FRONT & REAR AXLE

SECTION

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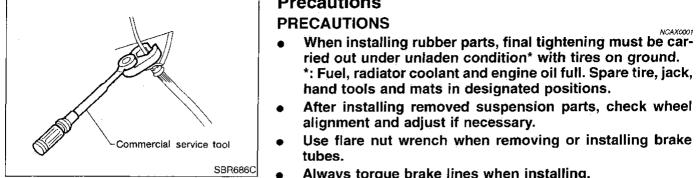
HA

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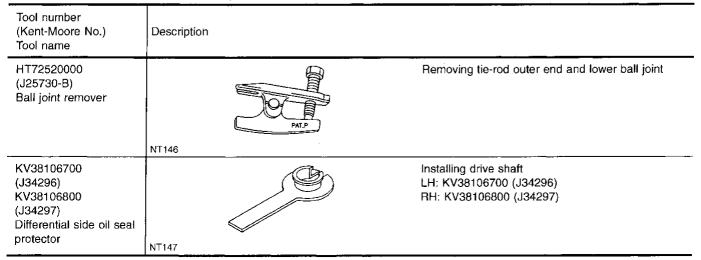
Precautions

NCAX0002

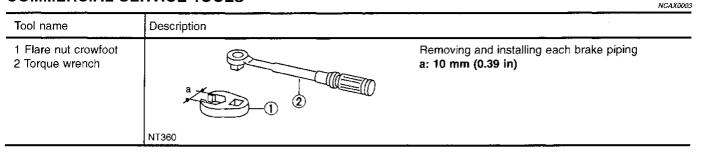
Always torque brake lines when installing. Preparation

SPECIAL SERVICE TOOLS

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



COMMERCIAL SERVICE TOOLS



	BLESHOOTI		auo	ies	100	τing	9								≐NCAX0004	G
		you find the caus	e of	the s	ymp	tom.	lf ne	ecess	sary, r	epair	or re	plac	e the	ese p	arts.	
Reference page				AX-15		AX-5, 21		AX-4, 21	Refer to DRIVE SHAFT in this chart.	Refer to AXLE in this chart.	NVH in SU section	NVH in SU section	NVH in SU section	NVH in BR section	NVH in ST section	' M E
Possible cause and SUSPECTED PARTS		Excessive joint angle	Joint sliding resistance	Imbalance	Improper installation, looseness	Parts interference	Wheel bearing damage	DRIVE SHAFT	AXLE	SUSPENSION	TIRES	ROAD WHEEL	BRAKES	STEERING	E(Fe CL	
· <u> </u>	DRIVE SHAFT	Noise, Vibration	×	×	_					×	×	×	×	×	×	AT
		Shake	×		×					х	×	×	×	×	×	
	AXLE	Noise				×	×		×		×	×	×	×	×	Aک
Symptom		Shake				×	×		×		×	×	×	×	×	- SU -
		Vibration				×	×		×		×	×			×	
		Shimmy				×	×		:		×	×	×	×	×	BR
		Judder				×					×	×	×	×	×	Con
		Poor quality ride or handling				×	×	×			×	×	×			ST
Applicable			. <u> </u>					l	I	L						RS

Noise, Vibration and Harshness (NVH)

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FRONT AXLE PARTS Check front axle and front suspension parts for excessive play, cracks, wear or other damage.

- Shake each front wheel to check for excessive play. •
- Make sure that cotter pin is inserted. •
- Retighten all axle and suspension nuts and bolts to the speci-٠ fied torque.

Tightening torque: Refer to "FRONT SUSPENSION", in SU section.

AX-3

On-vehicle Service

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SC

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(DX +

On-vehicle Service (Cont'd)

FRONT AXLE

SFA805B

FRONT WHEEL BEARING

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

Axial end play: 0.05 mm (0.0020 in) or less

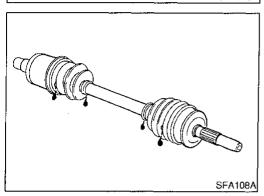
If out of specification or wheel bearing does not turn smoothly, replace wheel bearing assembly. Refer to "Wheel Hub and Knuckle", "FRONT AXLE", AX-5.

