

AXLE SHAFT

Article Text

1996 Volkswagen Golf
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Thursday, August 19, 1999 11:52PM

ARTICLE BEGINNING

1995-96 DRIVE AXLES
Volkswagen - FWD Axle Shafts

Golf

TROUBLE SHOOTING

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

REMOVAL, DISASSEMBLY, REASSEMBLY & INSTALLATION

AXLE SHAFT

NOTE: Two different types of joints may be used on axle shaft. Types used are: Constant Velocity (CV) type joint, or tripod-type joint. CV joint uses a 6 ball and cage design, while tripod joint uses a triple-roller design. Three methods may be used to assemble axle shaft to hub assembly depending on hub spline type. Later model design and new replacement parts are revised, and require an updated installation procedure.

NOTE: Tripod-type joints are used on models equipped with a 4-cylinder engine with an automatic transaxle. Engine/transaxle assembly must be raised to remove left-side axle shaft. It is not required to raise engine/transaxle assembly for right-side axle shaft removal.

Removal

1) Remove axle shaft nut. Raise and support vehicle. Remove wheel. Remove air deflector plate from lower control arm (if equipped). On models equipped with tripod-type joint, remove bolt for rear transaxle mount, and bolt for front engine mount.

2) Using Engine Support Bridge (10-222A) and Adapter (10-222 A/1), raise and support engine/transaxle assembly. Disconnect axle shaft(s) from transaxle drive flange. Mark position of lower control arm-to-ball joint bolts.

3) Remove both outer control arm-to-ball joint bolts. Loosen, but DO NOT remove inner control arm-to-ball joint bolt. On models equipped with compressed hub splines, use Press (3283) to press axle shaft from wheel hub. Swing wheel assembly outward and support if necessary. Remove axle shaft assembly.

Disassembly & Reassembly (CV-Type Joint)

1) Remove axle shaft boot(s). Using a drift, remove protective cap from CV joint (if equipped). Remove circlip from transaxle-side CV joint. See Fig. 1. Support CV joint with axle assembly on Support Stand (VW 402).

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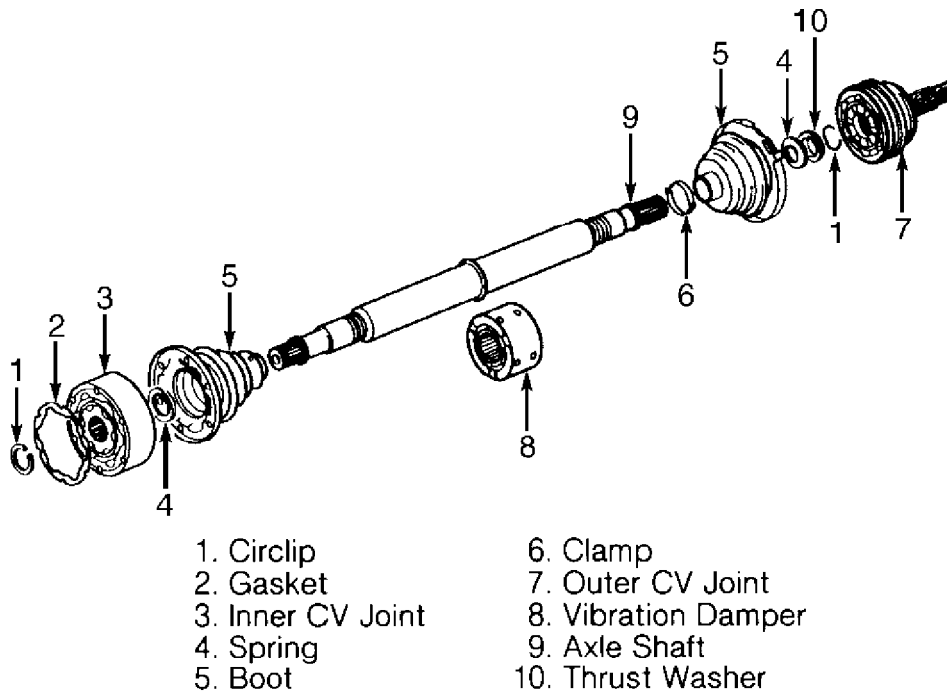
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2) Using Driver (VW 408A), press inner CV joint off axle shaft. Using a soft mallet, drive off outer CV joint from axle shaft. **DO NOT** disassemble outer CV joint. Outer CV joint is not serviceable, and must be replaced as an assembly if worn.

