

SECTION **FSU**  
FRONT SUSPENSION

A  
B  
C  
D

FSU

CONTENTS

<b>SYMPTOM DIAGNOSIS</b> .....	2	Removal and Installation (GT-R certified NISSAN dealer) .....	10	F
<b>NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING</b> .....	2	Disassembly and Assembly (GT-R certified NISSAN dealer) .....	11	G
NVH Troubleshooting Chart .....	2	Inspection (GT-R certified NISSAN dealer) .....	13	
<b>PRECAUTION</b> .....	3	<b>TRANSVERSE LINK</b> .....	14	H
<b>PRECAUTIONS</b> .....	3	Exploded View .....	14	
Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER" .....	3	Removal and Installation (GT-R certified NISSAN dealer) .....	14	I
Precaution Necessary for Steering Wheel Rotation after Battery Disconnect .....	3	Inspection (GT-R certified NISSAN dealer) .....	14	
Precaution for Procedure without Cowl Top Cover.....	4	<b>UPPER LINK</b> .....	16	J
General Precautions .....	4	Exploded View .....	16	
Precautions for Suspension (GT-R certified NISSAN dealer) .....	4	Removal and Installation (GT-R certified NISSAN dealer) .....	16	K
<b>PREPARATION</b> .....	5	Inspection (GT-R certified NISSAN dealer) .....	16	
<b>PREPARATION</b> .....	5	<b>FRONT STABILIZER</b> .....	18	L
Special Service Tool (GT-R certified NISSAN dealer) .....	5	Exploded View .....	18	
Commercial Service Tool (GT-R certified NISSAN dealer) .....	5	Removal and Installation (GT-R certified NISSAN dealer) .....	18	M
<b>ON-VEHICLE MAINTENANCE</b> .....	6	Inspection (GT-R certified NISSAN dealer) .....	18	
<b>FRONT SUSPENSION ASSEMBLY</b> .....	6	<b>REMOVAL AND INSTALLATION</b> .....	19	N
Inspection .....	6	<b>FRONT SUSPENSION MEMBER</b> .....	19	
<b>WHEEL ALIGNMENT</b> .....	7	Exploded View .....	19	O
Inspection .....	7	Removal and Installation (GT-R certified NISSAN dealer) .....	19	
Adjustment .....	7	Inspection (GT-R certified NISSAN dealer) .....	19	P
<b>ON-VEHICLE REPAIR</b> .....	10	<b>SERVICE DATA AND SPECIFICATIONS (SDS)</b> .....	21	
<b>FRONT COIL SPRING AND SHOCK ABSORBER</b> .....	10	<b>SERVICE DATA AND SPECIFICATIONS (SDS)</b> .....	21	
Exploded View .....	10	Wheel Alignment .....	21	
		Ball Joint (GT-R certified NISSAN dealer) .....	21	

# NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

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

#### NVH Troubleshooting Chart

INFOID:000000003852870

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														
				FSU-10, FSU-14, FSU-16, FSU-18, FSU-19	FSU-13	—	—	—	FSU-10, FSU-14, FSU-16, FSU-18, FSU-19	FSU-7	FSU-18	NVH in DLN section.	NVH in RFD section.	NVH in FAX and FSU sections.	NVH in WT section.	NVH in WT section.	NVH in FAX section.	NVH in BR 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

# PRECAUTIONS

< PRECAUTION >

## PRECAUTION

### PRECAUTIONS

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

INFOID:000000004122467

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 AIRBAG" and "SEAT BELT" of this Service Manual.

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIRBAG".
- 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.

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

INFOID:000000004122468

#### **NOTE:**

- Before removing and installing any control units, first turn the push-button 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-III 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.

This vehicle is equipped with a push-button ignition switch and a 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 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 push-button 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.
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 push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

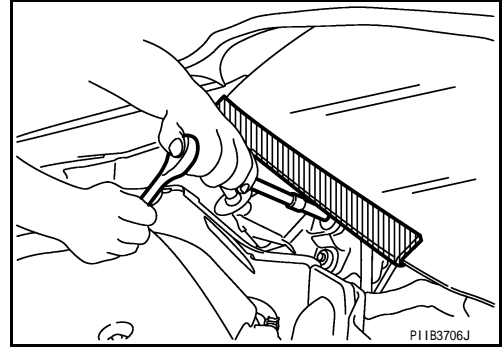
# PRECAUTIONS

## < PRECAUTION >

### Precaution for Procedure without Cowl Top Cover

INFOID:000000004122469

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



### General Precautions

INFOID:000000004173871

#### **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:000000003852874

- 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.

