Component Procedures: Drive/Propeller Shaft

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Axle Pinion Angle Adjustment (Article 2082997)

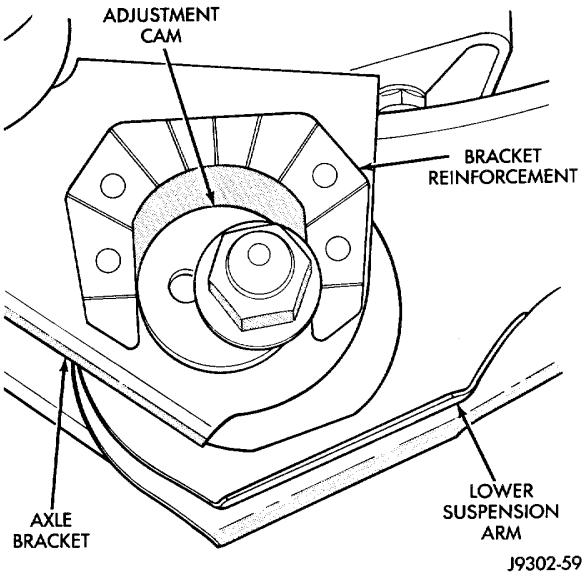


Fig. 37 Adjustment Cam

Parts and Labor (itype_189)

Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Replace	Front Axle	B	0.8	0.5
Replace	Front Axle > NOTE > To R&R Universal Joints, ?	B	0.5	0.0
Replace	Rear Axle	C	0.5	0.3
Replace	Rear Axle > NOTE > To R&R Universal Joints, A?	C	0.5	0.0

General Information (Article 2082186)

