SUPPLEMENTAL RESTRAINT SYSTEM

600RV-01

PRECAUTION

CAUTION:

- **PRIUS is equipped with SRS, which consists of a driver airbag, front passenger airbag, side airbag and curtain shield airbag. 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 indicated in the repair manual.**
- **Wait at least 90 seconds after the power switch is turned off and the negative (–) terminal cable is disconnected from the battery before starting the operation. (The SRS is equipped with a back–up power source, so that if work is started within 90 seconds after disconnecting the negative (–) terminal cable of the battery, the SRS may be deployed.)**
- **Do not expose the horn button assy, front passenger airbag assy, airbag sensor assy center, airbag sensor front, front seat airbag assy, side airbag sensor assy, curtain shield airbag assy, airbag sensor rear or seat position airbag sensor directly to hot air or flames.**

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 when the SRS does not deploy, the horn button assy, front passenger airbag assy, airbag sensor assy center, airbag sensor front, front seat airbag assy, side airbag sensor assy, curtain shield airbag assy, airbag sensor rear and seat position airbag sensor should be inspected (see page 60–14).**
- **Before repair work, 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 the parts, replace them with new ones.**
- **Never disassemble or repair the horn button assy, front passenger airbag assy, airbag sensor assy center, airbag sensor front, front seat airbag assy, side airbag sensor assy, curtain shield airbag assy, airbag sensor rear or seat position airbag sensor in order to reuse it.**
- **If the horn button assy, front passenger airbag assy, airbag sensor assy center, airbag sensor front, front seat airbag assy, side airbag sensor assy, curtain shield airbag assy, airbag sensor rear or seat position airbag sensor has been dropped, or if there are any cracks, dents or other defects in the case, bracket or connector, replace it with a new one.**
- **Use a volt/ohmmeter with high impedance (10 kΩ/V minimum) for troubleshooting the electrical circuits.**
- **Information labels are attached to the periphery of the SRS components. Follow the instructions in the caution.**
- **After work on the SRS is completed, perform the SRS warning light check (see page 05–1165).**
- **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 as it was before. Never use a back–up power supply from outside the vehicle to avoid erasing the memory in any system.**
- **If the vehicle is equipped with a mobile communication system, refer to the precaution in the INTRODUCTION section.**

NOTICE FOR INITIALIZATION:

When disconnecting the negative (–) battery terminal, initialize the following systems after the terminal is reconnected.

System Name	See Page
Power Window Control System	01–29

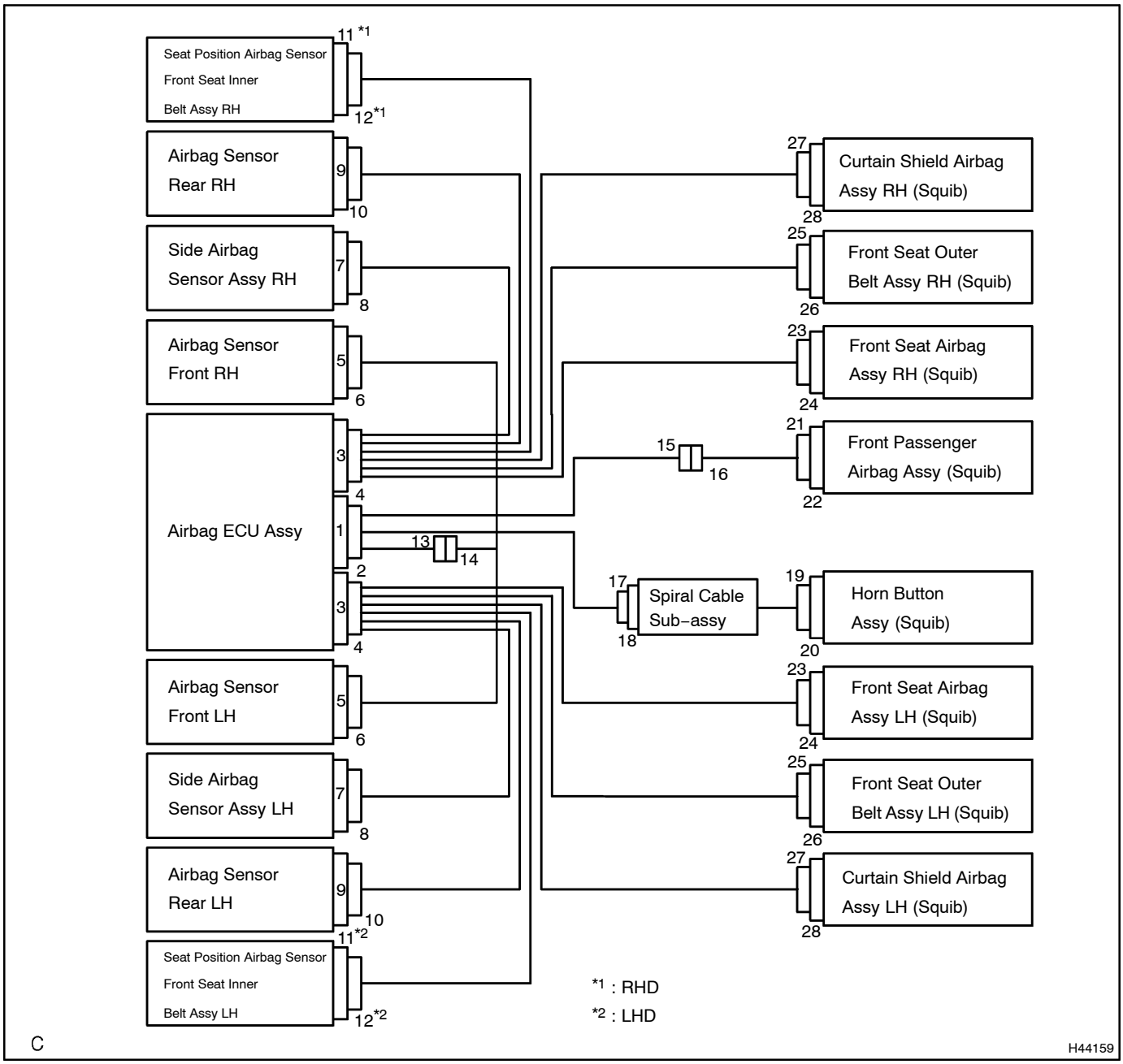
NOTICES FOR HYBRID SYSTEM ACTIVATION:

