# 25 Combine (Serial No. 25-130056 and Up)

JOHN DEERE

## OPERATORS MANUAL

25 Combine (Serial No. 25-130056 and Up)

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# FOREWORD

The purpose of this book is to supply useful harvesting information to owners and operators of John Deere 25 Combines. This information should help in choosing the proper adjustment and equipment required to meet each harvesting condition.

A Combine must be constructed to harvest in a wide range of conditions. Average conditions can be handled by the standard equipment with which the combine is shipped. However, unusual conditions may require some special equipment.

The information given in this Manual will afford a clear understanding of the fundamentals of combine harvesting. **The proper use of these fundamentals to suit the condition in which the machine is operating is up to the operator.**

Conditions vary, not only from year to year and section to section, but also from field to field. It is, therefore, obviously impossible to give definite rules for combine operation that will directly apply in every case. It is entirely possible that there are several solutions to any particular threshing problem. For this reason, we give numerous suggestions, some of which may conflict; you can use the one that best suits your needs.

It is often necessary to settle on a compromise of adjustments to save the maximum amount of the crop. To illustrate, in a trashy condition where a large volume of straw stems, weed joints, etc., is being delivered to the cleaning unit along with the grain, it is advisable to open the chaffer and sieve a little wider and accept a slightly dirtier sample rather than to close the sieves and receive a cleaner sample but allow too much grain to pass out of machine with the blanket of trash.

## SERIAL NUMBER.

Record the serial number of your combine and engine (if used) in the spaces provided below.

The combine serial number is stamped on the name plate, located on the right-hand side of the separator just above the tailings auger. The engine serial number is on the engine name plate, located on the front of the engine just above the crankcase oil level gauge.

