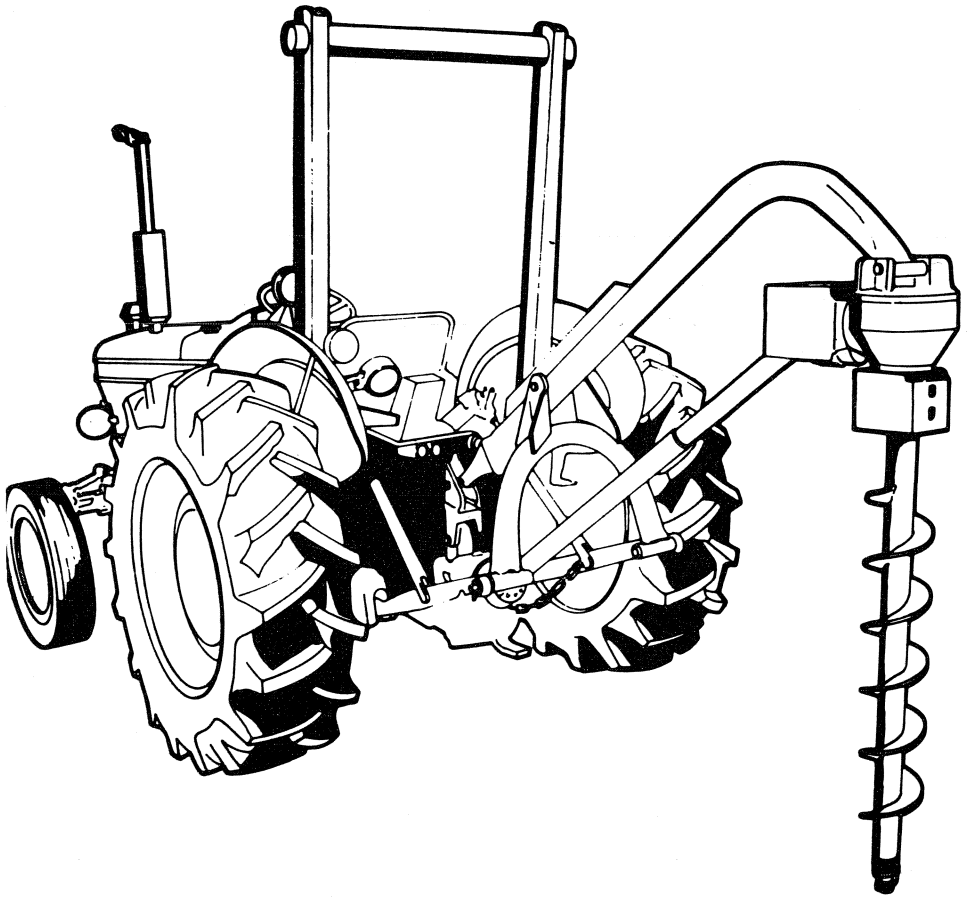
FORD

Series 905

Light & Medium Duty Post Hole Diggers



REPAIR MANUAL

42090511
Reprinted

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SAFETY PRECAUTIONS

Appropriate service methods and proper repair procedures are essential for the safe, reliable operation of all equipment as well as the personal safety of the individual doing the work. This Repair Manual provides general directions for accomplishing service and repair work with tested, effective techniques. Following them will help assure reliability.

There are numerous variations in procedures, techniques, tools, and parts for servicing equipment, as well as in the skill of the individual doing the work. This Manual cannot possibly anticipate all such variations and provide advice or cautions as to each. Accordingly, anyone who departs from the instructions provided in this Manual must first establish that he does not compromise his personal safety nor the integrity by his choice of methods, tools, or parts.

— REPAIR PROCEDURES —

GEARBOX DISASSEMBLY (Figure 1)

A. Drain oil from gearbox.

B. Remove top cover plate (10). Lift out lower shaft assembly (11 & 12).

C. Remove front plate (16). Remove pinion gear assembly (6).

D. Remove bearings (4, 5 & 18) and larger gear (11) from shafts using a press or gear puller. The pinion gear should not be removed as it is sold only with the shaft.

E. Remove oil seals (7 & 13) and bearing cups (17, 19 & 20) from gearbox housing.

GEARBOX REASSEMBLY

Before beginning assembly, clean all inside surfaces with solvent to remove any foreign particles. Thoroughly clean gasket contact area on housing, top cover plate, and front cover plate. Reassemble in reverse order of disassembly. Shim front and top covers using gaskets to achieve bearing pre-load of 5-10 in. lbs. Check for gear backlash of .006" - .020". Tighten cover bolts to 31 ft. lbs. After assembly, fill gearbox with 68 ozs. of SAE80W-140 or SAE 90 wt. gear oil to bring oil level to top of input shaft. An oil level plug is provided on later model units.

