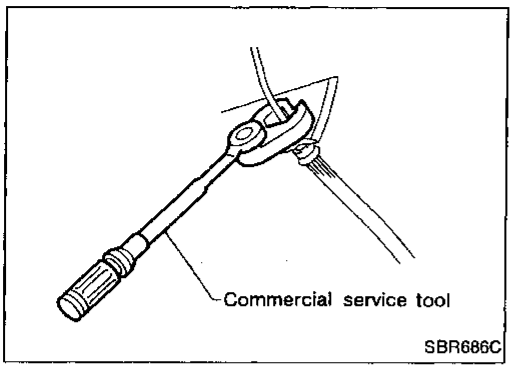
REAR AXLE & REAR SUSPENSION

SECTION **RA**

GI MA EM LC EC FE AT PD FA RA BR ST RS BT HA EL IDX

CONTENTS

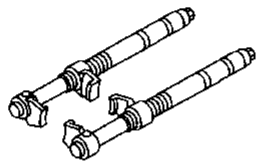
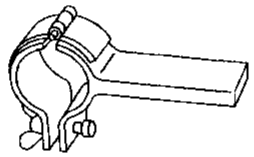
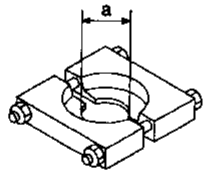
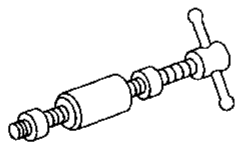
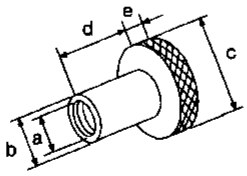
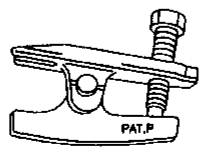


Precautions

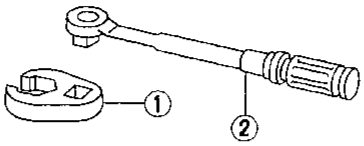
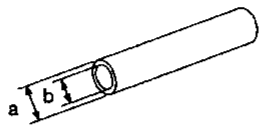
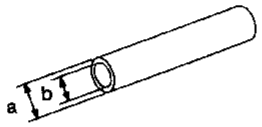
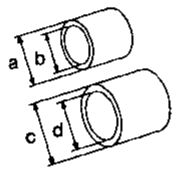
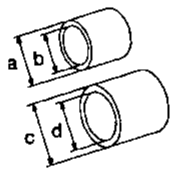
- **When installing rubber parts, final tightening must be carried out under unladen condition* with tires on ground.**
  *** Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.**
- **Use flare nut wrench when removing or installing brake lines.**
- **After installing removed suspension parts, check wheel alignment and adjust if necessary.**
- **Always torque brake lines when installing.**
- **Do not jack up at the lower arm.**

Special Service Tools

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

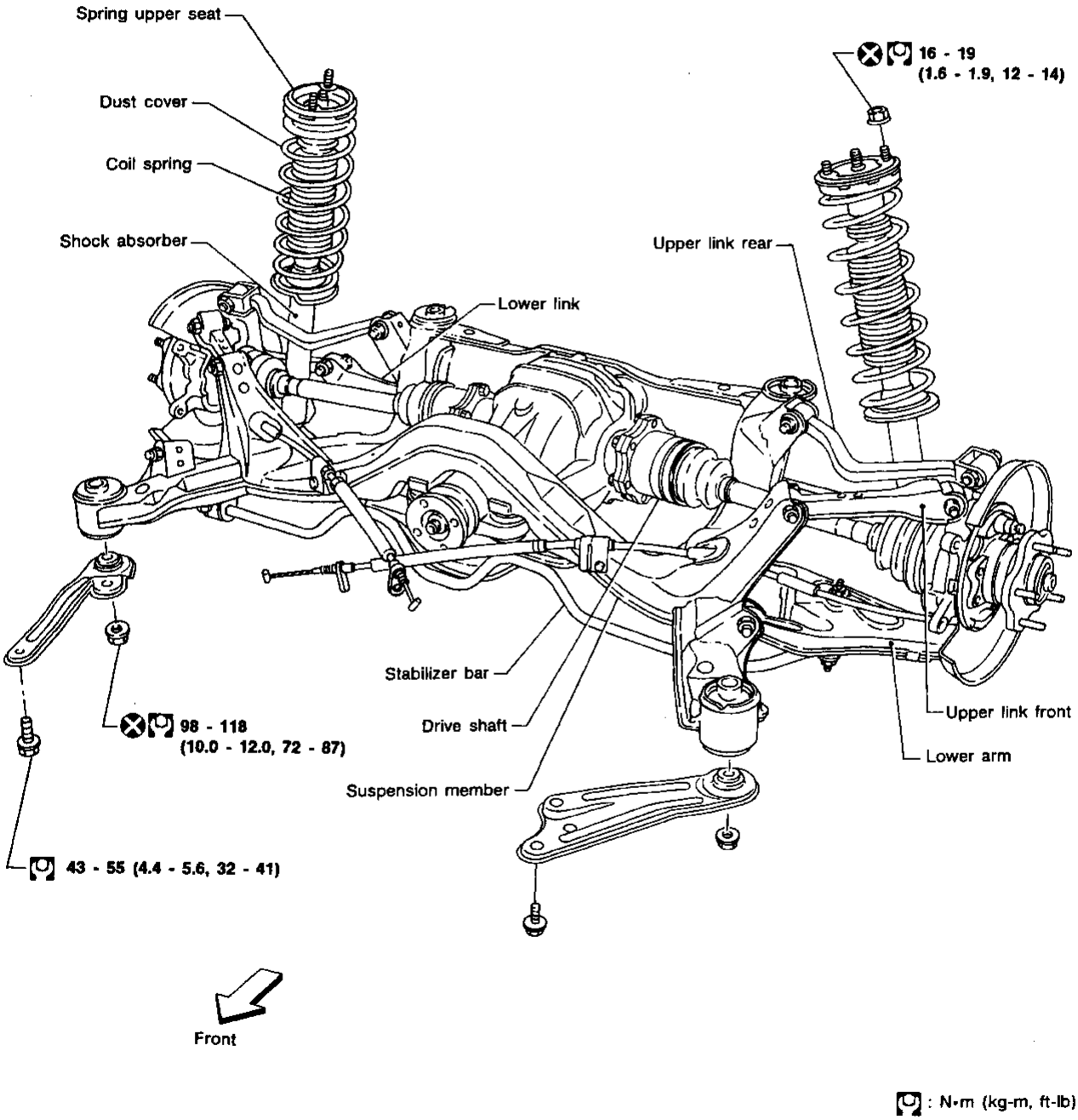
Tool number (Kent-Moore No.) Tool name	Description	
HT71780000 (—) Spring compressor	 NT144	Removing and installing coil spring
ST35652000 (—) Shock absorber attachment	 NT145	Fixing strut assembly
ST30031000 (J22912-01) Bearing puller	 NT412	Removing inner race of wheel bearing **a: 50 mm (1.97 in) dia.**
ST38280000 (—) Arm bushing remover	 NT157	Removing and installing rear axle housing bushing
IM23600800 (—) Attachment	 NT148	Measure rear wheel alignment **a: Screw M24 x 1.5** **b: 35 mm (1.38 in) dia.** **c: 65 mm (2.56 in) dia.** **d: 56 mm (2.20 in)** **e: 12 mm (0.47 in)**
HT72520000 (J25730-A) Ball joint remover	 NT146	Removing lower ball joint

Commercial Service Tools

Tool name	Description	
① Flare nut crows foot ② Torque wrench	 NT223	Removing and installing each brake piping
Rear wheel bearing drift	 NT065	Installing wheel bearing **a: 76 mm (2.99 in) dia.** **b: 68.5 mm (2.697 in) dia.**
Rear drive shaft plug seal drift	 NT065	Installing rear drive shaft plug seal **a: 78 mm (3.07 in) dia.** **b: 72 mm (2.83 in) dia.**
Rear axle housing ball joint drift	 NT164	Removing ball joint **a: 28 mm (1.10 in) dia.** **b: 20 mm (0.79 in) dia.** **c: 43 mm (1.69 in) dia.** **d: 40 mm (1.57 in) dia.**
Rear axle housing ball joint drift	 NT164	Installing ball joint **a: 43 mm (1.69 in) dia.** **b: 33 mm (1.30 in) dia.** **c: 40 mm (1.57 in) dia.** **d: 30 mm (1.18 in) dia.**

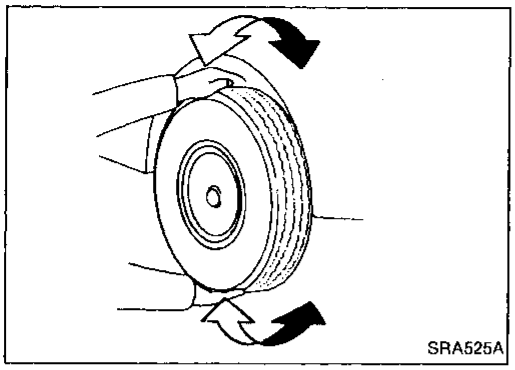
SEC. 380•396•430•431

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.



: N•m (kg-m, ft-lb)

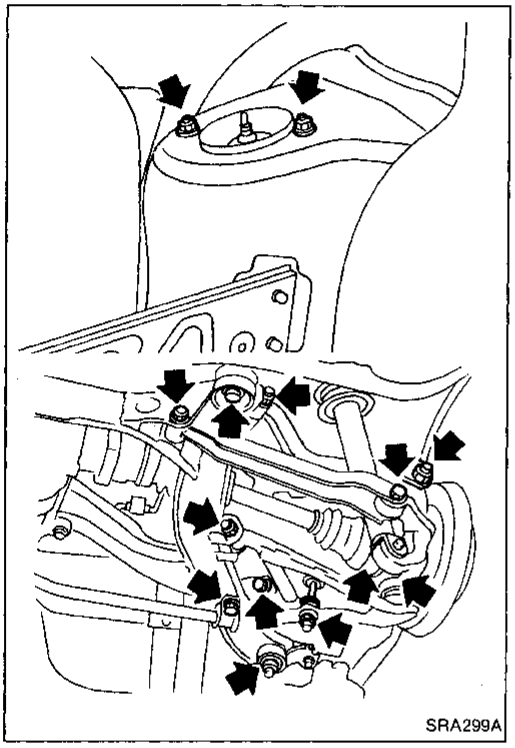
SRA648AB


SRA525A

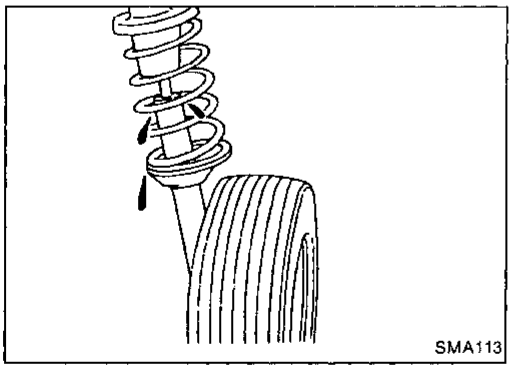
Rear Axle and Rear Suspension Parts

Check axle and suspension parts for excessive play, wear or damage.

