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2009 RESTRAINTS Supplemental Restraint System - Highlander

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AIRBAG SYSTEM

PRECAUTION

HINT:

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

  The steering pad, front passenger airbag assembly, front seat side airbag assembly, curtain shield airbag assembly, driver side knee airbag assembly, center airbag sensor assembly, front airbag sensor, side airbag sensor, rear airbag sensor, front seat outer belt assembly are collectively referred to as the SRS parts.

CAUTION:

- **The vehicle is equipped with a Supplemental Restraint System (SRS). It consists of a driver airbag, front passenger airbag, driver side knee airbag, center airbag sensor assembly, front seat side airbags, curtain shield airbags, front seat belt pretensioners, seat position airbag sensor, seat belt buckle switch, front airbag sensors, side airbag sensors and rear airbag sensors. Failure to carry out service operations in the correct sequence could cause the SRS to unexpectedly deploy during servicing, possibly leading to a serious accident. Further, if a mistake is made when servicing the SRS, it is possible that the SRS may fail to operate when required. Before performing servicing (including removal or installation of parts, inspection or replacement), be sure to read the following items carefully, then follow the procedures exactly as indicated in the repair manual.**
- **Wait at least 90 seconds after the ignition switch is turned off and the negative (-) terminal cable is disconnected from the battery before starting the operation.**

  (The SRS is equipped with a backup power source, so if work is started within 90 seconds after disconnecting the negative (-) terminal cable from the battery, the SRS may be deployed.)

- **Do not expose any of the SRS parts directly to hot air or flames.**

NOTE:

- **Malfunction symptoms of the SRS are difficult to confirm, so DTCs are the most important source of information when troubleshooting. When troubleshooting the SRS, always inspect DTCs before disconnecting the battery.**

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- **Even in the case of a minor collision that does not cause the SRS to deploy, the SRS parts should be inspected.**
- **Before beginning repairs, remove the airbag sensors if any kind of shock is likely to occur to the airbag sensors during the operation.**
- **Never use SRS parts from another vehicle. When replacing parts, replace them with new ones.**
- **Never disassemble or repair any of the SRS parts in order to reuse them. If any of these parts have been dropped, or any defect is found (e.g. cracks, dents or any other defects) in any of the housings, brackets or connectors, replace the part with a new one.**
- **Use a volt/ohmmeter with high impedance (10 kohms/V minimum) for troubleshooting the electrical circuits.**
- **Information labels are attached near the SRS parts. Follow the instructions noted in the caution.**
- **After work on the SRS is completed, perform an SRS warning light check (See DTC CHECK/CLEAR).**
- **When the negative (-) terminal cable is disconnected from the battery, the memory will be cleared. Because of this, be sure to make a record of the contents memorized in each system before starting work. When work is finished, adjust each system to its previous state. Never use a backup power supply for the purpose of retaining the memory of vehicle electronic systems.**
- **If the vehicle is equipped with a mobile communication system, refer to the precaution in the INTRODUCTION article.**

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 the vehicle equipped with front seat 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 the 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 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. **EXPRESSIONS OF IGNITION SWITCH**

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The type of ignition switch used on this model differs according to the specifications of the vehicle. The expressions listed in the table below are used in this article.

IGNITION SWITCH REFERENCE CHART

Switch Type		Ignition Switch (position)	Engine Switch (condition)
Expression	Ignition Switch off	LOCK	Off
	Ignition Switch on (IG)	ON	On (IG)
	Ignition Switch on (ACC)	ACC	On (ACC)
	Engine Start	START	Start

4. **FUNCTION OF SRS CONNECTORS**
   a. SRS connectors are located as shown in the following illustration.

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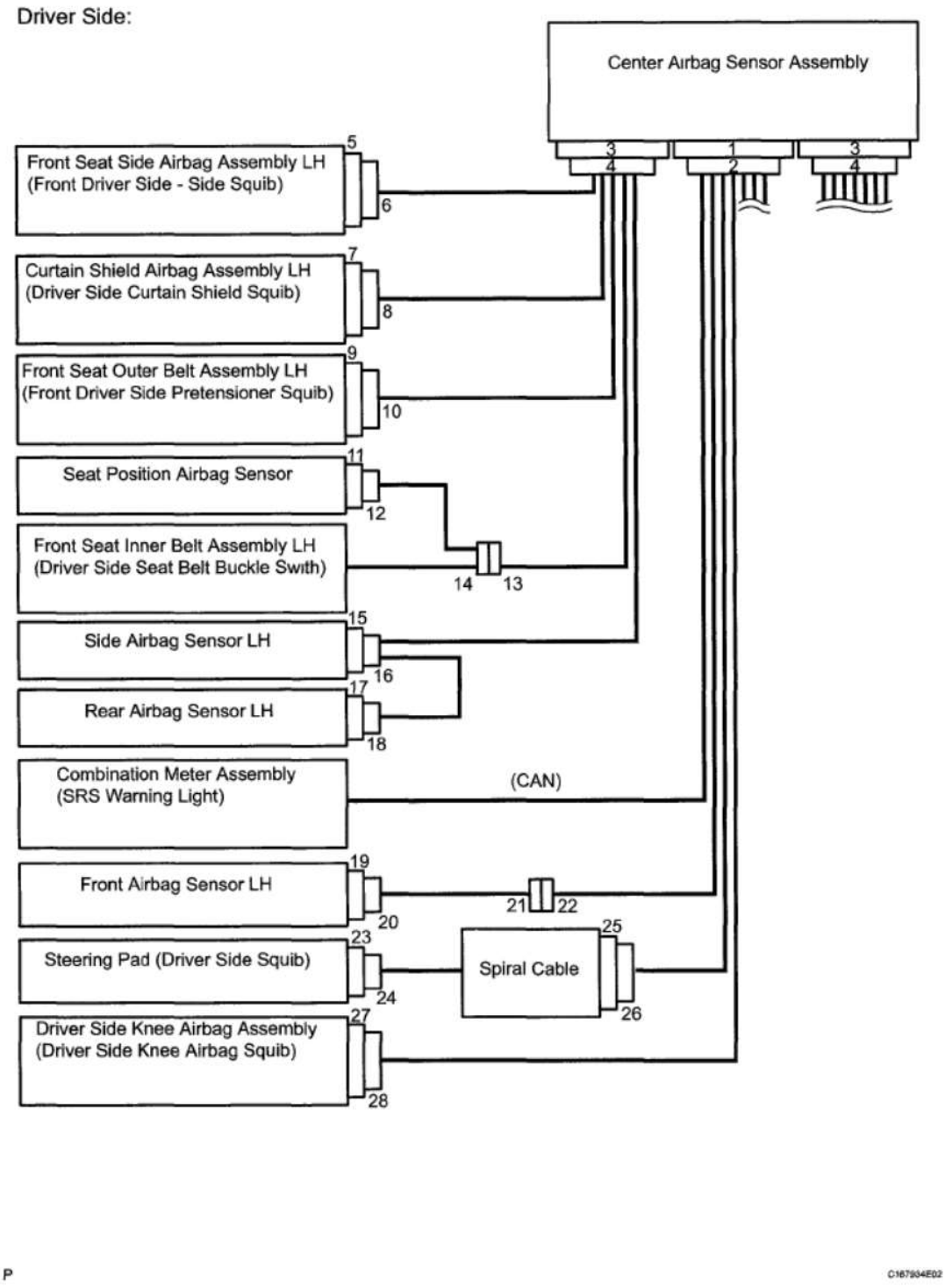


Fig. 1: SRS Connectors Connection Diagram (Driver Side)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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Passenger Side:

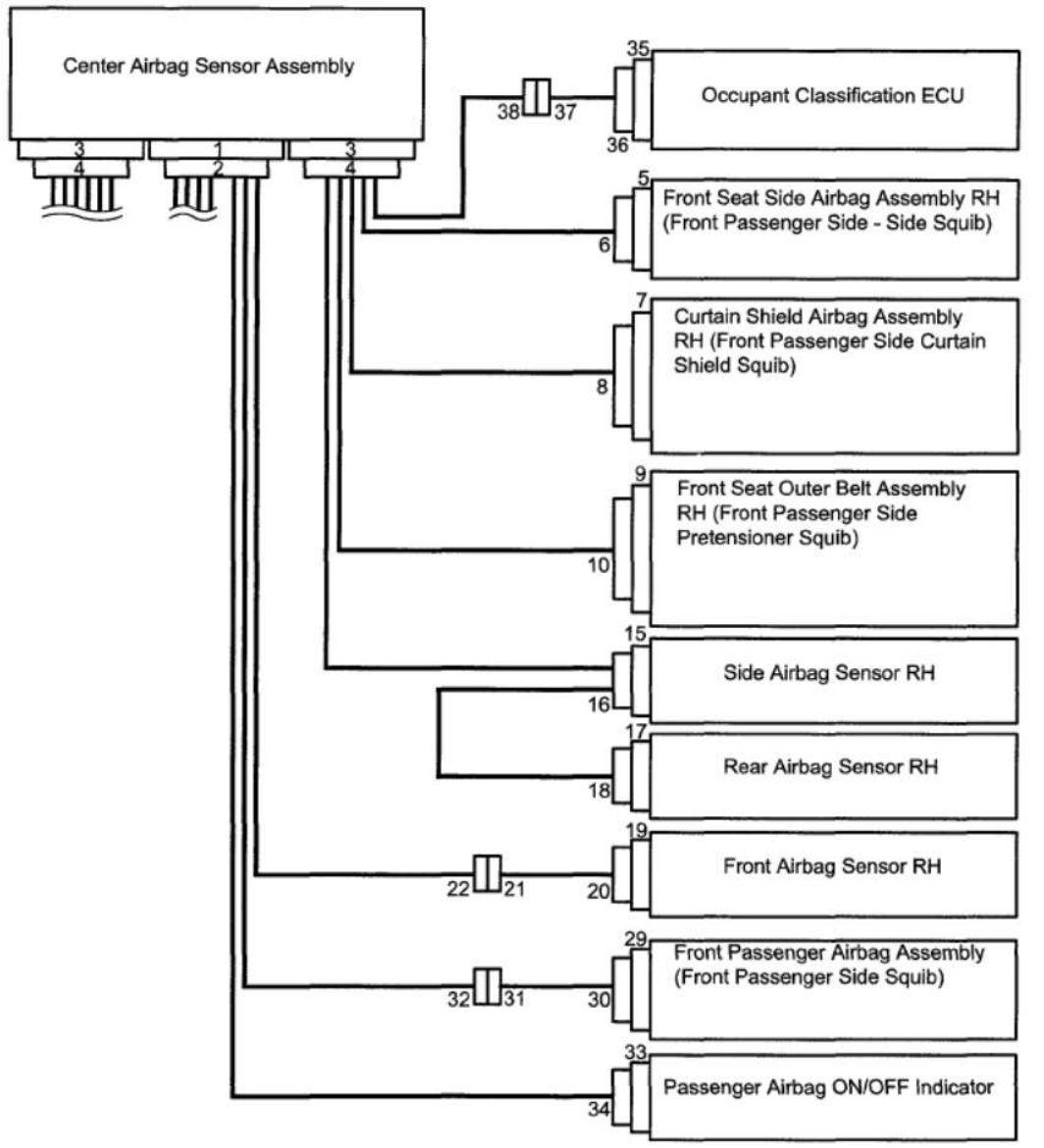


Fig. 2: SRS Connectors Connection Diagram (Passenger Side)
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CONNECTOR REFERENCE CHART

No.	Connector Type	Application

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(1)	Terminal Twin-Lock Mechanism	Connectors 2, 4, 16, 18,21,22,26,31,32,37,38
(2)	Activation Prevention Mechanism	Connectors 2, 4, 5, 7, 9, 23, 25, 27, 29, 31
(3)	Half Connection Prevention Mechanism	Connectors 16, 18, 21, 26, 32
(4)	Connector Position Assurance Mechanism	Connectors 6, 20
(5)	Connector Lock Mechanism (1)	Connectors 8, 10, 24, 28, 30
(6)	Connector Lock Mechanism (2)	Connectors 2, 4
(7)	Improper Connection Prevention Lock Mechanism	Connectors 1, 3

b. All connectors in the SRS are colored yellow to distinguish them from other connectors. These connectors have special functions, and are specially designed for the SRS. All SRS connectors use durable gold-plated terminals, and are placed in the locations shown on the preceding pages to ensure high reliability.

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.

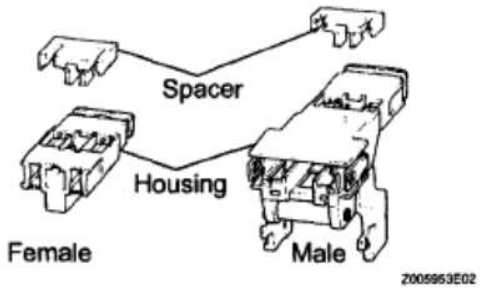


Fig. 3: Identifying Connectors Housing And Spacer
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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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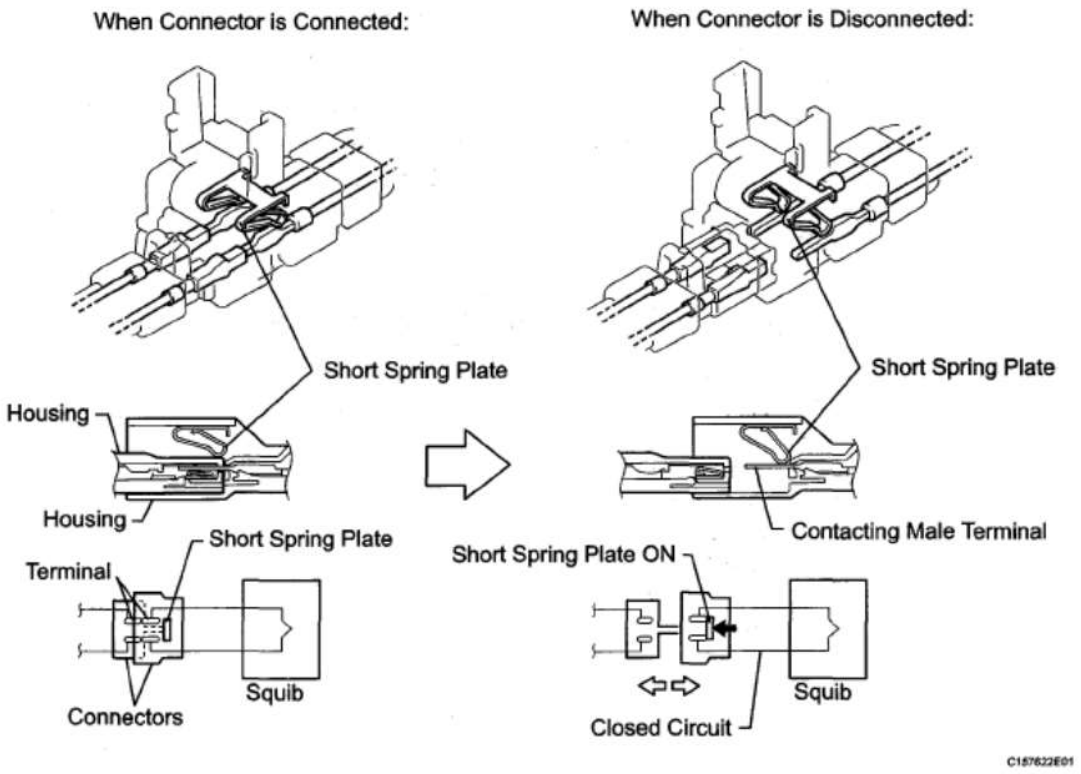


Fig. 4: Overview Of Activation Prevention Mechanism
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Half connection prevention mechanism:

   If the connector is not completely connected, the connector is disconnected due to the spring force so that no continuity exists.

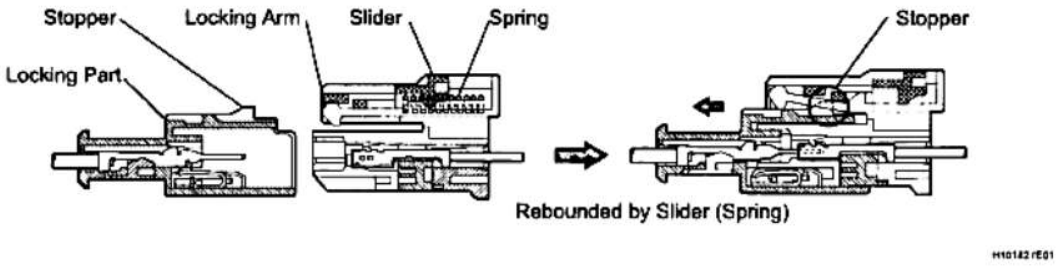


Fig. 5: Overview Of Half Connection Prevention Mechanism
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

4. Connector position assurance mechanism: Only when the housing lock (white part) is completely engaged, the CPA (yellow part) slides, which completes the connector engagement.

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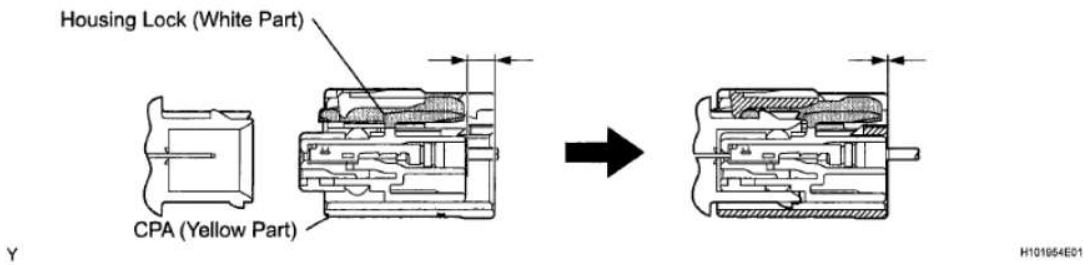


Fig. 6: Overview Of Connector Position Assurance Mechanism
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. Connector lock mechanism (1):

   Locking the connector lock button connects the connector securely.

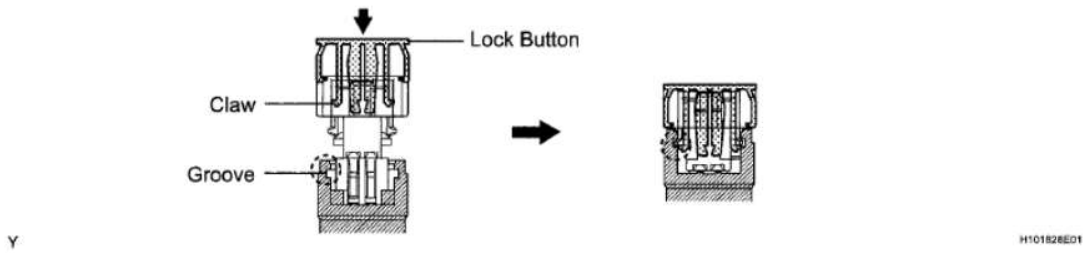


Fig. 7: Overview Of Connector Lock Mechanism (1)
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6. Connector lock mechanism (2):

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

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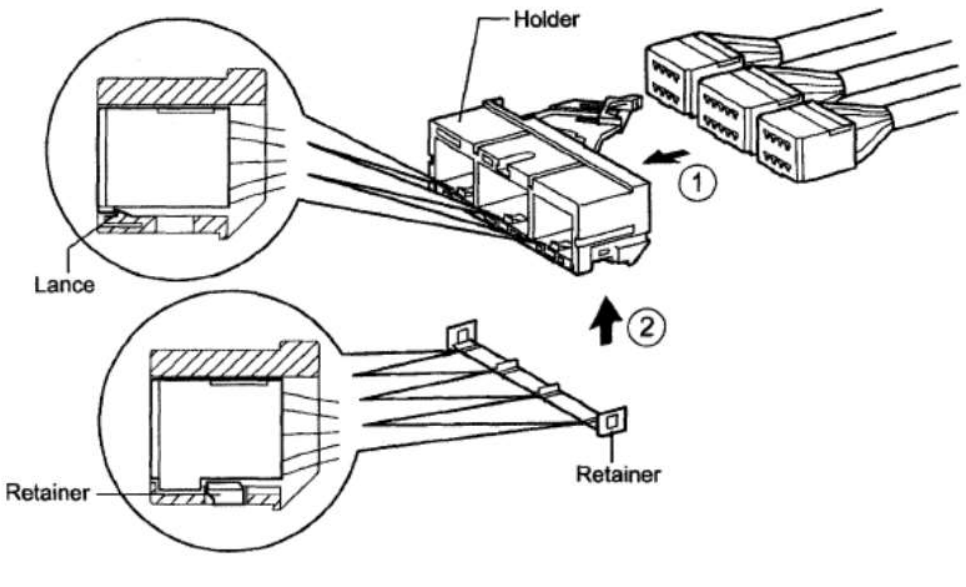


Fig. 8: Overview Of Connector Lock Mechanism (2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

7. Improper connection prevention lock mechanism:

   When the holder is connected, the lever is pushed into the end by rotating around the A axis to lock the holder securely.

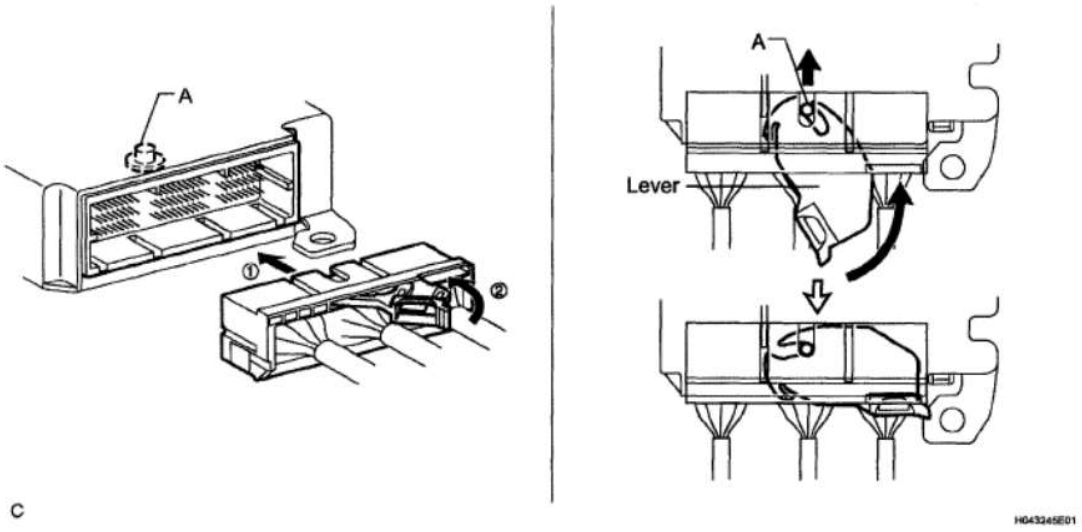


Fig. 9: Connecting Holder
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

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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.

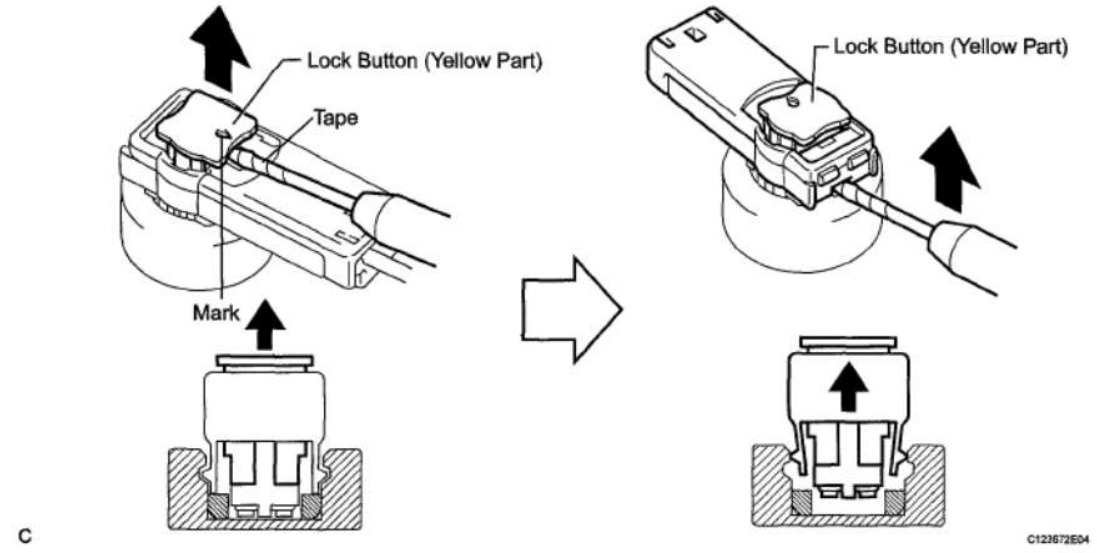
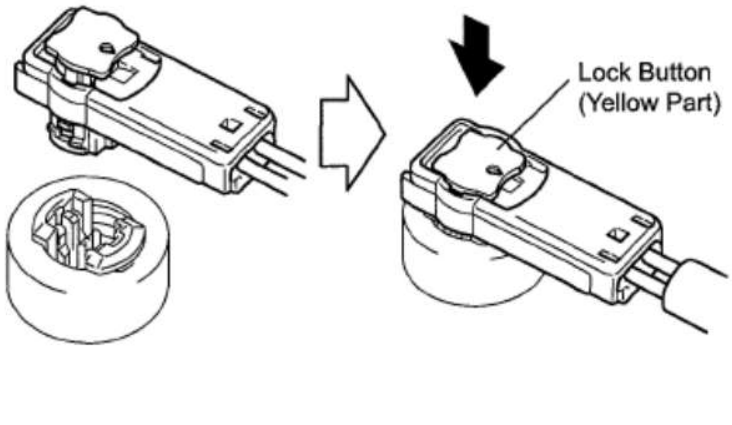


Fig. 10: Releasing Lock Button (Yellow Part) Of Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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



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

7. **DISCONNECTION OF CONNECTOR FOR DRIVER SIDE KNEE AIRBAG ASSEMBLY**

HINT:

Tape the screwdriver tip before use.

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

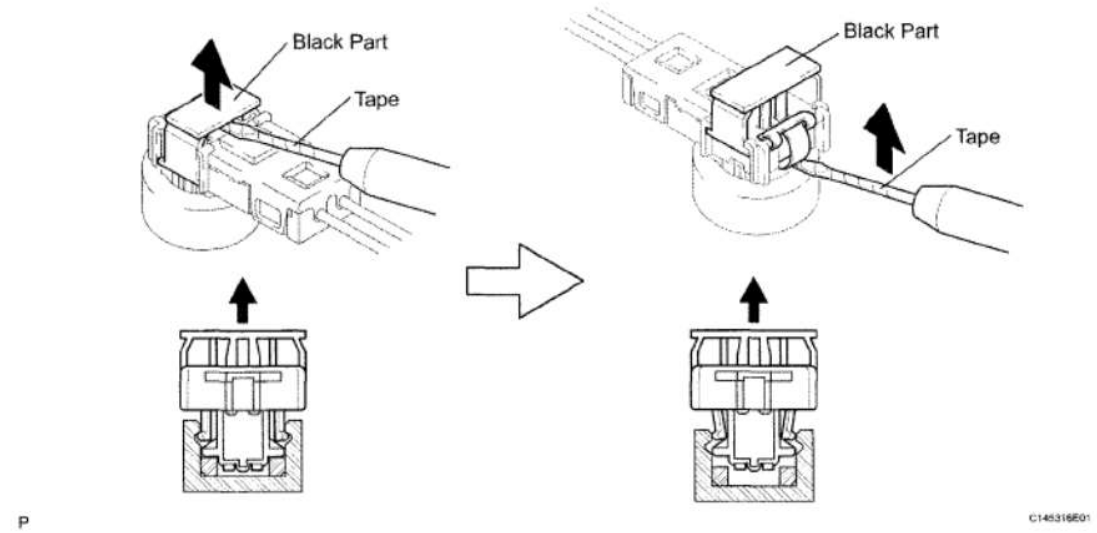


Fig. 12: Pulling Look Button
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

8. **CONNECTION OF CONNECTOR FOR DRIVER SIDE KNEE AIRBAG ASSEMBLY**

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.)

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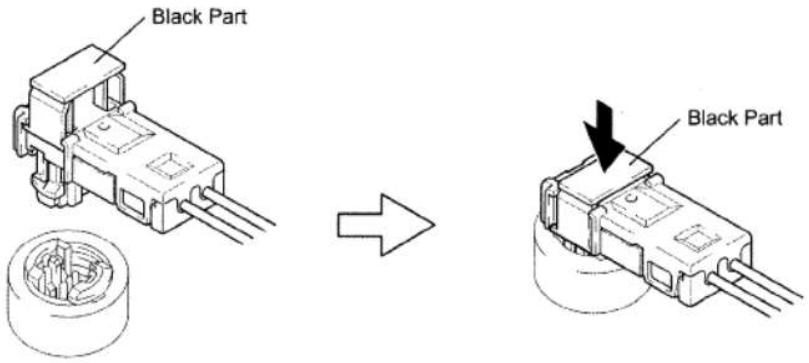


Fig. 13: Pushing Connector Lock Button
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

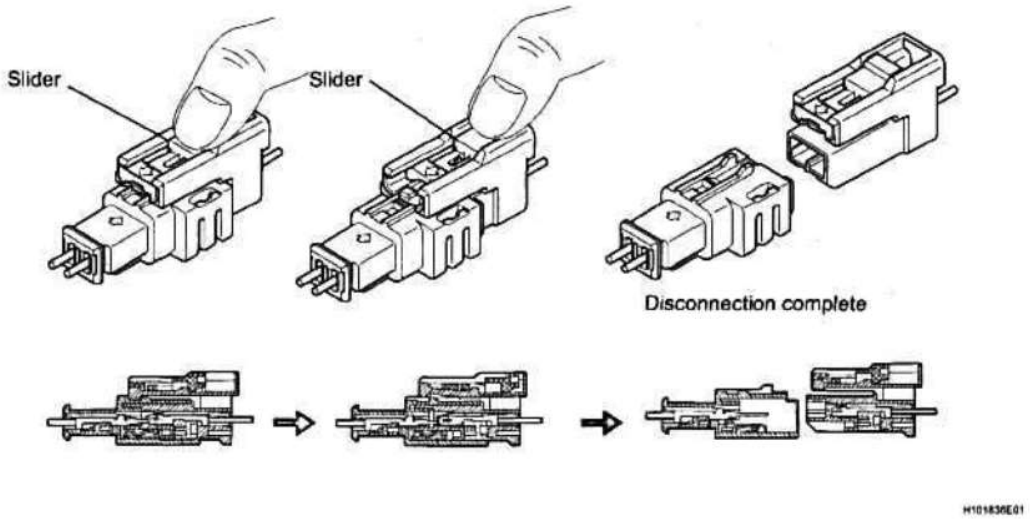


Fig. 14: Pulling Lever By Pushing Part A
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

10. **CONNECTION OF CONNECTOR FOR SPIRAL CABLE (INSTRUMENT PANEL WIRE SIDE) AND FRONT PASSENGER AIRBAG ASSEMBLY**
    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 connected, the slider will slide. Be sure not to touch the slider while connecting, as it may

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result in an insecure fit.

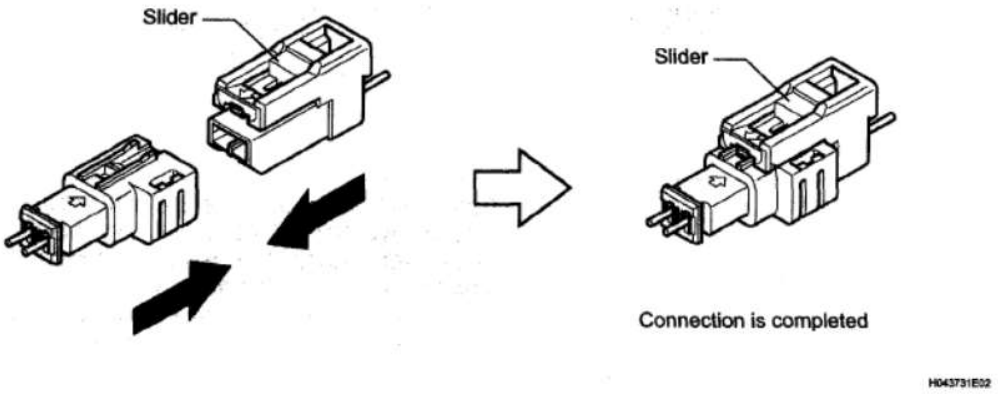


Fig. 15: Connecting Connector For Spiral Cable And Front Passenger Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

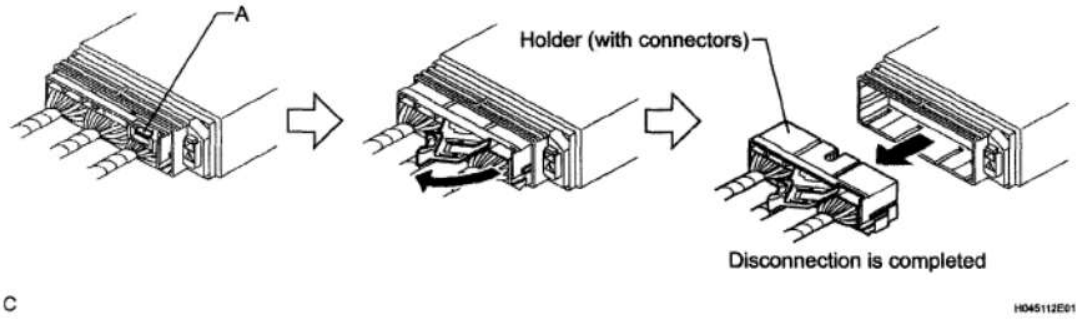


Fig. 16: Disconnecting Connector For Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

Perform the following procedures when replacing the holder.

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

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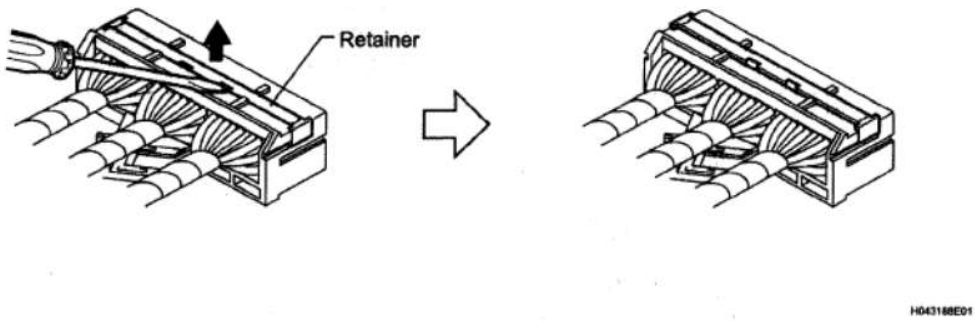


Fig. 17: Unlocking Retainer
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Release the fitting lance and remove the holder.

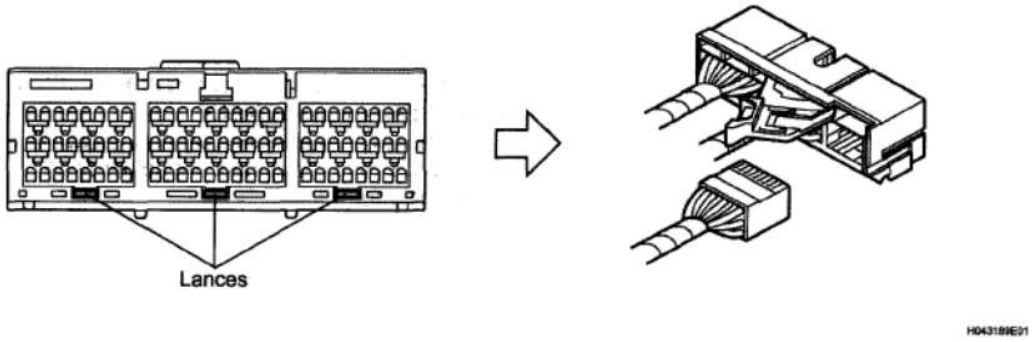


Fig. 18: Removing Holder
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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.

12. **CONNECTION OF CONNECTOR FOR CENTER AIRBAG SENSOR ASSEMBLY**
    a. Firmly insert the holder (with connectors) into the center airbag sensor assembly until it cannot be pushed any further.

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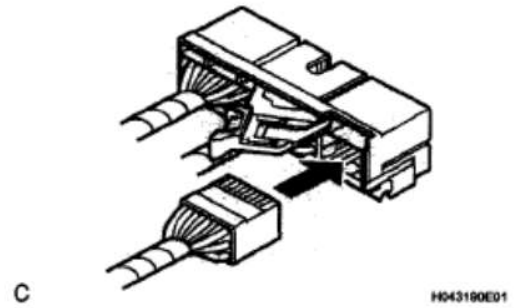


Fig. 19: Installing Connector To Holder
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 assembly when it is being connected. Be sure not to hold the holder while connecting, as it may result in an insecure fit.

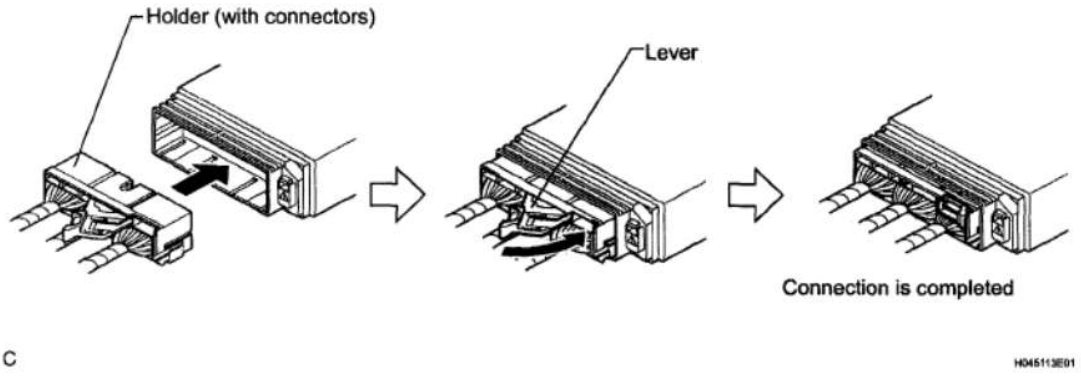


Fig. 20: Connecting Connector For Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

13. **DISCONNECTION OF CONNECTORS FOR FRONT AIRBAG SENSOR AND FRONT SEAT SIDE AIRBAG ASSEMBLY**
    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 part A shown in the illustration when disconnecting.

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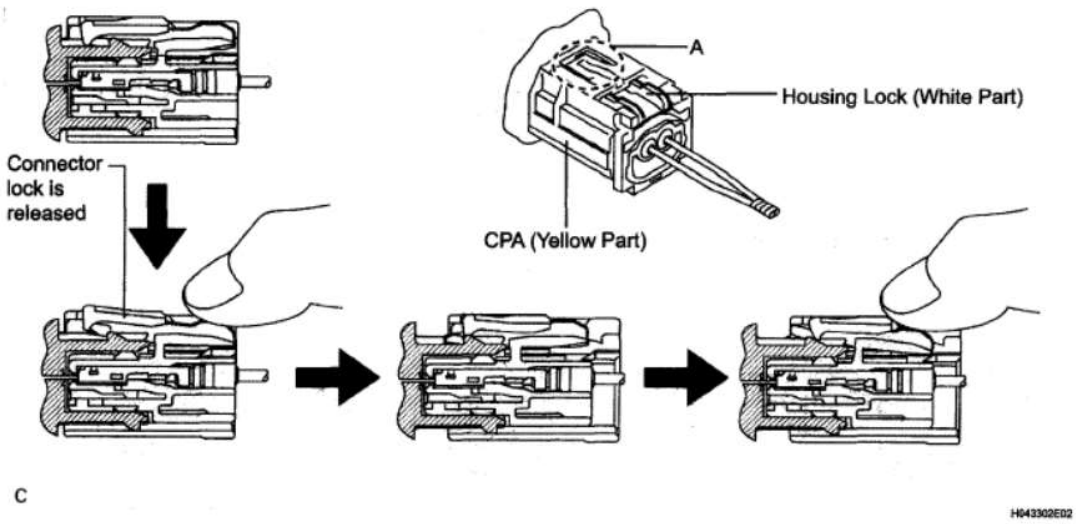


Fig. 21: Disconnecting Connector For Front Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

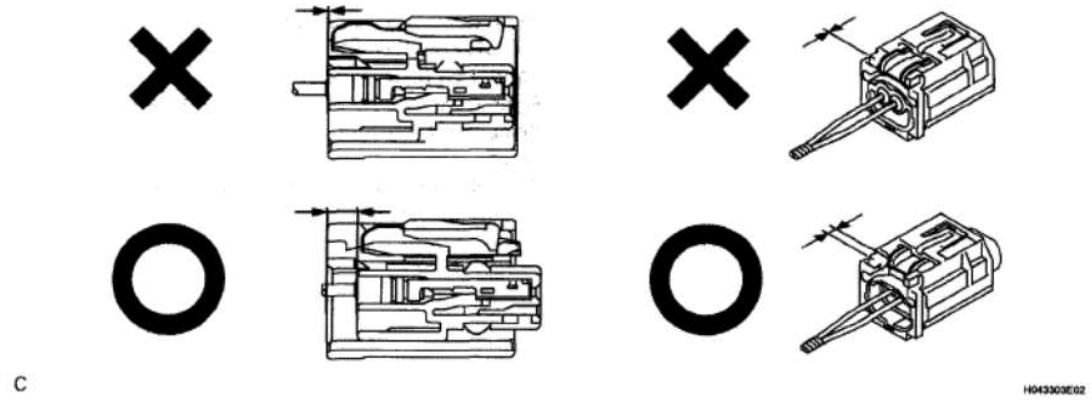


Fig. 22: Identifying Housing Lock Position (White Part)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

14. **CONNECTION OF CONNECTORS FOR FRONT AIRBAG SENSOR AND FRONT SEAT SIDE AIRBAG ASSEMBLY**

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

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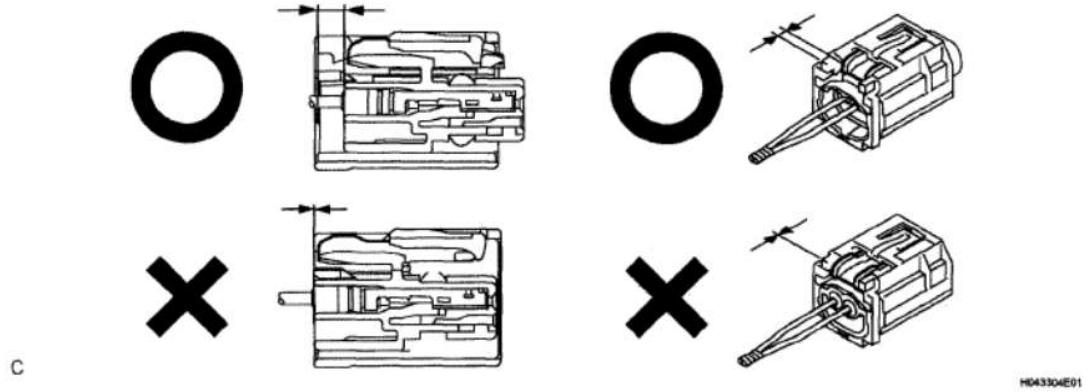


Fig. 23: Identifying Housing Lock Position (White Part)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

HINT:

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

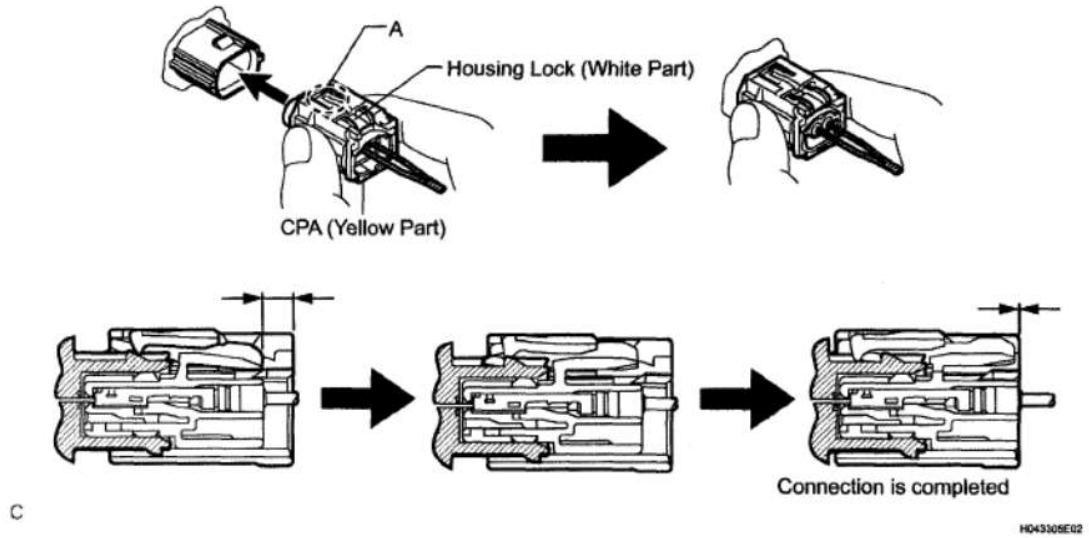


Fig. 24: Connecting Connector For Front Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

15. **DISCONNECTION OF CONNECTORS FOR SIDE AIRBAG SENSOR AND REAR AIRBAG SENSOR**
    a. While holding the sides of the outer connector locking sleeve, slide the outer in the direction shown by the arrow.
    b. When the connector lock is released, the connectors are disconnected.

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HINT:

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

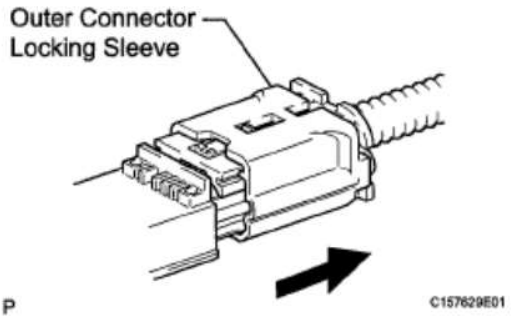


Fig. 25: Identifying Outer Connector Locking Sleeve
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

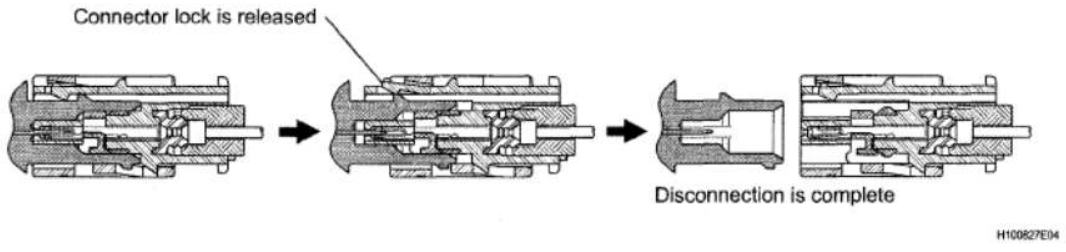


Fig. 26: Releasing Connector Lock
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

16. **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 returns to its original position and a click sound can be heard).

       HINT:

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

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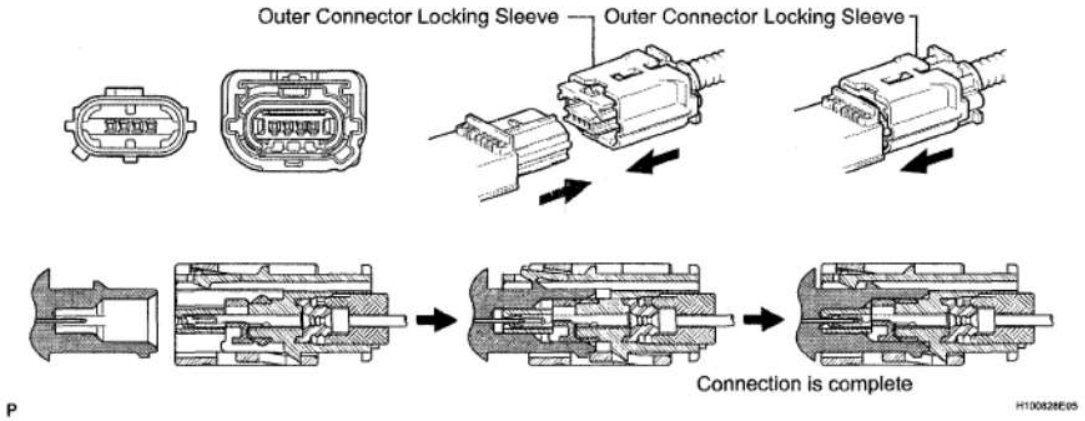


Fig. 27: Connecting Connectors For Side Airbag Sensor And Rear Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

PARTS LOCATION

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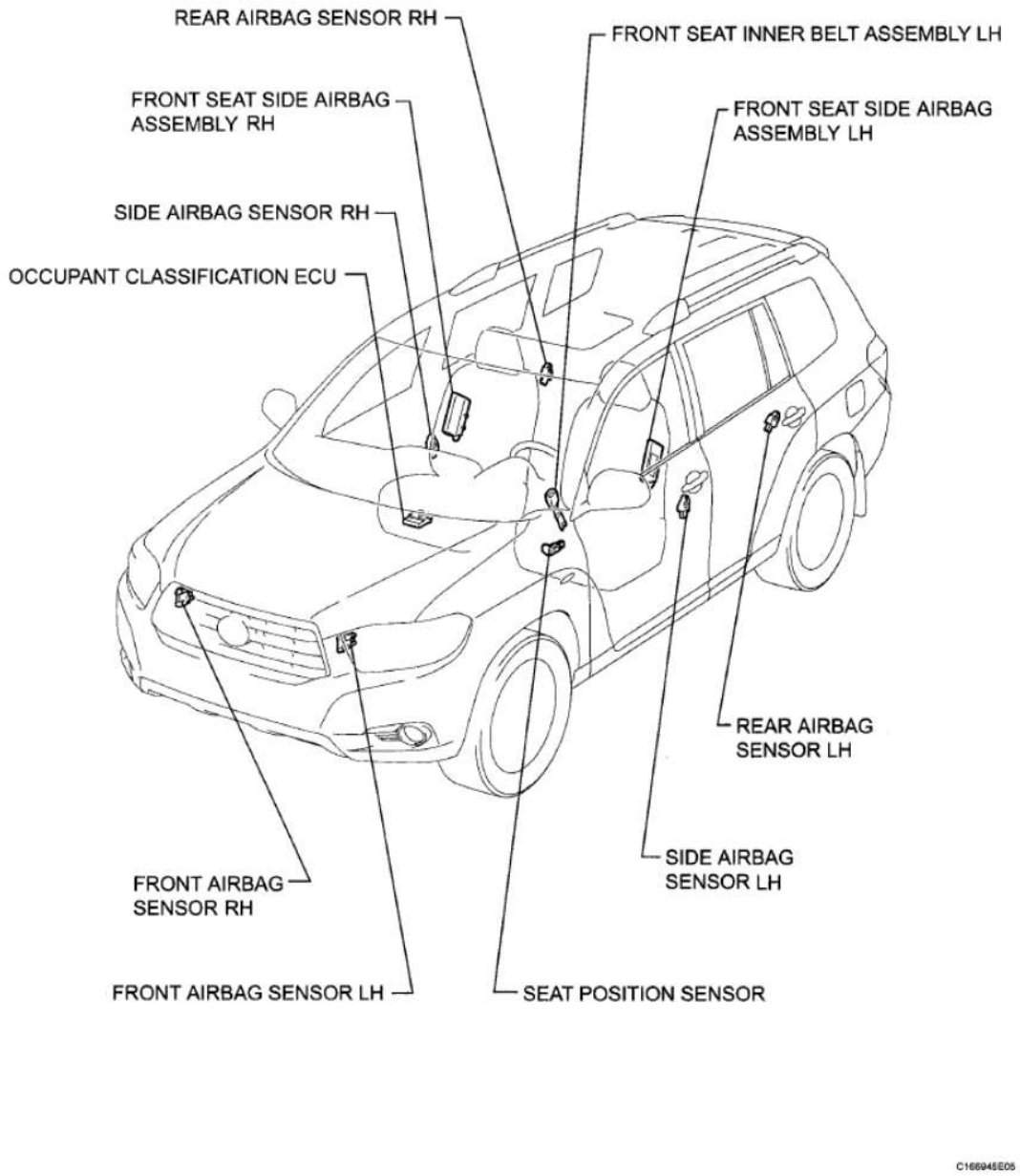


Fig. 28: Identifying SRS Parts Location (1 Of 2)
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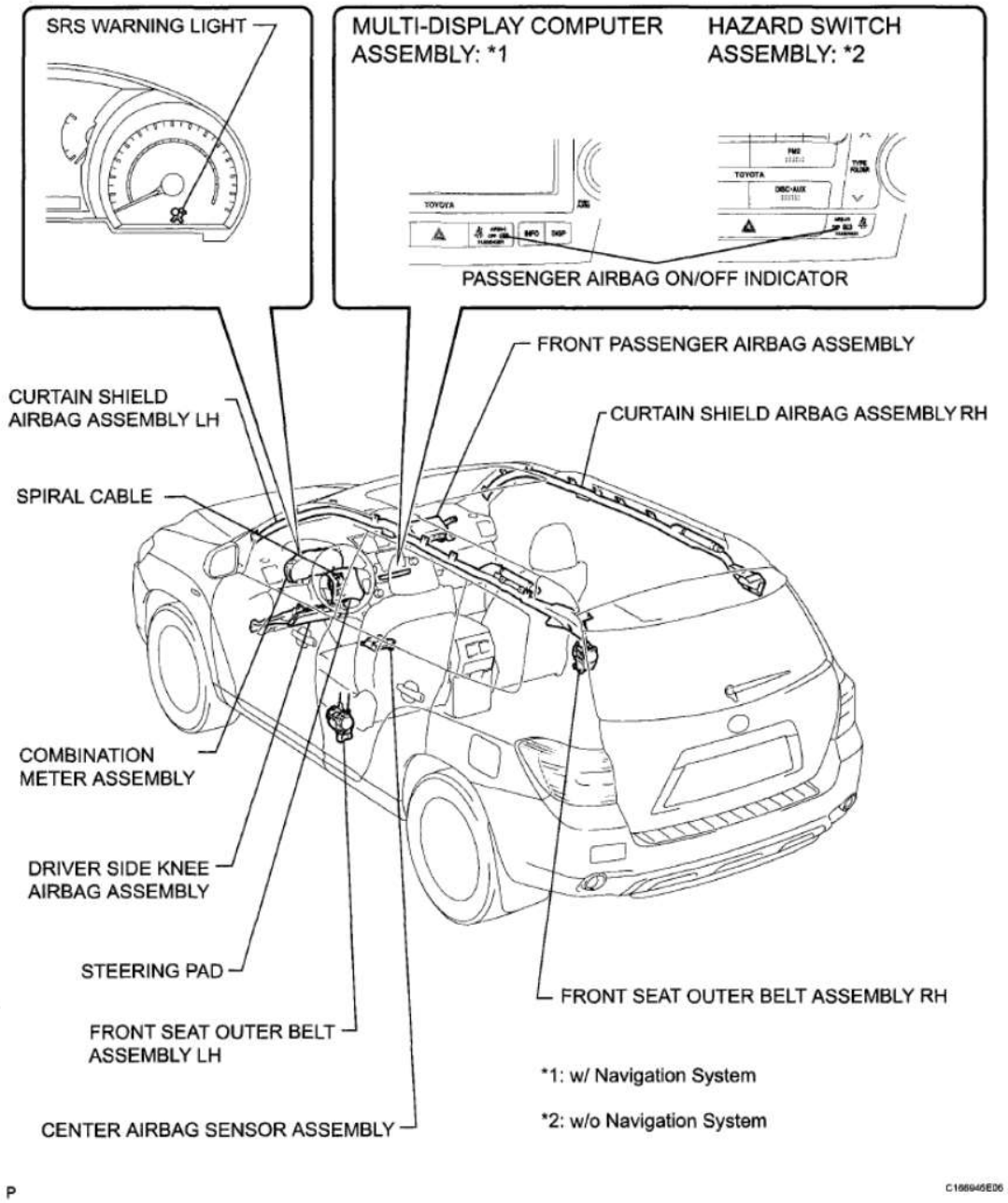


Fig. 29: Identifying SRS Parts Location (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SYSTEM DIAGRAM

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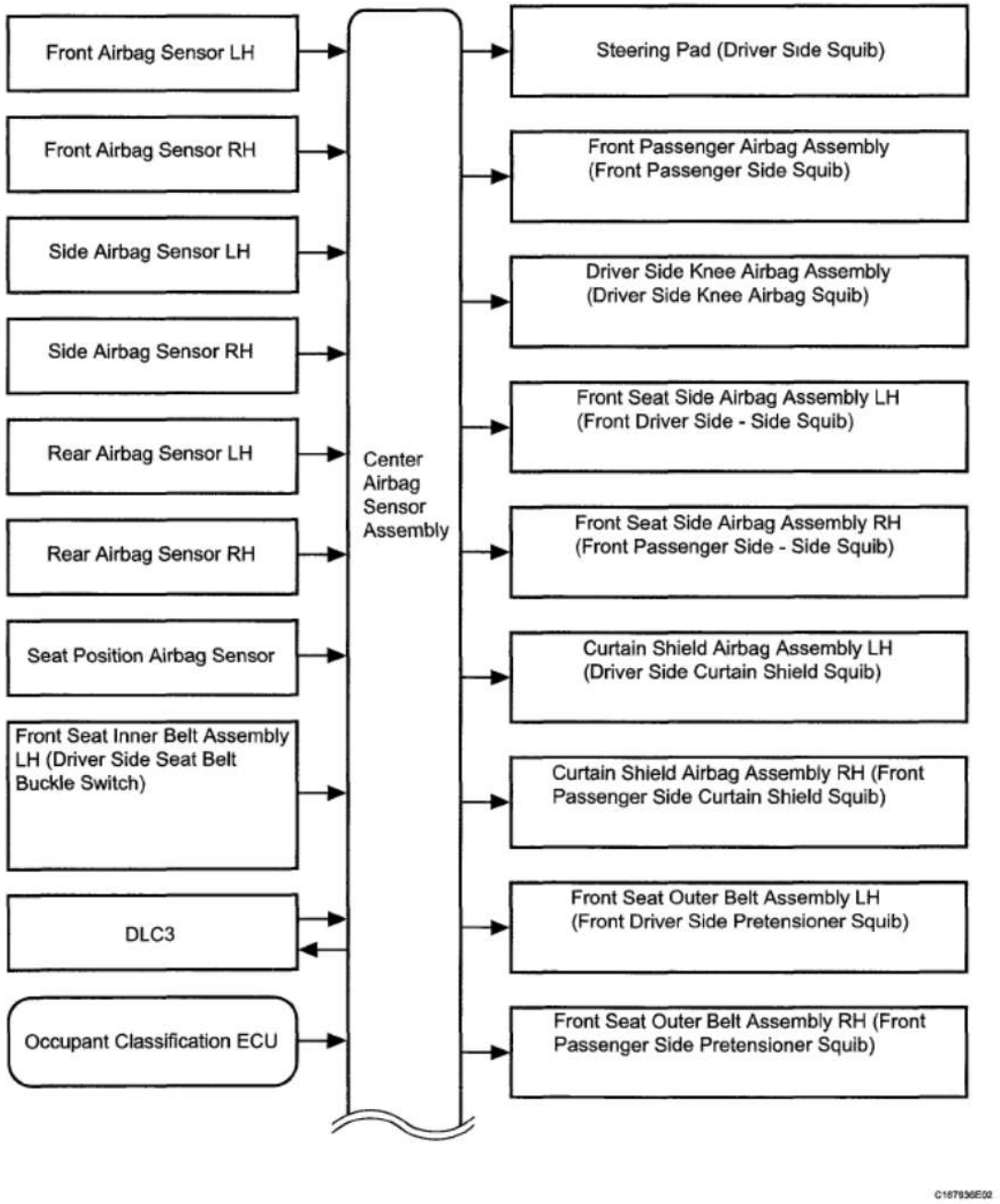


Fig. 30: SRS - System Diagram (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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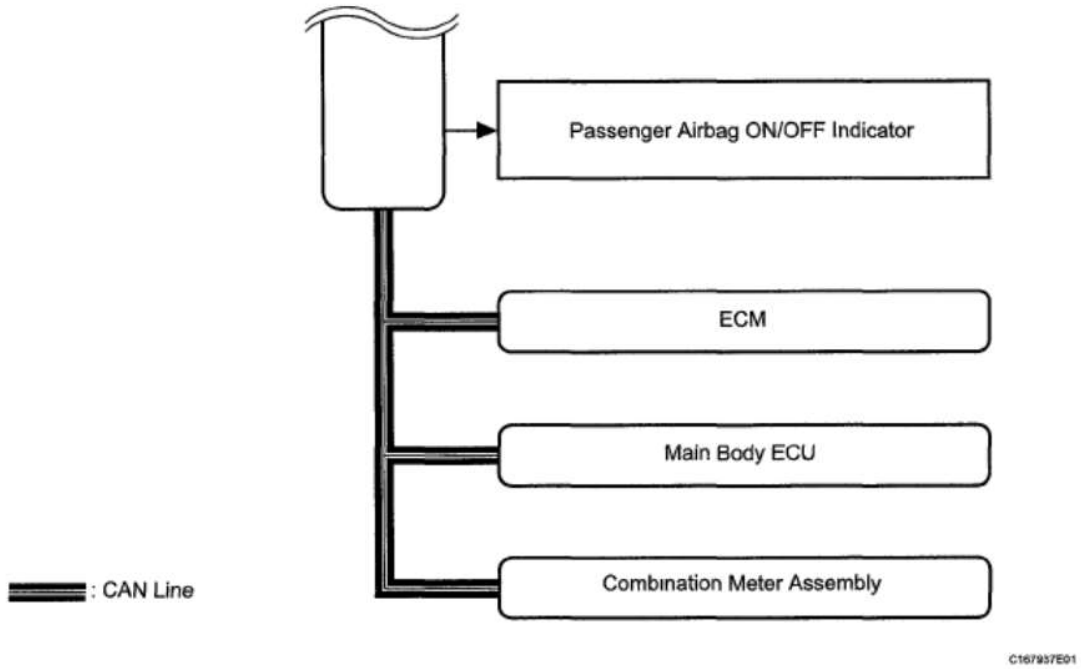


Fig. 31: SRS - System Diagram (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TRANSMITTER SIGNALS REFERENCE

Transmitting ECU (Transmitter)	Receiving ECU	Signals	Communication Method
Center Airbag Sensor Assembly	ECM	Crash detection signal	CAN
Center Airbag Sensor Assembly	Main Body ECU	Driver seat buckle switch signal	
Center Airbag Sensor Assembly	Combination Meter Assembly	• 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 Assembly	Center Airbag Sensor Assembly	• Vehicle speed signal • Meter diagnosis polling signal	
		• Engine speed signal • Accelerator opening angle	

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ECM	Center Airbag Sensor Assembly	information • Accelerator opening angle signal • Shift position signal • Test mode signal • Stop signal	

SYSTEM DESCRIPTION

1. **GENERAL**
   a. FRONTAL COLLISION
      1. The driver airbag, front passenger airbag and driver side knee 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 and knee of the driver.
      2. Frontal collisions are detected by the center airbag sensor and two front airbag sensors. The driver airbag, front passenger airbag, driver side knee 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.

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2. The rear airbag sensor uses an electrical type deceleration sensor.
3. The deceleration sensor is built into the rear airbag sensor, and the distortion that is created in the sensor is converted into an electric signal based on the vehicle deceleration rate during a rear side collision. Accordingly, the extent of the initial collision can be detected in detail.

d. CENTER AIRBAG SENSOR 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, 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, driver side knee airbag and front seat belt pretensioner should be activated, and diagnoses system malfunctions.
   - The center airbag sensor assembly receives signals from the deceleration sensor and the safing sensor built into the center airbag sensor 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.
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 or 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

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This circuit constantly diagnoses system malfunctions. When a malfunction is detected, it turns on the SRS warning light on the combination meter assembly to inform the driver.

6. Memory circuit

When a malfunction is detected in the diagnostic circuit, it is coded and stored in the memory circuit.

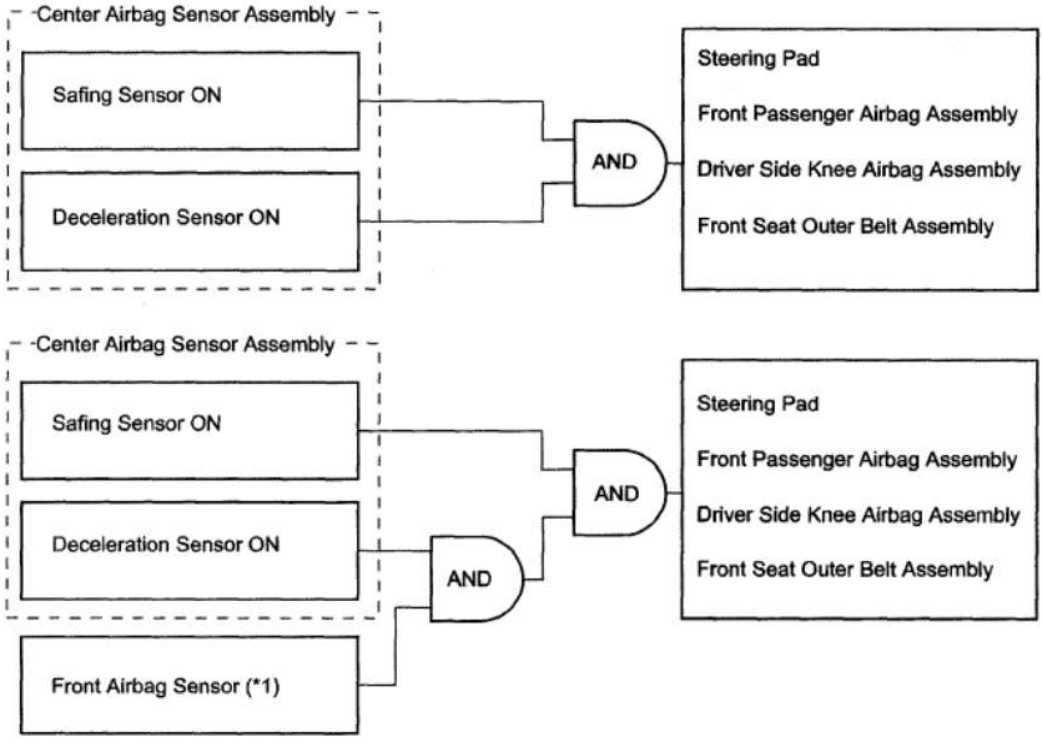
e. SRS WARNING LIGHT

1. The SRS warning light is located on the combination meter 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 on (IG), it comes on for approximately 6 seconds and then goes off.

3. DEPLOYMENT CONDITION

If the vehicle collides and the shock is greater than the specified value, the SRS is activated automatically. The center airbag sensor assembly includes the safing sensor and deceleration sensor. The safing sensor is designed to turn on at a lower deceleration rate than the deceleration sensor.

a. The center airbag sensor assembly determines whether ignition is necessary based on signals from the deceleration sensor and the front airbag sensor (*1). If the safing sensor turns on simultaneously, current flows to the squibs to deploy the SRS as shown in the illustration below.



C

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Fig. 32: Current Flows To Deploying SRS
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

*1: In case of a front collision, the ignition signal could be output with the deceleration sensor ON signal even without a signal from the front airbag sensor.

b. The center airbag sensor assembly determines whether ignition is necessary based on signals from the side airbag sensor. If the safing sensor turns on simultaneously, current flows to the squib to deploy the SRS as shown in the illustration below.

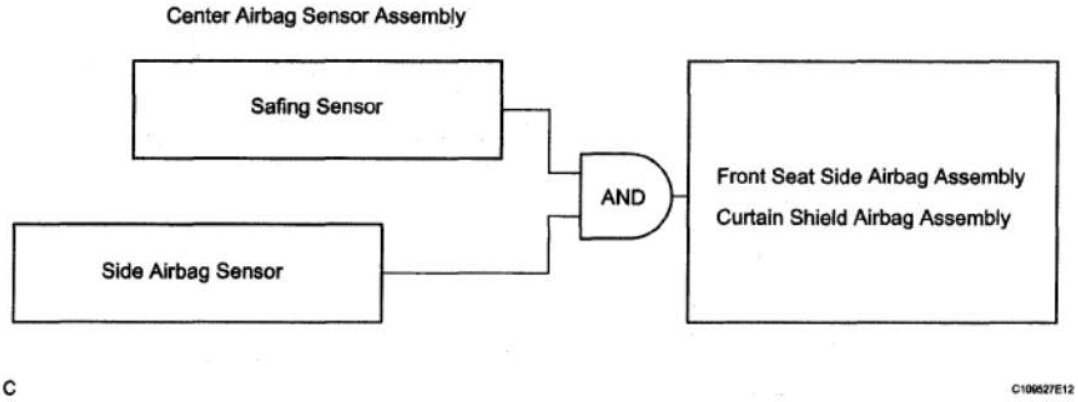


Fig. 33: Current Flows To Deploying SRS
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. The center airbag sensor assembly determines whether ignition is necessary based on signals from the rear airbag sensor (*1). If the safing sensor turns on simultaneously, current flows to the squib to deploy the SRS as shown in the illustration below.

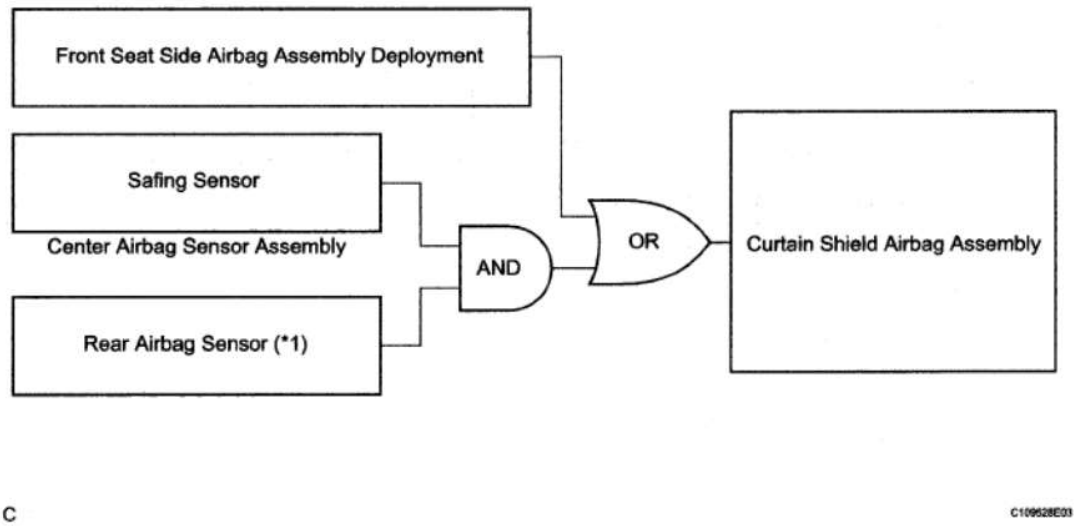


Fig. 34: Current Flows To Deploying SRS

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

HINT:

*1: If the front seat side airbag assembly deploys, the curtain shield airbag assembly will also deploy, regardless of whether the signal is output from the rear airbag sensor.

d. The vehicle is equipped with the function to activate the SRS in case of vehicle rollover. A circuit to detect vehicle rollover is built into the center airbag sensor assembly. When the conditions for vehicle rollover are met, the SRS is activated as shown in the illustration below.

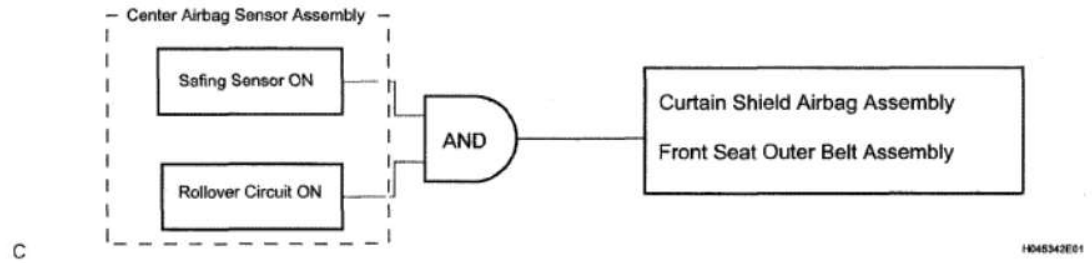


Fig. 35: Current Flows To Deploying SRS (Activation)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

*: Use Techstream.

1. **VEHICLE BROUGHT TO WORKSHOP**
2. **CUSTOMER PROBLEM ANALYSIS**
   a. Confirm problem symptoms (See **PROBLEM SYMPTOMS TABLE**).
3. **CHECK CAN COMMUNICATION SYSTEM***
   a. Use Techstream to check if the CAN communication system is functioning normally.

      HINT:

      Refer to "Bus Check" for the CAN communication system (See **HOW TO PROCEED WITH TROUBLESHOOTING**).

      The center airbag sensor assembly is connected to the CAN communication system. Therefore, before starting troubleshooting, make sure to check that there is no trouble in the CAN communication system.

Result

RESULT CHART

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

B: INSPECT CAN COMMUNICATION CIRCUIT

A: Go to next step

4. **SRS WARNING LIGHT CHECK**
   a. Proceed to Diagnosis System (See **DIAGNOSIS SYSTEM**).
5. **CHECK FOR DTC***
   a. Proceed to DTC Check/Clear (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

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

B: GO TO STEP 7

A: Go to next step

6. **DIAGNOSTIC TROUBLE CODE CHART**
   a. Proceed to Diagnostic Trouble Code Chart (See **DIAGNOSTIC TROUBLE CODE CHART**).

NEXT: GO TO STEP 9

7. **SYMPTOM SIMULATION**
   a. Proceed to Diagnosis System (See **DIAGNOSIS SYSTEM**).
8. **PROBLEM SYMPTOMS TABLE**
   a. Proceed to Problem Symptoms Table (See **PROBLEM SYMPTOMS TABLE**).
9. **CIRCUIT INSPECTION***
10. **IDENTIFICATION OF PROBLEM**
11. **REPAIR OR REPLACEMENT**
12. **CONFIRMATION TEST**

NEXT: END

PROBLEM SYMPTOMS TABLE

AIRBAG SYSTEM

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PROBLEM SYMPTOMS CHART - AIRBAG SYSTEM

Symptom	Suspected Area	Refer to
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 is turned on (IG), 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 when DTC is not output.	SRS Warning Light Remains ON	**SRS WARNING LIGHT REMAINS ON**
With the ignition switch is turned on (IG), 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.	TC and CG Terminal Circuit	**TC AND CG TERMINAL CIRCUIT**
Although terminals TC and CG of DLC3 are not connected, DTC or a normal system code is displayed.	TC and CG Terminal Circuit	**TC AND CG TERMINAL CIRCUIT**

TERMINALS OF ECU

1. **CENTER AIRBAG SENSOR ASSEMBLY**

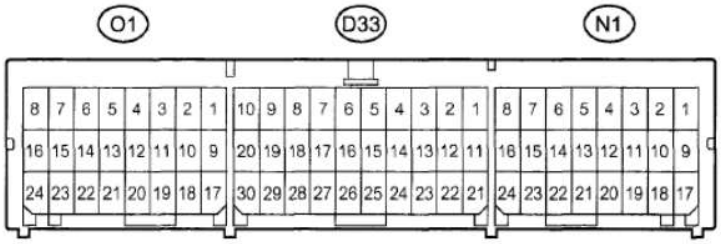


Fig. 36: Identifying ECU Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TERMINAL SYMBOL REFERENCE CHART

Terminal No.	Terminal Symbol	Destination
D33-1	P2+	Front passenger airbag assembly (Front passenger side squib 2nd step)
D33-2	P2-	Front passenger airbag assembly (Front passenger side squib 2nd step)
D33-3	P-	Front passenger airbag assembly (Front passenger side squib)
D33-4	P+	Front passenger airbag assembly (Front passenger side squib)
D33-5	D+	Steering pad (Driver side squib)

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D33-6	D-	Steering pad (Driver side squib)
D33-7	D2-	Steering pad (Driver side squib 2nd step)
D33-8	D2+	Steering pad (Driver side squib 2nd step)
D33-9	DK+	Driver side knee airbag assembly (Driver side knee airbag squib)
D33-10	DK-	Driver side knee airbag assembly (Driver side knee airbag squib)
D33-13	CANH	CAN Communication line
D33-16	SIL	DLC3
D33-17	P-AB	Passenger airbag ON/OFF indicator
D33-21	IG2	IGN fuse
D33-22	CANL	CAN Communication line
D33-23	PAON	Passenger airbag ON/OFF indicator
D33-25	E1	Ground
D33-26	E2	Ground
D33-27	-SR	Front airbag sensor RH
D33-28	-SL	Front airbag sensor LH
D33-29	+SR	Front airbag sensor RH
D33-30	+SL	Front airbag sensor LH
O1-1	SFD+	Front seat side airbag assembly LH (Front driver side - side squib)
O1-2	SFD-	Front seat side airbag assembly LH (Front driver side - side squib)
O1-3	ICD-	Curtain shield airbag assembly LH (Driver side curtain shield squib)
O1-4	ICD+	Curtain shield airbag assembly LH (Driver side curtain shield squib)
O1-5	PD+	Front seat outer belt assembly LH (Front driver side pretensioner squib)
O1-6	PD-	Front seat outer belt assembly LH (Front driver side pretensioner squib)
O1-9	DSP+	Seat position airbag sensor
O1-10	DBE+	Front seat inner belt assembly LH (Driver side seat belt buckle switch)
O1-17	DSP-	Seat position airbag sensor
O1-18	DBE-	Front seat inner belt assembly LH (Driver side seat belt buckle switch)
O1-23	BBD-	Side airbag sensor LH
O1-24	BBD+	Side airbag sensor LH
N1-3	PP-	Front seat outer belt assembly RH (Front passenger side pretensioner squib)
N1-4	PP+	Front seat outer belt assembly RH (Front passenger side pretensioner squib)
N1-5	ICP+	Curtain shield airbag assembly RH (Front passenger side curtain shield squib)
N1-6	ICP-	Curtain shield airbag assembly RH (Front passenger side curtain shield squib)
N1-7	SFP-	Front seat side airbag assembly RH (Front passenger side - side squib)
N1-8	SFP+	Front seat side airbag assembly RH (Front passenger side - side squib)
N1-16	FSP+	Occupant classification ECU
N1-17	BBP+	Side airbag sensor RH
N1-18	BBP-	Side airbag sensor RH

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N1-24	FSP-	Occupant classification ECU

DIAGNOSIS SYSTEM

1. **CHECK DLC3**
   a. Check the DLC3 (See **HOW TO TROUBLESHOOT ECU CONTROLLED SYSTEMS**).
2. **SYMPTOM SIMULATION**

   HINT:

   The most difficult case in troubleshooting is when no symptoms occur. In such cases, a thorough customer problem analysis must be carried out. Then the same or similar conditions and the environment in which the problem occurred in the customer's vehicle should be reproduced. No matter how experienced or skilled a technician may be, if he/she proceeds to troubleshooting without confirming the problem symptoms, he/she will likely overlook something important and make a wrong guess at some points in the repair operation. This leads to a standstill in troubleshooting.

   a. Vibration method: When vibration seems to be the major cause.

      HINT:

      Perform the simulation method only during the primary check period (of approximately 6 seconds after the ignition switch is turned on (IG)).

      1. Slightly vibrate the part of the sensor considered to be the problem cause with your fingers and check whether the malfunction occurs.

         HINT:

         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.

3. **FUNCTION OF SRS WARNING LIGHT**
   a. Primary check

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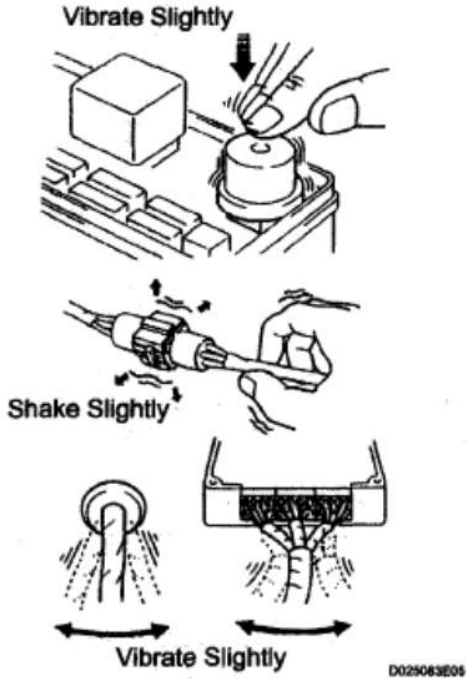


Fig. 37: Checking Connectors And Sensors For Vibration
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Turn the ignition switch off. Wait for at least 2 seconds, then turn the ignition switch on (IG). 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 assembly constantly monitors the airbag system for trouble.

      HINT:

      If trouble is detected during the constant check, the center airbag sensor assembly 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

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1. When the airbag system is normal:

   The SRS warning light comes on only during the primary check period (of approximately 6 seconds after the ignition switch is turned on (IG)).

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 (IG).

   HINT:

   The center airbag sensor assembly functions to keep the SRS warning light on if the airbag has been deployed.

4. **SRS WARNING LIGHT CHECK**
   a. Turn the ignition switch on (IG), 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 on (IG) (constant check).

   HINT:

   When any of the following symptoms occur, refer to "Problem Symptoms Table" (See **PROBLEM SYMPTOMS TABLE**).



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

   - 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 (IG), but the SRS warning light does not come on.

5. **FUNCTION OF PASSENGER AIRBAG ON/OFF INDICATOR**

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a. Initial check

1. Turn the ignition switch on (IG).
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 on (IG), the passenger airbag ON/OFF indicator will be ON/OFF depending on the conditions listed below.

PASSENGER AIRBAG ON/OFF INDICATOR CHART

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.

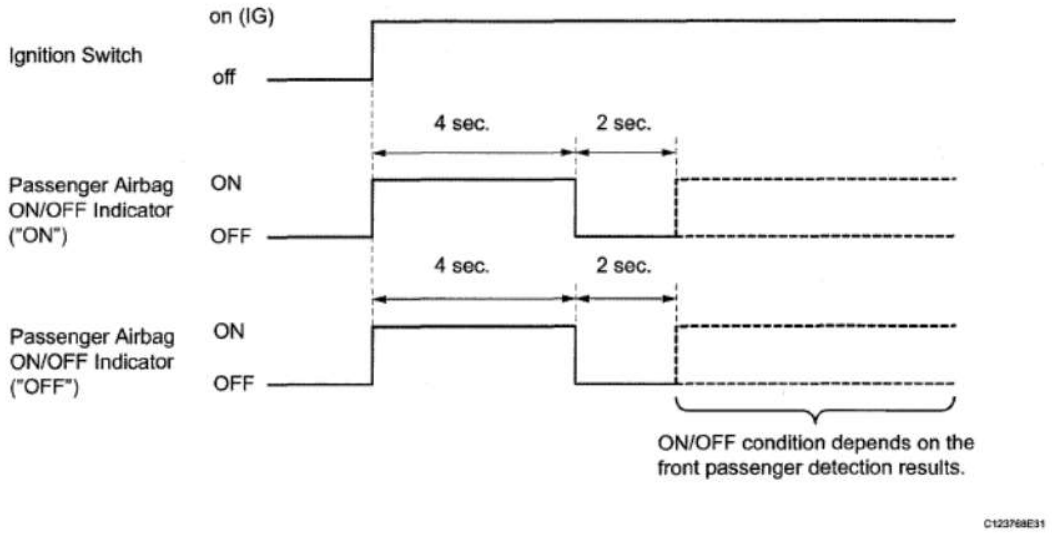


Fig. 39: Passenger Airbag ON/OFF Indicator On Timing Chart
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

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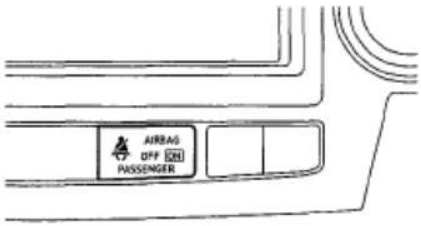
a. Turn the ignition switch on (IG).
b. Check that the passenger airbag ON/OFF indicator ("ON" and "OFF") comes on for approximately 4 seconds, then goes off for approximately 2 seconds.

HINT:

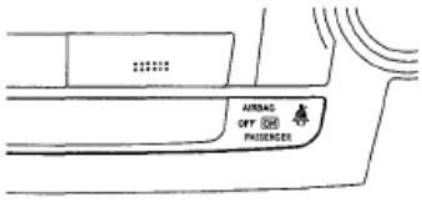
Refer to the table in the previous step regarding the passenger airbag ON/OFF indicator when the ignition switch is turned on (IG) and approximately 6 seconds pass.

7. **ACTIVATION PREVENTION MECHANISM**
   a. FUNCTION OF ACTIVATION PREVENTION MECHANISM
      1. An activation prevention mechanism is built into the connector (on the center airbag sensor assembly side) of the airbag system squib circuit to prevent accidental airbag activation.
      2. This mechanism closes the circuit when the connector is disconnected by bringing the short spring into contact with the terminals and shutting off external electricity to prevent accidental airbag activation.

w/ Navigation System:



w/o Navigation System:



H C166874E02

Fig. 40: Identifying Passenger Airbag Switch
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   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.

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

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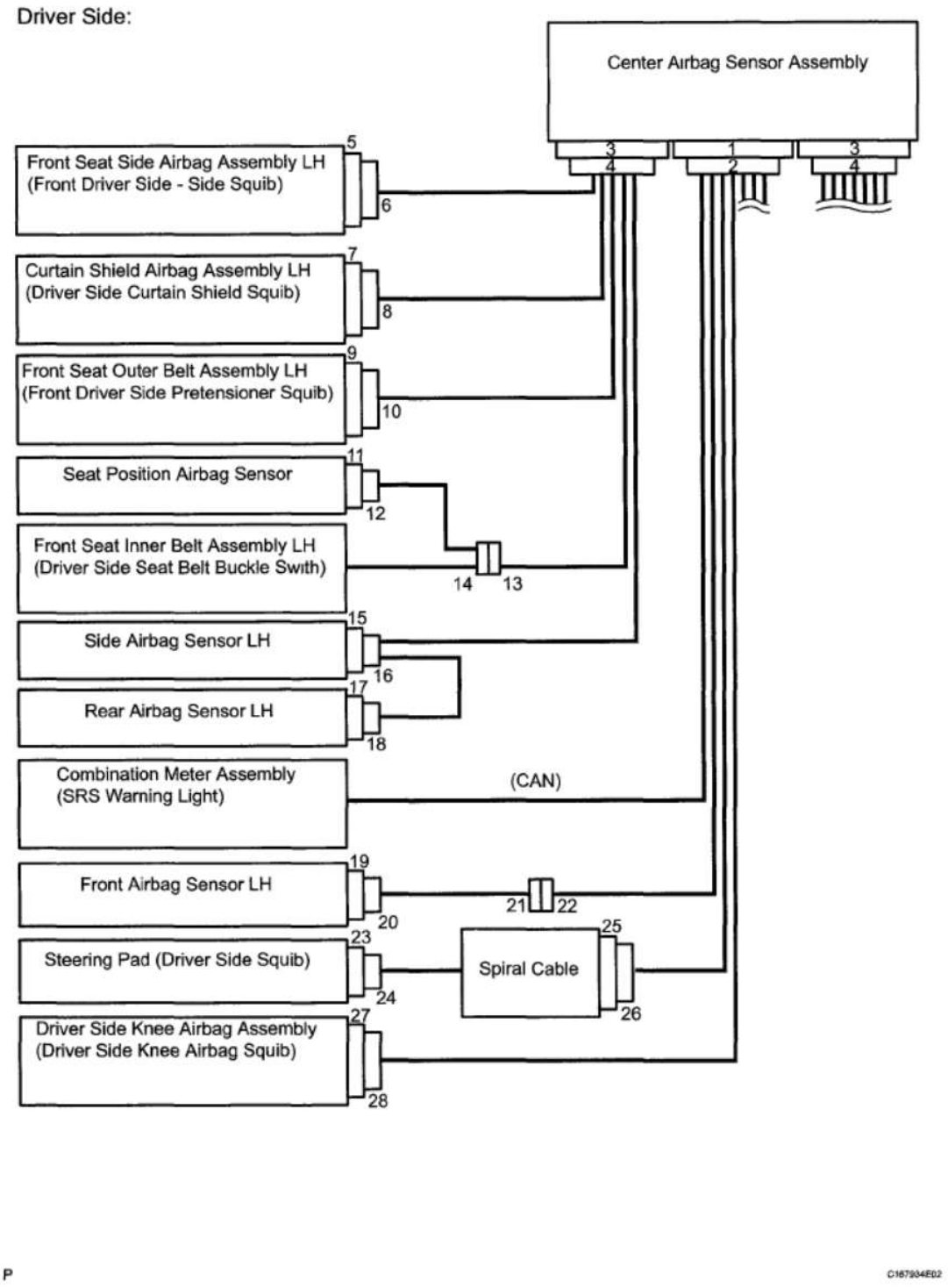


Fig. 41: SRS Connectors Connection Diagram (Driver Side)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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Passenger Side:

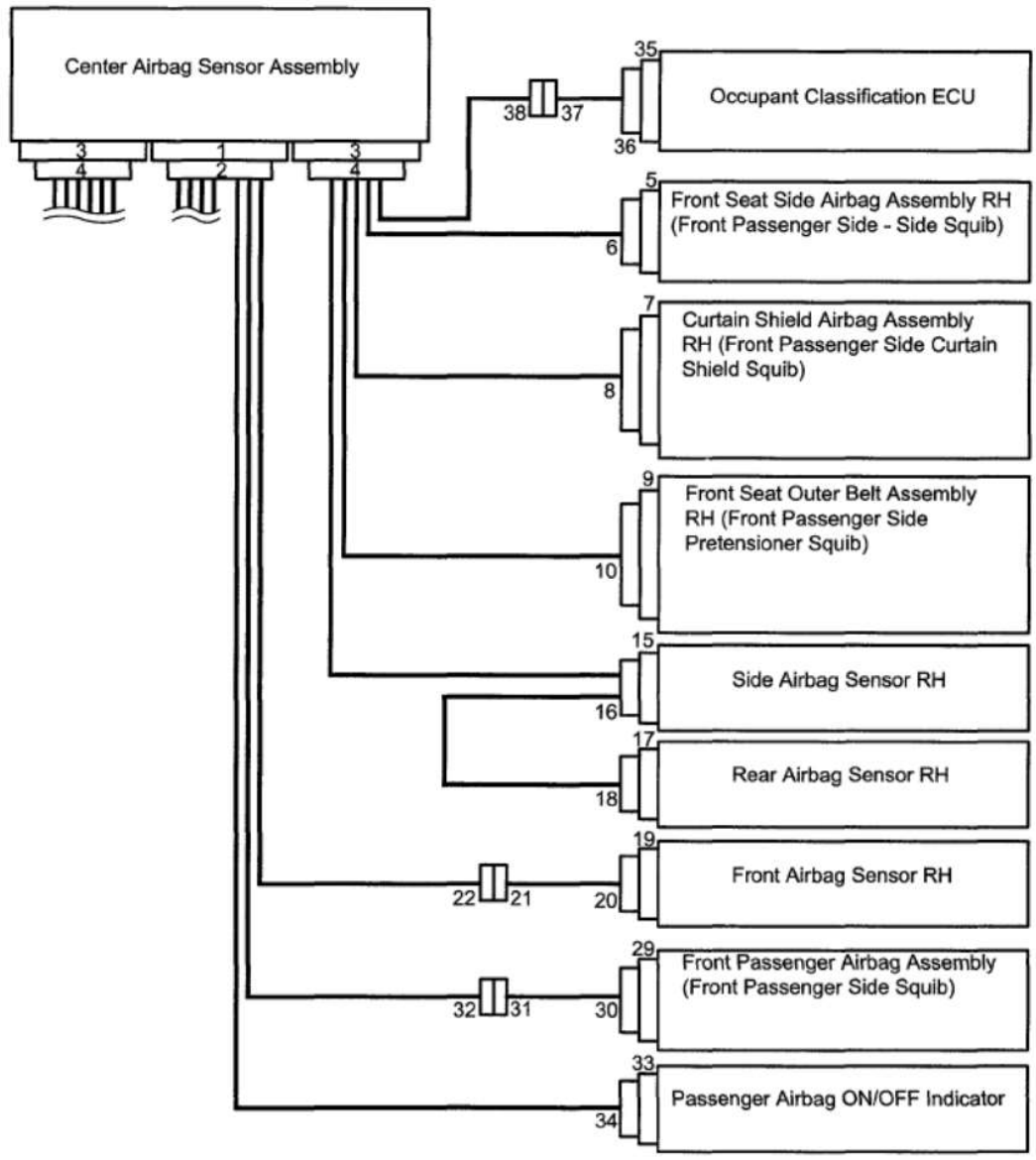


Fig. 42: SRS Connectors Connection Diagram (Passenger Side)
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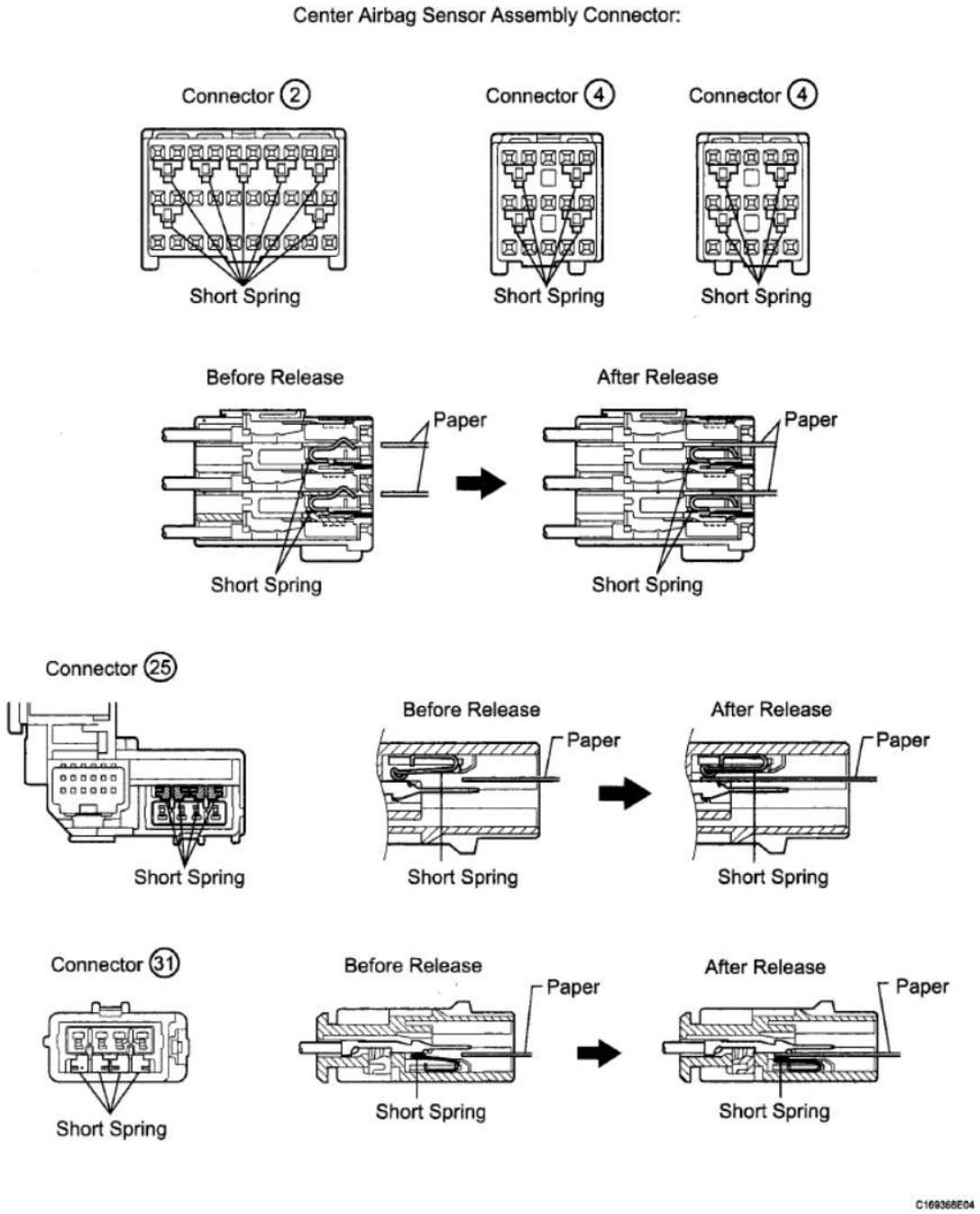


Fig. 43: Identifying SRS Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

DTC CHECK/CLEAR

1. **DTC CHECK (USING SST CHECK WIRE)**
   a. Check for DTCs (Present trouble code).
      1. Turn the ignition switch on (IG), and wait for approximately 60 seconds.

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2. Using SST, connect terminals TC and CG of the DLC3.

SST 09843-18040

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

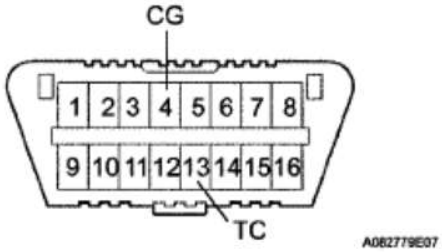


Fig. 44: Identifying DLC3, CG And TC Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Check for DTCs (Past trouble code).
   1. Using SST, connect terminals TC and CG of the DLC3.

   SST 09843-18040

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

   2. Turn the ignition switch on (IG), 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 assembly, the light blinks only once per second.

      - Trouble code indication

        The first blinks indicate the first digit of the DTC. The second digit is indicated by blinks the occur after a 1,5-second pause.

        If there is more than 1 code, there will be a 2.5-second pause between each code. After

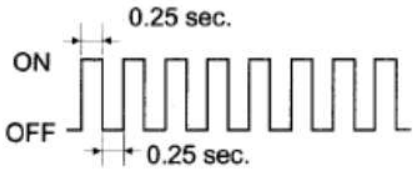
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all codes are shown, there will be a 4.0-second pause, and then all codes will be repeated.

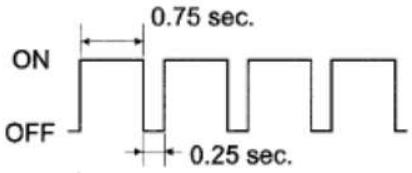
HINT:

- 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 "TC and CG Terminal Circuit" (See **TC AND CG TERMINAL CIRCUIT**).

Normal System Code
(without Past Trouble Code):



Normal System Code
(with Past Trouble Code):



Trouble Code
(Example Codes 11 and 31):

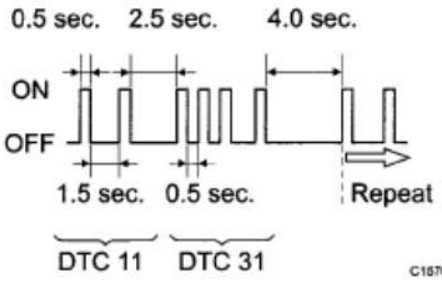


Fig. 45: Blinking Pattern For Normal System Code And Trouble Codes 11 And 31
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **DTC CLEAR (USING SST CHECK WIRE)**
   a. Clear the DTCs.
      1. When the ignition switch is turned off, the DTCs are cleared.

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HINT:

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

2. Using SST, connect terminals TC and CG of the DLC3, and then turn the ignition switch on (IG).

   SST 09843-18040

3. 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.
4. Within 2 to 4 seconds after the SRS warning light comes on, connect terminals TC and CG of the DLC3.
5. The SRS warning light should go off within 2 to 4 seconds after connecting terminals TC and CG of the DLC3. Then, disconnect terminal TC within 2 to 4 seconds after the SRS warning light goes off.
6. The SRS warning light comes on again within 2 to 4 seconds after disconnecting terminal TC. Then, reconnect terminals TC and CG within 2 to 4 seconds after the SRS warning light comes on.
7. Check if the SRS warning light goes off within 2 to 4 seconds after connecting terminals TC and 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.

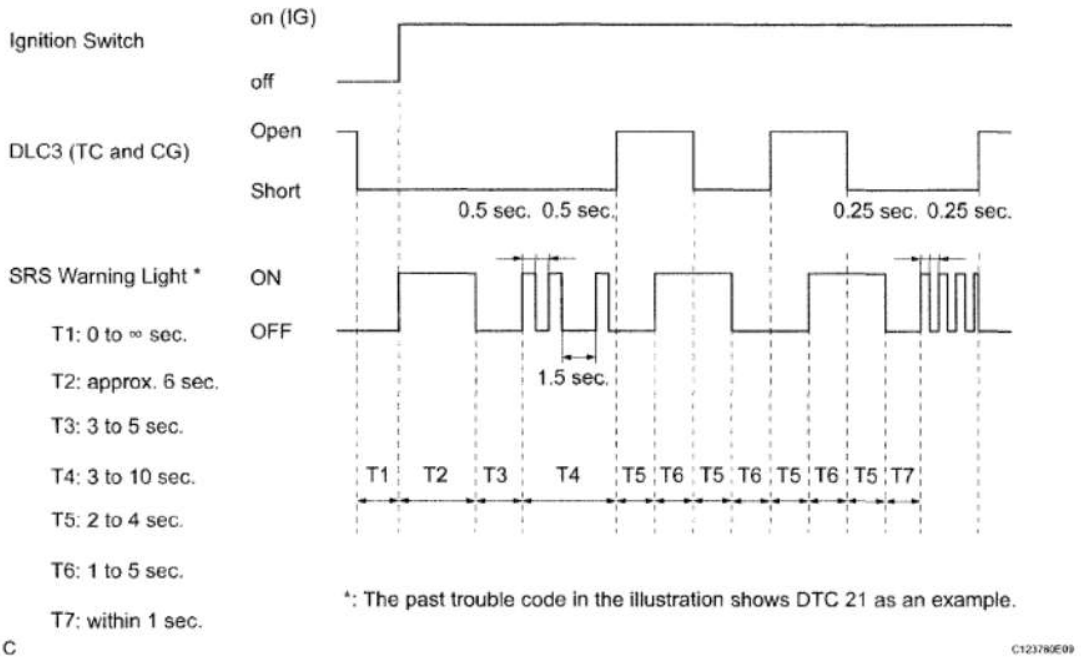


Fig. 46: SRS Warning Light - Blinking Pattern

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3. **DTC CHECK (USING TECHSTREAM)**
   a. Turn the ignition switch off.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG) and turn the Techstream on.
   d. Enter the following menus: Body Electrical/SRS Airbag/Trouble Code
   e. Check the DTCs by following the prompts on the Techstream screen.

   HINT:

   Refer to the Techstream operator's manual for further details.

4. **DTC CLEAR (USING TECHSTREAM)**
   a. Turn the ignition switch off.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG) and turn the Techstream on.
   d. Enter the following menus: Body Electrical/SRS Airbag/Trouble Code
   e. Clear the DTCs by following the prompts on the Techstream screen.

   HINT:

   Refer to the Techstream operator's manual for further details.

CHECK MODE PROCEDURE

1. **CHECK MODE (SIGNAL CHECK): DTC CHECK**
   a. Turn the ignition switch off.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG) and turn the Techstream on.
   d. Enter the following menus: Body/SRS Airbag/Utility/Signal Check, and proceed with checking using the Techstream.

   NOTE: Select Signal Check screen displayed on Techstream to clear the output DTCs (both present and past).

   HINT:

   - DTCs can be detected more sensitively in check mode than in normal diagnosis mode.
   - Perform 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

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HINT:

Using the Techstream to read the Data List allows the values or states of switches, sensors, actuators and other items to be read without removing any parts. This non-intrusive inspection can be very useful because intermittent conditions or signals may be discovered before parts or wiring is disturbed. Reading the Data List information early in troubleshooting is one way to save diagnostic time.

NOTE: In the table below, the values listed under "Normal Condition" are reference values. Do not depend solely on these reference values when deciding whether a part is faulty or not.

1. **DATA LIST FOR CENTER AIRBAG SENSOR ASSEMBLY**
   a. Turn the ignition switch off.
   b. Connect the Techstream to the DLC3.
   c. Turn the ignition switch on (IG) and turn the Techstream on.
   d. Enter the following menus: Body Electrical/SRS Airbag/Data List.
   e. Check the values by referring to the table below.

Data List

DATA LIST

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: Date is not determined OFF: Vacant CHILD: Child (less than 36 kg (79.371b)) is seated AF05: Adult (36 to 54 kg (79.37 to 119.05 1b)) is seated AM50: Adult (more than 54 kg (119.051b)) is seated FAIL: A failure is detected	OFF/CHI LD/AF05/AM50	-
Driver Buckle SW	Driver Buckle SW/ Unset: The seat belt is not fastened Set: The seat belt is fastened NG: Data is not determined	Unset/Set	-
Passenger Buckle SW	Passenger Buckle SW/ Unset: The seat belt is not fastened Set: The seat belt is fastened NG: Data is not determined	Unset/Set	-

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Display Type Information	Display Type Information/ LR: The display is indicated by LH/RH DP: The display is indicated by Driver/Passenger	DP	-
Number of Past DTC	Number of Past DTC/ Min.: 0, Max.: 255	0	-

DIAGNOSTIC TROUBLE CODE CHART

If a trouble code is displayed during the DTC check, check the circuit listed for the code in the table below (refer to the appropriate page).

HINT:

- When the SRS warning light remains on and the normal system code is output, a voltage source drop is likely to occur. This malfunction is not stored in the memory by the center airbag sensor assembly. If the power source voltage returns to normal, the SRS warning light will automatically go off.
- When 2 or more codes are indicated, the code with the lower number appears first.
- If a code is not listed on the display chart, the center airbag sensor assembly may have failed.
- In the case of any malfunction concerning an open circuit, short to ground, or short to B+ due to a squib, other trouble codes may not be detected. In this case, repair the malfunction currently indicated and then perform malfunction diagnosis again.
- Mark in the check mode column:

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

  *2: The DTC is corresponding to the check mode.

Air bag System

DIAGNOSTIC TROUBLE CODE CHART - AIR BAG SYSTEM

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	1. Front airbag sensor RH 2. Center airbag sensor assembly	*1
B1612/83	Lost Communication with Front Airbag Sensor RH	1. Instrument panel wire 2. Engine room main wire 3. Front airbag sensor RH	*1

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		4. Center airbag sensor assembly	
B1613/83	Front Airbag Sensor RH Initialization Incomplete	Same as DTC B1612/83	*1
B1615/14	Front Airbag Sensor LH Malfunction	1. Front airbag sensor LH 2. Center airbag sensor assembly	*1
B1617/84	Lost Communication with Front Airbag Sensor LH	1. Instrument panel wire 2. Engine room main wire 3. Front airbag sensor LH 4. Center airbag sensor assembly	*1
B1618/84	Front Airbag Sensor LH Initialization Incomplete	Same as DTC B1617/84	*1
B1620/21	Driver Side - Side Airbag Sensor Malfunction	1. Side airbag sensor LH 2. Center airbag sensor assembly	*1
B1622/81	Lost Communication with Driver Side - Side Airbag Sensor Assembly	1. Floor wire No. 2 2. Side airbag sensor LH 3. Rear airbag sensor LH 4. Center airbag sensor assembly	*1
B1623/81	Driver Side - Side Airbag Sensor Assembly Initialization Incomplete	Same as DTC B1622/81	*1
B1625/22	Front Passenger Side - Side Airbag Sensor Malfunction	1. Side airbag sensor RH 2. Center airbag sensor assembly	*1
B1627/82	Lost Communication with Front Passenger Side - Side Airbag Sensor Assembly	1. Floor wire 2. Side airbag sensor RH 3. Rear airbag sensor RH	*1

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		4. Center airbag sensor assembly	
B1628/82	Front Passenger Side - Side Airbag Sensor Assembly Initialization Incomplete	Same as DTC B1627/82	*1
B1630/23	Driver Side Rear Airbag Sensor Malfunction	1. Rear airbag sensor LH 2. Center airbag sensor assembly	*1
B1632/81	Lost Communication with Driver Side Rear Airbag Sensor	Same as DTC B1622/81	*1
B1633/81	Driver Side Rear Airbag Sensor Initialization Incomplete	Same as DTC B1622/81	*1
B1635/24	Front Passenger Side Rear Airbag Sensor Malfunction	1. Rear airbag sensor RH 2. Center airbag sensor assembly	*1
B1637/82	Lost Communication with Passenger Side Rear Airbag Sensor	Same as DTC B1627/82	*1
B1638/82	Passenger Side Rear Airbag Sensor Initialization Incomplete	Same as DTC B1627/82	*1
B1642/81	Lost Communication with Driver Side Satellite Sensor Bus	Same as DTC B1622/81	*1
B1643/81	Driver Side Satellite Sensor Bus Initialization Incomplete	Same as DTC B1622/81	*1
B1647/82	Lost Communication with Front Passenger Side Satellite Sensor Bus	Same as DTC B1627/82	*1
B1648/82	Front Passenger Side Satellite Sensor Bus Initialization Incomplete	Same as DTC B1627/82	*1
B1650/32	Occupant Classification System Malfunction	1. Floor wire 2. Front seat wire RH 3. Occupant classification system	*1

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		4. Center airbag sensor assembly	
B1653/35	Seat Position Airbag Sensor Circuit Malfunction	1. Floor wire No. 2 2. Front seat inner belt assembly LH 3. Seat position airbag sensor 4. Center airbag sensor assembly	*1
B1655/37	Driver Side Seat Belt Buckle Switch Circuit Malfunction	1. Floor wire No. 2 2. Front seat inner belt assembly LH (Driver side seat belt buckle switch) 3. Center airbag sensor assembly	*1
B1660/43	Passenger Airbag ON/OFF Indicator Circuit Malfunction	1. Instrument panel wire 2. Instrument panel wire No. 2 3. Multi-display computer assembly (w/ Navigation system) 4. Hazard switch assembly (w/o Navigation system) 5. Center airbag sensor assembly	*1
B1800/51	Short in Driver Side Squib Circuit	1. Instrument panel wire 2. Spiral cable 3. Steering Pad (Driver side squib) 4. Center airbag sensor assembly	*2
B1801/51	Open in Driver Side Squib Circuit	Same as DTC B1800/51	*2
B1802/51	Short to GND in Driver Side Squib Circuit	Same as DTC B1800/51	*2
B1803/51	Short to B+ in Driver Side Squib Circuit	Same as DTC B1800/51	*2

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B1805/52	Short in Front Passenger Side Squib Circuit	1. Instrument panel wire 2. Instrument panel wire assembly 3. Front passenger airbag assembly (Front passenger side squib) 4. Center airbag sensor assembly	*2
B1806/52	Open in Front Passenger Side Squib Circuit	Same as DTC B1805/52	*2
B1807/52	Short to GND in Front Passenger Side Squib Circuit	Same as DTC B1805/52	*2
B1808/52	Short to B+ in Front Passenger Side Squib Circuit	Same as DTC B1805/52	*2
B1810/53	Short in Driver Side Squib 2nd Step Circuit	1. Instrument panel wire 2. Spiral cable 3. Steering Pad (Driver side squib 2nd step) 4. Center airbag sensor assembly	*2
B1811/53	Open in Driver Side Squib 2nd Step Circuit	Same as DTC B1810/53	*2
B1812/53	Short to GND in Driver Side Squib 2nd Step Circuit	Same as DTC B1810/53	*2
B1813/53	Short to B+ in Driver Side Squib 2nd Step Circuit	Same as DTC B1810/53	*2
B1815/54	Short in Front Passenger Side Squib 2nd Step Circuit	1. Instrument panel wire 2. Instrument panel wire assembly 3. Front passenger airbag assembly (Front passenger side squib 2nd step)	*2

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		4. Center airbag sensor assembly	
B1816/54	Open in Front Passenger Side Squib 2nd Step Circuit	Same as DTC B1815/54	*2
B1817/54	Short to GND in Front Passenger Side Squib 2nd Step Circuit	Same as DTC B1815/54	*2
B1818/54	Short to B+ in Front Passenger Side Squib 2nd Step Circuit	Same as DTC B1815/54	*2
B1820/55	Short in Front Driver Side - Side Squib Circuit	1. Floor wire No. 2 2. Front seat side airbag assembly LH (Front driver side - side squib) 3. Center airbag sensor assembly	*2
B1821/55	Open in Front Driver Side - Side Squib Circuit	Same as DTC B1820/55	*2
B1822/55	Short to GND in Front Driver Side - Side Squib Circuit	Same as DTC B1820/55	*2
B1823/55	Short to B+ in Front Driver Side - Side Squib Circuit	Same as DTC B1820/55	*2
B1825/56	Short in Front Passenger Side - Side Squib Circuit	1. Floor wire 2. Front seat side airbag assembly RH (Front passenger side - side squib) 3. Center airbag sensor assembly	*2
B1826/56	Open in Front Passenger Side - Side Squib Circuit	Same as DTC B1825/56	*2
B1827/56	Short to GND in Front Passenger Side - Side Squib Circuit	Same as DTC B1825/56	*2
B1828/56	Short to B+ in Front Passenger Side - Side Squib Circuit	Same as DTC B1825/56	*2
		1. Floor wire No. 2	

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B1830/57	Short in Driver Side Curtain Shield Squib Circuit	2. Curtain shield airbag assembly LH (Front passenger side curtain shield squib) 3. Center airbag sensor assembly	*2
B1831/57	Open in Driver Side Curtain Shield Squib Circuit	Same as DTC B1830/57	*2
B1832/57	Short to GND in Driver Side Curtain Shield Squib Circuit	Same as DTC B1830/57	*2
B1833/57	Short to B+ in Driver Side Curtain Shield Squib Circuit	Same as DTC B1830/57	*2
B1835/58	Short in Front Passenger Side Curtain Shield Squib Circuit	1. Floor wire 2. Curtain shield airbag assembly RH (Driver side curtain shield squib) 3. Center airbag sensor assembly	*2
B1836/58	Open in Front Passenger Side Curtain Shield Squib Circuit	Same as DTC B1835/58	*2
B1837/58	Short to GND in Front Passenger Side Curtain Shield Squib Circuit	Same as DTC B1835/58	*2
B1838/58	Short to B+ in Front Passenger Side Curtain Shield Squib Circuit	Same as DTC B1835/58	*2
B1860/64	Short in Driver Side Knee Airbag Squib Circuit	1. Instrument panel wire 2. Driver side knee airbag assembly (Driver side knee airbag squib) 3. Center airbag sensor assembly	*2
B1861/64	Open in Driver Side Knee Airbag Squib Circuit	Same as DTC B1860/64	*2

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B1862/64	Short to GND in Driver Side Knee Airbag Squib Circuit	Same as DTC B1860/64	*2
B1863/64	Short to B+ in Driver Side Knee Airbag Squib Circuit	Same as DTC B1860/64	*2
B1900/73	Short in Front Driver Side Pretensioner Squib Circuit	1. Floor wire No. 2 2. Front seat outer belt assembly LH (Front passenger side pretensioner squib) 3. Center airbag sensor assembly	*2
B1901/73	Open in Front Driver Side Pretensioner Squib Circuit	Same as DTC B1900/73	*2
B1902/73	Short to GND in Front Driver Side Pretensioner Squib Circuit	Same as DTC B1900/73	*2
B1903/73	Short to B+ in Front Driver Side Pretensioner Squib Circuit	Same as DTC B1900/73	*2
B1905/74	Short in Front Passenger Side Pretensioner Squib Circuit	1. Floor wire 2. Front seat outer belt assembly RH (Front driver side pretensioner squib) 3. Center airbag sensor assembly	*2
B1906/74	Open in Front Passenger Side Pretensioner Squib Circuit	Same as DTC B1905/74	*2
B1907/74	Short to GND in Front Passenger Side Pretensioner Squib Circuit	Same as DTC B1905/74	*2
B1908/74	Short to B+ in Front Passenger Side Pretensioner Squib Circuit	Same as DTC B1905/74	*2

DTC B1000/31 CENTER AIRBAG SENSOR ASSEMBLY MALFUNCTION

DESCRIPTION

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

If the center airbag sensor assembly receives signals from the deceleration sensor, it determines whether the airbag squib and pretensioner squib should be activated.

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

DTC DETECTION CONDITION REFERENCE

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

INSPECTION PROCEDURE

HINT:

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

1. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   b. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   c. Turn the ignition switch off.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Check the DTCs (See **DTC CHECK/CLEAR**).

   OK:

   DTC B1000/31 is not output.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

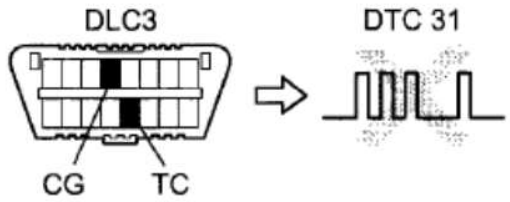


Fig. 47: Identifying DLC3, CG And TC Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

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DTC B1610/13 FRONT AIRBAG SENSOR RH MALFUNCTION

DESCRIPTION

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

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

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

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1610/13	• Front airbag sensor RH malfunction • Center airbag sensor assembly malfunction	• Front airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

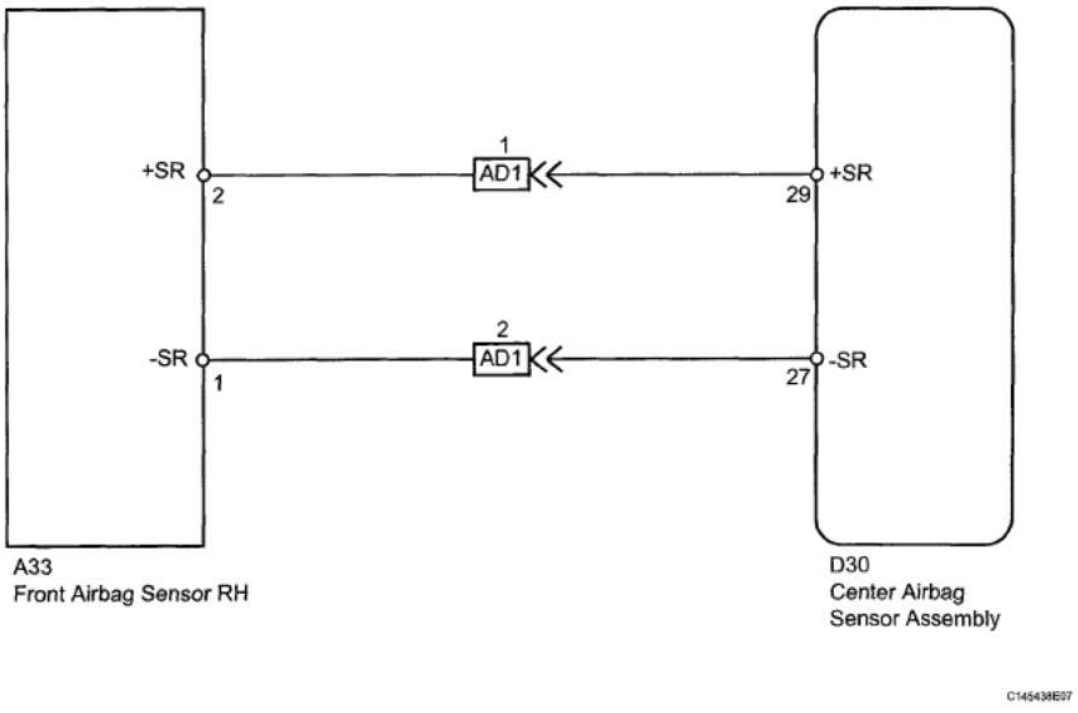


Fig. 48: Front Airbag Sensor RH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

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

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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.
e. Turn the ignition switch on (IG), and wait for at least 60 seconds.
f. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
g. Turn the ignition switch off.
h. Turn the ignition switch on (IG), and wait for at least 60 seconds.
i. Check for DTCs (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC B1610/13 or B1615/14 is not output	A
DTC B1610/13 is output	B
DTC B1615/14 is 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.

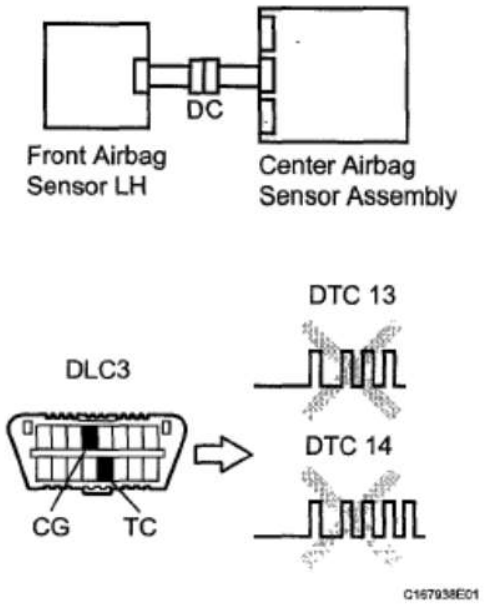


Fig. 49: Checking Front Airbag Sensor RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

B: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

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C: REPLACE FRONT AIRBAG SENSOR RH (See **ON-VEHICLE INSPECTION**)

A: 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 assembly and front airbag sensor RH.

