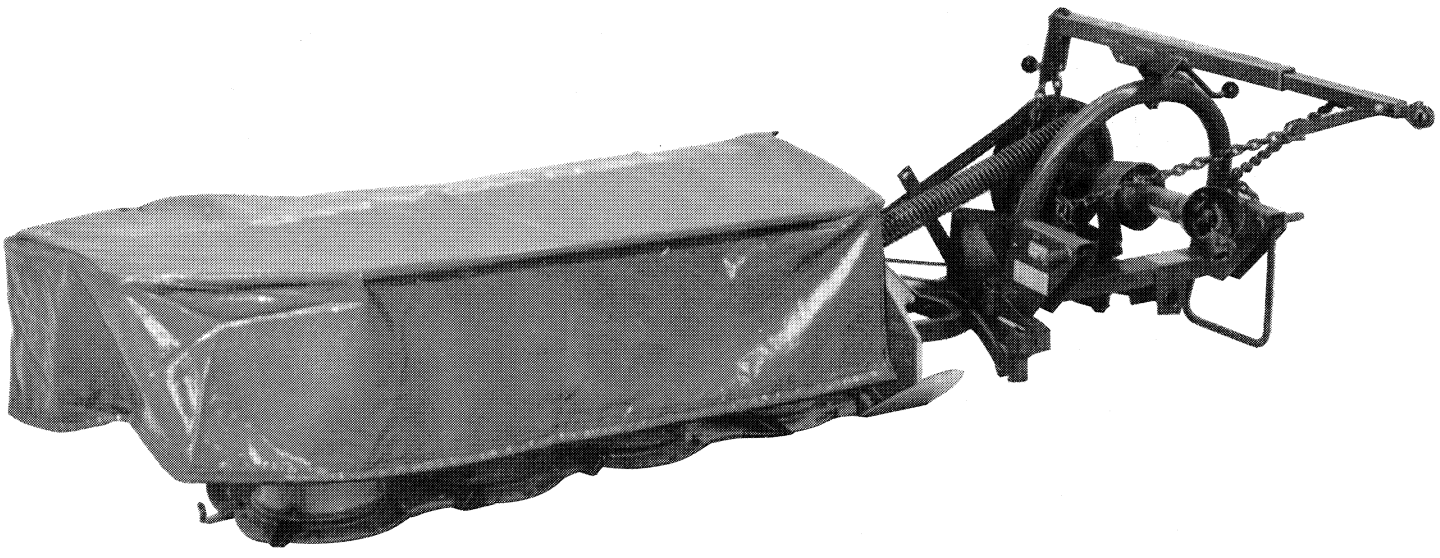
SERVICE MANUAL

DISC MOWER 438

NEW HOLLAND



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INTRODUCTION

This manual contains information on removal and installation of cutter bar components. It also covers the gear box and other areas of the base frame where, after normal use, parts may have to be replaced or adjusted.

