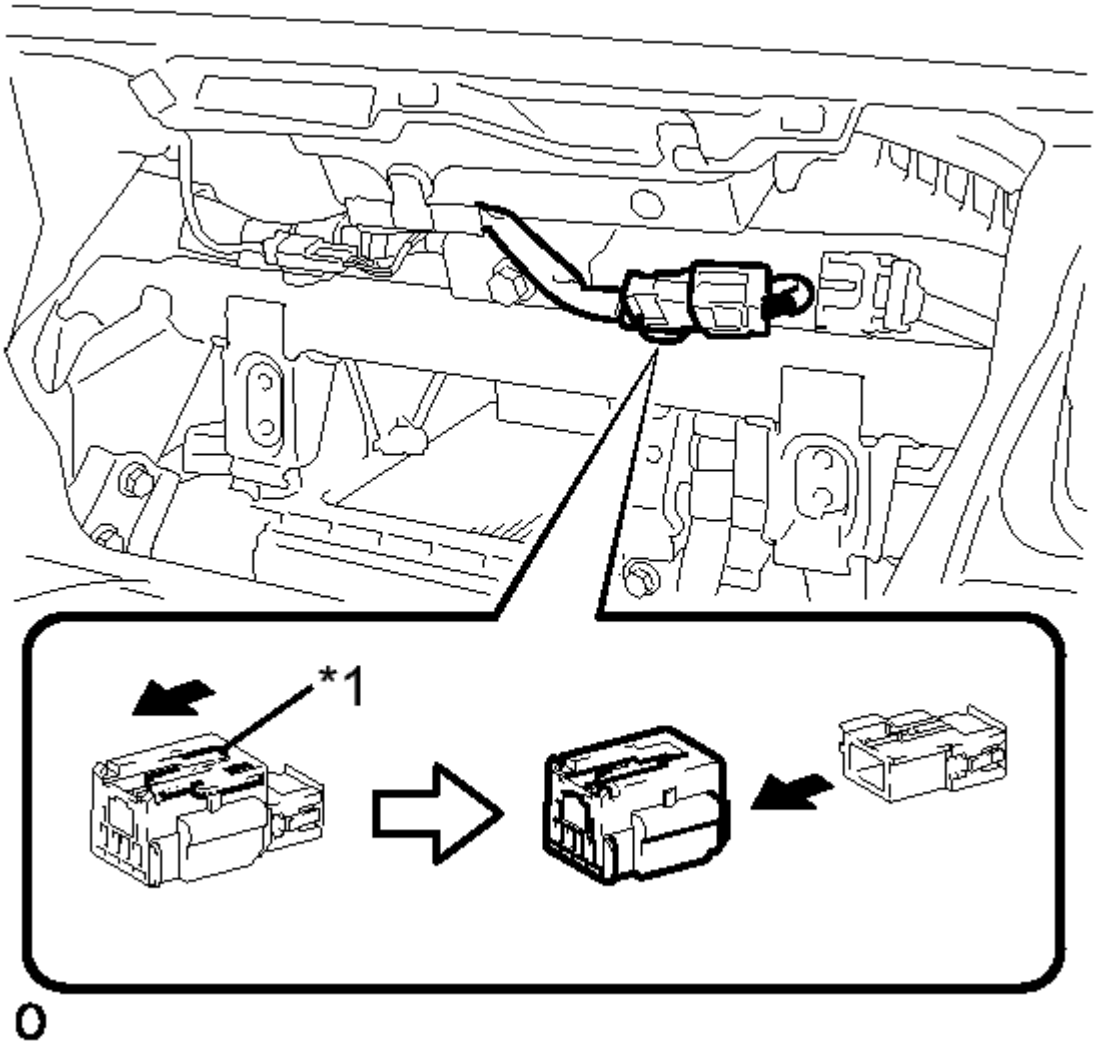


Fig. 67: Identifying Airbag Wire Harness Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Slider

NOTE: **Do not damage the airbag wire harness when handling the airbag connector.**

e. Connect SST.

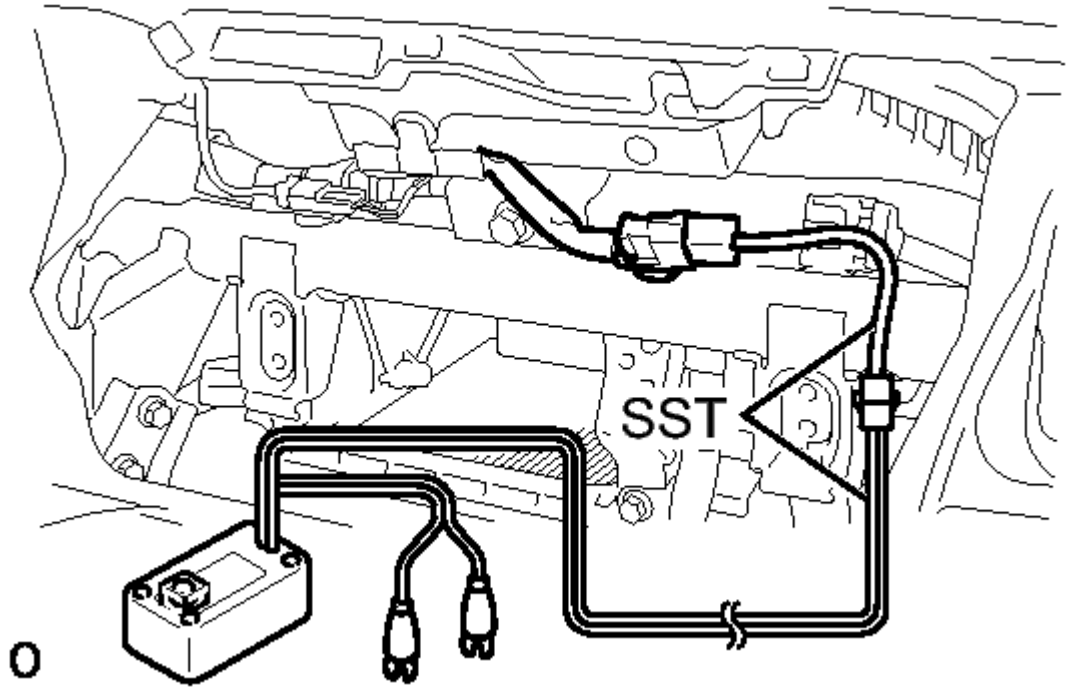


Fig. 68: Identifying Airbag Connector & SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Connect the SST connector to the front passenger airbag.
    - **SST: 09082-00700**
    - **SST: 09082-00780**

    NOTE: Do not lock the secondary lock of the twin lock to avoid damaging the SST connector and wire harness.

2. Move SST to at least 10 m (32.8 ft.) away from the vehicle.

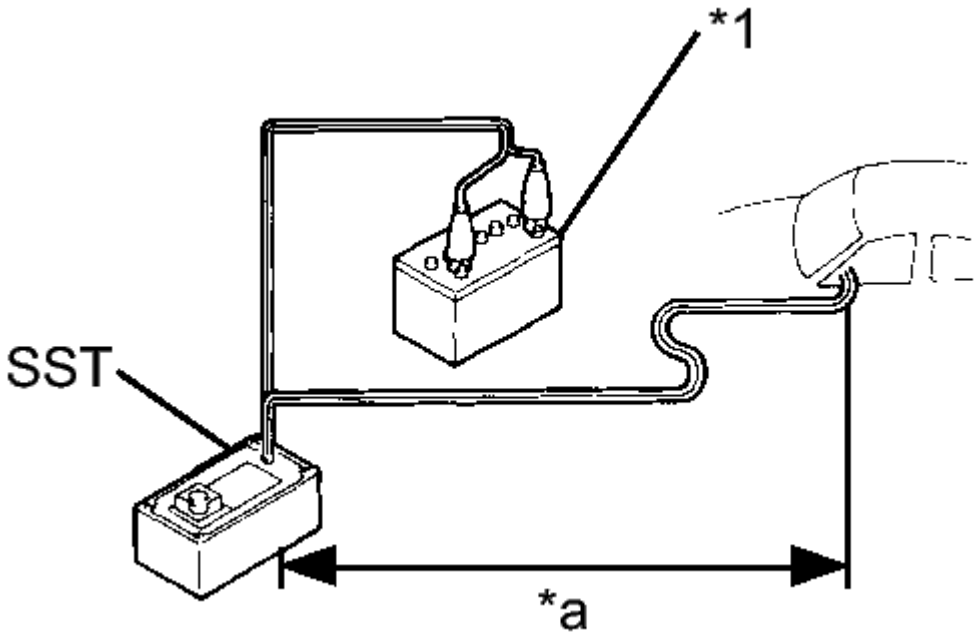


Fig. 69: Identifying Battery & SST Wire Harness Clearance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Battery
*a	10 m or more

3. Close all doors and windows of the vehicle.

NOTE: Do not damage the SST wire harness.

4. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.

f. Deploy the airbag.

1. Check that no one is inside the vehicle or within a 10 m (32.8 ft) radius of the vehicle.
2. Press the SST activation switch and deploy the airbag.

WARNING:

- **Make sure that no one is near the vehicle when deploying the airbag.**
- **The front passenger airbag becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a front**

passenger airbag which has been deployed.

- **Do not apply water, etc. to a front passenger airbag which has been deployed.**
- **Always wash your hands with water after completing the operation.**

HINT:

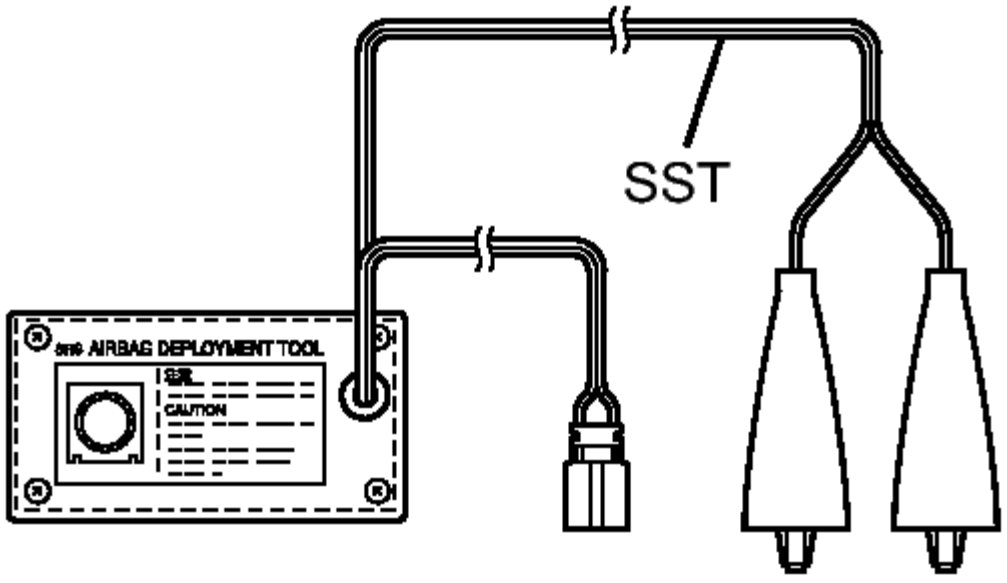
The airbag is deployed as the LED on the SST activation switch illuminates.

2. **DISPOSE OF FRONT PASSENGER AIRBAG ASSEMBLY (WHEN NOT INSTALLED IN VEHICLE)**

HINT:

Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST. See step 2.



Y

Fig. 70: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00700**

b. Remove the front passenger airbag. Refer to **INSTALLATION**.

WARNING:

- **When removing the front passenger airbag, work must be**

started at least 90 seconds after the ignition switch is turned off and the cable is disconnected from the negative battery terminal.

- **When storing the front passenger airbag, keep the upper surface of the airbag deployment side facing upward.**

c. Connect SST.

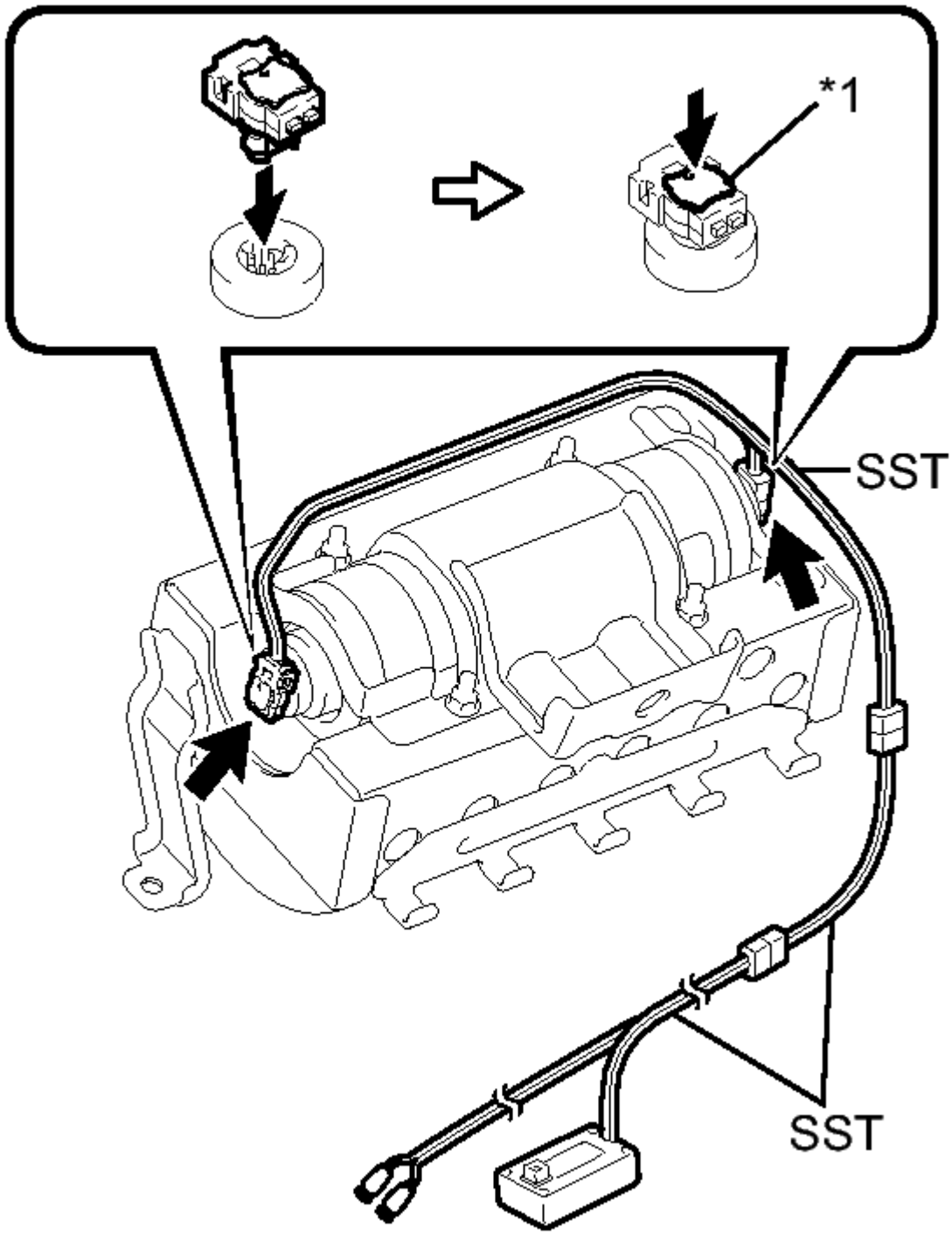


Fig. 71: Connecting SST To Airbag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

	Locking

*1	Button

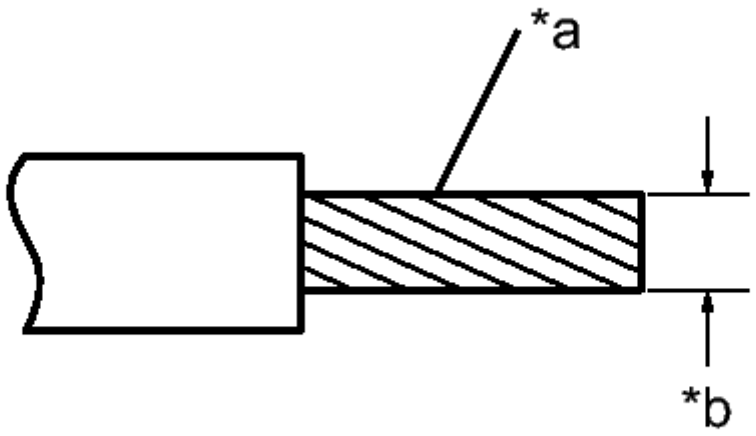
- **SST: 09082-00700**
- **SST: 09082-00802**

  09082-10801

  09082-30801

NOTE: Do not lock the secondary lock of the twin lock to avoid damaging the SST connector and wire harness.

d. Using a service-purpose wire harness for the vehicle, tie the front passenger airbag to the tire.



H

Fig. 72: Identifying Stripped Wire Section & Diameter
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*a	Stripped Wire Section
*b	Wire Diameter

Wire

Stripped wire section

1.25 mm^2 (0.0019 $in.^2$) or more

WARNING: Do not use a wire harness that is too thin or any other object to tie the front passenger airbag because it may snap due to the shock when the airbag is deployed. Always use a wire harness for vehicle use with a cross section of at least 1.25 mm^2 (0.0019 $in.^2$).

HINT:

To calculate the area of the stripped wire harness cross section:

Area = 3.14 x $(Diameter)^2$ divided by 4

1. Position the front passenger airbag inside the tire, as shown in the illustration.

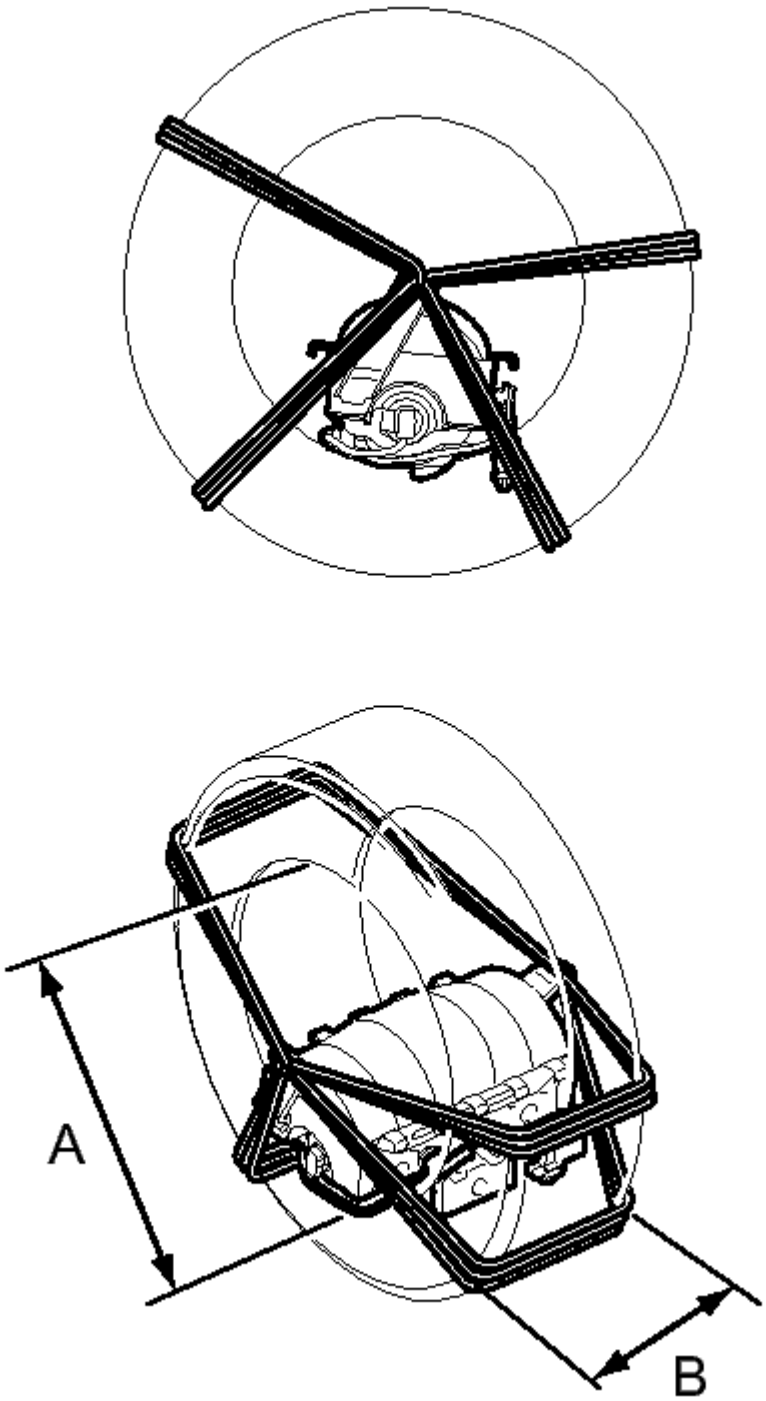


Fig. 73: Identifying Front Passenger Airbag Position Inside Tire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TIRE SIZE

Area	Measurement

A	360 mm (14.17 in.)
B	185 mm (7.28 in.)

WARNING:

- **Make sure that the wire harnesses are tight. If there is any slack in the wire harnesses, the front passenger airbag may become loose due to the shock when the airbag is deployed.**
- **Always tie the front passenger airbag with the airbag deployment side facing inside the tire.**

NOTE: The tire will be marked by the airbag deployment, so use a waste tire.

e. Place the tires.

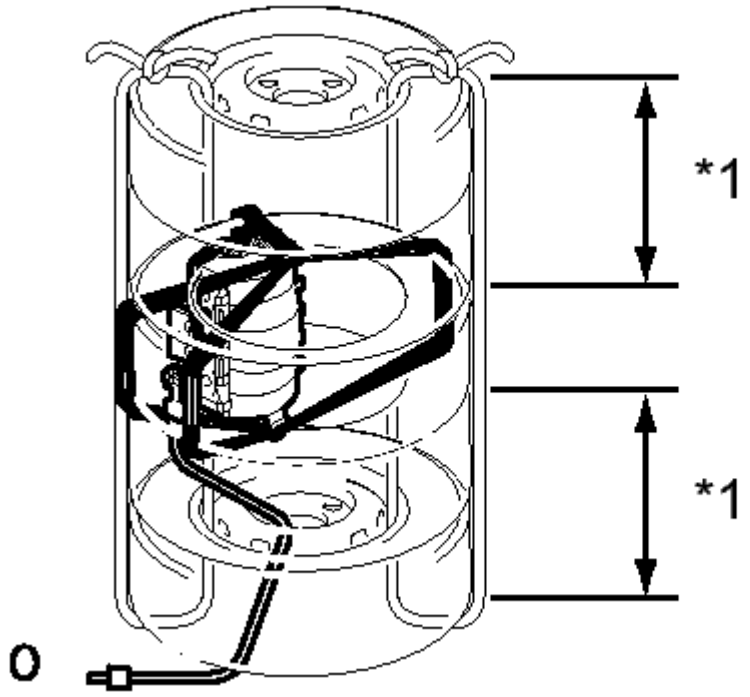


Fig. 74: Identifying Front Passenger Airbag & Tires (2 Or More)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

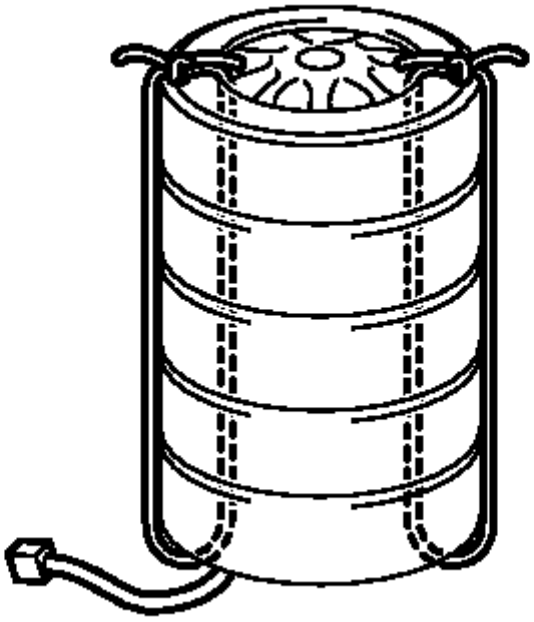
TEXT IN ILLUSTRATION

*1	Tire (2 or more)

1. Place at least 2 tires under the tire to which the front passenger airbag is tied.
2. Place at least 2 tires over the tire to which the front passenger airbag is tied. A disc wheel should be installed onto the top tire.

NOTE: Do not place the SST connector under the tire because it could be damaged.

3. Tie the tires together with 2 wire harnesses.

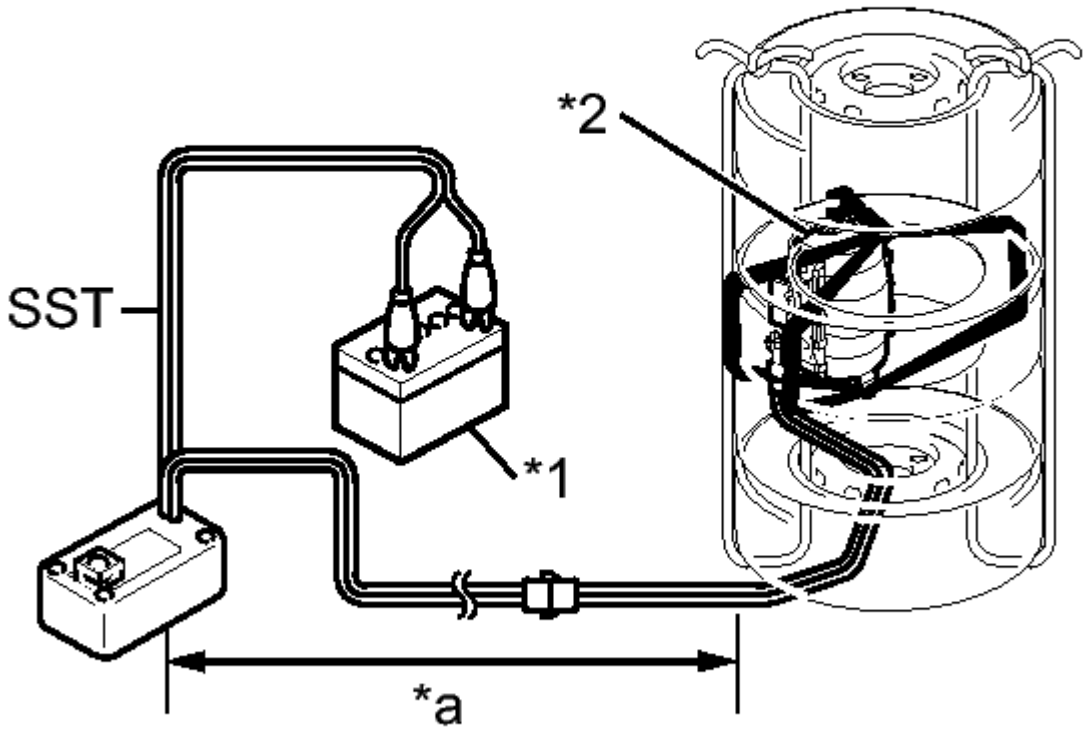


H

Fig. 75: Tying Tires Together With Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING: Make sure that the wire harnesses are tight. It is highly dangerous when a loose wire harness results in the tires coming free due to the shock when the airbag is deployed.

f. Connect SST.



0

Fig. 76: Identifying SST & Airbag Distance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Battery
*2	Front Passenger Airbag Assembly
*a	10 m or more

- **SST: 09082-00700**

NOTE: **Do not lock the secondary lock of the twin lock to avoid damaging**

the SST connector and wire harness. Also, secure some slack for SST wire harness inside the tire.

g. Deploy the airbag.
   1. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.
   2. Check that no one is within a 10 m (32.8 ft.) radius of the tire to which the front passenger airbag is tied.
   3. Press the SST activation switch and deploy the airbag.

WARNING: Make sure that no one is near the tires when deploying the airbag.

HINT:

The airbag is deployed as the LED on the SST activation switch illuminates.

h. Dispose of the front passenger airbag.



Fig. 77: Placing Airbag In Plastic Bag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING:

- **The front passenger airbag becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**

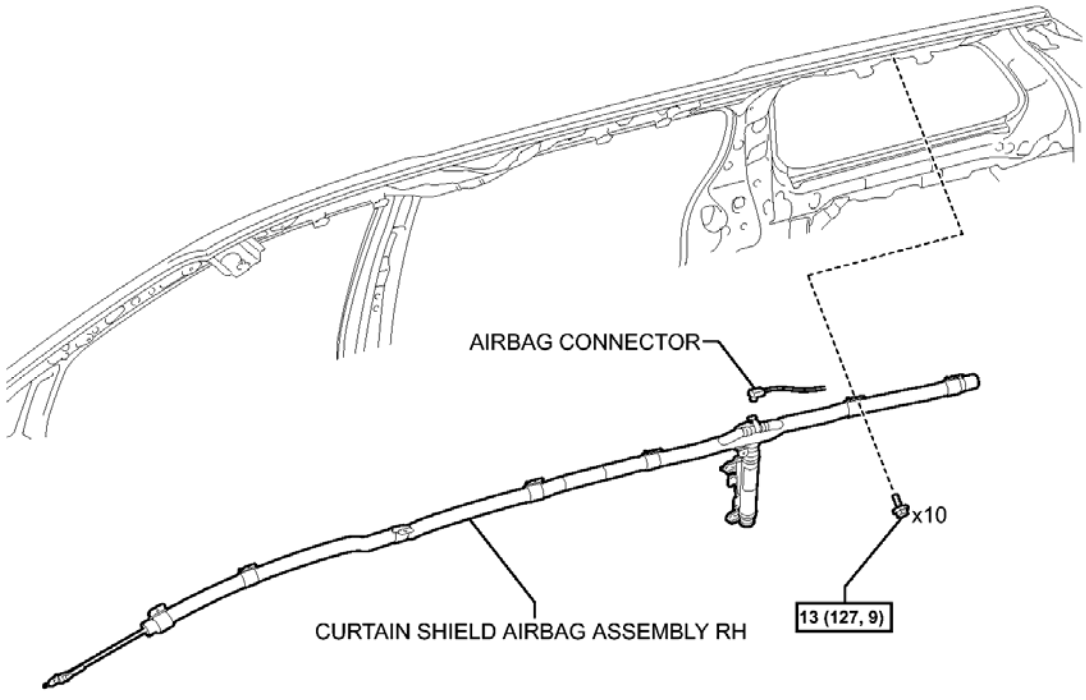
- **Use gloves and safety glasses when handling a front passenger airbag which has been deployed.**
- **Do not apply water, etc. to a front passenger airbag which has been deployed.**
- **Always wash your hands with water after completing the operation.**

1. Remove the front passenger airbag from the tire.
2. Place the front passenger airbag in a plastic bag, tie it tightly and dispose of it according to local regulations.

