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# SECTION **SB**

## SEAT BELT SYSTEM

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# PRECAUTIONS

< PRECAUTION >

## PRECAUTION

### PRECAUTIONS

#### Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:000000012193021

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

#### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### **WARNING:**

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.

#### Precaution for Seat Belt Service

INFOID:000000011934326

#### **CAUTION:**

- Before removing the front seat belt pre-tensioner assembly, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.
- Do not use electrical test equipment for front seat belt pre-tensioner connector.
- After replacing or reinstalling front seat belt pre-tensioner assembly, or reconnecting front seat belt pre-tensioner connector, check the system function. Refer to [SRC-15, "SRS Operation Check"](#).
- Do not disassemble buckle or seat belt assembly.
- Replace anchor bolts if they are deformed or worn out.
- Do not oil tongue and buckle.
- If any component of seat belt assembly is questionable, do not repair. Replace the whole seat belt assembly.
- If webbing is cut, frayed, or damaged, replace seat belt assembly.
- When replacing seat belt assembly, use a genuine NISSAN seat belt assembly.

#### Precaution for Work

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- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
  - Water soluble dirt:
- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.

## PRECAUTIONS

### < PRECAUTION >

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- Then rub with a soft, dry cloth.
- Oily dirt:
- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

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# PREPARATION

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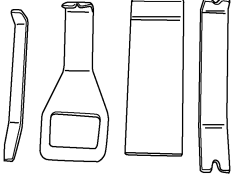
## PREPARATION

### PREPARATION

#### Special Service Tool

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The actual shape of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name	Description
<p>— (J-46534) Trim Tool Set</p>  <p>AWJIA0483ZZ</p>	Removing trim components

# COMPONENT INSPECTION

< BASIC INSPECTION >

## BASIC INSPECTION

### COMPONENT INSPECTION

Inspection

INFOID:0000000011934327

#### AFTER A COLLISION

##### **WARNING:**

**Inspect all seat belt assemblies including retractors and attaching hardware after any collision. NISSAN/INFINITI recommends that all seat belt assemblies in use during a collision be replaced unless the collision was minor and the belts show no damage and continue to operate properly. Failure to do so could result in serious personal injury in an accident. Seat belt assemblies not in use during a collision should also be replaced if either damage or improper operation is noted. Seat belt pretensioners should be replaced even if the seat belts are not in use during a frontal collision in which the air bags are deployed.**

Replace any seat belt assembly (including anchor bolts) if:

- The seat belt was in use at the time of a collision (except for minor collisions and the belts, retractors and buckles show no damage and continue to operate properly).
- The seat belt was damaged in an accident (i.e., torn webbing, bent retractor or guide, etc.).
- The seat belt attaching point was damaged in an accident. Inspect the seat belt attaching area for damage or distortion and repair as necessary before installing a new seat belt assembly.
- Anchor bolts are deformed or worn out.
- The seat belt pre-tensioners should be replaced even if the seat belts are not in use during the collision in which the air bags are deployed.