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

These DTCs are recorded when a malfunction is detected in the front airbag sensor RH circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1612/83 B1613/83	• The center airbag sensor assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the front airbag sensor RH circuit for 2 seconds. • Front airbag sensor RH malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Engine room main wire • Front airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

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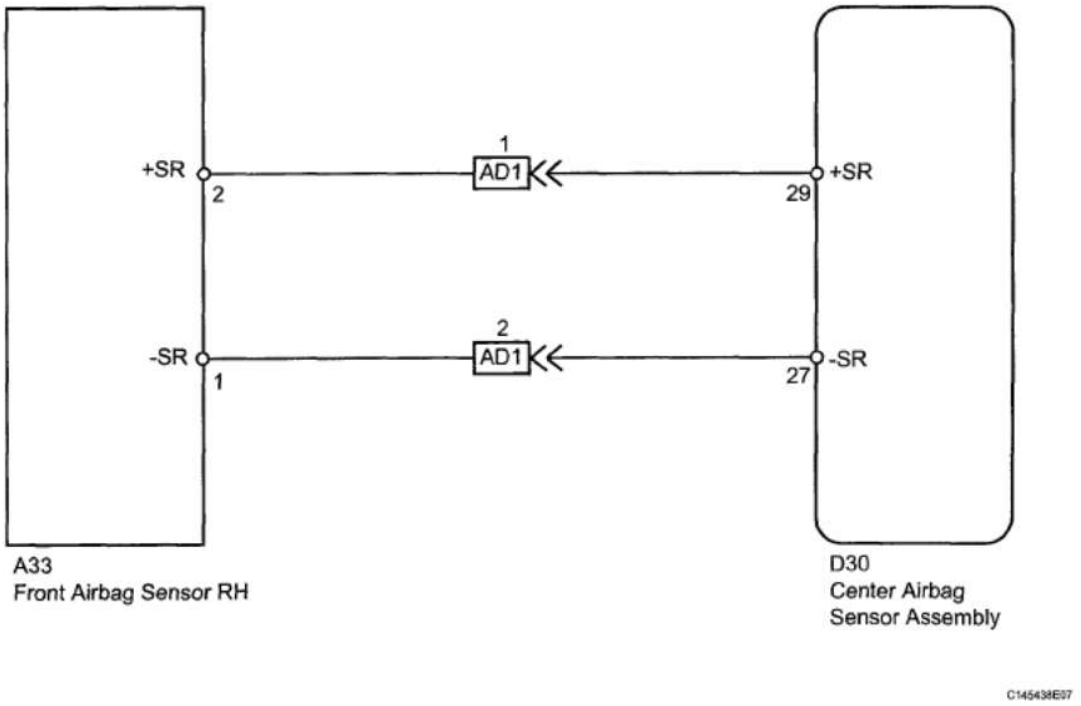


Fig. 50: Front Airbag Sensor RH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Check that the connectors are properly connected to the center airbag sensor assembly and the front airbag sensor RH. Also check that the connectors that link the engine room main wire and instrument panel wire 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.

   d. Disconnect the connectors from the center airbag sensor assembly and the front airbag sensor RH. Also disconnect the connectors that link the engine room main wire and instrument panel wire.
   e. Check that the connector terminals are not damaged.

      OK:

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The terminals are not deformed or damaged.

NG: REPLACE WIRE HARNESS

OK: Go to next step

2. **CHECK FRONT AIRBAG SENSOR RH CIRCUIT (OPEN)**
   a. Connect the connectors that link the engine room main wire and instrument panel wire.
   b. Using SST, connect terminals 29 (+SR) and 27 (-SR) of connector B.

NOTE: Do not forcibly insert SST into the terminals of the connector when connecting.

SST 09843-18040

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

Standard resistance

RESISTANCE SPECIFICATION

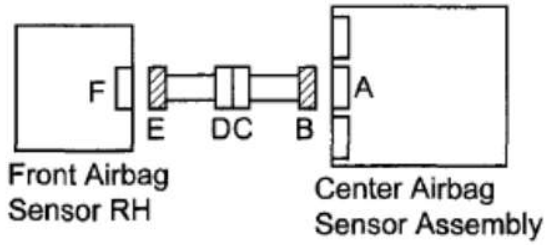
Tester Connection	Switch Condition	Specified Condition
A33-2 (+SR) - A33-1 (-SR)	Always	Below 1 ohms

NG: Go to step 7

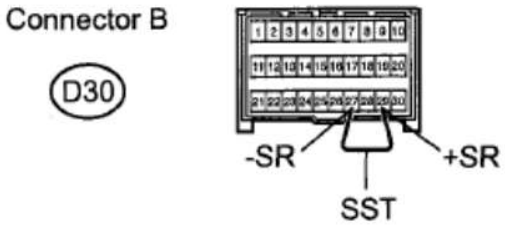
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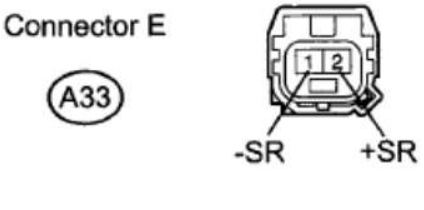
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Front view of wire harness connector:
(to Center Airbag Sensor Assembly)



Front view of wire harness connector:
(to Front Airbag Sensor RH)



P C167939E02

Fig. 51: Checking Front Airbag Sensor RH Circuit (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

3. **CHECK FRONT AIRBAG SENSOR RH CIRCUIT (SHORT)**
   a. Disconnect SST from connector B.
   b. Measure the resistance according to the value (s) in the table below.

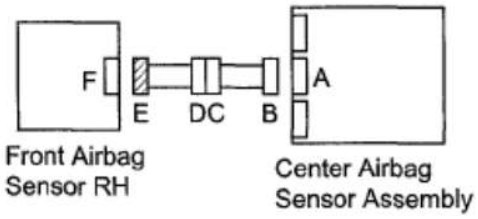
Standard resistance

RESISTANCE SPECIFICATION

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Tester Connection	Switch Condition	Specified Condition
A33-2 (+SR) - A33-1 (-SR)	Always	1 Mohms or higher

NG: Go to step 8



Front view of wire harness connector:
(to Front Airbag Sensor RH)

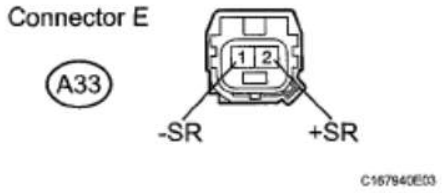


Fig. 52: Checking Front Airbag Sensor RH Circuit (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

4. **CHECK FRONT AIRBAG SENSOR RH CIRCUIT (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
A33-2 (+SR) - Body ground	Ignition switch on (IG)	Below 1 V
A33-1 (-SR) - Body ground	Ignition switch on (IG)	Below 1 V

NG: Go to step 9

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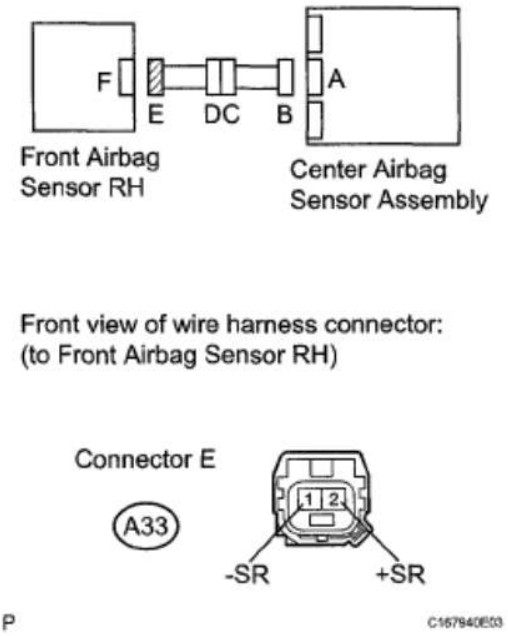


Fig. 53: Checking Front Airbag Sensor RH Circuit (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

5. **CHECK FRONT AIRBAG SENSOR RH CIRCUIT (SHORT TO GROUND)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
A33-2 (+SR) - Body ground	Always	1 Mohms or higher
A33-1 (-SR) - Body ground	Always	1 Mohms or higher

NG: Go to step 10

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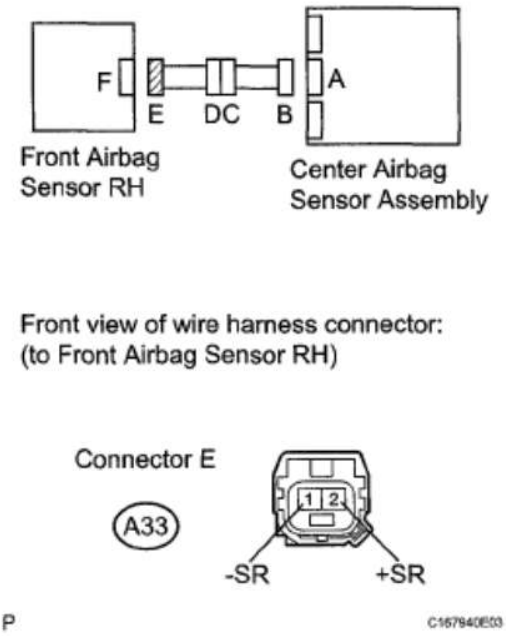


Fig. 54: Checking Front Airbag Sensor RH Circuit (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **CHECK FRONT AIRBAG SENSOR RH**
   a. Connect the connector to the center airbag sensor assembly.
   b. Interchange the front airbag sensor LH with RH and connect the connectors to them.
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   h. Check for DTCs (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

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

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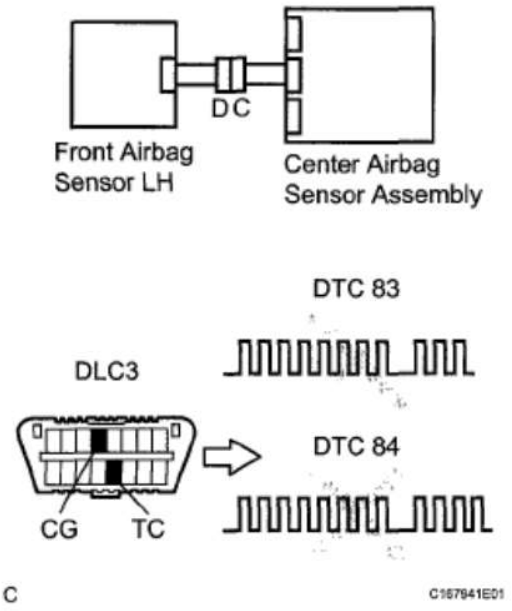


Fig. 55: Checking Front Airbag Sensor RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

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

B: REPLACE FRONT AIRBAG SENSOR RH (See **ON-VEHICLE INSPECTION**)

C: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

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

7. **CHECK INSTRUMENT PANEL WIRE (OPEN)**
   a. Disconnect the instrument panel wire connector from the engine room main wire.

      HINT:

      SST has already been inserted into connector B.

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

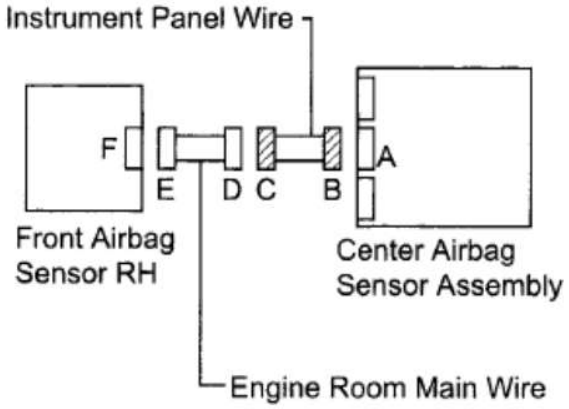
Standard resistance

RESISTANCE SPECIFICATION

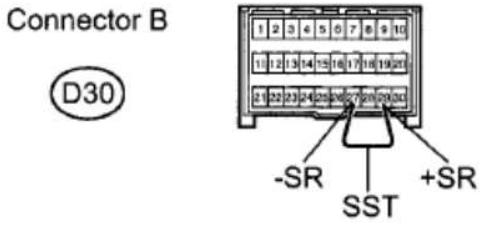
Tester Connection	Switch Condition	Specified Condition
AD1-2 (-SR) - AD1-1 (+SR)	Always	Below 1 ohms

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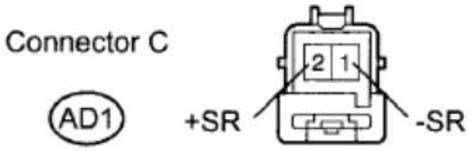
NG: REPLACE INSTRUMENT PANEL WIRE



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



Front view of wire harness connector:
(to Engine Room Main Wire)



P C167942E04

Fig. 56: Checking Instrument Panel Wire (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE ENGINE ROOM MAIN WIRE

8. **CHECK INSTRUMENT PANEL WIRE (SHORT)**
   a. Disconnect the instrument panel wire connector from the engine room main wire.
   b. Measure the resistance according to the value (s) in the table below.

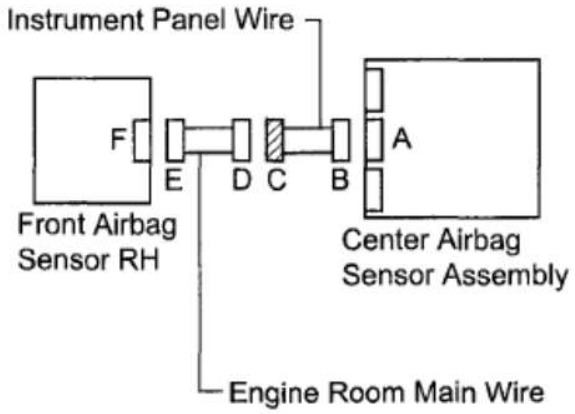
Standard resistance

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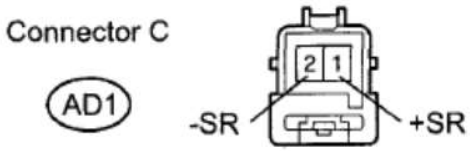
RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
AD1-2 (-SR) - AD1-1 (+SR)	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE



Front view of wire harness connector:
(to Engine Room Main Wire)



P C167943E06

Fig. 57: Checking Instrument Panel Wire (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE ENGINE ROOM MAIN WIRE

9. **CHECK INSTRUMENT PANEL WIRE (SHORT TO B+)**
   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 instrument panel wire connector from the engine room main wire.
   d. Connect the negative (-) terminal cable to the battery.
   e. Turn the ignition switch on (IG).

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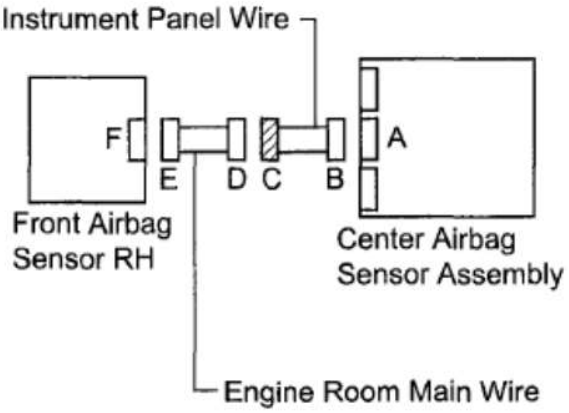
f. Measure the voltage according to the value (s) in the table below.

Standard voltage

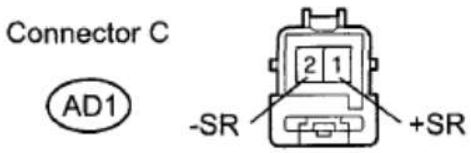
VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
AD1-2 (-SR) - Body ground	Ignition switch on (IG)	Below 1 V
AD1-1 (+SR) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE INSTRUMENT PANEL WIRE



Front view of wire harness connector:
(to Engine Room Main Wire)



P C167943E06

Fig. 58: Checking Instrument Panel Wire (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE ENGINE ROOM MAIN WIRE

10. **CHECK INSTRUMENT PANEL WIRE (SHORT TO GROUND)**

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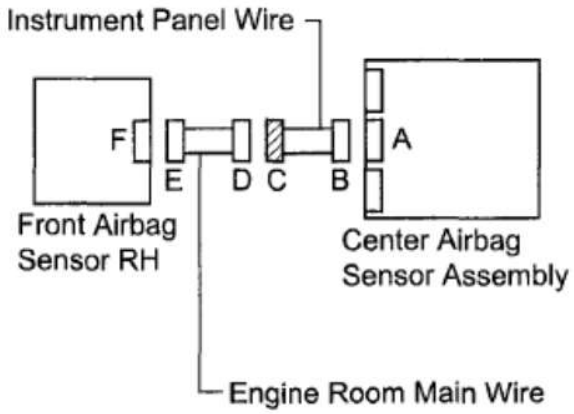
a. Disconnect the instrument panel wire connector from the engine room main wire.
b. Measure the resistance according to the value (s) in the table below.

Standard resistance

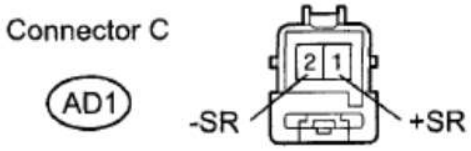
RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
AD1-2 (-SR) - Body ground	Always	1 Mohms or higher
AD1-1 (+SR) - Body ground	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE



Front view of wire harness connector:
(to Engine Room Main Wire)



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Fig. 59: Checking Instrument Panel Wire (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE ENGINE ROOM MAIN WIRE

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DTC B1615/14 FRONT AIRBAG SENSOR LH MALFUNCTION

DESCRIPTION

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

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

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

DTC DETECTING CONDITION REFERENCE

DTC No.	DTC Detecting Condition	Trouble Area
B1615/14	• Front airbag sensor LH malfunction • Center airbag sensor assembly malfunction	• Front airbag sensor LH • Center airbag sensor assembly

WIRING DIAGRAM

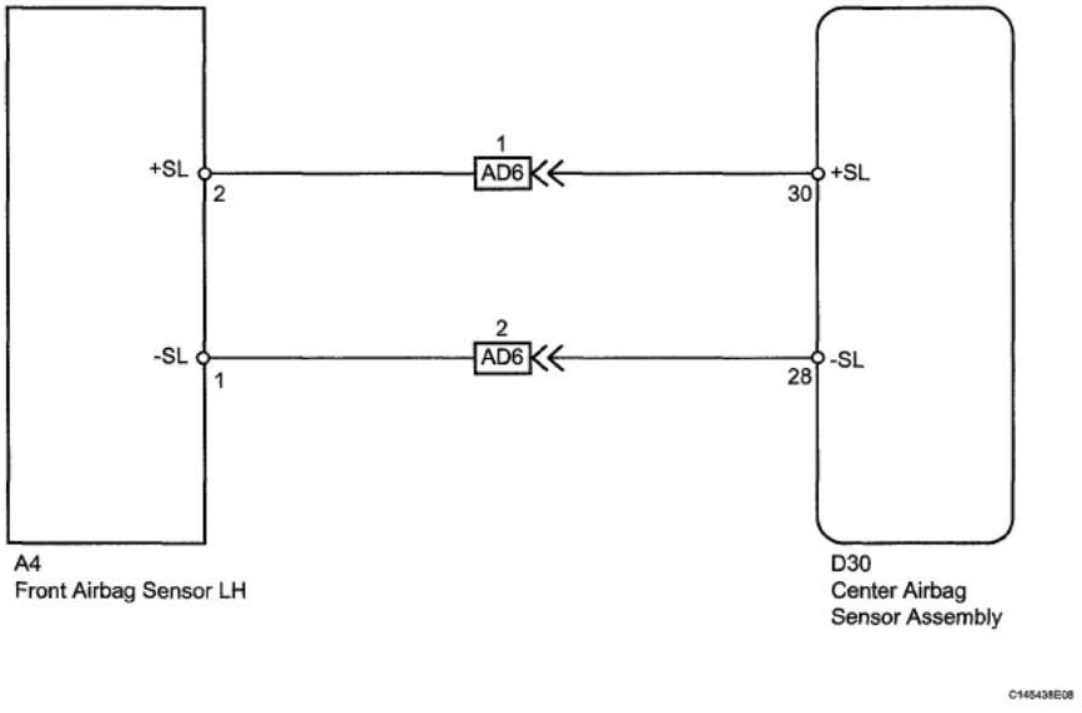


Fig. 60: Front Airbag Sensor LH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

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

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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.
e. Turn the ignition switch on (IG), and wait for at least 60 seconds.
f. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
g. Turn the ignition switch off.
h. Turn the ignition switch on (IG), and wait for at least 60 seconds.
i. Check for DTCs (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

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

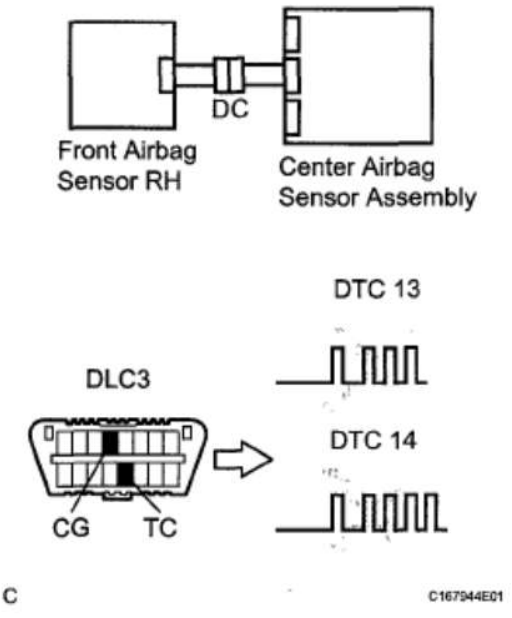


Fig. 61: Checking Front Airbag Sensor LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

B: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

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C: REPLACE FRONT AIRBAG SENSOR LH (See **ON-VEHICLE INSPECTION**)

A: 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 assembly and front airbag sensor LH.

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

These DTCs are recorded when a malfunction is detected in the front airbag sensor LH circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1617/84 B1618/84	• The center airbag sensor assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the front airbag sensor LH circuit for 2 seconds. • Front airbag sensor LH malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Engine room main wire • Front airbag sensor LH • Center airbag sensor assembly

WIRING DIAGRAM

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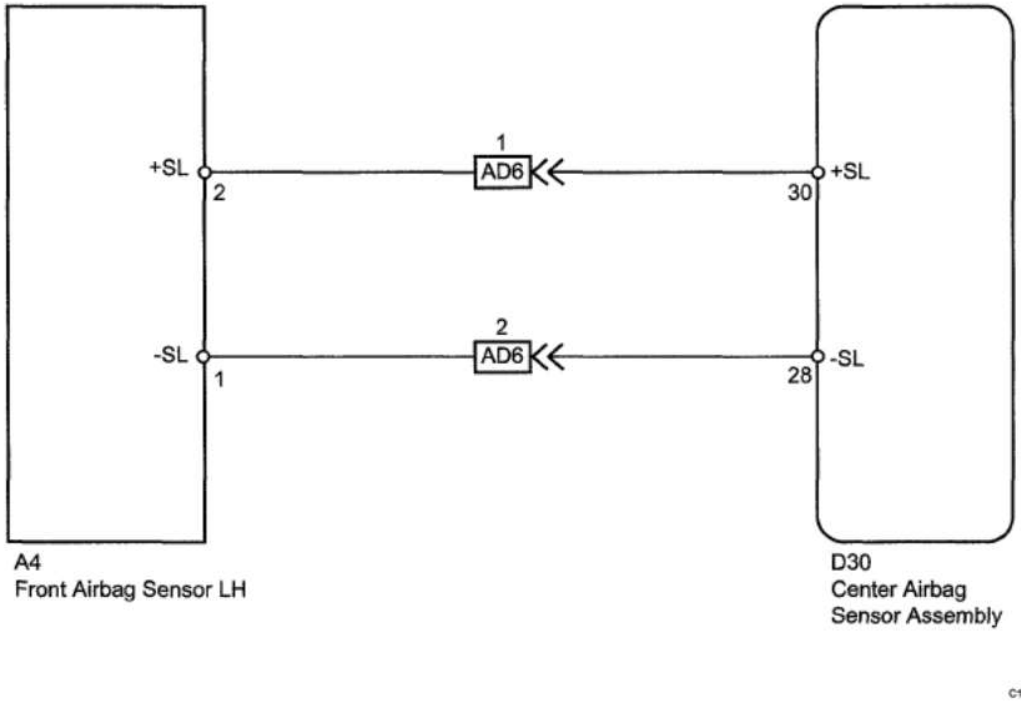


Fig. 62: Front Airbag Sensor LH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Check that the connectors are properly connected to the center airbag sensor assembly and the front airbag sensor LH. Also check that the connectors that link the engine room main wire and instrument panel wire 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.

   d. Disconnect the connectors from the center airbag sensor assembly and the front airbag sensor LH. Also disconnect the connectors that link the engine room main wire and instrument panel wire.
   e. Check that the connector terminals are not damaged.

      OK:

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The terminals are not deformed or damaged.

NG: REPLACE WIRE HARNESS

OK: Go to next step

2. **CHECK FRONT AIRBAG SENSOR LH CIRCUIT (OPEN)**
   a. Connect the connectors that link the engine room main wire and instrument panel wire.
   b. Using SST, connect terminals 30 (+SL) and 28 (-SL) of connector B.

NOTE: Do not forcibly insert SST into the terminals of the connector when connecting.

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

Standard resistance

RESISTANCE SPECIFICATION

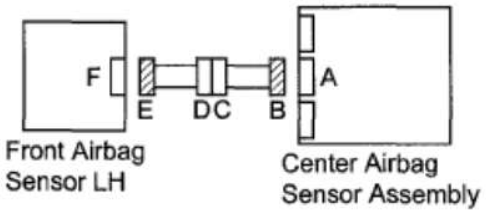
Tester Connection	Switch Condition	Specified Condition
A4-2 (+SL) - A4-1 (-SL)	Always	Below 1 ohms

NG: Go to step 7

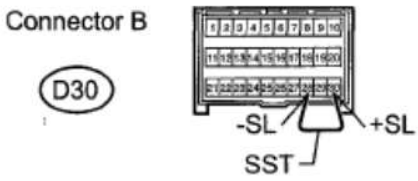
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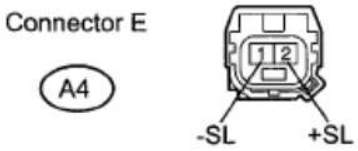
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Front view of wire harness connector:
(to Center Airbag Sensor Assembly)



Front view of wire harness connector:
(to Front Airbag Sensor LH)



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Fig. 63: Checking Front Airbag Sensor LH Circuit (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

3. **CHECK FRONT AIRBAG SENSOR LH CIRCUIT (SHORT)**
   a. Disconnect SST from connector B.
   b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
A4-2 (+SL) - A4-1 (-SL)	Always	1 Mohms or higher

NG: Go to step 8

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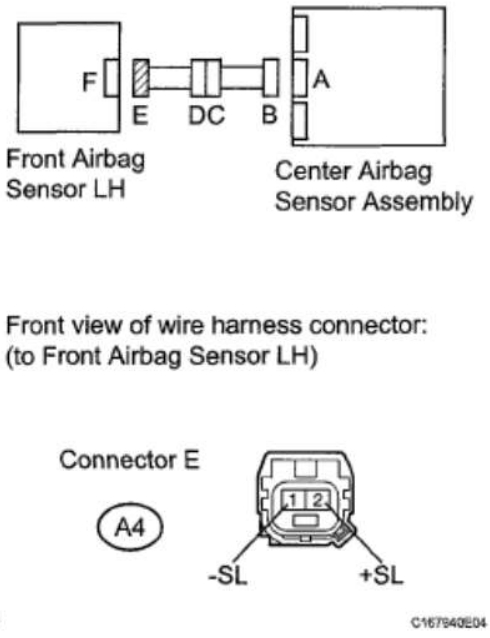


Fig. 64: Checking Front Airbag Sensor LH Circuit (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

4. **CHECK FRONT AIRBAG SENSOR LH CIRCUIT (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
A4-2 (+SL) - Body ground	Ignition switch on (IG)	Below 1 V
A4-1 (-SL) - Body ground	Ignition switch on (IG)	Below 1 V

NG: Go to step 9

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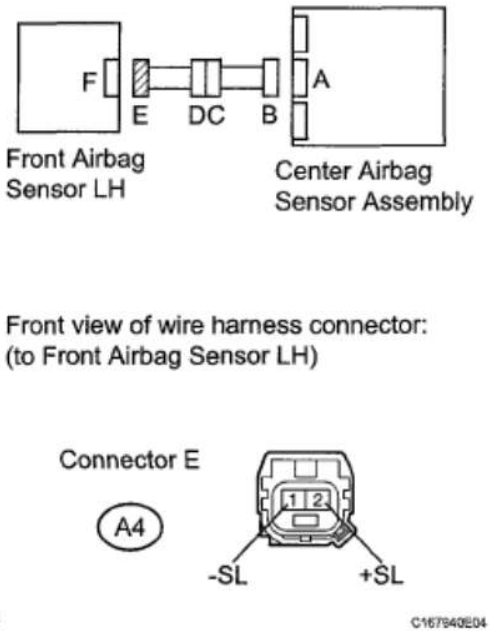


Fig. 65: Checking Front Airbag Sensor LH Circuit (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

5. **CHECK FRONT AIRBAG SENSOR LH CIRCUIT (SHORT TO GROUND)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

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

NG: Go to step 10

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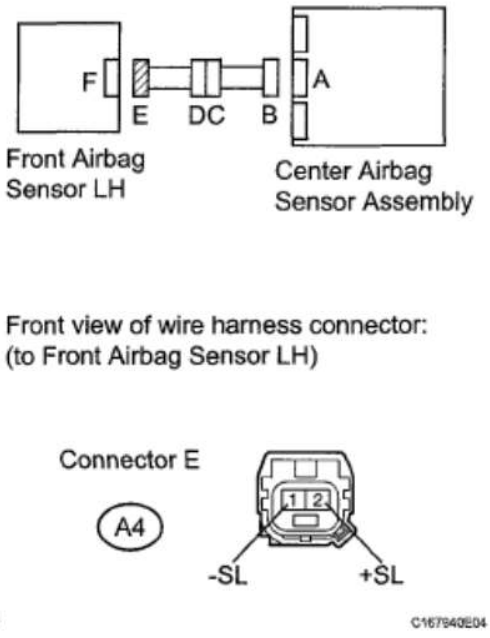


Fig. 66: Checking Front Airbag Sensor LH Circuit (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **CHECK FRONT AIRBAG SENSOR LH**
   a. Connect the connector to the center airbag sensor assembly.
   b. Interchange the front airbag sensor RH with LH and connect the connectors to them.
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   h. Check for DTCs (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC B1612/83, B1613/83, B1617/84 and B1618/84 are not output.	A
DTC B1617/84 or B1618/84 is output.	B
DTC B1612/83 or B1613/83 is output.	C

HINT:

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

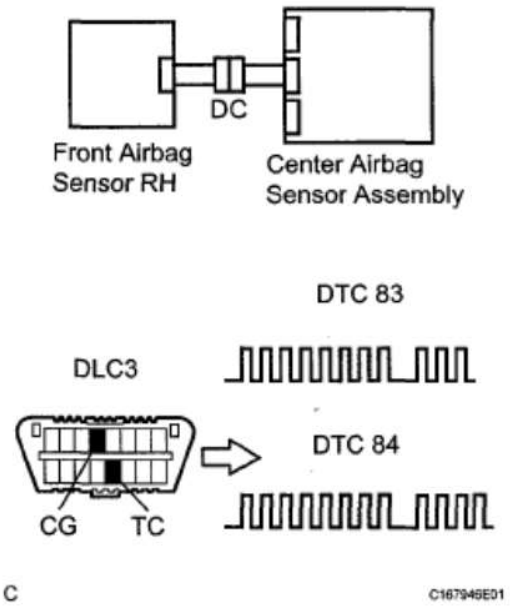


Fig. 67: Checking Front Airbag Sensor LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

B: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

C: REPLACE FRONT AIRBAG SENSOR LH (See **ON-VEHICLE INSPECTION**)

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

7. **CHECK INSTRUMENT PANEL WIRE (OPEN)**
   a. Disconnect the instrument panel wire connector from the engine room main wire.

      HINT:

      SST has already been inserted into connector B.

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
AD6-1 (+SL) - AD6-2 (-SL)	Always	Below 1 ohms

NG: REPLACE INSTRUMENT PANEL WIRE

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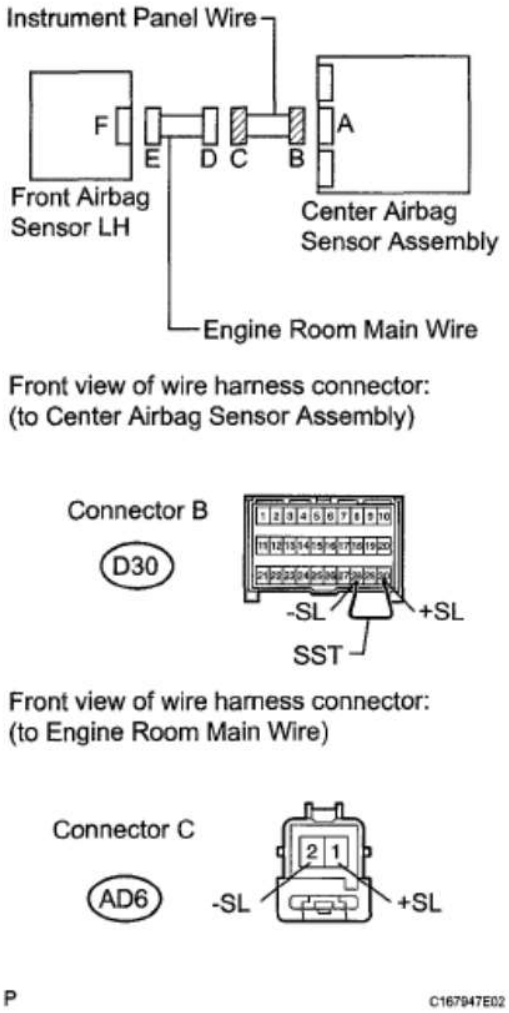


Fig. 68: Checking Instrument Panel Wire (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE ENGINE ROOM MAIN WIRE

8. **CHECK INSTRUMENT PANEL WIRE (SHORT)**
   a. Disconnect the instrument panel wire connector from the engine room main wire.
   b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

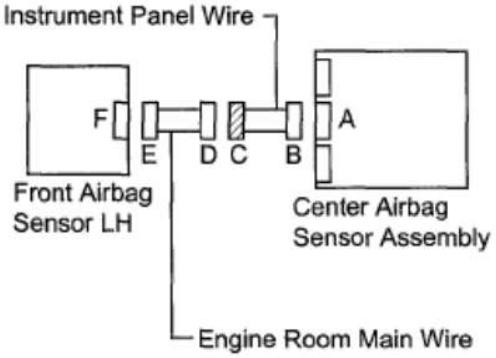
Tester Connection	Switch Condition	Specified Condition
AD6-1 (+SL) - AD6-2 (-SL)	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE

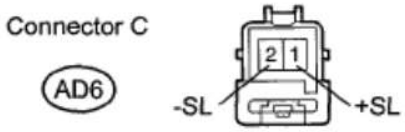
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Front view of wire harness connector:
(to Engine Room Main Wire)



P C167943E04

Fig. 69: Checking Instrument Panel Wire (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE ENGINE ROOM MAIN WIRE

9. **CHECK INSTRUMENT PANEL WIRE (SHORT TO B+)**
   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 instrument panel wire connector from the engine room main wire.
   d. Connect the negative (-) terminal cable to the battery.
   e. Turn the ignition switch on (IG).
   f. Measure the voltage according to the value (s) in the table below.

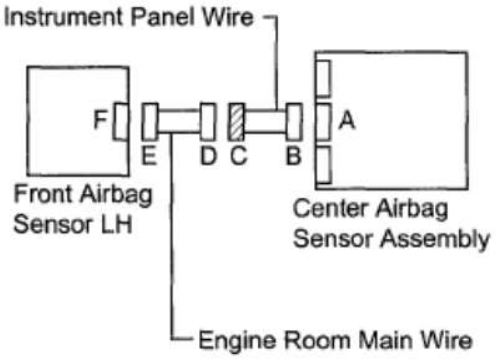
Standard voltage

VOLTAGE SPECIFICATION

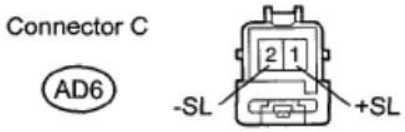
Tester Connection	Switch Condition	Specified Condition
AD6-1 (+SL) - Body ground	Ignition switch on (IG)	Below 1 V
AD6-2 (-SL) - Body ground	Ignition switch on (IG)	Below 1 V

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NG: REPLACE INSTRUMENT PANEL WIRE



Front view of wire harness connector:
(to Engine Room Main Wire)



P C167943E04

Fig. 70: Checking Instrument Panel Wire (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE ENGINE ROOM MAIN WIRE

10. **CHECK INSTRUMENT PANEL WIRE (SHORT TO GROUND)**
    a. Disconnect the instrument panel wire connector from the engine room main wire.
    b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

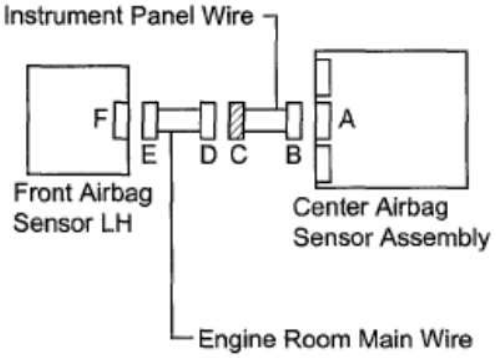
Tester Connection	Switch Condition	Specified Condition
AD6-1 (+SL) - Body ground	Always	1 Mohms or higher
AD6-2 (-SL) - Body ground	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE

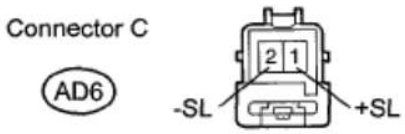
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Front view of wire harness connector:
(to Engine Room Main Wire)



P C167943E04

Fig. 71: Checking Instrument Panel Wire (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE ENGINE ROOM MAIN WIRE

DTC B1620/21 DRIVER SIDE - SIDE AIRBAG SENSOR MALFUNCTION

DESCRIPTION

The side airbag sensor LH circuit consists of the center airbag sensor assembly, side airbag sensor LH and rear airbag sensor LH.

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

DTC B1620/21 is recorded when a malfunction is detected in the side airbag sensor LH.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1620/21	• Side airbag sensor LH malfunction • Center airbag sensor assembly malfunction	• Side airbag sensor LH • Center airbag sensor assembly

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WIRING DIAGRAM

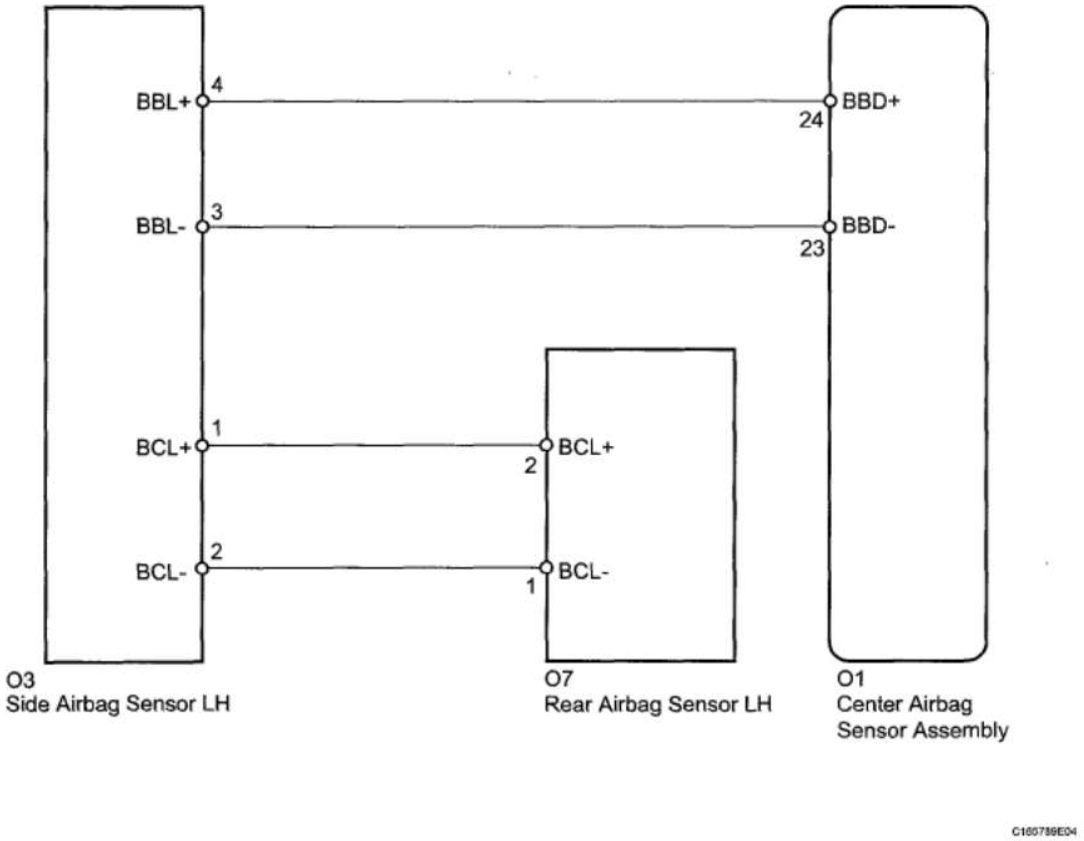


Fig. 72: Driver Side Rear Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

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

Result

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RESULT CHART

Result	Proceed to
DTC B1620/21 and B1625/22 are not output	A
DTC B1620/21 is output	B
DTC B1625/22 is output	C

HINT:

Codes other than DTC B1620/21 and B1625/22 may be output at this time, but they are not related to this check.

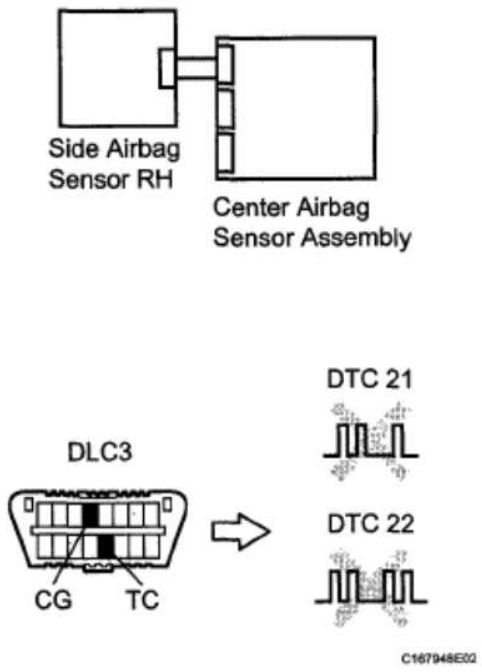


Fig. 73: Checking Side Airbag Sensor LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

B: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

C: REPLACE SIDE AIRBAG SENSOR LH (See **ON-VEHICLE INSPECTION**)

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

DTC B1622/81 LOST COMMUNICATION WITH DRIVER SIDE - SIDE AIRBAG SENSOR ASSEMBLY; DTC B1623/81 DRIVER SIDE - SIDE AIRBAG SENSOR ASSEMBLY INITIALIZATION INCOMPLETE; DTC B1632/81 LOST COMMUNICATION WITH DRIVER SIDE REAR AIR-BAG SENSOR; DTC B1633/81 DRIVER SIDE REAR AIRBAG SENSOR INITIALIZATION INCOMPLETE; DTC B1642/81 LOST COMMUNICATION WITH DRIVER SIDE SATELLITE SENSOR BUS; DTC B1643/81 DRIVER SIDE SATELLITE SENSOR BUS INITIALIZATION INCOMPLETE

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DESCRIPTION

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

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

Theses DTCs are recorded when a malfunction is detected for the driver side - side collision sensor circuit (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH).

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1622/81 B1623/81 B1632/81 B1633/81 B1642/81 B1643/81	• The center airbag sensor assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the driver side - side collision sensor circuit (to determine deployment of the front seat side airbag assembly LH and curtain shield airbag assembly LH) for 2 seconds. • Side airbag sensor LH malfunction • Rear airbag sensor LH malfunction • Center airbag sensor assembly malfunction	• Floor wire No. 2 • Side airbag sensor LH • Rear airbag sensor LH • Center airbag sensor assembly

WIRING DIAGRAM

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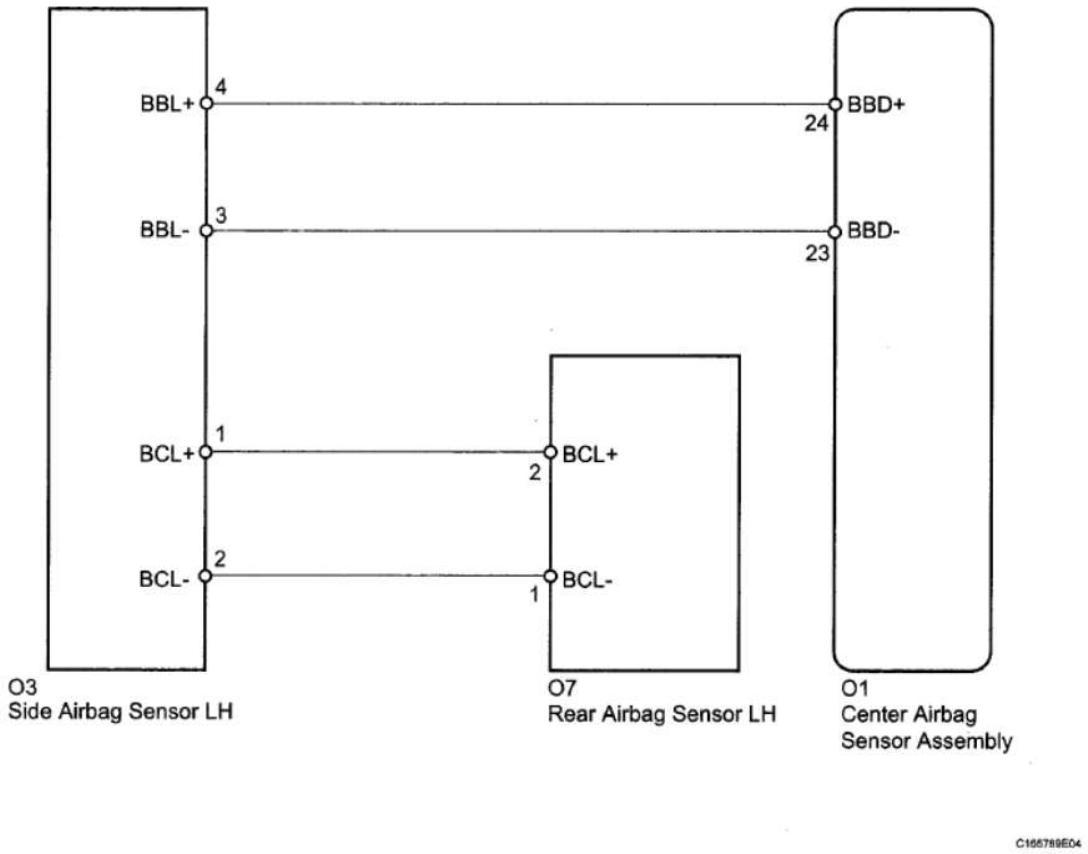


Fig. 74: Side Airbag Sensor LH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK PRESENT DTC**
   a. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   b. Check for present DTCs (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

Result	Proceed to
Present DTC B1623 or B1643 is output	A
Present DTC B1642 or 81 is output	B
Present DTC B1632 or B1633 is output	C
Present DTC B1622 is output	D
Present DTC B1622, B1623, B1632, B1633, B1642, B1643 or 81 is not output	E

HINT:

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- DTCs indicating communication errors will be changed to DTCs indicating errors in initialization by turning the ignition switch off and then on (IG) again.
- Codes other than present DTC B1622, B1623, B1632, B1633, B1642, B1643, and 81 may be output at this time, but they are not related to this check.

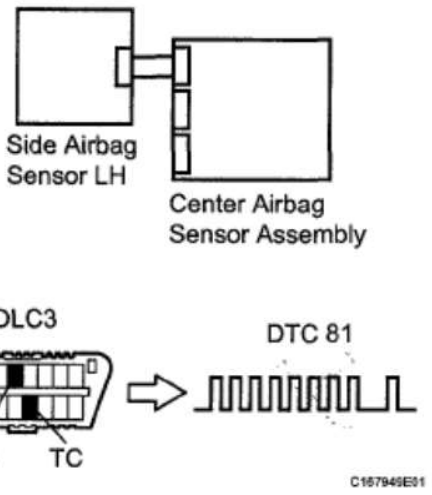


Fig. 75: Checking Present DTC
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

B: Go to step 3

C: Go to step 14

D: Go to step 21

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

A: Go to next step

2. **CHECK PAST DTC**
   a. Check for past DTCs (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

Result	Proceed to
Past DTC B1622 or B1632 is not output	A
Past DTC B1632 is output	B
Past DTC B1622 is output	C

HINT:

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Codes other than past DTC B1622 and B1632 may be output at this time, but they are not related to this check.

B: Go to step 14

C: Go to step 21

A: Go to next step

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

      OK:

      The connectors are properly connected.

      HINT:

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

   d. Disconnect the connectors from the center airbag sensor assembly, rear airbag sensor LH and side airbag sensor LH.
   e. Check that the terminals of connectors are not damaged.

      OK:

      The terminals are not deformed or damaged.

NG: REPLACE FLOOR WIRE NO. 2

OK: Go to next step

4. **CHECK FLOOR WIRE NO. 2 (OPEN)**
   a. Using SST, connect terminals 24 (BBD+) and 23 (BBD-) of connector B.

      NOTE: Do not forcibly insert SST into the terminals of the connector when connecting.

      SST 09843-18040

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

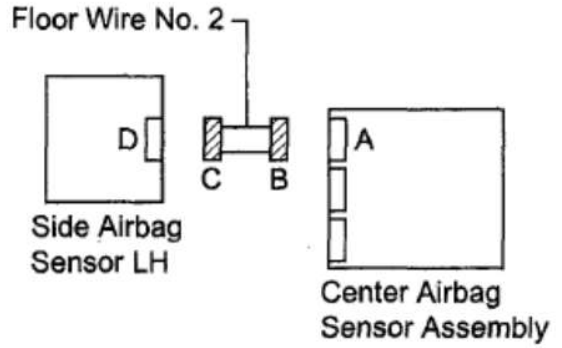
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Standard resistance

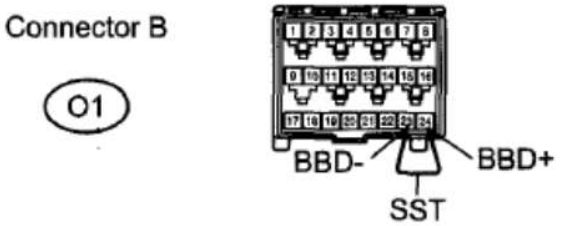
RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O3-4 (BBL+) - O3-3 (BBL-)	Always	Below 1 ohms

NG: REPLACE FLOOR WIRE NO. 2



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



Front view of wire harness connector:
(to Side Airbag Sensor LH)



P C167950E04

Fig. 76: Checking Floor Wire No. 2 (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

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5. **CHECK FLOOR WIRE NO. 2 (SHORT)**
   a. Disconnect SST from connector B.
   b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O3-4 (BBL+) - O3-3 (BBL-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE NO. 2

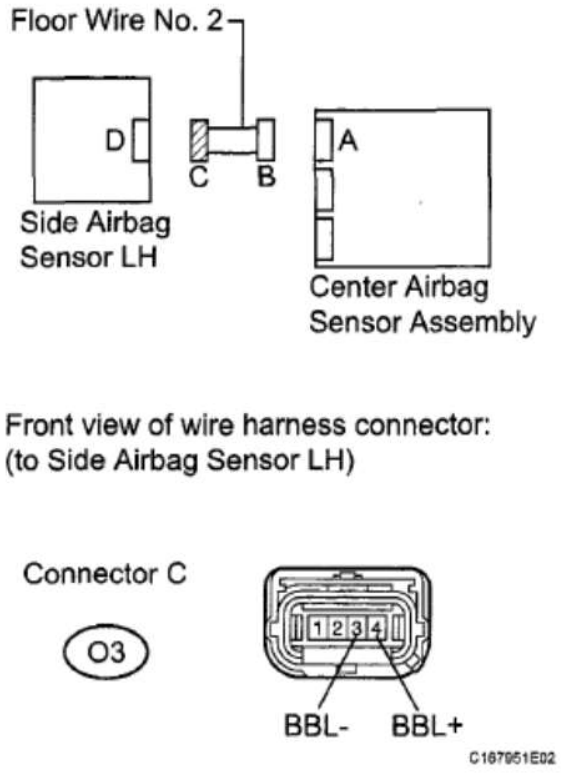


Fig. 77: Checking Floor Wire No. 2 (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **CHECK FLOOR WIRE NO. 2 (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

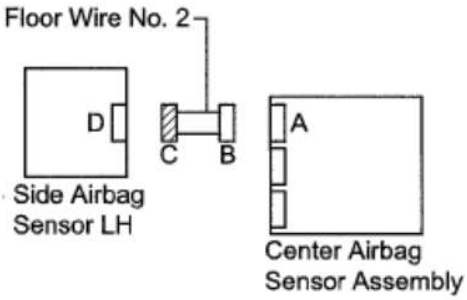
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Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O3-4 (BBL+) - Body ground	Ignition switch on (IG)	Below 1 V
O3-3 (BBL-) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE FLOOR WIRE NO. 2



Front view of wire harness connector:
(to Side Airbag Sensor LH)

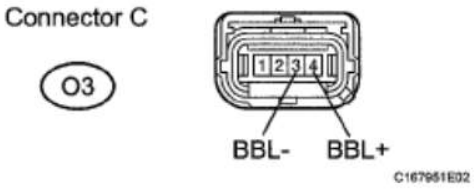


Fig. 78: Checking Floor Wire No. 2 (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

7. **CHECK FLOOR WIRE NO. 2 (SHORT TO GROUND)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Measure the resistance according to the value (s) in the table below.

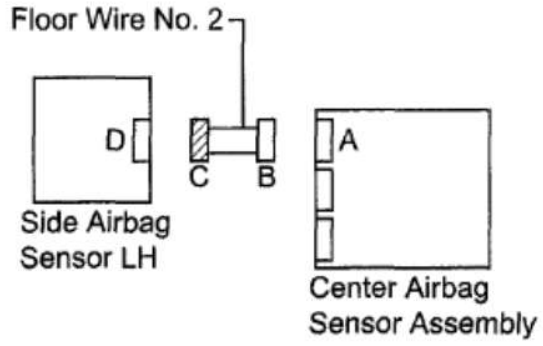
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O3-4 (BBL+) - Body ground	Always	1 Mohms or higher
O3-3 (BBL-) - Body ground	Always	1 Mohms or higher

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NG: REPLACE FLOOR WIRE NO. 2



Front view of wire harness connector:
(to Side Airbag Sensor LH)

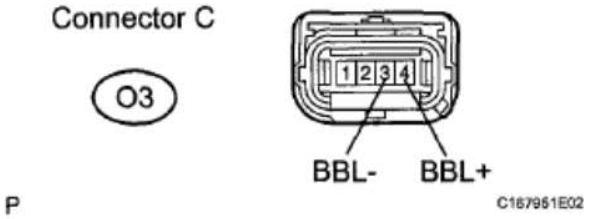


Fig. 79: Checking Floor Wire No. 2 (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

8. **CHECK FLOOR WIRE NO. 2 (OPEN)**
   a. Using SST, connect terminals 2 (BCL+) and 1 (BCL-) of connector C.

   NOTE: Do not forcibly insert SST into the terminals of the connector when connecting.

   SST 09843-18040

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

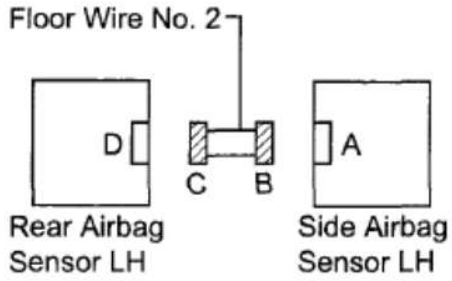
Standard resistance

RESISTANCE SPECIFICATION

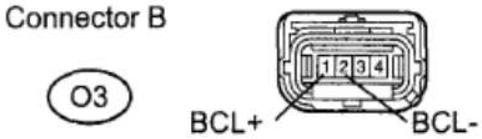
Tester Connection	Switch Condition	Specified Condition
O3-1 (BCL+) - O3-2 (BCL-)	Always	Below 1 ohms

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NG: REPLACE FLOOR WIRE NO. 2



Front view of wire harness connector:
(to Side Airbag Sensor LH)



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

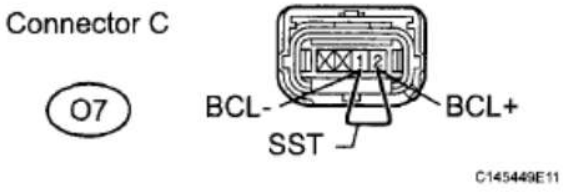


Fig. 80: Checking Floor Wire No. 2 (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

9. **CHECK FLOOR WIRE NO. 2 (SHORT)**
   a. Disconnect SST from connector C.
   b. Measure the resistance according to the value (s) in the table below.

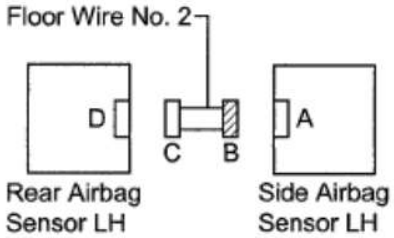
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O3-1 (BCL+) - O3-2 (BCL-)	Always	1 Mohms or higher

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NG: REPLACE FLOOR WIRE NO. 2



Front view of wire harness connector:
(to Side Airbag Sensor LH)

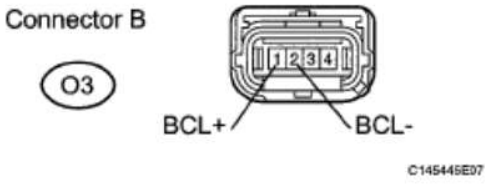


Fig. 81: Checking Floor Wire No. 2 (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

10. **CHECK FLOOR WIRE NO. 2 (SHORT TO B+)**
    a. Connect the negative (-) terminal cable to the battery.
    b. Turn the ignition switch on (IG).
    c. Measure the voltage according to the value (s) in the table below.

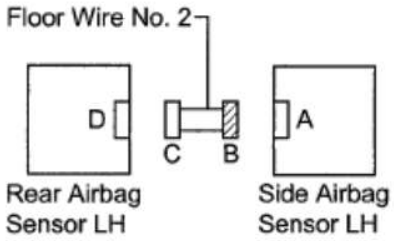
Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O3-1 (BCL+) - Body ground	Ignition switch on (IG)	Below 1 V
O3-2 (BCL-) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE FLOOR WIRE NO. 2

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Front view of wire harness connector:
(to Side Airbag Sensor LH)

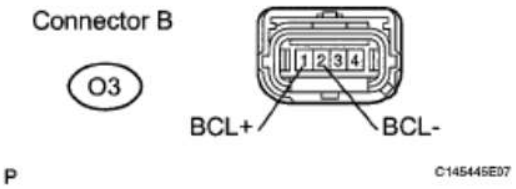


Fig. 82: Checking Floor Wire No. 2 (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

11. **CHECK FLOOR WIRE NO. 2 (SHORT TO GROUND)**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
    c. Measure the resistance according to the value (s) in the table below.

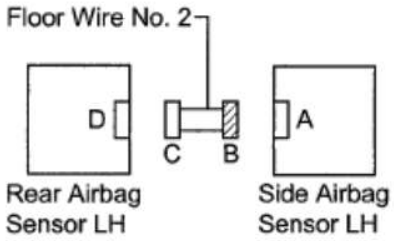
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O3-1 (BCL+) - Body ground	Always	1 Mohms or higher
O3-2 (BCL-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE NO. 2

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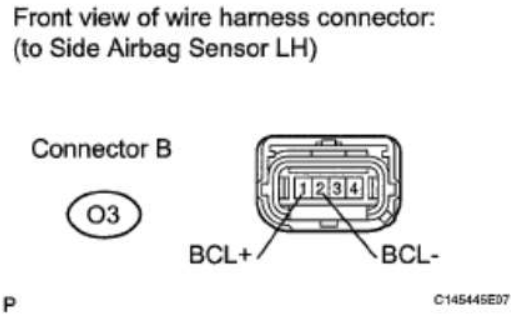


Fig. 83: Checking Floor Wire No. 2 (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

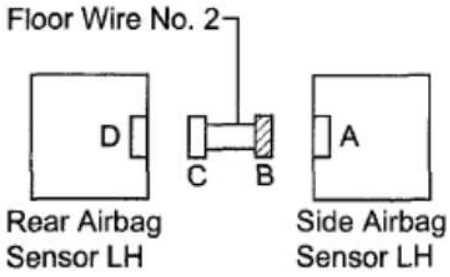
12. **CHECK SIDE AIRBAG SENSOR LH**
    a. Connect the connectors to the rear airbag sensor LH and center airbag sensor assembly.
    b. Interchange the side airbag sensor RH with LH and connect the connectors to them.
    c. Connect the negative (-) terminal cable to the battery.
    d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    e. Clear the DTCs stored in the the memory (See **DTC CHECK/CLEAR**).
    f. Turn the ignition switch off.
    g. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    h. Check for DTCs (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC B1623, B1642, B1643, or 81 is output.	A
DTC B1628, B1647, B1648, or 82 is output.	B
DTCs B1623, B1642, B1643, or 81 and B1628, B1647, B1648, or 82 are not output.	C

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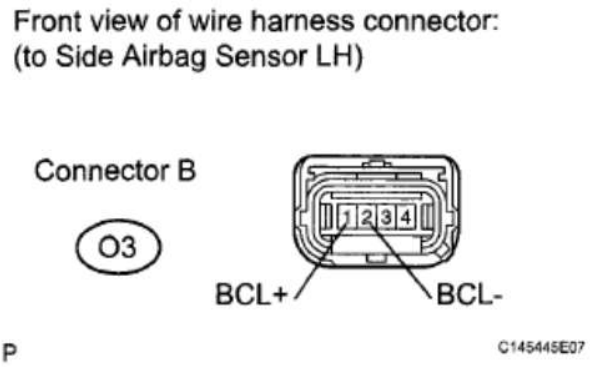


Fig. 84: Checking Side Airbag Sensor LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

Codes other than DTC B1623, B1642, B1643, or 81 and B1628, B1647, B1648, or 82 may be output at this time, but they are not related to this check.

B: REPLACE SIDE AIRBAG SENSOR LH (See **ON-VEHICLE INSPECTION**)

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

A: Go to next step

13. **CHECK REAR AIRBAG SENSOR LH**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
    c. Return the side airbag sensor RH and LH to their original positions and connect the connectors to them.
    d. Interchange the rear airbag sensor RH with LH and connect the connectors to them.
    e. Connect the negative (-) terminal cable to the battery.
    f. Turn the ignition switch on (IG), and wait for at least 60 seconds.

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g. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
h. Turn the ignition switch off.
i. Turn the ignition switch on (IG), and wait for at least 60 seconds.
j. Check for DTCs (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC B1623, B1642, B1643, or 81 and B1628, B1647, B1648, or 82 are not output.	A
DTC B1623, B1642, B1643, or 81 is output.	B
DTC B1628, B1647, B1648, or 82 is output.	C

HINT:

Codes other than DTC B1623, B1642, B1643, or 81 and B1628, B1647, B1648, or 82 may be output at this time, but they are not related to this check.

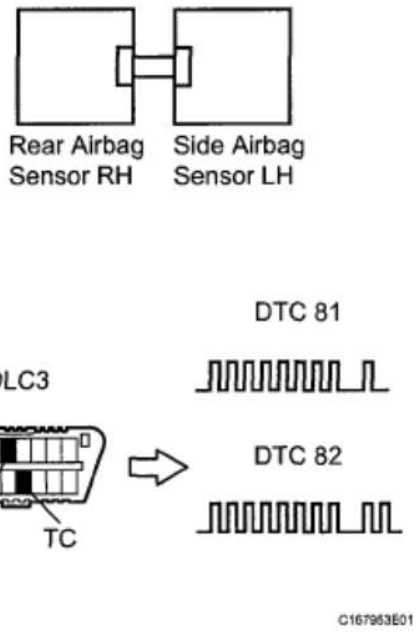


Fig. 85: Checking Rear Airbag Sensor LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

B: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

C: REPLACE REAR AIRBAG SENSOR LH (See **ON-VEHICLE INSPECTION**)

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

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

       OK:

       The connectors are properly connected.

       HINT:

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

    d. Disconnect the connectors from the side airbag sensor LH and rear airbag sensor LH.
    e. Check that the terminals of connectors are not damaged.

       OK:

       The terminals are not deformed or damaged.

NG: REPLACE FLOOR WIRE NO. 2

OK: Go to next step

15. **CHECK FLOOR WIRE NO. 2 (OPEN)**
    a. Using SST, connect terminals 2 (BCL+) and 1 (BCL-) of connector C.

       NOTE: Do not forcibly insert SST into the terminals of the connector when connecting.

       SST 09843-18040

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

Standard resistance

RESISTANCE SPECIFICATION

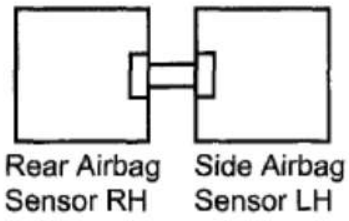
Tester Connection	Switch Condition	Specified Condition
O3-1 (BCL+) - O3-2 (BCL-)	Always	Below 1 ohms

NG: REPLACE FLOOR WIRE NO. 2

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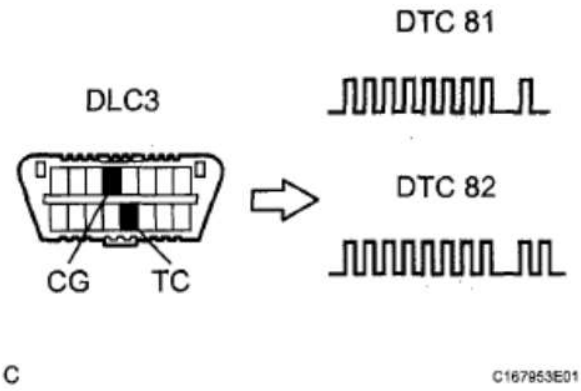


Fig. 86: Checking Floor Wire No. 2 (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

16. **CHECK FLOOR WIRE NO. 2 (SHORT)**
    a. Disconnect SST from connector C.
    b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

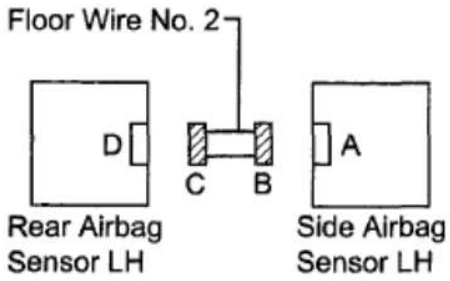
Tester Connection	Switch Condition	Specified Condition
O3-1 (BCL+) - O3-2 (BCL-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE NO. 2

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Front view of wire harness connector:
(to Side Airbag Sensor LH)



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

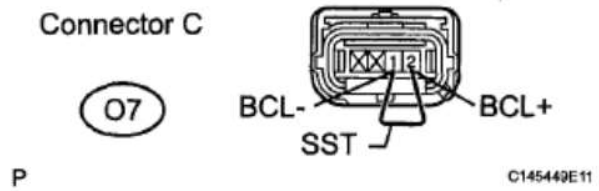


Fig. 87: Checking Floor Wire No. 2 (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

17. **CHECK FLOOR WIRE NO. 2 (SHORT TO B+)**
    a. Connect the negative (-) terminal cable to the battery.
    b. Turn the ignition switch on (IG).
    c. Measure the voltage according to the value (s) in the table below.

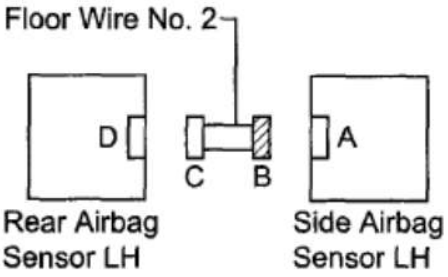
Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O3-1 (BCL+) - Body ground	Ignition switch on (IG)	Below 1 V
O3-2 (BCL-) - Body ground	Ignition switch on (IG)	Below 1 V

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NG: REPLACE FLOOR WIRE NO. 2



Front view of wire harness connector:
(to Side Airbag Sensor LH)

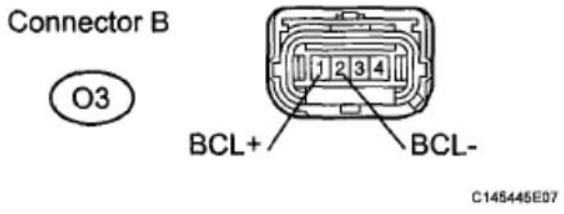


Fig. 88: Checking Floor Wire No. 2 (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

18. **CHECK FLOOR WIRE NO. 2 (SHORT TO GROUND)**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
    c. Measure the resistance according to the value (s) in the table below.

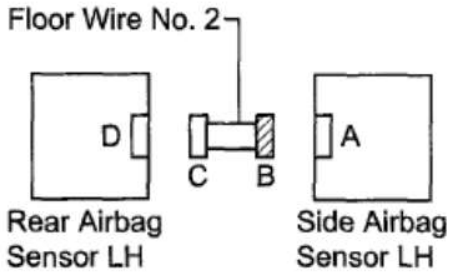
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O3-1 (BCL+) - Body ground	Always	1 Mohms or higher
O3-2 (BCL-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE NO. 2

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Front view of wire harness connector:
(to Side Airbag Sensor LH)

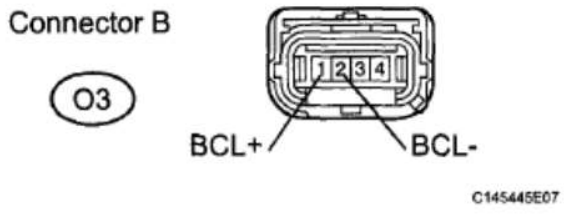


Fig. 89: Checking Floor Wire No. 2 (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

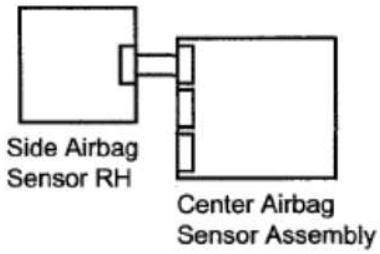
19. **CHECK SIDE AIRBAG SENSOR LH**
    a. Connect the connector to the rear airbag sensor LH.
    b. Interchange the side airbag sensor RH with LH and connect the connectors to them.
    c. Connect the negative (-) terminal cable to the battery.
    d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    e. Clear the DTCs stored in the the memory (See **DTC CHECK/CLEAR**).
    f. Turn the ignition switch off.
    g. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    h. Check for DTCs (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

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

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

HINT:

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

B: REPLACE SIDE AIRBAG SENSOR LH (See **ON-VEHICLE INSPECTION**)

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

A: Go to next step

20. **CHECK REAR AIRBAG SENSOR LH**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
    c. Return the side airbag sensor RH and LH to their original positions and connect the connectors to them.
    d. Interchange the rear airbag sensor RH with LH and connect the connectors to them.
    e. Connect the negative (-) terminal cable to the battery.
    f. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    g. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
    h. Turn the ignition switch off.
    i. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    j. Check for DTCs (See **DTC CHECK/CLEAR**).

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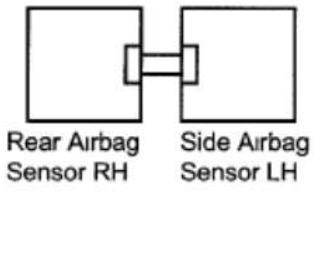


Fig. 91: Checking Rear Airbag Sensor LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Result

RESULT CHART

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

HINT:

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

B: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

C: REPLACE REAR AIRBAG SENSOR LH (See **ON-VEHICLE INSPECTION**)

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

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

Result

RESULT CHART

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Result	Proceed to
DTC B1622 and B1627 are not output.	A
DTC B1622 is output.	B
DTC B1627 is output.	C

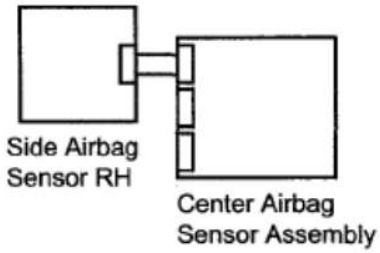


Fig. 92: Checking Side Airbag Sensor LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

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

B: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

C: REPLACE SIDE AIRBAG SENSOR LH (See **ON-VEHICLE INSPECTION**)

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

DTC B1625/22 FRONT PASSENGER SIDE - SIDE AIRBAG SENSOR MALFUNCTION

DESCRIPTION

The side airbag sensor RH circuit consists of the center airbag sensor assembly, side airbag sensor RH and rear airbag sensor RH.

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

DTC B1625/22 is recorded when a malfunction is detected in the side airbag sensor RH.

DTC DETECTING CONDITION REFERENCE

DTC No.	OTC Detection Condition	Trouble Area
B1625/22	• Side airbag sensor RH malfunction • Center airbag sensor assembly malfunction	• Side airbag sensor RH • Center airbag sensor assembly

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WIRING DIAGRAM

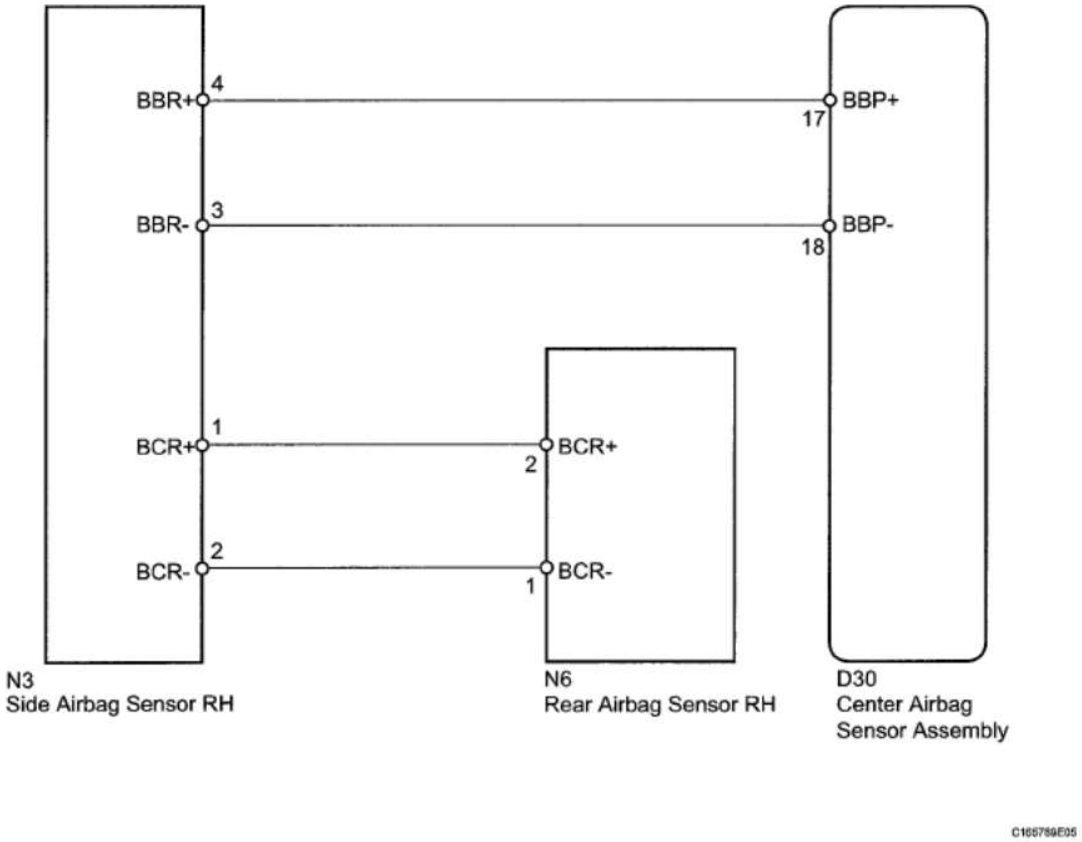


Fig. 93: Front Passenger Side Rear Airbag Sensor RH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

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

   Result

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RESULT CHART

Result	Proceed to
DTC B1620/21 and B1625/22 are not output.	A
DTC B1625/22 is output.	B
DTC B1620/21 is output.	C

HINT:

Codes other than DTC B1620/21 and B1625/22 may be output at this time, but they are not related to this check.

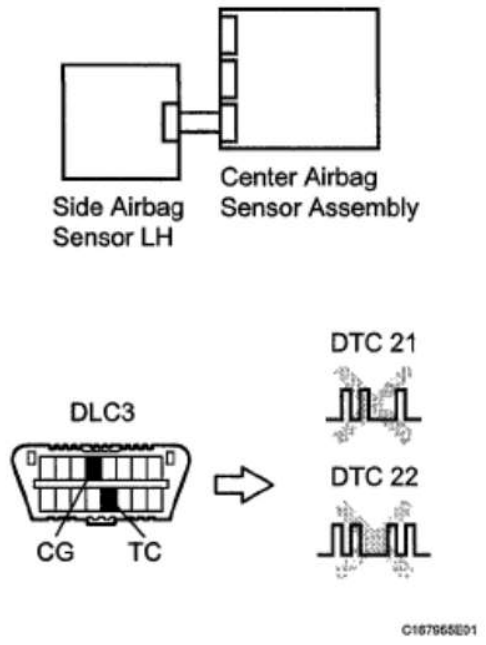


Fig. 94: Checking Side Airbag Sensor RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

B: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

C: REPLACE SIDE AIRBAG SENSOR RH (See **ON-VEHICLE INSPECTION**)

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

DTC B1627/82 LOST COMMUNICATION WITH FRONT PASSENGER SIDE - SIDE AIRBAG SENSOR ASSEMBLY; DTC B1628/82 FRONT PASSENGER SIDE - SIDE AIRBAG SENSOR ASSEMBLY INITIALIZATION INCOMPLETE; DTC B1637/82 LOST COMMUNICATION WITH PASSENGER SIDE REAR AIRBAG SENSOR; DTC B1638/82 PASSENGER SIDE REAR AIRBAG SENSOR INITIALIZATION INCOMPLETE; DTC B1647/82 LOST COMMUNICATION WITH FRONT PASSENGER SIDE SATELLITE SENSOR BUS; DTC B1648/82 FRONT PASSENGER SIDE SATELLITE SENSOR BUS INITIALIZATION INCOMPLETE

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DESCRIPTION

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

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

Theses DTCs are recorded when a malfunction is detected in the circuit for the front passenger side - side collision sensor (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH).

DTC DETECTING CONDITION REFERENCE

DTC No.	DTC Detecting Condition	Trouble Area
B1627/82 B1628/82 B1637/82 B1638/82 B1647/82 B1648/82	• The center airbag sensor assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the circuit for the front passenger side - side collision sensor (to determine deployment of the front seat side airbag assembly RH and curtain shield airbag assembly RH) for 2 seconds. • Side airbag sensor RH malfunction • Rear airbag sensor RH malfunction • Center airbag sensor assembly malfunction	• Floor wire • Side airbag sensor RH • Rear airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

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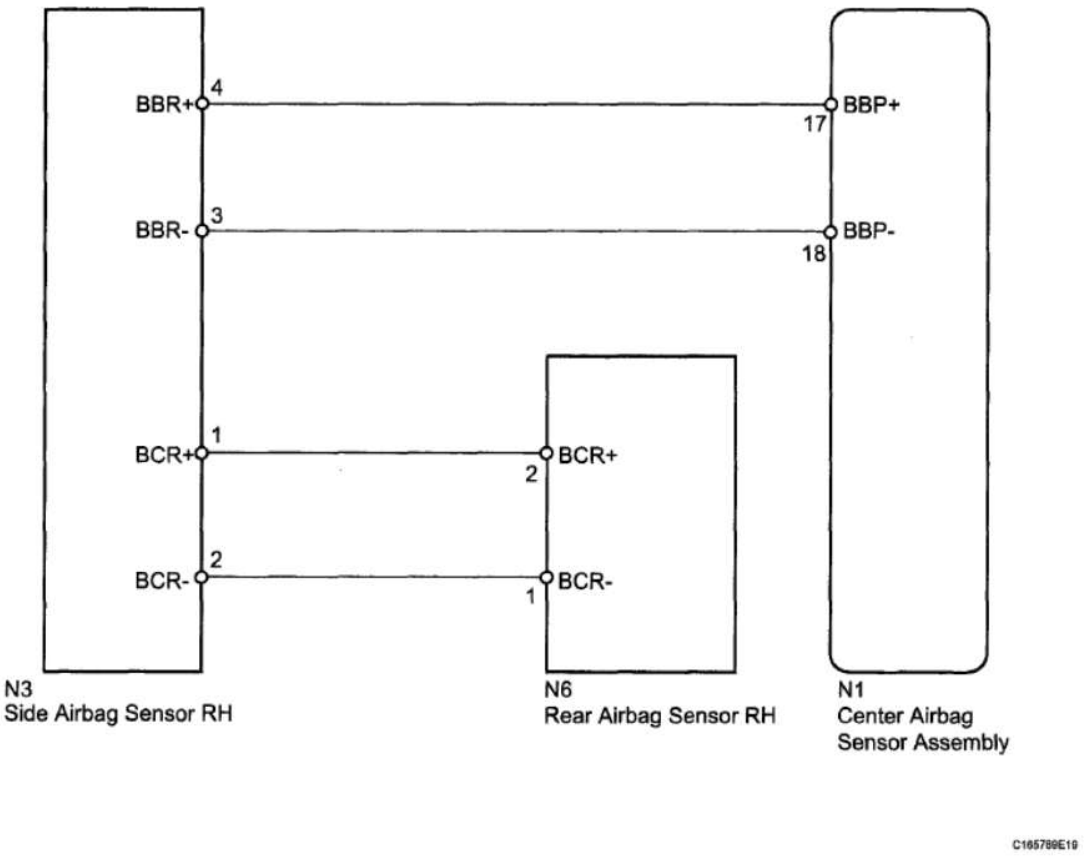


Fig. 95: Side Airbag Sensor RH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK PRESENT DTC**
   a. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   b. Check the present DTCs (See **DTC CHECK/CLEAR**).

Result

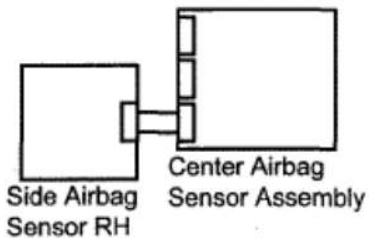
RESULT CHART

Result	Proceed to
Present DTC B1628 or B1648 is output.	A
Present DTC B1647 or 82 is output.	B
Present DTC B1637 or B1638 is output.	C
Present DTC B1627 is output.	D
Present DTC B1627, B1628, B1637, B1638, B1647, B1648, or 82 is not output.	E

HINT:

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- DTCs indicating communication errors will be changed to DTCs indicating errors in initialization by turning the ignition switch off and then on (IG) again.
- Codes other than present DTC B1627, B1628, B1637, B1638, B1647, B1648, and 82 may be output at this time, but they are not related to this check.



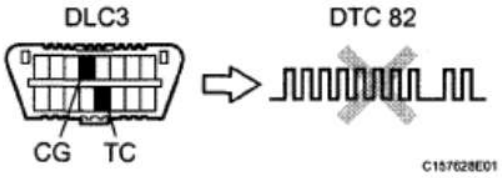


Fig. 96: Checking Present DTC
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

B: Go to step 3

C: Go to step 14

D: Go to step 21

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

A: Go to next step

2. **CHECK PAST DTC**
   a. Check the past DTCs (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

Result	Proceed to
Past DTC B1627 or B1637 is not output.	A
Past DTC B1637 is output.	B
Past DTC B1627 is output.	C

HINT:

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Codes other than past DTC B1627 and B1637 may be output at this time, but they are not related to this check.

B: Go to step 14

C: Go to step 21

A: Go to next step

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

      OK:

      The connectors are properly connected.

      HINT:

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

   d. Disconnect the connectors from the center airbag sensor assembly, rear airbag sensor RH and side airbag sensor RH.
   e. Check that the terminals of connectors are not damaged.

      OK:

      The terminals are not deformed or damaged.

NG: REPLACE FLOOR WIRE

OK: Go to next step

4. **CHECK FLOOR WIRE (OPEN)**
   a. Using SST, connect terminals 17 (BBP+) and 18 (BBP-) of connector B.

      NOTE: Do not forcibly insert SST into the terminals of the connector when connecting.

      SST 09843-18040

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

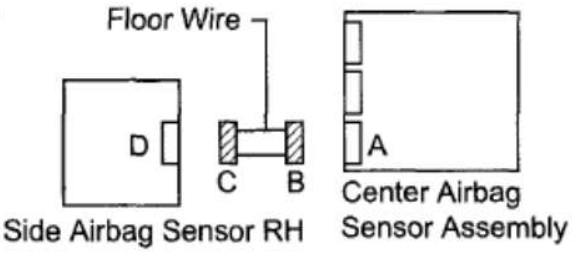
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Standard resistance

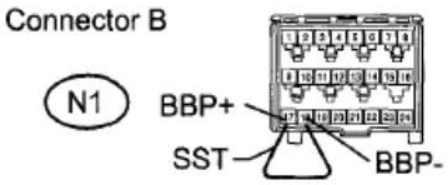
RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N3-4 (BBR+) - N3-3 (BBR-)	Always	Below 1 ohms

NG: REPLACE FLOOR WIRE



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



Front view of wire harness connector:
(to Side Airbag Sensor RH)



Fig. 97: Checking Floor Wire (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

5. **CHECK FLOOR WIRE (SHORT)**
   a. Disconnect SST from connector B.
   b. Measure the resistance according to the value (s) in the table below.

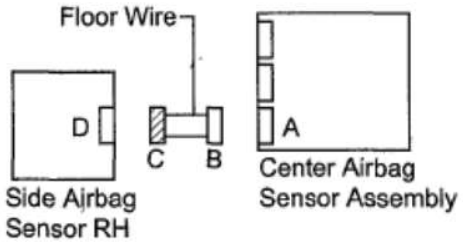
Standard resistance

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RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N3-4 (BBR+) - N3-3 (BBR-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE



Front view of wire harness connector:
(to Side Airbag Sensor RH)

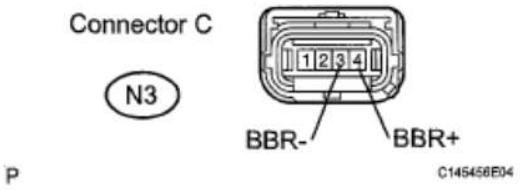


Fig. 98: Checking Floor Wire (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **CHECK FLOOR WIRE (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

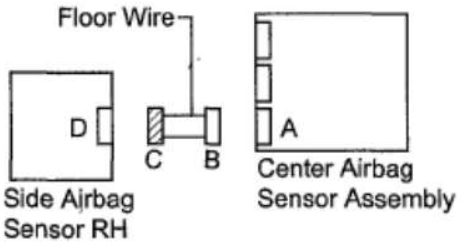
Tester Connection	Switch Condition	Specified Condition
N3-4 (BBR+) - Body ground	Ignition switch on (IG)	Below 1 V
N3-3 (BBR-) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE FLOOR WIRE

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Front view of wire harness connector:
(to Side Airbag Sensor RH)

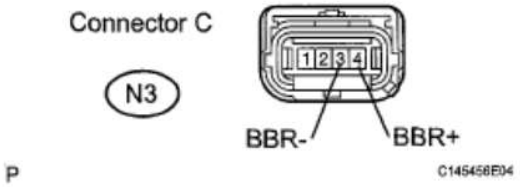


Fig. 99: Checking Floor Wire (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

7. **CHECK FLOOR WIRE (SHORT TO GROUND)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

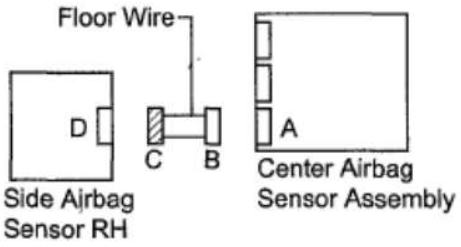
Tester Connection	Switch Condition	Specified Condition
N3-4 (BBR+) - Body ground	Always	1 Mohms or higher
N3-3 (BBR-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

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Front view of wire harness connector:
(to Side Airbag Sensor RH)

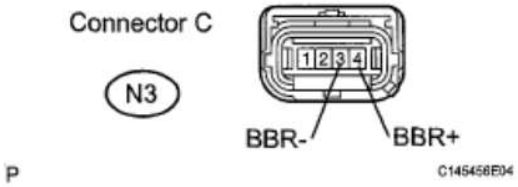


Fig. 100: Checking Floor Wire (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

8. **CHECK FLOOR WIRE (OPEN)**
   a. Using SST, connect terminals 2 (BCR+) and 1 (BCR-) of connector C.

   NOTE: Do not forcibly insert SST into the terminals of the connector when connecting.

   SST 09843-18040

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

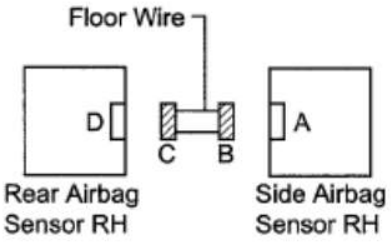
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N3-2 (BCR-) - N3-1 (BCR+)	Always	Below 1 ohms

NG: REPLACE FLOOR WIRE

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Front view of wire harness connector:
(to Side Airbag Sensor RH)



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

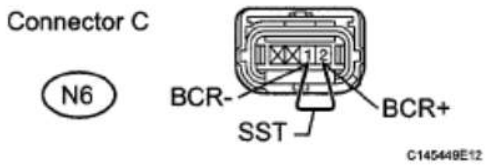


Fig. 101: Checking Floor Wire (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

9. **CHECK FLOOR WIRE (SHORT)**
   a. Disconnect SST from connector C.
   b. Measure the resistance according to the value (s) in the table below.

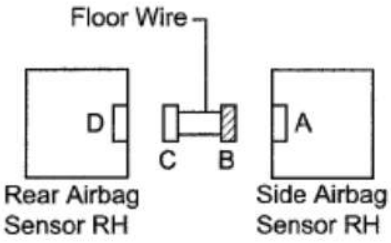
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N3-1 (BCR+) - N3-2 (BCR-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

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Front view of wire harness connector:
(to Side Airbag Sensor RH)

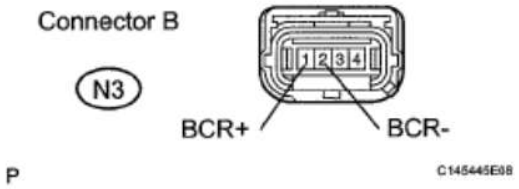


Fig. 102: Checking Floor Wire (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

10. **CHECK FLOOR WIRE (SHORT TO B+)**
    a. Connect the negative (-) terminal cable to the battery.
    b. Turn the ignition switch on (IG).
    c. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

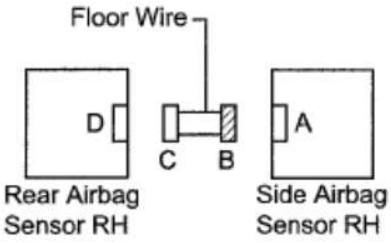
Tester Connection	Switch Condition	Specified Condition
N3-1 (BCR+) - Body ground	Ignition switch on (IG)	Below 1 V
N3-2 (BCR-) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE FLOOR WIRE

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Front view of wire harness connector:
(to Side Airbag Sensor RH)

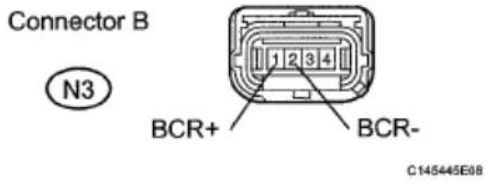


Fig. 103: Checking Floor Wire (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

11. **CHECK FLOOR WIRE (SHORT TO GROUND)**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
    c. Measure the resistance according to the value (s) in the table below.

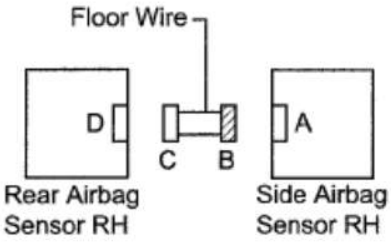
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N3-1 (BCR+) - Body ground	Always	1 Mohms or higher
N3-2 (BCR-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

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Front view of wire harness connector:
(to Side Airbag Sensor RH)

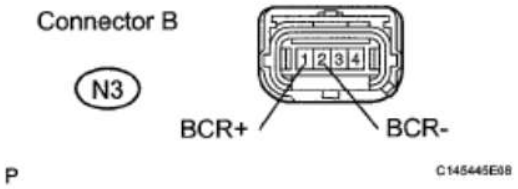


Fig. 104: Checking Floor Wire (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

12. **CHECK SIDE AIRBAG SENSOR RH**
    a. Connect the connectors to the rear airbag sensor RH and the center airbag sensor assembly.
    b. Interchange the side airbag sensor LH with RH and connect the connectors to them.
    c. Connect the negative (-) terminal cable to the battery.
    d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
    f. Turn the ignition switch off.
    g. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    h. Check for DTCs (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

Result	Proceed to
DTC B1628, B1647, B1648, or 82 is output.	A
DTC B1623, B1642, B1643, or 81 is output.	B
DTC B1623, B1642, B1643, or 81 and B1628, B1647, B1648, or 82 are not output.	C

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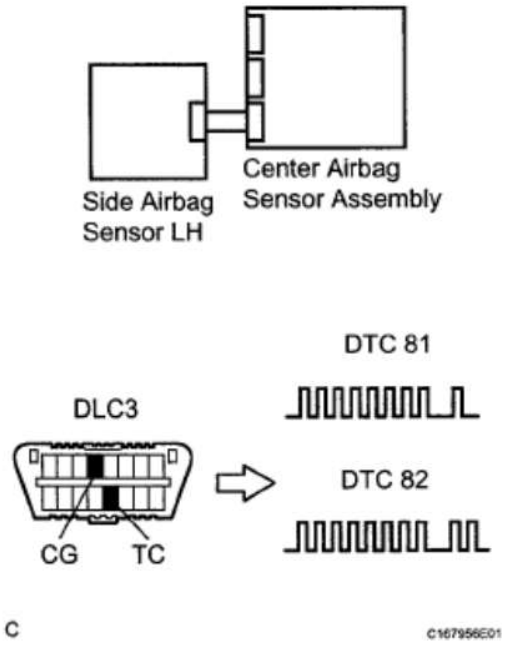


Fig. 105: Checking Side Airbag Sensor RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

Codes other than DTC B1623, B1642, B1643, or 81 and B1628, B1647, B1648, or 82 may be output at this time, but they are not related to this check.

B: REPLACE SIDE AIRBAG SENSOR RH (See **ON-VEHICLE INSPECTION**)

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

A: Go to next step

13. **CHECK REAR AIRBAG SENSOR RH**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
    c. Return the side airbag sensor LH and RH to their original positions and connect the connectors to them.
    d. Interchange the rear airbag sensor LH with RH and connect the connectors to them.
    e. Connect the negative (-) terminal cable to the battery.
    f. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    g. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
    h. Turn the ignition switch off.
    i. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    j. Check for DTCs (See **DTC CHECK/CLEAR**).

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Result

RESULT CHART

Result	Proceed to
DTC B1623, B1642, B1643, or 81 and B1628, B1647, B1648, or 82 are not output.	A
DTC B1628, B1647, B1648, or 82 is output.	B
DTC B1623, B1642, B1643, or 81 is output.	C

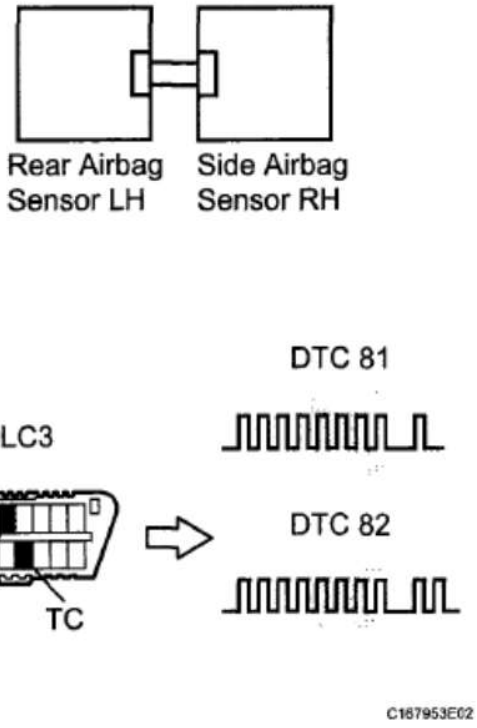


Fig. 106: Checking Rear Airbag Sensor RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

Codes other than DTC B1623, B1642, B1643, or 81 and B1628, B1647, B1648, or 82 may be output at this time, but they are not related to this check.

B: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

C: REPLACE REAR AIR BAG SENSOR RH (See **ON-VEHICLE INSPECTION**)

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

14. **CHECK CONNECTORS**
    a. Turn the ignition switch 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 connectors are properly connected to the side airbag sensor RH and the rear airbag sensor RH.

OK:

The connectors are properly connected.

HINT:

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

d. Disconnect the connectors from the side airbag sensor RH and rear airbag sensor RH.
e. Check that the terminals of connectors are not damaged.

OK:

The terminals are not deformed or damaged.

NG: REPLACE FLOOR WIRE

OK: Go to next step

15. **CHECK FLOOR WIRE (OPEN)**
a. Using SST, connect terminals 2 (BCR+) and 1 (BCR-) of connector C.

NOTE: Do not forcibly insert SST into the terminals of the connector when connecting.

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

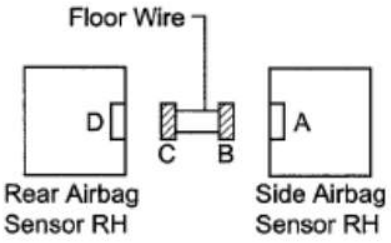
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N3-1 (BCR+) - N3-2 (BCR-)	Always	Below 1 ohms

NG: REPLACE FLOOR WIRE

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Front view of wire harness connector:
(to Side Airbag Sensor RH)



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

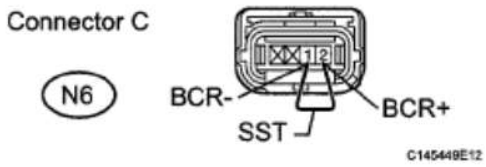


Fig. 107: Checking Floor Wire (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

16. **CHECK FLOOR WIRE (SHORT)**
    a. Disconnect SST from connector C.
    b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

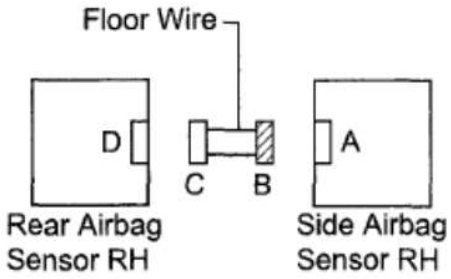
Tester Connection	Switch Condition	Specified Condition
N3-1 (BCR+) - N3-2 (BCR-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

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Front view of wire harness connector:
(to Side Airbag Sensor RH)

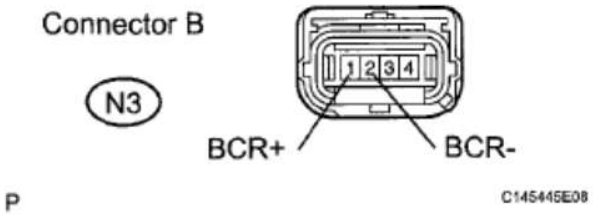


Fig. 108: Checking Floor Wire (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

17. **CHECK FLOOR WIRE (SHORT TO B+)**
    a. Connect the negative (-) terminal cable to the battery.
    b. Turn the ignition switch on (IG).
    c. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

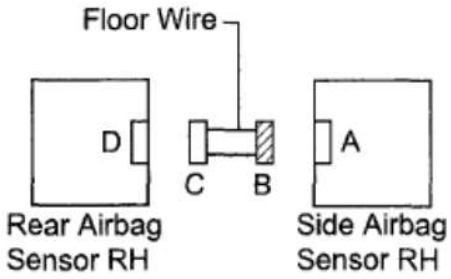
Tester Connection	Switch Condition	Specified Condition
N3-1 (BCR+) - Body ground	Ignition switch on (IG)	Below 1 V
N3-2 (BCR-) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE FLOOR WIRE

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Front view of wire harness connector:
(to Side Airbag Sensor RH)

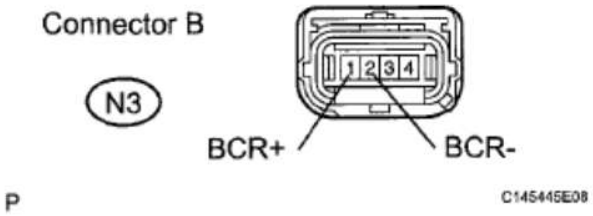


Fig. 109: Checking Floor Wire (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

18. **CHECK FLOOR WIRE (SHORT TO GROUND)**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
    c. Measure the resistance according to the value (s) in the table below.

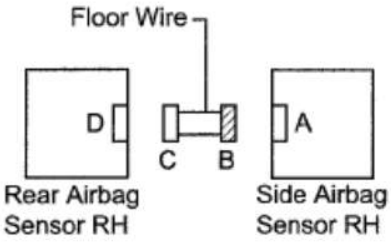
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N3-1 (BCR+) - Body ground	Always	1 Mohms or higher
N3-2 (BCR-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

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Front view of wire harness connector:
(to Side Airbag Sensor RH)

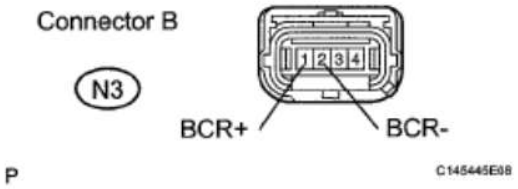


Fig. 110: Checking Floor Wire (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

19. **CHECK SIDE AIRBAG SENSOR RH**
    a. Connect the connector to the rear airbag sensor RH.
    b. Interchange the side airbag sensor LH with RH and connect the connectors to them.
    c. Connect the negative (-) terminal cable to the battery.
    d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    e. Clear the DTCs stored in the the memory (See **DTC CHECK/CLEAR**).
    f. Turn the ignition switch off.
    g. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    h. Check for DTCs (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

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

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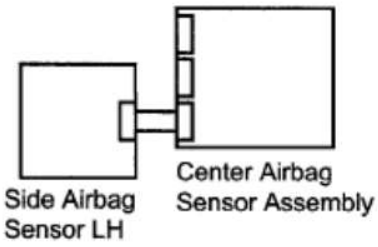


Fig. 111: Checking Side Airbag Sensor RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

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

B: REPLACE SIDE AIRBAG SENSOR RH (See **ON-VEHICLE INSPECTION**)

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

A: Go to next step

20. **CHECK REAR AIRBAG SENSOR RH**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
    c. Return the side airbag sensor LH and RH to their original positions and connect the connectors to them.
    d. Interchange the rear airbag sensor LH with RH and connect the connectors to them.
    e. Connect the negative (-) terminal cable to the battery.
    f. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    g. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
    h. Turn the ignition switch off.
    i. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    j. Check for DTCs (See **DTC CHECK/CLEAR**).

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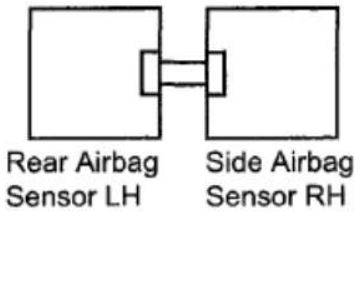


Fig. 112: Checking Rear Airbag Sensor RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Result

RESULT CHART

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

HINT:

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

B: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

C: REPLACE REAR AIR BAG SENSOR RH (See **ON-VEHICLE INSPECTION**)

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

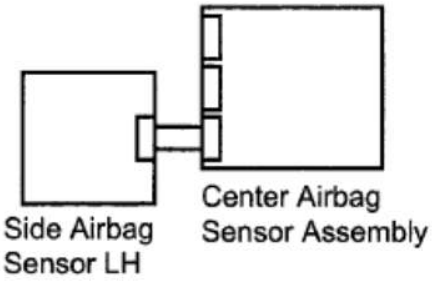
21. **CHECK SIDE AIRBAG SENSOR RH**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
    c. Interchange the side airbag sensor LH with RH and connect the connectors to them.
    d. Connect the negative (-) terminal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

    Result

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RESULT CHART

Result	Proceed to
DTC B1622 and B1627 are not output.	A
DTC B1627 is output.	B
DTC B1622 is output.	C



C166177E01

Fig. 113: Checking Side Airbag Sensor RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

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

B: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

C: REPLACE SIDE AIRBAG SENSOR RH (See **ON-VEHICLE INSPECTION**)

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

DTC B1630/23 DRIVER SIDE REAR AIRBAG SENSOR MALFUNCTION

DESCRIPTION

The rear airbag sensor LH circuit consists of the center airbag sensor assembly, rear airbag sensor LH, and side airbag sensor LH.

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

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

DTC DETECTION CONDITION REFERENCE

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DTC No.	DTC Detection Condition	Trouble Area
B1630/23	• Rear airbag sensor LH malfunction • Center airbag sensor assembly malfunction	• Rear airbag sensor LH • Center airbag sensor assembly

WIRING DIAGRAM

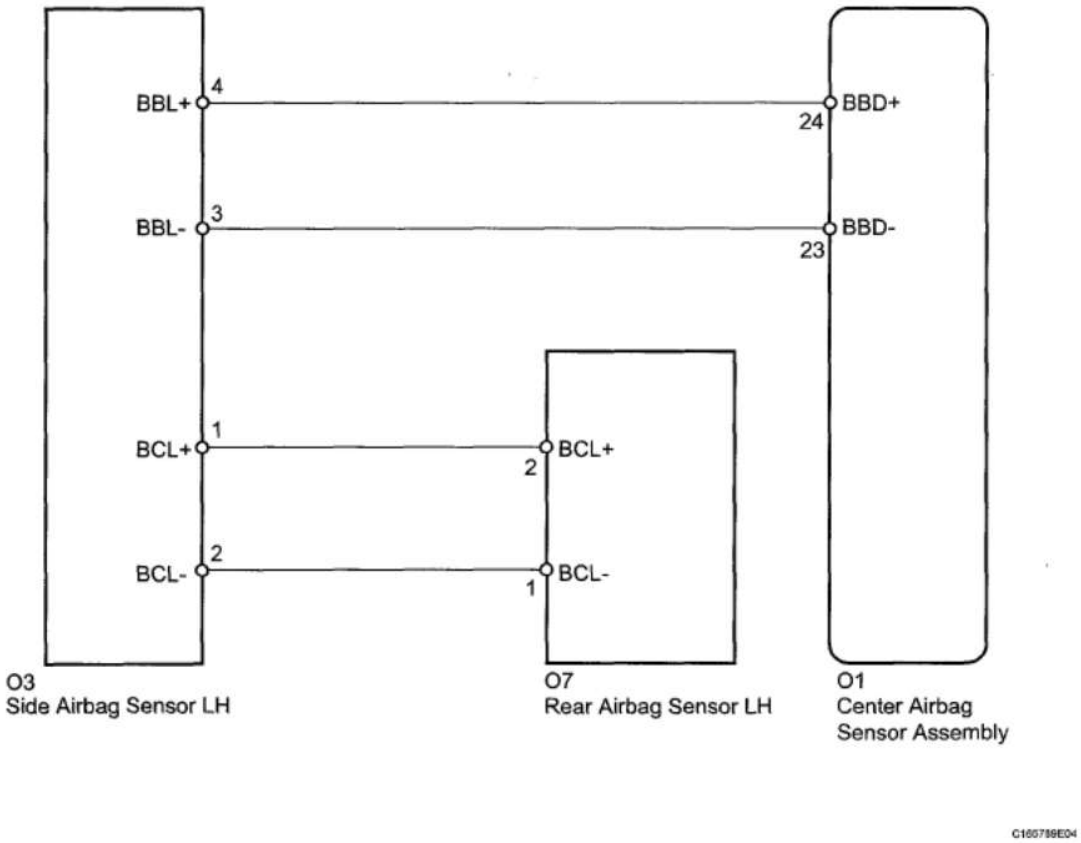


Fig. 114: Driver Side Rear Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

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

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i. Check for DTCs (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

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

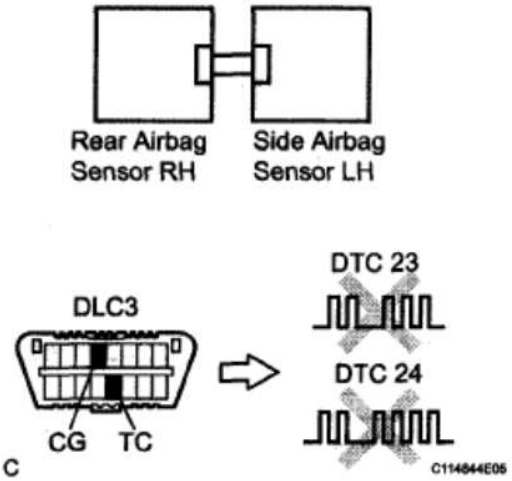


Fig. 115: Checking Rear Airbag Sensor LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

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

B: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

C: REPLACE REAR AIRBAG SENSOR LH (See **ON-VEHICLE INSPECTION**)

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

DTC B1635/24 FRONT PASSENGER SIDE REAR AIRBAG SENSOR MALFUNCTION

DESCRIPTION

The rear airbag sensor RH circuit consists of the center airbag sensor assembly, rear airbag sensor RH, and side airbag sensor RH.

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

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

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

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1635/24	• Rear airbag sensor RH malfunction • Center airbag sensor assembly malfunction	• Rear airbag sensor RH • Center airbag sensor assembly

WIRING DIAGRAM

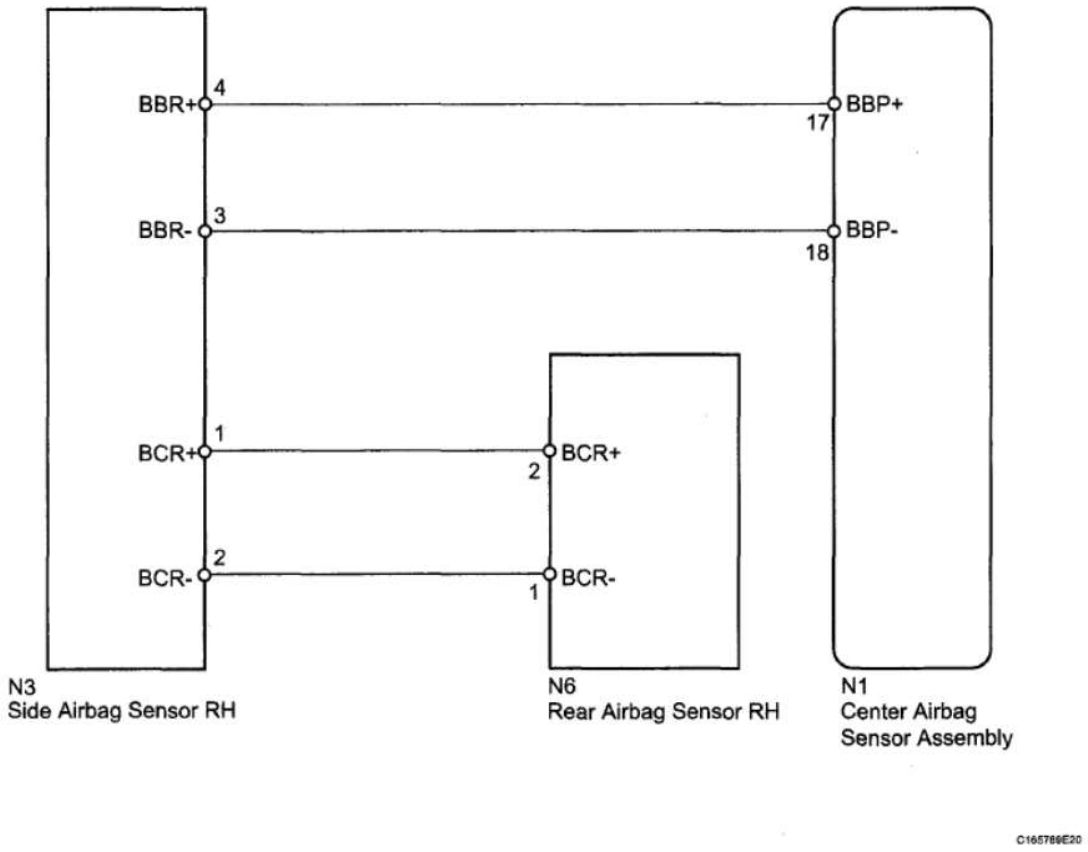


Fig. 116: Front Passenger Side Rear Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK REAR AIRBAG SENSOR RH**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Interchange the rear airbag sensor RH with LH and connect the connectors to them.
   d. Connect the negative (-) terminal cable to the battery.

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e. Turn the ignition switch on (IG), and wait for at least 60 seconds.
f. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
g. Turn the ignition switch off.
h. Turn the ignition switch on (IG), and wait for at least 60 seconds.
i. Check for DTCs (See **DTC CHECK/CLEAR**).

Result

RESULT CHART

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

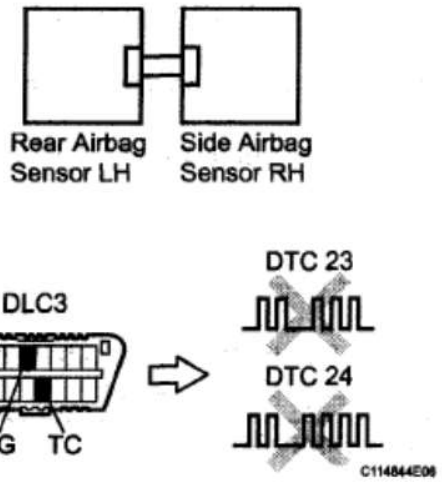


Fig. 117: Checking Rear Airbag Sensor RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

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

B: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

C: REPLACE REAR AIRBAG SENSOR RH (See **ON-VEHICLE INSPECTION**)

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

DTC B1650/32 OCCUPANT CLASSIFICATION SYSTEM MALFUNCTION

DESCRIPTION

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

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

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

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1650/32	• Occupant classification system malfunction • The center airbag sensor assembly receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the occupant classification system circuit for 2 seconds. • Center airbag sensor assembly malfunction	• Floor wire • Front seat wire RH • Occupant classification system • Center airbag sensor assembly

WIRING DIAGRAM

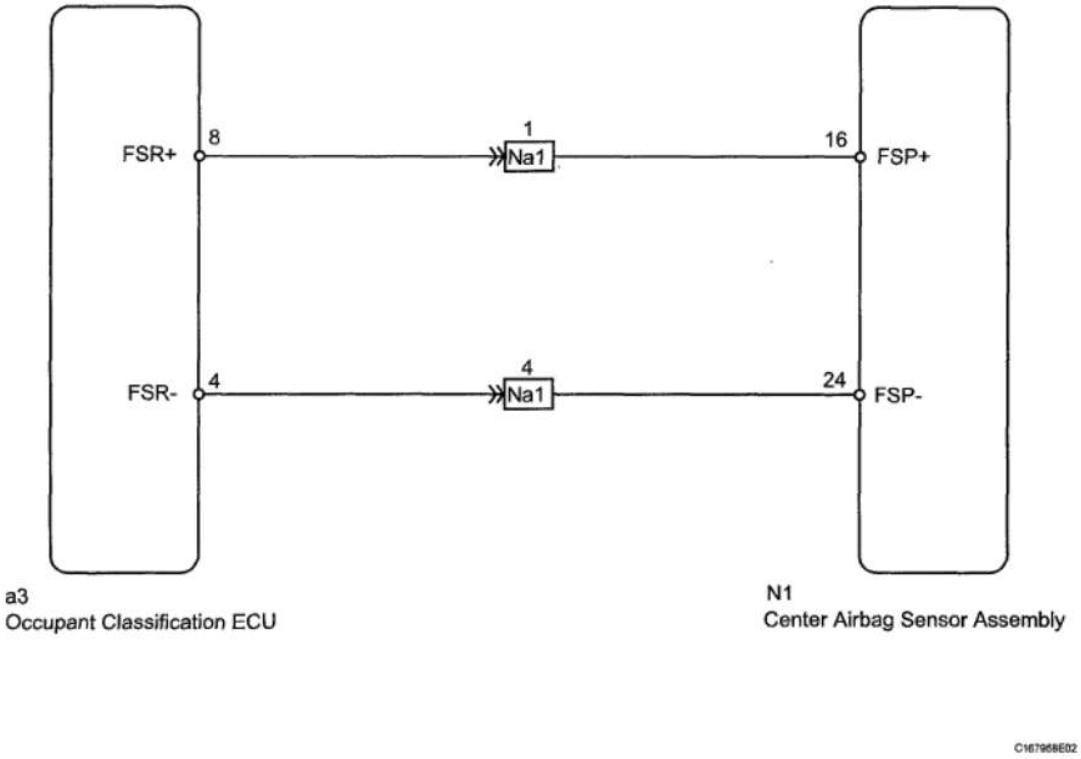


Fig. 118: Occupant Classification ECU - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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INSPECTION PROCEDURE

1. **CHECK DTC (OCCUPANT CLASSIFICATION ECU)**
   a. Turn the ignition switch on (IG).
   b. Using Techstream, check the DTCs of the occupant classification ECU (See **DTC CHECK/CLEAR**).

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

   OK: Go to next step

2. **CHECK CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Check that the connectors are properly connected to the center airbag sensor assembly and the occupant classification ECU. Also check that the connectors that link the front seat wire RH and floor wire 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.

   d. Disconnect the connectors from the center airbag sensor assembly and the occupant classification ECU. Also disconnect the connectors that link the front seat wire RH and floor wire.
   e. Check that the connector terminals are not damaged.

      OK:

      The terminals are not deformed or damaged.

   NG: REPLACE WIRE HARNESS

   OK: Go to next step

3. **CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (OPEN)**
   a. Using SST, connect terminals 16 (FSP+) and 24 (FSP-) of connector B.

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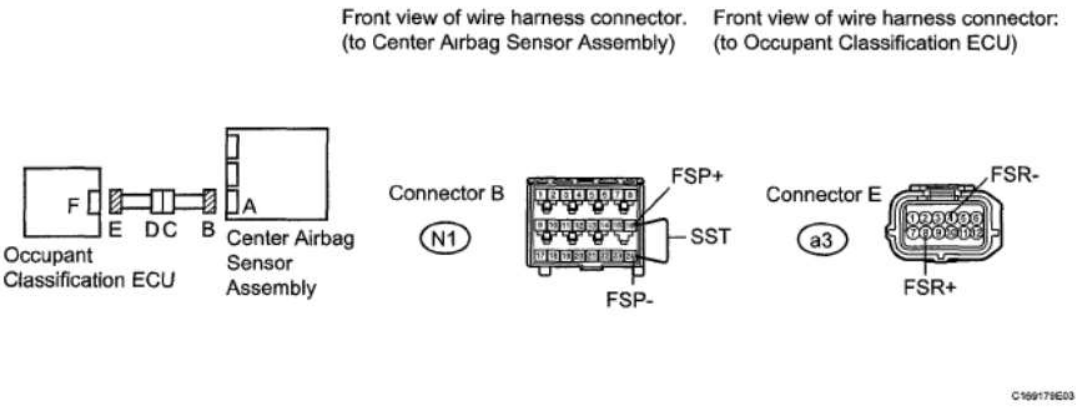


Fig. 119: Checking Occupant Classification System Circuit (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a3-8 (FSR+) - a3-4 (FSR-)	Always	Below 1 ohms

NG: Go to step 7

OK: Go to next step

4. **CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (SHORT)**
   a. Disconnect SST from connector B.
   b. Measure the resistance according to the value (s) in the table below.

