

SECTION **SB**  
SEAT BELTS

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# PRECAUTIONS

< PRECAUTION >

## PRECAUTION

### PRECAUTIONS

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

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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. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SRS 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 SRS 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 3 minutes before performing any service.

#### Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

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#### **NOTE:**

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYSTEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the "LOCK" position.
- Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.

For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.

If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

#### OPERATION PROCEDURE

1. Connect both battery cables.

#### **NOTE:**

Supply power using jumper cables if battery is discharged.

2. Use the Intelligent Key or mechanical key to turn the ignition switch to the "ACC" position. At this time, the steering lock will be released.
3. Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
4. Perform the necessary repair operation.

# PRECAUTIONS

## < PRECAUTION >

5. When the repair work is completed, return the ignition switch to the "LOCK" position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
6. Perform a self-diagnosis check of all control units using CONSULT.

## Precaution for Seat Belt Service

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### CAUTION:

- Before removing the front seat belt pre-tensioner assembly, turn the ignition switch off, disconnect the both battery cables and wait at least 3 minutes.
- After replacing or reinstalling front seat belt pre-tensioner assembly, or reconnecting front seat belt pre-tensioner connector, check the system function. Refer to [SRS-19, "SRS Operation Check"](#).
- Do not disassemble buckle or seat belt assembly.
- Do not reuse seat belt anchor bolts after removal. Replace with new ones.
- Replace anchor bolts if they are deformed or worn out.
- Never 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.

## AFTER A COLLISION

### WARNING:

- Inspect all seat belt assemblies including retractors and attaching hardware after any collision.
- NISSAN 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 pre-tensioner 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).
- 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-tensioner should be replaced even if the seat belts are not in use during the collision in which the air bags are deployed.