CURTAIN SHIELD AIRBAG ASSEMBLY

COMPONENTS

ILLUSTRATION



N*m (kgf*cm, ft.*lbf): Specified torque

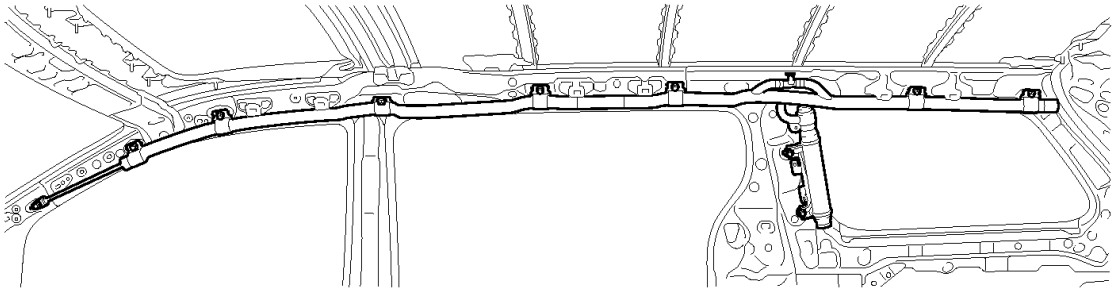
o

Fig. 78: Curtain Shield Airbag Assembly Replacement Components With Torque Specifications
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

ON-VEHICLE INSPECTION

1. **INSPECT CURTAIN SHIELD AIRBAG ASSEMBLY (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .
   b. With the curtain shield airbag installed on the vehicle, perform a visual check. If there are any defects, such as those mentioned below, replace the front pillar garnish or roof headlining with a new one:
      - Any cuts, minute cracks or marked discoloration on the front pillar garnish and roof headlining around the curtain shield airbag.



o

Fig. 79: Identifying Curtain Shield Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **INSPECT CURTAIN SHIELD AIRBAG ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)**

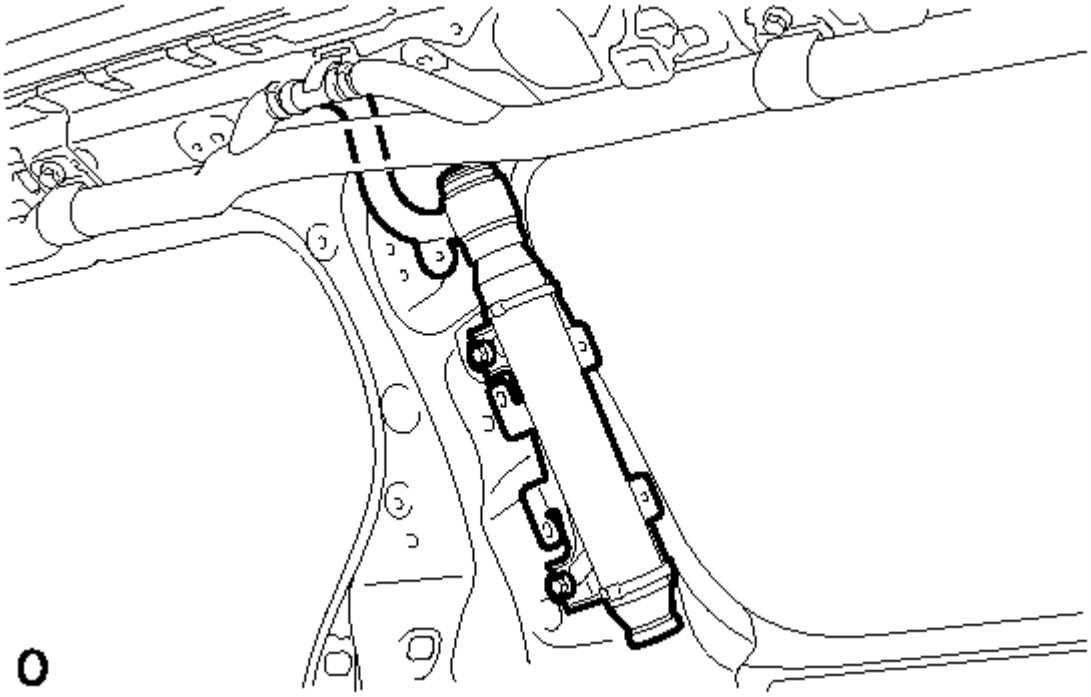


Fig. 80: Identifying Curtain Shield Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING: For curtain shield airbag removal and installation procedures. Refer to REMOVAL and Refer to INSTALLATION, and carefully follow the correct procedure.

a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .
b. With the curtain shield airbag removed from the vehicle, if there are any defects, such as those mentioned below, replace the curtain shield airbag with a new one:
   - Any cuts, minute cracks or marked discoloration on the curtain shield airbag.
   - Any cracks or other damage to the connector.

REMOVAL

REMOVAL

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTE: **When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .**

2. **REMOVE ROOF HEADLINING ASSEMBLY**

   Refer to **REMOVAL**

3. **REMOVE CURTAIN SHIELD AIRBAG ASSEMBLY RH**
   a. Using a thin-bladed screwdriver with its tip wrapped with protective tape, release the locking button.

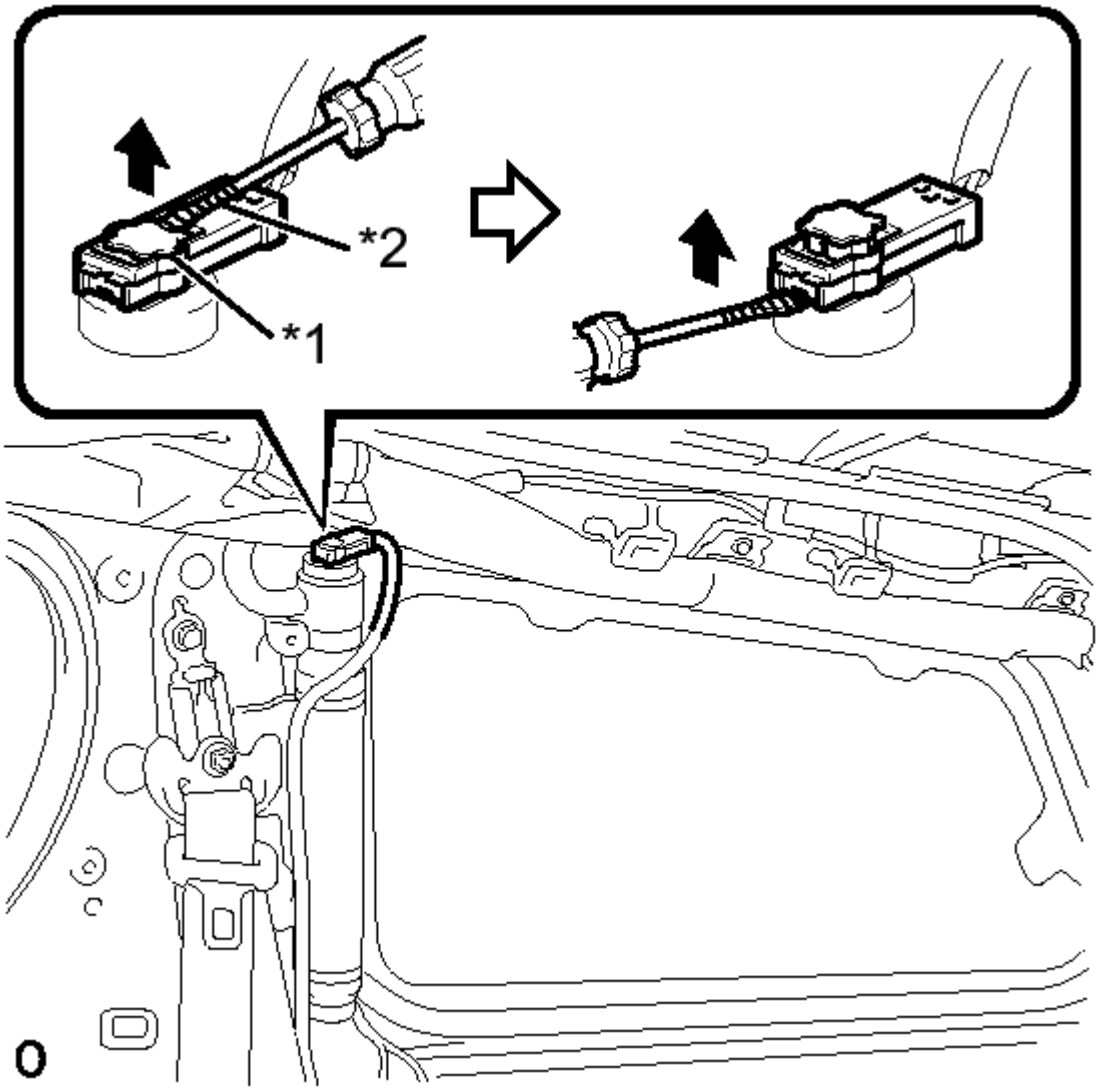


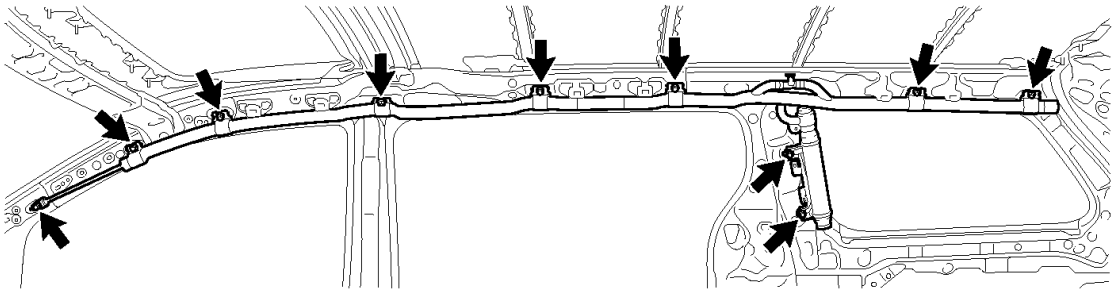
Fig. 81: Removing Curtain Shield Airbag Assembly Connector Using A Screwdriver
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Locking Button
*2	Protective Tape

b. Using a thin-bladed screwdriver with its tip wrapped with protective tape, detach the airbag connector.

c. Remove the 10 bolts and curtain shield airbag assembly.



o

Fig. 82: Identifying Curtain Shield Airbag Assembly, Connector & Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

INSTALLATION

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

HINT:

The procedure described below is for the RH side. Use the same procedure for both the RH and LH sides, unless otherwise specified.

INSTALLATION

1. **INSTALL CURTAIN SHIELD AIRBAG ASSEMBLY RH**
   a. Check that the ignition switch is off.
   b. Check that the cable is disconnected from the negative (-) battery terminal.

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

c. Install the curtain shield airbag assembly with the 10 bolts.

Torque: 13 N*m (127 kgf*cm, 9 ft.*lbf)

NOTE: Do not twist the curtain shield airbag assembly when installing it.

d. Connect the airbag connector.

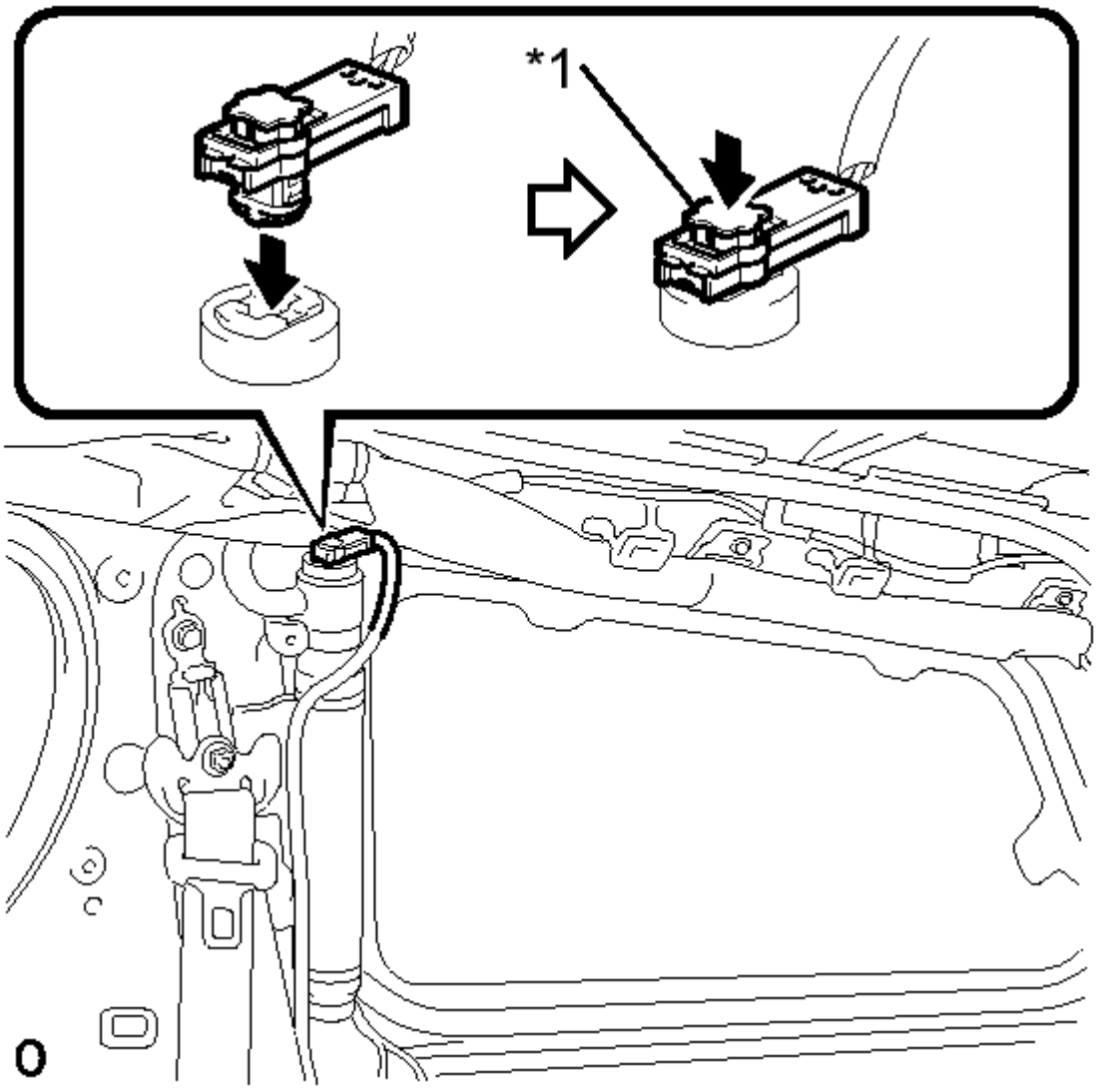


Fig. 83: Connecting Curtain Shield Airbag Assembly Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Locking Button

NOTE: **Securely lock the locking button.**

2. **INSTALL ROOF HEADLINING ASSEMBLY**

   Refer to **INSTALLATION**

3. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

   NOTE: **When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .**

   Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

4. **INSPECT SRS WARNING LIGHT**

   Refer to **DIAGNOSIS SYSTEM**

DISPOSAL

DISPOSAL

HINT:

- Disposal procedure for the RH side is the same as that for the LH side.
- The procedure described below is for the RH side.
- When scrapping a vehicle equipped with the SRS or disposing of a curtain shield airbag, deploy the airbag first in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the SERVICE DEPT. of the TOYOTA MOTOR SALES, U.S.A., INC.

WARNING:

- **Before performing pre-disposal deployment of any SRS component, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.**
- **Never dispose of a curtain shield airbag that has an undeployed airba**
- **The airbag emits an exploding sound when it is deployed, so perform operation outdoors and where it will not create a nuisance to nearby residents.**
- **When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electric noise.**

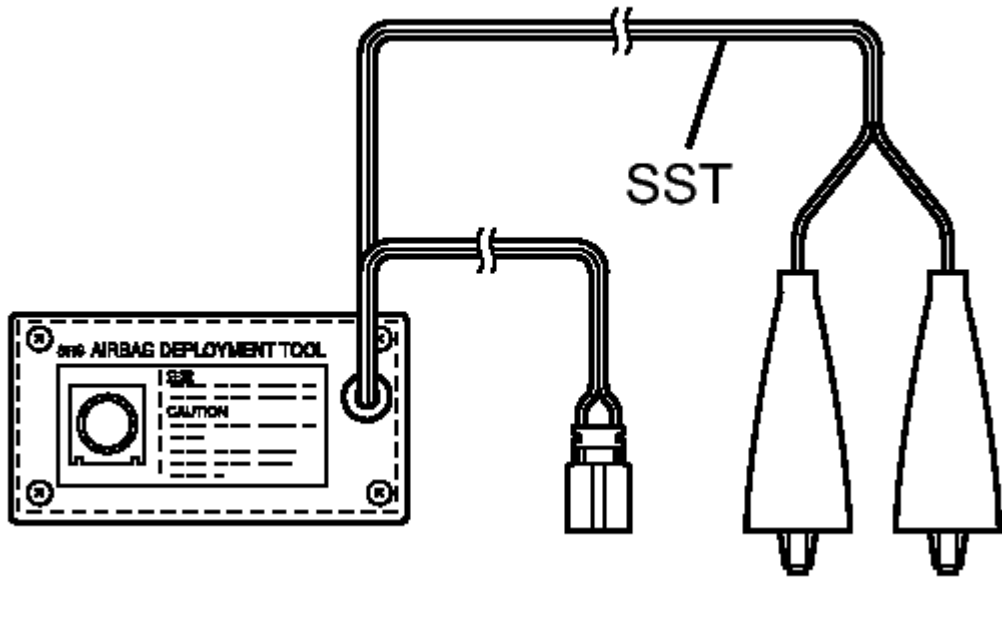


Fig. 84: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **When deploying the airbag, perform the operation at least 10 m (32.8 f away from the curtain shield airbag.**
- **The curtain shield airbag becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a curtain shield airbag which has been deployed.**
- **Do not apply water, etc. to a curtain shield airbag which has been deployed.**
- **Always wash your hands with water after completing the operation.**
- **An airbag or pretensioner may be activated by static electricity. To prevent this, be sure to touch a metal surface with bare hands to discharge static electricity before performing this procedure.**

DISPOSAL

1. **DISPOSE OF CURTAIN SHIELD AIRBAG ASSEMBLY (WHEN INSTALLED IN VEHICLE)**

   HINT:

   Prepare a battery as the power source to deploy the airbag.

   a. Check the function of SST. See step 1.

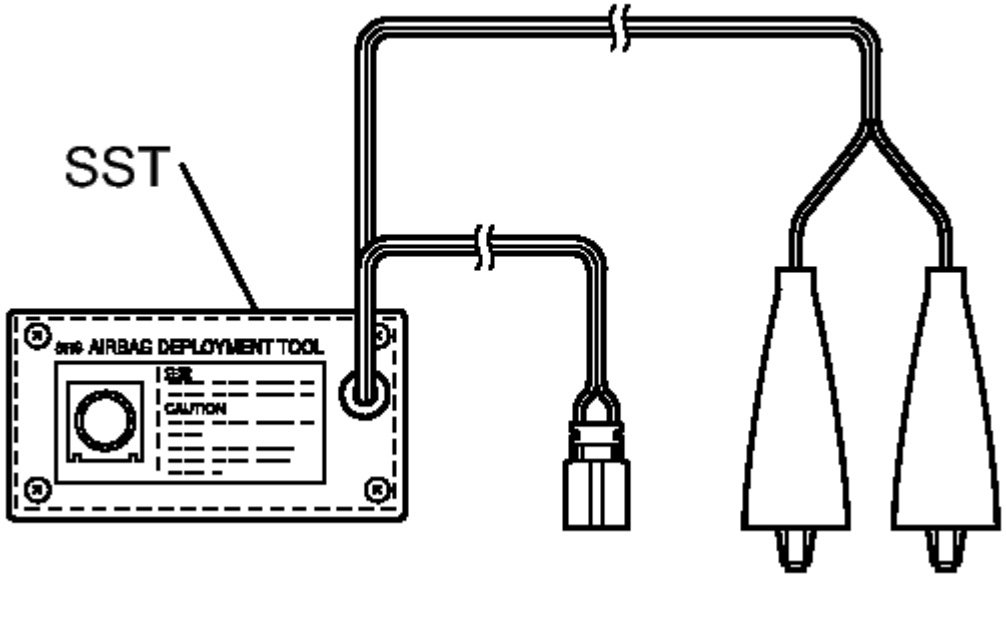


Fig. 85: Identifying SRS Air Bag Deployment SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00700**

b. Read the precaution. Refer to **PRECAUTION** .
c. Disconnect the cable from the negative battery terminal.

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

d. Remove the roof headlining assembly. Refer to **REMOVAL** .
e. Using a thin-bladed screwdriver with its tip wrapped with protective tape, release the locking button.

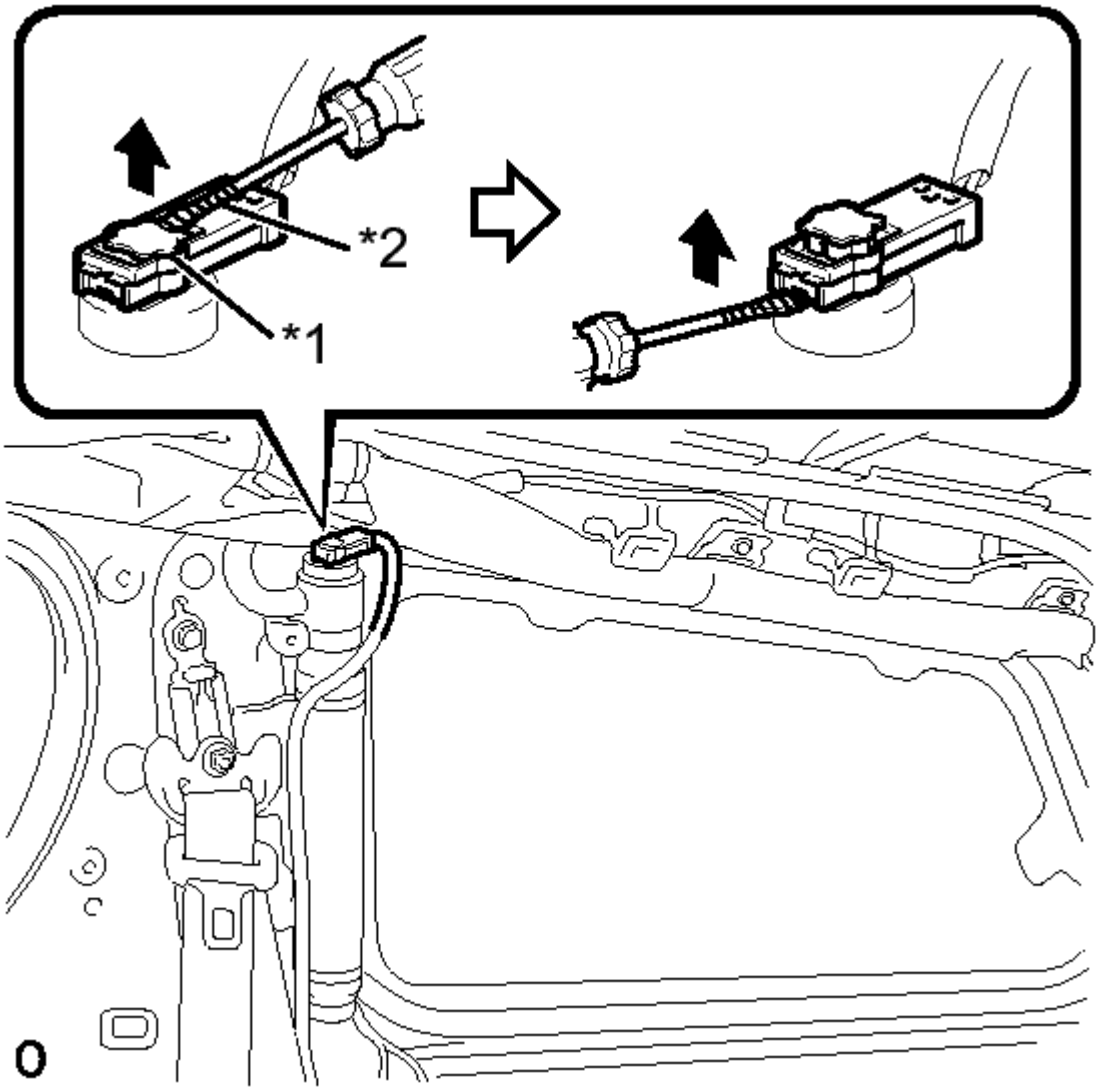


Fig. 86: Removing Curtain Shield Airbag Assembly Connector Using A Screwdriver
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Locking Button
*2	Protective Tape

f. Using a thin-bladed screwdriver with its tip wrapped with protective tape, disconnect the airbag connector.

NOTE: Do not damage the airbag wire harness when handling the airbag connector.

g. Connect SST.

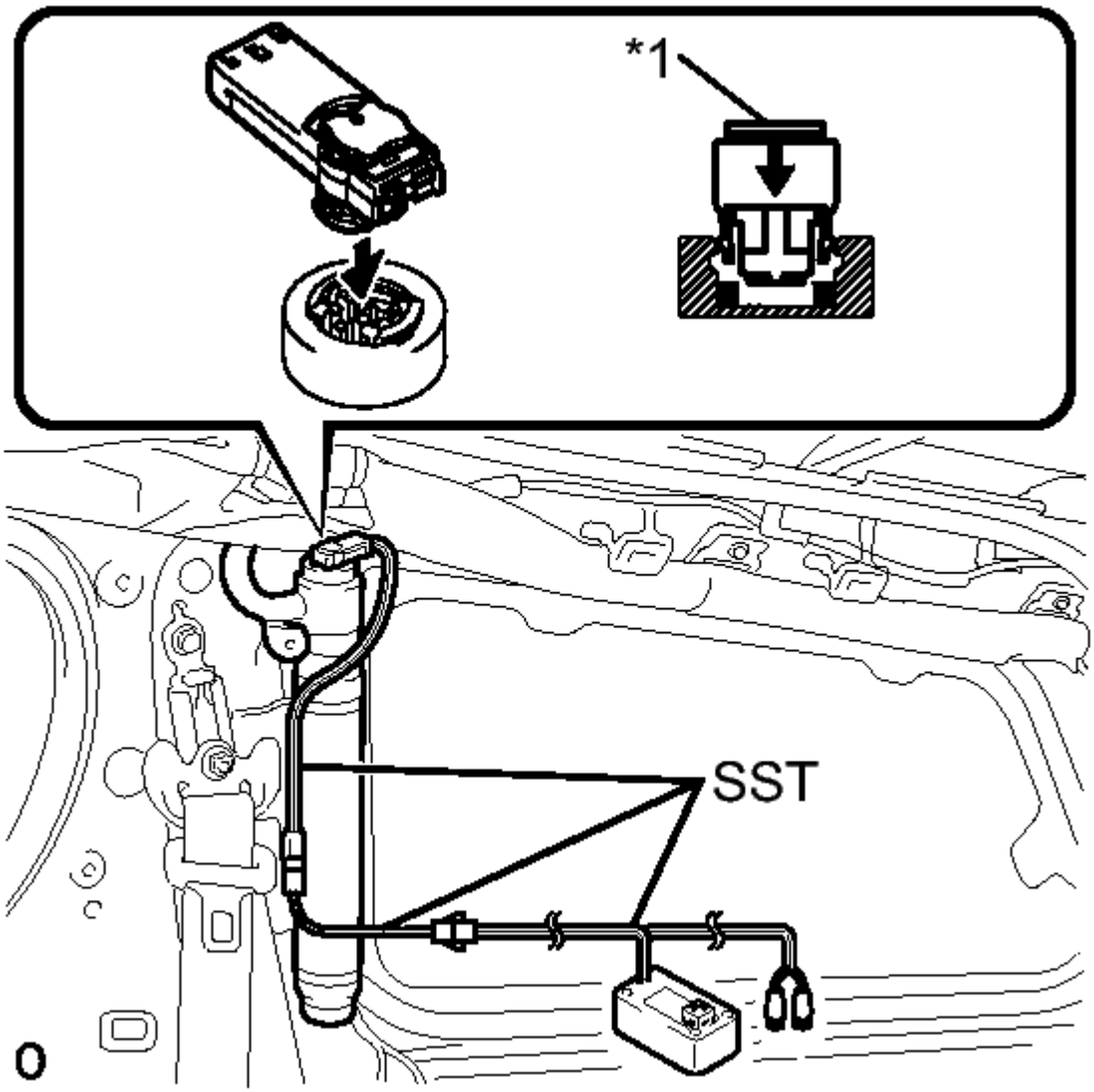


Fig. 87: Connecting SST To Curtain Shield Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Locking Button

- **SST: 09082-00700**
- **SST: 09082-00802**
  09082-10801
  09082-20801

1. After connecting SST, connect it to the curtain shield airbag.

NOTE: **Do not lock the secondary lock of the twin lock to avoid damaging the SST connector and wire harness.**

2. Move SST to at least 10 m (32.8 ft.) away from the vehicle.

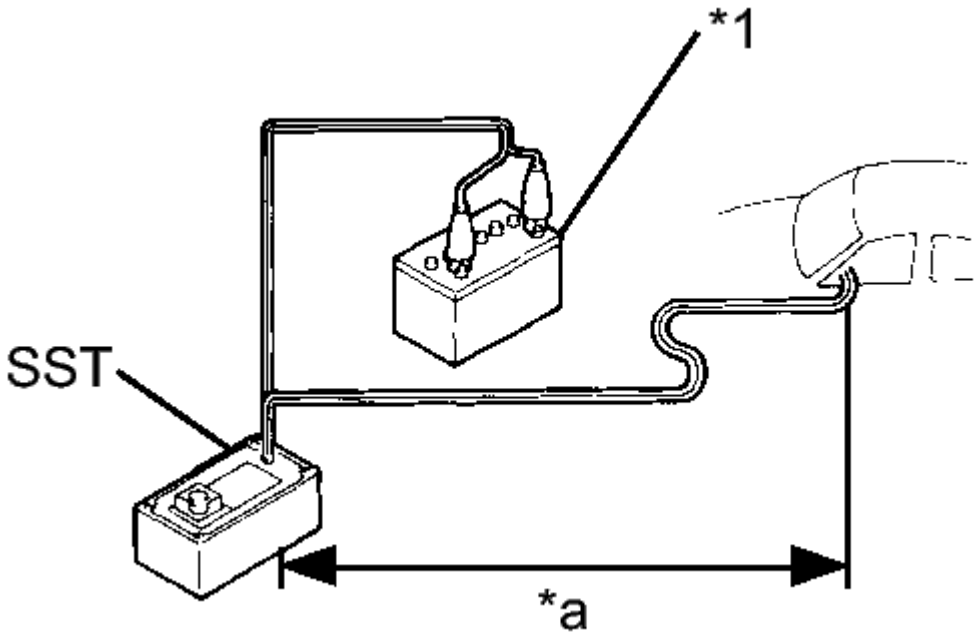


Fig. 88: Identifying Battery & SST Wire Harness Clearance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Battery
*a	10 m or more

3. Close all doors and windows of the vehicle.

NOTE: **Do not damage the SST wire harness.**

4. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.

h. Deploy the airbag.

1. Check that no one is inside the vehicle or within a 10 m (32.8 ft.) radius of the vehicle.
2. Press the SST activation switch and deploy the airbag.

WARNING:

- **When deploying the airbag, make sure that no one is**

near the vehicle.

- **The curtain shield airbag becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a curtain shield airbag which has been deployed.**
- **Always wash your hands with water after completing the operation.**

HINT:

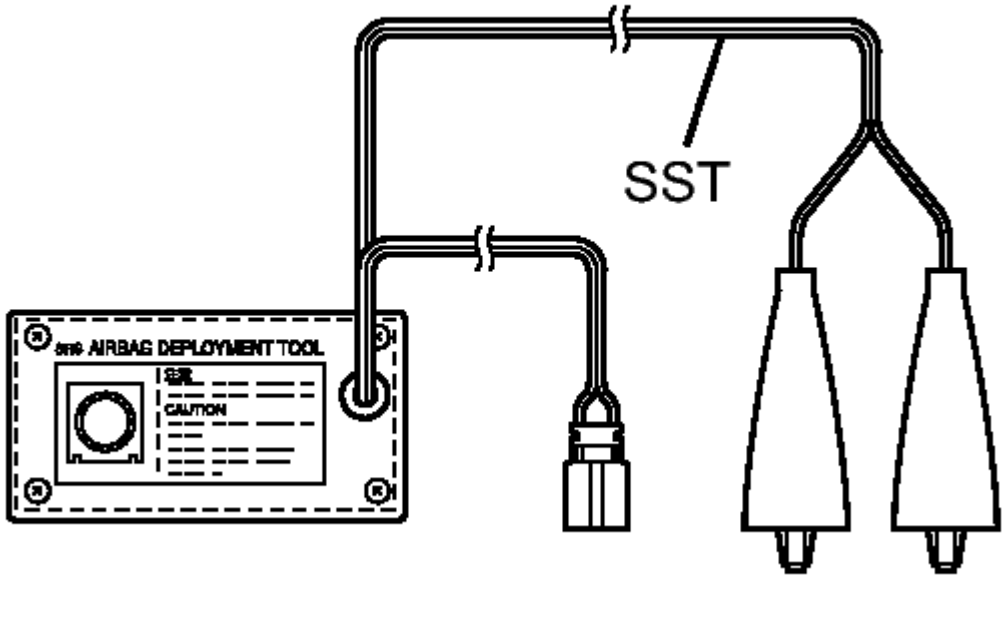
The airbag is deployed as the LED on the SST activation switch illuminates.

