

SECTION **RSU**
 REAR SUSPENSION

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RSU

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SERVICE DATA AND SPECIFICATIONS

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NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:000000003852973

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

Symptom		Possible cause and SUSPECTED PARTS	Reference page														
			RSU-10, RSU-14, RSU-17, RSU-19, RSU-22, RSU-23	RSU-10	—	—	—	RSU-10, RSU-14, RSU-17, RSU-19, RSU-22, RSU-23	RSU-22	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.
Noise	REAR SUSPENSION	Improper installation or looseness	x	x	x	x	x	x	x			x	x	x	x	x	x
		Shock absorber deformation, damage or deflection	x	x	x	x											
		Bushing or mounting deterioration	x	x	x	x	x										
		Parts interference	x	x	x	x											
		Spring fatigue	x	x	x												
		Suspension looseness	x	x													
Shake	REAR SUSPENSION	Incorrect wheel alignment	x														
		Stabilizer bar fatigue	x														
		PROPELLER SHAFT	x														
		DIFFERENTIAL	x														
		REAR AXLE AND REAR SUSPENSION	x														
		TIRE	x														
Vibration	REAR SUSPENSION	ROAD WHEEL	x														
		DRIVE SHAFT	x														
		BRAKE	x														
		STEERING	x														
			x														
			x														
Shimmy	REAR SUSPENSION		x														
			x														
			x														
			x														
			x														
			x														
Judder	REAR SUSPENSION		x														
			x														
			x														
			x														
			x														
			x														
Poor quality ride or handling	REAR SUSPENSION		x														
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x: Applicable

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RSU

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

Aluminum Die-Casting Parts Handling

INFOID:000000004123780

PROHIBITION OF WELDING OR BEATING REPAIR

- Material made of aluminum die-casting parts is heat-treated and loses strength when being exposed to welding heat. Do not perform welding repair for cracks, damage or others.
- For aluminum die-casting parts deformation, do not perform repair by beating. Always repair by replacement as an assembly.

CRACK CHECK

When the vehicle is damaged, always perform a visual deformation check and a crack check.

Crack Check Procedures

For a crack check, use dye penetrant inspection fluid (pre-cleaning fluid, penetrant fluid and developer fluid).

CAUTION:

Always perform a crack check in accordance with the procedures specified by the manufacturer of the dye penetrant inspection fluid.

1. Spray pre-cleaning fluid on the checking surface for cleaning.
2. Spray penetrant fluid on the checking surface and wait until the penetrant fluid soaks into any cracks.
3. Wipe off excessive penetrant fluid, and then also lightly wipe off penetrant fluid using a wet cloth.
4. Spray developer fluid on the checking surface.
5. Cracks, if any, are dyed red in color.

STRAY CURRENT CORROSION

- Corrosion occurs to aluminum die-casting parts by the stray current corrosion phenomenon, when directly contacting other parts made of steel. Always apply anti-stray current corrosion paint (primer) on the mounting surface.
- Clean mounting surface to prevent any foreign matter, steel powder or others from being mixed in. Always apply the specified adhesive when installing.
- Corrosion by stray current corrosion may occur when installing with any other bolts than the specified bolt. Always use the specified bolt that is surface treated.
- When loosening the specified bolt that is tightened, the treated surface may peel. Never reuse the specified bolt that is tightened once.

TIGHTENING TORQUE CONTROL

Material made of aluminum die-casting parts is soft in term of hardness. Tightening torque must be controlled exactly as specified. Always use a torque wrench to install any part to the specified tightening torque.

WARNING:

Never use a power tool to remove or tighten bolts for aluminum die-casting part.

General Precautions

INFOID:000000004173822

CAUTION:

After finishing servicing, check that all the tools and waste are stored in a customary place.

Precautions for Suspension (GT-R certified NISSAN dealer)

INFOID:000000004123779

- 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. Always wipe out any spilled oil.
- Unladen conditions mean that fuel, engine coolant and lubricant are full. Jack, hand tools and mats are in designated positions.
- After servicing suspension parts, always 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.
- Carry out a shakedown driving for (approximately) 1,000km (621 miles) to adjust the suspension parts after the replacement.
- Before starting and after the sports driving, always check for the damage on Bilstein DampTronic* and the oil leakage.

PRECAUTIONS

< PRECAUTION >

*: The Bilstein DampTronic is the trademark owned by Thyssen Krupp Bilstein Suspension GmbH, Germany.

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PREPARATION

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PREPARATION

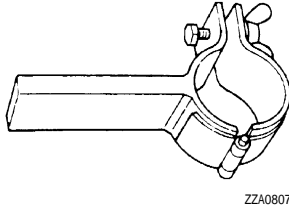
PREPARATION

Special Service Tool (GT-R certified NISSAN dealer)

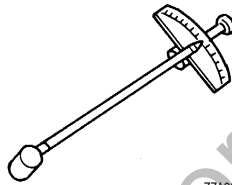
INFOID:000000003995942

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

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



ZZA0807D

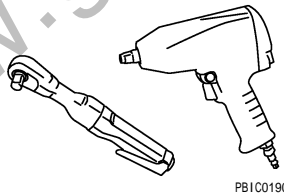


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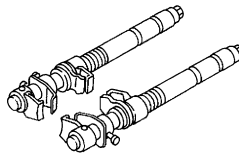
Commercial Service Tool (GT-R certified NISSAN dealer)

INFOID:000000003995943

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



PB1C0190E



S-NT717

REAR SUSPENSION ASSEMBLY

< ON-VEHICLE MAINTENANCE >

ON-VEHICLE MAINTENANCE

REAR SUSPENSION ASSEMBLY

Inspection

INFOID:000000004022348

MOUNTING INSPECTION

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

BALL JOINT AXIAL END PLAY

1. Set front wheels in a straight-ahead position.

CAUTION:

Never depress brake pedal when measuring.

2. Place an iron bar or equivalent between front lower link, rear lower link radius rod or suspension arm and axle housing.
3. Measure axial end play by playing it up and down.

Standard

Axial end play : Refer to [FSU-21, "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

CAUTION:

Be careful not to damage ball stud boot and 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

< ON-VEHICLE MAINTENANCE >

WHEEL ALIGNMENT

Inspection

INFOID:000000003995245

DESCRIPTION

Measure wheel alignment under unladen conditions.

NOTE:

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

PRELIMINARY CHECK

Check the following:

- Tires for improper air pressure and wear.
- Road wheels for runout. Refer to [XX-XX, "*****"](#).
- Wheel bearing axial end play. Refer to [RAX-5, "Inspection"](#).
- Ball joint axial end play of suspension arm. Refer to [RSU-15, "Inspection \(GT-R certified NISSAN dealer\)"](#).
- Shock absorber operation.
- Each mounting point of axle and suspension for looseness and deformation.
- Each of front lower link, rear lower link, radius rod, 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). **Do not use these indicators.**
- The alignment specifications programmed into your machine that operate these indicators may not be correct.
- This may result in an ERROR.
- Some newer alignment machines are equipped with an optional "Rolling Compensation" method to "compensate" the sensors (alignment targets or head units). **Never use this "Rolling Compensation" method.**
- Use the "Jacking Compensation Method". After installing the alignment targets or head units, raise the vehicle and rotate the wheels 1/2 turn both ways.
- See Instructions in the alignment machine you're using for more information on this.

