

SECTION **FSU**
FRONT SUSPENSION

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FSU

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APPLICATION NOTICE

< HOW TO USE THIS MANUAL >

HOW TO USE THIS MANUAL

APPLICATION NOTICE

How to Check Vehicle Type

INFOID:000000011734835

Check the vehicle type to confirm the service information.

x: Applicable, —: Not applicable

Service information	Grade	NISMO-specific suspension	Brake air guide
TYPE 1	<ul style="list-style-type: none">GTR Black editionGTR Premium edition	—	—
TYPE 2	<ul style="list-style-type: none">GTR N-Package	x	—
	<ul style="list-style-type: none">GTR Track edition		x
	<ul style="list-style-type: none">GTR NISMO		

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NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

TYPE 1

TYPE 1 : NVH Troubleshooting Chart

INFOID:000000011490163

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

Symptom		Possible cause and SUSPECTED PARTS	Reference															
			FSU-15, FSU-20, FSU-22, FSU-25, FSU-27	FSU-18	—	—	—	FSU-15, FSU-20, FSU-22, FSU-25, FSU-27	FSU-12	FSU-25	NVH in DLN section.	NVH in DLN section.	NVH in FAX and FSU sections.	NVH in WT section.	NVH in WT section.	NVH in FAX section.	NVH in BR section.	NVH in ST section.
Symptom	FRONT SUSPENSION	Noise	x	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	x
		Vibration	x	x	x	x	x				x		x	x		x		x
		Shimmy	x	x	x	x			x				x	x	x		x	x
		Judder	x	x	x								x	x	x		x	x
		Poor quality ride or handling	x	x	x	x	x		x	x				x	x	x		

x: Applicable

TYPE 2

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

TYPE 2 : NVH Troubleshooting Chart

INFOID:000000011490164

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

Symptom		Possible cause and SUSPECTED PARTS	Reference															
			FSU-15, FSU-20, FSU-22, FSU-26, FSU-27	FSU-18	—	—	—	FSU-15, FSU-20, FSU-22, FSU-26, FSU-27	FSU-12	FSU-25	NVH in DLN section.	NVH in DLN section.	NVH in FAX and FSU sections.	NVH in WT section.	NVH in WT section.	NVH in FAX section.	NVH in BR section.	NVH in ST section.
Noise	FRONT SUSPENSION	Improper installation looseness	x	x	x	x	x	x			x	x	x	x	x	x	x	x
		Shock absorber deformation, damage or deflection	x	x	x	x		x			x		x	x	x	x	x	x
		Bushing or mounting deterioration	x	x	x	x	x						x	x				
		Parts interference	x	x	x	x												
		Spring fatigue	x	x	x	x												
		Suspension looseness	x	x	x	x												
Shake	FRONT SUSPENSION	Incorrect wheel alignment	x															
		Stabilizer bar fatigue	x															
		PROPELLER SHAFT																
		DIFFERENTIAL																
		FRONT AXLE AND FRONT SUSPENSION																
		TIRE																
Vibration	FRONT SUSPENSION	ROAD WHEEL																
		DRIVE SHAFT																
		BRAKE																
		STEERING																
		Improper installation looseness	x	x	x	x	x											
		Shock absorber deformation, damage or deflection	x	x	x	x												
Shimmy	FRONT SUSPENSION	Improper installation looseness	x	x	x	x												
		Shock absorber deformation, damage or deflection	x	x	x	x												
		Bushing or mounting deterioration	x	x	x	x												
		Parts interference	x	x	x	x												
		Spring fatigue	x	x	x	x												
		Suspension looseness	x	x	x	x												
Judder	FRONT SUSPENSION	Incorrect wheel alignment	x															
		Stabilizer bar fatigue	x															
		PROPELLER SHAFT																
		DIFFERENTIAL																
		FRONT AXLE AND FRONT SUSPENSION																
		TIRE																
Poor quality ride or handling	FRONT SUSPENSION	ROAD WHEEL																
		DRIVE SHAFT																
		BRAKE																
		STEERING																
		Improper installation looseness	x	x	x	x	x											
		Shock absorber deformation, damage or deflection	x	x	x	x												

x: Applicable

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PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000011490165

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never 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:

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precautions Necessary for Steering Wheel Rotation After Battery Disconnection

INFOID:000000011490166

CAUTION:

Comply with the following cautions to prevent any error and malfunction.

- Before removing and installing any control units, first turn the ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

For vehicle with steering lock unit, if the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the operation procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

2. Turn the ignition switch to ACC position.
(At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.

PRECAUTIONS

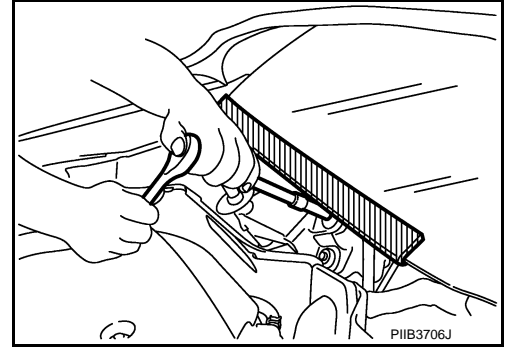
< PRECAUTION >

4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT.

Precaution for Procedure without Cowl Top Cover

INFOID:000000011490167

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



Precaution for Battery Service

INFOID:000000011490168

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

Aluminum Die-Casting Parts Handling

INFOID:000000011490169

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

PRECAUTIONS

< PRECAUTION >

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 to prevent damage to aluminum die-casting parts.

Precautions for Removing Battery Terminal

INFOID:000000011490170

- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

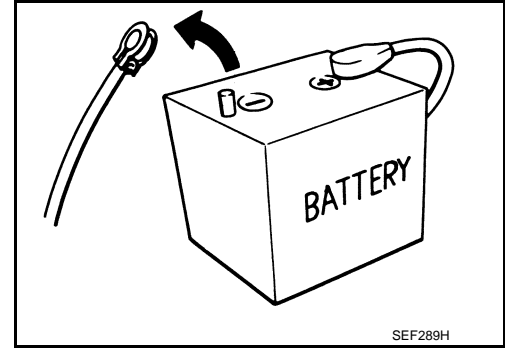
NOTE:

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.

NOTE:

The removal of 12V battery may cause a DTC detection error.



Titanium Muffler Handling

INFOID:000000011490171

CAUTION:

- **Never touch the titanium muffler directly with bare hands or allow oils to adhere to it during inspection, removal, and installation.**
- **Always wear new thick cotton gloves or working gloves. (Never use oil-adhered gloves.)**
- **After oil adhesion, wait until the titanium muffler cools and immediately remove oil with parts cleaner.**
- **Always use genuine parts cleaner (dry type) or the equivalent.**
- **When cleaning oil in on-board condition, apply parts cleaner to a waste to wipe out oil. By doing so, peripheral parts can be protected from parts cleaner adhesion.**
- **Be careful not to cut fingers with the insulator edge or the main muffler cooling fin.**

General Precautions

INFOID:000000011490172

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:000000011490173

- 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) 1,000 miles or 2,000 km 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.
 - *: The Bilstein DampTronic is the trademark owned by Thyssen Krupp Bilstein Suspension GmbH, Germany.
- Before and after the sports driving, check each link and the mounting part of the shock absorber for backlash and looseness.
- For vehicles with a NISMO-specific suspension, the following instructions must be also observed.

PRECAUTIONS

< PRECAUTION >

- For the coil spring, the spring rate and the orientation tolerance are factory-configured to eliminate the axial load difference during cornering and the load difference between the front and the rear axles during acceleration/deceleration. Therefore, it is necessary to replace all of four coil springs together as a set. A
- Before and after the sports driving, it is required to check the brake air guide for alignment and retighten the point shared with the brake peripheral part in order to obtain the high performance in the brake cooling system. (With brake air guide) B

PRECAUTION FOR WHEEL ALIGNMENT

Before Adjusting Wheel Alignment

- Adjust wheel alignment with the vehicle in customer's regular use condition (e.g. normal stock items).
- Confirm customer's requests to adjust the wheel alignment according to the customer's requests. If there is no request from the customer, adjust the wheel alignment to the specified value according to the level of wear in tires. For alignment values, refer to [FSU-29, "TYPE 1 : Wheel Alignment"](#) (TYPE 1), [FSU-30, "TYPE 2 : Wheel Alignment"](#) (TYPE 2). D
- Tires with the tendency of partial wear: Show and explain the customer the partial wear and adjust the camber in the positive direction, and in addition, adjust the toe-in distance in the IN direction. C
- Tires with no tendency of partial wear: Adjust to the value of the default setting at delivery.
- Vehicle attitude is high immediately after jack up. Before setting the vehicle on the alignment tester, drive the vehicle at least 656 ft or 200 m while steering right and left fully to allow the vehicle attitude to fit in. F
- Use an alignment tester calibrated periodically.
- If a vehicle is used with the alignment value for NG zone, tire performance cannot be delivered sufficiently, causing lower fuel economy due to excessive tire wear and an increase in rolling resistance. Therefore, never use the alignment value for NG zone. Toe-out is particularly prohibited. If the alignment becomes outside the specified value due to toe-out, this cannot be covered by the warranty. G
- Never change alignment. If it is changed, vehicle attitude may become higher because the suspension does not fit in sufficiently until the vehicle is driven (approximately) 1,000 miles or 2,000 km. H
- Always check and adjust wheel alignment at the first special maintenance (the mileage of 1,000 miles or 2,000 km). I

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PREPARATION

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PREPARATION

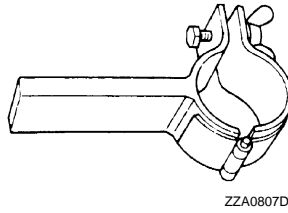
PREPARATION

Special Service Tool (GT-R certified NISSAN dealer)

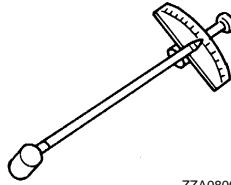
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The actual shapes of Kent-Moore tools may differ from those of the special service tools illustrated here.