2. **DISPOSE OF CURTAIN SHIELD AIRBAG ASSEMBLY (WHEN NOT INSTALLED IN VEHICLE)**

HINT:

Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST. See step 2.



Y

Fig. 89: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00700**

b. Remove the curtain shield airbag. Refer to **REMOVAL**.
c. Cut off the deployment section of the curtain shield airbag.

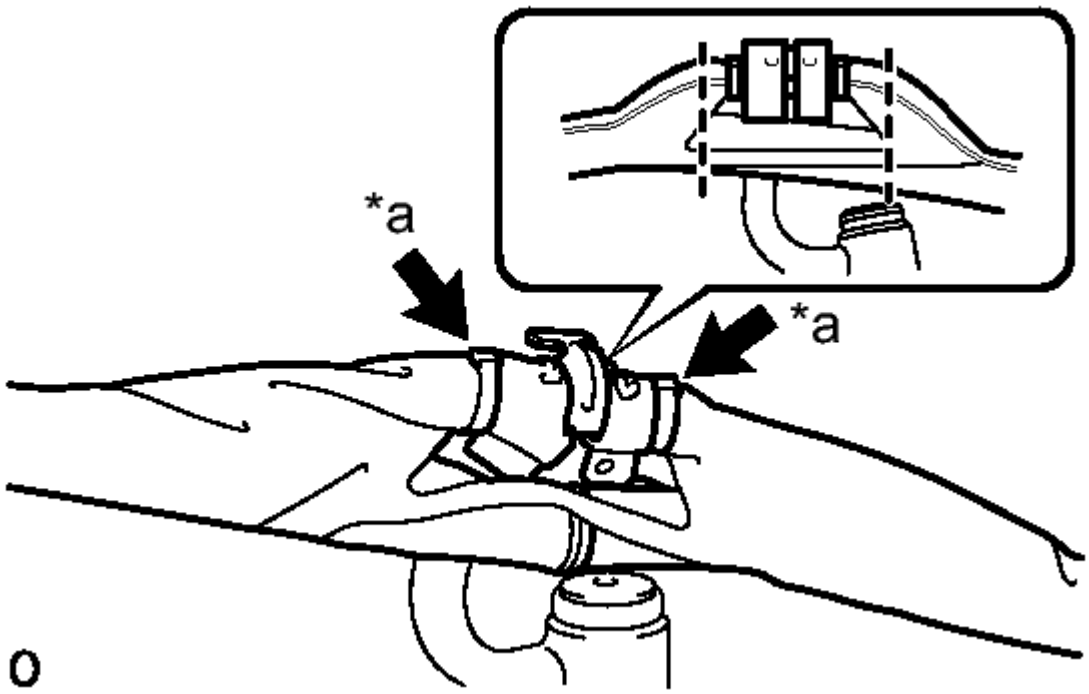


Fig. 90: Identifying Curtain Shield Airbag Deployment Cut Off Section
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*a	Cut

d. Connect SST.

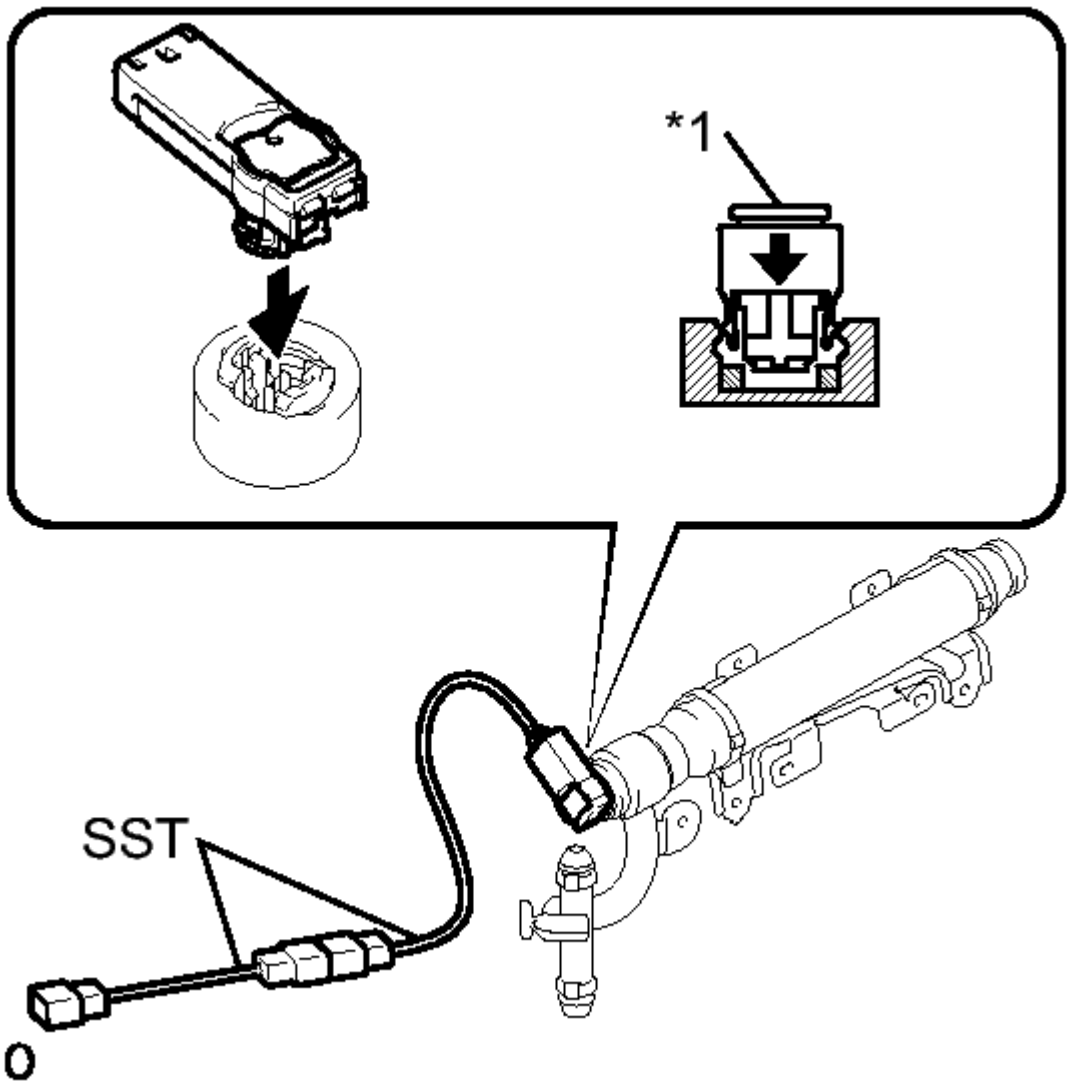


Fig. 91: Connecting SST To Curtain Shield Airbag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

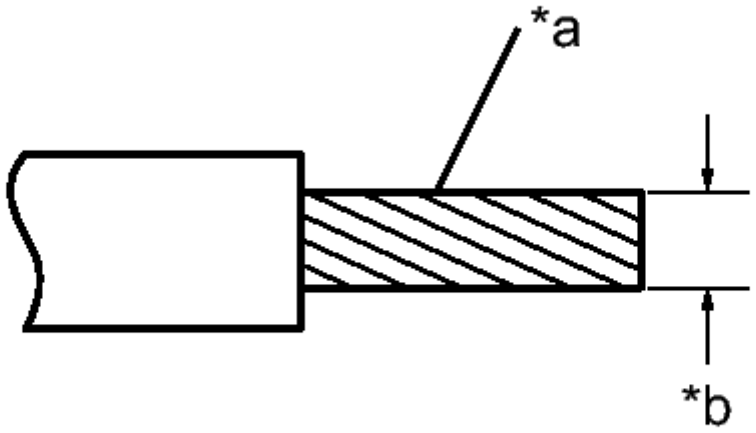
*1	Locking Button

- **SST: 09082-00802**
  09082-10801
  09082-20801

1. After connecting SST, connect it to the curtain shield airbag.

NOTE: Do not lock the secondary lock of the twin lock to avoid damaging the SST connector and wire harness.

e. Using a service-purpose wire harness for the vehicle, tie the curtain shield airbag to the tire.



H

Fig. 92: Identifying Stripped Wire Section & Diameter
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*a	Stripped Wire Section
*b	Wire Diameter

Wire

Stripped wire section

1.25 mm^2 (0.0019 $in.^2$) or more

WARNING: Do not use a wire harness that is too thin or any other object to tie the curtain shield airbag because it may snap due to the shock when the airbag is deployed. Always use a wire harness for vehicle use with a cross section of at least 1.25 mm^2 (0.0019 $in.^2$).

HINT:

To calculate the area of the stripped wire harness cross section:

Area = 3.14 x (Diameter)^2 divided by 4

1. Position the curtain shield airbag inside the tire, as shown in the illustration.

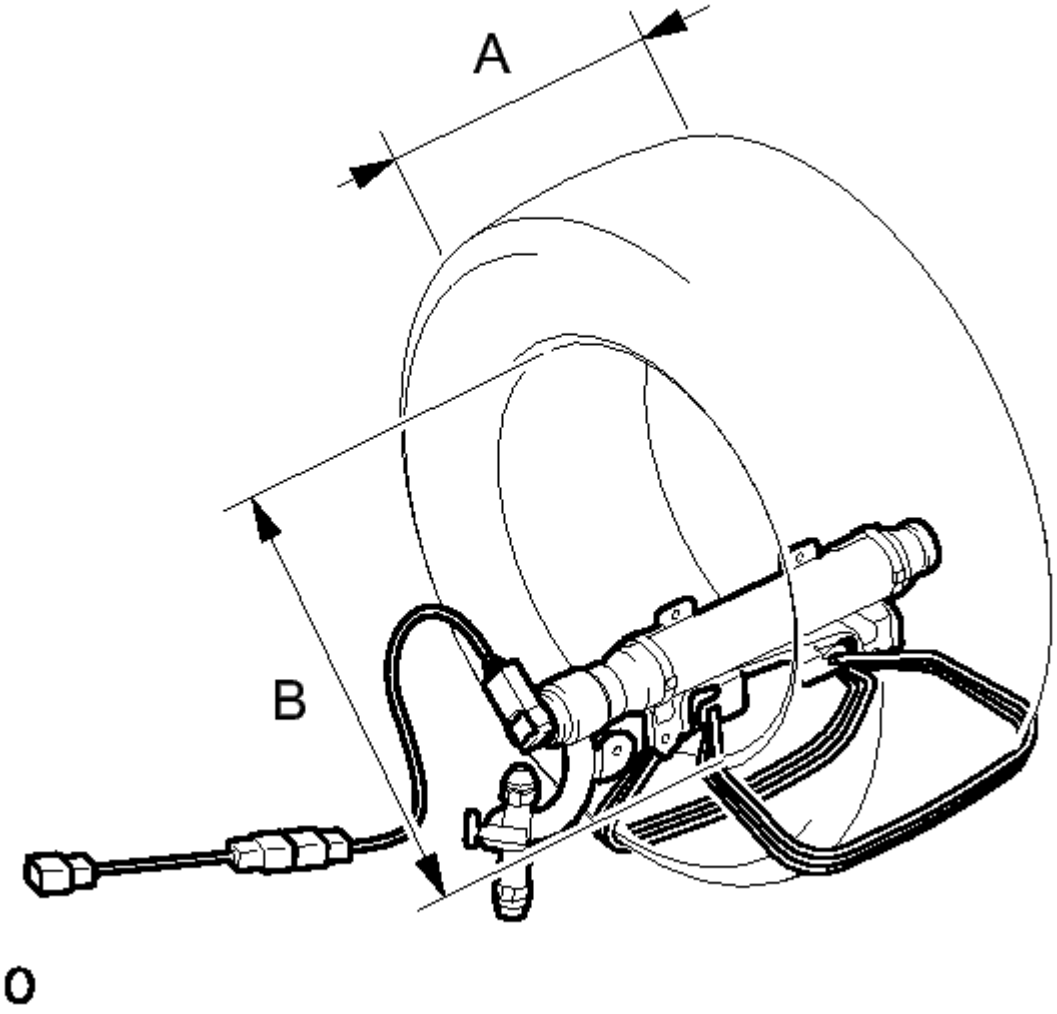


Fig. 93: Identifying Curtain Shield Airbag Position Inside Tire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TIRE SIZE

Area	Measurement
A	185 mm (7.28 in.)
B	360 mm (14.17 in.)

WARNING: Make sure that the wire harnesses are tight. If there is any slack in the wire harnesses, the curtain shield airbag may become loose due to the shock when the airbag is deployed.

NOTE: The tire will be marked by the airbag deployment, so use a waste tire.

f. Place the tires.

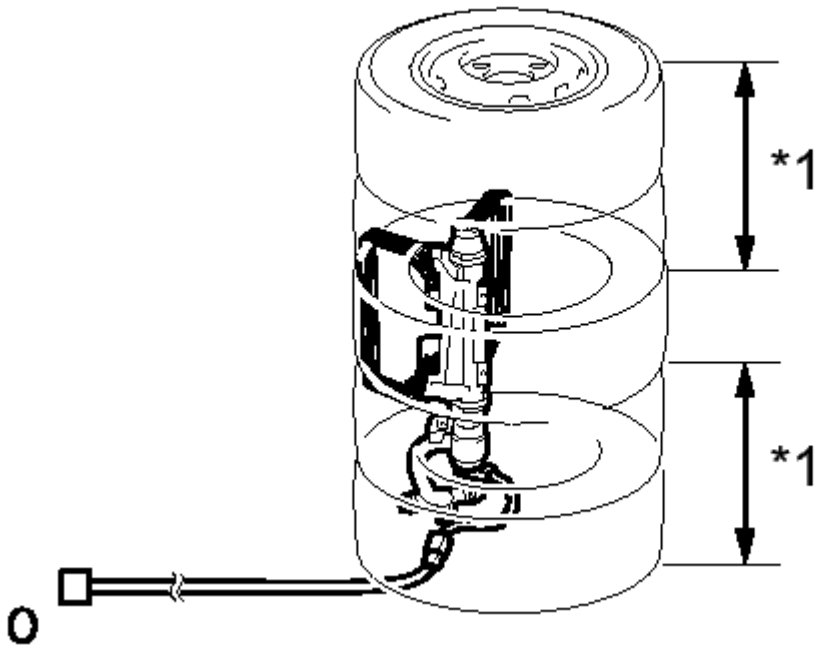


Fig. 94: Identifying Curtain Shield Airbag & Tires
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

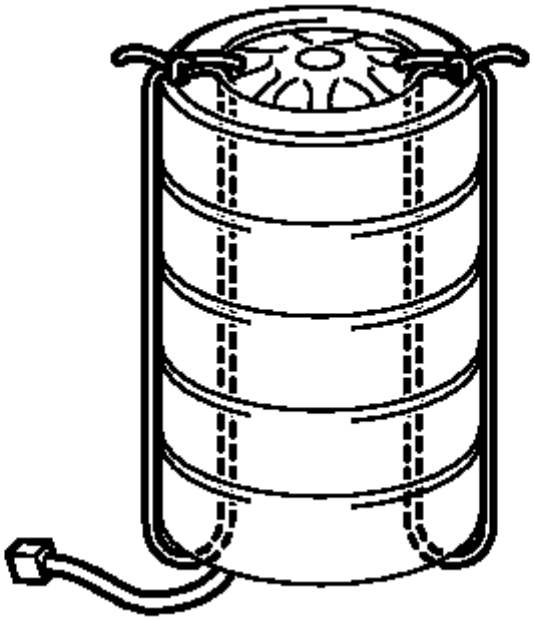
*1	Tire (2 or more)

WARNING: Do not place the curtain shield airbag with the deployment direction facing toward the ground.

1. Place at least 2 tires under the tire to which the curtain shield airbag is tied.
2. Place at least 2 tires over the tire to which the curtain shield airbag is tied. The disc wheel should be installed onto the top tire.

NOTE: **Do not place the SST connector under the tire because it could be damaged.**

3. Tie the tires together with 2 wire harnesses.



H

Fig. 95: Tying Tires Together With Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING: **Make sure that the wire harnesses are tight. It is highly dangerous when a loose wire harness results in the tires coming free due to the shock when the airbag is deployed.**

g. Connect SST.

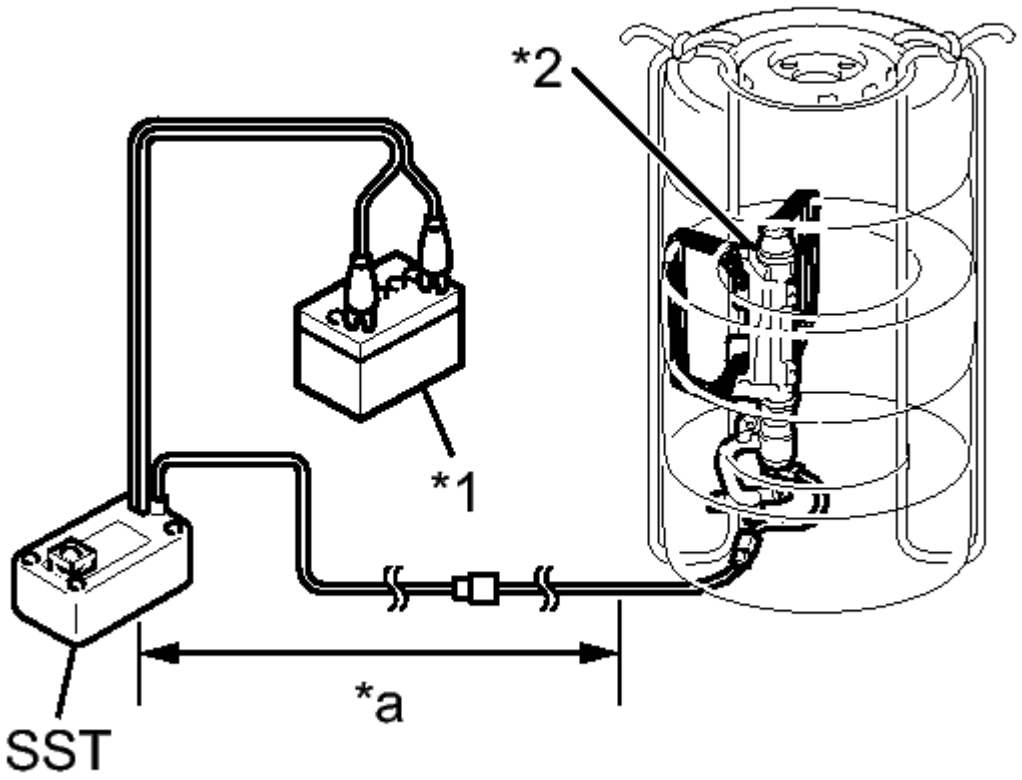


Fig. 96: Identifying Curtain Shield Airbag Assembly, Battery & SST Distance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Battery
*2	Curtain Shield Airbag Assembly
*a	10 m or more

- **SST: 09082-00700**

NOTE: **To avoid damaging the SST connector and wire harness, do not lock**

the secondary lock of the twin lock. Also, secure some slack for the SST wire harness inside the tire.

h. Deploy the airbag.

1. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.
2. Check that no one is within a 10 m (32.8 ft.) radius of the tire to which the curtain shield airbag is tied.
3. Press the SST activation switch and deploy the airbag.

WARNING: Make sure that no one is near the tire when deploying the airbag.

HINT:

The airbag is deployed as the LED on the SST activation switch illuminates.

i. Dispose of the curtain shield airbag.

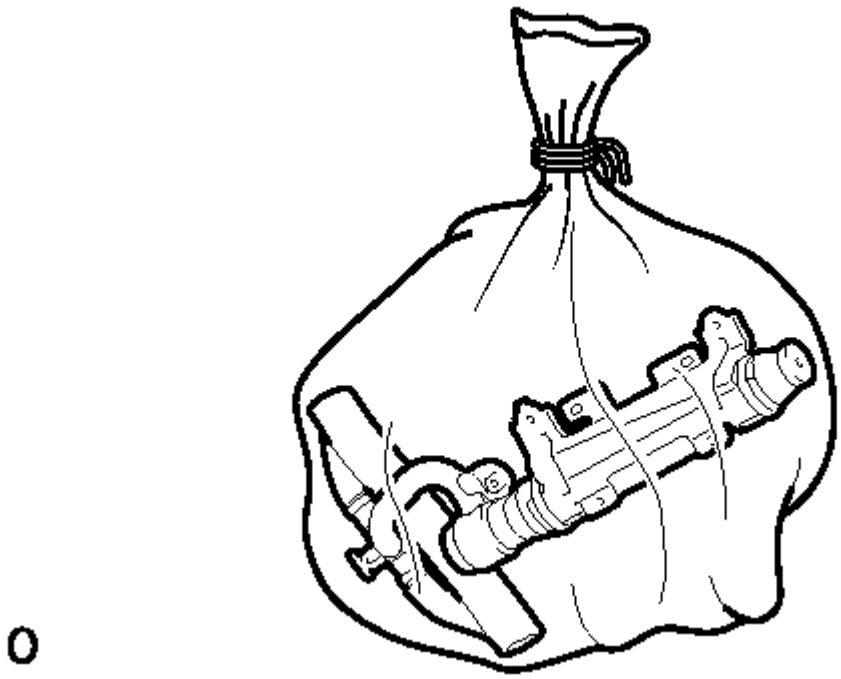


Fig. 97: Placing Airbag In Plastic Bag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING:

- **The curtain shield airbag becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**

- **Use gloves and safety glasses when handling a curtain shield airbag which has been deployed.**
- **Always wash your hands with water after completing the operation.**
- **Do not apply water, etc. to a curtain shield airbag which has been deployed.**

1. Remove the curtain shield airbag from the tire.
2. Place the curtain shield airbag in a plastic bag, tie it tightly and dispose of it according to local regulations.

FRONT SEAT SIDE AIRBAG ASSEMBLY

COMPONENTS

ILLUSTRATION

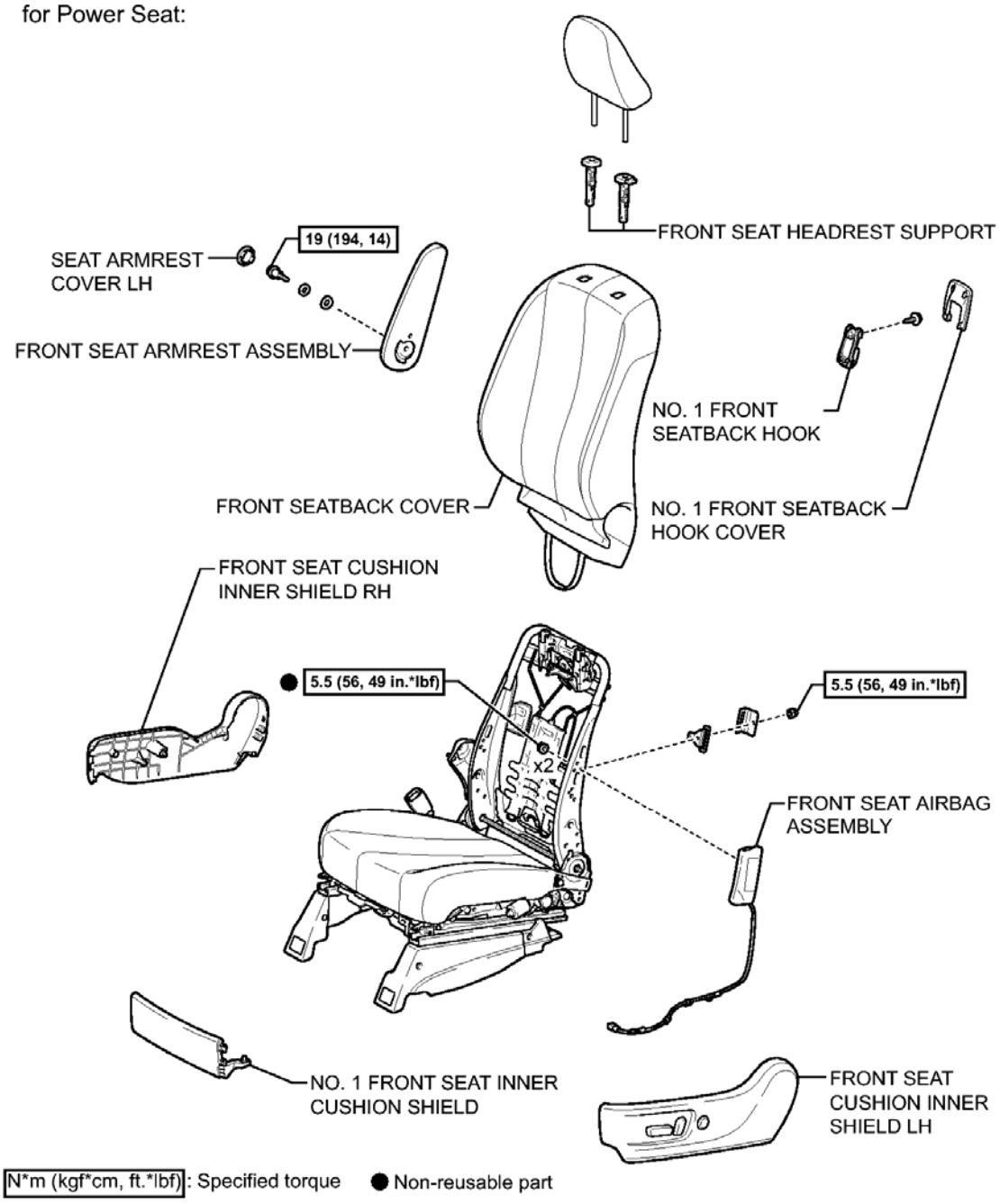


Fig. 98: Front Seat Side Airbag Assembly Replacement Components With Torque Specifications (Power Seat) (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ILLUSTRATION

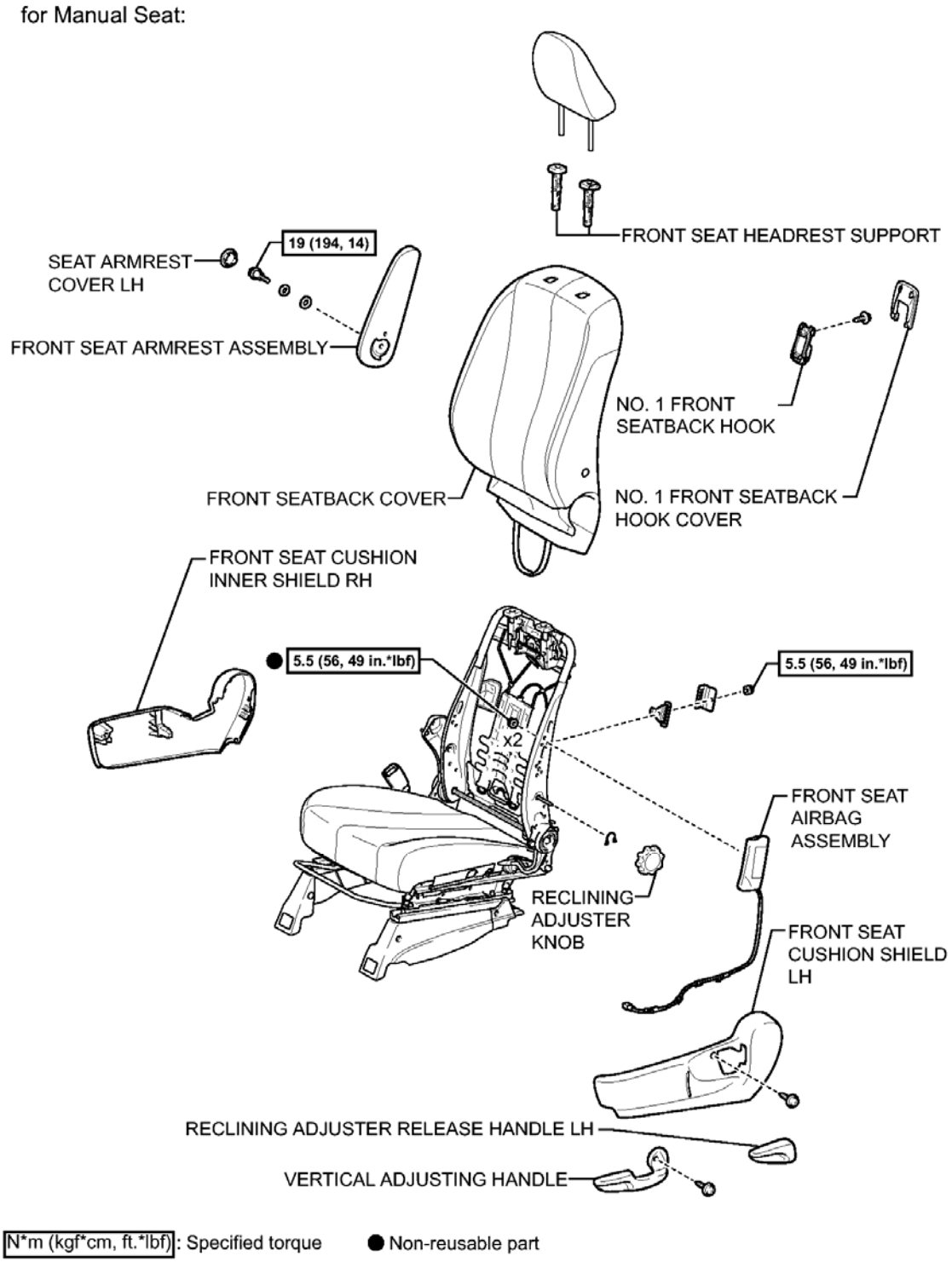
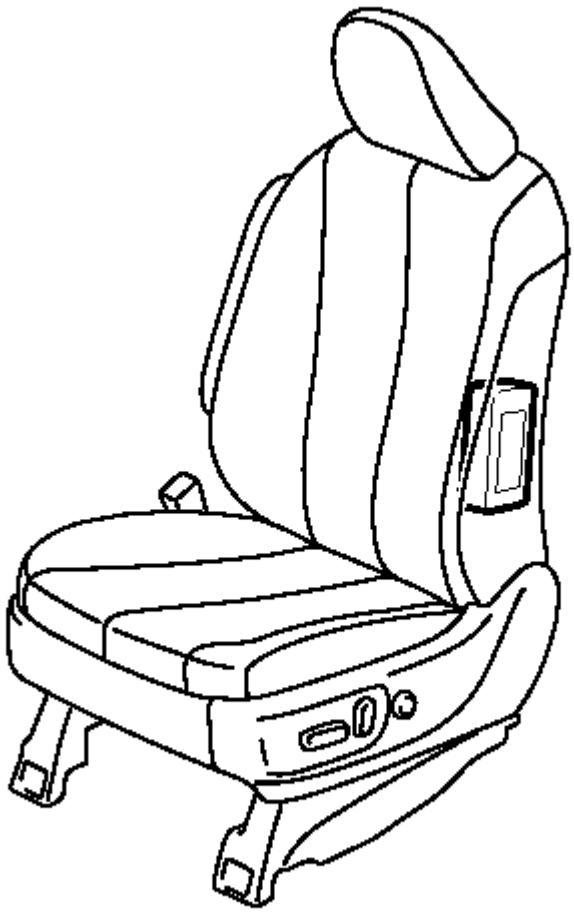


Fig. 99: Front Seat Side Airbag Assembly Replacement Components With Torque Specifications (Manual Seat) (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

ON-VEHICLE INSPECTION

1. **INSPECT FRONT SEAT AIRBAG ASSEMBLY (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .

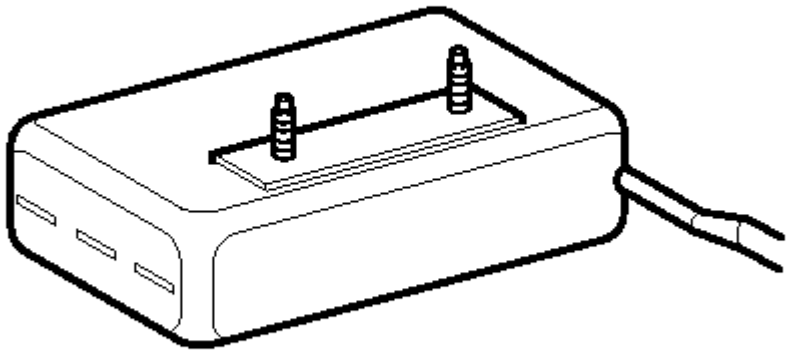


O

Fig. 100: Inspecting Front Seat Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   b. With the front seat airbag assembly installed on the vehicle, perform a visual check. If there are any defects, such as those mentioned below, replace the front seat airbag assembly with a new one:
      - Any cuts, minute cracks or marked discoloration on the front seat airbag assembly.