Adjustment

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TOE-IN

1. Remove rear diffuser. Refer to [EXT-39, "REAR DIFFUSER : Exploded View"](#).

WHEEL ALIGNMENT

< ON-VEHICLE MAINTENANCE >

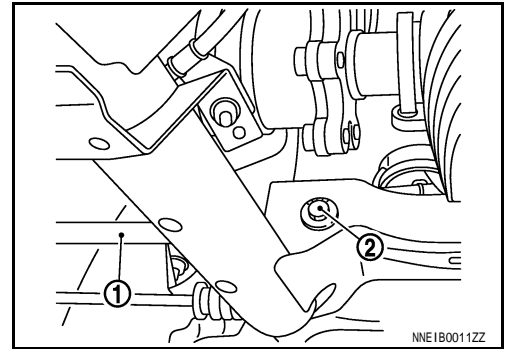
- Adjust using the adjust bolt (2) of rear lower link (1).

Standard

Toe-in : Refer to [RSU-25, "Wheel Alignment"](#).

CAUTION:

- Always evenly adjust both toe-in alternately and adjust the difference between the left and right to the standard.
- Always hold the adjust bolt firmly when tightening nut.



CAMBER

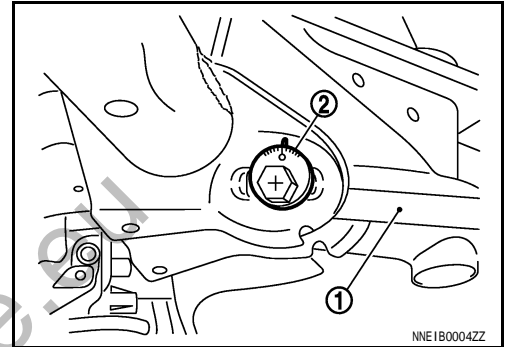
- Remove rear diffuser. Refer to [EXT-39, "REAR DIFFUSER : Exploded View"](#).
- Adjust using the adjust bolt (2) of front lower link (1).

Standard

Camber : Refer to [RSU-25, "Wheel Alignment"](#).

CAUTION:

- Always hold the adjust bolt firmly when tightening nut.
- Always check toe-in after adjusting camber.



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REAR COIL SPRING AND SHOCK ABSORBER

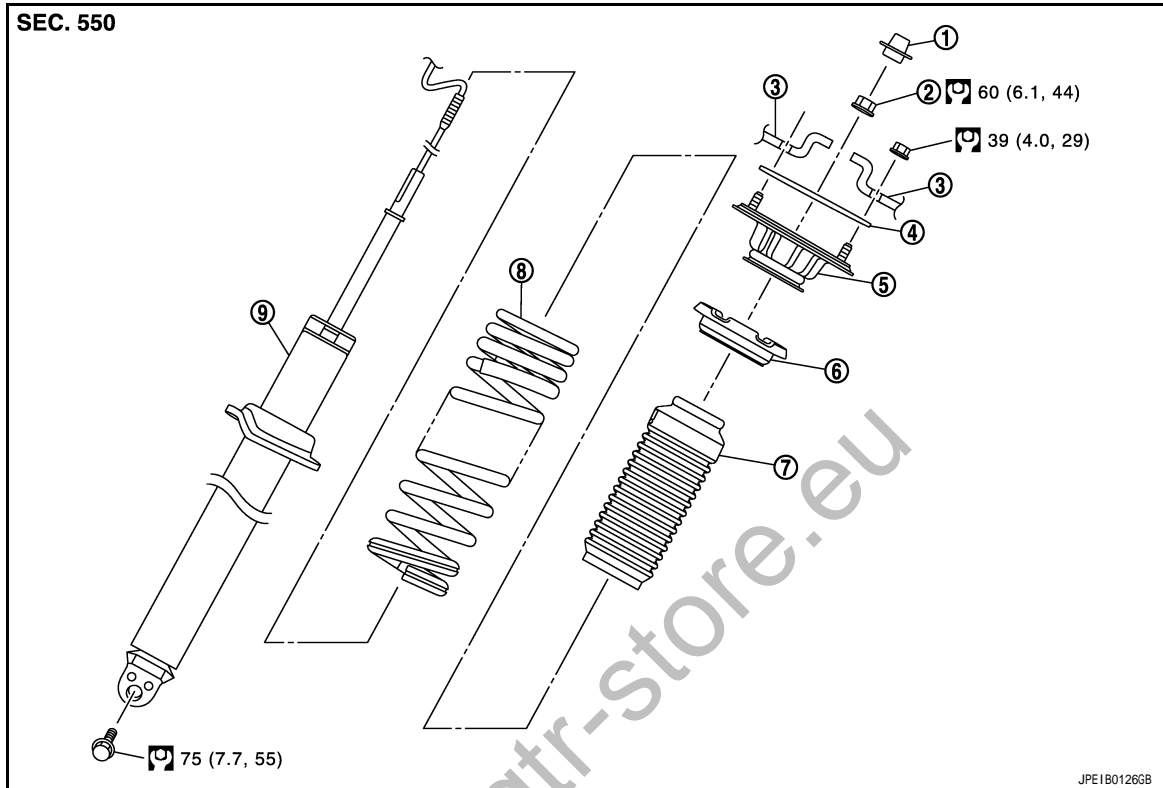
< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

REAR COIL SPRING AND SHOCK ABSORBER

Exploded View

INFOID:000000003852964



- | | | |
|------------------|------------------------|-------------------|
| 1. Cap | 2. Piston rod lock nut | 3. Vehicle body |
| 4. Mounting seal | 5. Mount insulator | 6. Rubber seat |
| 7. Bound bumper | 8. Coil spring | 9. Shock absorber |

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

Removal and Installation (GT-R certified NISSAN dealer)

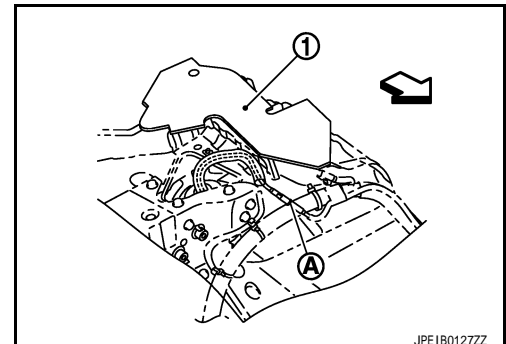
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REMOVAL

1. Remove tires with power tool.
2. Remove shock absorber from axle housing with power tool.
3. Remove rear parcel shelf finisher. Refer to [INT-17, "Exploded View"](#).
4. Remove shock absorber actuator harness connector (A) and seat (1).

↔ : Vehicle front

5. Remove shock absorber assembly.



INSTALLATION

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

REAR COIL SPRING AND SHOCK ABSORBER

< ON-VEHICLE REPAIR >

- Install the seat to cover the shock absorber actuator harness connector.
- Perform final tightening of bolts and nuts at the vehicle installation position (rubber bushing), under unladen conditions with tires on level ground.

