

# SRS AIRBAG

## PRECAUTION

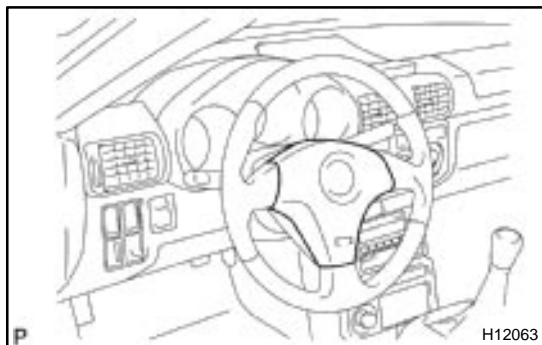
RSOJO-02

### CAUTION:

- The MR2 is equipped with SRS, which comprises a driver airbag, front passenger airbag and 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 in 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 correct procedures described in the repair manual.
- Work must be started 90 seconds after the ignition switch is turned to the "LOCK" position and the negative (-) terminal cable is disconnected from the battery.  
(The SRS is equipped with a back-up power source so that if work is started within 90 seconds from disconnecting the negative (-) terminal cable of the battery, the SRS may be deployed.)
- Do not expose the steering wheel pad, front passenger airbag assembly, airbag sensor assembly or front airbag sensor directly to hot air or flames.

### NOTICE:

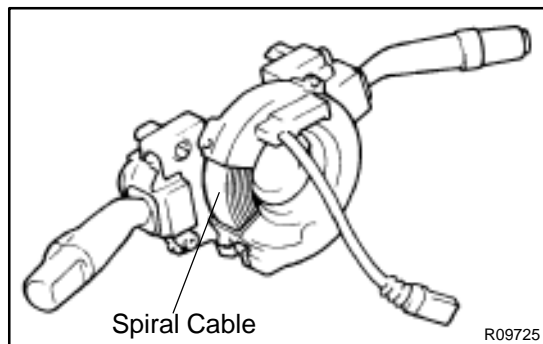
- Malfunction symptoms of the SRS are difficult to confirm, so the DTCs become the most important source of information when troubleshooting. When troubleshooting the SRS, always inspect the DTCs before disconnecting the battery.
- Even in cases of a minor collision where the SRS does not deploy, the steering wheel pad, front passenger airbag assembly, airbag sensor assembly and front airbag sensor should be inspected.  
(See pages [RS-13](#), [RS-28](#), [RS-42](#), and [RS-47](#))
- Before repairs, remove the airbag sensor if shocks are likely to be applied to the sensor during repairs.
- Never use SRS parts from another vehicle. When replacing parts, replace them with new parts.
- Never disassemble and repair the steering wheel pad, front passenger airbag assembly, airbag sensor assembly or front airbag sensor, in order to reuse it.
- If the steering wheel pad, front passenger airbag assembly, airbag sensor assembly or front airbag sensor, has been dropped, or if there are cracks, dents or other defects in the case, bracket or connector, replace it with new one.
- Use a volt/ohmmeter with high impedance (10 k $\Omega$ /V minimum) for troubleshooting the system's electrical circuits.
- Information labels are attached to the periphery of the SRS components. Follow the instructions on the notices.
- After work on the SRS is completed, check the SRS warning light check (See page [DI-237](#)).
- When the negative (-) terminal cable is disconnected from the battery, the memory of the clock and audio system will be canceled. So before starting work, make a record of the contents memorized in the audio memory system. When work is finished, reset the audio systems as they were before and adjust the clock. To avoid erasing the memory in each memory system, never use a back-up power supply from outside the vehicle.
- If the vehicle is equipped with a mobile communication system, refer to the precaution in the IN section.



## OPERATION

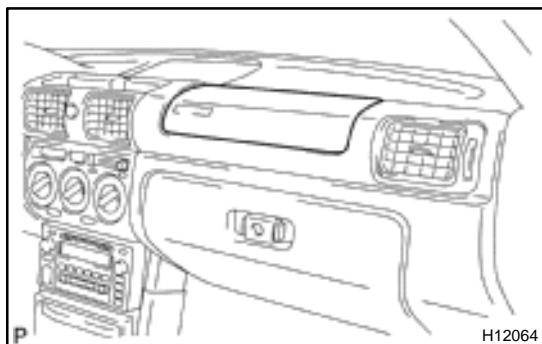
### 1. STEERING WHEEL PAD (with AIRBAG)

The inflator and bag of the SRS are stored in the steering wheel pad and cannot be disassembled. The inflator contains a squib, igniter charge, gas generator, etc., and inflates the bag when instructed by the airbag sensor assembly.



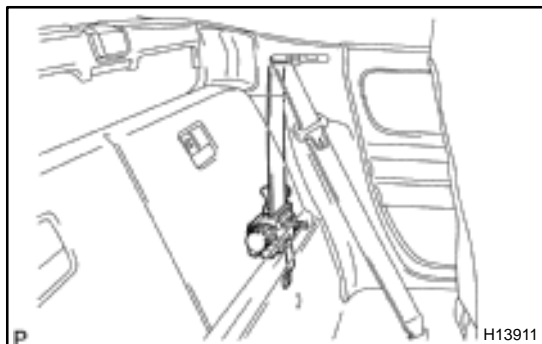
### 2. SPIRAL CABLE (in COMBINATION SWITCH)

A spiral cable is used as an electrical joint from the vehicle body side to the steering wheel.



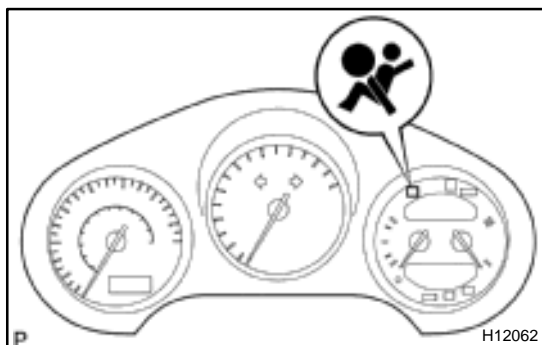
### 3. FRONT PASSENGER AIRBAG ASSEMBLY

The inflator and bag of the SRS are stored in the front passenger airbag assembly and cannot be disassembled. The inflator contains a squib, igniter charge, gas generator, etc., and inflates the bag when instructed by the airbag sensor assembly.



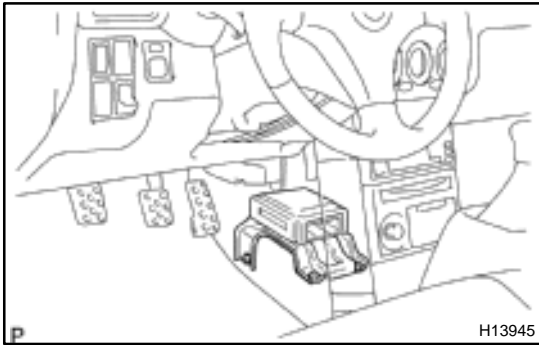
### 4. SEAT BELT PRETENSIONER

The seat belt pretensioner system is a component of the front seat outer belt. The pretensioner contains a squib, gas generator, wire, piston, etc., and operates in the event of a frontal collision. The seat belt pretensioner cannot be disassembled.



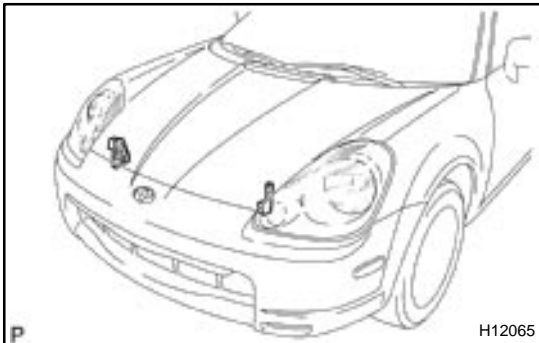
### 5. SRS WARNING LIGHT

The SRS warning light is located on the combination meter. It goes on to alert the driver of trouble in the system when a malfunction is detected in the airbag sensor assembly self-diagnosis. In normal operation conditions when the ignition switch is turned to the ON position, the light goes on for about 6 seconds and then goes off.



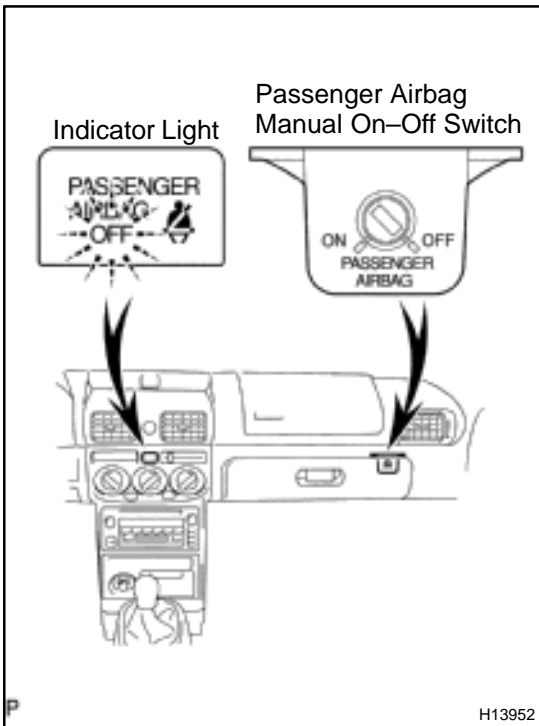
**6. AIRBAG SENSOR ASSEMBLY**

The airbag sensor assembly is mounted on the floor inside the lower center finish panel. The airbag sensor assembly consists of an airbag sensor, safing sensor, diagnosis circuit, ignition control, drive circuit, etc. It receives signals from the airbag sensor, front airbag sensor, side airbag sensor assembly and door side airbag assembly and judges whether the SRS must be activated or not. The airbag sensor assembly cannot be disassembled.



**7. FRONT AIRBAG SENSOR**

The front airbag sensor is mounted inside each of the side members. The sensor unit is a mechanical type. When the sensor detects deceleration force above a predetermined limit, contact is made in the sensor, sending a signal to the airbag sensor assembly. The front airbag sensor cannot be disassembled.



**8. PASSENGER AIRBAG MANUAL ON-OFF SWITCH**

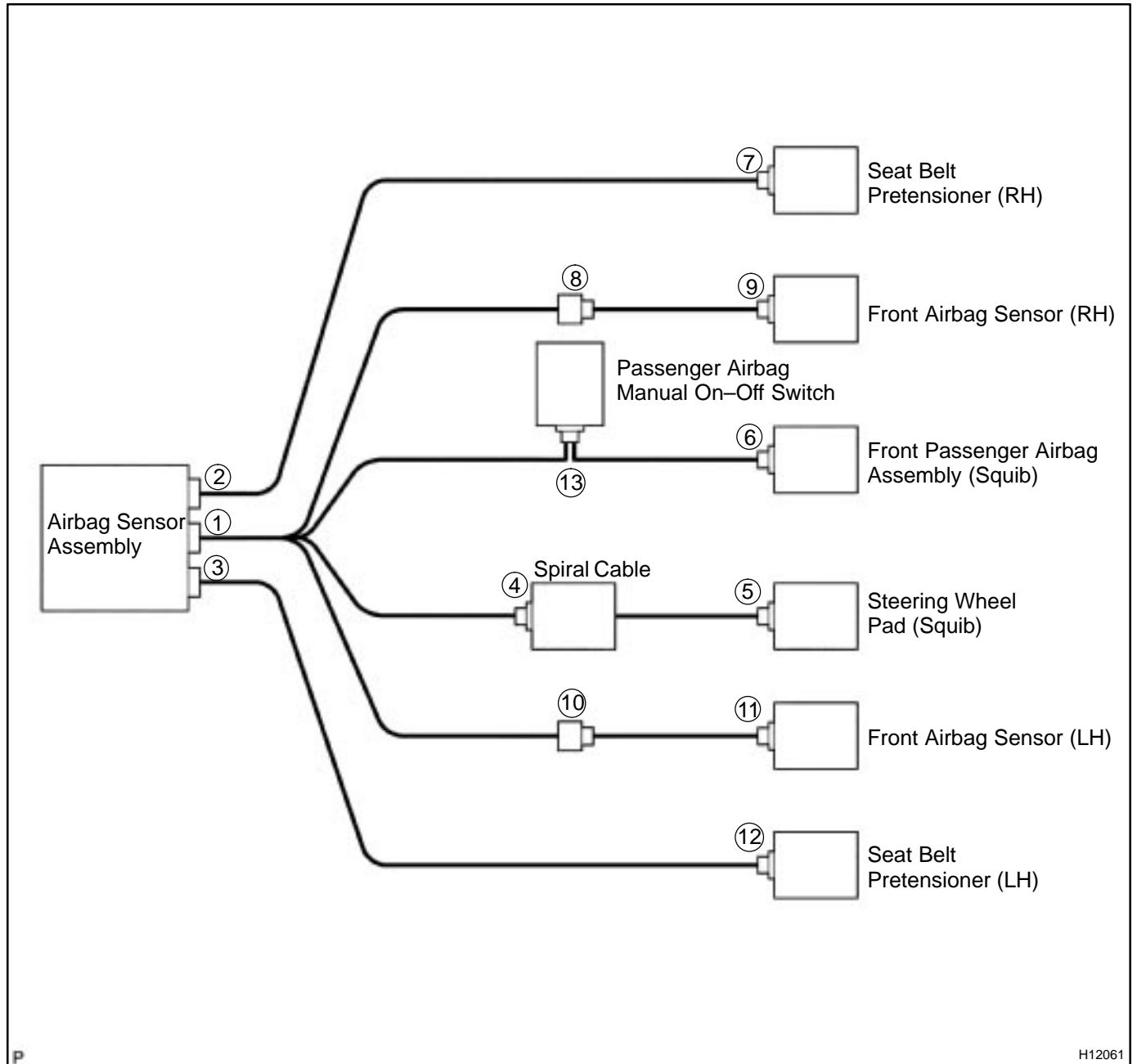
Passenger airbag manual on-off switch is mounted on in the glove compartment door. By turning the passenger airbag manual on-off switch to OFF with the ignition key, the passenger airbag system can be disabled. Also, in order to notify the passenger that the passenger airbag is disabled, OFF indicator inside the switch will light up.

Switch Position	Passenger Airbag	Indicator Light
ON	Operative	OFF
OFF	Disabled	ON

**9. SRS CONNECTORS**

HINT:

SRS connectors are located as shown in the following illustration.