#### PRELIMINARY CHECKS

1. Check the seat belt warning lamp/chime for proper operation as follows:
  1. Switch ignition ON. The seat belt warning lamp should illuminate. Also, the seat belt warning chime should sound for about six seconds.
  2. Fasten driver's seat belt. The seat belt warning lamp should go out and the chime (if sounding) should stop.
2. If the air bag warning lamp is blinking, conduct self-diagnosis using CONSULT, and air bag warning lamp. Refer to [SRC-15, "SRS Operation Check"](#).
3. Check that the seat belt retractor, seat belt anchor and buckle bolts are securely attached.
4. Check the shoulder seat belt guide and shoulder belt height adjuster for front seats. Make sure guide swivels freely and that webbing lays flat and does not bind in guide. Make sure height adjuster operates properly and holds securely.
5. Check retractor operation:
  - a. Fully extend the seat belt webbing and check for twists, tears or other damage.
  - b. Allow the seat belt to retract. Make sure that webbing returns smoothly and completely into the retractor. If the seat belt does not return smoothly, wipe the inside of the loops with a clean paper cloth. Dirt built up in the loops of the upper anchors can cause the seat belts to retract slowly.
  - c. Fasten the seat belt. Check that the seat belt returns smoothly and completely to the retractor. If the webbing does not return smoothly, the cause may be an accumulation of dust or dirt. Use the "SEAT BELT TAPE SET" and perform the following steps.
    - i. Pull the seat belt out to a length of 500 mm (19.69 in) or more.
    - ii. Use a clip or other device to hold the seat belt at the center pillar webbing opening.
    - iii. Pass a thin wire through the through-anchor webbing opening. Hold both ends of the wire and pull it taut while moving it up and down several times along the webbing opening surface to remove any matter stuck there.
    - iv. Any dirt that cannot be removed with the wire can be removed by cleaning the opening with a clean cloth.
    - v. Apply tape at the point where the webbing contacts the through-anchor webbing opening.
6. Repeat steps above as necessary to check the other seat belts.

##### **NOTE:**

Apply the tape so that there is no looseness or wrinkling.

- vi. Remove the clip holding the seat belt and check that the webbing returns smoothly.

6. Repeat steps above as necessary to check the other seat belts.

# COMPONENT INSPECTION

## < BASIC INSPECTION >

### SEAT BELT RETRACTOR ON-VEHICLE CHECK

Emergency Locking Retractors (ELR) and Automatic Locking Retractors (ALR)

#### NOTE:

All seat belt retractors are of the Emergency Locking Retractors (ELR) type. In an emergency (sudden stop) the retractor will lock and prevent the webbing from extending any further. All 3-point type seat belt retractors except the driver's seat belt also have an Automatic Locking Retractors (ALR) mode. The ALR mode (also called child restraint mode) is used when installing child seats. The ALR mode is activated when the seat belt is fully extended. When the webbing is then retracted partially, the ALR mode automatically locks the seat belt in a specific position so the webbing cannot be extended any further. To cancel the ALR mode, allow the seat belt to fully wind back into the retractor.

Check the seat belt retractors using the following test(s) to determine if a retractor assembly is operating properly.

#### ELR Function Stationary Check

Grasp the shoulder webbing and pull forward quickly. The retractor should lock and prevent the belt from extending further.

#### ALR Function Stationary Check

1. Pull out entire length of seat belt from retractor until a click is heard.
2. Retract the webbing partially. A clicking noise should be heard as the webbing retracts indicating that the retractor is in the Automatic Locking Retractors (ALR) mode.
3. Grasp the seat belt and try to pull out the retractor. The webbing must lock and not extend any further. If NG, replace the retractor assembly.
4. Allow the entire length of the webbing to retract to cancel the automatic locking mode.

#### ELR Function Moving Check

#### WARNING:

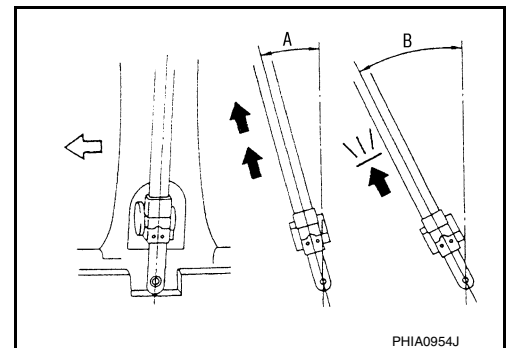
**Perform the following test in a safe, open area clear of other vehicles and obstructions (for example, a large, empty parking lot). Road surface must be paved and dry. DO NOT perform the following test on wet or gravel roads or on public streets and highways. This could result in an accident and serious personal injury. The driver and passenger must be prepared to brace themselves in the event the retractor does not lock.**

1. Fasten driver's seat belt. Buckle a passenger into the seat for the belt that is to be tested.
2. Proceed to the designated safe area.
3. Drive the vehicle at approximately 16 km/h (10 MPH). Notify any passengers of a pending sudden stop. The driver and passenger must be prepared to brace themselves in the event the retractor does not lock. Apply brakes firmly and make a very hard stop.

