

SECTION **RSU**  
 REAR SUSPENSION

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RSU

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# PRECAUTIONS

< PRECAUTION >

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## PRECAUTION

### PRECAUTIONS

#### Precautions for Suspension

*INFOID:000000006884631*

- 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 lubricant 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

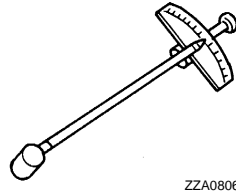
### PREPARATION

#### Special Service Tools

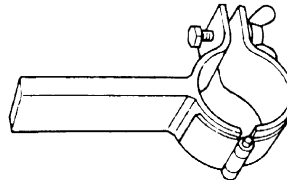
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The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
ST3127S000 (J-25765-A) Preload gauge	Measuring rotating torque of ball joint
ST35652000 ( - ) Shock absorber attachment	Disassembling and assembling shock absorber



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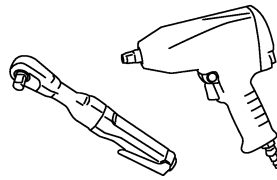


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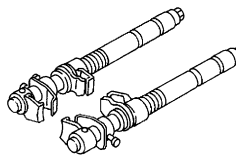
#### Commercial Service Tools

INFOID:000000006884633

Tool name	Description
Power tool	Loosening bolts and nuts
Spring compressor	Removing and installing coil spring



PBIC0190E



S-NT717

# NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

### NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

#### NVH Troubleshooting Chart

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

Symptom		Possible cause and SUSPECTED PARTS	Reference															
			RSU-8, RSU-11, RSU-14, RSU-16, RSU-18, RSU-20, RSU-21	RSU-10	—	—	RSU-10	RSU-8, RSU-11, RSU-14, RSU-16, RSU-18, RSU-20, RSU-21	RSU-6	RSU-20	NVH in DLN section.	NVH in DLN section.	NVH in RAX and RSU sections.	NVH in WT section.	NVH in WT section.	NVH in RAX section.	NVH in BR section.	NVH in ST section.
REAR SUSPENSION	Noise	Improper installation, looseness	x	x	x	x	x	x			x	x	x	x	x	x	x	x
	Shake	Shock absorber deformation, damage or deflection	x	x	x	x		x			x		x	x	x	x	x	x
	Vibration	Bushing or mounting deterioration	x	x	x	x					x		x					
	Shimmy	Parts interference	x	x	x	x							x	x	x		x	x
	Judder	Spring fatigue	x	x														
	Poor quality ride or handling	Suspension looseness	x	x														
		Incorrect wheel alignment							x									
		Stabilizer bar fatigue								x								
		PROPELLER SHAFT																
		DIFFERENTIAL																
		REAR AXLE AND REAR SUSPENSION																
		TIRE																
		ROAD WHEEL																
		DRIVE SHAFT																
		BRAKE																
		STEERING																

x: Applicable

# REAR SUSPENSION ASSEMBLY

< PERIODIC MAINTENANCE >

## PERIODIC MAINTENANCE

### REAR SUSPENSION ASSEMBLY

#### Inspection

INFOID:000000006884635

#### COMPONENT PART

Check the mounting conditions (looseness, backlash) of each component and component conditions (wear, damage) are normal.

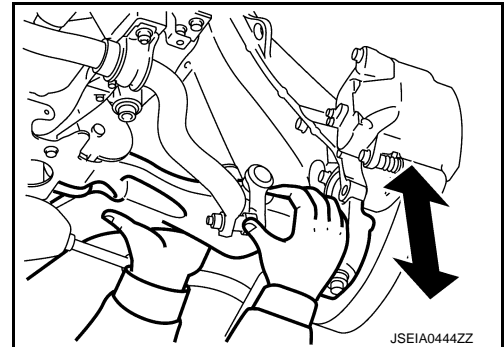
#### Ball Joint Axial End Play

Move axle side of suspension arm in the axial direction by hand.  
Check there is no end play.

**Axial end play** : Refer to [RSU-23, "Ball Joint"](#).

#### CAUTION:

- Never depress brake pedal when measuring.
- Never perform with tires on level ground.
- Be careful not to damage ball joint boot. Never damage the installation position by applying excessive force.



#### SHOCK ABSORBER

Check for oil leakage and damage. Replace it if necessary.

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# WHEEL ALIGNMENT

< PERIODIC MAINTENANCE >

## WHEEL ALIGNMENT

### Inspection

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#### DESCRIPTION

Measure wheel alignment under unladen conditions.

#### NOTE:

"Unladen conditions" means that fuel, engine coolant, and lubricant are full. Spare tire, jack, hand tools and mats are in designated positions.

#### PRELIMINARY CHECK

Check the following:

- Tires for improper air pressure and wear. Refer to [WT-62, "Tire Air Pressure"](#).
- Road wheels for runout.
- Wheel bearing axial end play. Refer to [RAX-6, "Inspection"](#).
- Ball joint axial end play of suspension arm. Refer to [RSU-5, "Inspection"](#).
- Shock absorber operation.
- Each mounting point of axle and suspension for looseness and deformation.
- Each of front lower link, rear lower link, toe control link (without 4WAS), 4WAS rear actuator (with 4WAS), rear suspension member, suspension arm and shock absorber for cracks, deformation, and other damage.
- Vehicle height (posture).

#### GENERAL INFORMATION AND RECOMMENDATIONS

- A four-wheel thrust alignment should be performed.
- This type of alignment is recommended for any NISSAN/INFINITI vehicle.
- The four-wheel "thrust" process helps ensure that the vehicle is properly aligned and the steering wheel is centered.
- The alignment rack itself should be capable of accepting any NISSAN/INFINITI vehicle.
- The rack should be checked to ensure that it is level.
- Make sure the machine is properly calibrated.
- Your alignment equipment should be regularly calibrated in order to give correct information.
- Check with the manufacturer of your specific equipment for their recommended Service/Calibration Schedule.

#### ALIGNMENT PROCESS

#### IMPORTANT:

Use only the alignment specifications listed in this Service Manual.

- When displaying the alignment settings, many alignment machines use "indicators": (Green/red, plus or minus, Go/No Go). **Never use these indicators.**
- The alignment specifications programmed into your machine that operate these indicators may not be correct.
- This may result in an ERROR.
- Most camera-type alignment machines are equipped with both "Rolling Compensation" method and optional "Jacking Compensation" method to "compensate" the alignment targets or head units. "Rolling Compensation" is the preferred method.
- If using the "Rolling Compensation" method, after installing the alignment targets or head units, push or pull on the rear wheel to move the vehicle. **Do not push or pull on the vehicle body.**
- If using the "Jacking Compensation" method, after installing the alignment targets or head units, raise the vehicle and rotate the wheels 1/2 turn both ways.

#### NOTE:

- Do not use the "Rolling Compensation" method if you are using sensor-type alignment equipment.
- Follow all instructions for the alignment machine you're using for more information.

### Adjustment

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#### CAMBER

# WHEEL ALIGNMENT

## < PERIODIC MAINTENANCE >

- If camber is exceeds the standard value, adjust with adjusting bolt (2) in rear lower link (1).

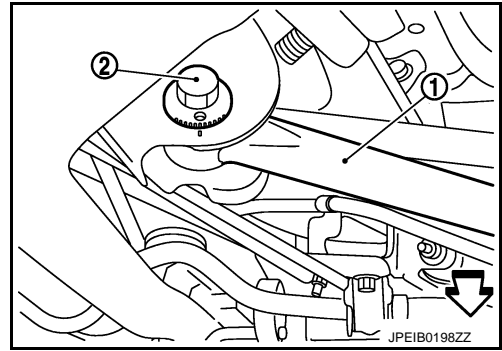
← : Vehicle front

**Camber:** Refer to [RSU-23, "Wheel Alignment"](#).

### CAUTION:

**After adjusting camber, be sure to check toe-in.**

- If camber is not still within the specification, inspect and replace any damaged or worn suspension parts.