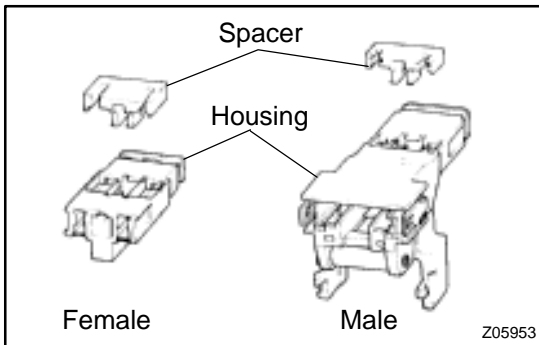


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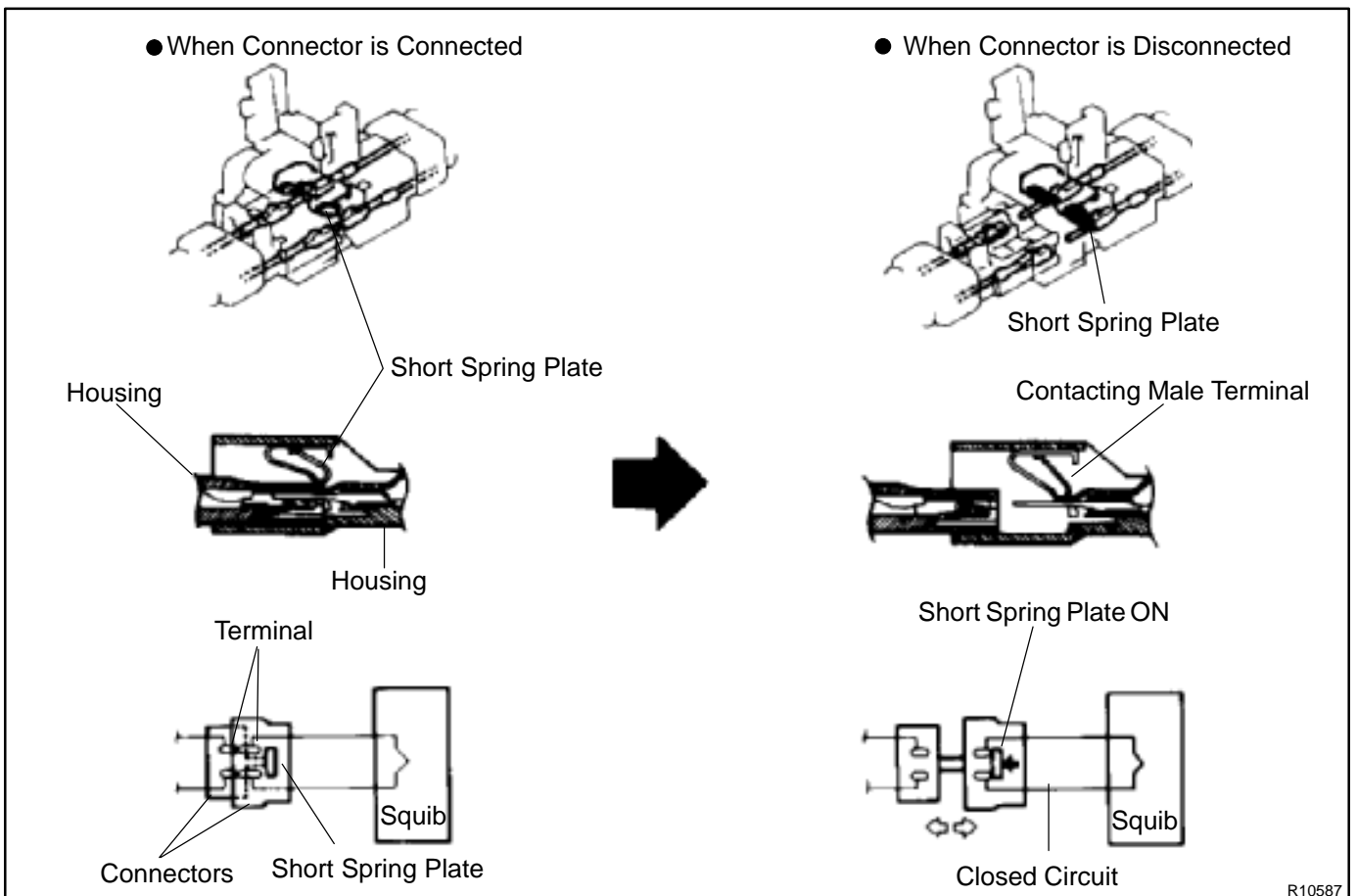
H12061

No.	Item	Application
(1)	Terminal Twin-Lock Mechanism	Connectors 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
(2)	Airbag Activation Prevention Mechanism	Connectors 1, 2, 3, 4, 5, 6, 13
(3)	Electrical Connection Check Mechanism	Connectors 1, 2, 3

- (a) All connectors in the SRS are colored in yellow to distinguish them from other connectors. Connectors having special functions and specifically designed for the SRS are used in the locations shown on the previous page to ensure high reliability. These connectors use durable gold-plated terminals.

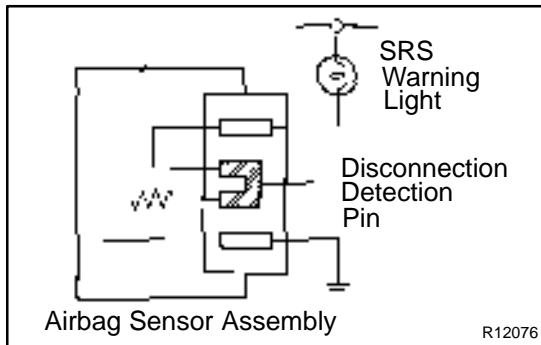


- (1) **Terminal Twin-Lock Mechanism**  
Each connector has a two-piece component consisting of a housing and a spacer. This design enables the terminal to be locked securely by two locking devices (the retainer and the lance) to prevent terminals from coming out.
- (2) **Airbag Activation Prevention Mechanism**  
Each connector contains a short spring plate. When the connector is disconnected, the short spring plate automatically connects positive (+) terminal and negative (-) terminal of the squib.

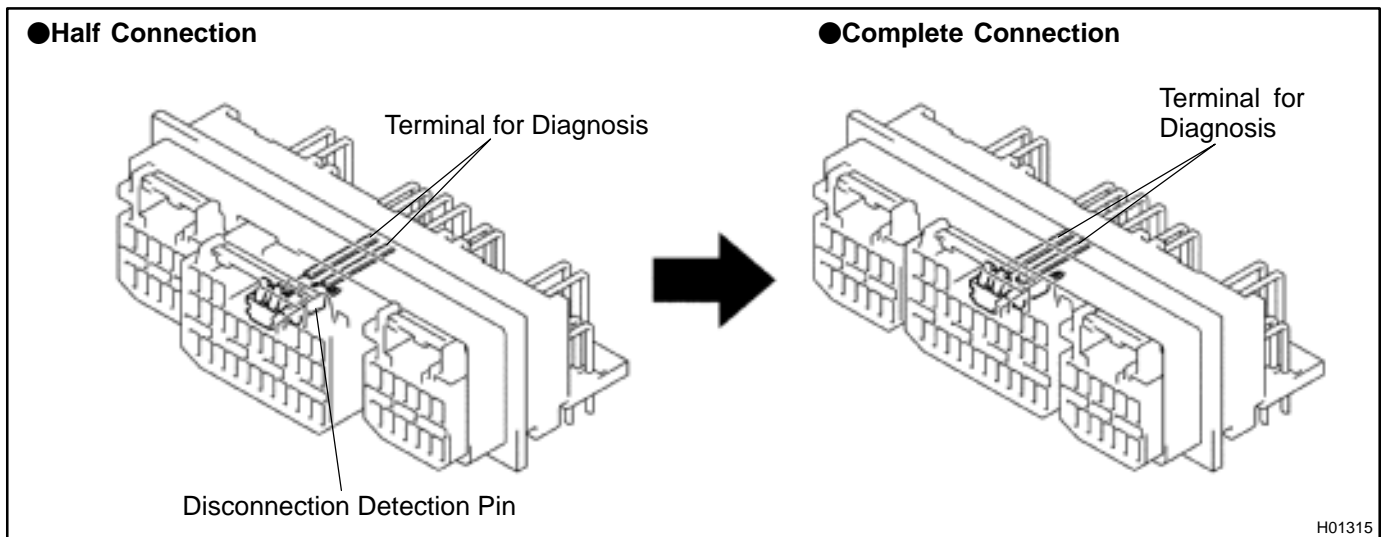


HINT:

The type of connector is shown in the diagram on the previous page.

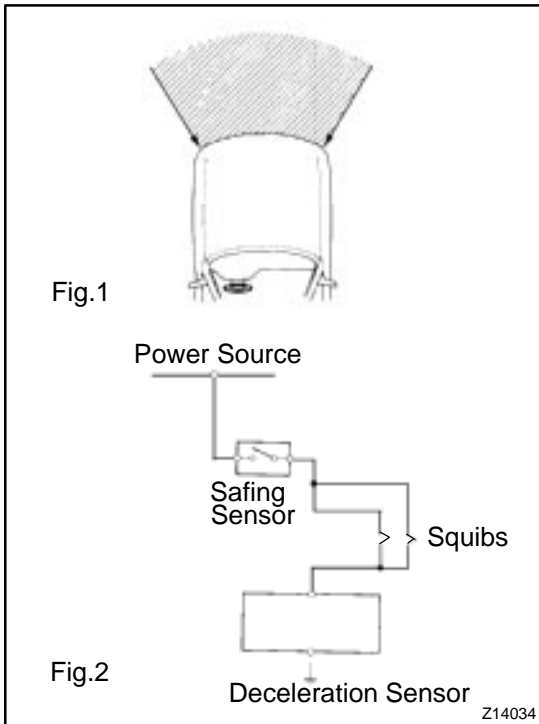


- (3) Electrical Connection Check Mechanism  
 This mechanism electrically checks that connectors are connected correctly and completely. The electrical connection check mechanism is designed so that the disconnection detection pin connects with the diagnosis terminals when the connector housing lock is locked.

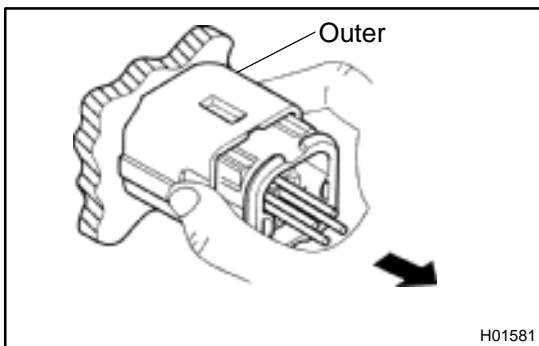


HINT:

The illustration shows connectors "1", "2" and "3" in step 11.



(b) When the vehicle is involved in a frontal collision in the hatched area (Fig. 1) and the shock is larger than the pre-determined level, the SRS is activated automatically. A safing sensor is designed to go on at a smaller deceleration rate than the airbag sensor. As illustrated in Fig. 2, ignition is caused when current flows to the squib, which happens when a safing sensor and the deceleration sensor go on simultaneously. When a deceleration force acts on the sensors, 2 squibs in the driver airbag and front passenger airbag ignite and generate gas. The gas discharging into the driver airbag and front passenger airbag rapidly increases the pressure inside the bags, breaking open the steering wheel pad and instrument panel. Bag inflation then ends, and the bags deflate as the gas is discharged through discharge holes at the bag's rear or side.

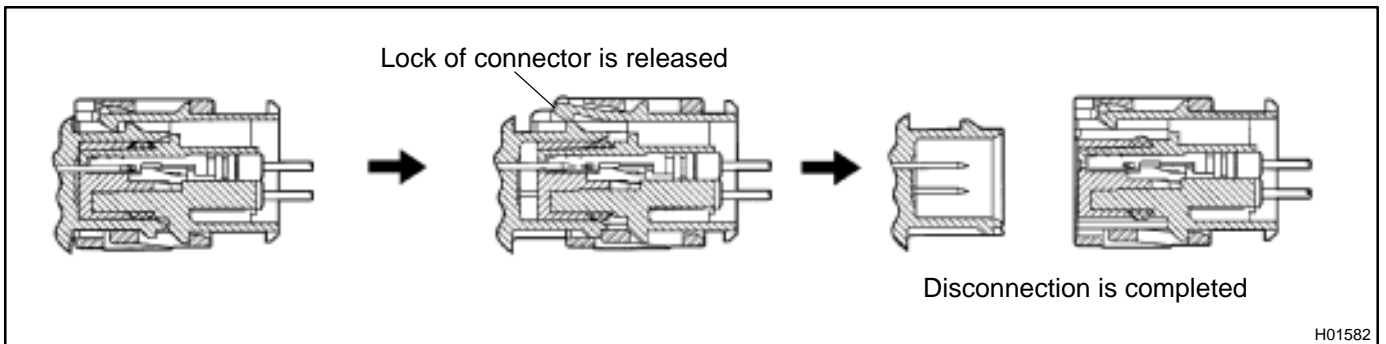


**10. DISCONNECTION OF CONNECTORS FOR FRONT AIRBAG SENSOR**

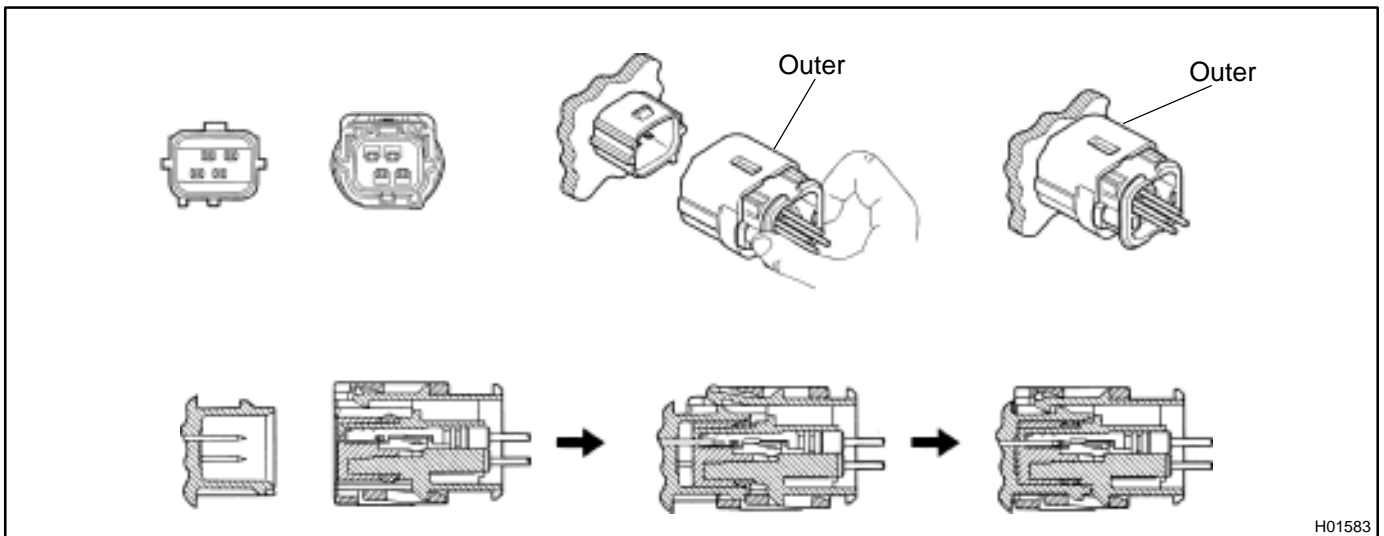
- (a) While holding both flank sides of the outer, slide the outer to the direction shown by an arrow.
- (b) Lock of the connectors is released, then disconnect the connectors.

**HINT:**

Be sure to hold both flank sides of the outer. If holding the top and bottom sides, it will obstruct disconnection.



### 11. CONNECTION OF CONNECTORS FOR FRONT AIRBAG SENSOR



H01583

- (a) Align the male connector (of the side of sensor) and female connector in the same direction as shown in the illustration and fit in them without rubbing.
- (b) As they are fitted in, the outer slides rearward. Press it until the outer returns to its original position again.  
If fitting stops half way, connectors will separate.
- (c) Be sure to insert until they are locked. After fitting in, pull them slightly to check that they are locked (When locked, make sure that the outer returns to its original position and the click can be heard at the time of fitting in.).

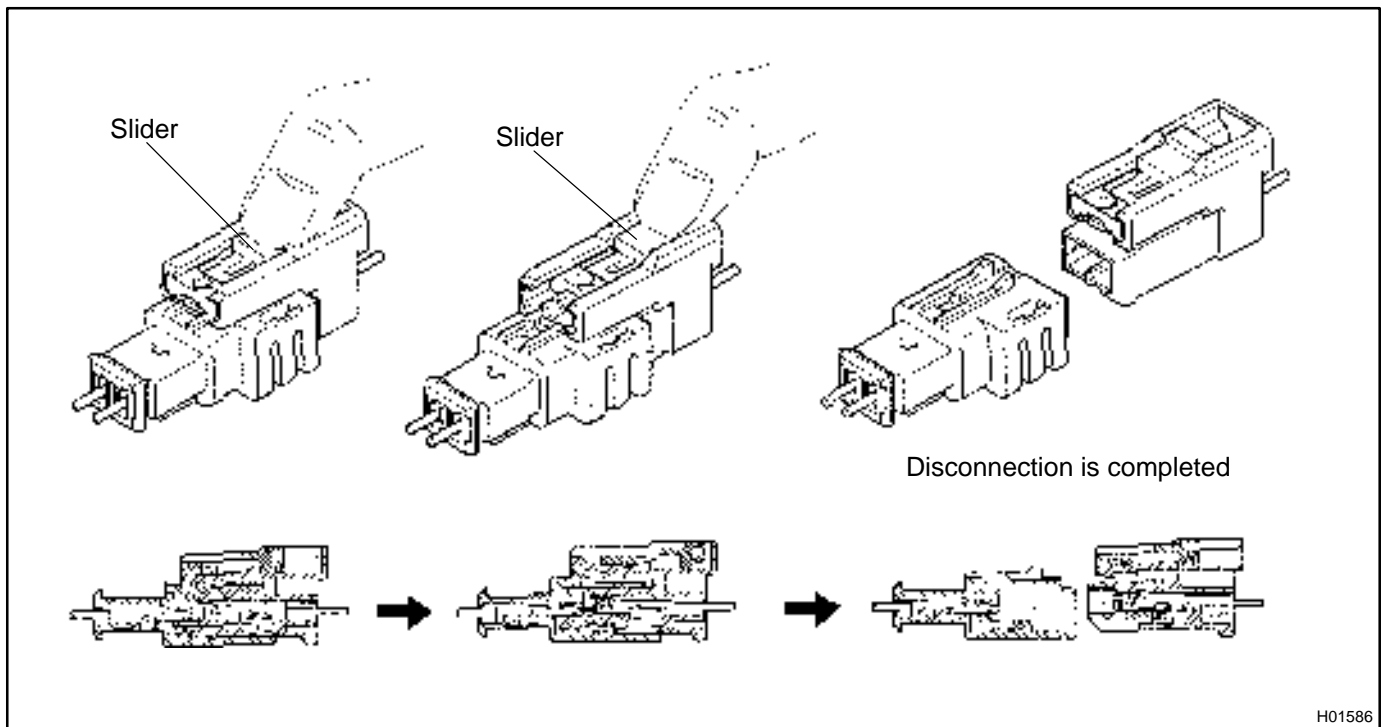
**HINT:**

- Do not fit in while holding the outer.
- When fitting in, the outer slides. Do not touch it.



