



New Idea

Operator's Manual

305

**Mounted Gathering
Unit**

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Operator's Manual

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OPERATOR'S MANUAL

No. P-194

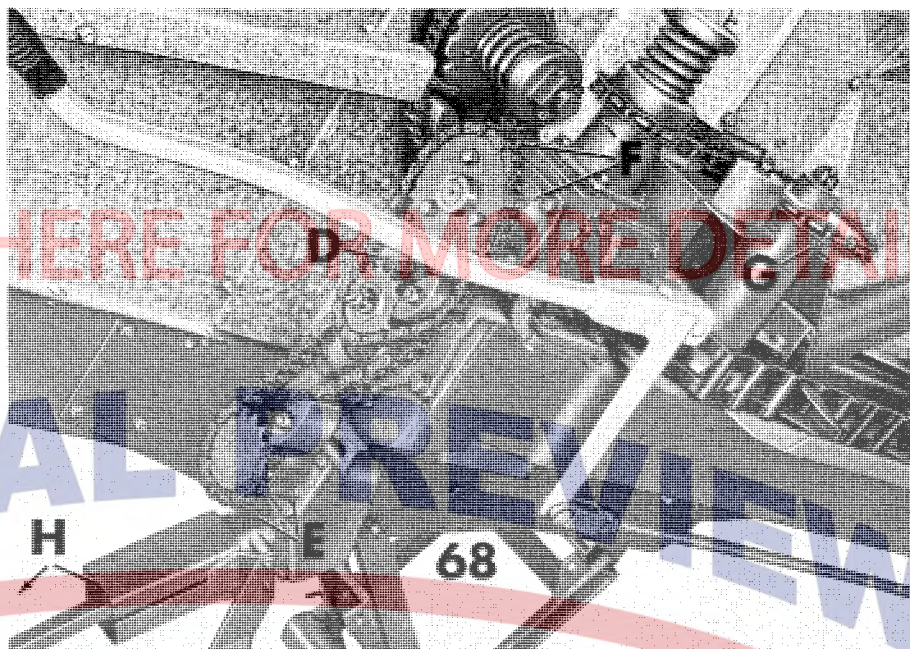
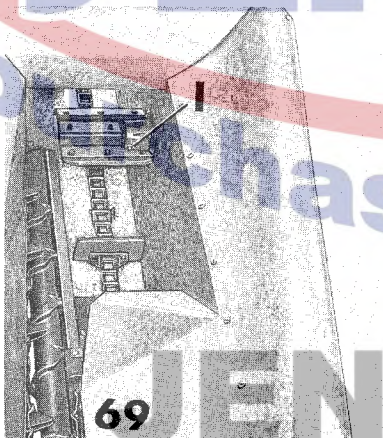
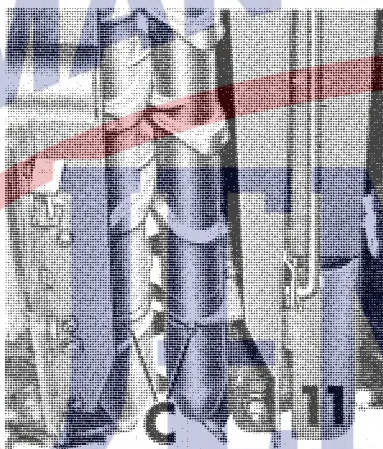
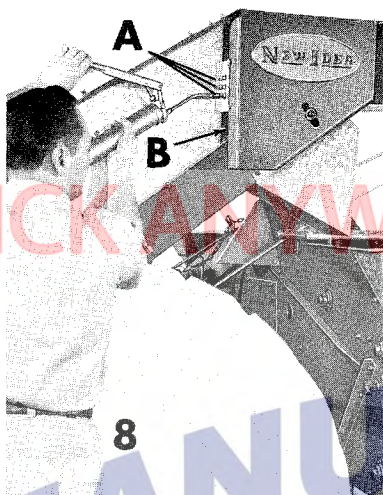
NO. 305 MOUNTED GATHERING UNIT

• **NEW IDEA**



For the Dealer and Operator
Read these instructions
Save them for reference

NEW IDEA
FARM EQUIPMENT COMPANY
Division **Avco** Distributing Corporation
COLDWATER, OHIO, U.S.A.