COMBINE SERIAL NO. _____

ENGINE SERIAL NO. _____

DATE PURCHASED _____

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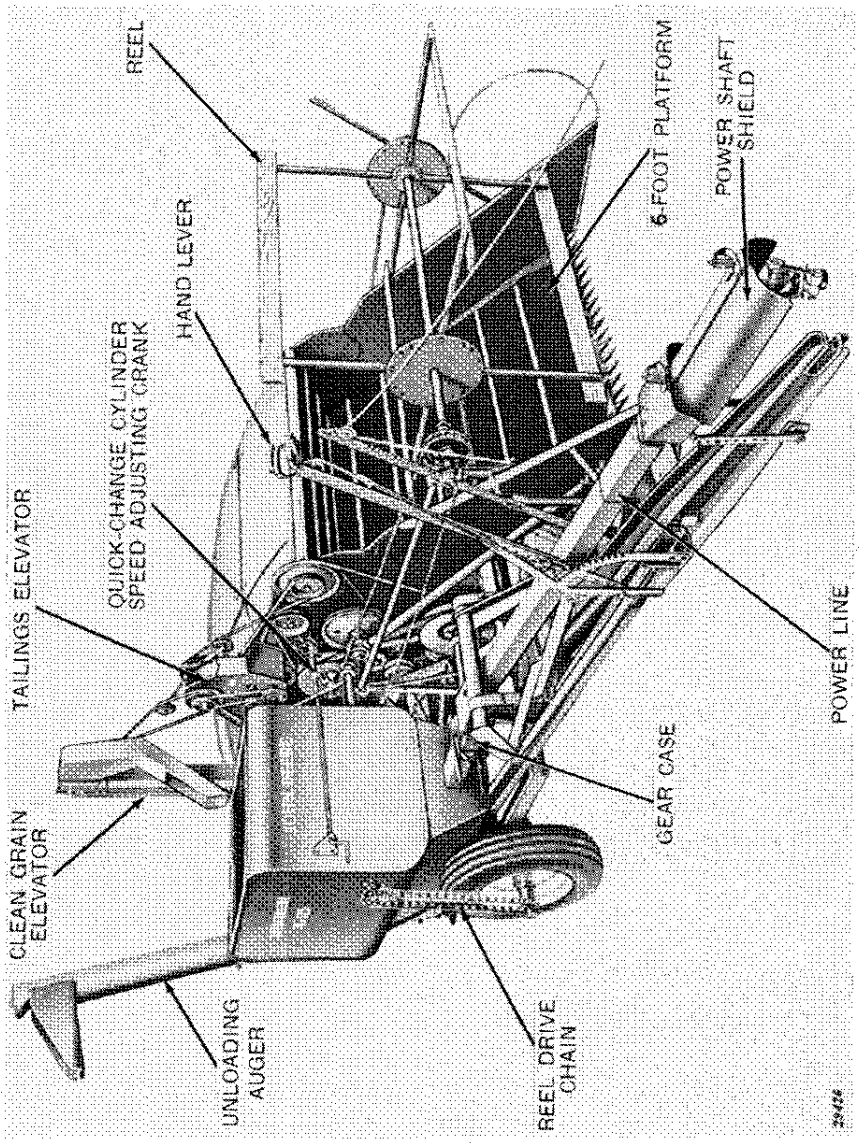
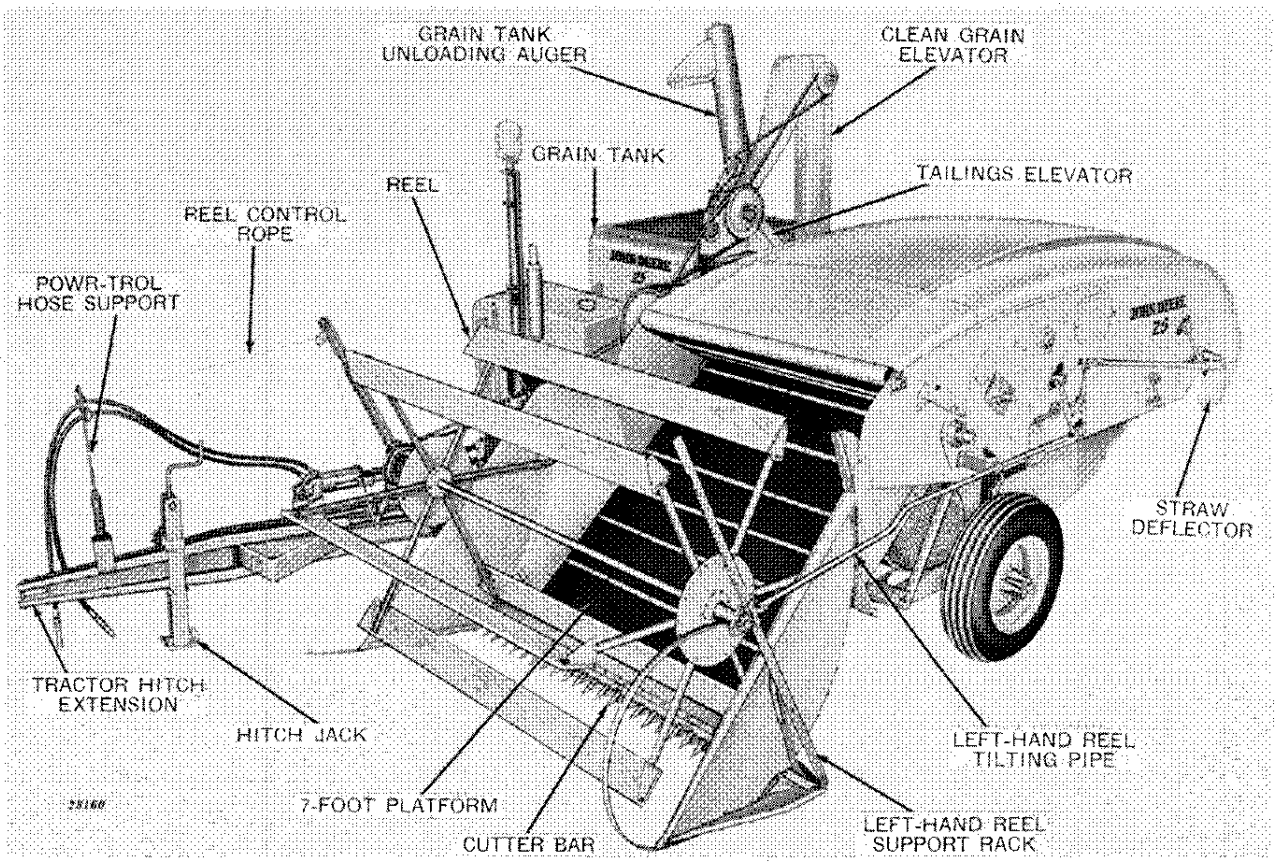
## ADJUSTMENT AND SERVICE—Continued.