During stop, seat belts should lock and not be extended. If the seat belt retractor assembly does not lock, perform the retractor off-vehicle check.

### SEAT BELT RETRACTOR OFF-VEHICLE CHECK (PILLAR)

1. Remove the seat belt retractor.
  - Remove the front seat belt assembly, refer to [SB-8, "SEAT BELT RETRACTOR : Removal and Installation"](#).
2. Slowly pull out webbing while tilting the retractor assembly forward from the mounted position without twisting the retractor assembly as shown in the illustration.
  - A:** The webbing can be pulled out if the retractor is tilted 15° degrees or less.
  - B:** The webbing cannot be pulled out if the retractor is tilted 45° degrees or more.
  - A and B show tilting angles.
  - ⇐: Front.



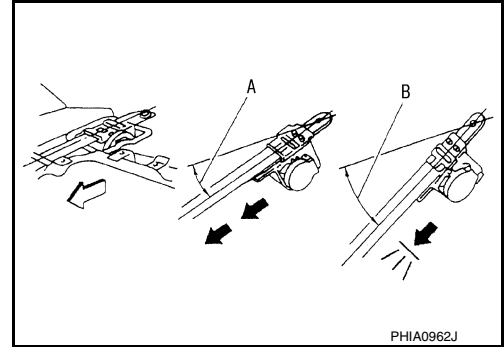
# COMPONENT INSPECTION

## < BASIC INSPECTION >

Replace the seat belt assembly if it does not operate within specifications.

### SEAT BELT RETRACTOR OFF-VEHICLE CHECK (REAR PARCEL SHELF)

1. Remove the seat belt retractor.
  - Remove the rear seat belt assembly, refer to [SB-12, "SEAT BELT RETRACTOR : Removal and Installation"](#).
2. Slowly pull out webbing while tilting the retractor assembly forward from the mounted position without twisting the retractor assembly as shown in the illustration.
  - A:** The webbing can be pulled out if the retractor is tilted 15° degrees or less.
  - B:** The webbing cannot be pulled out if the retractor is tilted 45° degrees or more.
  - A and B show tilting angles.
  - ←: Front.



Replace the seat belt assembly if it does not operate within specifications.