DRIVE SHAFT

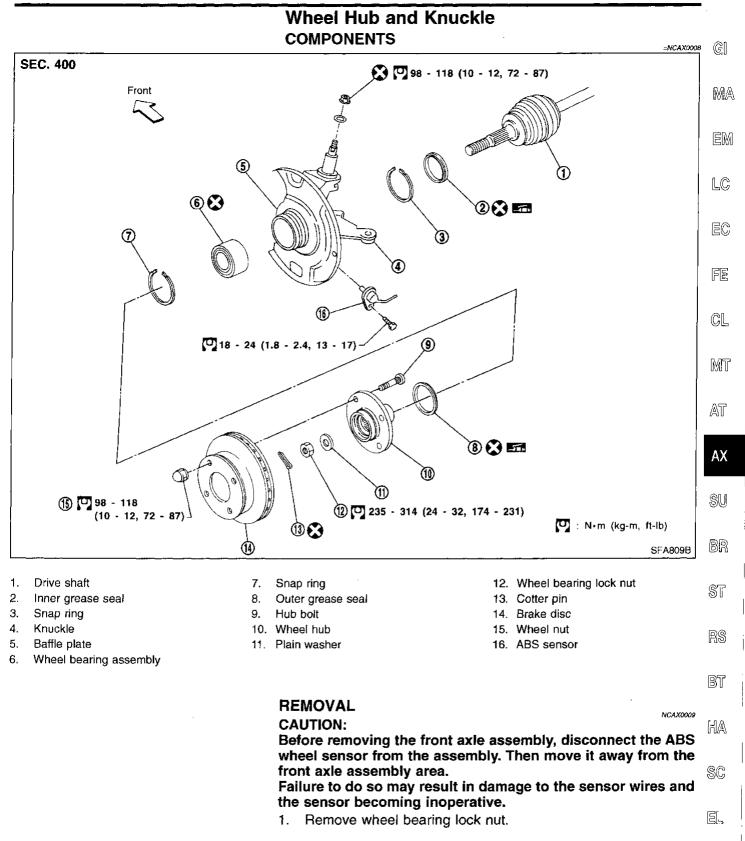
Check for grease leakage or other damage.

