

25 Combine (Serial No. 25-145000-)



JOHN DEERE

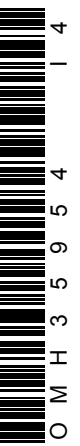
OPERATORS MANUAL

25 Combine
(Serial No. 25-145000-)

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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 _____

TABLE OF CONTENTS

| | <i>Page</i> |
|--|-------------|
| Adjustment and Service | 33-92 |
| Beater Behind Cylinder | 65-67 |
| Adjustments | 65 |
| Covers over Beater Teeth | 66 |
| Replacing the Beater | 67 |
| Replacing the Beater Shaft | 67 |
| Care Between Seasons | 101 |
| Care of Chains | 92 |
| Care of Pneumatic Tires | 90 |
| Care of V-Belts | 86-87 |
| Clean Grain and Tailings Elevator | 81-82 |
| Special Equipment | 82 |
| Cleaning Units | 71-80 |
| Adjustable Chaffer | 74-75 |
| Adjustment | 74 |
| Replacement | 75 |
| Adjustable Sieve | 75 |
| Replacement | 75 |
| Cleaning Fan | 72-73 |
| Fan Sheave | 72 |
| Valves at Ends of Fan Housing | 73 |
| Windboard | 73 |
| Cleaning Shoe | 77-80 |
| Installing Shoe | 77 |
| Removal of Shoe | 77 |
| Special Equipment | 78-80 |
| Tailboard | 76 |
| Tailings Fingers | 76 |
| Cutter Bar and Dividers | 39-44 |
| Care of Cutter Bar | 39-40 |
| Cutter Bar Repair | 41-42 |
| Special Equipment | 43-44 |
| Cylinder and Concave Grate | 54-64 |
| Adjustments | 56-61 |
| Care of Cylinder and Concave Grate | 61-62 |
| Operating Suggestions | 54-56 |
| Special Equipment | 63-64 |
| Feeder Canvas | 50-52 |
| Basic Speed of Combine | 50 |
| Care of Feeder Canvas | 51 |
| Feeder Canvas Tension Adjustment | 51 |
| Feeder Throat Adjustment | 51 |
| Separator Drive Belt Tightener | 50 |
| Special Equipment | 52 |