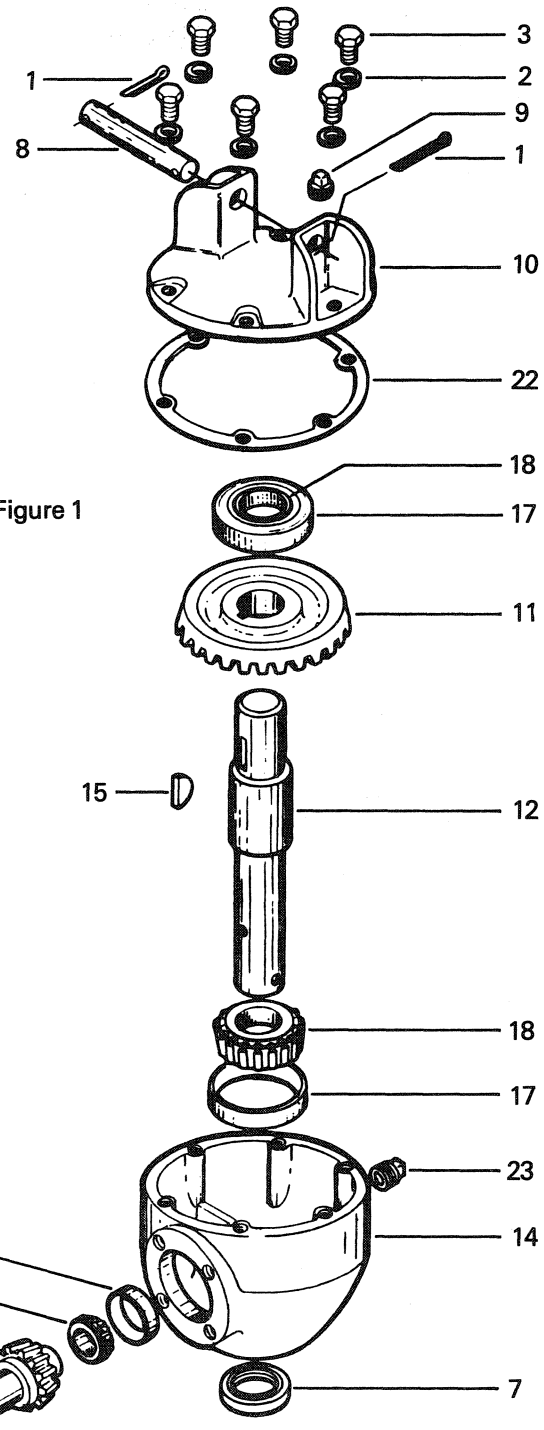


Figure 1

GEARBOX ASSEMBLY

Ref. No.	Description	Qty.
1	Cotter Pins 1/8" x 1 ½"	2
2	Lockwashers 3/8" Reg.	10
3	Capscrews 3/8" - 16 UNC x 1" Gr. 5	10
4	Bearing Cone (Inner Pinion)	1
5	Bearing Cone (Outer Pinion)	1
6	Pinion Gear	1
7	Oil Seal (Bottom)	1
8	Pin	1
9	Plug	1
10	Cover, Top	1
11	Gear	1
12	Shaft	1
13	Oil Seal (Front)	1
14	Housing Casting	1
15	Woodruff Key	1
16	Cover (Front)	1
17	Bearing Cups (Output Shaft)	2
18	Bearing Cones (Output Shaft)	2
19	Bearing Cup (Outer Pinion)	1
20	Bearing Cup (Inner Pinion)	1
21	Gasket	As Needed
22	Gasket .5mm	As Needed
	Gasket .10mm	As Needed
	Gasket .15mm	As Needed
23	Plug (not supplied on early units)	1

