

GROUP 5

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DRIVE LINE	5-1	CLUTCH	NOT APPLICABLE

PART 5-1 DRIVE LINE

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1 TROUBLE DIAGNOSIS

DRIVE SHAFT TROUBLE DIAGNOSIS AND POSSIBLE CAUSES

DRIVE SHAFT VIBRATION	Undercoating or other foreign material on shaft. Universal joint U-bolts loose. Universal joints worn, or lack of lubricant. Drive shaft mis-aligned (drive line angle). Drive shaft and universal joints	180° out of phase. Broken rear spring center bolt. Broken rear spring. Rear springs not matched (sagged to one side). Drive shaft damaged (bent) or out of balance (missing balance weights).
U-JOINT NOISE	Universal joint U-bolts loose. Lack of lubrication.	Worn U-joints.

2 DESCRIPTION AND OPERATION

The drive shaft is the means of transferring power from the engine to the differential in the rear axle and then to the rear wheels. The drive shaft incorporates two universal joints and a slip yoke. The universal joints (Fig. 1) are provided with a threaded plug which can be removed to lubricate them when necessary. The splines in the yoke and on the transmission output shaft permit the drive shaft to move forward and rearward as the axle moves up and down.

All drive shafts are balanced. If the car is to be undercoated, cover the drive shaft and universal joints to prevent application of the undercoating material.

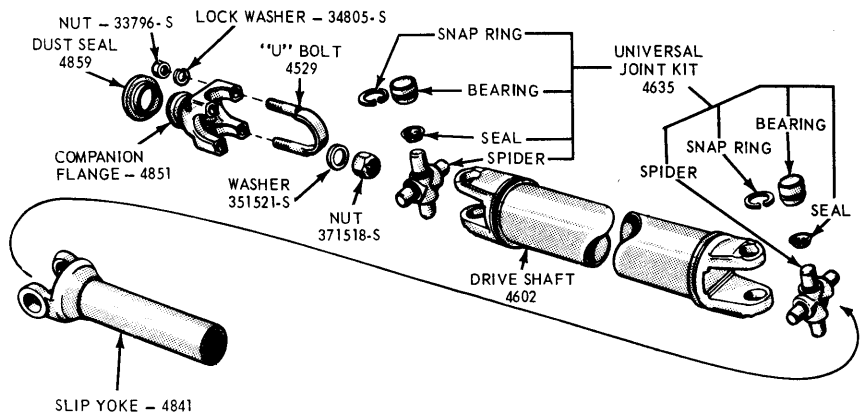


FIG. 1 – Drive Shaft and Universal Joints Disassembled

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3 REPLACEMENT

REMOVAL

1. To maintain drive line balance, mark the relationship of the slip yoke and the drive flange on the axle with the shaft so that they may be installed in their original positions.

2. Disconnect the rear U-joint from the drive pinion flange. Wrap tape around the loose bearing caps to prevent them from falling off the spider. Pull the drive shaft toward the rear of the car until the front U-joint yoke clears the transmission extension housing and the seal. Install tool T61L-7657-A or B, 7657-A or 7657-AB in the extension housing to prevent lubricant leakage.

3. Place the drive shaft in a vise being careful not to damage it.

4. Remove the snap rings that retain the bearings in the yoke and in the drive shaft.

5. Position the tool shown in Fig. 2 on the shaft and press the bearing out of the yoke. If the bearing cannot be pressed all the way out of the yoke, remove it with vise grip or channel lock pliers.

