

SECTION **RSU**
 REAR SUSPENSION

A
B
C
D

RSU

CONTENTS

PRECAUTION	2	FRONT LOWER LINK	16	F
PRECAUTIONS	2	Exploded View	16	
Precautions for Removing Battery Terminal	2	Removal and Installation	16	
Precautions for Suspension	2	Inspection	17	G
PREPARATION	3	REAR LOWER LINK	18	
PREPARATION	3	Exploded View	18	H
Special Service Tools	3	Removal and Installation	18	
Commercial Service Tools	3	Inspection	19	
SYMPTOM DIAGNOSIS	4	TOE CONTROL LINK	20	I
NOISE, VIBRATION AND HARSHNESS		Exploded View	20	
(NVH) TROUBLESHOOTING	4	Removal and Installation	20	J
NVH Troubleshooting Chart	4	Inspection	21	
PERIODIC MAINTENANCE	5	REAR STABILIZER	22	
REAR SUSPENSION ASSEMBLY	5	Exploded View	22	K
Inspection	5	Removal and Installation	22	
WHEEL ALIGNMENT	6	Inspection	23	
Inspection	6	REAR SUSPENSION MEMBER	24	L
Adjustment	6	Exploded View	24	
REMOVAL AND INSTALLATION	8	Removal and Installation	24	
REAR COIL SPRING AND SHOCK ABSORB-		Inspection	25	M
ER	8	UNIT REMOVAL AND INSTALLATION	26	
Exploded View	8	REAR SUSPENSION ASSEMBLY	26	N
Removal and Installation	9	Exploded View	26	
Disassembly and Assembly	9	Removal and Installation	26	
Inspection	11	Inspection	28	O
Disposal	12	SERVICE DATA AND SPECIFICATIONS		
SUSPENSION ARM	13	(SDS)	29	P
Exploded View	13	SERVICE DATA AND SPECIFICATIONS		
Removal and Installation	13	(SDS)	29	
Inspection	14	Wheel Alignment	29	
		Ball Joint	30	
		Wheelarch Height	31	

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

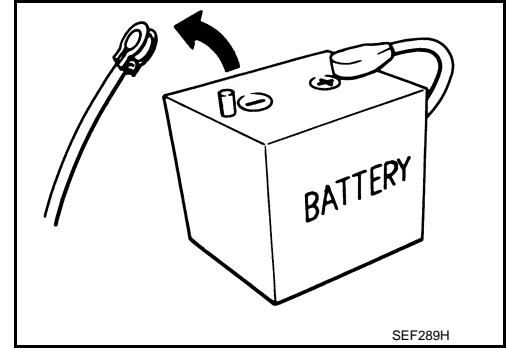
Precautions for Removing Battery Terminal

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When disconnecting the battery terminal, pay attention to the following.

- Always use a 12V battery as power source.
- Never disconnect battery terminal while engine is running.
- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
- For vehicles with the engine listed below, remove the battery terminal after a lapse of the specified time:

BR08DE	: 4 minutes	V9X engine	: 4 minutes
D4D engine	: 20 minutes	YD25DDTi	: 2 minutes
HR09DET	: 12 minutes	YS23DDT	: 4 minutes
HRA2DDT	: 12 minutes	YS23DDTT	: 4 minutes
K9K engine	: 4 minutes	ZD30DDTi	: 60 seconds
M9R engine	: 4 minutes	ZD30DDTT	: 60 seconds
R9M engine	: 4 minutes		



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.

- After high-load driving, if the vehicle is equipped with the V9X engine, turn the ignition switch OFF and wait for at least 15 minutes to remove the battery terminal.

NOTE:

- Turbocharger cooling pump may operate in a few minutes after the ignition switch is turned OFF.
- Example of high-load driving
 - Driving for 30 minutes or more at 140 km/h (86 MPH) or more.
 - Driving for 30 minutes or more on a steep slope.
- 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.

Precautions for Suspension

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

PREPARATION

< PREPARATION >

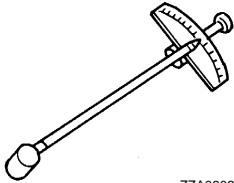
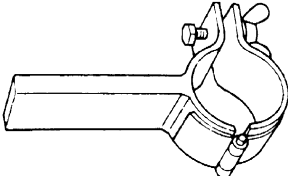
PREPARATION

PREPARATION

Special Service Tools

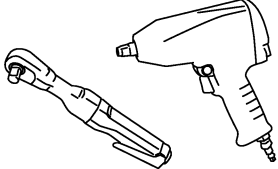
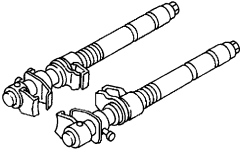
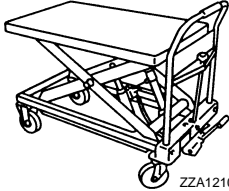
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The actual shapes of TechMate tools may differ from those of special service tools illustrated here.

Tool number (TechMate No.) Tool name	Description
ST3127S000 (J-25765-A) Preload gauge  ZZA0806D	Measuring rotating torque of ball joint
ST35652000 (-) Shock absorber attachment  ZZA0807D	Disassembling and assembling shock absorber

Commercial Service Tools

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Tool name	Description
Power tool  PBIC0190E	Loosening bolts and nuts
Spring compressor  S-NT717	Removing and installing coil spring
Manual lift table caddy  ZZA1210D	Removing and installing rear suspension member

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

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

Symptom		Possible cause and SUSPECTED PARTS		Reference															
				RSU-8, RSU-13, RSU-16, RSU-18, RSU-20, RSU-22, RSU-24	RSU-11	—	—	RSU-11	RSU-8, RSU-13, RSU-16, RSU-18, RSU-20, RSU-22, RSU-24	RSU-6	RSU-22	NVH in DLN section.	NVH in DLN section.	NVH in RAX and RSU sections.	NVH in WT section.	NVH in WT section.	NVH in RAX section.	NVH in BR section.	NVH in ST section.
REAR SUSPENSION	Noise	x	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	x	
	Vibration	x	x	x	x	x	—	—	—	x	—	x	x	—	x	—	x	x	
	Shimmy	x	x	x	x	—	—	x	—	—	—	x	x	x	—	x	x	x	
	Judder	x	x	x	—	—	—	—	—	—	—	x	x	x	—	x	x	x	
	Poor quality ride or handling	x	x	x	x	x	—	x	x	—	—	—	x	x	—	—	—	—	

x: Applicable, —: Not applicable

REAR SUSPENSION ASSEMBLY

< PERIODIC MAINTENANCE >

PERIODIC MAINTENANCE

REAR SUSPENSION ASSEMBLY

Inspection

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COMPONENT PART

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

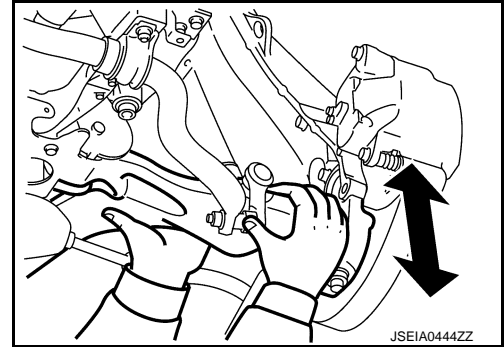
Ball Joint Axial End Play

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

Axial end play : Refer to [RSU-30, "Ball Joint"](#).

CAUTION:

- Never depress brake pedal when measuring.
- Never perform with tires on level ground.
- Never damage ball joint boot. Never damage the installation position by applying excessive force.



SHOCK ABSORBER

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

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RSU
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WHEEL ALIGNMENT

< PERIODIC MAINTENANCE >

WHEEL ALIGNMENT

Inspection

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DESCRIPTION

Measure wheel alignment under unladen conditions.

NOTE:

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

PRELIMINARY CHECK

Check the following:

- Tires for improper air pressure and wear. Refer to [WT-82, "Tire Air Pressure"](#).
- Road wheels for runout.
- Wheel bearing axial end play. Refer to [RAX-6, "Inspection"](#).
- Ball joint axial end play of suspension arm. Refer to [RSU-5, "Inspection"](#).
- Shock absorber operation.
- Each mounting point of axle and suspension for looseness and deformation.
- Each of front lower link, rear lower link, toe control link, rear suspension member, suspension arm and shock absorber for cracks, deformation, and other damage.
- Vehicle height (posture).

GENERAL INFORMATION AND RECOMMENDATIONS

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

ALIGNMENT PROCESS

IMPORTANT:

Use only the alignment specifications listed in this Service Manual.

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

NOTE:

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

Adjustment

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CAMBER

WHEEL ALIGNMENT

< PERIODIC MAINTENANCE >

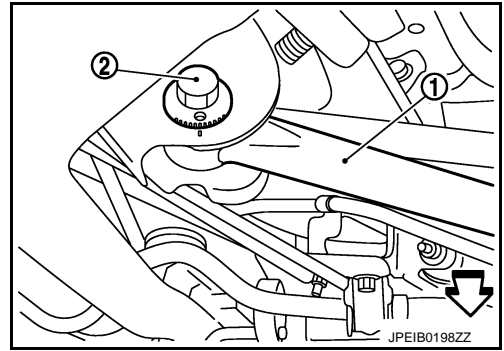
- If camber is exceeds the standard value, adjust with adjusting bolt ② in rear lower link ①.

