SELF-PROPELLED WINDROWER

JOHN DEERE

OPERATORS MANUAL

SELF-PROPELLED
WINDROWER

OMH69366 C6 English

OMH69366 C6

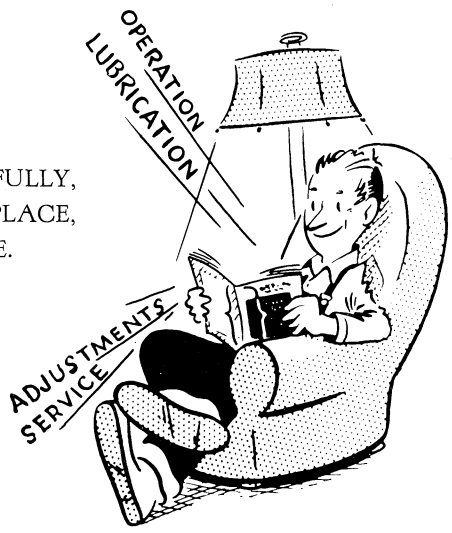
LITHO IN THE U.S.A.
ENGLISH

TO THE PURCHASER

The self-propelled windrower you have just purchased was designed and manufactured to the traditionally high quality standards of all John Deere Farm Equipment. Your windrower has been thoroughly inspected and tested, not only at the factory, but at your dealer's by a trained John Deere Serviceman. We are confident that you will receive years of dependable, economical service from your John Deere Self-Propelled Windrower.

If you should find that you require information not covered in this manual, consult your John Deere dealer. He will be glad to answer any questions that may arise regarding the operation and handling of the windrower. He has trained mechanics who are kept informed on the best methods of John Deere Windrower servicing, and can give you prompt know-how service in the field or in his shop.

STUDY THIS MANUAL CAREFULLY,
KEEP IT HANDY, IN A SAFE PLACE,
FOR FUTURE REFERENCE.



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KEEP YOUR WINDROWER A JOHN DEERE WINDROWER

Genuine John Deere Parts fit properly and insure satisfactory service because they are made from the original patterns and from the same materials as used in new machines. Should your windrower require replacement parts, go to your John Deere dealer where you can obtain Genuine John Deere Parts—accept no substitutes.

LOCATION REFERENCE.

"Right-hand" and "left-hand" sides are determined by facing in the direction the windrower will travel when in use.

"Clockwise" refers to parts turning to the right like the hands of a clock. "Counter-clockwise" refers to parts turning to the left.

NOTE: For engine lubrication, adjustments, service, and operation, see Engine Manual.

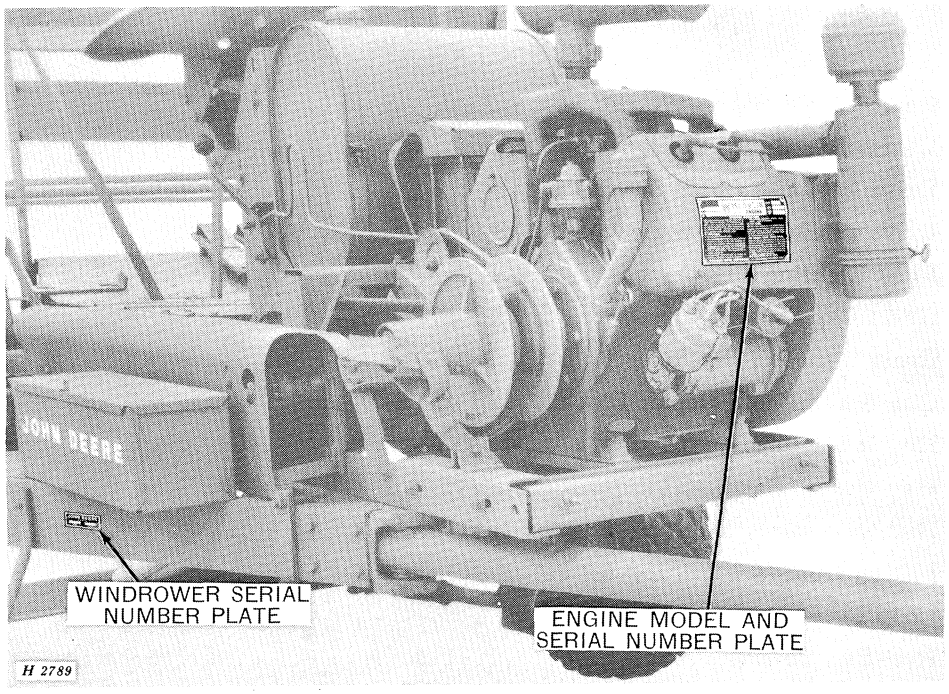
SERIAL NUMBERS

Your windrower and engine have serial numbers for positive identification.