- **When the warning lamp is illuminated or the battery has been disconnected and reconnected, pressing the power switch may not start the system on the first try. If so, press the power switch again.**
- **With the power switch's power mode changed to ON (IG), disconnect the battery. If the key is not in the key slot during reconnection, DTC B2799 may be output.**

1. SRS CONNECTORS

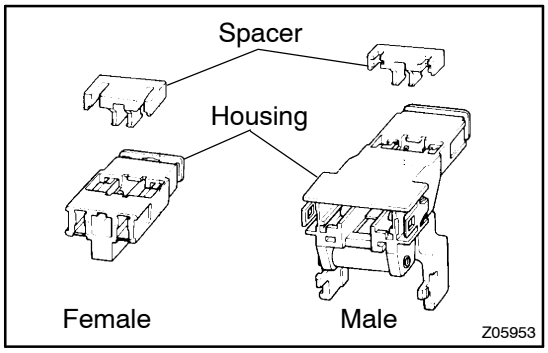
HINT:

SRS connectors are located as shown in the following illustration.



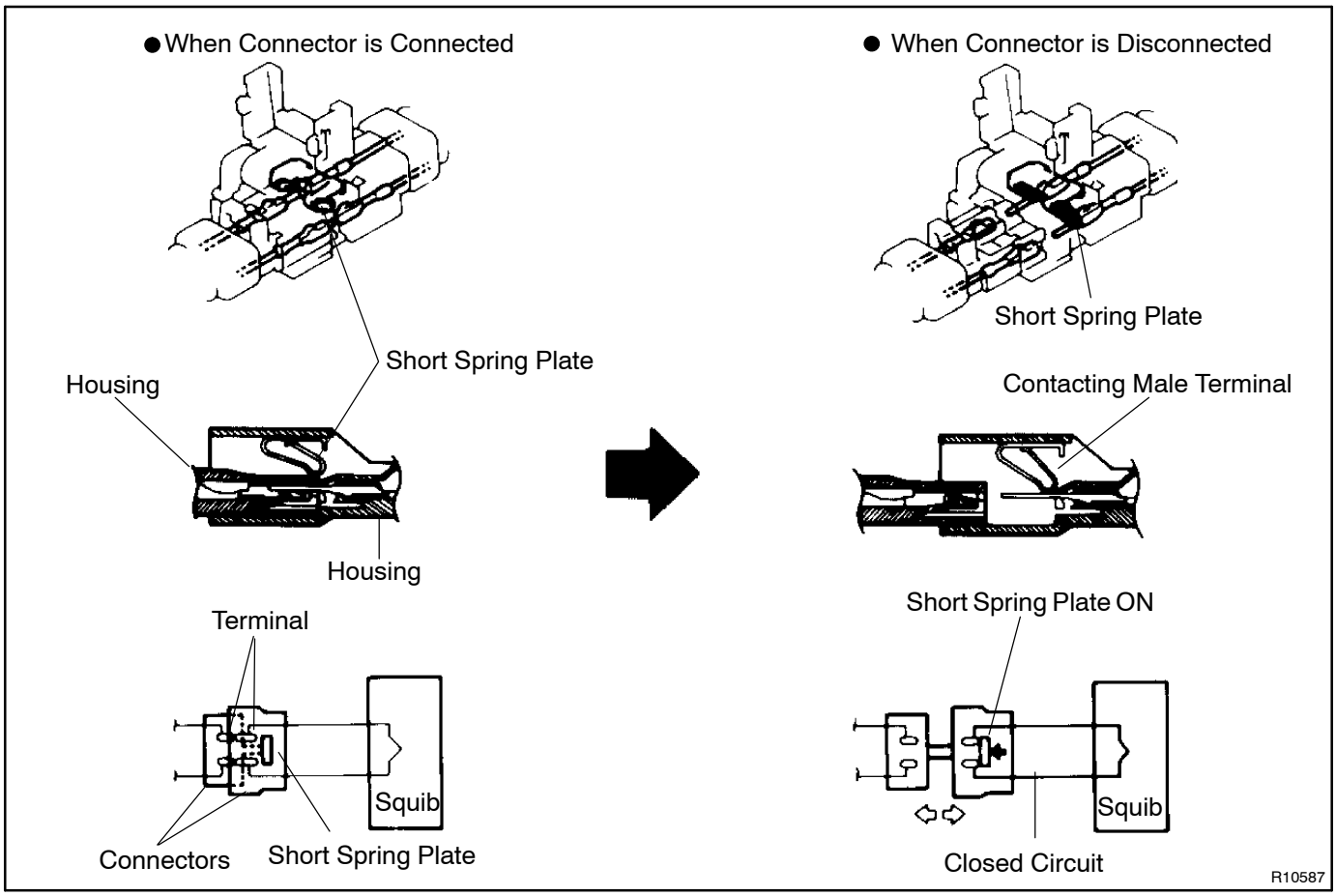
No.	Connector Type	Application
(1)	Terminal Twin–Lock Mechanism	Connectors 2, 4, 6, 8, 10, 13, 14, 17, 23, 24
(2)	Activation Prevention Mechanism	Connectors 2, 4, 16, 18, 20, 22, 24, 26, 28
(3)	Half Connection Prevention Mechanism	Connectors 6, 8, 10, 14, 15, 17, 23
(4)	Connector Lock Mechanism (1)	Connectors 19, 21, 25, 27
(5)	Connector Lock Mechanism (2)	Connectors 2, 4
(6)	Improper Connection Prevention Lock Mechanism	Connectors 1, 3

