

# AXLE SHAFTS

1993 Nissan Sentra

1991-94 DRIVE AXLES  
Nissan - FWD Axle Shafts

Sentra

## TROUBLE SHOOTING

NOTE: See TROUBLE SHOOTING - BASIC PROCEDURES article in the GENERAL INFORMATION section.

## REMOVAL, DISASSEMBLY, REASSEMBLY & INSTALLATION

### FWD AXLE SHAFT

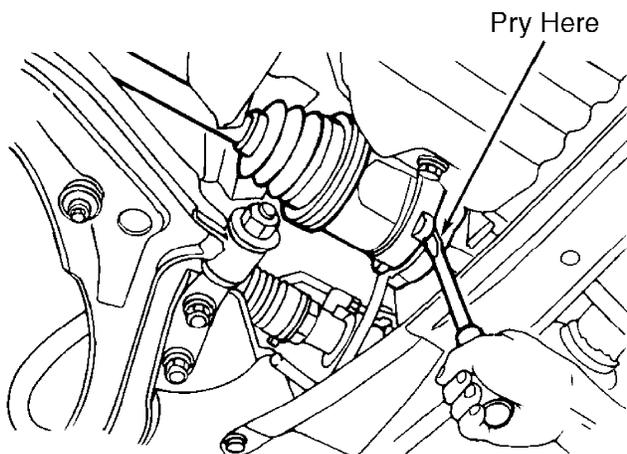
NOTE: On A/T models, right axle shaft must be removed to remove left axle shaft. On all models, cover axle shaft boots with shop towel to prevent damaging boots. Always use NEW snap rings, circular clips and boot clamps during reassembly and installation. Replace axle shaft oil seal in differential before installing axle shaft.

#### Removal

1) Raise and support vehicle. Remove wheel. Remove wheel bearing lock nut from end of drive axle. Remove disc brake caliper and suspend out of way. DO NOT allow caliper to hang by hydraulic hose.

2) Separate tie rod end from steering knuckle. Remove axle shaft from steering knuckle hub using a soft mallet. On models with ball and cage type right axle shaft, remove support bearing retainer-to-block bolts. See Fig. 4.

3) On all models, pry right axle shaft from transaxle using screwdriver. See Fig. 1. On M/T models, pry left axle shaft from transaxle using screwdriver. On A/T models, insert screwdriver through right axle shaft hole in differential, and drive out left axle shaft. See Fig. 2.



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Fig. 1: Removing Axle Shaft (Except A/T Left Shaft)  
Courtesy of Nissan Motor Co., U.S.A.