**12. DISCONNECTION OF CONNECTORS FOR STEERING WHEEL PAD (with AIRBAG) AND FRONT PASSENGER AIRBAG ASSEMBLY**

- (a) Place a finger on the slider.
- (b) Slide the slider to release lock.
- (c) Disconnect the connector.



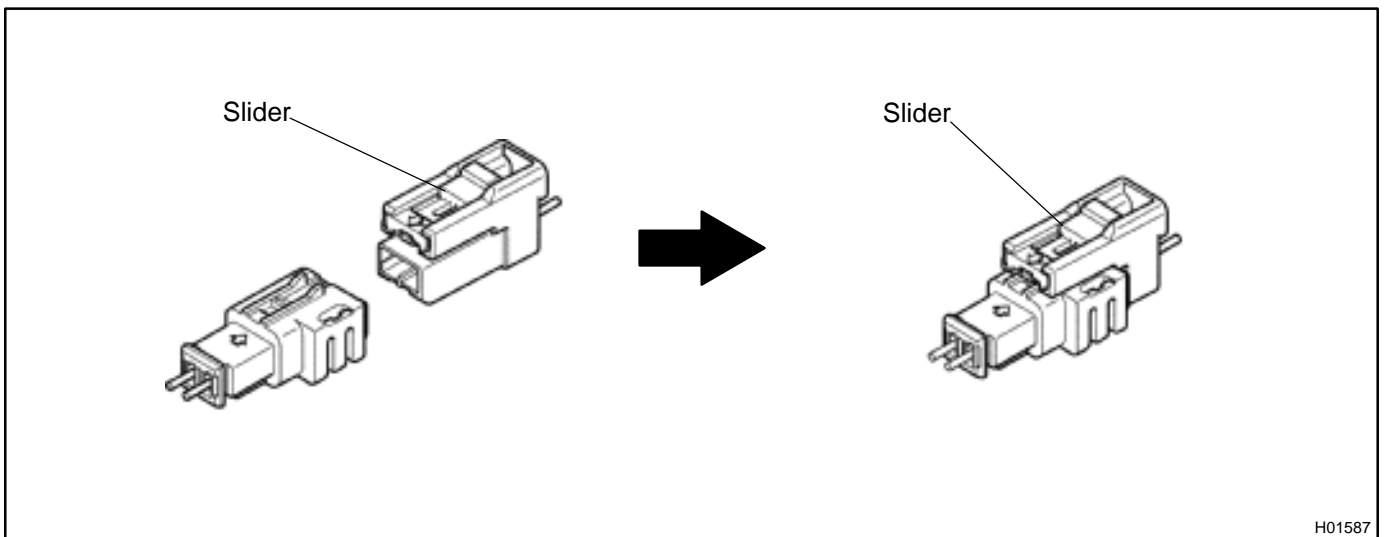
H01586

### 13. CONNECTION OF CONNECTORS FOR STEERING WHEEL PAD (with AIRBAG) AND FRONT PASSENGER AIRBAG ASSEMBLY

- (a) Align a lock part of male connector and a slider of female connector in the same direction as shown in the illustration, fit in them without rubbing.
- (b) Be sure to insert until they are locked. After fitting in pull them slightly to check that they are locked (When locked, make sure that the outer returns to its original position and the click can be heard at the time of fitting in.).

#### HINT:

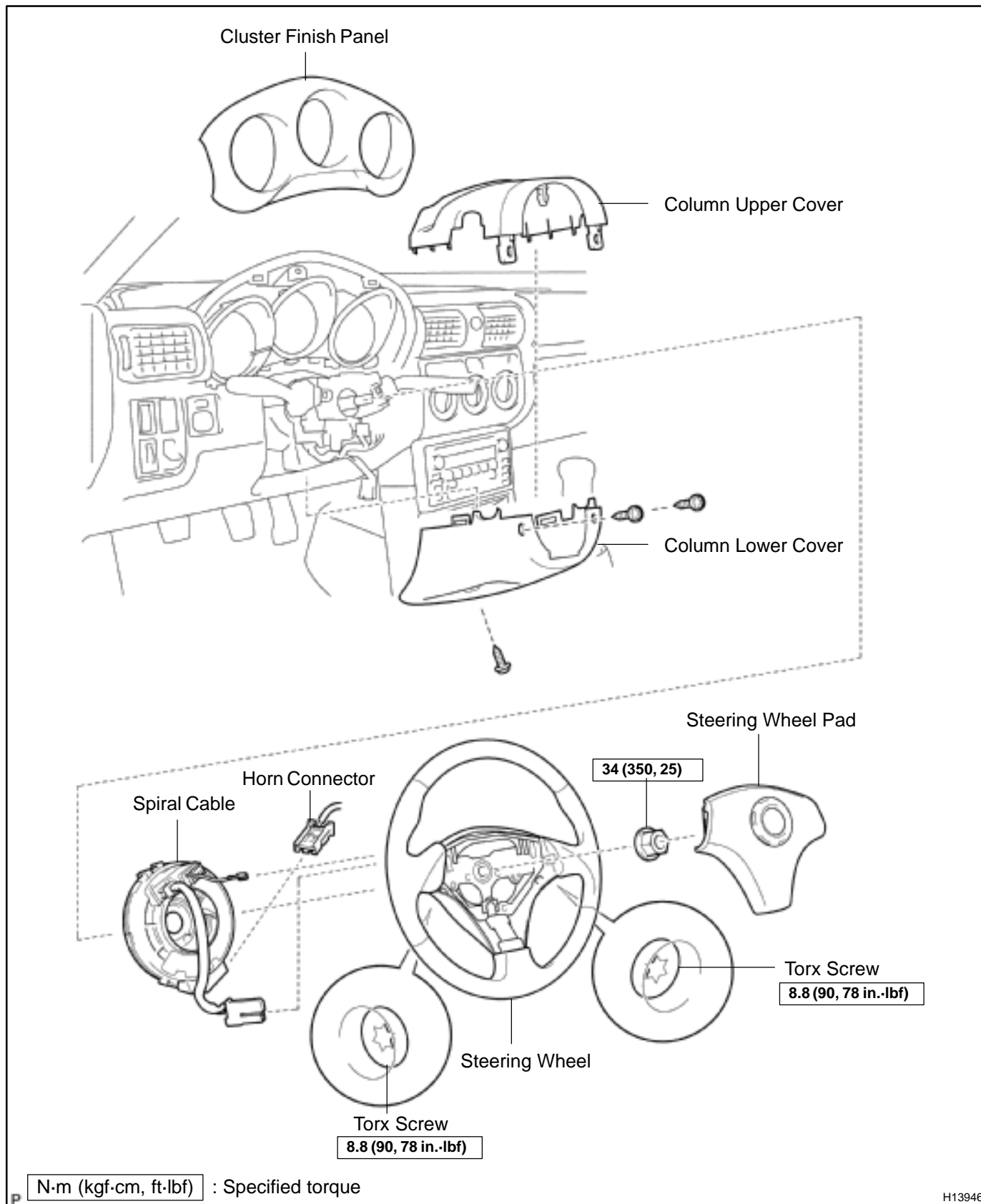
- As the slider slides, do not touch it.
- Be careful not to deform the release board. If the release board is deformed, replace it with a new one.



H01587

# STEERING WHEEL PAD AND SPIRAL CABLE COMPONENTS

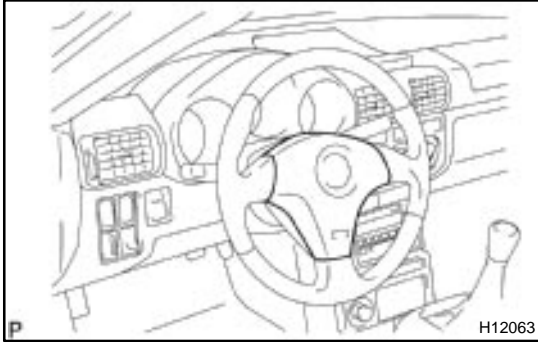
RS0JQ-02



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## REMOVAL

1. REMOVE STEERING WHEEL PAD
2. REMOVE STEERING WHEEL (See page [SR-10](#))
3. REMOVE CLUSTER FINISH PANEL
4. REMOVE UPPER AND LOWER COLUMN COVERS
5. REMOVE SPIRAL CABLE

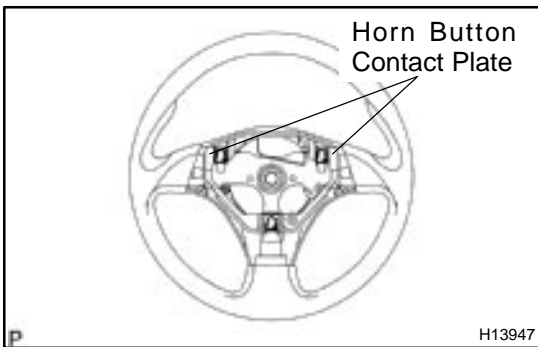


## INSPECTION

1. **Vehicle not involved in collision:**  
**INSPECT SUPPLEMENTAL RESTRAINT SYSTEM**
  - (a) Check a diagnostic system (See page [DI-237](#)).
  - (b) Do a visual check which includes the following item with the steering wheel pad (with airbag) installed in the vehicle.  
 Check cuts, minute cracks or marked discoloration on the steering wheel pad top surface and in the grooved portion.
2. **Vehicle involved in collision with airbag not deployed:**  
**INSPECT SUPPLEMENTAL RESTRAINT SYSTEM**
  - (a) Check a diagnostic system (See page [DI-237](#)).



- (b) Do a visual check which includes the following items with the steering wheel pad (with airbag) removed from the vehicle.
  - Check cuts, minute cracks or marked discoloration on the steering wheel pad top surface and in the grooved portion.
  - Check cuts and cracks in wire harness, and chipping in connectors.
- Check the deformation of the horn button contact plate of the steering wheel.

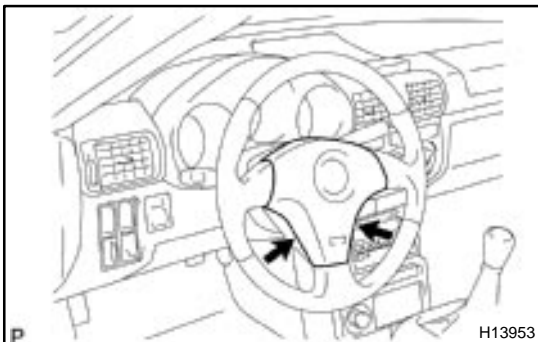


### CAUTION:

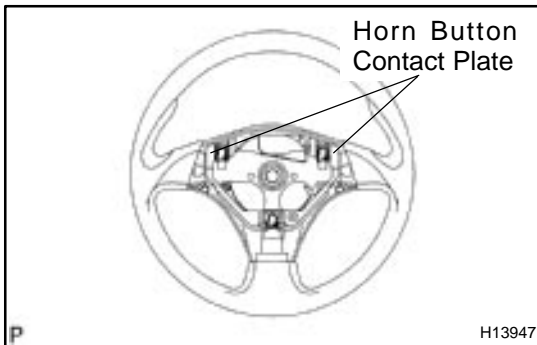
**For removal and installation of the steering wheel pad, see pages [SR-10](#) and [SR-19](#), be sure to follow the correct procedure.**

### HINT:

- If the horn button contact plate of the steering wheel is deformed, never repair it. Always replace the steering wheel assembly with a new one.
- There should be no interference between the steering wheel pad and steering wheel, and the clearance should be uniform all the way around when the new steering wheel pad is installed on the steering wheel.



3. **Vehicle involved in collision and airbag is deployed: INSPECT SUPPLEMENTAL RESTRAINT SYSTEM**
- (a) Check a diagnostic system (See page [DI-237](#)).



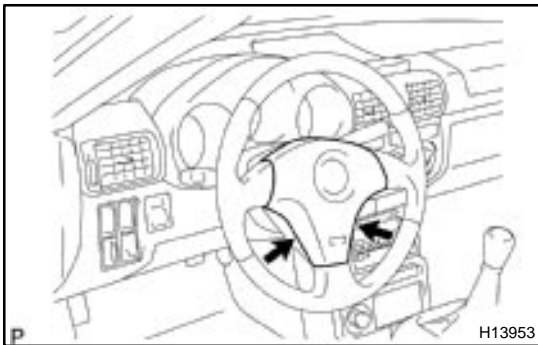
- (b) Do a visual check which includes the following items with the steering wheel pad (with airbag) removed from the vehicle.
- Check the deformation on the horn button contact plate of the steering wheel.
  - Check the damage on the spiral cable connector and wire harness.

**CAUTION:**

**For removal and installation of the steering wheel pad, see pages [SR-10](#) and [SR-19](#), and be sure to follow the correct procedure.**

**HINT:**

- If the horn button contact plate of the steering wheel is deformed, never repair it. Always replace the steering wheel assembly with a new one.
- There should be no interference between the steering wheel pad and steering wheel, and the clearance should be uniform all the way around when the new steering wheel pad is installed on the steering wheel.



## DISPOSAL

### HINT:

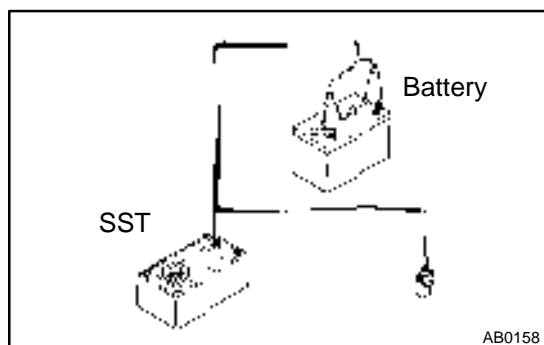
When scrapping vehicle equipped with an SRS or disposing of a steering wheel pad (with airbag), always first deploy the airbag in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the SERVICE DEPT. of TOYOTA MOTOR SALES, U.S.A., INC.

### CAUTION:

- Never dispose of a steering wheel pad which has an undeployed airbag.
- The airbag produces a sizeable exploding sound when it deploys, so perform the operation out-of-doors and where it will disturb 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.  
SST 09082-00700
- When deploying an airbag, perform the operation at least 10 m (33 ft) away from the steering wheel pad.
- The steering wheel pad is very hot when the airbag is deployed, so leave it alone for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling a steering wheel pad with the deployed airbag.
- Always wash your hands with water after completing the operation.
- Do not apply water, etc. to a steering wheel pad with the deployed airbag.



### 1. AIRBAG DEPLOYMENT WHEN SCRAPPING VEHICLE

#### HINT:

Have a battery ready as the power source to deploy the airbag.

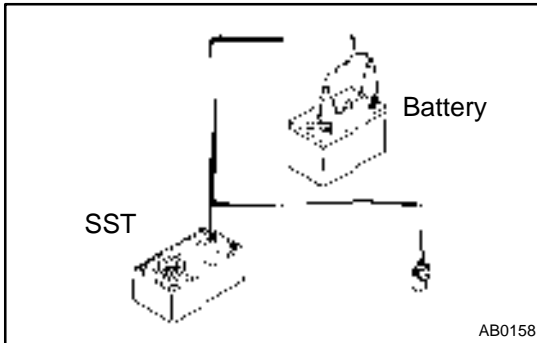


(a) Check functioning of the SST.