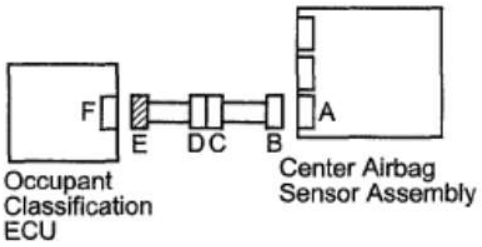
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a3-8 (FSR+) - a3-4 (FSR-)	Always	1 Mohms or higher

NG: Go to step 8

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Front view of wire harness connector:
(to Occupant Classification ECU)

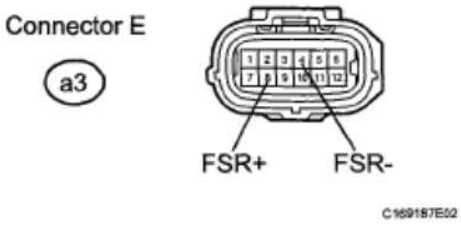


Fig. 120: Checking Occupant Classification System Circuit (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

5. **CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

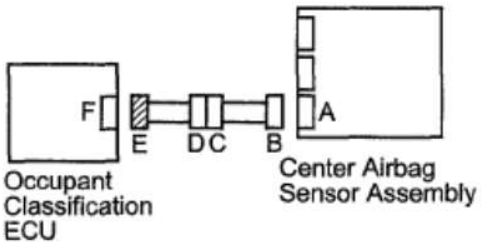
Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a3-8 (FSR+) - Body ground	Ignition switch on (IG)	Below 1 V
a3-4 (FSR-) - Body ground	Ignition switch on (IG)	Below 1 V

NG: Go to step 9

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Front view of wire harness connector:
(to Occupant Classification ECU)

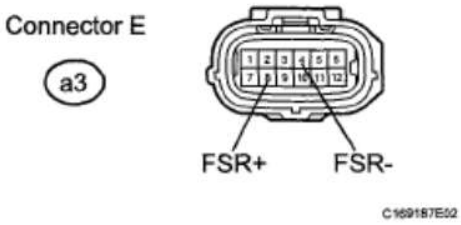


Fig. 121: Checking Occupant Classification System Circuit (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (SHORT TO GROUND)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

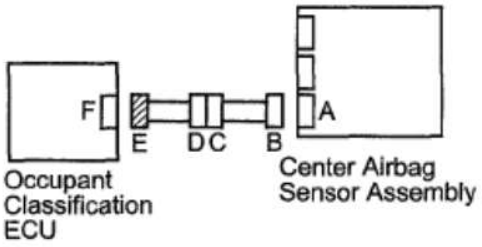
Tester Connection	Switch Condition	Specified Condition
a3-8 (FSR+) - Body ground	Always	1 Mohms or higher
a3-4 (FSR-) - Body ground	Always	1 Mohms or higher

HINT:

After replacing the center airbag sensor assembly, check for DTCs of the center airbag sensor assembly. If the DTC B1650/32 is detected, replace the occupant classification ECU (See **REMOVAL**) and perform "zero point calibration" and "sensitivity check" of the occupant classification system (See **HOW TO PROCEED WITH TROUBLESHOOTING**).

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NG: Go to step 10



Front view of wire harness connector:
(to Occupant Classification ECU)

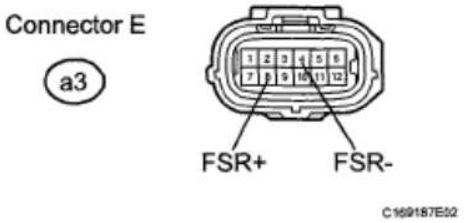


Fig. 122: Checking Occupant Classification System Circuit (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

7. **CHECK FLOOR WIRE (OPEN)**
   a. Disconnect the front seat wire RH connector from the floor wire.

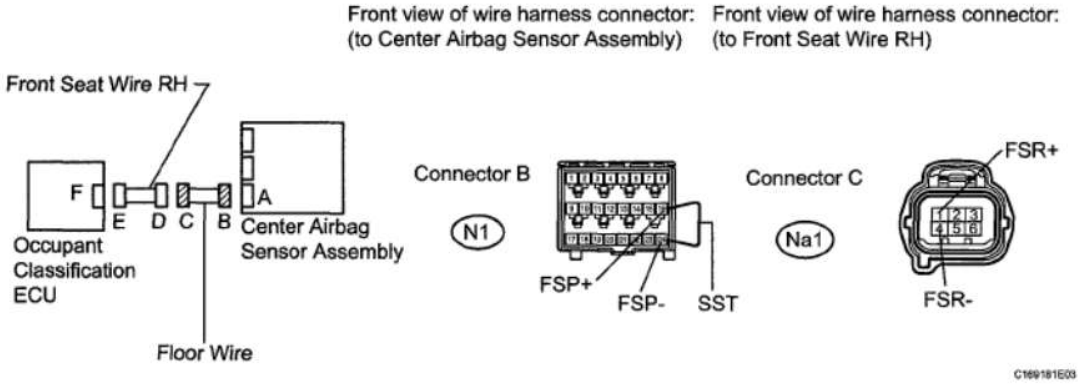


Fig. 123: Checking Floor Wire (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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HINT:

SST has already been inserted into connector B.

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
Na1-1 (FSR+) - Na1-4 (FSR-)	Always	Below 1 ohms

NG: REPLACE FLOOR WIRE

OK: REPLACE FRONT SEAT WIRE RH

8. **CHECK FLOOR WIRE (SHORT)**
   a. Disconnect the front seat wire RH connector from the floor wire.
   b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

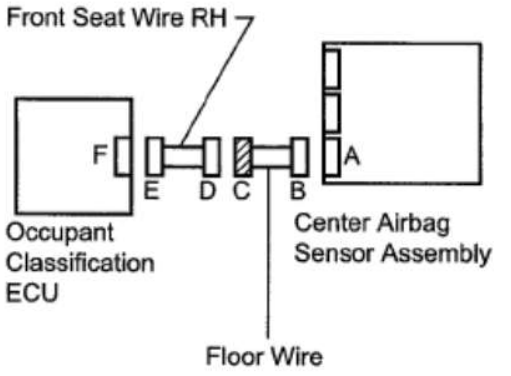
Tester Connection	Switch Condition	Specified Condition
Na1-1 (FSR+) - Na1-4 (FSR-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

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Front view of wire harness connector:
(to Front Seat Wire RH)

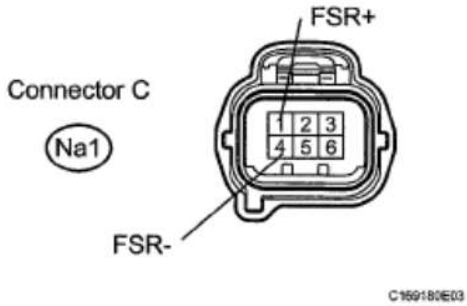


Fig. 124: Checking Floor Wire (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE FRONT SEAT WIRE RH

9. **CHECK FLOOR WIRE (SHORT TO B+)**
   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 front seat wire RH connector from the floor wire.
   d. Connect the negative (-) terminal cable to the battery.
   e. Turn the ignition switch on (IG).
   f. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
Na1-1 (FSR+) - Body ground	Ignition switch on (IG)	Below 1 V
Na1-4 (FSR-) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE FLOOR WIRE

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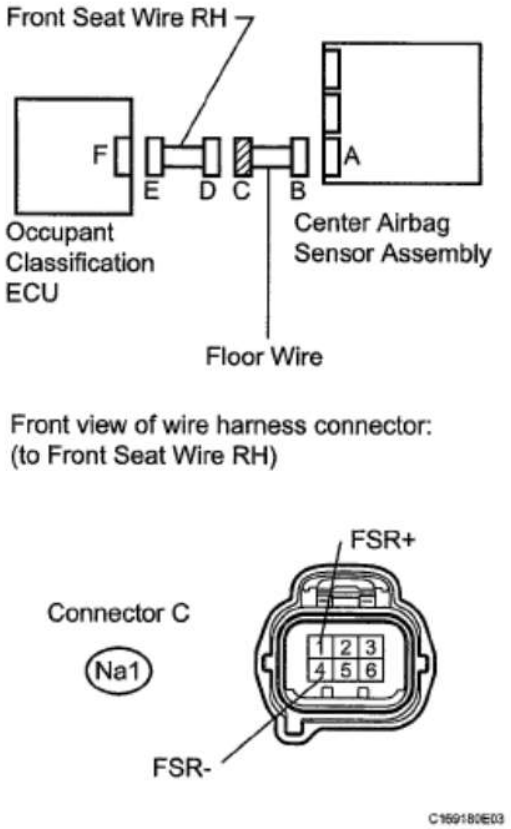


Fig. 125: Checking Floor Wire (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE FRONT SEAT WIRE RH

10. **CHECK FLOOR WIRE (SHORT TO GROUND)**
    a. Disconnect the front seat wire RH connector from the floor wire.
    b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

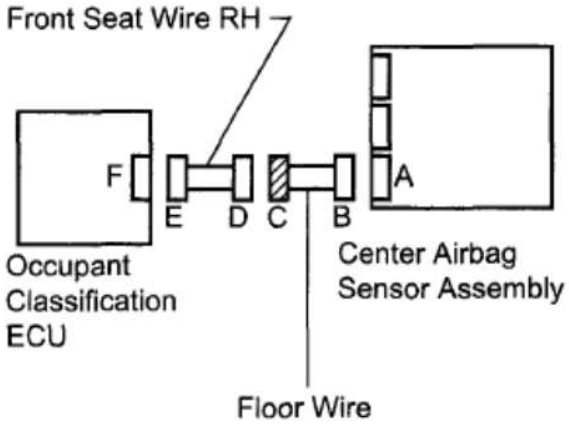
Tester Connection	Switch Condition	Specified Condition
Na1-1 (FSR+) - Body ground	Always	1 Mohms or higher
Na1-4 (FSR-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

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Front view of wire harness connector:
(to Front Seat Wire RH)

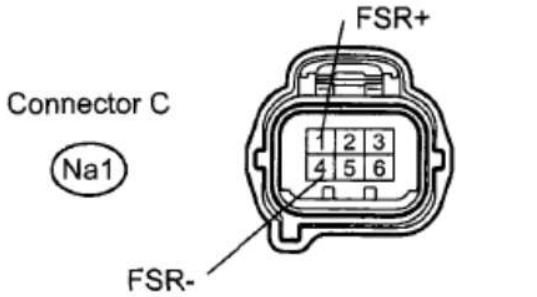


Fig. 126: Checking Floor Wire (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE FRONT SEAT WIRE RH

DTC B1653/35 SEAT POSITION AIRBAG SENSOR CIRCUIT MALFUNCTION

DESCRIPTION

The seat position airbag sensor circuit consists of the center airbag sensor assembly 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 REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
	• The center airbag sensor assembly receives a line short circuit	• Floor wire No. 2 • Front seat inner

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B1653/35	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. • Front seat inner belt assembly LH malfunction • Seat position airbag sensor malfunction • Center airbag sensor assembly malfunction	belt assembly LH • Seat position airbag sensor • Center airbag sensor assembly

WIRING DIAGRAM

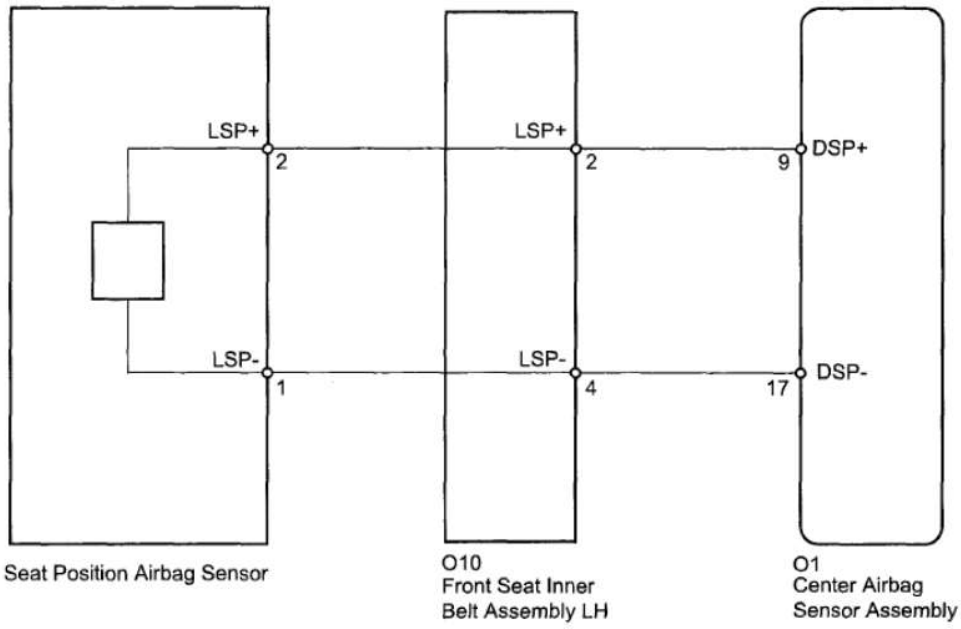


Fig. 127: Seat Position Airbag Sensor - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

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

   OK:

   The connectors are properly connected.

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HINT:

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

d. Disconnect the connectors from the center airbag sensor assembly, front seat inner belt assembly LH and the seat position airbag sensor.
e. Check that the connector terminals are not damaged.

OK:

The terminals are not deformed or damaged.

NG: REPLACE WIRE HARNESS

OK: Go to next step

2. **CHECK FLOOR WIRE NO. 2 (OPEN)**
   a. Connect the connectors to the front seat inner belt assembly LH and floor wire No. 2.

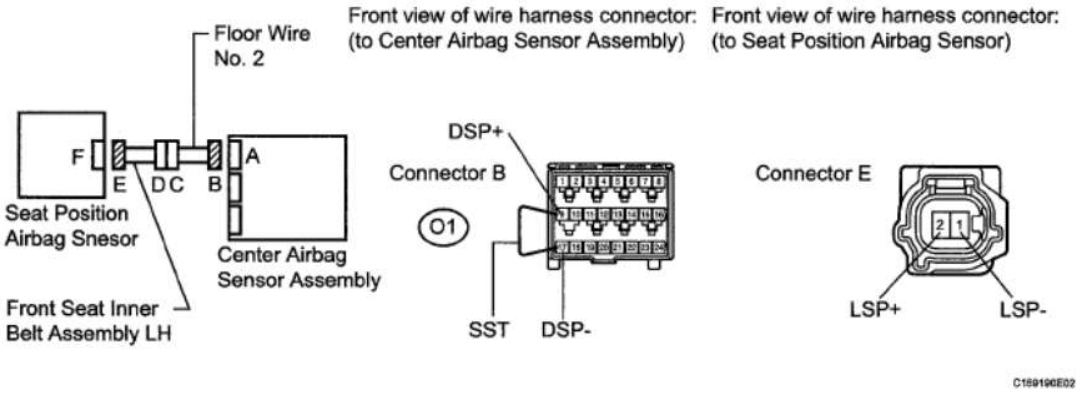


Fig. 128: Checking Floor Wire No. 2 (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   b. Using SST, connect terminals 9 (DSP+) and 17 (DSP-) of connector B.

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

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

Standard resistance

RESISTANCE SPECIFICATION

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Tester Connection	Switch Condition	Specified Condition
2 (LSP+) -1 (LSP-)	Always	Below 1 ohms

NG: Go to step 9

OK: Go to next step

3. **CHECK FLOOR WIRE NO. 2 (SHORT)**
   a. Disconnect SST from connector B.
   b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

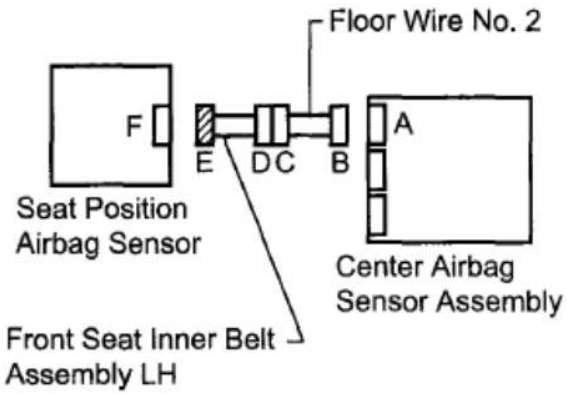
Tester Connection	Switch Condition	Specified Condition
2 (LSP+) -1 (LSP-)	Always	1 Mohms or higher

NG: Go to step 10

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Front view of wire harness connector:
(to Seat Position Airbag Sensor)

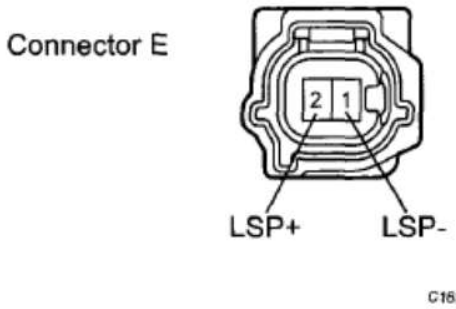


Fig. 129: Checking Floor Wire No. 2 (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

4. **CHECK FLOOR WIRE NO. 2 (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

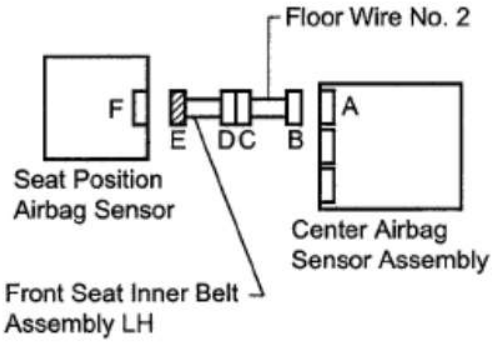
Standard voltage

VOLTAGE SPECIFICATION

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

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NG: Go to step 11



Front view of wire harness connector:
(to Seat Position Airbag Sensor)

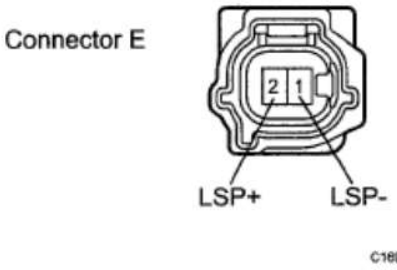


Fig. 130: Checking Floor Wire No. 2 (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

5. **CHECK FLOOR WIRE NO. 2 (SHORT TO GROUND)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

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

NG: Go to step 12

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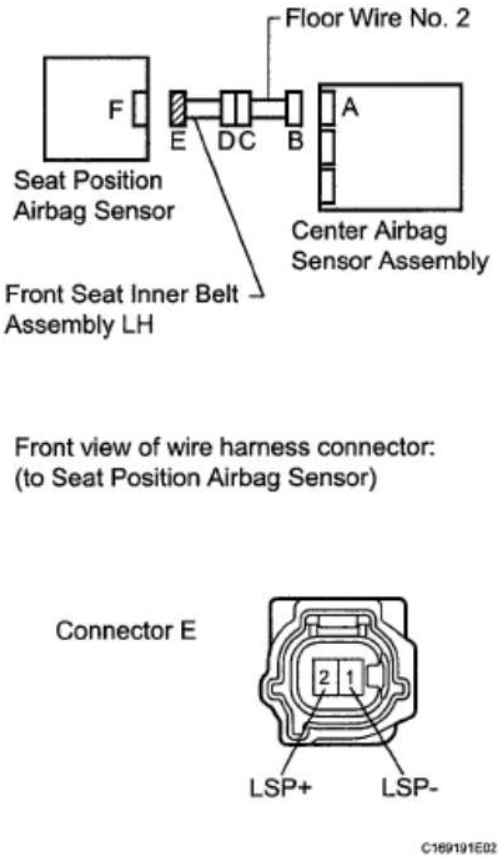


Fig. 131: Checking Floor Wire No. 2 (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **CHECK SEAT POSITION AIRBAG SENSOR**
   a. Connect the connectors to the center airbag sensor assembly and the seat position airbag sensor.
   b. Connect the negative (-) terminal cable to the battery.
   c. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   d. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   e. Turn the ignition switch off.
   f. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   g. Check for DTCs (See **DTC CHECK/CLEAR**).

   OK:

   DTC B1653/35 is not output.

   HINT:

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

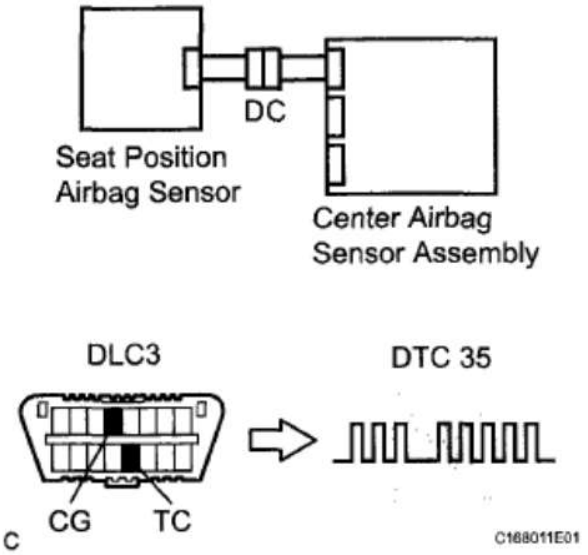


Fig. 132: Checking Seat Position Airbag Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: Go to step 7

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

7. **REPLACE SEAT POSITION AIRBAG SENSOR**
   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 seat position airbag sensor (See **REMOVAL**).

   HINT:

   Perform inspection using parts from a normal vehicle if possible.

8. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   c. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   d. Turn the ignition switch off.
   e. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   f. 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: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

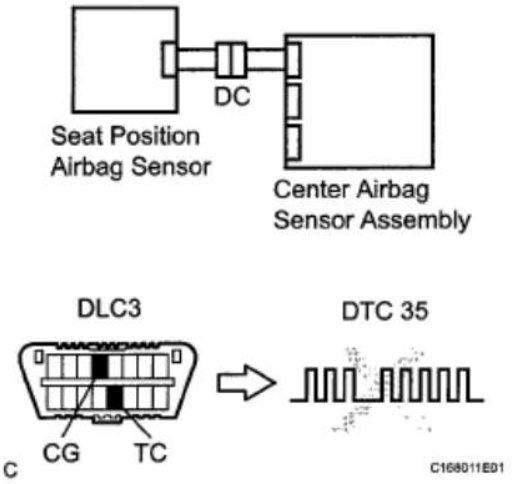


Fig. 133: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: END

9. **CHECK FLOOR WIRE NO. 2 (OPEN)**
   a. Disconnect the floor wire No. 2 from front seat inner belt assembly LH.

      HINT:

      SST has already been inserted into connector B.

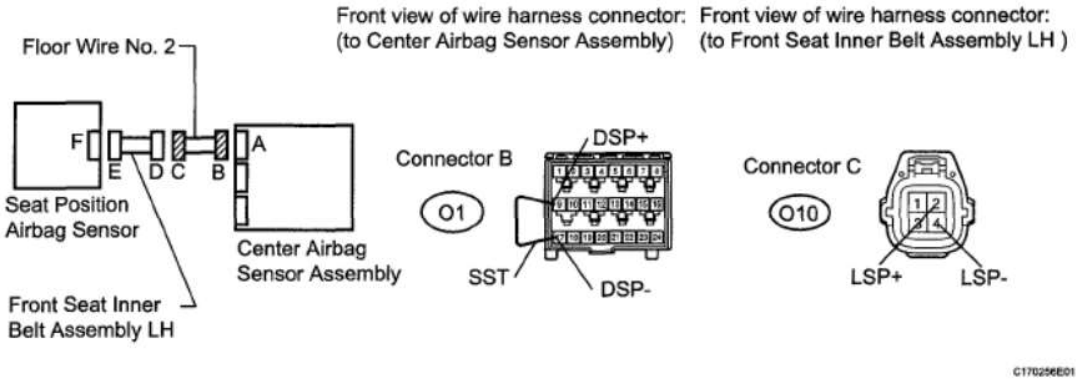


Fig. 134: Checking Floor Wire No. 2 (Open)

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

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O10-2 (LSP+) - O10-4 (LSP-)	Always	Below 1 ohms

NG: REPLACE FLOOR WIRE NO. 2

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

10. **CHECK FLOOR WIRE NO. 2 (SHORT)**
    a. Disconnect the floor wire No. 2 from front seat belt inner belt assembly LH.
    b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O10-2 (LSP+) - O10-4 (LSP-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE NO. 2

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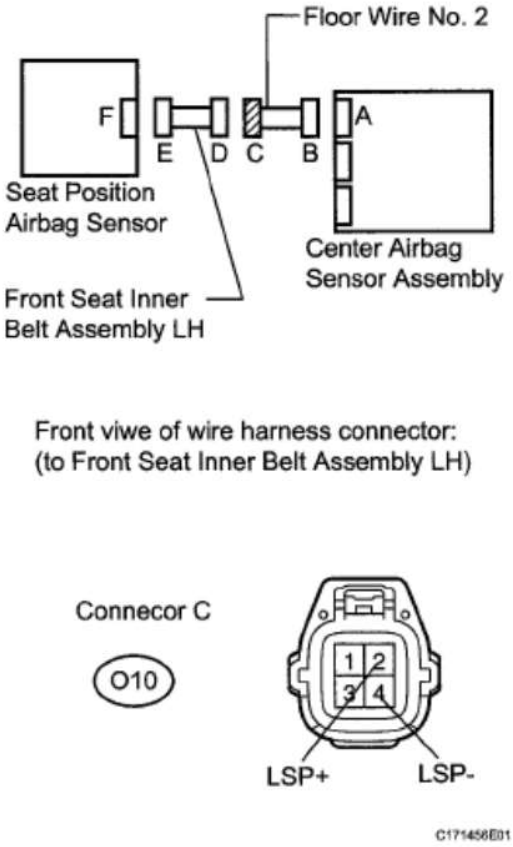


Fig. 135: Checking Floor Wire No. 2 (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

11. **CHECK FLOOR WIRE NO. 2 (SHORT TO B+)**
    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 floor wire No. 2 from front seat inner belt assembly LH.
    d. Connect the negative (-) terminal cable to the battery.
    e. Turn the ignition switch on (IG).
    f. Measure the voltage according to the value (s) in the table below.

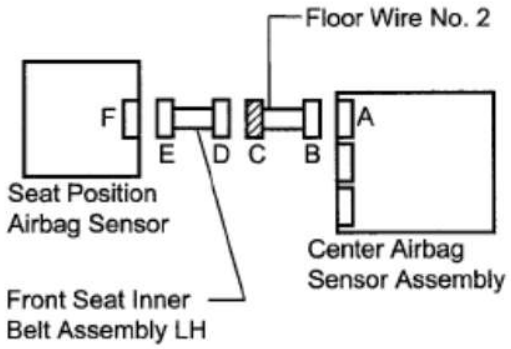
Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O10-2 (LSP+) - Body ground	Ignition switch on (IG)	Below 1 V
O10-4 (LSP-) - Body ground	Ignition switch on (IG)	Below 1 V

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NG: REPLACE FLOOR WIRE NO. 2



Front viwe of wire harness connector:
(to Front Seat Inner Belt Assembly LH)

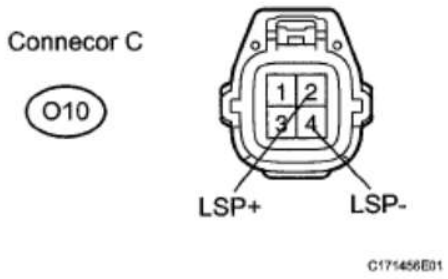


Fig. 136: Checking Floor Wire No. 2 (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

12. **CHECK FLOOR WIRE NO. 2 (SHORT TO GROUND)**
    a. Disconnect the floor wire No. 2 from front seat inner belt assembly LH.
    b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O10-2 (LSP+) - Body ground	Always	1 Mohms or higher
O10-4 (LSP-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE NO. 2

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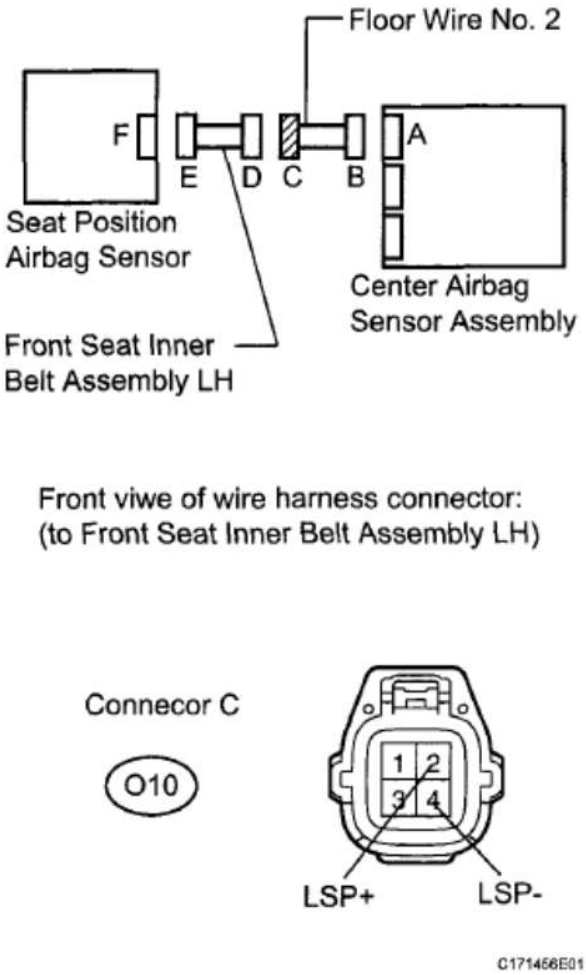


Fig. 137: Checking Floor Wire No. 2 (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

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

DESCRIPTION

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

DTC B1655/37 is recorded when a malfunction is detected in the driver side seat belt buckle switch circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
	• The center airbag sensor assembly receives a line short circuit signal, an open circuit signal, a short circuit to	• Floor wire No. 2 • Front seat inner belt

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B1655/37	ground signal or a short circuit to B+ signal in the driver side seat belt buckle switch circuit for 2 seconds. • Front seat inner belt assembly LH malfunction • Center airbag sensor assembly malfunction	assembly LH (Driver side seat belt buckle switch) • Center airbag sensor assembly

WIRING DIAGRAM

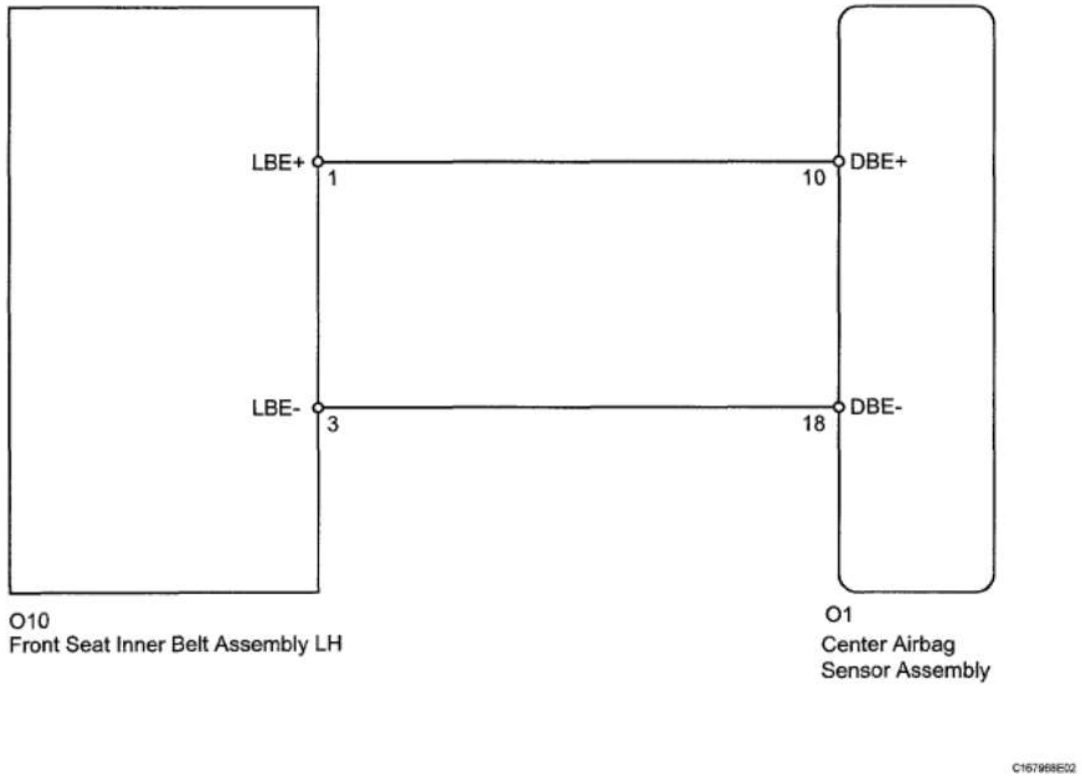


Fig. 138: Driver Side Seat Belt Buckle Switch - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

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

   OK:

   The connectors are properly connected.

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HINT:

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

d. Disconnect the connectors from the center airbag sensor assembly and the front seat inner belt assembly LH.
e. Check that the connector terminals are not damaged.

OK:

The terminals are not deformed or damaged.

NG: REPLACE FLOOR WIRE NO. 2

OK: Go to next step

2. **CHECK FLOOR WIRE NO. 2 (OPEN)**
   a. Using SST, connect terminals 10 (DBE+) and 18 (DBE-) of connector B.

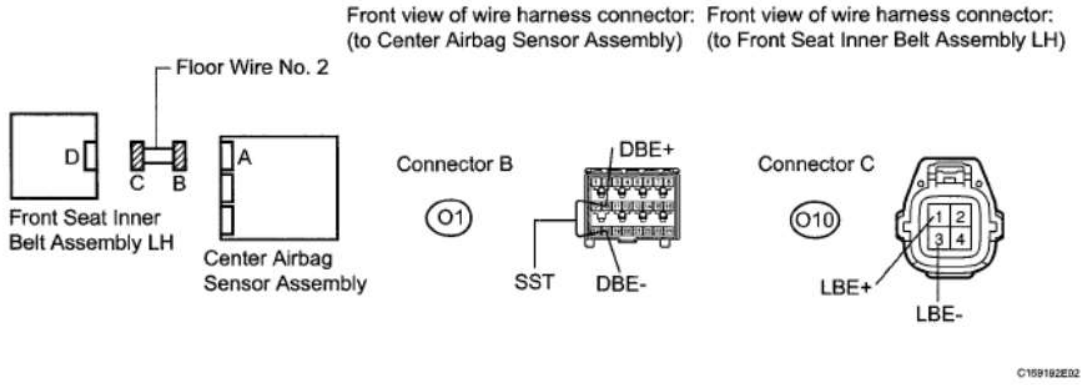


Fig. 139: Checking Floor Wire No. 2 (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

SST 09843-18040

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Condition	Specified Condition

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O10-1 (LBE+) - O10-3 (LBE-)	Always	Below 1 ohms

NG: REPLACE FLOOR WIRE NO. 2

OK: Go to next step

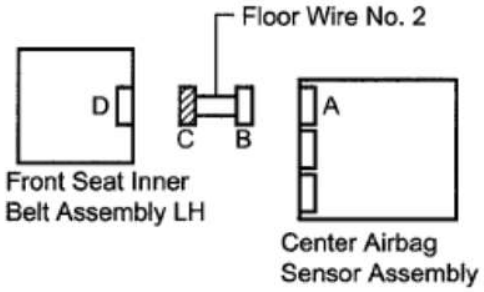
3. **CHECK FLOOR WIRE NO. 2 (SHORT)**
   a. Disconnect SST from connector B.
   b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Condition	Specified Condition
O10-1 (LBE+) - O10-3 (LBE-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE NO. 2



Front view of wire harness connector:
(to Front Seat Inner Belt Assembly LH)

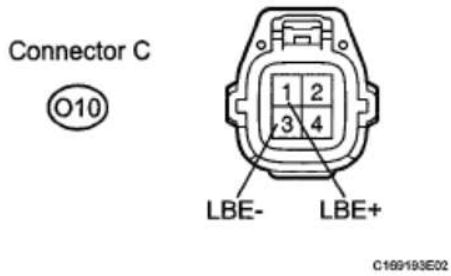


Fig. 140: Checking Floor Wire No. 2 (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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OK: Go to next step

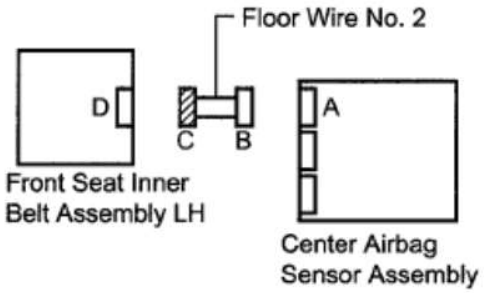
4. **CHECK FLOOR WIRE NO. 2 (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Condition	Specified Condition
O10-1 (LBE+) - Body ground	Ignition switch on (IG)	Below 1 V
O10-3 (LBE-) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE FLOOR WIRE NO. 2



Front view of wire harness connector:
(to Front Seat Inner Belt Assembly LH)

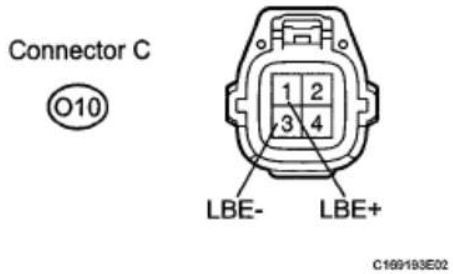


Fig. 141: Checking Floor Wire No. 2 (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

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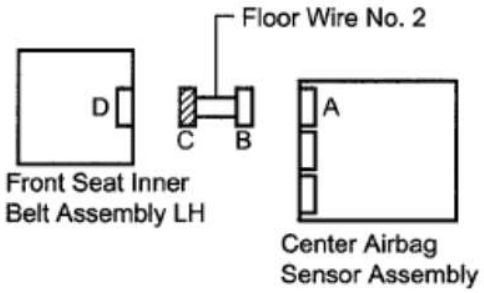
5. **CHECK FLOOR WIRE NO. 2 (SHORT TO GROUND)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Condition	Specified Condition
O10-1 (LBE+) - Body ground	Always	1 Mohms or higher
O10-3 (LBE-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE NO. 2



Front view of wire harness connector:
(to Front Seat Inner Belt Assembly LH)

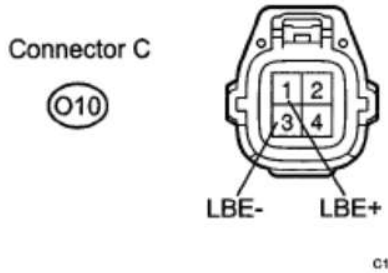


Fig. 142: Checking Floor Wire No. 2 (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **CHECK FRONT SEAT INNER BELT ASSEMBLY LH**
   a. Connect the connectors to the center airbag sensor assembly and the front seat inner belt assembly

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LH.

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

OK:

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.

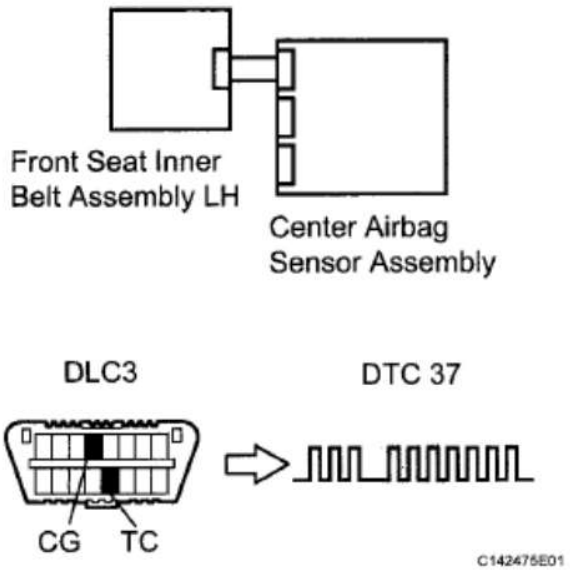


Fig. 143: Checking Front Seat Inner Belt Assembly LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: Go to step 7

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

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

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HINT:

Perform inspection using parts from a normal vehicle if possible.

8. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   c. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   d. Turn the ignition switch off.
   e. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   f. Check for DTCs (See **DTC CHECK/CLEAR**).

   OK:

   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: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

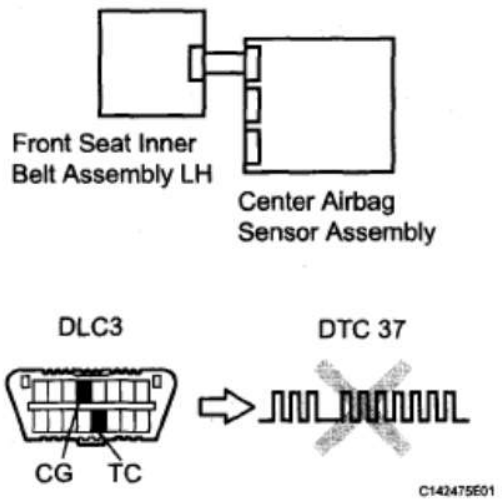


Fig. 144: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: END

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

DESCRIPTION

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

The passenger airbag ON/OFF indicator indicates the operation condition of the front passenger airbag assembly, front passenger side knee airbag assembly, front seat side airbag assembly RH and front seat outer be\\lt assembly RH.

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

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1660/43	• The center airbag sensor assembly receives an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the passenger airbag ON/OFF indicator circuit for 2 seconds. • Passenger airbag ON/OFF indicator malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Instrument panel wire No. 2 • Multi-display computer assembly (w/ Navigation system) • Hazard switch assembly (w/o Navigation system) • Center airbag sensor assembly

WIRING DIAGRAM

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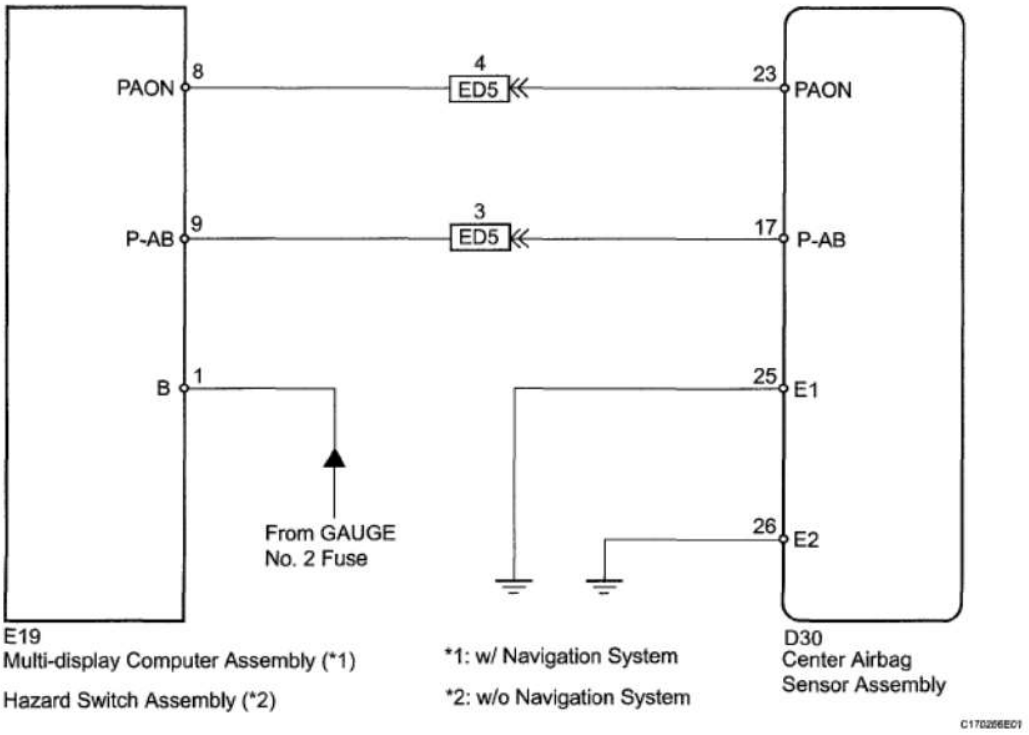


Fig. 145: Passenger Airbag ON/OFF Indicator - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR CONDITION**
   a. Turn the ignition switch on (IG).
   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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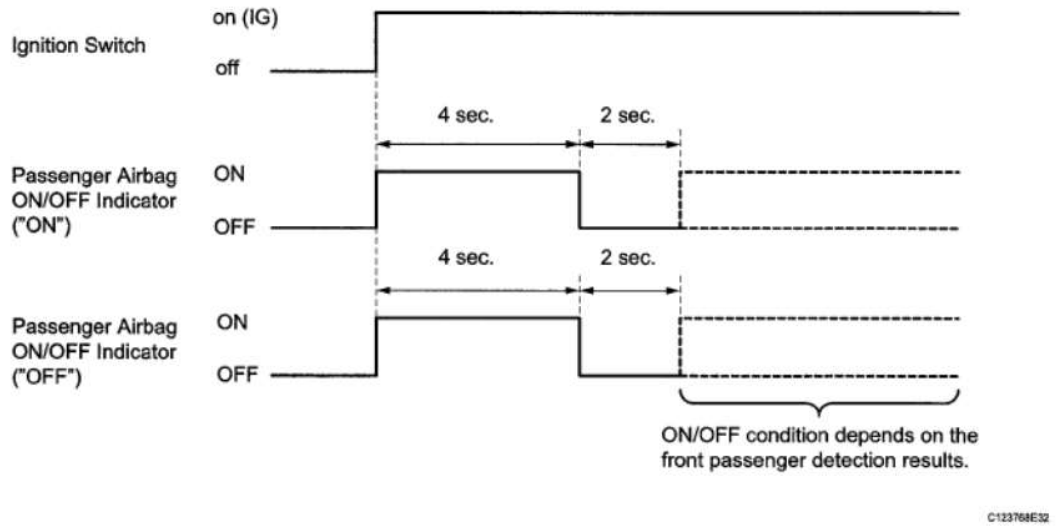


Fig. 146: Passenger Airbag ON/OFF Indicator Timing Chart
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Result

RESULT CHART

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

B: Go to step 9

A: Go to next step

2. **CHECK CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. w/ Navigation system:
      1. Check that the connectors are properly connected to the center airbag sensor assembly and the multi-display computer assembly. Also check that the connectors that link the instrument panel wire No. 2 and instrument panel wire 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.

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2. Disconnect the connectors from the center airbag sensor assembly and the multi-display computer assembly. Also disconnect the connectors that link the instrument panel wire No. 2 and instrument panel wire.
3. Check that the terminals of connectors are not damaged.

OK:

The terminals are not deformed or damaged.

d. w/o Navigation system:

1. Check that the connectors are properly connected to the center airbag sensor assembly and the hazard switch assembly. Also check that the connectors that link the instrument panel wire No. 2 and instrument panel wire 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.

2. Disconnect the connectors from the center airbag sensor assembly and the hazard switch assembly. Also disconnect the connectors that link the instrument panel wire No. 2 and instrument panel wire.
3. Check that the terminals of connectors are not damaged.

OK:

The terminals are not deformed or damaged.

NG: REPLACE WIRE HARNESS

OK: Go to next step

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

a. Connect the connectors that link the instrument panel wire No. 2 and instrument panel wire.
b. w/ Navigation system:

Connect the connector to the multi-display computer assembly.

c. w/o Navigation system:

Connect the connector to the hazard switch assembly.

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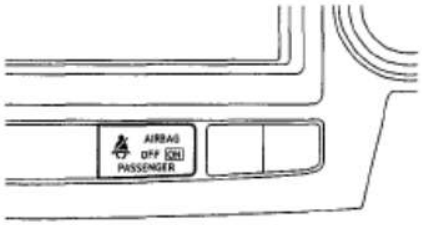
d. Connect the negative (-) terminal cable to the battery.
e. Turn the ignition switch on (IG).
f. Check the passenger airbag ON/OFF indicator operation.

OK:

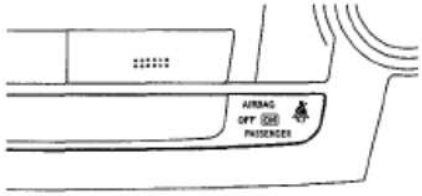
The passenger airbag ON/OFF indicator does not come on.

NG: Go to step 5

w/ Navigation System:



w/o Navigation System:



H C166874E02

Fig. 147: Passenger Airbag ON/OFF Indicator Button
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

4. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Connect the connector to the center airbag sensor assembly.
   b. Connect the negative (-) terminal cable to the battery.
   c. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   d. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   e. Turn the ignition switch off.
   f. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   g. Check for DTCs (See **DTC CHECK/CLEAR**).

OK:

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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 **ON-VEHICLE INSPECTION**)

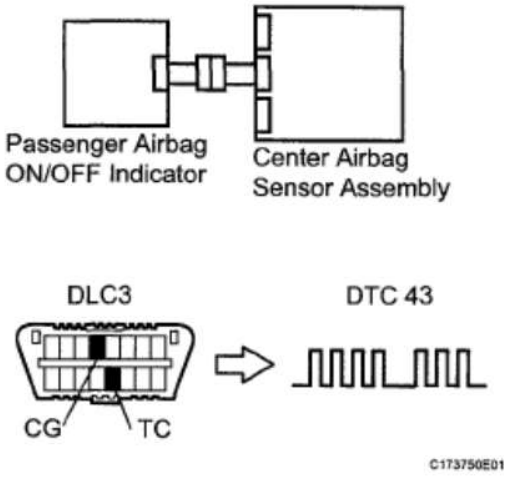


Fig. 148: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

5. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR CIRCUIT (OPEN)**
   a. Turn the ignition switch off.

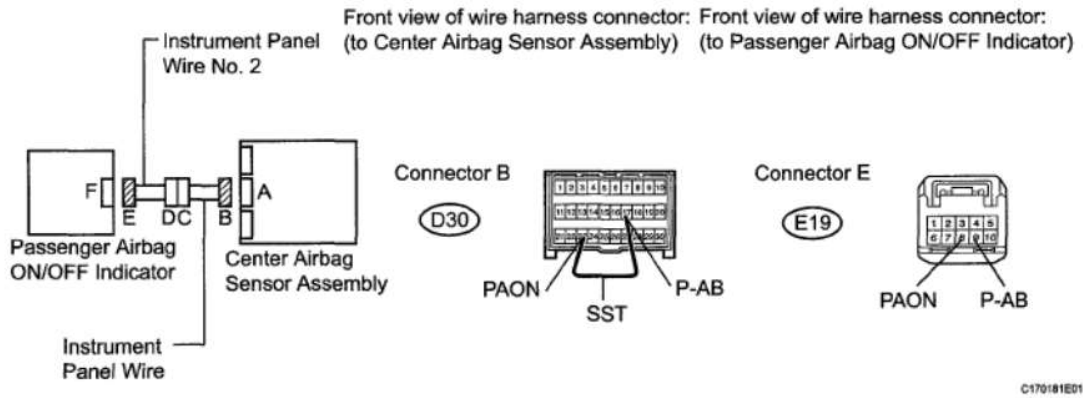


Fig. 149: Checking Passenger Airbag ON/OFF Indicator Circuit (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

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c. w/ Navigation system:

Disconnect the connector from the multi-display computer assembly.

d. w/o Navigation system:

Disconnect the connector from the hazard switch assembly.

e. Using SST, connect terminals 23 (PAON) and 17 (P-AB) of connector B.

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

SST 09843-18040

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
E19-8 (PAON) - E19-9 (P-AB)	Always	Below 1 ohms

NG: Go to step 17

OK: Go to next step

6. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR CIRCUIT (SHORT)**
   a. Disconnect SST from connector B.
   b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

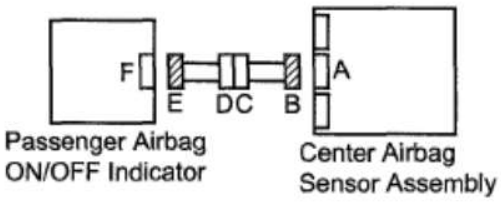
Tester Connection	Switch Condition	Specified Condition
E19-8 (PAON) - E19-9 (P-AB)	Always	1 Mohms or higher

NG: Go to step 18

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Front view of wire harness connetor:
(to Passenger Airbag ON/OFF
Indicator)

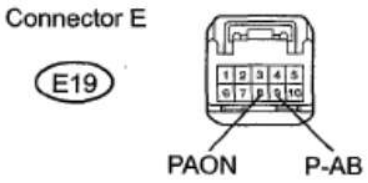


Fig. 150: Checking Passenger Airbag ON/OFF Indicator Circuit (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

7. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR CIRCUIT (SHORT TO GROUND)**
   a. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

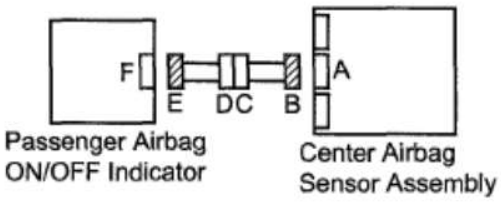
Tester Connection	Switch Condition	Specified Condition
E19-8 (PAON) -Body ground	Always	1 Mohms or higher
E19-9 (P-AB) -Body ground	Always	1 Mohms or higher

NG: Go to step 19

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Front view of wire harness connetor:
(to Passenger Airbag ON/OFF
Indicator)

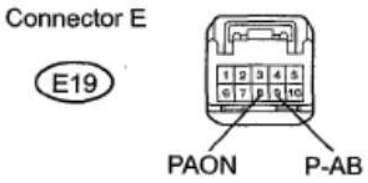


Fig. 151: Checking Passenger Airbag ON/OFF Indicator Circuit (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

8. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR CIRCUIT (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
E19-8 (PAON) -Body ground	Ignition switch on (IG)	Below 1 V
E19-9 (P-AB) - Body ground	Ignition switch on (IG)	Below 1 V

Result

RESULT CHART

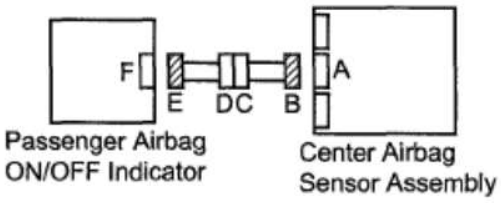
Result	Proceed to
OK (w/ Navigation system)	A

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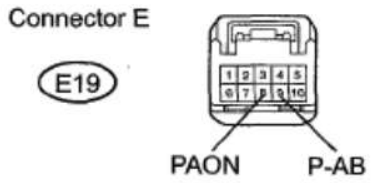
OK (w/o Navigation system)	B
NG	C

B: REPLACE HAZARD SWITCH ASSEMBLY (See **REMOVAL**)

C: Go to step 20



Front view of wire harness connetor:
(to Passenger Airbag ON/OFF Indicator)



C170182E01

Fig. 152: Checking Passenger Airbag ON/OFF Indicator Circuit (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

A: REPLACE MULTI-DISPLAY COMPUTER ASSEMBLY (See **REMOVAL**)

9. **CHECK CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. w/ Navigation system:
      1. Check that the connectors are properly connected to the center airbag sensor assembly and the multi-display computer assembly. Also check that the connectors that link the instrument panel wire No. 2 and instrument panel wire 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.

2. Disconnect the connectors from the center airbag sensor assembly and the multi-display computer assembly. Also disconnect the connectors that link the instrument panel wire No. 2 and instrument panel wire.
3. Check that the terminals of connectors are not damaged.

OK:

The terminals are not deformed or damaged.

d. w/o Navigation system:

1. Check that the connectors are properly connected to the center airbag sensor assembly and the hazard switch assembly. Also check that the connectors that link the instrument panel wire No. 2 and instrument panel wire 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.

2. Disconnect the connectors from the center airbag sensor assembly and the hazard switch assembly. Also disconnect the connectors that link the instrument panel wire No. 2 and instrument panel wire.
3. Check that the terminals of connectors are not damaged.

OK:

The terminals are not deformed or damaged.

NG: REPLACE WIRE HARNESS

OK: Go to next step

10. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR CIRCUIT (OPEN)**

a. Connect the connectors that link the instrument panel wire No. 2 and instrument panel wire.

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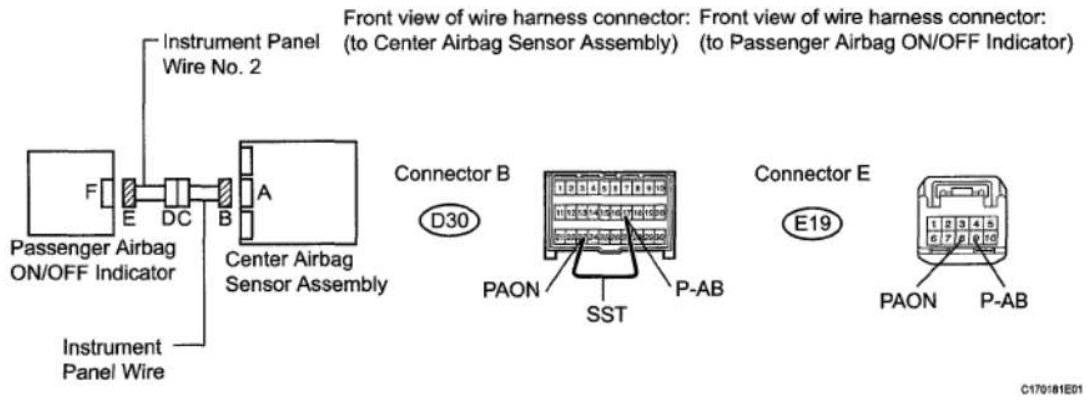


Fig. 153: Checking Passenger Airbag ON/OFF Indicator Circuit (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Using SST, connect terminals 23 (PAON) and 17 (P-AB) of connector B.

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

SST 09843-18040

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
E19-8 (PAON) -E19-9 (P-AB)	Always	Below 1 ohms

NG: Go to step 17

OK: Go to next step

11. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR CIRCUIT (SHORT)**
    a. Disconnect SST from connector B.
    b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

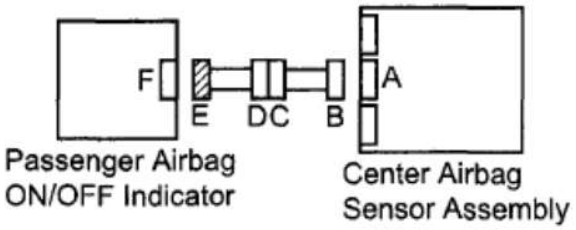
Tester Connection	Switch Condition	Specified Condition
E19-8 (PAON) -E19-9 (P-AB)	Always	1 Mohms or higher

NG: Go to step 18

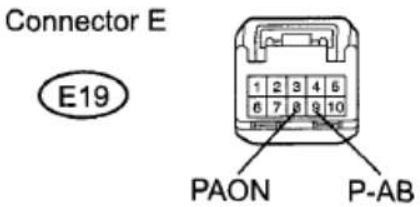
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Front view of wire harness connetor:
(to Passenger Airbag ON/OFF
Indicator)



C170182E01

Fig. 154: Checking Passenger Airbag ON/OFF Indicator Circuit (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

12. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR CIRCUIT (SHORT TO GROUND)**
    a. Measure the resistance according to the value (s) in the table below.

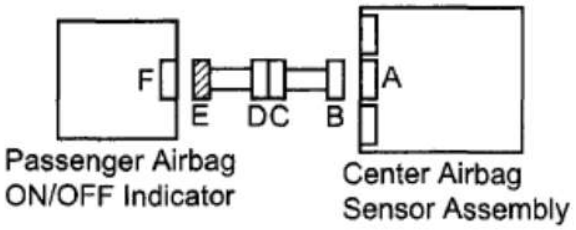
Standard resistance

RESISTANCE SPECIFICATION

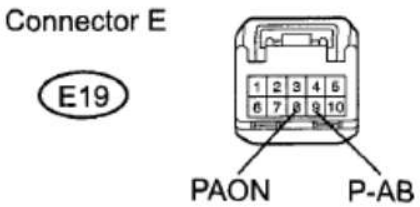
Tester Connection	Switch Condition	Specified Condition
E19-8 (PAON) - Body ground	Always	1 Mohms or higher
E19-9 (P-AB) -Body ground	Always	1 Mohms or higher

NG: Go to step 19

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Front view of wire harness connetor:
(to Passenger Airbag ON/OFF Indicator)



C170182E01

Fig. 155: Checking Passenger Airbag ON/OFF Indicator Circuit (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

13. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR CIRCUIT (SHORT TO B+)**
    a. Connect the negative (-) terminal cable to the battery.
    b. Turn the ignition switch on (IG).
    c. Measure the voltage according to the value (s) in the table below.

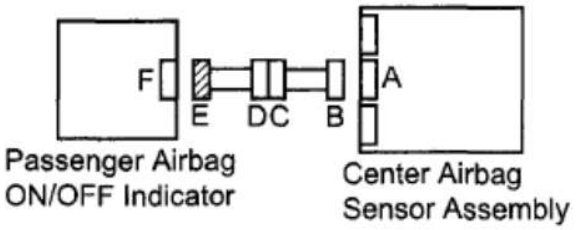
Standard voltage

VOLTAGE SPECIFICATION

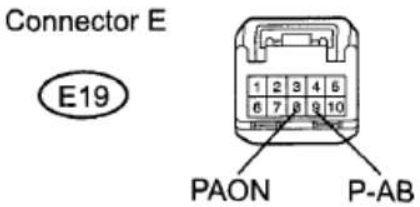
Tester Connection	Switch Condition	Specified Condition
E19-8 (PAON) - Body ground	Ignition switch on (IG)	Below 1 V
E19-9 (P-AB) -Body ground	Ignition switch on (IG)	Below 1 V

NG: Go to step 20

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Front view of wire harness connetor:
(to Passenger Airbag ON/OFF Indicator)



C170182E01

Fig. 156: Checking Passenger Airbag ON/OFF Indicator Circuit (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

14. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR (SOURCE VOLTAGE)**
    a. Turn the ignition switch on (IG).
    b. Measure the voltage according to the value (s) in the table below.

Standard voltage

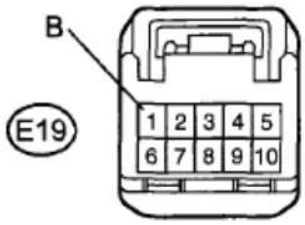
VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
E19-1 (B) - Body ground	Ignition switch on (IG)	10 to 14 V

NG: REPLACE WIRE HARNESS (PASSENGER AIRBAG ON/OFF INDICATOR - BATTERY) OR BATTERY

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Front view of wire harness connector:
(to Passenger Airbag ON/OFF Indicator)



C159196E02

Fig. 157: Checking Passenger Airbag ON/OFF Indicator (Source Voltage)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

15. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
    c. w/ Navigation system

       Connect the connector to the multi-display computer assembly.

    d. w/o Navigation system

       Connect the connector to the hazard switch assembly.

    e. Connect the negative (-) terminal cable to the battery.
    f. Turn the ignition switch on (IG).
    g. Check the indicator according to the conditions in the table below.

Indicator condition

PASSENGER AIRBAG ON/OFF INDICATOR CHART

Tester Connection	Switch Condition	Passenger Airbag ON/OFF Indicator
D30-23 (PAON) - Body ground	Ignition switch on (IG)	"ON" comes on
D30-17 (P-AB) - Body ground	Ignition switch on (IG)	"OFF" comes on

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

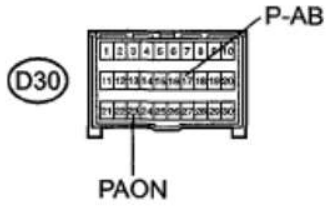


Fig. 158: Checking Passenger Airbag ON/OFF Indicator
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Result

RESULT CHART

Result	Proceed to
OK	A
NG (w/ Navigation system)	B
NG (w/o Navigation system)	C

B: REPLACE MULTI-DISPLAY COMPUTER ASSEMBLY (See **REMOVAL**)

C: REPLACE HAZARD SWITCH ASSEMBLY (See **REMOVAL**)

A: Go to next step

16. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
    c. Connect the connector to the center airbag sensor assembly.
    d. Connect the negative (-) terminal cable to the battery.
    e. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    f. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
    g. Turn the ignition switch off.
    h. Turn the ignition switch on (IG), and wait for at least 60 seconds.
    i. Check for DTCs (See **DTC CHECK/CLEAR**).

    OK:

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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.

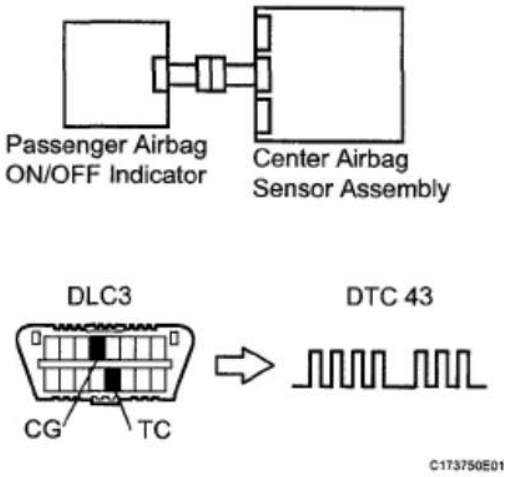


Fig. 159: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

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

17. **CHECK INSTRUMENT PANEL WIRE (OPEN)**
    a. Disconnect the instrument panel wire from the instrument panel wire No. 2.

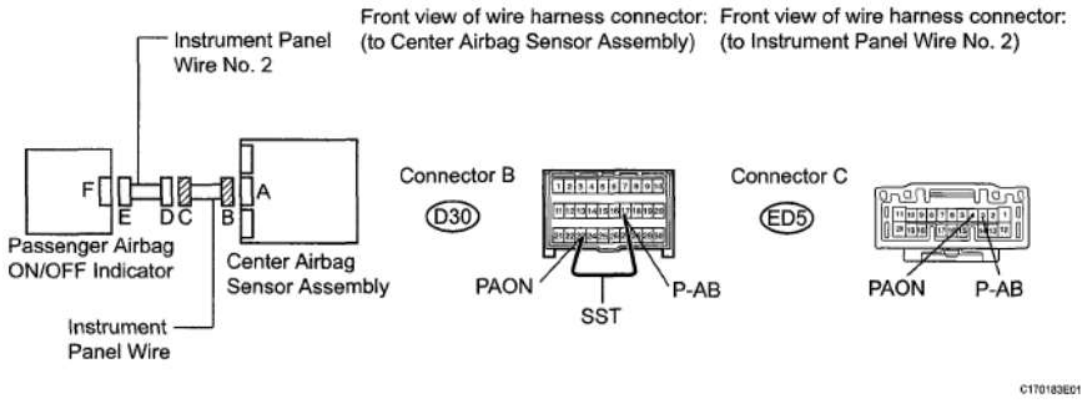


Fig. 160: Checking Instrument Panel Wire (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

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SST has already been inserted into connector B.

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
ED5-4 (PAON) - ED5-3 (P-AB)	Always	Below 1 ohms

NG: REPLACE INSTRUMENT PANEL WIRE

OK: REPLACE INSTRUMENT PANEL WIRE NO. 2

18. **CHECK INSTRUMENT PANEL WIRE (SHORT)**
    a. Disconnect the instrument panel wire from the instrument panel wire No. 2.
    b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
ED5-4 (PAON) - ED5-3 (P-AB)	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE

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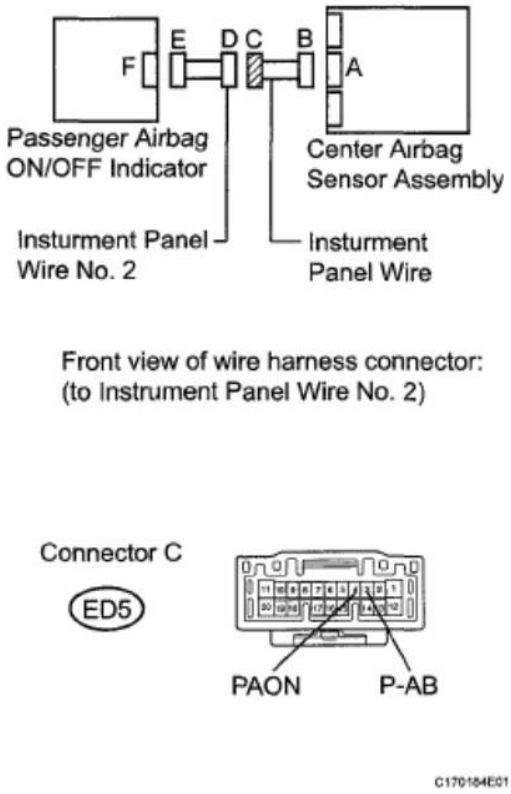


Fig. 161: Checking Instrument Panel Wire (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE INSTRUMENT PANEL WIRE NO. 2

19. **CHECK INSTRUMENT PANEL WIRE (SHORT TO GROUND)**
    a. Disconnect the instrument panel wire from the instrument panel wire No. 2.
    b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
ED5-4 (PAON) - Body ground	Always	1 Mohms or higher
ED5-3 (P-AB) - Body ground	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE

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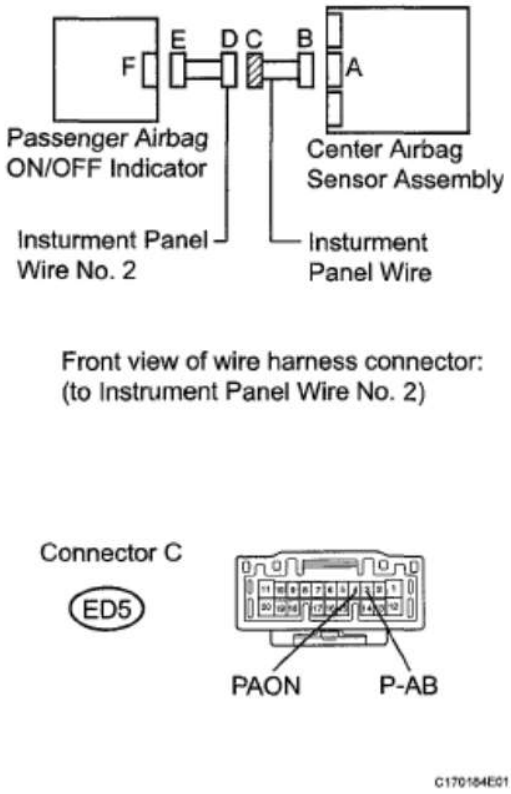


Fig. 162: Checking Instrument Panel Wire (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE INSTRUMENT PANEL WIRE NO. 2

20. **CHECK INSTRUMENT PANEL WIRE (SHORT TO B+)**
    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 instrument panel wire from the instrument panel wire No. 2.
    d. Connect the negative (-) terminal cable to the battery.
    e. Turn the ignition switch on (IG).
    f. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
ED5-4 (PAON) - Body ground	Ignition switch on (IG)	Below 1 V
ED5-3 (P-AB) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE INSTRUMENT PANEL WIRE

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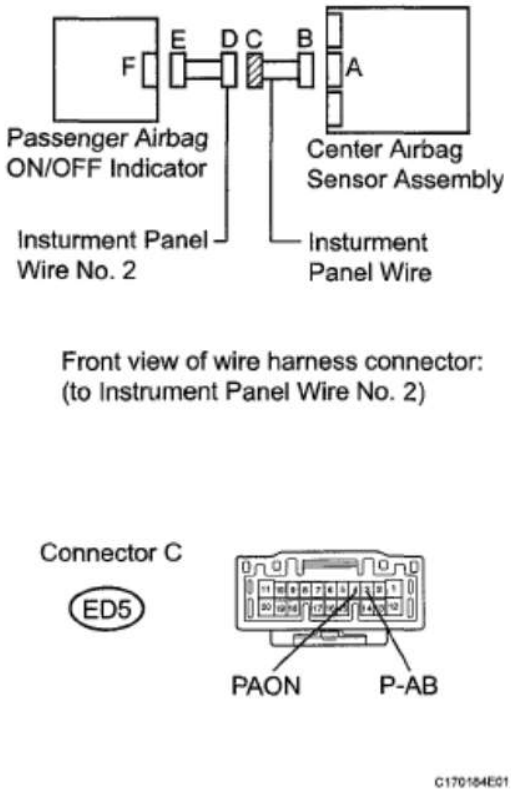


Fig. 163: Checking Instrument Panel Wire (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE INSTRUMENT PANEL WIRE NO. 2

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

DESCRIPTION

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

The circuit 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 REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1800/51	• The center airbag sensor assembly receives a line short circuit signal 5 times in the driver side squib circuit during primary check. • Driver side squib malfunction	• Instrument panel wire • Spiral cable • Steering pad

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	• Spiral cable malfunction • Center airbag sensor assembly malfunction	(Driver side squib) • Center airbag sensor assembly
B1801/51	• The center airbag sensor assembly receives an open circuit signal in the driver side squib circuit for 2 seconds. • Driver side squib malfunction • Spiral cable malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib) • Center airbag sensor assembly
B1802/51	• The center airbag sensor assembly 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 assembly malfunction	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib) • Center airbag sensor assembly
B1803/51	• The center airbag sensor assembly 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 assembly malfunction	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib) • Center airbag sensor assembly

WIRING DIAGRAM

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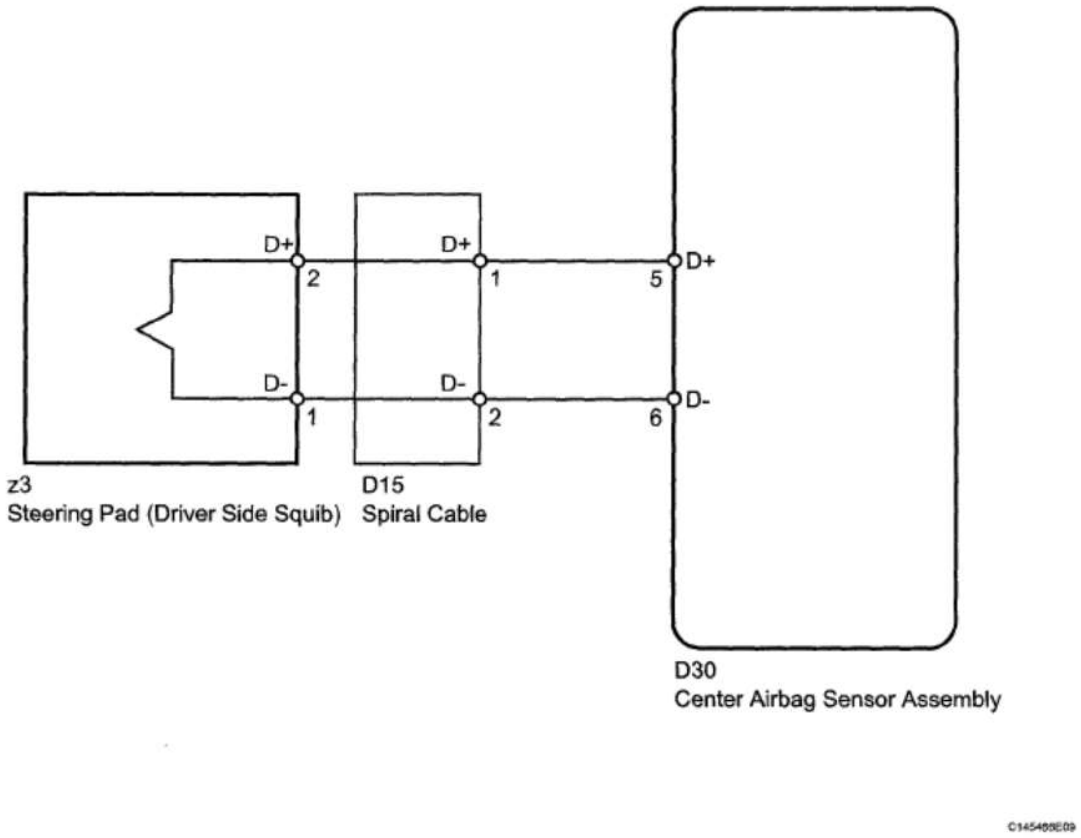


Fig. 164: Steering Pad (Driver Side Squib) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting the "check mode" (signal check) with Techstream (See **CHECK MODE PROCEDURE**).
- After selecting the "check mode" (signal check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (See **DIAGNOSIS SYSTEM**).

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

      OK:

      The connectors are properly connected.

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HINT:

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

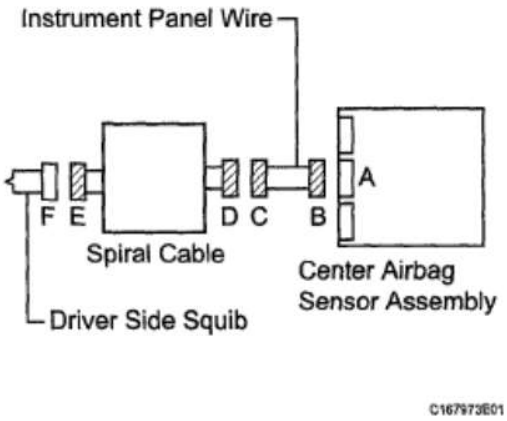


Fig. 165: Checking Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Disconnect the connectors from the steering pad, spiral cable and center airbag sensor assembly.
e. Check that the connectors of the terminals are not damaged.

OK:

The terminals are not deformed or damaged.

f. Check that the spiral cable connector (on the steering pad side) is not damaged.

OK:

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

NG: REPLACE WIRE HARNESS

OK: Go to next step

2. **CHECK STEERING PAD (DRIVER SIDE SQUIB)**
   a. Connect the instrument panel wire to the center airbag sensor assembly and spiral cable.
   b. Connect SST (resistance 2.1 ohms) 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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NOTE:

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

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

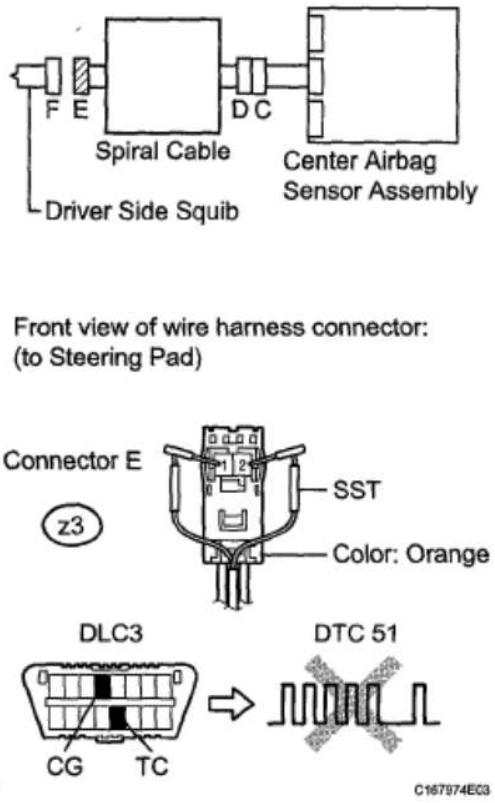


Fig. 166: Checking Steering Pad (Driver Side Squib)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

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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: Go to step 3

OK: REPLACE STEERING PAD

3. **CHECK DRIVER SIDE SQUIB CIRCUIT**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Disconnect SST from connector E.
   d. Disconnect the instrument panel wire from center airbag sensor assembly.
   e. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

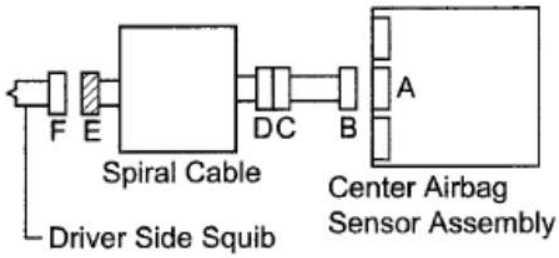
Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
z3-1 (D-) - Body ground	Ignition switch on (IG)	Below 1 V
z3-2 (D+) - Body ground	Ignition switch on (IG)	Below 1 V

   f. Check for an open in the circuit.
      1. Turn the ignition switch off.
      2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
      3. Measure the resistance according to the value (s) in the table below.

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Front view of wire harness connector:
(to Steering Pad)

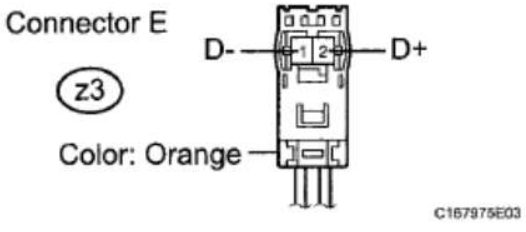


Fig. 167: Checking Driver Side Squib Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
z3-1 (D-) - z3-2 (D+)	Always	Below 1 ohms

g. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

      Standard resistance

      RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
z3-1 (D-) - Body ground	Always	1 Mohms or higher
z3-2 (D+) - Body ground	Always	1 Mohms or higher

h. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector B (See **DIAGNOSIS SYSTEM**).
   2. Measure the resistance according to the value (s) in the table below.

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Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
z3-1 (D-) - z3-2 (D+)	Always	1 Mohms or higher

NG: Go to step 5

OK: Go to next step

4. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the steering pad and the center airbag sensor assembly.
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG), 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.

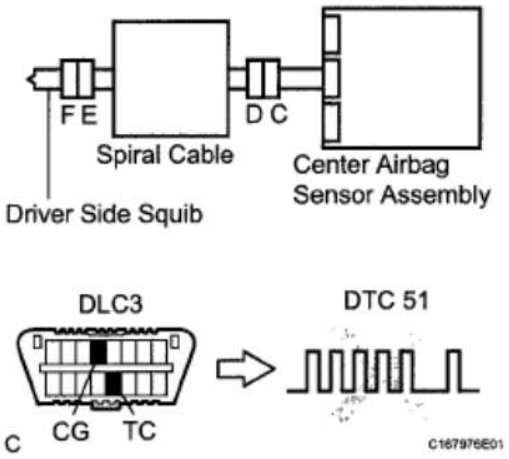


Fig. 168: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

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

5. **CHECK INSTRUMENT PANEL WIRE**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Disconnect the instrument panel wire from the spiral cable.
   c. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

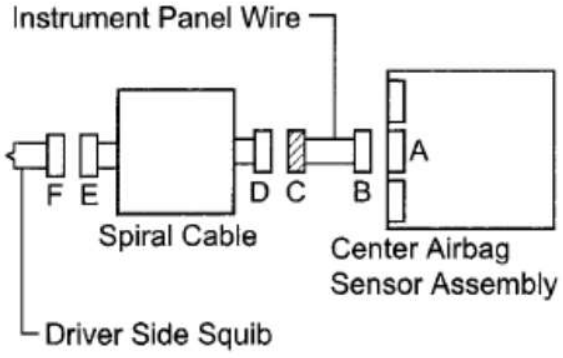
Tester Connection	Switch Condition	Specified Condition
D15-1 (D+) - Body ground	Ignition switch on (IG)	Below 1 V
D15-2 (D-) - Body ground	Ignition switch on (IG)	Below 1 V

   d. Check for an open in the circuit.
      1. Turn the ignition switch off.
      2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
      3. Measure the resistance according to the value (s) in the table below.

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Front view of wire harness connector:
(to Spiral Cable)

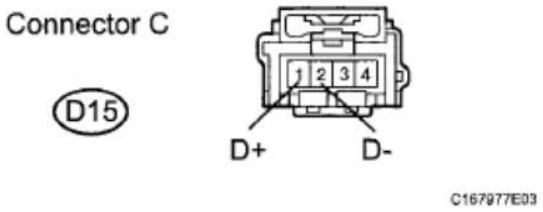


Fig. 169: Checking Instrument Panel Wire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D15-1 (D+) - D15-2 (D-)	Always	Below 1 ohms

e. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D15-1 (D+) - Body ground	Always	1 Mohms or higher
D15-2 (D-) - Body ground	Always	1 Mohms or higher

f. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector B (See **DIAGNOSIS SYSTEM**).
   2. Measure the resistance according to the value (s) in the table below.

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Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D15-1 (D+) - D15-2 (D-)	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

6. **CHECK SPIRAL CABLE**
   a. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
z3-1 (D-) - Body ground	Ignition switch on (IG)	Below 1 V
z3-2 (D+) - Body ground	Ignition switch on (IG)	Below 1 V

   b. Check for an open in the circuit.
      1. Turn the ignition switch off.
      2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
      3. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
z3-1 (D-) - z3-2 (D+)	Always	Below 1 ohms

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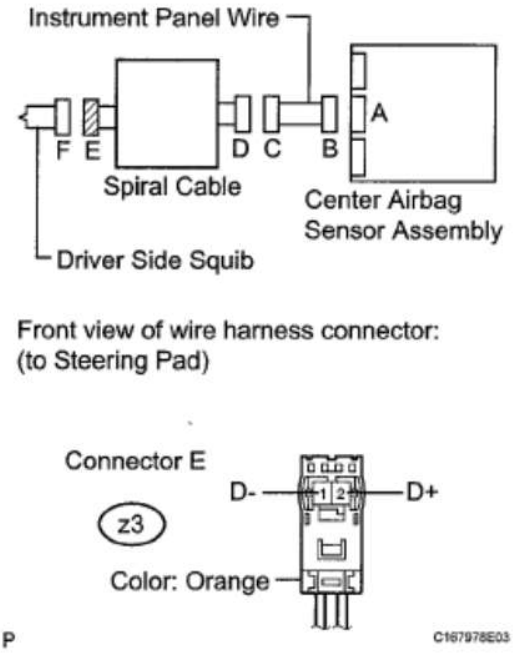


Fig. 170: Checking Spiral Cable
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
23-1 (D-) - Body ground	Always	1 Mohms or higher
z3-2 (D+) - Body ground	Always	1 Mohms or higher

d. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector D (See **DIAGNOSIS SYSTEM**).
   2. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
z3-1 (D-) - z3-2 (D+)	Always	1 Mohms or higher

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

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

DTC B1805/52 SHORT IN FRONT PASSENGER SIDE SQUIB CIRCUIT; DTC B1806/52 OPEN IN FRONT PASSENGER SIDE SQUIB CIRCUIT; DTC B1807/52 SHORT TO GND IN FRONT PASSENGER SIDE SQUIB CIRCUIT; DTC B1808/52 SHORT TO B+ IN FRONT PASSENGER SIDE SQUIB CIRCUIT

DESCRIPTION

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

The circuit 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 REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1805/52	• The center airbag sensor assembly 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 assembly malfunction	• Instrument panel wire • Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib) • Center airbag sensor assembly
B1806/52	• The center airbag sensor assembly receives an open circuit signal in the front passenger side squib circuit for 2 seconds. • Front passenger side squib malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib) • Center airbag sensor assembly
B1807/52	• The center airbag sensor assembly 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 assembly malfunction	• Instrument panel wire • Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib) • Center airbag sensor assembly
		• Instrument panel wire

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B1808/52	• The center airbag sensor assembly 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 assembly malfunction	• Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib) • Center airbag sensor assembly

WIRING DIAGRAM

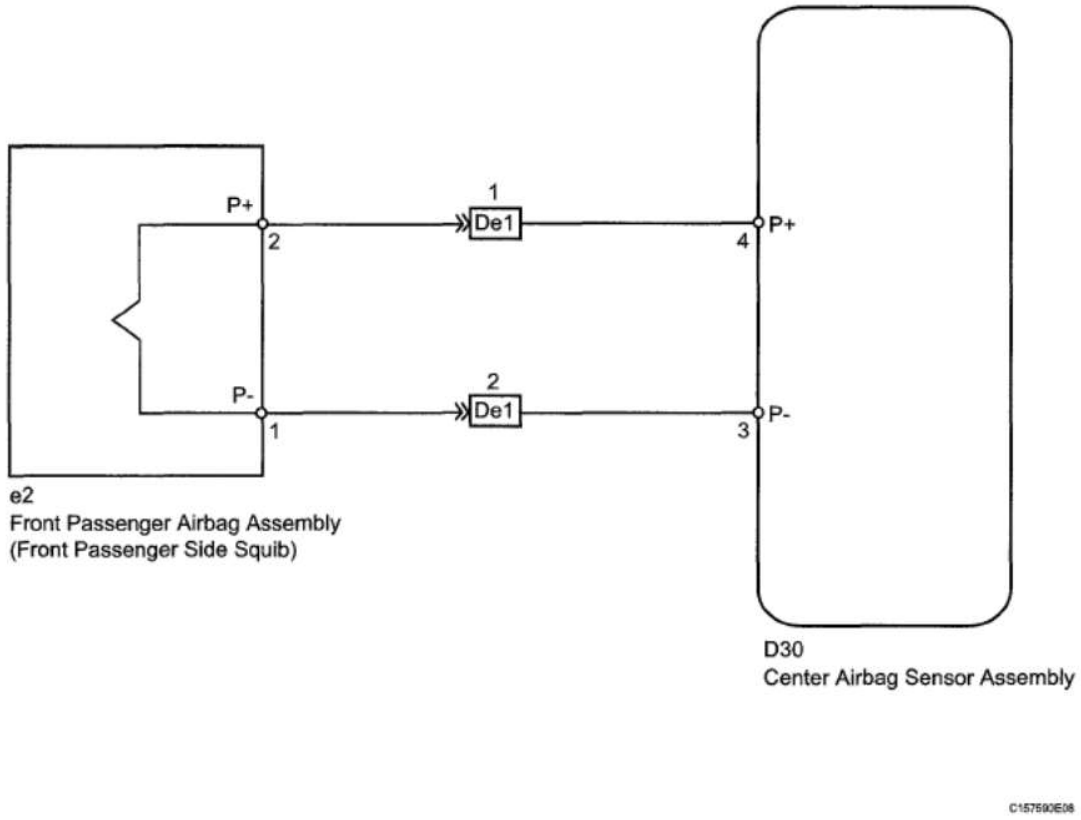


Fig. 171: Front Passenger Airbag Assembly (Front Passenger Side Squib) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting "check mode" (signal check) with 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 a city or rough road (See **DIAGNOSIS SYSTEM**).

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1. **CHECK CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Check that connectors are properly connected to the front passenger airbag assembly and center airbag sensor assembly. Also check that the connectors that link the instrument panel wire assembly and instrument panel wire 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.

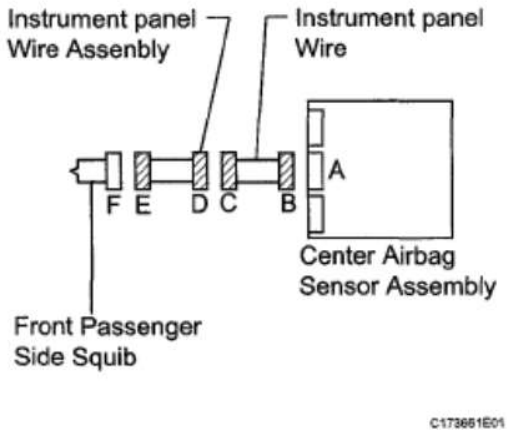


Fig. 172: Checking Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   d. Disconnect the connectors from the front passenger airbag assembly and center airbag sensor assembly. Also disconnect the instrument panel wire from the instrument panel wire assembly.
   e. Check that the connectors of the terminals are not damaged.

      OK:

      The terminals are not deformed or damaged.

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

      OK:

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

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NG: REPLACE WIRE HARNESS

OK: Go to next step

2. **CHECK FRONT PASSENGER AIRBAG ASSEMBLY (FRONT PASSENGER SIDE SQUIB)**
   a. Connect the instrument panel wire to the instrument panel wire assembly and center airbag sensor assembly.
   b. Connect SST (resistance 2.1 ohms) to connector E (color orange).

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

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

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

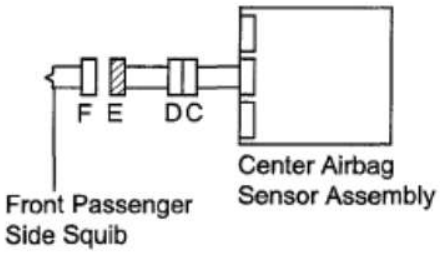
HINT:

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

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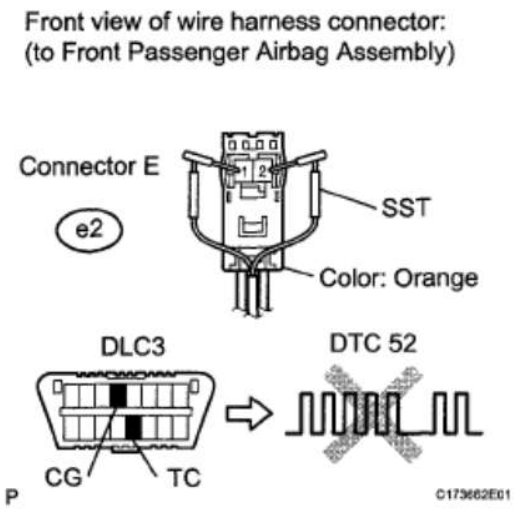


Fig. 173: Checking Front Passenger Airbag Assembly (Front Passenger Side Squib)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: Go to step 3

OK: REPLACE FRONT PASSENGER AIRBAG ASSEMBLY

3. **CHECK FRONT PASSENGER SIDE SQUIB CIRCUIT**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Disconnect SST from connector E.
   d. Disconnect the instrument panel wire from the center airbag sensor assembly.
   e. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

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Tester Connection	Switch Condition	Specified Condition
e2-2 (P+) - Body ground	Ignition switch on (IG)	Below 1 V
e2-1 (P-) - Body ground	Ignition switch on (IG)	Below 1 V

f. Check for an open in the circuit.
   1. Turn the ignition switch off.
   2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   3. Measure the resistance according to the value (s) in the table below.

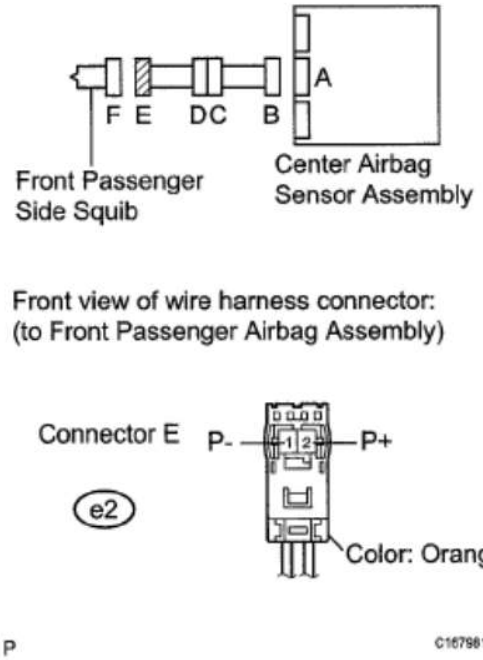


Fig. 174: Checking Front Passenger Side Squib Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
e2-2 (P+) - e2-1 (P-)	Always	Below 1 ohms

g. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition

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e2-2 (P+) - Body ground	Always	1 Mohms or higher
e2-1 (P-) - Body ground	Always	1 Mohms or higher

h. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector B (See **DIAGNOSIS SYSTEM**).
   2. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
e2-2 (P+) - e2-1 (P-)	Always	1 Mohms or higher

NG: Go to step 5

OK: Go to next step

4. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the front passenger airbag assembly and the center airbag sensor assembly.
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG), 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.

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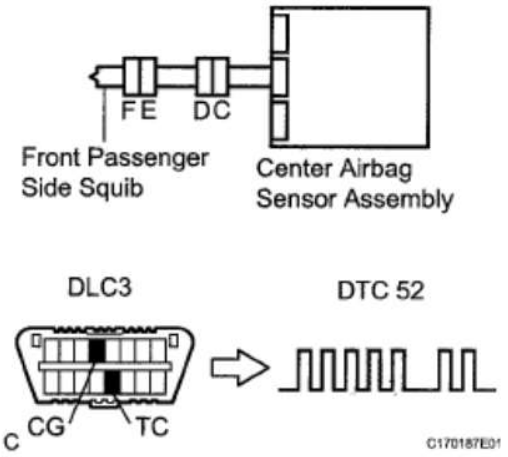


Fig. 175: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

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

5. **CHECK INSTRUMENT PANEL WIRE**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Disconnect the instrument panel wire assembly from the instrument panel wire.
   c. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
De1-1 (P+) - Body ground	Ignition switch on (IG)	Below 1 V
Del-2 (P-) - Body ground	Ignition switch on (IG)	Below 1 V

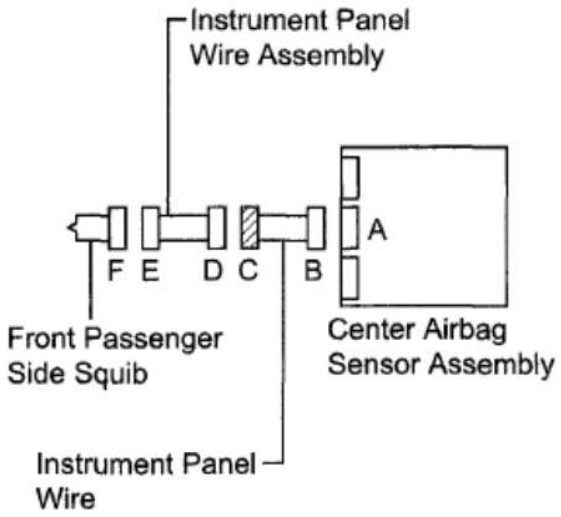
   d. Check for an open in the circuit.
      1. Turn the ignition switch off.
      2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
      3. Measure the resistance according to the value (s) in the table below.

Standard resistance

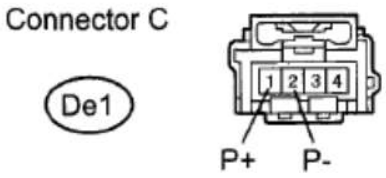
RESISTANCE SPECIFICATION

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Tester Connection	Switch Condition	Specified Condition
De1-1 (P+) - De1-2 (P-)	Always	Below 1 ohms



Front view of wire harness connector:
(to Instrument Panel Wire Assembly)



C187983E03

Fig. 176: Checking Instrument Panel Wire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
De1-1 (P+) - Body ground	Always	1 Mohms or higher
De1-2 (P-) - Body ground	Always	1 Mohms or higher

f. Check for a short in the circuit.

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
De1-1 (P+) - De1-2 (P-)	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

6. **CHECK INSTRUMENT PANEL WIRE ASSEMBLY**
   a. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
e2-2 (P+) - Body ground	Ignition switch on (IG)	Below 1 V
e2-1 (P-) - Body ground	Ignition switch on (IG)	Below 1 V

   b. Check for an open in the circuit.
      1. Turn the ignition switch off.
      2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
      3. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
e2-2 (P+) - e2-1 (P-)	Always	Below 1 ohms

   c. Check for a short to ground in the circuit.
      1. Measure the resistance according to the value (s) in the table below.

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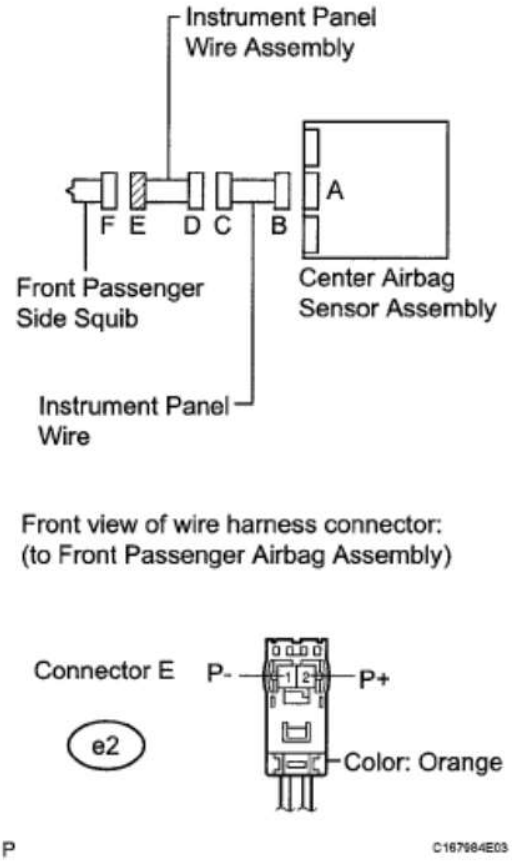


Fig. 177: Checking Instrument Panel Wire Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
e2-2 (P+) - Body ground	Always	1 Mohms or higher
e2-1 (P-) - Body ground	Always	1 Mohms or higher

d. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector D (See **DIAGNOSIS SYSTEM**).
   2. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
e2-2 (P+) - e2-1 (P-)	Always	1 Mohms or higher

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NG: REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

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

DTC B1810/53 SHORT IN DRIVER SIDE SQUIB 2ND STEP CIRCUIT; DTC B1811/53 OPEN IN DRIVER SIDE SQUIB 2ND STEP CIRCUIT; DTC B1812/53 SHORT TO GND IN DRIVER SIDE SQUIB 2ND STEP CIRCUIT; DTC B1813/53 SHORT TO B+ IN DRIVER SIDE SQUIB 2ND STEP CIRCUIT

DESCRIPTION

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

The circuit 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 REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1810/53	• The center airbag sensor assembly 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 assembly malfunction	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib 2nd step) • Center airbag sensor assembly
B1811/53	• The center airbag sensor assembly 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 assembly malfunction	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib 2nd step) • Center airbag sensor assembly
B1812/53	• The center airbag sensor assembly receives a short circuit to ground signal in the driver side squib 2nd step circuit for 0.5 seconds. • Driver side squib 2nd step malfunction • Spiral cable malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib 2nd step) • Center airbag sensor assembly
B1813/53	• The center airbag sensor assembly 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 • Spiral cable malfunction	• Instrument panel wire • Spiral cable • Steering pad (Driver side squib 2nd step)

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	• Center airbag sensor assembly malfunction	• Center airbag sensor assembly

WIRING DIAGRAM

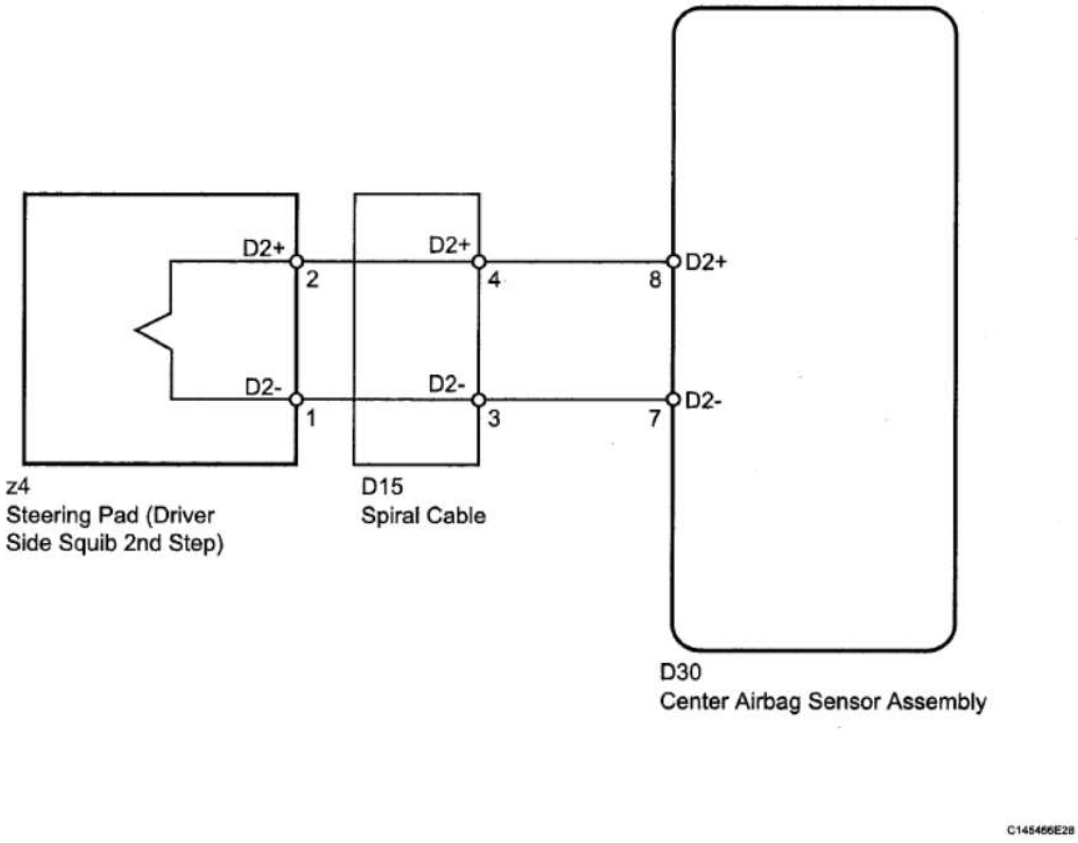


Fig. 178: Steering Pad (Driver Side Squib 2nd Step) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting the "check mode" (signal check) with Techstream (See **CHECK MODE PROCEDURE**).
- After selecting the "check mode" (signal check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (See **DIAGNOSIS SYSTEM**).

1. **CHECK CONNECTORS**
   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. Check that the connectors are properly connected to the steering pad, spiral cable and center airbag sensor assembly.

OK:

The connectors are properly connected.

HINT:

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

d. Disponnect the connectors from the steering pad, spiral cable and center airbag sensor assembly.
e. Check that the connectors of the terminals are not damaged.

OK:

The terminals are not deformed or damaged.

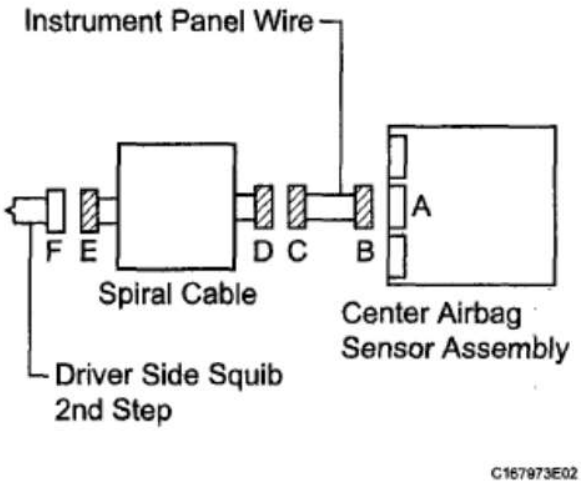


Fig. 179: Checking Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Check that the spiral cable connector (on the steering pad side) is not damaged.

OK:

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

NG: REPLACE WIRE HARNESS

OK: Go to next step

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2. **CHECK STEERING PAD (DRIVER SIDE SQUIB 2ND STEP)**
   a. Connect the instrument panel wire to the center airbag sensor assembly and spiral cable.
   b. Connect 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.**
- **Insert SST straight into the terminals of the connector.**

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

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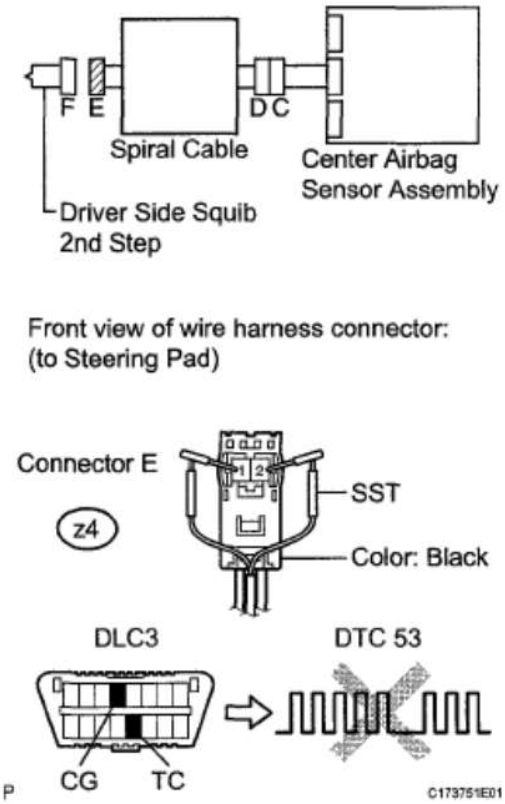


Fig. 180: Checking Steering Pad (Driver Side Squib 2nd Step)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: Go to step 3

OK: REPLACE STEERING PAD

3. **CHECK DRIVER SIDE SQUIB 2ND STEP CIRCUIT**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Disconnect SST from connector E.
   d. Disconnect the instrument panel wire from the center airbag sensor assembly.
   e. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition

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z4-1 (D2-) - Body ground	Ignition switch on (IG)	Below 1 V
z4-2 (D2+) - Body ground	Ignition switch on (IG)	Below 1 V

f. Check for an open in the circuit.
   1. Turn the ignition switch off.
   2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   3. Measure the resistance according to the value (s) in the table below.

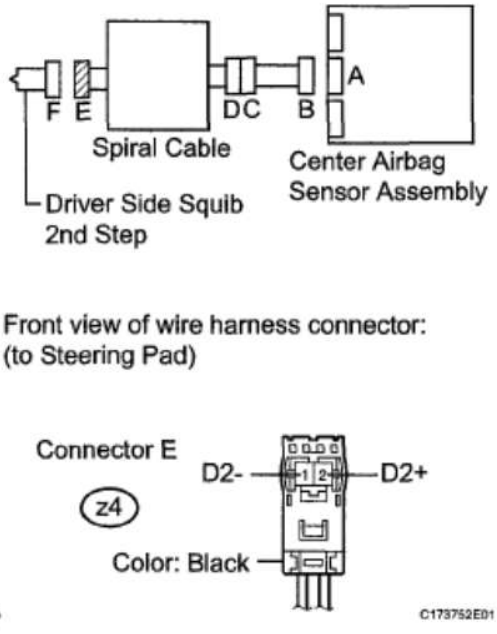


Fig. 181: Checking Driver Side Squib 2nd Step Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
z4-1 (D2-) - z4-2 (D2+)	Always	Below 1 ohms

g. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
z4-1 (D2-) - Body ground	Always	1 Mohms or higher
z4-2 (D2+) - Body ground	Always	1 Mohms or higher

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h. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector B (See **DIAGNOSIS SYSTEM**).
   2. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
z4-1 (D2-) - z4-2 (D2+)	Always	1 Mohms or higher

NG: Go to step 5

OK: Go to next step

4. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the steering pad and the center airbag sensor assembly.
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG), 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 **ON-VEHICLE INSPECTION**)

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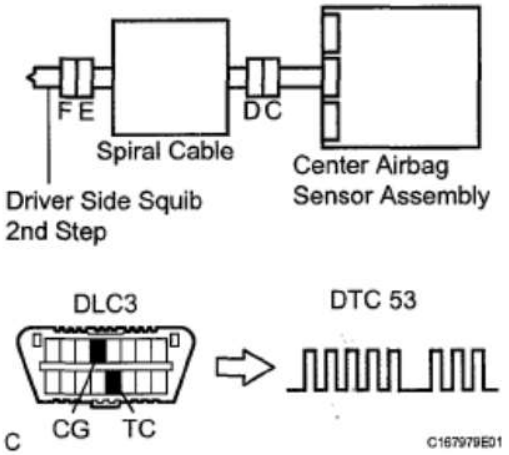


Fig. 182: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

5. **CHECK INSTRUMENT PANEL WIRE**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Disconnect the instrument panel wire from the spiral cable.
   c. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D15-4 (D2+) - Body ground	Ignition switch on (IG)	Below 1 V
D15-3 (D2-) - Body ground	Ignition switch on (IG)	Below 1 V

   d. Check for an open in the circuit.

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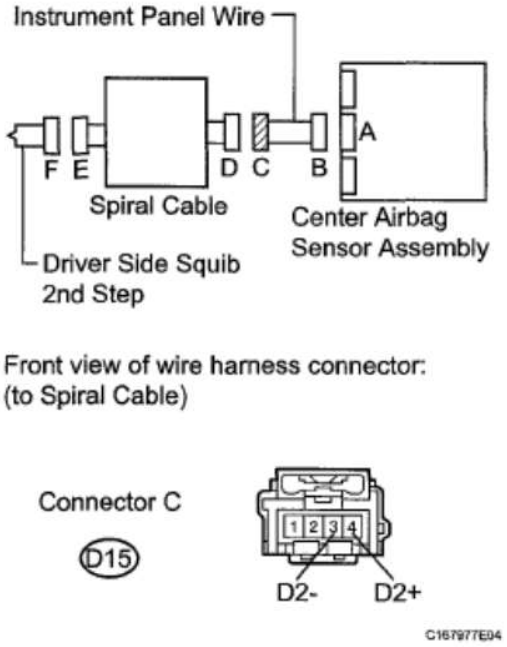


Fig. 183: Checking Instrument Panel Wire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Turn the ignition switch off.
2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
3. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D15-4 (D2+) - D15-3 (D2-)	Always	Below 1 ohms

e. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D15-4 (D2+) - Body ground	Always	1 Mohms or higher
D15-3 (D2-) - Body ground	Always	1 Mohms or higher

f. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector B (See **DIAGNOSIS SYSTEM**).

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D15-4 (D2+) - D15-3 (D2-)	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

6. **CHECK SPIRAL CABLE**
   a. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
z4-1 (D2-) - Body ground	Ignition switch on (IG)	Below 1 V
z4-2 (D2+) - Body ground	Ignition switch on (IG)	Below 1 V

   b. Check for an open in the circuit.
      1. Turn the ignition switch off.
      2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
      3. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
z4-1 (D2-) - z4-2 (D2+)	Always	Below 1 ohms

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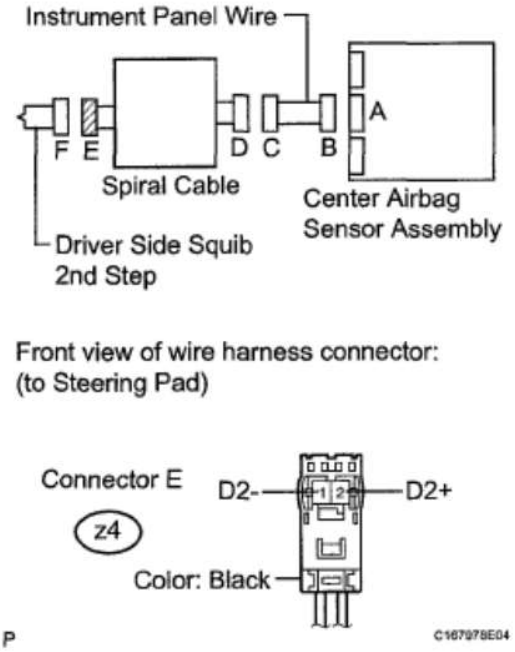


Fig. 184: Checking Spiral Cable
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
z4-1 (D2-) - Body ground	Always	1 Mohms or higher
z4-2 (D2+) - Body ground	Always	1 Mohms or higher

d. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector D (See **DIAGNOSIS SYSTEM**).
   2. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
z4-1 (D2-) - z4-2 (D2+)	Always	1 Mohms or higher

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

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

DTC B1815/54 SHORT IN FRONT PASSENGER SIDE SQUIB 2ND STEP CIRCUIT; DTC B1816/54 OPEN IN FRONT PASSENGER SIDE SQUIB 2ND STEP CIRCUIT; DTC B1817/54 SHORT TO GND IN FRONT PASSENGER SIDE SQUIB 2ND STEP CIRCUIT; DTC B1818/54 SHORT TO B+ IN FRONT PASSENGER SIDE SQUIB 2ND STEP CIRCUIT

DESCRIPTION

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

The circuit 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 REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1815/54	• The center airbag sensor assembly 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 assembly malfunction	• Instrument panel wire • Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib 2nd step) • Center airbag sensor assembly
B1816/54	• The center airbag sensor assembly 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 assembly malfunction	• Instrument panel wire • Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib 2nd step) • Center airbag sensor assembly
B1817/54	• The center airbag sensor assembly 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 • Center airbag sensor assembly malfunction	• Instrument panel wire • Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib 2nd step) • Center airbag sensor assembly
		• Instrument panel wire

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B1818/54	• The center airbag sensor assembly 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 assembly malfunction	• Instrument panel wire assembly • Front passenger airbag assembly (Front passenger side squib 2nd step) • Center airbag sensor assembly

WIRING DIAGRAM

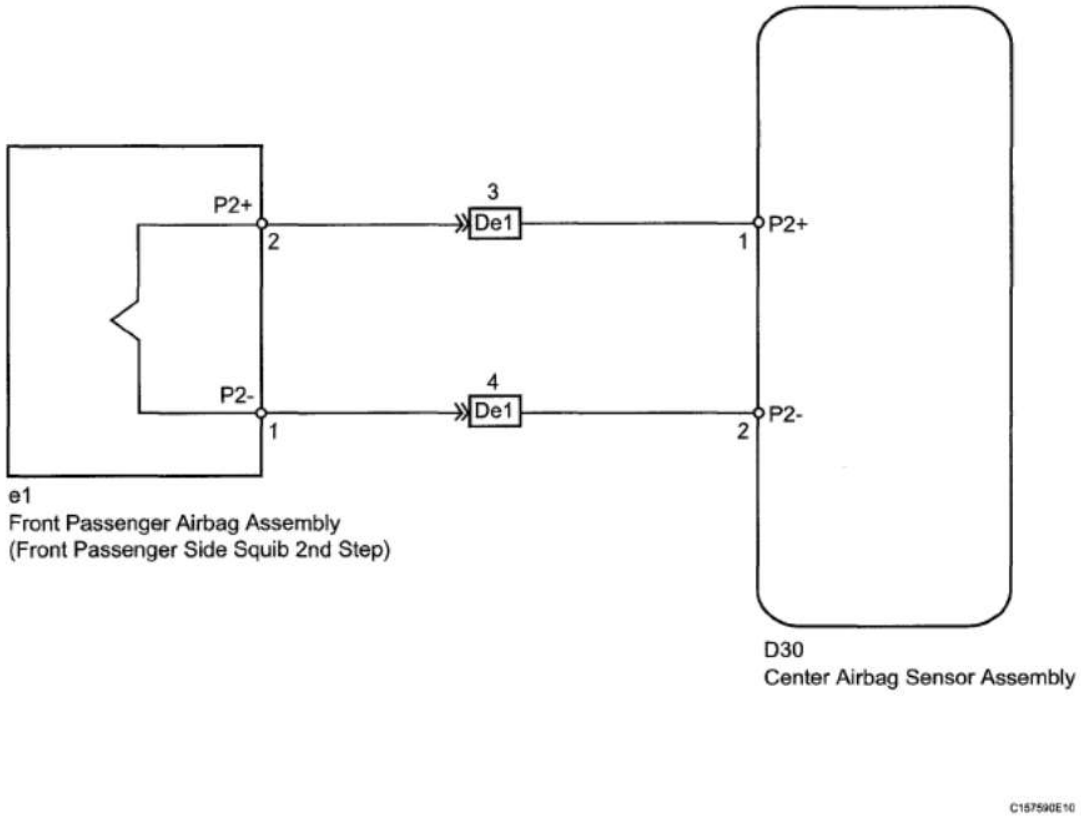


Fig. 185: Front Passenger Airbag Assembly (Front Passenger Side Squib 2nd Step) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting "check mode" (signal check) with 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 a city or rough road (See **DIAGNOSIS SYSTEM**).

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1. **CHECK CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Check that the connectors are properly connected to the front passenger airbag assembly and center airbag sensor assembly. Also check that the connectors that link the instrument panel wire assembly and instrument panel wire 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.

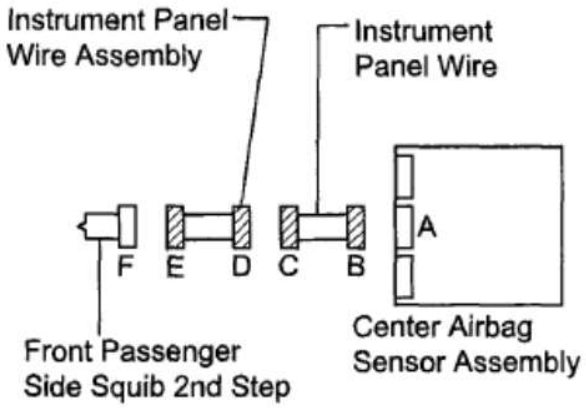


Fig. 186: Checking Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   d. Disconnect the connectors from the front passenger airbag assembly and center airbag sensor assembly. Also disconnect the instrument panel wire from the instrument panel wire assembly.
   e. Check that the connectors of the terminals are not damaged.

      OK:

      The terminals are not deformed or damaged.

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

      OK:

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

NG: REPLACE WIRE HARNESS

OK: Go to next step

2. **CHECK FRONT PASSENGER AIRBAG ASSEMBLY (FRONT PASSENGER SIDE SQUIB 2ND STEP)**
   a. Connect the instrument panel wire to the instrument panel wire assembly and center airbag sensor assembly.
   b. Connect SST (resistance 2.1 ohms) to connector E (black connector).

CAUTION: Never connect the tester to the front passenger airbag assembly (front passenger side squib 2nd step) for measurement, as this may lead to a serious injury due to airbag deployment.

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

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   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG), 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: Go to step 3

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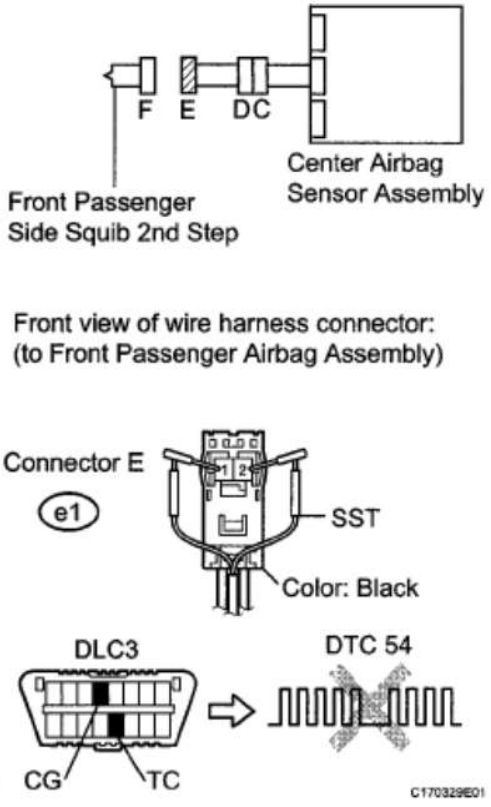


Fig. 187: Checking Front Passenger Airbag Assembly (Front Passenger Side Squib 2nd Step)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE FRONT PASSENGER AIRBAG ASSEMBLY

3. **CHECK FRONT PASSENGER SIDE SQUIB 2ND STEP CIRCUIT**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Disconnect SST from connector E.
   d. Disconnect the instrument panel wire from the center airbag sensor assembly.
   e. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
e1-2 (P2+) - Body ground	Ignition switch on (IG)	Below 1 V
e1-1 (P2-) - Body ground	Ignition switch on (IG)	Below 1 V

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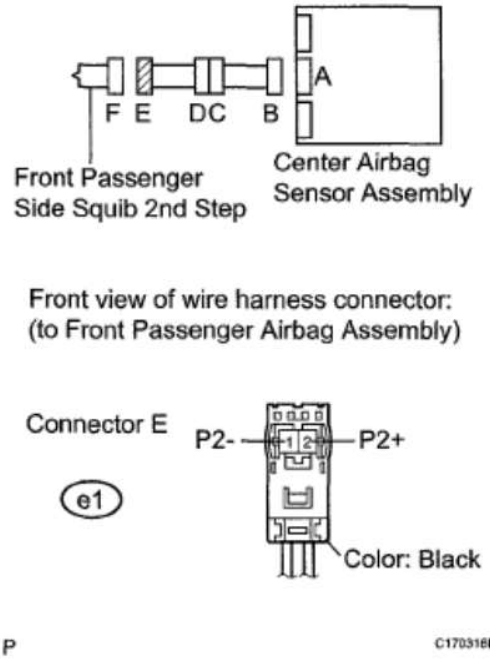


Fig. 188: Checking Front Passenger Side Squib 2nd Step Circuit
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Check for an open in the circuit.
   1. Turn the ignition switch off.
   2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   3. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
e1-2 (P2+) - e1-1 (P2-)	Always	Below 1 ohms

g. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
e1-2 (P2+) - Body ground	Always	1 Mohms or higher
e1-1 (P2-) - Body ground	Always	1 Mohms or higher

h. Check for a short in the circuit.