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# FRONT SEAT BELT

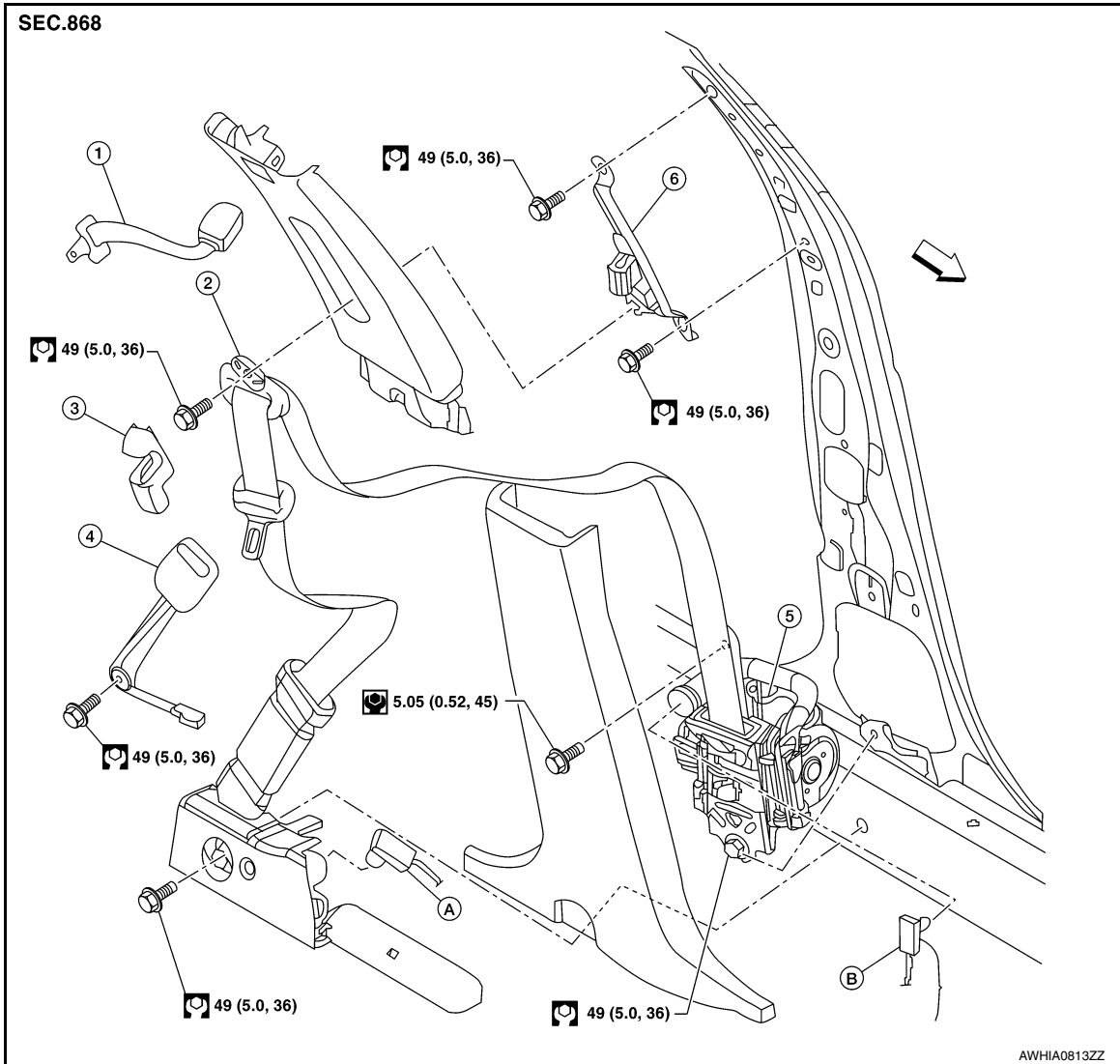
< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

### FRONT SEAT BELT

Exploded View

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- |   |  |                                    |
|---|--|------------------------------------|
| 1. Seat belt extender                       | 2. D-ring anchor                                 | 3. Seat belt height adjuster cover |
| 4. Seat belt buckle                         | 5. Seat belt retractor                           | 6. Seat belt height adjuster       |
| A. Lap belt pre-tensioner harness connector | B. Shoulder belt pre-tensioner harness connector | ← Front                            |

## SEAT BELT RETRACTOR

### SEAT BELT RETRACTOR : Removal and Installation

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#### REMOVAL

#### **WARNING:**

- Before servicing the SRS, turn the ignition switch OFF, disconnect both battery terminals then wait at least three minutes.
- Do not drop the seat belt retractor. Always handle it with care.
- Always point pre-tensioner cylinder away from body when handling.

1. Slide front seat to the full forward position.



# FRONT SEAT BELT

## < REMOVAL AND INSTALLATION >

2. Disconnect both negative and positive battery terminals, then wait at least 3 minutes. Refer to [PG-101, "Exploded View"](#).
3. Remove center pillar lower finisher. Refer to [INT-36, "CENTER PILLAR LOWER FINISHER : Removal and Installation"](#).

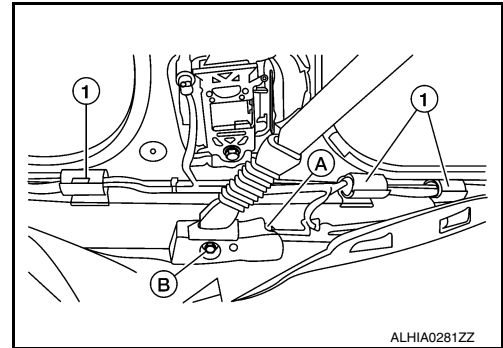
4. Release the floor trim hold downs (1) and pull floor trim back.

