

SECTION

RSU

REAR SUSPENSION

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RSU

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## PRECAUTIONS

< PRECAUTION >

### PRECAUTION

#### PRECAUTIONS

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

INFOID:000000014417907

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, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.
- Improper repair, 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 Air Bag Diagnosis Sensor Unit or other Air Bag 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 or batteries, and wait at least three minutes before performing any service.

##### Precautions for Suspension

INFOID:000000014417908

- When installing rubber bushings, the final tightening must be carried out under unladen conditions with tires on ground. Spilled oil might shorten the life of rubber bushings. Be sure to wipe off any spilled oil.
- Unladen conditions mean that fuel, engine coolant and lubricants are full. Spare tire, jack, hand tools and mats are in designated positions.
- After servicing suspension parts, be sure to check wheel alignment.
- Self-lock nuts are not reusable. Always use new ones when installing. Since new self-lock nuts are pre-oiled, tighten as they are.

# PREPARATION

< PREPARATION >

## PREPARATION

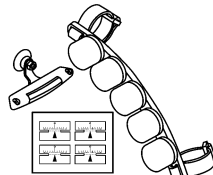
### PREPARATION

#### Special Service Tool

INFOID:0000000014417909

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

| Tool number<br>(TechMate No.)<br>Tool name | Description              |
|--------------------------------------------|--------------------------|
| —<br>(J-49286)<br>Drift and pull gauge set | Measuring drift and pull |



AWEIA01562Z

#### Commercial Service Tool

INFOID:0000000014417910

| Tool name  | Description                      |
|------------|----------------------------------|
| Power tool | Loosening nuts, screws and bolts |



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# NOISE VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

### NOISE VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

#### NVH Troubleshooting Chart

INFOID:0000000014417911

Use the chart below to help you find the cause of the symptom. If necessary, repair or replace the parts.

| Reference page                     |                               | <a href="#">RSU-6</a>            | <a href="#">RSU-11</a>                           | <a href="#">RSU-6</a>             | <a href="#">RSU-6</a> | <a href="#">RSU-7</a> | <a href="#">RSU-6</a> | <a href="#">DLN-163</a> [3F(2CVJ)], [3S(2CVJ)] | <a href="#">DLN-246</a> (MA248), <a href="#">DLN-285</a> [MA248 (ELD)], <a href="#">DLN-382</a> (MA241), <a href="#">DLN-413</a> [MA241 (ELD)] | <a href="#">RAX-4</a> | <a href="#">WT-64</a> | <a href="#">WT-64</a> | <a href="#">BR-7</a> | <a href="#">ST-33</a> |
|------------------------------------|-------------------------------|----------------------------------|--------------------------------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|----------------------|-----------------------|
| Possible cause and SUSPECTED PARTS |                               | Improper installation, looseness | Shock absorber deformation, damage or deflection | Bushing or mounting deterioration | Parts interference    | Spring fatigue        | Suspension looseness  | REAR PROPELLER SHAFT                           | REAR FINAL DRIVE                                                                                                                               | REAR AXLE             | TIRES                 | WHEEL                 | BRAKES               | STEERING              |
| Symptoms                           | Noise                         | x                                | x                                                | x                                 | x                     | x                     | x                     | x                                              | x                                                                                                                                              | x                     | x                     | x                     | x                    | x                     |
|                                    | Shake                         | x                                | x                                                | x                                 | x                     |                       | x                     | x                                              |                                                                                                                                                | x                     | x                     | x                     | x                    | x                     |
|                                    | Vibration                     | x                                | x                                                | x                                 | x                     | x                     |                       | x                                              |                                                                                                                                                | x                     | x                     |                       |                      | x                     |
|                                    | Shimmy                        | x                                | x                                                | x                                 | x                     |                       |                       |                                                |                                                                                                                                                | x                     | x                     | x                     | x                    | x                     |
|                                    | Shudder                       | x                                | x                                                | x                                 |                       |                       |                       |                                                |                                                                                                                                                | x                     | x                     | x                     | x                    | x                     |
|                                    | Poor-quality ride or handling | x                                | x                                                | x                                 | x                     | x                     | x                     |                                                |                                                                                                                                                | x                     | x                     | x                     |                      |                       |

x: Applicable

# REAR SUSPENSION ASSEMBLY

< PERIODIC MAINTENANCE >

## PERIODIC MAINTENANCE

### REAR SUSPENSION ASSEMBLY

#### Inspection

INFOID:0000000014417912

#### ON-VEHICLE SERVICE

- Check the suspension parts for excessive play, cracks, wear or damage. Shake each rear wheel to check for excessive play.
- Retighten all nuts and bolts to the specified torque.
- Check the wheelarch height. Refer to [RSU-14. "Wheelarch Height \(Unladen\\*1\)".](#)

#### SHOCK ABSORBER

- Check for smooth operation through a full stroke for both compression and extension.
- Check for oil leakage on the welded or gland packing portions.
- Check the shock absorber piston rod for cracks, deformation or other damage and replace if necessary.