## TOE-IN (WITHOUT 4WAS)

- If toe-in is exceeds the standard value, adjust with adjusting bolt (2) in toe control link (1).

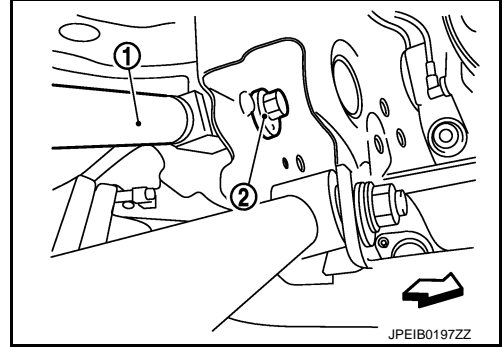
← : Vehicle front

**Toe-In:** Refer to [RSU-23, "Wheel Alignment"](#).

### CAUTION:

**Be sure to adjust equally on right and left side with adjusting bolt.**

- If toe-in is not still within the specification, inspect and replace any damaged or worn suspension parts.
- After toe-in adjustment, adjust neutral position of steering angle sensor. Refer to [BRC-59, "Work Procedure"](#).



## TOE-IN (WITH 4WAS)

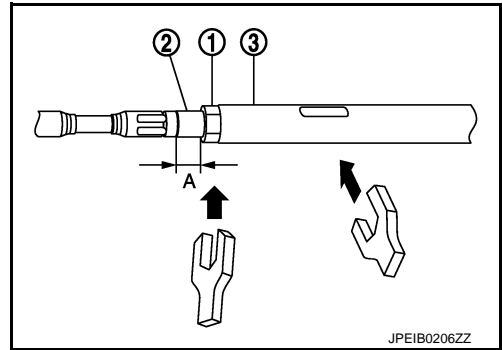
- Loosen lock nut (1) of the 4WAS rear actuator to adjust the length with tie rod bar (2).

**Toe-In:** Refer to [RSU-23, "Wheel Alignment"](#).

### CAUTION:

- Tighten the lock nut to the specified torque with the socket (3) fixed. Refer to [STC-176, "Exploded View"](#).
- Adjust the length symmetrically.
- The tie rod bar screw head allowance (A) after the adjustment must be 19 mm (0.75 in) or less.

- If toe-in is not still within the specification, inspect and replace any damaged or worn 4WAS rear actuator or suspension parts.
- After toe-in adjustment, adjust neutral position of steering angle sensor. Refer to [BRC-59, "Work Procedure"](#).
- After toe-in adjustment, adjust neutral position of 4WAS front actuator. Refer to [STC-73, "Work Procedure \(Pattern 2\)"](#).



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# REAR COIL SPRING AND SHOCK ABSORBER

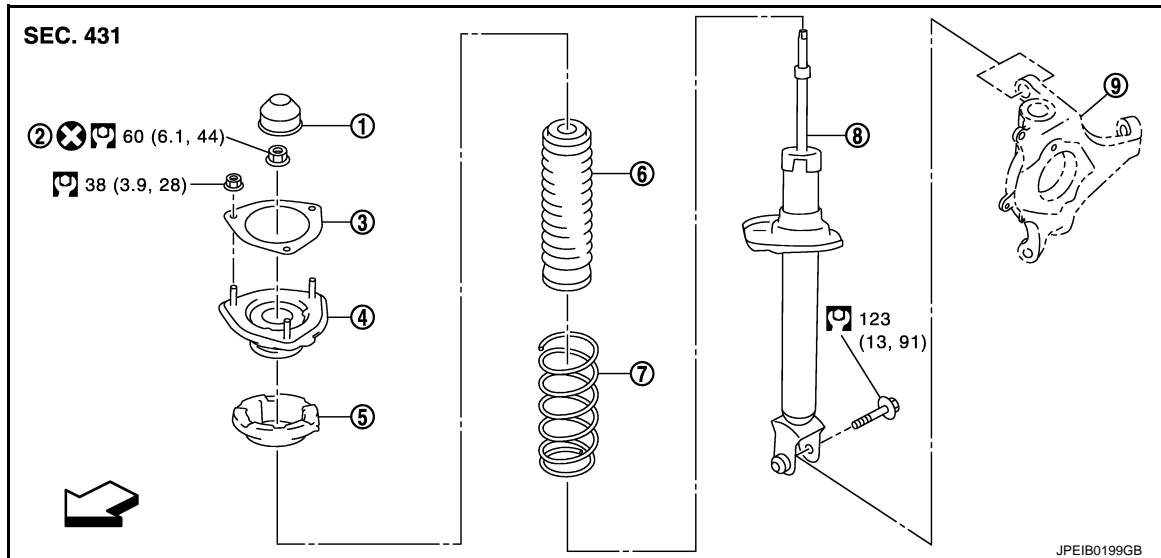
< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

### REAR COIL SPRING AND SHOCK ABSORBER

Exploded View

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- |                       |                        |                 |
|-----------------------|------------------------|-----------------|
| 1. Cap                | 2. Piston rod lock nut | 3. Gasket       |
| 4. Mounting insulator | 5. Rubber seat         | 6. Bound bumper |
| 7. Coil spring        | 8. Shock absorber      | 9. Axle housing |

↔ Vehicle front

Refer to [GI-4, "Components"](#) for symbols in the figure.

## Removal and Installation

INFOID:000000006884639

### REMOVAL

1. Perform adjustment before removal. (With 4WAS) Refer to [RSU-10, "Inspection and Adjustment"](#).
2. Remove tires with power tool. Refer to [WT-56, "Exploded View"](#).
3. Set suitable jack under axle housing.  
**CAUTION:**  
**Check that jack supporting status is stable.**
4. Remove shock absorber from axle housing.
5. Remove the rear parcel shelf finisher. Refer to [INT-40, "Removal and Installation"](#).
6. Remove the seat belt retractor. Refer to [SB-13, "SEAT BELT RETRACTOR : Removal and Installation"](#).
7. Remove mounting insulator nuts, and then remove shock absorber assembly.

### INSTALLATION

Note the following, and install in the reverse order of removal.

- Perform final tightening of bolts and nuts at the shock absorber lower side (rubber bushing), under unladen conditions with tires on level ground.
- Perform inspection after installation. Refer to [RSU-10, "Inspection and Adjustment"](#).
- After replacing the shock absorber, always follow the disposal procedure to discard the shock absorber. Refer to [RSU-10, "Disposal"](#).

## Disassembly and Assembly

INFOID:000000006884640

### DISASSEMBLY

**CAUTION:**

**Never damage shock absorber piston rod when removing components from shock absorber.**



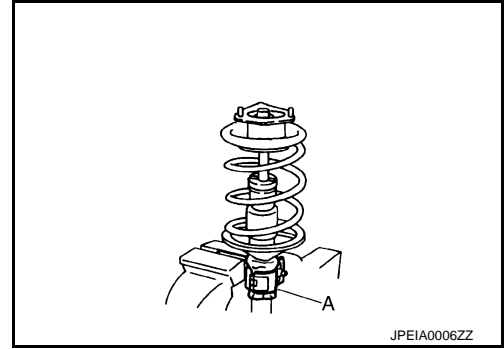
# REAR COIL SPRING AND SHOCK ABSORBER

## < REMOVAL AND INSTALLATION >

1. Remove gasket and cap from mounting insulator.
2. Install shock absorber attachment (A) [SST: ST35652000 ( - )] to shock absorber and secure it in a vise.