Pressure Type Grease Fittings on Gathering Unit Requiring Grease Every 4 Hours When Picking

1. Three in each Clearing Roll Assembly, at A, Photo 8.
2. Two at Upper End of each First Elevator Drive Shaft, B, Photo 8.
3. Two on Lower Bearings of Each Set of Snapping Rolls, C, Photo 11.

4. One for each Set of Snapping Roll Drive Gears, D, Photo 68.

Pressure Type Grease Fittings Requiring Annual Attention
Caution: Excessive pressure may rupture seals used in all greasing positions except those on Clearing Rolls and Upper Shafts of the First Elevators.

5. Two in each Angle Gear Box, E, Photo 68.
6. Three in each three-way Gear Box, F, Photo 68.
7. One in each Long Gathering Chain Drive Shaft Tube, G, Photo 68.
8. One at each Universal Joint on Drive H, Photo 68, from Sub Frame to Gathering Unit.

9. One each Beater Housing, I, Photo 69.

10. One in each Short Gathering Chain Gear Box, J, Photo 70.
11. Repack Gear Boxes annually. We suggest they be repacked as follows:

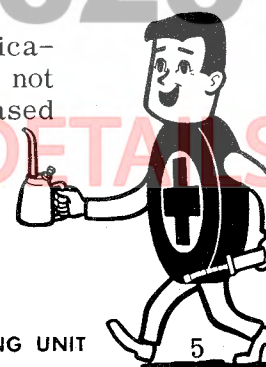
A. Remove any drive chains that need be removed, then remove the four cap screws holding the bearing and sprocket assembly, (or bearing and clutch assembly - or gear case cover). Remove this assembly from the gear box.

B. Flush the inside of box and refill to level of shafts with a good grade of grease.

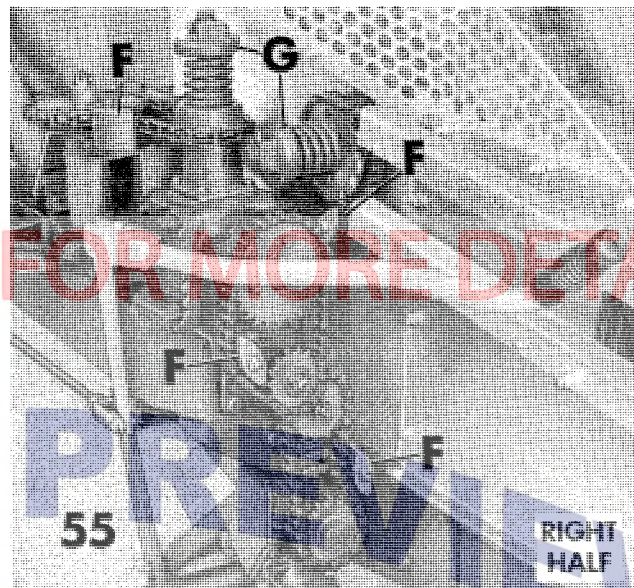
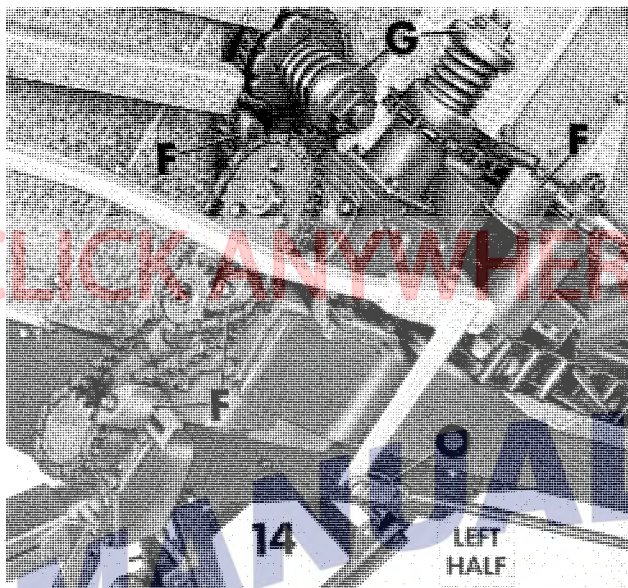
12. If the picker is equipped with the one shot lubrication system the following list of fittings are not serviced with this system and should be greased annually: Nos. 5, 6, 7, 8, 9 and 10.