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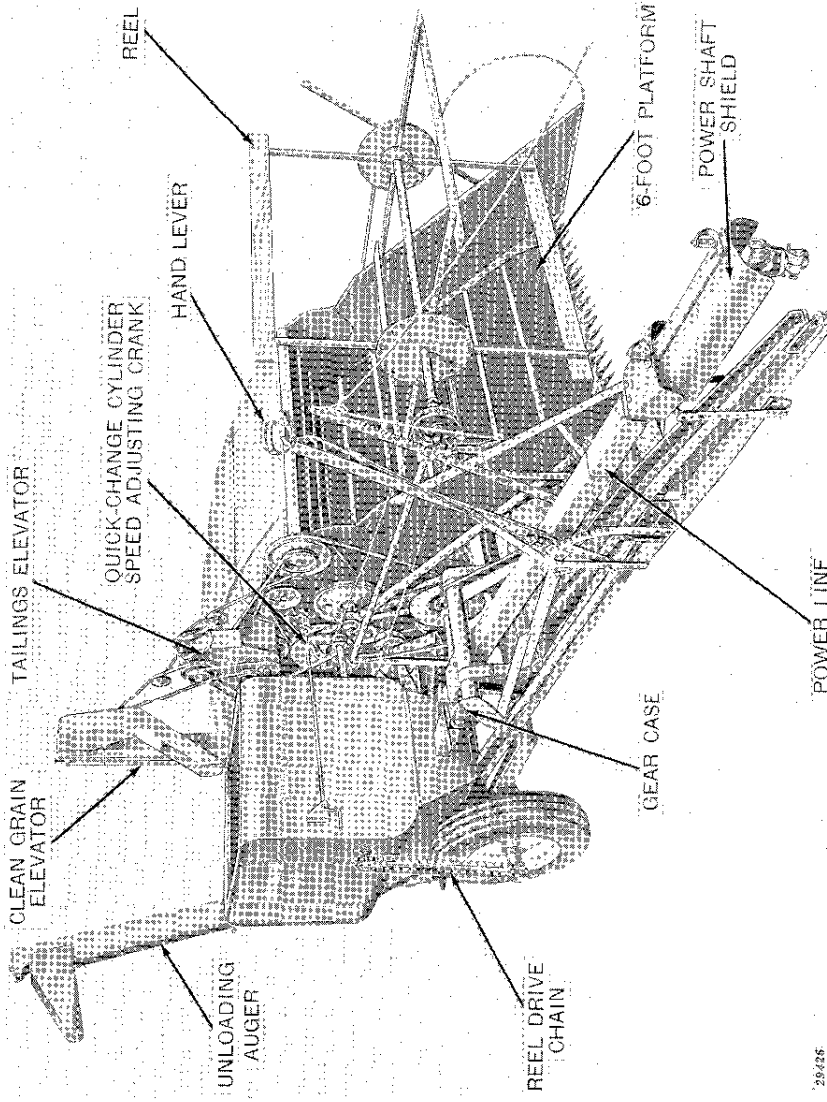
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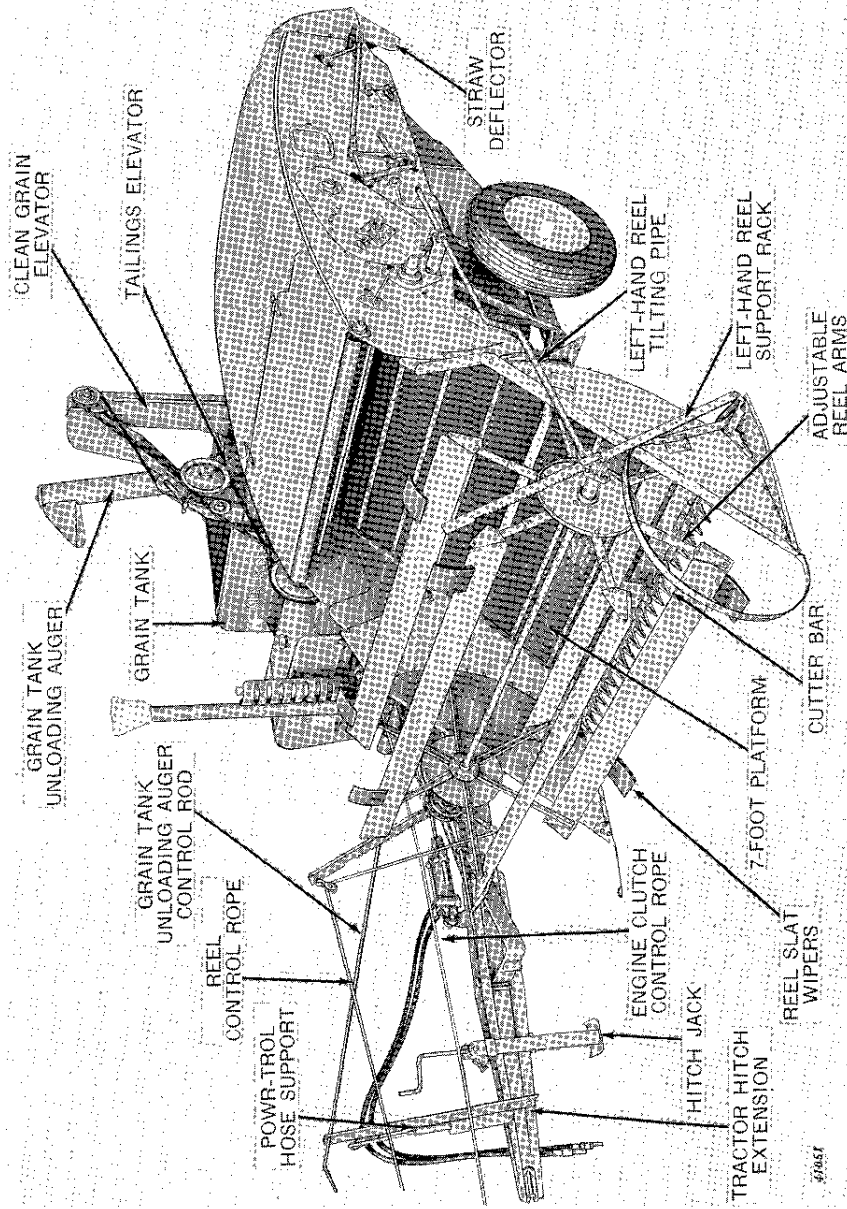
| | <i>Page</i> |
|--|-------------|
| Grain Tank and Unloading Auger..... | 83-84 |
| Miscellaneous Special Equipment..... | 85 |
| Platform and Canvas..... | 47-49 |
| Care of Canvas..... | 48 |
| Operating Suggestions..... | 47 |
| Shortening the Canvas..... | 49 |
| Platform and Feeder—Special Equipment..... | 52-53 |
| Platform Lifting Mechanism..... | 45-46 |
| Hand Lever Adjustments..... | 45 |
| Powr-Trol..... | 46 |
| Power Line, Grain Tank Drive, and Main Drive Gear Case..... | 88 |
| Reel..... | 34-38 |
| Adjustments..... | 34-35 |
| Operating Suggestions..... | 36-37 |
| Special Equipment..... | 37-38 |
| Speeds..... | 36 |
| Safety Suggestions..... | 11 |
| Service Chart..... | 94-100 |
| Cleaning Troubles..... | 99-100 |
| Cutting Troubles..... | 94-96 |
| Feeding Troubles..... | 96-97 |
| Threshing Troubles..... | 97-99 |
| Slip Clutches..... | 91 |
| Straw Rack..... | 68-70 |
| Care of Conveyor..... | 70 |
| Operating Suggestions..... | 69 |
| Replacing the Straw Rack..... | 69-70 |
| Speed Adjustment..... | 68 |
| COMPLETE VIEWS..... | 4-5 |
| CONTROLS..... | 12-15 |
| Clean Grain Elevator Spout..... | 13 |
| Engine..... | 14 |
| Clutch Throw-Out..... | 14 |
| Throttle..... | 14 |
| Grain Tank Unloading Auger Gear Shift Lever (Power-Driven).... | 12 |
| Grain Tank Unloading Auger Control Rod (Engine-Driven)..... | 15 |
| Platform Lifting..... | 12 |
| Powr-Trol Cylinder..... | 13 |
| Quick Change Speed Adjustable Crank..... | 12 |
| Reel Drive Hand Wheel..... | 13 |
| Reel Lifting Lever and Control Rope..... | 12 |
| Sack Chute Trip Rope..... | 13 |
| Separator Drive Clutch Throw-Out Lever (Engine-Driven)..... | 14 |
| Wheels..... | 90 |
| LUBRICATION..... | 7-10 |

