

# **SEAT BELT SYSTEM**

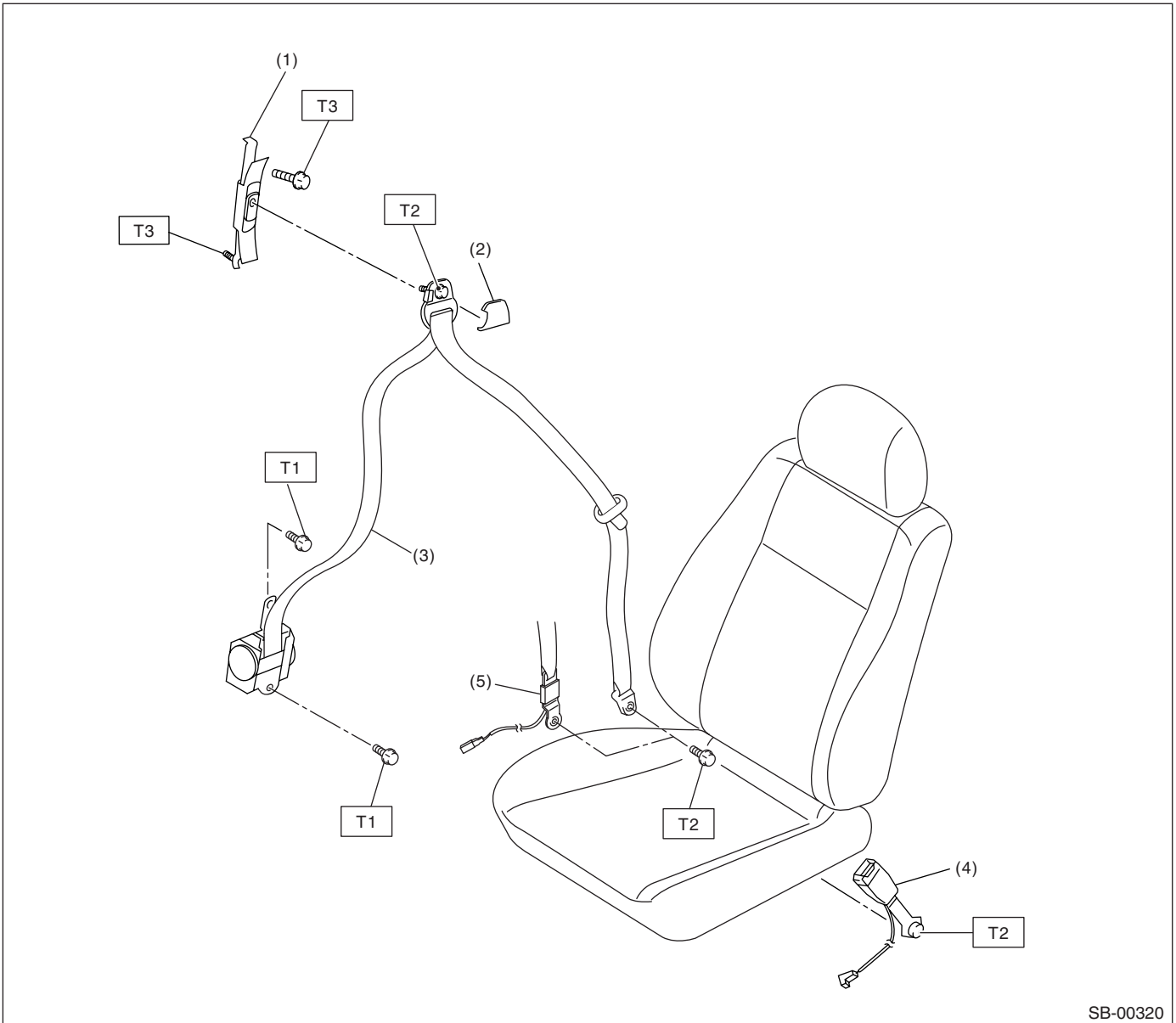
# General Description

## SEAT BELT SYSTEM

### 1. General Description

#### A: COMPONENT

#### 1. FRONT SEAT BELT



SB-00320

- (1) Adjuster anchor ASSY
- (2) Anchor cover
- (3) Outer seat belt ASSY

- (4) Inner seat belt ASSY
- (5) Belt tension sensor (passenger's side)