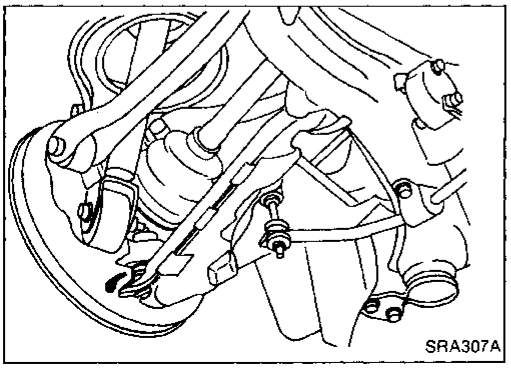
- Shake each rear wheel to check for excessive play.


SRA299A

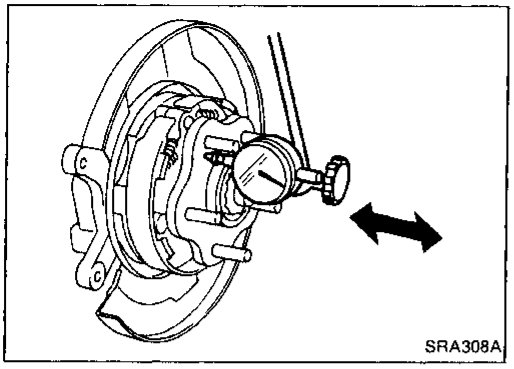
- Retighten all nuts and bolts to the specified torque.
  Tightening torque:
  Refer to drawing in REAR SUSPENSION (RA-21).
- Make sure that cotter pin is inserted.


SMA113

- Check shock absorber for oil leakage or other damage.
- Check wheelarch height. Refer to Front Axle and Front Suspension Parts of ON-VEHICLE SERVICE in FA section.


SRA307A

- Check suspension ball joint for grease leakage and ball joint dust cover for cracks or other damage.

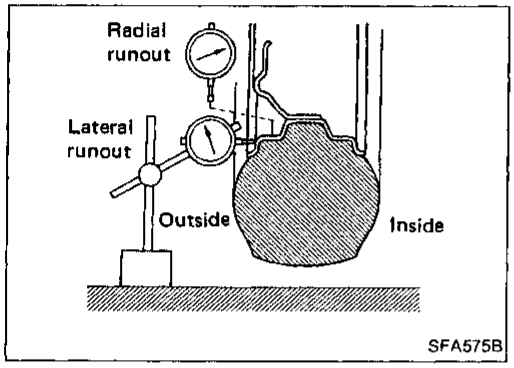


Rear Wheel Bearing

- Check wheel bearings for smooth operation.
- 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 REAR AXLE — Wheel Hub and Axle Housing (RA-10).



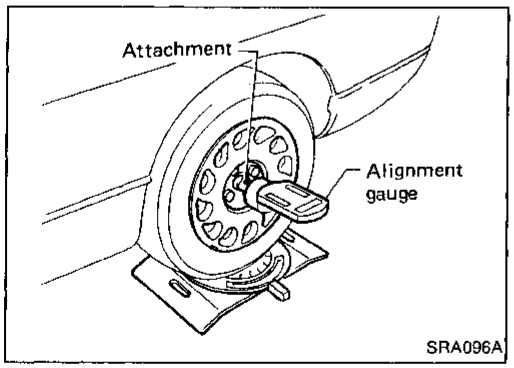
Rear Wheel Alignment

Before checking rear wheel alignment, be sure to make a preliminary inspection.

PRELIMINARY INSPECTION

Make the following checks. Adjust, repair or replace if necessary.

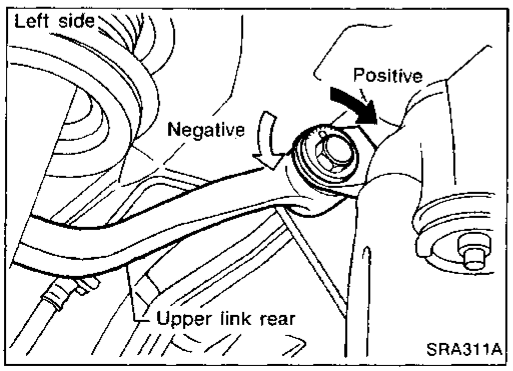
- Check tires for wear and for proper inflation.
- Check rear wheel bearings for excessive play.
- Check wheel runout.
  Refer to SDS in FA section.
- Check that rear shock absorber works properly.
- Check rear axle and rear suspension parts for excessive play.
- Check vehicle posture (Unladen).
  ("Unladen": Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.)



CAMBER

- **Measure camber of both right and left wheels with a suitable alignment gauge and adjust in accordance with the following procedures.**

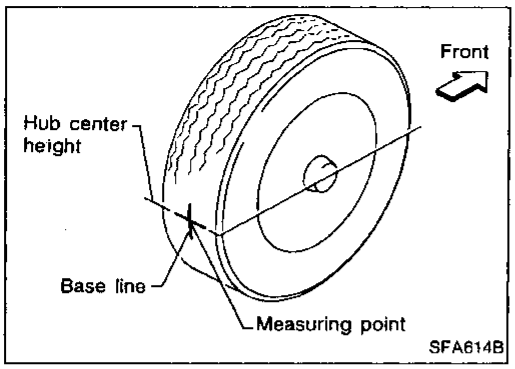
Camber:
Refer to SDS (RA-30).

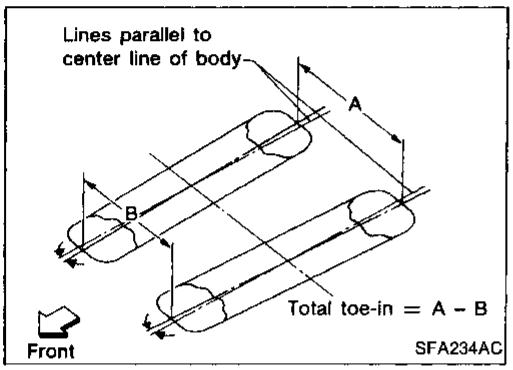


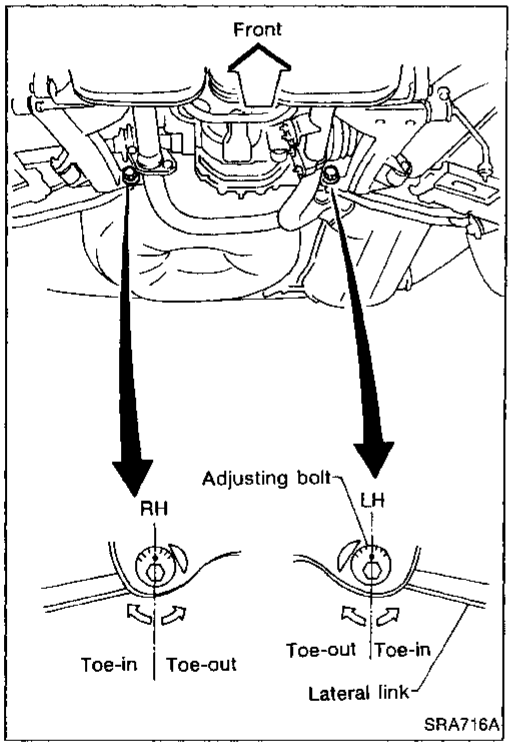
If camber is not within specification, adjust by turning the adjusting bolt.

a. Turn the adjusting bolt to adjust.
   Camber changes about 5′ with each graduation of the adjusting bolt.
b. Tighten to the specified torque.
   [O]: 69 - 88 N·m
   (7.0 - 9.0 kg-m, 51 - 65 ft-lb)

Rear Wheel Alignment (Cont'd)







TOE-IN

Measure toe-in using following procedure. If out of specification, inspect and replace any damaged or worn rear suspension parts.

WARNING:

- **Always perform following procedure on a flat surface.**
- **Make sure that no person is in front of the vehicle before pushing it.**

1. Bounce rear of vehicle up and down to stabilize the posture.
2. Push the vehicle straight ahead about 5 m (16 ft).
3. Put a mark on base line of the tread (rear side) of both tires at the same height of hub center. This mark is a measuring point.
4. Measure distance "A" (rear side).
5. Push the vehicle slowly ahead to rotate the wheels 180 degrees (1/2 turn).

If the wheels have rotated more than 180 degrees (1/2 turn), try the above procedure again from the beginning. Never push vehicle backward.

6. Measure distance "B" (front side).
   Total toe-in:
   Refer to SDS (RA-30).
7. Adjust toe-in by turning adjusting bolts.

Toe changes about 1.5 mm (0.059 in) [One side] with each graduation of the adjusting bolt.

8. Tighten to the specified torque.
   69 - 88 N·m
   (7.0 - 9.0 kg-m, 51 - 65 ft-lb)

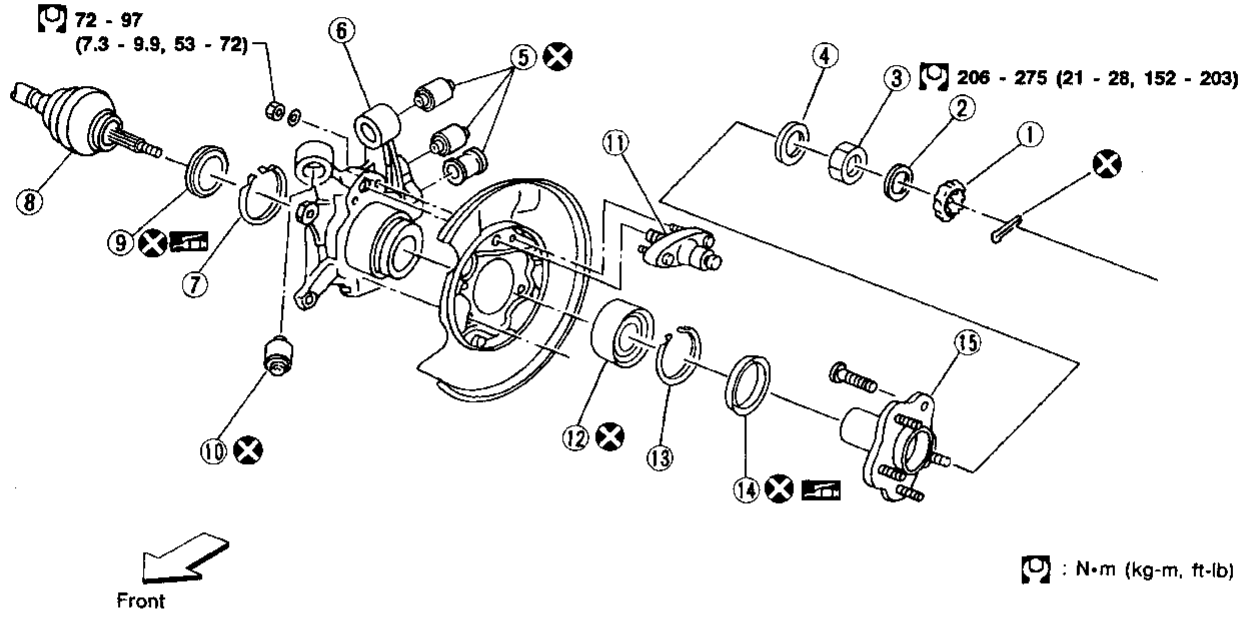
Drive Shaft

Check boot and drive shaft for cracks, wear, damage or grease leakage.