CONTENTS

REMOVING THE CUTTER BAR FROM THE BASE FRAME

1. Remove the cover and guard assembly A, Figure 1. Remove the end guard B.

FIGURE 1

2. Remove the swath board assembly A, Figure 2.

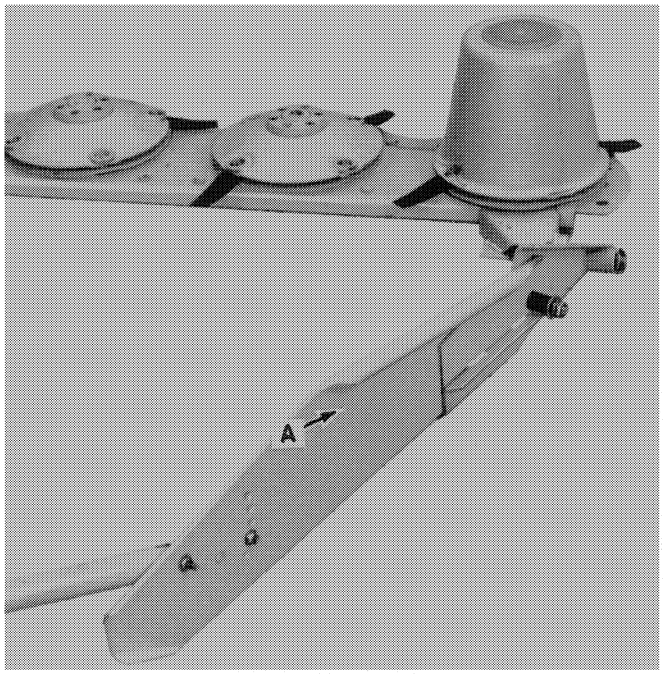

FIGURE 2

3. Remove the belt shield A, Figure 3. Remove the drive belts B from the cutter bar drive sheave.

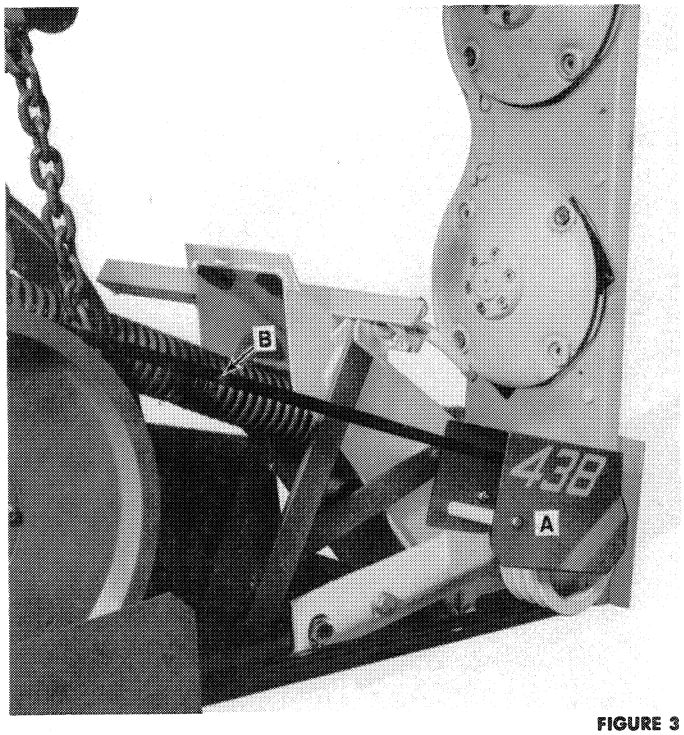

FIGURE 3

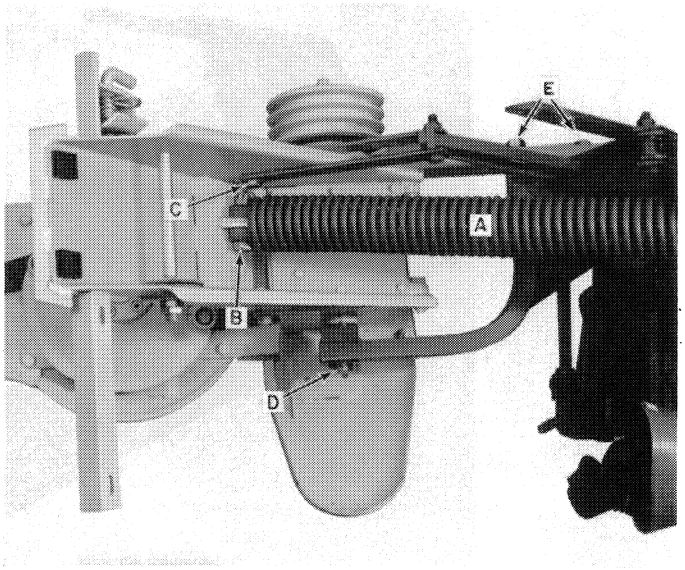

FIGURE 4

4. Slacken the spring A, Figure 4, by turning the handle. Remove bolt B to remove the spring. Remove bolt C in the lift straps. Remove two bolts E in the pivot support. Remove the cotter pin at D in the front hinge pin. The cutter bar can now be removed from the base frame.

