

SECTION **FSU**
FRONT SUSPENSION

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FSU

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PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000012199107

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, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper repair, 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 or batteries, and wait at least 3 minutes before performing any service.**

Precautions for Suspension

INFOID:000000012199108

- 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.
- The tightening surface must be kept free from oil/grease.
- When jacking up the vehicle with a floor jack, never hang the jack on the torque rod.

Precautions for Removing Battery Terminal

INFOID:000000012926372

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

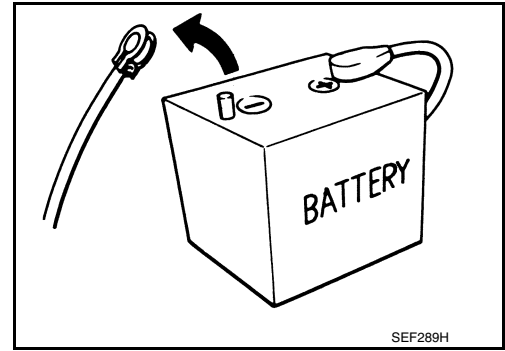
- Always use a 12V battery as power source.
- Never disconnect battery terminal while engine is running.

PRECAUTIONS

< PRECAUTION >

- 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:

D4D engine	: 20 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		
V9X engine	: 4 minutes		
YD25DDTi	: 2 minutes		



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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.

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PREPARATION

< PREPARATION >

PREPARATION

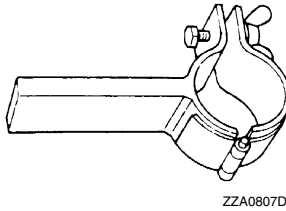
PREPARATION

Special Service Tools

INFOID:000000012199110

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

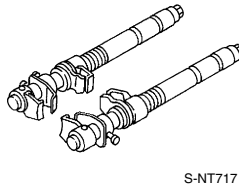
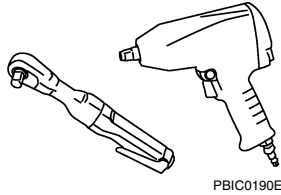
Tool number (TechMate No.) Tool name	Description
ST35652000 (—) Strut attachment	Disassembling and assembling strut



Commercial Service Tools

INFOID:000000012199111

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



NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:0000000012199112

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

Symptom		Possible cause and SUSPECTED PARTS													
		Improper installation, looseness	Shock absorber deformation, damage or deflection	Bushing or mounting deterioration	Parts interference	Spring fatigue	Suspension looseness	Incorrect wheel alignment	Stabilizer bar fatigue	FRONT AXLE AND FRONT SUSPENSION	TIRE	ROAD WHEEL	DRIVE SHAFT	BRAKE	STEERING
Symptom	FRONT SUSPENSION	Noise	x	x	x	x	x	x			x	x	x	x	x
		Shake	x	x	x	x		x			x	x	x	x	x
		Vibration	x	x	x	x	x				x	x		x	x
		Shimmy	x	x	x	x			x		x	x	x		x
		Judder	x	x	x						x	x	x		x
		Poor quality ride or handling	x	x	x	x	x		x	x	x	x	x		
Reference		FSU-9, FSU-13, FSU-15, FSU-17	FSU-12	—	—	FSU-12	FSU-9, FSU-13, FSU-15, FSU-17	FSU-7	FSU-16	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

x: Applicable

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FRONT SUSPENSION ASSEMBLY

< PERIODIC MAINTENANCE >

PERIODIC MAINTENANCE

FRONT SUSPENSION ASSEMBLY

Inspection

INFOID:000000012199113

COMPONENT PART

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

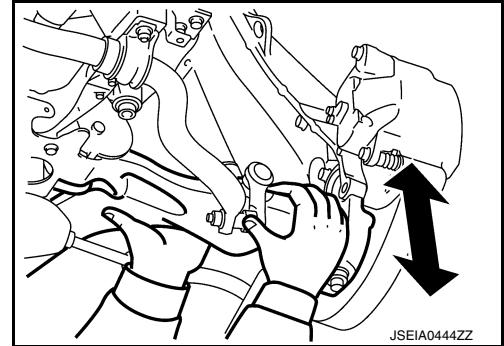
Ball Joint Axial End Play

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

Axial end play : Refer to [FSU-19, "Ball Joint"](#).

CAUTION:

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



STRUT ASSEMBLY

Check for oil leakage, damage, and replace if necessary.

WHEEL ALIGNMENT

< PERIODIC MAINTENANCE >

WHEEL ALIGNMENT

Inspection

INFOID:0000000012199114

DESCRIPTION

CAUTION:

- The adjustment mechanisms of camber, caster, and kingpin inclination angles are not included.
- If camber, caster, or 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. 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-47, "Tire Air Pressure"](#).
- Road wheels for runout.
- Wheel bearing axial end play. Refer to [FAX-9, "Inspection"](#)(NISMO RS), [FAX-64, "Inspection"](#)(EXCEPT NISMO RS).
- Transverse link ball joint axial end play. Refer to [FSU-6, "Inspection"](#).
- Strut operation.
- Each mounting part of axle and suspension for looseness and deformation.
- Each of suspension member, strut assembly 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.
- Check 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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TOE-IN

WHEEL ALIGNMENT

< PERIODIC MAINTENANCE >

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

Toe-in : Refer to [FSU-19, "Wheel Alignment"](#).

