

AIRBAG SYSTEM

PRECAUTION

CAUTION:

- The vehicle is equipped with a Supplemental Restraint System (SRS). It consists of a driver airbag, front passenger airbag, driver side knee airbag, front passenger side knee airbag, front side airbag, rear side airbag, curtain shield airbag, front seat belt pretensioner, and rear seat belt pretensioner. 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 engine 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 these components of the SRS directly to hot air or flames: the steering pad, front passenger airbag assembly, driver side knee airbag assembly, front passenger side knee airbag assembly, center airbag sensor assembly, front airbag sensor, front seat inner belt assembly, seat position airbag sensor, occupant classification ECU, front seat side airbag assembly, rear seat side airbag assembly, side airbag sensor, curtain shield airbag assembly, rear airbag sensor, front seat outer belt assembly, and rear seat outer belt assembly.

NOTICE:

- 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.

- Even in the case of a minor collision that does not cause the SRS to deploy, the following components of the SRS should be inspected: the steering pad, front passenger airbag assembly, driver side knee airbag assembly, front passenger side knee airbag assembly, center airbag sensor assembly, front airbag sensor, front seat inner belt assembly, seat position airbag sensor, occupant classification ECU, front seat side airbag assembly, rear seat side airbag assembly, side airbag sensor, curtain shield airbag assembly, rear airbag sensor, front seat outer belt assembly, and rear seat outer belt assembly.
- Before beginning repairs, remove the airbag sensor if any kind of shock is likely to occur to the airbag sensor 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 following 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.
 - (a) Steering Pad
 - (b) Front Passenger Airbag Assembly
 - (c) Driver Side Knee Airbag Assembly
 - (d) Front Passenger Side Knee Airbag Assembly
 - (e) Front Seat Side Airbag Assembly
 - (f) Rear Seat Side Airbag Assembly
 - (g) Curtain Shield Airbag Assembly
 - (h) Center Airbag Sensor Assembly
 - (i) Front Airbag Sensor
 - (j) Front Seat Inner Belt Assembly
 - (k) Seat Position Airbag Sensor
 - (l) Occupant Classification ECU
 - (m) Side Airbag Sensor
 - (n) Rear Airbag Sensor
 - (o) Front Seat Outer Belt Assembly
 - (p) Rear Seat Outer Belt Assembly
- Use a volt/ohmmeter with high impedance (10 k Ω /V minimum) for troubleshooting the electrical circuits.
- Information labels are attached near the SRS components. Follow the instructions noted in the caution.
- After work on the SRS is completed, perform on SRS warning light (See page [RS-37](#)).
- 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 section.
- Some systems need to be initialized after reconnecting the negative (-) battery terminal (See page IN-33).

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.

1. HANDLING PRECAUTIONS FOR AIRBAG SENSORS

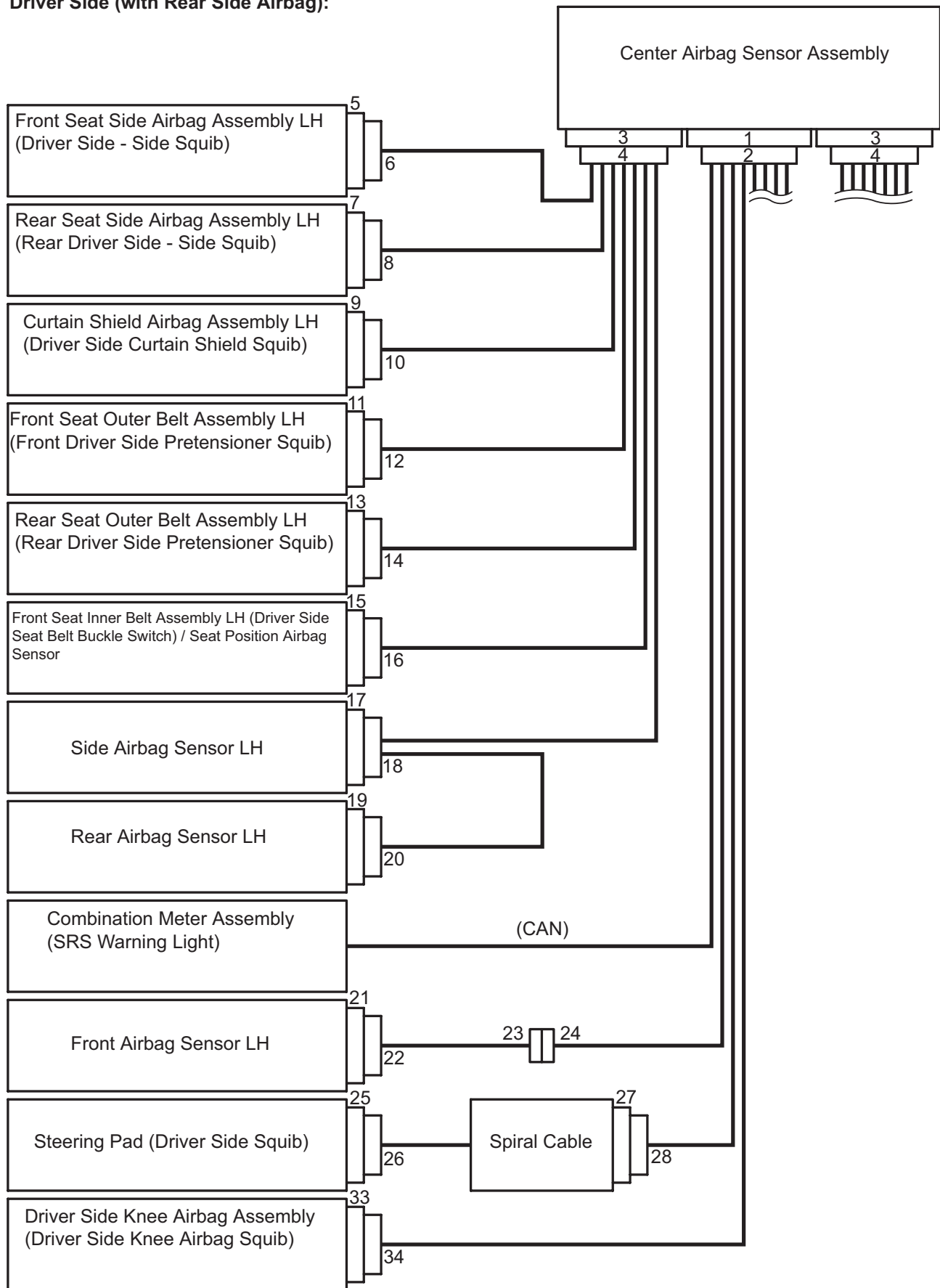
- (a) Before starting the following operations, wait for at least 90 seconds after disconnecting the negative (-) terminal cable from the battery:
 - (1) Replacement of the airbag sensors.
 - (2) Adjustment of the front/rear doors of the vehicle equipped with side airbags and curtain shield airbags (fitting 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.

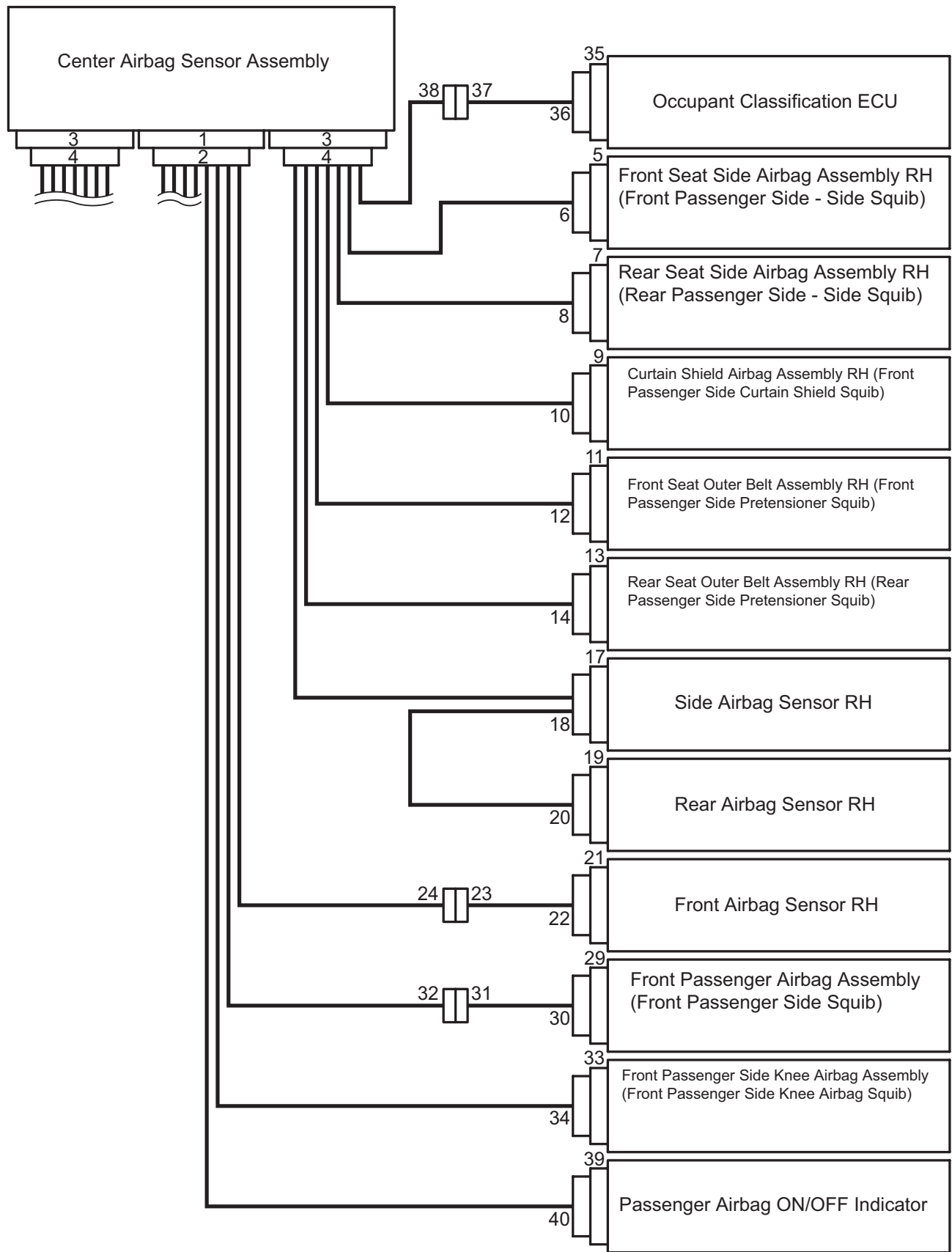
3. SRS CONNECTORS

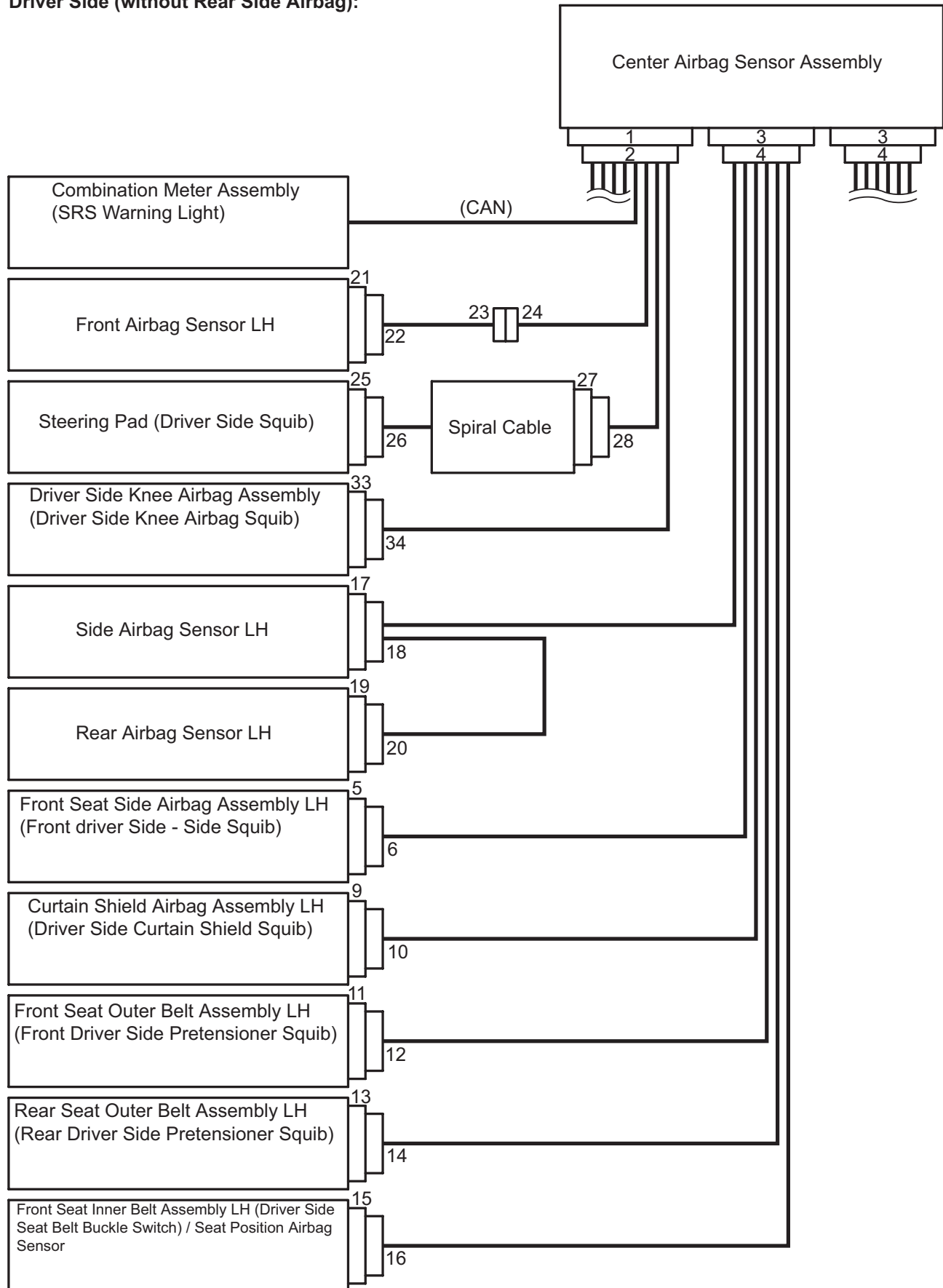
- (a) SRS connectors are located as shown in the following illustration.

Driver Side (with Rear Side Airbag):**RS**

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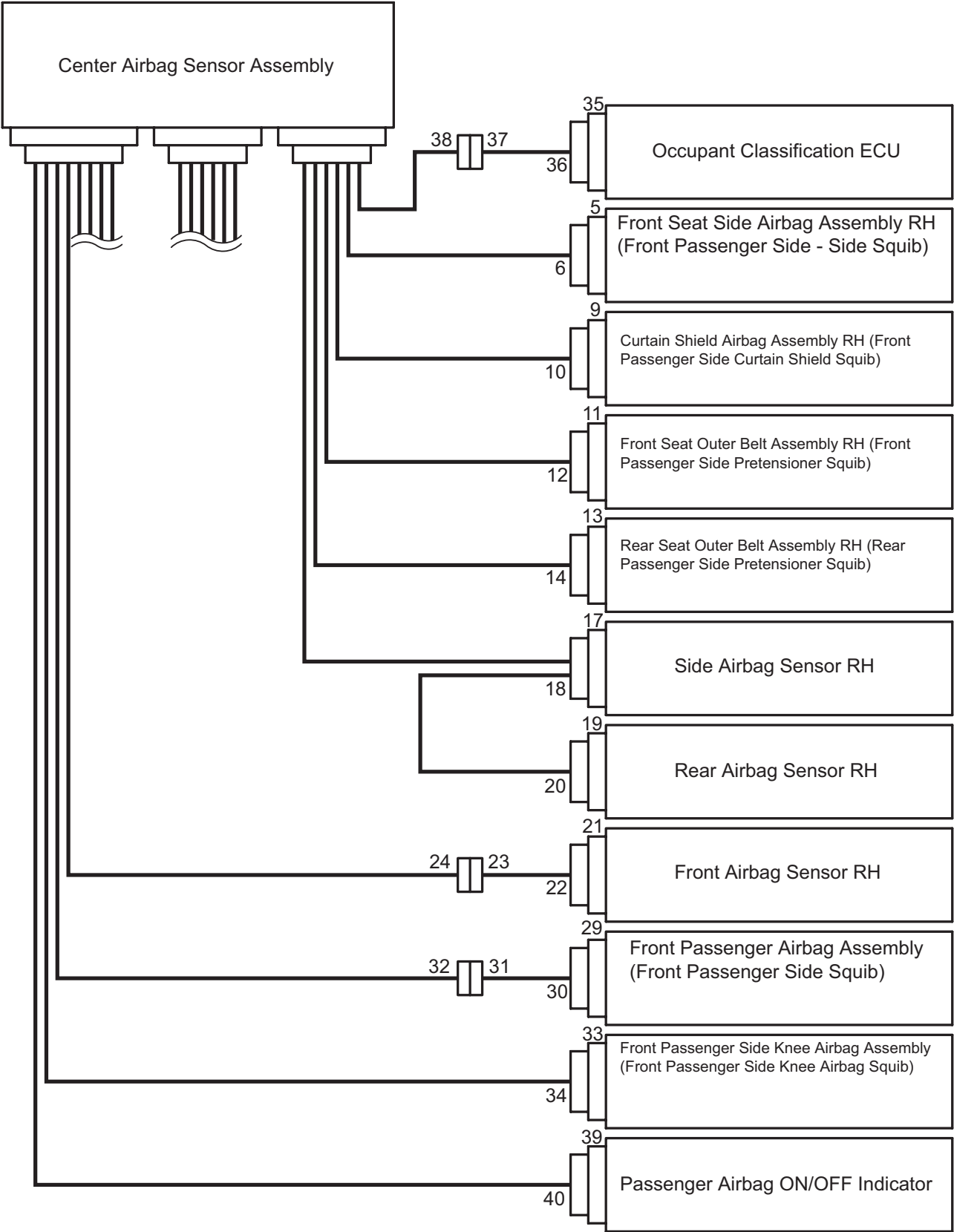
Passenger Side (with Rear Side Airbag):



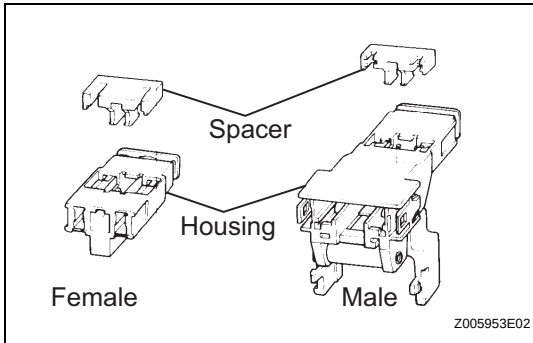
Driver Side (without Rear Side Airbag):**RS**

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Passenger Side (without Rear Side Airbag):



No.	Item	Application
(1)	Terminal Twin-Lock Mechanism	Connectors 5, 6, 7, 8, 18, 20, 23, 24, 27, 28, 31, 32, 38
(2)	Activation Prevention Mechanism	Connectors 5, 7, 27, 31
(3)	Half Connection Prevention Mechanism	Connectors 6, 8, 18, 20, 23, 28, 32
(4)	Connector Position Assurance Mechanism	Connector 22
(5)	Connector Lock Mechanism (1)	Connectors 10, 12, 14, 26, 30, 34
(6)	Connector Lock Mechanism (2)	Connectors 2, 4
(7)	Improper Connection Prevention Lock Mechanism	Connectors 1, 3



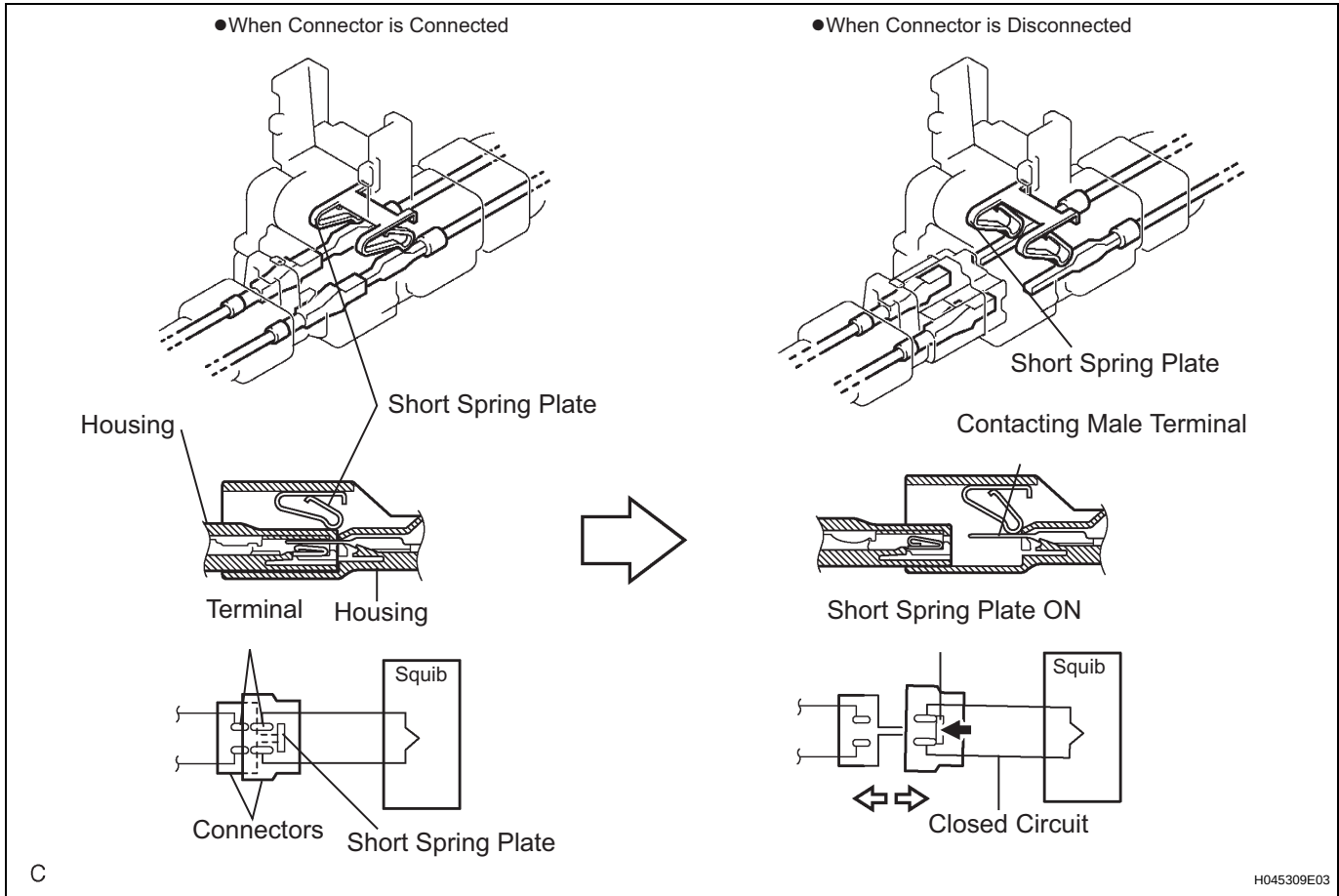
- (b) All connectors in the SRS, except the seat position airbag sensor connector, are colored yellow to distinguish them from other connectors. These connectors have special functions, and are specially designed for the SRS. All SRS connectors use durable gold-plated terminals, and are placed in the locations shown on the previous page to ensure high reliability.

(1) Terminal twin-lock mechanism:

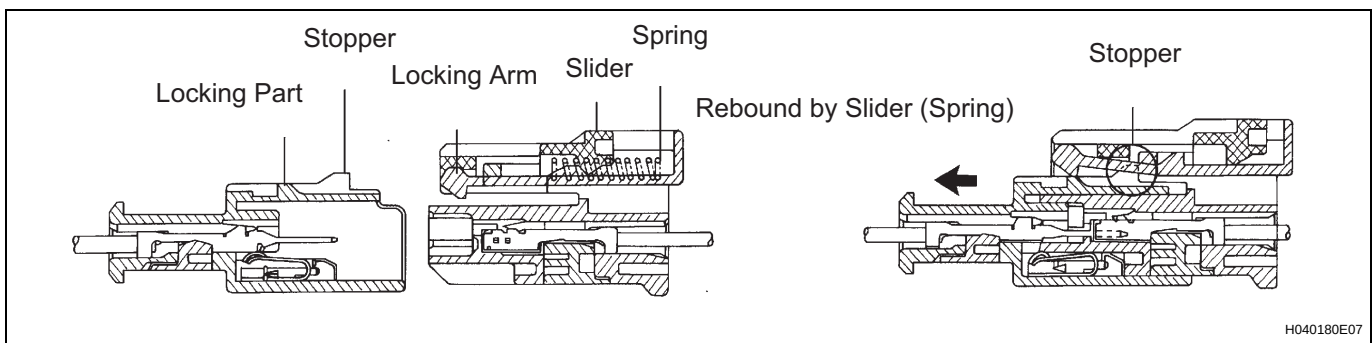
All connectors with a terminal twin-lock mechanism have a two-piece component consisting of a housing and a spacer. This design enables the terminal to be locked securely by two locking devices (the retainer and the lance) to prevent terminals from coming out.

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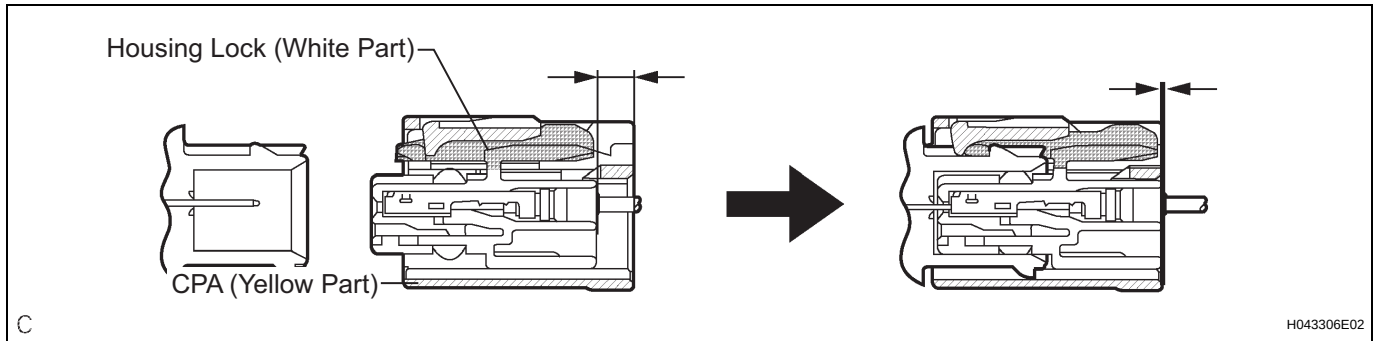
- (2) Activation prevention mechanism:
All connectors with an activation prevention mechanism contain a short spring plate. When these connectors are disconnected, the short spring plate creates a short circuit by automatically connecting the positive (+) and negative (-) terminals of the squib.



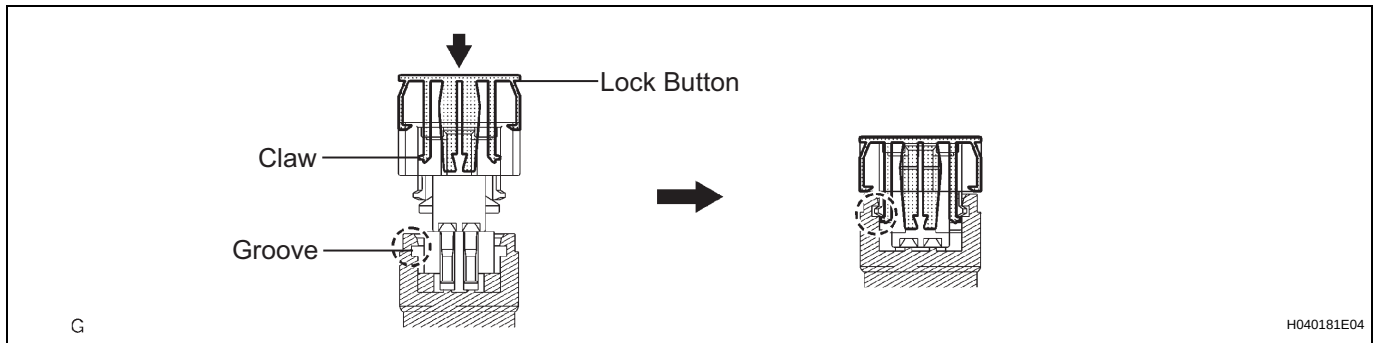
- (3) Half connection prevention mechanism:
If the connector is not completely connected, the connector is disconnected due to the spring force so that no continuity exists.



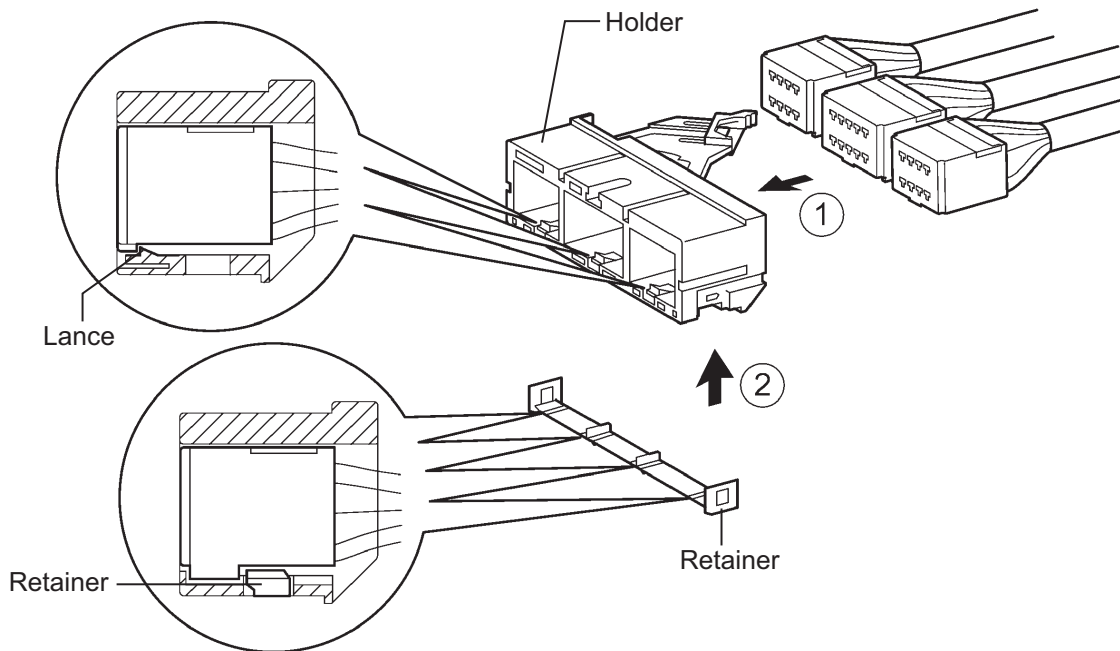
- (4) Connector position assurance mechanism:
Only when the housing lock (white part) is completely engaged, the CPA (yellow part) slides, which completes the connector engagement.



- (5) Connector lock mechanism (1):
Locking the connector lock button connects the connector securely.

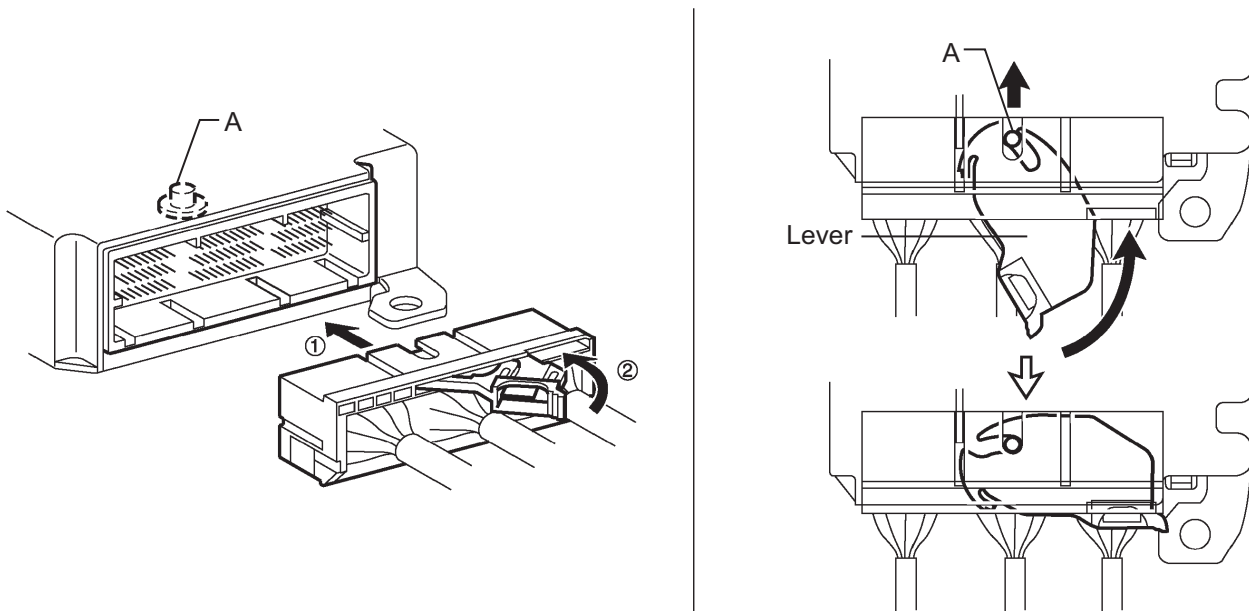


- (6) Connector lock mechanism (2):
Both the primary lock with holder lances and the secondary lock with retainer prevent the connectors from becoming disconnected.



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- (7) Improper connection prevention lock mechanism:
When connecting the holder, the lever is pushed into the end by rotating around the A axis to lock the holder securely.



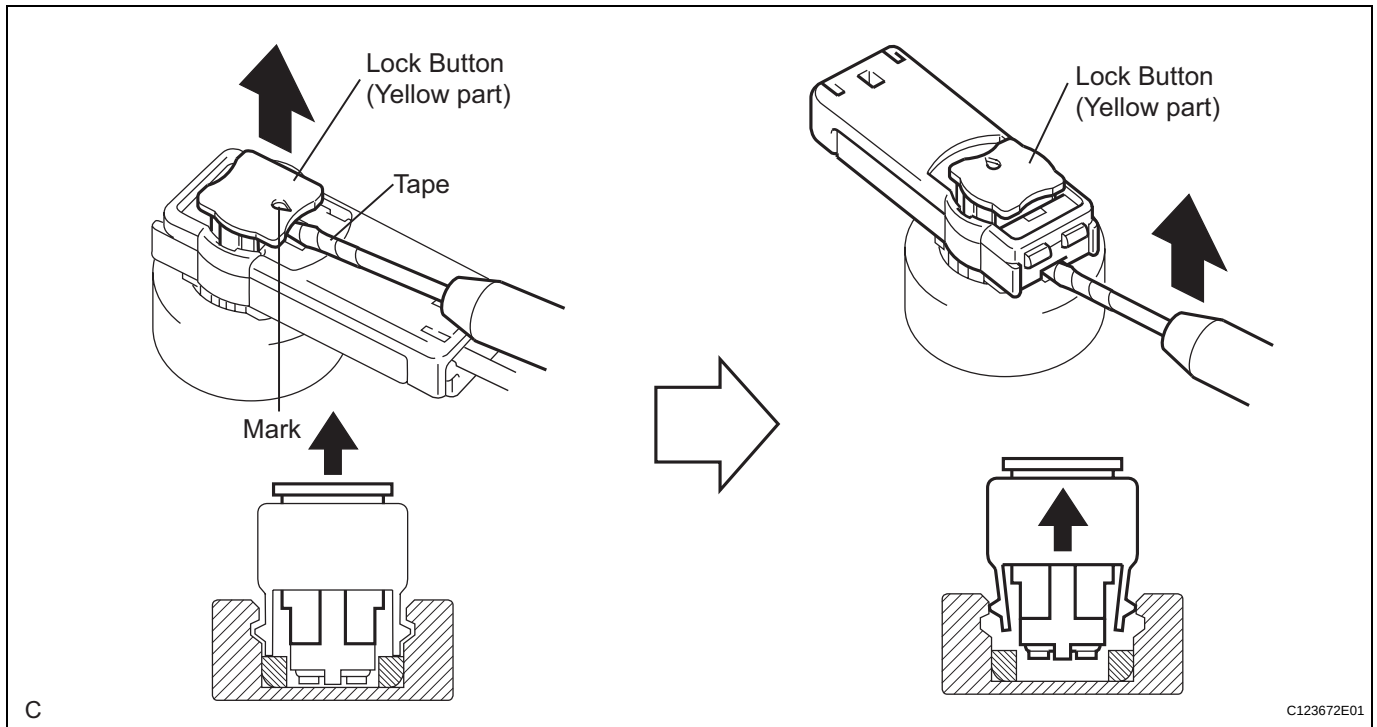
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4. DISCONNECTION OF CONNECTORS FOR STEERING PAD, FRONT PASSENGER AIRBAG ASSEMBLY (SQUIB SIDE), DRIVER SIDE KNEE AIRBAG ASSEMBLY, FRONT PASSENGER SIDE KNEE AIRBAG ASSEMBLY, CURTAIN SHIELD AIRBAG ASSEMBLY, FRONT SEAT OUTER BELT ASSEMBLY, AND REAR SEAT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

HINT:

Tape up 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.