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
e1-2 (P2+) - e1-1 (P2-)	Always	1 Mohms or higher

NG: Go to step 5

OK: Go to next step

4. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the front passenger airbag assembly and the center airbag sensor assembly.
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG), 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.

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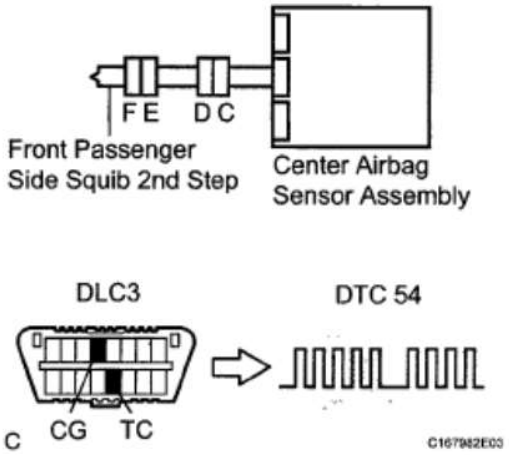


Fig. 189: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

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

5. **CHECK INSTRUMENT PANEL WIRE**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Disconnect the instrument panel wire assembly from the instrument panel wire.
   c. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
Del-3 (P2+) - Body ground	Ignition switch on (IG)	Below 1 V
De1-4 (P2-) - Body ground	Ignition switch on (IG)	Below 1 V

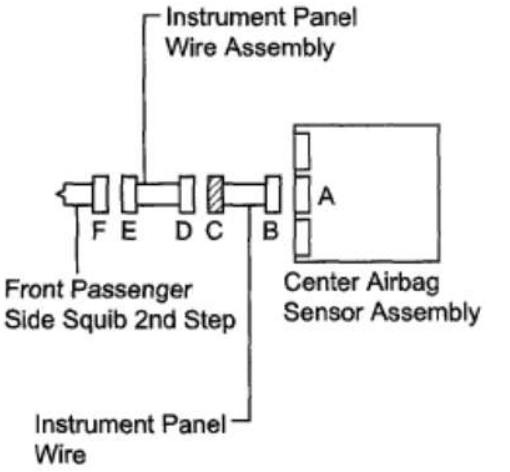
   d. Check for an open in the circuit.
      1. Turn the ignition switch off.
      2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
      3. Measure the resistance according to the value (s) in the table below.

Standard resistance

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Front view of wire harness connector:
(to Instrument Panel Wire Assembly)

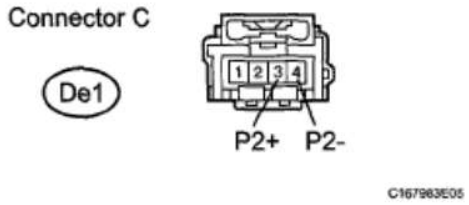


Fig. 190: Checking Instrument Panel Wire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
De1-3 (P2+) - De1-4 (P2-)	Always	Below 1 ohms

e. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

      Standard resistance

      RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
Del-3 (P2+) - Body ground	Always	1 Mohms or higher
De1-4 (P2-) - Body ground	Always	1 Mohms or higher

f. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector B (See **DIAGNOSIS SYSTEM**).

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
De1-3 (P2+) - De1-4 (P2-)	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

6. **CHECK INSTRUMENT PANEL WIRE ASSEMBLY**
   a. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
e1-2 (P2+) - Body ground	Ignition switch on (IG)	Below 1 V
e1-1 (P2-) - Body ground	Ignition switch on (IG)	Below 1 V

   b. Check for an open in the circuit.
      1. Turn the ignition switch off.
      2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
      3. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

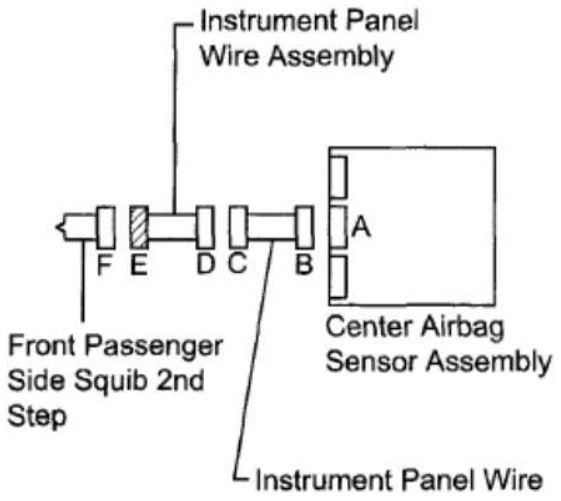
Tester Connection	Switch Condition	Specified Condition
e1-2 (P2+) - e1-1 (P2-)	Always	Below 1 ohms

   c. Check for a short to ground in the circuit.
      1. Measure the resistance according to the value (s) in the table below.

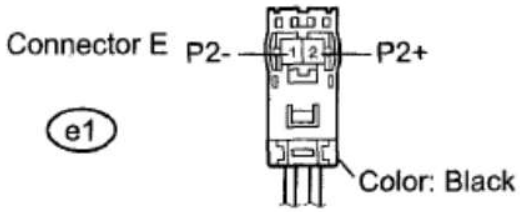
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Front view of wire harness connector:
(to Front Passenger Airbag Assembly)



P C170317E02

Fig. 191: Checking Instrument Panel Wire Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
e1-2 (P2+) - Body ground	Always	1 Mohms or higher
e1-1 (P2-) - Body ground	Always	1 Mohms or higher

d. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector D (See **DIAGNOSIS SYSTEM**).
   2. Measure the resistance according to the value (s) in the table below.

      Standard resistance

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RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
e1-2 (P2+) - e1-1 (P2-)	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE ASSEMBLY

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

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 front driver side - side squib circuit consists of the center airbag sensor assembly and the front seat side airbag assembly LH.

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

These DTCs are recorded when a malfunction is detected in the front driver side - side squib circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	OTC Detection Condition	Trouble Area
B1820/55	• The center airbag sensor assembly receives a line short circuit signal 5 times in the front driver side - side squib circuit during primary check. • Front driver side - side squib malfunction • Center airbag sensor assembly malfunction	• Floor wire No. 2 • Front seat side airbag assembly LH (Front driver side - side squib) • Center airbag sensor assembly
B1821/55	• The center airbag sensor assembly receives an open circuit signal in the front driver side - side squib circuit for 2 seconds. • Front driver side - side squib malfunction • Center airbag sensor assembly malfunction	• Floor wire No. 2 • Front seat side airbag assembly LH (Front driver side - side squib) • Center airbag sensor assembly
B1822/55	• The center airbag sensor assembly receives a short circuit to ground signal in the front driver side - side squib circuit for 0.5 seconds. • Front driver side - side squib malfunction • Center airbag sensor assembly malfunction	• Floor wire No. 2 • Front seat side airbag assembly LH (Front driver side - side squib) • Center airbag sensor assembly
	• The center airbag sensor assembly receives a short	• Floor wire No. 2

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B1823/55	circuit to B+ signal in the front driver side - side squib circuit for 0.5 seconds. • Front driver side - side squib malfunction • Center airbag sensor assembly malfunction	• Front seat side airbag assembly LH (Front driver side - side squib) • Center airbag sensor assembly

WIRING DIAGRAM

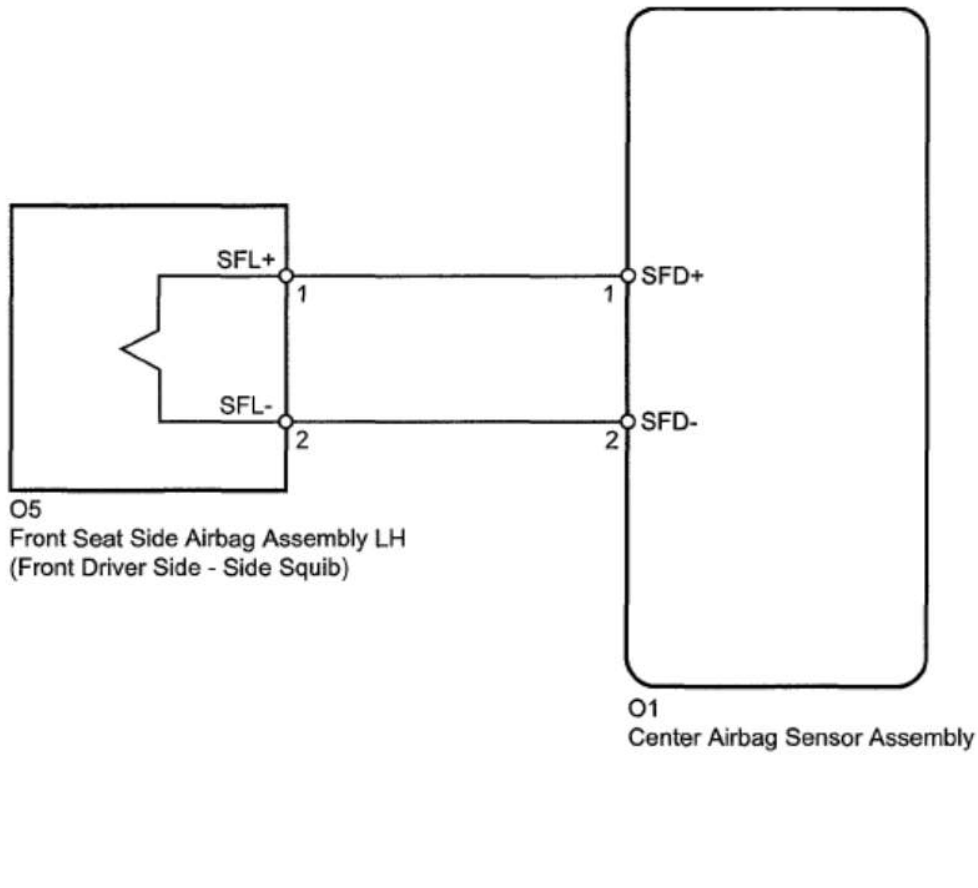


Fig. 192: Front Seat Side Airbag Assembly LH (Front Driver - Side Squib) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting the "check mode" (signal check) with Techstream (See **CHECK MODE PROCEDURE**).
- After selecting the "check mode" (signal check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (See **DIAGNOSIS SYSTEM**).

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

      OK:

      The connectors are properly connected.

      HINT:

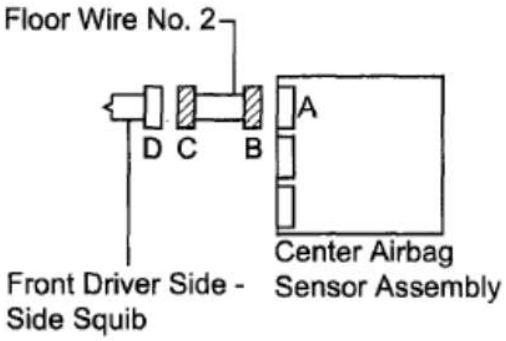
      If the connectors are not connected securely, reconnect the connectors and proceed to the next inspection.

   d. Disconnect the connectors from the front seat side airbag assembly LH and center airbag sensor assembly.
   e. Check that the connectors of the terminals are not damaged.

      OK:

      The terminals are not deformed or damaged.

NG: REPLACE FLOOR WIRE NO. 2



C187985E04

Fig. 193: Checking Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

2. **CHECK FRONT SEAT SIDE AIRBAG ASSEMBLY LH (FRONT DRIVER SIDE - SIDE SQUIB)**

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a. Connect the connector to the center airbag sensor assembly.
b. Connect SST (resistance 2.1 ohms) to connector C.

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

NOTE:

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

SST 09843-18061

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

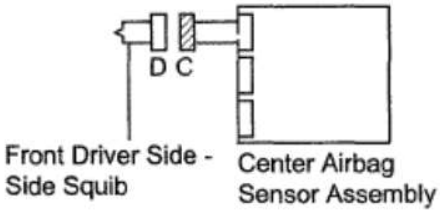
HINT:

Codes other than DTC B1820, B1821, B1822, B1823, and 55 may be output at this time, but they are not related to this check.

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Front view of wire harness connector: (to Front Seat Side Airbag Assembly LH)

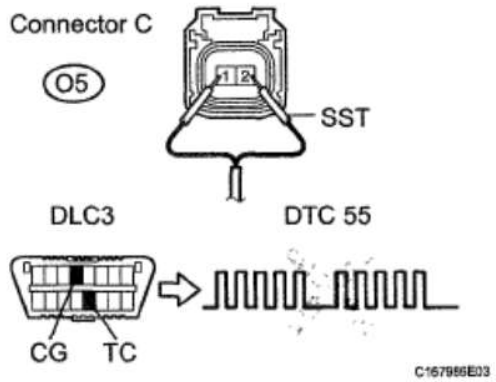


Fig. 194: Checking Front Seat Side Airbag Assembly LH (Front Driver - Side Squib)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Result

RESULT CHART

Result	Proceed to
OK	A
NG (for Manual seat)	B
NG (for Power seat)	C

B: REPLACE FRONT SEAT ASSEMBLY LH (See **REMOVAL**)

C: REPLACE FRONT SEAT ASSEMBLY LH (See **REMOVAL**)

A: Go to next step

3. **CHECK FLOOR WIRE NO. 2 (FRONT DRIVER SIDE - SIDE SQUIB CIRCUIT)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Disconnect SST from connector C.

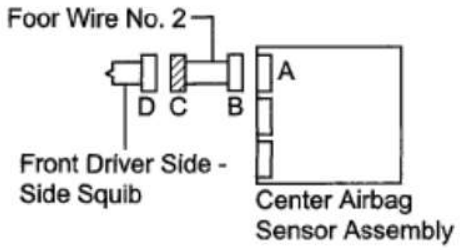
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d. Disconnect the floor wire No. 2 from the center airbag sensor assembly.
e. Check for a short to B+ in the circuit.
   1. Connect the negative (-) terminal cable to the battery.
   2. Turn the ignition switch on (IG).
   3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O5-1 (SFL+) - Body ground	Ignition switch on (IG)	Below 1 V
O5-2 (SFL-) - Body ground	Ignition switch on (IG)	Below 1 V



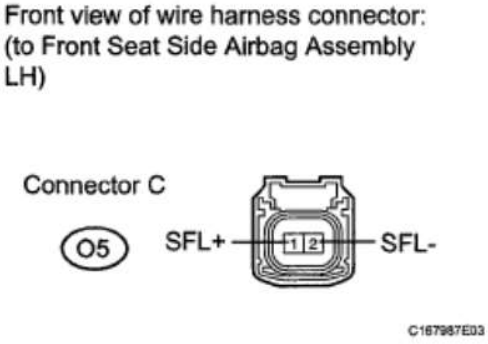


Fig. 195: Checking Floor Wire No. 2 (Front Driver - Side Squib Circuit)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Check for an open in the circuit.
   1. Turn the ignition switch off.
   2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   3. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

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Tester Connection	Switch Condition	Specified Condition
O5-1 (SFL+) - O5-2 (SFL-)	Always	Below 1 ohms

g. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O5-1 (SFL+) - Body ground	Always	1 Mohms or higher
O5-2 (SFL-) - Body ground	Always	1 Mohms or higher

h. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector B (See **DIAGNOSIS SYSTEM**).
   2. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O5-1 (SFL+) - O5-2 (SFL-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE NO. 2

OK: Go to next step

4. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the front seat side airbag assembly LH and the center airbag sensor assembly.
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG), 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.

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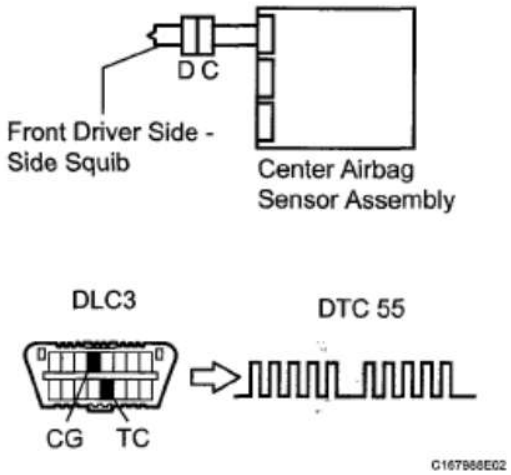


Fig. 196: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 **ON-VEHICLE INSPECTION**)

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

DESCRIPTION

The front passenger side - side squib circuit consists of the center airbag sensor assembly and the front seat side airbag assembly 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 passenger side - side squib circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1825/56	• The center airbag sensor assembly receives a line short circuit signal 5 times in the front passenger side - side squib circuit during primary check. • Front passenger side - side squib malfunction	• Floor wire • Front seat side airbag assembly RH (Front passenger side - side squib)

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	• Center airbag sensor assembly malfunction	• Center airbag sensor assembly
B1826/56	• The center airbag sensor assembly receives an open circuit signal in the front passenger side - side squib circuit for 2 seconds. • Front passenger side - side squib malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat side airbag assembly RH (Front passenger side - side squib) • Center airbag sensor assembly
B1827/56	• The center airbag sensor assembly receives a short circuit to ground signal in the front passenger side - side squib circuit for 0.5 seconds. • Front passenger side - side squib malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat side airbag assembly RH (Front passenger side - side squib) • Center airbag sensor assembly
B1828/56	• The center airbag sensor assembly receives a short circuit to B+ signal in the front passenger side - side squib circuit for 0.5 seconds. • Front passenger side - side squib malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat side airbag assembly RH (Front passenger side - side squib) • Center airbag sensor assembly

WIRING DIAGRAM

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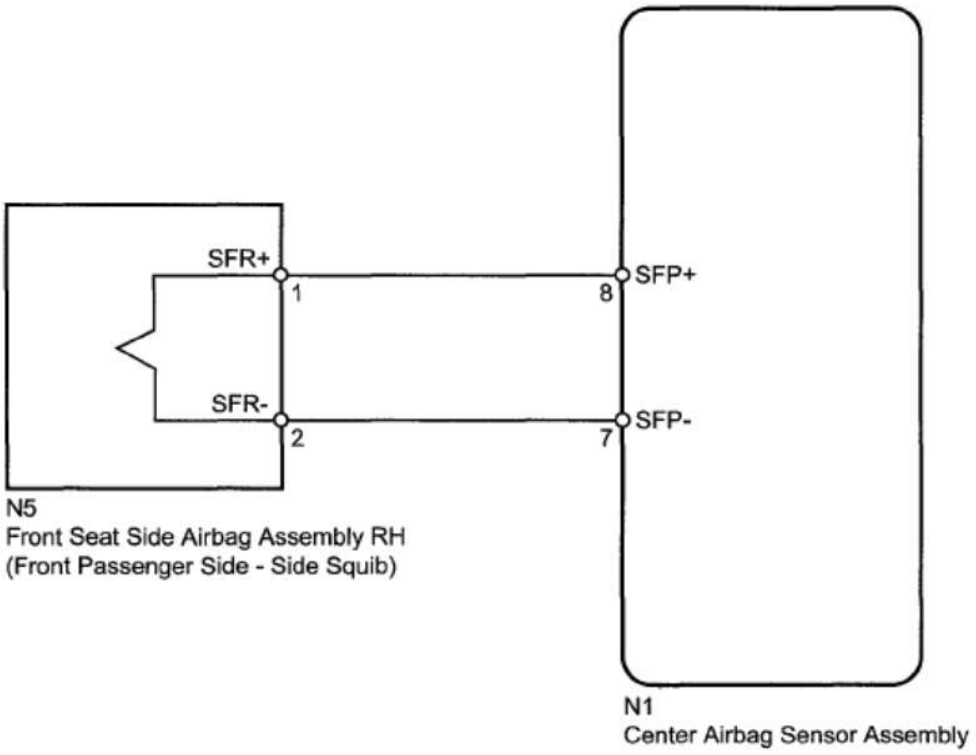


Fig. 197: Front Seat Side Airbag Assembly RH (Front Passenger - Side Squib) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting the "check mode" (signal check) with Techstream (See **CHECK MODE PROCEDURE**).
- After selecting the "check mode" (signal check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (See **DIAGNOSIS SYSTEM**).

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

   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.

d. Disconnect the connectors from the front seat side airbag assembly RH and center airbag sensor assembly.
e. Check that the connectors of the terminals are not damaged.

OK:

The terminals are not deformed or damaged.

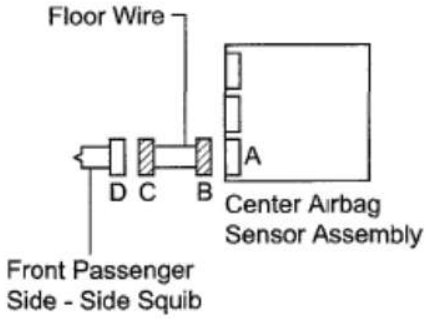


Fig. 198: Checking Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: REPLACE FLOOR WIRE

OK: Go to next step

2. **CHECK FRONT SEAT SIDE AIRBAG ASSEMBLY RH (FRONT PASSENGER SIDE - SIDE SQUIB)**
   a. Connect the connector to the center airbag sensor assembly.
   b. Connect SST (resistance 2.1 ohms) to connector C.

CAUTION: Never connect the tester to the front seat side airbag assembly RH (front passenger side - 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.**

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- **Insert SST straight into the terminals of the connector.**

SST 09843-18061

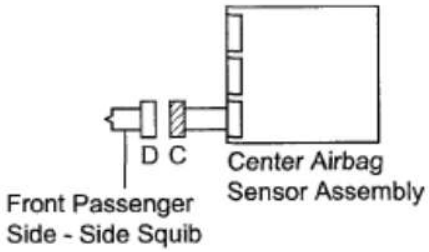
c. Connect the negative (-) terminal cable to the battery.
d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
f. Turn the ignition switch off.
g. Turn the ignition switch on (IG), and wait for at least 60 seconds.
h. 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.



Front view of wire harness connector: (to Front Seat Side Airbag Assembly RH)

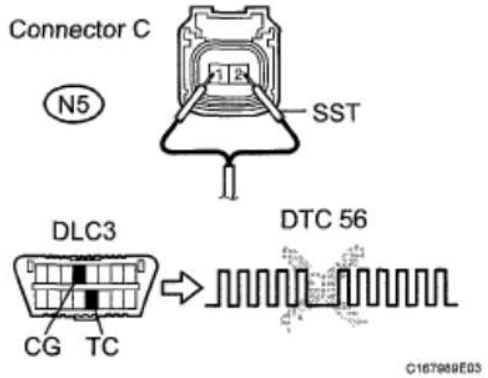


Fig. 199: Checking Front Seat Side Airbag Assembly RH (Front Passenger - Side Squib)

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Result

RESULT CHART

Result	Proceed to
OK	A
NG (for Manual seat)	B
NG (for Power seat)	C

B: REPLACE FRONT SEAT ASSEMBLY RH (See **REMOVAL**)

C: REPLACE FRONT SEAT ASSEMBLY RH (See **REMOVAL**)

A: Go to next step

3. **CHECK FLOOR WIRE (FRONT PASSENGER SIDE - SIDE SQUIB CIRCUIT)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Disconnect SST from connector C.
   d. Disconnect the floor wire from the center airbag sensor assembly.
   e. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N5-1 (SFR+) - Body ground	Ignition switch on (IG)	Below 1 V
N5-2 (SFR-) - Body ground	Ignition switch on (IG)	Below 1 V

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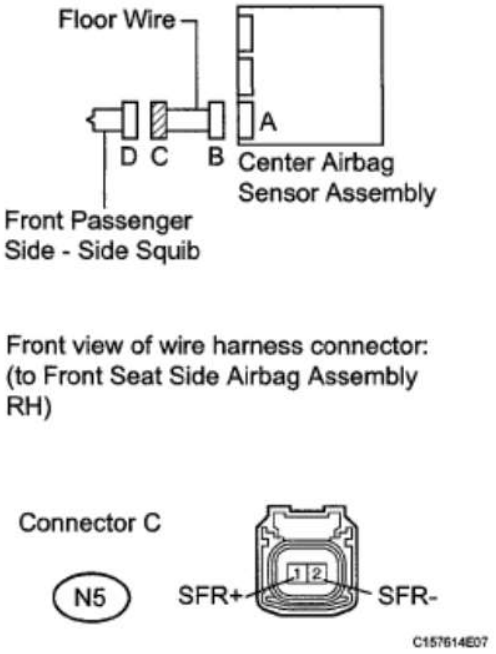


Fig. 200: Checking Floor Wire (Front Passenger - Side Squib Circuit)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Check for an open in the circuit.
   1. Turn the ignition switch off.
   2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   3. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N5-1 (SFR+) - N5-2 (SFR-)	Always	Below 1 ohms

g. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N5-1 (SFR+) - Body ground	Always	1 Mohms or higher
N5-2 (SFR-) - Body ground	Always	1 Mohms or higher

h. Check for a short in the circuit.

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N5-1 (SFR+) - N5-2 (SFR-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK: Go to next step

4. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the front seat side airbag assembly RH and the center airbag sensor assembly.
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   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.

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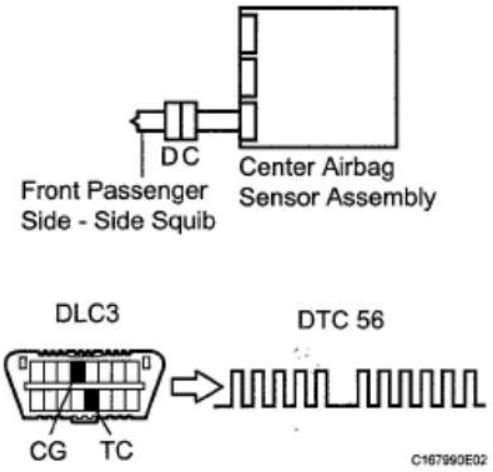


Fig. 201: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

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 driver side curtain shield squib circuit consists of the center airbag sensor assembly and the curtain shield airbag assembly LH.

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

These DTCs are recorded when a malfunction is detected in the driver side curtain shield squib circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1830/57	• The center airbag sensor assembly receives a line short circuit signal 5 times in the driver side curtain shield squib circuit during primary check. • Driver side curtain shield squib malfunction • Center airbag sensor assembly malfunction	• Floor wire No. 2 • Curtain shield airbag assembly LH (Driver side curtain shield squib) • Center airbag sensor assembly
	• The center airbag sensor assembly receives an open circuit signal in the driver side curtain shield squib	• Floor wire No. 2 • Curtain shield airbag

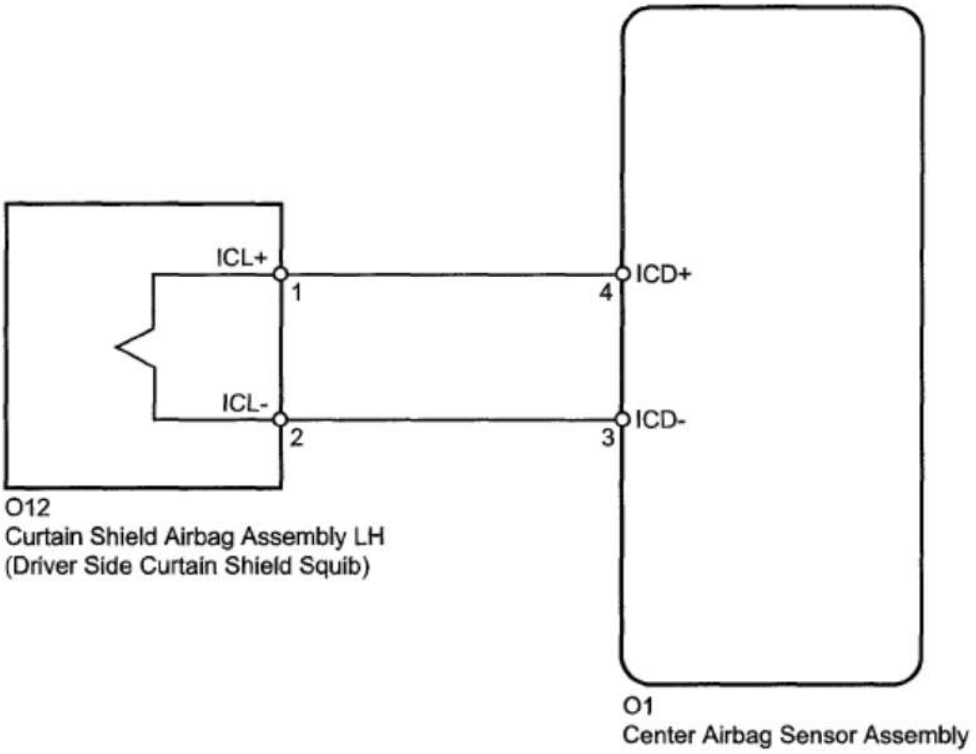
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B1831/57	circuit for 2 seconds. • Driver side curtain shield squib malfunction • Center airbag sensor assembly malfunction	assembly LH (Driver side curtain shield squib) • Center airbag sensor assembly
B1832/57	• The center airbag sensor assembly receives a short circuit to ground signal in the driver side curtain shield squib circuit for 0.5 seconds. • Driver side curtain shield squib malfunction • Center airbag sensor assembly malfunction	• Floor wire No. 2 • Curtain shield airbag assembly LH (Driver side curtain shield squib) • Center airbag sensor assembly
B1833/57	• The center airbag sensor assembly receives a short circuit to B+ signal in the driver side curtain shield squib circuit for 0.5 seconds. • Driver side curtain shield squib malfunction • Center airbag sensor assembly malfunction	• Floor wire No. 2 • Curtain shield airbag assembly LH (Driver side curtain shield squib) • Center airbag sensor assembly

WIRING DIAGRAM



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Fig. 202: Curtain Shield Airbag Assembly LH (Driver Side Curtain Shield Squib) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting the "check mode" (signal check) with Techstream (See **CHECK MODE PROCEDURE**).
- After selecting the "check mode" (signal check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (See **DIAGNOSIS SYSTEM**).

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

      OK:

      The connectors are properly connected.

      HINT:

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

   d. Disconnect the connectors from the curtain shield airbag assembly LH and center airbag sensor assembly.
   e. Check that the terminals of the connectors are not damaged.

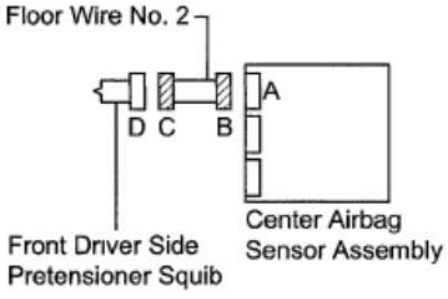


Fig. 203: Checking Connectors

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

OK:

The terminals are not deformed or damaged.

f. Check that the floor wire No. 2 connector (on the curtain shield airbag assembly LH side) is not damaged.

OK:

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

NG: REPLACE FLOOR WIRE NO. 2

OK: Go to next step

2. **CHECK CURTAIN SHIELD AIRBAG ASSEMBLY LH (DRIVER SIDE CURTAIN SHIELD SQUIB)**
   a. Connect the connector to the center airbag sensor assembly.
   b. Connect SST (resistance 2.1 ohms) to connector C.

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

NOTE:

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

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

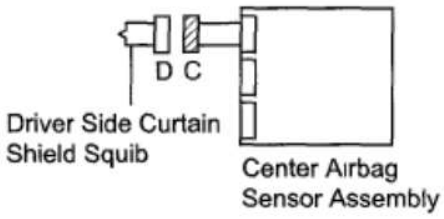
OK:

DTC B1830, B1831, B1832, B1833, or 57 is not output.

HINT:

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Codes other than DTC B1830, B1831, B1832, B1833, and 57 may be output at this time, but they are not related to this check.



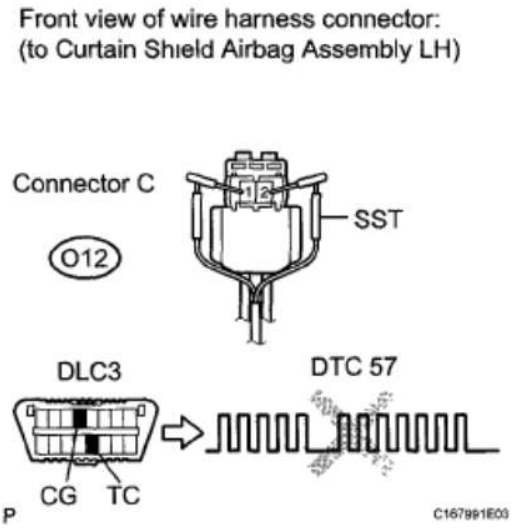


Fig. 204: Checking Curtain Shield Airbag Assembly LH (Driver Side Curtain Shield Squib)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: Go to step 3

OK: REPLACE CURTAIN SHIELD AIRBAG ASSEMBLY LH (See **REMOVAL**)

3. **CHECK FLOOR WIRE NO. 2 (DRIVER SIDE CURTAIN SHIELD SQUIB CIRCUIT)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Disconnect SST from connector C.
   d. Disconnect the floor wire No. 2 from the center airbag sensor assembly.
   e. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

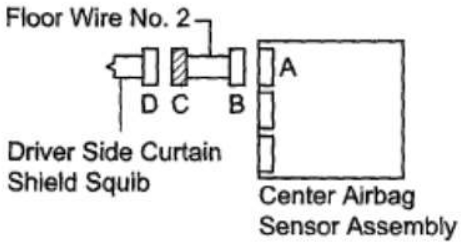
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Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O12-1 (ICL+) - Body ground	Ignition switch on (IG)	Below 1 V
O12-2 (ICL-) - Body ground	Ignition switch on (IG)	Below 1 V

f. Check for an open in the circuit.



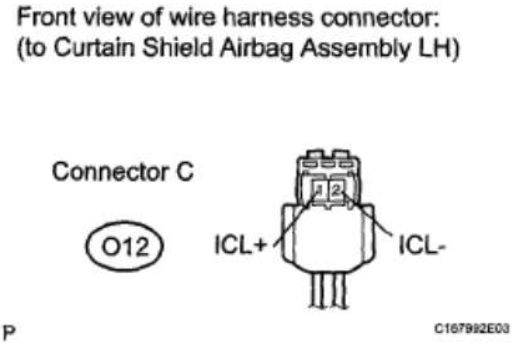


Fig. 205: Checking Floor Wire No. 2 (Driver Side Curtain Shield Squib Circuit)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Turn the ignition switch off.
2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
3. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O12-1 (ICL+) - O12-2 (ICL-)	Always	Below 1 ohms

g. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

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Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O12-1 (ICL+) - Body ground	Always	1 Mohms or higher
O12-2 (ICL-) - Body ground	Always	1 Mohms or higher

h. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector B (See **DIAGNOSIS SYSTEM**).
   2. Measure the resistance according to the value (s) in the table below.

      Standard resistance

      RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O12-1 (ICL+) - O12-2 (ICL-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE NO. 2

OK: Go to next step

4. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the curtain shield airbag assembly LH and the center airbag sensor assembly.
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG), 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.

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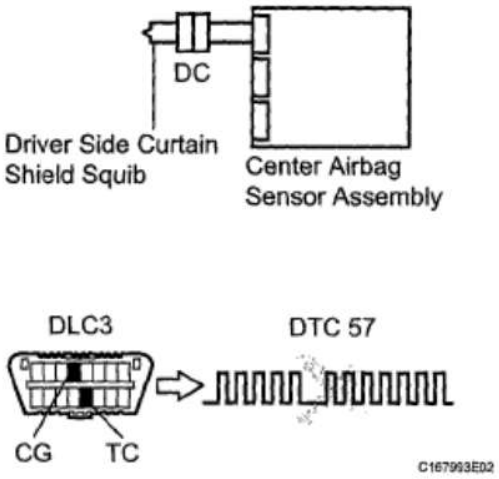


Fig. 206: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

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

The front passenger side curtain shield squib circuit consists of the center airbag sensor assembly and the curtain shield airbag assembly RH.

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

These DTCs are recorded when a malfunction is detected in the front passenger side curtain shield squib circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1835/58	• The center airbag sensor assembly receives a line short circuit signal 5 times in the front passenger side curtain shield squib circuit during primary check. • Front passenger side curtain shield squib malfunction • Center airbag sensor assembly malfunction	• Floor wire • Curtain shield airbag assembly RH (Front passenger side curtain shield squib) • Center airbag sensor assembly
	• The center airbag sensor assembly receives an open	• Floor wire

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B1836/58	circuit signal in the front passenger side curtain shield squib circuit for 2 seconds. • Front passenger side curtain shield squib malfunction • Center airbag sensor assembly malfunction	• Curtain shield airbag assembly RH (Front passenger side curtain shield squib) • Center airbag sensor assembly
B1837/58	• The center airbag sensor assembly receives a short circuit to ground signal in the front passenger side curtain shield squib circuit for 0.5 seconds. • Front passenger side curtain shield squib malfunction • Center airbag sensor assembly malfunction	• Floor wire • Curtain shield airbag assembly RH (Front passenger side curtain shield squib) • Center airbag sensor assembly
B1838/58	• The center airbag sensor assembly receives a short circuit to B+ signal in the front passenger side curtain shield squib circuit for 0.5 seconds. • Front passenger side curtain shield squib malfunction • Center airbag sensor assembly malfunction	• Floor wire • Curtain shield airbag assembly RH (Front passenger side curtain shield squib) • Center airbag sensor assembly

WIRING DIAGRAM

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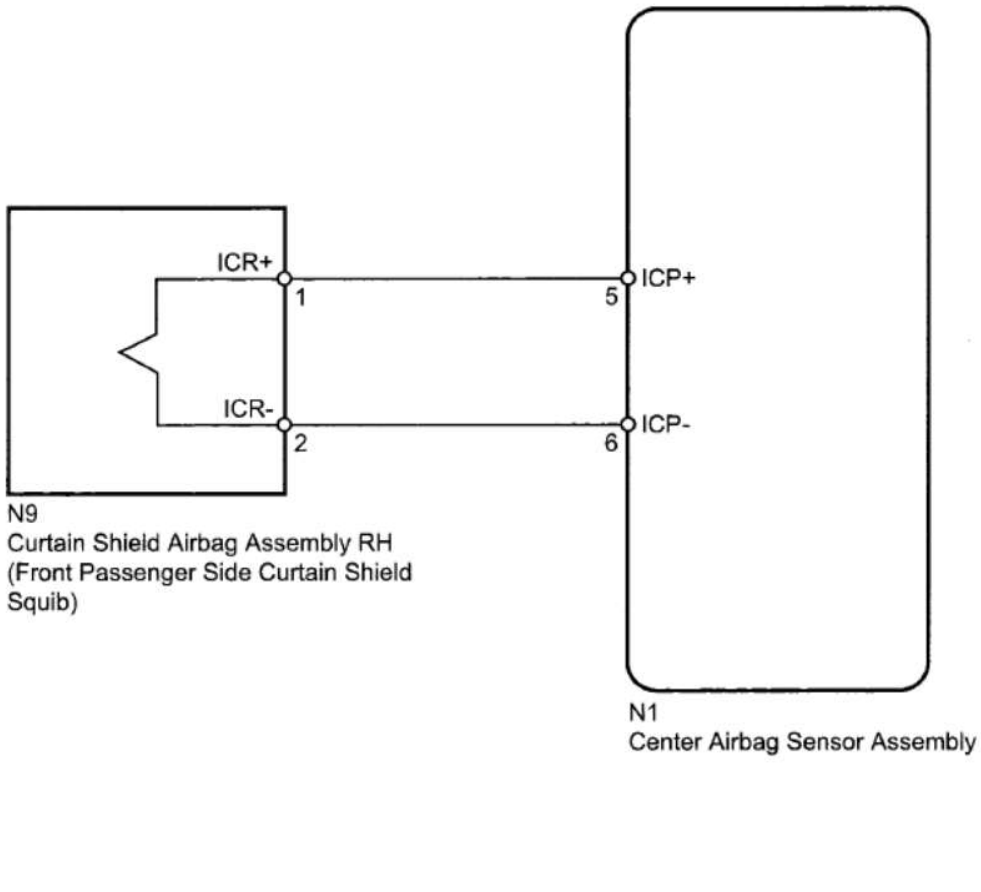


Fig. 207: Curtain Shield Airbag Assembly RH (Front Passenger Side Curtain Shield Squib) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting the "check mode" (signal check) with Techstream (See **CHECK MODE PROCEDURE**).
- After selecting the "check mode" (signal check), perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (See **DIAGNOSIS SYSTEM**).

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

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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.

d. Disconnect the connectors from the curtain shield airbag assembly RH and center airbag sensor assembly.
e. Check that the terminals of the connectors are not damaged.

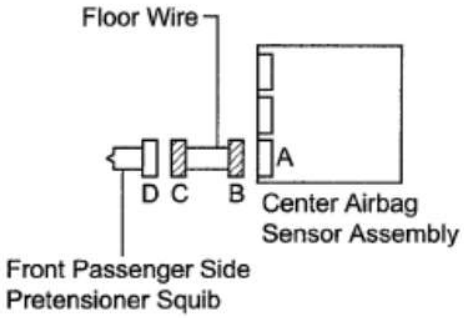


Fig. 208: Checking Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK:

The terminals are not deformed or damaged.

f. Check that the floor wire connector (on the curtain shield airbag assembly RH side) is not damaged.

OK:

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

NG: REPLACE FLOOR WIRE

OK: Go to next step

2. **CHECK CURTAIN SHIELD AIRBAG ASSEMBLY RH (FRONT PASSENGER SIDE CURTAIN SHIELD SQUIB)**
   a. Connect the connector to the center airbag sensor assembly.

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b. Connect SST (resistance 2.1 ohms) to connector C.

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

NOTE:

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

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

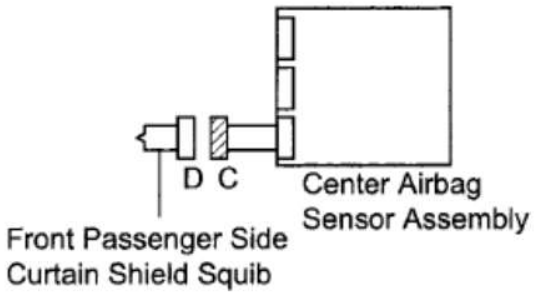
OK:

DTC B1835, B1836, B1837, B1838, or 58 is not output.

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Front view of wire harness connector:
(to Curtain Shield Airbag Assembly RH)

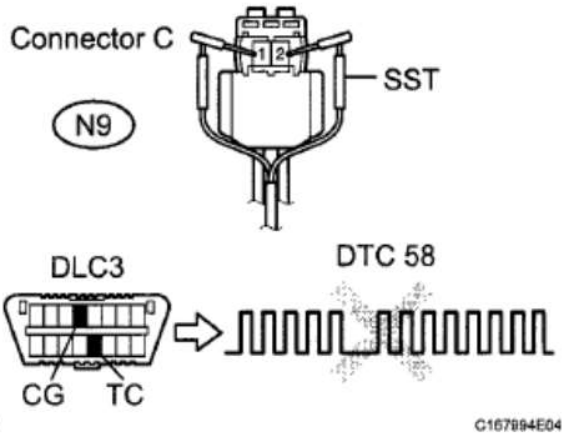


Fig. 209: Checking Curtain Shield Airbag Assembly RH (Front Passenger Side Curtain Shield Squib)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 FLOOR WIRE (FRONT PASSENGER SIDE CURTAIN SHIELD SQUIB CIRCUIT)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Disconnect SST from connector C.
   d. Disconnect the floor wire from the center airbag sensor assembly.

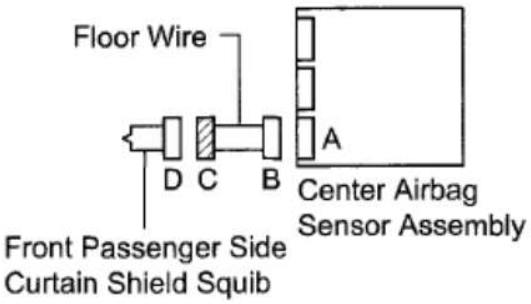
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e. Check for a short to B+ in the circuit.
   1. Connect the negative (-) terminal cable to the battery.
   2. Turn the ignition switch on (IG).
   3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N9-1 (ICR+) - Body ground	Ignition switch on (IG)	Below 1 V
N9-2 (ICR-) - Body ground	Ignition switch on (IG)	Below 1 V



Front view of wire harness connector:
(to Curtain Shield Airbag Assembly RH)

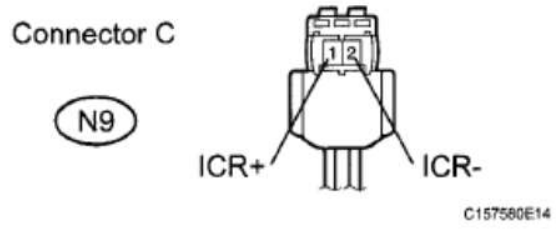


Fig. 210: Checking Floor Wire (Front Passenger Side Curtain Shield Squib Circuit)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Check for an open in the circuit.
   1. Turn the ignition switch off.
   2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   3. Measure the resistance according to the value (s) in the table below.

Standard resistance

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RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N9-1 (ICR+) - N9-2 (ICR-)	Always	Below 1 ohms

g. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N9-1 (ICR+) - Body ground	Always	1 Mohms or higher
N9-2 (ICR-) - Body ground	Always	1 Mohms or higher

h. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector B (See **DIAGNOSIS SYSTEM**).
   2. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N9-1 (ICR+) - N9-2 (ICR-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK: Go to next step

4. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the curtain shield airbag assembly RH and the center airbag sensor assembly.
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG), 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.

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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.

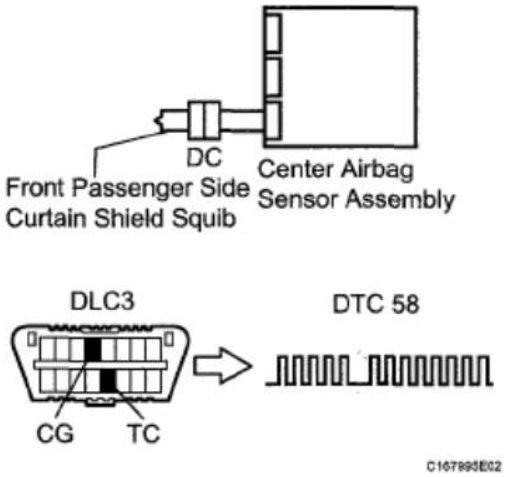


Fig. 211: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

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

DTC B1860/64 SHORT IN DRIVER SIDE KNEE AIRBAG SQUIB CIRCUIT; DTC B1861/64 OPEN IN DRIVER SIDE KNEE AIRBAG SQUIB CIRCUIT; DTC B1862/64 SHORT TO GND IN DRIVER SIDE KNEE AIRBAG SQUIB CIRCUIT; DTC B1863/64 SHORT TO B+ IN DRIVER SIDE KNEE AIRBAG SQUIB CIRCUIT

DESCRIPTION

The driver side knee airbag squib circuit consists of the center airbag sensor assembly and the driver side knee airbag assembly.

This circuit instructs the SRS to deploy when deployment conditions are met.

These DTCs are recorded when a malfunction is detected in the driver side knee airbag squib circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1860/64	• The center airbag sensor assembly receives a line short circuit signal 5 times in the driver side knee airbag squib circuit during primary check. • Driver side knee airbag squib malfunction	• Instrument panel wire • Driver side knee airbag assembly (Driver side knee airbag squib)

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	• Center airbag sensor assembly malfunction	• Center airbag sensor assembly
B1861/64	• The center airbag sensor assembly receives an open circuit signal in the driver side knee airbag squib circuit for 2 seconds. • Driver side knee airbag squib malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Driver side knee airbag assembly (Driver side knee airbag squib) • Center airbag sensor assembly
B1862/64	• The center airbag sensor assembly receives a short circuit to ground signal in the driver side knee airbag squib circuit for 0.5 seconds. • Driver side knee airbag squib malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Driver side knee airbag assembly (Driver side knee airbag squib) • Center airbag sensor assembly
B1863/64	• The center airbag sensor assembly receives a short circuit to B+ signal in the driver side knee airbag squib circuit for 0.5 seconds. • Driver side knee airbag squib malfunction • Center airbag sensor assembly malfunction	• Instrument panel wire • Driver side knee airbag assembly (Driver side knee airbag squib) • Center airbag sensor assembly

WIRING DIAGRAM

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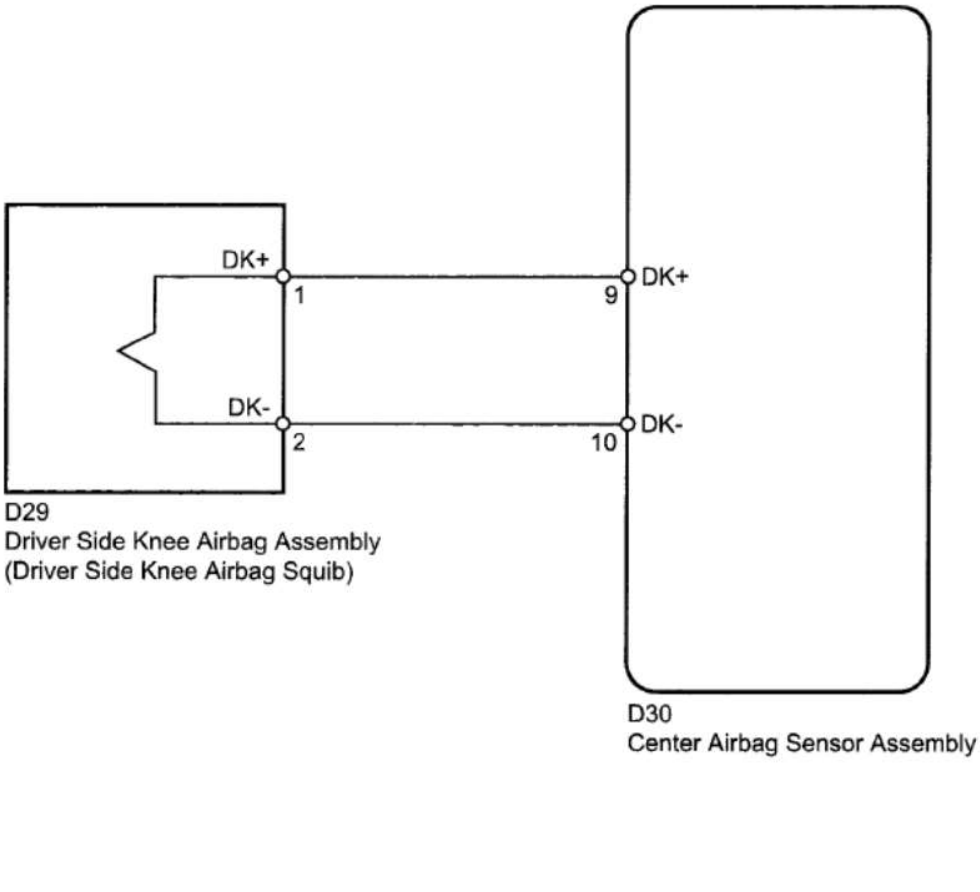


Fig. 212: Driver Side Knee Airbag Assembly (Driver Side Knee Airbag Squib) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting "check mode" (signal check) with 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 a city or rough road (See **DIAGNOSIS SYSTEM**).

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

      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.

d. Disconnect the connectors from the driver side knee airbag assembly and center airbag sensor assembly.
e. Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

f. Check that the instrument panel wire connector (on the driver side knee airbag assembly side) is not damaged.

OK:

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

NG: REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

2. **CHECK DRIVER SIDE KNEE AIRBAG ASSEMBLY (DRIVER SIDE KNEE AIRBAG SQUIB)**
   a. Connect the connector to the center airbag sensor assembly.
   b. Connect SST (resistance 2.1 ohms) to connector C.

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

NOTE:

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

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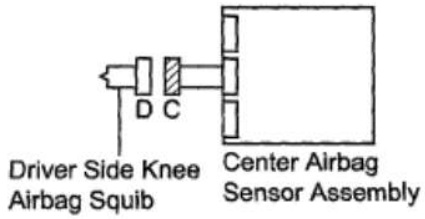
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.

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g. Turn the ignition switch on (IG), and wait for at least 60 seconds.
h. Check for DTCs (See **DTC CHECK/CLEAR**).

OK:

DTC B1860, B1861, B1862, B1863, or 64 is not output.



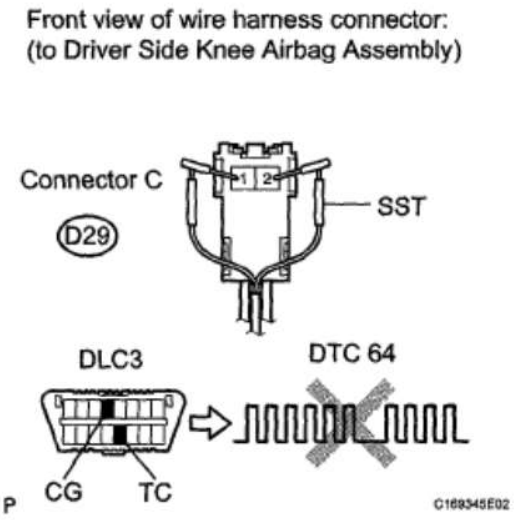


Fig. 213: Checking Driver Side Knee Airbag Assembly (Driver Side Knee Airbag Squib)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

Codes other than DTC B1860, B1861, B1862, B1863, and 64 may be output at this time, but they are not related to this check.

NG: Go to step 3

OK: REPLACE DRIVER SIDE KNEE AIRBAG ASSEMBLY (See **REMOVAL**)

3. **CHECK INSTRUMENT PANEL WIRE (DRIVER SIDE KNEE AIRBAG SQUIB CIRCUIT)**
   a. Turn the ignition switch off.

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b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the SST from connector C.
d. Disconnect the instrument panel wire from center airbag sensor assembly.
e. Check for a short to B+ in the circuit.
    1. Connect the negative (-) terminal cable to the battery.
    2. Turn the ignition switch on (IG).
    3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D29-1 (DK+) - Body ground	Ignition switch on (IG)	Below 1 V
D29-2 (DK-) - Body ground	Ignition switch on (IG)	Below 1 V

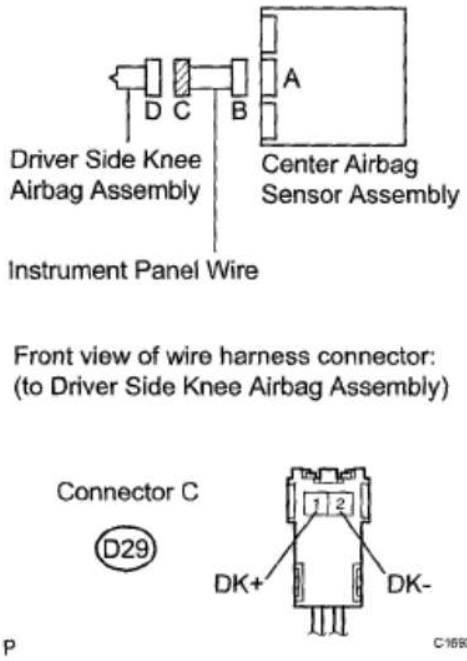


Fig. 214: Checking Instrument Panel Wire (Driver Side Knee Airbag Squib Circuit)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Check for an open in the circuit.
    1. Turn the ignition switch off.
    2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
    3. Measure the resistance according to the value (s) in the table below.

Standard resistance

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RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D29-1 (DK+) - D29-2 (DK-)	Always	Below 1 ohms

g. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D29-1 (DK+) - Body ground	Always	1 Mohms or higher
D29-2 (DK-) - Body ground	Always	1 Mohms or higher

h. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector B (See **DIAGNOSIS SYSTEM**).
   2. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D29-1 (DK+) - D29-2 (DK-)	Always	1 Mohms or higher

NG: REPLACE INSTRUMENT PANEL WIRE

OK: Go to next step

4. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the driver side knee airbag assembly and the center airbag sensor assembly.
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the stored DTCs in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   h. Check for DTCs (See **DTC CHECK/CLEAR**).

OK:

DTC B1860, B1861, B1862, B1863, or 64 is not output.

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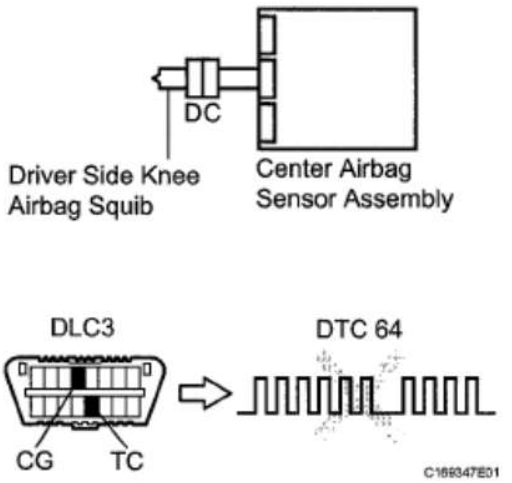


Fig. 215: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

Codes other than DTC B1860, B1861, B1862, B1863, and 64 may be output at this time, but they are not related to this check.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

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

DESCRIPTION

The front driver side pretensioner squib circuit consists of the center airbag sensor assembly and the front seat outer belt assembly LH.

This circuit instructs the SRS to deploy when deployment conditions are met.

These DTCs are recorded when a malfunction is detected in the front driver side pretensioner squib circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1900/73	• The center airbag sensor assembly receives a line short circuit signal 5 times in the front driver side pretensioner squib circuit during primary check.	• Floor wire No. 2 • Front seat outer belt assembly LH (Front driver side pretensioner squib)

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	• Front driver side pretensioner squib malfunction • Center airbag sensor assembly malfunction	• Center airbag sensor assembly
B1901/73	• The center airbag sensor assembly receives an open circuit signal in the front driver side pretensioner squib circuit for 2 seconds. Front driver side pretensioner squib malfunction • Center airbag sensor assembly malfunction	• Floor wire No. 2 • Front seat outer belt assembly LH (Front driver side pretensioner squib) • Center airbag sensor assembly
B1902/73	• The center airbag sensor assembly receives a short circuit to ground signal in the front driver side pretensioner squib circuit for 0.5 seconds. • Front driver side pretensioner squib malfunction • Center airbag sensor assembly malfunction	• Floor wire No. 2 • Front seat outer belt assembly LH (Front driver side pretensioner squib) • Center airbag sensor assembly
B1903/73	• The center airbag sensor assembly receives a short circuit to B+ signal in the front driver side pretensioner squib circuit for 0.5 seconds. • Front driver side pretensioner squib malfunction • Center airbag sensor assembly malfunction	• Floor wire No. 2 • Front seat outer belt assembly LH (Front driver side pretensioner squib) • Center airbag sensor assembly

WIRING DIAGRAM

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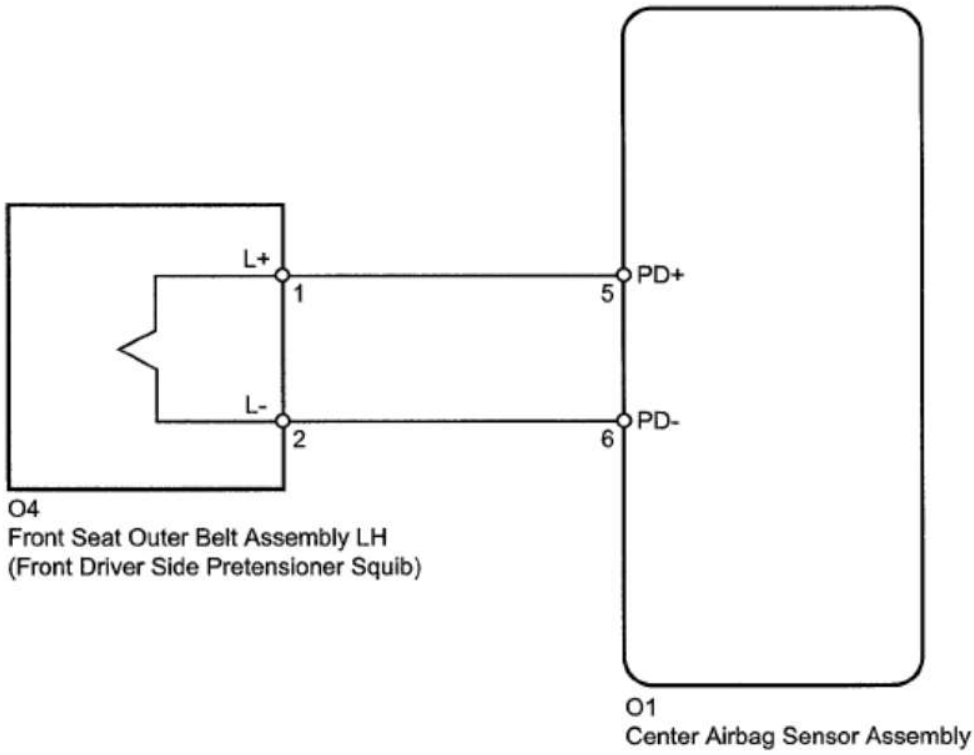


Fig. 216: Front Seat Outer Belt Assembly LH (Front Driver Side Pretensioner Squib) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting "check mode" (signal check) with 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 a city or rough road (See **DIAGNOSIS SYSTEM**).

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

   OK:

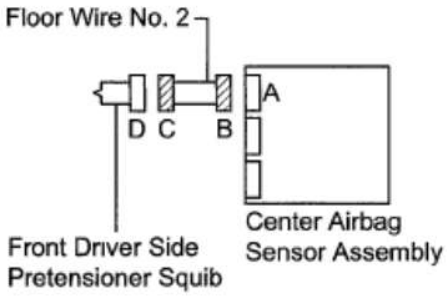
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The connectors are properly connected.

HINT:

If the connectors are connected securely, reconnect the connectors and proceed to the next inspection.

d. Disconnect the connectors from the front seat outer belt assembly LH and center airbag sensor assembly.
e. Check that the terminals of the connectors are not damaged.



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Fig. 217: Checking Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK:

The terminals are not deformed or damaged.

f. Check that the floor wire No. 2 connector (on the front seat outer belt assembly LH side) is not damaged.

OK:

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

NG: REPLACE FLOOR WIRE NO. 2

OK: Go to next step

2. **CHECK FRONT SEAT OUTER BELT ASSEMBLY LH (FRONT DRIVER SIDE PRETENSIONER SQUIB)**
   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 connector to the center airbag sensor assembly.
d. Connect SST (resistance 2.1 ohms) to connector C.

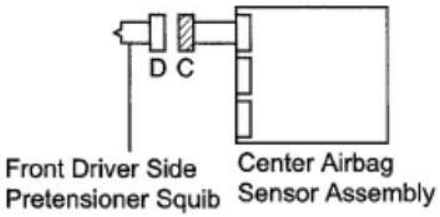
CAUTION: Never connect the tester to the front seat outer belt assembly LH (front driver side pretensioner squib) for measurement, as this may lead to a serious injury due to airbag deployment.

NOTE:

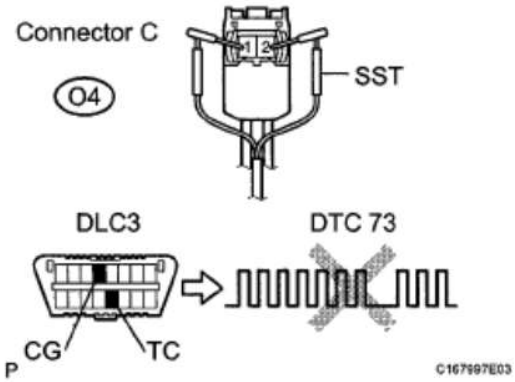
- **Do not forcibly insert SST into the terminals of the connector when connecting.**
- **Insert SST straight into the terminals of the connector.**

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



Front view of wire harness connector:
(to Front Seat Outer Belt Assembly LH)



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Fig. 218: Checking Front Seat Outer Belt Assembly LH (Front Driver Side Pretensioner Squib)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 FLOOR WIRE NO. 2 (FRONT DRIVER SIDE PRETENSIONER SQUIB CIRCUIT)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Disconnect SST from connector C.
   d. Disconnect the floor wire No. 2 from the center airbag sensor assembly.
   e. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O4-1 (L+) - Body ground	Ignition switch on (IG)	Below 1 V
O4-2 (L-) - Body ground	Ignition switch on (IG)	Below 1 V

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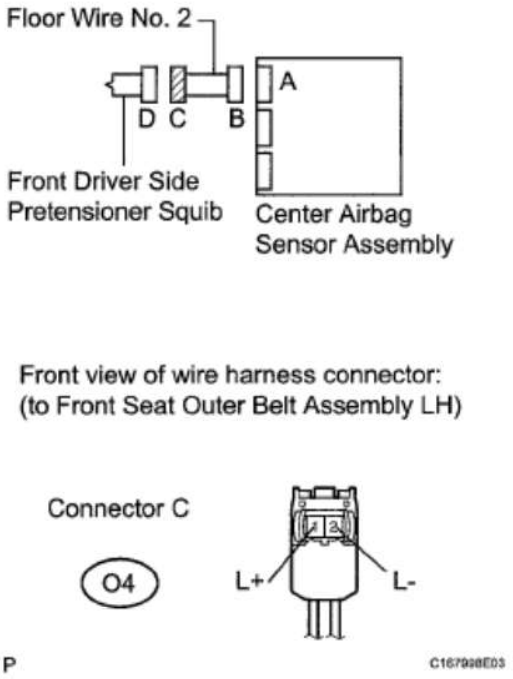


Fig. 219: Checking Floor Wire No. 2 (Front Driver Side Pretensioner Squib Circuit)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Check for an open in the circuit.
   1. Turn the ignition switch off.
   2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   3. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O4-1 (L+) - O4-2 (L-)	Always	Below 1 ohms

g. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O4-1 (L+) - Body ground	Always	1 Mohms or higher
O4-2 (L-) - Body ground	Always	1 Mohms or higher

h. Check for a short in the circuit.

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
O4-1 (L+) - O4-2 (L-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE NO. 2

OK: Go to next step

4. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the front seat outer belt assembly LH and the center airbag sensor assembly.
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   h. Check for DTCs (See **DTC CHECK/CLEAR**).

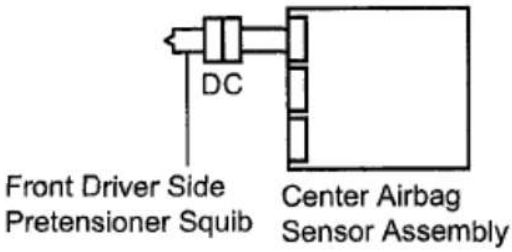
OK:

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.

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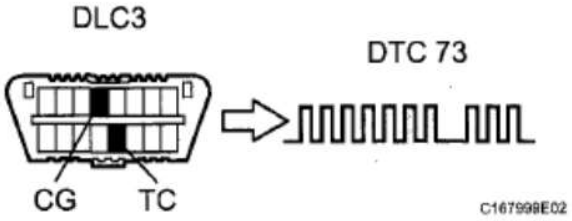


Fig. 220: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

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

DESCRIPTION

The front passenger side pretensioner squib circuit consists of the center airbag sensor assembly and the front seat outer belt assembly 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 passenger side pretensioner squib circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1905/74	• The center airbag sensor assembly receives a line short circuit signal 5 times in the front passenger side pretensioner squib circuit during primary check. • Front passenger side pretensioner squib malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat outer belt assembly RH (Front passenger side pretensioner squib) • Center airbag sensor assembly

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B1906/74	• The center airbag sensor assembly receives an open circuit signal in the front passenger side pretensioner squib circuit for 2 seconds. • Front passenger side pretensioner squib malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat outer belt assembly RH (Front passenger side pretensioner squib) • Center airbag sensor assembly
B1907/74	• The center airbag sensor assembly receives a short circuit to ground signal in the front passenger side pretensioner squib circuit for 0.5 seconds. • Front passenger side pretensioner squib malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat outer belt assembly RH (Front passenger side pretensioner squib) • Center airbag sensor assembly
B1908/74	• The center airbag sensor assembly receives a short circuit to B+ signal in the front passenger side pretensioner squib circuit for 0.5 seconds. • Front passenger side pretensioner squib malfunction • Center airbag sensor assembly malfunction	• Floor wire • Front seat outer belt assembly RH (Front passenger side pretensioner squib) • Center airbag sensor assembly

WIRING DIAGRAM

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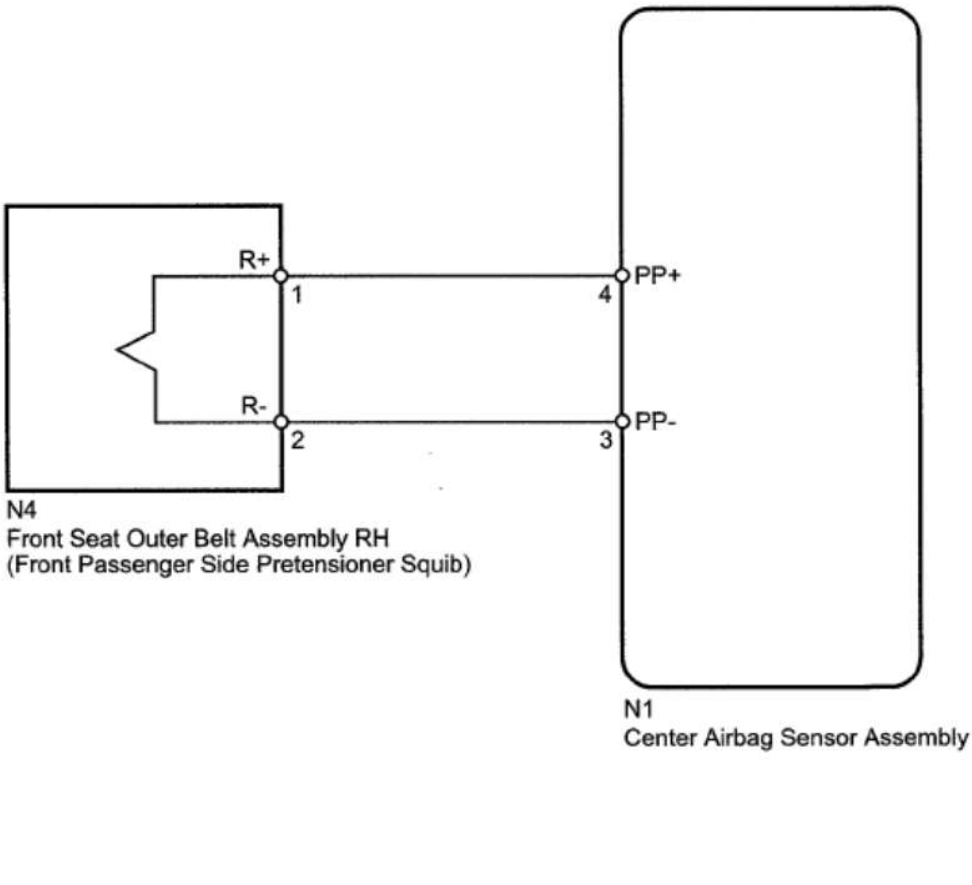


Fig. 221: Front Seat Outer Belt Assembly RH (Front Passenger Side Pretensioner Squib) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- Perform the simulation method by selecting "check mode" (signal check) with 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 a city or rough road (See **DIAGNOSIS SYSTEM**).

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

   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.

d. Disconnect the connectors from the front seat outer belt assembly RH and center airbag sensor assembly.
e. Check that the terminals of the connectors are not damaged.

OK:

The terminals are not deformed or damaged.

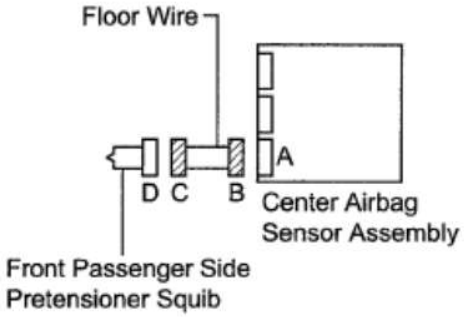


Fig. 222: Checking Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Check that the floor wire connector (on the front seat outer belt assembly RH side) is not damaged.

OK:

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

NG: REPLACE FLOOR WIRE

OK: Go to next step

2. **CHECK FRONT SEAT OUTER BELT ASSEMBLY RH (FRONT PASSENGER SIDE PRETENSIONER SQUIB)**
   a. Connect the connector to the center airbag sensor assembly.
   b. Connect SST (resistance 2.1 ohms) to connector C.

CAUTION: Never connect the tester to the front seat outer belt assembly

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RH (front passenger side pretensioner squib) for measurement, as this may lead to a serious injury due to airbag deployment.

NOTE:

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

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

OK:

DTC B1905, B1906, B1907, B1908, or 74 is not output.

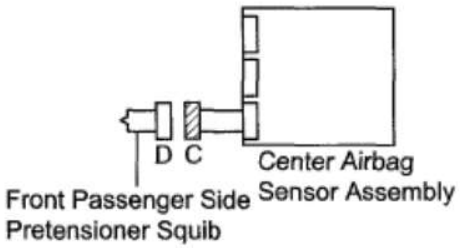
HINT:

Codes other than DTC B1905, B1906, B1907, B1908, and 74 may be output at this time, but they are not related to this check.

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Front view of wire harness connector:
(to Front Seat Outer Belt Assembly RH)

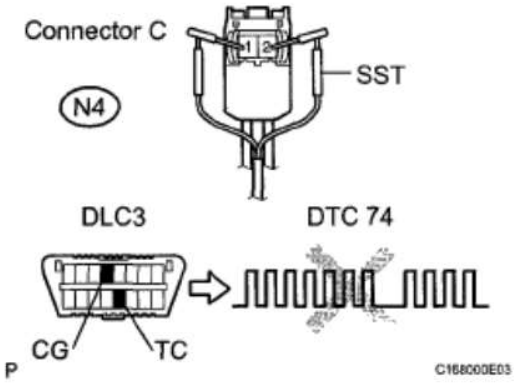


Fig. 223: Checking Front Seat Outer Belt Assembly RH (Front Passenger Side Pretensioner Squib)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: Go to step 3

OK: REPLACE FRONT SEAT OUTER BELT ASSEMBLY RH (See **REMOVAL**)

3. **CHECK FLOOR WIRE (FRONT PASSENGER SIDE PRETENSIONER SQUIB CIRCUIT)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Disconnect SST from connector C.
   d. Disconnect the floor wire from the center airbag sensor assembly.
   e. Check for a short to B+ in the circuit.
      1. Connect the negative (-) terminal cable to the battery.
      2. Turn the ignition switch on (IG).
      3. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

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Tester Connection	Switch Condition	Specified Condition
N4-1 (R+) - Body ground	Ignition switch on (IG)	Below 1 V
N4-2 (R-) - Body ground	Ignition switch on (IG)	Below 1 V

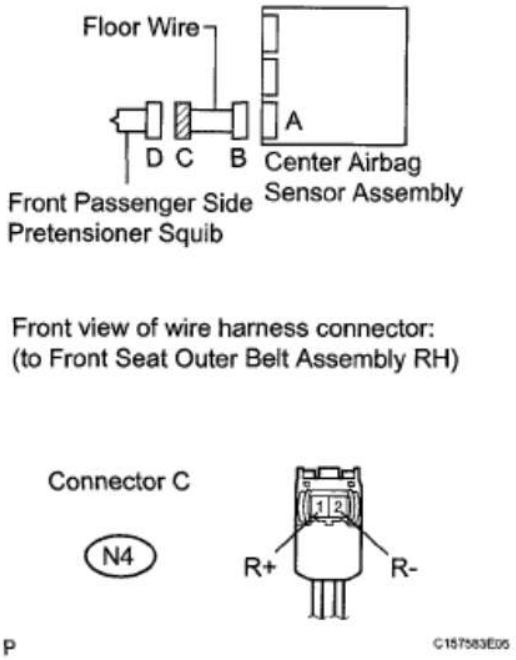


Fig. 224: Checking Floor Wire (Front Passenger Side Pretensioner Squib Circuit)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Check for an open in the circuit.
   1. Turn the ignition switch off.
   2. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   3. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N4-1 (R+) - N4-2 (R-)	Always	Below 1 ohms

g. Check for a short to ground in the circuit.
   1. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition

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N4-1 (R+) - Body ground	Always	1 Mohms or higher
N4-2 (R-) - Body ground	Always	1 Mohms or higher

h. Check for a short in the circuit.
   1. Release the activation prevention mechanism built into connector B (See **DIAGNOSIS SYSTEM**).
   2. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
N4-1 (R+) - N4-2 (R-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE

OK: Go to next step

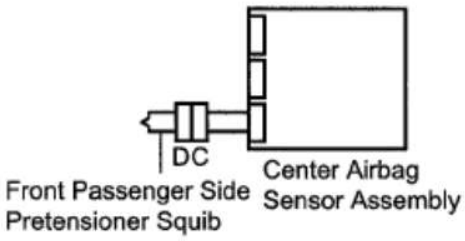
4. **CHECK CENTER AIRBAG SENSOR ASSEMBLY**
   a. Restore the released activation prevention mechanism of connector B to the original condition.
   b. Connect the connectors to the front seat outer belt assembly RH and the center airbag sensor assembly.
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   e. Clear the DTCs stored in the memory (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG), and wait for at least 60 seconds.
   h. Check for DTCs (See **DTC CHECK/CLEAR**).

OK:

DTC B1905, B1906, B1907, B1908, or 74 is not output.

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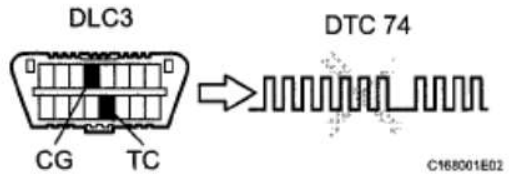


Fig. 225: Checking Center Airbag Sensor Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

Codes other than DTC B1905, B1906, B1907, B1908, or 74 may be output at this time, but they are not related to this check.

NG: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

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 assembly.

When the SRS is normal, the SRS warning light comes on for approximately 6 seconds after the ignition switch is turned from off to on (IG), 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 assembly 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 assembly. The SRS warning light

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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 assembly to the combination meter assembly through the CAN communication system.

WIRING DIAGRAM

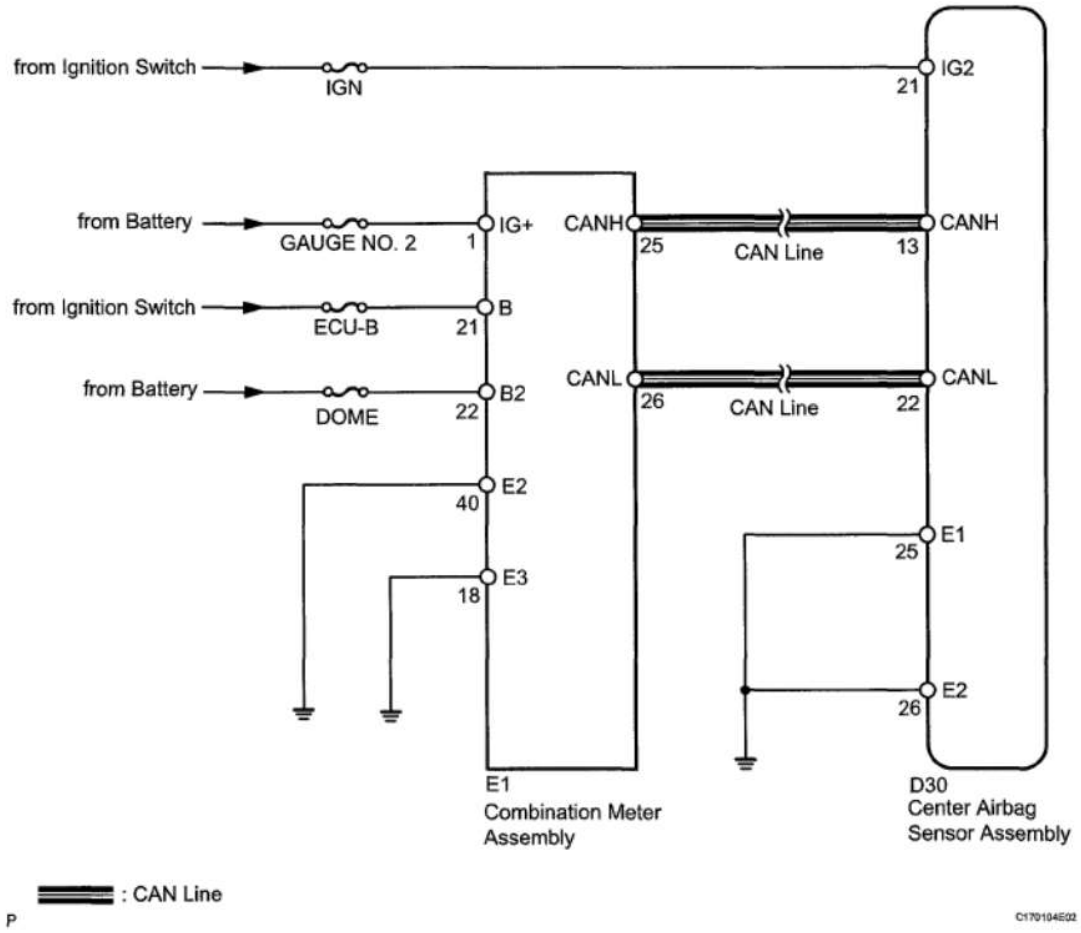


Fig. 226: SRS Warning Light - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK SRS WARNING LIGHT OPERATION**
   a. Check the SRS warning light operation approximately 6 seconds after the ignition switch is turned on (IG).

Result

RESULT CHART

SRS Warning Light Illumination	Proceed to

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Remains on	A
Remains on after it goes off	B

B: Go to step 6

A: Go to next step

2. **CHECK BATTERY VOLTAGE**
   a. Measure the voltage of the battery.

      Standard voltage:

      11 to 14 V

   NG: INSPECT CHARGING SYSTEM AND BATTERY

   OK: Go to next step

3. **CHECK 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 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.

   d. Disconnect the connector from the center airbag sensor assembly.
   e. Check that the connector terminal is not damaged.

      OK:

      The terminal is not deformed or damaged.

   NG: REPLACE WIRE HARNESS

   OK: Go to next step

4. **CHECK WIRE HARNESS (CENTER AIRBAG SENSOR ASSEMBLY - BODY GROUND)**
   a. Connect the negative (-) terminal cable to the battery.

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b. Turn the ignition switch on (IG).
c. Operate all components of the electrical system (defogger, wipers, headlights, heater blower, etc.).
d. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D30-21 (IG2) - Body ground	Ignition switch on (IG)	8 to 16 V

e. Turn the ignition switch off.
f. Measure the resistance according to the value (s) in the table below.

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

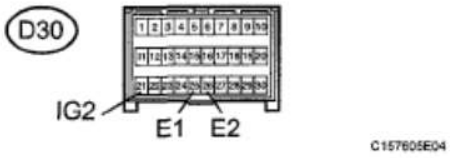


Fig. 227: Identifying D30 Center Airbag Sensor Assembly Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D30-25 (E1) - Body ground	Always	Below 1 ohms
D30-26 (E2) - Body ground	Always	Below 1 ohms

NG: REPLACE WIRE HARNESS

OK: Go to next step

5. **CHECK SRS WARNING LIGHT**
   a. Turn the ignition switch on (IG).
   b. Check the SRS warning light condition.

OK:

After the primary check period, the SRS warning light goes off for approximately 10 seconds and remains on.

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HINT:

The primary check is performed for approximately 6 seconds after the ignition switch is turned on (IG).

NG: REPLACE COMBINATION METER ASSEMBLY (See **REMOVAL**)

OK: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

6. **CHECK CAN COMMUNICATION SYSTEM**
   a. Use Techstream to check if the CAN communication system is functioning normally.

      HINT:

      - Refer to "Bus Check" of the CAN communication system (See **HOW TO PROCEED WITH TROUBLESHOOTING**).
      - The center airbag sensor assembly is connected to the CAN communication system. Therefore, before starting troubleshooting, make sure to check that there is no trouble in the CAN communication system.

Result

RESULT CHART

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

B: GO TO CAN COMMUNICATION SYSTEM (See **HOW TO PROCEED WITH TROUBLESHOOTING**)

A: Go to next step

7. **CHECK BATTERY VOLTAGE**
   a. Measure the voltage of the battery.

      Standard voltage:

      11 to 14 V

NG: INSPECT CHARGING SYSTEM AND BATTERY

OK: Go to next step

8. **CHECK CONNECTOR**
   a. Turn the ignition switch 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 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.

d. Disconnect the connector from the center airbag sensor assembly.
e. Check that the connector terminal is not damaged.

OK:

The terminal is not deformed or damaged.

NG: REPLACE WIRE HARNESS

OK: Go to next step

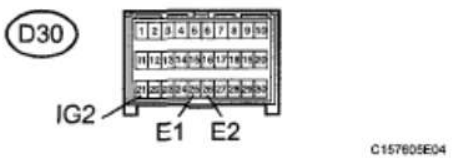
9. **CHECK WIRE HARNESS (CENTER AIRBAG SENSOR ASSEMBLY - BODY GROUND)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Operate all components of the electrical system (defogger, wipers, headlights, heater blower, etc.).
   d. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D30-21 (IG2) - Body ground	Ignition switch on (IG)	8 to 16 V

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



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Fig. 228: Identifying D30 Center Airbag Sensor Assembly Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Turn the ignition switch off.
f. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
D30-25 (E1) - Body ground	Always	Below 1 ohms
D30-26 (E2) - Body ground	Always	Below 1 ohms

NG: REPLACE WIRE HARNESS

OK: Go to next step

10. **CHECK CONNECTOR**
    a. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
    b. Check that the connector is properly connected to the combination meter assembly.

    OK:

    The connector is properly connected.

    HINT:

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

    c. Disconnect the connector from the combination meter assembly.
    d. Check that the connector terminal is not damaged.

    OK:

    The terminal is not deformed or damaged.

    NG: REPLACE WIRE HARNESS

    OK: Go to next step

11. **CHECK WIRE HARNESS (COMBINATION METER ASSEMBLY - BODY GROUND)**
    a. Connect the negative (-) terminal cable to the battery.
    b. Turn the ignition switch on (IG).
    c. Measure the voltage according to the value (s) in the table below.

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Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
E1-1 (IG+) - Body ground	Always	11 to 14 V
E1-21 (B) - Body ground	Ignition switch on (IG)	11 to 14 V
E1-22 (B2) - Body ground	Always	11 to 14 V

d. Turn the ignition switch off.
e. Measure the resistance according to the value (s) in the table below.

Front view of wire harness connector:
(to Combination Meter Assembly)

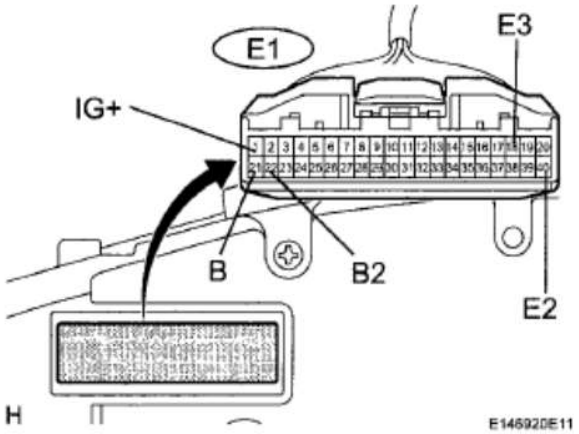


Fig. 229: Identifying E1 Combination Meter Assembly Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
E1-18 (E3) - Body ground	Always	Below 1 ohms
E1-40 (E2) - Body ground	Always	Below 1 ohms

NG: REPLACE WIRE HARNESS

OK: Go to next step

12. **CHECK SRS WARNING LIGHT**
    a. Connect the connector to the combination meter assembly.
    b. Connect the negative (-) terminal cable to the battery.

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c. Turn the ignition switch on (IG).
d. Check the SRS warning light condition.

OK:

After the primary check period, the SRS warning light goes off for approximately 10 seconds and remains on.

HINT:

The primary check is performed for approximately 6 seconds after the ignition switch is turned on (IG).

NG: REPLACE COMBINATION METER ASSEMBLY (See **REMOVAL**)

OK: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

SRS WARNING LIGHT DOES NOT COME ON

DESCRIPTION

The SRS warning light is located on the combination meter assembly.

When the SRS is normal, the SRS warning light comes on for approximately 6 seconds after the ignition switch is turned from off to on (IG), 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 assembly 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 assembly. 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 assembly to the combination meter assembly through the CAN communication system.

WIRING DIAGRAM

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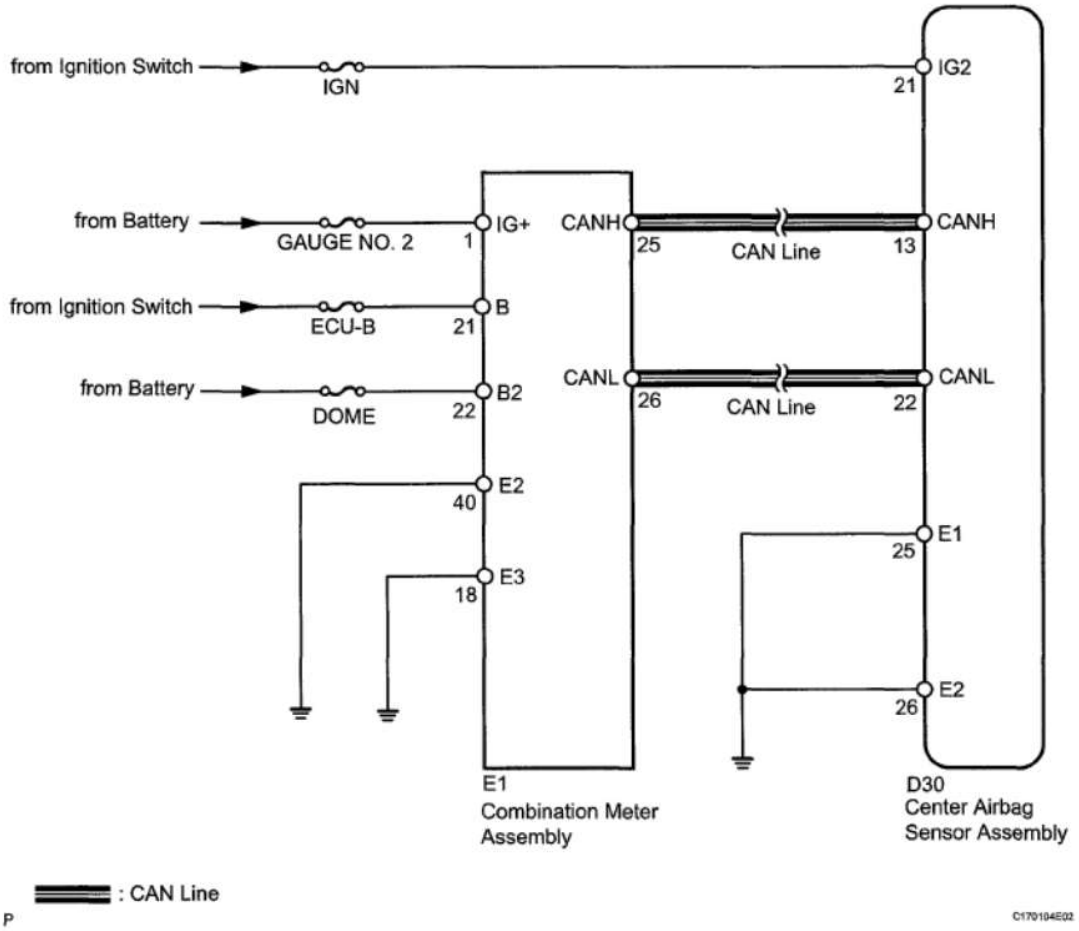


Fig. 230: SRS Warning Light - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK BATTERY VOLTAGE**
   a. Measure the voltage of the battery.

      Standard voltage:

      11 to 14 V

   NG: INSPECT CHARGING SYSTEM AND BATTERY

   OK: Go to next step

2. **CHECK CONNECTOR**
   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. Check that the connector is properly connected to the combination meter assembly.

OK:

The connector is properly connected.

HINT:

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

d. Disconnect the connector from the combination meter assembly.
e. Check that the connector terminals is not damaged.

OK:

The terminal is not deformed or damaged.

NG: REPLACE WIRE HARNESS

OK: Go to next step

3. **CHECK WIRE HARNESS (COMBINATION METER ASSEMBLY - BODY GROUND)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
E1-1 (IG+) - Body ground	Always	11 to 14 V
E1-21 (B) - Body ground	Ignition switch on (IG)	11 to 14 V
E1-22 (B2) - Body ground	Always	11 to 14 V

   d. Turn the ignition switch off.
   e. Measure the resistance according to the value (s) in the table below.

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Front view of wire harness connector:
(to Combination Meter Assembly)

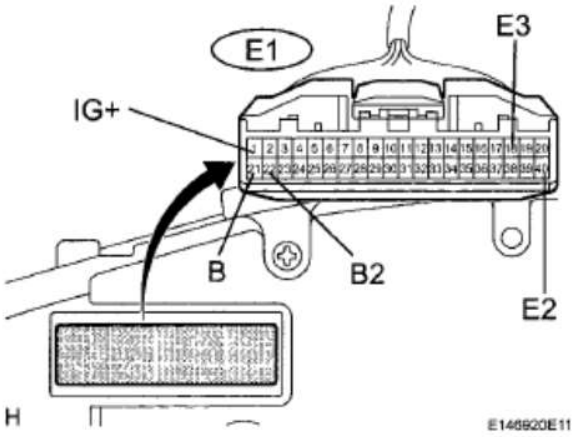


Fig. 231: Identifying E1 Combination Meter Assembly Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
E1-18 (E3) - Body ground	Always	Below 1 ohms
E1-40 (E2) - Body ground	Always	Below 1 ohms

NG: REPLACE WIRE HARNESS

OK: Go to next step

4. **CHECK SRS WARNING LIGHT**
   a. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   b. Connect the connector to the combination meter assembly.
   c. Disconnect the connector from the center airbag sensor assembly.
   d. Connect the negative (-) terminal cable to the battery.
   e. Turn the ignition switch on (IG).
   f. Check the SRS warning light condition.

   OK:

   After the primary check period, the SRS warning light goes off for approximately 10 seconds and remains on.

   HINT:

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The primary check is performed for approximately 6 seconds after the ignition switch is turned on (IG).

NG: REPLACE COMBINATION METER ASSEMBLY (See **REMOVAL**)

OK: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

TC AND CG TERMINAL 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 the CAN communication system to each ECU including the center airbag sensor assembly. Thus when all systems do not enter DTC output mode, there may be an ECM malfunction.

WIRING DIAGRAM

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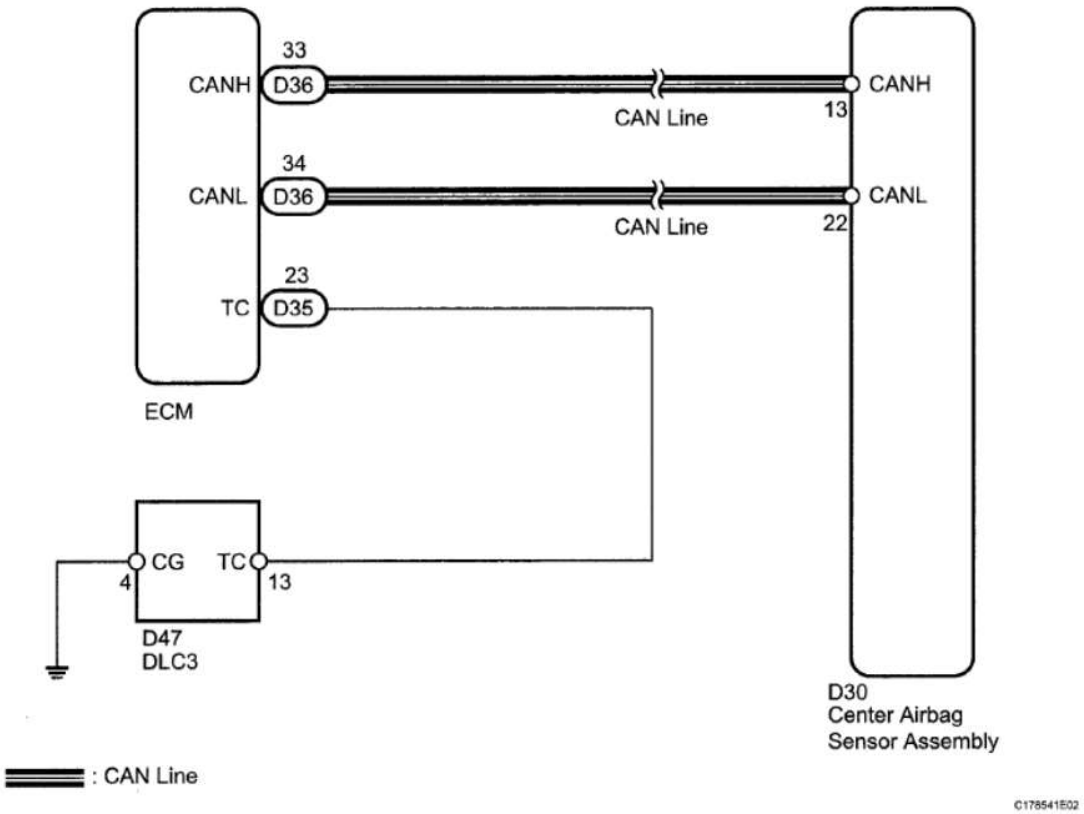


Fig. 232: TC And CG Terminal Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **CHECK CAN COMMUNICATION SYSTEM**
   a. Use Techstream to check if the CAN communication system is functioning normally.

      HINT:

      - Refer to "Bus Check" of the CAN communication system (See **HOW TO PROCEED WITH TROUBLESHOOTING**).
      - The center airbag sensor assembly is connected to the CAN communication system. Therefore, before starting troubleshooting, make sure to check that there is no trouble in the CAN communication system.

Result

RESULT CHART

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

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B: GO TO CAN COMMUNICATION SYSTEM (See **HOW TO PROCEED WITH TROUBLESHOOTING**)

A: Go to next step

2. **CHECK WIRE HARNESS (TC OF DLC3 - TC OF ECM)**
   a. Turn the ignition switch off.
   b. Disconnect the connector from the ECM.

DLC3:

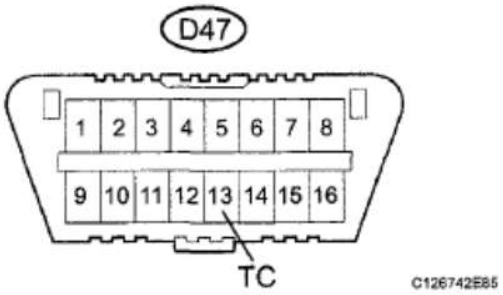


Fig. 233: Identifying D47, TC And DLC3 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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

Standard resistance

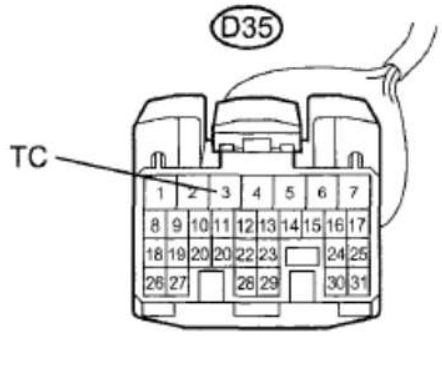
RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
E11-13 (TC) - A50-27 (TC)	Always	Below 1 ohms

NG: REPLACE WIRE HARNESS

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Front view of wire harness connector:
(to ECM)



C178312E02

Fig. 234: Identifying D35, TC And ECM Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

3. **CHECK WIRE HARNESS (CG OF DLC3 - BODY GROUND)**
   a. Measure the resistance according to the value (s) in the table below.

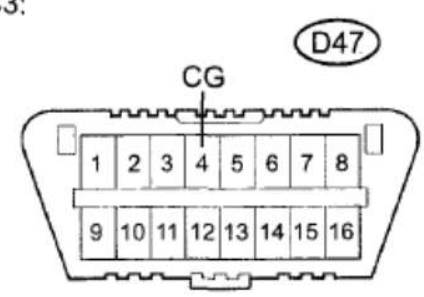
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
E11-4 (CG) - Body ground	Always	Below 1 ohms

NG: REPLACE WIRE HARNESS

DLC3:



C126742E86

Fig. 235: Identifying D47, CG And DLC3 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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OK: Go to next step

4. **CHECK WIRE HARNESS (TC OF DCL3 - BODY GROUND)**
   a. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
E11-13 (TC) - Body ground	Always	1 Mohms or higher

NG: REPLACE WIRE HARNESS OR EACH ECU

DLC3:

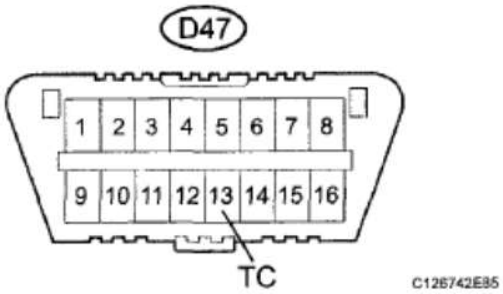


Fig. 236: Identifying D47, TC And DLC3 Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See **ON-VEHICLE INSPECTION**)

OCCUPANT CLASSIFICATION SYSTEM

PRECAUTION

1. **INSPECTION PROCEDURE FOR VEHICLE INVOLVED IN ACCIDENT**
   a. Perform zero point calibration and sensitivity check if any of the following conditions occur:
      - The occupant classification ECU is replaced.
      - 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.

NOTE: **When an accident vehicle is brought into the workshop for repair, check the flatness of the body side that is equipped with the passenger seat. If the flatness is not within +/- 3.0 mm (0.118 in.),**

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adjust it to the specified range.

2. **EXPRESSIONS OF IGNITION SWITCH**

The type of ignition switch used on this model differs according to the specifications of the vehicle. The expressions listed in the table below are used in this article.

IGNITION SWITCH REFERENCE CHART

Switch Type		Ignition Switch (position)	Engine Switch (condition)
Expression	Ignition Switch off	LOCK	Off
	Ignition Switch on (IG)	ON	On (IG)
	Ignition Switch on (ACC)	ACC	On (ACC)
	Engine Start	START	Start

PARTS LOCATION

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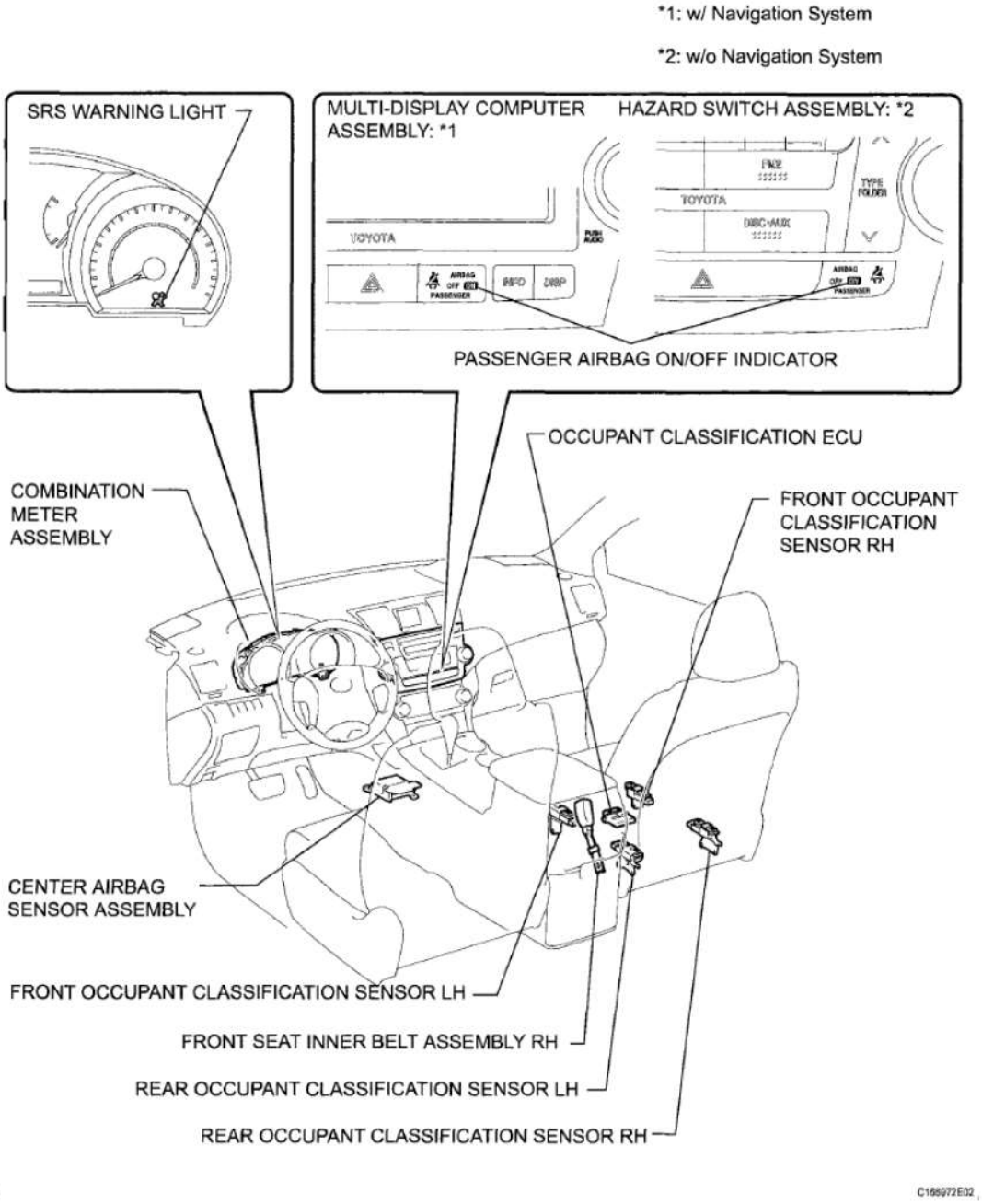


Fig. 237: Identifying Occupant Classification System Parts Location
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SYSTEM DIAGRAM

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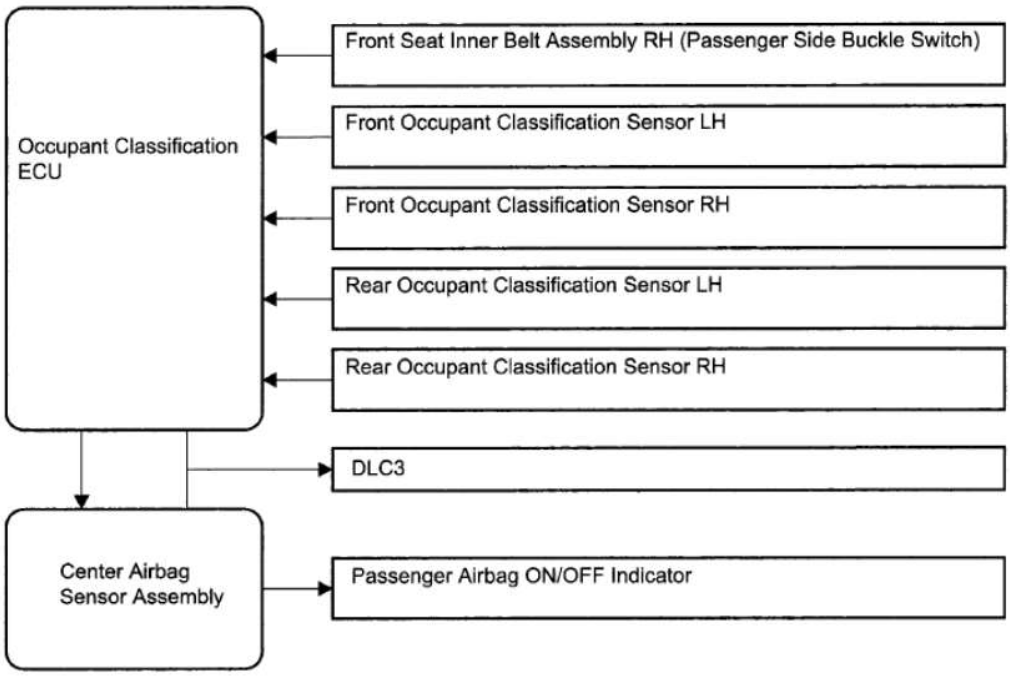


Fig. 238: Occupant Classification System Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SYSTEM DESCRIPTION

1. **DESCRIPTION OF OCCUPANT CLASSIFICATION SYSTEM**
   a. GENERAL DESCRIPTION
      1. In the occupant classification system, the occupant classification ECU calculates the weight of the occupant based on signals from the occupant classification sensors. This system recognizes the occupant as a child if it detects a weight of less than 36 kg (79.37 lb), and disables the front passenger airbag and front passenger side - side airbag.
      2. This system is mainly comprised of 4 occupant classification sensors that detect the load on the front passenger seat. The occupant classification ECU controls the system, and the passenger airbag ON/OFF indicator indicates the ON/OFF condition of the front passenger airbag and front passenger side - side airbag.
   b. OCCUPANT CLASSIFICATION SENSOR

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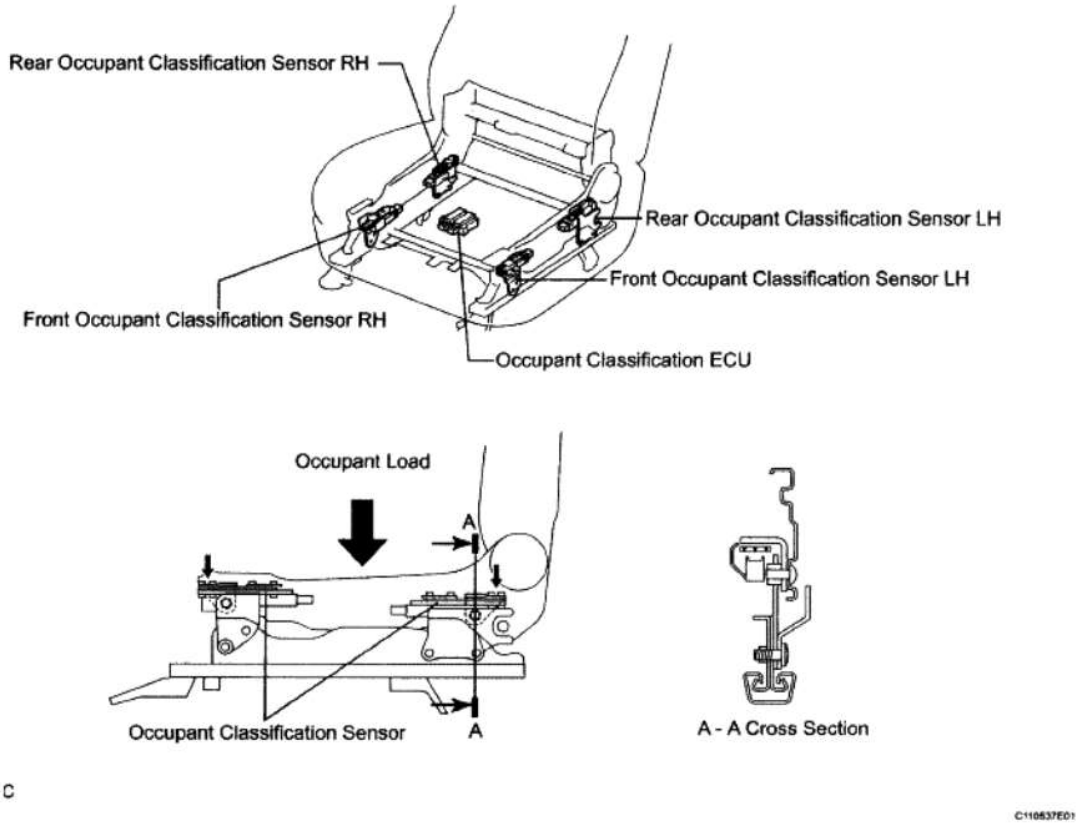


Fig. 239: Identifying Front And Rear Occupant Classification Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. The occupant classification sensors are installed on 4 brackets connecting the seat rail and seat frame. Accordingly, when load is applied to the front passenger seat by an occupant sitting in it, the occupant classification sensors register a distortion.

c. DESCRIPTION FOR PASSENGER AIRBAG ON/OFF INDICATOR

1. This indicator informs the driver whether the occupant classification ECU puts the front passenger airbag and front passenger side - side airbag into an active state or inactive state.
2. If a malfunction occurs in the occupant classification system, "OFF" indication of the passenger airbag ON/OFF indicator and the SRS warning light come on.

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

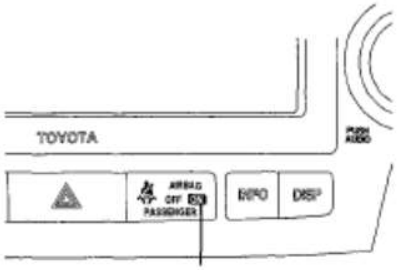
*: Use Techstream

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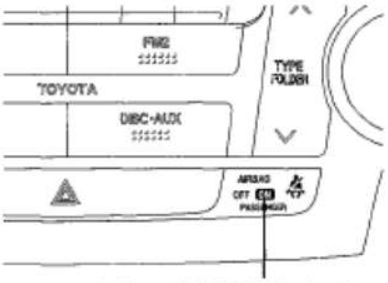
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w/ Navigation System:



Passenger Airbag ON/OFF Indicator

w/o Navigation System:



Passenger Airbag ON/OFF Indicator

C168440E01

Fig. 240: Identifying Passenger Airbag ON/OFF Indicator Button
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. **VEHICLE BROUGHT TO WORKSHOP**
2. **CUSTOMER PROBLEM ANALYSIS**
   a. Confirm problem symptoms (See **PROBLEM SYMPTOMS TABLE**).
3. **PASSENGER AIRBAG ON/OFF INDICATOR CHECK**
4. **DTC CHECK (Present and Past DTCs)**
   a. Check for DTCs.

Result

RESULT CHART

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

B: GO TO PROBLEM SYMPTOMS TABLE

A: Go to next step

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5. **DTC CHART**
6. **CIRCUIT INSPECTION***
7. **REPAIR**
8. **CLEAR DTCS (Present and Past DTCs)***
   a. Clear DTCs.
9. **DTC CHECK (Present and Past DTCs)***
   a. Check for DTCs.

Result

RESULT CHART

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

B: Go to step 5

A: Go to next step

10. **SYMPTOM SIMULATION**
    a. Check the passenger airbag ON/OFF indicator condition.

Result

RESULT CHART

Result	Proceed to
Passenger airbag ON/OFF indicator operates normally.	A
Passenger airbag ON/OFF indicator ("OFF") and SRS warning light come on.	B

B: Go to step 5

A: Go to next step

11. **CONFIRMATION TEST**

NEXT: END

INITIALIZATION

NOTE: Make sure that the front passenger seat is not occupied before performing the operation:

HINT:

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Perform the zero point calibration and sensitivity check if any of the following conditions occur.

- The occupant classification ECU is replaced.
- 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 passenger seat.
         - The front passenger seat belt buckle switch is OFF.
      2. Adjust the seat position according to the table below.

         SEAT POSITION ADJUSTMENT REFERENCE CHART

Adjustment Item	Position
Slide Direction	Rearmost position
Reclining Angle	Upright position
Headrest Height	Lowest position
Lifter Height	Lowest position

      3. Turn the ignition switch off.
      4. Connect Techstream to the DLC3.
      5. Turn the ignition switch on (IG) and turn the Techstream on.
      6. Enter the following menus: Body Electrical/Occupant Detection/Utility/Zero Point Calibration.
      7. Perform the zero point calibration by following the prompts on the Techstream screen.

         HINT:

         - Refer to the Techstream operator's manual for further details.
         - If the zero point calibration does not complete, replace the front seat assembly RH.

         OK:

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"Zero Point calibration is complete." is displayed.

2. **SENSITIVITY CHECK**
   a. Sensitivity check procedures
      1. Turn the ignition switch off.
      2. Connect Techstream to the DLC3.
      3. Turn the ignition switch on (IG) and turn the Techstream on.
      4. Enter the following menus: Body Electrical/Occupant Detection/Utility/Sensitivity Check.
      5. Perform the sensitivity check by following the prompts on the Techstream screen.

         HINT:

         Refer to the Techstream operator's manual for further details.

      6. Confirm that the initial sensor reading is within the specified range.

         Standard:

         -3.2 to 3.2 kg (-7 to 7 lb)

      7. Place a 30 kg (66.14 lb) weight (eg. a 30 kg (66.14 lb) of lead mass) onto the front passenger seat.
      8. Confirm that the sensitivity is within the specified range.

         Standard:

         27 to 33 kg (59.52 to 72.75 lb)

         HINT:

         - When performing the sensitivity check, use a solid metal weight (the check result may not appear properly if a liquid weight made from liquid is used).
         - If the sensitivity deviates from the specified range, retighten the bolts of the front passenger seat without deforming the seat rail. After performing this procedure, if the sensitivity is not within the specified range, replace the front seat assembly RH.

PROBLEM SYMPTOMS TABLE

OCCUPANT CLASSIFICATION SYSTEM:

PROBLEM SYMPTOMS CHART - OCCUPANT CLASSIFICATION SYSTEM

Symptom	Suspected Area	Refer to
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**

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TERMINALS OF ECU

1. OCCUPANT CLASSIFICATION ECU

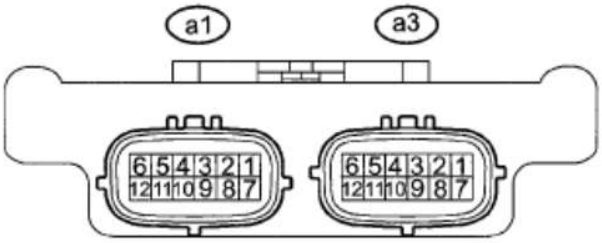


Fig. 241: Identifying Occupant Classification ECU Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TERMINAL DESCRIPTION

Terminal No. (Symbols)	Wiring Color	Terminal Description	Condition	Specification
a3-1 (+B) - a3-3 (GND)	R - W-B	Battery	Always	10 to 14 V
a3-2 (DIA) - a3-3 (GND)	GR - W-B	Diagnosis (DLC3)	Ignition switch on (IG)	Pulse generation
a3-3 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 V
a3-4 (FSR-) - a3-3 (GND)	B - W-B	Center airbag sensor assembly communication line (-)	Always	Below 1 V
a3-5 (BGND) - a3-3 (GND)	P - W-B	Passenger side buckle switch ground line	Always	Below 1 V
a3-7 (IG) - a3-3 (GND)	BR - W-B	Power source (ECU-B fuse)	Ignition switch on (IG)	10 to 14 V
a3-8 (FSR+) - a3-4 (FSR-)	W-B	Center airbag sensor assembly communication line	Ignition switch on (IG)	Pulse generation
a3-9 (BSW) - a3-5 (BGND)	L-P	Passenger side buckle switch line	Always	Below 1 V
a1-1 (SGD1) - a3-3 (GND)	G - W-B	Front occupant classification sensor LH ground line	Always	Below 1 V
a1-2 (SGD2) - a3-3 (GND)	O - W-B	Front occupant classification sensor RH ground line	Always	Below 1 V
a1-3 (SGD3) -	LG - W-B	Rear occupant classification sensor LH	Always	Below 1 V

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a3-3 (GND)		ground line		
a1-4 (SGD4) - a3-3 (GND)	BR - W-B	Rear occupant classification sensor RH ground line	Always	Below 1 V
a1-5 (SVC3) - a1-3 (SGD3)	GR-LG	Rear occupant classification sensor LH power supply line	Ignition switch on (IG), a load is applied to rear occupant classification sensor LH	4.5 to 5.1 V
a1-6 (SVC4) - a1-4 (SGD4)	V-BR	Rear occupant classification sensor RH power supply line	Ignition switch on (IG), a load is applied to rear occupant classification sensor RH	4.5 to 5.1 V
a1-7 (SIG1) - a1-1 (SGD1)	P-G	Front occupant classification sensor LH signal line	Ignition switch on (IG), a load is applied to front occupant classification sensor LH	0.2 to 4.9 V
a1-8 (SIG2) - a1-2 (SGD2)	L-0	Front occupant classification sensor RH signal line	Ignition switch on (IG), a load is applied to front occupant classification sensor RH	0.2 to 4.9 V
a1-9 (SIG3) - a1-3 (SGD3)	Y-LG	Rear occupant classification sensor LH signal line	Ignition switch on (IG), a load is applied to rear occupant classification sensor LH	0.2 to 4.9 V
a1-10 (SIG4) - a1-4 (SGD4)	B-BR	Rear occupant classification sensor RH signal line	Ignition switch on (IG), a load is applied to rear occupant classification sensor RH	0.2 to 4.9 V
a1-11 (SVC1) - a1-1 (SGD1)	R-G	Front occupant classification sensor LH power supply line	Ignition switch on (IG), a load is applied to front occupant classification sensor LH	4.5 to 5.1 V
a1-12 (SVC2) - a1-2 (SGD2)	W-0	Front occupant classification sensor RH power supply line	Ignition switch on (IG), a load is applied to front occupant classification sensor RH	4.5 to 5.1 V

DIAGNOSIS SYSTEM

1. **CHECK DLC3**
   a. Check the DLC3 (See **HOW TO TROUBLESHOOT ECU CONTROLLED SYSTEMS**).
2. **SYMPTOM SIMULATION**

HINT:

The most difficult case in troubleshooting is when no symptoms occur. In such cases, a thorough customer problem analysis must be carried out. Then the same or similar conditions and environment in which the problem occurred in the customer's vehicle should be simulated. No matter how experienced or skilled a technician may be, if he proceeds to troubleshoot without confirming the problem symptoms, he will likely overlook something important and make a wrong guess at some points in the repair operation.