← : Vehicle front

Camber: Refer to [RSU-29, "Wheel Alignment"](#).

CAUTION:

- When tightening the nut firmly and checking the torque, use a wrench to prevent the turning of the bolt.
 - After adjusting camber, be sure to check toe-in.
- If camber is not still within the specification, inspect and replace any damaged or worn suspension parts.



TOE-IN

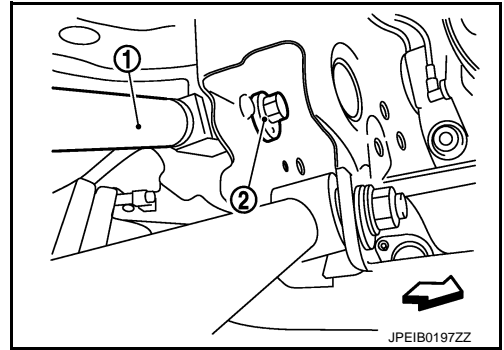
- If toe-in is exceeds the standard value, adjust with adjusting bolt ② in toe control link ①.

← : Vehicle front

Toe-In: Refer to [RSU-29, "Wheel Alignment"](#).

CAUTION:

- Be sure to adjust equally on right and left side with adjusting bolt.
 - When tightening the nut firmly and checking the torque, use a wrench to prevent the turning of the bolt.
- If toe-in is not still within the specification, inspect and replace any damaged or worn suspension parts.
- After toe-in adjustment, adjust neutral position of steering angle sensor. Refer to [BRC-91, "Description"](#).



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REAR COIL SPRING AND SHOCK ABSORBER

< REMOVAL AND INSTALLATION >

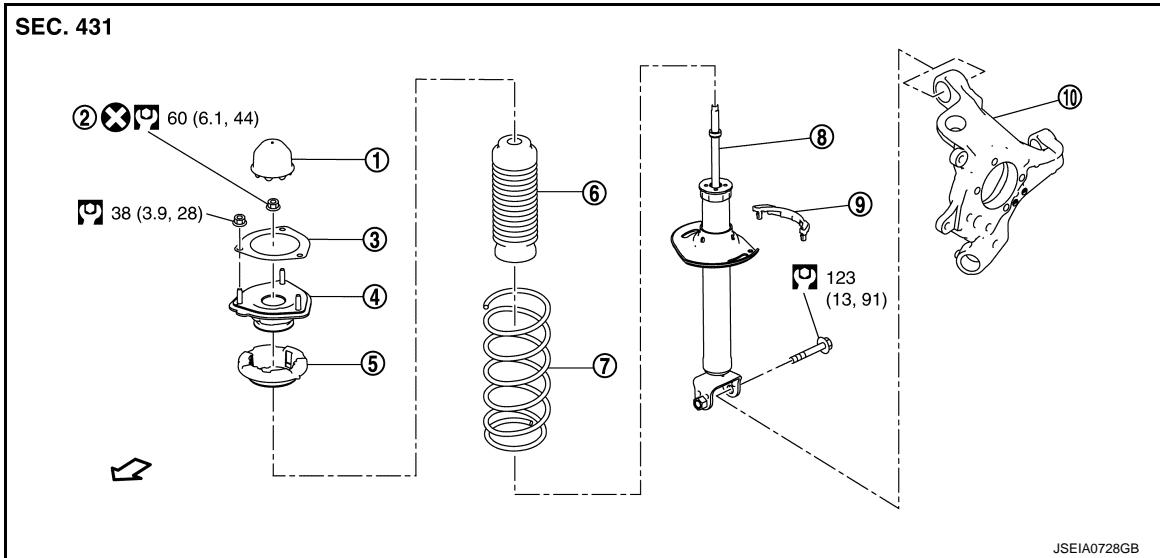
REMOVAL AND INSTALLATION

REAR COIL SPRING AND SHOCK ABSORBER

Exploded View

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WITHOUT DIGITAL MOTION CONTROL



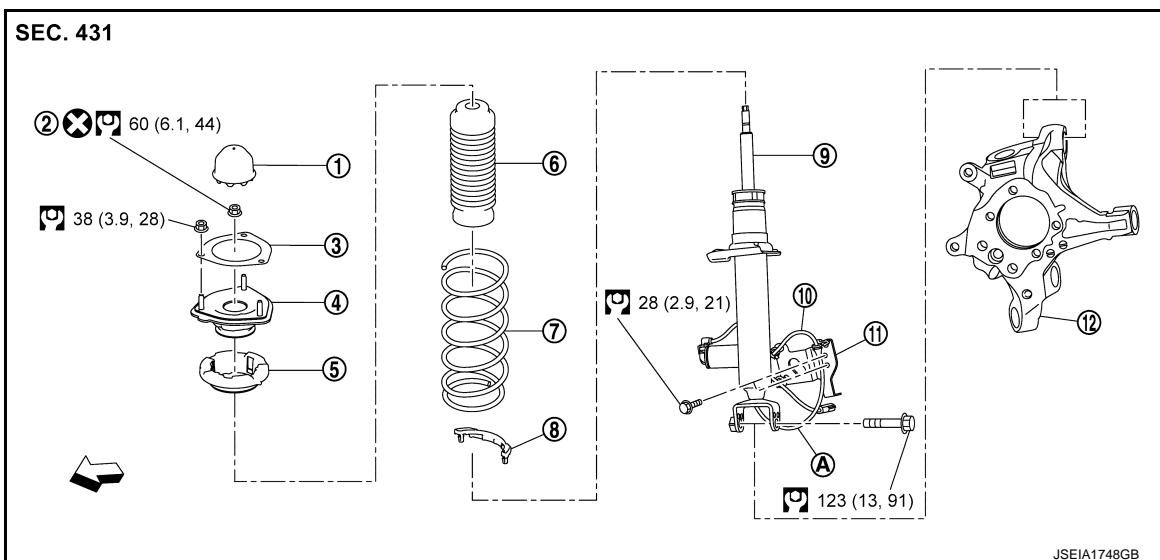
- | | | |
|----------------------|-----------------------|---------------------------------|
| ① Cap | ② Piston rod lock nut | ③ Gasket |
| ④ Mounting insulator | ⑤ Rubber seat | ⑥ Bound bumper |
| ⑦ Coil spring | ⑧ Shock absorber | ⑨ Spring lower pad (right side) |
| ⑩ Axle housing | | |

↔: Vehicle front

⊞ : N·m (kg·m, ft·lb)

⊗ : Always replace after every disassembly.

WITH DIGITAL MOTION CONTROL





REAR COIL SPRING AND SHOCK ABSORBER

< REMOVAL AND INSTALLATION >

- | | | |
|--------------------------------------|--------------------------------------|------------------------------|
| ① Cap | ② Piston rod lock nut | ③ Gasket |
| ④ Mounting insulator | ⑤ Rubber seat | ⑥ Bound bumper |
| ⑦ Coil spring | ⑧ Spring lower pad (right side) | ⑨ Dynamic digital suspension |
| ⑩ Dynamic digital suspension harness | ⑪ Dynamic digital suspension bracket | ⑫ Axle housing |
| Ⓐ Identification line | | |

⇐: Vehicle front

 : N·m (kg-m, ft-lb)

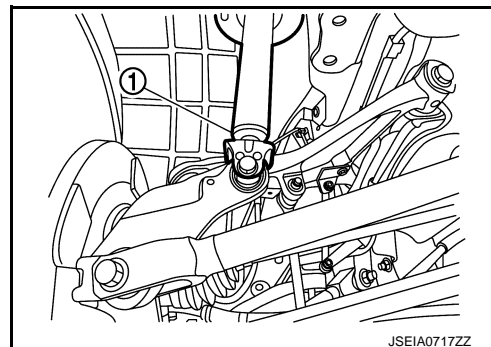
 : Always replace after every disassembly.

Removal and Installation

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REMOVAL

1. Remove tires with power tool. Refer to [WT-74, "Removal and Installation"](#).
2. Disconnect dynamic digital suspension harness connector, and remove dynamic digital suspension harness. (With digital motion control)
3. Remove dynamic digital suspension harness bracket. (With digital motion control)
4. Set jack under axle housing.
CAUTION:
 - Check the stable condition when using a jack.
 - Never damage axle housing with a jack.
5. Remove dynamic digital suspension or shock absorber ① from axle housing.
6. Remove the rear parcel shelf finisher. Refer to [INT-37, "Removal and Installation"](#).
7. Remove the seat belt retractor. Refer to [SB-14, "SEAT BELT RETRACTOR : Removal and Installation"](#).
8. Remove mounting insulator nuts, and then remove dynamic digital suspension assembly or shock absorber assembly.