**CAUTION:**

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

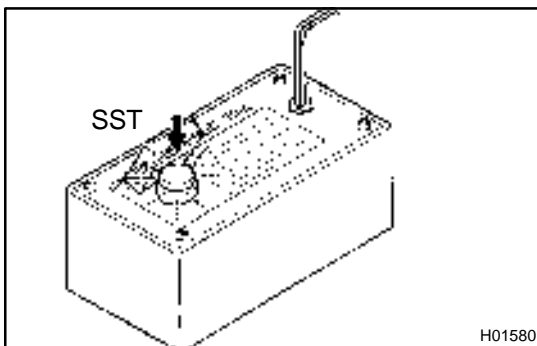
SST 09082-00700



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

**HINT:**

Do not connect the yellow connector which will be connected with the supplemental restraint system.

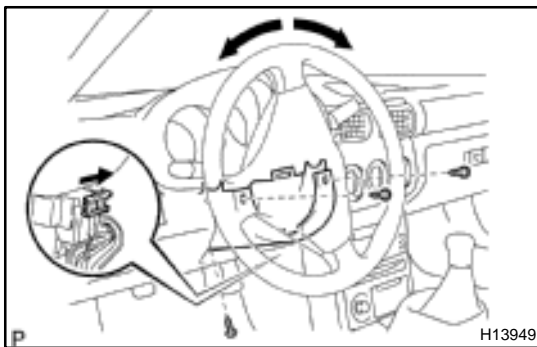


- (2) Press the SST activation switch, and check that the LED of the SST activation switch lights up.

**CAUTION:**

**If the LED lights up when the activation switch is not being pressed, SST malfunction is probable, so definitely do not use the SST.**

- (3) Disconnect the SST from the battery.

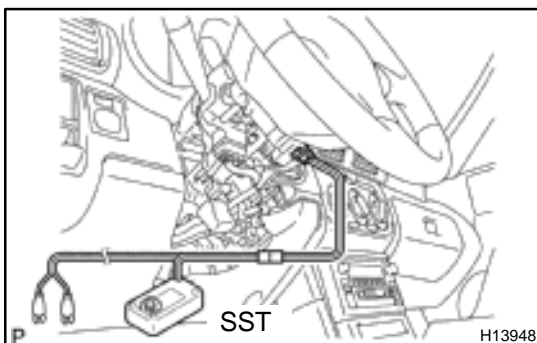


(b) Install the SST.

**CAUTION:**

**Check the steering wheel and steering wheel pad for looseness.**

- (1) While turning the steering wheel right / left, remove the 3 screws and column lower cover.
- (2) Disconnect the airbag connector of the spiral cable.



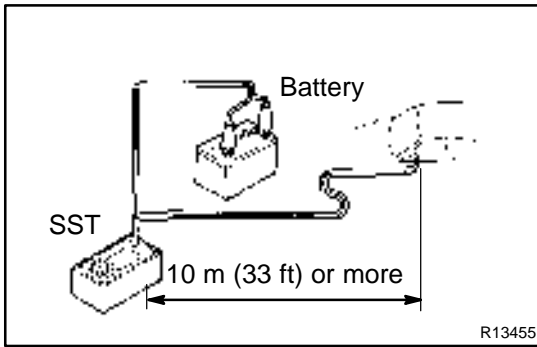
- (3) Connect the connectors of the 2 SST to the airbag connector of the spiral cable.

SST 09082-00700, 09082-00760

**NOTICE:**

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



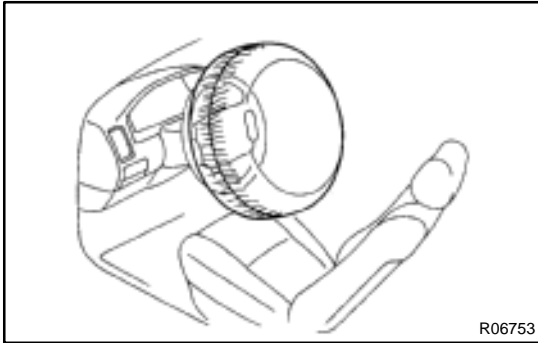


- (4) Move the SST at least 10 m (33 ft) away from the front of the vehicle.
- (5) Close all the doors and windows of the vehicle.

**NOTICE:**

**Take care not to damage the SST wire harness.**

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



- (c) Deploy the airbag.
  - (1) Check that no one is inside the vehicle or within 10 m (33 ft) area around the vehicle.
  - (2) Press the SST activation switch and deploy the airbag.

**CAUTION:**

- **The steering wheel pad is very hot when the airbag is deployed, so leave it alone for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a steering wheel pad with the deployed airbag.**
- **Always wash your hands with water after completing the operation.**
- **Do not apply water, etc. to a steering wheel pad with the deployed airbag.**
- **When scrapping a vehicle, deploy the airbag and scrap the vehicle with the steering wheel pad still installed.**
- **When moving a vehicle for scrapping which has a steering wheel pad with deployed airbag, use gloves and safety glasses.**

**HINT:**

The airbag deploys simultaneously as the LED of the SST activation switch lights up.

## 2. DEPLOYMENT WHEN DISPOSING OF STEERING WHEEL PAD ONLY

**NOTICE:**

- **When disposing of the steering wheel pad (with airbag) only, never use the customer's vehicle to deploy the airbag.**
- **Be sure to follow the procedure given below when deploying the airbag.**

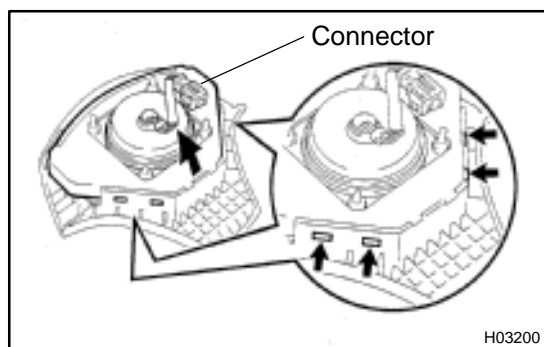
**HINT:**

Have a battery ready as the power source to deploy the airbag.

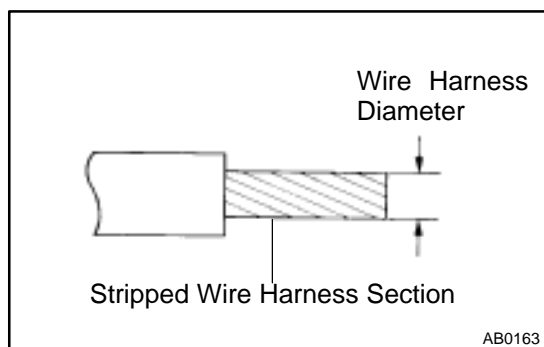
- (a) Remove the steering wheel pad (See page [SR-10](#)).

**CAUTION:**

- When removing the steering wheel pad, work must be started 90 seconds after the ignition switch is turned to the "LOCK" position and the negative (-) terminal cable is disconnected from the battery.
- When storing the steering wheel pad, keep the upper surface of the pad facing upward.



- (b) Remove the connector on the steering wheel pad rear surface.
- (c) Remove the steering wheel pad cover.



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

**Wire harness: Stripped wire harness section  
1.25 mm<sup>2</sup> or more (0.0019 in.<sup>2</sup> or more)**

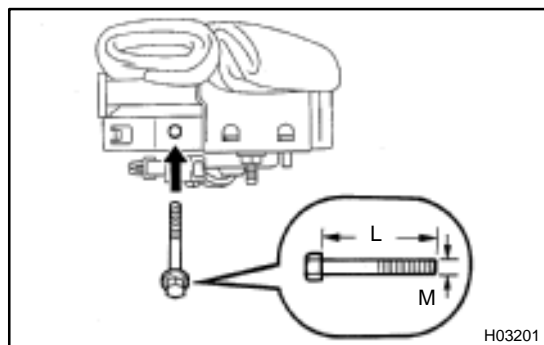
**CAUTION:**

If a wire harness which is too thin or some other thing is used to tie down the steering wheel pad, it may be snapped by the shock when the airbag is deployed. This is highly dangerous. Always use a wire harness for vehicle use which is at least 1.25 mm<sup>2</sup> (0.0019 in.<sup>2</sup>).

**HINT:**

To calculate the square of the stripped wire harness section:

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



- (1) Install the 2 bolts with washers in the 2 bolt holes in the steering wheel pad.

**Bolt:**

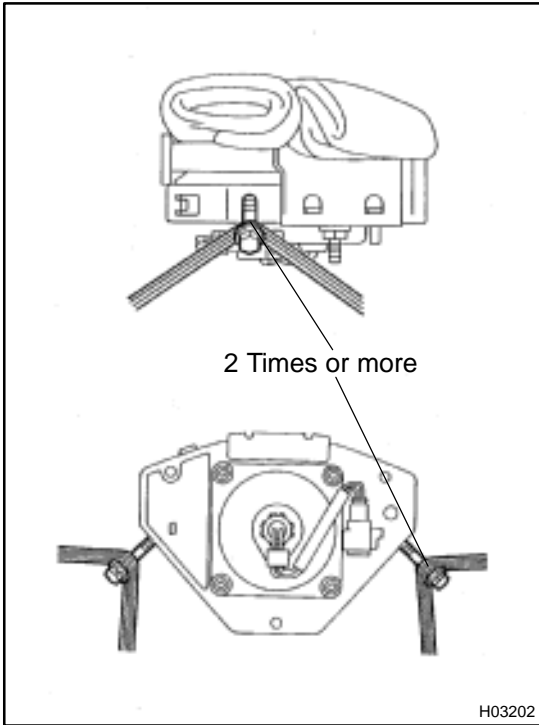
**L: 35.0 mm (1.378 in.)**

**M: 6.0 mm (0.236 in.)**

**Pitch: 1.0 mm (0.039 in.)**

**NOTICE:**

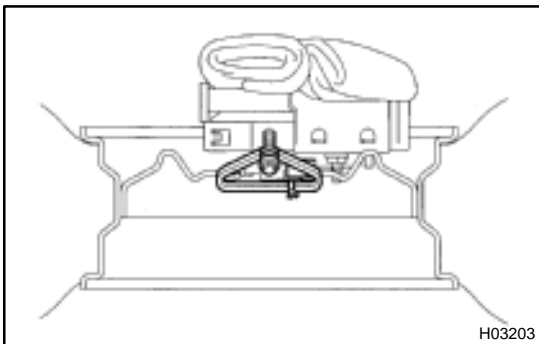
- Tighten the bolts by hand until the bolts become difficult to turn.
- Do not tighten the bolts too much.



- (2) Using 3 wire harness, wind the wire harness at least 2 times each around the bolts installed on the left and right sides of the steering wheel pad.

**CAUTION:**

- **Tightly wind the wire harness around the bolts so that there is no slack.**
- **If there is slackness in the wire harness, the steering wheel pad may come loose due to the shock when the airbag is deployed. This is highly dangerous.**



- (3) Face the upper surface of the steering wheel pad upward. Separately tie the left and right sides of the steering wheel pad to the disc wheel through the hub nut holes. Position the steering wheel pad connector so that it hangs downward through a hub hole in the disc wheel.

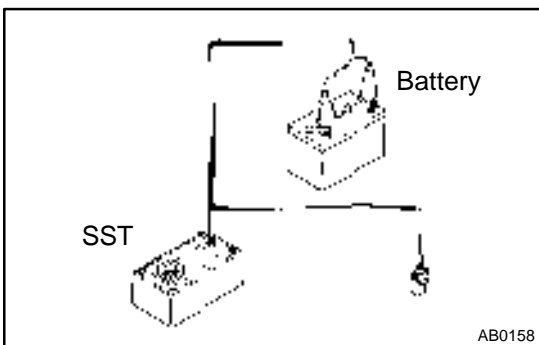
**CAUTION:**

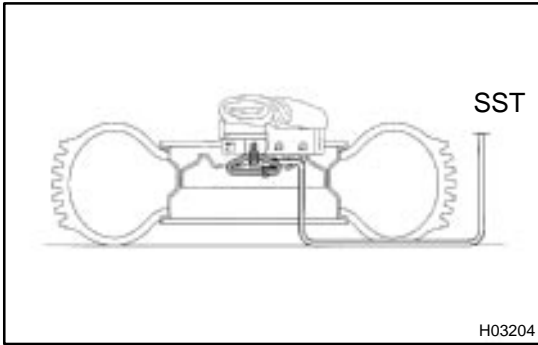
- **Make sure that the wire harness is tight. It is very dangerous when looseness in the wire harness results in the steering wheel pad coming free due to the shock from the airbag deploying.**
- **Always tie down the steering wheel pad with the pad side facing upward. It is very dangerous if the steering wheel pad is tied down with the metal surface facing upward as the wire harness will be cut by the shock from the airbag deploying and the steering wheel pad will be thrown into the air.**

**NOTICE:**

The disc wheel will be marked by airbag deployment, so when disposing of the airbag use a redundant disc wheel.

- (e) Check functioning of the SST (See step 1-(a)).  
SST 09082-00700





(f) Install the SST.

**CAUTION:**

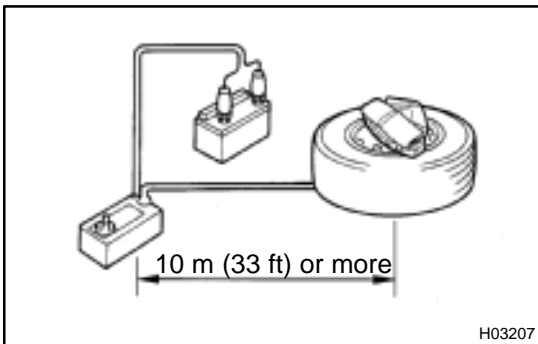
**Place the disc wheel on the level ground.**

- (1) Connect the connectors of the 2 SST to the steering wheel pad connector.

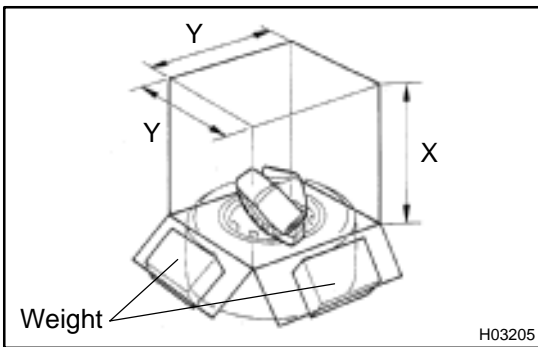
SST 09082-00700, 09082-00760

**NOTICE:**

**To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock. Also, remove some slack for the SST wire harness inside the disc wheel.**



- (2) Move the SST to at least 10 m (33 ft) away from the steering wheel pad tied down on the disc wheel.



- (g) Cover the steering wheel pad with a cardboard box or tires.

- Covering method using a cardboard box:  
Cover the steering wheel pad with the cardboard box and weight the cardboard box down in 4 places with at least 190 N (20 kg, 44 lb).

**Size of cardboard box:**

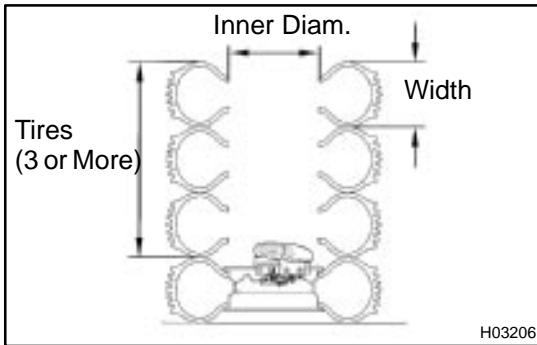
**Must exceed the following dimensions:**

**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 to which the steering wheel pad is tied, X should be the following size. X = 460 mm (18.11 in.) + width of tire**
- **If a cardboard box smaller than the specified size is used, the cardboard box will be broken by the shock from the airbag deployment.**



- Covering method using tires:  
Place at least 3 tires without disc wheel on top of the disc wheel with tire to which the steering wheel pad is tied.

**Tire size: Must exceed the following dimensions:**

**Width: 185 mm (7.28 in.)**

**Inner diameter: 360 mm (14.17 in.)**

**CAUTION:**

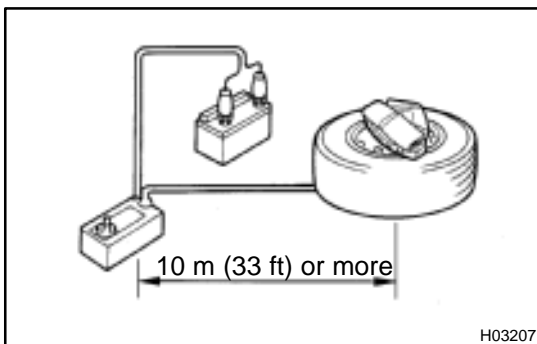
**Do not use tires with disc wheels.**

**NOTICE:**

**The tires may be marked by the airbag deployment, so use the redundant tires.**

(h) Deploy the airbag.