# SEAT BELTS

< ON-VEHICLE REPAIR >

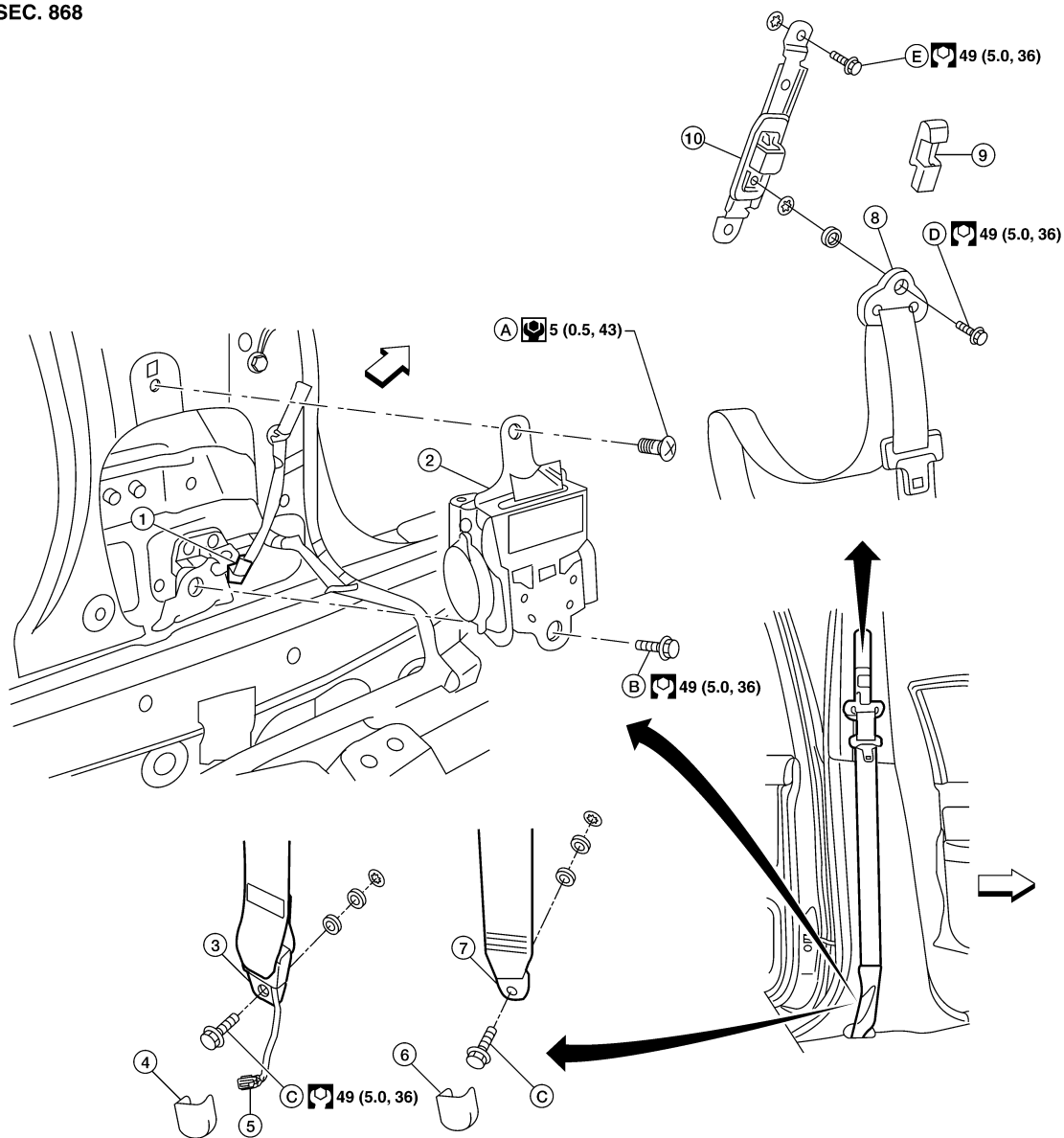
## ON-VEHICLE REPAIR

### SEAT BELTS

#### Removal and Installation of Front Seat Belt

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- |                                       |                                  |  |
|---------------------------------------|----------------------------------|--|
| 1. Seat belt pre-tensioner connector  | 2. Seat belt retractor           | 3. Outer anchor RH (belt tension sensor) |
| 4. Anchor cover (belt tension sensor) | 5. Belt tension sensor connector | 6. Anchor cover                          |
| 7. Outer anchor LH                    | 8. D-ring anchor                 | 9. Adjuster cover                        |
| 10. Seat belt adjuster                | A. Retractor bolt upper          | B. Retractor anchor bolt                 |
| C. Outer anchor bolt                  | D. D-ring anchor bolt            | E. Adjuster anchor bolt                  |
- ← Vehicle front

#### CAUTION:

Before servicing the SRS, turn the ignition switch off, disconnect both battery terminals and wait at least three minutes.

# SEAT BELTS

< ON-VEHICLE REPAIR >

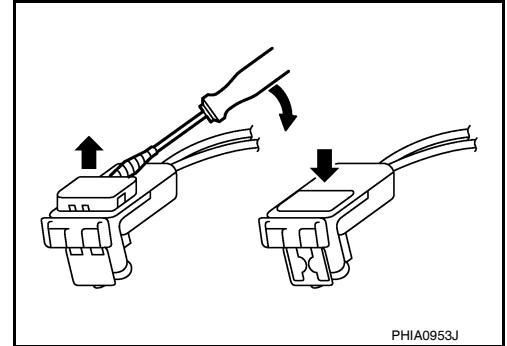
## REMOVAL OF SEAT BELT RETRACTOR

1. Disconnect both the negative and positive battery terminals, then wait at least three minutes.
2. Remove the adjuster cover and D-ring anchor bolt.
3. Remove both the center pillar upper and lower garnish. Refer to [EI-35](#).

**WARNING:**

**Do not reuse center pillar upper garnish if removed.**

4. Pull the floor trim away from center pillar.
5. Disconnect seat belt tension sensor connector and pre-tensioner connector. Refer to [SRS-7, "SRS Component Connectors"](#).