Disassembly and Assembly (GT-R certified NISSAN dealer)

INFOID:000000003852965

DISASSEMBLY

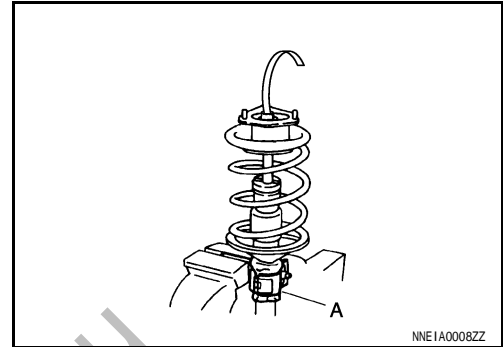
CAUTION:

- **Never damage shock absorber piston rod when removing components from shock absorber.**
- **Before disassembly, distinguish coil spring right and left.**

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

CAUTION:

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

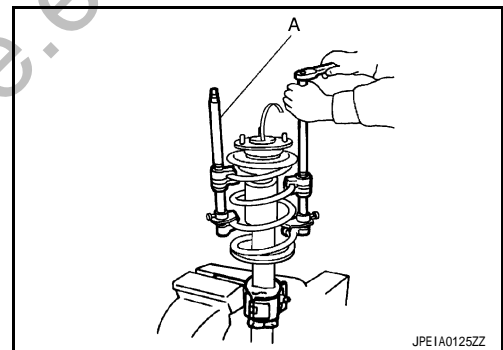


2. Using a spring compressor (A) (commercial service tool), compress coil spring between rubber seat and shock absorber until coil spring with a spring compressor is free.

CAUTION:

Always a spring compressor is installed coil spring. Compress coil spring.

3. Remove cap.



4. Check 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 with socket (A) [17 mm (0.67 in)].

CAUTION:

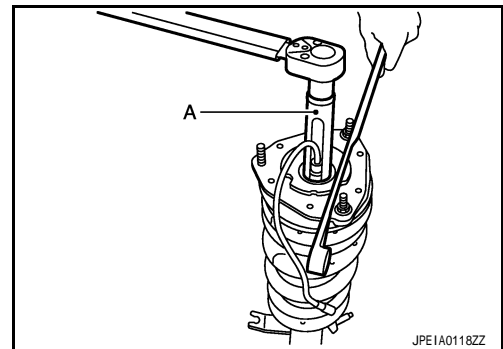
Never damage shock absorber actuator harness connector.

5. Remove mounting seal, mount insulator, rubber seat, bound bumper from shock absorber.
6. After remove coil spring with a spring compressor, and then gradually release a spring compressor.

CAUTION:

Loosen while checking coil spring attachment position does not move.

7. Remove the shock absorber attachment from shock absorber.



ASSEMBLY

1. 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 waste cloth around shock absorber to protect it from damage.

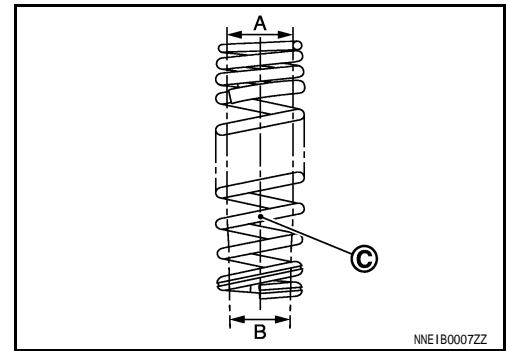
REAR COIL SPRING AND SHOCK ABSORBER

< ON-VEHICLE REPAIR >

- Compress the coil spring using a spring compressor, and then set it to the shock absorber.

CAUTION:

- Install the coil spring with larger-diameter side (A) facing up and the smaller-diameter side (B) facing down. Then, check that the paint mark (C) is facing downward.
- Start compressing the coil spring after checking that the spring compressor is completely installed to the coil spring.



- Assemble the rubber seat to the mount insulator as shown in the figure.

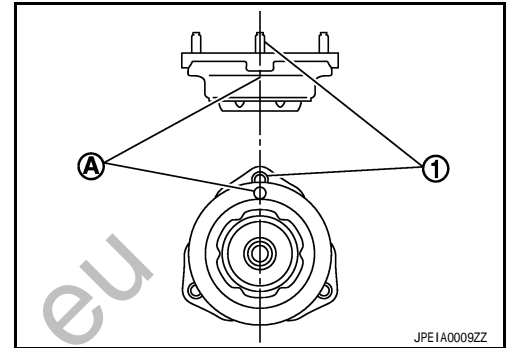
CAUTION:

Align the positions of the paint mark (A) and the stud bolt (1).

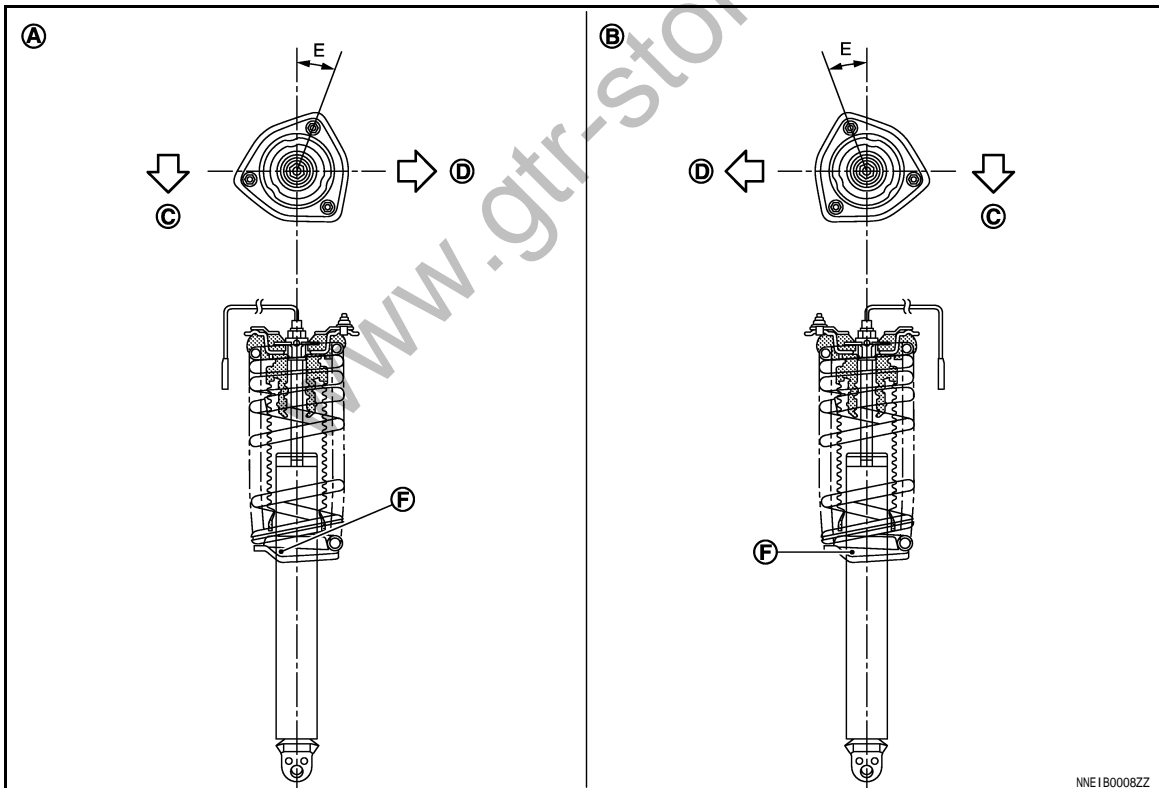
- Apply soapy water to bound bumper.