⇐: Front

### NOTE:

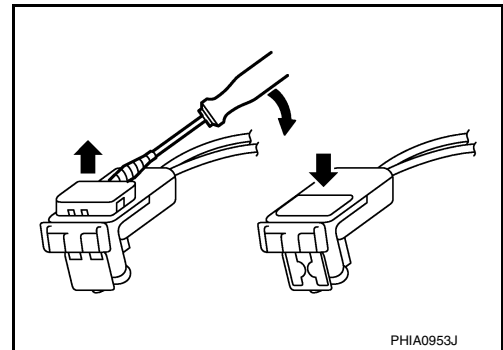
Driver side shown with seat removed for clarity; passenger side similar.

5. Disconnect the harness connector (A) from the lap belt pre-tensioner.



### CAUTION:

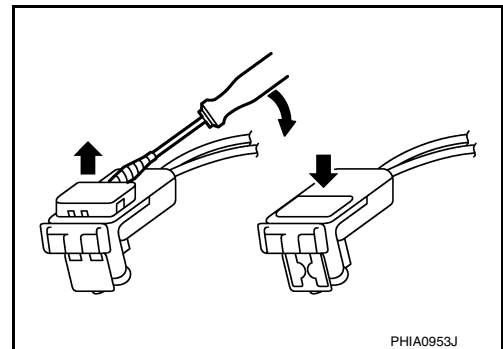
- For removing/installing the lap belt pre-tensioner harness connector, insert a thin screwdriver wrapped in tape into the notch, then lift the lock and remove the harness connector as shown.
- Install the harness connector with the lock raised, and push the lock into the harness connector as shown.
- After installing the harness connector, check that the lock is pushed in securely.



6. Remove the lap belt pre-tensioner anchor bolt (B).
7. Disconnect the harness connector from the shoulder belt pre-tensioner.

### CAUTION:

- For removing/installing shoulder belt pre-tensioner harness connector, insert a thin screwdriver wrapped in tape into the notch, then lift the lock and remove the harness connector as shown.
- Install harness connector with the lock raised, and push the lock into the harness connector as shown.
- After installing the harness connector, check that the lock is pushed in securely.



8. Remove seat belt retractor bolts, then remove seat belt retractor.

## INSTALLATION

Installation is in the reverse order of removal.

### CAUTION:

- Make sure seat belt height adjuster is locked in lowest position and is aligned with center pillar upper finisher opening during installation.
- Make sure both the D-ring anchor and seat belt height adjuster operate freely.
- Always perform an inspection after repair to make sure system is functioning within specifications. Refer to [SB-5, "Inspection"](#).

## SEAT BELT HEIGHT ADJUSTER

### SEAT BELT HEIGHT ADJUSTER : Removal and Installation

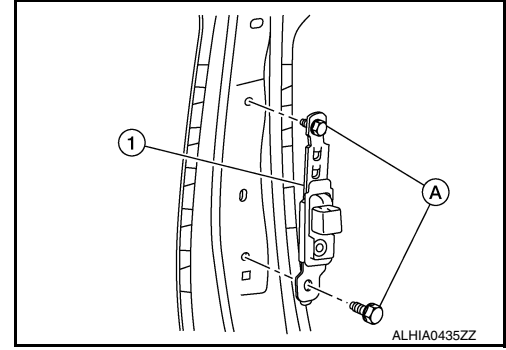
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## REMOVAL

## FRONT SEAT BELT

### < REMOVAL AND INSTALLATION >

1. Remove center pillar upper finisher. Refer to [INT-36. "CENTER PILLAR UPPER FINISHER : Removal and Installation"](#).
2. Remove seat belt height adjuster bolts (A) and seat belt height adjuster (1).



### INSTALLATION

Installation is in the reverse order of removal.