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



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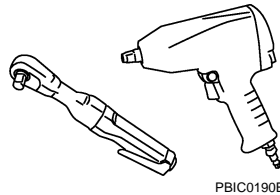


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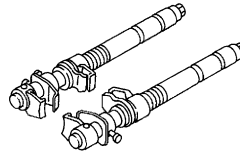
Commercial Service Tool (GT-R certified NISSAN dealer)

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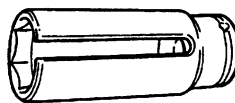
Tool name	Description
Power tool	Loosening bolts and nuts
Spring compressor	Removing and installs coil spring
Sensor socket 17 mm (0.67 in)	Removing and installs shock absorber piston rod lock nut



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S-NT717



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FRONT SUSPENSION ASSEMBLY

< PERIODIC MAINTENANCE >

PERIODIC MAINTENANCE

FRONT SUSPENSION ASSEMBLY

Inspection

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MOUNTING INSPECTION

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

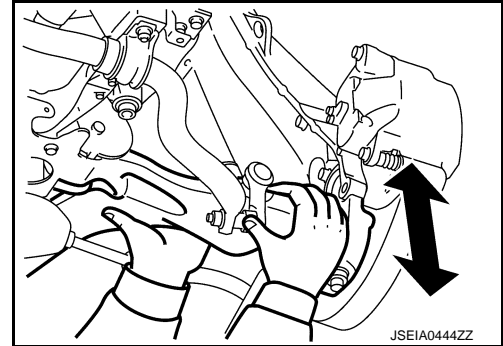
Ball Joint Axial End Play

1. Set front wheels in a straight-ahead position.
2. Move axle side of transverse link and upper link in the axial direction by hand. Check there is no end play.

Axial end play : Refer to [FSU-32. "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

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.

WHEEL ALIGNMENT

< PERIODIC MAINTENANCE >

WHEEL ALIGNMENT

Inspection

INFOID:000000011490177

DESCRIPTION

CAUTION:

- Kingpin inclination angles cannot be adjusted.
- If kingpin inclination angle is outside the standard, check front suspension parts for wear and damage. Replace suspect parts if a malfunction is detected.
- Kingpin inclination angle is reference value, no inspection is required.
- 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 pressure and wear.
- Wheel bearing axial end play. Refer to [FAX-7, "Inspection"](#).
- Transverse link or upper link ball joint axial end play. Refer to [FSU-23, "Inspection \(GT-R certified NISSAN dealer\)"](#).
- Shock absorber operation.
- Each mounting part of axle and suspension for looseness and deformation.
- Each of front suspension member, shock absorber, upper link and transverse link 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.
- See instructions in the alignment machine.

Adjustment

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CAUTION:

- When adjusting wheel alignment, refer to “PRECAUTION FOR WHEEL ALIGNMENT” in [FSU-8, "Precautions for Suspension \(GT-R certified NISSAN dealer\)"](#).
- Adjust wheel alignment with the vehicle in customer's regular use condition (e.g. normal stock items), with the fuel in full-tank condition, and with no one in the vehicle.
- To adjust wheel alignment, set tire pressure at 250 kPa (2.5 kg/cm², 36 psi). After adjusting wheel alignment, adjust tire pressure to the specified value. Refer to [WT-81, "Tire"](#).

TOE-IN

Loosen the steering outer socket, and then adjust the length using steering inner socket.

WHEEL ALIGNMENT

< PERIODIC MAINTENANCE >

Toe-in : Refer to [FSU-29, "TYPE 1 : Wheel Alignment" \(TYPE 1\)](#), [FSU-30, "TYPE 2 : Wheel Alignment" \(TYPE 2\)](#).

CAUTION:

- Always evenly adjust both toe-in alternately and adjust the difference between the left and right to the standard.
- Always fix the steering inner socket when tightening the steering outer socket.
- Always adjust to toe-in. The toe changes, depending on an attitude change or a permanent set of bush. Accordingly, the state of the front wheels change to toe-out and the rear wheels, toe-in. If the wheels change to toe-out, tire partial wear is accelerated and local heating may be accelerated in the inner side of tires.
- Always adjust toe-in to 1.5 mm (0.059 in) or less because too much toe-in may promote local heat generation.
- Engaging in performance driving on a racetrack and ultra-high-speed driving, be sure to adjust toe-in to 1.5 mm (0.059 in) or less. If used beyond this range, it is not covered by the warranty.

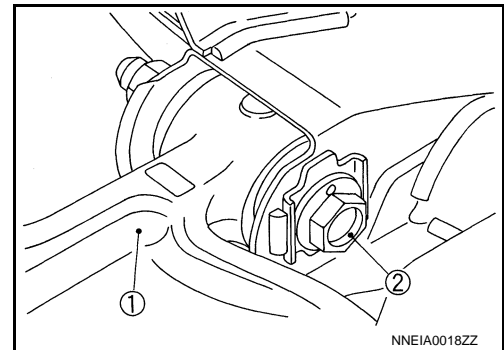
CAMBER

Loosen the mounting nut of transverse link (1) and front suspension member, and then adjust using adjust bolt (2).

Camber : Refer to [FSU-29, "TYPE 1 : Wheel Alignment" \(TYPE 1\)](#), [FSU-30, "TYPE 2 : Wheel Alignment" \(TYPE 2\)](#).

CAUTION:

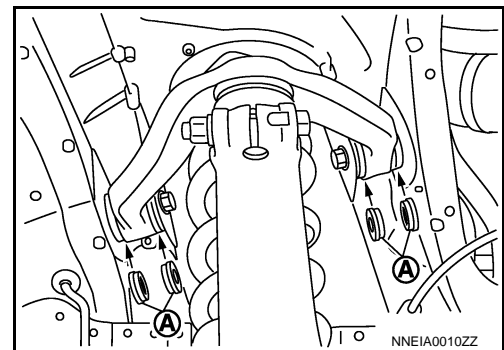
Always hold the adjust bolt firmly when tightening nut.



CASTER

Remove the upper link mounting bolts (body side), and then adjust them using the thickness (increasing and decreasing) of shims (A).

Caster : Refer to [FSU-29, "TYPE 1 : Wheel Alignment" \(TYPE 1\)](#), [FSU-30, "TYPE 2 : Wheel Alignment" \(TYPE 2\)](#).

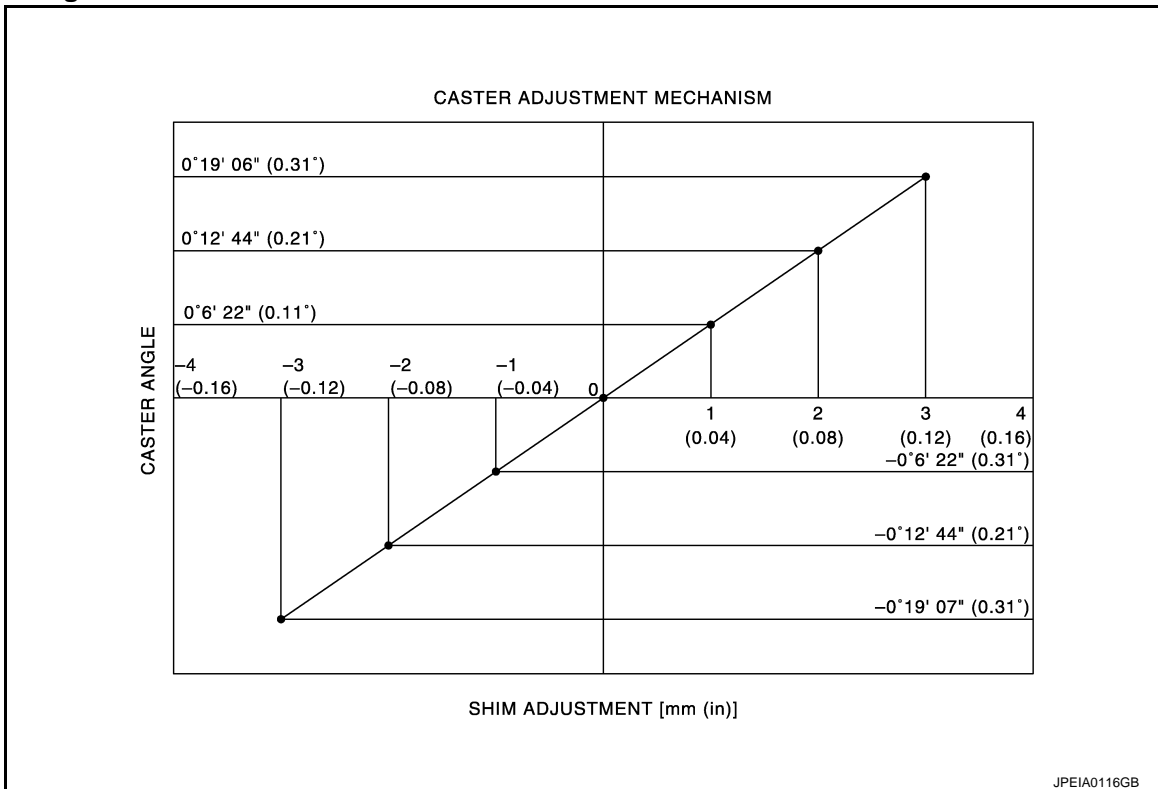


CAUTION:

WHEEL ALIGNMENT

< PERIODIC MAINTENANCE >

- Refer to figure for selection of shim.