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



- (2) Check that no one is within 10 m (33 ft) area around the disc wheel which the steering wheel pad is tied to.
- (3) Press the SST activation switch and deploy the airbag.

**HINT:**

The airbag deploys simultaneously as the LED of the SST activation switch lights up.



(i) Dispose of the steering wheel pad (with airbag).

**CAUTION:**

- **The steering wheel pad is very hot when the airbag is deployed, so leave it alone for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a steering wheel pad with the deployed airbag.**
- **Always wash your hands with water after completing the operation.**
- **Do not apply water, etc. to a steering wheel pad with the deployed airbag.**
  - (1) Remove the steering wheel pad from the disc wheel.
  - (2) Place the steering wheel pad in a vinyl bag, tie the end tightly and dispose of it in the same way as other general parts disposal.



### 3. DEPLOYMENT WHEN DISPOSING OF STEERING WHEEL PAD WITH AIRBAG DEPLOYED IN COLLISION

Dispose of the steering wheel pad (with airbag).

#### CAUTION:

- The steering wheel pad is very hot when the airbag is deployed, so leave it alone for at least 30 minutes after deployment.
- When moving a vehicle for scrapping which has a steering wheel pad with the deployed airbag, use gloves and safety glasses.
- Use gloves and safety glasses when handling a steering wheel pad with deployed airbag.
- Always wash your hands with water after completing the operation.
- Do not apply water, etc. to a steering wheel pad with deployed airbag.
  - (1) Remove the steering wheel pad from the steering wheel (See page [SR-10](#)).
  - (2) Place the steering wheel pad in a vinyl bag, tie the end tightly and dispose of it in the same way as other general parts disposal.

## REPLACEMENT

### REPLACEMENT REQUIREMENTS

In the following cases, replace the steering wheel pad, steering wheel or spiral cable.

Case	Part to be replaced
If the airbag has been deployed.	Steering wheel pad
If the steering wheel pad has been found to be faulty in troubleshooting.	Steering wheel pad
If the spiral cable has been found to be faulty in troubleshooting.	Spiral cable
If the steering wheel pad has been found to be faulty during checking (See page RS-13).	Steering wheel pad
If the steering wheel has been found to be faulty during checking (See page RS-13).	Steering wheel
If the spiral cable has been found to be faulty during checking (See page RS-13).	Spiral cable
If the steering wheel pad has been dropped.	Steering wheel pad

### CAUTION:

For removal and installation of the steering wheel pad, see pages SR-10 and SR-19. Be sure to follow the correct procedure.

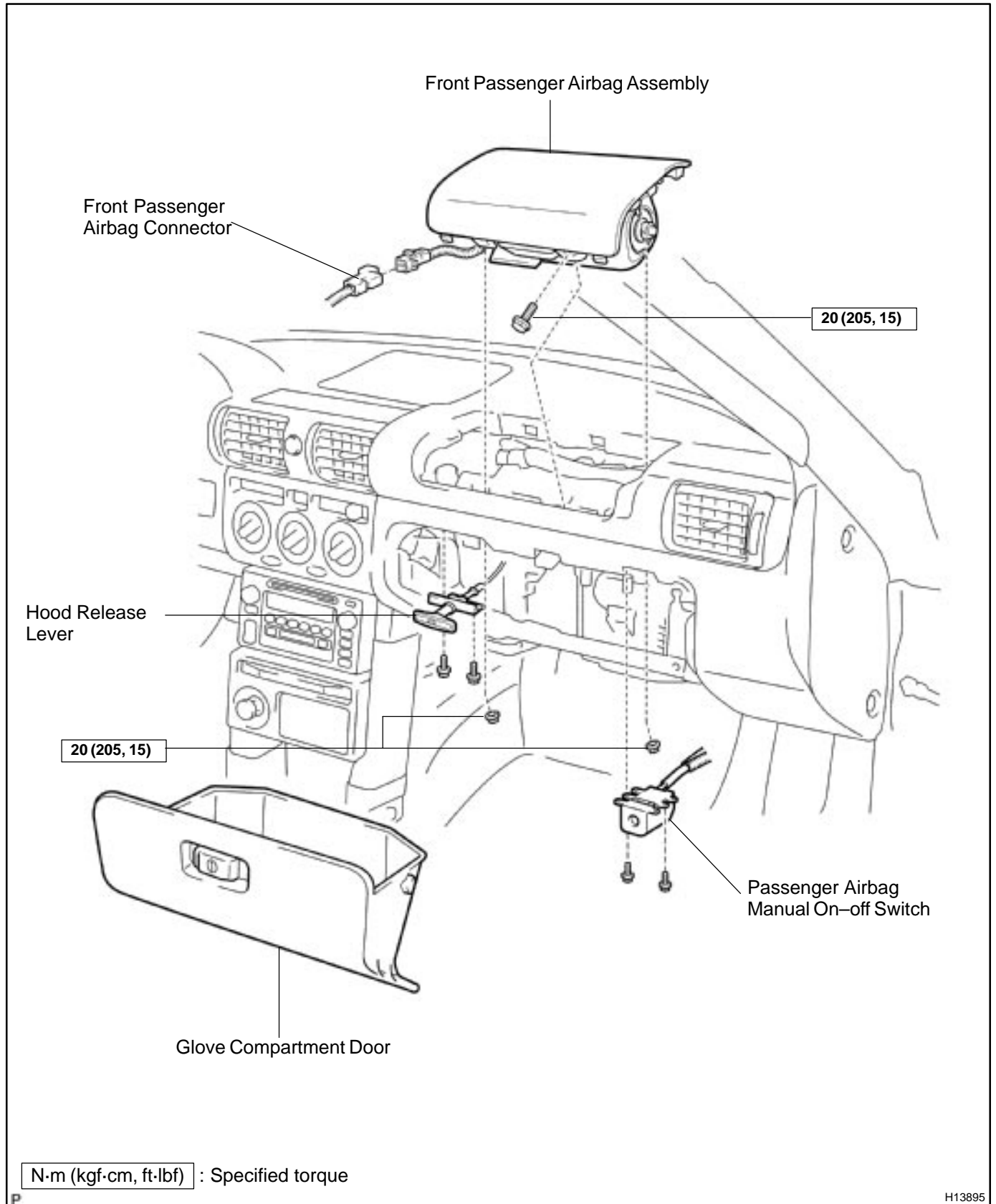
## INSTALLATION

1. INSTALL SPIRAL CABLE
2. INSTALL UPPER AND LOWER COLUMN COVERS
3. INSTALL CLUSTER FINISH PANEL
4. INSTALL STEERING WHEEL (See page [SR-19](#))
5. INSTALL STEERING WHEEL PAD



# FRONT PASSENGER AIRBAG ASSEMBLY COMPONENTS

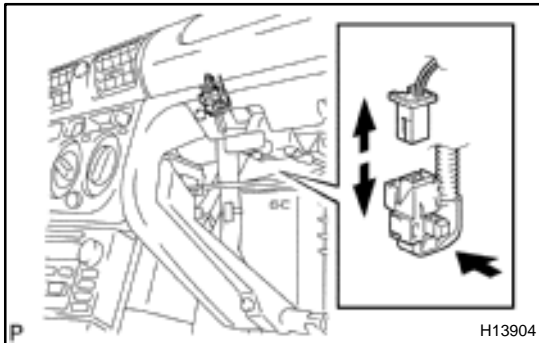
RS0JW-02



## REMOVAL

### NOTICE:

- If the wiring connector of the SRS is disconnected and the ignition switch is in ON position, DTCs will be recorded.
- Never use the airbag parts from another vehicle. When replacing parts, replace them with new parts.



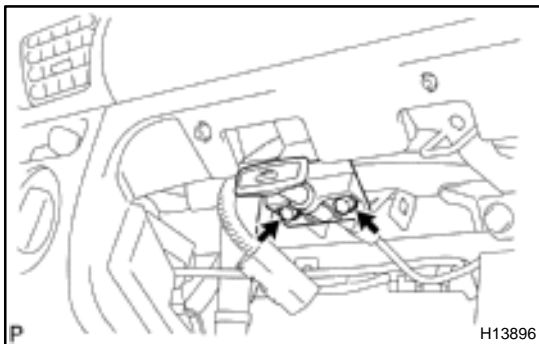
### 1. DISCONNECT AIRBAG CONNECTOR

- (a) Remove the glove compartment door.

### NOTICE:

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

- (b) Disconnect the airbag connector.

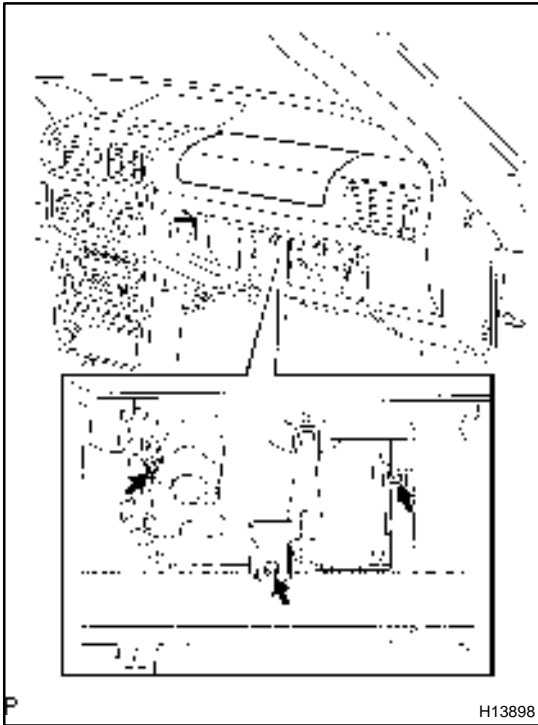


### 2. REMOVE FRONT PASSENGER AIRBAG ASSEMBLY

- (a) Remove the 2 bolts and disconnect the hood release lever.



- (b) Remove the 2 bolts and disconnect the passenger airbag manual on-off switch.



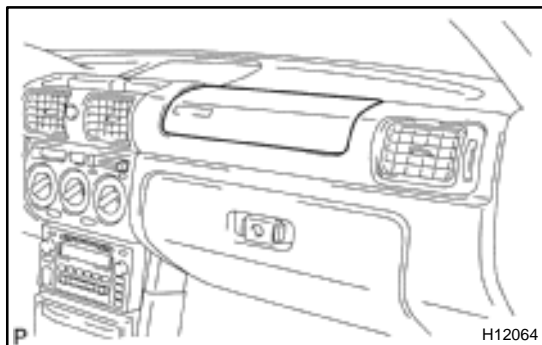
- (c) Remove the bolt, 2 nuts and front passenger airbag assembly.

**CAUTION:**

- Do not store the front passenger airbag assembly with the airbag deployment side facing downward.
- Never disassemble the front passenger airbag assembly.

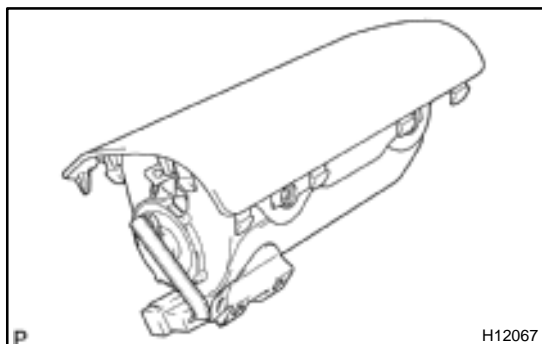
**NOTICE:**

When removing the front passenger airbag assembly, take care not to damage the wire harness.

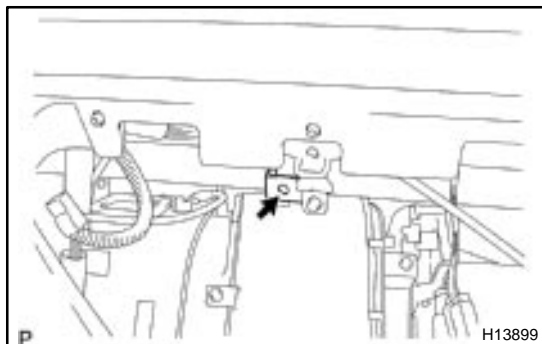


## INSPECTION

1. **Vehicles not involved in collision:**  
**INSPECT SUPPLEMENTAL RESTRAINT SYSTEM**
  - (a) Check diagnostic system (See page [DI-237](#)).
  - (b) Do a visual check which includes the following item with the front passenger airbag assembly installed in the vehicle.  
 Check cuts, minute cracks or marked discoloration on the front passenger airbag assembly and instrument panel.
2. **Vehicle involved in a collision with airbag not deployed:**  
**INSPECT SUPPLEMENTAL RESTRAINT SYSTEM**
  - (a) Check a diagnostic system (See page [DI-237](#)).



- (b) Do a visual check which includes the following items with the front passenger airbag assembly removed from the vehicle.
  - Check cuts, minute cracks or marked discoloration on the front passenger airbag assembly.
  - Check cuts and cracks in wire harness, and for chipping in connectors.



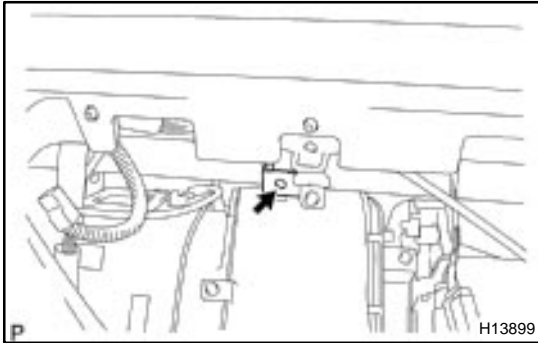
### CAUTION:

**For removal and installation of the front passenger airbag assembly, see pages [RS-26](#) and [RS-38](#), and be sure to follow the correct procedure.**

### HINT:

If the instrument panel or instrument panel reinforcement is deformed or cracked, never repair it. Always replace it with a new one.

3. **Vehicle involved in a collision with airbag deployed: INSPECT SUPPLEMENTAL RESTRAINT SYSTEM**
- (a) Check a diagnostic system (See page [DI-237](#)).



- (b) Do a visual check which includes the following items with the front passenger airbag assembly removed from the vehicle.
- Check the deformation or cracks on the instrument panel and instrument panel reinforcement.
  - Check the damage on the connector and wire harness.

**CAUTION:**

**For removal and installation of the front passenger airbag assembly, see pages [SR-10](#) and [SR-19](#), and be sure to follow the correct procedure.**

**HINT:**

If the instrument panel or instrument panel reinforcement is deformed or cracked, never repair it. Always replace it with a new one.

## DISPOSAL

### HINT:

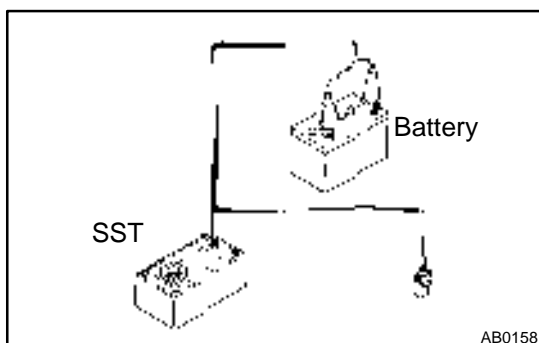
When scrapping vehicle equipped with an SRS or disposing of a front passenger airbag assembly, always first deploy the airbag in accordance with the procedure described below. If any abnormality occurs with the airbag deployment, contact the SERVICE DEPT. of TOYOTA MOTOR SALES, U.S.A., INC.

### CAUTION:

- **Never dispose of a front passenger airbag assembly which has an undeployed airbag.**
- **The airbag produces a sizeable exploding sound when it deploys, so perform the operation out-of-doors and where it will not disturb 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.**  
SST 09082-00700
- **When deploying an airbag, perform the operation at least 10 m (33 ft) away from the front passenger airbag assembly.**
- **The front passenger airbag assembly is very hot when the airbag is deployed, so leave it alone for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a front passenger airbag assembly with the deployed airbag.**
- **Always wash your hands with water after completing the operation.**
- **Do not apply water, etc. to a front passenger airbag assembly with the deployed airbag.**



### 1. AIRBAG DEPLOYMENT WHEN SCRAPPING VEHICLE

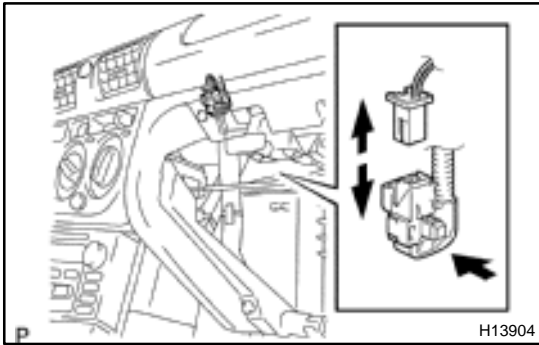
#### HINT:

Have a battery ready as the power source to deploy the airbag.

