

SECTION **FSU**
FRONT SUSPENSION

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PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

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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 dual stage front air bag modules. The SRS system may only deploy one front air bag, depending on the severity of a collision and whether the front passenger seat is occupied. Information necessary to service the system safely is included in the SR and SB section 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 SR section.
- Do not 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

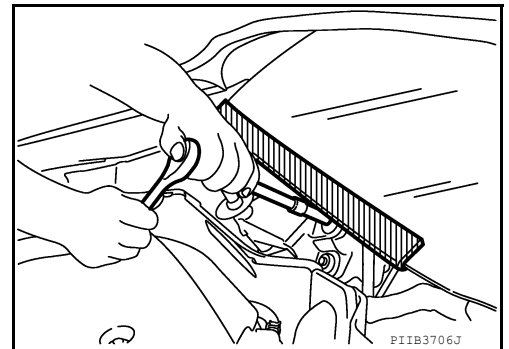
WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precaution for Procedure without Cowl Top Cover

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



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.

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 page				
		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	PROPELLER SHAFT (AWD)	DIFFERENTIAL (AWD)	FRONT AXLE AND FRONT SUSPENSION	TIRE	ROAD WHEEL		DRIVE SHAFT	BRAKE	STEERING	
Noise	FRONT SUSPENSION	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	FSU-7, FSU-9, FSU-11, FSU-14	
		x	x	x	x		x			x		x	x	x	x	x	x	FSU-5, "Inspection and Adjustment"	
		x	x	x	x	x												—	
		x	x	x	x													—	
		x	x	x	x	x												—	
		x	x	x	x														FSU-7, FSU-9, FSU-11, FSU-14
Shake	FRONT SUSPENSION	x	x	x	x	x												FSU-5, "Inspection and Adjustment"	
		x	x	x	x													FSU-5, "Inspection and Adjustment"	
		x	x	x	x													NVH in DLN section	
		x	x	x	x													NVH in DLN section	
		x	x	x	x														NVH in FAX and FSU sections
		x	x	x	x														NVH in WT section
Vibration	FRONT SUSPENSION	x	x	x	x	x												NVH in WT section	
		x	x	x	x													NVH in WT section	
		x	x	x	x													NVH in FAX section	
		x	x	x	x													NVH in BR section	
		x	x	x	x														NVH in ST section
		x	x	x	x														NVH in ST section
Shimmy	FRONT SUSPENSION	x	x	x	x														
		x	x	x	x														
		x	x	x	x														
		x	x	x	x														
		x	x	x	x														
		x	x	x	x														
Shudder	FRONT SUSPENSION	x	x	x	x														
		x	x	x	x														
		x	x	x	x														
		x	x	x	x														
		x	x	x	x														
		x	x	x	x														
Poor quality ride or handling	FRONT SUSPENSION	x	x	x	x														
		x	x	x	x														
		x	x	x	x														
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PREPARATION

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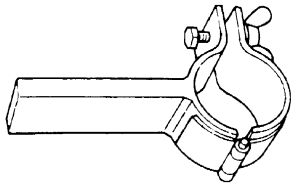
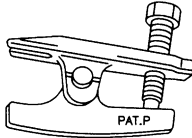
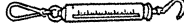
PREPARATION

PREPARATION

Special Service Tool

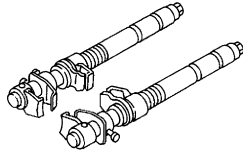

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The actual shapes of Kent-More tools may differ from those of special service tools illustrated here.

Tool number (Kent-More No.) Tool name	Image	Description
ST35652000 (—) Strut attachment	 <small>ZZA0807D</small>	Disassembling and assembling strut
HT7252000 (J-25730-A) Ball joint remover	 <small>PAT.P</small> <small>S-NT146</small>	Removing lower ball joint
— (J-44372) Spring gauge	 <small>LST024</small>	Measuring steering wheel turning force and ball joint swinging force

Commercial Service Tool

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Tool name	Image	Description
Spring compressor	 <small>S-NT717</small>	Removing and installing coil spring
Power tool	 <small>PIIB1407E</small>	Loosening bolts, screws and nuts

FRONT SUSPENSION ASSEMBLY

< PERIODIC MAINTENANCE >

PERIODIC MAINTENANCE

FRONT SUSPENSION ASSEMBLY

Inspection and Adjustment

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INSPECTION

Make sure the mounting conditions (looseness, back lash) of each component and component conditions (wear, damage) are normal.

LOWER BALL JOINT END PLAY

1. Set front wheels in a straight-ahead position. Do not depress brake pedal.
2. Place an iron bar or similar tool between upper link and steering knuckle.
3. Measure axial end play by prying it up and down. Refer to [FSU-20, "Ball Joint"](#).

CAUTION:

Be careful not to damage ball joint boot. Do not damage the installation position by applying excessive force.

SHOCK ABSORBER

Check for oil leakage, damage and replace if malfunction is detected.

WHEEL ALIGNMENT

WARNING:

If the vehicle is equipped with the ICC cruise control system and the rear toe has been adjusted during a wheel alignment, the millimeter wave sensor must be adjusted. Refer to [CCS-90, "Millimeter Wave Sensor Adjustment"](#).

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.

General Information and Recommendations

- A four-wheel thrust alignment should be performed.
- This type of alignment is recommended for any NISSAN 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 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.

Preliminary Check

Check the following:

1. Tires for improper air pressure and wear.
2. Road wheels for runout. Refer to [WT-51, "Inspection"](#).
3. Wheel bearing axial end play. Refer to [FAX-32, "Wheel Bearing"](#).
4. Transverse link ball joint axial end play. Refer to [FSU-9, "Removal and Installation"](#).
5. Shock absorber operation.
6. Each mounting part of axle and suspension for looseness and deformation.
7. Each of suspension member, shock absorber, upper link and transverse link for cracks, deformation and other damage.
8. Vehicle height (posture).

Alignment Process

IMPORTANT:

Use only the alignment specifications listed in this Service Manual.