2. **INSPECT FRONT SEAT AIRBAG ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)**



O

Fig. 101: Identifying Front Seat Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING: For front seat airbag assembly removal and installation procedures. Refer to REMOVAL and Refer to INSTALLATION, and carefully follow the correct procedure.

a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .
b. With the front seat airbag assembly removed from the vehicle, perform a visual check. If there are any defects, such as those mentioned below, replace the front seat airbag assembly a new one:
   - Any cuts, minute cracks or marked discoloration on the front seat airbag assembly.
   - Any cracks or other damage to the wire harness or connector.

REMOVAL

REMOVAL

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTE: **When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .**

2. **REMOVE FRONT SEAT ASSEMBLY (for Power Seat)**

   Refer to **REMOVAL**

3. **REMOVE FRONT SEAT ASSEMBLY (for Manual Seat)**

   Refer to **REMOVAL**

4. **REMOVE NO. 1 FRONT SEAT INNER CUSHION SHIELD (for Power Seat)** . Refer to **DISASSEMBLY - Step 6**
5. **REMOVE FRONT SEAT CUSHION INNER SHIELD RH (for Power Seat)** . Refer to **DISASSEMBLY - Step 7**
6. **REMOVE FRONT SEAT CUSHION INNER SHIELD RH (for Manual Seat)** . Refer to **DISASSEMBLY - Step 6**
7. **REMOVE RECLINING ADJUSTER RELEASE HANDLE LH (for Manual Seat)** . Refer to **DISASSEMBLY - Step 10**
8. **REMOVE VERTICAL ADJUSTING HANDLE (for Manual Seat)** . Refer to **DISASSEMBLY - Step 11**
9. **REMOVE FRONT SEAT CUSHION INNER SHIELD LH (for Power Seat)** . Refer to **DISASSEMBLY - Step 13**
10. **REMOVE FRONT SEAT CUSHION SHIELD LH (for Manual Seat)** . Refer to **DISASSEMBLY - Step 12**
11. **REMOVE SEAT ARMREST COVER LH (for Power Seat)** . Refer to **DISASSEMBLY - Step 18**
12. **REMOVE SEAT ARMREST COVER LH (for Manual Seat)** . Refer to **DISASSEMBLY - Step 15**
13. **REMOVE FRONT SEAT ARMREST ASSEMBLY (for Power Seat)** . Refer to **DISASSEMBLY - Step 19**
14. **REMOVE FRONT SEAT ARMREST ASSEMBLY (for Manual Seat)** . Refer to **DISASSEMBLY - Step 16**
15. **REMOVE NO. 1 FRONT SEATBACK HOOK (for Power Seat)** . Refer to **DISASSEMBLY - Step 20**
16. **REMOVE NO. 1 FRONT SEATBACK HOOK (for Manual Seat)** . Refer to **DISASSEMBLY - Step 17**
17. **REMOVE RECLINING ADJUSTER KNOB (for Manual Seat)** . Refer to **DISASSEMBLY - Step 18**
18. **REMOVE FRONT SEAT HEADREST SUPPORT (for Power Seat)** . Refer to **DISASSEMBLY - Step 21**
19. **REMOVE FRONT SEAT HEADREST SUPPORT (for Manual Seat)** . Refer to **DISASSEMBLY - Step 19**
20. **REMOVE FRONT SEATBACK COVER (for Power Seat)** . Refer to **DISASSEMBLY - Step 22**
21. **REMOVE FRONT SEATBACK COVER (for Manual Seat)** . Refer to **DISASSEMBLY - Step 20**
22. **REMOVE FRONT SEAT AIRBAG ASSEMBLY**

a. Remove the 2 nuts and the front seat airbag assembly.

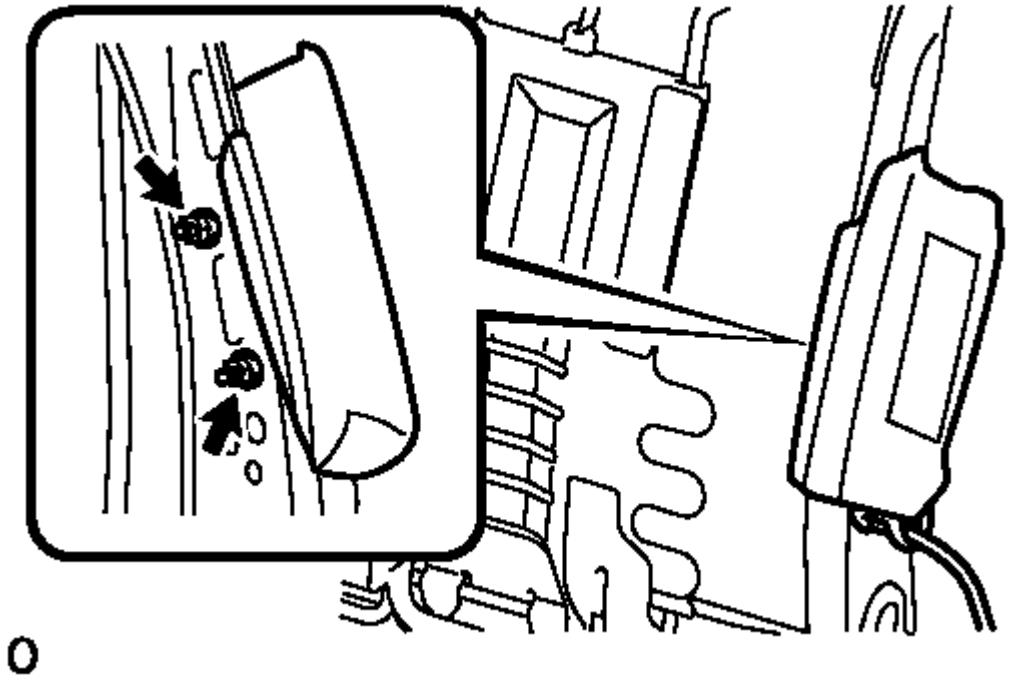


Fig. 102: Identifying Front Seat Airbag Assembly & Nuts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING: When storing the front seat airbag assembly, keep the airbag deployment side facing upward.

INSTALLATION

INSTALLATION

1. **INSTALL FRONT SEAT AIRBAG ASSEMBLY**
   a. Check that the ignition switch is off.
   b. Check that the cable is disconnected from the negative (-) battery terminal.

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

   c. Install the front seat airbag assembly with the 2 new nuts.

Torque: 5.5 N*m (56 kgf*cm, 49 in.*lbf)

WARNING: When storing the front seat airbag assembly, keep the airbag deployment side facing upward.

2. **INSTALL FRONT SEATBACK COVER (for Power Seat)** . Refer to **REASSEMBLY - Step 15**
3. **INSTALL FRONT SEATBACK COVER (for Manual Seat)** . Refer to **REASSEMBLY - Step 16**
4. **INSTALL FRONT SEAT HEADREST SUPPORT (for Power Seat)** . Refer to **REASSEMBLY - Step 16**
5. **INSTALL FRONT SEAT HEADREST SUPPORT (for Manual Seat)** . Refer to **REASSEMBLY - Step 17**
6. **INSTALL RECLINING ADJUSTER KNOB (for Manual Seat)** . Refer to **REASSEMBLY - Step 18**
7. **INSTALL NO. 1 FRONT SEATBACK HOOK (for Power Seat)** . Refer to **REASSEMBLY - Step 17**
8. **INSTALL NO. 1 FRONT SEATBACK HOOK (for Manual Seat)** . Refer to **REASSEMBLY - Step 19**
9. **INSTALL FRONT SEAT ARMREST ASSEMBLY (for Power Seat)** . Refer to **REASSEMBLY - Step 18**
10. **INSTALL FRONT SEAT ARMREST ASSEMBLY (for Manual Seat)** . Refer to **REASSEMBLY - Step 20**
11. **INSTALL SEAT ARMREST COVER LH (for Power Seat)** . Refer to **REASSEMBLY - Step 19**
12. **INSTALL SEAT ARMREST COVER LH (for Manual Seat)** . Refer to **REASSEMBLY - Step 21**
13. **INSTALL FRONT SEAT CUSHION INNER SHIELD LH (for Power Seat)** . Refer to **REASSEMBLY - Step 24**
14. **INSTALL FRONT SEAT CUSHION SHIELD LH (for Manual Seat)** . Refer to **REASSEMBLY - Step 24**
15. **INSTALL VERTICAL ADJUSTING HANDLE (for Manual Seat)** . Refer to **REASSEMBLY - Step 25**
16. **INSTALL RECLINING ADJUSTER RELEASE HANDLE LH (for Manual Seat)** . Refer to **REASSEMBLY - Step 26**
17. **INSTALL FRONT SEAT CUSHION INNER SHIELD RH (for Power Seat)** . Refer to **REASSEMBLY - Step 30**
18. **INSTALL FRONT SEAT CUSHION INNER SHIELD RH (for Manual Seat)** . Refer to **REASSEMBLY - Step 30**
19. **INSTALL NO. 1 FRONT SEAT INNER CUSHION SHIELD (for Power Seat)** . Refer to **REASSEMBLY - Step 31**
20. **INSTALL FRONT SEAT ASSEMBLY (for Power Seat)**

    Refer to **INSTALLATION**

21. **INSTALL FRONT SEAT ASSEMBLY (for Manual Seat)**

    Refer to **INSTALLATION**

22. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: **When disconnecting the cable, some systems need to be initialized after**

the cable is reconnected. Refer to INITIALIZATION .

Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

23. **ZERO POINT CALIBRATION AND SENSITIVITY CHECK (for Front Passenger Seat)**

    Refer to **INITIALIZATION**

24. **INSPECT FRONT SEAT ASSEMBLY**

    a. During sliding operation of the front seat, check that the left and right adjusters move together smoothly and lock simultaneously.

       If the seat adjusters do not lock simultaneously, loosen the seat mounting bolts to adjust the adjuster position.

    b. w/ Seat Heater Seat System:

       Check the seat heater operation.

       1. Turn the ignition switch to ON.
       2. Push the seat heater switch on.
       3. Wait 5 minutes or more and confirm that the seat surface becomes warm.

25. **INSPECT SRS WARNING LIGHT**

    Refer to **DIAGNOSIS SYSTEM**

DISPOSAL

DISPOSAL

HINT:

- Disposal procedure for the RH side is the same as that for the LH side.
- The procedure described below is for the LH side.
- When scrapping a vehicle equipped with the SRS or disposing of the front seat side airbag, deploy the airbag first in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the SERVICE DEPT. of the TOYOTA MOTOR SALES, U.S.A., INC.

WARNING:

- **Before performing pre-disposal deployment of any SRS component, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.**
- **Never dispose of a front seat airbag assembly that has an undeployed airbag.**

- **The airbag emits an exploding sound when it is deployed, so perform operation outdoors and where it will not create a nuisance to nearby residents.**
- **When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electric noise.**

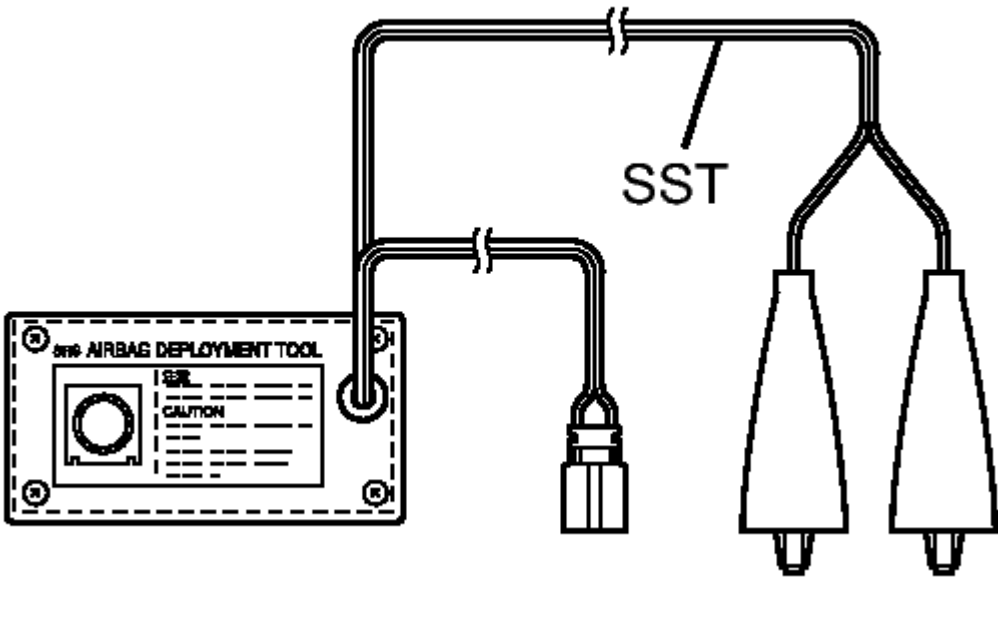


Fig. 103: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **When deploying the airbag, perform the operation at least 10 m (32.8 f away from the airbag.**
- **The front seat airbag assembly becomes extremely hot when the airba is deployed, so do not touch it for at least 30 minutes after deploymer**
- **Use gloves and safety glasses when handling a front seat airbag assembly which has been deployed.**
- **Always wash your hands with water after completing the operation.**
- **Do not apply water, etc. to a front seat airbag which has been deploye**
- **An airbag or pretensioner may be activated by static electricity. To prevent this, be sure to touch a metal surface with bare hands to discharge static electricity before performing this procedure.**

DISPOSAL

1. **DISPOSE OF FRONT SEAT AIRBAG ASSEMBLY (WHEN INSTALLED IN VEHICLE)**

HINT:

Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST. See step 1.

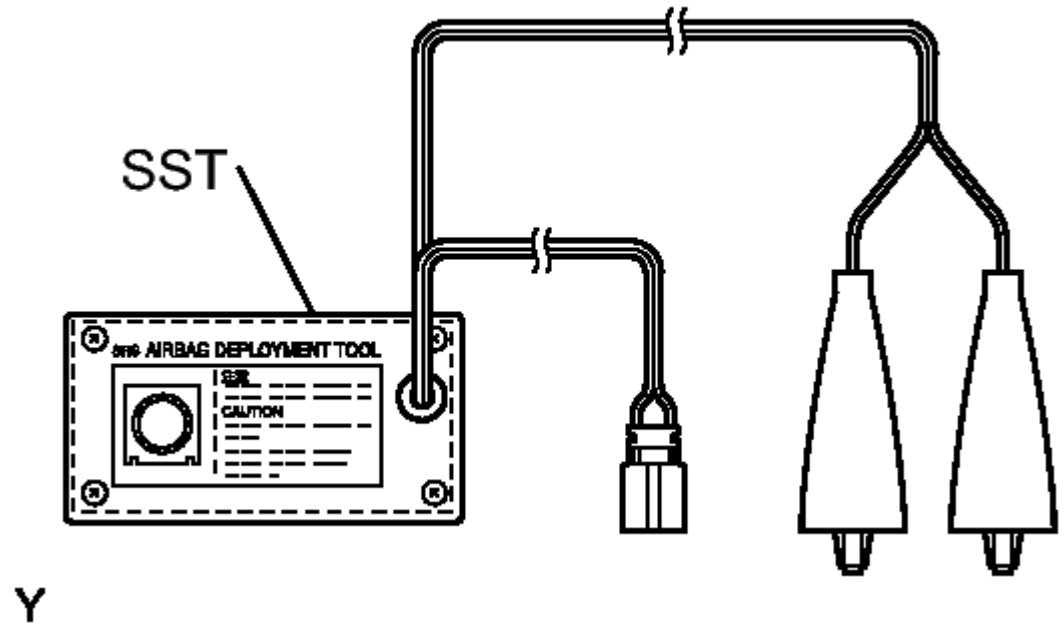


Fig. 104: Identifying SRS Air Bag Deployment SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00700**

b. Read the precaution. Refer to **PRECAUTION** .

c. Disconnect the cable from the negative battery terminal.

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

d. Connect SST.

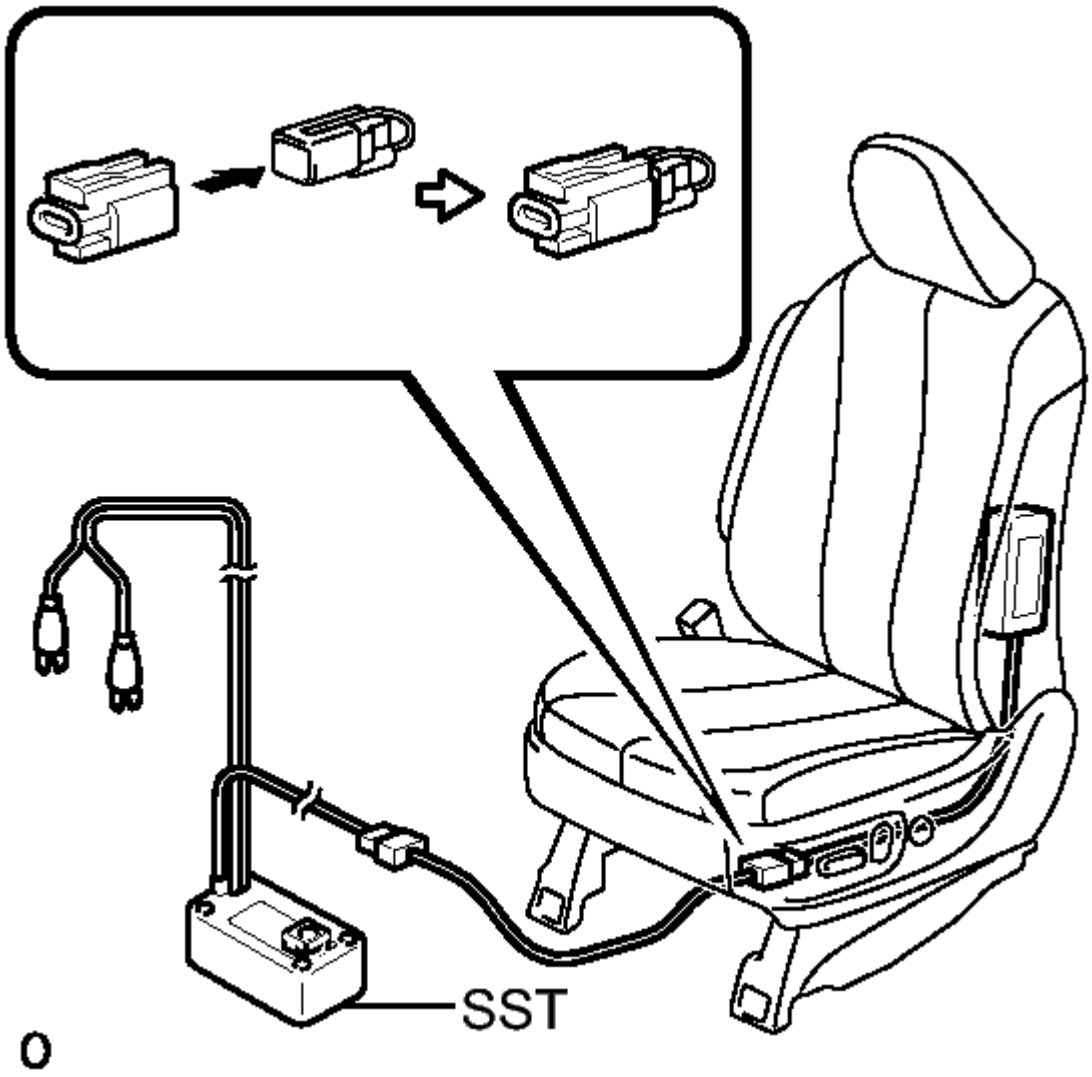


Fig. 105: Connecting SST Connector To Front Seat Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00700**
- **SST: 09082-00820**

1. Connect the SST connector to the front seat airbag assembly.

   NOTE: Do not lock the secondary lock of the twin lock to avoid damaging SST connector and wire harness.

2. Move SST to at least 10 m (32.8 ft.) away from the vehicle.

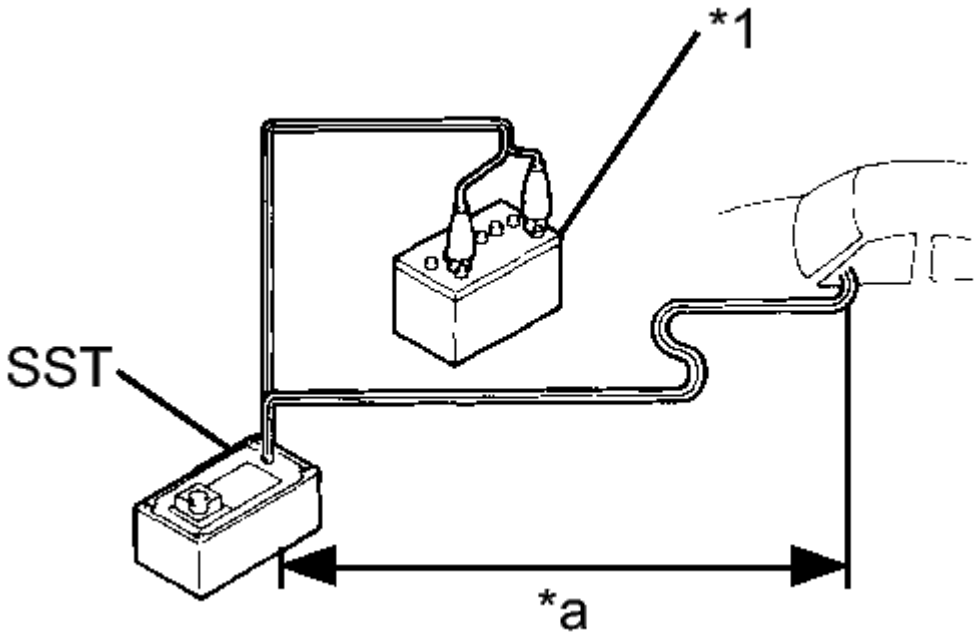


Fig. 106: Identifying Battery & SST Wire Harness Clearance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Battery
*a	10 m or more

3. Close all doors and windows of the vehicle.

NOTE: Do not damage the SST wire harness.

4. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.

e. Deploy the airbag.

1. Check that no one is inside the vehicle or within a 10 m (32.8 ft.) radius of the vehicle.
2. Press the SST activation switch and deploy the airbag.

WARNING:

- **When deploying the airbag, make sure that no one is near the vehicle.**
- **The front seat airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a front**

seat airbag assembly which has been deployed.

- **Always wash your hands with water after completing the operation.**

HINT:

The airbag is deployed as the LED on the SST activation switch illuminates.

2. **DISPOSE OF FRONT SEAT AIRBAG ASSEMBLY (WHEN NOT INSTALLED IN VEHICLE)**

NOTE: Be sure to observe the following procedure when deploying the airbag.

HINT:

Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST. See step 2.

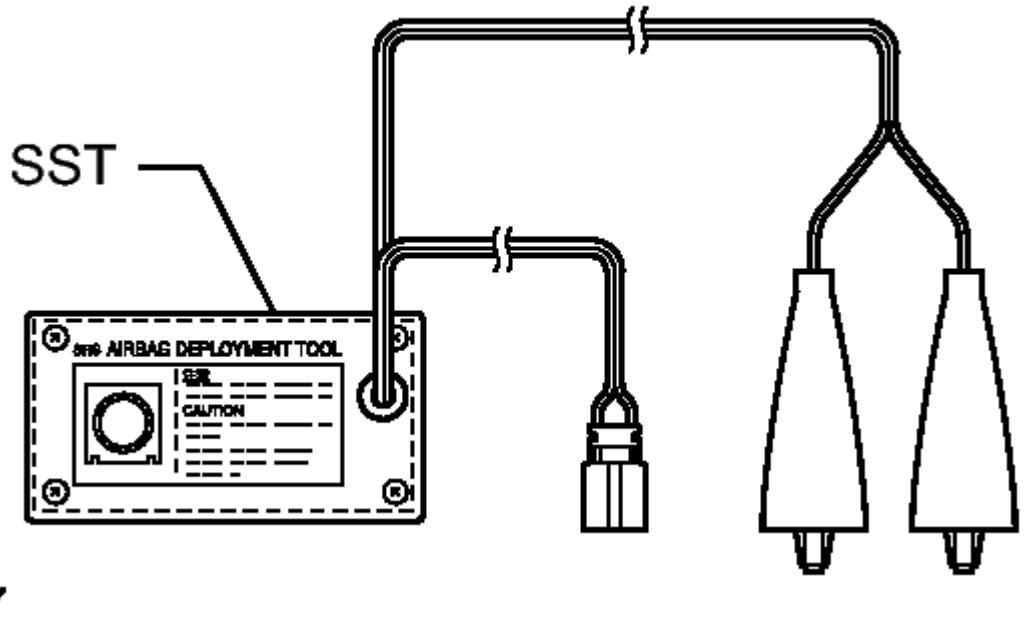


Fig. 107: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

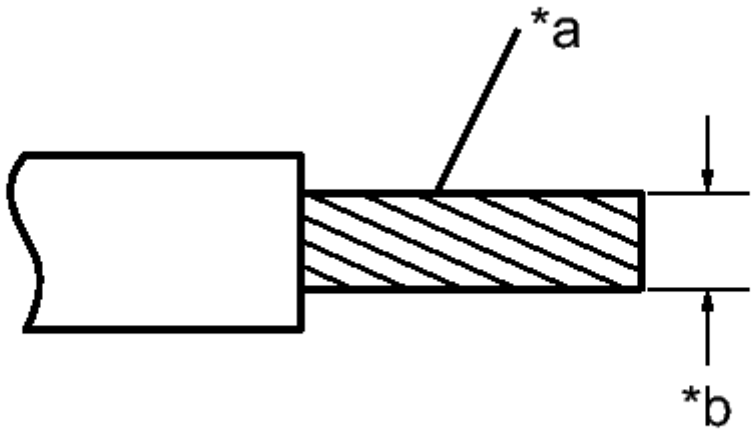
- **SST: 09082-00700**

b. Remove the front seat airbag assembly. Refer to **REMOVAL**.

WARNING: Before removing the front seat assembly, wait at least 90 seconds after turning the power switch off and disconnecting

the cable from the negative (-) battery terminal.

c. Using braided wire, tie down the front seat airbag assembly to an unneeded tire.



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Fig. 108: Identifying Stripped Wire Section & Diameter
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*a	Stripped Wire Section
*b	Wire Diameter

Wire

Stripped wire section

1.25 mm^2 (0.0019 $in.^2$) or more

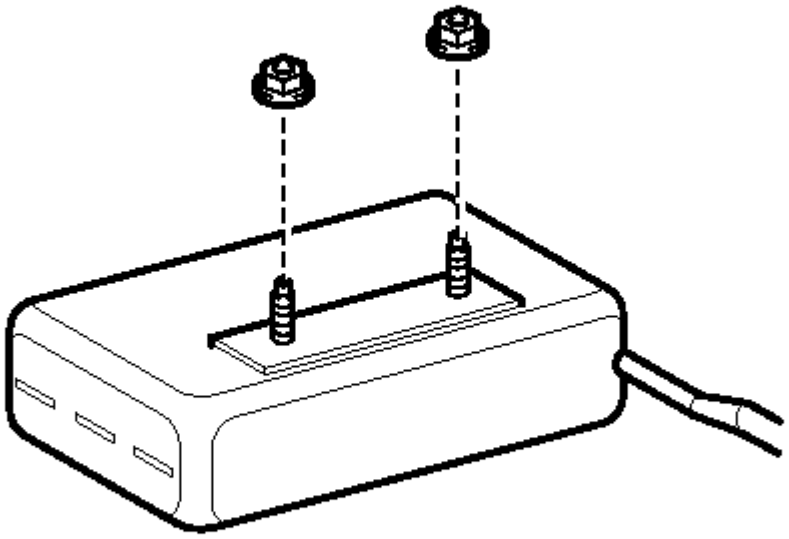
WARNING: If the wire is too thin or an alternative object is used to tie down the front seat airbag assembly, it may snap when the airbag is deployed. Always use a wire for vehicle use with an area of at least 1.25 mm^2 (0.0019 $in.^2$).

HINT:

To calculate the area of the stripped wire section:

Area = 3.14 x $(Diameter)^2$ / 4

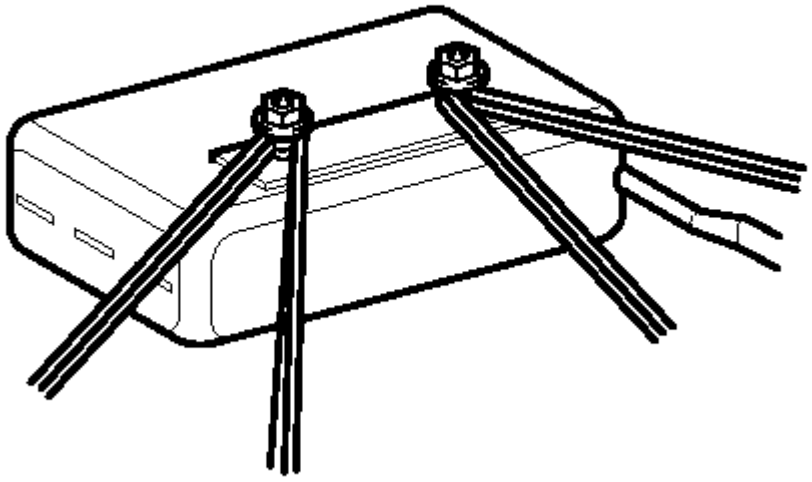
1. Install the 2 nuts to the front seat airbag assembly.



O

Fig. 109: Identifying Front Seat Airbag Assembly & Nuts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

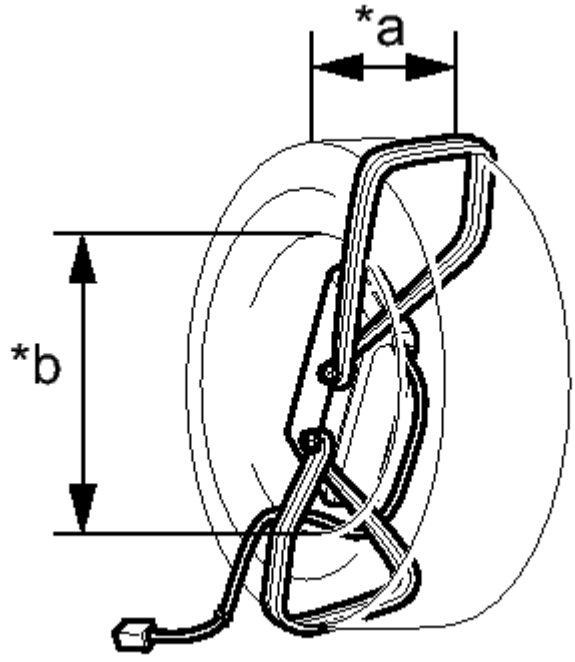
2. Wind the wires around the stud bolts of the front seat airbag assembly as shown in the illustration.



o

Fig. 110: Identifying Front Seat Airbag Assembly, Wires & Stud Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Position the front seat airbag assembly inside the tire.



o

Fig. 111: Identifying Front Seat Airbag Assembly Position Inside Tire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*a	Width
*b	Inner Diameter

Minimum tire size

Must exceed the following dimensions

Width

185 mm (7.28 in.)

Inner diameter

360 mm (1.18 ft.)

WARNING:

- **Make sure that the wires are tight. If there is slack in the wires, the front seat airbag assembly may break loose when the airbag is deployed.**
- **Face the front seat airbag assembly deployment surface toward the inside the tire to evenly distribute the force of deployment.**

NOTE: **The tire may be marked by the airbag deployment, so use an unneeded tire.**

d. Connect SST.
   1. Connect the SST connector to the front seat airbag assembly connector.

