

FRONT AXLE & FRONT SUSPENSION

SECTION **FA**

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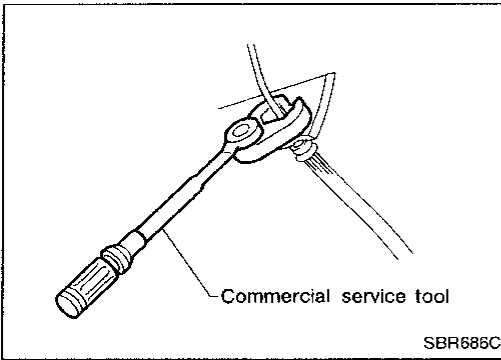
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PRECAUTIONS AND PREPARATION

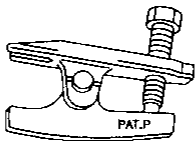
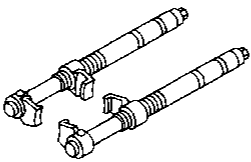
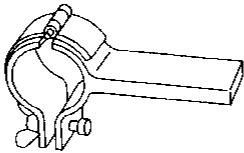
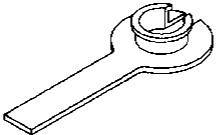


Precautions

- When installing rubber parts, final tightening must be carried out under unladen condition* with tires on ground.
- *: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.
- When removing each suspension part, check wheel alignment and adjust if necessary.
- Use flare nut wrench when removing or installing brake tubes.
- Always torque brake lines when installing.

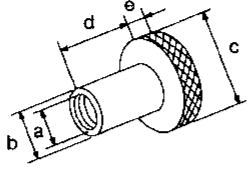
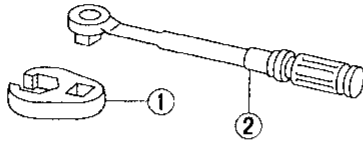
Special Service Tools

*: Special tool or commercial equivalent

Tool number (Kent-Moore No.) Tool name	Description
HT72520000* (J25730-A) Ball joint remover	 Removing tie-rod outer end and lower ball joint NT146
HT71780000* (—) Spring compressor	 Removing and installing coil spring NT144
ST35652000* (—) Strut attachment	 Fixing strut assembly NT145
KV38106700* (J34296) KV38106800* (J34297) Differential side oil seal protector	 Installing drive shaft LH: KV38106700 RH: KV38106800 NT147

PRECAUTIONS AND PREPARATION

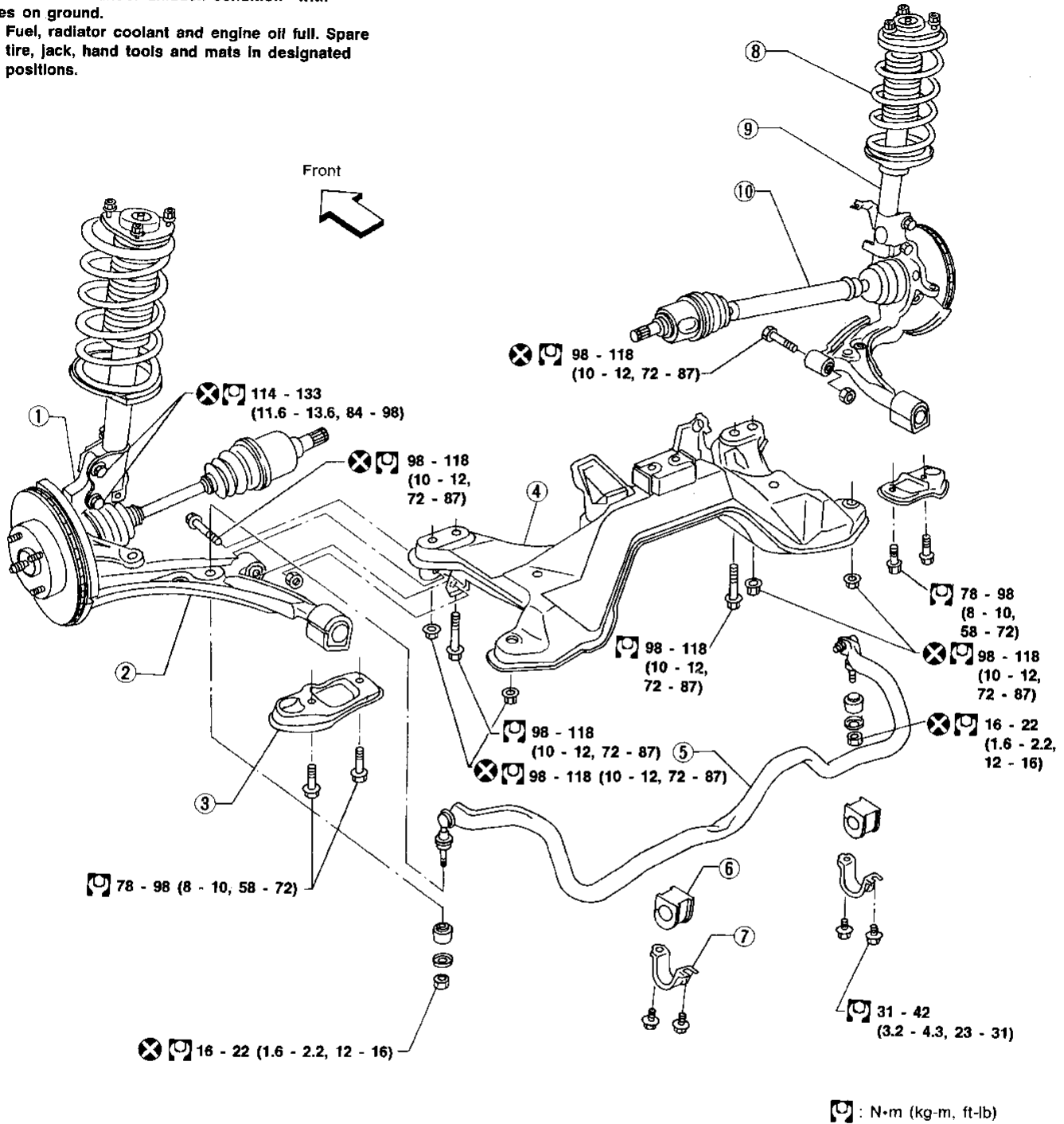
Commercial Service Tools

Tool name	Description	
Attachment Wheel alignment	 <p>NT148</p> <p>Measure wheel alignment a: Screw M22 x 1.5 b: 35 (1.38) dia. c: 65 (2.56) dia. d: 56 (2.20) e: 12 (0.47)</p> <p>Unit: mm (in)</p>	GI MA
① Flare nut crows foot ② Torque wrench	 <p>NT223</p> <p>Removing and installing brake piping</p>	EM LC EF & EC
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FRONT AXLE AND FRONT SUSPENSION

When installing rubber parts, final tightening must be carried out under unladen condition* with tires on ground.

* Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

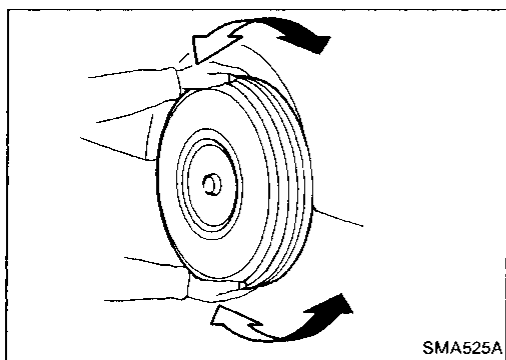


- ① Knuckle assembly
- ② Transverse link
- ③ Compression rod clamp
- ④ Front suspension member

- ⑤ Stabilizer bar
- ⑥ Bushing
- ⑦ Bracket

- ⑧ Coil spring
- ⑨ Strut assembly
- ⑩ Drive shaft

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Front Axle and Front Suspension Parts

Check front axle and front suspension parts for looseness, cracks, wear or other damage.

- Shake each front wheel to check for excessive play.

- Make sure that cotter pin is inserted.
- Retighten all nuts and bolts to the specified torque.

Tightening torque:

Refer to FRONT SUSPENSION. (FA-22)

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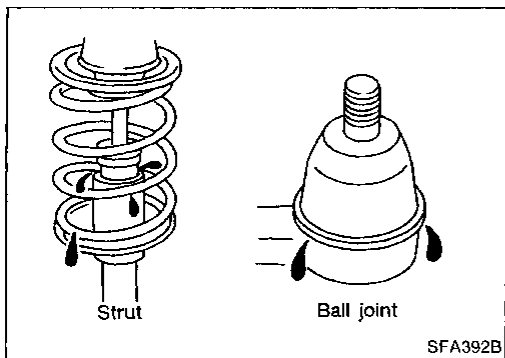
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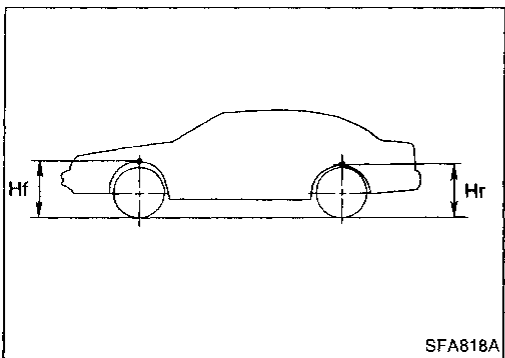
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- Check strut (shock absorber) for oil leakage or other damage.
- Check suspension ball joint for grease leakage and ball joint dust cover for cracks or other damage.



- Check spring height from the top of the wheelarch to the ground.

(1) Vehicle must be unladen*, parked on a level surface, and tires checked for proper inflation and wear (tread wear indicator must not be showing).

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

(2) Bounce the vehicle up and down several times before measuring.

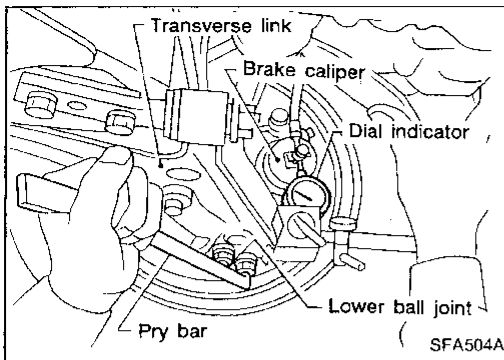
Standard height:

Refer to SDS. (FA-27)

(3) Spring height is not adjustable. If out of specification, check for worn springs or suspension parts.

ON-VEHICLE SERVICE

Front Axle and Front Suspension Parts (Cont'd)

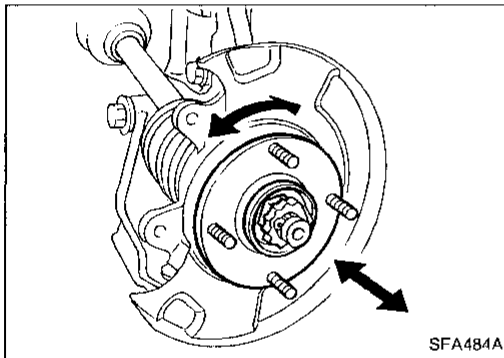


- Check suspension ball joint end play.
 - a. Jack up front of vehicle and set the stands.
 - b. Clamp dial indicator onto transverse link and place indicator tip on lower edge of brake caliper.
 - c. Make sure front wheels are straight and brake pedal is depressed.
 - d. Place a pry bar between transverse link and inner rim of road wheel.
 - e. While raising and releasing pry bar, observe maximum dial indicator value.