- (a) Check functioning of the SST (See step 1-(a) on page [RS-15](#)).

SST 09082-00700

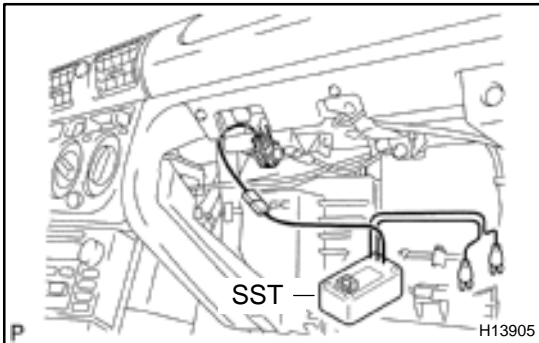
- (b) Remove the glove compartment door.



(c) Disconnect the airbag connector.

**NOTICE:**

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



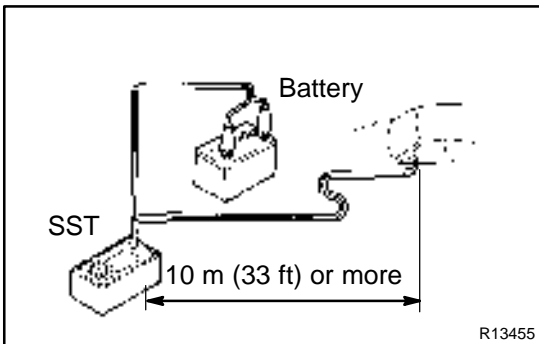
(d) Install the SST.

- (1) Connect the connectors of the 2 SST to the front passenger airbag assembly connector.

SST 09082-00700, 09082-00760

**NOTICE:**

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



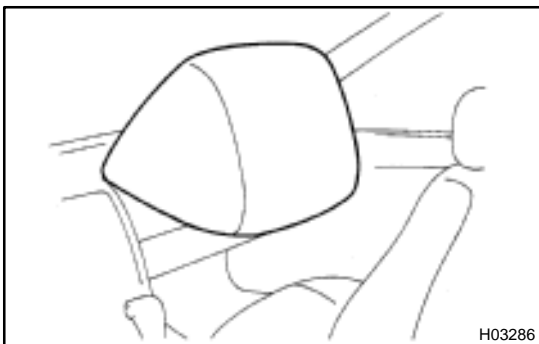
- (2) Move the SST at least 10 m (33 ft) away from the front of the vehicle.

- (3) Close all the doors and windows of the vehicle.

**NOTICE:**

**Take care not to damage the SST wire harness.**

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



(e) Deploy the airbag.

- (1) Check that no one is inside the vehicle or within 10 m (33 ft) area around the vehicle.

- (2) Press the SST activation switch and deploy the airbag.

**CAUTION:**

- The front passenger airbag assembly is very hot when the airbag is deployed, so leave it alone for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling the front passenger airbag assembly with the deployed airbag.
- Always wash your hands with water after completing the operation.
- Do not apply water, etc. to the front passenger airbag assembly with the deployed airbag.
- When scrapping a vehicle, deploy the airbag and scrap the vehicle with the front passenger airbag assembly still installed.
- When moving a vehicle for scrapping which has the front passenger airbag assembly with the deployed airbag, use gloves and safety glasses.

**HINT:**

The airbag deploys simultaneously as the LED of the SST activation switch lights up.

## 2. DEPLOYMENT WHEN DISPOSING OF FRONT PASSENGER AIRBAG ASSEMBLY ONLY

**NOTICE:**

- When disposing of the front passenger airbag assembly only, never use the customer's vehicle to deploy the airbag.
- Be sure to follow the procedure given below when deploying the airbag.

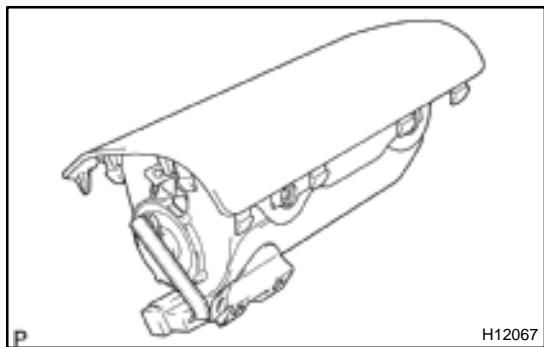
**HINT:**

Have a battery ready as the power source to deploy the airbag.

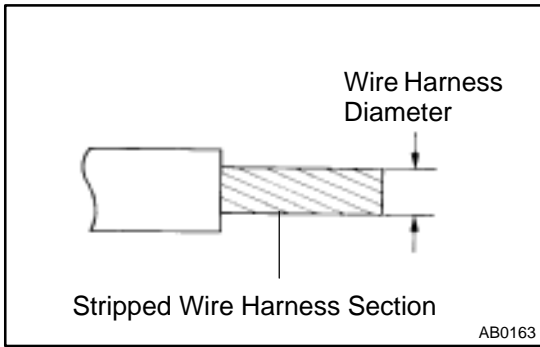
- (a) Remove the front passenger airbag assembly (See page [RS-26](#)).

**CAUTION:**

- When removing the front passenger airbag assembly, work must be started 90 seconds after the ignition switch is turned to the "LOCK" position and the negative (-) terminal cable is disconnected from the battery.
- When storing the front passenger airbag assembly, keep the upper surface of the airbag deployment side facing upward.







- (b) Using a service-purpose wire harness, tie down the front passenger airbag assembly to the tire.  
**Wire harness: Stripped wire harness section 1.25 mm<sup>2</sup> or more (0.0019 in.<sup>2</sup> or more)**

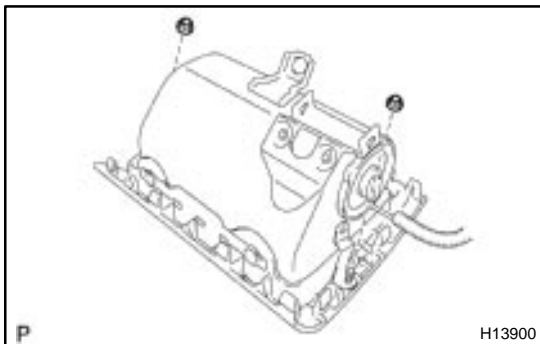
**CAUTION:**

If the front passenger airbag assembly is tied down with too thin wire harness, it may snap. This is highly dangerous. Always use a wire harness which is at least 1.25 mm<sup>2</sup> (0.0019 in.<sup>2</sup>).

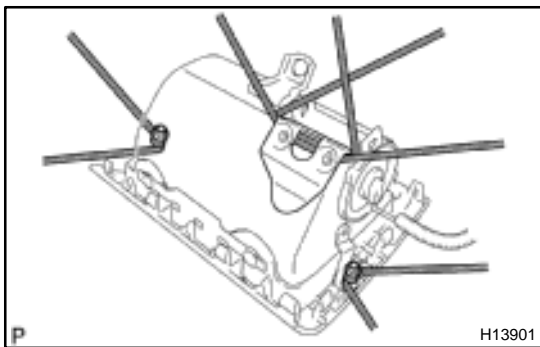
**HINT:**

To calculate the square of the stripped wire harness section:

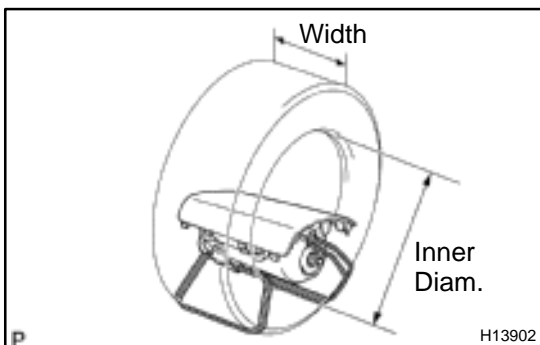
**Square = 3.14 x (Diameter)<sup>2</sup> divided by 4**



- (1) Install the front passenger airbag assembly with the 2 nuts.



- (2) Wind the wire harness around the bolts, and pass the wire harness through the installation holes.



- (3) Position the front passenger 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.)**

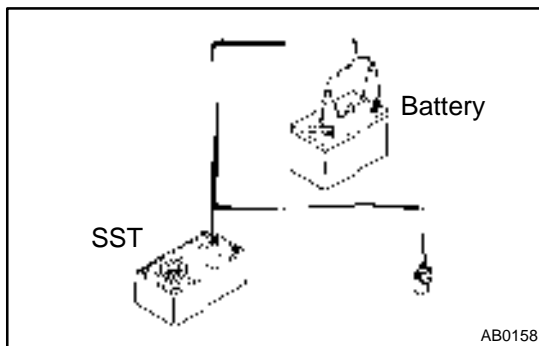
**Inner diameter: 360 mm (14.17 in.)**

**CAUTION:**

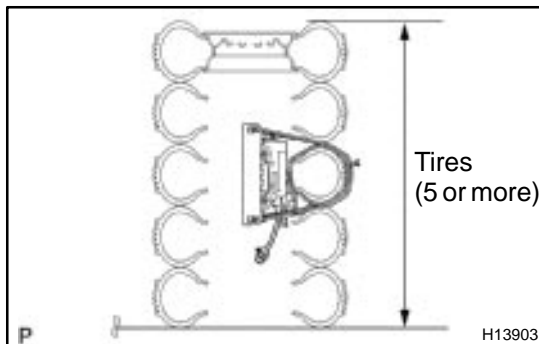
- Make sure that the wire harness is tight. It is very dangerous if loosen wire harness causes the front passenger airbag assembly to came free due to the shock from the airbag deploying.
- Always tie down the front passenger airbag assembly with the airbag deployment side facing inside.

**NOTICE:**

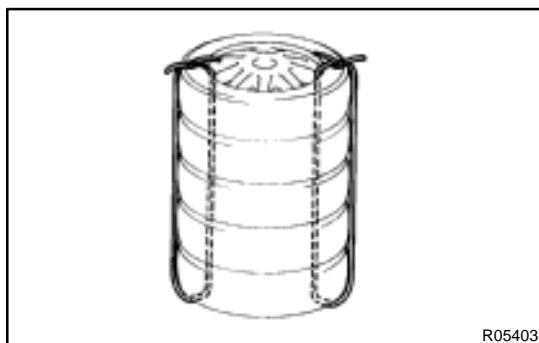
The tire will be marked by the airbag deployment, so when disposing of the airbag use a redundant tire.



- (c) Check functioning of the SST (See step 1–(a) on page [RS-15](#)).  
SST 09082-00700



- (d) Place the tires.
- (1) Place at least 2 tires under the tire to which the front passenger airbag assembly is tied.
  - (2) Place at least 2 tires over the tire to which the front passenger airbag assembly is tied. The top tire should have the wheel installed.



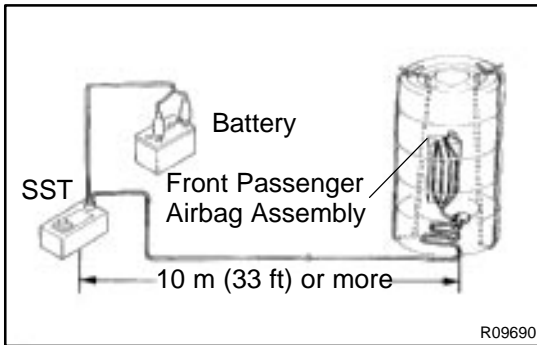
- (3) Tie the tires together with the 2 wire harnesses.

**CAUTION:**

Make sure that the wire harness is tight. It is very dangerous if loose wire harnesses cause the tires to came free due to the shock from the airbag deploying.

**HINT:**

Place the SST connector and wire harness inside tires. Provide at least 1 m (3 ft) of slack for the wire harness.



- (e) Install the SST.  
Connect the connectors of the 2 SST to the front passenger airbag assembly connector.  
SST 09082-00700, 09082-00760

**NOTICE:**

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

- (f) Deploy the airbag.
- (1) Connect the SST red clip to the battery positive (+) terminal and the black clip to the battery negative (-) terminal.
  - (2) Check that no one is within 10 m (33 ft) area around the tire which the front passenger airbag assembly is tied to.
  - (3) Press the SST activation switch and deploy the airbag.

**HINT:**

The airbag deploys simultaneously as the LED of the SST activation switch lights up.

- (g) Dispose of the front passenger airbag assembly.

**CAUTION:**

- **The front passenger airbag assembly is very hot when the airbag is deployed, so leave it alone for at least 30 minutes after deployment.**
  - **Use gloves and safety glasses when handling a front passenger airbag assembly with the deployed airbag.**
  - **Always wash your hands with water after completing the operation.**
  - **Do not apply water, etc. to a front passenger airbag assembly with the deployed airbag.**
- (1) Remove the front passenger airbag assembly from the tire.
  - (2) Place the front passenger airbag assembly in a vinyl bag, tie the end tightly and dispose of it in the same way as other parts disposal.



### 3. DEPLOYMENT WHEN DISPOSING OF FRONT PASSENGER AIRBAG ASSEMBLY WITH AIRBAG DEPLOYED IN COLLISION

Dispose of the front passenger airbag assembly.



**CAUTION:**

- **The front passenger airbag assembly is very hot when the airbag is deployed, so leave it alone for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a front passenger airbag assembly with the deployed airbag.**
- **Always wash your hands with water after completing the operation.**
- **Do not apply water, etc. to a front passenger airbag assembly with the deployed airbag.**
  - (1) Remove the front passenger airbag assembly from the instrument panel (See page [RS-26](#)).
  - (2) Place the front passenger airbag assembly in a vinyl bag, tie the end tightly and dispose of it in the same way so as othe parts disposal.

## REPLACEMENT

### REPLACEMENT REQUIREMENTS

In the following cases, replace the front passenger airbag assembly, instrument panel or instrument panel reinforcement.

Case	Part to be replaced
If the airbag has been deployed.	Front passenger airbag assembly
If the front passenger airbag assembly has been found to be faulty in troubleshooting.	Front passenger airbag assembly
If the front passenger airbag assembly has been found to be faulty during checking (See page <a href="#">RS-28</a> ).	Front passenger airbag assembly
If the instrument panel has been found to be faulty during checking (See page <a href="#">RS-28</a> ).	Instrument panel
If the instrument panel reinforcement has been found to be faulty during checking (See page <a href="#">RS-28</a> ).	Instrument panel reinforcement
If the front passenger airbag assembly has been dropped.	Front passenger airbag assembly

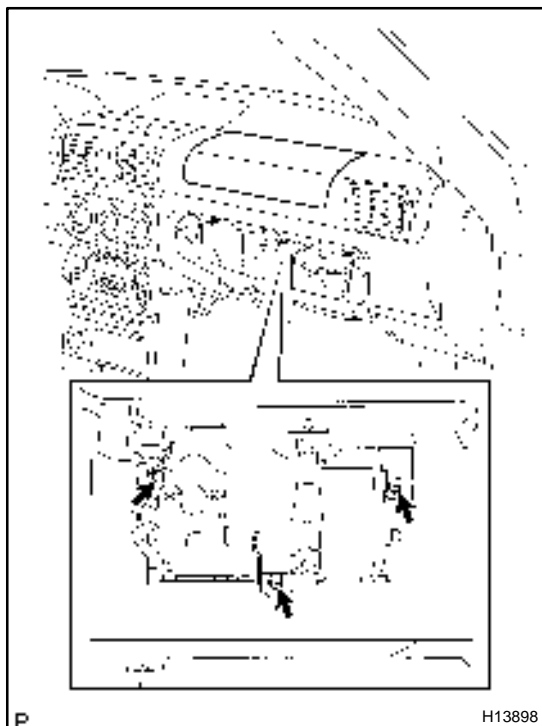
#### CAUTION:

For replacement of the front passenger airbag assembly, see pages [RS-26](#) and [RS-38](#). Be sure to follow the correct procedure.

## INSTALLATION

### NOTICE:

Never use airbag parts from another vehicle. When replacing parts, replace them with new ones.