INSTALLATION

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

- Install dynamic digital suspension harness in a manner such that outward identification line out of 2 faces operator as dynamic digital suspension is fixed. (With digital motion control)

CAUTION:

Never twist dynamic digital suspension harness.

- Perform final tightening of bolts and nuts at the dynamic digital suspension or shock absorber lower side (rubber bushing), under unladen conditions with tires on level ground.
- Perform inspection after installation. Refer to [RSU-11, "Inspection"](#).
- After replacing the dynamic digital suspension or shock absorber, always follow the disposal procedure to discard the dynamic digital suspension or shock absorber. Refer to [RSU-12, "Disposal"](#).

Disassembly and Assembly

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DISASSEMBLY

CAUTION:

Never damage dynamic digital suspension or shock absorber piston rod when removing components from dynamic digital suspension or shock absorber.

1. Remove gasket and cap from mounting insulator.

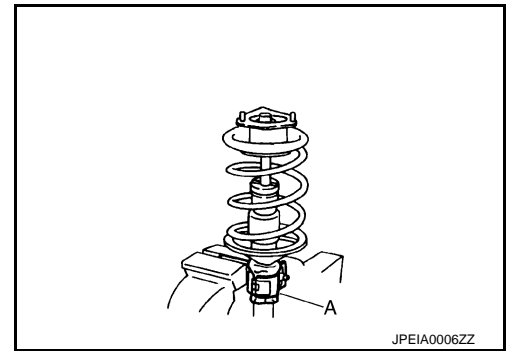
REAR COIL SPRING AND SHOCK ABSORBER

< REMOVAL AND INSTALLATION >

2. Install dynamic digital suspension or shock absorber attachment (A) [SST: ST35652000 (-)] to dynamic digital suspension or shock absorber and secure it in a vise.

CAUTION:

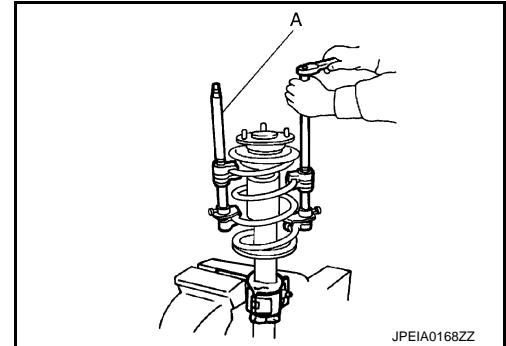
When installing the shock absorber attachment to dynamic digital suspension or shock absorber, wrap a shop cloth around dynamic digital suspension or shock absorber to protect it from damage.



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

CAUTION:

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



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

CAUTION:

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

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

CAUTION:

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

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

ASSEMBLY

CAUTION:

Never damage dynamic digital suspension or shock absorber piston rod when installing components from dynamic digital suspension or shock absorber.

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

CAUTION:

When installing the shock absorber attachment to dynamic digital suspension or shock absorber, wrap a shop cloth around dynamic digital suspension or shock absorber to protect it from damage.

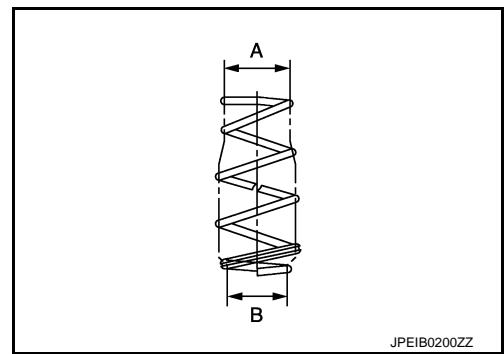
2. Compress coil spring using a spring compressor (commercial service tool), and install it onto dynamic digital suspension or shock absorber.

CAUTION:

REAR COIL SPRING AND SHOCK ABSORBER

< REMOVAL AND INSTALLATION >

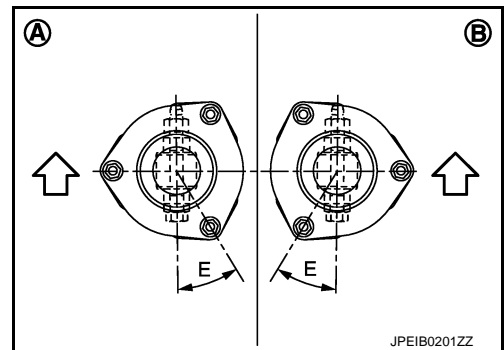
- Install with the large-diameter side (A) facing up and the small-diameter side (B) facing down.
 - Be sure a spring compressor is securely attached to coil spring.
3. Apply soapy water to bound bumper.
CAUTION:
Never use machine oil.



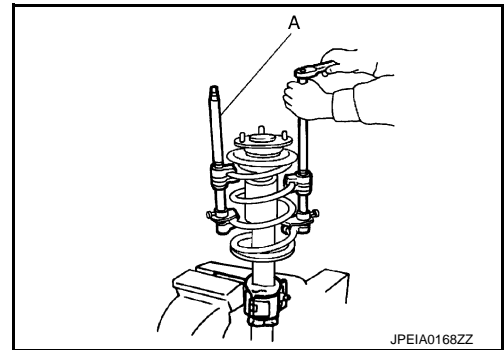
4. Install rubber sheet and mounting insulator to shock absorber.
CAUTION:
Install the mount insulator so that the stud bolt is in the position shown in the figure.

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

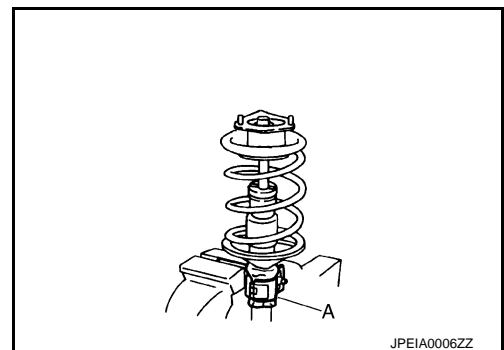
Angle (E) : 29.7°



5. Secure piston rod tip so that piston rod does not turn, then tighten piston rod lock nut with specified torque.
CAUTION:
Never reuse piston rod lock nut.
6. Gradually release a spring compressor (A) (commercial service tool), and remove coil spring.
CAUTION:
Loosen while making sure coil spring attachment position does not move.



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



8. Install the gasket and cap to the mounting insulator.

Inspection

INSPECTION AFTER DISASSEMBLY

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REAR COIL SPRING AND SHOCK ABSORBER

< REMOVAL AND INSTALLATION >

Shock absorber or Dynamic Digital Suspension

Check the following items and replace if necessary.

- Dynamic digital suspension or shock absorber for deformation, cracks, and other damage.
- Piston rod for damage, uneven wear, and distortion.
- Oil leakage

Mounting insulator, rubber seat, bound bumper, and gasket

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

Coil spring

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

INSPECTION AFTER INSTALLATION

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

Disposal

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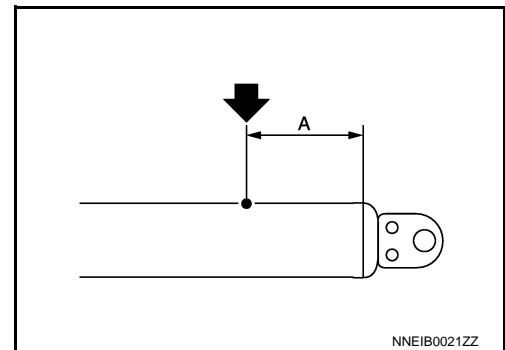
1. Set dynamic digital suspension or shock absorber horizontally with the piston rod fully extended.
2. Drill 2 – 3 mm (0.08 – 0.12 in) hole at the position (●) from top as shown in the figure to release gas gradually.

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.

