

PROPELLER SHAFT

SECTION I. TROUBLE SHOOTING

1-1. Vibration

- a. Check front and rear U-bolt-to-yoke connections and yoke nuts for tightness.
- b. Check front shaft and the splined yoke to make certain they are aligned in the same plane.
- c. Check the center bearing rubber cushion for damage, misalignment in its mount, or looseness.

1-2. Noisy When Engaged.

- a. Inspect the splines of the front shaft for damage, or excessive wear.
- b. Check the universal joint assemblies for wear or damage.

SECTION II. REMOVAL AND DISASSEMBLY

2-1. Propeller Shaft Differences.

Three different propeller shaft assemblies are supplied for vehicles with different transmission options. As the only real difference among the assemblies is in the length of the forward shaft, disassembly and reassembly instructions are the same for all three.

2-2. Propeller Shaft Removal.

- a. Remove the U-bolts (1-3), lockwashers (1-2), and nuts (1-1) from the rear axle end yoke.
- b. Slide the rear shaft (1-7) toward the front of the vehicle to free the bearings (1-5) from their seats in the end yoke. Take care not to drop the bearings from the ends of the journal cross (1-4).
- c. Mark the forward shaft (1-23) and the sliding yoke (1-11) so that the slip joint may be reassembled in the same way.
- d. Unscrew the dust cap (1-14) and slide the yoke (1-11) and rear shaft (1-7) off the forward shaft.
- e. Remove the U-bolts, lockwashers, and nuts from the transmission end yoke.
- f. Slide the forward shaft (1-23) toward the rear to remove the rubber cushion from its support ring and free the bearings (1-25) from their seats in the end yoke. Take care not to drop the bearings.
- g. Remove the forward shaft (1-23) from the support.

2-3. Disassembly.

- a. Remove the small slinger (1-15) and rear retainer (1-16) from the center bearing cushion (1-21).
- b. Pull and inspect the center bearing (1-18), front retainer (1-20), and shield (1-17, 19). Replace any damaged or worn center bearing parts.
- c. Clamp the rear shaft (1-7) gently in a vise near the sliding yoke and shaft, with one end of the journal cross (1-8) upward. Support the yoke (1-11).
- d. Tap the end of the bearing (1-9) lightly with a small drift punch to break it away from the snap ring (1-10).
- e. Pinch the ends of the snap ring (1-10) with pliers. Remove the snap ring. See Fig. 2.
- f. Turn the joint over and remove the opposite snap ring.
- g. Using a soft brass drift with a flat face $1/32$ " smaller than the diameter of the hole in yoke, tap one bearing (1-9) until the opposite one is free of the yoke.
- h. Turn the joint over and tap the exposed cross end to remove the remaining bearing.
- i. Tip the journal cross (1-8) and lift it free of the yoke.
- j. Mark all universal joint parts for reassembly in the same positions and repeat the above operations, removing all bearings and crosses.

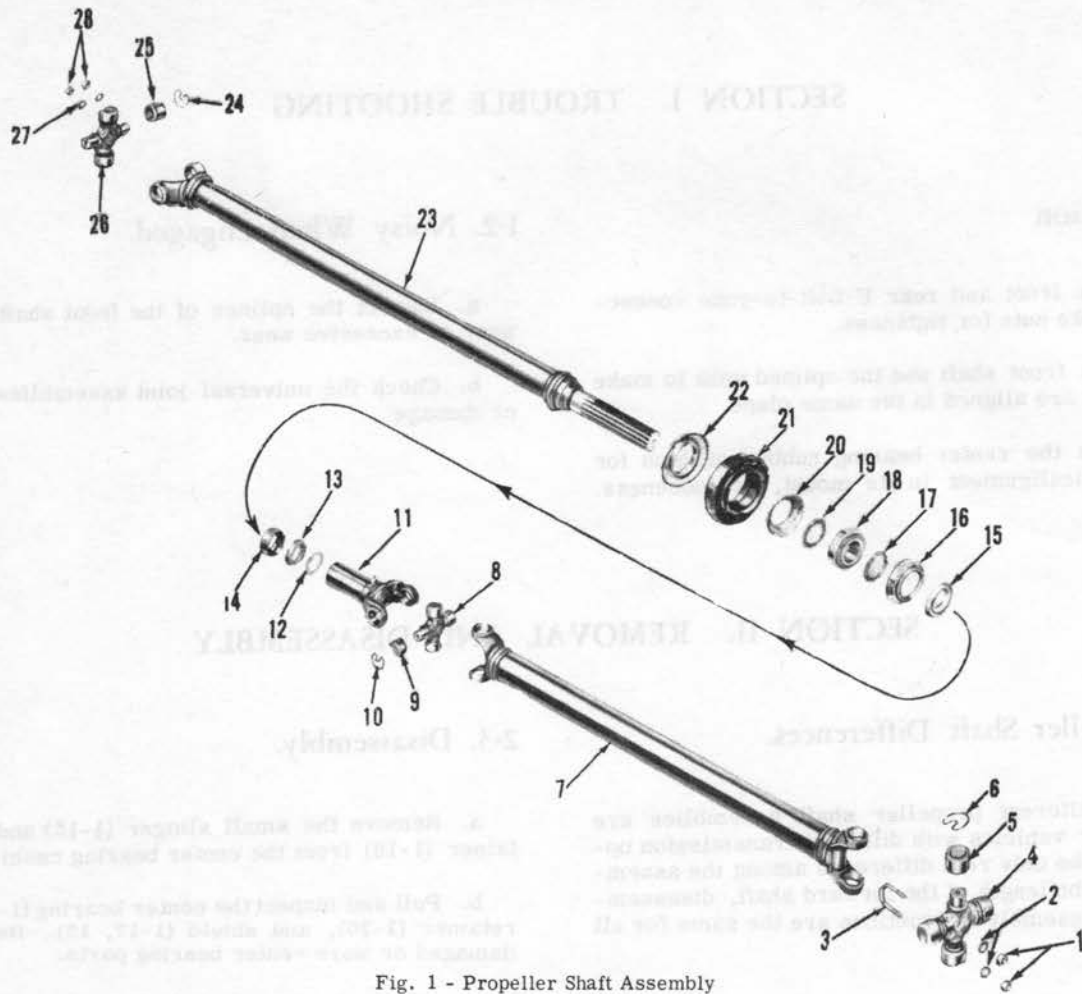


Fig. 1 - Propeller Shaft Assembly



Fig. 2 - Snap Ring Removal



Fig. 3 - Journal Cross Removal

SECTION III. INSPECTION AND REASSEMBLY

3-1. Cleaning and Inspection.

a. Clean all metal parts with solvent. Remove burrs or rough spots from machined surfaces.

b. Do not disassemble needle bearings. Clean with a stiff brush and blow out with air. Work a small quantity of semi-fluid lubricant into each bearing and turn each on its trunnion to check wear. Replace if worn.

c. Inspect crosses for wear. Replace if necessary. If either bearings or crosses are worn, **REPLACE BOTH.**

d. Inspect the shaft tubing for dents or other damage.

e. If tubing, bearing seats, yokes, or splines are worn or damaged, replace the appropriate subassembly.

3-2. Reassembly and Installation.

a. Reassemble the crosses, yokes, and bearings. See Fig. 3.

b. Reinstall the propeller shaft assembly by reversing removal instructions.

c. Check the shafts for runout, which should not exceed .020".

d. Check the shaft angles. The rear shaft assembly is angled at about $9-1/2^\circ$ from the front shaft under normal conditions.