OPENING THE CUTTER BAR

1. Remove the crop divider end cap at A, Figure 5. Cap can be removed by prying it out of divider with a screw driver. Remove the four discs by removing the allen head bolts in the hubs B.
2. Remove the outer skid shoe A, Figure 6. Remove all the bolts holding the cutter bar halves together. Remove the inner shoes B and disc shoes C.

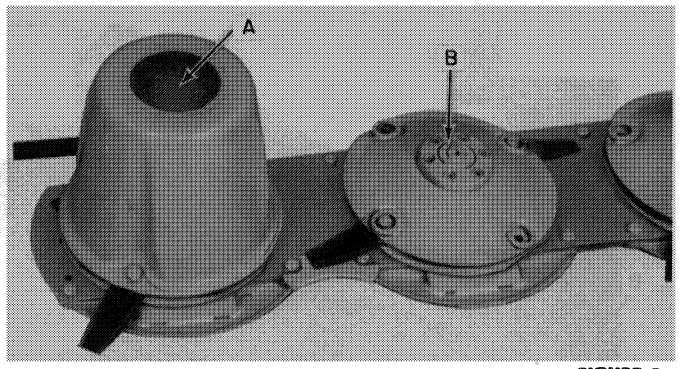

FIGURE 5

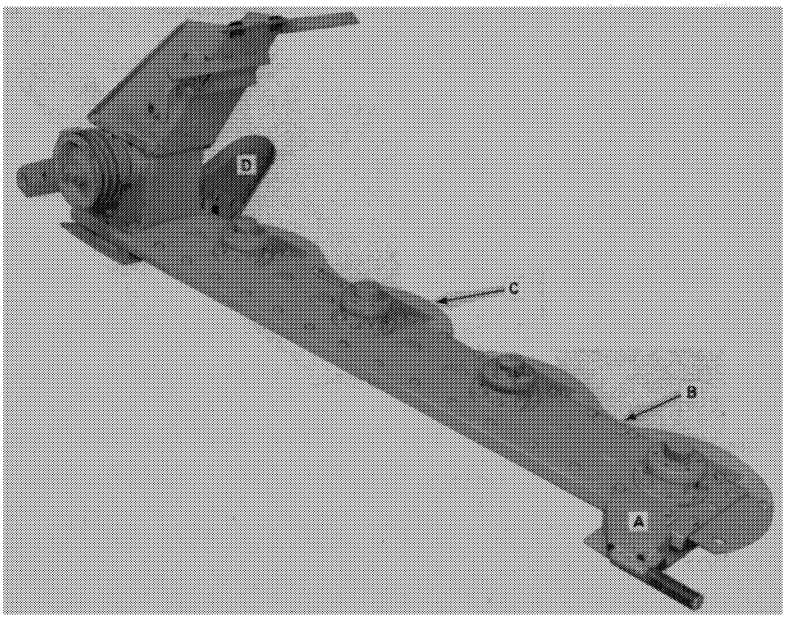