Vertical end play:

0 mm (0 in)

- f. If ball joint movement is beyond specifications, remove and recheck it.



Front Wheel Bearing

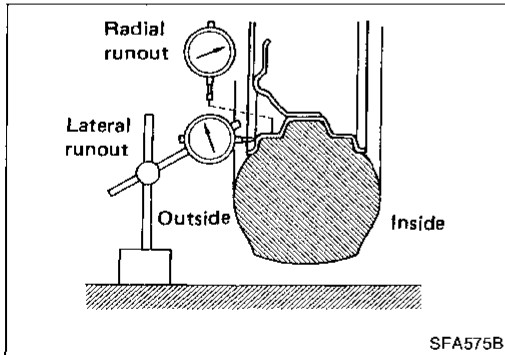
- Check that wheel bearings operate smoothly.
- Check axial end play.

Axial end play:

0.05 mm (0.0020 in) or less

- If axial end play is not within specification or wheel bearing does not turn smoothly, replace wheel bearing assembly.

Refer to FRONT AXLE — Wheel Hub and Knuckle. (FA-8)



Front Wheel Alignment

Before checking front wheel alignment, be sure to make a preliminary inspection (Unladen*).

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

PRELIMINARY INSPECTION

1. Check tires for wear and improper inflation.
2. Check wheel runout.

Wheel runout:

Refer to SDS. (FA-28)

3. Check front wheel bearings for looseness.
4. Check front suspension for looseness.
5. Check steering linkage for looseness.
6. Check that front shock absorbers work properly by using the standard bounce test.
7. Check vehicle posture (Unladen).

Front Wheel Alignment (Cont'd)

CAMBER, CASTER AND KINGPIN INCLINATION

Camber, caster and kingpin inclination are preset at factory and cannot be adjusted.

1. Measure camber, caster and kingpin inclination of both right and left wheels with a suitable alignment gauge.

Camber, Caster and Kingpin inclination:

Refer to SDS. (FA-28)

2. If camber, caster and kingpin inclination are not within specification, inspect and replace any damaged or worn front suspension parts.

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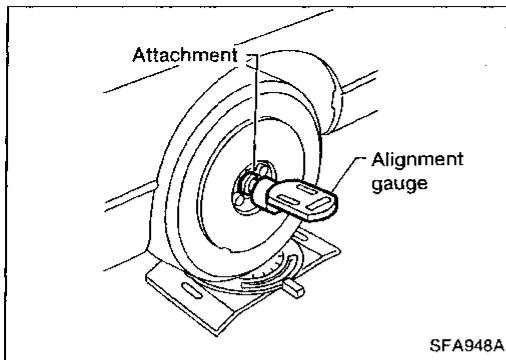
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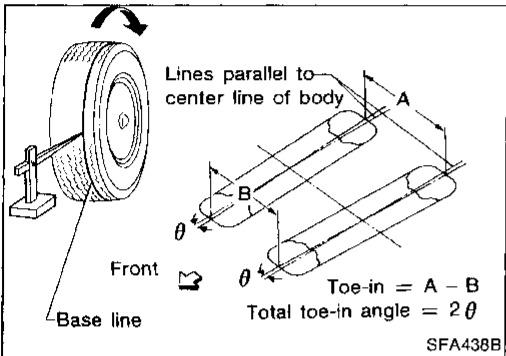
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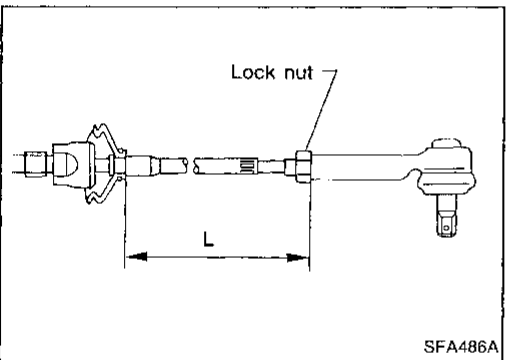
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TOE-IN

1. Draw a base line across the tread.
 2. After lowering front of vehicle, move it up and down to eliminate friction, and set steering wheel in straight-ahead position.
 3. Measure toe-in.
- Measure distance "A" and "B" at the same height as hub center.

Toe-in:

Refer to SDS. (FA-28)



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4. Adjust toe-in by varying the length of steering tie-rods.

- a. Loosen lock nuts.
- b. Adjust toe-in by screwing tie-rods in and out.

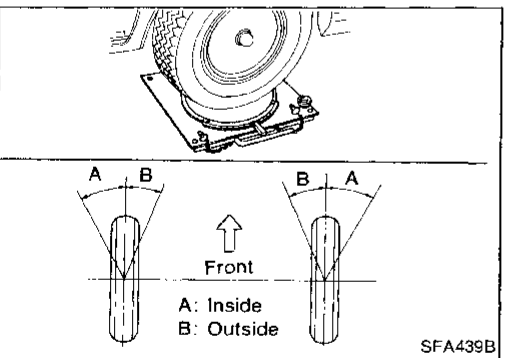
Standard length "L":

Refer to ST section.

- c. Tighten lock nuts to specified torque.

Lock nut tightening torque:

Refer to ST section.



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FRONT WHEEL TURNING ANGLE

1. Set wheels in straight-ahead position and then move vehicle forward until front wheels rest on turning radius gauge properly.
2. Rotate steering wheel all the way right and left with a force of 98 to 147 N (10 to 15 kg, 22 to 33 lb) while engine is running at idle and measure turning angle.

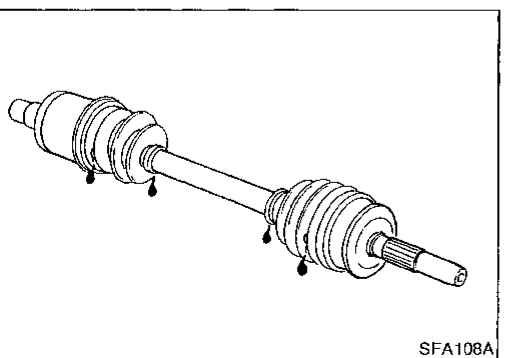
Do not hold the steering wheel on full lock for more than 15 seconds.

Wheel turning angle (Full turn):

Refer to SDS. (FA-28)

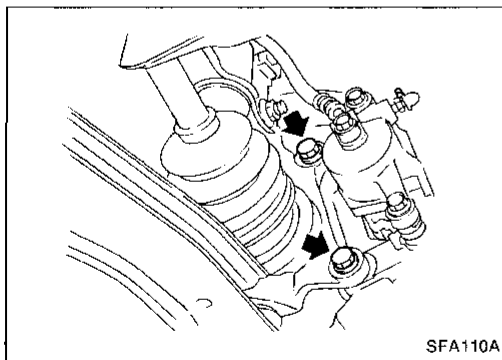
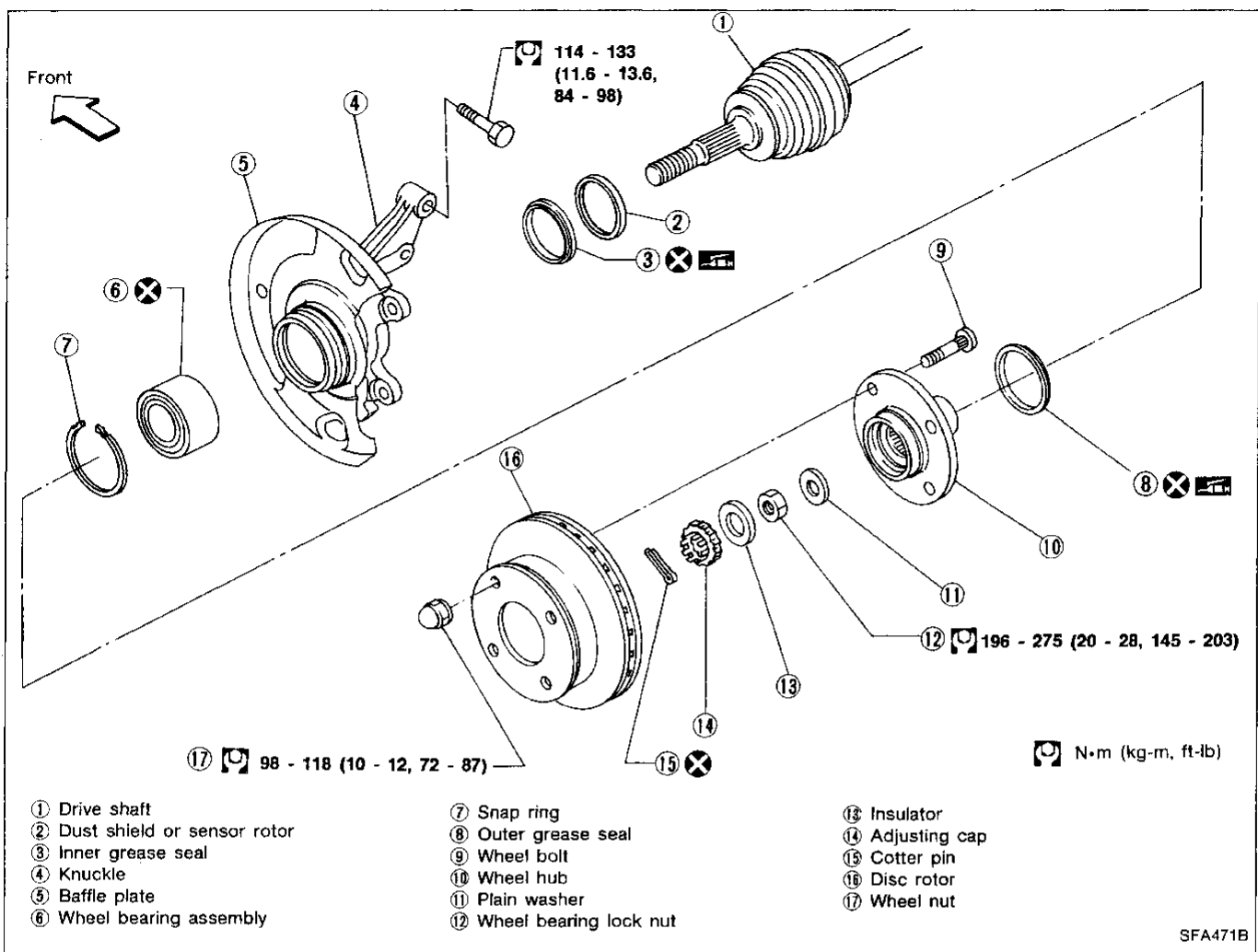
Drive Shaft

Check for grease leakage or other damage.



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FRONT AXLE



Wheel Hub and Knuckle

REMOVAL

CAUTION:

Before removing the front axle assembly, disconnect the ABS wheel sensor from the assembly and move it away from the front axle assembly area.