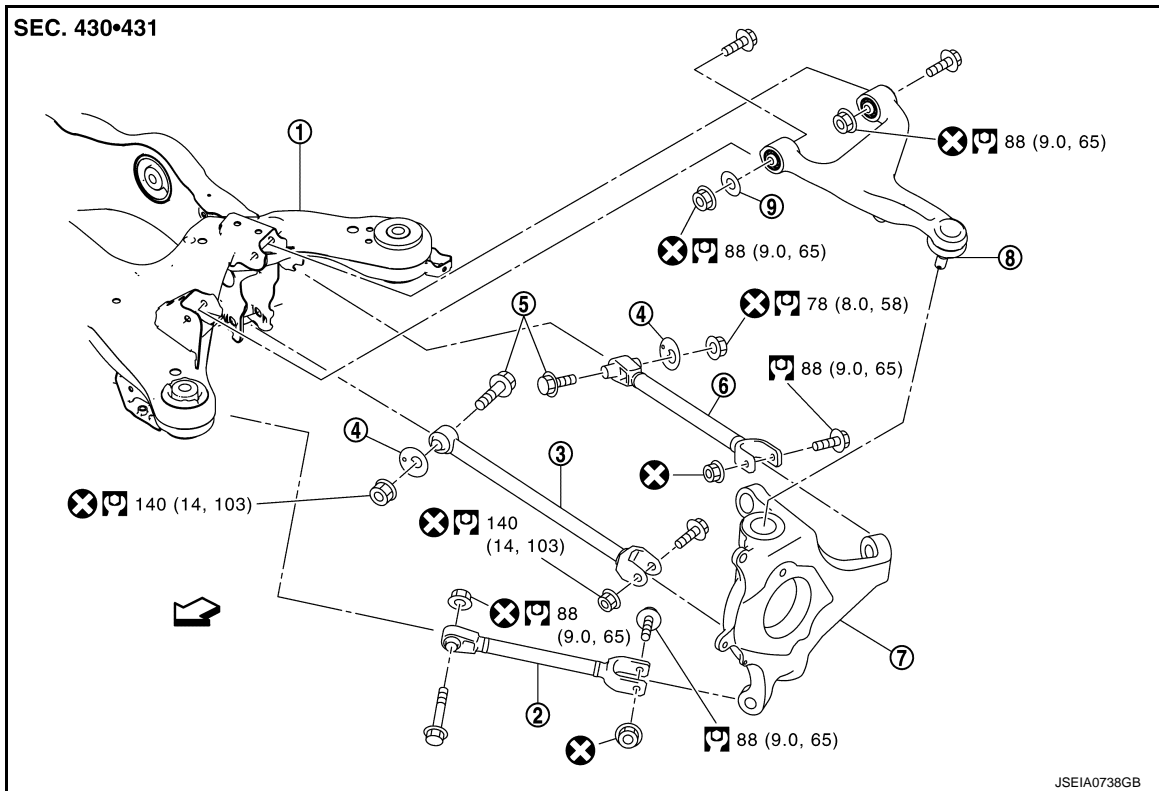
SUSPENSION ARM

< REMOVAL AND INSTALLATION >

SUSPENSION ARM

Exploded View

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- | | | |
|--------------------------|--------------------|--------------------|
| ① Rear suspension member | ② Front lower link | ③ Rear lower link |
| ④ Eccentric disk | ⑤ Adjusting bolt | ⑥ Toe control link |
| ⑦ Axle housing | ⑧ Suspension arm | ⑨ Stopper bushing |

↔ Vehicle front

☐ : N·m (kg-m, ft-lb)

⊗ : Always replace after every disassembly.

Removal and Installation

INFOID:0000000012796966

REMOVAL

Right Side

1. Remove rear suspension assembly. Refer to [RSU-24, "Removal and Installation"](#).
2. Remove stabilizer connecting rod from suspension arm. Refer to [RSU-22, "Exploded View"](#).
3. Separate suspension arm from axle housing. Refer to [RSU-8, "Exploded View"](#).
4. Remove suspension arm from axle housing.
5. Remove stopper bushing, bolts, and nuts, and then remove suspension arm from suspension member.
6. Perform inspection after removal. Refer to [RSU-14, "Inspection"](#).

Left Side

NOTE:

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

1. Remove tire with power tool. Refer to [WT-74, "Exploded View"](#).
2. Remove caliper assembly. Hang caliper assembly in a place where it will not interfere with work.

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RSU

F

G

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SUSPENSION ARM

< REMOVAL AND INSTALLATION >

- 1 piston type: Refer to [BR-73. "BRAKE CALIPER ASSEMBLY \(1 PISTON TYPE\) : Removal and Installation"](#).
- 2 piston type: Refer to [BR-79. "BRAKE CALIPER ASSEMBLY \(2 PISTON TYPE\) : Removal and Installation"](#).

CAUTION:

Never depress brake pedal while brake caliper is removed.

3. Remove disc rotor. Refer to [RAX-8. "Removal and Installation"](#).
4. Remove drive shaft. Refer to [RAX-13. "Removal and Installation"](#).
5. Remove dynamic digital suspension or shock absorber from axle housing. Refer to [RSU-9. "Removal and Installation"](#).
6. Remove height sensor from suspension arm. (AFS models) Refer to [EXL-222. "Removal and Installation"](#).
7. Remove stabilizer connecting rod from suspension arm. Refer to [RSU-22. "Removal and Installation"](#).
8. Separate suspension arm from axle housing. Refer to [RAX-8. "Removal and Installation"](#).
9. Remove stopper bushing, bolt, and nut, and then remove suspension arm from suspension member.
10. Perform inspection after removal. Refer to [RSU-14. "Inspection"](#).

INSTALLATION

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

- Perform final tightening of rear suspension member installation position (rubber bussing), under unladen conditions with tires on level ground.
- Perform inspection after installation. Refer to [RSU-14. "Inspection"](#).

Inspection

INFOID:000000012796967

INSPECTION AFTER REMOVAL

Appearance

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

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

Ball Joint Inspection

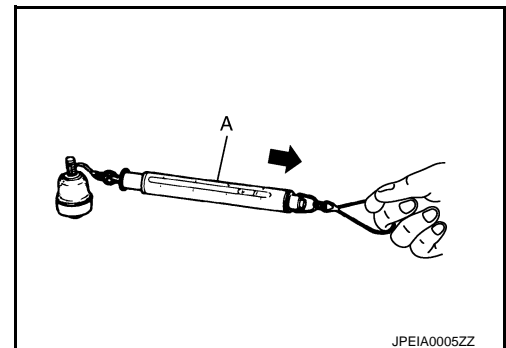
Manually move ball stud to confirm that it moves smoothly with no binding.

Swing Torque Inspection

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

Swing torque : Refer to [RSU-30. "Ball Joint"](#).

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



Rotating Torque Inspection

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

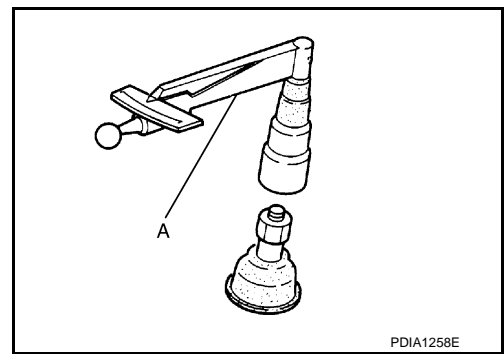
SUSPENSION ARM

< REMOVAL AND INSTALLATION >

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

Rotating torque : Refer to [RSU-30, "Ball Joint"](#).

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



Axial End Play Inspection

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

Axial end play : Refer to [RSU-30, "Ball Joint"](#).

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

INSPECTION AFTER INSTALLATION

Right Side

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

Left Side

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

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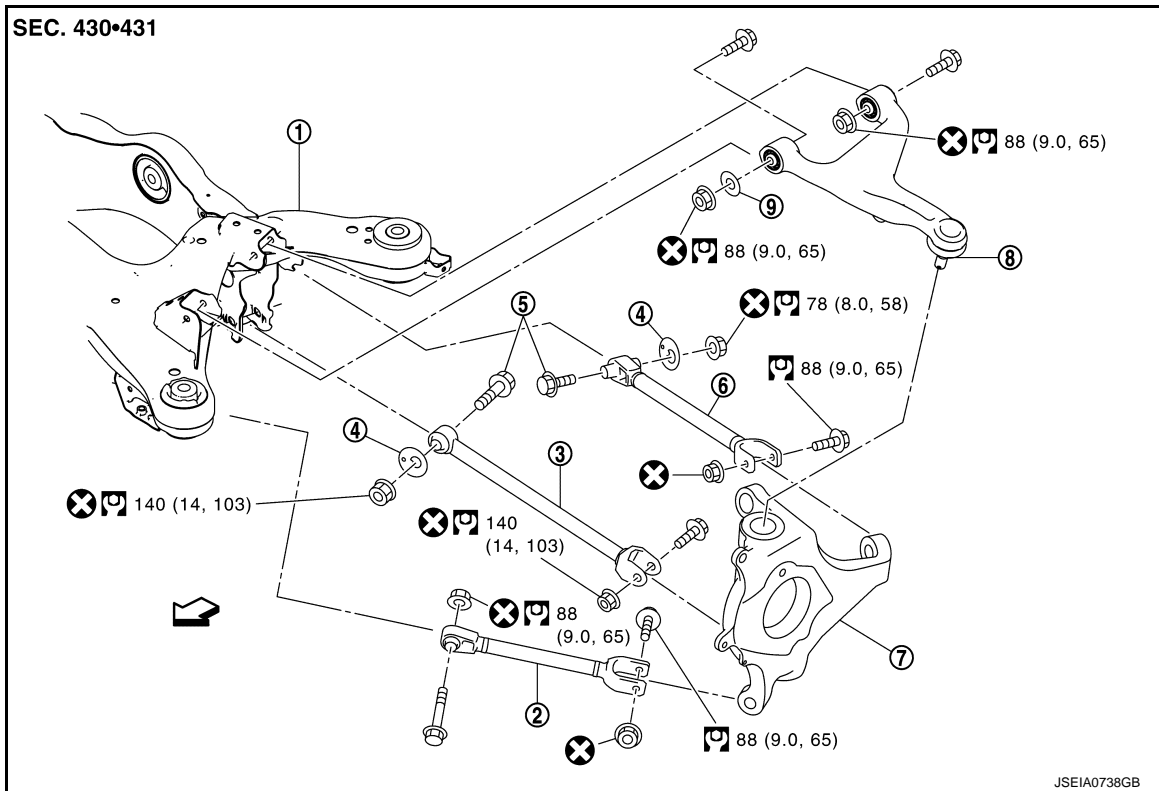
FRONT LOWER LINK

< REMOVAL AND INSTALLATION >

FRONT LOWER LINK

Exploded View

INFOID:000000012796968



- | | | |
|--------------------------|--------------------|--------------------|
| ① Rear suspension member | ② Front lower link | ③ Rear lower link |
| ④ Eccentric disk | ⑤ Adjusting bolt | ⑥ Toe control link |
| ⑦ Axle housing | ⑧ Suspension arm | ⑨ Stopper bushing |

←: Vehicle front

: N·m (kg-m, ft-lb)

: Always replace after every disassembly.