**CAUTION:**

**When installing the shock absorber attachment to shock absorber, wrap a shop cloth around shock absorber to protect it from damage.**



3. Using a spring compressor (A) (commercial service tool), compress coil spring between rubber seat and shock absorber until coil spring with a spring compressor is free.

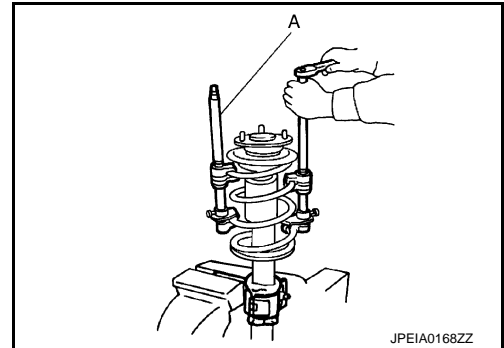
**CAUTION:**

**Be sure a spring compressor is securely attached coil spring. Compress coil spring.**

4. Make sure coil spring with a spring compressor between rubber seat and shock absorber is free. And then remove piston rod lock nut while securing the piston rod tip so that piston rod does not turn.

**CAUTION:**

**Start compressing the coil spring after checking that the spring compressor is completely attached.**



5. Remove mounting insulator, rubber sheet, and bound bumper from shock absorber.
6. After remove coil spring with a spring compressor (commercial service tool), and then gradually release a spring compressor.

**CAUTION:**

**Loosen while making sure coil spring attachment position does not move.**

7. Remove the shock absorber attachment [SST: ST35652000 ( - )] from shock absorber.

## ASSEMBLY

**CAUTION:**

**Never damage shock absorber piston rod when installing components from shock absorber.**

1. Install shock absorber attachment [SST: ST35652000 ( - )] to shock absorber and secure it in a vise.

**CAUTION:**

**When installing the shock absorber attachment to shock absorber, wrap a shop cloth around shock absorber to protect it from damage.**

2. Compress coil spring using a spring compressor (commercial service tool), and install it onto shock absorber.

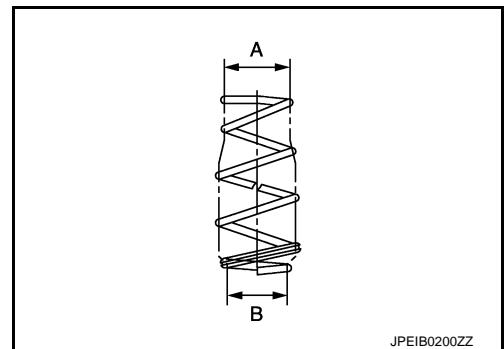
**CAUTION:**

- Install with the large-diameter side (A) facing up and the small-diameter side (B) facing down.
- Be sure a spring compressor is securely attached to coil spring. Compress coil spring.

3. Apply soapy water to bound bumper.

**CAUTION:**

**Never use machine oil.**




4. Install rubber sheet and mounting insulator to shock absorber.

**CAUTION:**

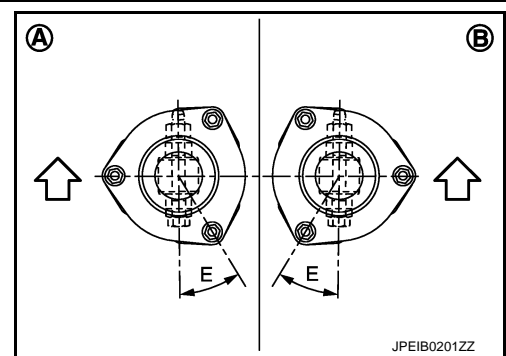
# REAR COIL SPRING AND SHOCK ABSORBER

## < REMOVAL AND INSTALLATION >

Install the mount insulator so that the stud bolt is in the position shown in the figure.

- A : LH  
 B : RH  
 : Vehicle front (shock absorber lower bolt insertion direction)

**Angle (E) : 29.7°**



- Secure piston rod tip so that piston rod does not turn, then tighten piston rod lock nut with specified torque.
- Gradually release a spring compressor (commercial service tool), and remove coil spring.

**CAUTION:**

**Loosen while making sure coil spring attachment position does not move.**

- Remove the shock absorber attachment [SST: ST35652000 ( - )] from shock absorber.
- Install the gasket and cap to the mounting insulator.

## Inspection and Adjustment

INFOID:000000006884641

### ADJUSTMENT BEFORE REMOVAL

Adjust neutral position of 4WAS front actuator. (With 4WAS) Refer to [STC-73, "Work Procedure \(Pattern 1\)"](#).

### INSPECTION AFTER DISASSEMBLY

#### Shock absorber

Check the following items and replace if necessary.

- Check shock absorber assembly for deformation, cracks, and other damage.
- Check piston rod for damage, uneven wear, and distortion.
- Check for oil leakage

#### Mounting insulator, rubber seat, bound bumper, and gasket

- Check mounting insulator, rubber seat, bound bumper, and gasket for cracks, uneven wear, and damage. Replace if necessary.

#### Coil spring

- Check coil spring for cracks, uneven wear, and damage. Replace if necessary.

### INSPECTION AFTER INSTALLATION

Check wheel alignment. Refer to [RSU-6, "Inspection"](#).

## Disposal


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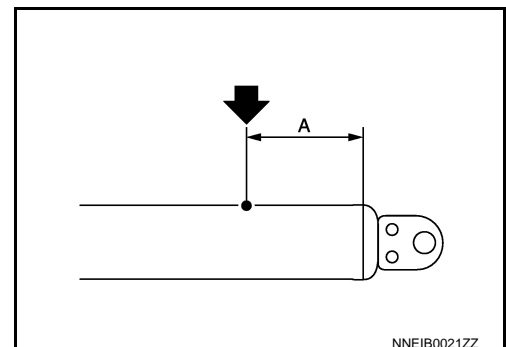
- Set shock absorber horizontally with the piston rod fully extended.
- Drill 2 – 3 mm (0.08 – 0.12 in) hole at the position (●) from top as shown in the figure to release gas gradually.

**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 to the outer tube avoiding brackets.
- The gas is clear, colorless, odorless, and harmless.