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

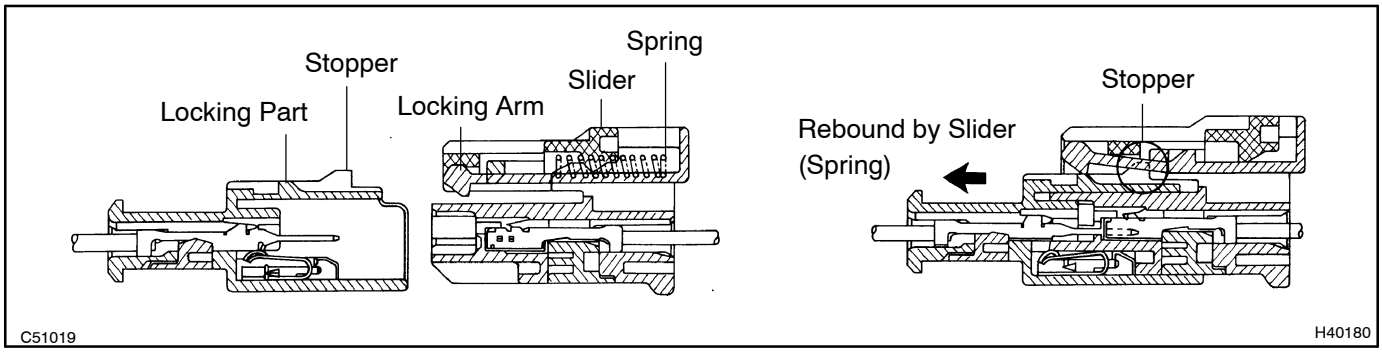


(1) Terminal twin–lock mechanism:
Each connector has a two–piece component consisting of a housing and a spacer. This design enables the terminal to be locked securely by two locking devices (the retainer and the lance) to prevent terminals from coming out.

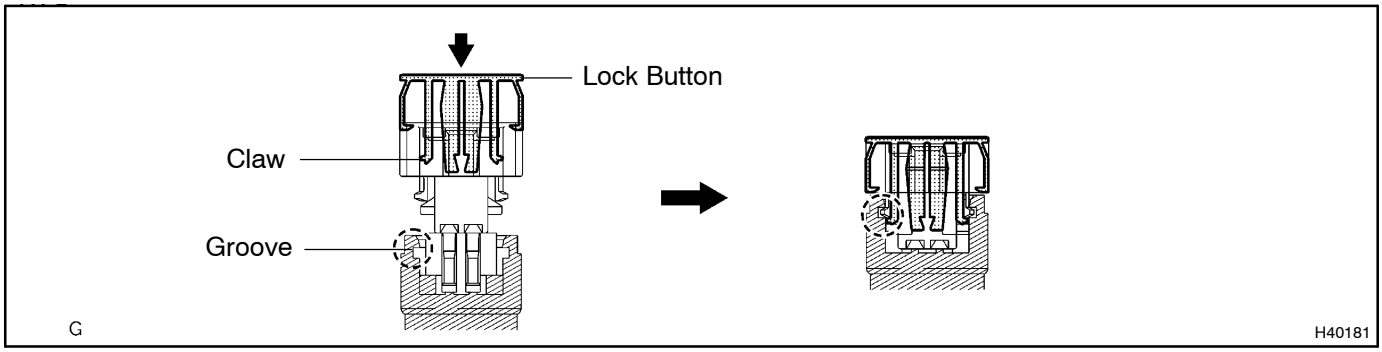
(2) Activation prevention mechanism:
Each connector contains a short spring plate. When the connector is disconnected, the short spring plate automatically connects the positive (+) terminal and the negative (–) terminal of the squib.



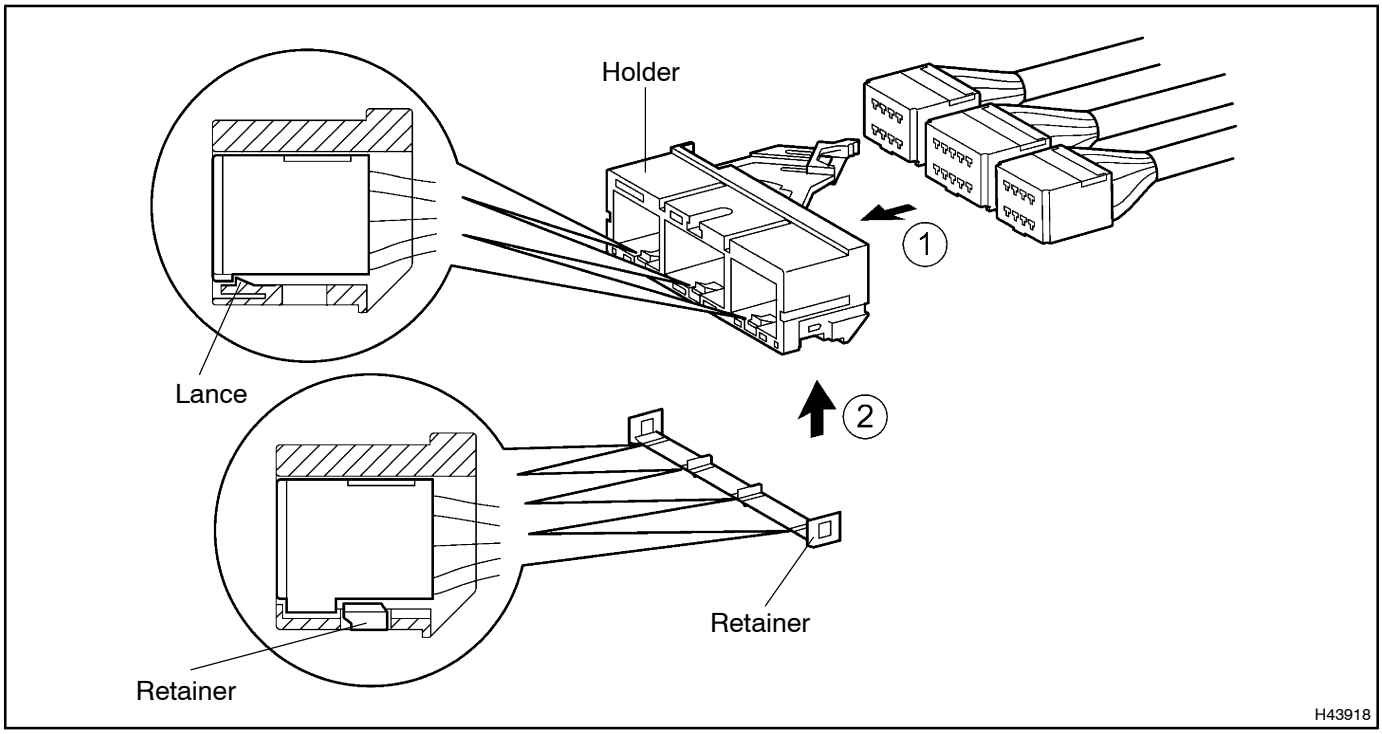
(3) Half connection prevention mechanism:
If the connector is not completely connected, the connector is disconnected due to the spring operation so that no continuity exists.