| | <i>Page</i> |
|---|-------------|
| OPERATION | 16-32 |
| Breaking In the New Combine | 15 |
| Combining Various Crops | 27-32 |
| Alfalfa | 27 |
| Barley | 27 |
| Beans | 27-28 |
| Buck Wheat | 28 |
| Clovers | 29 |
| Crotalaria | 29 |
| Flax | 30 |
| Grasses | 30-31 |
| Lespedeza | 31 |
| Lupine | 31 |
| Mustard | 31 |
| Oats | 31 |
| Peas | 32 |
| Proso | 32 |
| Radish Seed | 32 |
| Rye | 32 |
| Sorghums | 32 |
| Timothy | 32 |
| Vetch | 32 |
| Wheat | 32 |
| Cross-Sectional View | 20-21 |
| Factory Settings | 18 |
| Fundamentals of Combine Harvesting | 25 |
| Hooking Up To Tractor | 22-23 |
| Limitations Of A Power Driven Combine | 16 |
| Proper Preparation Of Field | 17 |
| Separator Speed | 19 |
| Speeds Of Various Units | 19 |
| Starting In The Field | 16 |
| The Operator | 17 |
| Transporting | 24 |
| Windrow Pickup Method | 26 |
| SPECIFICATIONS AND DATA | 6 |



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

295256



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

SPECIFICATIONS AND DATA

| | | |
|---|--------------------------|-----------------------------|
| Distance Between Divider Points | 6 Ft. Platform | 72. In. |
| | 7 Ft. Platform | 81 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 and nozzle of grease gun before greasing.

Replace all missing grease fittings immediately.

Lubricate at all grease fittings thoroughly, with a good grade of gun grease, until grease oozes out of bearing. This assures that bearing is full, also flushes out dirt that may have accumulated in the bearing. However, avoid excessive lubrication. **Excessive lubricant that has dropped onto belts should be wiped off immediately to avoid slippage of belts. This does not apply to sealed backed bearings.** They are pre-packed and need no lubrication.





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 re-packed at the beginning of each season.