CAUTION:

Never use machine oil.



- Install the rubber seat and mount insulator to the shock absorber.



A. Left side

B. Right side

C. Vehicle front

D. Vehicle out side

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

Angle (E) : 20.0°

- Install the coil spring so that the lower edge is in the position (F) of the lower seat shown in the figure.

CAUTION:

REAR COIL SPRING AND SHOCK ABSORBER

< ON-VEHICLE REPAIR >

Never lift up the shock absorber with the shock absorber harness connector.

- Secure piston rod tip so that piston rod does not turn, then tighten piston rod lock nut with specified torque with socket [17 mm (0.67 in)].

CAUTION:

Never damage shock absorber actuator harness connector.

- Gradually release a spring compressor, and remove coil spring.

CAUTION:

Loosen while checking coil spring attachment position does not move.

- Remove the shock absorber attachment from shock absorber.
- Install the mounting seal to mount insulator.

Inspection (GT-R certified NISSAN dealer)

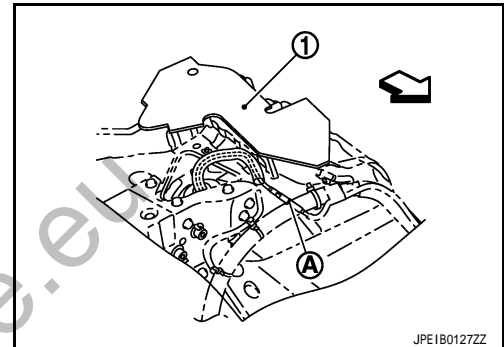
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INSPECTION AFTER INSTALLATION

- Check shock absorber actuator harness connector (A) and seat (1) for proper connection.

↔ : Vehicle front

- Check wheel alignment. Refer to [RSU-8, "Inspection"](#).
- Adjust neutral position of steering angle sensor. Refer to [BRC-10, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).



INSPECTION AFTER DISASSEMBLY

Shock Absorber

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

- Shock absorber for deformation, cracks or damage.
- Piston rod for damage, uneven wear or distortion.
- Oil leakage.
- Shock absorber harness connector for damage.

Mount Insulator and Rubber Parts Inspection

Check mount insulator for cracks and rubber parts for wear. Replace it if necessary

Coil Spring

Check coil spring for cracks, wear or damage. Replace it if necessary.

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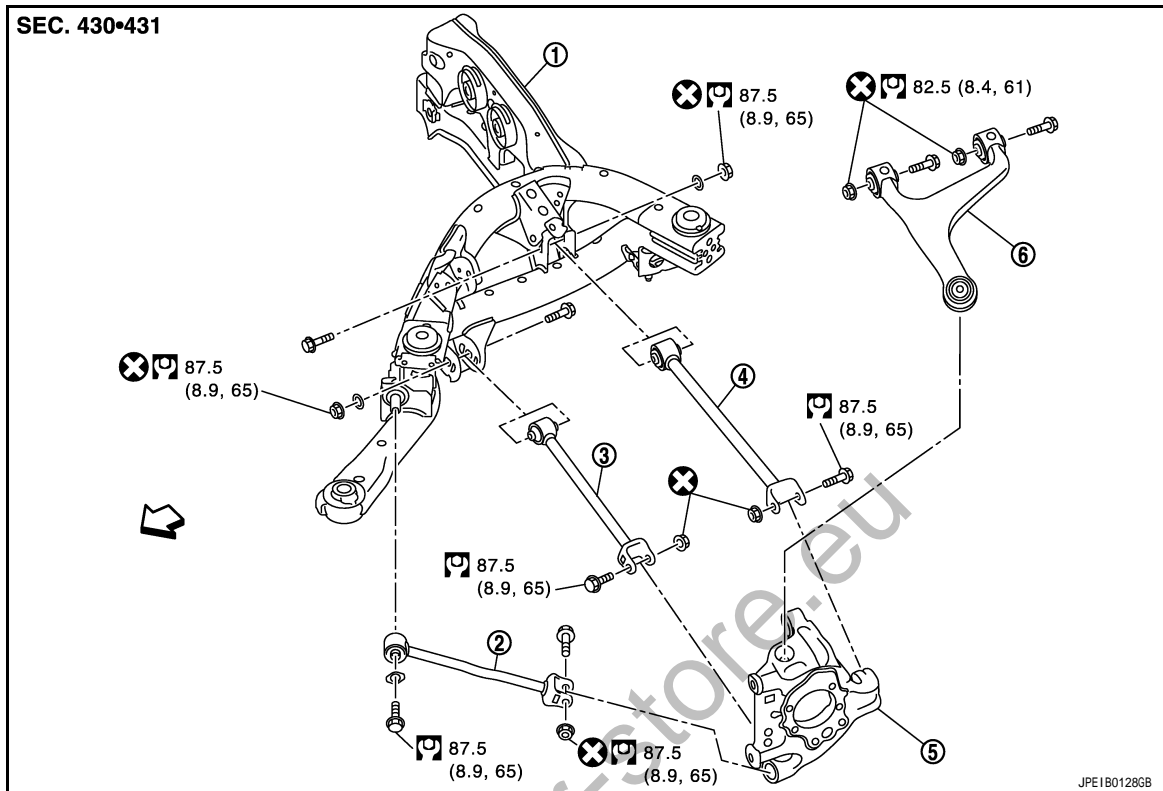
SUSPENSION ARM

< ON-VEHICLE REPAIR >

SUSPENSION ARM

Exploded View

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- | | | |
|---------------------------|-----------------|---------------------|
| 1. Rear suspension member | 2. Radius rod | 3. Front lower link |
| 4. Rear lower link | 5. Axle housing | 6. Suspension arm |

←: Vehicle front

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

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000003995248

REMOVAL

1. Remove tire with power tool.
2. Remove brake hose bracket. Refer to [BR-22, "REAR : Exploded View"](#).
3. Remove caliper assembly mounting bolts. Hang caliper assembly in a place where it will not interfere with work. Refer to [BR-43, "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NISSAN dealer\)"](#).
4. Remove disc rotor. Refer to [BR-44, "BRAKE CALIPER ASSEMBLY : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).
5. Set suitable jack under axle assembly.
6. Separate shock absorber from axle housing. Refer to [RSU-10, "Exploded View"](#).
7. Remove cotter pin of suspension arm ball joint, and loosen nut. Refer to [RAX-7, "Exploded View"](#).
8. Remove suspension arm mounting bolts and nuts from rear suspension member.
9. Remove suspension arm from axle housing. Refer to [RAX-7, "Exploded View"](#).
10. Remove suspension arm.

INSTALLATION

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

- Perform final tightening of bolts and nuts at the vehicle installation position (rubber bussing), under unladen conditions with tires on level ground.
- Never reuse cotter pin.

SUSPENSION ARM

< ON-VEHICLE REPAIR >

Inspection (GT-R certified NISSAN dealer)

INFOID:000000003853191

INSPECTION AFTER REMOVAL (PILLOW BALL BUSHING)

Appearance

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

- Ball stud boot for cracks, damage or leakage of grease.
- Suspension arm and ball stud for deformation, cracks or damage.