3) Mark position of ball hub in relation to ball cage and housing for installation reference of inner joint. Rotate inner race and remove balls. Clean and inspect parts for galling or wear. Cover balls with grease and reinstall in race.

4) To reassemble, reverse disassembly procedure. See **AXLE SHAFT LENGTH** table. Use **NEW** circlips and boot clamps during assembly.



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Fig. 1: Exploded View Of Axle Shaft With CV-Type Joint (Typical)
Courtesy of Volkswagen United States, Inc.

Disassembly & Reassembly (Tripod-Type Joint)

1) Remove axle shaft boot(s). Using a drift, remove protective cap from tripod joint. Remove circlip from tripod joint. Remove joint from axle shaft. Mark position of tripod-roller assembly in relation to housing for installation reference.

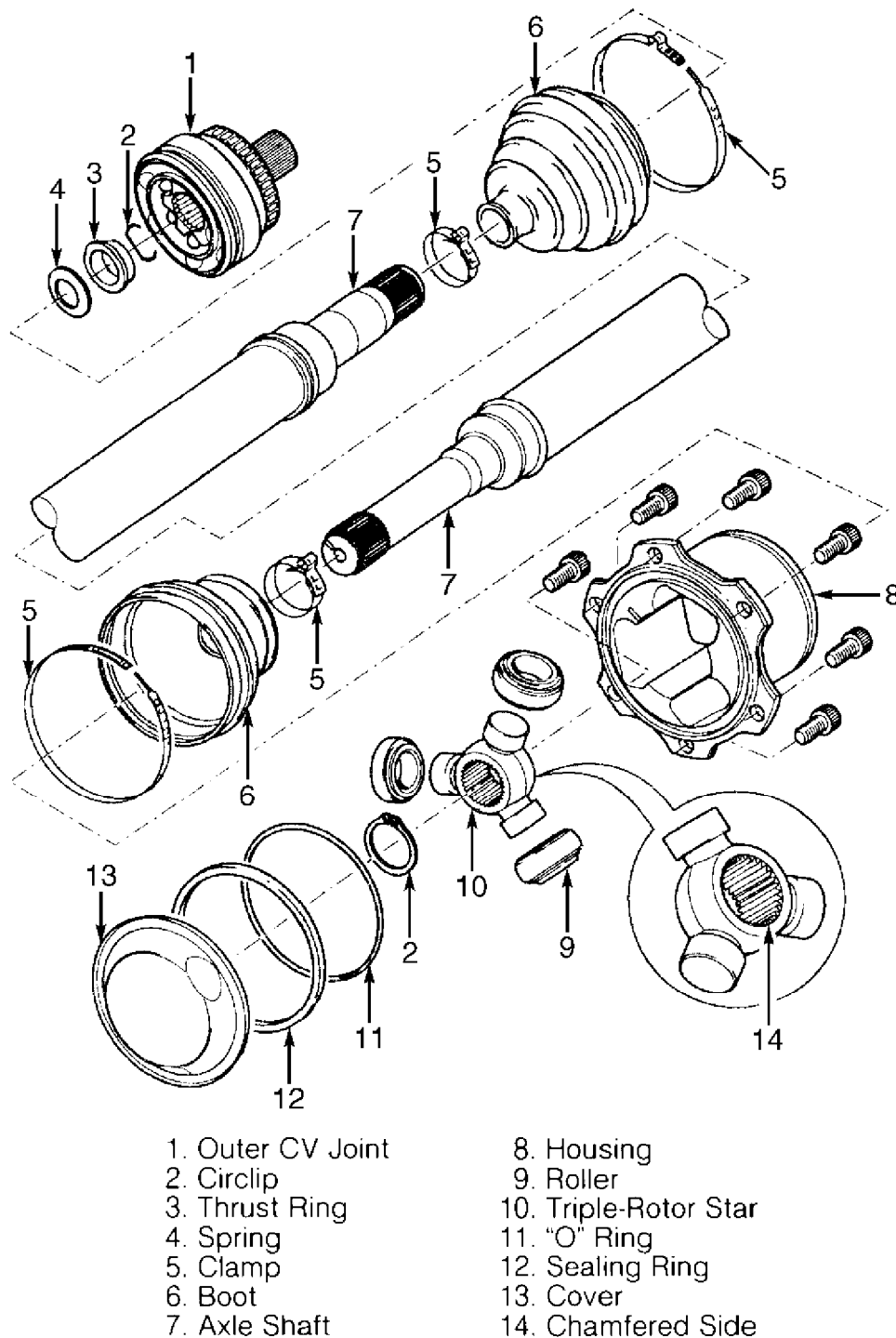
2) Remove tripod-roller assembly from housing. Clean and inspect parts for galling or wear. Install housing with a **NEW** boot on axle shaft. Cover tripod-roller assembly with grease and install into housing using reference marks made during disassembly.