#### BUSHINGS

Check the bushings for excessive wear or damage and replace if necessary.

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# LEAF SPRING

< REMOVAL AND INSTALLATION >

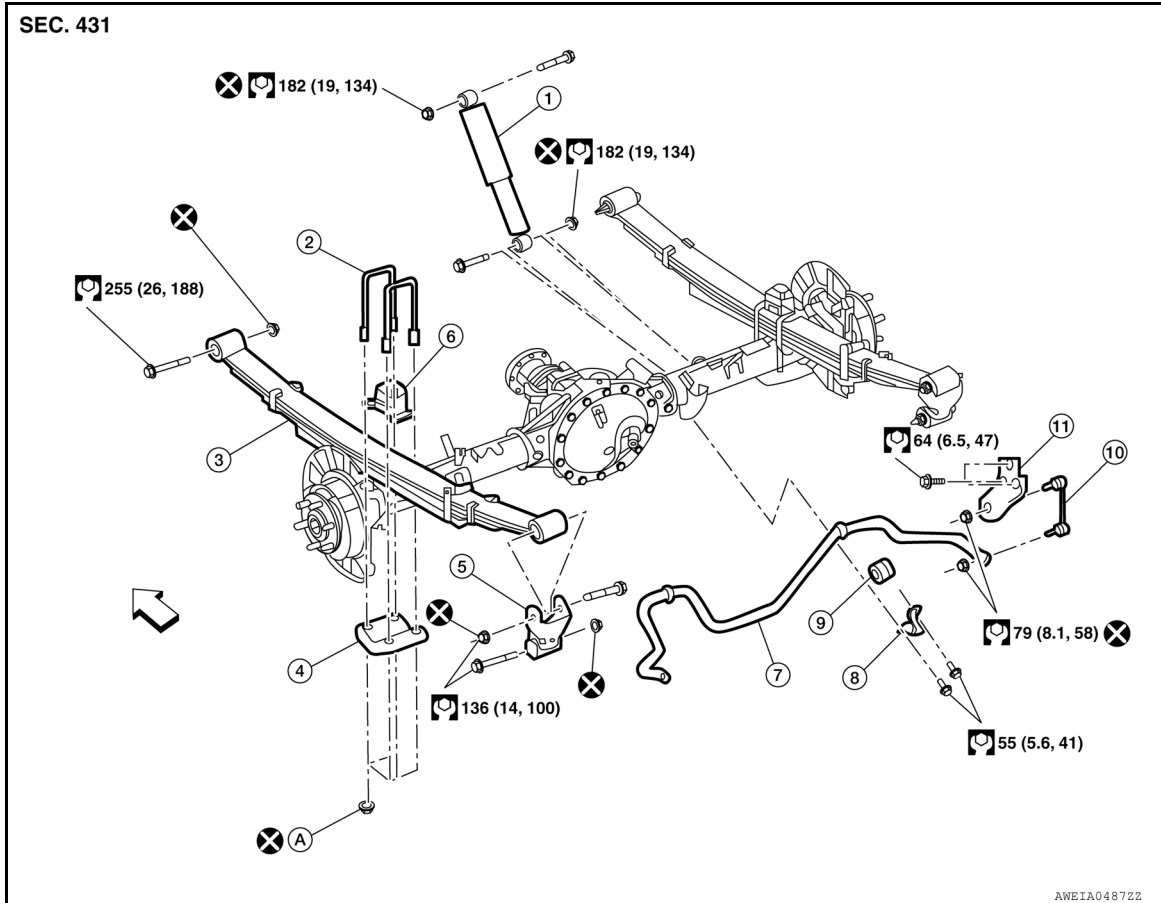
## REMOVAL AND INSTALLATION

### LEAF SPRING

Exploded View

INFOID:0000000014417913

XD Models

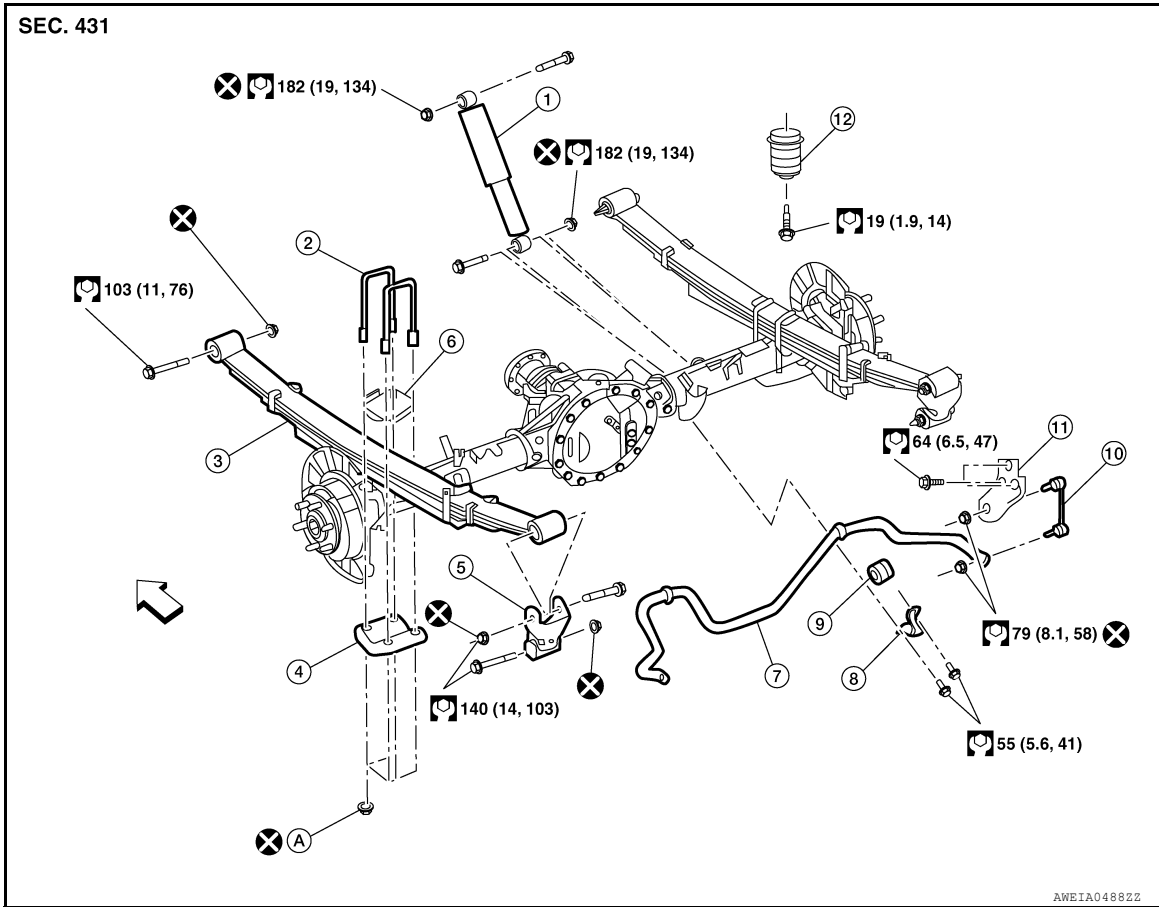


- |                                    |                             |                                 |
|------------------------------------|-----------------------------|---------------------------------|
| 1. Rear shock absorber             | 2. Rear leaf spring U-bolts | 3. Rear leaf spring             |
| 4. Rear leaf spring lower seat     | 5. Rear leaf spring shackle | 6. Rear leaf spring seat/bumper |
| 7. Rear stabilizer                 | 8. Rear stabilizer clamp    | 9. Rear stabilizer bushing      |
| 10. Rear stabilizer connecting rod | 11. Rear stabilizer bracket |                                 |
| A. Refer to INSTALLATION.          | Front                       |                                 |

# LEAF SPRING

## < REMOVAL AND INSTALLATION >

Non-XD Models



- |                                    |                             |                                |
|------------------------------------|-----------------------------|--------------------------------|
| 1. Rear shock absorber             | 2. Rear leaf spring U-bolts | 3. Rear leaf spring            |
| 4. Rear leaf spring lower seat     | 5. Rear leaf spring shackle | 6. Rear leaf spring upper seat |
| 7. Rear stabilizer                 | 8. Rear stabilizer clamp    | 9. Rear stabilizer bushing     |
| 10. Rear stabilizer connecting rod | 11. Rear stabilizer bracket | 12. Rear bumper                |
| A. Refer to INSTALLATION.          | ↩ Front                     |                                |

## Removal and Installation

INFOID:0000000014417914

### REMOVAL

1. Remove wheel and tire using power tool. Refer to [WT-69. "Exploded View"](#).
2. Support rear final drive using suitable jack.