FIGURE 6

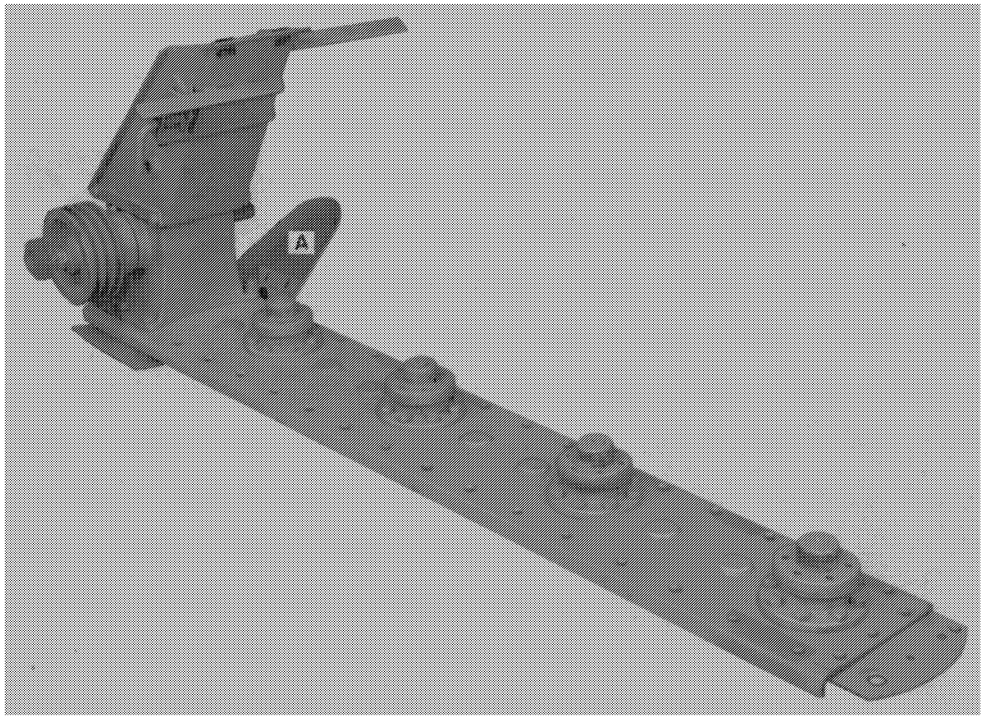

FIGURE 7

3. Remove the inner shoe A, Figure 7. **Be careful not to disturb the seal between the upper half of the cutter bar and the gear box.**

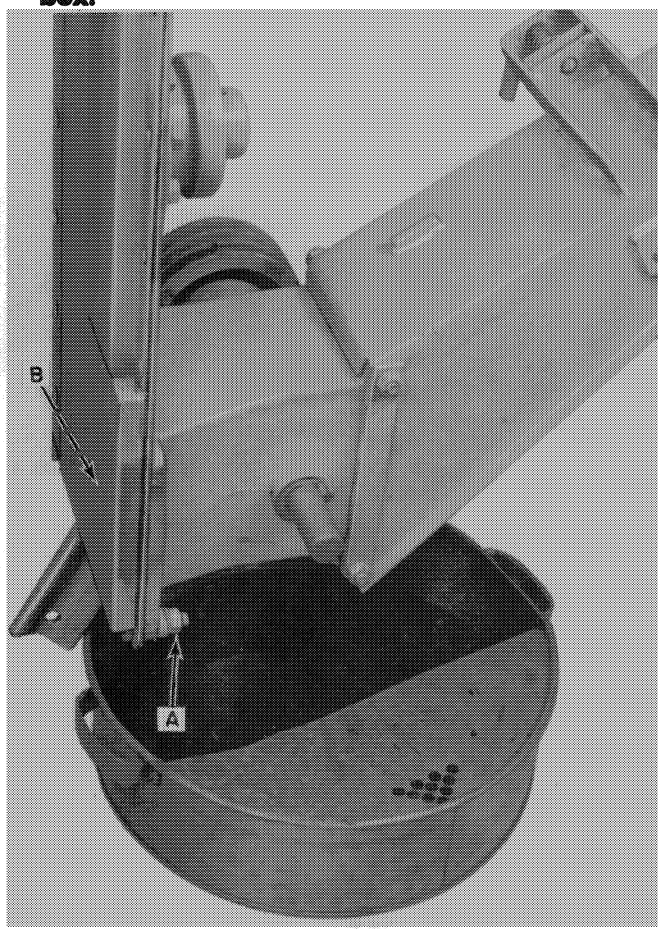

FIGURE 8

4. Install bolts shown at A, Figure 8, to temporarily hold the gear box in place. Hang the cutter bar assembly as shown and remove the drain plug at B and drain the oil.