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.
- After toe-in adjustment, adjust neutral position of steering angle sensor. Refer to [BRC-63, "Work Procedure"](#).

FRONT COIL SPRING AND STRUT

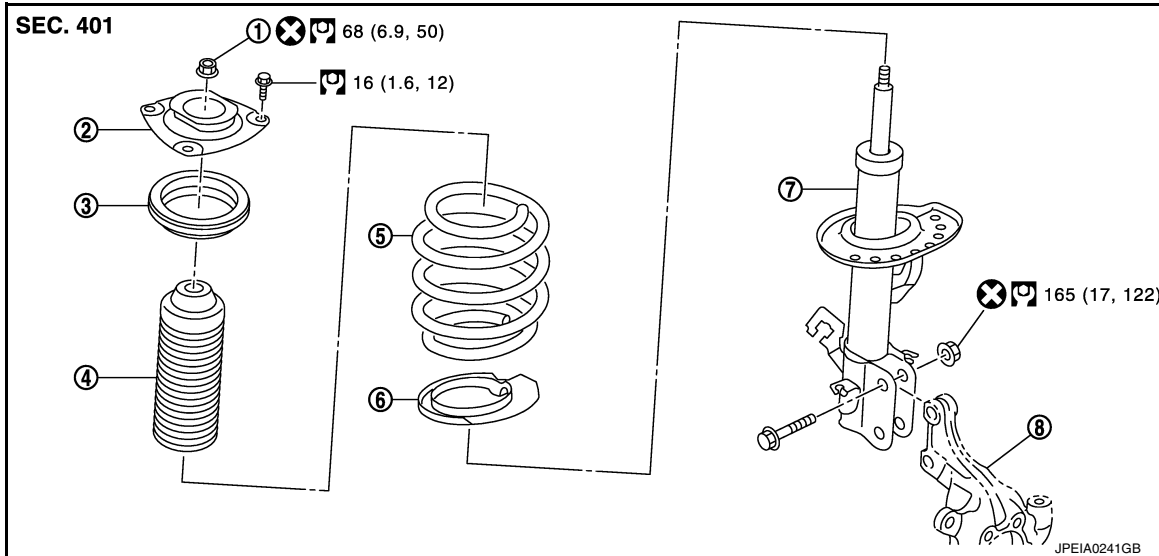
< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

FRONT COIL SPRING AND STRUT

Exploded View

INFOID:0000000012199116



- | | | |
|------------------------|-----------------------|----------------------|
| 1. Piston rod lock nut | 2. Mounting insulator | 3. Mounting bearing |
| 4. Bound bumper | 5. Coil spring | 6. Lower rubber seat |
| 7. Strut | 8. Steering knuckle | |

: N·m (kg-m, ft-lb)

: Always replace after every disassembly.

Removal and Installation

INFOID:0000000012199117

REMOVAL

1. Remove tires with power tool. Refer to [WT-39, "Removal and Installation"](#).
2. Remove lock plate from strut assembly. Refer to [BR-25, "FRONT : Removal and Installation"](#).
3. Remove wheel sensor. Refer to [BRC-147, "FRONT WHEEL SENSOR : Removal and Installation"](#).
4. Remove stabilizer connecting rod from strut assembly. Refer to [FSU-15, "Removal and Installation"](#).
5. Remove strut mounting bolts and nuts from steering knuckle.
6. Remove cowl top cover. Refer to [EXT-30, "Removal and Installation"](#).
7. Remove mounting bolt of mounting insulator, and then remove strut assembly.

INSTALLATION

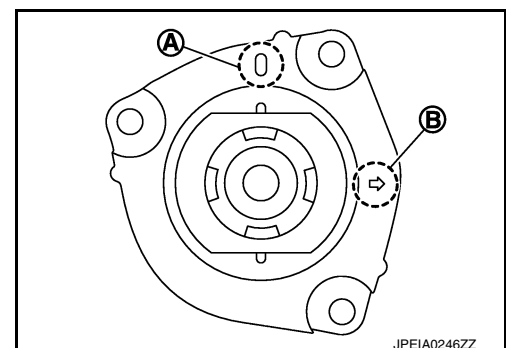
Note the following, and install in the reverse order of removal.

- Install strut assembly with the identification mark (A) of mounting insulator faced forward of the vehicle and the arrow (B) faced outside.

NOTE:

The identification mark "0" shows the right mounting insulator and "1" shows left.

- Never reuse strut mounting nut.
- Perform final tightening of bolts and nuts at the vehicle installation position (rubber bushing), under unladen conditions with tires on level ground.
- Perform inspection after installation. Refer to [FSU-12, "Inspection"](#).



FRONT COIL SPRING AND STRUT

< REMOVAL AND INSTALLATION >

- After replacing the strut absorber, always follow the disposal procedure to discard the strut absorber. Refer to [FSU-12, "Disposal"](#).