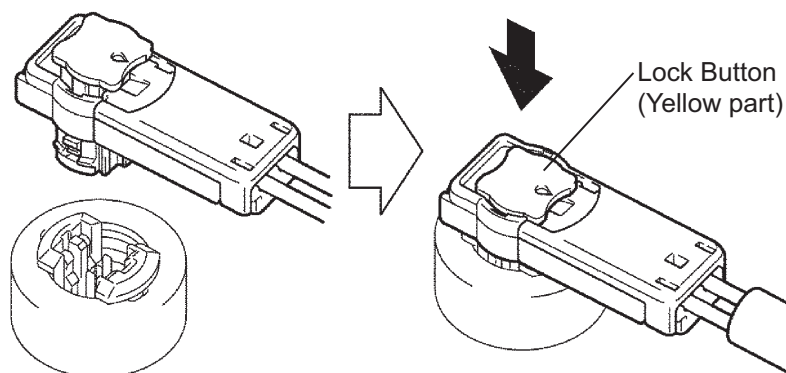


5. CONNECTION OF CONNECTORS FOR STEERING PAD, FRONT PASSENGER AIRBAG ASSEMBLY (SQUIB SIDE), DRIVER SIDE KNEE AIRBAG ASSEMBLY, FRONT PASSENGER SIDE KNEE AIRBAG ASSEMBLY CURTAIN SHIELD AIRBAG ASSEMBLY, FRONT SEAT OUTER BELT ASSEMBLY, AND REAR SEAT OUTER BELT ASSEMBLY

- (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.)

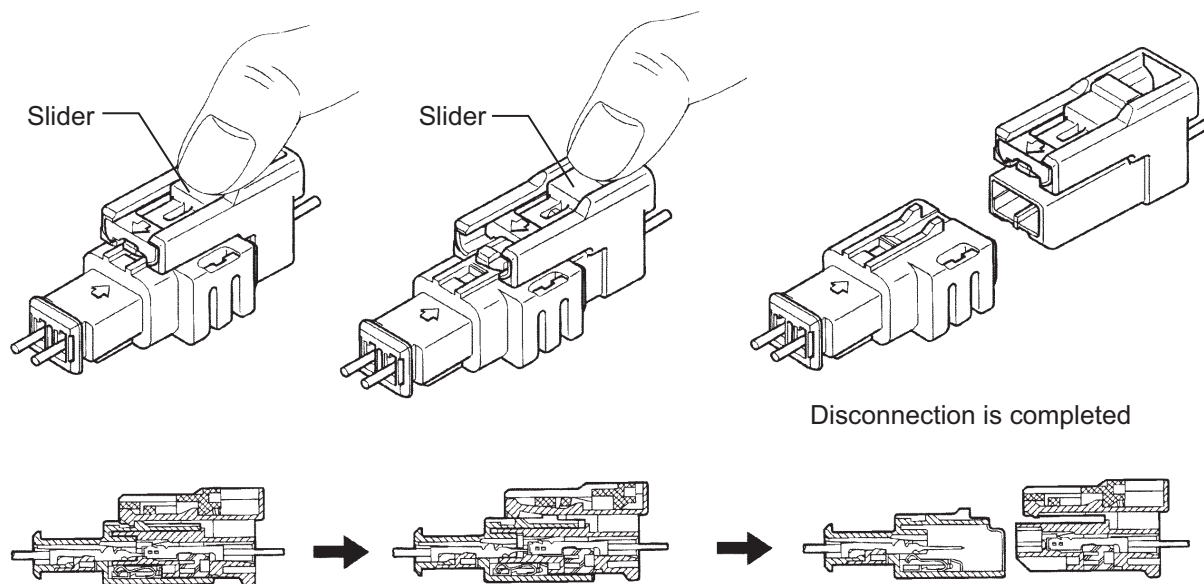
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6. DISCONNECTION OF CONNECTOR FOR SPIRAL CABLE (INSTRUMENT PANEL WIRE SIDE) AND FRONT PASSENGER AIRBAG ASSEMBLY (INSTRUMENT PANEL WIRE SIDE)

- (a) Place a finger on the slider, slide the slider to release the lock, and then disconnect the connector.



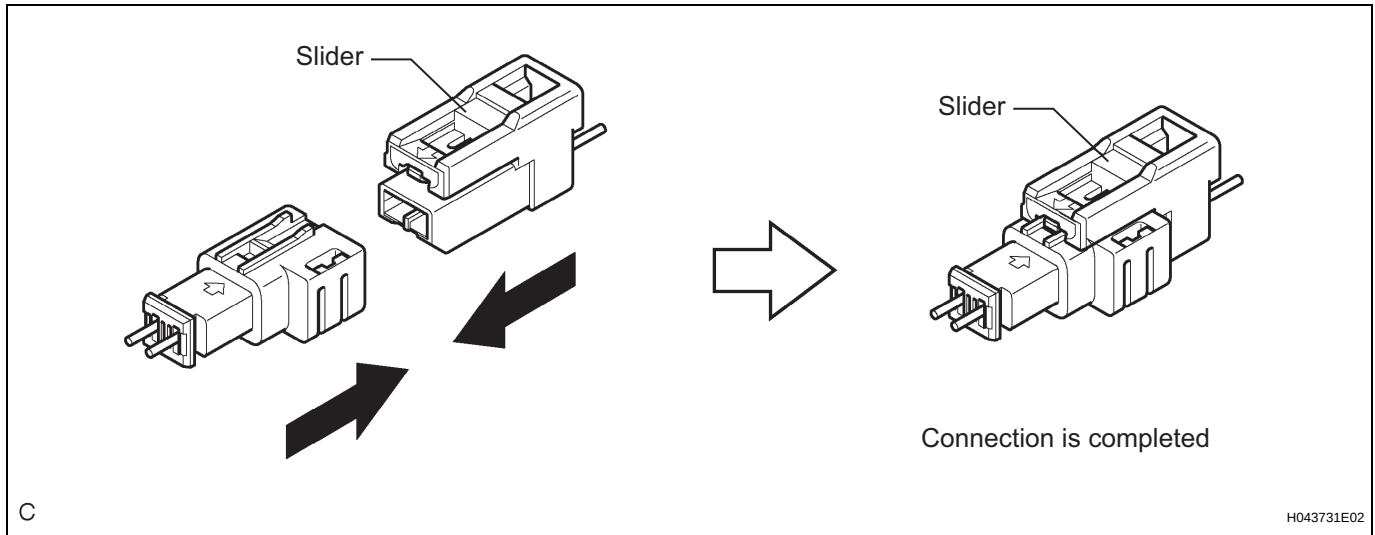
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7. CONNECTION OF CONNECTOR FOR SPIRAL CABLE (INSTRUMENT PANEL WIRE SIDE) AND FRONT PASSENGER AIRBAG ASSEMBLY (INSTRUMENT PANEL WIRE SIDE)

- (a) Connect the connector as shown in the illustration. (When locking, make sure that the slider returns to its original position and a click sound can be heard.)

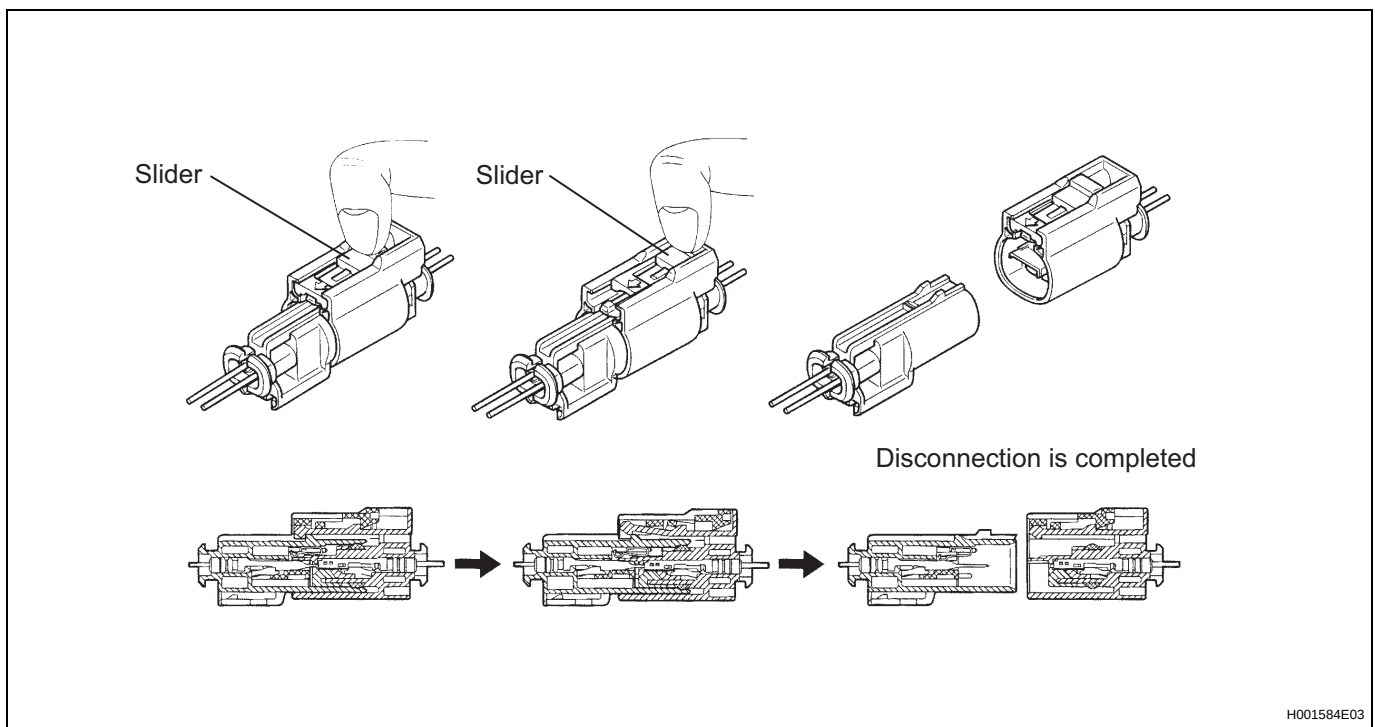
HINT:

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

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8. DISCONNECTION OF CONNECTORS FOR FRONT SEAT SIDE AIRBAG ASSEMBLY AND REAR SEAT SIDE AIRBAG ASSEMBLY

- (a) Place a finger on the slider, slide the slider to release the lock, and then disconnect the connector.



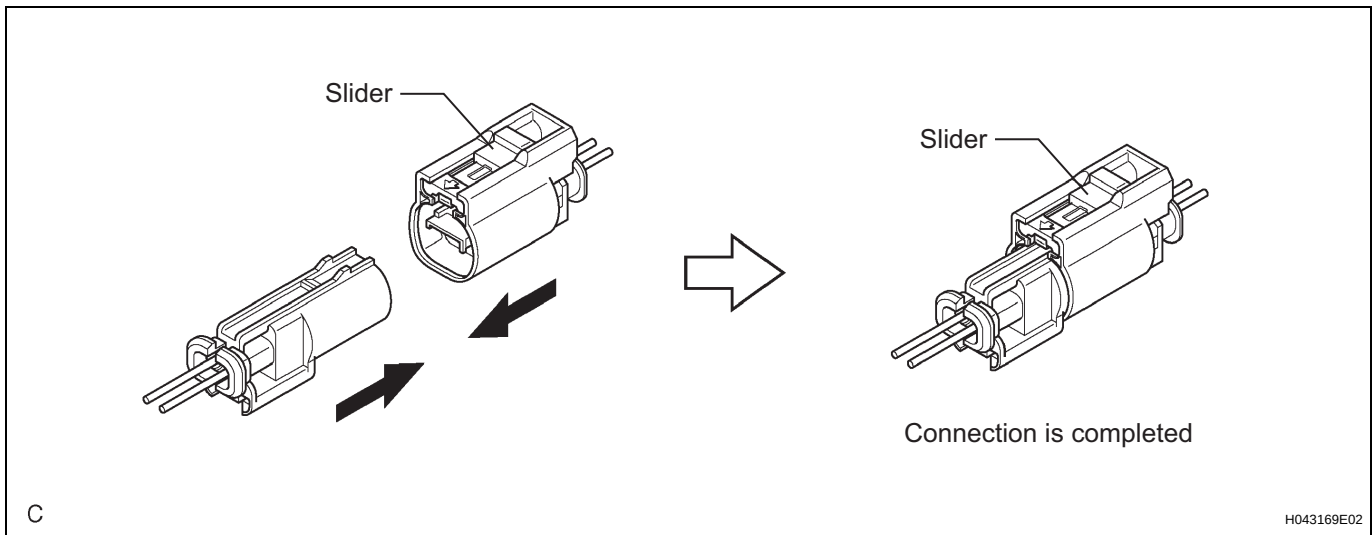
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9. CONNECTION OF CONNECTORS FOR FRONT SEAT SIDE AIRBAG ASSEMBLY AND REAR SEAT SIDE AIRBAG ASSEMBLY

- (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.)

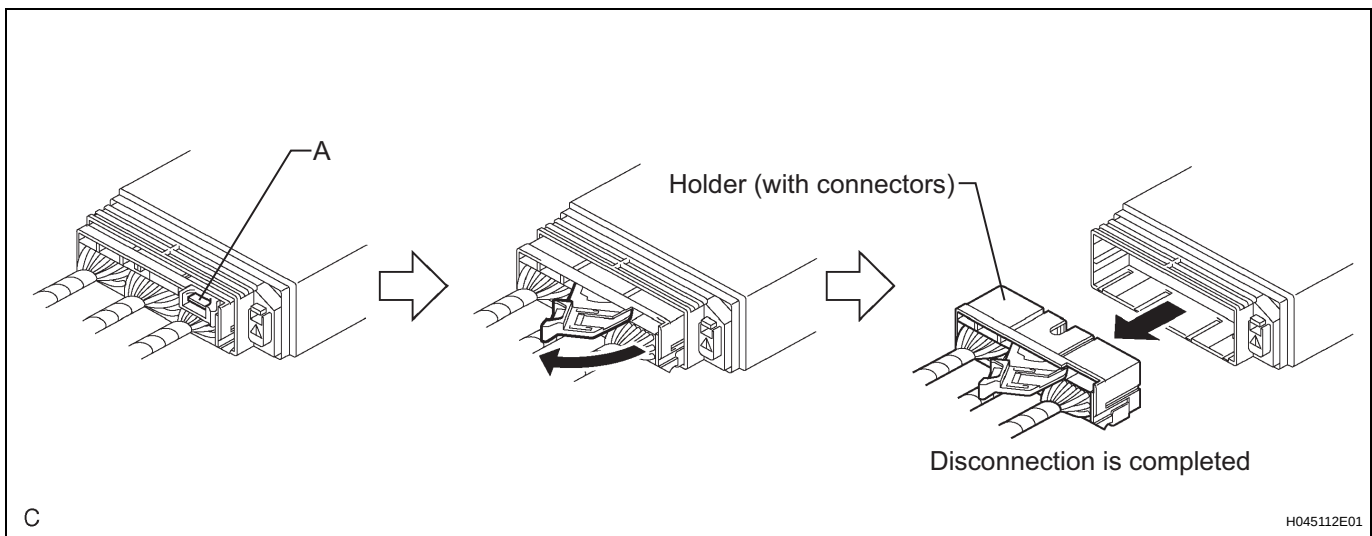
HINT:

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



10. DISCONNECTION OF CONNECTOR FOR CENTER AIRBAG SENSOR ASSEMBLY

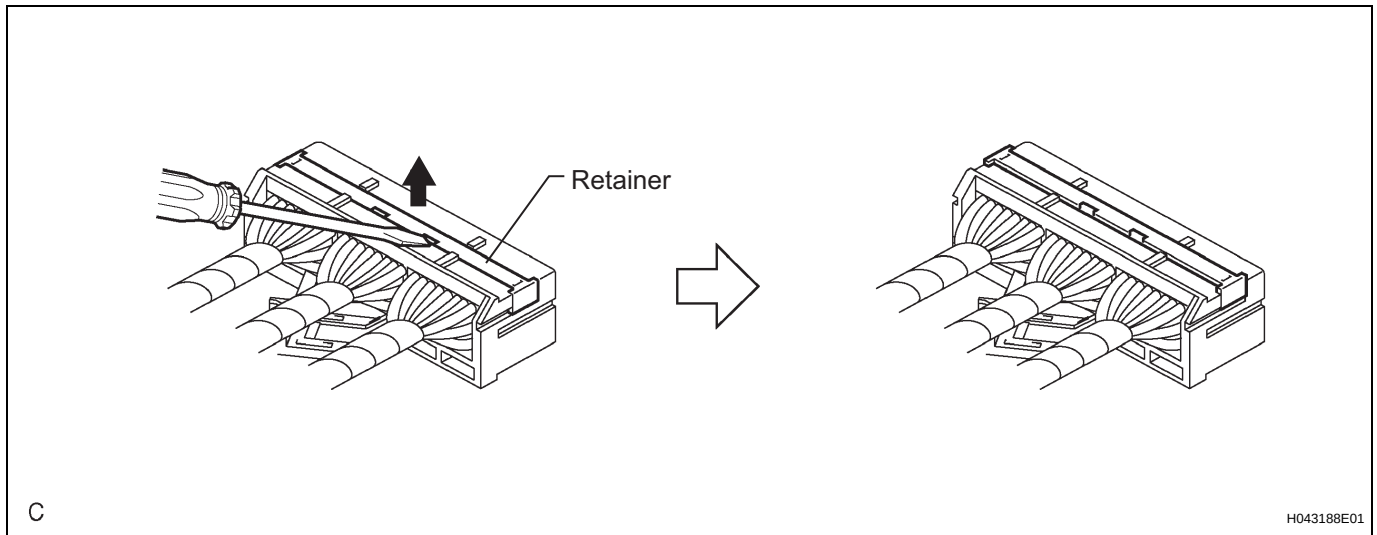
- (a) Pull the lever by pushing part A as shown in the illustration and disconnect the holder (with connectors).



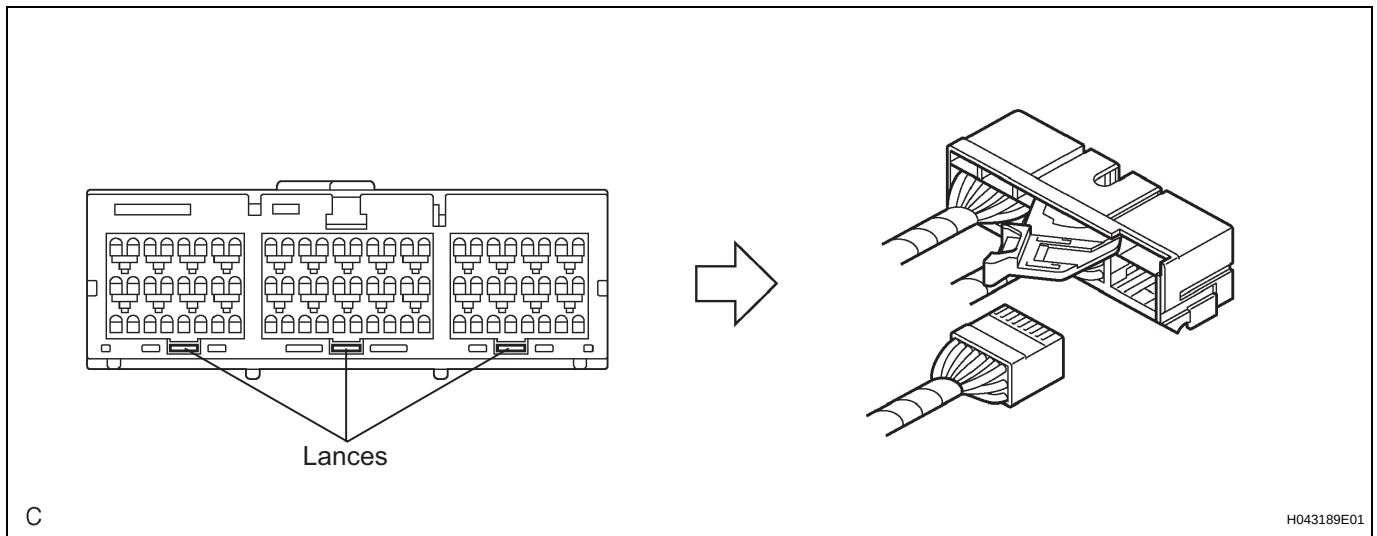
HINT:

Perform the following procedures when replacing the holder.

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



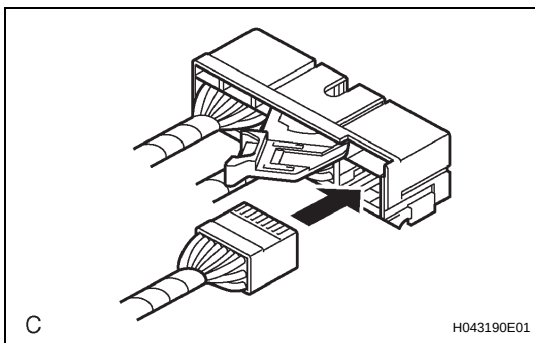
- (2) Release the fitting lance and remove the holder.



- (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.

11. 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.

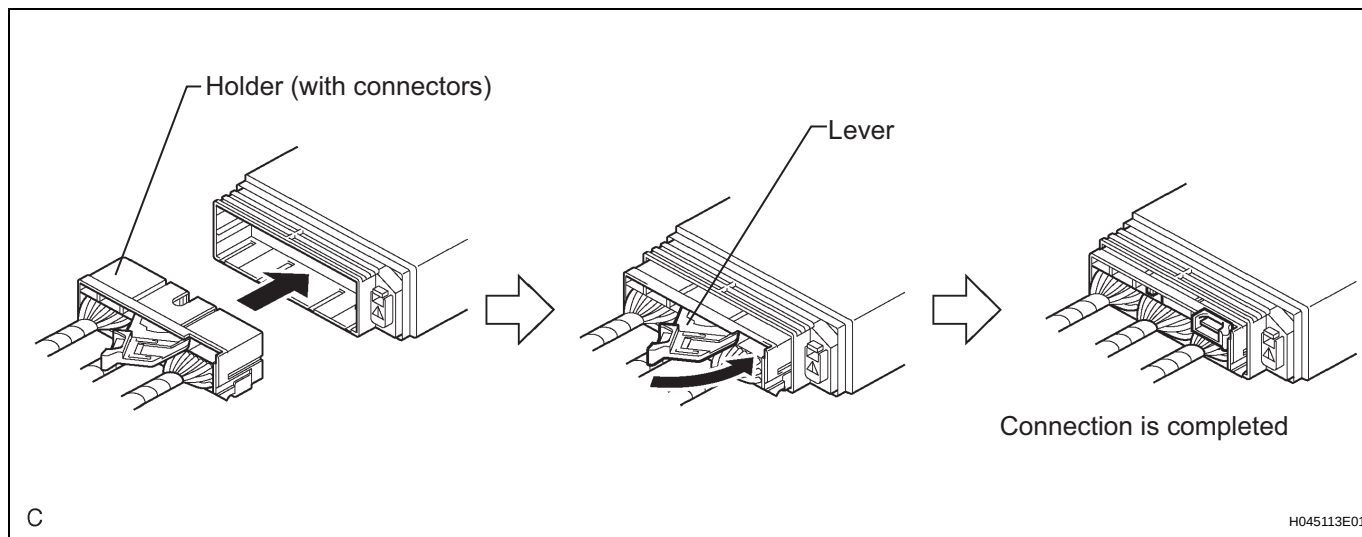


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- (b) Push the lever to connect the holder (with connectors). (When locked, a click sound can be heard.)

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.

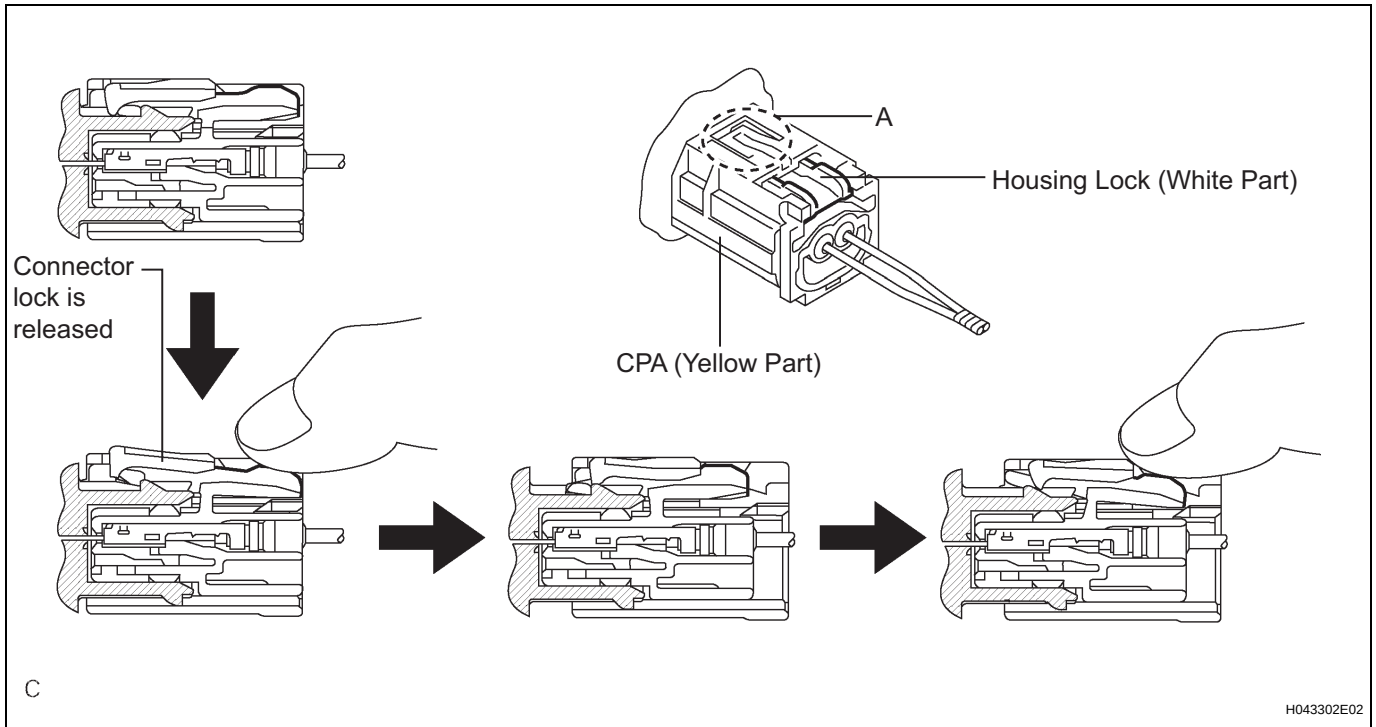


12. DISCONNECTION OF CONNECTOR FOR FRONT AIRBAG SENSOR

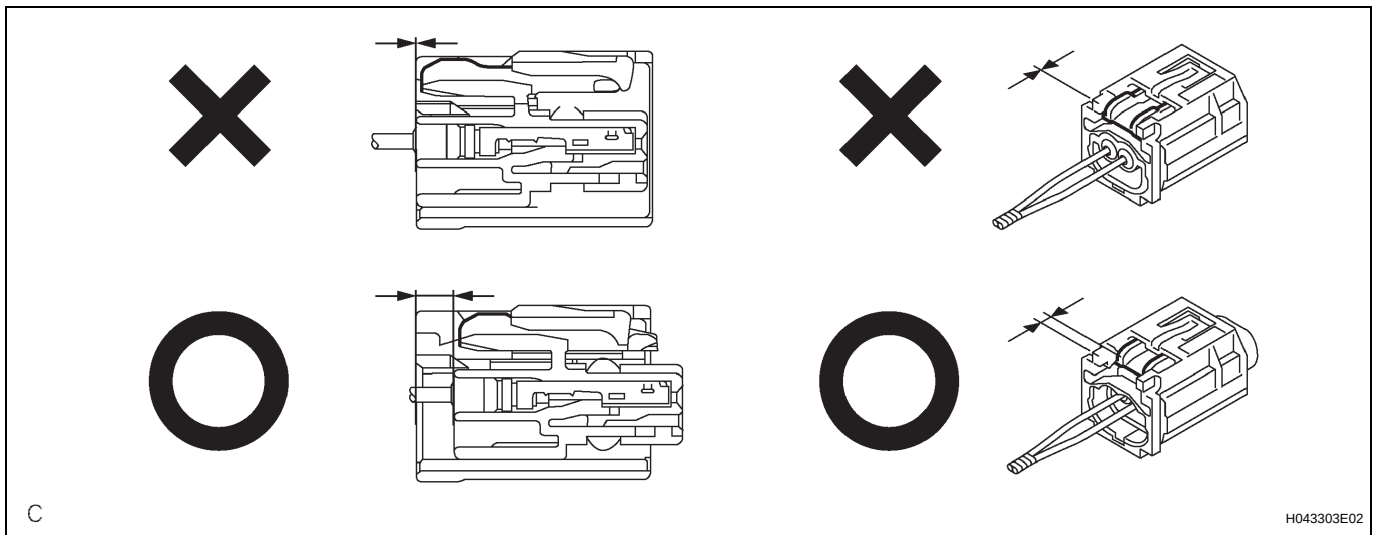
- (a) Push down the housing lock (white part) and slide the CPA (yellow part). (At this time, the connector cannot be disconnected yet.)
- (b) Push down the housing lock (white part) again and disconnect the connector.

HINT:

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



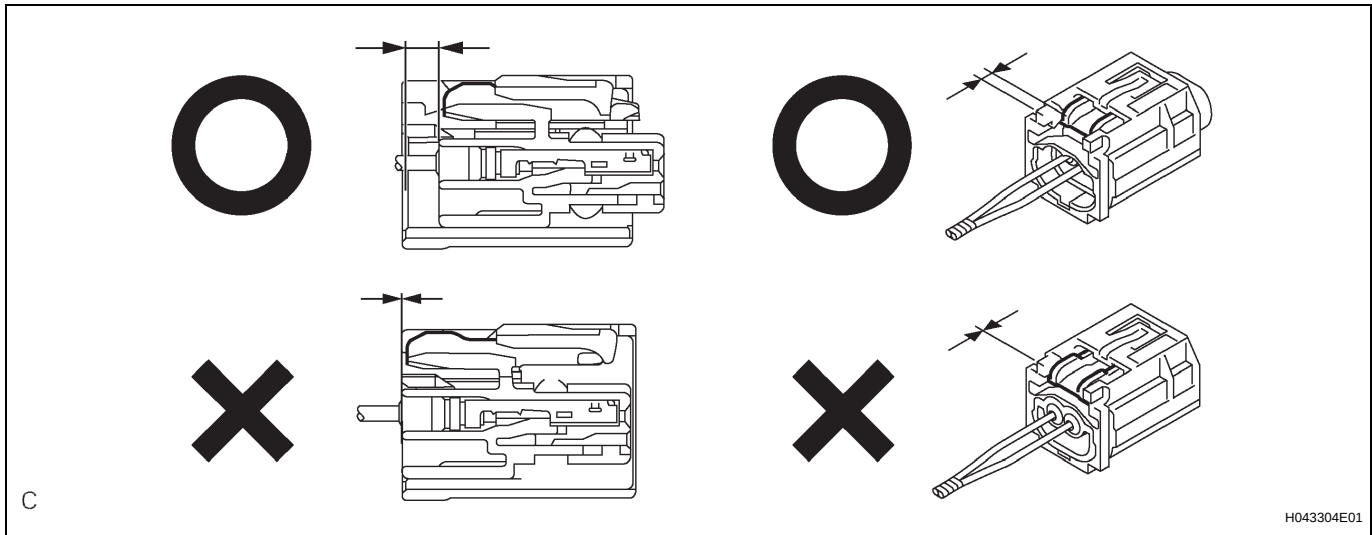
- (c) After disconnecting the connector, check that the position of the housing lock (white part) is as shown in the illustration.



13. CONNECTION OF CONNECTOR FOR FRONT AIRBAG SENSOR

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

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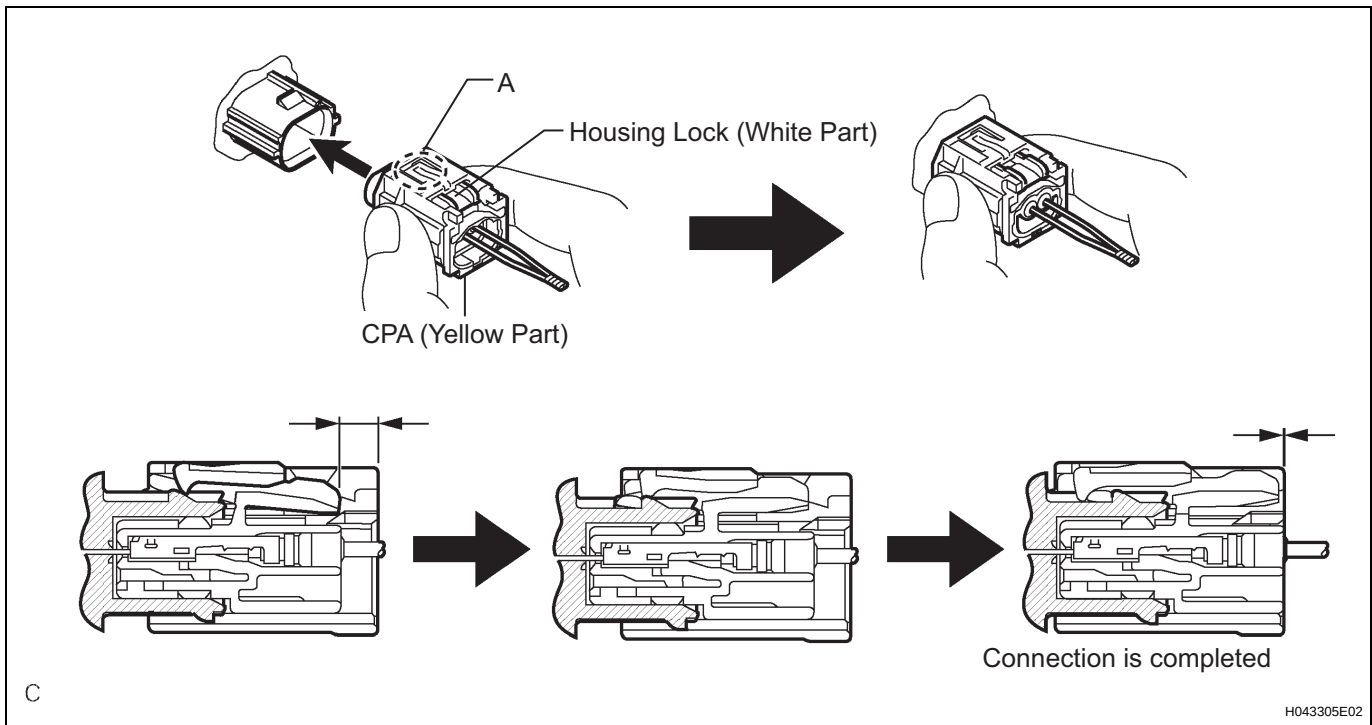


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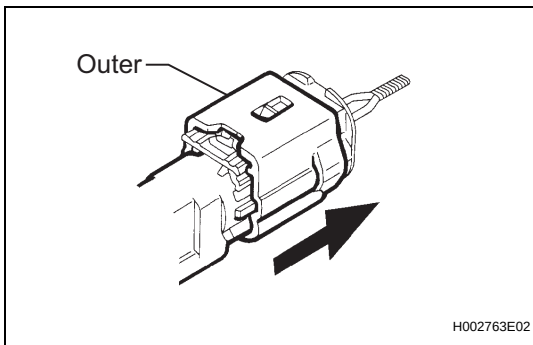
- (b) Be sure to engage the connectors until they are locked. (When locking, make sure that a click sound can be heard.)

HINT:

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



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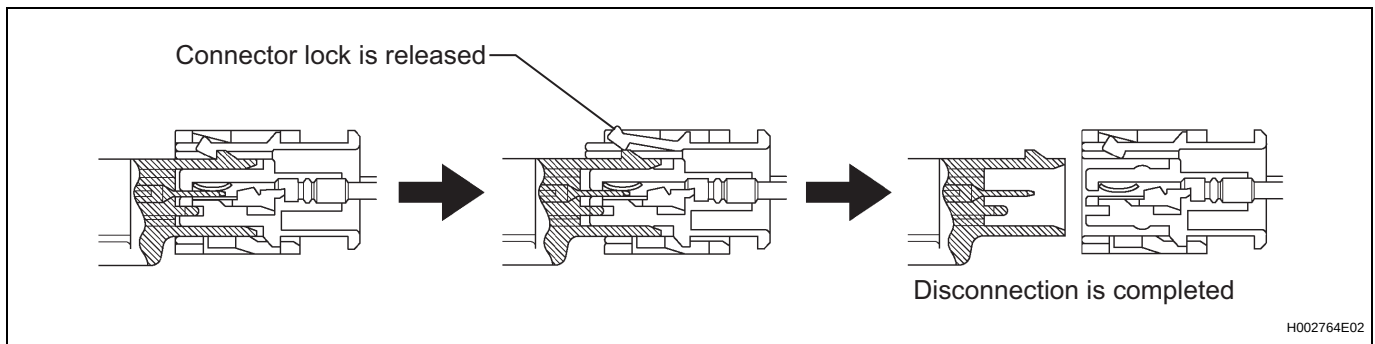
14. DISCONNECTION OF CONNECTORS FOR SIDE AIRBAG SENSOR AND REAR AIRBAG SENSOR

- (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.