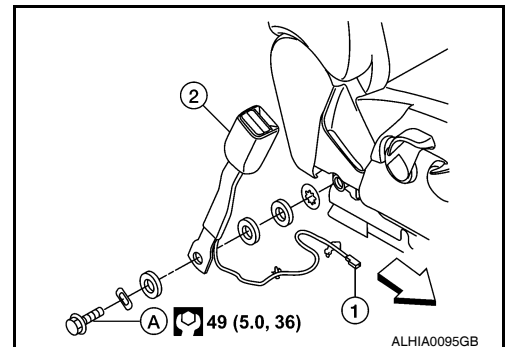
6. Remove the outer anchor bolt.
7. Remove the seat belt retractor screw and anchor bolt, then remove the seat belt retractor.

## INSTALLATION OF SEAT BELT RETRACTOR

Installation is in the reverse order of removal.

## REMOVAL OF SEAT BELT BUCKLE

1. Remove the front seat, refer to [SE-14, "Removal and Installation"](#).
2. Disconnect the seat belt buckle harness connector (1).  
⇐: Vehicle front
3. Remove the anchor bolt (A), then remove the seat belt buckle (2).



## INSTALLATION OF SEAT BELT BUCKLE

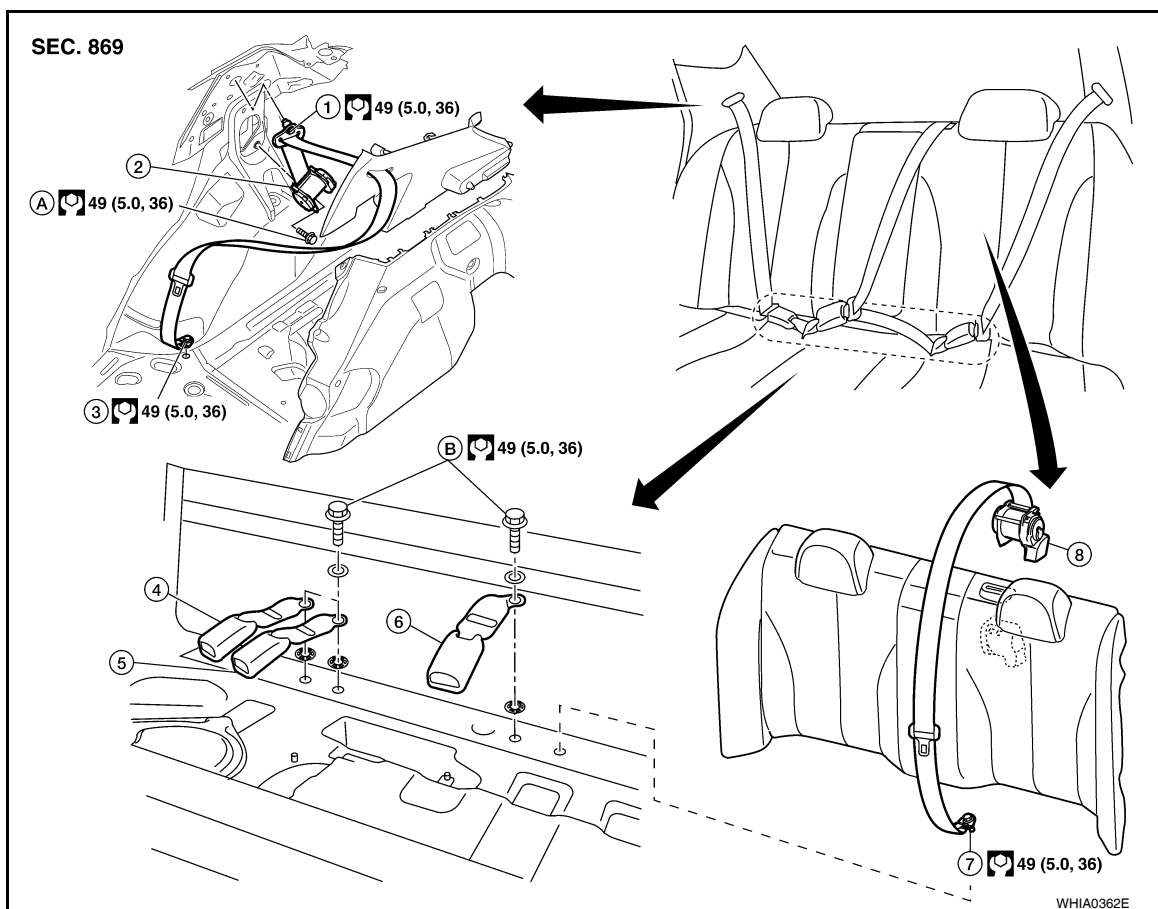
Installation is in the reverse order of removal.