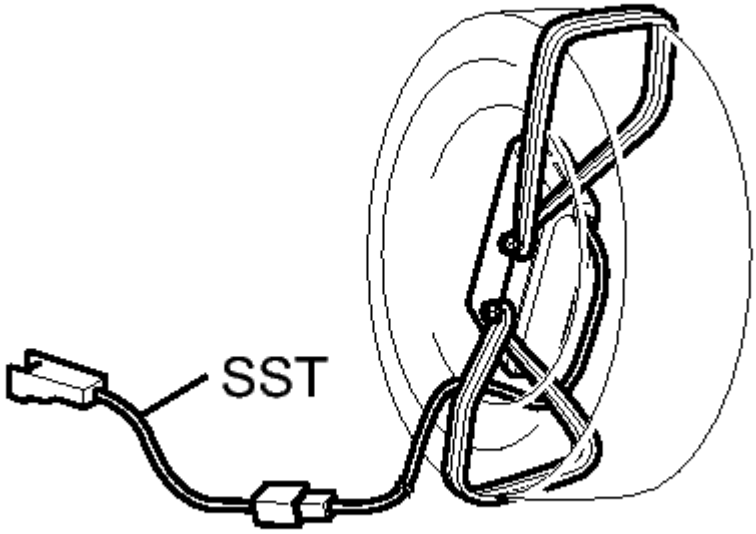


Fig. 112: Connecting SST Connector To Front Seat Airbag Assembly Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **SST: 09082-00820**

e. Place the tires.

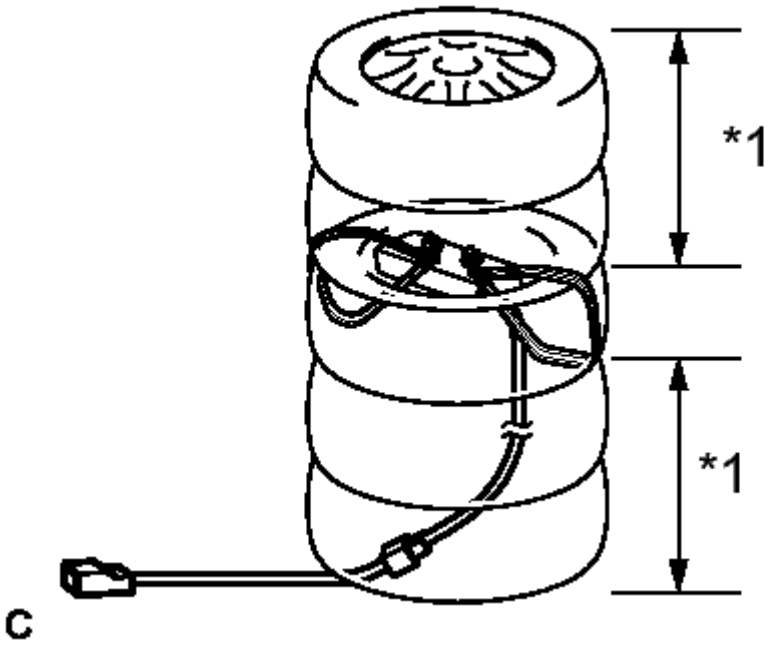


Fig. 113: Identifying Front Seat Airbag Assembly & Tires (2 Or More)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

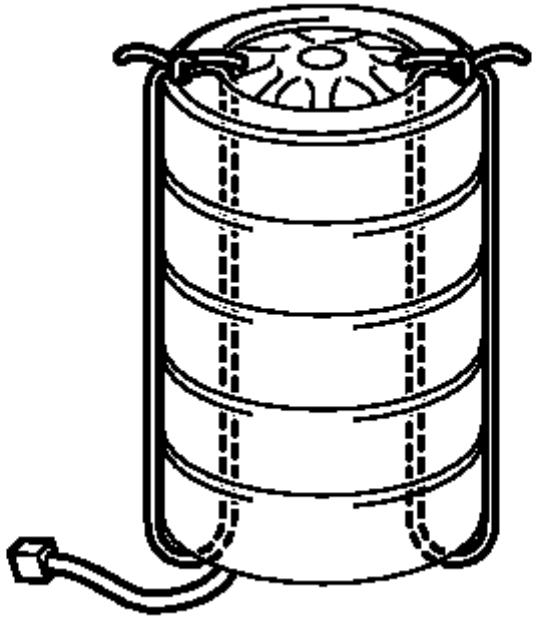
TEXT IN ILLUSTRATION

*1	Tire (2 or more)

1. Place at least 2 tires under the tire to which the front seat airbag assembly is tied.
2. Place at least 2 tires onto the tire to which the front seat airbag assembly is tied. The top tire should have a wheel installed.

NOTE: Do not place the SST connector under the tire because it could be damaged.

3. Tie the tires together with the 2 wires.

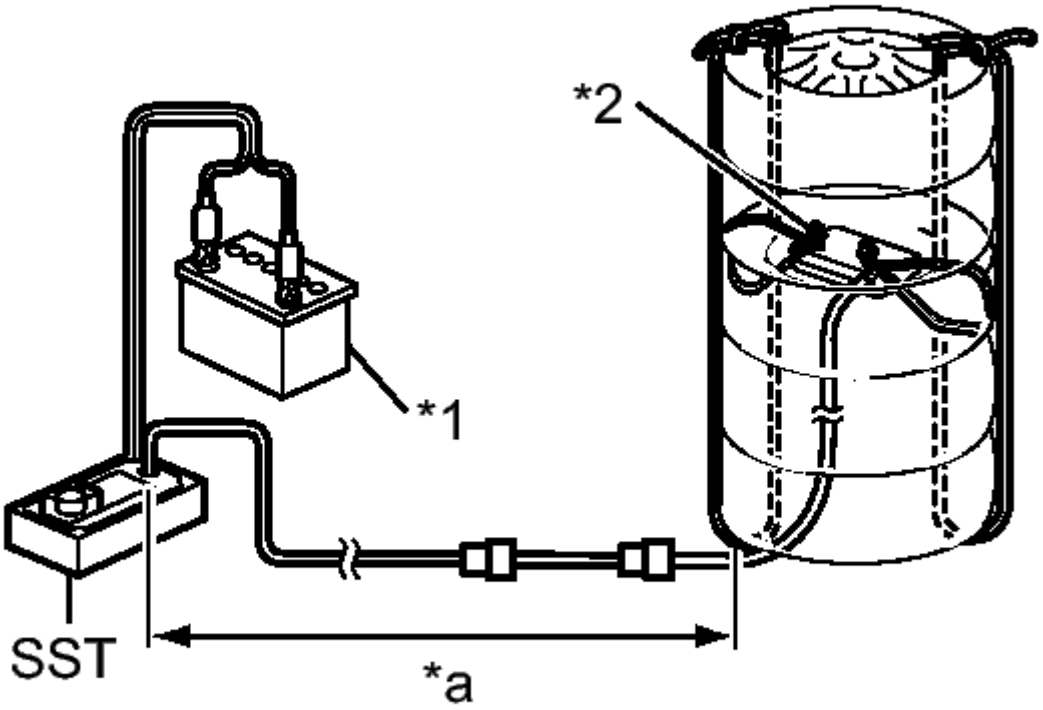


H

Fig. 114: Tying Tires Together With Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING: Make sure that the wires are tight. Looseness in the wires results in the tires breaking loose when the airbag is deployed.

f. Connect SST.
   1. Connect the SST connector.



C

Fig. 115: Identifying Front Seat Airbag Assembly, Battery & SST Distance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Battery
*2	Front Seat Airbag Assembly
*a	10 m or more

- **SST: 09082-00700**

NOTE: **To avoid damaging the SST connector or wire harness, do not lock the secondary lock of the twin lock. Also, secure some**

slack for the SST wire harness inside the tire.

2. Move SST at least 10 m (32.8 ft.) away from the airbag tied down to the tire.

g. Deploy the airbag.

1. Connect the red clip of SST to the positive (+) battery terminal and the black clip of SST to the negative (-) battery terminal.
2. Check that no one is within a 10 m (32.8 ft.) radius of the tire to which the front seat airbag assembly is tied.
3. Press the SST activation switch and deploy the airbag.

WARNING: Before deployment, make sure that no one is near the airbag.

HINT:

The airbag is deployed as the LED of the SST activation switch comes on.

h. Dispose of the front seat airbag assembly.



H00544

Fig. 116: Placing Front Seat Airbag Assembly In Plastic Bag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

WARNING:

- **The front seat airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**

- **Use gloves and safety glasses when handling a front seat airbag assembly with a deployed airbag.**
- **Do not apply water etc. to a front seat airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

1. Remove the front seat airbag assembly from the tire.
2. Place the front seat airbag assembly in a plastic bag, tie it tightly, and dispose of it according to local regulations.

CENTER AIRBAG SENSOR ASSEMBLY

COMPONENTS

ILLUSTRATION

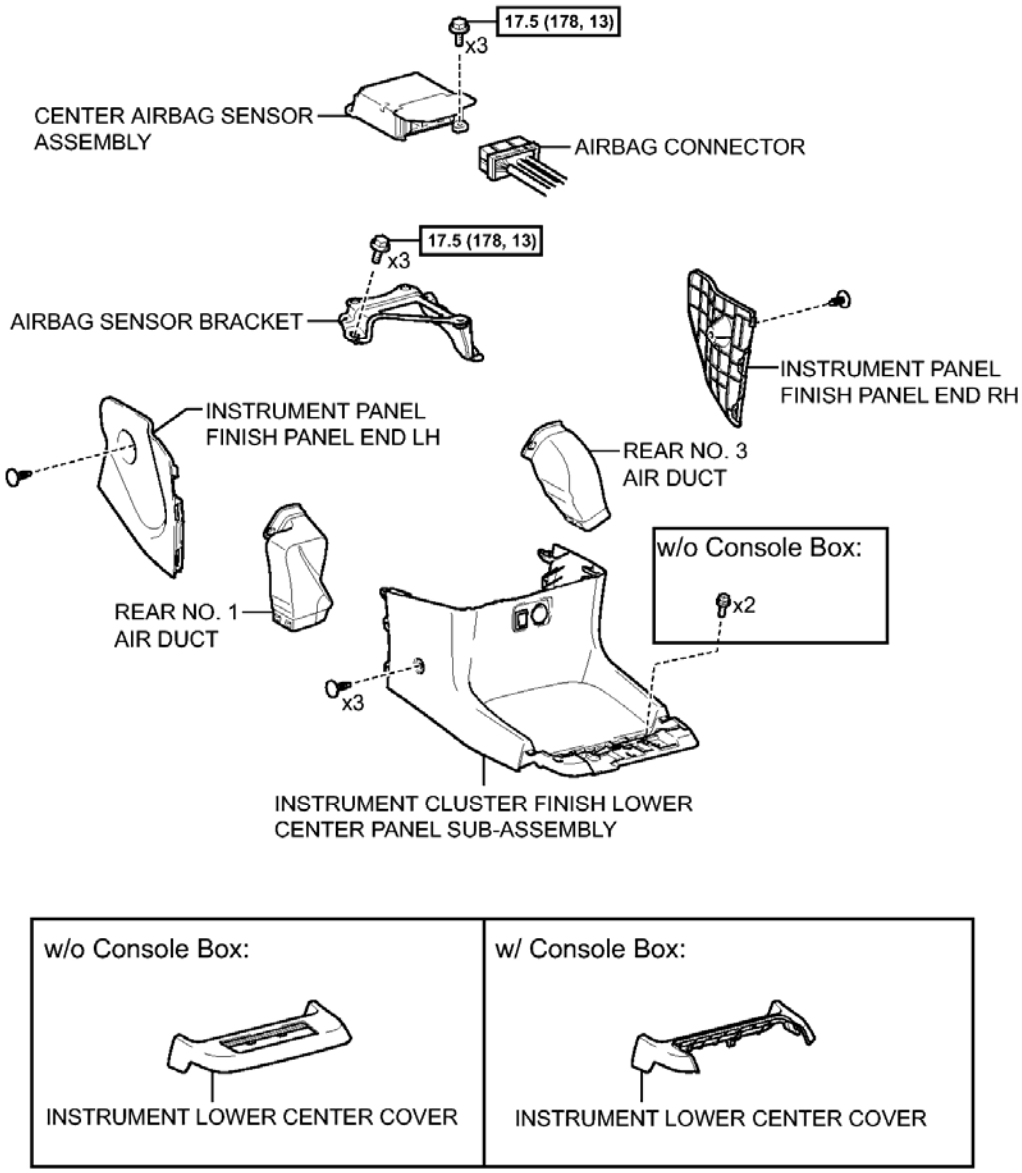


Fig. 117: Center Airbag Sensor Assembly Replacement Components With Torque Specifications
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

ON-VEHICLE INSPECTION

1. **INSPECT CENTER AIRBAG SENSOR ASSEMBLY (for Vehicle not Involved in Collision)**

a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .

2. **INSPECT CENTER AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)**
   a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .
3. **INSPECT CENTER AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision)**

WARNING: For center airbag sensor removal and installation procedures. Refer to REMOVAL and Refer to INSTALLATION, and follow the correct procedure.

a. Replace the center airbag sensor.

REMOVAL

REMOVAL

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

2. **REMOVE CONSOLE BOX ASSEMBLY (for Slide Type)**

   Refer to **REMOVAL**

3. **REMOVE CONSOLE BOX ASSEMBLY (for Fixed Type)**

   Refer to **REMOVAL**

4. **REMOVE INSTRUMENT LOWER CENTER COVER (w/ Console Box)** . Refer to **REMOVAL - Step 42**
5. **REMOVE INSTRUMENT LOWER CENTER COVER (w/o Console Box)** . Refer to **REMOVAL - Step 41**
6. **REMOVE INSTRUMENT PANEL FINISH PANEL END RH** . Refer to **REMOVAL - Step 39**
7. **REMOVE INSTRUMENT PANEL FINISH PANEL END LH** . Refer to **REMOVAL - Step 40**
8. **REMOVE INSTRUMENT CLUSTER FINISH LOWER CENTER PANEL SUB-ASSEMBLY** . Refer to **REMOVAL - Step 43**

9. **REMOVE REAR NO. 1 AIR DUCT**
    a. Disengage the 6 claws to remove the rear No. 1 air duct.

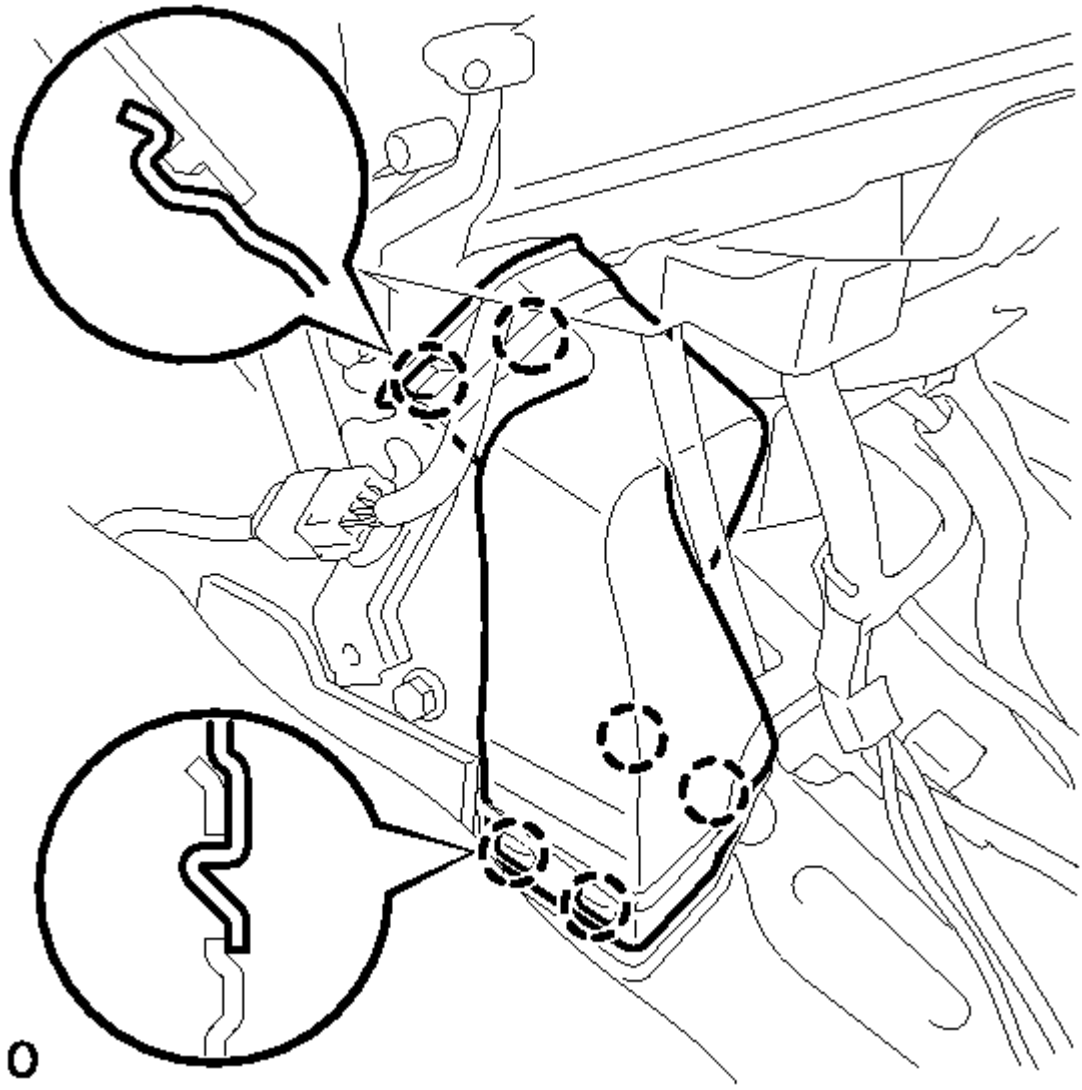


Fig. 118: Identifying Rear No. 1 Air Duct & Claws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

10. **REMOVE REAR NO. 3 AIR DUCT**
    a. Disengage 6 claws to remove the rear No. 3 air duct.

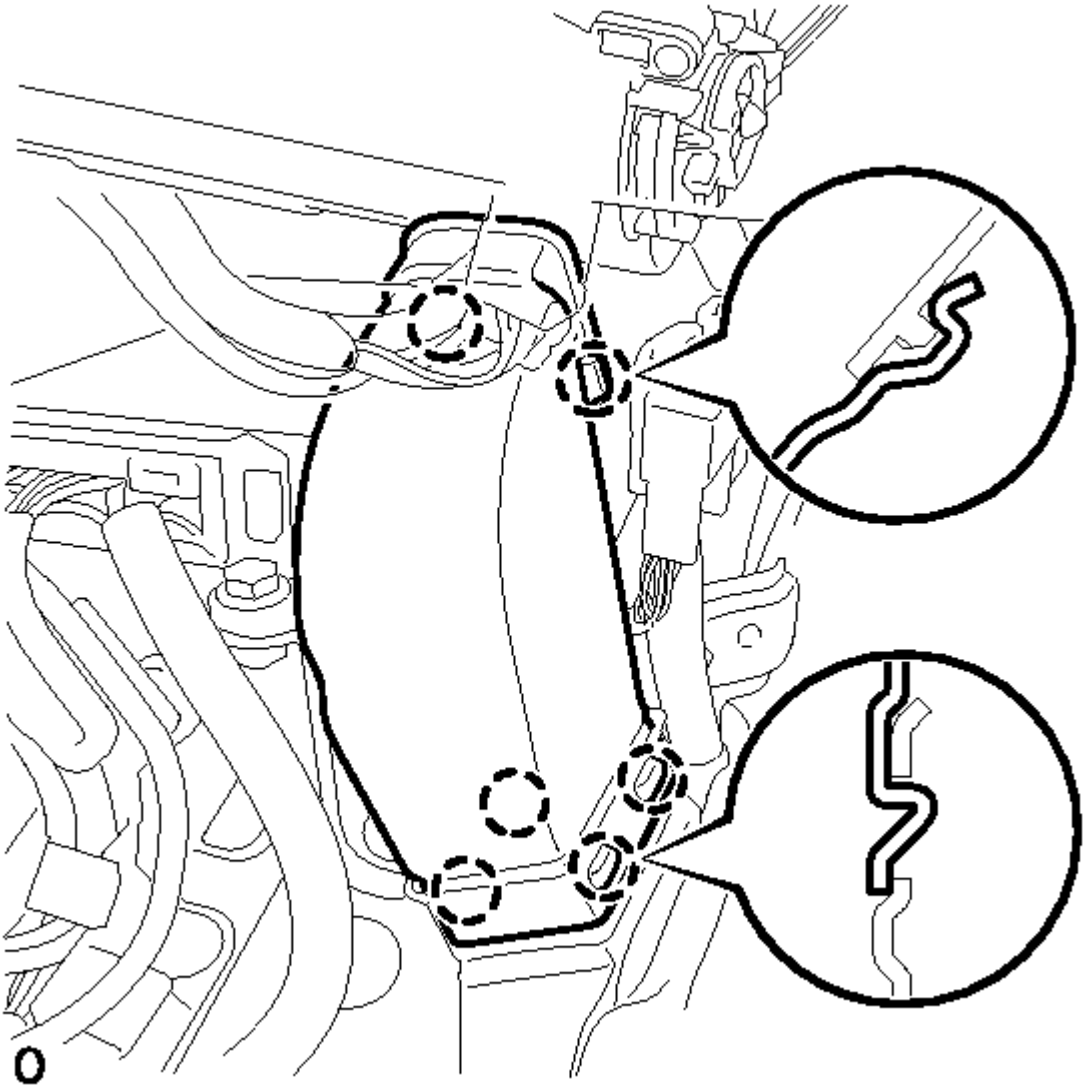


Fig. 119: Identifying Rear No. 3 Air Duct & Claws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

11. **REMOVE CENTER AIRBAG SENSOR ASSEMBLY**

WARNING: Confirm that the negative battery terminal is disconnected before performing the operation. Even an impact to only the airbag sensor will cause the airbag to deploy.

a. Pull the lever down and detach the connector holder.

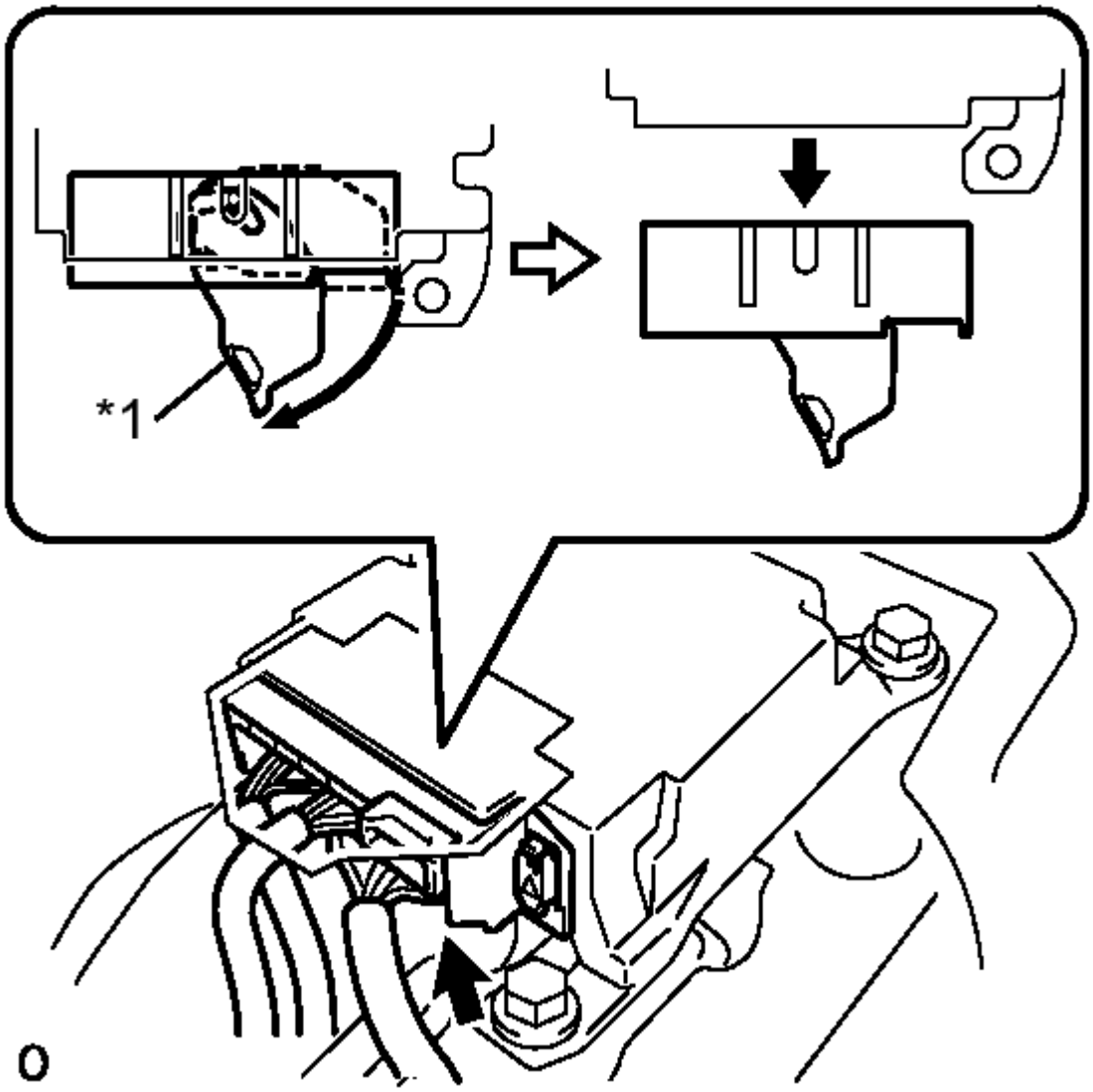


Fig. 120: Removing Center Airbag Sensor Assembly Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT ILLUSTRATION

*1	Lever

b. Remove the 3 bolts and the center airbag sensor.

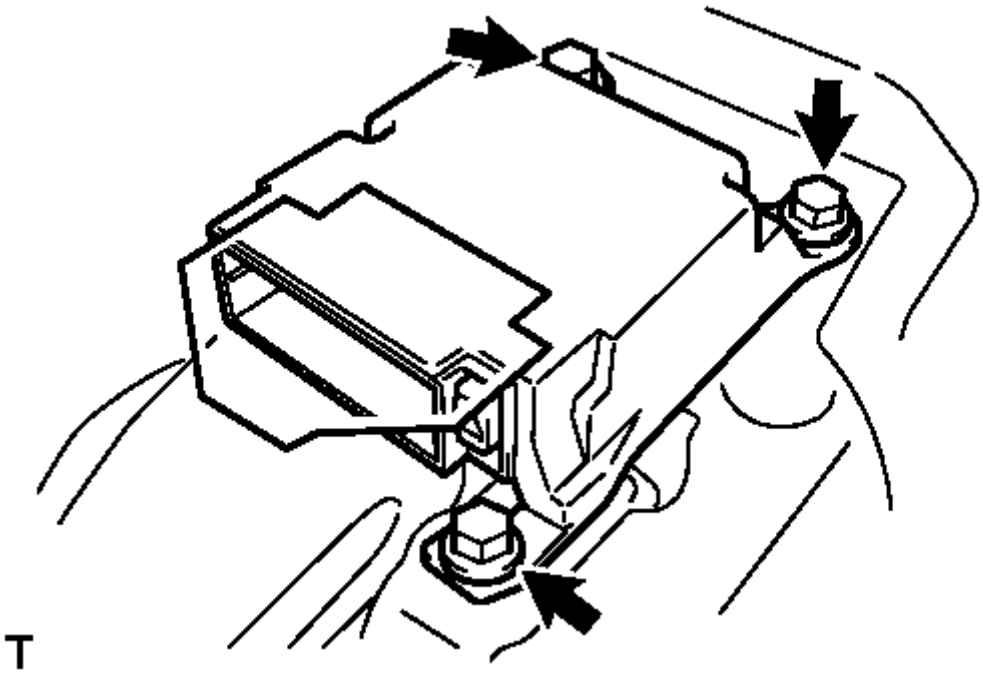


Fig. 121: Identifying Airbag Sensor Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

12. **REMOVE AIRBAG SENSOR BRACKET**
    a. Remove the 3 bolts and the airbag sensor bracket.

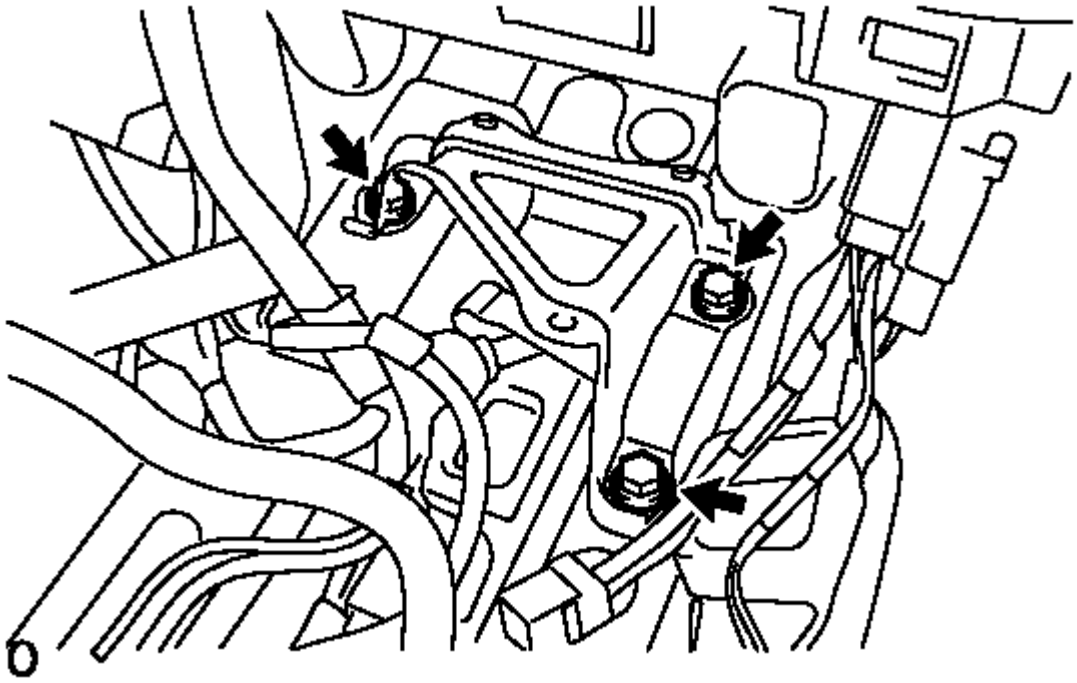


Fig. 122: Identifying Airbag Sensor Bracket & Bolts

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

INSTALLATION

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **INSTALL AIRBAG SENSOR BRACKET**
   a. Install the airbag sensor bracket with the 3 bolts.

      Torque: 17.5 N*m (178 kgf*cm, 13 ft.*lbf)

2. **INSTALL CENTER AIRBAG SENSOR ASSEMBLY**
   a. Check that the ignition switch is off.
   b. Check that the cable is disconnected from the negative (-) battery terminal.

      WARNING:
      - **Confirm that the negative battery terminal is disconnected before performing the operation. Even an impact to only the airbag sensor will cause the airbag to deploy.**
      - **Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.**

   c. Install the center airbag sensor with the 3 bolts.

      Torque: 17.5 N*m (178 kgf*cm, 13 ft.*lbf)

      NOTE:
      - **Do not use an center airbag sensor that has been dropped.**
      - **Do not subject the center airbag sensor to any impact or force.**
      - **Confirm that the carpet does not interfere with the installation plane.**

   d. Confirm that there is no looseness by shaking the center airbag sensor.
   e. Connect the connector holder to lock the lever.