NCAX0007

NCAX0006



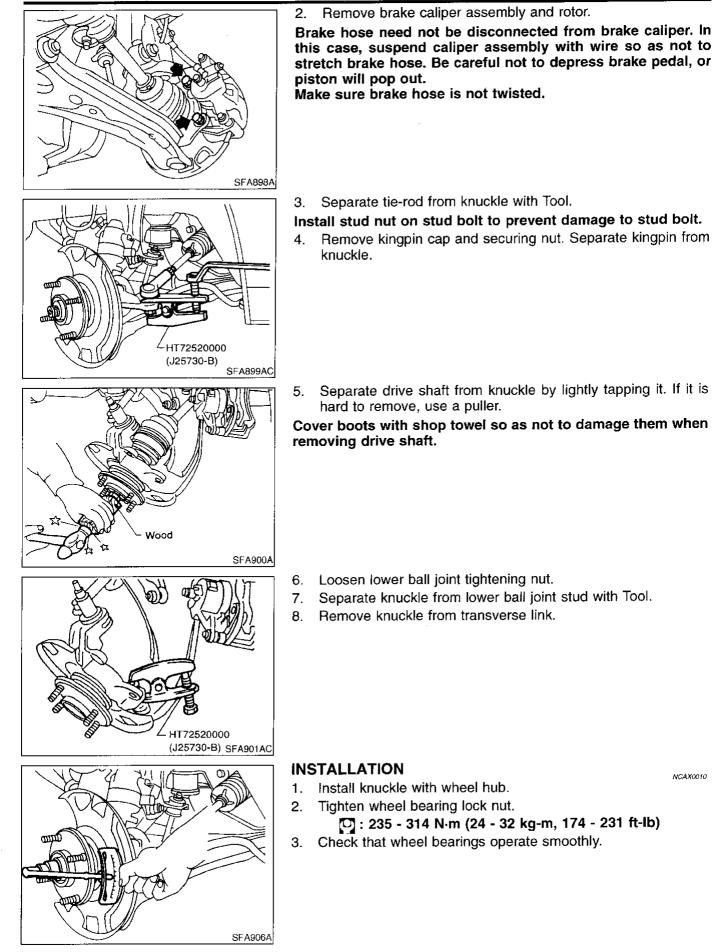
AX-4

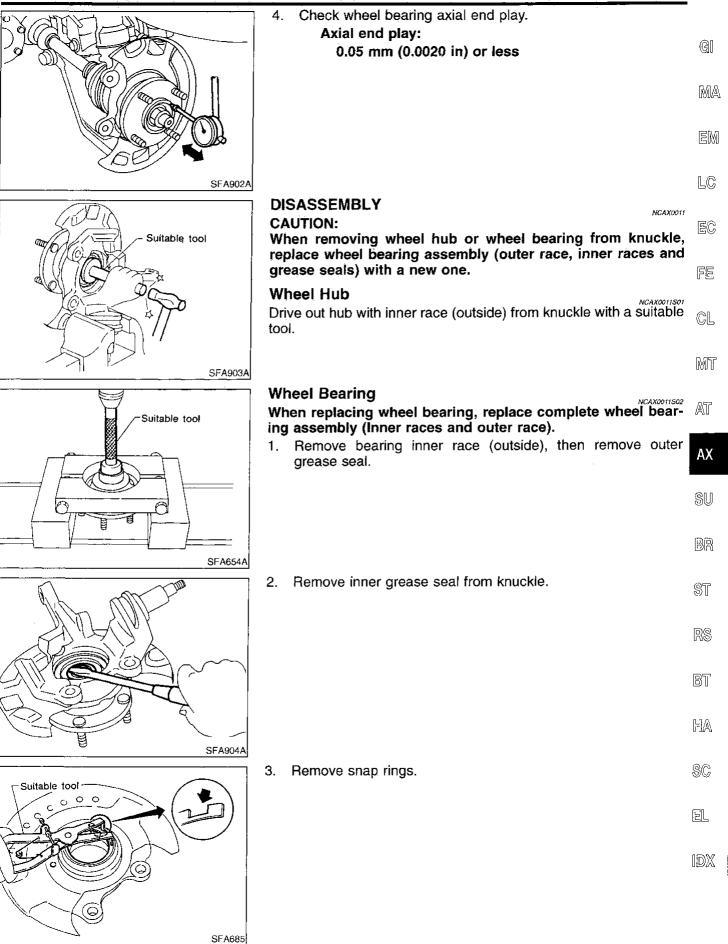


AX-5

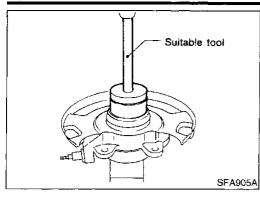
IDX

Wheel Hub and Knuckle (Cont'd)





Wheel Hub and Knuckle (Cont'd)



4. Press out bearing outer race.

INSPECTION

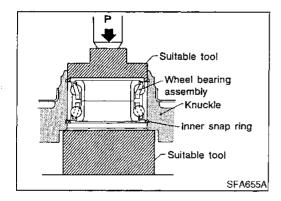
NCAX0012

NCAX0013

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.



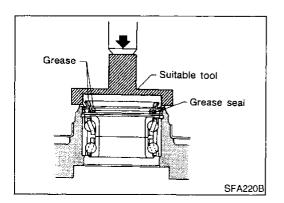
ASSEMBLY

- 1. Install inner snap ring into groove of knuckle.
- 2. Press new wheel bearing assembly into knuckle until it contacts snap ring.

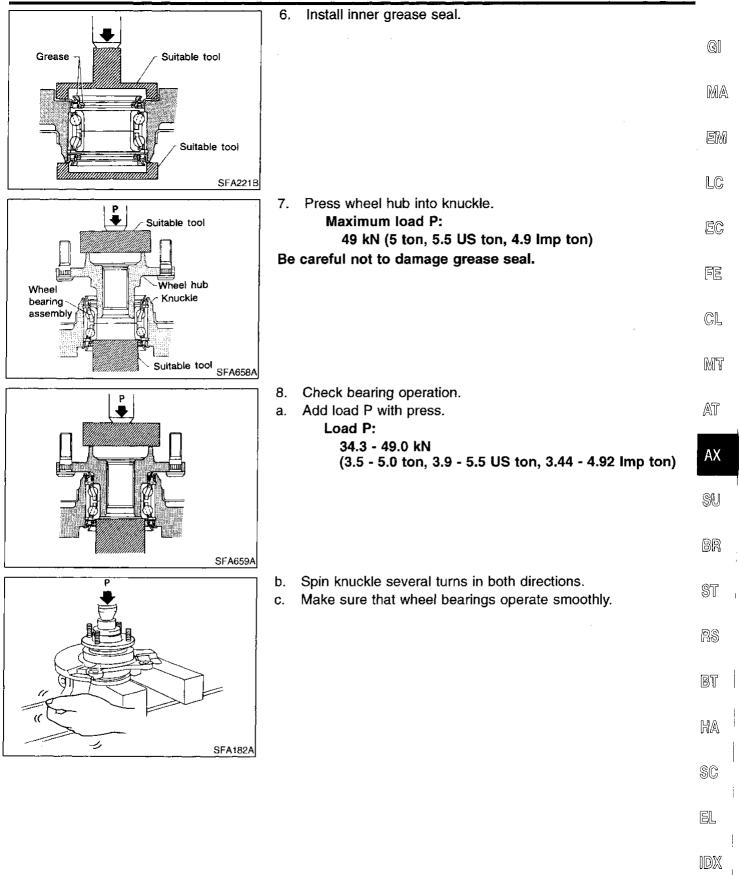
Maximum load P: 49 kN (5 ton, 5.5 US ton, 4.9 Imp ton)

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.
- 3. Install outer snap ring into groove of knuckle.