Disassembly and Assembly

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DISASSEMBLY

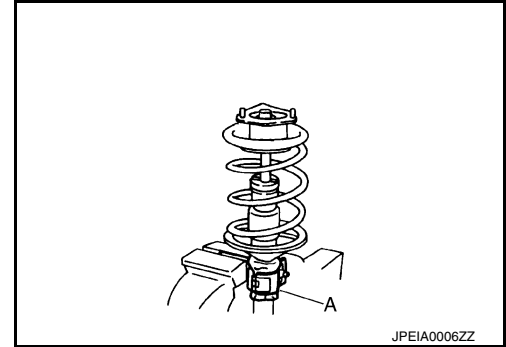
CAUTION:

Never damage strut assembly piston rod when removing components from strut assembly.

1. Install strut attachment (A) [SST: ST35652000 (—)] to strut assembly and secure it in a vise.

CAUTION:

When installing the strut attachment to strut assembly, wrap a shop cloth around strut to protect from damage.

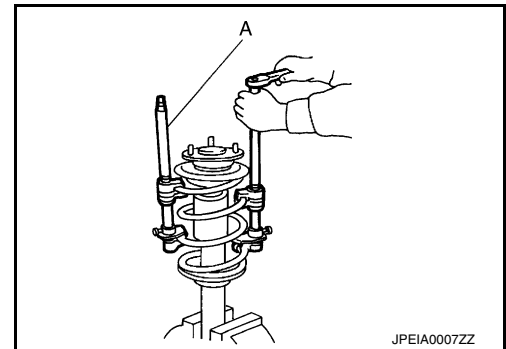


2. Using a spring compressor (A) (commercial service tool), compress coil spring between spring upper seat and lower seat (strut assembly) until coil spring with a spring compressor is free.

CAUTION:

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

3. Check coil spring with a spring compressor between spring upper seat and lower seat (strut assembly) is free. And then remove piston rod lock nut while securing the piston rod tip so that piston rod does not turn.



4. Remove mounting insulator, mounting bearing, and bound bumper from strut.
5. After removing coil spring with a spring compressor (commercial service tool), then gradually release a spring compressor.

CAUTION:

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

6. Remove lower rubber seat.
7. Remove strut attachment [SST: ST35652000 (—)] from strut assembly.
8. Perform inspection after disassembly. Refer to [FSU-12, "Inspection"](#).

ASSEMBLY

CAUTION:

Never damage strut assembly piston rod when installing components from strut assembly.

1. Install strut attachment [SST: ST35652000 (—)] to strut and secure it in a vise.

CAUTION:

When installing the strut attachment to strut assembly, wrap a shop cloth around strut to protect from damage.

2. Install lower rubber seat.
3. Compress coil spring using a spring compressor (commercial service tool), and install it onto strut assembly.

CAUTION:

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

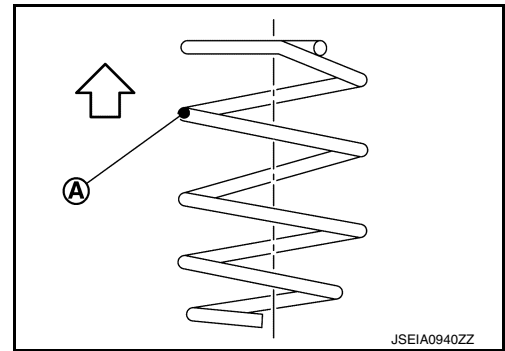
FRONT COIL SPRING AND STRUT

< REMOVAL AND INSTALLATION >

- Be careful with the vertical direction of the coil spring.

↶ : Upper side

- Set coil spring so that its paint (A) mark is aligned with the position of 1.75 turns from the bottom end of the coil spring.

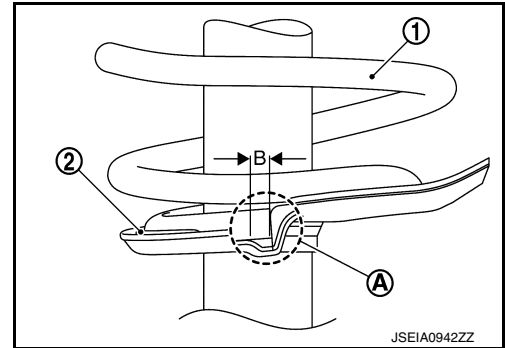


- Align the lower end of coil spring (1) with (A) of lower rubber seat (2) as shown in the figure.

Dimension (B) : 5 mm (0.20 in) or less

4. Apply soapy water to bound bumper.
CAUTION:
Never use machine oil.
5. Insert bound bumper into mounting insulator.
6. Install mounting bearing.

CAUTION:
Never apply oils, such as grease, when installing the mounting bearing.



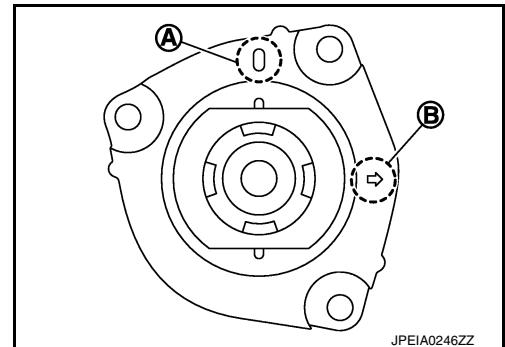
7. Check the location of identification mark (A) of the mounting insulator and install it with the arrow (B) faced outside of the vehicle to the strut.