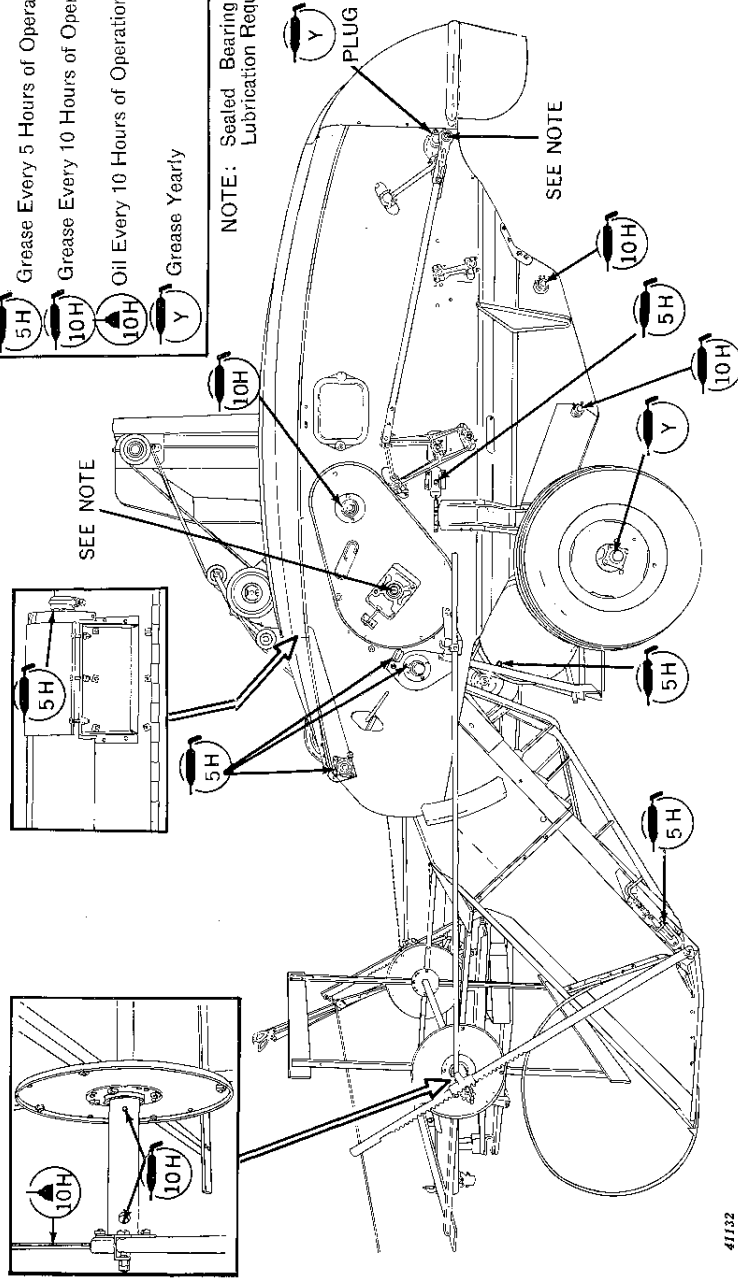
Chains, sprockets and knife should be oiled except when working in sandy soil conditions.

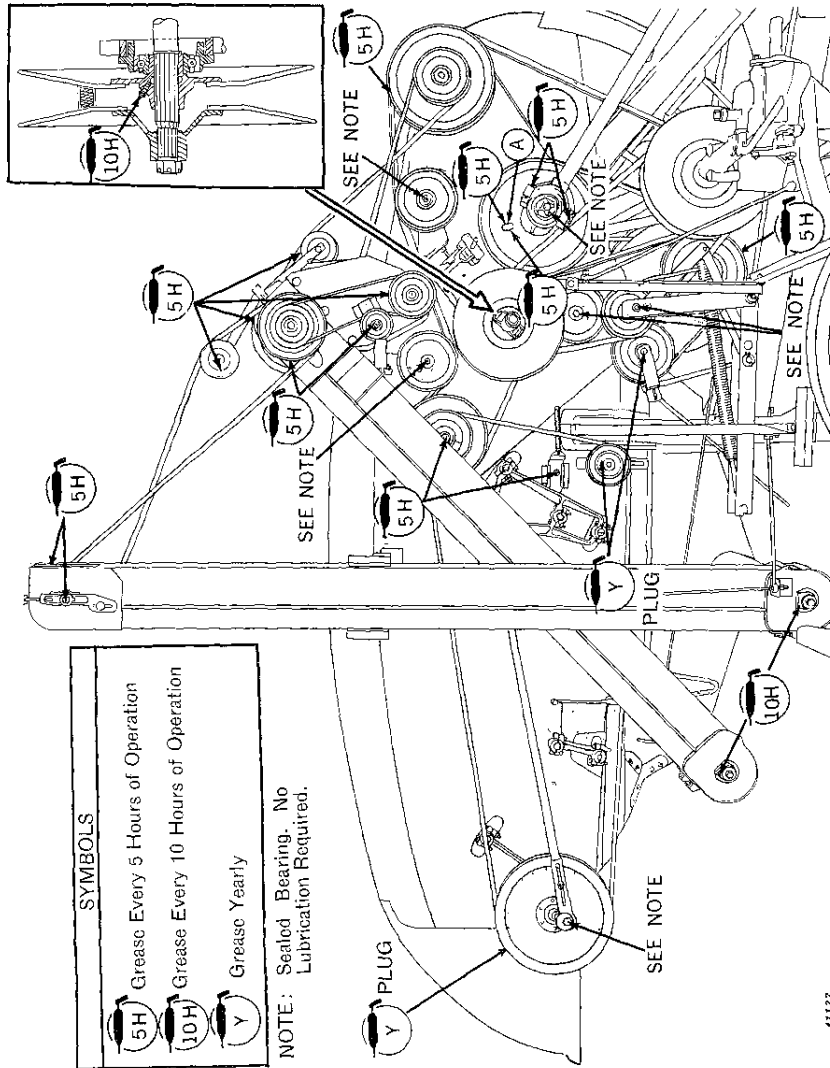
Do not overlook the grease fitting in right-hand end of feeder canvas idler roller or the grease fitting in platform canvas drive roller right-hand bearing box. Both these grease fittings must be greased through hole in platform canvas drive roller sheave, see "A," page 9.