**A : 20 – 30 mm (0.79 – 1.18 in)**

- 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.**

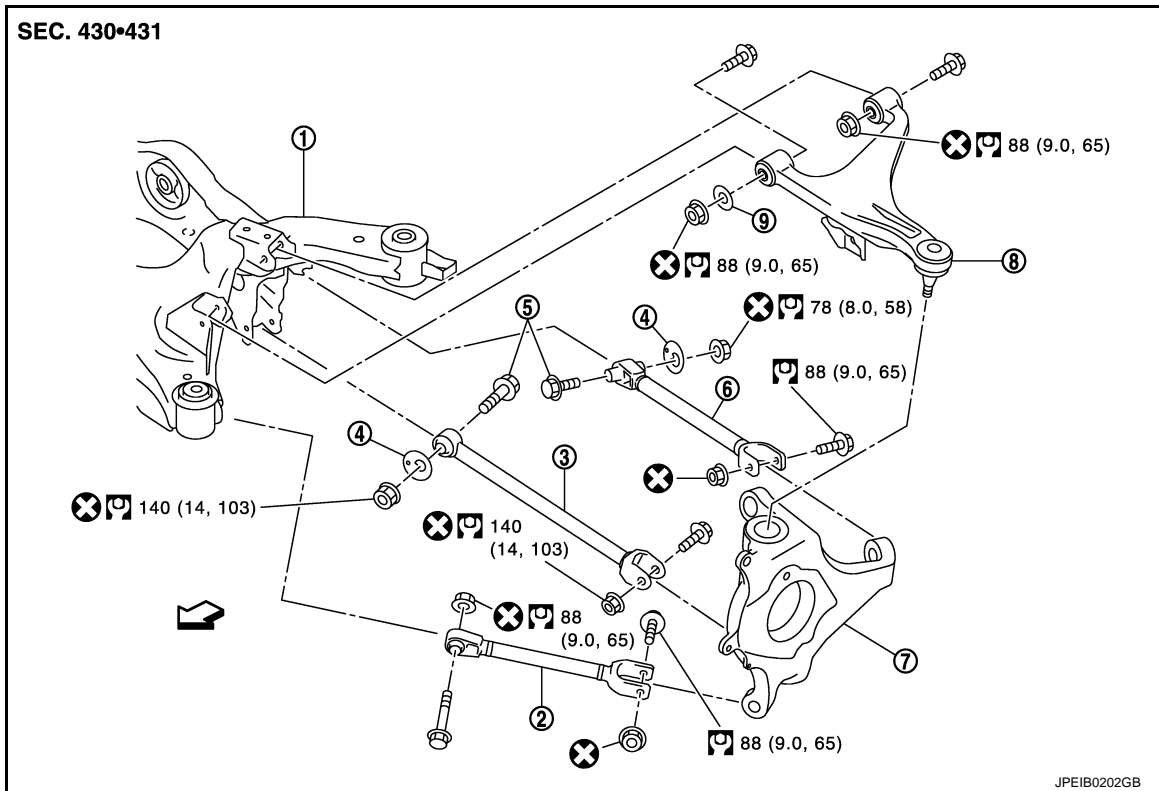
# SUSPENSION ARM

< REMOVAL AND INSTALLATION >

## SUSPENSION ARM

### Exploded View

INFOID:000000006884643



- |                           |                     |                                    |
|---------------------------|---------------------|------------------------------------|
| 1. Rear suspension member | 2. Front lower link | 3. Rear lower link                 |
| 4. Eccentric disk         | 5. Adjusting bolt   | 6. Toe control link (without 4WAS) |
| 7. Axle housing           | 8. Suspension arm   | 9. Stopper bushing                 |

← Vehicle front

Refer to [GI-4, "Components"](#) for symbols in the figure.

#### NOTE:

Toe control link is not included in 4WAS models. 4WAS rear actuator assembly is included instead. For 4WAS rear actuator assembly, refer to [STC-176, "Exploded View"](#).

### Removal and Installation

INFOID:000000006884644

#### REMOVAL

##### Right Side

1. Perform adjustment before removal. (With 4WAS) Refer to [RSU-12, "Inspection and Adjustment"](#).
2. Remove rear suspension assembly. Refer to [RSU-21, "Removal and Installation"](#).
3. Remove stabilizer connecting rod from suspension arm. Refer to [RSU-20, "Removal and Installation"](#).
4. Separate suspension arm from axle housing. Refer to [RAX-8, "Removal and Installation"](#).
5. Remove suspension arm from axle housing.
6. Remove stopper bushing, bolts, and nuts, and then remove suspension arm from suspension member.
7. Perform inspection after removal. Refer to [RSU-12, "Inspection and Adjustment"](#).

##### Left Side

#### NOTE:

When removing and installing the right side at the same time, it is efficient to remove the suspension arm assembly.

# SUSPENSION ARM

## < REMOVAL AND INSTALLATION >

1. Perform adjustment before removal. (With 4WAS) Refer to [RSU-12, "Inspection and Adjustment"](#).
2. Remove tire with power tool. Refer to [WT-56, "Exploded View"](#).
3. Remove caliper assembly. Hang caliper assembly in a place where it will not interfere with work. Refer to [BR-57, "BRAKE CALIPER ASSEMBLY \(1 PISTON TYPE\) : Removal and Installation"](#) (1 piston type), [BR-61, "BRAKE CALIPER ASSEMBLY \(2 PISTON TYPE\) : Removal and Installation"](#) (2 piston type).

### **CAUTION:**

**Never depress brake pedal while brake caliper is removed.**

4. Remove disc rotor. Refer to [RAX-8, "Removal and Installation"](#).
5. Remove drive shaft. Refer to [RAX-13, "Removal and Installation"](#).
6. Remove shock absorber from axle housing. Refer to [RSU-8, "Removal and Installation"](#).
7. Remove height sensor from suspension arm. (With AFS) Refer to [EXL-116, "Removal and Installation"](#).
8. Remove stabilizer connecting rod from suspension arm. Refer to [RSU-20, "Removal and Installation"](#).
9. Separate suspension arm from axle housing. Refer to [RAX-8, "Removal and Installation"](#).
10. Remove stopper bushing, bolt, and nut, and then remove suspension arm from suspension member.
11. Perform inspection after removal. Refer to [RSU-12, "Inspection and Adjustment"](#).

## INSTALLATION

Note the following and, install in the reverse order of removal.

- Perform final tightening of rear suspension member installation position (rubber bussing), under unladen conditions with tires on level ground.
- Perform inspection after installation. Refer to [RSU-12, "Inspection and Adjustment"](#).

## Inspection and Adjustment

INFOID:000000006884645

### ADJUSTMENT BEFORE REMOVAL

Adjust neutral position of 4WAS front actuator. (With 4WAS) Refer to [STC-73, "Work Procedure \(Pattern 1\)"](#).

### INSPECTION AFTER REMOVAL

#### Appearance

Check the following items, and replace the part if necessary.

- Check suspension arm and bushing for deformation, cracks, and other damage.
- Check ball joint boot for cracks, damage, and leakage of grease.

#### Ball Joint Inspection

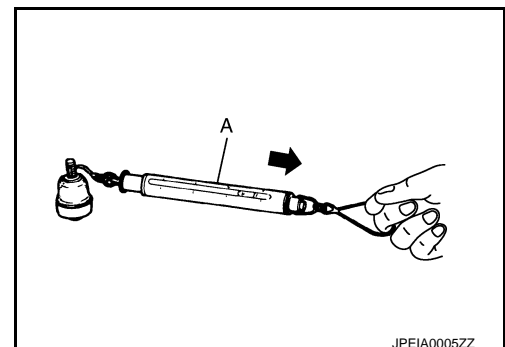
Manually move ball stud to confirm that it moves smoothly with no binding.

#### Swing Torque Inspection

1. Move the ball stud at least ten times by hand to check for smooth movement.
2. Hook spring balance (A) at cotter pin mounting hole. Confirm spring balance measurement value is within specifications when ball stud begins moving.

**Swing torque** : Refer to [RSU-23, "Ball Joint"](#).

- If swing torque exceeds the standard range, replace suspension arm assembly.



#### Rotating Torque Inspection

1. Move the ball stud at least ten times by hand to check for smooth movement.

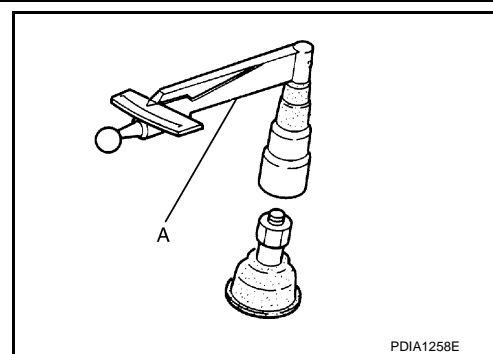
## SUSPENSION ARM

### < REMOVAL AND INSTALLATION >

2. Attach the mounting nut to ball stud. Make sure that rotating torque is within the specifications with a preload gauge (A) [SST: ST3127S000 (J-25765-A)].

