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AIRBAG SYSTEM

PRECAUTION

CAUTION:

- **The vehicle is equipped with a Supplemental Restraint System (SRS), which consists of a steering pad, front passenger airbag, curtain shield airbag, front seat side airbag, seat belt pretensioner, center airbag sensor, front airbag sensor, side airbag sensor, rear airbag sensor, occupant classification ECU and seat position airbag sensor. Failure to carry out service procedures in the correct sequence could cause SRS parts to unexpectedly deploy and possibly lead to serious injuries. Furthermore, if a mistake is made when servicing SRS parts, they may fail to operate when required. Before performing servicing (including installation/removal, inspection and replacement of parts), be sure to read the following precautions.**
- **Before starting work, wait at least 90 seconds after the ignition switch has been turned to OFF and after the cable of the negative (-) battery terminal has been disconnected. (SRS parts are equipped with a backup power source. If work is started within 90 seconds of turning the ignition switch to OFF and disconnecting the cable from the negative (-) battery terminal, SRS parts may deploy.)**
- **Do not expose SRS parts directly to hot air or flames.**
- **Be sure to perform the initialization of the occupant classification ECU if any of the following conditions occur. If the initialization is not performed, the SRS may not operate properly.**
  a. **The occupant classification ECU is replaced.**
  b. **Accessories (seatback tray, seat cover, etc.) are installed onto the vehicle.**
  c. **The passenger seat is removed from the vehicle, and then reinstalled or replaced.**
  d. **The passenger airbag ON/OFF indicator light (OFF) comes on when the passenger seat is not occupied.**
  e. **The vehicle is brought to the workshop for repair due to an accident or collision.**

NOTE:

- **Malfunction symptoms of SRS parts are difficult to confirm. DTCs are the most important source of information when troubleshooting. During troubleshooting, always confirm DTCs before disconnecting the cable from the negative (-) battery terminal.**

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- **For minor collisions where SRS parts do not deploy, always inspect the SRS parts.**
- **Before performing repairs, remove airbag sensors if any kind of impact is likely to occur to an airbag sensor during repairs.**
- **Never use SRS parts from another vehicle. When replacing SRS parts, replace them with new ones.**
- **Never disassemble or attempt to repair SRS parts.**
- **If an SRS part has been dropped, or if there are any cracks, dents or other defects in the case, bracket or connector, replace the SRS part with a new one.**
- **Use an ohmmeter/voltmeter with high impedance (10 kohms/V minimum) for troubleshooting the electrical circuits.**
- **Information labels are attached to the periphery of SRS parts. Follow the cautions and instructions on the labels.**
- **After work on the SRS is completed, perform the SRS warning light check (see DIAGNOSIS SYSTEM).**
- **When the cable is disconnected from the negative (-) battery terminal, the memory settings of each system will be cleared. Because of this, be sure to write down the settings of each system before starting work. When work is finished, reset the settings of each system as before. Never use a backup power supply from outside the vehicle to avoid erasing the memory in a system.**
- **If the vehicle is equipped with a mobile communication system, refer to the PRECAUTION in the INTRODUCTION section.**

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HINT:

In the airbag system, the center airbag sensor, front airbag sensor LH and RH, side airbag sensor LH and RH, rear airbag sensor LH and RH are collectively referred to as the airbag sensors.

1. **HANDLING PRECAUTIONS FOR AIRBAG SENSORS**
   a. Before starting the following operations, wait for at least 90 seconds after disconnecting the negative (-) terminal cable from the battery:
      1. Replacement of the airbag sensors.
      2. Adjustment of the front/rear doors of a vehicle equipped with side airbags and curtain shield airbags (fitting adjustment).
   b. When connecting or disconnecting the airbag sensor connectors, ensure that each sensor is installed in the vehicle.
   c. Do not use airbag sensors which have been dropped during operation or transportation.
   d. Do not disassemble the airbag sensors.
2. **INSPECTION PROCEDURE FOR VEHICLE INVOLVED IN ACCIDENT**
   a. When the airbag has not deployed, confirm the DTCs by checking the SRS warning light. If there is

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any malfunction in the SRS airbag system, perform troubleshooting.

b. When any of the airbags have deployed, replace the airbag sensors and check the installation condition.

3. **SRS CONNECTORS**

a. SRS connectors are located as shown in the following illustration.

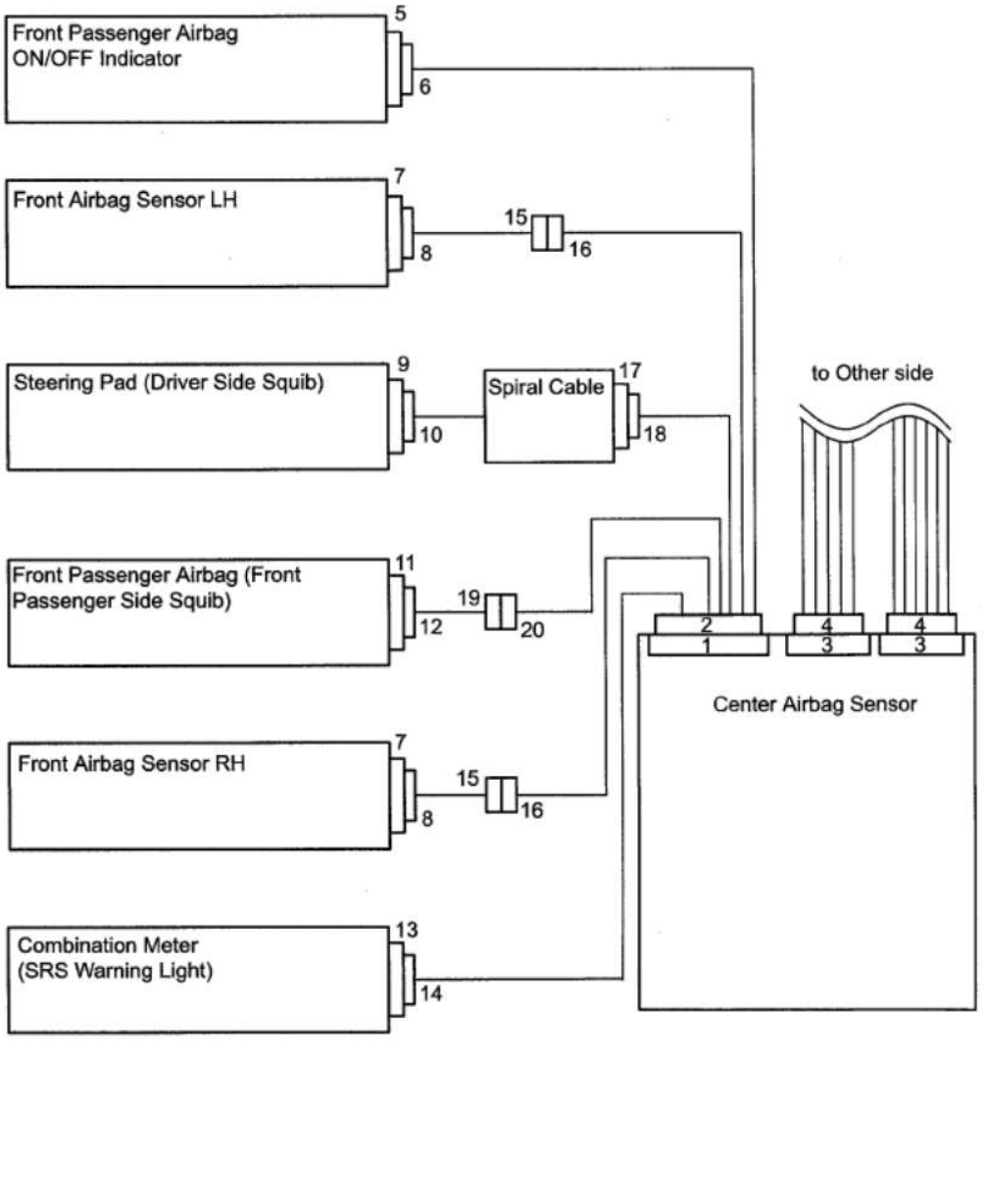


Fig. 1: Airbag Sensor And SRS Connectors Diagram (1 Of 3)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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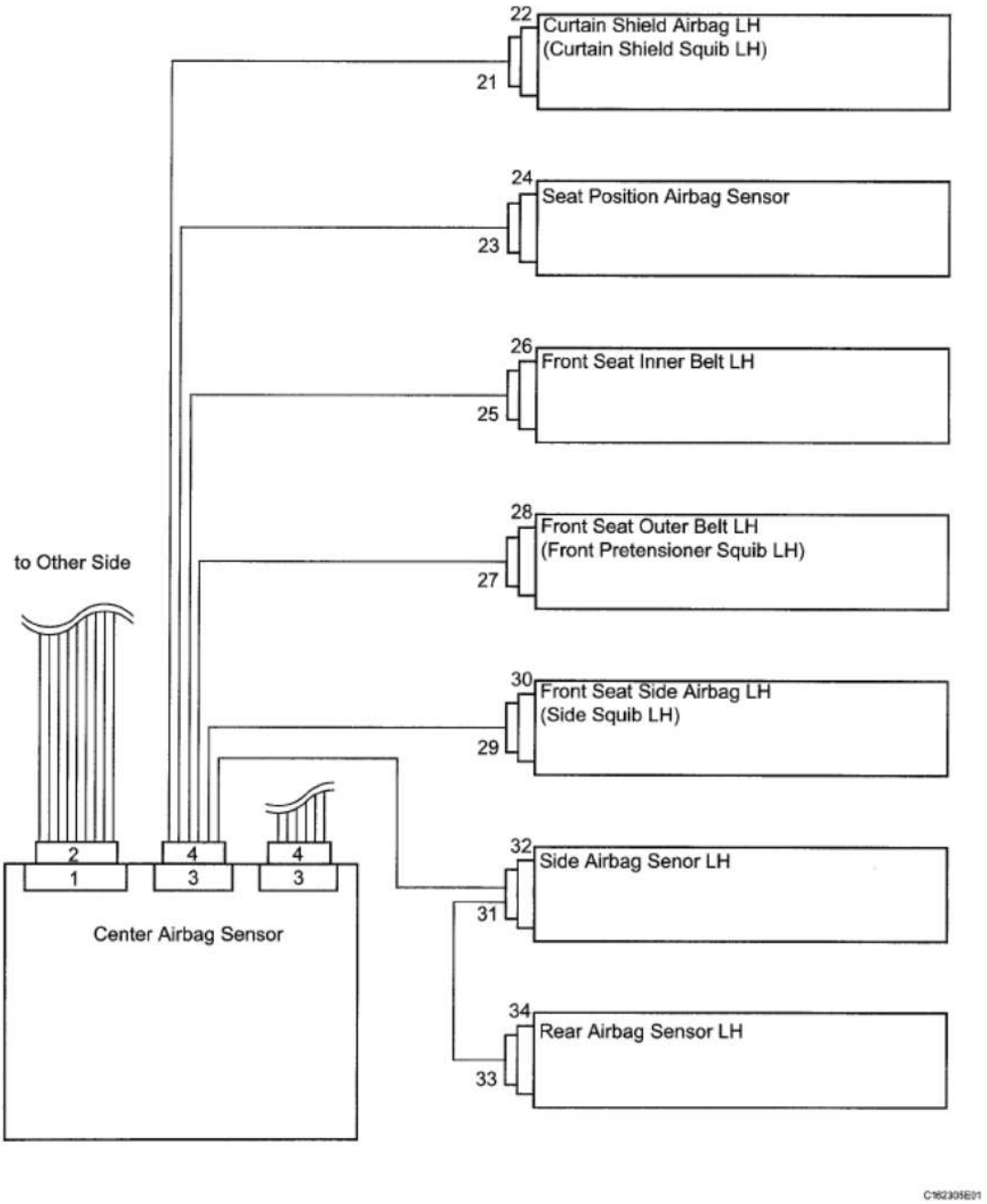


Fig. 2: Airbag Sensor And SRS Connectors Diagram (2 Of 3)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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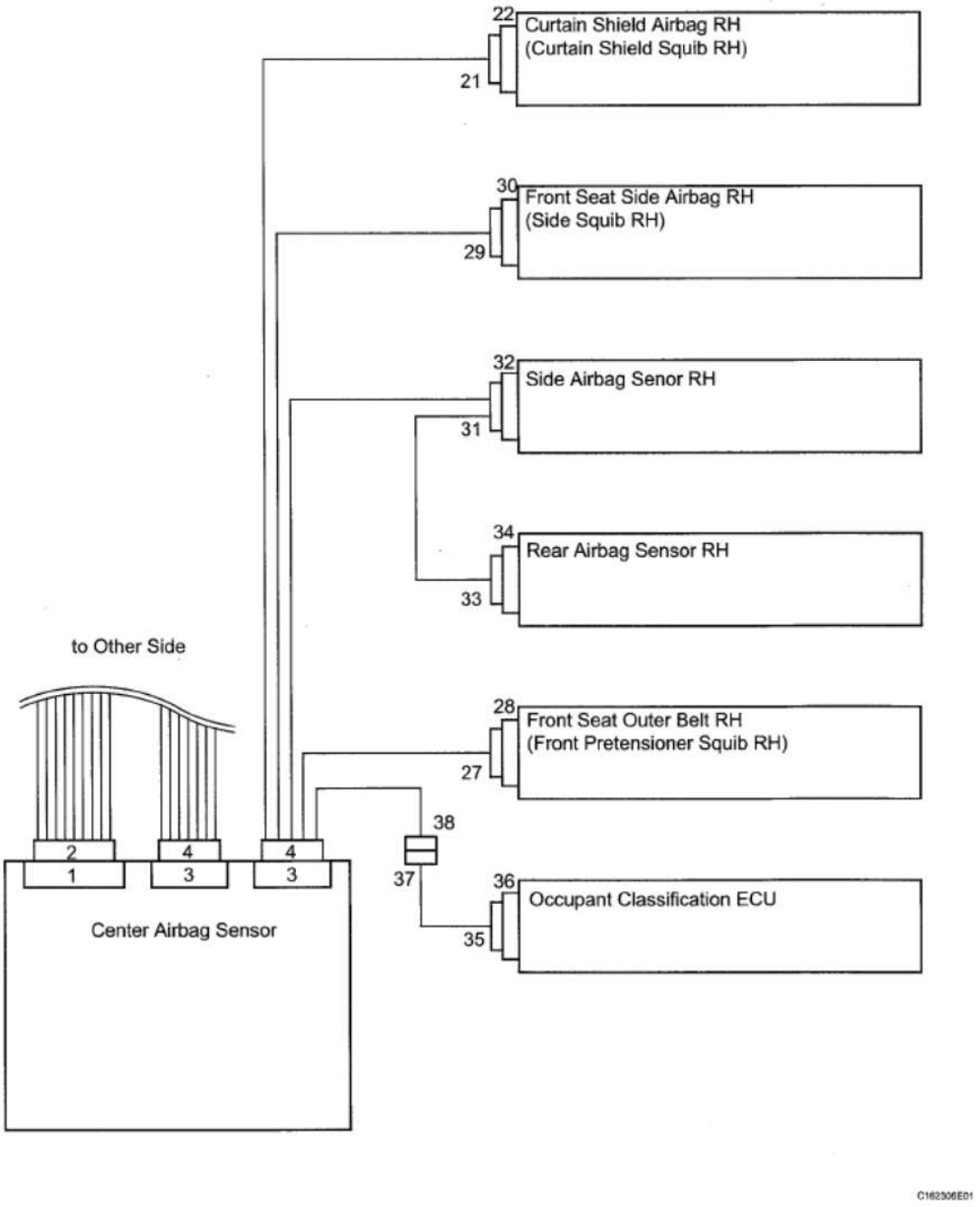


Fig. 3: Airbag Sensor And SRS Connectors Diagram (3 Of 3)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ITEM SPECIFICATIONS

Item	Application
Terminal Twin-Lock Mechanism	Connectors 15.16, 18, 19, 20, 29, 31, 33
Activation Prevention Mechanism	Connectors 2, 4, 9, 11, 17, 19, 22, 28, 30

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Half Connection Prevention Mechanism	Connectors 15, 18, 20, 29
Connector Position Assurance Mechanism	Connectors 5, 8, 31, 33
Connector Lock Mechanism (1)	Connectors 10, 12, 21, 27
Connector Lock Mechanism (2)	Connectors 2, 4
Improper Connection Prevention Lock Mechanism	Connectors 1, 3

b. All connectors in the SRS, except the seat position airbag sensor connector, 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.

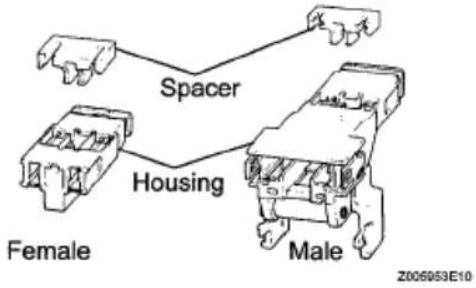


Fig. 4: Identifying Male And Female Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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.

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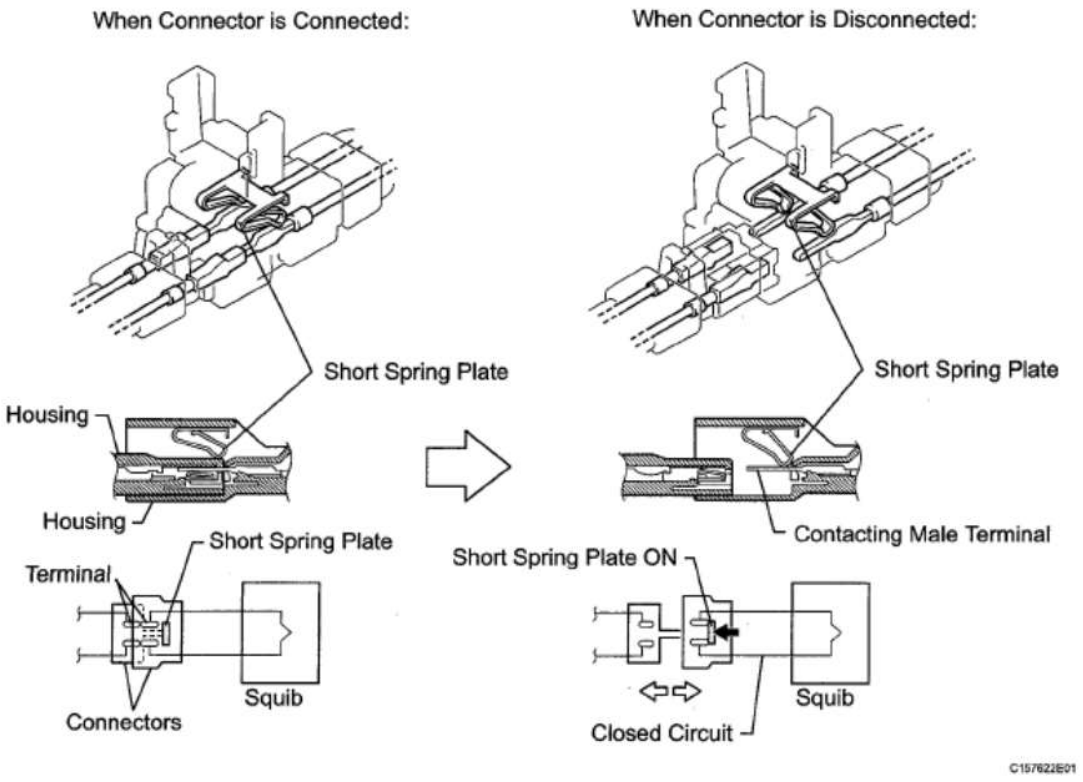


Fig. 5: Identifying Connector Connect And Disconnect Position
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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.

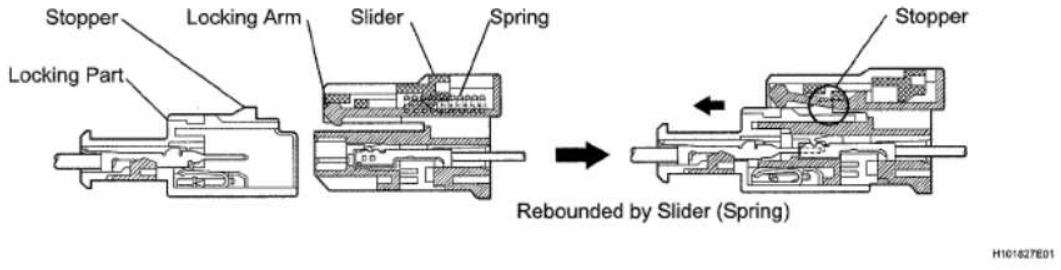


Fig. 6: Identifying Spring Slider
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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.

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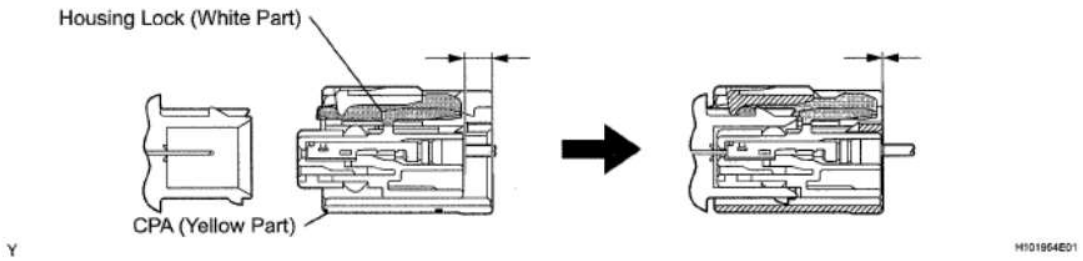


Fig. 7: Identifying Housing Lock And CPA
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. Connector lock mechanism (1):

   Locking the connector lock button connects the connector securely.

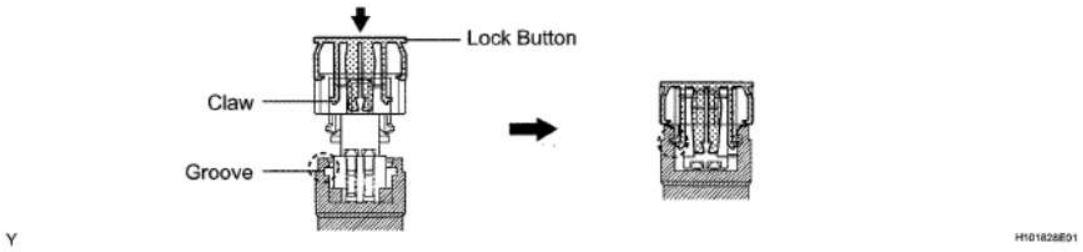
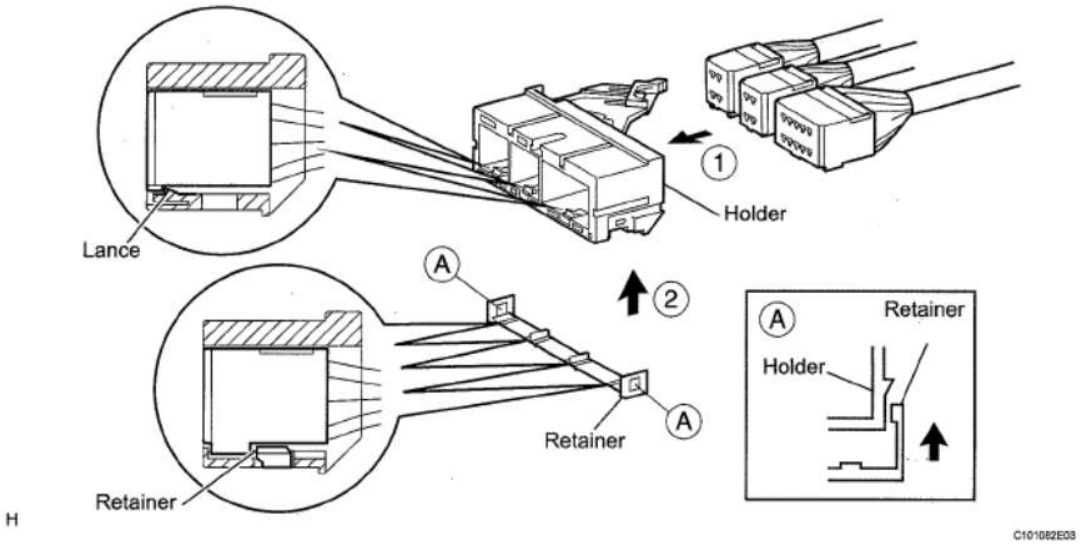


Fig. 8: Locking Connector Lock Button
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

6. Connector lock mechanism (2):

   Both the primary lock with holder lances and the secondary lock with retainer prevent the connectors from becoming disconnected.



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Fig. 9: 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.

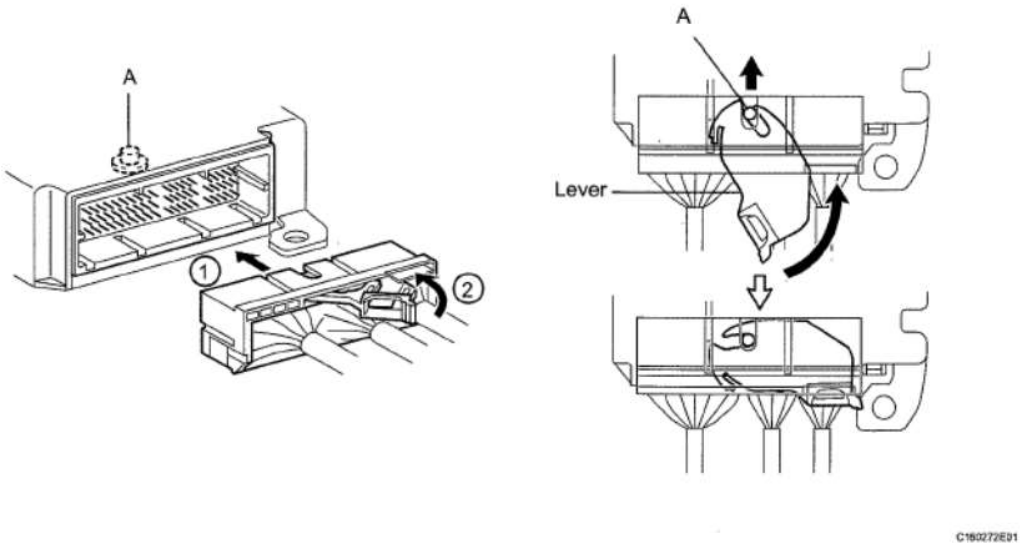


Fig. 10: Pushing Into Lock Position By Rotating Around A Axis To Lock Holder
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

4. **DISCONNECTION OF CONNECTORS FOR STEERING PAD, FRONT PASSENGER AIRBAG (SQUIB SIDE), CURTAIN SHIELD AIRBAG AND FRONT SEAT OUTER BELT**

   HINT:

   Tape the screwdriver tip before use.

   a. Release the lock button (yellow part) of the connector using a screwdriver.
   b. Insert the screwdriver tip between the connector and the base, and then raise the connector.

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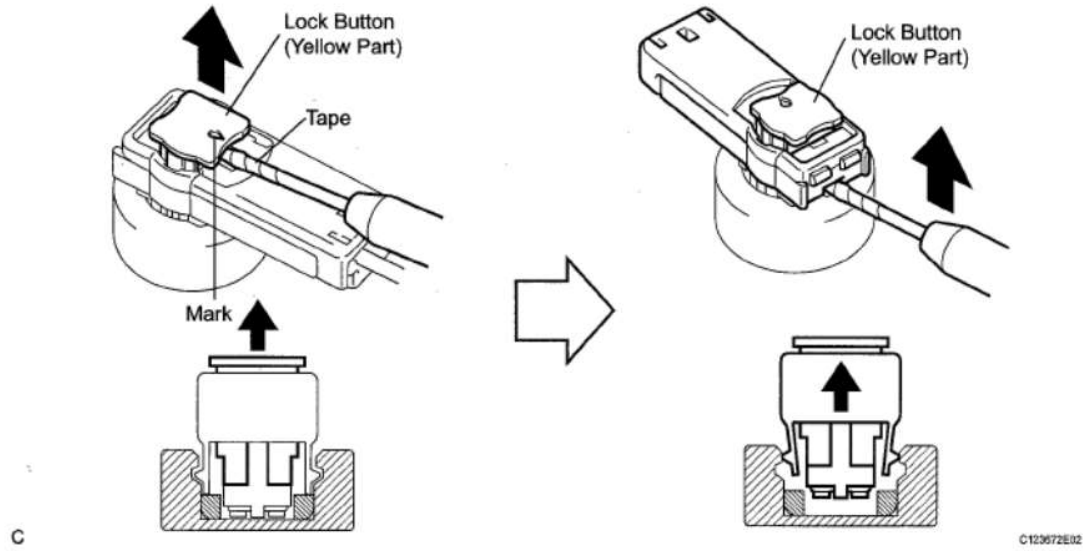


Fig. 11: Releasing Lock Button (Yellow Part) Of Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. **CONNECTION OF CONNECTORS FOR STEERING PAD, FRONT PASSENGER AIRBAG (SQUIB SIDE), CURTAIN SHIELD AIRBAG AND FRONT SEAT OUTER BELT**
   a. Connect the connector.
   b. Push down securely on the lock button (yellow part) of the connector. (When locked, a click sound can be heard.)

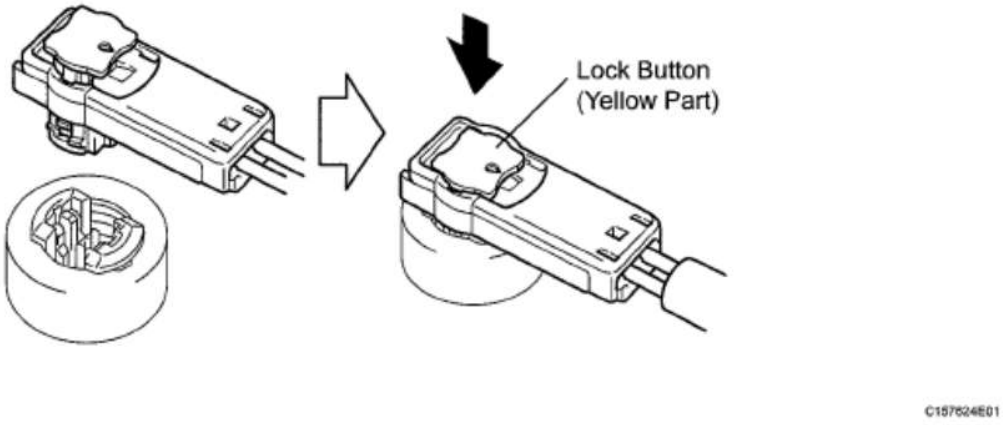


Fig. 12: Pushing Lock Button (Yellow Part) Of Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

6. **DISCONNECTION OF CONNECTOR FOR SPIRAL CABLE (INSTRUMENT PANEL WIRE SIDE) AND FRONT PASSENGER AIRBAG (INSTRUMENT PANEL WIRE SIDE)**
   a. Place a finger on the slider, slide the slider to release the lock, and then disconnect the connector.

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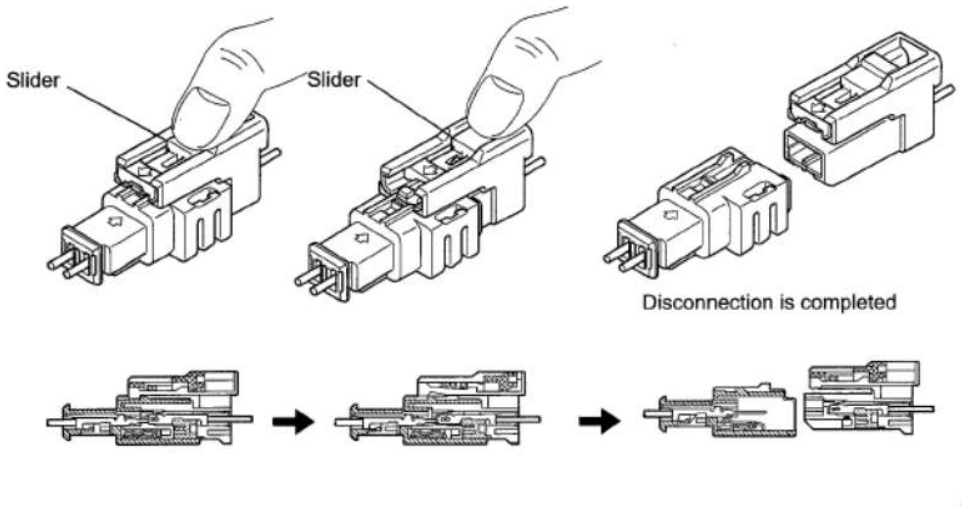


Fig. 13: Sliding Slider To Release Lock
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

7. **CONNECTION OF CONNECTOR FOR SPIRAL CABLE (INSTRUMENT PANEL WIRE SIDE) AND FRONT PASSENGER AIRBAG (INSTRUMENT PANEL WIRE SIDE)**
   a. Connect the connector as shown in the illustration. (When locking, make sure that the slider returns to its original position and a click sound can be heard.)

      HINT:

      When connecting, the slider will slide. Be sure not to touch the slider while connecting, as it may result in an insecure fit.

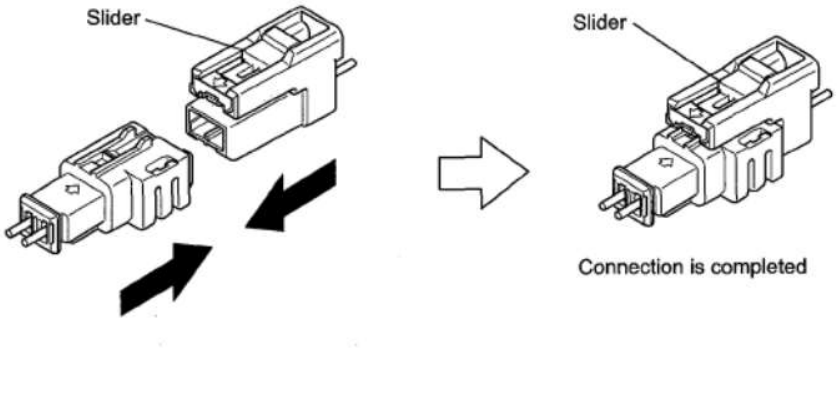


Fig. 14: Identifying Connector Connection
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

8. **DISCONNECTION OF CONNECTORS FOR FRONT SEAT SIDE AIRBAG**
   a. Place a finger on the slider, slide the slider to release the lock, and then disconnect the connector.

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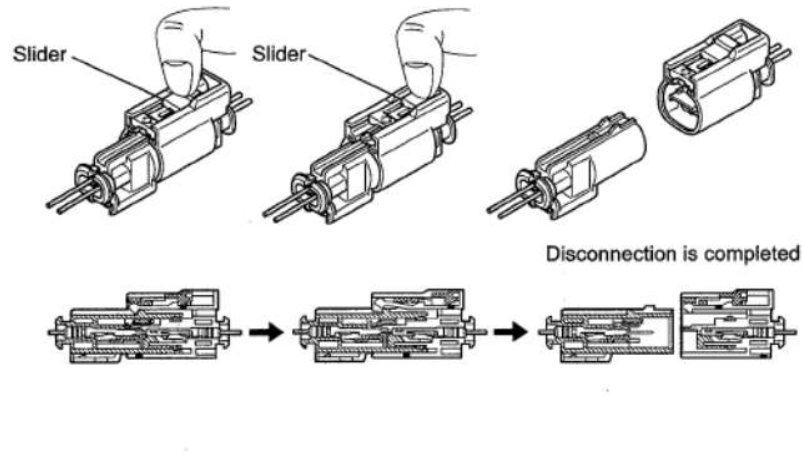


Fig. 15: Sliding Slider To Release Lock
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

9. **CONNECTION OF CONNECTORS FOR FRONT SEAT SIDE AIRBAG**
   a. Connect the connector as shown in the illustration. (When locking, make sure that the slider returns to its original position and a click sound can be heard.)

      HINT:

      When connecting, the slider will slide. Be sure not to touch the slider while connecting, as it may result in an insecure fit.

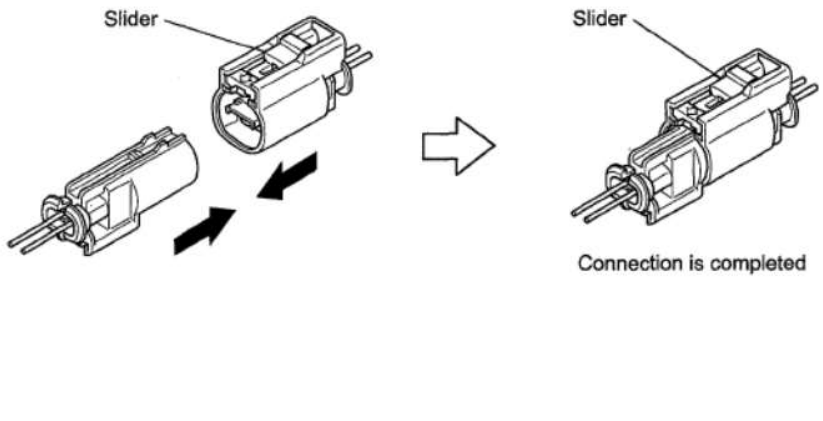


Fig. 16: Identifying Connector Connection
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

10. **DISCONNECTION OF CONNECTOR FOR CENTER AIRBAG SENSOR**
    a. Pull the lever by pushing part A as shown in the illustration and disconnect the holder (with connectors).

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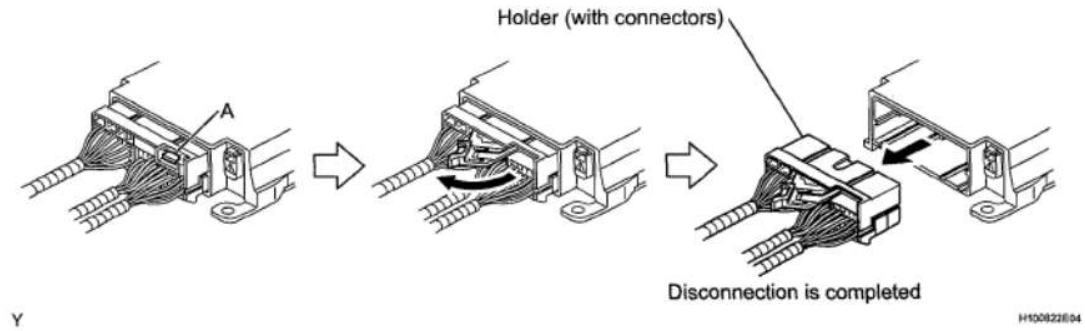


Fig. 17: Pulling Lever With Pushing Part
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

Perform the following procedures when replacing the holder.

b. Remove the holder.
   1. Using a screwdriver, unlock the retainer.

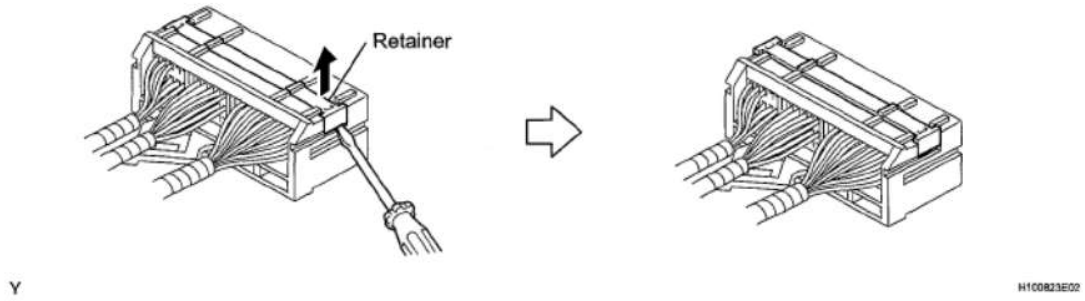


Fig. 18: Removing Holder
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   2. Release the fitting lance and remove the holder.

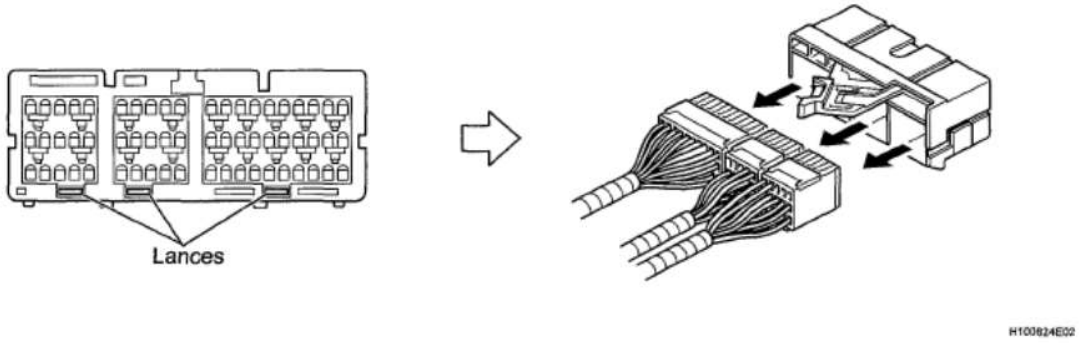


Fig. 19: Removing Holder
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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c. Install the holder.

1. Install the connectors to the holder. (When locked, a click sound can be heard.)

HINT:

The retainer is locked when the holder is connected.

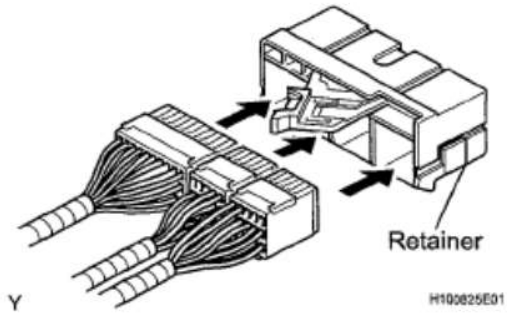


Fig. 20: Installing Connectors To Holder
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

11. **CONNECTION OF CONNECTOR FOR CENTER AIRBAG SENSOR**

a. Firmly insert the holder (with connectors) into the center airbag sensor until it cannot be pushed any further.

b. Push the lever to connect the holder (with connectors). (When locked, a click sound can be heard.)

HINT:

The holder slides into the center airbag sensor when it is being connected. Be sure not to hold the holder while connecting, as it may result in an insecure fit.

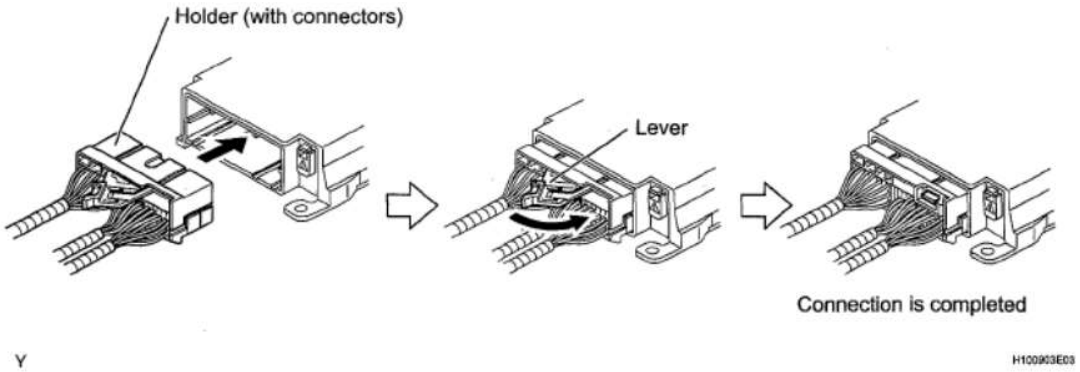


Fig. 21: Pushing Lever To Holder (With Connectors)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

12. **DISCONNECTION OF CONNECTOR FOR FRONT AIRBAG SENSOR**

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a. Push down the housing lock (white part) and slide the CPA (yellow part). (At this time, the connector cannot be disconnected yet.)
b. Push down the housing lock (white part) again and disconnect the connector.

HINT:

Do not push down the A part shown in the illustration when disconnecting.

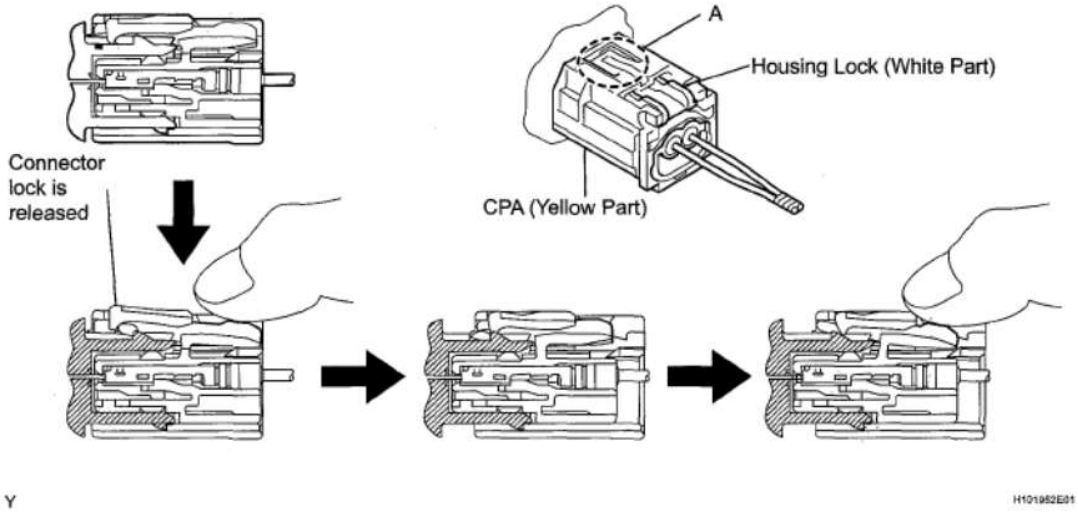


Fig. 22: Identifying Connector Lock Released
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. After disconnecting the connector, check that the position of the housing lock (white part) is as shown in the illustration.

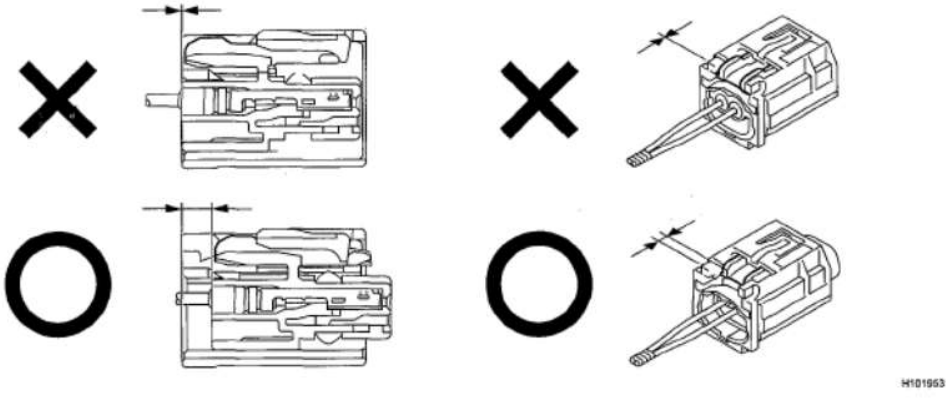


Fig. 23: Identifying Position Of Housing Lock (White Part)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

13. **CONNECTION OF CONNECTOR FOR FRONT AIRBAG SENSOR**

a. Before connecting the connectors, check that the position of the housing lock (white part) is as

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shown in the illustration.

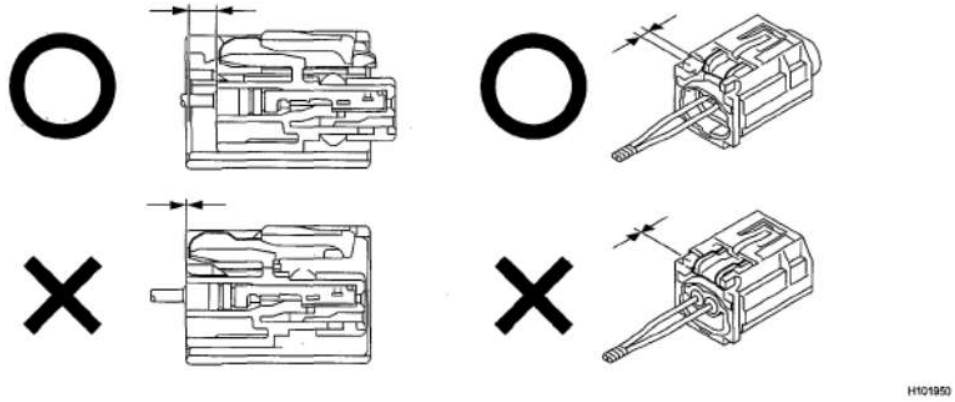


Fig. 24: Identifying Position Of Housing Lock (White Part)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Be sure to engage the connectors until they are locked. (When locking, make sure that a click sound can be heard.)

HINT:

When connecting them, the housing lock (white part) slides. Be sure not to hold the housing lock (white part) or A part, as it may result in an insecure fit.

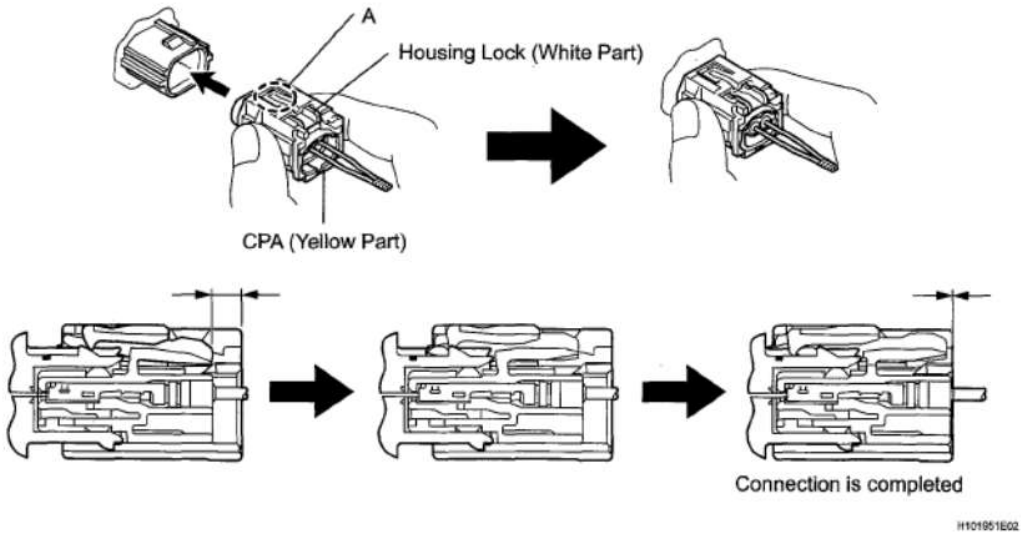


Fig. 25: Identifying Housing Lock (White Part) And CPA (Yellow Part)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

14. **DISCONNECTION OF CONNECTORS FOR SIDE AIRBAG SENSOR AND REAR AIRBAG SENSOR**

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a. While holding the sides of the outer connector locking sleeve, slide the sleeve in the direction shown by the arrow.
b. When the connector lock is released, the connectors are disconnected.

HINT:

Be sure to hold both sides of the sleeve. Holding the top and bottom will make disconnection difficult.

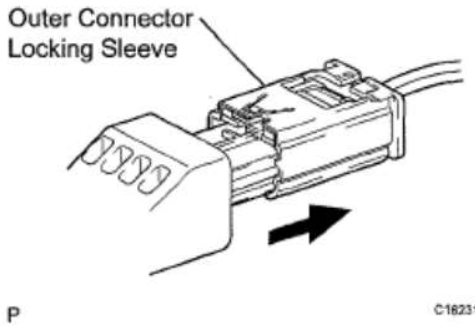


Fig. 26: Identifying Outer Connector Locking Sleeve
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

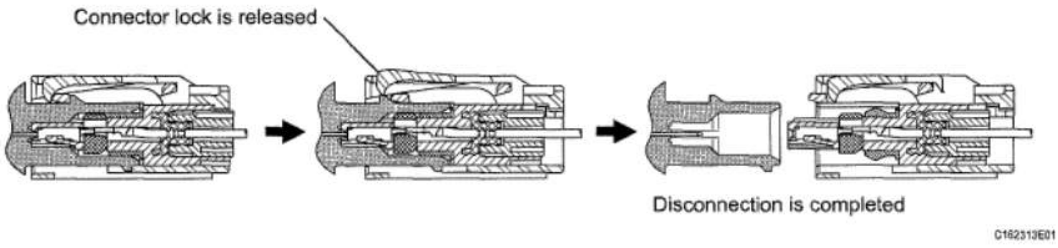


Fig. 27: Identifying Connector Lock Release Direction
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

15. **CONNECTION OF CONNECTORS FOR SIDE AIRBAG SENSOR AND REAR AIRBAG SENSOR**
    a. 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).

    HINT:

    When connecting, the sleeve will slide. Be sure not to hold the sleeve while connecting, as it may result in an insecure fit.

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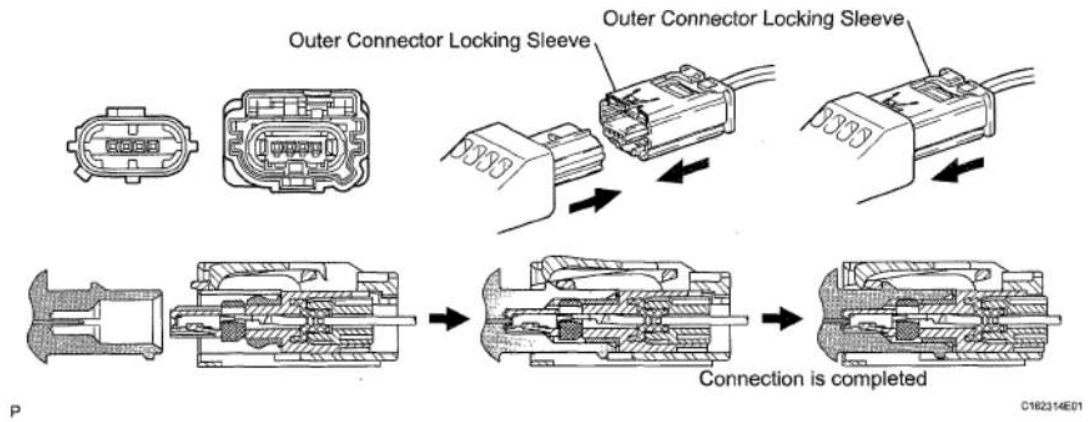
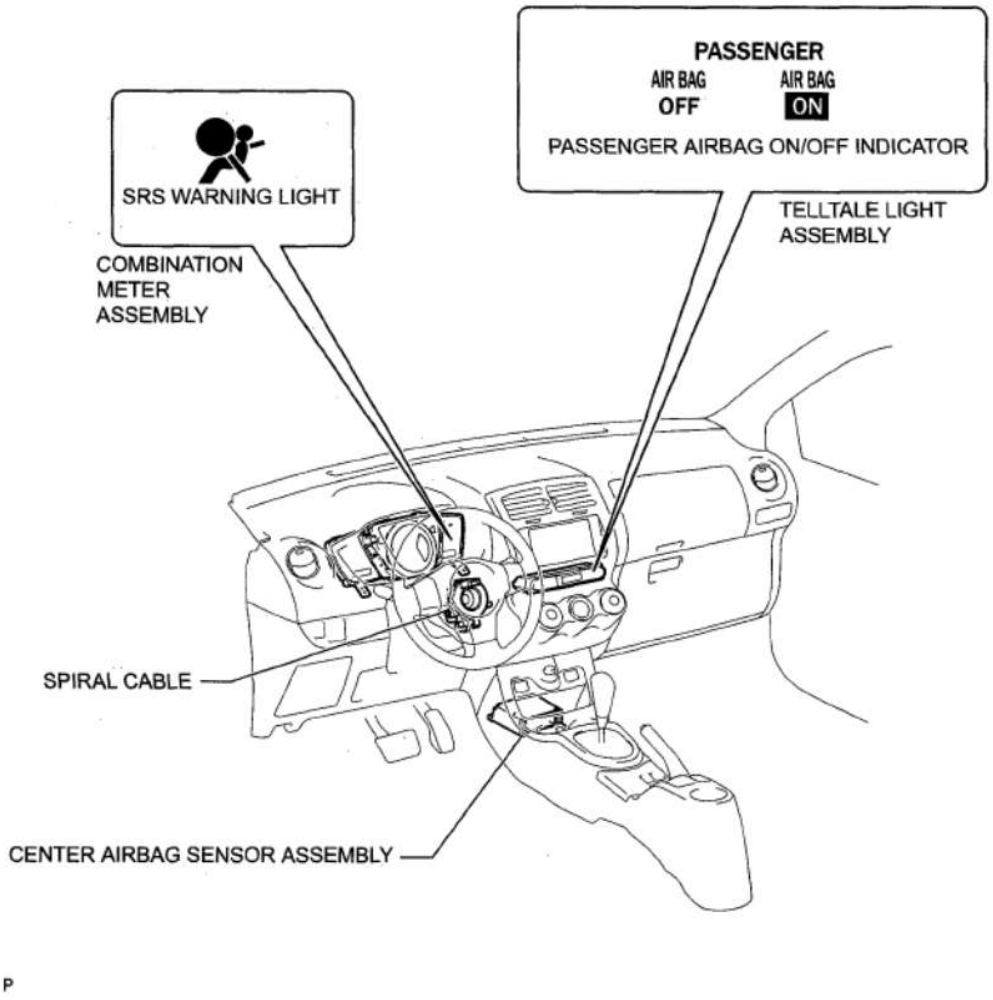


Fig. 28: Identifying Outer Connector Locking Sleeve
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

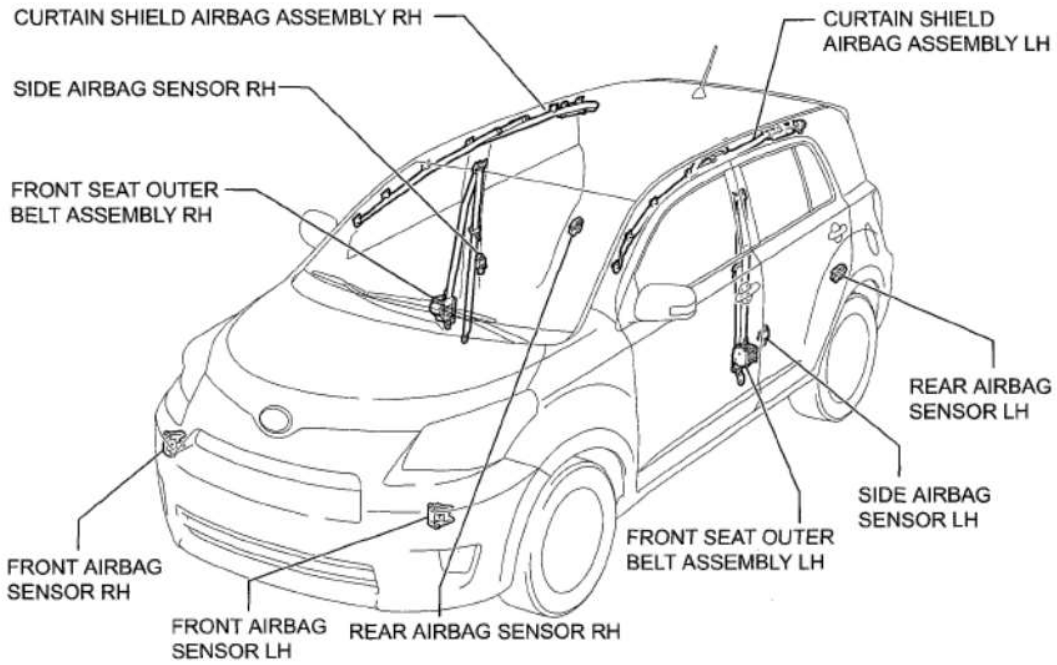
PARTS LOCATION

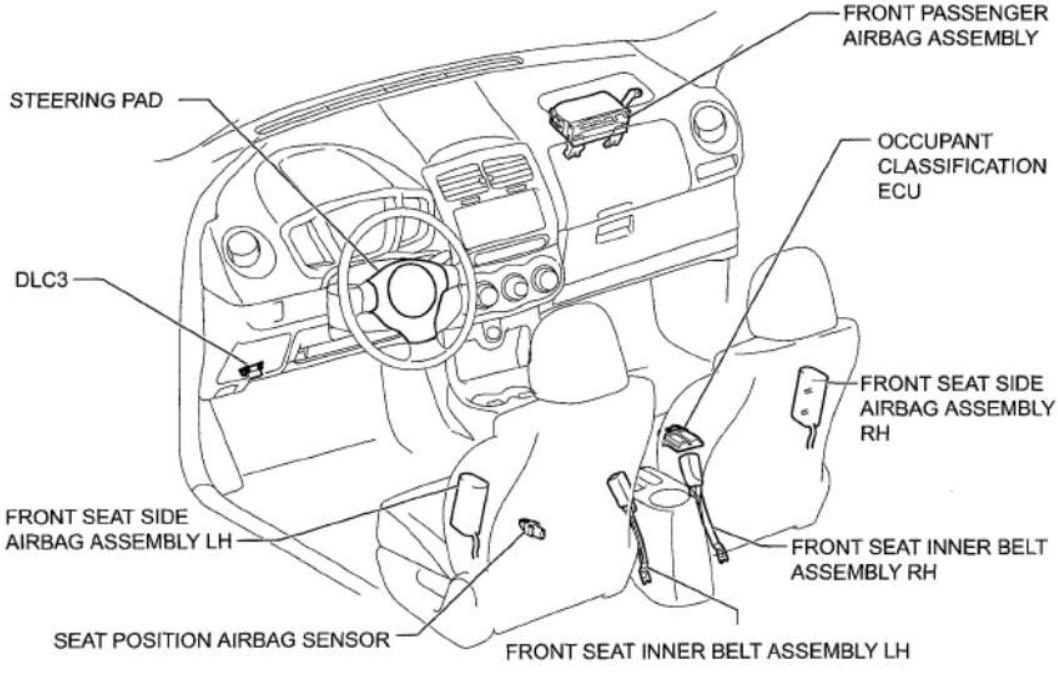


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Fig. 29: Identifying Airbag System Parts Location (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.





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Fig. 30: Identifying Airbag System Parts Location (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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SYSTEM DIAGRAM

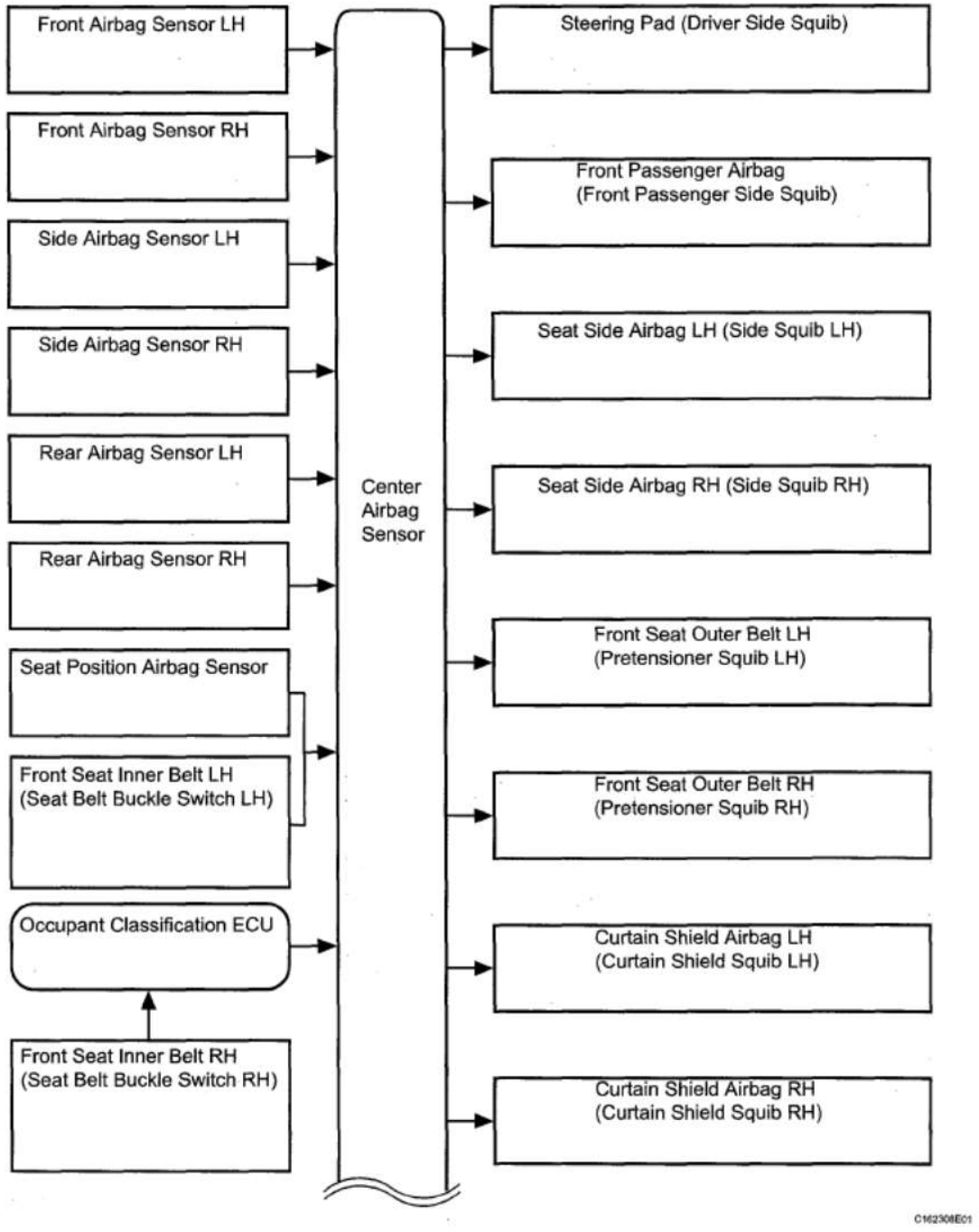


Fig. 31: Airbag System Diagram (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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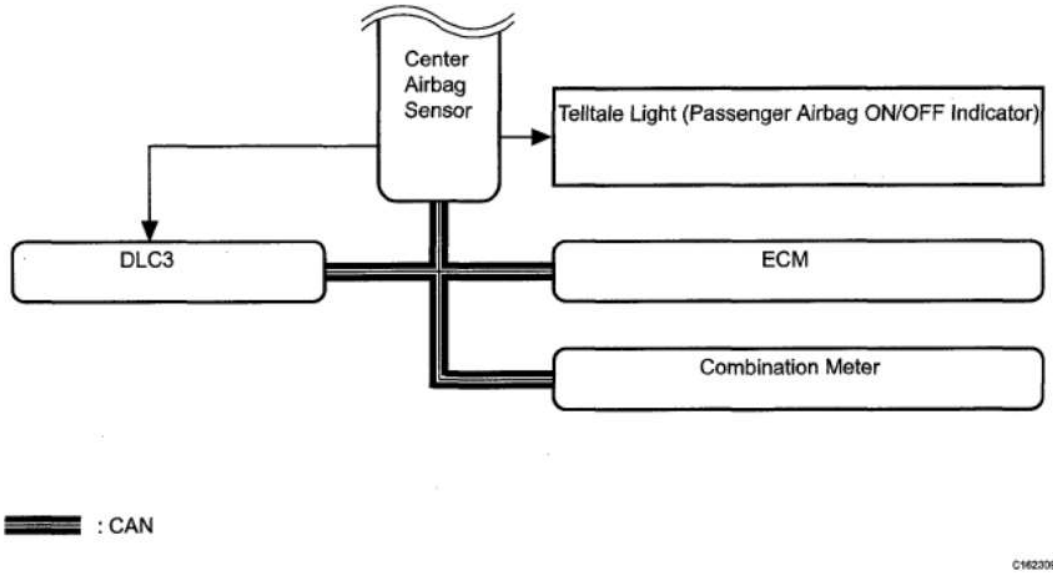


Fig. 32: Airbag System Diagram (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

COMMUNICATION METHOD CHART

Transmitting ECU (Transmitter)	Receiving ECU	Signals	Communication method
Center Airbag Sensor	ECM	• Crash detection signal • Fuel cut signal	CAN
Center Airbag Sensor	Combination Meter	• SRS warning light ON demand signal • SRS warning light blink demand signal • Passenger seat occupant detection signal • Passenger seat buckle switch signal • Diagnosis signal (DTC)	
Combination Meter	Center Airbag Sensor	• Vehicle speed signal • Meter diagnosis polling signal	
ECM	Center Airbag Sensor	• Engine speed signal • Accelerator opening angle information • Accelerator opening angle signal • Shift position signal	

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		• Test mode signal • Stop signal	

SYSTEM DESCRIPTION

1. **GENERAL**
   a. FRONTAL COLLISION
      1. The driver airbag and front passenger airbag are designed to supplement seat belts in the event of a front collision in order to help reduce shock to the head and chest 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 and the 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 center pillar 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 center pillars 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.

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d. CENTER AIRBAG SENSOR ASSEMBLY

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 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 assembly, the side airbag sensor and the rear airbag sensor, and determines whether the front seat side airbag and the curtain shield airbag should be activated, and diagnoses system malfunctions.
   - The center airbag sensor assembly sends the airbag deployment signal to the ECM through CAN (Controller Area Network) to operate the fuel pump control (only on gasoline engine models).
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 assembly if a deceleration rate sent to the safing sensor is greater than the specified value.

4. Backup power source

   The backup 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.

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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 assembly. It comes on to inform the driver of system trouble when a malfunction is detected in self-diagnosis of the center airbag sensor assembly. 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 with something 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.

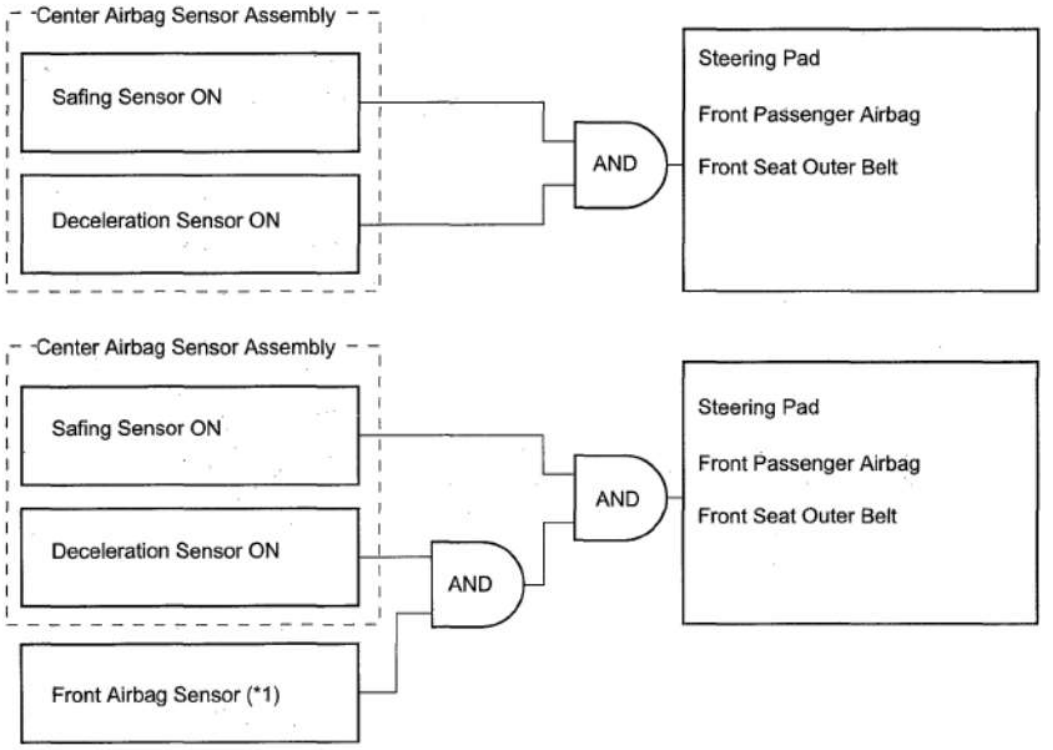


Fig. 33: Center Airbag Sensor Operation Diagram
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HINT:

*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.

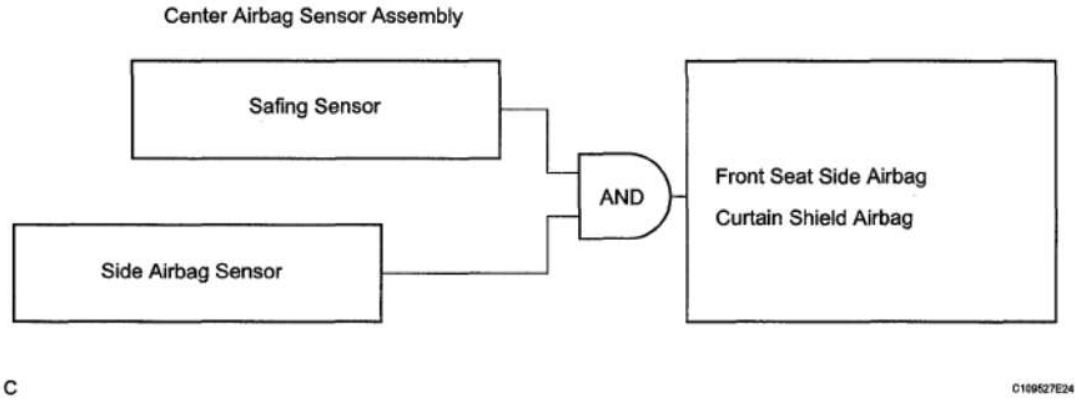


Fig. 34: Center Airbag Sensor Current Flow Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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).

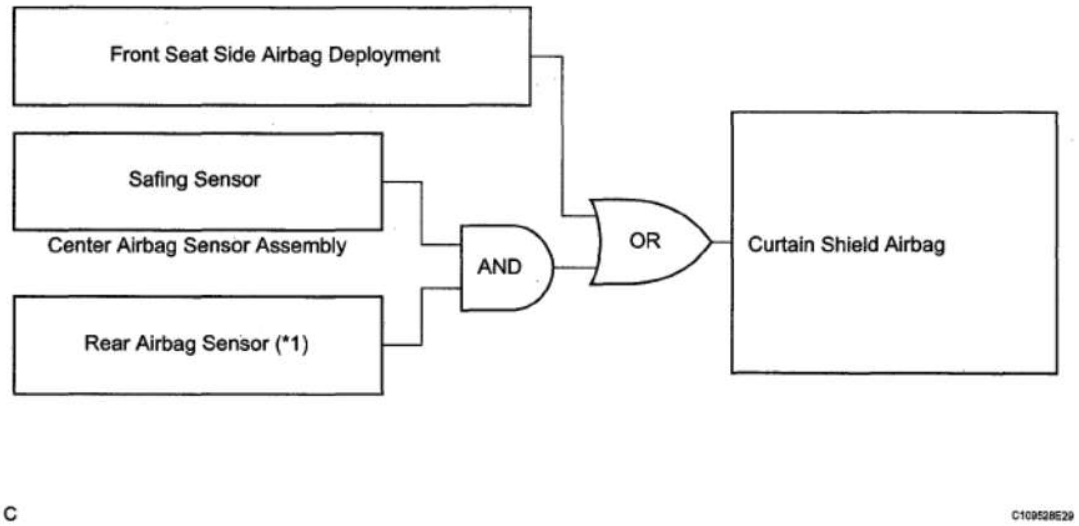


Fig. 35: Front Seat Side Airbag Deployment Diagram
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HINT:

*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

HINT:

- Use these procedures to troubleshoot the airbag system.
- *: Use the Techstream.

1. **VEHICLE BROUGHT TO WORKSHOP**
2. **INSPECT BATTERY VOLTAGE**

   Standard voltage:

   11 to 14 V

   If the voltage is below 11V, recharge or replace the battery before proceeding.

3. **CHECK CAN COMMUNICATION SYSTEM***
   a. Check for DTC (see **DTC CHECK / CLEAR**).

   Result

   RESULT CHART

Result	Proceed to
DTC is not output	A
DTC is output	B

   B : CHECK CAN COMMUNICATION CIRCUIT

   A: Go to next step

4. **WARNING LIGHT CHECK**
5. **CHECK DTC (Present and Past DTCs)***
   a. Check for DTC (see **DTC CHECK / CLEAR**).

   Result

   RESULT CHART

Result	Proceed to
DTC is not output	A

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DTC is output	B

B : PROBLEM SYMPTOMS TABLE

A: Go to next step

6. **DTC CHART**
7. **CIRCUIT INSPECTION***
8. **REPAIR**
9. **CLEAR DTC (Present and Past DTCs)***
10. **CHECK DTC (Present and Past DTCs)***
    a. Check for DTC (see **DTC CHECK / CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC is not output	A
DTC is output	B

B : DIAGNOSTIC TROUBLE CODE CHART

A: Go to next step

11. **CONFIRMATION TEST***

NEXT : END

PROBLEM SYMPTOMS TABLE

HINT:

Proceed to the troubleshooting for each circuit in the table below.

Airbag system:

PROBLEM SYMPTOM CHART

Symptom	Suspected Area	See
The SRS warning light goes off after the primary check, but then comes on.	SRS Warning Light Remains ON	**SRS WARNING LIGHT REMAINS ON**
With the ignition switch ON, the SRS warning light sometimes comes on after approximately 6 seconds.	SRS Warning Light Remains ON	**SRS WARNING LIGHT REMAINS ON**
The SRS warning light always comes on even	SRS Warning Light	**SRS WARNING LIGHT**

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when DTC is not output.	Remains ON	**REMAINS ON**
With the ignition switch ON, the SRS warning light does not come on.	SRS Warning Light does not Come ON	**SRS WARNING LIGHT DOES NOT COME ON**
Although an SRS warning light operates normally, DTC or a normal system code is not displayed.	Diagnosis Circuit	**DIAGNOSIS CIRCUIT**
Although terminals TC and CG of DLC3 are not connected, DTC or a normal system code is displayed.	Diagnosis Circuit	**DIAGNOSIS CIRCUIT**

TERMINALS OF ECU

1. **CENTER AIRBAG SENSOR**

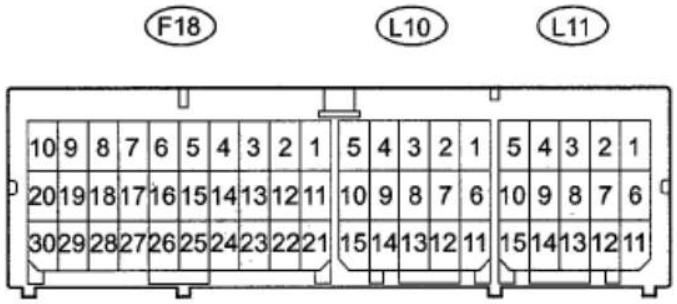


Fig. 36: Identifying F18, L10 And L11 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TERMINAL SYMBOL CHART

Terminal No.	Terminal Symbol	Destination
F18-1	P2+	Front passenger airbag (Front passenger side squib 2nd step)
F18-2	P2-	Front passenger airbag (Front passenger side squib 2nd step)
F18-3	P-	Front passenger airbag (Front passenger side squib)
F18-4	P+	Front passenger airbag (Front passenger side squib)
F18-5	D+	Steering pad (Driver side squib)
F18-6	D-	Steering pad (Driver side squib)
F18-7	D2-	Steering pad (Driver side squib 2nd step)
F18-8	D2+	Steering pad (Driver side squib 2nd step)
F18-13	CANH	CAN communication line
F18-16	SIL	DLC3
F18-17	P-AB	Front passenger seat belt warning light (Passenger airbag ON/OFF indicator)
F18-21	IG2	IGN fuse

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F18-22	CANL	CAN communication line
F18-23	PAON	Passenger airbag ON/OFF indicator
F18-25	E1	Ground
F18-26	E2	Ground
F18-27	-SR	Front airbag sensor RH
F18-28	-SL	Front airbag sensor LH
F18-29	+SR	Front airbag sensor RH
F18-30	+SL	Front airbag sensor LH
L10-1	PD-	Front seat outer belt LH (Front pretensioner squib LH)
L10-2	PD+	Front seat outer belt LH (Front pretensioner squib LH)
L10-6	ICD-	Curtain shield airbag LH (Curtain shield squib LH)
L10-7	ICD+	Curtain shield airbag LH (Curtain shield squib LH)
L10-8	BBD+	Side airbag sensor LH
L10-9	SFD+	Front seat side airbag LH (Front side squib LH)
L10-10	SFD-	Front seat side airbag LH (Front side squib LH)
L10-11	DBE+	Front seat inner belt LH (Seat position airbag sensor)
L10-12	DBE-	Front seat inner belt LH (Seat position airbag sensor)
L10-13	DSP-	Seat position airbag sensor
L10-14	DSP+	Seat position airbag sensor
L10-15	BBD-	Side airbag sensor LH
L11-4	PP+	Front seat outer belt RH (Front pretensioner squib RH)
L11-5	PP-	Front seat outer belt RH (Front pretensioner squib RH)
L11-6	SFP-	Front seat side airbag RH
L11-7	SFP+	Front seat side airbag RH
L11-8	BBP+	Side airbag sensor RH
L11-9	ICP+	Curtain shield airbag RH (Curtain shield squib RH)
L11-10	ICP-	Curtain shield airbag RH (Curtain shield squib RH)
L11-11	BBP-	Side airbag sensor RH
L11-12	FSP+	Occupant classification ECU
L11-13	FSP-	Occupant classification ECU

DIAGNOSIS SYSTEM

1. 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.

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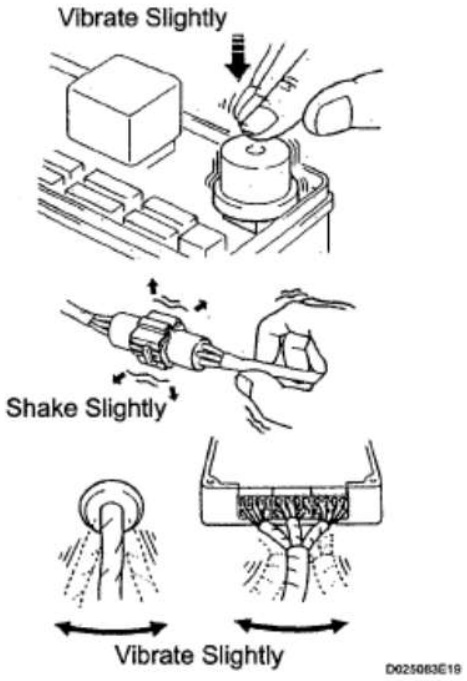


Fig. 37: Checking Connector Connection
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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.

2. **FUNCTION OF SRS WARNING LIGHT**

a. Primary check.

1. Turn the ignition switch to OFF. Wait for at least 2 seconds, then turn the ignition switch to

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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.

3. **CHECK SRS WARNING LIGHT**
   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).

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Fig. 38: Identifying SRS Warning Light
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

When any of the following symptoms occur, 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.

4. **FUNCTION OF PASSENGER AIRBAG ON/OFF INDICATOR**
   a. Initial check
      1. Turn the ignition switch to ON.
      2. The passenger airbag ON/OFF indicator comes on for approximately 4 seconds, 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 or OFF depending on the conditions listed below.

FUNCTION OF PASSENGER AIRBAG ON/OFF INDICATOR

Condition	"ON" indicator	"OFF" indicator
Vacant	OFF	OFF
Adult is seated	ON	OFF
Child is seated	OFF	ON
Child restraint system is set	OFF	ON
Front passenger occupant classification failure	OFF	ON

HINT:

- The passenger airbag ON/OFF indicator is 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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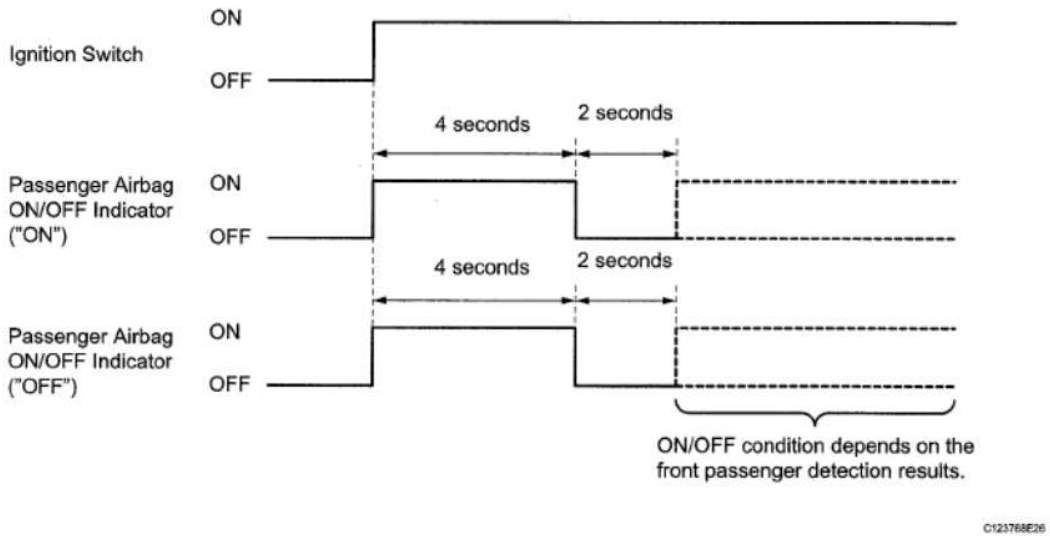


Fig. 39: Passenger Airbag ON/OFF Indicator Timing Chart
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR**
   a. Turn the ignition switch to ON.
   b. Check that the passenger airbag ON/OFF indicator ("ON" and "OFF") comes on for approximately 4 seconds, then goes off for approximately 2 seconds.

Telltale Light:



Fig. 40: Passenger Airbag ON/OFF Indicator Display
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

Refer to the table in the previous step regarding the passenger airbag ON/OFF indicator when the ignition switch is turned to ON and approximately 6 seconds have passed.

6. **ACTIVATION PREVENTION MECHANISM**
   a. FUNCTION OF ACTIVATION PREVENTION MECHANISM
      1. An activation prevention mechanism is built into the connector (on the center airbag sensor side) of the airbag system squib circuit to prevent accidental airbag activation.

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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.