Removal and Installation

INFOID:000000012796968

REMOVAL

1. Remove tires with power tool. Refer to [WT-74, "Removal and Installation"](#).
2. Set jack under axle housing.
CAUTION:
 - Check the stable condition when using a jack.
 - Never damage axle housing with a jack.
3. Separate dynamic digital suspension or shock absorber from axle housing. Refer to [RSU-9, "Removal and Installation"](#).
4. Remove rear under cover. Refer to [EXT-35, "FLOOR UNDER COVER : Exploded View"](#).
5. Remove rear suspension member stay. Refer to [RSU-24, "Exploded View"](#).
6. Remove nuts and bolts, and remove front lower link.
7. Perform inspection after removal. Refer to [RSU-17, "Inspection"](#).

INSTALLATION

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

FRONT LOWER LINK

< REMOVAL AND INSTALLATION >

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

Inspection

INFOID:0000000012796970

INSPECTION AFTER REMOVAL

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

INSPECTION AFTER INSTALLATION

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

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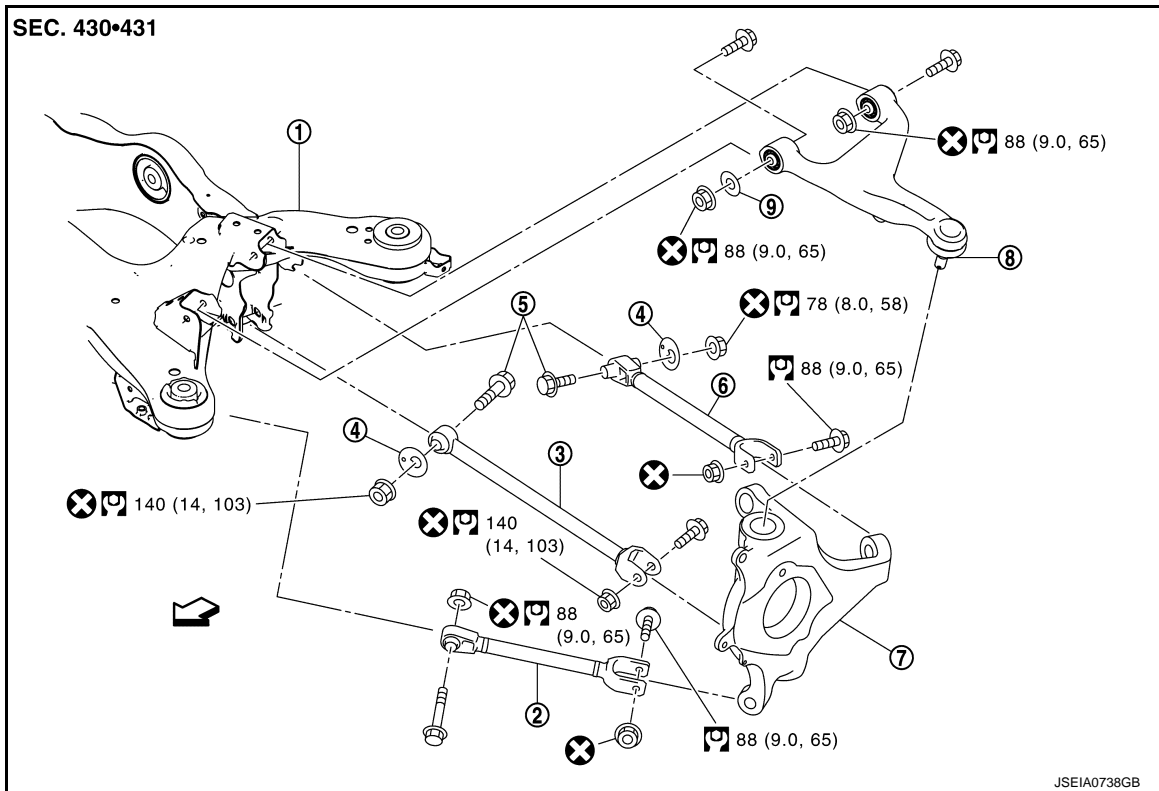
REAR LOWER LINK

< REMOVAL AND INSTALLATION >

REAR LOWER LINK

Exploded View

INFOID:000000012796971



- | | | |
|--------------------------|--------------------|--------------------|
| ① Rear suspension member | ② Front lower link | ③ Rear lower link |
| ④ Eccentric disk | ⑤ Adjusting bolt | ⑥ Toe control link |
| ⑦ Axle housing | ⑧ Suspension arm | ⑨ Stopper bushing |

←: Vehicle front

: N·m (kg-m, ft-lb)

: Always replace after every disassembly.

Removal and Installation

INFOID:000000012796972

REMOVAL

1. Remove tires with power tool. Refer to [WT-74, "Removal and Installation"](#).
2. Set jack under axle housing.
CAUTION:
 - Check the stable condition when using a jack.
 - Never damage axle housing with a jack.
3. Separate dynamic digital suspension or shock absorber from axle housing. Refer to [RSU-9, "Removal and Installation"](#).
4. Remove eccentric disc, adjusting bolt, mounting bolt, and nut. Remove rear lower link.
5. Perform inspection after removal. Refer to [RSU-19, "Inspection"](#).

INSTALLATION

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

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

REAR LOWER LINK

< REMOVAL AND INSTALLATION >

Inspection

INFOID:000000012796973

INSPECTION AFTER REMOVAL

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

INSPECTION AFTER INSTALLATION

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

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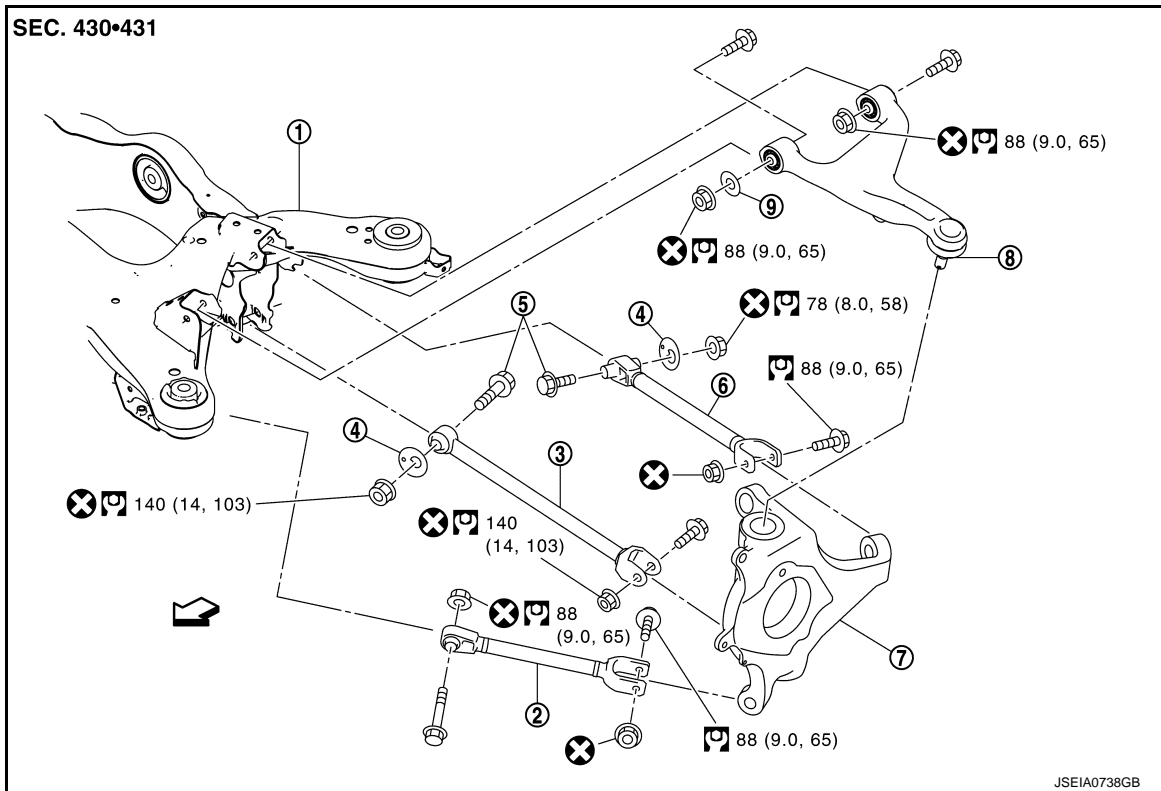
TOE CONTROL LINK

< REMOVAL AND INSTALLATION >

TOE CONTROL LINK


Exploded View


INFOID:000000012796974



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|--------------------------|--------------------|--------------------|
| ① Rear suspension member | ② Front lower link | ③ Rear lower link |
| ④ Eccentric disk | ⑤ Adjusting bolt | ⑥ Toe control link |
| ⑦ Axle housing | ⑧ Suspension arm | ⑨ Stopper bushing |

←: Vehicle front

 : N·m (kg-m, ft-lb)

 : Always replace after every disassembly.