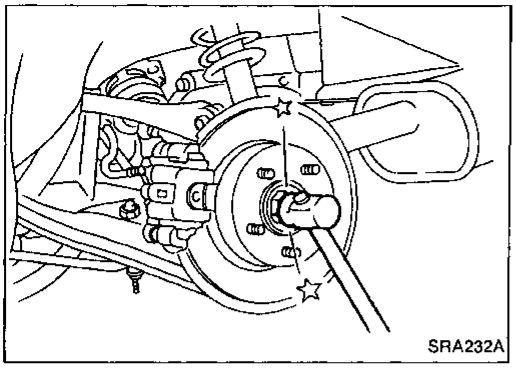
SEC. 396•430

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.**



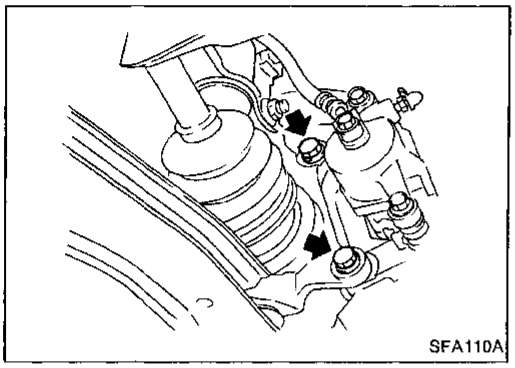
① Adjusting cap
② Insulator
③ Wheel bearing lock nut
④ Washer
⑤ Bushing
⑥ Axle housing
⑦ Snap ring
⑧ Drive shaft
⑨ Grease seal
⑩ Bushing
⑪ Brake anchor pin
⑫ Wheel bearing
⑬ Snap ring
⑭ Grease seal
⑮ Wheel hub


SRA232A

Removal

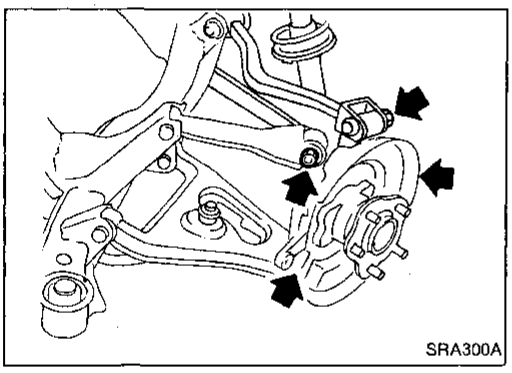
- Remove wheel bearing lock nut.
- Separate drive shaft from axle housing by lightly tapping it. If it is hard to remove use puller.

When removing drive shaft, cover boots with shop towel to prevent them from being damaged.

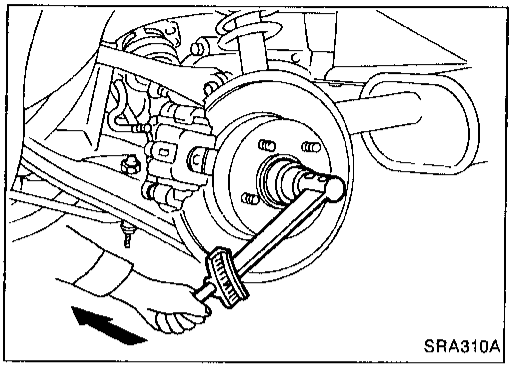

SFA110A

- Remove brake caliper assembly and rotor.

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

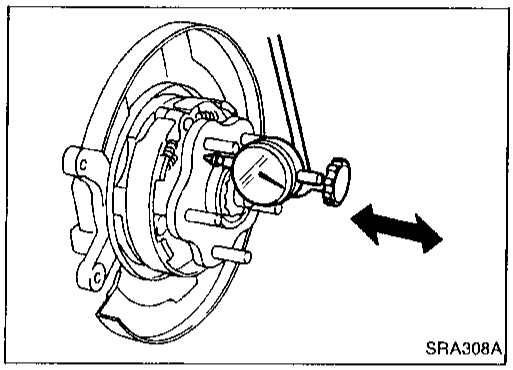

SRA300A

- Remove axle housing.


SRA310A

Installation

- Install axle housing with wheel hub.
- Tighten wheel bearing lock nut.
  Before tightening, apply oil to threaded portion of rear spindle and both sides of plain washer.
  : 206 - 275 N·m
  (21 - 28 kg-m, 152 - 203 ft-lb)

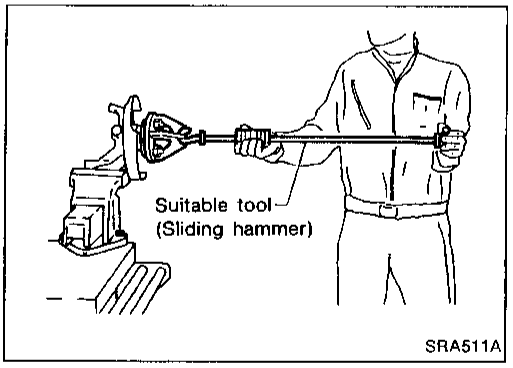

SRA308A

- Check wheel bearing axial end play.
  Axial end play: 0.05 mm (0.0020 in) or less
- Make sure that wheel bearings operate smoothly.
- Check toe-in — Refer to ON-VEHICLE SERVICE (RA-7).

Disassembly

CAUTION:
Wheel bearing does not require maintenance. If any of the following symptoms are noted, replace wheel bearing assembly.

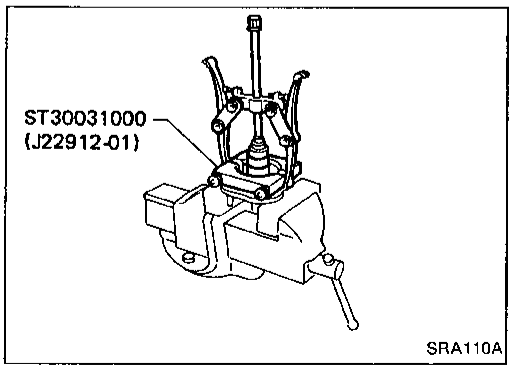
- **Growling noise is emitted from wheel bearing during operation.**
- **Wheel hub bearing drags or turns roughly. This occurs when turning hub by hand after bearing lock nut is tightened to specified torque.**
- **After wheel bearing is removed from hub.**



SRA511A

WHEEL BEARING

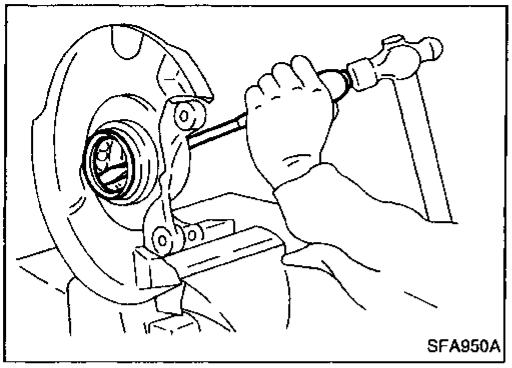
- Remove wheel hub from axle housing using a suitable tool.



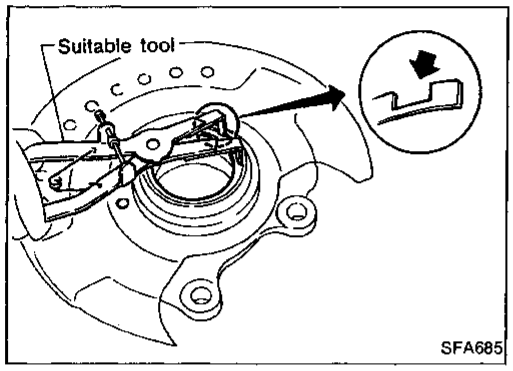
SRA110A

- Remove inner race from hub using a bearing replacer/puller.

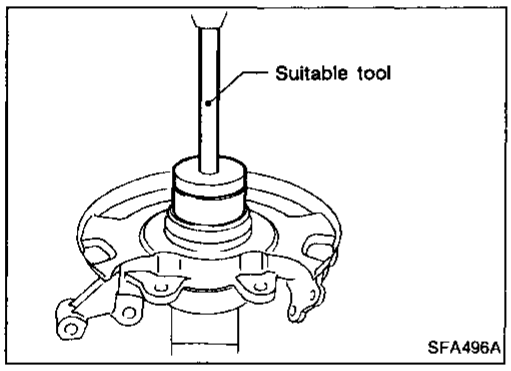
Disassembly (Cont'd)



- Remove grease seal from axle housing.

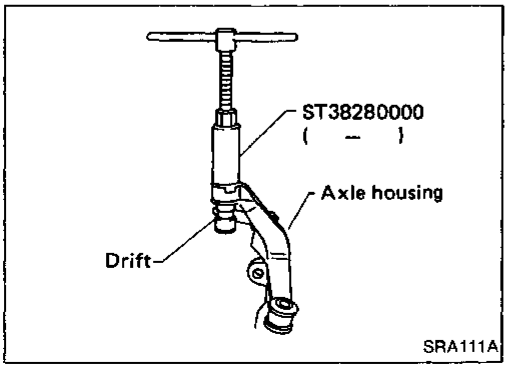


- Remove snap ring.



- Press out bearing outer race.

CAUTION:
Do not reuse old inner race although it is of the same brand as the bearing assembly.

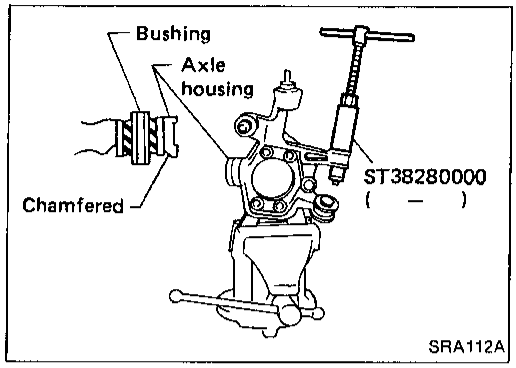


AXLE HOUSING

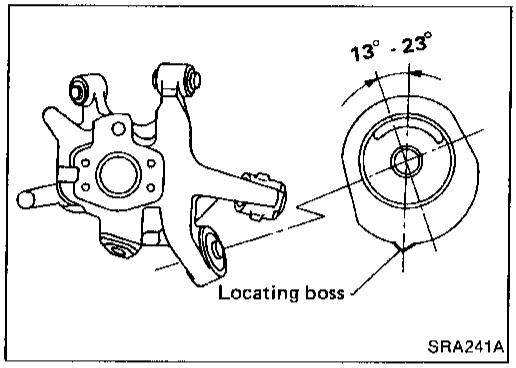
- Attach a drift on outer shell of bushing as shown in figure at left, remove bushing using arm bushing remover.

When placing axle housing in a vise, use wooden blocks or copper plates as pads.

Disassembly (Cont'd)



- Ensure axle housing bore is free from scratches or deformities before pressing bushing into it.
- Attach bushing to chamfered bore end of axle housing and press it until it is flush with end face of axle housing.