CAUTION: 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 speci directed by the troubleshooting procedure.**
- **To prevent the terminal and the short spring from being damaged use a piece of paper with the same thickness as the male terminal**

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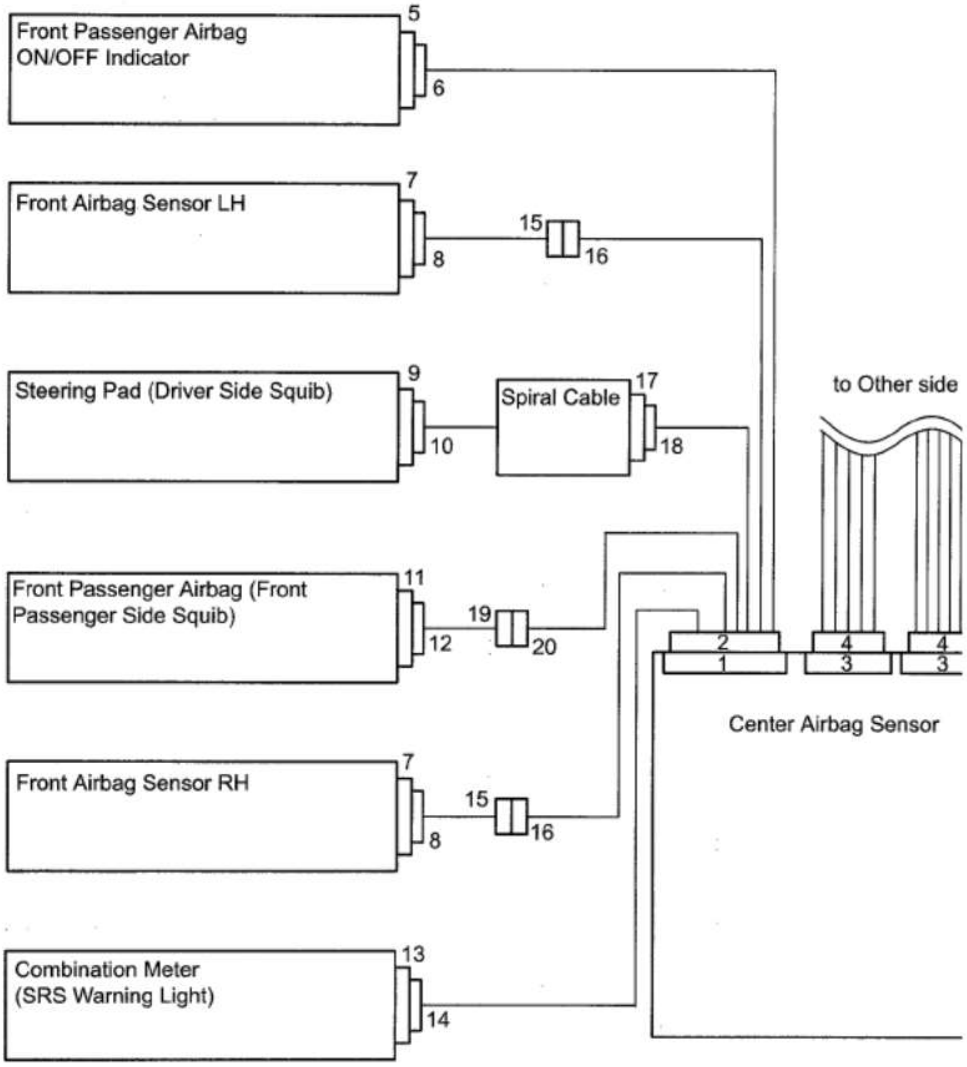


Fig. 41: Front Passenger Airbag ON/OFF Indicator Function Diagra 3)

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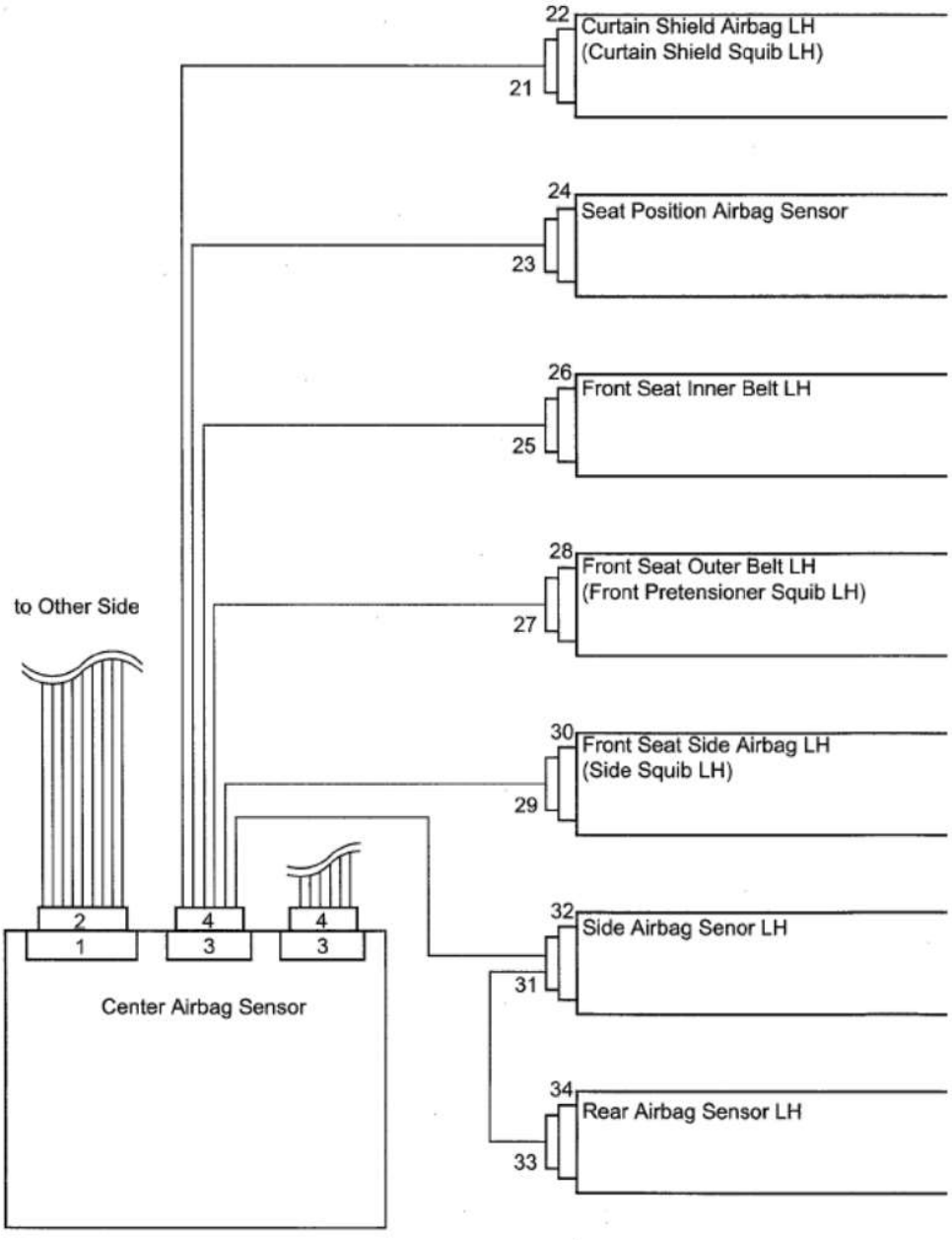


Fig. 42: Front Passenger Airbag ON/OFF Indicator Function Diagra 3)

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

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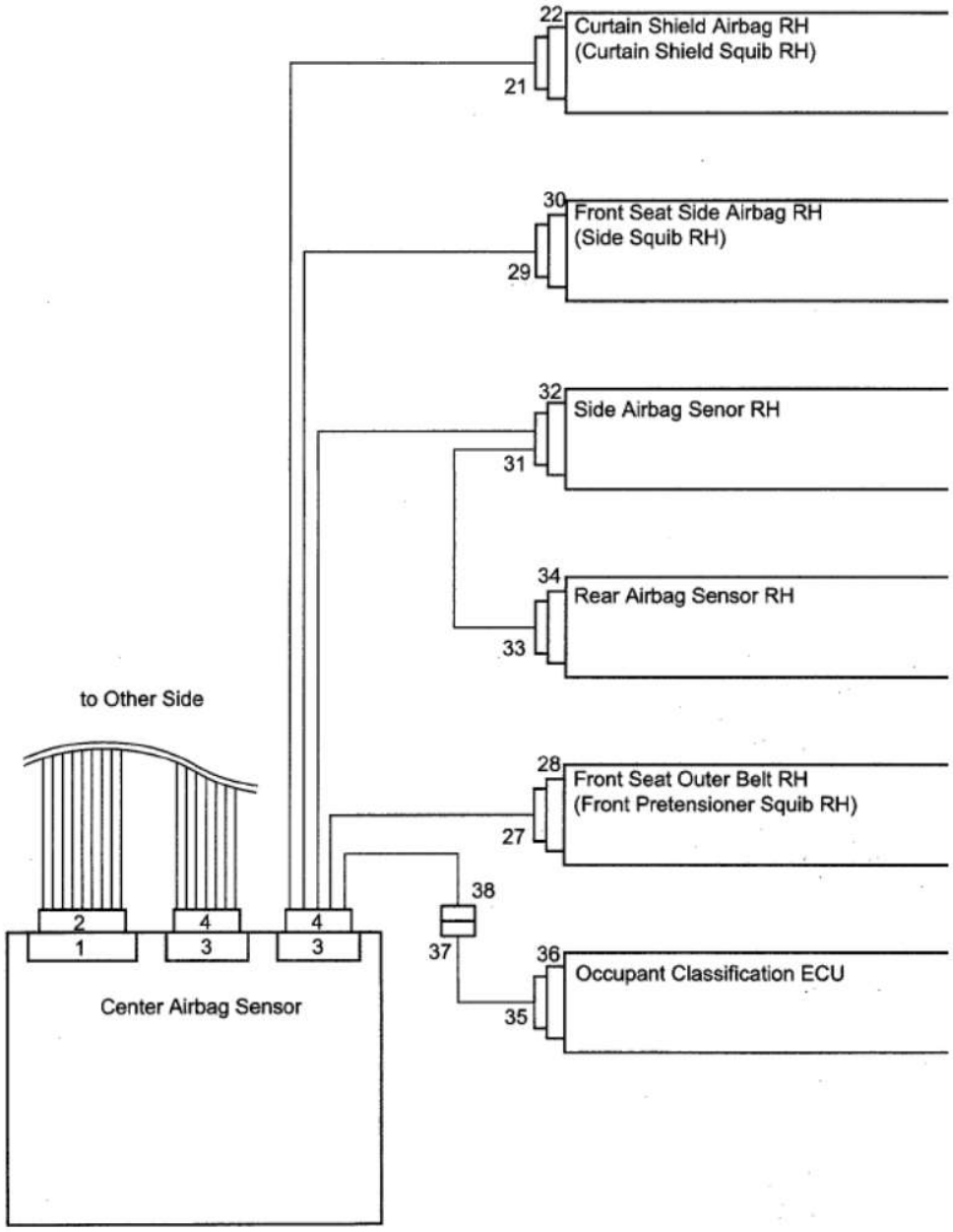


Fig. 43: Front Passenger Airbag ON/OFF Indicator Function Diagra 3)

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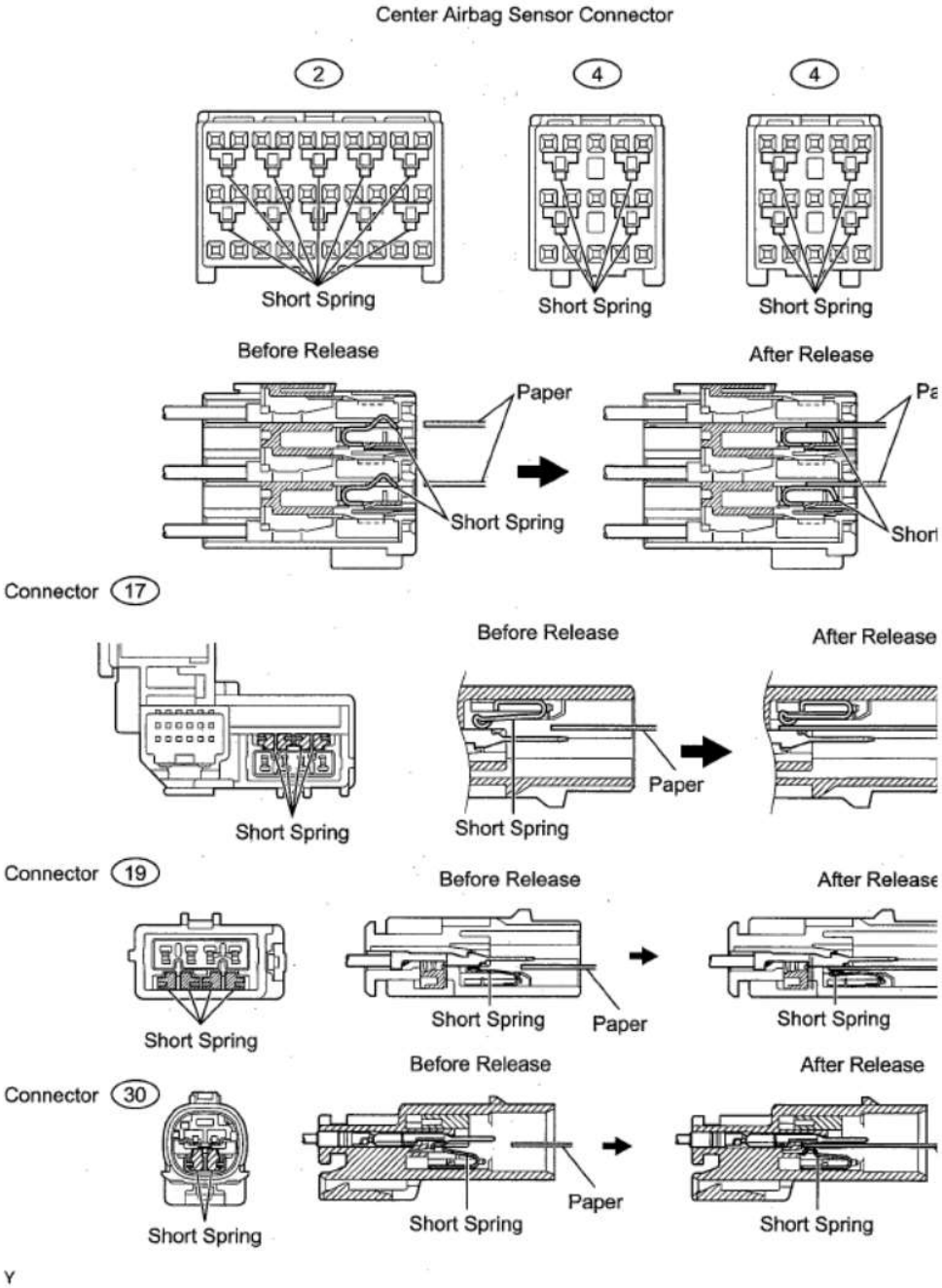


Fig. 44: Center Airbag Sensor Connector Connection Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

DTC CHECK / CLEAR

1. **CHECK DTC (Using SST Check Wire)**
   a. Check the DTCs (Present trouble code).
      1. Turn the ignition switch to ON, and wait for approximately 60 seconds.

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2. Using SST, connect terminals 13 (TC) and 4 (CG) of the DLC3.

Front view of DLC3:

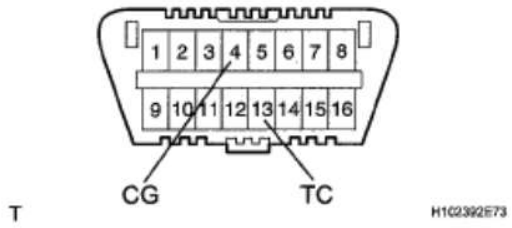


Fig. 45: Identifying Terminals 13 (TC) And 4 (CG) Of DLC3
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SST 09843-18040

NOTE: Connect the terminals to the correct positions to avoid a malfunction.

b. Check the DTCs (Past trouble code).
   1. Using SST, connect terminals 13 (TC) and 4 (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.
   1. Read the blinking patterns of the DTCs. As examples, the blinking patterns for the normal system code and trouble codes 11 and 31 are shown in the illustration.
      - Normal system code indication (without past trouble code)

        The light blinks twice per second.

      - Normal system code indication (with past trouble code)

        When the past trouble code is stored in the center airbag sensor, the light blinks only once per second.

      - Trouble code indication

        The first blink indicates the first DTC. The second blinks occurs after a 1.5-second pause.

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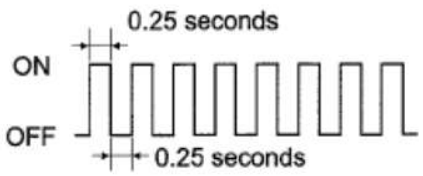
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If there is more than 1 code, there will be a 2.5-second pause between each code. After all codes are shown, there will be a 4.0-second pause, and then all codes will be repeated.

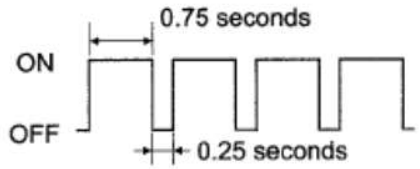
HINT:

- If 2 or more malfunctions are found, the indication begins with the smaller-numbered code.
- If DTCs are indicated without connecting the terminals, proceed to "**DIAGNOSIS CIRCUIT**" .

Normal System Code
(without Past Trouble Code):



Normal System Code
(with Past Trouble Code):



Trouble Code (Example Codes 11 and 31):

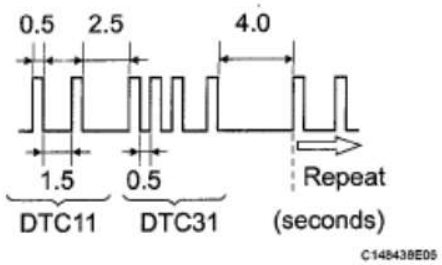


Fig. 46: Blinking Patterns Of DTCs
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **CLEAR DTC (Using SST Check Wire)**
   a. When the ignition switch is turned to OFF, the DTCs are cleared.

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HINT:

Depending on the DTC, the code may not be cleared by turning the ignition switch to OFF. In this case, proceed to the next procedure.

b. Using SST, connect terminals 13 (TC) and 4 (CG) of the DLC3, and then turn the ignition switch to ON.

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c. Disconnect terminal TC of the DLC3 within 3 to 10 seconds after the DTCs are output, and check if the SRS warning light comes on after 3 seconds.

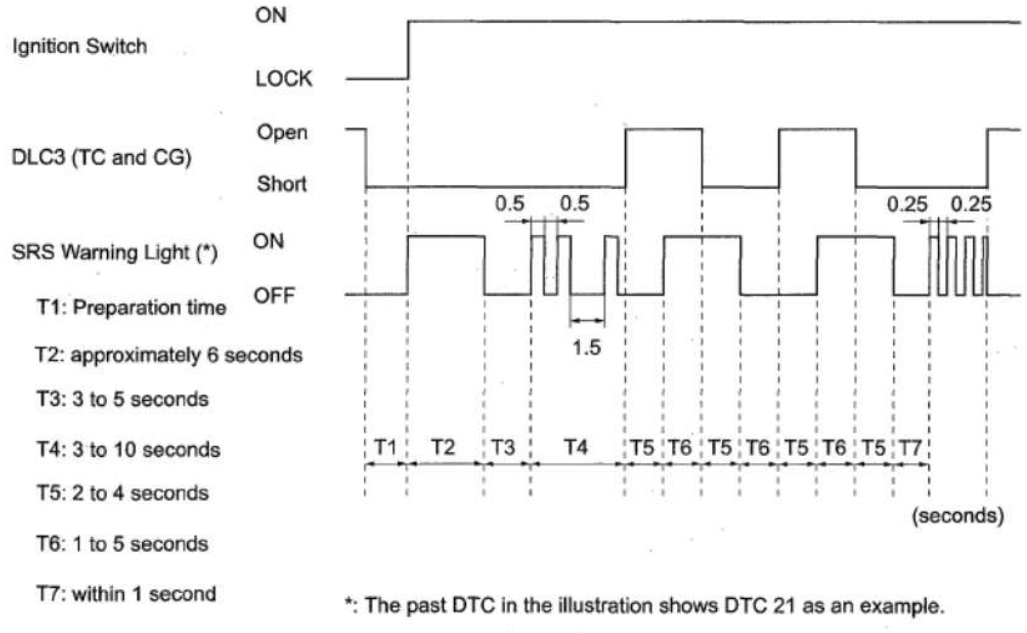
d. Within 2 to 4 seconds after the SRS warning light comes on, connect terminals 13 (TC) and 4 (CG) of the DLC3.

e. The SRS warning light should go off within 2 to 4 seconds after connecting terminals 13 (TC) and 4 (CG) of the DLC3. Then, disconnect terminal 13 (TC) within 2 to 4 seconds after the SRS warning light goes off.

f. The SRS warning light comes on again within 2 to 4 seconds after disconnecting terminal 13 (TC). Then, reconnect terminals 13 (TC) and 4 (CG) within 2 to 4 seconds after the SRS warning light comes on.

g. Check if the SRS warning light goes off within 2 to 4 seconds after connecting terminals 13 (TC) and 4 (CG) of the DLC3. Also check if the normal system code is output within 1 second after the SRS warning light goes off.

If DTCs are not cleared, repeat this procedure until the codes are cleared.



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Fig. 47: SRS Warning Light Blinking Patterns
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. **CHECK DTC (Using Techstream)**
   a. Connect the Techstream to the DLC3.
   b. Turn the ignition switch to ON.
   c. Turn the tester ON.
   d. Enter the following menus: Body Electrical / SRS Airbag / Trouble Codes /
4. **CLEAR DTC (Using Techstream)**
   a. Connect the Techstream to the DLC3.
   b. Turn the ignition switch to ON.
   c. Turn the tester ON.
   d. Enter the following menus: Body Electrical / SRS Airbag / Trouble Codes /
   e. Erase the DTCs.

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 tester 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 check mode inspection when a malfunction in each squib circuit is suspected even after the normal system code is output through normal diagnosis mode inspection.

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.

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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 to OFF.
c. Connect the Techstream to the DLC3.
d. Turn the ignition switch to ON.
e. Turn the tester ON.
f. Enter the following menus: Body Electrical / SRS Airbag / Data List /
g. According to the display on tester, read the "Data List".

SRS Airbag:

DIAGNOSTIC NOTE CHART

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 36 kg (79.37 lb)) is seated AF05: Adult (36 to 54 kg (79.37 to 119.05 lb) is seated AM50: Adult (more than 54 kg (119.05 lb)) is seated Fail: A failure is detected	OFF/Child/AF05/AM50	-
Driver Buckle SW	Driver seat belt buckle switch/ Unset: The seat belt is not fastened Set: The seat belt is fastened NG: Data is not determined	Unset/Set	-
Passenger Buckle SW	Passenger seat belt buckle switch/ Unset: The seat belt is not fastened Set: The seat belt is fastened NG: Data is not determined	Unset/Set	-
Display Type Information	Display Type Information/ DP: The display is indicated by Driver/Passenger LR: The display is indicated by LH/ RH	DP/LR	-
Number of Past DTC	Number of Past DTC/ Min.: 0, Max.: 255	0	-

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DIAGNOSTIC TROUBLE CODE CHART

HINT:

- If a trouble code is displayed during the DTC check, inspect the trouble areas listed for that code. For details of the code, refer to the "See" below.
- When the SRS warning light remains on and the DTC output is the normal system code, a voltage source drop is likely to occur. This malfunction is not stored in the memory by the center airbag sensor. If the power source voltage returns to normal, the SRS warning light will automatically go off.
- When 2 or more codes are indicated, the code with the lower number appears first.
- If a code not listed in the chart is displayed, the center airbag sensor may have a malfunction.
- If a DTC is output indicating a short to ground, short to B+ or open in an airbag squib circuit area, other DTCs may not be output. First replace or repair the malfunctioning area indicated by the current DTC, and then check for DTCs again to output the other DTCs.
- Mark in the check mode column:

  *1: DTC is not corresponding to the check mode.

  *2: DTC is corresponding to the check mode.

AIRBAG SYSTEM

DTC DETECTION CONDITION CHART

DTC Code	Detection Item	Trouble Area	Check Mode
B1000/31	Center Airbag Sensor Assembly Malfunction	Center airbag sensor assembly	*1
B1610/13	Front Airbag Sensor RH Malfunction	○ Front airbag sensor RH ○ Center airbag sensor assembly	*1
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
B1613/83	Front Airbag Sensor RH Initialization Incomplete	○ Instrument panel wire ○ Engine room main wire	*1

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		○ Front airbag sensor RH ○ Center airbag sensor assembly	
B1615/14	Front Airbag Sensor LH Malfunction	○ Front airbag sensor LH ○ Center airbag sensor assembly	*1
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
B1618/84	Front Airbag Sensor LH Initialization Incomplete	○ Instrument panel wire ○ Engine room main wire ○ Front airbag sensor LH ○ Center airbag sensor assembly	*1
B1620/21	Driver Side - Side Airbag Sensor Circuit Malfunction	○ Side airbag sensor LH ○ Center airbag sensor assembly	*1
B1622/81	Lost Communication with Driver Side - Side Airbag Sensor Assembly	○ Side airbag sensor LH ○ Center airbag sensor assembly	*1
B1623/81	Driver Side - Side Airbag Sensor Assembly Initialization Incomplete	○ Floor wire ○ Side airbag sensor LH ○ Rear airbag sensor LH ○ Center airbag sensor assembly	*1
	Front Passenger Side - Side Airbag Sensor	○ Side airbag sensor	

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B1625/22	Circuit Malfunction	RH o Center airbag sensor assembly	*1
B1627/82	Lost Communication with Front Passenger Side - Side Airbag Sensor Assembly	o Side airbag sensor RH o Center airbag sensor assembly	*1
B1628/82	Front Passenger Side - Side Airbag Sensor Assembly Initialization Incomplete	o No. 2 floor wire o Side airbag sensor RH o Rear airbag sensor RH o Center airbag sensor assembly	*1
B1630/23	Driver Side Rear Airbag Sensor Circuit Malfunction	o Rear airbag sensor LH o Center airbag sensor assembly	*1
B1632/81	Lost Communication with Driver Side Rear Airbag Sensor	o Floor wire o Side airbag sensor LH o Rear airbag sensor LH o Center airbag sensor assembly	*1
B1633/81	Driver Side Rear Airbag Sensor Initialization Incomplete	o Floor wire o Side airbag sensor LH o Rear airbag sensor LH o Center airbag sensor assembly	*1
B1635/24	Front Passenger Side Rear Airbag Sensor Circuit Malfunction	o Rear airbag sensor RH o Center airbag sensor assembly	*1
B1637/82	Lost Communication with Passenger Side Rear	o No. 2 floor wire o Side airbag sensor RH o Rear airbag sensor	*1

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	Airbag Sensor	RH o Center airbag sensor assembly	
B1638/82	Passenger Side Rear Airbag Sensor Initialization Incomplete	o No. 2 floor wire o Side airbag sensor RH o Rear airbag sensor RH o Center airbag sensor assembly	*1
B1642/81	Lost Communication with Driver Side Satellite Sensor Bus	o Floor wire o Side airbag sensor LH o Rear airbag sensor LH o Center airbag sensor assembly	*1
B1643/81	Driver Side Satellite Sensor Bus Initialization Incomplete	o Floor wire o Side airbag sensor LH o Rear airbag sensor LH o Center airbag sensor assembly	*1
B1647/82	Lost Communication with Front Passenger Side Satellite Sensor Bus	o No. 2 floor wire o Side airbag sensor RH o Rear airbag sensor RH o Center airbag sensor assembly	*1
B1648/82	Fornt Passenger Side Satellite Sensor Bus Initialization Incomplete	o No. 2 floor wire o Side airbag sensor RH o Rear airbag sensor RH o Center airbag sensor assembly	*1
		o No. 2 floor wire o Front seat wire RH	

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B1650/32	Occupant Classification System Malfunction	○ Occupant classification system ○ Center airbag sensor assembly	*1
B1653/35	Seat Position Airbag Sensor Circuit Malfunction	○ Floor wire ○ Front seat inner belt assembly LH ○ Seat position airbag sensor ○ Center airbag sensor assembly	*1
B1655/37	Driver Side Seat Belt Buckle Switch Circuit Malfunction	○ Floor wire ○ Front seat inner belt assembly LH (Seat belt buckle switch LH) ○ Center airbag sensor assembly	*1
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
B1800/51	Short in Driver Side Squib Circuit	○ Instrument panel wire ○ Spiral cable ○ Steering pad (Driver side squib) ○ Center airbag sensor assembly	*2
B1801/51	Open in Driver Side Squib Circuit	○ Instrument panel wire ○ Spiral cable ○ Steering pad (Driver side squib) ○ Center airbag sensor assembly	*2

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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
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
B1805/52	Short in Front Passenger Side Squib Circuit	○ Instrument panel wire ○ Instrument panel wire assembly ○ Front passenger airbag assembly (Front passenger side squib) ○ Center airbag sensor assembly	*2
B1806/52	Open in Front Passenger Side Squib Circuit	○ Instrument panel wire ○ Instrument panel wire assembly ○ Front passenger airbag assembly (Front passenger side squib) ○ Center airbag sensor assembly	*2
B1807/52	Short to GND in Front Passenger Side Squib Circuit	○ Instrument panel wire ○ Instrument panel wire assembly ○ Front passenger airbag assembly (Front passenger	*2

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		side squib) ○ Center airbag sensor assembly	
B1808/52	Short to B+ in Front Passenger Side Squib Circuit	○ Instrument panel wire ○ Instrument panel wire assembly ○ Front passenger airbag assembly (Front passenger side squib) ○ Center airbag sensor assembly	*2
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
B1811/53	Open in Driver Side Squib 2nd Step Circuit	○ Instrument panel wire ○ Spiral cable ○ Steering pad (Driver side squib 2nd step) ○ Center airbag sensor assembly	*2
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
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

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B1815/54	Short in Front Passenger Side Squib 2nd Step Circuit	○ Instrument panel wire ○ Instrument panel wire assembly ○ Front passenger airbag assembly (Front passenger side squib 2nd step) ○ Center airbag sensor assembly	*2
B1816/54	Open in Front Passenger Side Squib 2nd Step Circuit	○ Instrument panel wire ○ Instrument panel wire assembly ○ Front passenger airbag assembly (Front passenger side squib 2nd step) ○ Center airbag sensor assembly	*2
B1817/54	Short to GND in Front Passenger Side Squib 2nd Step Circuit	○ Instrument panel wire ○ Instrument panel wire assembly ○ Front passenger airbag assembly (Front passenger side squib 2nd step) ○ Center airbag sensor assembly	*2
B1818/54	Short to B+ in Front Passenger Side Squib 2nd Step Circuit	○ Instrument panel wire ○ Instrument panel wire assembly ○ Front passenger airbag assembly (Front passenger side squib 2nd step) ○ Center airbag sensor assembly	*2
		○ Floor wire ○ Front seat side	

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B1820/55	Short in Front Driver Side - Side Squib Circuit	airbag assembly LH (Side squib LH) o Center airbag sensor assembly	*2
B1821/55	Open in Front Driver Side - Side Squib Circuit	o Floor wire o Front seat side airbag assembly LH (Side squib LH) o Center airbag sensor assembly	*2
B1822/55	Short to GND in Front Driver Side - Side Squib Circuit	o Floor wire o Front seat side airbag assembly LH (Side squib LH) o Center airbag sensor assembly	*2
B1823/55	Short to B+ in Front Driver Side - Side Squib Circuit	o Floor wire o Front seat side airbag assembly LH (Side squib LH) o Center airbag sensor assembly	*2
B1825/56	Short in Front Passenger Side - Side Squib Circuit	o No. 2 floor wire o Front seat side airbag assembly RH (Side squib RH) o Center airbag sensor assembly	*2
B1826/56	Open in Front Passenger Side - Side Squib Circuit	o No. 2 floor wire o Front seat side airbag assembly RH (Side squib RH) o Center airbag sensor assembly	*2
B1827/56	Short to GND in Front Passenger Side - Side Squib Circuit	o No. 2 floor wire o Front seat side airbag assembly RH (Side squib RH) o Center airbag sensor assembly	*2
		o No. 2 floor wire	

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B1828/56	Short to B+ in Front Passenger Side - Side Squib Circuit	○ Front seat side airbag assembly RH (Side squib RH) ○ Center airbag sensor assembly	*2
B1830/57	Short in Driver Side Curtain Shield Squib Circuit	○ Floor wire ○ Curtain shield airbag assembly LH (Curtain shield squib LH) ○ Center airbag sensor assembly	*2
B1831/57	Open in Driver Side Curtain Shield Squib Circuit	○ Floor wire ○ Curtain shield airbag assembly LH (Curtain shield squib LH) ○ Center airbag sensor assembly	*2
B1832/57	Short to GND in Driver Side Curtain Shield Squib Circuit	○ Floor wire ○ Curtain shield airbag assembly LH (Curtain shield squib LH) ○ Center airbag sensor assembly	*2
B1833/57	Short to B+ in Driver Side Curtain Shield Squib Circuit	○ Floor wire ○ Curtain shield airbag assembly LH (Curtain shield squib LH) ○ Center airbag sensor assembly	*2
B1835/58	Short in Front Passenger Side Curtain Shield Squib Circuit	○ No. 2 floor wire ○ Curtain shield airbag assembly RH (Curtain shield squib RH) ○ Center airbag sensor assembly	*2
		○ No. 2 floor wire	

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B1836/58	Open in Front Passenger Side Curtain Shield Squib Circuit	○ Curtain shield airbag assembly RH (Curtain shield squib RH) ○ Center airbag sensor assembly	*2
B1837/58	Short to GND in Front Passenger Side Curtain Shield Squib Circuit	○ No. 2 floor wire ○ Curtain shield airbag assembly RH (Curtain shield squib RH) ○ Center airbag sensor assembly	*2
B1838/58	Short to B+ in Front Passenger Side Curtain Shield Squib Circuit	○ No. 2 floor wire ○ Curtain shield airbag assembly RH (Curtain shield squib RH) ○ Center airbag sensor assembly	*2
B1900/73	Short in Front Driver Side Pretensioner Squib Circuit	○ Floor wire ○ Front seat outer belt assembly LH (Front pretensioner squib LH) ○ Center airbag sensor assembly	*2
B1901/73	Open in Front Driver Side Pretensioner Squib Circuit	○ Floor wire ○ Front seat outer belt assembly LH (Front pretensioner squib LH) ○ Center airbag sensor assembly	*2
B1902/73	Short to GND in Front Driver Side Pretensioner Squib Circuit	○ Floor wire ○ Front seat outer belt assembly LH (Front pretensioner squib LH) ○ Center airbag sensor assembly	*2

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B1903/73	Short to B+ in Front Driver Side Pretensioner Squib Circuit	○ Floor wire ○ Front seat outer belt assembly LH (Front pretensioner squib LH) ○ Center airbag sensor assembly	*2
B1905/74	Short in Front Passenger Side Pretensioner Squib Circuit	○ No. 2 floor wire ○ Front seat outer belt assembly RH (Front pretensioner squib RH) ○ Center airbag sensor assembly	*2
B1906/74	Open in Front Passenger Side Pretensioner Squib Circuit	○ No. 2 floor wire ○ Front seat outer belt assembly RH (Front pretensioner squib RH) ○ Center airbag sensor assembly	*2
B1907/74	Short to GND in Front Passenger Side Pretensioner Squib Circuit	○ No. 2 floor wire ○ Front seat outer belt assembly RH (Front pretensioner squib RH) ○ Center airbag sensor assembly	*2
B1908/74	Short to B+ in Front Passenger Side Pretensioner Squib Circuit	○ No. 2 floor wire ○ Front seat outer belt assembly RH (Front pretensioner squib RH) ○ Center airbag sensor assembly	*2

DTC B1000/31 CENTER AIRBAG SENSOR ASSEMBLY MALFUNCTION

DESCRIPTION

The center airbag sensor consists of the airbag sensor, the safing sensor, the drive circuit, the diagnosis circuit, the ignition control, etc.

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

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

DTC DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1000/31	Center airbag sensor malfunction	Center airbag sensor assembly

HINT:

When a trouble code is displayed simultaneously with B1000/31, repair the malfunction indicated by this code (except B1000/31) first.

INSPECTION PROCEDURE

1. **CHECK CENTER AIRBAG SENSOR**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   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 (see **DTC CHECK / CLEAR**).
   f. Turn the ignition switch to OFF.
   g. Turn the ignition switch to ON, and wait for at least 60 seconds.
   h. Check for DTCs (see **DTC CHECK / CLEAR**).

   OK:

   DTC B1000/31 is not output.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

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 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.

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DTC DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1610/13	When one of following conditions is met: • Front airbag sensor RH malfunction • Center airbag sensor malfunction	• Front airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

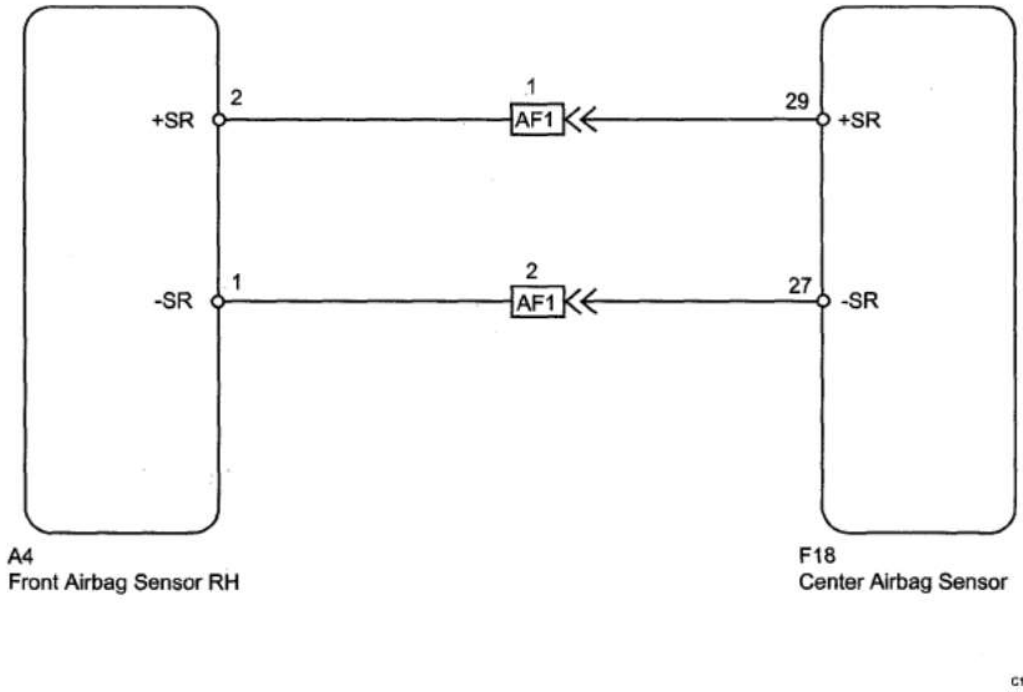


Fig. 48: Front Air Bag Sensor And Center Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK FRONT AIRBAG SENSOR RH**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, 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 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.

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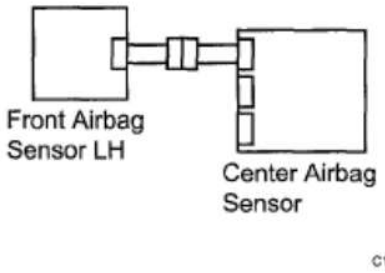


Fig. 49: Identifying Front Air Bag Sensor LH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Clear the DTCs stored in the memory (see **DTC CHECK / CLEAR**).
g. Turn the ignition switch to OFF.
h. Turn the ignition switch to ON, and wait for at least 60 seconds.
i. Check for DTCs (see **DTC CHECK / CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC B1610/13 is output	A
DTC B1615/14 is output	B
DTC B1610/13 and B1615/14 are not output	C

HINT:

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

A : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

B : REPLACE FRONT AIRBAG SENSOR RH (See **REMOVAL**)

C : USE SIMULATION METHOD TO CHECK (See **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 and front airbag sensor RH.

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

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

DTC DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1612/83 B1613/83	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 front airbag sensor RH circuit for 2 seconds. • Front airbag sensor RH malfunction • Center airbag sensor malfunction	• Instrument panel wire assembly • Engine room main wire • Front airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

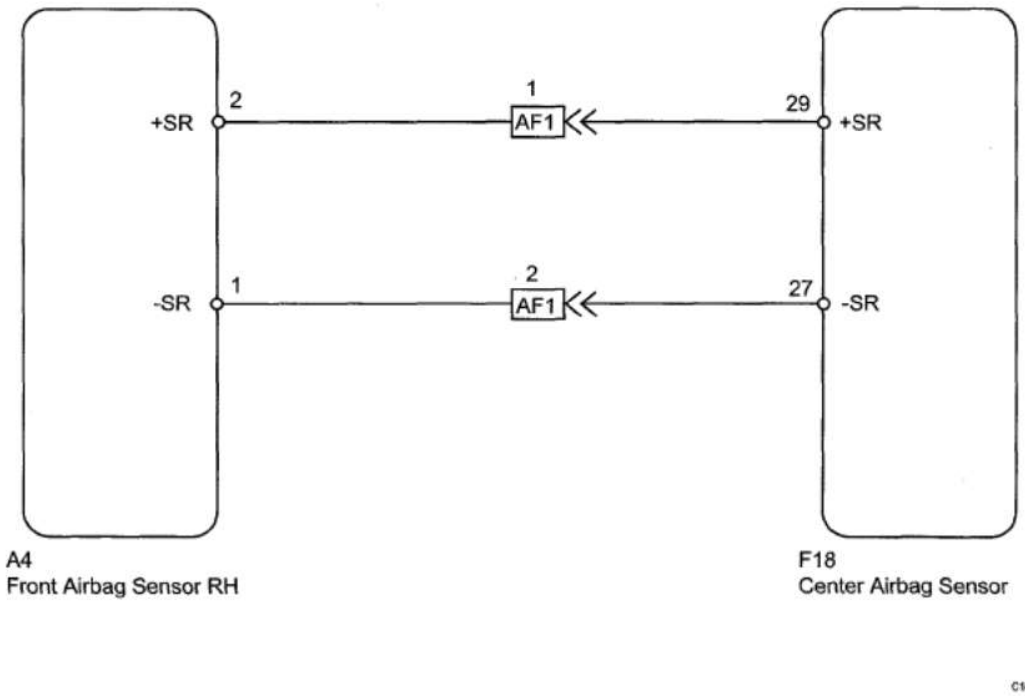


Fig. 50: Front Air Bag Sensor And Center Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

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c. Check that the connectors are properly connected to the center airbag sensor and the front 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 and front airbag sensor RH.
   b. Check that the connectors (on the center airbag sensor 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

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

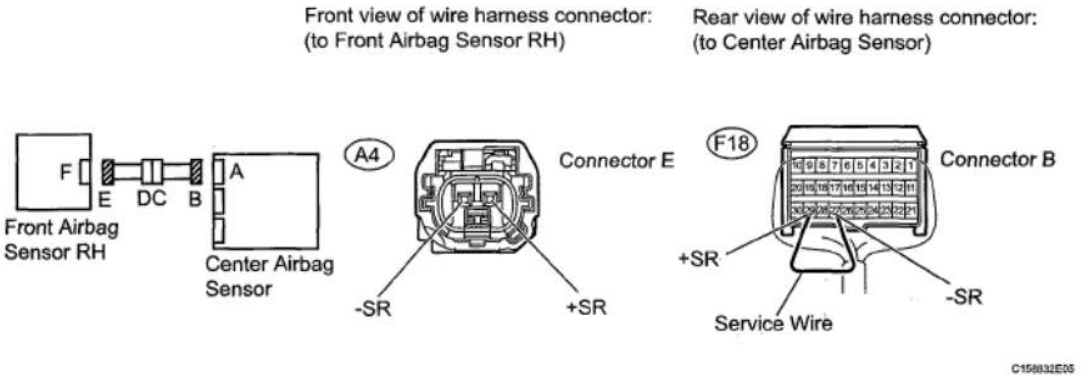


Fig. 51: Identifying A4 And F18 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard voltage

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TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
A4-2 (+SR) - Body ground	Ignition switch ON	Below 1 V
A4-1 (-SR) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch to OFF.
e. Disconnect the negative (-) terminal cable from the battery, 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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
A4-2 (+SR) - A4-1 (-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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
A4-2 (+SR) - A4-1 (-SR)	Always	1 Mohms or higher
A4-2 (+SR) - Body ground	Always	1 Mohms or higher
A4-1 (-SR) - Body ground	Always	1 Mohms or higher

NG: Go to step 5

OK: Go to next step

4. **CHECK FRONT AIRBAG SENSOR RH**
   a. Connect the connectors to the center airbag sensor.
   b. Interchange the front airbag sensor LH with RH and connect the connectors to them.
   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 (see **DTC CHECK / CLEAR**).
   f. Turn the ignition switch to OFF.

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g. Turn the ignition switch to ON, and wait for at least 60 seconds.

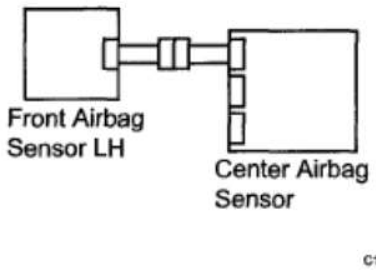


Fig. 52: Identifying Front Air Bag Sensor LH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

h. Check for DTCs (see **DTC CHECK / CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC B1612, B1613, B1617 and B1618 are not output	A
DTC B1617 or B1618 is output	B
DTC B1612 or B1613 is output	C

HINT:

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

A : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B : REPLACE FRONT AIRBAG SENSOR RH (See **REMOVAL**)

C : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

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

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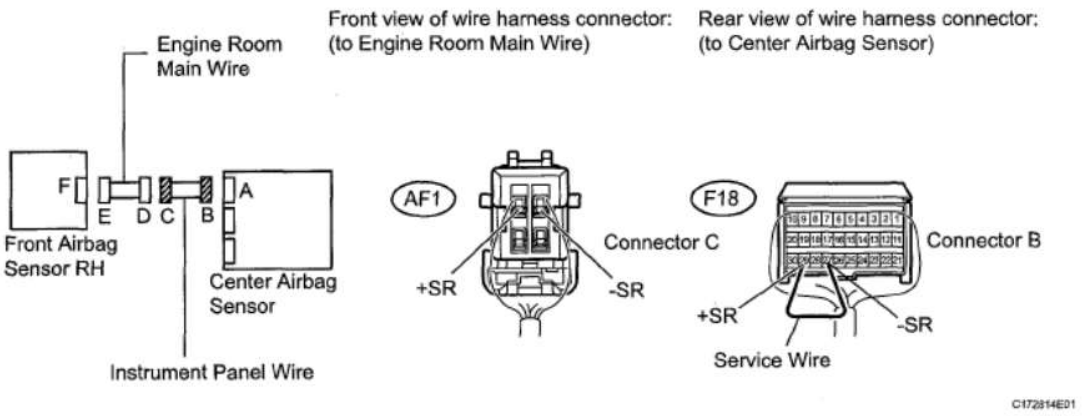


Fig. 53: Identifying AF1 And F18 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Disconnect the instrument panel wire connector from the engine room main wire.
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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
AF1-2 (-SR) - Body ground	Ignition switch ON	Below 1 V
AF1-1 (+SR)-Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch to OFF.
f. Disconnect the negative (-) terminal cable from the battery, 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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
AF1-2 (-SR) - AF1-1 (+SR)	Always	Below 1 ohms

i. Disconnect the service wire from connector B.

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
AF1-2 (-SR) - AF1-1 (+SR)	Always	1 Mohms or higher
AF1-2 (-SR) - Body ground	Always	1 Mohms or higher
AF1-1 (+SR) - Body ground	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

OK : REPLACE ENGINE ROOM MAIN WIRE

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 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 DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1615/14	When one of following conditions is met: • Front airbag sensor LH malfunction • Center airbag sensor malfunction	• Front airbag sensor LH • Center airbag sensor assembly

WIRING DIAGRAM

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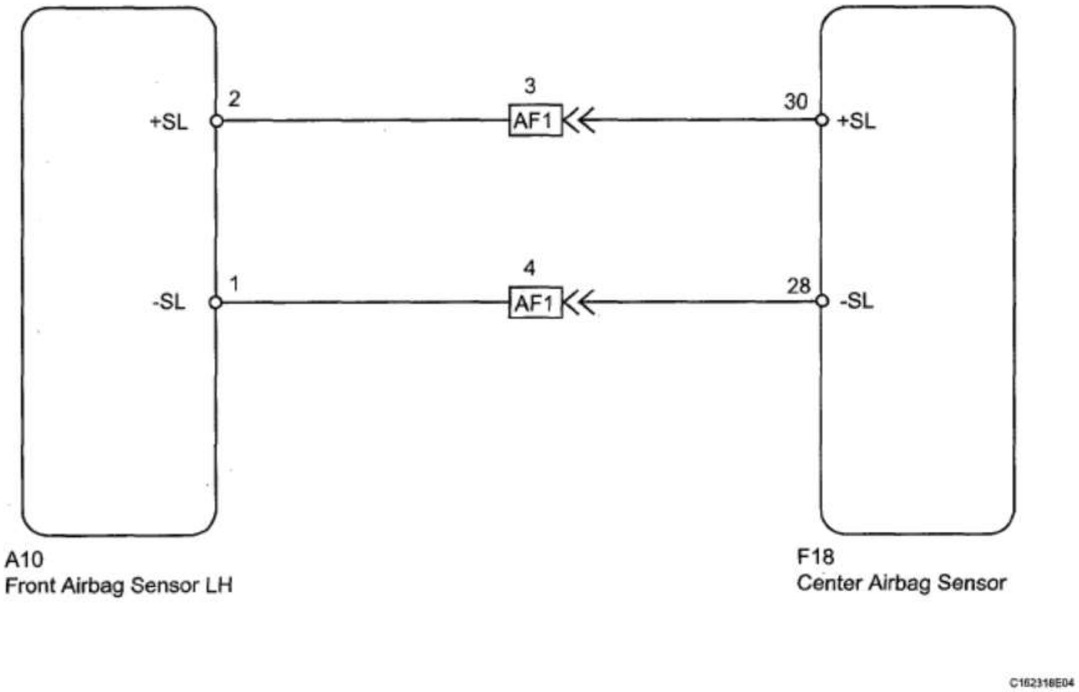


Fig. 54: Front Air Bag Sensor LH And Center Air Bag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK FRONT AIRBAG SENSOR LH**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, 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 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.

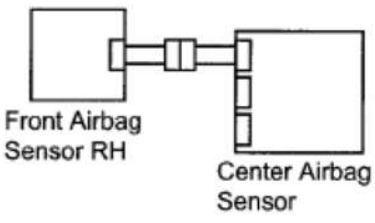


Fig. 55: Front Air Bag Sensor RH And Center Air Bag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   f. Clear the DTCs stored in the memory (see **DTC CHECK / CLEAR**).

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g. Turn the ignition switch to OFF.
h. Turn the ignition switch to ON, and wait for at least 60 seconds.
i. Check for DTCs (see **DTC CHECK / CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC B1615/14 is output	A
DTC B1610/13 is output	B
DTC B1610/13 and B1615/14 are not output	C

HINT:

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

A : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

B : REPLACE FRONT AIRBAG SENSOR LH (See **REMOVAL**)

C : USE SIMULATION METHOD TO CHECK (See **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 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 DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1617/84 B1618/84	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 front airbag sensor LH circuit for 2 seconds.	• Instrument panel wire assembly • Engine room main wire • Front airbag sensor LH

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	• Front airbag sensor LH malfunction • Center airbag sensor malfunction	• Center airbag sensor assembly

WIRING DIAGRAM

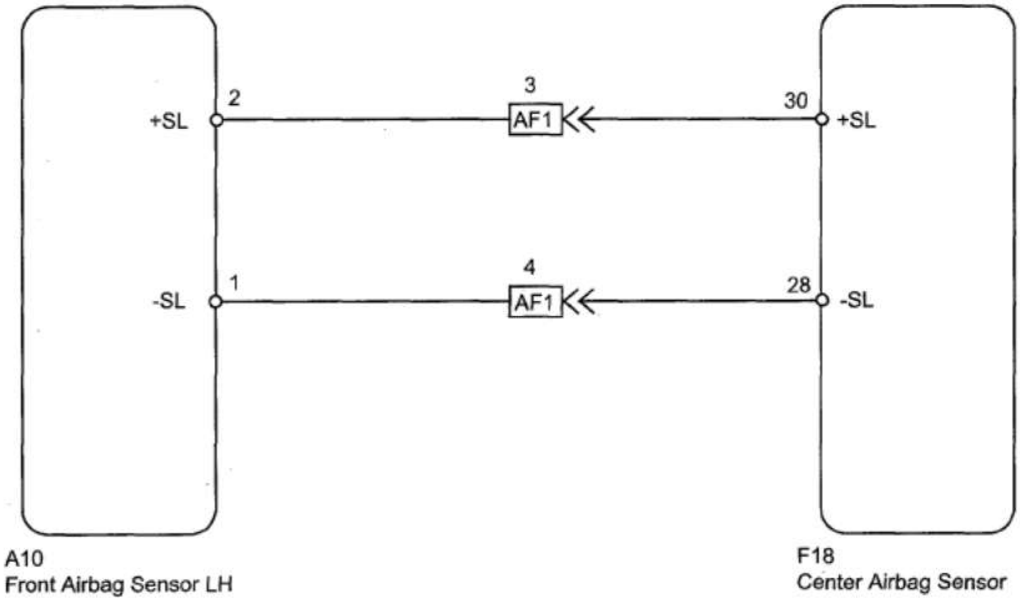


Fig. 56: Front Air Bag Sensor LH And Center Air Bag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch to 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 and the front airbag sensor LH.

      OK:

      The connectors are properly connected.

   NG: CONNECT CONNECTORS PROPERLY

   OK: Go to next step

2. **CHECK CONNECTORS**

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a. Disconnect the connectors from the center airbag sensor and front airbag sensor LH.
b. Check that the connectors (on the center airbag sensor 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

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

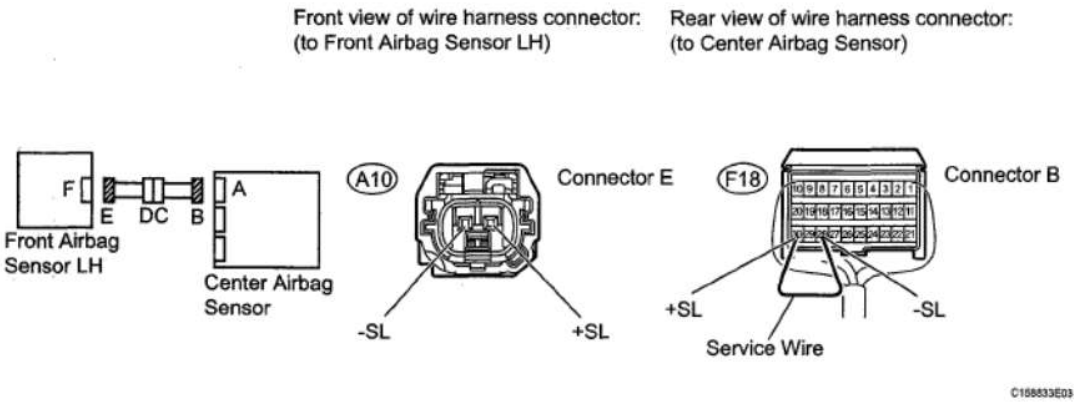


Fig. 57: Identifying A10 And F18 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
A10-2 (+SL) - Body ground	Ignition switch ON	Below 1 V
A10-1 (-SL)-Body ground	Ignition switch ON	Below 1 V

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

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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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
A10-2 (+SL) - A10-1 (-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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
A10-2 (+SL) - A10-1 (-SL)	Always	1 Mohms or higher
A10-2 (+SL) - Body ground	Always	1 Mohms or higher
A10-1 (-SL) - Body ground	Always	1 Mohms or higher

NG: Go to step 5

OK: Go to next step

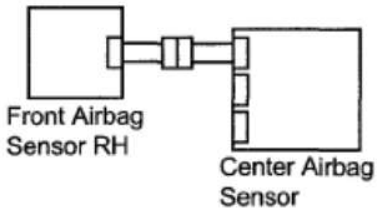
4. **CHECK FRONT AIRBAG SENSOR LH**

a. Connect the connectors to the center airbag sensor.

b. Interchange the front airbag sensor LH with RH and connect the connectors to them.

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.



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Fig. 58: Identifying Front Airbag Sensor RH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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e. Clear the DTCs stored in the memory (see **DTC CHECK / CLEAR**).
f. Turn the ignition switch to OFF.
g. Turn the ignition switch to ON, and wait for at least 60 seconds.
h. Check for DTCs (see **DTC CHECK / CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC B1617 or B1618 is output	A
DTC B1612 or B1613 is output	B
DTC B1612, B1613, B1617 and B1618 are not output	C

HINT:

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

A : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

B : REPLACE FRONT AIRBAG SENSOR LH (See **REMOVAL**)

C : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

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

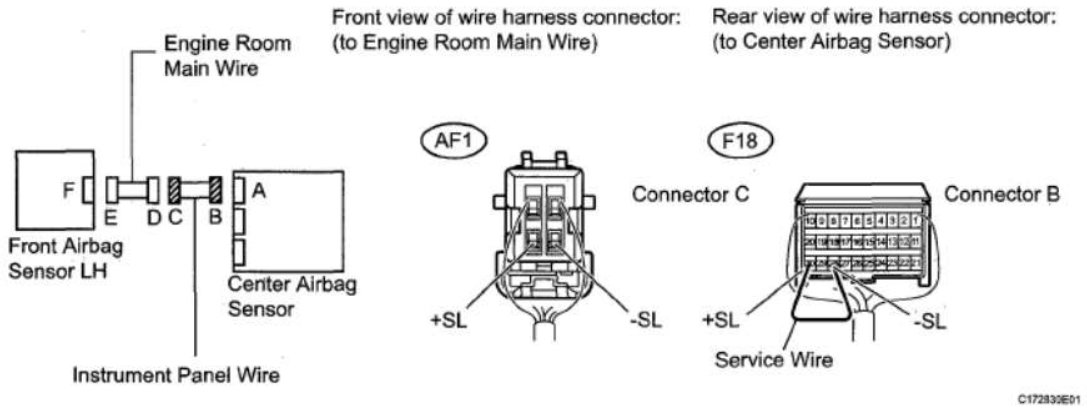


Fig. 59: Identifying AF1 And F18 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Disconnect the instrument panel wire connector from the engine room main wire.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

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

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
AF1-3 (+SL) - Body ground	Ignition switch ON	Below 1 V
AF1-4 (-SL) - Body ground	Ignition switch ON	Below 1 V

e. Turn the ignition switch to OFF.
f. Disconnect the negative (-) terminal cable from the battery, 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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
AF1-3 (+SL) - AF1-4 (-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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
AF1-3 (+SL) - AF1-4 (-SL)	Always	1 Mohms or higher
AF1-3 (+SL) - Body ground	Always	1 Mohms or higher
AF1-4 (-SL) - Body ground	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

OK : REPLACE ENGINE ROOM MAIN WIRE

DTC B1620/21 DRIVER SIDE - SIDE AIRBAG SENSOR CIRCUIT MALFUNCTION; DTC B1622/81 LOST COMMUNICATION WITH DRIVER SIDE - SIDE AIRBAG SENSOR ASSEMBLY; DTC B1625/22 FRONT PASSENGER SIDE - SIDE AIRBAG SENSOR CIRCUIT MALFUNCTION; DTC

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B1627/82 LOST COMMUNICATION WITH FRONT PASSENGER SIDE - SIDE AIRBAG SENSOR ASSEMBLY

DESCRIPTION

for DTC B1620/21 and B1625/22:

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

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

DTC B1620/21 or B1625/22 is recorded when a malfunction is detected in the side airbag sensor LH or RH circuit.

for DTC B1622/81 and B1627/82:

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

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

DTC B1622/81 or B1627/82 is recorded when a malfunction is detected in the circuit for the side collision sensor LH or RH (to determine deployment of the front seat side airbag LH or RH, and curtain shield airbag LH or RH).

DTC DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1620/21 B1622/81	When one of following conditions is met: • Side airbag sensor LH malfunction • Center airbag sensor malfunction	• Side airbag sensor LH • Center airbag sensor assembly
B1625/22 B1627/82	When one of following conditions is met: • Side airbag sensor RH malfunction • Center airbag sensor malfunction	• Side airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

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for Driver Side:

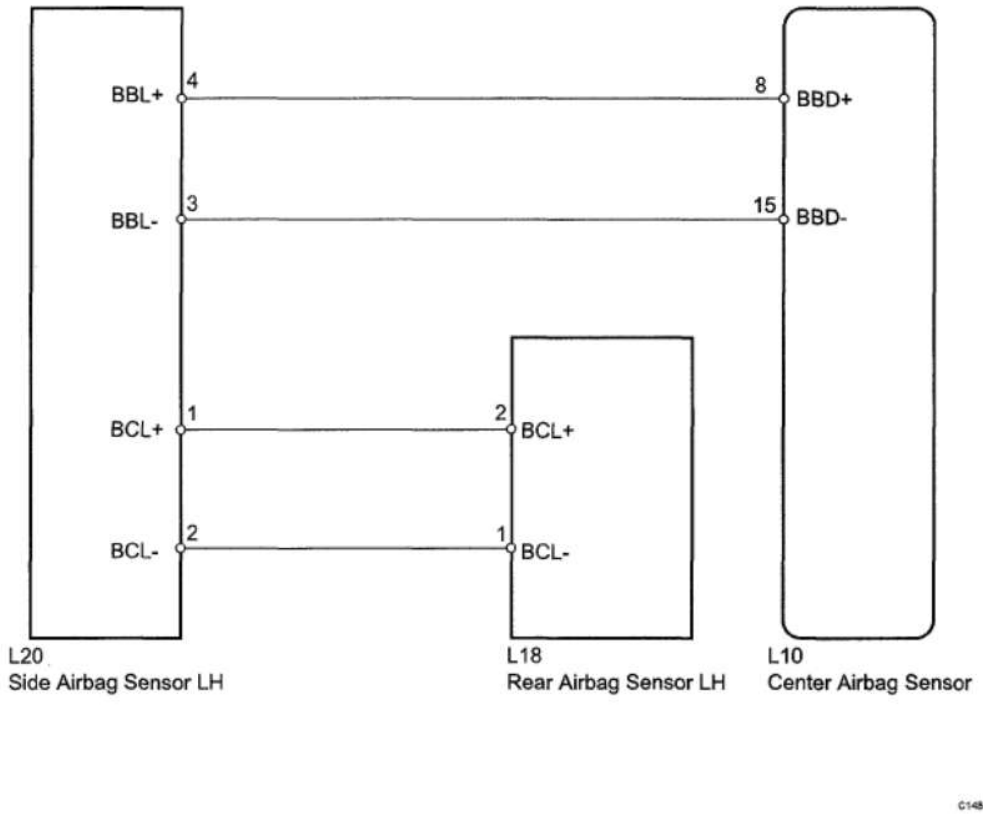


Fig. 60: Side Airbag Sensor LH, Rear Airbag Sensor LH And Center Airbag Sensor - Wiring Diagram (For Driver Side)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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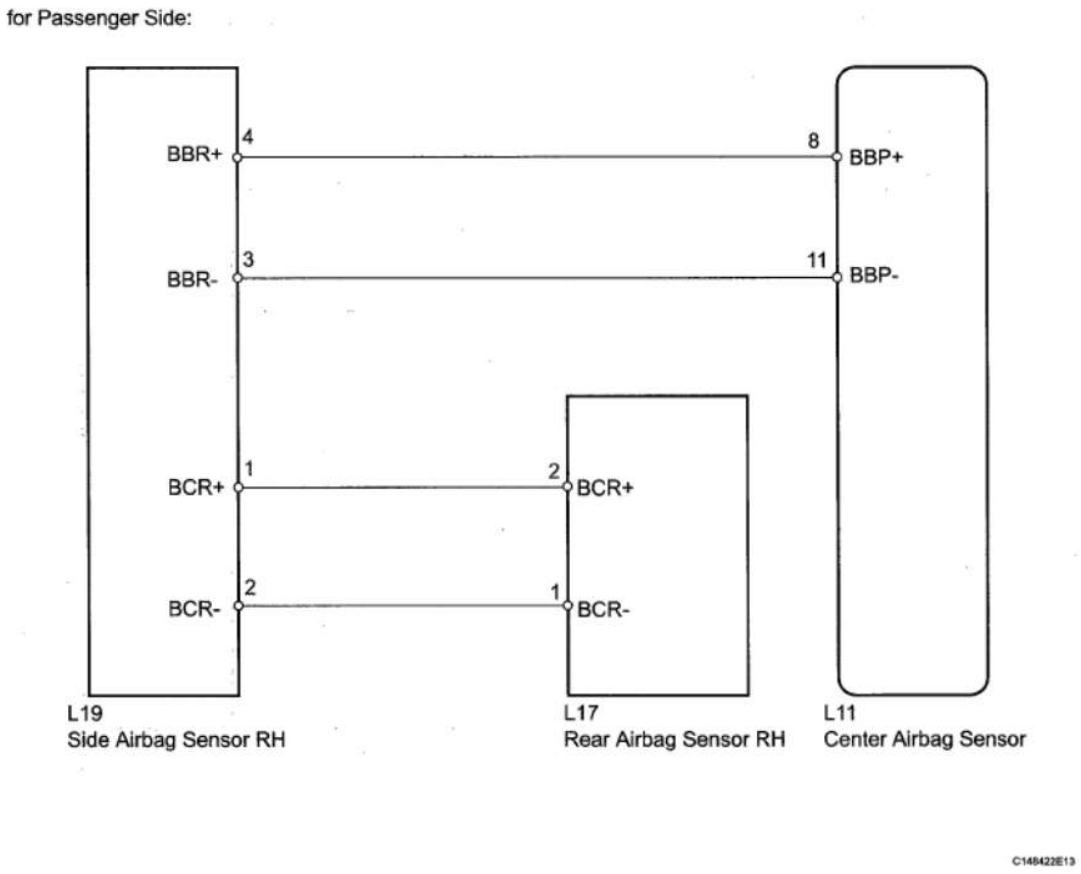


Fig. 61: Side Airbag Sensor RH, Rear Airbag Sensor RH And Center Airbag Sensor - Wiring Diagram (For Passenger Side)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK FOR DTC**
   a. Turn the ignition switch to ON, and wait for at least 60 seconds.
   b. Clear the DTCs stored in the memory (see **DTC CHECK / CLEAR**).
   c. Turn the ignition switch to OFF.
   d. Turn the ignition switch to ON, and wait for at least 60 seconds.
   e. Check for DTCs (see **DTC CHECK / CLEAR**).

   Result:

   RESULT CHART

Result	Proceed to
DTC B1620, B1622, B1625 and B1627 are not output	A
DTC B1620 or B1622 is output	B
DTC B1625 or B1627 is output	C

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HINT:

Codes other than DTC B1620, B1622, B1625 and B1627 may be output at this time, but they are not related to this check.

A : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B: Go to step 3

C: Go to next step

2. **CHECK SIDE AIRBAG SENSOR RH**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Interchange the side airbag sensor RH with LH 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.

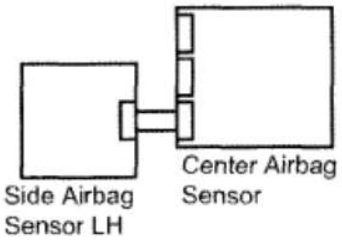


Fig. 62: Side Airbag Sensor LH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   f. Clear the DTCs stored in the memory (see **DTC CHECK / CLEAR**).
   g. Turn the ignition switch to OFF.
   h. Turn the ignition switch to ON, wait for at least 60 seconds.
   i. Check for DTCs (see **DTC CHECK / CLEAR**).

Result:

RESULT CHART

Result	Proceed to
DTC B1620, B1622, B1625 and B1627 are not output	A
DTC B1625 or B1627 is output	B
DTC B1620 or B1622 is output	C

HINT:

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Codes other than DTC B1620, B1622, B1625 and B1627 may be output at this time, but they are not related to this check.

j. Turn the ignition switch to OFF.
k. Disconnect the negative (-) terminal cable from the battery, 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 : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

C : REPLACE SIDE AIRBAG SENSOR ASSEMBLY RH (See **REMOVAL**)

3. **CHECK SIDE AIRBAG SENSOR LH**
   a. Turn the ignition switch to 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.

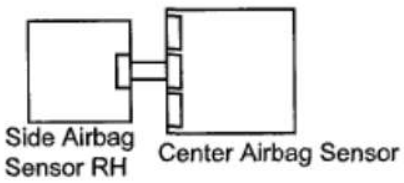


Fig. 63: Side Airbag Sensor RH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   e. Turn the ignition switch to ON, and wait for at least 60 seconds.
   f. Clear the DTCs stored in the memory (see **DTC CHECK / CLEAR**).
   g. Turn the ignition switch to OFF.
   h. Turn the ignition switch to ON, wait for at least 60 seconds.
   i. Check for DTCs (see **DTC CHECK / CLEAR**).

Result:

RESULT CHART

Result	Proceed to
DTC B1620, B1622, B1625 and B1627 are not output	A
DTC B1625 or B1627 is output	B

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DTC B1620 or B1622 is output	C

HINT:

Codes other than DTC B1620, B1622, B1625 and B1627 may be output at this time, but they are not related to this check.

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

A : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B : REPLACE SIDE AIRBAG SENSOR ASSEMBLY LH (See **REMOVAL**)

C : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

DTC B1623/81 DRIVER SIDE - SIDE AIRBAG SENSOR ASSEMBLY INITIALIZATION INCOMPLETE; DTC B1628/82 FRONT PASSENGER SIDE - SIDE AIRBAG SENSOR ASSEMBLY INITIALIZATION INCOMPLETE; DTC B1643/81 DRIVER SIDE SATELLITE SENSOR BUS INITIALIZATION INCOMPLETE; DTC B1648/82 FORNT PASSENGER SIDE SATELLITE SENSOR BUS INITIALIZATION INCOMPLETE

DESCRIPTION

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

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

DTC B1623/81, B1628/82, B1643/81 or B1648/82 is recorded when a malfunction is detected in the circuit for the side collision sensor LH or RH (to determine deployment of the front seat side airbag LH or RH and curtain shield airbag LH or RH).

DTC DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1623/81	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 LH (to determine deployment of the front seat side airbag LH and curtain shield	• Floor wire • Side airbag sensor LH • Rear airbag

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B1643/81	airbag LH) for 2 seconds. • Side airbag sensor LH malfunction • Rear airbag sensor LH malfunction • Center airbag sensor malfunction	sensor LH • Center airbag sensor assembly
B1628/82 B1648/82	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 RH (to determine deployment of the front seat side airbag RH and curtain shield airbag RH) for 2 seconds. • Side airbag sensor RH malfunction • Rear airbag sensor RH malfunction • Center airbag sensor malfunction	• Floor wire • Side airbag sensor RH • Rear airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

for Driver Side:

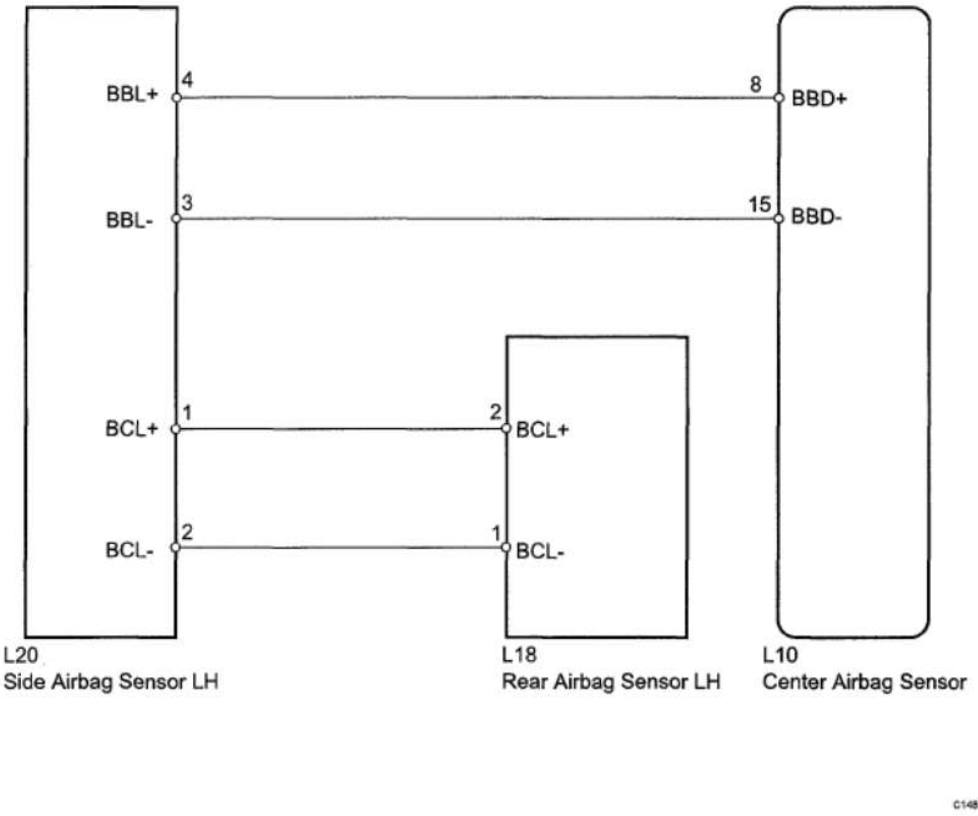


Fig. 64: Side Airbag Sensor LH, Rear Airbag Sensor LH And Center Airbag Sensor - Wiring Diagram (For Driver Side)

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

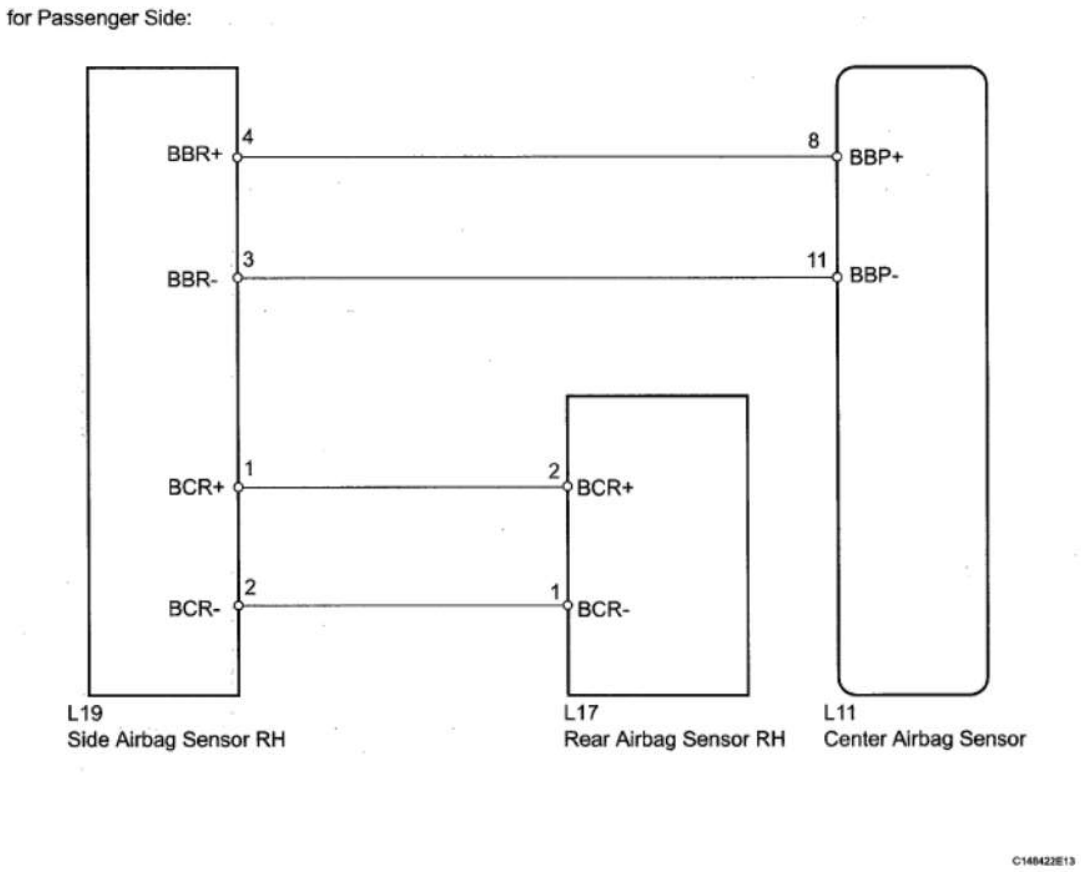


Fig. 65: Side Airbag Sensor RH, Rear Airbag Sensor RH And Center Airbag Sensor - Wiring Diagram (For Passenger Side)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

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

   Result:

   RESULT CHART

Result	Proceed to
DTC B1622 or B1627 is output	A
DTC B1632 or B1637 is output	B

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DTC B1622, B1627, B1632 and B1637 are not output	C

A: Go to **DTC B1622**

B: Go to **DTC B1632**

C: Go to next step

2. **CHECK FOR DTC**
   a. Turn the ignition switch to OFF.
   b. Turn the ignition switch to ON, and wait for at least 60 seconds.
   c. Check for DTCs (see **DTC CHECK / CLEAR**).

   Result:

   RESULT CHART

Result	Proceed to
DTC B1623, B1628, B1643 and B1648 are not output	A
DTC B1623 or B1643 is output	B
DTC B1628 or B1648 is output	C

A : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B: Go to step 11

C: Go to next step

3. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch to 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 and side airbag sensor RH.

   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 and side airbag sensor RH.

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b. Check that the connectors (on the center airbag sensor side and side airbag sensor RH side) are not damaged.

OK:

The connectors are not deformed or damaged.

NG: REPLACE FLOOR WIRE

OK: Go to next step

5. **CHECK FLOOR WIRE (CENTER AIRBAG SENSOR - SIDE AIRBAG SENSOR RH)**

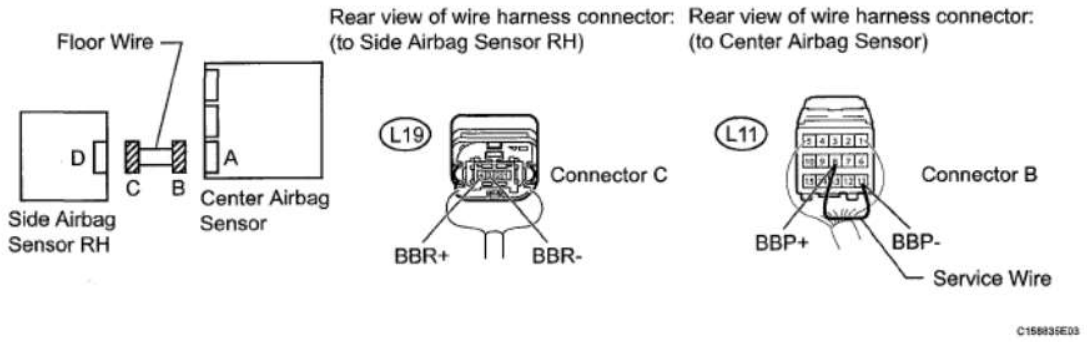


Fig. 66: Identifying L19 And L11 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L19-4 (BBR+) - Body ground	Ignition switch ON	Below 1 V
L19-3 (BBR-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch to 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 (BBP+) and 11 (BBP-) of connector B.

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

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L19-4 (BBR+) - L19-3 (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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L19-4 (BBR+) - L19-3 (BBR-)	Always	1 Mohms or higher
L19-4 (BBR+) - Body ground	Always	1 Mohms or higher
L19-3 (BBR-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK: Go to next step

6. **CHECK CONNECTION OF CONNECTORS**

a. Check that the connector is properly connected to the rear airbag sensor RH.

OK:

The connector is properly connected.

NG: CONNECT CONNECTOR PROPERLY

OK: Go to next step

7. **CHECK CONNECTORS**

a. Disconnect the connectors from the side airbag sensor RH and rear airbag sensor RH.

b. Check that the connector (on the rear airbag sensor RH side) is not damaged.

OK:

The connector is not deformed or damaged.

NG: REPLACE FLOOR WIRE

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OK: Go to next step

8. **CHECK FLOOR WIRE (SIDE AIRBAG SENSOR RH - REAR AIRBAG SENSOR RH)**

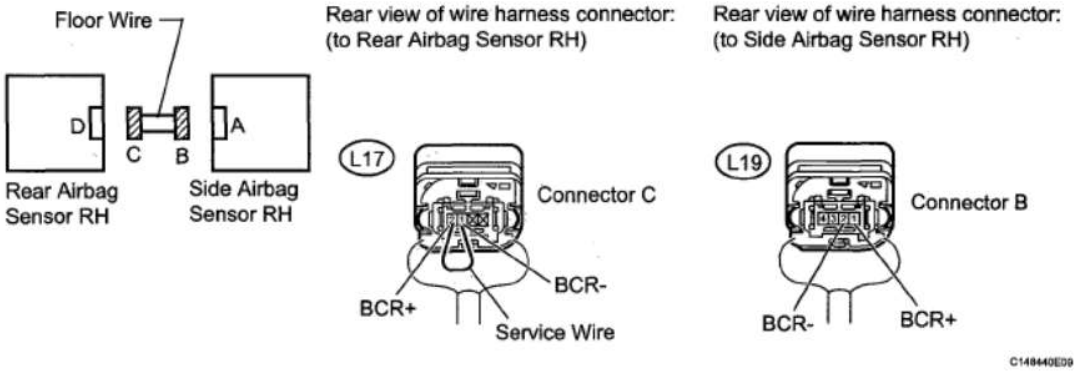


Fig. 67: Identifying L17 And L19 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L19-1 (BCR+) - Body ground	Ignition switch ON	Below 1 V
L19-2 (BCR-) - Body ground	Ignition switch ON	Below 1 V

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

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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L19-1 (BCR+) - L19-2 (BCR-)	Always	Below 1 ohms

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L19-1 (BCR+) - L19-2 (BCR-)	Always	1 Mohms or higher
L19-1 (BCR+) - Body ground	Always	1 Mohms or higher
L19-2 (BCR-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK: Go to next step

9. **CHECK SIDE AIRBAG SENSOR RH**
   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 (see **DTC CHECK / CLEAR**).
   e. Turn the ignition switch to OFF.
   f. Turn the ignition switch to ON, and wait for at least 90 seconds.

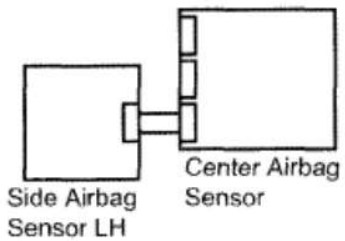


Fig. 68: Side Airbag Sensor LH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   g. Check for DTCs (see **DTC CHECK / CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC B1623, B1628, B1643 and B1648 are not output	A
DTC B1623 or B1643 is output	B

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DTC B1628 or B1648 is output	C

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

A : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B : REPLACE SIDE AIRBAG SENSOR ASSEMBLY RH (See **REMOVAL**)

C: Go to next step

10. **CHECK REAR AIRBAG SENSOR RH**
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 (see **DTC CHECK / CLEAR**).
e. Turn the ignition switch to OFF.

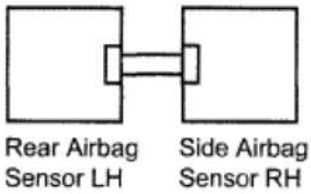


Fig. 69: Identifying Rear Airbag Sensor LH And Side Airbag Sensor RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Result

RESULT CHART

Result	Proceed to
DTC B1623 or B1643 is output	A
DTC B1628 or B1648 is output	B
DTC B1623, B1628, B1643 and B1648 are not output	C

HINT:

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Codes other than DTC B1623, B1628, B1643 and B1648 may be output at this time, but they are not related to this check.

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

A : REPLACE REAR AIRBAG SENSOR RH (See **REMOVAL**)

B : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

C : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

11. **CHECK CONNECTION OF CONNECTORS**
    a. Turn the ignition switch to 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 and side airbag sensor LH.

    OK:

    The connectors are properly connected.

    NG: CONNECT CONNECTORS PROPERLY

    OK: Go to next step

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

    OK:

    The connectors are not deformed or damaged.

    NG: REPLACE FLOOR WIRE

    OK: Go to next step

13. **CHECK FLOOR WIRE (CENTER AIRBAG SENSOR - SIDE AIRBAG SENSOR LH)**

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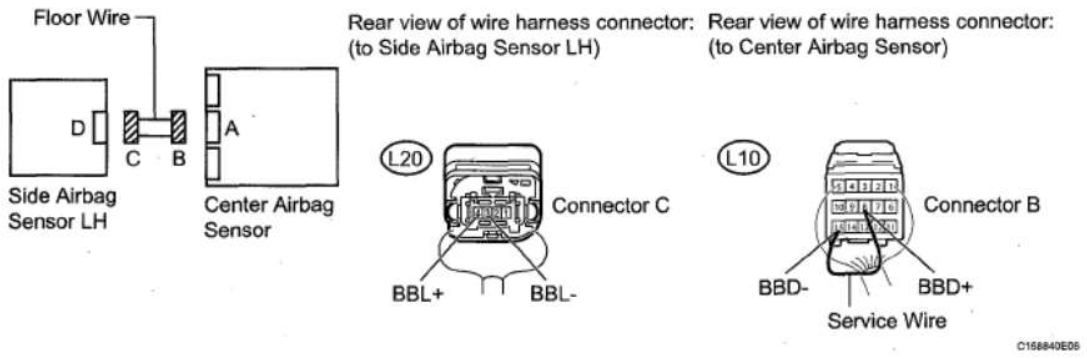


Fig. 70: Identifying L20 And L10 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L20-4 (BBL+) - Body ground	Ignition switch ON	Below 1 V
L20-3 (BBL-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch to 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 (BBD+) and 15 (BBD-) 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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L20-4 (BBL+) - L20-3 (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

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TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L20-4 (BBL+) - L20-3 (BBL-)	Always	1 Mohms or higher
L20-4 (BBL+) - Body ground	Always	1 Mohms or higher
L20-3 (BBL-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK: Go to next step

14. **CHECK CONNECTION OF CONNECTOR**
    a. Check that the connector is properly connected to the rear airbag sensor LH.

    OK:

    The connector is properly connected.

    NG: CONNECT CONNECTORS PROPERLY

    OK: Go to next step

15. **CHECK CONNECTORS**
    a. Disconnect the connectors from the side airbag sensor LH and rear airbag sensor LH.
    b. Check that the connector (on the rear airbag sensor LH side) is not damaged.

    OK:

    The connector is not deformed or damaged.

    NG: REPLACE FLOOR WIRE

    OK: Go to next step

16. **CHECK FLOOR WIRE (SIDE AIRBAG SENSOR LH - REAR AIRBAG SENSOR LH)**

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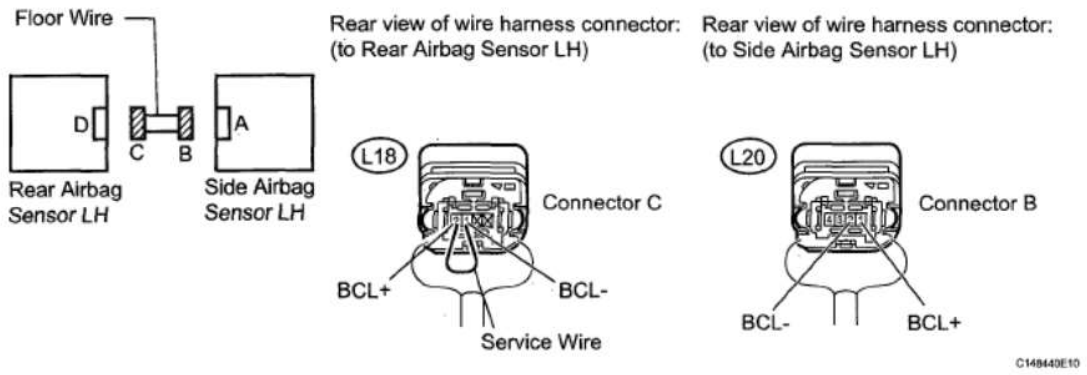


Fig. 71: Identifying L18 And L20 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L20-1 (BCL+) - Body ground	Ignition switch ON	Below 1 V
L20-2 (BCL-) - Body ground	Ignition switch ON	Below 1 V

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

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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L20-1 (BCL+) - L20-2 (BCL-)	Always	Below 1 ohms

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

Standard resistance

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TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L20-1 (BCL+) - L20-2 (BCL-)	Always	1 Mohms or higher
L20-1 (BCL+) - Body ground	Always	1 Mohms or higher
L20-2 (BCL-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK: Go to next step

17. **CHECK SIDE AIRBAG SENSOR LH**
    a. Interchange the side airbag sensor RH with 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.

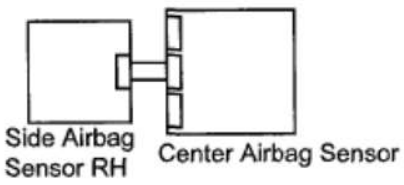


Fig. 72: Side Airbag Sensor RH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

    d. Clear the DTCs stored in the memory (see **DTC CHECK / CLEAR**).
    e. Turn the ignition switch to OFF.
    f. Turn the ignition switch to ON, and wait for at least 90 seconds.
    g. Check for DTCs (see **DTC CHECK / CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC B1628 or B1648 is output	A
DTC B1623, B1628, B1643 and B1648 are not output	B
DTC B1623 or B1643 is output	C

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

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them.

A : REPLACE SIDE AIRBAG SENSOR ASSEMBLY LH (See **REMOVAL**)

B : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

C: Go to next step

18. **CHECK REAR AIRBAG SENSOR LH**
    a. Interchange the rear airbag sensor RH with 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 (see **DTC CHECK / CLEAR**).
    e. Turn the ignition switch to OFF.

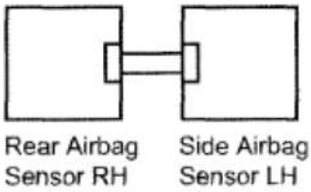


Fig. 73: Identifying Rear Airbag Sensor RH And Side Airbag Sensor LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Result

RESULT CHART

Result	Proceed to
DTC B1623 or B1643 is output	A
DTC B1628 or B1648 is output	B
DTC B1623, B1628, B1643 and B1648 are not output	C

HINT:

Codes other than DTC B1623, B1628, B1643 and B1648 may be output at this time, but they are not related to this check.

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

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

A : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

B : REPLACE REAR AIRBAG SENSOR LH (See **REMOVAL**)

C : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

DTC B1630/23 DRIVER SIDE REAR AIRBAG SENSOR CIRCUIT MALFUNCTION; DTC B1635/24 FRONT PASSENGER SIDE REAR AIRBAG SENSOR CIRCUIT MALFUNCTION

DESCRIPTION

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

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

DTC B1630/23 or B1635/24 is recorded when a malfunction is detected in the rear airbag sensor LH or RH circuit.