***John Deere 25 Combine—Power Take Off Grain Tank Machine with 6-foot Platform and Hand Levers***




***John Deere 25 Combine—Engine-Driven Grain Tank Machine with 7-foot Platform and Powr-Trol***

# SPECIFICATIONS AND DATA

| | | |
|---|---|---|
| Distance Between Divider Points | 6 Ft. Platform | 72. In. |
| | 7 Ft. Platform | 84 In. |
| Length of Cutter Bar | 6 Ft. Platform | 66 In. |
| | 7 Ft. Platform | 78 In. |
| Right- or Left-Hand Cut | | Left-Hand |
| Sickle Front or to Side of Cylinder | | Front |
| Type of Platform | | Hinged |
| Range of Cutting Height | | 1½ In. to 40 In. |
| Type of Conveyor | | Canvas |
| Width of Canvas | | 59 In. |
| Reel Drive | | Ground-Driven |
| Reel, Adjustable from Tractor Seat | | Yes |
| Number of Slats on Reel | 6 Ft. Platform | 4 Slats* |
| | 7 Ft. Platform | 6 Slats |
| Type of Cylinder | | Rasp Bar |
| Width of Cylinder | | 60 In. |
| Diameter of Cylinder | | 15 In. |
| Speed Range of Cylinder | | 430 to 1685 R.P.M. |
| Type of Separation | | Unit Rack |
| Length of Separating Surface | | 76 In.** |
| Width and Length of Chaffer and Cleaning Sieves | | 36 x 34 In. |
| Width of Separator, Rear | | 60 In. |
| Recleaner Available | | Yes |
| Type of Drive | | Power Take-Off or Engine |
| Drive to Cylinder | | V-Belt |
| Number of Wheels | | 2 |
| Tire Size | | 7.50 x 16 |
| Cylinder Bearings | | Sealed Ball |
| Fan and Beater Bearings | | Straight Roller |
| Wheel Bearings | | Tapered Roller |
| Length over all (with Tractor Hitch Extension) | | 19 Ft. 4 In. |
| Width over all | 6 Ft. Platform | 10 Ft. 2-5/8 In. |
| | 7 Ft. Platform | 10 Ft. 11-½ In. |
| Height over all | | 9 Ft. 2 In. |
| Capacity of Grain Tank | | 25 Bu. |
| Shipping Weight, Standard Equipped | | Approx. 3368 lbs. |

*Six or Eight Slats Optional on 6 Ft. Platform

**Measured in a straight line from center of cylinder shaft to point of discharge of straw.

# LUBRICATION

The economical and efficient operation of any machine depends on regular and proper lubrication of all moving parts with a quality lubricant. This is especially true of farm equipment which must operate in hot, dusty conditions over rough ground. Neglected lubrication quickly leads to reduced efficiency, heavy draft, wear, breakdown, and costly replacement of parts.

**Wipe dirt from grease fittings before greasing.**

**Replace all missing grease fittings immediately.**

**Lubricate all parts thoroughly with a good grade of gun grease but avoid excessive lubrication.** Excessive lubricant will drop onto belts, causing slippage.

**Keep main drive gear case filled with a good grade of gun grease.**

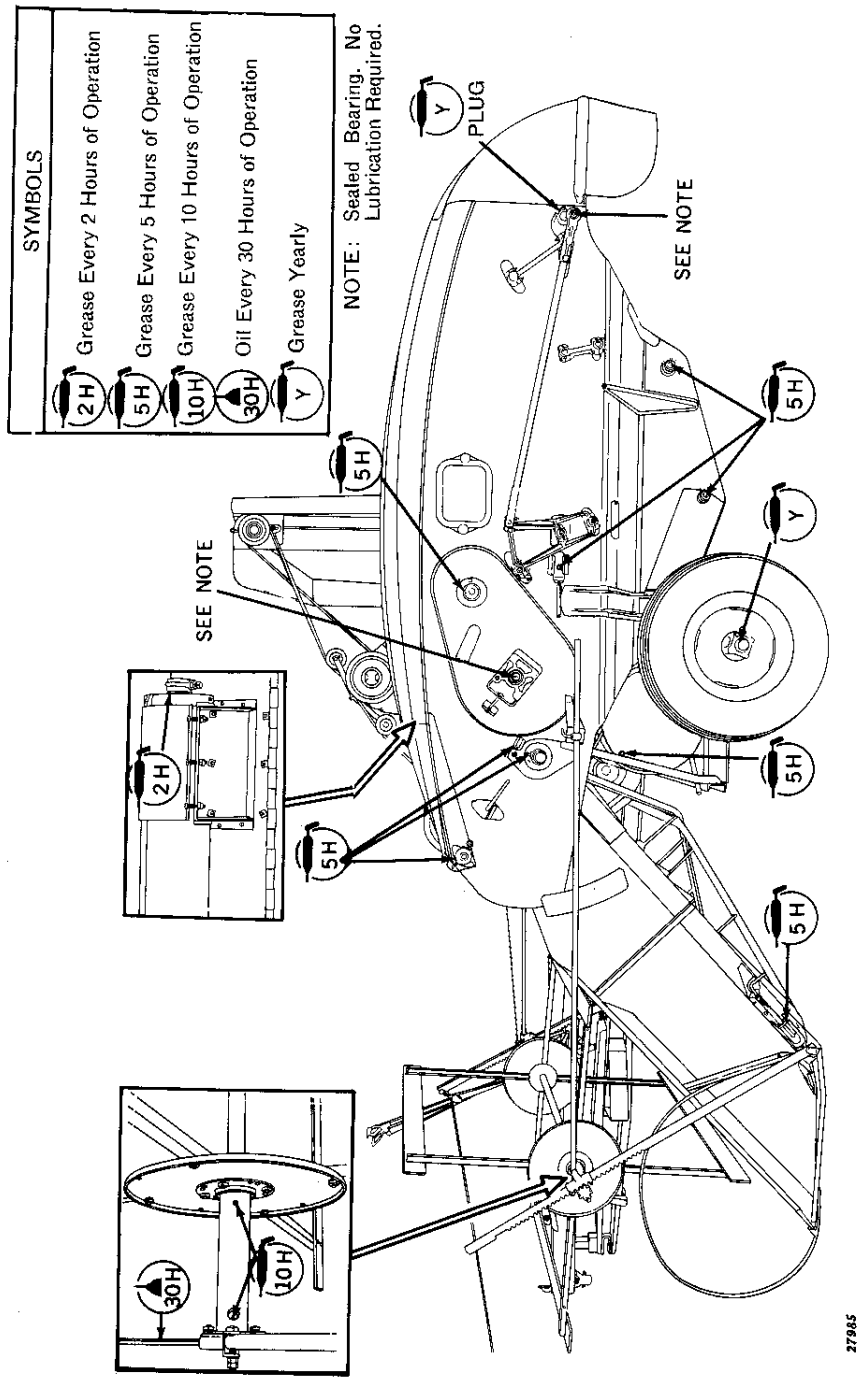
Wheel bearings are packed with grease at the factory. They should be repacked at the beginning of each season.