**Rotating torque** : Refer to [RSU-23, "Ball Joint"](#).

- If rotating torque exceeds the standard range, replace suspension arm assembly.



### Axial End Play Inspection

1. Move the ball stud at least ten times by hand to check for smooth movement.
2. Move tip of ball stud in axial direction to check for looseness.

**Axial end play** : Refer to [RSU-23, "Ball Joint"](#).

- If axial end play exceeds the standard range, replace suspension arm assembly.

### INSPECTION AFTER INSTALLATION

#### Right Side

1. Adjust parking brake operation (stroke). Refer to [PB-3, "Inspection and Adjustment"](#).
2. Check wheel alignment. Refer to [RSU-6, "Inspection"](#).

#### Left Side

Check wheel alignment. Refer to [RSU-6, "Inspection"](#).

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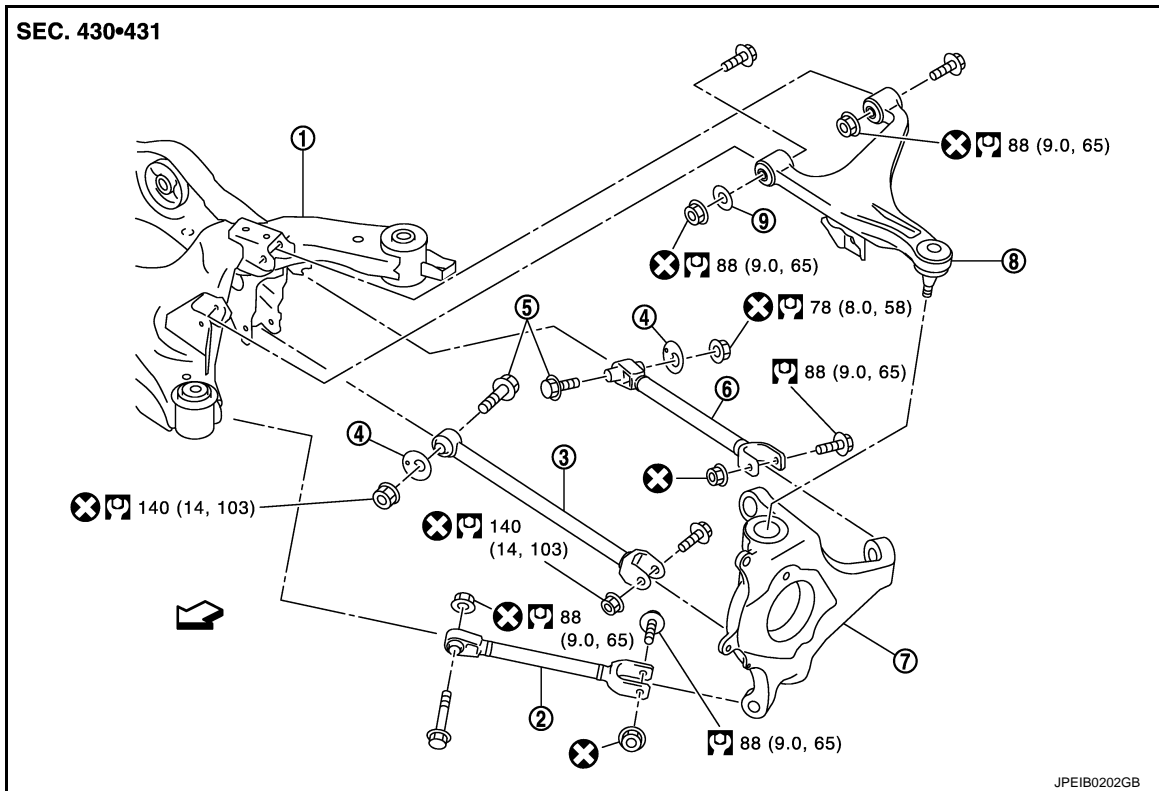
# FRONT LOWER LINK

< REMOVAL AND INSTALLATION >

## FRONT LOWER LINK

Exploded View

INFOID:000000006884646



- |                           |                     |                                    |
|---------------------------|---------------------|------------------------------------|
| 1. Rear suspension member | 2. Front lower link | 3. Rear lower link                 |
| 4. Eccentric disk         | 5. Adjusting bolt   | 6. Toe control link (without 4WAS) |
| 7. Axle housing           | 8. Suspension arm   | 9. Stopper bushing                 |

← Vehicle front

Refer to [GI-4, "Components"](#) for symbols in the figure.

### NOTE:

Toe control link is not included in 4WAS models. 4WAS rear actuator assembly is included instead. For 4WAS rear actuator assembly, refer to [STC-176, "Exploded View"](#).

## Removal and Installation

INFOID:000000006884647

### REMOVAL

1. Perform adjustment before removal. (With 4WAS) Refer to [RSU-15, "Inspection and Adjustment"](#).
2. Remove tires with power tool. Refer to [WT-56, "Exploded View"](#).
3. Set suitable jack under axle housing.  
**CAUTION:**  
**Check that jack supporting status is stable.**
4. Separate shock absorber from axle housing. Refer to [RSU-8, "Removal and Installation"](#).
5. Remove rear suspension member stay. Refer to [RSU-21, "Removal and Installation"](#).
6. Remove nuts and bolts, and remove front lower link.
7. Perform inspection after removal. Refer to [RSU-15, "Inspection and Adjustment"](#).

### INSTALLATION

Note the following, and install in the reverse order of removal.

- Perform final tightening of rear suspension member installation position (rubber bussing), under unladen conditions with tires on level ground.

# FRONT LOWER LINK

## < REMOVAL AND INSTALLATION >

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- Perform inspection after installation. Refer to [RSU-15, "Inspection and Adjustment"](#).

### Inspection and Adjustment

INFOID:000000006884648

#### ADJUSTMENT BEFORE REMOVAL

Adjust neutral position of 4WAS front actuator. (With 4WAS) Refer to [STC-73, "Work Procedure \(Pattern 1\)"](#).

#### INSPECTION AFTER REMOVAL

Check front lower link and bushing for any deformation, cracks, or damage. Replace it if necessary.

#### INSPECTION AFTER INSTALLATION

Check wheel alignment. Refer to [RSU-6, "Inspection"](#).