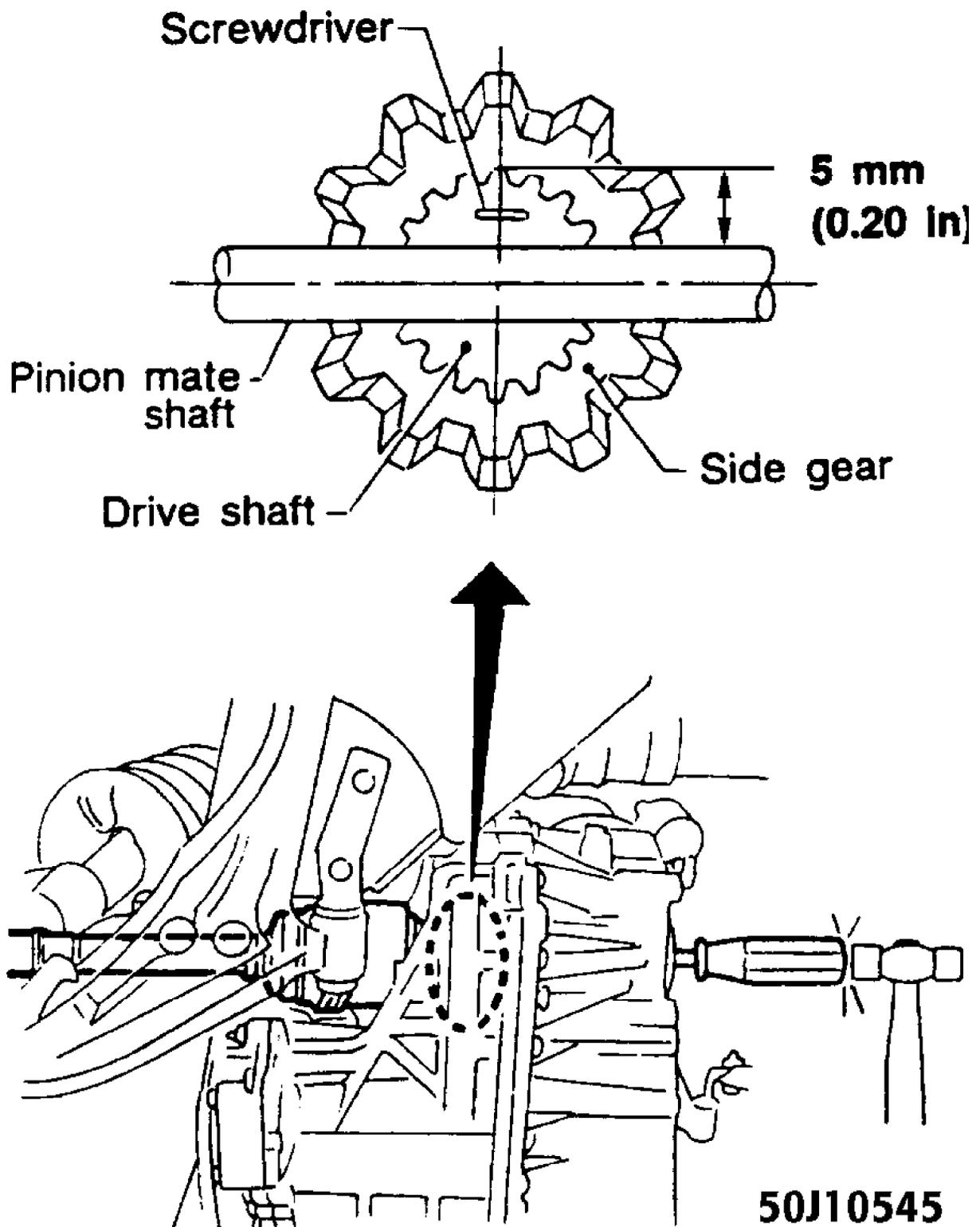


Fig. 2: Removing Axle Shaft (A/T Left Shaft)  
 Courtesy of Nissan Motor Co., U.S.A.

Disassembly (Inner Joint Ball & Cage Type)

- 1) Place axle shaft in soft-jawed vise with inner joint

facing up. Remove boot clamps. See Fig. 4. Mark slide joint housing and inner race in relation to axle shaft for reassembly reference.

2) Remove and discard snap ring "A". See Figs. 3 and 4. Remove slide joint housing. Remove snap ring "C". Remove cage, inner race and balls as an assembly. Remove snap ring "B". Cover axle shaft splines with tape. Remove boot.

3) To disassemble support bearing and retainer assembly on right axle shaft, remove dust shield and snap ring "D". See Fig. 4. Press axle shaft out of support bearing and retainer assembly. Remove snap ring and dust shield from retainer. Using bearing driver and hammer, drive support bearing out of retainer.