This leads to a standstill in troubleshooting.

a. Vibration method: When vibration seems to be the major cause.

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HINT:

Perform the simulation method only during the primary check period (for approximately 6 seconds after the ignition switch is turned on (IG)).

1. Slightly vibrate the part of the sensor considered to be the problem cause with your fingers and check whether the malfunction occurs.

   HINT:

   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.

b. Simulation method for DTC B1794:

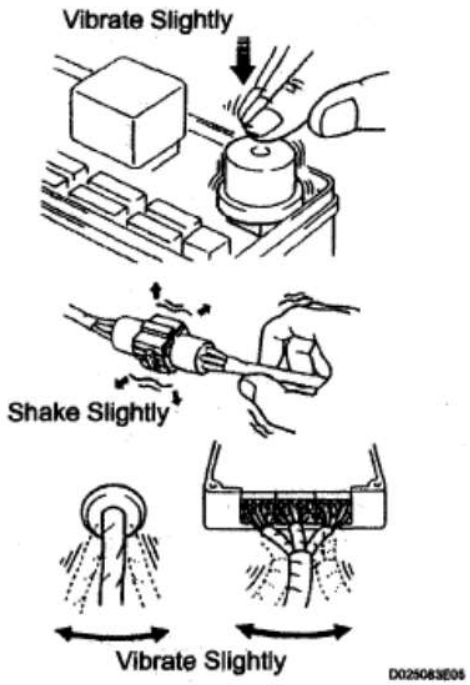


Fig. 242: Checking Connectors And Sensors For Vibration
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Turn the ignition switch from the off to on (IG), hold it for 10 seconds, and back to off again 50 times in a row.

HINT:

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DTC B1794 is output if the occupant classification ECU receives the ignition switch off to on (IG) to off signal 50 times in a row when a malfunction occurs in the power circuit for the occupant classification system.

3. **FUNCTION OF PASSENGER AIRBAG ON/OFF INDICATOR (a) Initial check.**
   1. Turn the ignition switch on (IG).
   2. The passenger airbag ON/OFF indicator ("ON" and "OFF") comes on for approximately 4 seconds, then goes off for approximately 2 seconds.
   3. Approximately 6 seconds after the ignition switch is turned on (IG), the passenger airbag ON/OFF indicator will show ON or 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	
Vacant	OFF	OFF	OFF
Adult is seated.	ON	OFF	OFF
Child is seated.	OFF	ON	OFF
Child restraint system is set.	OFF	ON	OFF
Occupant classification system failure	OFF	ON	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.

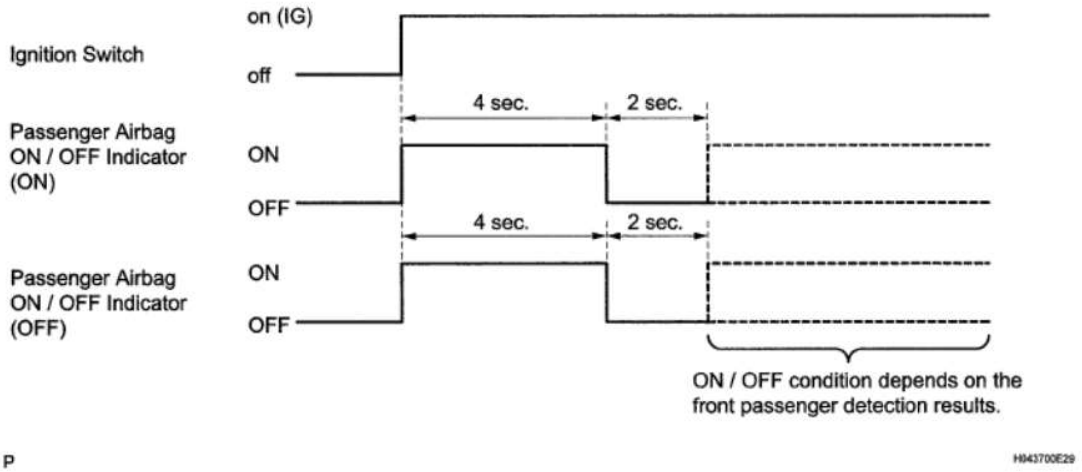


Fig. 243: Passenger Airbag ON/OFF Indicator On Timing Chart
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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4. **CHECK PASSENGER AIRBAG ON/OFF INDICATOR**
   a. Turn the ignition switch on (IG).
   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.

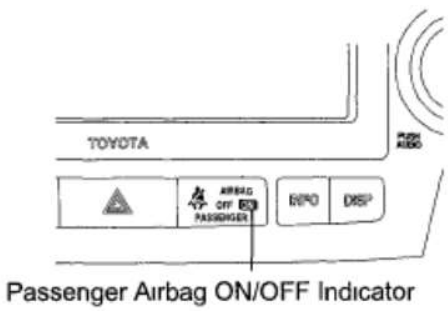
      HINT:

      Refer to the table in step 3 regarding the passenger airbag ON/OFF indicator when the ignition switch is turned on (IG) and approximately 6 seconds pass.

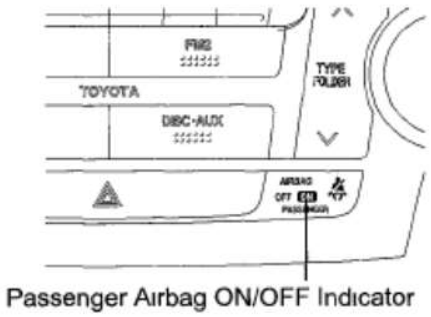
DTC CHECK/CLEAR

1. **DTC CHECK**
   a. Turn the ignition switch off.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG) and turn the Techstream on.
   d. Enter the following menus: Body Electrical/Occupant Detection/Trouble Code
   e. Check the DTCs by following the prompts on the Techstream screen.

w/ Navigation System:



w/o Navigation System:



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Fig. 244: Identifying Passenger Airbag ON/OFF Indicator Button

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HINT:

Refer to the Techstream operator's manual for further details.

2. **DTC CLEAR**
   a. Turn the ignition switch off.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG) and turn the Techstream on.
   d. Enter the following menus: Body Electrical/Occupant Detection/Trouble Code
   e. Clear the DTCs by following the prompts on the Techstream screen.

      HINT:

      Refer to the Techstream operator's manual for further details.

DATA LIST/ACTIVE TEST

HINT:

Using the Techstream to read the Date 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 Date 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.

1. **DATA LIST FOR OCCUPANT CLASSIFICATION ECU**
   a. Turn the ignition switch off.
   b. Connect the Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Turn the Techstream on.
   e. Enter the following menus: Body Electrical/Occupant Detection/Data List.
   f. Check the values by referring to the table below.

DATA LIST

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
IG Switch	Ignition switch condition/ ON: Ignition switch on (IG) OFF: Ignition switch off	ON/OFF	-

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Passenger Buckle SW	Passenger side buckle switch/ Set: The seat belt is fastened UNSET: The seat belt is not fastened Unset: Data is not determined	Set/Unset	-
Passenger Classification	Passenger classification/ AM50: Adult (more than 54 kg (119.051b)) is seated AF05: Adult (36 to 54 kg (79.37 to 119.051b)) 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 is 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.: More than 27 kg (59.52 lb)	OK	-
RL Sensor Range Info	Rear left sensor range information/ OK: Sensor range is -17 to 37 kg (-37.48 to 81.571b) 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.: 0V Max.: 19.8 V	0 to 4.7 V	-
FR Sensor Voltage	Front right sensor voltage/ Min.: 0V Max.: 19.8 V	0 to 4.7 V	-

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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.: 0V 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 (81.571b)	-17 to 37 kg (-37.48 to 81.571b)	-
RR Sensor Weight Info	Rear right sensor weight information/ Min.:-17 kg (-37.481b) Max.: 37 kg (81.571b)	-17 to 37 kg (-37.48 to 81.571b)	-
Total Weight Information	Total weight information/ Min.: -68 kg (-149.91 lb) Max.: 128 kg (282.191b)	-68 to 128 kg (-149.91 to 282.191b)	-
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	-

DIAGNOSTIC TROUBLE CODE CHART

If a trouble code is displayed during the DTC check, check the circuit listed for the code in the table below (Proceed to the page listed for that circuit).

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.
- Use Techstream to read and clear the DTC of the occupant classification ECU, otherwise the DTCs cannot be read and cleared.

Occupant Classification System

DIAGNOSTIC TROUBLE CODE CHART - OCCUPANT CLASSIFICATION SYSTEM

DTC Code	Detection Item	Trouble Area	Passenger Airbag ON/OFF Indicator (OFF indicator)
		1. Front seat inner	

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B1771	Passenger Side Buckle Switch Circuit Malfunction	belt assembly RH (Passenger side buckle switch) 2. Occupant classification ECU 3. Front seat wire RH	ON
B1780	Front Occupant Classification Sensor LH Circuit Malfunction	1. Front seat assembly RH (Front occupant classification sensor LH) 2. Occupant classification ECU 3. Front seat wire RH	ON
B1781	Front Occupant Classification Sensor RH Circuit Malfunction	1. Front seat assembly RH (Front occupant classification sensor RH) 2. Occupant classification ECU 3. Front seat wire RH	ON
B1782	Rear Occupant Classification Sensor LH Circuit Malfunction	1. Front seat assembly RH (Rear occupant classification sensor LH) 2. Occupant classification ECU 3. Front seat wire RH	ON
B1783	Rear Occupant Classification Sensor RH Circuit Malfunction	1. Front seat assembly RH (Rear occupant classification sensor RH) 2. Occupant classification ECU 3. Front seat wire RH	ON
B1785	Front Occupant Classification Sensor LH Collision Detection	1. Front seat assembly RH (Front occupant classification sensor LH) 2. Occupant classification ECU	ON

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B1786	Front Occupant Classification Sensor RH Collision Detection	1. Front seat assembly RH (Front occupant classification sensor RH) 2. Occupant classification ECU	ON
B1787	Rear Occupant Classification Sensor LH Collision Detection	1. Front seat assembly RH (Rear occupant classification sensor LH) 2. Occupant classification ECU	ON
B1788	Rear Occupant Classification Sensor RH Collision Detection	1. Front seat assembly RH (Rear occupant classification sensor RH) 2. Occupant classification ECU	ON
B1790	Center Airbag Sensor Assembly Communication Circuit Malfunction	1. Occupant classification ECU 2. Center airbag sensor assembly 3. Floor wire No. 2 4. Front seat wire RH (for Power seat)	ON
B1793	Occupant Classification Sensor Power Supply Circuit Malfunction	1. Front seat assembly RH (Occupant classification sensors) 2. Occupant classification ECU 3. Front seat wire RH	ON
B1794	Open in Occupant Classification ECU Battery Positive Line	1. Battery 2. ECU-B fuse 3. Floor wire No. 2 4. Front seat wire RH (for Power seat) 5. Occupant classification ECU	ON
	Occupant Classification	1. Front seat inner belt assembly RH	

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B1795	ECU Malfunction	2. 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 assembly RH.

DTC B1771 is recorded when a malfunction is detected in the passenger side buckle switch circuit. Troubleshoot DTC B1771 first if DTCs B1771 and B1795 are output simultaneously.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1771	• The occupant classification ECU 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 passenger side buckle switch circuit for 2 seconds. • Passenger side buckle switch malfunction • Occupant classification ECU malfunction	• Front seat inner belt assembly RH (Passenger side buckle switch) • Occupant classification ECU • Front seat wire RH

HINT:

When DTC B1650/32 is detected as a result of troubleshooting for the AIRBAG SYSTEM, check the DTCs stored in the occupant classification ECU. When DTC B1771 in output, perform troubleshooting for the DTC.

WIRING DIAGRAM

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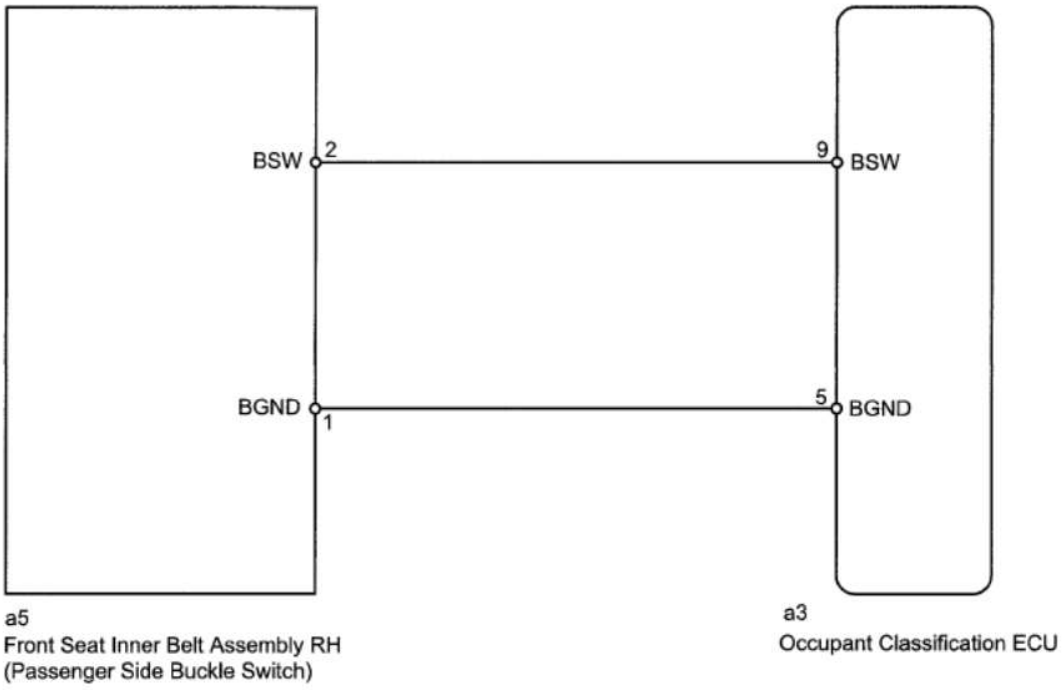


Fig. 245: Front Seat Inner Belt Assembly RH (Passenger Side Buckle Switch) - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front passenger seat installation bolts to see under the seat cushion.
- In the above case, hold the seat so that it does not fall down. Hold the seat only as necessary because holding the seat for a long period of time may cause seat rail deformation.

1. **CHECK CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Check that the connectors are properly connected to the occupant classification ECU and the front seat inner belt assembly RH.

      OK:

      The connectors are properly connected.

      HINT:

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

d. Disconnect the connectors from the occupant classification ECU and the front seat inner belt assembly RH.
e. Check that the terminals of connectors are not damaged.

OK:

The terminals are not deformed or damaged.

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

2. **CHECK FRONT SEAT WIRE RH (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a3-9 (BSW) - Body ground	Ignition switch on (IG)	Below 1 V
a3-5 (BGND) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE FRONT SEAT WIRE RH

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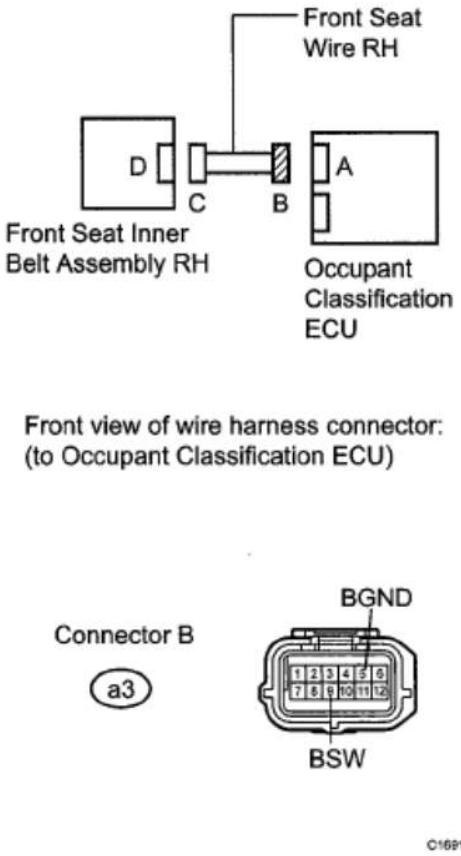


Fig. 246: Checking Front Seat Wire RH (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

3. **CHECK FRONT SEAT WIRE RH (OPEN)**
   a. Turn the ignition switch off.

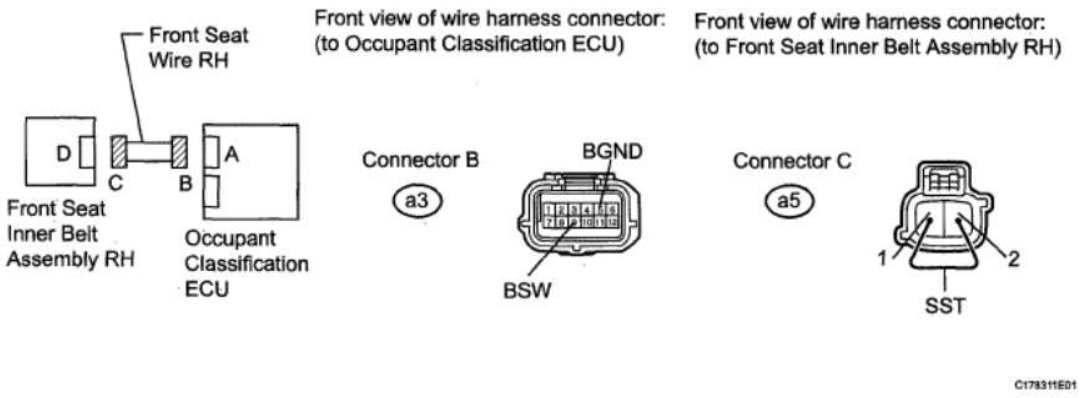


Fig. 247: Checking Front Seat Wire RH (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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b. Disconnect the negative (-) terminal cable from the battery.
c. Using SST, connect terminals 2 and 1 of connector C.

NOTE: Do not forcibly insert SST into the terminals of the connector when connecting.

SST 09843-18040

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a3-9 (BSW) - a3-5 (BGND)	Always	Below 1 ohms

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

4. **CHECK FRONT SEAT WIRE RH (SHORT)**
   a. Disconnect SST from connector C.
   b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a3-9 (BSW) - a3-5 (BGND)	Always	1 Mohms or higher

NG: REPLACE FRONT SEAT WIRE RH

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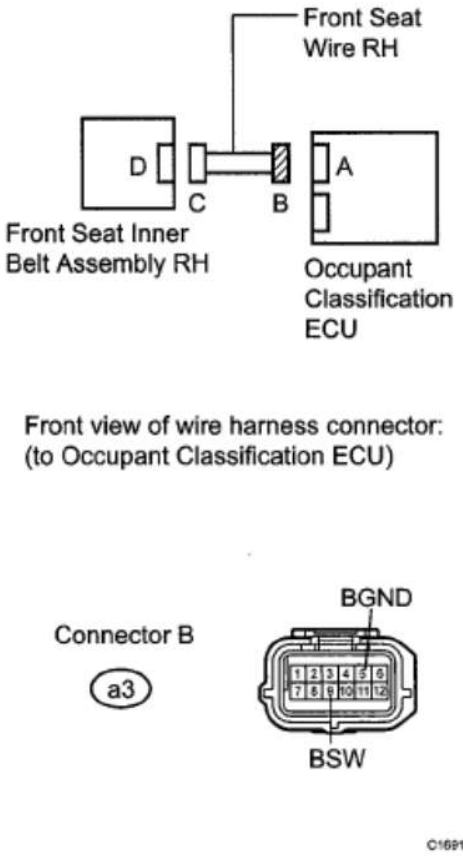


Fig. 248: Checking Front Seat Wire RH (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

5. **CHECK FRONT SEAT WIRE RH (SHORT TO GROUND)**
   a. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a3-9 (BSW) - Body ground	Always	1 Mohms or higher
a3-5 (BGND) - Body ground	Always	1 Mohms or higher

NG: REPLACE FRONT SEAT WIRE RH

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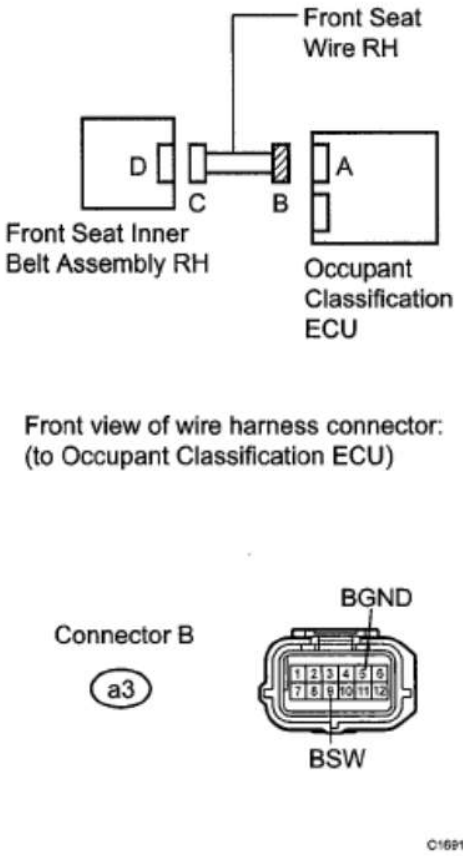


Fig. 249: Checking Front Seat Wire RH (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **CHECK DTC**
   a. Connect the connectors to the occupant classification ECU and the front seat inner belt assembly RH.
   b. Connect the negative (-) terminal cable to the battery.
   c. Turn the ignition switch on (IG).
   d. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   e. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG).
   h. Check for DTCs (See **DTC CHECK/CLEAR**).

   OK:

   DTC B1771 is not output.

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HINT:

Codes other than DTC B1771 may be output at this time, but they are not related to this check.

NG: Go to step 7

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

7. **REPLACE FRONT SEAT INNER BELT ASSEMBLY RH**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Replace the front seat inner belt assembly RH (See **REMOVAL**).

      HINT:

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

   d. Connect the negative (-) terminal cable to the battery.
   e. Turn the ignition switch on (IG).
   f. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   g. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   h. Turn the ignition switch off.
   i. Turn the ignition switch on (IG).
   j. 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.
   c. Replace the occupant classification ECU (See **REMOVAL**).
9. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.

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b. Connect Techstream to the DLC3.
c. Turn the ignition switch on (IG).
d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

OK:

"Zero Point Calibration is complete." is displayed.

10. **PERFORM SENSITIVITY CHECK**
    a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

Standard:

27 to 33 kg (59.52 to 72.75 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 recorded when a malfunction is detected in the front occupant classification sensor LH circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1780	• The occupant classification ECU 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 occupant classification sensor LH circuit for 2 seconds. • Front occupant classification sensor LH malfunction • Occupant classification ECU malfunction	• Front seat assembly RH (Front occupant classification sensor LH) • Occupant classification ECU • Front seat wire RH

HINT:

When DTC B1650/32 is detected as a result of troubleshooting for the AIRBAG SYSTEM, check the DTCs stored in the occupant classification ECU. When DTC B1780 in output, perform troubleshooting for the DTC.

WIRING DIAGRAM

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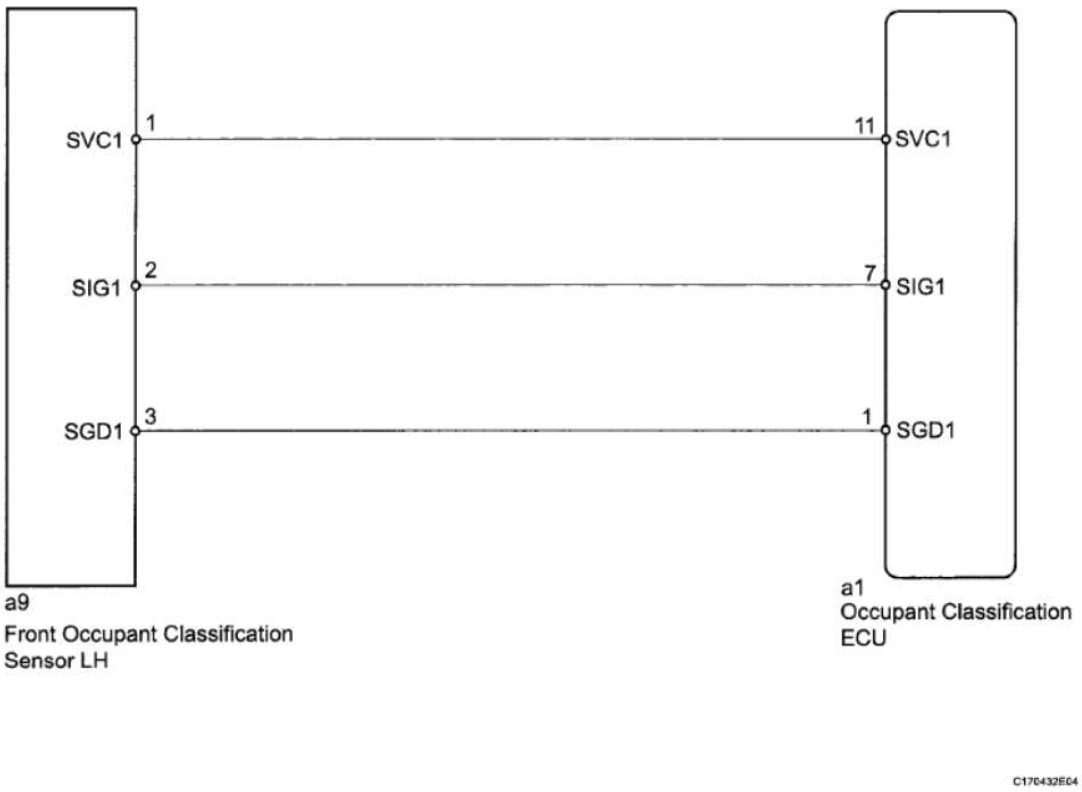


Fig. 250: Front Occupant Classification Sensor LH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front passenger seat installation bolts to see under the seat cushion.
- In the above case, hold the seat so that it does not fall down. Hold the seat only as necessary because holding the seat for a long period of time may cause seat rail deformation.

1. **CHECK CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Check that the connectors are properly connected to the occupant classification ECU and the front occupant classification sensor LH.

   OK:

   The connectors are properly connected.

   HINT:

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

d. Disconnect the connectors from the occupant classification ECU and the front occupant classification sensor LH.
e. Check that the terminals of connectors are not damaged.

OK:

The terminals are not deformed or damaged.

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

2. **CHECK FRONT SEAT WIRE RH (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

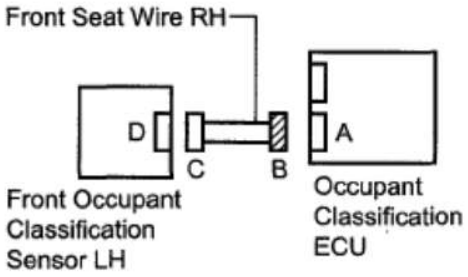
Standard voltage

VOLTAGE SPECIFICATION

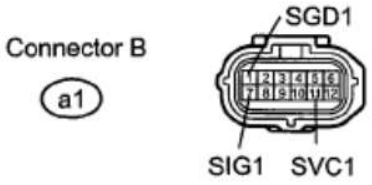
Tester Connection	Switch Condition	Specified Condition
a1-1 (SGD1) - Body ground	Ignition switch on (IG)	Below 1 V
a1-7 (SIG1) - Body ground	Ignition switch on (IG)	Below 1 V
a1-11 (SVC1) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE FRONT SEAT WIRE RH

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Front view of wire harness connector:
(to Occupant Classification ECU)

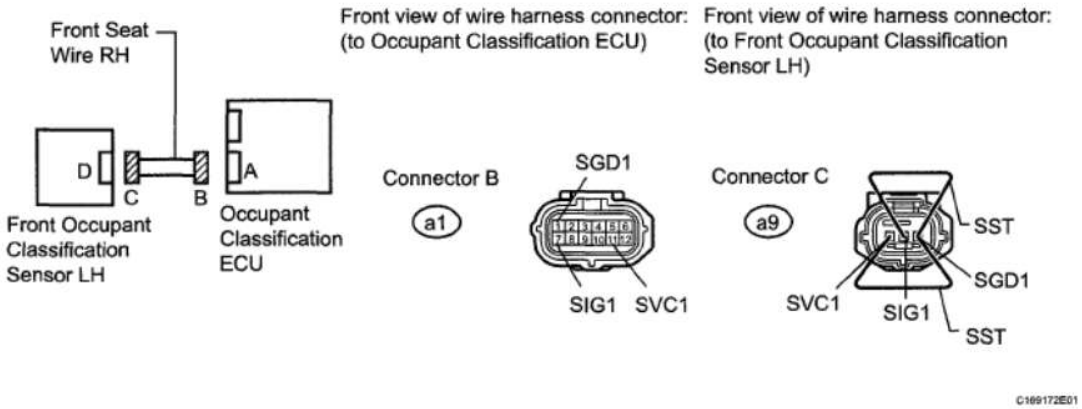


C169171E01

Fig. 251: Checking Front Seat Wire RH (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

3. **CHECK FRONT SEAT WIRE RH (OPEN)**
   a. Turn the ignition switch off.



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Fig. 252: Checking Front Seat Wire RH (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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b. Disconnect the negative (-) terminal cable from the battery.

c. Using SST, connect terminals 1 (SVC1) and 3 (SGD1), and connect terminals 2 (SIG1) and 3 (SGD1) of connector C.

NOTE: Do not forcibly insert SST into the terminals of the connector when connecting.

SST 09843-18040

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-7 (SIG1) - a1-1 (SGD1)	Always	Below 1 ohms
a1-11 (SVC1) - a1-1 (SGD1)	Always	Below 1 ohms

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

4. **CHECK FRONT SEAT WIRE RH (SHORT)**

a. Disconnect SST from connector C.

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-7 (SIG1) - a1-1 (SGD1)	Always	1 Mohms or higher
a1-11 (SVC1) - a1-1 (SGD1)	Always	1 Mohms or higher
a1-7 (SIG1) - a1-11 (SVC1)	Always	1 Mohms or higher

NG: REPLACE FRONT SEAT WIRE RH

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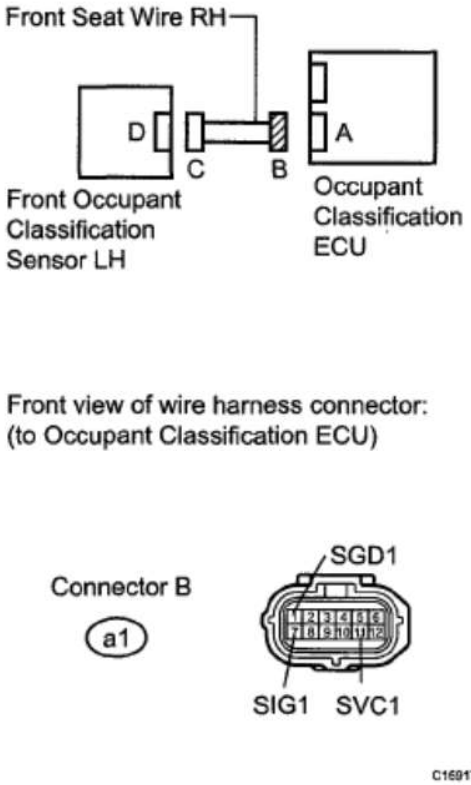


Fig. 253: Checking Front Seat Wire RH (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

5. **CHECK FRONT SEAT WIRE RH (SHORT TO GROUND)**
   a. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-1 (SGD1) - Body ground	Always	1 Mohms or higher
a1-7 (SIG1) - Body ground	Always	1 Mohms or higher
a1-11 (SVC1) - Body ground	Always	1 Mohms or higher

NG: REPLACE FRONT SEAT WIRE RH

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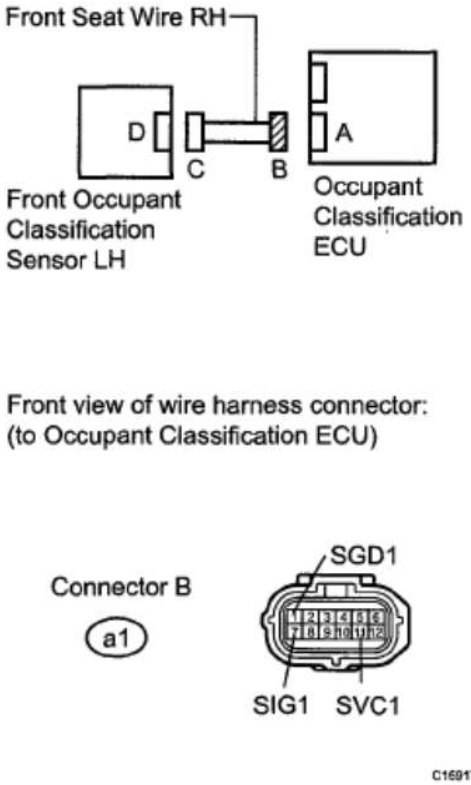


Fig. 254: Checking Front Seat Wire RH (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **CHECK 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.
   c. Turn the ignition switch on (IG).
   d. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   e. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG).
   h. Check for DTCs (See **DTC CHECK/CLEAR**).

   OK:

   DTC B1780 is not output.

   HINT:

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Codes other than DTC B1780 may be output at this time, but they are not related to this check.

NG: Go to step 7

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

7. **REPLACE OCCUPANT CLASSIFICATION ECU**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Replace the occupant classification ECU (See **REMOVAL**).

   HINT:

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

8. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

   OK:

   "Zero Point Calibration is complete." is displayed.

NG: Go to step 11

OK: Go to next step

9. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

   Standard:

   27 to 33 kg (59.52 to 72.75 lb)

NG: Go to step 11

OK: Go to next step

10. **CHECK DTC**
    a. Turn the ignition switch on (IG).
    b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
    c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).

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d. Turn the ignition switch off.
e. Turn the ignition switch on (IG).
f. Check for DTCs (See **DTC CHECK/CLEAR**).

OK:

DTC B1780 is not output.

HINT:

Codes other than DTC B1780 may be output at this time, but they are not related to this check.

NG: Go to step 11

OK: END

11. **REPLACE FRONT SEAT ASSEMBLY RH**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery.
    c. Replace the front seat assembly RH (See **REMOVAL** for power seat or See **REMOVAL** for manual seat).
12. **PERFORM ZERO POINT CALIBRATION**
    a. Connect the negative (-) terminal cable to the battery.
    b. Connect Techstream to the DLC3.
    c. Turn the ignition switch on (IG).
    d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

OK:

"Zero Point Calibration is complete." is displayed.

13. **PERFORM SENSITIVITY CHECK**
    a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

Standard:

27 to 33 kg (59.52 to 72.75 lb)

NEXT: END

DTC B1781 FRONT OCCUPANT CLASSIFICATION SENSOR RH CIRCUIT MALFUNCTION

DESCRIPTION

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The front occupant classification sensor RH circuit consists of the occupant classification ECU and the front occupant classification sensor RH.

DTC B1781 is recorded when a malfunction is detected in the front occupant classification sensor RH circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1781	• The occupant classification ECU 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 occupant classification sensor RH circuit for 2 seconds. • Front occupant classification sensor RH malfunction • Occupant classification ECU malfunction	• Front seat assembly RH (Front occupant classification sensor RH) • Occupant classification ECU • Front seat wire RH

HINT:

When DTC B1650/32 is detected as a result of troubleshooting for the AIRBAG SYSTEM, check the DTCs stored in the occupant classification ECU. When DTC B1781 in output, perform troubleshooting for the DTC.

WIRING DIAGRAM

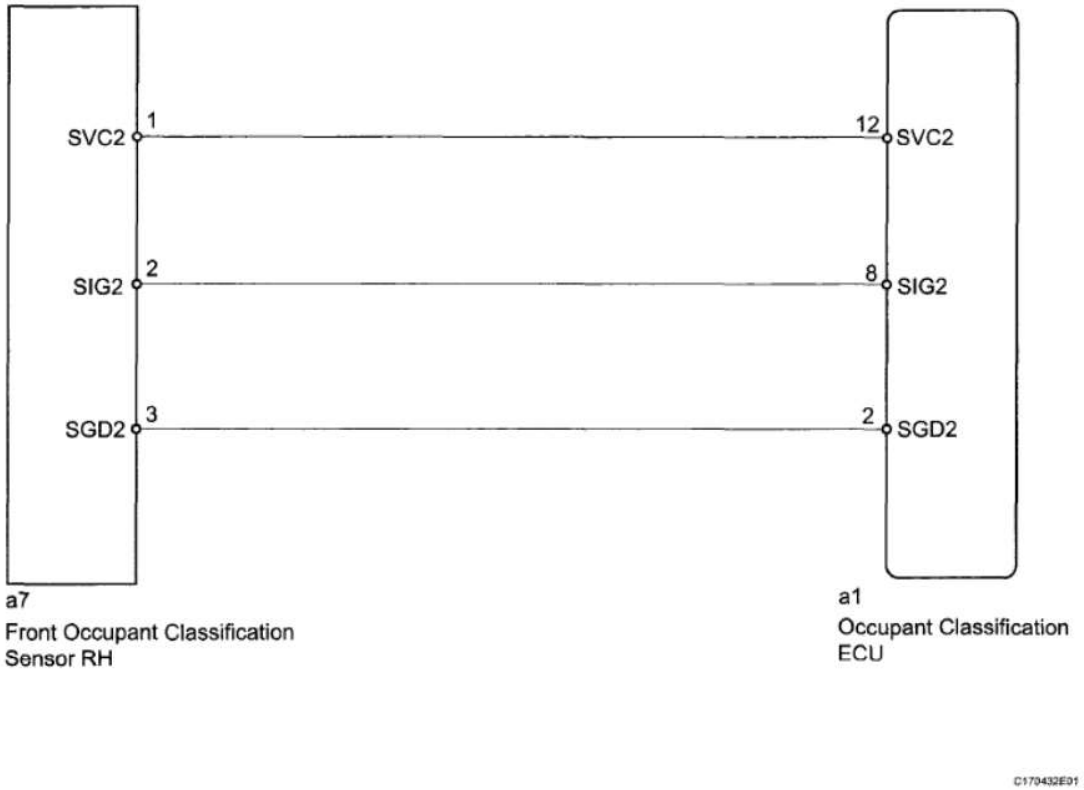


Fig. 255: Front Occupant Classification Sensor RH - Wiring Diagram

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

INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front passenger seat installation bolts to see under the seat cushion.
- In the above case, hold the seat so that it does not fall down. Hold the seat only as necessary because holding the seat for a long period of time may cause seat rail deformation.

1. **CHECK CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Check that the connectors are properly connected to the occupant classification ECU and the front occupant classification sensor RH.

      OK:

      The connectors are properly connected.

      HINT:

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

   d. Disconnect the connectors from the occupant classification ECU and the front occupant classification sensor RH.
   e. Check that the terminals of connectors are not damaged.

      OK:

      The terminals are not deformed or damaged.

   NG: REPLACE FRONT SEAT WIRE RH

   OK: Go to next step

2. **CHECK FRONT SEAT WIRE RH (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

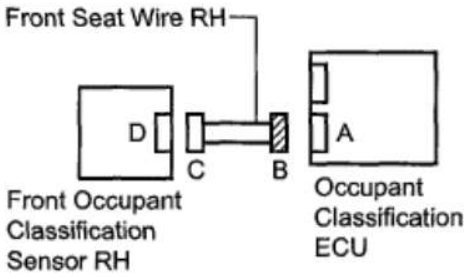
   Standard voltage

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VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-2 (SGD2) - Body ground	Ignition switch on (IG)	Below 1 V
a1-8 (SIG2) - Body ground	Ignition switch on (IG)	Below 1 V
a1-12 (SVC2) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE FRONT SEAT WIRE RH



Front view of wire harness connector:
(to Occupant Classification ECU)

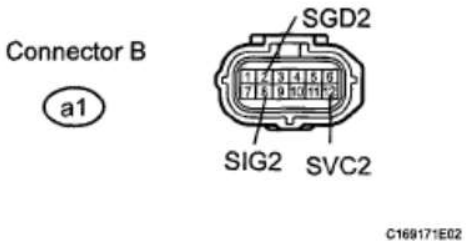


Fig. 256: Checking Front Seat Wire RH (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

3. **CHECK FRONT SEAT WIRE RH (OPEN)**
   a. Turn the ignition switch off.

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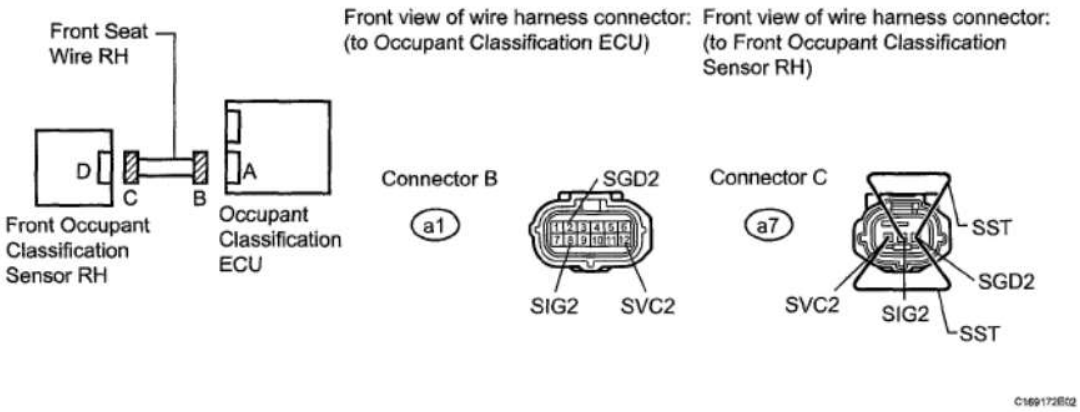


Fig. 257: Checking Front Seat Wire RH (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Disconnect the negative (-) terminal cable from the battery.
c. Using SST, connect terminals 1 (SVC2) and 3 (SGD2), and connect terminals 2 (SIG2) and 3 (SGD2) of connector C.

NOTE: Do not forcibly insert SST into the terminals of the connector when connecting.

SST 09843-18040

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-8 (SIG2) - a1-2 (SGD2)	Always	Below 1 ohms
a1-12 (SVC2) - a1-2 (SGD2)	Always	Below 1 ohms

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

4. **CHECK FRONT SEAT WIRE RH (SHORT)**
   a. Disconnect SST from connector C.
   b. Measure the resistance according to the value (s) in the table below.

Standard resistance

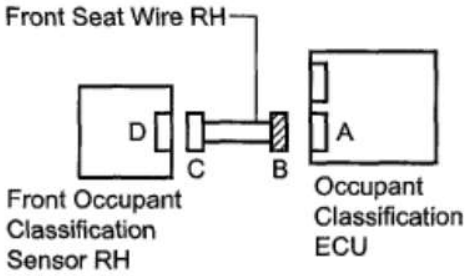
RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition

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a1-8 (SIG2) - a1-2 (SGD2)	Always	1 Mohms or higher
a1-12 (SVC2) - a1-2 (SGD2)	Always	1 Mohms or higher
a1-8 (SIG2) - a1-12 (SVC2)	Always	1 Mohms or higher

NG: REPLACE FRONT SEAT WIRE RH



Front view of wire harness connector:
(to Occupant Classification ECU)

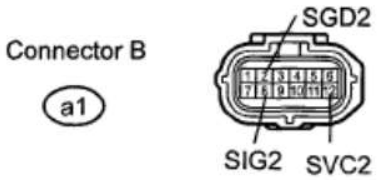


Fig. 258: Checking Front Seat Wire RH (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

5. **CHECK FRONT SEAT WIRE RH (SHORT TO GROUND)**
   a. Measure the resistance according to the value (s) in the table below.

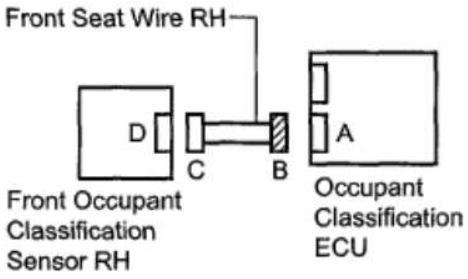
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-2 (SGD2) - Body ground	Always	1 Mohms or higher
a1-8 (SIG2) - Body ground	Always	1 Mohms or higher
a1-12 (SVC2) - Body ground	Always	1 Mohms or higher

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NG: REPLACE FRONT SEAT WIRE RH



Front view of wire harness connector:
(to Occupant Classification ECU)

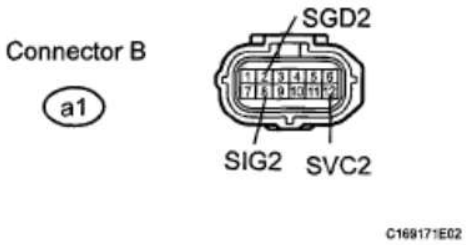


Fig. 259: Checking Front Seat Wire RH (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **CHECK 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.
   c. Turn the ignition switch on (IG).
   d. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   e. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG).
   h. Check for DTCs (See **DTC CHECK/CLEAR**).

   OK:

   DTC B1781 is not output.

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HINT:

Codes other than DTC B1781 may be output at this time, but they are not related to this check.

NG: Go to step 7

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

7. **REPLACE OCCUPANT CLASSIFICATION ECU**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Replace the occupant classification ECU (See **REMOVAL**).

   HINT:

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

8. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

   OK:

   "Zero Point Calibration is complete." is displayed.

NG: Go to step 11

OK: Go to next step

9. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

   Standard:

   27 to 33 kg (59.52 to 72.75 lb)

NG: Go to step 11

OK: Go to next step

10. **CHECK DTC**
    a. Turn the ignition switch on (IG).
    b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).

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c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
d. Turn the ignition switch off.
e. Turn the ignition switch on (IG).
f. Check for DTCs (See **DTC CHECK/CLEAR**).

OK:

DTC B1781 is not output.

HINT:

Codes other than DTC B1781 may be output at this time, but they are not related to this check.

NG: Go to step 11

OK: END

11. **REPLACE FRONT SEAT ASSEMBLY RH**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery.
    c. Replace the front seat assembly RH (See **REMOVAL** for power seat or See **REMOVAL** for manual seat).
12. **PERFORM ZERO POINT CALIBRATION**
    a. Connect the negative (-) terminal cable to the battery.
    b. Connect Techstream to the DLC3.
    c. Turn the ignition switch on (IG).
    d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

OK:

"Zero Point Calibration is complete." is displayed.

13. **PERFORM SENSITIVITY CHECK**
    a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

Standard:

27 to 33 kg (59.52 to 72.75 lb)

NEXT: END

DTC B1782 REAR OCCUPANT CLASSIFICATION SENSOR LH CIRCUIT MALFUNCTION

DESCRIPTION

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2009 Toyota Highlander Limited
2009 RESTRAINTS Supplemental Restraint System - Highlander

The rear occupant classification sensor LH circuit consists of the occupant classification ECU and the rear occupant classification sensor LH.

DTC B1782 is recorded when a malfunction is detected in the rear occupant classification sensor LH circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1782	• The occupant classification ECU 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 rear occupant classification sensor LH circuit for 2 seconds. • Rear occupant classification sensor LH malfunction • Occupant classification ECU malfunction	• Front seat assembly 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 for the AIRBAG SYSTEM, check the DTCs stored in the occupant classification ECU. When DTC B1782 in output, perform troubleshooting for the DTC.

WIRING DIAGRAM

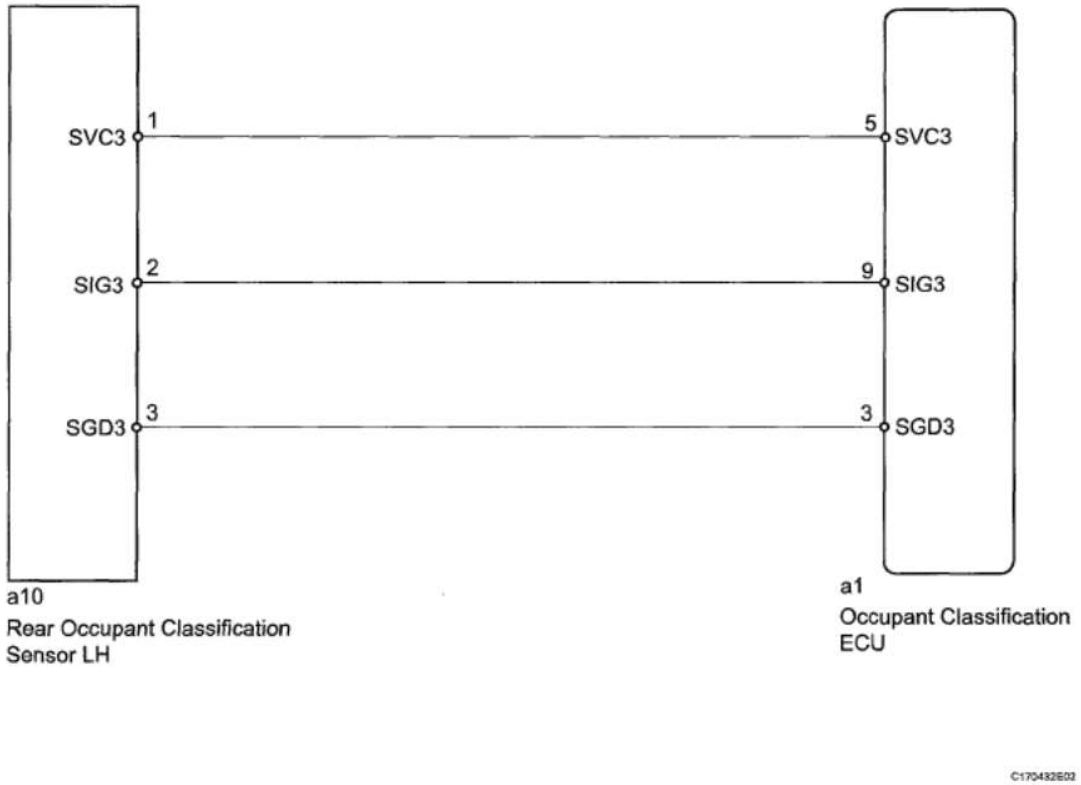


Fig. 260: Rear Occupant Classification Sensor LH - Wiring Diagram

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2009 Toyota Highlander Limited
2009 RESTRAINTS Supplemental Restraint System - Highlander

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

INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front passenger seat installation bolts to see under the seat cushion.
- In the above case, hold the seat so that it does not fall down. Hold the seat only as necessary because holding the seat for a long period of time may cause seat rail deformation.

1. **CHECK CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Check that the connectors are properly connected to the occupant classification ECU and the rear occupant classification sensor LH.

      OK:

      The connectors are properly connected.

      HINT:

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

   d. Disconnect the connectors from the occupant classification ECU and the rear occupant classification sensor LH.
   e. Check that the terminals of connectors are not damaged.

      OK:

      The terminals are not deformed or damaged.

   NG: REPLACE FRONT SEAT WIRE RH

   OK: Go to next step

2. **CHECK FRONT SEAT WIRE RH (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

   Standard voltage

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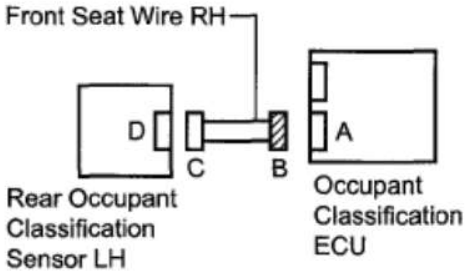
2009 Toyota Highlander Limited

2009 RESTRAINTS Supplemental Restraint System - Highlander

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-3 (SGD3) - Body ground	Ignition switch on (IG)	Below 1 V
a1-5 (SVC3) - Body ground	Ignition switch on (IG)	Below 1 V
a1-9 (SIG3) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE FRONT SEAT WIRE RH



Front view of wire harness connector:
(to Occupant Classification ECU)

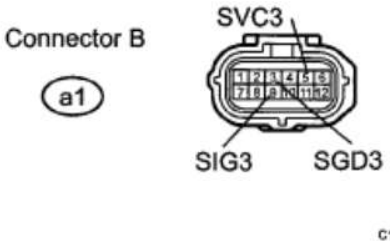


Fig. 261: Checking Front Seat Wire RH (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

3. **CHECK FRONT SEAT WIRE RH (OPEN)**
   a. Turn the ignition switch off.

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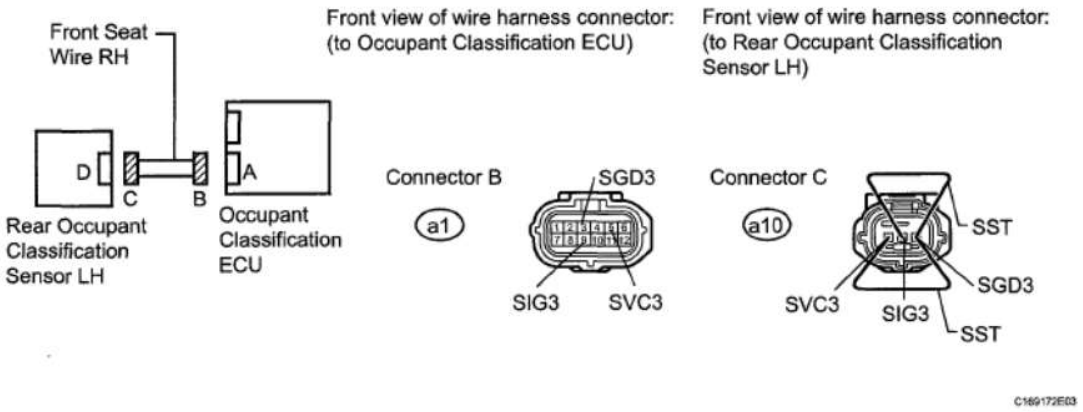


Fig. 262: Checking Front Seat Wire RH (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Disconnect the negative (-) terminal cable from the battery.
c. Using SST, connect terminals 1 (SVC3) and 3 (SGD3), and connect terminals 2 (SIG3) and 3 (SGD3) of connector C.

NOTE: Do not forcibly insert SST into the terminals of the connector when connecting.

SST 09843-18040

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-5 (SVC3) - a1-3 (SGD3)	Always	Below 1 ohms
a1-9 (SIG3) - a1-3 (SGD3)	Always	Below 1 ohms

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

4. **CHECK FRONT SEAT WIRE RH (SHORT)**
   a. Disconnect SST from connector C.
   b. Measure the resistance according to the value (s) in the table below.

Standard resistance

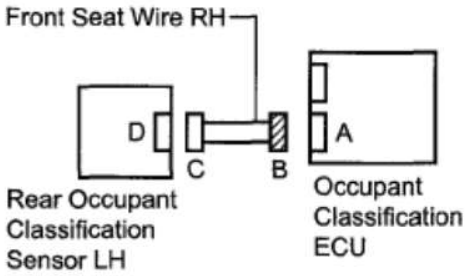
RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition

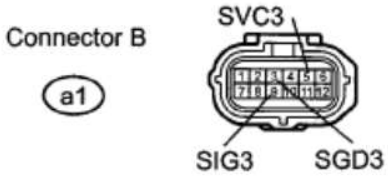
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a1-5 (SVC3) - a1-3 (SGD3)	Always	1 Mohms or higher
a1-9 (SIG3) - a1-3 (SGD3)	Always	1 Mohms or higher
a1-5 (SVC3) - a1-9 (SIG3)	Always	1 Mohms or higher

NG: REPLACE FRONT SEAT WIRE RH



Front view of wire harness connector:
(to Occupant Classification ECU)



C169171E03

Fig. 263: Checking Front Seat Wire RH (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

5. **CHECK FRONT SEAT WIRE RH (SHORT TO GROUND)**
   a. Measure the resistance according to value (s) in the table below.

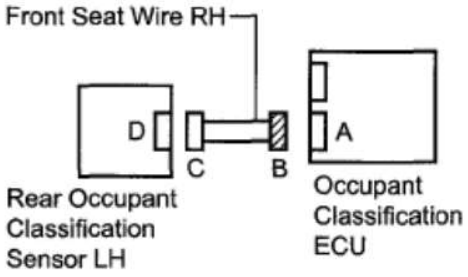
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-3 (SGD3) - Body ground	Always	1 Mohms or higher
a1-5 (SVC3) - Body ground	Always	1 Mohms or higher
a1-9 (SIG3) - Body ground	Always	1 Mohms or higher

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NG: REPLACE FRONT SEAT WIRE RH



Front view of wire harness connector:
(to Occupant Classification ECU)

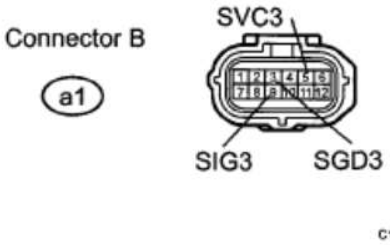


Fig. 264: Checking Front Seat Wire RH (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **CHECK 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.
   c. Turn the ignition switch on (IG).
   d. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   e. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG).
   h. Check for DTCs (See **DTC CHECK/CLEAR**).

   OK:

   DTC B1782 is not output.

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HINT:

Codes other than DTC B1782 may be output at this time, but they are not related to this check.

NG: Go to step 7

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

7. **REPLACE OCCUPANT CLASSIFICATION ECU**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Replace the occupant classification ECU (See **REMOVAL**).

   HINT:

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

8. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

   OK:

   "Zero Point Calibration is complete." is displayed.

NG: Go to step 11

OK: Go to next step

9. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

   Standard:

   27 to 33 kg (59.52 to 72.75 lb)

NG: Go to step 11

OK: Go to next step

10. **CHECK DTC**
    a. Turn the ignition switch on (IG).
    b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).

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c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
d. Turn the ignition switch off.
e. Turn the ignition switch on (IG).
f. Check for DTCs (See **DTC CHECK/CLEAR**).

OK:

DTC B1782 is not output.

HINT:

Codes other than DTC B1782 may be output at this time, but they are not related to this check.

NG: Go to step 11

OK: END

11. **REPLACE FRONT SEAT ASSEMBLY RH**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery.
    c. Replace the front seat assembly RH (See **REMOVAL** for power seat or See **REMOVAL** for manual seat).
12. **PERFORM ZERO POINT CALIBRATION**
    a. Connect the negative (-) terminal cable to the battery.
    b. Connect Techstream to the DLC3.
    c. Turn the ignition switch on (IG).
    d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

OK:

"Zero Point Calibration is complete." is displayed.

13. **PERFORM SENSITIVITY CHECK**
    a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

Standard:

27 to 33 kg (59.52 to 72.75 lb)

NEXT: END

DTC B1783 REAR OCCUPANT CLASSIFICATION SENSOR RH CIRCUIT MALFUNCTION

DESCRIPTION

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2009 Toyota Highlander Limited
2009 RESTRAINTS Supplemental Restraint System - Highlander

The rear occupant classification sensor RH circuit consists of the occupant classification ECU and the rear occupant classification sensor RH.

DTC B1783 is recorded when a malfunction is detected in the rear occupant classification sensor RH circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detecting Condition	Trouble Area
B1783	• The occupant classification ECU 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 rear occupant classification sensor RH circuit for 2 seconds. • Rear occupant classification sensor RH malfunction. • Occupant classification ECU malfunction.	• Front seat assembly RH (Rear occupant classification sensor RH) • Occupant classification ECU • Front seat wire RH

HINT:

When DTC B1650/32 is detected as a result of troubleshooting for the AIRBAG SYSTEM, check the DTCs stored in the occupant classification ECU. When DTC B1783 in output, perform troubleshooting for the DTC.

WIRING DIAGRAM

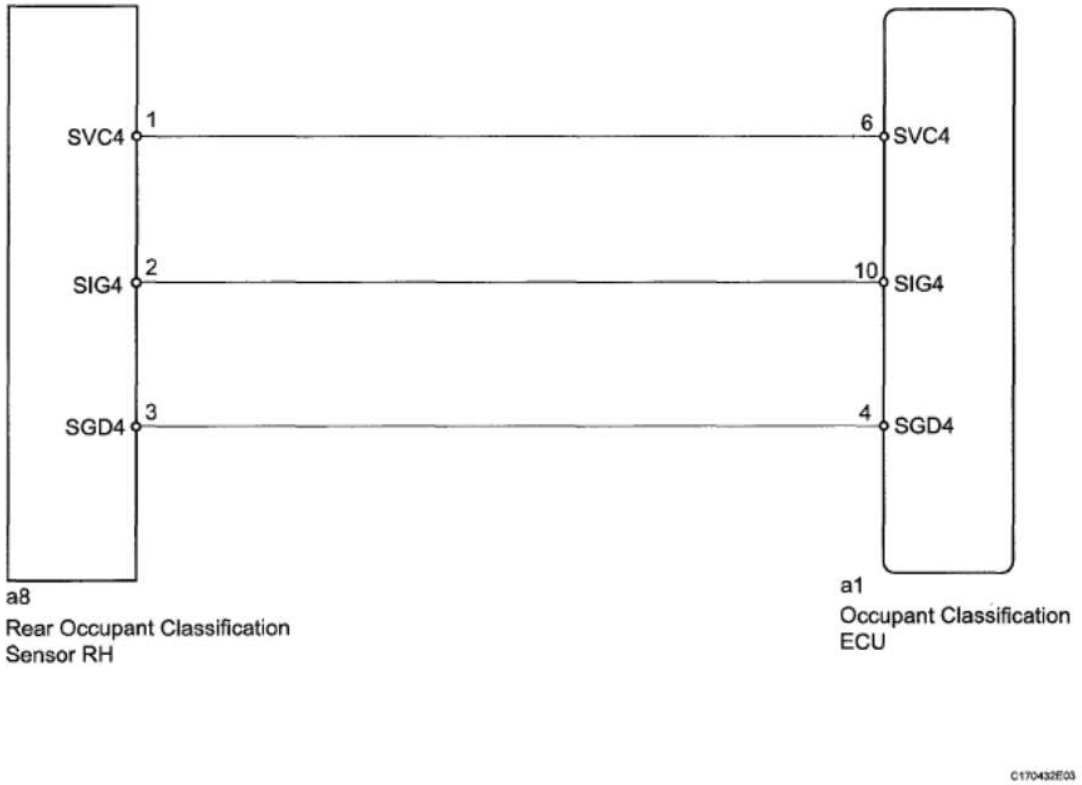


Fig. 265: Rear Occupant Classification Sensor RH - Wiring Diagram

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2009 Toyota Highlander Limited
2009 RESTRAINTS Supplemental Restraint System - Highlander

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

INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front passenger seat installation bolts to see under the seat cushion.
- In the above case, hold the seat so that it does not fall down. Hold the seat only as necessary because holding the seat for a long period of time may cause seat rail deformation.

1. **CHECK CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Check that the connectors are properly connected to the occupant classification ECU and the rear occupant classification sensor RH.

      OK:

      The connectors are properly connected.

      HINT:

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

   d. Disconnect the connectors from the occupant classification ECU and the rear occupant classification sensor RH.
   e. Check that the terminals of connectors are not damaged.

      OK:

      The terminals are not deformed or damaged.

   NG: REPLACE FRONT SEAT WIRE RH

   OK: Go to next step

2. **CHECK FRONT SEAT WIRE RH (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

   Standard voltage

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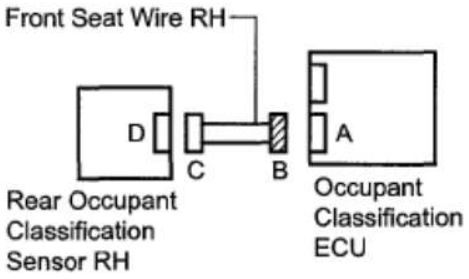
2009 Toyota Highlander Limited

2009 RESTRAINTS Supplemental Restraint System - Highlander

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-4 (SGD4) - Body ground	Ignition switch on (IG)	Below 1 V
a1-6 (SVC4) - Body ground	Ignition switch on (IG)	Below 1 V
a1-10 (SIG4) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE FRONT SEAT WIRE RH



Front view of wire harness connector:
(to Occupant Classification ECU)

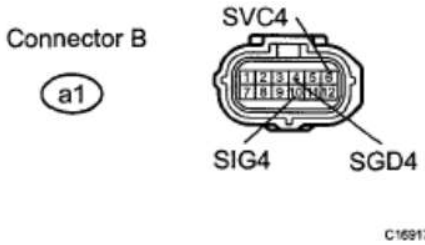


Fig. 266: Checking Front Seat Wire RH (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

3. **CHECK FRONT SEAT WIRE RH (OPEN)**
   a. Turn the ignition switch off.

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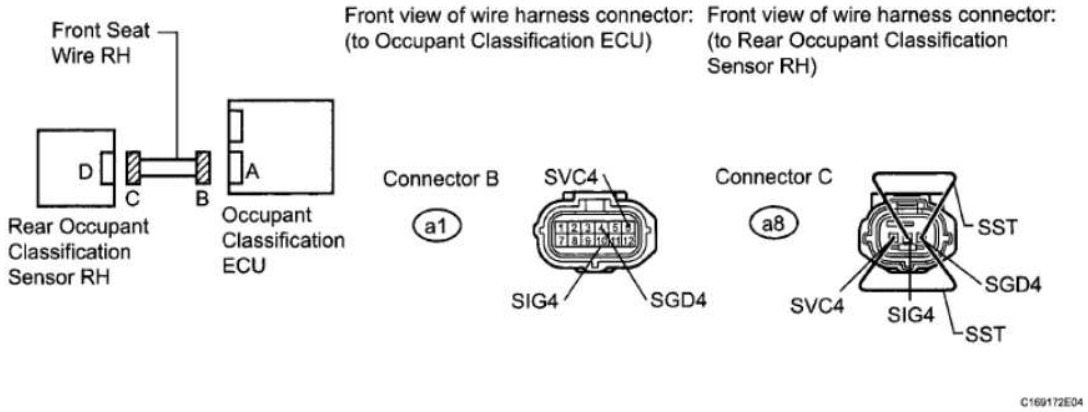


Fig. 267: Checking Front Seat Wire RH (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Disconnect the negative (-) terminal cable from the battery.
c. Using SST, connect terminals 1 (SVC4) and 3 (SGD4), and connect terminals 2 (SIG4) and 3 (SGD4) of connector C.

NOTE: Do not forcibly insert SST into the terminals of the connector when connecting.

SST 09843-18040

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-6 (SVC4) - a1-4 (SGD4)	Always	Below 1 ohms
a1-10 (SIG4) - a1-4 (SGD4)	Always	Below 1 ohms

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

4. **CHECK FRONT SEAT WIRE RH (SHORT)**
   a. Disconnect SST from connector C.
   b. Measure the resistance according to the value (s) in the table below.

Standard resistance

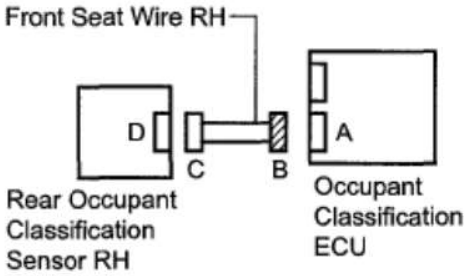
RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition

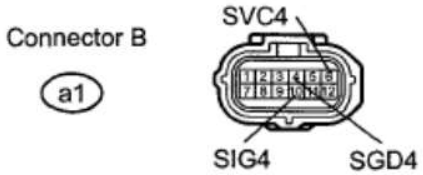
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a1-6 (SVC4) - a1-4 (SGD4)	Always	1 Mohms or higher
a1-10 (SIG4) - a1-4 (SGD4)	Always	1 Mohms or higher
a1-6 (SVC4) - a1-10 (SIG4)	Always	1 Mohms or higher

NG: REPLACE FRONT SEAT WIRE RH



Front view of wire harness connector:
(to Occupant Classification ECU)



C169171E04

Fig. 268: Checking Front Seat Wire RH (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

5. **CHECK FRONT SEAT WIRE RH (SHORT TO GROUND)**
   a. Measure the resistance according to the value (s) in the table below.

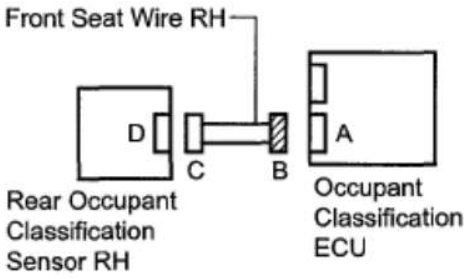
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-4 (SGD4) - Body ground	Always	1 Mohms or higher
a1-6 (SVC4) - Body ground	Always	1 Mohms or higher
a1-10 (SIG4) - Body ground	Always	1 Mohms or higher

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NG: REPLACE FRONT SEAT WIRE RH



Front view of wire harness connector:
(to Occupant Classification ECU)

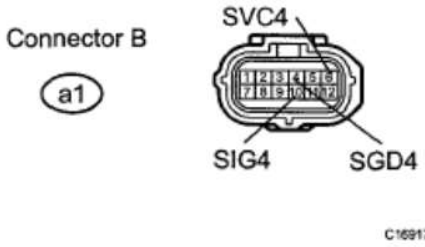


Fig. 269: Checking Front Seat Wire RH (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **CHECK 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.
   c. Turn the ignition switch on (IG).
   d. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   e. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG).
   h. Check for DTCs (See **DTC CHECK/CLEAR**).

   OK:

   DTC B1783 is not output.

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HINT:

Codes other than DTC B1783 may be output at this time, but they are not related to this check.

NG: Go to step 7

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

7. **REPLACE OCCUPANT CLASSIFICATION ECU**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Replace the occupant classification ECU (See **REMOVAL**).

   HINT:

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

8. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

   OK:

   "Zero Point Calibration is complete." is displayed.

NG: Go to step 11

OK: Go to next step

9. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

   Standard:

   27 to 33 kg (59.52 to 72.75 lb)

NG: Go to step 11

OK: Go to next step

10. **CHECK DTC**
    a. Turn the ignition switch on (IG).
    b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).

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c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
d. Turn the ignition switch off.
e. Turn the ignition switch on (IG).
f. Check for DTCs (See **DTC CHECK/CLEAR**).

OK:

DTC B1783 is not output.

HINT:

Codes other than DTC B1783 may be output at this time, but they are not related to this check.

NG: Go to step 11

OK: END

11. **REPLACE FRONT SEAT ASSEMBLY RH**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery.
    c. Replace the front seat assembly RH (See **REMOVAL** for power seat or See **REMOVAL** for manual seat).
12. **PERFORM ZERO POINT CALIBRATION**
    a. Connect the negative (-) terminal cable to the battery.
    b. Connect Techstream to the DLC3.
    c. Turn the ignition switch on (IG).
    d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

OK:

"Zero Point Calibration is complete." is displayed.

13. **PERFORM SENSITIVITY CHECK**
    a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

Standard:

27 to 33 kg (59.52 to 72.75 lb)

NEXT: END

DTC B1785 FRONT OCCUPANT CLASSIFICATION SENSOR LH COLLISION DETECTION

DESCRIPTION

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DTC B1785 is output when the occupant classification ECU receives a collision detection signal sent by the front occupant classification sensor LH if an accident occurs.

DTC B1785 is also output when the front seat assembly RH is subjected to a strong impact, even if an actual accident does not occur.

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 "zero point calibration" and "sensitivity check".

Therefore, if DTC B1785 is output, first perform "zero point calibration" and "sensitivity check".

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1785	• Front seat assembly RH malfunction • Occupant classification ECU malfunction • Front occupant classification sensor LH sensed large load	• Front seat assembly RH (Front occupant classification sensor LH) • Occupant classification ECU

HINT:

When DTC B1650/32 is detected as a result of troubleshooting for the AIRBAG SYSTEM, check the DTCs stored in the occupant classification ECU. When DTC B1785 is output, perform troubleshooting for the DTC.

WIRING DIAGRAM

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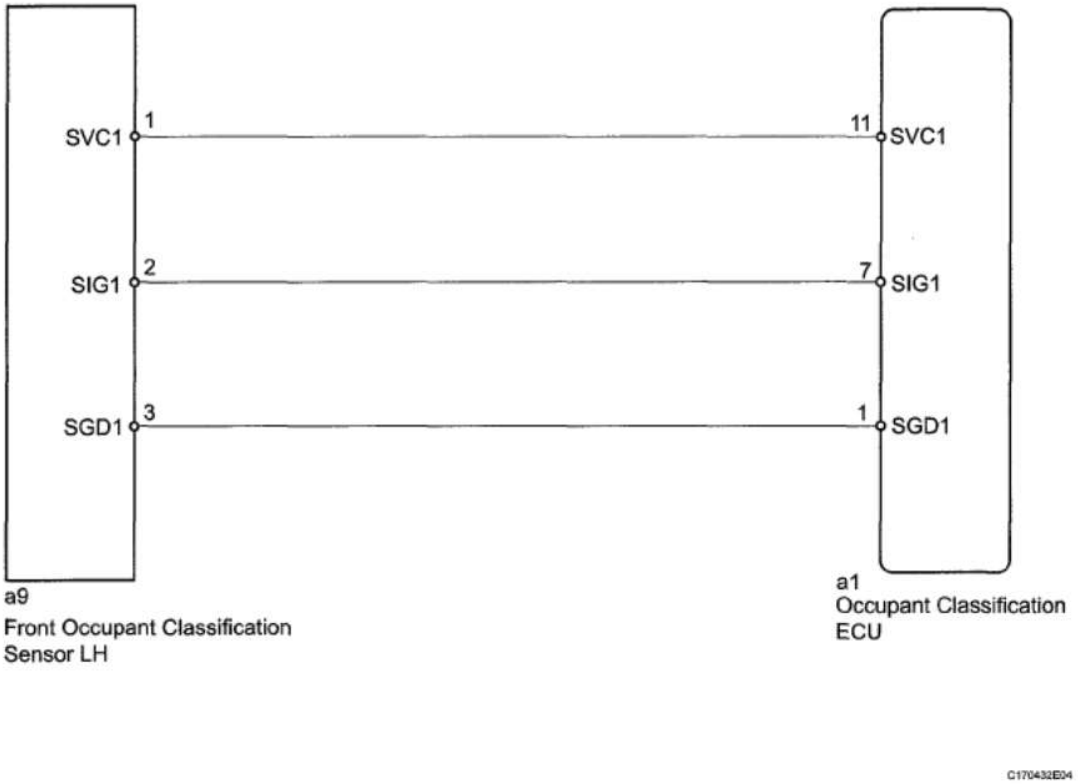


Fig. 270: Front Occupant Classification Sensor LH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **PERFORM ZERO POINT CALIBRATION**
   a. Connect Techstream to the DLC3.
   b. Turn the ignition switch on (IG).
   c. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

   OK:

   "Zero Point Calibration is complete." is displayed.

   NG: Go to step 4

   OK: Go to next step

2. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

   Standard:

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27 to 33 kg (59.52 to 72.75 lb)

NG: Go to step 4

OK: Go to next step

3. **CHECK DTC**
   a. Turn the ignition switch on (IG).
   b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   d. Turn the ignition switch off.
   e. Turn the ignition switch on (IG).
   f. Check for DTCs (See **DTC CHECK/CLEAR**).

   OK:

   DTC B1785 is not output.

   HINT:

   Codes other than DTC B1785 may be output at this time, but they are not related to this check.

NG: Go to step 4

OK: END

4. **REPLACE FRONT SEAT ASSEMBLY RH**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Replace the front seat assembly RH (See **REMOVAL** for power seat or See **REMOVAL** for manual seat).

   HINT:

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

5. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

   OK:

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"Zero Point Calibration is complete." is displayed.

NG: Go to step 8

OK: Go to next step

6. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

      Standard:

      27 to 33 kg (59.52 to 72.75 lb)

   NG: Go to step 8

   OK: Go to next step

7. **CHECK DTC**
   a. Turn the ignition switch on (IG).
   b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   d. Turn the ignition switch off.
   e. Turn the ignition switch on (IG).
   f. Check for DTCs (See **DTC CHECK/CLEAR**).

      OK:

      DTC B1785 is not output.

      HINT:

      Codes other than DTC B1785 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.
   c. Replace the occupant classification ECU (See **REMOVAL**).
9. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.

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c. Turn the ignition switch on (IG).
d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

OK:

"Zero Point Calibration is complete." is displayed.

10. **PERFORM SENSITIVITY CHECK**
    a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

Standard:

27 to 33 kg (59.52 to 72.75 lb)

NEXT: END

DTC B1786 FRONT OCCUPANT CLASSIFICATION SENSOR RH COLLISION DETECTION

DESCRIPTION

DTC B1786 is output when the occupant classification ECU receives a collision detection signal sent by the front occupant classification sensor RH if an accident occurs.

DTC B1786 is also output when the front seat assembly RH is subjected to a strong impact, even if an actual accident does not occur.

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 "zero point calibration" and "sensitivity check".

Therefore, if DTC B1786 is output, first perform "zero point calibration" and "sensitivity check".

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1786	• Front seat assembly RH malfunction • Occupant classification ECU malfunction • Front occupant classification sensor RH sensed large load	• Front seat assembly RH (Front occupant classification sensor RH) • Occupant classification ECU

HINT:

When DTC B1650/32 is detected as a result of troubleshooting for the AIRBAG SYSTEM, check the DTCs stored in the occupant classification ECU. When DTC B1786 is output, perform troubleshooting for the DTC.

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WIRING DIAGRAM

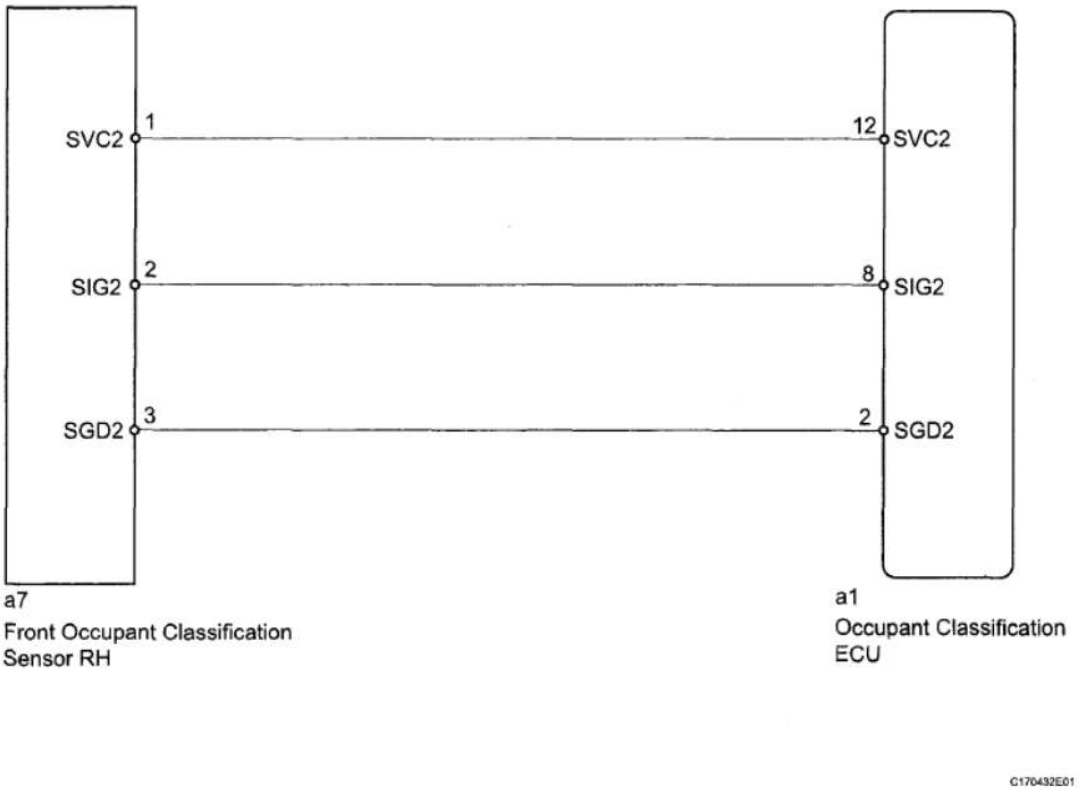


Fig. 271: Front Occupant Classification Sensor RH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **PERFORM ZERO POINT CALIBRATION**
   a. Connect Techstream to the DLC3.
   b. Turn the ignition switch on (IG).
   c. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

   OK:

   "Zero Point Calibration is complete." is displayed.

   NG: Go to step 4

   OK: Go to next step

2. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

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Standard:

27 to 33 kg (59.52 to 72.75 lb)

NG: Go to step 4

OK: Go to next step

3. **CHECK DTC**
   a. Turn the ignition switch on (IG).
   b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   d. Turn the ignition switch off.
   e. Turn the ignition switch on (IG).
   f. Check for DTCs (See **DTC CHECK/CLEAR**).

   OK:

   DTC B1786 is not output.

   HINT:

   Codes other than DTC B1786 may be output at this time, but they are not related to this check.

NG: Go to step 4

OK: END

4. **REPLACE FRONT SEAT ASSEMBLY RH**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Replace the front seat assembly RH (See **REMOVAL** for power seat or See **REMOVAL** for manual seat).

   HINT:

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

5. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

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OK:

"Zero Point Calibration is complete." is displayed.

NG: Go to step 8

OK: Go to next step

6. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

      Standard:

      27 to 33 kg (59.52 to 72.75 lb)

   NG: Go to step 8

   OK: Go to next step

7. **CHECK DTC**
   a. Turn the ignition switch on (IG).
   b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   d. Turn the ignition switch off.
   e. Turn the ignition switch on (IG).
   f. Check for DTCs (See **DTC CHECK/CLEAR**).

      OK:

      DTC B1786 is not output.

      HINT:

      Codes other than DTC B1786 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.
   c. Replace the occupant classification ECU (See **REMOVAL**).
9. **PERFORM ZERO POINT CALIBRATION**

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a. Connect the negative (-) terminal cable to the battery.
b. Connect Techstream to the DLC3.
c. Turn the ignition switch on (IG).
d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

OK:

"Zero Point Calibration is complete." is displayed.

10. **PERFORM SENSITIVITY CHECK**
    a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

Standard:

27 to 33 kg (59.52 to 72.75 lb)

NEXT: END

DTC B1787 REAR OCCUPANT CLASSIFICATION SENSOR LH COLLISION DETECTION

DESCRIPTION

DTC B1787 is output when the occupant classification ECU receives a collision detection signal sent by the rear occupant classification sensor LH if an accident occurs.

DTC B1787 is also output when the front seat assembly RH is subjected to a strong impact, even if an actual accident does not occur.

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 "zero point calibration" and "sensitivity check".

Therefore, if DTC B1787 is output, first perform "zero point calibration" and "sensitivity check".

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1787	• Front seat assembly RH malfunction • Occupant classification ECU malfunction • Rear occupant classification sensor LH sensed large load	• Front seat assembly RH (Rear occupant classification sensor LH) • Occupant classification ECU

HINT:

When DTC B1650/32 is detected as a result of troubleshooting for the AIRBAG SYSTEM, check the DTCs

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stored in the occupant classification ECU. When DTC B1787 is output, perform troubleshooting for the DTC.

WIRING DIAGRAM

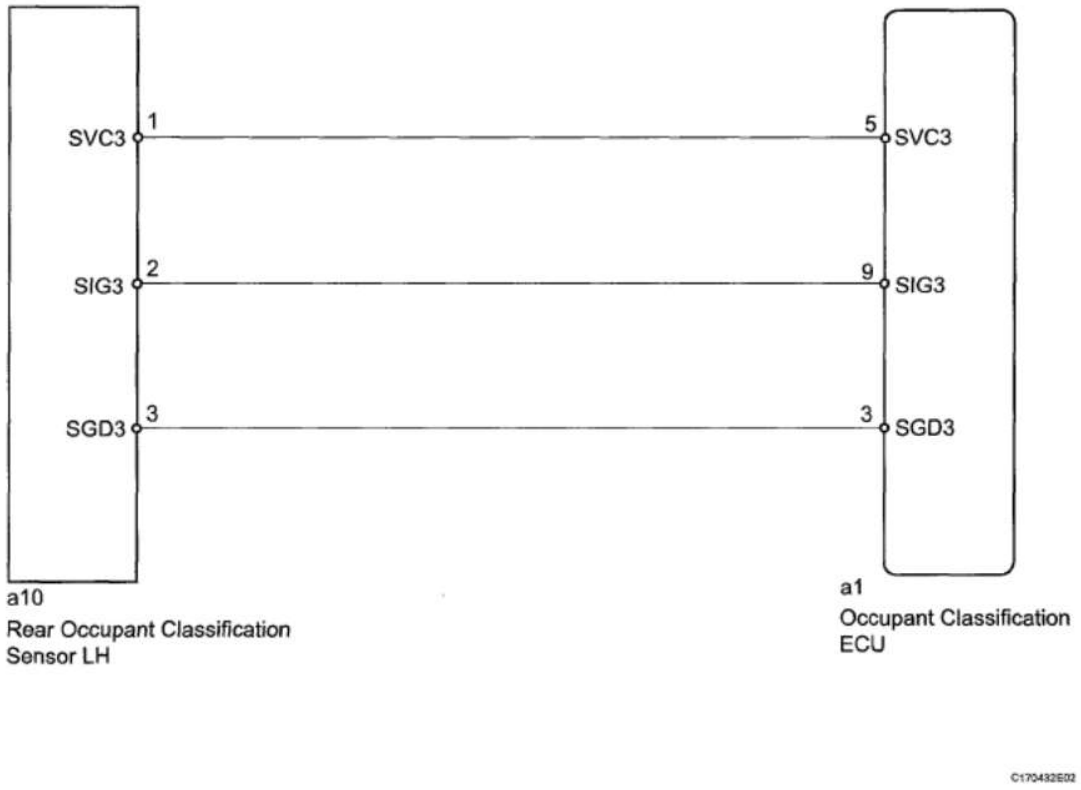


Fig. 272: Rear Occupant Classification Sensor LH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **PERFORM ZERO POINT CALIBRATION**
   a. Connect Techstream to the DLC3.
   b. Turn the ignition switch on (IG).
   c. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

   OK:

   "Zero Point Calibration is complete." is displayed.

   NG: Go to step 4

   OK: Go to next step

2. **PERFORM SENSITIVITY CHECK**

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a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

Standard:

27 to 33 kg (59.52 to 72.75 lb)

NG: Go to step 4

OK: Go to next step

3. **CHECK DTC**
   a. Turn the ignition switch on (IG).
   b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   d. Turn the ignition switch off.
   e. Turn the ignition switch on (IG).
   f. Check for DTCs (See **DTC CHECK/CLEAR**).

OK:

DTC B1787 is not output.

HINT:

Codes other than DTC B1787 may be output at this time, but they are not related to this check.

NG: Go to step 4

OK: END

4. **REPLACE FRONT SEAT ASSEMBLY RH**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Replace the front seat assembly RH (See **REMOVAL** for power seat or See **REMOVAL** for manual seat).

HINT:

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

5. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).

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d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

OK:

"Zero Point Calibration is complete." is displayed.

NG: Go to step 8

OK: Go to next step

6. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

Standard:

27 to 33 kg (59.52 to 72.75 lb)

NG: Go to step 8

OK: Go to next step

7. **CHECK DTC**
   a. Turn the ignition switch on (IG).
   b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   d. Turn the ignition switch off.
   e. Turn the ignition switch on (IG).
   f. Check for DTCs (See **DTC CHECK/CLEAR**).

OK:

DTC B1787 is not output.

HINT:

Codes other than DTC B1787 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.

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c. Replace the occupant classification ECU (See **REMOVAL**).

9. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

   OK:

   "Zero Point Calibration is complete." is displayed.

10. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

   Standard:

   27 to 33 kg (59.52 to 72.75 lb)

NEXT: END

DTC B1788 REAR OCCUPANT CLASSIFICATION SENSOR RH COLLISION DETECTION

DESCRIPTION

DTC B1788 is output when the occupant classification ECU receives a collision detection signal sent by the rear occupant classification sensor RH if an accident occurs.

DTC B1788 is also output when the front seat assembly RH is subjected to a strong impact, even if an actual accident does not occur.

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 "zero point calibration" and "sensitivity check".

Therefore, if DTC B1788 is output, first perform "zero point calibration" and "sensitivity check".

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1788	• Front seat assembly RH malfunction • Occupant classification ECU malfunction • Rear occupant classification sensor RH sensed large load	• Front seat assembly RH (Rear occupant classification sensor RH) • Occupant classification ECU

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HINT:

When DTC B1650/32 is detected as a result of troubleshooting for the AIRBAG SYSTEM, check the DTCs stored in the occupant classification ECU. When DTC B1788 is output, perform troubleshooting for the DTC.

WIRING DIAGRAM

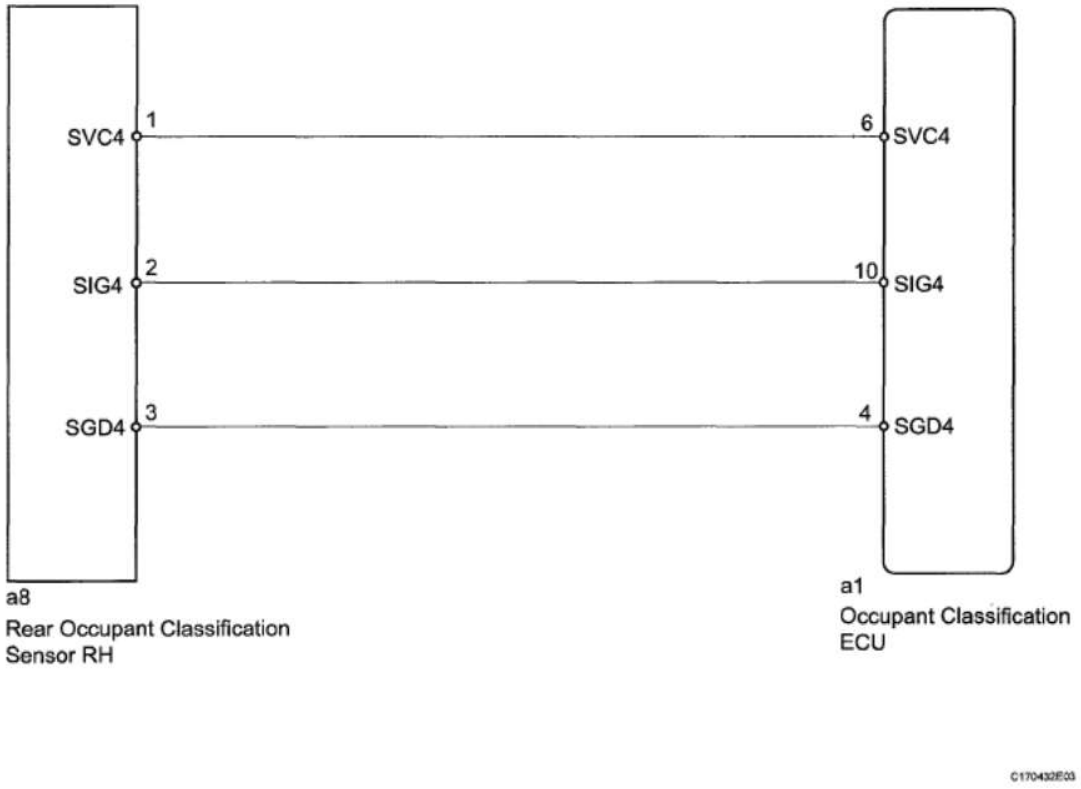


Fig. 273: Rear Occupant Classification Sensor RH - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

1. **PERFORM ZERO POINT CALIBRATION**
   a. Connect Techstream to the DLC3.
   b. Turn the ignition switch on (IG).
   c. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

   OK:

   "Zero Point Calibration is complete." is displayed.

NG: Go to step 4

OK: Go to next step

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2. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

      Standard:

      27 to 33 kg (59.52 to 72.75 lb)

   NG: Go to step 4

   OK: Go to next step

3. **CHECK DTC**
   a. Turn the ignition switch on (IG).
   b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   d. Turn the ignition switch off.
   e. Turn the ignition switch on (IG).
   f. Check for DTCs (See **DTC CHECK/CLEAR**).

      OK:

      DTC B1788 is not output.

      HINT:

      Codes other than DTC B1788 may be output at this time, but they are not related to this check.

   NG: Go to step 4

   OK: END

4. **REPLACE FRONT SEAT ASSEMBLY RH**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Replace the front seat assembly RH (See **REMOVAL** for power seat or See **REMOVAL** for manual seat).

      HINT:

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

5. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.

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c. Turn the ignition switch on (IG).
d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

OK:

"Zero Point Calibration is complete." is displayed.

NG: Go to step 8

OK: Go to next step

6. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

Standard:

27 to 33 kg (59.52 to 72.75 lb)

NG: Go to step 8

OK: Go to next step

7. **CHECK DTC**
   a. Turn the ignition switch on (IG).
   b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   d. Turn the ignition switch off.
   e. Turn the ignition switch on (IG).
   f. Check for DTCs (See **DTC CHECK/CLEAR**).

OK:

DTC B1788 is not output.

HINT:

Codes other than DTC B1788 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.

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b. Disconnect the negative (-) terminal cable from the battery.
c. Replace the occupant classification ECU (See **REMOVAL**).

9. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

      OK:

      "Zero Point Calibration is complete." is displayed.

10. **PERFORM SENSITIVITY CHECK**
    a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

       Standard:

       27 to 33 kg (59.52 to 72.75 lb)

NEXT: END

DTC B1790 CENTER AIRBAG SENSOR ASSEMBLY COMMUNICATION CIRCUIT MALFUNCTION

DESCRIPTION

The center airbag sensor assembly communication circuit consists of the occupant classification ECU and the center airbag sensor assembly.

DTC B1790 is recorded when a malfunction is detected in the center airbag sensor assembly communication circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1790	• The occupant classification ECU 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 center airbag sensor assembly communication circuit for 2 seconds. • Center airbag sensor assembly malfunction • Occupant classification ECU malfunction	• Occupant classification ECU • Center airbag sensor assembly • Floor wire No. 2 • Front seat wire RH

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HINT:

When DTC B1650/32 is detected as a result of troubleshooting for the AIRBAG SYSTEM, check the DTCs stored in the occupant classification ECU. When DTC B1790 is output, perform troubleshooting for the DTC.

WIRING DIAGRAM

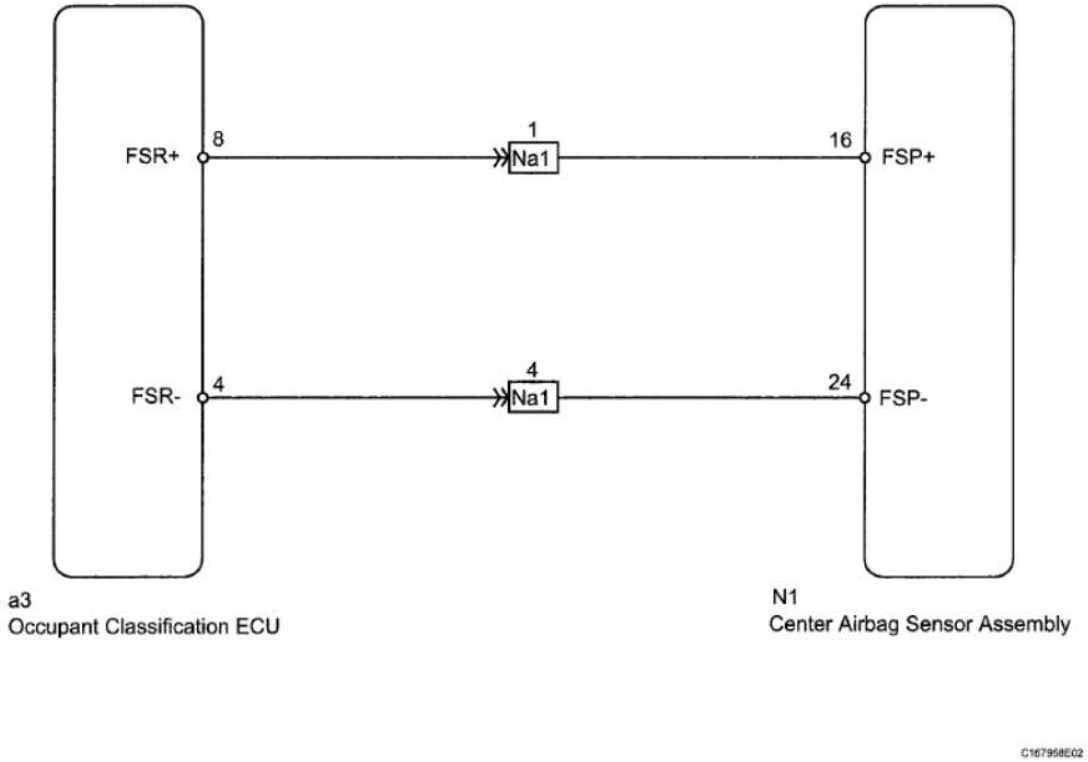


Fig. 274: Occupant Classification ECU - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front passenger seat installation bolts to see under the seat cushion.
- In the above case, hold the seat so that it does not fall down. Hold the seat only as necessary because holding the seat for a long period of time may cause seat rail deformation.

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

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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.

d. Disconnect the connectors from the center airbag sensor assembly and the occupant classification ECU.
e. Check that the terminals of connectors are not damaged.

OK:

The terminals are not deformed or damaged.

NG: REPLACE WIRE HARNESS

OK: Go to next step

2. **CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

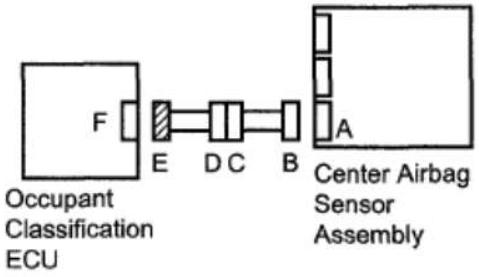
Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a3-8 (FSR+) - Body ground	Ignition switch on (IG)	Below 1 V
a3-4 (FSR-) - Body ground	Ignition switch on (IG)	Below 1 V

NG: Go to step 11

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Front view of wire harness connector:
(to Occupant Classification ECU)

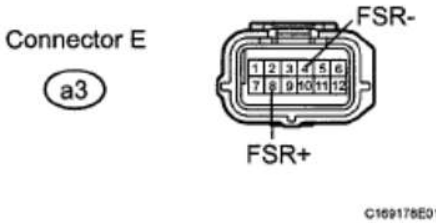


Fig. 275: Checking Occupant Classification System Circuit (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

3. **CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (OPEN)**
   a. Turn the ignition switch off.

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

Front view of wire harness connector:
(to Occupant Classification ECU)

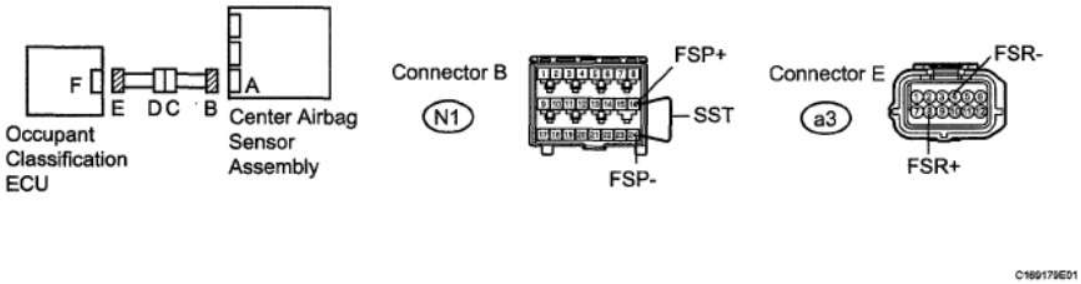


Fig. 276: Checking Occupant Classification System Circuit (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Using SST, connect terminals 16 (FSP+) and 24 (FSP-) of connector B.

NOTE: Do not forcibly insert SST into the terminals of the connector when connecting.

SST 09843-18040

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a3-8 (FSR+) - a3-4 (FSR-)	Always	Below 1 ohms

NG: Go to step 12

OK: Go to next step

4. **CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (SHORT)**
   a. Disconnect SST from connector B.
   b. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

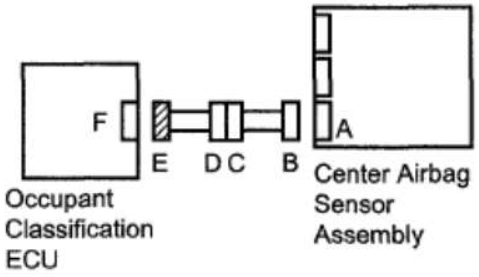
Tester Connection	Switch Condition	Specified Condition
a3-8 (FSR+) - a3-4 (FSR-)	Always	1 Mohms or higher

NG: Go to step 13

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Front view of wire harness connector:
(to Occupant Classification ECU)

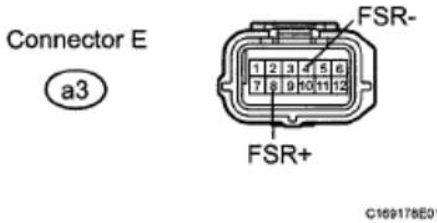


Fig. 277: Checking Occupant Classification System Circuit (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

5. **CHECK OCCUPANT CLASSIFICATION SYSTEM CIRCUIT (SHORT TO GROUND)**
   a. Measure the resistance according to the value (s) in the table below.

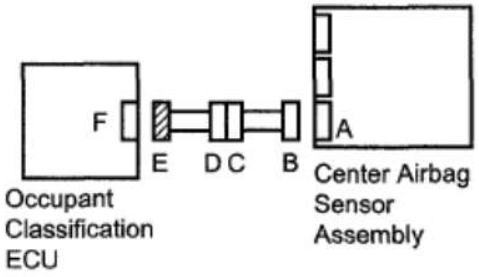
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a3-8 (FSR+) - Body ground	Always	1 Mohms or higher
a3-4 (FSR-) - Body ground	Always	1 Mohms or higher

NG: Go to step 14

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Front view of wire harness connector:
(to Occupant Classification ECU)

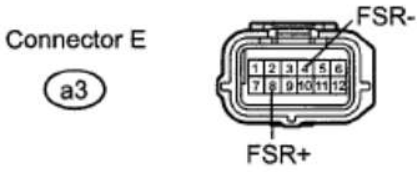


Fig. 278: Checking Occupant Classification System Circuit (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **RECHECK DTC**
   a. Connect the connectors to the occupant classification ECU and the center airbag sensor assembly.
   b. Connect Techstream to the DLC3.
   c. Connect the negative (-) terminal cable to the battery.
   d. Turn the ignition switch on (IG).
   e. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   f. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   g. Turn the ignition switch off.
   h. Turn the ignition switch on (IG).
   i. Using Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK/CLEAR**).

      OK:

      DTC B1790 is not output.

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HINT:

Codes other than DTC B1790 may be output at this time, but they are not related to this check.

NG: Go to step 7

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

7. **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 if possible.

8. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

   OK:

   "Zero Point Calibration is complete." is displayed.

9. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

   Standard:

   27 to 33 kg (59.52 to 72.75 lb)

10. **RECHECK DTC**
    a. Turn the ignition switch on (IG).
    b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
    c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
    d. Turn the ignition switch off.
    e. Turn the ignition switch on (IG).
    f. Using Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK/CLEAR**).

    OK:

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DTC B1790 is not output.

HINT:

Codes 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 **ON-VEHICLE INSPECTION**)

OK: END

11. **CHECK FLOOR WIRE NO. 2 (SHORT TO B+)**
    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 front seat wire RH connector from the floor wire No. 2.
    d. Connect the negative (-) terminal cable to the battery.
    e. Turn the ignition switch on (IG).
    f. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
Na1-1 (FSR+) - Body ground	Ignition switch on (IG)	Below 1 V
Na1-4 (FSR-) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE FLOOR WIRE NO. 2

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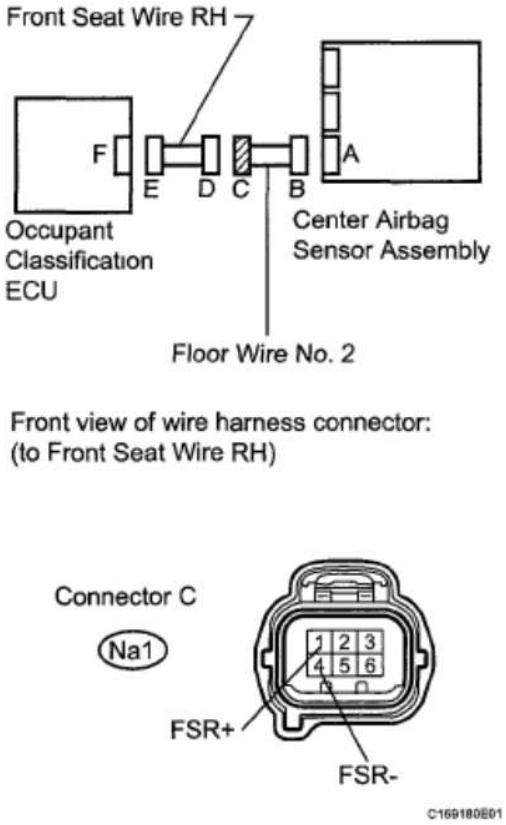


Fig. 279: Checking Floor Wire No. 2 (Short To B+)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE FRONT SEAT WIRE RH

12. **CHECK FLOOR WIRE NO. 2 (OPEN)**
    a. Disconnect the front seat wire RH connector from the floor wire No. 2.

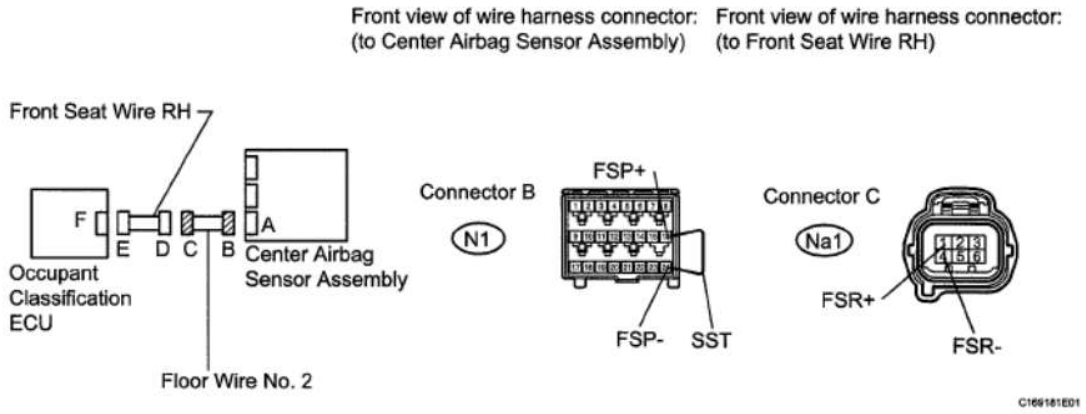


Fig. 280: Checking Floor Wire No. 2 (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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HINT:

SST has already been inserted into connector B.

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

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
Na1-1 (FSR+) - Na1-4 (FSR-)	Always	Below 1 ohms

NG: REPLACE FLOOR WIRE NO. 2

OK: REPLACE FRONT SEAT WIRE RH

13. **CHECK FLOOR WIRE NO. 2 (SHORT)**
    a. Disconnect the front seat wire RH connector from the floor wire No. 2.
    b. Measure the resistance according to the value (s) in the table below.

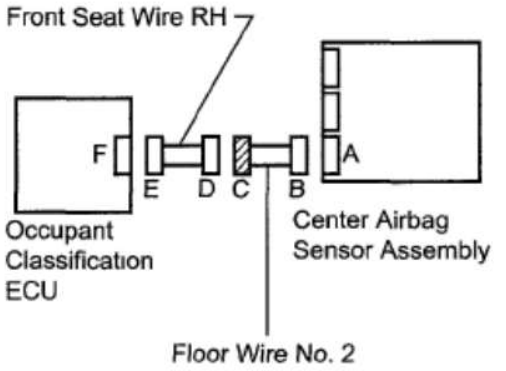
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
Na1-1 (FSR+) - Na1-4 (FSR-)	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE NO. 2

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Front view of wire harness connector:
(to Front Seat Wire RH)

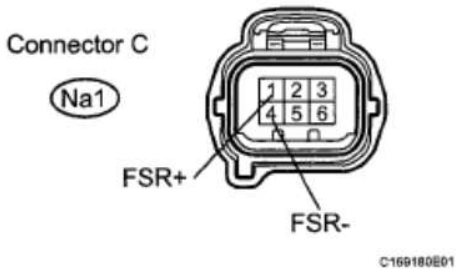


Fig. 281: Checking Floor Wire No. 2 (Short)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE FRONT SEAT WIRE RH

14. **CHECK FLOOR WIRE NO. 2 (SHORT TO GROUND)**
    a. Disconnect the front seat wire RH connector from the floor wire No. 2.
    b. Measure the resistance according to the value (s) in the table below.

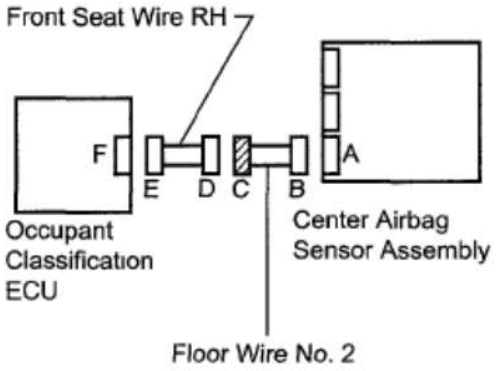
Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
Na1-1 (FSR+) - Body ground	Always	1 Mohms or higher
Na1-4 (FSR-) - Body ground	Always	1 Mohms or higher

NG: REPLACE FLOOR WIRE NO. 2

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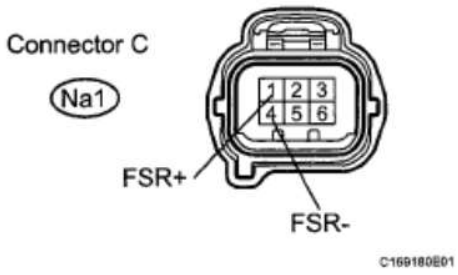


Fig. 282: Checking Floor Wire No. 2 (Short To Ground)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: REPLACE FRONT SEAT WIRE RH

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 recorded when a malfunction is detected in the occupant classification sensor power supply circuit.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1793	• The occupant classification ECU 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 sensor power supply circuit for 2 seconds.	• Front seat assembly RH (Occupant classification sensors) • Occupant classification

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	• Occupant classification ECU malfunction	ECU • Front seat wire RH

HINT:

When DTC B1650/32 is detected as a result of troubleshooting for the AIRBAG SYSTEM, check the DTCs stored in the occupant classification ECU. When DTC B1793 is output, perform troubleshooting for the DTC.

WIRING DIAGRAM



Fig. 283: Occupant Classification Sensor Power Supply Circuit - 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 passenger seat installation bolts to see under the seat cushion.
- In the above case, hold the seat so that it does not fall down. Hold the seat only as necessary because holding the seat for a long period of time may cause seat rail deformation.

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1. **CHECK CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Check that the connectors are properly connected to the center airbag sensor assembly and the occupant classification ECU.

      OK:

      The connectors are properly connected.

      HINT:

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

   d. Disconnect the connectors from the center airbag sensor assembly and the occupant classification ECU.
   e. Check that the terminals of connectors are not damaged.

      OK:

      The terminals are not deformed or damaged.

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

2. **CHECK FRONT SEAT WIRE RH (SHORT TO B+)**
   a. Connect the negative (-) terminal cable to the battery.
   b. Turn the ignition switch on (IG).
   c. Measure the voltage according to the value (s) in the table below.

Standard voltage

VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-5 (SVC3) - Body ground	Ignition switch on (IG)	Below 1 V
a1-6 (SVC4) - Body ground	Ignition switch on (IG)	Below 1 V
a1-11 (SVC1) - Body ground	Ignition switch on (IG)	Below 1 V
a1-12 (SVC2) - Body ground	Ignition switch on (IG)	Below 1 V

NG: REPLACE FRONT SEAT WIRE RH

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Front view of wire harness connector:
(to Occupant Classification ECU)

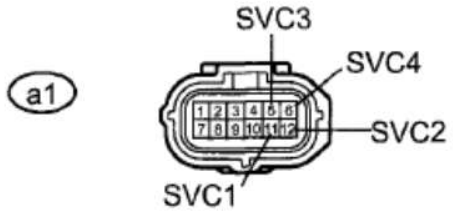


Fig. 284: Identifying A1 Occupant Classification ECU Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

3. **CHECK FRONT SEAT WIRE RH (SHORT TO GROUND)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-5 (SVC3) - Body ground	Always	1 Mohms or higher
a1-6 (SVC4) - Body ground	Always	1 Mohms or higher
a1-11 (SVC1) - Body ground	Always	1 Mohms or higher
a1-12 (SVC2) - Body ground	Always	1 Mohms or higher

NG: REPLACE FRONT SEAT WIRE RH

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Front view of wire harness connector:
(to Occupant Classification ECU)

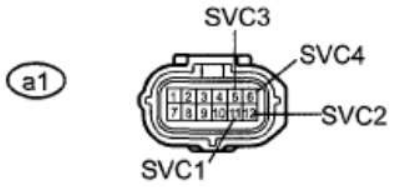


Fig. 285: Identifying A1 Occupant Classification ECU Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

4. **CHECK FRONT SEAT WIRE RH (OPEN)**
   a. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-5 (SVC3) - a10-1 (SVC3)	Always	Below 1 ohms
a1-6 (SVC4) - a8-1 (SVC4)	Always	Below 1 ohms
a1-11 (SVC1) - a9-1 (SVC1)	Always	Below 1 ohms
a1-12 (SVC2) - a7-1 (SVC2)	Always	Below 1 ohms

NG: REPLACE FRONT SEAT WIRE RH

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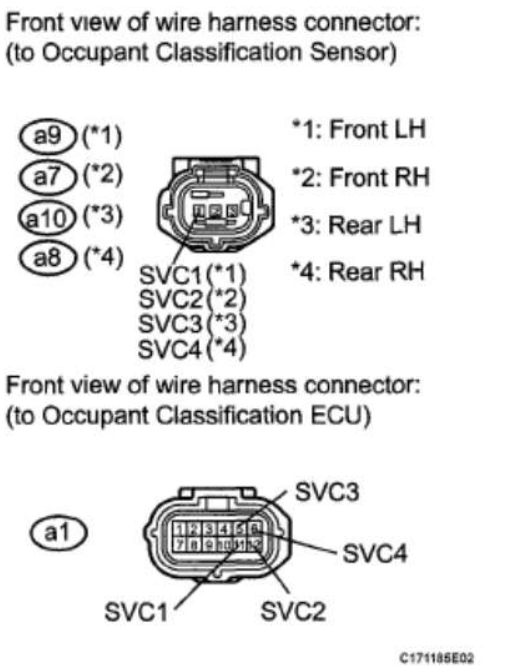


Fig. 286: Identifying Occupant Classification Sensor And A1 Occupant Classification ECU Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

5. **CHECK FRONT SEAT WIRE RH (SHORT)**
   a. Measure the resistance according to the value (s) in the table below.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a1-5 (SVC3) - a1-6 (SVC4)	Always	1 Mohms or higher
a1-5 (SVC3) - a1-11 (SVC1)	Always	1 Mohms or higher
a1-5 (SVC3) - a1-12 (SVC2)	Always	1 Mohms or higher
a1-6 (SVC4) - a1-11 (SVC1)	Always	1 Mohms or higher
a1-6 (SVC4) - a1-12 (SVC2)	Always	1 Mohms or higher
a1-11 (SVC1) - a1-12 (SVC2)	Always	1 Mohms or higher

NG: REPLACE FRONT SEAT WIRE RH

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Front view of wire harness connector:
(to Occupant Classification ECU)

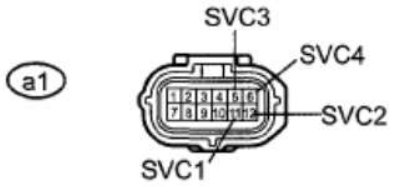


Fig. 287: Identifying A1 Occupant Classification ECU Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK: Go to next step

6. **CHECK 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.
   c. Turn the ignition switch on (IG).
   d. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   e. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   f. Turn the ignition switch off.
   g. Turn the ignition switch on (IG).
   h. Check for DTCs (See **DTC CHECK/CLEAR**).

      OK:

      DTC B1793 is not output.

      HINT:

      Codes other than DTC B1793 may be output at this time, but they are not related to this check.

NG: Go to step 7

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

7. **REPLACE OCCUPANT CLASSIFICATION ECU**
   a. Turn the ignition switch off.

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b. Disconnect the negative (-) terminal cable from the battery.
c. Replace the occupant classification ECU (See **DTC CHECK/CLEAR**).

HINT:

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

8. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

OK:

"Zero Point Calibration is complete." is displayed.

NG: Go to step 11

OK: Go to next step

9. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

Standard:

27 to 33 kg (59.52 to 72.75 lb)

NG: Go to step 11

OK: Go to next step

10. **CHECK DTC**
    a. Turn the ignition switch on (IG).
    b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
    c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
    d. Turn the ignition switch off.
    e. Turn the ignition switch on (IG).
    f. Check for DTCs (See **DTC CHECK/CLEAR**).

OK:

DTC B1793 is not output.

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HINT:

Codes other than DTC B1793 may be output at this time, but they are not related to this check.

NG: Go to step 11

OK: END

11. **REPLACE FRONT SEAT ASSEMBLY RH**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery.
    c. Replace the front seat assembly RH (See **REMOVAL** for power seat or See **REMOVAL** for manual seat).
12. **PERFORM ZERO POINT CALIBRATION**
    a. Connect the negative (-) terminal cable to the battery.
    b. Connect Techstream to the DLC3.
    c. Turn the ignition switch on (IG).
    d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

    OK:

    "Zero Point Calibration is complete." is displayed.

13. **PERFORM SENSITIVITY CHECK**
    a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

    Standard:

    27 to 33 kg (59.52 to 72.75 lb)

NEXT: END

DTC B1794 OPEN IN OCCUPANT CLASSIFICATION ECU BATTERY POSITIVE LINE

DESCRIPTION

This circuit consists of the occupant classification ECU and the power source circuit (battery, fuse, and wire harness).

DTC B1794 is recorded when a malfunction is detected in the occupant classification ECU or the power source circuit.

HINT:

If DTC B1794 is output after turning the ignition switch from off to on (IG) to off 50 times in a row when a

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malfunction occurs in the power circuit for the occupant classification system.

This DTC is output if a malfunction is detected even after being cleared unless the normal system code is input.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area
B1794	• The ignition switch is turned from off to on (IG), hold for 10 seconds or more, and turned off again 50 times in a row when a malfunction occurs in the power circuit for the occupant classification system. • Occupant classification ECU malfunction	• Battery • ECU-B fuse • Wire harness • Occupant classification ECU

When DTC B1650/32 is detected as a result of troubleshooting for the AIRBAG SYSTEM, check the DTCs stored in the occupant classification ECU. When DTC B1794 is output, perform troubleshooting for the DTC.