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



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



(6) 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.

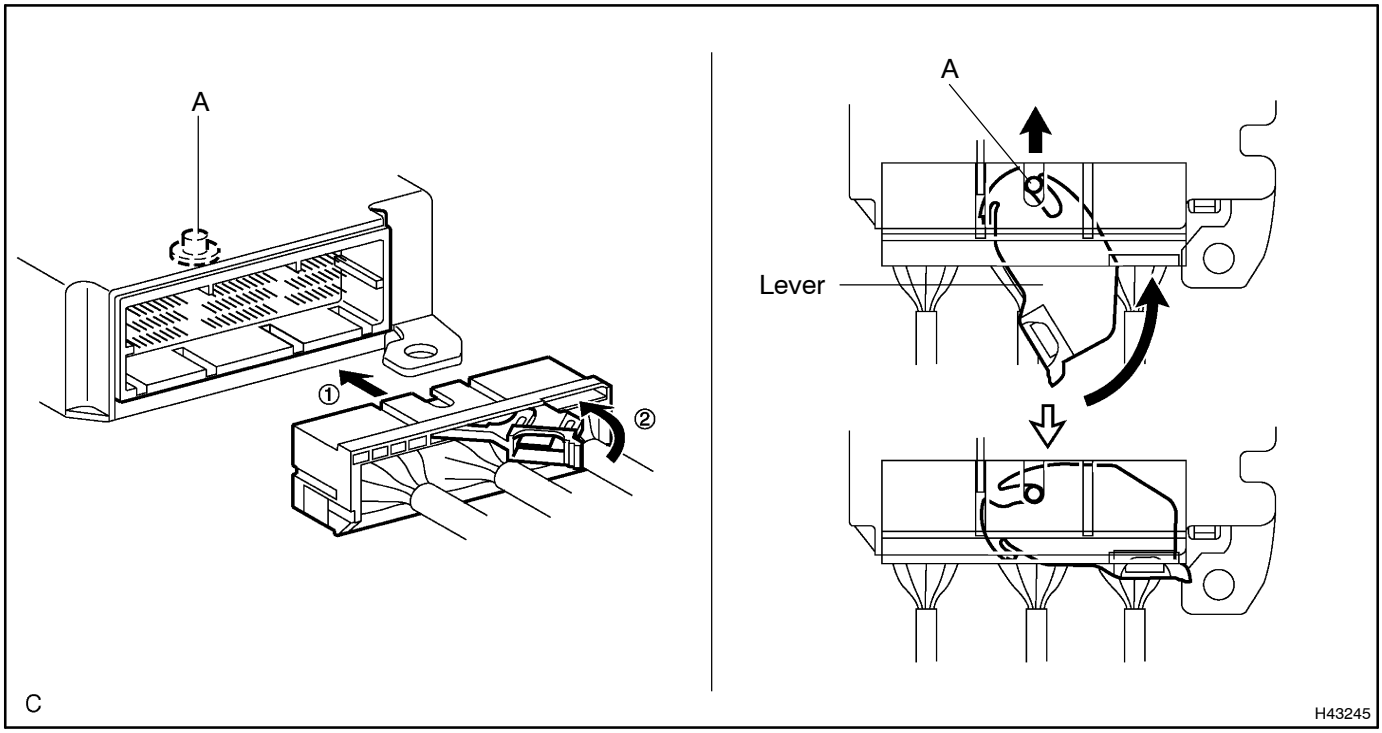


Fig.1

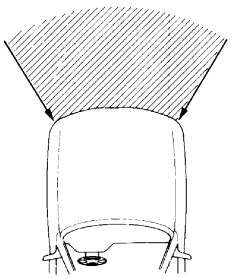
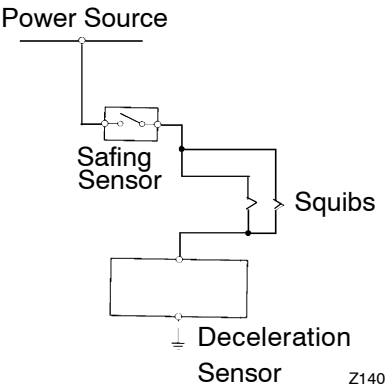