#### **WARNING:**

Place suitable jack under center of rear final drive.

#### **CAUTION:**

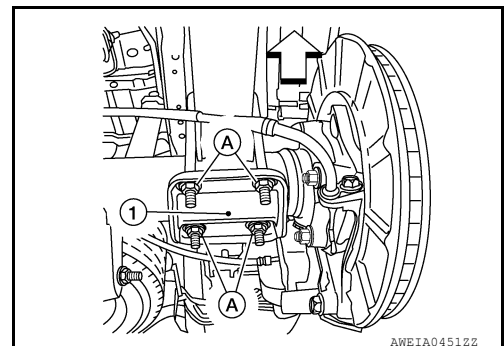
The axle weight must be supported, but there should be no compression in leaf spring.

3. Remove U-bolt nuts (A) using power tool and remove rear leaf spring lower seat (1).

#### **CAUTION:**

Do not reuse U-bolt nuts.

↩ : Front



## LEAF SPRING

### < REMOVAL AND INSTALLATION >

4. For XD Models, remove U-bolts and rear leaf spring seat/bumper. For Non-XD Models, remove rear leaf spring upper seat.

5. Remove nut (B) and bolt (A) using power tool. Nut fits into pocket (1) on frame rail that prevents it from turning with bolt.

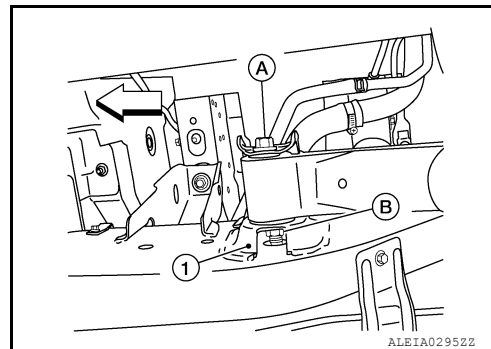
**CAUTION:**

**Do not reuse rear leaf spring nut.**

**NOTE:**

Nut will drop out of slot in pocket when bolt is removed.

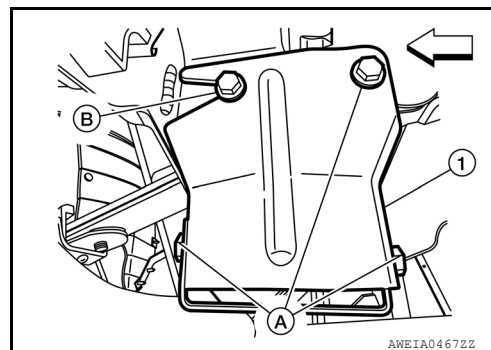
⇐ : Front



6. For removing the (LH) rear leaf spring from XD Models, remove spare tire.

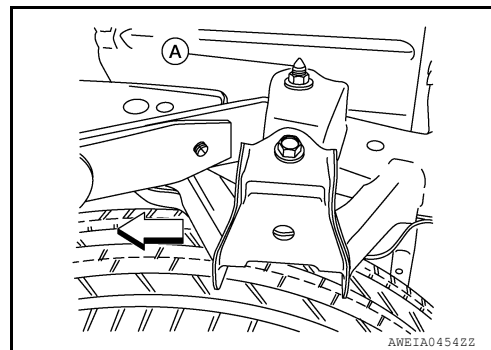
7. For XD Models, remove bolts (A) loosen bolt (B) and remove trailer hitch support bracket (1)

⇐ : Front



8. Loosen rear spring to shackle upper nut and bolt (A).

⇐ : Front

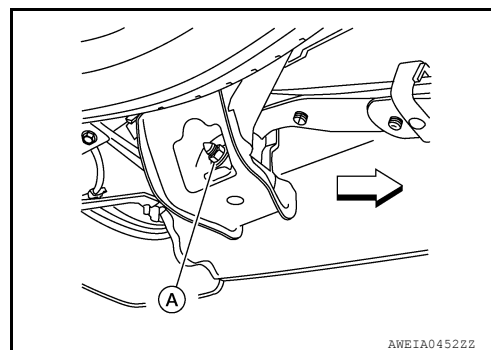


9. Remove nut and bolt from rear leaf spring shackle.
- For XD Models, remove bolt and nut (A) from rear leaf spring shackle.