- Assemble the shims and the rubber bushings while facing the rubber bushings toward the upper link side.

NOTE:

The shims and rubber bushings are fitted on a new vehicle [shim: 3 mm (0.12 in)] are a single unit. However the shims for adjustment and rubber bushings are separated parts. When shim: 6 mm (0.24in) is selected, fix it on one side only.

FRONT COIL SPRING AND SHOCK ABSORBER

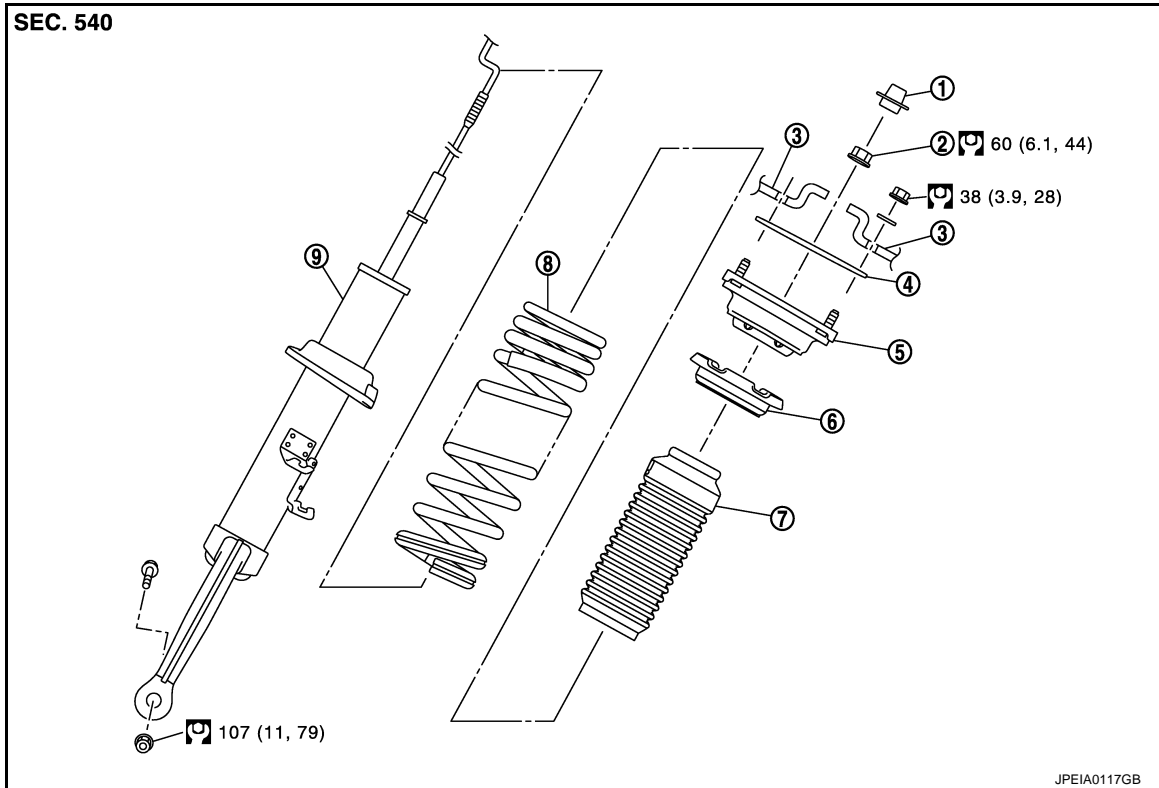
< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

FRONT COIL SPRING AND SHOCK ABSORBER

Exploded View

INFOID:000000011490179



- | | | |
|------------------|------------------------|-------------------|
| 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 |

*: To replace, all of four coil springs must be replaced together as a set. (Vehicles with NISMO-specific suspension)

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

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000011490180

REMOVAL

1. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).
NOTE:
Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).
2. Remove steering knuckle. Refer to [FAX-9, "Exploded View"](#).
3. Remove stabilizer connecting rod. Refer to [FSU-25, "TYPE 1 : Exploded View"](#) (TYPE 1), [FSU-26, "TYPE 2 : Exploded View"](#) (TYPE 2).
4. Separate shock absorber from transverse link with power tool.

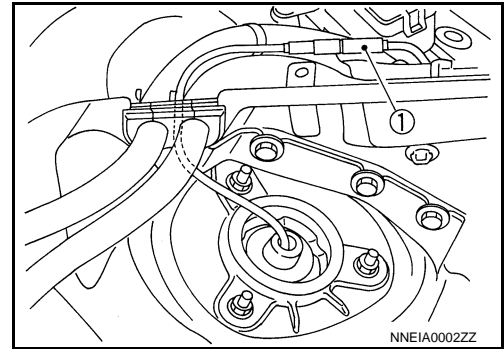
FRONT COIL SPRING AND SHOCK ABSORBER

< REMOVAL AND INSTALLATION >

5. Separate shock absorber actuator harness connector (1).
6. Remove shock absorber assembly.

NOTE:

If removing shock absorber is difficult, loosen upper link mounting bolts (vehicle side).



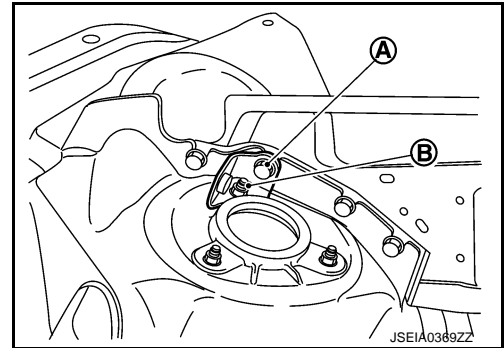
INSTALLATION

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

- Since the mounting nut of mount insulator is tightened together with the strut support bar bracket, loosen bolt (A) of the strut support bar bracket on the vehicle side (strut housing side) first to tighten mounting nut (B) of the mount insulator to the specified torque.

CAUTION:

- Always tighten the mounting nut of mount insulator to the specified torque with the bolt of the strut support bar bracket on the vehicle side (strut housing side) loosened (temporarily tightened).
 - For the installation procedure of the strut support bar bracket, refer to [EXT-29, "Removal and Installation"](#).
- Never pull the shock absorber harness connector.
 - Perform final tightening of bolts and nuts at the vehicle installation position (rubber bushing), under unladen conditions with tires on level ground. (tightening joint of shock absorber and transverse link)



Disassembly and Assembly (GT-R certified NISSAN dealer)

INFOID:000000011490181

DISASSEMBLY

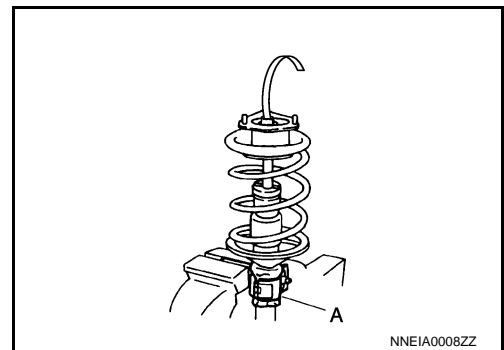
CAUTION:

- 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.

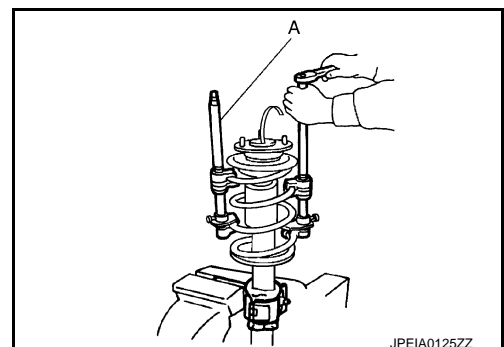


2. Using a spring compressor (A) (commercial service tool), compress coil spring between rubber seat and shock absorber until coil spring with a spring compressor is free.