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

# PREPARATION

< PREPARATION >

## PREPARATION

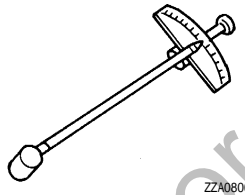
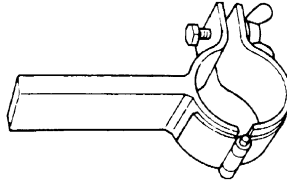
### PREPARATION

Special Service Tool (GT-R certified NISSAN dealer)

INFOID:000000003852875

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

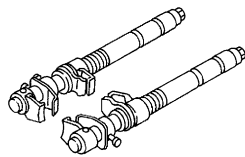
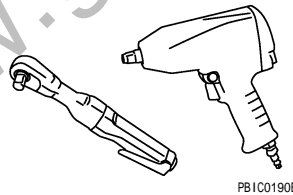
Tool number (Kent-Moore No.) Tool name	Description
ST35652000 ( - ) Strut attachment	Disassembling and assembling strut
ST3127S000 (J-25765-A) Preload gauge	Measuring rotating torque of ball joint



Commercial Service Tool (GT-R certified NISSAN dealer)

INFOID:000000003852876

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



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FSU

# FRONT SUSPENSION ASSEMBLY

< ON-VEHICLE MAINTENANCE >

## ON-VEHICLE MAINTENANCE

### FRONT SUSPENSION ASSEMBLY

#### Inspection

INFOID:000000003987678

#### 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 transverse link or upper link and steering knuckle.
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 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

< ON-VEHICLE MAINTENANCE >

## WHEEL ALIGNMENT

### Inspection

INFOID:000000003995243

### 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 air pressure and wear.
- Road wheels for runout. Refer to [XX-XX, "\\*\\*\\*\\*\\*"](#).
- Wheel bearing axial end play. Refer to [FAX-6, "Inspection"](#).
- Transverse link or upper link ball joint axial end play. Refer to [FSU-16, "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.
- 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

INFOID:000000003852858

### TOE-IN

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

**Standard**

**Toe-in** : Refer to [FSU-21, "Wheel Alignment"](#).

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# WHEEL ALIGNMENT

< ON-VEHICLE MAINTENANCE >

**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.

**CAMBER**

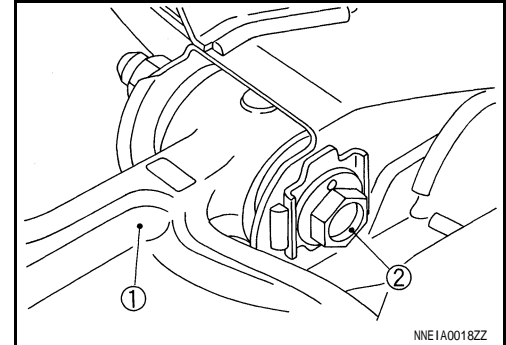
Loosen the mounting nut of transverse link (1) and front suspension member, and then adjust using adjust bolt (2).

Standard

Camber : Refer to [FSU-21, "Wheel Alignment"](#).

**CAUTION:**

Always hold the adjust bolt firmly when tightening nut.