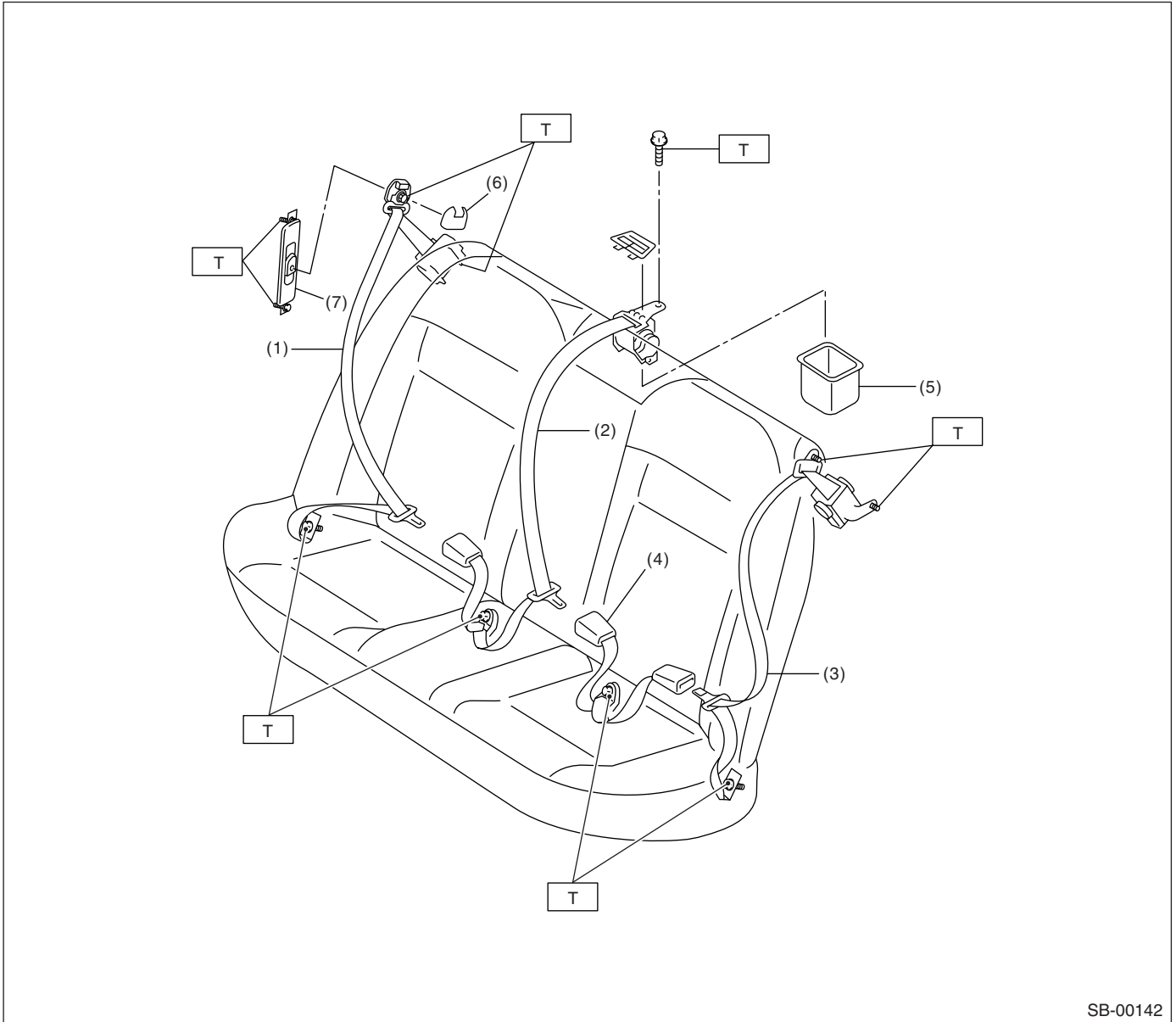
**Tightening torque: N·m (kgf·m, ft·lb)**

**T1: 7.5 (0.76, 5.5)**

**T2: 30 (3.1, 22)**

**T3: 53 (5.4, 39)**

## 2. REAR SEAT BELT (SEDAN MODEL)



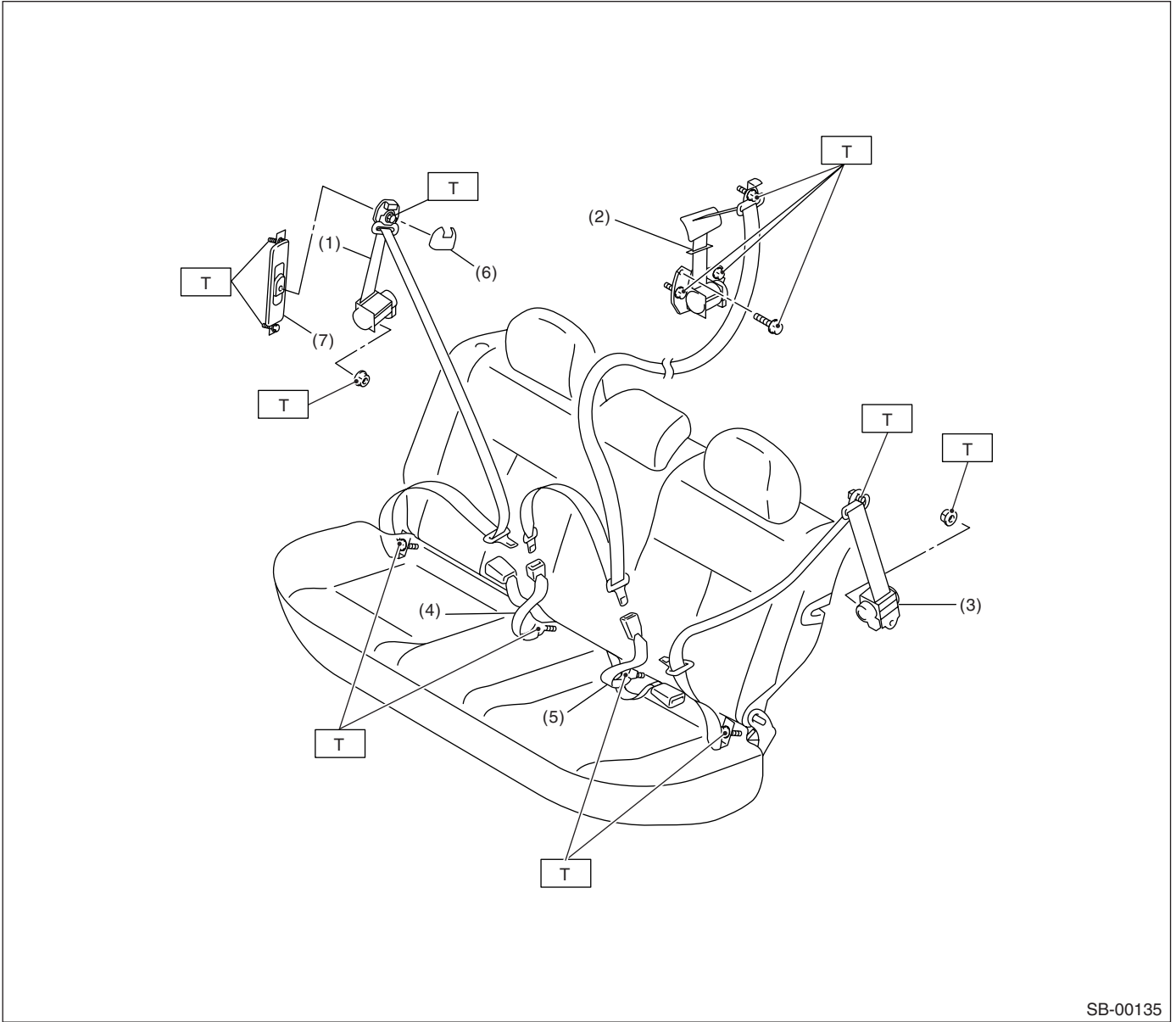
- |                                 |                          |
|---------------------------------|--------------------------|
| (1) Outer seat belt RH ASSY     | (5) Case center ELR      |
| (2) Shoulder seat belt CTR ASSY | (6) Anchor cover         |
| (3) Outer seat belt LH ASSY     | (7) Adjuster anchor ASSY |
| (4) Center seat belt LH ASSY    |                          |