HINT:

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

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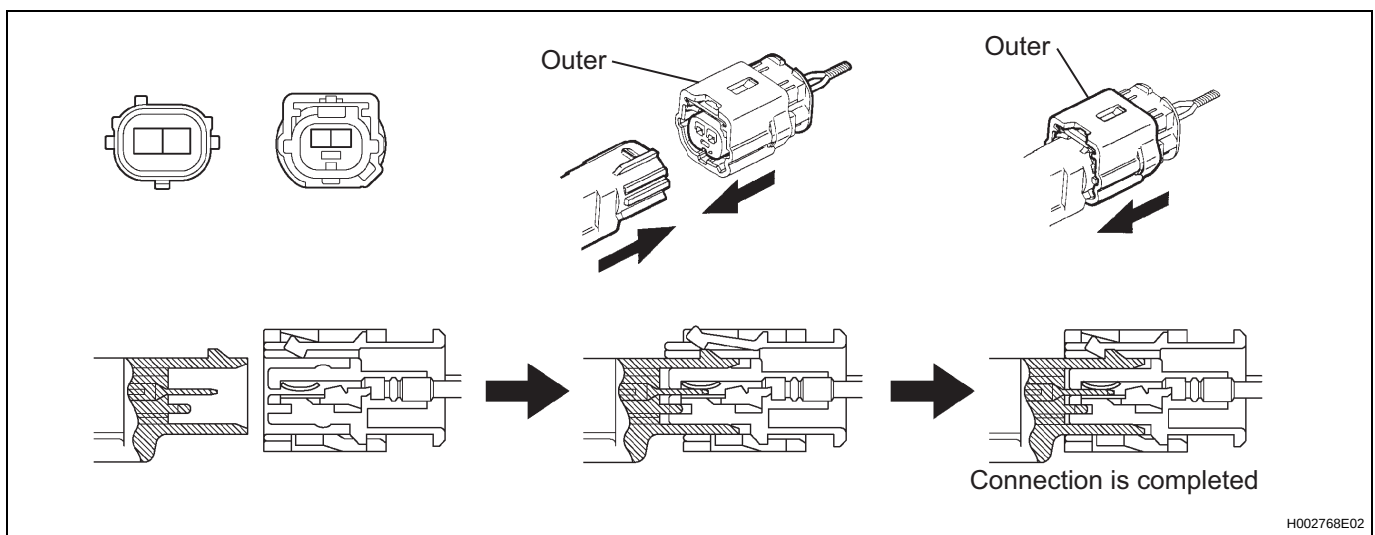


15. CONNECTION OF CONNECTORS FOR SIDE AIRBAG SENSOR AND REAR AIRBAG SENSOR

- (a) Connect the connector as shown in the illustration (When locking, make sure that the outer returns to its original position and a click sound can be heard).

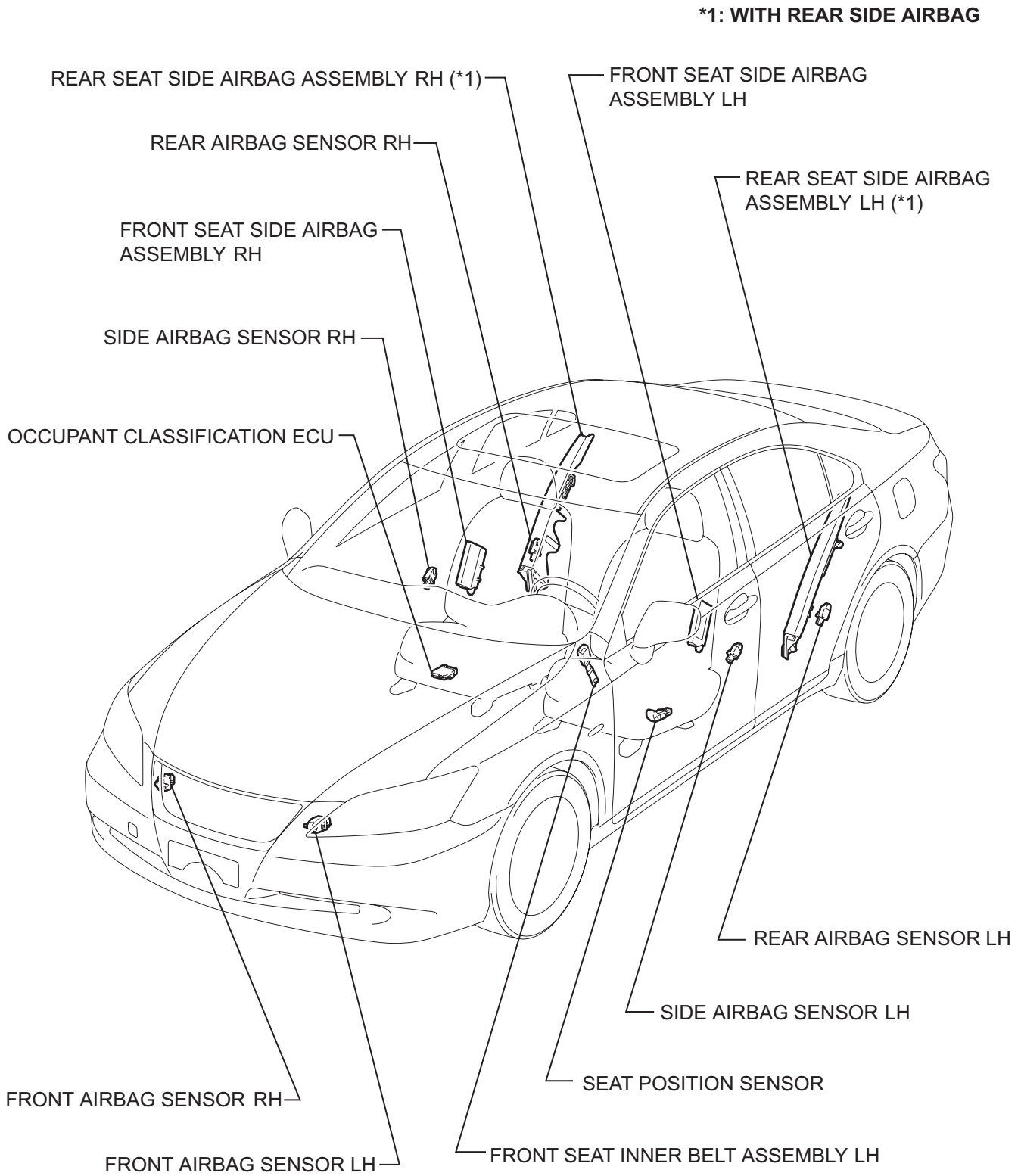
HINT:

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



PARTS LOCATION

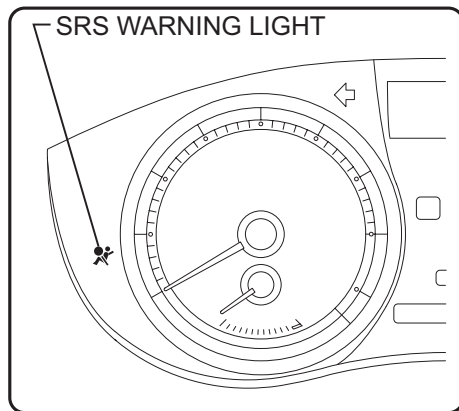
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*1: WITH NAVIGATION SYSTEM

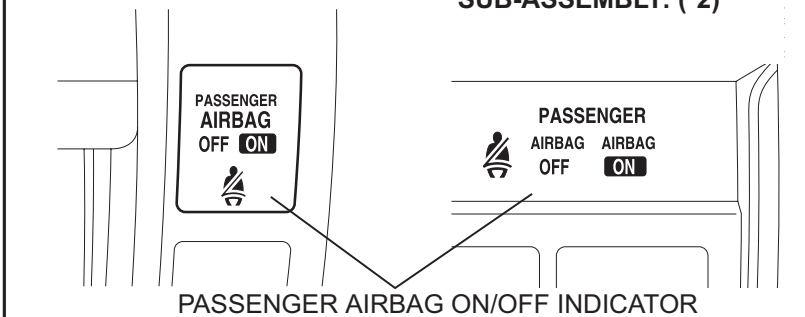
*2: WITHOUT NAVIGATION SYSTEM

COMBINATION METER ASSEMBLY:

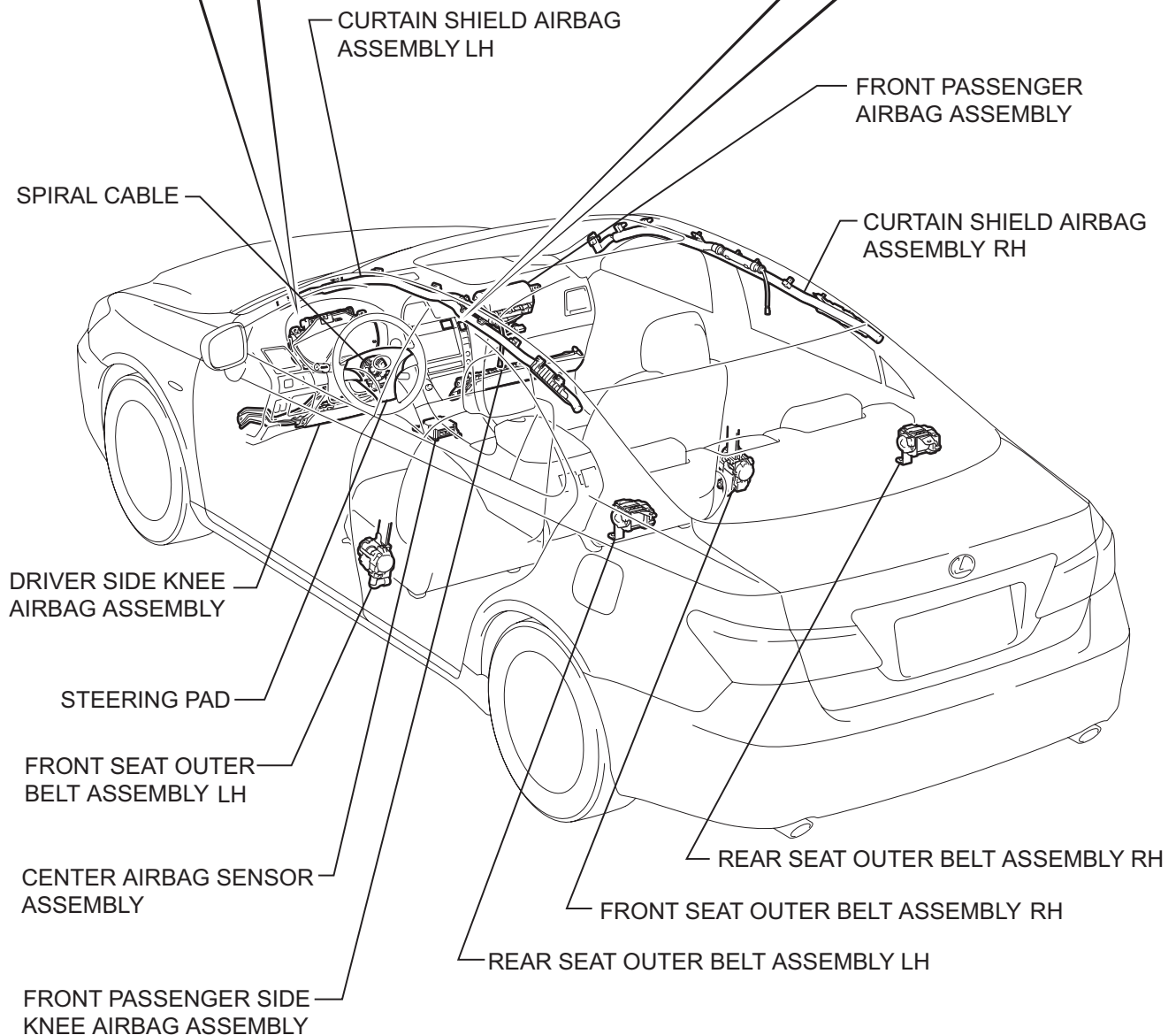


MULTI-DISPLAY ASSEMBLY: (*1)

AIR CONDITIONER PANEL SUB-ASSEMBLY: (*2)

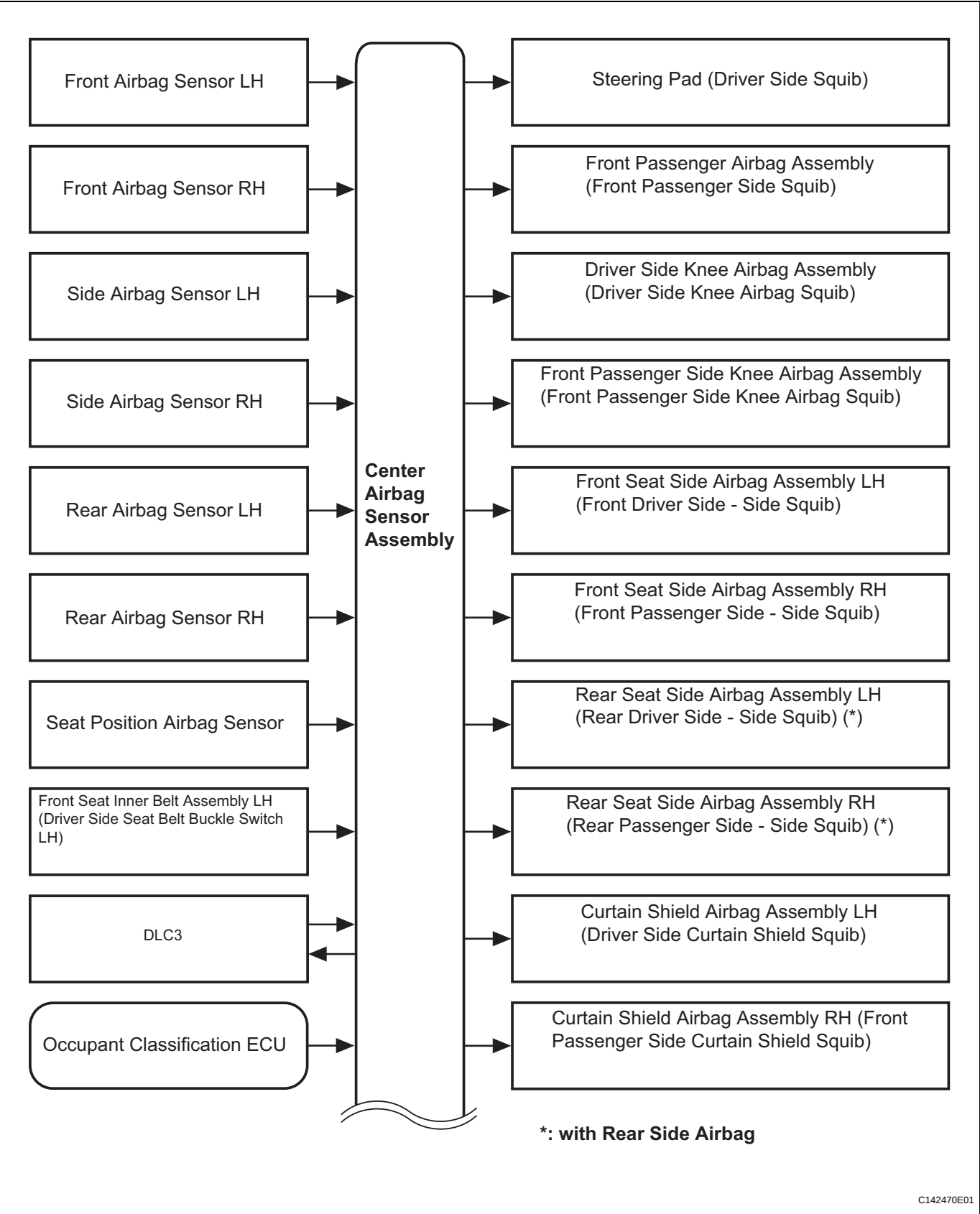


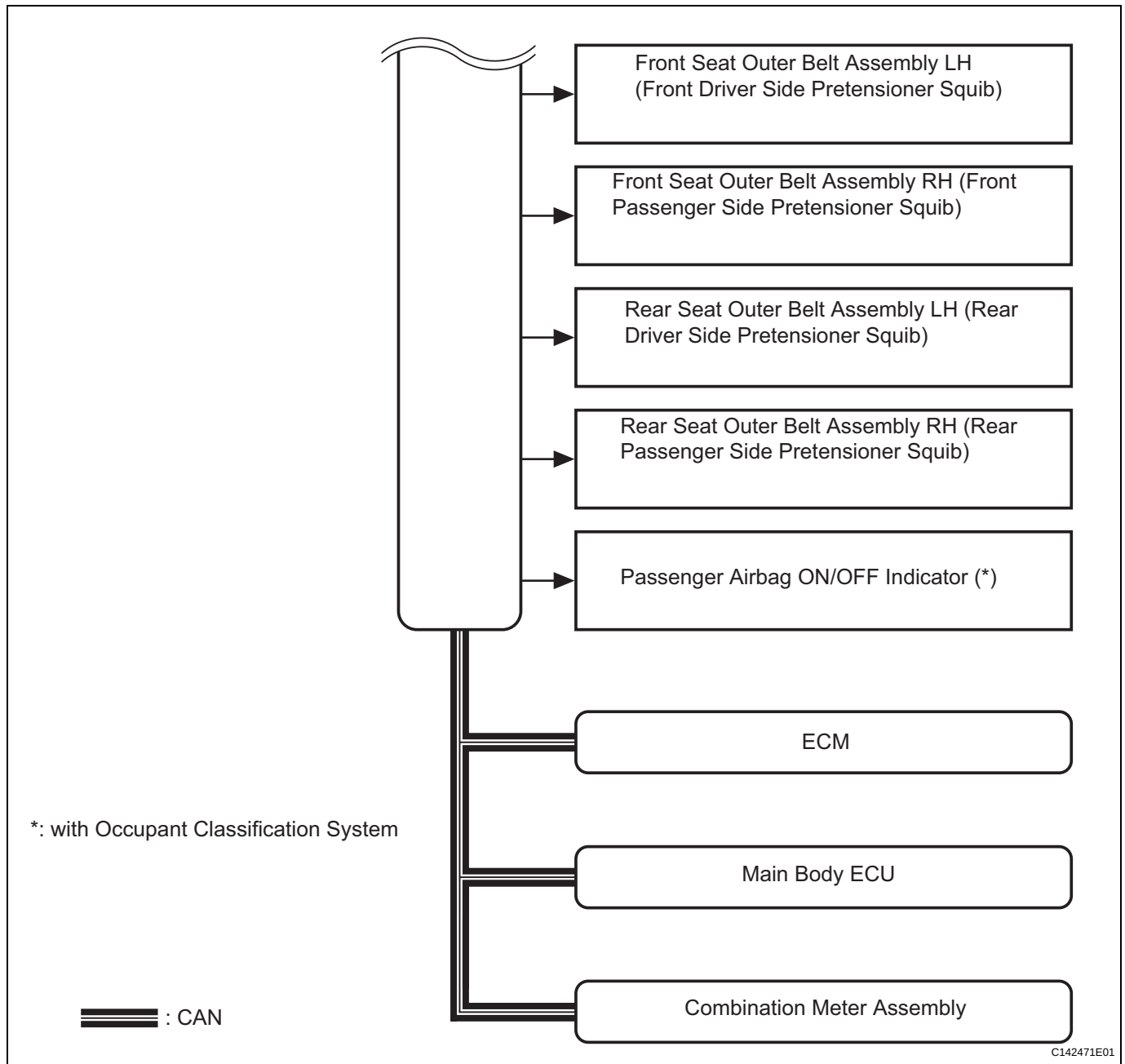
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SYSTEM DIAGRAM

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

RS

SYSTEM DESCRIPTION

1. GENERAL

- (a) In conjunction with the impact absorbing structure for a front collision, the SRS (Supplemental Restraint System) driver airbag, front passenger airbag, driver side knee airbag, and front passenger side knee airbag were designed to supplement seat belts in the event of a front collision in order to help reduce shock to the head, chest, and knees of the driver and front passenger. This system is a 3-sensor type airbag system which detects the impact during a front collision using the center airbag sensor assembly and front airbag sensors. It also operates the airbag system and seat belt pretensioner.
- (b) In order to detect the extent of the collision during the initial stages of the collision in further details, the front airbag sensors have been changed from mechanical type to electrical type deceleration sensors. Accordingly, the deployment of the driver airbag and front passenger airbag is controlled in two stages according to the severity of the impact.
- (c) In conjunction with the impact absorbing structure for a side collision, the side airbag and curtain shield airbag were designed to help reduce shock to the driver, front passenger, and rear outer passengers in the event of a side collision.
- (d) A curtain shield airbag that helps reduce shock to the front and rear seat occupants with a single curtain shield airbag has been adopted. In conjunction with this system, the side airbag sensors have been installed at the bottom of the center pillars and the rear airbag sensors have been installed at the bottom of the rear pillars.
- (e) In this system, a front side collision is detected by the side airbag sensor in order to simultaneously deploy the front side, rear side, and curtain shield airbags. A rear side collision is detected by the rear airbag sensor and the center airbag sensor assembly in order to deploy the rear side airbags and curtain shield airbag.
- (f) The center airbag sensor assembly sends the airbag deployment signal to the ECM through CAN (Controller Area Network) to operate the fuel pump control.
- (g) The center airbag sensor assembly sends the airbag deployment signal to the main body ECU via the discrete line to operate collision door lock release control.

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 consists of a 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 consists of a deceleration sensor and an ignition control circuit.
 - (3) The deceleration sensor is built into the side airbag sensor, and the distortion that is created in the sensor is converted into an electric signal based on the vehicle deceleration rate during a front side collision. Accordingly, the extent of the initial collision can be detected in detail.
- (c) REAR AIRBAG SENSOR
 - (1) The rear airbag sensors are installed on the right and left rear pillars respectively.
 - (2) The rear airbag sensor consists of a deceleration sensor and an ignition control circuit.
 - (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, electronic safing sensor, ignition control circuit, and diagnostic circuit.
 - 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. Then the center airbag sensor assembly determines whether the driver airbag, front passenger airbag, driver side knee airbag, front passenger side knee airbag, front seat belt pretensioners and rear seat belt pretensioners should be activated, and diagnoses system malfunctions.

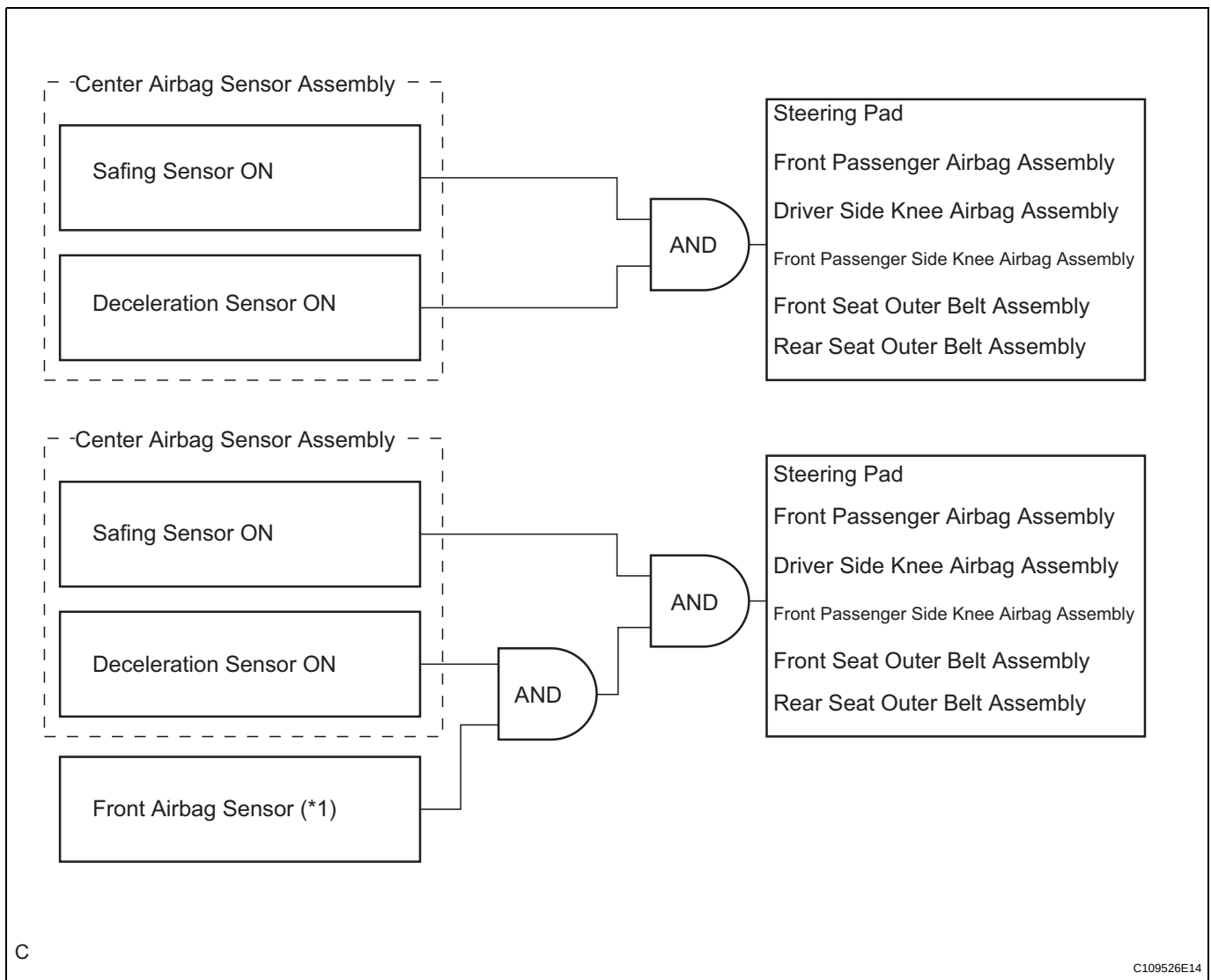
- The center airbag sensor assembly causes the front side, rear side, and curtain shield airbags to deploy when receiving signals from the side airbag sensors.
 - The center airbag sensor assembly receives signals from the deceleration sensor and the electronic safing sensor built into the center airbag sensor assembly and the rear airbag sensor, and determines whether the rear side and 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 to operate the fuel pump control.
 - The center airbag sensor assembly sends the airbag deployment signal to the main body ECU through the discrete line to operate collision door lock release control.
- (2) Deceleration sensor and ignition control circuit
- The deceleration sensor is built into the center airbag sensor assembly.
 - The ignition control circuit performs calculations based on the signal output from the deceleration sensors of the center airbag sensor assembly and front 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 front 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) Electronic safing sensor
- The electronic safing sensor is built into the center airbag sensor assembly. During a side collision, the sensor turns on and outputs an ON signal to the center airbag sensor assembly if a deceleration rate sent to the electronic safing sensor is greater than the specified value.
- (5) 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.

- (6) Diagnostic circuit
 - This circuit constantly diagnoses system malfunctions. When a malfunction is detected, it turns on the SRS warning light on the combination meter assembly to inform the driver.
- (7) 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 engine 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.

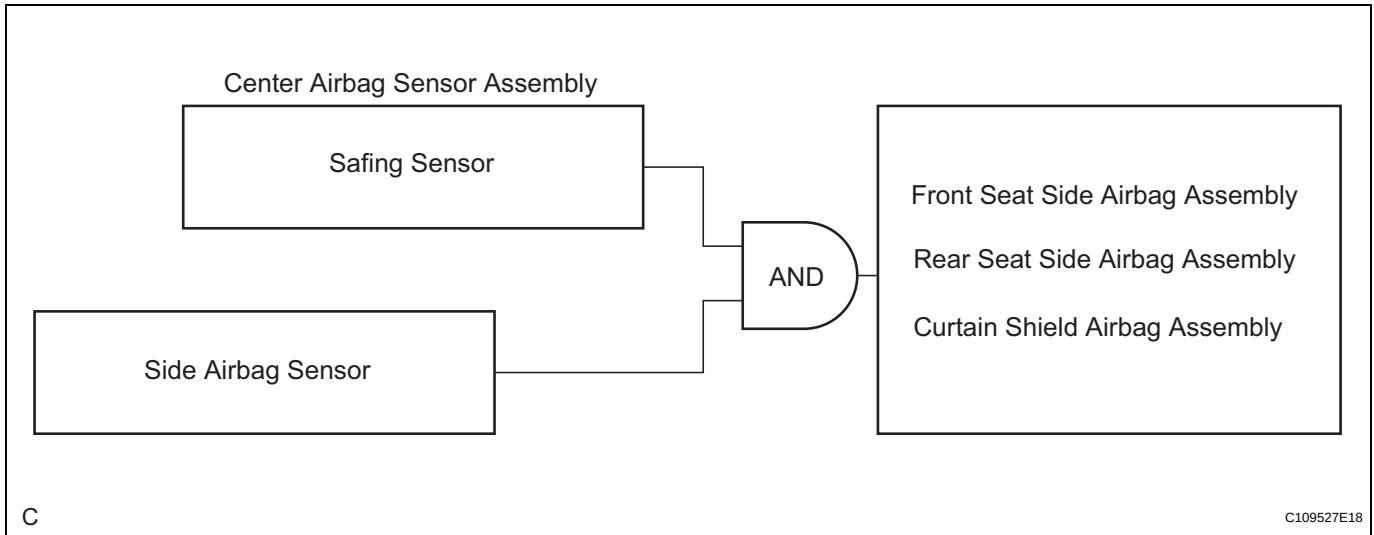
RS

HINT:

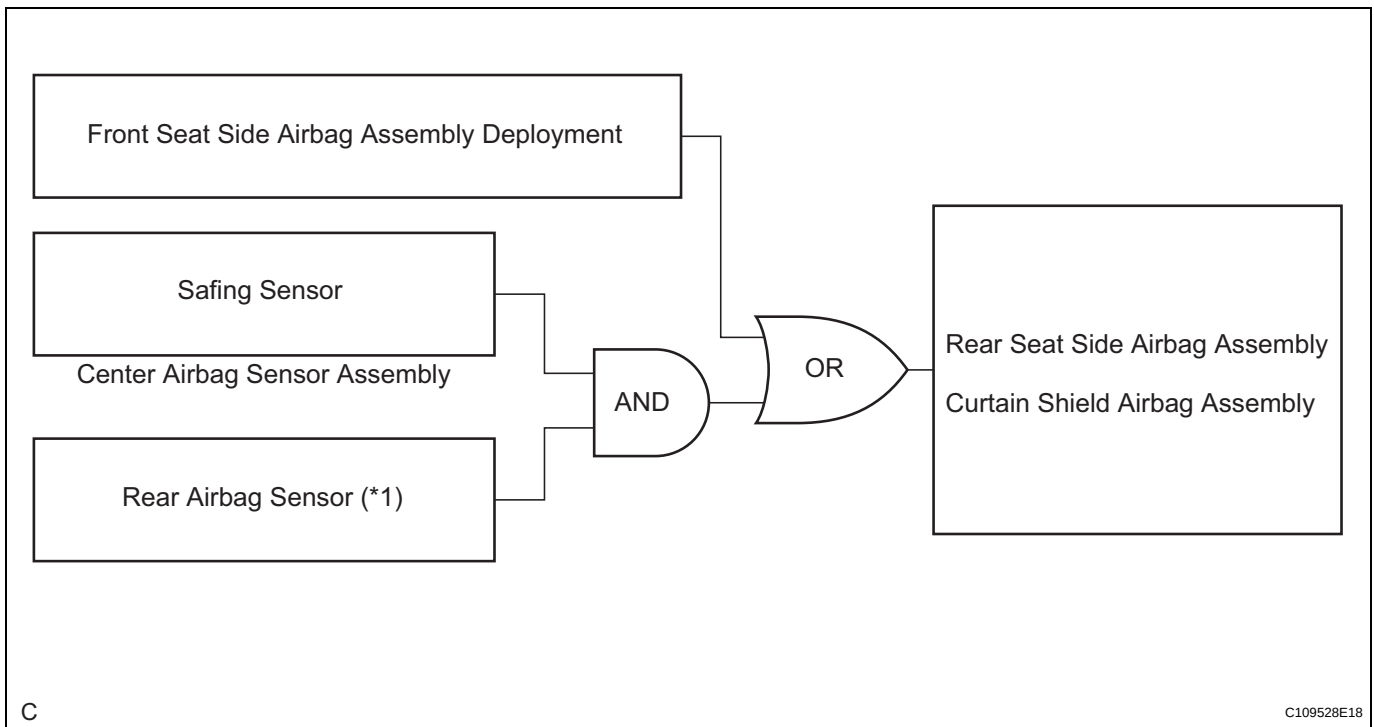
*1: In case of front collision, the ignition signal could be output with the deceleration sensor ON signal even without a signal from the front airbag sensor.

- (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.

RS



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



HINT:

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

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

*: Use the intelligent tester.

RS

1 VEHICLE BROUGHT TO WORKSHOP

NEXT

2 CUSTOMER PROBLEM ANALYSIS

(a) Confirm problem symptoms (See page [IN-39](#)).

NEXT

3 CHECK CAN COMMUNICATION SYSTEM*

(a) Check for DTC outputs (See page [CA-41](#)).

HINT:

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

B

INSPECT CAN COMMUNICATION CIRCUIT

A

4 SRS WARNING LIGHT CHECK

NEXT

5 CHECK DTC (Present and Past DTCs)*

(a) Check for DTC outputs.

Result

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

B

PROBLEM SYMPTOMS TABLE

A

6

DTC CHART

NEXT

7

CIRCUIT INSPECTION*

NEXT

8

REPAIR

NEXT

9

CLEAR DTC (Present and Past DTCs)*

NEXT

10

CHECK DTC (Present and Past DTCs)*

(a) Check for DTC outputs.
Result

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

B

Go to step 6

A

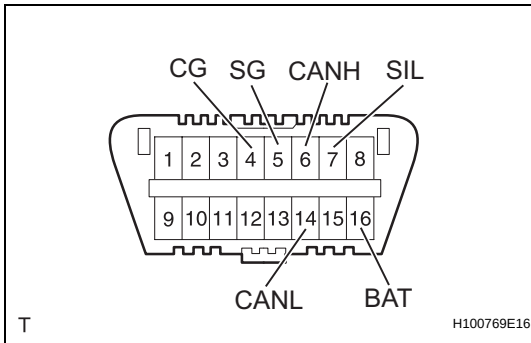
11

CONFIRMATION TEST

NEXT

END

Terminal No.	Terminal Symbol	Destination
M1-11	BBP-	Side airbag sensor RH
M1-12	FSP+	Occupant classification ECU
M1-13	FSP-	Occupant classification ECU



DIAGNOSIS SYSTEM

1. CHECK DLC3

- (a) The ECU uses ISO 15765-4 for communication. The terminal arrangement of the DLC3 complies with SAE J1962 and matches the ISO 15765-4 format.

RS

Symbols (Terminal No.)	Terminal Description	Condition	Specified condition
SIL (7) - SG (5)	Bus "+" line	During transmission	Pulse generation
CG (4) - Body ground	Chassis ground	Always	Below 1 Ω
SG (5) - Body ground	Signal ground	Always	Below 1 Ω
BAT (16) - Body ground	Battery positive	Always	10 to 14 V
CANH (6) - CANL (14)	CAN bus line	Engine switch off (*)	54 to 69 Ω
CANH (6) - BAT (16)	HIGH-level CAN bus line	Engine switch off (*)	6 k Ω or higher
CANH (6) - CG (4)	HIGH-level CAN bus line	Engine switch off (*)	200 Ω or higher
CANL (14) - BAT (16)	LOW-level CAN bus line	Engine switch off (*)	6 k Ω or higher
CANL (14) - CG (4)	LOW-level CAN bus line	Engine switch off (*)	200 Ω or higher

NOTICE:

***: Before measuring the resistance, leave the vehicle as is for at least 1 minute and do not operate the engine switch, any other switches, or the doors.**

If the result is not as specified, the DLC3 may have a malfunction. Repair or replace the harness and connector.

HINT:

If the display shows a communication error message when connecting the cable of the intelligent tester to the DLC3, turning the engine switch on (IG) and operating the intelligent tester, there is a problem on the vehicle side or tester side.

- If communication is normal when the tester is connected to another vehicle, inspect the DLC3 on the original vehicle.
- If communication is still not possible when the tester is connected to another vehicle, the problem is probably in the tester itself. Consult the Service Department listed in the tester's instruction manual.

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 proceeds to troubleshooting 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.

HINT:

Perform the simulation method only during the primary check period (for approximately 6 seconds after the engine 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.

- (1) Turn the engine switch off. Wait for at least 2 seconds, then turn the engine 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.

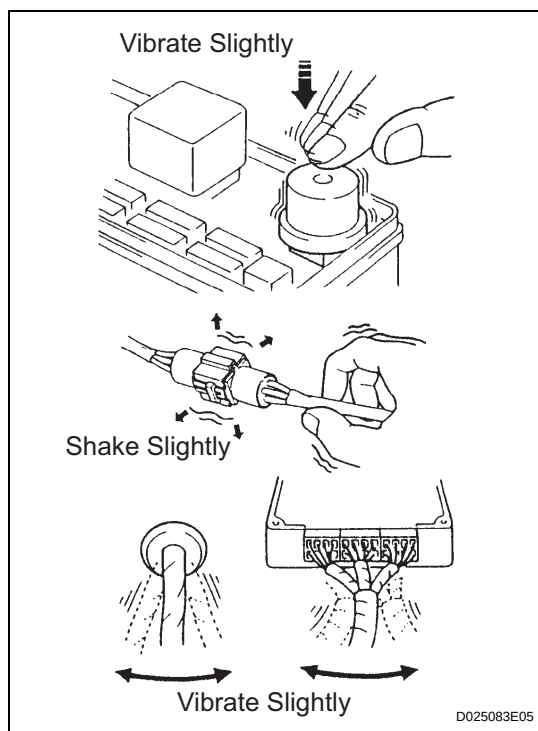
- (b) Constant check.

- (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.