Ball stud Inspection

Manually move ball stud to check that it moves smoothly with no binding and check for looseness. Replace the suspension arm if necessary.

Swing Torque Inspection

1. Move the ball stud ten times or more by hand to check for smooth movement.
2. Hook spring balance at the ball stud inner cylinder. Check that the reading at the moment that the ball stud begins moving is within the standard.

Standard

Swing torque

: Refer to [RSU-25, "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

Measurement on spring balance

: Refer to [RSU-25, "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

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

INSPECTION AFTER REMOVAL (BALL JOINT)

Appearance

Check the following items, and replace the part if necessary

- Suspension arm and ball joint for deformation, cracks or damage.
- Ball joint boot for cracks, damage or leakage of grease.

Ball Joint Inspection

Manually move ball joint to check that it moves smoothly with no binding and check for looseness. Replace the suspension arm if necessary.

Swing Torque Inspection

1. Move the ball joint ten times or more by hand to check for smooth movement.
2. Hook spring balance (A) at cotter pin mounting hole. Check that the reading at the moment that the ball stud begins moving is within the standard.

Standard

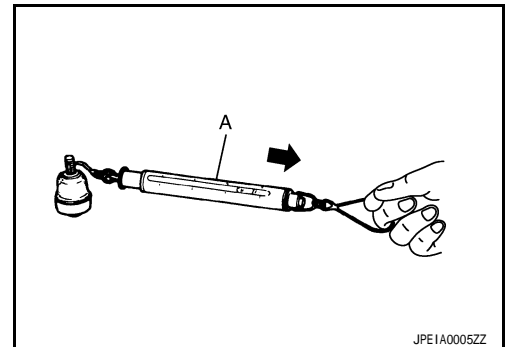
Swing torque

: Refer to [RSU-25, "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

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

Rotating Torque Inspection

1. Move the ball joint ten times or more by hand to check for smooth movement.



SUSPENSION ARM

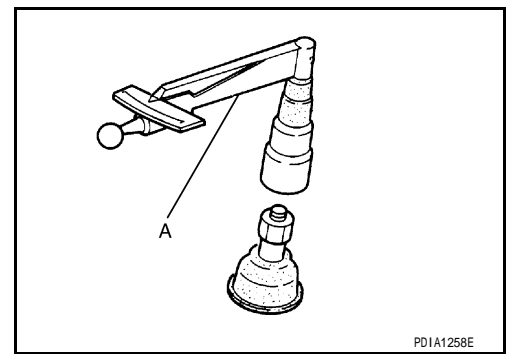
< ON-VEHICLE REPAIR >

2. Install the mounting nut to ball joint. Check that rotating torque is within the standard with a preload gauge (A) [SST: ST3127S000 (J-25765-A)].

Standard

Rotating torque : Refer to [RSU-25, "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

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



Axial End Play Inspection

Move tip of ball joint in axial direction to check looseness.

Standard

Axial end play : Refer to [RSU-25, "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

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

INSPECTION AFTER INSTALLATION

1. Check wheel alignment. Refer to [RSU-25, "Wheel Alignment"](#).
2. Adjust neutral position of steering angle sensor. Refer to [BRC-10, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).

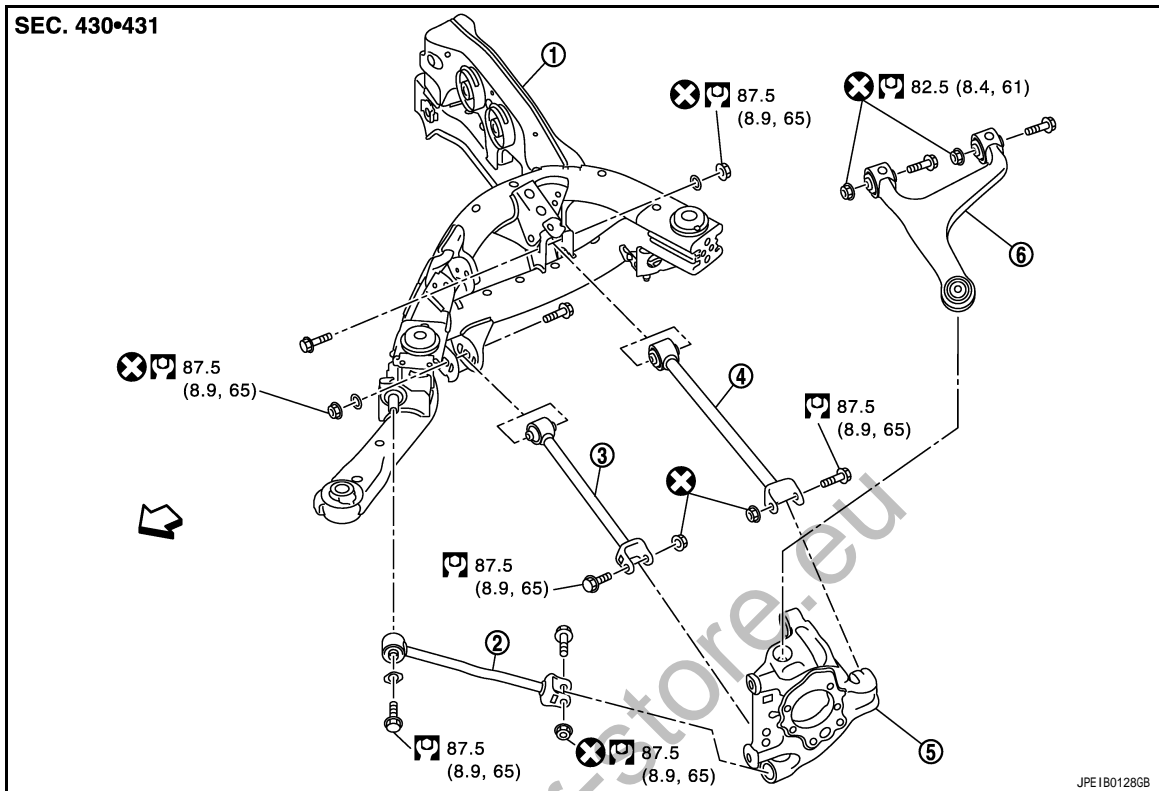
RADIUS ROD

< ON-VEHICLE REPAIR >

RADIUS ROD

Exploded View

INFOID:000000003852968



- | | | |
|---------------------------|-----------------|---------------------|
| 1. Rear suspension member | 2. Radius rod | 3. Front lower link |
| 4. Rear lower link | 5. Axle housing | 6. Suspension arm |

↔: Vehicle front

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

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000003995249

REMOVAL

1. Remove tire with power tool.
2. Remove rear diffuser. Refer to [EXT-39, "REAR DIFFUSER : Exploded View"](#).
3. Set suitable jack under rear suspension member.
4. Loosen rear suspension member mounting nuts, and gradually lower jack to rear suspension member.
CAUTION:
Never remove rear suspension member mounting bolts and nuts.
5. Remove radius rod.

INSTALLATION

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

- Perform final tightening of bolts and nuts at the vehicle installation position (rubber bushing), under unladen conditions with tires on level ground.

Inspection (GT-R certified NISSAN dealer)

INFOID:000000003995250

INSPECTION AFTER REMOVAL

Check radius rod and bushing for any deformation, cracks and damage. Replace it if necessary.