Chains, sprockets and sickle should be oiled except when working in sandy soil conditions.

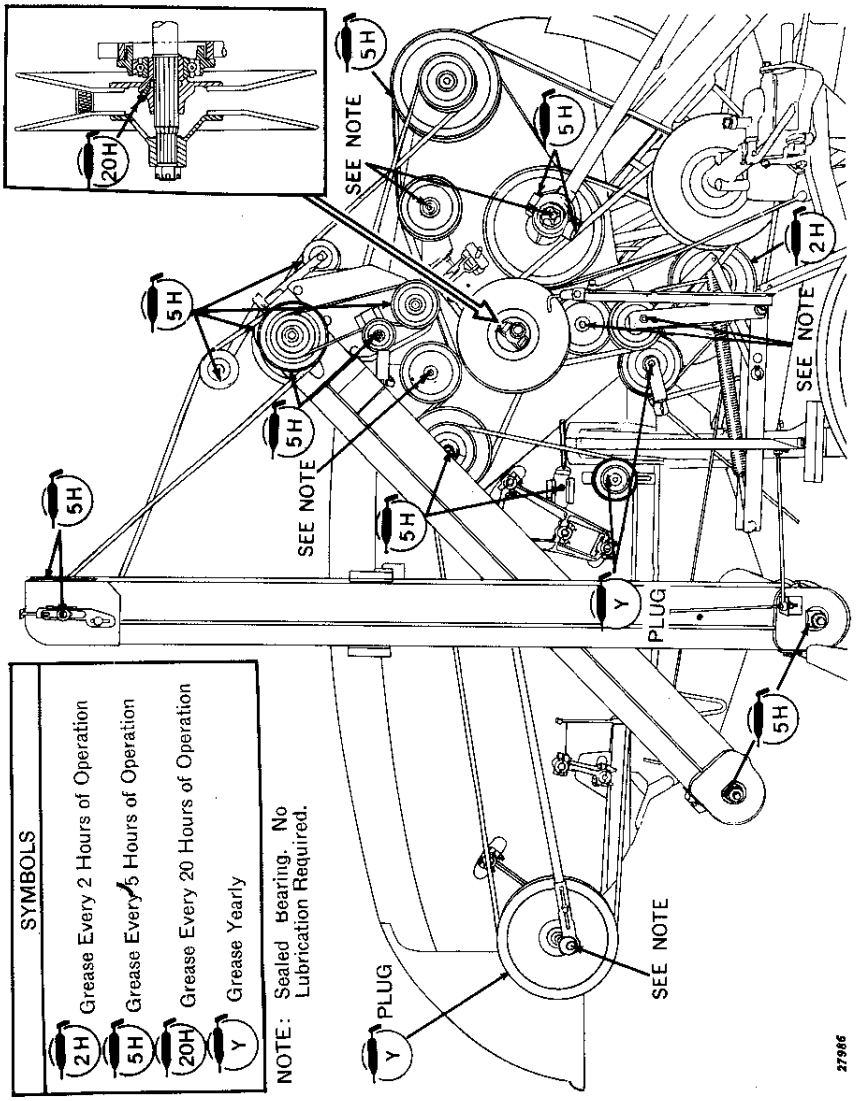
**Do not overlook the grease fitting in right-hand end of feeder canvas idler roller or the grease fitting in platform canvas drive roller right-hand bearing box.** Both these grease fittings must be greased through hole in platform canvas drive roller sheave.