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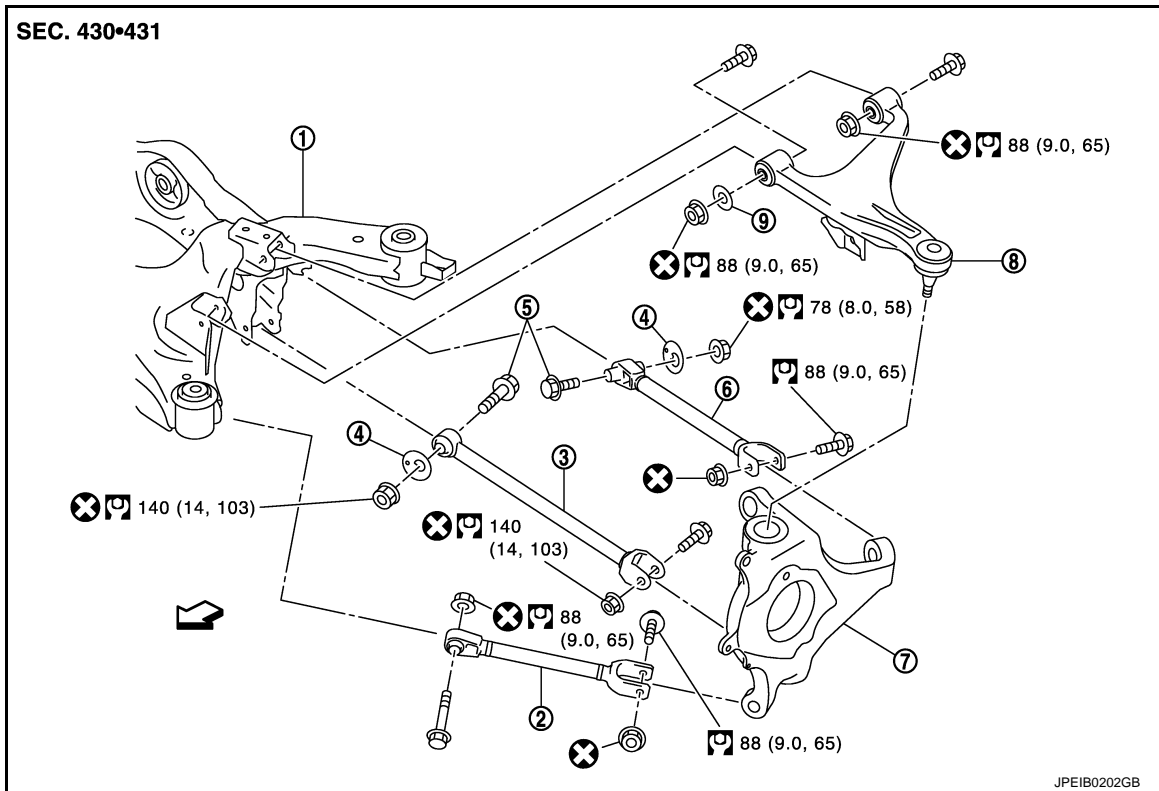
# REAR LOWER LINK

< REMOVAL AND INSTALLATION >

## REAR LOWER LINK

Exploded View

INFOID:000000006884649



- |                           |                     |                                    |
|---------------------------|---------------------|------------------------------------|
| 1. Rear suspension member | 2. Front lower link | 3. Rear lower link                 |
| 4. Eccentric disk         | 5. Adjusting bolt   | 6. Toe control link (without 4WAS) |
| 7. Axle housing           | 8. Suspension arm   | 9. Stopper bushing                 |

← Vehicle front

Refer to [GI-4, "Components"](#) for symbols in the figure.

### NOTE:

Toe control link is not included in 4WAS models. 4WAS rear actuator assembly is included instead. For 4WAS rear actuator assembly, refer to [STC-176, "Exploded View"](#).

## Removal and Installation

INFOID:000000006884650

### REMOVAL

1. Perform adjustment before removal. (With 4WAS) Refer to [RSU-17, "Inspection and Adjustment"](#).
2. Remove tires with power tool. Refer to [WT-56, "Exploded View"](#).
3. Set suitable jack under axle housing.  
**CAUTION:**  
**Check that jack supporting status is stable.**
4. Separate shock absorber from axle housing. Refer to [RSU-8, "Removal and Installation"](#).
5. Remove eccentric disc, adjusting bolt, mounting bolt, and nut. Remove rear lower link.
6. Perform inspection after removal. Refer to [RSU-17, "Inspection and Adjustment"](#).

### INSTALLATION

Note the following, and install in the reverse order of removal.

- Perform final tightening of rear suspension member installation position (rubber bussing), under unladen conditions with tires on level ground.
- Perform inspection after installation. Refer to [RSU-17, "Inspection and Adjustment"](#).



# REAR LOWER LINK

< REMOVAL AND INSTALLATION >

## Inspection and Adjustment

INFOID:000000006884651

### ADJUSTMENT BEFORE REMOVAL

Adjust neutral position of 4WAS front actuator. (With 4WAS) Refer to [STC-73. "Work Procedure \(Pattern 1\)"](#).

### INSPECTION AFTER REMOVAL

Check rear lower link and bushing for any deformation, cracks, or damage. Replace it if necessary.

### INSPECTION AFTER INSTALLATION

Check wheel alignment. Refer to [RSU-6. "Inspection"](#).

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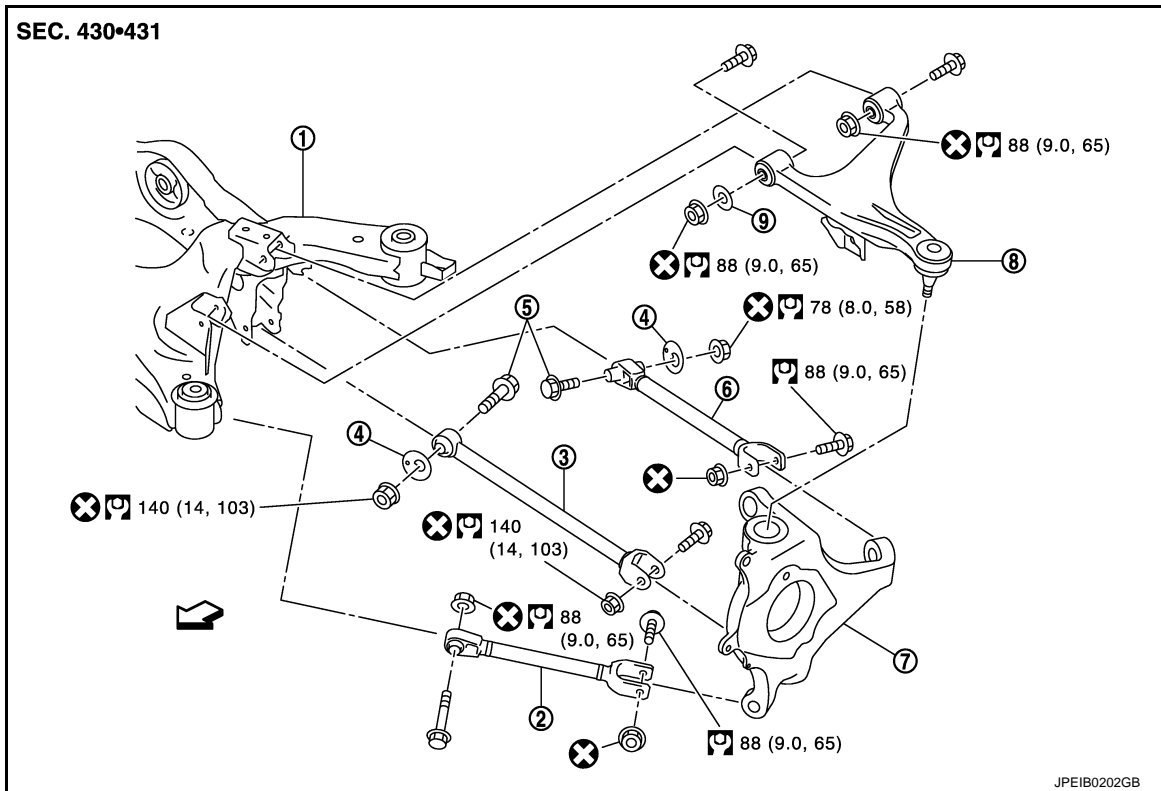
# TOE CONTROL LINK

< REMOVAL AND INSTALLATION >

## TOE CONTROL LINK

Exploded View

INFOID:000000006884652



- |                           |                     |                                    |
|---------------------------|---------------------|------------------------------------|
| 1. Rear suspension member | 2. Front lower link | 3. Rear lower link                 |
| 4. Eccentric disk         | 5. Adjusting bolt   | 6. Toe control link (without 4WAS) |
| 7. Axle housing           | 8. Suspension arm   | 9. Stopper bushing                 |

↔: Vehicle front

Refer to [GI-4, "Components"](#) for symbols in the figure.