Failure to do so may result in the sensor wires being damaged and the sensor becoming inoperative.

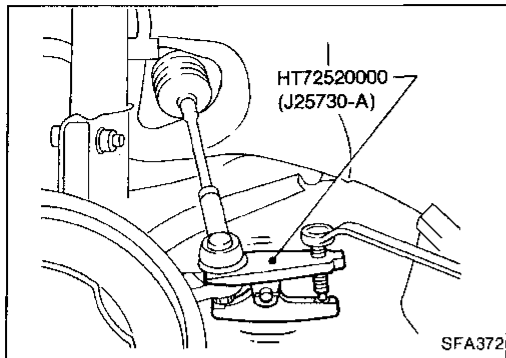
- Remove wheel bearing lock nut while depressing brake pedal.
- Remove brake caliper assembly.

Brake hose does not need to be disconnected from brake caliper. Be careful not to depress brake pedal, or piston will pop out.

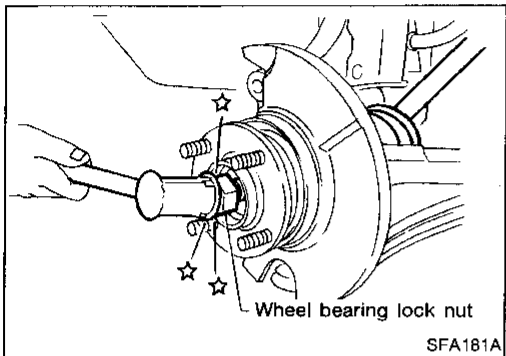
Make sure brake hose is not twisted.

FRONT AXLE

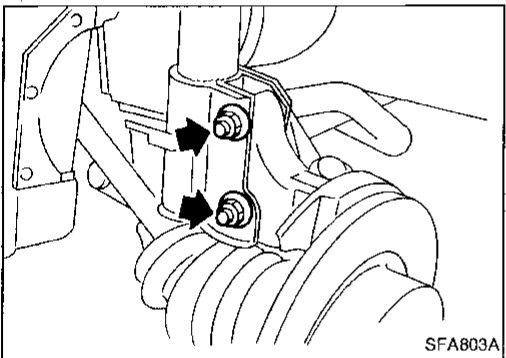
Wheel Hub and Knuckle (Cont'd)



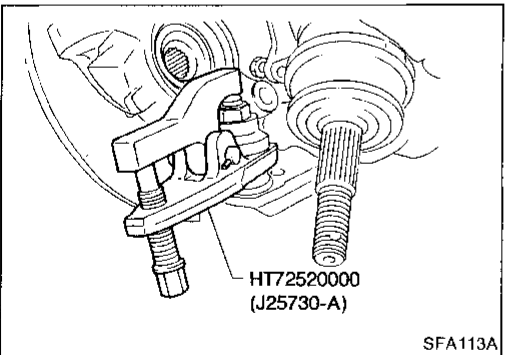
- Remove tie-rod ball joint.



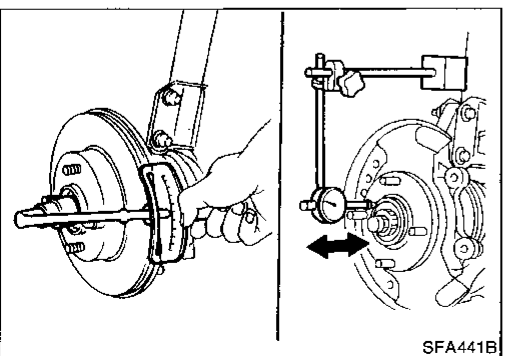
- Separate drive shaft from knuckle by slightly tapping it.
Cover boots with shop towel so as not to damage them when removing drive shaft.



- Remove strut lower mounting bolts.



- Loosen lower ball joint tightening nut.
- Separate knuckle from lower ball joint stud with Tool.
- Remove knuckle from transverse link.



INSTALLATION

- Install knuckle with wheel hub.
- Tighten wheel bearing lock nut.
□: 196 - 275 N·m
(20 - 28 kg·m, 145 - 203 ft·lb)
- Check that wheel bearings operate smoothly.
- Check wheel bearing axial end play.
Axial end play:
0.05 mm (0.0020 in) or less

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FRONT AXLE

Wheel Hub and Knuckle (Cont'd)

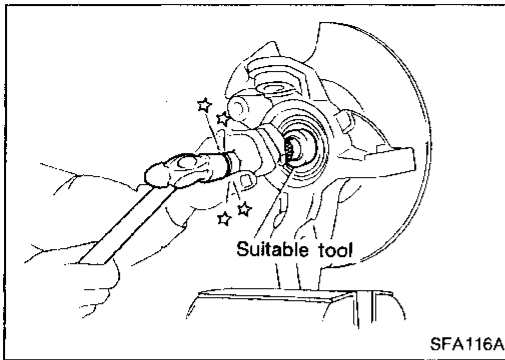
DISASSEMBLY

CAUTION:

When removing wheel hub or wheel bearing from knuckle, replace wheel bearing assembly (outer race, inner races and grease seals) with a new one.

Wheel hub

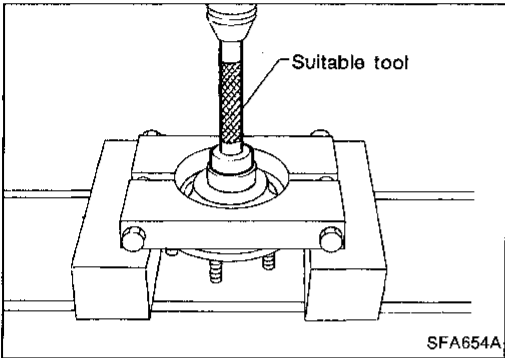
Drive out hub with inner race (outside) from knuckle with a suitable tool.



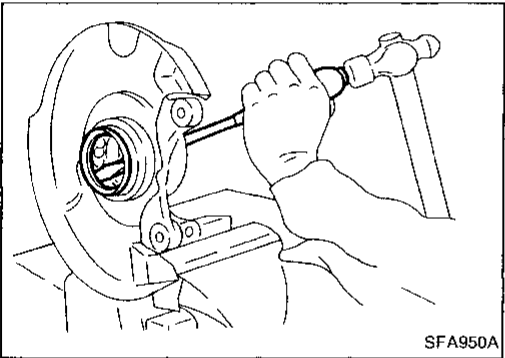
Wheel bearing

When replacing wheel bearing, replace wheel bearing assembly (including inner and outer races).

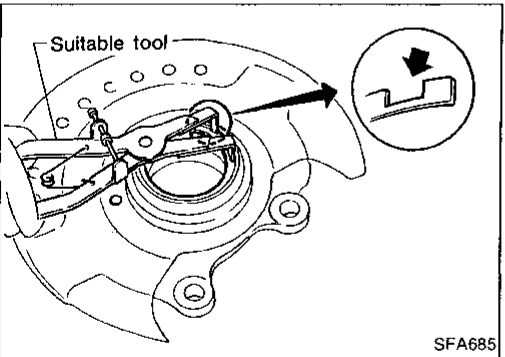
- Remove bearing inner race (outside), then remove outer grease seal.



- Remove inner and outer grease seals from knuckle.



- Remove snap ring.



- Press out bearing outer race.

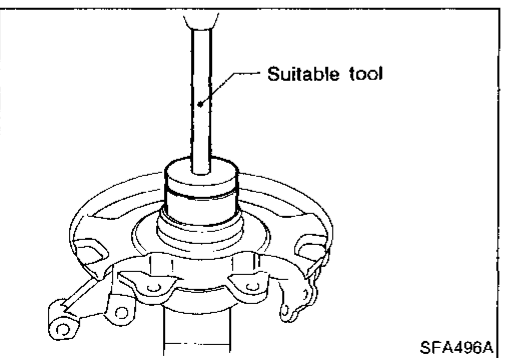
INSPECTION

Wheel hub and knuckle

Check wheel hub and knuckle for cracks by using a magnetic exploration or dyeing test.

Snap ring

Check snap ring for wear or cracks. Replace if necessary.



FRONT AXLE

Wheel Hub and Knuckle (Cont'd)

ASSEMBLY

1. Press new wheel bearing assembly into knuckle.

Maximum load P:

29 kN (3 ton, 3.3 US ton, 3.0 Imp ton)

CAUTION:

- Do not press inner race of wheel bearing assembly.
 - Do not apply oil or grease to mating surfaces of wheel bearing outer race and knuckle.
2. Install snap ring into groove of knuckle.

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3. Pack grease seal lip with multi-purpose grease.
4. Install outer grease seal.

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5. Install inner grease seal.

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6. Press wheel hub into knuckle.

Maximum load P:

29 kN (3 ton, 3.3 US ton, 3.0 Imp ton)

Be careful not to damage grease seal.

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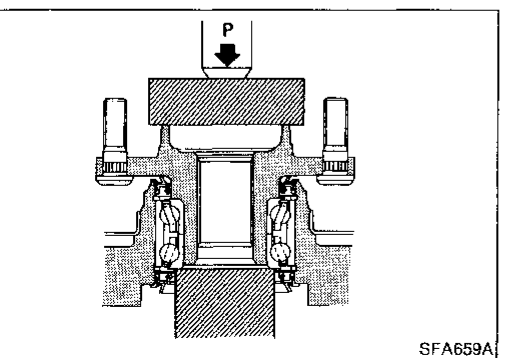
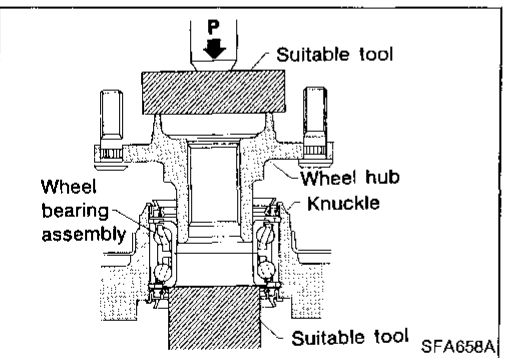
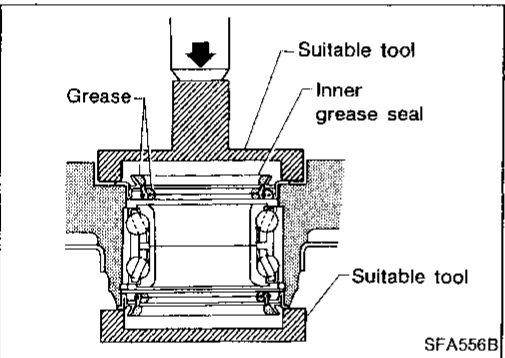
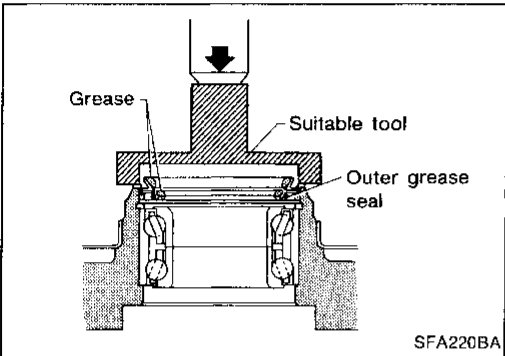
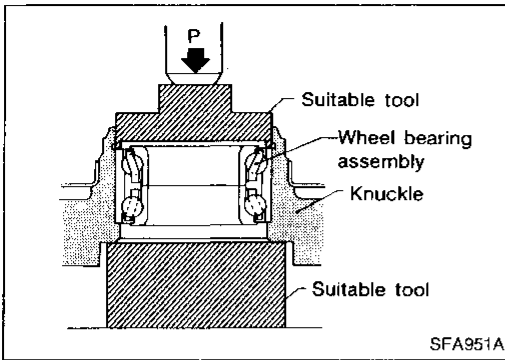
7. Check bearing operation.