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.

| SYMBOLS | |
|---|------------------------------------|
|  | Grease Every 5 Hours of Operation |
|  | Grease Every 10 Hours of Operation |
|  | Oil Every 10 Hours of Operation |
|  | Grease Yearly |

NOTE: Sealed Bearing. No Lubrication Required.

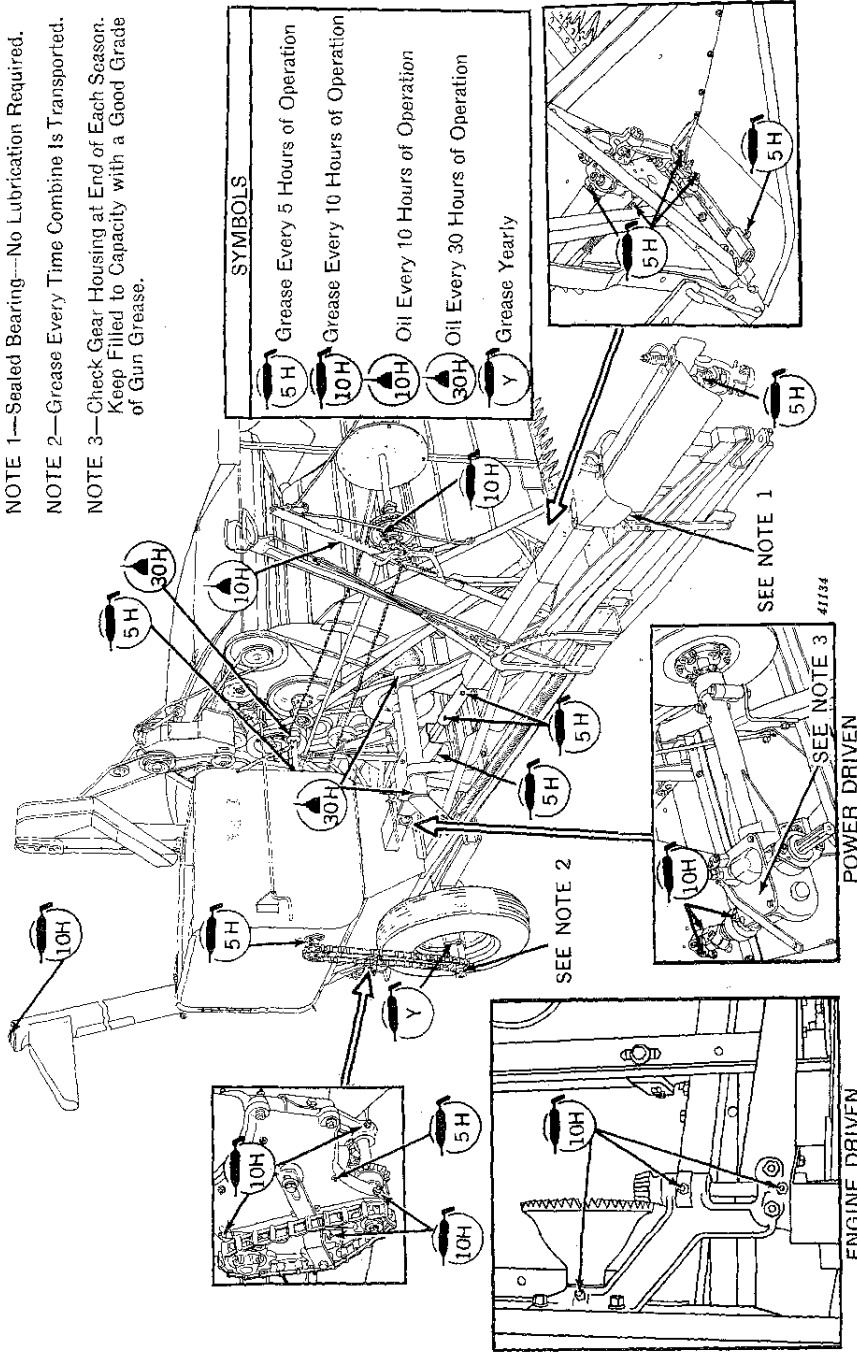




NOTE 1—Sealed Bearing—No Lubrication Required.