**Important Note:** The "symbols" on the charts that follow apply to machines that have been thoroughly broken in. When the machine is new, lubricate the bearings more often during the first few days of use.

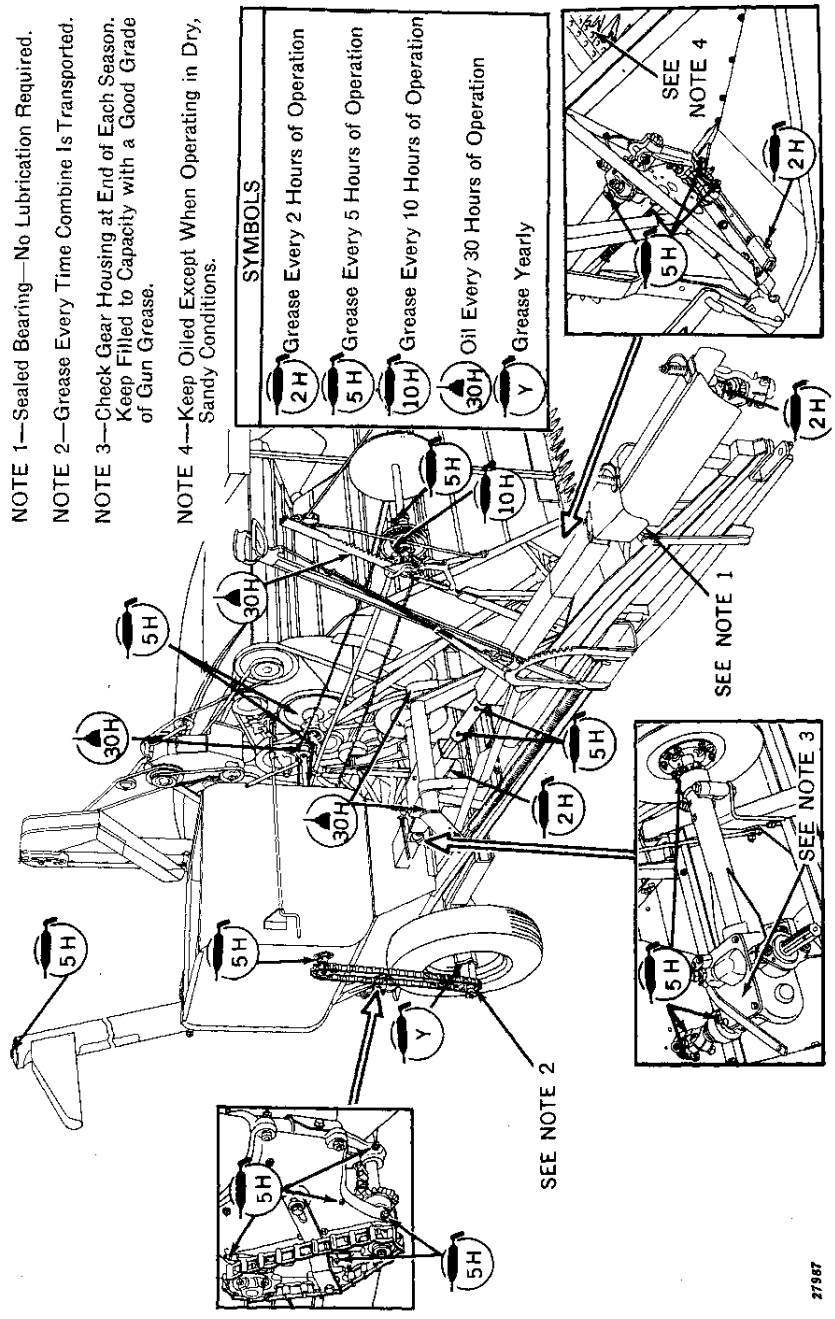
## LUBRICATION CHART A



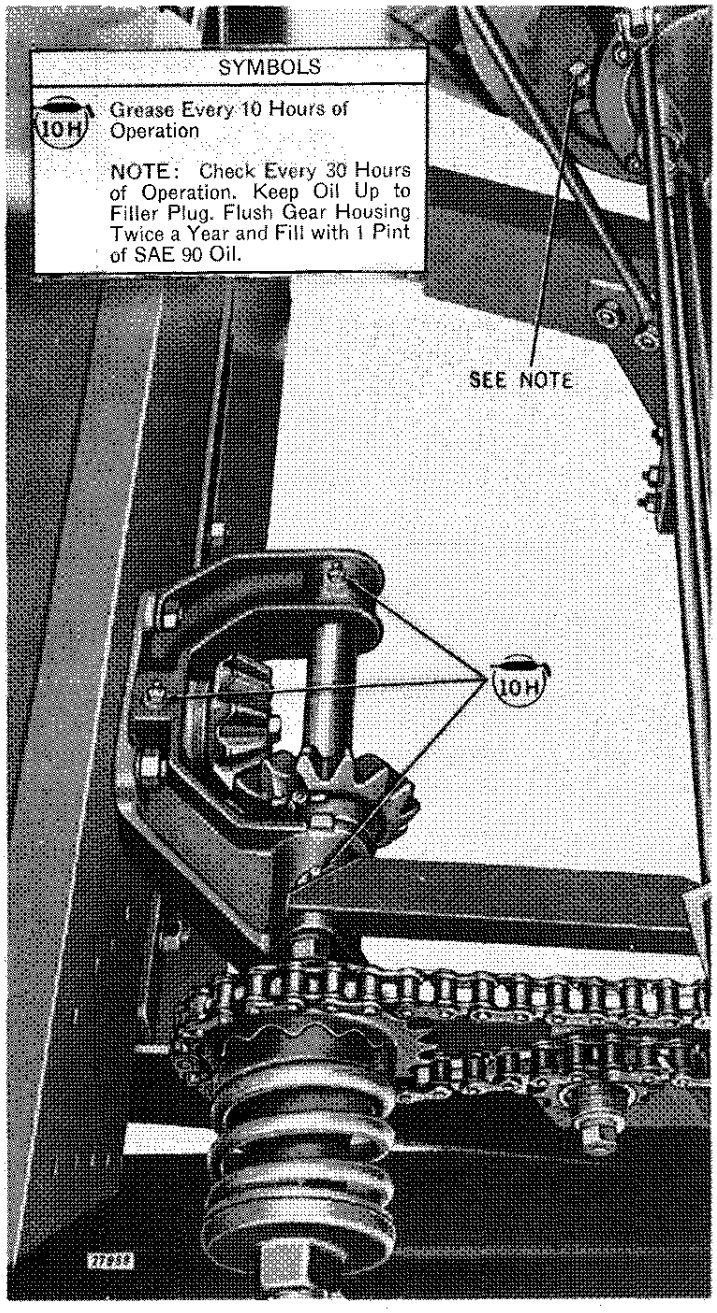
## LUBRICATION CHART B

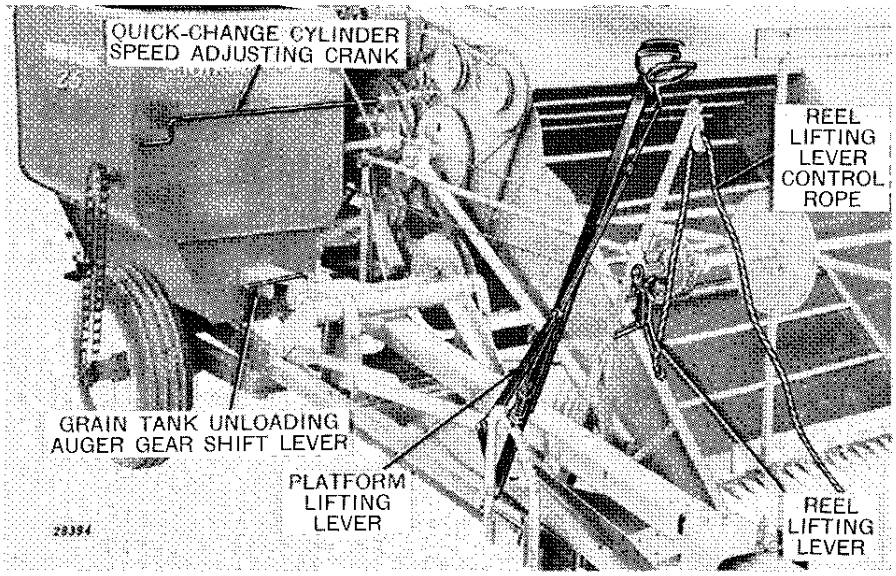


## LUBRICATION CHART C



## LUBRICATION CHART D






*Grain Tank Combine with Hand Levers*

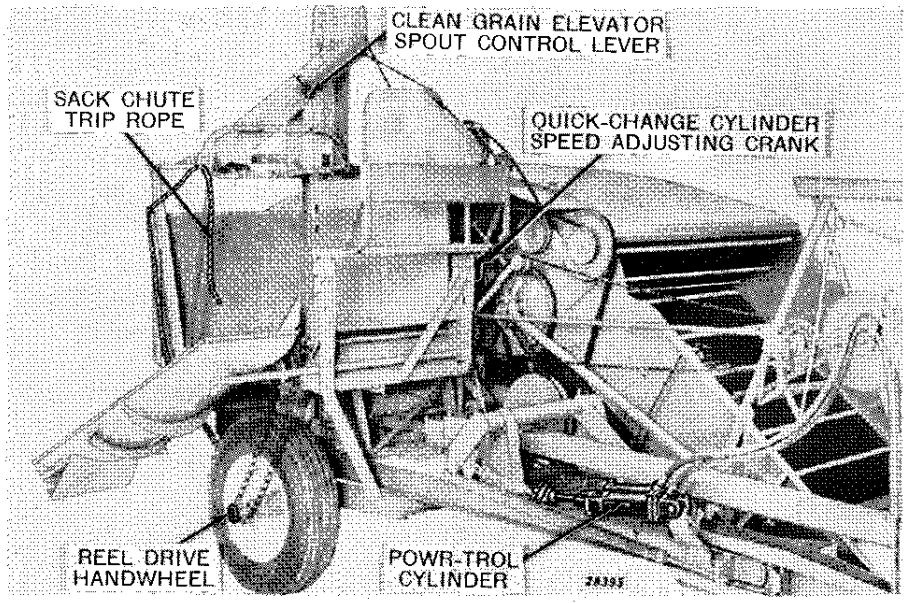
**Quick-Change Cylinder Speed Adjusting Crank** is used to change the speed of the cylinder. With the $12\frac{3}{4}''$ sheave on the cylinder shaft, one turn of the crank clockwise will decrease the speed approximately 25 R.P.M. One turn counter-clockwise will increase the speed approximately 25 R.P.M. With the 15″ sheave on the cylinder shaft the speed will be decreased or increased approximately 12 R.P.M. with each turn of the crank.