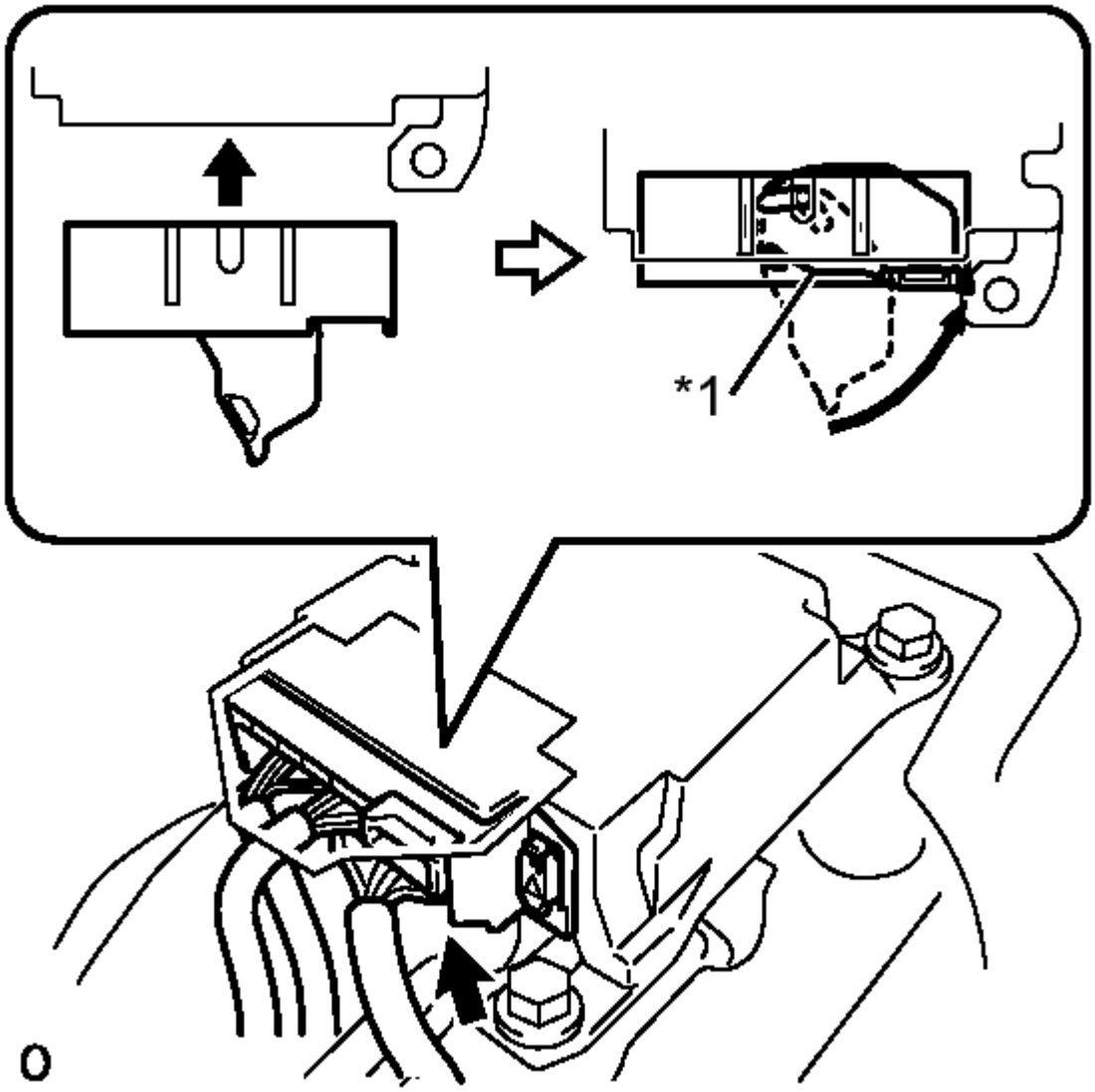


Fig. 123: Installing Center Airbag Sensor Assembly Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Lever

NOTE: Confirm that the lever is locked.

f. Confirm that the drip-proof sheet has not been removed and does not cut into the connectors.

3. **INSTALL REAR NO. 1 AIR DUCT**
   a. Engage 6 claws to install the rear No. 1 air duct.
4. **INSTALL REAR NO. 3 AIR DUCT**
   a. Engage 6 claws to install the rear No. 3 air duct.
5. **INSTALL INSTRUMENT CLUSTER FINISH LOWER CENTER PANEL SUB-ASSEMBLY** .

Refer to **INSTALLATION - Step 15**

6. **INSTALL INSTRUMENT PANEL FINISH PANEL END RH** . Refer to **INSTALLATION - Step 18**
7. **INSTALL INSTRUMENT PANEL FINISH PANEL END LH** . Refer to **INSTALLATION - Step 19**
8. **INSTALL INSTRUMENT LOWER CENTER COVER (w/ Console Box)** . Refer to **INSTALLATION - Step 17**
9. **INSTALL INSTRUMENT LOWER CENTER COVER (w/o Console Box)** . Refer to **INSTALLATION - Step 16**
10. **INSTALL CONSOLE BOX ASSEMBLY (for Slide Type)**

    Refer to **INSTALLATION**

11. **INSTALL CONSOLE BOX ASSEMBLY (for Fixed Type)**

    Refer to **INSTALLATION**

12. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

    NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

    Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

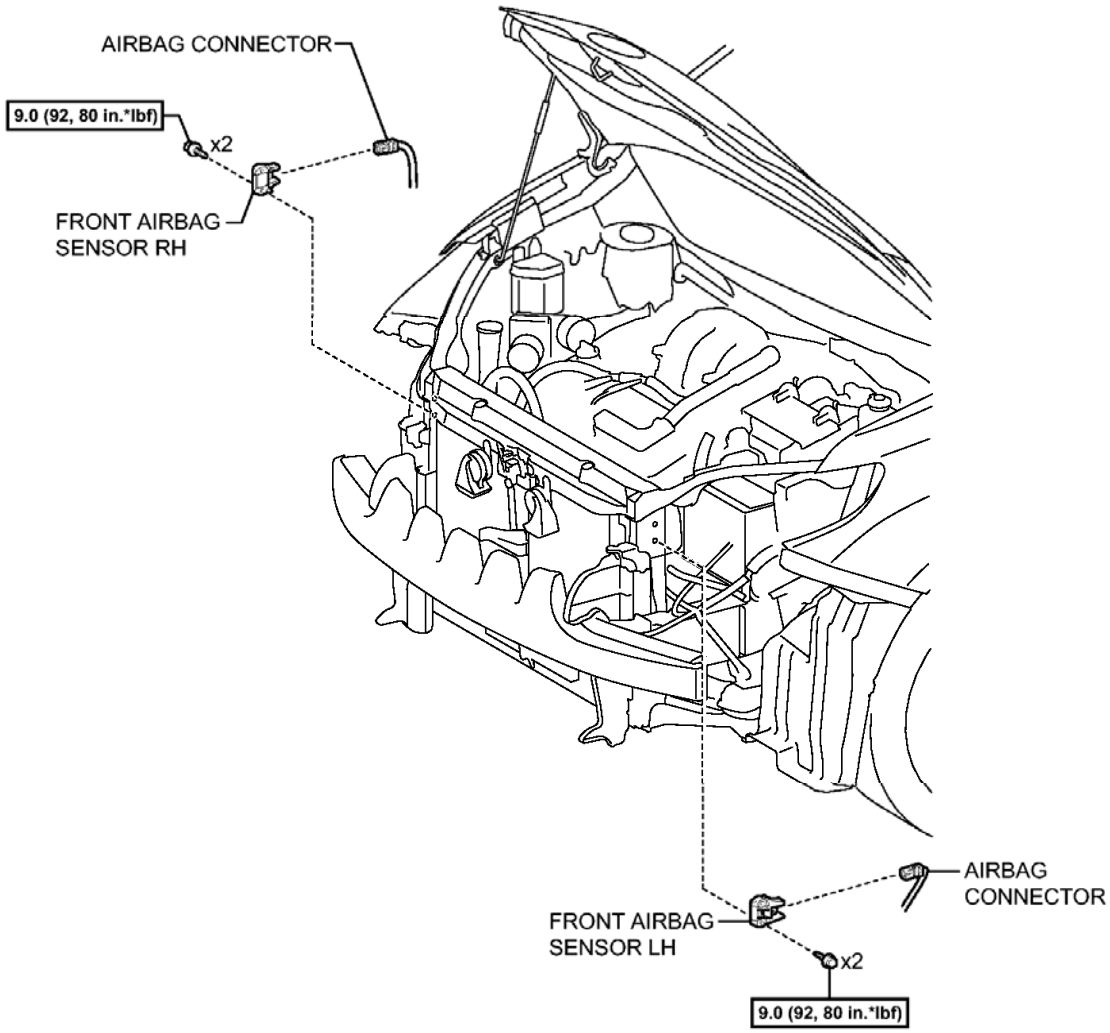
13. **INSPECT SRS WARNING LIGHT**

    Refer to **DIAGNOSIS SYSTEM**

FRONT AIRBAG SENSOR

COMPONENTS

ILLUSTRATION



N*m (kgf*cm, ft.*lbf): Specified torque

o

Fig. 124: Front Airbag Sensor Replacement Components With Torque Specifications
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

ON-VEHICLE INSPECTION

1. **INSPECT FRONT AIRBAG SENSOR (for Vehicle not Involved in Collision)**

a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .

2. **INSPECT FRONT AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)**

WARNING: For front airbag sensor removal and installation procedures. Refer to REMOVAL and Refer to INSTALLATION, and carefully follow the correct procedure.

a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .

b. When the center front bumper or its periphery is damaged, check whether there is any damage to the front airbag sensor. If there are any defects, such as those mentioned below, replace the front airbag sensor with a new one:

- Any cracks, dents or chips in the case.
- Any cracks or other damage to the connector.
- Peeling of the label or damage to the serial number.

3. **INSPECT FRONT AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision)**

WARNING: For front airbag sensor removal and installation procedures. Refer to REMOVAL and Refer to INSTALLATION, and carefully follow the correct procedure.

a. Replace the front airbag sensor.

REMOVAL

REMOVAL

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

HINT:

The procedure described below is for the LH side. Use the same procedure for both the RH and LH sides, unless otherwise specified.

REMOVAL

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTE: When disconnecting the cable, some systems need to be initialized after

the cable is reconnected. Refer to INITIALIZATION .

2. **REMOVE HEADLIGHT ASSEMBLY**

   Refer to **REMOVAL**

3. **REMOVE FRONT AIRBAG SENSOR LH**

   WARNING: Confirm that the negative battery terminal is disconnected before performing the operation. Even an impact to only the airbag sensor will cause the airbag to deploy.

   a. Disconnect the connector from the front airbag sensor.

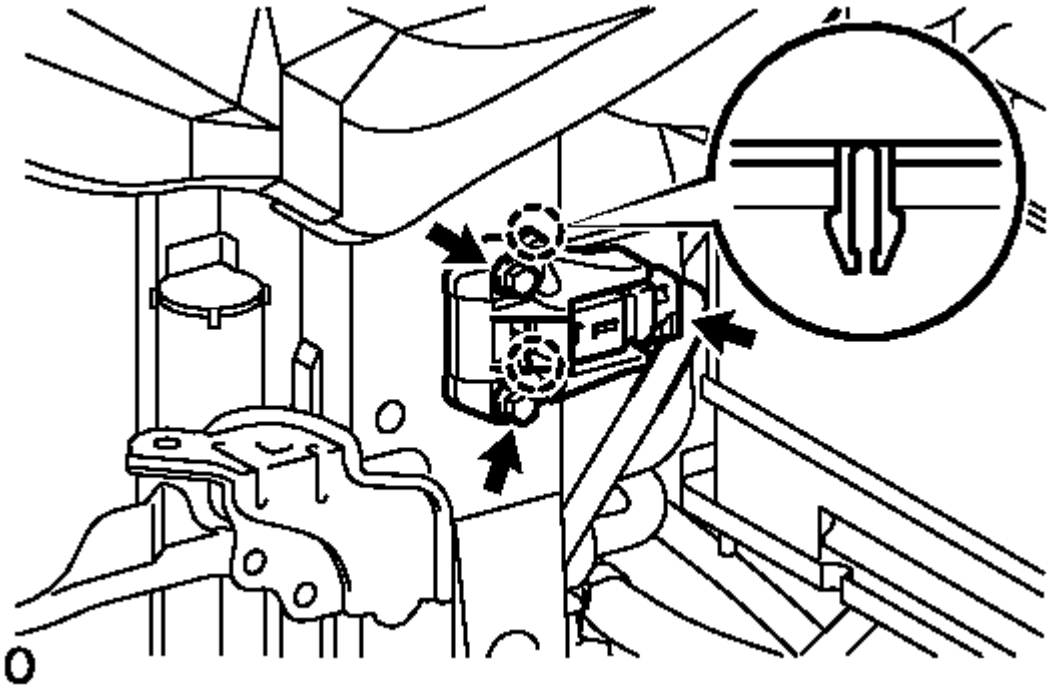
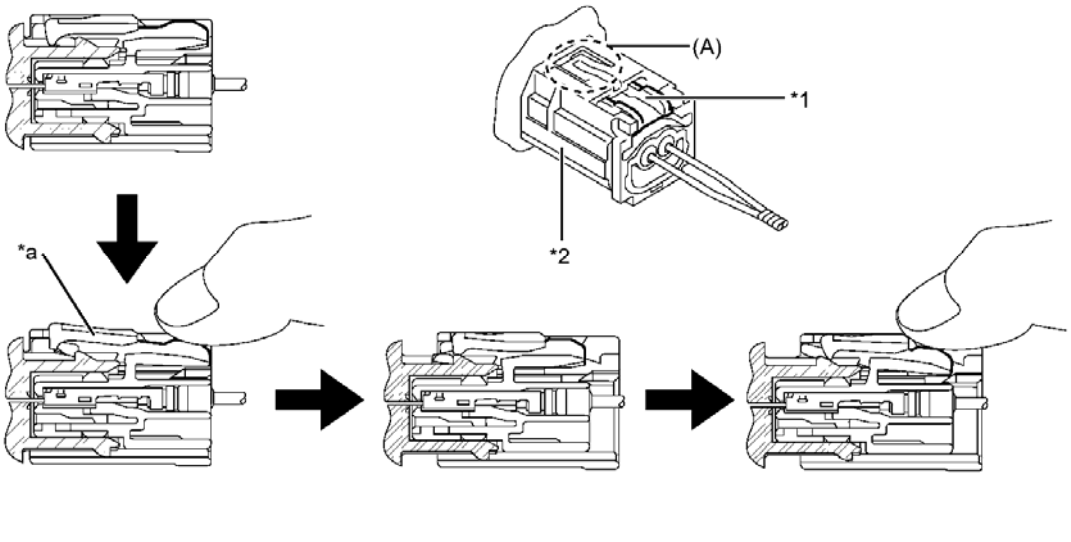


Fig. 125: Identifying Front Airbag Sensor, Connector & Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NOTE: When disconnecting any airbag connector, take care not to damage the airbag wire harness.

   1. Push down the white housing lock and slide the yellow CPA. (At this time, the connector cannot be disconnected yet.)



C

Fig. 126: Disconnecting Airbag Connector Housing
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Housing Lock (White)	*2	CPA (Yellow)
*a	Connector Lock is Released.	-	-

2. Push down the white housing lock again and disconnect the connector.

NOTE: Do not push down the part (A) shown in the illustration when disconnecting.

3. After disconnecting the connector, check that the position of the white housing lock is correct as shown in the illustration.

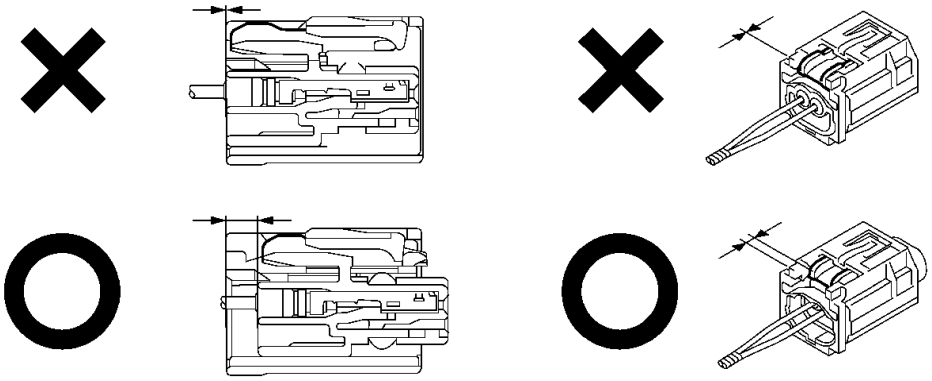


Fig. 127: Identifying Housing Lock Position (White Part)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Remove the 2 bolts and the front airbag sensor.

INSTALLATION

INSTALLATION

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

HINT:

The procedure described below is for the LH side. Use the same procedure for both the RH and LH sides, unless otherwise specified.

INSTALLATION

1. **INSTALL FRONT AIRBAG SENSOR LH**

NOTE:

- **Do not use a front airbag sensor that has been dropped.**
- **Do not subject the front airbag sensor to any impact or force.**

a. Check that the ignition switch is off.
b. Check that the cable is disconnected from the negative (-) battery terminal.

WARNING:

- **Confirm that the negative battery terminal is disconnected before performing the operation. Even an impact to only the airbag sensor will cause the airbag to deploy.**
- **Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS**

system.

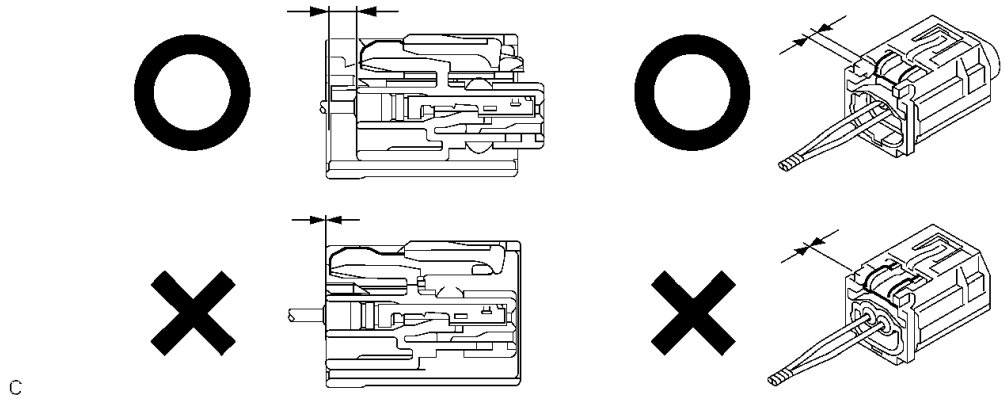
c. Install the front airbag sensor with the 2 bolts.

Torque: 9.0 N*m (92 kgf*cm, 80 in.*lbf)

d. Connect the connector to the front airbag sensor.

NOTE: When connecting any airbag connector, take care not to damage the airbag wire harness.

1. Before connecting the connector, check that the position of the white housing lock is correct as shown in the illustration.



C

Fig. 128: Identifying Housing Lock Position (White Part)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Be sure to engage the connectors until they are locked (when locking, make sure that a click sound can be heard).

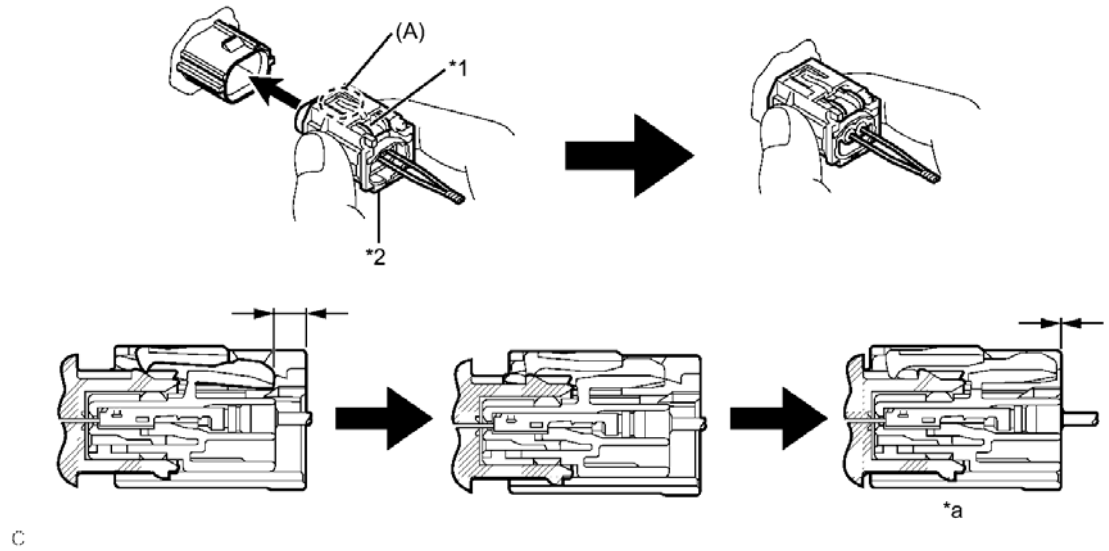


Fig. 129: Connecting Airbag Sensor Housing
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Housing Lock (White)	*2	CPA (Yellow)
*a	Connection is Completed.	-	-

HINT:

When engaged, the white housing lock will slide. Be sure not to hold the white housing lock and part (A), as it may result in an insecure fit.

e. Confirm that there is no looseness by shaking the front airbag sensor.

2. **INSTALL HEADLIGHT ASSEMBLY**

Refer to **INSTALLATION**

3. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

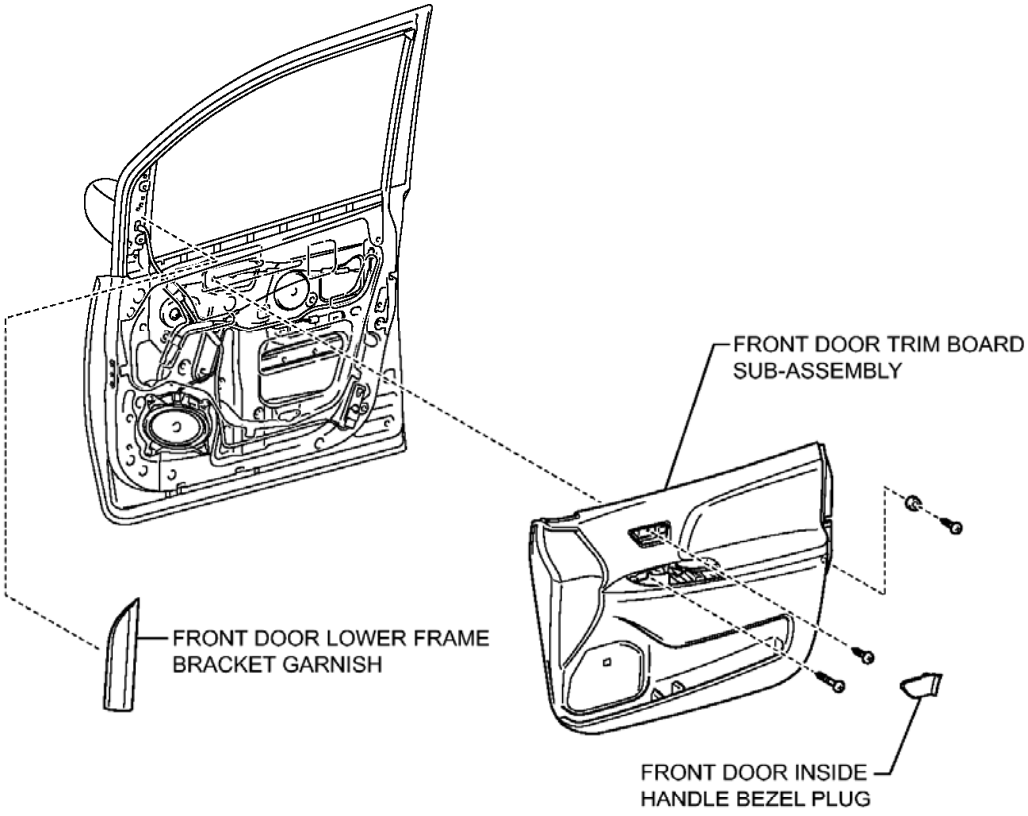
4. **INSPECT SRS WARNING LIGHT**

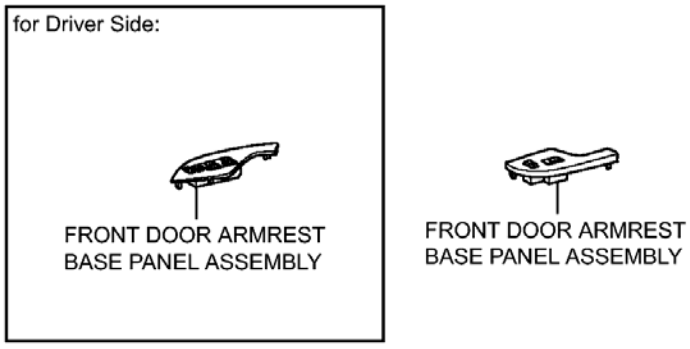
Refer to **DIAGNOSIS SYSTEM**

SIDE AIRBAG SENSOR

COMPONENTS

ILLUSTRATION

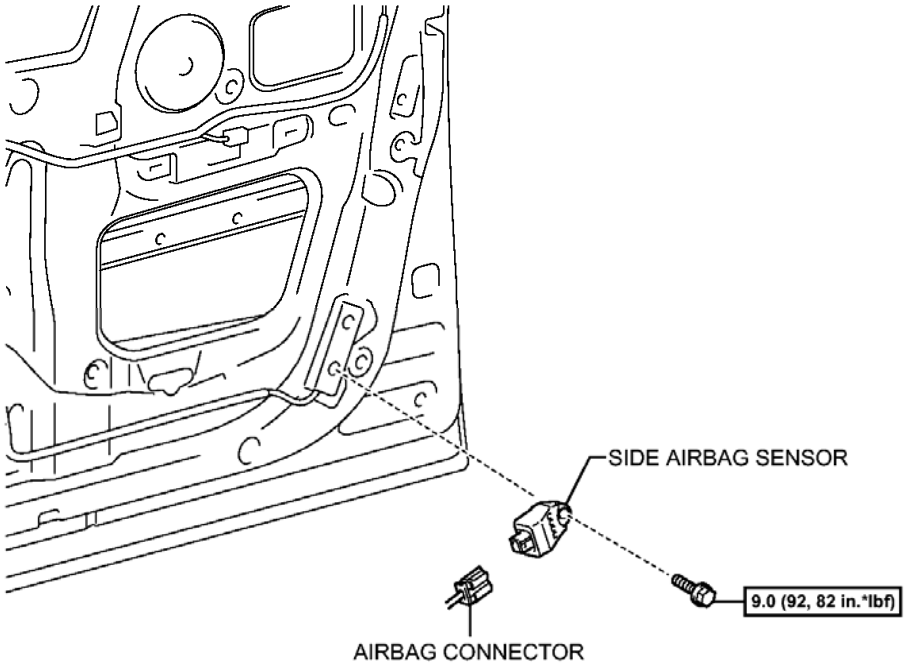




Y

Fig. 130: Side Airbag Sensor Replacement Components (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ILLUSTRATION



N*m (kgf*cm, ft.*lbf): Specified torque

Y

Fig. 131: Side Airbag Sensor Replacement Components With Torque Specifications (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

ON-VEHICLE INSPECTION

1. **INSPECT SIDE AIRBAG SENSOR ASSEMBLY (for Vehicle not Involved in Collision)**
   a. Perform a Diagnostic System Check. Refer to **DTC CHECK / CLEAR** .
2. **INSPECT SIDE AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)**

WARNING: For side airbag sensor removal and installation procedures. Refer to REMOVAL and Refer to INSTALLATION, and carefully follow the correct procedure.

a. Perform a Diagnostic System Check. Refer to **DTC CHECK / CLEAR** .

b. When the front door of the vehicle or its periphery is damaged, check whether there is any damage to the side airbag sensor. If there are any defects, such as those mentioned below, replace the side airbag sensor with a new one:

- Any cracks, dents or chips in the case.
- Any cracks or other damage to the connector.
- Peeling of the label or damage to the serial number.

3. **INSPECT SIDE AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision)**

WARNING: For side airbag sensor removal and installation procedures. Refer to REMOVAL and Refer to INSTALLATION, and carefully follow the correct procedure.

a. Replace the side airbag sensor.

REMOVAL

REMOVAL

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

HINT:

The procedure described below is for the RH side. Use the same procedure for both the RH and LH sides, unless otherwise specified.

REMOVAL

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

2. **REMOVE FRONT DOOR ARMREST BASE PANEL ASSEMBLY** . Refer to **DISASSEMBLY - Step 2**
3. **REMOVE FRONT DOOR INSIDE HANDLE BEZEL PLUG** . Refer to **DISASSEMBLY - Step 3**
4. **REMOVE FRONT DOOR LOWER FRAME BRACKET GARNISH** . Refer to **DISASSEMBLY - Step 4**

5. **REMOVE FRONT DOOR TRIM BOARD SUB-ASSEMBLY** . Refer to **DISASSEMBLY - Step 5**
6. **REMOVE SIDE AIRBAG SENSOR**

WARNING: Confirm that the cable is disconnected from the battery negative (-) terminal. Even an impact to only the airbag sensor will cause the airbag to deploy.

a. Disconnect the connector.

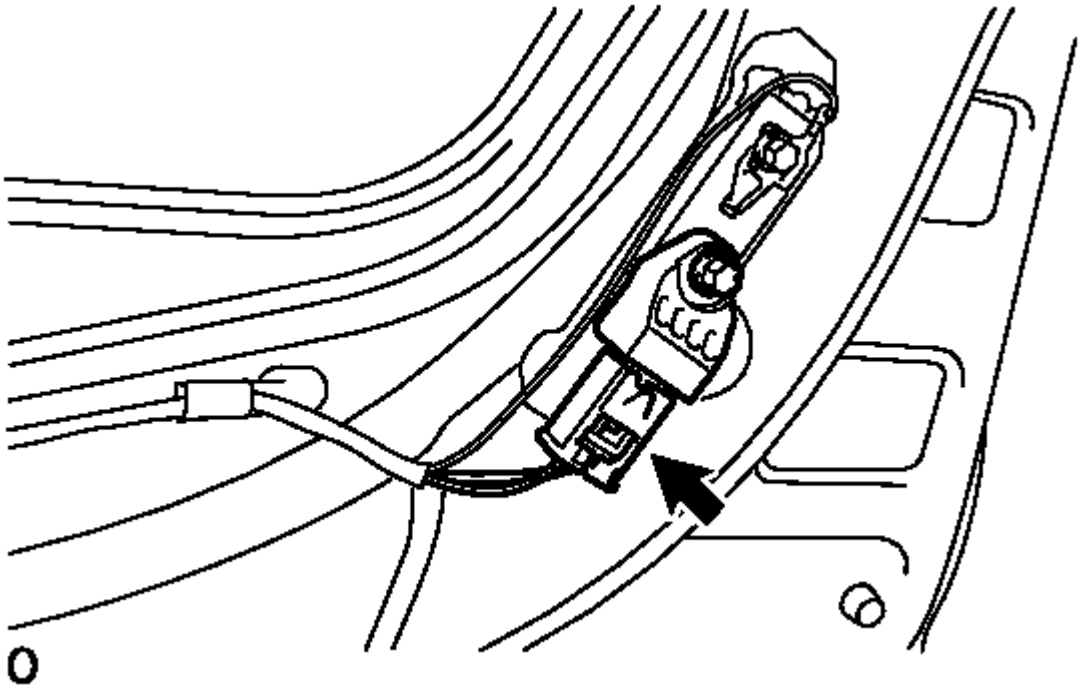
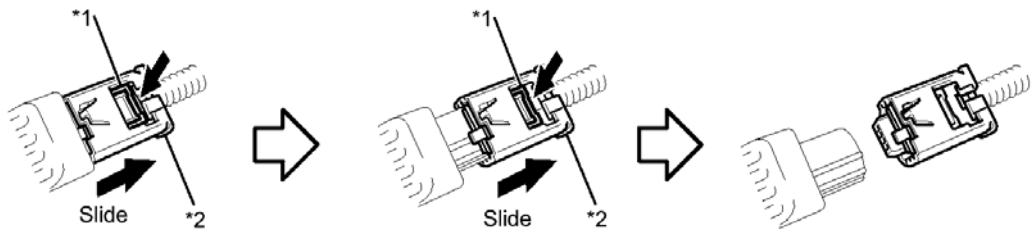


Fig. 132: Identifying Side Airbag Sensor Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NOTE: When disconnecting any airbag connector, take care not to damage the airbag wire harness.