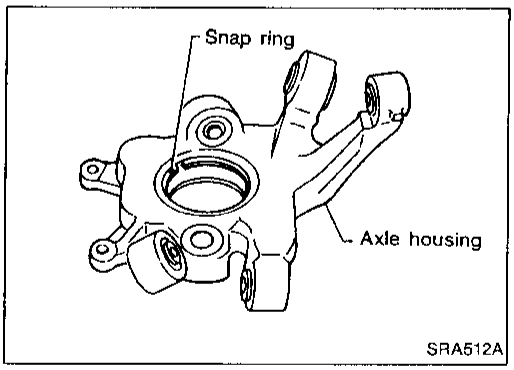
- When installing shock absorber bushing, make sure that it is positioned as shown.

Inspection

WHEEL HUB AND AXLE HOUSING

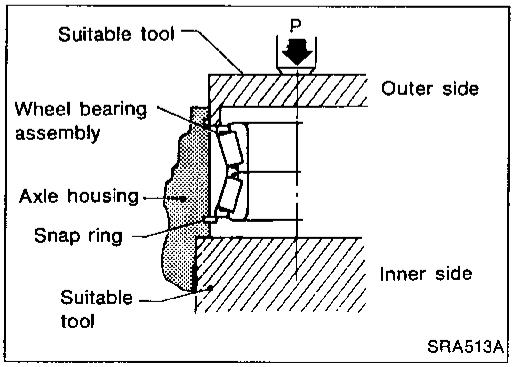
- Check wheel hub and axle housing for cracks by using a magnetic exploration or dyeing test.
- Check wheel bearing for damage, seizure, rust or rough operation.
- Check rubber bushing for wear or other damage.
- Check snap ring for wear or cracks.

Replace if necessary.



Assembly

1. Install snap ring into groove of axle housing.

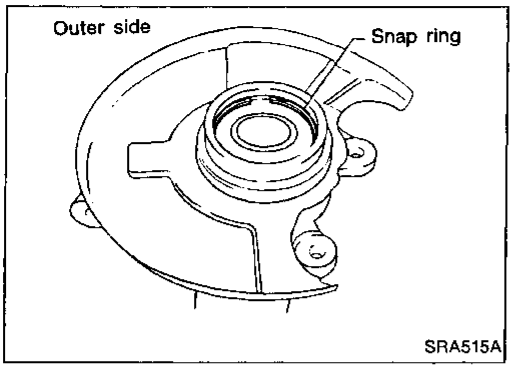


2. Press new wheel bearing assembly into axle housing. Press only on outer race of wheel bearing assembly.
   Maximum load P:
   29 kN (3 ton, 3.3 US ton, 3.0 Imp ton)

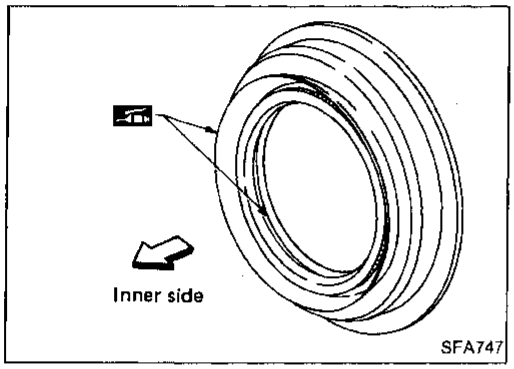
CAUTION:

- **Do not press inner race of wheel bearing assembly.**
- **Do not apply oil or grease to mating surfaces of wheel bearing outer race and axle housing.**
- **Before pressing, check for correct bearing grease seal orientation, as inner and outer seals are different.**

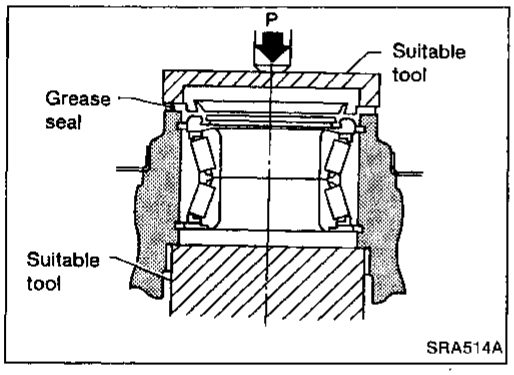
Assembly (Cont'd)



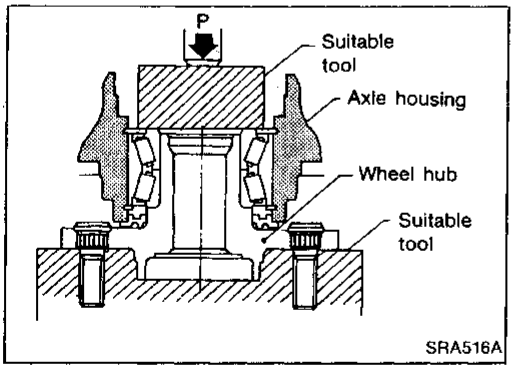
- Install snap ring.



- Pack grease seal lip with multi-purpose grease.



- Install outer grease seal.

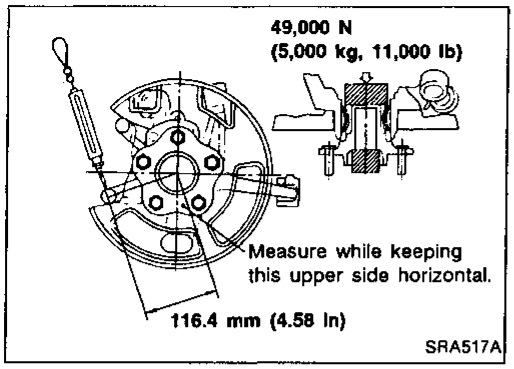


- Press wheel hub into axle housing with suitable tool.

Maximum load P:
29 kN (3 ton, 3.3 US ton, 3.0 Imp ton)

Be careful not to damage grease seal.

Assembly (Cont'd)



With wheel hub pressed into axle housing, apply 49,000 N (5,000 kg, 11,000 lb) to wheel hub and rotate both clockwise and counterclockwise 10 times to minimize resistance.

Attach spring scale in the position shown at left and pull at a rate of 10 rpm to measure rotating torque.

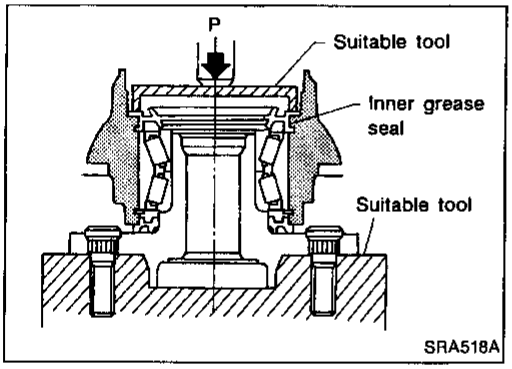
Load:
49,000 N (5,000 kg, 11,000 lb)

Rotating torque:
0.2 - 2.4 N·m (2.3 - 24.3 kg-cm, 2.0 - 21.1 in-lb)

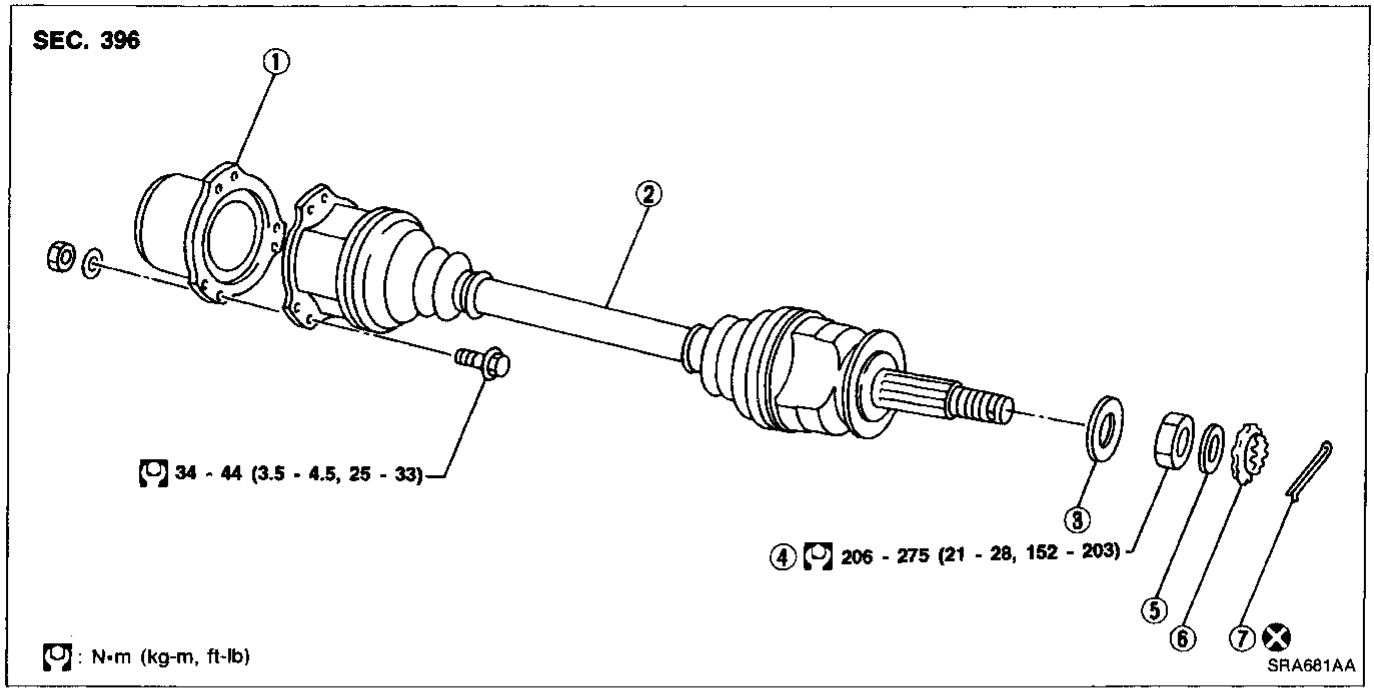
Spring scale reading:
2.0 - 20.6 N (0.2 - 2.1 kg, 0.4 - 4.6 lb)

If measured value is outside specifications, replace wheel bearing.

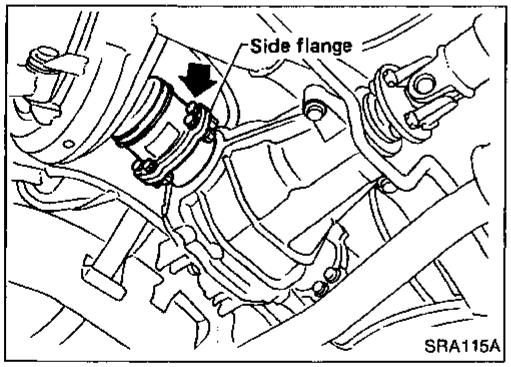
Also make sure axial play does not exist in wheel hub when a 49,000 N (5,000 kg, 11,000 lb) load is applied.



- Install inner grease seal.