DTC DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1630/23	When one of following conditions is met: • Rear airbag sensor LH malfunction • Center airbag sensor malfunction	• Rear airbag sensor LH • Center airbag sensor assembly
B1635/24	When one of following conditions is met: • Rear airbag sensor RH malfunction • Center airbag sensor malfunction	• Rear airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

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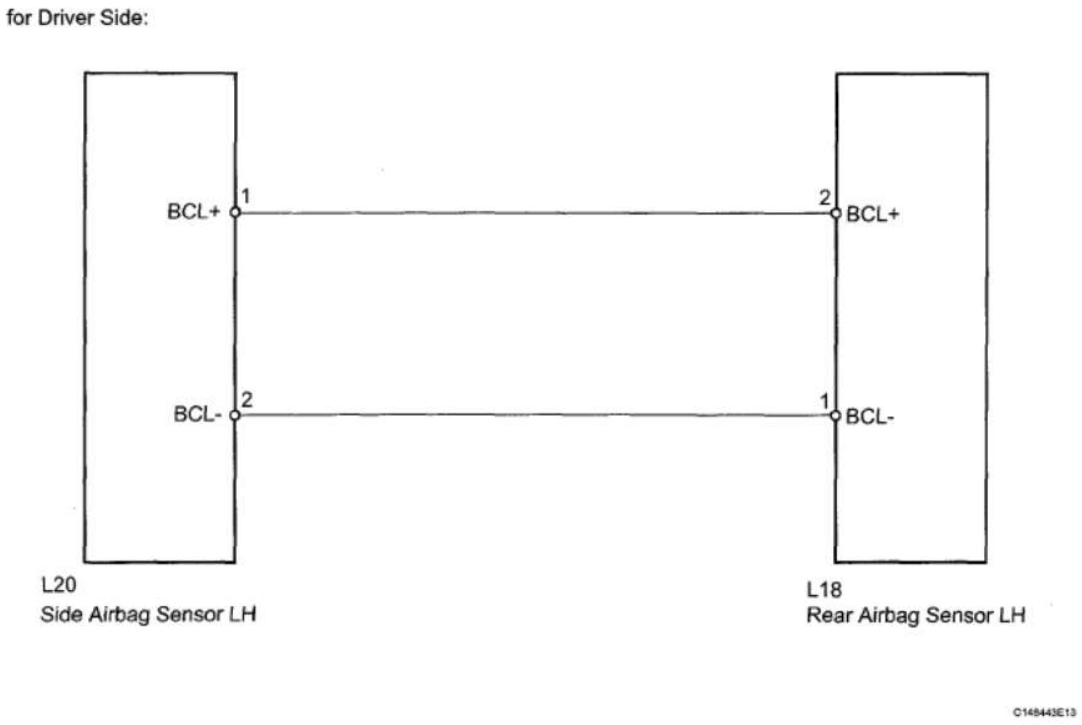


Fig. 74: Side Airbag Sensor LH And Rear Airbag Sensor LH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

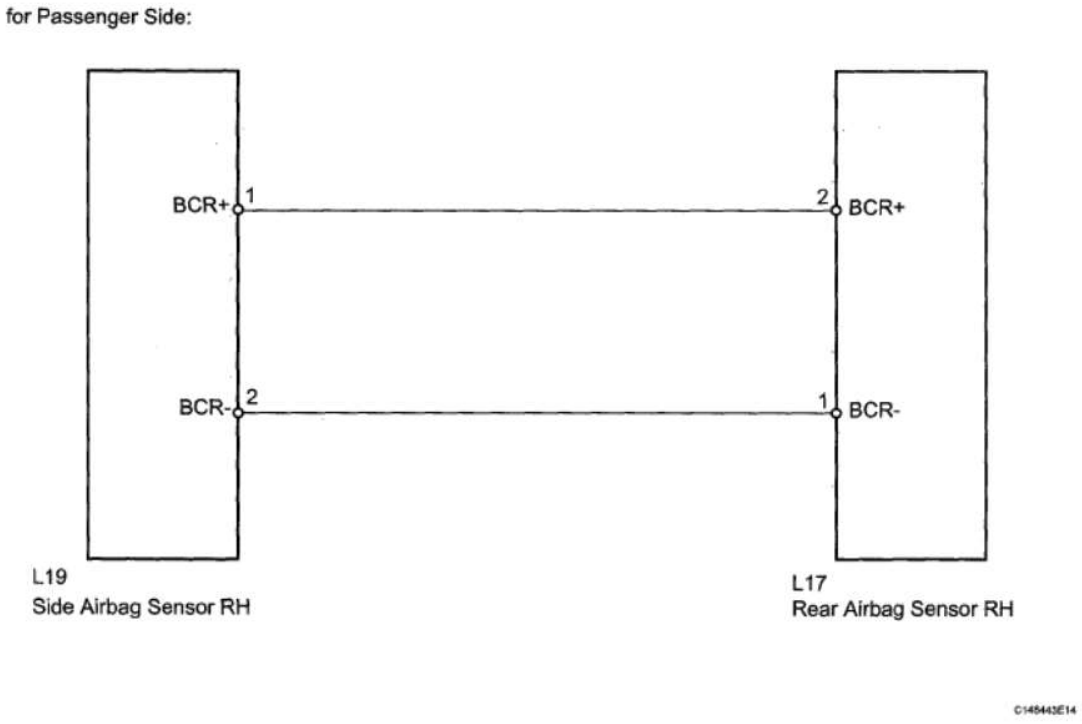


Fig. 75: Side Airbag Sensor RH And Rear Airbag Sensor RH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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INSPECTION PROCEDURE

1. **CHECK FOR DTC**
   a. Turn the ignition switch to OFF.
   b. Clear the DTCs stored in the memory (see **DTC CHECK / CLEAR**).
   c. Turn the ignition switch to OFF.
   d. Turn the ignition switch to ON, and wait for at least 60 seconds.
   e. Check for DTCs (see **DTC CHECK / CLEAR**).

   Result

   RESULT CHART

Result	Proceed to
DTC B1630 and B1635 are not output	A
DTC B1630 is output	B
DTC B1635 is output	C

A : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B: Go to step 3

C: Go to next step

2. **CHECK REAR AIRBAG SENSOR RH**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, 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 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.

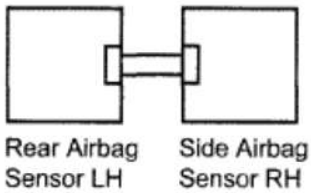


Fig. 76: Identifying Rear Airbag Sensor LH And Side Airbag Sensor RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   f. Clear the DTCs stored in the memory (see **DTC CHECK / CLEAR**).
   g. Turn the ignition switch to OFF.

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h. Turn the ignition switch to ON, and wait for at least 60 seconds.
i. Check for DTCs (see **DTC CHECK / CLEAR**).

Result:

RESULT CHART

Result	Proceed to
DTC B1630 and B1635 are not output	A
DTC B1630 is output	B
DTC B1635 is output	C

HINT:

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

j. Turn the ignition switch to OFF.
k. Disconnect the negative (-) terminal cable from the battery, 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 : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B : REPLACE REAR AIRBAG SENSOR RH (See **REMOVAL**)

C : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

3. **CHECK REAR AIRBAG SENSOR LH**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, 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 negative (-) terminal cable to the battery, and wait for at least 2 seconds.

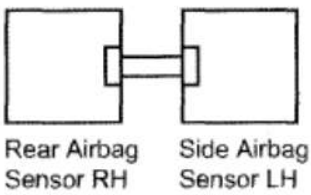


Fig. 77: Identifying Rear Airbag Sensor RH And Side Airbag Sensor LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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e. Turn the ignition switch to ON, and wait for at least 60 seconds.
f. Clear the DTCs stored in the memory (see **DTC CHECK / CLEAR**).
g. Turn the ignition switch to OFF.
h. Turn the ignition switch to ON, and wait for at least 60 seconds.
i. Check for DTCs (see **DTC CHECK / CLEAR**).

Result:

RESULT CHART

Result	Proceed to
DTC B1630 and B1635 are not output	A
DTC B1630 is output	B
DTC B1635 is output	C

HINT:

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

j. Turn the ignition switch to OFF.
k. Disconnect the negative (-) terminal cable from the battery, 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 : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

C : REPLACE REAR AIRBAG SENSOR LH (See **REMOVAL**)

DTC B1632/81 LOST COMMUNICATION WITH DRIVER SIDE REAR AIR-BAG SENSOR; DTC B1633/81 DRIVER SIDE REAR AIRBAG SENSOR INITIALIZATION INCOMPLETE; DTC B1637/82 LOST COMMUNICATION WITH PASSENGER SIDE REAR AIRBAG SENSOR; DTC B1638/82 PASSENGER SIDE REAR AIRBAG SENSOR INITIALIZATION INCOMPLETE

DESCRIPTION

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

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

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DTC B1632/81, B1633/81, B1637/82 or B1638/82 is recorded when a malfunction is detected in the circuit for the side collision sensor LH or RH (to determine deployment of the front seat side airbag LH or RH and curtain shield airbag LH or RH).

DTC DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1632/81 B1633/81	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 LH (to determine deployment of the front seat side airbag LH and curtain shield airbag LH) for 2 seconds. • Side airbag sensor LH malfunction • Rear airbag sensor LH malfunction • Center airbag sensor malfunction	• Floor wire • Side airbag sensor LH • Rear airbag sensor LH • Center airbag sensor assembly
B1637/82 B1638/82	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 RH (to determine deployment of the front seat side airbag RH and curtain shield airbag RH) for 2 seconds. • Side airbag sensor RH malfunction • Rear airbag sensor RH malfunction • Center airbag sensor malfunction	• Floor wire • Side airbag sensor RH • Rear airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

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for Driver Side:

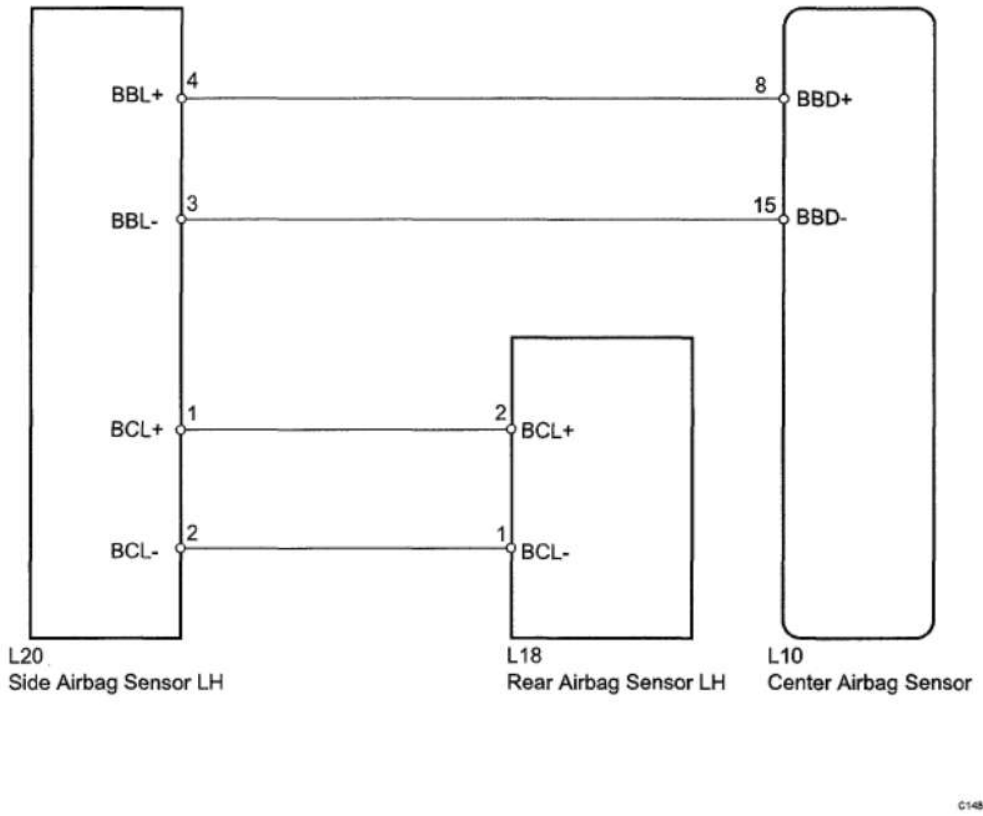


Fig. 78: Side Airbag Sensor LH, Rear Airbag Sensor LH And Center Airbag Sensor - Wiring Diagram (For Driver Side)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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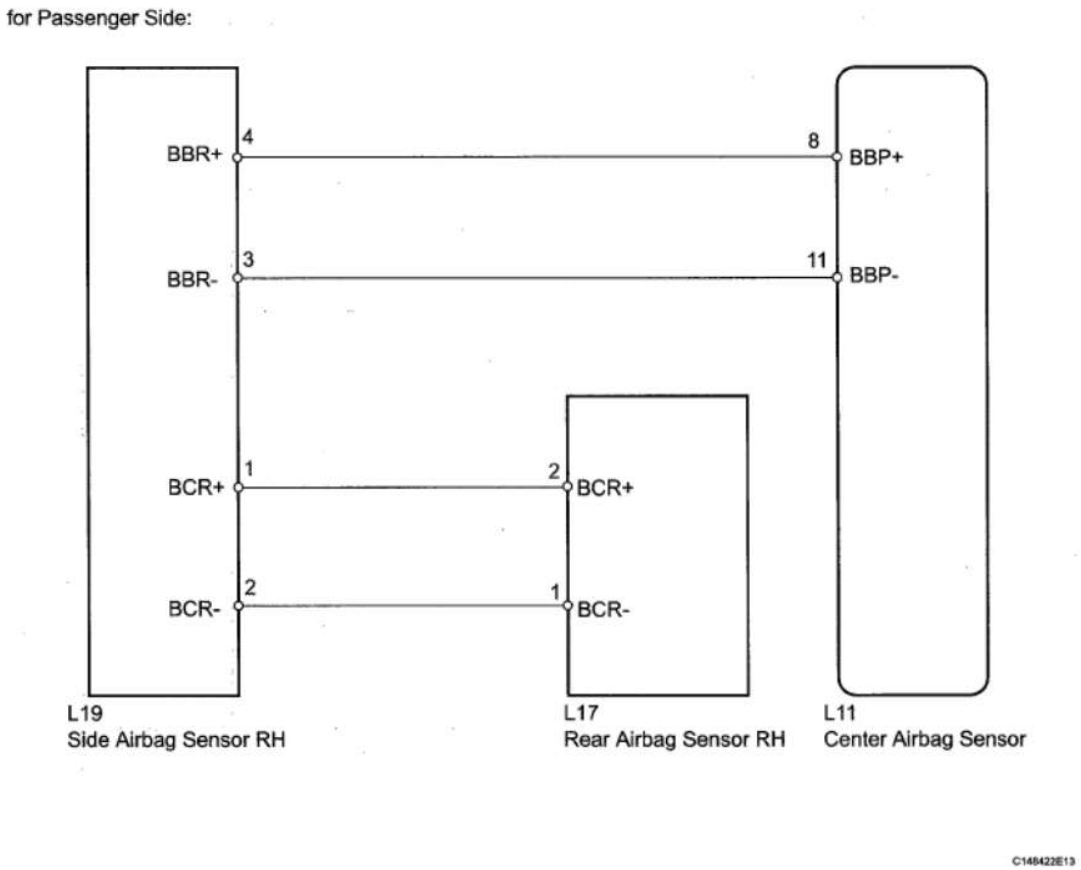


Fig. 79: Side Airbag Sensor RH, Rear Airbag Sensor RH And Center Airbag Sensor - Wiring Diagram (For Passenger Side)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK FOR DTC**
   a. Turn the ignition switch to ON, and wait for at least 60 seconds.
   b. Clear the DTCs stored in the memory (see **DTC CHECK / CLEAR**).
   c. Turn the ignition switch to OFF.
   d. Turn the ignition switch to ON, and wait for at least 60 seconds.
   e. Check for DTCs (see **DTC CHECK / CLEAR**).

   Result

   RESULT CHART

Result	Proceed to
DTC B1632, B1633, B1637 and B1638 are not output	A
DTC B1632 or B1633 is output	B
DTC B1637 or B1638 is output	C

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HINT:

Codes other than past DTC B1632, B1633, B1637 and B1638 may be output at this time, but they are not related to this check.

A : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B: Go to step 7

C: Go to next step

2. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch to 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 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 side airbag sensor RH and rear airbag sensor RH.
   b. Check that the connectors (on the side airbag sensor RH side and rear airbag sensor RH side) are not damaged.

   OK:

   The connectors are not deformed or damaged.

NG: REPLACE FLOOR WIRE

OK: Go to next step

4. **CHECK SIDE AIRBAG SENSOR RH**
   a. Interchange the side airbag sensor LH with RH and connect the connectors to them.
   b. Connect the negative (-) terminal 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 (see **DTC CHECK / CLEAR**).

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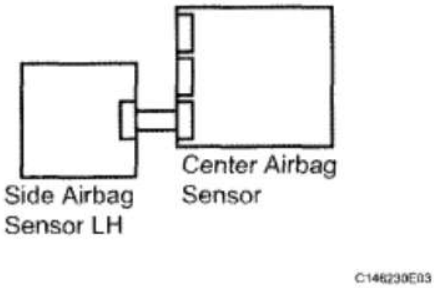


Fig. 80: Side Airbag Sensor LH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Turn the ignition switch to OFF.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs (see **DTC CHECK / CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC B1632, B1633, B1637 and B1638 are not output	A
DTC B1632 or B1633 is output	B
DTC B1637 or B1638 is output	C

h. Turn the ignition switch to OFF.
i. Disconnect the negative (-) terminal cable from the battery, 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 : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B : REPLACE SIDE AIRBAG SENSOR ASSEMBLY RH (See **REMOVAL**)

C: Go to next step

5. **CHECK FLOOR WIRE (SIDE AIRBAG SENSOR RH - REAR AIRBAG SENSOR RH)**

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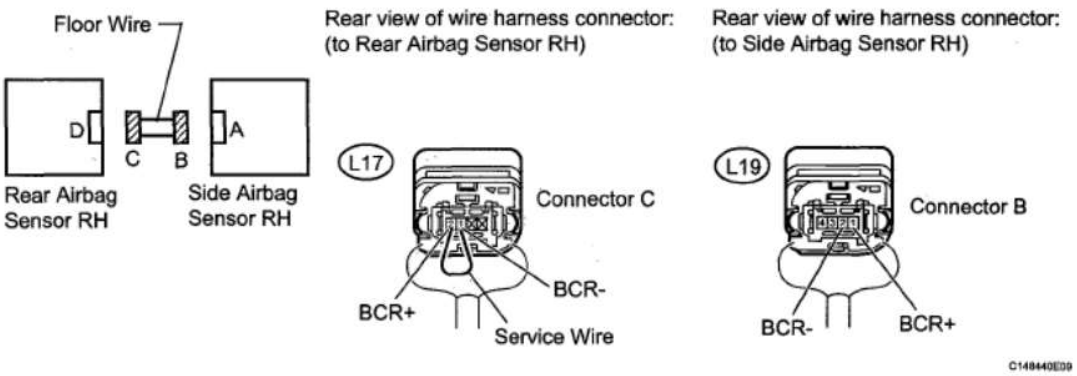


Fig. 81: Identifying L17 And L19 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L19-1 (BCR+) - Body ground	Ignition switch ON	Below 1 V
L19-2 (BCR-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch to OFF.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Disconnect the connectors from the side airbag sensor RH and rear airbag sensor RH.
g. Using a service wire, connect terminals 2 (BCR+) and 1 (BCR-) of connector C.

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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L19-1 (BCR+) - L19-2 (BCR-)	Always	Below 1 ohms

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

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Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L19-1 (BCR+) - L19-2 (BCR-)	Always	1 Mohms or higher
L19-1 (BCR+) - Body ground	Always	1 Mohms or higher
L19-2 (BCR-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK: Go to next step

6. **CHECK REAR AIRBAG SENSOR RH**
   a. Interchange the rear airbag sensor LH with RH and connect the connectors to them.
   b. Connect the negative (-) terminal to the battery, and wait for at least 2 seconds.
   c. Turn the ignition switch to ON, and wait for at least 60 seconds.

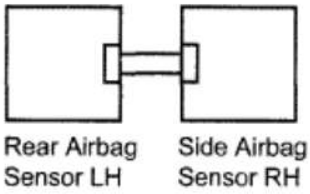


Fig. 82: Identifying Rear Airbag Sensor LH And Side Airbag Sensor RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Result

RESULT CHART

Result	Proceed to
DTC B1632, B1633, B1637 and B1638 are not output	A
DTC B1632 or B1633 is output	B
DTC B1637 or B1638 is output	C

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

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

A : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B : REPLACE REAR AIRBAG SENSOR RH (See **REMOVAL**)

C : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

7. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch to 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 side airbag sensor LH and rear airbag sensor LH.

      OK:

      The connectors are properly connected.

   NG: CONNECT CONNECTORS PROPERLY

   OK: Go to next step

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

      OK:

      The connectors are not deformed or damaged.

   NG: REPLACE FLOOR WIRE

   OK: Go to next step

9. **CHECK SIDE AIRBAG SENSOR LH**
   a. Interchange the side airbag sensor LH with RH and connect the connectors to them.
   b. Connect the negative (-) terminal 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 (see **DTC CHECK / CLEAR**).
   e. Turn the ignition switch to OFF.
   f. Turn the ignition switch to ON, and wait for at least 60 seconds.

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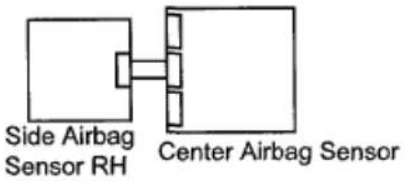


Fig. 83: Side Airbag Sensor RH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

g. Check for DTCs (see **DTC CHECK / CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC B1632, B1633, B1637 and B1638 are not output	A
DTC B1637 or B1638 is output	B
DTC B1632 or B1633 is output	C

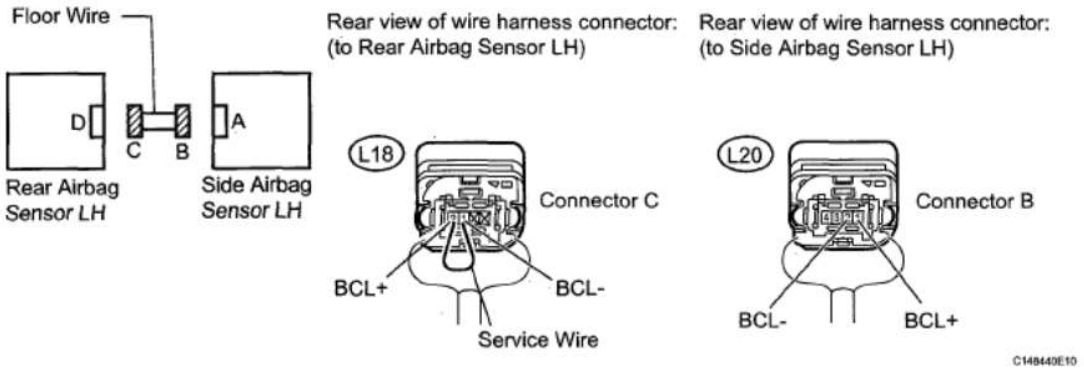
h. Turn the ignition switch to OFF.
i. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
j. Return the side airbag sensor RH and LH to their original positions and connect the connectors to them.

A : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B : REPLACE SIDE AIRBAG SENSOR ASSEMBLY LH (See **REMOVAL**)

C: Go to next step

10. **CHECK FLOOR WIRE (SIDE AIRBAG SENSOR LH - REAR AIRBAG SENSOR LH)**



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Fig. 84: Identifying L18 And L20 Connector Terminals
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.
c. Measure the voltage according to the value(s) in the table below.

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified condition
L20-1 (BCL+) - Body ground	Ignition switch ON	Below 1 V
L20-2 (BCL-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch to OFF.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Disconnect the connectors from the side airbag sensor LH and rear airbag sensor LH.
g. Using a service wire, connect terminals 2 (BCL+) and 1 (BCL-) of connector C.

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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L20-1 (BCL+) - L20-2 (BCL-)	Always	Below 1 ohms.

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L20-1 (BCL+) - L20-2 (BCL-)	Always	1 Mohms or higher
L20-1 (BCL+) - Body ground	Always	1 Mohms or higher
L20-2 (BCL-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

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OK: Go to next step

11. **CHECK REAR AIRBAG SENSOR LH**
    a. Interchange the rear airbag sensor LH with RH and connect the connectors to them.
    b. Connect the negative (-) terminal 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 (see **DTC CHECK / CLEAR**).
    e. Turn the ignition switch to OFF.
    f. Turn the ignition switch to ON, and wait for at least 60 seconds.

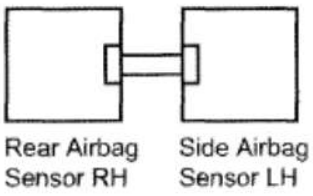


Fig. 85: Identifying Rear Airbag Sensor RH And Side Airbag Sensor LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

    g. Check for DTCs (see **DTC CHECK / CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC B1632, B1633, B1637 and B1638 are not output	A
DTC B1637 or B1638 is output	B
DTC B1632 or B1633 is output	C

    h. Turn the ignition switch to OFF.
    i. Disconnect the negative (-) terminal cable from the battery, 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 : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B : REPLACE REAR AIRBAG SENSOR LH (See **REMOVAL**)

C : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

DTC B1642/81 LOST COMMUNICATION WITH DRIVER SIDE SATELLITE SENSOR BUS; DTC B1647/82 LOST COMMUNICATION WITH FRONT PASSENGER SIDE SATELLITE SENSOR BUS

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DESCRIPTION

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

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

DTC B1642/81 or B1647/82 is recorded when a malfunction is detected in the circuit for the side collision sensor LH or RH (to determine deployment of the front seat side airbag LH or RH and curtain shield airbag LH or RH).

DTC DETECTION CONDITION CHART

DTC Code	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 LH (to determine deployment of the front seat side airbag LH and curtain shield airbag LH) for 2 seconds. • Side airbag sensor LH malfunction • Rear airbag sensor LH malfunction • Center airbag sensor malfunction	• Floor wire • Side airbag sensor LH • Rear airbag sensor LH • Center airbag sensor assembly
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 RH (to determine deployment of the front seat side airbag RH and curtain shield airbag RH) for 2 seconds. • Side airbag sensor RH malfunction • Rear airbag sensor RH malfunction • Center airbag sensor malfunction	• Floor wire • Side airbag sensor RH • Rear airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

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for Driver Side:

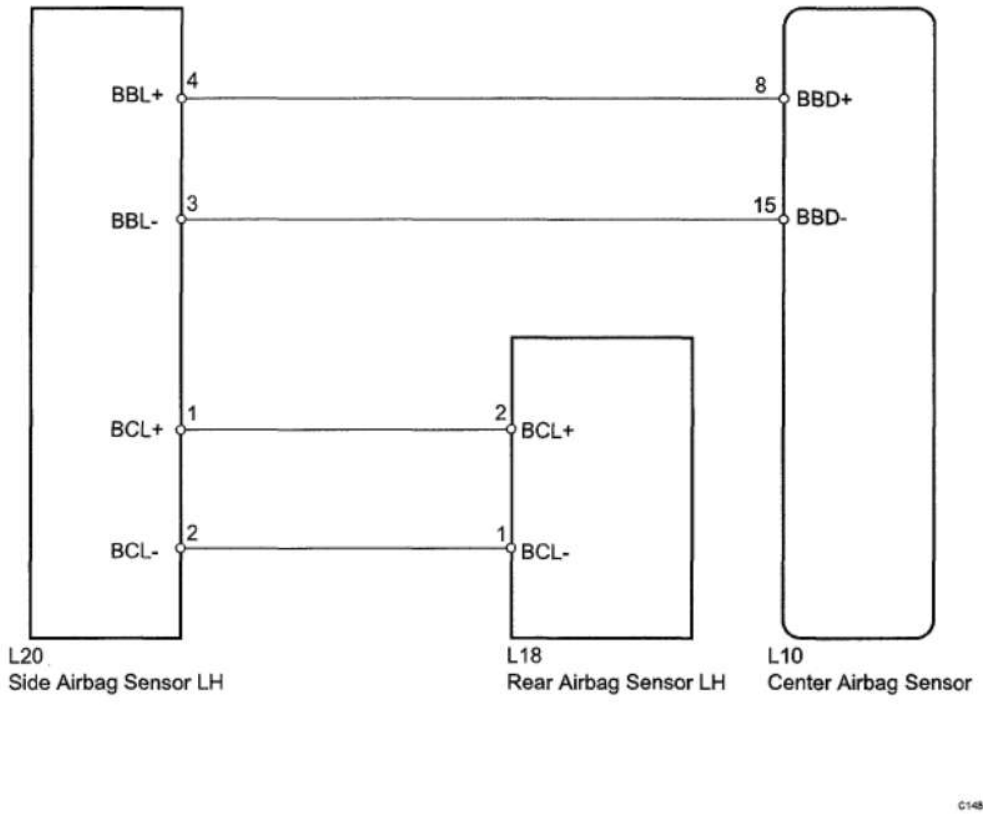


Fig. 86: Side Airbag Sensor LH, Rear Airbag Sensor LH And Center Airbag Sensor - Wiring Diagram (For Driver Side)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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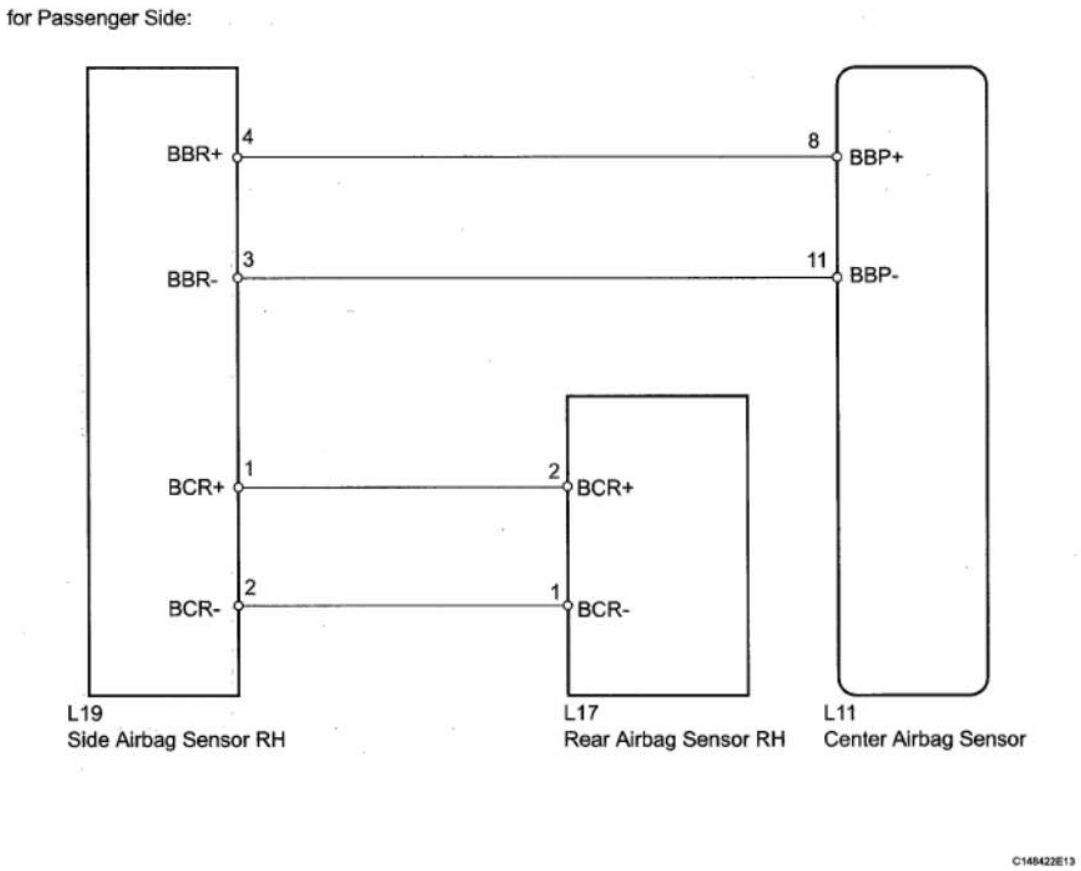


Fig. 87: Side Airbag Sensor RH, Rear Airbag Sensor RH And Center Airbag Sensor - Wiring Diagram (For Passenger Side)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

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

   Result:

   RESULT CHART

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

A : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

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B: Go to step 10

C: Go to next step

2. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch to 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 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 and side airbag sensor RH.
   b. Check that the connectors (on the center airbag sensor side and side airbag sensor RH side) are not damaged.

      OK:

      The connectors are not deformed or damaged.

   NG: REPLACE FLOOR WIRE

   OK: Go to next step

4. **CHECK FLOOR WIRE (CENTER AIRBAG SENSOR - SIDE AIRBAG SENSOR RH)**

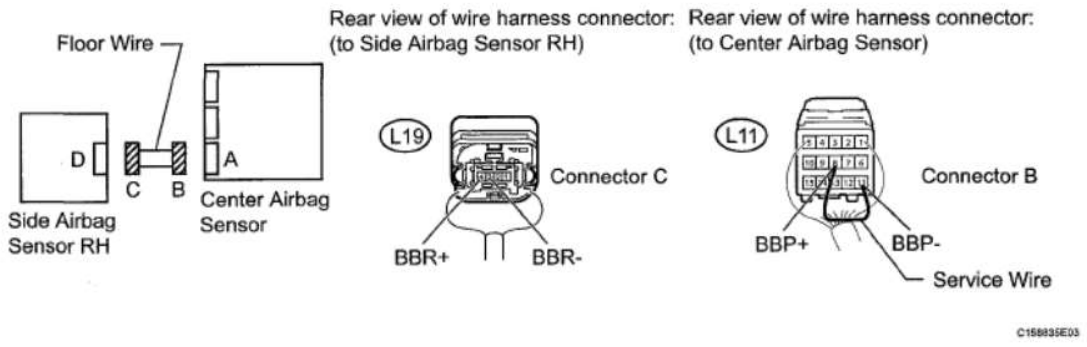


Fig. 88: Identifying L19 And L11 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L19-4 (BBR+) - Body ground	Ignition switch ON	Below 1 V
L19-3 (BBR-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch to 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 (BBP+) and 11 (BBP-) 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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L19-4 (BBR+) - L19-3 (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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L19-4 (BBR+) - L19-3 (BBR-)	Always	1 Mohms or higher
L19-4 (BBR+) - Body ground	Always	1 Mohms or higher
L19-3 (BBR-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK: Go to next step

5. **CHECK CONNECTION OF CONNECTORS**
   a. Check that the connector is properly connected to the rear airbag sensor RH.

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OK:

The connector is properly connected.

NG: CONNECT CONNECTOR PROPERLY

OK: Go to next step

6. **CHECK CONNECTORS**
   a. Disconnect the connectors from the side airbag sensor RH and rear airbag sensor RH.
   b. Check that the connector (on the rear airbag sensor RH side) is not damaged.

OK:

The connector is not deformed or damaged.

NG: REPLACE FLOOR WIRE

OK: Go to next step

7. **CHECK FLOOR WIRE (SIDE AIRBAG SENSOR RH - REAR AIRBAG SENSOR RH)**

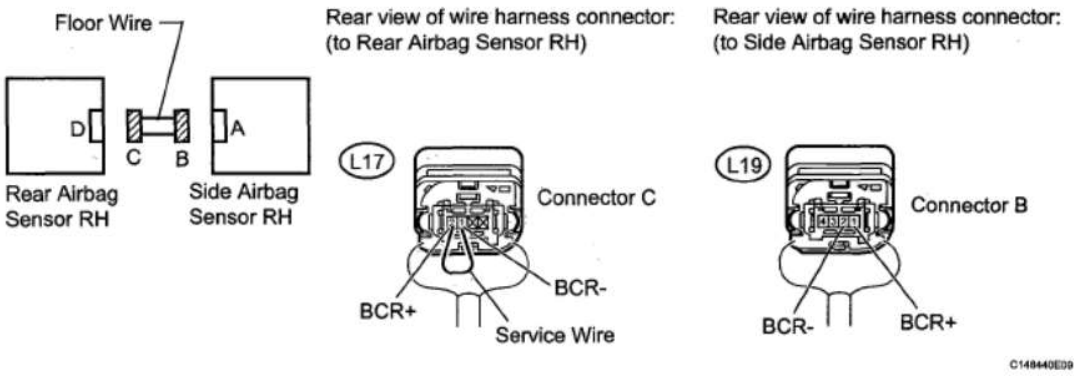


Fig. 89: Identifying L17 And L19 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L19-1 (BCR+) - Body ground	Ignition switch ON	Below 1 V

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L19-2 (BCR-) - Body ground	Ignition switch ON	Below 1 V

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

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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L19-1 (BCR+) - L19-2 (BCR-)	Always	Below 1 ohms

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L19-1 (BCR+) - L19-2 (BCR-)	Always	1 Mohms or higher
L19-1 (BCR+) - Body ground	Always	1 Mohms or higher
L19-2 (BCR-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK: Go to next step

8. **CHECK SIDE AIRBAG SENSOR RH**
   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 (see **DTC CHECK / CLEAR**).
   e. Turn the ignition switch to OFF.
   f. Turn the ignition switch to ON, and wait for at least 90 seconds.

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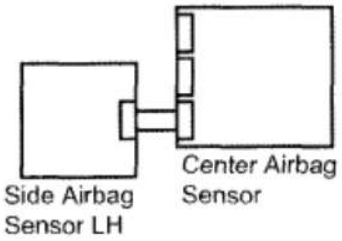


Fig. 90: Side Airbag Sensor LH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

g. Check for DTCs (see **DTC CHECK / CLEAR**).

Result

RESULT CHART

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

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

A : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

B : REPLACE SIDE AIRBAG SENSOR ASSEMBLY RH (See **REMOVAL**)

C: Go to next step

9. **CHECK REAR AIRBAG SENSOR RH**
   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 (see **DTC CHECK / CLEAR**).
   e. Turn the ignition switch to OFF.
   f. Turn the ignition switch to ON, and wait for at least 90 seconds.

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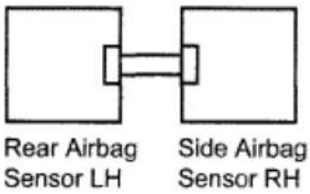


Fig. 91: Identifying Rear Airbag Sensor LH And Side Airbag Sensor RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

g. Check for DTCs (see **DTC CHECK / CLEAR**).

Result

RESULT CHART

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

HINT:

Codes other than DTC B1642 and B1647 may be output at this time, but they are not related to this check.

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

A : REPLACE REAR AIRBAG SENSOR RH (See **REMOVAL**)

B : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

C : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

10. **CHECK CONNECTION OF CONNECTORS**
    a. Turn the ignition switch to 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 and side airbag sensor LH.

    OK:

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The connectors are properly connected.

NG: CONNECT CONNECTORS PROPERLY

OK: Go to next step

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

OK:

The connectors are not deformed or damaged.

NG: REPLACE FLOOR WIRE

OK: Go to next step

12. **CHECK FLOOR WIRE (CENTER AIRBAG SENSOR - SIDE AIRBAG SENSOR LH)**

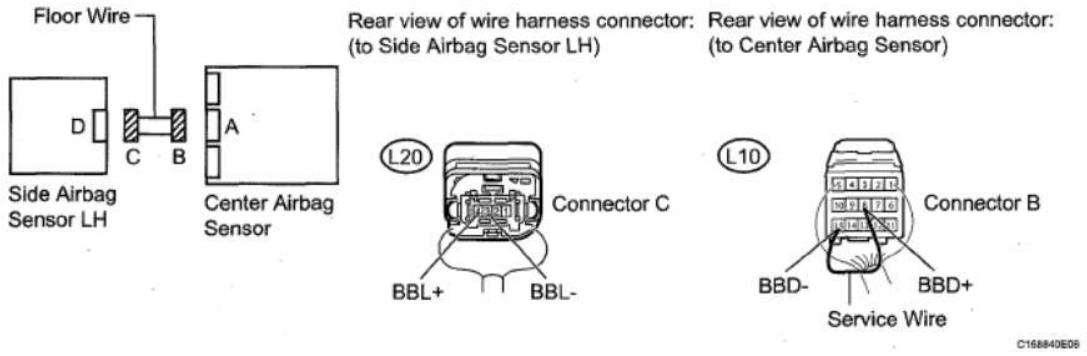


Fig. 92: Identifying L20 And L10 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L20-4 (BBL+) - Body ground	Ignition switch ON	Below 1 V
L20-3 (BBL-) - Body ground	Ignition switch ON	Below 1 V

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d. Turn the ignition switch to 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 (BBD+) and 15 (BBD-) 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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L20-4 (BBL+) - L20-3 (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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L20-4 (BBL+) - L20-3 (BBL-)	Always	1 Mohms or higher
L20-4 (BBL+) - Body ground	Always	1 Mohms or higher
L20-3 (BBL-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK: Go to next step

13. **CHECK CONNECTION OF CONNECTOR**
a. Check that the connector is properly connected to the rear airbag sensor LH.

OK:

The connector is properly connected.

NG: CONNECT CONNECTORS PROPERLY

OK: Go to next step

14. **CHECK CONNECTORS**
a. Disconnect the connectors from the side airbag sensor LH and rear airbag sensor LH.

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b. Check that the connector (on the rear airbag sensor LH side) is not damaged.

OK:

The connector is not deformed or damaged.

NG: REPLACE FLOOR WIRE

OK: Go to next step

15. **CHECK FLOOR WIRE (SIDE AIRBAG SENSOR LH - REAR AIRBAG SENSOR LH)**

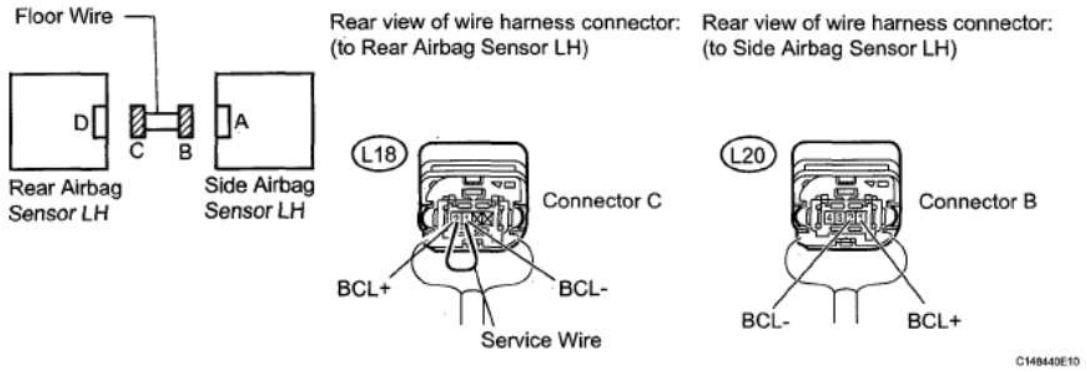


Fig. 93: Identifying L18 And L20 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L20-1 (BCL+) - Body ground	Ignition switch ON	Below 1 V
L20-2 (BCL-) - Body ground	Ignition switch ON	Below 1 V

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

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

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L20-1 (BCL+) - L20-2 (BCL-)	Always	Below 1 ohms

h. Disconnect the service wire from connector C.

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L20-1 (BCL+) - L20-2 (BCL-)	Always	1 Mohms or higher
L20-1 (BCL+) - Body ground	Always	1 Mohms or higher
L20-2 (BCL-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK: Go to next step

16. **CHECK SIDE AIRBAG SENSOR LH**

a. Interchange the side airbag sensor RH with 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 (see **DTC CHECK / CLEAR**).

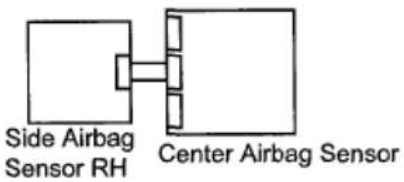


Fig. 94: Side Airbag Sensor RH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Turn the ignition switch to OFF.

f. Turn the ignition switch to ON, and wait for at least 90 seconds.

g. Check for DTCs (see **DTC CHECK / CLEAR**).

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Result

RESULT CHART

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

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

A : REPLACE SIDE AIRBAG SENSOR ASSEMBLY LH (See **REMOVAL**)

B : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

C: Go to next step

17. **CHECK REAR AIRBAG SENSOR LH**
    a. Interchange the rear airbag sensor RH with 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 (see **DTC CHECK / CLEAR**).
    e. Turn the ignition switch to OFF.
    f. Turn the ignition switch to ON, and wait for at least 90 seconds.

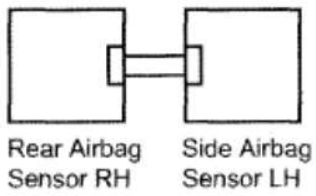


Fig. 95: Identifying Rear Airbag Sensor RH And Side Airbag Sensor LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

g. Check for DTCs (see **DTC CHECK / CLEAR**).

Result

RESULT CHART

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

HINT:

Codes other than DTC B1642 and B1647 may be output at this time, but they are not related to this check.

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

A : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

B : REPLACE REAR AIRBAG SENSOR LH (See **REMOVAL**)

C : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

DTC B1650/32 OCCUPANT CLASSIFICATION SYSTEM MALFUNCTION

DESCRIPTION

The occupant classification system circuit consists of the center airbag sensor and the occupant classification system.

If the center airbag sensor 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 recorded when a malfunction is detected in the occupant classification system circuit.

DTC DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1650/32	When one of following conditions is met: • Occupant classification system malfunction • 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 occupant classification system circuit for 2 seconds. • Center airbag sensor malfunction	• Floor wire • Front seat wire RH • Occupant classification system • Center airbag sensor assembly

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WIRING DIAGRAM

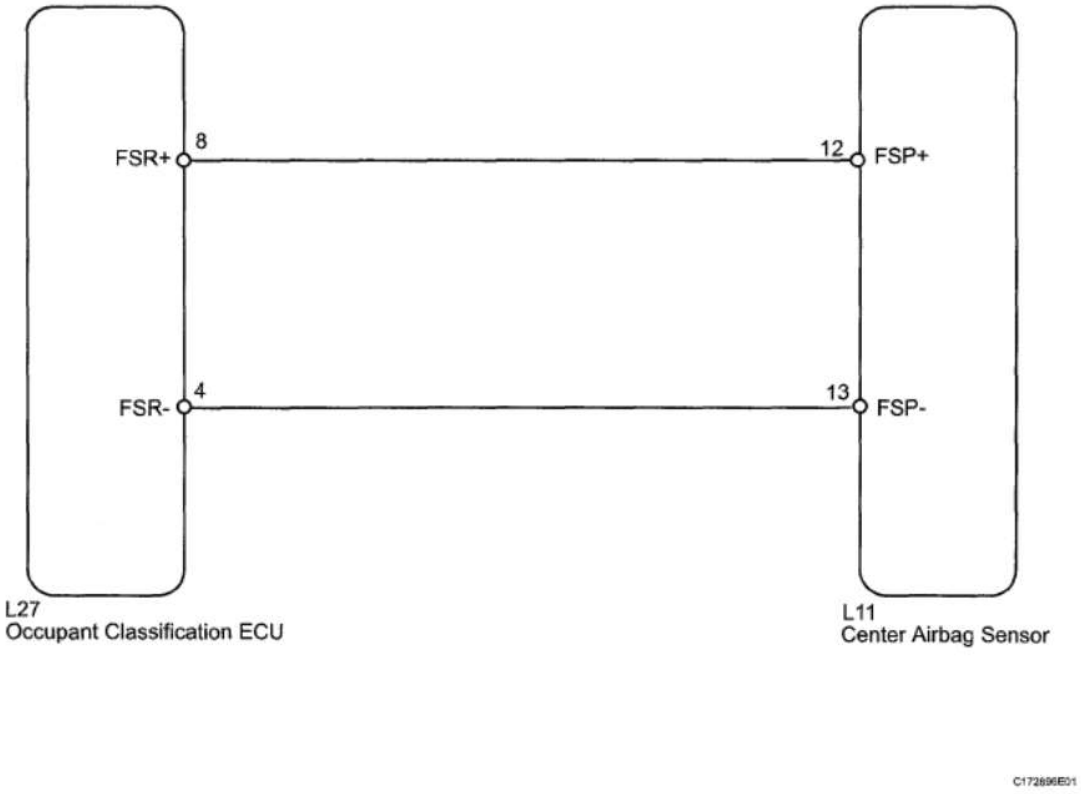


Fig. 96: ECU And Center Air Bag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION 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 (see **DTC CHECK / CLEAR**).

      OK:

      DTC is not output.

   NG: REPAIR CIRCUITS INDICATED BY OUTPUT DTCS (See **DIAGNOSTIC TROUBLE CODE CHART**)

   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 (see **DTC CHECK / CLEAR**).

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c. Turn the ignition switch to OFF.
d. Turn the ignition switch to ON, and wait for at least 60 seconds.
e. Check for DTCs (see **DTC CHECK / CLEAR**).

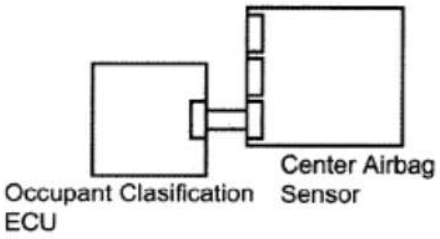


Fig. 97: Identifying Occupant Classification ECU And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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: Go to step 3

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

3. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch to 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 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 and the occupant classification ECU.

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b. Check that the connectors (on the center airbag sensor side and occupant classification ECU side) are not damaged.

OK:

The connectors are not deformed or damaged.

NG: REPLACE FLOOR WIRE

OK: Go to next step

5. **CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT**

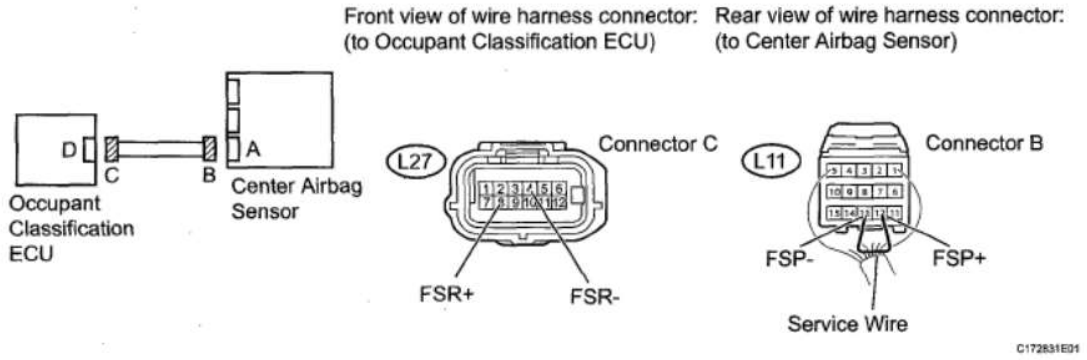


Fig. 98: Identifying L27 And L11 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Using a service wire, connect terminals 12 (FSP+) and 13 (FSP-) 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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L27-8 (FSR+) - L27-4 (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

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TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L27-8 (FSR+) - L27-4 (FSR-)	Always	1 Mohms or higher
L27-8 (FSR+) - Body ground	Always	1 Mohms or higher
L27-4 (FSR-) - Body ground	Always	1 Mohms or higher

e. Connect the negative (-) terminal cable to the battery, 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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L27-8 (FSR+) - Body ground	Ignition switch ON	Below 1 V
L27-1 (FSR-) - Body ground	Ignition switch ON	Below 1 V

NG: REPLACE FLOOR WIRE

OK : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

DTC B1653/35 SEAT POSITION AIRBAG SENSOR CIRCUIT MALFUNCTION

DESCRIPTION

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

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

DTC DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1653/35	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 seat position airbag sensor circuit for 2 seconds. • Seat position airbag sensor malfunction • Center airbag sensor malfunction	• Floor wire • Front seat inner belt assembly LH • Seat position airbag sensor • Center airbag sensor assembly

WIRING DIAGRAM

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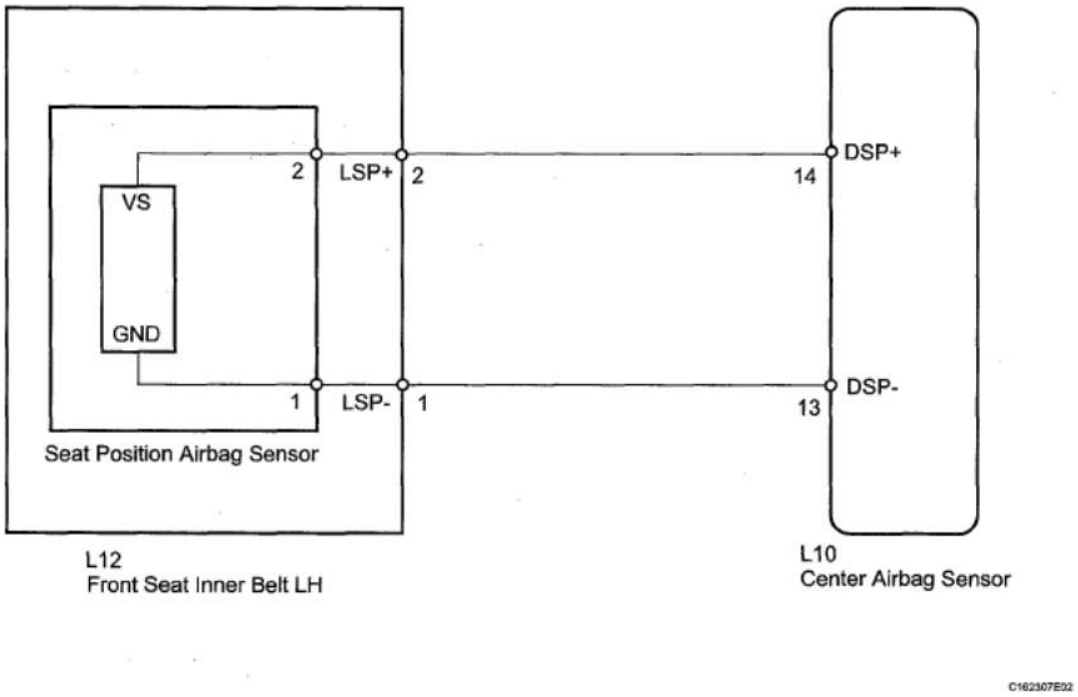


Fig. 99: Front Seat Inner Belt LH And Center Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch to 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 and the seat position airbag 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 and the seat position airbag sensor.
   b. Check that the connectors (on the center airbag sensor side and seat position airbag sensor side) are not damaged.

      OK:

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The connectors are not deformed or damaged.

NG: REPLACE HARNESS AND CONNECTOR

OK: Go to next step

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

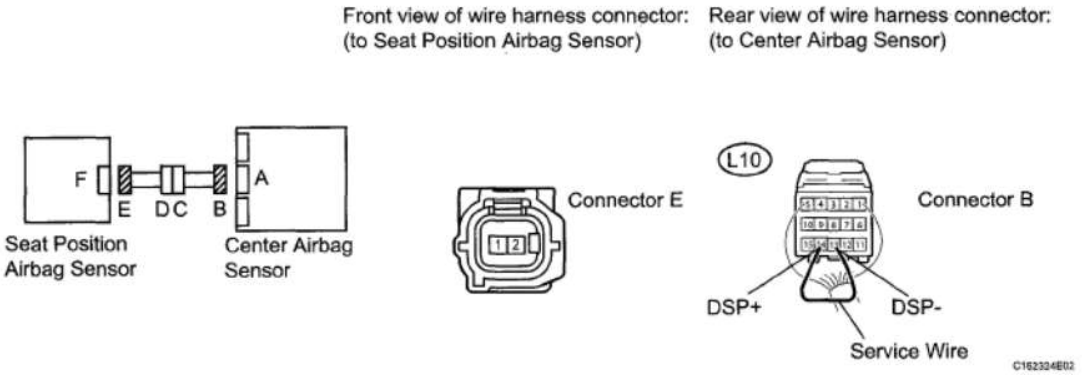


Fig. 100: Identifying Center Airbag Sensor And Seat Position Airbag Sensor Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

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

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

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TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
2-1 (DSP-)	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 SPECIFIED CONDITION CHART

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

NG: Go to step 7

OK: Go to next step

4. **CHECK SEAT POSITION AIRBAG SENSOR**

a. Connect the connectors to the center airbag sensor and the seat position airbag sensor.

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 (see **DTC CHECK / CLEAR**).

e. Turn the ignition switch to OFF.

f. Turn the ignition switch to ON, and wait for at least 60 seconds.

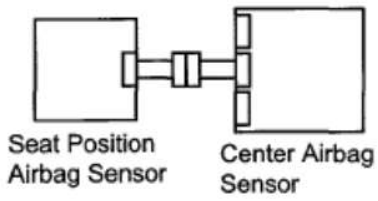


Fig. 101: Identifying Center Airbag Sensor And Seat Position Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

g. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

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DTC B1653/35 is not output.

HINT:

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

NG: Go to step 5

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

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

   HINT:

   Perform inspection using parts from a normal vehicle if possible.

6. **CHECK CENTER AIRBAG SENSOR**
   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 (see **DTC CHECK / CLEAR**).
   d. Turn the ignition switch to OFF.
   e. Turn the ignition switch to ON, and wait for at least 60 seconds.

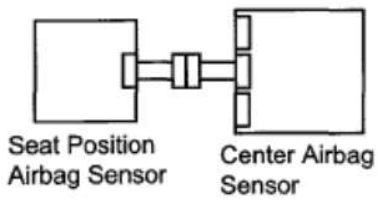


Fig. 102: Identifying Center Airbag Sensor And Seat Position Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   f. Check for DTCs (see **DTC CHECK / CLEAR**).

   OK:

   DTC B1653/35 is not output.

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HINT:

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

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : END

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

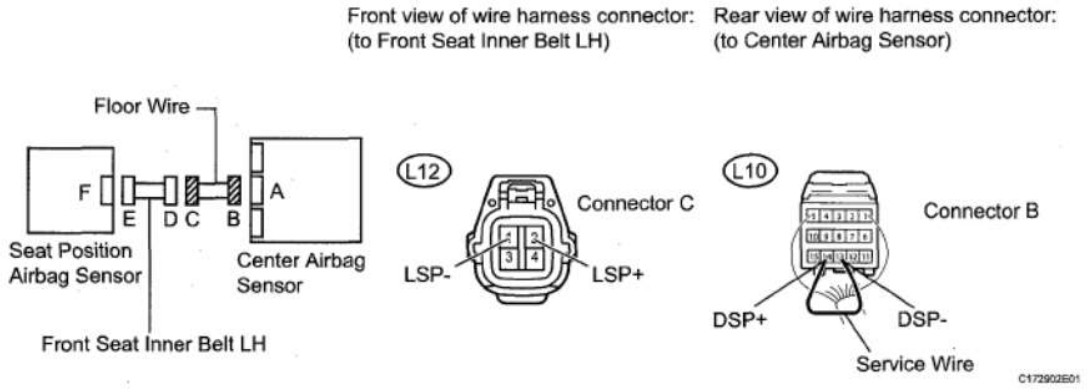


Fig. 103: Identifying L12 And L10 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Disconnect the floor wire connector from the front seat inner belt 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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L12-2 (LSP+) - Body ground	Ignition switch ON	Below 1 V
L12-1 (LSP-) - Body ground	Ignition switch ON	Below 1 V

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

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Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L12-2 (LSP+) - L12-1 (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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L12-2 (LSP+) - L12-1 (LSP-)	Always	1 Mohms or higher
L12-2 (LSP+) - Body ground	Always	1 Mohms or higher
L12-1 (LSP-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK : REPLACE FRONT SEAT INNER BELT ASSEMBLY LH (See **REMOVAL**)

DTC B1655/37 DRIVER SIDE SEAT BELT BUCKLE SWITCH CIRCUIT MALFUNCTION

DESCRIPTION

The seat belt buckle switch LH circuit consists of the center airbag sensor and the front seat inner belt LH. DTC B1655/37 is recorded when a malfunction is detected in the seat belt buckle switch LH circuit.

DTC DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1655/37	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 seat belt buckle switch LH circuit for 2 seconds. • Front seat inner belt LH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat inner belt assembly LH (Seat belt buckle switch LH) • Center airbag sensor assembly

WIRING DIAGRAM

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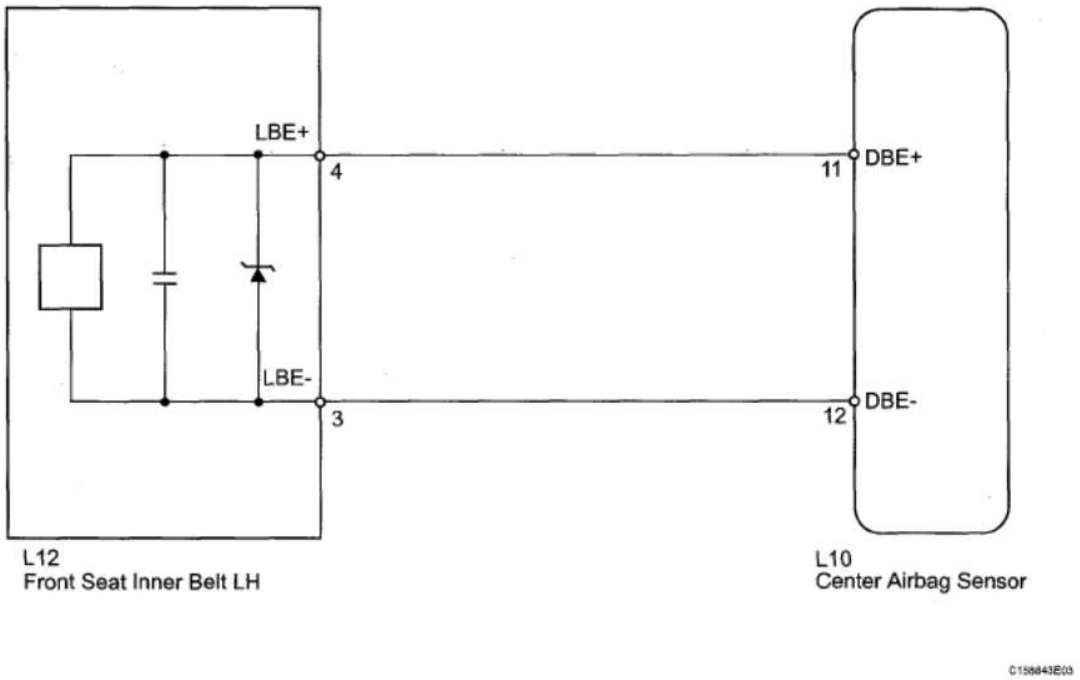


Fig. 104: Front Seat Inner Belt LH And Center Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch to 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 and front seat inner belt 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 and the front seat inner belt LH.
   b. Check that the connectors (on the center airbag sensor side and front seat inner belt LH side) are not damaged.

      OK:

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The connectors are not deformed or damaged.

NG: REPLACE FLOOR WIRE

OK: Go to next step

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

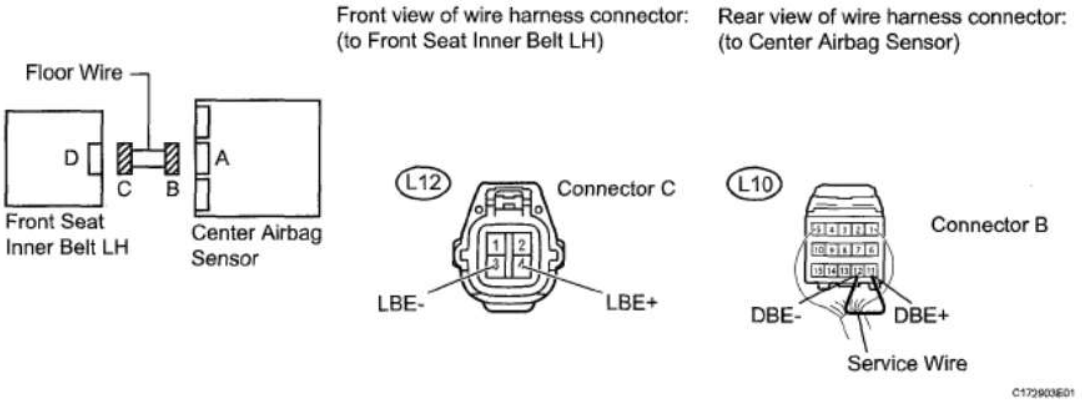


Fig. 105: Identifying L10 And L12 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L12-4 (LBE+) - Body ground	Ignition switch ON	Below 1 V
L12-3 (LBE-) - Body ground	Ignition switch ON	Below 1 V

d. Turn the ignition switch to 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 (DBE+) and 12 (DBE-) 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

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TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L12-4 (LBE+) - L12-3 (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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L12-4 (LBE+) - L12-3 (LBE-)	Always	1 Mohms or higher
L12-4 (LBE+) - Body ground	Always	1 Mohms or higher
L12-3 (LBE-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK: Go to next step

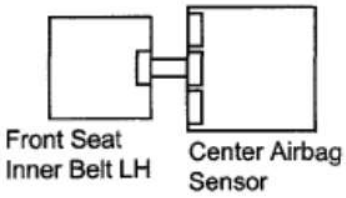
4. **CHECK FRONT SEAT INNER BELT LH**

a. Connect the connector to the center airbag sensor and the front seat inner belt 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 (see **DTC CHECK / CLEAR**).



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Fig. 106: Identifying Front Seat Inner Belt LH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Turn the ignition switch to OFF.

f. Turn the ignition switch to ON, and wait for at least 60 seconds.

g. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

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DTC B1655/37 is not output.

HINT:

Codes other than DTC B1655/37 may be output at this time, but they are not related to this check.

NG: Go to step 5

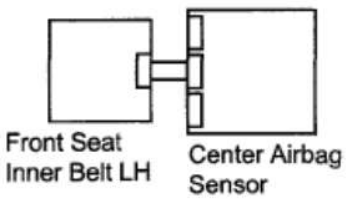
OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

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

   HINT:

   Perform inspection using parts from a normal vehicle if possible.

6. **CHECK CENTER AIRBAG SENSOR**
   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 (see **DTC CHECK / CLEAR**).
   d. Turn the ignition switch to OFF.
   e. Turn the ignition switch to ON, and wait for at least 60 seconds.



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Fig. 107: Identifying Front Seat Inner Belt LH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   f. Check for DTCs (see **DTC CHECK / CLEAR**).

   OK:

   DTC B1655/37 is hot output.

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HINT:

Codes other than DTC B1655/37 may be output at this time, but they are not related to this check.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : END

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

DESCRIPTION

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

The passenger airbag ON/OFF indicator indicates the operation condition of the front passenger airbag, front seat side airbag RH and front seat outer belt RH.

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

DTC DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1660/43	When one of following conditions is met: • The center airbag sensor 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 malfunction	• Instrument panel wire assembly • Telltale light assembly (Passenger airbag ON/OFF indicator) • Center airbag sensor assembly

WIRING DIAGRAM

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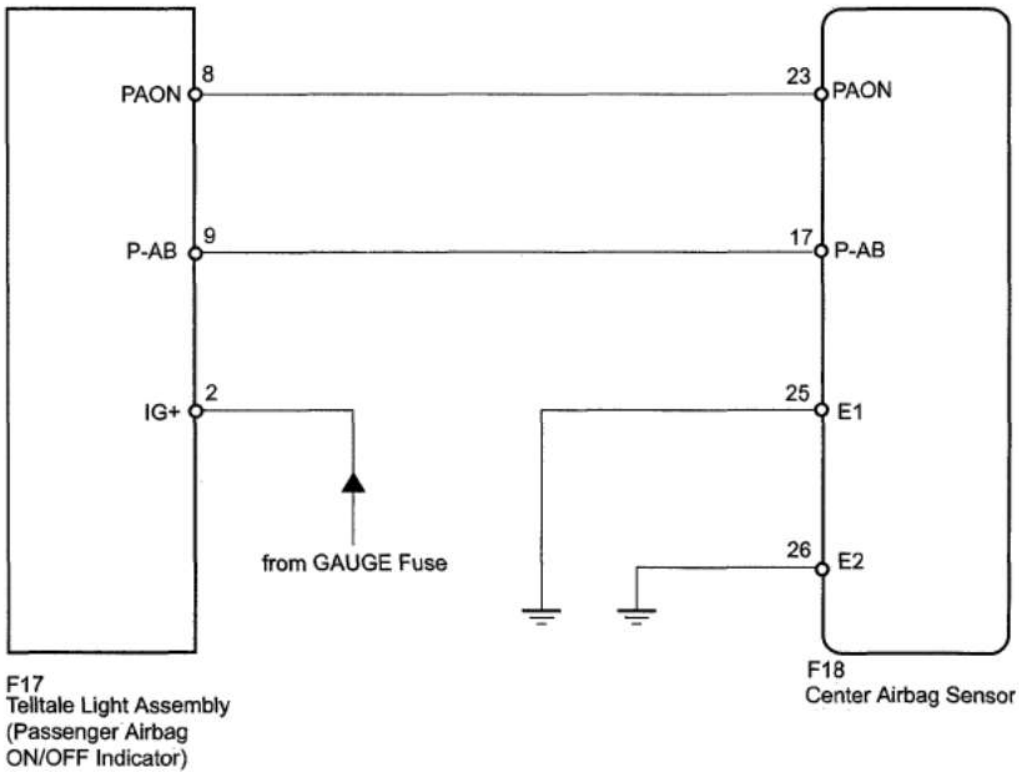


Fig. 108: Telltale Light And Center Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION 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 (see **DIAGNOSIS SYSTEM**).

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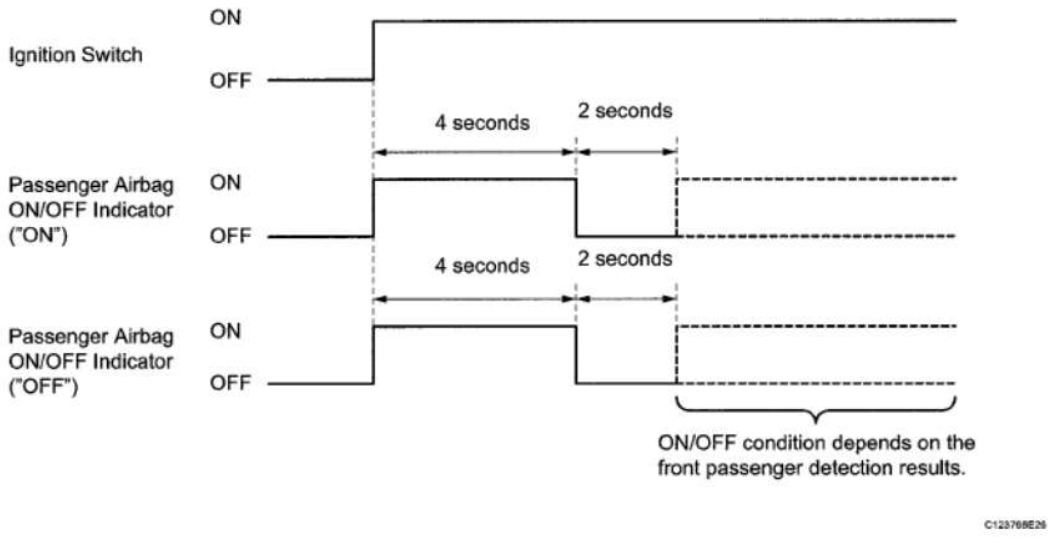


Fig. 109: Passenger Airbag ON/OFF Indicator Timing Chart
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Result

RESULT CHART

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

B: Go to step 7

A: Go to next step

2. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch to 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 and the telltale light.

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 and the telltale light.

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

OK:

The connectors are not deformed or damaged.

NG: REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

OK: Go to next step

4. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR**
   a. Connect the connector to the telltale light.
   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.

Telltale Light:



B177818E01

Fig. 110: Passenger Airbag ON/OFF Indicator Display
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK:

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

NG: Go to step 6

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR**
   a. Connect the connector to the center airbag sensor.
   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 (see **DTC CHECK / CLEAR**).
   e. Turn the ignition switch to OFF.
   f. Turn the ignition switch to ON, and wait for at least 60 seconds.

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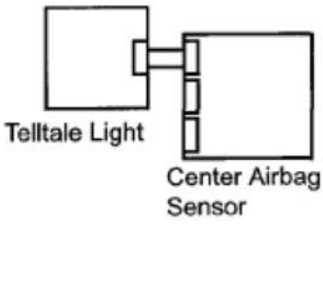


Fig. 111: Identifying Telltale Light And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

g. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1660/43 is not output.

HINT:

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

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

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

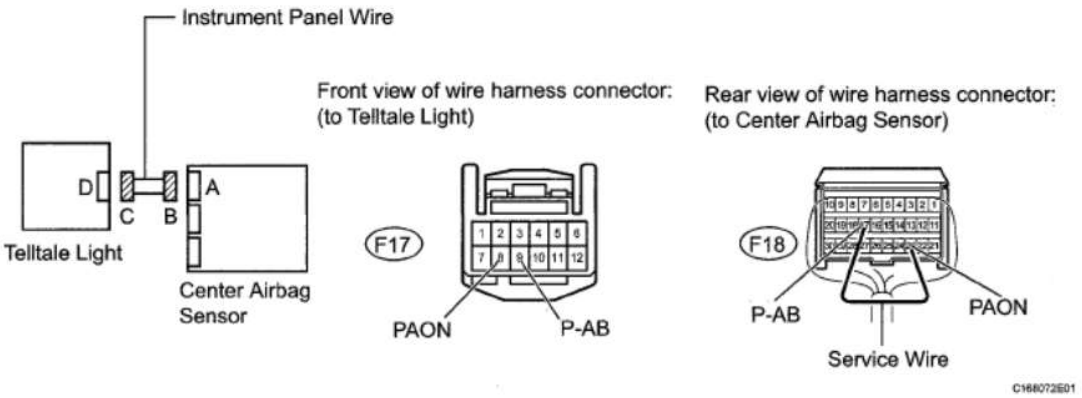


Fig. 112: Identifying F17 And F18 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

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c. Disconnect the connector from the telltale light.
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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
F17-8 (PAON) - F17-9 (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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
F17-8 (PAON) - F17-9 (P-AB)	Always	1 Mohms or higher
F17-8 (PAON) - Body ground	Always	1 Mohms or higher
F17-9 (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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
F17-8 (PAON) - Body ground	Ignition switch ON	Below 1 V
F17-9 (P-AB) - Body ground	Ignition switch ON	Below 1 V

NG: REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

OK : REPLACE TELLTALE LIGHT ASSEMBLY (See **REMOVAL**)

7. **CHECK CONNECTION OF CONNECTORS**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

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c. Check that the connectors are properly connected to the center airbag sensor and the telltale light.

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

OK:

The connectors are not deformed or damaged.

NG: REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

OK: Go to next step

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

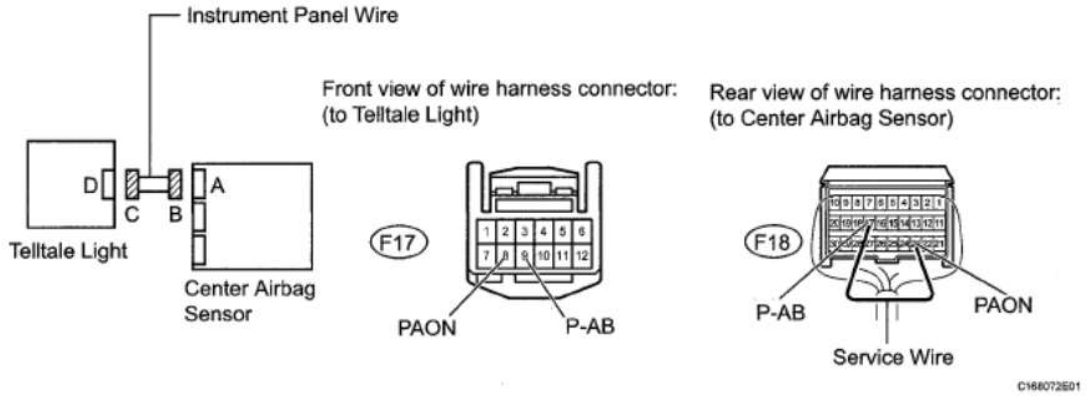


Fig. 113: Identifying F17 And F18 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Turn the ignition switch to OFF.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connector from the telltale light.
d. Using a service wire, connect terminals 23 (PAON) and 17 (P-AB) of connector B.

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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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
F17-8 (PAON) - F17-9 (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 SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
F17-8 (PAON) - F17-9 (P-AB)	Always	1 Mohms or higher
F17-8 (PAON) - Body ground	Always	1 Mohms or higher
F17-9 (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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
F17-8 (PAON) - Body ground	Ignition switch ON	Below 1V
F17-9 (P-AB) - Body ground	Ignition switch ON	Below 1 V

NG: REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

OK: Go to next step

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

a. Connect the connectors to the center airbag sensor.

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.

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Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
F17-2 (IG+) - Body ground	Ignition switch ON	11 to 14 V

NG: REPLACE HARNESS AND CONNECTOR (TELLTALE LIGHT - BATTERY)

Front view of wire harness connector:
(to Telltale Light)

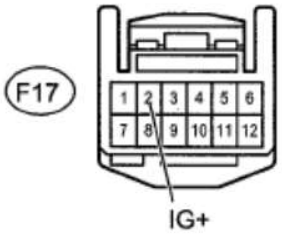


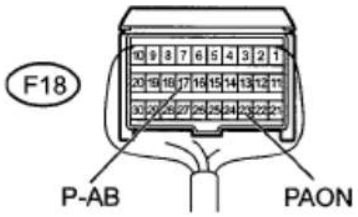
Fig. 114: Identifying F17 Front View Of Wire Harness Connector (Telltale Light)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

11. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR**
    a. Turn the ignition switch to 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.
    d. Disconnect the connectors from the center airbag sensor.
    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.

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Rear view of wire harness connector:
(to Center Airbag Sensor)



C159407E03

Fig. 115: Identifying F18 Rear View Of Wire Harness Connector (Center Airbag Sensor)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK

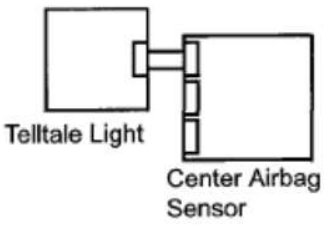
PASSENGER AIRBAG ON/ OFF INDICATOR CHART

Connection	Switch Condition	Passenger airbag ON/ OFF indicator
F18-23 (PAON) - Body ground	Ignition switch ON	"ON" comes on
F18-17 (P-AB) - Body ground	Ignition switch ON	"OFF" comes on

NG: REPLACE TELLTALE LIGHT ASSEMBLY (See **REMOVAL**)

OK: Go to next step

12. **CHECK CENTER AIRBAG SENSOR**
    a. Turn the ignition switch to 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.
    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.



C146229E14

Fig. 116: Identifying Telltale Light And Center Airbag Sensor

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

f. Clear the DTCs (see **DTC CHECK / CLEAR**).
g. Turn the ignition switch to OFF.
h. Turn the ignition switch to ON, and wait for at least 60 seconds.
i. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1660/43 is not output.

HINT:

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

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

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, the spiral cable, and the steering pad.

The circuit instructs 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 DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1800/51	When one of following conditions is met: • The center airbag sensor receives a line short circuit signal 5 times in the driver side squib circuit during primary check. • Driver side squib malfunction • Spiral cable malfunction • Center airbag sensor malfunction	• Instrument panel wire assembly • Spiral cable • Steering pad (Driver side squib) • Center airbag sensor assembly
	When one of following conditions is met: • The center airbag sensor receives an open circuit signal in	• Instrument panel wire assembly • Spiral cable

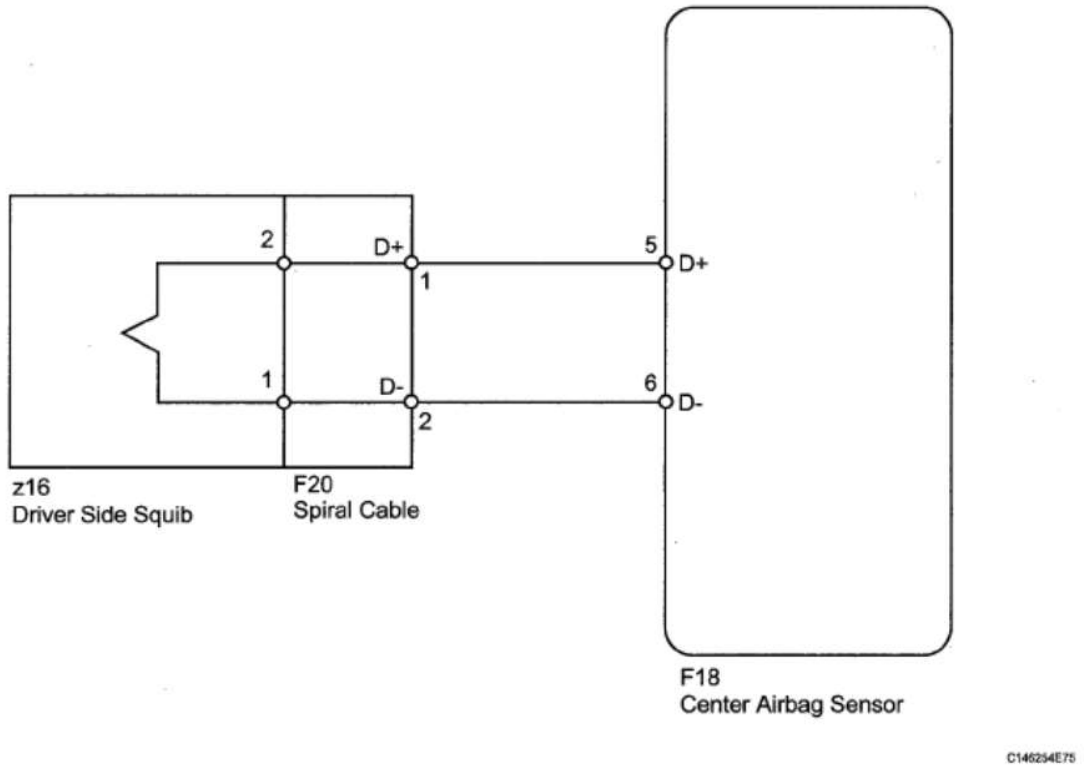
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B1801/51	the driver side squib circuit for 2 seconds. • Driver side squib malfunction • Spiral cable malfunction • Center airbag sensor malfunction	• Steering pad (Driver side squib) • Center airbag sensor assembly
B1802/51	When one of following conditions is met: • The center airbag sensor receives a short circuit to ground signal in the driver side squib circuit for 0.5 seconds. • Driver side squib malfunction • Spiral cable malfunction • Center airbag sensor malfunction	• Instrument panel wire assembly • Spiral cable • Steering pad (Driver side squib) • Center airbag sensor assembly
B1803/51	When one of following conditions is met: • The center airbag sensor receives a short circuit to B+ signal in the driver side squib circuit for 0.5 seconds. • Driver side squib malfunction • Spiral cable malfunction • Center airbag sensor malfunction	• Instrument panel wire assembly • Spiral cable • Steering pad (Driver side squib) • Center airbag sensor assembly

WIRING DIAGRAM



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Fig. 117: Driver Side Squib, Spiral Cable And Center Airbag Sensor - 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 (see **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 (see **DIAGNOSIS SYSTEM**).

1. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, 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: REPLACE SPIRAL CABLE (See **REMOVAL**)

   OK: Go to next step

2. **CHECK STEERING PAD (DRIVER SIDE SQUIB)**
   a. Connect the white wire side of SST (resistance: 2.1 O) to connector E (orange connector).

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

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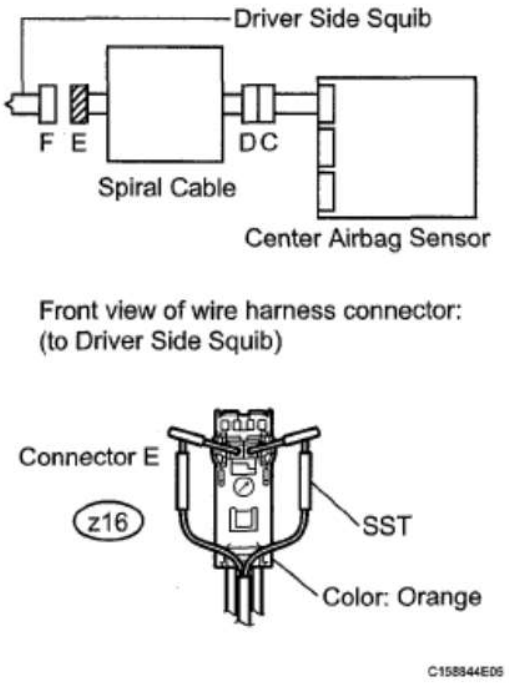


Fig. 118: Identifying White Wire Side Of SST To Connector E (Orange Connector)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NOTE:

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

SST 09843-18061

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 (see **DTC CHECK / CLEAR**).
e. Turn the ignition switch to OFF.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

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

HINT:

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

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NG: Go to step 3

OK : REPLACE STEERING PAD (See **REMOVAL**)

3. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Disconnect 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 assembly 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 ASSEMBLY

OK: Go to next step

4. **CHECK DRIVER SIDE SQUIB CIRCUIT**
   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 SPECIFIED CONDITION CHART

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Tester Connection	Switch Condition	Specified Condition
z16-2 (D+) - Body ground	Ignition switch ON	Below 1 V
z16-1 (D-) - Body ground	Ignition switch ON	Below 1 V

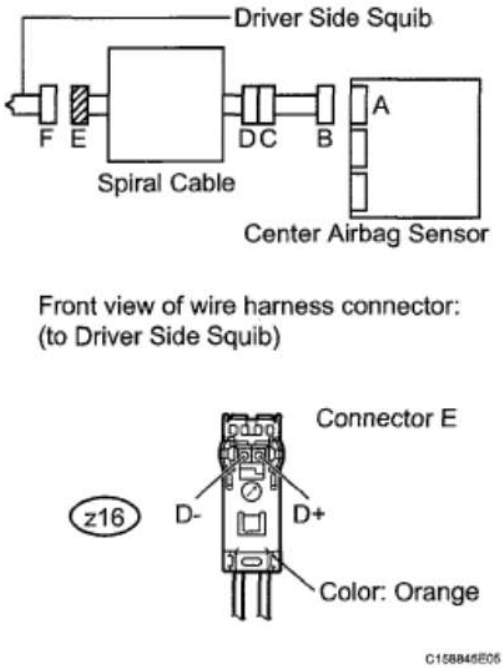


Fig. 119: Identifying Z16 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Turn the ignition switch to OFF.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z16-2 (D+) - z16-1 (D-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B (see **DIAGNOSIS SYSTEM**).
h. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition

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z16-2 (D+) - z16-1 (D-)	Always	1 Mohms or higher
z16-2 (D+) - Body ground	Always	1 Mohms or higher
z16-1 (D-) - Body ground	Always	1 Mohms or higher

NG: Go to step 6

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the steering pad and the center airbag sensor.
   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.

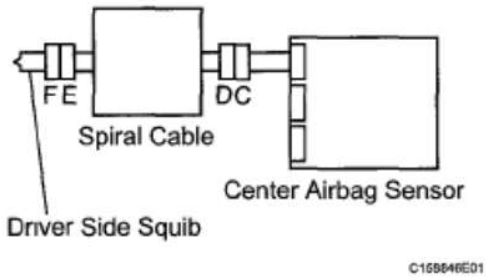


Fig. 120: Identifying Driver Side Squib And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   e. Clear the DTCs (see **DTC CHECK / CLEAR**).
   f. Turn the ignition switch to OFF.
   g. Turn the ignition switch to ON, and wait for at least 60 seconds.
   h. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

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

HINT:

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

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

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6. **CHECK CONNECTOR**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Check that the connectors that link the spiral cable and instrument panel wire assembly 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.

   c. Disconnect the connectors that link the spiral cable and instrument panel wire assembly.
   d. Check that the terminals of the connectors are not damaged.