FRONT SUSPENSION ASSEMBLY

< PERIODIC MAINTENANCE >

- When displaying the alignment settings, many alignment machines use "indicators" **Do not use these indicators.**: (Green/red, plus or minus, Go/No Go).
- 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 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

Camber, Caster and Kingpin Inclination Angles

CAUTION:

Camber, caster, kingpin inclination angles cannot be adjusted.

FRONT COIL SPRING AND STRUT

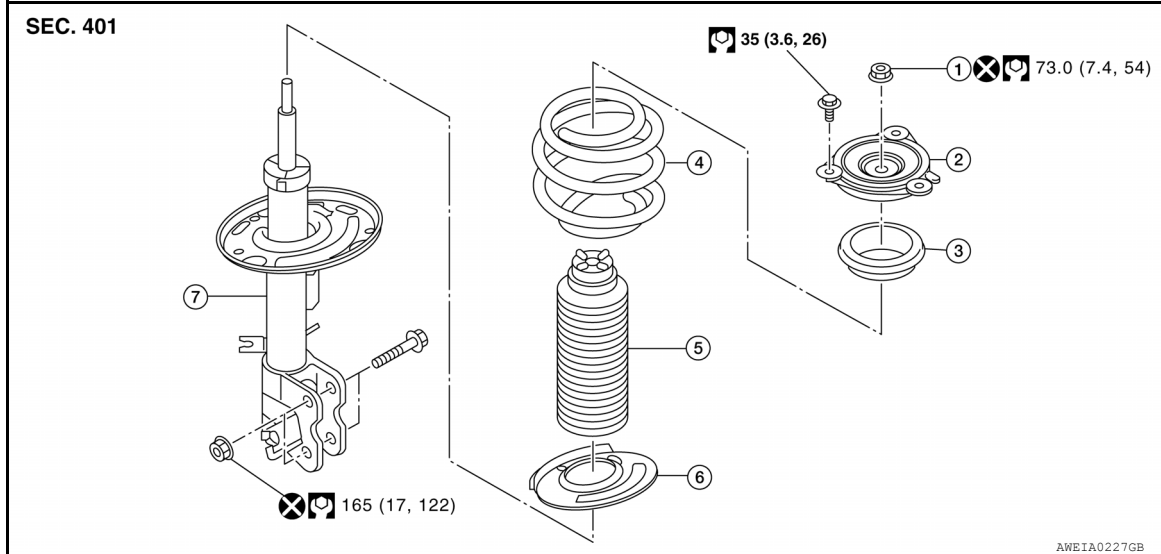
< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

FRONT COIL SPRING AND STRUT

Exploded View

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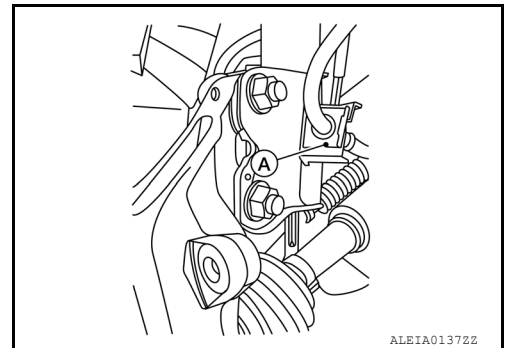
- | | | |
|------------------------|-----------------------------|---------------------------|
| 1. Piston rod lock nut | 2. Strut mounting insulator | 3. Strut mounting bearing |
| 4. Coil spring | 5. Bound bumper | 6. Lower rubber seat |
| 7. Strut | | |

Removal and Installation

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REMOVAL

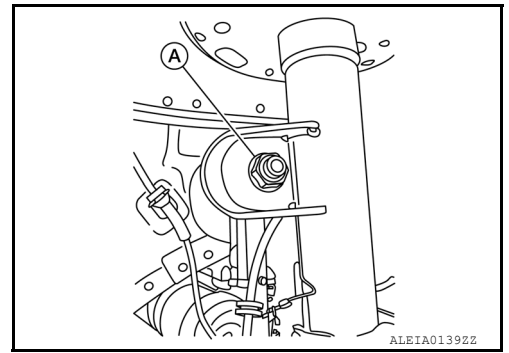
1. Remove wiper arm covers and wiper arms. Refer to [WW-67, "Removal and Installation"](#).
2. Remove cowl top finisher assembly. Refer to [EXT-24, "Exploded View"](#).
3. Remove front coil spring and strut mounting insulator covers.
4. Remove upper front coil spring and strut mounting insulator bolts using power tool.
5. Remove the wheel and tire using power tool. Refer to [WT-58, "Road Wheel"](#).
6. Remove wheel sensor harness from the front coil spring and strut.
7. Remove brake hose lock plate (A).



FRONT COIL SPRING AND STRUT

< REMOVAL AND INSTALLATION >

- Remove stabilizer connecting rod nut (A) from front coil spring and strut. Position stabilizer connecting rod aside. Refer to [FSU-11, "Exploded View"](#).



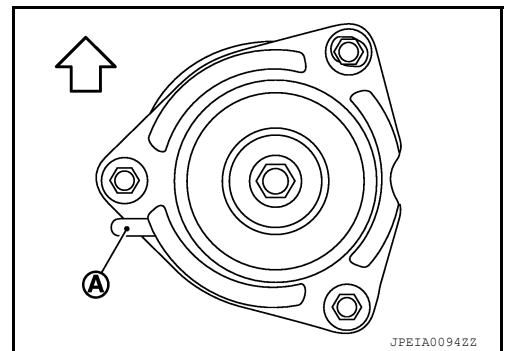
- Remove steering knuckle-to-front coil spring and strut bolts and nuts with power tool.
- Remove front coil spring and strut assembly.

INSTALLATION

Installation is in the reverse order of removal,

- Be sure tab (A) on strut mount insulator is positioned as shown.