— REPAIR PROCEDURES —

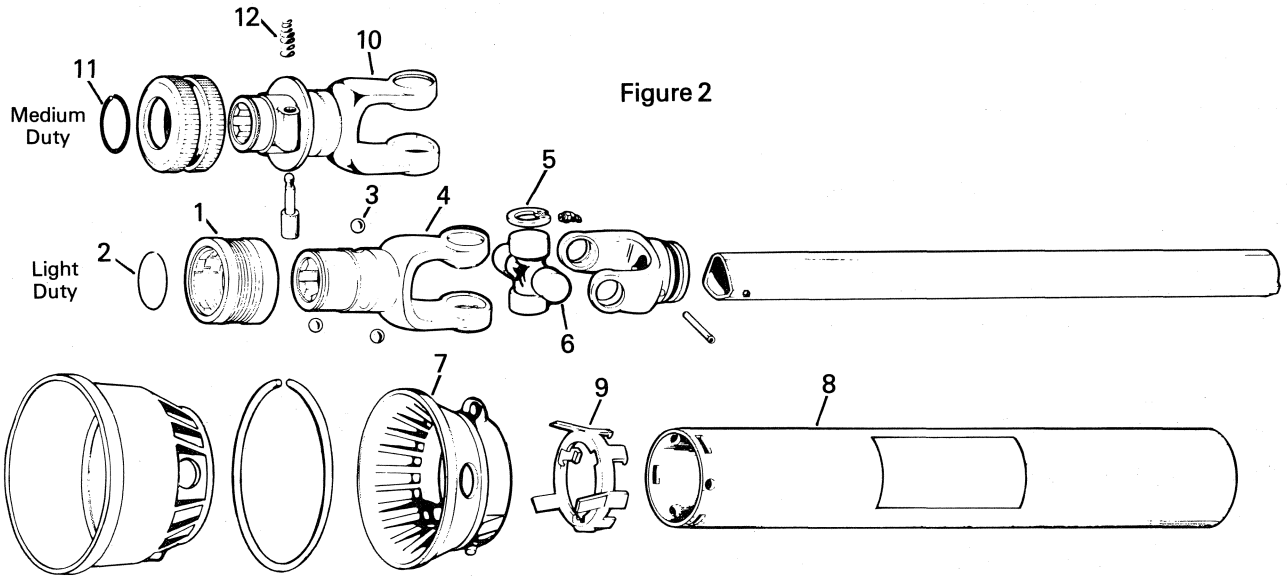


Figure 2

DRIVESHAFT REPAIR

The two universal joints, retainer collar yoke, and safety shields can be rebuilt. If the yokes are worn internally and are loose, they should be replaced. If the shaft seems unusually loose, indicating wear in the triangular shaft and tube, the entire driveshaft should be replaced. Replace the danger decal on driveshaft shield if damaged or missing. (See page 8)

DRIVESHAFT DISASSEMBLY

The following instructions pertain to the tractor half of driveshaft due to the retaining collar. Implement half of driveshaft can be rebuilt using these instructions by skipping steps "C" and "D" below.

NOTE: To remove driveshaft from gearbox, remove shear bolt (pin), setscrew, and nut shown in Figure 7.

A. Press three tabs and slide yoke shield (Figure 2, item 7) off tube. (Figure 3)

B. Remove plastic bearing (9) and tube (8). (Figure 2)

C. (Light Duty Models) Clamp the retainer yoke (4) securely in a bench vise. Remove the snap ring (2) from the nose end of the yoke. Use care so this snap ring is not over stretched. Slide the collar (1) off the yoke. The RETAINER BALLS (3) WILL FALL OUT! Take care so they are not lost. Clean and inspect all retainer parts. Replace as needed. Reassemble the collar assembly.

D. (Medium Duty Models) Clamp the retainer yoke (10) securely in bench vise. Remove snap ring (11) from the nose end of the yoke. Slide collar off yoke. Remove spring from quick disconnect (Q.D.) pin (12). Clean and inspect all retainer parts. Replace as needed. Reassemble the collar assembly.

E. Remove the four snap rings (5) that retain universal joint in place.

F. Remove bearing cups (6) as shown in Figure 4. Inspect the cup, rollers, seal, and cross for wear or damage. Replace entire universal joint if necessary.

Figure 3

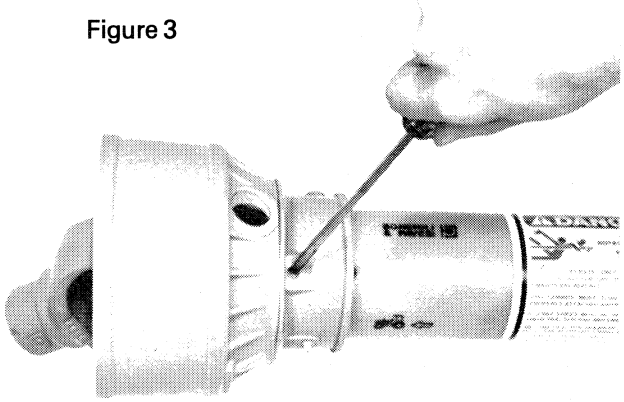
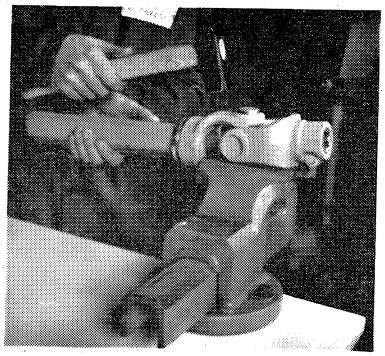