(1) When the airbag system is normal:

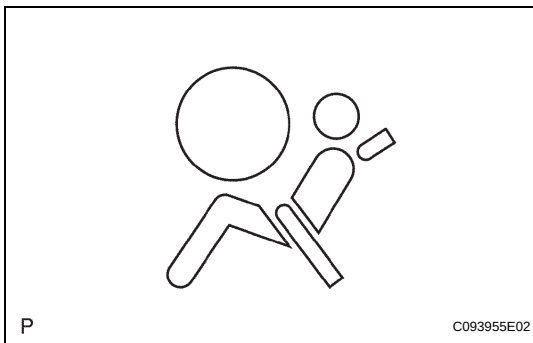
The SRS warning light comes on only during the primary check period (for approximately 6 seconds after the engine switch is turned on (IG)).

(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 engine 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

- Turn the engine switch on (IG), and check that the SRS warning light comes on for approximately 6 seconds (primary check).
- Check that the SRS warning light goes off approximately 6 seconds after the engine switch is turned on (IG) (constant check).

HINT:

When any of the following symptoms occur, refer to "Problem Symptoms Table" (See page RS-33).

- 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 engine 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

(a) Initial check

- Turn the engine switch on (IG).
- The passenger airbag ON/OFF indicator comes on for approximately 4 seconds, then goes off for approximately 2 seconds.
- Approximately 6 seconds after the engine switch is turned on (IG), the passenger airbag ON/OFF indicator will be ON or OFF depending on the conditions listed below.

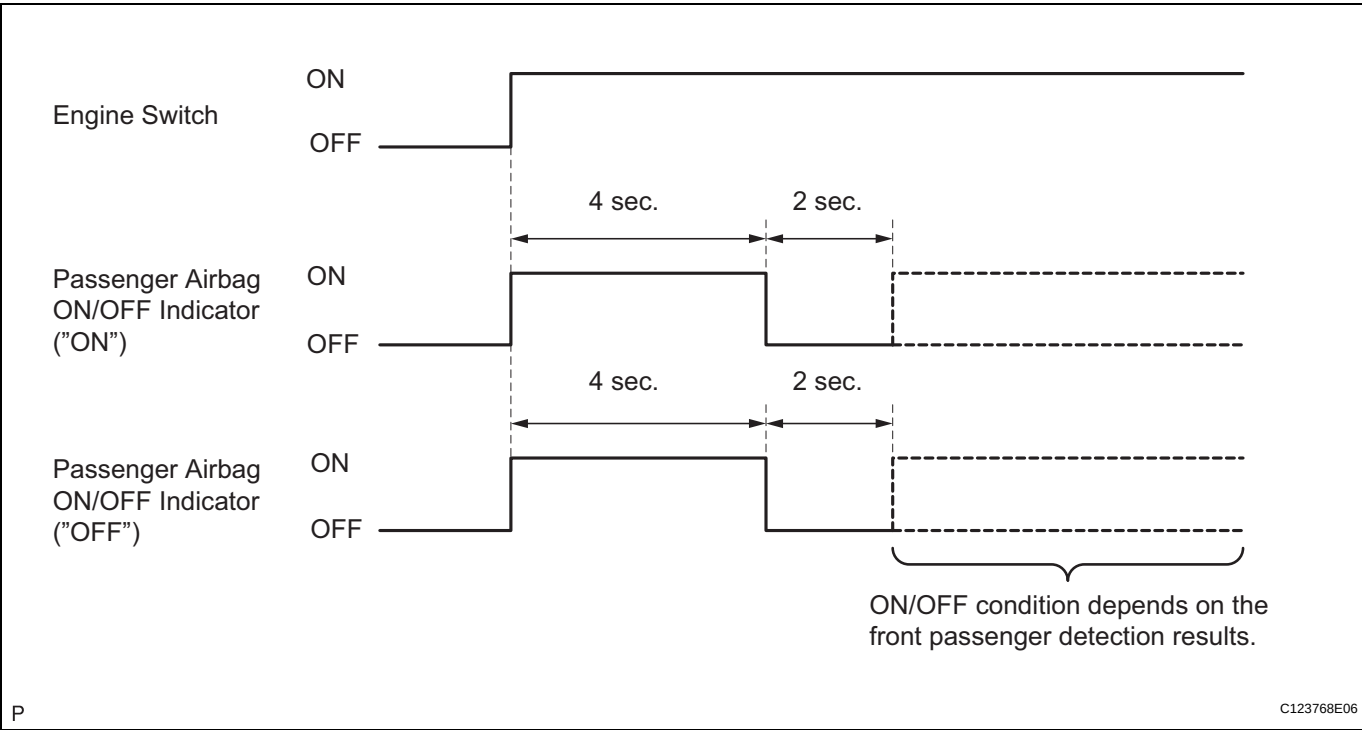
Condition	"ON" indicator	"OFF" indicator
Vacant	OFF	OFF

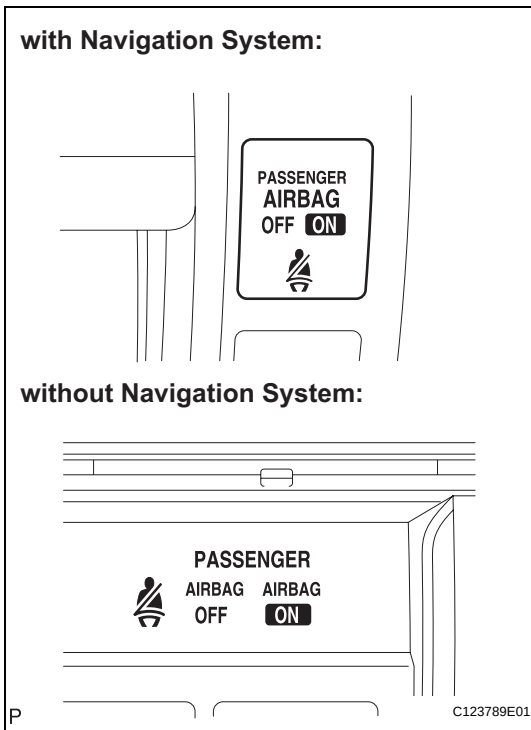
Condition	"ON" indicator	"OFF" indicator
Adult is seated.	ON	OFF
Child is seated.	OFF	ON
Child restraint system is set.	OFF	ON
Front passenger occupant classification failure	OFF	ON

RS

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.





6. PASSENGER AIRBAG ON/OFF INDICATOR CHECK

- Turn the engine switch on (IG).
- 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 engine switch is turned on (IG) and approximately 6 seconds have passed.

7. ACTIVATION PREVENTION MECHANISM

- FUNCTION OF ACTIVATION PREVENTION MECHANISM

- 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.
- 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.

- RELEASING OF ACTIVATION PREVENTION MECHANISM

- 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.
- Refer to the following illustrations concerning connectors utilizing the activation prevention mechanism and its release method.

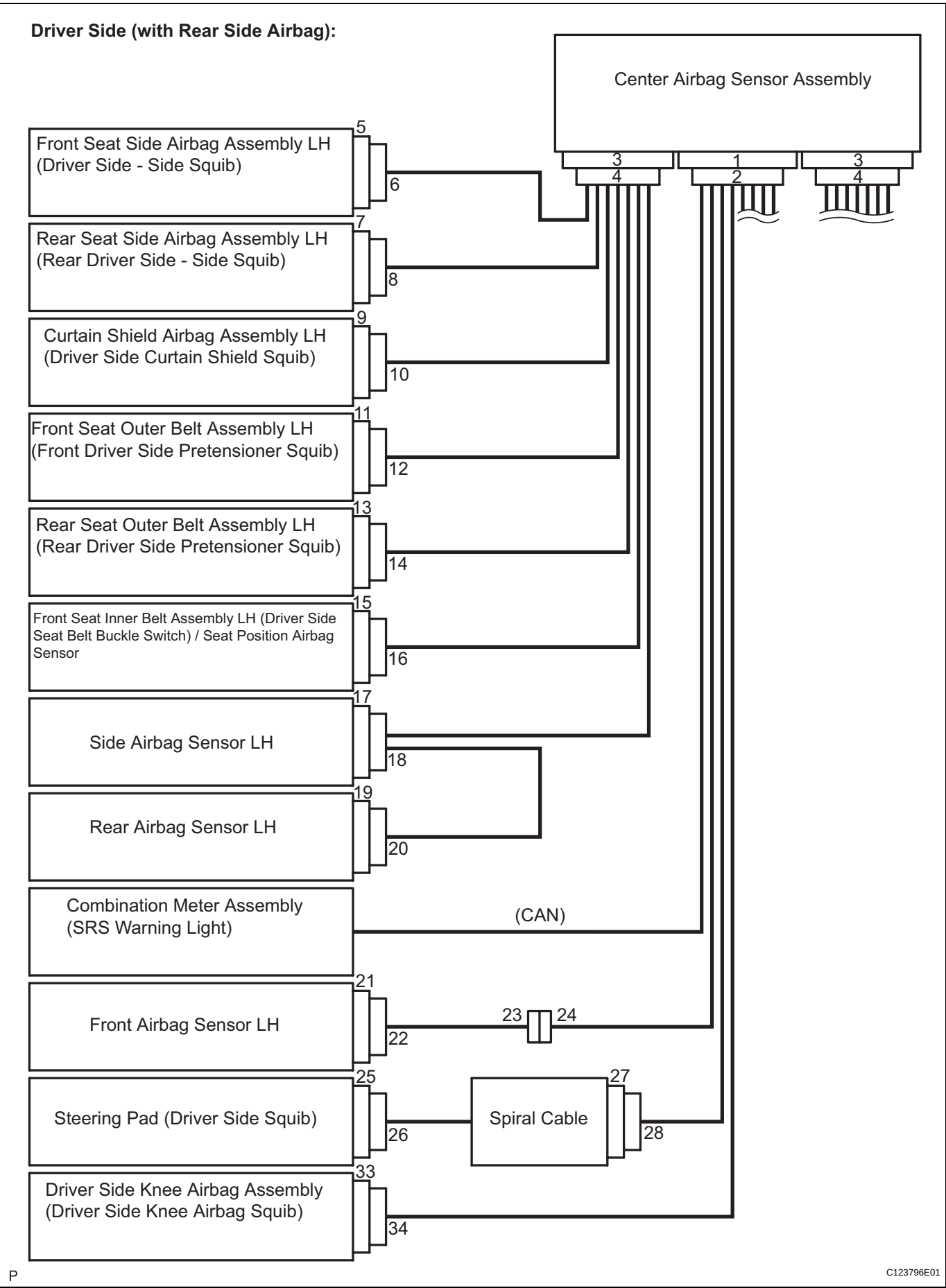
CAUTION:

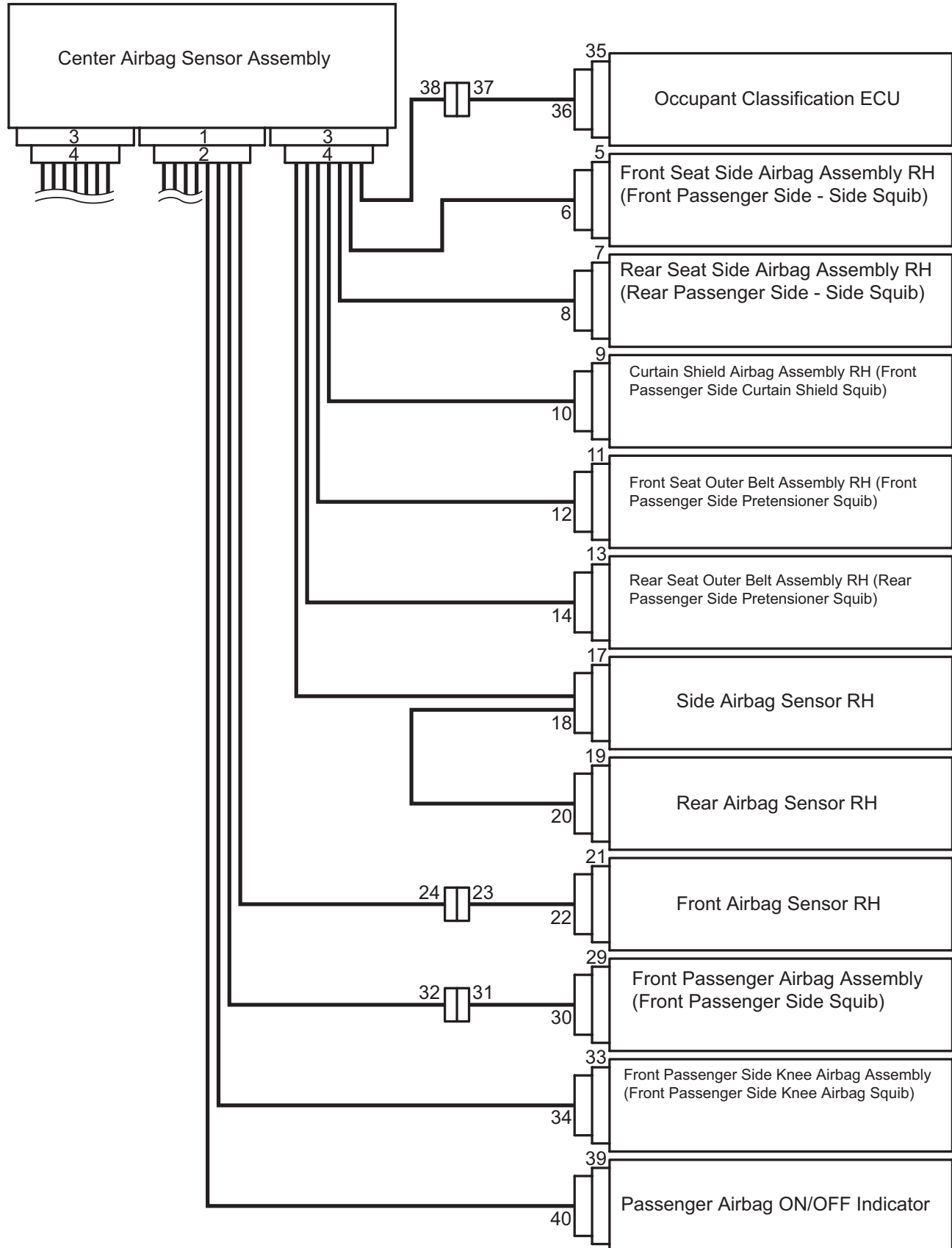
Never release the activation prevention mechanism on the squib connector even when inspecting with the squib disconnected.

NOTICE:

- 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.

RS



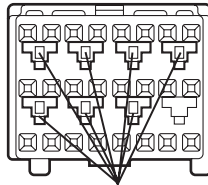
Passenger Side (with Rear Side Airbag):**RS**

with Rear Side Airbag:

Center Airbag Sensor Assembly Connector

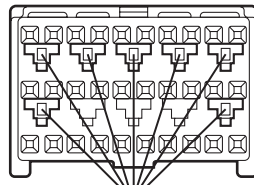
RS

Connector ④



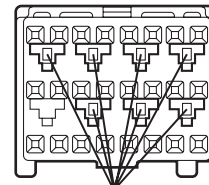
Short Spring

Connector ②



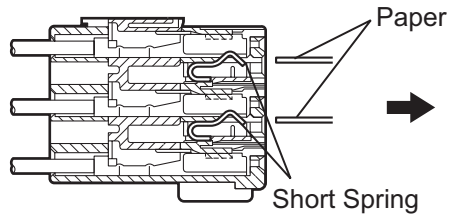
Short Spring

Connector ④

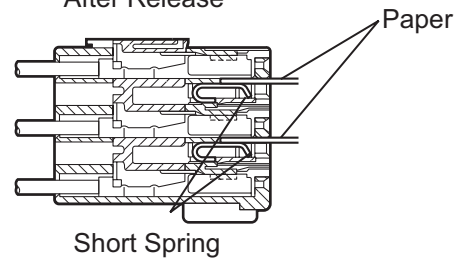


Short Spring

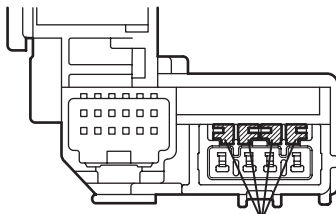
Before Release



After Release

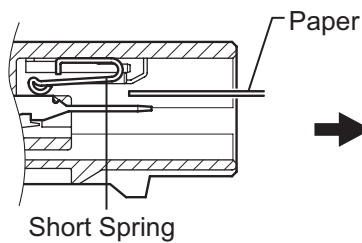


Connector ②⑦

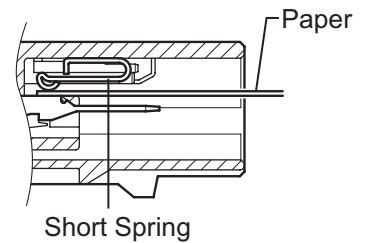


Short Spring

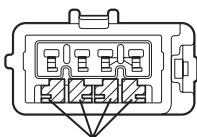
Before Release



After Release

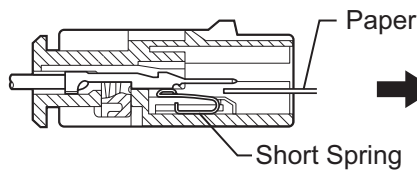


Connector ③①

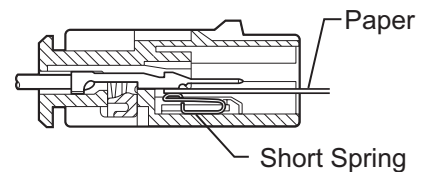


Short Spring

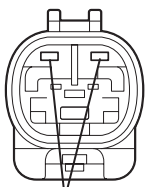
Before Release



After Release

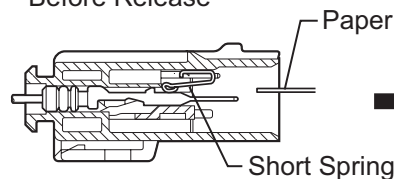


Connector ⑤⑦

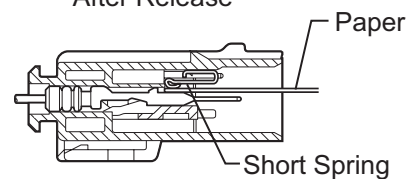


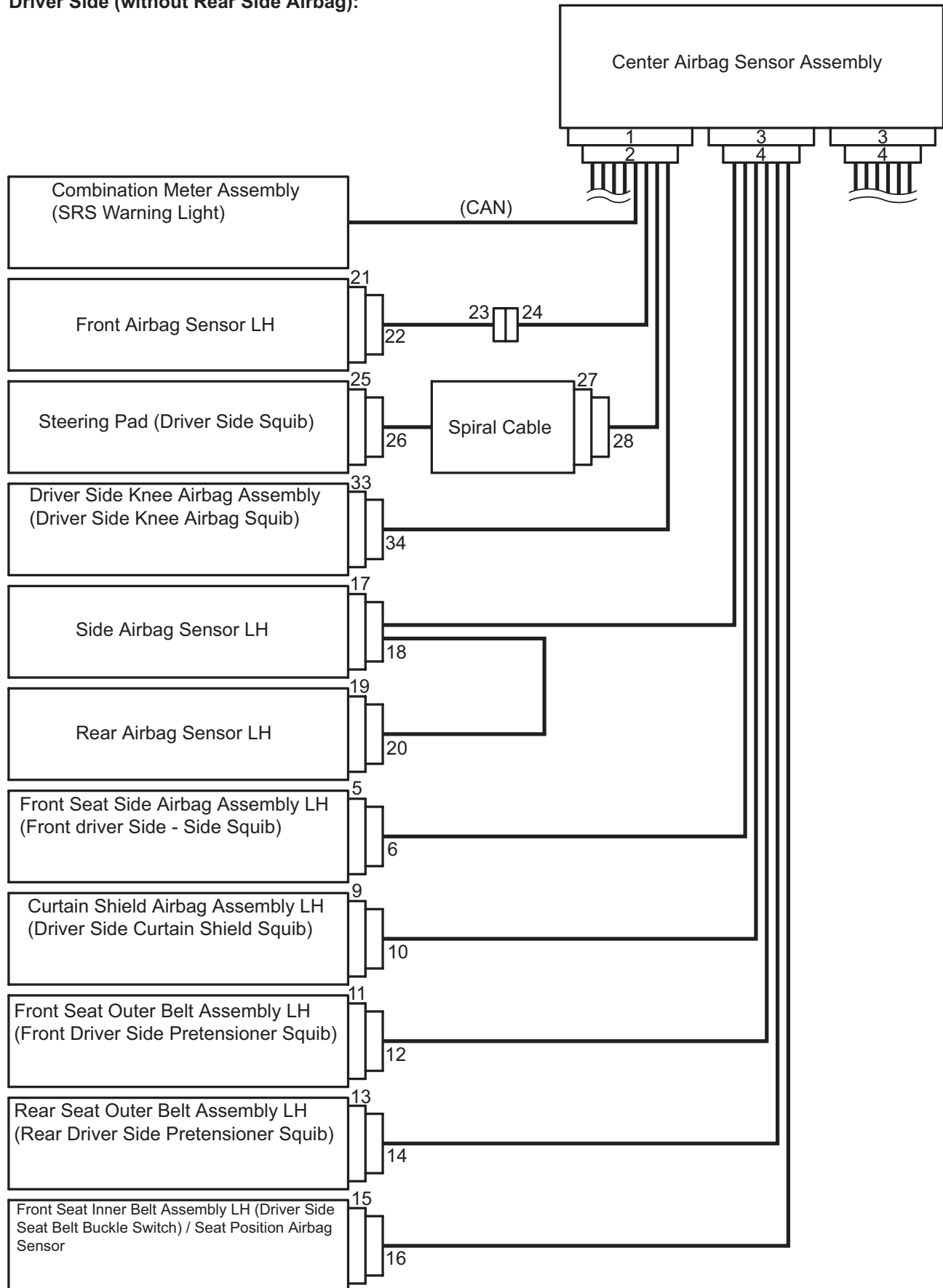
Short Spring

Before Release



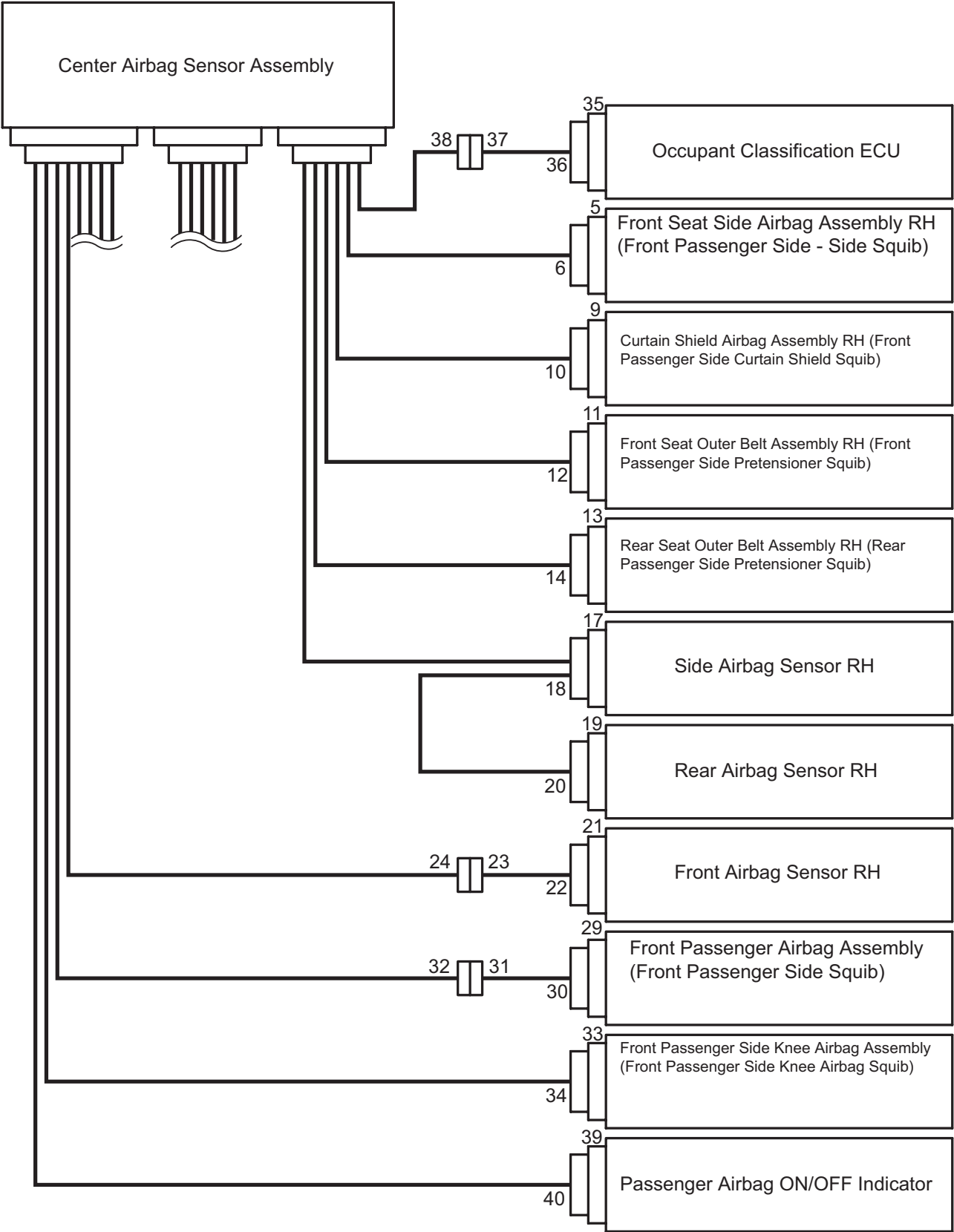
After Release



Driver Side (without Rear Side Airbag):**RS**

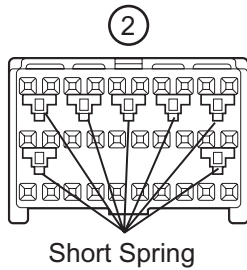
RS

Passenger Side (without Rear Side Airbag):

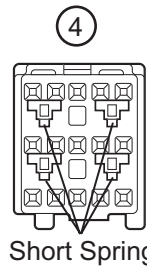
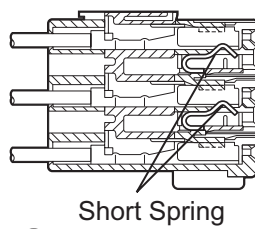


without Rear Side Airbag:

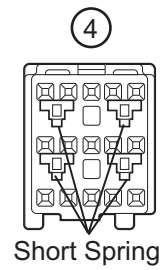
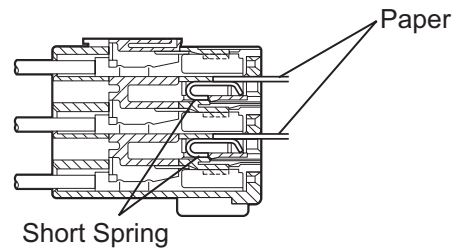
Center Airbag Sensor Assembly Connector



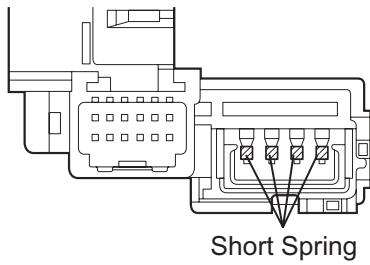
Before Release



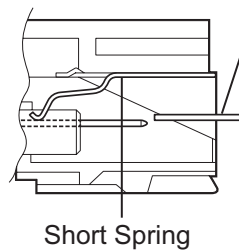
After Release



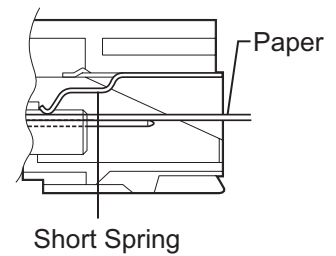
Connector ②⑦



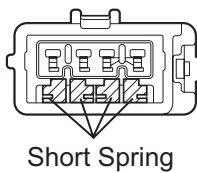
Before Release



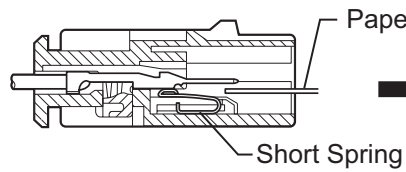
After Release



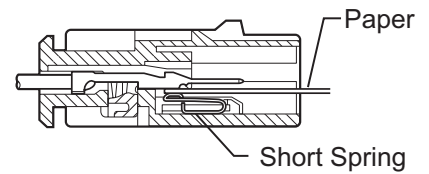
Connector ③①



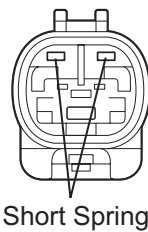
Before Release



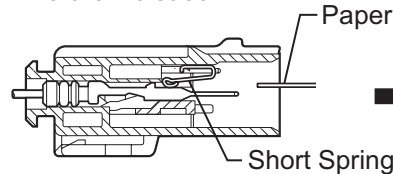
After Release



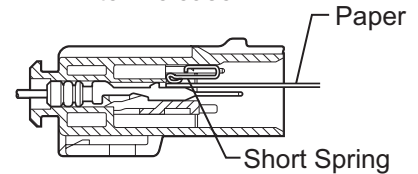
Connector ⑤



Before Release



After Release



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 engine 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.

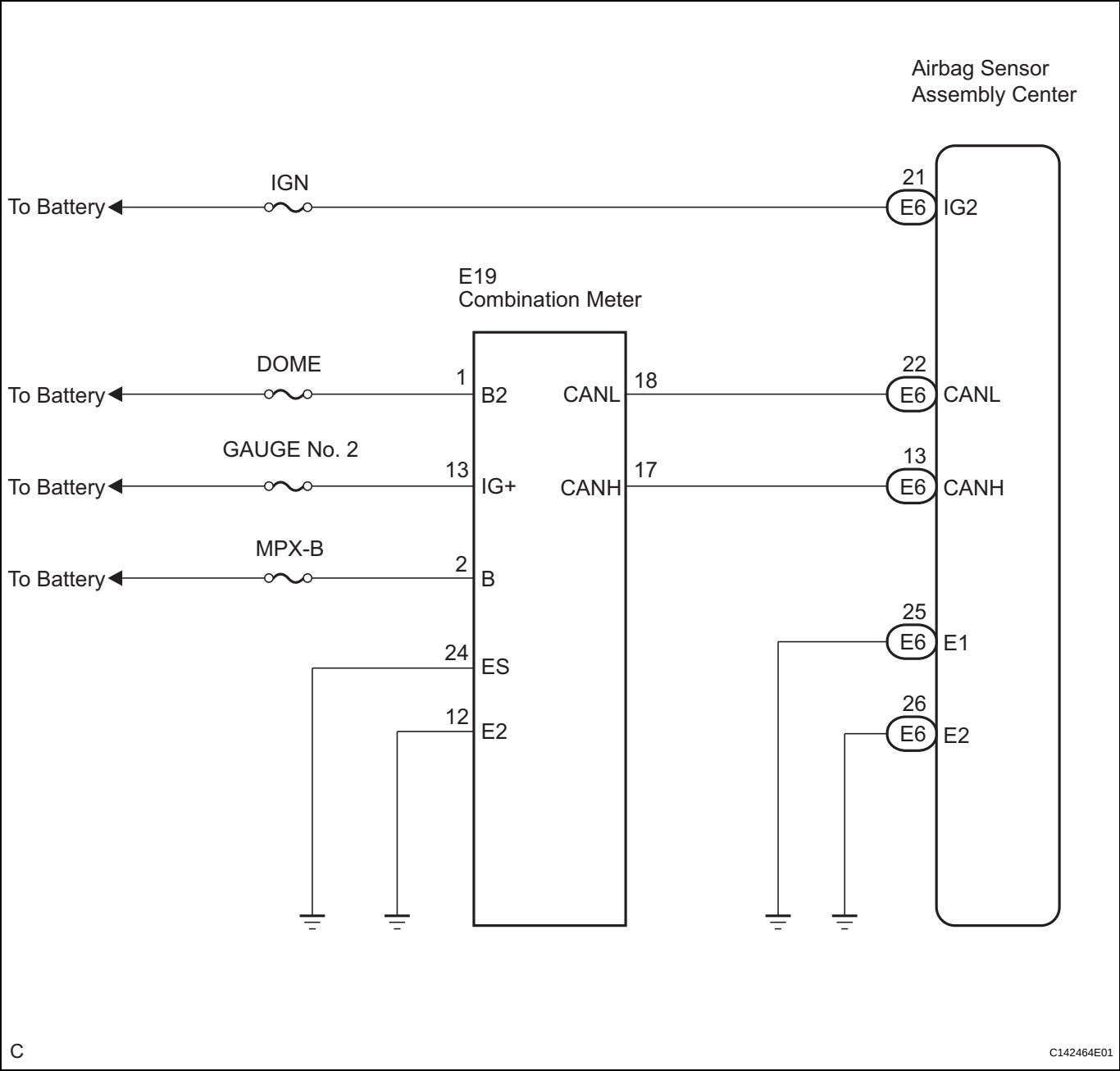
When the battery voltage drops, the voltage-increase circuit (DC-DC converter) functions to increase the voltage of the SRS to normal voltage.

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.

RS

WIRING DIAGRAM



INSPECTION PROCEDURE

1	CHECK CAN COMMUNICATION SYSTEM
---	--------------------------------

(a) Check if a CAN communication DTC is output (See page [CA-41](#)).

Result

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

B

REPAIR CIRCUITS INDICATED BY OUTPUT DTCS

A

2

CHECK BATTERY

RS

- (a) Measure the voltage of the battery.

Standard voltage:**11 to 14 V**

NG

CHECK AND REPLACE BATTERY OR CHARGING SYSTEM

OK

3

CHECK CONNECTORS

- (a) Turn the engine 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 combination meter assembly.

OK:**The connectors are properly connected.**

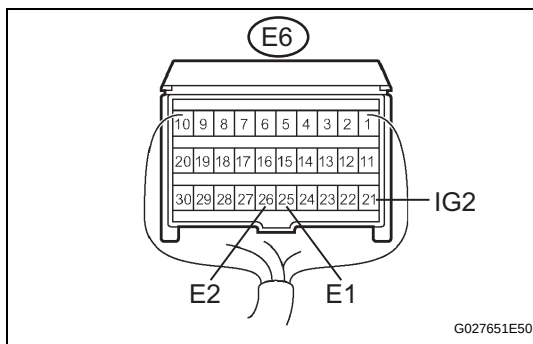
NG

CONNECT CONNECTORS PROPERLY

OK

4

CHECK WIRE HARNESS (SOURCE VOLTAGE OF CENTER AIRBAG SENSOR ASSEMBLY)



- (a) Disconnect the connectors from the center airbag sensor assembly.
 (b) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
 (c) Turn the engine switch on (IG).
 (d) Operate all components of the electrical system (defogger, wipers, headlights, heater blower, etc.).
 (e) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester Connection	Condition	Specified Condition
E6-21 (IG2) - E6-25 (E1)	Engine switch on (IG)	10 to 14 V
E6-21 (IG2) - E6-26 (E2)	Engine switch on (IG)	10 to 14 V

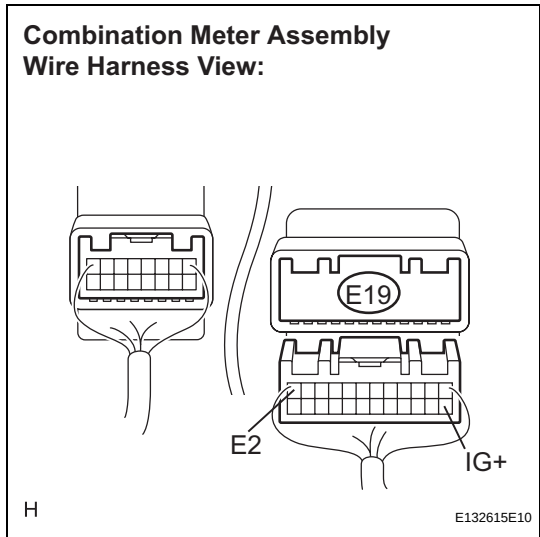
NG

REPAIR OR REPLACE WIRE HARNESS

OK

5

CHECK WIRE HARNESS (SOURCE VOLTAGE OF COMBINATION METER ASSEMBLY)



- (a) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- (b) Disconnect the E19 connector from the combination meter assembly.
- (c) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
- (d) Turn the engine switch on (IG).
- (e) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester Connection	Condition	Specified Condition
E19-13 (IG+) - E19-12 (E2)	Engine switch on (IG)	10 to 14 V

NG

REPAIR OR REPLACE WIRE HARNESS

OK

6

CHECK SRS WARNING LIGHT

- (a) Turn the engine switch off.
- (b) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- (c) Connect the connector to the combination meter assembly.
- (d) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
- (e) Turn the engine switch on (IG).
- (f) Check the SRS warning light condition.

OK:

After the primary check period, SRS warning light goes off for approximately 10 seconds and remains on.

HINT:

The primary check period shows approximately 6 seconds after the engine switch is turned on (IG).

NG

GO TO METER / GAUGE SYSTEM (See page ME-14)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See page RS-468)

SRS Warning Light does not Come ON**DESCRIPTION**

See page [RS-294](#).

WIRING DIAGRAM

See page [RS-295](#).

RS**INSPECTION PROCEDURE****1 CHECK BATTERY**

- (a) Measure the voltage of the battery.

Standard voltage:

11 to 14 V

NG

**CHECK AND REPLACE BATTERY OR
CHARGING SYSTEM**

OK

2 CHECK CONNECTOR

- (a) Turn the engine 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 combination meter assembly.

OK:

The connectors are properly connected.