5. Remove all the allen head stub bolts on the bottom side of cutter bar as shown at A, Figure 9.

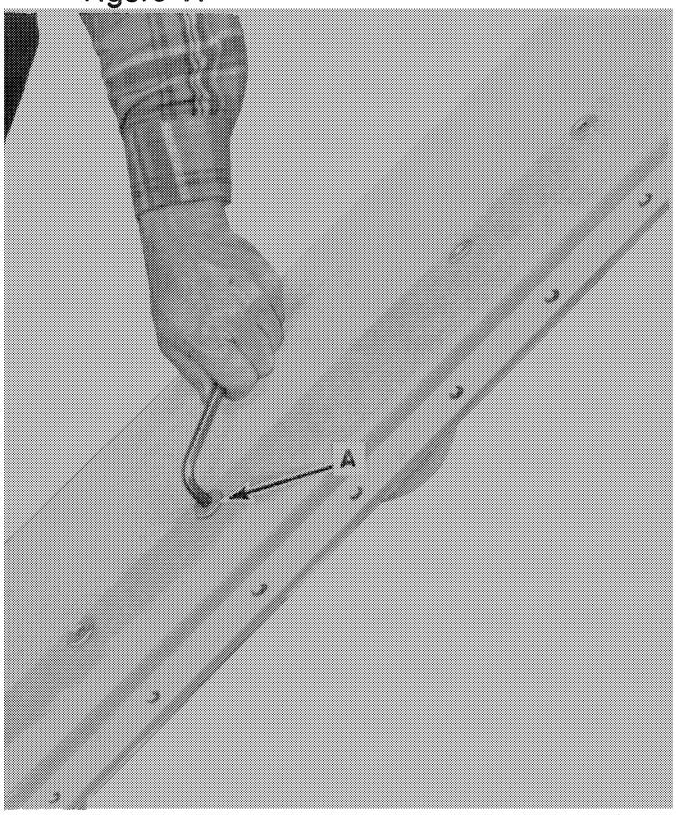

FIGURE 9

6. Place the cutter bar in an upside-down position and remove the bottom half as shown in Figure 10. Be sure to collect the tapered washers on each idler stud. The

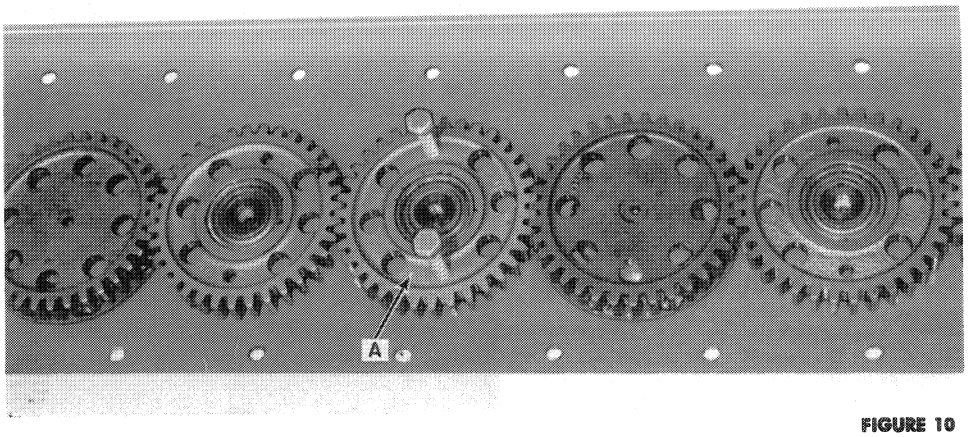

FIGURE 10

small idlers A can be removed by using two bolts in the threaded holes and turning them in against the cutter bar.

7. The large idler A, Figure 11, does not have holes provided for bolts to remove it. Use pry bars to remove idler from shaft.