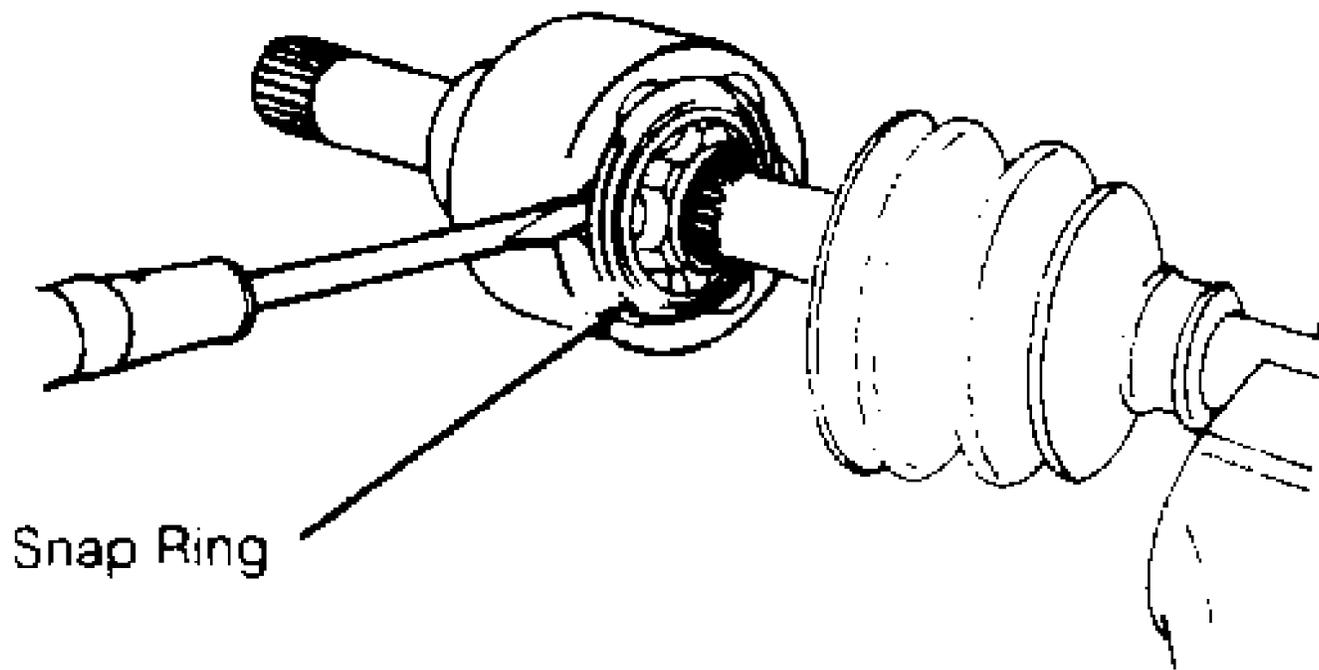
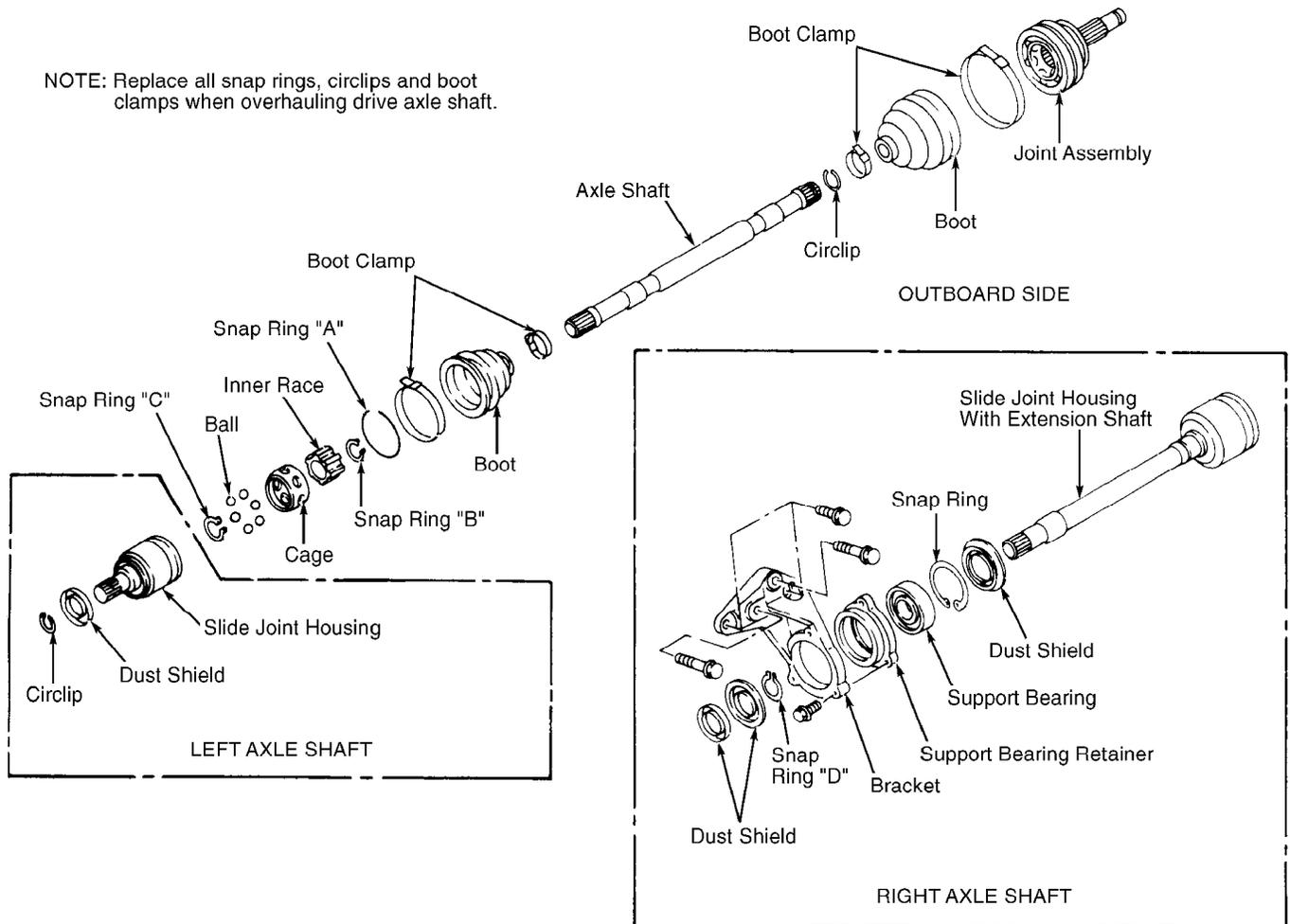