↔ : Front



- Check wheel alignment. Refer to [FSU-5, "Inspection and Adjustment"](#).
- Adjust neutral position of steering angle sensor. Refer to [BRC-59, "Work Procedure"](#).

Disposal

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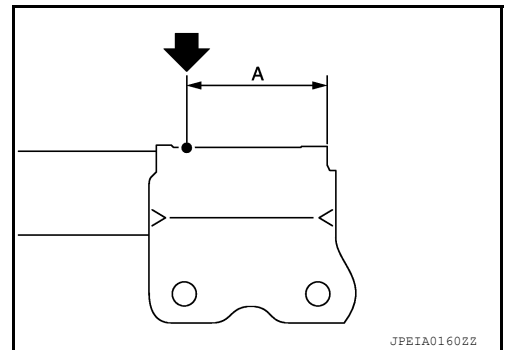
- Set strut assembly horizontally with the piston rod fully extended.
- Drill 2 – 3 mm (0.08 – 0.12 in) hole at the position (●) from top as shown in the figure to release gas gradually.

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)

- 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.

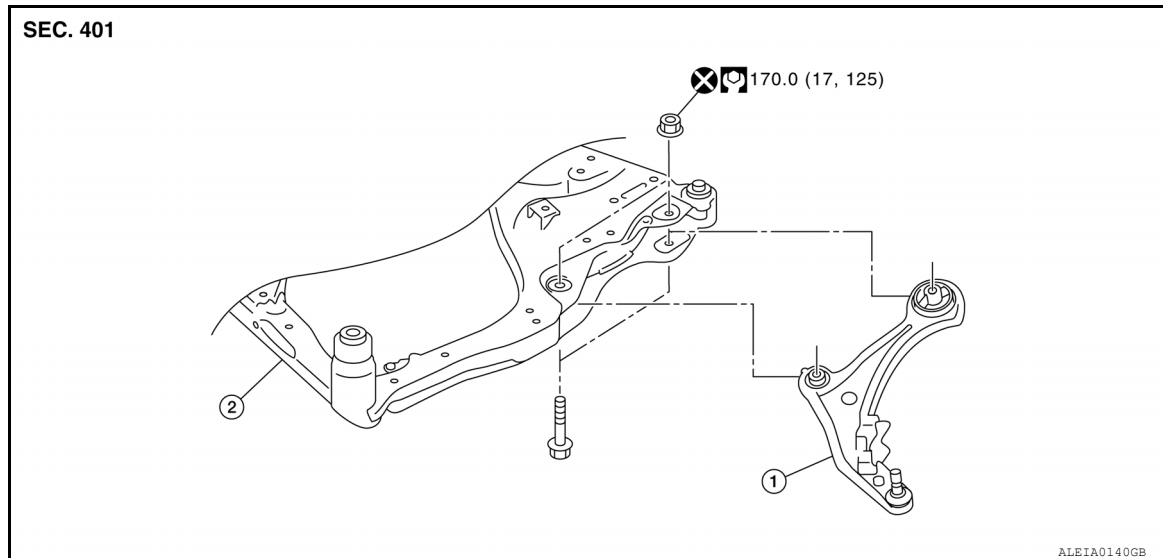
TRANSVERSE LINK

< REMOVAL AND INSTALLATION >

TRANSVERSE LINK

Exploded View

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1. Transverse link

2. Front suspension member

Removal and Installation

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REMOVAL

1. Remove front wheel and tire using power tool. Refer to [WT-58, "Road Wheel"](#).
2. Remove brake caliper torque member bolts, leaving brake hose attached, reposition the caliper aside with wire. Refer to [BR-36, "BRAKE CALIPER ASSEMBLY : Removal and Installation"](#).
CAUTION:
Do not depress brake pedal while brake caliper is removed.
3. Put alignment marks on disc rotor and rear wheel hub and bearing assembly, then remove disc rotor.
CAUTION:
 - Put alignment marks on the wheel hub and bearing assembly and the disc rotor before removing the disc rotor.
 - Do not drop the disc rotor.
4. Remove speed sensor.
5. Disengage the drive shaft from wheel hub and bearing assembly. Refer to [FAX-15, "Exploded View \(Left Side\)"](#); [FAX-17, "Exploded View \(Right Side\)"](#).
6. Separate the outer socket from the knuckle. Refer to [FSU-14, "Exploded View"](#).
7. Remove the strut from the knuckle using power tool. Refer to [FSU-14, "Exploded View"](#).
8. Remove transverse link from steering knuckle.
9. Remove the steering knuckle and hub.
10. Remove transverse link from suspension member.

INSPECTION AFTER REMOVAL

Ball Joint Inspection

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

Swing Torque Inspection

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

TRANSVERSE LINK

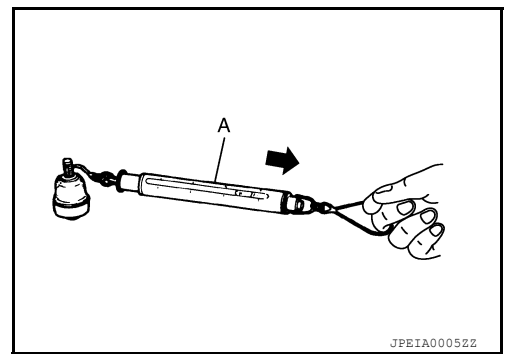
< REMOVAL AND INSTALLATION >

- Hook a spring balance (A) at pinch bolt location. Confirm spring balance measurement value is within specifications when ball stud begins moving.

Swing torque :Refer to [FSU-20, "Ball Joint"](#).

Spring balance measurement :Refer to [FSU-20, "Ball Joint"](#).

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



Axial End Play Inspection

- 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-20, "Ball Joint"](#).

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

INSTALLATION

Installation is in the reverse order of removal.

- Perform final tightening of bolts and nuts at the front suspension member, under unladen conditions with tires on level ground.
- Check wheel alignment. Refer to [FSU-5, "Inspection and Adjustment"](#).
- Adjust neutral position of steering angle sensor. Refer to [BRC-59, "Work Procedure"](#).