CAUTION:

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

3. Remove cap.



FRONT COIL SPRING AND SHOCK ABSORBER

< REMOVAL AND INSTALLATION >

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 sensor socket (A) (commercial service tool) [17 mm (0.67 in)].

CAUTION:

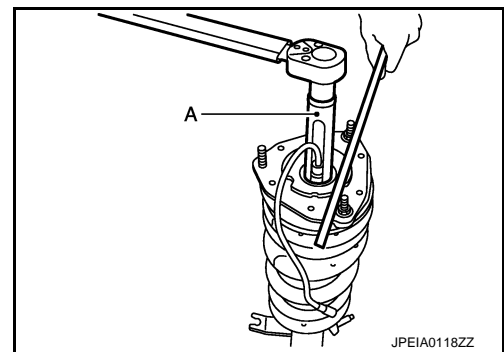
Never damage shock absorber actuator harness connector.

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

CAUTION:

- Loosen while checking coil spring attachment position does not move.
- To replace coil springs, all of four coil springs must be replaced together as a set. (Vehicles with NISMO-specific suspension)

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.

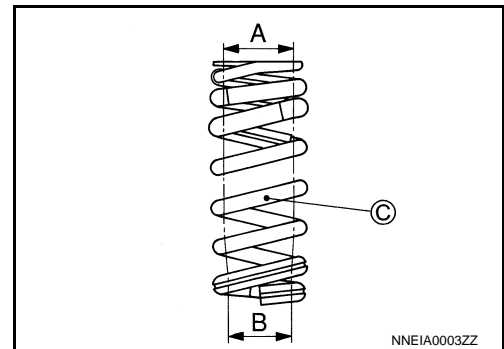
CAUTION:

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

2. 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.
- To replace coil springs, all of four coil springs must be replaced together as a set. (Vehicles with NISMO-specific suspension)



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

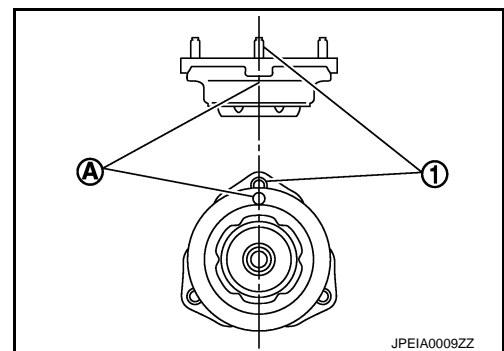
CAUTION:

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

4. Apply soapy water to bound bumper.

CAUTION:

Never use machine oil.

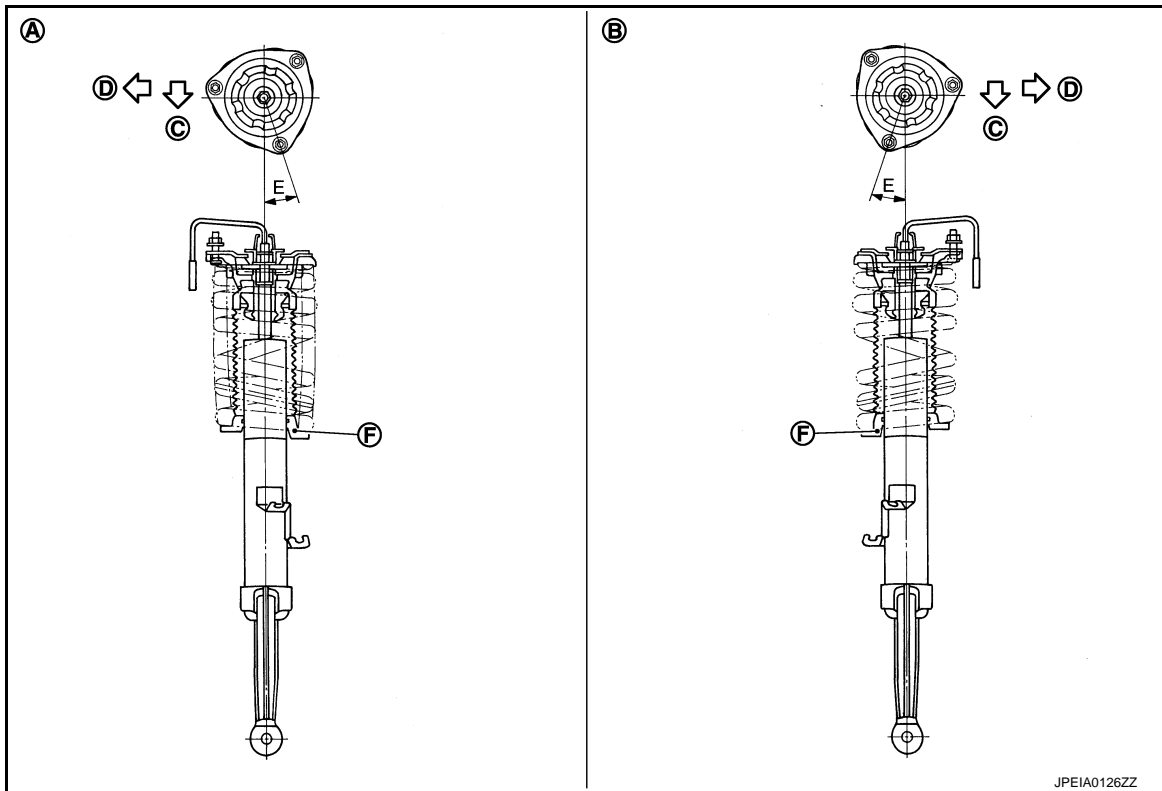


A
B
C
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FSU
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P

FRONT COIL SPRING AND SHOCK ABSORBER

< REMOVAL AND INSTALLATION >

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



A. Right side

B. Left 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) : 18°

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

CAUTION:

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

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

CAUTION:

Never damage shock absorber actuator harness connector.

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

CAUTION:

Loosen while checking coil spring attachment position does not move.

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

Inspection (GT-R certified NISSAN dealer)

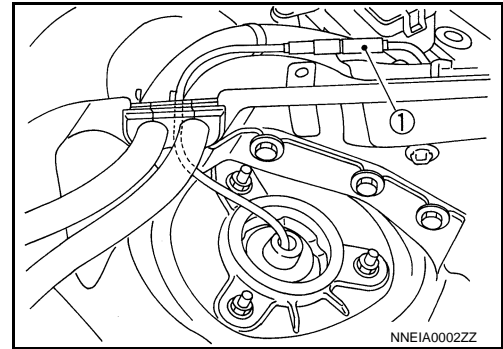
INFOID:000000011490182

INSPECTION AFTER INSTALLATION

FRONT COIL SPRING AND SHOCK ABSORBER

< REMOVAL AND INSTALLATION >

1. Check shock absorber actuator harness connector (1) for proper connection.
2. Check wheel sensor harness connector for proper connection. Refer to [BRC-147, "FRONT WHEEL SENSOR : Exploded View \(GT-R certified NISSAN dealer\)"](#).
3. Check wheel alignment. Refer to [FSU-12, "Adjustment"](#).
4. Adjust neutral position of steering angle sensor. Refer to [BRC-9, "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.

Disposal

INFOID:000000011490183

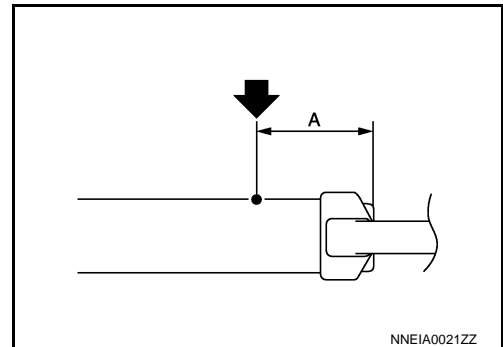
1. Set shock absorber horizontally with the piston rod fully extended.
2. Drill 2 – 3 mm (0.08 – 0.12 in) hole at the position (●) from top as shown in the figure to release gas gradually.

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)

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.

