

2002-04 DRIVE AXLES

Axle Shafts - Rear - RAV4

DESCRIPTION

Axle shafts transfer power from transaxle to front wheels (FWD), or front and rear wheels (AWD). Axle shaft consists of axle shaft with flexible Constant Velocity (CV) joint at each end. Rear inner CV joint is bolted to differential and outer CV joint is splined to front or rear hub assembly.

Inner and outer CV joints are enclosed by a CV joint boot. Boot maintains lubrication in CV joint and prevents contamination of CV lubricant. Boots must be replaced if cracked, torn or damaged. Inner CV joint can be repaired without replacing assembly but outer CV joint must be replaced as an assembly.

TROUBLE SHOOTING

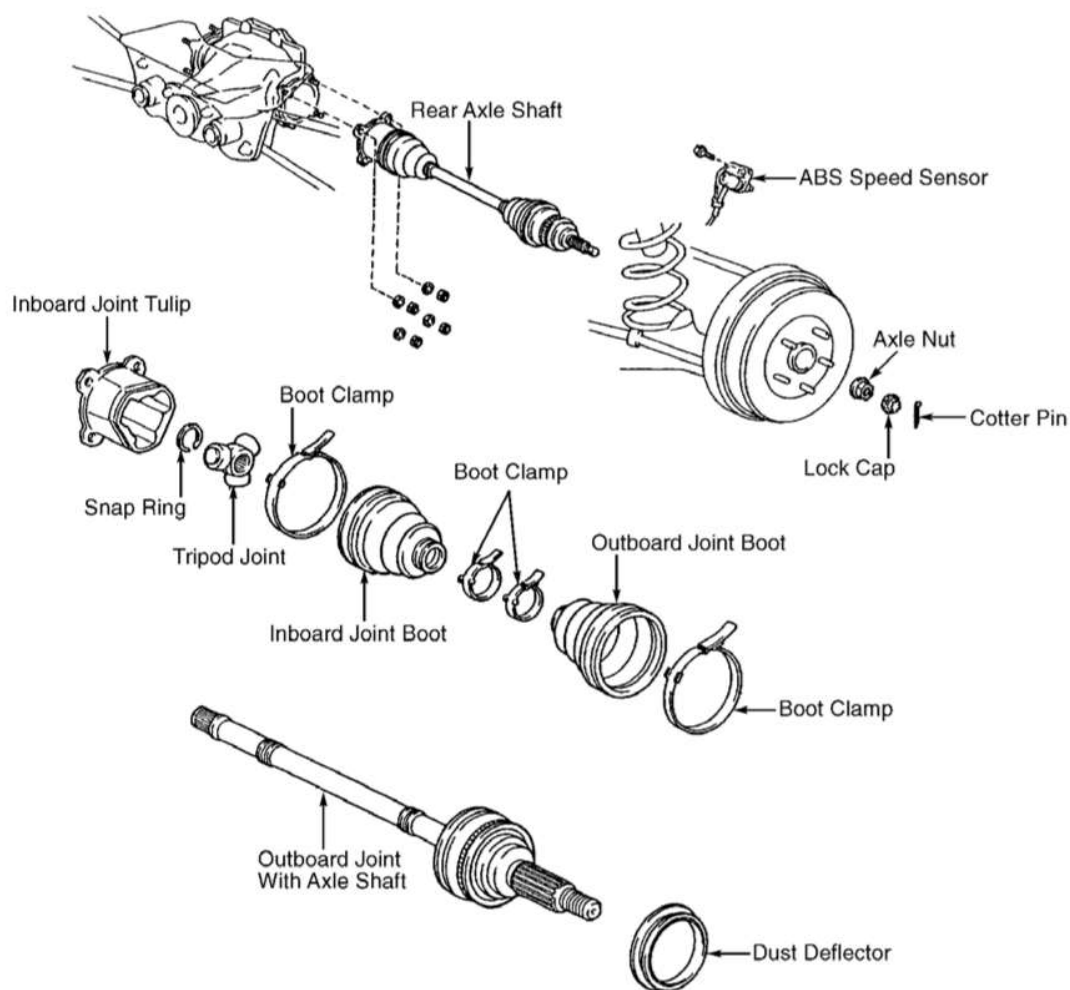
NOTE: See DRIVE AXLE NOISE DIAGNOSIS article in **GENERAL INFORMATION**.

REMOVAL & INSTALLATION

REMOVAL

NOTE: **DO NOT** damage oil seal, axle shaft boots or Anti-Lock Brake System (ABS) speed sensor rotor when removing axle shaft.