- a. Add load P with press.

Load P:

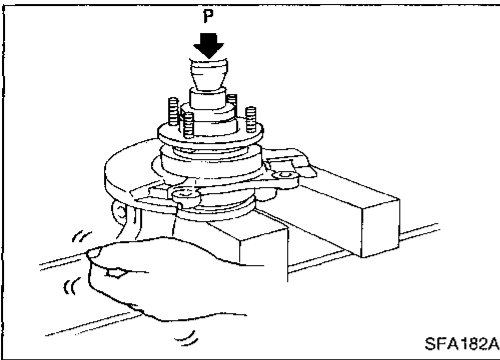
34.3 - 49.0 kN

(3.5 - 5.0 ton, 3.9 - 5.5 US ton, 3.44 - 4.92 Imp ton)

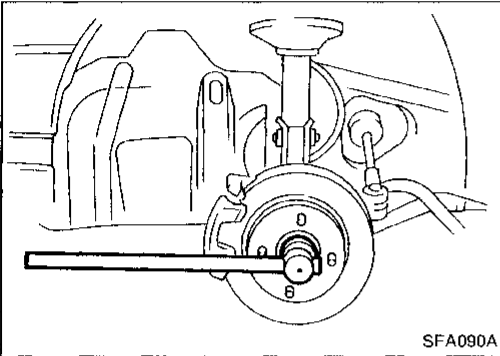


FRONT AXLE

Wheel Hub and Knuckle (Cont'd)



- b. Spin knuckle several turns in both directions.
- c. Make sure that wheel bearings operate smoothly.

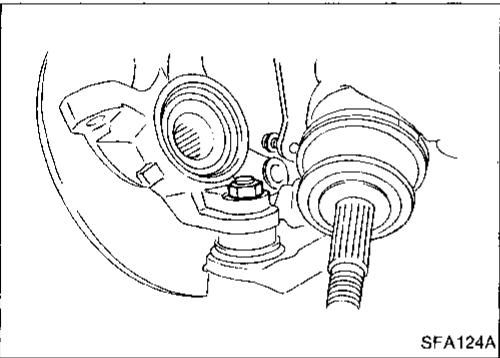


Drive Shaft

REMOVAL

- Remove wheel bearing lock nut.
- Remove brake caliper assembly.

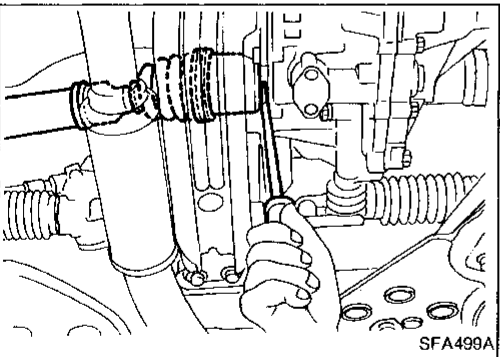
Brake hose need not be disconnected from brake caliper. Be careful not to depress brake pedal, or piston will pop out. Do not puller or twist brake hose.



- Remove tie-rod ball joint.
- Separate drive shaft from knuckle by lightly tapping it. If it is hard to remove, use a puller.

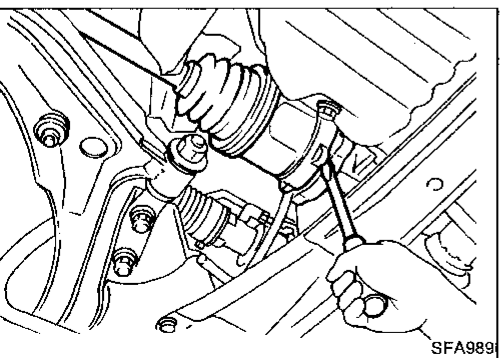
When removing drive shaft, cover boots with shop towel to prevent damage to them.

Refer to FRONT AXLE — Wheel Hub and Knuckle. (FA-8)



1. Remove right drive shaft from transaxle.

— Models without support bearing —



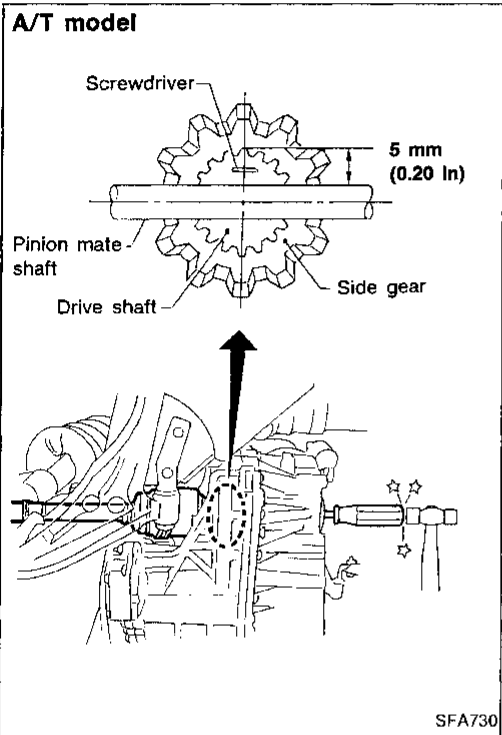
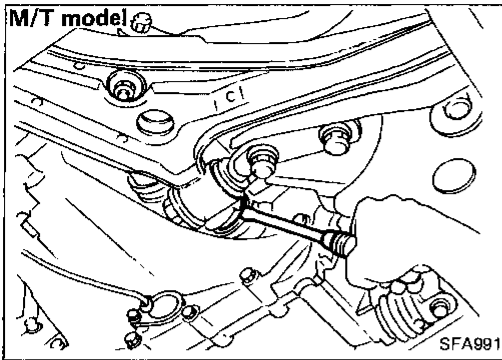
— Models with support bearing —

FRONT AXLE

Drive Shaft (Cont'd)

2. Remove left drive shaft from transaxle.

— For M/T models —



— For A/T models —

● Remove left drive shaft with a suitable tool.

Be careful not to damage pinion mate shaft and side gear.

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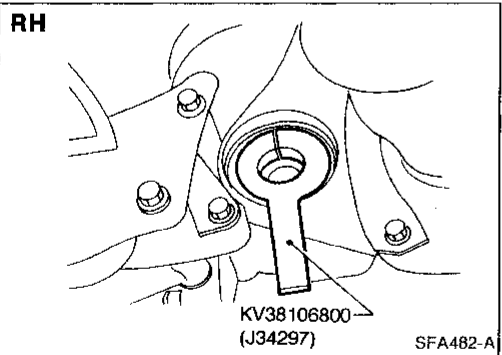
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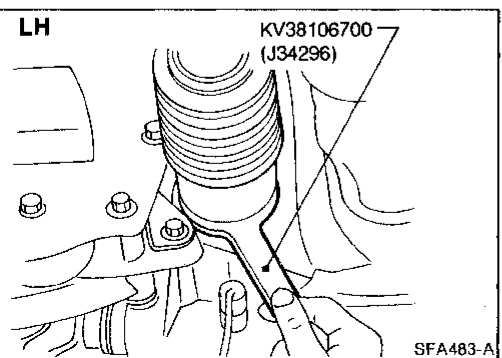
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INSTALLATION

Transaxle side

1. Drive a new oil seal to transaxle. Refer to MT or AT section.
2. Set Tool along the inner circumference of oil seal.



3. Insert drive shaft into transaxle. Be sure to properly align the serrations and then withdraw Tool.
4. Push drive shaft, then press-fit circular clip on the drive shaft into circular clip groove of side gear.
5. After its insertion, try to pull the flange out of the slide joint by hand. If it pulls out, the circular clip is not properly meshed with the side gear.

FRONT AXLE

Drive Shaft (Cont'd)

Wheel side

- Install drive shaft into knuckle.
- Tighten wheel bearing lock nut. Refer to section Installation in FRONT AXLE — Wheel Hub and Knuckle. (FA-8)

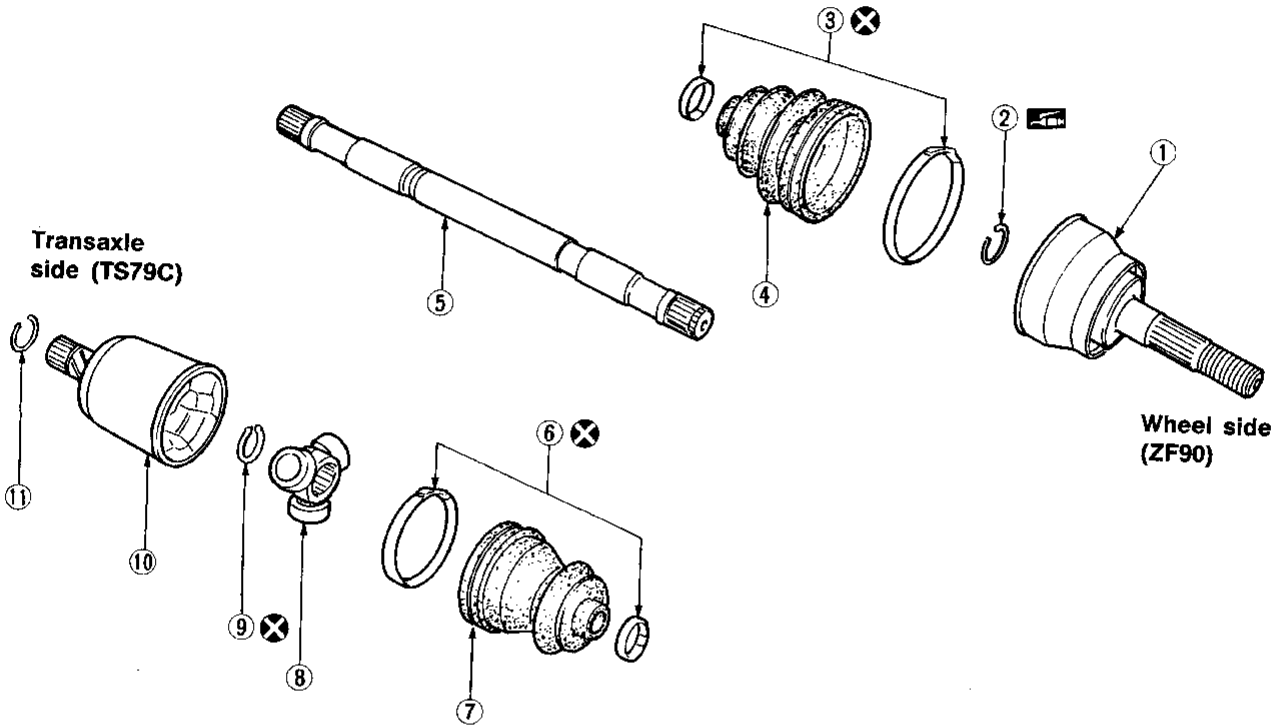
COMPONENTS

Circular clip.