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

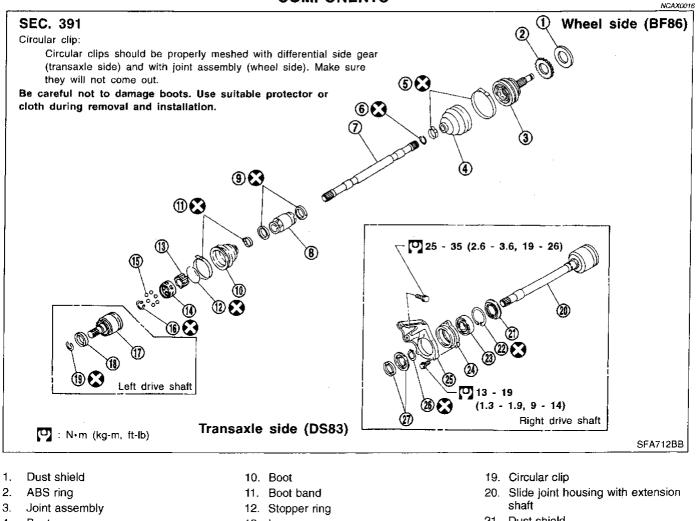


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Drive Shaft

FRONT AXLE

Drive Shaft COMPONENTS

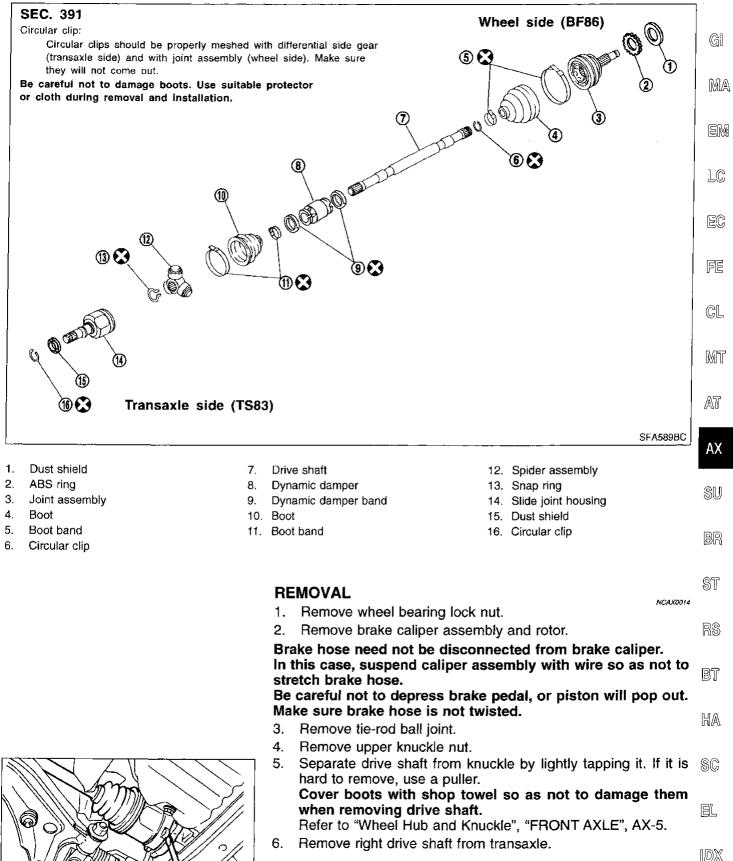


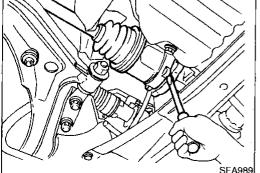
- 4. Boot
- 5. Boot band
- 6. Circular clip
- Drive shaft 7.
- 8. Dynamic damper
- 9. Dynamic damper band

- 13. Inner race
- 14. Cage
- 15. Ball
- 16. Snap ring
- 17. Slide joint housing
- 18. Dust shield

