NEW HOLLAND SERVICE MANUAL

GEARBOX

MANURE SPREADERS
130, 145, 155, 165, 185, 513, 519, 679, 514, 520, and 680

41721802

APRON DRIVE GEARBOX

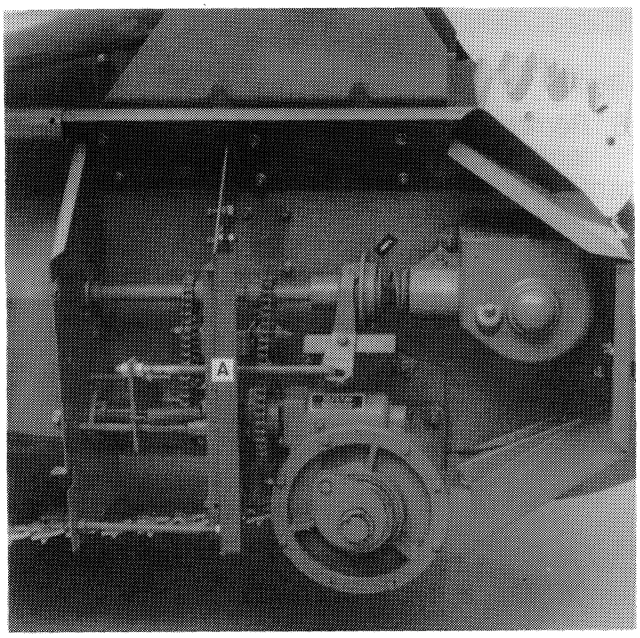

FIGURE 1

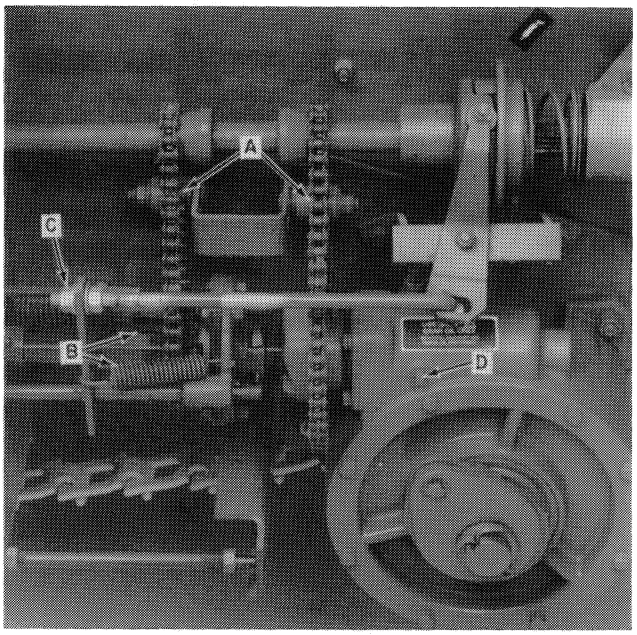

FIGURE 2

NOTE: The following photos show Models 520 and 680 spreaders. All other models are similar.

REMOVAL

1. Remove the beater support brace, A, Figure 1.
2. Remove the two gearbox drive chains, A, and the clutch shifter springs, B, Figure 2.
3. Remove the clutch rod nut, C, Figure 2.

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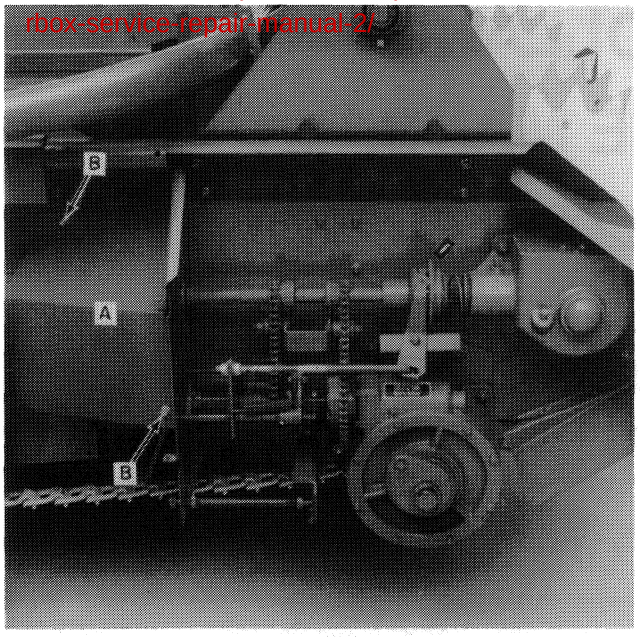