① Side flange
② Drive shaft
③ Plain washer
④ Wheel bearing lock nut
⑤ Insulator
⑥ Adjusting cap
⑦ Cotter pin

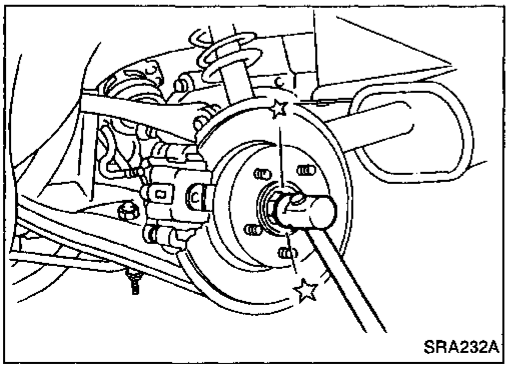


Removal

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

FINAL DRIVE SIDE

Remove side flange mounting bolt and separate shaft.



WHEEL SIDE

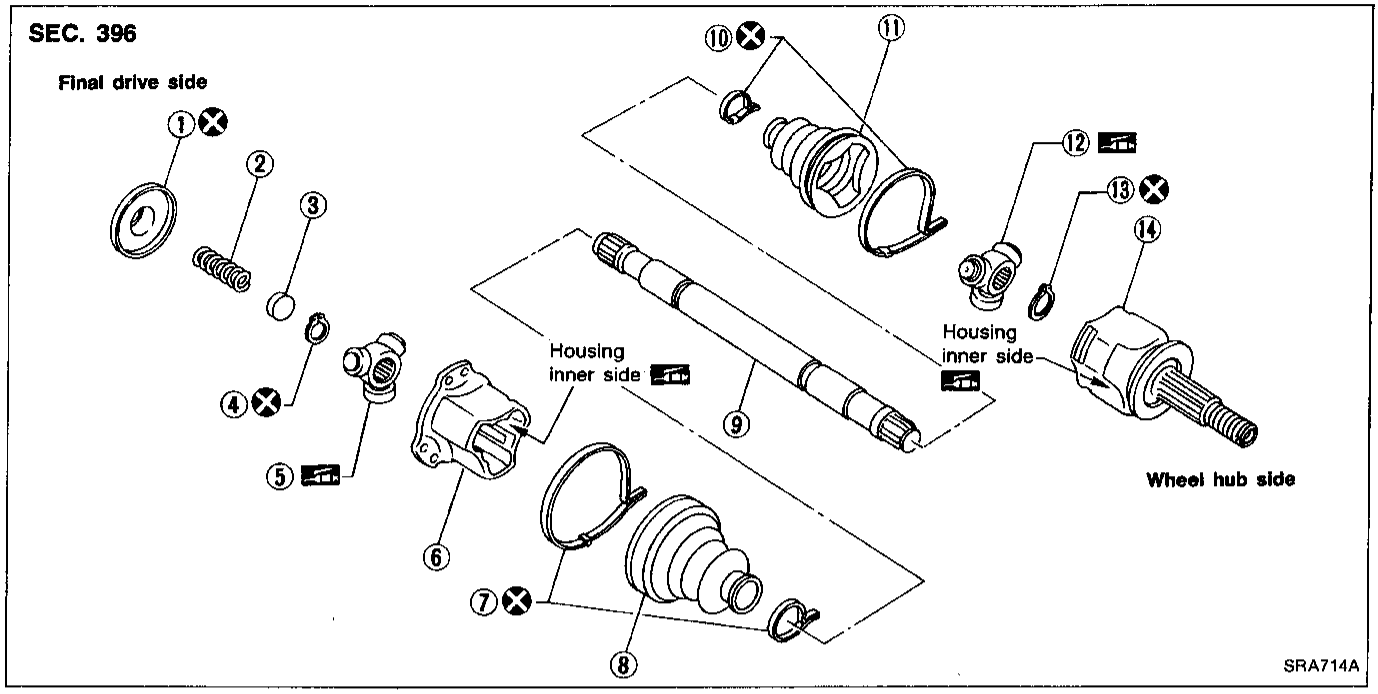
Remove drive shaft by lightly tapping it with a copper hammer. If it is hard to remove, use puller.

To avoid damaging threads of drive shaft, install a nut while removing drive shaft.

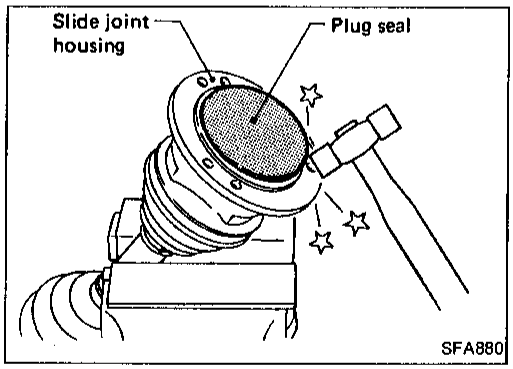
Installation

1. Insert drive shaft from wheel hub and temporarily tighten wheel bearing lock nut.
2. Tighten side flange mounting bolts to specified torque.
3. Tighten wheel bearing lock nut to specified torque.

Components



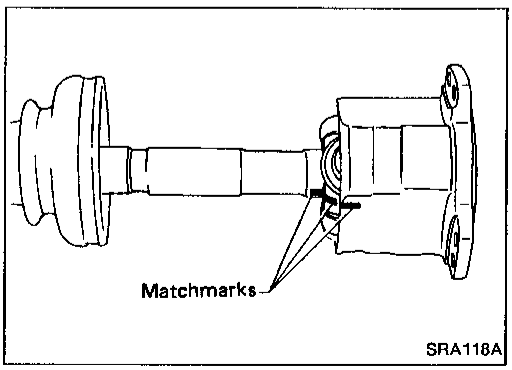
① Plug seal
② Spring
③ Spring cap
④ Snap ring
⑤ Spider assembly
⑥ Slide joint housing
⑦ Boot band
⑧ Boot
⑨ Drive shaft
⑩ Boot band
⑪ Boot
⑫ Spider assembly
⑬ Snap ring
⑭ Housing with shaft



Disassembly

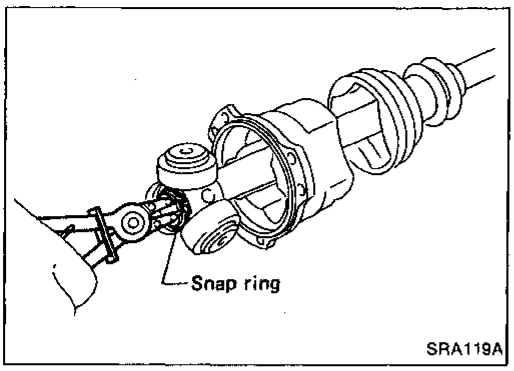
FINAL DRIVE SIDE

1. Remove plug seal from slide joint housing by lightly tapping around slide joint housing.



2. Remove boot bands.
3. Put matchmarks on slide joint housing and drive shaft before separating joint assembly.
4. Put matchmarks on spider assembly and drive shaft.

Disassembly (Cont'd)

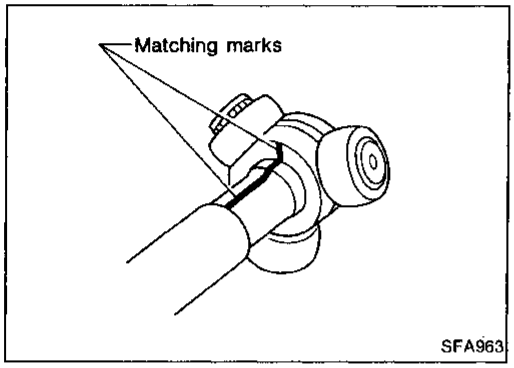


5. Pry off snap ring, then remove spider assembly.

CAUTION:
Do not disassemble spider assembly.

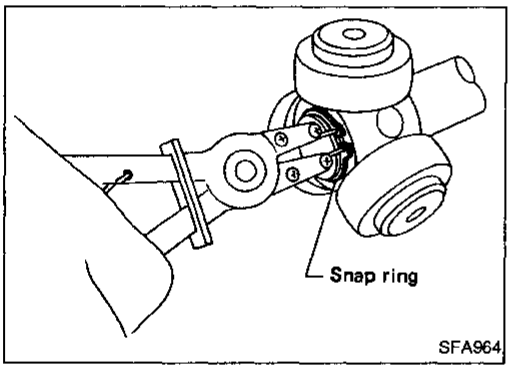
6. Draw out slide joint housing.
7. Draw out boot.

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



WHEEL SIDE

1. Remove boot bands.
2. Put matchmarks on housing together with shaft and drive shaft before separating joint assembly.
3. Put matchmarks 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.

Inspection

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

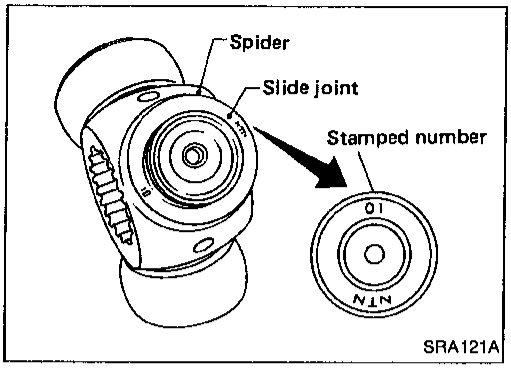
DRIVE SHAFT

Replace drive shaft if it is twisted or cracked.

BOOT

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

Inspection (Cont'd)



JOINT ASSEMBLY

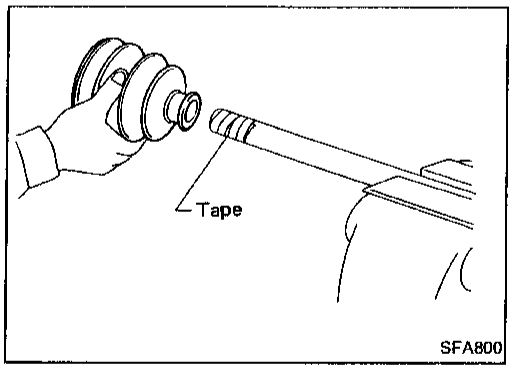
- Check spider assembly for bearing, roller and washer damage. Replace spider assembly if necessary.
- Check housing for any damage. Replace housing set and spider assembly, if necessary.
- When replacing only spider assembly, select a new spider assembly from among those listed in table below. Ensure the number stamped on sliding joint is the same as that stamped on new part.

Housing alone cannot be replaced. It must be replaced together with spider assembly.