Fig.2

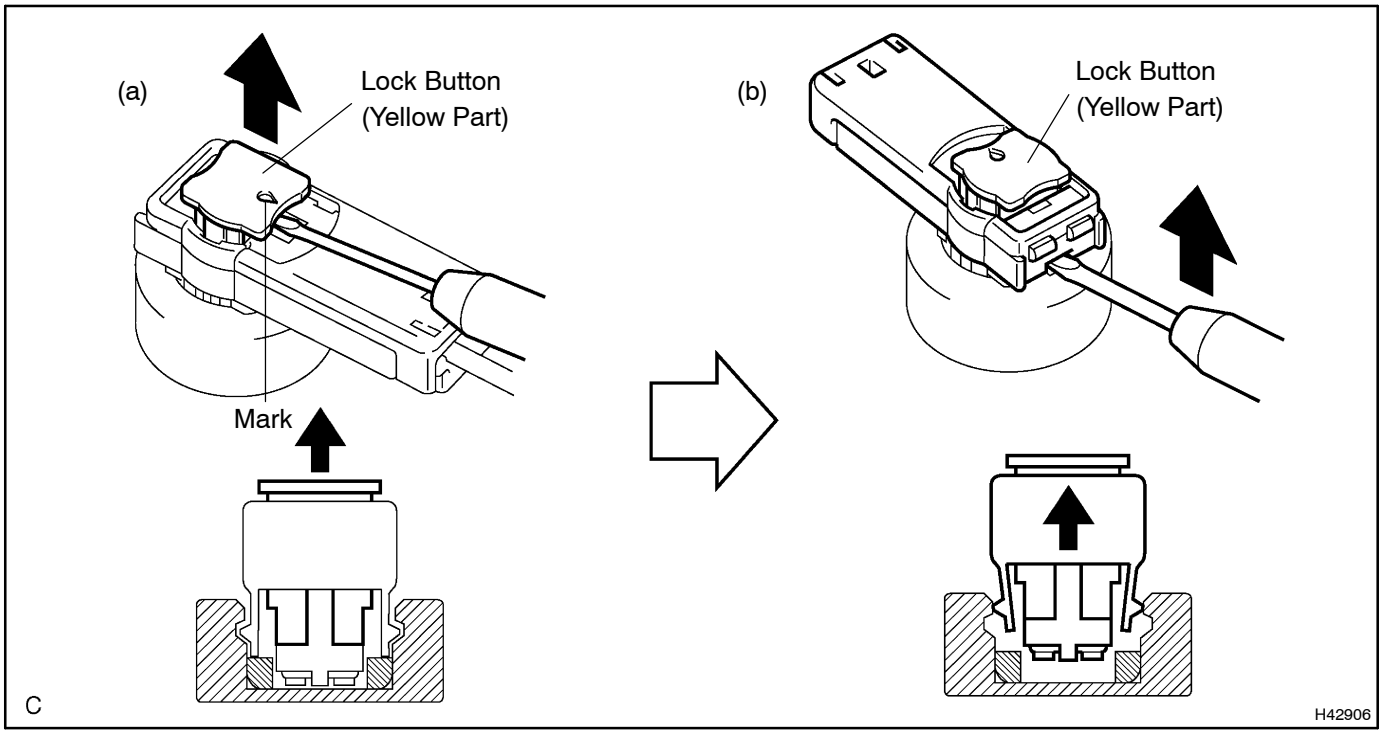


(b) When the vehicle is involved in a frontal collision in the hatched area (Fig.1) and the shock is larger than the predetermined level, the SRS is activated automatically. The safing sensor is designed to go on at a smaller deceleration rate than the airbag sensor. As illustrated in Fig.2, ignition is caused when current flows to the squib, which happens when the 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 the horn button assy and instrument panel. The deployment of the bags then ends, and the bags deflate as the gas is discharged through discharge holes at the bag's rear or side.

2. DISCONNECTION OF CONNECTORS FOR HORN BUTTON ASSY, FRONT PASSENGER AIRBAG ASSY AND CURTAIN SHIELD AIRBAG ASSY

(a) Release the lock button (yellow part) of the connector using a screwdriver.

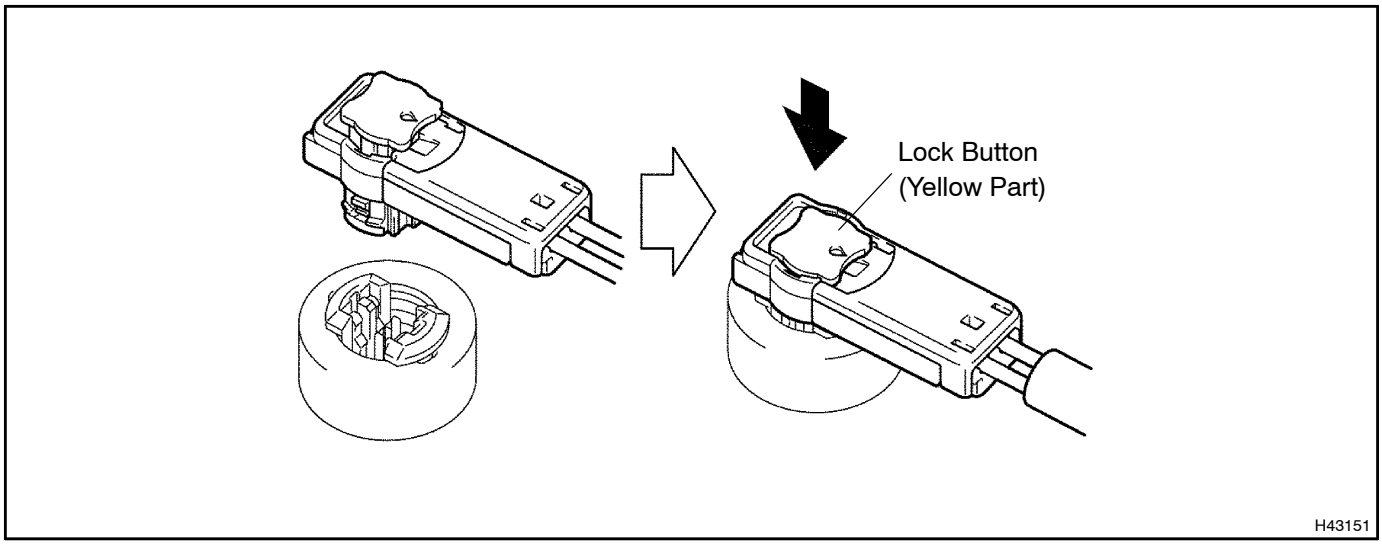
(b) Insert the screwdriver tip between the connector and the base, and then raise the connector.