Make sure circular clip is properly installed with side gear (transaxle side) and joint assembly (wheel side), and will not come out.

Drive shaft joint grease:

Use NISSAN GENUINE GREASE or equivalent after very overhaul.



Be careful not to damage bolts. Use suitable protector or cloth during removal and installation.

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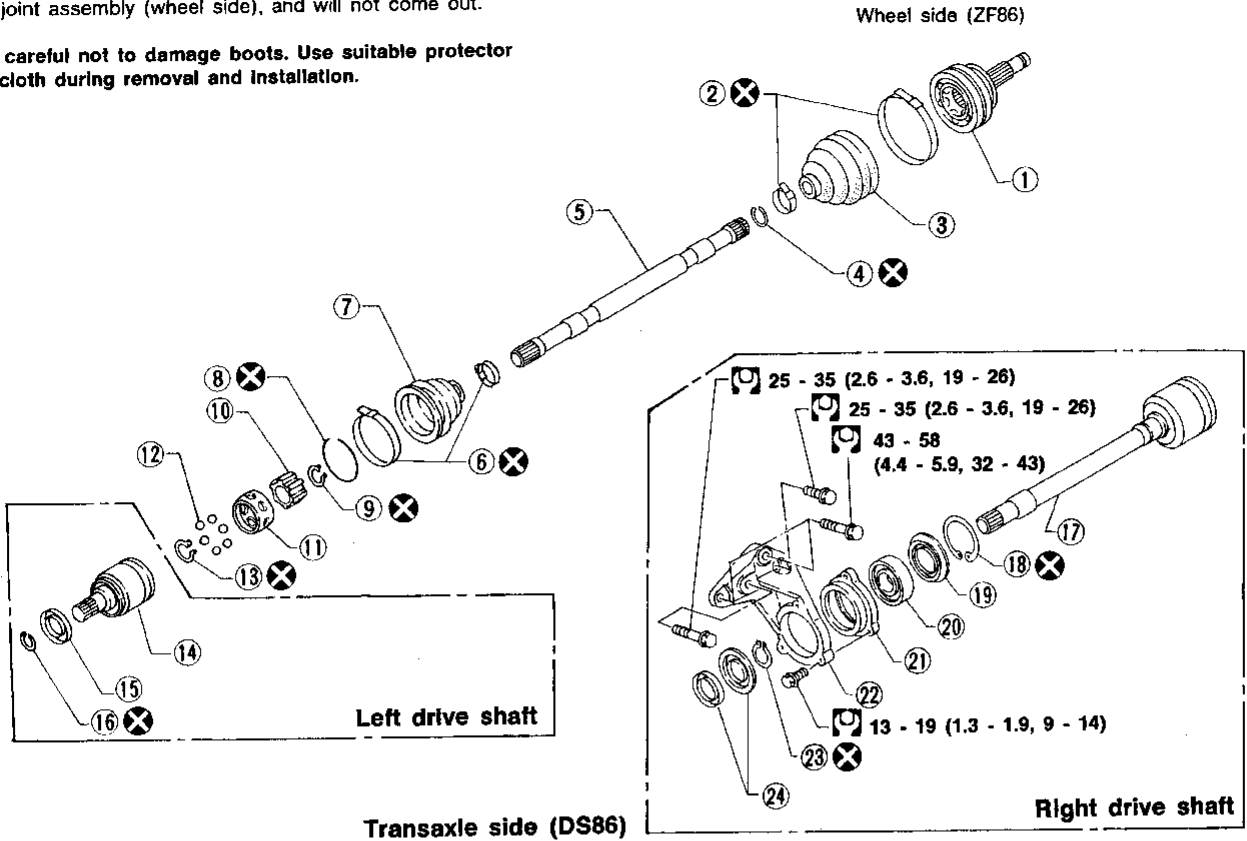
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| ① Joint assembly | ⑤ Drive shaft | ⑨ Snap ring |
| ② Circular clip | ⑥ Boot band | ⑩ Slide joint housing |
| ③ Boot band | ⑦ Boot | ⑪ Circular clip |
| ④ Boot | ⑧ Spider assembly | |

FRONT AXLE Drive Shaft (Cont'd)

Circular clip:

Make sure circular clip is properly meshed with side gear (transaxle side) and joint assembly (wheel side), and will not come out.

Be careful not to damage boots. Use suitable protector or cloth during removal and installation.



: N·m (kg-m, ft-lb)

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|-------------------|-----------------------|--|
| ① Joint assembly | ⑨ Snap ring B | ⑰ Slide joint housing with extension shaft |
| ② Boot band | ⑩ Inner race | ⑱ Snap ring E |
| ③ Boot | ⑪ Cage | ⑲ Dust shield |
| ④ Circular clip B | ⑫ Ball | ⑳ Support bearing |
| ⑤ Drive shaft | ⑬ Snap ring C | ㉑ Support bearing retainer |
| ⑥ Boot band | ⑭ Slide joint housing | ㉒ Bracket |
| ⑦ Boot | ⑮ Dust shield | ㉓ Snap ring D |
| ⑧ Snap ring A | ⑯ Circular clip A | ㉔ Dust shield |

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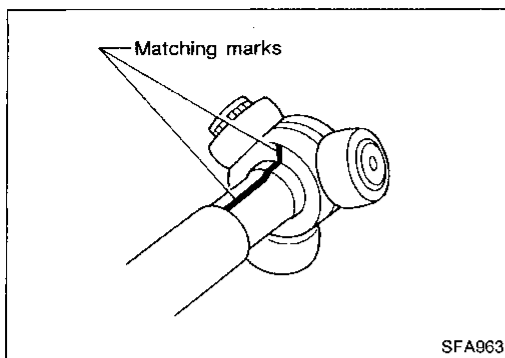
FRONT AXLE

Drive Shaft (Cont'd)

DISASSEMBLY

Transaxle side (TS79C type)

1. Remove boot bands.
2. Put matching marks on slide joint housing and drive shaft before separating joint assembly.
3. Put matching marks on spider assembly and drive shaft.



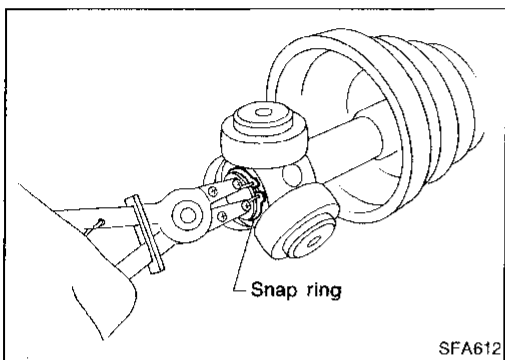
4. Pry off snap ring, then remove spider assembly.

CAUTION:

Do not disassemble spider assembly.

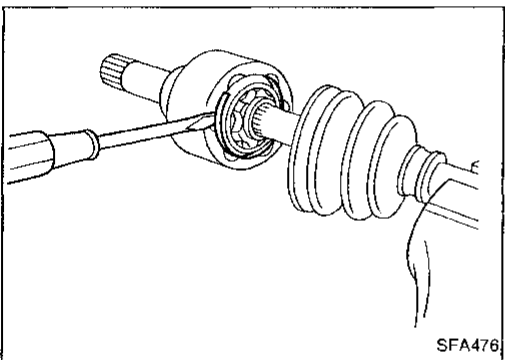
5. Draw out boot.

Cover drive shaft serration with tape to prevent damage to the boot.



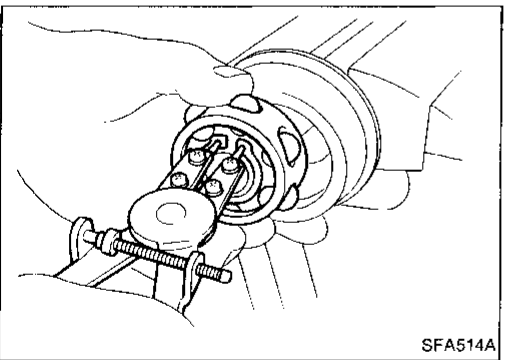
Transaxle side (DS86 type)

1. Remove boot bands.
2. Put matching marks on slide joint housing and inner race, before separating joint assembly.
3. Pry off snap ring "A" with a screwdriver, and pull out slide joint housing.



4. Put matching marks on inner race and drive shaft.
5. Pry off snap ring "C", then remove ball cage, inner race and balls as a unit.
6. Pry off snap ring "B".
7. Draw out boot.

Cover drive shaft serrations with tape so as not to damage the boot.



Wheel side (ZF90, BF86 type)

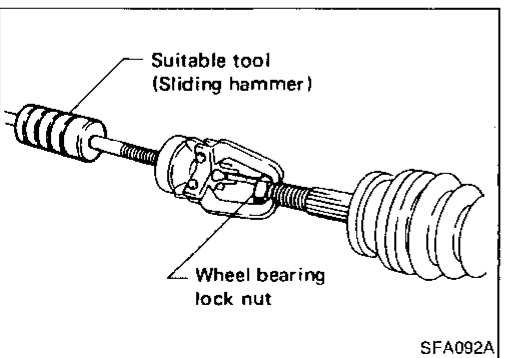
CAUTION:

The joint on the wheel side cannot be disassembled.

- Before separating joint assembly, put matching marks on drive shaft and joint assembly.
- Separate joint assembly with a suitable tool.

Be careful not to damage threads on drive shaft.

- Remove boot bands.

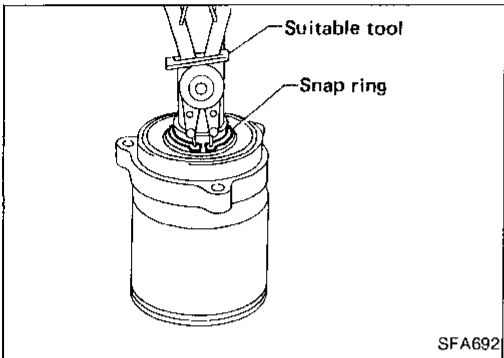
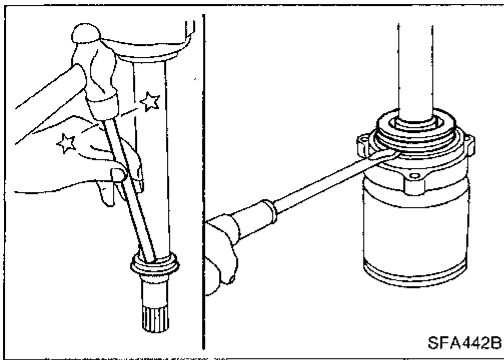


FRONT AXLE

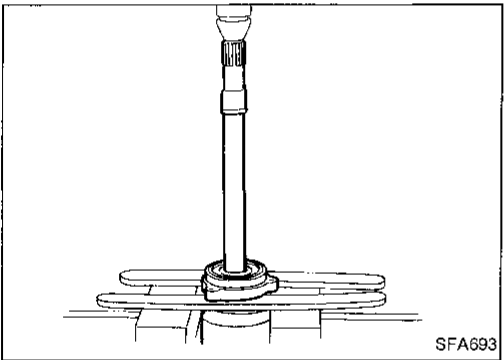
Drive Shaft (Cont'd)

Support bearing

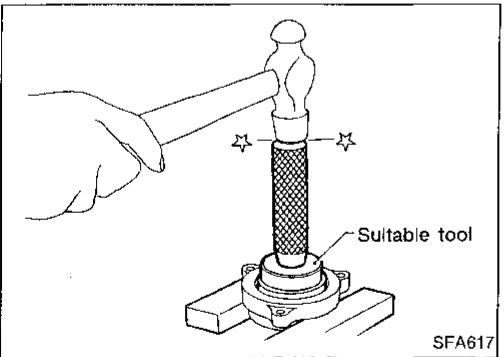
- Remove dust shield.