There are also two fittings on the first elevator pylons that require annual attention.

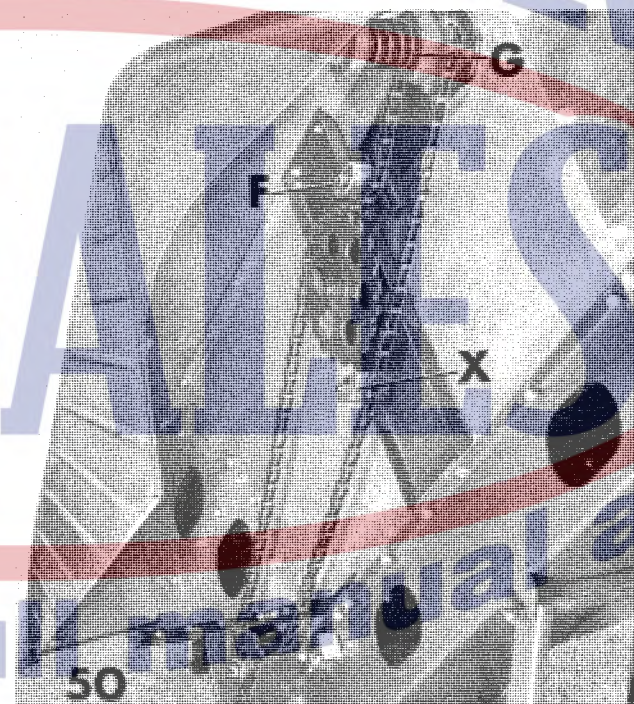
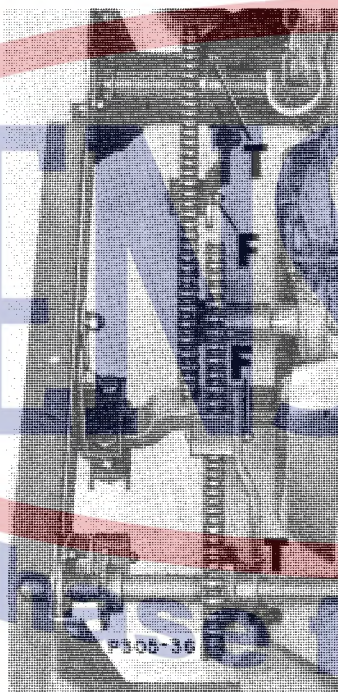
**BRUSH OIL ... LIBERALLY AND FREQUENTLY, ON ALL CHAINS AND DRIVE SHAFT TUBE.
 GREASE ALL EXPOSED GEARS, FREQUENTLY.**



ADJUSTMENTS



All Drive Chains in Photos 14, 36, 50 and 55. Reset Idler Blocks F. Note: Block X, in Photo 50, is not adjustable. Keep these Chains at proper operating tension so as to avoid Sprocket wear and prevent Chain jumping.



SHEAR BOLTS T, PHOTO 36, PROTECT MAIN DRIVE. BOLTS SHEAR BECAUSE OF OBSTRUCTIONS IN SNAPPING ROLLS.

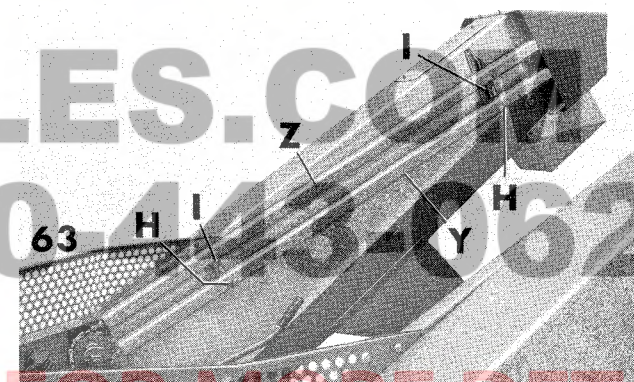
WHEN REPLACING A SHEAR BOLT USE ONLY SPECIAL STEEL BOLT, PART NO. K 4914. Washer on bolt is a K 2878.