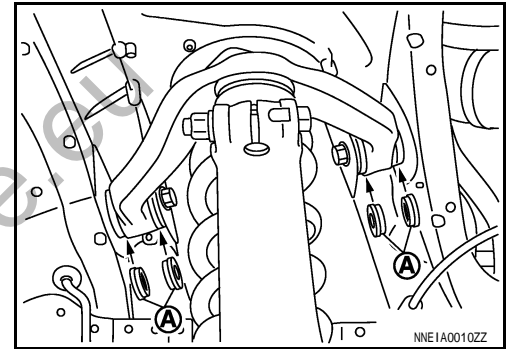


**CASTER**

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

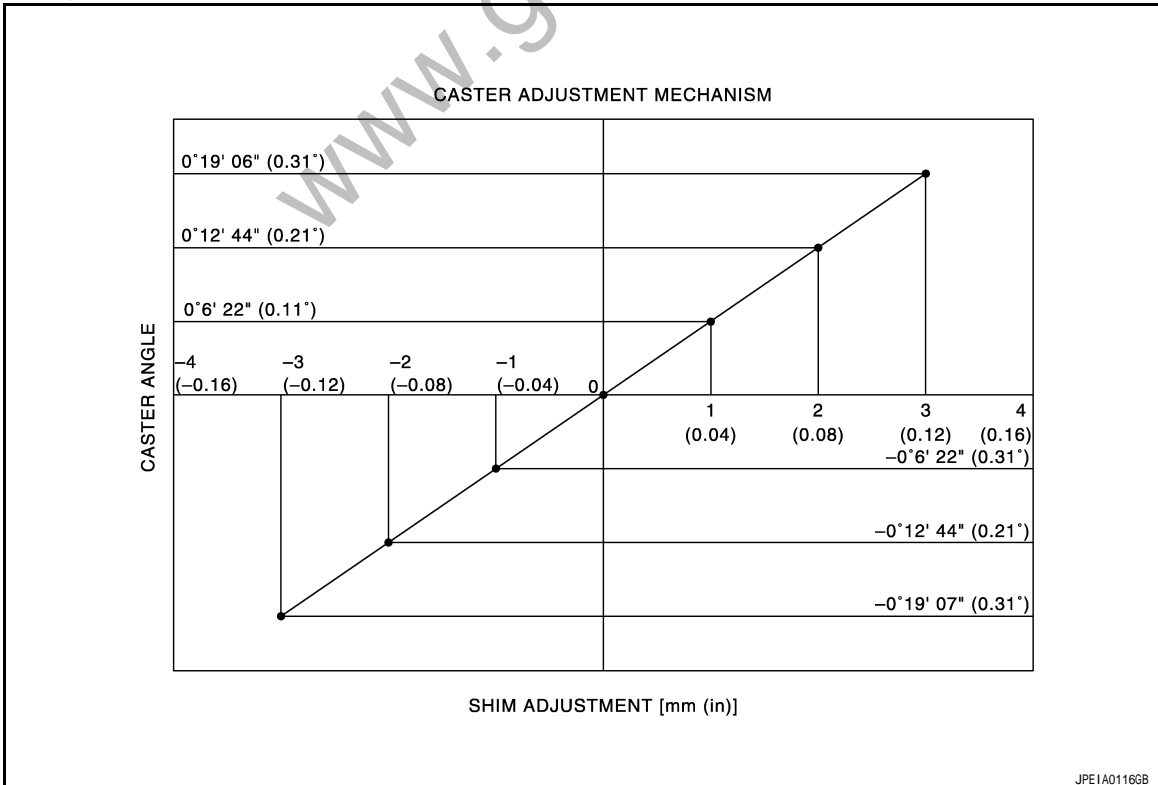
Standard

Caster : Refer to [FSU-21, "Wheel Alignment"](#).



**CAUTION:**

- Refer to figure for selection of shim.



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



# WHEEL ALIGNMENT

< ON-VEHICLE MAINTENANCE >

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**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.

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# FRONT COIL SPRING AND SHOCK ABSORBER

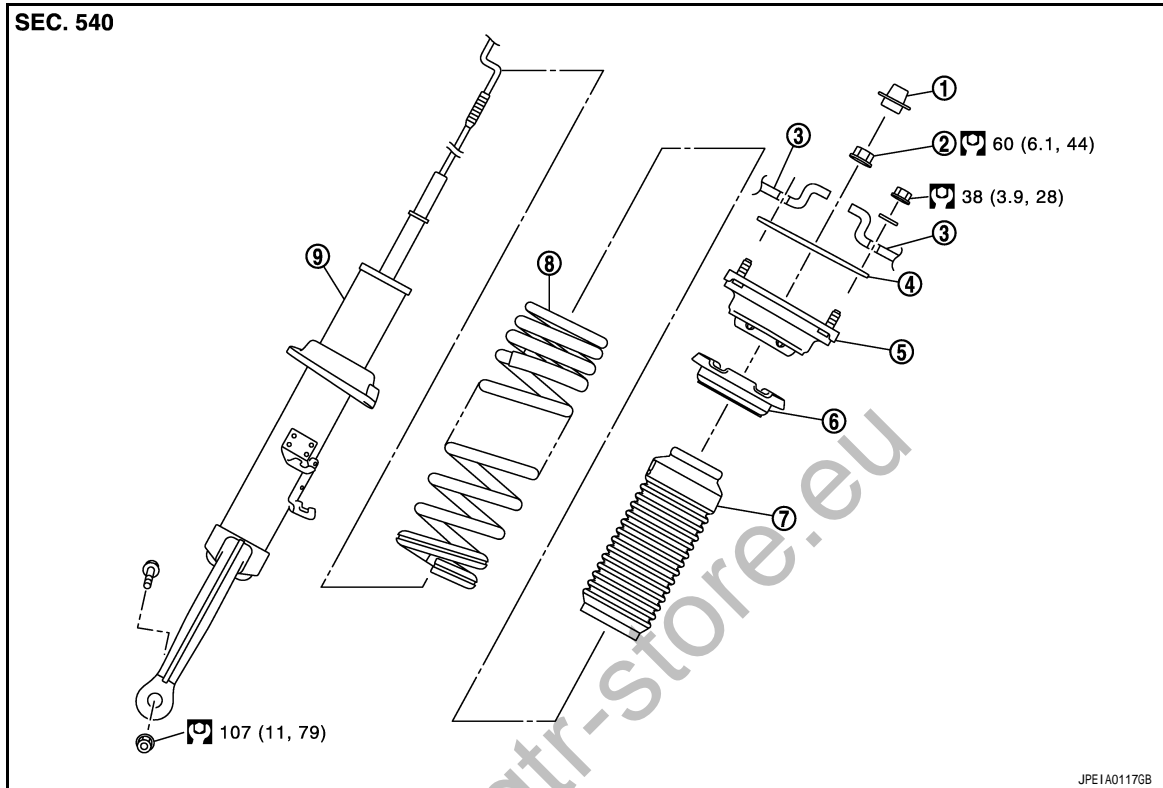
< ON-VEHICLE REPAIR >

## ON-VEHICLE REPAIR

### FRONT COIL SPRING AND SHOCK ABSORBER

Exploded View

INFOID:000000003852859



- |                  |                        |                   |
|------------------|------------------------|-------------------|
| 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)

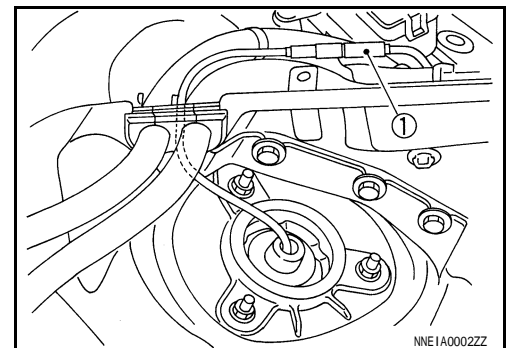
INFOID:000000003987679

#### REMOVAL

1. Remove tires with power tool.
2. Remove steering knuckle. Refer to [FAX-8, "Exploded View"](#).
3. Remove stabilizer connecting rod. Refer to [FSU-18, "Exploded View"](#).
4. Separate shock absorber from transverse link with power tool.
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

# FRONT COIL SPRING AND SHOCK ABSORBER

## < ON-VEHICLE REPAIR >

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

- 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.