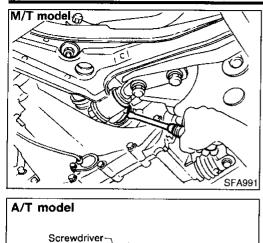
- 21. Dust shield
- 22. Snap ring
- 23. Support bearing
- 24. Support bearing retainer
- 25. Bracket
- 26. Snap ring
- 27. Dust shield

AX-10





Drive Shaft (Cont'd)

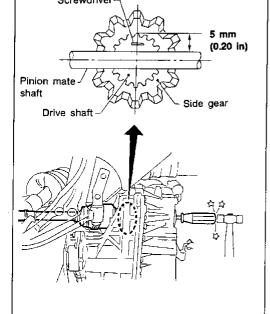


- 7. Remove left drive shaft from transaxle.
- For M/T models -
- Pry off drive shaft from transaxle as shown at left.

- For A/T models -

 Insert screwdriver into transaxle opening for right drive shaft and strike with a hammer.

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

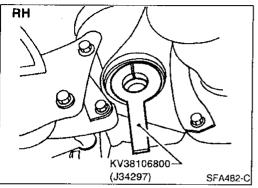


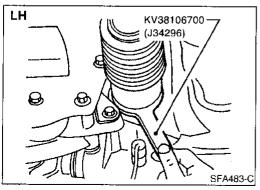
INSTALLATION

Transaxle Side

NCAX0015

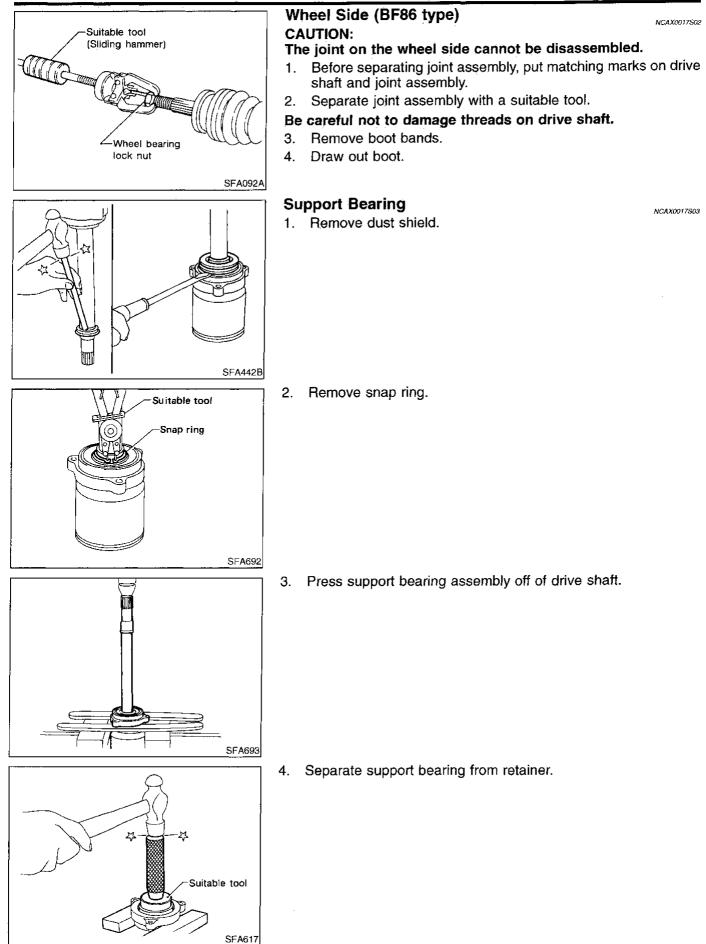
- 1. Drive a new oil seal to transaxle. Refer to MT or AT section "Replacing Oil Seal" or "Differential Side Oil Seal Replacement", "ON-VEHICLE SERVICE".
- 2. Set Tool along the inner circumference of oil seal.
- 3. Insert drive shaft into transaxle. Be sure to properly align the serrations and then 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.