Removal and Installation

INFOID:000000012796975

REMOVAL

1. Remove tires with power tool. Refer to [WT-74, "Removal and Installation"](#).
2. Set jack under axle housing.
CAUTION:
 - Check the stable condition when using a jack.
 - Never damage axle housing with a jack.
3. Separate dynamic digital suspension or shock absorber from axle housing. Refer to [RSU-9, "Removal and Installation"](#).
4. Remove eccentric disk, adjusting bolt, mounting bolt, and nut. Remove toe control link.
5. Perform inspection after removal. Refer to [RSU-21, "Inspection"](#).

INSTALLATION

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

- Perform final tightening of rear suspension member and axle installation position (rubber bushing), under unladen conditions with tires on level ground.
- Perform inspection after installation. Refer to [RSU-21, "Inspection"](#).

TOE CONTROL LINK

< REMOVAL AND INSTALLATION >

Inspection

INFOID:000000012796976

INSPECTION AFTER REMOVAL

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

INSPECTION AFTER INSTALLATION

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

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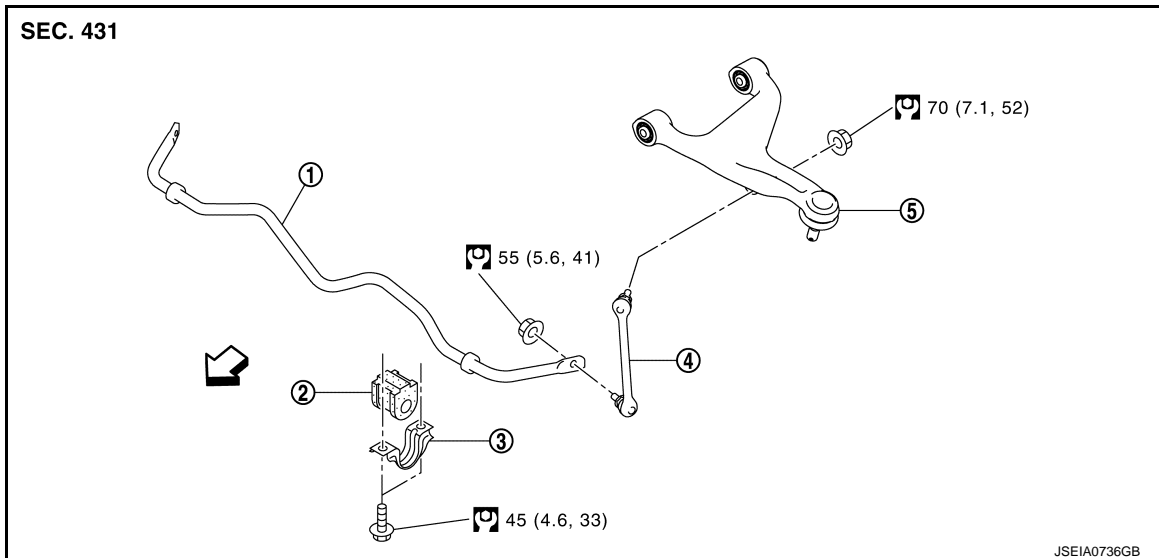
REAR STABILIZER

< REMOVAL AND INSTALLATION >

REAR STABILIZER

Exploded View

INFOID:000000012796977



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

⇐: Vehicle front

: N·m (kg-m, ft-lb)

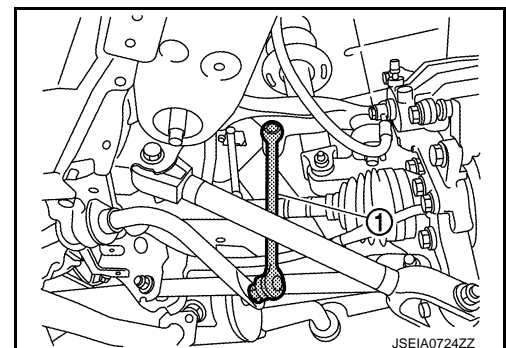
: Always replace after every disassembly.

Removal and Installation

INFOID:000000012796978

REMOVAL

1. Remove member stay. Refer to [RSU-24, "Exploded View"](#).
2. Remove rear under cover. Refer to [EXT-35, "FLOOR UNDER COVER : Exploded View"](#).
3. Remove rear floor rear cover. Refer to [EXT-35, "FLOOR UNDER COVER : Exploded View"](#).
4. Remove stabilizer connecting rods ①.



5. Remove stabilizer clamp and bushing.
6. Remove stabilizer bar.
7. Perform inspection after removal. Refer to [RSU-23, "Inspection"](#).

INSTALLATION

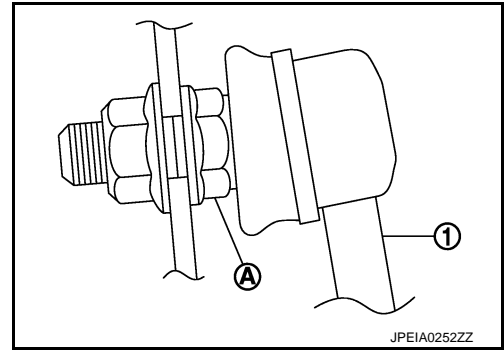
Note the following, and install in the reverse order of removal.

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

REAR STABILIZER

< REMOVAL AND INSTALLATION >

- To install stabilizer connecting rod ①, tighten the mounting nut with hexagon part ② on the stabilizer connecting rod side fixed.



Inspection

INSPECTION AFTER REMOVAL

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

INFOID:000000012796979

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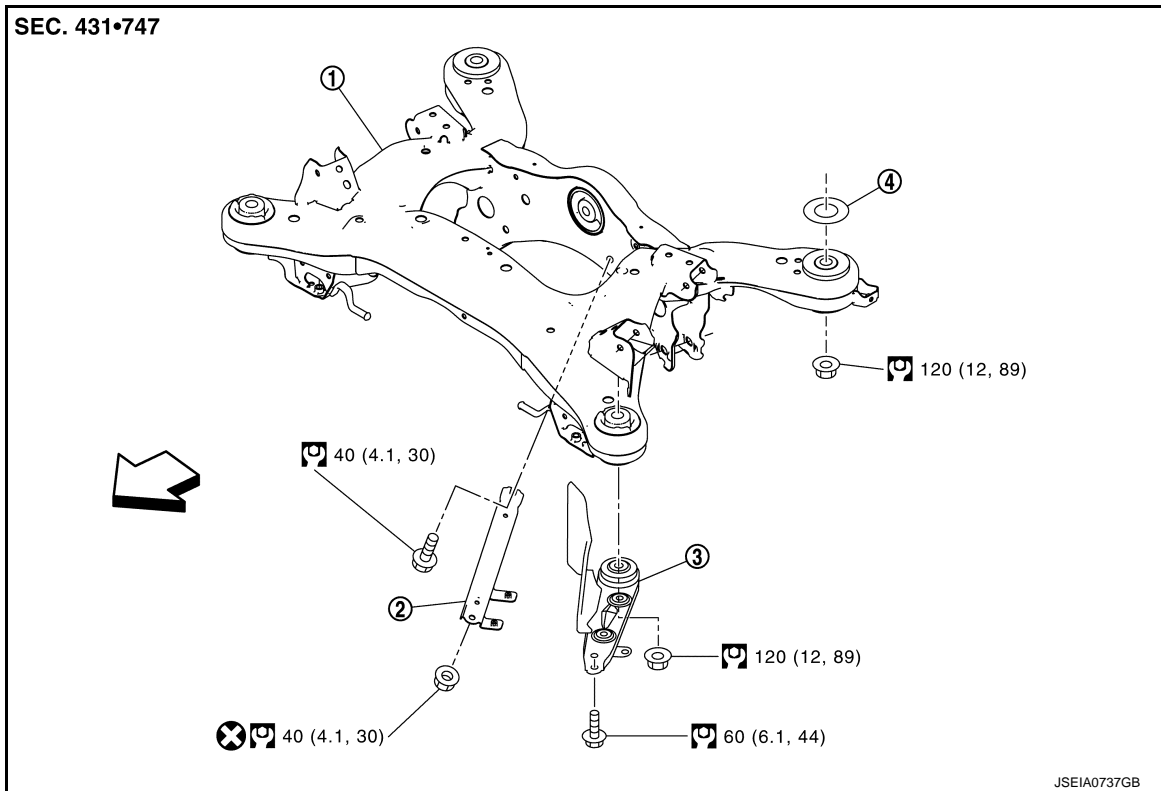
REAR SUSPENSION MEMBER

< REMOVAL AND INSTALLATION >

REAR SUSPENSION MEMBER

Exploded View

INFOID:000000012796980



① Rear suspension member ② Member stay ③ Rear suspension member stay

④ Mount stopper

⇐ Vehicle front

: N-m (kg-m, ft-lb)

: Always replace after every disassembly.