1. Push and hold the white housing lock, and slide the yellow outer connector locking sleeve.



c

Fig. 133: Disconnecting Airbag Sensor Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Housing Lock	*2	Outer Connector Locking Sleeve

2. Push and hold the white housing lock again, and slide the yellow outer connector locking sleeve to disconnect the connector.

b. Remove the bolt and the side airbag sensor.

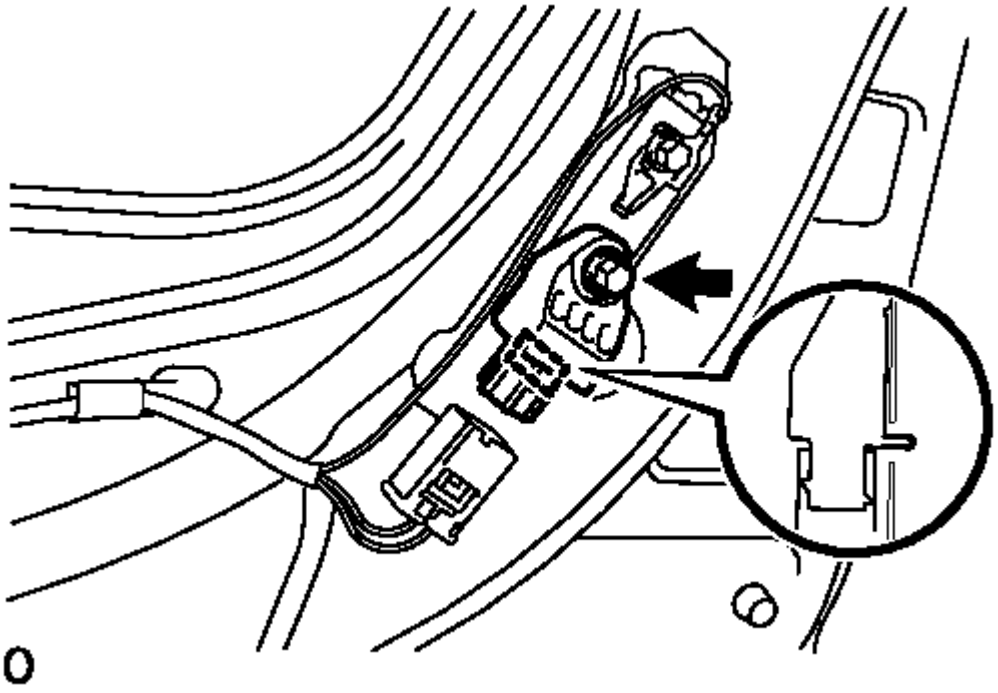


Fig. 134: Identifying Side Airbag Sensor & Fasteners

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NOTE: Loosen the bolt while holding the side airbag sensor because the side airbag sensor pin (stopper) is easily damaged.

INSTALLATION

INSTALLATION

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

HINT:

The procedure described below is for the RH side. Use the same procedure for both the RH and LH sides, unless otherwise specified.

INSTALLATION

1. **INSTALL SIDE AIRBAG SENSOR**
   a. Check that the ignition switch is off.
   b. Check that the cable is disconnected from the negative (-) battery terminal.

WARNING:

- **Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.**
- **Confirm that the negative battery terminal is disconnected before performing the operation. Even an impact to only the airbag sensor will cause the airbag to deploy.**

   c. Insert the pin (stopper) into the body hole to install the side airbag sensor to the vehicle with the bolt.

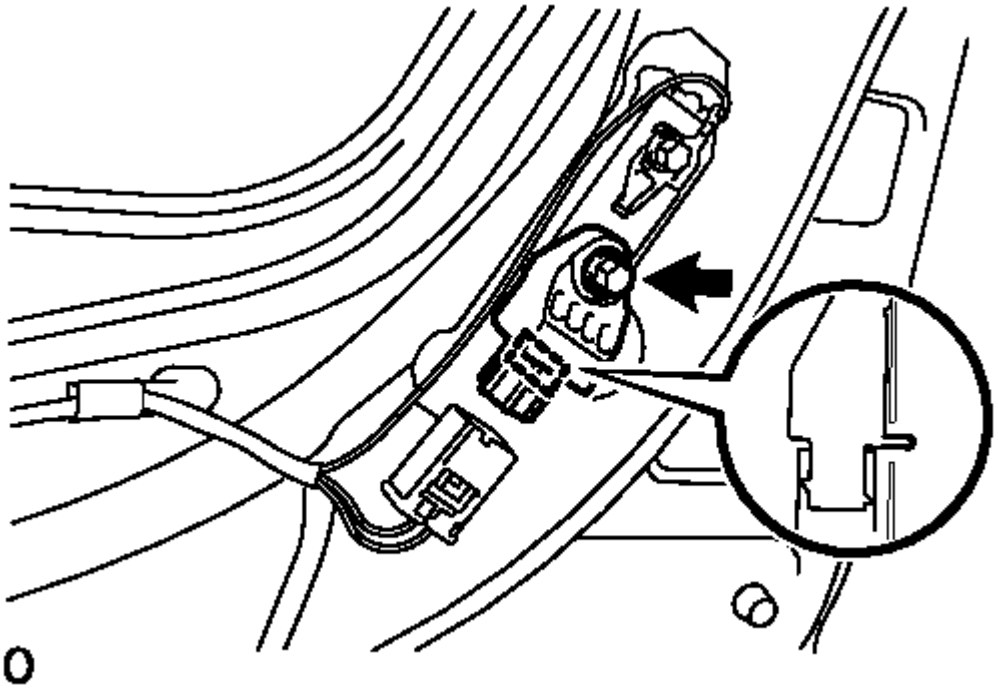


Fig. 135: Identifying Side Airbag Sensor & Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Torque: 9.0 N*m (92 kgf*cm, 80 in.*lbf)

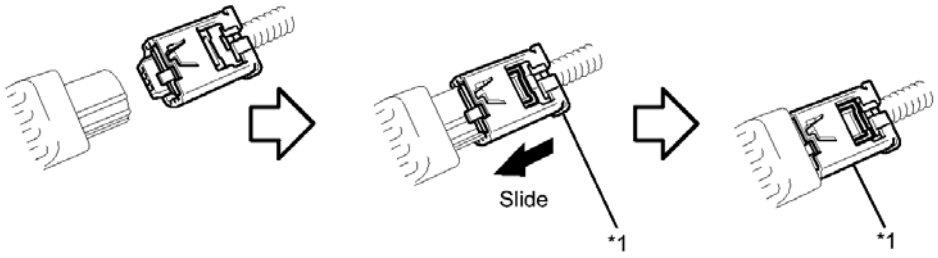
NOTE:

- **If the side airbag sensor has been dropped, or there are any cracks, dents or other defects in the case or connector, replace it with a new one.**
- **When installing the side airbag sensor, be careful that the SRS wiring does not interfere with and is not pinched between other parts.**
- **Make sure that the pin (stopper) is securely inserted into the body hole.**
- **Tighten the bolt while holding the side airbag sensor because the side airbag sensor pin (stopper) is easily damaged.**

d. Connect the connector to the side airbag sensor.

NOTE: When connecting any airbag connector, take care not to damage the airbag wire harness.

1. Connect the connector as shown in the illustration (when locking, make sure that the outer connector locking sleeve returns to its original position and a click sound can be heard).



c

Fig. 136: Connecting Airbag Outer Connector Locking Sleeve
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Outer Connector Locking Sleeve	-	-

HINT:

When connected, the outer connector locking sleeve will slide. Be sure not to hold the outer connector locking sleeve while connecting, as it may result in an insecure fit.

e. Check that there is no looseness in the installation parts of the side airbag sensor.

2. **INSTALL FRONT DOOR TRIM BOARD SUB-ASSEMBLY** . Refer to **REASSEMBLY - Step 30**
3. **INSTALL FRONT DOOR LOWER FRAME BRACKET GARNISH** . Refer to **REASSEMBLY - Step 31**
4. **INSTALL FRONT DOOR INSIDE HANDLE BEZEL PLUG** . Refer to **REASSEMBLY - Step 32**
5. **INSTALL FRONT DOOR ARMREST BASE PANEL ASSEMBLY** . Refer to **REASSEMBLY - Step 33**
6. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

7. **INSPECT SRS WARNING LIGHT**

Refer to **DIAGNOSIS SYSTEM**

REAR AIRBAG SENSOR

COMPONENTS

ILLUSTRATION

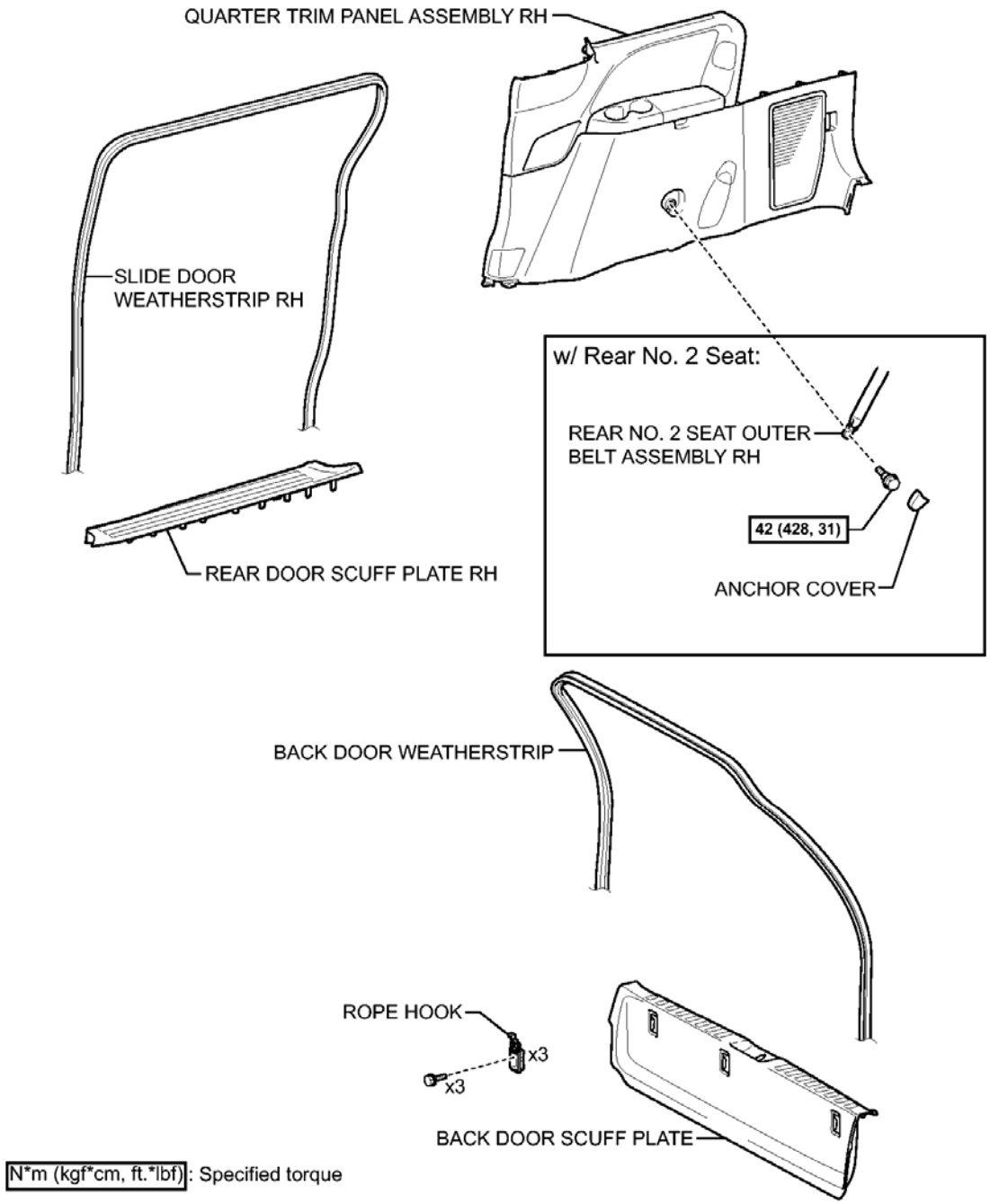
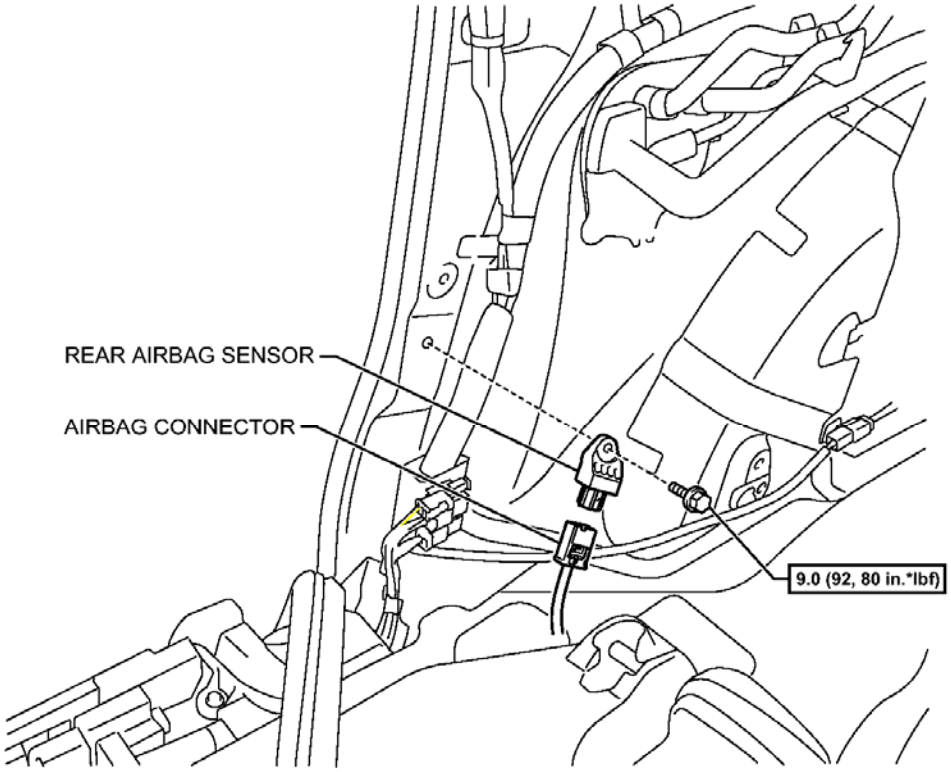


Fig. 137: Rear Airbag Sensor Replacement Components With Torque Specifications (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ILLUSTRATION



N*m (kgf*cm, ft.*lbf): Specified torque

o

Fig. 138: Rear Airbag Sensor Replacement Components With Torque Specifications (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

ON-VEHICLE INSPECTION

1. **INSPECT REAR AIRBAG SENSOR (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .
2. **INSPECT REAR AIRBAG SENSOR (for Vehicle Involved in Collision and Airbag not Deployed)**

WARNING: For rear airbag sensor removal and installation procedures. Refer to REMOVAL and Refer to INSTALLATION, and carefully follow the correct procedure.

   a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .

b. When the quarter trim panel assembly RH of the vehicle or its periphery is damaged, check whether there is any damage to the rear airbag sensor. If there are any defects, such as those mentioned below, replace the rear airbag sensor with a new one:

- Any cracks, dents or chips in the case.
- Any cracks or other damage to the connector.
- Peeling of the label or damage to the serial number.

3. **INSPECT REAR AIRBAG SENSOR (for Vehicle Involved in Collision)**

WARNING: For rear airbag sensor removal and installation procedures. Refer to REMOVAL and Refer to INSTALLATION, and carefully follow the correct procedure.

a. Replace the rear airbag sensor.

REMOVAL

REMOVAL

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

HINT:

The procedure described below is for the RH side. Use the same procedure for both the RH and LH sides, unless otherwise specified.

REMOVAL

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

2. **REMOVE REAR DOOR SCUFF PLATE RH** . Refer to **REMOVAL - Step 13**
3. **SEPARATE SLIDE DOOR WEATHERSTRIP RH**
4. **SEPARATE BACK DOOR WEATHERSTRIP**
5. **REMOVE BACK DOOR SCUFF PLATE** . Refer to **REMOVAL - Step 17**
6. **SEPARATE REAR NO. 2 SEAT OUTER BELT ASSEMBLY RH (w/ Rear No. 2 Seat)** . Refer to **REMOVAL - Step 24**

7. **REMOVE QUARTER TRIM PANEL ASSEMBLY RH** . Refer to **REMOVAL - Step 26**
8. **REMOVE REAR AIRBAG SENSOR**

WARNING: Confirm that the negative battery terminal is disconnected before performing the operation. Even an impact to only the airbag sensor will cause the airbag to deploy.

a. Disconnect the connector.

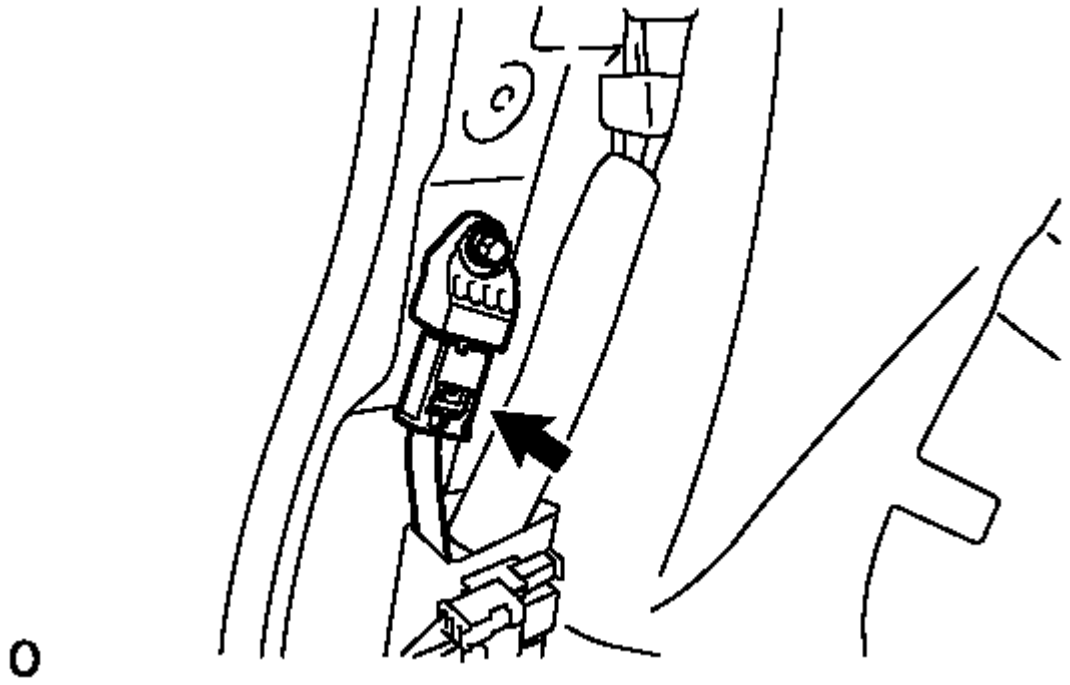
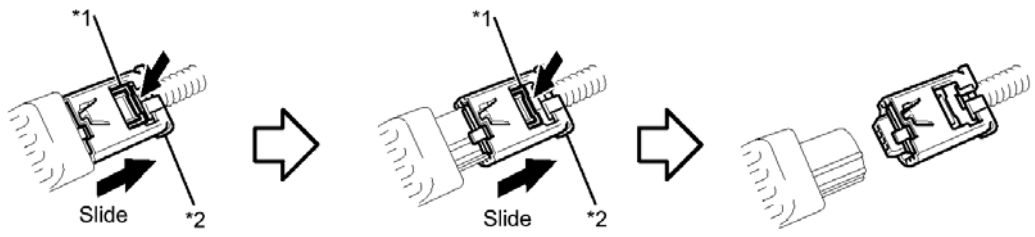


Fig. 139: Identifying Rear Airbag Sensor & Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NOTE: When disconnecting any airbag connector, take care not to damage the airbag wire harness.

1. Push and hold the white housing lock, and slide the yellow outer connector locking sleeve.



c

Fig. 140: Disconnecting Airbag Sensor Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Housing Lock	*2	Outer Connector Locking Sleeve

2. Push and hold the white housing lock again, and slide the yellow outer connector locking sleeve to disconnect the connector.

b. Remove the bolt and the rear airbag sensor.

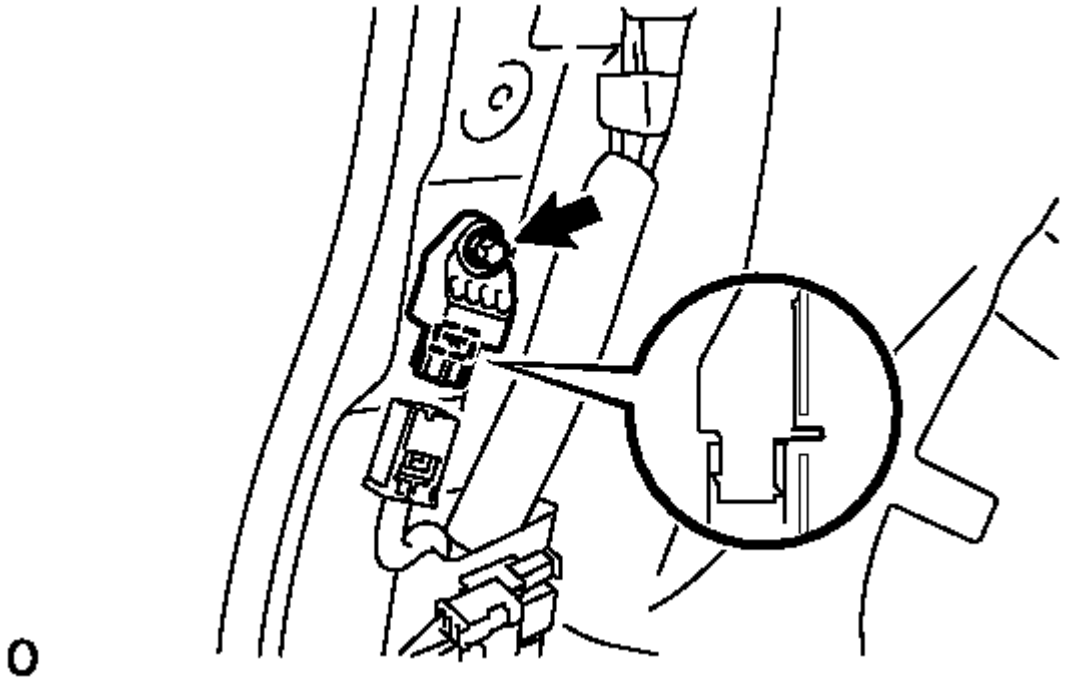


Fig. 141: Identifying Rear Airbag Sensor & Fasteners

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NOTE: **Loosen the bolt while holding the rear airbag sensor because the rear airbag sensor pin (stopper) is easily damaged.**

INSTALLATION

INSTALLATION

WARNING: **Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .**

HINT:

The procedure described below is for the RH side. Use the same procedure for both the LH and RH sides, unless otherwise specified.

INSTALLATION

1. **INSTALL REAR AIRBAG SENSOR**
   a. Check that the ignition switch is off.
   b. Check that the cable is disconnected from the negative (-) battery terminal.

WARNING:

- **Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.**
- **Confirm that the negative battery terminal is disconnected before performing the operation. Even an impact to only the airbag sensor will cause the airbag to deploy.**

   c. Insert the pin (stopper) into the body hole to install the rear airbag sensor to the vehicle with the bolt.

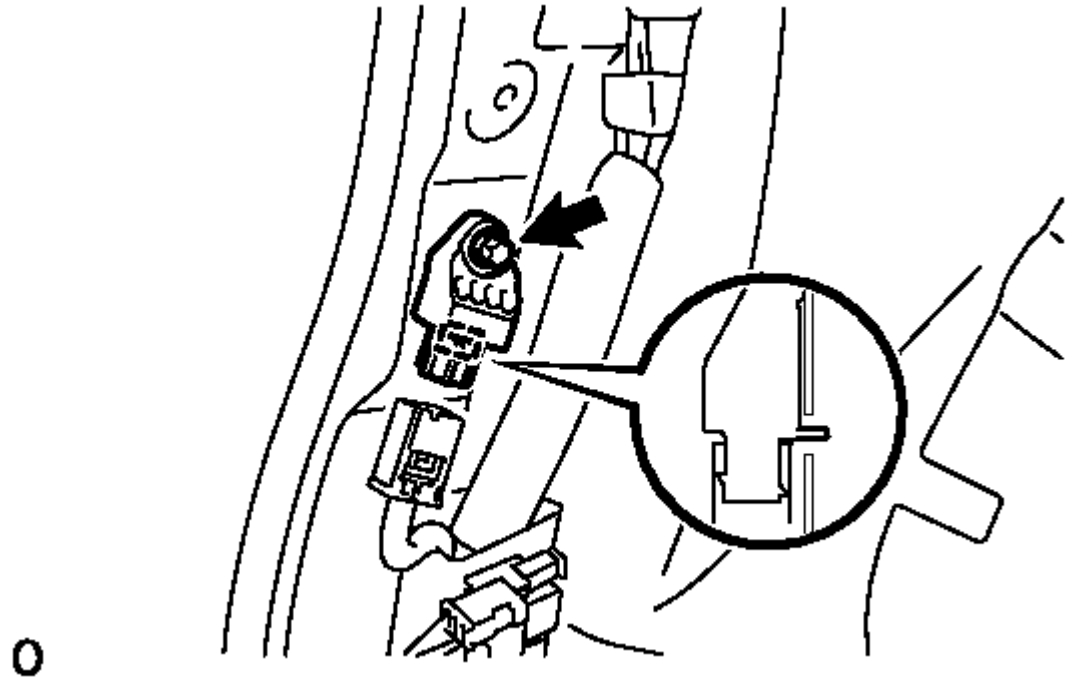


Fig. 142: Identifying Rear Airbag Sensor & Fasteners
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Torque: 9.0 N*m (92 kgf*cm, 80 in.*lbf)

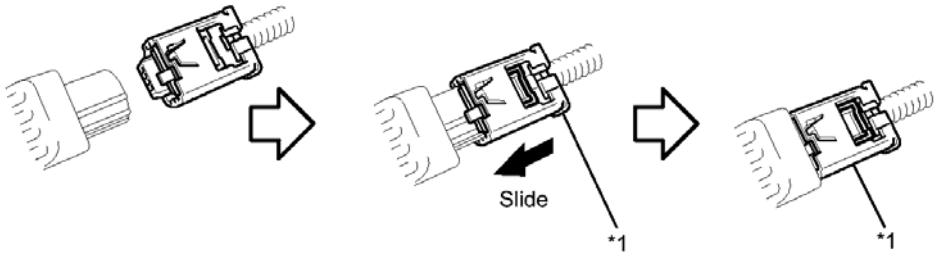
NOTE:

- **If the rear airbag sensor has been dropped, or there are any cracks, dents or other defects in the case or connector, replace it with a new one.**
- **When installing the rear airbag sensor, be careful that the SRS wiring does not interfere with and is not pinched between other parts.**
- **Make sure that the pin (stopper) is securely inserted into the body hole.**
- **Tighten the bolt while holding the rear airbag sensor because the rear airbag sensor pin (stopper) is easily damaged.**

d. Connect the connector to the rear airbag sensor.

NOTE: When connecting any airbag connector, take care not to damage the airbag wire harness.

1. Connect the connector as shown in the illustration (when locking, make sure that the outer connector locking sleeve returns to its original position and a click sound can be heard).



c

Fig. 143: Connecting Airbag Outer Connector Locking Sleeve
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Outer Connector Locking Sleeve	-	-

HINT:

When connected, the outer connector locking sleeve will slide. Be sure not to hold the outer connector locking sleeve while connecting, as it may result in an insecure fit.

e. Check that there is no looseness in the installation parts of the rear airbag sensor.

2. **INSTALL QUARTER TRIM PANEL ASSEMBLY RH** . Refer to **INSTALLATION - Step 14**
3. **INSTALL REAR NO. 2 SEAT OUTER BELT ASSEMBLY RH (w/ Rear No. 2 Seat)** . Refer to **INSTALLATION - Step 16**
4. **INSTALL BACK DOOR SCUFF PLATE** . Refer to **INSTALLATION - Step 24**
5. **INSTALL BACK DOOR WEATHERSTRIP**
6. **INSTALL SLIDE DOOR WEATHERSTRIP RH**
7. **INSTALL REAR DOOR SCUFF PLATE RH** . Refer to **INSTALLATION - Step 27**
8. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

9. **INSPECT SRS WARNING LIGHT**

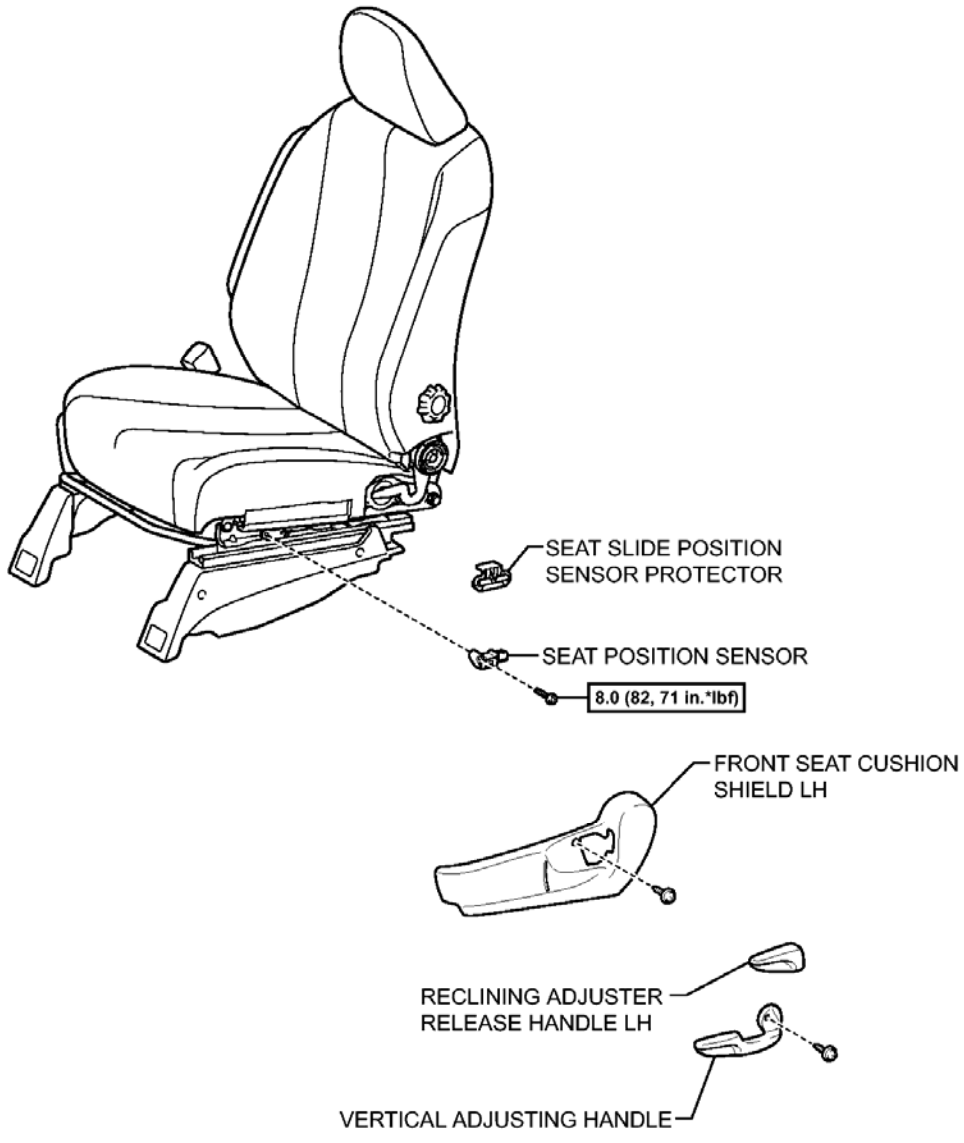
Refer to **DIAGNOSIS SYSTEM**

SEAT POSITION SENSOR

COMPONENTS

ILLUSTRATION

for Manual Seat:



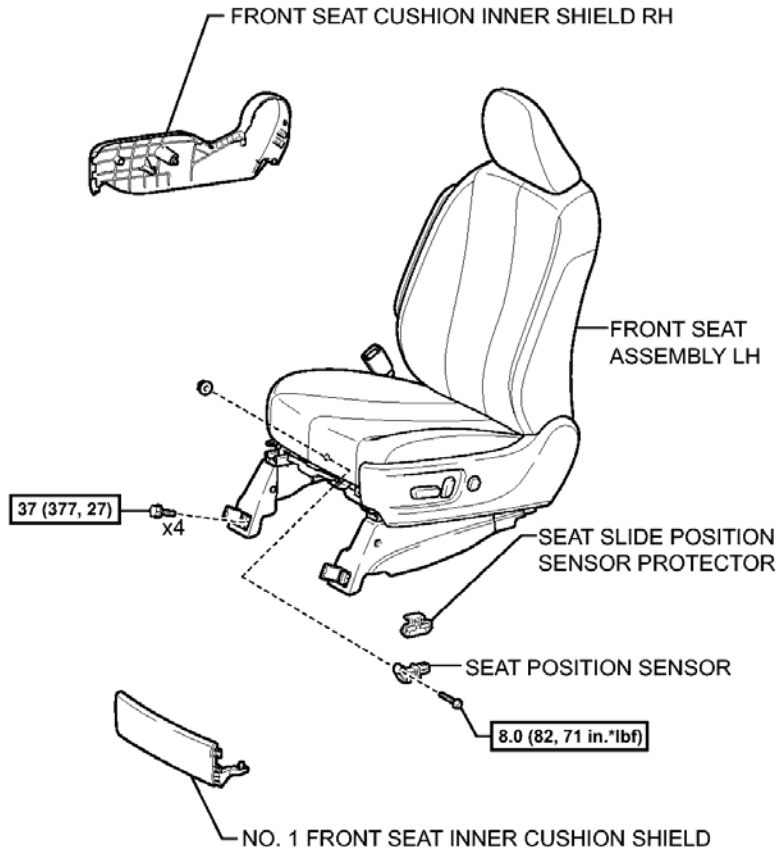
N*m (kgf*cm, ft.*lbf): Specified torque

Fig. 144: Seat Position Sensor Replacement Components With Torque Specifications (Manual Seat) (1 Of 2)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ILLUSTRATION

for Power Seat:



N*m (kgf*cm, ft.*lbf): Specified torque

o

Fig. 145: Seat Position Sensor Replacement Components With Torque Specifications (Power Seat) (2 Of 2)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

ON-VEHICLE INSPECTION

1. **INSPECT SEAT POSITION SENSOR (for Vehicle not Involved in Collision)**

a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .

2. **INSPECT SEAT POSITION SENSOR (for Vehicle Involved in Collision and Airbag not Deployed)**
   a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .
   b. Visually check for defects with the seat position sensor removed from the vehicle.
      1. The defects are as follows:
         - Cracks on the sensor housing
         - Dents on the sensor housing
         - Chips on the sensor housing
         - Cracks or other damage to the connector

      OK

      No defects are found.

      HINT:

      If any of the defects is found, replace the seat position sensor with a new one.

REMOVAL

REMOVAL

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

   WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

   NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

2. **REMOVE RECLINING ADJUSTER RELEASE HANDLE LH (for Manual Seat)** . Refer to **DISASSEMBLY - Step 10**
3. **REMOVE VERTICAL ADJUSTING HANDLE (for Manual Seat)** . Refer to **DISASSEMBLY - Step 11**
4. **REMOVE FRONT SEAT CUSHION SHIELD LH (for Manual Seat)** . Refer to **DISASSEMBLY - Step 12**
5. **REMOVE SEAT POSITION SENSOR (for Manual Seat)**
   a. Disconnect the connector.

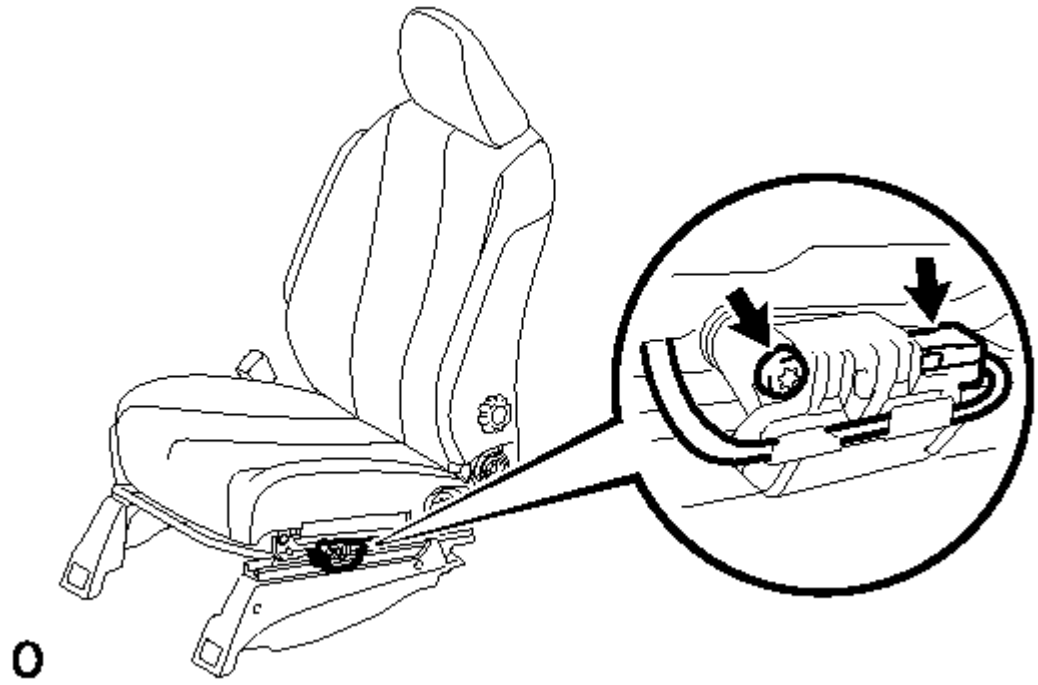


Fig. 146: Identifying Seat Position Sensor, Connector & Screw (For Manual Seat)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Separate the wire harness from the seat slide position sensor protector.
c. Using a T30 "TORX" socket wrench, remove the screw and seat position sensor with the seat slide position sensor protector.

6. **REMOVE FRONT SEAT ASSEMBLY LH (for Power Seat)** . Refer to **REMOVAL - Step 3**
7. **REMOVE NO. 1 FRONT SEAT INNER CUSHION SHIELD (for Power Seat)** . Refer to **DISASSEMBLY - Step 6**
8. **REMOVE FRONT SEAT CUSHION INNER SHIELD RH (for Power Seat)** . Refer to **DISASSEMBLY - Step 7**
9. **REMOVE SEAT POSITION SENSOR (for Power Seat)**
   a. Disconnect the connector.

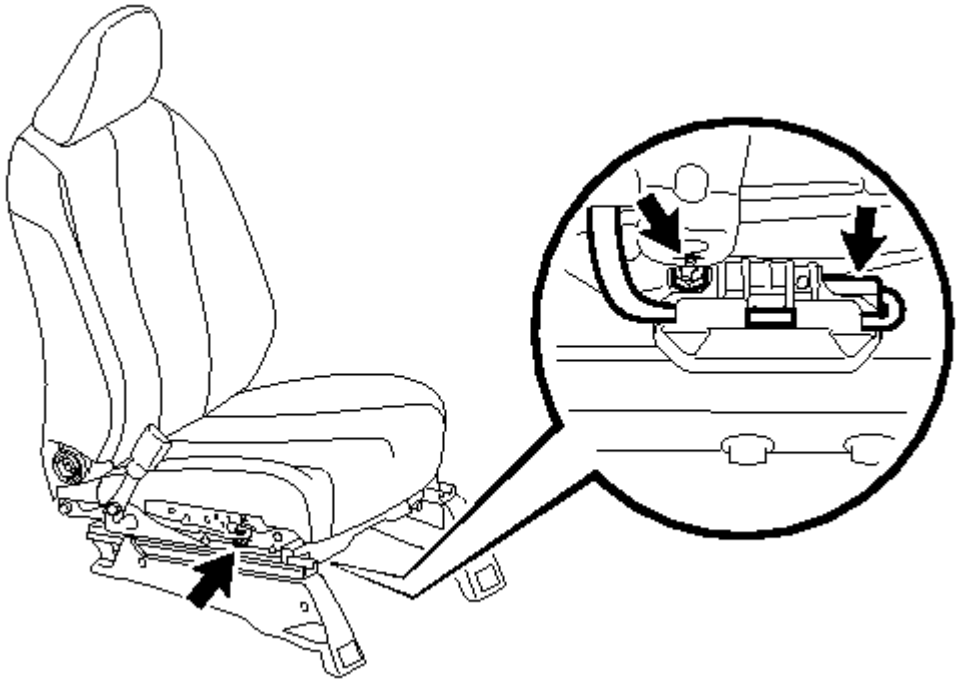
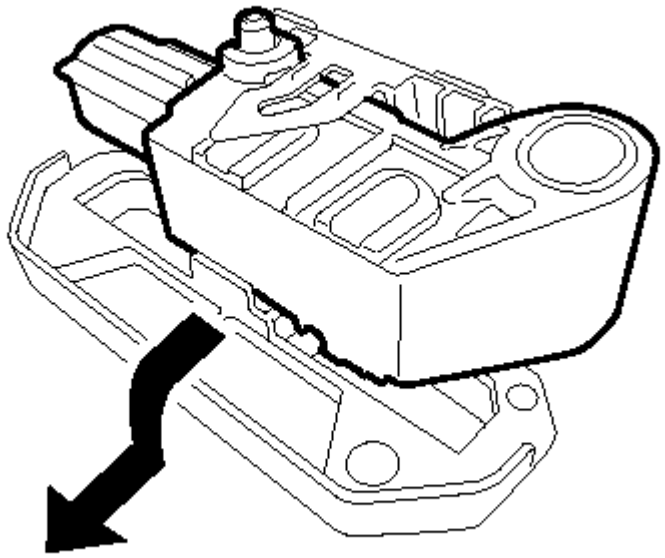


Fig. 147: Identifying Seat Position Sensor, Connector & Fasteners (For Power Seat)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Separate the wire harness from the seat slide position sensor protector.
c. Using a T30 "TORX" socket wrench, remove the screw, nut and seat position sensor with the seat slide position sensor protector.

10. **REMOVE SEAT SLIDE POSITION SENSOR PROTECTOR**
    a. Remove the seat slide position sensor protector as shown in the illustration.



C

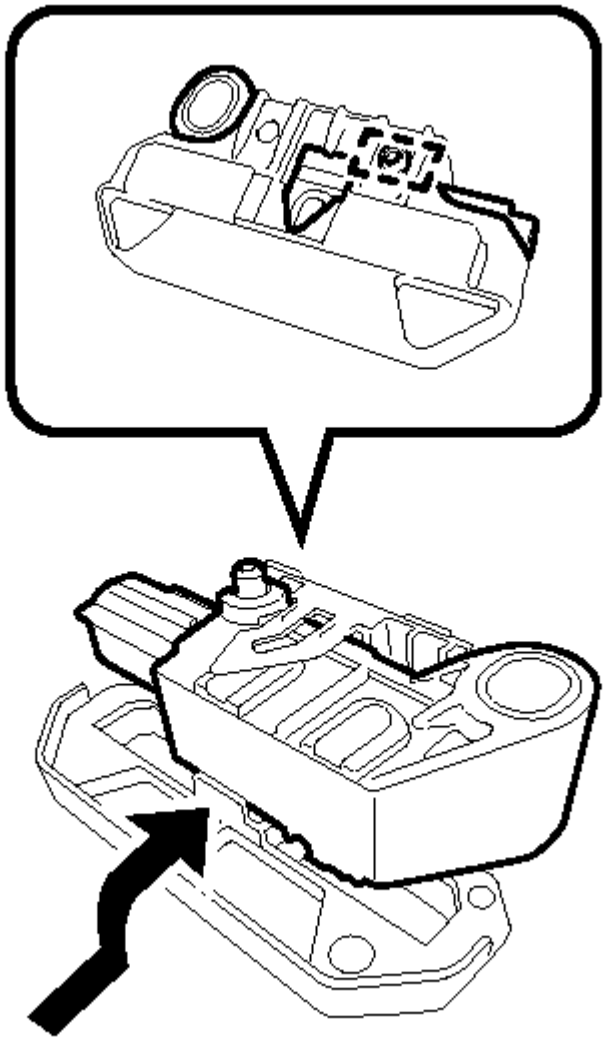
Fig. 148: Identifying Seat Position Sensor And Seat Slide Position Sensor Protector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

INSTALLATION

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **INSTALL SEAT SLIDE POSITION SENSOR PROTECTOR**
   a. Install the seat slide position sensor protector with the pin as shown in the illustration.



C

Fig. 149: Identifying Seat Position Sensor And Seat Slide Position Sensor Protector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **INSTALL SEAT POSITION SENSOR (for Manual Seat)**
    a. Using a 1.3 mm (0.0512 in.) feeler gauge, temporarily install the seat position sensor.

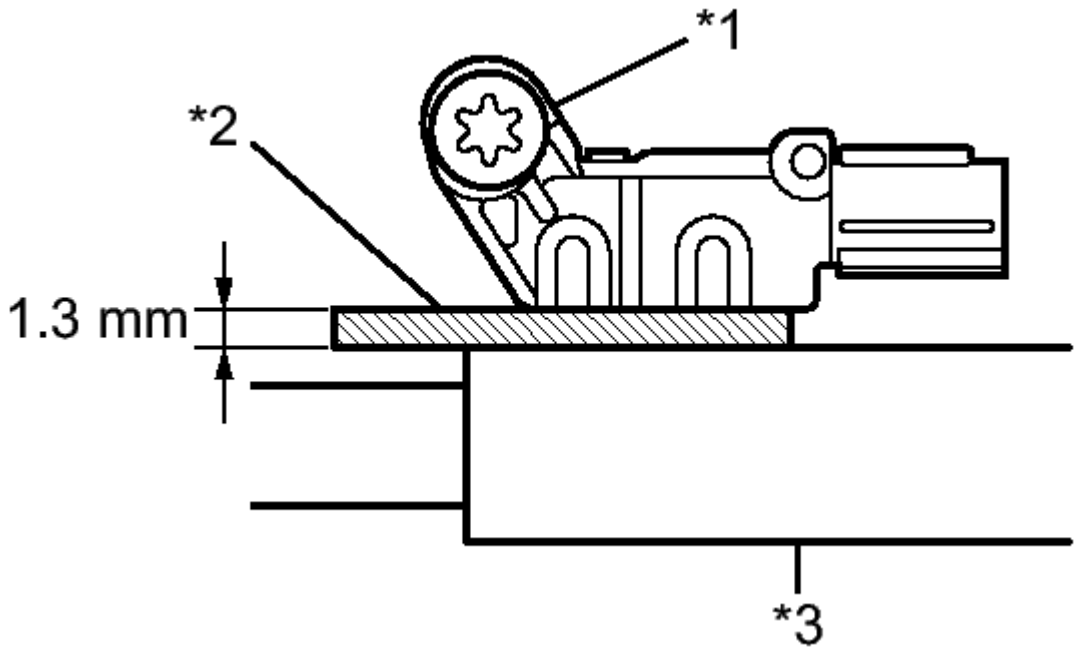


Fig. 150: Identifying Seat Position Sensor & Seat Rail Clearance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Seat Position Sensor
*2	Feeler Gauge
*3	Seat Rail

NOTE:

- **If the seat position sensor has been dropped, or there are any cracks, dents or other defects in the case or connector, replace the seat position sensor with a new one.**
- **When installing the seat position sensor, be careful that the SRS wiring does not interfere with and is not pinched between other parts.**

HINT:

Be sure that the clearance between the seat position sensor and seat rail is between 0.6 mm (0.0236 in.) and 2.0 mm (0.0787 in.).

b. Using a T30 "TORX" socket wrench, tighten the screw to install the seat position sensor.

Torque: 8.0 N*m (82 kgf*cm, 71 in.*lbf)

c. Make sure that the clearance between the seat position sensor and seat rail is between 0.6 mm (0.0236 in.) and 2.0 mm (0.0787 in.).
d. Install the wire harness to the seat slide position sensor protector.
e. Connect the connector.
f. Check that there is no looseness in the installation parts of the seat position sensor.

3. **INSTALL FRONT SEAT CUSHION SHIELD LH (for Manual Seat)** . Refer to **REASSEMBLY - Step 24**
4. **INSTALL VERTICAL ADJUSTING HANDLE (for Manual Seat)** . Refer to **REASSEMBLY - Step 25**
5. **INSTALL RECLINING ADJUSTER RELEASE HANDLE LH (for Manual Seat)** . Refer to **REASSEMBLY - Step 26**
6. **INSTALL SEAT POSITION SENSOR (for Power Seat)**
   a. Using a 1.3 mm (0.0512 in.) feeler gauge, temporarily install the seat position sensor.

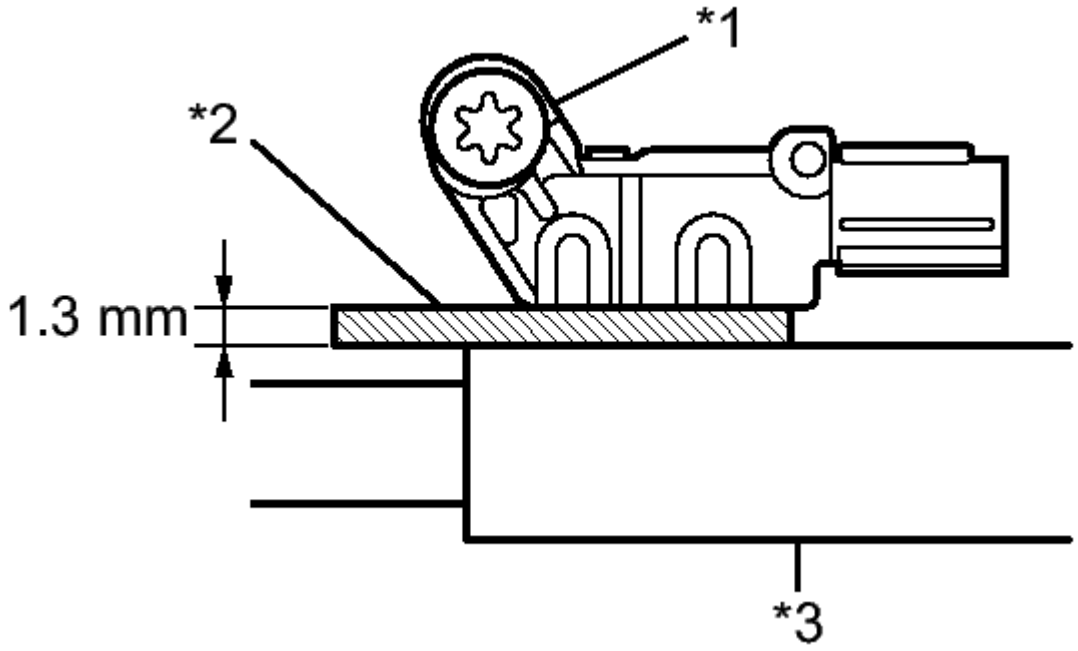


Fig. 151: Identifying Seat Position Sensor & Seat Rail Clearance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Seat Position Sensor
*2	Feeler Gauge

*3	Seat Rail

NOTE:

- **If the seat position sensor has been dropped, or there are any cracks, dents or other defects in the case or connector, replace the seat position sensor with a new one.**
- **When installing the seat position sensor, be careful that the SRS wiring does not interfere with and is not pinched between other parts.**

HINT:

Be sure that the clearance between the seat position sensor and seat rail is between 0.6 mm (0.0236 in.) and 2.0 mm (0.0787 in.).

b. Using a T30 "TORX" socket wrench, install the seat position sensor with the screw and the nut.

Torque: 8.0 N*m (82 kgf*cm, 71 in.*lbf)

c. Make sure that the clearance between the seat position sensor and seat rail is between 0.6 mm (0.0236 in.) and 2.0 mm (0.0787 in.).
d. Install the wire harness to the seat slide position sensor protector.
e. Connect the connector.
f. Check that there is no looseness in the installation parts of the seat position sensor.

7. **INSTALL FRONT SEAT CUSHION INNER SHIELD RH (for Power Seat)** . Refer to **REASSEMBLY - Step 30**
8. **INSTALL NO. 1 FRONT SEAT INNER CUSHION SHIELD (for Power Seat)** . Refer to **REASSEMBLY - Step 31**
9. **INSTALL FRONT SEAT ASSEMBLY LH (for Power Seat)** . Refer to **INSTALLATION - Step 1**
10. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: **When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .**

Torque: 5.4 N*m (54 kgf*cm, 48 in.*lbf)

11. **INSPECT SRS WARNING LIGHT**

Refer to **PRECAUTION**

OCCUPANT CLASSIFICATION ECU

COMPONENTS

ILLUSTRATION

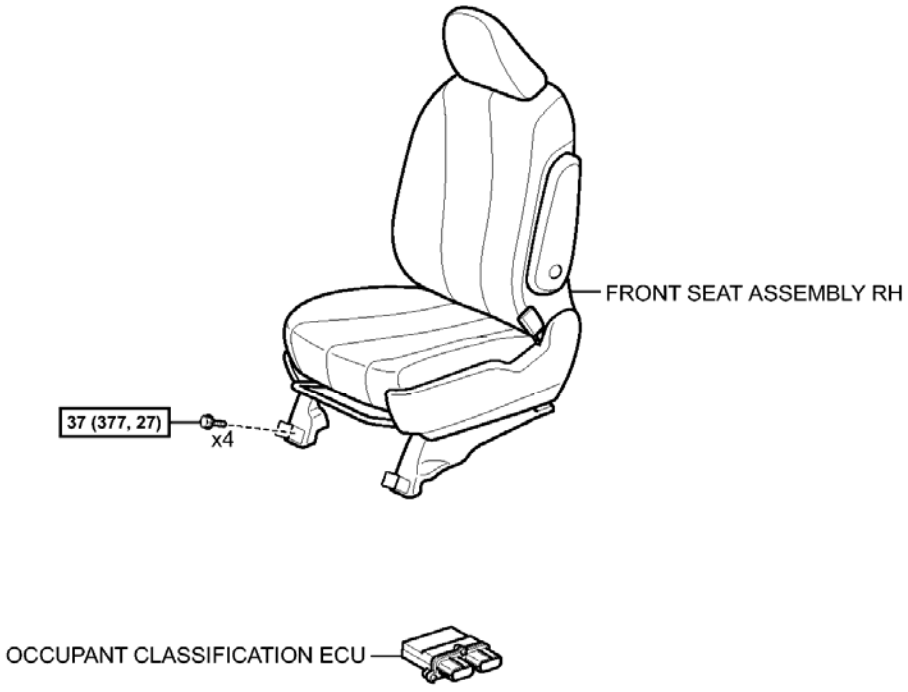


Fig. 152: Occupant Classification ECU Replacement Components With Torque Specifications
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

ON-VEHICLE INSPECTION

1. **INSPECT OCCUPANT CLASSIFICATION ECU (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .
2. **INSPECT OCCUPANT CLASSIFICATION ECU (for Vehicle Involved in Collision and Airbag not Deployed)**
   a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .
   b. Visually check for defects with the occupant classification ECU.
      1. The defects are as follows:
         - Cracks on the ECU housing
         - Dents on the ECU housing
         - Chips on the ECU housing
         - Cracks or other damage to the connector

- Damage to the serial number

OK

No defects are found.

HINT:

If any of the defects is found, replace the occupant classification ECU with a new one.

3. **INSPECT OCCUPANT CLASSIFICATION ECU (for Vehicle Involved in Collision and Airbag is Deployed)**
   a. Perform a diagnostic system check. Refer to **DTC CHECK / CLEAR** .
   b. Visually check for defects with the occupant classification ECU.
      1. The defects are as follows:
         - Cracks on the ECU housing
         - Dents on the ECU housing
         - Chips on the ECU housing
         - Cracks or other damage to the connector
         - Damage to the serial number

OK

No defects are found.

HINT:

If any of the defects is found, replace the occupant classification ECU with a new one.

REMOVAL

REMOVAL

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

NOTE:

- **When removing front seat assembly RH, perform zero point calibration and sensitivity check. Refer to INITIALIZATION .**
- **When replacing the occupant classification ECU, perform zero point calibration and sensitivity check. Refer to INITIALIZATION .**

REMOVAL

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

WARNING: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .

2. **REMOVE FRONT SEAT ASSEMBLY RH (for Manual Seat)** . Refer to **REMOVAL - Step 2**
3. **REMOVE FRONT SEAT ASSEMBLY RH (for Power Seat)** . Refer to **REMOVAL - Step 3**
4. **REMOVE OCCUPANT CLASSIFICATION ECU**
   a. Disconnect the 2 connectors.

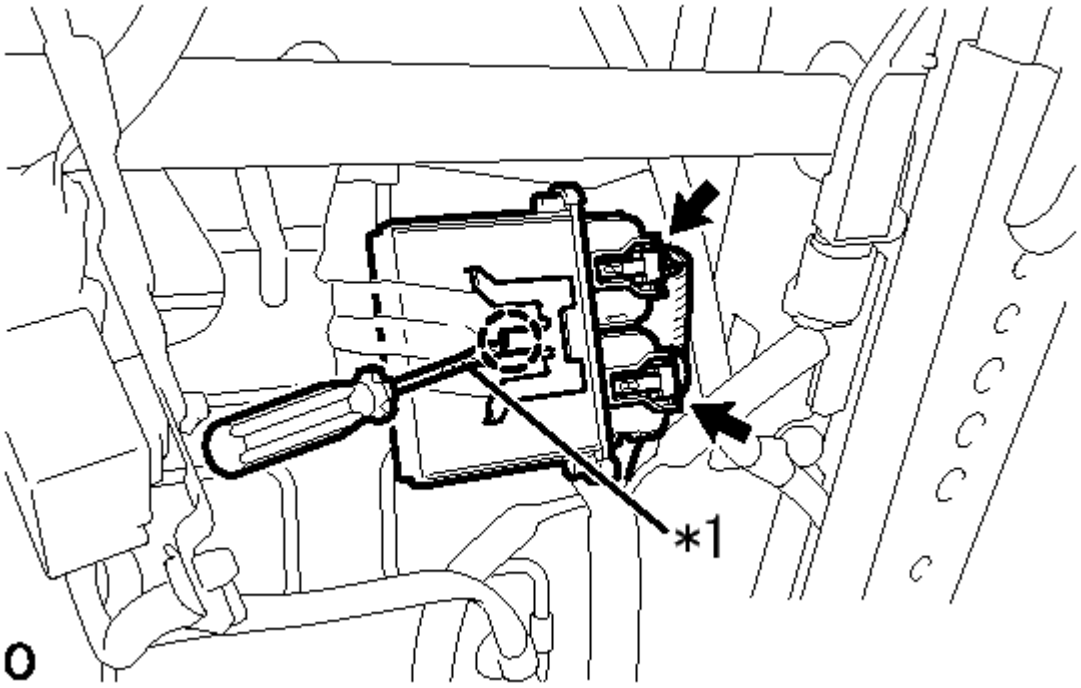


Fig. 153: Removing Occupant Classification ECU, Connectors & Claw Using A Screwdriver
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   b. Using a screwdriver with the tip wrapped with protective tape, disengage the claw and remove the occupant classification ECU.

TEXT IN ILLUSTRATION

*1	Protective Tape

INSTALLATION

INSTALLATION

WARNING: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing. Refer to PRECAUTION .

1. **INSTALL OCCUPANT CLASSIFICATION ECU**
   a. Install the occupant classification ECU with the claw.

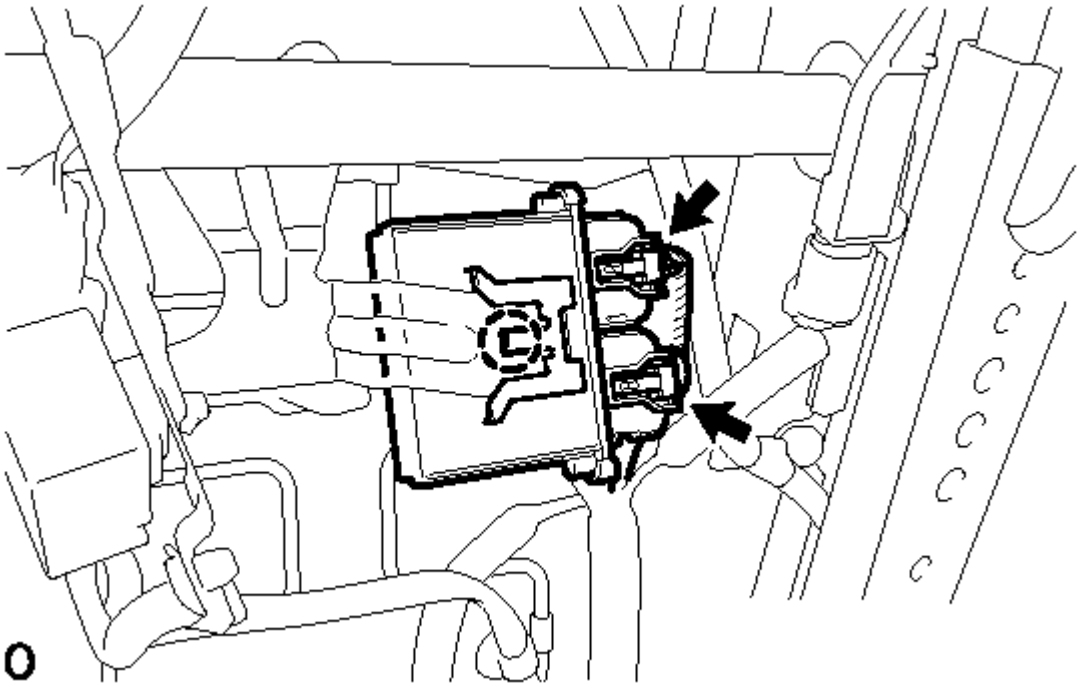


Fig. 154: Identifying Occupant Classification ECU, Connectors & Claw
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NOTE: If the occupant classification ECU has been dropped, or there are any cracks, dents or other defects in the case or connector, replace the occupant classification ECU with a new one.

   b. Connect the 2 connectors.

NOTE: When installing the occupant classification ECU, be careful that the SRS wiring does not interfere with and is not pinched between other parts.

2. **INSTALL FRONT SEAT ASSEMBLY RH (for Manual Seat)** . Refer to **INSTALLATION - Step 1**
3. **INSTALL FRONT SEAT ASSEMBLY RH (for Power Seat)** . Refer to **INSTALLATION - Step 1**
4. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: **When disconnecting the cable, some systems need to be initialized after the cable is reconnected. Refer to INITIALIZATION .**

Torque: 5.4 N*m (54 kgf*cm, 48 in.*lbf)

5. **ZERO POINT CALIBRATION AND SENSITIVITY CHECK**

   Refer to **INITIALIZATION**

6. **INSPECT SRS WARNING LIGHT**

   Refer to **DIAGNOSIS SYSTEM**

Supplemental Restraint System (Service Specifications) - Sienna

SUPPLEMENTAL RESTRAINT SYSTEMS

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

Part Tightened	N*m	kgf*cm	ft.*lbf
Steering pad x Steering wheel assembly	8.8	90	78 in.*lbf
Driver side knee airbag assembly x Body	10	102	7
Curtain shield airbag assembly x Body	13	127	9
Front seat airbag assembly x Front seat assembly	5.5	56	49 in.*lbf
Center airbag sensor assembly x Body	17.5	178	13
Airbag sensor bracket x Body	17.5	178	13
Front airbag sensor x Body	9.0	92	80 in.*lbf
Side airbag sensor assembly x Body	9.0	92	80 in.*lbf
Rear airbag sensor x Body	9.0	92	80 in.*lbf
Seat position sensor x Front seat assembly	8.0	82	71 in.*lbf