Stamped number	Part No.
00	39720 10V10
01	39720 10V11
02	39720 10V12

Assembly

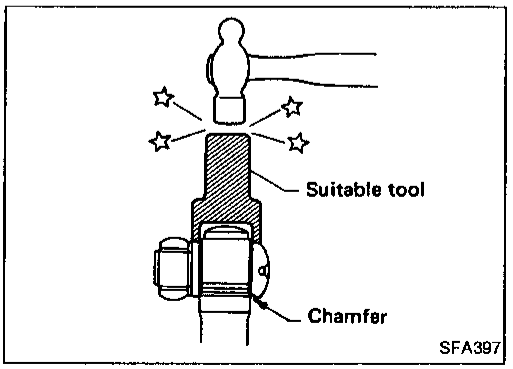
- **After drive shaft has been assembled, ensure it moves smoothly over its entire range without binding.**
- **Use NISSAN GENUINE GREASE or equivalent after every overhaul.**



WHEEL SIDE

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

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

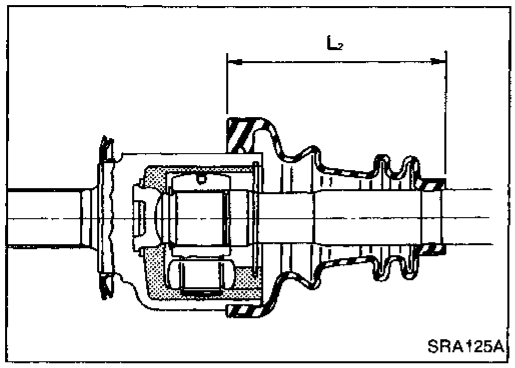


2. Install spider assembly securely, making sure marks are properly aligned.

Press-fit with spider assembly serration chamfer facing shaft.

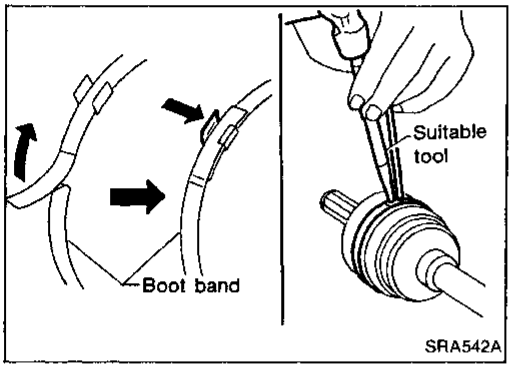
3. Install new snap ring.

Assembly (Cont'd)



4. Pack drive shaft with specified amount of grease.
   Specified amount of grease:
   115 - 125 g (4.06 - 4.41 oz)
5. Install slide joint housing, then install new snap ring.
6. Set boot so that it does not swell and deform when its length is "L_2".
   Length "L_2":
   95 - 97 mm (3.74 - 3.82 in)

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

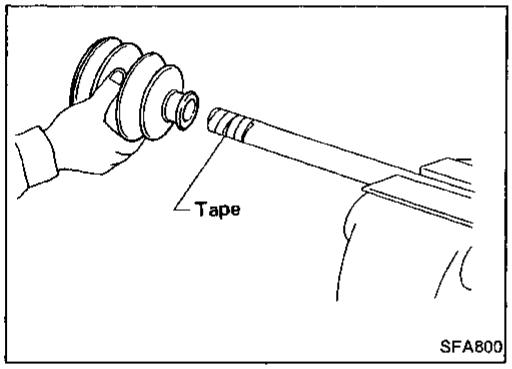


7. Lock new larger and smaller boot bands securely with a suitable tool.

FINAL DRIVE SIDE

1. Install new small boot band, boot and slide joint housing to drive shaft.

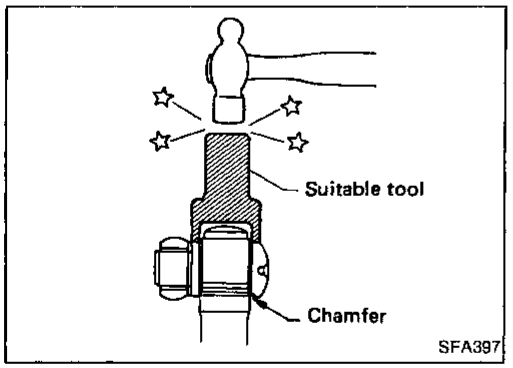
Cover drive shaft serration with tape to prevent damage to boot during installation.



2. Install spider assembly securely, making sure marks are properly aligned.

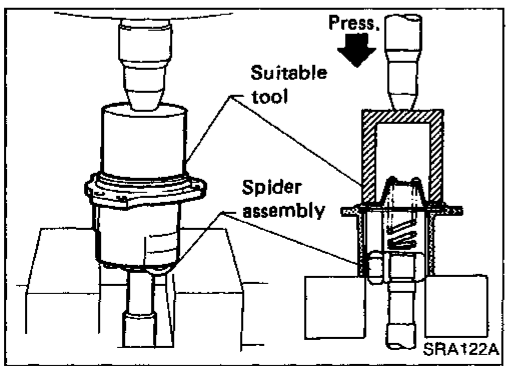
Press-fit with spider assembly serration chamfer facing shaft.

3. Install new snap ring.



4. Install coil spring, spring cap and new plug seal to slide joint housing. Press plug seal.

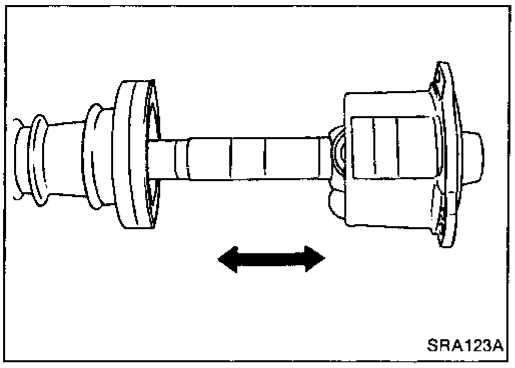
Apply sealant to mating surface of plug seal.



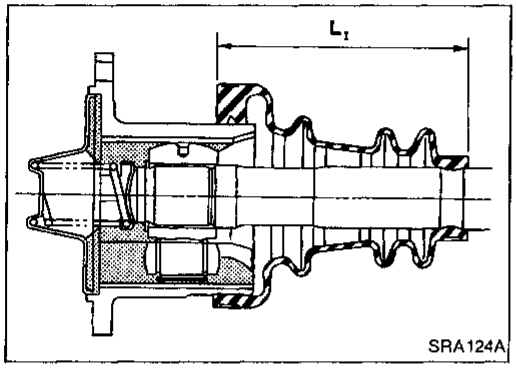
CAUTION:

a. When pressing plug seal into place, hold it horizontally. This prevents spring inside it from tilting or falling down.

Assembly (Cont'd)

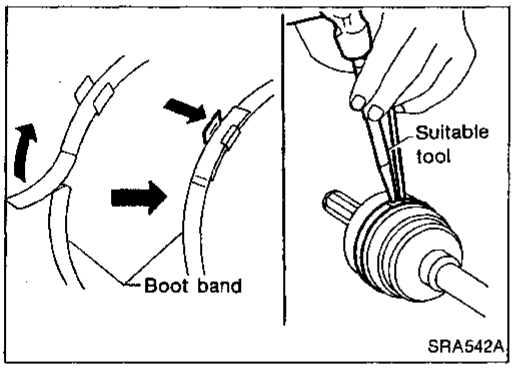


b. Move shaft in axial direction to ensure that spring is installed properly. If shaft drags or if spring is not properly installed, replace plug seal with a new one.



5. Pack drive shaft with specified amount of grease.
   Specified amount of grease:
   102 - 107 g (3.60 - 3.77 oz)
6. Set boot so that it does not swell and deform when its length is "L_1".
   Length "L_1":
   95 - 97 mm (3.74 - 3.82 in)

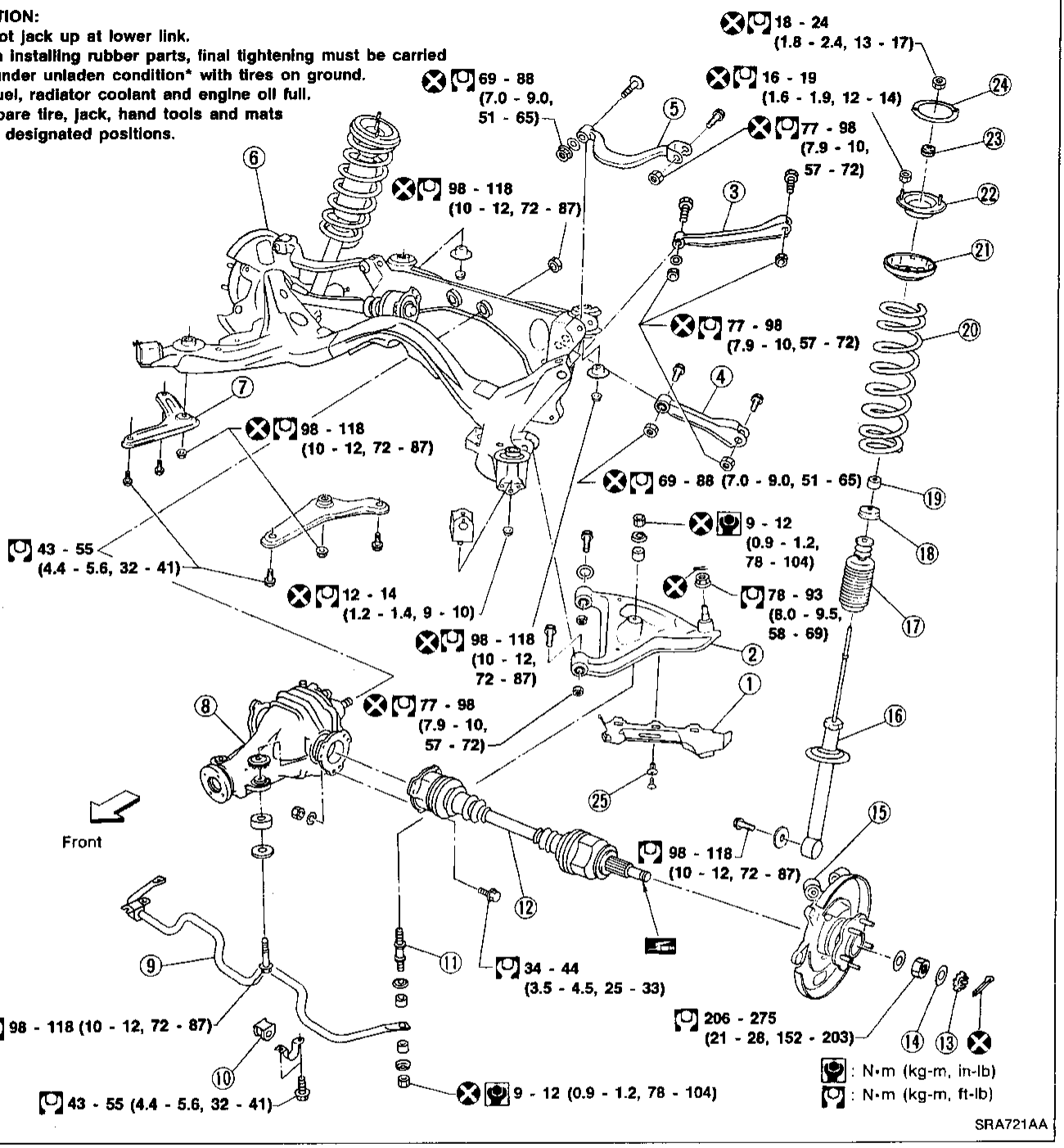
Make sure that boot is properly installed on the drive shaft groove.