**Tightening torque: N·m (kgf·m, ft·lb)**  
**T: 30 (3.1, 22)**

# General Description

## SEAT BELT SYSTEM

### 3. REAR SEAT BELT (WAGON MODEL)



SB-00135

- |                                 |                              |
|---------------------------------|------------------------------|
| (1) Outer seat belt RH ASSY     | (5) Center seat belt LH ASSY |
| (2) Shoulder seat belt CTR ASSY | (6) Anchor cover             |
| (3) Outer seat belt LH ASSY     | (7) Adjuster anchor ASSY     |
| (4) Center seat belt RH ASSY    |                              |

**Tightening torque: N·m (kgf·m, ft·lb)**  
**T: 30 (3.1, 22)**

### **B: CAUTION**

- Before starting, turn the ignition switch to OFF, disconnect the battery ground cable and wait for 20 seconds or more.
- The pretensioner system has a backup power source. The pretensioner might deploy if you do not wait for 20 seconds or more before starting work.
- Do not drop or apply any impact to the pretensioner.
- If oil, grease, or water gets on the pretensioner, wipe it off immediately with a dry cloth.
- Do not expose the pretensioner to high temperature or flame.
- Do not allow current to flow through or voltage to reach the pretensioner. Do not use a circuit tester to check resistance of the pretensioner.
- Do not disassemble or attempt to repair the pretensioner. If it is dented, cracked, or deformed, replace it with a new one.
- Do not use the airbag or pretensioner parts from other vehicles. Always replace parts with new parts.
- When handling a seat belt with a deployed pretensioner, wear gloves and goggles. Wash your hands afterwards.
- Do not re-use a seat belt with a deployed pretensioner again.
- If the material gets in your eyes or on your skin during deployment, wash it away with clean water, and then consult a doctor.

## 2. Pretensioner Connector

### A: PROCEDURE

Refer to “Airbag Connector” in AIRBAG SYSTEM section. <Ref. to AB-8, PROCEDURE, Airbag Connector.>

### 3. Inspection Locations After a Collision

#### A: INSPECTION

Check for the following, and then replace with new parts if necessary.

- Center pillar lower garnish is discolored or cracked.
- Wire harness and/or connector is damaged.

# Seat Belt Warning System

SEAT BELT SYSTEM

## 4. Seat Belt Warning System

### A: WIRING DIAGRAM

<Ref. to WI-113, WIRING DIAGRAM, Seat Belt Warning System.>

### B: INSPECTION

#### TROUBLE SYMPTOM:

- Seat belt warning light does not come on or go off.
- Buzzer does not beep.

Step	Check	Yes	No
<p><b>1</b></p> <p><b>CHECK HARNESS BETWEEN BODY INTEGRATED MODULE AND CHASSIS GROUND.</b></p> <p>1) Turn the ignition switch to OFF. 2) Disconnect the connector from body integrated module. 3) Measure the resistance between body integrated module harness connector and chassis ground.</p> <p><b>Connector &amp; terminal:</b> <b>(B280) No. 13 — Chassis ground:</b></p>	<p>Is the resistance less than 1 <math>\Omega</math>?</p>	Go to step 2.	Repair the open circuit of harness between body integrated module and chassis ground.
<p><b>2</b></p> <p><b>CHECK POWER SUPPLY OF BODY INTEGRATED MODULE.</b></p> <p>1) Turn the ignition switch to ON. 2) Measure the voltage between body integrated module connector and chassis ground.</p> <p><b>Connector &amp; terminal:</b> <b>(B281) No. 19 (+) — Chassis ground (-):</b></p>	<p>Is the voltage more than 10 V?</p>	Go to step 3.	Repair the open harness, short circuit and poor contact of connector between body integrated module and battery.
<p><b>3</b></p> <p><b>CHECK SEAT BELT SWITCH AND HARNESS.</b></p> <p>1) Turn the ignition switch to OFF. 2) Disconnect the connector from body integrated module. 3) Hold the tang plate disconnected from driver's seat belt buckle. 4) Measure the resistance between body integrated module harness connector and chassis ground.</p> <p><b>Connector &amp; terminal:</b> <b>(B281) No. 3 — Chassis ground:</b></p>	<p>Is the resistance less than 1 <math>\Omega</math>?</p>	Go to step 4.	Repair the short circuit of harness between body integrated module connector and chassis ground.
<p><b>4</b></p> <p><b>CHECK SEAT BELT SWITCH AND HARNESS.</b></p> <p>1) Turn the ignition switch to OFF. 2) Insert the tang plate into driver's seat belt buckle. 3) Measure the resistance between body integrated module connector and chassis ground.</p> <p><b>Connector &amp; terminal:</b> <b>(B281) No. 3 — Chassis ground:</b></p>	<p>Is the resistance more than 1 <math>M\Omega</math>?</p>	Go to step 7.	Go to step 5.
<p><b>5</b></p> <p><b>CHECK HARNESS BETWEEN BODY INTEGRATED MODULE AND SEAT BELT SWITCH.</b></p> <p>Measure the resistance of harness between body integrated module connector and seat belt switch.</p> <p><b>Connector &amp; terminal:</b> <b>(B281) No. 3 — (R245) No. 2:</b></p>	<p>Is the resistance less than 1 <math>\Omega</math>?</p>	Go to step 6.	Repair the open circuit of harness and poor contact of connector between body integrated module connector and seat belt switch.