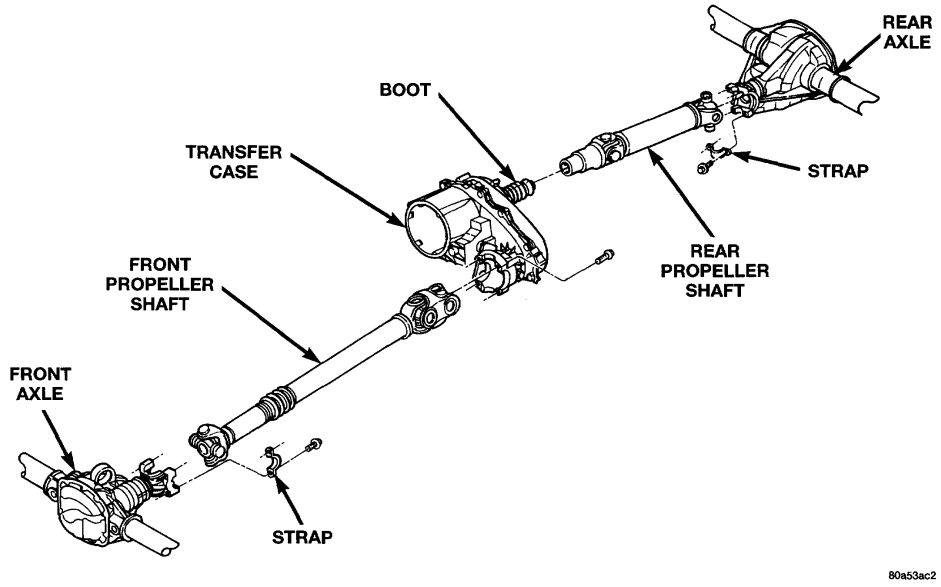


Fig. 1 Propeller Shafts

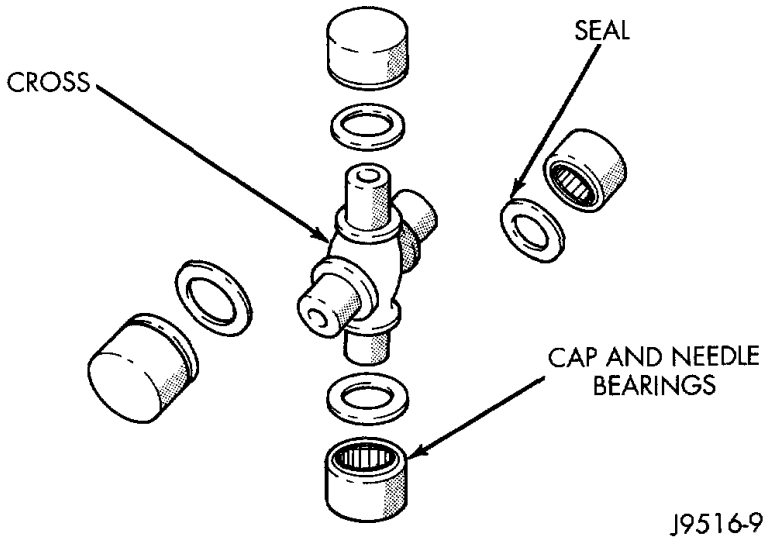
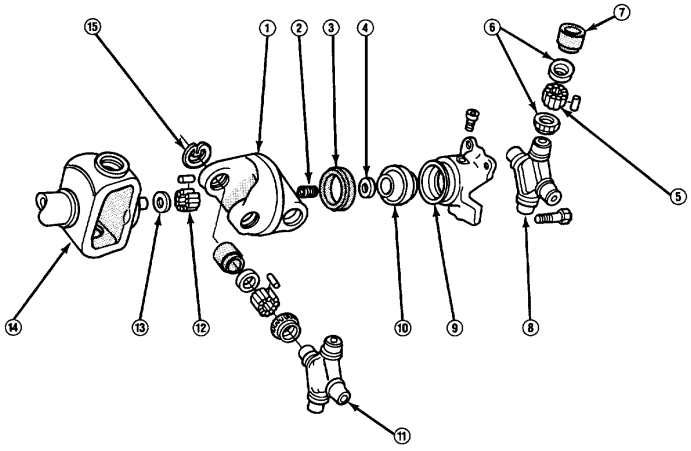


Fig. 2 Single Cardan U-Joint



1. LINK YOKE
2. SOCKET SPRING
3. SOCKET BALL RETAINER
4. THRUST WASHER
5. NEEDLE BEARINGS
6. SEAL
7. BEARING CAP
8. REAR SPIDER
9. SOCKET YOKE
10. SOCKET BALL
11. FRONT SPIDER
12. NEEDLE BEARINGS
13. THRUST WASHER
14. DRIVE SHAFT YOKE
15. RETAINING CLIP

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Fig. 3 Double Cardan U-Joint

PROPELLER SHAFT R.P.M.	MAX. NORMAL OPERATING ANGLES
5000	3°
4500	3°
4000	4°
3500	5°
3000	5°
2500	7°
2000	8°
1500	11°

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Fig. 4 Maximum Angles And Engine Speed

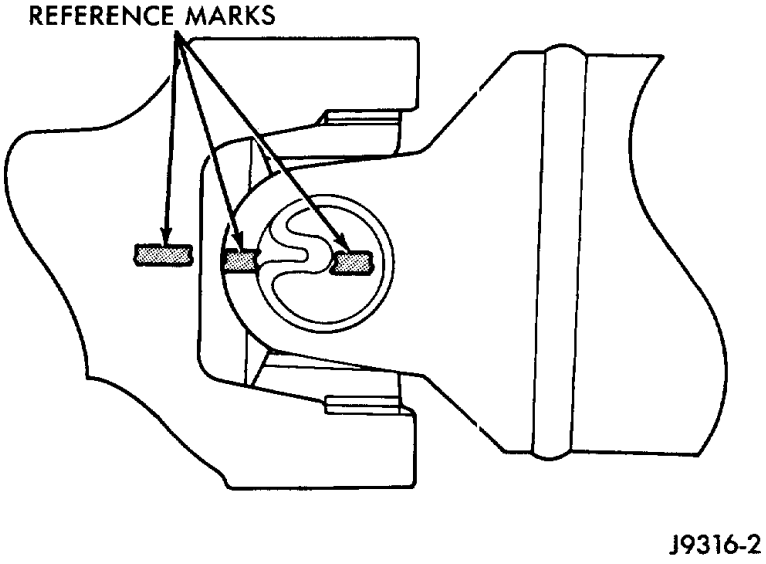

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Fig. 5 Reference Marks on Yokes

Disassembly and Assembly (Article 2082172)