WIRING DIAGRAM

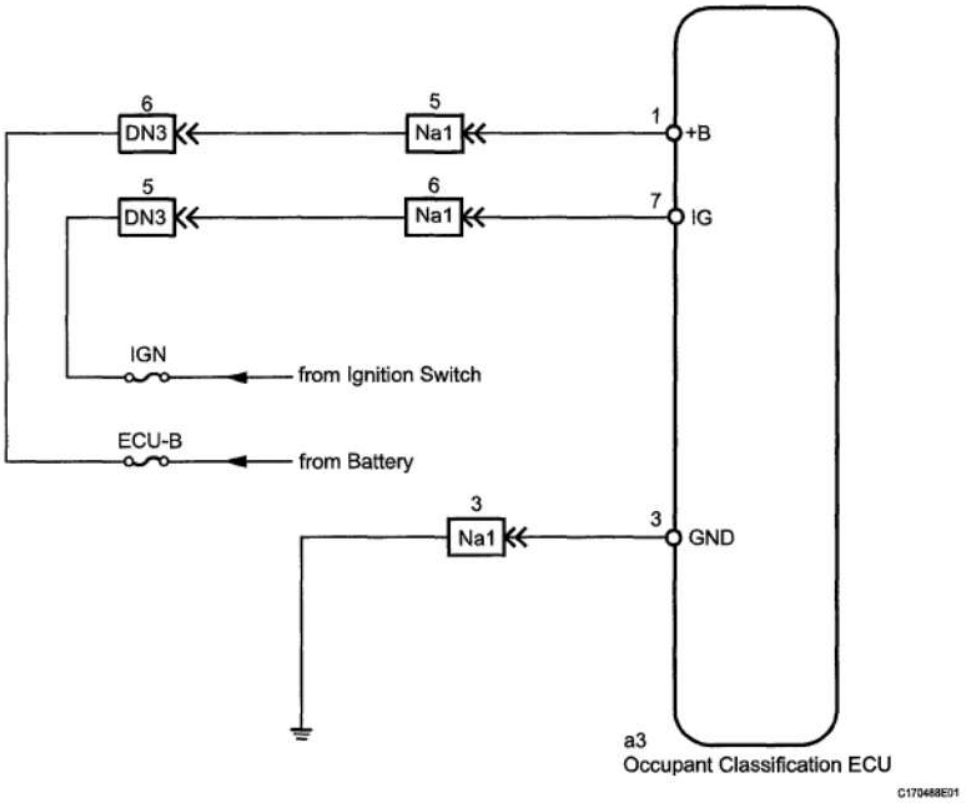


Fig. 288: Occupant Classification ECU Battery Positive Line - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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INSPECTION PROCEDURE

1. **CHECK BATTERY**
   a. Measure the voltage of the battery.

      Standard voltage:

      11 to 14 V

   NG: REPLACE BATTERY

   OK: Go to next step

2. **CHECK FUSE**
   a. Measure the resistance of the ECU-B fuse.

      Standard resistance:

      Below 1 ohms

   NG: REPLACE FUSE

   OK: Go to next step

3. **CHECK WIRE HARNESS (SOURCE VOLTAGE)**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Disconnect the connector from the occupant classification ECU.
   d. Connect the negative (-) terminal cable to the battery.
   e. Turn the ignition switch on (IG).
   f. Measure the voltage according to the value (s) in the table below.

      Standard voltage

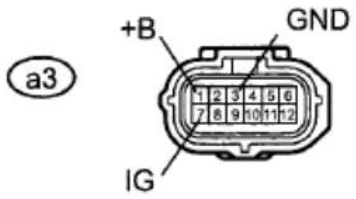
      VOLTAGE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a3-1 (+B) - Body ground	Always	11 to 14 V
a3-7 (IG) - Body ground	Ignition switch on (IG)	11 to 14 V

   g. Turn the ignition switch off.
   h. Measure the resistance according to the value (s) in the table below.

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Front view of wire harness connector:
(to Occupant Classification ECU)



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Fig. 289: Identifying A3 Occupant Classification ECU Connector Terminals
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard resistance

RESISTANCE SPECIFICATION

Tester Connection	Switch Condition	Specified Condition
a3-3 (GND) - Body ground	Always	Below 1 ohms

NG: REPLACE WIRE HARNESS

OK: Go to next step

4. **CHECK DTC**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Connect the connector to the occupant classification ECU.
   d. Connect Techstream to the DLC3.
   e. Connect the negative (-) terminal cable to the battery.
   f. Turn the ignition switch on (IG).
   g. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   h. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   i. Turn the ignition switch off.
   j. Turn the ignition switch on (IG), and wait for at least 10 seconds.
   k. Using Techstream, check for DTCs of the occupant classification ECU (See **DTC CHECK/CLEAR**).

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OK:

DTC B1794 is not output.

HINT:

Codes other than DTC B1794 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 OCCUPANT CLASSIFICATION ECU**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Replace the occupant classification ECU (See **REMOVAL**).
6. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Using Techstream, perform the "zero point calibration" (See **INITIALIZATION**).

   OK:

   "Zero Point Calibration is complete." is displayed.

7. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

   Standard:

   27 to 33 kg (59.52 to 72.75 lb)

NEXT: END

DTC B1795 OCCUPANT CLASSIFICATION ECU MALFUNCTION

DESCRIPTION

DTC B1795 is recorded when a malfunction is detected in the occupant classification ECU. Troubleshoot DTC B1771 first if DTCs B1771 and B1795 are output simultaneously.

DTC DETECTION CONDITION REFERENCE

DTC No.	DTC Detection Condition	Trouble Area

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B1795	• Front seat inner belt assembly RH malfunction • Occupant classification ECU malfunction	• Front seat inner belt assembly RH • Occupant classification ECU

HINT:

When DTC B1650/32 is detected as a result of troubleshooting for the AIRBAG SYSTEM, check the DTCs stored in the occupant classification ECU. When DTC B1795 is output, perform troubleshooting for the DTC.

INSPECTION PROCEDURE

1. **CHECK DTC**
   a. Turn the ignition switch on (IG), and wait for at least 10 seconds.
   b. Check for DTCs (See **DTC CHECK/CLEAR**).

   Result:

   A:

   DTCs B1771 and B1795 are output.

   B:

   DTC B1795 is output.

   HINT:

   Codes other than DTCs B1771 and B1795 may be output at this time, but they are not related to this check.

   A: GO TO DTC B1771 (See **DTC B1771 PASSENGER SIDE BUCKLE SWITCH CIRCUIT MALFUNCTION**)

   B: Go to next step

2. **REPLACE OCCUPANT CLASSIFICATION ECU**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Replace the occupant classification ECU (See **DTC CHECK/CLEAR**).
3. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

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OK:

"Zero Point Calibration is complete." is displayed.

4. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

      Standard:

      27 to 33 kg (59.52 to 72.75 lb)

NEXT: END

DTC B1796 SLEEP OPERATION FAILURE OF OCCUPANT CLASSIFICATION ECU

DESCRIPTION

In sleep mode, the occupant classification ECU reads the condition of each sensor while the ignition switch is off.

In this mode, if occupant classification ECU detects an internal malfunction, DTC B1796 is output.

DTC DETECTION CONDITION REFERENCE

DTC No.	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 for the AIRBAG SYSTEM, check the DTCs stored in the occupant classification ECU. When DTC B1796 is output, perform troubleshooting for the DTC.

INSPECTION PROCEDURE

1. **CHECK DTC**
   a. Turn the ignition switch on (IG).
   b. Clear the DTCs stored in the occupant classification ECU (See **DTC CHECK/CLEAR**).
   c. Clear the DTCs stored in the center airbag sensor assembly (See **DTC CHECK/CLEAR**).
   d. Turn the ignition switch off, and wait for at least 10 seconds.
   e. Turn the ignition switch on (IG).
   f. Check for DTCs (See **DTC CHECK/CLEAR**).

      OK:

      DTC B1796 is not output.

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HINT:

Codes 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.
   c. Replace the occupant classification ECU (See **REMOVAL**).
3. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

   OK:

   "Zero Point Calibration is complete." is displayed.

4. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

   Standard:

   27 to 33 kg (59.52 to 72.75 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 assembly and front seat side airbag assembly RH condition (activated/not activated) with the passenger airbag ON/OFF indicator.

HINT:

Approximately 6 seconds after the ignition switch is turned on (IG), the passenger airbag ON/OFF indicator will be ON/OFF depending on the conditions listed below.

PASSENGER AIRBAG ON/OFF INDICATOR REFERENCE CHART

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Front Passenger Seat Condition	Passenger Airbag ON/OFF Indicator		SRS Warning Light
	ON Indicator	OFF Indicator	
Vacant	OFF	OFF	OFF
Adult is seated.	ON	OFF	OFF
Child is seated.	OFF	ON	OFF
Child restraint system is set.	OFF	ON	OFF
Occupant classification system failure	OFF	ON	ON

INSPECTION PROCEDURE

1. **CHECK SRS WARNING LIGHT**
   a. Turn the ignition switch on (IG), and check the SRS warning light condition.

      HINT:

      If this trouble occurs, the SRS warning light is off. If the light is on, a DTC is output. Troubleshoot for the output DTC.

      OK:

      After the primary check period, the SRS warning light goes off.

      HINT:

      The primary check is performed for approximately 6 seconds after the ignition switch is turned on (IG).

   NG: GO TO DTC CHART (See **DIAGNOSTIC TROUBLE CODE CHART**)

   OK: Go to next step

2. **PERFORM ZERO POINT CALIBRATION**
   a. Turn the ignition switch off.
   b. Connect Techstream to the DLC3.
   c. Turn the ignition switch on (IG).
   d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

      OK:

      "Zero Point Calibration is complete." is displayed.

   NG: Go to step 4

   OK: Go to next step

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3. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

      Standard:

      27 to 33 kg (59.52 to 72.75 lb)

   NG: Go to step 4

   OK: END

4. **RETIGHTEN FRONT SEAT ASSEMBLY RH BOLT**
   a. Turn the ignition switch off.
   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 (377 kgf*cm, 27 ft.*lbf)

5. **PERFORM ZERO POINT CALIBRATION**
   a. Connect Techstream to the DLC3.
   b. Turn the ignition switch on (IG).
   c. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

      OK:

      "Zero Point Calibration is complete." is displayed.

   NG: Go to step 7

   OK: Go to next step

6. **PERFORM SENSITIVITY CHECK**
   a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

      Standard:

      27 to 33 kg (59.52 to 72.75 lb)

   NG: Go to step 7

   OK: END

7. **READ VALUE USING PASSENGER SIDE BUCKLE SWITCH**
   a. Turn the ignition switch on (IG).

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b. Using Techstream, read the "Data List" (See **DATA LIST/ACTIVE TEST**).

1. Read the display when the passenger side buckle switch is operated.

Occupant Detection:

DATA LIST

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
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	Unset/Set	-

OK:

The Techstream display changes correctly in accordance with the operation of the buckle switch.

NG: Go to step 12

OK: Go to next step

8. **CHECK CONNECTORS**
   a. Turn the ignition switch off.
   b. Disconnect the negative (-) terminal cable from the battery.
   c. Disconnect the connectors from the occupant classification ECU and the 4 occupant classification sensors.
   d. Check that the terminals of connectors are not damaged.

OK:

The terminals are not deformed or damaged.

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

9. **REPLACE OCCUPANT CLASSIFICATION ECU**
   a. Connect the connectors to the 4 occupant classification sensors.
   b. Replace the occupant classification ECU (See **REMOVAL**).
10. **PERFORM ZERO POINT CALIBRATION**
   a. Connect the negative (-) terminal cable to the battery.
   b. Connect Techstream to the DLC3.

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c. Turn the ignition switch on (IG).
d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

OK:

"Zero Point Calibration is complete." is displayed.

11. **PERFORM SENSITIVITY CHECK**
    a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

Standard:

27 to 33 kg (59.52 to 72.75 lb)

NEXT: END

12. **CHECK CONNECTORS**
    a. Turn the ignition switch off.
    b. Disconnect the negative (-) terminal cable from the battery.
    c. Disconnect the connectors from the occupant classification ECU and the front seat inner belt assembly RH.
    d. Check that the terminals of connectors are not damaged.

OK:

The terminals are not deformed or damaged.

NG: REPLACE FRONT SEAT WIRE RH

OK: Go to next step

13. **REPLACE FRONT SEAT INNER BELT ASSEMBLY RH**
    a. Connect the connector to the occupant classification ECU.
    b. Replace the front seat inner belt assembly RH (See **REMOVAL**).
14. **PERFORM ZERO POINT CALIBRATION**
    a. Connect the negative (-) terminal cable to the battery.
    b. Connect Techstream to the DLC3.
    c. Turn the ignition switch on (IG).
    d. Using Techstream, perform "zero point calibration" (See **INITIALIZATION**).

OK:

"Zero Point Calibration is complete." is displayed.

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15. **PERFORM SENSITIVITY CHECK**
    a. Using Techstream, perform "sensitivity check" (See **INITIALIZATION**).

       Standard:

       27 to 33 kg (59.52 to 72.75 lb)

    NEXT: END

STEERING PAD

COMPONENTS

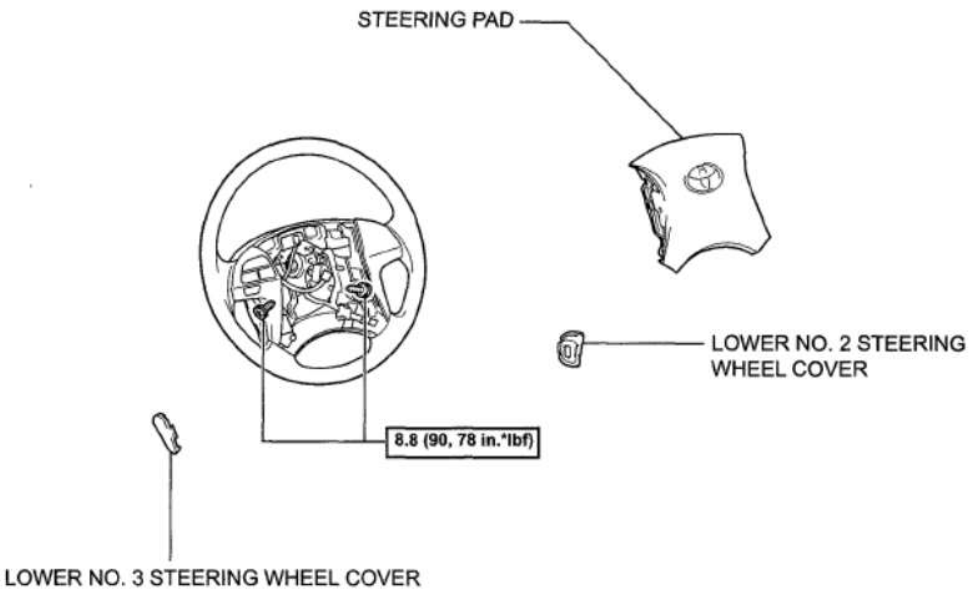


Fig. 290: Identifying Steering Pad Components With Torque Specification
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

1. **INSPECT STEERING PAD (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 as mentioned below, replace the steering pad with a new one:

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Cuts, minute cracks or marked discoloration on the steering pad top surface or grooves.

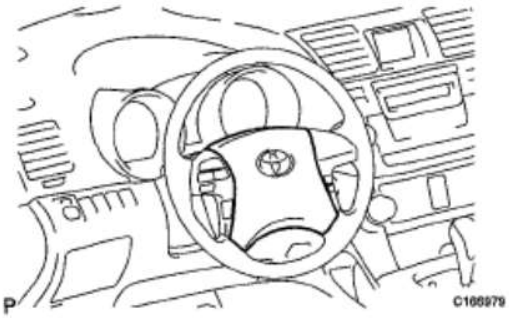


Fig. 291: Identifying Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **INSPECT STEERING PAD (VEHICLE INVOLVED IN COLLISION AND AIRBAG HAS NOT DEPLOYED)**
   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 as mentioned below, replace the steering pad or steering wheel assembly with a new one:
      - Cuts, minute cracks or marked discoloration on the steering pad top surface or grooves.
      - Cracks or other damage to the connectors.
      - Deformation of the steering wheel assembly.
      - Deformation of the horn button contact plate of the steering pad.
      - There should be no interference between the steering pad and steering wheel assembly, and the clearance should be uniform all the way around when the new steering pad is installed on the steering wheel assembly.

CAUTION: Be sure to follow the correct removal and installation procedure.

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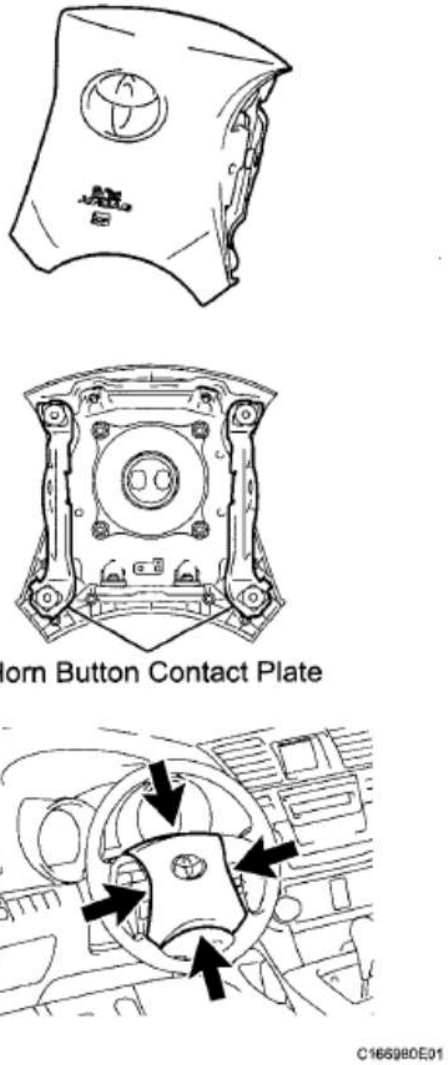


Fig. 292: Identifying Horn Button Contact Plate With Inspection Points
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

1. **PRECAUTION**

   CAUTION: Be sure to read "PRECAUTION" thoroughly before servicing (See AIRBAG SYSTEM).

2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

   CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

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NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

3. **REMOVE LOWER NO. 3 STEERING WHEEL COVER**
   a. Disengage the claw and remove the lower No. 3 steering wheel cover.

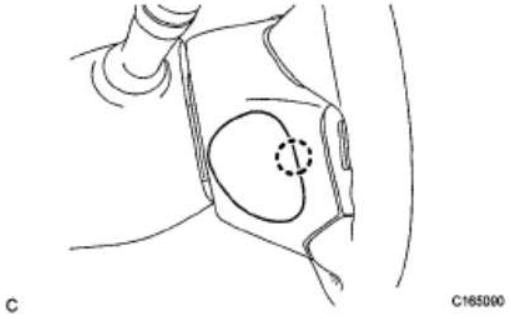


Fig. 293: Identifying Lower No. 3 Steering Wheel Cover And Claw
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

4. **REMOVE LOWER NO. 2 STEERING WHEEL COVER**
   a. Disengage the claw and remove the lower No. 2 steering wheel cover.



Fig. 294: Identifying Lower No. 2 Steering Wheel Cover And Claw
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. **REMOVE STEERING PAD**
   a. Using a "TORX" socket wrench (T30), loosen the 2 "TORX" screws until the groove along the screw circumference catches on the screw case.

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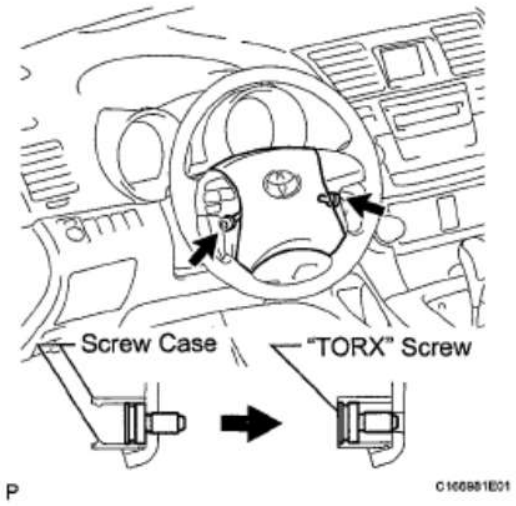


Fig. 295: Locating "TORX" Screws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Pull out the steering pad from the steering wheel assembly and support the steering pad with one hand as shown in the illustration.

NOTE: When removing the steering pad, do not pull the airbag wire harness.

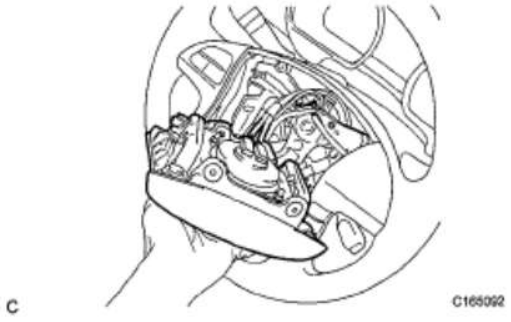


Fig. 296: Supporting Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Disconnect the horn connector from the steering pad.
d. Using a screwdriver with the tip wrapped with protective tape, disconnect the 2 airbag connectors and remove the steering pad.

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

INSTALLATION

1. **INSTALL STEERING PAD**

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a. Check that the ignition switch is off.
b. Check that the battery negative (-) terminal is disconnected.

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

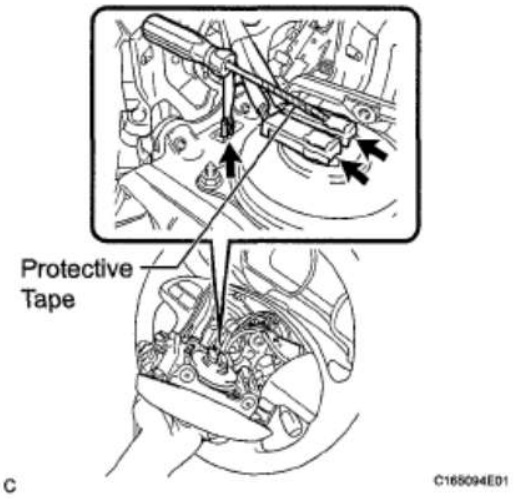


Fig. 297: Disconnecting Horn Connector From Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Support the steering pad with one hand as shown in the illustration.

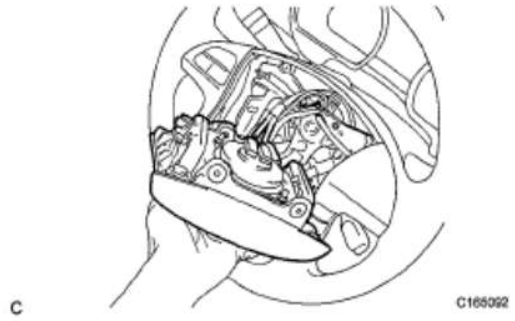


Fig. 298: Supporting Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Connect the 2 airbag connectors to the steering pad.

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

e. Connect the horn connector to the steering pad.

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f. Confirm that the circumference groove of the "TORX" screw fits in the screw case, and place the steering pad onto the steering wheel assembly.

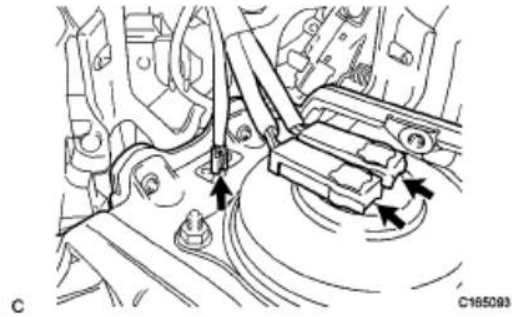


Fig. 299: Locating Airbag Connectors To Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

g. Using a "TORX" socket wrench (T30), tighten the 2 "TORX" screws.

Torque: 8.8 N*m (90 kgf*cm, 78 in.*lbf)

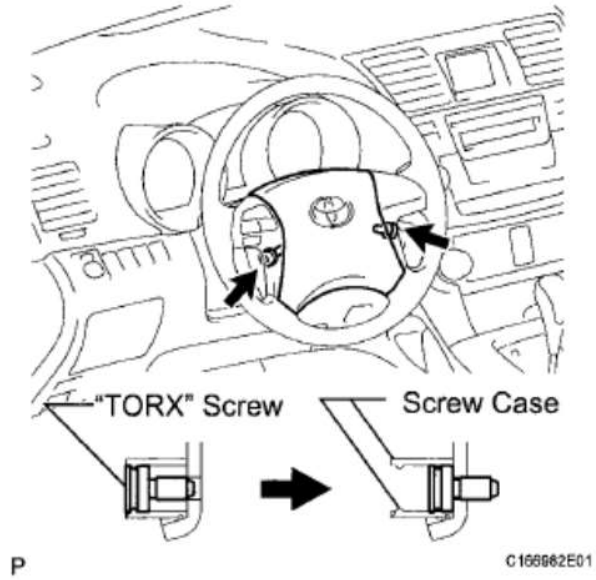


Fig. 300: Locating "TORX" Screws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **INSTALL LOWER NO. 3 STEERING WHEEL COVER**
   a. Install the lower No. 3 steering wheel cover with the claw.

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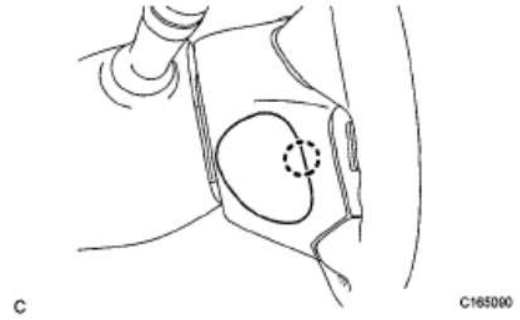


Fig. 301: Identifying Lower No. 3 Steering Wheel Cover And Claw
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. **INSTALL LOWER NO. 2 STEERING WHEEL COVER**
   a. Install the lower No. 2 steering wheel cover with the claw.
4. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

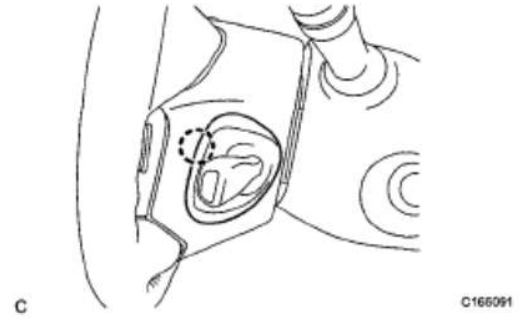


Fig. 302: Identifying Lower No. 2 Steering Wheel Cover And Claw
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. **INSPECT STEERING PAD**
   a. With the steering pad installed on the vehicle, perform a visual check. If there are any defects as mentioned below, replace the steering pad with a new one:

      Cuts, minute cracks or marked discoloration on the steering pad top surface or grooves.

   b. Make sure that the horn sounds.

      HINT:

      If the horn does not sound, inspect the horn system (See **SYSTEM DIAGRAM**).

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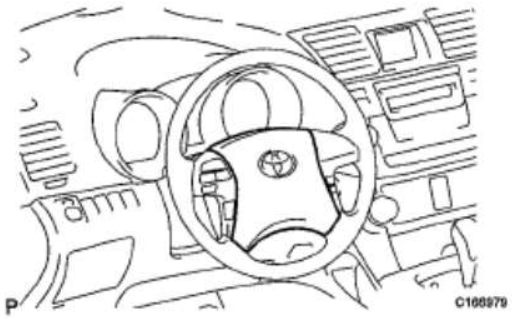


Fig. 303: Identifying Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

6. **INSPECT SRS WARNING LIGHT**
   a. Inspect the SRS warning light (See **DIAGNOSIS SYSTEM**).

DISPOSAL

CAUTION: Before performing pre-disposal deployment of any SRS component, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.

1. **PRECAUTION**

HINT:

When scrapping a vehicle equipped with an SRS or disposing of the steering pad, be sure to deploy the airbag first in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the Service Dept. of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION:

- **An airbag or pretensioner may be activated by static electricity. To prevent this, be sure to touch a metal surface with your bare hands to discharge static electricity before performing this procedure.**
- **Never dispose of a steering pad with an undeployed airbag.**
- **The airbag produces an exploding sound when it is deployed, so perform the operation outdoors and where it will not create a nuisance to nearby residents.**
- **When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electrical noise.**
- **When deploying the airbag, perform the operation at least 10 m (33 ft.) away from the steering pad.**
- **The steering pad becomes extremely hot when the airbag is**

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deployed, so do not touch it for at least 30 minutes after deployment.

- **Use gloves and safety glasses when handling a steering pad with a deployed airbag.**
- **Do not apply water etc. to a steering pad with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

2. **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: When deploying the airbag, always use the specified SST:

SRS Airbag Deployment Tool

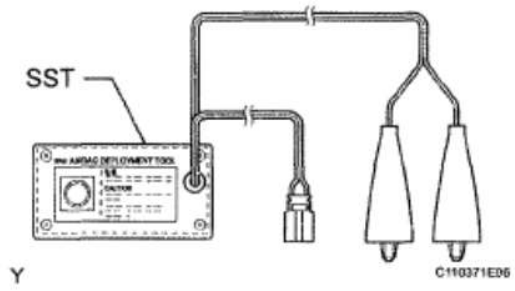


Fig. 304: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Connect SST to the battery.

Connect the red clip of SST to the battery positive (+) terminal and the black clip of SST to the negative (-) terminal.

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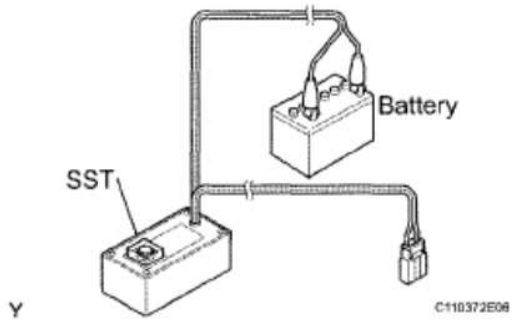


Fig. 305: Connecting SST To Battery
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Check the function of SST.

   Press the SST activation switch and check that the LED of the SST activation switch comes on.

CAUTION:
- **Do not connect the SST connector (yellow colored one) to the airbag.**
- **If the LED comes on when the activation switch is not being pressed, an SST malfunction is possible, so replace SST with a new one.**

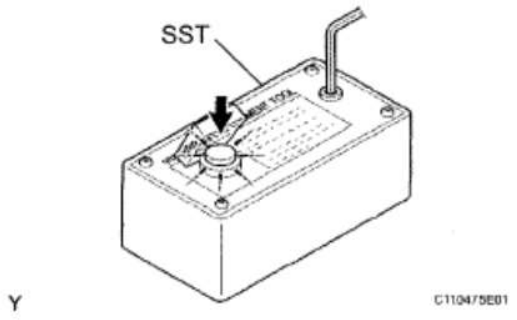


Fig. 306: Pressing SST Activation Switch
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Disconnect SST from the battery.

b. Refer to PRECAUTION (See **AIRBAG SYSTEM**).

c. Remove the steering column cover (lower).
   1. While turning the steering wheel assembly to the right and left, remove the 2 screws and steering column cover (lower).

d. Disconnect the cable from the negative battery terminal.

CAUTION: Wait for at least 90 seconds after disconnecting the cable to

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prevent airbag deployment.

e. Install SST.

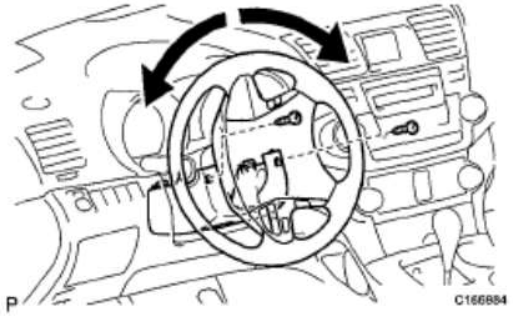


Fig. 307: Turning Steering Wheel Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION: Check that there is no looseness in the steering wheel assembly and steering pad.

1. Disconnect the airbag connector (yellow colored one) from the spiral cable.

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

2. Connect the SST connector to the airbag connector of the spiral cable.

SST 09082-00700,09082-00780

NOTE: To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock.

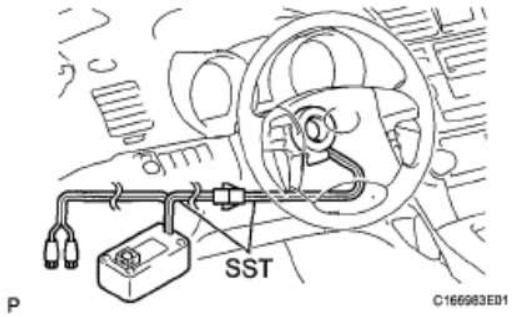


Fig. 308: Identifying SST Connection Airbag Connector Of Spiral Cable
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

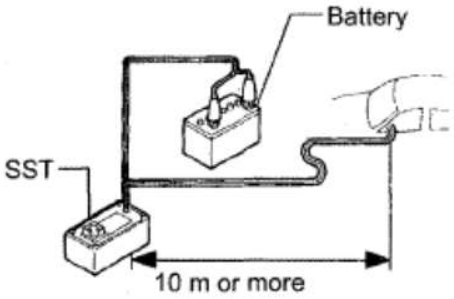
3. Move SST at least 10 m (33 ft.) away from the vehicle front side window.

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4. Maintaining sufficient clearance for the SST wire harness in the front side window, close all doors and windows of the vehicle.

NOTE: Take care not to damage the SST wire harness.

5. Connect the red clip of SST to the battery positive (+) terminal and the black clip of SST to the negative (-) terminal.



C1h0478E12

Fig. 309: Identifying SST Moving Distance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 steering pad becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a steering pad with a deployed airbag.**
- **Do not apply water, etc. to a steering pad with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

HINT:

The airbag is deployed as the LED of the SST activation switch comes on.

3. **DISPOSE OF STEERING PAD (WHEN NOT INSTALLED IN VEHICLE)**

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NOTE:

- **When disposing of the steering pad, never use the customer's vehicle to deploy the airbag.**
- **Be sure to 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: When deploying the airbag, always use the specified SST: SRS Airbag Deployment Tool

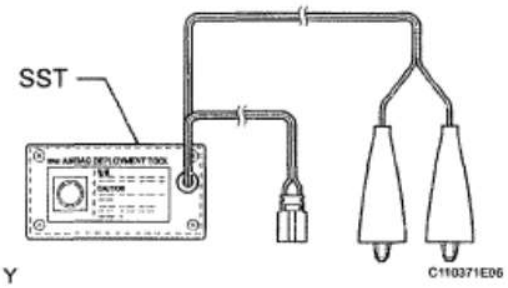


Fig. 310: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Connect SST to the battery.

   Connect the red clip of SST to the battery positive (+) terminal and the black clip of SST to the negative (-) terminal.

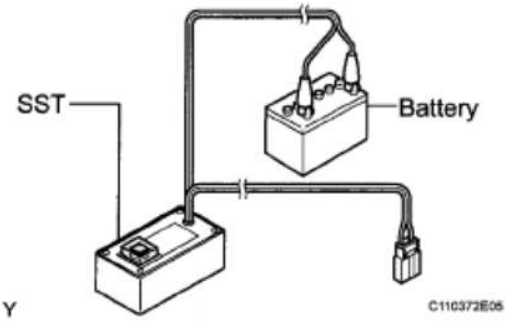


Fig. 311: Connecting SST To Battery
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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2. Check the function of SST.

   Press the SST activation switch and check that the LED of the SST activation switch comes on.

   CAUTION:
   - **Do not connect the SST connector (yellow colored one) to the airbag.**
   - **If the LED comes on when the activation switch is not being pressed, an SST malfunction is possible, so replace SST with a new one.**

3. Disconnect SST from the battery.

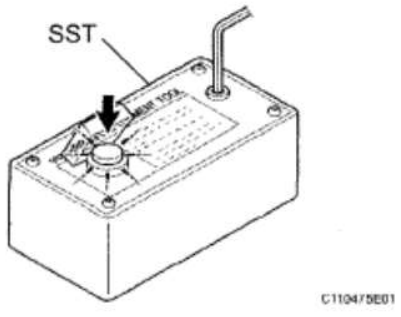


Fig. 312: Pressing SST Activation Switch
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Remove the steering pad (See **REMOVAL**).

   CAUTION:
   - **When removing the steering pad, work must be started at least 90 seconds after the ignition switch is turned off and the negative (-) terminal cable is disconnected from the battery.**
   - **When storing the steering pad, keep the airbag deployment side facing upward.**

c. Using braided wire, tie down the steering pad to an unneeded wheel.

   Wire:

   Stripped wire section

   1.25 mm^2 (0.0019 $in.^2$) or more

   CAUTION: If the wire is too thin or an alternative object is used to tie down the steering pad, it may be snapped by the shock when the

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airbag is deployed. Always use a wire for vehicle use with an area of at least 1.25 mm^2 (0.0019 $in.^2$).

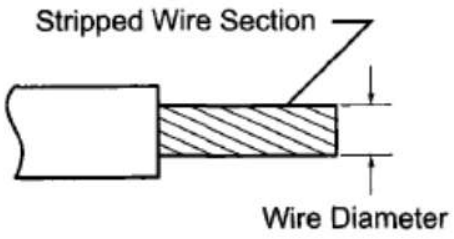


Fig. 313: Identifying Stripped Wire Section
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

To calculate the area of the stripped wire section:

Area = 3.14 x $(Diameter)^2$ divided by 4

1. Install the 2 bolts with washers into the 2 bolt holes on the steering pad.

   Bolt:

   L:

   35.0 mm (1.378 in.)

   M:

   6.0 mm (0.236 in.)

   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.**

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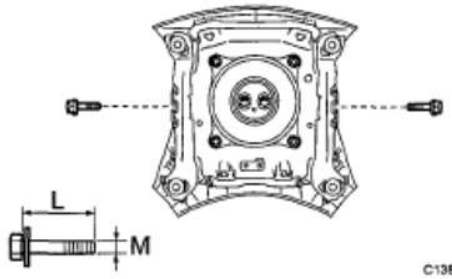


Fig. 314: Identifying Bolts Into Holes On Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. After connecting the following SST to each other, connect them to the steering pad.

SST 09082-00802 (09082-10801, 09082- 30801)

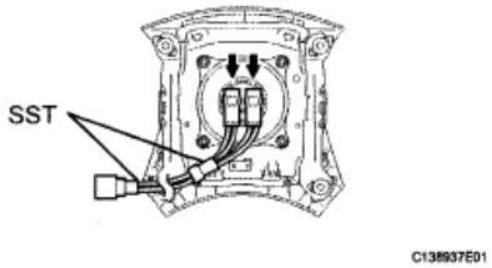


Fig. 315: Connecting SST To Steering Pad
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Wind 3 wires at least 2 times each around each of the bolts installed on the left and right sides of the steering pad.

CAUTION:

- **Tightly wind the wires around the bolts so that there is no slack.**
- **Make sure that the wires are tight. If there is slack in the wires, the steering pad may break loose due to the shock when the airbag is deployed.**

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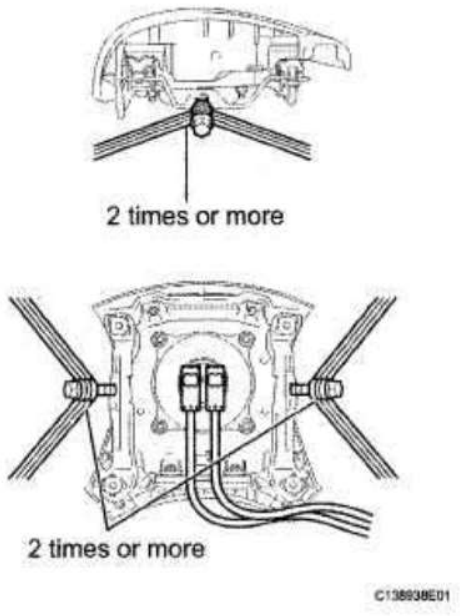


Fig. 316: Winding Wire Harness
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

4. Face the airbag deployment side of the steering pad upward on top of an unneeded tire and wheel set. Separately tie the left and right sides of the steering pad to the wheel through the hub nut holes. Position the SST connector so that it hangs downward through the hub hole of the wheel.

CAUTION:
- **Make sure that the wires are tight. If there is slack in the wires, the steering pad may break loose due to the shock when the airbag is deployed.**
- **Always tie down the steering pad with the airbag deployment side facing upward.**

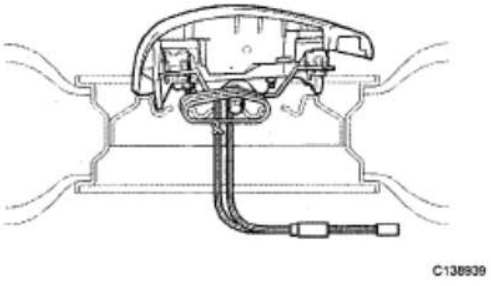


Fig. 317: Identifying Face Of Airbag Deployment Side Of Steering Pad Upward
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NOTE: **The wheel will be damaged by the airbag deployment, so use an unneeded wheel.**

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d. Install SST.

CAUTION: Place the wheel on level ground.

1. Connect the SST connector.

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 disc wheel.

2. Move SST at least 10 m (33 ft.) away from the airbag tied down to the wheel.

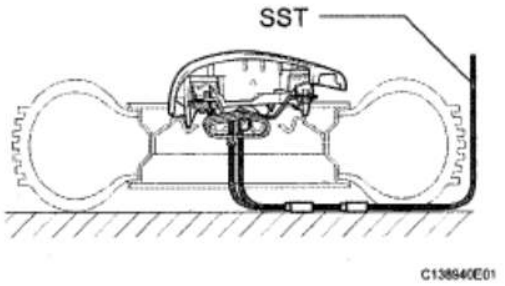


Fig. 318: Connecting SST Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

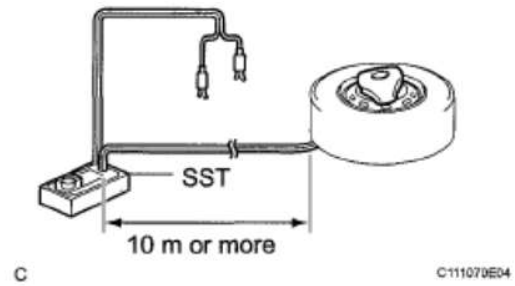


Fig. 319: Identifying SST Moving Distance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Cover the steering pad (using a cardboard box).
1. Cover the steering pad with the cardboard box.
2. Place weights on the cardboard box in 4 places to talling at least 190 N (19 kg, 43 lb).

Minimum cardboard box size:

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Must exceed the following dimensions

X:

460 mm (18.11 in.)

Y:

650 mm (25.59 in.)

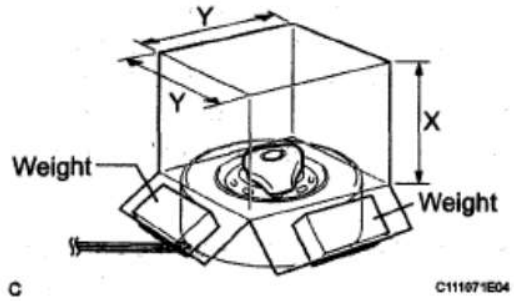


Fig. 320: Identifying Cardboard Box Dimensions
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NOTE:

- **When dimension Y of the cardboard box exceeds the diameter of the wheel and tire which the steering pad is tied to, 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 may be broken by the shock from the airbag deployment.**

f. Cover the steering pad (using tires).
   1. Place at least 3 tires without wheels onto wheel and tire which the steering pad is tied to.
   2. Place the wheel and tire on top of them.

Minimum tire size:

Must exceed the following dimensions

Width:

185 mm (7.28 in.)

Inner diameter:

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360 mm (14.17 in.)

CAUTION: Do not use tires with wheels except for on the top and bottom.

NOTE:

- **The tires may be damaged by the airbag deployment, so use unneeded tires.**
- **Do not place the SST connector under the tire because it could be damaged.**

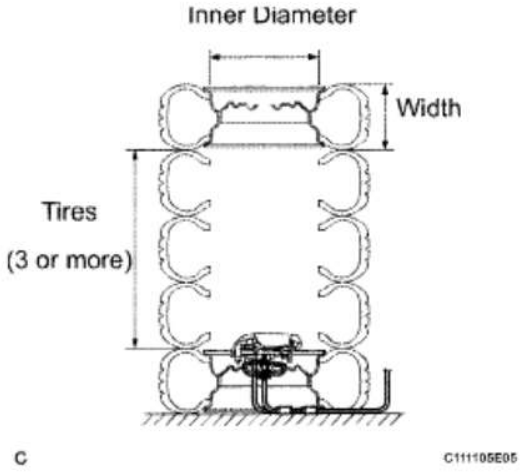


Fig. 321: Placing Tire With Disc Wheel On Top Of Them
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Tie the tires together with the 2 wires.

CAUTION: Make sure that the wires are tight. Looseness in the wires results in the tires breaking loose due to the shock when the airbag is deployed.



Fig. 322: Tying Tires Together With Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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g. Deploy the airbag.

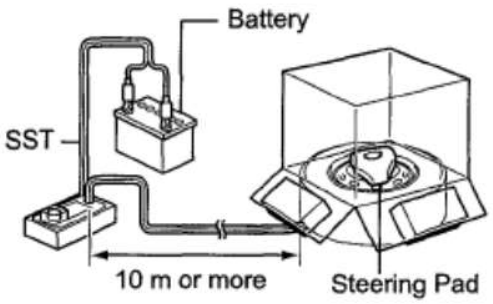
1. Connect the red clip of SST to the battery positive (+) terminal and the black clip of SST to the negative (-) terminal.
2. Check that no one is within a 10 m (33 ft.) radius of the wheel which the steering pad is tied to.
3. Press the SST activation switch and deploy the airbag.

CAUTION: When deploying the airbag, make sure that no one is near the tire.

HINT:

The airbag is deployed as the LED of the SST activation switch comes on.

Using a cardboard box:



Using tires:

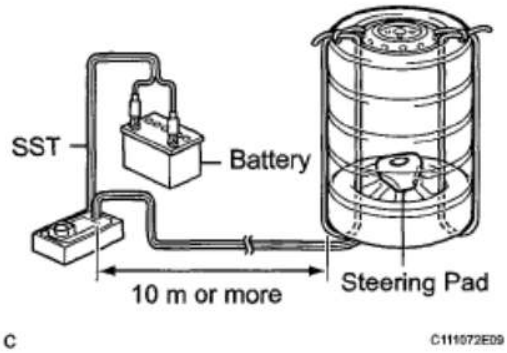


Fig. 323: [Pressing SST Activation Switch And Deploy Airbag]
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

h. Dispose of the steering pad.

CAUTION:
- **The steering pad becomes extremely hot when the airbag**

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is deployed, so do not touch it for at least 30 minutes after deployment.

- **Use gloves and safety glasses when handling a steering pad with a deployed airbag.**
- **Do not apply water, etc. to a steering pad with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

1. Remove the steering pad from the wheel.
2. Place the steering pad in a plastic bag, tie it tightly and dispose of it according to local regulations.



Fig. 324: Identifying Steering Pad In Plastic Bag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SPIRAL CABLE

COMPONENTS

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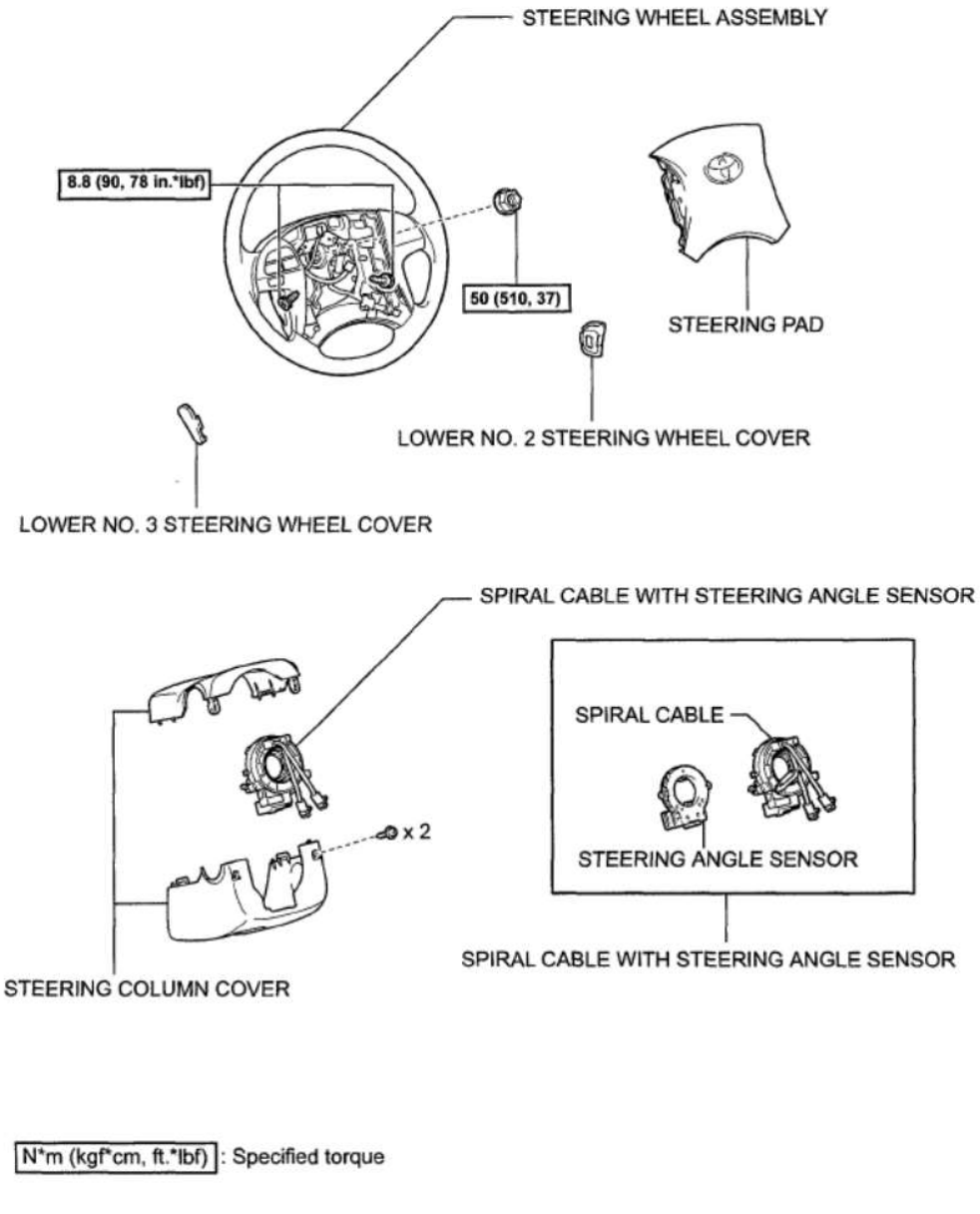


Fig. 325: Identifying Spiral Cable Components With Torque Specification
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

1. **PRECAUTION**

CAUTION: Be sure to read "PRECAUTION" thoroughly before servicing (See AIRBAG SYSTEM).

2. **POSITION FRONT WHEELS STRAIGHT AHEAD**

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3. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

4. **REMOVE LOWER NO. 3 STEERING WHEEL COVER** (See **INSTALLATION**)
5. **REMOVE LOWER NO. 2 STEERING WHEEL COVER** (See **INSTALLATION**)
6. **REMOVE STEERING PAD** (See **INSTALLATION**)
7. **REMOVE STEERING WHEEL ASSEMBLY** (See **DISASSEMBLY**)
8. **REMOVE STEERING COLUMN COVER** (See **REMOVAL**)
9. **REMOVE SPIRAL CABLE WITH STEERING ANGLE SENSOR**
   a. Disconnect the connectors from the spiral cable with steering angle sensor.

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

   b. Disengage the 3 claws and remove the spiral cable with steering angle sensor.

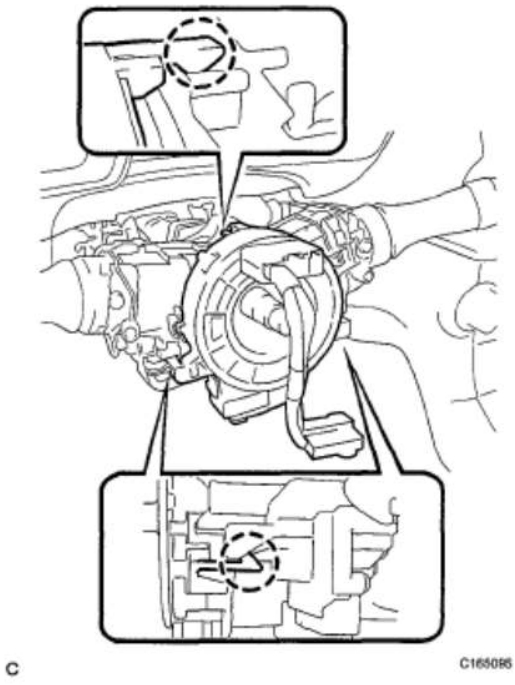


Fig. 326: Identifying Spiral Cable With Steering Angle Sensor And Claws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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10. **REMOVE SPIRAL CABLE**
    a. Disengage the 6 claws and 2 pins, and remove the spiral cable from the steering angle sensor.

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.

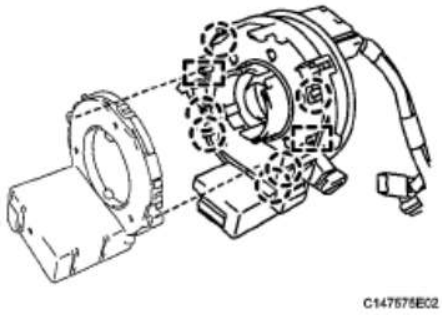


Fig. 327: Identifying Claws And Pins
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

    b. Inspect the spiral cable.
        1. Measure the resistance according to the value (s) in the table below.

NOTE: To avoid breakage of 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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Spiral Cable:

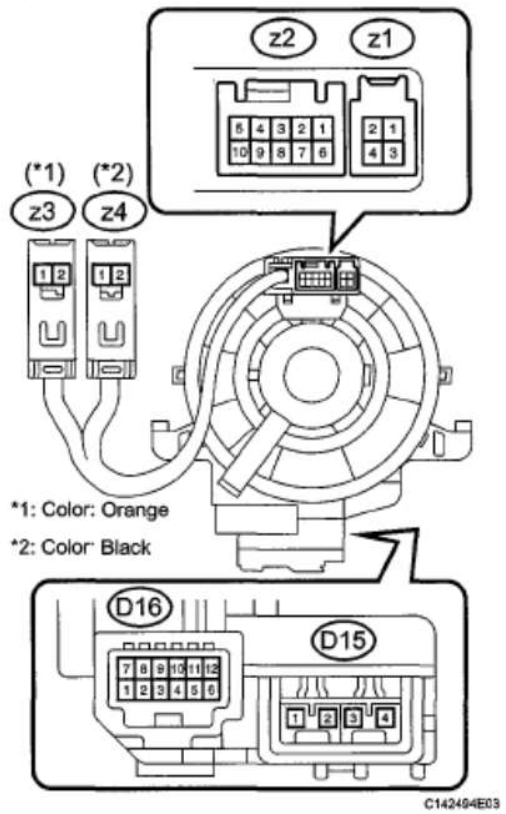


Fig. 328: Inspecting Spiral Cable
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard resistance

RESISTANCE SPECIFICATION

Tester connection	Condition	Specified condition
z2-1 - z1-2	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
z2-1 - D16-8 (HO)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
z2-2 - D16-9 (EAC)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
z2-3-D16-10 (AC1)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
	Center	

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22-4 - D16-11 (ASL)	2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z1-5-E6-12 (IL+2)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z2-6 - z1-4	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z1-3 - D16-1 (CCS)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z2-6 - D16-2 (ECC)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z2-5 - D16-3 (+DP)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z2-8 - D16-4 (EAU)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z2-9 - D16-5 (AU2)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z2-10 - D16-6 (AU1)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z1-2 - D16-8 (HO)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z1-3 - D16-1 (CCS)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z1-4 - D16-2 (ECC)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z3-1 (D-) - D15-2 (D-)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms
z3-2 (D+) - D15-1 (D+)	Center 2.5 rotations to the left 2.5 rotations to the right	Below 1 ohms

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z4-1 (D2-) - D15-3 (D2-)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	
z4-2 (D2+) - D15-4 (D2+)	Center	Below 1 ohms
	2.5 rotations to the left	
	2.5 rotations to the right	

INSTALLATION

1. **INSTALL SPIRAL CABLE**
   a. Engage the 6 claws and 2 pins, and install the spiral cable to the steering angle sensor.
2. **INSTALL SPIRAL CABLE WITH STEERING ANGLE SENSOR**
   a. Check that the front wheels are facing straight ahead.
   b. Set the turn signal switch to the neutral position.

NOTE: If it is not in the neutral position, the turn signal switch pin may be snapped.

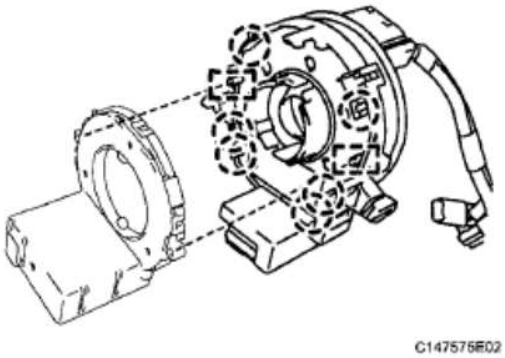


Fig. 329: Identifying Claws And Pins
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   c. Install the spiral cable with steering angle sensor with the 3 claws.

NOTE: When replacing the spiral cable with a new one, remove the lock pin before installing the steering wheel assembly.

   d. Connect the connectors to the spiral cable with steering angle sensor.

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

3. **INSTALL STEERING COLUMN COVER** (See **INSTALLATION**)
4. **ADJUST SPIRAL CABLE**

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a. Check that the ignition switch is off.
b. Check that the battery negative (-) cable is disconnected.

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

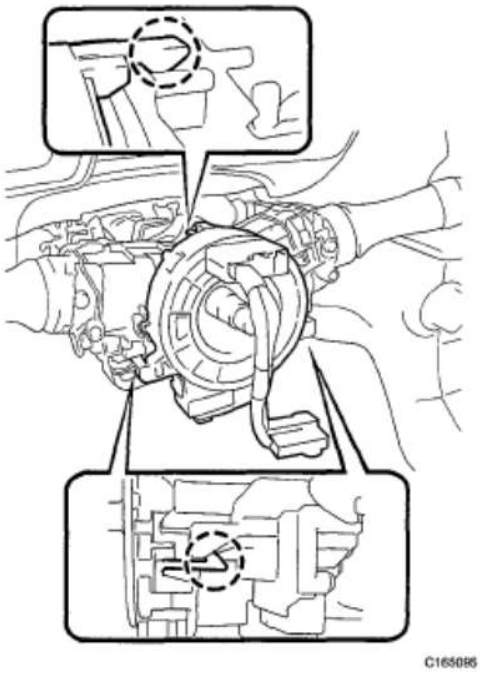


Fig. 330: Identifying Spiral Cable With Steering Angle Sensor And Claws
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c. Rotate the spiral cable counterclockwise slowly by hand until it stops.

NOTE: Do not turn the spiral cable using the airbag wire harness.

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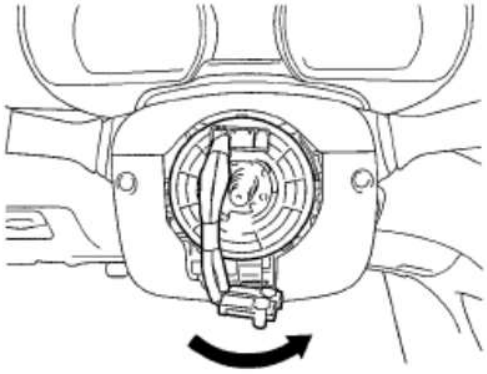


Fig. 331: Turning Spiral Cable
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Rotate the spiral cable clockwise approximately 2.5 turns to align the marks.

NOTE: Do not turn the spiral cable using the airbag wire harness.

HINT:

The spiral cable will rotate approximately 2.5 turns to both the left and right from the center.

5. **INSTALL STEERING WHEEL ASSEMBLY** (See **INSTALLATION**)
6. **INSPECT STEERING WHEEL CENTER POINT**
7. **INSTALL STEERING PAD** (See **INSTALLATION**)
8. **INSTALL LOWER NO. 3 STEERING WHEEL COVER** (See **DISPOSAL**)

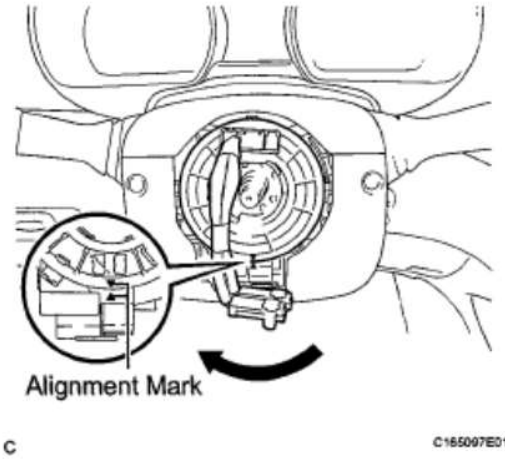


Fig. 332: Rotating Spiral Cable Clockwise To Alignment Marks
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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9. **INSTALL LOWER NO. 2 STEERING WHEEL COVER** (See **DISPOSAL**)
10. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

11. **INSPECT STEERING PAD** (See **DISPOSAL**)
12. **INSPECT SRS WARNING LIGHT**
    a. Inspect the SRS warning light (See **DIAGNOSIS SYSTEM**).

DRIVER SIDE KNEE AIRBAG ASSEMBLY

COMPONENTS

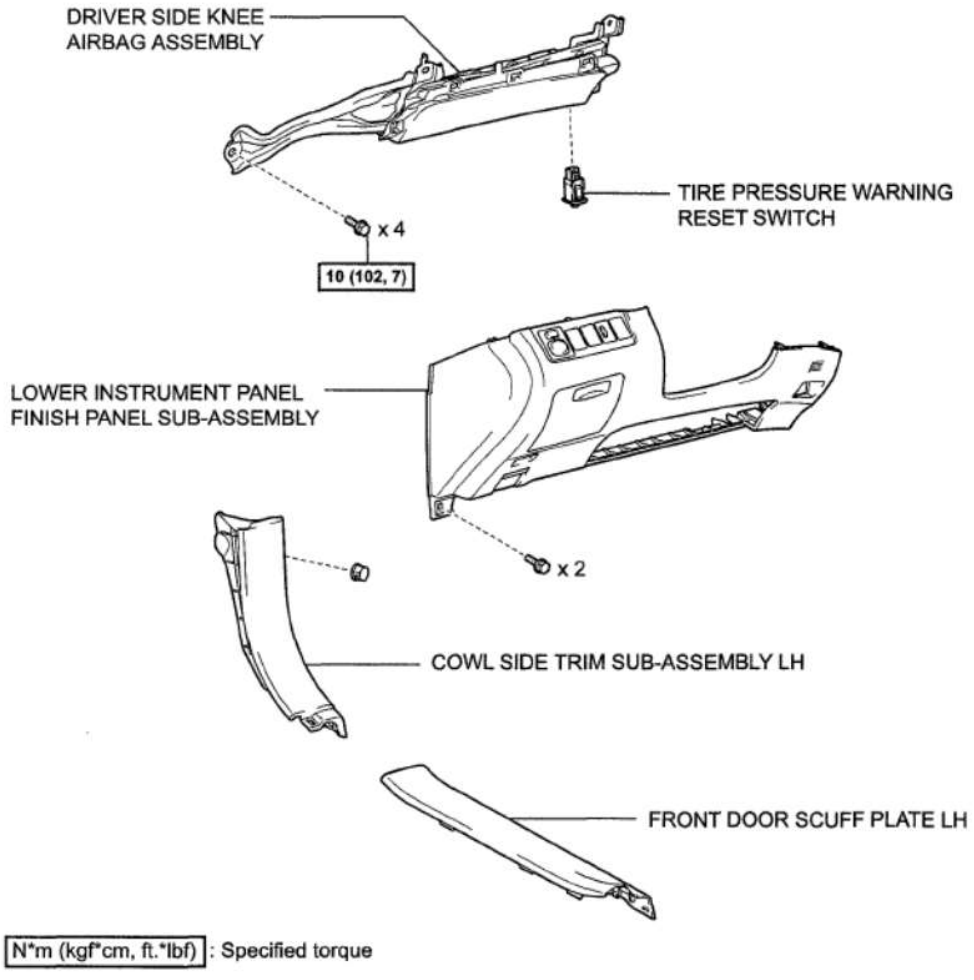


Fig. 333: Identifying Driver Side Knee Airbag Assembly Components With Torque Specification
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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ON-VEHICLE INSPECTION

1. **INSPECT DRIVER SIDE KNEE AIRBAG ASSEMBLY (VEHICLE NOT INVOLVED IN COLLISION)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
   b. With the driver side knee airbag assembly installed on the vehicle, perform a visual check. If there are any defects as mentioned below, replace the driver side knee airbag assembly with a new one: Cuts, minute cracks or marked discoloration on the driver side knee airbag assembly.

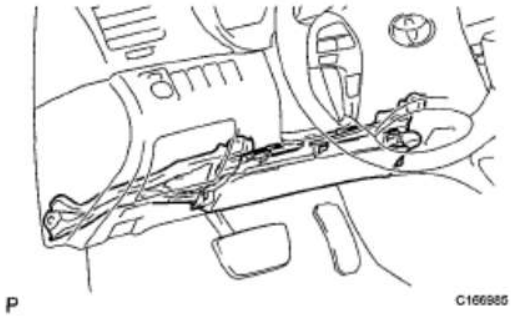


Fig. 334: Identifying Driver Side Knee Airbag Assembly Installed On Vehicle
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **INSPECT DRIVER SIDE KNEE AIRBAG ASSEMBLY (VEHICLE INVOLVED IN COLLISION AND AIRBAG HAS NOT DEPLOYED)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
   b. With the driver side knee airbag assembly removed from the vehicle, perform a visual check. If there are any defects as mentioned below, replace the driver side knee airbag assembly with a new one:
      - Cuts, minute cracks or marked discoloration on the driver side knee airbag assembly.
      - Cracks or other damage to the connector.
      - Deformation or cracks on the instrument panel reinforcement.

CAUTION: Be sure to follow the correct removal and installation procedures.

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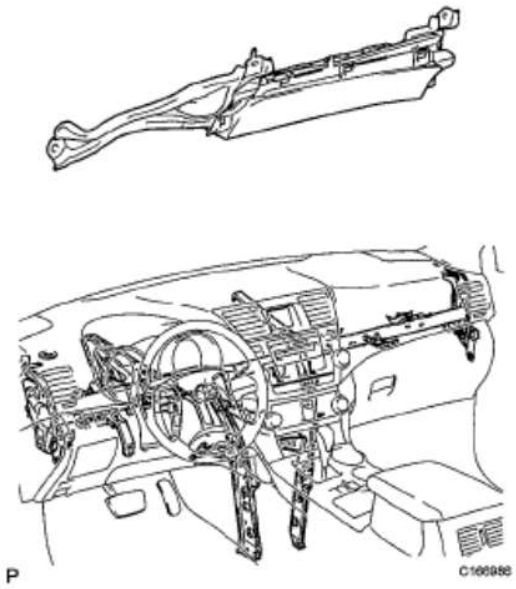


Fig. 335: Identifying Driver Side Knee Airbag Assembly Removed From Vehicle
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

1. **PRECAUTION**

   CAUTION: Be sure to read "PRECAUTION" thoroughly before servicing (See AIRBAG SYSTEM).

2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

   CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

   NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

3. **REMOVE FRONT DOOR SCUFF PLATE LH** (See **REMOVAL**)
4. **REMOVE COWL SIDE TRIM SUB-ASSEMBLY LH** (See **REMOVAL**)
5. **REMOVE LOWER INSTRUMENT PANEL FINISH PANEL SUB-ASSEMBLY (for Manual Air Conditioning System)** (See **REMOVAL**)
6. **REMOVE LOWER INSTRUMENT PANEL FINISH PANEL SUB-ASSEMBLY (for Automatic Air Conditioning System)** (See **REMOVAL**)
7. **REMOVE DRIVER SIDE KNEE AIRBAG ASSEMBLY**
   a. Remove the 4 bolts.

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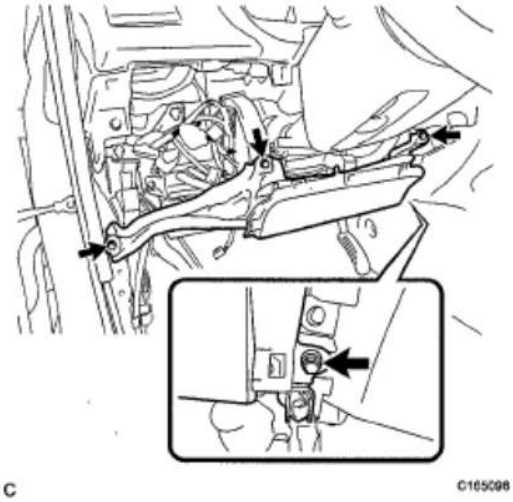


Fig. 336: Locating Driver Side Knee Airbag Assembly And Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Disengage the 2 hooks.



Fig. 337: Identifying Driver Side Knee Airbag Assembly And Hooks
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Pull out the driver side knee airbag assembly from the vehicle and support the driver side knee airbag assembly with one hand as shown in the illustration.

NOTE: When removing the driver side knee airbag assembly, do not pull the

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airbag wire harness.

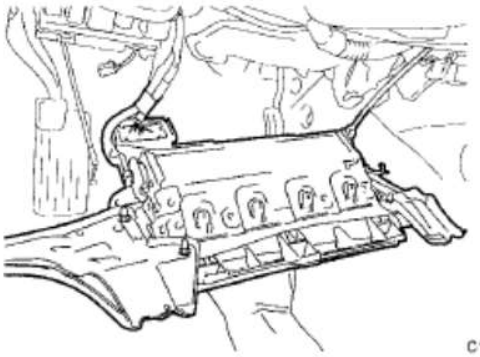


Fig. 338: Supporting Driver Side Knee Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Disconnect the tire pressure warning reset switch connector.
e. Using a screwdriver with the tip wrapped with protective tape, disconnect the driver side knee airbag connector.

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.



Fig. 339: Disconnecting Driver Side Knee Airbag Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Disengage the 2 claws and separate the DLC3 from the driver side knee airbag assembly.

8. **REMOVE TIRE PRESSURE WARNING RESET SWITCH** (See **REMOVAL**)

INSTALLATION

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1. **INSTALL TIRE PRESSURE WARNING RESET SWITCH** (See **INSPECTION**)
2. **INSTALL DRIVER SIDE KNEE AIRBAG ASSEMBLY**

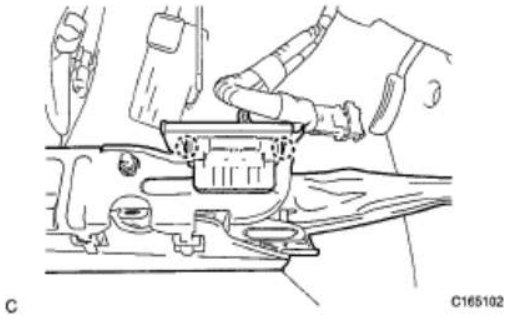


Fig. 340: Identifying Driver Side Knee Airbag Assembly And Claws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Check that the ignition switch is off.
b. Check that the battery negative (-) cable is disconnected.

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

c. Install the DLC3 to the driver side knee airbag assembly with the 2 claws.

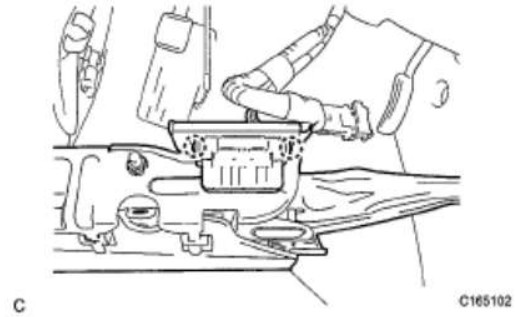


Fig. 341: Identifying Driver Side Knee Airbag Assembly And Claws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Connect the driver side knee airbag connector and tire pressure warning reset switch connector to the driver side knee airbag assembly.

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

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Fig. 342: Connecting Driver Side Knee Airbag Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Support the driver side knee airbag assembly with one hand as shown in the illustration.

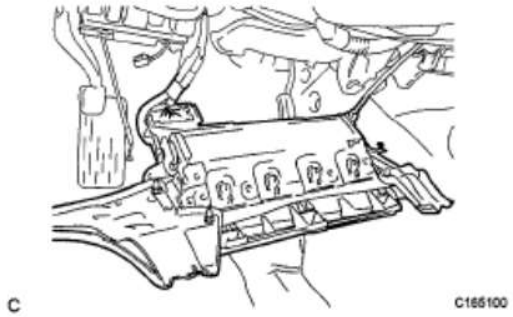


Fig. 343: Supporting Driver Side Knee Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Temporarily install the driver side knee airbag assembly with the 2 hooks.

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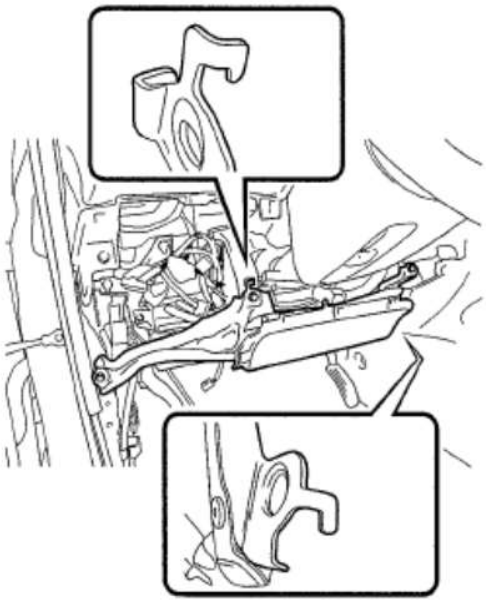


Fig. 344: Identifying Driver Side Knee Airbag Assembly And Hooks
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

g. Install the driver side knee airbag assembly with the 4 bolts.

Torque: 10 N*m (102 kgf*cm, 7 ft.*lbf)

3. **INSTALL LOWER INSTRUMENT PANEL FINISH PANEL SUB-ASSEMBLY (for Manual Air Conditioning System)** (See **INSTALLATION**)
4. **INSTALL LOWER INSTRUMENT PANEL FINISH PANEL SUB-ASSEMBLY (for Automatic Air Conditioning System)** (See **INSTALLATION**)
5. **INSTALL COWL SIDE TRIM SUB-ASSEMBLY LH** (See **INSTALLATION**)
6. **INSTALL FRONT DOOR SCUFF PLATE LH** (See **INSTALLATION**)

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Fig. 345: Turning Spiral Cable
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

7. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

8. **INSPECT TIRE PRESSURE WARNING SYSTEM**

HINT:

(See **TEST MODE PROCEDURE**)

9. **INSPECT SRS WARNING LIGHT**
   a. Inspect the SRS warning light (See **DIAGNOSIS SYSTEM**).

DISPOSAL

CAUTION: Before performing pre-disposal deployment of any SRS component, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.

1. **PRECAUTION**

HINT:

When scrapping a vehicle equipped with an SRS or disposing of the driver side knee airbag assembly, be

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sure to deploy the airbag first in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the SERVICE DEPT. of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION:

- **An airbag or pretensioner may be activated by static electricity. To prevent this, be sure to touch a metal surface with your bare hands to discharge static electricity before performing this procedure.**
- **Never dispose of a driver side knee airbag assembly with an undeployed airbag.**
- **The airbag produces an exploding sound when it is deployed, so perform the operation outdoors and where it will not create a nuisance to nearby residents.**
- **When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electrical noise.**
- **When deploying the airbag, perform the operation at least 10 m (33 ft.) away from the driver side knee airbag assembly.**
- **The driver side knee airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a driver side knee airbag assembly with a deployed airbag.**
- **Do not apply water, etc. to a driver side knee airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

2. **DISPOSE OF DRIVER SIDE KNEE AIRBAG ASSEMBLY (WHEN INSTALLED IN VEHICLE)**

HINT:

Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST (See **DISPOSAL**).
b. Refer to PRECAUTION (See **AIRBAG SYSTEM**).
c. Disconnect the cable from the negative battery terminal.

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

d. Disconnect the driver side knee airbag connector.

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NOTE: Take care not to damage the airbag wire harness.

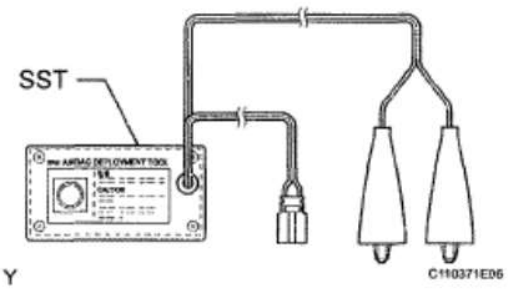


Fig. 346: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Install SST.
   1. Connect the SST connector to the driver side knee airbag assembly.

      SST 09082-00700,09082-00770

      NOTE: To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock.

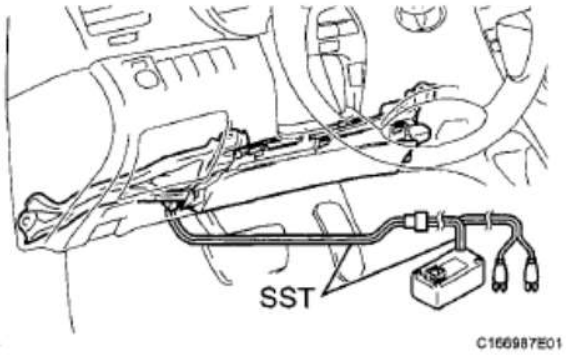


Fig. 347: Identifying SST Connection To Driver Side Knee Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   2. Move SST at least 10 m (33 ft.) away from the vehicle front side window.
   3. Maintaining sufficient clearance for the SST wire harness in the front side window, close all doors and windows of the vehicle.

      NOTE: Take care not to damage the SST wire harness.

   4. Connect the red clip of SST to the battery positive (+) terminal and the black clip of SST to the battery negative (-) terminal.

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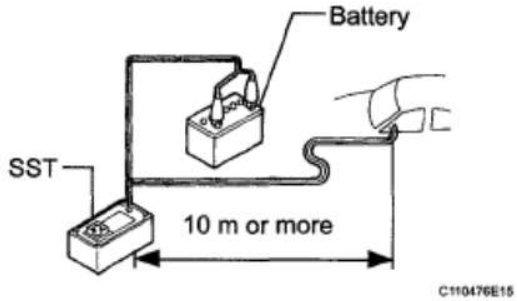


Fig. 348: Identifying SST Moving Distance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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 driver side knee airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a driver side knee airbag assembly with a deployed airbag.**
- **Do not apply water, etc. to a driver side knee airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

HINT:

The airbag is deployed as the LED of the SST activation switch comes on.

3. **DISPOSE OF DRIVER SIDE KNEE AIRBAG ASSEMBLY (WHEN NOT INSTALLED IN VEHICLE)**

NOTE:
- **When disposing of the driver side knee airbag assembly, never use the customer's vehicle to deploy the airbag.**
- **Be sure to follow the procedure detailed below when deploying the airbag.**

HINT:

Prepare a battery as the power source to deploy the airbag.

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a. Check the function of SST (See **SPIRAL CABLE**).
b. Remove the driver side knee airbag assembly (See **REMOVAL**).

CAUTION:
- **When removing the driver side knee airbag assembly, work must be started at least 90 seconds after the ignition switch is turned off and the negative (-) terminal cable is disconnected from the battery.**
- **When storing the driver side knee airbag assembly, keep the airbag deployment side facing upward.**

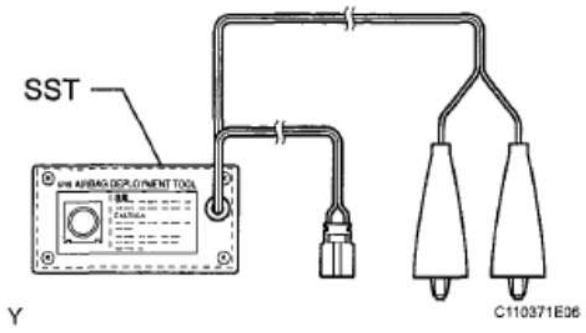


Fig. 349: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Using braided wire, tie down the driver side knee airbag assembly to an needed tire.

Wire:

Stripped wire section

1.25 mm^2 (0.0019 $in.^2$) or more

CAUTION: If the wire harness is too thin or an alternative object is used to tie down the driver side knee airbag assembly, it may be snapped by the shock when the airbag is deployed. Always use a wire for vehicle use with an area of at least 1.25 mm^2 (0.0019 $in.^2$).

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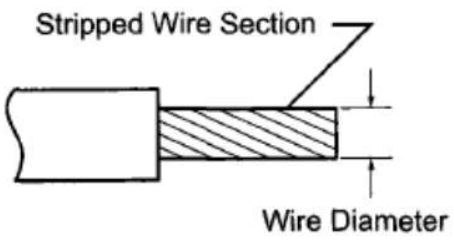


Fig. 350: Identifying Stripped Wire Section
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

To calculate the area of the stripped wire section:

Area = 3.14 x $(Diameter)^2$ divided by 4

1. Position the driver side knee airbag assembly inside the tire with the airbag deployment side facing inside.

   Minimum tire size:

   Must exceed the following dimensions

   Width:

   185 mm (7.28 in.)

   Inner diameter:

   360 mm (14.17 in.)

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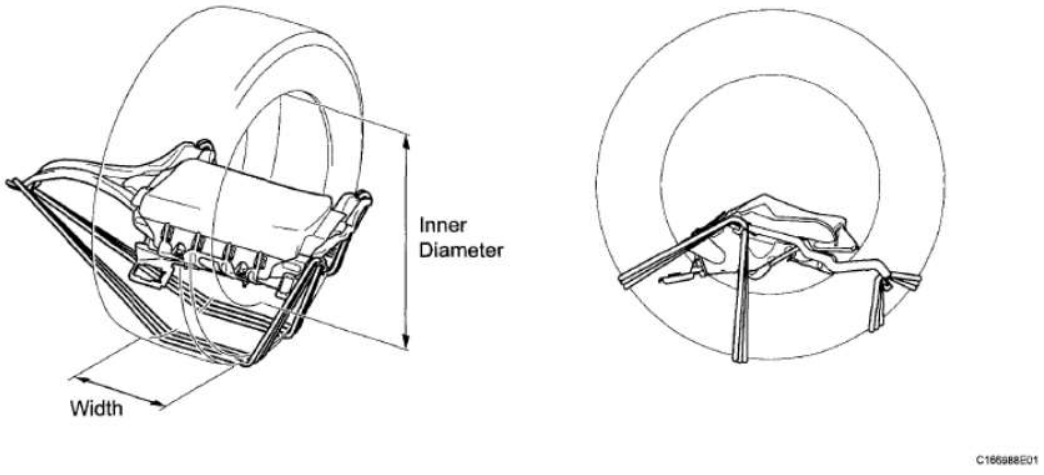


Fig. 351: Identifying Width Inner Diameter
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION:

- **Make sure that the wires are tight. If there is slack in the wires, the driver side knee airbag assembly may break loose due to the shock when the airbag is deployed.**
- **Always tie down the driver side knee airbag assembly with the airbag deployment side facing inside the tire as shown in the illustration.**

NOTE: **The tire will be marked by the airbag deployment, so use an unneeded tire.**

d. Install SST.

1. Connect the SST connector to the driver side knee airbag assembly.

SST 09082-00770

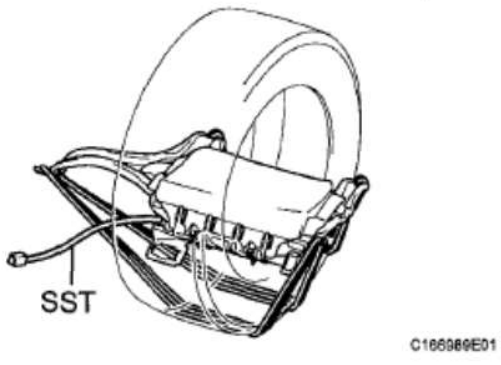


Fig. 352: Connecting SST To Driver Side Knee Airbag Assembly

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e. Place the tires.
   1. Place at least 2 tires under the tire which the driver side knee airbag assembly is tied to.
   2. Place at least 2 tires over the tire which the driver side knee airbag assembly is tied to. The top tire should have a wheel installed.

NOTE: Do not place the SST connector under the tire because it could be damaged.

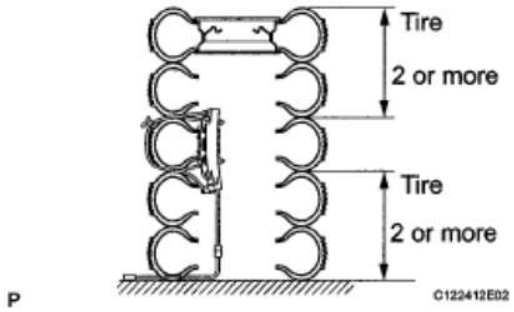


Fig. 353: Identifying Tires Height
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   3. Tie the tires together with the 2 wires.

CAUTION: Make sure that the wires are tight. Looseness in the wires results in the tires breaking loose due to the shock when the airbag is deployed.

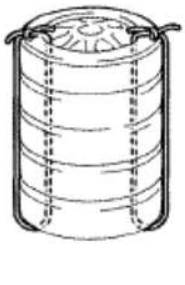


Fig. 354: Tying Tires Together With Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Install SST.
   1. Connect the SST connector.

SST 09082-00700

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NOTE: **To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock. Also, secure some slack for the SST wire harness inside the tire.**

2. Move SST at least 10 m (33 ft.) away from the airbag tied down to the tire.

g. Deploy the airbag.

1. Connect the red clip of SST to the battery positive (+) terminal and the black clip of SST to the-battery negative (-) terminal.
2. Check that no one is within a 10 m (33 ft.) radius of the tire which the driver side knee airbag assembly is tied to.
3. Press the SST activation switch and deploy the airbag.

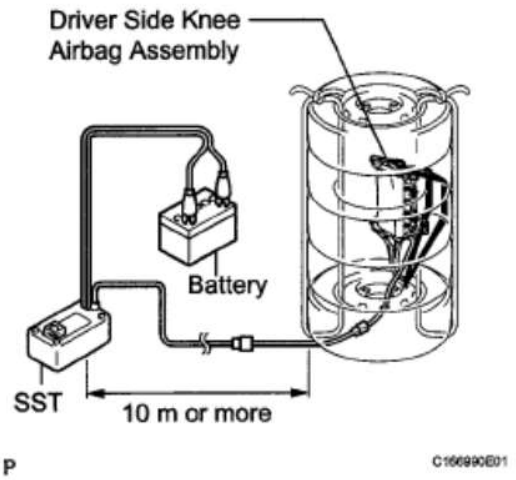


Fig. 355: Identifying SST Moving Distance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION: When deploying the airbag, make sure that no one is near the tire.

HINT:

The airbag is deployed as the LED of the SST activation switch comes on.

h. Dispose of the driver side knee airbag assembly.

CAUTION:

- **The driver side knee airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a driver side knee airbag assembly with a deployed airbag.**
- **Do not apply water, etc. to a driver side knee airbag**

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assembly with a deployed airbag.

- **Always wash your hands with water after completing the operation.**

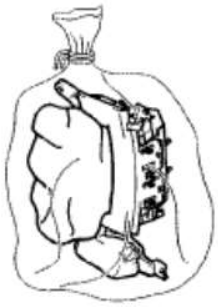


Fig. 356: Placing Driver Side Knee Airbag Assembly In Plastic Bag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Remove the driver side knee airbag assembly from the tire.
2. Place the driver side knee airbag assembly in a plastic bag, tie it tightly, and dispose of it according to local regulations.

FRONT PASSENGER AIRBAG ASSEMBLY

COMPONENTS

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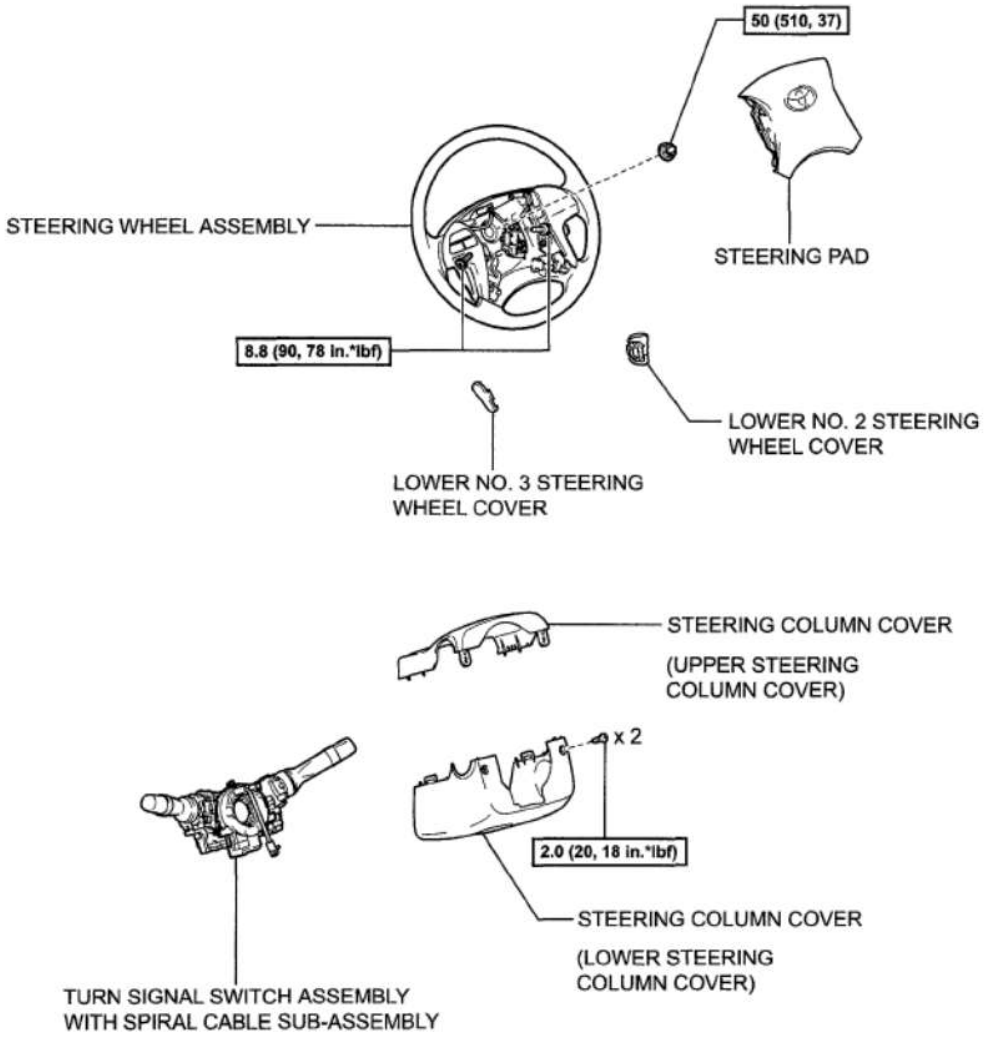


Fig. 357: Identifying Front Passenger Airbag Assembly Components With Torque Specification (1 Of 8)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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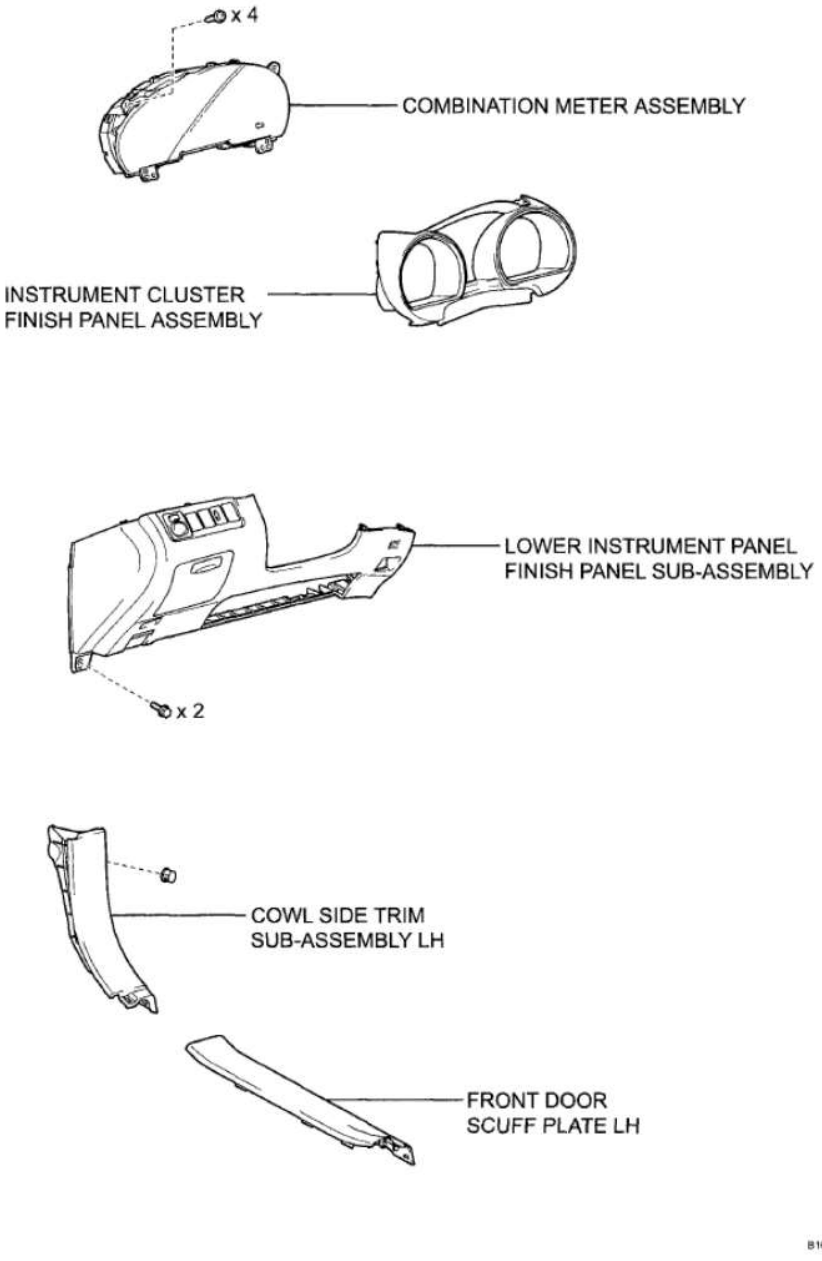


Fig. 358: Identifying Front Passenger Airbag Assembly Components With Torque Specification (2 Of 8)
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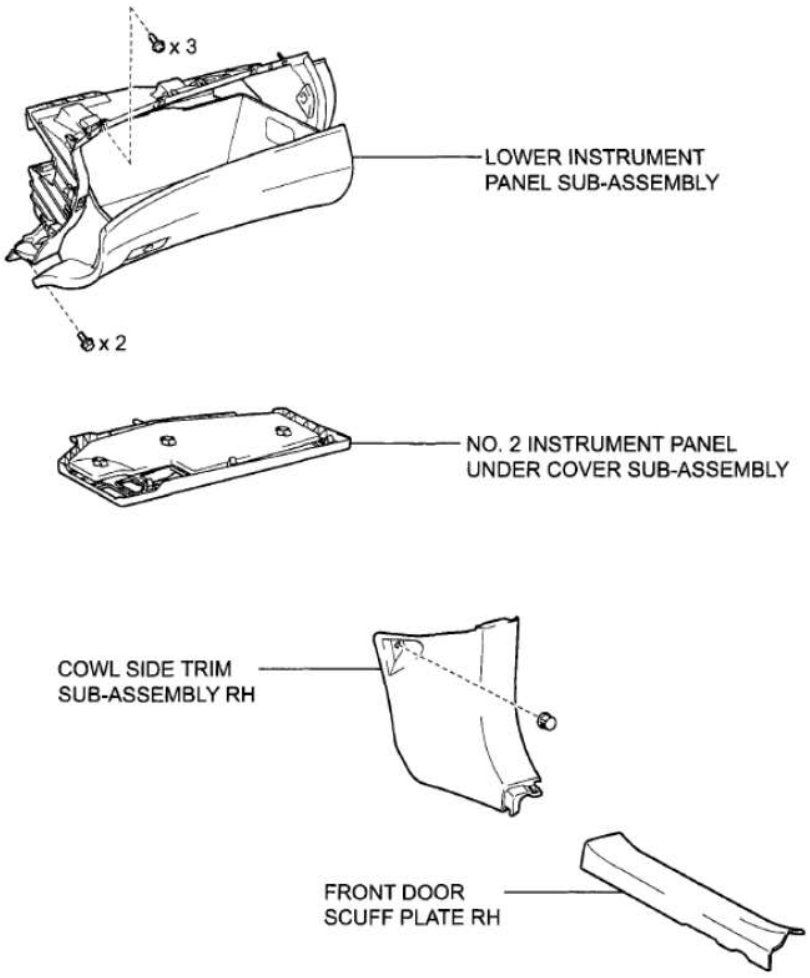


Fig. 359: Identifying Front Passenger Airbag Assembly Components With Torque Specification (3 Of 8)
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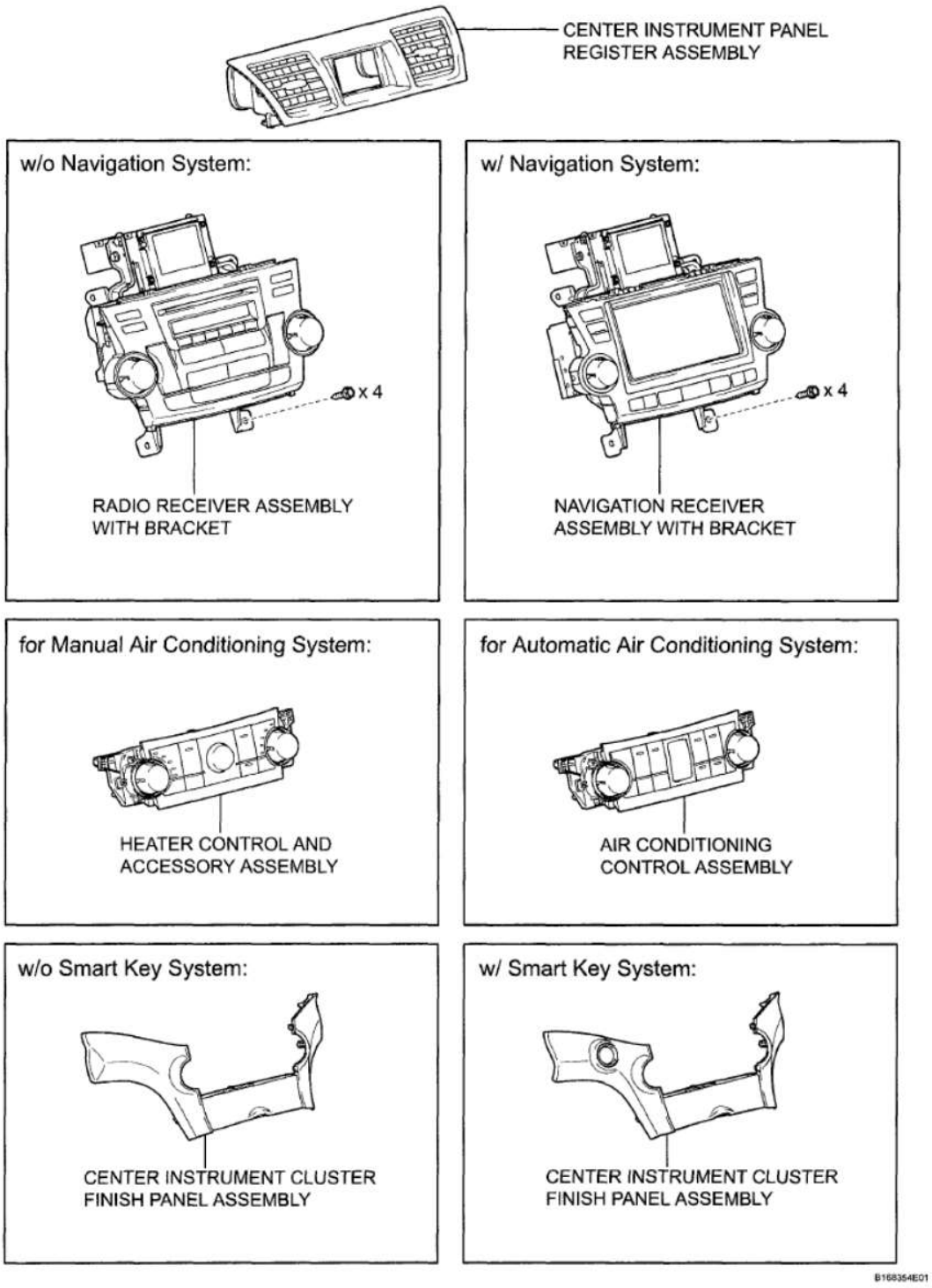


Fig. 360: Identifying Front Passenger Airbag Assembly Components With Torque Specification (4 Of 8)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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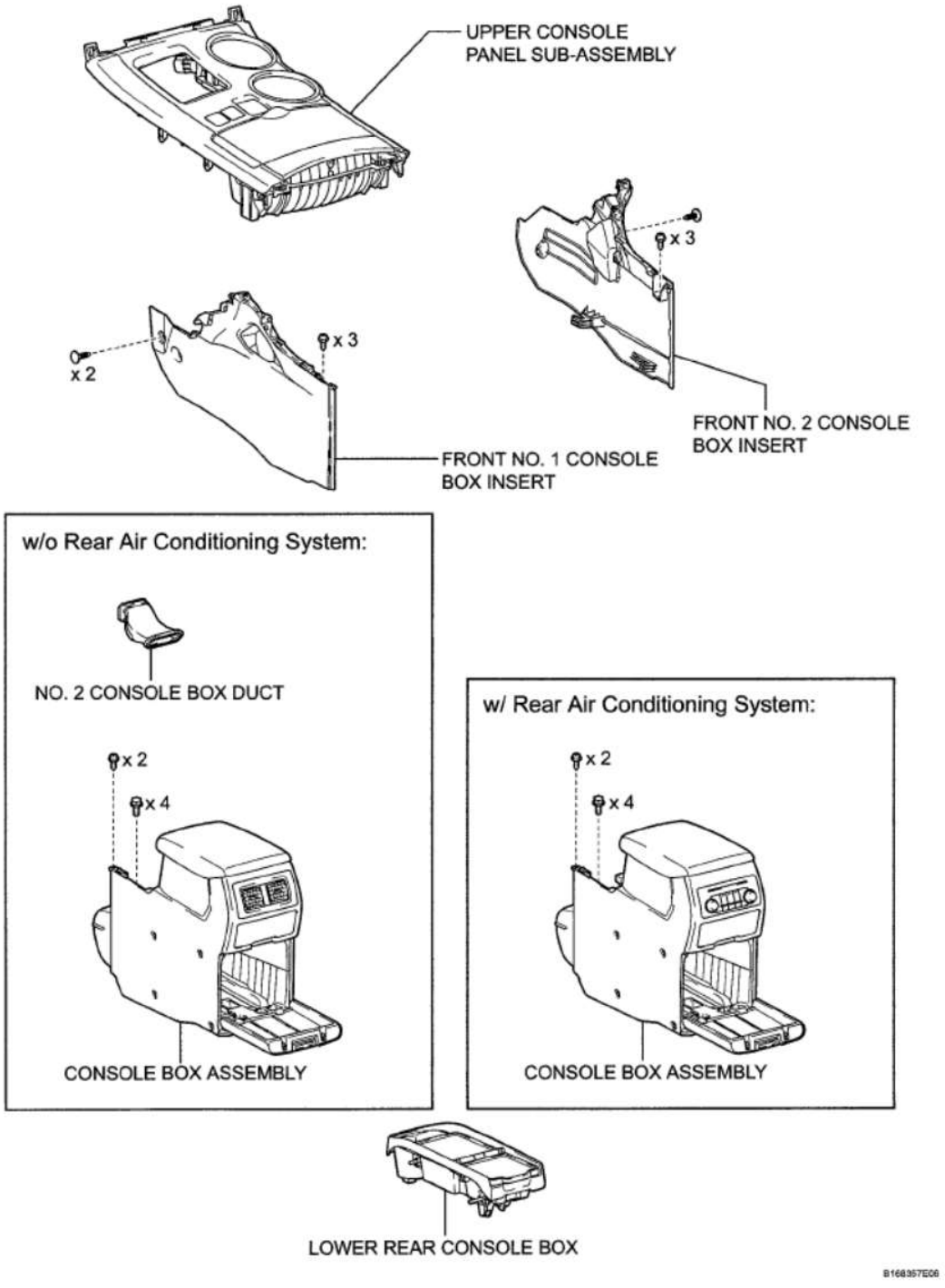


Fig. 361: Identifying Front Passenger Airbag Assembly Components With Torque Specification (5 Of 8)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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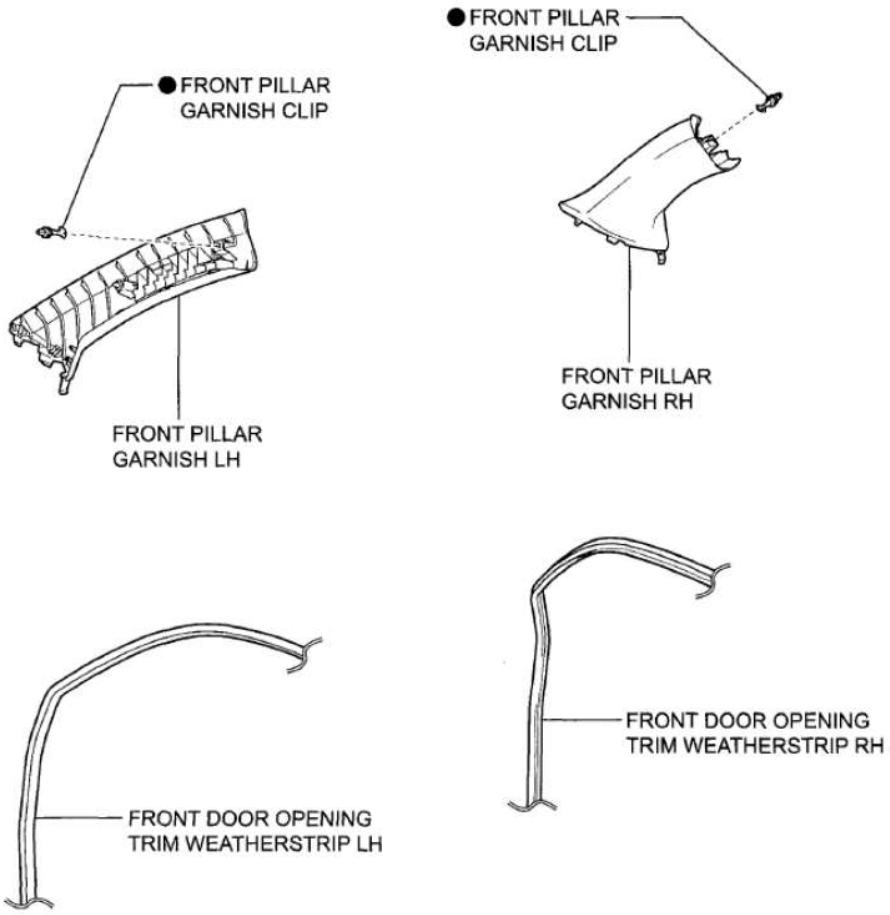


Fig. 362: Identifying Front Passenger Airbag Assembly Components With Torque Specification (6 Of 8)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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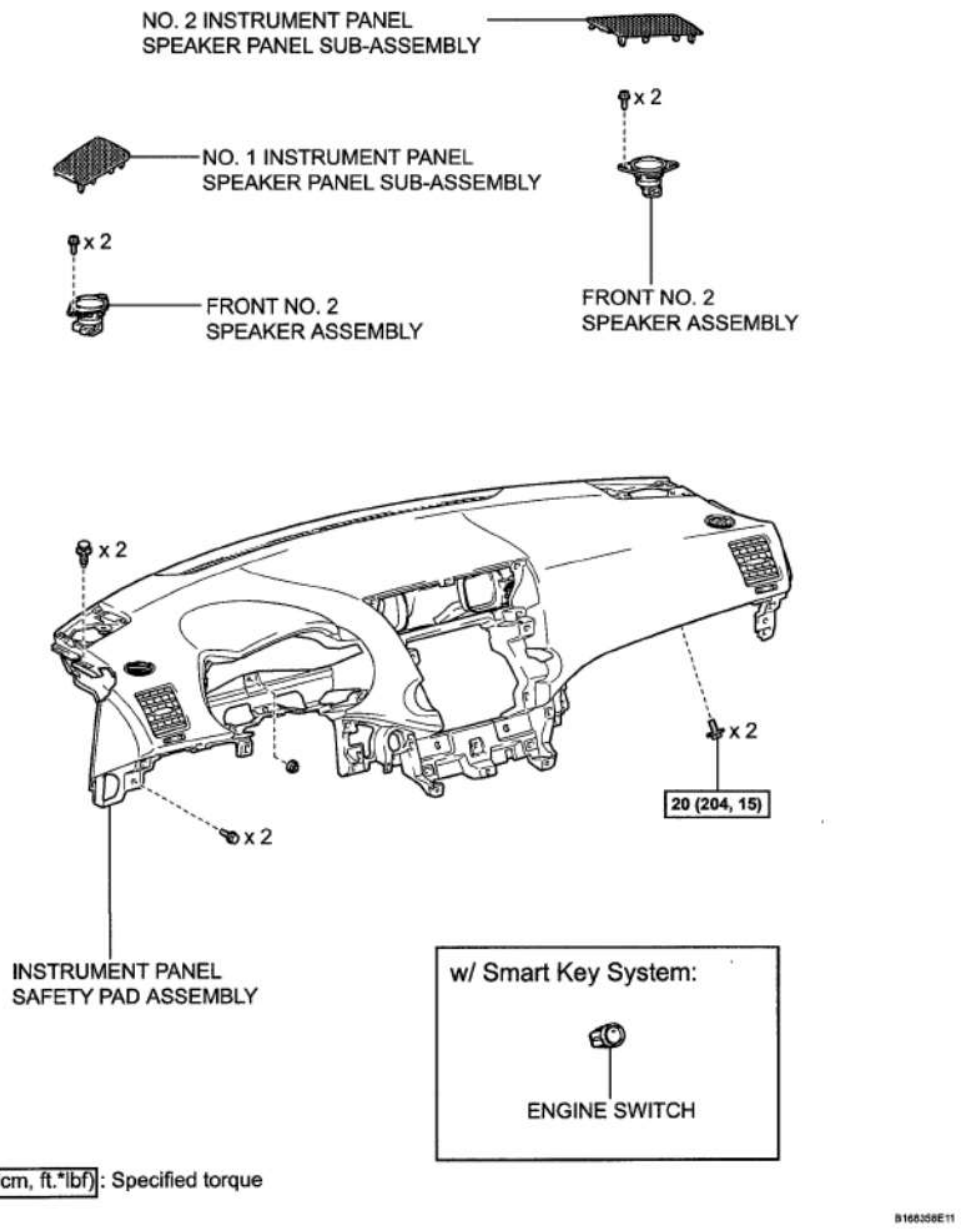


Fig. 363: Identifying Front Passenger Airbag Assembly Components With Torque Specification (7 Of 8)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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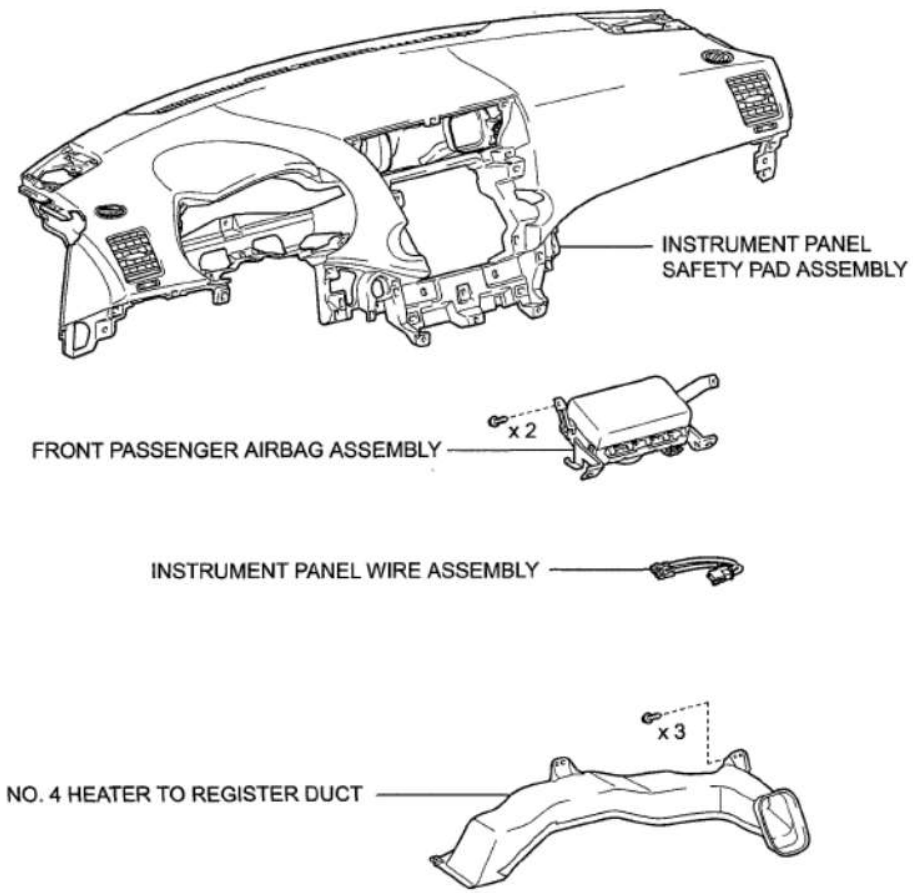


Fig. 364: Identifying Front Passenger Airbag Assembly Components With Torque Specification (8 Of 8)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

1. **INSPECT FRONT PASSENGER AIRBAG ASSEMBLY (VEHICLE NOT INVOLVED IN COLLISION)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
   b. With the front passenger airbag assembly installed on the vehicle, perform a visual check. If there are any defects as mentioned below, replace the instrument panel with a new one: Cuts, minute cracks or marked discoloration on the instrument panel around the front passenger airbag assembly.
2. **INSPECT FRONT PASSENGER AIRBAG ASSEMBLY (VEHICLE INVOLVED IN COLLISION AND AIRBAG HAS NOT DEPLOYED)**

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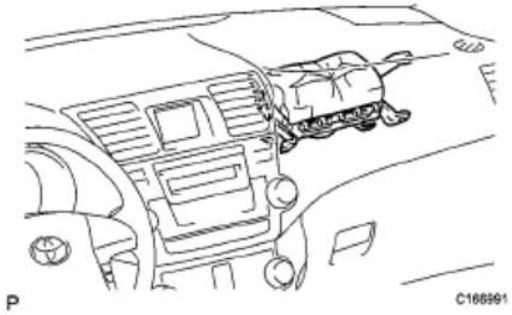


Fig. 365: Identifying Front Passenger Airbag Assembly Installed On Vehicle
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
b. With the front passenger airbag assembly removed from the vehicle, perform a visual check. If there are any defects as mentioned below, replace the front passenger airbag assembly, instrument panel or instrument panel reinforcement with a new one:
   - Cuts, minute cracks or marked discoloration on the front passenger airbag assembly.
   - Cracks or other damage to the connectors.
   - Deformation or cracks on the instrument panel or instrument panel reinforcement.

CAUTION: Be sure to follow the correct removal and installation procedures.



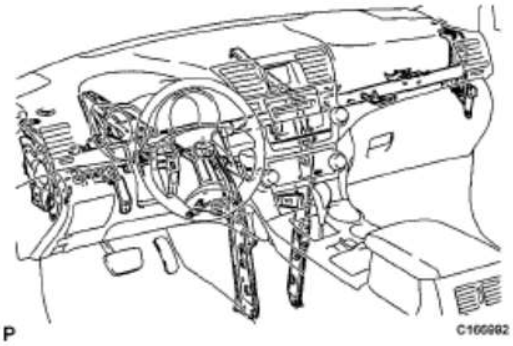


Fig. 366: Identifying Front Passenger Airbag Assembly Removed From Vehicle
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REMOVAL

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1. **PRECAUTION**

CAUTION: Be sure to read "PRECAUTION" thoroughly before servicing (See AIRBAG SYSTEM).

2. **POSITION FRONT WHEELS STRAIGHT AHEAD**
3. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

4. **REMOVE LOWER NO. 3 STEERING WHEEL COVER** (See **INSTALLATION**)
5. **REMOVE LOWER NO. 2 STEERING WHEEL COVER** (See **INSTALLATION**)
6. **REMOVE STEERING PAD** (See **INSTALLATION**)
7. **REMOVE STEERING WHEEL ASSEMBLY** (See **DISASSEMBLY**)
8. **REMOVE STEERING COLUMN COVER** (See **REMOVAL**)
9. **REMOVE TURN SIGNAL SWITCH ASSEMBLY WITH SPIRAL CABLE SUB-ASSEMBLY** (See **REMOVAL**)
10. **REMOVE INSTRUMENT CLUSTER FINISH PANEL ASSEMBLY** (See **REMOVAL**)
11. **REMOVE COMBINATION METER ASSEMBLY** (See **REMOVAL**)
12. **REMOVE CENTER INSTRUMENT PANEL REGISTER ASSEMBLY** (See **REMOVAL**)
13. **REMOVE CENTER INSTRUMENT CLUSTER FINISH PANEL ASSEMBLY (w/o Smart Key System)** (See **REMOVAL**)
14. **REMOVE CENTER INSTRUMENT CLUSTER FINISH PANEL ASSEMBLY (w/ Smart Key System)** (See **REMOVAL**)
15. **REMOVE HEATER CONTROL AND ACCESSORY ASSEMBLY (for Manual Air Conditioning System)** (See **AIR CONDITIONING PANEL (FOR MANUAL AIR CONDITIONING SYSTEM)**)
16. **REMOVE AIR CONDITIONING CONTROL ASSEMBLY (for Automatic Air Conditioning System)** (See **REMOVAL**)
17. **REMOVE RADIO RECEIVER ASSEMBLY WITH BRACKET (w/o Navigation System)** (See **REMOVAL**)
18. **REMOVE NAVIGATION RECEIVER ASSEMBLY WITH BRACKET (w/ Navigation System)** (See **REMOVAL**)
19. **REMOVE FRONT DOOR SCUFF PLATE LH** (See **REMOVAL**)
20. **REMOVE COWL SIDE TRIM SUB-ASSEMBLY LH** (See **REMOVAL**)
21. **REMOVE LOWER INSTRUMENT PANEL FINISH PANEL SUB-ASSEMBLY (for Manual Air Conditioning System)** (See **REMOVAL**)

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22. **REMOVE LOWER INSTRUMENT PANEL FINISH PANEL SUB-ASSEMBLY (for Automatic Air Conditioning System)** (See **REMOVAL**)
23. **REMOVE FRONT DOOR SCUFF PLATE RH**

    HINT:

    Use the same procedure for the RH side and the LH side (See **REMOVAL**).

24. **REMOVE COWL SIDE TRIM SUB-ASSEMBLY RH**

    HINT:

    Use the same procedure for the RH side and the LH side (See **REMOVAL**).

25. **REMOVE NO. 2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY** (See **REMOVAL**)
26. **REMOVE LOWER INSTRUMENT PANEL SUB-ASSEMBLY** (See **REMOVAL**)
27. **REMOVE UPPER CONSOLE PANEL SUB-ASSEMBLY** (See **REMOVAL**)
28. **REMOVE NO. 2 CONSOLE BOX DUCT (w/o Rear Air Conditioning System)** (See **REMOVAL**)
29. **REMOVE LOWER REAR CONSOLE BOX** (See **REMOVAL**)
30. **REMOVE CONSOLE BOX ASSEMBLY (w/o Rear Air Conditioning System)** (See **REMOVAL**)
31. **REMOVE CONSOLE BOX ASSEMBLY (w/ Rear Air Conditioning System)** (See **DISASSEMBLY**)
32. **REMOVE FRONT NO. 1 CONSOLE BOX INSERT** (See **REMOVAL**)
33. **REMOVE FRONT NO. 2 CONSOLE BOX INSERT** (See **REMOVAL**)
34. **REMOVE ENGINE SWITCH (w/ Smart Key System)** (See **INSPECTION**)
35. **DISCONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP LH** (See **REMOVAL**)
36. **REMOVE FRONT PILLAR GARNISH LH** (See **REMOVAL**)
37. **DISCONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP RH**

    HINT:

    Use the same procedure for the RH side and the LH side (See **REMOVAL**).

38. **REMOVE FRONT PILLAR GARNISH RH** (See **REMOVAL**)
39. **REMOVE NO. 1 INSTRUMENT PANEL SPEAKER PANEL SUB-ASSEMBLY** (See **REMOVAL**)
40. **REMOVE FRONT NO. 2 SPEAKER ASSEMBLY (for LH Side)** (See **REMOVAL**)
41. **REMOVE NO. 2 INSTRUMENT PANEL SPEAKER PANEL SUB-ASSEMBLY** (See **REMOVAL**)
42. **REMOVE FRONT NO. 2 SPEAKER ASSEMBLY (for RH Side)**

    HINT:

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Use the same procedure for the RH side and the LH side (See **REMOVAL**).

43. **DISCONNECT INSTRUMENT PANEL WIRE ASSEMBLY**
    a. Disconnect the connector.
44. **REMOVE INSTRUMENT PANEL SAFETY PAD ASSEMBLY (for Pole Antenna Type)** (See **REMOVAL**)
45. **REMOVE INSTRUMENT PANEL SAFETY PAD ASSEMBLY (for Glass Antenna Type)** (See **REMOVAL**)

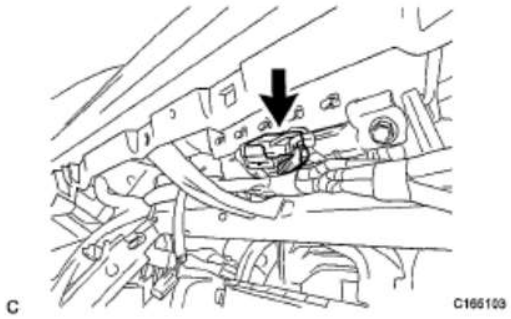


Fig. 367: Locating Instrument Panel Wire Assembly And Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

46. **REMOVE NO. 4 HEATER TO REGISTER DUCT** (See **DISASSEMBLY**)
47. **REMOVE FRONT PASSENGER AIRBAG ASSEMBLY**
    a. Remove the 2 screws.