1. Raise and support vehicle.
2. Remove rear wheels.
3. Remove ABS speed sensor (if equipped).
4. Remove cotter pin and lock cap. Apply brakes and remove nut.
5. Place match marks on axle shaft flange and differential flange for installation reference. Remove 4 nuts and washers.
6. Using a plastic hammer, tap axle shaft from rear hub. Remove rear axle. See **Fig. 1**.



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Fig. 1: Exploded View Of Rear Axle Shaft (AWD)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION

Ensure no play exists in inner and outer joints. Inner joint must slide smoothly inward and outward, and be free from excessive play in radial direction. Check for torn or damaged boots.

DISASSEMBLY

NOTE: Manufacturer does not recommend overhaul of outer joint assembly.

1. Remove boot clamps and slide boots from joints.
2. Paint reference marks on inboard joint tulip and outboard joint for reassembly reference.
3. Remove inboard tripod joint from outboard joint shaft. Remove snap ring from end of axle shaft retaining

inboard tripod joint.

4. Paint reference marks on tripod joint and outboard joint shaft for reassembly reference.
5. Using a hammer and brass drift, tap inboard tripod joint from axle shaft. DO NOT tap on roller of tripod joint during removal.
6. Remove boots and clamps from axle shaft.
7. Using a screwdriver and hammer, remove dust deflector from axle shaft.

REASSEMBLY

1. Using a press, install NEW dust deflector on axle shaft.
2. Wrap splines on axle shaft with tape to prevent damaging boots during installation.
3. Install NEW boots and NEW boot clamps on axle shaft.
4. Install inboard tripod joint on axle shaft, with small diameter side facing outboard joint. Install NEW snap ring that retains inboard tripod joint on axle shaft.
5. Apply grease supplied with overhaul kit to inboard and outboard joints and boots. See **BOOT GREASE SPECIFICATIONS**.
6. Ensure reference mark on inboard joint and outboard joint shaft are aligned. Install inboard joint tulip on outboard joint
7. Install boot on inner housing and outer joint. Ensure boots are seated in grooves on axle shaft. Adjust axle shaft to standard axle shaft length. See **AXLE SHAFT LENGTH SPECIFICATIONS**. See **Fig. 2**. Install and tighten boot clamps.

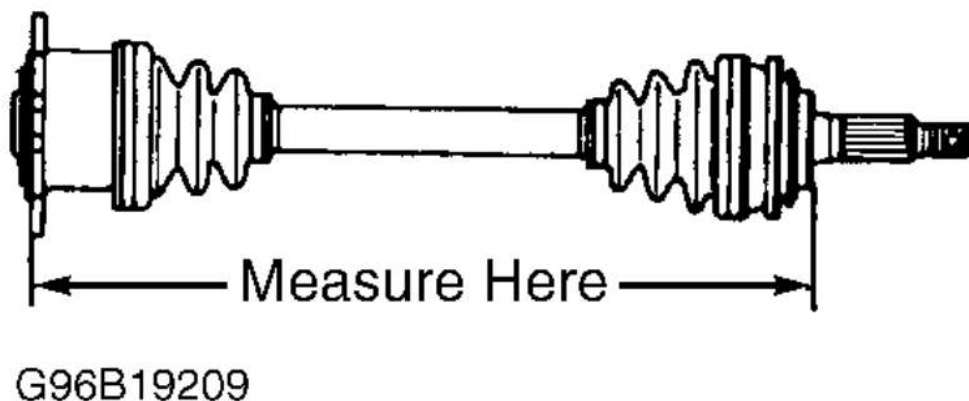


Fig. 2: Measuring Rear Axle Shaft Length
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

To install, reverse removal procedure. Tighten fasteners to specification. See **TORQUE SPECIFICATIONS**. After installation, check ABS speed sensor signal and wheel alignment.

AXLE SHAFT LENGTH SPECIFICATIONS

REAR AXLE SHAFT LENGTH SPECIFICATIONS ⁽¹⁾

Application	In. (mm)
Left Side	21.59-21.98 (559.9-569.9)
Right Side	25.86-26.26 (606.9-616.9)
(1) Measure axle shaft length between inner joint flange and outer joint flange. See Fig. 2 .	

BOOT GREASE SPECIFICATIONS

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Application & Type	Oz. (g)
Inboard (Yellow)	6.3-6.7 (180-190)
Outboard (Black)	3.5-4.2 (100-110)

TORQUE SPECIFICATIONS

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Application	Ft. Lbs. (N.m)
ABS Speed Sensor Bolt	(1)
Axle Shaft Flange Bolt	41 (56)
Axle Shaft Hub Nut	159 (216)
Wheel Lug Nut	76 (103)
(1) Tighten bolt to 71 INCH lbs. (8.0 N.m).	