When ordering parts, always have the model and serial numbers as given on the serial number plates. By doing so, you will help your John Deere dealer give you prompt, efficient service.

Record the serial numbers in the spaces provided below.

It is a good plan to copy the serial numbers down on a card to be carried in your billfold for quick reference.



Location of Serial Number Plates

Windrower Serial Number .....

Engine Serial Number .....

Engine Model .....

Date Purchased .....

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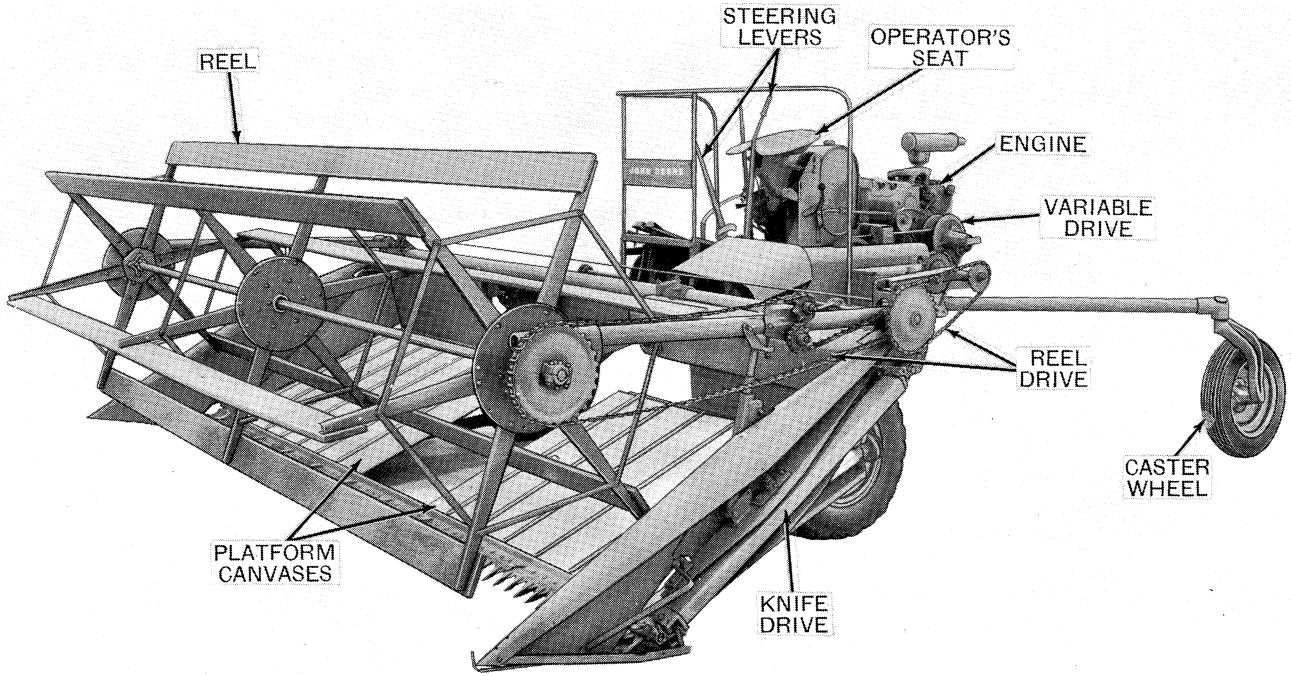
SPECIAL EQUIPMENT AVAILABLE