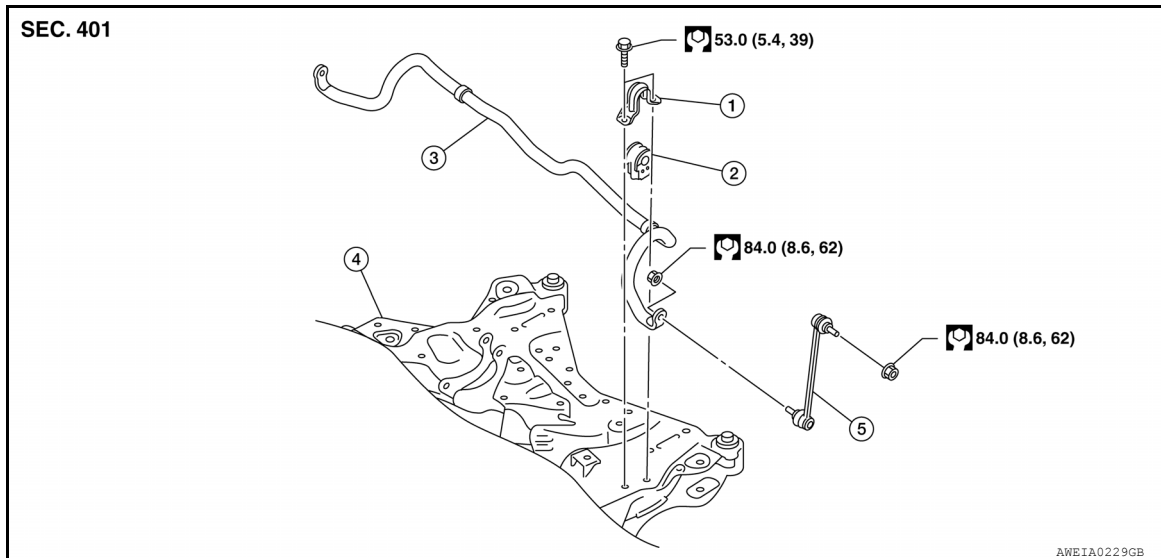
FRONT STABILIZER

< REMOVAL AND INSTALLATION >

FRONT STABILIZER

Exploded View

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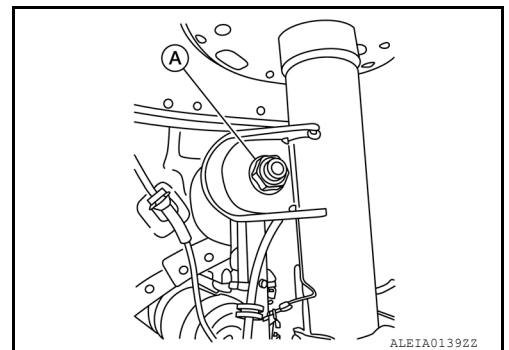
- | | | |
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| 1. Stabilizer clamp | 2. Stabilizer bushing | 3. Stabilizer bar |
| 4. Front suspension member | 5. Stabilizer connecting rod | |

Removal and Installation

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REMOVAL

1. Remove the wheel and tire using power tool. Refer to [WT-52, "Adjustment"](#).
2. Remove heat insulator (AWD models).
3. Remove rear propeller shaft. (AWD models) Refer to [DLN-99, "Exploded View"](#).
4. Disconnect the LH outer socket from steering knuckle. Refer to [ST-49, "Exploded View"](#).
5. Remove front exhaust tube. Refer to [EX-5, "Exploded View"](#).
6. Remove engine rear mount bracket (FWD models).
7. Disconnect steering column from steering gear. Refer to [ST-47, "Exploded View"](#).
8. Remove the steering gear bolts. Refer to [ST-49, "Exploded View"](#).
9. Position the steering gear forward.
10. Disconnect the RH outer socket from steering knuckle. Refer to [ST-49, "Exploded View"](#).
11. Remove stabilizer connecting rod nut (A) from front coil spring and strut.

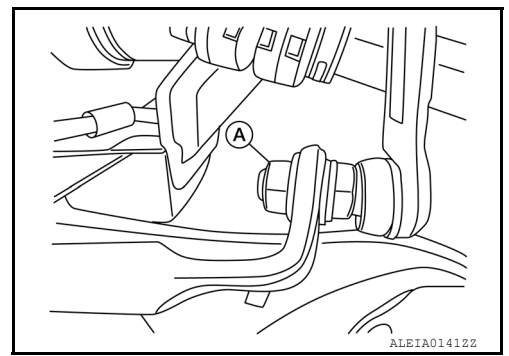


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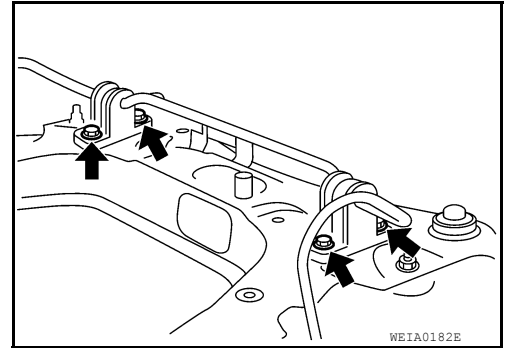
FRONT STABILIZER

< REMOVAL AND INSTALLATION >

12. Remove stabilizer connecting rod nut (A) from stabilizer bar and remove the stabilizer connecting rod.



13. Remove bolts (←) of stabilizer clamp, and then remove stabilizer clamp and stabilizer bushing from front suspension member.

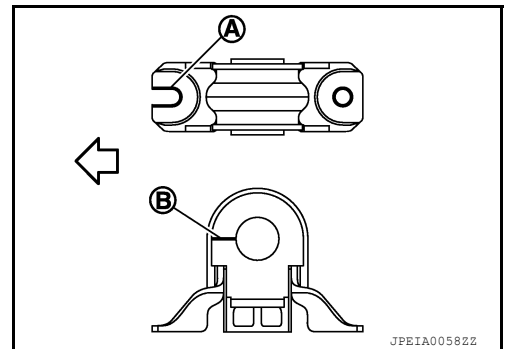


14. Remove stabilizer bar from the LH side of vehicle.

INSTALLATION

Installation is in the reverse order of removal.