# Seat Belt Warning System

SEAT BELT SYSTEM

Step	Check	Yes	No
<b>6 CHECK HARNESS BETWEEN SEAT BELT SWITCH AND CHASSIS GROUND.</b> Measure the resistance of harness between seat belt switch and chassis ground. <b>Connector &amp; terminal:</b> <i>(R245) No. 1 — Chassis ground:</i>	Is the resistance less than 1 $\Omega$ ?	Go to step 7.	Repair the open circuit of harness between seat belt switch and chassis ground.
<b>7 CHECK SEAT BELT SWITCH.</b> 1) Hold the tang plate disconnected from driver's seat belt buckle. 2) Measure the resistance between seat belt switch terminals. <b>Terminal</b> <i>(R245) No. 1 — No. 2:</i>	Is the resistance less than 1 $\Omega$ ?	Go to step 8.	Replace the inner belt assembly.
<b>8 CHECK SEAT BELT SWITCH.</b> 1) Insert the tang plate into driver's seat belt buckle. 2) Measure the resistance between seat belt switch terminals. <b>Terminal</b> <i>(R245) No. 1 — No. 2:</i>	Is the resistance more than 1 $M\Omega$ ?	Go to step 9.	Replace the inner belt assembly.
<b>9 CHECK COMBINATION METER.</b> 1) Turn the ignition switch to ON. 2) Measure the voltage between combination meter and chassis ground. <b>Connector &amp; terminal:</b> <i>(i10) No. 9 (+) — Chassis ground (-):</i>	Is the voltage more than 10 V?	Go to step 10.	Check the wiring harness and combination meter, and then repair or replace them.
<b>10 CHECK HARNESS BETWEEN BODY INTEGRATED MODULE AND COMBINATION METER.</b> Measure the resistance of harness between body integrated module and combination meter. <b>Connector &amp; terminal:</b> <i>(B280) No. 11 — (i10) No. 9:</i>	Is the resistance less than 1 $\Omega$ ?	Go to step 11.	Repair the open circuit in harness between body integrated module and combination meter.
<b>11 CHECK POOR CONTACT.</b> Check the poor contact of seat belt warning light circuit.	Is there any poor contact?	Repair the poor contact.	Go to step 12.
<b>12 CHECK BODY INTEGRATED MODULE.</b> 1) Connect all connectors. 2) Turn the ignition switch to ON. 3) Hold the tang plate disconnected from driver's seat belt buckle. 4) Check seat belt warning light comes on.	Does the seat belt warning light come on?	Go to step 13.	Check the connectors and the harness, and if there are no abnormalities, replace the bulb of the seat belt warning light in the combination meter.
<b>13 CHECK BODY INTEGRATED MODULE.</b> 1) Connect all connectors. 2) Turn the ignition switch to ON. 3) Hold the tang plate disconnected from driver's seat belt buckle. 4) Check seat belt warning light comes on and buzzer beeps.	Does the seat belt warning light come on and buzzer beep for 6 seconds?	Check the connector or harness for poor contact.	Replace the body integrated module.

# Front Seat Belt

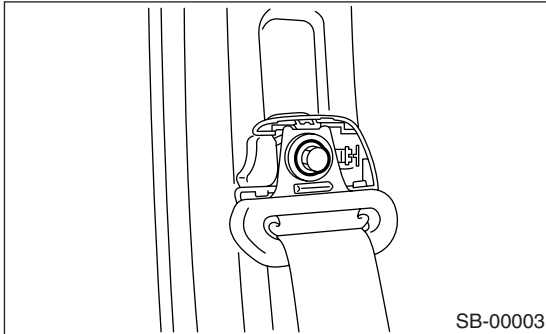
## SEAT BELT SYSTEM

### 5. Front Seat Belt

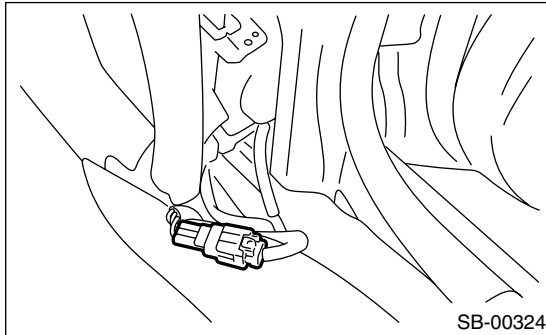
#### A: REMOVAL

##### 1. OUTER SEAT BELT ASSEMBLY

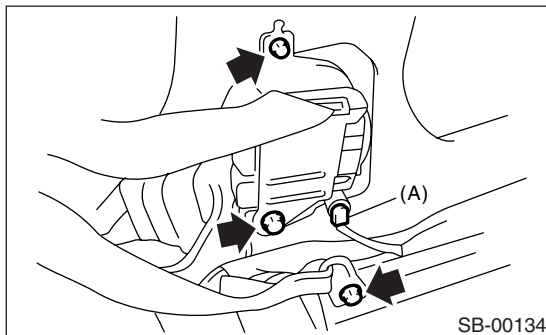
- 1) Turn the ignition switch to OFF, disconnect the ground cable from battery, and wait for more than 20 seconds.
- 2) Fold backrest all the way forward, and then move front seat all the way forward.
- 3) Remove the center pillar lower trim. <Ref. to EI-51, REMOVAL, Lower Inner Trim.>
- 4) Remove the anchor cover. Loosen the shoulder anchor bolt, and then detach the shoulder anchor from center pillar.