INSPECTION AFTER INSTALLATION

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RADIUS ROD

< ON-VEHICLE REPAIR >

1. Check wheel alignment. Refer to [RSU-8, "Inspection"](#).
2. Adjust neutral position of steering angle sensor. Refer to [BRC-10, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).

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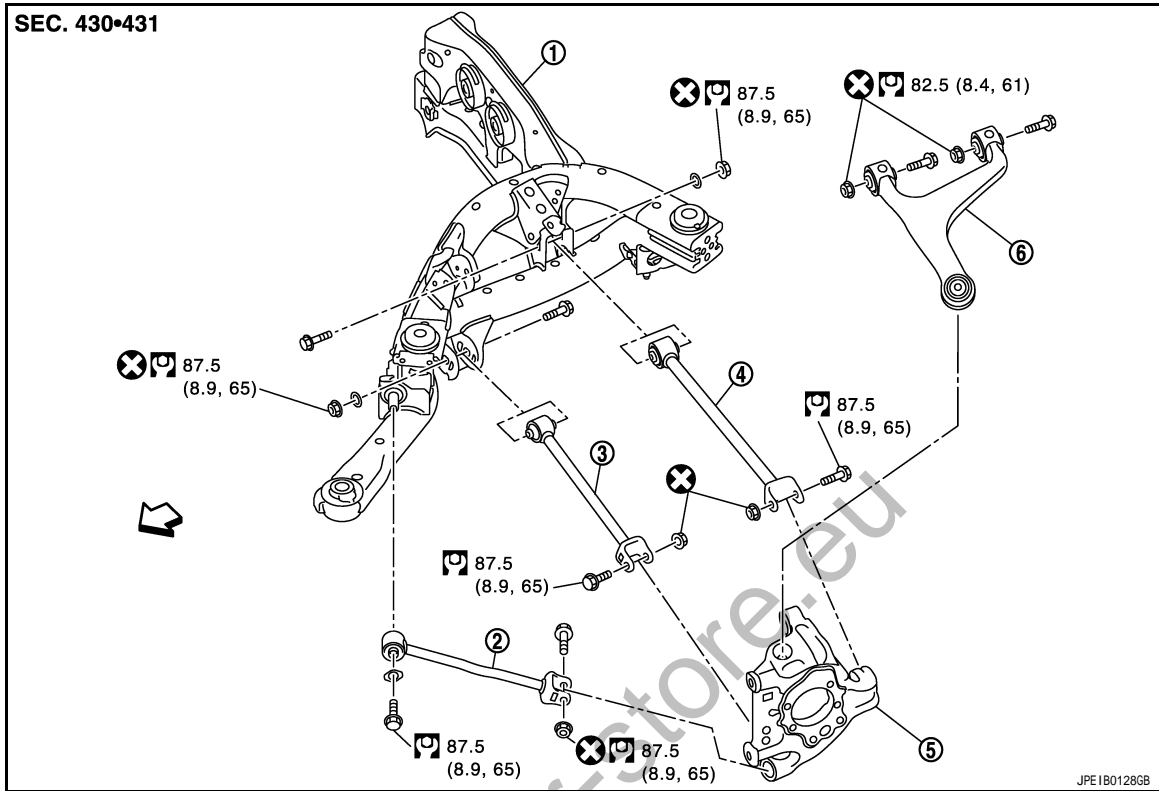
FRONT LOWER LINK

< ON-VEHICLE REPAIR >

FRONT LOWER LINK

Exploded View

INFOID:000000003852969



- | | | |
|---------------------------|-----------------|---------------------|
| 1. Rear suspension member | 2. Radius rod | 3. Front lower link |
| 4. Rear lower link | 5. Axle housing | 6. Suspension arm |

←: Vehicle front

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

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000003995251

REMOVAL

1. Remove tires with power tool.
2. Remove rear diffuser. Refer to [EXT-39, "REAR DIFFUSER : Exploded View"](#).
3. Remove front lower link.

CAUTION:

Apply a matching mark to the installation position for adjusting bolt and rear suspension member.

INSTALLATION

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

- Perform final tightening of bolts and nuts at the vehicle installation position (rubber bushing) under unladen condition with tires on level ground.

Inspection (GT-R certified NISSAN dealer)

INFOID:000000003995953

INSPECTION AFTER INSTALLATION

1. Check wheel alignment. Refer to [RSU-25, "Wheel Alignment"](#).
2. Adjust neutral position of steering angle sensor. Refer to [BRC-10, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).

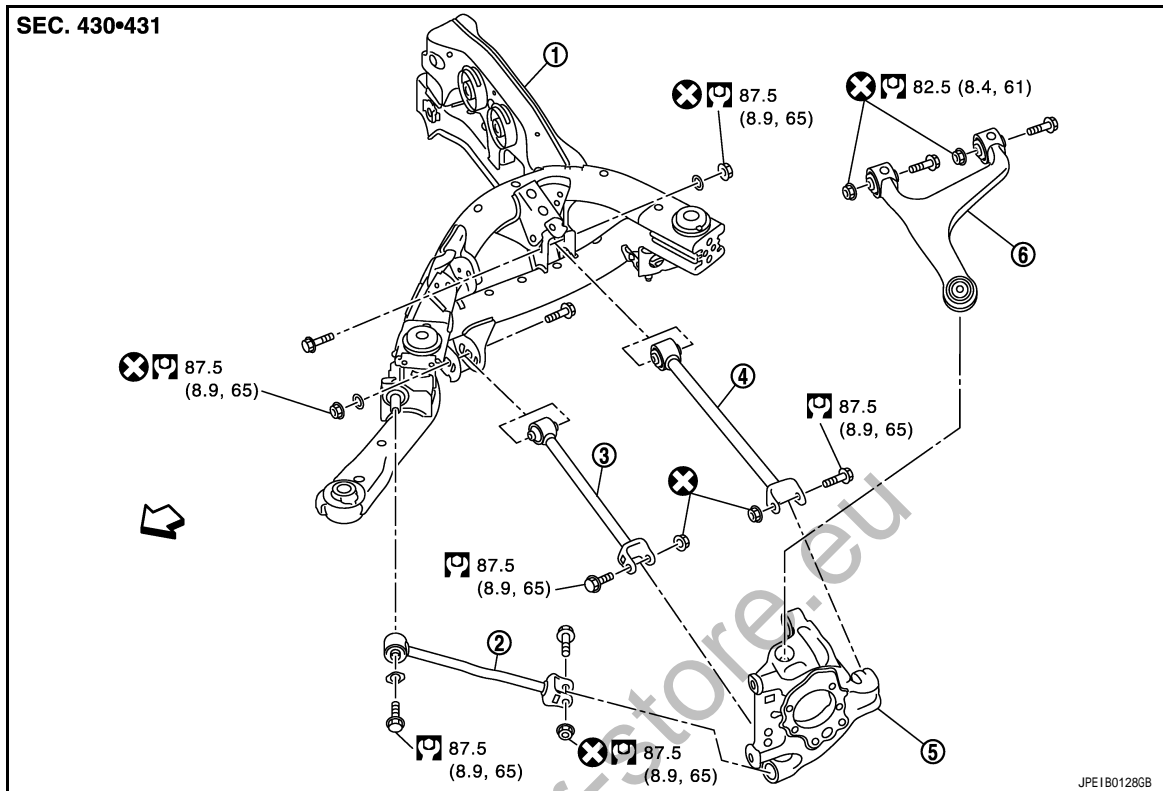
REAR LOWER LINK

< ON-VEHICLE REPAIR >

REAR LOWER LINK

Exploded View

INFOID:000000003995954



- | | | |
|---------------------------|-----------------|---------------------|
| 1. Rear suspension member | 2. Radius rod | 3. Front lower link |
| 4. Rear lower link | 5. Axle housing | 6. Suspension arm |

←: Vehicle front

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

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000003995955

REMOVAL

1. Remove tires with power tool.
2. Remove rear diffuser. Refer to [EXT-39, "REAR DIFFUSER : Exploded View"](#).
3. Remove rear lower link.