      OK:

      The terminals are not deformed or damaged.

   e. 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 ASSEMBLY

OK: Go to next step

7. **CHECK INSTRUMENT PANEL WIRE ASSEMBLY (CENTER AIRBAG SENSOR - SPIRAL CABLE)**
   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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
F20-1 (D+) - Body ground	Ignition switch ON	Below 1 V
F20-2 (D-) - Body ground	Ignition switch ON	Below 1 V

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

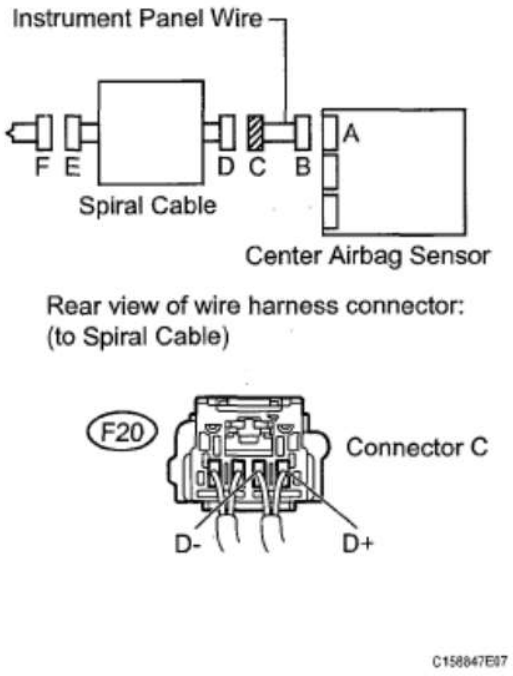


Fig. 121: Identifying F20 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
F20-1 (D+) - F20-2 (D-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B (see **DIAGNOSIS SYSTEM**).
h. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
F20-1 (D+) - F20-2 (D-)	Always	1 Mohms or higher
F20-1 (D+) - Body ground	Always	1 Mohms or higher
F20-2 (D-) - Body ground	Always	1 Mohms or higher

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NG: REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

OK : REPLACE SPIRAL CABLE (See **REMOVAL**)

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 and the front passenger airbag. The circuit instructs 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 DETECTION CONDITION CHART

DTC Code	DTC Detection Condition	Trouble Area
B1805/52	When one of following conditions is met: • The center airbag sensor receives a line short circuit signal 5 times in the front passenger side squib circuit during primary check. • Front passenger side squib malfunction • Center airbag sensor malfunction	• Instrument panel wire • Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib) • Center airbag sensor assembly
B1806/52	When one of following conditions is met: • The center airbag sensor receives an open circuit signal in the front passenger side squib circuit for 2 seconds. • Front passenger side squib malfunction • Center airbag sensor malfunction	• Instrument panel wire • Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib) • Center airbag sensor assembly
B1807/52	When one of following conditions is met: • The center airbag sensor receives a short circuit to ground signal in the front passenger side squib circuit for 0.5 seconds. • Front passenger side squib malfunction • Center airbag sensor malfunction	• Instrument panel wire • Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib) • Center airbag sensor assembly

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B1808/52	When one of following conditions is met: • The center airbag sensor receives a short circuit to B+ signal in the front passenger side squib circuit for 0.5 seconds. • Front passenger side squib malfunction • Center airbag sensor malfunction	• Instrument panel wire • Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib) • Center airbag sensor assembly

WIRING DIAGRAM

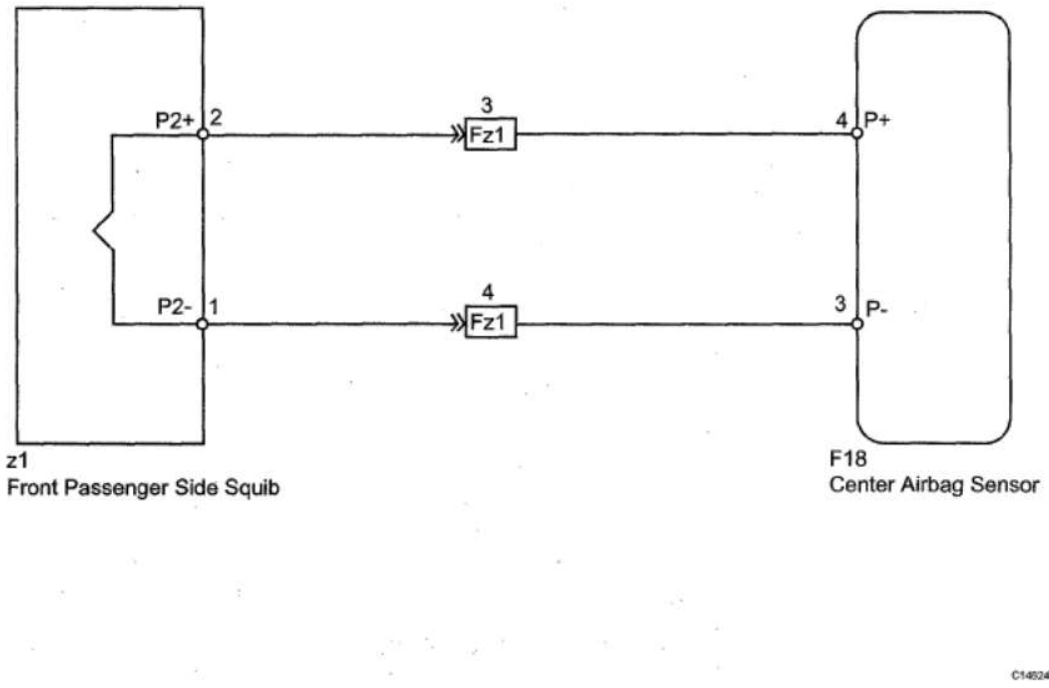


Fig. 122: Front Passenger Side Squib And Center Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting "check mode" (signal check) with the Techstream (see **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 (see **DIAGNOSIS SYSTEM**).

1. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.

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b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Check that the connector is properly connected to the front passenger airbag.

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.
e. Check that the instrument panel wire assembly connector (on the front passenger airbag side) is not damaged.

OK:

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

NG: REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

OK: Go to next step

2. **CHECK FRONT PASSENGER AIRBAG (FRONT PASSENGER SIDE SQUIB)**
   a. Connect the white wire side of SST (resistance: 2.1 ohms) to connector E (orange connector).

CAUTION: Never connect the tester to the front passenger airbag (front passenger side squib) for measurement, as this may lead to a serious injury due to airbag deployment.

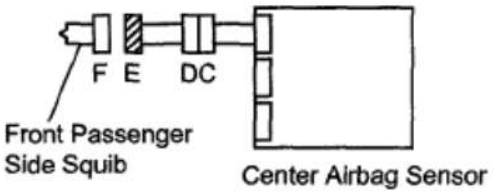
NOTE:

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

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Front view of wire harness connector:
(to Front Passenger Side Squib)

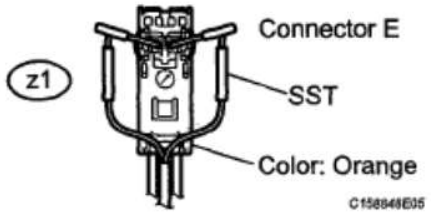


Fig. 123: Identifying White Wire Side Of SST To Connector E (Orange Connector)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 (see **DTC CHECK / CLEAR**).
e. Turn the ignition switch to OFF.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1805, B1806, B1807, B1808 or 52 is not output.

HINT:

Codes other than DTC B1805, B1806, B1807, B1808 and 52 may be output at this time, but they are not related to this check.

NG: Go to step 3

OK : REPLACE FRONT PASSENGER AIRBAG ASSEMBLY (See **REMOVAL**)

3. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

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c. Disconnect 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 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 FRONT PASSENGER SIDE SQUIB CIRCUIT**
   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

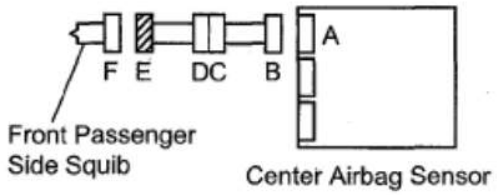
TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
z1-2 (P2+) - Body ground	Ignition switch ON	Below 1 V
z1-1 (P2-) - Body ground	Ignition switch ON	Below 1 V

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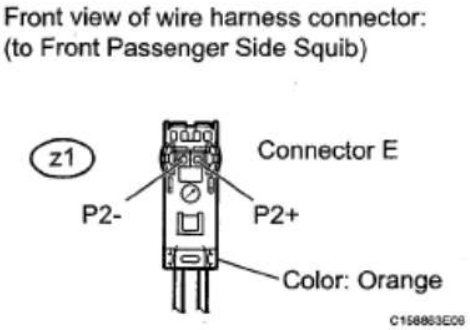


Fig. 124: Identifying Z1 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Turn the ignition switch to OFF.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z1-2 (P2+) - z1-1(P2-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B (see **DIAGNOSIS SYSTEM**).
h. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z1-2 (P2+) - z1-1 (P2-)	Always	1 Mohms or higher
z1-2 (P2+) - Body ground	Always	1 Mohms or higher
z1-1 (P2-) - Body ground	Always	1 Mohms or higher

NG: Go to step 6

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OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the front passenger airbag and the center airbag sensor.
   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 (see **DTC CHECK / CLEAR**).

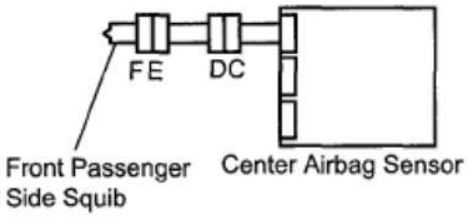


Fig. 125: Identifying Front Passenger Side Squib And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   f. Turn the ignition switch to OFF.
   g. Turn the ignition switch to ON, and wait for at least 60 seconds.
   h. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1805, B1806, B1807, B1808 or 52 is not output.

HINT:

Codes other than DTC B1805, B1806, B1807, B1808 and 52 may be output at this time, but they are not related to this check.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

6. **CHECK CONNECTOR**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Check that the connectors that link the instrument panel wire assembly and instrument panel wire harness are properly connected.

OK:

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The connectors are properly connected.

HINT:

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

c. Disconnect the connectors that link the instrument panel wire assembly and instrument panel wire.
d. Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

e. Check that the short spring for the 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 INSTRUMENT PANEL WIRE ASSEMBLY OR INSTRUMENT PANEL WIRE

OK: Go to next step

7. **CHECK INSTRUMENT PANEL WIRE (CENTER AIRBAG SENSOR - INSTRUMENT PANEL WIRE ASSEMBLY)**
   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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
Fz1-3 - Body ground	Ignition switch ON	Below 1 V
Fz1-4 - Body ground	Ignition switch ON	Below 1 V

   d. Turn the ignition switch to OFF.
   e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   f. Measure the resistance according to the value(s) in the table below.

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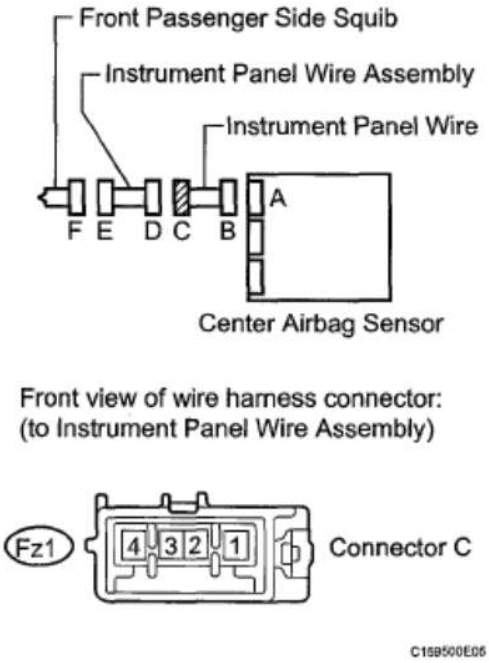


Fig. 126: Identifying Fz1 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
Fz1-3 - Fz1-4	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B (see **DIAGNOSIS SYSTEM**).

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
Fz1-3 - Fz1-4	Always	1 Mohms or higher
Fz1-3 - Body ground	Always	1 Mohms or higher
Fz1-4 - Body ground	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE

OK : REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

DTC B1810/53 SHORT IN DRIVER SIDE SQUIB 2ND STEP CIRCUIT; DTC B1811/53 OPEN IN

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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, the spiral cable, and the steering pad.

The circuit instructs 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 DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1810/53	When one of following conditions is met: • The center airbag sensor receives a line short circuit signal 5 times in the driver side squib 2nd step circuit during primary check. • Driver side squib 2nd step malfunction • Spiral cable malfunction • Center airbag sensor malfunction	• Instrument panel wire assembly • Spiral cable • Steering pad (Driver side squib 2nd step) • Center airbag sensor assembly
B1811/53	When one of following conditions is met: • The center airbag sensor receives an open circuit signal in the driver side squib 2nd step circuit for 2 seconds. • Driver side squib 2nd step malfunction • Spiral cable malfunction • Center airbag sensor malfunction	• Instrument panel wire assembly • Spiral cable • Steering pad (Driver side squib 2nd step) • Center airbag sensor assembly
B1812/53	When one of following conditions is met: • The center airbag sensor receives a short circuit to ground signal in the driver side 2nd step circuit for 0.5 seconds. • Driver side squib 2nd step malfunction • Spiral cable malfunction • Center airbag sensor malfunction	• Instrument panel wire assembly • Spiral cable • Steering pad (Driver side squib 2nd step) • Center airbag sensor assembly
B1813/53	When one of following conditions is met: • The center airbag sensor receives a short circuit to B+ signal in the driver side squib 2nd step circuit for 0.5 seconds. • Driver side squib 2nd step malfunction	• Instrument panel wire assembly • Spiral cable • Steering pad (Driver side squib 2nd step)

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	• Spiral cable malfunction • Center airbag sensor malfunction	• Center airbag sensor assembly

WIRING DIAGRAM

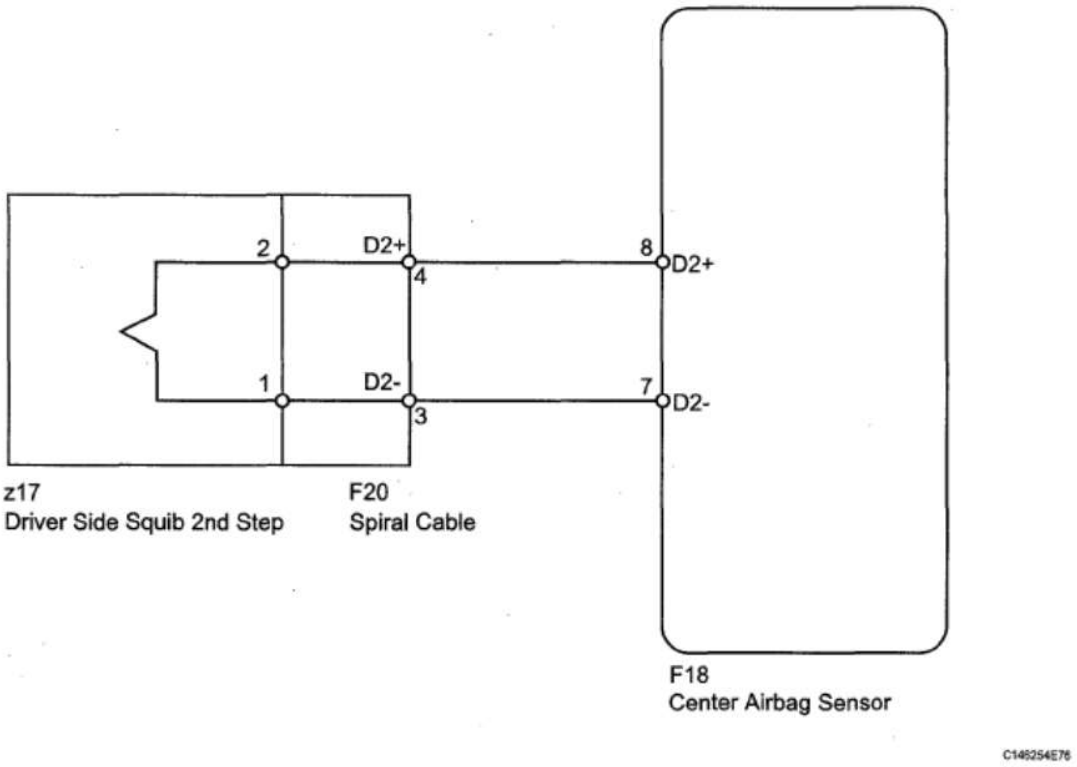


Fig. 127: Driver Side Squib And Center Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting "check mode" (signal check) with the Techstream (see **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 (see **DIAGNOSIS SYSTEM**).

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

   OK:

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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: REPLACE SPIRAL CABLE (See **REMOVAL**)

OK: Go to next step

2. **CHECK STEERING PAD (DRIVER SIDE SQUIB 2ND STEP)**
   a. Connect the white wire side of SST (resistance: 2.1 ohms) to connector E (black connector).

CAUTION: Never connect the 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 SST.**
- **Insert SST straight into the terminals of the connector.**

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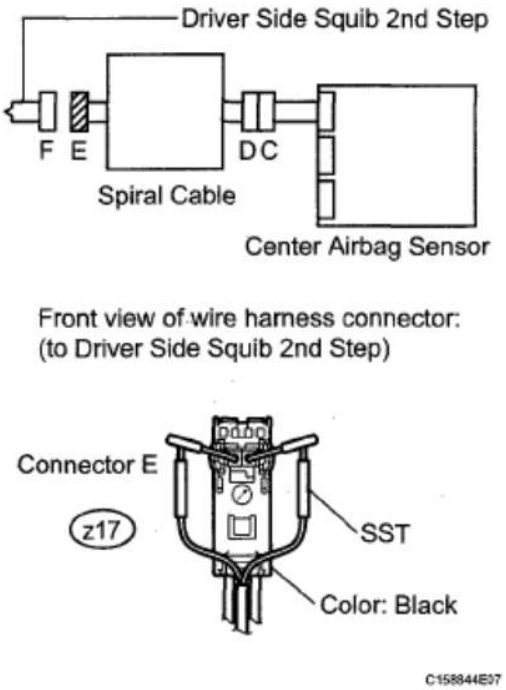


Fig. 128: Identifying White Wire Side Of SST To Connector E (Black Connector)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 (see **DTC CHECK / CLEAR**).
e. Turn the ignition switch to OFF.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1810, B1811, B1812, B1813 or 53 is not output.

HINT:

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

NG: Go to step 3

OK : REPLACE STEERING PAD (See **REMOVAL**)

3. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.

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

OK: Go to next step

4. **CHECK DRIVER SIDE SQUIB 2ND STEP CIRCUIT**
   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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
z17-2 (D2+) - Body ground	Ignition switch ON	Below 1 V
z17-1 (D2-) - Body ground	Ignition switch ON	Below 1 V

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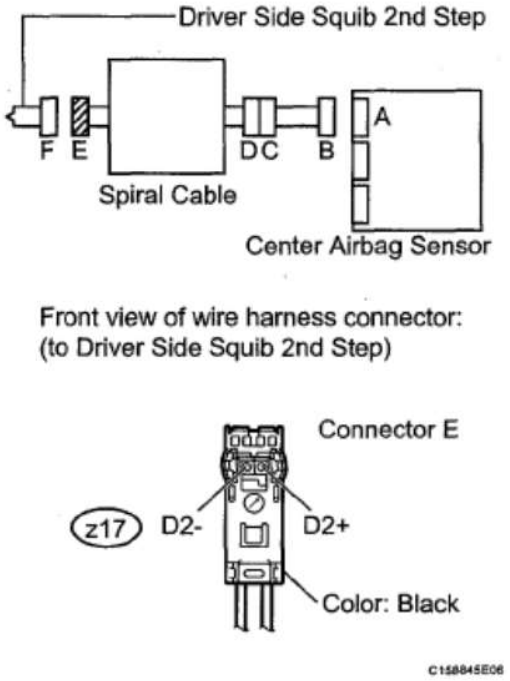


Fig. 129: Identifying Driver Side Squib 2nd Step
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Turn the ignition switch to OFF.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z17-2 (D2+) - z17-1(D2-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B (see **DIAGNOSIS SYSTEM**).
h. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z17-2 (D2+) - z17-1 (D2-)	Always	1 Mohms or higher
z17-2 (D2+) - Body ground	Always	1 Mohms or higher
z17-1 (D2-) - Body ground	Always	1 Mohms or higher

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NG: Go to step 6

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the steering pad and the center airbag sensor.
   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.

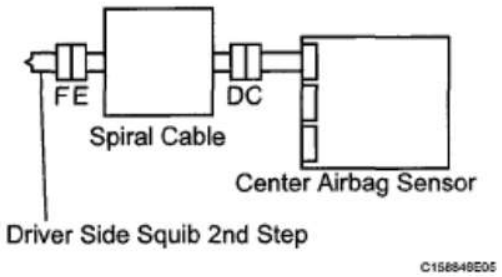


Fig. 130: Identifying Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   e. Clear the DTCs (see **DTC CHECK / CLEAR**).
   f. Turn the ignition switch to OFF.
   g. Turn the ignition switch to ON, and wait for at least 60 seconds.
   h. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1810, B1811, B1812, B1813 or 53 is not output.

HINT:

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

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

6. **CHECK CONNECTOR**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Check that the connectors that link the spiral cable and instrument panel wire assembly harness are properly connected.

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OK:

The connectors are properly connected.

HINT:

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

c. Disconnect the connectors that link the spiral cable and instrument panel wire assembly.
d. Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

e. 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 ASSEMBLY

OK: Go to next step

7. **CHECK INSTRUMENT PANEL WIRE ASSEMBLY (CENTER AIRBAG SENSOR - SPIRAL CABLE)**
   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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
F20-4 (D2+) - Body ground	Ignition switch ON	Below 1 V
F20-3 (D2-) - Body ground	Ignition switch ON	Below 1 V

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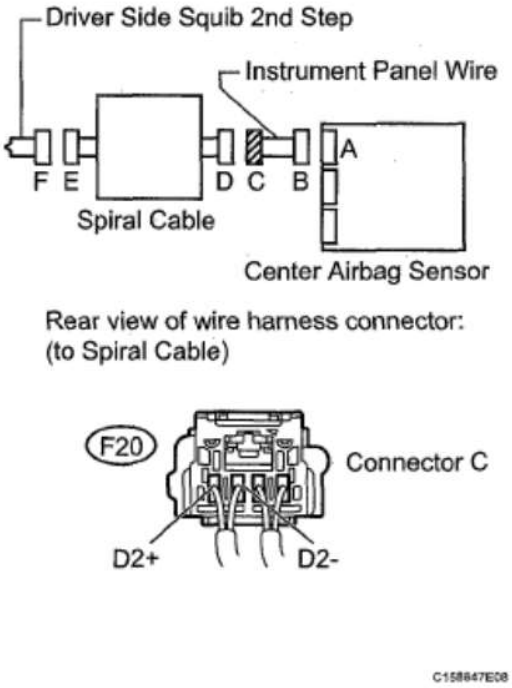


Fig. 131: Identifying Instrument Panel Wire Assembly (Center Airbag Sensor - Spiral Cable)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Turn the ignition switch to OFF.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
F20-4 (D2+) - F20-3 (D2-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B (see **DIAGNOSIS SYSTEM**).
h. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
F20-4 (D2+) - F20-3 (D2-)	Always	1 Mohms or higher
F20-4 (D2+) - Body ground	Always	1 Mohms or higher
F20-3 (D2-) - Body ground	Always	1 Mohms or higher

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NG: REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

OK : REPLACE SPIRAL CABLE (See **REMOVAL**)

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 and the front passenger airbag.

The circuit instructs 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 DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1815/54	When one of following conditions is met: • The center airbag sensor receives a line short circuit signal 5 times in the front passenger side squib 2nd step circuit during primary check. • Front passenger side squib 2nd step malfunction • Center airbag sensor malfunction	• Instrument panel wire • Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib 2nd step) • Center airbag sensor assembly
B1816/54	When one of following conditions is met: • The center airbag sensor receives an open circuit signal in the front passenger side squib 2nd step circuit for 2 seconds. • Front passenger side squib 2nd step malfunction • Center airbag sensor malfunction	• Instrument panel wire • Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib 2nd step) • Center airbag sensor assembly
B1817/54	When one of following conditions is met: • The center airbag sensor receives a short circuit to ground signal in the front passenger side squib 2nd step circuit for 0.5 seconds. • Front passenger side squib 2nd step malfunction	• Instrument panel wire • Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib 2nd step)

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	• Center airbag sensor malfunction	• Center airbag sensor assembly
B1818/54	When one of following conditions is met: • The center airbag sensor receives a short circuit to B+ signal in the front passenger side squib 2nd step circuit for 0.5 seconds. • Front passenger side squib 2nd step malfunction • Center airbag sensor malfunction	• Instrument panel wire • Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib 2nd step) • Center airbag sensor assembly

WIRING DIAGRAM

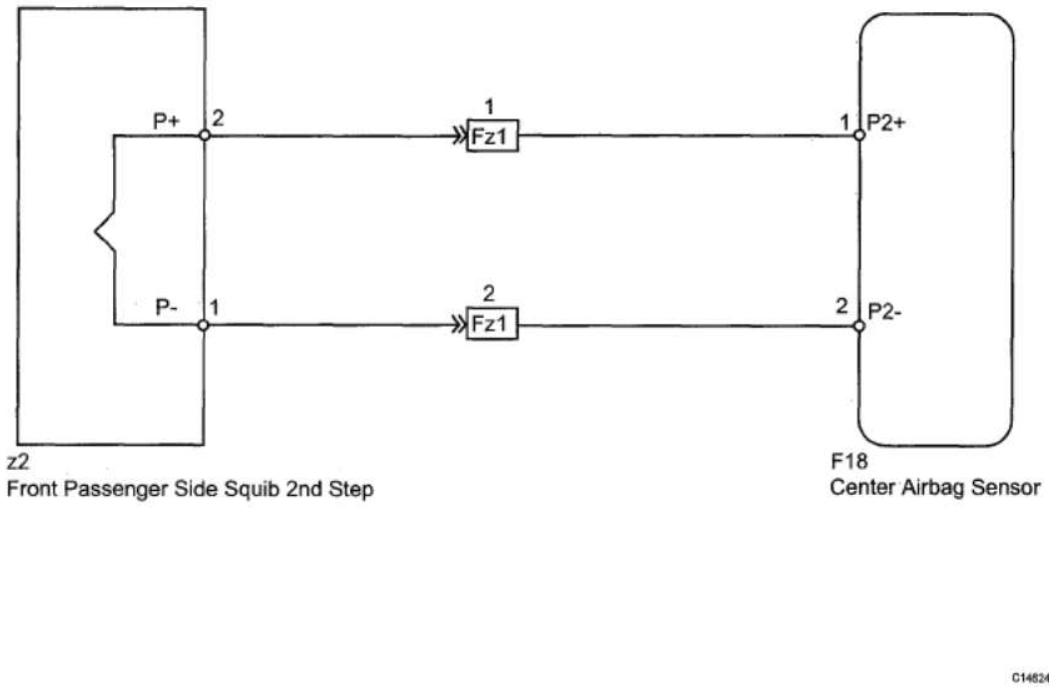


Fig. 132: Front Passenger Side Squib 2nd Step And Center Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting "check mode" (signal check) with the Techstream (see **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 (see **DIAGNOSIS SYSTEM**).

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1. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the front passenger airbag.

      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.
   e. Check that the instrument panel wire assembly connector (on the front passenger airbag side) is not damaged.

      OK:

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

NG: REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

OK: Go to next step

2. **CHECK FRONT PASSENGER AIRBAG (FRONT PASSENGER SIDE SQUIB 2ND STEP)**
   a. Connect the white wire side of SST (resistance: 2.1 ohms) to connector E (black connector).

CAUTION: Never connect the tester to the front passenger airbag (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 SST.**
- **Insert SST straight into the terminals of the connector.**

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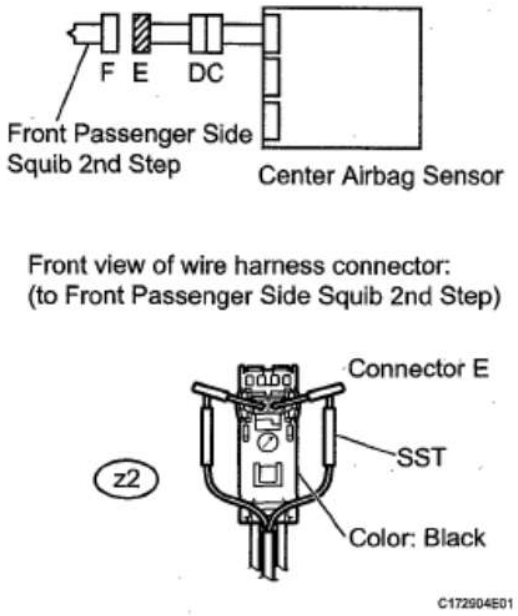


Fig. 133: Identifying Front Passenger Airbag (Front Passenger Side Squib 2nd Step)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 (see **DTC CHECK / CLEAR**).
e. Turn the ignition switch to OFF.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1815, B1816, B1817, B1818 or 54 is not output.

HINT:

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

NG: Go to step 3

OK : REPLACE FRONT PASSENGER AIRBAG ASSEMBLY (See **REMOVAL**)

3. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

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c. Disconnect 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 FRONT PASSENGER SIDE SQUIB 2ND STEP CIRCUIT**
   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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
z2-2 (P+) - Body ground	Ignition switch ON	Below 1 V
z2-1 (P-) - Body ground	Ignition switch ON	Below 1 V

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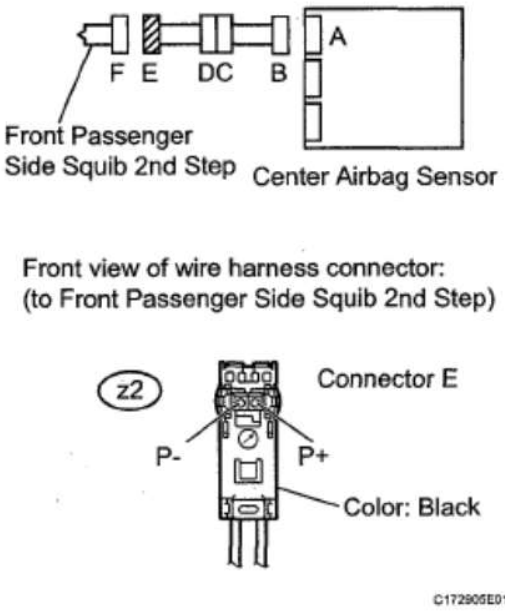


Fig. 134: Identifying Front Passenger Side Squib 2nd Step
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Turn the ignition switch to OFF.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z2-2 (P+) - z2-1 (P-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B (see **DIAGNOSIS SYSTEM**).
h. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z2-2 (P+) - z2-1 (P-)	Always	1 Mohms or higher
z2-2 (P+) - Body ground	Always	1 Mohms or higher
z2-1 (P-) - Body ground	Always	1 Mohms or higher

NG: Go to step 6

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OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the front passenger airbag and the center airbag sensor.
   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.

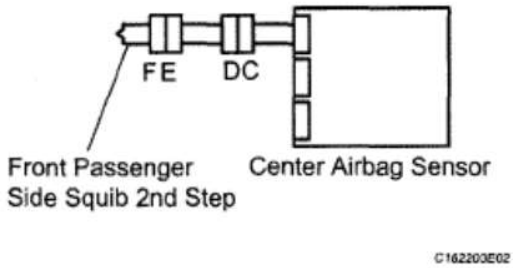


Fig. 135: Identifying Front Passenger Side Squib 2nd Step And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   e. Clear the DTCs (see **DTC CHECK / CLEAR**).
   f. Turn the ignition switch to OFF.
   g. Turn the ignition switch to ON, and wait for at least 60 seconds.
   h. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1815, B1816, B1817, B1818 or 54 is not output.

HINT:

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

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

6. **CHECK CONNECTOR**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Check that the connectors that link the instrument panel wire assembly and instrument panel wire harness are properly connected.

OK:

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The connectors are properly connected.

HINT:

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

c. Disconnect the connectors that link the instrument panel wire assembly and instrument panel wire.
d. Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

e. Check that the short spring for the 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 INSTRUMENT PANEL WIRE ASSEMBLY OR INSTRUMENT PANEL WIRE

OK: Go to next step

7. **CHECK INSTRUMENT PANEL WIRE (CENTER AIRBAG SENSOR - INSTRUMENT PANEL WIRE ASSEMBLY)**
   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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
Fz1-1 - Body ground	Ignition switch ON	Below 1 V
Fz1-2 - Body ground	Ignition switch ON	Below 1 V

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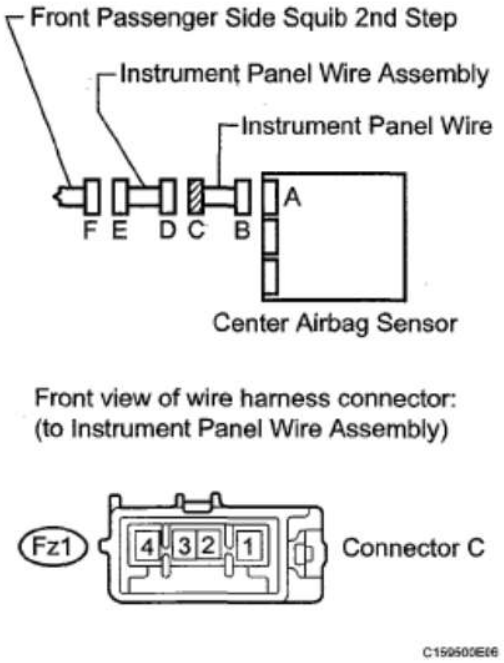


Fig. 136: Identifying Front Passenger Side Squib 2nd Step, Instrument Panel Wire Assembly And Instrument Panel Wire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Turn the ignition switch to OFF.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
Fz1-1 - Fz1-2	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B (see **DIAGNOSIS SYSTEM**).
h. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
Fz1-1 - Fz1-2	Always	1 Mohms or higher
Fz1-1 - Body ground	Always	1 Mohms or higher
Fz1-2 - Body ground	Always	1 Mohms or higher

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NG: REPLACE INSTRUMENT PANEL WIRE

OK : REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

DTC B1820/55 SHORT IN FRONT DRIVER SIDE - SIDE SQUIB CIRCUIT; DTC B1821/55 OPEN IN FRONT DRIVER SIDE - SIDE SQUIB CIRCUIT; DTC B1822/55 SHORT TO GND IN FRONT DRIVER SIDE - SIDE SQUIB CIRCUIT; DTC B1823/55 SHORT TO B+ IN FRONT DRIVER SIDE - SIDE SQUIB CIRCUIT

DESCRIPTION

The side squib LH circuit consists of the center airbag sensor and the front seat side airbag LH.

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 LH circuit.

DTC DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1820/55	When one of following conditions is met: • The center airbag sensor receives a line short circuit signal 5 times in the side squib LH circuit during primary check. • Side squib LH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat side airbag assembly LH (Side squib LH) • Center airbag sensor assembly
B1821/55	When one of following conditions is met: • The center airbag sensor receives an open circuit signal in the side squib LH circuit for 2 seconds. • Side squib LH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat side airbag assembly LH (Side squib LH) • Center airbag sensor assembly
B1822/55	When one of following conditions is met: • The center airbag sensor receives a short circuit to ground signal in the side squib LH circuit for 0.5 seconds. • Side squib LH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat side airbag assembly LH (Side squib LH) • Center airbag sensor assembly
B1823/55	When one of following conditions is met: • The center airbag sensor receives a short circuit to B+ signal in the side squib LH circuit for 0.5 seconds.	• Floor wire • Front seat side airbag assembly LH (Side squib LH)

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	• Side squib LH malfunction • Center airbag sensor malfunction	• Center airbag sensor assembly

WIRING DIAGRAM

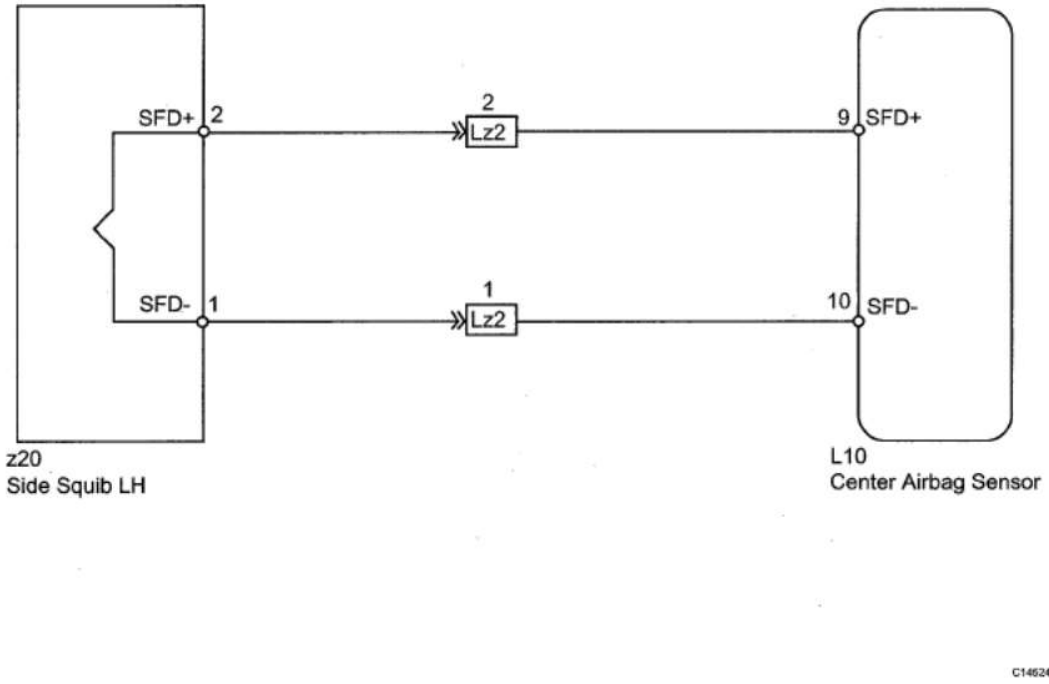


Fig. 137: Side Squib LH And Center Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting "check mode" (signal check) with the Techstream (see **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 (see **DIAGNOSIS SYSTEM**).

1. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the front seat side airbag LH.

   OK:

   The connector is properly connected.

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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 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 LH (SEAT AIRBAG WIRE LH)**
   a. Connect the black wire side of SST (resistance: 2.1 ohms) to connector C.

CAUTION: Never connect the tester to the front seat side airbag 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.**

SST 09843-18061

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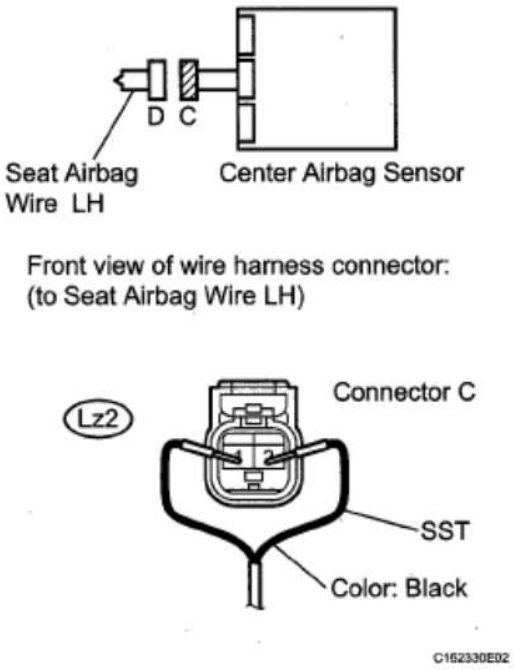


Fig. 138: Identifying Front Seat Side Airbag LH (Seat Airbag Wire LH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 (see **DTC CHECK / CLEAR**).
e. Turn the ignition switch to OFF.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1820, B1821, B1822, B1823 or 55 is not output.

HINT:

Codes other than DTC B1820, B1821, B1822, B1823 and 55 may be output at this time, but they are not related to this check.

NG: Go to step 3

OK : REPLACE FRONT SEAT ASSEMBLY LH (See **REMOVAL**)

3. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.

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b. Disconnect the negative (-) terminal cable from the battery, 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 CIRCUIT)**
   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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
Lz2-2 (SFD+) - Body ground	Ignition switch ON	Below 1 V
Lz2-1 (SFD-) - Body ground	Ignition switch ON	Below 1 V

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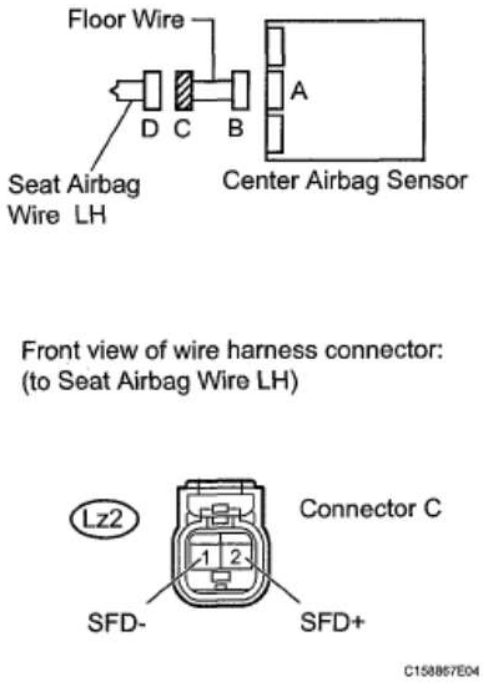


Fig. 139: Identifying Floor Wire (Side Squib LH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Turn the ignition switch to OFF.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
Lz2-2 (SFD+) - Lz2-1(SFD-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B (see **DIAGNOSIS SYSTEM**).
h. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
Lz2-2 (SFD+) - Lz2-1 (SFD-)	Always	1 Mohms or higher
Lz2-2 (SFD+) - Body ground	Always	1 Mohms or higher
Lz2-1 (SFD-) - Body ground	Always	1 Mohms or higher

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NG: REPLACE FLOOR WIRE

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the front seat side airbag LH and the center airbag sensor.
   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 (see **DTC CHECK / CLEAR**).

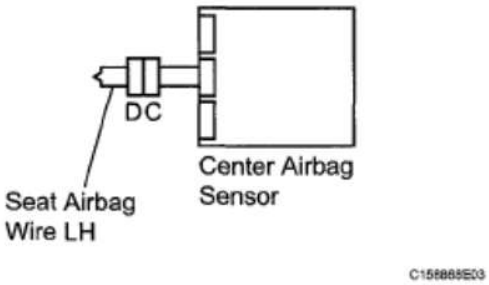


Fig. 140: Identifying Seat Airbag LH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   f. Turn the ignition switch to OFF.
   g. Turn the ignition switch to ON, and wait for at least 60 seconds.
   h. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1820, B1821, B1822, B1823 or 55 is not output.

HINT:

Codes other than DTC B1820, B1821, B1822, B1823 and 55 may be output at this time, but they are not related to this check.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

DTC B1825/56 SHORT IN FRONT PASSENGER SIDE - SIDE SQUIB CIRCUIT; DTC B1826/56 OPEN IN FRONT PASSENGER SIDE - SIDE SQUIB CIRCUIT; DTC B1827/56 SHORT TO GND IN FRONT PASSENGER SIDE - SIDE SQUIB CIRCUIT; DTC B1828/56 SHORT TO B+ IN FRONT PASSENGER SIDE - SIDE SQUIB CIRCUIT

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DESCRIPTION

The side squib RH circuit consists of the center airbag sensor and the front seat side airbag RH.

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 RH circuit.

DTC DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1825/56	When one of following conditions is met: • The center airbag sensor receives a line short circuit signal 5 times in the side squib RH circuit during primary check. • Side squib RH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat side airbag assembly RH (Side squib RH) • Center airbag sensor assembly
B1826/56	When one of following conditions is met: • The center airbag sensor receives an open circuit signal in the side squib RH circuit for 2 seconds. • Side squib RH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat side airbag assembly RH (Side squib RH) • Center airbag sensor assembly
B1827/56	When one of following conditions is met: • The center airbag sensor receives a short circuit to ground signal in the side squib RH circuit for 0.5 seconds. • Side squib RH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat side airbag assembly RH (Side squib RH) • Center airbag sensor assembly
B1828/56	When one of following conditions is met: • The center airbag sensor receives a short circuit to B+ signal in the side squib RH circuit for 0.5 seconds. • Side squib RH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat side airbag assembly RH (Side squib RH) • Center airbag sensor assembly

WIRING DIAGRAM

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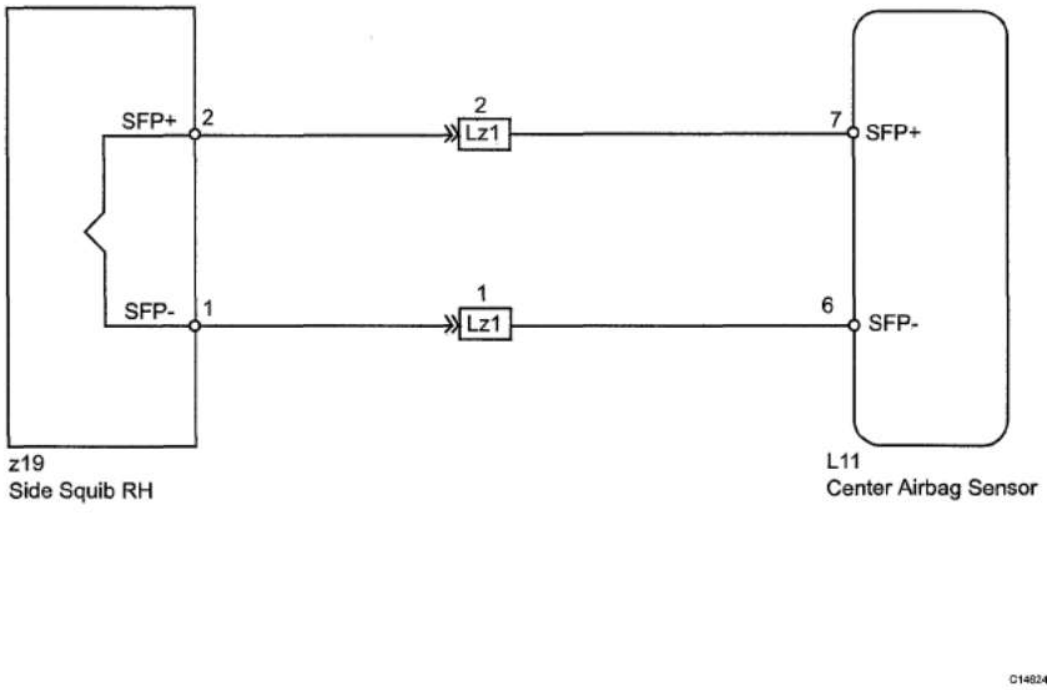


Fig. 141: Side Squib RH And Center Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting "check mode" (signal check) with the Techstream (see **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 (see **DIAGNOSIS SYSTEM**).

1. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the front seat side airbag RH.

   OK:

   The connector is properly connected.

   HINT:

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

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d. Disconnect the connector from the front seat side airbag RH.
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 RH (SIDE SQUIB RH)**
   a. Connect the black wire side of SST (resistance: 2.1 ohms) to connector C.

CAUTION: Never connect the tester to the front seat side airbag 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.**

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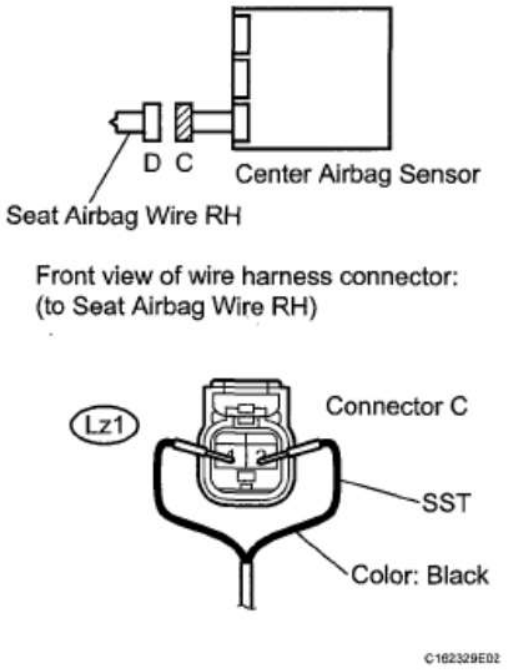


Fig. 142: Identifying Front Seat Side Airbag RH (Side Squib RH)

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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 (see **DTC CHECK / CLEAR**).
e. Turn the ignition switch to OFF.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1825, B1826, B1827, B1828 or 56 is not output.

HINT:

Codes other than DTC B1825, B1826, B1827, B1828 and 56 may be output at this time, but they are not related to this check.

NG: Go to step 3

OK : REPLACE FRONT SEAT ASSEMBLY RH (See **REMOVAL**)

3. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, 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:

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The short spring is not deformed or damaged.

NG: REPLACE FLOOR WIRE

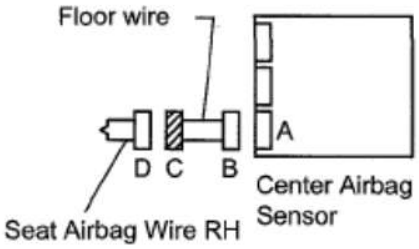
OK: Go to next step

4. **CHECK FLOOR WIRE (SIDE SQUIB RH CIRCUIT)**
   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.

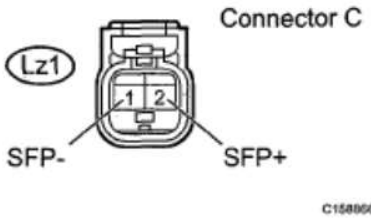
Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
Lz1-2 (SFP+) - Body ground	Ignition switch ON	Below 1 V
Lz1-1 (SFP-) - Body ground	Ignition switch ON	Below 1 V



Front view of wire harness connector:
(to Seat Airbag Wire RH)



C158866E04

Fig. 143: Identifying Floor Wire (Side Squib RH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   d. Turn the ignition switch to OFF.
   e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   f. Measure the resistance according to the value(s) in the table below.

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Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
Lz1-2 (SFP+) - Lz1-1 (SFP-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B (see **DIAGNOSIS SYSTEM**).

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

Standard resistance

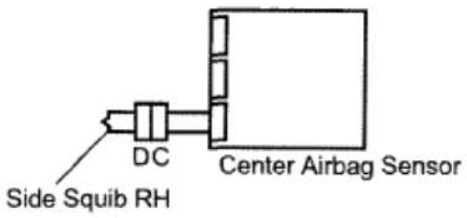
TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
Lz1-2 (SFP+) - Lz1-1 (SFP-)	Always	1 Mohms or higher
Lz1-2 (SFP+) - Body ground	Always	1 Mohms or higher
Lz1-1 (SFP-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the front seat side airbag RH and the center airbag sensor.
   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.



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Fig. 144: Identifying Side Squib RH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   e. Clear the DTCs (see **DTC CHECK / CLEAR**).
   f. Turn the ignition switch to OFF.
   g. Turn the ignition switch to ON, and wait for at least 60 seconds.

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h. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1825, B1826, B1827, B1828 or 56 is not output.

HINT:

Codes other than DTC B1825, B1826, B1827, B1828 and 56 may be output at this time, but they are not related to this check.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

DTC B1830/57 SHORT IN DRIVER SIDE CURTAIN SHIELD SQUIB CIRCUIT; DTC B1831/57 OPEN IN DRIVER SIDE CURTAIN SHIELD SQUIB CIRCUIT; DTC B1832/57 SHORT TO GND IN DRIVER SIDE CURTAIN SHIELD SQUIB CIRCUIT; DTC B1833/57 SHORT TO B+ IN DRIVER SIDE CURTAIN SHIELD SQUIB CIRCUIT

DESCRIPTION

The curtain shield squib LH circuit consists of the center airbag sensor and the curtain shield airbag 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 DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1830/57	When one of following conditions is met: • The center airbag sensor 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 malfunction	• Floor wire • Curtain shield airbag assembly LH (Curtain shield squib LH) • Center airbag sensor assembly
B1831/57	When one of following conditions is met: • The center airbag sensor receives an open circuit' signal in the curtain shield squib LH circuit for 2 seconds. • Curtain shield squib LH malfunction • Center airbag sensor malfunction	• Floor wire • Curtain shield airbag assembly LH (Curtain shield squib LH) • Center airbag sensor assembly

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B1832/57	When one of following conditions is met: • The center airbag sensor 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 malfunction	• Floor wire • Curtain shield airbag assembly LH (Curtain shield squib LH) • Center airbag sensor assembly
B1833/57	When one of following conditions is met: • The center airbag sensor 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 malfunction	• Floor wire • Curtain shield airbag assembly LH (Curtain shield squib LH) • Center airbag sensor assembly

WIRING DIAGRAM

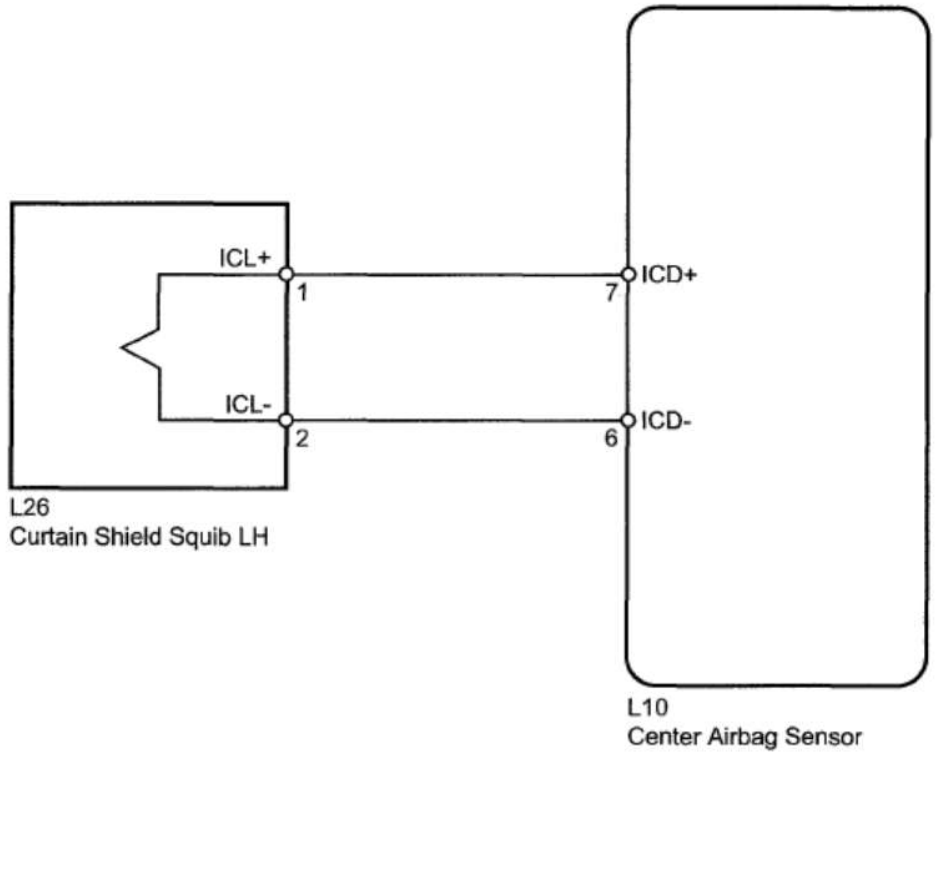


Fig. 145: Curtain Shield Squib LH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting "check mode" (signal check) with the Techstream (see **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 (see **DIAGNOSIS SYSTEM**).

1. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the curtain shield airbag 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 LH.
   e. Check that the floor wire connector (on the curtain shield airbag 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 CURTAIN SHIELD AIRBAG LH (CURTAIN SHIELD SQUIB LH)**
   a. Connect the white wire side of SST (resistance: 2.1 ohms) to connector C.

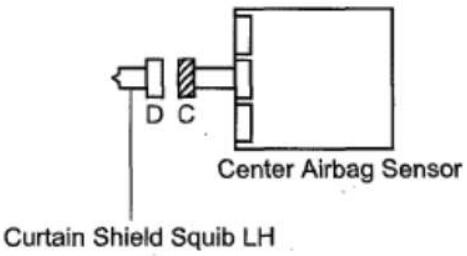
CAUTION: Never connect the tester to the curtain shield airbag LH (curtain shield squib LH) for measurement, as this may lead to a serious injury due to airbag deployment.

NOTE:

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

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Front view of wire harness connector:
(to Curtain Shield Squib LH)

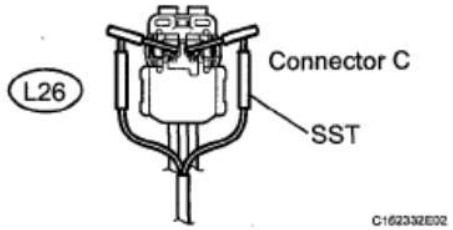


Fig. 146: Identifying White Wire Side Of SST To Connector C
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 (see **DTC CHECK / CLEAR**).
e. Turn the ignition switch to OFF.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1830, B1831, B1832, B1833 or 57 is not output.

HINT:

Codes other than DTC B1830, B1831, B1832, B1833 and 57 may be output at this time, but they are not related to this check.

NG: Go to step 3

OK : REPLACE CURTAIN SHIELD AIRBAG ASSEMBLY LH (See **REMOVAL**)

3 **CHECK CONNECTOR**

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a. Turn the ignition switch to OFF.
b. Disconnect the negative (-) terminal cable from the battery, 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 CIRCUIT)**
   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

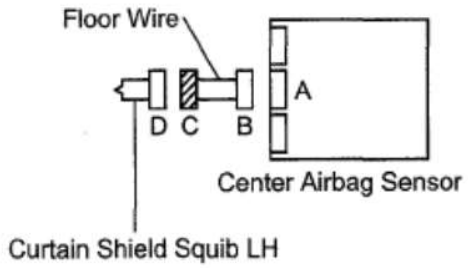
TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L26-1 (ICL+) - Body ground	Ignition switch ON	Below 1 V
L26-2 (ICL-) - Body ground	Ignition switch ON	Below 1 V

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Front view of wire harness connector:
(to Curtain Shield Squib LH)

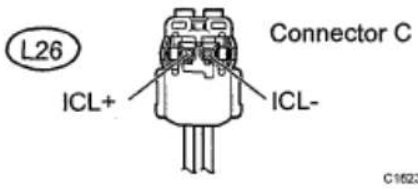


Fig. 147: Identifying Front View Of Wire Harness Connector (Curtain Shield Squib LH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Turn the ignition switch to OFF.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L26-1 (ICL+) - L26-2 (ICL-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B (see **DIAGNOSIS SYSTEM**).
h. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L26-1 (ICL+) - L26-2 (ICL-)	Always	1 Mohms or higher
L26-1 (ICL+) - Body ground	Always	1 Mohms or higher
L26-2 (ICL-) - Body ground	Always	1 Mohms or higher

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NG: REPLACE FLOOR WIRE

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the curtain shield airbag LH and the center airbag sensor.
   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 (see **DTC CHECK / CLEAR**).

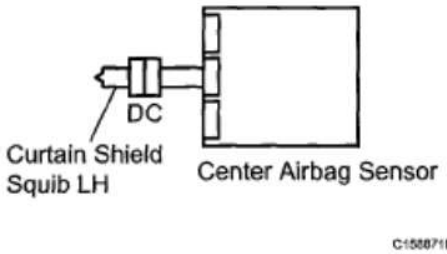


Fig. 148: Identifying Curtain Shield Squib LH And Center Air Bag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   f. Turn the ignition switch to OFF.
   g. Turn the ignition switch to ON, and wait for at least 60 seconds.
   h. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1830, B1831, B1832, B1833 or 57 is not output.

HINT:

Codes other than DTC B1830, B1831, B1832, B1833 and 57 may be output at this time, but they are not related to this check.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

DTC B1835/58 SHORT IN FRONT PASSENGER SIDE CURTAIN SHIELD SQUIB CIRCUIT; DTC B1836/58 OPEN IN FRONT PASSENGER SIDE CURTAIN SHIELD SQUIB CIRCUIT; DTC B1837/58 SHORT TO GND IN FRONT PASSENGER SIDE CURTAIN SHIELD SQUIB CIRCUIT; DTC B1838/58 SHORT TO B+ IN FRONT PASSENGER SIDE CURTAIN SHIELD SQUIB CIRCUIT

DESCRIPTION

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The curtain shield squib RH circuit consists of the center airbag sensor and the curtain shield airbag 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 DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1835/58	When one of following conditions is met: • The center airbag sensor 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 malfunction	• Floor wire • Curtain shield airbag assembly RH (Curtain shield squib RH) • Center airbag sensor assembly
B1836/58	When one of following conditions is met: • The center airbag sensor receives an open circuit signal in the curtain shield squib RH circuit for 2 seconds. • Curtain shield squib RH malfunction • Center airbag sensor malfunction	• Floor wire • Curtain shield airbag assembly RH (Curtain shield squib RH) • Center airbag sensor assembly
B1837/58	When one of following conditions is met: • The center airbag sensor 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 malfunction	• Floor wire • Curtain shield airbag assembly RH (Curtain shield squib RH) • Center airbag sensor assembly
B1838/58	When one of following conditions is met: • The center airbag sensor 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 malfunction	• Floor wire • Curtain shield airbag assembly RH (Curtain shield squib RH) • Center airbag sensor assembly

WIRING DIAGRAM

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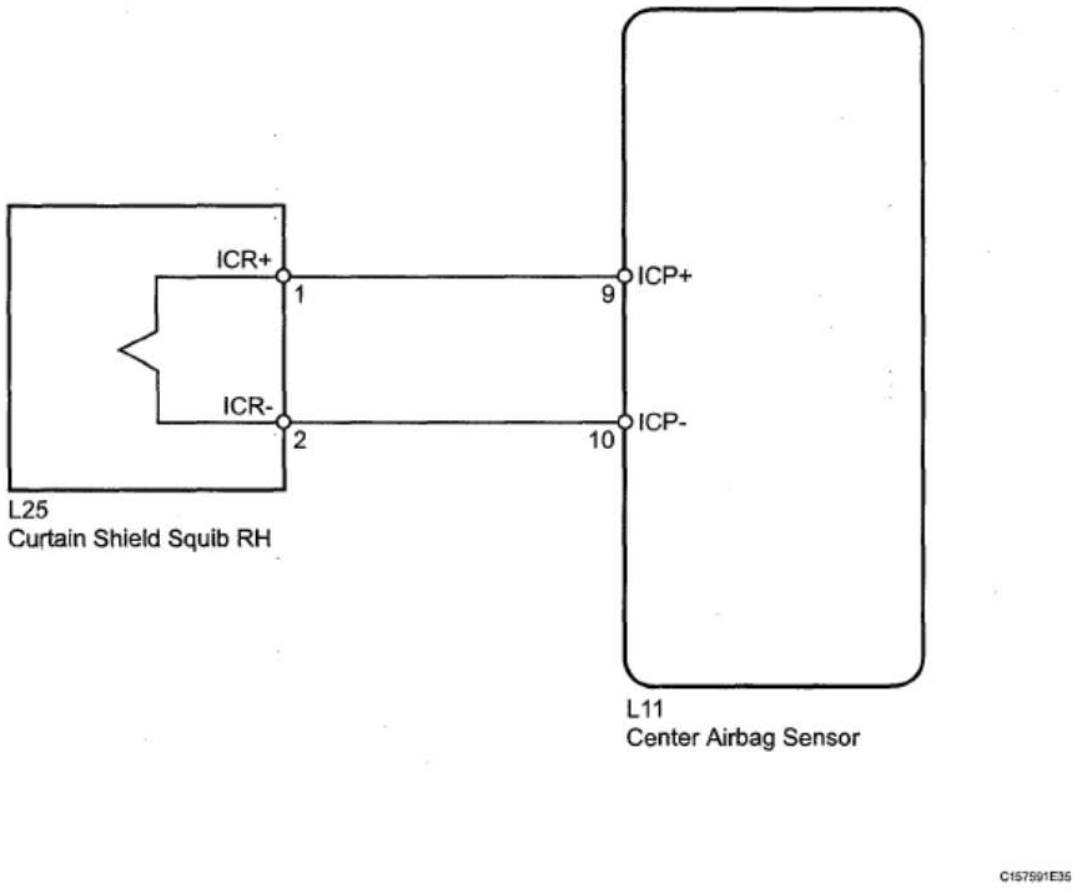


Fig. 149: Curtain Shield Squib RH And Center Air Bag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting "check mode" (signal check) with the Techstream (see **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 (see **DIAGNOSIS SYSTEM**).

1. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the curtain shield airbag RH.

   OK:

   The connector is properly connected.

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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 RH.
e. Check that the floor wire connector (on the curtain shield airbag RH 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 CURTAIN SHIELD AIRBAG RH (CURTAIN SHIELD SQUIB RH)**
   a. Connect the white wire side of SST (resistance: 2.1 ohms) to connector C.

CAUTION: Never connect the tester to the curtain shield airbag 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.**

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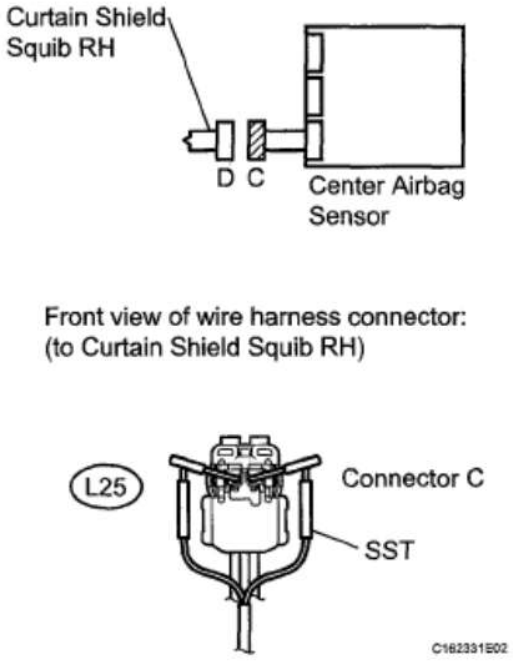


Fig. 150: Identifying Curtain Shield Airbag RH (Curtain Shield Squib RH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 (see **DTC CHECK / CLEAR**).
e. Turn the ignition switch to OFF.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1835, B1836, B1.837, B1838 or 58 is not output.

HINT:

Codes other than DTC B1835, B1836, B1837, B1838 and 58 may be output at this time, but they are not related to this check.

NG: Go to step 3

OK : REPLACE CURTAIN SHIELD AIRBAG ASSEMBLY RH (See **REMOVAL**)

3. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.

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b. Disconnect the negative (-) terminal cable from the battery, 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 RH CIRCUIT)**
   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

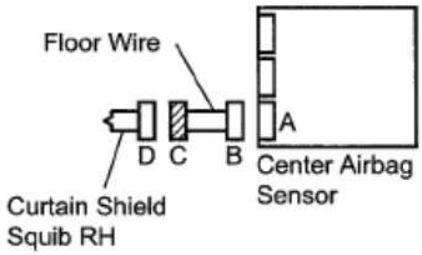
TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L25-1 (ICR+) - Body ground	Ignition switch ON	Below 1 V
L25-2 (ICR-) - Body ground	Ignition switch ON	Below 1 V

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Front view of wire harness connector:
(to Curtain Shield Squib RH)

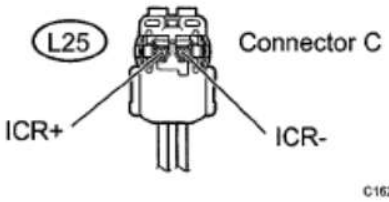


Fig. 151: Identifying Floor Wire (Curtain Shield Squib RH)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Turn the ignition switch to OFF.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L25-1 (ICR+) - L25-2 (ICR-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B (see **DIAGNOSIS SYSTEM**).
h. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L25-1 (ICR+) - L25-2 (ICR-)	Always	1 Mohms or higher
L25-1 (ICR+) - Body ground	Always	1 Mohms or higher
L25-2 (ICR-) - Body ground	Always	1 Mohms or higher

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NG: REPLACE FLOOR WIRE

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the curtain shield airbag RH and the center airbag sensor.
   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.

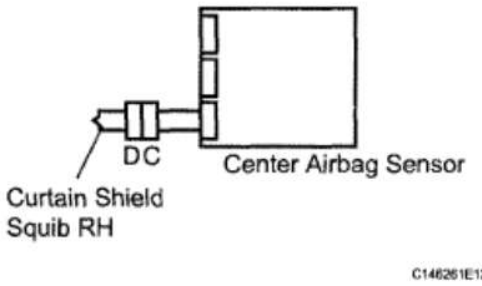


Fig. 152: Identifying Curtain Shield Squib RH And Center Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   e. Clear the DTCs (see **DTC CHECK / CLEAR**).
   f. Turn the ignition switch to OFF.
   g. Turn the ignition switch to ON, and wait for at least 60 seconds.
   h. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1835, B1836, B1837, B1838 or 58 is not output.

HINT:

Codes other than DTC B1835, B1836, B1837, B1838 and 58 may be output at this time, but they are not related to this check.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

DTC B1900/73 SHORT IN FRONT DRIVER SIDE PRETENSIONER SQUIB CIRCUIT; DTC B1901/73 OPEN IN FRONT DRIVER SIDE PRETENSIONER SQUIB CIRCUIT; DTC B1902/73 SHORT TO GND IN FRONT DRIVER SIDE PRETENSIONER SQUIB CIRCUIT; DTC B1903/73 SHORT TO B+ IN FRONT DRIVER SIDE PRETENSIONER SQUIB CIRCUIT

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DESCRIPTION

The front pretensioner squib LH circuit consists of the center airbag sensor and the front seat outer belt LH.

This circuit instructs 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 DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1900/73	When one of following conditions is met: • The center airbag sensor receives a line short circuit signal 5 times in the front pretensioner squib LH circuit during primary check. • Front pretensioner squib LH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat outer belt assembly LH (Front pretensioner squib LH) • Center airbag sensor assembly
B1901/73	When one of following conditions is met: • The center airbag sensor receives an open circuit signal in the front pretensioner squib LH circuit for 2 seconds. • Front pretensioner squib LH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat outer belt assembly LH (Front pretensioner squib LH) • Center airbag sensor assembly
B1902/73	When one of following conditions is met: • The center airbag sensor receives a short circuit to ground signal in the front pretensioner squib LH circuit for 0.5 seconds. • Front pretensioner squib LH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat outer belt assembly LH (Front pretensioner squib LH) • Center airbag sensor assembly
B1903/73	When one of following conditions is met: • The center airbag sensor receives a short circuit to B+ signal in the front pretensioner squib LH circuit for 0.5 seconds. • Front pretensioner squib LH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat outer belt assembly LH (Front pretensioner squib LH) • Center airbag sensor assembly

WIRING DIAGRAM

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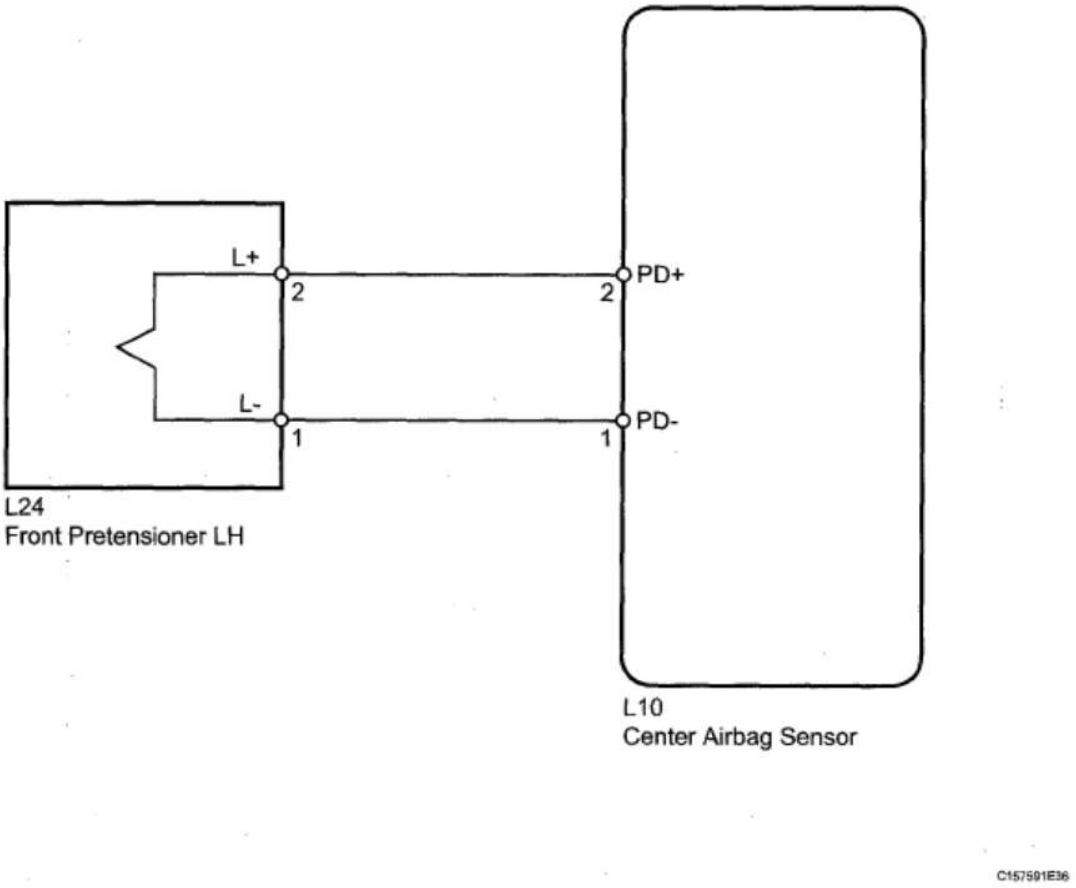


Fig. 153: Front Pretensioner LH And Center Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting "check mode" (signal check) with the Techstream (see **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 (see **DIAGNOSIS SYSTEM**).

1. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the front seat outer belt LH.

   OK:

   The connector is properly connected.

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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 LH.
e. Check that the floor wire connector (on the front seat outer belt 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 LH (FRONT PRETENSIONER SQUIB LH)**
   a. Connect the white wire side of SST (resistance: 2.1 ohms) to connector C.

CAUTION: Never connect the tester to the front seat outer belt LH (front pretensioner squib LH) for measurement, as this may lead to a serious injury due to airbag deployment.

NOTE:

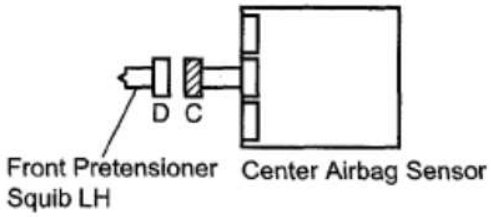
- **Do not forcibly insert SST into the terminals of the connector when connecting SST.**
- **Insert SST straight into the terminals of the connector.**

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Front view of wire harness connector:
(to Front Pretensioner Squib LH)

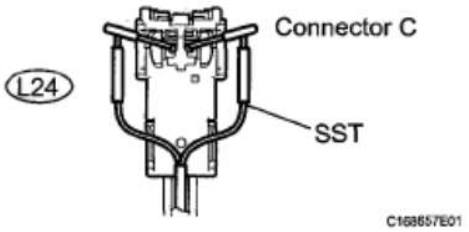


Fig. 154: Identifying Front Seat Outer Belt Squib LH With L24 Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 (see **DTC CHECK / CLEAR**).
e. Turn the ignition switch to OFF.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1900, B1901, B1902, B1903 or 73 is not output.

HINT:

Codes other than DTC B1900, B1901, B1902, B1903 and 73 may be output at this time, but they are not related to this check.

NG: Go to step 3

OK : REPLACE FRONT SEAT OUTER BELT ASSEMBLY LH (See **REMOVAL**)

3. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.

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b. Disconnect the negative (-) terminal cable from the battery, 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 (FRONT PRETENSIONER SQUIB LH CIRCUIT)**
   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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L24-2 (L+) - Body ground	Ignition switch ON	Below 1 V
L24-1 (L-) - Body ground	Ignition switch ON	Below 1 V

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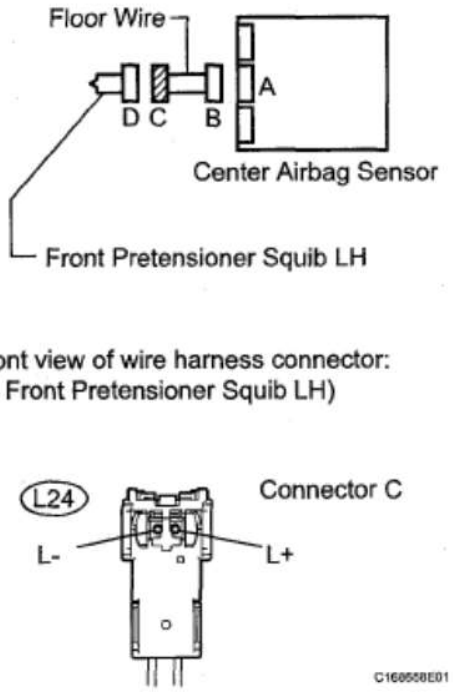


Fig. 155: Identifying Floor Wire Front Pretensioner Squib LH And L24 Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Turn the ignition switch to OFF.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L24-2 (L+) - L24-1 (L-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B (see **DIAGNOSIS SYSTEM**).
h. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L24-2 (L+) - L24-1 (L-)	Always	1 Mohms or higher
L24-2 (L+) - Body ground	Always	1 Mohms or higher
L24-1 (L-) - Body ground	Always	1 Mohms or higher

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NG: REPLACE FLOOR WIRE

OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the front seat outer belt LH and the center airbag sensor.
   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.

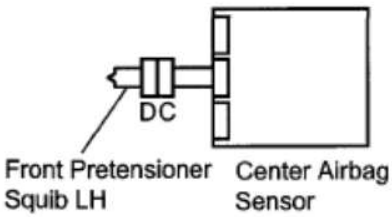


Fig. 156: Identifying Front Pretensioner Squib LH And Center Air Bag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   e. Clear the DTCs (see **DTC CHECK / CLEAR**).
   f. Turn the ignition switch to OFF.
   g. Turn the ignition switch to ON, and wait for at least 60 seconds.
   h. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1900, B1901, B1902, B1903 or 73 is not output.

HINT:

Codes other than DTC B1900, B1901, B1902, B1903 and 73 may be output at this time, but they are not related to this check.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

DTC B1905/74 SHORT IN FRONT PASSENGER SIDE PRETENSIONER SQUIB CIRCUIT; DTC B1906/74 OPEN IN FRONT PASSENGER SIDE PRETENSIONER SQUIB CIRCUIT; DTC B1907/74 SHORT TO GND IN FRONT PASSENGER SIDE PRETENSIONER SQUIB CIRCUIT; DTC B1908/74 SHORT TO B+ IN FRONT PASSENGER SIDE PRETENSIONER SQUIB CIRCUIT

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DESCRIPTION

The front pretensioner squib RH circuit consists of the center airbag sensor and the front seat outer belt RH.

This circuit instructs 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 DETECTION CONDITION CHART

DTC Code	Detection Condition	Trouble Area
B1905/74	When one of following conditions is met: • The center airbag sensor receives a line short circuit signal 5 times in the front pretensioner squib RH circuit during primary check. • Front pretensioner squib RH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat outer belt assembly RH (Front pretensioner squib RH) • Center airbag sensor assembly
B1906/74	When one of following conditions is met: • The center airbag sensor receives an open circuit signal in the front pretensioner squib RH circuit for 2 seconds. • Front pretensioner squib RH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat outer belt assembly RH (Front pretensioner squib RH) • Center airbag sensor assembly
B1907/74	When one of following conditions is met: • The center airbag sensor receives a short circuit to ground signal in the front pretensioner squib RH circuit for 0.5 seconds. • Front pretensioner squib RH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat outer belt assembly RH (Front pretensioner squib RH) • Center airbag sensor assembly
B1908/74	When one of following conditions is met: • The center airbag sensor receives a short circuit to B+ signal in the front pretensioner squib RH circuit for 0.5 seconds. • Front pretensioner squib RH malfunction • Center airbag sensor malfunction	• Floor wire • Front seat outer belt assembly RH (Front pretensioner squib RH) • Center airbag sensor assembly

WIRING DIAGRAM

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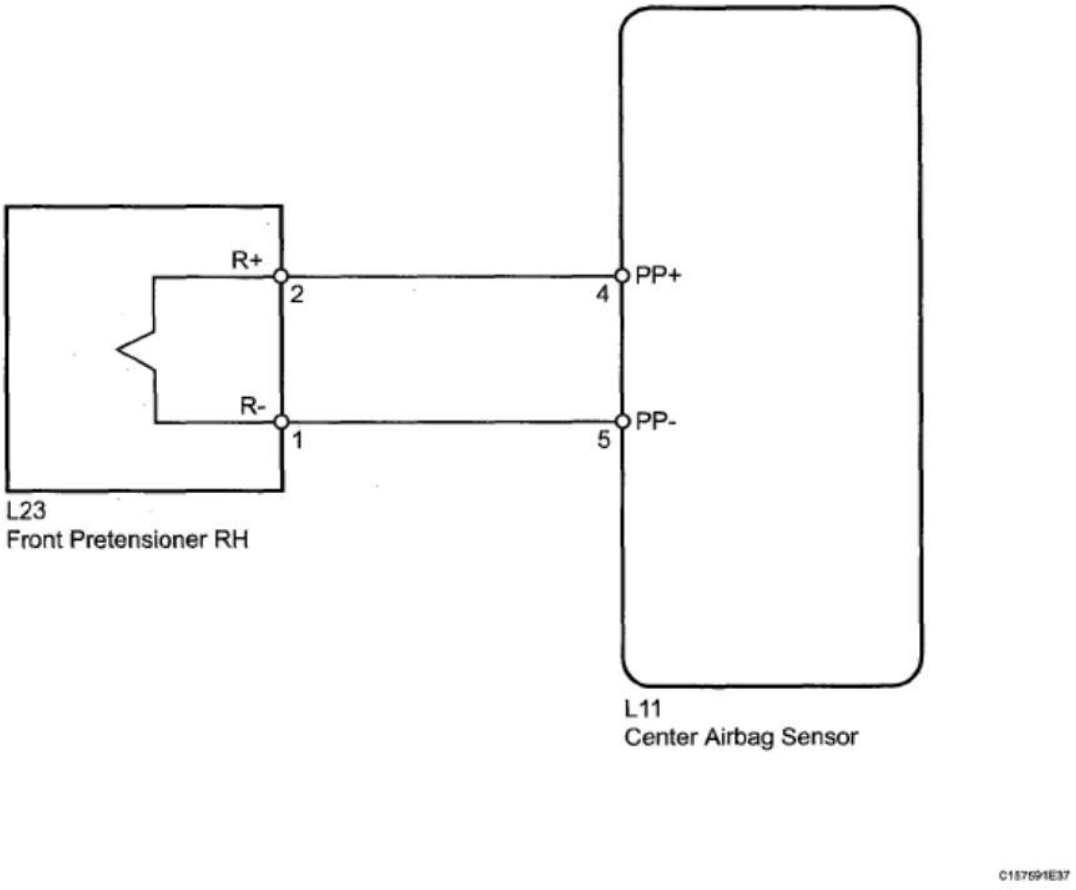


Fig. 157: Front Pretensioner RH And Center Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting "check mode" (signal check) with the Techstream (see **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 (see **DIAGNOSIS SYSTEM**).

1. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Check that the connector is properly connected to the front seat outer belt RH.

   OK:

   The connector is properly connected.

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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 RH.
e. Check that the floor wire connector (on the front seat outer belt RH 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 RH (FRONT PRETENSIONER SQUIB RH)**
   a. Connect the white wire side of SST (resistance: 2.1 ohms) to connector C.

CAUTION: Never connect the tester to the front seat outer belt RH (front pretensioner 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.**

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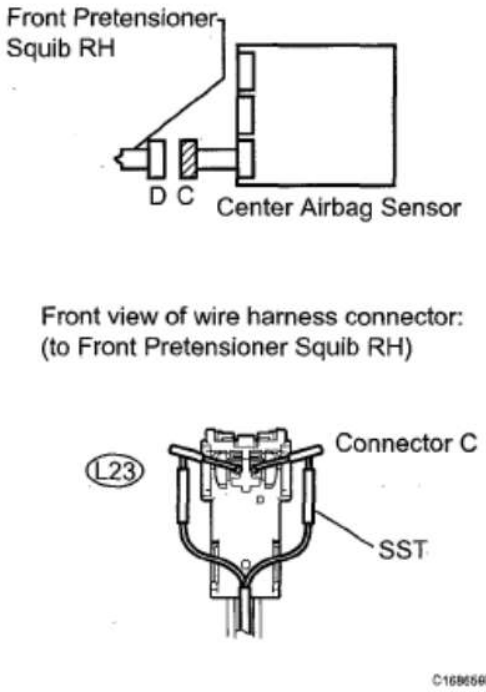


Fig. 158: Identifying Front Seat Outer Belt RH And L23 Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 (see **DTC CHECK / CLEAR**).
e. Turn the ignition switch to OFF.
f. Turn the ignition switch to ON, and wait for at least 60 seconds.
g. Check for DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1905, B1906, B1907, B1908 or 74 is not output.

HINT:

Codes other than DTC B1905, B1906, B1907, B1908 and 74 may be output at this time, but they are not related to this check.

NG: Go to step 3

OK : REPLACE FRONT SEAT OUTER BELT ASSEMBLY RH (See **REMOVAL**)

3. **CHECK CONNECTOR**
   a. Turn the ignition switch to OFF.

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b. Disconnect the negative (-) terminal cable from the battery, 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 (FRONT PRETENSIONER SQUIB RH CIRCUIT)**
   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 SPECIFIED CONDITION CHART

tester Connection	Switch Condition	Specified Condition
L23-2 (R+) - Body ground	Ignition switch ON	Below 1 V
L23-2 (R-) - Body ground	Ignition switch ON	Below 1 V

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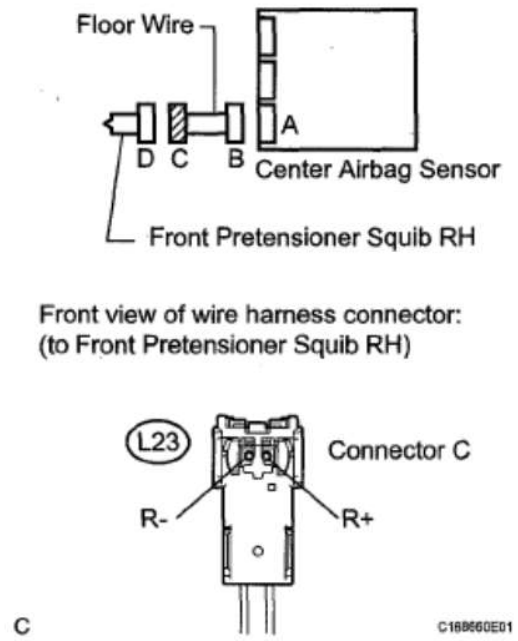


Fig. 159: Identifying Floor Wire Front Pretensioner Squib RH And L23 Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Turn the ignition switch to OFF.
e. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
f. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L23-2 (R+) - L23-1 (R-)	Always	Below 1 ohms

g. Release the activation prevention mechanism built into connector B (see **DIAGNOSIS SYSTEM**).
h. Measure the resistance according to the value(s) in the table below.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L23-2 (R+) - L23-1 (R-)	Always	1 Mohms or higher
L23-2 (R+) - Body ground	Always	1 Mohms or higher
L23-1 (R-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

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OK: Go to next step

5. **CHECK CENTER AIRBAG SENSOR**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the front seat outer belt RH and the center airbag sensor.
   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.

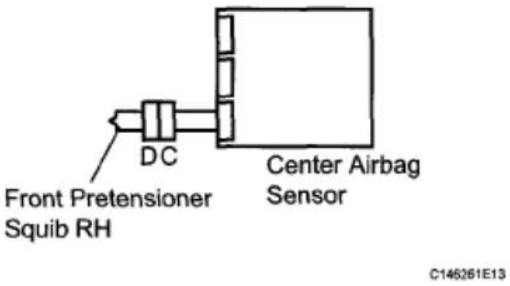


Fig. 160: Identifying Front Pretensioner Squib RH And Center Air Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   e. Clear the DTCs stored in the memory (see **DTC CHECK / CLEAR**).
   f. Turn the ignition switch to OFF.
   g. Turn the ignition switch to ON, and wait for at least 60 seconds.
   h. Check the DTCs (see **DTC CHECK / CLEAR**).

OK:

DTC B1905, B1906, B1907, B1908 or 74 is not output.

HINT:

Codes other than DTC B1905, B1906, B1907, B1908 and 74 may be output at this time, but they are not related to this check.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

SRS WARNING LIGHT REMAINS ON

DESCRIPTION

The SRS warning light is located on the combination meter.

When the SRS is normal, the SRS warning light comes on for approximately 6 seconds after the ignition switch

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is turned from OFF to ON, and then goes off automatically.

If there is a malfunction in the SRS, the SRS warning light comes on to inform the driver of a problem. When terminals TC and CG of the DLC3 are connected, the DTC is displayed by blinking of the SRS warning light.

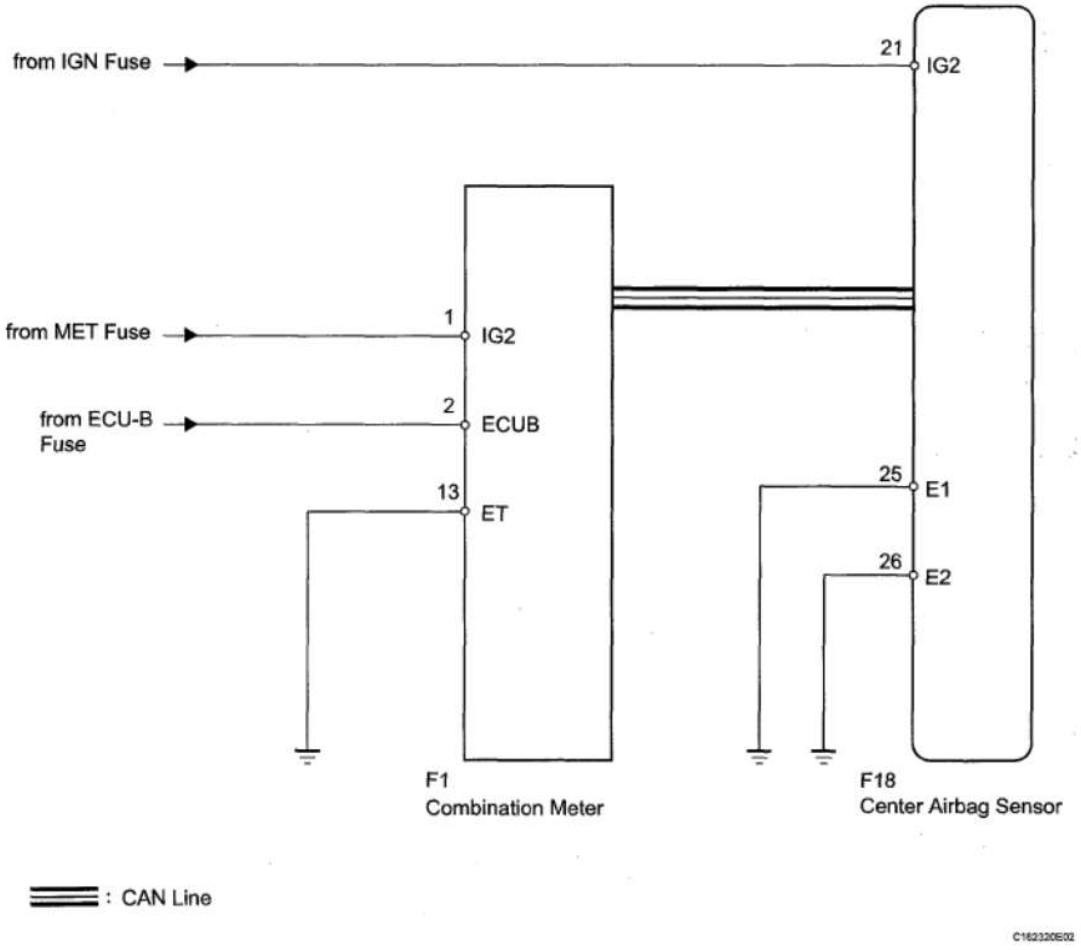
The SRS is equipped with a voltage-increase circuit (DC-DC converter) in the center airbag sensor in case the source voltage drops.