## Disassembly and Assembly (GT-R certified NISSAN dealer)

INFOID:000000003852860

### DISASSEMBLY

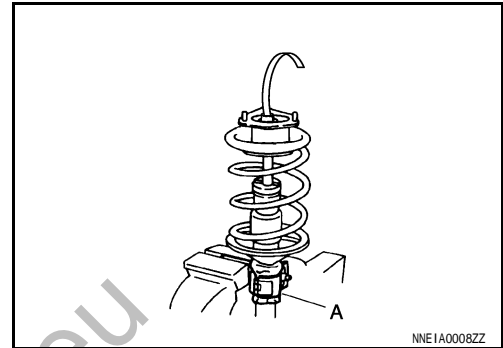
#### CAUTION:

- **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.**

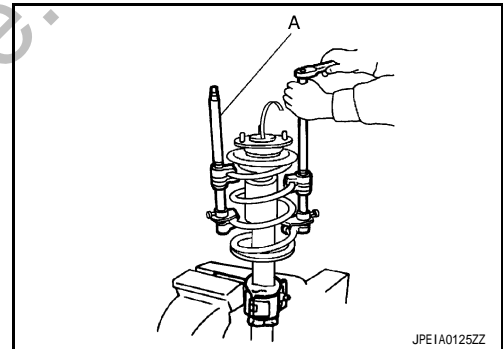


2. Using a spring compressor (A) (commercial service tool), compress coil spring between rubber seat and shock absorber until coil spring with a spring compressor is free.

#### 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 sensor socket (A) [17 mm (0.67 in)].

#### CAUTION:

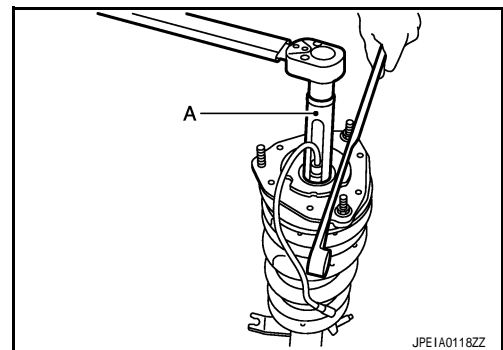
**Never damage shock absorber actuator harness connector.**