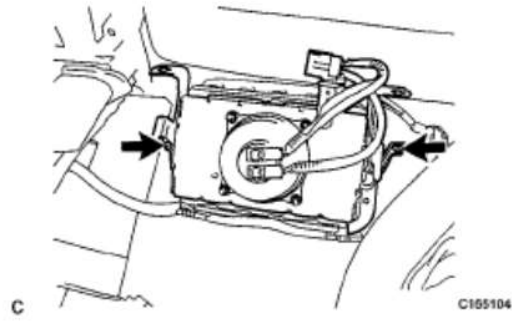


Fig. 368: Locating Front Passenger Airbag Assembly And Screws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

    b. Disengage the 5 hooks.

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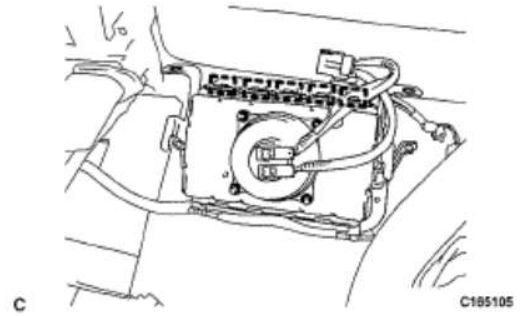


Fig. 369: Locating Front Passenger Airbag Assembly And Hooks
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Disengage the 5 hooks and remove the front passenger airbag assembly from the instrument panel safety pad assembly as shown in the illustration.

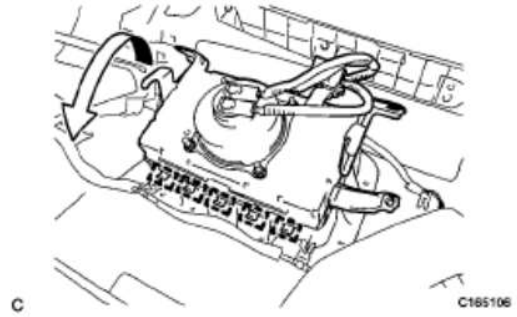


Fig. 370: Removing Front Passenger Airbag Assembly And Hooks
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

48. **REMOVE INSTRUMENT PANEL WIRE ASSEMBLY**

a. Disconnect the 2 airbag connectors.

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

b. Remove the clamp and instrument panel wire assembly from the front passenger airbag assembly.

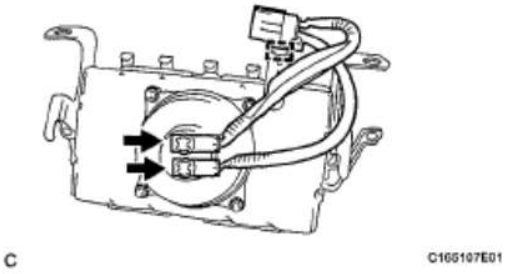


Fig. 371: Locating Airbag Connectors

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INSTALLATION

1. **INSTALL INSTRUMENT PANEL WIRE ASSEMBLY**
   a. Connect the 2 airbag connectors.

   NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

   b. Install the clamp and instrument panel wire assembly on the front passenger airbag assembly.

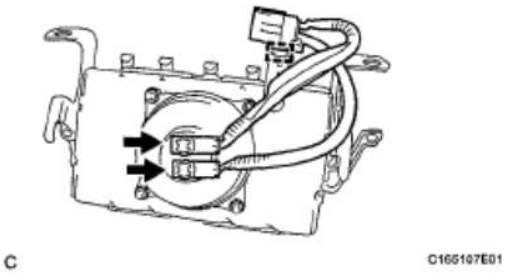


Fig. 372: Locating Airbag Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **INSTALL FRONT PASSENGER AIRBAG ASSEMBLY**
   a. Engage the 5 hooks.

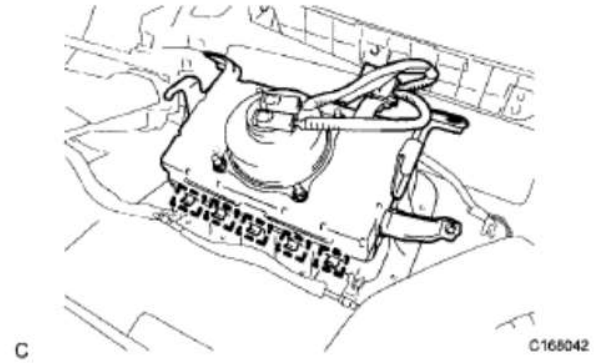


Fig. 373: Identifying Front Passenger Airbag Assembly And Hooks
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   b. Install the front passenger airbag assembly with the 5 hooks on the instrument panel.

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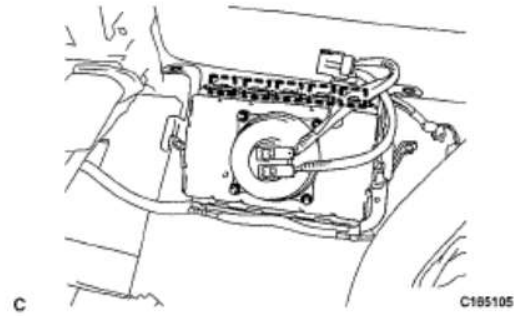


Fig. 374: Locating Front Passenger Airbag Assembly And Hooks
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Install the 2 screws.

3. **INSTALL NO. 4 HEATER TO REGISTER DUCT** (See **INSTALLATION**)
4. **INSTALL INSTRUMENT PANEL SAFETY PAD ASSEMBLY (for Pole Antenna Type)** (See **INSTALLATION**)
5. **INSTALL INSTRUMENT PANEL SAFETY PAD ASSEMBLY (for Glass Antenna Type)** (See **INSTALLATION**)

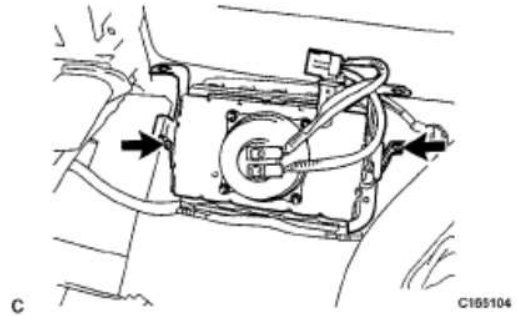


Fig. 375: Locating Front Passenger Airbag Assembly And Screws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

6. **CONNECT INSTRUMENT PANEL WIRE ASSEMBLY**
   a. Check that the ignition switch is off.
   b. Check that the battery negative (-) terminal is disconnected.

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

   c. Connect the connector.
7. **INSTALL FRONT NO. 2 SPEAKER ASSEMBLY (for LH Side)** (See **REMOVAL**)
8. **INSTALL NO. 1 INSTRUMENT PANEL SPEAKER PANEL SUB-ASSEMBLY** (See **INSTALLATION**)
9. **INSTALL FRONT NO. 2 SPEAKER ASSEMBLY (for RH Side)**

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HINT:

Use the same procedure for the RH side and the LH side (See **REMOVAL**).

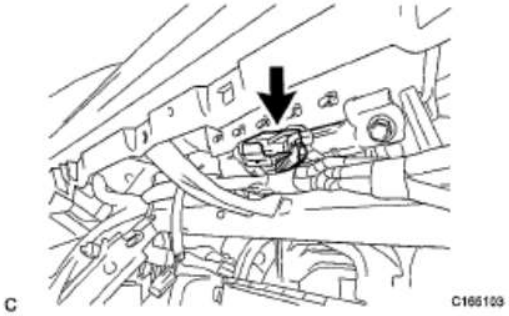


Fig. 376: Locating Instrument Panel Wire Assembly And Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

10. **INSTALL NO. 2 INSTRUMENT PANEL SPEAKER PANEL SUB-ASSEMBLY** (See **INSTALLATION**)
11. **INSTALL FRONT PILLAR GARNISH RH** (See **INSTALLATION**)
12. **CONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP RH** (See **INSTALLATION**)
13. **INSTALL FRONT PILLAR GARNISH LH** (See **INSTALLATION**)
14. **CONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP LH** (See **INSTALLATION**)
15. **INSTALL ENGINE SWITCH (w/ Smart Key System)** (See **INSTALLATION**)
16. **INSTALL FRONT NO. 2 CONSOLE BOX INSERT** (See **INSTALLATION**)
17. **INSTALL FRONT NO. 1 CONSOLE BOX INSERT** (See **INSTALLATION**)
18. **INSTALL CONSOLE BOX ASSEMBLY (w/o Rear Air Conditioning System)** (See **INSTALLATION**)
19. **INSTALL CONSOLE BOX ASSEMBLY (w/ Rear Air Conditioning System)** (See **INSTALLATION**)
20. **INSTALL LOWER REAR CONSOLE BOX** (See **INSTALLATION**)
21. **INSTALL NO. 2 CONSOLE BOX DUCT (w/o Rear Air Conditioning System)** (See **INSTALLATION**)
22. **INSTALL UPPER CONSOLE PANEL SUB-ASSEMBLY** (See **INSTALLATION**)
23. **INSTALL LOWER INSTRUMENT PANEL SUB-ASSEMBLY** (See **INSTALLATION**)
24. **INSTALL NO. 2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY** (See **INSTALLATION**)
25. **INSTALL COWL SIDE TRIM SUB-ASSEMBLY RH**

HINT:

Use the same procedure for the RH side and the LH side (See **INSTALLATION**).

26. **INSTALL FRONT DOOR SCUFF PLATE RH**

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HINT:

Use the same procedure for the RH side and the LH side (See **INSTALLATION**).

27. **INSTALL LOWER INSTRUMENT PANEL FINISH PANEL SUB-ASSEMBLY (for Manual Air Conditioning System)** (See **INSTALLATION**)
28. **INSTALL LOWER INSTRUMENT PANEL FINISH PANEL SUB-ASSEMBLY (for Automatic Air Conditioning System)** (See **INSTALLATION**)
29. **INSTALL COWL SIDE TRIM SUB-ASSEMBLY LH** (See **INSTALLATION**)
30. **INSTALL FRONT DOOR SCUFF PLATE LH** (See **INSTALLATION**)
31. **INSTALL RADIO RECEIVER ASSEMBLY WITH BRACKET (w/o Navigation System)** (See **INSTALLATION**)
32. **INSTALL NAVIGATION RECEIVER ASSEMBLY WITH BRACKET (w/ Navigation System)** (See **INSTALLATION**)
33. **INSTALL HEATER CONTROL AND ACCESSORY ASSEMBLY (for Manual Air Conditioning System)** (See **AIR CONDITIONING PANEL (FOR MANUAL AIR CONDITIONING SYSTEM)**)
34. **INSTALL AIR CONDITIONING CONTROL ASSEMBLY (for Automatic Air Conditioning System)** (See **REMOVAL**)
35. **INSTALL CENTER INSTRUMENT CLUSTER FINISH PANEL ASSEMBLY (w/o Smart Key System)** (See **INSTALLATION**)
36. **INSTALL CENTER INSTRUMENT CLUSTER FINISH PANEL ASSEMBLY (w/ Smart Key System)** (See **INSTALLATION**)
37. **INSTALL CENTER INSTRUMENT PANEL REGISTER ASSEMBLY** (See **INSTALLATION**)
38. **INSTALL COMBINATION METER ASSEMBLY** (See **INSTALLATION**)
39. **INSTALL INSTRUMENT CLUSTER FINISH PANEL ASSEMBLY** (See **INSTALLATION**)
40. **POSITION FRONT WHEELS STRAIGHT AHEAD**
41. **INSTALL TURN SIGNAL SWITCH ASSEMBLY WITH SPIRAL CABLE SUB-ASSEMBLY** (See **INSTALLATION**)
42. **INSTALL STEERING COLUMN COVER** (See **INSTALLATION**)
43. **ADJUST SPIRAL CABLE** (See **DRIVER SIDE KNEE AIRBAG ASSEMBLY**)
44. **INSTALL STEERING WHEEL ASSEMBLY** (See **INSTALLATION**)
45. **INSPECT STEERING WHEEL CENTER POINT**
46. **INSTALL STEERING PAD** (See **INSTALLATION**)
47. **INSTALL LOWER NO. 2 STEERING WHEEL COVER** (See **DISPOSAL**)
48. **INSTALL LOWER NO. 3 STEERING WHEEL COVER** (See **DISPOSAL**)
49. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).**

50. **INSPECT STEERING PAD** (See **DISPOSAL**)

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51. **INSPECT SRS WARNING LIGHT**

a. Inspect the SRS warning light (See **DIAGNOSIS SYSTEM**).

DISPOSAL

CAUTION: Before performing pre-disposal deployment of any SRS component, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.

1. **PRECAUTION**

HINT:

When scrapping a vehicle equipped with an SRS or disposing of the front passenger airbag assembly, be sure to deploy the airbag first in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the SERVICE DEPT. of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION:

- **An airbag or pretensioner may be activated by static electricity. To prevent this, be sure to touch a metal surface with your bare hands to discharge static electricity before performing this procedure.**
- **Never dispose of a front passenger airbag assembly with an undeployed airbag.**
- **The airbag produces an exploding sound when it is deployed, so perform the operation outdoors and where it will not create a nuisance to nearby residents.**
- **When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electrical noise.**
- **When deploying the airbag, perform the operation at least 10 m (33 ft.) away from the front passenger airbag assembly.**
- **The front passenger airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a front passenger airbag assembly with a deployed airbag.**
- **Do not apply water etc. to a front passenger airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

2. **DISPOSE OF FRONT PASSENGER AIRBAG ASSEMBLY (WHEN INSTALLED IN VEHICLE)**

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HINT:

Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST (See **DISPOSAL**).
b. Refer to PRECAUTION (See **AIRBAG SYSTEM**).
c. Disconnect the cable from the negative battery terminal.

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

d. Remove the lower instrument panel sub-assembly (See **REMOVAL**).

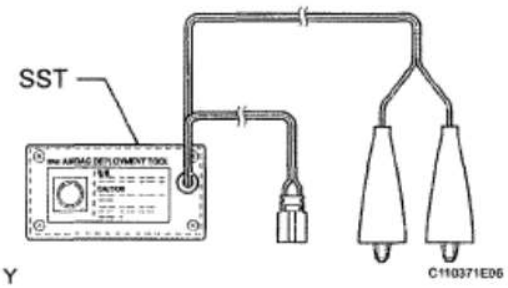


Fig. 377: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Install SST.
   1. Disconnect the connector.

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

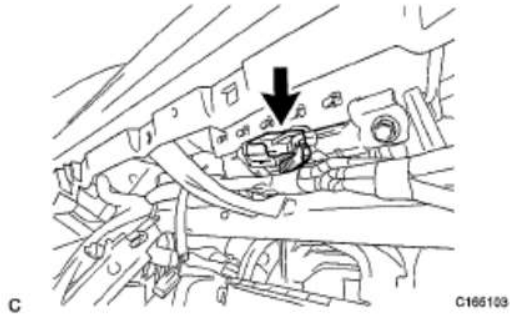


Fig. 378: Locating Instrument Panel Wire Assembly And Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   2. Connect the SST connector to the instrument panel wire assembly.

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SST 09082-00700,09082-00780

NOTE: To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock.

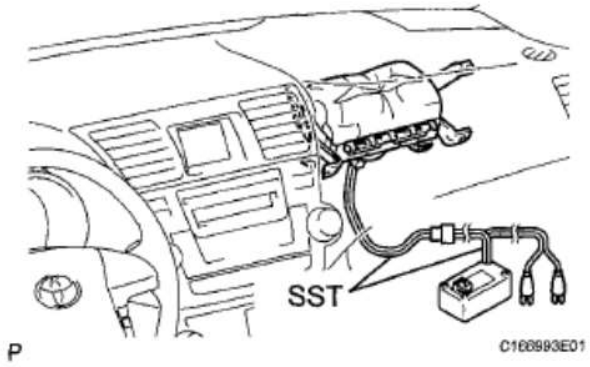


Fig. 379: Connecting SST Connector To Instrument Panel Wire Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Move SST at least 10 m (33 ft.) away from the vehicle front side window.
4. Maintaining sufficient clearance for the SST wire harness in the front side window, close all doors and windows of the vehicle.

NOTE: Take care not to damage the SST wire harness.

5. Connect the red clip of SST to the battery positive (+) terminal and the black clip of SST to the negative (-) terminal.

f. Deploy the airbag.

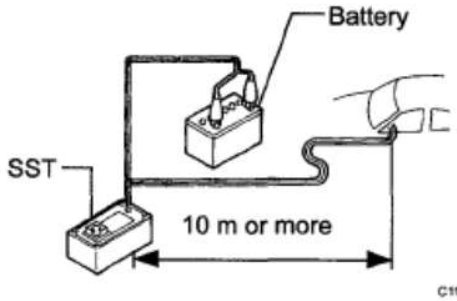


Fig. 380: Identifying SST Moving Distance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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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- **When deploying the airbag, make sure that no one is near the vehicle.**
- **The front passenger airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a front passenger airbag assembly with a deployed airbag.**
- **Do not apply water, etc. to a front passenger airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

HINT:

The airbag is deployed as the LED of the SST activation switch comes on.

3. **DISPOSE OF FRONT PASSENGER AIRBAG ASSEMBLY (WHEN NOT INSTALLED IN VEHICLE)**

NOTE:

- **When disposing of the front passenger airbag assembly, never use the customer's vehicle to deploy the airbag.**
- **Be sure to 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 (See **SPIRAL CABLE**).
b. Remove the front passenger airbag assembly (See **REMOVAL**).

CAUTION:

- **When removing the front passenger airbag assembly, work must be started at least 90 seconds after the ignition switch is turned off and the negative (-) terminal cable is disconnected from the battery.**
- **When storing the front passenger airbag assembly, keep the airbag deployment side facing upward.**

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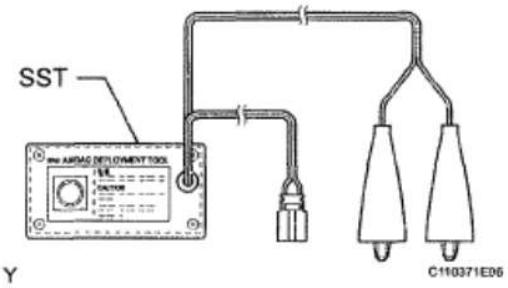


Fig. 381: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Install SST.

1. After connecting the following SST to each other, connect them to the front passenger airbag assembly.

SST 09082-00802 (09082-10801, 09082-30801)

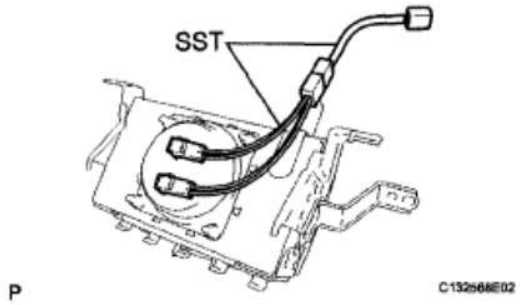


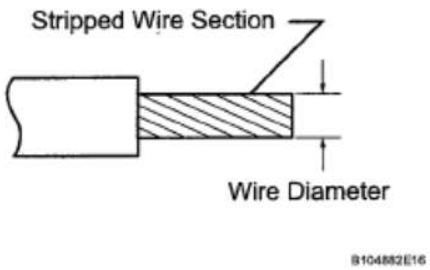
Fig. 382: Identifying SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Using braided wire, tie down the front passenger airbag assembly to an unneeded tire.

Wire:

Stripped wire section

1.25 mm^2 (0.0019 $in.^2$) or more



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Fig. 383: Identifying Stripped Wire Section
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION: If the wire is too thin or an alternative object is used to tie down the front passenger airbag assembly, it may be snapped by the shock when the airbag is deployed. Always use a wire for vehicle use with an area of at least 1.25 mm^2 (0.0019 $in.^2$).

HINT:

To calculate the area of the stripped wire section:

Area = 3.14 x $(Diameter)^2$ divided by 4

1. Position the front passenger airbag assembly inside the tire with the airbag deployment side facing inside.

   Minimum tire size:

   Must exceed the following dimensions

   Width:

   185 mm (7.28 in.)

   Inner diameter:

   360 mm (14.17 in.)

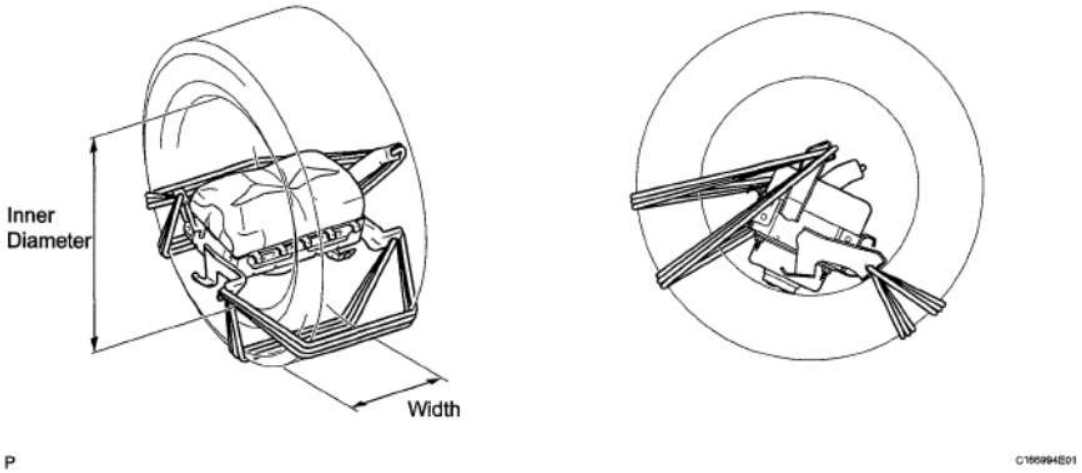


Fig. 384: Identifying Width Inner Diameter
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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CAUTION:

- **Make sure that the wires are tight. If there is slack in the wires, the front passenger airbag assembly may break loose due to the shock when the airbag is deployed.**
- **Always tie down the front passenger airbag assembly with the airbag deployment side facing inside the tire as shown in the illustration.**

NOTE: **The tire will be marked by the airbag deployment, so use an unneeded tire.**

e. Place the tires.

1. Place at least 2 tires under the tire which the front passenger airbag assembly is tied to.
2. Place at least 2 tires over the tire which the front passenger airbag assembly is tied to. The top tire should have a wheel installed.

NOTE: **Do not place the SST connector under the tire because it could be damaged.**

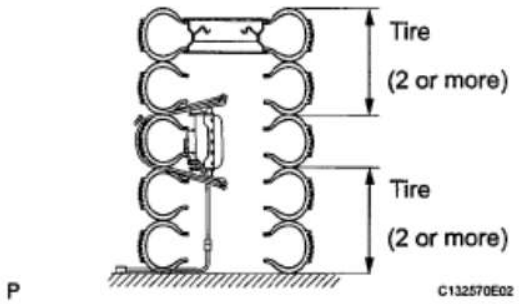


Fig. 385: Identifying Tires Hight
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Tie the tires together with the 2 wires.

CAUTION: **Make sure that the wires are tight. Looseness in the wires results in the tires breaking loose due to the shock when the airbag is deployed.**

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Fig. 386: Tying Tires Together With Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Install SST.
   1. Connect the SST connector.

      SST 09082-00700

      NOTE: To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock. Also, secure some slack for the SST wire harness inside the tire.

   2. Move SST at least 10 m (33 ft.) away from the airbag tied down to the tire.

g. Deploy the airbag.
   1. Connect the red clip of SST to the battery positive (+) terminal and the black clip of SST to the battery negative (-) terminal.
   2. Check that no one is within a 10 m (33 ft.) radius of the tire which the front passenger airbag assembly is tied to.
   3. Press the SST activation switch and deploy the airbag.

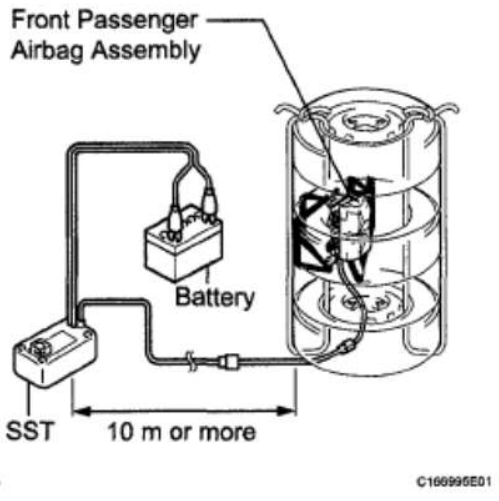


Fig. 387: Identifying SST Moving Distance

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

CAUTION: When deploying the airbag, make sure that no one is near the tire.

HINT:

The airbag is deployed as the LED of the SST activation switch comes on.

h. Dispose of the front passenger airbag assembly.

CAUTION:

- **The front passenger airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a front passenger airbag assembly with a deployed airbag.**
- **Do not apply water, etc. to a front passenger airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**



Fig. 388: Placing Front Passenger Airbag Assembly In Plastic Bag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Remove the front passenger airbag assembly from the tire.
2. Place the front passenger airbag assembly in a plastic bag, tie it tightly, and dispose of it according to local regulations.

CURTAIN SHIELD AIRBAG ASSEMBLY

COMPONENTS

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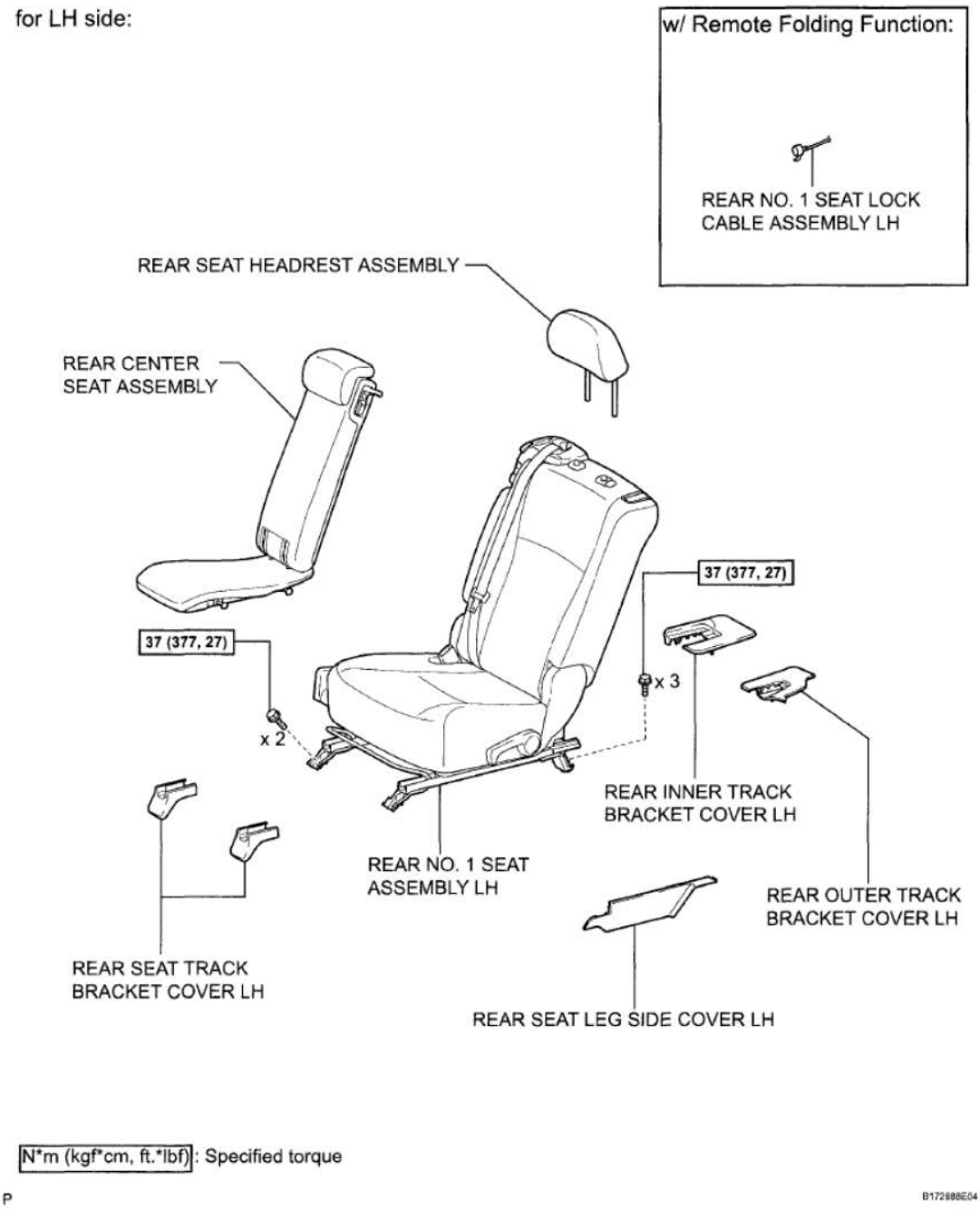


Fig. 389: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (1 Of 15)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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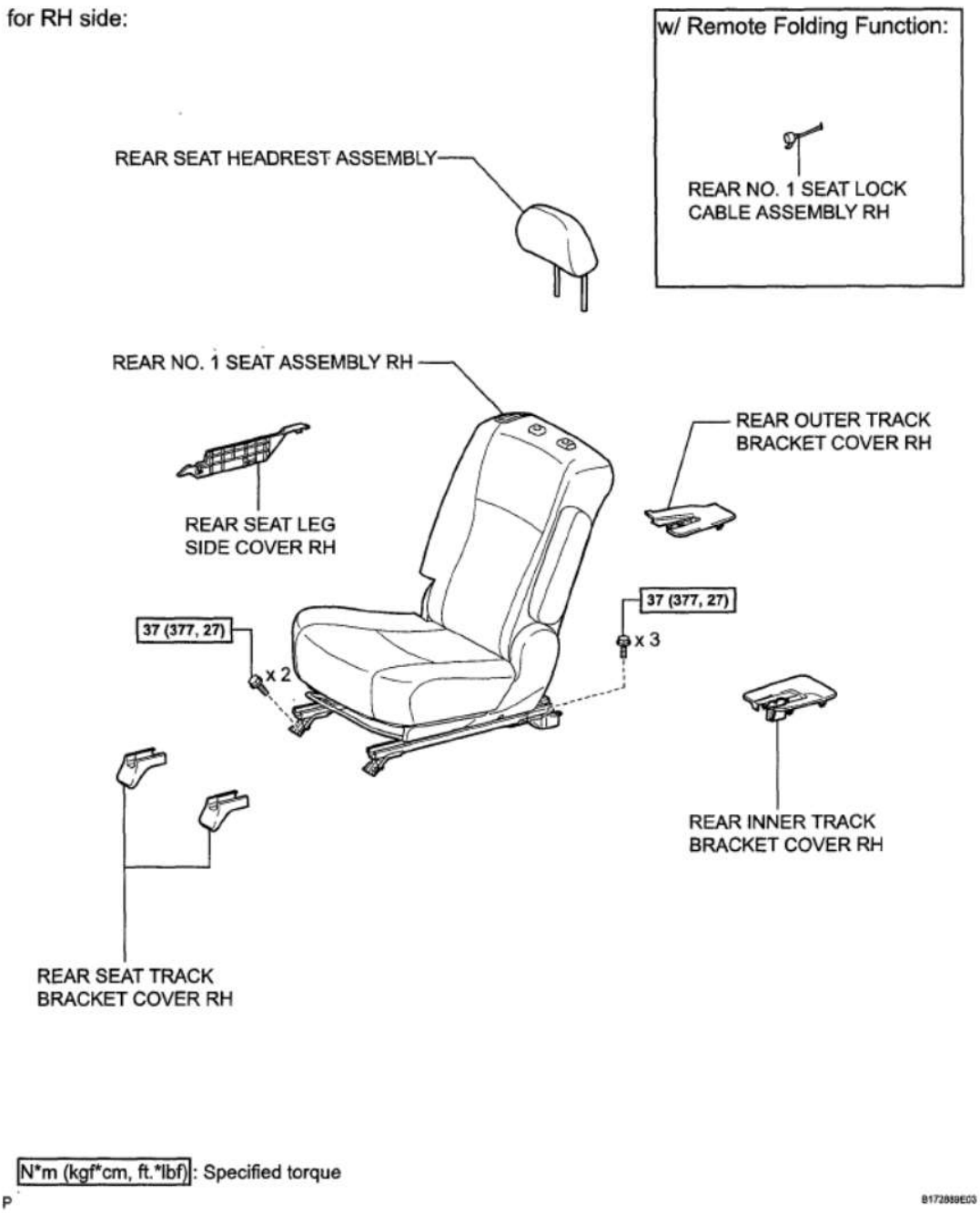


Fig. 390: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (2 Of 15)
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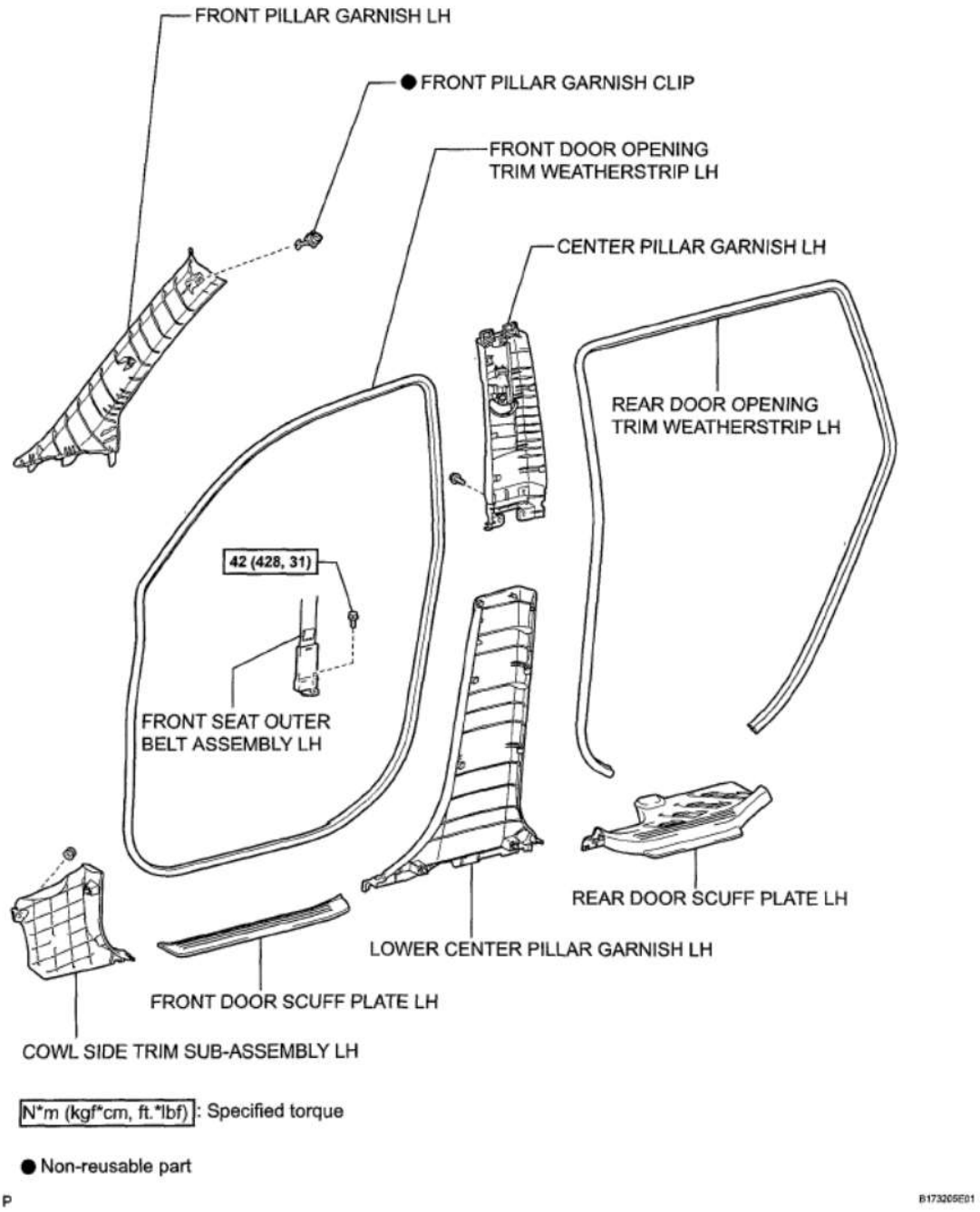


Fig. 391: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (3 Of 15)
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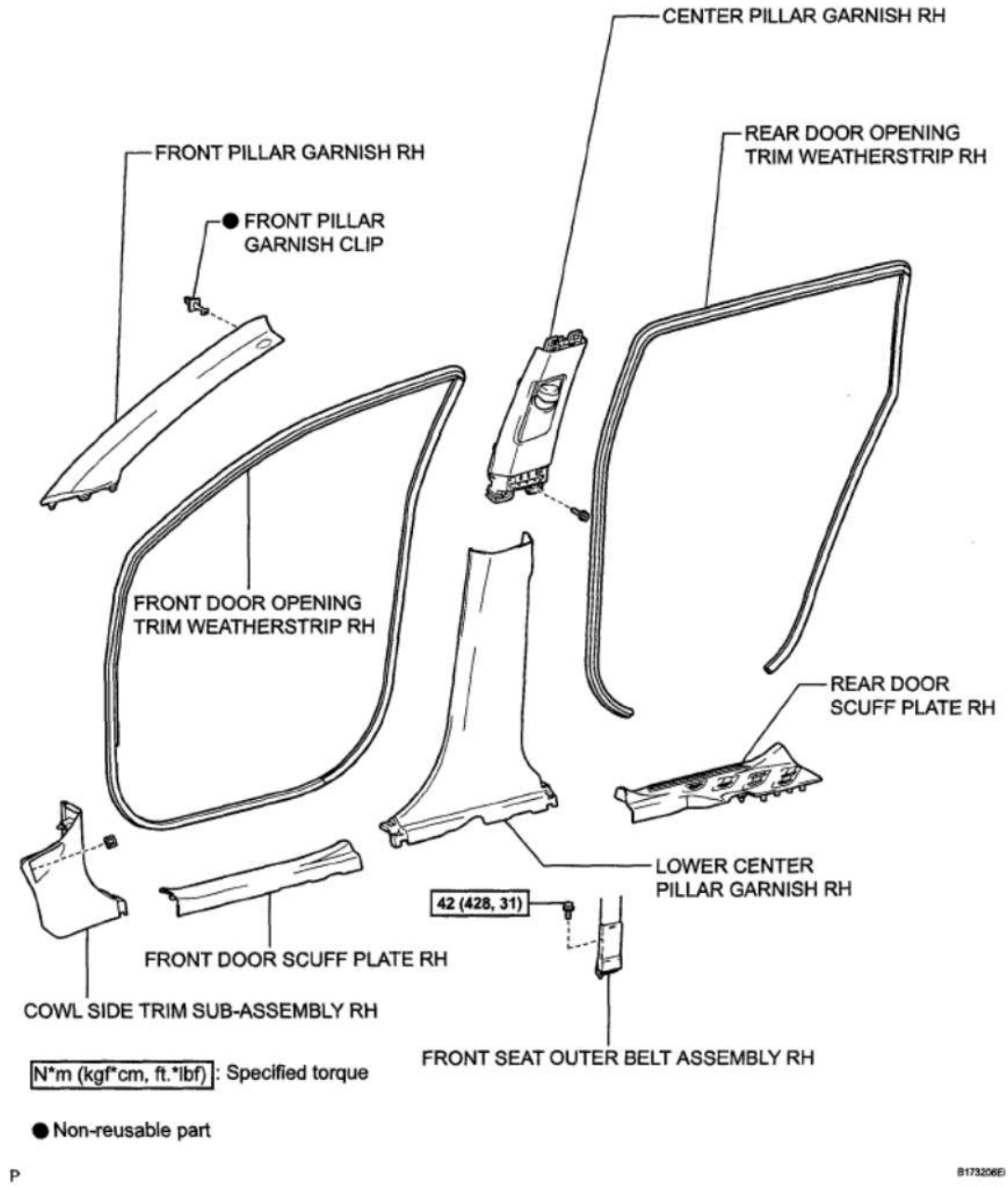


Fig. 392: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (4 Of 15)
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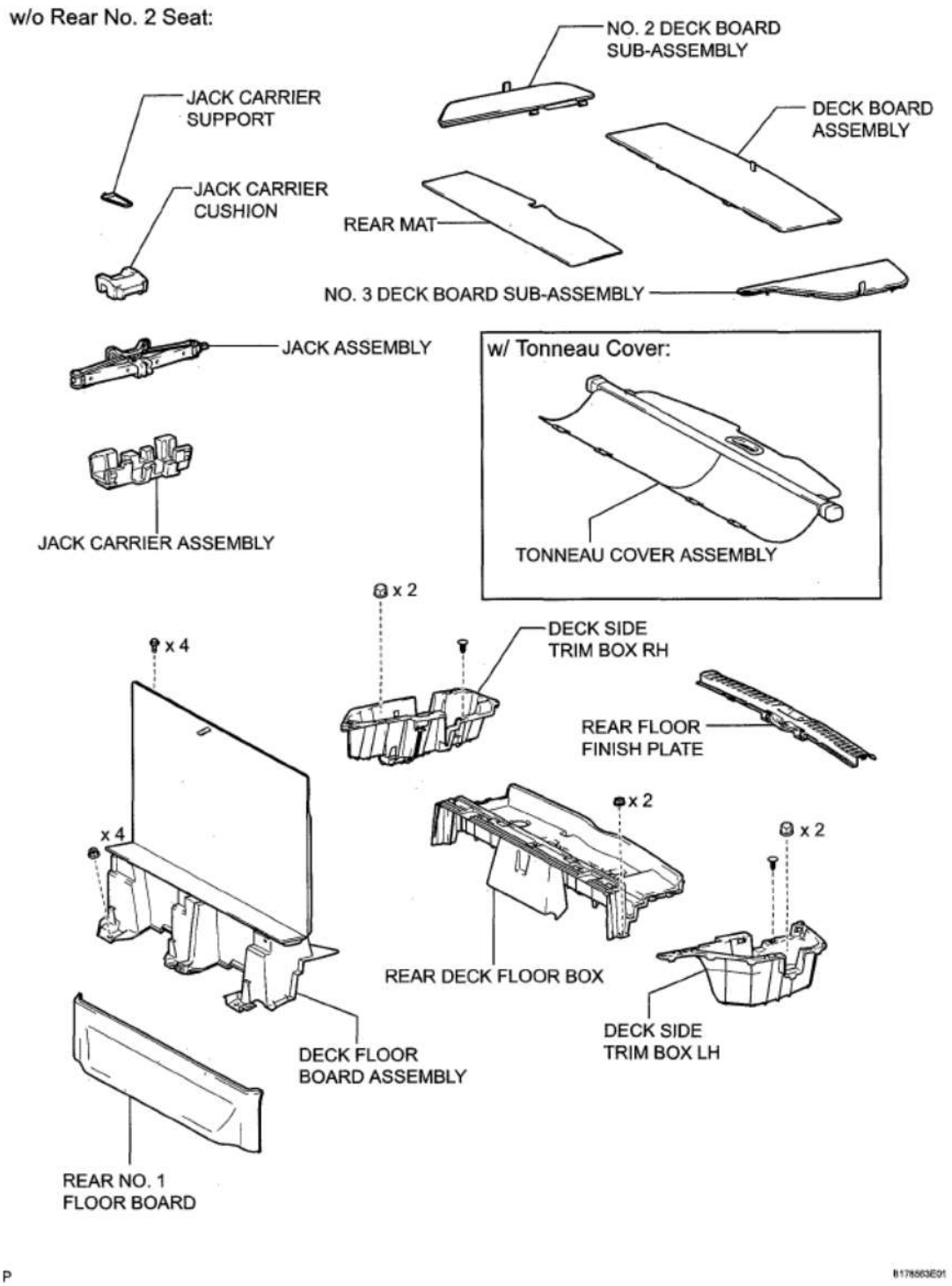


Fig. 393: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (5 Of 15)
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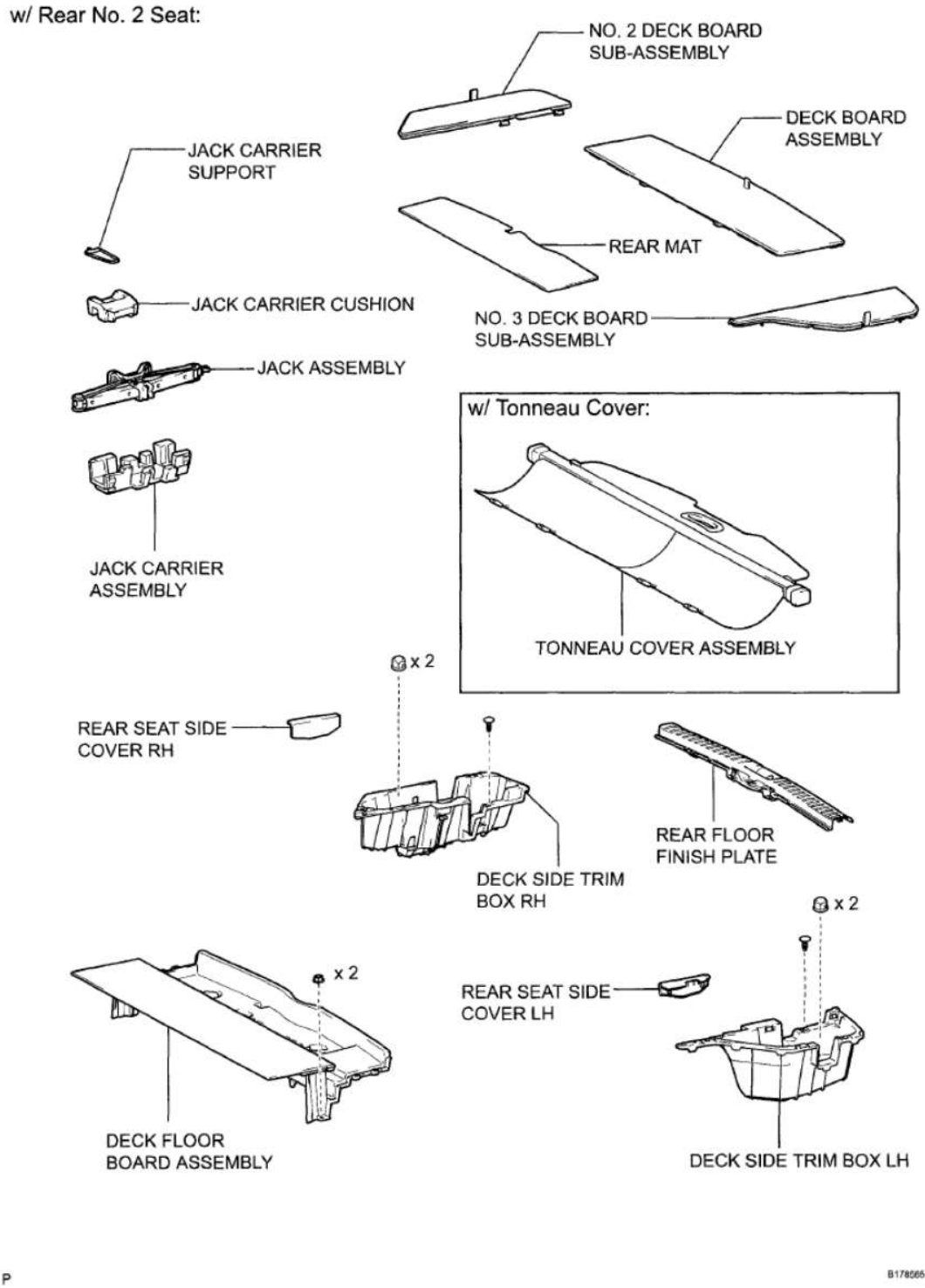


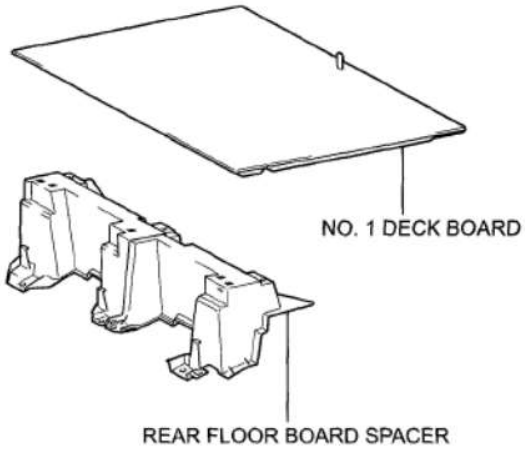
Fig. 394: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (6 Of 15)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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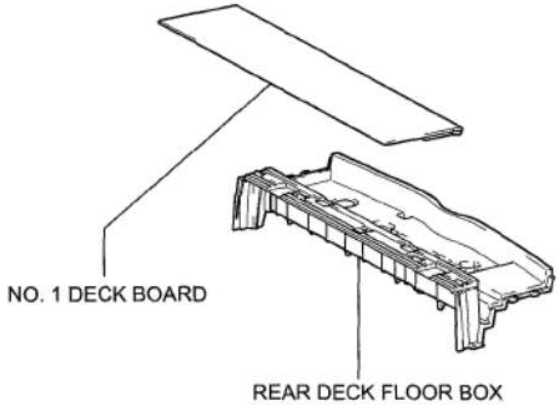
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w/o Rear No. 2 Seat:



w/ Rear No. 2 Seat:



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Fig. 395: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (7 Of 15)
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w/ Rear No. 2 Seat:

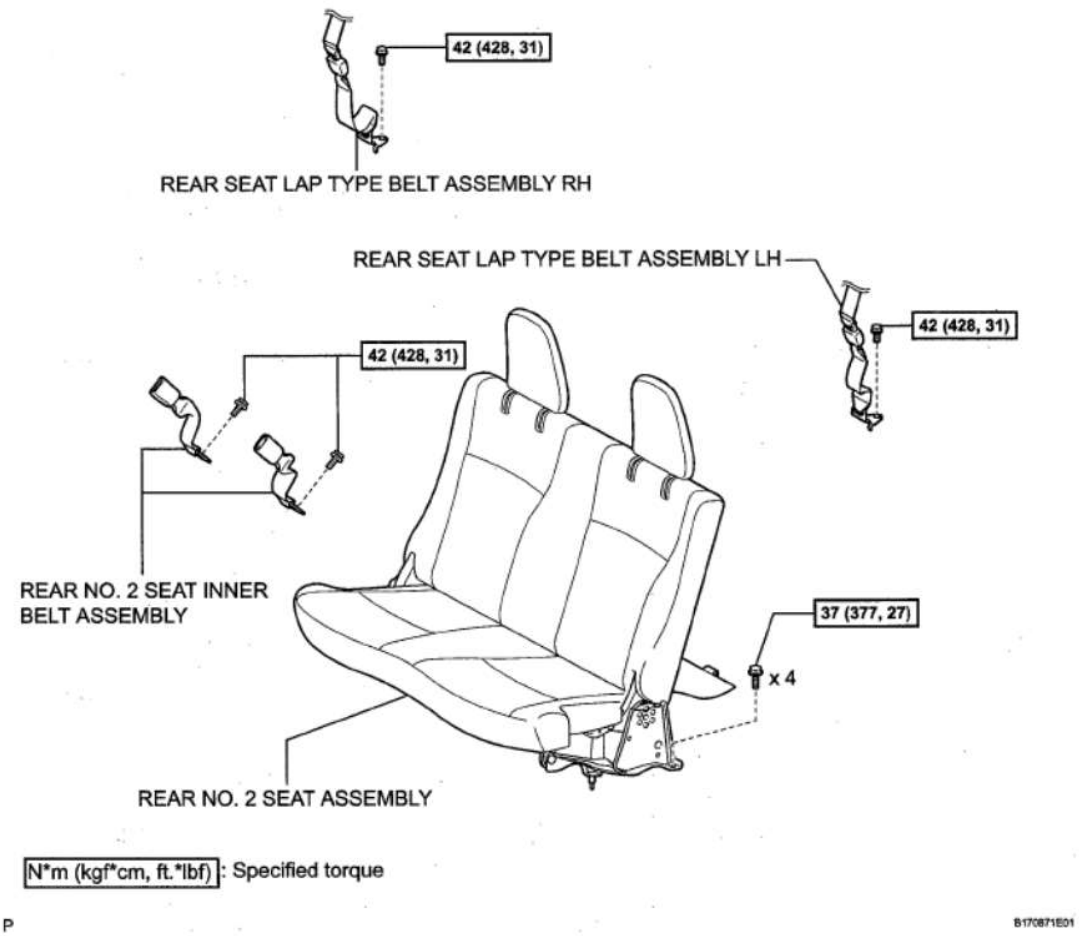


Fig. 396: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (8 Of 15)
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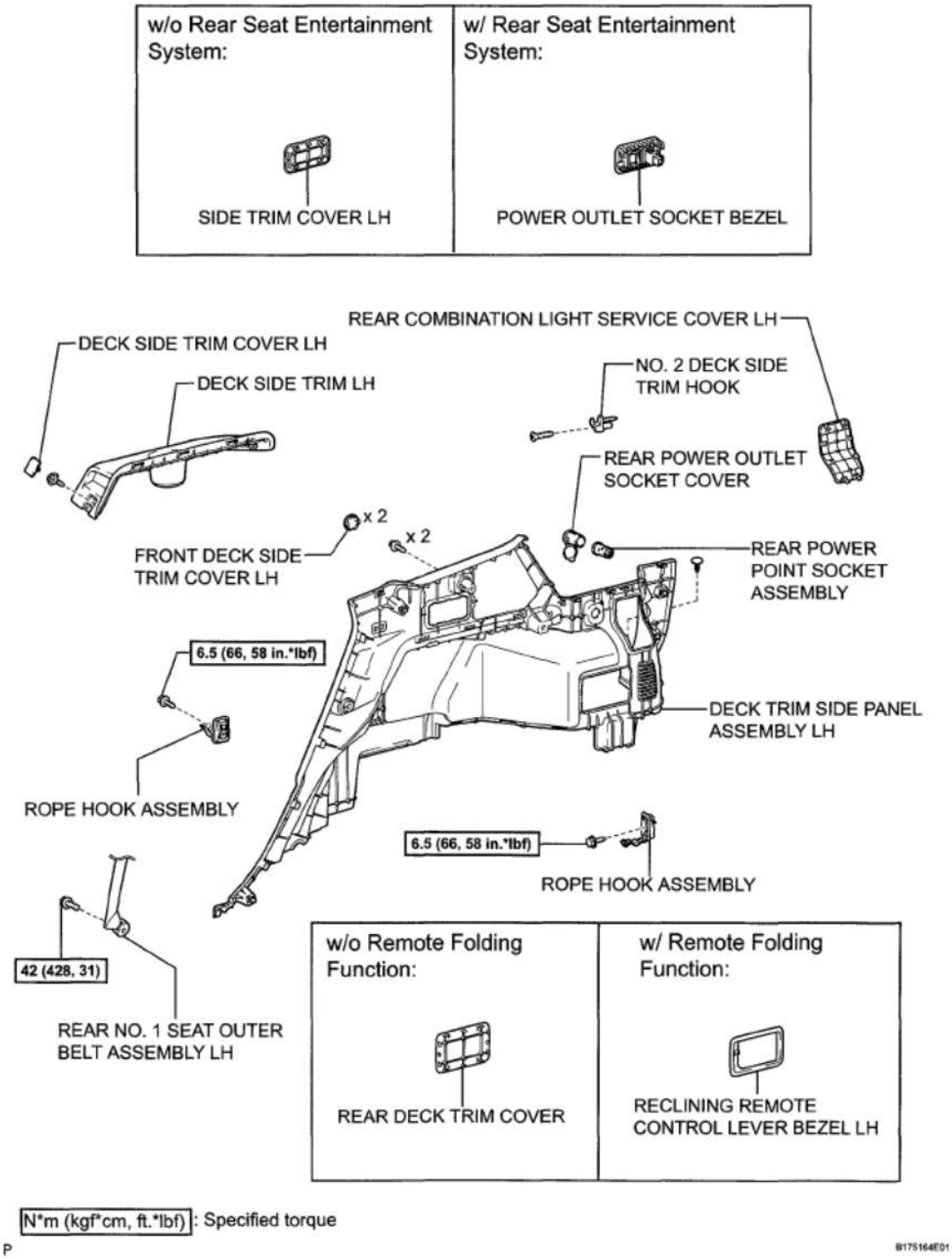


Fig. 397: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (9 Of 15)
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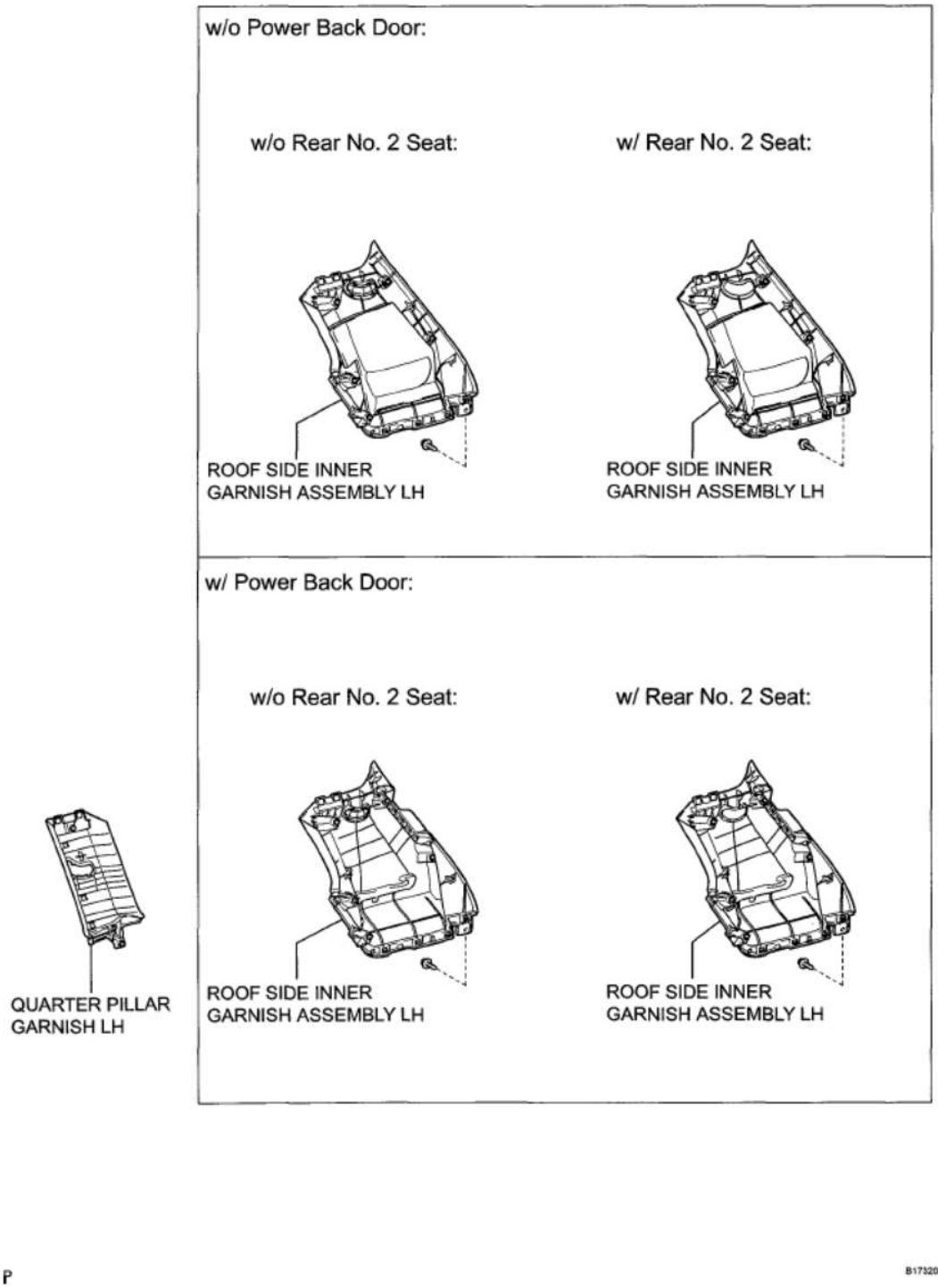


Fig. 398: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (10 Of 15)
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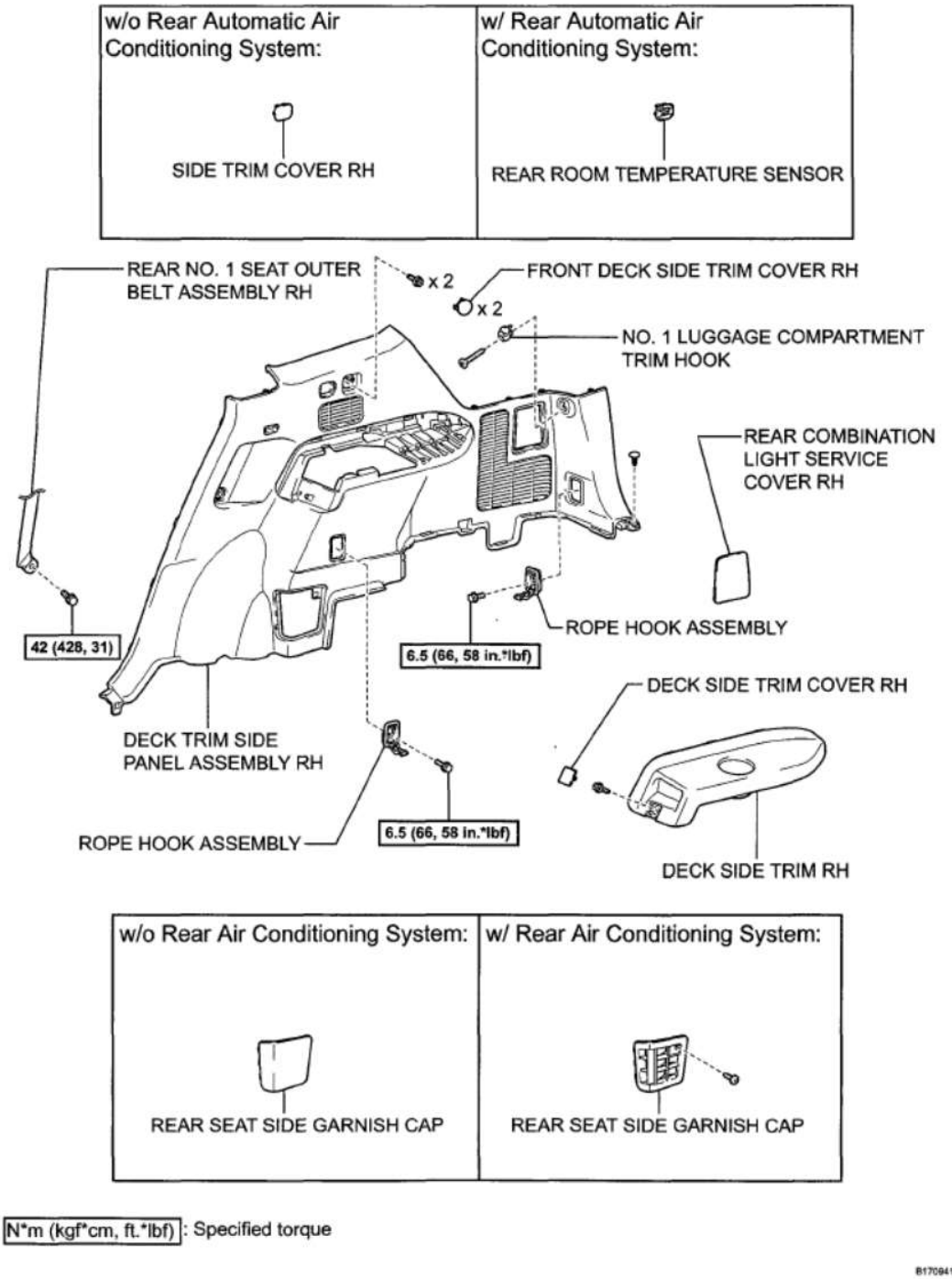


Fig. 399: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (11 Of 15)
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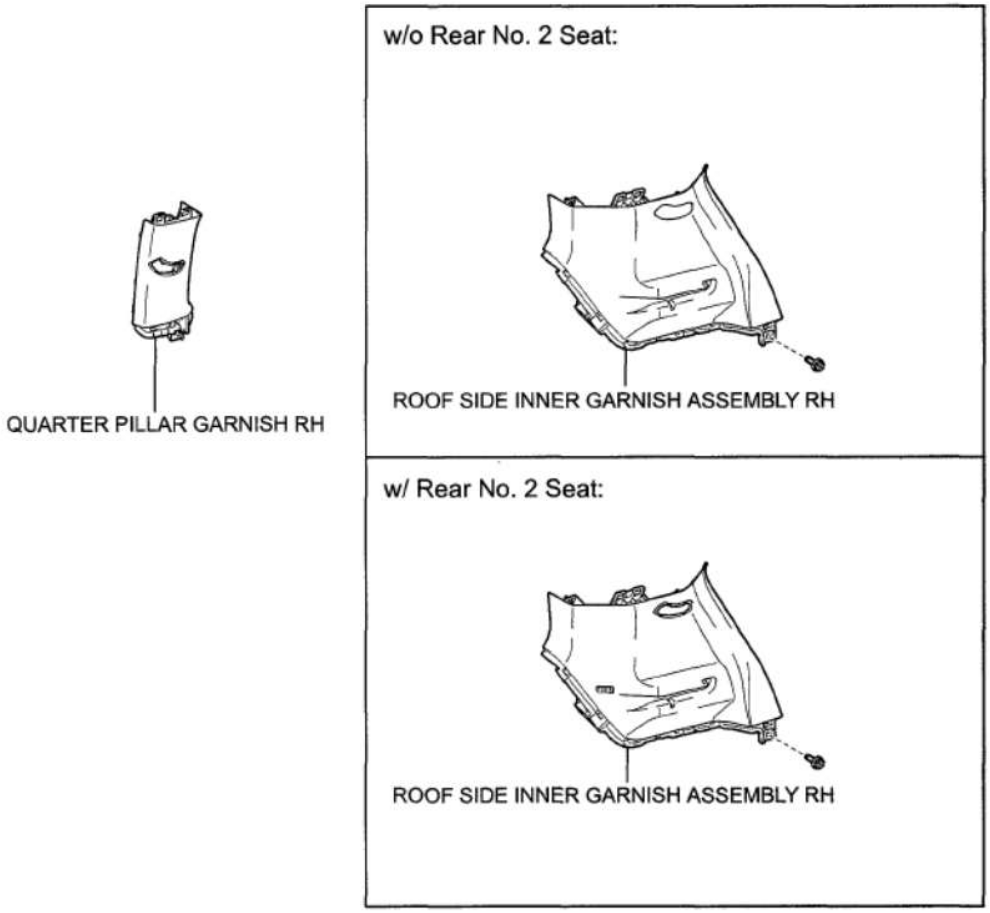


Fig. 400: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (12 Of 15)
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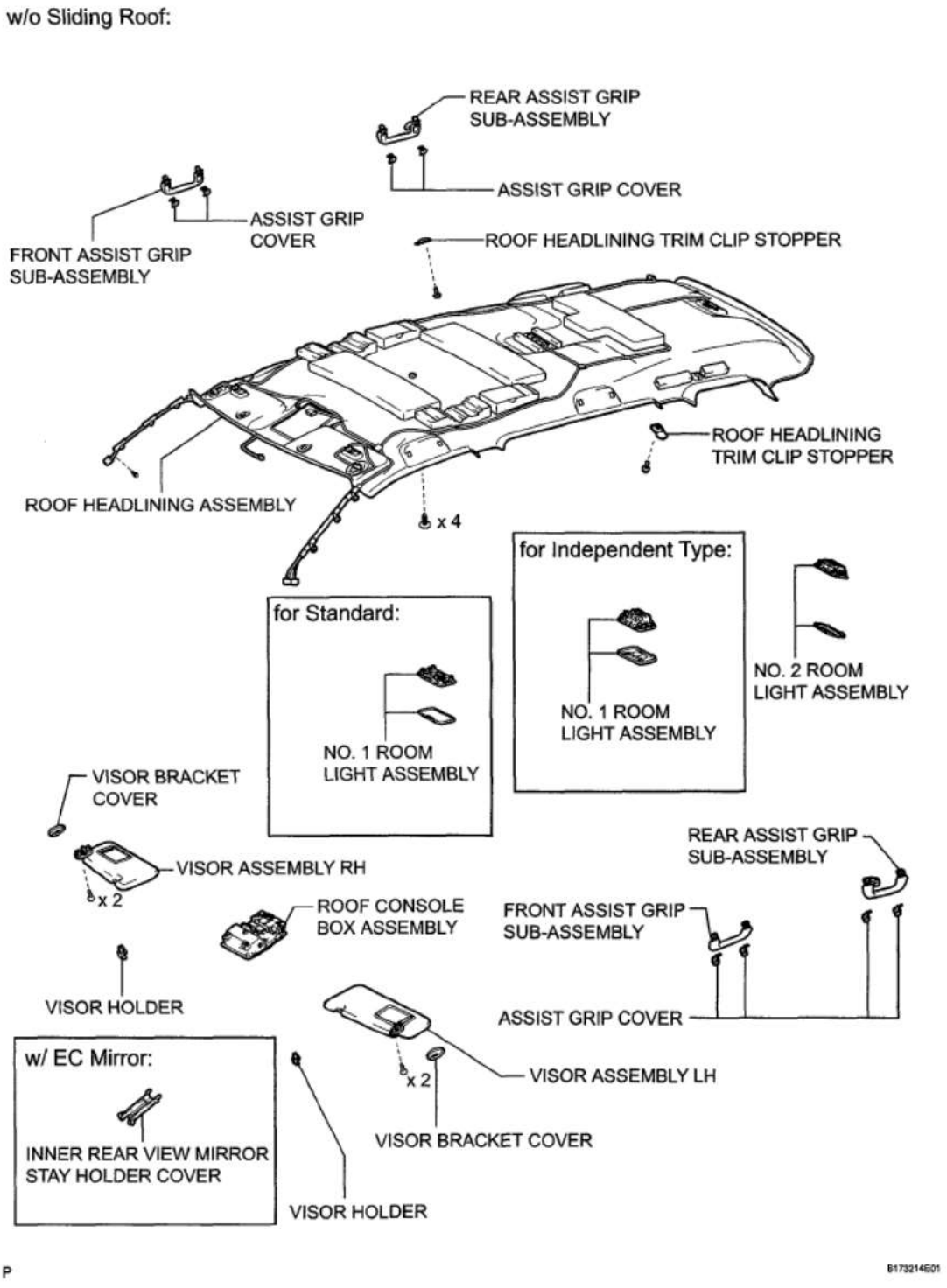


Fig. 401: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (13 Of 15)
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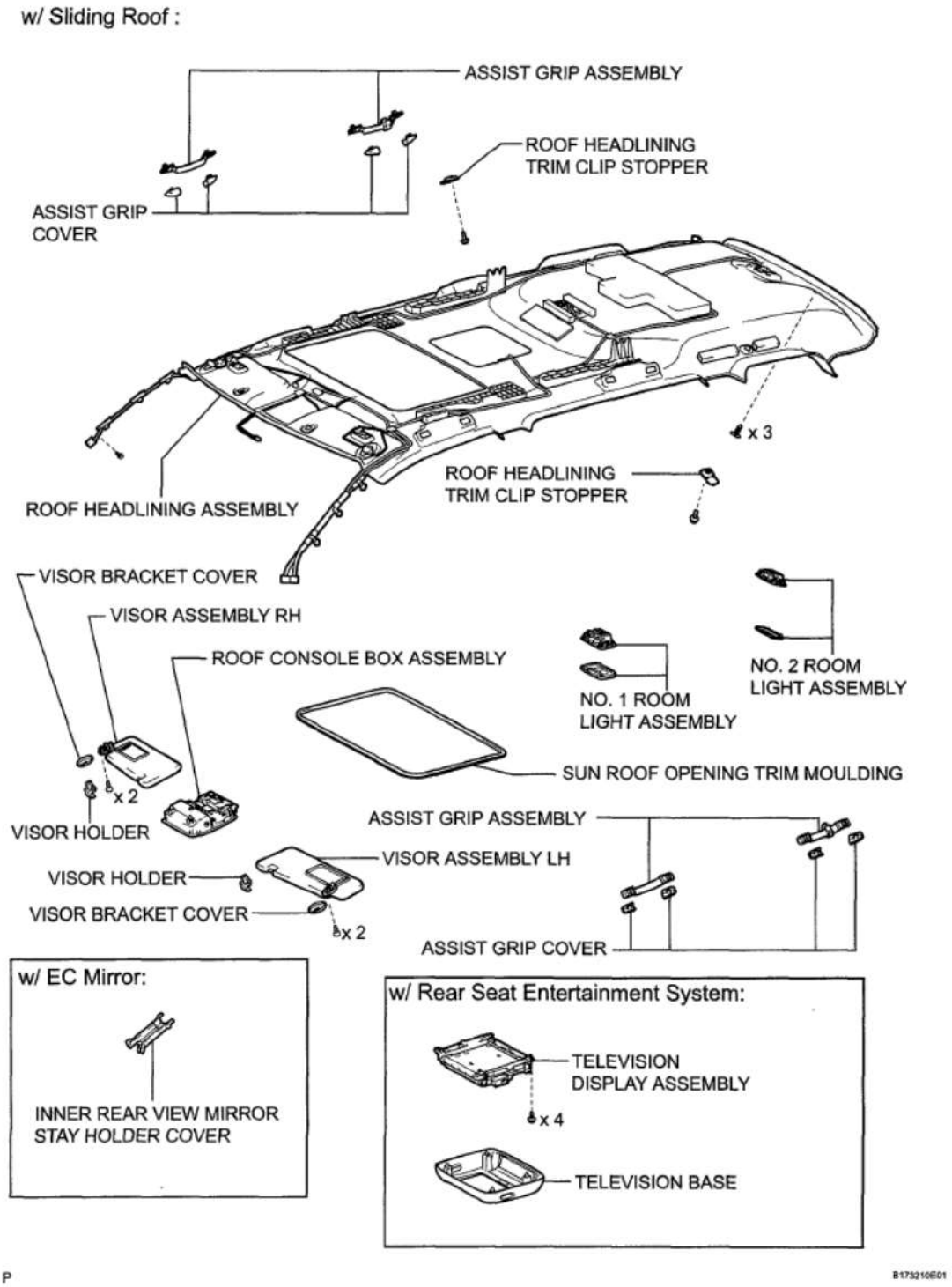


Fig. 402: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (14 Of 15)
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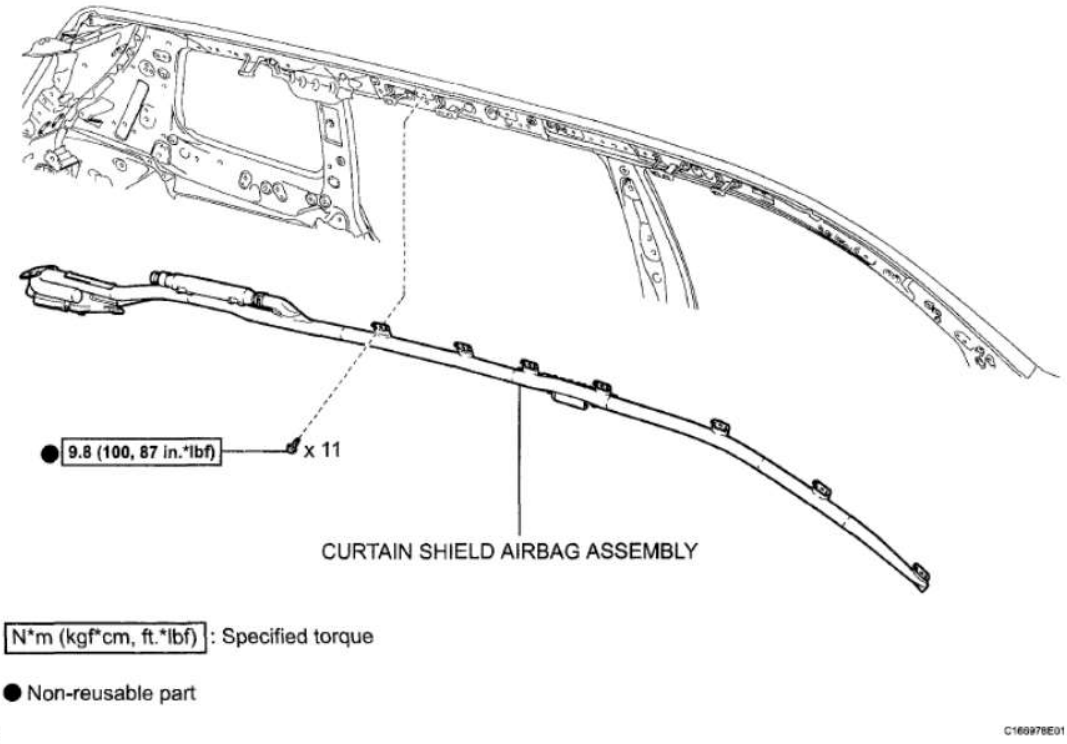


Fig. 403: Identifying Curtain Shield Airbag Assembly Components With Torque Specification (15 Of 15)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

1. **INSPECT CURTAIN SHIELD AIRBAG ASSEMBLY (VEHICLE NOT INVOLVED IN COLLISION)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
   b. With the curtain shield airbag assembly installed on the vehicle, perform a visual check. If there are any defects as mentioned below, replace the front pillar garnish or roof headlining assembly with a new one: Cuts, minute cracks or marked discoloration on the front pillar garnish or roof headlining assembly around the curtain shield airbag assembly.

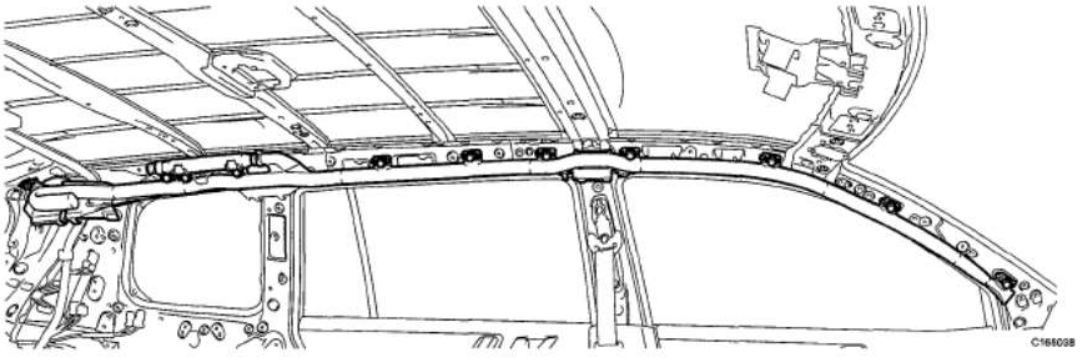


Fig. 404: Identifying Curtain Shield Airbag Assembly Installed On Vehicle

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2. **INSPECT CURTAIN SHIELD AIRBAG ASSEMBLY (VEHICLE INVOLVED IN COLLISION AND AIRBAG HAS NOT DEPLOYED)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
   b. With the curtain shield airbag assembly removed from the vehicle, perform a visual check. If there are any defects as mentioned below, replace the curtain shield airbag assembly with a new one:
      - Cuts, minute cracks or marked discoloration on the curtain shield airbag assembly.
      - Cracks or other damage to the connectors.

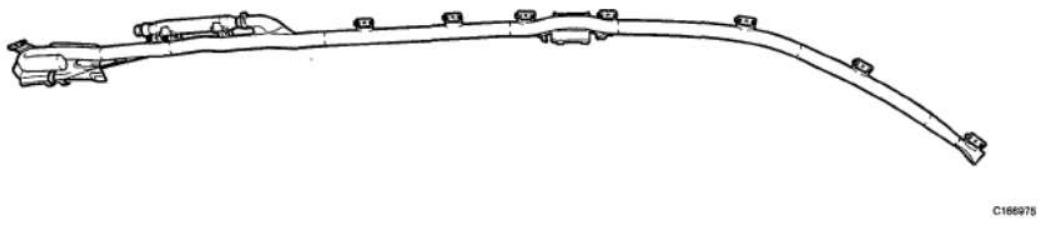


Fig. 405: Identifying Curtain Shield Airbag Assembly Removed From Vehicle
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION: Be sure to follow the correct removal and installation procedures.

REMOVAL

HINT:

- Use the same procedure for the RH side and LH side.
- The procedures listed below are for the LH side.

1. **PRECAUTION**

CAUTION: Be sure to read "PRECAUTION" thoroughly before servicing (See AIRBAG SYSTEM).

2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

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3. **REMOVE REAR CENTER SEAT ASSEMBLY**
4. **REMOVE REAR SEAT HEADREST ASSEMBLY (for LH Side)** (See **REMOVAL**)
5. **REMOVE REAR SEAT TRACK BRACKET COVER LH** (See **REMOVAL**)
6. **REMOVE REAR OUTER TRACK BRACKET COVER LH** (See **REMOVAL**)
7. **REMOVE REAR INNER TRACK BRACKET COVER LH** (See **REMOVAL**)
8. **REMOVE REAR SEAT LEG SIDE COVER LH** (See **REMOVAL**)
9. **DISCONNECT REAR NO. 1 SEAT LOCK CABLE ASSEMBLY LH (w/ Remote Folding Function)** (See **REMOVAL**)
10. **REMOVE REAR NO. 1 SEAT ASSEMBLY LH** (See **DISASSEMBLY**)
11. **REMOVE REAR SEAT HEADREST ASSEMBLY (for RH Side)** (See **REMOVAL**)
12. **REMOVE REAR SEAT TRACK BRACKET COVER RH** (See **REMOVAL**)
13. **REMOVE REAR OUTER TRACK BRACKET COVER RH** (See **REMOVAL**)
14. **REMOVE REAR INNER TRACK BRACKET COVER RH** (See **REMOVAL**)
15. **REMOVE REAR SEAT LEG SIDE COVER RH** (See **REMOVAL**)
16. **DISCONNECT REAR NO. 1 SEAT LOCK CABLE ASSEMBLY RH (w/ Remote Folding Function)** (See **REMOVAL**)
17. **REMOVE REAR NO. 1 SEAT ASSEMBLY RH** (See **DISASSEMBLY**)
18. **REMOVE FRONT DOOR SCUFF PLATE LH** (See **REMOVAL**)
19. **REMOVE COWL SIDE TRIM SUB-ASSEMBLY LH** (See **REMOVAL**)
20. **REMOVE FRONT DOOR OPENING TRIM WEATHERSTRIP LH** (See **REMOVAL**)
21. **REMOVE FRONT PILLAR GARNISH LH** (See **REMOVAL**)
22. **REMOVE REAR DOOR SCUFF PLATE LH** (See **REMOVAL**)
23. **REMOVE REAR DOOR OPENING TRIM WEATHERSTRIP LH** (See **REMOVAL**)
24. **REMOVE LOWER CENTER PILLAR GARNISH LH** (See **REMOVAL**)
25. **DISCONNECT FRONT SEAT OUTER BELT ASSEMBLY LH** (See **REMOVAL**)
26. **REMOVE CENTER PILLAR GARNISH LH** (See **REMOVAL**)
27. **REMOVE FRONT DOOR SCUFF PLATE RH** (See **REMOVAL**)
28. **REMOVE COWL SIDE TRIM SUB-ASSEMBLY RH** (See **REMOVAL**)
29. **REMOVE FRONT DOOR OPENING TRIM WEATHERSTRIP RH** (See **REMOVAL**)
30. **REMOVE FRONT PILLAR GARNISH RH** (See **REMOVAL**)
31. **REMOVE REAR DOOR SCUFF PLATE RH** (See **REMOVAL**)
32. **REMOVE REAR DOOR OPENING TRIM WEATHERSTRIP RH** (See **REMOVAL**)
33. **REMOVE LOWER CENTER PILLAR GARNISH RH** (See **REMOVAL**)
34. **DISCONNECT FRONT SEAT OUTER BELT ASSEMBLY RH** (See **REMOVAL**)
35. **REMOVE CENTER PILLAR GARNISH RH** (See **REMOVAL**)
36. **REMOVE DECK BOARD ASSEMBLY** (See **REMOVAL**)
37. **REMOVE NO. 3 DECK BOARD SUB-ASSEMBLY** (See **REMOVAL**)
38. **REMOVE NO. 2 DECK BOARD SUB-ASSEMBLY** (See **REMOVAL**)

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39. **REMOVE TONNEAU COVER ASSEMBLY (w/ Tonneau Cover)** (See **REMOVAL**)
40. **REMOVE REAR NO. 1 FLOOR BOARD (w/o Rear No. 2 Seat)** (See **REMOVAL**)
41. **REMOVE REAR SEAT SIDE COVER LH (w/ Rear No. 2 Seat)** (See **REMOVAL**)
42. **REMOVE DECK SIDE TRIM BOX LH** (See **REMOVAL**)
43. **REMOVE REAR SEAT SIDE COVER RH (w/ Rear No. 2 Seat)** (See **REMOVAL**)
44. **REMOVE JACK CARRIER SUPPORT**
45. **REMOVE JACK CARRIER CUSHION** (See **REMOVAL**)
46. **REMOVE JACK ASSEMBLY** (See **REMOVAL**)
47. **REMOVE JACK CARRIER ASSEMBLY** (See **REMOVAL**)
48. **REMOVE DECK SIDE TRIM BOX RH** (See **REMOVAL**)
49. **REMOVE DECK FLOOR BOARD ASSEMBLY (w/o Rear No. 2 Seat)** (See **REMOVAL**)
50. **REMOVE REAR MAT** (See **REMOVAL**)
51. **REMOVE DECK FLOOR BOARD ASSEMBLY (w/ Rear No. 2 Seat)** (See **REMOVAL**)
52. **REMOVE REAR DECK FLOOR BOX (w/o Rear No. 2 Seat)** (See **REMOVAL**)
53. **REMOVE NO. 1 DECK BOARD (w/o Rear No. 2 Seat)** (See **REMOVAL**)
54. **REMOVE NO. 1 DECK BOARD (w/ Rear No. 2 Seat)** (See **REMOVAL**)
55. **REMOVE REAR NO. 2 SEAT INNER BELT ASSEMBLY (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
56. **DISCONNECT REAR SEAT LAP TYPE BELT ASSEMBLY LH (w/ Rear No. 2 Seat)** (See **REMOVAL**)
57. **DISCONNECT REAR SEAT LAP TYPE BELT ASSEMBLY RH (w/ Rear No. 2 Seat)** (See **REMOVAL**)
58. **REMOVE REAR NO. 2 SEAT ASSEMBLY (w/ Rear No. 2 Seat)** (See **DISASSEMBLY**)
59. **REMOVE REAR FLOOR FINISH PLATE** (See **REMOVAL**)
60. **REMOVE DECK SIDE TRIM COVER LH** (See **REMOVAL**)
61. **REMOVE DECK SIDE TRIM LH** (See **REMOVAL**)
62. **REMOVE SIDE TRIM COVER LH (w/o Rear Seat Entertainment System)** (See **REMOVAL**)
63. **REMOVE POWER OUTLET SOCKET BEZEL (w/ Rear Seat Entertainment System)** (See **REMOVAL**)
64. **REMOVE REAR COMBINATION LIGHT SERVICE COVER LH** (See **REMOVAL**)
65. **REMOVE REAR POWER POINT SOCKET ASSEMBLY** (See **REAR POWER OUTLET SOCKET**)
66. **REMOVE REAR POWER OUTLET SOCKET COVER** (See **INSTALLATION**)
67. **REMOVE REAR DECK TRIM COVER (w/o Remote Folding Function)** (See **REMOVAL**)
68. **REMOVE RECLINING REMOTE CONTROL LEVER BEZEL LH (w/ Remote Folding Function)** (See **REMOVAL**)
69. **REMOVE ROPE HOOK ASSEMBLY (for LH Side)** (See **REMOVAL**)
70. **REMOVE NO. 2 DECK SIDE TRIM HOOK** (See **REMOVAL**)
71. **REMOVE FRONT DECK SIDE TRIM COVER LH** (See **REMOVAL**)

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72. **DISCONNECT REAR NO. 1 SEAT OUTER BELT ASSEMBLY LH** (See **REMOVAL**)
73. **REMOVE DECK TRIM SIDE PANEL ASSEMBLY LH** (See **REMOVAL**)
74. **REMOVE QUARTER PILLAR GARNISH LH** (See **REMOVAL**)
75. **REMOVE ROOF SIDE INNER GARNISH ASSEMBLY LH (w/o Power Back Door)** (See **REMOVAL**)
76. **REMOVE ROOF SIDE INNER GARNISH ASSEMBLY LH (w/ Power Back Door)** (See **REMOVAL**)
77. **REMOVE REAR SEAT SIDE GARNISH CAP (w/o Rear Air Conditioning System)** (See **REMOVAL**)
78. **REMOVE REAR SEAT SIDE GARNISH CAP (w/ Rear Air Conditioning System)** (See **REMOVAL**)
79. **REMOVE DECK SIDE TRIM COVER RH** (See **REMOVAL**)
80. **REMOVE DECK SIDE TRIM RH** (See **REMOVAL**)
81. **REMOVE SIDE TRIM COVER RH (w/o Rear Automatic Air Conditioning System)** (See **REMOVAL**)
82. **REMOVE REAR ROOM TEMPERATURE SENSOR (w/ Rear Automatic Air Conditioning System)** (See **ROOM TEMPERATURE SENSOR (FOR REAR)**)
83. **REMOVE REAR COMBINATION LIGHT SERVICE COVER RH** (See **REMOVAL**)
84. **REMOVE ROPE HOOK ASSEMBLY (for RH Side)** (See **REMOVAL**)
85. **REMOVE NO. 1 LUGGAGE COMPARTMENT TRIM HOOK** (See **REMOVAL**)
86. **REMOVE FRONT DECK SIDE TRIM COVER RH** (See **REMOVAL**)
87. **DISCONNECT REAR NO. 1 SEAT OUTER BELT ASSEMBLY RH** (See **REMOVAL**)
88. **REMOVE DECK TRIM SIDE PANEL ASSEMBLY RH** (See **REMOVAL**)
89. **REMOVE QUARTER PILLAR GARNISH RH** (See **REMOVAL**)
90. **REMOVE ROOF SIDE INNER GARNISH ASSEMBLY RH (w/o Rear No. 2 Seat)** (See **REMOVAL**)
91. **REMOVE ROOF SIDE INNER GARNISH ASSEMBLY RH (w/ Rear No. 2 Seat)** (See **REMOVAL**)
92. **REMOVE ROOF CONSOLE BOX ASSEMBLY** (See **REMOVAL**)
93. **REMOVE VISOR BRACKET COVER (for LH Side)** (See **REMOVAL**)
94. **REMOVE VISOR ASSEMBLY LH** (See **REMOVAL**)
95. **REMOVE VISOR BRACKET COVER (for RH Side)** (See **REMOVAL**)
96. **REMOVE VISOR ASSEMBLY RH** (See **REMOVAL**)
97. **REMOVE INNER REAR VIEW MIRROR STAY HOLDER COVER (w/ EC Mirror)** (See **REMOVAL**)
98. **REMOVE NO. 1 ROOM LIGHT ASSEMBLY (for Standard)** (See **REMOVAL**)
99. **REMOVE NO. 1 ROOM LIGHT ASSEMBLY (for Independent Type)** (See **REMOVAL**)
100. **REMOVE NO. 2 ROOM LIGHT ASSEMBLY** (See **REMOVAL**)
101. **REMOVE TELEVISION BASE (w/ Rear Seat Entertainment System)** (See **TELEVISION DISPLAY**)

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102. **REMOVE TELEVISION DISPLAY ASSEMBLY (w/ Rear Seat Entertainment System)** (See **TELEVISION DISPLAY**)
103. **REMOVE FRONT ASSIST GRIP SUB-ASSEMBLY (w/o Sliding Roof)** (See **REMOVAL**)
104. **REMOVE REAR ASSIST GRIP SUB-ASSEMBLY (w/o Sliding Roof)** (See **REMOVAL**)
105. **REMOVE ASSIST GRIP ASSEMBLY (w/ Sliding Roof)** (See **REMOVAL**)
106. **REMOVE ROOF HEADLINING TRIM CLIP STOPPER** (See **REMOVAL**)
107. **REMOVE SUN ROOF OPENING TRIM MOULDING (w/ Sliding Roof)**
108. **REMOVE VISOR HOLDER** (See **REMOVAL**)
109. **REMOVE ROOF HEADLINING ASSEMBLY (w/o Sliding Roof)** (See **REMOVAL**)
110. **REMOVE ROOF HEADLINING ASSEMBLY (w/ Sliding Roof)** (See **REMOVAL**)
111. **REMOVE CURTAIN SHIELD AIRBAG ASSEMBLY**
    a. Disconnect the curtain shield airbag connector.

NOTE: **When handling the airbag connector, take care not to damage the airbag wire harness.**

    b. Remove the 11 bolts.

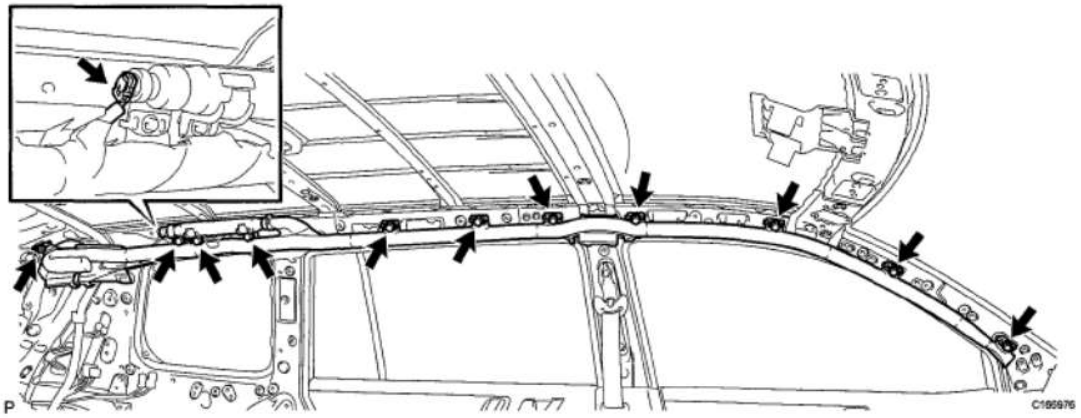


Fig. 406: Locating Curtain Shield Airbag Assembly And Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

    c. Disengage the 11 hooks and remove the curtain shield airbag assembly.

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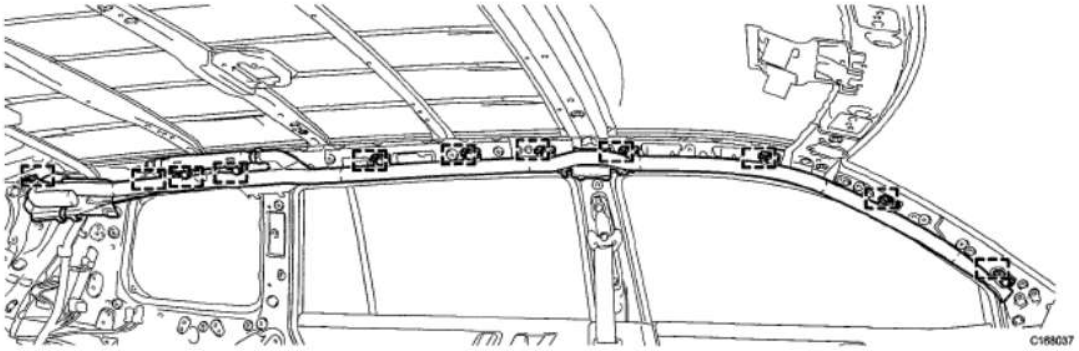


Fig. 407: Identifying Curtain Shield Airbag Assembly And Hooks
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

1. **INSTALL CURTAIN SHIELD AIRBAG ASSEMBLY**
   a. Check that the ignition switch is off.
   b. Check that the battery negative (-) cable is disconnected.

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

   c. Temporarily install the curtain shield airbag assembly to the body panel with the 11 hooks.

NOTE: Do not twist the curtain shield airbag assembly when installing it.

   d. Install new 11 bolts.

Torque: 9.8 N*m (100 kgf*cm, 87 in.*lbf)

HINT:

Tighten the bolts in the order shown in the illustration.

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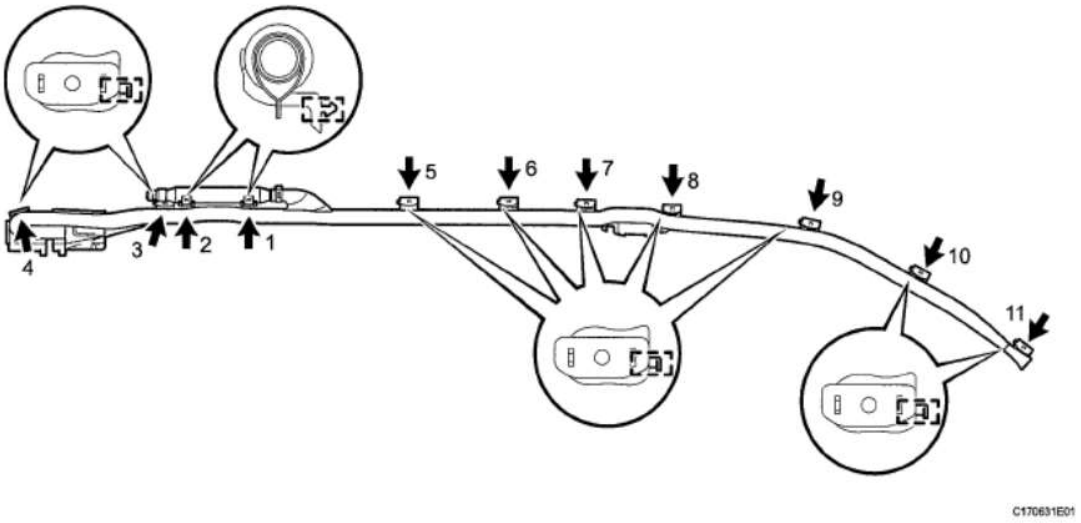


Fig. 408: Locating Curtain Shield Airbag Assembly Bolts In Tightening Sequence
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Connect the curtain shield airbag connector.

NOTE: **When handling the airbag connector, take care not to damage the airbag wire harness.**

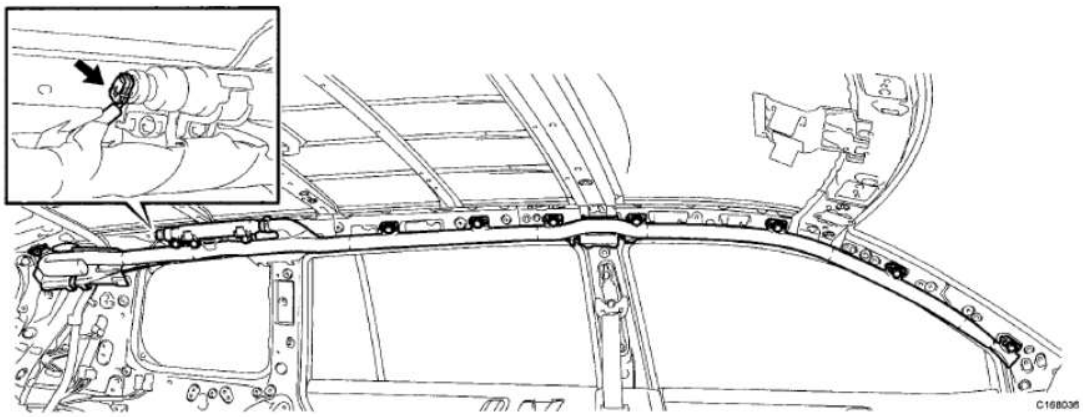


Fig. 409: Locating Curtain Shield Airbag Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. **INSTALL ROOF HEADLINING ASSEMBLY (w/o Sliding Roof)** (See **INSTALLATION**)
3. **INSTALL ROOF HEADLINING ASSEMBLY (w/ Sliding Roof)** (See **INSTALLATION**)
4. **INSTALL VISOR HOLDER** (See **INSTALLATION**)
5. **INSTALL SUN ROOF OPENING TRIM MOULDING (w/ Sliding Roof)** (See **INSTALLATION**)
6. **INSTALL ROOF HEADLINING TRIM CLIP STOPPER** (See **INSTALLATION**)
7. **INSTALL ASSIST GRIP ASSEMBLY (w/ Sliding Roof)** (See **INSTALLATION**)

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8. **INSTALL REAR ASSIST GRIP SUB-ASSEMBLY (w/o Sliding Roof)** (See **INSTALLATION**)
9. **INSTALL FRONT ASSIST GRIP SUB-ASSEMBLY (w/o Sliding Roof)** (See **INSTALLATION**)
10. **INSTALL TELEVISION DISPLAY ASSEMBLY (w/ Rear Seat Entertainment System)** (See **INSTALLATION**)
11. **INSTALL TELEVISION BASE (w/ Rear Seat Entertainment System)** (See **INSTALLATION**)
12. **INSTALL NO. 2 ROOM LIGHT ASSEMBLY** (See **INSTALLATION**)
13. **INSTALL NO. 1 ROOM LIGHT ASSEMBLY (for Standard)** (See **INSTALLATION**)
14. **INSTALL NO. 1 ROOM LIGHT ASSEMBLY (for Independent Type)** (See **INSTALLATION**)
15. **INSTALL INNER REAR VIEW MIRROR STAY HOLDER COVER (w/ EC Mirror)** (See **INSTALLATION**)
16. **INSTALL VISOR ASSEMBLY LH** (See **INSTALLATION**)
17. **INSTALL VISOR BRACKET COVER (for LH Side)** (See **INSTALLATION**)
18. **INSTALL VISOR ASSEMBLY RH** (See **INSTALLATION**)
19. **INSTALL VISOR BRACKET COVER (for RH Side)** (See **INSTALLATION**)
20. **INSTALL ROOF CONSOLE BOX ASSEMBLY** (See **INSTALLATION**)
21. **INSTALL ROOF SIDE INNER GARNISH ASSEMBLY LH (w/o Power Back Door)** (See **INSTALLATION**)
22. **INSTALL ROOF SIDE INNER GARNISH ASSEMBLY LH (w/ Power Back Door)** (See **INSTALLATION**)
23. **INSTALL QUARTER PILLAR GARNISH LH** (See **INSTALLATION**)
24. **INSTALL DECK TRIM SIDE PANEL ASSEMBLY LH** (See **INSTALLATION**)
25. **CONNECT REAR NO. 1 SEAT OUTER BELT ASSEMBLY LH** (See **INSTALLATION**)
26. **INSTALL FRONT DECK SIDE TRIM COVER LH** (See **INSTALLATION**)
27. **INSTALL NO. 2 DECK SIDE TRIM HOOK** (See **INSTALLATION**)
28. **INSTALL ROPE HOOK ASSEMBLY (for LH Side)** (See **INSTALLATION**)
29. **INSTALL REAR DECK TRIM COVER (w/o Remote Folding Function)** (See **INSTALLATION**)
30. **INSTALL RECLINING REMOTE CONTROL LEVER BEZEL LH (w/ Remote Folding Function)** (See **INSTALLATION**)
31. **INSTALL REAR POWER OUTLET SOCKET COVER** (See **INSTALLATION**)
32. **INSTALL REAR POWER POINT SOCKET ASSEMBLY** (See **INSTALLATION**)
33. **INSTALL REAR COMBINATION LIGHT SERVICE COVER LH** (See **INSTALLATION**)
34. **INSTALL SIDE TRIM COVER LH (w/o Rear Seat Entertainment System)** (See **INSTALLATION**)
35. **INSTALL POWER OUTLET SOCKET BEZEL (w/ Rear Seat Entertainment System)** (See **INSTALLATION**)
36. **INSTALL DECK SIDE TRIM LH** (See **INSTALLATION**)
37. **INSTALL DECK SIDE TRIM COVER LH** (See **INSTALLATION**)
38. **INSTALL ROOF SIDE INNER GARNISH ASSEMBLY RH (w/o Rear No. 2 Seat)** (See **INSTALLATION**)

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39. **INSTALL ROOF SIDE INNER GARNISH ASSEMBLY RH (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
40. **INSTALL QUARTER PILLAR GARNISH RH** (See **INSTALLATION**)
41. **INSTALL DECK TRIM SIDE PANEL ASSEMBLY RH** (See **INSTALLATION**)
42. **CONNECT REAR NO. 1 SEAT OUTER BELT ASSEMBLY RH** (See **INSTALLATION**)
43. **INSTALL FRONT DECK SIDE TRIM COVER RH** (See **INSTALLATION**)
44. **INSTALL NO. 1 LUGGAGE COMPARTMENT TRIM HOOK** (See **INSTALLATION**)
45. **INSTALL ROPE HOOK ASSEMBLY (for RH Side)** (See **INSTALLATION**)
46. **INSTALL REAR COMBINATION LIGHT SERVICE COVER RH** (See **INSTALLATION**)
47. **INSTALL REAR ROOM TEMPERATURE SENSOR (w/ Rear Automatic Air Conditioning System)** (See **INSPECTION**)
48. **INSTALL SIDE TRIM COVER RH (w/o Rear Automatic Air Conditioning System)** (See **INSTALLATION**)
49. **INSTALL DECK SIDE TRIM RH** (See **INSTALLATION**)
50. **INSTALL DECK SIDE TRIM COVER RH** (See **INSTALLATION**)
51. **INSTALL REAR SEAT SIDE GARNISH CAP (w/o Rear Air Conditioning System)** (See **INSTALLATION**)
52. **INSTALL REAR SEAT SIDE GARNISH CAP (w/ Rear Air Conditioning System)** (See **INSTALLATION**)
53. **INSTALL REAR FLOOR FINISH PLATE** (See **INSTALLATION**)
54. **INSTALL REAR NO. 2 SEAT ASSEMBLY (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
55. **CONNECT REAR SEAT LAP TYPE BELT ASSEMBLY LH (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
56. **CONNECT REAR SEAT LAP TYPE BELT ASSEMBLY RH (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
57. **INSTALL REAR NO. 2 SEAT INNER BELT ASSEMBLY (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
58. **INSTALL NO. 1 DECK BOARD (w/o Rear No. 2 Seat)** (See **INSTALLATION**)
59. **INSTALL NO. 1 DECK BOARD (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
60. **INSTALL REAR DECK FLOOR BOX (w/o Rear No. 2 Seat)** (See **INSTALLATION**)
61. **INSTALL DECK FLOOR BOARD ASSEMBLY (w/o Rear No. 2 Seat)** (See **INSTALLATION**)
62. **INSTALL REAR MAT** (See **INSTALLATION**)
63. **INSTALL DECK FLOOR BOARD ASSEMBLY (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
64. **INSTALL DECK SIDE TRIM BOX LH** (See **INSTALLATION**)
65. **INSTALL REAR SEAT SIDE COVER LH (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
66. **INSTALL DECK SIDE TRIM BOX RH** (See **INSTALLATION**)
67. **INSTALL JACK CARRIER ASSEMBLY** (See **INSTALLATION**)
68. **INSTALL JACK ASSEMBLY** (See **INSTALLATION**)
69. **INSTALL JACK CARRIER CUSHION** (See **INSTALLATION**)

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70. **INSTALL JACK CARRIER SUPPORT**
71. **INSTALL REAR SEAT SIDE COVER RH (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
72. **INSTALL REAR NO. 1 FLOOR BOARD (w/o Rear No. 2 Seat)** (See **INSTALLATION**)
73. **INSTALL TONNEAU COVER ASSEMBLY (w/ Tonneau Cover)** (See **INSTALLATION**)
74. **INSTALL NO. 2 DECK BOARD SUB-ASSEMBLY** (See **INSTALLATION**)
75. **INSTALL NO. 3 DECK BOARD SUB-ASSEMBLY** (See **INSTALLATION**)
76. **INSTALL DECK BOARD ASSEMBLY** (See **INSTALLATION**)
77. **INSTALL CENTER PILLAR GARNISH LH** (See **INSTALLATION**)
78. **CONNECT FRONT SEAT OUTER BELT ASSEMBLY LH** (See **INSTALLATION**)
79. **INSTALL LOWER CENTER PILLAR GARNISH LH** (See **INSTALLATION**)
80. **INSTALL REAR DOOR OPENING TRIM WEATHERSTRIP LH** (See **INSTALLATION**)
81. **INSTALL REAR DOOR SCUFF PLATE LH** (See **INSTALLATION**)
82. **INSTALL FRONT PILLAR GARNISH LH** (See **INSTALLATION**)
83. **INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP LH** (See **INSTALLATION**)
84. **INSTALL COWL SIDE TRIM SUB-ASSEMBLY LH** (See **INSTALLATION**)
85. **INSTALL FRONT DOOR SCUFF PLATE LH** (See **INSTALLATION**)
86. **INSTALL CENTER PILLAR GARNISH RH** (See **INSTALLATION**)
87. **CONNECT FRONT SEAT OUTER BELT ASSEMBLY RH** (See **INSTALLATION**)
88. **INSTALL LOWER CENTER PILLAR GARNISH RH** (See **INSTALLATION**)
89. **INSTALL REAR DOOR OPENING TRIM WEATHERSTRIP RH** (See **INSTALLATION**)
90. **INSTALL REAR DOOR SCUFF PLATE RH** (See **INSTALLATION**)
91. **INSTALL FRONT PILLAR GARNISH RH** (See **INSTALLATION**)
92. **INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP RH** (See **INSTALLATION**)
93. **INSTALL COWL SIDE TRIM SUB-ASSEMBLY RH** (See **INSTALLATION**)
94. **INSTALL FRONT DOOR SCUFF PLATE RH** (See **INSTALLATION**)
95. **INSTALL REAR NO. 1 SEAT ASSEMBLY LH** (See **INSTALLATION**)
96. **CONNECT REAR NO. 1 SEAT LOCK CABLE ASSEMBLY LH (w/ Remote Folding Function)** (See **INSTALLATION**)
97. **INSPECT REAR SEAT SLIDE ADJUSTER LOCK (for LH Side)** (See **INSTALLATION**)
98. **INSTALL REAR SEAT LEG SIDE COVER LH** (See **INSTALLATION**)
99. **INSTALL REAR INNER TRACK BRACKET COVER LH** (See **INSTALLATION**)
100. **INSTALL REAR OUTER TRACK BRACKET COVER LH** (See **INSTALLATION**)
101. **INSTALL REAR SEAT TRACK BRACKET COVER LH** (See **INSTALLATION**)
102. **INSTALL REAR SEAT HEADREST ASSEMBLY (for LH Side)** (See **INSTALLATION**)
103. **INSTALL REAR CENTER SEAT ASSEMBLY**
104. **INSTALL REAR NO. 1 SEAT ASSEMBLY RH** (See **INSTALLATION**)
105. **CONNECT REAR NO. 1 SEAT LOCK CABLE ASSEMBLY RH (w/ Remote Folding Function)** (See **INSTALLATION**)

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106. **INSPECT REAR SEAT SLIDE ADJUSTER LOCK (for RH Side)** (See **INSTALLATION**)
107. **INSTALL REAR SEAT LEG SIDE COVER RH** (See **INSTALLATION**)
108. **INSTALL REAR INNER TRACK BRACKET COVER RH** (See **INSTALLATION**)
109. **INSTALL REAR OUTER TRACK BRACKET COVER RH** (See **INSTALLATION**)
110. **INSTALL REAR SEAT TRACK BRACKET COVER RH** (See **INSTALLATION**)
111. **INSTALL REAR SEAT HEADREST ASSEMBLY (for RH Side)** (See **INSTALLATION**)
112. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

113. **INSPECT SRS WARNING LIGHT**
    a. Inspect the SRS warning light (See **DIAGNOSIS SYSTEM**).

DISPOSAL

CAUTION: Before performing pre-disposal deployment of any SRS component, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.

1. **PRECAUTION**

HINT:

When scrapping a vehicle equipped with an SRS or disposing of the curtain shield airbag assembly, be sure to deploy the airbag first in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the SERVICE DEPT. of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION:

- **An airbag or pretensioner may be activated by static electricity. To prevent this, be sure to touch a metal surface with your bare hands to discharge static electricity before performing this procedure.**
- **Never dispose of a curtain shield airbag assembly that has an undeployed airbag.**
- **The airbag produces an exploding sound when it is deployed, so perform the operation outdoors and where it will not create a nuisance to nearby residents.**
- **When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electrical noise.**
- **When deploying the airbag, perform the operation at least 10 m**

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(33 ft.) away from the curtain shield airbag assembly.

- **The curtain shield airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a curtain shield airbag assembly with a deployed airbag.**
- **Do not apply water etc. to a curtain shield airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

2. **DISPOSE OF CURTAIN SHIELD AIRBAG ASSEMBLY (WHEN INSTALLED IN VEHICLE)**

HINT:

Prepare a battery as the power source to deploy the airbag.

a. Check the function of SST (See **DISPOSAL**).
b. Refer to PRECAUTION (See **AIRBAG SYSTEM**).
c. Disconnect the cable from the negative battery terminal.

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

d. Remove the roof headlining assembly (See **REMOVAL**).
e. Install SST.

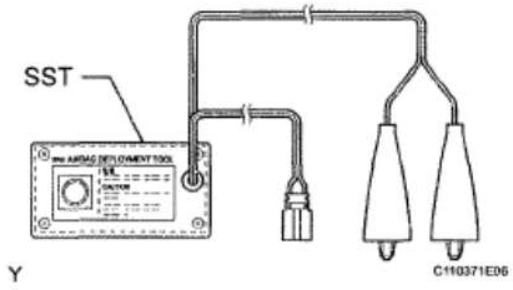


Fig. 410: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Disconnect the connector from the curtain shield airbag assembly.

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

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2. After connecting the following SST to each other, connect them to the curtain shield airbag assembly.

SST 09082-00700, 09082-00802 (09082-10801,09082-20801)

NOTE: To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock.

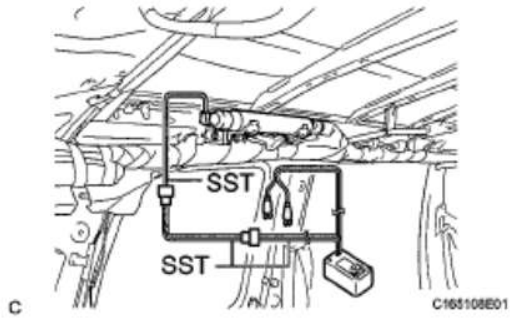


Fig. 411: Identifying SST To Curtain Shield Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Move SST at least 10 m (33 ft.) away from the vehicle rear side window.
4. Maintaining enough clearance for the SST wire harness in the rear side window, close all doors and windows of the vehicle.

NOTE: Take care not to damage the SST wire harness.

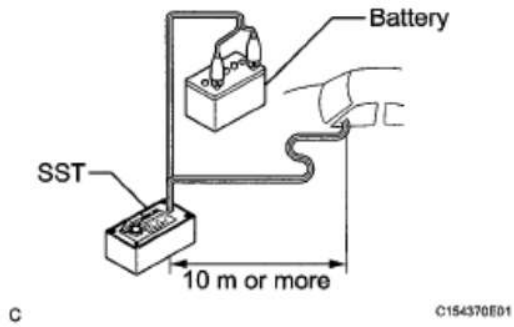


Fig. 412: Identifying SST Moving Distance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. Connect the red clip of SST to the battery positive (+) terminal and the black clip of SST to the battery negative (-) 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.

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CAUTION:

- **When deploying the airbag, make sure that no one is near the vehicle.**
- **The curtain shield airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a curtain shield airbag assembly with a deployed airbag.**
- **Do not apply water, etc. to a curtain shield airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

HINT:

The airbag is deployed as the LED of the SST activation switch comes on.

3. **DISPOSE OF CURTAIN SHIELD AIRBAG ASSEMBLY (WHEN NOT INSTALLED IN VEHICLE)**

NOTE:

- **When disposing of the curtain shield airbag assembly, never use the customer's vehicle to deploy the airbag.**
- **Be sure to 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 (See **SPIRAL CABLE**).
b. Remove the curtain shield airbag assembly (See **REMOVAL**).

CAUTION: When removing the curtain shield airbag assembly, work must be started at least 90 seconds after the ignition switch is turned off and the negative (-) terminal cable is disconnected from the battery.

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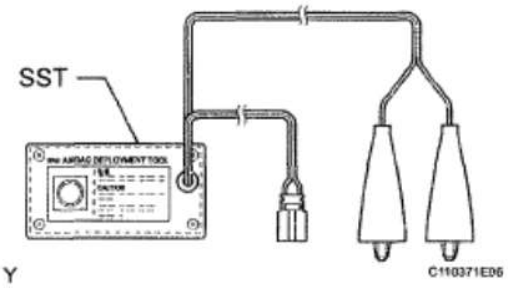


Fig. 413: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Cut off the deployment section of the curtain shield airbag assembly.

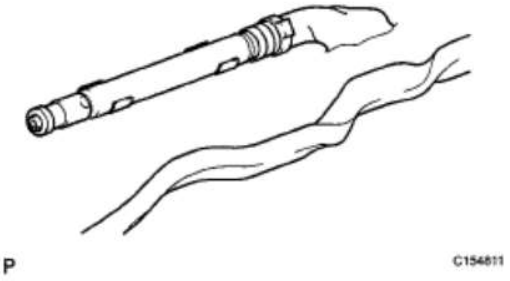


Fig. 414: Identifying Deployment Section Of Curtain Shield Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Using braided wire, tie down the curtain shield airbag assembly to an unneeded tire.

Wire:

Stripped wire section

1.25 mm^2 (0.0019 $in.^2$) or more

CAUTION: If the wire is too thin or an alternative object is used to tie down the curtain shield airbag assembly, it may be snapped by the shock when the airbag is deployed. Always use a wire for vehicle use with an area of at least 1.25 mm^2 (0.0019 $in.^2$).

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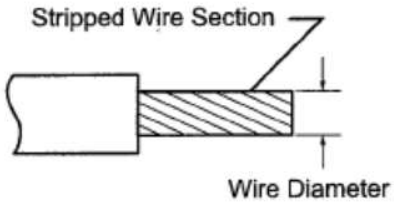


Fig. 415: Identifying Stripped Wire Section
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

To calculate the area of the stripped wire section:

Area = 3.14 x $(\text{Diameter})^2$ divided by 4

1. Position the curtain shield airbag assembly inside the tire as shown in the illustration.

   Minimum tire size:

   Must exceed the following dimensions

   Width:

   185 mm (7.28 in.)

   Inner diameter:

   360 mm (14.17 in.)

   CAUTION: Make sure that the wires are tight. If there is slack in the wires, the curtain shield airbag assembly may break loose due to the shock when the airbag is deployed.

   NOTE: The tire may be damaged by the airbag deployment, so use an unneeded tire.

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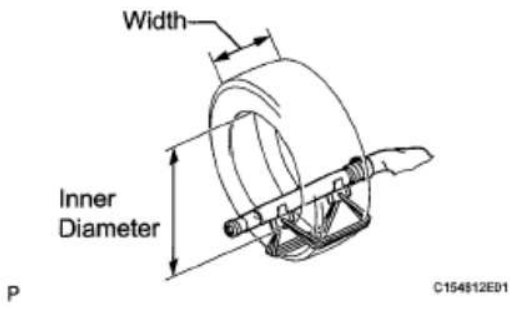


Fig. 416: Identifying Width Inner Diameter
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

e. Install SST.
   1. After connecting the following SST to each other, connect them to the curtain shield airbag assembly.

      SST 09082-00802 (09082-10801, 09082-20801)

f. Place the tires.

CAUTION: Do not place the deployment direction of the curtain shield airbag assembly facing toward the ground.

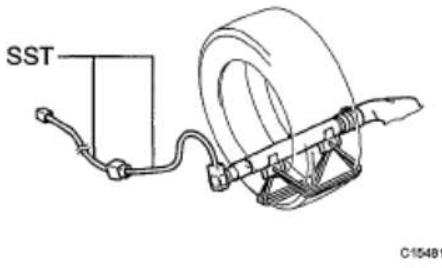


Fig. 417: Connecting SST To Curtain Shield Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Place at least 2 tires under the tire which the curtain shield airbag assembly is tied to.
2. Place at least 2 tires over the tire which the curtain shield airbag assembly is tied to. The top tire should have a wheel installed.

NOTE: Do not place the SST connector under the tire because it could be damaged.

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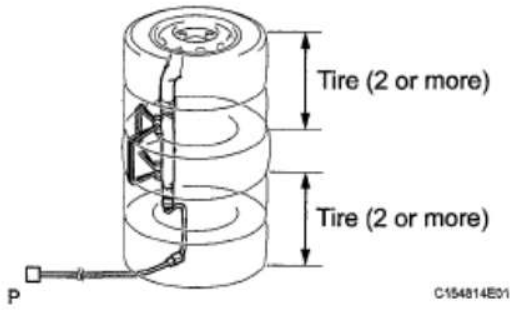


Fig. 418: [Placing Curtain Shield Airbag Assembly On Tire]
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Tie the tires together with the 2 wires.