NG

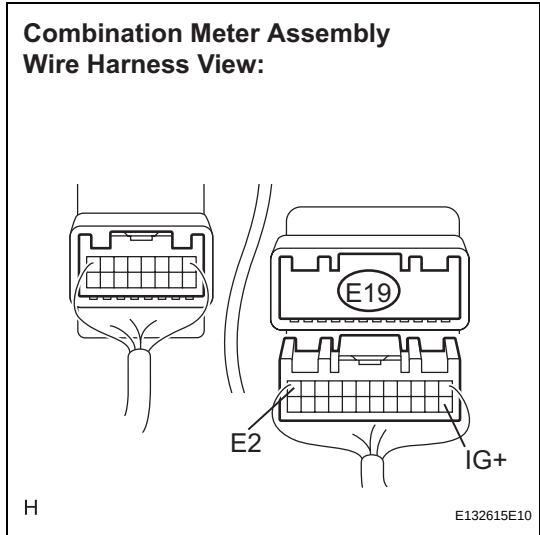
CONNECT CONNECTOR PROPERLY

OK

RS

3

CHECK WIRE HARNESS (SOURCE VOLTAGE OF COMBINATION METER)



- (a) Turn the engine switch off.
- (b) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- (c) Disconnect the E19 connector from the combination meter assembly.
- (d) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
- (e) Turn the engine switch on (IG).
- (f) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester Connection	Condition	Specified Condition
E19-13 (IG+) - E12-12 (E2)	Engine switch on (IG)	10 to 14 V

NG

REPAIR OR REPLACE WIRE HARNESS

OK

4

CHECK SRS WARNING LIGHT

- (a) Turn the engine switch off.
- (b) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- (c) Connect the connector to the combination meter assembly.
- (d) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
- (e) Turn the engine switch on (IG).
- (f) Check the SRS warning light condition.

OK:
After the primary check period, SRS warning light goes off for approximately 10 seconds and remains on.

HINT:
The primary check period is approximately 6 seconds after the engine switch is turned on (IG).

NG

GO TO METER / GAUGE SYSTEM (See page ME-14)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See page RS-468)

Diagnosis Circuit

DESCRIPTION

DTC output mode is set by connecting terminals TC and CG of the DLC3.

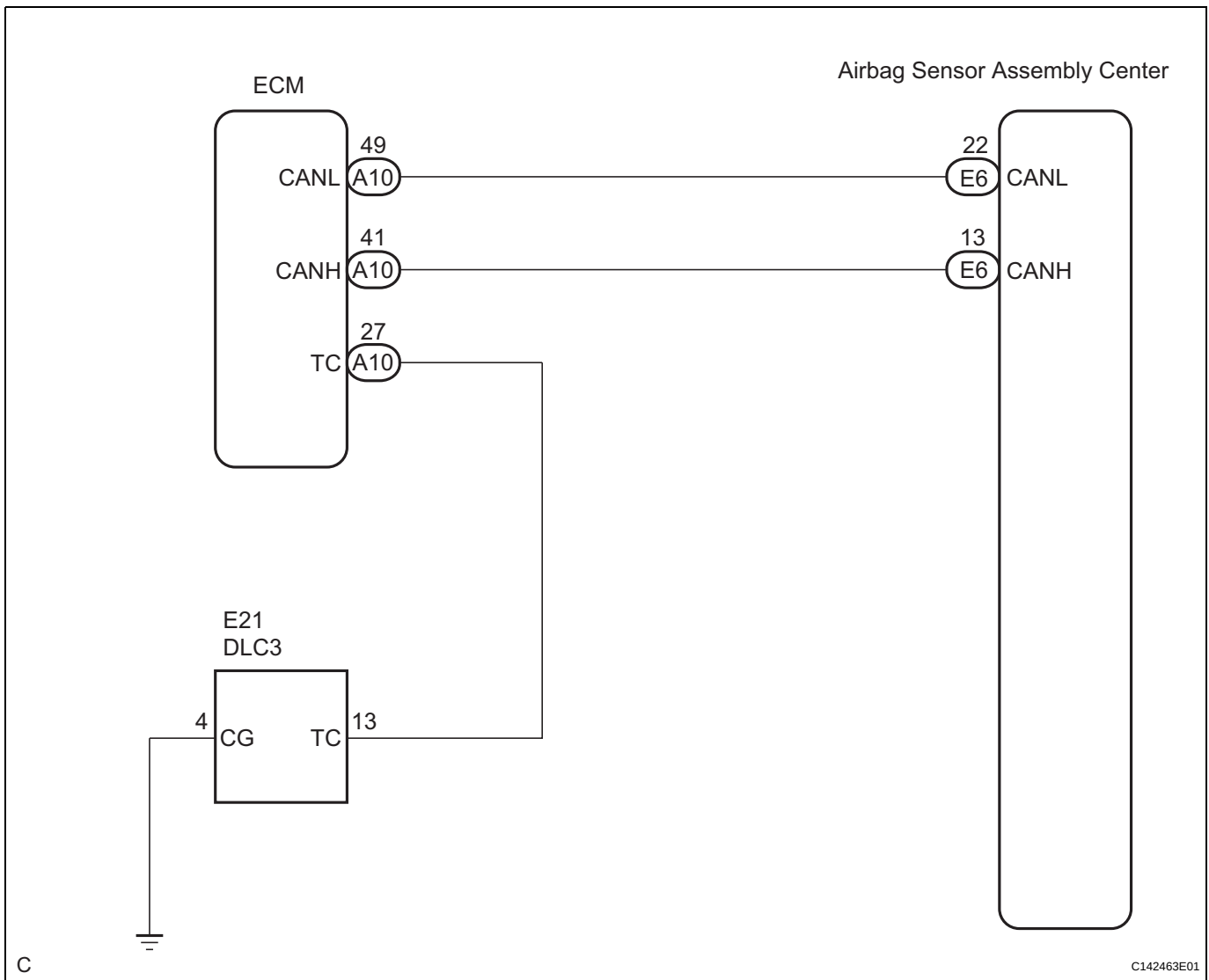
DTCs are displayed by blinking of the SRS warning light.

HINT:

- When each warning light stays blinking, a ground short in the wiring of terminal TC of the DLC3 or an internal ground short in each ECU is suspected.
- A DTC output mode signal is transmitted through CAN communication system to each ECU including the center airbag sensor assembly. Thus when all systems do not enter DTC output mode, there may be an ECM malfunction.

RS

WIRING DIAGRAM



INSPECTION PROCEDURE

1

CHECK CAN COMMUNICATION SYSTEM

- (a) Check if a CAN communication system DTC is output
(See page CA-41).

Result

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

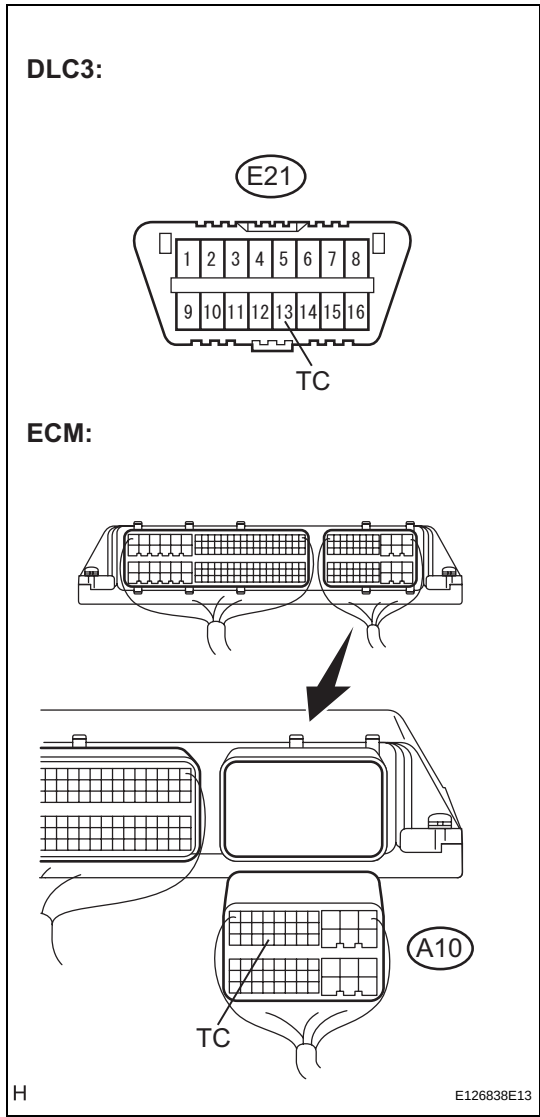
B

REPAIR CIRCUITS INDICATED BY OUTPUT DTCS

A

2

CHECK WIRE HARNESS (DLC3 - ECM)



- (a) Turn the engine switch off.
- (b) Disconnect the A10 connector from the ECM.
- (c) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
E21-13 (TC) - A10-27 (TC)	Always	Below 1 Ω

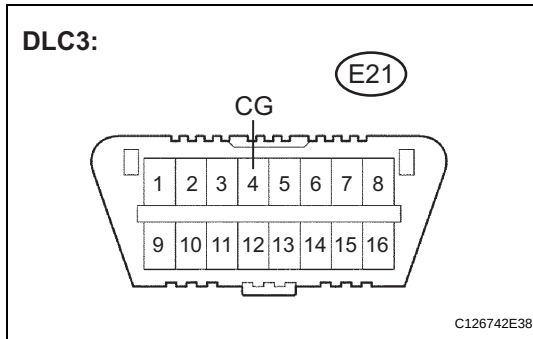
NG

REPAIR OR REPLACE WIRE HARNESS (TC OF DLC3 - TC OF ECM)

OK

3 CHECK WIRE HARNESS (CG OF DLC3 - BODY GROUND)

RS



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

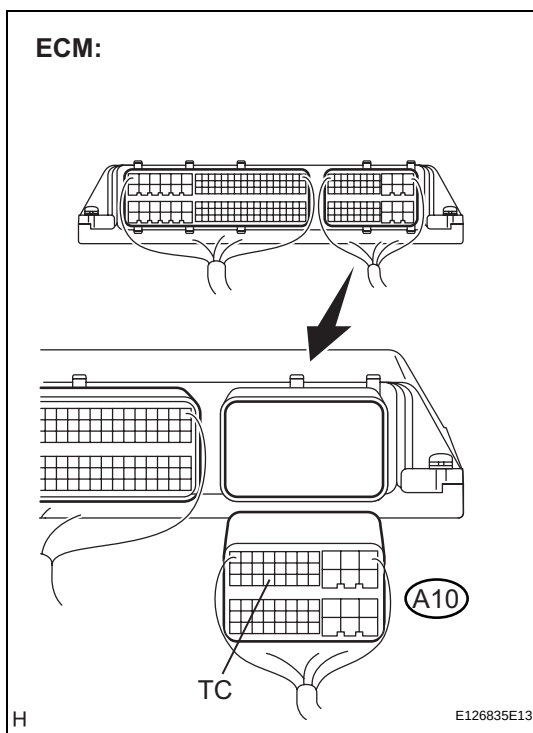
Standard resistance

Tester Connection	Condition	Specified Condition
E21-4 (CG) - Body ground	Always	Below 1 Ω

NG

REPAIR OR REPLACE WIRE HARNESS (CG OF DLC3 - BODY GROUND)

OK

4 CHECK WIRE HARNESS (TC OF ECM - BODY GROUND)

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

Standard resistance

Tester Connection	Condition	Specified Condition
A10-27 (TC) - Body ground	Always	1 M Ω or higher

NG

REPAIR OR REPLACE WIRE HARNESS OR EACH ECU

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See page [RS-468](#))

OCCUPANT CLASSIFICATION SYSTEM

PRECAUTION

NOTICE:

Some systems need to be initialized after reconnecting the negative (-) battery terminal (See page [IN-33](#)).

1. INSPECTION PROCEDURE FOR VEHICLE INVOLVED IN ACCIDENT

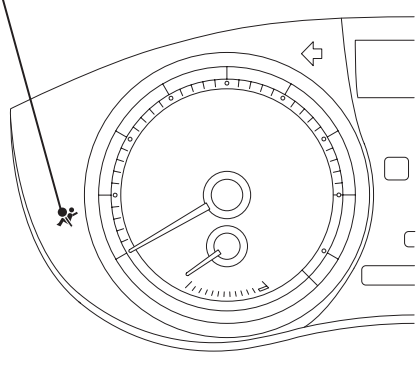
- (a) Perform zero point calibration and sensitivity check if any of the following conditions apply.
 - The occupant classification ECU is replaced.
 - The passenger airbag ON/OFF indicator indicates OFF when the front passenger seat is not occupied.
 - The vehicle is brought to the workshop for repair due to an accident or a collision.

RS

PARTS LOCATION

COMBINATION METER ASSEMBLY:

SRS WARNING LIGHT



MULTI-DISPLAY ASSEMBLY: (*1)

AIR CONDITIONER PANEL
SUB-ASSEMBLY: (*2)PASSENGER
AIRBAG
OFF ONPASSENGER
AIRBAG AIRBAG
OFF ON

PASSENGER AIRBAG ON/OFF INDICATOR



*1: WITH NAVIGATION SYSTEM

*2: WITHOUT NAVIGATION SYSTEM

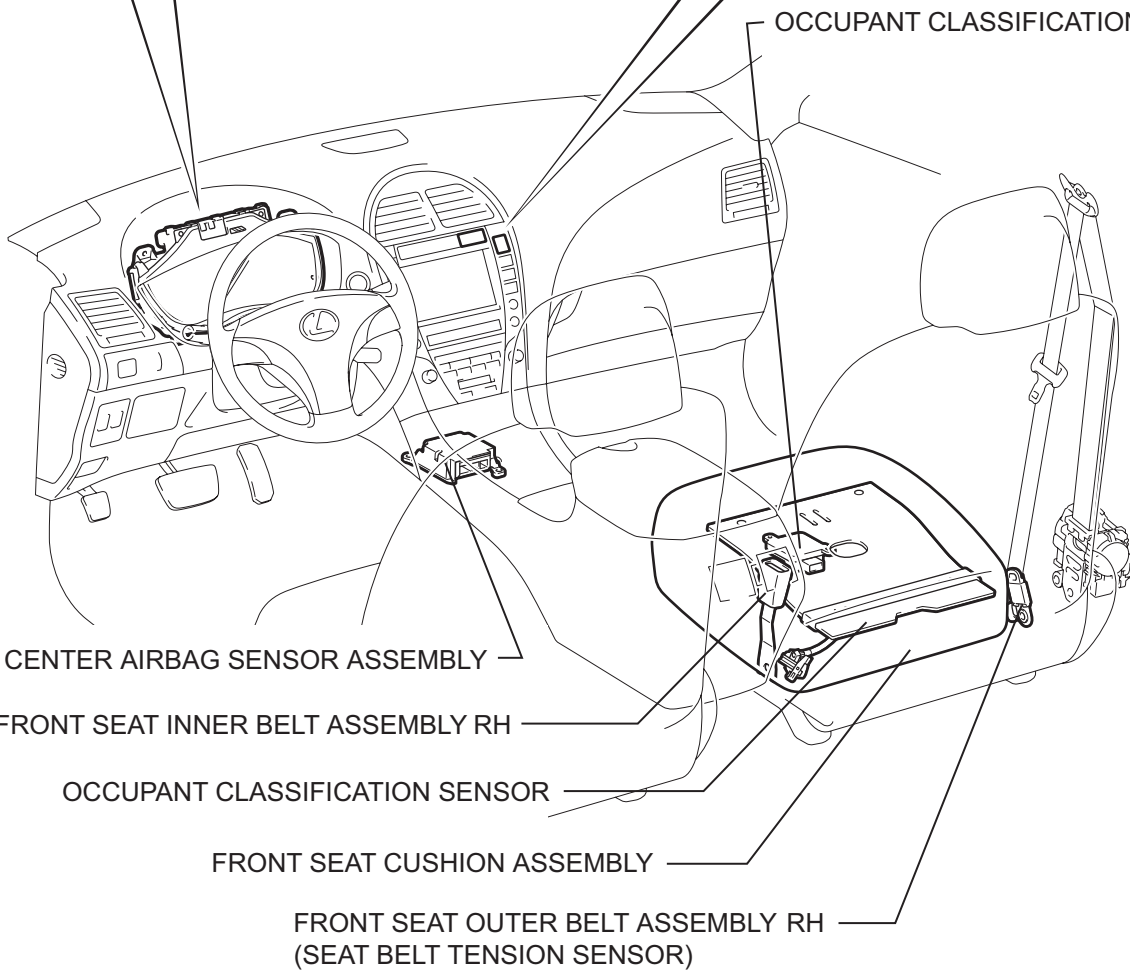
OCCUPANT CLASSIFICATION ECU

CENTER AIRBAG SENSOR ASSEMBLY

FRONT SEAT INNER BELT ASSEMBLY RH

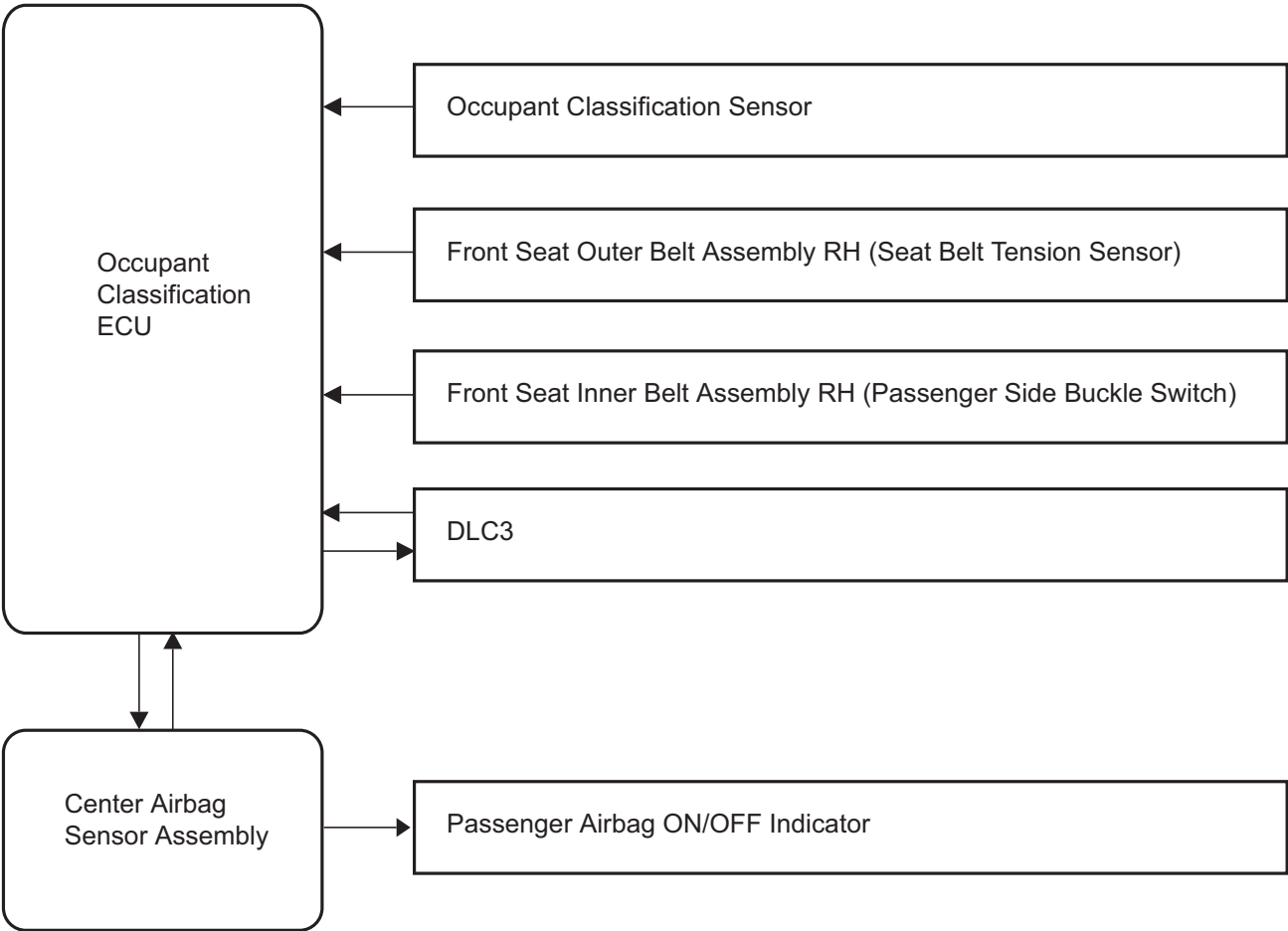
OCCUPANT CLASSIFICATION SENSOR

FRONT SEAT CUSHION ASSEMBLY

FRONT SEAT OUTER BELT ASSEMBLY RH
(SEAT BELT TENSION SENSOR)

SYSTEM DIAGRAM

RS



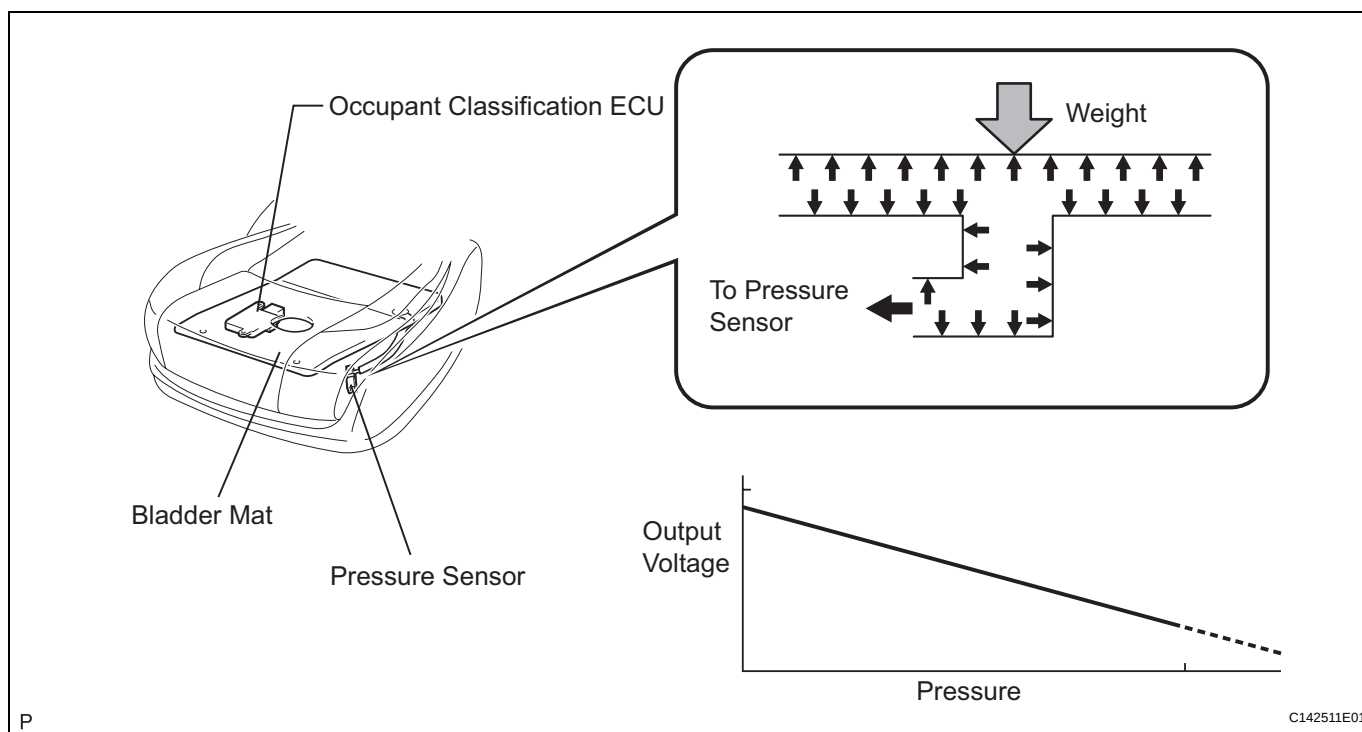
SYSTEM DESCRIPTION

1. GENERAL DESCRIPTION

- (a) In the occupant classification system, the occupant classification ECU calculates the weight of the front passenger based on a signal from the occupant classification sensor. This system judges the occupant to be a child when it detects a weight of less than 27.3 kg (60 lb), and disables the front passenger side airbag and front passenger side - side airbag.
- (b) This system is mainly composed of the occupant classification sensor that detects 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 assembly and front passenger side - side airbag assembly.

2. OCCUPANT CLASSIFICATION SENSOR

- (a) The occupant classification sensor consists of the bladder mat and the pressure sensor. When weight is applied to the bladder mat, the pressure applied through the silicone to the pressure sensor changes. The pressure sensor converts these changes into voltages and transmits them to the occupant classification ECU.



- (b) The occupant classification sensor is installed between the seat cushion frame and seat cushion pad. The pressure sensor is installed on the seat frame.

- (c) The pressure sensor detects the pressure applied to the front passenger seat as a seated passenger. The occupant classification ECU determines whether the front passenger side airbag and front passenger side - side airbag are deployed based on signals from the pressure sensor.

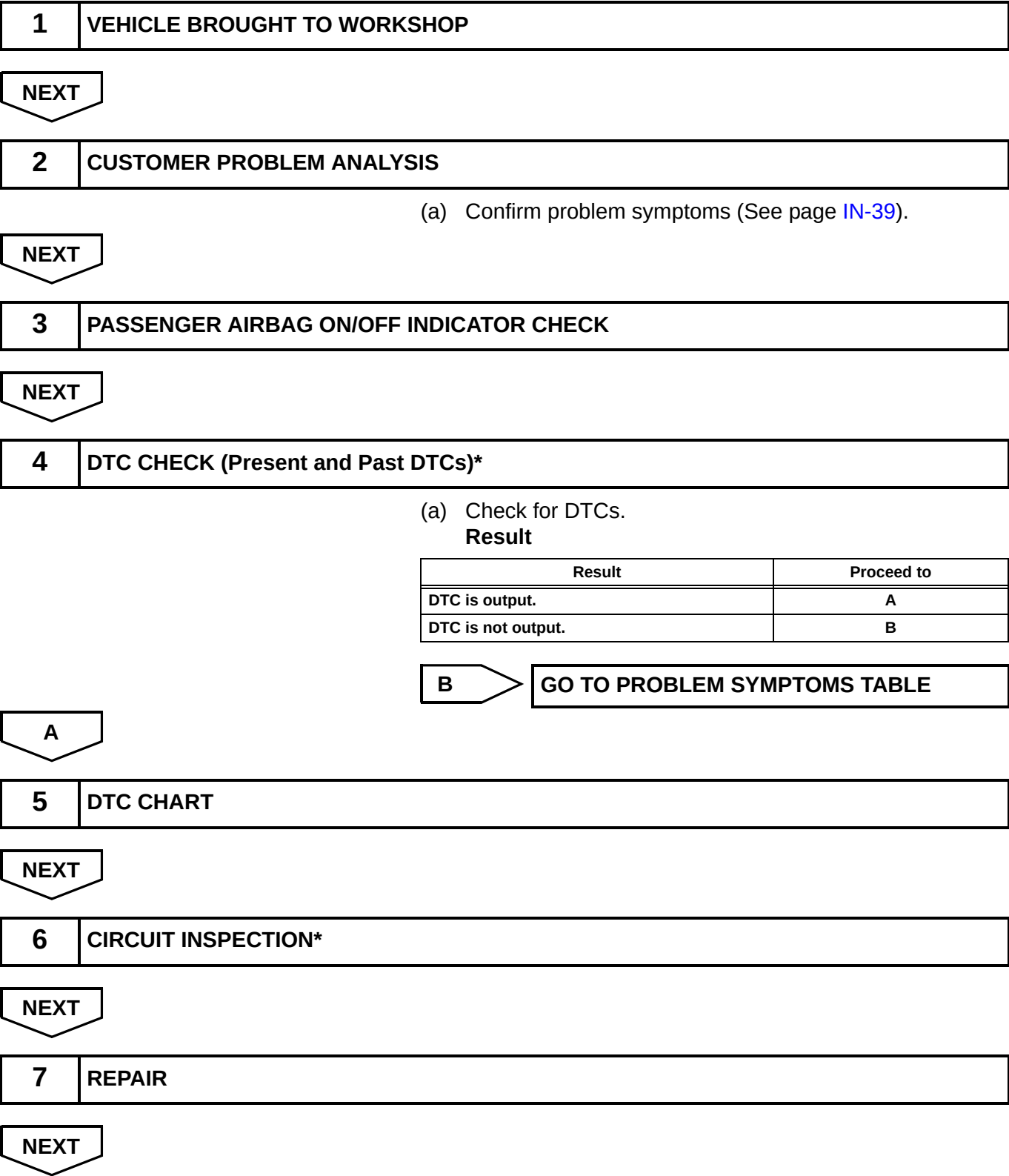
3. SEAT BELT TENSION SENSOR

- (a) The seat belt tension sensor is installed on the front seat outer belt to detect a CRS (Child Restraint System).

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:
*: Use the intelligent tester.

RS



8 CLEAR DTCS (Present and Past DTCS)*

(a) Clear DTCS.

NEXT

RS

9 DTCS CHECK (Present and Past DTCS)*

(a) Check for DTCS.

Result

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

B

Go to step 5

A

10 SYMPTOM SIMULATION

(a) Check the passenger airbag ON/OFF indicator condition.

Result

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

11 CONFIRMATION TEST

NEXT

END

REGISTRATION

1. REGISTRATION

NOTICE:

- If any DTCs related to the occupant classification ECU are output, troubleshoot those DTCs by referring to the **DIAGNOSTIC TROUBLE CODE CHART**.
- When ECU data saving or loading operations cannot be performed, replace the front seat cushion assembly (with occupant classification ECU and occupant classification sensor).

HINT:

- When the occupant classification ECU is replaced, the previous ECU data must be saved in the intelligent tester and loaded into the new ECU by following the flowchart below.
 - Until the data from the previous ECU are loaded into the new occupant classification ECU, these data are not erased even when the tester is turned off.
 - ECU EXCHANGE PROCEDURE (Before Exchange) describes the procedure to save the data in the intelligent tester from the occupant classification ECU which has been installed on the vehicle. ECU EXCHANGE PROCEDURE (After Exchange) describes the procedure to load the data from the previous ECU, stored in the intelligent tester, into the new ECU.
- (a) Connect the intelligent tester to the DLC3.
 - (b) Turn the engine switch on (IG).
 - (c) Store the occupant classification ECU data in the intelligent tester by following the prompts on the tester screen.

HINT:

If the ECU data cannot be stored in the intelligent tester, replace the front seat cushion assembly (with occupant classification ECU and occupant classification sensor).

- (d) Turn the engine switch on (IG).
- (e) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- (f) Replace the occupant classification ECU (See page [RS-501](#)).
- (g) Connect the negative (-) terminal cable to the battery.
- (h) Turn the engine switch on (IG).
- (i) Load the data from the previous ECU stored in the tester, into the newly installed ECU by following the prompts on the tester screen.
- (j) Turn the engine switch off.
- (k) Turn the engine switch on (IG).

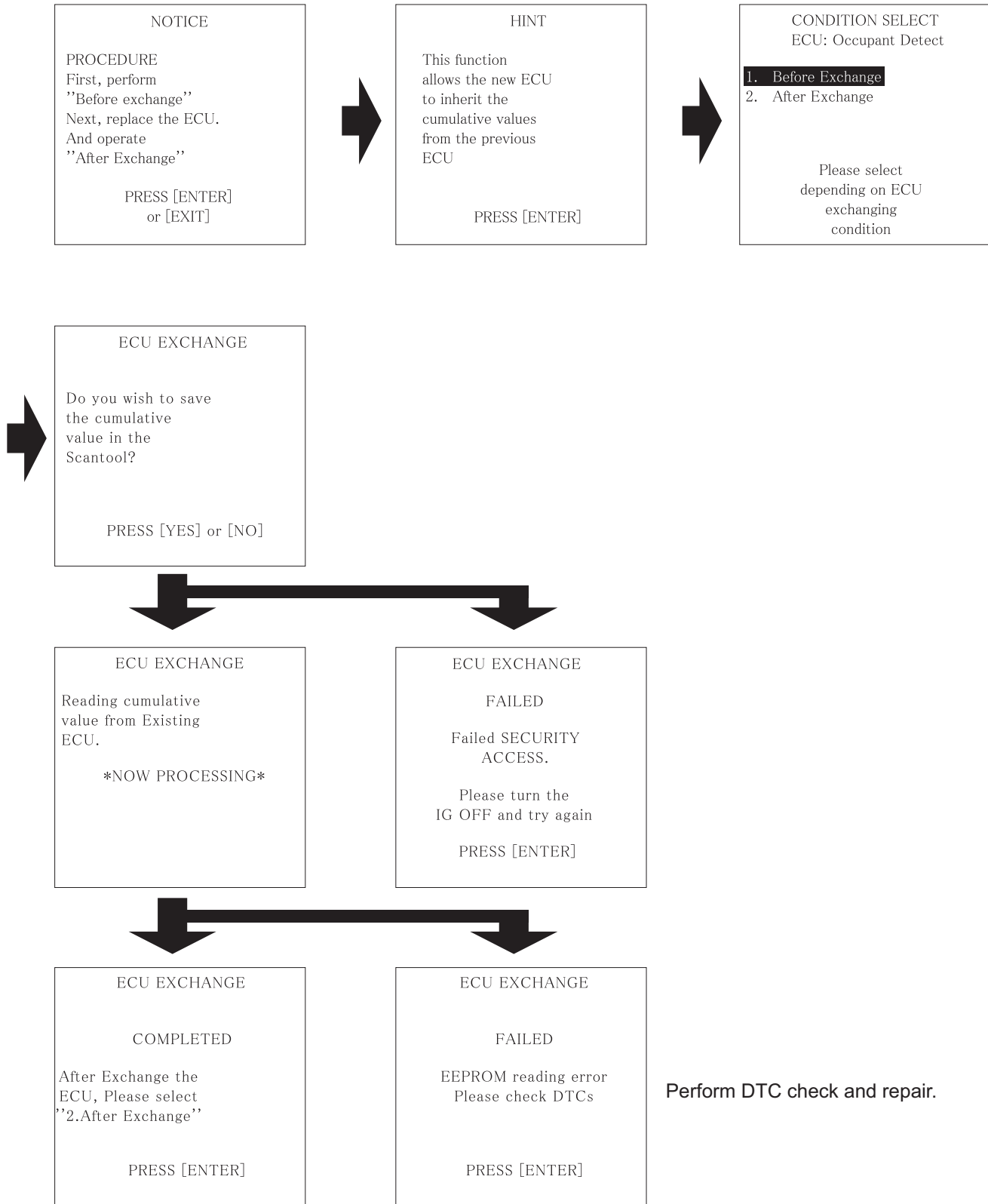
- (I) Clear the DTCs stored in the memory (See page [RS-318](#)).

HINT:

If DTCs are not cleared at this time, past DTCs will remain.

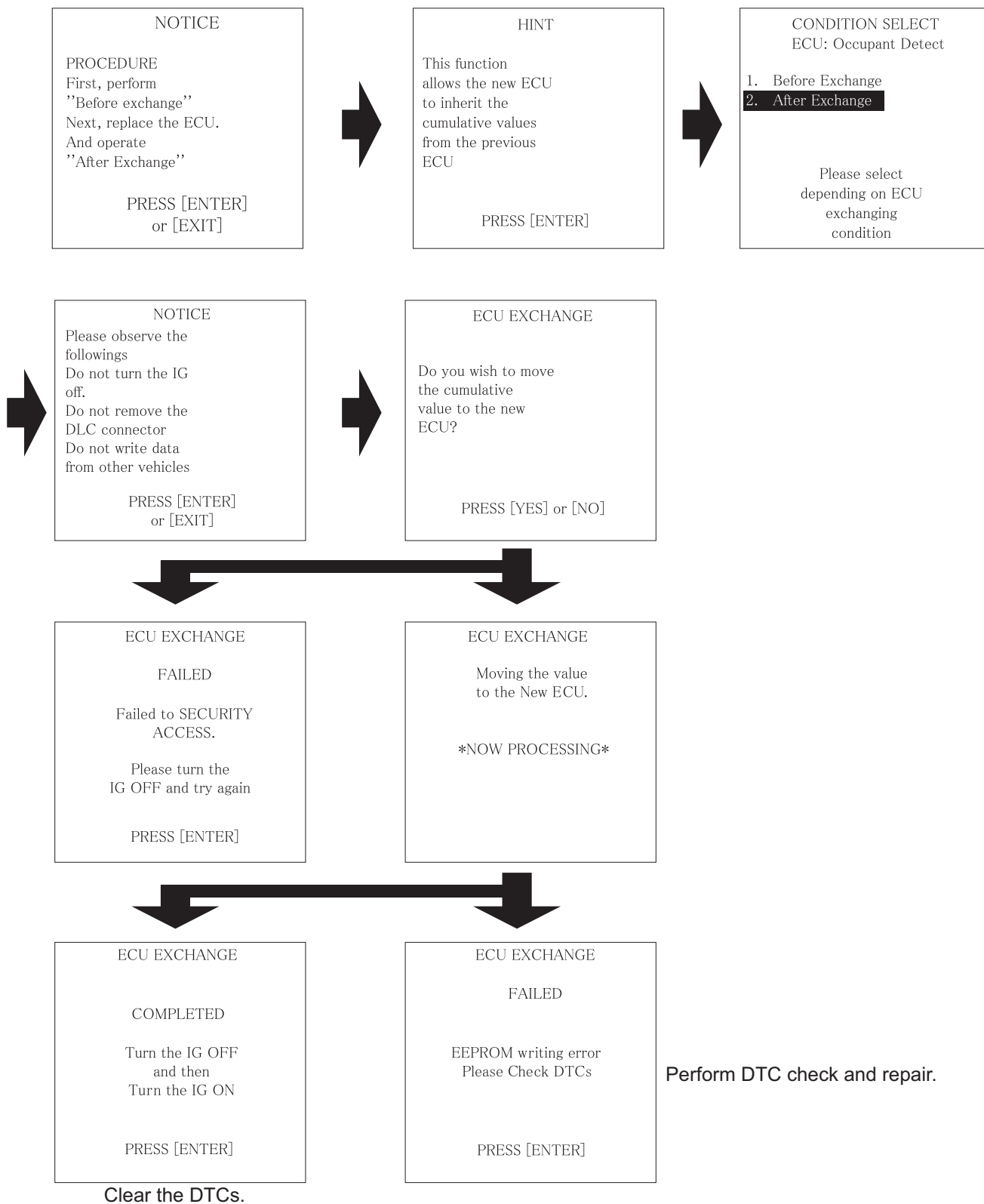
ECU EXCHANGE PROCEDURE (Before Exchange):

1: DIAGNOSIS - 1: OBD/MOBD - MODEL YEAR - MODEL SELECTION - 9: OCCUPANT DETECT
Refer to the following screen flow.