FIGURE 3

4. Remove shield, A, Figure 3, by removing the hardware at B.

5. Remove spring retaining angle, A, and outboard bearing hardware, B, Figure 4.

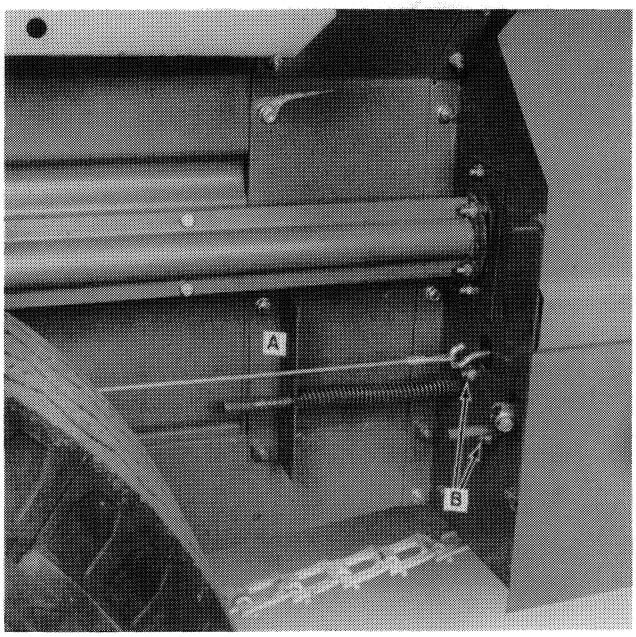

FIGURE 4

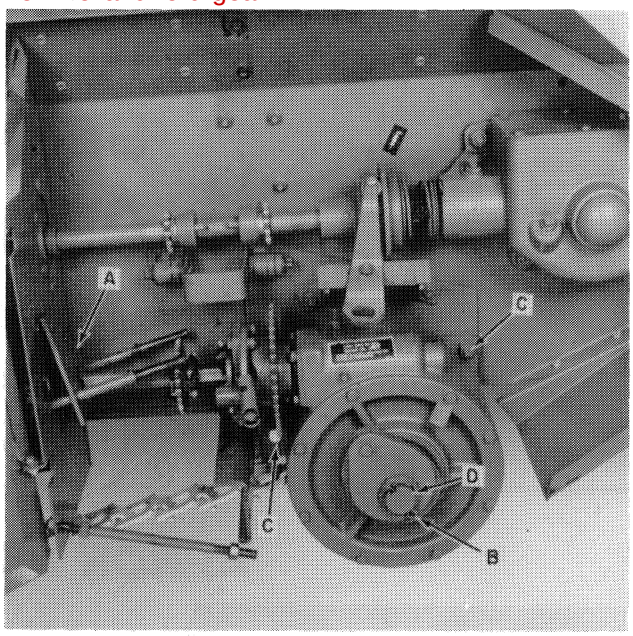

FIGURE 5

6. Remove the shifter weld assembly, A, and cotter pin, B, Figure 5. Remove the hardware at C, Figure 5, and the gearbox from shaft, D.