CAUTION:

Apply a matching mark to the installation position for adjusting bolt and rear suspension member.

INSTALLATION

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

- Perform the final tightening of bolts and nuts at the vehicle installation position (rubber bushing) under unladen condition with tires on level ground.

Inspection (GT-R certified NISSAN dealer)

INFOID:000000003995956

INSPECTION AFTER REMOVAL (PILLOW BALL BUSHING)

Appearance

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

- Ball stud boot for cracks, damage or leakage of grease.
- Suspension arm and ball stud for deformation, cracks or damage.

Ball Stud Inspection

REAR LOWER LINK

< ON-VEHICLE REPAIR >

Manually move ball stud to check that it moves smoothly with no binding and check for looseness. Replace the rear lower link if necessary.

Swing Torque Inspection

1. Move the ball stud ten times or more by hand to check for smooth movement.
2. Hook spring balance at the ball stud inner cylinder. Check that the reading at the moment that the ball stud begins moving is within the standard.

Standard

Swing torque : Refer to [RSU-25, "Ball Joint \(GT-R certified NIS-SAN dealer\)"](#).

Measurement on spring balance : Refer to [RSU-25, "Ball Joint \(GT-R certified NIS-SAN dealer\)"](#).

- If swing torque outside standard range, replace the rear lower link assembly.

INSPECTION AFTER INSTALLATION

1. Check wheel alignment. Refer to [RSU-25, "Wheel Alignment"](#).
2. Adjust neutral position of steering angle sensor. Refer to [BRC-10, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).

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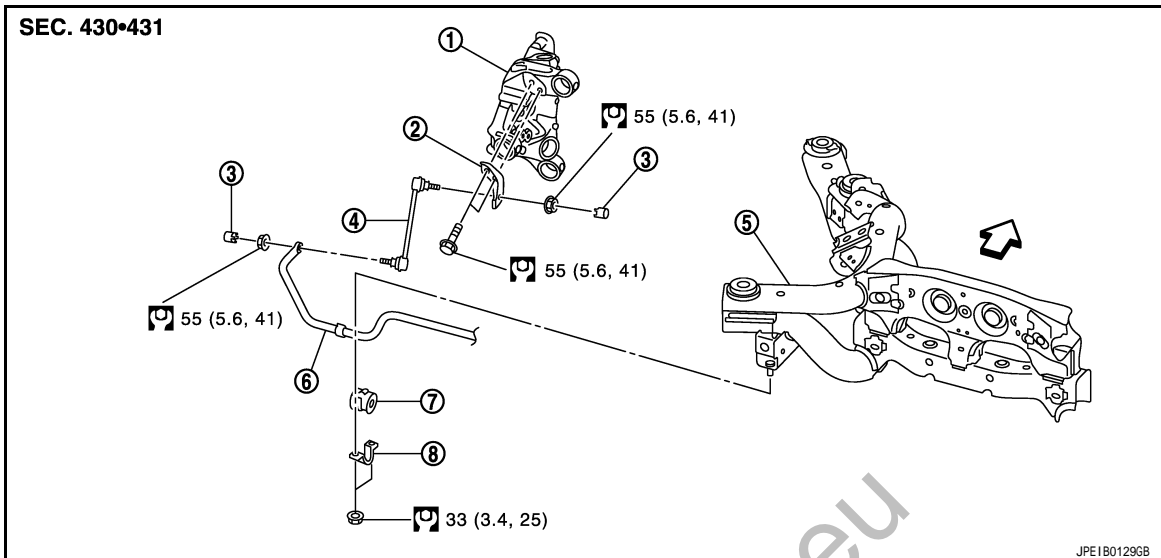
REAR STABILIZER

< ON-VEHICLE REPAIR >

REAR STABILIZER

Exploded View

INFOID:000000003852971



- | | | |
|------------------------------|---|-------------------|
| 1. Axle housing | 2. Stabilizer connecting rod mounting bracket | 3. Cap |
| 4. Stabilizer connecting rod | 5. Rear suspension member | 6. Stabilizer bar |
| 7. Stabilizer bushing | 8. Stabilizer clamp | |

↔ Vehicle front

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

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000003995252

REMOVAL

1. Remove tires with power tool.
2. Remove rear diffuser. Refer to [EXT-39, "REAR DIFFUSER : Exploded View"](#).
3. Remove main muffler assembly. Refer to [EX-4, "Exploded View"](#).
4. Remove cap, and then stabilizer connecting rod.
CAUTION:
Apply a matching mark to identify the installation position.
5. Remove stabilizer connecting rod mounting bracket.
6. Remove stabilizer clamp and stabilizer bushing, and then remove stabilizer bar.

INSTALLATION

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

- Check the matching mark when installing.
- Tighten the mounting nut to the specified torque while holding a hexagonal part of stabilizer connecting rod side.

Inspection (GT-R certified NISSAN dealer)

INFOID:000000003995253

INSPECTION AFTER REMOVAL

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

REAR SUSPENSION MEMBER

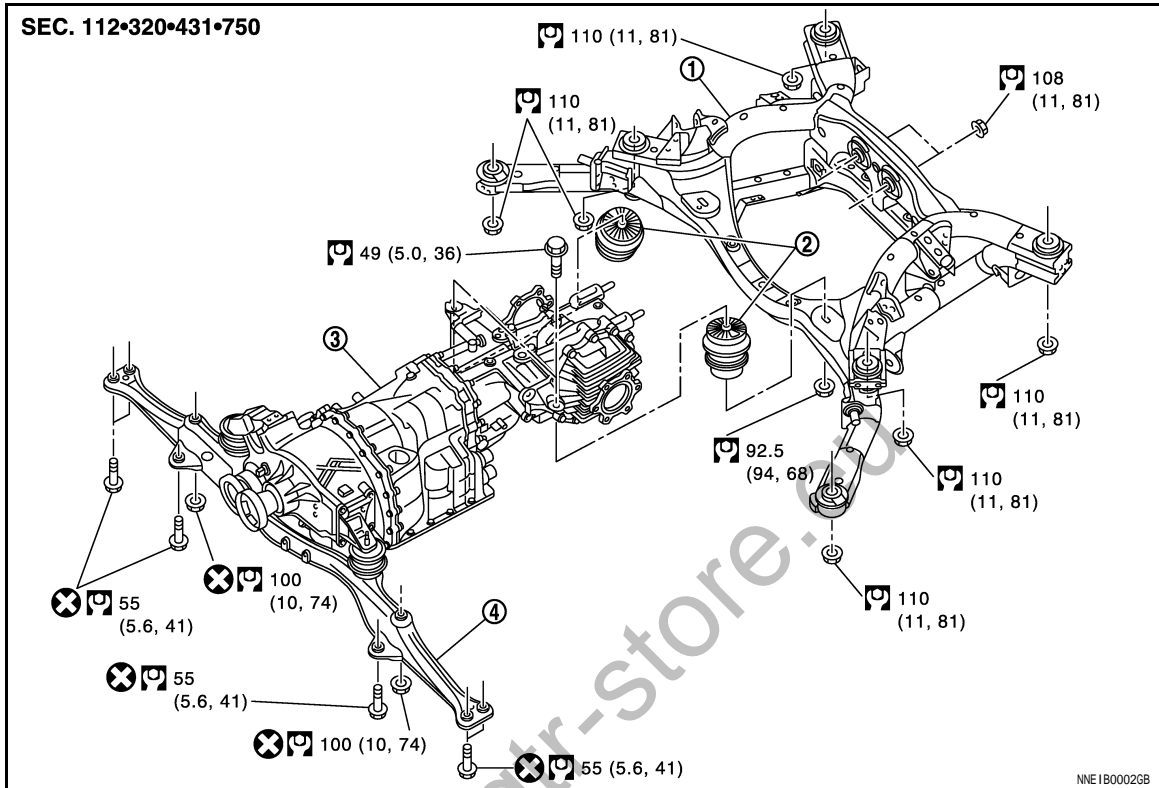
< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