ECU EXCHANGE PROCEDURE (After Exchange):

1: DIAGNOSIS - 1: OBD/MOBD - MODEL YEAR - MODEL SELECTION - 9: OCCUPANT DETECT
Refer to the following screen flow.

**RS**

RS

INITIALIZATION

NOTICE:

Make sure that the front passenger seat is not occupied before performing the operation.

HINT:

Perform the zero point calibration if any of the following conditions is met:

- The occupant classification ECU is replaced.
- The passenger airbag ON/OFF indicator indicates OFF 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

(1) Check that all of the following conditions are met:

- The vehicle is parked on a flat 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.

Adjustment Item	Position
Slide Direction	Rearmost position
Reclining Angle	Upright position
Headrest Height	Lowest position
Lifter Height	Lowest position

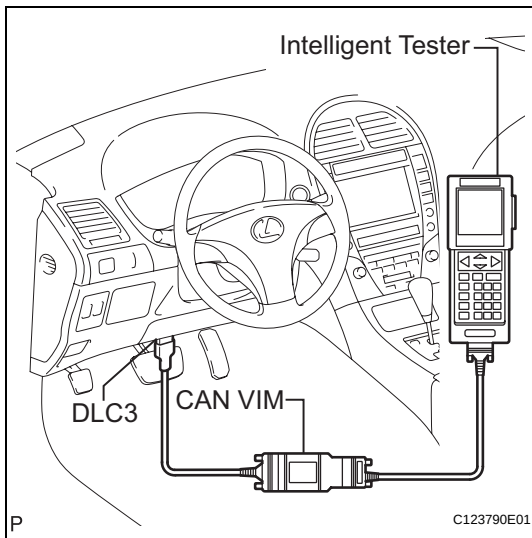
(3) Connect the intelligent tester to the DLC3.

(4) Turn the engine switch on (IG).

(5) Perform the zero point calibration by following the prompts on the tester screen.

HINT:

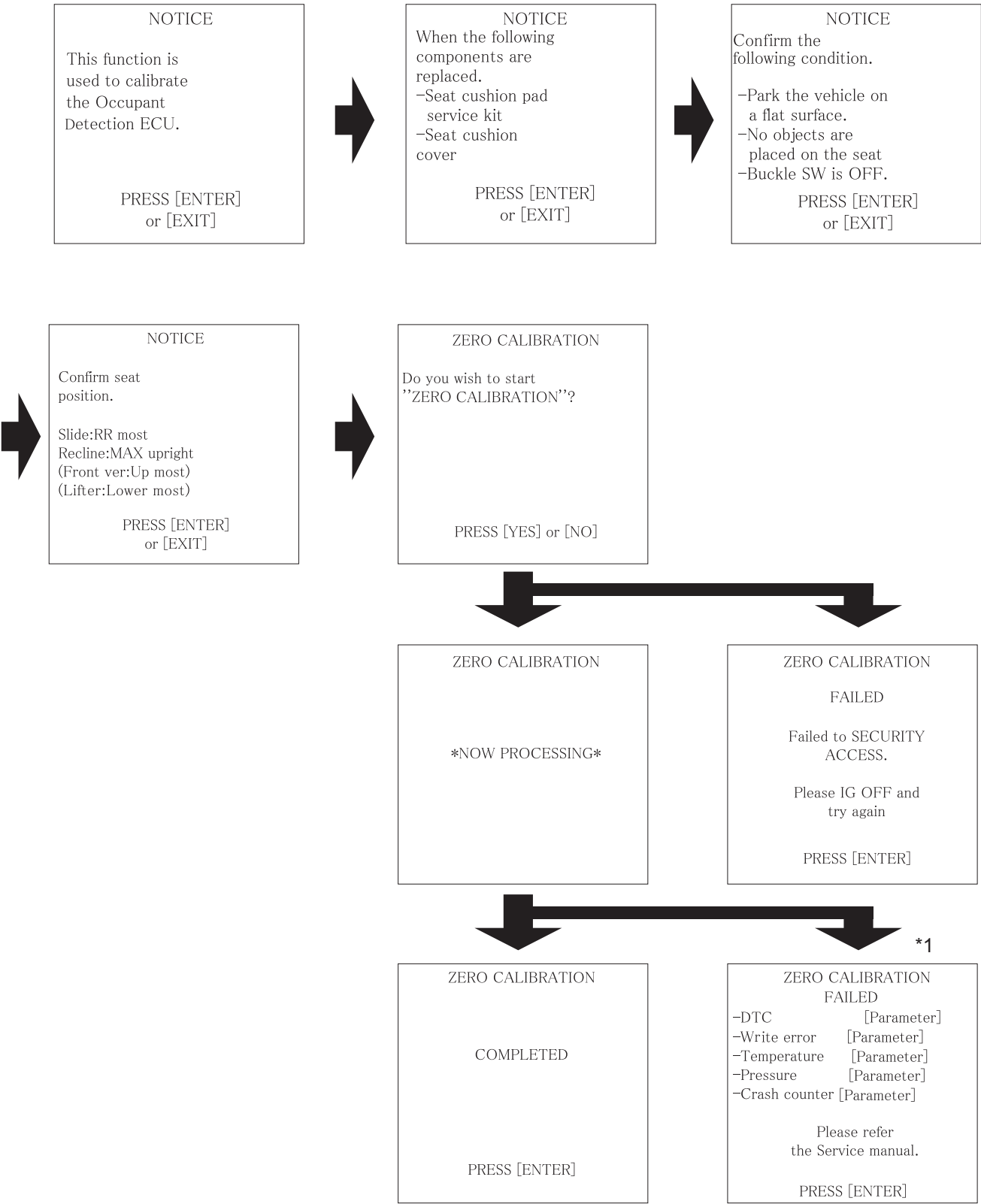
- Refer to the intelligent tester operator's manual for further details.
- If the zero point calibration is performed when the calibration conditions are not satisfied, DTC B1797 is output.
- If the zero point calibration has failed, DTC B1797 is output.



ZERO POINT CALIBRATION PROCEDURE:

1: DIAGNOSIS - 1: OBD/MOBD - MODEL YEAR - MODEL SELECTION - 9: OCCUPANT DETECT

Refer to the following screen flow.



HINT:

*1: If After Exchange is selected before the previous ECU data are stored in the intelligent tester, the display screen returns to CONDITION SELECT ECU: Occupant Detect.

RS

Item	Procedure
DTC	Perform DTC check and repair
Write error	Replace front seat cushion assembly (with occupant classification ECU and occupant classification sensor)
Temperature	Check value of THERMISTOR TEMP in ECU DATA LIST
Pressure	Check value of FILTERED PRESS in ECU DATA LIST
Crash counter	-

2. SENSITIVITY CHECK

(a) Sensitivity check procedures

- (1) Turn the engine switch off.
- (2) Place a weight of 20 kg (44.0 lb) on the front passenger seat.

NOTICE:

- Do not allow the weight to come into contact with the seatback when placing it on the seat cushion.
- Place the weight in the area shown in the illustration.

- (3) Turn the engine switch on (IG), and wait for at least 6 seconds.
- (4) Check that the passenger airbag ON/OFF indicator indicates OFF.

OK:

The passenger airbag ON/OFF indicator indicates OFF.

- (5) Add a weight of 30 kg (66.1 lb) to the front passenger seat (total 50 kg (110.2 lb)).

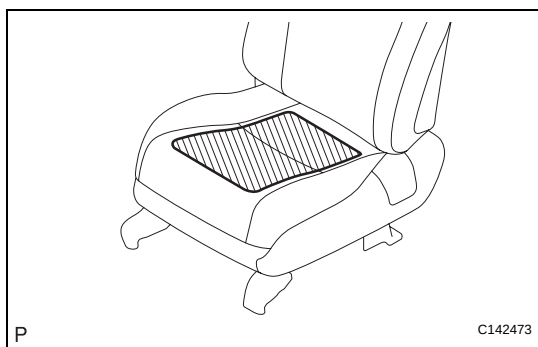
NOTICE:

- Do not allow the weight to come into contact with the seatback when placing it on the seat cushion.
- Place the weight in the area shown in the illustration.

- (6) Check that the passenger airbag ON/OFF indicator indicates ON.

OK:

The passenger airbag ON/OFF indicator indicates ON.



PROBLEM SYMPTOMS TABLE

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

OCCUPANT CLASSIFICATION SYSTEM

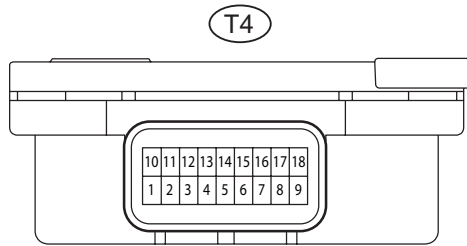
Symptom	Suspected Area	See page
The front passenger seat condition differs from the indication by the passenger airbag ON/OFF indicator (DTC is not output).	Trouble in Passenger Airbag ON/OFF Indicator	RS-361

RS

TERMINALS OF ECU

1. OCCUPANT CLASSIFICATION ECU

RS



Y

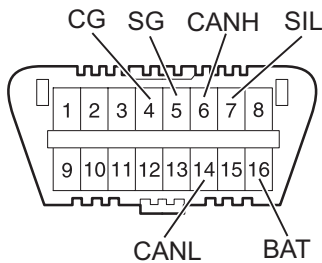
H101800E04

Terminal No. (Symbols)	Wiring Color	Terminal Description	Condition	Specified Condition
T4-5 (GND) - Body ground	W-B - Body ground	Occupant classification ECU ground line	Always	Below 1 V
T4-6 (PS) - T4-15 (GPS)	LG - W	Pressure sensor signal line	Engine switch on (IG)	0 to 5 V
T4-7 (VPS) - T4-5 (GND)	Y - W-B	Pressure sensor +B line	Engine switch on (IG)	4.75 to 5.25 V
T4-8 (GBT) - T4-5 (GND)	G - W-B	Belt tension sensor ground line	Always	Below 1 V
T4-9 (IG) - T4-5 (GND)	B - W-B	Occupant classification ECU +B line	Engine switch on (IG)	10 to 14 V
T4-10 (DIA) - T4-5 (GND)	W - W-B	Diagnosis (DLC3)	Engine switch on (IG)	Pulse generation
T4-11 (FSR+) - T4-12 (FSR-)	W - B	Center airbag sensor assembly communication line	Engine switch on (IG)	Pulse generation
T4-12 (FSR-) - T4-5 (GND)	B - W-B	Center airbag sensor assembly communication line (-)	Always	Below 1 V
T4-13 (BSW) - T4-14 (BGND)	B - GR	Passenger side buckle switch line	Engine switch on (IG)	Low: 4 to 7 mA Hi: 12 to 18 mA
T4-14 (BGND) - T4-5 (GND)	GR - W-B	Passenger side buckle switch ground line	Always	Below 1 V
T4-15 (GPS) - T4-5 (GND)	W - W-B	Pressure sensor ground line	Always	Below 1 V
T4-16 (BT) - T4-5 (GND)	R - W-B	Belt tension sensor signal line	Engine switch on (IG)	0 to 5 V
T4-17 (VBT) - T4-5 (GND)	P - W-B	Belt tension sensor +B line	Engine switch on (IG)	4.75 to 5.25 V

DIAGNOSIS SYSTEM

1. CHECK DLC3

- (a) The ECU uses ISO 15765-4 for communication. The terminal arrangement of the DLC3 complies with SAE J1962 and matches the ISO 15765-4 format.



T

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Symbols (Terminal No.)	Terminal Description	Condition	Pulse condition
SIL (7) - SG (5)	Bus "+" Line	During transmission	Pulse generation
CG (4) - Body ground	Chassis Ground	Always	Below 1 Ω
SG (5) - Body ground	Signal ground	Always	Below 1 Ω

Symbols (Terminal No.)	Terminal Description	Condition	Pulse condition
BAT (16) - Body ground	Battery positive	Always	10 to 14 V
CANH (6) - CANL (14)	CAN bus line	Engine switch off (*)	54 to 69 Ω
CANH (6) - BAT (16)	HIGH-level CAN bus line	Engine switch off (*)	6 k Ω or higher
CANH (6) - CG (4)	HIGH-level CAN bus line	Engine switch off (*)	200 Ω or higher
CANL (14) - BAT (16)	LOW-level CAN bus line	Engine switch off (*)	6 k Ω or higher
CANL (14) - CG (4)	LOW-level CAN bus line	Engine switch off (*)	200 Ω or higher

RS

NOTICE:

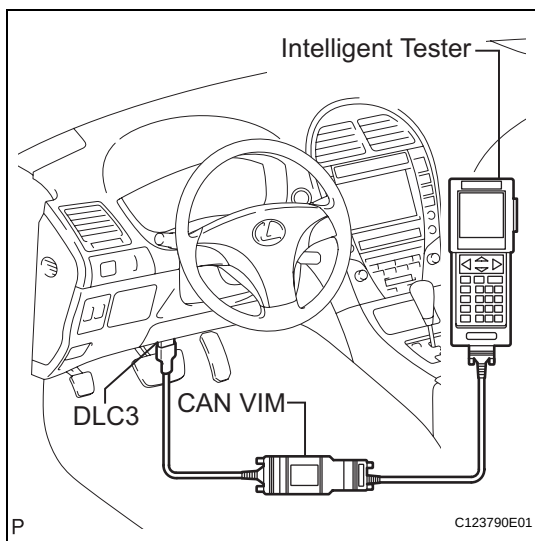
***: Before measuring the resistance, leave the vehicle as is for at least 1 minute and do not operate the engine switch, any other switches, or the door.**

If the result is not as specified, the DLC3 may have a malfunction. Repair or replace the harness and connector.

HINT:

If the display shows a communication error message when connecting the cable of the intelligent tester to the DLC3, turning the engine switch on (IG) and operating the intelligent tester, there is a problem on the vehicle side or tester side.

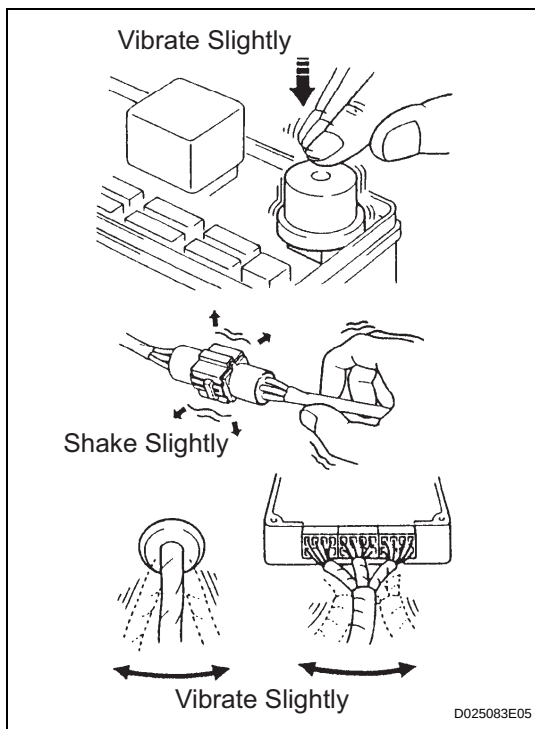
- If communication is normal when the tester is connected to another vehicle, inspect the DLC3 on the original vehicle.
- If communication is still not possible when the tester is connected to another vehicle, the problem is probably in the tester itself. Consult the Service Department listed in the tester's instruction manual.

**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 simulated. No matter how experienced or skilled a technician may be, if he proceeds to troubleshooting 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.

RS



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

HINT:

Perform the simulation method only during the primary check period (for approximately 6 seconds after the engine 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 PASSENGER AIRBAG ON/OFF INDICATOR

- (a) Initial check.

- (1) Turn the engine switch on (IG).

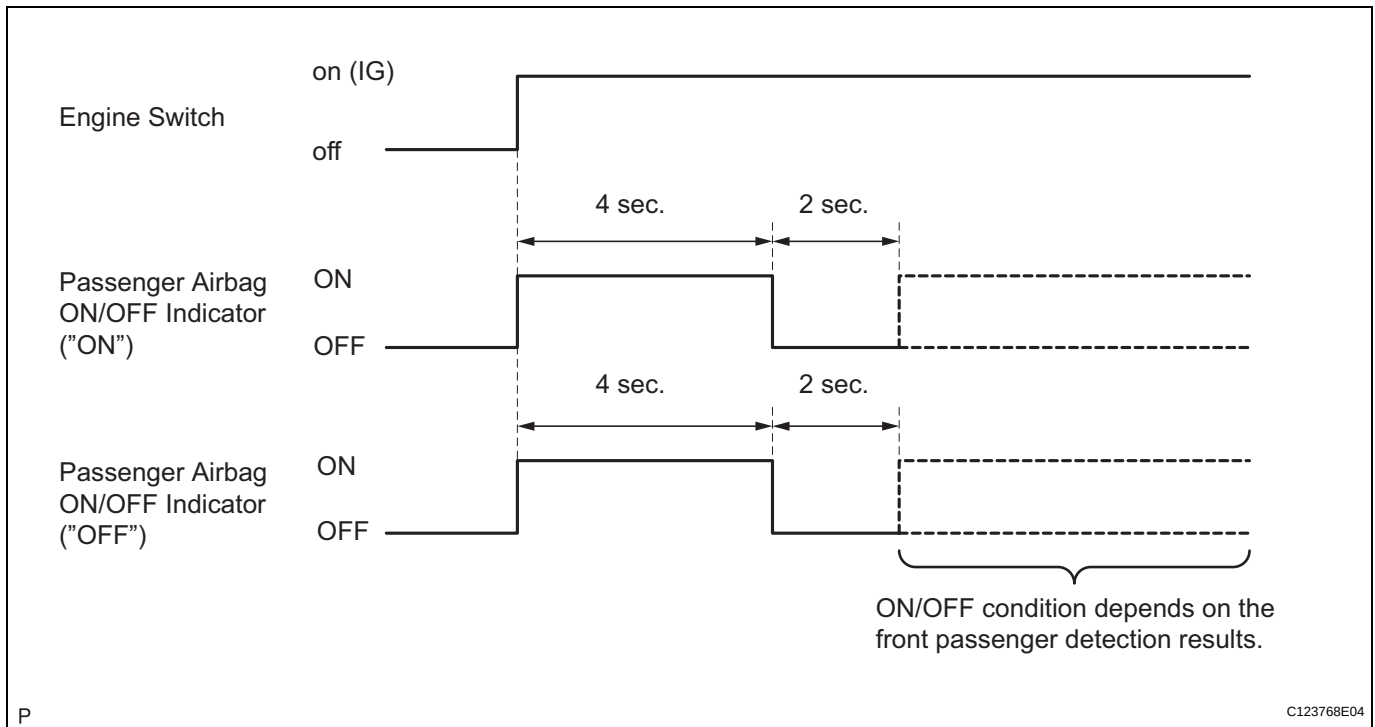
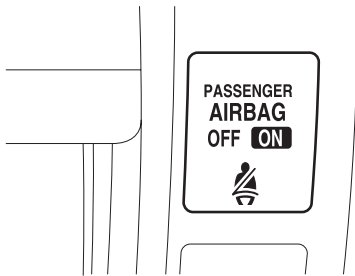
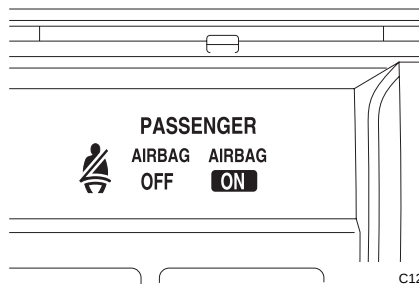
- (2) The passenger airbag ON/OFF indicator ("ON" and "OFF") comes on for approximately 4 seconds, then goes off for approximately 2 seconds.

- (3) Approximately 6 seconds after the engine switch is turned on (IG), the passenger airbag ON/OFF indicator will show ON or OFF depending on the conditions listed below.

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
Occupant classification system 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.

**with Navigation System:****without Navigation System:**

P

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4. CHECK PASSENGER AIRBAG ON/OFF INDICATOR

- Turn the engine switch on (IG).
- 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 engine switch is turned on (IG) and approximately 6 seconds pass.

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 condition (activated/not activated) by the passenger airbag ON/OFF indicator.

HINT:

Approximately 6 seconds after the engine switch is turned on (IG), the passenger airbag ON/OFF indicator will be ON/OFF depending on the conditions listed below.

Front passenger seat condition	Passenger Airbag ON/OFF Indicator		SRS Warning Light
	ON Indicator	OFF Indicator	
Adult is seated	ON	OFF	OFF
Child is seated	OFF	ON	OFF
Vacant	OFF	OFF	OFF
Occupant classification system failure	OFF	ON	ON

INSPECTION PROCEDURE

HINT:

If this trouble occurs, the SRS warning light is off. If it is on, a DTC is output. Troubleshoot for the output DTC.

1 CHECK DTC

- Turn the engine switch on (IG).
- Clear the DTCs stored in the occupant classification ECU (See page [RS-318](#)).
- Clear the DTCs stored in the center airbag sensor assembly (See page [RS-49](#)).
- Turn the engine switch off.
- Turn the engine switch on (IG).
- Check the DTCs of the occupant classification ECU (See page [RS-318](#)).

OK:

DTC is not output.

OK

REPAIR CIRCUITS INDICATED BY OUTPUT DTCs

NG

2 READ VALUE OF DATA LIST (PASSENGER SIDE BUCKLE SWITCH)

- Turn the engine switch on (IG).
- Using the intelligent tester, read the DATA LIST (See page [RS-319](#)).

- (1) Read the the display when the passenger side buckle switch is operated.

Item	Measurement Item / Range (Display)	Normal Condition	Diagnostic Note
P BUCKLE SW	Buckle switch (Passenger side)/ UNSET: The seat belt is not fastened SET: The seat belt is fastened NG: Data is not determined	UNSET/SET	-

OK:

The tester display changes correctly in accordance with the operation of the buckle switch.

NG

REPLACE FRONT SEAT INNER BELT ASSEMBLY RH (See page [SB-22](#))

OK

3 READ VALUE OF DATA LIST (SEAT BELT TENSION SENSOR)

- Fasten the passenger side seat belt.
- Turn the engine switch on (IG).
- Using the intelligent tester, read the value of the DATA LIST (See page [RS-319](#)).

Item	Measurement Item / Range (Display)	Normal Condition	Diagnostic Note
FILTERED TENSION	Filtered belt tension output/ Min.: 0 N Max.: 255 N	39 to 64 (no load)	-

OK:

When there is no tension on the belt, 39 to 64 is displayed on the tester.

NG

REPLACE FRONT SEAT OUTER BELT ASSEMBLY RH (See page [SB-27](#))

OK

4 CHECK PASSENGER AIRBAG ON/OFF INDICATOR (PERFORM SENSITIVITY CHECK)

- Perform the sensitivity check (See page [RS-312](#)).

NG

Go to step 7

OK

5 PERFORM ZERO POINT CALIBRATION

- Connect the intelligent tester to the DLC3.
- Turn the engine switch on (IG).
- Using the intelligent tester, perform the zero point calibration (See page [RS-312](#)).

NEXT

6 CHECK DTC

- (a) Turn the engine switch on (IG).
- (b) Clear the DTCs stored in the occupant classification ECU (See page [RS-318](#)).
- (c) Clear the DTCs stored in the center airbag sensor assembly (See page [RS-49](#)).
- (d) Turn the engine switch off.
- (e) Turn the engine switch on (IG).
- (f) Check the DTCs of the occupant classification ECU (See page [RS-318](#)).

OK:**DTC B1797 is not output.****NG****GO TO DTC B1797 (See page [RS-357](#))**

OK

7 REPLACE FRONT SEAT CUSHION ASSEMBLY

- (a) Turn the engine switch off.
- (b) Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- (c) Replace the front seat cushion assembly (with occupant classification ECU and occupant classification sensor) (See page [RS-490](#)).
- (d) Connect the negative (-) terminal cable to the battery.
- (e) Turn the engine switch on (IG).
- (f) Clear the DTCs stored in the occupant classification ECU (See page [RS-318](#)).
- (g) Clear the DTCs stored in the center airbag sensor assembly (See page [RS-49](#)).
- (h) Turn the engine switch off.
- (i) Turn the engine switch on (IG).
- (j) Check the DTCs (See page [RS-318](#)).

OK:**DTC is not output.****NG****REPLACE CENTER AIRBAG SENSOR ASSEMBLY (See page [RS-468](#))**

OK

8 PERFORM ZERO POINT CALIBRATION

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the engine switch on (IG).
- (c) Using the intelligent tester, perform the zero point calibration (See page [RS-312](#)).
- (d) Turn the engine switch off.
- (e) Turn the engine switch on (IG).

RS

- (f) Clear the DTCs stored in the occupant classification ECU (See page [RS-318](#)).

HINT:

If the DTCs are not cleared at this time, past DTCs will remain.

RS**NEXT****9****CHECK DTC**

- (a) Turn the engine switch on (IG).
(b) Clear the DTCs stored in the occupant classification ECU (See page [RS-318](#)).
(c) Clear the DTCs stored in the center airbag sensor assembly (See page [RS-49](#)).
(d) Turn the engine switch off.
(e) Turn the engine switch on (IG).
(f) Check the DTCs of the occupant classification ECU (See page [RS-318](#)).

OK:

DTC B1797 is not output.

NEXT**10****PERFORM SENSITIVITY CHECK**

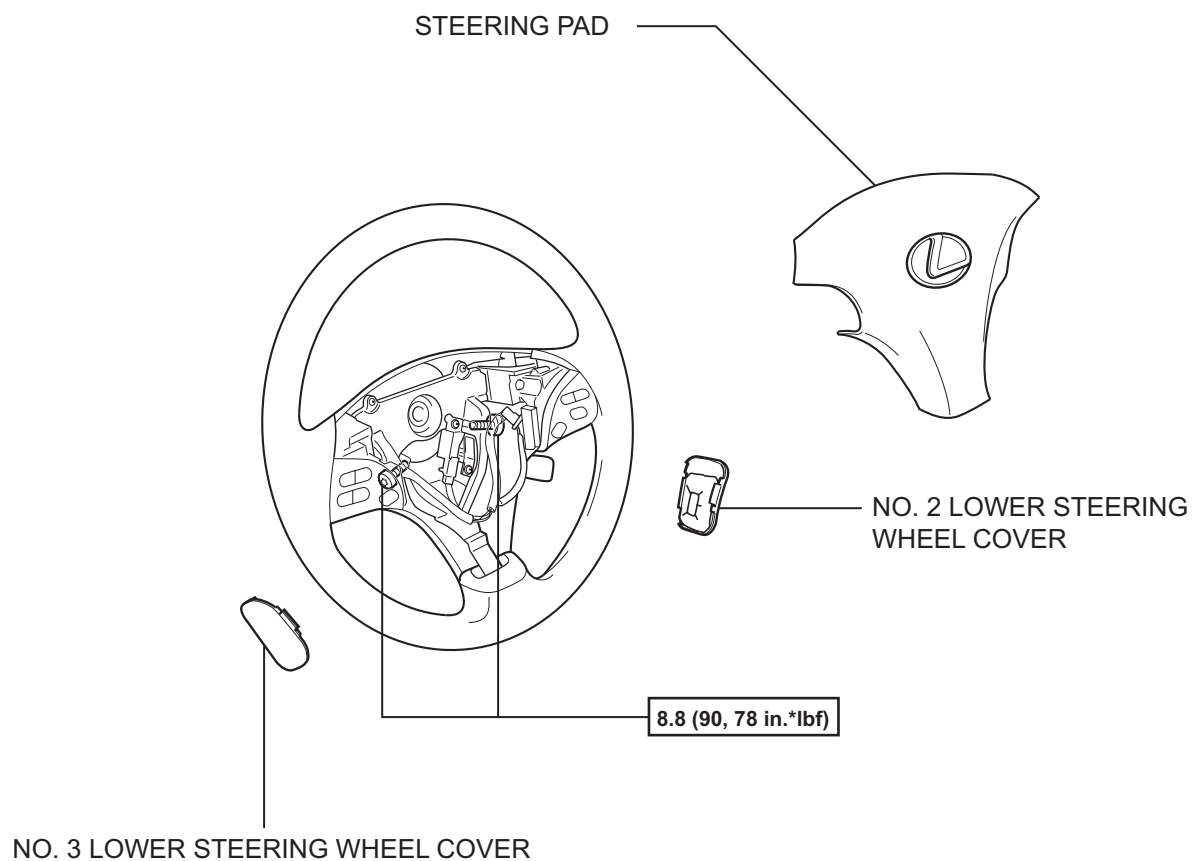
- (a) Perform the sensitivity check (See page [RS-312](#)).

NEXT**END**

STEERING PAD

COMPONENTS

RS



$\boxed{\text{N*m (kgf*cm, ft.*lbf)}}$: Specified torque

ON-VEHICLE INSPECTION

1. INSPECT STEERING PAD (VEHICLE NOT INVOLVED IN COLLISION)

- (a) Perform a diagnostic system check (See page [RS-37](#)).
- (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:
Cuts, minute cracks or marked discoloration on the steering pad top surface or in the grooved portion.

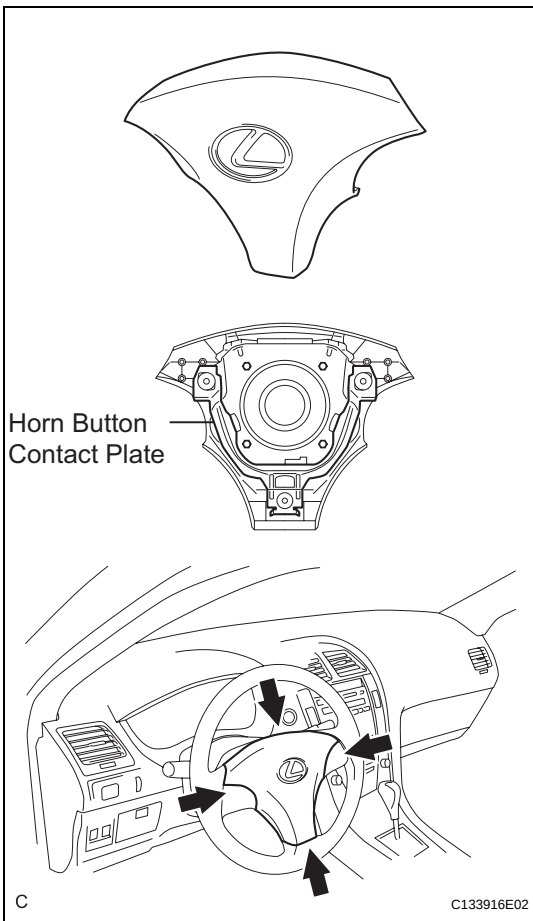
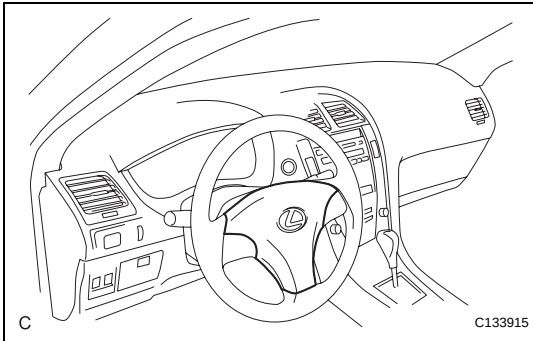
2. INSPECT STEERING PAD (VEHICLE INVOLVED IN COLLISION AND AIRBAG HAS NOT DEPLOYED)

- (a) Perform a diagnostic system check (See page [RS-37](#)).
- (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 in the grooved portion.
 - 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 procedures.

RS



REMOVAL

1. PRECAUTION

CAUTION:

Be sure to read "PRECAUTION" thoroughly before servicing (See page [RS-1](#)).

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

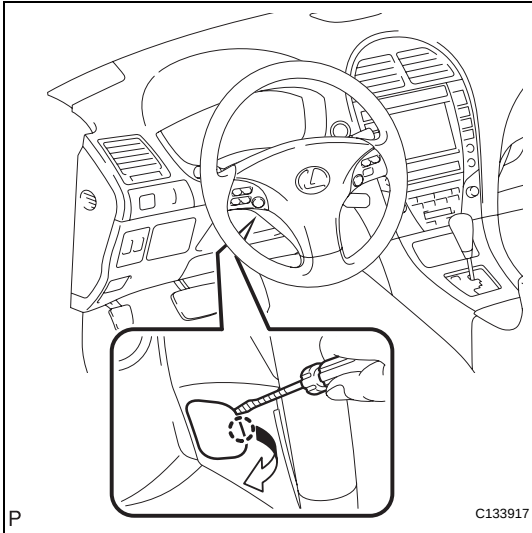
Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.

3. REMOVE NO. 3 LOWER STEERING WHEEL COVER

- (a) Using a screwdriver, remove the No. 3 lower steering wheel cover as shown in the illustration.

HINT:

Tape up the screwdriver tip before use.

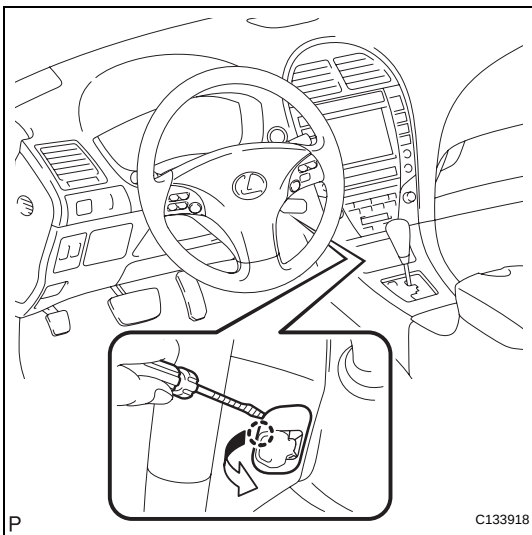


4. REMOVE NO. 2 LOWER STEERING WHEEL COVER

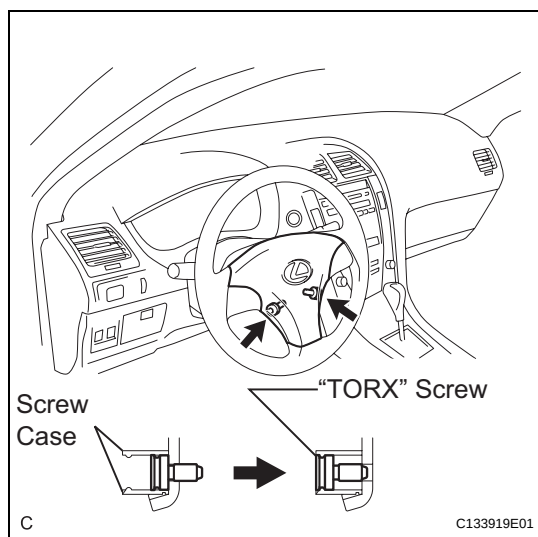
- (a) Using a screwdriver, remove the No. 2 lower steering wheel cover as shown in the illustration.

HINT:

Tape up the screwdriver tip before use.

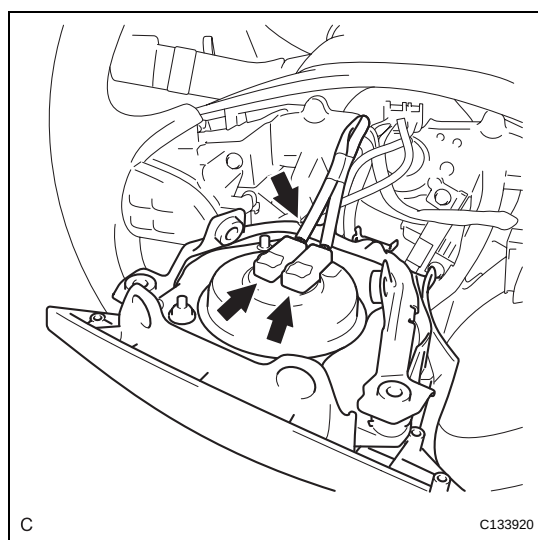


RS



5. REMOVE STEERING PAD

- (a) Using a "TORX" socket (T30), loosen the 2 "TORX" screws until the groove along the screw circumference catches on the screw case.



- (b) Pull out the steering pad from the steering wheel assembly and support the steering pad with one hand.

NOTICE:

When removing the steering pad, do not pull the airbag wire harness.

- (c) Disconnect the horn connector from the steering pad.
(d) Disconnect the 2 airbag connectors and remove the steering pad.

NOTICE:

When handling the airbag connector, take care not to damage the airbag wire harness.

- (e) Remove the steering pad.

INSTALLATION

1. INSTALL STEERING PAD

- (a) Check that the engine switch is off.
- (b) Check that the battery negative (-) cable is disconnected.