### 1. INSTALL FRONT PASSENGER AIRBAG ASSEMBLY

(a) Install the front passenger airbag assembly with the 2 nuts.

(b) Install the bolt.

**Torque: 20 N·m (205 kgf-cm, 15 ft-lbf)**

### CAUTION:

- When installing the front passenger airbag assembly, take care that the wiring does not interfere with other parts and is not pinched between other parts.
- Make sure that no foreign objects are trapped between the airbag and within the module.

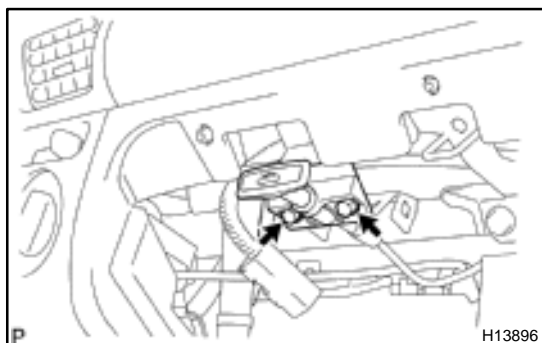
### NOTICE:

If the front passenger airbag assembly has been dropped, or there are cracks, dents or other defects in the case or connector, replace the front passenger airbag assembly with a new one.

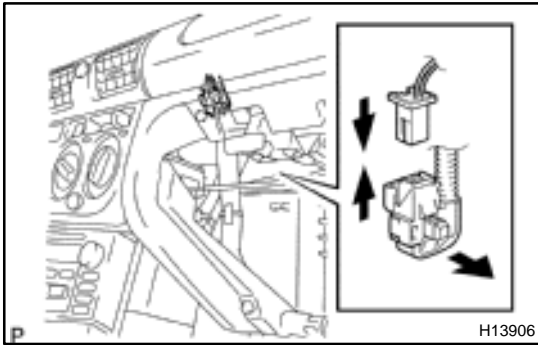
(c) Install the airbag wire harness clamp.



(d) Install the passenger airbag manual on-off switch with the 2 bolts.



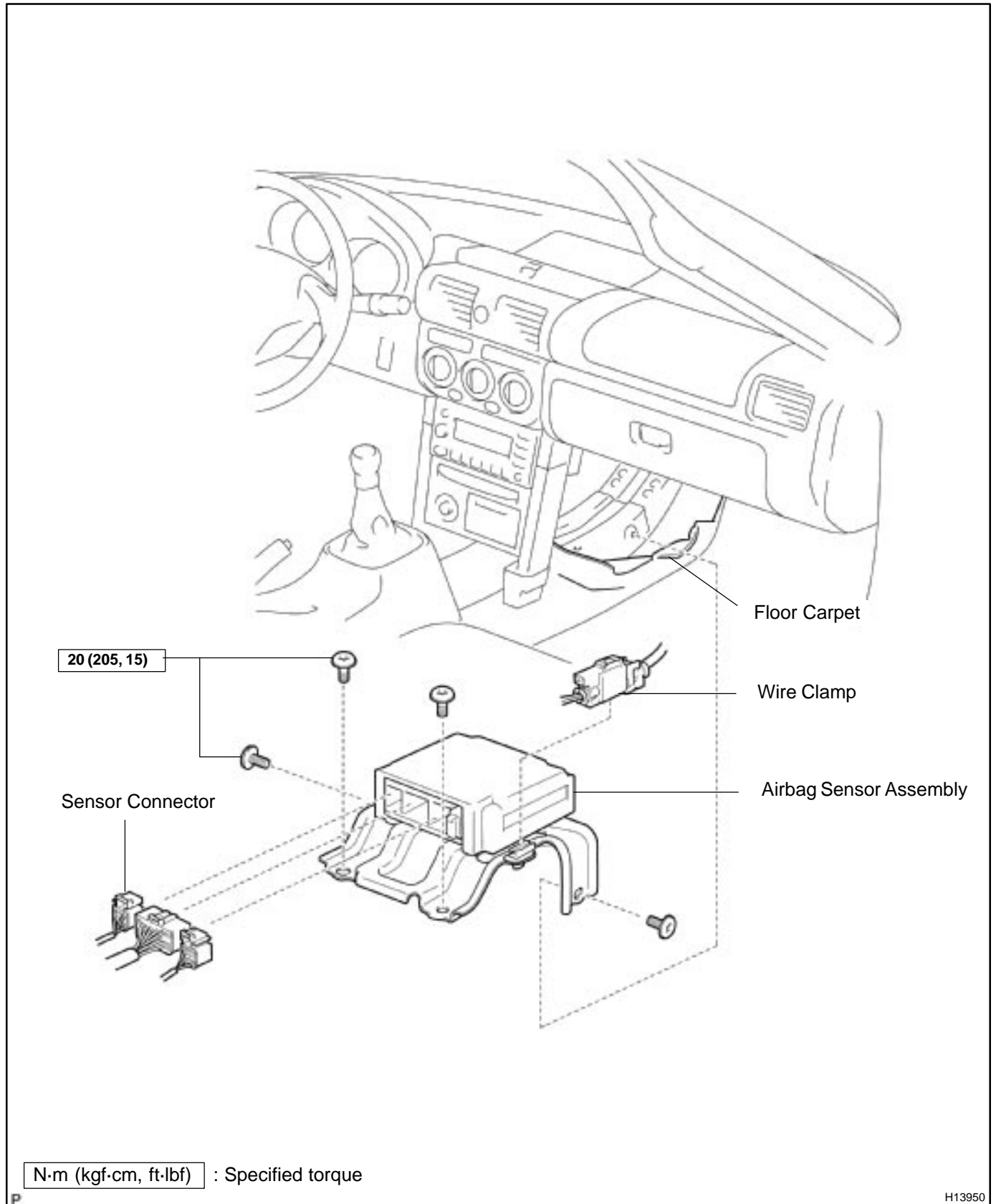
(e) Install the hood release lever with the 2 bolts.

**2. CONNECT AIRBAG CONNECTOR**

- (a) Connect the airbag connector.
- (b) Install the glove compartment door.

# AIRBAG SENSOR ASSEMBLY COMPONENTS

RS0K6-03



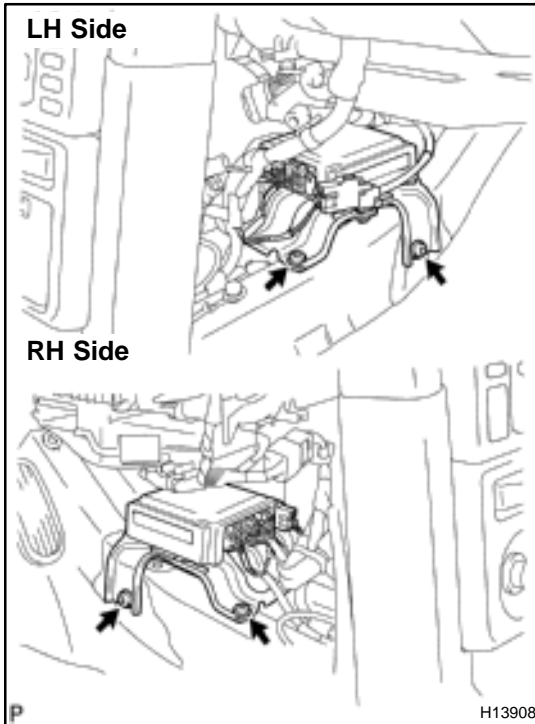


## REMOVAL

### NOTICE:

Do not open the cover or the case of the ECU and various electrical devices unless absolutely necessary.

(If the IC terminals are touched, the IC may be destroyed by static electricity.)



### REMOVE AIRBAG SENSOR ASSEMBLY

- (a) Take out the floor carpet.
- (b) Disconnect the wire clamp.
- (c) Disconnect the airbag sensor connectors.

### NOTICE:

Disconnect the connectors with the airbag sensor assembly installed.

- (d) Using a torx wrench, remove the 3 screws and airbag sensor assembly.

**Torx wrench: T40 (Part No.09042-00020 or locally manufactured tool)**

## INSPECTION

### 1. VEHICLE NOT INVOLVED IN COLLISION

Check a diagnostic system (See page [DI-237](#)).

### 2. VEHICLE INVOLVED IN COLLISION WITH AIRBAG NOT DEPLOYED

Check a diagnostic system (See page [DI-237](#)).

### 3. VEHICLE INVOLVED IN COLLISION WITH AIRBAG DEPLOYED

Replace the airbag sensor assembly (See page [DI-237](#)).

## REPLACEMENT

### REPLACEMENT REQUIREMENTS

In the following cases, replace the airbag sensor assembly.

- If the SRS has been deployed in a collision.
- If the airbag sensor assembly has been found to be faulty in troubleshooting.
- If the airbag sensor assembly has been dropped.

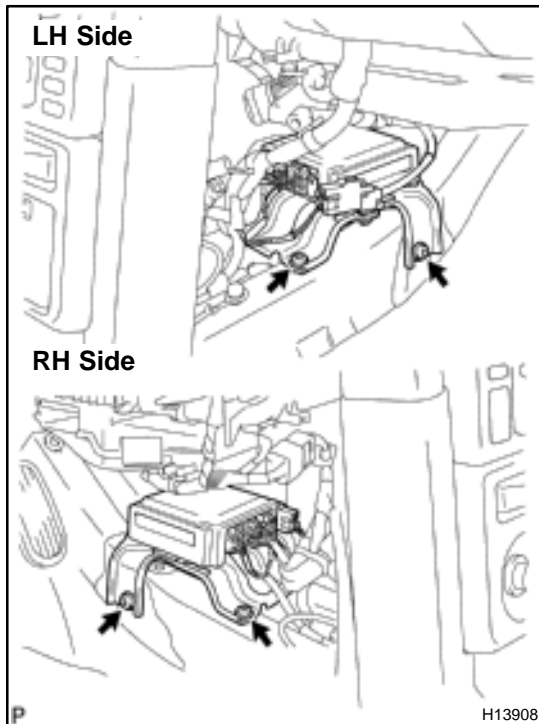
### CAUTION:

For removal and installation of the airbag sensor assembly, see pages [RS-41](#) and [RS-44](#). Be sure to follow the correct procedure.

## INSTALLATION

### NOTICE:

- Never use SRS parts from another vehicle. When replacing parts, replace them with new ones.
- Never reuse the airbag sensor assembly involved in a collision with the airbag has deployed.
- Never repair a sensor in order to reuse it.



### INSTALL AIRBAG SENSOR ASSEMBLY

- (a) Using a torx wrench, install the airbag sensor assembly with the 3 screws.

**Torx wrench: T40 (Part No.09042-00020 or locally manufactured tool)**

**Torque: 20 N·m (205 kgf·cm, 15 ft·lbf)**

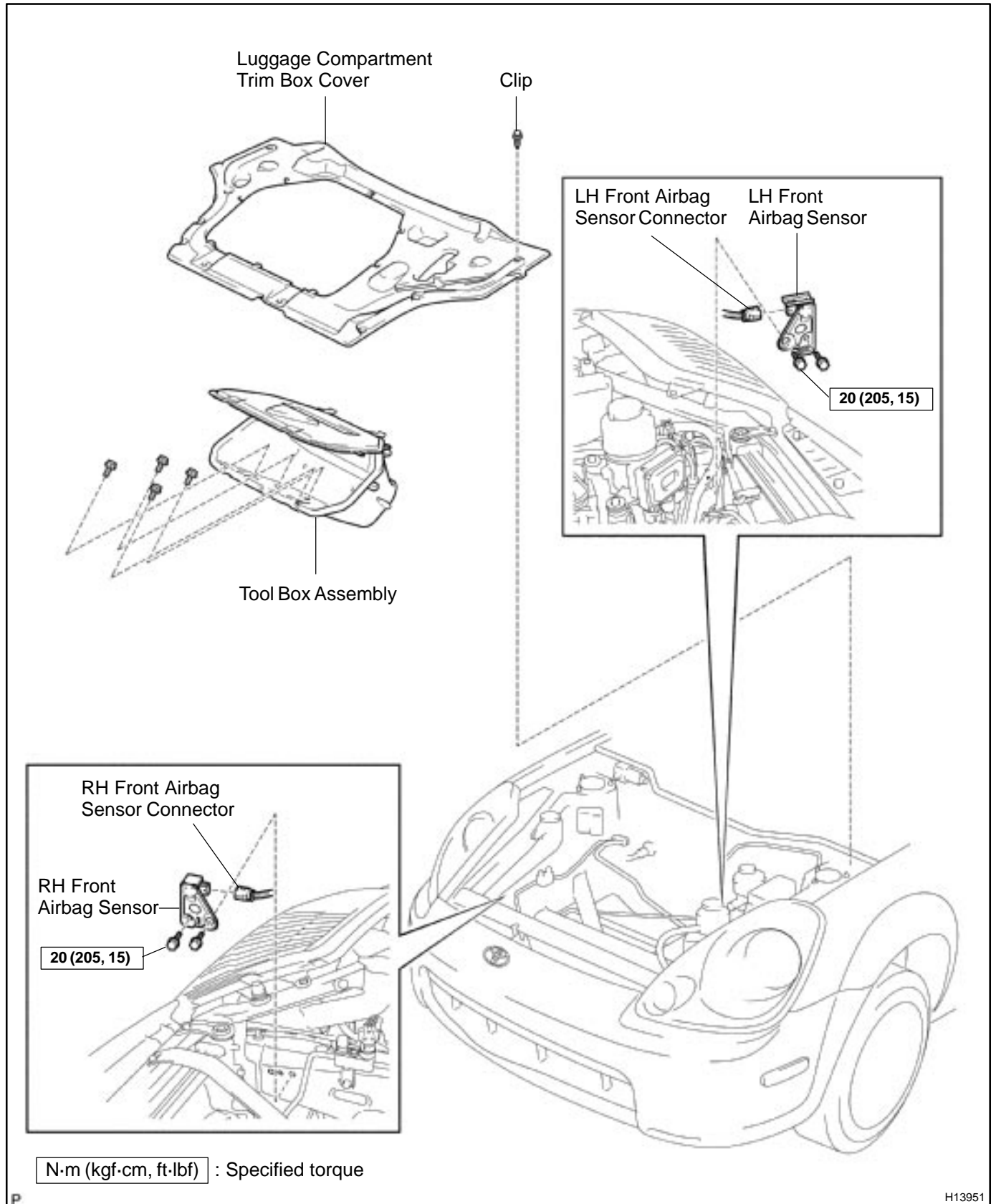
- (b) Connect the airbag sensor connectors.  
 (c) Connect the wire clamp.  
 (d) Install the floor carpet.

### NOTICE:

- Connection of the connector is done after the sensor assembly has been installed.
- Make sure the sensor assembly is installed with the specified torque.
- If the sensor assembly has been dropped, or there are cracks, dents or other defects in the case, bracket or connector, replace the sensor assembly with a new one.
- When installing the sensor assembly, take care that the SRS wiring does not interfere with other parts and is not pinched between other parts.
- After installing, shake the sensor assembly to check for looseness.

# FRONT AIRBAG SENSOR COMPONENTS

RS0KD-02



P

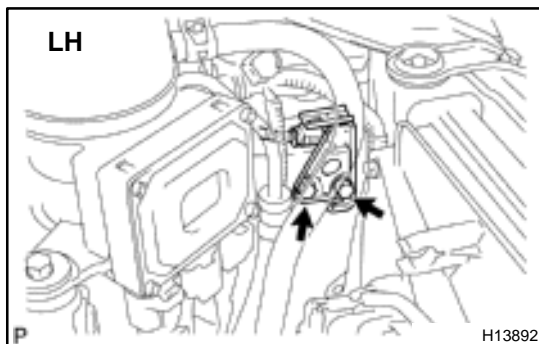
H13951

## REMOVAL

### NOTICE:

- If the wiring connector of the SRS is disconnected with the ignition switch at ON position, DTCs will be recorded.
- Never use SRS parts from another vehicle. When replacing parts, replace them with new ones.
- Never reuse the sensor involved in a collision with the SRS deployed.
- Never repair a sensor in order to reuse it.

1. REMOVE LUGGAGE COMPARTMENT TRIM BOX COVER
2. REMOVE TOOL BOX ASSEMBLY



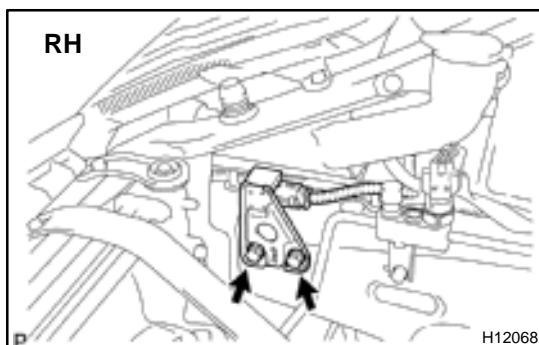
3. LH  
REMOVE FRONT AIRBAG SENSOR

- (a) Disconnect the connector.