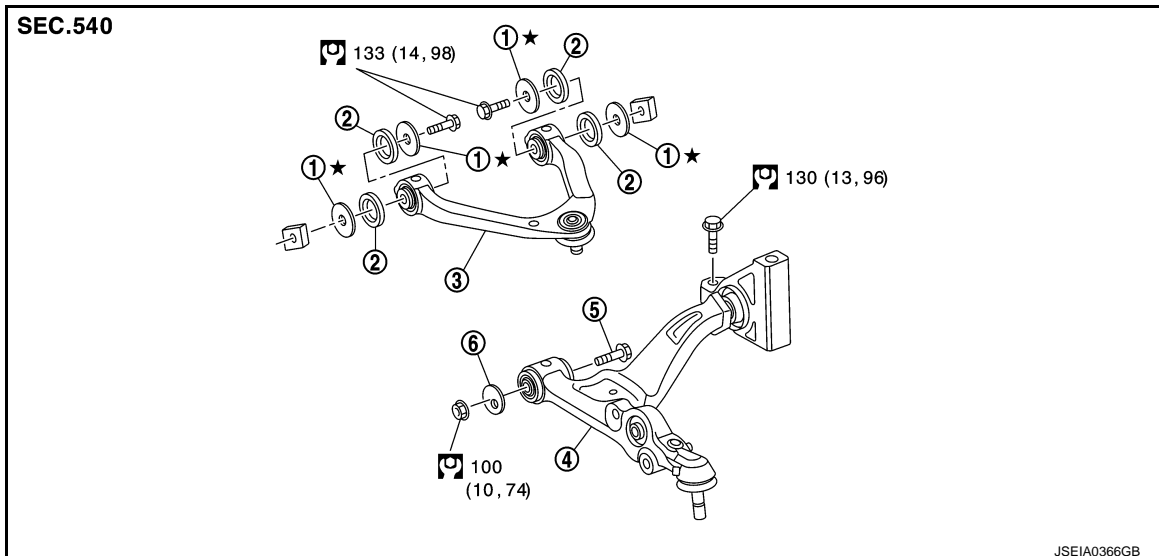
TRANSVERSE LINK

< REMOVAL AND INSTALLATION >

TRANSVERSE LINK

Exploded View

INFOID:000000011490184



- | | | |
|--------------------|-------------------|-------------------|
| 1. Shim* | 2. Rubber bushing | 3. Upper link |
| 4. Transverse link | 5. Adjusting bolt | 6. Eccentric disk |

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

*: The shims and rubber bushings are fitted on a new vehicle [shim: 3 mm (0.12 in)] are a single unit. However the shims for adjustment and rubber bushings are separated parts. When shim: 6 mm (0.24in) is selected, fix it on one side only.

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000011490185

REMOVAL

1. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

2. Remove under cover. Refer to [EXT-40, "FRONT UNDER COVER : Exploded View"](#).
3. Remove steering knuckle. Refer to [FAX-9, "Exploded View"](#).
4. Separate shock absorber form transverse link with power tool. Refer to [FSU-15, "Exploded View"](#).
5. Set suitable jack under front suspension member.
6. Loosen front suspension member mounting bolts and nuts, and gradually lower jack to front suspension member. Refer to [FSU-27, "Exploded View"](#).

CAUTION:

Never remove front suspension member mounting bolts and nuts.

7. Remove transverse link.

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.
- Never reuse cotter pin.

Inspection (GT-R certified NISSAN dealer)

INFOID:000000011490186

INSPECTION AFTER REMOVAL

Appearance

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

TRANSVERSE LINK

< REMOVAL AND INSTALLATION >

- Transverse link and bushing for deformation, cracks or damage.
- Ball joint boot for cracks, damage or grease leakage.

Ball Joint Inspection

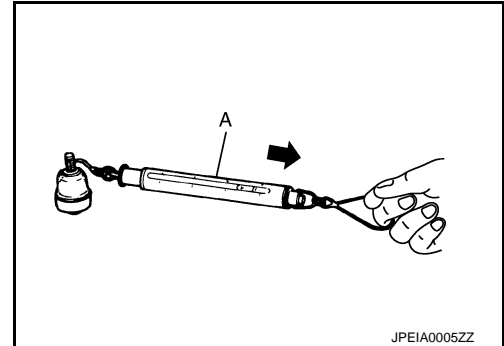
Manually move ball joint to check that it moves smoothly with no binding and check for looseness. Replace the transverse link if necessary.

Swing Torque Inspection

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

Swing torque : Refer to [FSU-32, "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

- If swing torque outside standard range, replace transverse link assembly.

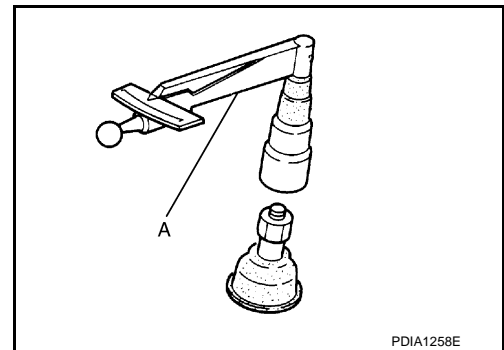


Rotating Torque Inspection

1. Move ball joint at least ten times by hand to check for smooth movement.
2. Install mounting nut to ball joint. Check that rotating torque is within specifications with a preload gauge (A) [SST: ST3127S000 (J-25765-A)].

Rotating torque : Refer to [FSU-32, "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

- If rotating torque outside standard range, replace transverse link assembly.



Axial End Play Inspection

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

Axial end play : Refer to [FSU-32, "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

- If axial end play outside standard range, replace transverse link assembly.

INSPECTION AFTER INSTALLATION

1. Check wheel alignment. Refer to [FSU-12, "Adjustment"](#).
2. Adjust neutral position of steering angle sensor. Refer to [BRC-9, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).

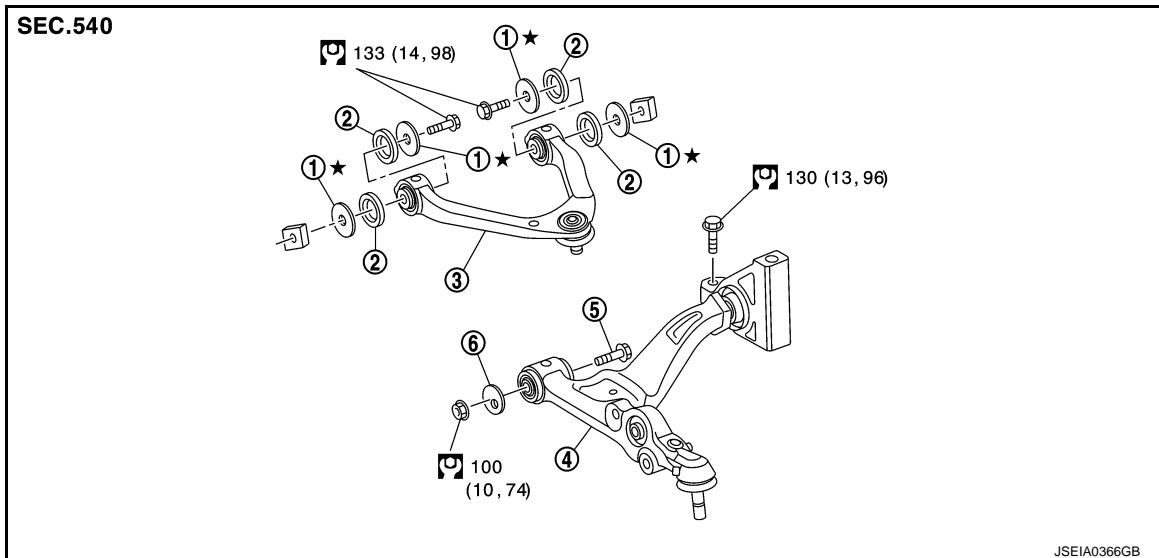
UPPER LINK

< REMOVAL AND INSTALLATION >

UPPER LINK

Exploded View

INFOID:000000011490187



- | | | |
|--------------------|-------------------|-------------------|
| 1. Shim* | 2. Rubber bushing | 3. Upper link |
| 4. Transverse link | 5. Adjusting bolt | 6. Eccentric disk |

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

*: The shims and rubber bushings are fitted on a new vehicle [shim: 3 mm (0.12 in)] are a single unit. However the shims for adjustment and rubber bushings are separated parts. When shim: 6 mm (0.24in) is selected, fix it on one side only.

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000011490188

REMOVAL

1. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

2. Remove shock absorber. Refer to [FSU-15, "Exploded View"](#).
3. Remove upper link and shims.

INSTALLATION

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

- Assemble the shim while facing the rubber bushing toward the upper link side.
- Refer to [FSU-12, "Adjustment"](#) for selection of shims.
- Perform final tightening of bolts and nuts at the vehicle installation position (rubber bushing), under unladen conditions with tires on level ground.

INSTALLATION

CAUTION:

When installing upper link, never allow the strut of mating part to be scratched and deformed because it is an aluminum die-casting part.

1. Install shims and rubber bushing to upper link.

CAUTION:

Assemble the shim while facing the rubber bushing toward the upper link side. Refer to [FSU-12, "Adjustment"](#) for selection of shims.

2. Tighten upper link mounting bolts according to the following procedure.

CAUTION:

Even when upper link on only one side is removed, tighten upper link mounting bolts on both side according to the following procedure.

UPPER LINK

< REMOVAL AND INSTALLATION >

- a. Temporarily install upper link to the vehicle.

CAUTION:

Leave approximately 1 mm (0.04 in) of allowance on the bearing surface of mounting bolts to release bush tension.

- b. Install shock absorber. Refer to [FSU-15, "Exploded View"](#).

- c. Install tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

- d. Measure the dimension (C) between wheel house top end (A) and wheel hub center part (B) as shown in the figure, under unladen conditions with tires on level ground.

NOTE:

Record the measured value.

- e. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

- f. Using the garage jack (A), compress the coil spring to adjust the dimension (D) between wheel house top end (B) and wheel hub center part (C) to specified value.