NOTE:

The identification mark "0" shows right mounting insulator and "1" shows left.

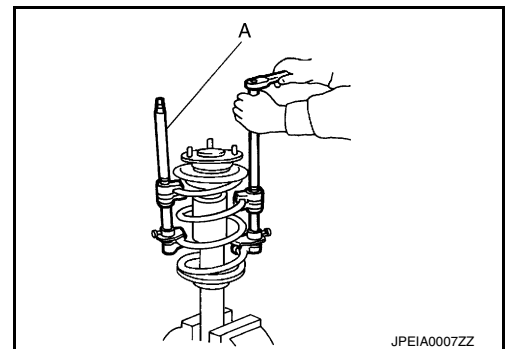
8. Secure piston rod tip so that piston rod does not turn, then tighten piston rod lock nut with specified torque.

CAUTION:
Never reuse piston rod lock nut.



9. 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.

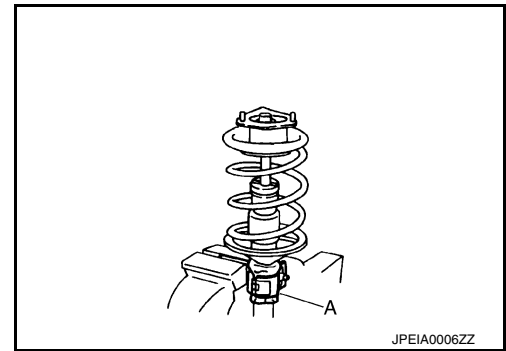


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FRONT COIL SPRING AND STRUT

< REMOVAL AND INSTALLATION >

10. Remove the strut attachment (A) [SST: ST35652000 (—)] from strut assembly.



INFOID:000000012199119

Inspection

INSPECTION AFTER DISASSEMBLY

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

Strut

- Strut for deformation, cracks or damage.
- Piston rod for damage, uneven wear or distortion.
- Oil leakage.

Strut Mounting Insulator and bound bumper

Check strut mounting insulator and bound bumper for cracks, wear or damage.

Coil Spring

Check coil spring for cracks, wear or damage.

INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness for proper connector. Refer to [BRC-147. "FRONT WHEEL SENSOR : Exploded View"](#).
2. Check wheel alignment. Refer to [FSU-7. "Inspection"](#).
3. Adjust neutral position of steering angle sensor. Refer to [BRC-63. "Work Procedure"](#).

Disposal

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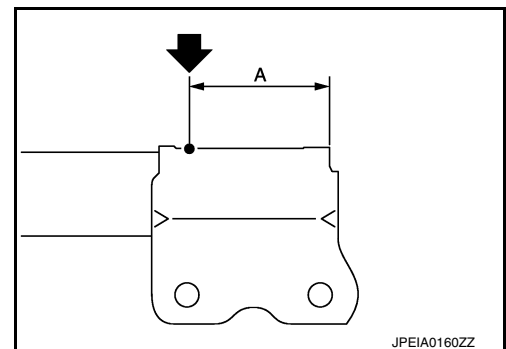
1. Set strut assembly horizontally to the ground with the piston rod fully extracted.
2. Drill 2 – 3 mm (0.08 – 0.12 in) hole at the position (●) from top as shown in the figure to release gas gradually.

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.

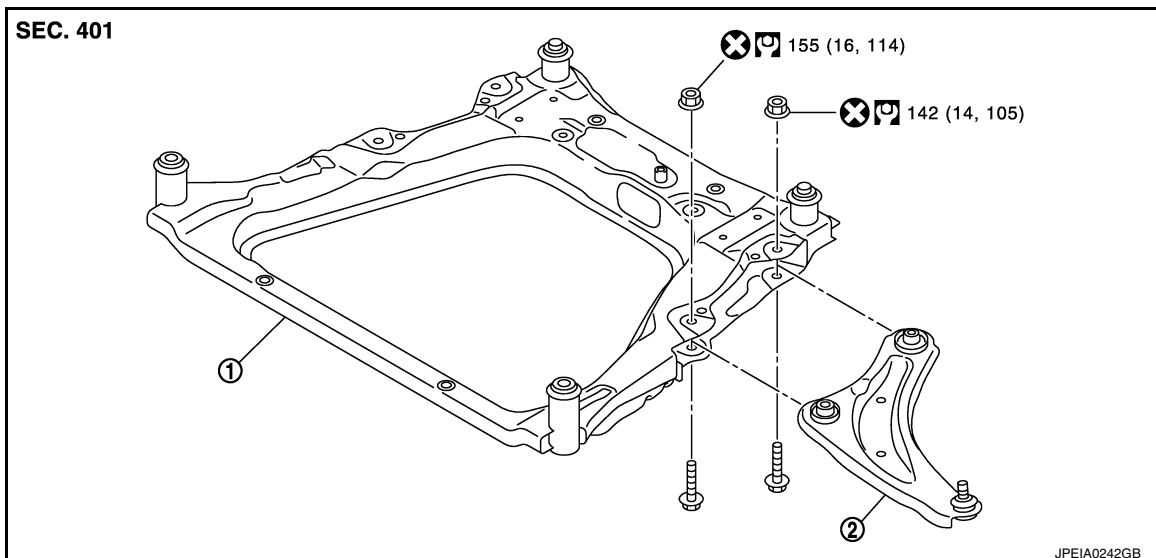
TRANSVERSE LINK

< REMOVAL AND INSTALLATION >

TRANSVERSE LINK

Exploded View

INFOID:000000012199121



1. Front suspension member
2. Transverse link

⊗: Always replace after every disassembly.