Wheel Side NCAX0015S02 Install drive shaft into knuckle. GI Tighten upper knuckle nut and wheel bearing lock nut. Refer to section Installation in "Wheel Hub and Knuckle", "FRONT AXLE", AX-5. MA EM LC DISASSEMBLY NCAX0017 **Transaxle Side** EC NCAX0017S01 (DS83 type) NCAX0017S0101 1. Remove boot bands. FE Put matching marks on slide joint housing and inner race, 2. before separating joint assembly. Remove stopper ring with a screwdriver, and pull out slide joint 3. CL housing. MT SFA476 Put matching marks on inner race and drive shaft. 4. AT Remove snap ring, then remove ball cage, inner race and balls 5. as a unit. Draw out boot. 6. AX Cover drive shaft serrations with tape so as not to damage the boot. SU BR SFA514A (TS83 type) ST NCAX0017S0102 Matching marks 1. Remove boot bands. Put matching marks on slide joint housing and drive shaft 2. before separating joint assembly. RS Put matching marks on spider assembly and drive shaft. 3. BT HA SFA963 4. Remove snap ring, then remove spider assembly. SC CAUTION: Do not disassemble spider assembly. EL Draw out boot. Cover drive shaft serration with tape to prevent damage to the boot. 1DX Snap ring

SFA612

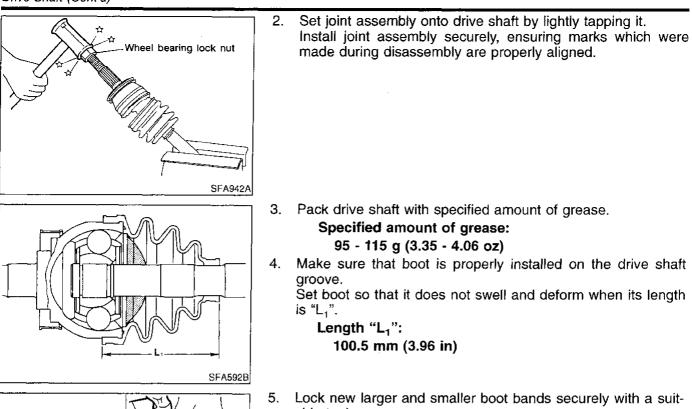


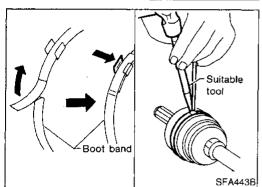
INSPECTION

Thoroughly clean all parts in cleaning solvent, and dry with compressed air. Check parts for evidence of deformation or G other damage. **Drive Shaft** MA NCAX0018S01 Replace drive shaft if it is twisted or cracked. Boot EM NCAX0018502 Check boot for fatigue, cracks or wear. Replace boot with new boot bands. LC Joint Assembly (Transaxle side) NCAX0018503 Check spider assembly for needle bearing and washer damage. Replace if necessary. (TS83 type) EC Check roller surfaces for scratches, wear or other damage. . Replace if necessary. (TS83 type) FE Replace any parts of double offset joint which show signs of • scorching, rust, wear or excessive play. (DS83 type) Check serration for deformation. Replace if necessary. CL Check slide joint housing for any damage. Replace if necessary. MT Joint Assembly (Wheel side) NCAX0018504 Replace joint assembly if it is deformed or damaged. Support Bearing AT NCAX0018S05 Make sure wheel bearing rolls freely and is free from noise, cracks, pitting or wear. AX Support Bearing Bracket NCAX0018S06 Check support bearing bracket for cracks with a magnetic explora-SU tion or dyeing test. ASSEMBLY After drive shaft has been assembled, ensure that it BR moves smoothly over its entire range without binding. Use NISSAN GENUINE GREASE or equivalent after every ST overhaul. RS BT HA Wheel Side (BF86 type) SC NCAX0019S01 Install boot and new small boot band on drive shaft. Cover drive shaft serration with tape so as not to damage boot Ei. during installation. ID))

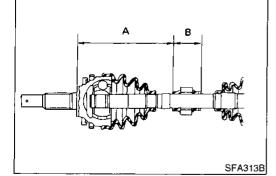
Tape	
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SFA800