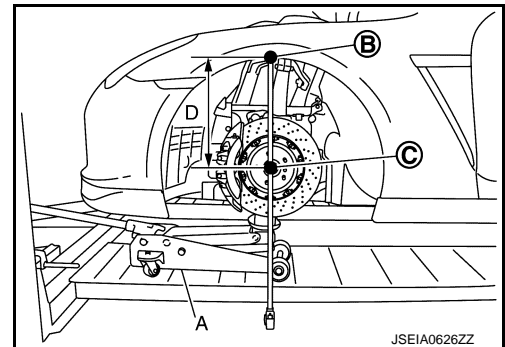
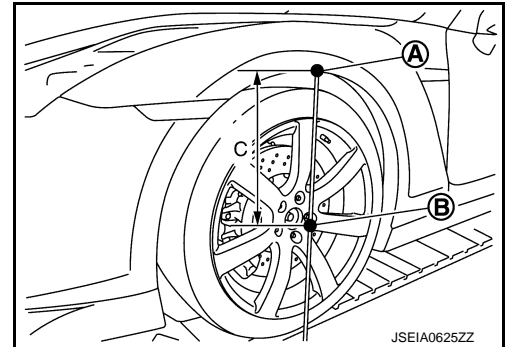
Dimension (D) : A value that 3 mm (0.12 in) is subtracted from the value measured at temporary assembly

- g. Tighten the upper link mounting bolts to the specified torque.

3. Install tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).



Inspection (GT-R certified NISSAN dealer)

INFOID:000000011490189

INSPECTION AFTER REMOVAL

Appearance

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

- Upper link and bushing for deformation, cracks or damage.
- Ball joint boot for cracks or other damage or grease leakage.

Ball Joint Inspection

Manually move ball joint to confirm it moves smoothly with no binding and check for looseness. Replace the upper link if necessary.

Swing Torque Inspection

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

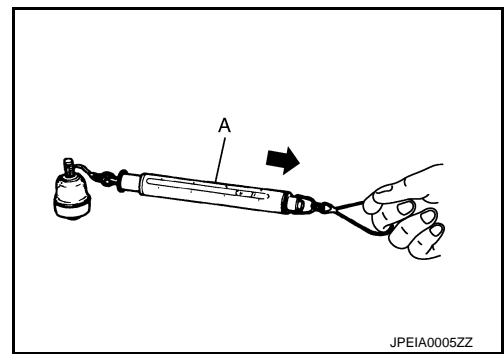
UPPER LINK

< REMOVAL AND INSTALLATION >

- Hook a spring balance (A) at cutout on ball joint. Check that spring balance measurement value is within specifications when ball joint begins moving.

Swing torque : Refer to [FSU-32, "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

- If swing torque outside standard range, replace upper link assembly.



Axial End Play Inspection

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

Axial end play : Refer to [FSU-32, "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

- If axial end play outside standard range, replace upper link assembly.

INSPECTION AFTER INSTALLATION

- Check shock absorber actuator harness connector for proper connection. Refer to [FSU-15, "Removal and Installation \(GT-R certified NISSAN dealer\)"](#).
- Check wheel sensor harness connector for proper connection. Refer to [BRC-147, "FRONT WHEEL SENSOR : Exploded View \(GT-R certified NISSAN dealer\)"](#).
- Check wheel alignment. Refer to [FSU-12, "Adjustment"](#).
- Adjust neutral position of steering angle sensor. Refer to [BRC-9, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).

FRONT STABILIZER

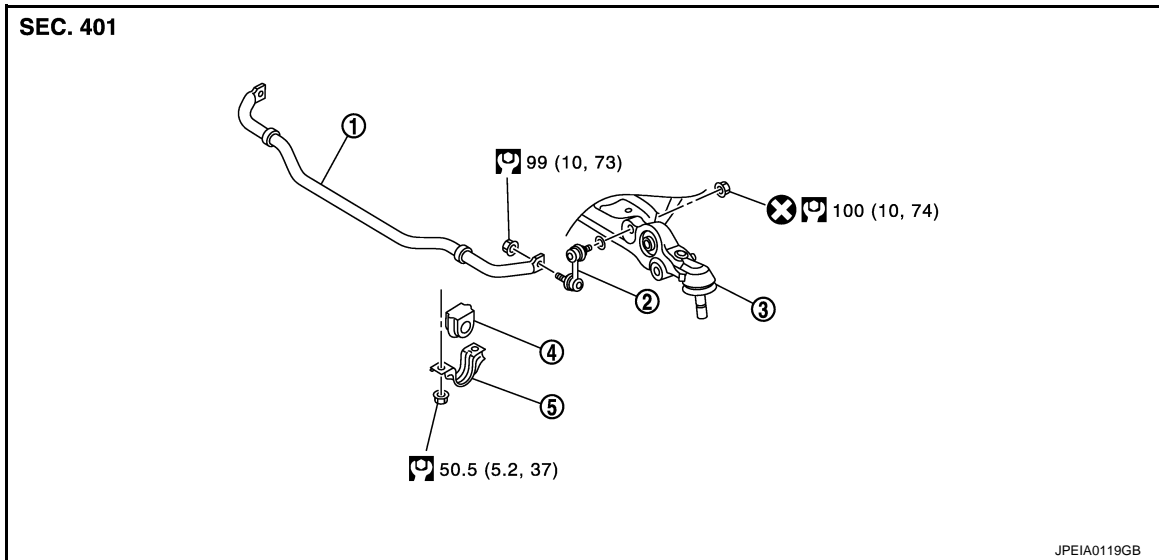
< REMOVAL AND INSTALLATION >

FRONT STABILIZER

TYPE 1

TYPE 1 : Exploded View

INFOID:0000000011490190



1. Stabilizer bar
2. Stabilizer connecting rod
3. Transverse link
4. Stabilizer bushing
5. Stabilizer clamp

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

TYPE 1 : Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011490191

REMOVAL

1. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#).
2. Remove under cover. Refer to [EXT-40, "FRONT UNDER COVER : Exploded View"](#).
3. Remove stabilizer connecting rod.

CAUTION:

Apply a matching mark to identify the installation position.

4. Remove stabilizer clamp and stabilizer bushing.
5. Remove stabilizer bar.

INSTALLATION

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

- Check the matching mark when installing.
- Never tap on the ball joint cap of the stabilizer connecting rod with a hammer or a similar item when inserting the stabilizer connecting rod into the transverse link.
- Tighten the mounting nut to the specified torque while holding a hexagonal part of stabilizer connecting rod side.

TYPE 1 : Inspection (GT-R certified NISSAN dealer)

INFOID:0000000011490192

INSPECTION AFTER REMOVAL

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

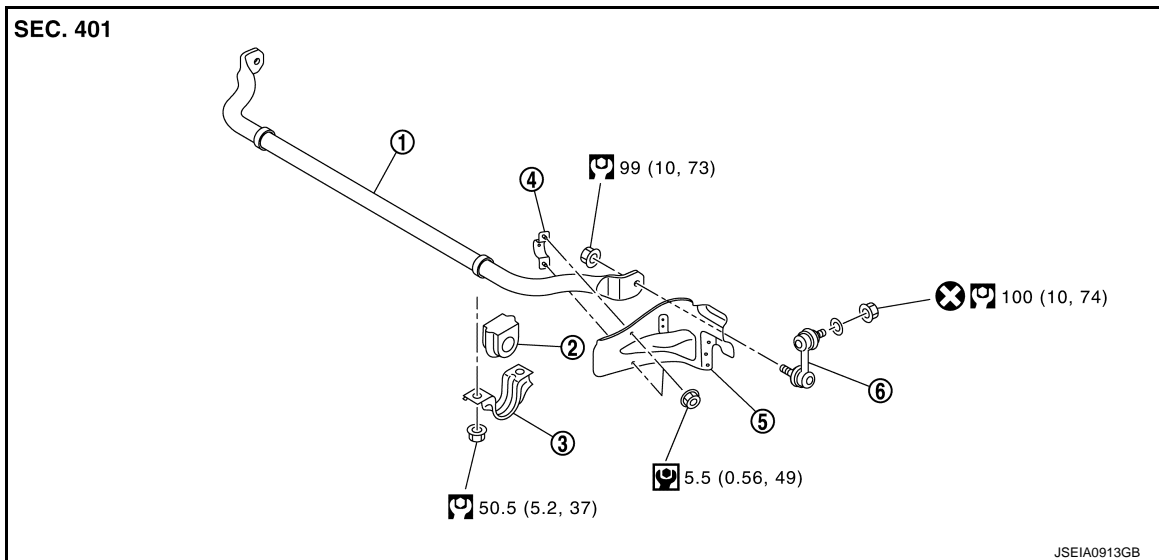
TYPE 2

FRONT STABILIZER

< REMOVAL AND INSTALLATION >

TYPE 2 : Exploded View

INFOID:000000011490193



- | | | |
|---------------------------|-----------------------|------------------------------|
| 1. Stabilizer bar | 2. Stabilizer bushing | 3. Stabilizer clamp |
| 4. Brake air guide clamp* | 5. Brake air guide* | 6. Stabilizer connecting rod |

*: With brake air guide

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

TYPE 2 : Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000011490194

REMOVAL

1. Remove tires with power tool. Refer to [WT-74, "NISMO : Exploded View"](#).
2. Remove under cover. Refer to [EXT-40, "FRONT UNDER COVER : Exploded View"](#).
3. Remove stabilizer connecting rod.
CAUTION:
Apply a matching mark to identify the installation position.
4. Remove stabilizer clamp and stabilizer bushing.
5. Remove stabilizer bar.
6. Remove brake air guide and brake air guide clamp from stabilizer bar. (With brake air guide)

INSTALLATION

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

- Check the matching mark when installing.
- Never tap on the ball joint cap of the stabilizer connecting rod with a hammer or a similar item when inserting the stabilizer connecting rod into the transverse link.
- Tighten the mounting nut to the specified torque while holding a hexagonal part of stabilizer connecting rod side.
- Install brake air guide in following procedure (With brake air guide):
 - Temporarily tighten brake air guide mounting nuts, and then tighten stabilizer connecting rod mounting nuts.
 - And then tighten brake air guide mounting nuts.