**CAUTION:**

**Do not reuse rear leaf spring shackle nut.**

⇐ : Front



# LEAF SPRING

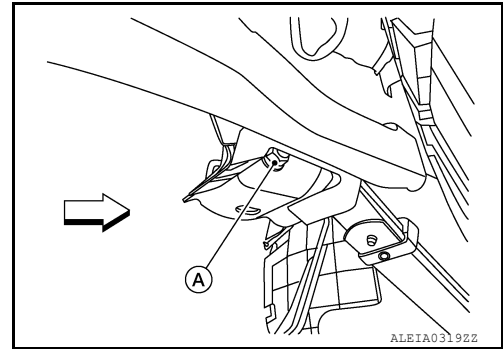
## < REMOVAL AND INSTALLATION >

- For Non-XD Models, remove bolt and nut (A) from rear leaf spring shackle.

### CAUTION:

**Do not reuse rear leaf spring shackle nut.**

⇐ : Front



10. Remove rear leaf spring and rear leaf spring shackle as an assembly from vehicle.

11. Remove rear leaf spring shackle from rear leaf spring (if necessary).

## INSPECTION AFTER REMOVAL

- Check rear leaf spring for any cracks or damage. Replace rear leaf spring if necessary.
- Check rear spring shackle, rear leaf spring U-bolts, bumper and rear spring upper pad for excessive wear, cracks, straightness, and damage. Replace any components if necessary.
- Check all bushings for deformation and cracks. Replace leaf spring if necessary.

## INSTALLATION

- Apply soapsuds to all rubber bushings.
- Install rear leaf spring shackle and rear leaf spring front nut and bolt. Finger-tighten nuts.

### CAUTION:

**Do not reuse rear leaf spring shackle nuts.**

### NOTE:

To prevent side-to-side leaning, match the spring classification marks. If one spring mark is "(+)", then the other spring mark must be "(+)". If one spring mark is "(-)", then the other spring mark must be "(-)".

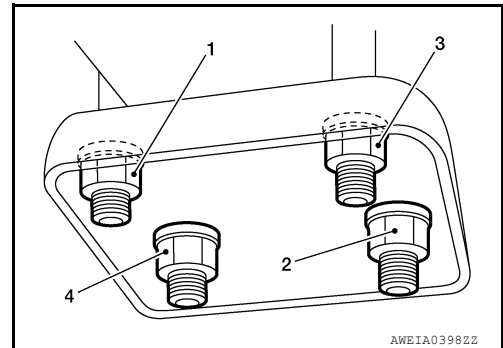
- For XD Models, position rear leaf spring U-bolts and rear seat/bumper on top of rear leaf spring. For Non-XD Models, position rear leaf spring U-bolts and rear spring upper seat on top of rear leaf spring.
- Install rear leaf spring lower seat and rear leaf spring U-bolt nuts under rear final drive axle case.

### CAUTION:

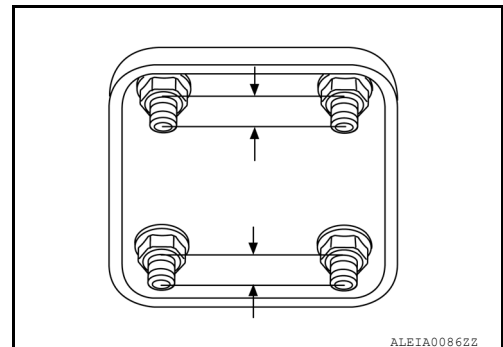
**Do not reuse rear leaf spring U-bolt nuts.**

- Tighten rear leaf spring U-bolt nuts diagonally and evenly using the following procedure:
  - Tighten rear leaf spring U-bolt nuts until rear leaf spring pad contacts rear final drive axle case.
  - Tighten rear leaf spring U-bolt nuts diagonally and evenly to specified torque.

**Specified torque :153 N·m (16 kg-m, 113 ft-lb)**



- Tighten rear leaf spring U-bolt nuts to specification so lengths of all exposed rear leaf spring U-bolt threads under rear spring pad are equal in length as shown. Thread protrusion difference between front and rear must not be more than 3 mm (0.1 in).



## LEAF SPRING

### < REMOVAL AND INSTALLATION >

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6. Tighten the rear leaf spring front bolt, the rear leaf spring to shackle nut, and the shackle to frame bolt to specification. Refer to [RSU-6, "Exploded View"](#).

**NOTE:**

Perform the final tightening of nuts and bolts under unladen conditions with tires on level ground.