### NOTE:

Toe control link is not included in 4WAS models. 4WAS rear actuator assembly is included instead. For 4WAS rear actuator assembly, refer to [STC-176, "Exploded View"](#).

## Removal and Installation

INFOID:000000006884653

### REMOVAL

1. Remove tires with power tool. Refer to [WT-56, "Exploded View"](#).
2. Set suitable jack under axle housing.  
**CAUTION:**  
**Check that jack supporting status is stable.**
3. Separate shock absorber from axle housing. Refer to [RSU-8, "Removal and Installation"](#).
4. Remove eccentric disk, adjusting bolt, mounting bolt, and nut. Remove toe control link.
5. Perform inspection after removal. Refer to [RSU-19, "Inspection"](#).

### INSTALLATION

Note the following, and install in the reverse order of removal.

- Perform final tightening of rear suspension member and axle installation position (rubber bushing), under unladen conditions with tires on level ground.
- Perform inspection after installation. Refer to [RSU-19, "Inspection"](#).

# TOE CONTROL LINK

< REMOVAL AND INSTALLATION >

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## Inspection

INFOID:000000006884654

### INSPECTION AFTER REMOVAL

Check toe control link and bushing for any deformation, cracks, or damage. Replace it if necessary.

### INSPECTION AFTER INSTALLATION

Check wheel alignment. Refer to [RSU-6, "Inspection"](#).

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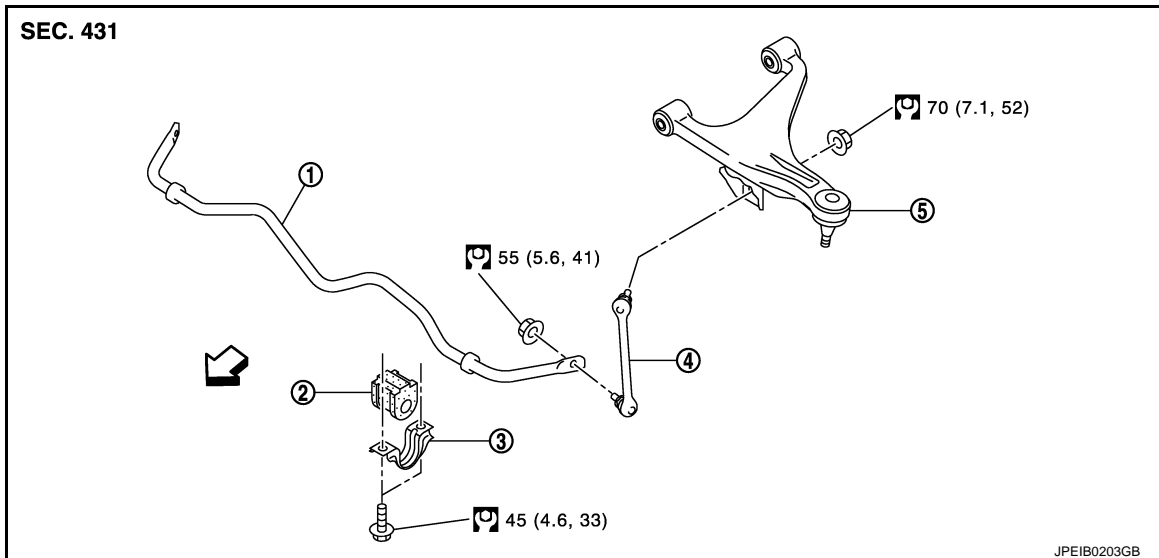
# REAR STABILIZER

< REMOVAL AND INSTALLATION >

## REAR STABILIZER

Exploded View

INFOID:000000006884655



- |                              |                   |                     |
|------------------------------|-------------------|---------------------|
| 1. Stabilizer bar            | 2. Bushing        | 3. Stabilizer clamp |
| 4. Stabilizer connecting rod | 5. Suspension arm |                     |

↔: Vehicle front

Refer to [GI-4, "Components"](#) for symbols in the figure.

## Removal and Installation

INFOID:000000006884656

### REMOVAL

1. Remove member stay. Refer to [RSU-21, "Removal and Installation"](#).
2. Remove stabilizer connecting rod.
3. Remove stabilizer clamp and bushing.
4. Remove stabilizer bar.
5. Perform inspection after removal. Refer to [RSU-20, "Inspection"](#).

### INSTALLATION

Note the following, and install in the reverse order of removal.

- Perform final tightening of rear suspension member and axle installation position (rubber bushing), under unladen conditions with tires on level ground.

## Inspection

INFOID:000000006884657

### INSPECTION AFTER REMOVAL

Check stabilizer bar, stabilizer connecting rod, stabilizer bushing and stabilizer clamp for deformation, cracks or damage. Replace it if necessary.

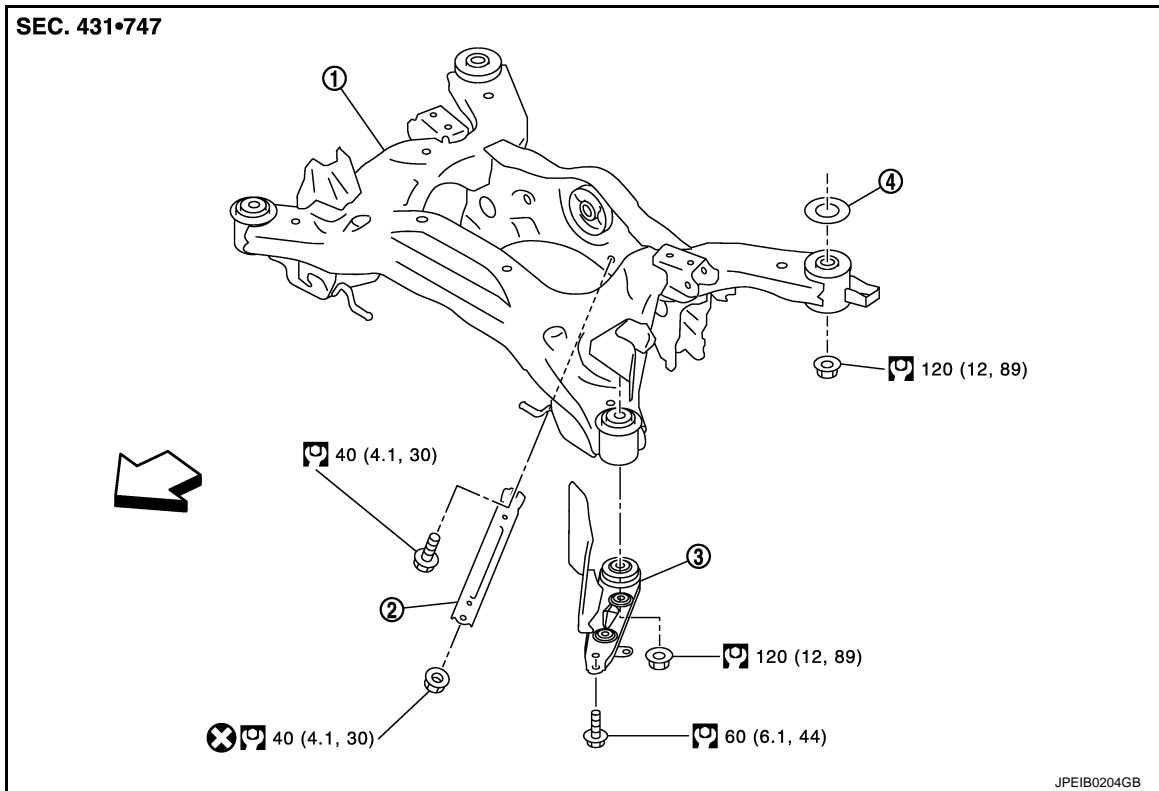
# REAR SUSPENSION ASSEMBLY

< REMOVAL AND INSTALLATION >

## REAR SUSPENSION ASSEMBLY

Exploded View

INFOID:000000006884658



1. Rear suspension member
2. Member stay
3. Rear suspension member stay
4. Mount stopper

← Vehicle front

Refer to [GI-4. "Components"](#) for symbols in the figure.