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

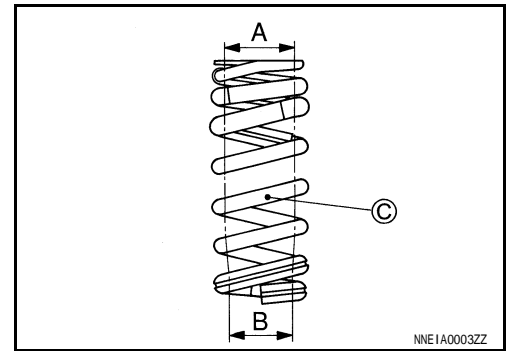
## FRONT COIL SPRING AND SHOCK ABSORBER

### < 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.

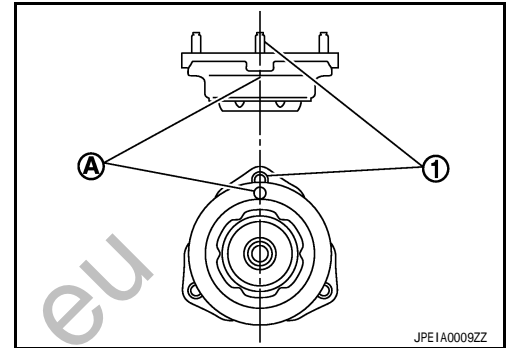
**CAUTION:**

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

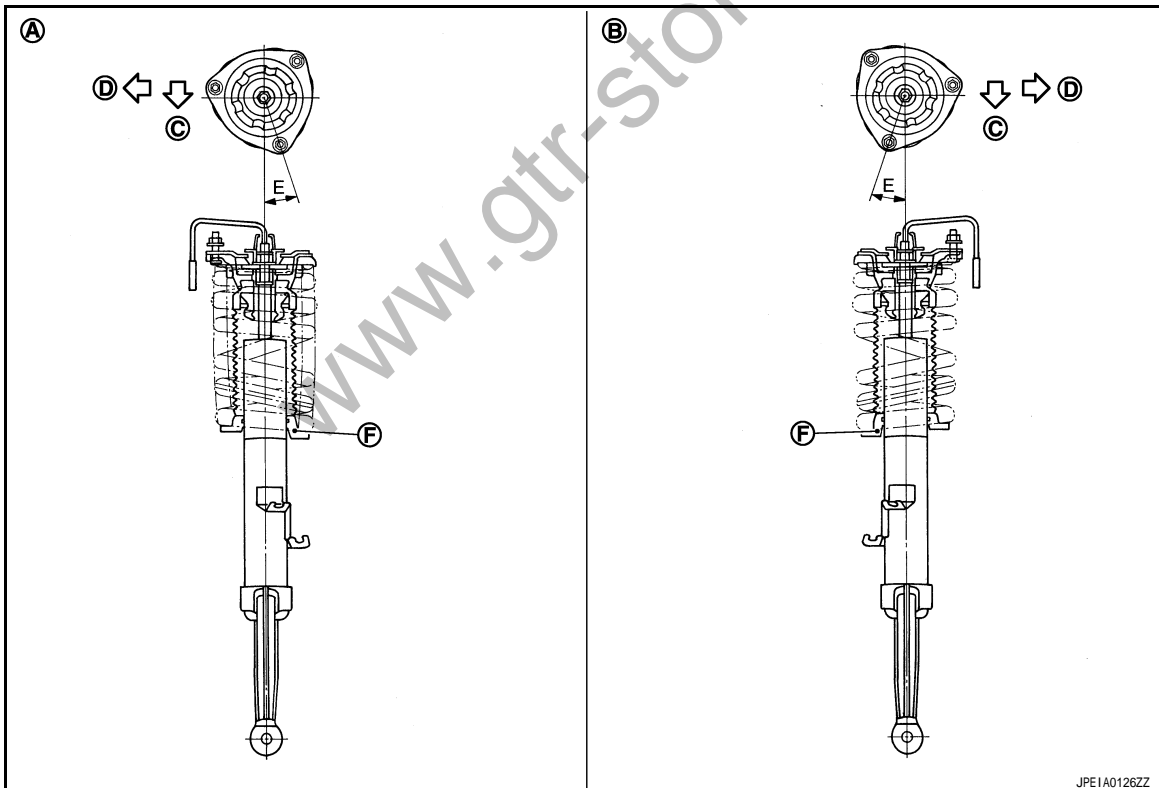
- Apply soapy water to bound bumper.

**CAUTION:**

Never use machine oil.



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



A. 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:**

# FRONT COIL SPRING AND SHOCK ABSORBER

## < ON-VEHICLE REPAIR >

**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.

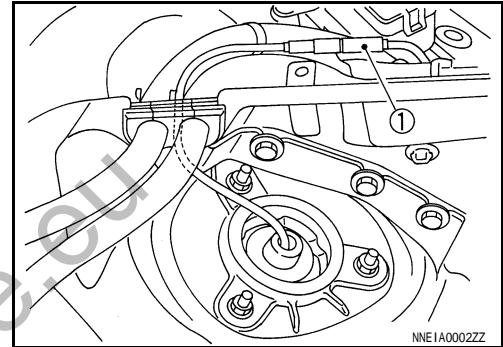
9. Install the mounting seal to mount insulator.

## Inspection (GT-R certified NISSAN dealer)

INFOID:000000003987680

## INSPECTION AFTER INSTALLATION

1. Check shock absorber actuator harness connector (1) for proper connection.
2. Check wheel sensor harness connector for proper connection. Refer to [BRC-115, "FRONT WHEEL SENSOR : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).
3. Check wheel alignment. Refer to [FSU-7, "Adjustment"](#).
4. Adjust neutral position of steering angle sensor. Refer to [BRC-10, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).



## 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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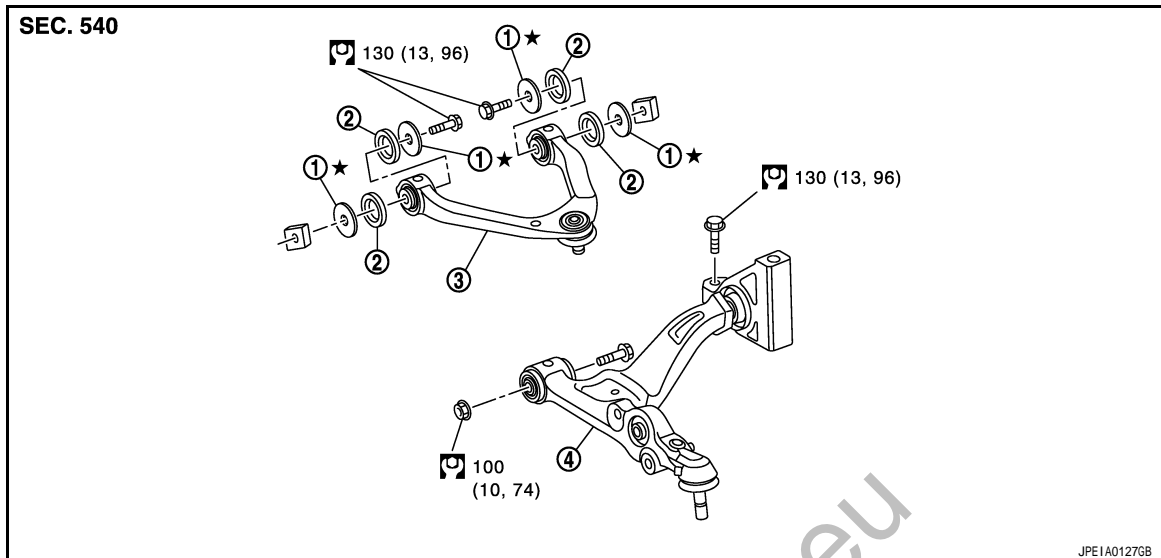
# TRANSVERSE LINK

< ON-VEHICLE REPAIR >

## TRANSVERSE LINK

### Exploded View

INFOID:000000003852861



1. Shim\*
2. Rubber bushing
3. Upper link
4. Transverse link

\*: 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.