# SHOCK ABSORBER

< REMOVAL AND INSTALLATION >

## SHOCK ABSORBER

### Removal and Installation

INFOID:0000000014417915

#### REMOVAL

1. Support rear final drive using a suitable jack.

**WARNING:**

**Place suitable jack under center of rear final drive.**

**CAUTION:**

**The axle weight must be supported, but there should be no compression in leaf spring.**

2. Remove shock absorber upper bolt and nut using power tool.

**CAUTION:**

**Do not reuse shock absorber upper nut.**

3. Remove shock absorber lower bolt and nut using power tool.

**CAUTION:**

**Do not reuse shock absorber lower nut.**

4. Remove shock absorber.

#### INSPECTION AFTER REMOVAL

Inspect shock absorber for any oil leaks, cracks, or deformations. Replace shock absorber as necessary.

#### INSTALLATION

Installation is in the reverse order of removal.

**CAUTION:**

**Do not reuse shock absorber upper or lower nut.**

**Shock absorber upper and lower nuts : Refer to [RSU-6, "Exploded View"](#).**

#### Disposal

INFOID:0000000014417916

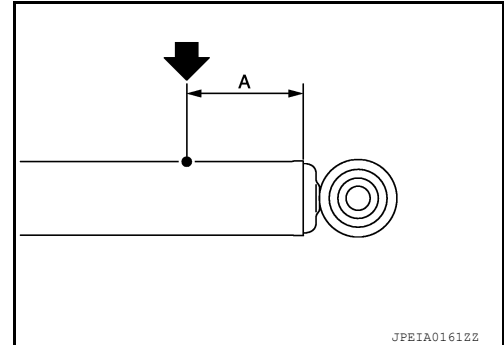
1. Set shock absorber horizontally with the piston rod fully extended.
2. Drill a 2 – 3 mm (0.08 – 0.12 in) hole at the position (●) from the top as shown to release gas gradually.

**CAUTION:**

- **Wear eye protection (safety glasses).**
- **Wear gloves.**
- **Be careful with metal chips or oil blown out by the compressed gas.**

**NOTE:**

- Drill vertically in this direction (↓) directly into the outer tube avoiding brackets.
- The gas is clear, colorless, odorless, and harmless.



**A : 20 – 30 mm (0.79 – 1.18 in)**

3. Position the drilled hole downward and drain oil by moving the piston rod several times.

**CAUTION:**

**Dispose of drained oil according to the law and local regulations.**

# REAR STABILIZER

< REMOVAL AND INSTALLATION >

## REAR STABILIZER

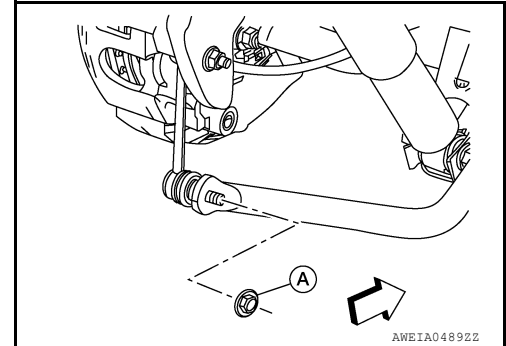
### Removal and Installation

INFOID:000000014417917

#### REMOVAL

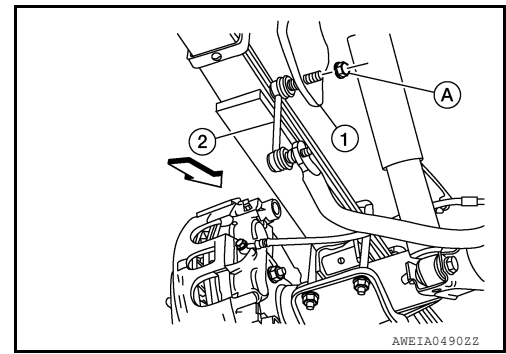
1. Remove the (RH/LH) rear stabilizer connecting rod lower nuts (A) from the rear stabilizer.

⇐ : Front



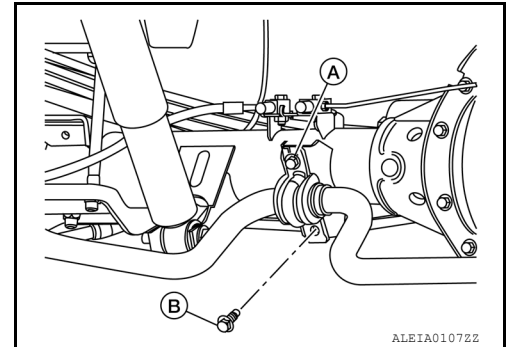
2. Remove the (RH/LH) rear stabilizer connecting rod upper nuts (A) from the rear stabilizer bracket (1).