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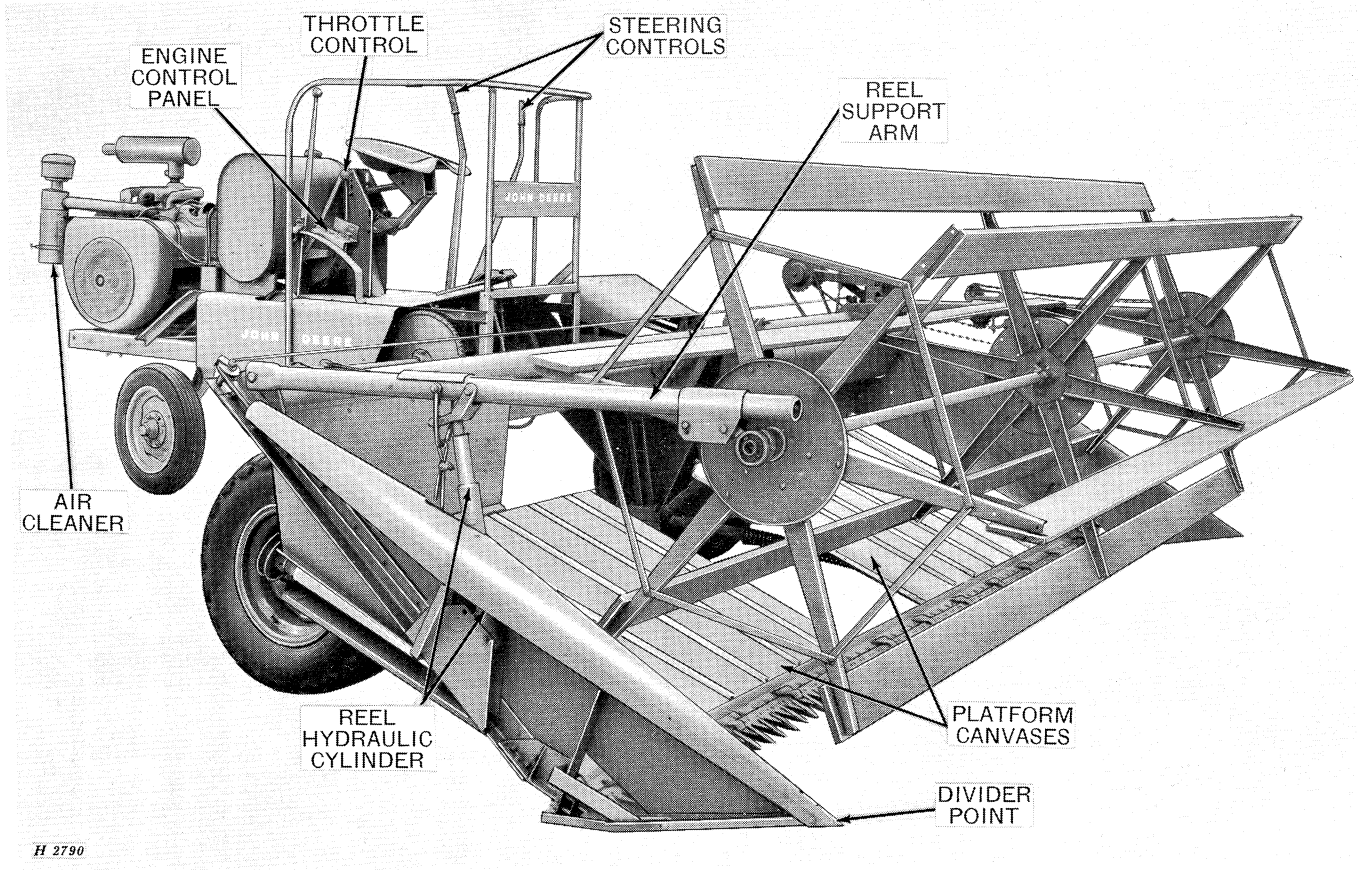
Left-Hand Front View of John Deere Self-Propelled Windrower



Right-Hand Front View of John Deere Self-Propelled Windrower

SPECIFICATIONS

WINDROWER

Cutter Bar:

Types..... Grain, or Hay
Width of Cut... 10 Ft. 6 In., or 12 Ft. 6 In., or 14 Ft. 6 In., or 16 Ft. 6 In.
Length of Cutter Bar..... 10 Ft., 12 Ft., 14 Ft. or 16 Ft.
Type of Knife Sections..... Heavy-Duty Overserrated

Reel:

Speed Range... 24.5 to 54.6 rpm
Drive..... Chain
No. of Slats..... 6 Regular—2, 3, 4 or 8 Optional
Diameter of Reel..... 54 In.
Height Control..... Hydraulic Cylinder
Range of Height Cutter Bar..... 1-1/2 to 25 In.