TYPE 2 : Inspection (GT-R certified NISSAN dealer)

INFOID:000000011490195

INSPECTION AFTER REMOVAL

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

FRONT SUSPENSION MEMBER

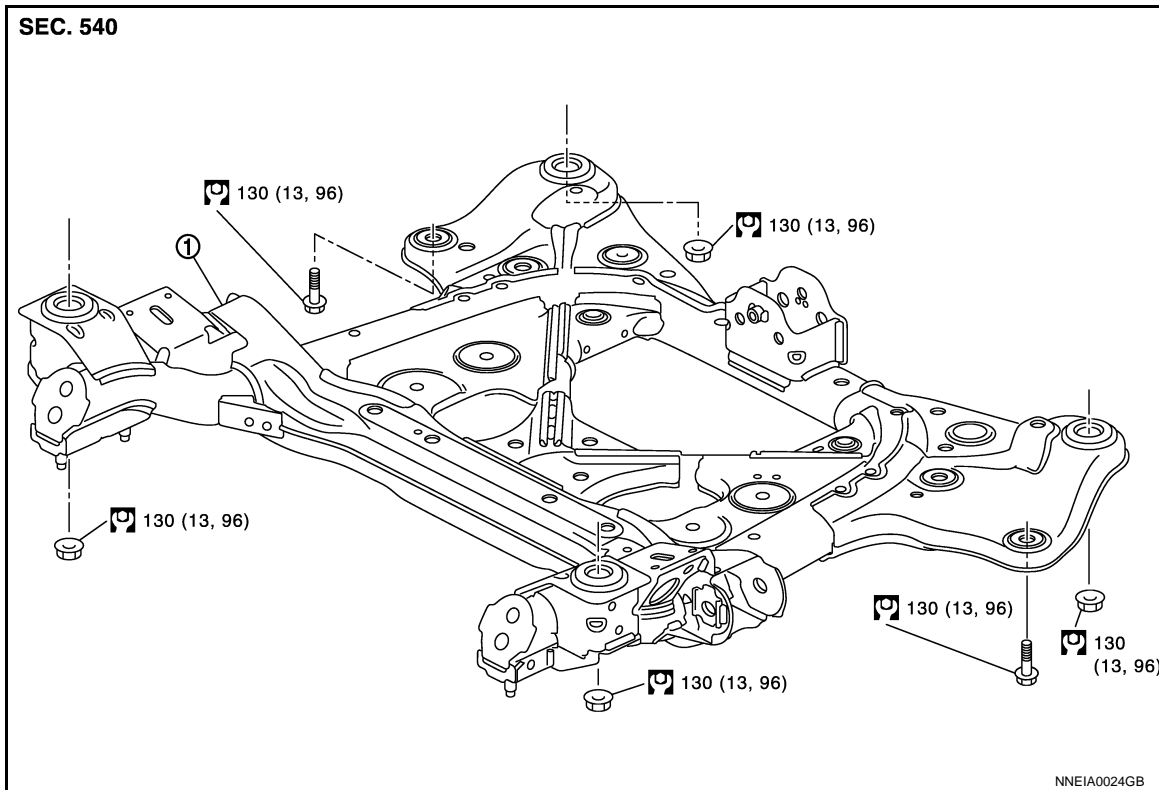
< UNIT REMOVAL AND INSTALLATION >

UNIT REMOVAL AND INSTALLATION

FRONT SUSPENSION MEMBER

Exploded View

INFOID:0000000011490196



1. Front suspension member

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

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011490197

REMOVAL

1. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

2. At first, remove the following parts as a set.
 - Engine and front final drive: refer to [EM-53, "Exploded View \(GT-R certified NISSAN dealer\)"](#).
 - Drive shaft: refer to [FAX-16, "Exploded View \(GT-R certified NISSAN dealer\)"](#).
3. Remove the following parts.
 - Steering knuckle and wheel hub and bearing assembly: refer to [FAX-9, "Exploded View"](#).
 - Steering gear assembly and hydraulic line: refer to [ST-20, "Exploded View"](#), [ST-33, "Exploded View"](#).
 - Stabilizer bar and stabilizer connecting rod: refer to [FSU-25, "TYPE 1 : Exploded View"](#) (TYPE 1), [FSU-26, "TYPE 2 : Exploded View"](#) (TYPE 2).
 - Transverse link: refer to [FSU-20, "Exploded View"](#).
 - Engine mount insulator: refer to [EM-53, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

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.

FRONT SUSPENSION MEMBER

< UNIT REMOVAL AND INSTALLATION >

Inspection (GT-R certified NISSAN dealer)

INFOID:000000011490198

INSPECTION AFTER REMOVAL

Check the front suspension member for significant deformation, cracks and damages. Replace if necessary.

INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness connector for proper connection. Refer to [BRC-147, "FRONT WHEEL SENSOR : Exploded View \(GT-R certified NISSAN dealer\)"](#).
2. Check wheel alignment. Refer to [FSU-12, "Adjustment"](#).
3. Adjust the neutral position of the steering angle sensor. Refer to [BRC-9, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

TYPE 1

TYPE 1 : Wheel Alignment

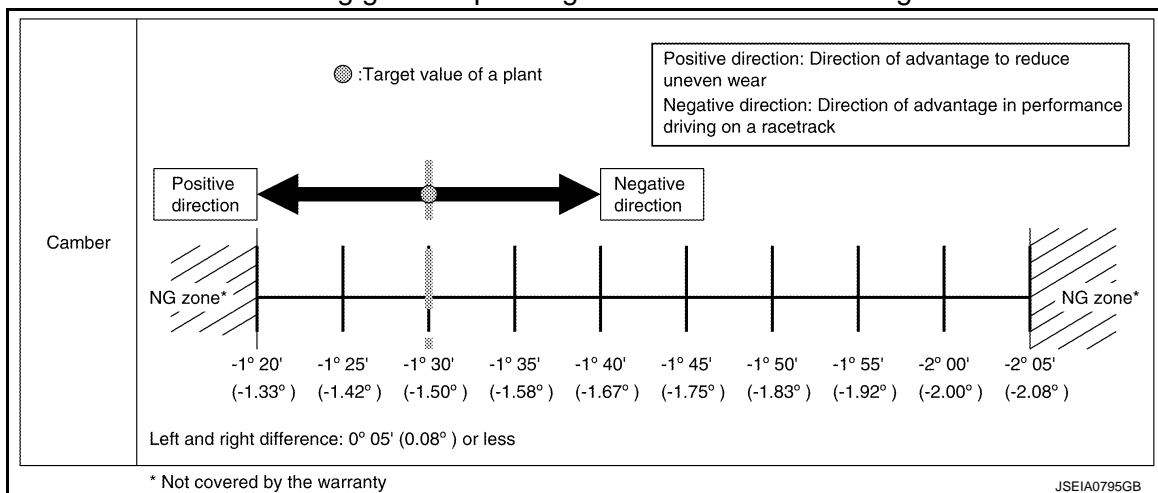
INFOID:000000011490199

CAUTION:

- When adjusting wheel alignment, refer to “PRECAUTION FOR WHEEL ALIGNMENT” in [FSU-8, "Precautions for Suspension \(GT-R certified NISSAN dealer\)"](#).
- Adjust wheel alignment with the vehicle in customer's regular use condition (e.g. normal stock items).
- To adjust wheel alignment, set tire pressure at 250 kPa (2.5 kg/cm², 36 psi). After adjusting wheel alignment, adjust tire pressure to the specified value. Refer to [WT-81, "Tire"](#).

CAMBER, TOE-IN

Setting guide depending on the customer's driving



Item		Standard	
Toe-in	Total toe-in Distance	Minimum	In 0.5 mm (In 0.020 in)
		Nominal	In 1.7 mm (In 0.067 in)
		Maximum	In 2.9 mm (In 0.114 in)
		Left and right difference	1.0 mm (0.039 in) or less
	Toe angle (Left wheel or right wheel) Degree minute (Decimal degree)	Minimum	In 0° 01' (0.02°)
		Nominal	In 0° 04' (0.07°)
		Maximum	In 0° 07' (0.11°)
		Left and right difference	0° 02' 30" (0.04°) or less

- The adoption of the adjustment mechanism allows the GTR wheel alignment to be changed, if necessary. To adjust wheel alignment, check the level of tire wear and consult with the customer.
- To adjust the wheel alignment effectively for performance driving on a racetrack, adjust the camber in the negative direction within the adjustment range.
- To adjust the wheel alignment effectively for preventing uneven wear, adjust the camber in the positive direction, and in addition, adjust the toe-in distance in the IN direction.
- Target adjustment values may not be satisfied, depending on the level of vehicle adaptability, measurement error of the alignment tester, and the vehicle attitude during adjustment.
- Never set to toe-out.
- Always adjust to toe-in. If the wheels change to toe-out, tire partial wear is accelerated and local heating may be accelerated in the inner side of tires.
- For the above reasons, always adjust to toe-in for the vehicle of a customer who drives on a racetrack.
- Wheel alignment can be changed in process of time and mileage, as suspension parts do not adjust to each other up to the mileage of about 1,000 miles or 2,000 km.