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



Dynamic Damper

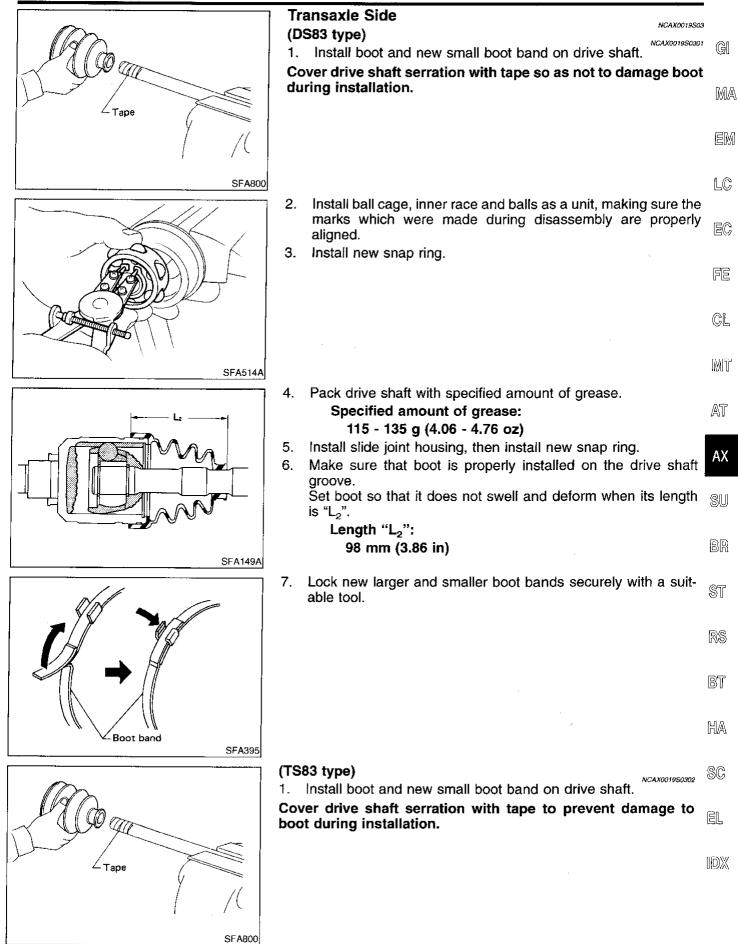
1. Use new damper bands when installing.

NCAX0019S02

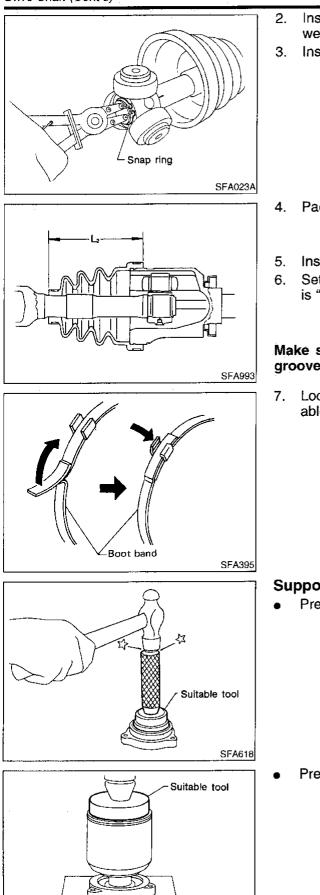
2. Install dynamic damper from stationary-joint side while holding it securely.

Length:

•					Unit: mm (in)
Applied	, н	iH	LH		
model	odel BF86/DS83 + E		BF86	/DS83	BF86/TS83
Transaxle	Without	With vis-	With vise	cous type	Without vis-
	viscous type	cous type	M/T	A/T	cous type
"A"	205.1 (8.07)	186.0 (7.32)	163.5 (6.44)	157.8 (6.21)	181.0 (7.13)
"B"		<u> </u>	70 (2.76)		



Drive Shaft (Cont'd)



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

- 4. Pack drive shaft with specified amount of grease. Specified amount of grease:
 - 125 145 g (4.41 5.11 oz)
- 5. Install slide joint housing.
- Set boot so that it does not swell and deform when its length is "L₂".
 - Length "L₂":

99 mm (3.90 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.

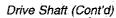
Support Bearing

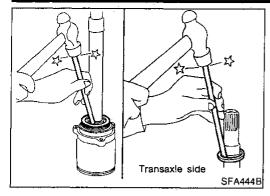
• Press bearing into retainer.

NCAX0019504

• Press drive shaft into bearing.

SFA694





and the second of the second states and the second	Dire Chair (Conra)
Install snap ring.	···· · · · · · · · · · · · · · · · · ·
 Install new dust shield. 	

AT

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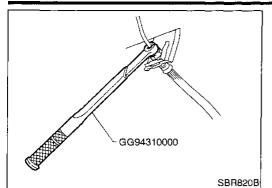
EC

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CL

MT

REAR AXLE

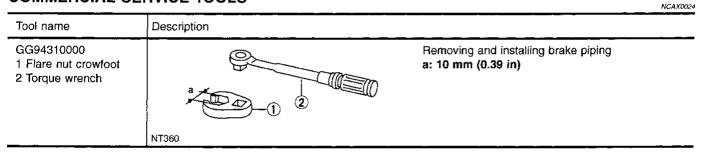


Precautions

PRECAUTIONS

- When installing each rubber part, 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 tubes.
- After installing removed suspension parts, check wheel alignment.
- Do not jack up at the trailing arm and lateral link.
- Always torque brake lines when installing.