The Chains on First Elevators and Clearing Rolls, Photo 63, run in Slides Y and Z. Chain is adjusted by lower slide Y, loosen Nuts H and reposition Slide on Brackets I, primarily at the Upper End, secondarily at Lower End. If all the adjustment is taken up by slide and chain is still too loose, remove one link.

Note: If replacing this Chain, shield, which is attached to Slide with wood screws, must be removed.

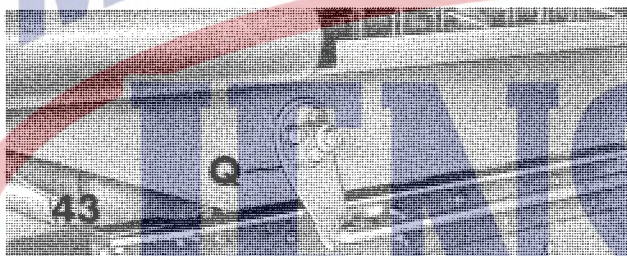
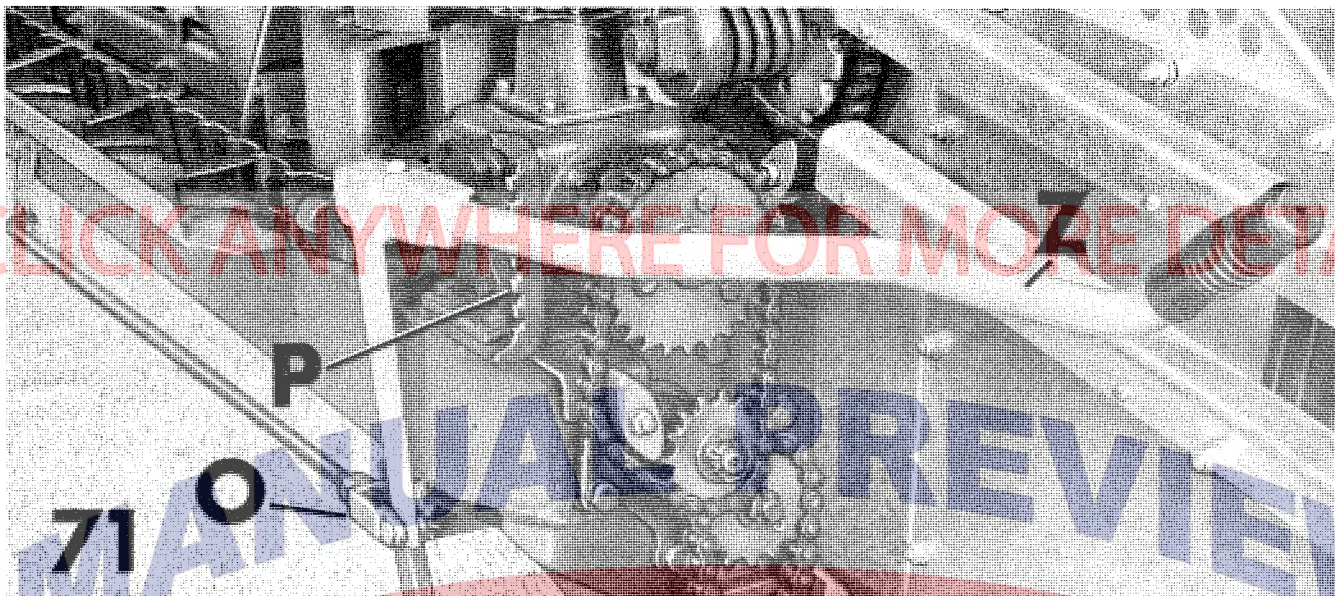
Adjusting Slip Clutches Photos 14, 50 & 55

The safe operating factor Slip Clutches provide may be lost by compressing Springs too



much. If slippage is excessive and no obstruction is evident, take up Slotted Nut one half to one full turn, as needed.

Note: Duplicate Springs exactly, if replacing.



Procedure for Equalizing Gap Between Rolls

Set both Control Levers Z in top notch on Quadrant P, Photo 71.

Adjust Clevis O, Photo 71 on Adjustment Rod and check gaps between sets of Rolls, when open.

If insufficient adjustment is made with Clevis O loosen Cap Screws in Adjustment Plate Q, Photo 43. Then turn Cam R, Photo 28, against Rolls, by hand, until Rolls are as close together as they can be without striking.