Fig. 3: Removing Snap Ring "A" (Inner Joint - Ball & Cage Type)  
Courtesy of Nissan Motor Co., U.S.A.

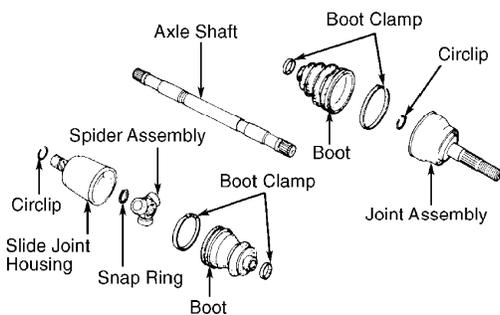


93C83800  
 Fig. 4: Exploded View Of Front Axle Shaft (Ball & Cage Type)  
 Courtesy of Nissan Motor Co., U.S.A.

Disassembly (Inner Joint Spider Assembly Type)

1) Place axle shaft in soft-jawed vise with inner joint facing up. Remove boot clamps. See Fig. 5. Mark slide joint housing and spider assembly in relation to axle shaft for reassembly reference.

2) Remove slide joint housing. Remove snap ring. Remove spider assembly. DO NOT disassemble spider assembly. Cover axle shaft splines with tape. Remove boot.



93D83801  
 Fig. 5: Exploded View Of Front Axle Shaft (Spider Assembly Type)  
 Courtesy of Nissan Motor Co., U.S.A.

NOTE: Outer joint can be removed from axle shaft but cannot be disassembled.

Disassembly (Outer Joint)

Place axle shaft in soft-jawed vise with outer joint facing up. Remove boot clamps. See Figs. 4 and 5. Mark slide joint housing and inner race in relation to axle shaft for reassembly reference. Remove joint assembly from axle shaft using slide hammer. See Fig. 6.