Non Standards
- Single Cardan Universal Joint (2082173)
- Double Cardan Joint (2082174)

Cleaning and Inspection (Article 2082149)

Non Standards
- Propeller Shaft (2082175)

Service Procedures (Article 2082152)

Non Standards
- Driveline Angel Measurement Preparation (2082176)
- Propeller Shaft Angle Measurement (2082177)

Removal and Installation (Article 2082146)

Non Standards

- Front Propeller Shaft (2082178)
- Rear Propeller Shaft (2082179)

Mechanical (including Torque) (itype_28)

Front Propeller Shaft Bolts Bolts, Rear Yoke 20 ft.lb
Bolts, Front Yoke 30 ft.lb
Rear Propeller Shaft Bolts, Rear Yoke 14 ft.lb

Vibration (Article 2082136)

Drive Condition	Possible Cause	Correction
Propeller Shaft Noise	1) Undercoating or other foreign material on shaft.	1) Clean exterior of shaft and wash with solvent.
	2) Loose U-joint clamp screws.	2) Install new clamps and screws and tighten to proper torque.
	3) Loose or bent U-joint yoke or excessive runout.	3) Install new yoke.
	4) Incorrect driveline angularity.	4) Measure and correct driveline angles.
	5) Rear spring center bolt not in seat.	5) Loosen spring u-bolts and seat center bolt.
	6) Worn U-joint bearings.	6) Install new U-joint.
	7) Propeller shaft damaged or out of balance.	7) Installl new propeller shaft.
	8) Broken rear spring.	8) Install new rear spring.
	9) Excessive runout or unbalanced condition.	9) Re-index propeller shaft 180°, test, and evaluate.
	10) Excessive drive pinion gear shaft runout.	10) Re-index propeller shaft 180° and evaluate.
	11) Excessive axle yoke deflection.	11) Inspect and replace yoke if necessary.
	12) Excessive transfer case runout.	12) Inspect and repair as necessary.
Universal Joint Noise	1) Loose U-joint clamp screws.	1) Install new clamps and screws and tighten to proper torque.
	2) Lack of lubrication.	2) Lubricate U-joint and evaluate. Replace as necessary.

Unbalance (Article 2082137)