3. CONNECTION OF CONNECTORS FOR HORN BUTTON ASSY, FRONT PASSENGER AIRBAG ASSY AND CURTAIN SHIELD AIRBAG ASSY

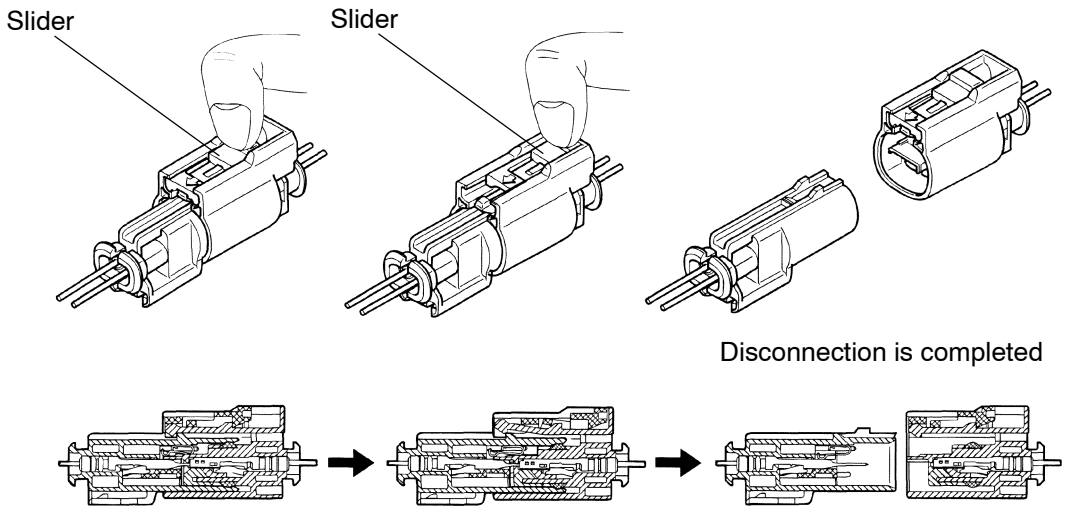
(a) Connect the connector.

(b) Push down securely on the lock button (yellow part) of the connector. (When locking, a click sound can be heard.)



4. DISCONNECTION OF CONNECTOR FOR FRONT SEAT AIRBAG ASSY

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

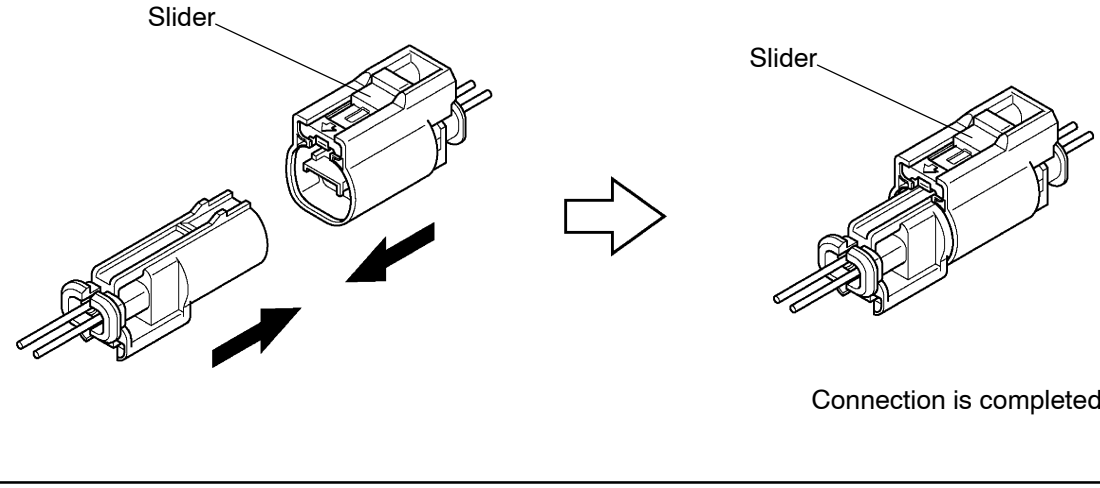


5. CONNECTION OF CONNECTOR FOR FRONT SEAT AIRBAG ASSY

(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.)

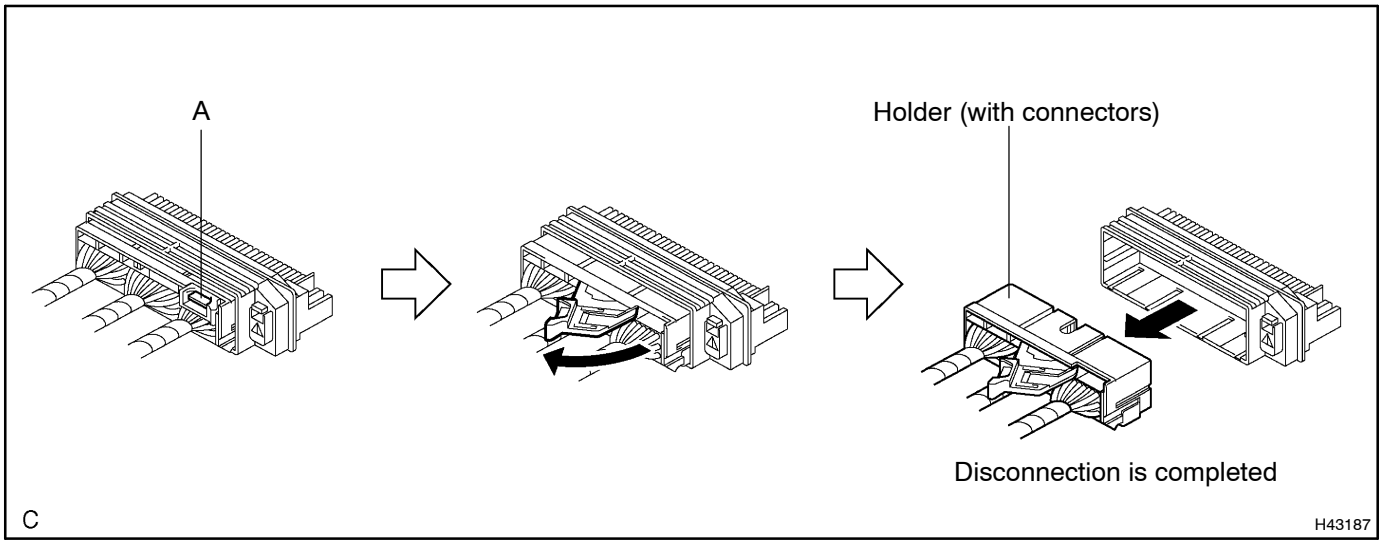
HINT:

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



6. DISCONNECTION OF CONNECTOR FOR AIRBAG ECU ASSY

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

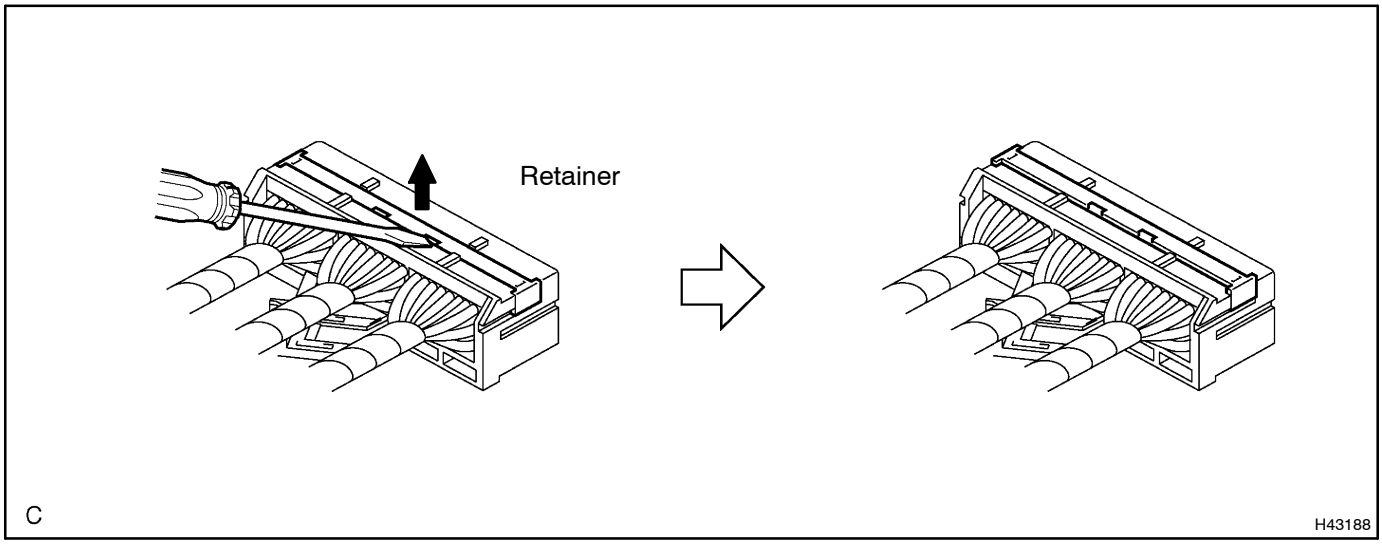


HINT:

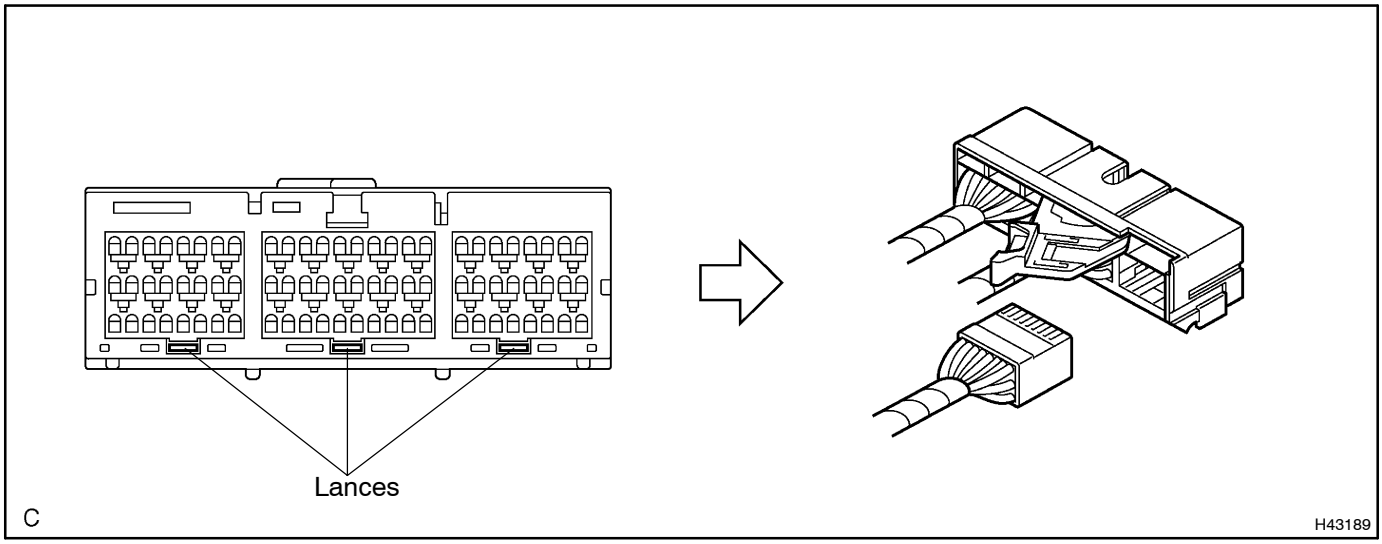
Perform the following procedures when replacing the holder.