7. If the gearbox will not slide from the shaft, attach a gear puller to the shear hub as shown in Figure 6.

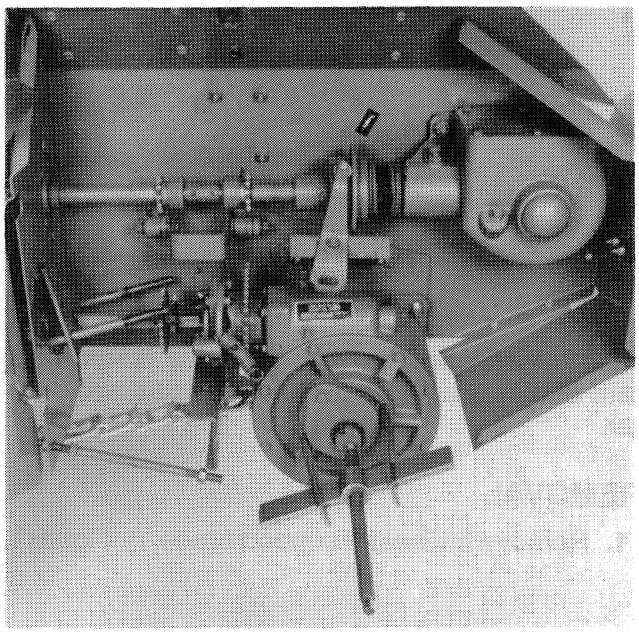

FIGURE 6

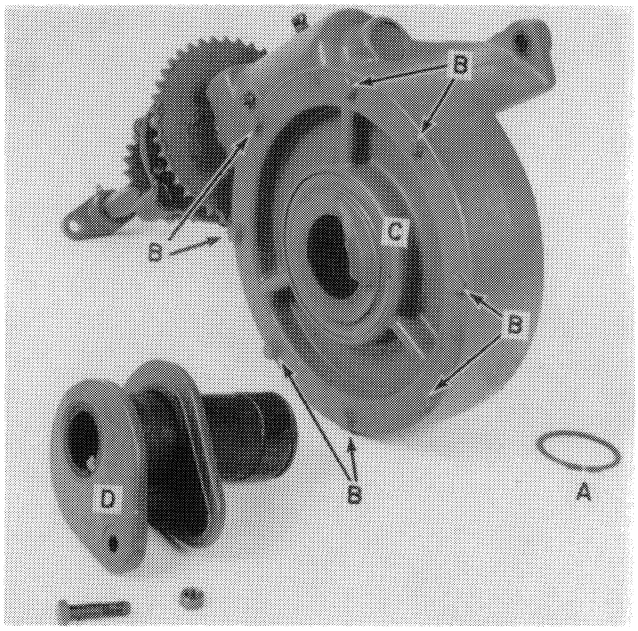

FIGURE 7

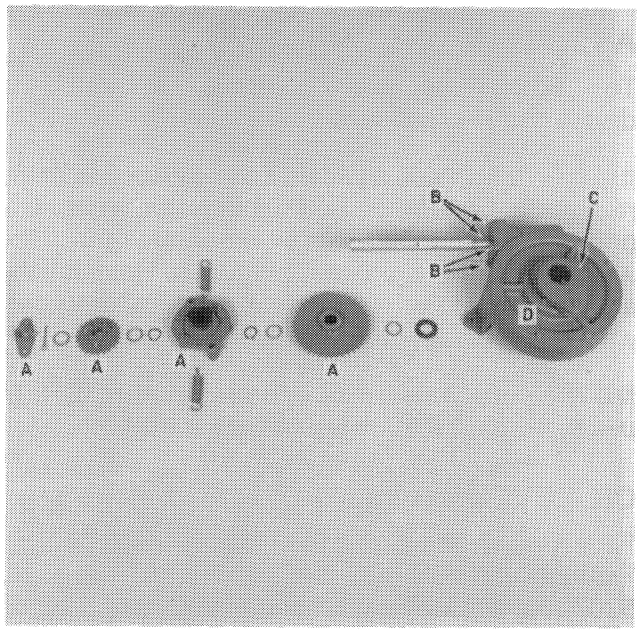

FIGURE 8

DISASSEMBLY

1. To remove the shear hub, D, remove snap ring, A, Figure 7. To remove the ring gear, remove cap screws, B, and cover, C, Figure 7.

   If the gearbox is to be completely disassembled, use the following steps.

2. Remove the drive components, A, as shown in Figure 8.

3. Remove four cap screws, B, Figure 8, from the input shaft bearing retainer. With the gearbox in an upright position, the input shaft can be removed by rotating it in a counterclockwise direction. The lubricant can then be drained through the input shaft opening.