**Grain Tank Unloading Auger Gear Shift Lever** moved forward will disengage the separator and engage the grain tank unloading auger.

**Platform Lifting Lever** moved forward will raise the platform; moved to the rear will lower the platform.

**Reel Lifting Lever** raises or lowers the reel. Each stroke of lever raises reel two notches on racks.

**Reel Lifting Lever Control Rope** is used to raise or lower the reel without leaving the tractor seat.




*Sacker Machine with Powr-Trol*

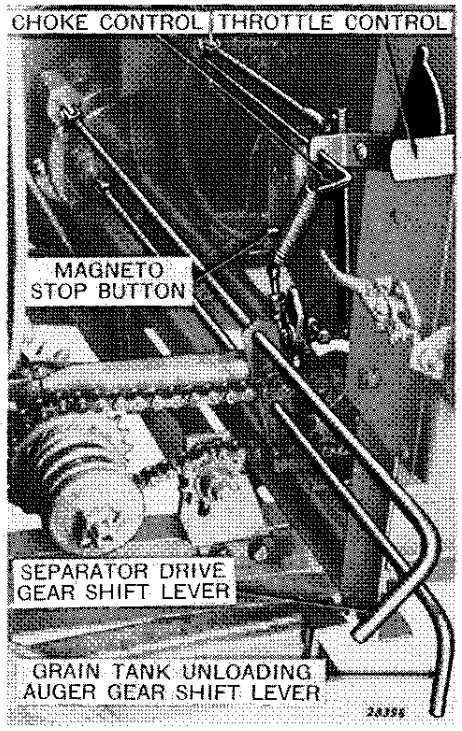
**Sack Chute Trip Rope** when pulled forward releases the door at the rear of chute, and deposits filled sacks on the ground.

**Clean Grain Elevator Spout Control Lever** moved to the left diverts the grain down the left-hand spout; moved to the right diverts the grain down the right-hand spout.

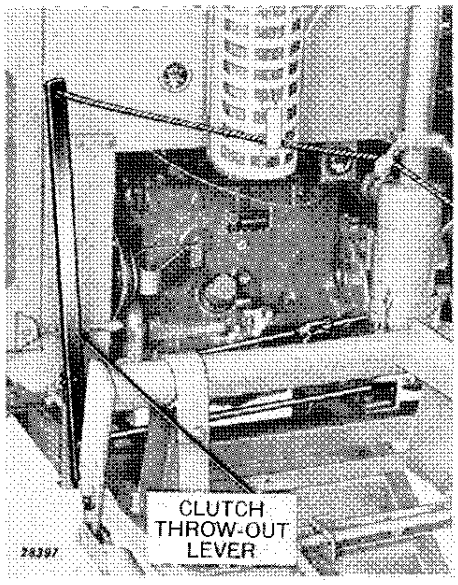
**Reel Drive Hand Wheel** when turned clockwise engages reel drive sprocket on right-hand wheel. Turned counter-clockwise disengages sprocket; this always should be done when transporting combine.

**Powr-Trol Cylinder** is used instead of the platform lifting lever to raise or lower the platform. The operation of this cylinder is controlled from the tractor seat.

## CONTINENTAL ENGINE MODEL Y112-618




*Engine Controls*




*Clutch Throw-Out Lever*

**Magneto Stop Button.** This button is used to stop the engine. Press in the button and hold it there until the engine is stopped.

**Throttle Control.** When pulled out and locked the throttle control is in idling position. To open throttle, flip up throttle control lock and push throttle in towards the engine.