- Install stabilizer clamp so that notch (A) is facing front of vehicle (←).
- Install stabilizer bushing so that slit (B) is facing front of vehicle (←).



- Check toe in measurement. Refer to [FSU-5, "Inspection and Adjustment"](#).
- Adjust neutral position of steering angle sensor. Refer to [BRC-59, "Work Procedure"](#).

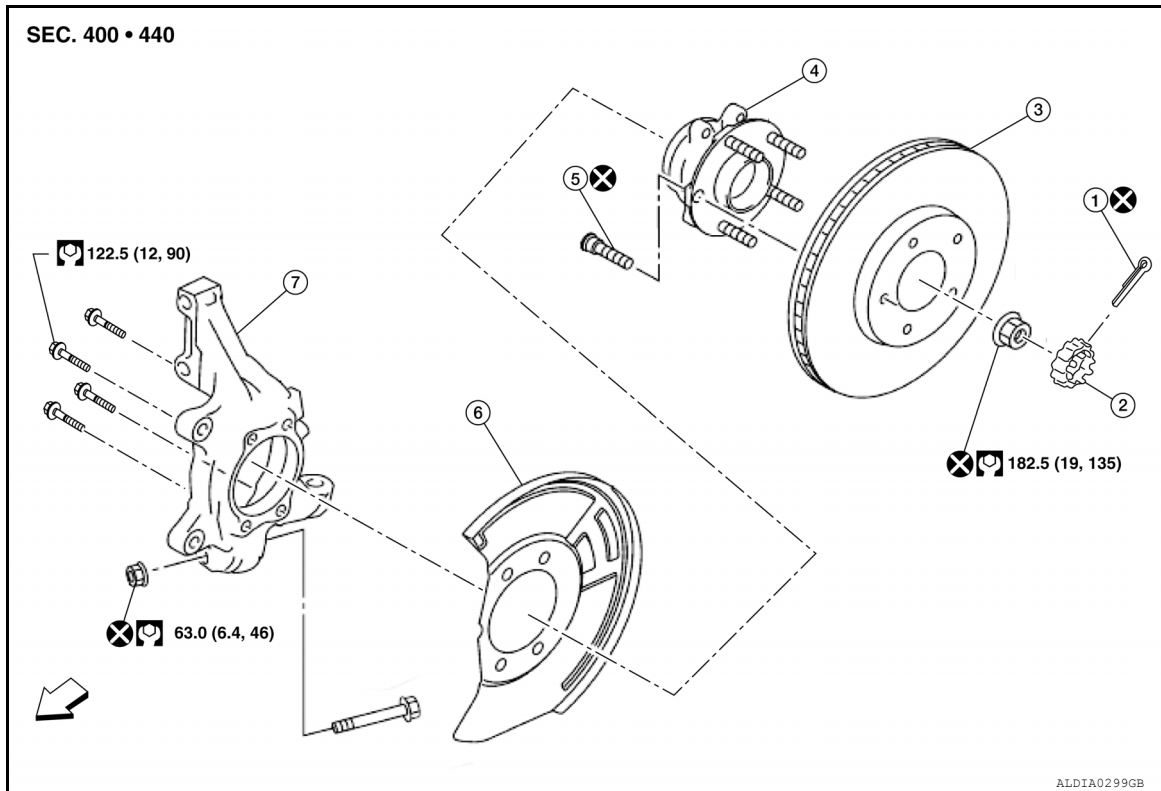
STEERING KNUCKLE

< REMOVAL AND INSTALLATION >

STEERING KNUCKLE

Exploded View

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- | | | |
|-----------------------------------|-------------------|-----------------|
| 1. Cotter pin | 2. Nut retainer | 3. Rotor |
| 4. Wheel hub and bearing assembly | 5. Wheel hub bolt | 6. Splash guard |
| 7. Steering knuckle | ⇐ Front | |

Removal and Installation

INFOID:000000008180624

REMOVAL

1. Remove front wheel hub. Refer to [FAX-8, "Removal and Installation"](#).
2. Separate outer socket from steering knuckle. Refer to [ST-49, "Exploded View"](#).
3. Remove the steering knuckle lower pinch bolt and separate transverse link from the steering knuckle.
4. Remove steering knuckle to strut bolts and steering knuckle. Refer to [FSU-13, "Exploded View"](#).

INSPECTION AFTER REMOVAL

Check for deformity, cracks and damage on each part, replace if necessary.

Ball Joint Inspection

- Check for boot breakage, axial looseness, and torque of transverse link ball joint and repair as necessary.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Do not reuse non-reusable parts.