# SEAT BELTS

< ON-VEHICLE REPAIR >

## Removal and Installation of Rear Seat Belt

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- |                            |                                 |                                   |
|----------------------------|---------------------------------|-----------------------------------|
| 1. D-ring anchor           | 2. Outer seat belt retractor RH | 3. Outer anchor bolt              |
| 4. Seat belt buckle center | 5. Seat belt buckle RH          | 6. Seat belt buckle LH            |
| 7. Center anchor bolt      | 8. Center seat belt retractor   | A. Outer retractor anchor bolt RH |
| B. Buckle anchor bolt      |                                 |                                   |

### REMOVAL OF OUTER SEAT BELT RETRACTOR

1. Remove rear seatback, cushion and seat back side, refer to [SE-22, "Removal and Installation"](#).
2. Remove the tonneau board. Refer to [EI-44, "Removal and Installation"](#).
3. Remove the luggage floor center board. Refer to [EI-44, "Removal and Installation"](#).
4. Remove the outer anchor bolt.
5. Remove the luggage side lower finisher, refer to [EI-44, "Removal and Installation"](#).
6. Remove the D-ring anchor bolt.
7. Remove the outer retractor anchor bolt, then remove outer seat belt retractor.

### INSTALLATION OF OUTER SEAT BELT RETRACTOR

Installation is in the reverse order of removal.

### REMOVAL OF CENTER SEAT BELT RETRACTOR

1. Remove and disassemble the rear seat cushion, refer to [SE-22, "Removal and Installation"](#).
2. Remove the center seat belt retractor.

### INSTALLATION OF CENTER SEAT BELT RETRACTOR

Installation is in the reverse order of removal.

### REMOVAL OF SEAT BELT BUCKLE

1. Remove rear seat cushion, refer to [SE-22, "Removal and Installation"](#).

# SEAT BELTS

## < ON-VEHICLE REPAIR >

2. Remove the tonneau board. Refer to [EI-44, "Removal and Installation"](#).
3. Remove the luggage floor center board. Refer to [EI-44, "Removal and Installation"](#).
4. Remove buckle anchor bolt, then remove seat belt buckle.

## INSTALLATION OF SEAT BELT BUCKLE

Installation is in the reverse order of removal.

## Seat Belt Inspection

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## AFTER A COLLISION

### **WARNING:**

**Inspect all seat belt assemblies including retractors and attaching hardware after any collision. NISSAN 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 pre-tensioner 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-tensioner should be replaced even if the seat belts are not in use during a frontal collision in which the air bags are deployed.

## PRELIMINARY CHECKS

1. Check the seat belt warning lamp/chime for proper operation as follows:
  - a. Switch ignition ON. The seat belt warning lamp should illuminate. Also, the seat belt warning chime should sound for about seven seconds.
  - b. 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 [SRS-19, "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 build-up in the loops of the upper anchors can cause the seat belts to retract slowly.
  - c. Fasten the seat belt. Check 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.

Inspect the front seat belt through-anchor

1. Pull the seat belt out to a length of 500 mm (19.69 in) or more.
2. Use a clip or other device to attach the seat belt at the center pillar webbing opening.
3. Pass a thin wire through the D-ring anchor webbing opening. Hold both ends of the wire and pull taut while moving it up and down several times along the webbing opening surface to remove matter stuck there.
4. Any dirt that cannot be removed with the wire can be removed by cleaning the opening with a clean cloth.
5. Apply tape at the point where the webbing contacts the through-anchor webbing opening.

### **NOTE:**

# SEAT BELTS

## < ON-VEHICLE REPAIR >

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

6. Remove the clip attaching the seat belt and check that the webbing returns smoothly.
6. Repeat steps above as necessary to check the other seat belts.