- Pry off snap ring.



- Press support bearing assembly out of drive shaft.



- Press support bearing out of retainer.

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FRONT AXLE

Drive Shaft (Cont'd)

INSPECTION

Thoroughly clean all parts in cleaning solvent, and dry with compressed air. Check parts for evidence of deformation or other damage.

Drive shaft

Replace drive shaft if it is twisted or cracked.

Boot

Check boot for fatigue, cracks, or wear. Replace boot with new boot bands.

Joint assembly (Transaxle side)

- Check spider assembly for needle bearing and washer damage. Replace if necessary. (TS79C type)
- Check roller surfaces for scratches, wear or other damage. Replace if necessary. (TS79C type)
- Replace any parts of double offset joint which show signs of scorching, rust, wear or excessive play. (DS86 type)
- Check serration for deformation. Replace if necessary.
- Check slide joint housing for any damage. Replace if necessary.

Joint assembly (Wheel side)

Replace joint assembly if it is deformed or damaged.

Support bearing

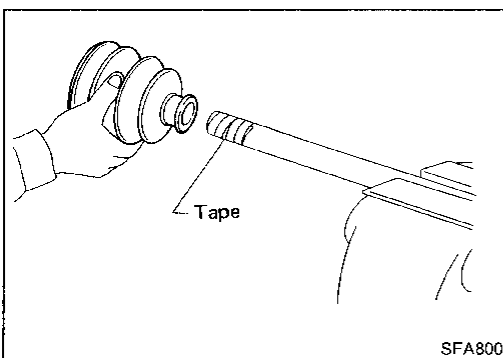
Make sure wheel bearing rolls freely and is free from noise, cracks, pitting or wear.

Support bearing bracket

Check support bearing bracket for cracks with a magnetic exploration or dyeing test.

ASSEMBLY

- After drive shaft has been assembled, ensure that it moves smoothly over its entire range without binding.
- Use **NISSAN GENUINE GREASE** or equivalent after every overhaul.



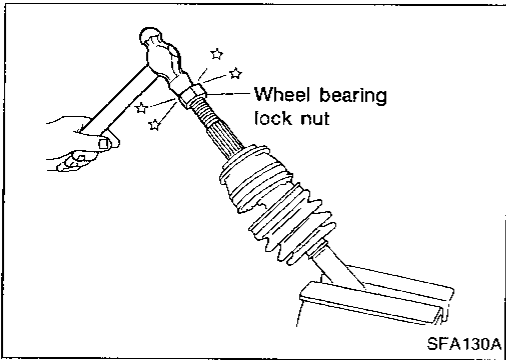
Wheel side (ZF90, BF86 type)

1. Install boot and new small boot band on drive shaft.

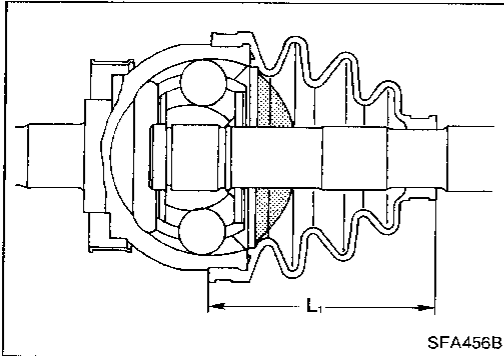
Cover drive shaft serration with tape so as not to damage boot during installation.

FRONT AXLE

Drive Shaft (Cont'd)



- Set joint assembly onto drive shaft by lightly tapping it. Install joint assembly securely, ensuring marks which were made during disassembly are properly aligned.



- Pack drive shaft with specified amount of grease.

Specified amount of grease:

ZF90 155 - 175 g (5.47 - 6.17 oz)

BF86 105 - 125 g (3.70 - 4.41 oz)

- Make sure that boot is properly installed on the drive shaft groove.

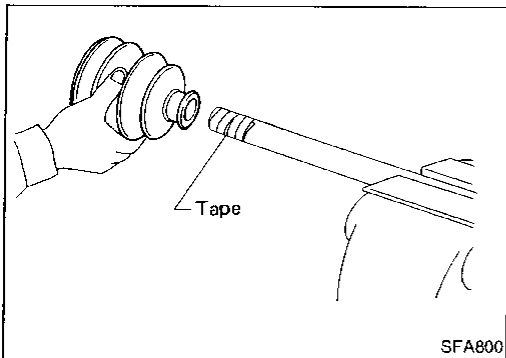
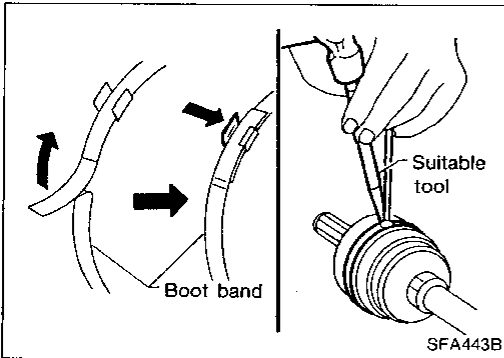
Set boot so that it does not swell and deform when its length is "L₁".

Length "L₁":

ZF90 96 - 98 mm (3.78 - 3.86 in)

BF86 99.5 - 101.5 mm (3.917 - 3.996 in)

- Lock new larger and smaller boot bands securely with a suitable tool.

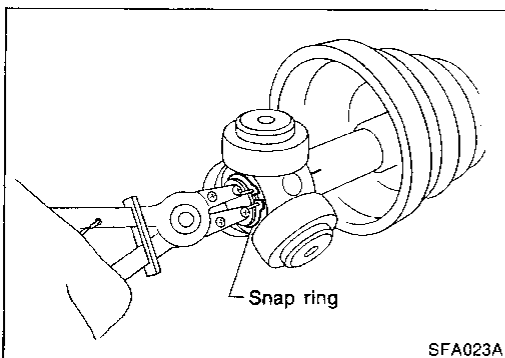


Transaxle side

(TS79C type)

- Install boot and new small boot band on drive shaft.

Cover drive shaft serration with tape to prevent damage to boot during installation.



- Install spider assembly securely, making sure the marks which were made during disassembly are properly aligned.
- Install new snap ring.

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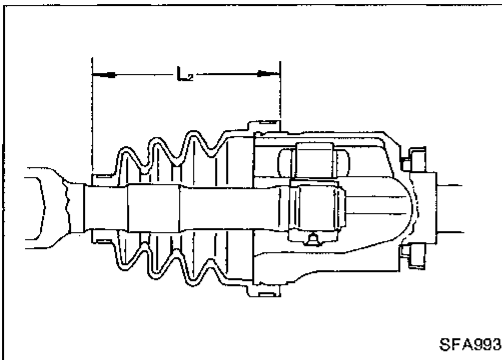
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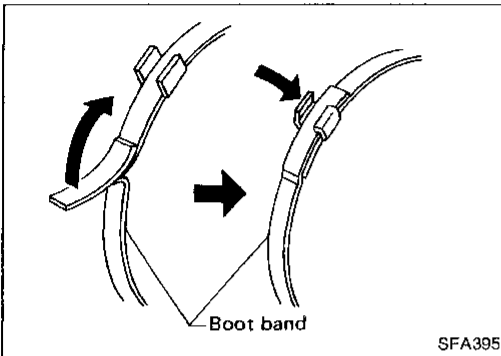
FRONT AXLE

Drive Shaft (Cont'd)



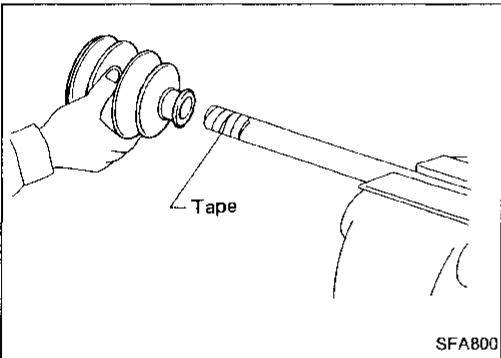
4. Pack drive shaft with specified amount of grease.
Specified amount of grease:
TS79C 225 - 235 g (7.94 - 8.29 oz)
5. Install slide joint housing.
6. Set boot so that it does not swell and deform when its length is "L₂".
Length "L₂":

TS79C 101.5 - 103.5 mm (4.00 - 4.07 in)
Make sure that boot is properly installed on the drive shaft groove.

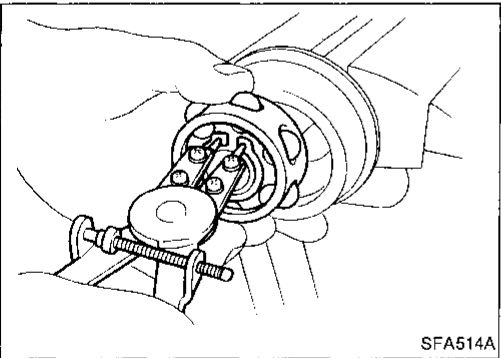


7. Lock new larger and smaller boot bands securely with a suitable tool.

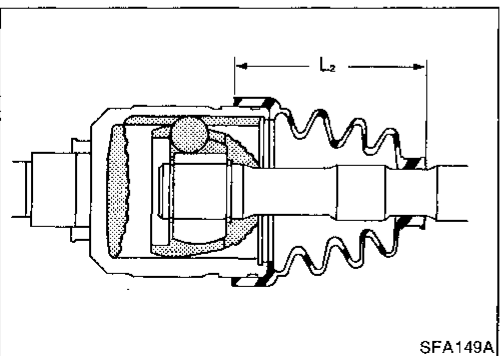
(DS86 type)



1. Install boot and new small boot band on drive shaft.
Cover drive shaft serration with tape to prevent damage boot during installation.



2. Install new snap ring "B", then securely install ball cage, inner race and balls as a unit, making sure the marks which were made during disassembly are properly aligned.
3. Install new snap ring "C".