FRONT SUSPENSION MEMBER

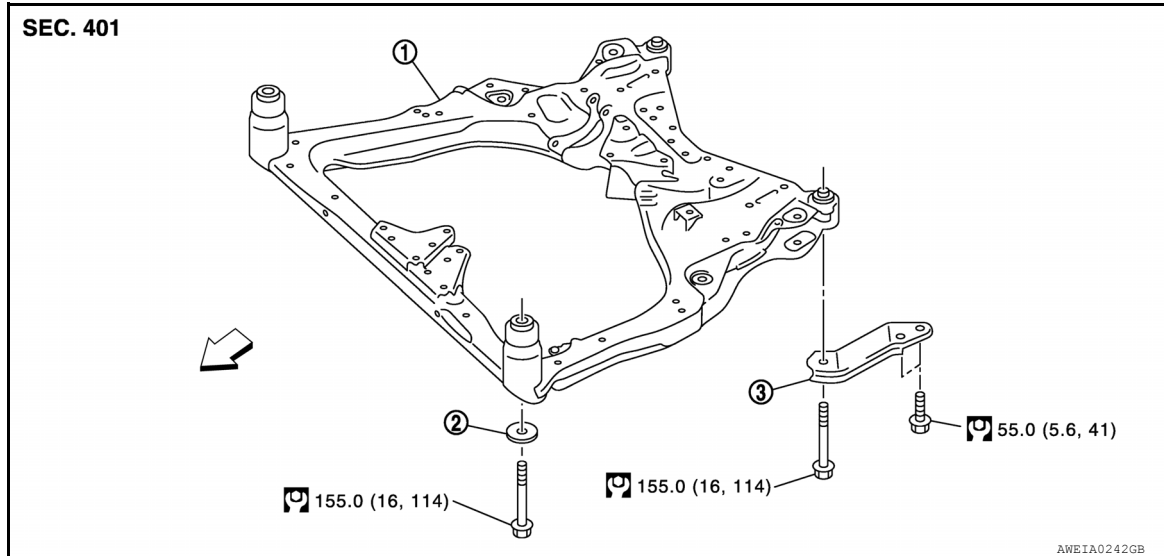
< UNIT REMOVAL AND INSTALLATION >

UNIT REMOVAL AND INSTALLATION

FRONT SUSPENSION MEMBER

Exploded View

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1. Front suspension member

2. Rebound stopper

3. Front suspension member stay

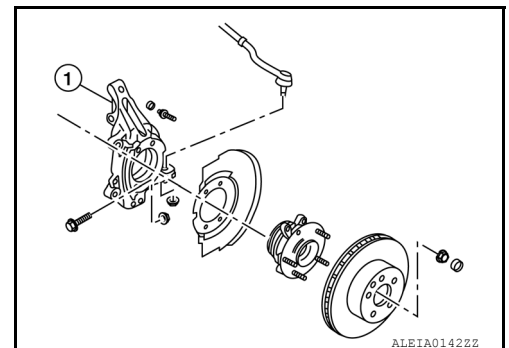
⇐ Front

Removal and Installation

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REMOVAL

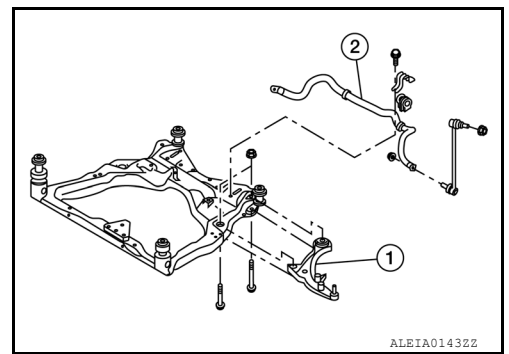
1. Remove the wheels and tires using power tool. Refer to [WT-52, "Adjustment"](#).
2. Remove the engine and transmission with the front suspension member. Refer to [EM-102, "2WD : Removal and Installation"](#) (2WD) or [EM-107, "AWD : Removal and Installation"](#) (AWD).
 - Engine, transmission and suspension member must be removed as an assembly.
3. Lift engine and transmission off of suspension member.
4. Remove the steering knuckle (1). Refer to [FSU-13, "Removal and Installation"](#).



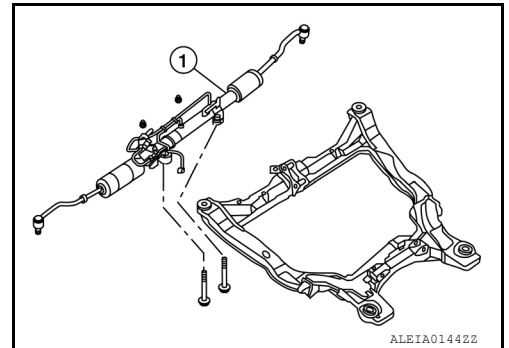
FRONT SUSPENSION MEMBER

< UNIT REMOVAL AND INSTALLATION >

5. Remove the transverse links (1) and stabilizer bar (2). Refer to [FSU-9, "Removal and Installation"](#) and [FSU-11, "Removal and Installation"](#).



6. Remove the steering gear assembly (1) and hydraulic lines. Refer to [ST-49, "Exploded View"](#).



INSTALLATION

Installation is in the reverse order of removal.

- Refer to [FSU-14, "Exploded View"](#) for tightening torque.
- After installation, perform final tightening of each part under unladen conditions with tires on ground. Check wheel alignment. Refer to [FSU-5, "Inspection and Adjustment"](#).

Inspection

INFOID:000000007883396

INSPECTION AFTER REMOVAL

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

INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness for proper connection. Refer to [BRC-122, "Exploded View - Front Wheel Sensor"](#).
2. Check wheel alignment. Refer to [FSU-5, "Inspection and Adjustment"](#).
3. Adjust the neutral position of the steering angle sensor. Refer to [BRC-59, "Work Procedure"](#).

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FRONT COIL SPRING AND STRUT

< UNIT DISASSEMBLY AND ASSEMBLY >

UNIT DISASSEMBLY AND ASSEMBLY

FRONT COIL SPRING AND STRUT

Disassembly and Assembly

INFOID:000000008180622

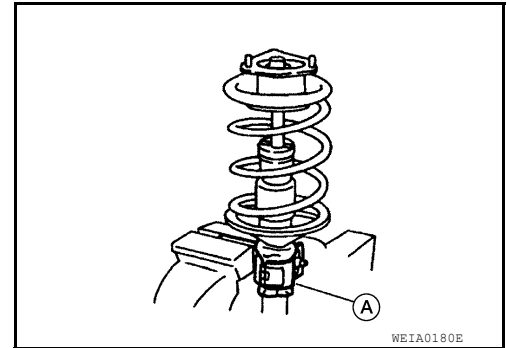
DISASSEMBLY

1. Install Tool (A) to strut and secure it in a vise.

Tool number (A) : ST35652000 (—)

CAUTION:

When installing Tool, wrap a shop cloth around strut to protect it from damage.