3) Push triple-roller assembly onto axle shaft with chamfered side of splines first. See Fig. 2. Install a **NEW** circlip. Fasten boot using a **NEW** clamp. Measure axle shaft length. See **AXLE SHAFT LENGTH** table.

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Fig. 2: Exploded View Of Axle Shaft With Tripod-Type Joint
Courtesy of Volkswagen United States, Inc.

NOTE: Bonded-type axle shafts use a locking fluid on mating axle shaft and hub splines. If reusing original hub assembly, apply Locking Fluid (D 185 400 A2) to axle shaft splines. Locking fluid is not needed if replacing hub assembly with

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revised part, since hub is a compress-fit design.

Installation

To install, reverse removal procedure. Clean bolts and nuts to ensure tightening torque is correct. Install a NEW axle shaft nut. See TORQUE SPECIFICATIONS.

AXLE SHAFT LENGTH TABLE

Application			In. (mm)
Automatic Transaxle (096)			
Left Axle	.....	17.6	(447.4)
Right Axle	.....	26.8	(681.5)
Automatic Transaxle (01M)			
	.....	(1)	
Manual Transaxle (02A)			
Left Axle	.....	17.6	(447.4)
Right Axle	.....	26.8	(681.5)
Manual Transaxle (020)			
Left Axle	.....	17.9	(455.5)
Right Axle	.....	27.1	(691.5)
Vibration Damper Position			
1. 9L Engine	..... (2)	20.63-20.71	(524.0-526.0)
2. 0L Engine	..... (2)	21.26-21.34	(540.0-542.0)

(1) - Information not available at time of publication.

(2) - Measured from outer surface of joint to outer surface of vibration damper.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS TABLE

Application			Ft. Lbs. (N.m)
Axle Shaft Nut			
With Tripod-Type Joint	.....	195	(265)
With Bonded Axle Shaft Splines	... 66 (90) Plus 1/8 Turn		
With Compressed Hub Splines	.....	(1)	
Axle Shaft-To-Transaxle Flange Bolt			
CV-Type Joint	.....	33	(45)
Tripod-Type Joint	.....	59	(80)
Lower Control Arm-To-Ball Joint Bolt	.....	26	(35)
Wheel Lug Nut	.....	81	(110)

(1) - Tighten to 148 ft. lbs. (200 N.m), then back off one turn. Retighten to 37 ft. lbs. (50 N.m), plus an additional 30 degrees.

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