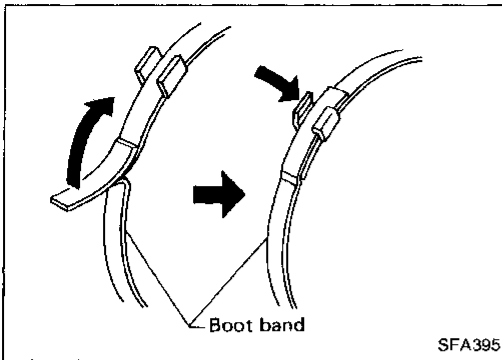


4. Pack drive shaft with specified amount of grease.
Specified amount of grease:
140 - 160 g (4.94 - 5.64 oz)
5. Install slide joint housing, then install new snap ring "A".
6. Make sure that boot is properly installed on the drive shaft groove.
Set boot so that it does not swell and deform when its length is "L₂".
Length "L₂":
97 - 99 mm (3.82 - 3.90 in)

FRONT AXLE

Drive Shaft (Cont'd)

7. Lock new larger and smaller boot bands securely with a suitable tool.



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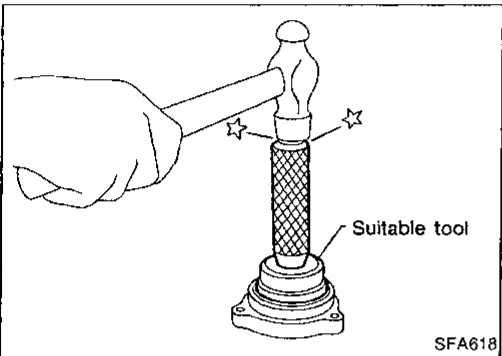
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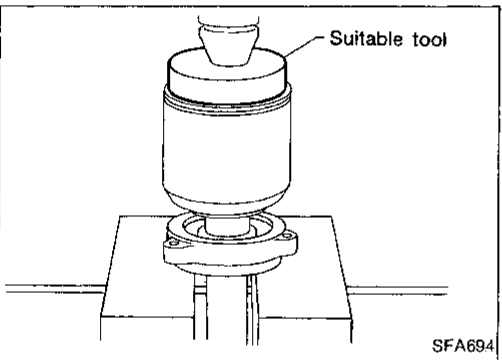
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Support bearing

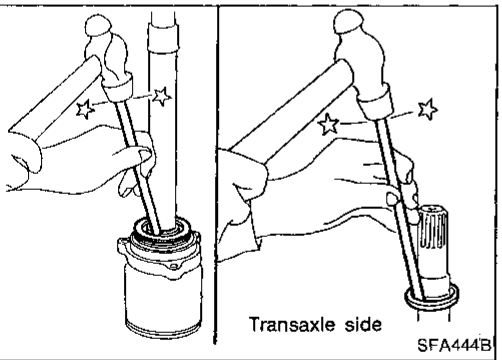
- Press bearing into retainer.



- Press drive shaft into bearing.



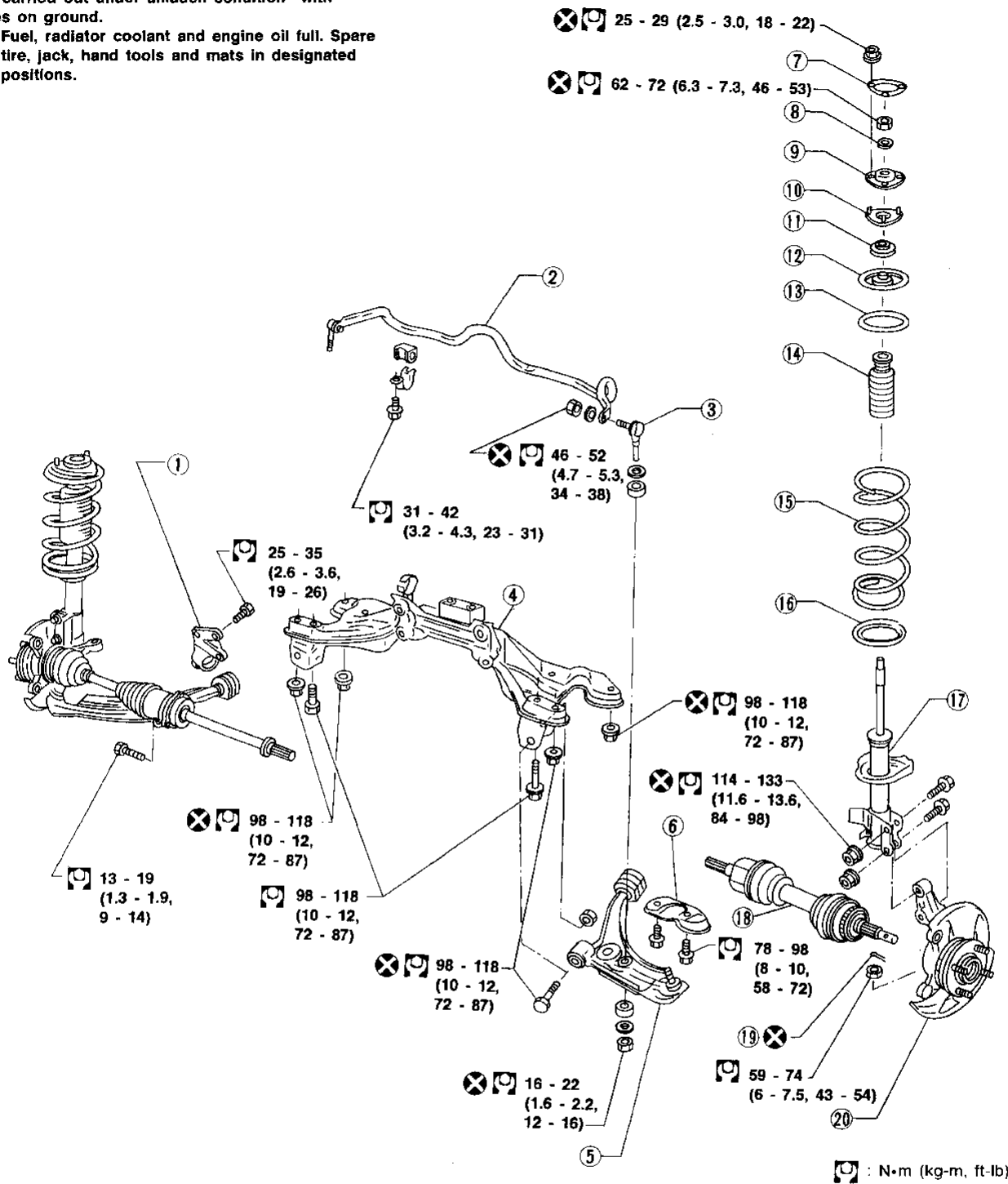
- Install snap ring.
- Install new dust shield.



FRONT SUSPENSION

When installing rubber parts, final tightening must be carried out under unladen condition* with tires on ground.

* Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

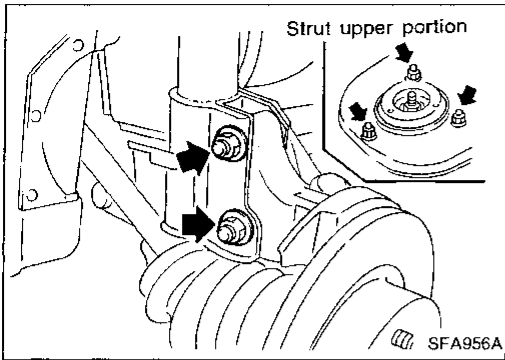


SFA483B

- ① Support bearing bracket
- ② Stabilizer bar
- ③ Connecting rod
- ④ Front suspension member
- ⑤ Transverse link
- ⑥ Compression rod clamp
- ⑦ Gasket

- ⑧ Washer
- ⑨ Strut mounting insulator
- ⑩ Strut insulator bracket
- ⑪ Thrust bearing
- ⑫ Upper spring seat
- ⑬ Rubber seat
- ⑭ Bound bumper rubber

- ⑮ Coil spring
- ⑯ Rubber seat
- ⑰ Strut assembly
- ⑱ Drive shaft
- ⑲ Cotter pin
- ⑳ Wheel hub assembly



Coil Spring and Strut Assembly

REMOVAL AND INSTALLATION

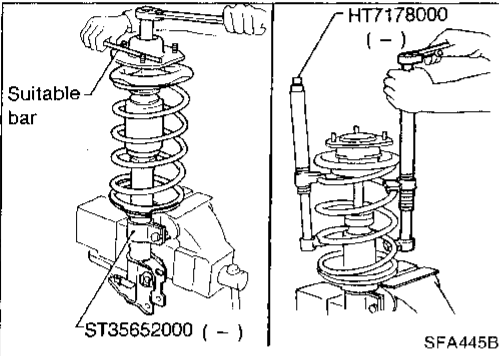
- Remove strut assembly fixing bolts and nuts (to hood ledge).

Do not remove piston rod lock nut on vehicle.

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DISASSEMBLY

1. Set strut assembly on vise with Tool, then loosen piston rod lock nut.

Do not remove piston rod lock nut.

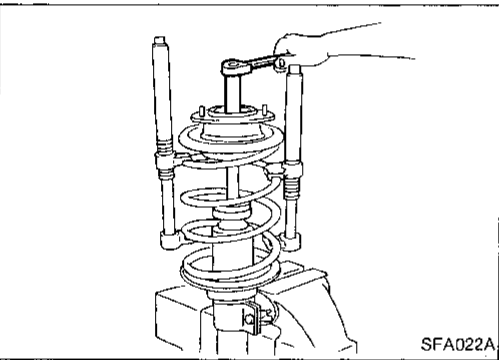
2. Compress spring with Tool so that the strut mounting insulator can be turned by hand.

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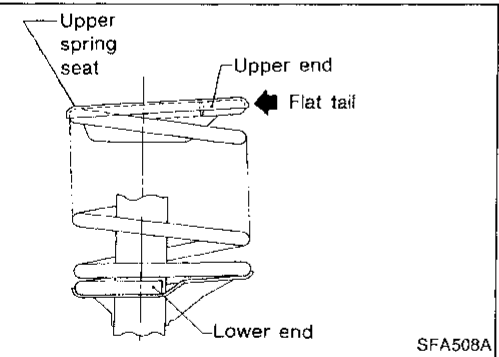
3. Remove piston rod lock nut.

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ASSEMBLY

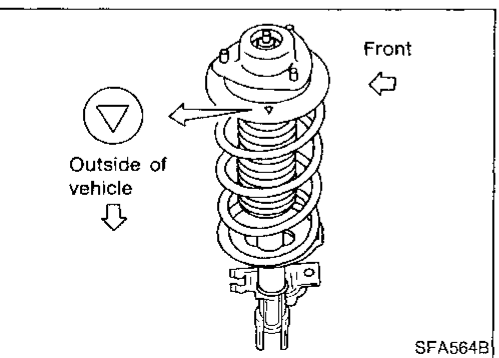
- When installing coil spring on strut, it must be positioned as shown in the figure at left.

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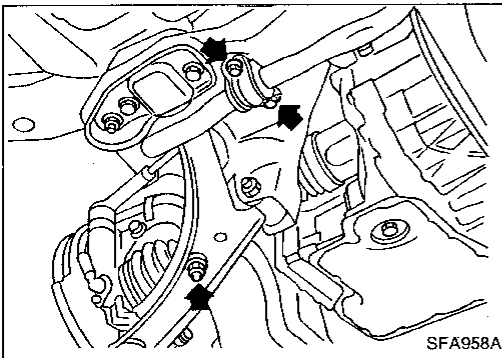


- When installing spring seat, make sure that it is positioned as shown.