## Removal and Installation

INFOID:000000006884659

### REMOVAL

1. Perform adjustment before removal. (With 4WAS) Refer to [RSU-22. "Inspection and Adjustment"](#).
2. Remove tires with power tool. Refer to [WT-56. "Exploded View"](#).
3. Remove caliper assemblies. Hang caliper assembly in a place where it will not interfere with work. Refer to [BR-57. "BRAKE CALIPER ASSEMBLY \(1 PISTON TYPE\) : Removal and Installation"](#) (1 piston type), [BR-61. "BRAKE CALIPER ASSEMBLY \(2 PISTON TYPE\) : Removal and Installation"](#) (2 piston type).  
**CAUTION:**  
**Avoid depressing brake pedal while brake caliper is removed.**
4. Remove disc rotor. Refer to [RAX-8. "Removal and Installation"](#).
5. Remove main muffler. Refer to [EX-6. "VQ37VHR : Removal and Installation"](#) (VQ37VHR), [EX-7. "VK56VD : Removal and Installation"](#) (VK56VD).
6. Remove member stay and rear final drive assembly. Refer to [DLN-170. "Removal and Installation"](#) (VQ37VHR), [DLN-208. "Removal and Installation"](#) (VK56VD).
7. Remove drive shaft. Refer to [RAX-13. "Removal and Installation"](#).
8. Separate rear cable from front cable, and then remove rear cable from rear suspension member. Refer to [PB-6. "Removal and Installation"](#).
9. Remove wheel sensor and sensor harness from rear suspension member. Refer to [BRC-138. "REAR WHEEL SENSOR : Removal and Installation"](#).
10. Disconnect height sensor harness connector. Refer to [EXL-116. "Removal and Installation"](#) (with AFS).

# REAR SUSPENSION ASSEMBLY

## < REMOVAL AND INSTALLATION >

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11. Remove shock absorber from axle housing. Refer to [RSU-8. "Removal and Installation"](#).
12. Set suitable jack under rear suspension member.  
**CAUTION:**  
**Check that jack supporting status is stable.**
13. Remove rear under cover from rear suspension member stay. Refer to [EXT-29. "REAR UNDER COVER : Removal and Installation"](#).
14. Remove rear suspension member stay.
15. Remove rear suspension member mounting nuts.
16. Slowly lower jack, then remove rear suspension member, suspension arms, front lower links, wheel hub and housings from vehicle as a unit.  
**CAUTION:**  
**Operate while checking that jack supporting status is stable.**
17. Remove mount stopper from rear suspension member.
18. Remove height sensor from suspension arm (left side). Refer to [EXL-116. "Removal and Installation"](#) (with AFS).
19. Remove toe control link from rear suspension member. Refer to [RSU-18. "Removal and Installation"](#) (without 4WAS).
20. Remove 4WAS rear actuator assembly from rear suspension member. Refer to [STC-176. "Removal and Installation"](#) (with 4WAS).
21. Remove suspension arms, front lower link, rear lower link, and axle housing from rear suspension member.
22. Perform inspection after removal. Refer to [RSU-22. "Inspection and Adjustment"](#).

## INSTALLATION

Note the following, and install in the reverse order of the removal.

- Perform final tightening of rear suspension member installation position (rubber bussing), under unladen conditions with tires on level ground.
- Perform inspection after installation. Refer to [RSU-22. "Inspection and Adjustment"](#).

## Inspection and Adjustment

INFOID:000000006884660

### ADJUSTMENT BEFORE REMOVAL

Adjust neutral position of 4WAS front actuator. (With 4WAS) Refer to [STC-73. "Work Procedure \(Pattern 1\)"](#).

### INSPECTION AFTER REMOVAL

Check rear suspension member for deformation, cracks, or any other damage. Replace if necessary.

### INSPECTION AFTER INSTALLATION

1. Check wheel sensor and harness for proper connection. Refer to [BRC-138. "REAR WHEEL SENSOR : Exploded View"](#).
2. Adjust parking brake operation (stroke). Refer to [PB-3. "Inspection and Adjustment"](#).
3. Check wheel alignment. Refer to [RSU-6. "Inspection"](#).

# SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

#### Wheel Alignment

INFOID:0000000006884661

Item		Standard	
Axle type		2WD	AWD
Camber Degree minute (Decimal degree)	Minimum	-1° 30' (-1.50°)	-1° 00' (-1.00°)
	Nominal	-1° 00' (-1.00°)	-0° 30' (-0.50°)
	Maximum	-0° 30' (-0.50°)	0° 00' (0.00°)
Toe-in Total toe-in Distance	Minimum	0 mm (0 in)	
	Nominal	In 2.9 mm (In 0.114 in)	
	Maximum	In 5.8 mm (In 0.228 in)	

Measure value under unladen\* conditions.

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

#### Ball Joint

INFOID:0000000006884662

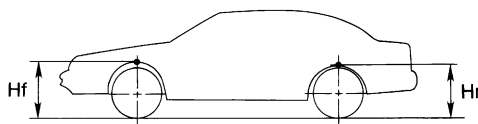
Item	Standard
Swing torque	0.5 – 3.4 N·m (0.06 – 0.34 kg-m, 5 – 30 in-lb)
Measurement on spring balance (cotter pinhole position)	8.1 – 54.8 N (0.83 – 5.59 kg, 1.83 – 12.31 lb)
Rotating torque	0.5 – 3.4 N·m (0.06 – 0.34 kg-m, 5 – 30 in-lb)
Axial end play	0 mm (0 in)

#### Wheelarch Height

INFOID:0000000006884663

#### VQ37VHR

Item	Standard		
	2WD		AWD
Wheel size	18 inch	20 inch	18 inch
Front (Hf)	752 mm (29.61 in)	751 mm (29.57 in)	765 mm (30.12 in)
Rear (Hr)	743 mm (29.25 in)	742 mm (29.21 in)	757 mm (29.80 in)



SFA818A

Measure value under unladen\* conditions.

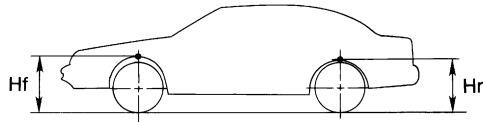
\*: Fuel, engine coolant and lubricant are full. Spare tire, jack, hand tools and mats are in designated positions.

#### VK56VD

# SERVICE DATA AND SPECIFICATIONS (SDS)

## < SERVICE DATA AND SPECIFICATIONS (SDS)

Item	Standard		
	2WD		AWD
Axle type			
Wheel size	18 inch	20 inch	18 inch
Front (Hf)	751 mm (29.57 in)	750 mm (29.53 in)	763 mm (30.04 in)
Rear (Hr)	743 mm (29.25 in)	741 mm (29.17 in)	757 mm (29.80 in)



SFA818A

Measure value under unladen\* conditions.

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