2. Install suitable tool to strut rod.
3. Slightly loosen piston rod lock nut.

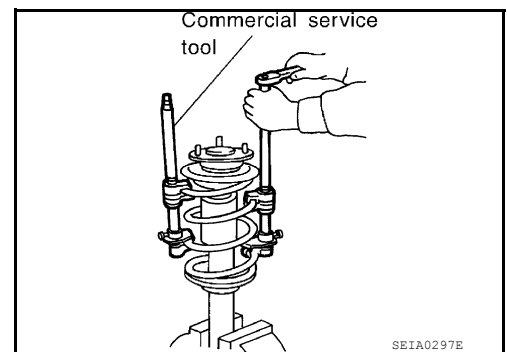
WARNING:

Do not remove piston rod lock nut completely. If it is removed completely, the coil spring can jump out and may cause serious damage or injury.

4. Compress coil spring using a suitable tool.

WARNING:

Make sure that the pawls of the suitable tool are firmly hooked on the spring. The suitable tool must be tightened alternately so as not to tilt the spring tools.



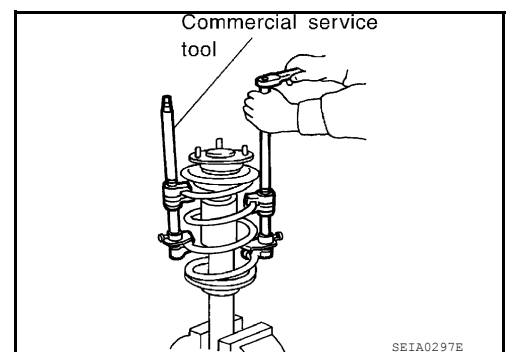
5. Make sure coil spring is free between upper and lower seats, then remove piston rod lock nut.
6. Remove small parts on strut.
 - Remove strut spacer, strut mount insulator, strut mounting insulator bracket thrust bearing, spring upper seat, and upper rubber seat. Then remove coil spring.
7. Remove bound bumper from spring upper seat.
8. Gradually release suitable tool and remove coil spring.

ASSEMBLY

1. Compress coil spring using a suitable tool and install it onto the strut.

WARNING:

Be sure tool is securely attached to coil spring. Compress coil spring.

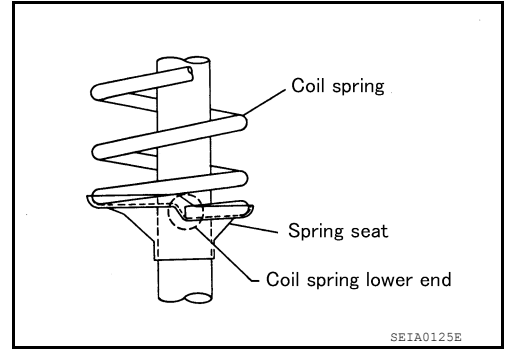


FRONT COIL SPRING AND STRUT

< UNIT DISASSEMBLY AND ASSEMBLY >

CAUTION:

Face tube side of coil spring downward. Align lower end to spring seat as shown.



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2. Connect bound bumper to spring upper seat.

CAUTION:

- Be sure to install bound bumper to spring upper seat securely.
- When installing bound bumper, use soapy water. Do not use machine oil or other lubricants.

3. Install small parts to the strut.

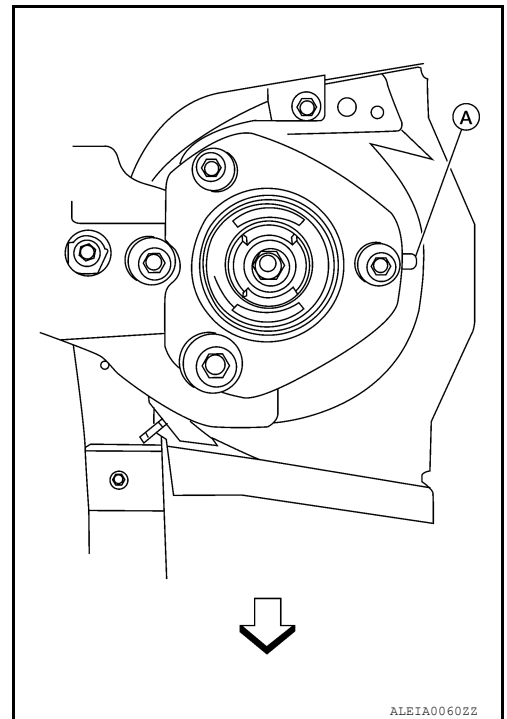
- Connect upper rubber seat, spring upper seats, thrust bearing, strut mount insulator, and strut spacer. Temporarily install piston rod lock nut.

CAUTION:

Do not reuse piston rod lock nut.

4. Be sure tab (A) on strut mount insulator is positioned as shown.

- (A) : Tab
← : Front



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5. Be sure coil spring is properly set in spring rubber seat. Gradually release spring compressor.

CAUTION:

Be sure upper rubber seat is properly aligned to spring upper seat and coil spring.

6. Tighten piston rod lock nut to the specified torque. Refer to [FSU-14. "Exploded View"](#).

7. Remove suitable tool from strut.

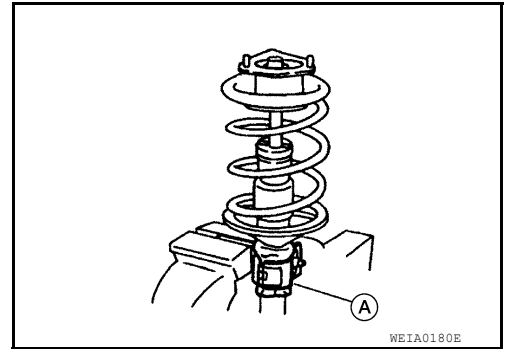
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FRONT COIL SPRING AND STRUT

< UNIT DISASSEMBLY AND ASSEMBLY >

8. Remove Tool (A) from strut.

Tool number (A) : ST35652000 (—)



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Inspection

INSPECTION AFTER DISASSEMBLY

Strut

- Check strut for deformation, cracks, and damage, and replace if necessary.
- Check piston rod for damage, uneven wear, and distortion, and replace if necessary.
- Check welded and sealed areas for oil leakage, and replace if necessary.