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

- Remarks for up to the mileage of 1,000 miles or 2,000 km
- Toe angle of one-side wheel: See reference value.

CASTER, KINGPIN INCLINATION

Item		Standard
Caster Degree minute (Decimal degree)	Minimum	5° 40' (5.67°)
	Nominal	6° 00' (5.00°)
	Maximum	6° 40' (6.66°)
	Left and right difference	0° 30' (0.50°) or less
Kingpin inclination Degree minute (Decimal degree)	Minimum	9° 10' (9.17°)
	Nominal	9° 20' (9.33°)
	Maximum	9° 30' (9.50°)

Measure value under unladen* conditions.

*: Fuel, engine coolant and lubricant are full. Jack, hand tools and mats are in designated positions.

- Wheel alignment can be changed in process of time and mileage, as suspension parts do not adjust to each other up to the mileage of about 1,000 miles or 2,000 km.

TYPE 2

TYPE 2 : Wheel Alignment

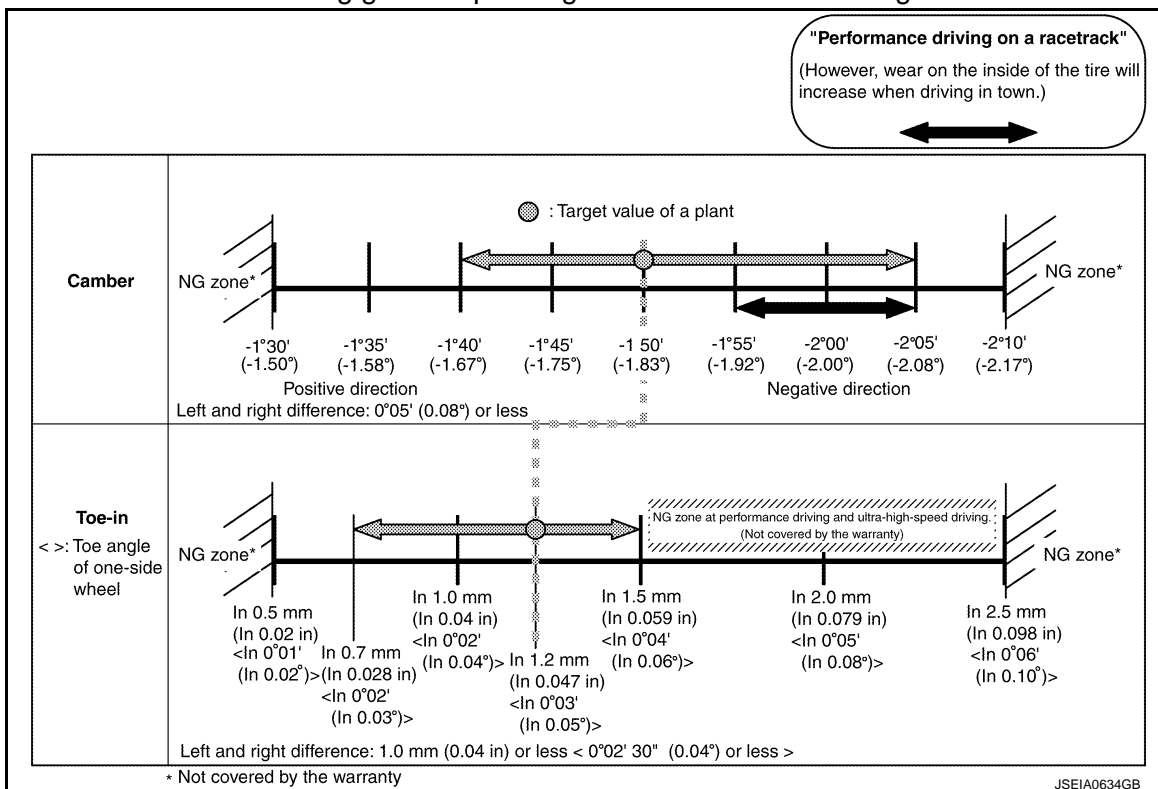
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CAUTION:

- When adjusting wheel alignment, refer to “PRECAUTION FOR WHEEL ALIGNMENT” in [FSU-8, "Precautions for Suspension \(GT-R certified NISSAN dealer\)"](#).
- Adjust wheel alignment with the vehicle in customer's regular use condition (e.g. normal stock items).
- To adjust wheel alignment, set tire pressure at 250 kPa (2.5 bar, 2.5 kg/cm², 36 psi). After adjusting wheel alignment, adjust tire pressure to the specified value. Refer to [WT-81, "Tire"](#).

CAMBER, TOE-IN

Setting guide depending on the customer's driving



- Adjust wheel alignment to the customer's driving style.

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

- Never set to toe-out.
- Always adjust to toe-in. If the wheels change to toe-out, tire partial wear is accelerated and local heating may be accelerated in the inner side of tires.
- Always adjust toe-in to 1.5 mm (0.059 in) or less because too much toe-in may promote local heat generation.
- For the above reasons, always adjust to toe-in for the vehicle of a customer who drives on a racetrack.
- Engaging in performance driving on a racetrack and ultra-high-speed driving, be sure to adjust toe-in to 1.5 mm (0.059 in) or less. If used beyond this range, it is not covered by the warranty.
- Insufficient negative camber during hard cornering on a racetrack may result in tire wear. Therefore, recommend the customer to adjust negative camber angle in the negative direction when driving on a racetrack. [To avoid uneven wear, recommend the customer to have the camber angle aligned in the positive direction at an inspection after performance driving (at customer's expense).]
- Wheel alignment can be changed in process of time and mileage, as suspension parts do not adjust to each other up to the mileage of about 1,000 miles or 2,000 km.
- Remarks for up to the mileage of 1,000 miles or 2,000 km
 - Toe angle of one-side wheel: See reference value.
- Each part of the suspension may not conform during a normal driving because of the adoption of a hard rate coil spring and a high damping shock absorber.

CASTER, KINGPIN INCLINATION

Except GTR Track edition

Item		Standard
Caster Degree minute (Decimal degree)	Minimum	5° 55' (5.92°)
	Nominal	6° 15' (6.25°)
	Maximum	6° 35' (6.58°)
	Left and right difference	0° 30' (0.50°) or less
Kingpin inclination Degree minute (Decimal degree)	Minimum	9° 30' (9.50°)
	Nominal	9° 40' (9.67°)
	Maximum	9° 50' (9.83°)

Measure value under unladen* conditions.

*: Fuel, engine coolant and lubricant are full. Jack, hand tools and mats are in designated positions.

- Wheel alignment can be changed in process of time and mileage, as suspension parts do not adjust to each other up to the mileage of about 1,000 miles or 2,000 km.
- Each part of the suspension may not conform during a normal driving because of the adoption of a hard rate coil spring and a high damping shock absorber.

GTR Track edition

Item		Standard
Caster Degree minute (Decimal degree)	Minimum	5° 45' (5.75°)
	Nominal	6° 05' (6.08°)
	Maximum	6° 45' (6.75°)
	Left and right difference	0° 30' (0.50°) or less
Kingpin inclination Degree minute (Decimal degree)	Minimum	9° 30' (9.50°)
	Nominal	9° 40' (9.67°)
	Maximum	9° 50' (9.83°)

Measure value under unladen* conditions.

*: Fuel, engine coolant and lubricant are full. Jack, hand tools and mats are in designated positions.

- Wheel alignment can be changed in process of time and mileage, as suspension parts do not adjust to each other up to the mileage of about 1,000 miles or 2,000 km.
- Each part of the suspension may not conform during a normal driving because of the adoption of a hard rate coil spring and a high damping shock absorber.

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

Ball Joint (GT-R certified NISSAN dealer)

INFOID:000000011490201

Item		Standard
Swing torque	Transverse link	0.5 – 3.6 N·m (0.06 – 0.36 kg-m, 5 – 31 in-lb)
	Upper link	0 – 2.0 N·m (0 – 0.20 kg-m, 0 – 17 in-lb)
Measurement on spring balance	Transverse link	7.8 – 56.3 N (0.8 – 5.7 kg, 1.8 – 12.6 lb)
	Upper link	0 – 61.5 N (0 – 6.2 kg, 0 – 13.8 lb)
Rotating torque	Transverse link	0.5 – 3.9 N·m (0.06 – 0.39 kg-m, 5 – 34 in-lb)
Axial end play		0 mm (0 in)