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

### Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000003987681

#### REMOVAL

1. Remove tires with power tool.
2. Remove under cover. Refer to [EXT-35, "FRONT UNDER COVER : Exploded View"](#).
3. Remove steering knuckle. Refer to [FAX-8, "Exploded View"](#).
4. Separate shock absorber form transverse link with power tool. Refer to [FSU-10, "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-19, "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:000000003987682

#### INSPECTION AFTER REMOVAL

##### Appearance

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

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

## TRANSVERSE LINK

### < ON-VEHICLE REPAIR >

#### 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.

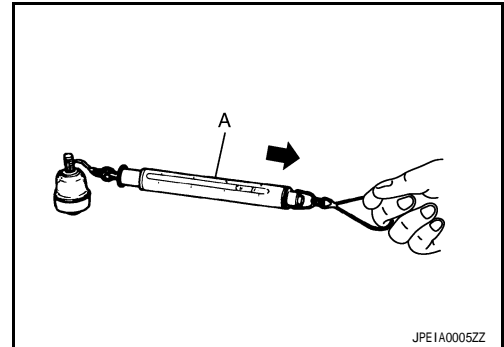
#### Swing Torque Inspection

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.

#### Standard

**Swing torque** : Refer to [FSU-21, "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

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



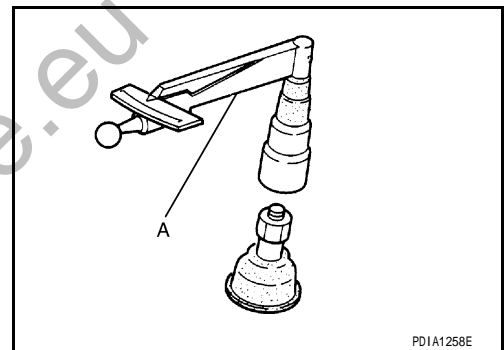
#### Rotating Torque Inspection

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)].

#### Standard

**Rotating torque** : Refer to [FSU-21, "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.

#### Standard

**Axial end play** : Refer to [FSU-21, "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-7, "Adjustment"](#).
2. Adjust neutral position of steering angle sensor. Refer to [BRC-10, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).

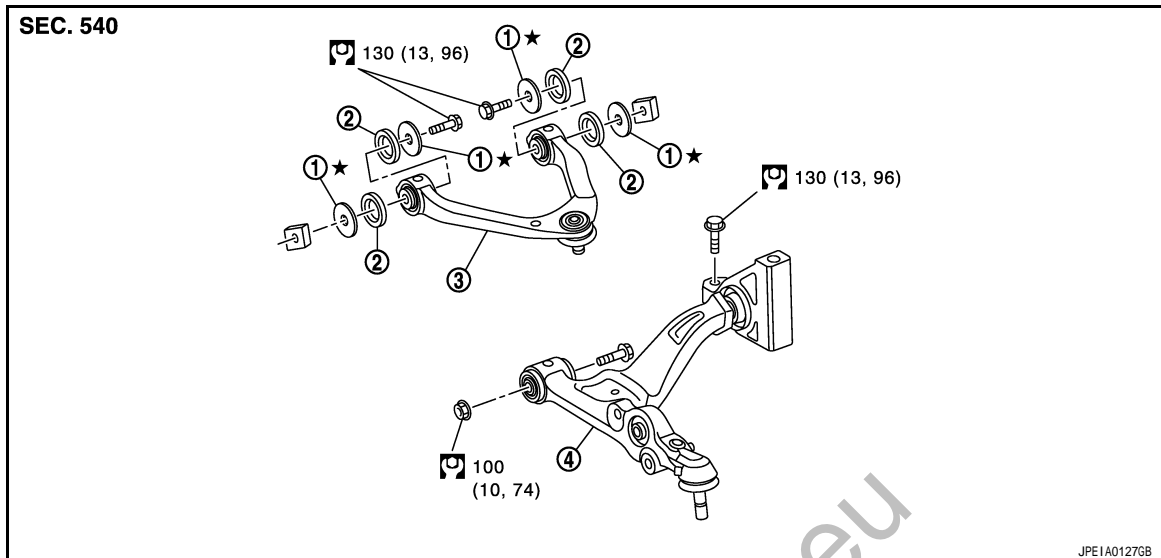
# UPPER LINK

< ON-VEHICLE REPAIR >

## UPPER LINK

### Exploded View

INFOID:000000003852862



1. Shim\*
2. Rubber bushing
3. Upper link
4. Transverse link

\*: 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.

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

## Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000003987773

### REMOVAL

1. Remove tires from with power tool.
2. Remove shock absorber. Refer to [FSU-10, "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-7, "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.