⊞: N·m (kg-m, ft-lb)

Removal and Installation

INFOID:000000012199122

REMOVAL

1. Remove tires with power tool. Refer to [WT-39, "Removal and Installation"](#).
2. Remove transverse link from steering knuckle. Refer to [FAX-11, "Exploded View"](#)(NISMO RS), [FAX-66, "Exploded View"](#)(EXCEPT NISMO RS).
3. Remove transverse link from suspension member.

INSTALLATION

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

- Never reuse transverse link mounting nut.
- Perform final tightening of bolts and nuts at the vehicle installation position (rubber bushing), under unladen conditions with tires on level ground.
- Perform inspection after installation. Refer to [FSU-13, "Inspection"](#).

Inspection

INFOID:000000012199123

INSPECTION AFTER REMOVAL

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

Transverse Link

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

Swing Torque

1. Manually move ball stud to confirm it moves smoothly with no binding.
2. Move ball stud at least ten times by hand to check for smooth movement.

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TRANSVERSE LINK

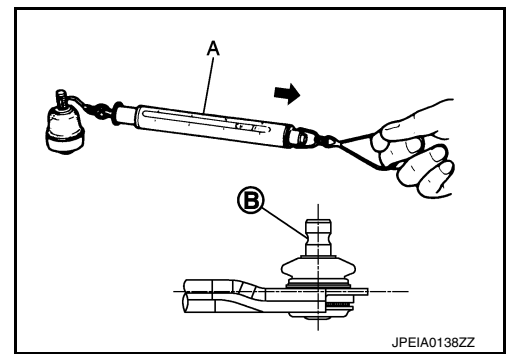
< REMOVAL AND INSTALLATION >

- Hook a spring balance (A) at cutout on ball stud (B). Confirm spring balance measurement value is within specifications when ball stud begins moving.

Swing torque : Refer to [FSU-19, "Ball Joint"](#).

Measurement on spring balance : Refer to [FSU-19, "Ball Joint"](#).

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



Axial End Play

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

Axial end play : Refer to [FSU-19, "Ball Joint"](#).

- If axial end play exceeds the standard value, replace transverse link assembly.

INSPECTION AFTER INSTALLATION

- Check wheel alignment. Refer to [FSU-7, "Inspection"](#).
- Adjust neutral position of steering angle sensor. Refer to [BRC-63, "Work Procedure"](#).

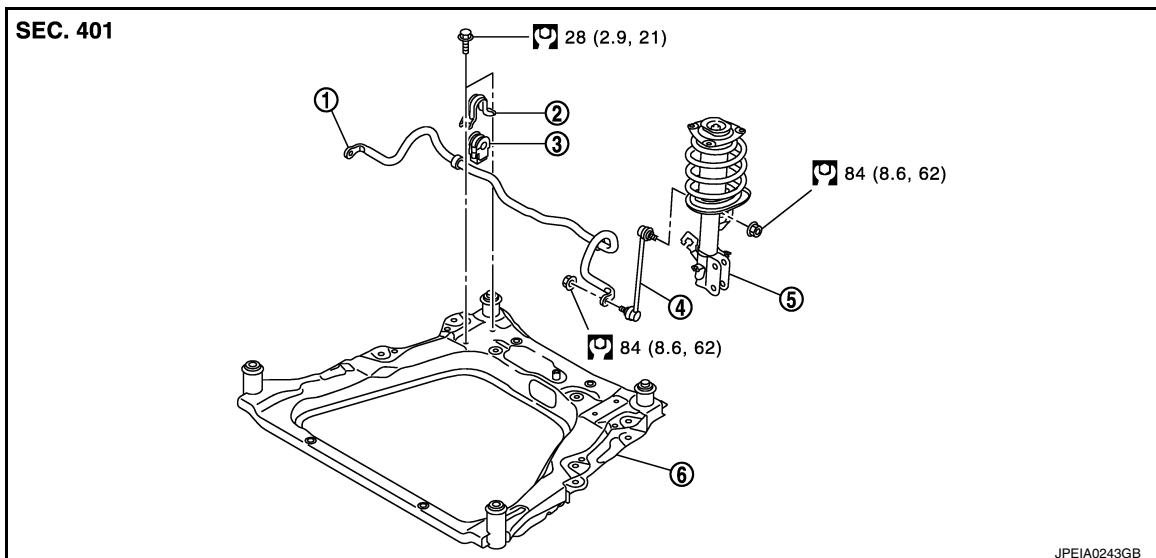
FRONT STABILIZER

< REMOVAL AND INSTALLATION >

FRONT STABILIZER

Exploded View

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- | | | |
|------------------------------|---------------------|----------------------------|
| 1. Stabilizer bar | 2. Stabilizer clamp | 3. Stabilizer bushing |
| 4. Stabilizer connecting rod | 5. Strut assembly | 6. Front suspension member |