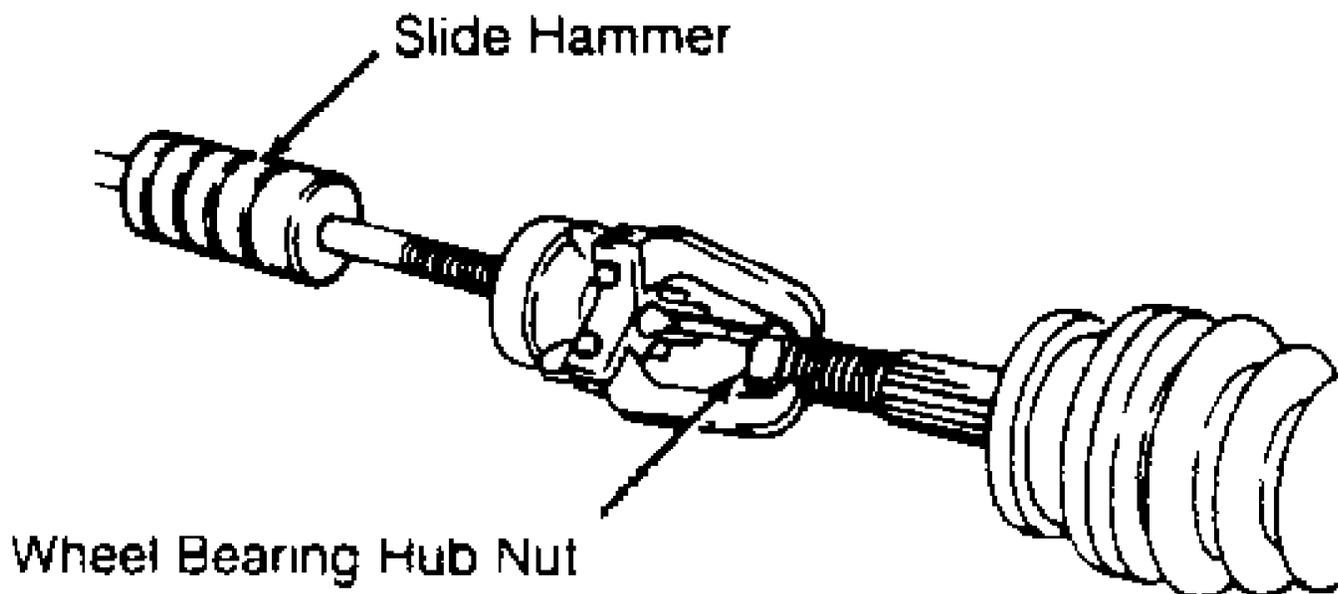


Fig. 6: Removing Outer Joint Assembly  
Courtesy of Nissan Motor Co., U.S.A.

Inspection

Replace axle shaft if twisted or cracked. Check boots for fatigue, cracks or wear. Replace joint components that are scorched, rusted, worn or loose. Check axle shaft splines for deformation. Inspect slide joint housing for damage. Ensure support bearing rolls freely and is not noisy, cracked, pitted or worn.

Reassembly (Inner Joint Ball & Cage Type)

1) Mount axle shaft in soft-jawed vise with inner joint facing up. Wrap tape around shaft splines. Install boot and clamp on shaft. Install snap ring "B". See Fig. 4.

2) Install ball cage, inner race and balls as an assembly, aligning marks made during disassembly. Install snap ring "C". Pack joint with grease. Install slide joint housing, aligning marks made during disassembly. Install snap ring "A".

3) Position boot to correct length. See AXLE SHAFT BOOT LENGTH table. See Fig. 7. Lock boot clamps in place using hammer and punch. See Fig. 8.