## Inspection (GT-R certified NISSAN dealer)

INFOID:000000003987774

### 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

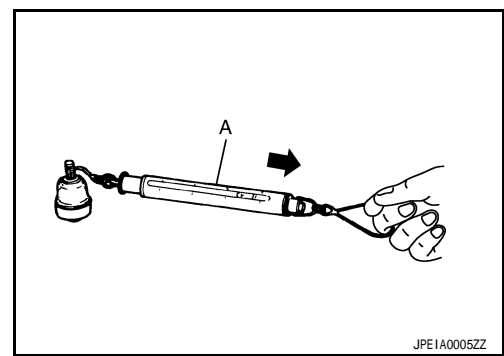
### < ON-VEHICLE REPAIR >

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

#### Standard

**Swing torque** : Refer to [FSU-21, "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

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



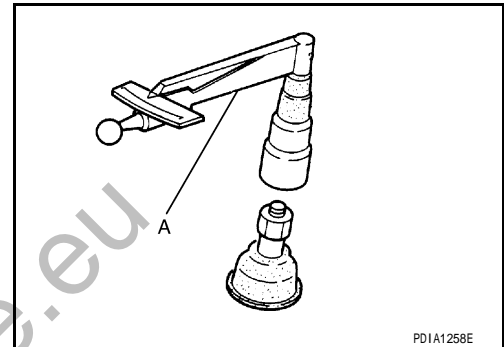
### Rotating Torque Inspection

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

#### Standard

**Rotarian torque** : Refer to [FSU-21, "Ball Joint \(GT-R certified NISSAN dealer\)"](#).

- If rotating torque outside torque 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.

#### Standard

**Axial end play** : Refer to [FSU-21, "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-13, "Inspection \(GT-R certified NISSAN dealer\)"](#).
- Check wheel sensor harness connector for proper connection. Refer to [BRC-115, "FRONT WHEEL SENSOR : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).
- Check wheel alignment. Refer to [FSU-7, "Adjustment"](#).
- Adjust neutral position of steering angle sensor. Refer to [BRC-10, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).

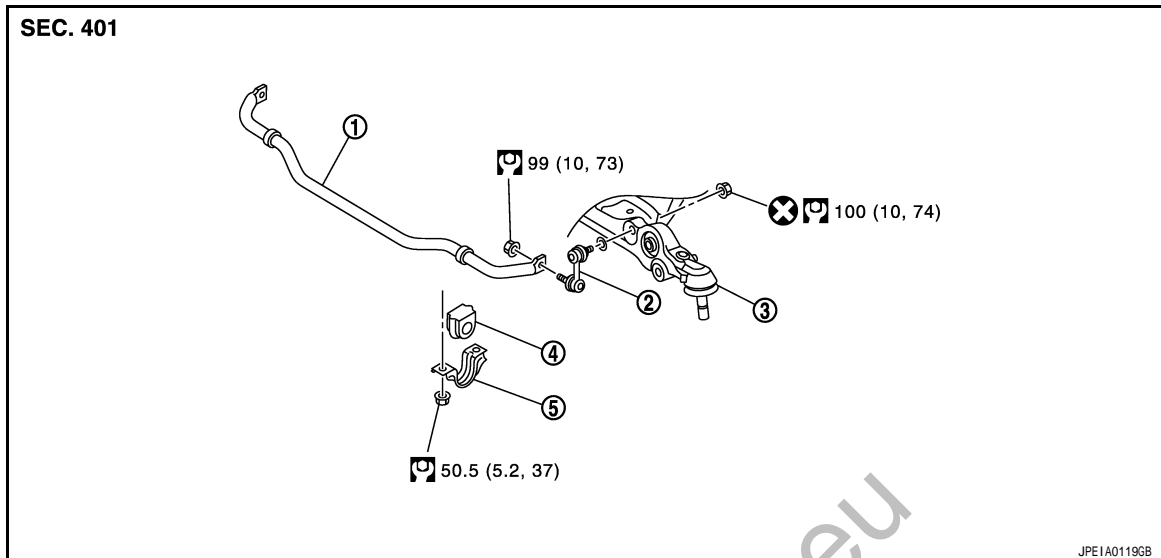
# FRONT STABILIZER

< ON-VEHICLE REPAIR >

## FRONT STABILIZER

### Exploded View

INFOID:000000003852863



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.

### Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000003987775

#### REMOVAL

1. Remove tires with power tool.
2. Remove under cover. Refer to [EXT-35. "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.