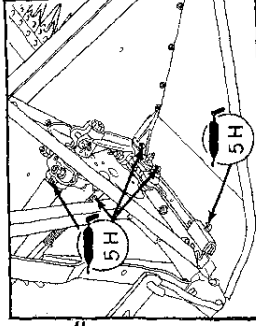
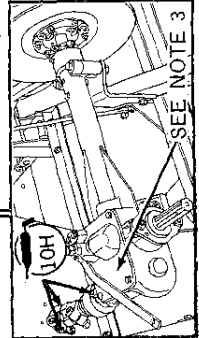
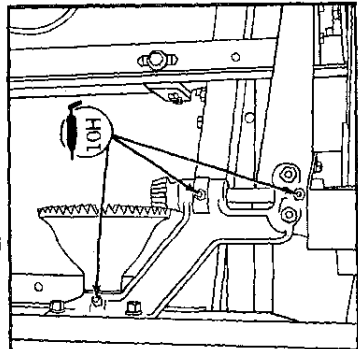
NOTE 2—Grease Every Time Combine Is Transported.

NOTE 3—Check Gear Housing at End of Each Season. Keep Filled to Capacity with a Good Grade of Gun Grease.



SYMBOLS

| | |
|--|------------------------------------|
| | Grease Every 5 Hours of Operation |
| | Grease Every 10 Hours of Operation |
| | Oil Every 10 Hours of Operation |
| | Oil Every 30 Hours of Operation |
| | Grease Yearly |



SEE NOTE 2

SEE NOTE 1

41/134

SEE NOTE 3

POWER DRIVEN

ENGINE DRIVEN

According to safety authorities, agriculture is one of the most hazardous of all occupations. More farmers were killed by accident during the last year on record than construction workers, miners, or factory workers. Careless use of farm machinery causes 29 out of every 100 farm accidents. The rules given below are based on a study of thousands of farm accidents and if followed, will make your farm a safer place on which to live and work. Study these rules carefully and insist that they be followed by those working with you and for you.



All machinery should be operated only by those who are responsible and have been delegated to do so.

Never clean, oil, or adjust the combine when it is running.

Clothing worn by combine operator should be fairly tight and belted. Loose jackets, skirts, shirts or sleeves should never be worn because of the danger of getting into moving parts.

Replace badly frayed or worn V-belts **before** they break.

Be sure shields and guards are in place and in good condition before starting in the field.

Make sure everyone is clear of the combine and tractor before starting so they cannot be struck by moving parts or caught in a drive belt or chain.

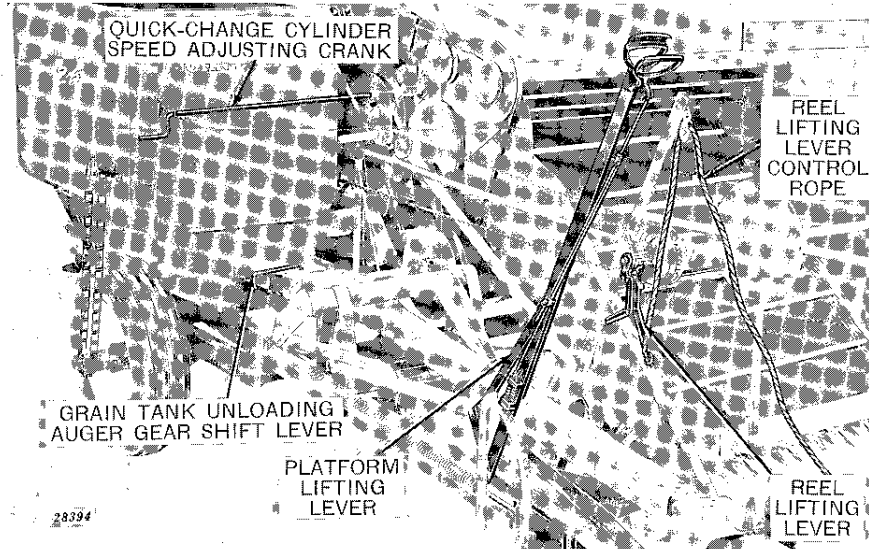
Never attempt to clear obstructions off the cutting platform unless the combine is stopped and the engine shut down.