⇐ : Front



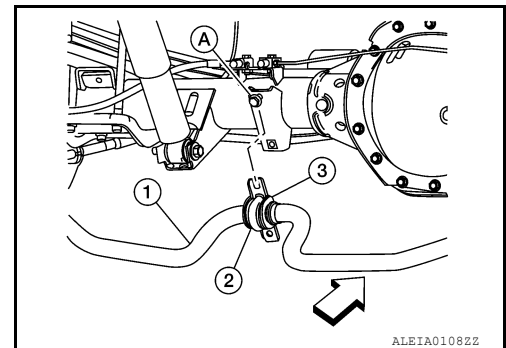
3. Remove the (RH/LH) rear stabilizer connecting rods (2).

4. Loosen the (RH/LH) rear stabilizer upper clamp bolts (A) and remove the (RH/LH) rear stabilizer lower clamp bolts (B).



5. Lower the rear stabilizer (1), the rear stabilizer clamps (2) and the rear stabilizer bushings (3) as an assembly from the rear stabilizer upper clamp bolts (A) to remove it from the vehicle.

⇐ : Front

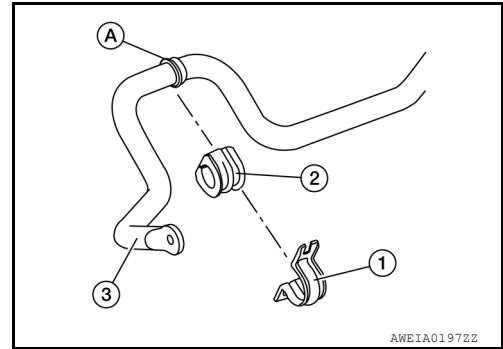


## REAR STABILIZER

### < REMOVAL AND INSTALLATION >

6. Separate the rear stabilizer clamps (1) and the rear stabilizer bushings (2) from the rear stabilizer (3).

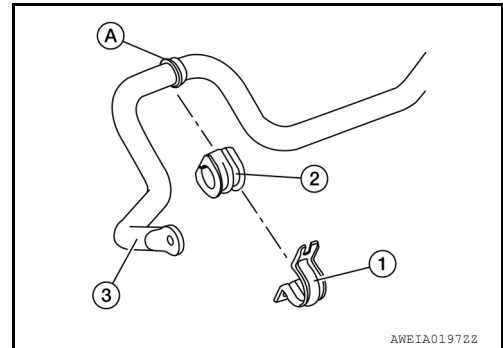
Crimp ring (A)



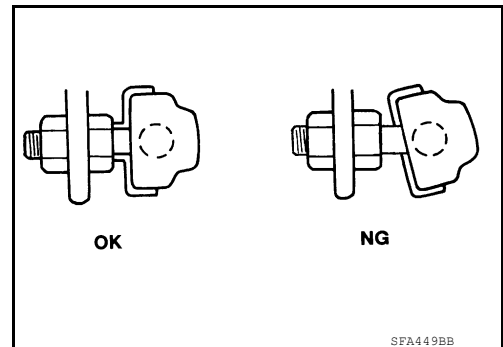
### INSTALLATION

Installation is in the reverse order of removal.

- During installation, position the rear stabilizer clamp (1) and rear stabilizer bushing (2) on the outside of the crimp ring (A) on the rear stabilizer (3).



- Install the rear stabilizer with the rear stabilizer bar connecting rod ball joint sockets properly aligned.



## SERVICE DATA AND SPECIFICATIONS (SDS)

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## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

#### General Specification (Rear)

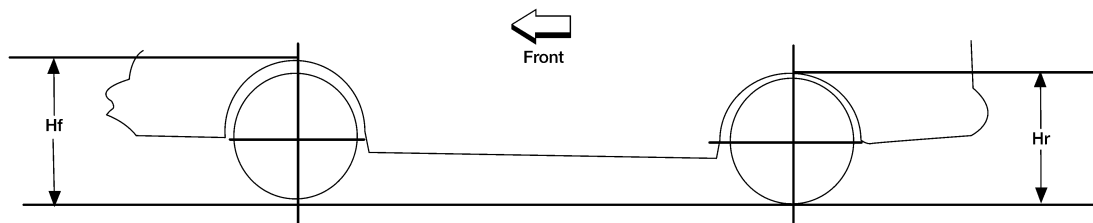
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|                     |                                           |
|---------------------|-------------------------------------------|
| Suspension type     | Rigid axle with semi-elliptic leaf spring |
| Shock absorber type | Double-acting hydraulic                   |