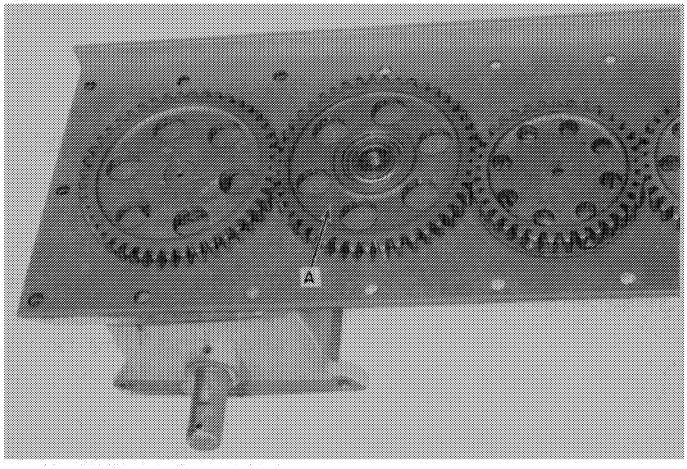

FIGURE 11

DISC GEAR BEARINGS AND HUB

1. Each disc gear shaft A, Figure 12, is supported with two bearings inside housing B. To remove bearings remove roll pin C from disc hub.

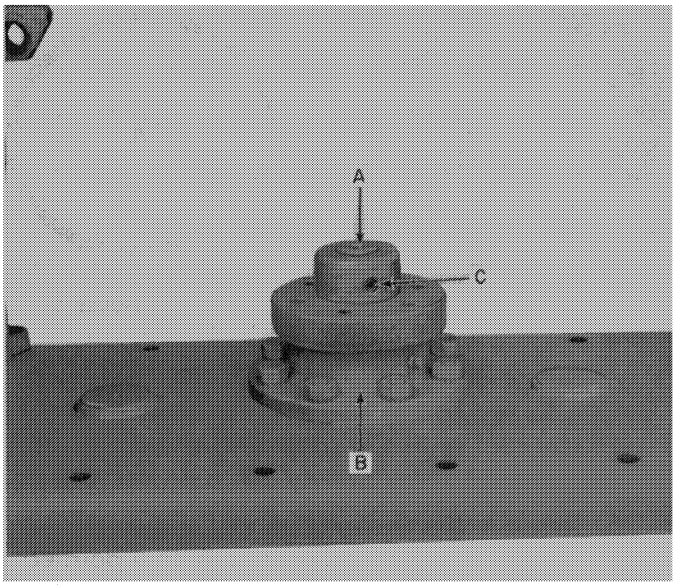

FIGURE 12

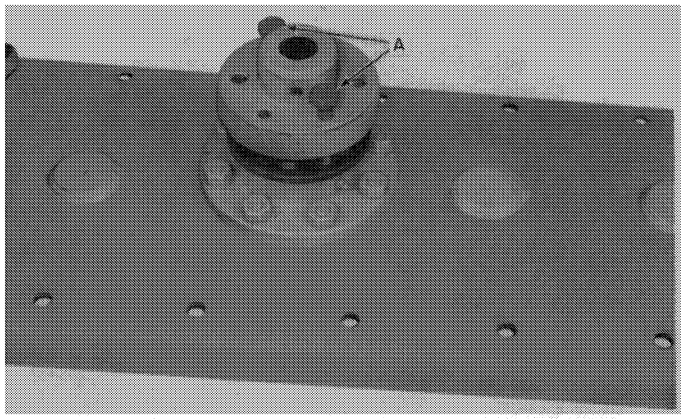

FIGURE 13

2. Remove the disc hub by installing two bolts A, Figure 13, and turning them against housing. **NOTE:** To install hub, it must be heated with a torch to expand it. Make sure holes are lined up with roll pin.

3. Clean shaft with emery cloth and remove upper bearing as shown in Figure 14. The lower bearing and spacer can be removed from bottom side. If housing A is replaced, use permatex between housing and trough. Pack bearings with grease in assembly.