REAR SUSPENSION MEMBER

Exploded View

INFOID:000000003852972



1. Rear suspension member
2. Mount insulator
3. Transmission assembly
4. Transmission mount stay

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

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000003995254

REMOVAL

1. Remove tires with power tool.
2. Remove rear diffuser. Refer to [EXT-39, "REAR DIFFUSER : Exploded View"](#).
3. Remove main muffler assembly. Refer to [EX-4, "Exploded View"](#).
4. Remove brake hose bracket. Refer to [BR-22, "REAR : Exploded View"](#).
5. Remove brake caliper assembly. Hang brake caliper assembly in a place where it will not interfere with work. Refer to [BR-43, "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NISSAN dealer\)"](#).
6. Remove disc rotor. Refer to [BR-44, "BRAKE CALIPER ASSEMBLY : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).
7. Remove wheel sensor and wheel sensor harness connector. Refer to [BRC-116, "REAR WHEEL SENSOR : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).
8. Remove stabilizer bar. Refer to [RSU-22, "Exploded View"](#).
9. Remove front propeller shaft. Refer to [DLN-48, "Exploded View \(GT-R certified NISSAN dealer\)"](#).
10. Remove main propeller shaft. Refer to [DLN-57, "Exploded View \(GT-R certified NISSAN dealer\)"](#).
11. Transmission harness connector. Refer to [TM-281, "Exploded View \(GT-R certified NISSAN dealer\)"](#).
12. Remove parking brake of rear cable mounting nuts (front side), and then separate rear cables from front cable. Refer to [PB-7, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

REAR SUSPENSION MEMBER

< REMOVAL AND INSTALLATION >

13. Remove transmission of control cable from transmission. Refer to [TM-265, "Exploded View \(GT-R certified NISSAN dealer\)"](#).
14. Remove transmission of water hose. Refer to [TM-273, "HEAT EXCHANGER PIPING : Exploded View \(GT-R certified NISSAN dealer\)"](#).
15. Remove shock absorber mounting bolts from axle housing. Refer to [RSU-10, "Exploded View"](#).
16. Set suitable jack under rear suspension member.
17. Remove rear suspension member mounting nuts and transmission mount stay mounting bolts and nuts.
18. Slowly lower jack, then remove rear suspension member, transmission mount stay, transmission, suspension arm, front lower link, rear lower link, radius rod, wheel hub and bearing assembly, axle housing, drive shaft and rear cables from vehicle as a unit.

CAUTION:

Secure rear suspension member with transmission to a jack.

19. Remove the following parts.
 - Transmission and breather hose: refer to [TM-281, "Exploded View \(GT-R certified NISSAN dealer\)"](#).
 - Suspension arm: refer to [RSU-14, "Exploded View"](#).
 - Front lower link: refer to [RSU-19, "Exploded View"](#).
 - Rear lower link: refer to [RSU-20, "Exploded View"](#).
 - Radius rod: refer to [RSU-17, "Exploded View"](#).
 - Wheel hub and bearing assembly, axle housing and rear cable: refer to [RAX-7, "Exploded View"](#), [PB-7, "Exploded View \(GT-R certified NISSAN dealer\)"](#).
 - Drive shaft: refer to [RAX-9, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

INSTALLATION

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

- Perform final tightening of bolts and nuts at the vehicle installation position (rubber bushing), under unladen condition with tire on level ground.
- The transmission mount stay mounting bolts and nuts are aluminum die-casting parts.

CAUTION:

- **Never use the power tools when removing and installing the transmission mount stay mounting bolt.**
 - **If the coating on the joint surface with the vehicle is peeled off, apply primer on the surface to prevent electric corrosion.**
 - **The surface of transmission mount stay mounting bolts and nuts are approximately finished. Always use the specified bolts and nuts.**
 - **Never use the bolts and nuts other than those that are specified, otherwise electric corrosion may occur.**
- Never reuse cotter pin.

Inspection (GT-R certified NISSAN dealer)

INFOID:000000003995255

INSPECTION AFTER REMOVAL

Check rear suspension member for deformation, cracks and damage. Replace if necessary.

INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness connector for proper connection. Refer to [BRC-116, "REAR WHEEL SENSOR : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).
2. Adjust parking brake operation (stroke). [PB-4, "Inspection and Adjustment"](#).
3. Check wheel alignment. Refer to [RSU-8, "Inspection"](#).
4. Adjust neutral position of steering angle sensor. Refer to [BRC-10, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).

SERVICE DATA AND SPECIFICATIONS (SDS)

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SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Wheel Alignment

INFOID:0000000003852977

Item		Standard	
Camber	Degree minute (Decimal degree)	Minimum	-1° 44' (-1.73°)
		Nominal	-1° 34' (-1.57°)
		Maximum	-1° 24' (-1.40°)
		Left and right difference	0° 20' (0.33°) or less
Total toe-in	Distance	Minimum	Out 0.3 mm (0.012 in)
		Nominal	In 1.7 mm (0.067 in)
		Maximum	In 3.7 mm (0.146 in)
	Angle (Left wheel or right wheel) Degree minute (Decimal degree)	Minimum	Out 0° 01' (0.01°)
		Nominal	In 0° 04' (0.07°)
		Maximum	In 0° 09' (0.15°)
	Left and right difference	0° 10' (0.16°) or less	

Measure value under unladen* conditions.

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

Pillow Ball Bushing (GT-R certified NISSAN dealer)

INFOID:0000000003996973

Item	Standard
Swing torque	0 – 1.50 N·m (0 – 0.15 kg-m, 0 – 13 in-lb)
Measurement on spring balance (cotter pinhole position)	0 – 60.0 N (0 – 6.12 kg, 0 – 13.48 lb)

Ball Joint (GT-R certified NISSAN dealer)

INFOID:0000000003852978

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)