#### CAUTION:

- Make sure seat belt height adjuster is locked in lowest position and is aligned with the center pillar upper finisher opening during installation.
- Make sure both D-ring anchor and seat belt height adjuster operate freely.
- Always perform an inspection after repair to make sure system is functioning within specifications. Refer to [SB-5. "Inspection"](#).

## FRONT SEAT BELT BUCKLE

### FRONT SEAT BELT BUCKLE : Removal and Installation

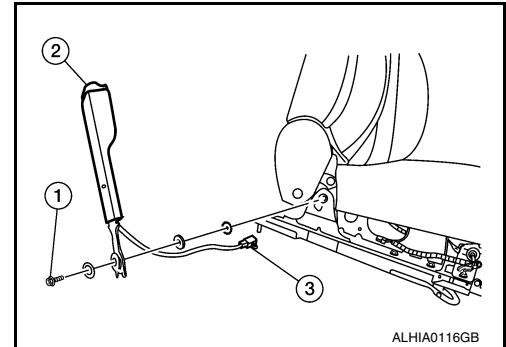
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### REMOVAL

1. Remove the front seat. Refer to [SE-79. "Removal and Installation"](#) (WITH CLIMATE CONTROLLED SEATS), or [SE-79. "Removal and Installation"](#) (W/O CLIMATE CONTROLLED SEATS).
2. Disconnect the harness connector (3) from the seat belt buckle, then release harness clip from the seat rail.
3. Remove seat belt buckle anchor bolt (1), then remove the seat belt buckle (2) from front seat.

#### CAUTION:

Before removing the seat belt buckle anchor bolt, note the positions of washers and spacers for correct installation.

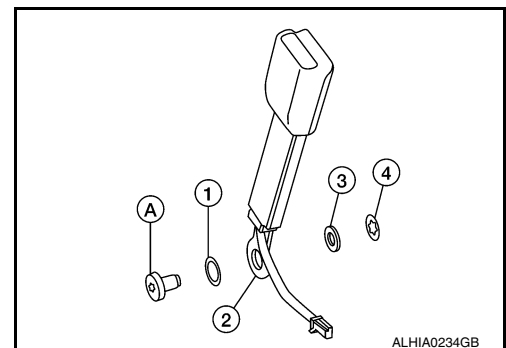


### INSTALLATION

Installation is in the reverse order of removal.

- During installation, make sure seat belt buckle anchor bolt (A) is inserted through the components in the following order:

1.	Wave washer
2.	Seat belt buckle
3.	Spacer
4.	Star washer



#### CAUTION:

# FRONT SEAT BELT

< REMOVAL AND INSTALLATION >

**Always perform an inspection after repair to make sure system is functioning within specifications. Refer to [SB-5, "Inspection"](#).**