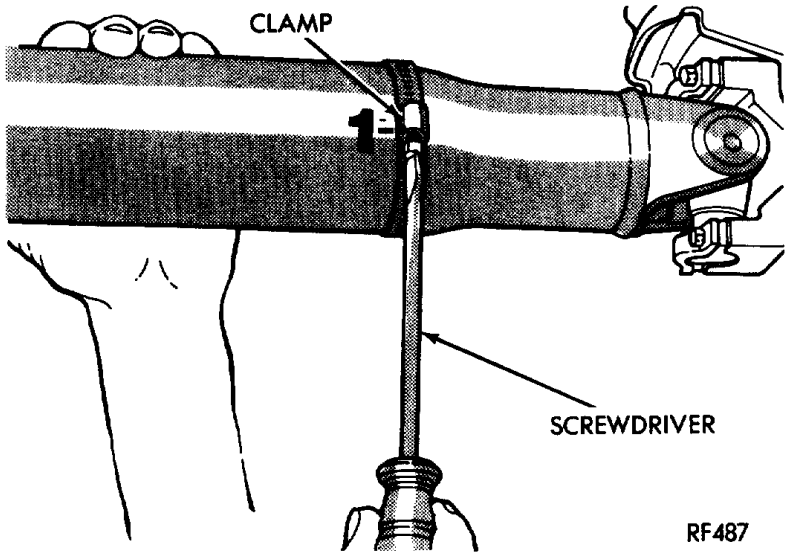

Fig. 6 Clamp Screw At Position 1

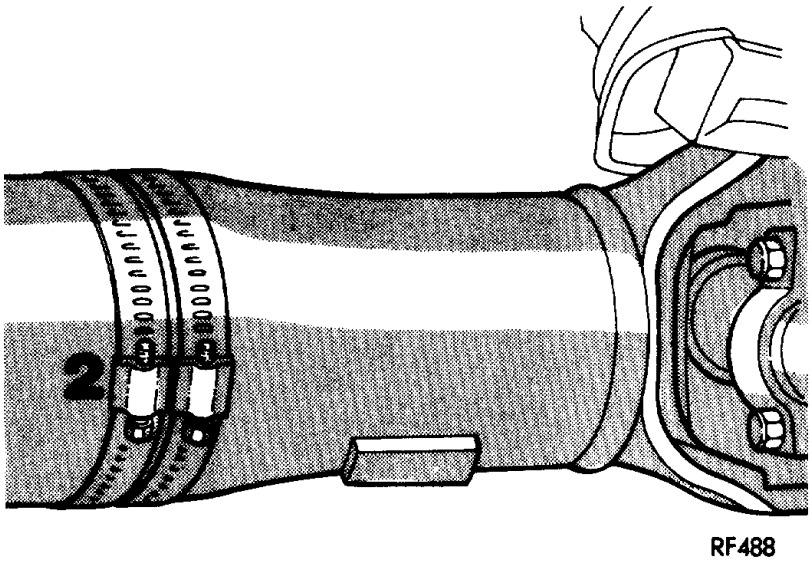

Fig. 7 Two Clamp Screws At The Same Position

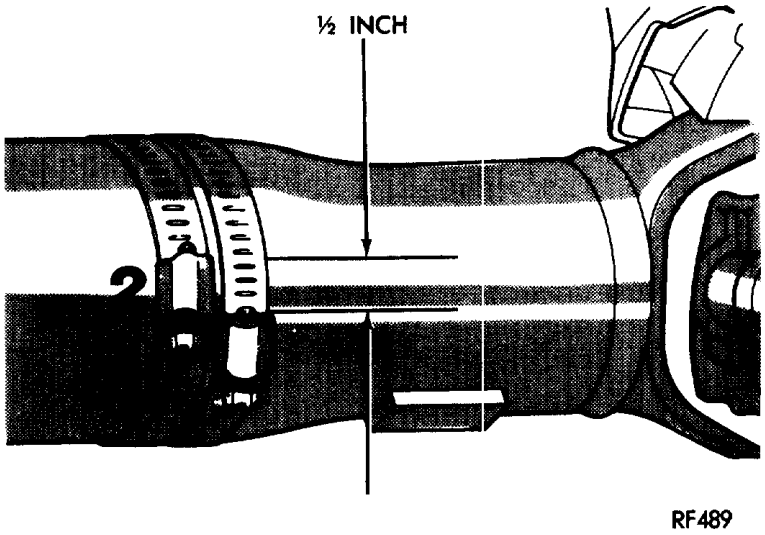

Fig. 8 Clamp Screws Separated

Runout (Article 2082138)

Front of Shaft	0.020 in. (0.50 mm)
Center of Shaft	0.025 in. (0.63 mm)
Rear of Shaft	0.020 in. (0.50 mm)
Measure front/rear runout approximately 3 inches (76 mm) from the weld seam at each end of the shaft tube for tube lengths over 30 inches. For tube lengths under 30 inches, the maximum allowed runout is 0.020 in. (0.50 mm) for the full length of the tube.	

Electrical / Mechanical Repair (itype_413)

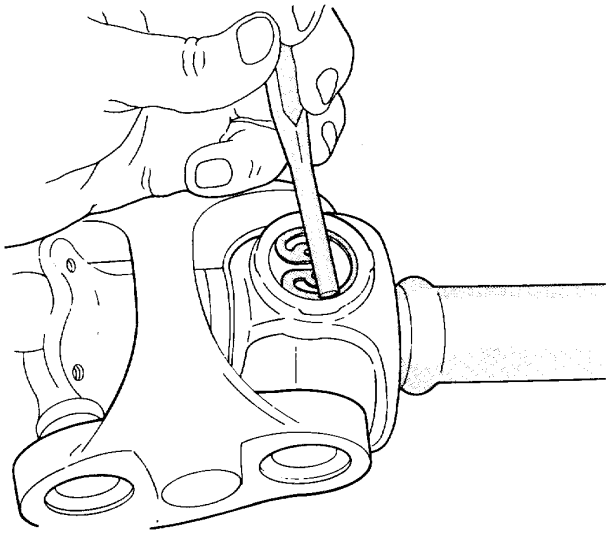

Fig. 35 Seat Snap Rings In Groove