Refuel your combine engine only when it has been shut off. Do not smoke or use an oil or gasoline lantern when refueling.

Refill the radiator only when the engine is stopped or idling slowly. Be sure there is no steam pressure back of the radiator cap to cause scalding when the cap is removed.

When transporting on a highway, keep as far to the right as possible. Hang a red flag prominently on the rear of the combine when transporting during the day. Never transport at night unless the combine and tractor are equipped with lights and they are in good working condition.

COMBINE CONTROLS



Grain Tank Combine with Hand Levers and Standard Type Gear Case

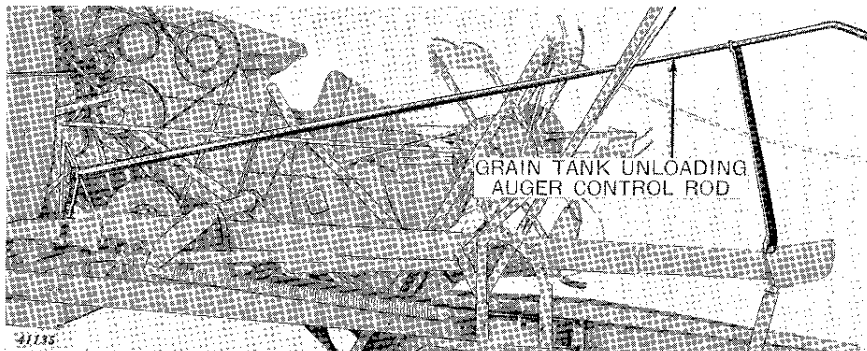
Quick-Change Cylinder Speed Adjusting Crank is used to change the speed of the cylinder to meet the varying field conditions during the day. With the 12-3/4" sheave on the cylinder shaft, one turn of the crank clockwise will decrease the speed approximately 25 R.P.M. One turn counter-clockwise will increase 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.

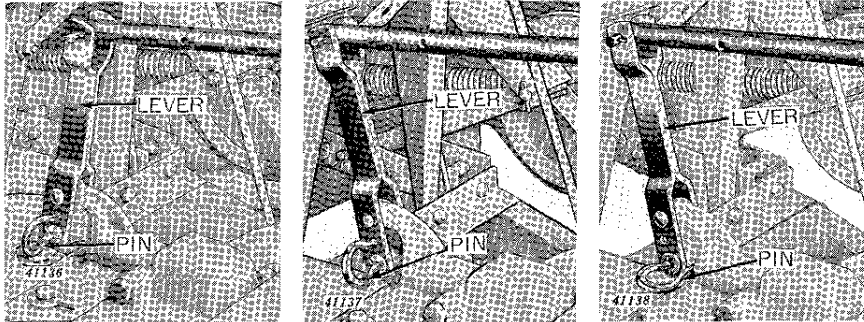
Reel Lifting Lever raises or lowers the reel. Each stroke of lever raises reel two notches on racks.

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



Grain Tank Combine with Remote Control Type Gear Case

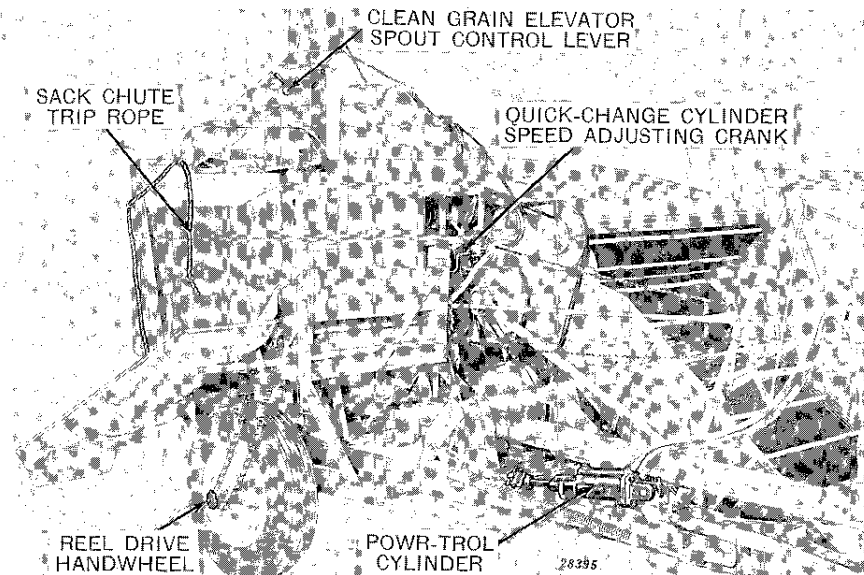
Grain Tank Unloading Auger Control Rod allows grain tank unloading auger or separator to be engaged or disengaged from tractor seat.