7. Lock new larger boot band securely with a suitable tool, then lock new smaller boot band.

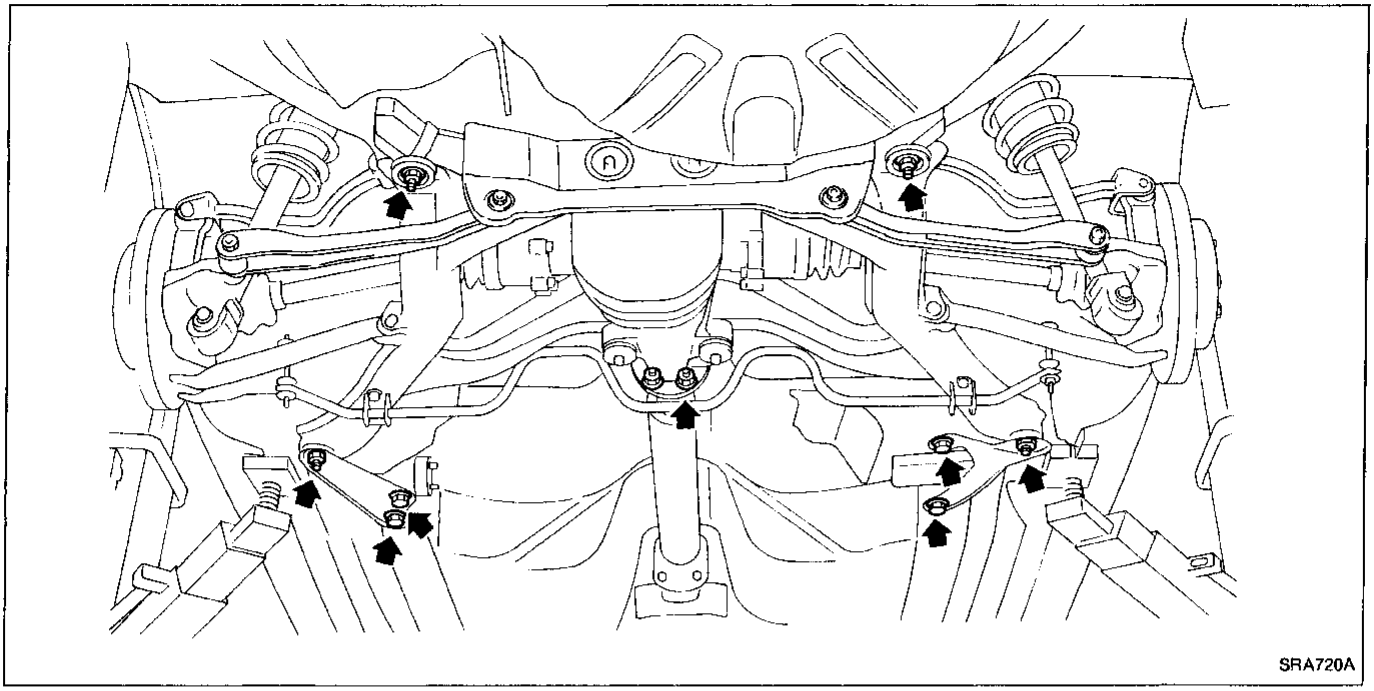
SEC. 380•396•430•431

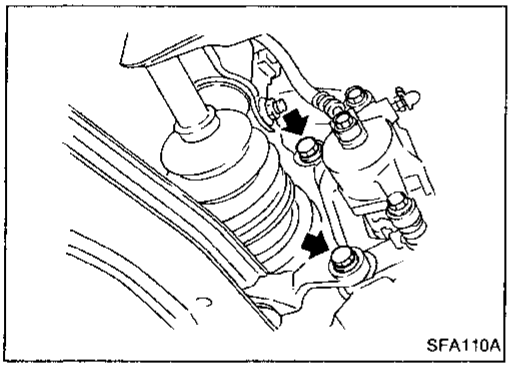
CAUTION:
Do not jack up at lower link.
When installing rubber parts, final tightening must be carried out under unladen condition* with tires on ground.
*** Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.**



① Protector
② Lower link
③ Lateral link
④ Front upper link
⑤ Rear upper link
⑥ Suspension member
⑦ Member stay
⑧ Final drive
⑨ Stabilizer
⑩ Bushing
⑪ Connecting rod
⑫ Drive shaft
⑬ Adjusting cap
⑭ Insulator
⑮ Axle housing
⑯ Shock absorber
⑰ Bound bumper
⑱ Plate
⑲ Bushing
⑳ Coil spring
㉑ Upper rubber seat
㉒ Upper spring seat
㉓ Bushing
㉔ Gasket
㉕ Clip

Removal and Installation

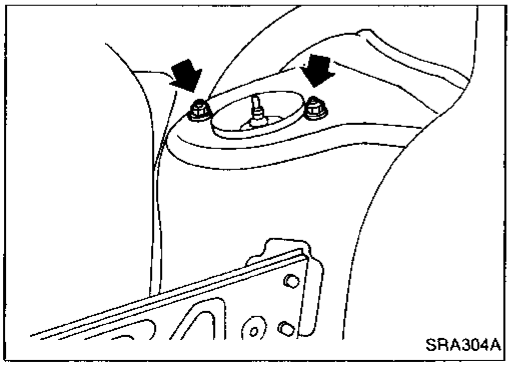




CAUTION:
Before removing the rear suspension assembly, disconnect the ABS wheel sensor from the assembly. Then move it away from the rear suspension assembly.
Failure to do so may result in the sensor wires being damaged and the sensor becoming inoperative.

- Remove exhaust tube.
- Disconnect propeller shaft rear end.
- Disconnect hand brake wire front end.
- Remove brake caliper assembly.

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



- Remove upper end nuts of shock absorber.

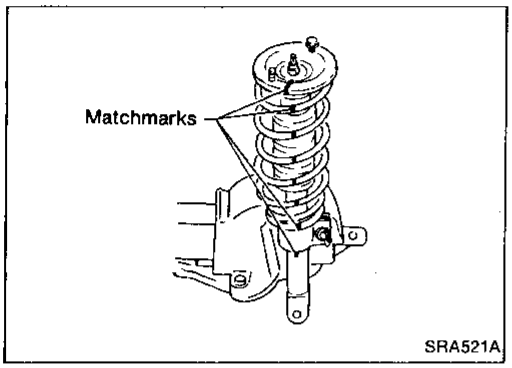
Do not remove piston rod lock nut.

- Remove suspension member fixing nuts. Then draw out rear axle and rear suspension assembly.

Removal

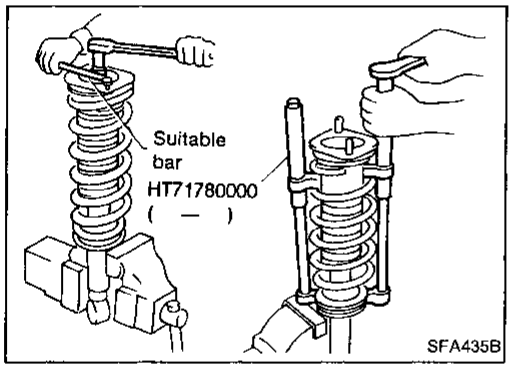
Remove shock absorber upper and lower fixing nuts.

Do not remove piston rod lock nut on vehicle.



Disassembly

- Put matchmarks on coil spring and shock absorber.



1. Set shock absorber in vise with attachment, then **loosen** piston rod lock nut.

Do not remove piston rod lock nut at this time.

2. Compress spring with Tool so that the shock absorber upper spring seat can be turned by hand.
3. Remove piston rod lock nut.

Inspection

SHOCK ABSORBER ASSEMBLY

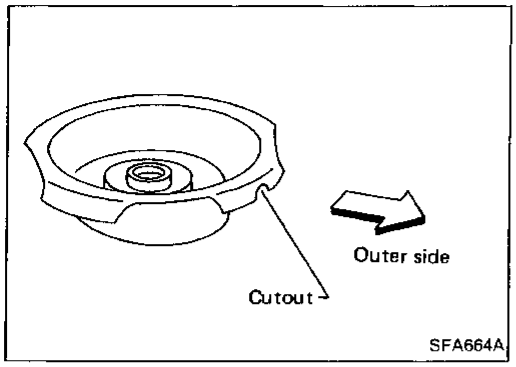
- Check for smooth operation through a full stroke, both compression and extension.
- Check for oil leakage occurring on welded or gland packing portions.
- Check piston rod for cracks, deformation or other damage. Replace if necessary.

UPPER RUBBER SEAT AND BUSHING

Check rubber parts for deterioration or cracks. Replace if necessary.

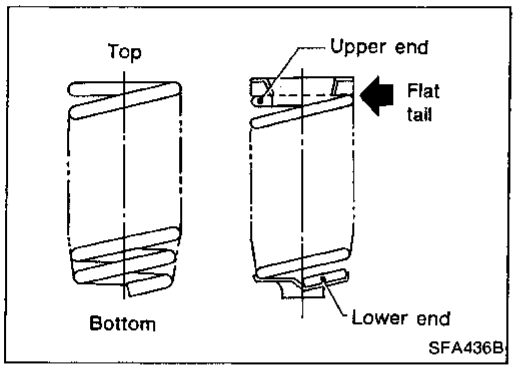
COIL SPRING

Check for cracks, deformation or other damage. Replace if necessary.

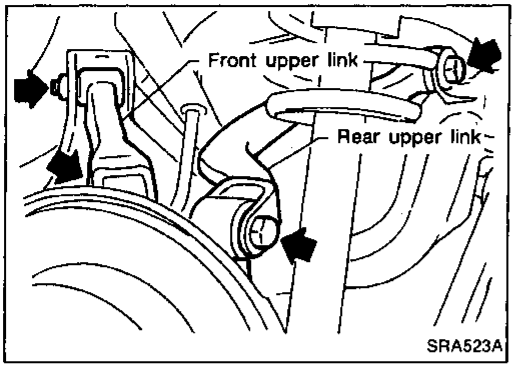


Assembly

- Install upper spring seat with its cutout facing the outer side of vehicle.

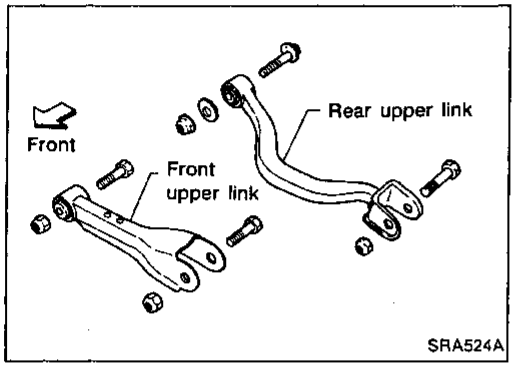


- When installing coil springs, be careful not to reverse top and bottom direction. (Top end is flat.)
- When installing coil spring on shock absorber, it must be positioned as shown in figure at left.