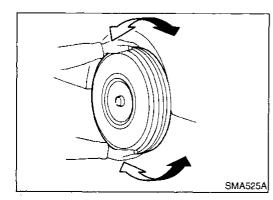
COMMERCIAL SERVICE TOOLS



Preparation

Noise, Vibration and Harshness (NVH) Troubleshooting

Refer to "Noise, Vibration and Harshness (NVH) Troubleshooting", "FRONT AXLE", AX-3.



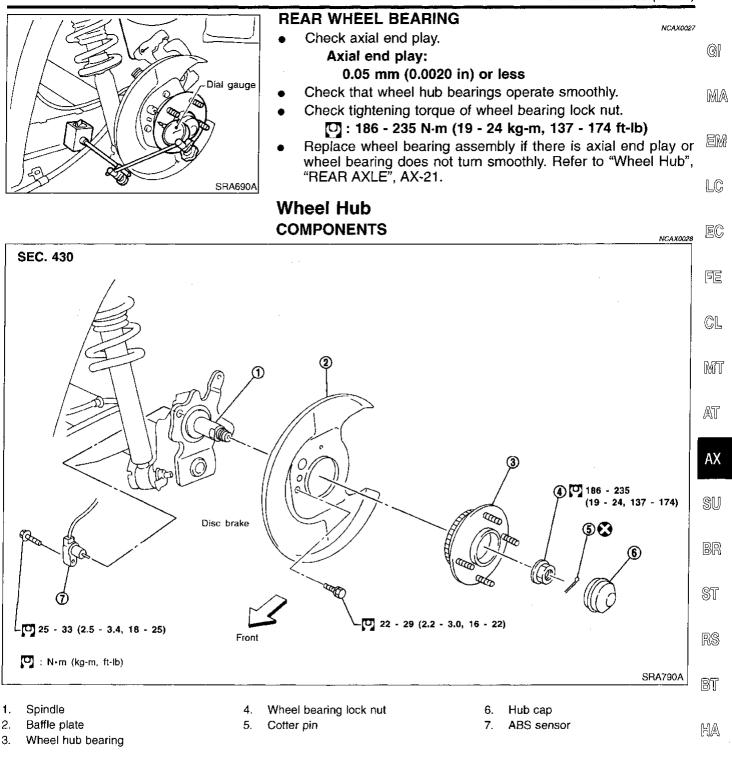
On-vehicle Service REAR AXLE PARTS

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

• Shake each rear wheel to check for excessive play.

AX-20

REAR AXLE



REMOVAL

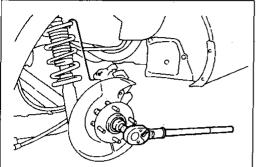
- CAUTION:
- Before removing the rear wheel hub assembly, disconnect EL the ABS wheel sensor from the assembly. Then move it away from the hub assembly. Failure to do so may result in damage to the sensor wires and the sensor becoming IDX inoperative.
- Wheel hub bearing does not require maintenance. If any of the following symptoms are noted, replace wheel hub bearing assembly.

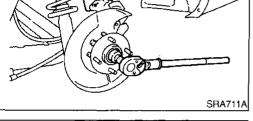
SC

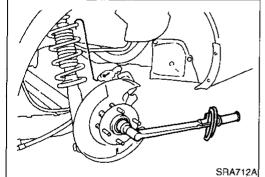
NCAX0029

REAR AXLE

- Growling noise is emitted from wheel hub 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.







- Remove brake caliper assembly. 1.
- 2. Remove wheel bearing lock nut.
- 3. Remove brake rotor.
- Remove wheel hub bearing from spindle. 4.

Brake hose does not need to be disconnected from brake caliper.

Suspend caliper assembly with wire so as not to stretch brake hose.

Be careful not to depress brake pedal, or piston will pop out. Make sure brake hose is not twisted.

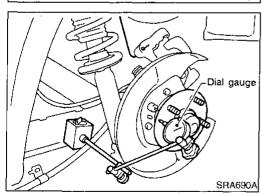
INSTALLATION

- Install wheel hub bearing. •
- Tighten wheel bearing lock nut. Before tightening, apply oil to threaded portion of rear spindle and both sides of plain washer.

NCAX0030

[□] : 186 - 235 N⋅m (19 - 24 kg-m, 137 - 174 ft-lb)

- Check that wheel bearings operate smoothly.
- Check wheel hub bearing axial end play. Axial end play: 0.05 mm (0.0020 in) or less



SERVICE DATA AND SPECIFICATIONS (SDS)

Drive Shaft