## 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 it 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 and 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 the 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

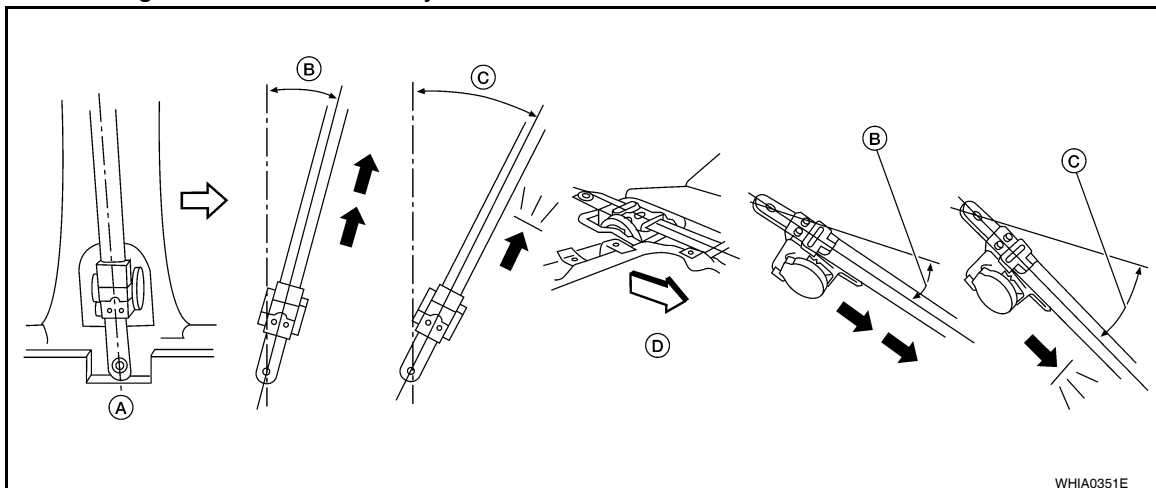
1. Remove the seat belt retractor. Refer to [SB-4, "Removal and Installation of Front Seat Belt"](#).



## SEAT BELTS

### < ON-VEHICLE REPAIR >

2. Slowly pull out seat belt webbing while tilting the retractor assembly forward from the installed position without twisting the retractor assembly as shown in the illustration.



- A:** Seat belt retractor in vertically installed position.  
**B:** With 15° or less tilt, the webbing can be pulled out.  
**C:** With 35° or more tilt, the webbing can not be pulled out.  
**D:** Seat belt retractor in horizontally installed position.

⇐: Vehicle front.

If the seat belt does not operate properly within the specifications, replace the seat belt retractor assembly.

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# LATCH (LOWER ANCHORS AND TETHER FOR CHILDREN) SYSTEM

< ON-VEHICLE REPAIR >

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## LATCH (LOWER ANCHORS AND TETHER FOR CHILDREN) SYSTEM

### Removal and Installation

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**NOTE:**

The LATCH (Lower Anchors and Tether for Children) system is not serviceable.

# TOP TETHER STRAP CHILD RESTRAINT

< ON-VEHICLE REPAIR >

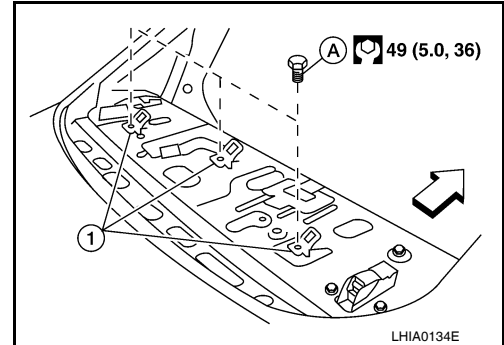
## TOP TETHER STRAP CHILD RESTRAINT

### Removal and Installation

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#### REMOVAL

1. Disconnect the negative battery cable.
2. Remove the tonneau board. Refer to [EI-44, "Removal and Installation"](#).
3. Remove the bolt (A), then remove the top tether bracket (1) from the body panel.  
↶: Vehicle front



#### INSTALLATION

Installation is in the reverse order of removal.

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