- 5) Turn over the floor mat to disconnect the connector of belt tension sensor. (Passenger's side).

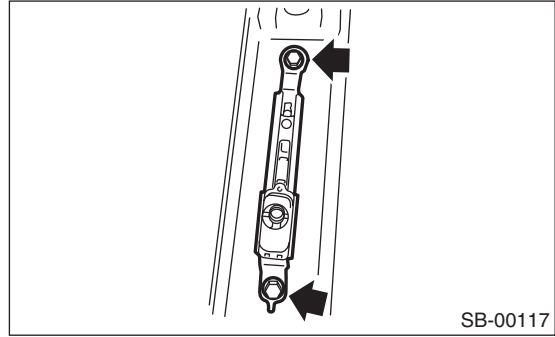


- 6) Turn over the floor mat to disconnect the connector (A) of pretensioner, and then loosen the three bolts to remove the outer seat belt assembly.



- 7) Remove the center pillar upper trim. <Ref. to EI-50, REMOVAL, Upper Inner Trim.>

- 8) Remove the two bolts and adjustable anchor assembly.

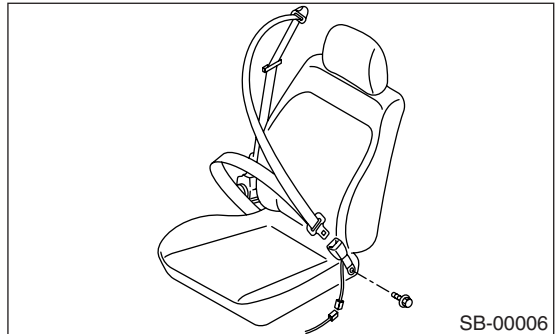


#### CAUTION:

- Do not drop or apply any impact to the pretensioner.
- Pretensioner and bracket should be treated as an assembly. Do not attempt to disassemble it.

##### 2. INNER SEAT BELT ASSEMBLY

- 1) Turn the ignition switch to OFF, disconnect the ground cable from battery, and wait for more than 20 seconds before starting work.
- 2) Remove the console box. <Ref. to EI-46, REMOVAL, Console Box.>
- 3) Disconnect the seat belt warning light connector under the seat.
- 4) Remove the clip of harness from seat rail.
- 5) Remove the anchor bolt, and then remove the inner seat belt assembly.



#### B: INSTALLATION

##### 1. OUTER SEAT BELT ASSEMBLY

Install in the reverse order of removal.

#### CAUTION:

- Parts of the driver and passenger sides are not identical. Before installation, make sure the correct part is used.
- Be careful not to twist the seat belts during installation.

#### Tightening torque:

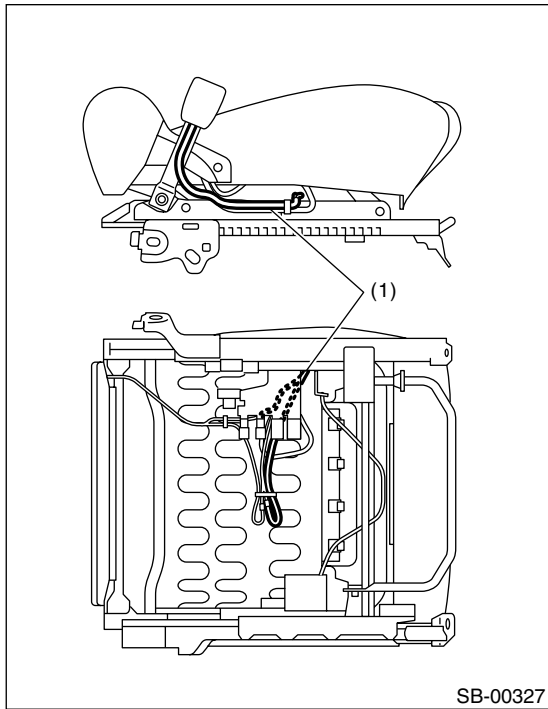
<Ref. to SB-2, FRONT SEAT BELT, COMPONENT, General Description.>

## 2. INNER SEAT BELT ASSEMBLY

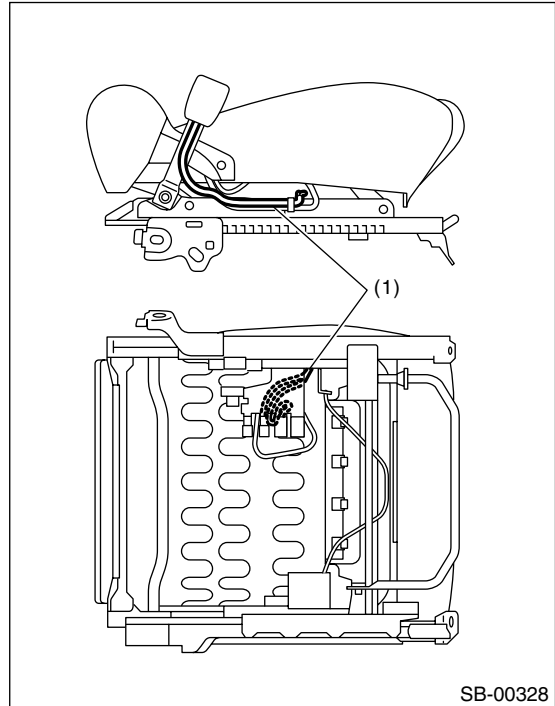
Install in the reverse order of removal.