6. Reposition the tool to press on the spider to remove the bearing from the opposite side of the yoke.

7. Remove the yoke from the spider.

8. Remove the bearings and spider from the drive shaft in the same manner.

9. Clean all foreign matter from the yoke area at each end of the drive shaft.

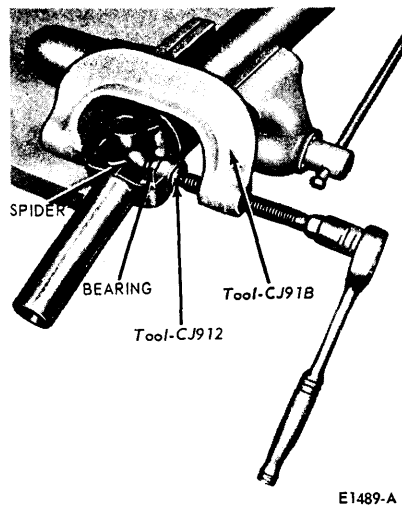


FIG. 2—Removing U-Joint

INSTALLATION

1. Start a new bearing into the yoke at the rear of the drive shaft.

2. Position the spider in the rear yoke and press the bearing $\frac{1}{4}$ inch below the surface (Fig. 3).

3. Remove the tool and install a new snap ring.

4. Start a new bearing into the opposite side of the yoke.

5. Install the tool and press on the bearing until the opposite bearing contacts the snap ring.

6. Remove the tool and install a new snap ring.

7. Reposition the drive shaft and install the new spider and two new bearings in the same manner as the rear yoke.

8. Position the yoke on the spider and install two new bearings and snap rings.

9. Check the joint for freedom of movement. If a bind has resulted from misalignment during the foregoing procedures, tap the ears of the drive shaft sharply to relieve the bind. Do not install the drive shaft unless the universal joints are free of bind.

10. If the rubber seal installed on the end of the transmission extension housing is damaged in any manner, install a new seal.

11. Lubricate the yoke spline with B8A-19589-A lubricant. This spline is sealed so that the transmission fluid does not "wash" away the spline lubricant (Fig. 4). Remove the tool from the extension housing. Install the yoke on the transmission output shaft.

12. Install the U-bolts and nuts that attach the U-joint to the drive pinion flange. Torque the U-bolt nuts to 15-20 ft-lbs.

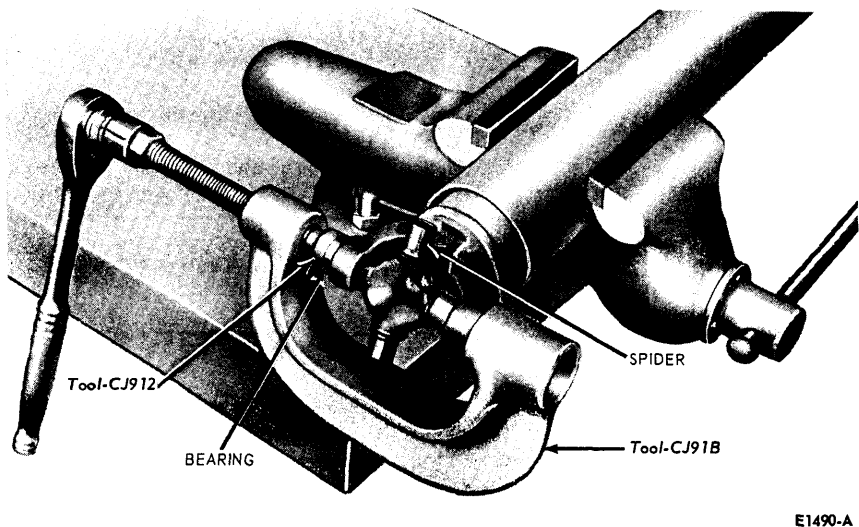


FIG. 3—Installing U-Joint Bearing

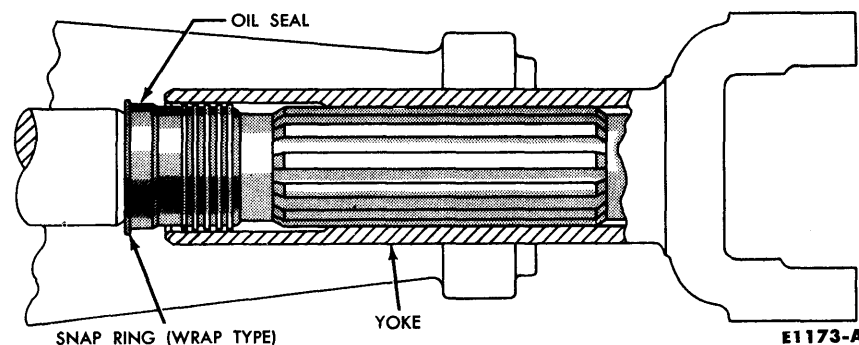


FIG. 4—Output Shaft Spline Seal