When the battery voltage drops, the voltage-increase circuit (DC-DC converter) functions to increase the voltage of the SRS to normal voltage.

A malfunction in this circuit is not recorded in the center airbag sensor. The SRS warning light automatically goes off when the source voltage returns to normal.

The signal to illuminate the SRS warning light is transmitted from the center airbag sensor to the combination meter through the CAN communication system.

WIRING DIAGRAM



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Fig. 161: Combination Meter And Center Air Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK CAN COMMUNICATION SYSTEM**
   a. Check if a CAN communication DTC is output (See **DIAGNOSIS SYSTEM**).

      Result

      RESULT CHART

Result	Proceed to
DTC is not output	A
DTCs are output	B

B : REPAIR CIRCUITS INDICATED BY OUTPUT DTCS (See **DIAGNOSIS SYSTEM**)

A: Go to next step

2. **CHECK BATTERY**
   a. Measure the voltage of the battery.

      Standard voltage

      TESTER CONNECTION SPECIFIED CONDITION CHART

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 CONNECTORS**
   a. Turn the ignition switch to 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 and combination meter.

      OK:

      The connectors are properly connected.

NG: CONNECT CONNECTORS PROPERLY

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OK: Go to next step

4. **CHECK HARNESS AND CONNECTOR (SOURCE VOLTAGE OF CENTER AIRBAG SENSOR)**
   a. Disconnect the connectors from the center airbag sensor.
   b. Connect the negative (-) terminal cable to the battery, 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.

Rear view of wire harness connector:

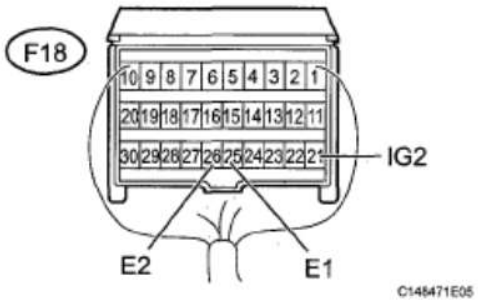


Fig. 162: Identifying F18 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
F18-21 (IG2) - F18-25 (E1)	Ignition switch ON	11 to 14 V
F18-21 (IG2) - F18-26 (E2)	Ignition switch ON	11 to 14 V

NG: REPLACE HARNESS AND CONNECTOR

OK: Go to next step

5. **CHECK HARNESS AND CONNECTOR (SOURCE VOLTAGE OF COMBINATION METER)**
   a. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   b. Disconnect the connector from the combination meter.
   c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   d. Turn the ignition switch to ON.

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

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
F1-2 (IG2) - F1-13(ET)	Ignition switch ON	11 to 14 V

NG: REPAIR OR REPLACE HARNESS OR CONNECTOR

Front view of wire harness connector:
(to Combination Meter)

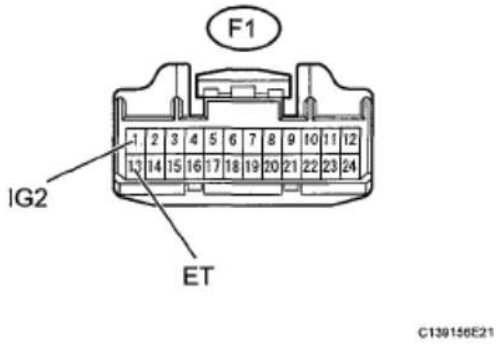


Fig. 163: Identifying F1 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **CHECK SRS WARNING LIGHT**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Connect the connector to the combination meter.
   d. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   e. Turn the ignition switch to ON.
   f. Check the SRS warning light condition.

OK:

After the primary check period, SRS warning light goes off for approximately 10 seconds and remains on.

HINT:

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The primary check period is approximately 6 seconds after the ignition switch is turned to ON.

NG: REPLACE COMBINATION METER (See **REMOVAL**)

OK : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

SRS WARNING LIGHT DOES NOT COME ON

DESCRIPTION

Refer to "**SRS WARNING LIGHT REMAINS ON**" .

WIRING DIAGRAM

Refer to "**SRS WARNING LIGHT REMAINS ON**" .

INSPECTION PROCEDURE

1. **CHECK BATTERY**
   a. Measure the voltage according to the value(s) in the table below.

   Standard voltage

   TESTER CONNECTION SPECIFIED CONDITION CHART

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 CONNECTOR**
   a. Turn the ignition switch to 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 combination meter.

   OK:

   The connectors are properly connected.

   NG: CONNECT CONNECTOR PROPERLY

   OK: Go to next step

3. **CHECK HARNESS AND CONNECTOR (SOURCE VOLTAGE OF COMBINATION METER)**

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a. Turn the ignition switch to OFF.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connector from the combination meter.
d. Connect the negative (-) terminal cable to the battery, 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 SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
F1-2 (IG2) - F1-13 (ET)	Ignition switch ON	11 to 14 V

NG: REPAIR OR REPLACE HARNESS OR CONNECTOR

Front view of wire harness connector:
(to Combination Meter)

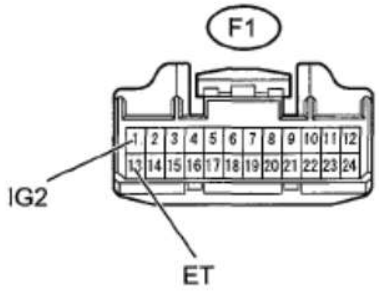


Fig. 164: Identifying F1 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

4. **CHECK SRS WARNING LIGHT**
   a. Turn the ignition switch to OFF.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Disconnect the connectors from the center airbag sensor.
   d. Connect the connector to the combination meter.
   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 SRS warning light condition.

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OK:

After the primary check period, SRS warning light goes off for approximately 10 seconds and remains on.

HINT:

The primary check period is approximately 6 seconds after the ignition switch is turned to ON.

NG: REPLACE COMBINATION METER (See **REMOVAL**)

OK : REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

DIAGNOSIS CIRCUIT

DESCRIPTION

DTC output mode is set by connecting terminals TC and CG of the DLC3.

DTCs are displayed by blinking of the SRS warning light.

HINT:

- When each warning light stays blinking, a ground short in the wiring of terminal TC of the DLC3 or an internal ground short in each ECU is suspected.
- A DTC output mode signal is transmitted through CAN communication system to each ECU including the center airbag sensor. Thus when all systems do not enter DTC output mode, there may be an ECM malfunction.

WIRING DIAGRAM

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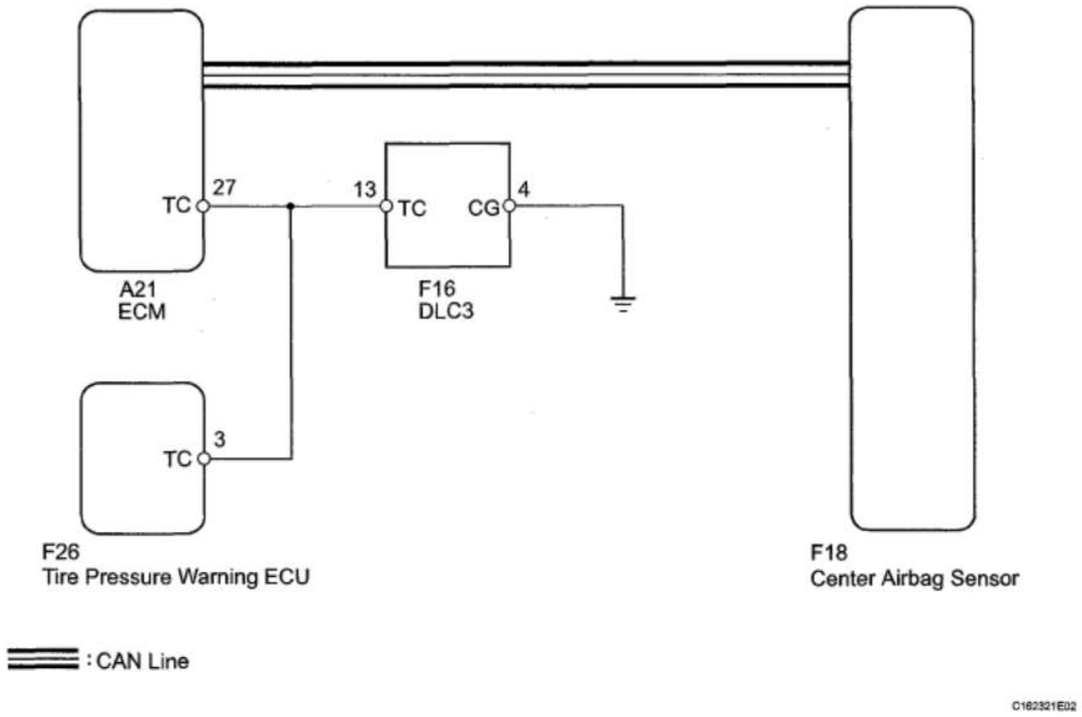


Fig. 165: Tire Pressure Warning ECU And Center Air Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK CAN COMMUNICATION SYSTEM**
   a. Check if a CAN communication system DTC is output (See **DIAGNOSIS SYSTEM**).

   Result

   RESULT CHART

Result	Proceed to
DTC is not output	A
DTC is output	B

   B : REPAIR CIRCUITS INDICATED BY OUTPUT DTCS (See **DIAGNOSIS SYSTEM**)

   A: Go to next step

2. **CHECK HARNESS AND CONNECTOR (DLC3 - ECM)**
   a. Turn the ignition switch to OFF.
   b. Disconnect the connector from the ECM.
   c. Measure the resistance according to the value(s) in the table below.

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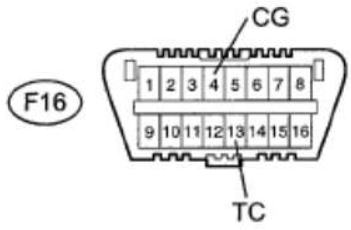
Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

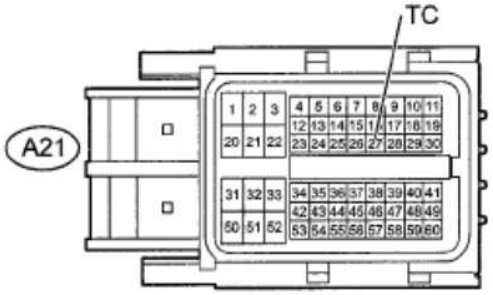
Tester Connection	Condition	Specified Condition
F16-13 (TC) - A21-27 (TC)	Always	Below 1 ohms

NG: REPAIR OR REPLACE HARNESS OR CONNECTOR

Front view of DLC3:



Front view of wire harness connector:
(ECM)



E146093E06

Fig. 166: Identifying F16 And A21 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

3. **CHECK HARNESS AND CONNECTOR (DLC3 - BODY GROUND)**
   a. Measure the resistance according to the value(s) in the table below.

Standard resistance

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TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
F16-4 (CG) - Body ground	Always	Below 1 ohms

NG: REPAIR OR REPLACE HARNESS OR CONNECTOR

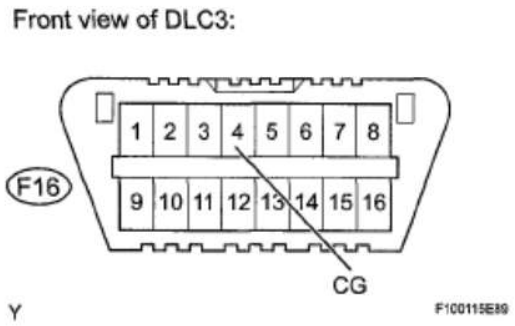


Fig. 167: Identifying F16 And CG Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

4. **CHECK HARNESS AND CONNECTOR (TC OF ECM - BODY GROUND)**
   a. Measure the resistance according to the value(s) in the table below.

   Standard resistance

   TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
A21-27(TC) - Body ground	Always	1 Mohms or higher

NG: REPAIR OR REPLACE HARNESS OR CONNECTOR OR EACH ECU

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Front view of wire harness connector:

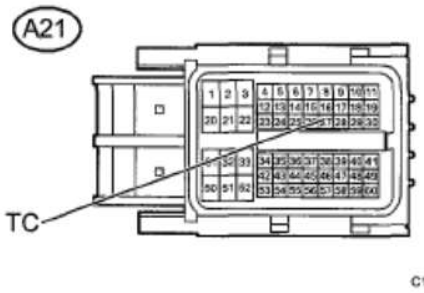


Fig. 168: Identifying A21 And TC Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK : REPLACE ECM (See **REMOVAL**)

OCCUPANT CLASSIFICATION SYSTEM

PRECAUTION

1. **INSPECTION PROCEDURE FOR VEHICLE INVOLVED IN ACCIDENT**
   a. Perform the zero point calibration and sensitivity check if any of the following conditions apply (See **INITIALIZATION**).
      - The occupant classification ECU is replaced.
      - Accessories (seatback tray and seat cover, etc.) are installed.
      - The front seat RH is removed from the vehicle.
      - The passenger airbag ON/OFF indicator (OFF) comes on when the front seat RH is not occupied.
      - The vehicle is brought to the workshop for repair due to an accident or a collision.

NOTE: **When a vehicle that has been in an accident is brought into the workshop for repair, check the flatness of the floor where the front seat RH is mounted. If the flatness is not within +/-3.0 mm (0.118 in.), adjust it to the specified range.**

PARTS LOCATION

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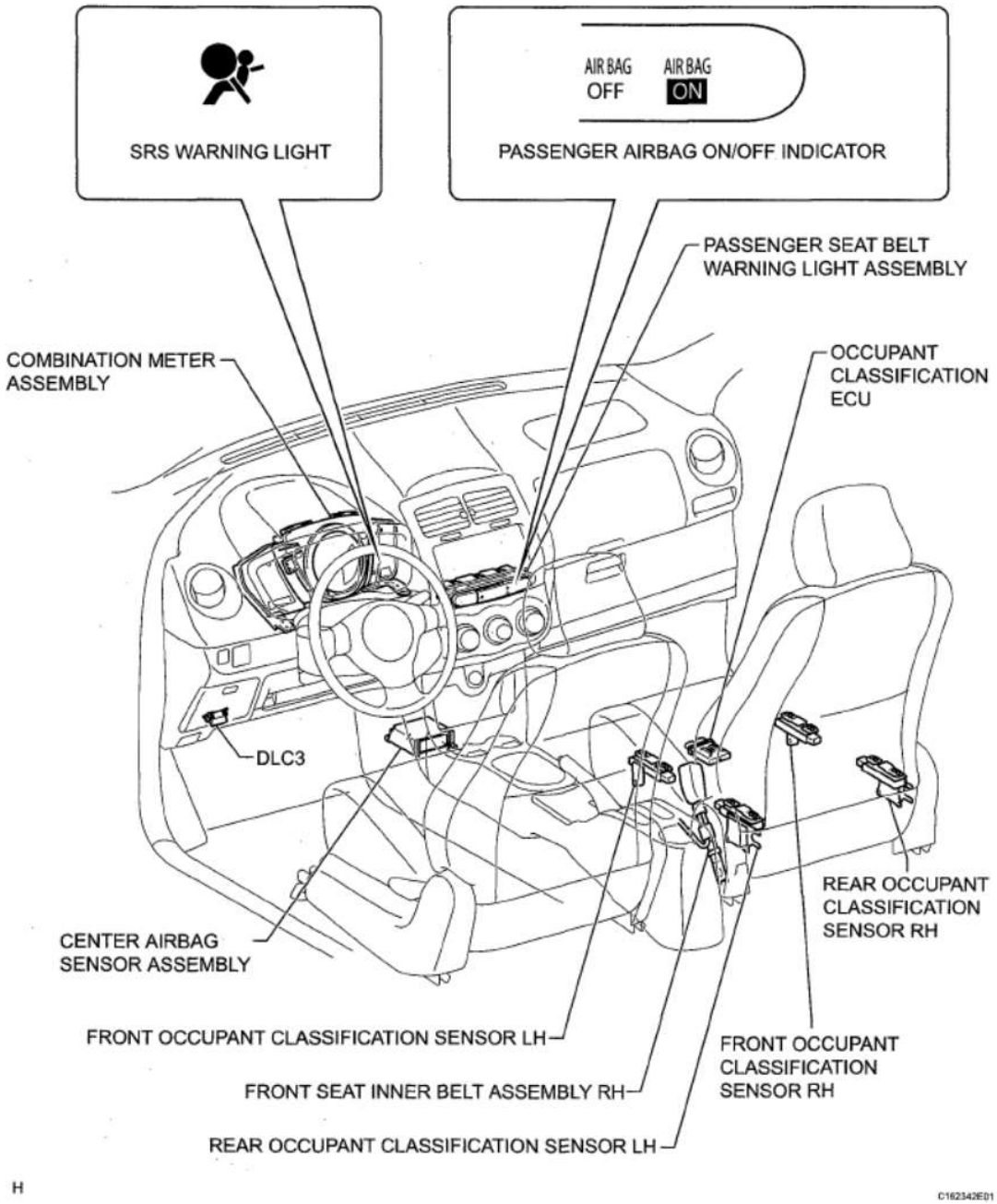


Fig. 169: Occupant Classification System Parts Location
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SYSTEM DIAGRAM

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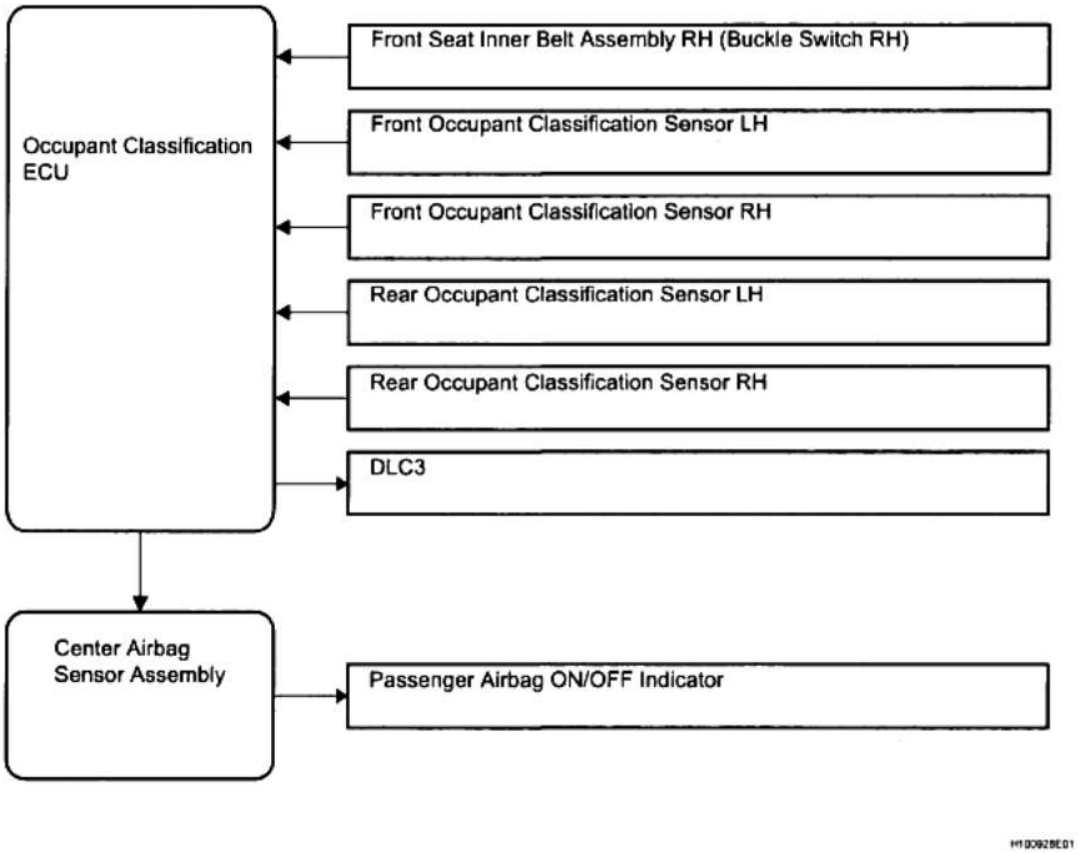


Fig. 170: Occupant Classification System Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SYSTEM DESCRIPTION

1. **GENERATION DESCRIPTION**
   a. The occupant classification system determines whether the front passenger seat is occupied by an adult or child (with child seat) or is unoccupied, based on the load that is applied to the front passenger seat and whether the seat belt is buckled. The system restricts the deployment of the front passenger airbag, front passenger side airbag, and front passenger seat belt pretensioner in accordance with this judgment. The result is informed to the driver through the airbag ON/OFF indicator illumination.
2. **SYSTEM CONFIGURATION**
   a. This system consists of the occupant classification ECU, occupant classification sensors, airbag ON/ OFF indicator, passenger side seat belt buckle switches, and center airbag sensor.
3. **OCCUPANT CLASSIFICATION SENSOR**
   a. The occupant classification sensors are installed on 4 brackets, which connect the seat rail and the seat frame. The resistance values of these sensors, which vary in accordance with the load that acts on the brackets, are transmitted to the occupant classification ECU as signals. Upon receipt of the signals, the ECU determines the front passenger seat occupant conditions.

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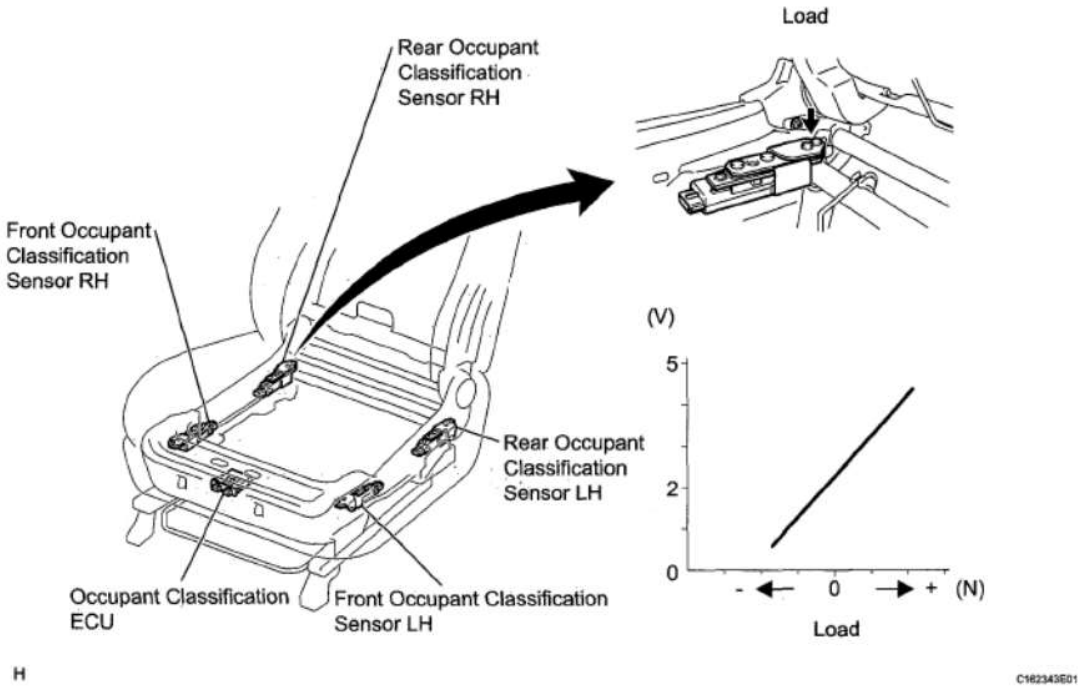


Fig. 171: Identifying Occupant Classification Sensors Location
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

- Use these procedures to troubleshoot the occupant classification system.
- *: Use a Techstream.

1. **VEHICLE BROUGHT TO WORKSHOP**
2. **CUSTOMER PROBLEM ANALYSIS**
   a. Confirm customer problem symptoms (See **HOW TO PROCEED WITH TROUBLESHOOTING**).
3. **CHECK FOR DTC***
   a. Check for DTCs and note any codes that are output (See **DTC CHECK / CLEAR**).
   b. Check for DTCs (See **DTC CHECK / CLEAR**).
   c. Recheck for DTCs (See **DTC CHECK / CLEAR**). Based on the DTCs output above, try to force output of the same CAN communication system DTC or occupant classification system DTC by simulating the symptoms indicated by the DTC.

   Result

   RESULT CHART

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Result	Proceed to
DTC does not output	A
CAN communication system DTC outputs	B
Occupant classification system DTC outputs	C

B: Go to DIAGNOSTIC TROUBLE CODE CHART (See **DIAGNOSIS SYSTEM**)

C: Go to **DIAGNOSTIC TROUBLE CODE CHART**

A: Go to next step

4. **PROBLEM SYMPTOMS TABLE**
   a. Refer to the **PROBLEM SYMPTOMS TABLE** .

Result

RESULT CHART

Result	Proceed to
Fault is not listed in problem symptoms table	A
Fault is listed in problem symptoms table	B

B: Go to step 6

A: Go to next step

5. **OVERALL ANALYSIS AND TROUBLESHOOTING***
   a. Terminals of ECU (See **TERMINALS OF ECU**)
   b. DATA LIST / ACTIVE TEST (See **DTC CHECK / CLEAR**)
6. **REPAIR OR REPLACE**
7. **CONFIRMATION TEST***

NEXT : END

INITIALIZATION

NOTE: Make sure that the front passenger seat is not occupied, before performing the operation.

HINT:

Perform the zero point calibration and sensitivity check if any of the following conditions apply.

- The occupant classification ECU is replaced.

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- Accessories (seatback tray and seat cover, etc.) are installed.
- The front passenger seat is removed from the vehicle.
- The passenger airbag ON/OFF indicator (OFF) comes on when the front passenger seat is not occupied.
- The vehicle is brought to the workshop for repair due to an accident or a collision.

1. **ZERO POINT CALIBRATION**
   a. Zero point calibration procedures:

      HINT:

      Make sure that the zero point calibration has finished normally, and then perform the sensitivity check.

      1. Check that all of the following conditions are met:
         - The vehicle is parked on a level surface.
         - No objects are placed on the front seat RH.
         - The front seat inner belt RH (passenger side buckle switch) is off.
      2. Adjust the seat position in accordance with the table below.

         ADJUSTMENT ITEM CHART

Adjustment Item	Position
Slide Direction	Rearmost position
Reclining Angle	Upright position
Headrest Height	Lowest position
Lifter Height	Lowest position

      3. Connect a Techstream to the DLC3.
      4. Turn the ignition switch ON.
      5. Perform the zero point calibration by following the prompts on the tester screen.

         HINT:

         - Refer to the Techstream operator's manual for further details.
         - If the zero point calibration has not finished normally, replace the front seat RH.

2. **SENSITIVITY CHECK**
   a. Sensitivity check procedures:
      1. Connect a Techstream to the DLC3.
      2. Turn the ignition switch ON.
      3. Perform the sensitivity check by following the prompts on the tester screen.

         HINT:

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Refer to the Techstream operator's manual for further details.

4. Confirm that the beginning sensor reading is within the standard range.

   Standard range:

   -3.2 to 3.2 kg (-7.0 to 7.0 lb)

5. Place a 30 kg (66.2 lb) weight onto the front passenger seat.
6. Confirm that the sensitivity is within the standard range.

   Standard range:

   27 to 33 kg (59.5 to 72.8 lb)

   HINT:

   - When performing the sensitivity check, use a solid metal weight (the check result may not be accurate if a liquid weight is used).
   - If the sensitivity deviates from the standard range, retighten the bolts of the front seat RH taking care not to deform the seat rail. After performing this procedure, if the sensitivity is not within the standard range, replace the front seat RH.

PROBLEM SYMPTOMS TABLE

HINT:

- Use the table below to help determine the cause of the problem symptom. 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.

Occupant Classification System

PROBLEM SYMPTOMS CHART

Symptom	Suspected Area	See
The front passenger seat condition differs from the indication by the passenger airbag ON/OFF indicator (DTC is not output).	Trouble in Passenger Airbag ON/OFF Indicator	**TROUBLE IN PASSENGER AIRBAG ON / OFF INDICATOR**

TERMINALS OF ECU

1. **CHECK OCCUPANT CLASSIFICATION ECU**

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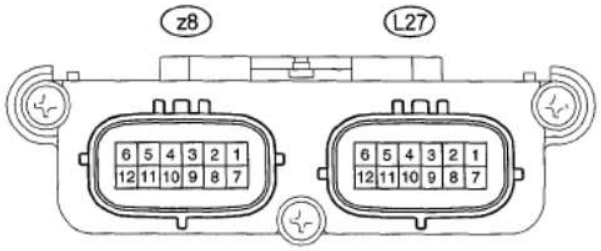


Fig. 172: Identifying Z8 And L27 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TERMINAL DESCRIPTION CHART

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specification
L27-1 (+B) - L27-3 (GND)	V - W-B	Battery	Ignition switch ON	11 to 14 V
L27-2 (DIA) - L27-3 (GND)	G - W-B	Diagnosis (DLC3)	Ignition switch ON	Pulse generation
L27-3 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1ohms
L27-4 (FSR-) - L27-3 (GND)	Y - W-B	Center airbag sensor communication ground line	Always	Below 1 ohms
L27-5 (BGND) - L27-3 (GND)	P - W-B	Passenger side buckle switch ground line	Always	Below 1 ohms
L27-7 (1G) - L27-3 (GND)	O - W-B	Power source (IGN fuse)	Ignition switch ON	11 to 14 V
L27-8 (FSR+) - L27-4 (FSR-)	GR-Y	Center airbag sensor communication line	Ignition switch ON	Pulse generation
L27-9 (BSW) - L27-5 (BGND)	O-P	Passenger side buckle switch line	Seat belt is fastened	12 to 18 mA
			Seat belt is unfastened	4 to 7 mA
z8-1 (SGD1)- L27-3 (GND)	G - W-B	Front occupant classification sensor LH ground line	Always	Below 1 ohms
z8-2 (SGD2) - L27-3 (GND)	O - W-B	Front occupant classification sensor RH ground line	Always	Below 1 ohms
z8-3 (SGD3) - L27-3 (GND)	W - W-B	Rear occupant classification sensor LH ground line	Always	Below 1 ohms
z8-4 (SGD4) - L27-3 (GND)	BR - W-B	Rear occupant classification sensor RH ground line	Always	Below 1 ohms
z8-11 (SVC1) - z8-1 (SGD1)	R-G	Front occupant classification sensor LH power supply line	Ignition switch ON, load is applied to front occupant classification sensor LH	4.5 to 5.1 V

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z8-12 (SVC2) - z8-2 (SGD2)	W-O	Front occupant classification sensor RH power supply line	Ignition switch ON, load is applied to front occupant classification sensor RH	4.5 to 5.1 V
z8-5 (SVC3) - Z8-3 (SGD3)	GR-W	Rear occupant classification sensor LH power supply line	Ignition switch ON, load is applied to rear occupant classification sensor LH	4.5 to 5.1 V
z8-6 (SVC4) - Z8-4 (SGD4)	V - BR	Rear occupant classification sensor RH power supply line	Ignition switch ON, load is applied to rear occupant classification sensor RH	4.5 to 5.1 V
z8-7 (SIG1) - z8-1 (SGD1)	SB-G	Front occupant classification sensor LH signal line	Ignition switch ON, load is applied to front occupant classification sensor LH	Pulse generation
z8-8 (SIG2) - z8-2 (SGD2)	L-O	Front occupant classification sensor RH signal line	Ignition switch ON, load is applied to front occupant classification sensor RH	Pulse generation
z8-9 (SIG3) - z8-3 (SGD3)	Y-W	Rear occupant classification sensor LH signal line	Ignition switch ON, load is applied to rear occupant classification sensor LH	Pulse generation
z8-10 (SIG4) - z8-4 (SGD4)	R-BR	Rear occupant classification sensor RH signal line	Ignition switch ON, load is applied to rear occupant classification sensor RH	Pulse generation

DIAGNOSIS SYSTEM

1. **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. Troubleshooting without confirming the problem symptoms will lead to important repairs being overlooked and mistakes or delays.

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 ON).

1. Slightly vibrate the part of the sensor considered to be the cause of the problem with your fingers and check whether the malfunction occurs.

HINT:

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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.

The connector joint and fulcrum of the vibration are the major areas to be checked thoroughly.

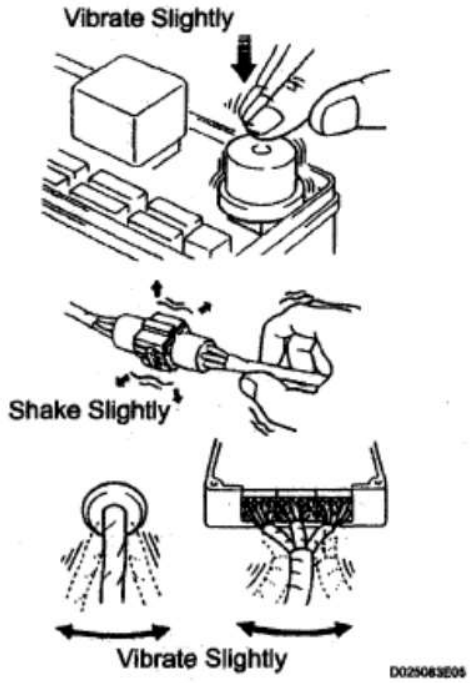


Fig. 173: Checking Whether Malfunction Occurs
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Simulation method for DTC B1795: Turn the ignition switch from OFF to ON, hold it for 10 seconds, and then turn it back to OFF. Repeat this procedure 50 times in a row.

HINT:

DTC B1795 is output if the occupant classification ECU receives the ignition switch OFF-ON-OFF signal 50 times in a row when a malfunction occurs in the power circuit for the occupant classification system.

2. **FUNCTION OF PASSENGER AIRBAG ON/OFF INDICATOR**
   a. Initial check
      1. Turn the ignition switch ON.
      2. The passenger airbag ON/OFF indicator (ON and OFF) comes on for approximately 4 seconds, then goes off for approximately 2 seconds.

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3. Approximately 6 seconds after the ignition switch is turned ON, the passenger airbag ON/OFF indicator will be ON/OFF depending on the conditions listed below.

SRS WARNING LIGHT DESCRIPTION

Front Seat Passenger	ON Indicator	OFF Indicator	SRS Warning Light
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.

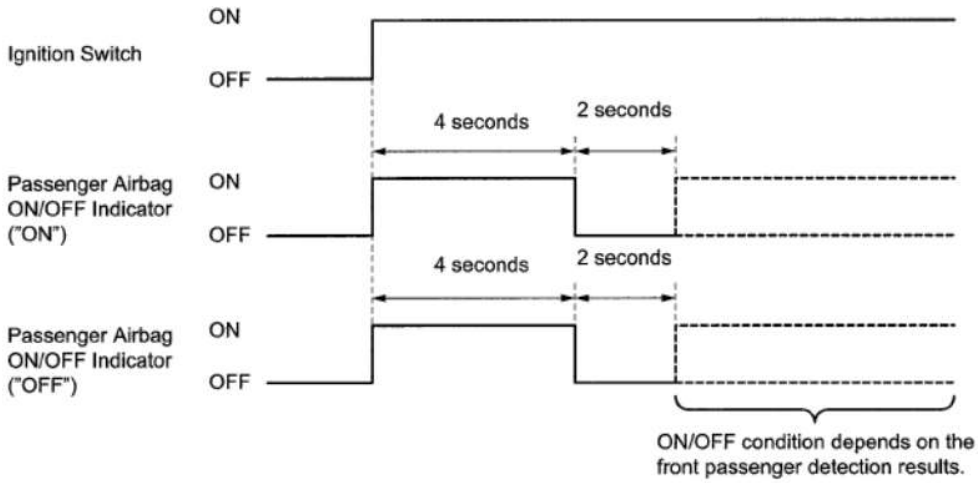


Fig. 174: Passenger Airbag ON/OFF Indicator Timing Chart
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- 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 the airbag system first.

3. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR**
   a. Turn the ignition switch ON.
   b. Check that the passenger airbag ON/OFF indicator (ON and OFF) comes on for approximately 4 seconds, then goes off for approximately 2 seconds.

   HINT:

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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 ON.

Passenger Seat Belt Warning Light Assembly:



Fig. 175: Passenger Seat Belt Warning Light Display
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

DTC CHECK / CLEAR

1. **CHECK DTC**

   HINT:

   - When DTC B1650/23 is detected as a result of troubleshooting the airbag system, troubleshoot the occupant classification system.
   - Use a Techstream to read and clear DTCs, otherwise the DTCs cannot be read and cleared.

   a. Connect the Techstream to the DLC3.
   b. Turn the ignition switch ON.
   c. Turn the tester on.
   d. Enter the following menus: Body Electrical / Occupant Detection / Trouble Codes.

2. **CLEAR DTC**
   a. Connect a Techstream to the DLC3.
   b. Turn the ignition switch ON.
   c. Turn the tester on.
   d. Enter the following menus: Body Electrical / Occupant Detection / Trouble Codes.
   e. Clear the DTCs.

DATA LIST / ACTIVE TEST

1. **READ DATA LIST**

   HINT:

   Using a 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

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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. Connect the Techstream to the DLC3.
b. Turn the ignition switch ON.
c. Turn the tester on.
d. Enter the following menus: Body Electrical / Occupant Detection / Data List.
e. According to the display on the tester, read the "Data List".

DIAGNOSTIC NOTE CHART

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
IG Switch	Ignition switch condition/ ON: Ignition switch ON OFF: Ignition switch OFF	ON/OFF	-
Passenger Buckle SW	Passenger side buckle switch/ Set: The seat belt is fastened Unset: The seat belt is not fastened NG: Data is not determined	Set/Unset	-
Passenger Classification	Passenger classification/ AM50: Adult (more than 54 kg (119.05 lb)) is seated AF05: Adult (36 to 54 kg (79.37 to 119.05 lb)) is seated Child: Child (less than 36 kg (79.37 lb)) is seated CRS: Child restraint system (less than 7 kg (15.43 lb)) and passenger side buckle switch are ON, then 7 to 36 kg (15.43 to 79.37 lb) is set OFF: Vacant	AM50/AF05/Child/CRS/OFF	-
Sensor Range Info	Sensor range information/ OK: The value of a sensor is within the range NG: The value of a sensor is over the range	OK	-
FL Sensor Range Info	Front left sensor range information/ OK: Sensor range is -17 to 27 kg (.37.48 to 59.52 lb) Min.: Less than -17 kg (-37.48 lb) Max.: More than 27 kg (59.52 lb)	OK	-
FR Sensor Range Info	Front right sensor range information/ OK: Sensor range is -17 to 27 kg (-37.48 to 59.52 lb) Min.: Less than -17 kg (-37.48 lb) Max.:	OK	-

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	More than 27 kg (59.52 lb)		
RL Sensor Range Info	Rear left sensor range information/ OK: Sensor range is -17 to 37 kg (-37.48 to 81.57 lb) Min.: Less than -17 kg (-37.48 lb) Max.: More than 37 kg (81.57 lb)	OK	-
RR Sensor Range Info	Rear right sensor range information/ OK: Sensor range is -17 to 37 kg (-37.48 to 81.57 lb) Min.: Less than -17 kg (-37.48 lb) Max.: More than 37 kg (81.57 lb)	OK	-
FL Sensor Voltage	Front left sensor voltage/ Min.: 0 V Max.: 19.8 V	0 to 4.7 V	-
FR Sensor Voltage	Front right sensor voltage/ Min.: 0 V Max.: 19.8 V	0 to 4.7 V	-
RL Sensor Voltage	Rear left sensor voltage/ Min.: 0 V Max.: 19.8 V	0 to 4.7 V	-
RR Sensor Voltage	Rear right sensor voltage/ Min.: 0 V Max.: 19.8 V	0 to 4.7 V	-
FL Sensor Weight Info	Front left sensor weight information/Min.:- 17 kg (-37.48 lb) Max.: 27 kg (59.52 lb)	-17 to 27 kg (-37.48 to 59.52 lb)	-
FR Sensor Weight Info	Front right sensor weight information/Min.: -17 kg (-37.48 lb) Max.: 27 kg (59.52 lb)	-17 to 27 kg (-37.48 to 59.52 lb)	-
RL Sensor Weight Info	Rear left sensor weight information/Min.:-17 kg (-37.48 lb) Max.: 37 kg (81.57 lb)	-17 to 37 kg (-37.48 to 81.57 lb)	-
RR Sensor Weight Info	Rear right sensor weight information/Min.: -17 kg (-37.48 lb) Max.: 37 kg (81.57 lb)	-17 to 37 kg (-37.48 to 81.57 lb)	-
Total Weight Information	Total weight information/ Min.: -68 kg (-149.91 lb) Max.: 128 kg (282.19 lb)	-68 to 128 kg (-149.91 to 282.19 lb)	-
Number of Present DTC	Number of present DTC recorded/ Min.: 0, Max.: 255	0	-
Number of Past DTC	Number of past DTC recorded/ Min.: 0, Max.: 255	0	-

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DIAGNOSTIC TROUBLE CODE CHART

HINT:

- When DTC B1650/32 is detected as a result of troubleshooting for the "AIRBAG SYSTEM", perform troubleshooting for the "OCCUPANT CLASSIFICATION SYSTEM" as shown in the chart below.

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- Use a Techstream to read and clear the DTC of the occupant classification ECU, otherwise the DTCs cannot be read and cleared.

Occupant Classification System

DTC DETECTION CONDITION CHART

DTC Code	Detection Item	Trouble Area	Passenger Airbag ON/ OFF Indicator (OFF)
B1771	Passenger Side Buckle Switch Circuit Malfunction	○ Front seat inner belt RH (Passenger side buckle switch) ○ Front seat wire RH ○ Occupant classification ECU	ON
B1780	Front Occupant Classification Sensor LH Circuit Malfunction	○ Front seat frame with adjuster RH (Front occupant classification sensor LH) ○ Front seat wire RH ○ Occupant classification ECU	ON
B1781	Front Occupant Classification Sensor RH Circuit Malfunction	○ Front seat frame with adjuster RH (Front occupant classification sensor RH) ○ Front seat wire RH ○ Occupant classification ECU	ON
B1782	Rear Occupant Classification Sensor LH Circuit Malfunction	○ Front seat frame with adjuster RH (Rear occupant classification sensor LH) ○ Front seat wire RH ○ Occupant classification ECU	ON
B1783	Rear Occupant Classification Sensor RH	○ Front seat frame with adjuster RH (Rear occupant classification sensor	ON

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	Circuit Malfunction	RH) ○ Front seat wire RH ○ Occupant classification ECU	
B1785	Front Occupant Classification Sensor LH Collision Detection	○ Front seat frame with adjuster RH (Front occupant classification sensor LH) ○ Occupant classification ECU	ON
B1786	Front Occupant Classification Sensor RH Collision Detection	○ Front seat frame with adjuster RH (Front occupant classification sensor RH) ○ Occupant classification ECU	ON
B1787	Rear Occupant Classification Sensor LH Collision Detection	○ Front seat frame with adjuster RH (Rear occupant classification sensor LH) ○ Occupant classification ECU	ON
B1788	Rear Occupant Classification Sensor RH Collision Detection	○ Front seat frame with adjuster RH (Rear occupant classification sensor RH) ○ Occupant classification ECU	ON
B1790	Center Airbag Sensor Assembly Communication Circuit Malfunction	○ Floor wire ○ Occupant classification ECU ○ Center airbag sensor	ON
B1793	Occupant Classification Sensor Power Supply Circuit Malfunction	○ Front seat frame with adjuster RH (Occupant classification sensors) ○ Front seat wire RH	ON

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		○ Occupant classification ECU	
B1794	Open in Occupant Classification ECU Battery Positive Line	○ Harness or connector ○ Occupant classification ECU	ON
B1795	Occupant Classification ECU Malfunction	Occupant classification ECU	ON
B1796	Sleep Operation Failure of Occupant Classification ECU	Occupant classification ECU	ON

DTC B1771 PASSENGER SIDE BUCKLE SWITCH CIRCUIT MALFUNCTION

DESCRIPTION

The passenger side buckle switch circuit consists of the occupant classification ECU and the front seat inner belt RH.

DTC B1771 is recorded when a malfunction is detected in the passenger side buckle switch circuit.

Troubleshoot DTC B1771 first when DTCs B1771 and B1795 are output simultaneously.

DTC DETECTION CONDITION CHART

DTC Code	DTC Detection Condition	Trouble Area
B1771	One of following conditions is met: • Occupant classification ECU detects line short circuit signal, open circuit signal, short circuit to ground signal or short circuit to +B signal in passenger side buckle switch circuit for 2 seconds • Passenger side buckle switch malfunction • Occupant classification ECU malfunction	• Front seat wire RH • Front seat inner belt RH (Passenger side buckle switch) • Occupant classification ECU

HINT:

- When DTC B1650/32 is detected as a result of troubleshooting the airbag system, perform troubleshooting for DTC B1771 of the occupant classification system.
- Use a Techstream to check for DTCs of the occupant classification ECU, otherwise the DTC cannot be read.

WIRING DIAGRAM

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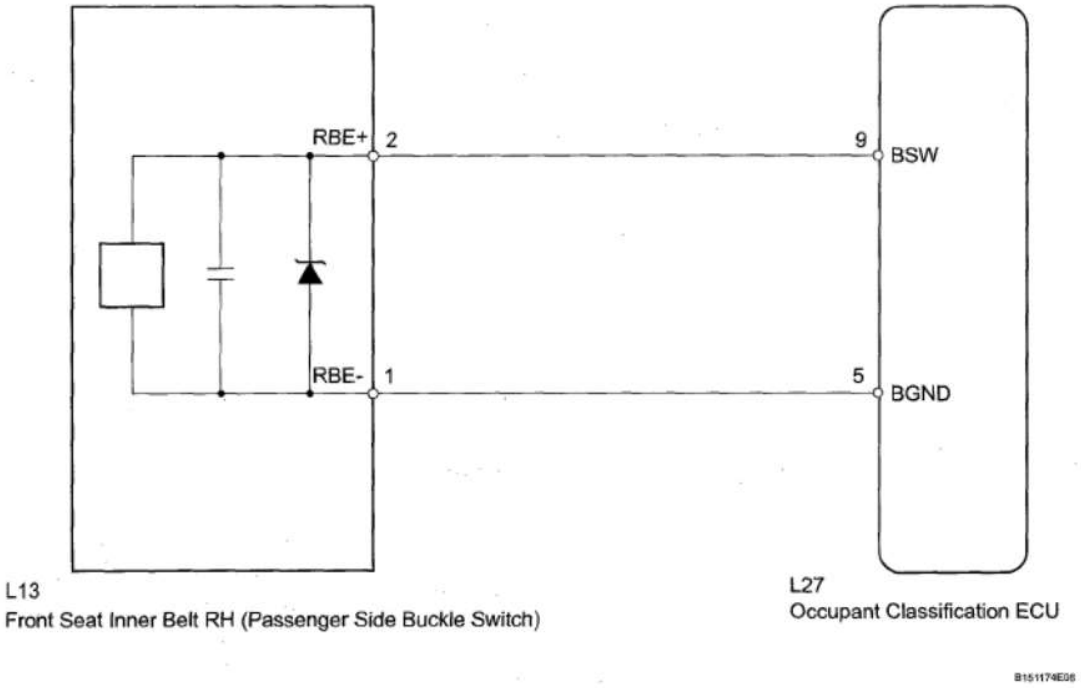


Fig. 176: Passenger Side Buckle Switch And ECU - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front seat RH installation bolts to see the undersurface of the seat cushion.
- In the above case, hold the seat so that it does not fall down. Holding the seat for a long period of time may cause a problem, such as seat rail deformation. Hold the seat up only for as long as necessary.

1. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear the DTCs stored in the memory (See **DTC CHECK / CLEAR**).

      HINT:

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

   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Check for DTCs (See **DTC CHECK / CLEAR**).

      OK:

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DTC B1771 is not output.

HINT:

Codes other than DTC B1771 may be output at this time, but they are not related to this check.

NG: Go to step 2

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

2. **CHECK CONNECTION OF CONNECTOR**
   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 occupant classification ECU and the front seat inner belt RH.

   OK:

   Connectors are properly connected.

   NG: CONNECT CONNECTOR

   OK: Go to next step

3. **CHECK CONNECTOR**
   a. Disconnect the connectors from the occupant classification ECU and the front seat inner belt RH.
   b. Check that the connectors (on the occupant classification ECU side and passenger side buckle switch side) are not damaged (See **ELECTRONIC CIRCUIT INSPECTION PROCEDURE**).

   OK:

   Connectors are not deformed or damaged.

   NG: REPLACE FRONT SEAT WIRE RH

   OK: Go to next step

4. **CHECK FRONT SEAT WIRE RH**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Turn the ignition switch ON, and wait for at least 60 seconds.
   c. Measure the voltage according to the value(s) in the table below.

   Standard voltage

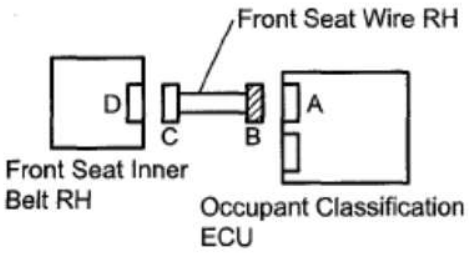
   TESTER CONNECTION SPECIFIED CONDITION CHART

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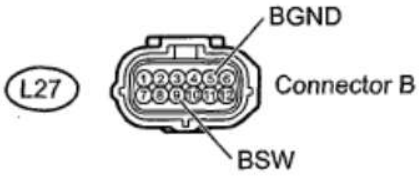
Tester Connection	Switch Condition	Specified Condition
L27-9 (BSW) - Body ground	Ignition switch ON	Below 1 V
L27-5 (BGND) - Body ground		

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 (RBE-) and 2 (RBE+) of connector C.

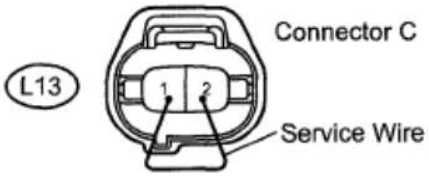
NOTE: Do not forcibly insert the service wire into the terminals of the connector.



Front view of wire harness connector:
(to Occupant Classification ECU)



Front view of wire harness connector:
(to Front Seat Inner Belt RH)



C162339E01

Fig. 177: Identifying L27 And L13 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

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Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L27-9 (BSW) - L27-5 (BGND)	Always	Below 1 ohms

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L27-9 (BSW) - Body ground	Always	1 Mohms or higher
L27-5 (BGND) - Body ground		
L27-9 (BSW) - L27-5 (BGND)		

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

5. **CHECK FOR DTC**
   a. Connect the connectors to the occupant classification ECU and the front seat inner belt RH.
   b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Clear the DTCs stored in the memory (See **DTC CHECK / CLEAR**).

      HINT:

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

   e. Turn the ignition switch off.
   f. Turn the ignition switch ON, and wait for at least 60 seconds.
   g. Check for DTCs (See **DTC CHECK / CLEAR**).

      OK:

      DTC B1771 is not output.

      HINT:

      Codes other than DTC B1771 may be output at this time, but they are not related to this check.

NG: Go to step 6

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OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

6. **REPLACE FRONT SEAT INNER BELT ASSEMBLY RH**
   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 RH (See **REMOVAL**).

      HINT:

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

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

      HINT:

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

   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Check for DTCs (See **DTC CHECK / CLEAR**).

      OK:

      DTC B1771 is not output.

      HINT:

      Codes other than DTC B1771 may be output at this time, but they are not related to this check.

NG: Go to step 8

OK : END

8. **REPLACE OCCUPANT CLASSIFICATION ECU**
   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 occupant classification ECU (See **REMOVAL**).

      HINT:

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

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

HINT:

If the DTCs are not cleared at this time, past DTCs will remain.

9. **PERFORM ZERO POINT CALIBRATION**
   a. Connect a Techstream to the DLC3.
   b. Turn the ignition switch ON, and wait for at least 60 seconds.
   c. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).
10. **PERFORM SENSITIVITY CHECK**
    a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

Standard range:

27 to 33 kg (59.5 to 72.8 lb)

NEXT : END

DTC B1780 FRONT OCCUPANT CLASSIFICATION SENSOR LH CIRCUIT MALFUNCTION

DESCRIPTION

The front occupant classification sensor LH circuit consists of the occupant classification ECU and the front occupant classification sensor LH.

DTC B1780 is set when a malfunction is detected in the front occupant classification sensor LH circuit.

DTC DETECTION CONDITION CHART

DTC Code	DTC Detection Condition	Trouble Area
B1780	One of following conditions is met: • Occupant classification ECU receives line short circuit signal, open circuit signal, short circuit to ground signal or short circuit to +B signal in front occupant classification sensor LH circuit for 2 seconds • Front occupant classification sensor LH malfunction • Occupant classification ECU malfunction	• Front seat frame with adjuster RH (Front occupant classification sensor LH) • Front seat wire RH • Occupant classification ECU

HINT:

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- When DTC B1650/32 is detected as a result of troubleshooting the airbag system, perform troubleshooting for DTC B1780 of the occupant classification system.
- Use a Techstream to check for DTCs of the occupant classification ECU, otherwise the DTC cannot be read.

WIRING DIAGRAM

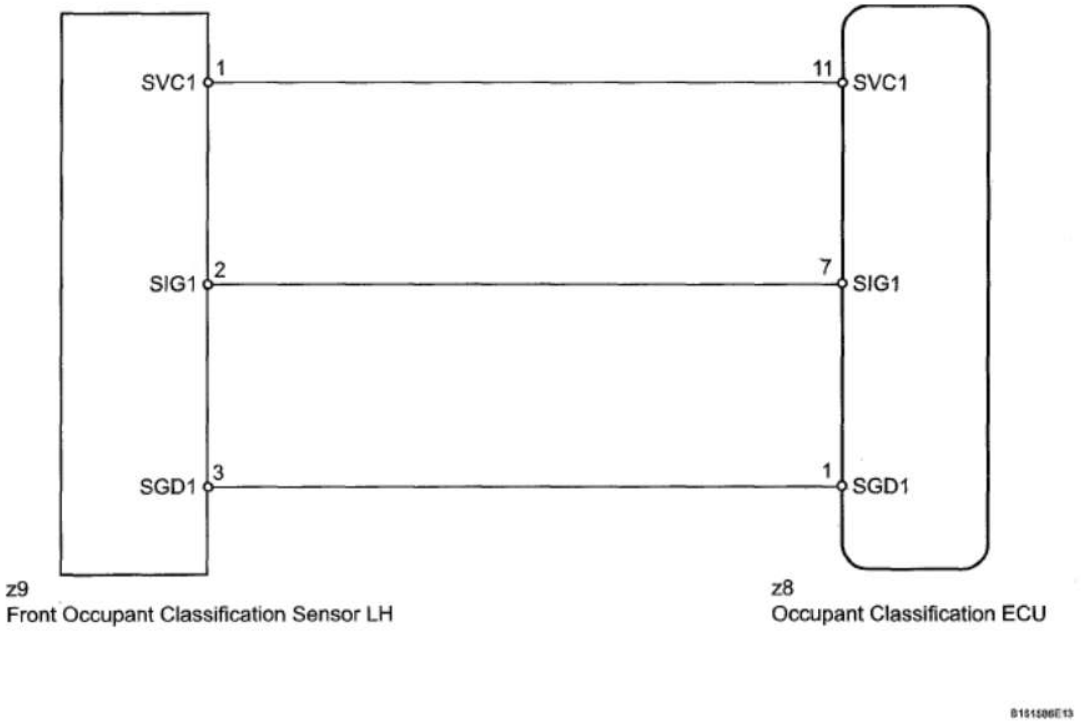


Fig. 178: Front Occupant Classification Sensor LH And ECU - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

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

1. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

   HINT:

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- First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
- Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

c. Turn the ignition switch off.

d. Turn the ignition switch ON, and wait for at least 60 seconds.

e. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

DTC B1780 is not output.

HINT:

DTCs other than DTC B1780 may be output at this time, but they are not related to this check.

NG: Go to step 2

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

2. **CHECK CONNECTION OF CONNECTOR**

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 occupant classification ECU and the front occupant classification sensor LH.

OK:

Connectors are properly connected.

NG: CONNECT CONNECTOR

OK: Go to next step

3. **CHECK CONNECTOR**

a. Check that the connectors (on the occupant classification ECU side and front occupant classification sensor LH side) are not damaged (See **ELECTRONIC CIRCUIT INSPECTION PROCEDURE**).

OK:

Connectors are not deformed or damaged.

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NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

4. **CHECK FRONT SEAT WIRE RH**
   a. Disconnect the connectors from the occupant classification ECU and the front occupant classification sensor LH.
   b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Measure the voltage according to the value(s) in the table below.

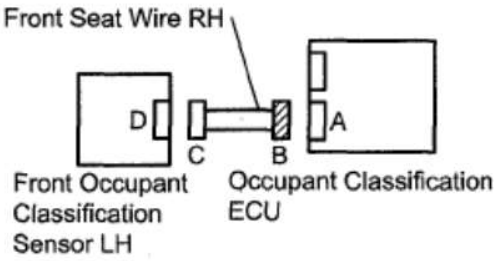
Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
z8-1 (SGD1) - Body ground	Ignition switch ON	Below 1 V
z8-7 (SIG1) - Body ground		
z8-11 (SVC1) - Body ground		

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Front view of wire harness connector:
(to Occupant Classification ECU)



Front view of wire harness connector: (to Front Occupant Classification Sensor LH)

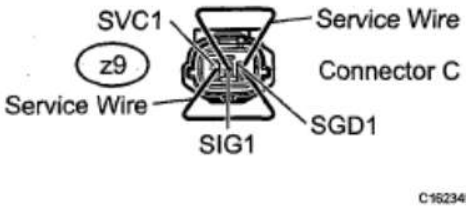


Fig. 179: Identifying Z8 And Z9 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Turn the ignition switch off.
f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
g. Using service wires, connect terminals 1 (SVC1) and 3 (SGD1), and connect terminals 2 (SIG1) and 3 (SGD1) of connector C.

NOTE: Do not forcibly insert the service wires into the terminals of the connector.

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

Standard resistance

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TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z8-7 (SIG1) - z8-1 (SGD1)	Always	Below 1 ohms
z8-11 (SVC1) - z8-1 (SGD1)		

i. Disconnect the service wires from connector C.

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z8-7 (SIG1) - z8-1 (SGD1)	Always	1 Mohms or higher
z8-11 (SVC1) - z8-1 (SGD1)		
z8-7 (SIG1) - z8-11 (SVC1)		
z8-1 (SGD1) - Body ground		
z8-7 (SIG1)- Body ground		
z8-11 (SVC1) - Body ground		

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

5. **CHECK FOR DTC**

a. Connect the connectors to the occupant classification ECU and the front occupant classification sensor LH.

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

c. Turn the ignition switch ON, and wait for at least 60 seconds.

d. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

HINT:

- First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
- Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

e. Turn the ignition switch off.

f. Turn the ignition switch ON, and wait for at least 60 seconds.

g. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

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DTC B1780 is not output.

HINT:

DTCs other than DTC B1780 may be output at this time, but they are not related to this check.

NG: Go to step 6

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

6. **REPLACE OCCUPANT CLASSIFICATION ECU**
   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 occupant classification ECU (See **REMOVAL**).

   HINT:

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

7. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Connect a Techstream to the DLC3.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

NG: Go to step 10

OK: Go to next step

8. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

   Standard range:

   27 to 33 kg (59.5 to 72.8 lb)

NG: Go to step 10

OK: Go to next step

9. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

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HINT:

- First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
- Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

c. Turn the ignition switch off.

d. Turn the ignition switch ON, and wait for at least 60 seconds.

e. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

DTC B1780 is not output.

HINT:

DTCs other than DTC B1780 may be output at this time, but they are not related to this check.

NG: Go to step 10

OK : END

10. **REPLACE FRONT SEAT FRAME WITH ADJUSTER ASSEMBLY RH**

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 frame with adjuster RH (See **DISASSEMBLY**).

HINT:

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

11. **PERFORM ZERO POINT CALIBRATION**

a. Connect a Techstream to the DLC3.

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

c. Turn the ignition switch ON, and wait for at least 60 seconds.

d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

12. **PERFORM SENSITIVITY CHECK**

a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

Standard range:

27 to 33 kg (59.5 to 72.8 lb)

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NEXT : END

DTC B1781 FRONT OCCUPANT CLASSIFICATION SENSOR RH CIRCUIT MALFUNCTION

DESCRIPTION

The front occupant classification sensor RH circuit consists of the occupant classification ECU and the front occupant classification sensor RH.

DTC B1781 is set when a malfunction is detected in the front occupant classification sensor RH circuit.

DTC DETECTION CONDITION CHART

DTC Code	DTC Detection Condition	Trouble Area
B1781	One of following conditions is met: • Occupant classification ECU receives line short circuit signal, open circuit signal, short circuit to ground signal or short circuit to +B signal in front occupant classification sensor RH circuit for 2 seconds • Front occupant classification sensor RH malfunction • Occupant classification ECU malfunction	• Front seat frame with adjuster RH (Front occupant classification sensor RH) • Front seat wire RH • Occupant classification ECU

HINT:

- When DTC B1650/32 is detected as a result of troubleshooting the airbag system, perform troubleshooting for DTC B1781 of the occupant classification system.
- Use a Techstream to check for DTCs of the occupant classification ECU, otherwise the DTC cannot be read.

WIRING DIAGRAM

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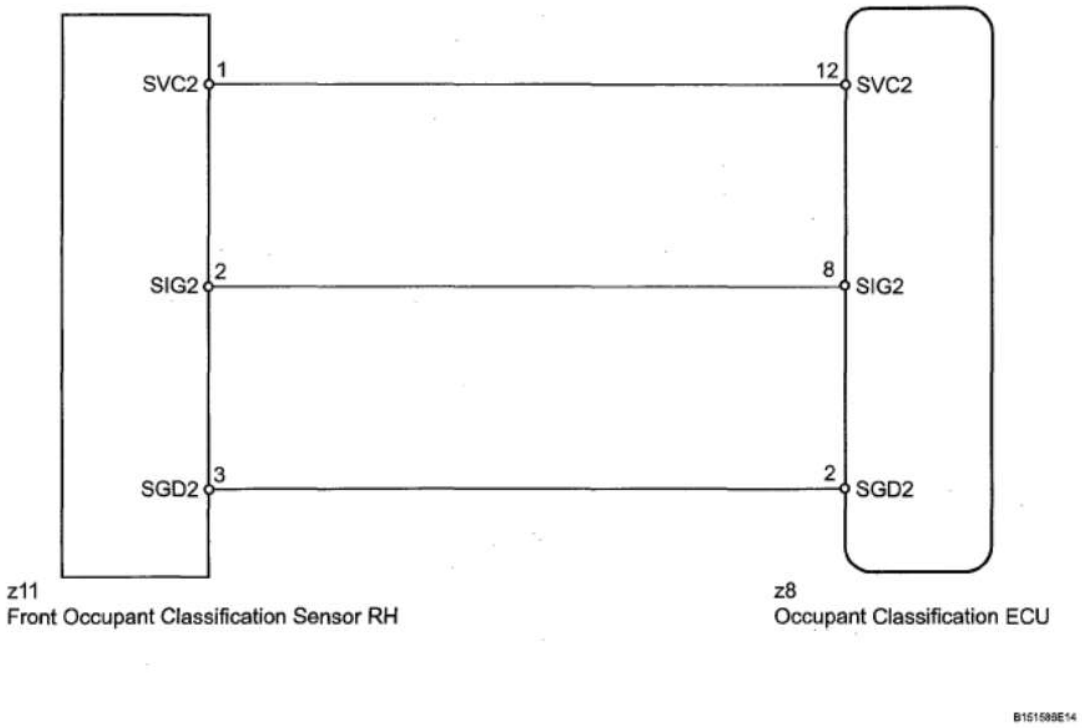


Fig. 180: Front Occupant Classification Sensor RH And ECU - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

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

1. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

      HINT:

      - First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
      - Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.

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e. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

DTC B1781 is not output.

HINT:

DTCs other than DTC B1781 may be output at this time, but they are not related to this check.

NG: Go to step 2

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

2. **CHECK CONNECTION OF CONNECTOR**
   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 occupant classification ECU and the front occupant classification sensor RH.

OK:

Connectors are properly connected.

NG: CONNECT CONNECTOR

OK: Go to next step

3. **CHECK CONNECTOR**
   a. Check that the connectors (on the occupant classification ECU side and front occupant classification sensor RH side) are not damaged (See **ELECTRONIC CIRCUIT INSPECTION PROCEDURE**).

OK:

Connectors are not deformed or damaged.

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

4. **CHECK FRONT SEAT WIRE RH**
   a. Disconnect the connectors from the occupant classification ECU and the front occupant classification sensor RH.

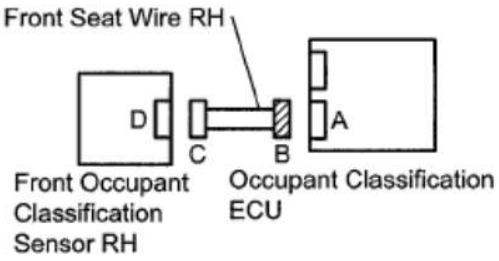
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b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch ON, and wait for at least 60 seconds.
d. Measure the voltage according to the value(s) in the table below.

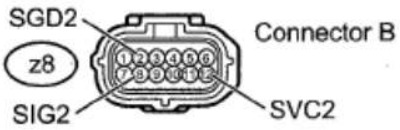
Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

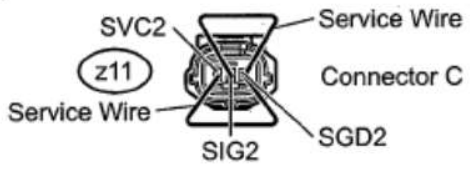
Tester Connection	Switch Condition	Specified Condition
z8-2 (SGD2) - Body ground	Ignition switch ON	Below 1 V
z8-8 (SIG2) - Body ground		
z8-12 (SVC2) - Body ground		



Front view of wire harness connector:
(to Occupant Classification ECU)



Front view of wire harness connector: (to Front Occupant Classification Sensor RH)



C162340E02

Fig. 181: Identifying Z8 And Z11 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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e. Turn the ignition switch off.
f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
g. Using service wires, connect terminals 1 (SVC2) and 3 (SGD2), and connect terminals 2 (SIG2) and 3 (SGD2) of connector C.

NOTE: Do not forcibly insert the service wires into the terminals of the connector.

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z8-8 (SIG2) - z8-2 (SGD2)	Always	Below 1 ohms
z8-12 (SVC2) - z8-2 (SGD2)		

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z8-8 (SIG2) - z8-2 (SGD2)	Always	1 Mohms or higher
z8-12 (SVC2) - z8-2 (SGD2)		
z8-8 (SIG2) - z8-12 (SVC2)		
z8-2 (SGD2) - Body ground		
z8-8 (SIG2) - Body ground		
z8-12 (SVC2) - Body ground		

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

5. **CHECK FOR DTC**
   a. Connect the connectors to the occupant classification ECU and the front occupant classification sensor RH.
   b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

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HINT:

- First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
- Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

e. Turn the ignition switch off.
f. Turn the ignition switch ON, and wait for at least 60 seconds.
g. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

DTC B1781 is not output.

HINT:

DTCs other than DTC B1781 may be output at this time, but they are not related to this check.

NG: Go to step 6

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

6. **REPLACE OCCUPANT CLASSIFICATION ECU**
   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 occupant classification ECU (See **REMOVAL**).

   HINT:

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

7. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Connect a Techstream to the DLC3.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

NG: Go to step 10

OK: Go to next step

8. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

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Standard range:

27 to 33 kg (59.5 to 72.8 lb)

NG: Go to step 10

OK: Go to next step

9. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

      HINT:

      - First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
      - Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

      OK:

      DTC B1781 is not output.

      HINT:

      DTCs other than DTC B1781 may be output at this time, but they are not related to this check.

NG: Go to step 10

OK : END

10. **REPLACE FRONT SEAT FRAME WITH ADJUSTER ASSEMBLY RH**
    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 frame with adjuster RH (See **DISASSEMBLY**).

       HINT:

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

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11. **PERFORM ZERO POINT CALIBRATION**
    a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
    b. Connect a Techstream to the DLC3.
    c. Turn the ignition switch ON, and wait for at least 60 seconds.
    d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).
12. **PERFORM SENSITIVITY CHECK**
    a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

    Standard range:

    27 to 33 kg (59.5 to 72.8 lb)

NEXT : END

DTC B1782 REAR OCCUPANT CLASSIFICATION SENSOR LH CIRCUIT MALFUNCTION

DESCRIPTION

The rear occupant classification sensor LH circuit consists of the occupant classification ECU and the rear occupant classification sensor LH.

DTC B1782 is set when a malfunction is detected in the rear occupant classification sensor LH circuit.

DTC DETECTION CONDITION CHART

DTC Code	DTC Detection Condition	Trouble Area
B1782	One of following conditions is met: • Occupant classification ECU receives line short circuit signal, open circuit signal, short circuit to ground signal or short circuit to B+ signal in rear occupant classification sensor LH circuit for 2 seconds • Rear occupant classification sensor LH malfunction • Occupant classification ECU malfunction	• Front seat frame with adjuster RH (Rear occupant classification sensor LH) • Front seat wire RH • Occupant classification ECU

HINT:

- When DTC B1650/32 is detected as a result of troubleshooting the airbag system, perform troubleshooting for DTC B1782 of the occupant classification system.
- Use a Techstream to check for DTCs of the occupant classification ECU, otherwise the DTCs cannot be read.

WIRING DIAGRAM

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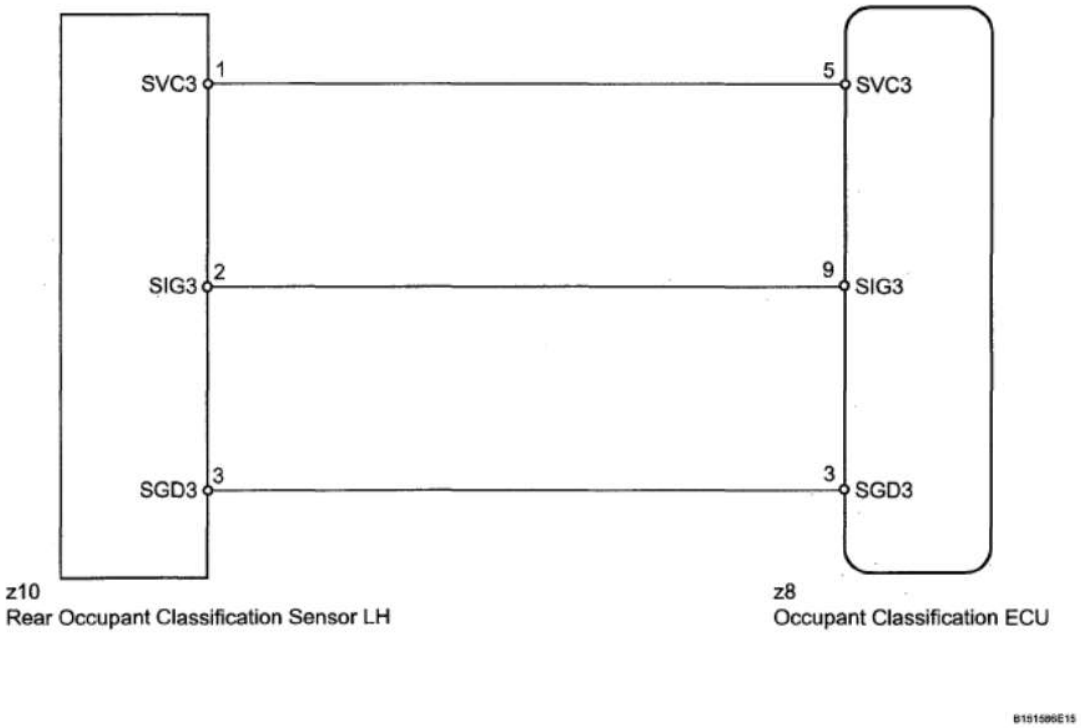


Fig. 182: Rear Occupant Classification Sensor LH And ECU - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

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

1. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

      HINT:

      - First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
      - Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.

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e. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

DTC B1782 is not output.

HINT:

DTCs other than DTC B1782 may be output at this time, but they are not related to this check.

NG: Go to step 2

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

2. **CHECK CONNECTION OF CONNECTOR**
   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 occupant classification ECU and the rear occupant classification sensor LH.

OK:

Connectors are properly connected.

NG: CONNECT CONNECTOR

OK: Go to next step

3. **CHECK CONNECTOR**
   a. Check that the connectors (on the occupant classification ECU side and rear occupant classification sensor LH side) are not damaged (See **ELECTRONIC CIRCUIT INSPECTION PROCEDURE**).

OK:

Connectors are not deformed or damaged.

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

4. **CHECK FRONT SEAT WIRE RH**
   a. Disconnect the connectors from the occupant classification ECU and the rear occupant classification sensor LH.

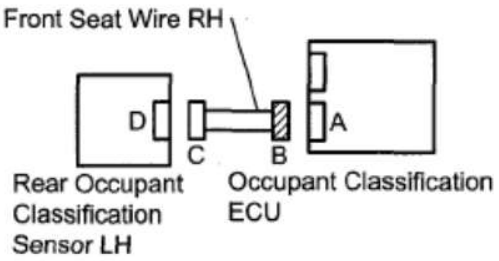
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b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch ON, and wait for at least 60 seconds.
d. Measure the voltage according to the value(s) in the table below.

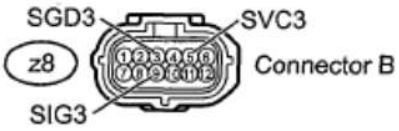
Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
z8-3 (SGD3) - Body ground	Ignition switch ON	Below 1 V
z8-5 (SVC3) - Body ground		
z8-9 (SIG3) - Body ground		



Front view of wire harness connector:
(to Occupant Classification ECU)



Front view of wire harness connector: (to Rear Occupant Classification Sensor LH)



C162340E03

Fig. 183: Identifying Z8 And Z10 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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e. Turn the ignition switch off.
f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
g. Using service wires, connect terminals 1 (SVC3) and 3 (SGD3), and connect terminals 2 (SIG3) and 3 (SGD3) of connector C.

NOTE: Do not forcibly insert the service wires into the terminals of the connector.

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z8-5 (SVC3) - z8-3 (SGD3)	Always	Below 1 ohms
z8-9 (SIG3) - z8-3 (SGD3)		

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z8-5 (SVC3) - z8-3 (SGD3)	Always	1 Mohms or higher
z8-9 (SIG3) - z8-3 (SGD3)		
z8-5 (SVC3) - z8-9 (SIG3)		
z8-3 (SGD3) - Body ground		
z8-5 (SVC3) - Body ground		
z8-9 (SIG3) - Body ground		

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

5. **CHECK FOR DTC**
   a. Connect the connectors to the occupant classification ECU and the rear occupant classification sensor LH.
   b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

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HINT:

- First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
- Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

e. Turn the ignition switch off.
f. Turn the ignition switch ON, and wait for at least 60 seconds.
g. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

DTC B1782 is not output.

HINT:

DTCs other than DTC B1782 may be output at this time, but they are not related to this check.

NG: Go to step 6

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

6. **REPLACE OCCUPANT CLASSIFICATION ECU**
   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 occupant classification ECU (See **REMOVAL**).

   HINT:

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

7. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Connect a Techstream to the DLC3.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

NG: Go to step 10

OK: Go to next step

8. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

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Standard range:

27 to 33 kg (59.5 to 72.8 lb)

NG: Go to step 10

OK: Go to next step

9. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear the DTCs stored in the memory (See **DTC CHECK / CLEAR**).

      HINT:

      - First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
      - Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

      OK:

      DTC B1782 is not output.

      HINT:

      DTCs other than DTC B1782 may be output at this time, but they are not related to this check.

NG: Go to step 10

OK : END

10. **REPLACE FRONT SEAT FRAME WITH ADJUSTER ASSEMBLY RH**
    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 frame with adjuster RH (See **DISASSEMBLY**).

       HINT:

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

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11. **PERFORM ZERO POINT CALIBRATION**
    a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
    b. Connect a Techstream to the DLC3.
    c. Turn the ignition switch ON, and wait for at least 60 seconds.
    d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).
12. **PERFORM SENSITIVITY CHECK**
    a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

    Standard range:

    27 to 33 kg (59.5 to 72.8 lb)

NEXT : END

DTC B1783 REAR OCCUPANT CLASSIFICATION SENSOR RH CIRCUIT MALFUNCTION

DESCRIPTION

The rear occupant classification sensor RH circuit consists of the occupant classification ECU and the rear occupant classification sensor RH.

DTC B1783 is set when a malfunction is detected in the rear occupant classification sensor RH circuit.

DTC DETECTION CONDITION CHART

DTC Code	DTC Detection Condition	Trouble Area
B1783	One of following conditions is met: • Occupant classification ECU receives line short circuit signal, open circuit signal, short circuit to ground signal or short circuit to +B signal in rear occupant classification sensor RH circuit for 2 seconds • Rear occupant classification sensor RH malfunction • Occupant classification ECU malfunction	• Front seat frame with adjuster RH (Rear occupant classification sensor RH) • Front seat wire wire RH • Occupant classification ECU

HINT:

- When DTC B1650/32 is detected as a result of troubleshooting the airbag system, perform troubleshooting for DTC B1783 of the occupant classification system.
- Use a Techstream to check for DTCs of the occupant classification ECU, otherwise the DTCs cannot be read.

WIRING DIAGRAM

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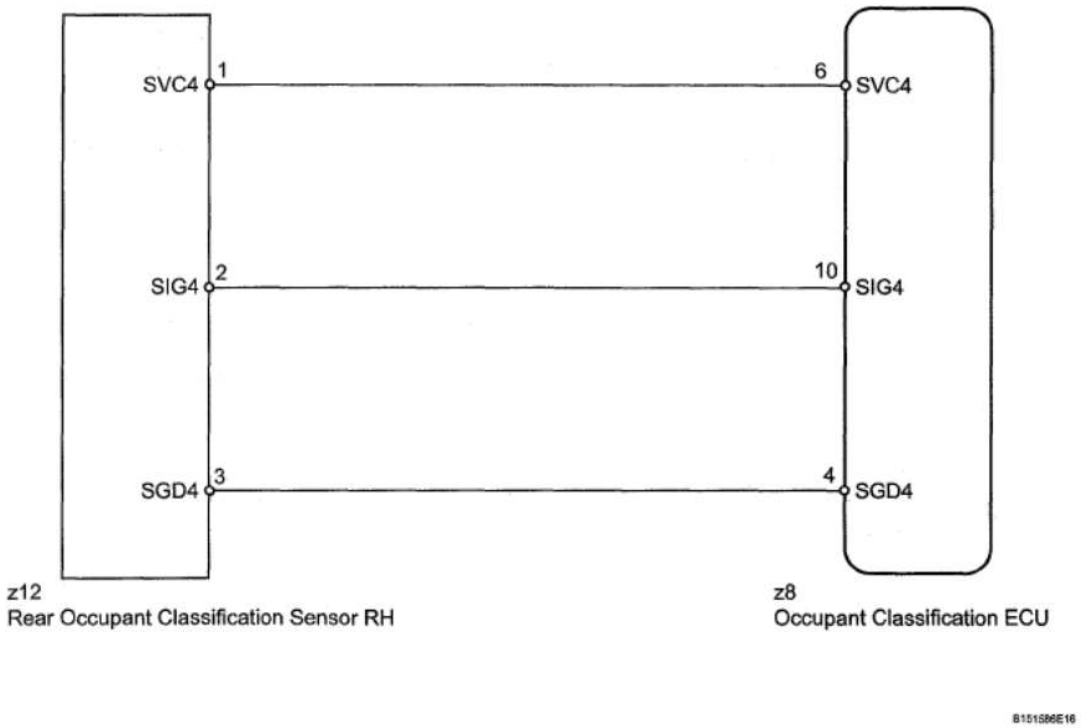


Fig. 184: Rear Occupant Classification Sensor RH And ECU - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

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

1. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

      HINT:

      - First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
      - Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.

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e. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

DTC B1783 is not output.

HINT:

DTCs other than DTC B1783 may be output at this time, but they are not related to this check.

NG: Go to step 2

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

2. **CHECK CONNECTION OF CONNECTOR**
   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 occupant classification ECU and the rear occupant classification sensor RH.

OK:

Connectors are properly connected.

NG: CONNECT CONNECTOR

OK: Go to next step

3. **CHECK CONNECTOR**
   a. Check that the connectors (on the occupant classification ECU side and rear occupant classification sensor RH side) are not damaged (See **ELECTRONIC CIRCUIT INSPECTION PROCEDURE**).

OK:

Connectors are not deformed or damaged.

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

4. **CHECK FRONT SEAT WIRE RH**
   a. Disconnect the connectors from the occupant classification ECU and the rear occupant classification sensor RH.

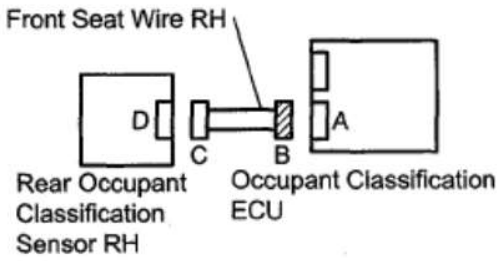
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b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch ON, and wait for at least 60 seconds.
d. Measure the voltage according to the value(s) in the table below.

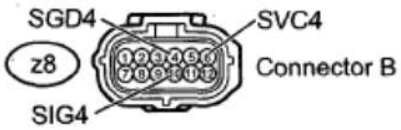
Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
z8-4 (SGD4) - Body ground	Ignition switch ON	Below 1 V
z8-6 (SVC4) - Body ground		
z8-10 (SIG4) - Body ground		



Front view of wire harness connector:
(to Occupant Classification ECU)



Front view of wire harness connector: (to Rear Occupant Classification Sensor RH)

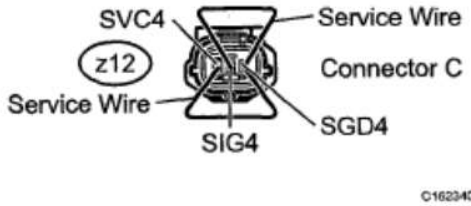


Fig. 185: Identifying Z8 And Z12 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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e. Turn the ignition switch off.
f. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
g. Using service wires, connect terminals 1 (SVC4) and 3 (SGD4), and connect terminals 2 (SIG4) and 3 (SGD4) of connector C.

NOTE: Do not forcibly insert the service wires into the terminals of the connector.

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z8-6 (SVC4) - z8-4 (SGD4)	Always	Below 1 ohms
z8-10 (SIG4) - z8-4 (SGD4)		

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z8-6 (SVC4) - z8-4 (SGD4)	Always	1 Mohms or higher
z8-10 (SIG4) - z8-4 (SGD4)		
z8-6 (SVC4) - z8-10 (SIG4)		
z8-4 (SGD4) - Body ground		
z8-6 (SVC4) - Body ground		
z8-10 (SIG4) - Body ground		

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

5. **CHECK FOR DTC**
   a. Connect the connectors to the occupant classification ECU and the rear occupant classification sensor RH.
   b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

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HINT:

- First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
- Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

e. Turn the ignition switch off.
f. Turn the ignition switch ON, and wait for at least 60 seconds.
g. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

DTC B1783 is not output.

HINT:

DTCs other than DTC B1783 may be output at this time, but they are not related to this check.

NG: Go to step 6

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

6. **REPLACE OCCUPANT CLASSIFICATION ECU**
   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 occupant classification ECU (See **REMOVAL**).

   HINT:

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

7. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Connect a Techstream to the DLC3.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

NG: Go to step 10

OK: Go to next step

8. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

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Standard range:

27 to 33 kg (59.5 to 72.8 lb)

NG: Go to step 10

OK: Go to next step

9. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

      HINT:

      - First clear DTCs' stored in the occupant classification ECU and then in the center airbag sensor.
      - Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

      OK:

      DTC B1783 is not output.

      HINT:

      DTCs other than DTC B1783 may be output at this time, but they are not related to this check.

NG: Go to step 10

OK : END

10. **REPLACE FRONT SEAT FRAME WITH ADJUSTER ASSEMBLY RH**
    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 frame with adjuster RH (See **DISASSEMBLY**).

       HINT:

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

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11. **PERFORM ZERO POINT CALIBRATION**
    a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
    b. Connect a Techstream to the DLC3.
    c. Turn the ignition switch ON, and wait for at least 60 seconds.
    d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).
12. **PERFORM SENSITIVITY CHECK**
    a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

       Standard range:

       27 to 33 kg (59.5 to 72.8 lb)

NEXT : END

DTC B1785 FRONT OCCUPANT CLASSIFICATION SENSOR LH COLLISION DETECTION

DESCRIPTION

DTC B1785 is set when the occupant classification ECU receives a collision detection signal, which is sent by the front occupant classification sensor LH when an accident occurs.

DTC B1785 is also set when the front seat frame with adjuster RH is subjected to a strong impact, even if an actual accident has not occurred.

However, when the occupant classification ECU outputs a collision detection signal, even if the vehicle is not in a collision, DTC B1785 can be cleared by conducting the zero point calibration and sensitivity check.

Therefore, if DTC B1785 is set, first perform the zero point calibration and sensitivity check.

DTC DETECTION CONDITION CHART

DTC Code	DTC Detection Condition	Trouble Area
B1785	Either of following conditions is met: • Occupant classification ECU receives collision detection signal, which is sent by front occupant classification sensor LH when accident occurs • Front seat frame with adjuster RH is subjected to strong impact, even if actual accident has not occurred	• Front seat frame with adjuster RH (Front occupant classification sensor LH) • Occupant classification ECU

HINT:

- When DTC B1650/32 is set as a result of troubleshooting the airbag system, perform troubleshooting for

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DTC B1785 of the occupant classification system.

- Use a Techstream to check for DTCs of the occupant classification ECU, otherwise the DTCs cannot be read.

WIRING DIAGRAM

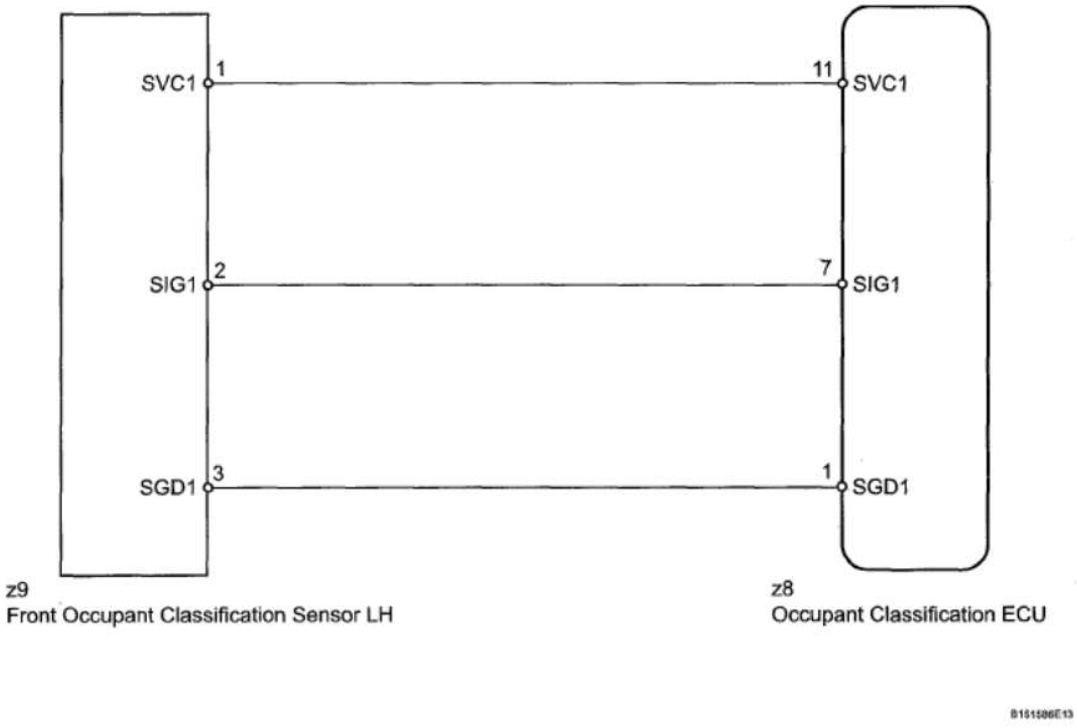


Fig. 186: Front Occupant Classification Sensor And ECU - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the center airbag sensor (See **DTC CHECK / CLEAR**).
   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Using a Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

   OK:

   DTC B1785 is not output.