AXLE SHAFT BOOT LENGTH SPECIFICATIONS

Model	Outboard Boot In. (mm)	Inboard Boot In. (mm)
1.6L .....	3.8-3.9 (97-99) .....	4.0-4.1 (101-103)
2.0L .....	3.9-4.0 (99-101) .....	3.8-3.9 (97-99)

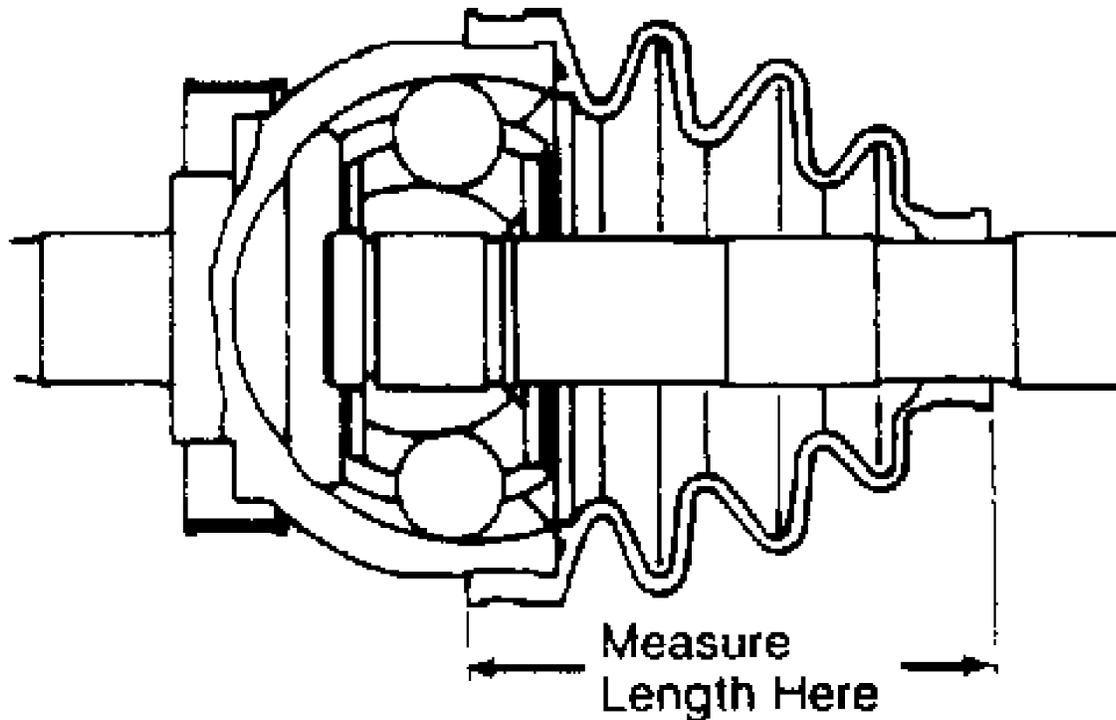


Fig. 7: Setting Boot Length (Typical)  
 Courtesy of Nissan Motor Co., U.S.A.