### Inspection (GT-R certified NISSAN dealer)

INFOID:000000003987776

#### 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

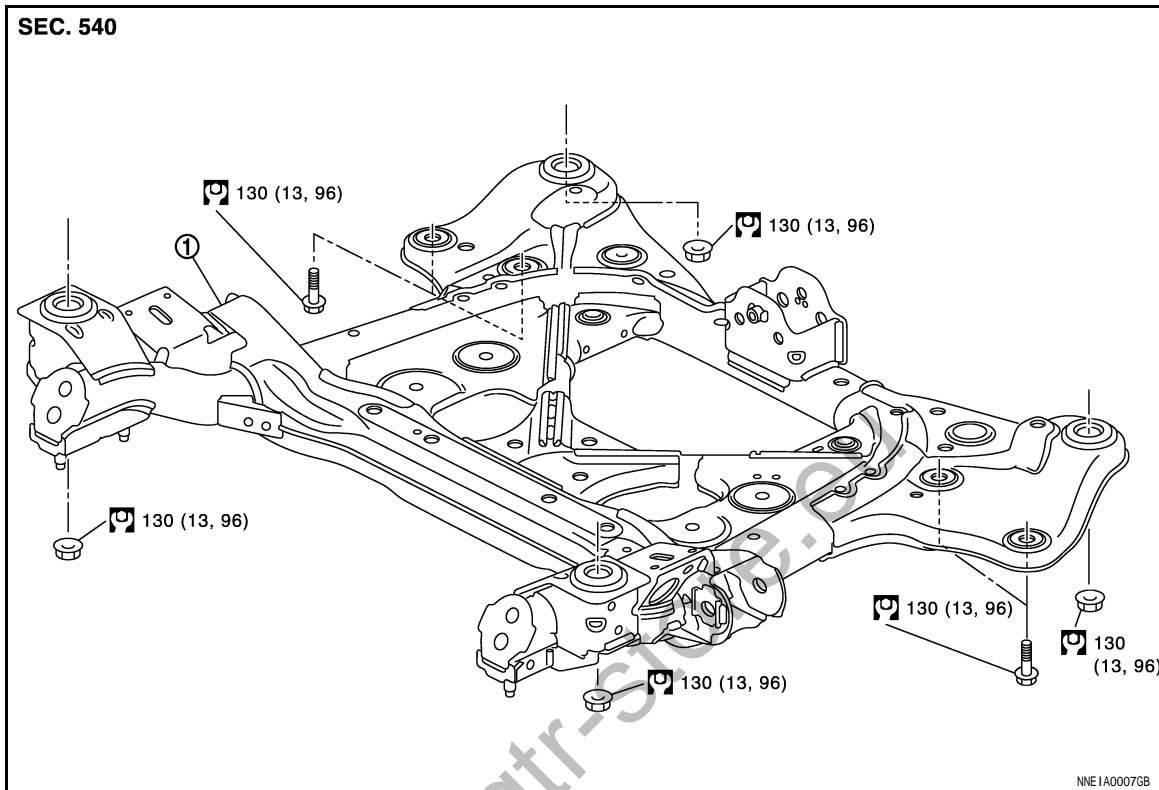
< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

### FRONT SUSPENSION MEMBER

Exploded View

INFOID:000000003852864



1. Front suspension member

⇐: Vehicle front

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

### Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000003987777

#### REMOVAL

1. Remove tire with power tool.
2. At first, remove the following parts as a set.
  - Engine and front final drive: refer to [EM-48, "Exploded View \(GT-R certified NISSAN dealer\)"](#).
  - Drive shaft: refer to [FAX-14, "Exploded View \(GT-R certified NISSAN dealer\)"](#).
3. Remove the following parts.
  - Steering knuckle and wheel hub and bearing assembly: refer to [FAX-8, "Exploded View"](#).
  - Steering gear assembly and hydraulic line: refer to [ST-19, "Exploded View"](#), [ST-32, "Exploded View"](#).
  - Stabilizer bar and stabilizer connecting rod: refer to [FSU-18, "Exploded View"](#).
  - Transverse link: refer to [FSU-14, "Exploded View"](#).
  - Engine mount insulator: refer to [EM-48, "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.

### Inspection (GT-R certified NISSAN dealer)

INFOID:000000003987778

#### INSPECTION AFTER REMOVAL

## FRONT SUSPENSION MEMBER

### < REMOVAL AND INSTALLATION >

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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-115, "FRONT WHEEL SENSOR : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).
2. Check wheel alignment. Refer to [FSU-7, "Adjustment"](#).
3. Adjust the neutral position of the 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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## SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

# SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS)

### Wheel Alignment

INFOID:000000003852901

Item		Standard	
Camber Degree minute (Decimal degree)	Minimum	-1° 46' (-1.76°)	
	Nominal	-1° 36' (-1.60°)	
	Maximum	-1° 26' (-1.44°)	
	Left and right difference	0° 10' (0.16°) or less	
Caster Degree minute (Decimal degree)	Minimum	5° 14' (5.24°)	
	Nominal	5° 34' (5.57°)	
	Maximum	5° 54' (5.91°)	
	Left and right difference	0° 30' (0.50°) or less	
Kingpin inclination Degree minute (Decimal degree)	Minimum	9° 14' (9.24°)	
	Nominal	9° 24' (9.40°)	
	Maximum	9° 34' (9.56°)	
Total toe-in	Distance	Minimum	Out 0.9 mm (0.035 in)
		Nominal	In 0.3 mm (0.012 in)
		Maximum	In 1.5 mm (0.059 in)
	Angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	Out 0° 02' (0.03°)
		Nominal	In 0° 01' (0.02°)
		Maximum	In 0° 04' (0.06°)
		Left and right difference	0° 06' (0.10°) or less

Measure value under unladen\* conditions.

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

### Ball Joint (GT-R certified NISSAN dealer)

INFOID:000000003852902

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)
	Upper link	0 – 2.0 N·m (0 – 0.2 kg-m, 0 – 17 in-lb)
Axial end play		0 mm (0 in)