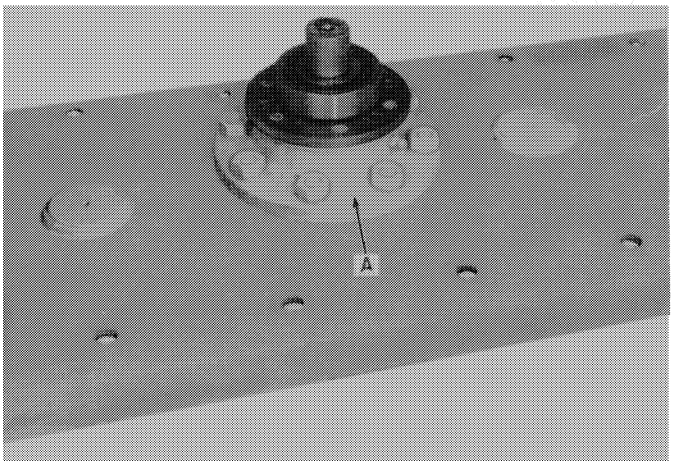

FIGURE 14

IDLER GEAR BEARINGS

1. Idler gear bearings, A, Figure 15, should be replaced if there is any horizontal movement in bearing assembly. The bearing is retained in the gear with an internal snap ring. The bearing must be removed with a hydraulic press.
2. To remove the bearing a special tool should be made as shown in Figure 15B.
3. Install the shaft part of the special tool down through the flush side of the bearing and gear. **NOTE:** Figure 15 shows the recessed side of the bearing and gear at B, or the bottom side when inserting the special tool.

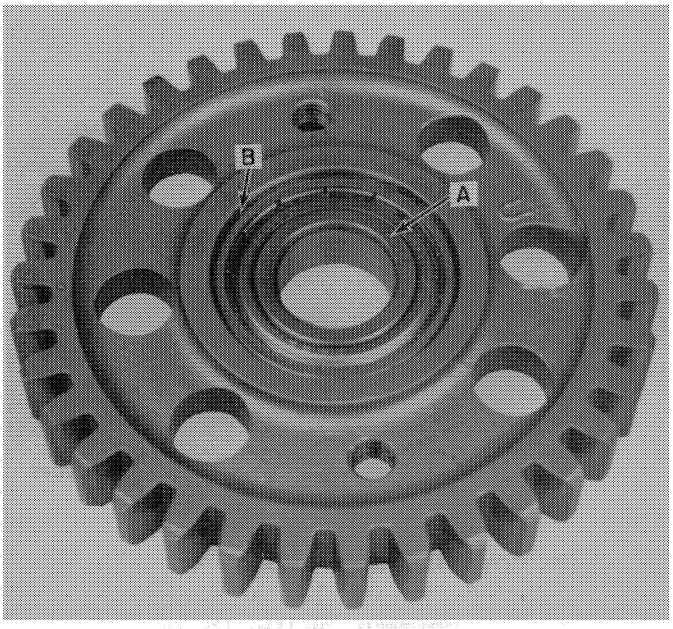

FIGURE 15

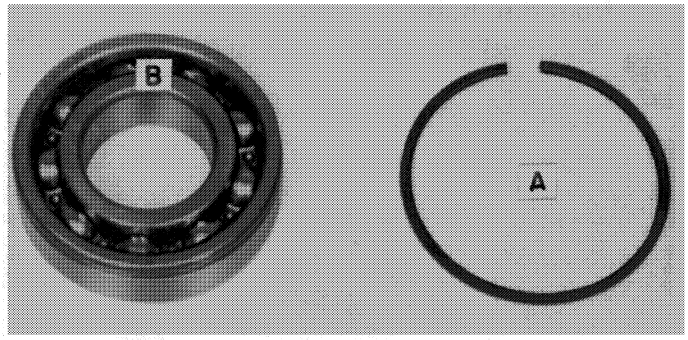

FIGURE 15A

4. Support the bottom of the gear hub with a heavy spacer and press against the special tool until the snap ring shears. It will require approximately 20 tons pressure.
5. Remove the sheared part of the snap ring inside the gear ring groove with a pointed object or small screw driver. Install the new snap ring.