Retighten Cap Screws in Adjustment Plate Q when adjustment is satisfactory.

Adjusting Spacing Between Snapping Rolls

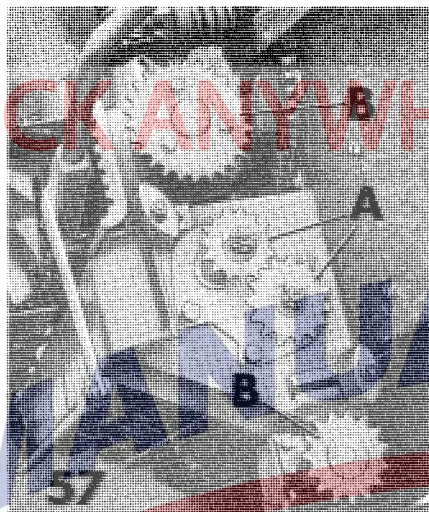
Set Lever Z, Photo 71, in top notch on the Quadrant, P, to close Snapping Rolls when picking conditions are good.

Set Lever Z, Photo 71, in a lower notch on Quadrant, P, to open Snapping Rolls when picking under dry, frozen or other unusual conditions.

Note: Snapping Rolls must not "strike" when they are operating closed.

Note: Both sets of Snapping Rolls should be adjusted so the gaps between the Rolls are equal, when Rolls are open.

Note: Three washers (3-1/16" ID, 3-1/2" OD by 7/64") are stored under Plate Q, Photo 43. Transfer them to the other side and use behind Cam R, Photo 28, as needed to space out Cam to Rolls.



Removing Snapping Rolls for Repair

Note: Reverse Procedure to Replace Rolls.

Things to Do at Upper End of Rolls:

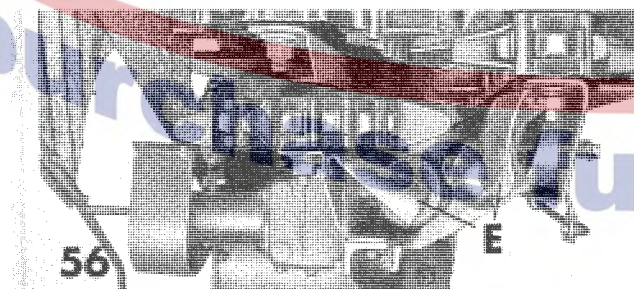
1. Open Rolls by setting Lever Z, Photo 71, on Page 9, in bottom notch on Quadrant P.