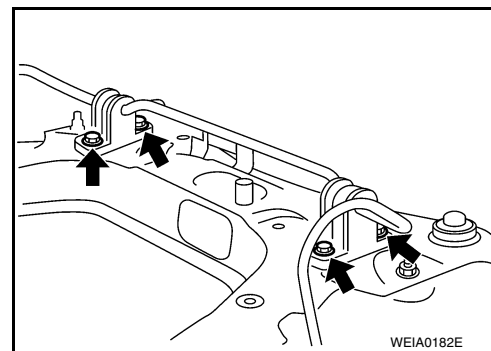
: N·m (kg-m, ft-lb)

Removal and Installation

INFOID:000000012199125

REMOVAL

1. Remove tires with power tool. Refer to [WT-39, "Removal and Installation"](#).
2. Remove front suspension member. Refer to [FSU-17, "Removal and Installation"](#).
3. Remove stabilizer connecting rod.
4. Remove mounting bolts (←) of stabilizer clamp, and then remove stabilizer clamp and stabilizer bushing from front suspension member.
5. Remove stabilizer bar.
6. Perform inspection after removal. Refer to [FSU-16, "Inspection"](#).



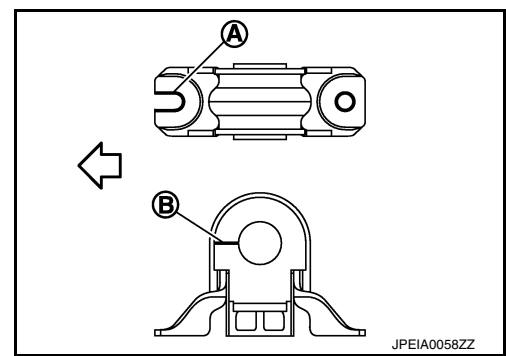
INSTALLATION

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

FRONT STABILIZER

< REMOVAL AND INSTALLATION >

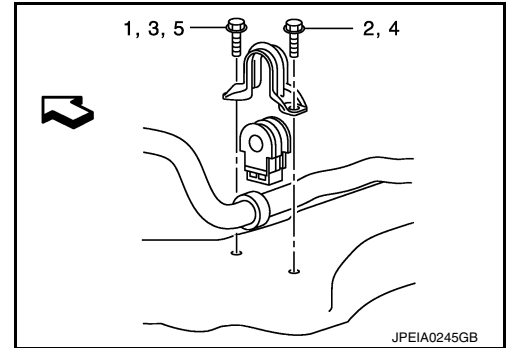
- Install stabilizer clamp and stabilizer bush with notch (A) and slit (B) faced forward of the vehicle (⇐).



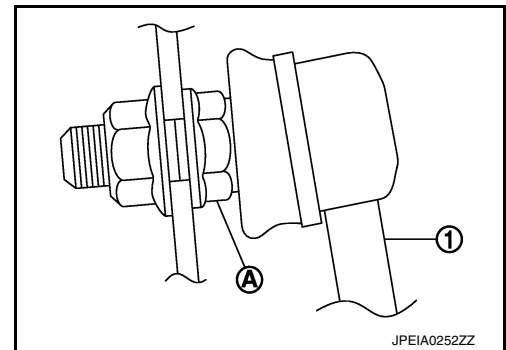
- To install stabilizer clamp mounting bolt, follow the tightening method and the numerical order shown below:

Manual tightening : 1
Temporary tightening : 2 → 3
Final tightening (Specified torque) : 4 → 5

⇐ : Vehicle front



- To install stabilizer connecting rod (1), tighten the mounting nut with the hexagonal part (A) on the stabilizer connecting rod side fixed.
- Perform final tightening of bolts and nuts at the vehicle installation position (rubber bushing), under unladen conditions with tires on level ground.
- Perform inspection after installation. Refer to [FSU-13. "Inspection"](#).



Inspection

INFOID:000000012199126

INSPECTION AFTER REMOVAL

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

INSPECTION AFTER INSTALLATION

1. Check wheel alignment. Refer to [FSU-7. "Inspection"](#).
2. Adjust neutral position of steering angle sensor. Refer to [BRC-63. "Work Procedure"](#).