4. Remove shear hub, C, and cover, D, Figure 8, as outlined in Step 1.

5. To replace the rear input shaft bushing, A, Figure 9, drive out expansion plug, B, and drive bushing, A, to the rear.

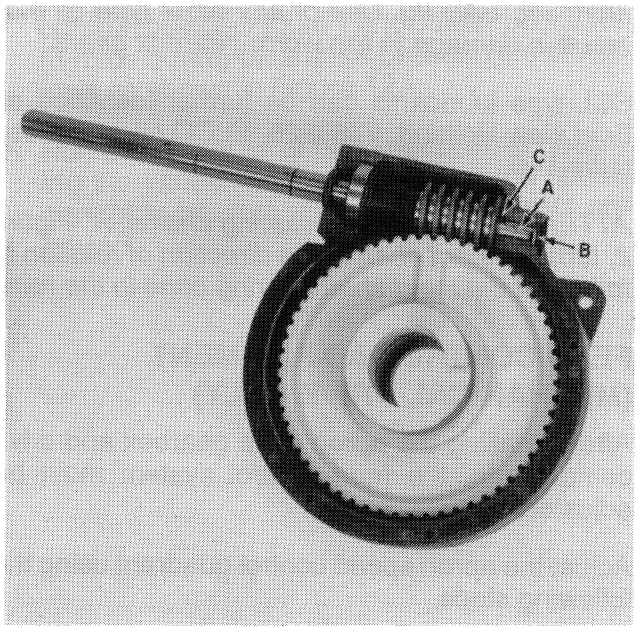

FIGURE 9

ASSEMBLY

To reassemble the gearbox, reverse the disassembly procedure.

It is best to replace all seals if the gearbox is being repaired. Also check all bushings for wear. The only shimming required is between the rear of the worm and the gearbox at C, Figure 9. Reinstall the shims removed or shim to remove shaft end play without preloading the tapered bearing.

NOTE: Coat the edge of expansion plug, B, Figure 9, with #2 Permatex before installing.

OIL LEVEL

Fill the worm gearbox to the oil level check plug, D, Figure 2 (Models 130, 145, 155, 165, 185, 514, 520, 680) or to the center line of the input shaft on older models.

IMPORTANT: Be sure to use only an SCL-type lubricant, SAE 90. Use of any other type oil may result in damage to the worm gearbox gears.

SCL-type lubricants can be further identified as Ford New Holland, #768925, ELCO oil, and Mobil Lube #46.

ATTENTION: Before tensioning chains, A, Figure 2, turn the input shaft in the direction of rotation to fully seat the input shaft bearing cone in the race.

FEED CONTROL ADJUSTMENT (MECHANICAL DRIVE ONLY)

After installing the apron drive gearbox and drive components, the feed control system must be adjusted.

Adjust the apron speed control quadrant using the following steps.

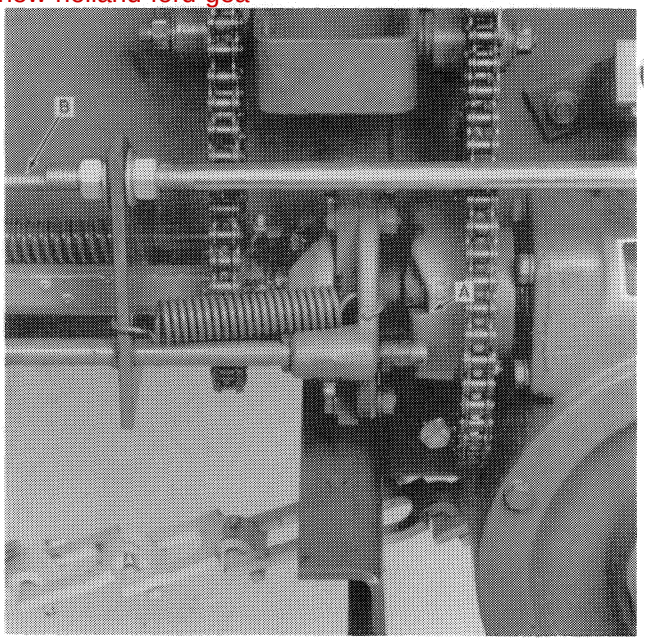

FIGURE 10

1. Set the apron speed control quadrant in "S" or slow position.
2. Rotate the drive shaft by hand until the clutch teeth and slow speed sprocket teeth engage as shown at A, Figure 10.
3. Adjust eyebolt, B, Figures 10 and 11, until the driving teeth of the shifting clutch are engaged fully with the teeth on the slow speed sprocket. Proper engagement is when both clutch and slow speed sprocket are flush to 1/16" (1.5 mm) extended from the sprocket tooth as shown at A, Figure 10.