   HINT:

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DTCs other than DTC B1785 may be output at this time, but they are not related to this check.

NG: Go to step 2

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

2. **PERFORM ZERO POINT CALIBRATION**
   a. Connect a Techstream to the DLC3.
   b. Turn the ignition switch ON, and wait for at least 60 seconds.
   c. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

NG: Go to step 5

OK: Go to next step

3. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

      Standard range:

      27 to 33 kg (59.5 to 72.8 lb)

NG: Go to step 5

OK: Go to next step

4. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the center airbag sensor (See **DTC CHECK / CLEAR**).
   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Using a Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

      OK:

      DTC B1785 is not output.

      HINT:

      DTCs other than DTC B1785 may be output at this time, but they are not related to this check.

NG: Go to step 5

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OK : END

5. **REPLACE FRONT SEAT FRAME WITH ADJUSTER ASSEMBLY RH**
   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 frame with adjuster RH (See **DISASSEMBLY**).

      HINT:

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

6. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Connect a Techstream to the DLC3.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

   NG: Go to step 9

   OK: Go to next step

7. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

      Standard range:

      27 to 33 kg (59.5 to 72.8 lb)

   NG: Go to step 9

   OK: Go to next step

8. **CHECK FOR DTC**
   a. Connect the connectors to the occupant classification ECU and the front occupant classification sensor LH.
   b. Turn the ignition switch ON, and wait for at least 60 seconds.
   c. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

      HINT:

      - First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
      - Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

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d. Turn the ignition switch off.
e. Turn the ignition switch ON, and wait for at least 60 seconds.
f. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

DTC B1785 is not output.

HINT:

DTCs other than DTC B1785 may be output at this time, but they are not related to this check.

NG: Go to step 9

OK : END

9. **REPLACE OCCUPANT CLASSIFICATION ECU**
   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 occupant classification ECU (See **REMOVAL**).

   HINT:

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

10. **PERFORM ZERO POINT CALIBRATION**
    a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
    b. Connect a Techstream to the DLC3.
    c. Turn the ignition switch ON, and wait for at least 60 seconds.
    d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).
11. **PERFORM SENSITIVITY CHECK**
    a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

    Standard range:

    27 to 33 kg (59.5 to 72.8 lb)

NEXT : END

DTC B1786 FRONT OCCUPANT CLASSIFICATION SENSOR RH COLLISION DETECTION

DESCRIPTION

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DTC B1786 is set when the occupant classification ECU receives a collision detection signal, which is sent by the front occupant classification sensor RH when an accident occurs.

DTC B1786 is also set when the front seat frame with adjuster RH is subjected to a strong impact, even if an actual accident has not occurred.

However, when the occupant classification ECU outputs a collision detection signal, even if the vehicle is not in a collision, DTC B1786 can be cleared by conducting the zero point calibration and sensitivity check.

Therefore, if DTC B1786 is set, first perform the zero point calibration and sensitivity check.

DTC DETECTION CONDITION CHART

DTC Code	DTC Detection Condition	Trouble Area
B1786	Either of following conditions is met: • Occupant classification ECU receives collision detection signal, which is sent by front occupant classification sensor RH when accident occurs • Front seat frame with adjuster RH is subjected to strong impact, even if actual accident has not occurred	• Front seat frame with adjuster RH (Front occupant classification sensor RH) • Occupant classification ECU

HINT:

- When DTC B1650/32 is set as a result of troubleshooting the airbag system, perform troubleshooting for DTC B1786 of the occupant classification system.
- Use a Techstream to check for DTCs of the occupant classification ECU, otherwise the DTCs cannot be read.

WIRING DIAGRAM

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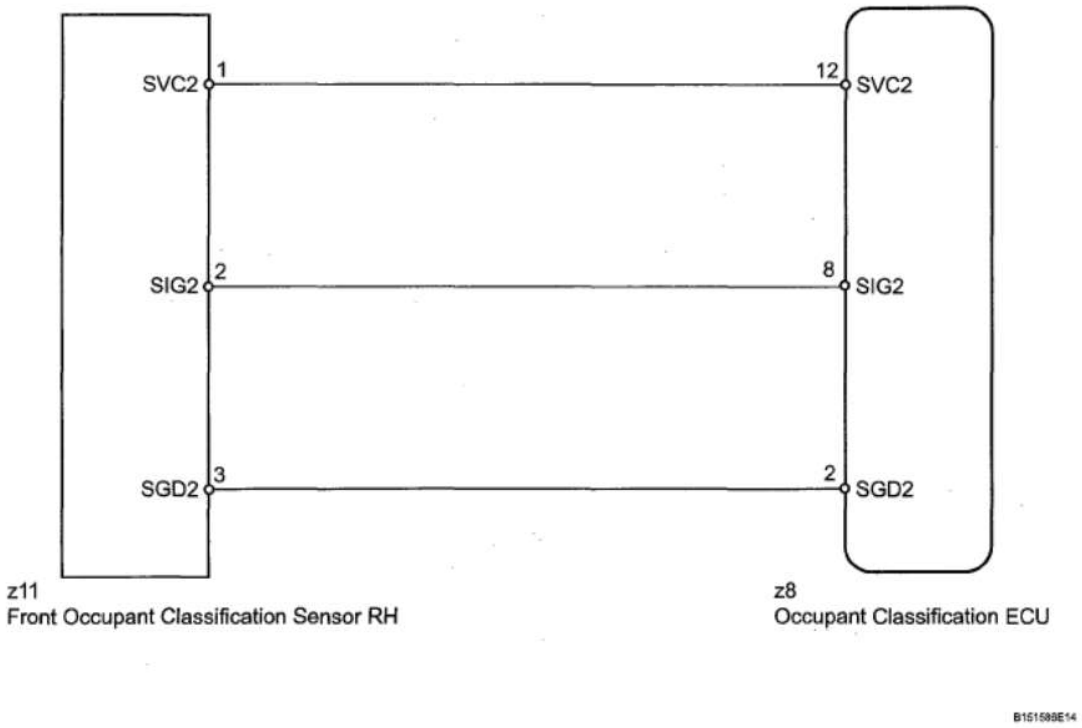


Fig. 187: Front Occupant Classification Sensor RH And ECU - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the center airbag sensor (See **DTC CHECK / CLEAR**).
   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Using a Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

      OK:

      DTC B1786 is not output.

      HINT:

      DTCs other than DTC B1786 may be output at this time, but they are not related to this check.

NG: Go to step 2

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

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2. **PERFORM ZERO POINT CALIBRATION**
   a. Connect a Techstream to the DLC3.
   b. Turn the ignition switch ON, and wait for at least 60 seconds.
   c. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

   NG: Go to step 5

   OK: Go to next step

3. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

      Standard range:

      27 to 33 kg (59.5 to 72.8 lb)

   NG: Go to step 5

   OK: Go to next step

4. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the center airbag sensor (See **DTC CHECK / CLEAR**).
   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Using a Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

      OK:

      DTC B1786 is not output.

      HINT:

      DTCs other than DTC B1786 may be output at this time, but they are hot related to this check.

   NG: Go to step 5

   OK : END

5. **REPLACE FRONT SEAT FRAME WITH ADJUSTER ASSEMBLY RH**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

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c. Replace the front seat frame with adjuster RH (See **DISASSEMBLY**).

HINT:

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

6. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Connect a Techstream to the DLC3.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

NG: Go to step 9

OK: Go to next step

7. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

Standard range:

27 to 33 kg (59.5 to 72.8 lb)

NG: Go to step 9

OK: Go to next step

8. **CHECK FOR DTC**
   a. Connect the connectors to the occupant classification ECU and the front occupant classification sensor RH.
   b. Turn the ignition switch ON, and wait for at least 60 seconds.
   c. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

HINT:

- First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
- Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   d. Turn the ignition switch off.
   e. Turn the ignition switch ON, and wait for at least 60 seconds.
   f. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

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OK:

DTC B1786 is not output.

HINT:

DTCs other than DTC B1786 may be output at this time, but they are not related to this check.

NG: Go to step 9

OK : END

9. **REPLACE OCCUPANT CLASSIFICATION ECU**
   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 occupant classification ECU (See **REMOVAL**).

   HINT:

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

10. **PERFORM ZERO POINT CALIBRATION**
    a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
    b. Connect a Techstream to the DLC3.
    c. Turn the ignition switch ON, and wait for at least 60 seconds.
    d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).
11. **PERFORM SENSITIVITY CHECK**
    a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

    Standard range:

    27 to 33 kg (59.5 to 72.8 lb)

NEXT : END

DTC B1787 REAR OCCUPANT CLASSIFICATION SENSOR LH COLLISION DETECTION

DESCRIPTION

DTC B1787 is set when the occupant classification ECU receives a collision detection signal, which is sent by the rear occupant classification sensor LH when an accident occurs.

DTC B1787 is also set when the front seat frame with adjuster RH is subjected to a strong impact, even if an actual accident has not occurred.

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However, when the occupant classification ECU outputs a collision detection signal, even if the vehicle is not in a collision, DTC B1787 can be cleared by conducting the zero point calibration and sensitivity check.

Therefore, if DTC B1787 is output, first perform the zero point calibration and sensitivity check.

DTC DETECTION CONDITION CHART

DTC Code	DTC Detection Condition	Trouble Area
B1787	Either of following conditions is met: • Occupant classification ECU receives collision detection signal, which is sent by rear occupant classification sensor LH when accident occurs • Front seat frame with adjuster RH is subjected to strong impact, even if actual accident has not occurred	• Front seat frame with adjuster RH (Rear occupant classification sensor LH) • Occupant classification ECU

HINT:

- When DTC B1650/32 is set as a result of troubleshooting the airbag system, perform troubleshooting for DTC B1787 of the occupant classification system.
- Use a Techstream to check for DTCs of the occupant classification ECU, otherwise the DTCs cannot be read.

WIRING DIAGRAM

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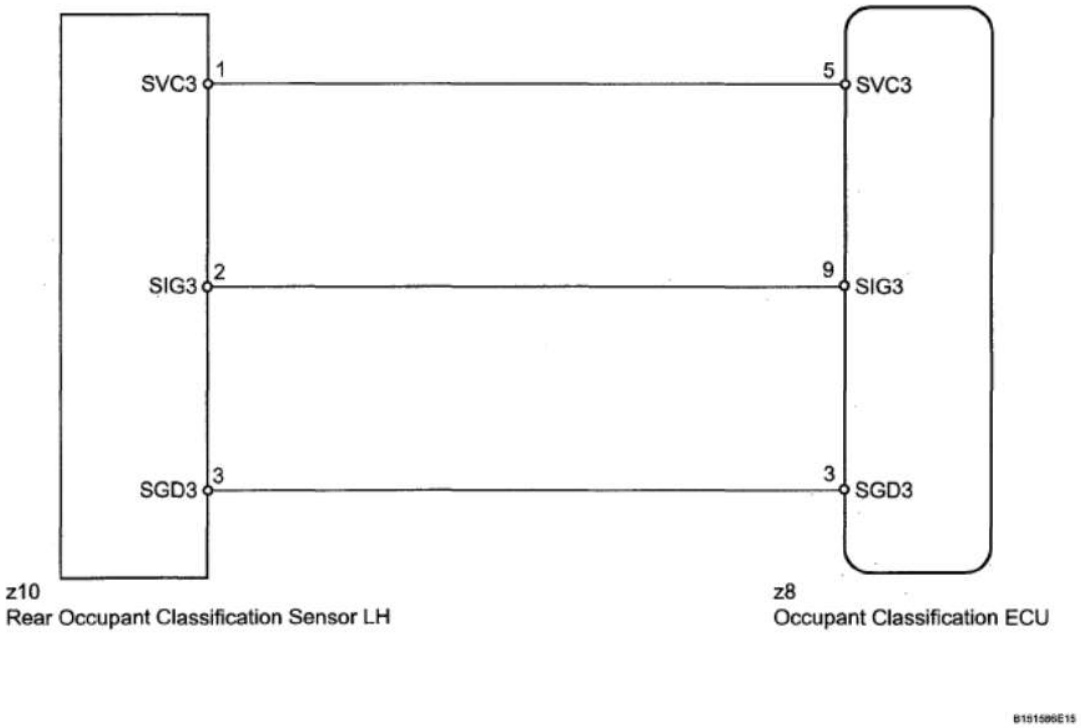


Fig. 188: Rear Occupant Classification Sensor LH And ECU - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the center airbag sensor (See **DTC CHECK / CLEAR**).
   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Using a Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

      OK:

      DTC B1787 is not output.

      HINT:

      DTCs other than DTC B1787 may be output at this time, but they are not related to this check.

NG: Go to step 2

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

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2. **PERFORM ZERO POINT CALIBRATION**
   a. Connect a Techstream to the DLC3.
   b. Turn the ignition switch ON, and wait for at least 60 seconds.
   c. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

   NG: Go to step 5

   OK: Go to next step

3. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

      Standard range:

      27 to 33 kg (59.5 to 72.8 lb)

   NG: Go to step 5

   OK: Go to next step

4. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the center airbag sensor (See **DTC CHECK / CLEAR**).
   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Using a Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

      OK:

      DTC B1787 is not output.

      HINT:

   DTCs other than DTC B1787 may be output at this time, but they are not related to this check.

   NG: Go to step 5

   OK : END

5. **REPLACE FRONT SEAT FRAME WITH ADJUSTER ASSEMBLY RH**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

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c. Replace the front seat frame with adjuster RH (See **DISASSEMBLY**).

HINT:

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

6. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Connect a Techstream to the DLC3.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

NG: Go to step 9

OK: Go to next step

7. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

Standard range:

27 to 33 kg (59.5 to 72.8 lb)

NG: Go to step 9

OK: Go to next step

8. **CHECK FOR DTC**
   a. Connect the connectors to the occupant classification ECU and the rear occupant classification sensor LH.
   b. Turn the ignition switch ON, and wait for at least 60 seconds.
   c. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

HINT:

- First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
- Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   d. Turn the ignition switch off.
   e. Turn the ignition switch ON, and wait for at least 60 seconds.
   f. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

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OK:

DTC B1787 is not output.

HINT:

DTCs other than DTC B1787 may be output at this time, but they are not related to this check.

NG: Go to step 9

OK : END

9. **REPLACE OCCUPANT CLASSIFICATION ECU**
   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 occupant classification ECU (See **REMOVAL**).

   HINT:

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

10. **PERFORM ZERO POINT CALIBRATION**
    a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
    b. Connect a Techstream to the DLC3.
    c. Turn the ignition switch ON, and wait for at least 60 seconds.
    d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).
11. **PERFORM SENSITIVITY CHECK**
    a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

    Standard range:

    27 to 33 kg (59.5 to 72.8 lb)

NEXT : END

DTC B1788 REAR OCCUPANT CLASSIFICATION SENSOR RH COLLISION DETECTION

DESCRIPTION

DTC B1788 is set when the occupant classification ECU receives a collision detection signal, which is sent by the rear occupant classification sensor RH when an accident occurs.

DTC B1788 is also set when the front seat frame with adjuster RH is subjected to a strong impact, even if an actual accident has not occurred.

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However, when the occupant classification ECU outputs a collision detection signal, even if the vehicle is not in a collision, DTC B1788 can be cleared by conducting the zero point calibration and sensitivity check.

Therefore, if DTC B1788 is output, first perform the zero point calibration and sensitivity check.

DTC DETECTION CONDITION CHART

DTC Code	DTC Detection Condition	Trouble Area
B1788	Either of following conditions is met: • Occupant classification ECU receives collision detection signal, which is sent by rear occupant classification sensor RH when accident occurs • Front seat frame with adjuster RH is subjected to strong impact, even if actual accident has not occurred	• Front seat frame with adjuster RH (Rear occupant classification sensor RH) • Occupant classification ECU

HINT:

- When DTC B1650/32 is set as a result of troubleshooting the airbag system, perform troubleshooting for DTC B1788 of the occupant classification system.
- Use a Techstream to check for DTCs of the occupant classification ECU, otherwise the DTCs cannot be read.

WIRING DIAGRAM

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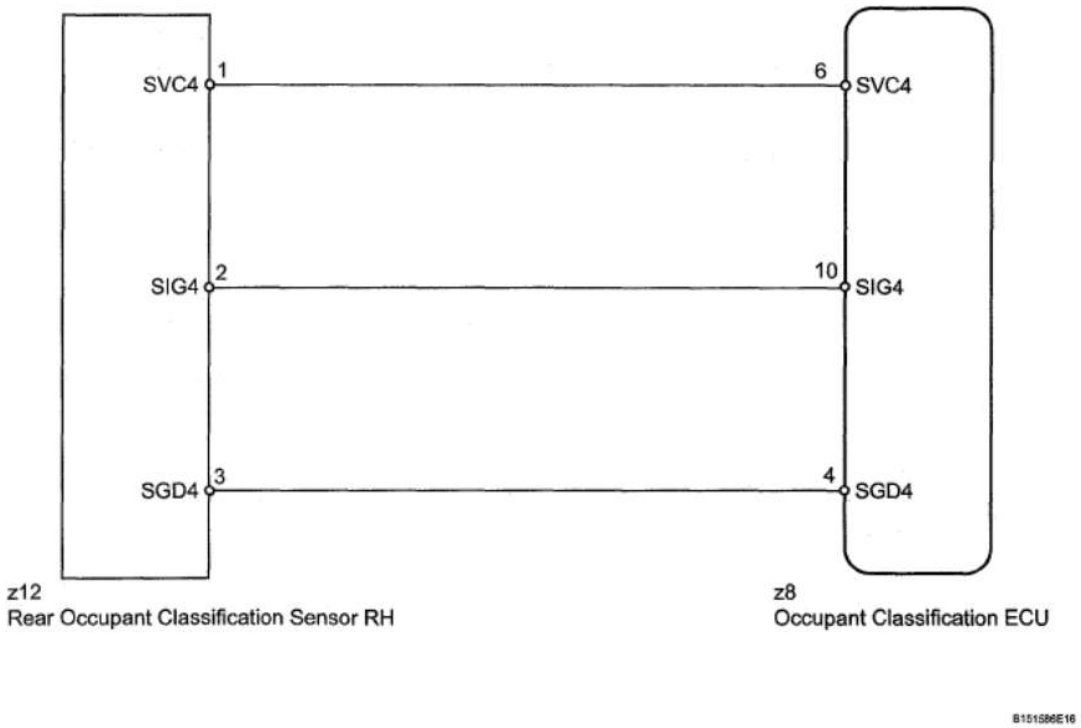


Fig. 189: Rear Occupant Classification Sensor RH And ECU - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the center airbag sensor (See **DTC CHECK / CLEAR**).
   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Using a Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

   OK:

   DTC B1788 is not output.

   HINT:

   DTCs other than DTC B1788 may be output at this time, but they are not related to this check.

NG: Go to step 2

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

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2. **PERFORM ZERO POINT CALIBRATION**
   a. Connect a Techstream to the DLC3.
   b. Turn the ignition switch ON, and wait for at least 60 seconds.
   c. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

   NG: Go to step 5

   OK: Go to next step

3. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

      Standard range:

      27 to 33 kg (59.5 to 72.8 lb)

   NG: Go to step 5

   OK: Go to next step

4. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear the DTCs stored in the center airbag sensor (See **DTC CHECK / CLEAR**).
   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Using a Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

      OK:

      DTC B1788 is not output.

      HINT:

      DTCs other than DTC B1788 may be output at this time, but they are not related to this check.

   NG: Go to step 5

   OK : END

5. **REPLACE FRONT SEAT FRAME WITH ADJUSTER ASSEMBLY RH**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

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c. Replace the front seat frame with adjuster RH (See **DISASSEMBLY**).

HINT:

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

6. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Connect a Techstream to the DLC3.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

NG: Go to step 9

OK: Go to next step

7. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

Standard range:

27 to 33 kg (59.5 to 72.8 lb)

NG: Go to step 9

OK: Go to next step

8. **CHECK FOR DTC**
   a. Connect the connectors to the occupant classification ECU and the rear occupant classification sensor RH.
   b. Turn the ignition switch ON, and wait for at least 60 seconds.
   c. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

HINT:

- First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
- Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   d. Turn the ignition switch off.
   e. Turn the ignition switch ON, and wait for at least 60 seconds.
   f. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

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OK:

DTC B1788 is not output.

HINT:

DTCs other than DTC B1788 may be output at this time, but they are not related to this check.

NG: Go to step 9

OK : END

9. **REPLACE OCCUPANT CLASSIFICATION ECU**
   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 occupant classification ECU (See **REMOVAL**).

   HINT:

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

10. **PERFORM ZERO POINT CALIBRATION**
    a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
    b. Connect a Techstream to the DLC3.
    c. Turn the ignition switch ON, and wait for at least 60 seconds.
    d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).
11. **PERFORM SENSITIVITY CHECK**
    a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

    Standard range:

    27 to 33 kg (59.5 to 72.8 lb)

NEXT : END

DTC B1790 CENTER AIRBAG SENSOR ASSEMBLY COMMUNICATION CIRCUIT MALFUNCTION

DESCRIPTION

The center airbag sensor communication circuit consists of the occupant classification ECU and the center airbag sensor.

DTC B1790 is set when a malfunction is detected in the center airbag sensor communication circuit.

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DTC DETECTION CONDITION CHART

DTC Code	DTC Detection Condition	Trouble Area
B1790	One of following conditions is met: • Occupant classification ECU receives line short circuit signal, open circuit signal, short circuit to ground signal or short circuit to +B signal in center airbag sensor communication circuit for 2 seconds • Center airbag sensor malfunction • Occupant classification ECU malfunction	• Floor wire • Occupant classification ECU • Center airbag sensor

HINT:

- When DTC B1630/32 is detected as a result of troubleshooting the airbag system, perform troubleshooting for DTC B1790 of the occupant classification system.
- Use a Techstream to check for DTCs of the occupant classification ECU, otherwise the DTCs cannot be read.

WIRING DIAGRAM

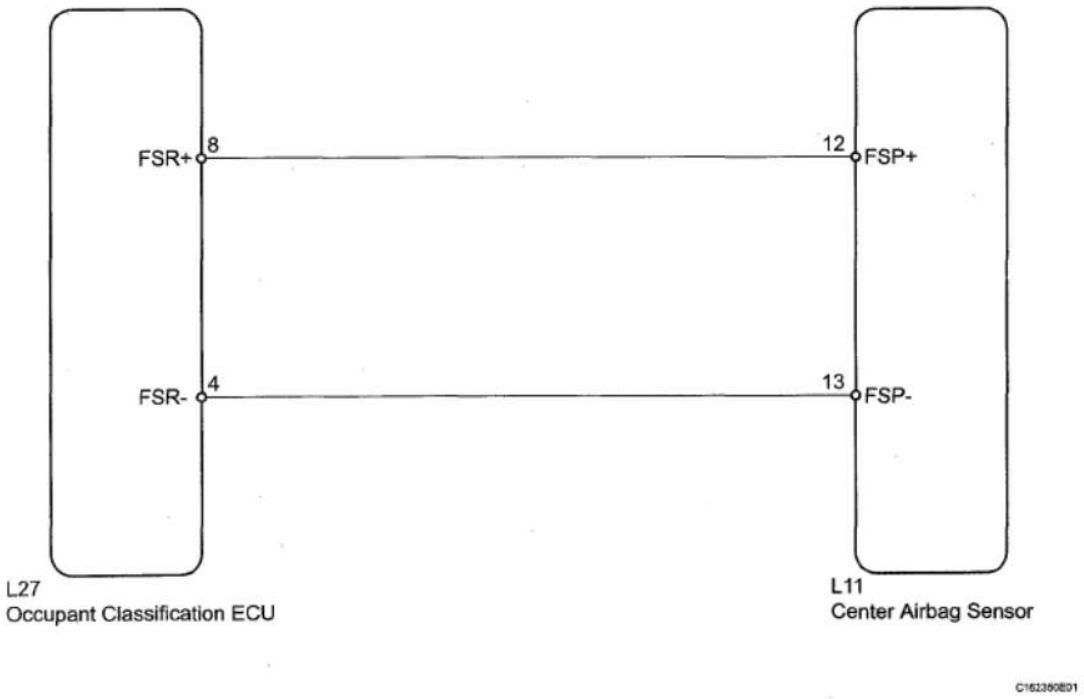


Fig. 190: Occupant Classification ECU And Center Air Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

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HINT:

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

1. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

      HINT:

      - First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
      - Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   c. Turn the ignition switch off.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

      OK:

      DTC B1790 is not output.

      HINT:

      DTCs other than DTC B1790 may be output at this time, but they are not related to this check.

   NG: Go to step 2

   OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

2. **CHECK CONNECTION OF CONNECTOR**
   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 occupant classification ECU and the center airbag sensor.

      OK:

      Connectors are properly connected.

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NG: CONNECT CONNECTOR

OK: Go to next step

3. **CHECK CONNECTOR**
   a. Check that the connectors (on the center airbag sensor side and occupant classification ECU side) are not damaged (See **ELECTRONIC CIRCUIT INSPECTION PROCEDURE**).

      OK:

      Connectors are not deformed or damaged.

NG: REPLACE FLOOR WIRE

OK: Go to next step

4. **CHECK FLOOR WIRE**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Turn the ignition switch ON, and wait for at least 60 seconds.
   c. Measure the voltage according to the value(s) in the table below.

      Standard voltage

      TESTER CONNECTION SPECIFIED CONDITION CHART

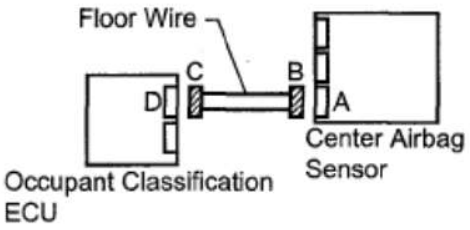
Tester Connection	Switch Condition	Specified Condition
L27-8 (FSR+) - Body ground	Ignition switch ON	Below 1 V
L27-4 (FSR-) - Body ground		

   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 12 (FSP+) and 13 (FSP-) of connector B.

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Front view of wire harness connector:
(to Occupant Classification ECU)



Rear view of wire harness connector:
(to Center Airbag Sensor)

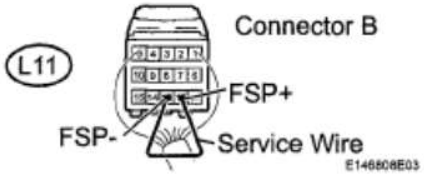


Fig. 191: Identifying L27 And L11 Connector Terminal
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L27-8 (FSR+) - L27-4 (FSR-)	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 SPECIFIED CONDITION CHART

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Tester Connection	Condition	Specified Condition
L27-8 (FSR+) - L27-4 (FSR-)	Always	1 Mohms or higher
L27-8 (FSR+) - Body ground		
L27-4 (FSR-) - Body ground		

NG: REPLACE FLOOR WIRE

OK: Go to next step

5. **CHECK FOR DTC**
   a. Connect the connectors to the occupant classification ECU and the center airbag sensor.
   b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

      HINT:

      - First clear any DTCs stored in the occupant classification ECU and then in the center airbag sensor.
      - Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   e. Turn the ignition switch off.
   f. Turn the ignition switch ON, and wait for at least 60 seconds.
   g. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

      OK:

      DTC B1790 is not output.

      HINT:

      DTCs other than DTC B1790 may be output at this time, but they are not related to this check.

NG: Go to step 6

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

6. **REPLACE OCCUPANT CLASSIFICATION ECU**
   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 occupant classification ECU (See **REMOVAL**).

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HINT:

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

7. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Connect a Techstream to the DLC3.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).
8. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

   Standard range:

   27 to 33 kg (59.5 to 72.8 lb)

9. **CHECK FOR DTC**
   a. Connect the connector to the occupant classification ECU.
   b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

   HINT:

   - First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
   - Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   e. Turn the ignition switch off.
   f. Turn the ignition switch ON, and wait for at least 60 seconds.
   g. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

DTC B1790 is not output.

HINT:

DTCs other than DTC B1790 may be output at this time, but they are not related to this check.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **REMOVAL**)

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OK : END

DTC B1793 OCCUPANT CLASSIFICATION SENSOR POWER SUPPLY CIRCUIT MALFUNCTION

DESCRIPTION

The occupant classification sensor power supply circuit consists of the occupant classification ECU and the occupant classification sensors.

DTC B1793 is set when a malfunction is detected in the occupant classification sensor power supply circuit.

DTC DETECTION CONDITION CHART

DTC Code	DTC Detection Condition	Trouble Area
B1793	One of following conditions is met: • Occupant classification ECU receives line short circuit signal, open circuit signal, short circuit to ground signal or short circuit to +B signal in occupant classification sensor power supply circuit for 2 seconds • Open circuit in occupant classification sensor wire harness • Occupant classification ECU malfunction	• Front seat frame with adjuster RH (Occupant classification sensors) • Front seat wire RH • Occupant classification ECU

HINT:

- When DTC B1650/32 is detected as a result of troubleshooting the airbag system, perform troubleshooting for DTC B1793 of the occupant classification system.
- Use a Techstream to check for DTCs of the occupant classification ECU, otherwise the DTCs cannot be read.

WIRING DIAGRAM

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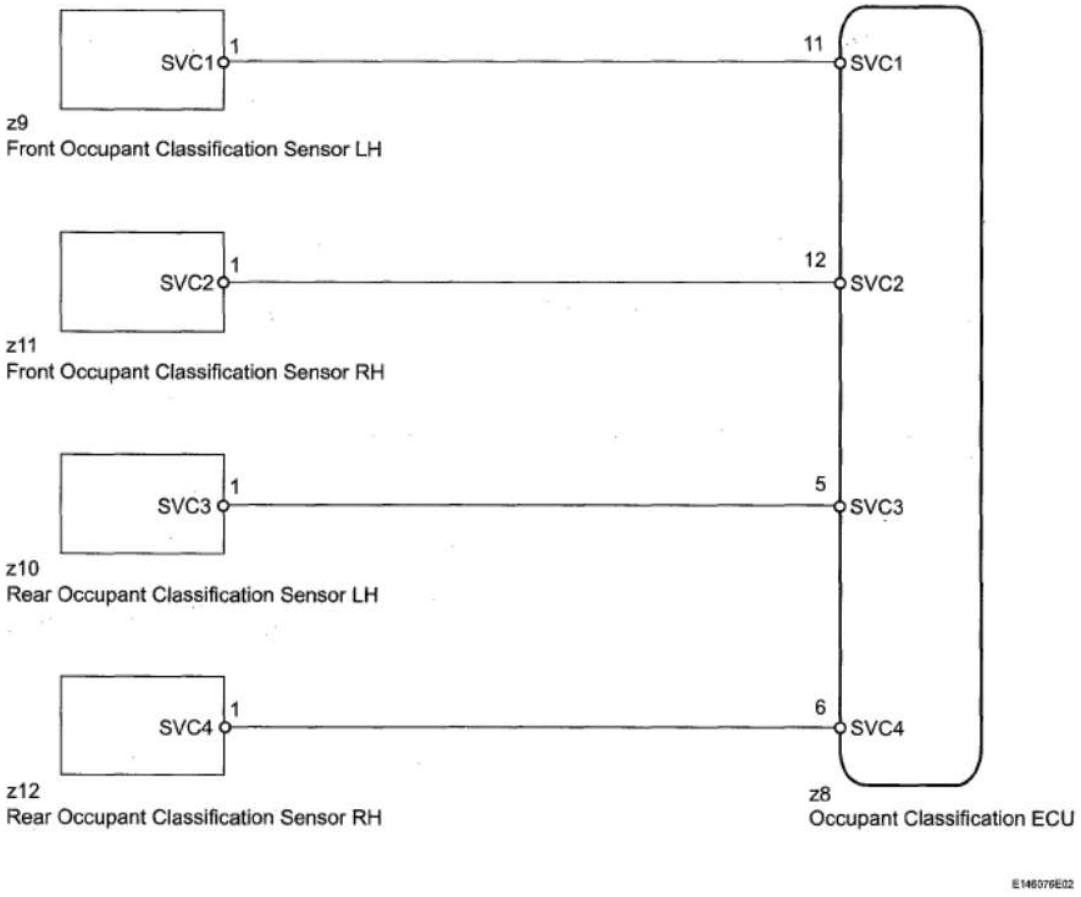


Fig. 192: Rear Occupant Classification Sensor And ECU - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

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

1. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

   HINT:

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

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- Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

c. Turn the ignition switch off.

d. Turn the ignition switch ON, and wait for at least 60 seconds.

e. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

DTC B1793 is not output.

HINT:

DTCs other than DTC B1793 may be output at this time, but they are not related to this check.

NG: Go to step 2

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

2. **CHECK CONNECTION OF CONNECTOR**

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 occupant classification ECU and the occupant classification sensors.

OK:

Connectors are properly connected.

NG: CONNECT CONNECTOR

OK: Go to next step

3. **CHECK CONNECTOR**

a. Check that the connectors (on the occupant classification ECU side and the occupant classification sensors side) are not damaged (See **ELECTRONIC CIRCUIT INSPECTION PROCEDURE**).

OK:

Connectors are not deformed or damaged.

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

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4. **CHECK FRONT SEAT WIRE RH**

a. Disconnect the connectors from the occupant classification ECU and the 4 occupant classification sensors.

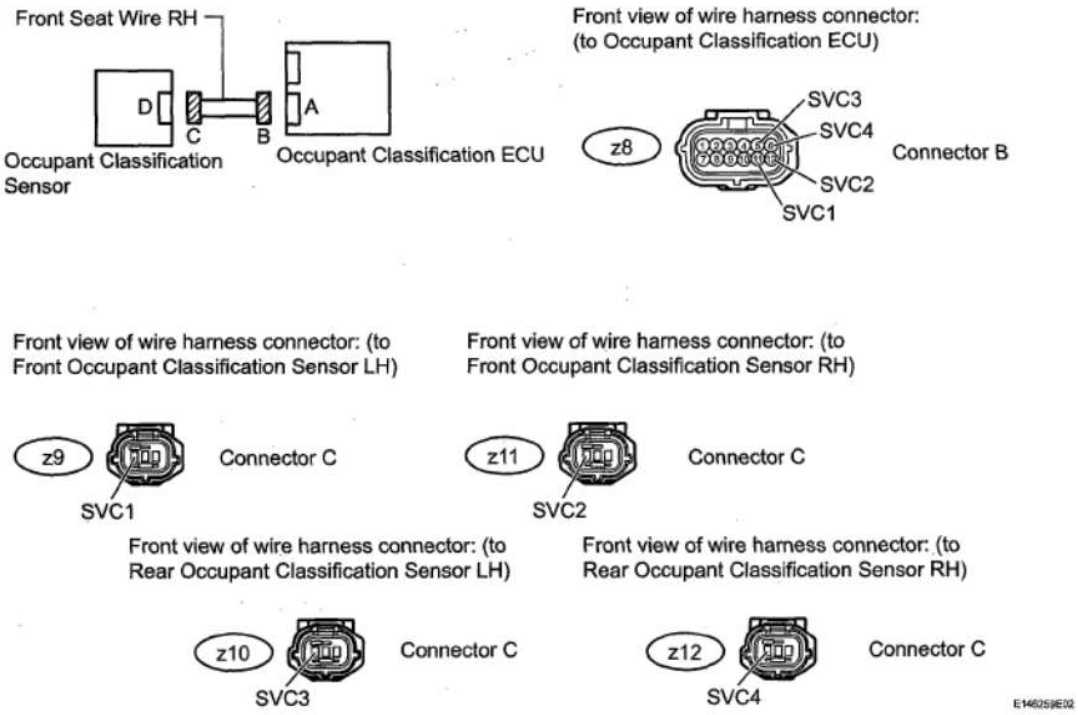


Fig. 193: Identifying Front Seat Wire RH And Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch ON, and wait for at least 60 seconds.
d. Measure the voltage according to the value(s) in the table below.

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
z8-11 (SVC1) - Body ground	Ignition switch ON	Below 1 V
z8-12 (SVC2) - Body ground		
z8-5 (SVC3) - Body ground		
z8-6 (SVC4) - Body ground		

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 the value(s) in the table below.

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Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z8-11 (SVC1) - z9-1 (SVC1)	Always	Blow 1 ohms
z8-12 (SVC2) - z11-1 (SVC2)		
z8-5 (SVC3) - z10-1 (SVC3)		
z8-6 (SVC4) - z12-1 (SVC4)		

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
z8-11 (SVC1) - Body ground	Always	1 Mohms or higher
z8-12 (SVC2) - Body ground		
z8-5 (SVC3) - Body ground		
z8-6 (SVC4) - Body ground		
z8-11 (SVC1) - z8-12 (SVC2)		
z8-11 (SVC1) - z8-5 (SVC3)		
z8-11 (SVC1) - z8-6 (SVC4)		
z8-12 (SVC2) - z8-5 (SVC3)		
z8-12 (SVC2) - z8-6 (SVC4)		
z8-5 (SVC3) - z8-6 (SVC4)		

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

5. **CHECK FOR DTC**
   a. Connect the connectors to the occupant classification ECU and the 4 occupant classification sensors.
   b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

      HINT:

      - First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
      - Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   e. Turn the ignition switch off.

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f. Turn the ignition switch ON, and wait for at least 60 seconds.
g. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

DTC B1793 is not output.

HINT:

DTCs other than DTC B1793 may be output at this time, but they are not related to this check.

NG: Go to step 6

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

6. **REPLACE OCCUPANT CLASSIFICATION ECU**
   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 occupant classification ECU (See **REMOVAL**).

   HINT:

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

7. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Connect a Techstream to the DLC3.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).
8. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

   Standard range:

   27 to 33 kg (59.5 to 72.8 lb)

NEXT : END

DTC B1794 OPEN IN OCCUPANT CLASSIFICATION ECU BATTERY POSITIVE LINE

DESCRIPTION

DTC B1794 is set when a malfunction is detected in the occupant classification ECU.

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DTC DETECTION CONDITION CHART

DTC Code	DTC Detection Condition	Trouble Area
B1794	One of following conditions is met: • Occupant classification ECU circuit malfunction • Occupant classification ECU malfunction • Occupant classification ECU receives short circuit to ground signal in passenger side buckle switch circuit for 2 seconds	• Harness or connector • Occupant classification ECU

HINT:

- When DTC B1650/32 is detected as a result of troubleshooting the airbag system, perform troubleshooting for DTC B1794 of the occupant classification system.
- Use a Techstream to check for DTCs of the occupant classification ECU, otherwise the DTCs cannot be read.

WIRING DIAGRAM

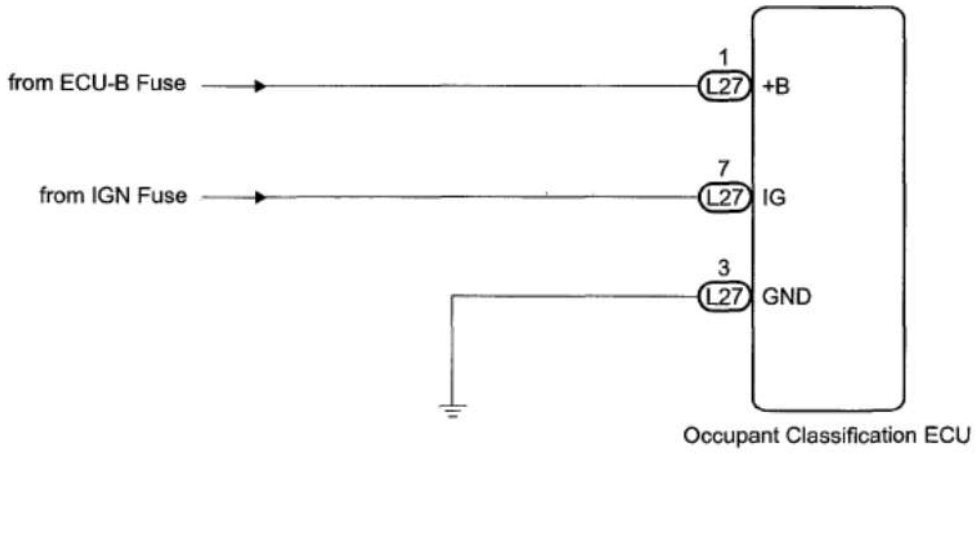


Fig. 194: Occupant Classification ECU And Fuse - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

   HINT:

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- First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
- Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

c. Turn the ignition switch off, and wait for at least 10 seconds.

d. Turn the ignition switch ON, and wait for at least 60 seconds.

e. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

DTC B1794 is not output.

HINT:

DTCs other than DTC B1794 may be output at this time, but they are not related to this check.

NG: Go to step 2

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

2. **CHECK CONNECTION OF CONNECTOR**

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, occupant classification sensors and occupant classification ECU.

OK:

Connectors are properly connected.

NG: CONNECT CONNECTOR

OK: Go to next step

3. **CHECK CONNECTOR**

a. Check that the connectors (on the occupant classification ECU side) are not damaged (See **ELECTRONIC CIRCUIT INSPECTION PROCEDURE**).

OK:

Connectors are not deformed or damaged.

NG: REPLACE HARNESS OR CONNECTOR

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OK: Go to next step

4. **CHECK HARNESS AND CONNECTOR (SOURCE VOLTAGE)**
   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 connector from the occupant classification ECU.
   d. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   e. Turn the ignition switch ON, and wait for at least 60 seconds.

Front view of wire harness connector:
(to Occupant Classification ECU)



H043112E24

Fig. 195: Identifying L27 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Condition	Specified Condition
L27-3 (GND) - Body ground	Always	Below 1 ohms

Standard voltage

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester Connection	Switch Condition	Specified Condition
L27-1 (+B) - Body ground	Ignition switch ON	11 to 14 V
L27-7 (IG) - Body ground		

NG: REPLACE HARNESS OR CONNECTOR

OK: Go to next step

5. **CHECK FOR DTC**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

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c. Connect the connectors to the occupant classification ECU.
d. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
e. Turn the ignition switch ON, and wait for at least 60 seconds.
f. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

HINT:

- First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
- Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

g. Turn the ignition switch off, and wait for at least 10 seconds.
h. Turn the ignition switch ON, and wait for at least 60 seconds.
i. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

OK:

DTC B1794 is not output.

HINT:

DTCs other than DTC B1794 may be output at this time, but they are not related to this check.

NG: Go to step 6

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

6. **REPLACE OCCUPANT CLASSIFICATION ECU**
   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 occupant classification ECU (See **REMOVAL**).

   HINT:

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

7. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Connect a Techstream to the DLC3.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).
8. **PERFORM SENSITIVITY CHECK**

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a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

Standard range:

27 to 33 kg (59.5 to 72.8 lb)

NEXT : END

DTC B1795 OCCUPANT CLASSIFICATION ECU MALFUNCTION

DESCRIPTION

DTC B1795 is set when a malfunction is detected in the occupant classification ECU.

Troubleshoot DTC B1771 first when both DTCs B1771 and B1795 are present.

DTC DETECTION CONDITION CHART

DTC Code	DTC Detection Condition	Trouble Area
B1795	Occupant classification ECU malfunction	Occupant classification ECU

HINT:

- When DTC B1650/32 is detected as a result of troubleshooting the airbag system, perform troubleshooting for DTC B1795 of the occupant classification system.
- Use a Techstream to check for DTCs of the occupant classification ECU, otherwise the DTCs cannot be read.

INSPECTION PROCEDURE

1. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

      HINT:

      - First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
      - Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   c. Turn the ignition switch off, and wait for at least 10 seconds.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

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OK:

DTC B1795 is not output.

HINT:

DTCs other than DTC B1795 may be output at this time, but they are not related to this check.

NG: Go to step 2

OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

2. **REPLACE OCCUPANT CLASSIFICATION ECU**
   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 occupant classification ECU (See **REMOVAL**).

   HINT:

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

3. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Connect a Techstream to the DLC3.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).
4. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

   Standard range:

   27 to 33 kg (59.5 to 72.8 lb)

NEXT : END

DTC B1796 SLEEP OPERATION FAILURE OF OCCUPANT CLASSIFICATION ECU

DESCRIPTION

During sleep mode, the occupant classification ECU monitors the condition of each sensor while the ignition switch is OFF. In this mode, if the occupant classification ECU detects an internal malfunction, DTC B1796 is set.

DTC DETECTION CONDITION CHART

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DTC Code	DTC Detection Condition	Trouble Area
B1796	Occupant classification ECU malfunction	Occupant classification ECU

HINT:

- When DTC B1650/32 is detected as a result of troubleshooting the airbag system, perform troubleshooting for DTC B1796 of the occupant classification system.
- Use a Techstream to check for DTCs of the occupant classification ECU, otherwise the DTCs cannot be read.

INSPECTION PROCEDURE

1. **CHECK FOR DTC**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear any DTCs stored in the memory (See **DTC CHECK / CLEAR**).

      HINT:

      - First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
      - Use a Techstream to clear the DTCs of the occupant classification ECU, otherwise the DTCs cannot be cleared.

   c. Turn the ignition switch off, and wait for at least 10 seconds.
   d. Turn the ignition switch ON, and wait for at least 60 seconds.
   e. Using the Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK / CLEAR**).

      OK:

      DTC B1796 is not output.

      HINT:

      DTCs other than DTC B1796 may be output at this time, but they are not related to this check.

   NG: Go to step 2

   OK : USE SIMULATION METHOD TO CHECK (See **DIAGNOSIS SYSTEM**)

2. **REPLACE OCCUPANT CLASSIFICATION ECU**
   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 occupant classification ECU (See **REMOVAL**).

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HINT:

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

3. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   b. Connect a Techstream to the DLC3.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).
4. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

Standard range:

27 to 33 kg (59.5 to 72.8 lb)

NEXT : END

TROUBLE IN PASSENGER AIRBAG ON / OFF INDICATOR

DESCRIPTION

The occupant classification system detects the front passenger seat condition. It then informs a passenger of the front passenger airbag, the front seat side airbag RH and front seat belt pretensioner RH condition (activated/not activated) by the passenger airbag ON/OFF indicator.

HINT:

Approximately 6 seconds after the ignition switch is turned ON, the passenger airbag ON/OFF indicator will be ON/OFF depending on the conditions listed below.

PASSENGER AIRBAG ON/OFF INDICATOR CHART

Front Passenger Seat Condition	Passenger Airbag ON/OFF Indicator		SRS Warning Light
	ON Indicator	OFF Indicator	
Adult is seated	ON	OFF	OFF
Child is seated.	OFF	ON	OFF
Vacant	OFF	OFF	OFF
Occupant classification system failure	OFF	ON	ON

INSPECTION PROCEDURE

1. **CHECK FOR DTC (AIRBAG SYSTEM)**
   a. Turn the ignition switch ON, and wait for at least 60 seconds.
   b. Clear the DTCs stored in the memory (See **DTC CHECK / CLEAR**).

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HINT:

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

c. Turn the ignition switch off.
d. Turn the ignition switch ON, and wait for at least 60 seconds.
e. Check for the DTCs (See **DTC CHECK / CLEAR**).

OK:

DTC is not output.

NG: REPAIR CIRCUITS INDICATED BY OUTPUT DTCS (See **DIAGNOSTIC TROUBLE CODE CHART**)

OK: Go to next step

2. **PERFORM ZERO POINT CALIBRATION**
   a. Turn the ignition switch off.
   b. Connect a Techstream to the DLC3.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

OK:

Zero point calibration is completed using tester.

NG: Go to step 4

OK: Go to next step

3. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

Standard range:

27 to 33 kg (59.5 to 72.8 lb)

NG: Go to step 4

OK : END

4. **RETIGHTEN FRONT SEAT ASSEMBLY RH BOLT**
   a. Turn the ignition switch off.

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b. Loosen the 4 installation bolts of the front seat assembly RH.
c. Tighten the 4 installation bolts of the front seat assembly RH to the specified torque.

Torque: 37 N*m (375 kgf*cm, 27 ft.*lbf)

5. **PERFORM ZERO POINT CALIBRATION**
   a. Connect a Techstream to the DLC3.
   b. Turn the ignition switch ON, and wait for at least 60 seconds.
   c. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

   OK:

   Zero point calibration is completed using tester.

   NG: Go to step 7

   OK: Go to next step

6. **PERFORM SENSITIVITY CHECK**
   a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

   Standard range:

   27 to 33 kg (59.5 to 72.8 lb)

   NG: Go to step 7

   OK : END

7. **CHECK CONNECTION OF CONNECTOR**
   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 occupant classification ECU and the 4 occupant classification sensors.

   OK:

   Connectors are connected.

   NG: CONNECT CONNECTOR

   OK: Go to next step

8. **CHECK CONNECTOR**

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a. Disconnect the connectors from the occupant classification ECU and the 4 occupant classification sensors.
b. Check that the connectors (on the occupant classification ECU side and 4 occupant classification sensors side) are not damaged (See **ELECTRONIC CIRCUIT INSPECTION PROCEDURE**).

OK:

Connectors are not deformed or damaged.

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

9. **CHECK FOR DTC (OCCUPANT CLASSIFICATION SYSTEM)**
   a. Connect the connectors to the occupant classification ECU and the 4 occupant classification sensors.
   b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
   c. Turn the ignition switch ON, and wait for at least 60 seconds.
   d. Clear the DTCs stored in the memory (See **DTC CHECK / CLEAR**).

   HINT:

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

   e. Turn the ignition switch off.
   f. Turn the ignition switch ON, and wait for at least 60 seconds.
   g. Check for the DTCs (See **DTC CHECK / CLEAR**).

   OK:

   DTC is not output.

   NG: REPAIR CIRCUITS INDICATED BY OUTPUT DTCS (See **DIAGNOSTIC TROUBLE CODE CHART**)

   OK: Go to next step

10. **REPLACE OCCUPANT CLASSIFICATION ECU**
    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 occupant classification ECU (See **REMOVAL**).
11. **PERFORM ZERO POINT CALIBRATION**
    a. Connect the negative (-) terminal cable to the battery.

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b. Connect a Techstream to the DLC3.
c. Turn the ignition switch ON, and wait for at least 60 seconds.
d. Using the Techstream, perform the zero point calibration (See **INITIALIZATION**).

12. **PERFORM SENSITIVITY CHECK**
    a. Using a Techstream, perform the sensitivity check (See **INITIALIZATION**).

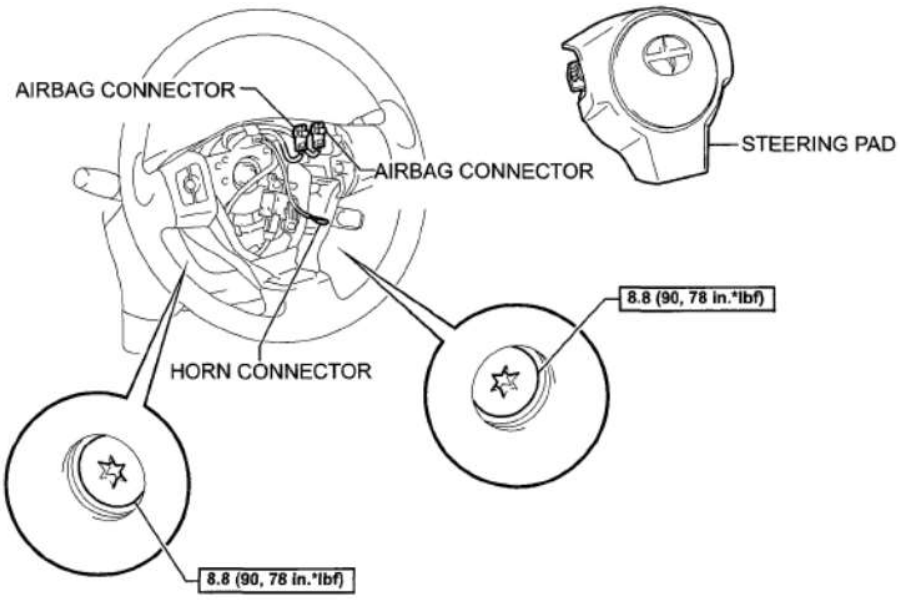
Standard range:

27 to 33 kg (59.5 to 72.8 lb)

NEXT : END

STEERING PAD

COMPONENTS



N*m (kgf*cm, ft*lbf) : Specified torque

P B169901E01

Fig. 196: Identifying Steering Pad Components With Torque Specifications

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ON-VEHICLE INSPECTION

1. **INSPECT STEERING PAD (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check (See **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:

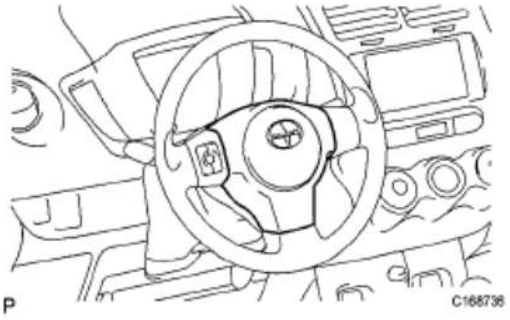


Fig. 197: Identifying Steering
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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)**

CAUTION: For steering pad removal and installation procedures, see REMOVAL and INSTALLATION , and carefully follow the correct procedure.

   a. Perform a diagnostic system check (See **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.

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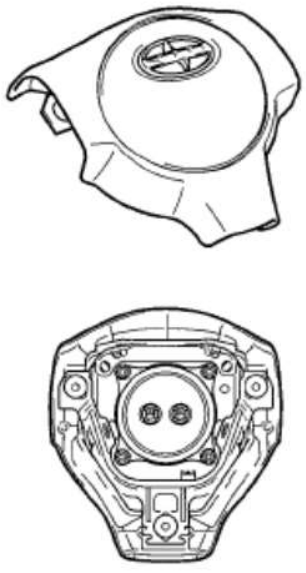


Fig. 198: Identifying Steering Pad Cover
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- 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.

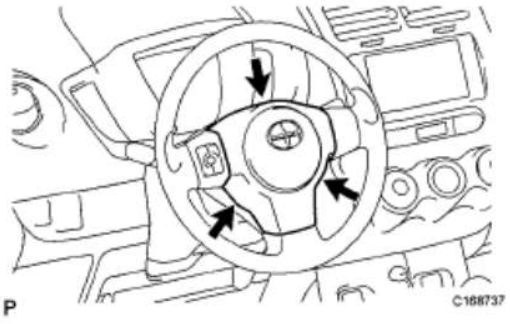


Fig. 199: Locating Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

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CAUTION: Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.

2. **REMOVE STEERING PAD**
   a. Using "TORX" socket wrench T30, loosen the 2 bolts completely.

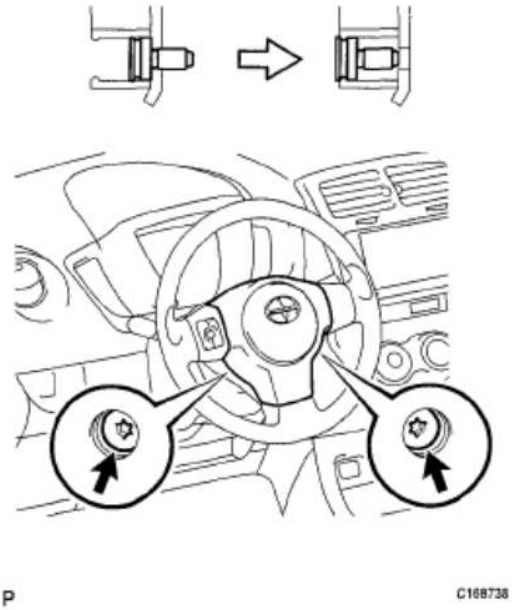
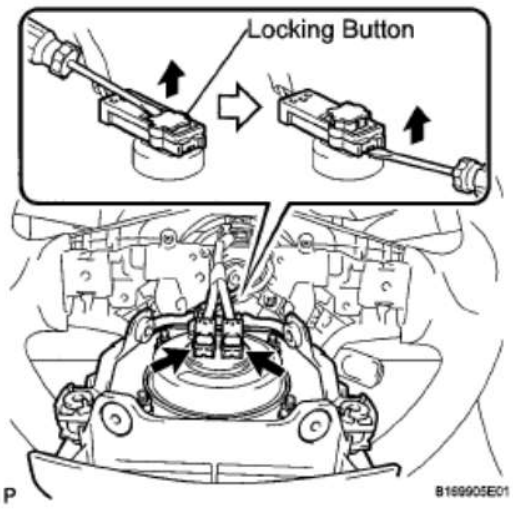


Fig. 200: Locating Steering Pad Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   b. Pull the steering pad toward you.
   c. Using a thin-bladed screwdriver, release the locking button.



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Fig. 201: Releasing Locking Button
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Using a thin-bladed screwdriver, disconnect the 2 connectors.
e. Detach the horn terminal.

INSTALLATION

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

1. **INSTALL STEERING PAD**

NOTE: Do not use a steering pad that has been dropped.

a. Confirm that the ignition switch is turned to OFF.
b. Confirm that the negative battery terminal is detached.

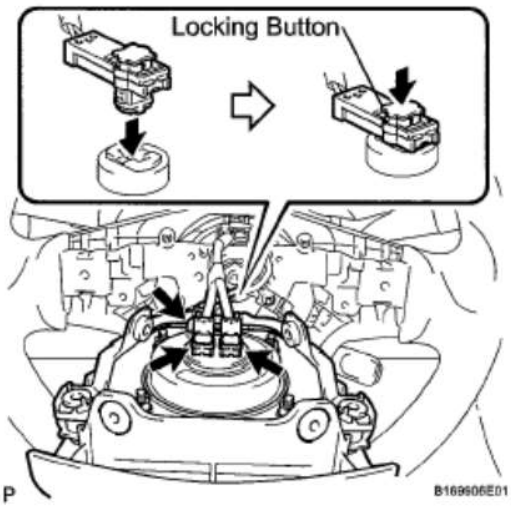


Fig. 202: Installing Locking Button
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION: Do not begin the operation for at least 90 seconds after the negative battery terminal has been detached.

c. Connect the horn terminal.
d. Connect the airbag connector.

NOTE:
- **Match the color of the airbag connector with that of the steering**

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pad assembly, and install the airbag connector.

- **Securely lock the locking button.**

e. Install the steering pad.

f. Using "TORX" socket wrench T30, tighten the 2 bolts.

Torque: 8.8 N*m (90 kgf*cm, 78 in.*lbf)

NOTE: Tighten the 2 bolts while holding the steering pad to prevent it moving upward.

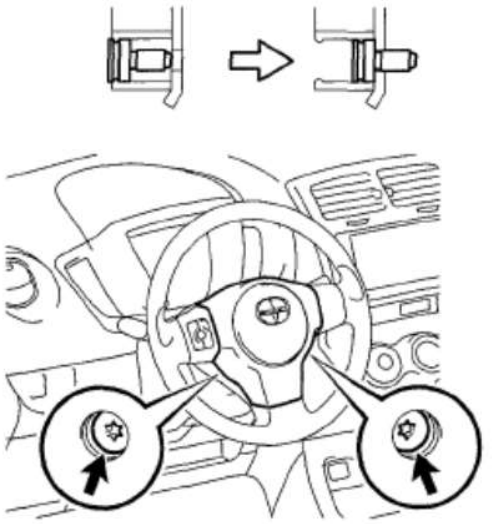


Fig. 203: Locating Steering Pad Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

   Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

3. **INSPECT SRS WARNING LIGHT**

   (See **DIAGNOSIS SYSTEM**)

DISPOSAL

HINT:

When scrapping a vehicle equipped with the SRS or disposing of a steering pad, deploy the airbag first in

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accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the SERVICE DEPT. of the DISTRIBUTOR.

CAUTION:

- **Never dispose of a steering pad that has an undeployed airbag.**
- **The airbag emits 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 (33 ft) away from the steering pad.**
- **The steering pad becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**

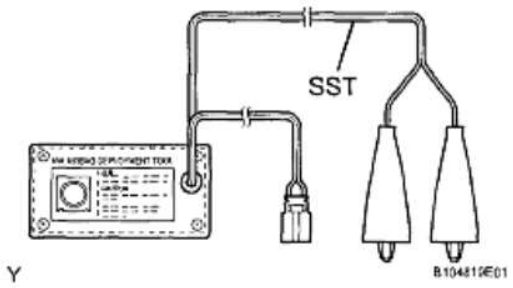


Fig. 204: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **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. **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.

SST 09082-00700

CAUTION: Always use the specified SST (SRS Airbag Deployment Tool) when deploying the airbag.

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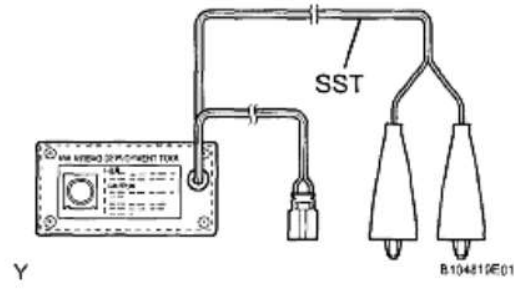


Fig. 205: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.

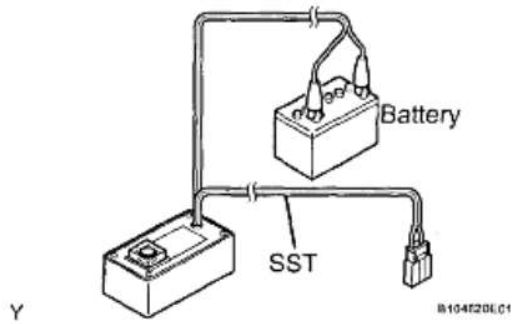


Fig. 206: Connecting Clip Of Positive Battery Terminal And Clip Of Negative Battery Terminal With SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Press the SST activation switch, and check that the LED on the SST activation switch illuminates.

CAUTION:

- **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.**

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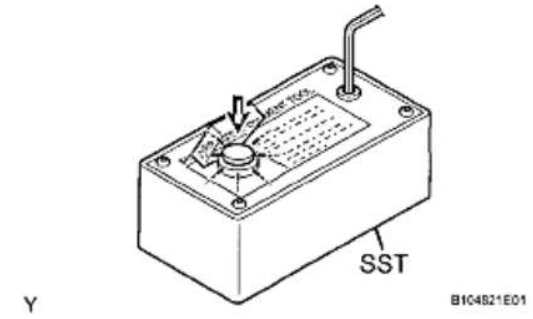


Fig. 207: Pressing SST Activation Switch
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Disconnect SST from the battery.

b. Disconnect the cable from the negative battery terminal.

c. Remove the steering column lower cover.

1. Turn the steering wheel 90 degrees in both directions and remove the 2 screws.

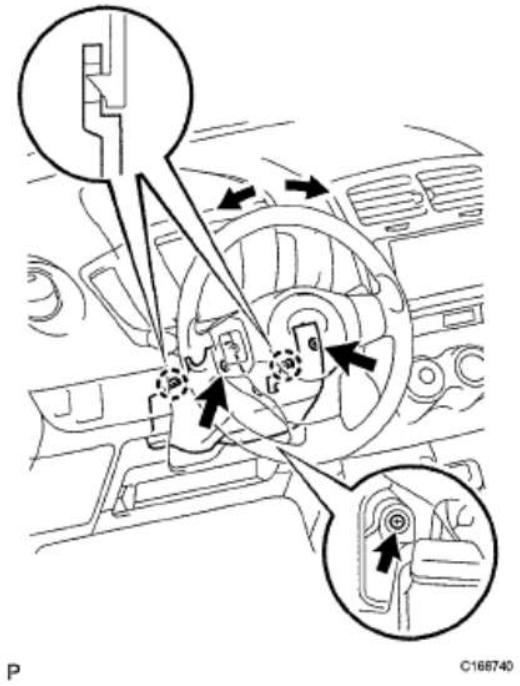


Fig. 208: Locating Steering Column Lower Cover Screws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Remove the screw from the lower portion of the steering lower cover.
3. Remove the steering column lower cover.

d. Connect SST.

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CAUTION: Check that there is no slack in the steering wheel and steering pad.

1. Disconnect the airbag connector, as shown in the illustration.

NOTE: Do not damage the airbag wire harness when handling the airbag connector.

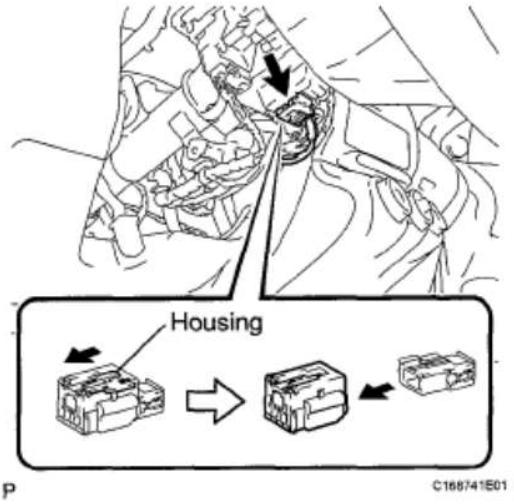


Fig. 209: Locating Airbag Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Connect SST.

SST 09082-00700, 09082-00780

NOTE: Do not lock the secondary lock on the twin lock to avoid damaging the SST connector and wire harness.

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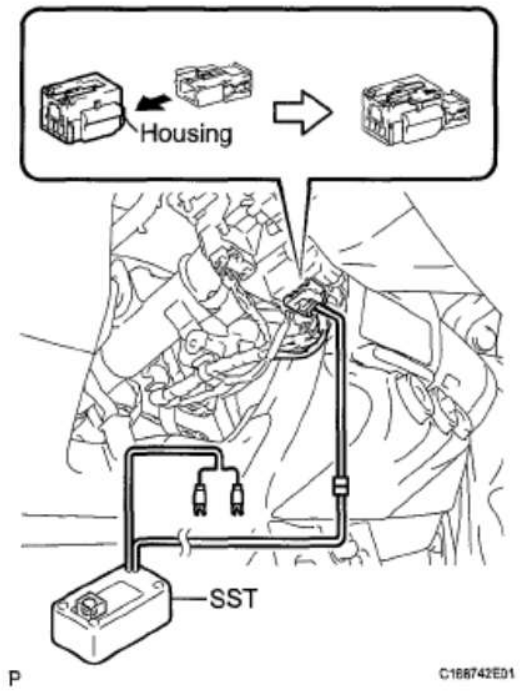


Fig. 210: Connecting SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Move SST to at least 10 m (33 ft) away from the vehicle front side window.
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.

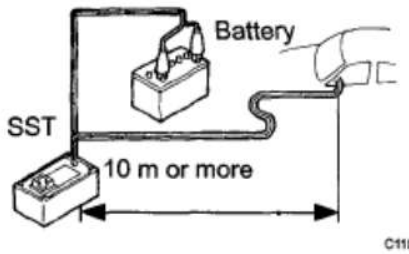


Fig. 211: Identifying Clearance For SST Wire Harness In Front Side Window
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. 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 (33 ft) radius of the vehicle.
   2. Press the SST activation switch and deploy the airbag.

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CAUTION:

- **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.**
- **Do not apply water, etc. to a steering pad with a deployed airbag.**

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:

- **Never use the customer's vehicle to deploy the airbag when disposing of the steering pad,**
- **Follow the procedure detailed below when deploying the airbag.**

HINT:

Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST.

SST 09082-00700

CAUTION: Always use the specified SST (SRS Airbag Deployment Tool) when deploying the airbag.

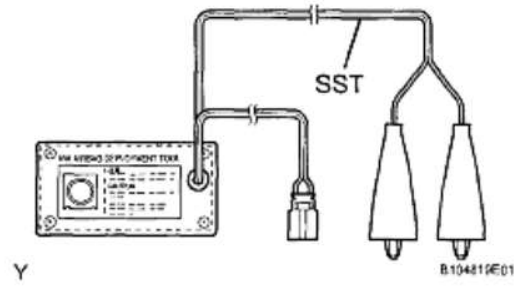


Fig. 212: Checking Function Of SST

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

1. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.

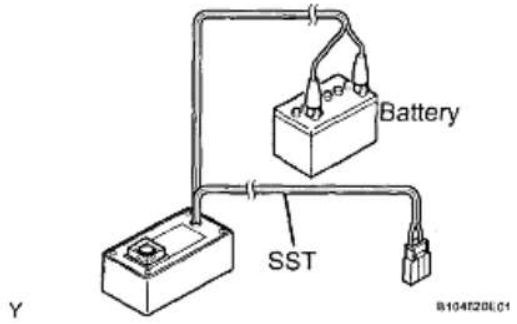


Fig. 213: Connecting Clip Of Positive Battery Terminal And Clip Of Negative Battery Terminal With SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Press the SST activation switch, and check that the LED on the SST activation switch illuminates.

CAUTION:

- **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.**

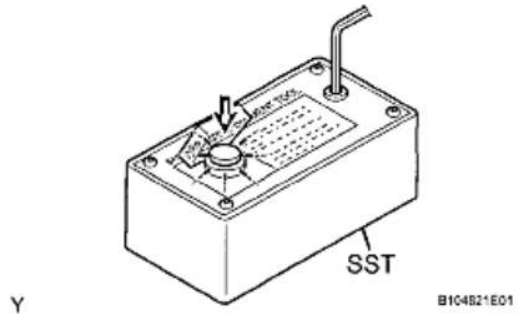


Fig. 214: Pressing SST Activation Switch
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Disconnect SST from the battery.

b. Disconnect the cable from the negative battery terminal.

c. Remove the steering pad (See **REMOVAL**).

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CAUTION:

- **When removing the steering pad, work must be started at least 90 seconds after the power switch is turned off and the cable is disconnected from the negative battery terminal.**
- **When storing the steering pad, keep the upper surface of the airbag deployment side facing upward.**

d. Using a service-purpose wire harness for the vehicle, tie the steering pad to the disc wheel.

Stripped wire harness section:

AREA MEASUREMENT CHART

Area	Measurement
A	1 25 mm^2 or more (0 0019 in^2 or more)

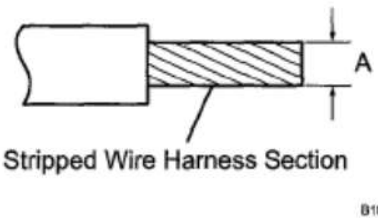


Fig. 215: Identifying Stripped Wire Harness Section
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION: Do not use a wire harness that is too thin or any other object to tie the steering pad 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. Install the 2 bolts with washers into the 2 bolt holes in the steering pad.

Bolt size:

BOLT SIZE SPECIFICATIONS

Area	Specification
L	35.0 mm (1.378 in.)
M	6.0 mm (0 236 in.)

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Pitch	1 0 mm (0 039 in.)

NOTE:

- **Tighten the bolts by hand until they become difficult to turn.**
- **Do not tighten the bolts excessively.**

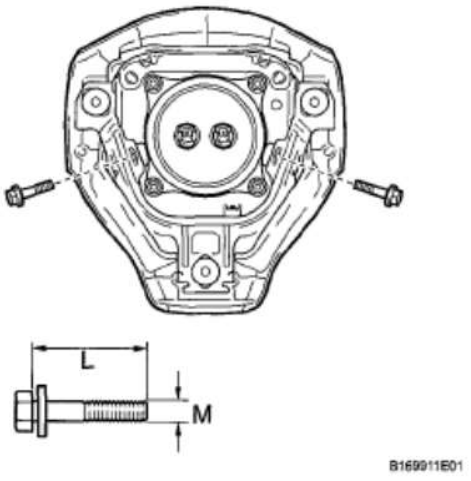


Fig. 216: Identifying Steering Pad Bolt Dimension
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. After connecting SST, connect it to the horn button.

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.**

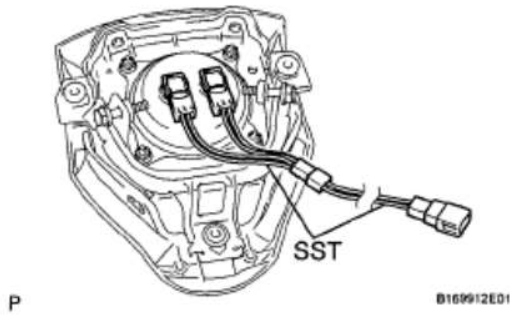


Fig. 217: Connecting SST To Horn Button
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Using 3 wire harnesses, wind the wire harnesses at least 2 times each around the bolts installed on the left and right sides of the steering pad.

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CAUTION:

- **Tightly wind the wire harnesses around the bolts so that there is no slack.**
- **Make sure that the wire harnesses are tight. If there is any slack in the wire harnesses, the steering pad may become loose due to the shock when the airbag is deployed.**

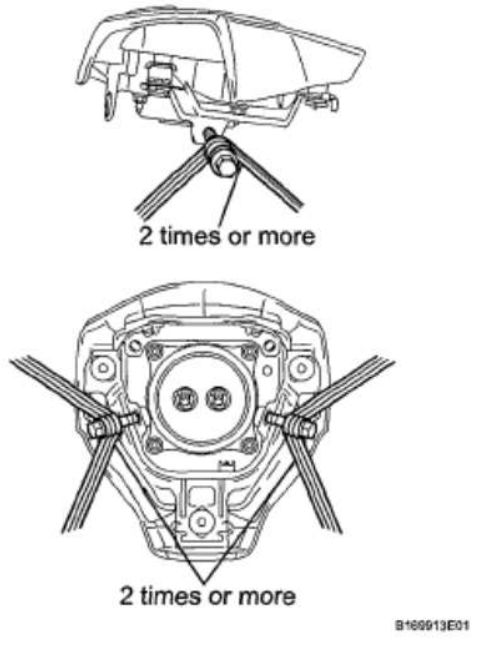


Fig. 218: Winding Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

4. Face the airbag deployment side of the steering pad upward. Using the wire harnesses, separately tie the left and right sides of the steering pad to a disc wheel through the hub nut holes. Position the SST connector so that it hangs downward through the hub hole in the disc wheel.

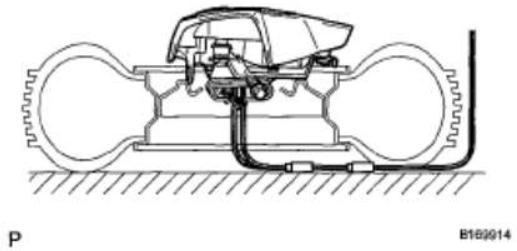


Fig. 219: Positioning SST Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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CAUTION:

- **Make sure that the wire harnesses are tight. If there is any slack in the wire harnesses, the steering pad may become loose due to the shock when the airbag is deployed.**
- **Always tie the steering pad with the airbag deployment side facing upward. It is highly dangerous if the steering pad is tied with the airbag deployment side facing downward as the wire harnesses will be cut by the shock caused by the airbag deployment and the steering pad will be thrown into the air.**

NOTE: **The disc wheel will be marked by the airbag deployment, so use a waste disc wheel.**

e. Connect SST.

SST 09082-00700

CAUTION: Place the disc wheel on a level ground.

1. Connect the SST connector.

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 the SST wire harness inside the disc wheel.**

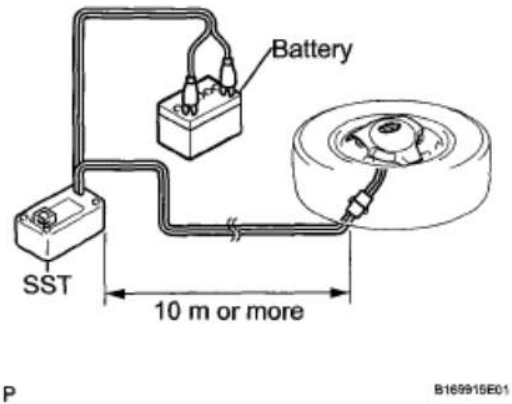


Fig. 220: Connecting SST Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Move SST to at least 10 m (33 ft) away from the steering pad tied to the disc wheel.

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f. Cover the steering pad with a cardboard box or tires.

1. Covering method using a cardboard box: Cover the steering pad with the cardboard box and place weights of at least 190 N (19 kg, 43 lb) on the cardboard box in 4 places.

Cardboard box size:

AREA MEASUREMENT CHART

Area	Measurement
X	460 mm (18.11 in)
Y	650 mm (25 59 in)

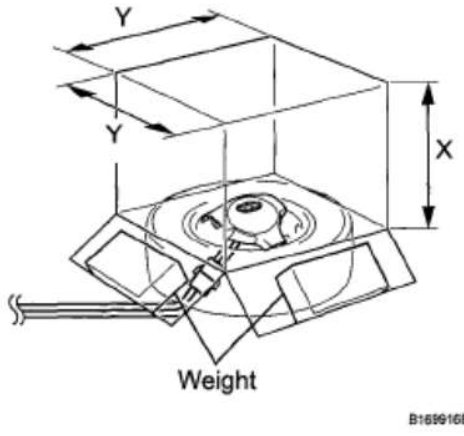


Fig. 221: Identifying Steering Pad With Cardboard Box Or Tires
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NOTE:

- **When dimension Y of the cardboard box exceeds the diameter of the disc wheel and tire to which the steering pad is tied, X should be the following size.**

  X = 460 mm (18.11 in.) + width of tire

- **If a cardboard box which is smaller than the specified size is used, the cardboard box will be broken by the shock from the airbag deployment.**

2. Covering method using tires:

Place at least 3 tires without disc wheels on top of the tire with a disc wheel to which the steering pad is tied.

Tire size:

AREA MEASUREMENT CHART

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Area	Measurement
A	185 mm (7 28 in)
B	360 mm (14 17 in)

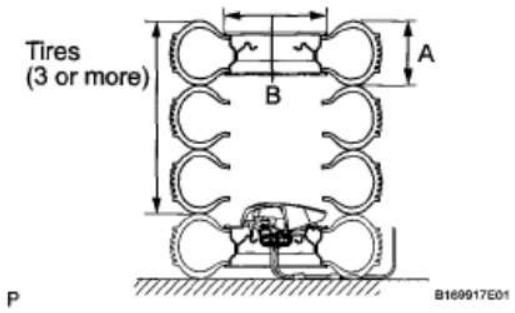


Fig. 222: Identifying Steering Pad Dimension
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION: Do not use tires with disc wheels.

NOTE:

- **The tires may be marked by the airbag deployment, so use waste tires.**
- **Do not place the SST connector under the tire because it could be damaged.**

3. Tie the tires together with 2 wire harnesses.

CAUTION: 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.



Fig. 223: Identifying Tires Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

g. Deploy the airbag.

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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 (33 ft) radius of the disc wheel to which the steering pad is tied.

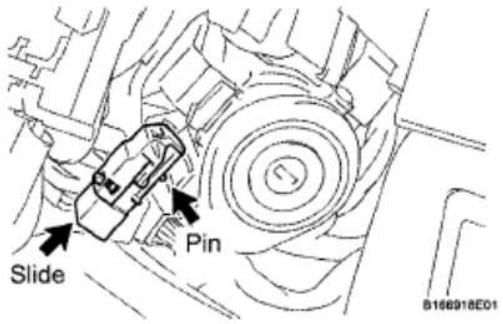


Fig. 224: Checking Radius Of Disc Wheel To Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Press the SST activation switch and deploy the airbag.

CAUTION: Make sure that no one is near the tires when deploying the airbag.

HINT:

The airbag is deployed as the LED of the SST activation switch illuminates.

h. Dispose of the steering pad.

CAUTION:

- **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 horn button with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

1. Remove the steering pad from the disc wheel.
2. Place the steering pad in a plastic bag, tie it tightly and dispose of it in the same way as other general parts.

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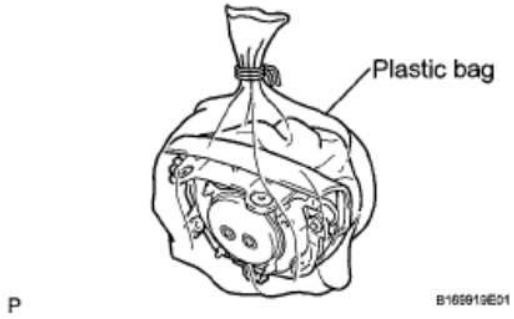


Fig. 225: Covering Steering Pad With Plastic Bag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SPIRAL CABLE

COMPONENTS

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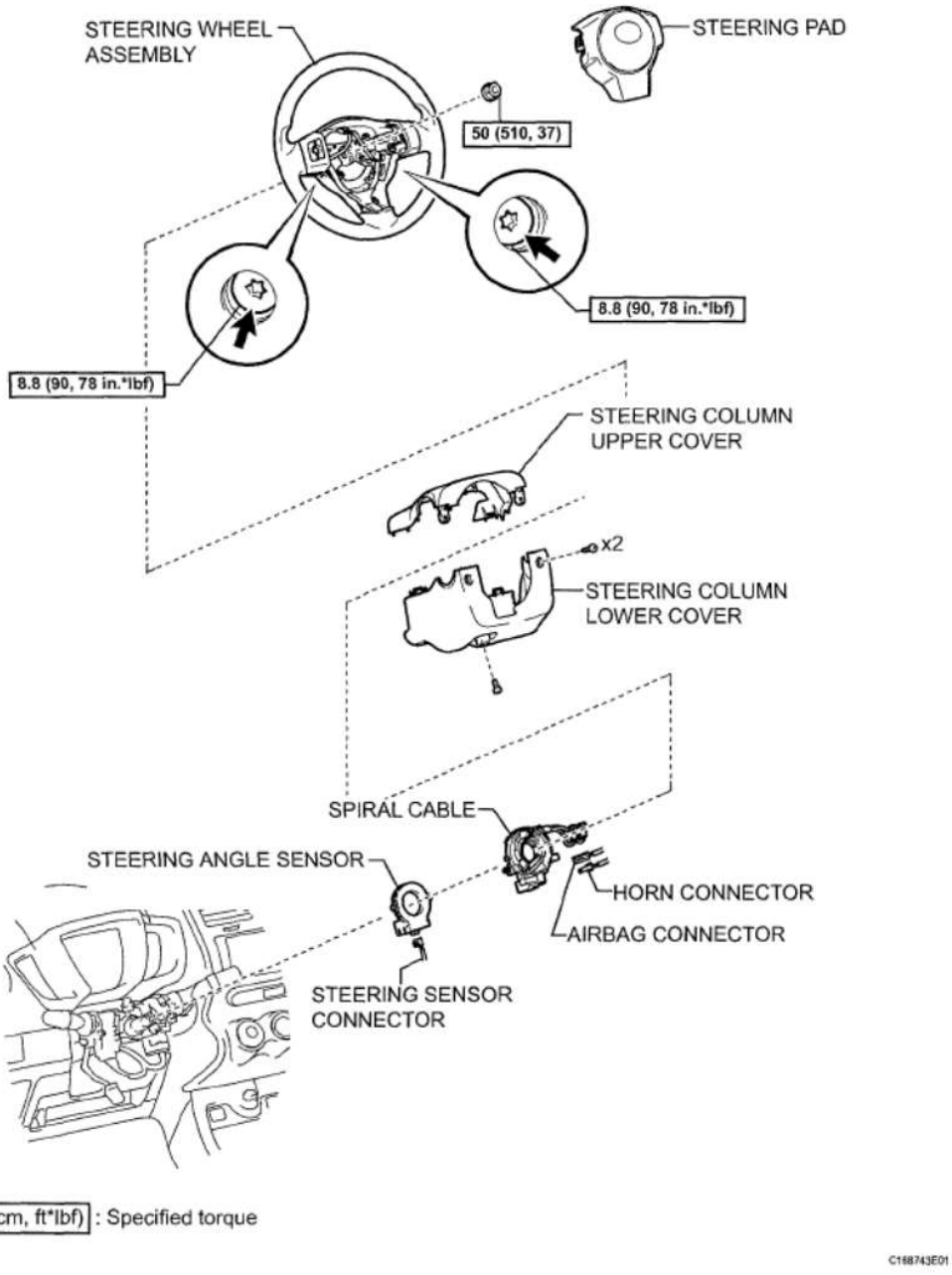


Fig. 226: Identifying Spiral Cable Components With Torque Specifications
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

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1. **TURN FRONT WHEELS FACING STRAIGHT AHEAD**
2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

CAUTION: Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.

3. **REMOVE STEERING PAD** (See **REMOVAL**)
4. **REMOVE STEERING WHEEL ASSEMBLY** (See **REMOVAL**)
5. **REMOVE STEERING COLUMN LOWER COVER** (See **REMOVAL**)
6. **REMOVE STEERING COLUMN UPPER COVER** (See **REMOVAL**)
7. **REMOVE SPIRAL CABLE**
   a. Detach the horn connector.

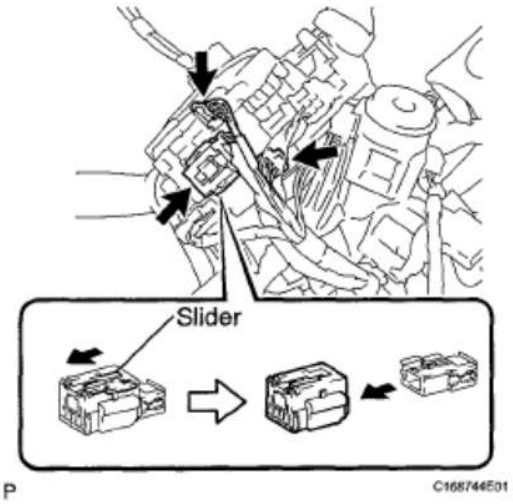


Fig. 227: Identifying Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   b. Slide the slider and detach the airbag connector.
   c. Detach the steering sensor connector.
   d. Disengage the 3 claws and remove the spiral cable.

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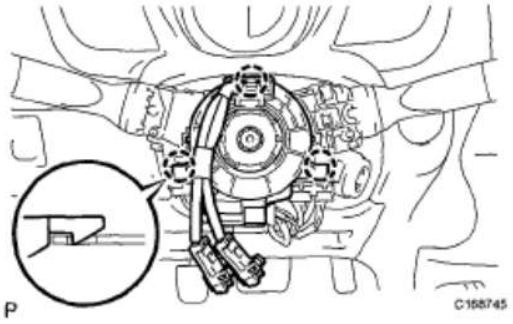


Fig. 228: Identifying Claws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

8. **REMOVE STEERING ANGLE SENSOR** (See **REMOVAL**)

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.
   b. Inspect the spiral cable.
      1. Measure the resistance according to the value(s) in the table below.

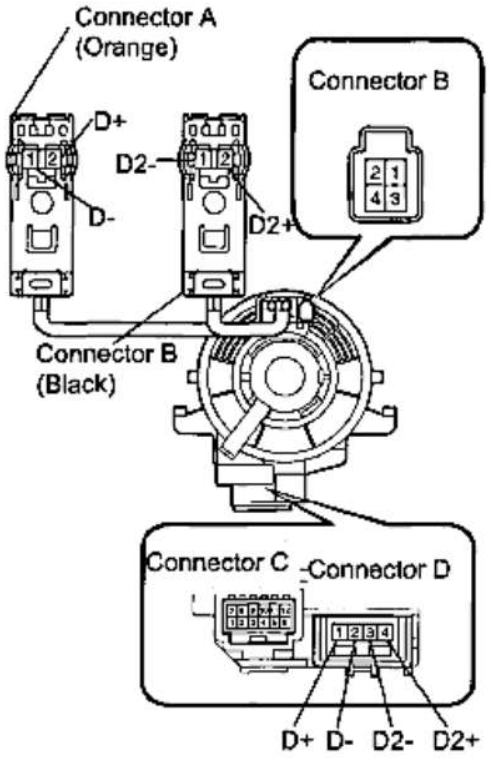
NOTE: **To avoid breaking the spiral cable, do not turn the spiral cable more than necessary.**

If the value is not within the specified range, replace the spiral cable.

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Fig. 229: Identifying Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard resistance

TESTER CONNECTION SPECIFIED CONDITION CHART

Tester connection	Condition	Specified condition
A1 (D-) - D2 (D-)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
A2 (D+) - D1 (D+)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
B1 (D2-) - D3 (D2-)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
B2 (D2+) - D4 (D2+)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	

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INSTALLATION

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

1. **INSTALL STEERING ANGLE SENSOR** (See **INSTALLATION**)

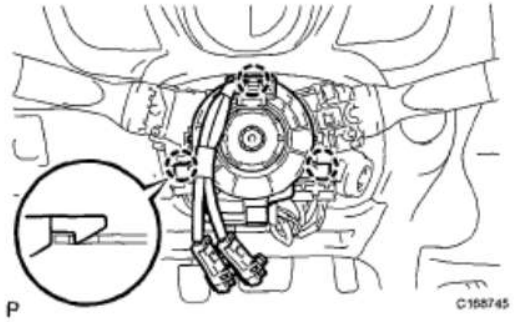


Fig. 230: Identifying Steering Angle Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **INSTALL SPIRAL CABLE**
   a. Check that the ignition switch is turned to OFF.
   b. Confirm that the negative battery terminal is detached.

CAUTION: Do not begin the operation for at least 90 seconds after the negative battery terminal has been detached.