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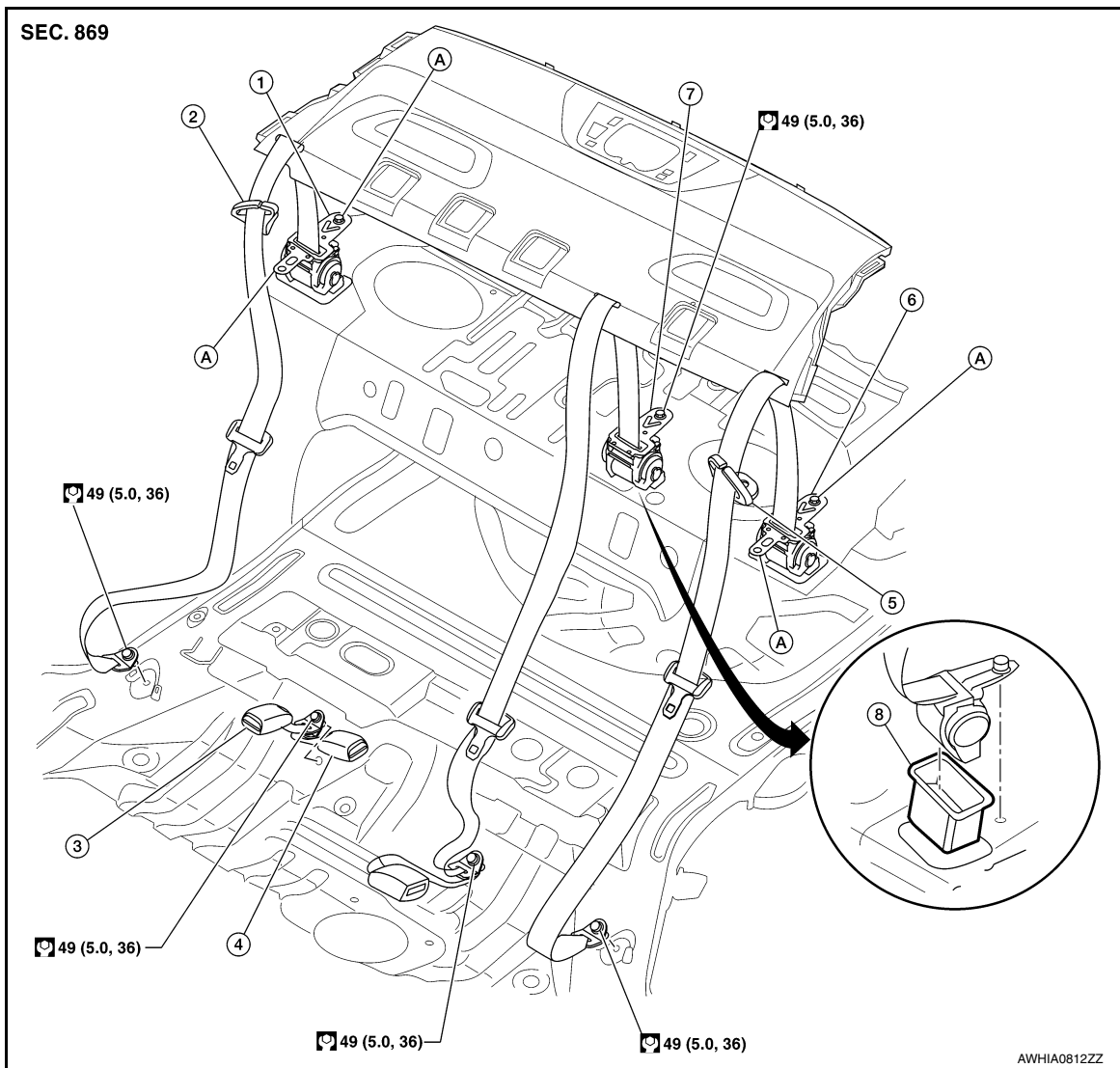
# REAR SEAT BELT

< REMOVAL AND INSTALLATION >

## REAR SEAT BELT

Exploded View

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- |   |                            |                                      |
|---|----------------------------|--------------------------------------|
| 1. Seat belt retractor assembly (RH)                                | 2. Seat belt hook (RH)     | 3. Seat belt buckle (RH)             |
| 4. Seat belt buckle (center)  | 5. Seat belt hook (LH)     | 6. Seat belt retractor assembly (LH) |
| 7. Seat belt retractor assembly (center) with seat belt buckle (LH) | 8. Seat belt retractor box | A. Refer to INSTALLATION             |

## SEAT BELT RETRACTOR

### SEAT BELT RETRACTOR : Removal and Installation

INFOID:000000011934331

Removal - (LH/RH)

1. Remove the rear parcel shelf finisher. Refer to [INT-40. "Removal and Installation"](#).
2. Remove the lower anchor bolt.
3. Remove retractor bolts, then remove seat belt retractor assembly.

Installation

Installation is in the reverse order of removal.