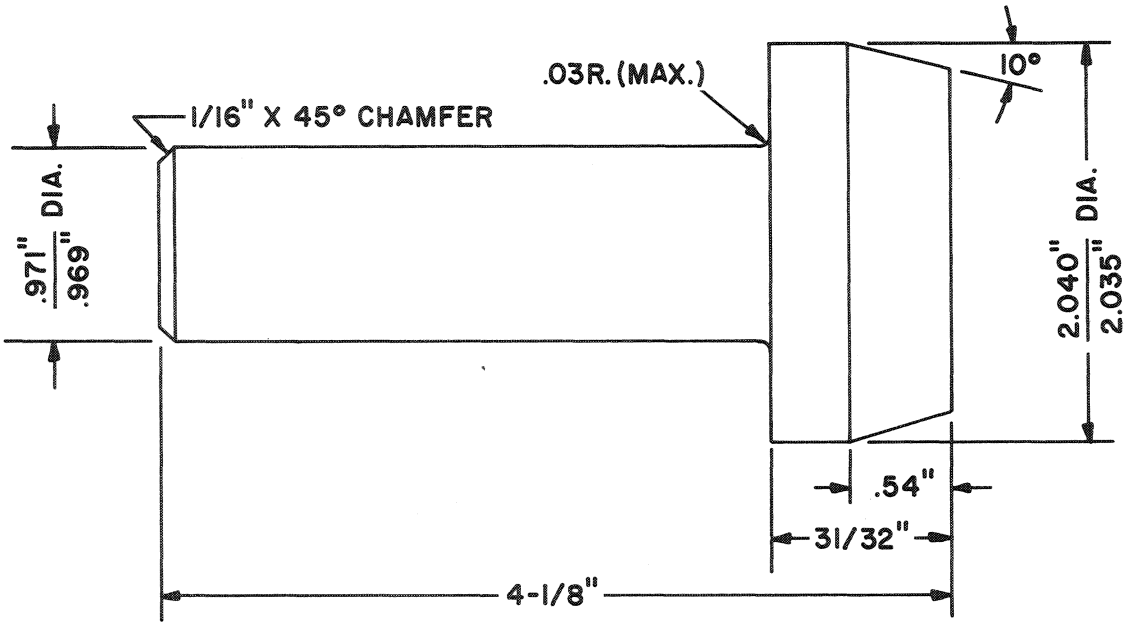

FIGURE 15B

6. Place the bearing over the shaft part of the special tool and insert the tapered part of the tool inside the gear. The tool will expand the snap ring and allow the bearing to be inserted inside the gear. Continue inserting the bearing until the snap ring falls into the bearing groove.
7. **NOTE:** Before installing new bearing inspect gear to make sure gear was not cracked or damaged in bearing removal.

CUTTER BAR ASSEMBLY

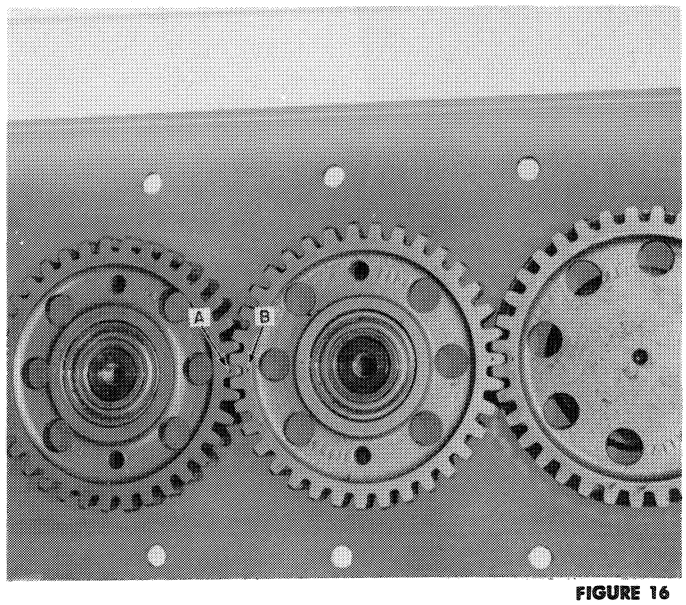

FIGURE 16

1. Place the upper trough in an upside-down position. Install the idler gears as shown in Figure 16. Make sure **all the gears are timed the full length** of the cutter bar as shown at A and B. All gears have timing marks.
2. Clean all the old permatex and gasket material from each trough half. Apply permatex on the upper trough half and install the new gasket.