2. Take Chains off Sprockets A & B, Photo 57.

3. Remove Cotter Pins, Slotted Nuts and both Sprockets A, Photo 57.

4. Remove Spacer Y and Bearing Housing Cover C, Photo 58.

5. Remove Gears D and Spacers behind Gears, (2) Photo 59.



2. Remove Bolts F (2), Photo 37.

3. Remove Tension Rod G, Photo 37.

4. Remove Nut and Bolt H from Support Hanger, Photo 37.

5. Remove Snapping Rolls, rotating one Roll to clear lobe on the other.

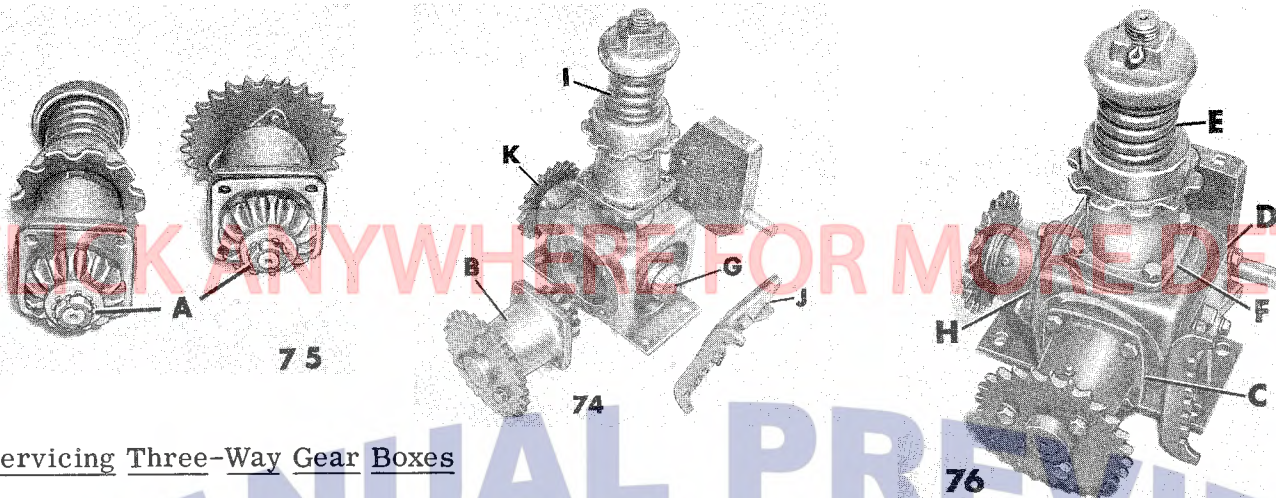
Timing and Mating Rolls When Replacing

Small marks I, in Gear D teeth, Photo 59, are "timing" marks, indicating correct meshing of gears for Snapping Roll timing.

Important: Keyway J must be directly under single "time-marked" tooth on both Shafts. The Snapping Rolls are correctly mated when short Bar K, Photo 60, Page 11, on one Roll, is set next to long Bar L (attached to lobe) on the other Roll.

Things to Do at Lower End of Rolls:

1. Remove Entry Guides E, Photo 56.



Servicing Three-Way Gear Boxes

Note: The 3-way Gear Boxes on the No.305 Gathering Unit may be serviced without removing box from machine.

To adjust bearings on Input Shaft Assembly B and gathering Chain Drive Assembly I, remove assemblies B and I.

On these assemblies, at A, Photo 75, free the Locking Washers and draw up nut. For proper adjustment, draw nut up tight then back them off 1/4 of a turn. This should leave a slight drag on the bearings.

Be sure to use Locking Washer to anchor nut.

Mesh Gears on Input Shaft Assembly B and Gathering Chain Drive Assembly I, Photo 74, by using additional or fewer Shims at C and F, Photo 76.

Note: Gears should mesh so there is a slight amount of backlash (.007 to .017)

Removing Cross Shaft from Gear Box

Remove Bearing Cap J, Photo 74, and Roll Pin from Sprocket K, permitting Shaft Bearings and Gear to be withdrawn from the case.

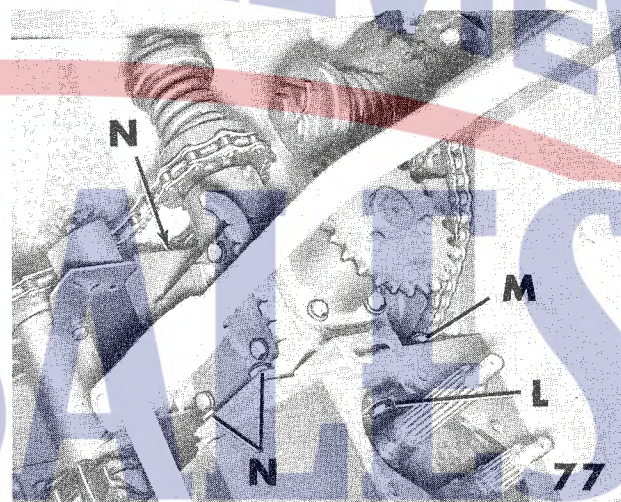
Bearings on this Shaft are adjusted by the addition or removal of Shims at H, Photo 76.

Proper meshing of Gears on this Shaft is accomplished by adding or removing Shims at D, Photo 76.

Note: Adding or removing Shims at D will also affect the bearing adjustment. If Shims are added or removed at D, Shims will also have to be added or removed at H to insure proper meshing of gears.

PROCEDURE IF IT IS EVER NECESSARY TO REMOVE A THREE-WAY GEAR BOX

1. (See instructions in this Manual for Re-



moving the Snapping Rolls, Page 11, and do the five things specified at Upper End of Rolls) so access can be had for removing Bolt L, Photo 77.

2. Remove Bolts M and N, Photo 77.

3. Remove Bolts O, Photo 78.

Reverse procedure to reinstall.