### CAUTION:

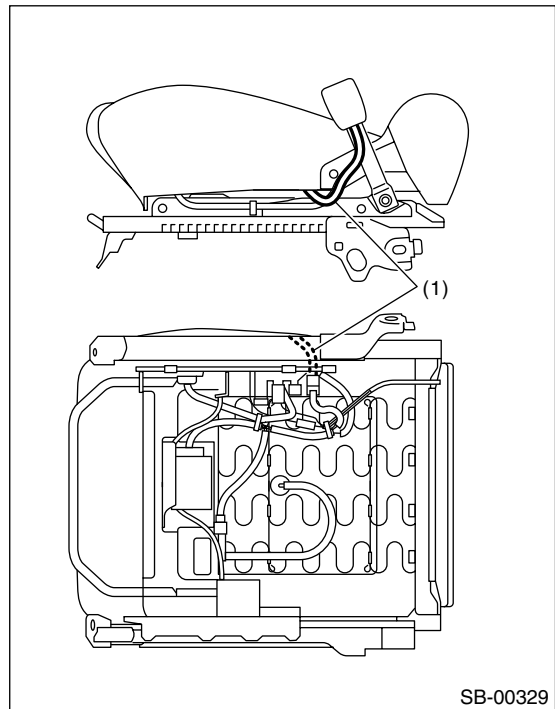
- After driver's and passenger's inner seat belt assemblies installation, check that the seat belt buckle switch operates normally using Subaru Select Monitor on the {Status Data} of «Airbag System». <Ref. to AB(diag)-29, STATUS DATA DISPLAY, OPERATION, Subaru Select Monitor.> Improper buckle switch function may cause airbag system malfunction.
- Inner seat belt assembly harness (1) must be routed securely as shown in the figure, since it may affect the performances of seat position sensor and occupant detection system.
- Driver's seat (with seat heater)



- Driver's seat (without seat heater)



- Passenger's seat



### Tightening torque:

<Ref. to SB-2, FRONT SEAT BELT, COMPONENT, General Description.>

### **C: INSPECTION**

#### **1. OUTER SEAT BELT ASSEMBLY**

Check for the following, and replace with new parts if necessary.

- Pretensioner is cracked or deformed.
- Seat belt is slackened, bent, or frayed. Seat belt is abnormally wound or extended.

#### **2. INNER SEAT BELT ASSEMBLY**

Check for the following, and replace with new parts if necessary.

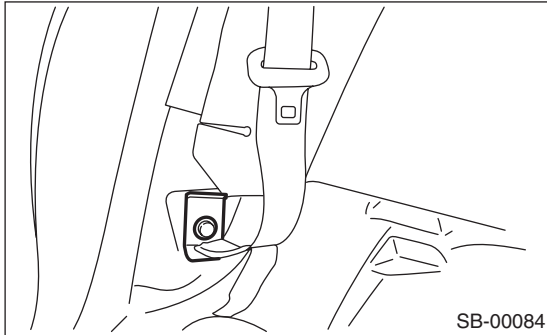
- Inner seat belt assembly is deformed or damaged.
- Seat belt buckle is engaged improperly.

## 6. Rear Seat Belt

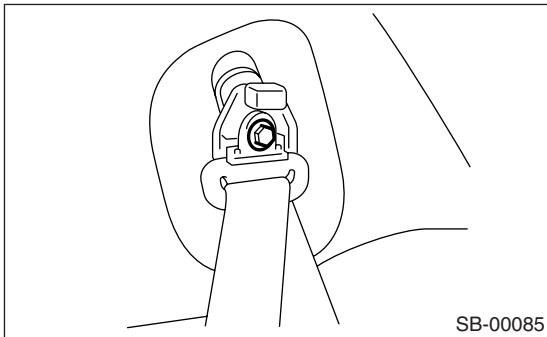
### A: REMOVAL

#### 1. OUTER SEAT BELT RH ASSEMBLY AND LH ASSEMBLY (SEDAN MODEL)

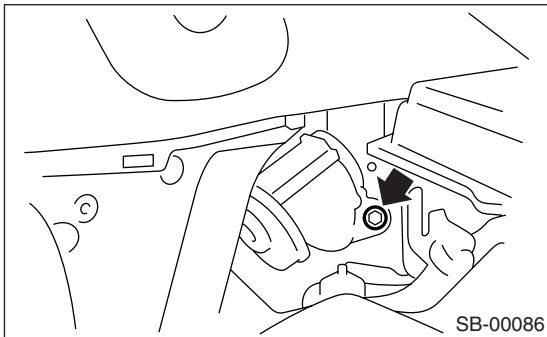
- 1) Remove the rear seat. <Ref. to SE-13, REMOVAL, Rear Seat.>
- 2) Remove the side sill rear lower cover. <Ref. to EI-51, REMOVAL, Lower Inner Trim.>
- 3) Remove the seat belt lower anchor bolt.



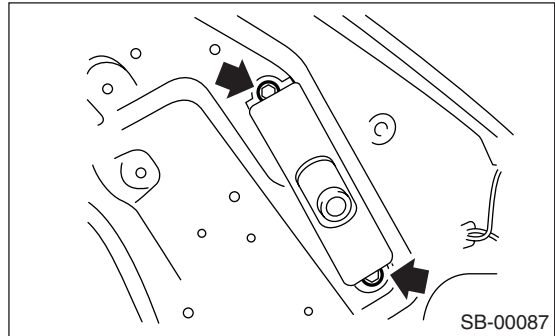
- 4) Remove the anchor cover. Remove the bolt from pillar and remove shoulder anchor.



- 5) Remove the quarter pillar trim. <Ref. to EI-52, REMOVAL, Rear Quarter Trim.>
- 6) Remove the bolts, and then detach the outer seat belt assembly.