Removal and Installation

INFOID:000000012796981

REMOVAL

1. Remove tires with power tool. Refer to [WT-74, "Removal and Installation"](#).
2. Remove rear suspension member assembly. Refer to [RSU-26, "Removal and Installation"](#).
3. Remove the following parts.
 - Remove rear wheel hub and axle housing: Refer to [RAX-8, "Exploded View"](#).
 - Remove suspension arm: Refer to [RSU-13, "Exploded View"](#).
 - Remove height sensor (AFS models): Refer to [EXL-222, "Removal and Installation"](#).
 - Remove front lower link: Refer to [RSU-16, "Exploded View"](#).
 - Remove rear lower link: Refer to [RSU-18, "Exploded View"](#).
 - Remove toe control link: Refer to [RSU-20, "Exploded View"](#).
 - Remove rear stabilizer: Refer to [RSU-22, "Exploded View"](#).

INSTALLATION

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

- Perform final tightening of rear suspension member installation position (rubber bussing), under unladen conditions with tires on level ground.
- Perform inspection after installation. Refer to [RSU-28, "Inspection"](#).

REAR SUSPENSION MEMBER

< REMOVAL AND INSTALLATION >

Inspection

INFOID:000000012796982

INSPECTION AFTER REMOVAL

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

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REAR SUSPENSION ASSEMBLY

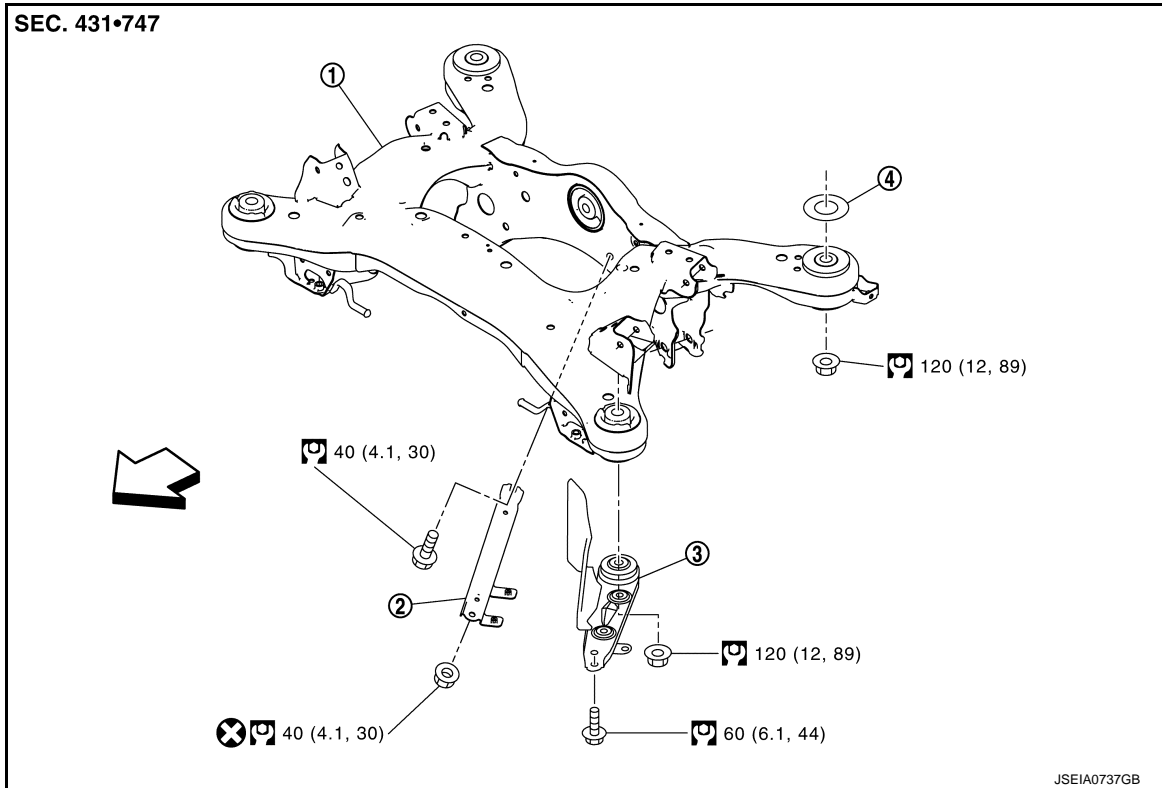
< UNIT REMOVAL AND INSTALLATION >

UNIT REMOVAL AND INSTALLATION

REAR SUSPENSION ASSEMBLY

Exploded View

INFOID:000000012796983



① Rear suspension member ② Member stay ③ Rear suspension member stay

④ Mount stopper

←: Vehicle front

: N·m (kg·m, ft·lb)

: Always replace after every disassembly.

Removal and Installation

INFOID:000000012796984

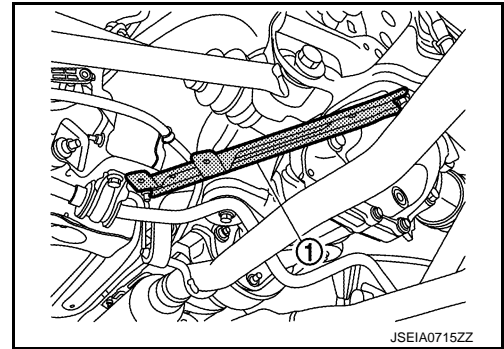
REMOVAL

1. Remove tires with power tool. Refer to [WT-74, "Exploded View"](#).
 2. Remove caliper assemblies. Hang caliper assembly in a place where it will not interfere with work.
 - 1 piston type: Refer to [BR-73, "BRAKE CALIPER ASSEMBLY \(1 PISTON TYPE\) : Removal and Installation"](#).
 - 2 piston type: Refer to [BR-79, "BRAKE CALIPER ASSEMBLY \(2 PISTON TYPE\) : Removal and Installation"](#).
- CAUTION:**
Avoid depressing brake pedal while brake caliper is removed.
3. Remove disc rotor. Refer to [RAX-8, "Removal and Installation"](#).
 4. Remove main muffler. Refer to [EX-7, "Removal and Installation"](#).

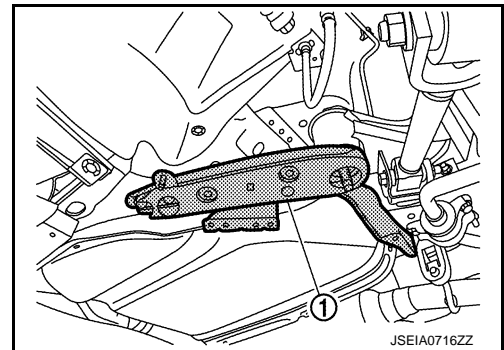
REAR SUSPENSION ASSEMBLY

< UNIT REMOVAL AND INSTALLATION >

5. Remove member stays ①.



6. Remove rear final drive assembly. Refer to [DLN-183, "Removal and Installation"](#).
7. Remove drive shaft. Refer to [RAX-13, "Removal and Installation"](#).
8. Separate rear cable from front cable, and then remove rear cable from rear suspension member. Refer to [PB-9, "Removal and Installation"](#).
9. Remove wheel sensor and sensor harness from rear suspension member. Refer to [BRC-192, "REAR WHEEL SENSOR : Removal and Installation"](#).
10. Disconnect height sensor harness connector. (AFS models) Refer to [EXL-222, "Removal and Installation"](#).
11. Remove dynamic digital suspension or shock absorber from axle housing. Refer to [RSU-9, "Removal and Installation"](#).
12. Set manual lift table caddy (commercial service tool) under rear suspension member.
- CAUTION:**
- At this step, the manual lift table caddy must be set only for supporting the removal procedure. For details on jacking up the vehicle, refer to [GI-30, "Garage Jack and Safety Stand and 2-Pole Lift"](#).
 - Never damage the rear suspension member with a manual lift table caddy.
 - Check the stable condition when using a manual lift table caddy.
13. Remove rear under cover from rear suspension member stay. Refer to [EXT-36, "FLOOR UNDER COVER : Removal and Installation"](#).
14. Remove rear suspension member stays ①.