   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.

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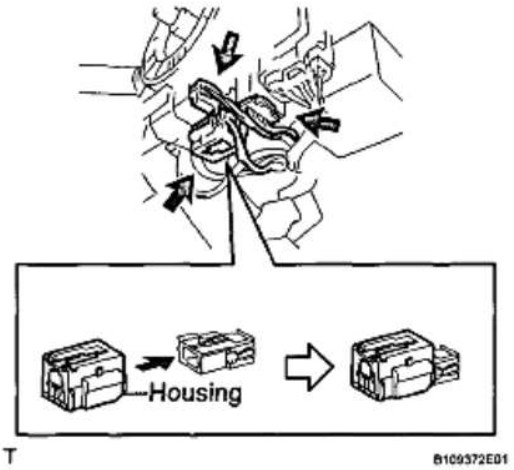


Fig. 231: Locating Airbag Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

g. Connect the horn connector.
h. Connect the steering sensor.

3. **INSTALL STEERING COLUMN UPPER COVER** (See **INSTALLATION**)
4. **INSTALL STEERING COLUMN LOWER COVER** (See **INSTALLATION**)
5. **ADJUST SPIRAL CABLE**
   a. Center the spiral cable.
      1. Turn the spiral cable counterclockwise until it locks.

         HINT:

         The spiral cable turns a maximum of approximately 5 times.

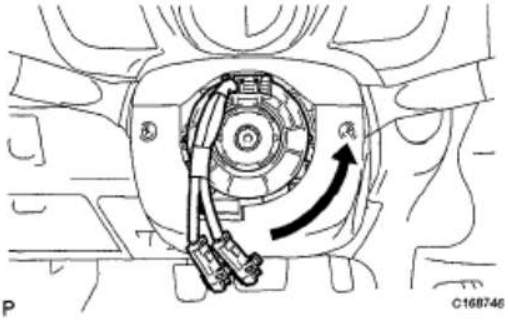


Fig. 232: Turning Spiral Cable Counterclockwise
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

      2. Turn the spiral cable 2.5 times clockwise from its locked position and align the center marks.

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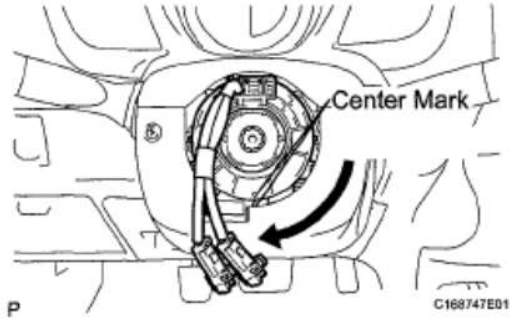


Fig. 233: Turning Spiral Cable Clockwise
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

6. **INSTALL STEERING WHEEL ASSEMBLY** (See **INSTALLATION**)
7. **INSTALL STEERING PAD** (See **INSTALLATION**)
8. **TURN FRONT WHEELS FACING STRAIGHT AHEAD**
9. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

   Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

10. **INSPECT SRS WARNING LIGHT**

    (See **DIAGNOSIS SYSTEM**)

FRONT PASSENGER AIRBAG ASSEMBLY

COMPONENTS

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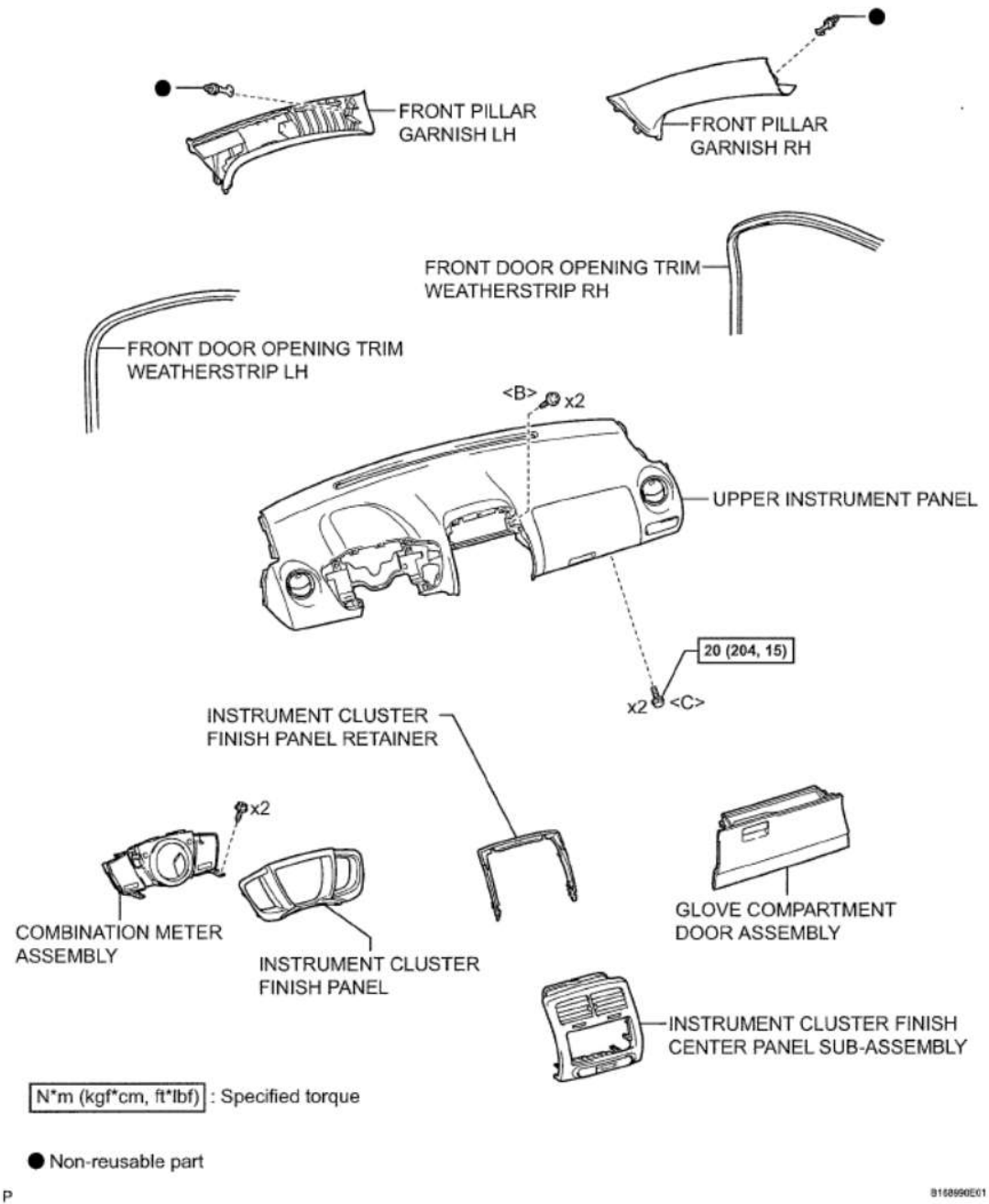


Fig. 234: Identifying Front Passenger Airbag Assembly Components With Torque Specification (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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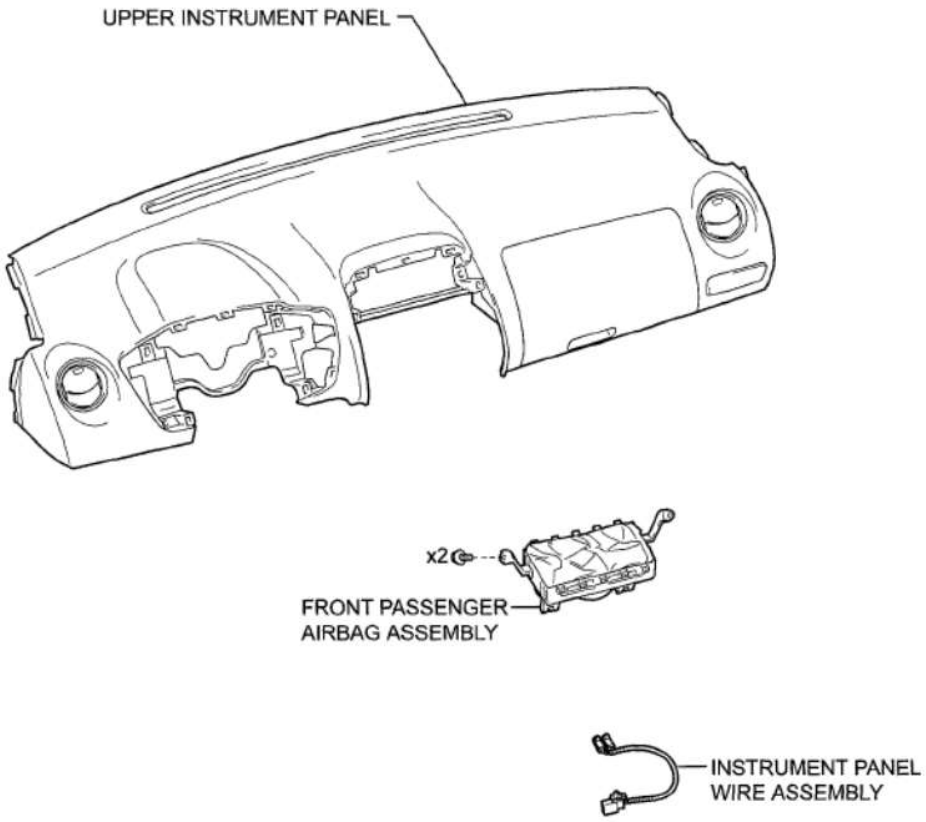


Fig. 235: Identifying Front Passenger Airbag Assembly Components (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

1. **INSPECT FRONT PASSENGER AIRBAG ASSEMBLY (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check (See **DTC CHECK / CLEAR**).

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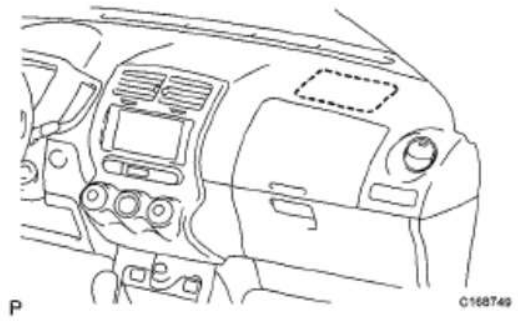


Fig. 236: Identifying Front Passenger Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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)**

CAUTION: For front passenger airbag removal and installation procedures, see REMOVAL and REMOVAL , and carefully follow the correct procedure.

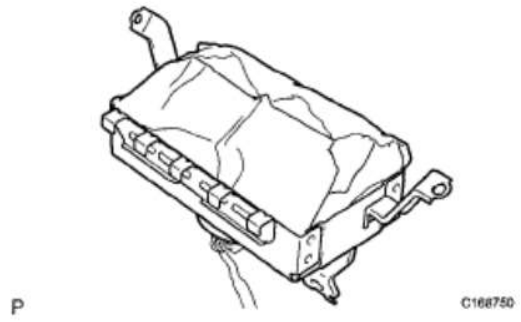


Fig. 237: Inspecting Front Passenger Airbag Assembly (For Vehicle Involved In Collision And Airbag Not Deployed)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Perform a diagnostic system check (See **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.

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REMOVAL



Fig. 238: Identifying Front Passenger Airbag Assembly Location
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

   CAUTION: Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.

2. **SEPARATE FRONT DOOR OPENING TRIM WEATHERSTRIP RH** (See **REMOVAL**)
3. **SEPARATE FRONT DOOR OPENING TRIM WEATHERSTRIP LH** (See **REMOVAL**)
4. **REMOVE FRONT PILLAR GARNISH RH** (See **REMOVAL**)
5. **REMOVE FRONT PILLAR GARNISH LH** (See **REMOVAL**)
6. **REMOVE INSTRUMENT CLUSTER FINISH PANEL** (See **REMOVAL**)
7. **REMOVE COMBINATION METER ASSEMBLY** (See **REMOVAL**)
8. **REMOVE INSTRUMENT CLUSTER FINISH CENTER PANEL SUB-ASSEMBLY** (See **REMOVAL**)
9. **REMOVE INSTRUMENT CLUSTER FINISH PANEL RETAINER** (See **REMOVAL**)
10. **REMOVE GLOVE COMPARTMENT DOOR ASSEMBLY** (See **REMOVAL**)
11. **REMOVE UPPER INSTRUMENT PANEL** (See **REMOVAL**)
12. **REMOVE INSTRUMENT PANEL WIRE ASSEMBLY**
    a. Using a thin-bladed screwdriver, release the locking button.

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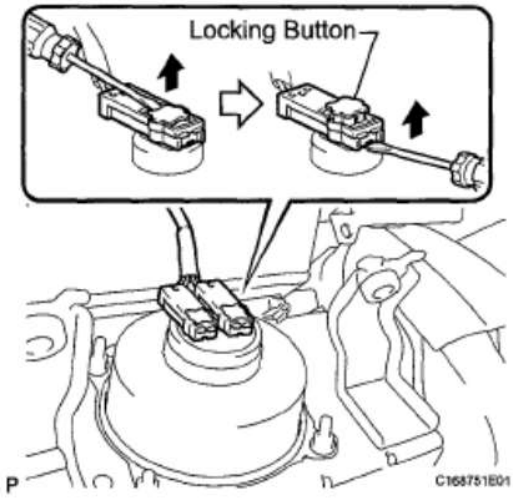


Fig. 239: Disconnecting Airbag Connectors Using Screwdriver
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Using a thin-bladed screwdriver, disconnect the 2 airbag connectors and remove the instrument panel wire assembly.

13. **REMOVE FRONT PASSENGER AIRBAG ASSEMBLY**
    a. Remove the wire harness from the claw on the instrument panel.
    b. Remove the 2 screws.

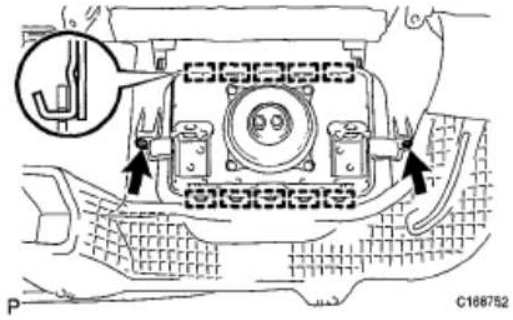


Fig. 240: Locating Screws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Disengage the 10 hooks and remove the front passenger airbag.

INSTALLATION

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

1 **INSTALL FRONT PASSENGER AIRBAG ASSEMBLY**

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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.

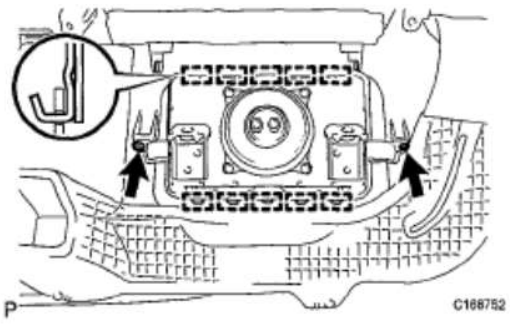


Fig. 241: Locating Screws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Install the wire harness onto the claw of the instrument panel.

2. **INSTALL INSTRUMENT PANEL WIRE ASSEMBLY**

a. Connect the airbag connector to install the instrument panel wire.

NOTE:

- **Match the color of the connector of the instrument panel wire assembly with that of the connector of the front passenger assembly and install the airbag connector.**
- **Lock the locking button securely.**

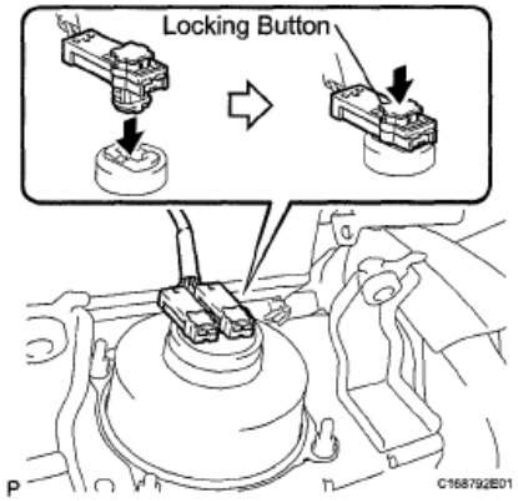


Fig. 242: Connecting Airbag Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. **INSTALL UPPER INSTRUMENT PANEL** (See **INSTALLATION**)

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4. **INSTALL GLOVE COMPARTMENT DOOR ASSEMBLY** (See **INSTALLATION**)
5. **INSTALL INSTRUMENT CLUSTER FINISH PANEL RETAINER** (See **INSTALLATION**)
6. **INSTALL INSTRUMENT CLUSTER FINISH CENTER PANEL SUB-ASSEMBLY** (See **INSTALLATION**)
7. **INSTALL COMBINATION METER ASSEMBLY** (See **INSTALLATION**)
8. **INSTALL INSTRUMENT CLUSTER FINISH PANEL** (See **INSTALLATION**)
9. **INSTALL FRONT PILLAR GARNISH RH** (See **INSTALLATION**)
10. **INSTALL FRONT PILLAR GARNISH LH** (See **INSTALLATION**)
11. **INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP RH** (See **INSTALLATION**)
12. **INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP LH** (See **INSTALLATION**)
13. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

    Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

14. **INSPECT SRS WARNING LIGHT**

    (See **DIAGNOSIS SYSTEM**)

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 DISTRIBUTOR.

CAUTION:

- **Never dispose of a front passenger airbag that has an undeployed airbag.**
- **The airbag emits 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 (33 ft) away from the front passenger airbag.**

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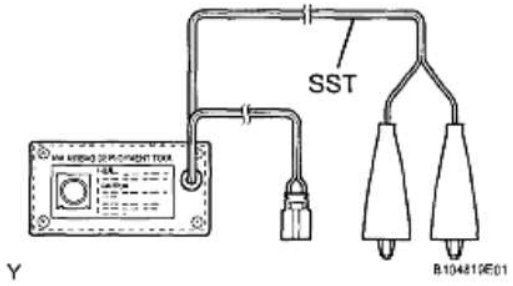


Fig. 243: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **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. **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.

SST 09082-00700

CAUTION: Always use the specified SST (SRS Airbag Deployment Tool) when deploying the airbag.

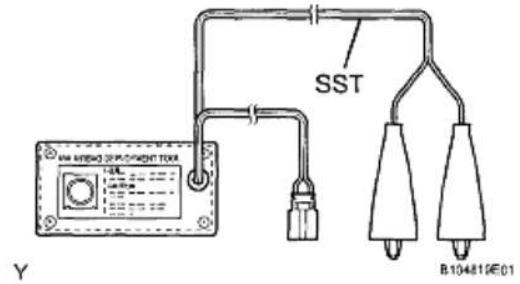


Fig. 244: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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1. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.

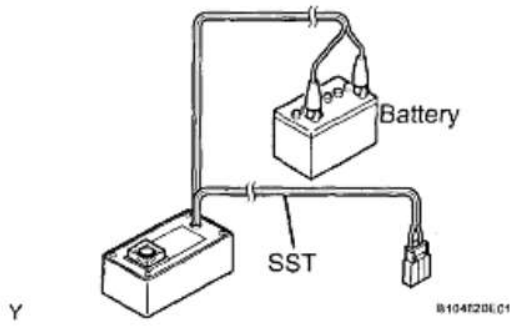


Fig. 245: Connecting Clip Of Positive Battery Terminal And Clip Of Negative Battery Terminal With SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Press the SST activation switch, and check that the LED on the SST activation switch illuminates.

CAUTION:
- **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. Disconnect the cable from the negative battery terminal.

c. Disengage the claw and disconnect the glove compartment door stopper.

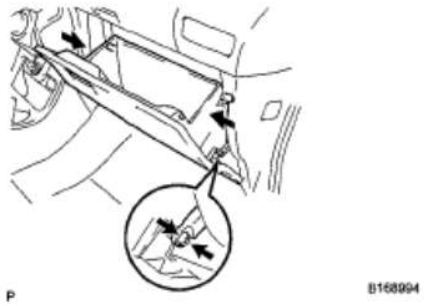


Fig. 246: Locating Glove Compartment Door
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Slightly flex the upper part of the glove compartment door to release the 2 stoppers and open the glove compartment door until it becomes horizontal.

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e. Pull the glove compartment door out horizontally to disengage the 2 hinges and remove the glove compartment door.

NOTE: Pull the glove compartment door out horizontally, otherwise, the hinges may be damaged, resulting in an installation failure.

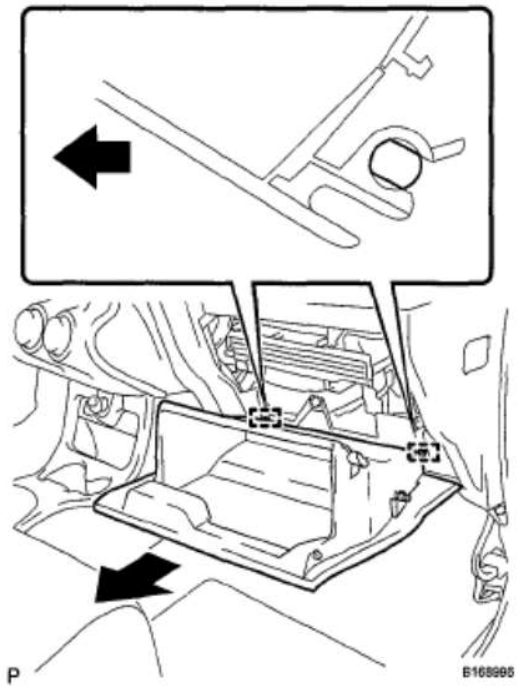


Fig. 247: Pulling Glove Compartment Door Out Horizontally
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Disconnect the airbag connector, as shown in the illustration.

NOTE: Do not damage the airbag wire harness when handling the airbag connector.

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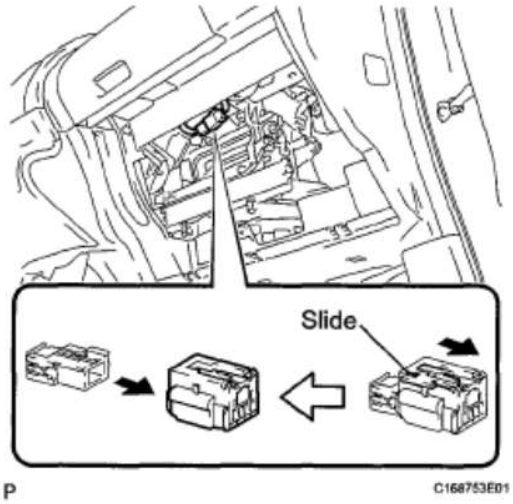


Fig. 248: Disconnecting Airbag Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

g. Connect SST.
   1. Connect the SST connector to the front passenger airbag.

      SST 09082-00700, 09082-00780

      NOTE: Do not lock the secondary lock of the twin lock to avoid damaging the SST connector and wire harness.

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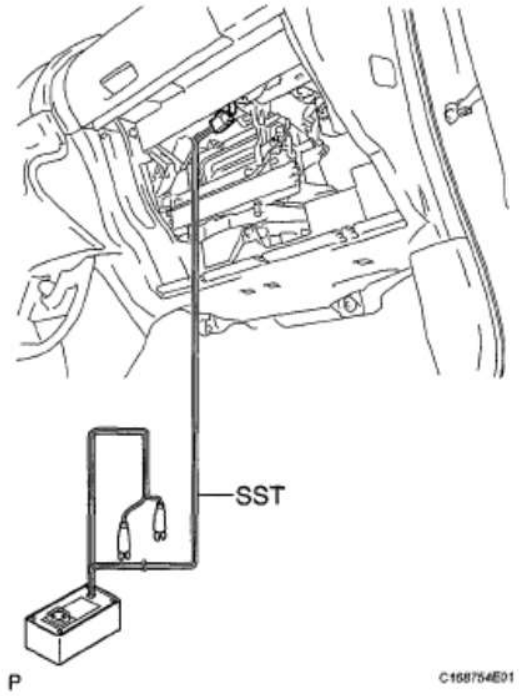


Fig. 249: Connecting SST Connector To Front Passenger Airbag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Move SST to at least 10 m (33 ft) away from the vehicle.

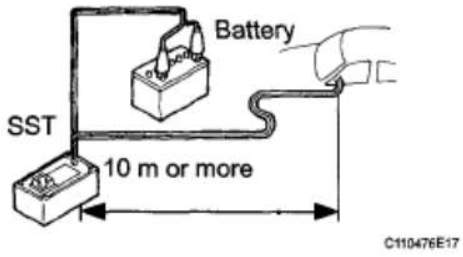


Fig. 250: Identifying Distance Between SST And Vehicle
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 (33 ft) radius of the vehicle.
2. Press the SST activation switch and deploy the airbag.

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CAUTION:

- **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)**

SST 09082-00700, 09082-00802 (09082-10801, 09082-30801)

NOTE:

- **Never use the customer's vehicle to deploy the airbag when disposing of the front passenger airbag.**
- **Follow the procedure detailed below when deploying the airbag.**

HINT:

Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST.

SST 09082-00700

CAUTION: Always use the specified SST (SRS Airbag Deployment Tool) when deploying the airbag.

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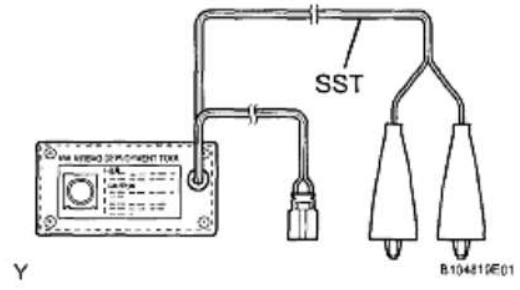


Fig. 251: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.

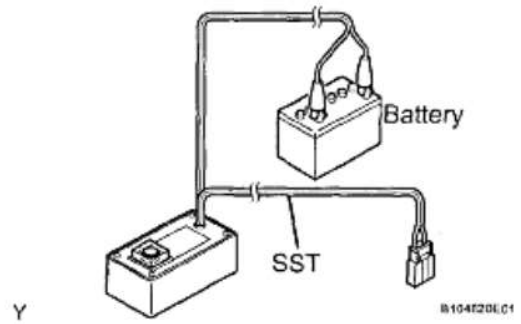


Fig. 252: Connecting Clip Of Positive Battery Terminal And Clip Of Negative Battery Terminal With SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Press the SST activation switch, and check that the LED on the SST activation switch illuminates.

CAUTION:
- **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. Remove the front passenger airbag (see **REMOVAL**).

CAUTION:
- **When removing the front passenger airbag, work must be started at least 90 seconds after the ignition switch is turned to OFF and the cable is disconnected from the negative battery terminal.**

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- **When storing the front passenger airbag, keep the upper surface of the airbag deployment side facing upward.**

c. Connect SST.

SST 09082-00700, 09082-00802 (09082-10801)

NOTE: Do not lock the secondary lock of the twin lock to avoid damaging the SST connector and wire harness.

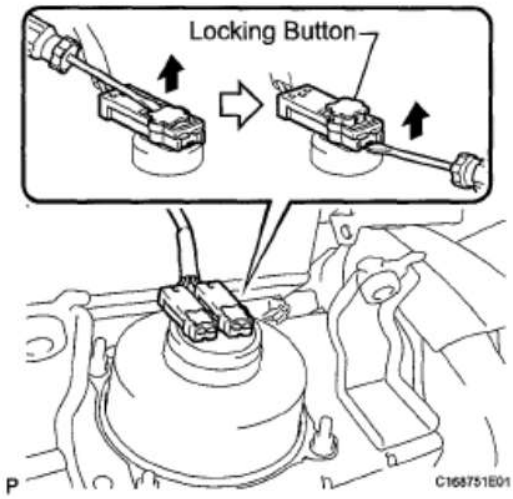


Fig. 253: Disconnecting Airbag Connectors Using Screwdriver
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Using a service-purpose wire harness for the vehicle, tie the front passenger airbag to the tire.

Stripped wire harness section:

AREA MEASUREMENT CHART

Area	Measurement
A	1 25 mm^2 or more (0.0019 in^2 or more)

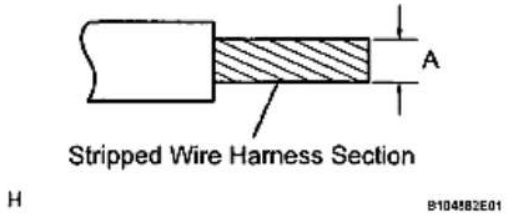


Fig. 254: Identifying Stripped Wire Harness Section
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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CAUTION: 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.

Tire size:

AREA MEASUREMENT CHART

Area	Measurement
A	185 mm (7.28 in)
B	360 mm (14 17 in)

CAUTION:

- **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.

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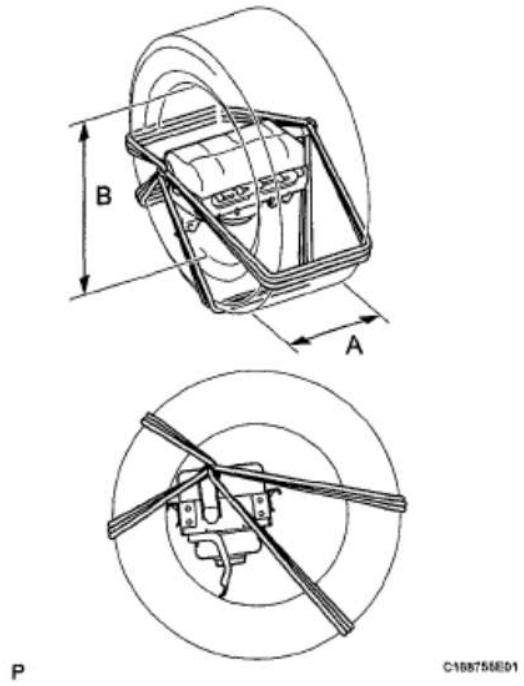


Fig. 255: Positioning Front Passenger Airbag Inside Tire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Place the tires.
   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.

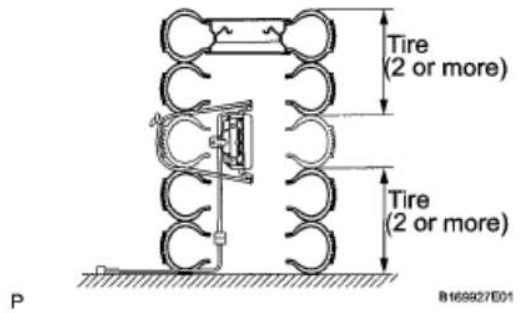


Fig. 256: Placing Tires
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   3. Tie the tires together with 2 wire harnesses.

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CAUTION: 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.



Fig. 257: Tying Tires Together With Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Connect SST.

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.

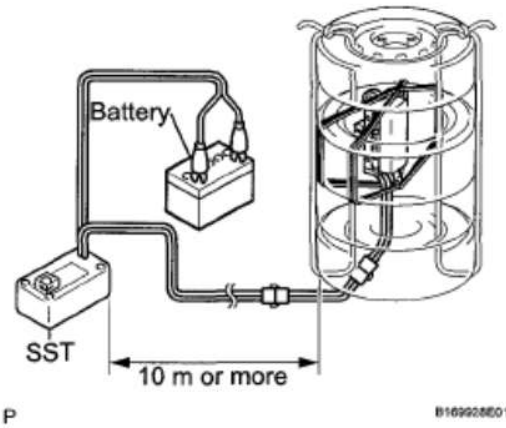


Fig. 258: Connecting SST To Front Passenger Airbag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 (33 ft) radius of the tire to which the front passenger airbag is tied.

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3. Press the SST activation switch and deploy the airbag.

CAUTION: 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. 259: Placing Front Passenger Airbag In Plastic Bag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION:

- **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 in the same way as other general parts.

CURTAIN SHIELD AIRBAG ASSEMBLY

COMPONENTS

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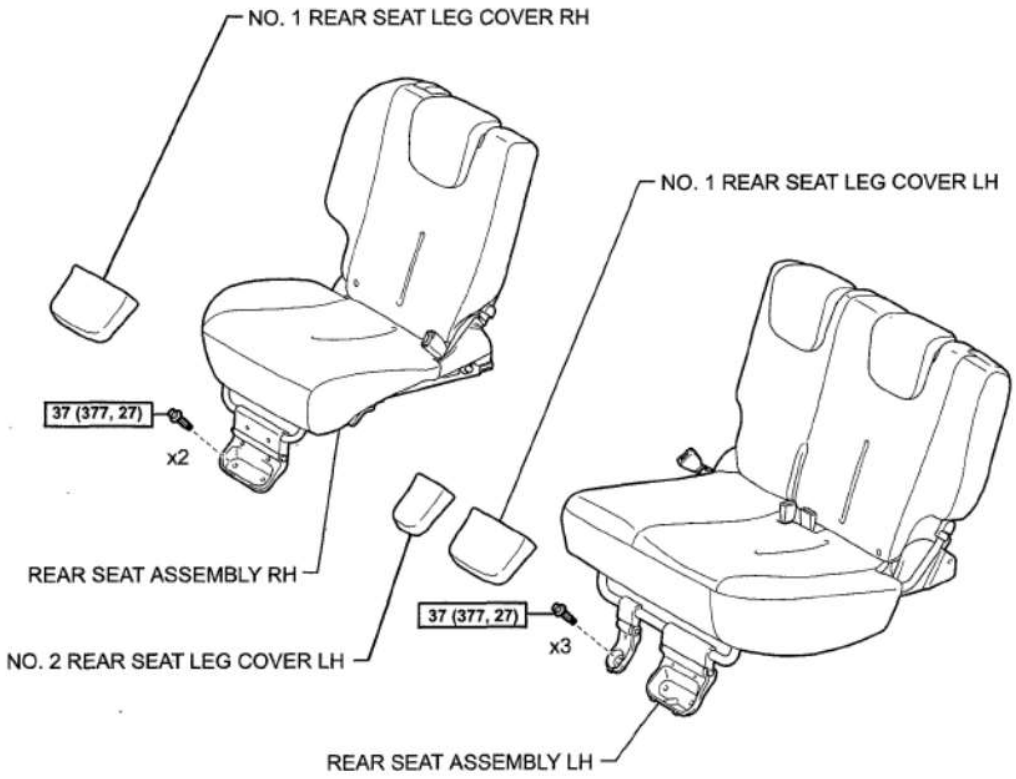


Fig. 260: Identifying Curtain Shield Airbag Assembly Components And Torque Specifications (1 Of 8)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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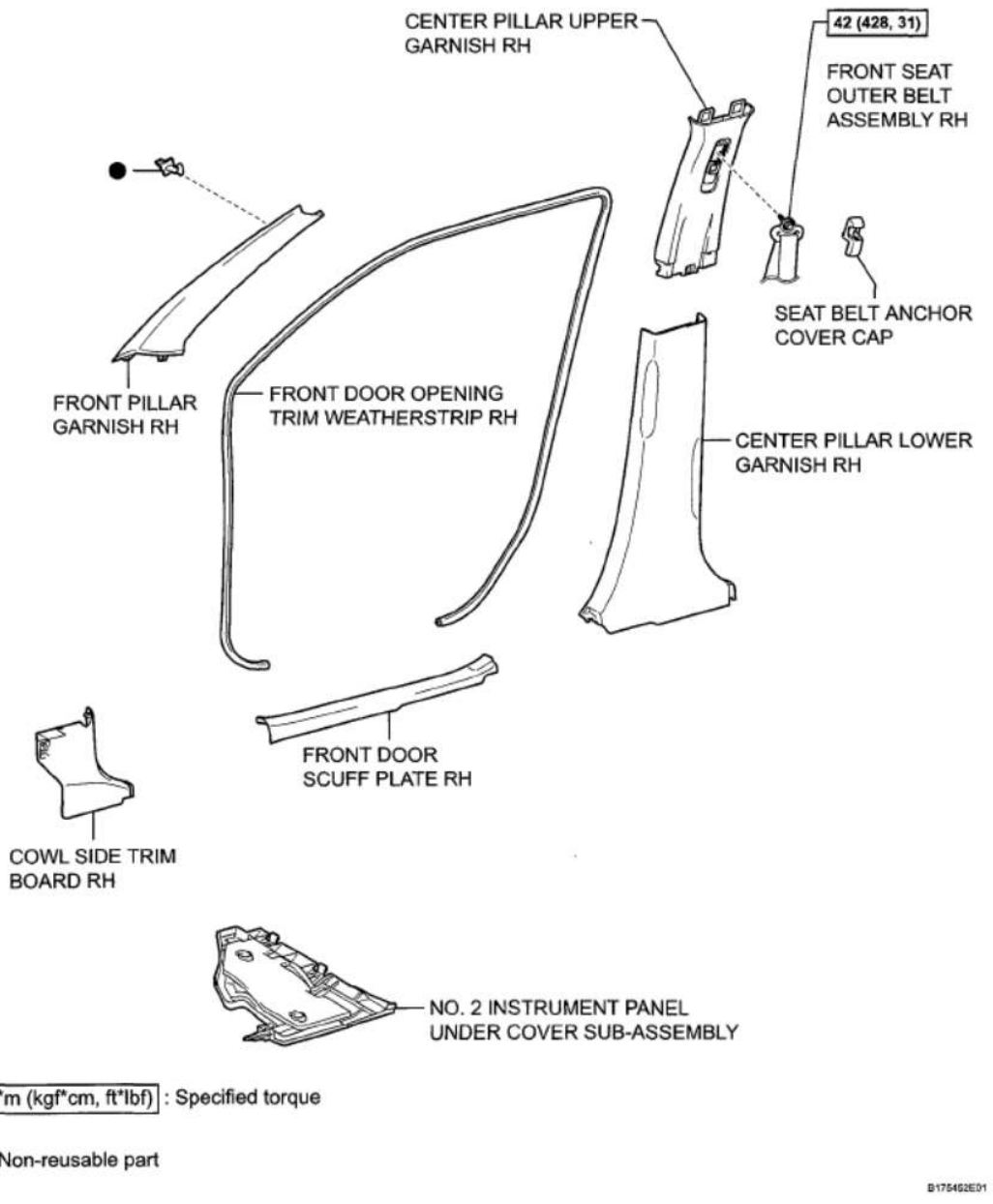


Fig. 261: Identifying Curtain Shield Airbag Assembly Components And Torque Specifications (2 Of 8)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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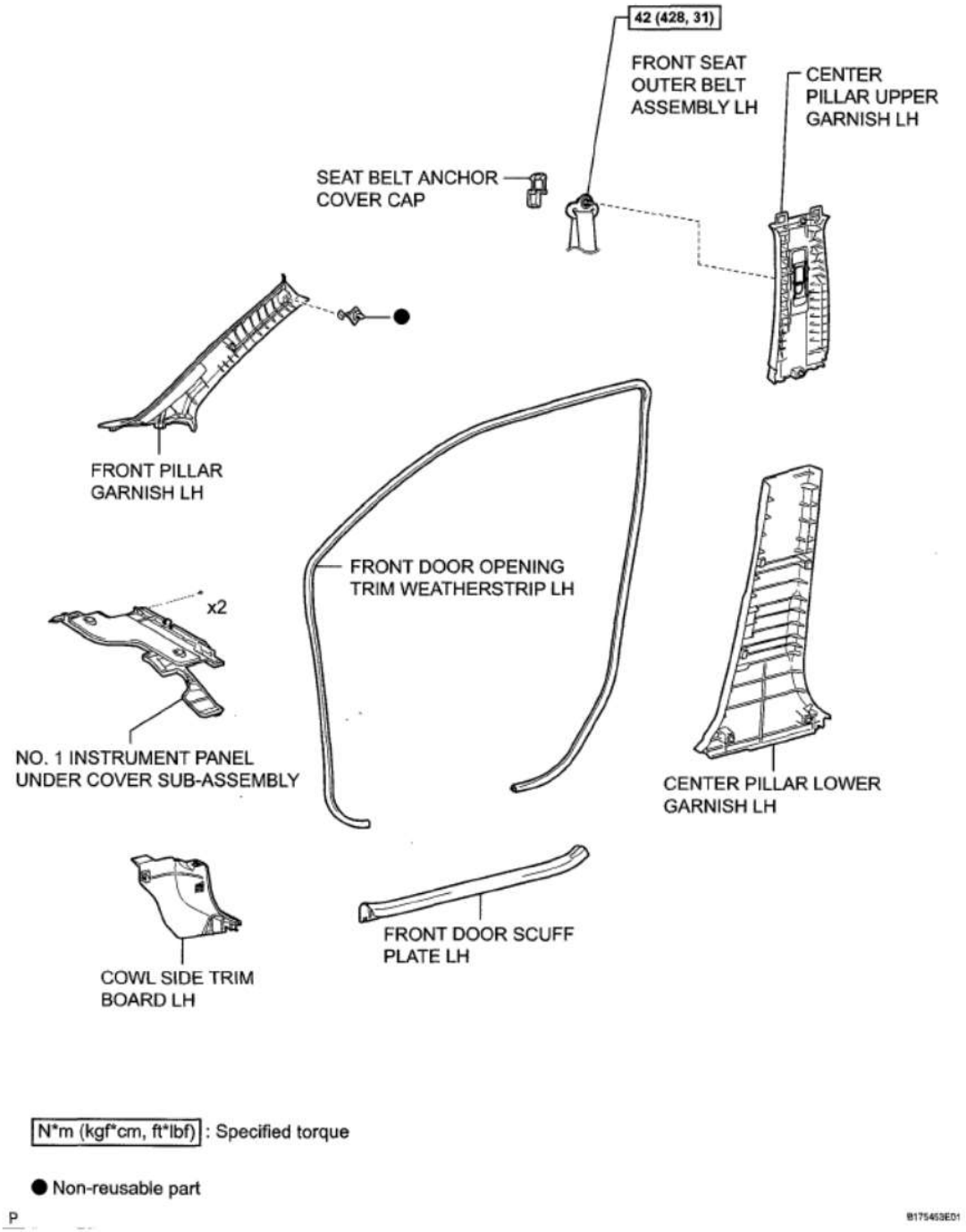


Fig. 262: Identifying Curtain Shield Airbag Assembly Components And Torque Specifications (3 Of 8)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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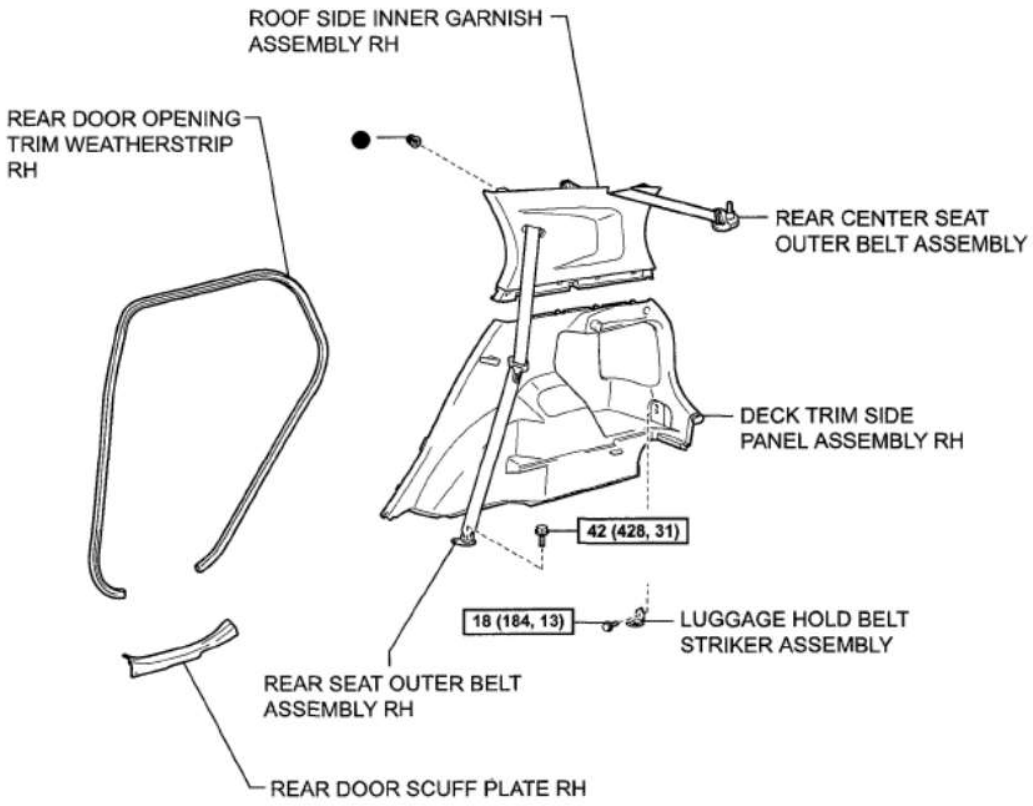


Fig. 263: Identifying Curtain Shield Airbag Assembly Components And Torque Specifications (4 Of 8)
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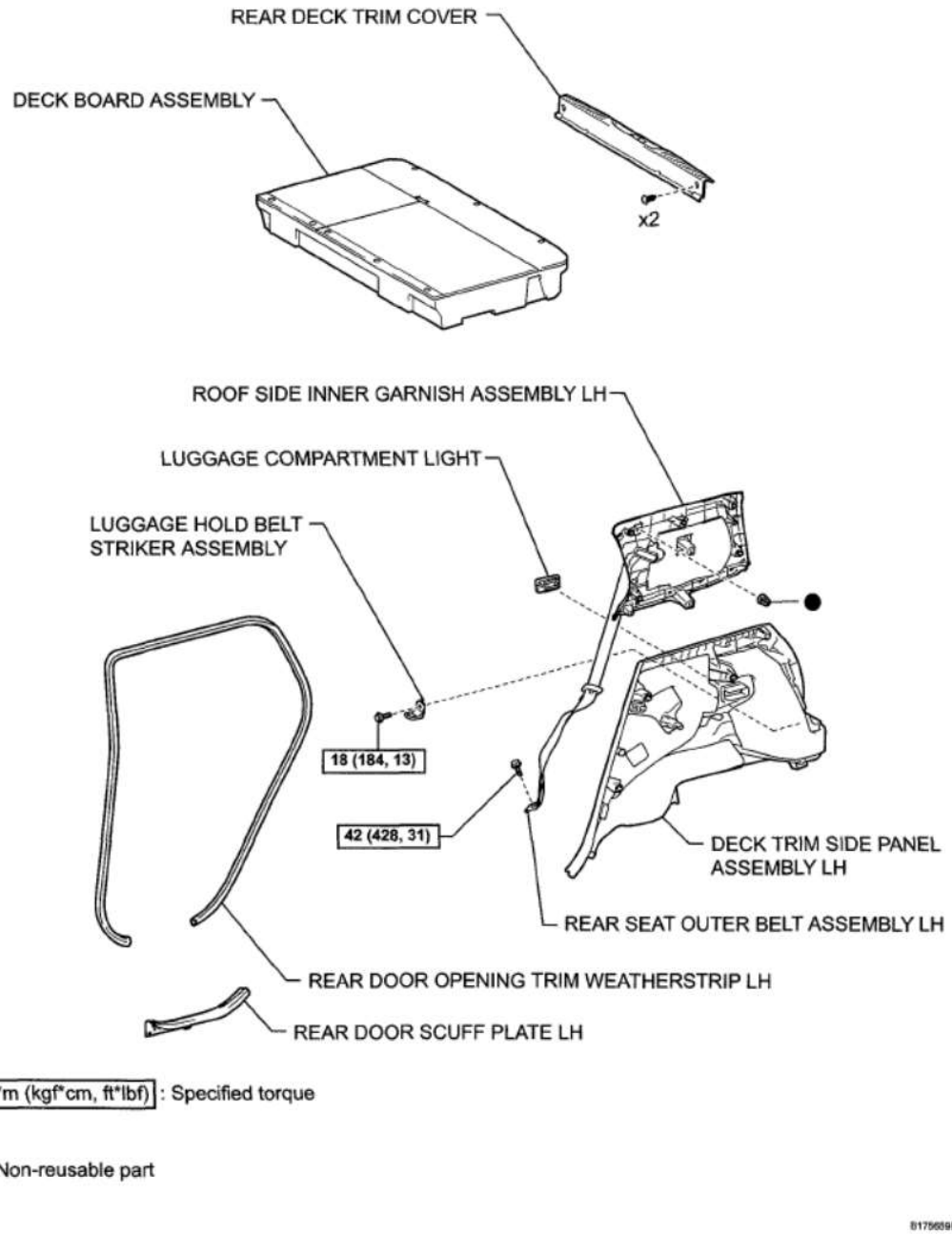


Fig. 264: Identifying Curtain Shield Airbag Assembly Components And Torque Specifications (5 Of 8)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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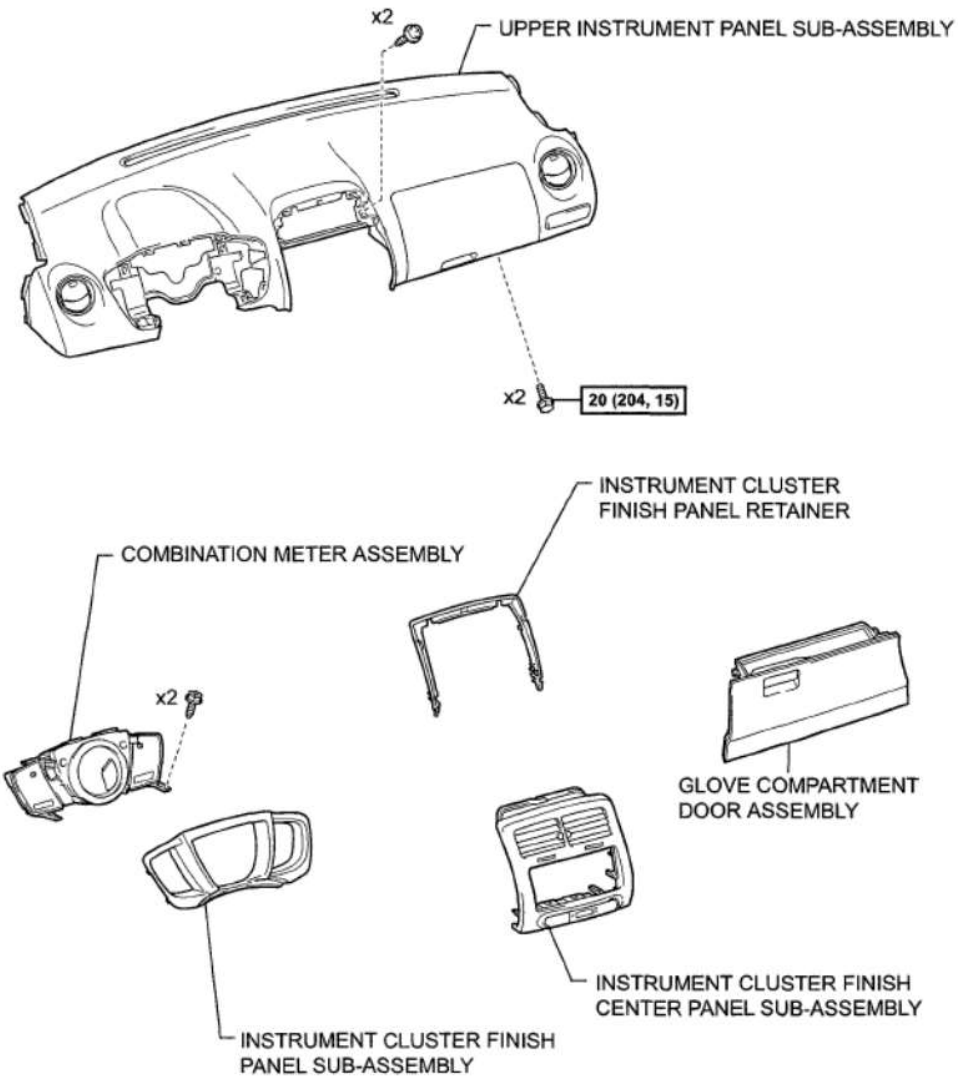


Fig. 265: Identifying Curtain Shield Airbag Assembly Components And Torque Specifications (6 Of 8)
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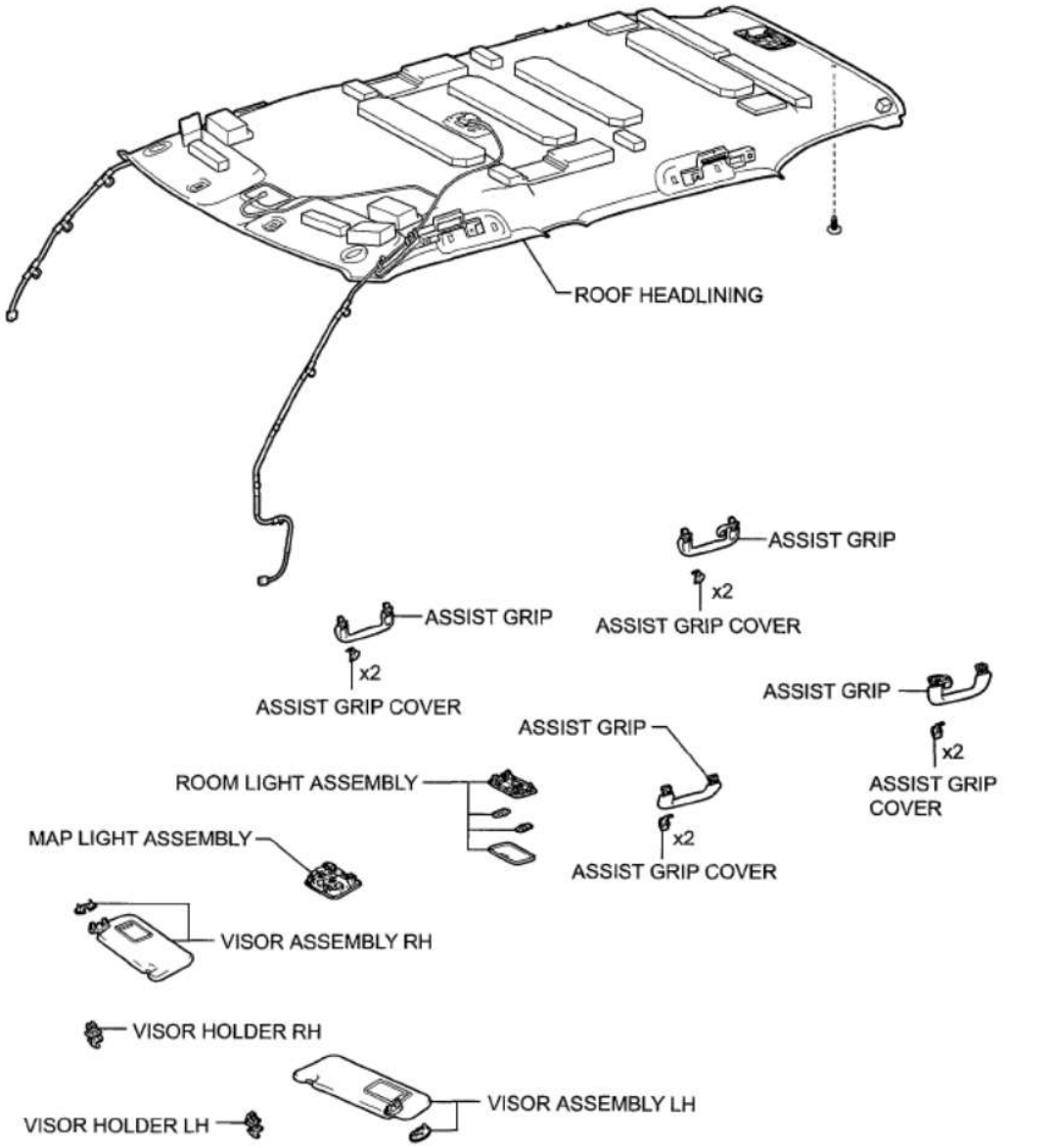


Fig. 266: Identifying Curtain Shield Airbag Assembly Components (7 Of 8)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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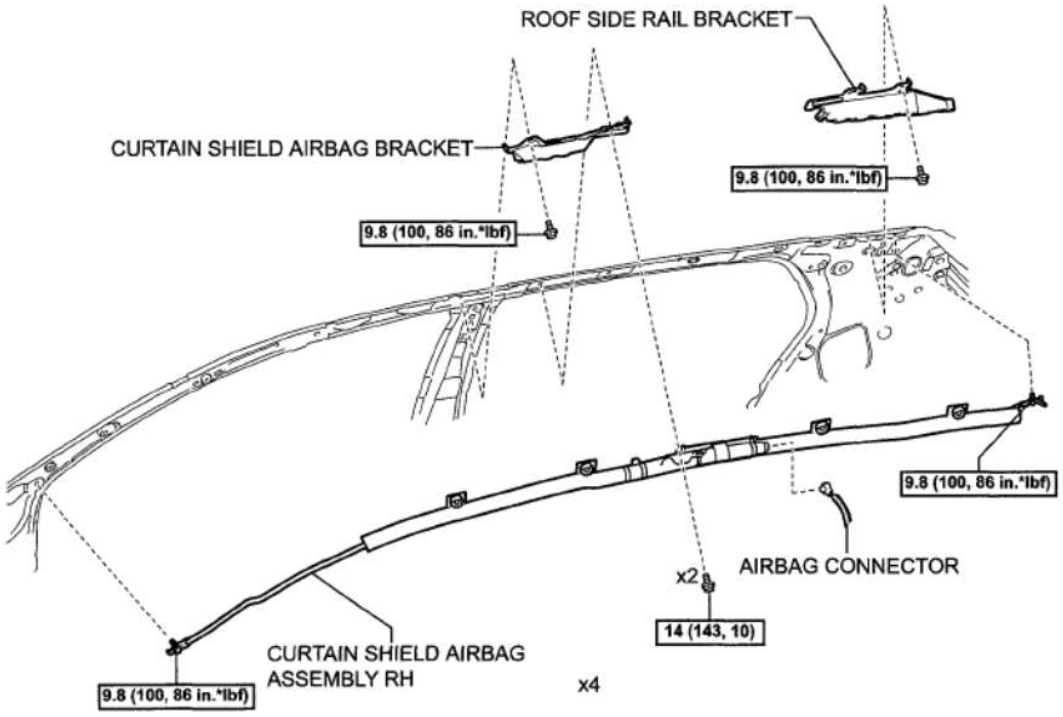


Fig. 267: Identifying Curtain Shield Airbag Assembly Components And Torque Specifications (8 Of 8)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

1. **INSPECT CURTAIN SHIELD AIRBAG ASSEMBLY (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check (See **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.

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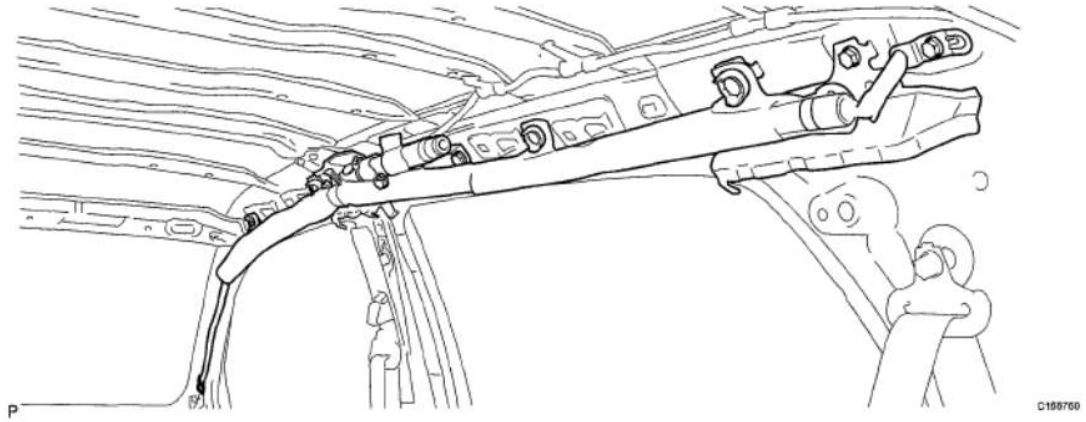


Fig. 268: Inspecting Curtain Shield Airbag Assembly (For Vehicle Not Involved In Collision)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **INSPECT CURTAIN SHIELD AIRBAG ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)**

CAUTION: For curtain shield airbag removal and installation procedures, see REMOVAL and INSTALLATION , and carefully follow the correct procedure.

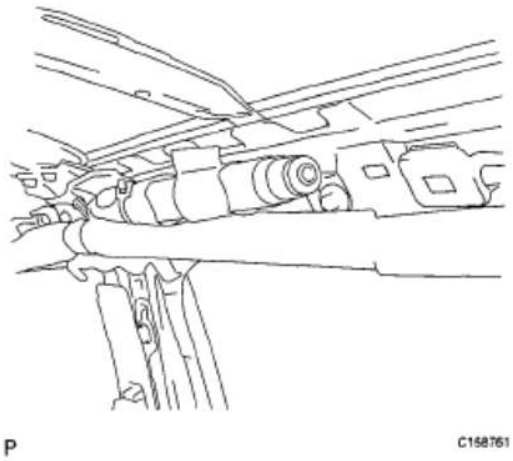


Fig. 269: Inspecting Curtain Shield Airbag Assembly (For Vehicle Involved In Collision And Airbag Not Deployed)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Perform a diagnostic system check (See **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.

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- Any cracks or other damage to the connector.

REMOVAL

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL** (See **REMOVAL**)
2. **REMOVE DECK BOARD ASSEMBLY** (See **REMOVAL**)
3. **REMOVE NO. 1 REAR SEAT LEG COVER RH** (See **REMOVAL**)
4. **REMOVE NO. 1 REAR SEAT LEG COVER LH** (See **REMOVAL**)
5. **REMOVE NO. 2 REAR SEAT LEG COVER LH** (See **REMOVAL**)
6. **REMOVE REAR SEAT ASSEMBLY RH** (See **REMOVAL**)
7. **REMOVE REAR SEAT ASSEMBLY LH** (See **REMOVAL**)
8. **REMOVE FRONT DOOR SCUFF PLATE RH** (See **REMOVAL**)
9. **REMOVE FRONT DOOR SCUFF PLATE LH** (See **REMOVAL**)
10. **REMOVE NO. 1 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY** (See **REMOVAL**)
11. **REMOVE NO. 2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY** (See **REMOVAL**)
12. **REMOVE COWL SIDE TRIM BOARD RH** (See **REMOVAL**)
13. **REMOVE COWL SIDE TRIM BOARD LH** (See **REMOVAL**)
14. **REMOVE FRONT DOOR OPENING TRIM WEATHERSTRIP RH** (See **REMOVAL**)
15. **REMOVE FRONT DOOR OPENING TRIM WEATHERSTRIP LH** (See **REMOVAL**)
16. **REMOVE REAR DOOR SCUFF PLATE RH** (See **REMOVAL**)
17. **REMOVE REAR DOOR SCUFF PLATE LH** (See **REMOVAL**)
18. **REMOVE REAR DOOR OPENING TRIM WEATHERSTRIP RH** (See **REMOVAL**)
19. **REMOVE REAR DOOR OPENING TRIM WEATHERSTRIP LH** (See **REMOVAL**)
20. **REMOVE REAR DECK TRIM COVER** (See **REMOVAL**)
21. **REMOVE LUGGAGE HOLD BELT STRIKER ASSEMBLY** (See **REMOVAL**)
22. **REMOVE REAR SEAT OUTER BELT ASSEMBLY RH** (See **REMOVAL**)
23. **REMOVE REAR SEAT OUTER BELT ASSEMBLY LH** (See **REMOVAL**)
24. **REMOVE DECK TRIM SIDE PANEL ASSEMBLY RH** (See **REMOVAL**)
25. **REMOVE DECK TRIM SIDE PANEL ASSEMBLY LH** (See **REMOVAL**)
26. **REMOVE ROOF SIDE INNER GARNISH ASSEMBLY RH** (See **REMOVAL**)
27. **REMOVE ROOF SIDE INNER GARNISH ASSEMBLY LH** (See **REMOVAL**)
28. **REMOVE SEAT BELT ANCHOR COVER CAP** (See **REMOVAL**)
29. **REMOVE FRONT SEAT OUTER BELT ASSEMBLY RH** (See **REMOVAL**)
30. **REMOVE FRONT SEAT OUTER BELT ASSEMBLY LH** (See **REMOVAL**)
31. **REMOVE CENTER PILLAR LOWER GARNISH RH** (See **REMOVAL**)
32. **REMOVE CENTER PILLAR LOWER GARNISH LH** (See **REMOVAL**)
33. **REMOVE CENTER PILLAR UPPER GARNISH RH** (See **REMOVAL**)
34. **REMOVE CENTER PILLAR UPPER GARNISH LH** (See **REMOVAL**)

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35. **REMOVE FRONT PILLAR GARNISH RH** (See **REMOVAL**)
36. **REMOVE FRONT PILLAR GARNISH LH** (See **REMOVAL**)
37. **REMOVE ASSIST GRIP** (See **REMOVAL**)
38. **REMOVE VISOR ASSEMBLY RH** (See **REMOVAL**)
39. **REMOVE VISOR ASSEMBLY LH** (See **REMOVAL**)
40. **REMOVE VISOR HOLDER RH** (See **REMOVAL**)
41. **REMOVE VISOR HOLDER LH** (See **REMOVAL**)
42. **REMOVE ROOM LIGHT ASSEMBLY** (See **REMOVAL**)
43. **REMOVE MAP LIGHT ASSEMBLY** (See **REMOVAL**)
44. **REMOVE INSTRUMENT CLUSTER FINISH CENTER PANEL SUB-ASSEMBLY** (See **REMOVAL**)
45. **REMOVE GLOVE COMPARTMENT DOOR ASSEMBLY** (See **REMOVAL**)
46. **REMOVE INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY** (See **REMOVAL**)
47. **REMOVE COMBINATION METER ASSEMBLY** (See **REMOVAL**)
48. **REMOVE GLOVE COMPARTMENT DOOR ASSEMBLY** (See **REMOVAL**)
49. **REMOVE UPPER INSTRUMENT PANEL SUB-ASSEMBLY** (See **REMOVAL**)
50. **REMOVE REAR CENTER SEAT OUTER BELT ASSEMBLY** (See **REMOVAL**)
51. **REMOVE SEAT BELT ANCHOR COVER** (See **REMOVAL**)
52. **REMOVE ROOF HEADLINING** (See **REMOVAL**)
53. **REMOVE CURTAIN SHIELD AIRBAG ASSEMBLY RH**
    a. Remove the 4 clips.
        1. Using a clip remover, remove the pin.

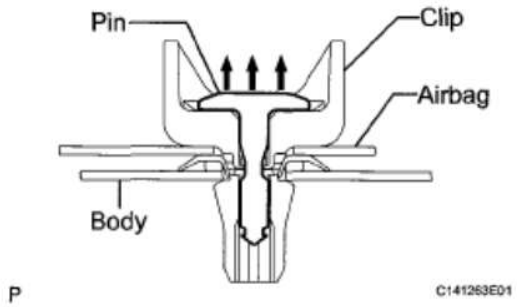


Fig. 270: Identifying Clip
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

        2. Using needle-nose pliers, remove the clip and curtain shield airbag from the body as shown in the illustration.

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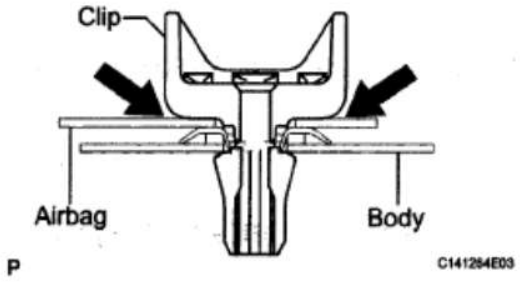


Fig. 271: Identifying Clip And Curtain Shield Airbag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Using a thin-bladed screwdriver, release the locking button.

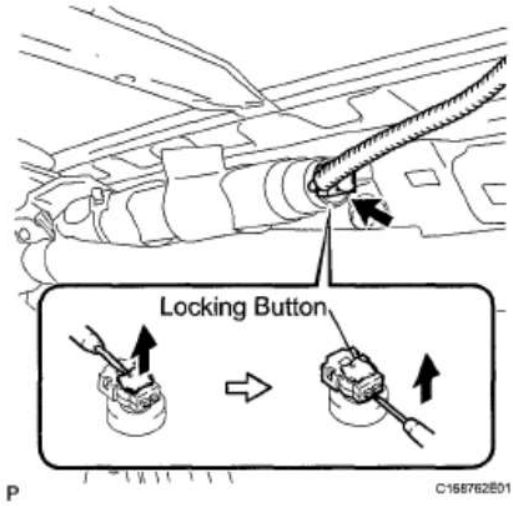


Fig. 272: Releasing Locking Button
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Using a thin-bladed screwdriver, detach the airbag connector.
d. Remove the 4 bolts and curtain shield airbag assembly.

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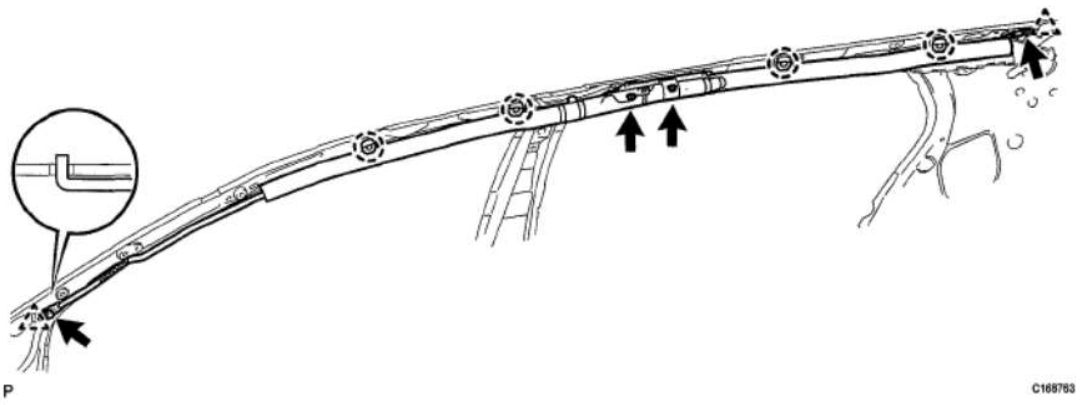


Fig. 273: Locating Bolts And Curtain Shield Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Disengage the 2 hooks.
f. Remove the 4 clips and 4 spacers from the curtain shield airbag assembly.

NOTE: If clips and spacers are removed, always replace them with new ones even though they may not appear to be damaged.

54. **REMOVE CURTAIN SHIELD AIRBAG BRACKET**
    a. Remove the bolt, disengage the 2 hooks and remove the curtain shield airbag bracket.

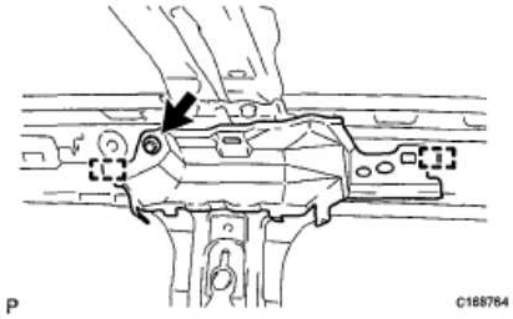


Fig. 274: Locating Bolt And Curtain Shield Airbag Bracket
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

55. **REMOVE ROOF SIDE RAIL BRACKET**
    a. Remove the bolt, disengage the 2 hooks and remove the roof side rail bracket.

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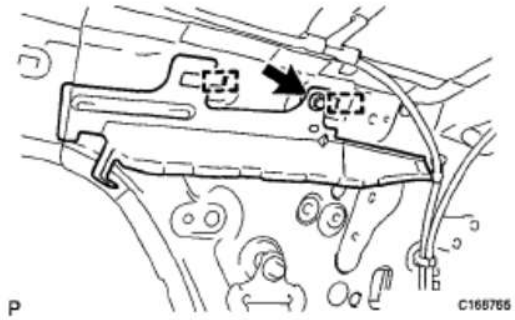


Fig. 275: Locating Bolt And Roof Side Rail Bracket
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See 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.

1. **INSTALL ROOF SIDE RAIL BRACKET**
   a. Insert the 2 hooks into the body holes and install the roof side rail bracket and tighten the bolt.

   Torque: 9.8 N*m (100 kgf*cm, 86 in.*lbf)

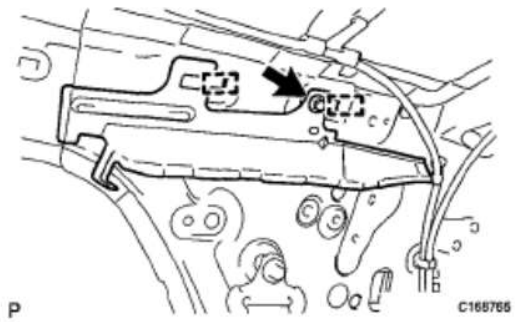


Fig. 276: Locating Bolt And Roof Side Rail Bracket
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **INSTALL CURTAIN SHIELD AIRBAG BRACKET**
   a. Insert the 2 hooks into the body holes and install the curtain shield back bracket and tighten the bolt.

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Torque: 9.8 N*m (100 kgf*cm, 86 in.*lbf)

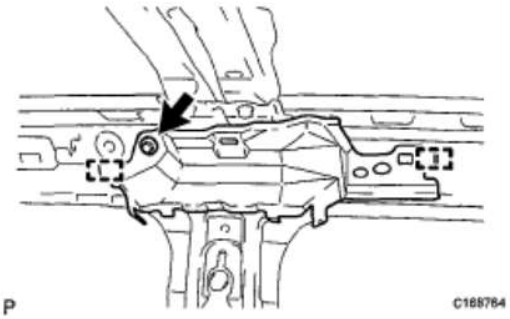


Fig. 277: Locating Bolt And Curtain Shield Airbag Bracket
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. **INSTALL CURTAIN SHIELD AIRBAG ASSEMBLY RH**
   a. Check that the ignition switch is off.
   b. Check that the battery negative (-) terminal is disconnected.

CAUTION: Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.

   c. Install 4 new clips and 4 new spacers the curtain shield airbag assembly as shown in the illustration.

   HINT:

   - Do not push in the pin.
   - Make sure that the clips are installed in the correct direction.
   - Make sure that the spacers are installed properly, in the correct direction, and that they are not damaged.

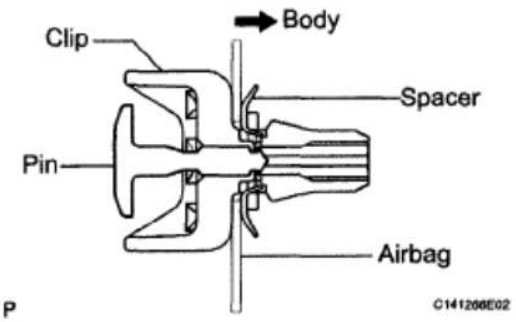


Fig. 278: Identifying Clips And Spacers
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   d. Install the curtain shield airbag assembly with 4 new bolts.

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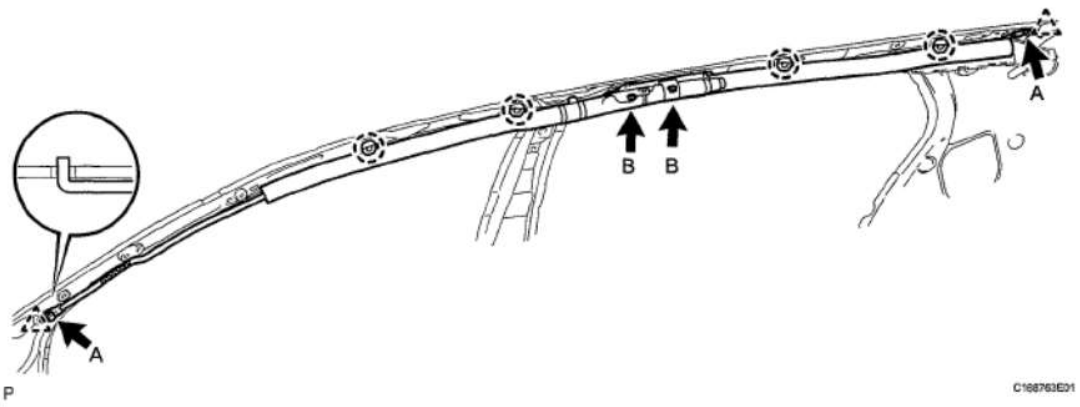


Fig. 279: Locating Curtain Shield Airbag Assembly And Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Torque: 9.8 N*m (100 kgf*cm, 86 in.*lbf) for Bolt A

Torque: 14 N*m (143 kgf*cm, 10 ft.*lbf) for Bolt B

NOTE: Do not twist the curtain shield airbag assembly when installing it.

e. Install the 4 clips and the curtain shield airbag assembly to the body panel as shown in the illustration.

NOTE: Make sure that the pins of the clips are pushed in firmly.

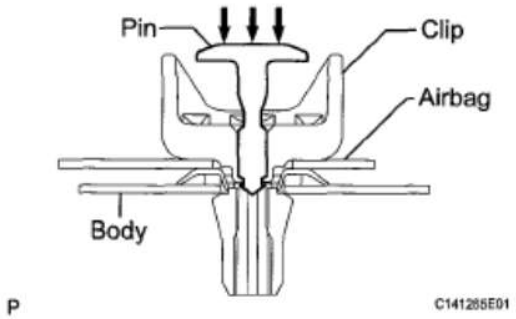


Fig. 280: Identifying Clips And Curtain Shield Airbag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Mark the clips.

HINT:

Mark the clips to make sure that they are not reused.

g. Connect the airbag connector.

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NOTE: Securely lock the locking button.

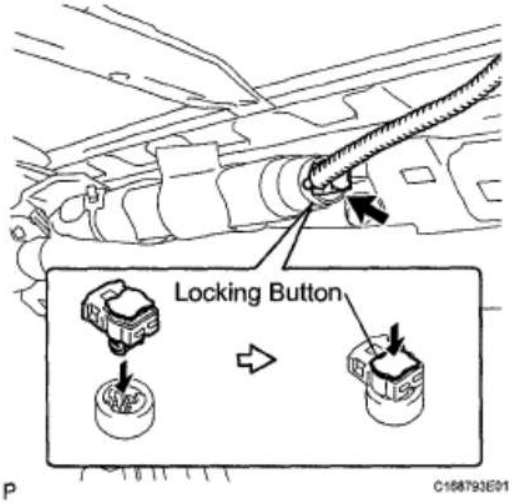


Fig. 281: Connecting Airbag Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

4. **INSTALL ROOF HEADLINING** (See **INSTALLATION**)
5. **INSTALL SEAT BELT ANCHOR COVER** (See **INSTALLATION**)
6. **INSTALL SHOULDER BELT ANCHOR COVER RH** (See **INSTALLATION**)
7. **INSTALL REAR CENTER SEAT OUTER BELT ASSEMBLY** (See **INSTALLATION**)
8. **INSTALL UPPER INSTRUMENT PANEL SUB-ASSEMBLY** (See **INSTALLATION**)
9. **INSTALL GLOVE COMPARTMENT DOOR ASSEMBLY** (See **INSTALLATION**)
10. **INSTALL COMBINATION METER ASSEMBLY** (See **REASSEMBLY**)
11. **INSTALL INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY** (See **REASSEMBLY**)
12. **INSTALL GLOVE COMPARTMENT DOOR ASSEMBLY** (See **INSTALLATION**)
13. **INSTALL INSTRUMENT CLUSTER FINISH CENTER PANEL SUB-ASSEMBLY** (See **INSTALLATION**)
14. **INSTALL MAP LIGHT ASSEMBLY** (See **INSTALLATION**)
15. **INSTALL ROOM LIGHT ASSEMBLY** (See **INSTALLATION**)
16. **INSTALL VISOR HOLDER RH** (See **INSTALLATION**)
17. **INSTALL VISOR HOLDER LH** (See **INSTALLATION**)
18. **INSTALL VISOR ASSEMBLY RH** (See **INSTALLATION**)
19. **INSTALL VISOR ASSEMBLY LH** (See **INSTALLATION**)
20. **INSTALL ASSIST GRIP** (See **INSTALLATION**)
21. **INSTALL FRONT PILLAR GARNISH RH** (See **INSTALLATION**)
22. **INSTALL FRONT PILLAR GARNISH LH** (See **INSTALLATION**)
23. **INSTALL CENTER PILLAR UPPER GARNISH RH** (See **INSTALLATION**)

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24. **INSTALL CENTER PILLAR UPPER GARNISH LH** (See **INSTALLATION**)
25. **INSTALL CENTER PILLAR LOWER GARNISH RH** (See **INSTALLATION**)
26. **INSTALL CENTER PILLAR LOWER GARNISH LH** (See **INSTALLATION**)
27. **INSTALL FRONT SEAT OUTER BELT ASSEMBLY RH** (See **INSTALLATION**)
28. **INSTALL FRONT SEAT OUTER BELT ASSEMBLY LH** (See **INSTALLATION**)
29. **INSTALL SEAT BELT ANCHOR COVER CAP** (See **INSTALLATION**)
30. **INSTALL ROOF SIDE INNER GARNISH ASSEMBLY RH** (See **INSTALLATION**)
31. **INSTALL ROOF SIDE INNER GARNISH ASSEMBLY LH** (See **INSTALLATION**)
32. **INSTALL DECK TRIM SIDE PANEL ASSEMBLY RH** (See **INSTALLATION**)
33. **INSTALL DECK TRIM SIDE PANEL ASSEMBLY LH** (See **INSTALLATION**)
34. **INSTALL REAR SEAT OUTER BELT ASSEMBLY RH** (See **INSTALLATION**)
35. **INSTALL REAR SEAT OUTER BELT ASSEMBLY LH** (See **INSTALLATION**)
36. **INSTALL LUGGAGE HOLD BELT STRIKER ASSEMBLY** (See **INSTALLATION**)
37. **INSTALL REAR DECK TRIM COVER** (See **INSTALLATION**)
38. **INSTALL REAR DOOR OPENING TRIM WEATHERSTRIP RH** (See **INSTALLATION**)
39. **INSTALL REAR DOOR OPENING TRIM WEATHERSTRIP LH** (See **INSTALLATION**)
40. **INSTALL REAR DOOR SCUFF PLATE RH** (See **INSTALLATION**)
41. **INSTALL REAR DOOR SCUFF PLATE LH** (See **INSTALLATION**)
42. **INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP RH** (See **INSTALLATION**)
43. **INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP LH** (See **INSTALLATION**)
44. **INSTALL COWL SIDE TRIM BOARD RH** (See **INSTALLATION**)
45. **INSTALL COWL SIDE TRIM BOARD LH** (See **INSTALLATION**)
46. **INSTALL NO. 1 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY** (See **INSTALLATION**)
47. **INSTALL NO. 2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY** (See **INSTALLATION**)
48. **INSTALL FRONT DOOR SCUFF PLATE RH** (See **INSTALLATION**)
49. **INSTALL FRONT DOOR SCUFF PLATE LH** (See **INSTALLATION**)
50. **INSTALL REAR SEAT ASSEMBLY RH** (See **INSTALLATION**)
51. **INSTALL REAR SEAT ASSEMBLY LH** (See **INSTALLATION**)
52. **INSTALL NO. 1 REAR SEAT LEG COVER RH** (See **INSTALLATION**)
53. **INSTALL NO. 1 REAR SEAT LEG COVER LH** (See **INSTALLATION**)
54. **INSTALL NO. 2 REAR SEAT LEG COVER LH** (See **INSTALLATION**)
55. **INSTALL DECK BOARD ASSEMBLY** (See **INSTALLATION**)
56. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

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57. **INSPECT SRS WARNING LIGHT**

(See **DIAGNOSIS SYSTEM**)

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 DISTRIBUTOR.

CAUTION:

- **Never dispose of a curtain shield airbag that has an undeployed airbag.**
- **The airbag emits 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 (33 ft) away from the curtain shield airbag.**

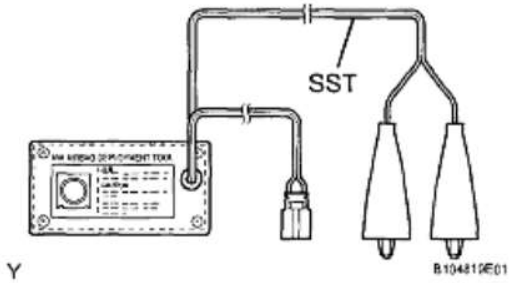


Fig. 282: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **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.**

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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.

SST 09082-00700

CAUTION: Always use the specified SST (SRS Airbag Deployment Tool) when deploying the airbag.

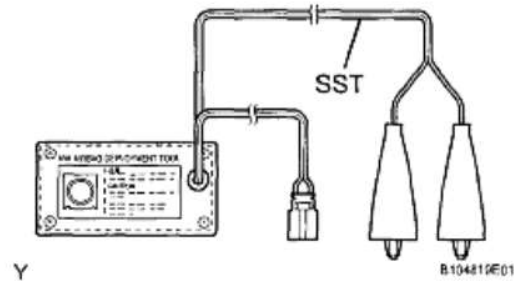


Fig. 283: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.

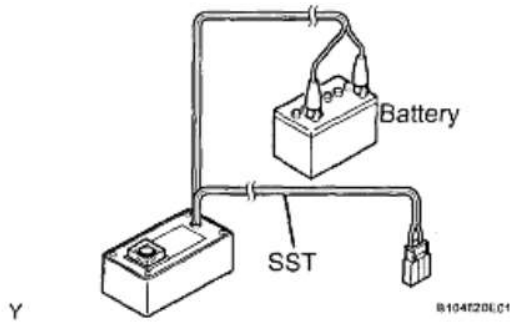


Fig. 284: Connecting Clip Of Positive Battery Terminal And Clip Of Negative Battery Terminal With SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Press the SST activation switch, and check that the LED on the SST activation switch illuminates.

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CAUTION:

- **Do not connect the SST connector (yellow colored one) to the airbag.**
- **If the LED illuminates when the activation switch is not pressed, SST may be malfunctioning. Do not use SST.**

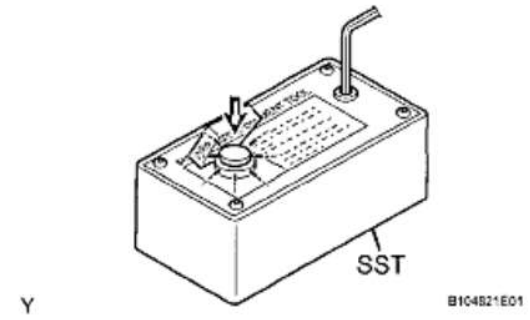


Fig. 285: Pressing SST Activation Switch
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Disconnect SST from the battery.

b. Disconnect the cable from the negative battery terminal.

c. Remove the roof headlining (See **REMOVAL**).

d. Disconnect the airbag connector, as shown in the illustration.

NOTE: **Do not damage the airbag wire harness when handling the airbag connector.**

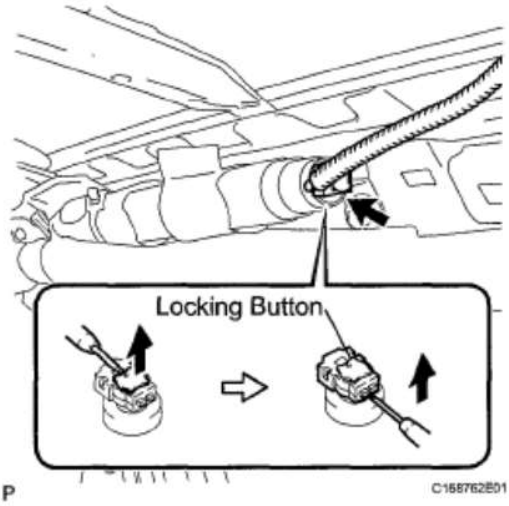


Fig. 286: Disconnecting Airbag Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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e. Connect SST.

SST 09082-00700, 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.

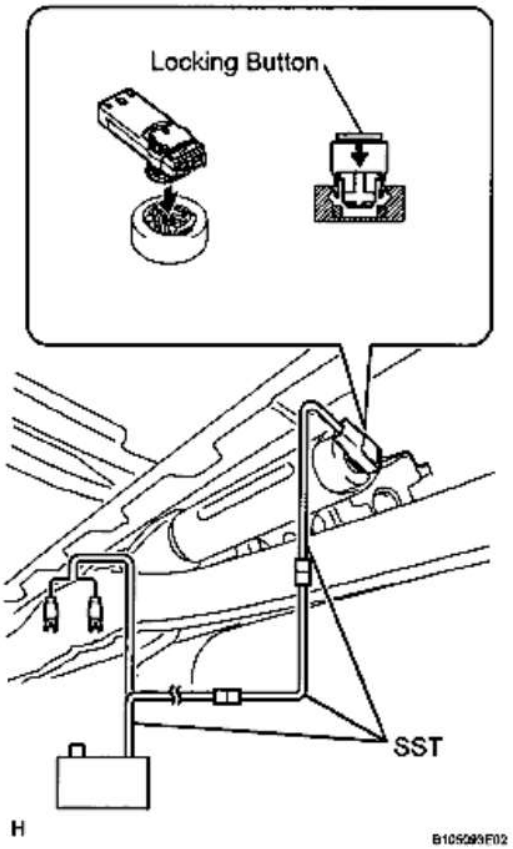


Fig. 287: Connecting SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Move SST to at least 10 m (33 ft) away from the vehicle.