CAUTION:

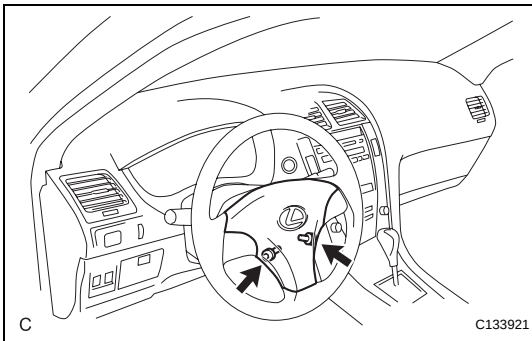
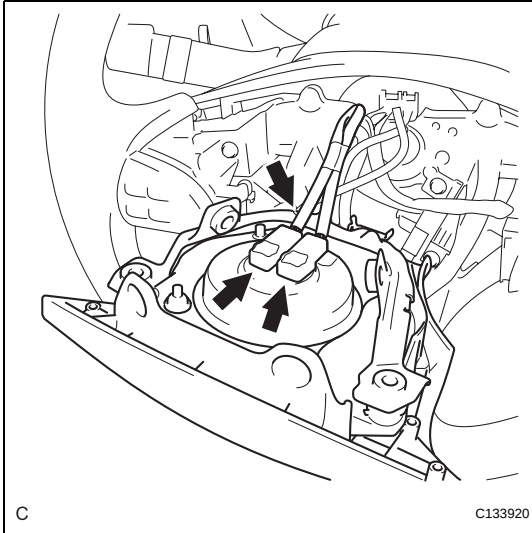
Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.

- (c) Support the steering pad with one hand.
- (d) Connect the 2 airbag connectors to the steering pad.

NOTICE:

When handling the airbag connector, take care not to damage the airbag wire harness.

- (e) Connect the horn connector to the steering pad.
- (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.

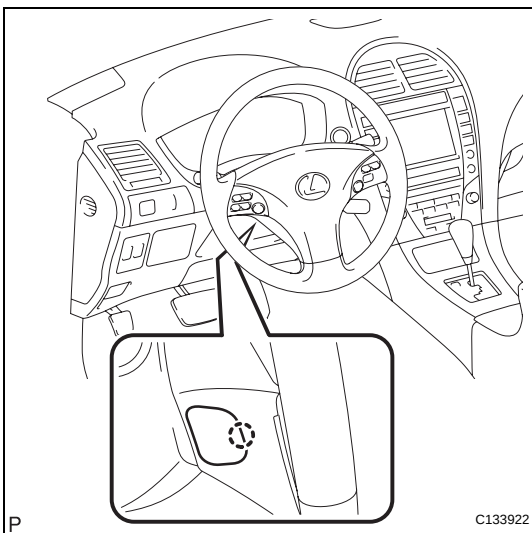


- (g) Using a "TORX" socket (T30), tighten the 2 "TORX" screws.

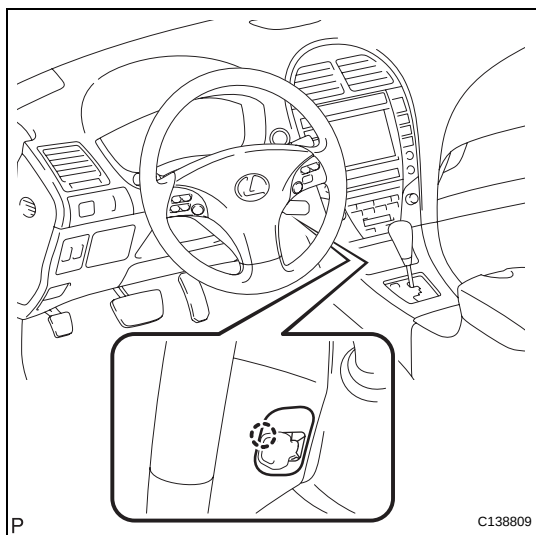
Torque: 8.8 N*m (90 kgf*cm, 78 in.*lbf)

2. INSTALL NO. 3 LOWER STEERING WHEEL COVER

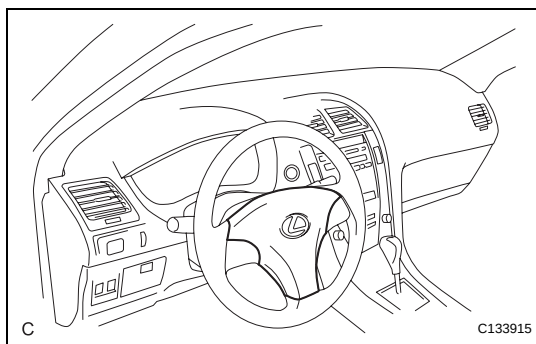
- (a) Engage the claw and install the No. 3 lower steering wheel cover.



RS



3. **INSTALL NO. 2 LOWER STEERING WHEEL COVER**
 - (a) Engage the claw and install the No. 2 lower steering wheel cover.
4. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
5. **PERFORM INITIALIZATION**
 - (a) Perform initialization (See page [IN-33](#)).
HINT:
Some systems need initialization after reconnecting the cable to the negative battery terminal.



6. **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 in the grooved portion.
 - (b) Make sure that the horn sounds.
HINT:
If the horn does not sound, inspect the horn system (See page [HO-3](#)).
7. **INSPECT SRS WARNING LIGHT**
 - (a) Inspect the SRS warning light (See page [RS-37](#)).

DISPOSAL

HINT:

When scrapping a vehicle equipped with the 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:

- Never dispose of a steering pad 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 (33 ft) away from the steering pad.
- The steering pad becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling a steering pad with a deployed airbag.
- Do not apply water, etc. to a steering pad with a deployed airbag.
- Always wash your hands with water after completing the operation.

1. DISPOSE OF STEERING PAD (WHEN INSTALLED IN VEHICLE)

HINT:

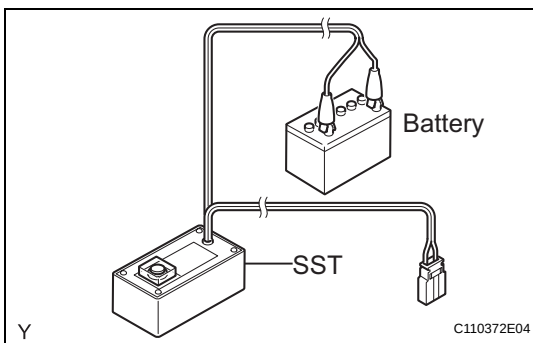
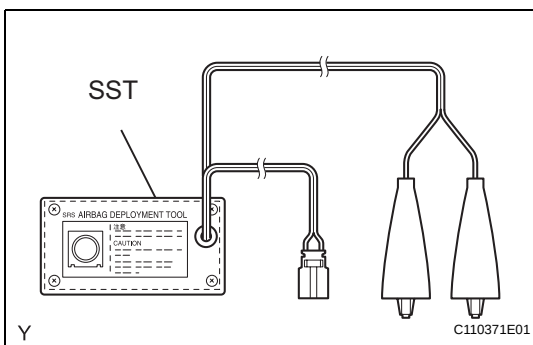
Prepare a battery as the power source to deploy the airbag.

- (a) Check the function of the SST.

SST 09082-00700

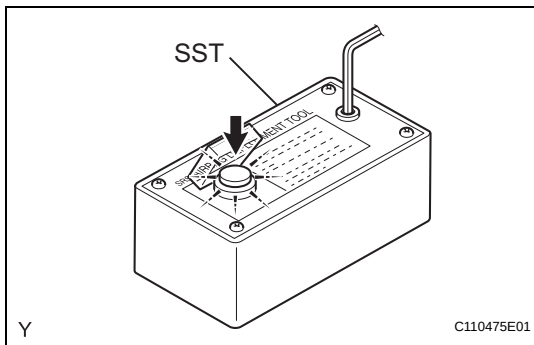
CAUTION:

**When deploying the airbag, always use the specified SST:
SRS Airbag Deployment Tool**



- (1) Connect the SST to the battery.
Connect the red clip of the SST to the battery positive (+) terminal and the black clip of the SST to the negative (-) terminal.

RS



- (2) Check the function of the 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, SST malfunction is possible, so replace the SST with a new one.

- (3) Disconnect the SST from the battery.

- (b) Refer to PRECAUTION (See page RS-1).

- (c) Disconnect the cable from the negative battery terminal.

CAUTION:

Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.

- (d) 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).

- (e) Install the SST.

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.

NOTICE:

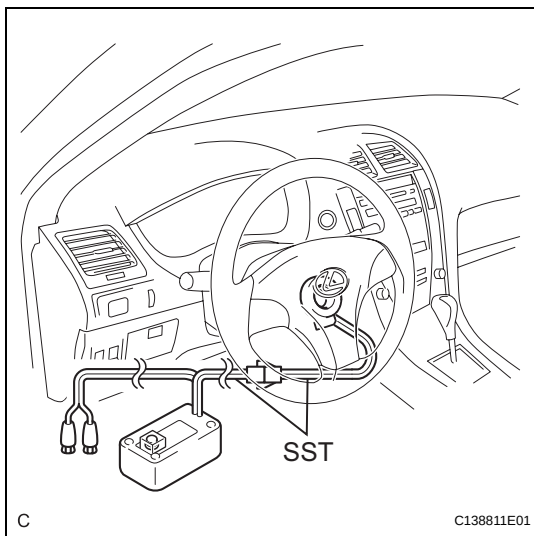
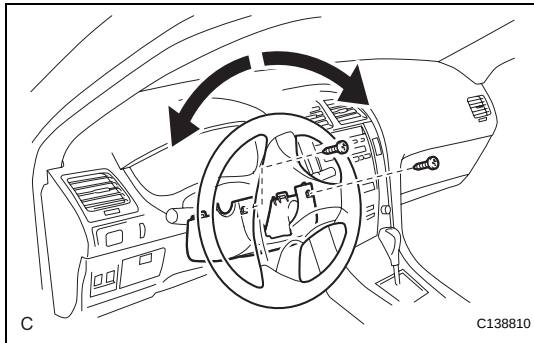
When handling the airbag connector, take care not to damage the airbag wire harness.

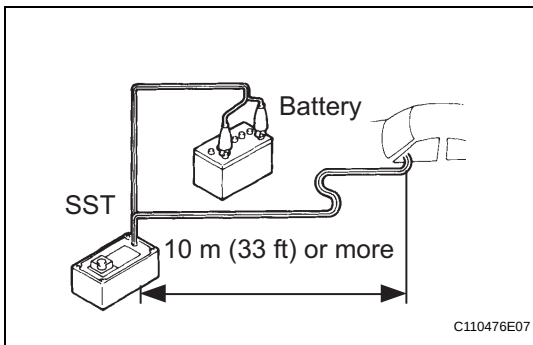
- (2) Connect the SST connector to the airbag connector of the spiral cable.

SST 09082-00700, 09082-00780

NOTICE:

To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock.





- (3) Move the SST at least 10 m (33 ft) away from the vehicle front side window.
- (4) Maintaining enough clearance for the SST wire harness in the front side window, close all doors and windows of the vehicle.

NOTICE:

Take care not to damage the SST wire harness.

- (5) Connect the red clip of the SST to the battery positive (+) terminal and the black clip of the SST to the negative (-) terminal.
- (f) Deploy the airbag.
 - (1) Check that no one is inside the vehicle or within a 10 m (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.

2. DISPOSE OF STEERING PAD (WHEN NOT INSTALLED IN VEHICLE)

NOTICE:

- 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.

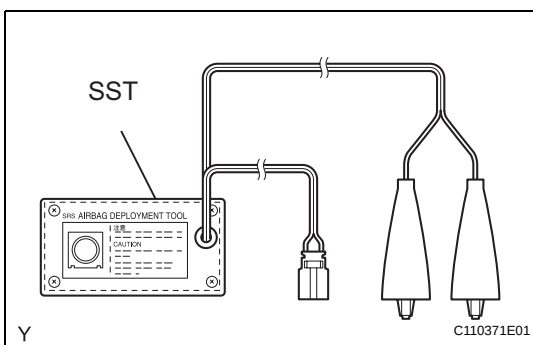
- (a) Check the function of the SST.

SST 09082-00700

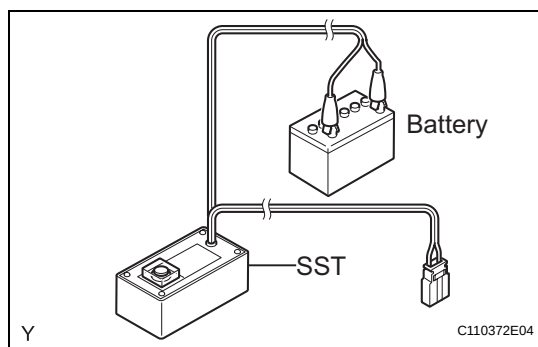
CAUTION:

When deploying the airbag, always use the specified SST:

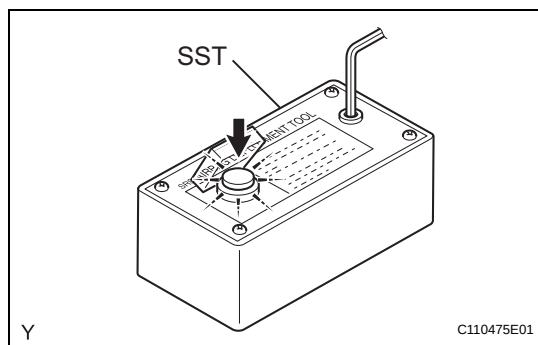
SRS Airbag Deployment Tool



RS



- (1) Connect the SST to the battery.
Connect the red clip of the SST to the battery positive (+) terminal and the black clip of the SST to the negative (-) terminal.



- (2) Check the function of the 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, SST malfunction is possible, so replace the SST with a new one.

- (3) Disconnect the SST from the battery.

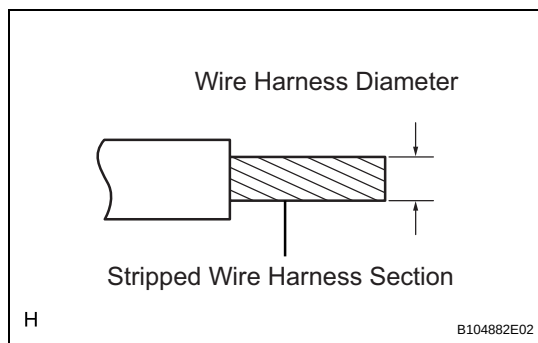
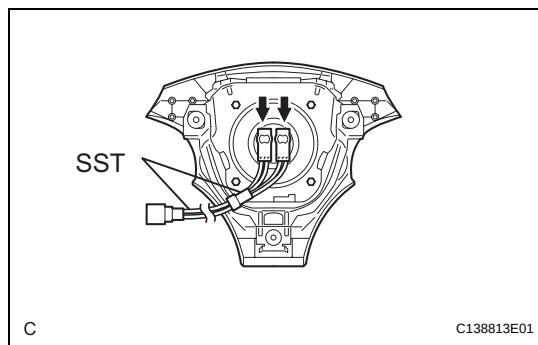
- (b) Remove the steering pad (See page [RS-366](#)).

CAUTION:

- When removing the steering pad, work must be started 90 seconds after the engine 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) After connecting the SST below to each other, connect them to the steering pad.

SST 09082-00802 (09082-10801, 09082-30801)



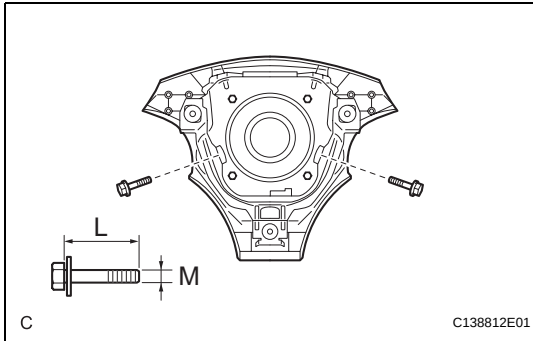
- (d) Using a service-purpose wire harness for the vehicle, tie down the steering pad to the disc wheel.

Wire harness:**Stripped wire harness section**

1.25 mm² or more (0.0019 in.² or more)

CAUTION:

If the wire harness is too thin or an alternative object is used to tie down the steering pad, it may be snapped by the shock when the airbag is deployed. Always use a wire harness for vehicle use with an area of at least 1.25 mm² (0.0019 in.²).

**HINT:**

To calculate the area of the stripped wire harness section:

$$\text{Area} = 3.14 \times (\text{Diameter})^2 \text{ divided by } 4$$

- (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:

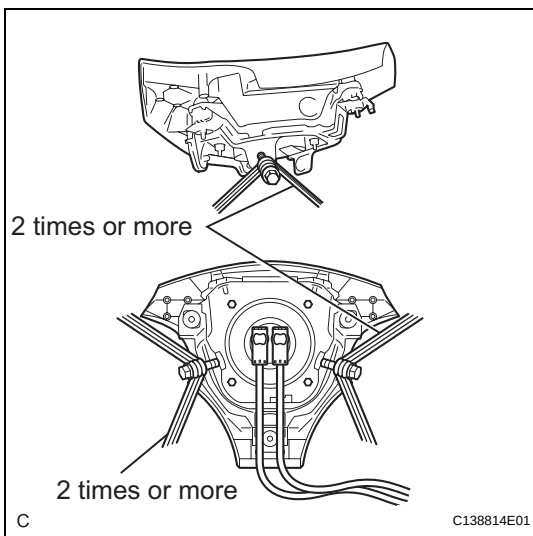
6.0 mm (0.236 in.)

Pitch:

1.0 mm (0.039 in.)

NOTICE:

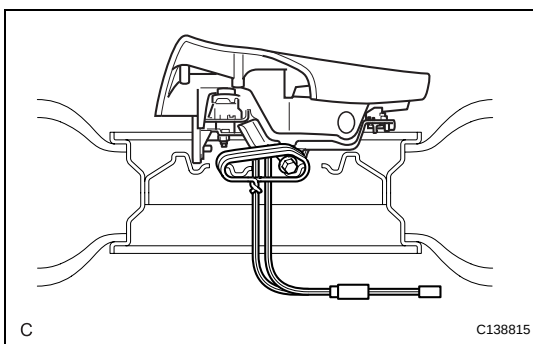
- Tighten the bolts by hand until they become difficult to turn.
- Do not tighten the bolts excessively.



- (2) Using 3 wire harnesses, wind wire harness 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 wire harness around the bolts so that there is no slack.
- Make sure that the wire harness is tight. If there is slack in the wire harness, the steering pad may become loose due to the shock when the airbag is deployed.



- (3) Face the airbag deployment side of the steering pad upward on top of a tire and wheel set. Separately tie the left and right sides of the steering pad to the disc wheel through the hub nut holes. Position the SST connector so that it hangs downward through the hub hole of the disc wheel.

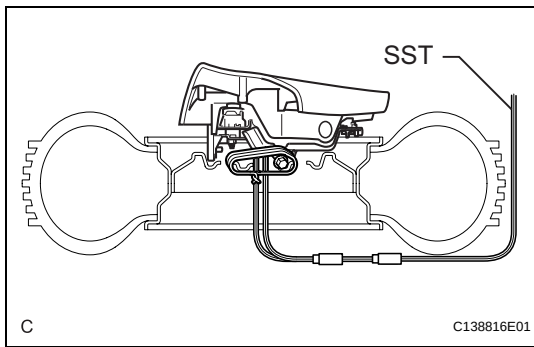
CAUTION:

- Make sure that the wire harness is tight. If there is slack in the wire harness, the steering pad may become loose due to the shock when the airbag is deployed.
- Always tie down the steering pad with the airbag deployment side facing upward.

NOTICE:

The disc wheel will be damaged by the airbag deployment, so use an extra disc wheel.

RS



- (e) Install the SST.

CAUTION:

Place the disc wheel on level ground.

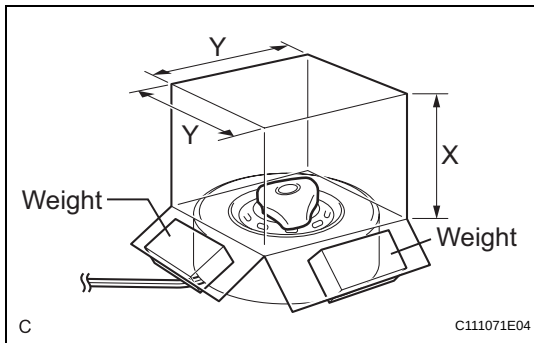
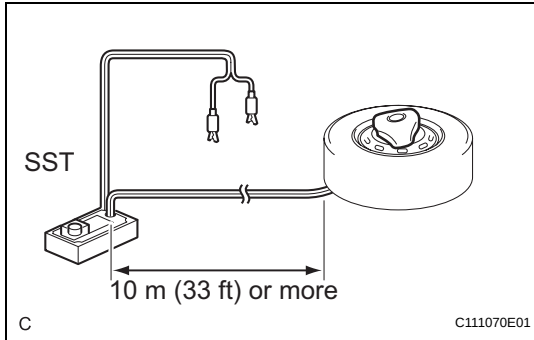
- (1) Connect the SST connector.

SST 09082-00700

NOTICE:

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 the SST at least 10 m (33 ft) away from the airbag tied down to the disc wheel.



- (f) 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 totalling at least 190 N (19 kg, 43 lb).

Cardboard box size:

Must exceed the following dimensions

X:

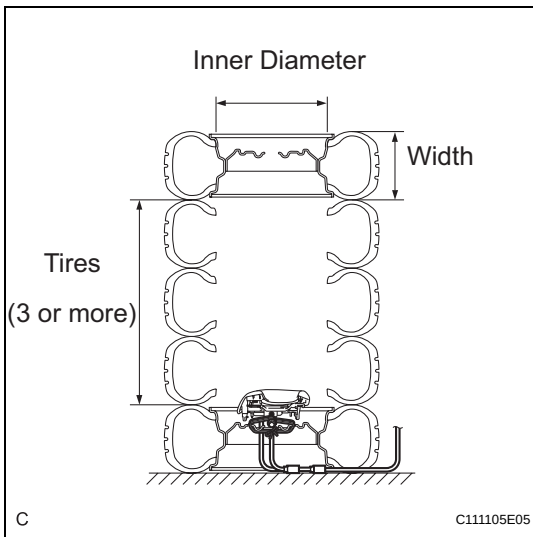
460 mm (18.11 in.)

Y:

650 mm (25.59 in.)

NOTICE:

- When dimension Y of the cardboard box exceeds the diameter of the disc wheel with tire which the steering pad is tied to, X should be the following size.
 $X = 460 \text{ mm (18.11 in.)} + \text{width of tire}$
- If a cardboard box which is smaller than the specified size is used, the cardboard box will be broken by the shock from the airbag deployment.



- (g) Cover the steering pad (Using tires).
- (1) Place at least 3 tires without disc wheels on the tire with disc wheel which the steering pad is tied to.
 - (2) Place the tire with a disc wheel on top of them.

Tire size:

Must exceed the following dimensions

Width:

185 mm (7.28 in.)

Inner diameter:

360 mm (14.17 in.)

CAUTION:

Do not use tires with disc wheels except for on the top and bottom.

NOTICE:

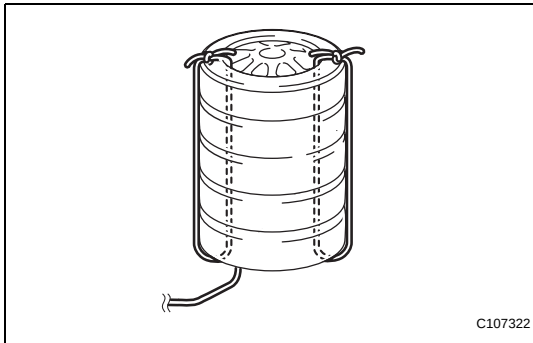
- The tires may be damaged by the airbag deployment, so use an extra tire.
- Do not place the SST connector under the tire because it could be damaged.

- (3) Tie the tires together with 2 wire harnesses.

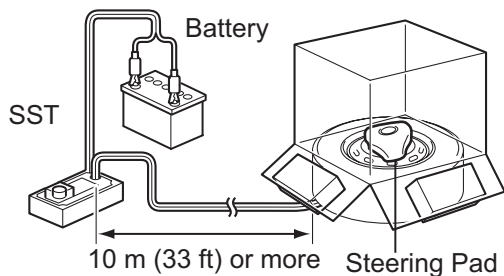
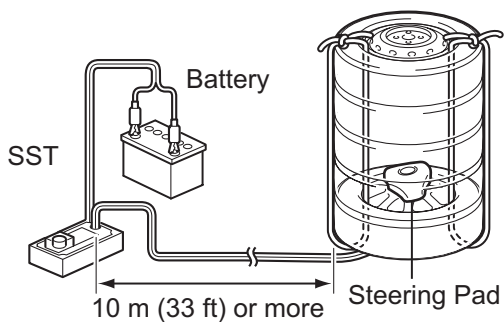
CAUTION:

Make sure that the wire harness is tight.

Looseness in the wire harness results in the tires coming free due to the shock when the airbag is deployed.



RS

Using a cardboard box:**Using tires:**

C

C111072E03



C051699E01

(h) Deploy the airbag.

- (1) Connect the red clip of the SST to the battery positive (+) terminal and the black clip of the SST to the negative (-) terminal.
- (2) Check that no one is within a 10 m (33 ft) radius of the disc 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.

(i) Dispose of the steering pad.

CAUTION:

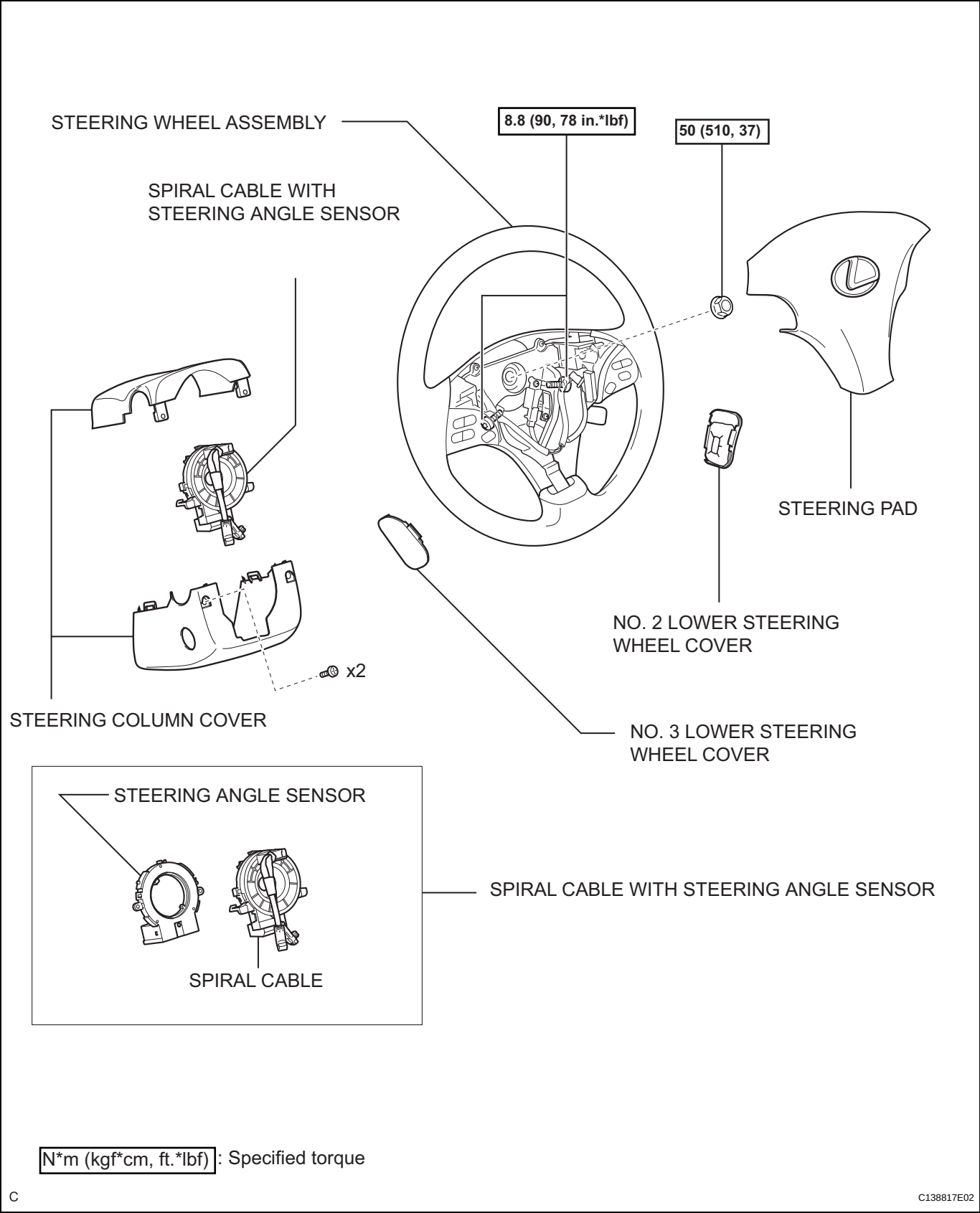
- The steering pad becomes extremely hot when the airbag is deployed, so do not touch it for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling a steering pad with a deployed airbag.
- Do not apply water, etc. to a steering pad with a deployed airbag.
- Always wash your hands with water after completing the operation.

- (1) Remove the steering pad from the disc wheel.
- (2) Place the steering pad in a plastic bag, tie it tightly and dispose of it as other general part disposal.

SPIRAL CABLE

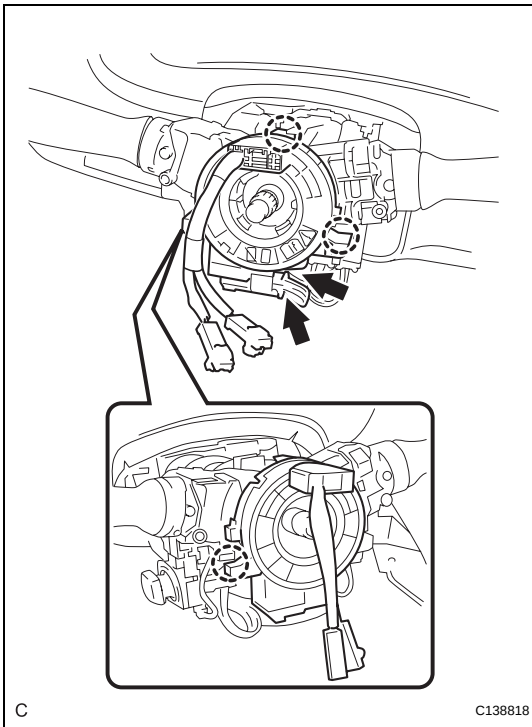
COMPONENTS

RS



REMOVAL

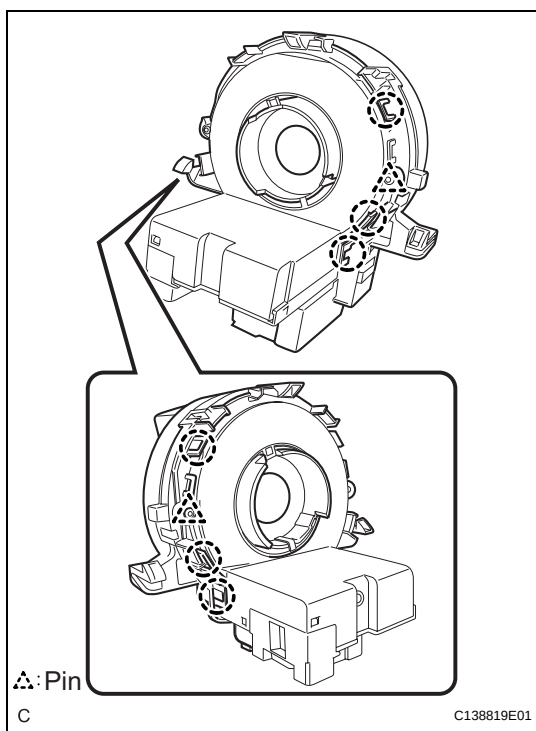
1. **PRECAUTION**
CAUTION:
Be sure to read "PRECAUTION" thoroughly before servicing (See page [RS-1](#)).
2. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
NOTICE:
Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.
3. **ALIGN FRONT WHEELS FACING STRAIGHT AHEAD**
4. **REMOVE NO. 3 LOWER STEERING WHEEL COVER**
(See page [RS-367](#))
5. **REMOVE NO. 2 LOWER STEERING WHEEL COVER**
(See page [RS-367](#))
6. **REMOVE STEERING PAD** (See page [RS-367](#))
7. **REMOVE STEERING WHEEL ASSEMBLY** (See page [SR-80](#))
8. **REMOVE STEERING COLUMN COVER** (See page [SR-80](#))
9. **REMOVE SPIRAL CABLE WITH STEERING ANGLE SENSOR**
 - (a) Disconnect the connectors from the spiral cable with steering angle sensor.
NOTICE:
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.



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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.

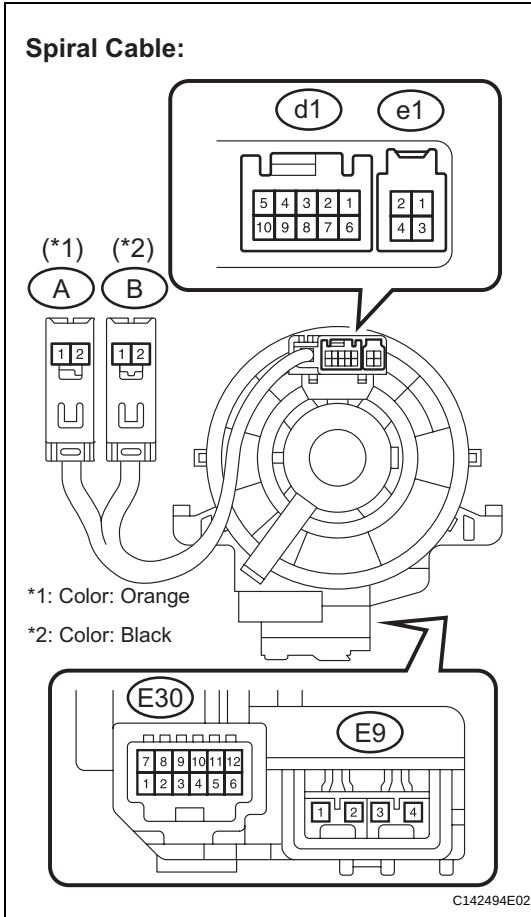
- (b) Inspect the spiral cable.

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

NOTICE:

To avoid breakage of the spiral cable, do not turn the spiral cable more than necessary.

Standard resistance



Tester connection	Condition	Specified condition
d1-1 - e1-2	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
d1-1 - E30-8 (HO)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
d1-4 - E30-11 (DIST)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
d1-5 - E30-12 (IL+2)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
d1-6 - e1-4	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
d1-6 - E30-2 (ECC)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
d1-7 - E30-3 (DISP)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
d1-8 - E30-4 (EAU)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
d1-9 - E30-5 (AU2)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
d1-10 - E30-6 (AU1)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
e1-1 - E30-7 (R/N)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
e1-2 - E30-8 (HO)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	

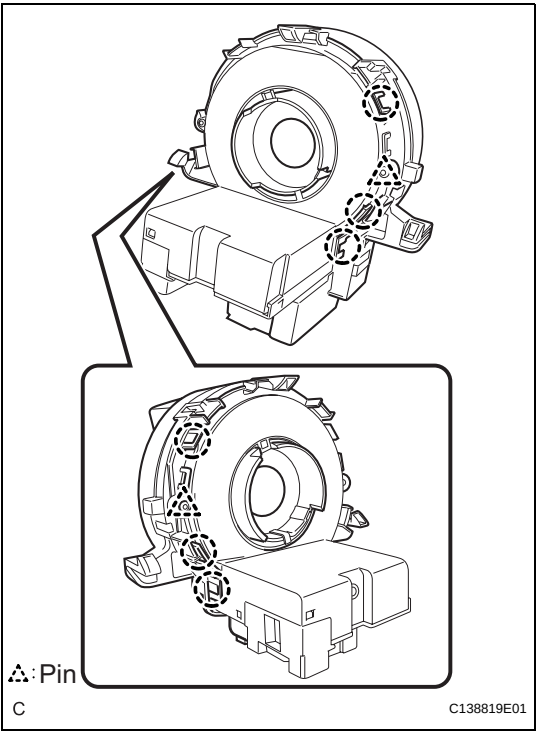
RS

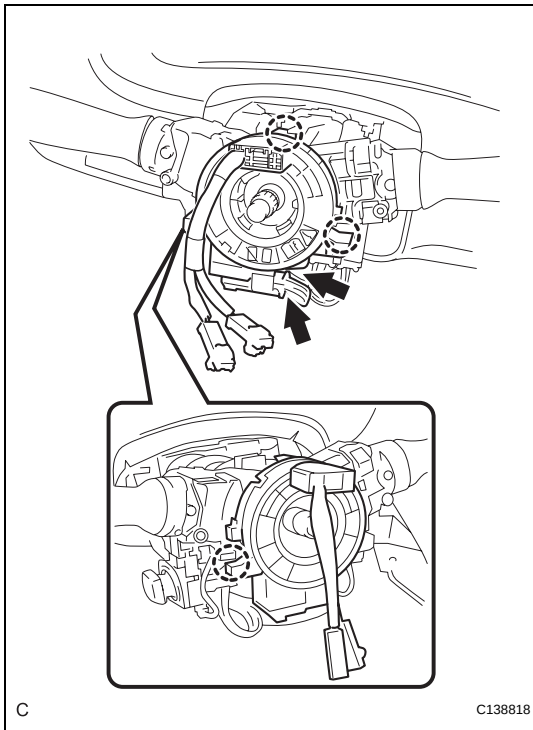
Tester connection	Condition	Specified condition
e1-3 - E30-1 (CCS)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
e1-4 - E30-2 (ECC)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
A-1 (D-) - E9-2 (D-)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
A-2 (D+) - E9-1 (D+)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
B-1 (D2-) - E9-3 (D2-)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
B-2 (D2+) - E9-4 (D2+)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	

If the value is not within the specified range, replace the spiral cable.