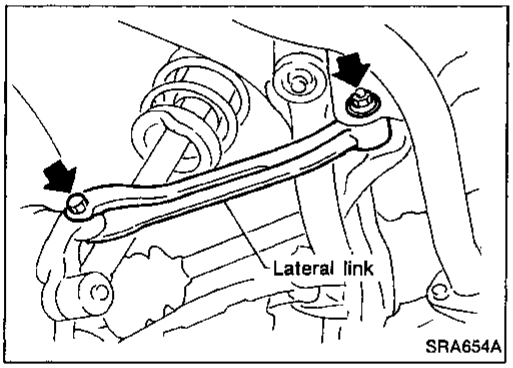


Removal and Installation

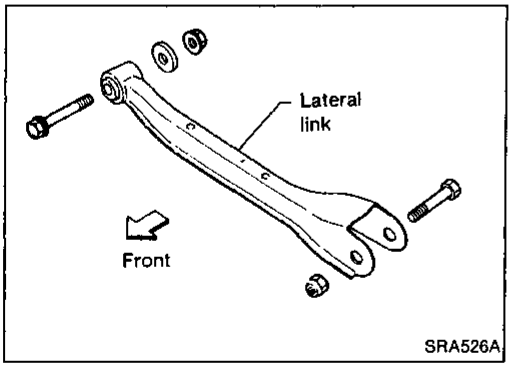
- Remove upper link.



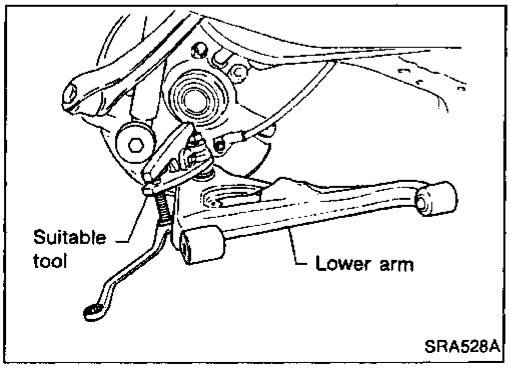
- Install upper link.



- Remove lateral link.

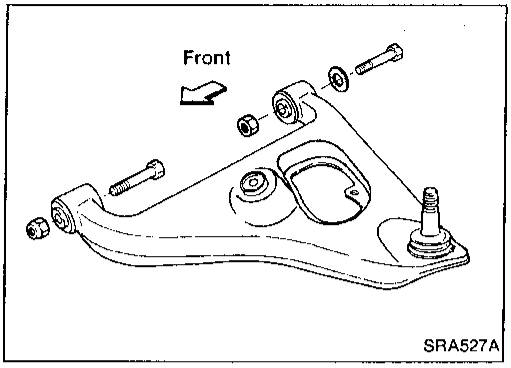


- Install lateral link.

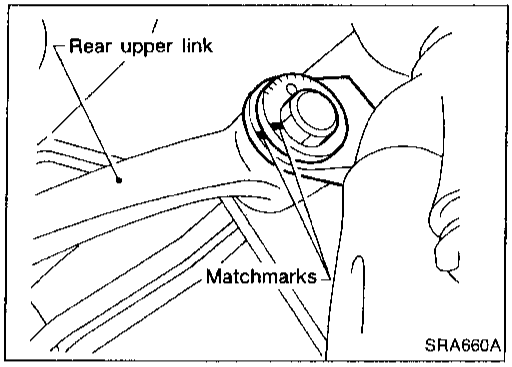


- Remove lower arm.

Removal and Installation (Cont'd)

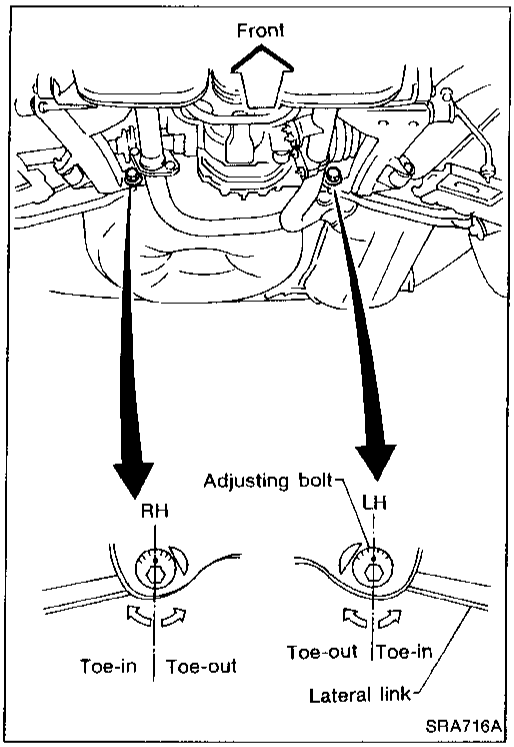


- Install lower arm.



Before removing, put matchmarks on adjusting bolt.

- When installing, final tightening must be done under unladen condition with tires on ground.



- After installation, check wheel alignment. Refer to Rear Wheel Alignment in ON-VEHICLE SERVICE (RA-6).

Inspection

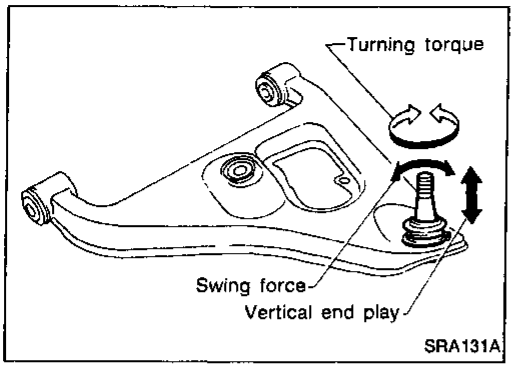
REAR SUSPENSION MEMBER

Replace suspension member assembly if cracked or deformed or if any part (insulator, for example) is damaged.

UPPER, LOWER AND LATERAL LINKS

Replace upper, lower or lateral link as required if cracked or deformed or if bushing is damaged.

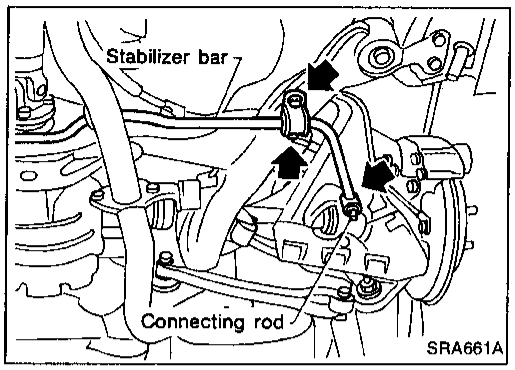
Inspection (Cont'd)



SUSPENSION LOWER BALL JOINT

- Measure swing force, turning torque and vertical end play in axial direction. (Use same measurement procedures as that of FA section.)
- If ball stud is worn, play in axial direction is excessive, or joint is hard to swing, replace lower arm.

Ball joint specifications	Swing force	7.8 - 54.9 N (0.8 - 5.6 kg, 1.8 - 12.3 lb)
	Turning torque	0.5 - 3.4 N·m (5 - 35 kg-cm, 4.3 - 30.4 in-lb)
	Vertical end play	0 mm (0 in)

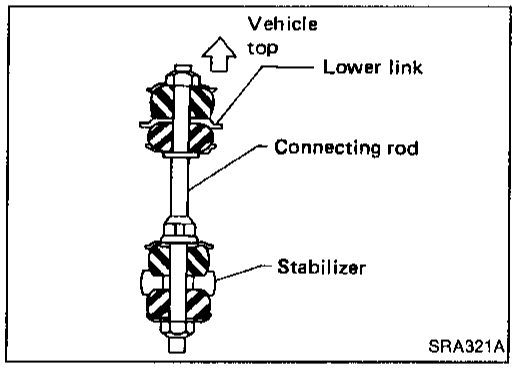


Removal

Remove connecting rod and clamp.

Inspection

- Check stabilizer bar for deformation or cracks. Replace if necessary.
- Check rubber bushings for deterioration or cracks. Replace if necessary.



Installation

When installing connecting rod, make sure direction is correct (as shown at left).

General Specifications

COIL SPRING

Applied model	Standard	Option
Wire diameter mm (in)	12.3 (0.484)	12.6 (0.496)
Coil outer diameter mm (in)		
Small	103.1 (4.06)	116.0 (4.57)
Large	119.3 (4.70)	132.2 (5.20)
Free length mm (in)	430.0 (16.93)	410.0 (16.14)
Spring constant N/mm (kg/mm, lb/in)	19.6 (2.0, 112)	21.6 (2.2, 123)
Identification color	Red x 2, Orange x 1	White x 1, Purple x 2

SHOCK ABSORBER

Applied model	All
Piston rod diameter mm (in)	12.5 (0.492)
Damping force [at 0.3 m (1.0 ft)/sec.] N (kg, lb)	
Expansion	706 - 961 (72 - 98, 159 - 216)
Compression	255 - 392 (26 - 40, 57 - 88)

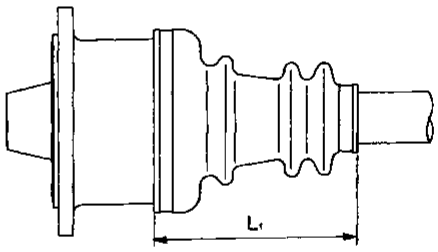
STABILIZER BAR

Applied model	Standard	Option
Diameter mm (in)	19.1 (0.752)	17.3 (0.681)

DRIVE SHAFT

Joint type	
Final drive side	TS82F
Wheel side	TS82C
Grease	Nissan genuine grease or equivalent
Specified amount of grease g (oz)	
Final drive side	102 - 107 (3.60 - 3.77)
Wheel side	115 - 125 (4.06 - 4.41)
Boot length mm (in)	
Final drive side (L_1)	95 - 97 (3.74 - 3.82)
Wheel side (L_2)	

Final drive side



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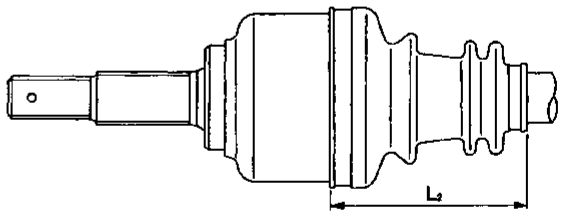
Wheel side



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Inspection and Adjustment

WHEEL ALIGNMENT (Unladen*)

Camber	Minimum	−1°30′ (−1.50°)
Degree minute (Decimal degree)	Nominal	−1°00′ (−1.00°)
	Maximum	−0°30′ (−0.50°)
Total toe-in	Minimum	0 (0)
Distance (A–B) mm (in)	Nominal	2 (0.08)
	Maximum	4 (0.16)
Angle (left plus right)	Minimum	0′ (0.00°)
Degree minute (Decimal degree)	Nominal	14′ (0.23°)
	Maximum	28′ (0.47°)

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

WHEEL BEARING

Wheel bearing axial end play mm (in)	0.05 (0.0020) or less
Wheel bearing lock nut Tightening torque N·m (kg-m, ft-lb)	206 - 275 (21 - 28, 152 - 203)

WHEEL RUNOUT (Radial and lateral)

Wheel type		Radial runout	Lateral runout
Aluminum wheel	mm (in)	0.3 (0.012) or less	

LOWER BALL JOINT

Swing force (Measuring point: cotter pin hole of ball stud)	N (kg, lb)	7.8 - 54.9 (0.8 - 5.6, 1.8 - 12.3)
Turning torque	N·m (kg-cm, in-lb)	0.5 - 3.4 (5 - 35, 4.3 - 30.4)
Vertical end play	mm (in)	0 (0)