Insulator and Rubber Parts

Check strut mount insulator for cracks, rubber parts for wear and replace if necessary.

Coil Spring

Check for cracks, wear, and damage and replace if necessary.

SERVICE DATA AND SPECIFICATIONS (SDS)

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Wheel Alignment (Unladen*¹)

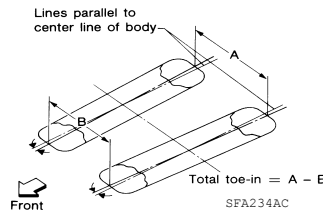
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WARNING:

If the vehicle is equipped with the ICC cruise control system and the rear toe has been adjusted during a wheel alignment, the millimeter wave sensor must be adjusted. Refer to [CCS-90, "Millimeter Wave-Sensor Adjustment"](#).

UNITED STATES and CANADA

Item		Standard	
Measurement wheel		(LH) side	(RH) side
Camber Degree minute (Decimal degree)	Minimum	-1° 00' (-1.00°)	-1° 15' (-1.25°)
	Nominal	-0° 15' (-0.25°)	-0° 30' (-0.50°)
	Maximum	0° 30' (0.50°)	0° 15' (0.25°)
	(LH) and (RH) difference* ²	-0° 15'± 0° 33' (0.25°± 0.55°)	
Caster Degree minute (Decimal degree)	Minimum	3° 55' (3.92°)	
	Nominal	4° 40' (4.67°)	
	Maximum	5° 25' (5.42°)	
	(LH) and (RH) difference* ²	0.30' (0.50°) Maximum	
Kingpin inclination Degree minute (Decimal degree)	Minimum	11° 55' (11.92°)	12° 10' (12.17°)
	Nominal	12° 40' (12.67°)	12° 55' (12.92°)
	Maximum	13° 25' (13.42°)	13° 40' (13.67°)



Total toe-in	Distance (A - B)	Minimum	Out 0.6 mm (Out 0.024 in)
		Nominal	In 1.4 mm (In 0.055 in)
		Maximum	In 3.4 mm (In 0.134 in)
	Angle (LH and RH) Degree minute (Decimal degree)	Minimum	Out 0° 3' 36" (Out 0.06°)
		Nominal	In 0° 6' 14" (In 0.10°)
		Maximum	In 0° 15' 36" (In 0.26°)

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

*2: The difference when assuming the (LH) side is the standard.

Ball Joint

INFOID:000000007883398

Item		Standard
Swing torque	Transverse link	0.5 – 4.9 N·m (0.06 – 0.49 kg·m, 5 – 43 in·lb)
Measurement on spring balance	Transverse link	11.1 – 108.9 N (1.2 – 11.1 kg, 3 – 24 lb)
Axial end play		0 mm (0 in)

SERVICE DATA AND SPECIFICATIONS (SDS)

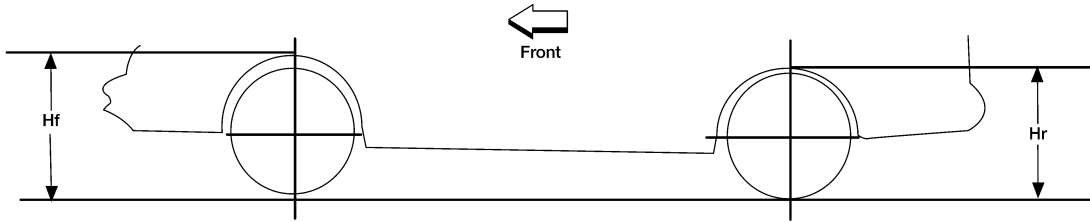
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Wheelarch Height

UNITED STATES

Item	Standard					
Axle type	2WD			AWD		
Wheel size	235/65R18		235/55R20	235/65R18		235/55R20
Grade	Base	Premium		Base	Premium	
Front (Hf)	823 mm (32.40 in)	822 mm (32.36 in)	821 mm (32.32 in)	822 mm (32.36 in)	822 mm (32.36 in)	821 mm (32.32 in)
Rear (Hr)	828 mm (32.60 in)	827 mm (32.56 in)	826 mm (32.52 in)	827 mm (32.56 in)	827 mm (32.56 in)	826 mm (32.52 in)

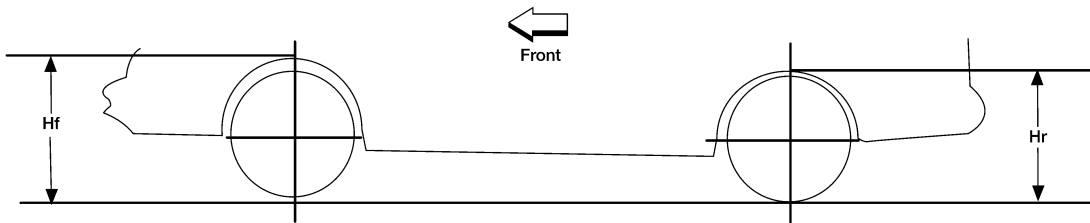


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Measure value under unladen conditions. (Fuel, engine coolant and lubricant are full. Spare tire, jack, hand tools and mats are in designated positions).

CANADA (AWD)

Item	Standard		
Wheel size	235/65R18		235/55R20
Grade	Base	Premium	
Front (Hf)	823 mm (32.40 in))	822 mm (32.36 in)	821 mm (32.32 in)
Rear (Hr)	828 mm (32.60 in)	827 mm (32.56 in)	826 mm (32.52 in)



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Measure value under unladen* conditions. (Fuel, engine coolant and lubricant are full. Spare tire, jack, hand tools and mats are in designated positions).

SERVICE DATA AND SPECIFICATIONS (SDS)

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