Figure 4



— REPAIR PROCEDURES —

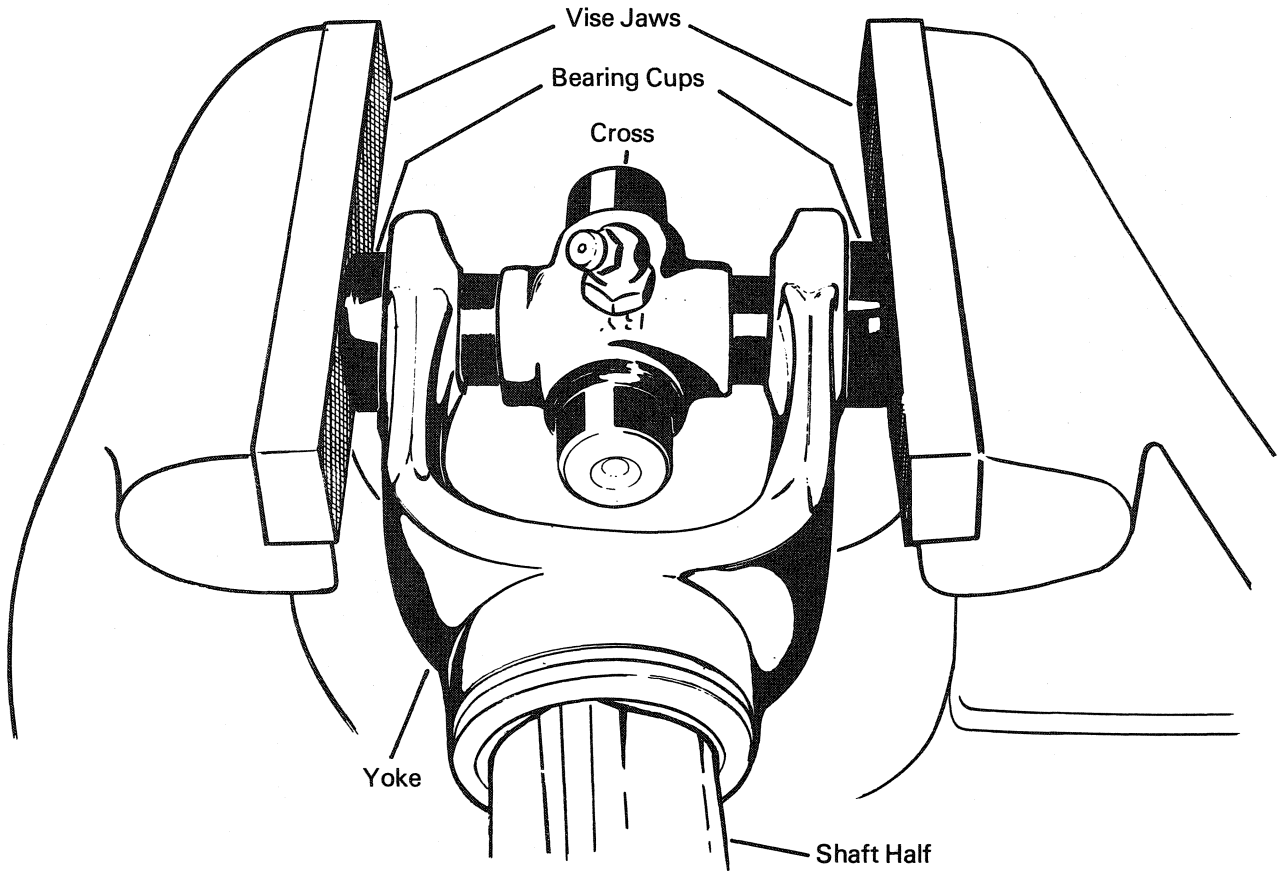
DRIVESHAFT REASSEMBLY

A. Using a vise, install cross and bearing cups onto shaft half and yoke as shown in Figure 5. Remove from vise and tap each bearing cup in with hammer until slot for snap ring is exposed. Install snap rings. If bearing cups will not go in enough for snap rings to be installed, it usually indicates one or more needle rollers fell into bottom of cup. Correct immediately. If cup is forced, needle roller will be crushed necessitating replacement of entire cross and bearing assembly.

B. Reinstall driveshaft to tractor and implement. When setting setscrew and nut (Figure 7, items 17 and 18) on implement end of driveshaft turn down setscrew until it bottoms against groove then back off 1/4 turn and tighten nut. The setscrew contains driveshaft if shear bolt (pin) should shear.

IMPORTANT: The bolt (pin) used in the implement half of driveshaft, through gearbox input shaft, is special. It is specifically designed to shear at a given load before the tractor or implement can be damaged. Use only Ford replacement parts or tractor/implement damage can be expected. The light duty model has a 3/8'' x 1½'' coiled spring shear pin. Medium duty model has a 3/8'' x 2½'' Grade 2 shear bolt.

Figure 5



GEARBOX ASSEMBLY

(Figure 6)

Ref. No.	Description	Qty.
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8	Pin	1
9	Plug	1
10	Cover, Top	1
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