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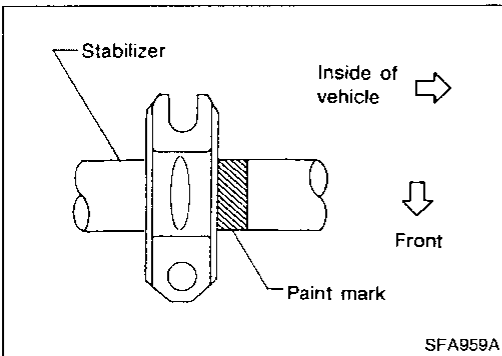
FRONT SUSPENSION



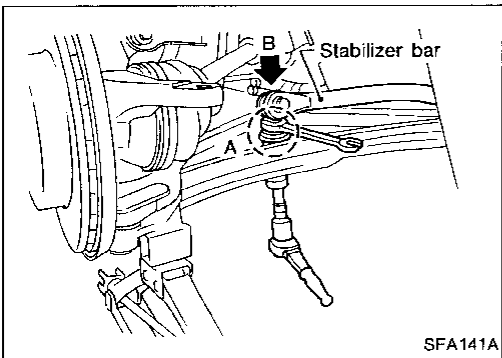
Stabilizer Bar

REMOVAL AND INSTALLATION

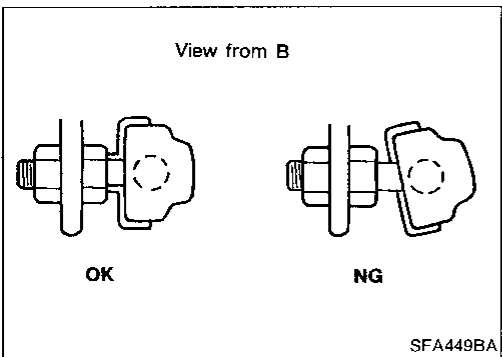
- Remove stabilizer bar.
- When installing stabilizer, make sure that paint mark and clamp face in their correct directions.



- When removing and installing stabilizer bar, fix portion A.



- Install stabilizer bar with ball joint socket properly placed.

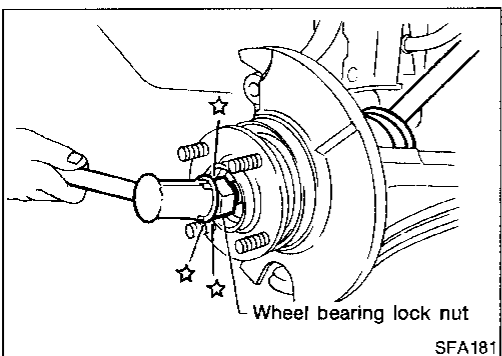


Transverse Link and Lower Ball Joint

REMOVAL AND INSTALLATION

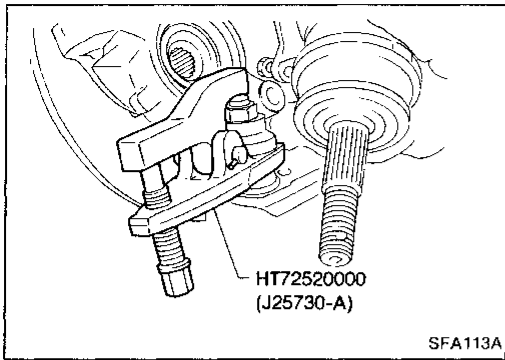
1. Remove wheel bearing lock nut.
2. Remove tie-rod ball joint.
3. Remove strut lower bracket fixing bolts and nuts.
4. Separate drive shaft from knuckle by slightly tapping drive shaft end.

Cover boots with shop towel so as not to damage them when removing drive shaft.

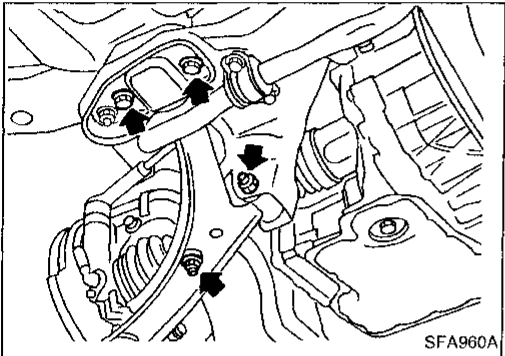


FRONT SUSPENSION

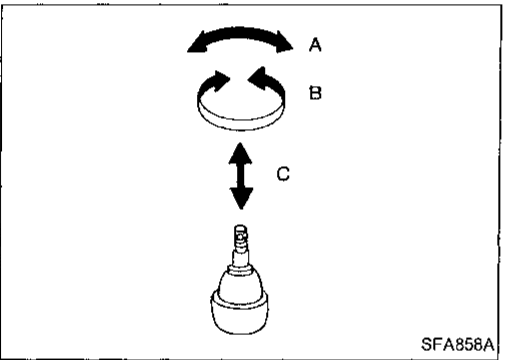
Transverse Link and Lower Ball Joint (Cont'd)



5. Separate lower ball joint stud from knuckle with Tool.
Refer to FRONT AXLE — Wheel Hub and Knuckle. (FA-8)



6. Remove bolts and nuts as shown at left.



INSPECTION

- Check ball joint for play. If ball stud is worn, play in axial direction is excessive or joint is hard to swing, replace lower ball joint.
Before checking, turn ball joint at least 10 revolutions so that ball joint is properly broken in.

Swinging force "A":

(measuring point: cotter pin hole of ball stud)

7.8 - 57.9 N (0.8 - 5.9 kg, 1.8 - 13.0 lb)

Turning torque "B":

0.5 - 3.4 N·m (5 - 35 kg-cm, 4.3 - 30.4 in-lb)

Vertical end play "C":

0 mm (0 in)

- Check dust cover for damage. Replace it and cover clamp if necessary.

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SERVICE DATA AND SPECIFICATIONS (SDS)

General Specifications

SUSPENSION

Suspension type	Strut type independent suspension
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COIL SPRING

Applied model	GA16DE				SR20DE	
	M/T		A/T		M/T	A/T
	DX	Except DX	DX	Except DX		
Wire diameter mm (in)	12.0 (0.472)	12.1 (0.476)	12.3 (0.484)		12.3 (0.484)	12.5 (0.492)
Coil diameter mm (in)	130.0 (5.12)					
Free length mm (in)	365.0 (14.37)	375.0 (14.76)	385.0 (15.16)		360.0 (14.17)	370.0 (14.57)
Identification color	White x 2, Purple x 1	Pink x 2, Yellow x 1	Pink x 2, White x 1		Orange x 2, Light blue x 1	Orange x 2, Orange x 1

SHOCK ABSORBER OR STRUT

Strut type	Double-acting hydraulic
Piston rod mm (in)	
Rod diameter	18 (0.71)

STABILIZER BAR

Applied model	GA16DE (Except DX models without P/S*)	SR20DE
Bar diameter mm (in)		
Outer diameter	28.6 (1.126)	28 (1.10)
Inner diameter	20.6 (0.811)	—

*: Power steering

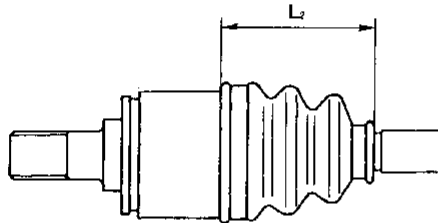
SERVICE DATA AND SPECIFICATIONS (SDS)

General Specifications (Cont'd)

DRIVE SHAFT

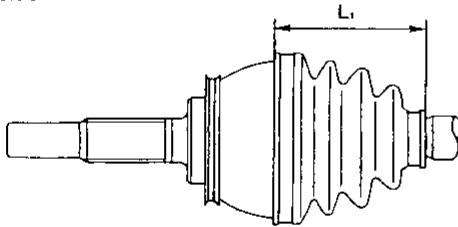
Applied model	GA16DE	SR20DE
Joint type		
Transaxle side	TS79C	DS86
Wheel side	ZF90	BF86
Applied grease	Nissan genuine grease or equivalent	
Quality		
Capacity g (oz)		
Transaxle side	225 - 235 (7.94 - 8.29)	140 - 160 (4.94 - 5.64)
Wheel side	155 - 175 (5.47 - 6.17)	105 - 125 (3.70 - 4.41)
Boot length mm (in)		
Transaxle side "L ₂ "	101.5 - 103.5 (4.00 - 4.07)	97 - 99 (3.82 - 3.90)
Wheel side "L ₁ "	96 - 98 (3.78 - 3.86)	99.5 - 101.5 (3.92 - 4.00)

Transaxle side



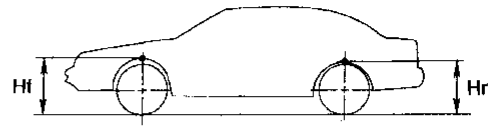
SFA961A

Wheel side



SFA962A

WHEELARCH HEIGHT (Unladen*)



SFA818A			
Applied model	155SR13	175/70R13	185/60R14
Front (Hf) mm (in)	649 (25.55)		647 (25.47)
Rear (Hr) mm (in)	636 (25.04)	639 (25.16)	633 (24.92)

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

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SERVICE DATA AND SPECIFICATIONS (SDS)

Inspection and Adjustment

WHEEL ALIGNMENT (Unladen*1)

Camber	degree	-1°00' to 0°30'
Caster	degree	0°40' - 2°10'
Kingpin inclination	degree	13°15' - 14°45'
Toe-in	mm (in)	
A - B		1 - 3 (0.04 - 0.12)
Total angle 2θ	degree	6' - 18'
Front wheel turning angle		
Full turn*2	degree	
GA16DE	Inside	39° - 43°
	Outside	34°
SR20DE	Inside	33° - 37°
	Outside	30°

*1: Fuel, radiator coolant and engine oil full.

Spare tire, jack, hand tools and mats in designated positions.

*2: On power steering models, wheel turning force (at circumference of steering wheel) of 98 to 147 N (10 to 15 kg, 22 to 33 lb) with engine at idle.

WHEEL BEARING

Applied model		All
Axial end play	mm (in)	Less than 0.05 (0.0020)
Lock nut tightening torque		196 - 275
	N·m (kg-m, ft-lb)	(20 - 28, 145 - 203)
Preload	N·m (kg-cm, in-lb)	1.31 (13.4, 11.6)
At knuckle arm	N (kg, lb)	8.8 (0.9, 2.0)

LOWER BALL JOINT

Applied model		All
Swinging force "A"	N (kg, lb)	
At cotter pin hole		7.8 - 57.9 (0.8 - 5.9, 1.8 - 13.0)
Turning torque "B"	N·m (kg-cm, in-lb)	0.5 - 3.4 (5 - 35, 4.3 - 30.4)
Vertical end play "C"	mm (in)	0 (0)

WHEEL RUNOUT

Unit: mm (in)

Wheel type	Aluminum	Steel wheel
Maximum radial runout limit	0.3 (0.012)	0.5 (0.020)
Maximum lateral runout limit	0.3 (0.012)	0.8 (0.031)