#### Wheelarch Height (Unladen\*1)

INFOID:0000000014417919

#### XD MODELS

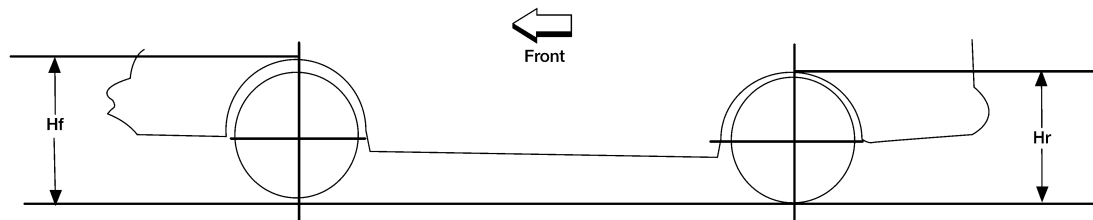


LEIA0085E

| Drive type                   | 2WD                |                    | 4WD                |                    |                    |
|------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Tire size                    | 245/75R17          | 265/60R20          | 245/75R17          | 275/65R18          | 265/60R20          |
| Front wheel arch height (Hf) | 988 mm (38.90 in)  | 1011 mm (39.80 in) | 986 mm (38.82 in)  | 1000 mm (39.37 in) | 1010 mm (39.76 in) |
| Rear wheel arch height (Hr)  | 1025 mm (40.35 in) | 1045 mm (41.14 in) | 1025 mm (40.35 in) | 1034 mm (40.71 in) | 1045 mm (41.14 in) |

\*1: Fuel, engine coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

#### NON-XD 2WD MODELS



LEIA0085E

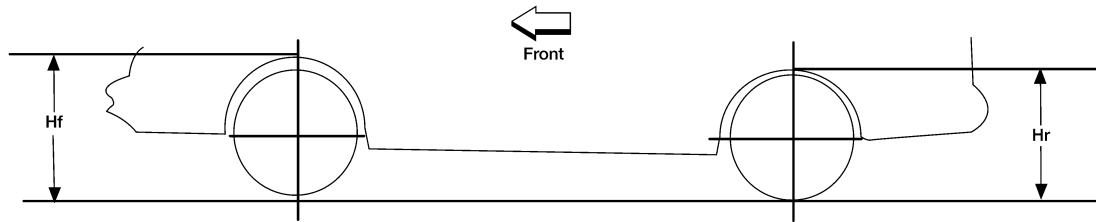
| Drive type                   | 2WD               |                   |           |                   |
|------------------------------|-------------------|-------------------|-----------|-------------------|
| Grade                        | S BASE            | SV BASE           | SV COMF   | SL BASE           |
| Body                         | CREW CAB          |                   |           |                   |
| Tire size                    | 265/70R18         | 265/70R18         | 265/70R18 | 275/60R20         |
| Front wheel arch height (Hf) | 920 mm (36.22 in) | 921 mm (36.26 in) |           | 927 mm (36.50 in) |
| Rear wheel arch height (Hr)  | 960 mm (37.80 in) | 961 mm (37.83 in) |           | 966 mm (38.03 in) |

\*1: Fuel, engine coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

# SERVICE DATA AND SPECIFICATIONS (SDS)

## < SERVICE DATA AND SPECIFICATIONS (SDS)

### NON-XD 4WD MODELS



LEIA0085E

| Drive type                   | 4WD               |                   |           |                    |                    |
|------------------------------|-------------------|-------------------|-----------|--------------------|--------------------|
| Grade                        | S BASE            | SV BASE           | SV COMF   | PRO-4X             | SL BASE            |
| Body                         | CREW CAB          |                   |           |                    |                    |
| Tire size                    | 265/70R18         | 265/70R18         | 265/70R18 | 275/70R18          | 275/60/R20         |
| Front wheel arch height (Hf) | 934 mm (36.77 in) | 935 mm (36.81 in) |           | 965 mm (37.99 in)  | 965 mm (37.99 in)  |
| Rear wheel arch height (Hr)  | 976 mm (38.43 in) | 976 mm (38.43 in) |           | 1007 mm (39.65 in) | 1006 mm (39.61 in) |

\*1: Fuel, engine coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.