*Separator Engaged.
Unloading Auger Dis-
engaged*

*Separator Engaged.
Unloading Auger En-
gaged*

*Separator Disengaged.
Unloading Auger En-
gaged*



Sacker Machine with Powr-Trol

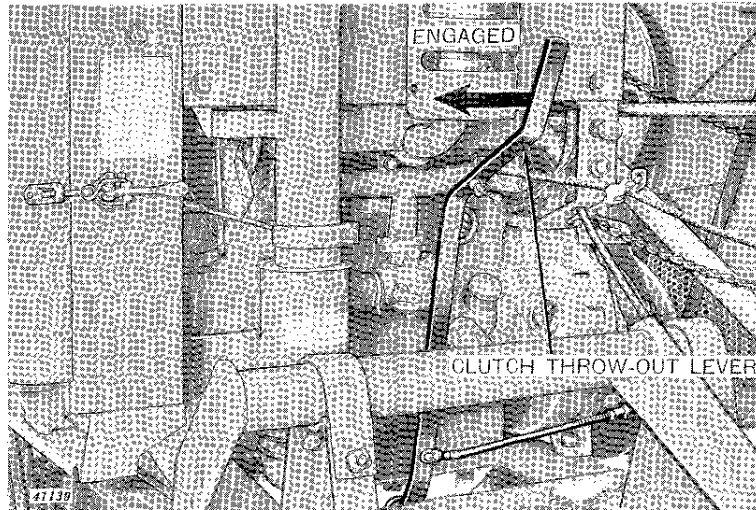
Sack Chute Trip Rope when pulled forward releases the door at the rear of chute, and deposits filled sacks on the ground.

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.

DUBUQUE ENGINE, MODEL "HA" 92



Clutch. The clutch lever is equipped with a rope control so that the clutch can be operated from the tractor seat.

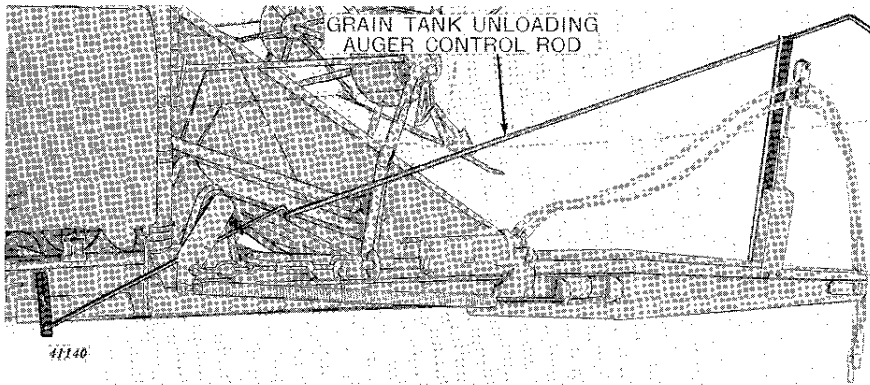
To disengage the clutch, pull rope or push lever until the latch catches. To engage the clutch, pull rope or move lever back until the latch releases; then allow the lever to come forward slowly.



*Speed Control Lever in
Lower Position*

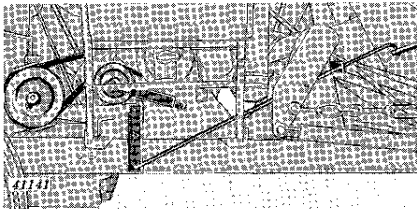
*Speed Control Lever in
Upper Position*

Engine Speed Control Lever. The engine speed is increased by moving the control lever into the lower position, and decreased by placing the lever in the upper position.

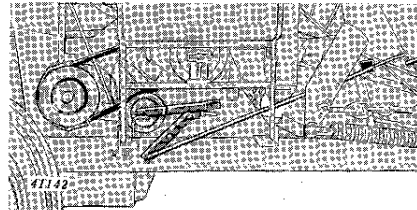


Combine Equipped with Engine

Grain Tank Unloading Auger Control Rod. To engage grain tank unloading auger, pull control rod out; to disengage, push rod in.



Grain Tank Unloading Auger Engaged



Grain Tank Unloading Auger Disengaged



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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.

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.

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 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 and crop condition. 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.

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