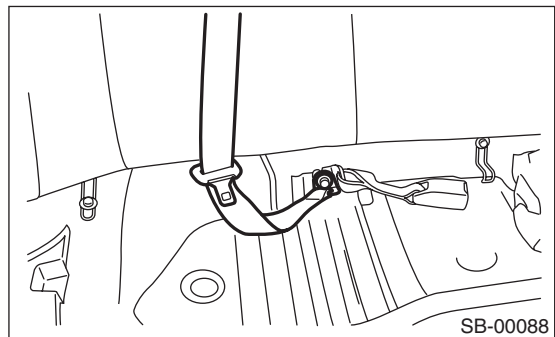


- 7) Remove the two bolts and remove adjustable anchor ASSY.

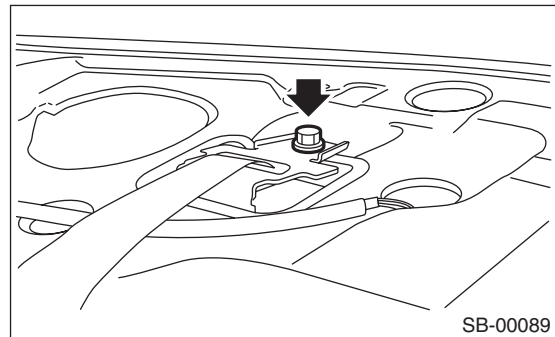


#### 2. SHOULDER SEAT BELT CTR ASSEMBLY (SEDAN MODEL)

- 1) Remove the rear seat cushion. <Ref. to SE-13, REMOVAL, Rear Seat.>
- 2) Remove the seat belt lower anchor bolt.



- 3) Remove the quarter pillar trim. <Ref. to EI-52, REMOVAL, Rear Quarter Trim.>
- 4) Remove the rear shelf trim. <Ref. to EI-58, REMOVAL, Rear Shelf Trim.>
- 5) Remove the bolts, and then detach the shoulder seat belt assembly.

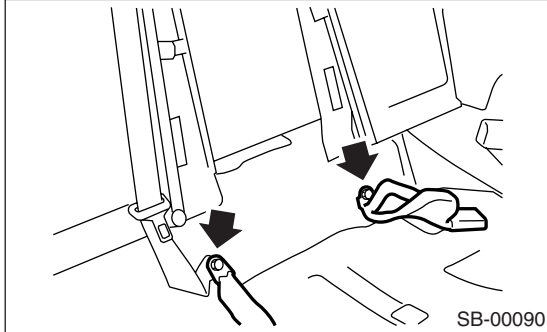


# Rear Seat Belt

## SEAT BELT SYSTEM

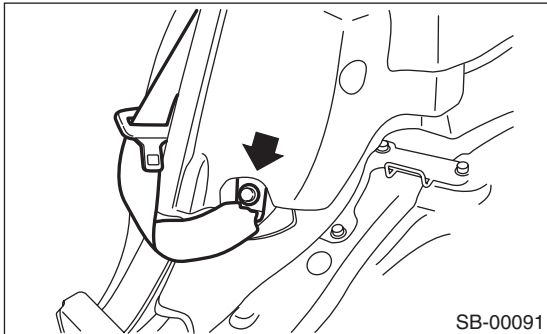
### 3. CENTER SEAT BELT LH ASSEMBLY (SEDAN MODEL)

- 1) Remove the rear seat cushion. <Ref. to SE-13, REMOVAL, Rear Seat.>
- 2) Remove the bolts, and then detach the center seat belt LH assembly.

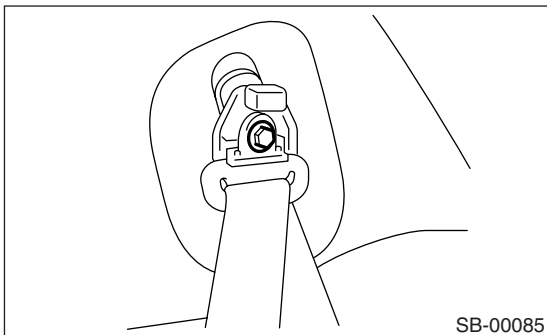


### 4. OUTER SEAT BELT RH ASSEMBLY AND LH ASSEMBLY (WAGON MODEL)

- 1) Remove the luggage floor mat. <Ref. to EI-61, REMOVAL, Luggage Floor Mat.>
- 2) Remove the rear seat cushion. <Ref. to SE-13, REMOVAL, Rear Seat.>
- 3) Remove the side sill rear lower cover. <Ref. to EI-51, REMOVAL, Lower Inner Trim.>
- 4) Remove the seat belt lower anchor bolt.

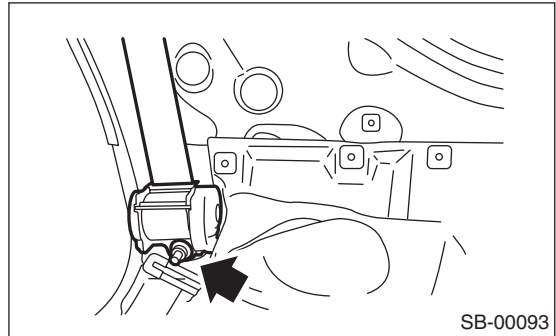


- 5) Remove the anchor cover. Remove the bolt from pillar and remove shoulder anchor.

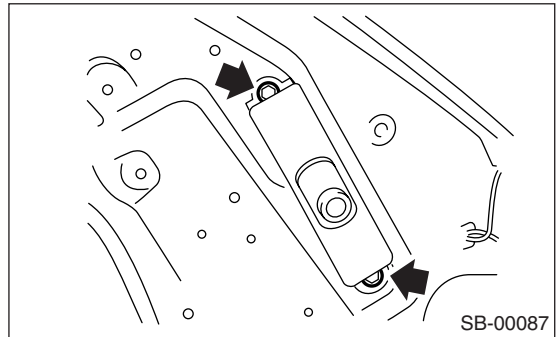


- 6) Remove the rear quarter trim. <Ref. to EI-52, REMOVAL, Rear Quarter Trim.>

- 7) Remove the bolts, and then detach the outer seat belt.