**Separator Drive Gear Shift Rod.** When pulled out, this rod engages the separator drive. Disengage shift lever before grain tank unloading auger is put into use.

**Grain Tank Unloading Auger Gear Shift Rod.** This rod engages the grain tank unloading auger when pushed in.

**Choke Control.** The choke control operates the butterfly valve on the air intake side of the carburetor. When pulled out it chokes the carburetor to help start the engine.

**Clutch Throw-Out Lever.** This lever engages the clutch when it is in the forward (right-hand) position.

# OPERATION

## BREAKING-IN THE NEW COMBINE

All V-belt drives should be checked carefully. See the illustration on page 88. Keep belts tight enough to eliminate slippage because a belt can be ruined very quickly if it is allowed to slip in the grooves of a sheave for any length of time. Excessive heating of a sheave is a sign of belt slippage. New belts will stretch slightly after the first run-off and tension should be increased. Be sure all shafts turn freely.

Open the clean-out doors in the bottom of the clean grain and tailings elevators, and grain tank unloading auger. Run combine slowly for some time to allow the parts to work in gradually. After a short run at idling speed, stop combine and inspect completely, making a careful check for loose bolts, heating bearings, binding parts, loose belts, etc. After a complete lubrication, the combine should again be started and run for a brief period at a slow speed. It should then be brought up to fast idle speed and operated at that speed for at least two hours, preferably longer. After this full-speed run-off, another careful check should be made for loose bolts, heating bearings, etc.

Remember, the break-in period is just as important with a new combine as it is with a new automobile. Don't try to "step it down to the floor" right at the start. If you do, trouble is sure to develop later.

## STARTING IN THE FIELD

### Understand Function of All Working Units.

Before starting to combine, turn to pages 20 and 21 where you will find a cutaway view showing the working units of the machine. Study this illustration until you thoroughly understand the function of each unit. Also, read over the section of the manual on "Adjustments and Service" to become familiar with the adjustments necessary to obtain best results.

### Don't Start Combining Until Crop Is Ripe.

It is only natural for the owner of a new combine to want to try his machine as early as possible. This results in most new combines being started in the field before the crop is ready for combining.

A combine should not be started until the grain is dead ripe. **If the threshed grain feels damp or is easily dented with the fingernail, the moisture content is usually too high for safe storage.**

Grain crops containing **14% moisture or less** are considered dry enough for safe storage. Arrangements can usually be made at the local grain elevator for necessary moisture tests. The maximum moisture content for safe storage depends upon the crop to be combined and in part upon atmospheric conditions, storage facilities, foreign material in the grain, whether handled in bulk or sacks, and whether the crop is for market or feeding.

**The first round in the field is usually the hardest.** The forward speed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### STARTING IN THE FIELD—Continued

of tractor should be as slow as possible to reduce the volume of material entering machine. With a power-driven machine the tractor should be run at full throttle to keep the combine mechanism up to full speed thus guarding against slugging and clogging. **Shift the tractor to a lower gear to obtain slower travel speed but do not throttle down tractor engine.**

## LIMITATIONS OF A POWER DRIVEN COMBINE

The operating efficiency of any power driven machine is directly proportional to the tractor power available. Steady, smooth power is of vital importance—any fluctuations in tractor engine speed is reflected in the speed of the combine—uneven speed results in loss of grain, inferior threshing and, in extreme cases, complete plugging of the machine. Every precaution should be taken to maintain uniform speed.

## THE OPERATOR

The degree of satisfaction given by this or any other combine is directly dependent upon the carefulness of the tractor operator. Once the combine has been adjusted to meet the crop condition, the rest is up to the operator.

Excessive travel speed is one of the greatest causes of trouble. Traveling at a high rate of speed over rough ground can cause extra wear and breakage that would not occur if the combine was pulled at a more reasonable speed. Overloading, resulting in a loss of grain, is another evil of fast ground travel. More straw is taken in than the machine can handle. Grain is carried over the rack and sieve if layer of material passing over them is too heavy.

On a power-driven combine, the tractor engine must be operated at full throttle at all times. Any reduction in travel speed should be handled by shifting to a lower gear instead of throttling the tractor engine.

When stopping the tractor to unload grain tank, or for any other reason, the combine should be cleaned out before disengaging power takeoff. If necessary to stop in the middle of the field, the combine and tractor should be backed up a few feet before proceeding ahead. This will allow the combine to come up to speed before grain enters.

If there are ditches in the field that require throttling down the tractor engine to cross them, cut around the ditches rather than reduce the engine speed.

By rounding the corners in the field more uniform speed can be maintained when turning.

Watch the condition of the crop carefully and adjust platform so just enough of the straw is cut to get all the grain. If, in a certain section of the field, the crop is extremely heavy and down badly, take less than a full swath.