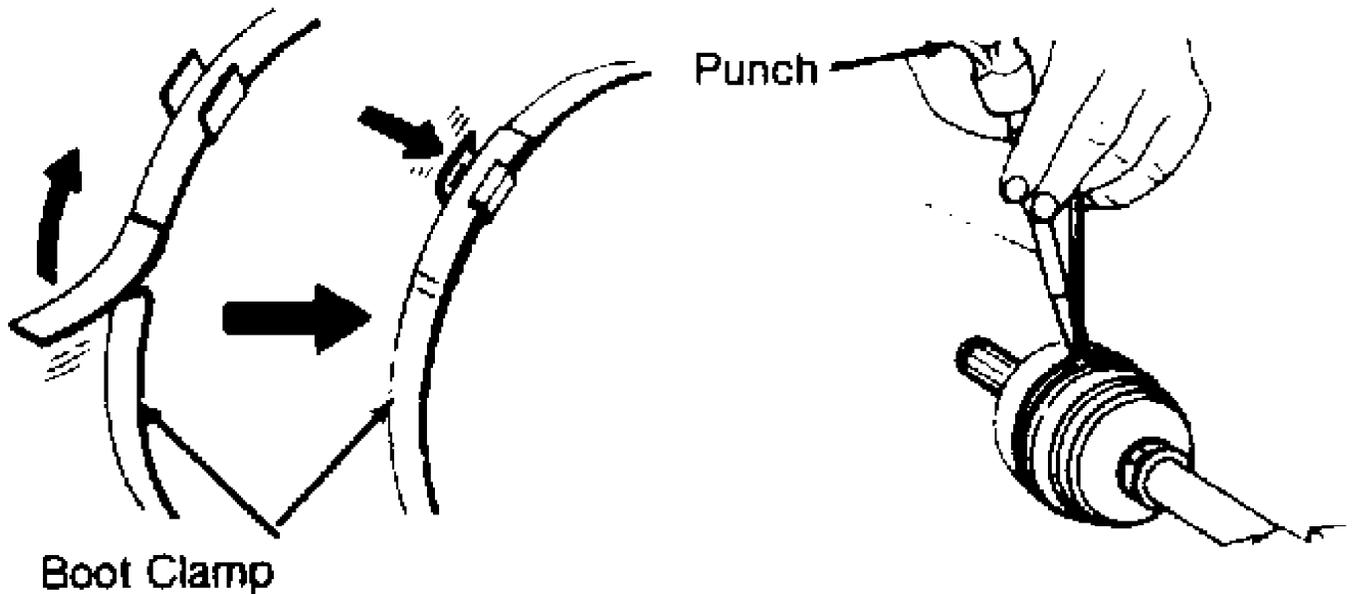


Fig. 8: Installing Boot Clamps  
 Courtesy of Nissan Motor Co., U.S.A.

Reassembly (Inner Joint Spider Assembly Type)

1) Mount axle shaft in soft-jawed vise with inner joint facing up. Wrap tape around shaft splines. Install boot and clamp on shaft. See Fig. 5. Install spider assembly, aligning marks made during disassembly. Install snap ring.

2) Pack joint with grease. Install slide joint housing, aligning marks made during disassembly. Position boot to correct length. Refer to the AXLE SHAFT BOOT LENGTH SPECIFICATIONS table. See Fig. 7. Lock the boot attaching clamps in place using a hammer and punch. See Fig. 8.

Reassembly (Outer Joint)

1) Mount axle shaft in soft-jawed vise with outer joint facing up. Wrap tape around shaft splines. Install boot and clamp on shaft. See Figs. 4 and 5. Temporarily install wheel bearing hub nut on end of joint assembly stub shaft. Position joint assembly onto shaft, ensuring marks made during disassembly are aligned.

2) Drive joint assembly onto shaft by tapping on the nut with a hammer. Pack the joint with grease. Position boot to correct length. Refer to the AXLE SHAFT BOOT LENGTH SPECIFICATIONS table. Also, see Fig. 7. Lock the boot attaching clamps in place using a hammer and punch. See Fig. 8.

Installation

Install NEW circlip on stub shaft of inner joint. Replace axle shaft oil seal in differential. Lubricate seal lip with transaxle oil. To install, reverse removal procedure. Try to pull slide joint housing out of differential by hand to ensure circlip is engaged. Tighten nuts and bolts to specification. See TORQUE SPECIFICATIONS. Check transaxle fluid level.

## TORQUE SPECIFICATIONS

### TORQUE SPECIFICATIONS TABLE

Application	Ft. Lbs. (N.m)
Ball Joint-To-Control Arm Nut .....	56-80 (76-109)
Caliper-To-Torque Member Bolt	
1.6L .....	16-23 (22-31)
2.0L .....	23-30 (31-41)
Support Bearing	
Bracket-To-Block Bolt	
Small Diameter .....	19-26 (26-35)
Medium Diameter .....	22-30 (30-41)
Large Diameter .....	32-43 (43-58)
Bracket-To-Bearing Retainer .....	10-14 (14-19)
Torque Member-To-Knuckle Bolt .....	40-47 (54-64)
Wheel Bearing Lock Nut .....	145-203 (196-275)
Wheel Lug Nut .....	72-87 (98-118)