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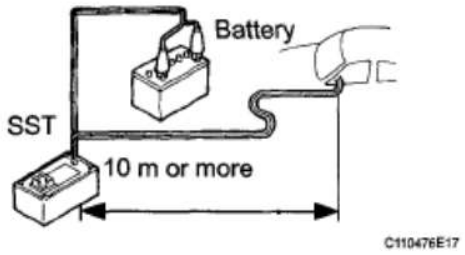


Fig. 288: Identifying Distance Between SST And Vehicle
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 (33 ft) radius of the vehicle.
2. Press the SST activation switch and deploy the airbag.

CAUTION:

- **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.**
- **Do not apply water, etc. to 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)**

NOTE:

- **Never use the customer's vehicle to deploy the airbag when only disposing of the curtain shield airbag.**
- **Follow the procedure detailed below when deploying the airbag.**

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HINT:

Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST.

SST 09082-00700

CAUTION: Always use the specified SST (SRS Airbag Deployment Tool) when deploying the airbag.

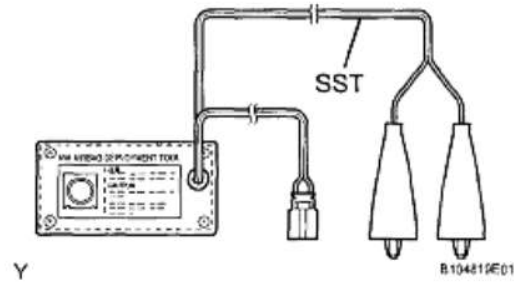


Fig. 289: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.

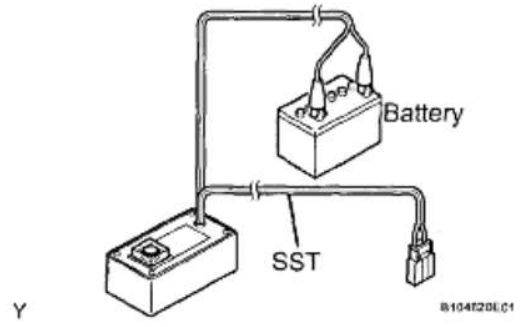


Fig. 290: Connecting Clip Of Positive Battery Terminal And Clip Of Negative Battery Terminal With SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Press the SST activation switch, and check that the LED on the SST activation switch illuminates.

CAUTION:
- **Do not connect the SST connector (yellow colored one) to the airbag.**

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- **If the LED illuminates when the activation switch is not pressed, SST may be malfunctioning. Do not use SST.**

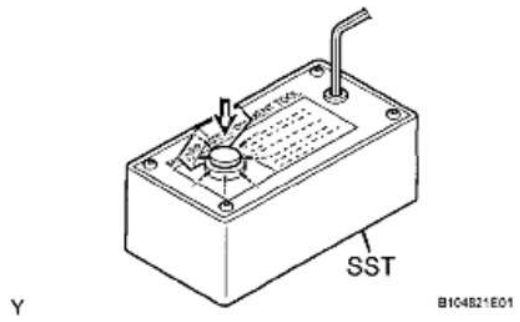


Fig. 291: Pressing SST Activation Switch
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Disconnect SST from the battery.

b. Remove the curtain shield airbag (See **REMOVAL**).

c. Cut off the deployment section of the curtain shield airbag.

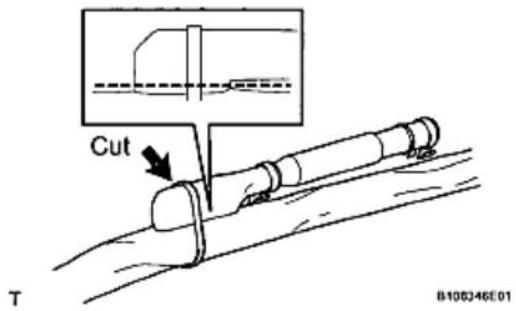


Fig. 292: Locating Cut Off Deployment Section Of Curtain Shield Airbag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Connect SST.

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.

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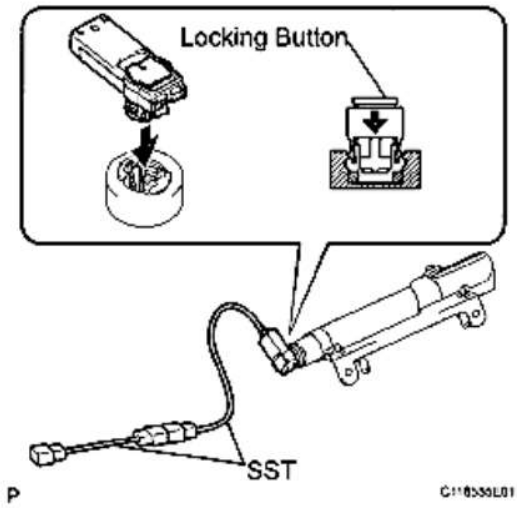


Fig. 293: Connecting SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Using a service-purpose wire harness for the vehicle, tie the curtain shield airbag to the tire.

Stripped wire harness section:

AREA MEASUREMENT CHART

Area	Measurement
A	1 25 mm^2 or more (0 0019 in^2 or more)

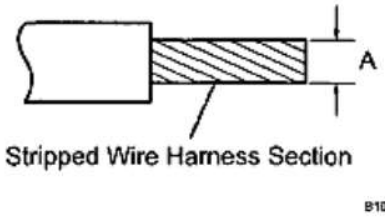


Fig. 294: Identifying Stripped Wire Harness Section
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION: 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:

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Area = 3.14 x (Diameter)^2 divided by 4

1. Position the curtain shield airbag inside the tire, as shown in the illustration.

Tire size:

AREA MEASUREMENT CHART

Area	Measurement
A	185 mm (7 28 in)
B	360 mm (14 17 in)

CAUTION: 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.

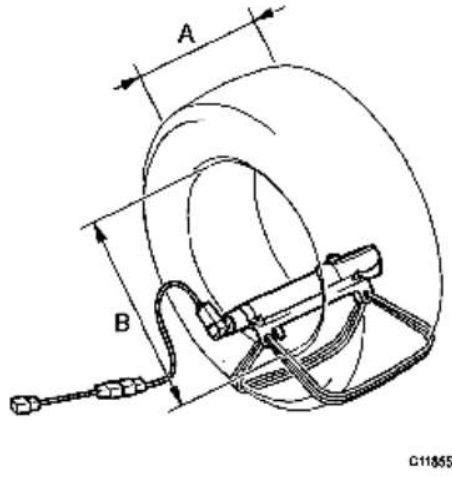


Fig. 295: Positioning Curtain Shield Airbag Inside Tire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Place the tires.

CAUTION: 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.

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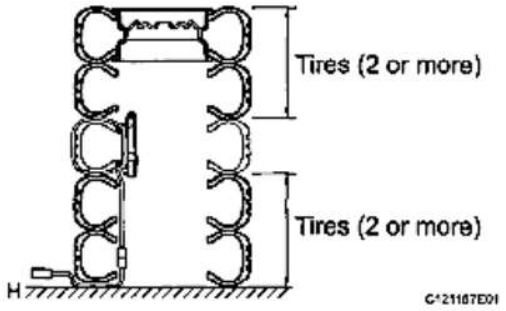


Fig. 296: Placing Tires
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NOTE: Do not place the SST connector under the tire because it could be damaged.

3. Tie the tires together with 2 wire harnesses.

CAUTION: 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.



Fig. 297: Tying Tires Together With Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

g. Connect SST.

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.

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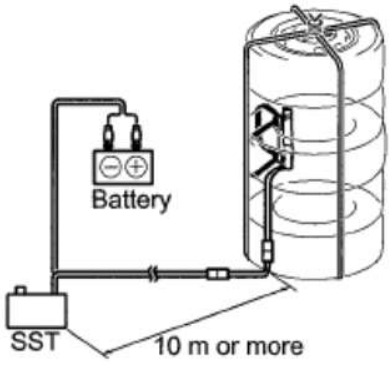


Fig. 298: Identifying Distance Between SST And Curtain Shield Airbag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 (33 ft) radius of the tire to which the curtain shield airbag is tied.
   3. Press the SST activation switch and deploy the airbag.

CAUTION: 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.

CAUTION:
- **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.**

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Fig. 299: Placing Curtain Shield Airbag In Plastic Bag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 in the same way as other general parts.

FRONT SEAT SIDE AIRBAG ASSEMBLY

ON-VEHICLE INSPECTION

1. **INSPECT FRONT SEAT SIDE AIRBAG ASSEMBLY (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check (See **DTC CHECK / CLEAR**).
   b. With the front seat side airbag installed on the vehicle, perform a visual check. If there are any defects, such as those mentioned below, replace the front seat side airbag with a new one:
      - Any cuts, minute cracks or marked discoloration on the front seat airbag.



Fig. 300: Inspecting Front Seat Side Airbag Assembly (For Vehicle Not Involved In Collision)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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2. **INSPECT FRONT SEAT SIDE AIRBAG ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)**

CAUTION: For front seat side airbag removal and installation procedures, see REMOVAL and INSTALLATION , and carefully follow the correct procedure.

a. Perform a diagnostic system check (See **DTC CHECK / CLEAR**).

b. With the front seat side airbag removed from the vehicle, perform a visual check. If there are any defects, such as those mentioned below, replace the front seat side airbag with a new one:

- Any cuts, minute cracks or marked discoloration on the front seat airbag.
- Any cracks or other damage to the wire harness or connector.

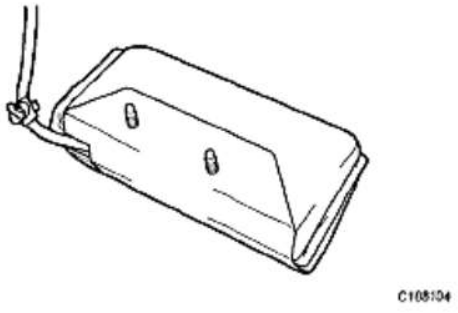


Fig. 301: Inspecting Front Seat Side Airbag Assembly (For Vehicle Involved In Collision And Airbag Not Deployed)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 DISTRIBUTOR.

CAUTION:

- **Never dispose of a front seat side airbag that has an undeployed airbag.**
- **The airbag emits 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**

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electrical noise.

- **When deploying the airbag, perform the operation at least 10 m (33 ft) away from the airbag.**
- **The front seat side 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 seat side airbag which has been deployed.**

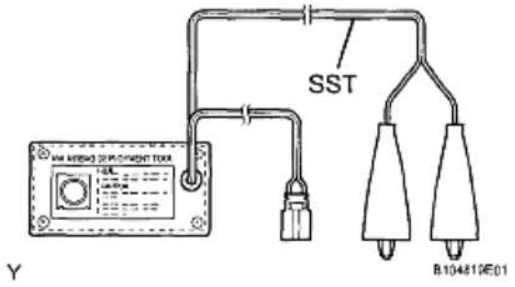


Fig. 302: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **Always wash your hands with water after completing the operation.**
- **Do not apply water, etc. to a front seat airbag which has been deployed.**

1. **DISPOSE OF FRONT SEAT SIDE AIRBAG ASSEMBLY (WHEN INSTALLED IN VEHICLE)**

HINT:

Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST.

SST 09082-00700

CAUTION: Always use the specified SST (SRS Airbag Deployment Tool) when deploying the airbag.

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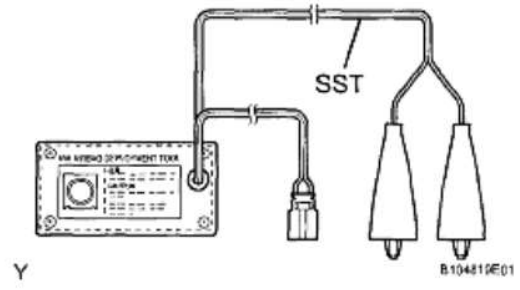


Fig. 303: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.

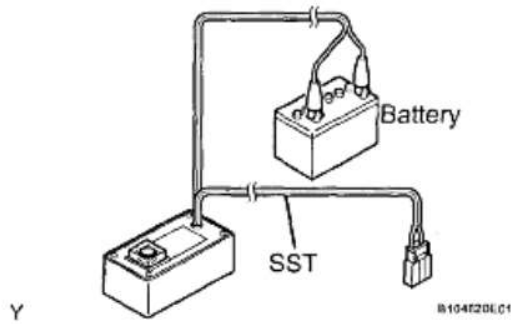


Fig. 304: Connecting Clip Of Positive Battery Terminal And Clip Of Negative Battery Terminal With SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Press the SST activation switch, and check that the LED on the SST activation switch illuminates.

CAUTION:

- **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 to use SST.**

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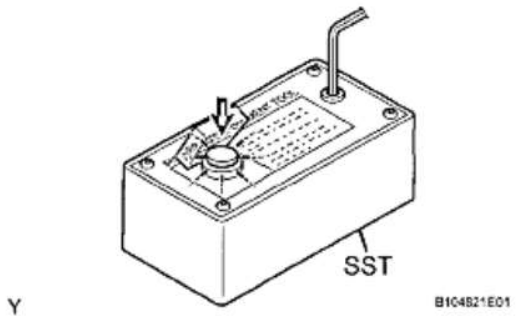


Fig. 305: Pressing SST Activation Switch
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Disconnect SST from the battery.

b. Disconnect the cable from the negative battery terminal.

c. Remove the connector clamp.

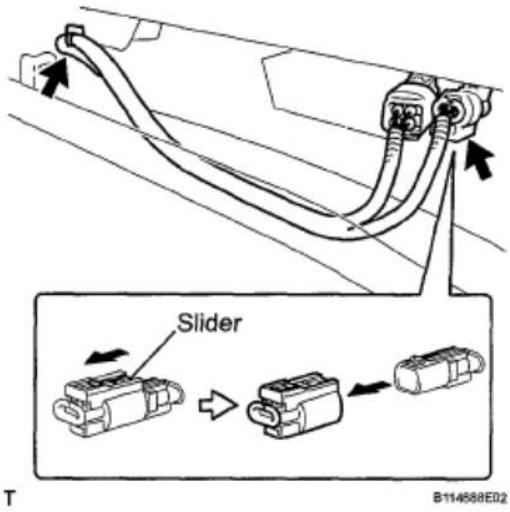


Fig. 306: Locating Connector Clamp
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Disconnect the airbag connector, as shown in the illustration.

NOTE: Do not damage the airbag wire harness when handling the airbag connector.

e. Connect SST.

SST 09082-00700,09082-00810

1. Connect the SST connector to the front seat side airbag.

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NOTE: **Do not lock the secondary lock of the twin lock to avoid damaging SST connector and wire harness.**

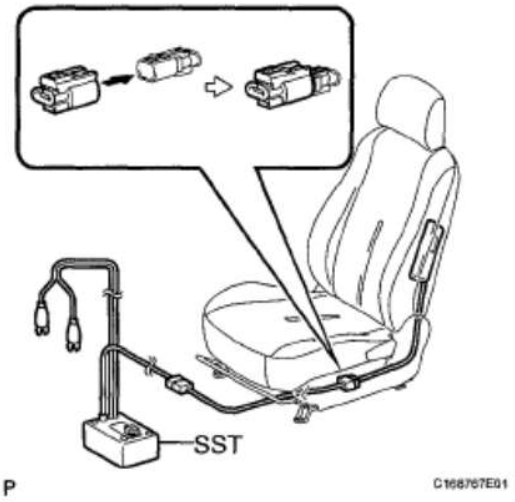


Fig. 307: Connecting SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Move SST to at least 10 m (33 ft) away from the vehicle.

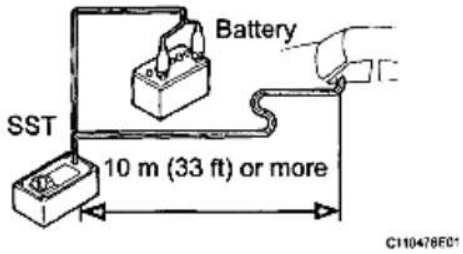


Fig. 308: Identifying Distance Between SST And Vehicle
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 (33 ft) radius of the vehicle.
   2. Press the SST activation switch and deploy the airbag.

CAUTION:

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- **Make sure that no one is near the vehicle when deploying the airbag.**
- **The front seat side 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 seat side airbag which has been deployed.**
- **Do not apply water, etc. to a front seat side 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 illuminations.

2. **DISPOSE OF FRONT SEAT SIDE AIRBAG ASSEMBLY (WHEN NOT INSTALLED IN VEHICLE)**

SST 09082-00700, 09082-00760

NOTE:

- **Never use the customer's vehicle to deploy the airbag when disposing of a front seat side airbag.**
- **Follow the procedure detailed below when deploying the airbag.**

HINT:

Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST.

SST 09082-00700

CAUTION: Always use the specified SST (SRS Airbag Deployment Tool) when deploying the airbag.

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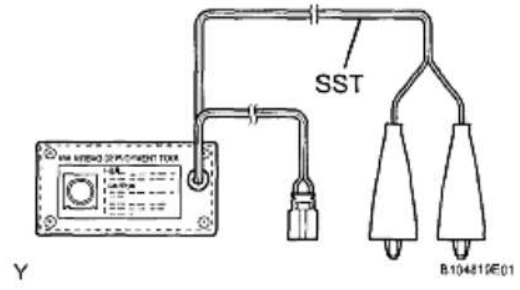


Fig. 309: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Connect the red clip of SST to the positive battery terminal and the black clip of SST to the negative battery terminal.

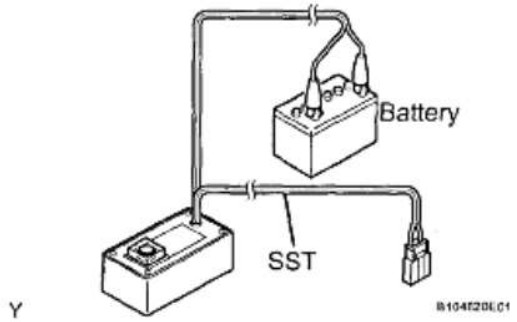


Fig. 310: Connecting Clip Of Positive Battery Terminal And Clip Of Negative Battery Terminal With SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Press the SST activation switch, and check that the LED on the SST activation switch illuminates.

CAUTION:

- **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.**

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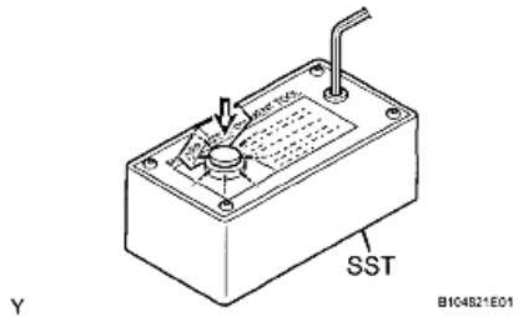


Fig. 311: Pressing SST Activation Switch
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Disconnect SST from the battery.

b. Remove the front seat side airbag (See **REMOVAL**).

c. Using a service-purpose wire harness for the vehicle, tie the front seat side airbag.

Stripped wire harness section:

AREA MEASUREMENT CHART

Area	Measurement
A	1 25 mm^2 or more (0 0019 in^2 or more)

HINT:

To calculate the area of the stripped wire harness cross section:

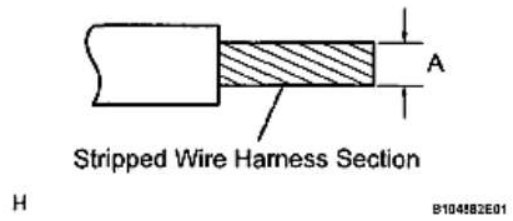


Fig. 312: Identifying Stripped Wire Harness Section
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Area = 3.14 x $(Diameter)^2$ divided by 4

CAUTION: Do not use a wire harness that is too thin or any other object to tie the front seat side 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).

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1. Install the 2 nuts onto the front seat side airbag.
2. Wind the wire harnesses around the stud bolts of the front seat side airbag, as shown in the illustration.

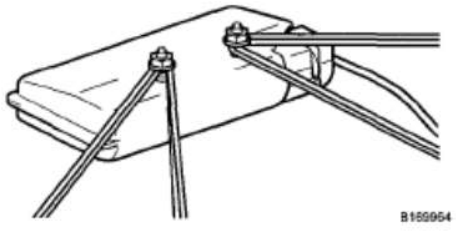


Fig. 313: Winding Wire Harnesses Around Stud Bolts Of Front Seat Side Airbag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Position the front seat side airbag inside the tire, as shown in the illustration.

Tire size:

AREA MEASUREMENT CHART

Area	Measurement
A	185 mm (7 28 in)
B	360 mm (14 17 in)

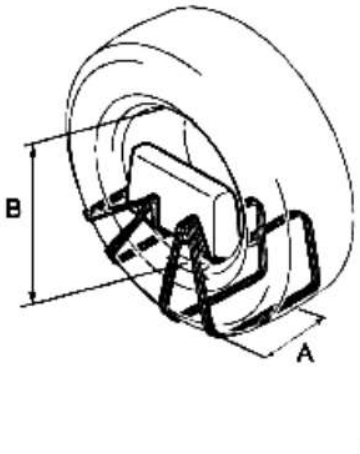


Fig. 314: Positioning Front Seat Side Airbag Inside Tire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION:

- **Make sure that the wire harnesses are tight. If there is any slack in the wire harnesses, the front seat side airbag may become loose due to the shock when the airbag is deployed.**

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- **Always tie the front seat side airbag with the airbag deployment direction facing inside the tire.**

NOTE: **The tire will be marked by the airbag deployment, so use a waste tire.**

d. Connect SST.

1. Connect the SST connector to the front seat side airbag connector.

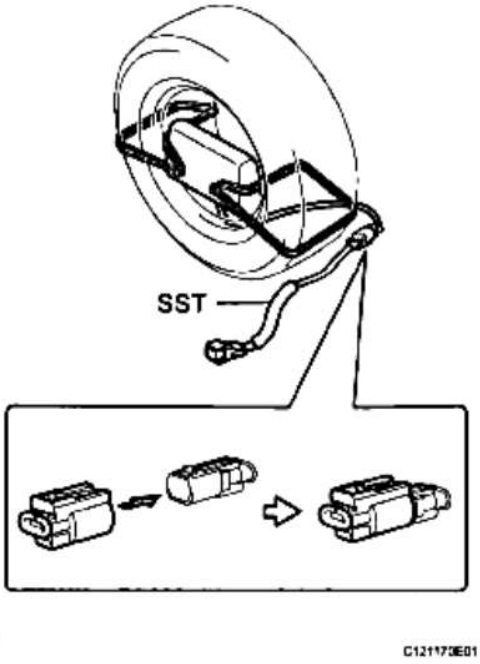


Fig. 315: Connecting SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Place the tires.

1. Place at least 2 tires under the tire to which the front seat side airbag is tied.
2. Place at least 2 tires over the tire to which the front seat side 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.**

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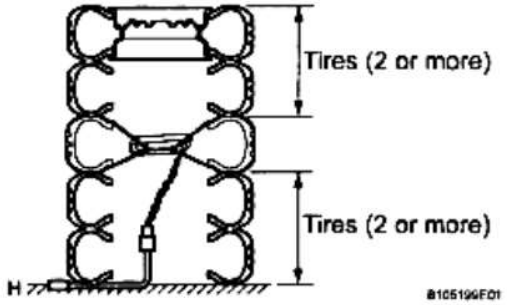


Fig. 316: Placing Tires
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Tie the tires together with 2 wire harnesses.

CAUTION: 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.



Fig. 317: Tying Tires Together With Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Install SST.
   1. Connect the SST connector.

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 the SST wire harness inside the tire.

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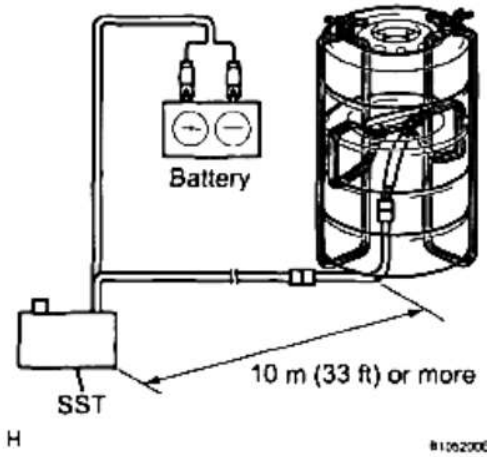


Fig. 318: Identifying Distance Between SST And Airbag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 (33 ft) radius of the tire to which the front seat side airbag is tied.
   3. Press the SST activation switch and deploy the airbag.

CAUTION: 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 seat side airbag.



Fig. 319: Placing Front Seat Side Airbag In Plastic Bag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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CAUTION:

- **The front seat side 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 seat side airbag which has been deployed.**
- **Always wash your hands with water after completing the operation.**
- **Do not apply water, etc. to a front seat side airbag which has been deployed.**

1. Remove the front seat side airbag from the tire.
2. Place the front seat side airbag in a plastic bag, tie it tightly and dispose of it in the same way as other general parts.

CENTER AIRBAG SENSOR ASSEMBLY

COMPONENTS

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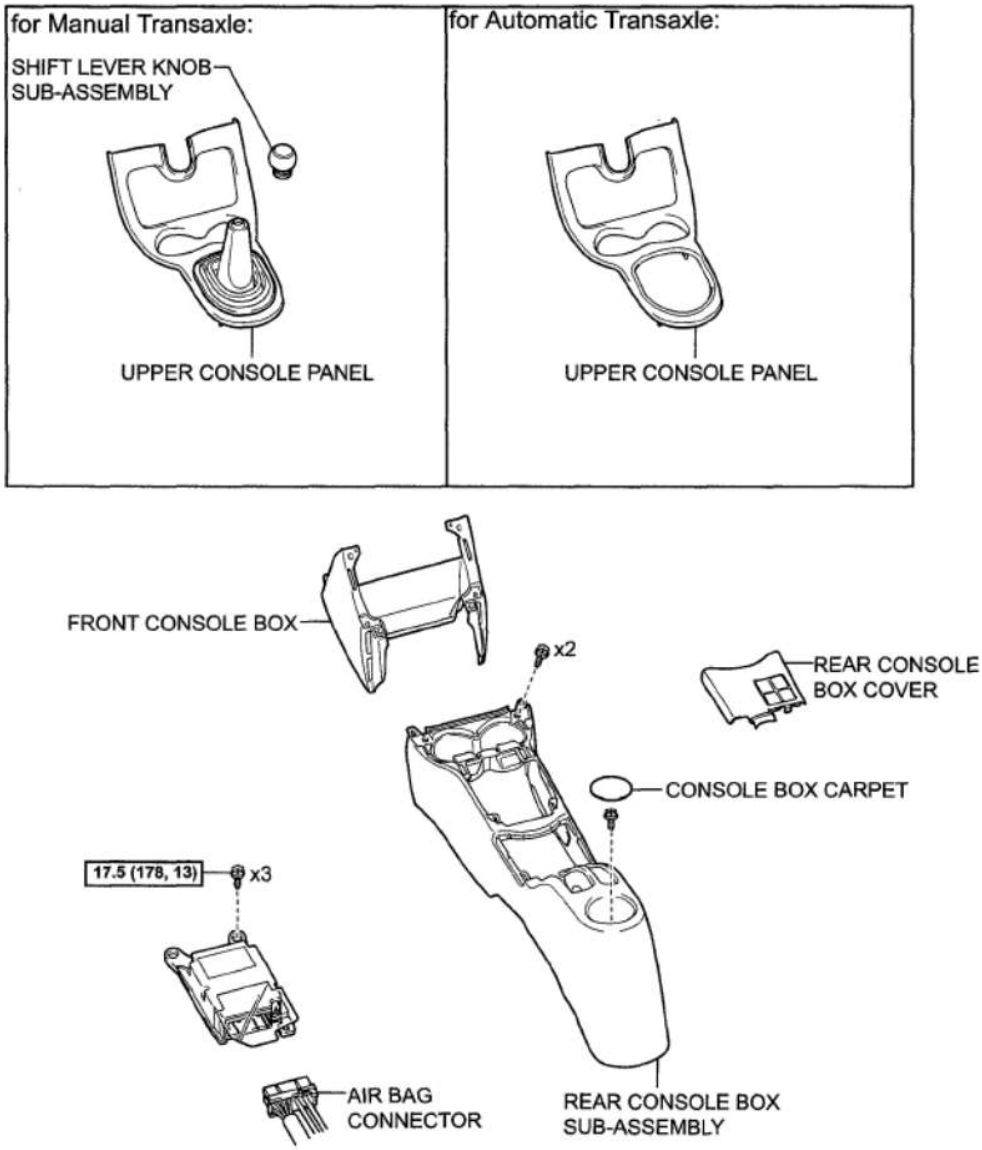


Fig. 320: Identifying Center Airbag Sensor Assembly Components And Torque Specifications
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

1. **INSPECT CENTER AIRBAG SENSOR ASSEMBLY (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check (See **DTC CHECK / CLEAR**).
2. **INSPECT CENTER AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag**

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not Deployed)

a. Perform a diagnostic system check (See **DTC CHECK / CLEAR**).

3. **INSPECT CENTER AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision)**

CAUTION: For center airbag sensor removal and installation procedures, see REMOVAL and , and follow the correct procedure.

a. Replace the center airbag sensor.

REMOVAL

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See DIAGNOSIS SYSTEM).

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transaxle)** (See **REMOVAL**)
3. **REMOVE UPPER CONSOLE PANEL** (See **REMOVAL**)
4. **REMOVE REAR CONSOLE BOX COVER** (See **REMOVAL**)
5. **REMOVE REAR CONSOLE BOX SUB-ASSEMBLY** (See **REMOVAL**)
6. **REMOVE FRONT CONSOLE BOX** (See **REMOVAL**)
7. **REMOVE CENTER AIRBAG SENSOR ASSEMBLY**

CAUTION: 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.

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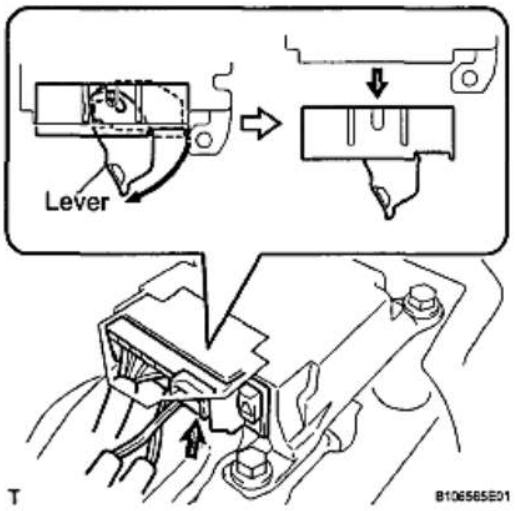


Fig. 321: Locating Connector Holder
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Remove the 3 bolts and remove the airbag sensor.

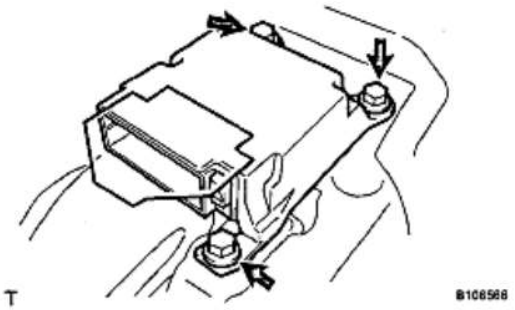


Fig. 322: Locating Bolts And Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

1. **INSTALL CENTER AIRBAG SENSOR ASSEMBLY**
   a. Confirm that the ignition switch is turned to OFF.
   b. Confirm that the negative battery terminal is detached.

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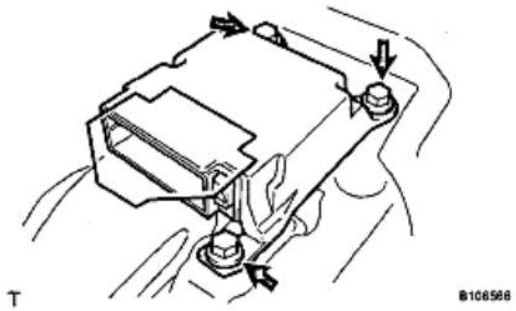


Fig. 323: Locating Bolts And Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION:
- **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.**
- **Do not start the operation for at least 90 seconds after disconnecting the negative battery terminal.**

c. Install the airbag sensor with the 3 bolts.

Torque: 17.5 N*m (178 kgf*cm, 13 ft.*lbf)

NOTE:
- **Do not use an airbag sensor that has been dropped.**
- **Do not subject the 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 front airbag sensor.
e. Connect the connector holder to lock the lever.

NOTE: Confirm that the lever is locked.

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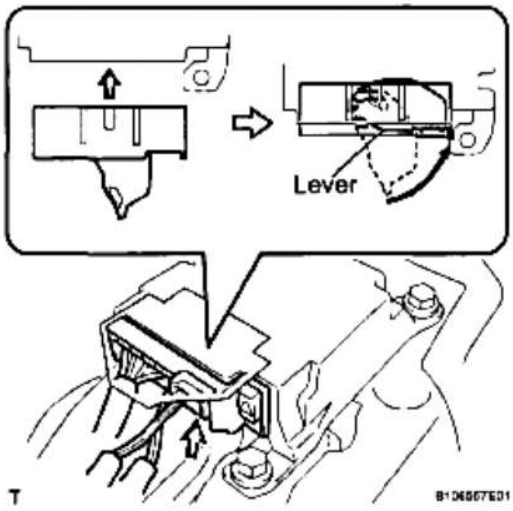


Fig. 324: Locating Connector Holder
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Confirm that the drip-proof sheet has not been removed and does not cut into the connectors.

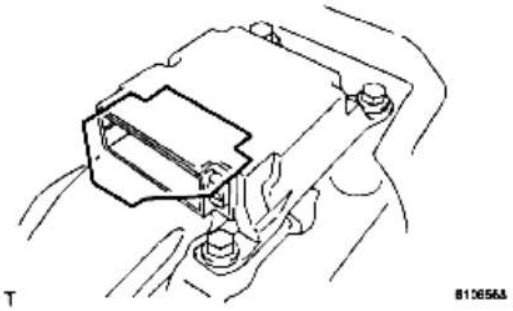


Fig. 325: Identifying Drip-Proof Sheet
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **INSTALL FRONT CONSOLE BOX** (See **INSTALLATION**)
3. **INSTALL REAR CONSOLE BOX SUB-ASSEMBLY** (See **INSTALLATION**)
4. **INSTALL CONSOLE BOX CARPET** (See **INSTALLATION**)
5. **INSTALL REAR CONSOLE BOX COVER** (See **INSTALLATION**)
6. **INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transaxle)** (See **INSTALLATION**)
7. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

   Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

8. **INSPECT SRS WARNING LIGHT**

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(See **DIAGNOSIS SYSTEM**)

FRONT AIRBAG SENSOR

COMPONENTS

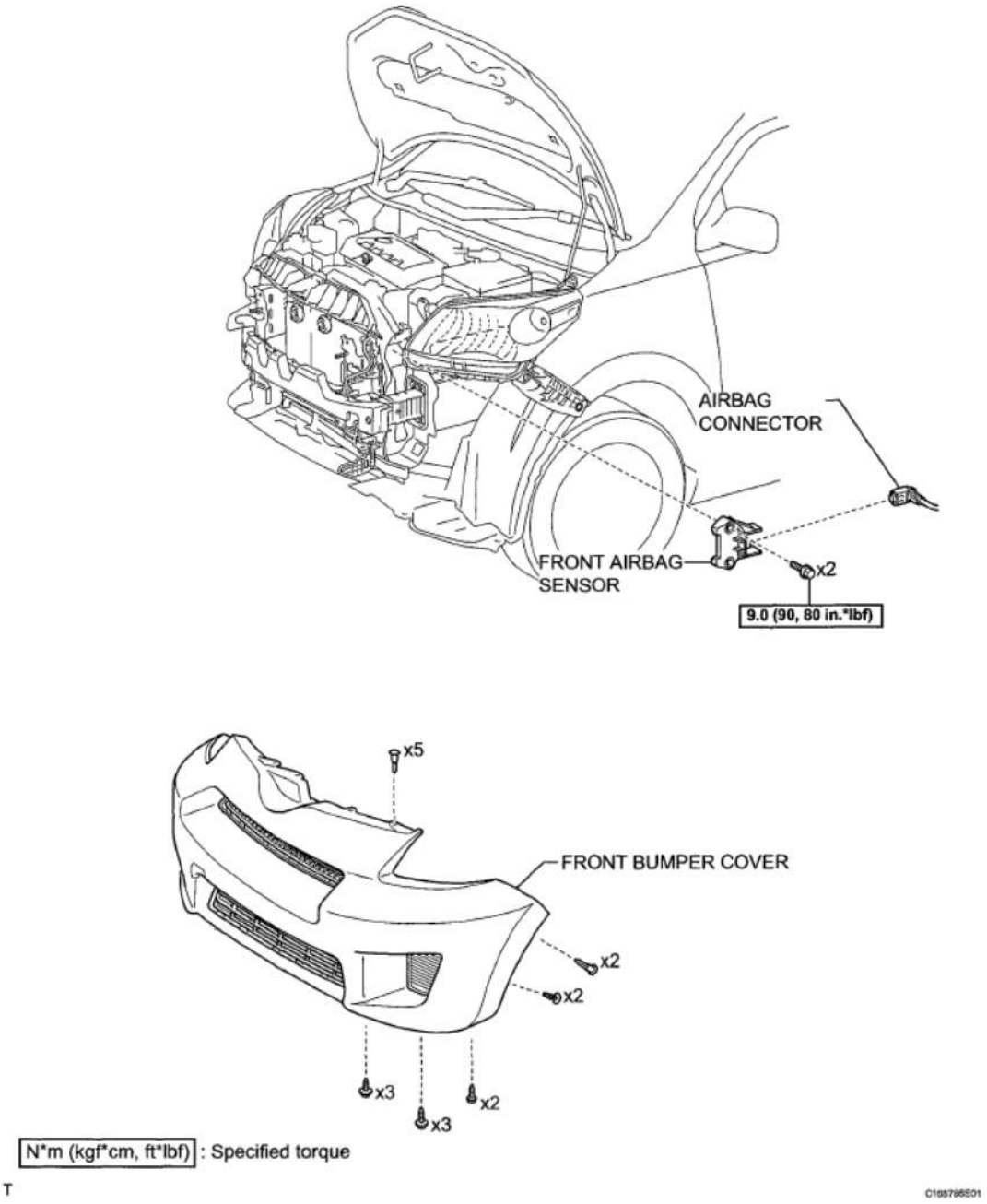


Fig. 326: Identifying Front Airbag Sensor Components And Torque Specifications
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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ON-VEHICLE INSPECTION

1. **INSPECT FRONT AIRBAG SENSOR (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check (See **DTC CHECK / CLEAR**).
2. **INSPECT FRONT AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)**

CAUTION: For front airbag sensor removal and installation procedures, see REMOVAL and INSTALLATION , and carefully follow the correct procedure.

   a. Perform a diagnostic system check (See **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)**

CAUTION: For front airbag sensor removal and installation procedures, see REMOVAL and INSTALLATION , and carefully follow the correct procedure.

   a. Replace the front airbag sensor.

REMOVAL

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See 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.

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE FRONT BUMPER COVER** (See **REMOVAL**)
3. **REMOVE FRONT AIRBAG SENSOR**

CAUTION: Confirm that the negative battery terminal is disconnected before performing the operation. Even an impact to only the airbag sensor

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will cause the airbag to deploy.

a. Remove the 2 bolts.

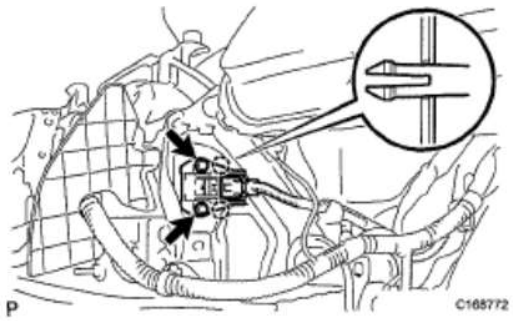


Fig. 327: Locating Bolts And Front Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Disengage the 2 claws and remove the front airbag sensor.
c. Disconnect the airbag connector.

NOTE:

- **Do not disconnect the airbag connector by pulling the wire harness.**
- **Release the lock without holding the upper side of CPA.**

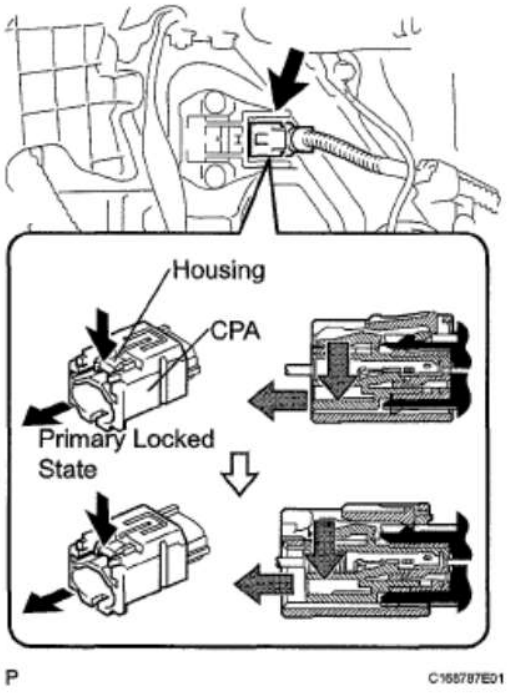


Fig. 328: Locating Airbag Connector

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1. While pushing the housing, slide only the CPA backward (from its provisionally locked state).
2. Detach the connector while pushing the housing in the provisionally locked state.
3. After detaching the connector, confirm that the CPA protrudes beyond the rear of the housing.

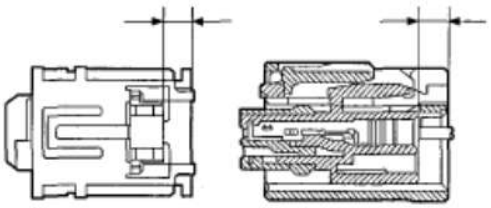


Fig. 329: Identifying Clearance Of Rear Housing
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

HINT:

The procedure described below is for the LH side. Use the same procedure for both the LH and RH sides, unless otherwise specified.

1. **INSTALL FRONT AIRBAG SENSOR**

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. Confirm that the ignition switch is turned to OFF.
b. Confirm that the negative battery terminal is detached.

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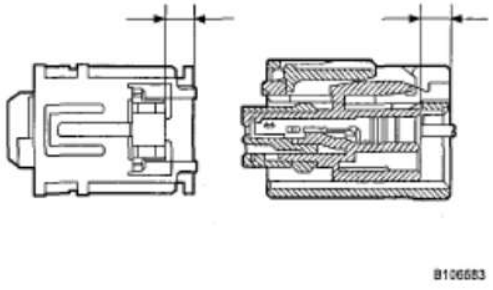


Fig. 330: Identifying Clearance Of Rear Housing
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION:

- **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.**
- **Do not start the operation for at least 90 seconds after disconnecting the negative battery terminal.**

c. Connect the airbag connector.
   1. Check that the CPA is in the provisionally locked state.
   2. Push the CPA until it makes a click sound.

NOTE:

- **Engage the connector by pushing it straight.**
- **Hold the CPA when engaging the connector.**
- **Do not engage the CPA while pressing the CPA upper portion, otherwise, the half connection prevention mechanism will not function.**

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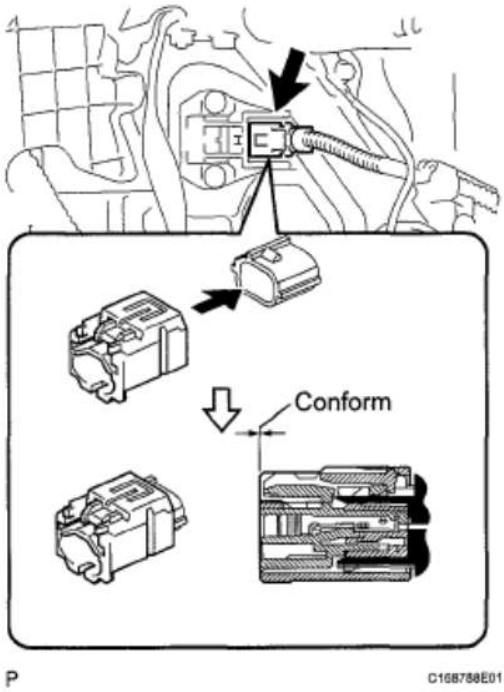


Fig. 331: Locating Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Confirm that the rear side of the housing and the CPA rear surface are tightly fitted together.

d. Install the front airbag sensor with the 2 bolts.

Torque: 9.0 N*m (90 kgf*cm, 80 in.*lbf)

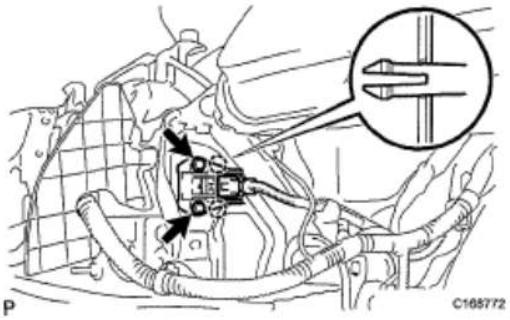


Fig. 332: Locating Bolts And Front Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Confirm that there is no looseness by shaking the front airbag sensor.

2. **INSTALL FRONT BUMPER COVER** (See **INSTALLATION**)
3. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

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Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

4. **INSPECT SRS WARNING LIGHT**

   (See **DIAGNOSIS SYSTEM**)

SIDE AIRBAG SENSOR

COMPONENTS

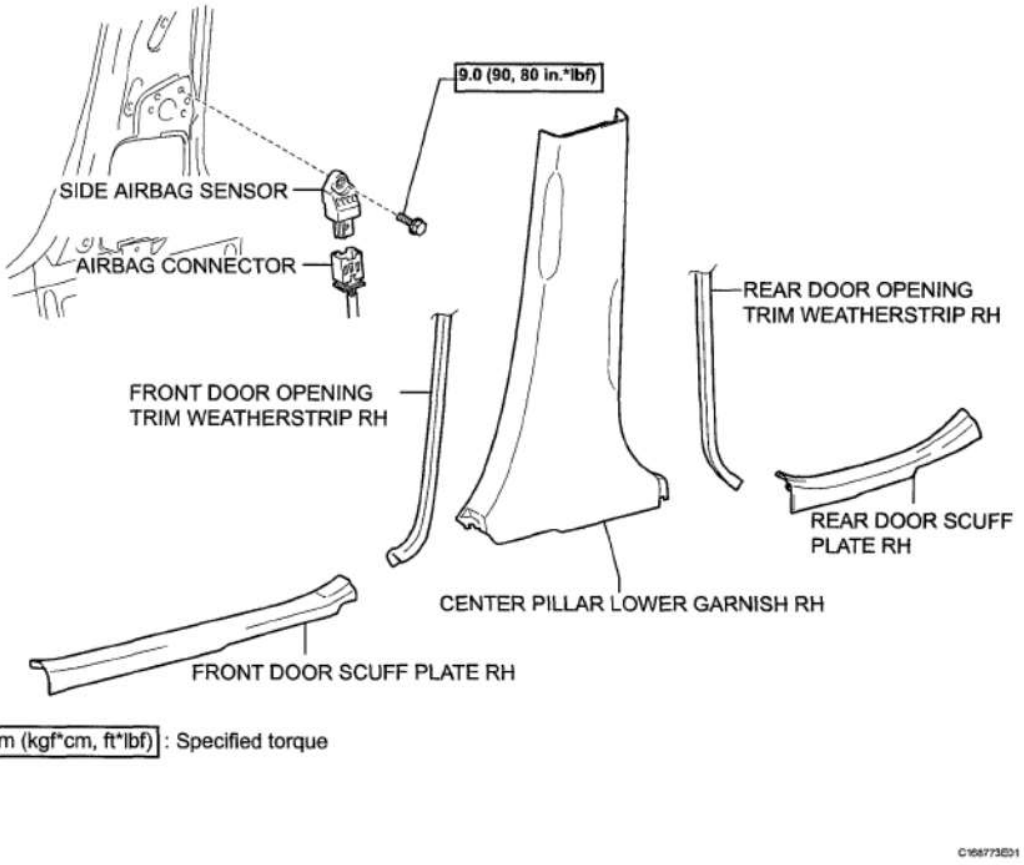


Fig. 333: Identifying Side Airbag Sensor Components And Torque Specifications
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

1. **INSPECT SIDE AIRBAG SENSOR ASSEMBLY (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check (See **DTC CHECK / CLEAR**).
2. **INSPECT SIDE AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)**

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CAUTION: For side airbag sensor removal and installation procedures, see REMOVAL and INSTALLATION , and carefully follow the correct procedure.

a. Perform a diagnostic system check (See **DTC CHECK / CLEAR**).

b. When the center pillar 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)**

CAUTION: For side airbag sensor removal and installation procedures, see REMOVAL and INSTALLATION , and carefully follow the correct procedure.

a. Replace the side airbag sensor.

REMOVAL

CAUTION: Some of the these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See 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.

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE FRONT DOOR SCUFF PLATE RH** (See **REMOVAL**)
3. **REMOVE REAR DOOR SCUFF PLATE RH** (See **REMOVAL**)
4. **REMOVE FRONT DOOR OPENING TRIM WEATHERSTRIP RH** (See **REMOVAL**)
5. **REMOVE REAR DOOR OPENING TRIM WEATHERSTRIP RH** (See **REMOVAL**)
6. **REMOVE CENTER PILLAR LOWER GARNISH RH** (See **REMOVAL**)
7. **REMOVE SIDE AIRBAG SENSOR**

CAUTION: 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. Slide the outer housing and detach the airbag connector.

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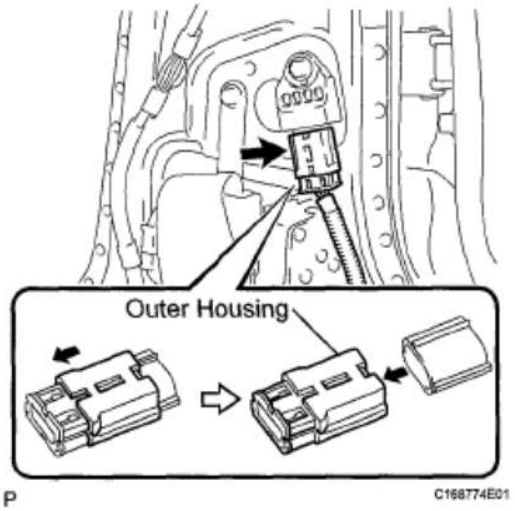


Fig. 334: Locating Airbag Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Remove the bolt, disengage the hook and remove the side airbag sensor.

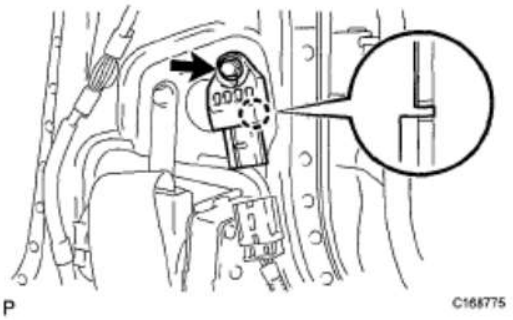


Fig. 335: Locating Bolt And Side Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See 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.

1. **INSTALL SIDE AIR BAG SENSOR**
   a. Confirm that the ignition switch is turned to OFF.

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b. Confirm that the negative battery terminal is detached.

CAUTION:

- **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 hook into the body hole and install the airbag sensor with the bolt.

Torque: 9.0 N*m (90 kgf*cm, 80 ft.*lbf)

NOTE:

- **Do not use a side airbag sensor that has been dropped.**
- **Do not subject the side airbag sensor to any impact or force.**

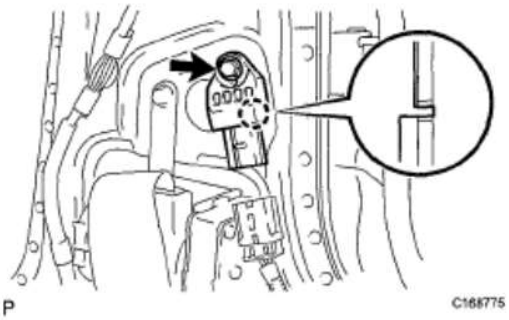
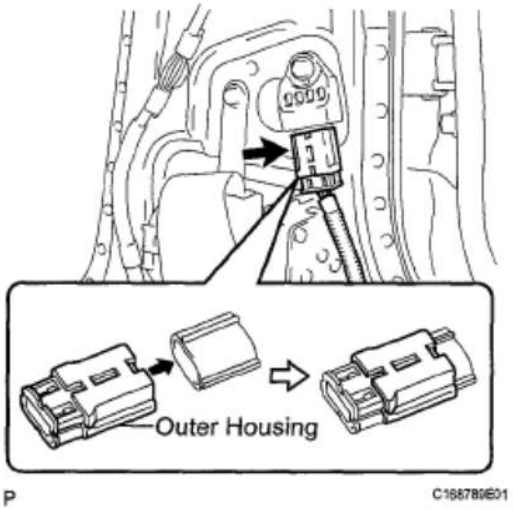


Fig. 336: Locating Bolt And Side Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Confirm that there is no looseness by shaking the side airbag sensor.
e. Connect the airbag connector.



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Fig. 337: Locating Airbag Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **INSTALL CENTER PILLAR LOWER GARNISH RH** (See **INSTALLATION**)
3. **INSTALL REAR DOOR OPENING TRIM WEATHERSTRIP RH** (See **INSTALLATION**)
4. **INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP RH** (See **INSTALLATION**)
5. **INSTALL REAR DOOR SCUFF PLATE RH** (See **INSTALLATION**)
6. **INSTALL FRONT DOOR SCUFF PLATE RH** (See **INSTALLATION**)
7. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

   Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

8. **INSPECT SRS WARNING LIGHT**

   (See **DIAGNOSIS SYSTEM**)

REAR AIRBAG SENSOR

COMPONENTS

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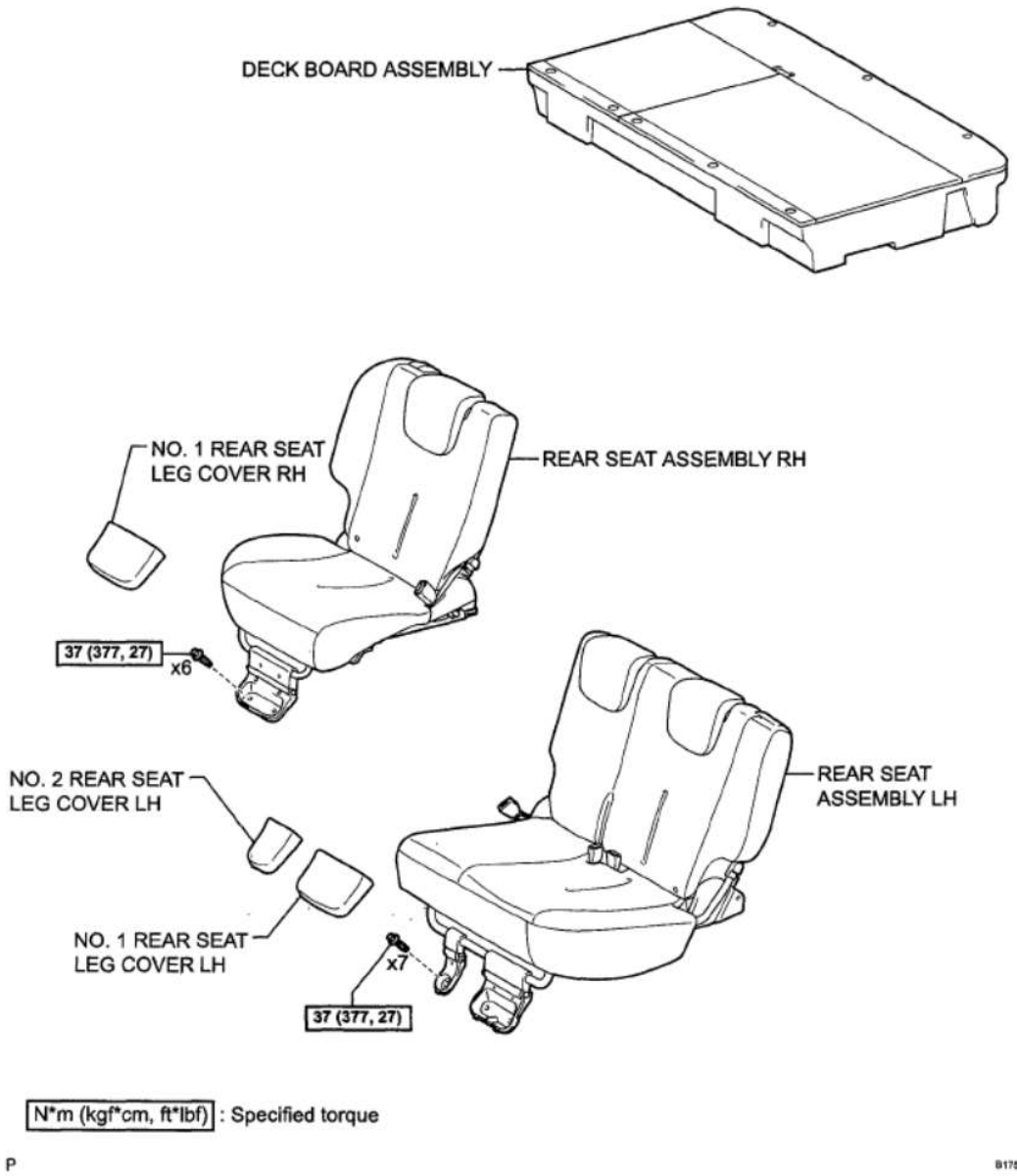


Fig. 338: Identifying Rear Airbag Sensor Components And Torque Specifications (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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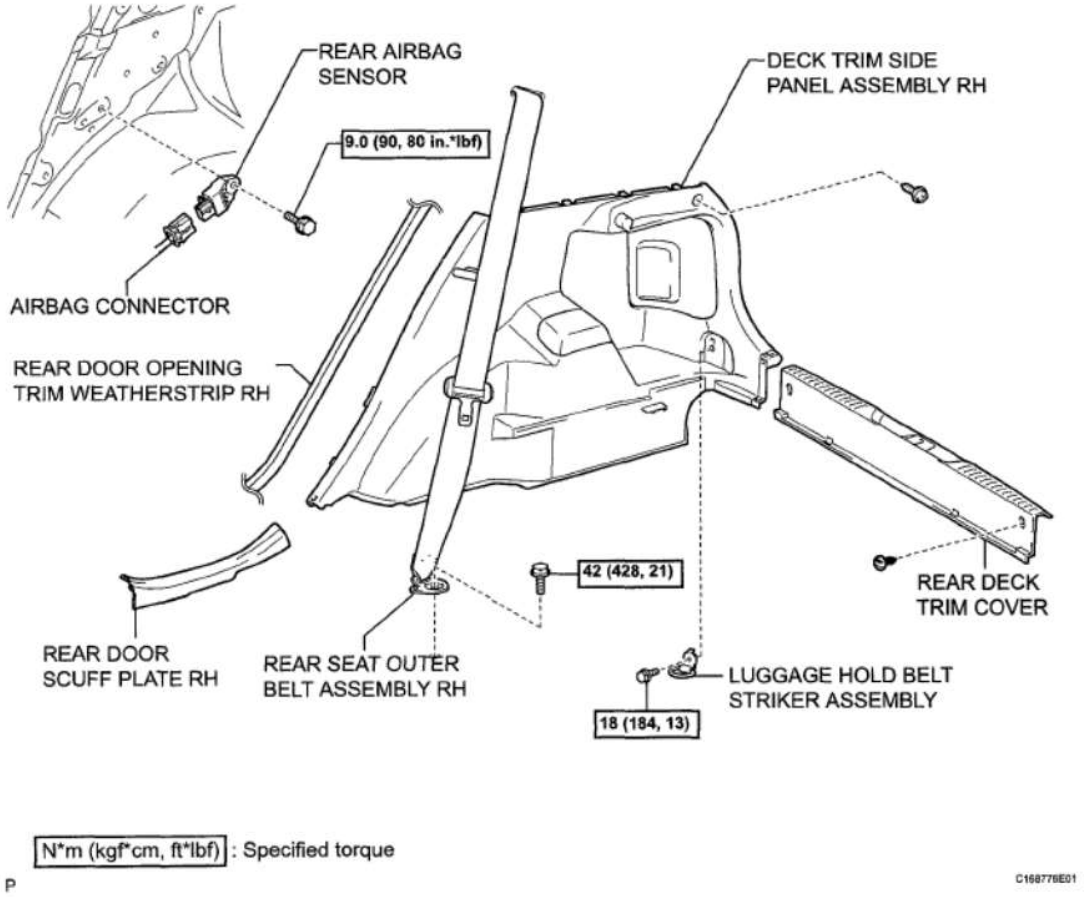


Fig. 339: Identifying Rear Airbag Sensor Components And Torque Specifications (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

1. **INSPECT REAR AIRBAG SENSOR ASSEMBLY (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check (See **DTC CHECK / CLEAR**).
2. **INSPECT REAR AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision and Airbag not Deployed)**

CAUTION: For rear airbag sensor removal and installation procedures, see REMOVAL and INSTALLATION , and carefully follow the correct procedure.

   a. Perform a diagnostic system check (See **DTC CHECK / CLEAR**).
   b. When the center pillar 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.

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- Any cracks or other damage to the connector.
- Peeling of the label or damage to the serial number.

3. **INSPECT REAR AIRBAG SENSOR ASSEMBLY (for Vehicle Involved in Collision)**

CAUTION: For rear airbag sensor removal and installation procedures, see REMOVAL and INSTALLATION , and carefully follow the correct procedure.

a. Replace the rear airbag sensor.

REMOVAL

CAUTION: Some of the these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

NOTE: Always use "TORX" socket wrench E10 when installing the rear seat.

HINT:

The procedure described below is for the RH side. Use the same procedure for both the RH and LH sides, unless otherwise specified.

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE DECK BOARD ASSEMBLY** (See **REMOVAL**)
3. **REMOVE NO. 1 REAR SEAT LEG COVER RH** (See **REMOVAL**)
4. **REMOVE NO. 1 REAR SEAT LEG COVER LH** (See **REMOVAL**)
5. **REMOVE NO. 2 REAR SEAT LEG COVER LH** (See **REMOVAL**)
6. **REMOVE REAR SEAT ASSEMBLY RH** (See **REMOVAL**)
7. **REMOVE REAR SEAT ASSEMBLY LH** (See **REMOVAL**)
8. **REMOVE REAR DECK TRIM COVER** (See **REMOVAL**)
9. **REMOVE REAR DOOR OPENING TRIM WEATHERSTRIP RH**
   a. Remove the rear opening trim weatherstrip to the extent necessary to remove the deck trim side panel.

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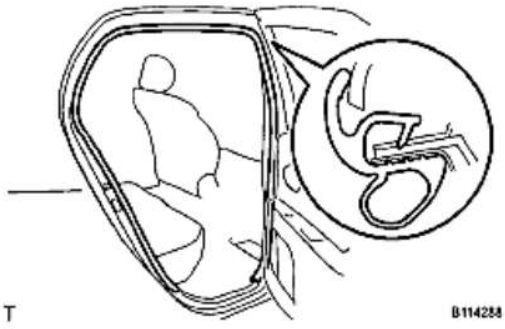


Fig. 340: Identifying Rear Opening Trim Weatherstrip
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

10. **REMOVE REAR SEAT OUTER BELT ASSEMBLY RH** (See **REMOVAL**)
11. **REMOVE LUGGAGE HOLD BELT STRIKER ASSEMBLY** (See **REMOVAL**)
12. **REMOVE DECK TRIM SIDE PANEL ASSEMBLY RH**
    a. Remove the screw.
    b. Disengage the 3 clips and the 7 claws and remove the deck trim side panel.

    HINT:

    When removing the deck trim side panel assembly LH, disconnect the room light connector and remove the deck trim side panel.

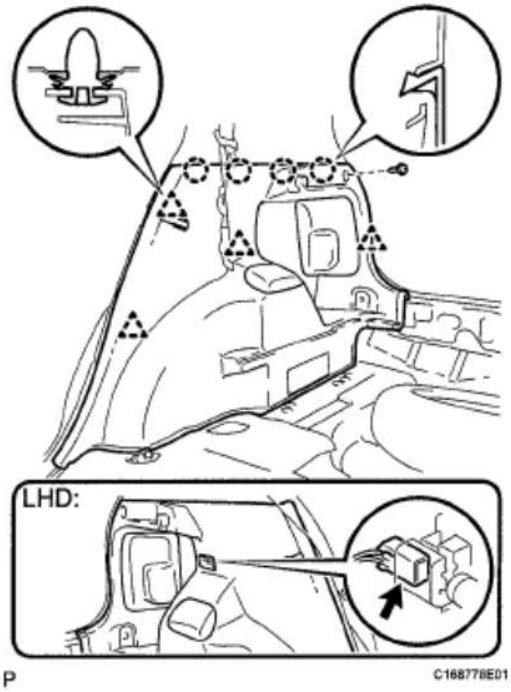


Fig. 341: Identifying Clips And Claws Locations

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

13. **REMOVE REAR AIRBAG SENSOR**

CAUTION: 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. Slide the outer housing and detach the airbag connector.

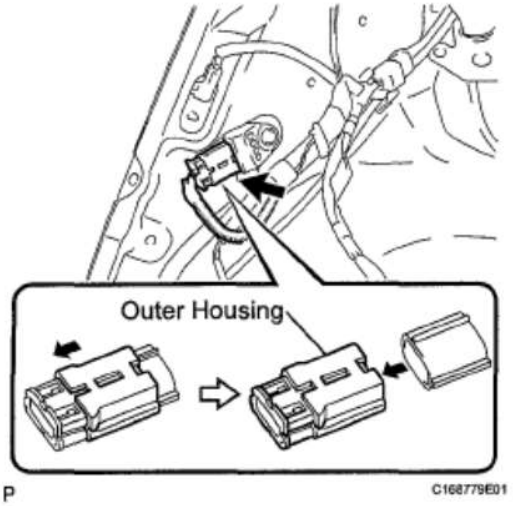


Fig. 342: Locating Airbag Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Disengage the bolt and hook and remove the airbag sensor.

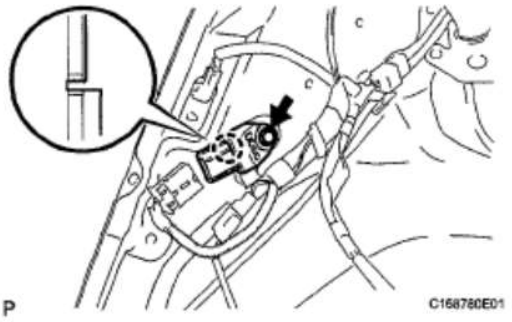


Fig. 343: Locating Bolt And Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

CAUTION: Some of these service operations affect the SRS airbag system. Read the

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precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

NOTE: Always use "TORX" socket wrench E10 when installing the rear seat.

HINT:

The procedure described below is for the RH side. Use the same procedure for both the LH and RH sides, unless otherwise specified.

1. **INSTALL REAR AIRBAG SENSOR**
   a. Confirm that the ignition switch is turned to OFF.
   b. Confirm that the negative battery terminal is detached.

CAUTION:
- **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 hook into the body hole and install the airbag sensor with the bolt.

Torque: 9.0 N*m (90 kgf*cm, 80 in.*lbf)

NOTE:
- **Do not use a rear airbag sensor that has been dropped.**
- **Do not subject the rear airbag sensor to any impact or force.**

   d. Confirm that there is no looseness by shaking the rear airbag sensor.

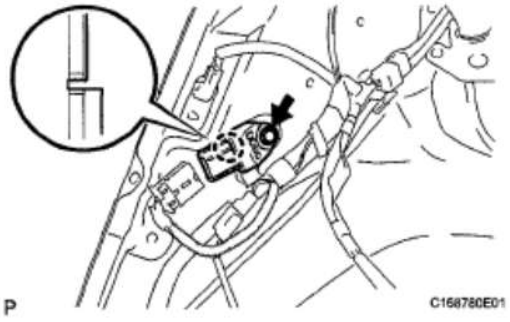


Fig. 344: Locating Bolt And Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   e. Connect the airbag connector.

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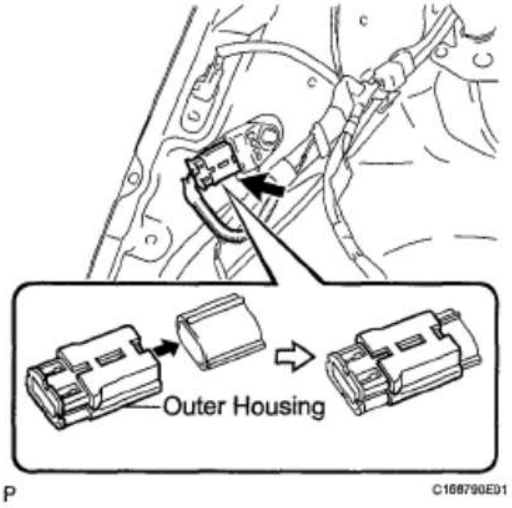


Fig. 345: Connecting Airbag Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **INSTALL DECK TRIM SIDE PANEL ASSEMBLY RH**
   a. Engage the 3 clips and the 6 claws and install the deck trim side panel.

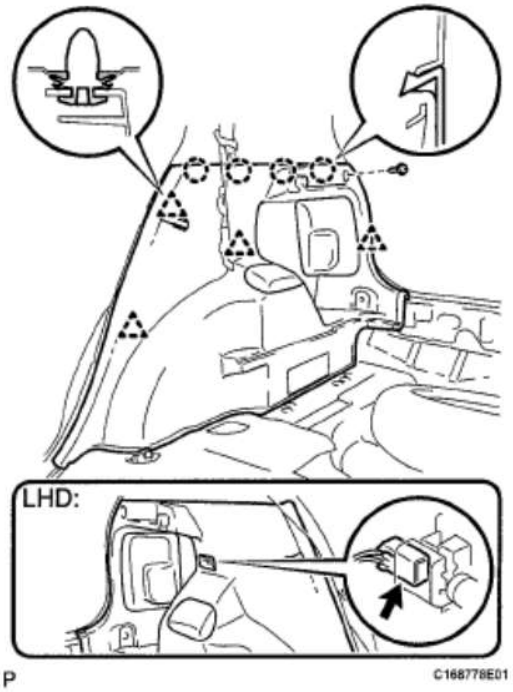


Fig. 346: Identifying Clips And Claws Locations
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   b. Tighten the screw.

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HINT:

When installing the rear seat outer belt assembly RH, connect the room light connector and install the deck trim side panel assembly RH.

3. **INSTALL LUGGAGE HOLD BELT STRIKER ASSEMBLY** (See **INSTALLATION**)
4. **INSTALL REAR SEAT OUTER BELT ASSEMBLY RH** (See **INSTALLATION**)
5. **INSTALL REAR DOOR OPENING TRIM WEATHERSTRIP RH**
   a. Install the rear door opening trim weatherstrip.

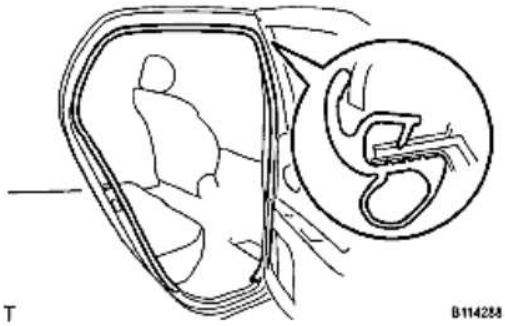


Fig. 347: Identifying Rear Opening Trim Weatherstrip
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

6. **INSTALL REAR DOOR SCUFF PLATE RH** (See **INSTALLATION**)
7. **INSTALL REAR DECK TRIM COVER** (See **INSTALLATION**)
8. **INSTALL REAR SEAT ASSEMBLY LH** (See **INSTALLATION**)
9. **INSTALL REAR SEAT ASSEMBLY RH** (See **INSTALLATION**)
10. **INSTALL NO. 1 REAR SEAT LEG COVER RH** (See **INSTALLATION**)
11. **INSTALL NO. 1 REAR SEAT LEG COVER LH** (See **INSTALLATION**)
12. **INSTALL NO. 2 REAR SEAT LEG COVER LH** (See **INSTALLATION**)
13. **INSTALL DECK BOARD ASSEMBLY** (See **INSTALLATION**)
14. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

    Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

15. **INSPECT SRS WARNING LIGHT**

    (See **DIAGNOSIS SYSTEM**)

SEAT POSITION SENSOR

COMPONENTS

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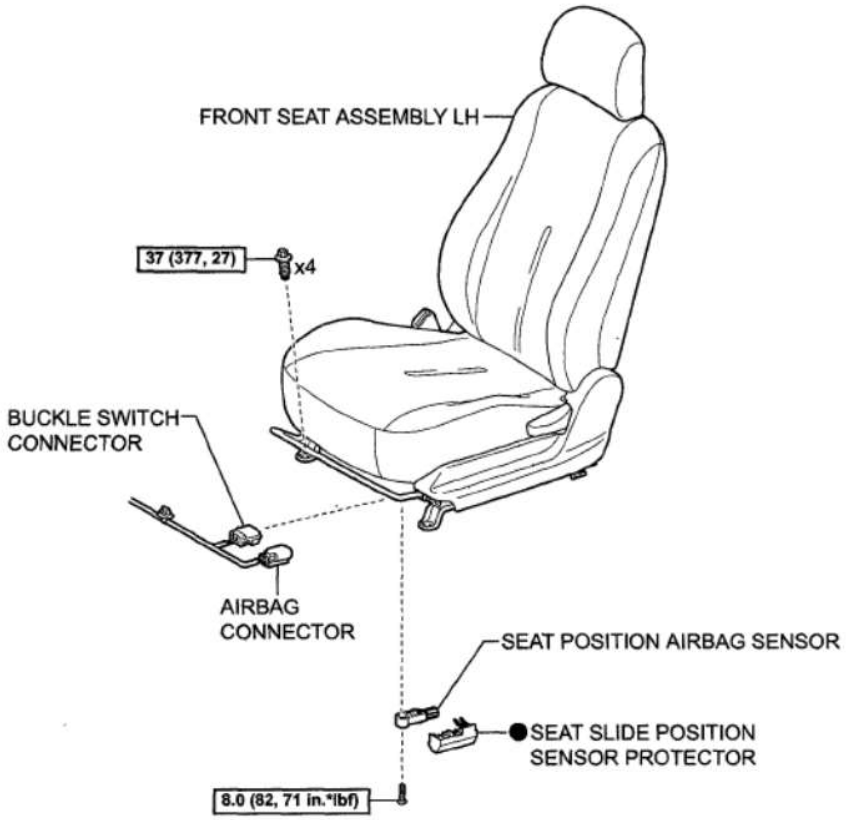


Fig. 348: Identifying Seat Position Sensor Components And Torque Specifications
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

1. **INSPECT SEAT POSITION SENSOR (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check (See **DTC CHECK / CLEAR**).
2. **INSPECT SEAT POSITION SENSOR (for Vehicle Involved in Collision)**
   a. Perform a diagnostic system check (See **DTC CHECK / CLEAR**).
   b. Even if the airbag was not deployed, check whether there is any damage to the seat position sensor. If there are any defects such as those mentioned below, replace the seat position sensor with a new one:
      - Cracks, dents or chips on the sensor housing.
      - Cracks or other damage to the connector.

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CAUTION: Follow the correct removal and installation procedures.

REMOVAL

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

NOTE: Always use "TORX" socket wrench E10 when removing the front seat.

HINT:

Installation is in the reverse order of removal.

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE FRONT SEAT ASSEMBLY LH** (See **REMOVAL**)
3. **REMOVE SEAT SLIDE POSITION SENSOR PROTECTOR**
   a. Disengage the pin and remove the seat position sensor protector.
4. **REMOVE SEAT POSITION AIRBAG SENSOR**
   a. Disconnect the connector from the seat position airbag sensor.

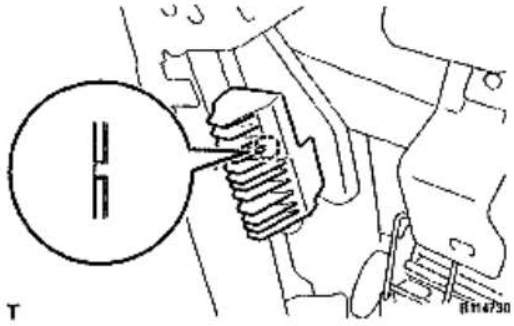


Fig. 349: Identifying Seat Position Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   b. Using "TORX" socket wrench T30, remove the torx screw and the seat position airbag sensor.

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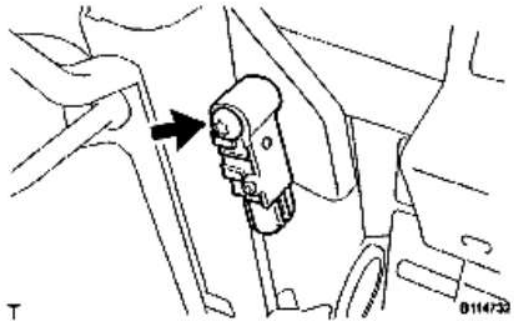


Fig. 350: Locating Torx Screw And Seat Position Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

NOTE: Always use "TORX" socket wrench E10 when removing the front seat.

1. **INSTALL SEAT POSITION AIRBAG SENSOR**
   a. Check that the ignition switch is turned to OFF.
   b. Check that the battery negative (-) terminal is disconnected.

CAUTION: After removing the terminal, wait for at least 90 seconds before starting the operation.

   c. Using a 1 mm (0.039 in.) feeler gauge, install the seat position airbag sensor.

NOTE:

- **If the seat position sensor has been dropped, or there are any cracks, dents or other defects in the case, bracket or connector, replace the seat position sensor with a new one.**
- **When installing the seat position airbag sensor, make sure that the SRS wiring does not interfere with other parts and is not pinched between other parts.**

HINT:

Maintain a clearance between the seat position airbag sensor and the seat rail within 0.6 mm (0.023 in.) to 2 mm (0.079 in.).

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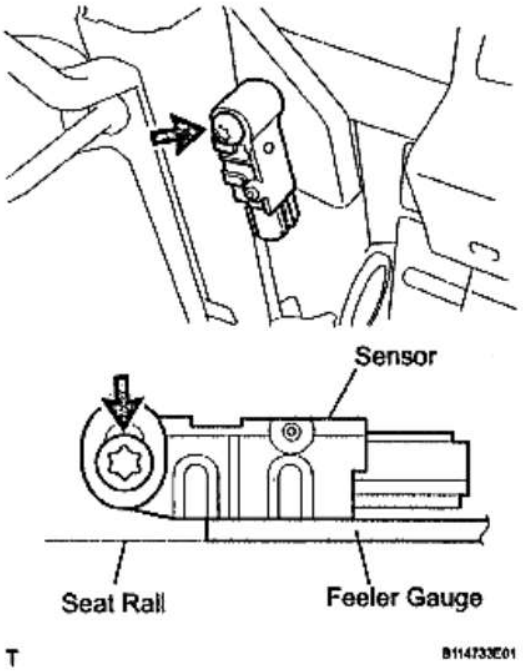


Fig. 351: Locating Torx Screw And Seat Position Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Using "TORX" socket wrench, tighten the torx screw to install the seat position airbag sensor.

Torque: 8.0 N*m (82 kgf*cm, 71 in.*lbf)

e. Make sure that a clearance between the seat position airbag sensor and the seat rail is within 0.6 mm (0.023 in.) to 2 mm (0.079 in.).
f. Connect the connector to the seat position airbag sensor.
g. Check that there is no looseness in the installation parts of the seat position airbag sensor.

2. **INSTALL SEAT SLIDE POSITION SENSOR PROTECTOR**

a. Engage the pin and install a new seat position sensor protector.

NOTE: Do not damage portion A, shown in the illustration, when installing the seat position sensor protector.

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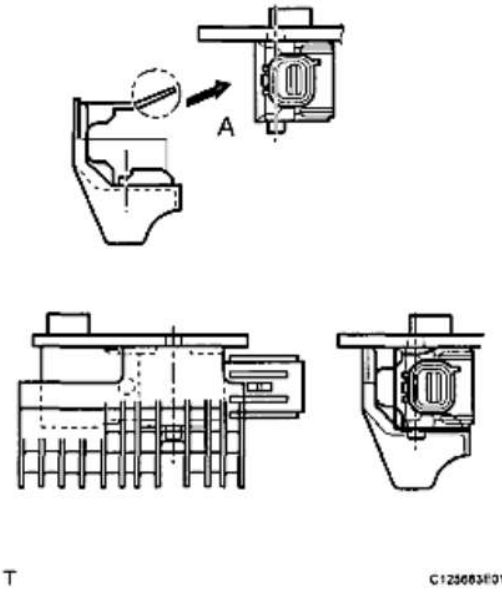


Fig. 352: Identifying Seat Position Sensor Protector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. **INSTALL FRONT SEAT ASSEMBLY LH** (See **INSTALLATION**)
4. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

   Torque: 5.4 N*m (54 kgf*cm, 48 in.*lbf)

5. **INSPECT SRS WARNING LIGHT**

   (See **DIAGNOSIS SYSTEM**)

OCCUPANT CLASSIFICATION ECU

COMPONENTS

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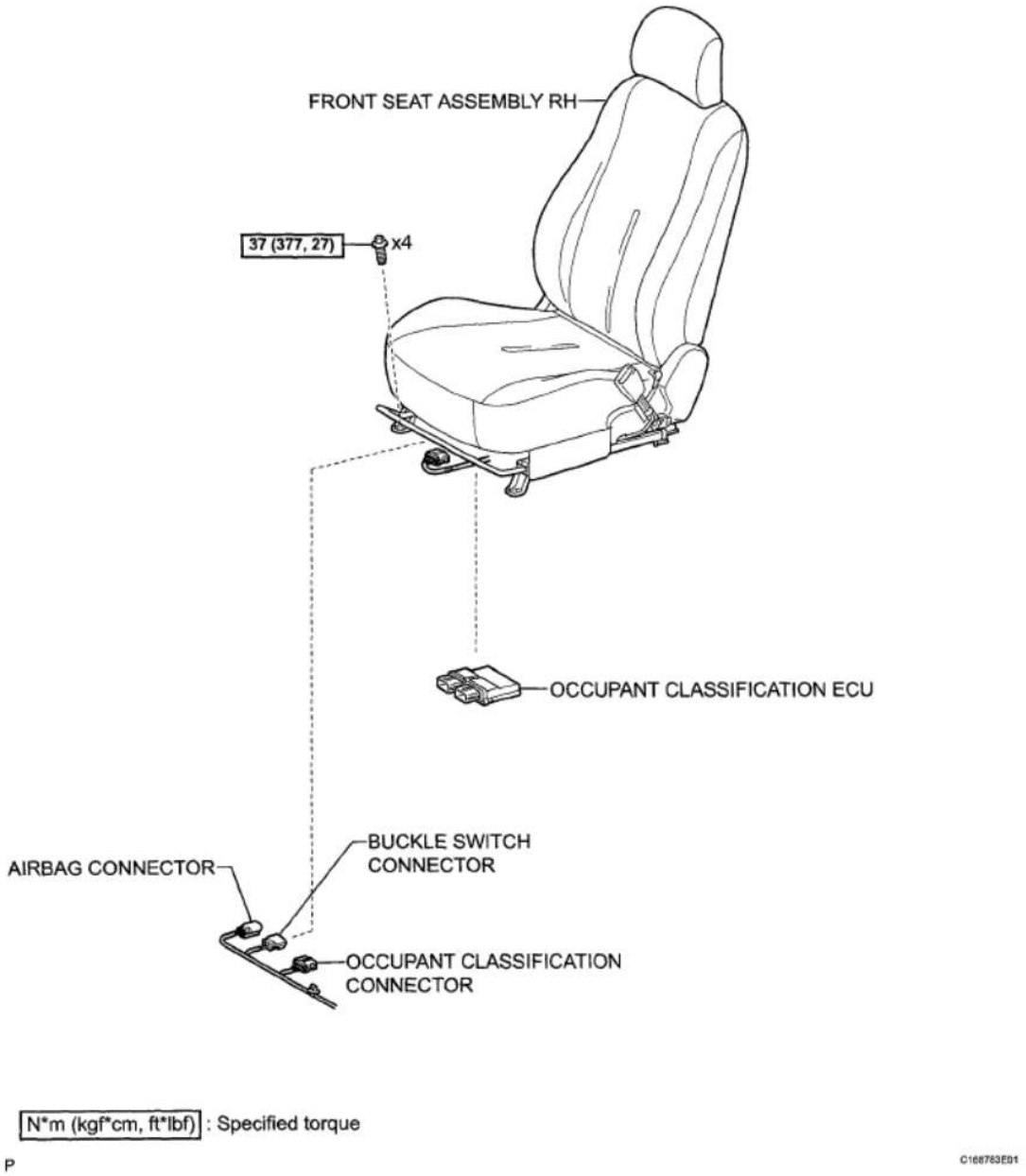


Fig. 353: Identifying Occupant Classification ECU Components And Torque Specifications
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

1. **INSPECT OCCUPANT CLASSIFICATION ECU (for Vehicle not Involved in Collision)**
   a. Perform a diagnostic system check (See **DTC CHECK / CLEAR**).
2. **REMOVE OCCUPANT CLASSIFICATION ECU (for Vehicle Involved in Collision)**
   a. Perform a diagnostic system check (See **DTC CHECK / CLEAR**).
   b. Even if the airbag was not deployed, check if there is any damage to the occupant classification

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ECU. If there are any defects as those mentioned below, replace the occupant classification ECU with a new one:

- Cracks, dents or chips in the case.
- Cracks or other damage to the connector.

CAUTION: Follow the correct removal and installation procedures.

REMOVAL

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

NOTE: Installation is in the reverse order of removal.

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE FRONT SEAT ASSEMBLY RH** (See **DISASSEMBLY**)
3. **REMOVE OCCUPANT CLASSIFICATION ECU**
   a. Disconnect the connectors from the occupant classification ECU.
   b. Using a screwdriver, disengage the claw and remove the occupant classification ECU..

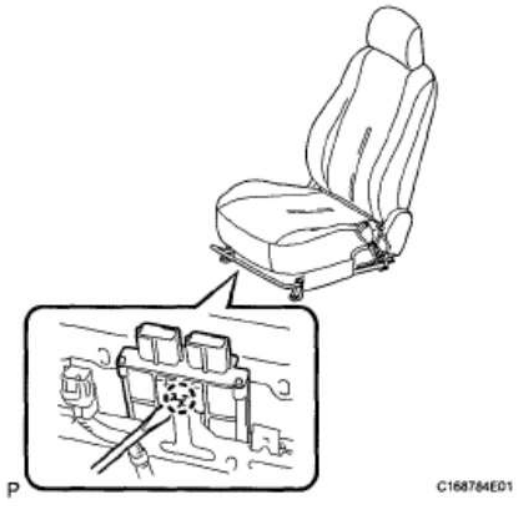


Fig. 354: Disengaging Claw
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

CAUTION: Some of these service operations affect the SRS airbag system. Read the

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precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

NOTE: Always use "TORX" socket wrench E10 when installing the front seat.

1. **INSTALL OCCUPANT CLASSIFICATION ECU**
   a. Check that the ignition switch is turned OFF.
   b. Check that the negative (-) battery terminal is disconnected.

CAUTION: After removing the terminal, wait for at least 90 seconds before starting the operation.

   c. Engage the claw and install the occupant classification ECU.

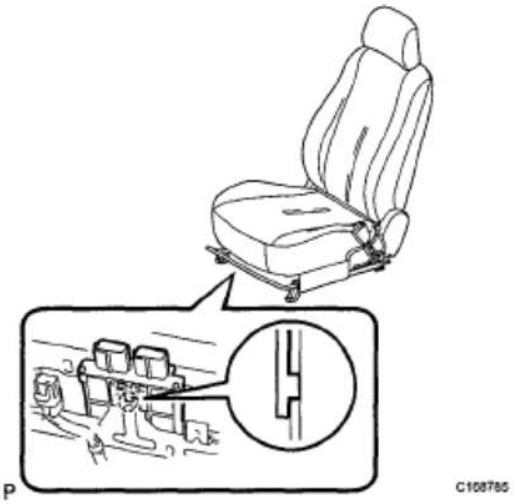


Fig. 355: Identifying Occupant Classification ECU
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   d. Connect the connectors to the occupant classification ECU.

NOTE:

- **If the occupant classification ECU has been dropped, or there are any cracks, dents or other defects in the case, bracket or connector, replace it with a new one.**
- **When installing the occupant classification ECU, make sure that the SRS wiring does not interfere with other parts and that it is not pinched between other parts.**

2. **INSTALL FRONT SEAT ASSEMBLY RH** (See **INSTALLATION**)
3. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

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Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

4. **PERFORM OCCUPANT CLASSIFICATION ECU INITIALIZATION**

   (See **INITIALIZATION**)

5. **INSPECT SRS WARNING LIGHT**

   (See **DIAGNOSIS SYSTEM**)

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