CAUTION: Make sure that the wires are tight. Looseness in the wires results in the tires breaking loose due to the shock when the airbag is deployed.



Fig. 419: Tying Tires Together With Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

g. Install SST.
   1. Connect the SST connector.

      SST 09082-00700

      NOTE: To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock. Also, secure some slack for the SST wire harness inside the tire.

   2. Move SST at least 10 m (33 ft.) away from the airbag tied down to the tire.

h. Deploy the airbag.
   1. Connect the red clip of SST to the battery positive (+) terminal and the black clip of SST to the battery negative (-) terminal.
   2. Check that no one is within a 10 m (33 ft.) radius of the tire which the curtain shield airbag

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assembly is tied to.

3. Press the SST activation switch and deploy the airbag.

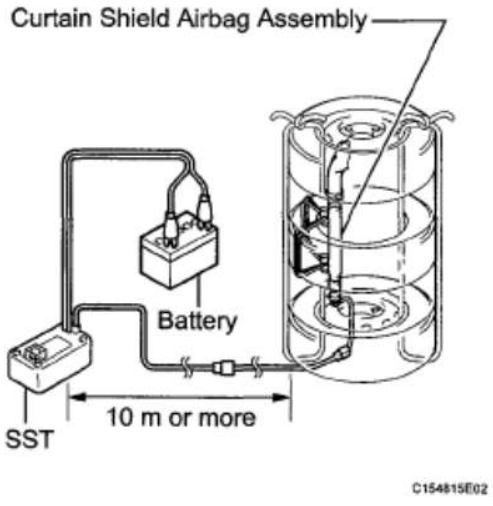


Fig. 420: Identifying SST Moving Distance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION: When deploying the airbag, make sure that no one is near the tire.

HINT:

The airbag is deployed as the LED of the SST activation switch comes on.

i. Dispose of the curtain shield airbag assembly.

CAUTION:

- **The curtain shield airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a curtain shield airbag assembly with a deployed airbag.**
- **Do not apply water, etc. to a curtain shield airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

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Fig. 421: Identifying Curtain Shield Airbag Assembly In Plastic Bag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Remove the curtain shield airbag assembly from the tire.
2. Place the curtain shield airbag assembly in a plastic bag, tie it tightly, and dispose of it according to local regulations.

FRONT SEAT SIDE AIRBAG ASSEMBLY

ON-VEHICLE INSPECTION

1. **INSPECT FRONT SEAT SIDE AIRBAG ASSEMBLY (VEHICLE NOT INVOLVED IN COLLISION)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
   b. With the front seat side airbag assembly installed on the vehicle, perform a visual check. If there are any defects as mentioned below, replace the front seat assembly with a new one:

      Cuts, minute cracks or marked discoloration on the front seatback assembly around the front seat side airbag assembly.

2. **INSPECT FRONT SEAT SIDE AIRBAG ASSEMBLY (VEHICLE INVOLVED IN COLLISION AND AIRBAG HAS NOT DEPLOYED)**

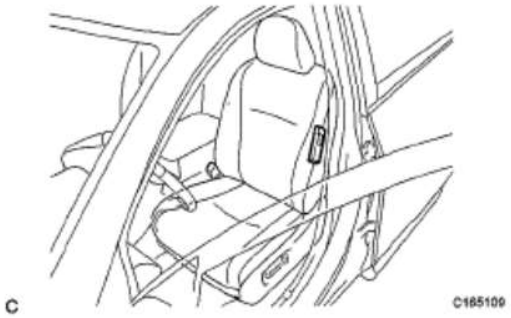


Fig. 422: Identifying Front Seat Side Airbag Assembly Installed On Vehicle
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
b. With the front seat side airbag assembly removed from the vehicle, perform a visual check. If there are any defects as mentioned below, replace the front seat assembly with a new one:
   - Make sure that there are no scratches, broken or frayed threads on the surface of the front seat side airbag assembly base fabric.
   - A front seat side airbag assembly that has been dropped.
   - A front seat side airbag assembly with a deformed installation part.
   - Cracks or other damage to the wire harness or connector.

CAUTION: Be sure to follow the correct removal and installation procedures.

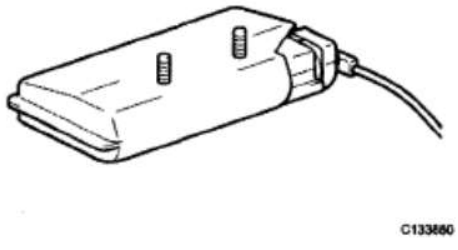


Fig. 423: Identifying Front Seat Side Airbag Assembly Removed From Vehicle
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

DISPOSAL

CAUTION: Before performing pre-disposal deployment of any SRS component, review and closely follow all applicable environmental and hazardous material regulations. Pre-disposal deployment may be considered hazardous material treatment.

1. PRECAUTION

HINT:

When scrapping a vehicle equipped with an SRS or disposing of the front seat side airbag assembly, be sure to deploy the airbag first in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the SERVICE DEPT. of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION:
- **An airbag or pretensioner may be activated by static electricity. To prevent this, be sure to touch a metal surface with your bare hands to discharge static electricity before performing this procedure.**
- **Never dispose of a front seat side airbag assembly with an**

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undeployed airbag.

- **The airbag produces an exploding sound when it is deployed, so perform the operation outdoors and where it will not create a nuisance to nearby residents.**
- **When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electrical noise.**
- **When deploying the airbag, perform the operation at least 10 m (33 ft.) away from the front seat side airbag assembly.**
- **The front seat side airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a front seat side airbag assembly with a deployed airbag.**
- **Do not apply water, etc. to a front seat side airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

2. **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 (See **DISPOSAL**).
b. Refer to PRECAUTION (See **AIRBAG SYSTEM**).
c. Disconnect the cable from the negative battery terminal.

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

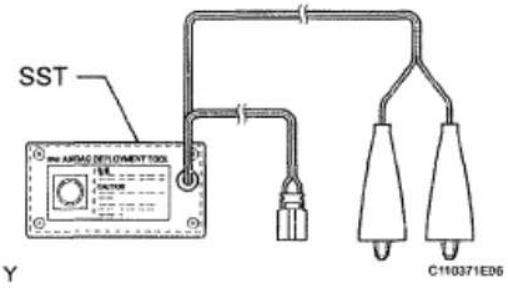


Fig. 424: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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d. Install SST.

1. Disconnect the airbag connector (yellow colored one) from the front seat side airbag assembly under the seat.

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

2. Connect the SST connector to the front seat side airbag assembly connector.

SST 09082-00700,09082-00820

NOTE: To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock.

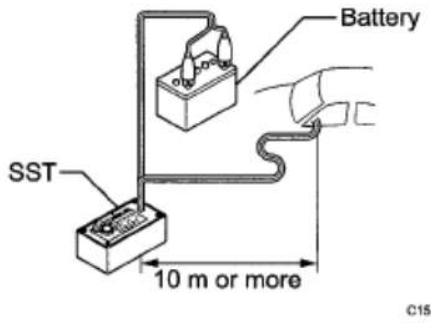


Fig. 425: Identifying SST Connection To Front Seat Side Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Move SST at least 10 m (33 ft.) away from the vehicle front side window.
4. Maintaining sufficient clearance for the SST wire harness in the front side window, close all doors and windows of the vehicle.

NOTE: Take care not to damage the SST wire harness.

5. Connect the red clip of SST to the battery positive (+) terminal and the black clip of SST to the battery negative (-) terminal.



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Fig. 426: Identifying SST Moving Distance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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.

CAUTION:
- **When deploying the airbag, make sure that no one is near the vehicle.**
- **The front seat side airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a front seat side airbag assembly with a deployed airbag.**
- **Do not apply water, etc. to a front seat side airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

HINT:

The airbag is deployed as the LED of the SST activation switch comes on.

3. **DISPOSE OF FRONT SEAT SIDE AIRBAG ASSEMBLY (WHEN NOT INSTALLED IN VEHICLE)**

NOTE:
- **When disposing of the front seat side airbag assembly, never use the customer's vehicle to deploy the airbag.**
- **Be sure to 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 (See **SPIRAL CABLE**).
b. Remove the front seat side airbag assembly.
   1. Remove the front seat assembly (See **REMOVAL** for Manual seat, See **REMOVAL** for Power seat).
   2. Remove the 2 nuts and the front seat side airbag assembly from the seatback assembly (See **DISASSEMBLY** for Manual seat, See **DISASSEMBLY** for Power seat).

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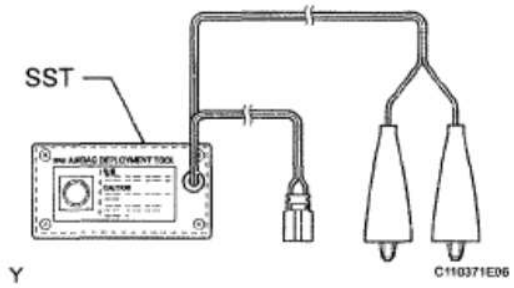


Fig. 427: Checking Function Of SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION:
- **When removing the front seat side airbag assembly, work must be started at least 90 seconds after the ignition switch is turned off and the negative (-) terminal cable is disconnected from the battery.**
- **When storing the front seat side airbag assembly, keep the airbag deployment side facing upward.**

c. Using braided wire, tie down the front seat side airbag assembly to an unneeded tire.

Wire:

Stripped wire section

1.25 mm^2 (0.0019 $in.^2$) or more

HINT:

To calculate the area of the stripped wire section:

Area = 3.14 x $(Diameter)^2$ divided by 4

CAUTION: If the wire is too thin or an alternative object is used to tie down the front seat side airbag assembly, it may be snapped by the shock when the airbag is deployed. Always use a wire for vehicle use with an area of at least 1.25 mm^2 (0.0019 $in.^2$).

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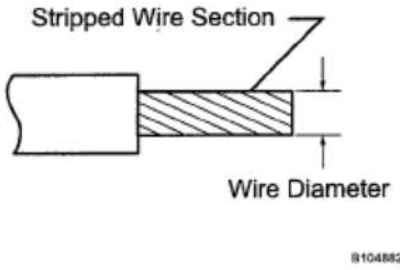


Fig. 428: Identifying Stripped Wire Section
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1. Install the 2 nuts to the front seat side airbag assembly.

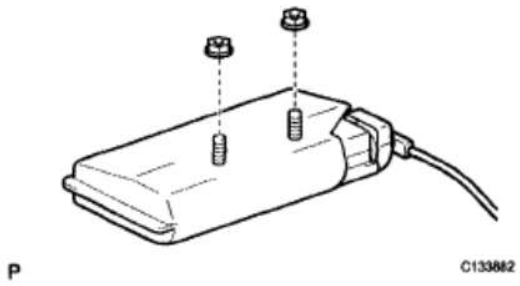


Fig. 429: Installing Nuts To Front Seat Side Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. Wind the wires around the stud bolts of the front seat side airbag assembly as shown in the illustration.

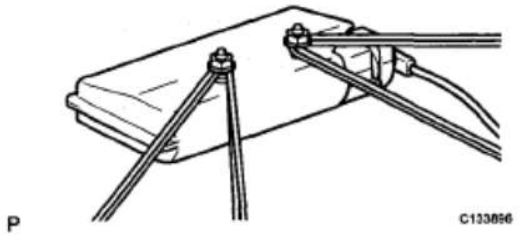


Fig. 430: Winding Wire Harness Around Stud Bolts Of Front Seat Side Airbag Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Position the front seat side airbag assembly inside the tire.

Minimum tire size:

Must exceed the following dimensions

Width:

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185 mm (7.28 in.)

Inner diameter:

360 mm (14.17 in.)

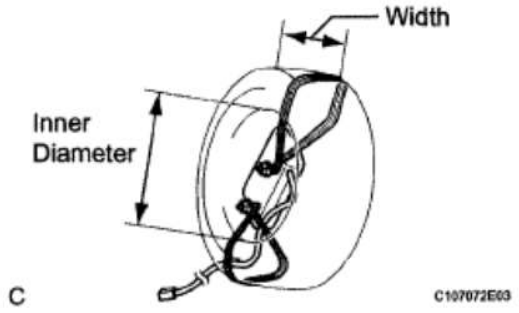


Fig. 431: Identifying Width And Inner Diameter Of Tire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CAUTION:

- **Make sure that the wires are tight. If there is slack in the wires, the front seat side airbag assembly may break loose due to the shock when the airbag is deployed.**
- **Always tie down the front seat side airbag assembly with the airbag deployment direction facing inside the tire.**

NOTE: **The tire will be marked by the airbag deployment, so use an unneeded tire.**

d. Install SST.
   1. Connect the SST connector to the front seat side airbag assembly connector.

SST 09082-00820

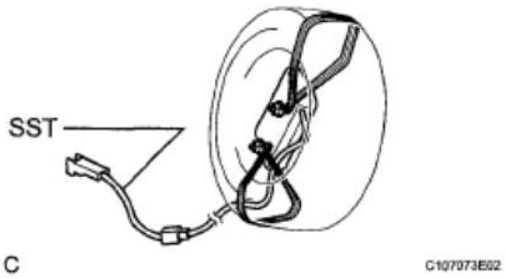


Fig. 432: Connecting SST Connector To Front Seat Side Airbag Assembly Connector
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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e. Place the tires.

1. Place at least 2 tires under the tire which the front seat side airbag assembly is tied to.
2. Place at least 2 tires over the tire which the front seat side airbag assembly is tied to. The top tire should have a wheel installed.

NOTE: Do not place the SST connector under the tire because it could be damaged.

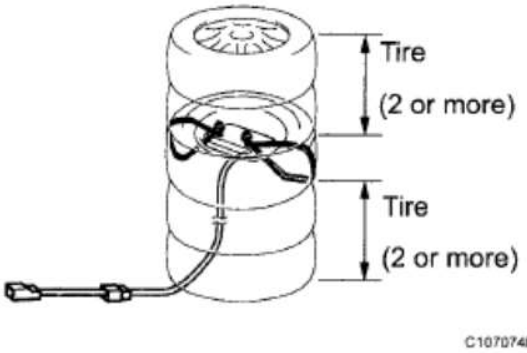


Fig. 433: Placing Front Seat Side Airbag Assembly On Tire
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. Tie the tires together with the 2 wires.

CAUTION: Make sure that the wires are tight. Looseness in the wires results in the tires breaking loose due to the shock when the airbag is deployed.



Fig. 434: Tying Tires Together With Wire Harnesses
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

f. Install SST.

1. Connect the SST connector.

SST 09082-00700

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NOTE: **To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock. Also, secure some slack for the SST wire harness inside the tire.**

2. Move SST at least 10 m (33 ft.) away from the airbag tied down to the tire.

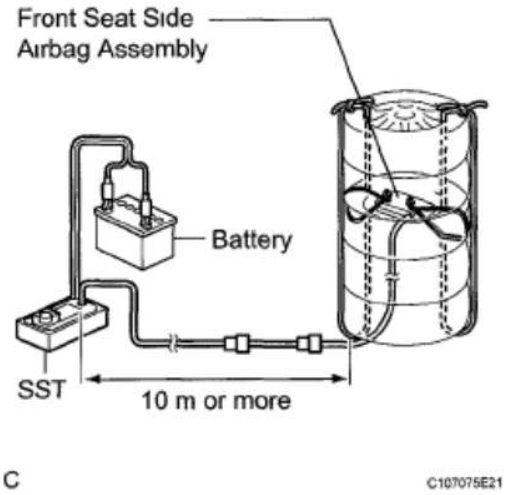


Fig. 435: Identifying SST Moving Distance
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

g. Deploy the airbag.
   1. Connect the red clip of SST to the battery positive (+) terminal and the black clip of SST to the battery negative (-) terminal.
   2. Check that no one is within a 10 m (33 ft.) radius of the tire which the front seat side airbag assembly is tied to.
   3. Press the SST activation switch and deploy the airbag.

CAUTION: When deploying the airbag, make sure that no one is near the tire.

HINT:

The airbag is deployed as the LED of the SST activation switch comes on.

h. Dispose of the front seat side airbag assembly.

CAUTION:
- **The front seat side airbag assembly becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a front seat side airbag assembly with a deployed airbag.**

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- **Do not apply water, etc. to a front seat side airbag assembly with a deployed airbag.**
- **Always wash your hands with water after completing the operation.**

1. Remove the front seat side airbag assembly from the tire.
2. Place the front seat side airbag assembly in a plastic bag, tie it tightly, and dispose of it according to local regulations.



Fig. 436: Placing Front Seat Airbag Assembly In Plastic Bag
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

CENTER AIRBAG SENSOR ASSEMBLY

COMPONENTS

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2009 Toyota Highlander Limited

2009 RESTRAINTS Supplemental Restraint System - Highlander

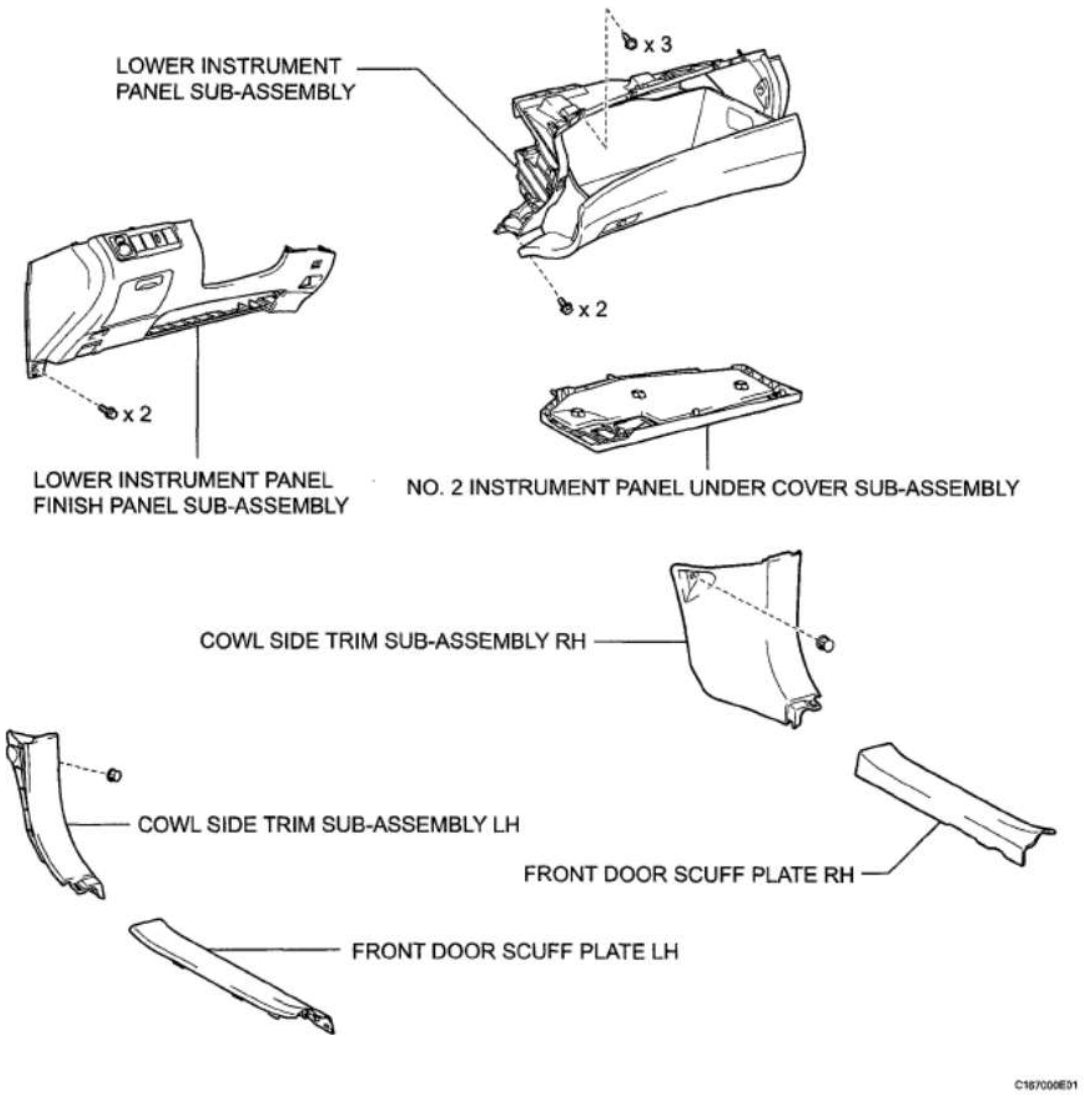


Fig. 437: Identifying Center Airbag Sensor Assembly Components With Torque Specification (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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2009 RESTRAINTS Supplemental Restraint System - Highlander

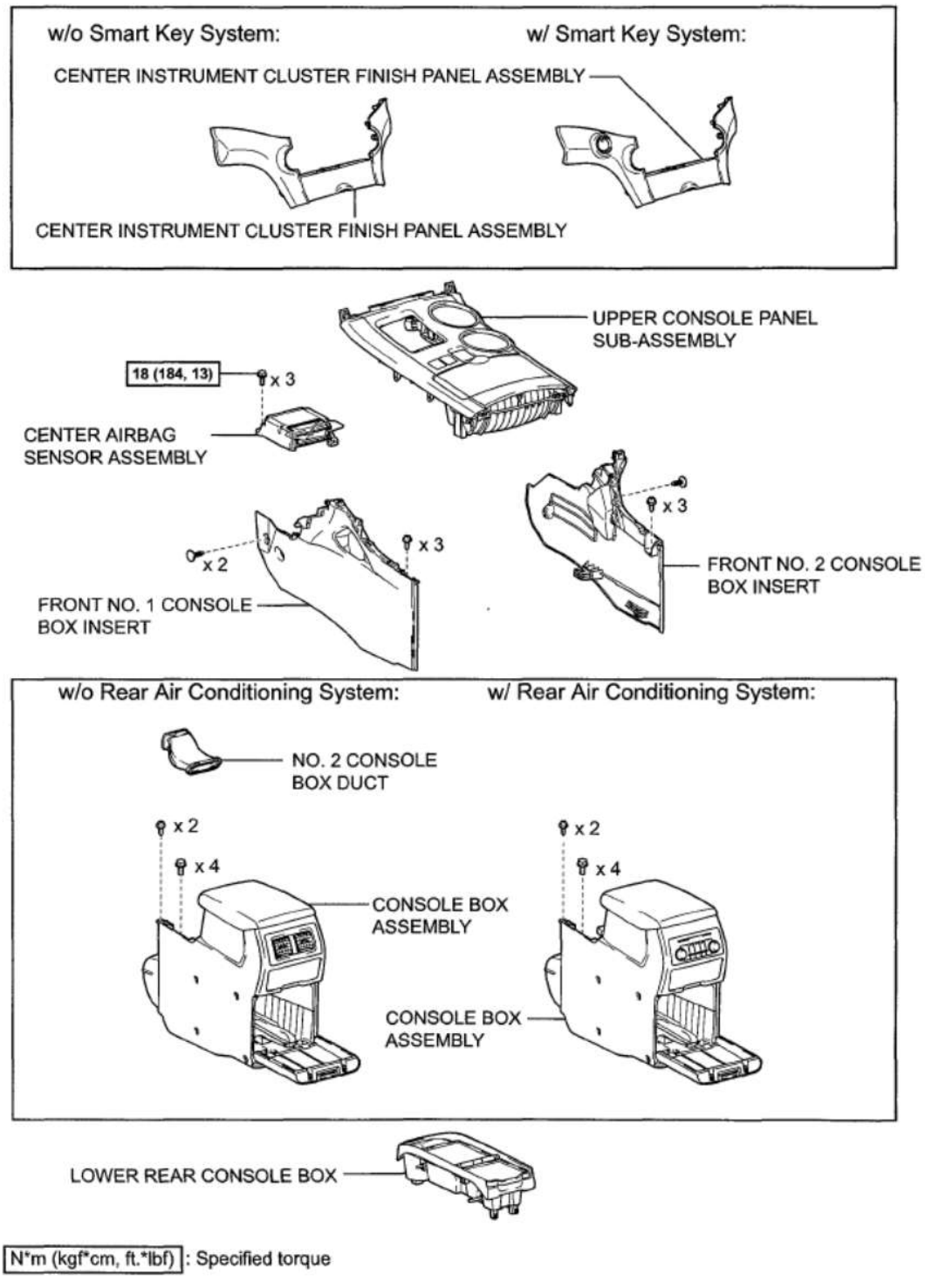


Fig. 438: Identifying Center Airbag Sensor Assembly Components With Torque Specification (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

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2009 RESTRAINTS Supplemental Restraint System - Highlander

1. **INSPECT CENTER AIRBAG SENSOR ASSEMBLY (VEHICLE NOT INVOLVED IN COLLISION)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
2. **INSPECT CENTER AIRBAG SENSOR ASSEMBLY (VEHICLE INVOLVED IN COLLISION AND AIRBAG HAS NOT DEPLOYED)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
3. **INSPECT CENTER AIRBAG SENSOR ASSEMBLY (VEHICLE INVOLVED IN COLLISION AND AIRBAG IS DEPLOYED)**
   a. Replace the center airbag sensor assembly.

CAUTION: Be sure to follow the correct removal and installation procedure.

HINT:

The center airbag sensor assembly should be replaced after any of the airbags has deployed, as it has been subjected to an impact.

REMOVAL

1. **PRECAUTION**

CAUTION: Be sure to read "PRECAUTION" thoroughly before servicing (See AIRBAG SYSTEM).

2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

3. **REMOVE CENTER INSTRUMENT CLUSTER FINISH PANEL ASSEMBLY (w/o Smart Key System)** (See **REMOVAL**)
4. **REMOVE CENTER INSTRUMENT CLUSTER FINISH PANEL ASSEMBLY (w/ Smart Key System)** (See **REMOVAL**)
5. **REMOVE FRONT DOOR SCUFF PLATE LH** (See **REMOVAL**)
6. **REMOVE COWL SIDE TRIM SUB-ASSEMBLY LH** (See **REMOVAL**)
7. **REMOVE LOWER INSTRUMENT PANEL FINISH PANEL SUB-ASSEMBLY (for Manual Air Conditioning System)** (See **REMOVAL**)
8. **REMOVE LOWER INSTRUMENT PANEL FINISH PANEL SUB-ASSEMBLY (for Automatic**

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Air Conditioning System) (See **REMOVAL**)

9. **REMOVE FRONT DOOR SCUFF PLATE RH**

   HINT:

   Use the same procedure for the RH side and the LH side (See **REMOVAL**).

10. **REMOVE COWL SIDE TRIM SUB-ASSEMBLY RH**

    HINT:

    Use the same procedure for the RH side and the LH side (See **REMOVAL**).

11. **REMOVE NO. 2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY** (See **REMOVAL**)
12. **REMOVE LOWER INSTRUMENT PANEL SUB-ASSEMBLY** (See **REMOVAL**)
13. **REMOVE UPPER CONSOLE PANEL SUB-ASSEMBLY** (See **REMOVAL**)
14. **REMOVE NO. 2 CONSOLE BOX DUCT (w/o Rear Air Conditioning System)** (See **REMOVAL**)
15. **REMOVE LOWER REAR CONSOLE BOX** (See **REMOVAL**)
16. **REMOVE CONSOLE BOX ASSEMBLY (w/o Rear Air Conditioning System)** (See **REMOVAL**)
17. **REMOVE CONSOLE BOX ASSEMBLY (w/ Rear Air Conditioning System)** (See **DISASSEMBLY**)
18. **REMOVE FRONT NO. 1 CONSOLE BOX INSERT** (See **REMOVAL**)
19. **REMOVE FRONT NO. 2 CONSOLE BOX INSERT** (See **REMOVAL**)
20. **REMOVE CENTER AIRBAG SENSOR ASSEMBLY**
    a. Disconnect the holder (with connectors).

    NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

    b. Remove the 3 bolts and center airbag sensor assembly.

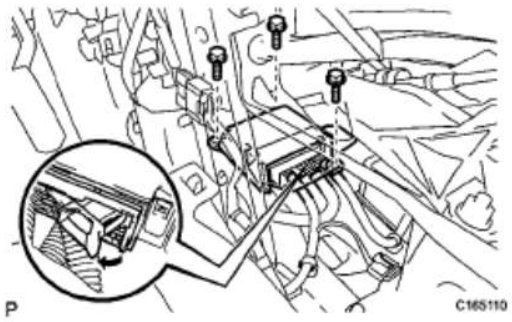


Fig. 439: Identifying Center Airbag Sensor Assembly And Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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2009 RESTRAINTS Supplemental Restraint System - Highlander

INSTALLATION

1. **INSTALL CENTER AIRBAG SENSOR ASSEMBLY**
   a. Check that the ignition switch is off.
   b. Check that the battery negative (-) cable is disconnected.

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

   c. Install the center airbag sensor assembly with the 3 bolts.

Torque: 18 N*m (184 kgf*cm, 13 ft.*lbf)

NOTE:

- **If the center airbag sensor assembly 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 center airbag sensor assembly, be careful that the SRS wiring does not interfere with other parts and that it is not pinched between other parts.**
- **When the ignition switch is first turned on (IG) after the center airbag sensor assembly has been replaced, make sure that no one is in the vehicle.**

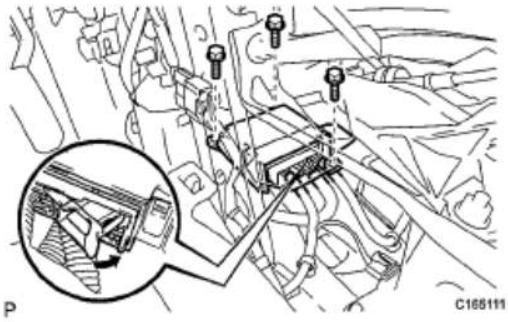


Fig. 440: Identifying Center Airbag Sensor Assembly With Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

   d. Check that there are no loose parts after installing the center airbag sensor assembly.
   e. Connect the holder (with connectors).

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

   f. Check that the waterproof sheet is properly set.
2. **INSTALL FRONT NO. 2 CONSOLE BOX INSERT** (See **INSTALLATION**)

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3. **INSTALL FRONT NO. 1 CONSOLE BOX INSERT** (See **INSTALLATION**)
4. **INSTALL CONSOLE BOX ASSEMBLY (w/o Rear Air Conditioning System)** (See **INSTALLATION**)
5. **INSTALL CONSOLE BOX ASSEMBLY (w/ Rear Air Conditioning System)** (See **INSTALLATION**)
6. **INSTALL LOWER REAR CONSOLE BOX** (See **INSTALLATION**)
7. **INSTALL NO. 2 CONSOLE BOX DUCT (w/o Rear Air Conditioning System)** (See **INSTALLATION**)
8. **INSTALL UPPER CONSOLE PANEL SUB-ASSEMBLY** (See **INSTALLATION**)
9. **INSTALL LOWER INSTRUMENT PANEL FINISH PANEL SUB-ASSEMBLY (for Manual Air Conditioning System)** (See **INSTALLATION**)
10. **INSTALL LOWER INSTRUMENT PANEL FINISH PANEL SUB-ASSEMBLY (for Automatic Air Conditioning System)** (See **INSTALLATION**)
11. **INSTALL COWL SIDE TRIM SUB-ASSEMBLY LH** (See **INSTALLATION**)
12. **INSTALL FRONT DOOR SCUFF PLATE LH** (See **INSTALLATION**)
13. **INSTALL LOWER INSTRUMENT PANEL SUB-ASSEMBLY** (See **INSTALLATION**)
14. **INSTALL NO. 2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY** (See **INSTALLATION**)
15. **INSTALL COWL SIDE TRIM SUB-ASSEMBLY RH**

    HINT:

    Use the same procedure for the RH side and the LH side (See **INSTALLATION**).

16. **INSTALL FRONT DOOR SCUFF PLATE RH**

    HINT:

    Use the same procedure for the RH side and the LH side (See **INSTALLATION**).

17. **INSTALL CENTER INSTRUMENT CLUSTER FINISH PANEL ASSEMBLY (w/o Smart Key System)** (See **INSTALLATION**)
18. **INSTALL CENTER INSTRUMENT CLUSTER FINISH PANEL ASSEMBLY (w/ Smart Key System)** (See **INSTALLATION**)
19. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

    NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

20. **INSPECT SRS WARNING LIGHT**
    a. Inspect the SRS warning light (See **DIAGNOSIS SYSTEM**).

FRONT AIRBAG SENSOR

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COMPONENTS

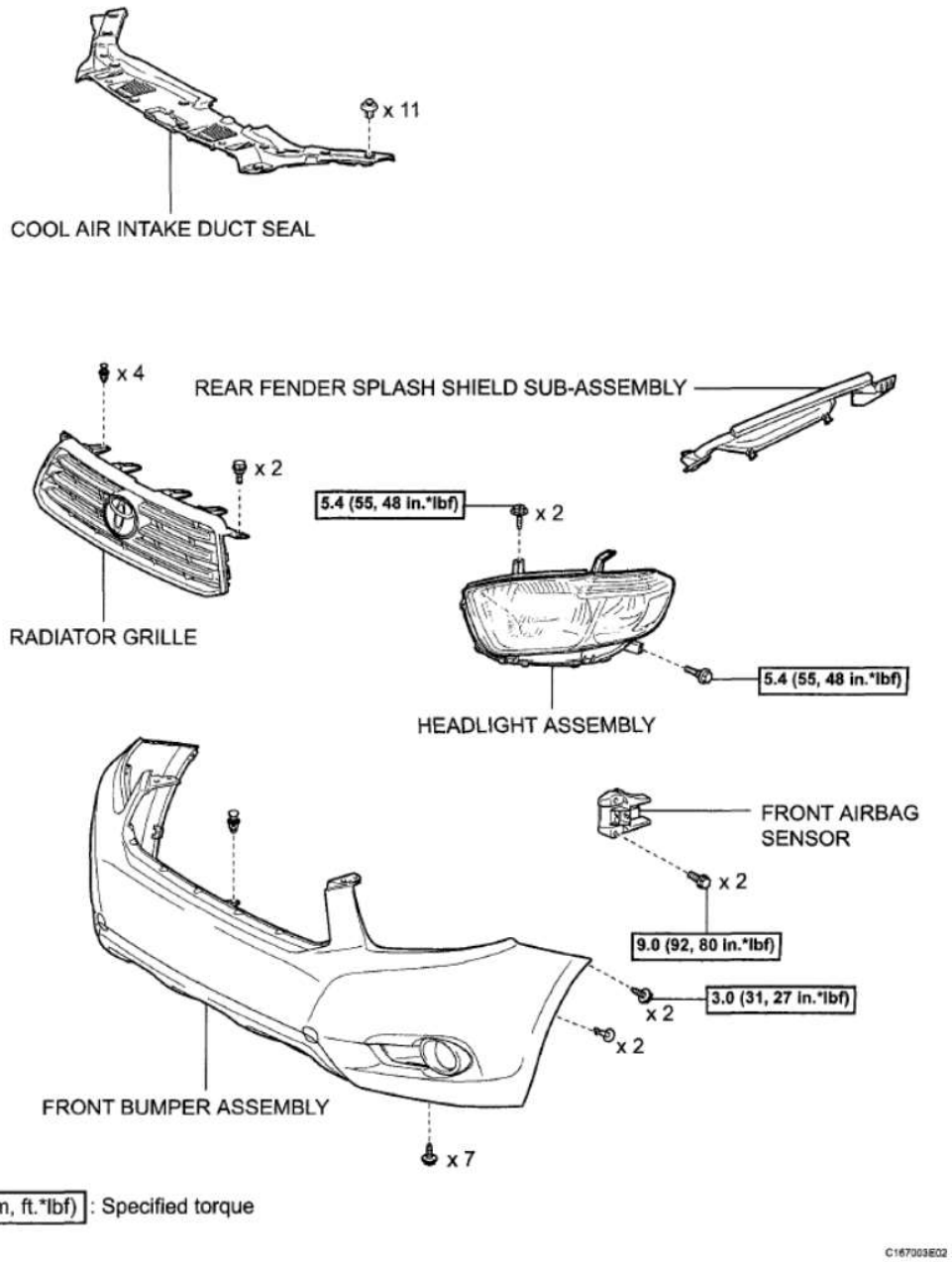


Fig. 441: Identifying Front Airbag Sensor Components With Torque Specification
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

1. **INSPECT FRONT AIRBAG SENSOR (VEHICLE NOT INVOLVED IN COLLISION)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
2. **INSPECT FRONT AIRBAG SENSOR (VEHICLE INVOLVED IN COLLISION AND AIRBAG**

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HAS NOT DEPLOYED)

a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).

b. If the front bumper of the vehicle or the area around it is damaged, check if there is any damage to the front airbag sensor. If there are any defects as mentioned below, replace the front airbag sensor with a new one:

- Cracks, dents or chips on the sensor housing.
- Cracks or other damage to the connector.
- Peeling off of the label or damage to the serial number.

CAUTION: For removal and installation of the front airbag sensor, be sure to follow the correct procedures.

3. **INSPECT FRONT AIRBAG SENSOR (VEHICLE INVOLVED IN COLLISION AND AIRBAG IS DEPLOYED)**

a. When airbags have deployed as the result of a collision, be certain to replace all front airbag sensors in the damaged area (anywhere in need of repair). Furthermore, it is also necessary to replace any front airbag sensors in undamaged areas that have registered a major collision, or which exhibit any of the following abnormalities.

- Cracks, dents or chips on the sensor housing.
- Cracks or other damage to the connector.
- Peeling off of the label or damage to the serial number.

CAUTION: For removal and installation of the front airbag sensor, be sure to follow the correct procedures.

REMOVAL

HINT:

- Use the same procedure for the RH side and LH side.
- The procedure listed below are for the LH side.

1. **PRECAUTION**

CAUTION: Be sure to read "PRECAUTION" thoroughly before servicing (See AIRBAG SYSTEM).

2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

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NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

3. **REMOVE COOL AIR INTAKE DUCT SEAL** (See **REMOVAL**)
4. **REMOVE RADIATOR GRILLE** (See **REMOVAL**)
5. **REMOVE FRONT BUMPER ASSEMBLY (w/o Fog Light)** (See **REMOVAL**)
6. **REMOVE FRONT BUMPER ASSEMBLY (w/ Fog Light)** (See **DISASSEMBLY**)
7. **REMOVE REAR FENDER SPLASH SHIELD SUB-ASSEMBLY** (See **DISASSEMBLY**)
8. **REMOVE HEADLIGHT ASSEMBLY** (See **DISASSEMBLY**)
9. **REMOVE FRONT AIRBAG SENSOR**
   a. Disconnect the connector from the front airbag sensor.

      NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

   b. Remove the 2 bolts.

      NOTE: Loosen the bolt while holding the front airbag sensor because the front airbag sensor claws and pin (stopper) are easily damaged.

   c. Disengage the 2 claws and pin, and remove the front airbag sensor from the body.

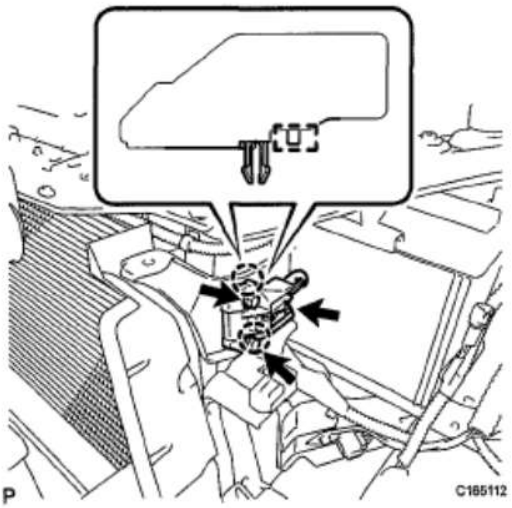


Fig. 442: Locating Claws And Pin
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

1. **INSTALL FRONT AIRBAG SENSOR**
   a. Check that the ignition switch is off.

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b. Check that the battery negative (-) cable is disconnected.

CAUTION: Wait for least 90 seconds after disconnecting the cable to prevent airbag deployment.

c. Temporarily install the front airbag sensor with the 2 claws and pin.
d. Install the front airbag sensor with the 2 bolts.

Torque: 9.0 N*m (92 kgf*cm, 80 in.*lbf)

NOTE:

- **If the front airbag sensor 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 front airbag sensor, be careful that the SRS wiring does not interfere with other parts and that it is not pinched between other parts.**
- **Make sure that the pin is securely inserted into the body hole.**
- **Tighten the bolt while holding the front airbag sensor because the front airbag sensor claws and pin (stopper) are easily damaged.**

e. Check that there are no loose parts after installing the front airbag sensor.
f. Connect the connector to the front airbag sensor.

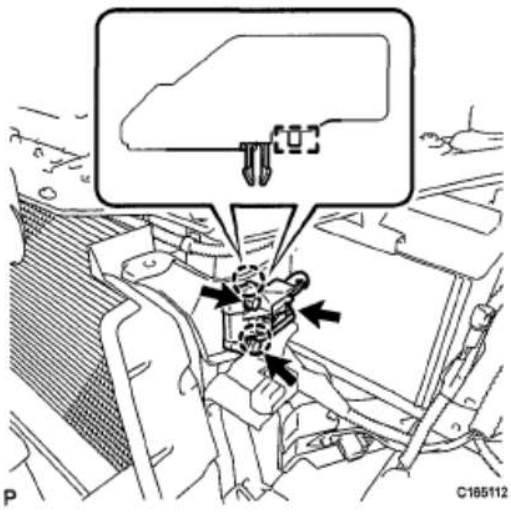


Fig. 443: Locating Claws And Pin
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

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2. **INSTALL HEADLIGHT ASSEMBLY** (See **INSTALLATION**)
3. **INSTALL REAR FENDER SPLASH SHIELD SUB-ASSEMBLY** (See **INSTALLATION**)
4. **INSTALL FRONT BUMPER ASSEMBLY (w/o Fog Light)** (See **INSTALLATION**)
5. **INSTALL FRONT BUMPER ASSEMBLY (w/ Fog Light)** (See **INSTALLATION**)
6. **INSTALL RADIATOR GRILLE** (See **INSTALLATION**)
7. **INSTALL COOL AIR INTAKE DUCT SEAL** (See **INSTALLATION**)
8. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).**

9. **VEHICLE PREPARATION FOR HEADLIGHT AIMING ADJUSTMENT** (See **ADJUSTMENT**)
10. **PREPARATION FOR HEADLIGHT AIMING (Using a headlight aim test machine)** (See **ADJUSTMENT**)
11. **PREPARATION FOR HEADLIGHT AIMING (Using a Screen)** (See **ADJUSTMENT**)
12. **INSPECT HEADLIGHT AIMING** (See **ADJUSTMENT**)
13. **ADJUST HEADLIGHT AIMING** (See **REASSEMBLY**)
14. **VEHICLE PREPARATION FOR FOG LIGHT AIMING ADJUSTMENT (w/ Fog Light)** (See **REMOVAL**)
15. **PREPARATION FOR FOG LIGHT AIMING (w/ Fog Light)** (See **ADJUSTMENT**)
16. **INSPECT FOG LIGHT AIMING (w/ Fog Light)** (See **ADJUSTMENT**)
17. **ADJUST FOG LIGHT AIMING (w/ Fog Light)** (See **REASSEMBLY**)
18. **INSPECT SRS WARNING LIGHT**
    a. Inspect the SRS warning light (See **DIAGNOSIS SYSTEM**).

SIDE AIRBAG SENSOR

COMPONENTS

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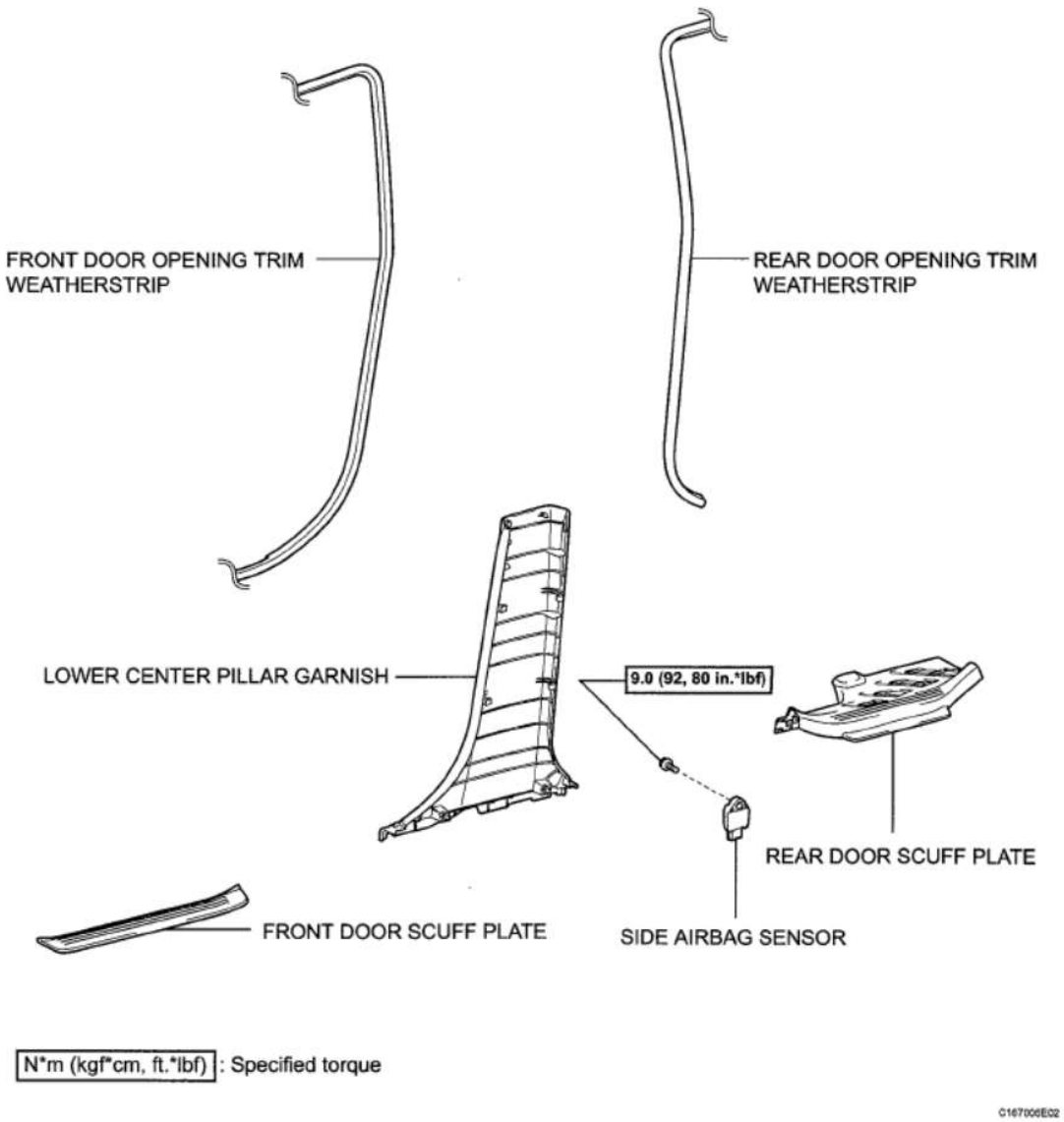


Fig. 444: Identifying Side Airbag Sensor Components With Torque Specification
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

1. **INSPECT SIDE AIRBAG SENSOR (VEHICLE NOT INVOLVED IN COLLISION)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
2. **INSPECT SIDE AIRBAG SENSOR (VEHICLE INVOLVED IN COLLISION AND AIRBAG HAS NOT DEPLOYED)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
   b. If the center pillar of the vehicle or the area around it is damaged, check if there is any damage to the side airbag sensor. If there are any defects as mentioned below, replace the side airbag sensor with a new one:

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- Cracks, dents or chips on the sensor housing.
- Cracks or other damage to the connector.
- Peeling off of the label or damage to the serial number.

CAUTION: For removal and installation of the side airbag sensor, be sure to follow the correct procedures.

3. **INSPECT SIDE AIRBAG SENSOR (VEHICLE INVOLVED IN COLLISION AND AIRBAG IS DEPLOYED)**
   a. When airbags have deployed as the result of a collision, be certain to replace all side airbag sensors in the damaged area (anywhere in need of repair). Furthermore, it is also necessary to replace any side airbag sensors in undamaged areas that have registered a major collision, or which exhibit any of the following abnormalities.
      - Cracks, dents or chips on the sensor housing.
      - Cracks or other damage to the connector.
      - Peeling off of the label or damage to the serial number.

CAUTION: For removal and installation of the side airbag sensor, be sure to follow the correct procedures.

REMOVAL

HINT:

- Use the same procedure for the RH side and LH side.
- The procedures listed below are for the LH side.

1. **PRECAUTION**

CAUTION: Be sure to read "PRECAUTION" thoroughly before servicing (See AIRBAG SYSTEM).

2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

3. **REMOVE FRONT DOOR SCUFF PLATE** (See **REMOVAL**)
4. **DISCONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP** (See **REMOVAL**)

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5. **REMOVE REAR DOOR SCUFF PLATE** (See **REMOVAL**)
6. **DISCONNECT REAR DOOR OPENING TRIM WEATHERSTRIP** (See **REMOVAL**)
7. **REMOVE LOWER CENTER PILLAR GARNISH** (See **REMOVAL**)
8. **REMOVE SIDE AIRBAG SENSOR**
   a. Disconnect the connector from the side airbag sensor.

NOTE: **When handling the airbag connector, take care not to damage the airbag wire harness.**

   b. Remove the bolt and disengage the pin, and remove the side airbag sensor.

NOTE: **Loosen the bolt while holding the side airbag sensor because the side airbag sensor pin (stopper) is easily damaged.**

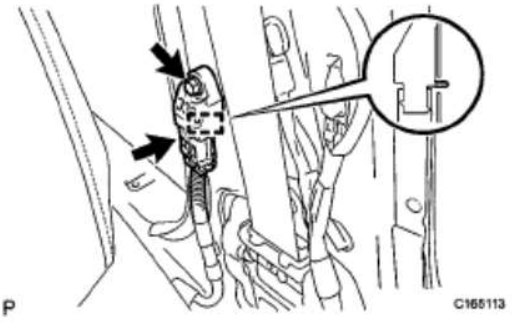


Fig. 445: Locating Side Airbag Sensor With Bolt And Pin
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

1. **INSTALL SIDE AIRBAG SENSOR**
   a. Check that the ignition switch is off.
   b. Check that the battery negative (-) cable is disconnected.

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

   c. Install the side airbag sensor with the bolt and pin.

Torque: 9.0 N*m (92 kgf*cm, 80 in.*lbf)

NOTE:
- **If the side airbag sensor has been dropped, or there are any cracks, dents or other defects in the case, bracket or connector, replace it with a new one.**

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- **When installing the side airbag sensor, be careful that the SRS wiring does not interfere with other parts and that it is not pinched between other parts.**

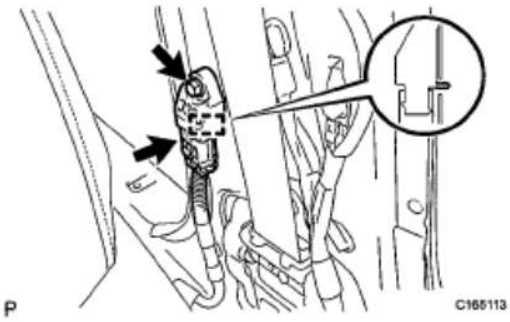


Fig. 446: Locating Side Airbag Sensor With Bolt And Pin
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **Make sure that the pin is securely inserted into the body hole.**
- **Tighten the bolt while holding the side airbag sensor because the side airbag sensor pin (stopper) is easily damaged.**

d. Check that there are no loose parts after installing the side airbag sensor.
e. Connect the connector to the side airbag sensor.

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

2. **INSTALL LOWER CENTER PILLAR GARNISH** (See **INSTALLATION**)
3. **CONNECT REAR DOOR OPENING TRIM WEATHERSTRIP** (See **INSTALLATION**)
4. **INSTALL REAR DOOR SCUFF PLATE** (See **INSTALLATION**)
5. **CONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP** (See **INSTALLATION**)
6. **INSTALL FRONT DOOR SCUFF PLATE** (See **INSTALLATION**)
7. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

8. **INSPECT SRS WARNING LIGHT**
   a. Inspect the SRS warning light (See **DIAGNOSIS SYSTEM**).

REAR AIRBAG SENSOR

COMPONENTS

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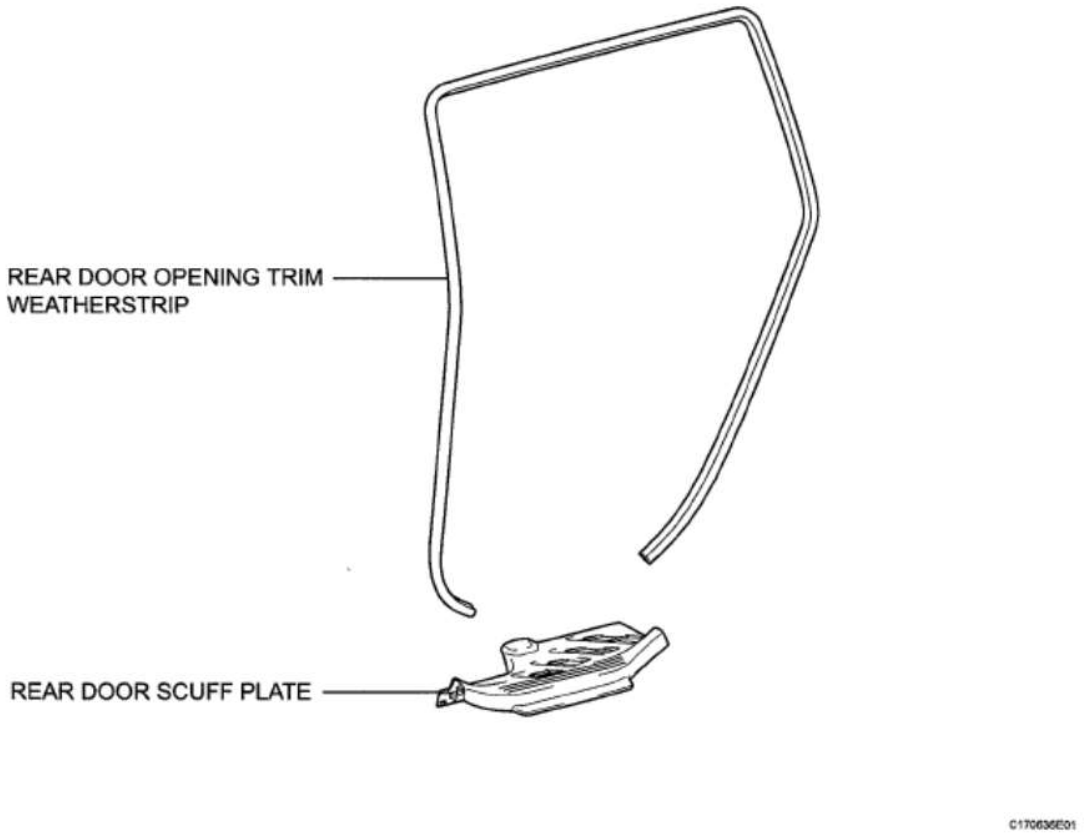


Fig. 447: Identifying Rear Airbag Sensor Components With Torque Specification (1 Of 7)
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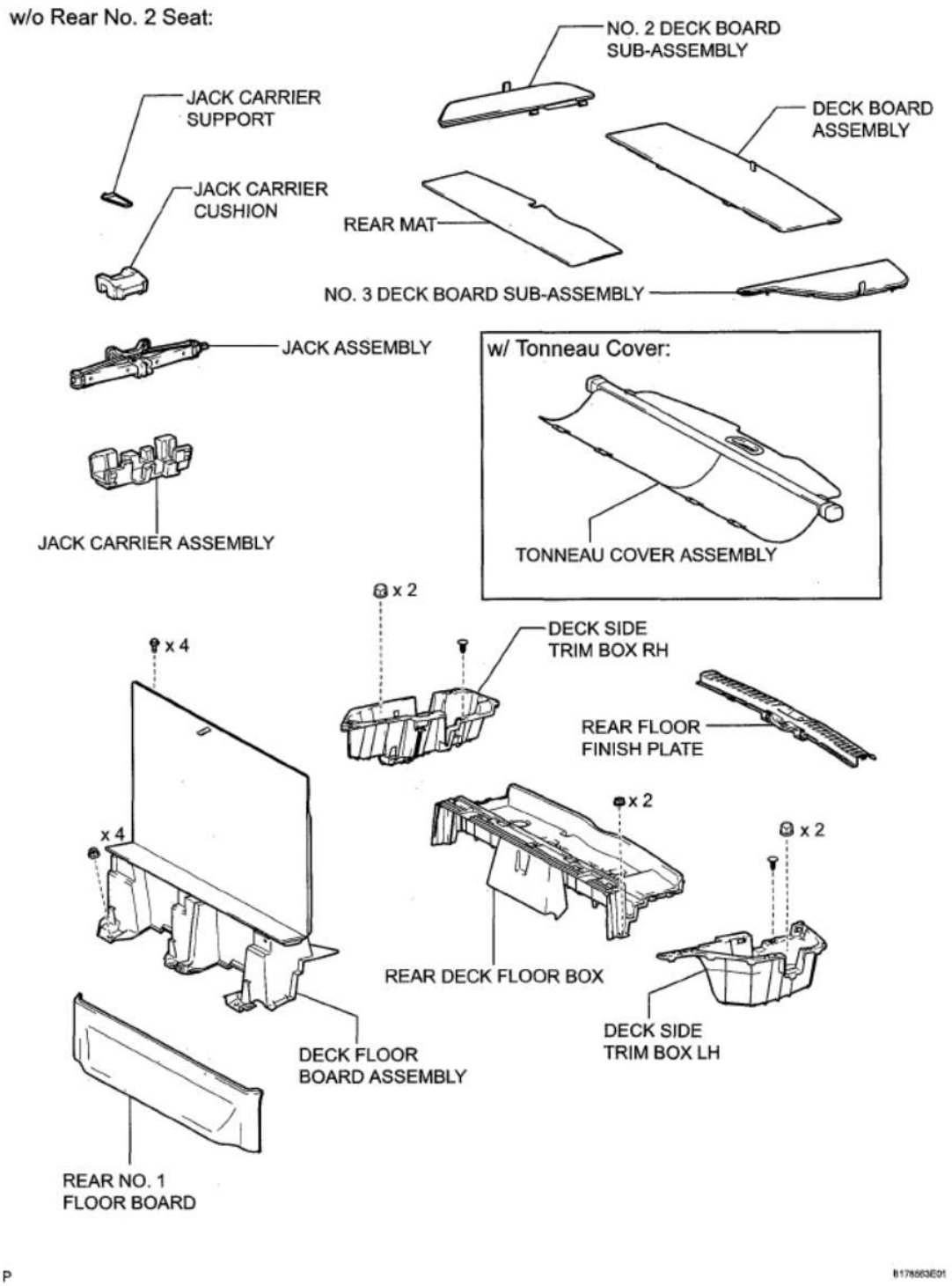


Fig. 448: Identifying Rear Airbag Sensor Components With Torque Specification (2 Of 7)
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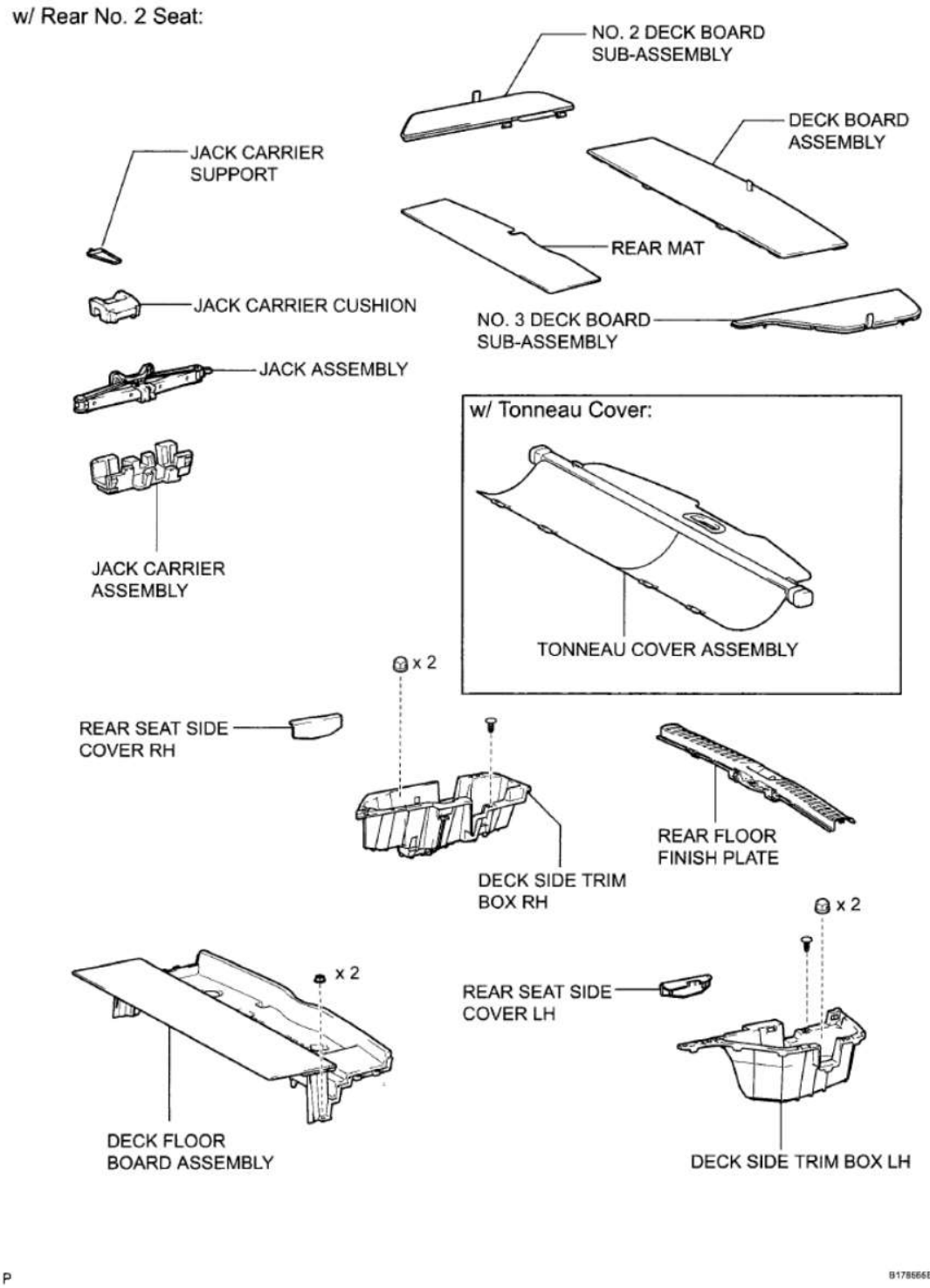


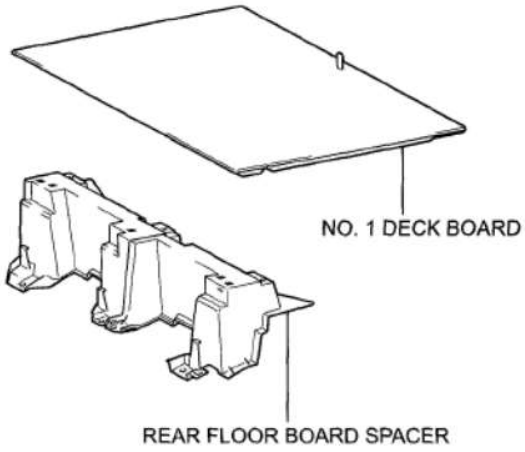
Fig. 449: Identifying Rear Airbag Sensor Components With Torque Specification (3 Of 7)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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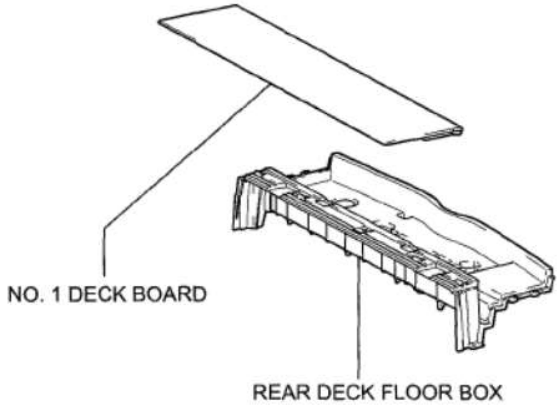
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w/o Rear No. 2 Seat:



w/ Rear No. 2 Seat:



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Fig. 450: Identifying Rear Airbag Sensor Components With Torque Specification (4 Of 7)
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w/ Rear No. 2 Seat:

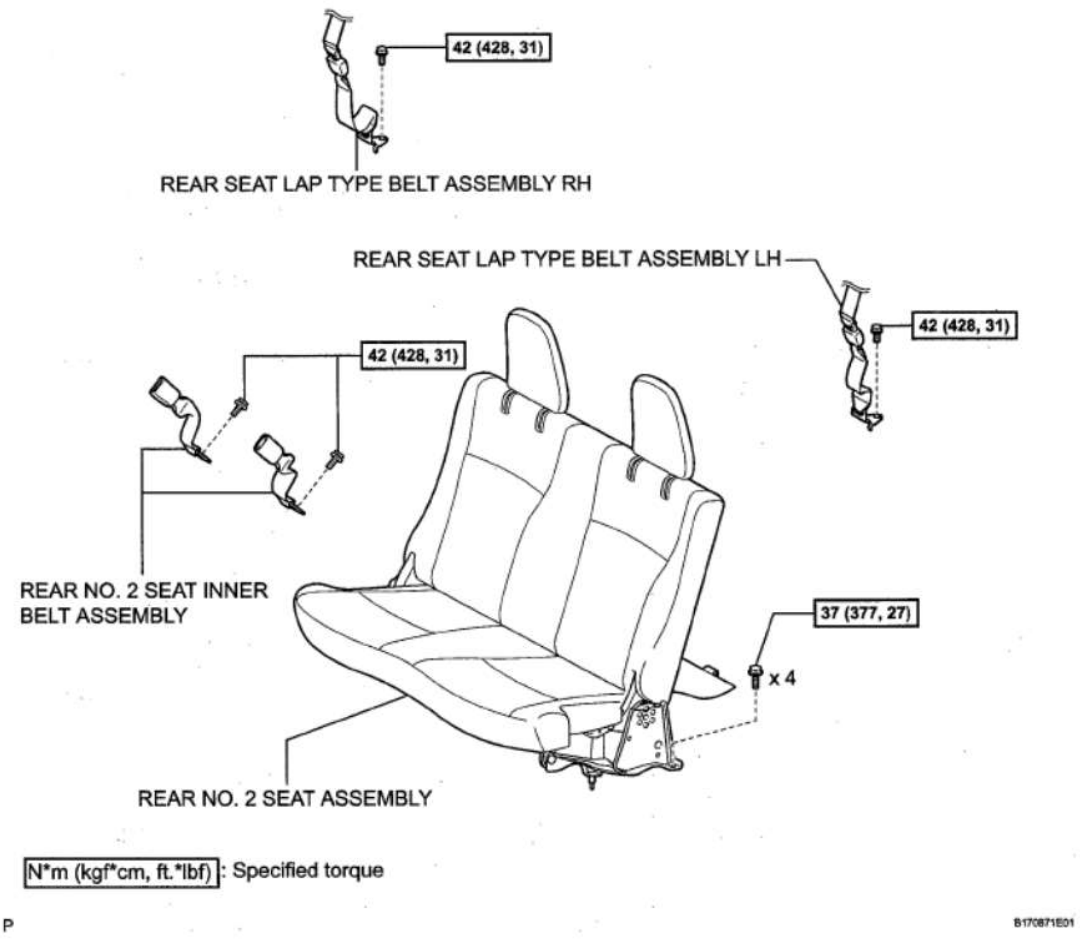


Fig. 451: Identifying Rear Airbag Sensor Components With Torque Specification (5 Of 7)
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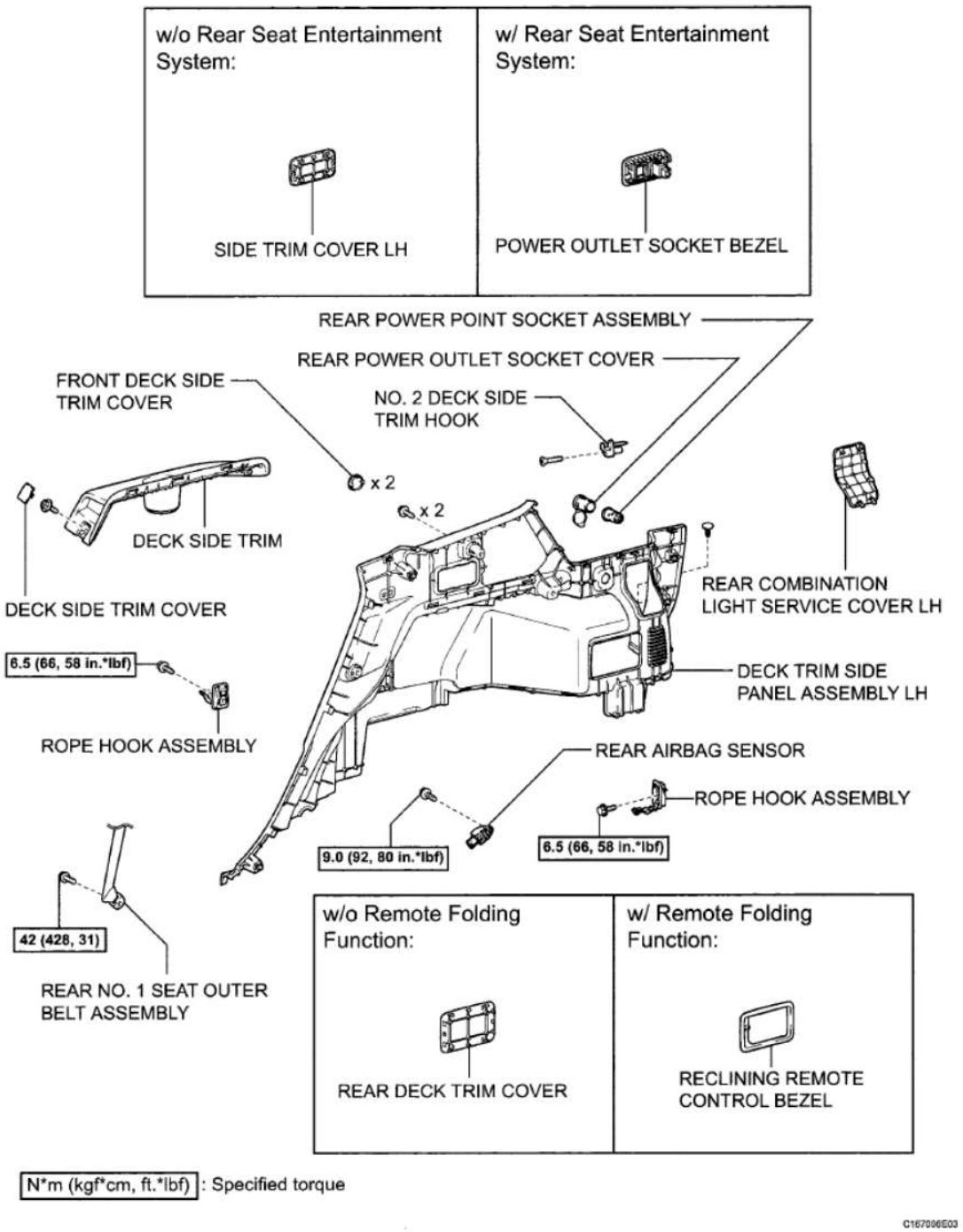


Fig. 452: Identifying Rear Airbag Sensor Components With Torque Specification (6 Of 7)
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for RH Side:

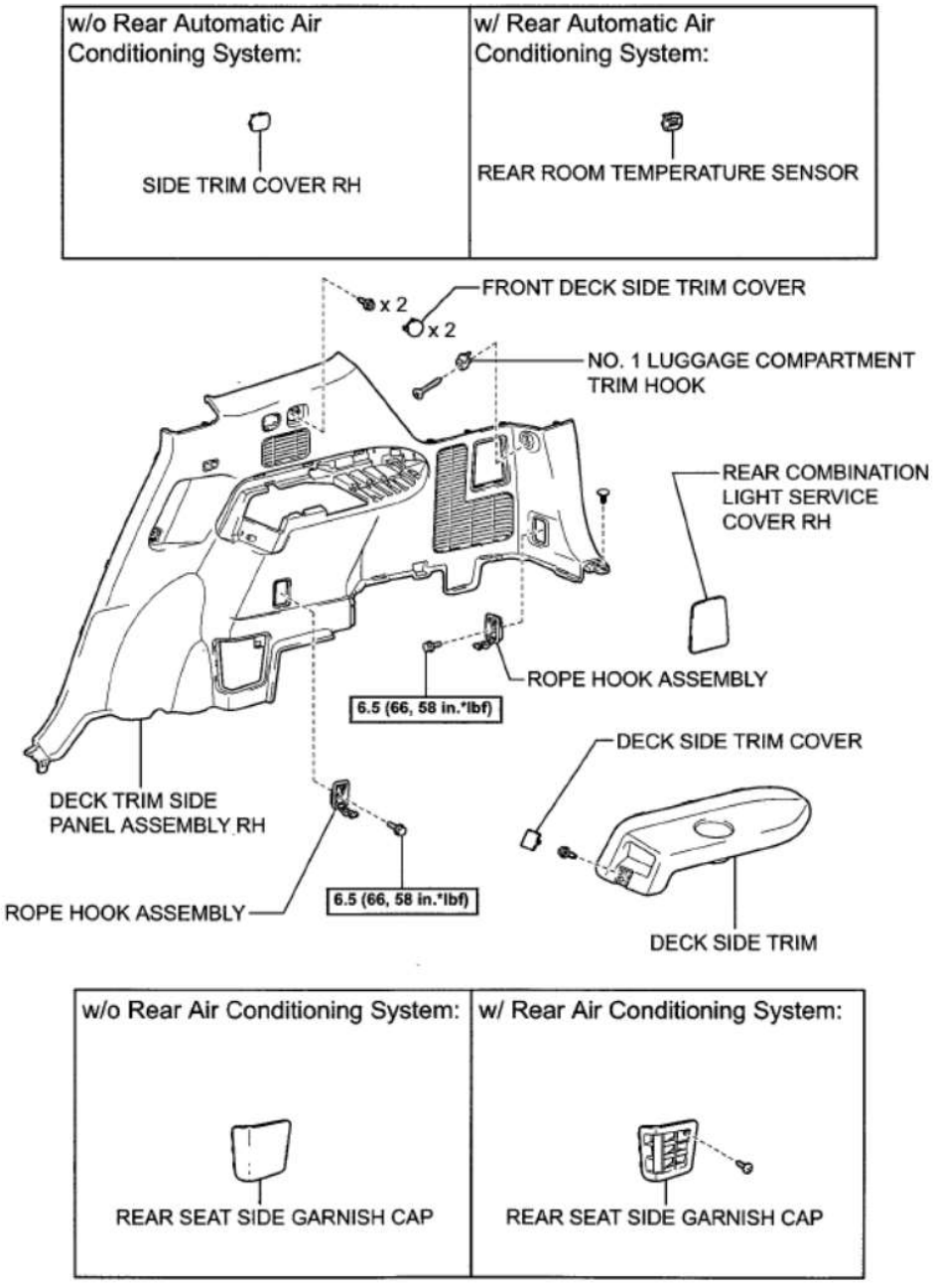


Fig. 453: Identifying Rear Airbag Sensor Components With Torque Specification (7 Of 7)
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ON-VEHICLE INSPECTION

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1. **INSPECT REAR AIRBAG SENSOR (VEHICLE NOT INVOLVED IN COLLISION)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
2. **INSPECT REAR AIRBAG SENSOR (VEHICLE INVOLVED IN COLLISION AND AIRBAG HAS NOT DEPLOYED)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
   b. If the quarter panel of the vehicle or the area around it is damaged, check if there is any damage to the rear airbag sensor. If there are any defects as mentioned below, replace the rear airbag sensor with a new one:
      - Cracks, dents or chips on the sensor housing.
      - Cracks or other damage to the connector.
      - Peeling off of the label or damage to the serial number.

CAUTION: For removal and installation of the rear airbag sensor, be sure to follow the correct procedures.

3. **INSPECT REAR AIRBAG SENSOR (VEHICLE INVOLVED IN COLLISION AND AIRBAG IS DEPLOYED)**
   a. When airbags have deployed as the result of a collision, be certain to replace all rear airbag sensors in the damaged area (anywhere in need of repair). Furthermore, it is also necessary to replace any rear airbag sensors in undamaged areas that have registered a major collision, or which exhibit any of the following abnormalities.
      - Cracks, dents or chips on the sensor housing.
      - Cracks or other damage to the connector.
      - Peeling off of the label or damage to the serial number.

CAUTION: For removal and installation of the rear airbag sensor, be sure to follow the correct procedures.

REMOVAL

HINT:

- Use the same procedure for the RH side and LH side.
- The procedures listed below are for the LH side.

1. **PRECAUTION**

CAUTION: Be sure to read "PRECAUTION" thoroughly before servicing (See AIRBAG SYSTEM).

2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**

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CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

3. **REMOVE REAR DOOR SCUFF PLATE** (See **REMOVAL**)
4. **DISCONNECT REAR DOOR OPENING TRIM WEATHERSTRIP** (See **REMOVAL**)
5. **REMOVE DECK BOARD ASSEMBLY** (See **REMOVAL**)
6. **REMOVE NO. 3 DECK BOARD SUB-ASSEMBLY** (See **REMOVAL**)
7. **REMOVE NO. 2 DECK BOARD SUB-ASSEMBLY** (See **REMOVAL**)
8. **REMOVE TONNEAU COVER ASSEMBLY (w/ Tonneau Cover)** (See **REMOVAL**)
9. **REMOVE REAR NO. 1 FLOOR BOARD (w/o Rear No. 2 Seat)** (See **REMOVAL**)
10. **REMOVE REAR SEAT SIDE COVER LH (w/ Rear No. 2 Seat)** (See **REMOVAL**)
11. **REMOVE DECK SIDE TRIM BOX LH** (See **REMOVAL**)
12. **REMOVE REAR SEAT SIDE COVER RH (w/ Rear No. 2 Seat)** (See **REMOVAL**)
13. **REMOVE JACK CARRIER SUPPORT**
14. **REMOVE JACK CARRIER CUSHION** (See **REMOVAL**)
15. **REMOVE JACK ASSEMBLY** (See **REMOVAL**)
16. **REMOVE JACK CARRIER ASSEMBLY** (See **REMOVAL**)
17. **REMOVE DECK SIDE TRIM BOX RH** (See **REMOVAL**)
18. **REMOVE REAR MAT** (See **REMOVAL**)
19. **REMOVE DECK FLOOR BOARD ASSEMBLY (w/o Rear No. 2 Seat)** (See **REMOVAL**)
20. **REMOVE DECK FLOOR BOARD ASSEMBLY (w/ Rear No. 2 Seat)** (See **REMOVAL**)
21. **REMOVE REAR DECK FLOOR BOX (w/o Rear No. 2 Seat)** (See **REMOVAL**)
22. **REMOVE NO. 1 DECK BOARD (w/o Rear No. 2 Seat)** (See **REMOVAL**)
23. **REMOVE NO. 1 DECK BOARD (w/ Rear No. 2 Seat)** (See **REMOVAL**)
24. **REMOVE REAR NO. 2 SEAT INNER BELT ASSEMBLY (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
25. **DISCONNECT REAR SEAT LAP TYPE BELT ASSEMBLY LH (w/ Rear No. 2 Seat)** (See **REMOVAL**)
26. **DISCONNECT REAR SEAT LAP TYPE BELT ASSEMBLY RH (w/ Rear No. 2 Seat)** (See **REMOVAL**)
27. **REMOVE REAR NO. 2 SEAT ASSEMBLY (w/ Rear No. 2 Seat)** (See **DISASSEMBLY**)
28. **REMOVE REAR FLOOR FINISH PLATE** (See **REMOVAL**)
29. **REMOVE REAR SEAT SIDE GARNISH CAP (for RH Side without Rear Air Conditioning System)** (See **REMOVAL**)
30. **REMOVE REAR SEAT SIDE GARNISH CAP (for RH Side with Rear Air Conditioning System)** (See **REMOVAL**)

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31. **REMOVE DECK SIDE TRIM COVER** (See **REMOVAL**)
32. **REMOVE DECK SIDE TRIM** (See **REMOVAL**)
33. **REMOVE SIDE TRIM COVER LH (for LH Side without Rear Seat Entertainment System)** (See **REMOVAL**)
34. **REMOVE POWER OUTLET SOCKET BEZEL (for LH Side with Rear Seat Entertainment System)** (See **REMOVAL**)
35. **REMOVE SIDE TRIM COVER RH (for RH Side without Rear Automatic Air Conditioning System)** (See **REMOVAL**)
36. **REMOVE REAR ROOM TEMPERATURE SENSOR (for RH Side with Rear Automatic Air Conditioning System)** (See **ROOM TEMPERATURE SENSOR (FOR REAR)**)
37. **REMOVE REAR COMBINATION LIGHT SERVICE COVER LH (for LH Side)** (See **REMOVAL**)
38. **REMOVE REAR COMBINATION LIGHT SERVICE COVER RH (for RH Side)** (See **REMOVAL**)
39. **REMOVE REAR POWER POINT SOCKET ASSEMBLY (for LH Side)** (See **REAR POWER OUTLET SOCKET**)
40. **REMOVE REAR POWER OUTLET SOCKET COVER (for LH Side)** (See **INSTALLATION**)
41. **REMOVE REAR DECK TRIM COVER (for LH Side without Remote Folding Function)** (See **REMOVAL**)
42. **REMOVE RECLINING REMOTE CONTROL BEZEL (for LH Side with Remote Folding Function)** (See **REMOVAL**)
43. **REMOVE ROPE HOOK ASSEMBLY** (See **REMOVAL**)
44. **REMOVE NO. 2 DECK SIDE TRIM HOOK (for LH Side)** (See **REMOVAL**)
45. **REMOVE NO. 1 LUGGAGE COMPARTMENT TRIM HOOK (for RH Side)** (See **REMOVAL**)
46. **REMOVE FRONT DECK SIDE TRIM COVER** (See **REMOVAL**)
47. **DISCONNECT REAR NO. 1 SEAT OUTER BELT ASSEMBLY** (See **REMOVAL**)
48. **REMOVE DECK TRIM SIDE PANEL ASSEMBLY LH (for LH Side)** (See **REMOVAL**)
49. **REMOVE DECK TRIM SIDE PANEL ASSEMBLY RH (for RH Side)** (See **REMOVAL**)
50. **REMOVE REAR AIRBAG SENSOR**
    a. Disconnect the connector from the rear airbag sensor.

NOTE: **When handling the airbag connector, take care not to damage the airbag wire harness.**

    b. Remove the bolt and disengage the pin, and remove the rear airbag sensor.

NOTE: **Loosen the bolt while holding the rear airbag sensor because the rear airbag sensor pin (stopper) is easily damaged.**

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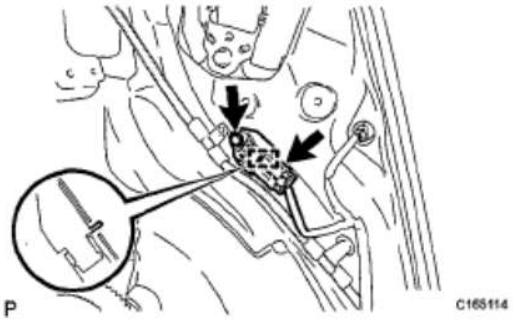


Fig. 454: Locating Rear Airbag Sensor With Bolt And Pin
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

1. **INSTALL REAR AIRBAG SENSOR**
   a. Check that the ignition switch is off.
   b. Check that the battery negative (-) cable is disconnected.

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

   c. Install the rear airbag sensor with the bolt and pin.

Torque: 9.0 N*m (92 kgf*cm, 80 in.*lbf)

NOTE:

- **If the rear airbag sensor has been dropped, or there are any cracks, dents or other defects in the case, bracket or connector, replace it with a new one.**
- **When installing the rear airbag sensor, be careful that the SRS wiring does not interfere with other parts and that it is not pinched between other parts.**
- **Make sure that the pin is securely inserted into the body hole.**
- **Tighten the bolt while holding the rear airbag sensor because the rear airbag sensor pin (stopper) is easily damaged.**

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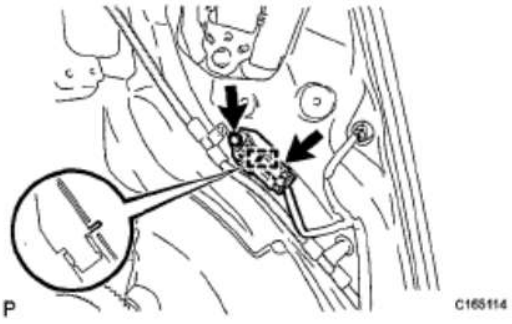


Fig. 455: Locating Rear Airbag Sensor With Bolt And Pin
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

d. Check that there are no loose parts after installing the rear airbag sensor.
e. Connect the connector to the rear airbag sensor.

NOTE: When handling the airbag connector, take care not to damage the airbag wire harness.

2. **INSTALL DECK TRIM SIDE PANEL ASSEMBLY LH (for LH Side)** (See **INSTALLATION**)
3. **INSTALL DECK TRIM SIDE PANEL ASSEMBLY RH (for RH Side)** (See **INSTALLATION**)
4. **CONNECT REAR NO. 1 SEAT OUTER BELT ASSEMBLY** (See **INSTALLATION**)
5. **INSTALL FRONT DECK SIDE TRIM COVER** (See **INSTALLATION**)
6. **INSTALL NO. 1 LUGGAGE COMPARTMENT TRIM HOOK (for RH Side)** (See **INSTALLATION**)
7. **INSTALL NO. 2 DECK SIDE TRIM HOOK (for LH Side)** (See **INSTALLATION**)
8. **INSTALL ROPE HOOK ASSEMBLY** (See **INSTALLATION**)
9. **INSTALL REAR DECK TRIM COVER (for LH Side without Remote Folding Function)** (See **INSTALLATION**)
10. **INSTALL RECLINING REMOTE CONTROL BEZEL (for LH Side with Remote Folding Function)** (See **INSTALLATION**)
11. **INSTALL REAR POWER OUTLET SOCKET COVER (for LH Side)** (See **INSTALLATION**)
12. **INSTALL REAR POWER POINT SOCKET ASSEMBLY (for LH Side)** (See **INSTALLATION**)
13. **INSTALL REAR COMBINATION LIGHT SERVICE COVER RH (for RH Side)** (See **INSTALLATION**)
14. **INSTALL REAR COMBINATION LIGHT SERVICE COVER LH (for LH Side)** (See **INSTALLATION**)
15. **INSTALL SIDE TRIM COVER RH (for RH Side without Rear Automatic Air Conditioning System)** (See **INSTALLATION**)
16. **INSTALL REAR ROOM TEMPERATURE SENSOR (for RH Side with Rear Automatic Air Conditioning System)** (See **INSPECTION**)
17. **INSTALL SIDE TRIM COVER LH (for LH Side without Rear Seat Entertainment System)** (See **INSTALLATION**)

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18. **INSTALL POWER OUTLET SOCKET BEZEL (for LH Side with Rear Seat Entertainment System)** (See **INSTALLATION**)
19. **INSTALL DECK SIDE TRIM** (See **INSTALLATION**)
20. **INSTALL DECK SIDE TRIM COVER** (See **INSTALLATION**)
21. **INSTALL REAR SEAT SIDE GARNISH CAP (for RH Side without Rear Air Conditioning System)** (See **INSTALLATION**)
22. **INSTALL REAR SEAT SIDE GARNISH CAP (for RH Side with Rear Air Conditioning System)** (See **INSTALLATION**)
23. **INSTALL REAR FLOOR FINISH PLATE** (See **INSTALLATION**)
24. **INSTALL REAR NO. 2 SEAT ASSEMBLY (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
25. **CONNECT REAR SEAT LAP TYPE BELT ASSEMBLY LH (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
26. **CONNECT REAR SEAT LAP TYPE BELT ASSEMBLY RH (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
27. **INSTALL REAR NO. 2 SEAT INNER BELT ASSEMBLY (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
28. **INSTALL NO. 1 DECK BOARD (w/o Rear No. 2 Seat)** (See **INSTALLATION**)
29. **INSTALL NO. 1 DECK BOARD (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
30. **INSTALL REAR DECK FLOOR BOX (w/o Rear No. 2 Seat)** (See **INSTALLATION**)
31. **INSTALL DECK FLOOR BOARD ASSEMBLY (w/o Rear No. 2 Seat)** (See **INSTALLATION**)
32. **INSTALL DECK FLOOR BOARD ASSEMBLY (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
33. **INSTALL REAR MAT** (See **INSTALLATION**)
34. **INSTALL DECK SIDE TRIM BOX RH** (See **INSTALLATION**)
35. **INSTALL JACK CARRIER ASSEMBLY** (See **INSTALLATION**)
36. **INSTALL JACK ASSEMBLY** (See **INSTALLATION**)
37. **INSTALL JACK CARRIER CUSHION** (See **INSTALLATION**)
38. **INSTALL JACK CARRIER SUPPORT**
39. **INSTALL REAR SEAT SIDE COVER RH (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
40. **INSTALL DECK SIDE TRIM BOX LH** (See **INSTALLATION**)
41. **INSTALL REAR SEAT SIDE COVER LH (w/ Rear No. 2 Seat)** (See **INSTALLATION**)
42. **INSTALL REAR NO. 1 FLOOR BOARD (w/o Rear No. 2 Seat)** (See **INSTALLATION**)
43. **INSTALL TONNEAU COVER ASSEMBLY (w/ Tonneau Cover)** (See **INSTALLATION**)
44. **INSTALL NO. 2 DECK BOARD SUB-ASSEMBLY** (See **INSTALLATION**)
45. **INSTALL NO. 3 DECK BOARD SUB-ASSEMBLY** (See **INSTALLATION**)
46. **INSTALL DECK BOARD ASSEMBLY** (See **INSTALLATION**)
47. **CONNECT REAR DOOR OPENING TRIM WEATHERSTRIP** (See **INSTALLATION**)
48. **INSTALL REAR DOOR SCUFF PLATE** (See **INSTALLATION**)
49. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

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NOTE: **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).**

50. **INSPECT SRS WARNING LIGHT**
    a. Inspect the SRS warning light (See **DIAGNOSIS SYSTEM**).

SEAT POSITION SENSOR

COMPONENTS

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for Manual Seat:

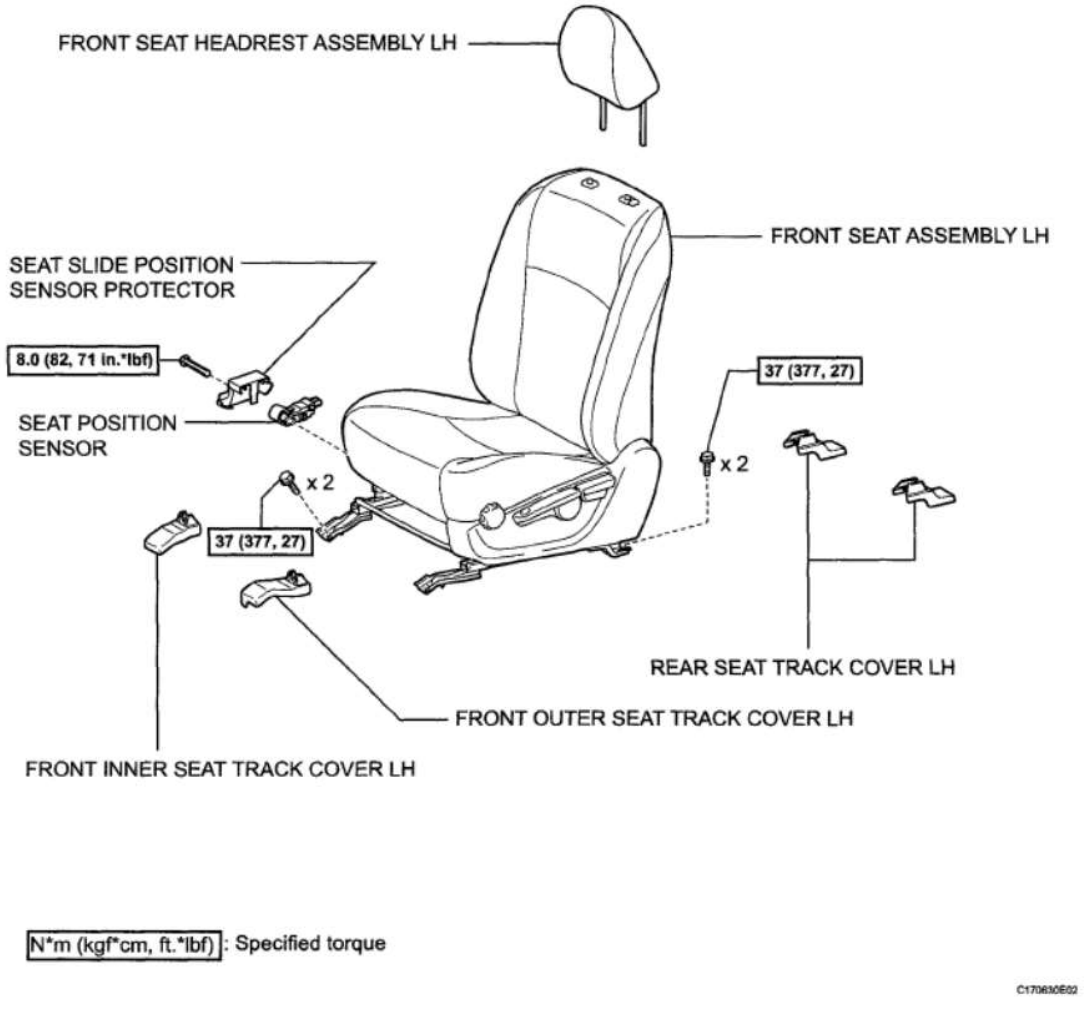


Fig. 456: Identifying Seat Position Sensor Components With Torque Specification (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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for Power Seat:

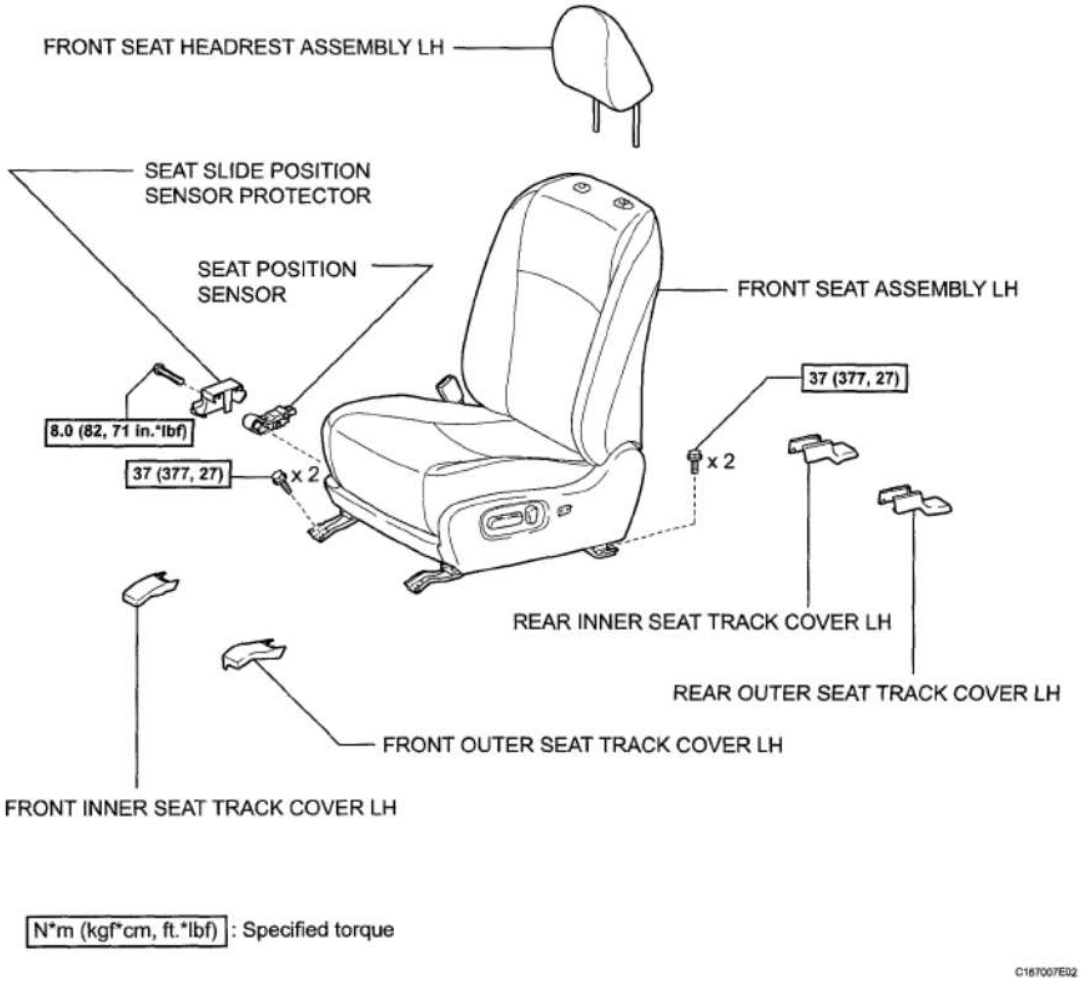


Fig. 457: Identifying Seat Position Sensor Components With Torque Specification (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

1. **INSPECT SEAT POSITION SENSOR (VEHICLE NOT INVOLVED IN COLLISION)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
2. **INSPECT SEAT POSITION SENSOR (VEHICLE INVOLVED IN COLLISION)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
   b. Even if an airbag was not deployed, check if there is any damage to the seat position sensor.

   If there are any defects as mentioned below, replace the seat position sensor with a new one:

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- Cracks, dents or chips on the sensor housing.
- Cracks or other damage to the connector.

CAUTION: For removal and installation procedures of the seat position sensor, be sure to follow the correct procedure.

REMOVAL

1. **PRECAUTION**

CAUTION: Be sure to read "PRECAUTION" thoroughly before servicing (See AIRBAG SYSTEM).

2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL (for Manual Seat)**

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

3. **REMOVE FRONT SEAT HEADREST ASSEMBLY LH (for Manual Seat)** (See **REMOVAL**)
4. **REMOVE FRONT OUTER SEAT TRACK COVER LH (for Manual Seat)** (See **REMOVAL**)
5. **REMOVE FRONT INNER SEAT TRACK COVER LH (for Manual Seat)** (See **REMOVAL**)
6. **REMOVE REAR SEAT TRACK COVER LH (for Manual Seat)** (See **REMOVAL**)
7. **REMOVE FRONT SEAT ASSEMBLY LH (for Manual Seat)** (See **REMOVAL**)
8. **REMOVE FRONT SEAT HEADREST ASSEMBLY LH (for Power Seat)** (See **REMOVAL**)
9. **REMOVE FRONT OUTER SEAT TRACK COVER LH (for Power Seat)** (See **REMOVAL**)
10. **REMOVE FRONT INNER SEAT TRACK COVER LH (for Power Seat)** (See **REMOVAL**)
11. **REMOVE REAR OUTER SEAT TRACK COVER LH (for Power Seat)** (See **REMOVAL**)
12. **REMOVE REAR INNER SEAT TRACK COVER LH (for Power Seat)** (See **REMOVAL**)
13. **REMOVE FRONT SEAT ASSEMBLY LH (for Power Seat)** (See **REMOVAL**)
14. **REMOVE SEAT POSITION SENSOR**
    a. Disconnect the connector.
    b. Using a "TORX" socket wrench (T30), remove the "TORX" screw and seat position sensor with the seat slide position sensor protector.

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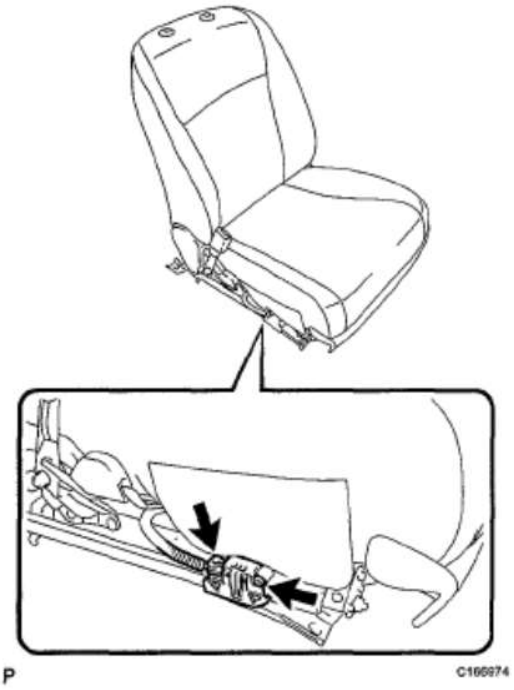


Fig. 458: Locating "TORX" Screw And Seat Position Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

c. Remove the seat position sensor from the seat slide position sensor protector as shown in the illustration.

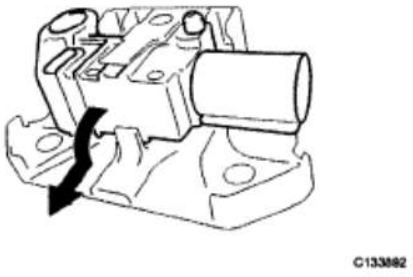


Fig. 459: Removing Seat Position Sensor (For Power Seat)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

1. **INSTALL SEAT POSITION SENSOR**
   a. Install the seat position sensor to the seat slide position sensor protector with the pin as shown in the illustration.

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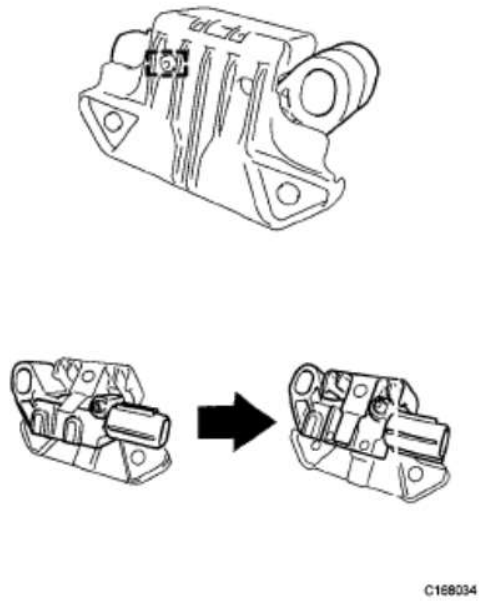


Fig. 460: Installing Seat Position Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Using a 1.3 mm (0.051 in.) feeler gauge, temporarily install the seat position sensor.

NOTE:

- **If the seat position sensor has been dropped, or there are any cracks, dents or other defects in the case or connector, replace the seat position sensor with a new one.**
- **When installing the seat position sensor, be careful that the SRS wiring does not interfere with other parts and that it is not pinched between other parts.**

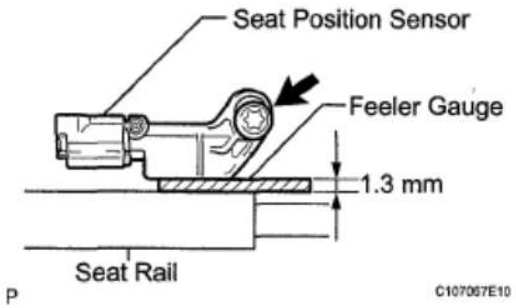


Fig. 461: Installing Seat Position Sensor And Using Feeler Gauge
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HINT:

Be sure that the clearance between the seat position sensor and the seat rail is within 0.6 mm (0.024 in.) to 2.0 mm (0.079 in.).

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c. Using a "TORX" socket wrench (T30), tighten the "TORX" screw to install the seat position sensor.

Torque: 8.0 N*m (82 kgf*cm, 71 in.*lbf)

d. Make sure that the clearance between the seat position sensor and the seat rail is within 0.6 mm (0.024 in.) to 2.0 mm (0.079 in.).
e. Connect the connector.
f. Check that there are no loose parts after installing the seat position sensor.

2. **INSTALL FRONT SEAT ASSEMBLY LH (for Manual Seat)** (See **INSTALLATION**)
3. **INSPECT FRONT SEAT SLIDE ADJUSTER LOCK (for Manual Seat)** (See **INSTALLATION**)
4. **INSTALL REAR SEAT TRACK COVER LH (for Manual Seat)** (See **INSTALLATION**)
5. **INSTALL FRONT INNER SEAT TRACK COVER LH (for Manual Seat)** (See **INSTALLATION**)

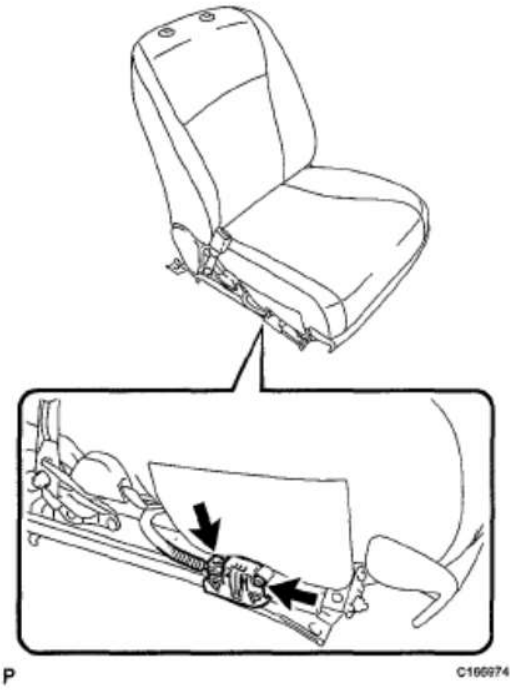


Fig. 462: Locating "TORX" Screw And Seat Position Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

6. **INSTALL FRONT OUTER SEAT TRACK COVER LH (for Manual Seat)** (See **INSTALLATION**)
7. **INSTALL FRONT SEAT HEADREST ASSEMBLY LH (for Manual Seat)** (See **INSTALLATION**)
8. **INSTALL FRONT SEAT ASSEMBLY LH (for Power Seat)** (See **INSTALLATION**)
9. **INSTALL REAR INNER SEAT TRACK COVER LH (for Power Seat)** (See **INSTALLATION**)
10. **INSTALL REAR OUTER SEAT TRACK COVER LH (for Power Seat)** (See **INSTALLATION**)

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11. **INSTALL FRONT INNER SEAT TRACK COVER LH (for Power Seat)** (See **INSTALLATION**)
12. **INSTALL FRONT OUTER SEAT TRACK COVER LH (for Power Seat)** (See **INSTALLATION**)
13. **INSTALL FRONT SEAT HEADREST ASSEMBLY LH (for Power Seat)** (See **INSTALLATION**)
14. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL (for Manual Seat)**

NOTE: **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).**

15. **INSPECT FRONT SEAT ASSEMBLY (for Power Seat)** (See **INSTALLATION**)
16. **INSPECT SRS WARNING LIGHT**
    a. Inspect the SRS warning light (See **DIAGNOSIS SYSTEM**).

OCCUPANT CLASSIFICATION ECU

COMPONENTS

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for Manual Seat:

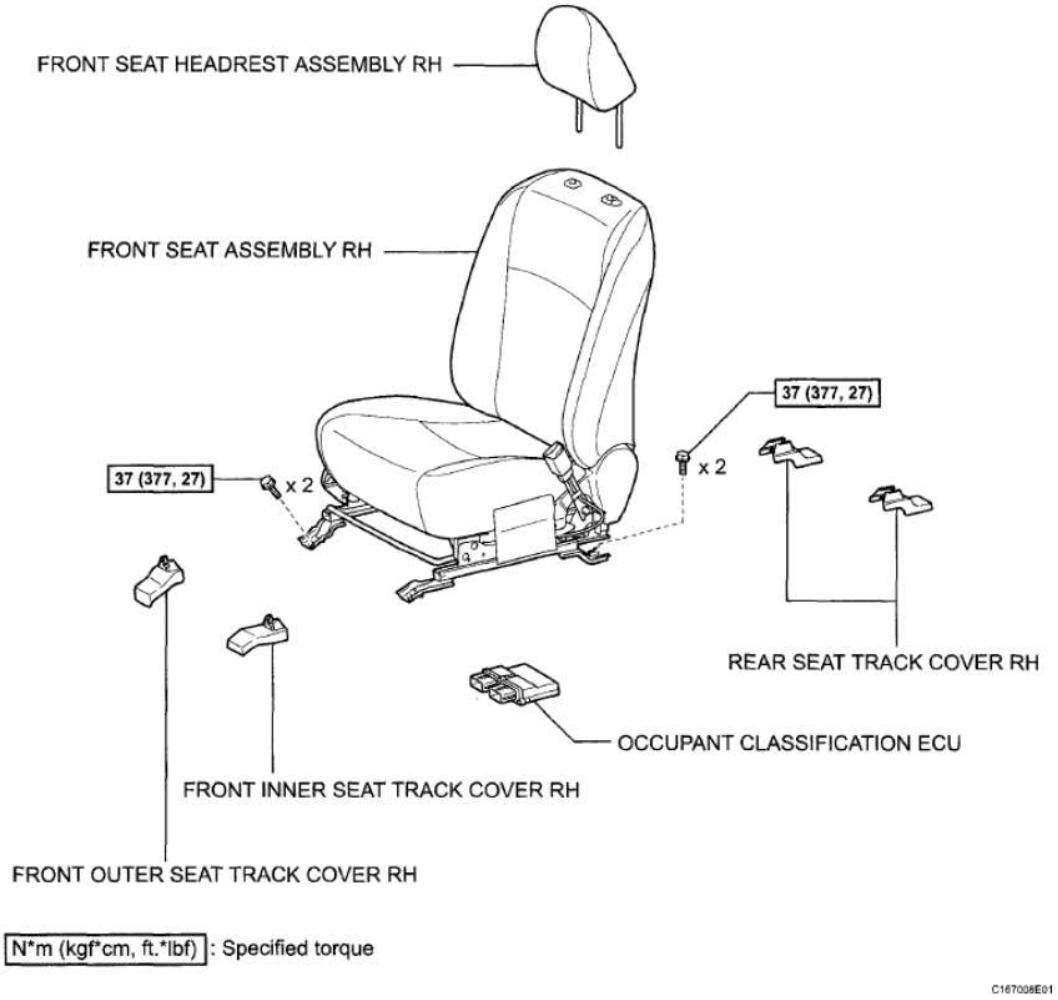


Fig. 463: Identifying Occupant Classification ECU Components With Torque Specification (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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for Power Seat:

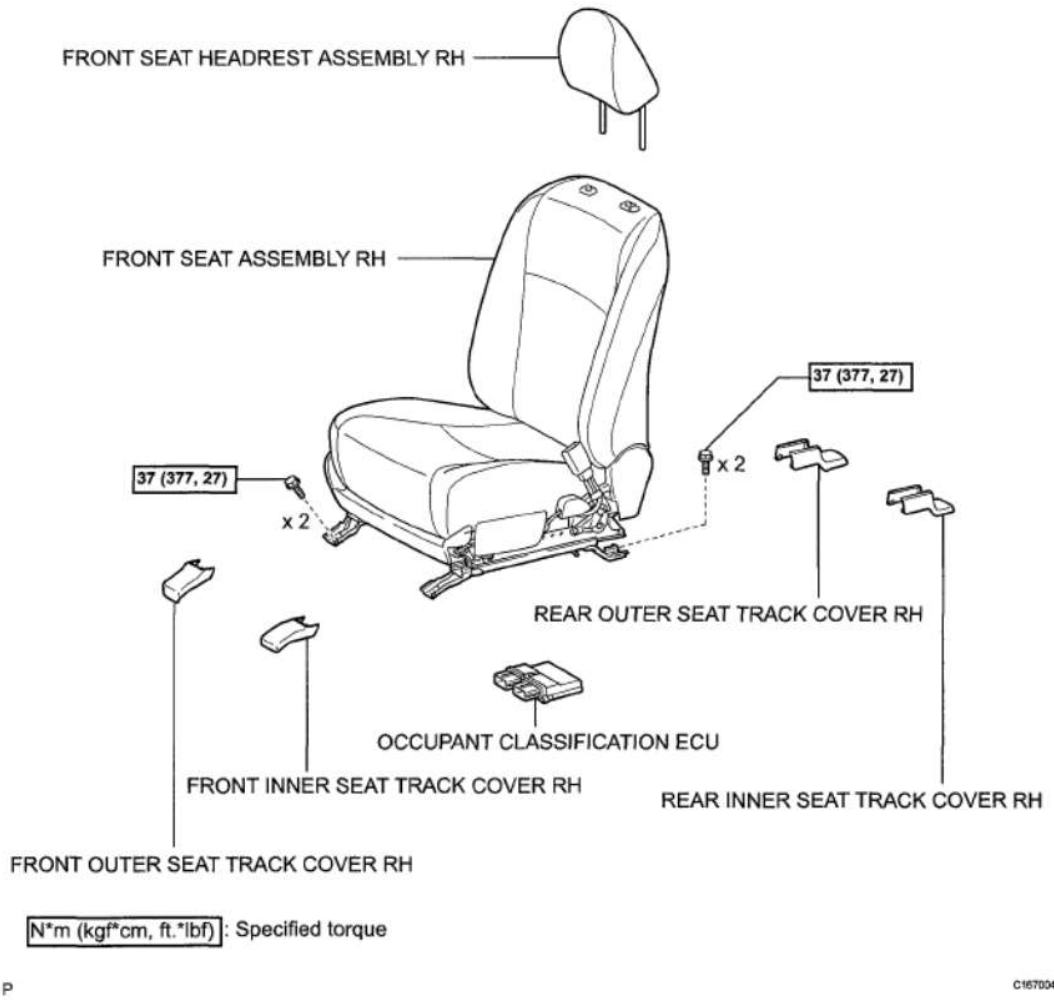


Fig. 464: Identifying Occupant Classification ECU Components With Torque Specification (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ON-VEHICLE INSPECTION

1. **INSPECT OCCUPANT CLASSIFICATION ECU (VEHICLE NOT INVOLVED IN COLLISION)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
2. **INSPECT OCCUPANT CLASSIFICATION ECU (VEHICLE INVOLVED IN COLLISION)**
   a. Perform a diagnostic system check (See **DTC CHECK/CLEAR**).
   b. Even if an airbag was not deployed, check if there is any damage to the occupant classification ECU. If there are any defects as mentioned below, replace the occupant classification ECU with a new one:
      - Cracks, dents or chips on the case.

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- Cracks or other damage to the connector.

CAUTION: For removal and installation procedures of the occupant classification ECU, be sure to follow the correct procedure.

REMOVAL

1. **PRECAUTION**

CAUTION: Be sure to read "PRECAUTION" thoroughly before servicing (See AIRBAG SYSTEM).

2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL (for Manual Seat)**

CAUTION: Wait for at least 90 seconds after disconnecting the cable to prevent airbag deployment.

NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

3. **REMOVE FRONT SEAT HEADREST ASSEMBLY RH (for Manual Seat)**

HINT:

Use the same procedure for the RH side and the LH side (See **REMOVAL**).

4. **REMOVE FRONT OUTER SEAT TRACK COVER RH (for Manual Seat)**

HINT:

Use the same procedure for the RH side and the LH side (See **REMOVAL**).

5. **REMOVE FRONT INNER SEAT TRACK COVER RH (for Manual Seat)**

HINT:

Use the same procedure for the RH side and the LH side (See **REMOVAL**).

6. **REMOVE REAR SEAT TRACK COVER RH (for Manual Seat)**

HINT:

Use the same procedure for the RH side and the LH side (See **REMOVAL**).

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7. **REMOVE FRONT SEAT ASSEMBLY RH (for Manual Seat)**

   HINT:

   Use the same procedure for the RH side and the LH side (See **REMOVAL**).

8. **REMOVE FRONT SEAT HEADREST ASSEMBLY RH (for Power Seat)**

   HINT:

   Use the same procedure for the RH side and the LH side (See **REMOVAL**).

9. **REMOVE FRONT OUTER SEAT TRACK COVER RH (for Power Seat)**

   HINT:

   Use the same procedure for the RH side and the LH side (See **REMOVAL**).

10. **REMOVE FRONT INNER SEAT TRACK COVER RH (for Power Seat)**

    HINT:

    Use the same procedure for the RH side and the LH side (See **REMOVAL**).

11. **REMOVE REAR OUTER SEAT TRACK COVER RH (for Power Seat)**

    HINT:

    Use the same procedure for the RH side and the LH side (See **REMOVAL**).

12. **REMOVE REAR INNER SEAT TRACK COVER RH (for Power Seat)**

    HINT:

    Use the same procedure for the RH side and the LH side (See **REMOVAL**).

13. **REMOVE FRONT SEAT ASSEMBLY RH (for Power Seat)**

    HINT:

    Use the same procedure for the RH side and the LH side (See **REMOVAL**).

14. **REMOVE OCCUPANT CLASSIFICATION ECU**
    a. Disconnect the 2 connectors from the occupant classification ECU.
    b. Disengage the claw and remove the occupant classification ECU.

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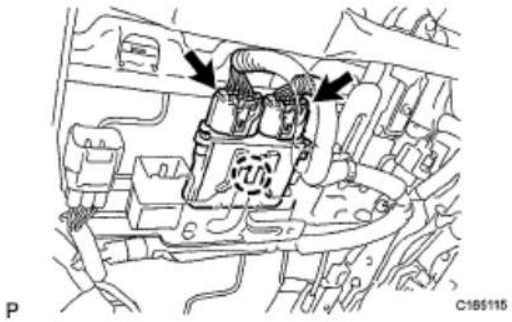


Fig. 465: Locating Occupant Classification ECU Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

1. **INSTALL OCCUPANT CLASSIFICATION ECU**
   a. Install the occupant classification ECU with the claw.

NOTE:

- **If the occupant classification ECU has been dropped, or there are any cracks, dents or other defects in the case or connector, replace the occupant classification ECU with a new one.**

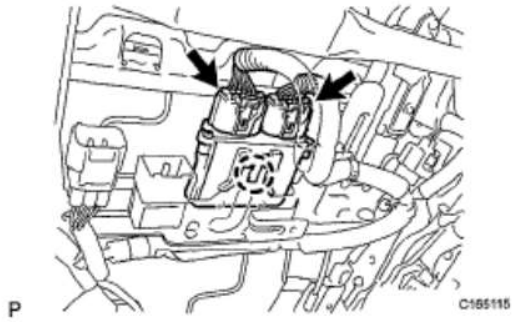


Fig. 466: Locating Occupant Classification ECU Connectors
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- **When installing the occupant classification ECU, be careful that the SRS wiring does not interfere with other parts and that it is not pinched between other parts.**

   b. Connect the 2 connectors.
2. **INSTALL FRONT SEAT ASSEMBLY RH (for Manual Seat)**

HINT:

Use the same procedure for the RH side and the LH side (See **INSTALLATION**).

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3. **INSPECT FRONT SEAT SLIDE ADJUSTER LOCK (for Manual Seat)** (See **INSTALLATION**)
4. **INSTALL REAR SEAT TRACK COVER RH (for Manual Seat)**

   HINT:

   Use the same procedure for the RH side and the LH side (See **INSTALLATION**).

5. **INSTALL FRONT INNER SEAT TRACK COVER RH (for Manual Seat)**

   HINT:

   Use the same procedure for the RH side and the LH side (See **INSTALLATION**).

6. **INSTALL FRONT OUTER SEAT TRACK COVER RH (for Manual Seat)**

   HINT:

   Use the same procedure for the RH side and the LH side (See **INSTALLATION**).

7. **INSTALL FRONT SEAT HEADREST ASSEMBLY RH (for Manual Seat)**

   HINT:

   Use the same procedure for the RH side and the LH side (See **INSTALLATION**).

8. **INSTALL FRONT SEAT ASSEMBLY RH (for Power Seat)**

   HINT:

   Use the same procedure for the RH side and the LH side(See **INSTALLATION**).

9. **INSTALL REAR INNER SEAT TRACK COVER RH (for Power Seat)**

   HINT:

   Use the same procedure for the RH side and the LH side (See **INSTALLATION**).

10. **INSTALL REAR OUTER SEAT TRACK COVER RH (for Power Seat)**

    HINT:

    Use the same procedure for the RH side and the LH side (See **INSTALLATION**).

11. **INSTALL FRONT INNER SEAT TRACK COVER RH (for Power Seat)**

    HINT:

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Use the same procedure for the RH side and the LH side (See **INSTALLATION**).

12. **INSTALL FRONT OUTER SEAT TRACK COVER RH (for Power Seat)**

    HINT:

    Use the same procedure for the RH side and the LH side (See **INSTALLATION**).

13. **INSTALL FRONT SEAT HEADREST ASSEMBLY RH (for Power Seat)**

    HINT:

    Use the same procedure for the RH side and the LH side (See **INSTALLATION**).

14. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL (for Manual Seat)**

    NOTE: When disconnecting the cable, some systems need to be initialized after the cable is reconnected (See INITIALIZATION).

15. **INSPECT FRONT SEAT ASSEMBLY (for Manual Seat)** (See **INSTALLATION**)
16. **INSPECT FRONT SEAT ASSEMBLY (for Power Seat)** (See **INSTALLATION**)
17. **INSPECT SRS WARNING LIGHT**
    a. Inspect the SRS warning light (See **DIAGNOSIS SYSTEM**).

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