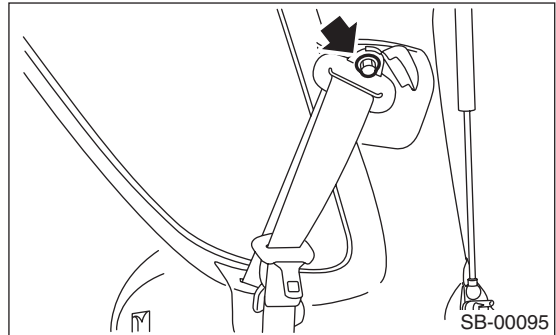


- 8) Remove the two bolts and remove adjustable anchor ASSEMBLY.



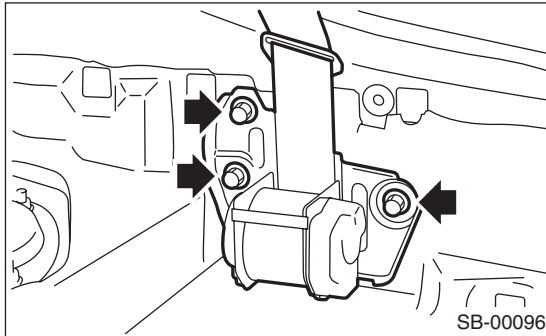
### 5. SHOULDER SEAT BELT CTR ASSEMBLY (WAGON MODEL)

- 1) Remove the shoulder anchor bolt, and then detach the shoulder anchor from quarter pillar.



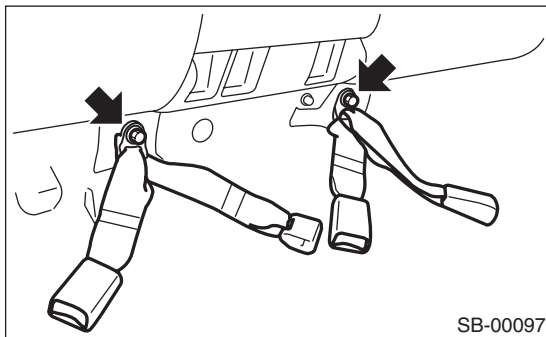
- 2) Remove the quarter trim. <Ref. to EI-52, REMOVAL, Rear Quarter Trim.>

3) Remove the three bolts, and then detach the seat belt assembly.



## 6. CENTER SEAT BELT RH ASSEMBLY AND LH ASSEMBLY (WAGON MODEL)

1) Remove the rear seat cushion.  
2) Remove the bolt, and then detach the center seat belt assembly.



## B: INSTALLATION

### 1. OUTER SEAT BELT RH ASSEMBLY AND LH ASSEMBLY (SEDAN MODEL)

Install in the reverse order of removal.

#### CAUTION:

- During installation, make sure that the seat belts are not twisted.
- After installation, make sure that the seat belts can be smoothly extended and wound.

### 2. SHOULDER SEAT BELT CTR ASSEMBLY (SEDAN MODEL)

Install in the reverse order of removal.

#### CAUTION:

- During installation, make sure that the seat belts are not twisted.
- After installation, make sure that the seat belts can be smoothly extended and wound.

### 3. CENTER SEAT BELT LH ASSEMBLY (SEDAN MODEL)

Install in the reverse order of removal.

#### CAUTION:

During installation, make sure that the seat belts are not twisted.

### 4. OUTER SEAT BELT RH ASSEMBLY AND LH ASSEMBLY (WAGON MODEL)

Install in the reverse order of removal.

#### CAUTION:

- During installation, make sure that the seat belts are not twisted.
- After installation, make sure that the seat belts can be smoothly extended and wound.

### 5. SHOULDER SEAT BELT CTR ASSEMBLY (WAGON MODEL)

Install in the reverse order of removal.

#### CAUTION:

- During installation, make sure that the seat belts are not twisted.
- After installation, make sure that the seat belts are smoothly extended and wound.

### 6. CENTER SEAT BELT RH ASSEMBLY AND LH ASSEMBLY (WAGON MODEL)

Install in the reverse order of removal.

#### CAUTION:

During installation, make sure that the seat belts are not twisted.

## C: INSPECTION

### 1. OUTER SEAT BELT RH ASSEMBLY AND LH ASSEMBLY (SEDAN MODEL)

Check for the following, and replace with new parts if necessary.

- Seat belt is slackened, bent, or frayed. Seat belt is abnormally wound or extended.

### 2. SHOULDER SEAT BELT CTR ASSEMBLY (SEDAN MODEL)

Check for the following, and replace with new parts if necessary.

- Seat belt is slackened, bent, or frayed. Seat belt is abnormally wound or extended.

### 3. CENTER SEAT BELT LH ASSEMBLY (SEDAN MODEL)

Check for the following, and replace with new parts if necessary.

- Inner belt is deformed or damaged.
- Seat belt buckle is engaged improperly.

#### **4. OUTER SEAT BELT RH ASSEMBLY AND LH ASSEMBLY (WAGON MODEL)**

Check for the following, and replace with new parts if necessary.

- Seat belt is slackened, bent, or frayed. Seat belt is abnormally wound or extended.

#### **5. SHOULDER SEAT BELT CTR ASSEMBLY (WAGON MODEL)**

Check for the following, and replace with new parts if necessary.

- Seat belt is slackened, bent, or frayed. Seat belt is abnormally wound or extended.

#### **6. CENTER SEAT BELT RH ASSEMBLY AND LH ASSEMBLY (WAGON MODEL)**

Check for the following, and replace with new parts if necessary.

- Inner belt is deformed or damaged.
- Seat belt buckle is engaged improperly.