### NOTICE:

**Disconnect the connector with sensor assembly installed.**

- (b) Remove the 2 bolts and front airbag sensor LH.



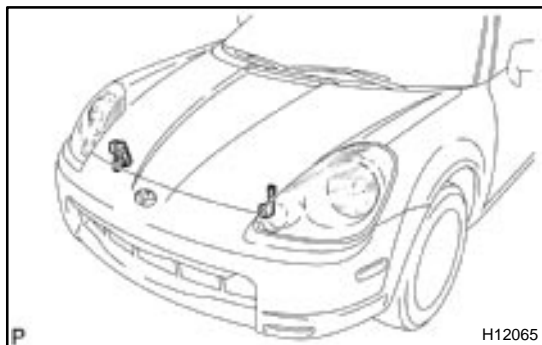
4. RH  
REMOVE FRONT AIRBAG SENSOR

- (a) Disconnect the connector.

### NOTICE:

**Disconnect the connector with sensor assembly installed.**

- (b) Remove the 2 bolts and front airbag sensor RH.



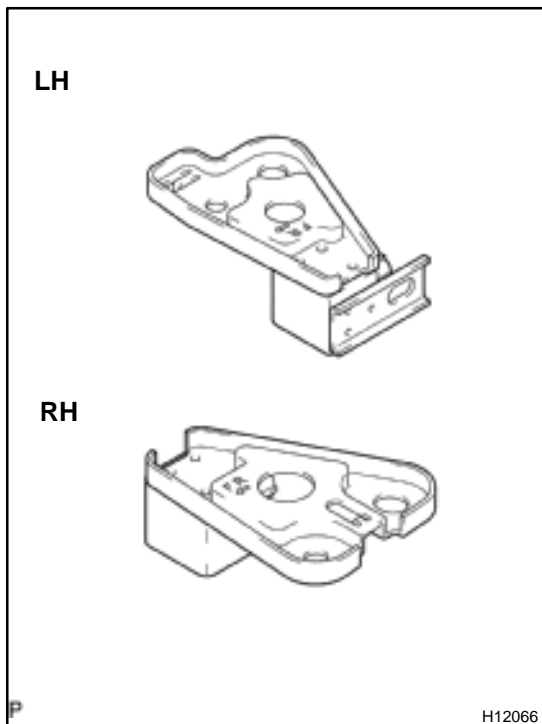
## INSPECTION

### 1. VEHICLES NOT INVOLVED IN COLLISION

Check a diagnostic system (See page [DI-237](#)).

### 2. VEHICLES INVOLVED IN COLLISION

- (a) Check a diagnostic system (See page [DI-237](#)).
- (b) If the front fender of the car or its periphery is damaged, do a visual check for damage to the front airbag sensor, which includes the following items even if the airbag was not deployed:
  - Check the bracket deformation.
  - Check the paint peeling off the bracket.
  - Check the cracks, dents or chips in the case.
  - Check the cracks, dents, chipping and scratches in the connector.
  - Check the peeling off of the label or damage to the serial number.



## REASSEMBLY

### REPLACEMENT REQUIREMENTS

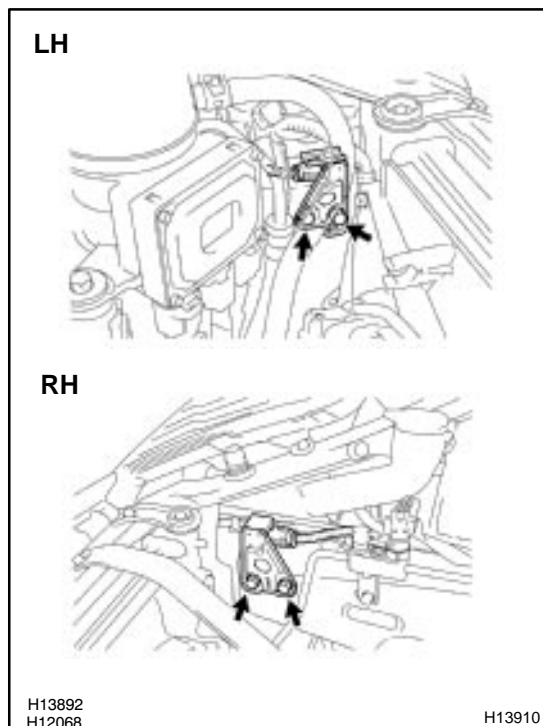
In the following cases, replace the front airbag sensor.

- If the SRS has been deployed in a collision. (Replace both the left and right airbag sensors.)
- If the front airbag sensor has been found to be faulty in troubleshooting.
- If the front airbag sensor has been found to be faulty during checking (See page [RS-47](#)).
- If the front airbag sensor has been dropped.

### CAUTION:

**For removal and installation of the front airbag sensor, see pages [RS-46](#) and [RS-49](#). Be sure to follow the correct procedure.**





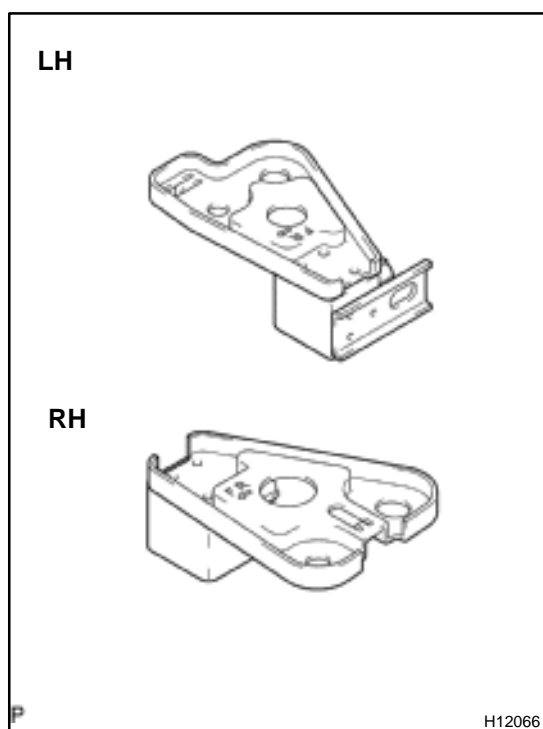
## INSTALLATION

### 1. INSTALL FRONT AIRBAG SENSOR LH AND RH

- (a) Install the front airbag sensors with the 4 bolts.  
**Torque: 20 N·m (205 kgf·cm, 15 ft·lbf)**
- (b) Connect the front airbag sensor connector.

#### NOTICE:

- The connector is connected after the sensor assembly has been installed.
- Make sure the sensor is installed with the specified torque.
- If the sensor has been dropped, or there are cracks, dents or other defects in the case, brackets or connector, replace the removed sensor with a new one.
- The front sensor is equipped with an electrical connection check mechanism. Be sure to lock this mechanism securely when connecting the connector. If the connector is not securely locked, a malfunction code will be detected by the diagnostic system.



#### HINT:

Install the front airbag sensor with the arrow on the sensor facing toward the front of the vehicle.

2. INSTALL TOOL BOX ASSEMBLY
3. INSTALL LUGGAGE COMPARTMENT TRIM BOX COVER

# PASSENGER AIRBAG MANUAL ON-OFF SWITCH INSPECTION

RS006-01

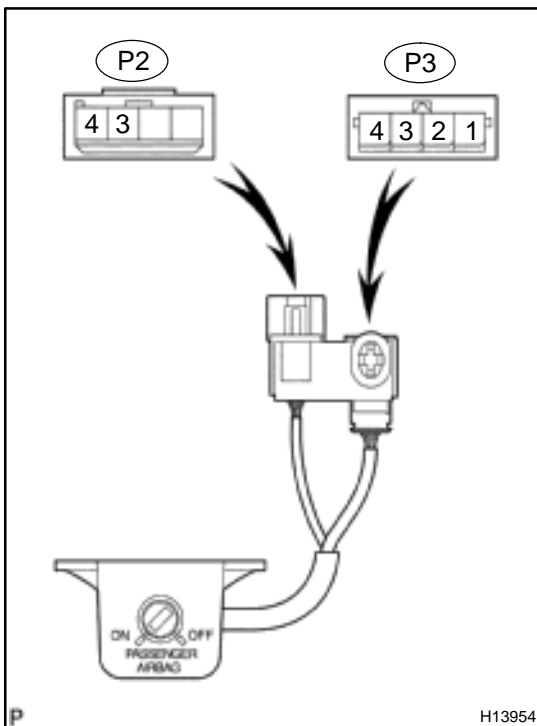
## HINT:

Release the airbag activation prevention mechanism of the passenger airbag manual on-off switch connector on the airbag sensor assembly side (See page [DI-237](#)).



### 1. REMOVE PASSENGER AIRBAG MANUAL ON-OFF SWITCH

- (a) Remove the glove compartment door.
- (b) Remove the 2 bolts and passenger airbag manual on-off switch, and disconnect the switch connectors.



### 2. INSPECT PASSENGER AIRBAG MANUAL ON-OFF SWITCH CONTINUITY

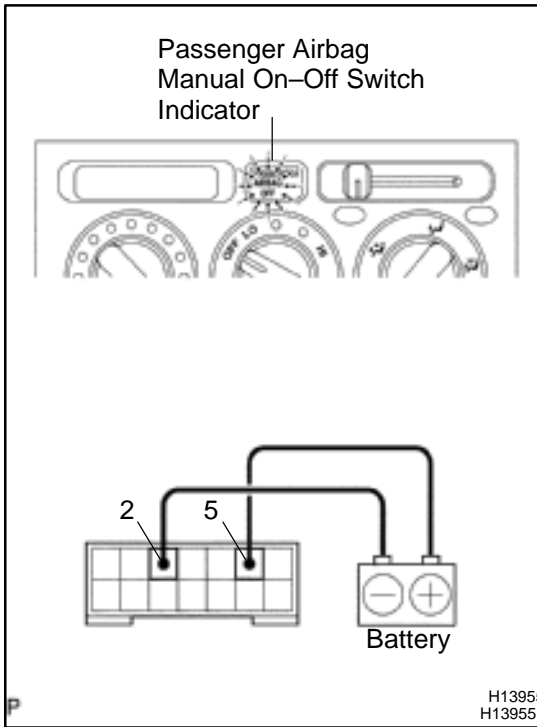
Using an ohmmeter, measure the continuity and resistance between each terminal.

Switch position	Tester connection	Specified condition
ON OFF	1 (P3) – 2 (P3)	Continuity
ON	3 (P3) – 4 (P3)	Continuity
	2 (P3) – 4 (P3) 3 (P2) – 4 (P2)	No continuity
OFF	3 (P2) – 4 (P2)	Continuity
	3 (P3) – 4 (P3)	No continuity
	2 (P3) – 4 (P3)	Resistance 2.4 Ω

If continuity is not as specified, replace the switch.

### 3. REINSTALL PASSENGER AIRBAG MANUAL ON-OFF SWITCH

- (a) Install the passenger airbag manual on-off switch with the 2 bolts and connect the switch connector.
- (b) Install the glove compartment door.



#### 4. INSPECT PASSENGER AIRBAG MANUAL ON-OFF INDICATOR OPERATION

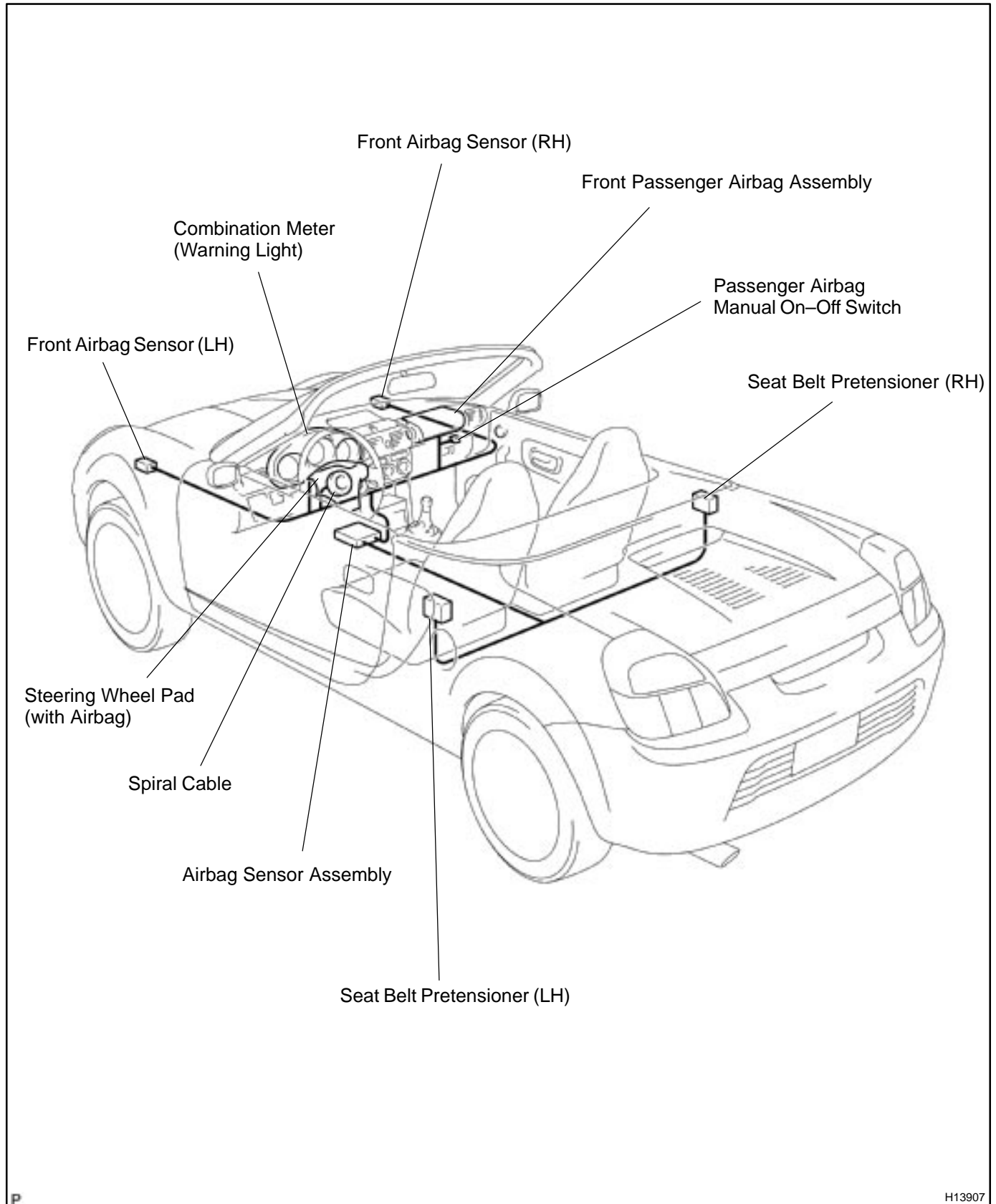
- Remove the heater control assembly (See page [AC-83](#)).
- Check that continuity exists between terminals 2 and 5.
- Connect the positive (+) lead from the battery to terminal 2 and negative (-) lead to terminal 5.
- Check that the indicator light lights up.

If the operation is not as specified, replace the heater control assembly.

- Reinstall the heater control assembly (See page [AC-86](#)).

# WIRE HARNESS AND CONNECTOR LOCATION

RS0KS-02



## INSPECTION

### HINT:

The SRS wire harness is integrated with the instrument panel wire harness assembly. All the connectors in the system are a standard yellow color.

#### 1. VEHICLES NOT INVOLVED IN COLLISION

Check a diagnostic system (See page [DI-237](#)).

#### 2. VEHICLES INVOLVED IN COLLISION

- (a) Check a diagnostic system (See page [DI-237](#)).
- (b) Check the breakage in all wires of the SRS wire harness, and exposed conductors.
- (c) Check to see if the SRS wire harness connectors are cracked or chipped.

## REPLACEMENT

In the following cases, replace the wire harness or connector.

- If any part of the SRS wire harness or any connector has been found to be faulty in troubleshooting.
- If any part of the SRS wire harness or any connector has been found to be faulty during checking items (See page [RS-53](#)).

### CAUTION:

**If the wire harness used in the SRS is damaged, replace the whole wire harness assembly.**