15. Remove rear suspension member mounting nuts.
16. Slowly lower manual lift table caddy, then remove rear suspension member, suspension arms, front lower links, wheel hub and housings from vehicle as a unit.
- CAUTION:**
- Operate while checking that manual lift table caddy supporting status is stable.**
17. Remove mount stopper from rear suspension member.

INSTALLATION

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

- Perform final tightening of rear suspension member installation position (rubber bussing), under unladen conditions with tires on level ground.
- Perform inspection after installation. Refer to [RSU-28, "Inspection"](#).

REAR SUSPENSION ASSEMBLY

< UNIT REMOVAL AND INSTALLATION >

Inspection

INFOID:000000012796985

INSPECTION AFTER REMOVAL

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

INSPECTION AFTER INSTALLATION

1. Check wheel sensor and harness for proper connection. Refer to [BRC-192, "REAR WHEEL SENSOR : Exploded View"](#).
2. Adjust parking brake operation (stroke). Refer to [PB-6, "Inspection and Adjustment"](#).
3. Check wheel alignment. Refer to [RSU-6, "Inspection"](#).

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Wheel Alignment

INFOID:0000000012796986

WARNING:

If the vehicle is equipped with the ICC system and the rear toe has been adjusted during a wheel alignment, the ICC sensor must be aligned. Refer to [CCS-114, "TYPE 1 : Description"](#) (TYPE 1) or [CCS-118, "TYPE 2 : Description"](#) (TYPE 2).

2.0L TURBO GASOLINE ENGINE

Item		Standard	
Camber Degree minute (Decimal degree)	Minimum	-1° 25' (-1.41°)	
	Nominal	-0° 55' (-0.92°)	
	Maximum	-0° 25' (-0.42°)	
Toe-in	Total toe-in Distance	Minimum	0 mm (0 in)
		Nominal	In 2.8 mm (In 0.110 in)
		Maximum	In 5.6 mm (In 0.220 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	0° 00' (0.00°)
		Nominal	In 0° 14' (In 0.23°)
		Maximum	In 0° 28' (In 0.46°)

Measure value under unladen* conditions.

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

VR30DDTT

2WD

EXCEPT MEXICO (EXCEPT PREMIUM SPORT GRADE)

Item		Standard	
Camber Degree minute (Decimal degree)	Minimum	-1° 40' (-1.66°)	
	Nominal	-1° 10' (-1.17°)	
	Maximum	-0° 40' (-0.67°)	
Toe-in	Total toe-in Distance	Minimum	0 mm (0 in)
		Nominal	In 2.8 mm (In 0.110 in)
		Maximum	In 5.6 mm (In 0.220 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	0° 00' (0.00°)
		Nominal	In 0° 14' (In 0.23°)
		Maximum	In 0° 28' (In 0.46°)

Measure value under unladen* conditions.

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

EXCEPT MEXICO (PREMIUM SPORT GRADE)

Item		Standard	
Tire Size	Front	245/40RF19	245/40RF19
	Rear		265/35RF19
Camber Degree minute (Decimal degree)	Minimum	-1° 40' (-1.66°)	
	Nominal	-1° 10' (-1.17°)	
	Maximum	-0° 40' (-0.67°)	

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

Item		Standard		
Tire Size	Front	245/40RF19	245/40RF19	
	Rear		265/35RF19	
Toe-in	Total toe-in Distance	Minimum	0 mm (0 in)	
		Nominal	In 2.8 mm (In 0.110 in)	
		Maximum	In 5.6 mm (In 0.220 in)	
	Total toe-angle Degree minute (Decimal degree)	Minimum	0° 00' (0.00°)	
		Nominal	In 0° 14' (In 0.23°)	
		Maximum	In 0° 28' (In 0.46°)	

Measure value under unladen* conditions.

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

MEXICO

Item		Standard		
Camber Degree minute (Decimal degree)	Minimum	-1° 25' (-1.41°)		
	Nominal	-0° 55' (-0.92°)		
	Maximum	-0° 25' (-0.42°)		
Toe-in	Total toe-in Distance	Minimum	0 mm (0 in)	
		Nominal	In 2.8 mm (In 0.110 in)	
		Maximum	In 5.6 mm (In 0.220 in)	
	Total toe-angle Degree minute (Decimal degree)	Minimum	0° 00' (0.00°)	
		Nominal	In 0° 14' (In 0.23°)	
		Maximum	In 0° 28' (In 0.46°)	

Measure value under unladen* conditions.

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

AWD

Item		Standard		
Camber Degree minute (Decimal degree)	Minimum	-1° 40' (-1.66°)		
	Nominal	-1° 10' (-1.17°)		
	Maximum	-0° 40' (-0.67°)		
Toe-in	Total toe-in Distance	Minimum	0 mm (0 in)	
		Nominal	In 2.8 mm (In 0.110 in)	
		Maximum	In 5.6 mm (In 0.220 in)	
	Total toe-angle Degree minute (Decimal degree)	Minimum	0° 00' (0.00°)	
		Nominal	In 0° 14' (In 0.23°)	
		Maximum	In 0° 28' (In 0.46°)	

Measure value under unladen* conditions.

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

Ball Joint

INFOID:0000000012796987

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

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

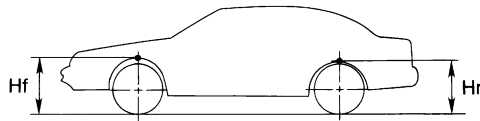
INFOID:000000012796988

Wheelarch Height

2.0L TURBO GASOLINE ENGINE

2WD

Item	Standard
Front (Hf)	716 mm (28.19 in)
Rear (Hr)	708 mm (27.87 in)



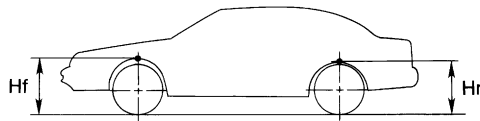
SFA818A

Measure value under unladen* conditions

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

AWD

Item	Standard
Front (Hf)	715 mm (28.15 in)
Rear (Hr)	708 mm (27.87 in)



SFA818A

Measure value under unladen* conditions.

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

VR30DDTT

2WD

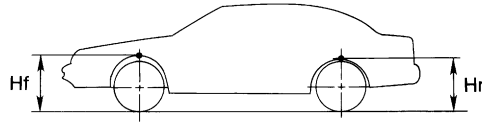
EXCEPT MEXICO (EXCEPT PREMIUM SPORT GRADE)

Item	Standard	
	17 inch	19 inch
Tire Size	17 inch	19 inch
Front (Hf)	704 mm (27.72 in)	705 mm (27.76 in)

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

Item	Standard	
Tire Size	17 inch	19 inch
Rear (Hr)	699 mm (27.52 in)	



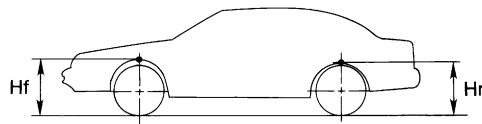
SFA818A

Measure value under unladen* conditions

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

EXCEPT MEXICO (PREMIUM SPORT GRADE)

Item	Standard	
Tire Size	Front	245/40RF19
	Rear	265/35RF19
Front (Hf)	706 mm (27.80 in)	708 mm (27.87 in)
Rear (Hr)	699 mm (27.52 in)	696 mm (27.40 in)



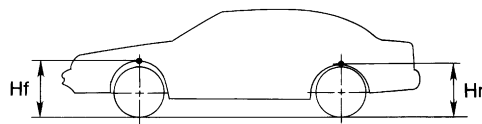
SFA818A

Measure value under unladen* conditions

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

MEXICO

Item	Standard
Front (Hf)	717 mm (28.23 in)
Rear (Hr)	709 mm (27.91 in)



SFA818A

Measure value under unladen* conditions

SERVICE DATA AND SPECIFICATIONS (SDS)

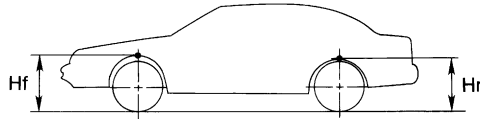
< SERVICE DATA AND SPECIFICATIONS (SDS)

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

AWD

EXCEPT PREMIUM SPORT GRADE

Item	Standard	
Tire Size	17 inch	19 inch
Front (Hf)	713 mm (28.07 in)	714 mm (28.11 in)
Rear (Hr)	708 mm (27.87 in)	709 mm (27.91 in)



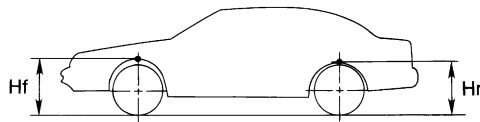
SFA818A

Measure value under unladen* conditions

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

PREMIUM SPORT GRADE

Item	Standard
Front (Hf)	715 mm (28.15 in)
Rear (Hr)	709 mm (27.91 in)



SFA818A

Measure value under unladen* conditions.

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

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