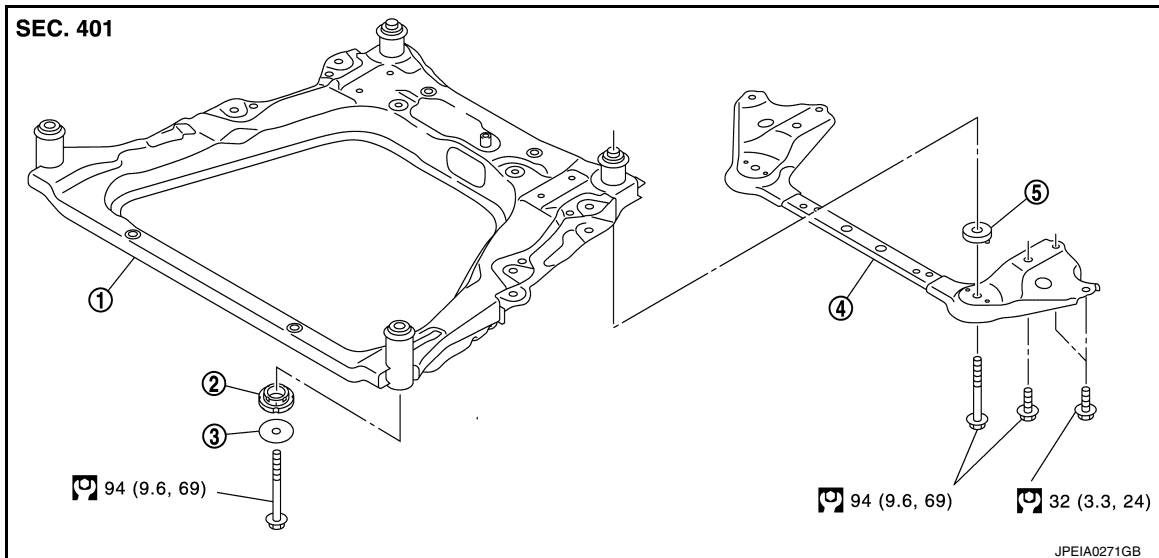
FRONT SUSPENSION MEMBER

< REMOVAL AND INSTALLATION >

FRONT SUSPENSION MEMBER

Exploded View

INFOID:000000012199127



- | | | |
|----------------------------|---------------------------|--------------|
| 1. Front suspension member | 2. Rebound stopper rubber | 3. Insulator |
| 4. Member stay | 5. Rebound stopper | |

: N·m (kg-m, ft-lb)

Removal and Installation

INFOID:000000012199128

REMOVAL

1. Separate intermediate shaft from steering gear assembly. Refer to [ST-14, "Removal and Installation"](#).
2. Remove tires with power tool. Refer to [WT-39, "Removal and Installation"](#).
3. Remove front under cover.
4. Separate stabilizer connecting rod from strut assembly. Refer to [FSU-15, "Removal and Installation"](#).
5. Separate steering outer socket from steering knuckle. Refer to [ST-17, "Removal and Installation"](#).
6. Separate transverse link from steering knuckle. Refer to [FAX-11, "Exploded View"](#)(NISMO), [FAX-66, "Exploded View"](#)(EXCEPT NISMO).
7. Remove rear torque rod.
 - 2WD: Refer to [EM-64, "2WD : Removal and Installation"](#).
 - AWD: Refer to [EM-68, "AWD : Removal and Installation"](#).
8. Set suitable jack under front suspension member.

CAUTION:
Check the stable condition when using a jack.
9. Remove member stay and rebound stopper.
10. Remove suspension member mounting bolts, insulator, and rebound stopper rubber.
11. Gradually lower the jack to remove front suspension member from vehicle body.

CAUTION:
Operate while checking that jack supporting status is stable.

NOTE:
Remove it with each component parts.
12. Remove component parts from front suspension member.
13. Perform inspection after removal. Refer to [FSU-13, "Inspection"](#).

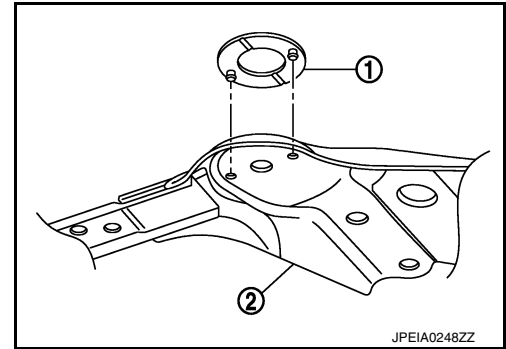
INSTALLATION

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

FRONT SUSPENSION MEMBER

< REMOVAL AND INSTALLATION >

- To install rebound stopper (1), insert it with the protrusion aligned with the hole of member stay (2).

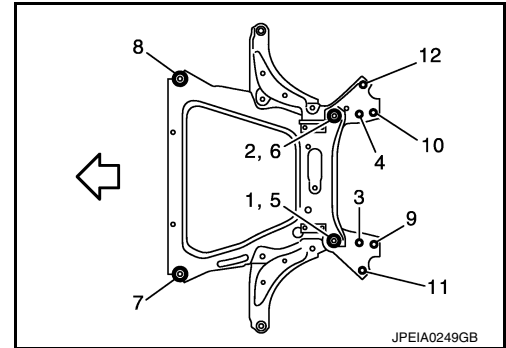


- To install member stay and mounting bolts of front suspension member, temporarily tighten the bolts before tightening to the specified torque, referring to the tightening method and the numerical order shown below:

Temporary tightening : 1 → 2

Final tightening
(Specified torque) : 3 → 4 → 5 → 6 → 7 → 8 → 9 → 10 → 11 → 12

⇐ : Vehicle front



- Perform final tightening of bolts and nuts at the vehicle installation position (rubber bushing), under unladen conditions with tires on level ground.
- Perform inspection after installation. Refer to [FSU-13, "Inspection"](#).

Inspection

INFOID:0000000012199129

INSPECTION AFTER REMOVAL

Check front suspension member for cracks, wear or damage. Replace it if necessary.

INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness for proper connector. Refer to [BRC-147, "FRONT WHEEL SENSOR : Exploded View"](#).
2. Check wheel alignment. Refer to [FSU-7, "Inspection"](#).
3. Adjust neutral position of steering angle sensor. Refer to [BRC-63, "Work Procedure"](#).

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Wheel Alignment

INFOID:0000000012199130

Item		Standard		
Axle type		2WD	AWD	
Camber Degree minute (Decimal degree)	Minimum	-1° 10' (-1.16°)		
	Nominal	-0° 25' (-0.42°)		
	Maximum	0° 20' (0.33°)		
	Left and right difference*1	-0° 45' (-0.75°) - 0° 45' (0.75°)		
Caster Degree minute (Decimal degree)	Minimum	3° 45' (3.75°)	3° 50' (3.84°)	
	Nominal	4° 30' (4.50°)	4° 35' (4.58°)	
	Maximum	5° 15' (5.25°)	5° 20' (5.33°)	
	Left and right difference*1	-0° 45' (-0.75°) - 0° 45' (0.75°)		
Kingpin inclination Degree minute (Decimal degree)	Minimum	10° 40' (10.67°)		
	Nominal	11° 25' (11.42°)		
	Maximum	12° 10' (12.16°)		
Toe-in	Total toe-in Distance	Minimum	0 mm (0.00 in)	
		Nominal	In 2 mm (In 0.08 in)	
		Maximum	In 4 mm (In 0.16 in)	
	Total toe-angle Degree minute (Decimal degree)	Minimum	Out 0° 02' 00" (Out 0.03°)	
		Nominal	In 0° 10' 00" (In 0.17°)	
		Maximum	In 0° 22' 00" (In 0.36°)	

Measure value under unladen*2 conditions.

*1: A difference when assuming the left side a standard.

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

Ball Joint

INFOID:0000000012199131

Item	Standard
Swing torque	0.5 – 4.9 N·m (0.06 – 0.49 kg-m, 5 – 43 in-lb)
Measurement on spring balance	15.4 – 150.8 N (1.6 – 15.3 kg, 3.5 – 33.8 lb)
Axial end play	0 mm (0 in)

Wheelarch Height

INFOID:0000000012199132

FOR USA MODELS

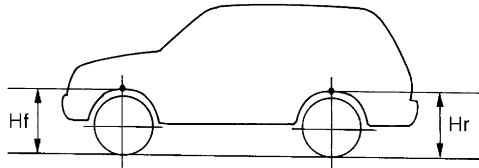
EXCEPT NISMO

Item	Standard		
Axle type	2WD		AWD
Transmission	M/T	CVT	
Front (Hf)	734 mm (28.90 in)	735 mm (28.94 in)	734 mm (28.90 in)

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

Item	Standard		
Axle type	2WD		AWD
Transmission	M/T	CVT	
Rear (Hr)	745 mm (29.33 in)	746 mm (29.37 in)	741 mm (29.17 in)



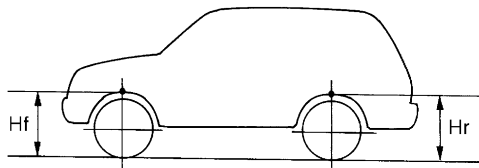
SFA746B

Measure value under unladen* conditions.

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

NISMO

Item	NISMO	NISMO RS	NISMO	NISMO RS
Axle type	2WD		AWD	
Front (Hf)	724 mm (28.50 in)	725 mm (28.54 in)	724 mm (28.50 in)	
Rear (Hr)	738 mm (29.06 in)	739 mm (29.09 in)	735 mm (28.94 in)	



SFA746B

Measure value under unladen* conditions.

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

FOR CANADA MODELS

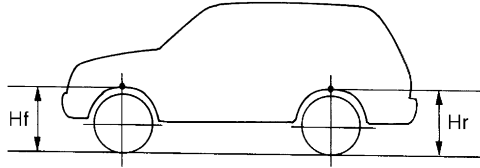
EXCEPT NISMO

Item	Standard		
Axle type	2WD		AWD
Transmission	M/T	CVT	
Front (Hf)	735 mm (28.94 in)	735 mm (28.94 in)	735 mm (28.94 in)

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

Item	Standard		
	2WD		AWD
Axle type			
Transmission	M/T	CVT	
Rear (Hr)	745 mm (29.33 in)	746 mm (29.37 in)	741 mm (29.17 in)



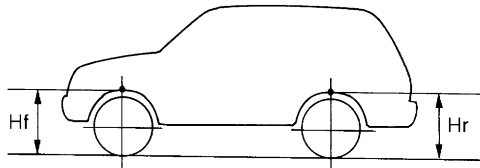
SFA746B

Measure value under unladen* conditions.

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

NISMO

Item	NISMO	NISMO RS	NISMO	NISMO RS
	2WD		AWD	
Front (Hf)	727 mm (28.62 in)	725 mm (28.54 in)	726 mm (28.58 in)	724 mm (28.50 in)
Rear (Hr)	740 mm (29.13 in)	740 mm (29.13 in)	735 mm (28.94 in)	735 mm (28.94 in)



SFA746B

Measure value under unladen* conditions.

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

A
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