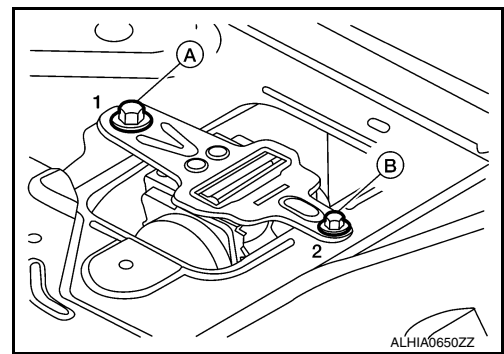
## REAR SEAT BELT

### < REMOVAL AND INSTALLATION >

- Hand tighten bolts (A/B) in the order shown then tighten to specification in the order shown.

**Seat belt retractor bolt (A) : 49 N·m (5.0 kg-m, 36 ft-lb)**

**Seat belt retractor bolt (B) : 5 N·m (0.5 kg-m, 43 in-lb)**



- Always perform an inspection after repair to be sure the system is functioning within specifications. Refer to [SB-5, "Inspection"](#).

#### Removal - (center) with seat belt buckle (LH)

1. Remove the rear seat cushion. Refer to [SE-89, "Removal and Installation"](#).
2. Remove the center lower anchor bolt.
3. Remove the rear parcel shelf finisher. Refer to [INT-40, "Removal and Installation"](#).
4. Remove retractor anchor bolt, then remove seat belt retractor assembly center.

#### Installation

Installation is in the reverse order of removal.

- Always perform an inspection after repair to be sure the system is functioning within specifications. Refer to [SB-5, "Inspection"](#).

## SEAT BELT BUCKLE

### SEAT BELT BUCKLE : Removal and Installation

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#### SEAT BELT BUCKLE - (RH/center)

##### Removal

1. Remove the rear seat cushion. Refer to [SE-119, "SEAT CUSHION : Disassembly and Assembly"](#) (W/O CLIMATE CONTROLLED SEATS), or [SE-89, "Removal and Installation"](#) (WITH CLIMATE CONTROLLED SEATS).
2. Remove seat belt buckle anchor bolt, then remove the seat belt buckle. Refer to [SB-12, "Exploded View"](#).

##### Installation

Installation is in the reverse order of removal.

##### **CAUTION:**

**Always perform an inspection after repair to make sure system is functioning within specifications. Refer to [SB-5, "Inspection"](#).**

# LATCH SYSTEM FOR CHILDREN

< REMOVAL AND INSTALLATION >

## LATCH SYSTEM FOR CHILDREN

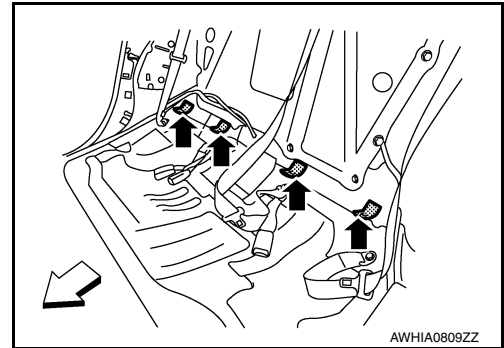
### Removal and Installation

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**NOTE:**

The LATCH (Lower Anchors and Tether for CHildren) system is a built-in part of the vehicle structure, and is not serviceable.

←: Front



# TOP TETHER STRAP CHILD RESTRAINT

< REMOVAL AND INSTALLATION >

## TOP TETHER STRAP CHILD RESTRAINT

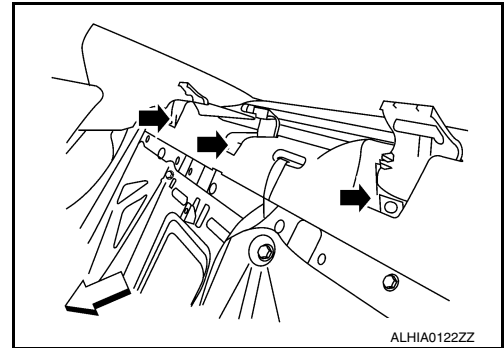
### Removal and Installation

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**NOTE:**

The top tether strap child restraint is a built-in part of the vehicle structure and is not serviceable.

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