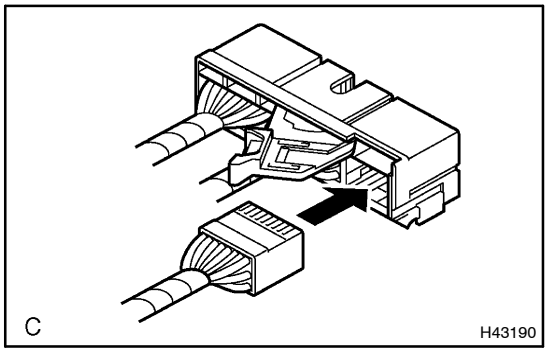
(b) Remove the holder.

(1) Using a screwdriver, unlock the retainer.



(2) Release the lance fittings and remove the holder.





(c) Install the holder.

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

HINT:

The retainer is locked when the holder is connected.

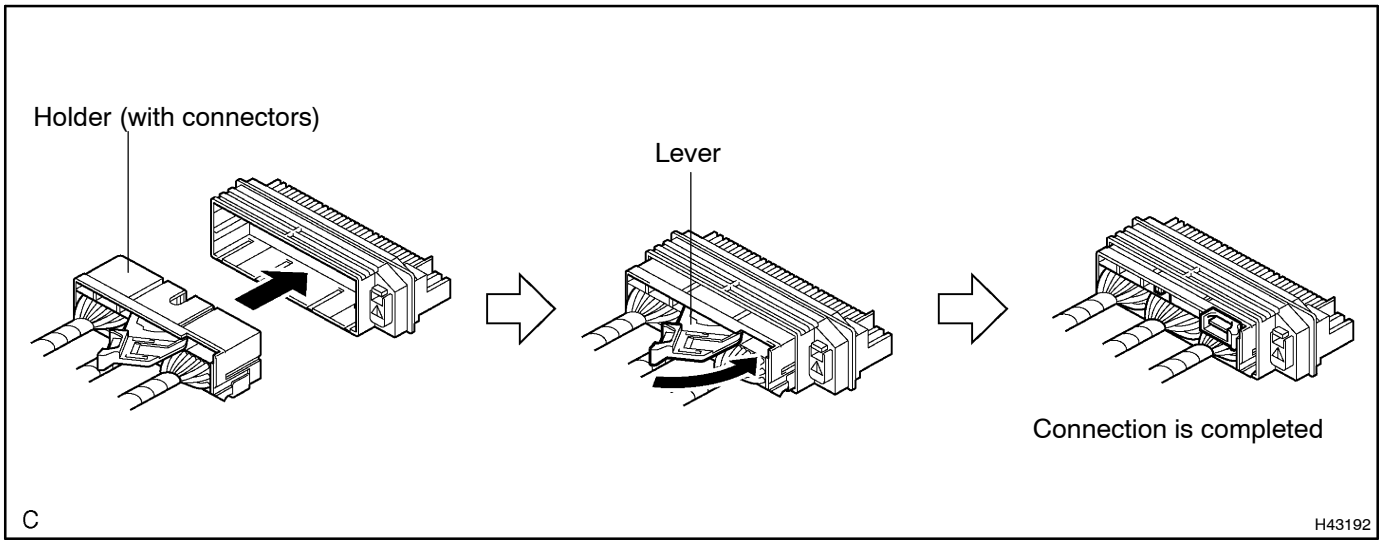
7. CONNECTION OF CONNECTOR FOR AIRBAG ECU ASSY

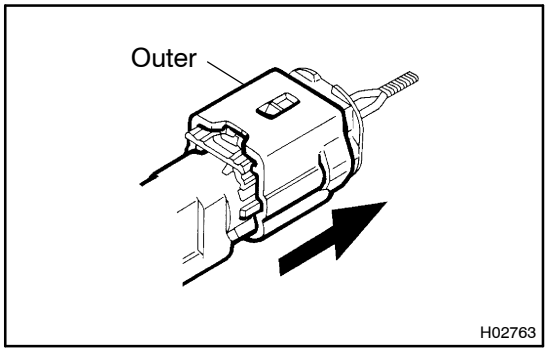
(a) Firmly insert the holder (with connectors) until it can not be pushed any further.

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

HINT:

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





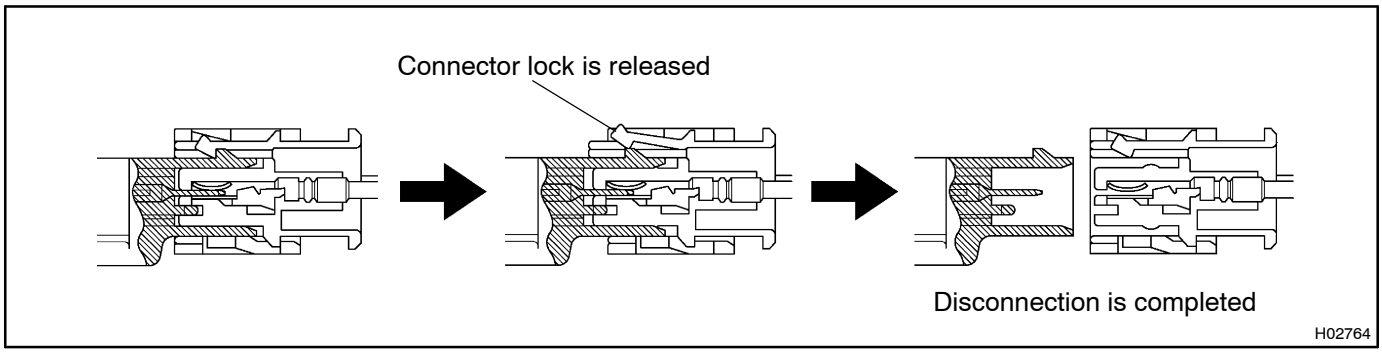
8. DISCONNECTION OF CONNECTORS FOR AIRBAG SENSOR FRONT, SIDE AIRBAG SENSOR AND AIRBAG SENSOR REAR

(a) While holding both outer flank sides, 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 sides will make disconnection difficult.



9. CONNECTION OF CONNECTORS FOR AIRBAG SENSOR FRONT, SIDE AIRBAG SENSOR AND AIRBAG SENSOR REAR

(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.