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.
- NOTICE:
- If it is not in the neutral position, the pin of the turn signal switch may be snapped.





- (c) Engage the 3 claws and install the spiral cable with steering angle sensor.

NOTICE:

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.

NOTICE:

When handling the airbag connector, take care not to damage the airbag wire harness.

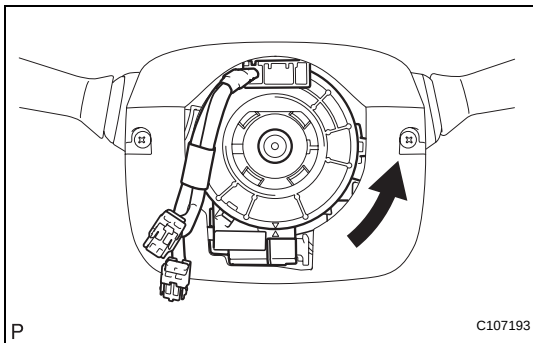
3. INSTALL STEERING COLUMN COVER (See page [SR-87](#))

4. ADJUST SPIRAL CABLE

- (a) Check that the engine switch is off.
 (b) Check that the battery negative (-) cable is disconnected.

CAUTION:

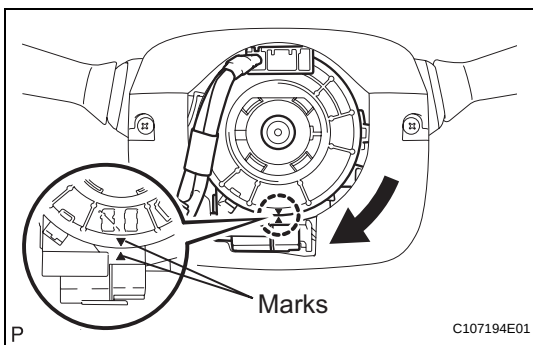
Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.



- (c) Rotate the spiral cable counterclockwise slowly by hand until it feels firm.

NOTICE:

Do not turn the spiral cable by the airbag wire harness.



- (d) Rotate the spiral cable clockwise approximately 2.5 turns to align the marks.

NOTICE:

Do not turn the spiral cable by 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 page [SR-87](#))

6. INSPECT STEERING WHEEL CENTER POINT

7. INSTALL STEERING PAD (See page [RS-368](#))

8. INSTALL NO. 3 LOWER STEERING WHEEL COVER (See page [RS-369](#))

9. INSTALL NO. 2 LOWER STEERING WHEEL COVER (See page [RS-369](#))

10. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

RS

11. PERFORM INITIALIZATION

- (a) Perform initialization (See page [IN-33](#)).

HINT:

Some systems need initialization after reconnecting the cable to the negative battery terminal.

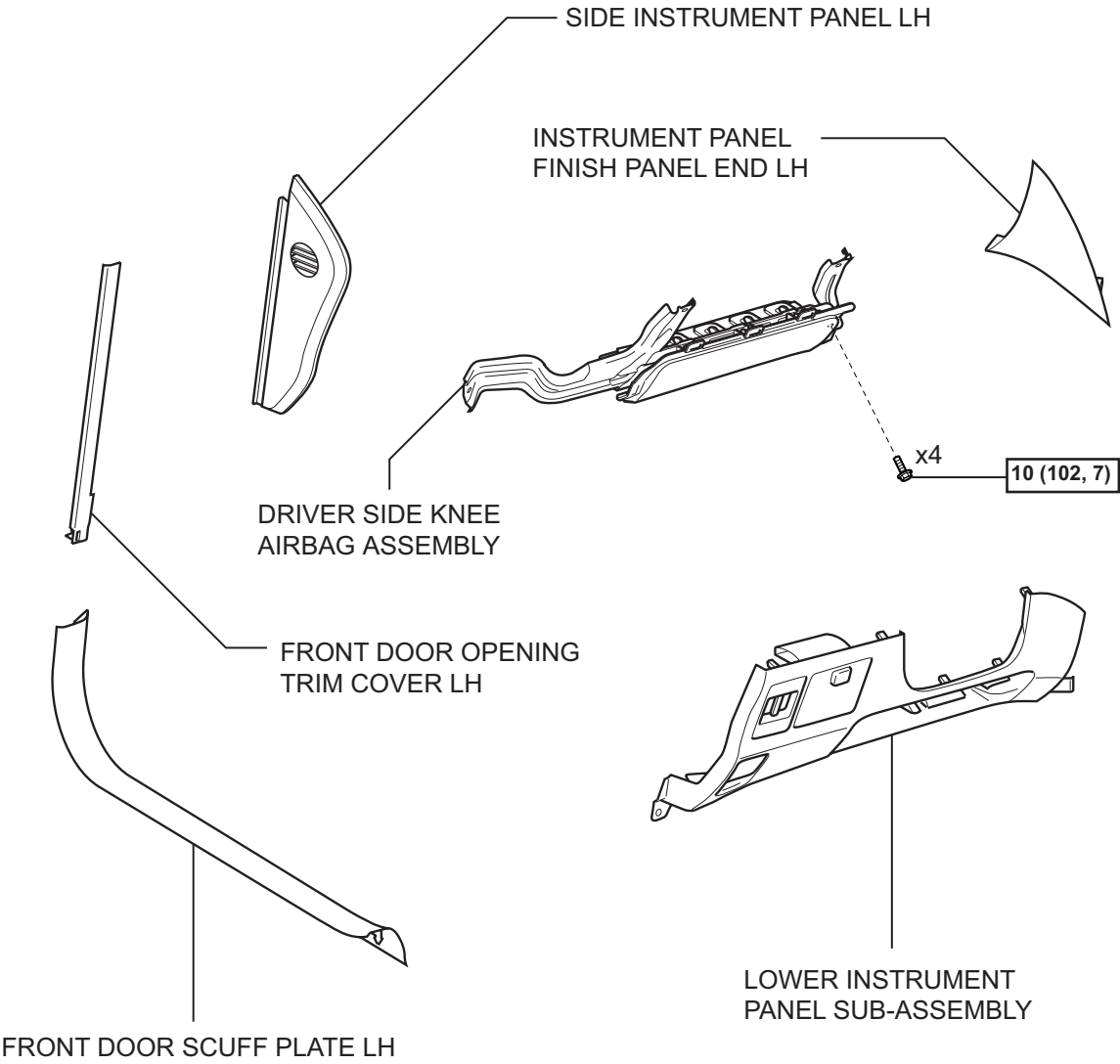
12. INSPECT STEERING PAD (See page [RS-369](#))**13. INSPECT SRS WARNING LIGHT**

- (a) Inspect the SRS warning light (See page [RS-37](#)).

DRIVER SIDE KNEE AIRBAG ASSEMBLY

COMPONENTS

RS

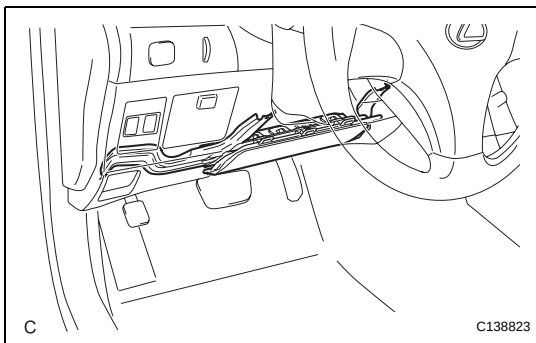


N*m (kgf*cm, ft.*lbf) : Specified torque

ON-VEHICLE INSPECTION

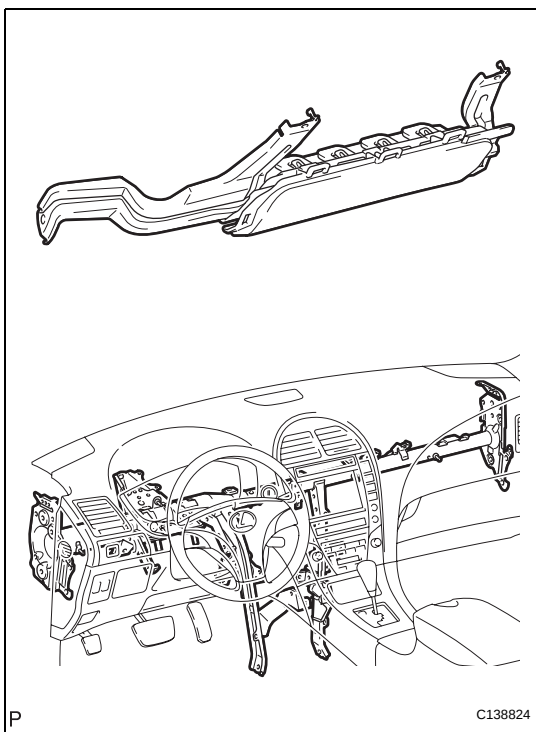
1. INSPECT DRIVER SIDE KNEE AIRBAG ASSEMBLY (VEHICLE NOT INVOLVED IN COLLISION)

- (a) Perform a diagnostic system check (See page [RS-37](#)).
- (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.



2. INSPECT DRIVER SIDE KNEE AIRBAG ASSEMBLY (VEHICLE INVOLVED IN COLLISION AND AIRBAG HAS NOT DEPLOYED)

- (a) Perform a diagnostic system check (See page [RS-37](#)).
- (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.

RS

REMOVAL

1. PRECAUTION

CAUTION:

Be sure to read "PRECAUTION" thoroughly before servicing (See page [RS-1](#)).

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

NOTICE:

Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.

3. REMOVE FRONT DOOR SCUFF PLATE LH (See page [IR-39](#))

4. REMOVE FRONT DOOR OPENING TRIM COVER LH (See page [IR-39](#))

5. REMOVE SIDE INSTRUMENT PANEL LH (See page [IP-12](#))

6. REMOVE INSTRUMENT PANEL FINISH PANEL END LH (See page [IP-13](#))

7. REMOVE LOWER INSTRUMENT PANEL SUB-ASSEMBLY (See page [IP-13](#))

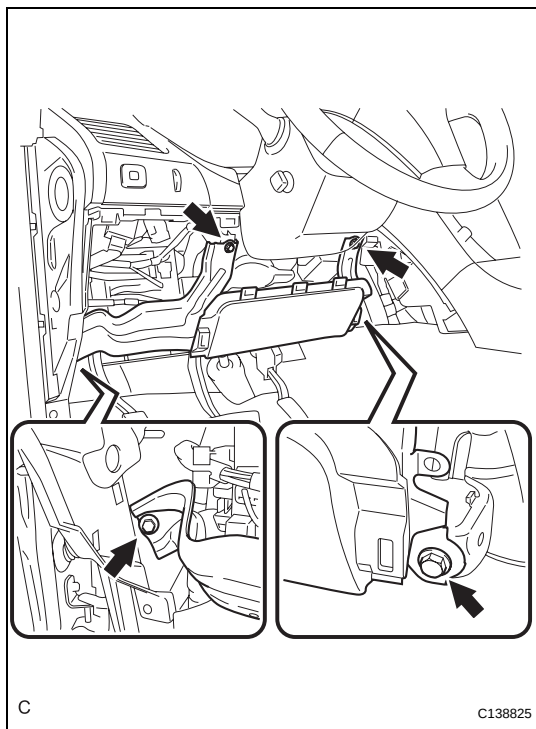
8. REMOVE DRIVER SIDE KNEE AIRBAG ASSEMBLY

(a) Remove the 4 bolts.

(b) Disconnect the driver side knee airbag connector.

NOTICE:

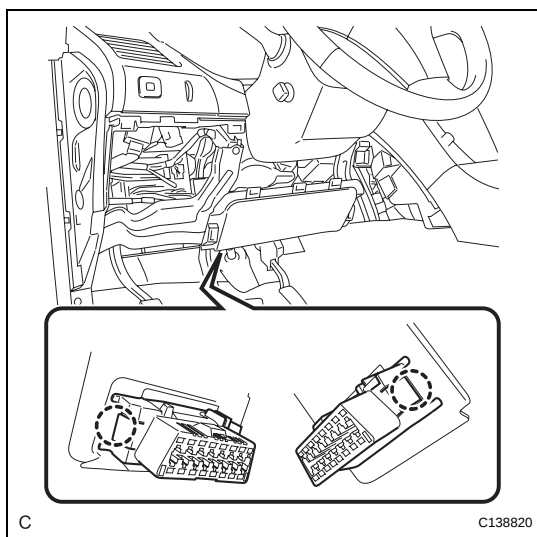
When handling the airbag connector, take care not to damage the airbag wire harness.



- (c) Disengage the 2 hooks and separate the driver side knee airbag assembly.



- (d) Disengage the 2 claws and remove the DLC3, and remove the driver side knee airbag assembly.



RS

INSTALLATION

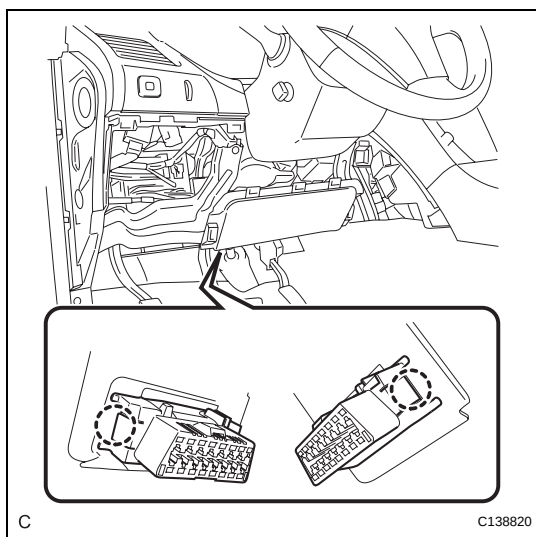
1. INSTALL DRIVER SIDE KNEE AIRBAG ASSEMBLY

- (a) Check that the engine switch is off.
- (b) Check that the battery negative (-) cable is disconnected.

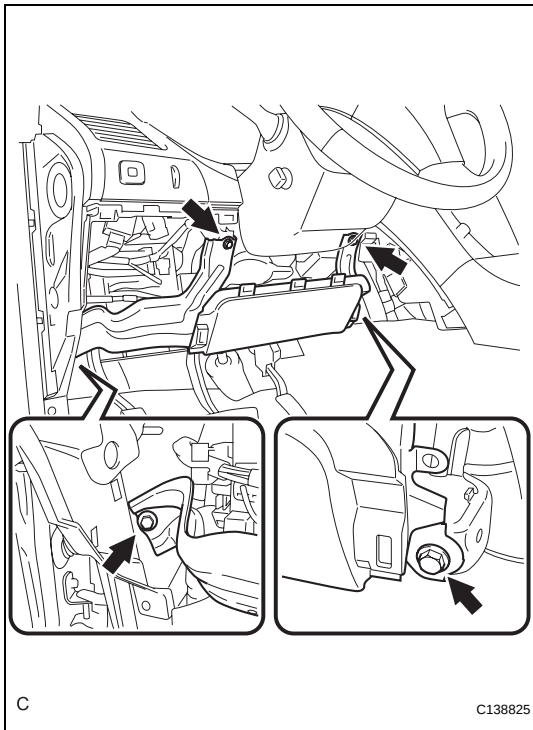
CAUTION:

Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.

- (c) Temporarily install the driver side knee airbag assembly with the 2 hooks.



- (d) Engage the 2 claws and install the DLC3.



- (e) Install the driver side knee airbag assembly with the 4 bolts.

Torque: 10 N*m (102 kgf*cm, 7 ft.*lbf)

- (f) Connect the driver side knee airbag connector.

NOTICE:

When handling the airbag connector, take care not to damage the airbag wire harness.

RS

2. **INSTALL LOWER INSTRUMENT PANEL SUB-ASSEMBLY** (See page [IP-46](#))
3. **INSTALL INSTRUMENT PANEL FINISH PANEL END LH** (See page [IP-46](#))
4. **INSTALL SIDE INSTRUMENT PANEL LH** (See page [IP-47](#))
5. **INSTALL FRONT DOOR OPENING TRIM COVER LH** (See page [IR-64](#))
6. **INSTALL FRONT DOOR SCUFF PLATE LH** (See page [IR-65](#))
7. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
8. **PERFORM INITIALIZATION**
 - (a) Perform initialization (See page [IN-33](#)).

HINT:
Some systems need initialization after reconnecting the cable to the negative battery terminal.
9. **INSPECT DRIVER SIDE KNEE AIRBAG ASSEMBLY** (See page [RS-385](#))
10. **INSPECT SRS WARNING LIGHT**
 - (a) Inspect the SRS warning light (See page [RS-37](#)).

DISPOSAL

HINT:

When scrapping a vehicle equipped with the SRS or disposing of the driver side knee 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:

- **Never dispose of a driver side knee airbag assembly that has an undeployed airbag.**
- **The airbag produces an exploding sound when it is deployed, so perform the operation outdoors and where it will not create a nuisance to nearby residents.**
- **When deploying the airbag, always use the specified SST (SRS Airbag Deployment Tool). Perform the operation in a place away from electrical noise.**
- **When deploying the airbag, perform the operation at least 10 m (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.**

1. DISPOSE OF DRIVER SIDE KNEE AIRBAG ASSEMBLY (WHEN INSTALLED IN VEHICLE)

HINT:

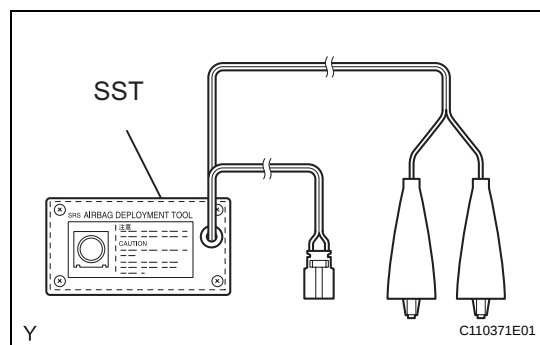
Prepare a battery as the power source to deploy the airbag.

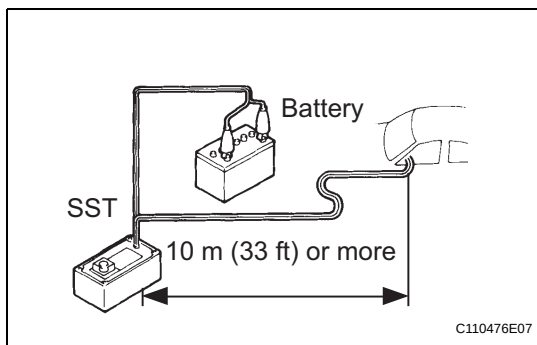
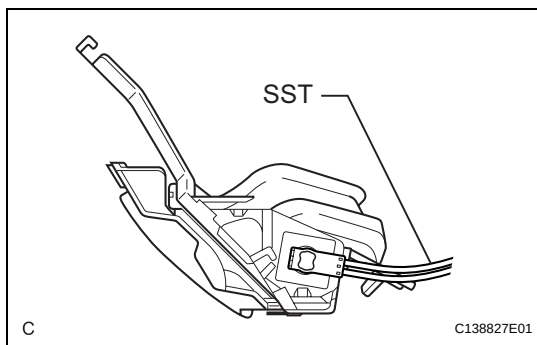
- Check the function of the SST (See page [RS-370](#)).
- Refer to PRECAUTION (See page [RS-1](#)).
- Disconnect the cable from the negative battery terminal.

CAUTION:

Wait for 90 seconds after disconnecting the cable to prevent airbag deployment.

- Remove the driver side knee airbag assembly (See page [RS-385](#)).





(e) Install the SST.

- (1) Connect the SST connector to the driver side knee airbag assembly.

SST 09082-00700, 09082-00770

NOTICE:

To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock.

- (2) Install the driver side knee airbag assembly (See page [RS-387](#)).

NOTICE:

Take care not to damage the SST wire harness.

- (3) Move the SST at least 10 m (33 ft) away from the vehicle front side window.
- (4) Maintaining enough clearance for the SST wire harness in the front side window, close all doors and windows of the vehicle.

NOTICE:

Take care not to damage the SST wire harness.

- (5) Connect the red clip of the SST to the battery positive (+) terminal and the black clip of the 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.

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:

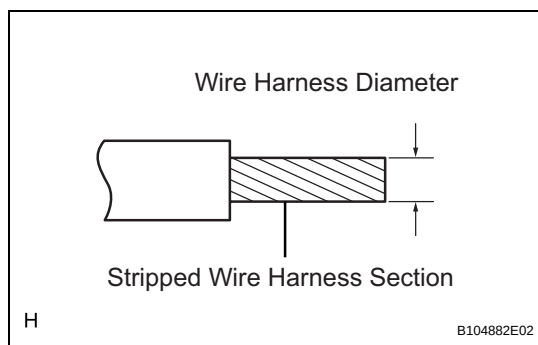
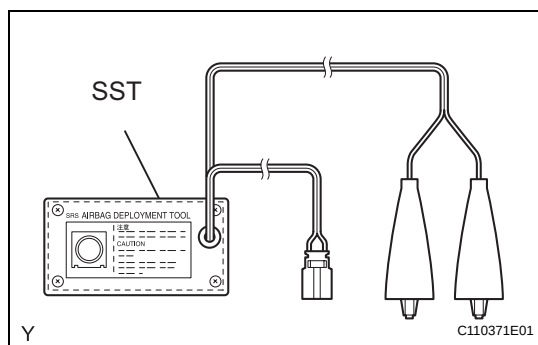
The airbag is deployed as the LED of the SST activation switch comes on.

2. DISPOSE OF DRIVER SIDE KNEE AIRBAG ASSEMBLY (WHEN NOT INSTALLED IN VEHICLE)

NOTICE:

- When disposing of the driver side knee airbag assembly, never use the customer's vehicle to deploy the airbag.

RS



- **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 the SST (See page [RS-372](#)).
- (b) Remove the driver side knee airbag assembly (See page [RS-385](#)).

CAUTION:

- **When removing the driver side knee airbag assembly, work must be started 90 seconds after the engine 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.**
- (c) Using a service-purpose wire harness for the vehicle, tie down the driver side knee airbag assembly to the tire.

Wire harness:

Stripped wire harness section

1.25 mm² or more (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 harness for vehicle use with an area of at least 1.25 mm² (0.0019 in.²).

HINT:

To calculate the area of the stripped wire harness section:

$$\text{Area} = 3.14 \times (\text{Diameter})^2 \text{ divided by } 4$$

- (1) Position the driver side knee airbag assembly inside the tire with the airbag deployment side facing inside.

Tire size:

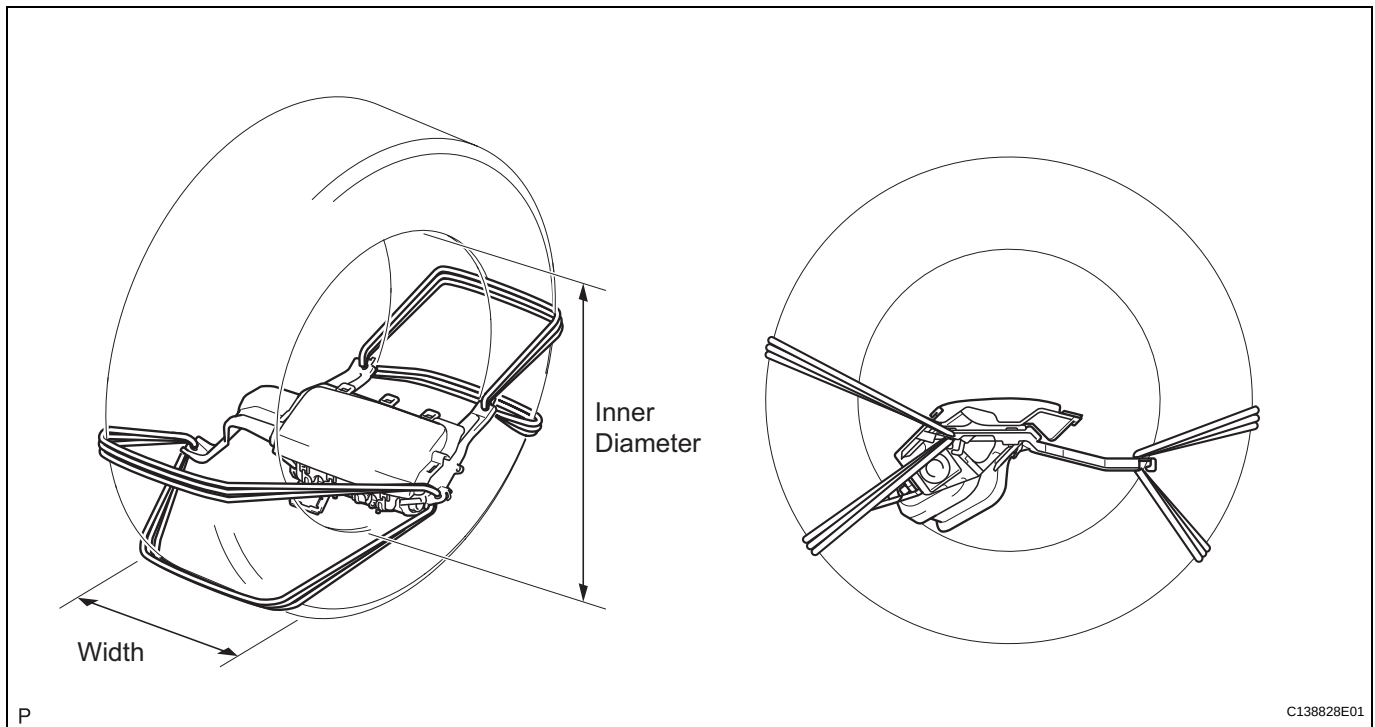
Must exceed the following dimensions

Width:

185 mm (7.28 in.)

Inner diameter:

360 mm (14.17 in.)

**CAUTION:**

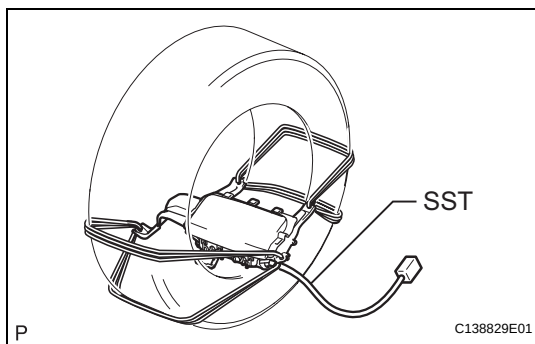
- Make sure that the wire harness is tight. If there is slack in the wire harness, the driver side knee airbag assembly may become loose due to the shock when the airbag is deployed.
- Always tie down the driver side knee airbag assembly with the airbag deployment side facing inside the tire.

NOTICE:

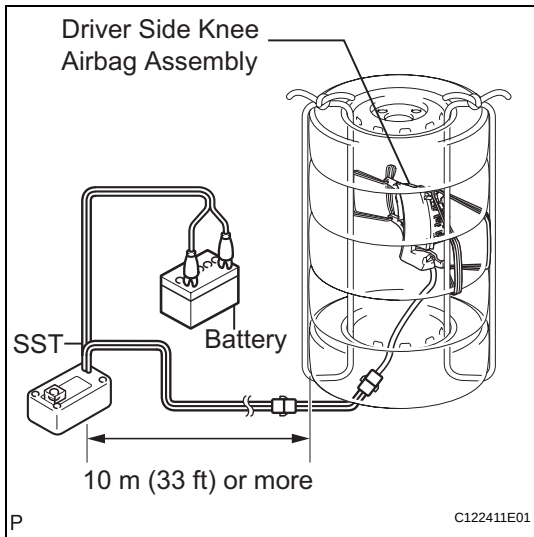
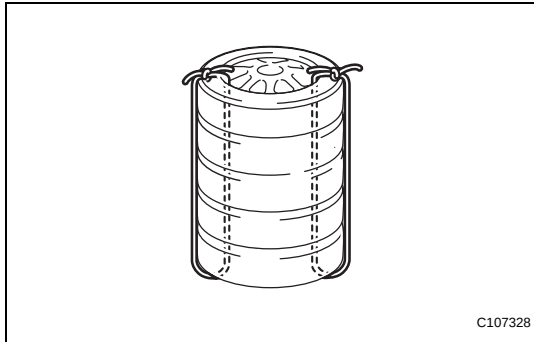
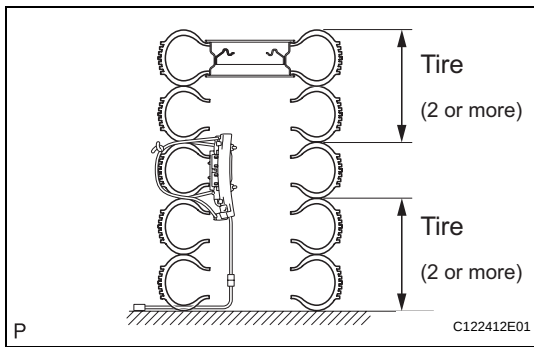
The tire may be damaged by the airbag deployment, so use an extra tire.

- (d) Install the SST.
- (1) Connect the SST connector to the driver side knee airbag assembly.

SST 09082-00770



RS



(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 the disc wheel installed.

NOTICE:

- The tire may be damaged by the airbag deployment, so use an extra tire.
- Do not place the SST connector under the tire because it could be damaged.

- (3) Tie the tires together with 2 wire harnesses.

CAUTION:

Make sure that the wire harness is tight. Looseness in the wire harness results in the tires coming free due to the shock when the airbag is deployed.

(f) Install the SST.

- (1) Connect the SST connector.

SST 09082-00700

NOTICE:

To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock. Also, secure some slack for the SST wire harness inside the tire.

- (2) Move the SST at least 10 m (33 ft) away from the airbag tied down to the tire.

(g) Deploy the airbag.

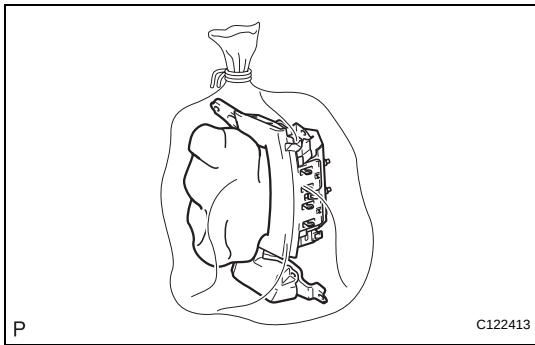
- (1) Connect the red clip of the SST to the battery positive (+) terminal and the black clip of the SST to the battery negative (-) terminal.
- (2) Check that no one is within a 10 m (33 ft) radius of the tire which the driver side knee airbag assembly is tied to.
- (3) Press the SST activation switch and deploy the airbag.

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 assembly with a deployed airbag.
- Always wash your hands with water after completing the operation.

- (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 as other general part disposal.

FRONT PASSENGER SIDE KNEE AIRBAG ASSEMBLY

COMPONENTS

RS

FRONT DOOR OPENING TRIM COVER RH

NO. 2 INSTRUMENT PANEL
UNDER COVER SUB-ASSEMBLY

SIDE INSTRUMENT
PANEL RH

FRONT PASSENGER SIDE
KNEE AIRBAG ASSEMBLY

x3
10 (102, 7)

FRONT DOOR SCUFF PLATE RH

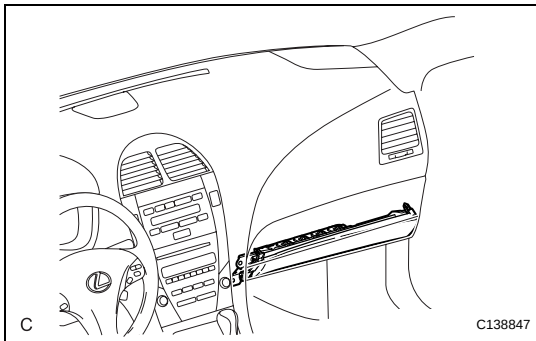
INSTRUMENT PANEL FINISH PANEL END RH

N*m (kgf*cm, ft.*lbf) : Specified torque

ON-VEHICLE INSPECTION

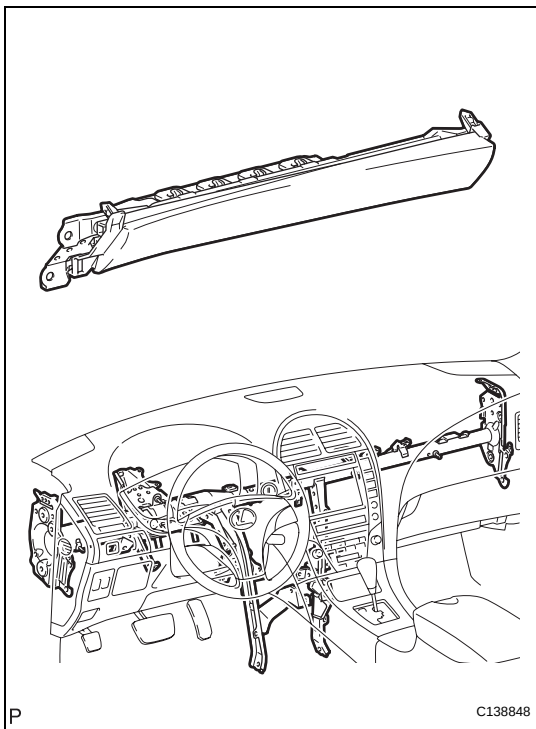
1. INSPECT FRONT PASSENGER SIDE KNEE AIRBAG ASSEMBLY (VEHICLE NOT INVOLVED IN COLLISION)

- (a) Perform a diagnostic system check (see page [RS-37](#)).
- (b) With the front passenger side knee airbag assembly installed on the vehicle, perform a visual check. If there are any defects as mentioned below, replace the front passenger side knee airbag assembly with a new one:
Cuts, minute cracks or marked discoloration on the front passenger side knee airbag assembly.



2. INSPECT FRONT PASSENGER SIDE KNEE AIRBAG ASSEMBLY (VEHICLE INVOLVED IN COLLISION AND AIRBAG HAS NOT DEPLOYED)

- (a) Perform a diagnostic system check (see page [RS-37](#)).
- (b) With the front passenger side knee airbag assembly removed from the vehicle, perform a visual check. If there are any defects as mentioned below, replace the front passenger side knee airbag assembly with a new one:
 - Cuts, minute cracks or marked discoloration on the front passenger 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 procedure.

RS

REMOVAL

1. PRECAUTION

CAUTION:

Be sure to read "PRECAUTION" thoroughly before servicing (See page [RS-1](#)).

2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

NOTICE:

Wait for 90 seconds after disconnecting the cable to prevent the airbag deployment.

3. REMOVE FRONT DOOR SCUFF PLATE RH (See page [IR-42](#))

4. REMOVE FRONT DOOR OPENING TRIM COVER RH (See page [IR-42](#))

5. REMOVE SIDE INSTRUMENT PANEL RH (See page [IP-15](#))

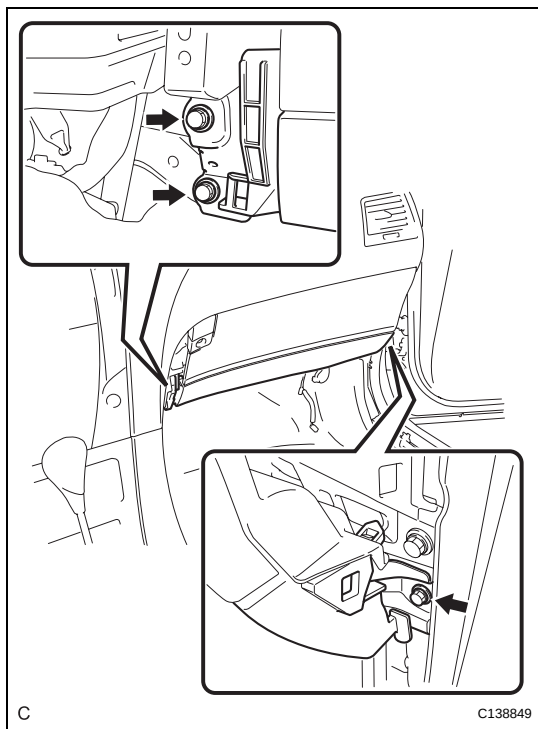
6. REMOVE INSTRUMENT PANEL FINISH PANEL END RH (See page [IP-15](#))

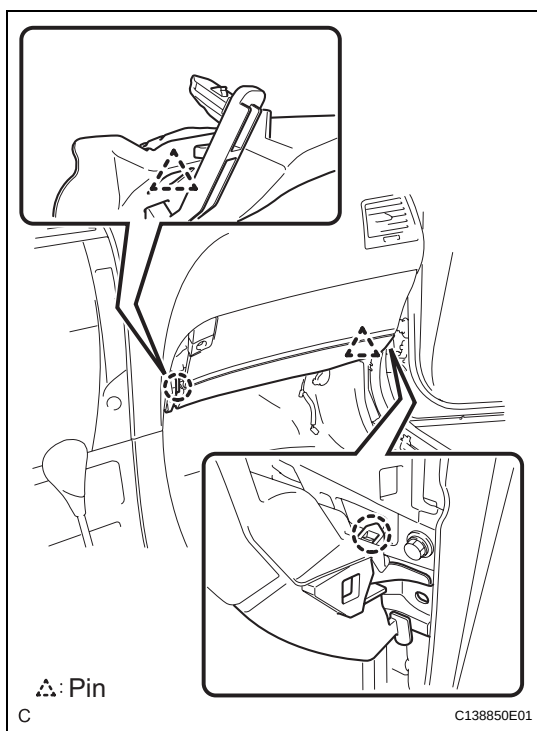
7. REMOVE NO. 2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY (See page [IP-15](#))

8. REMOVE FRONT PASSENGER SIDE KNEE AIRBAG ASSEMBLY

(a) Remove the 3 bolts.

(b) Disconnect the front passenger side knee airbag connector.





- (c) Disengage the 2 claws and 2 pins, and remove the front passenger side knee airbag assembly.

NOTICE:

When handling the airbag connector, take care not to damage the airbag wire harness.