Cutting Platform:

Type.. Two Canvases (Regular or Rubberized)
Depth of Canvases..... 42 In.
Distance between Canvases..... 30 to 36 In.
Maximum Degree of Slope..... 23 Degrees
Width of Windshield Opening..... 72 In.
Range of Cutting Height..... 1-1/2 to 35 In. Above Ground Level
Height Control..... Hydraulic Cylinders

Weight:

Windrower with 10-Ft. Cutting Platform... 3057 Lbs. Approximately
Windrower with 12-Ft. Cutting Platform... 3164 Lbs. Approximately
Windrower with 14-Ft. Cutting Platform... 3272 Lbs. Approximately
Windrower with 16-Ft. Cutting Platform... 3382 Lbs. Approximately

Tire Sizes:

Main Wheels. 7.50-16 (Low Profile) or
Main Wheels (Optional)..... 9-16 (Low Profile or Cleat)
Caster Wheel..... 5.50-16 (Rib Implement)

Dimensions:

Length with Cutting Platform. 17 Ft. 8-1/2 In.
Length less Cutting Platform..... 12 Ft.
Length less Cutting Platform, Caster Wheel and Beam... 8 Ft. 6 In.
Over-All Height..... 6 Ft. 7 In.
Clearance—Main Frame to Ground Level..... 2 Ft. 6 In.
Main Wheel Tread (Center-to-Center) (7.50 Tires)..... 8 Ft. 2 In.

Transmission:

Type..... Reversing
Ground Speeds..... 2 to 8 mph

Capacities (Approximate):

Fuel Tank.....17 U.S. Gals.
Transmission.....1/4 U.S. Pt. in each case
Hydraulic Unit (Including Hydraulic Oil Lines and Cylinders). 2-1/2 U.S. Qts.

ENGINE

Type..... Wisconsin 4 Cylinder 28 Brake Horsepower
Operating Speed (Fast Idle—No Load)..... 2550 rpm
NOTE: Detailed engine specifications are given in the Engine Manual.

OPTIONAL EQUIPMENT AVAILABLE

Rubberized Canvas:

9-16 (Low Profile or Cleat) Tires for Main Wheels
10-Ft., 12-Ft., 14-Ft., or 16-Ft. Cutting Platform

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 replacement of parts.

Use a clean container for storing and handling all lubricants. **See that only clean lubricants go into the working parts of your windrower.**

LUBRICATING THE WINDROWER

This windrower has been designed with a minimum of lubrication points.

There are 26 sealed-for-life bearings.

There are 10 bearings to hand pack every 250 hours of operation.

There are *only* 2 places to grease every 50 hours of operation.

There are *only* 10 places to grease every 10 hours of operation.

There are *only* 3 places to grease every 5 hours of operation.

The locations of all grease fittings, together with lubrication intervals, are shown on pages 7 and 8. All other periodic lubrication and service is described on pages 9 through 11. **CAUTION: Never attempt to lubricate windrower or engine while engine is running.**

Wipe dirt from grease fittings and grease gun nozzle before greasing.

Replace all missing or damaged grease fittings immediately.

LUBRICANTS

It is difficult to judge the true quality of a lubricant, except by use of elaborate equipment and prolonged tests. Therefore, the best practice is to buy lubricants of some well known and established brand, from a company with a good reputation.

BEARINGS

Lubricate all grease fittings thoroughly with SAE Multipurpose grease, until grease oozes out of bearing. This assures that the bearing is full, and 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 belt slippage.

Two types of sealed bearings are used on this windrower. One type is a sealed-for-life bearing which requires no lubrication; the other type is pre-packed at the factory and should be repacked after every 250 hours of operation.

LUBRICATION OF LINKAGES

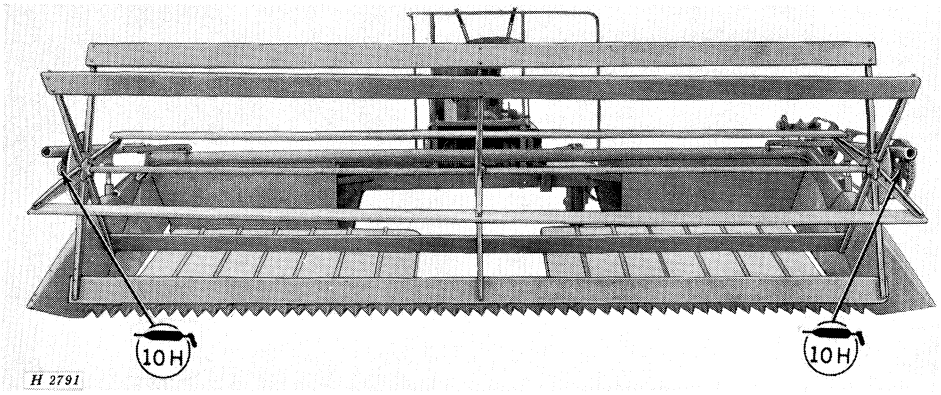
When lubricating the windrower, make a practice of putting a few drops of SAE 10 engine oil on all clevises, linkages, and other moving parts. This will make them work easier and prolong their life.

LUBRICATION OF CHAINS

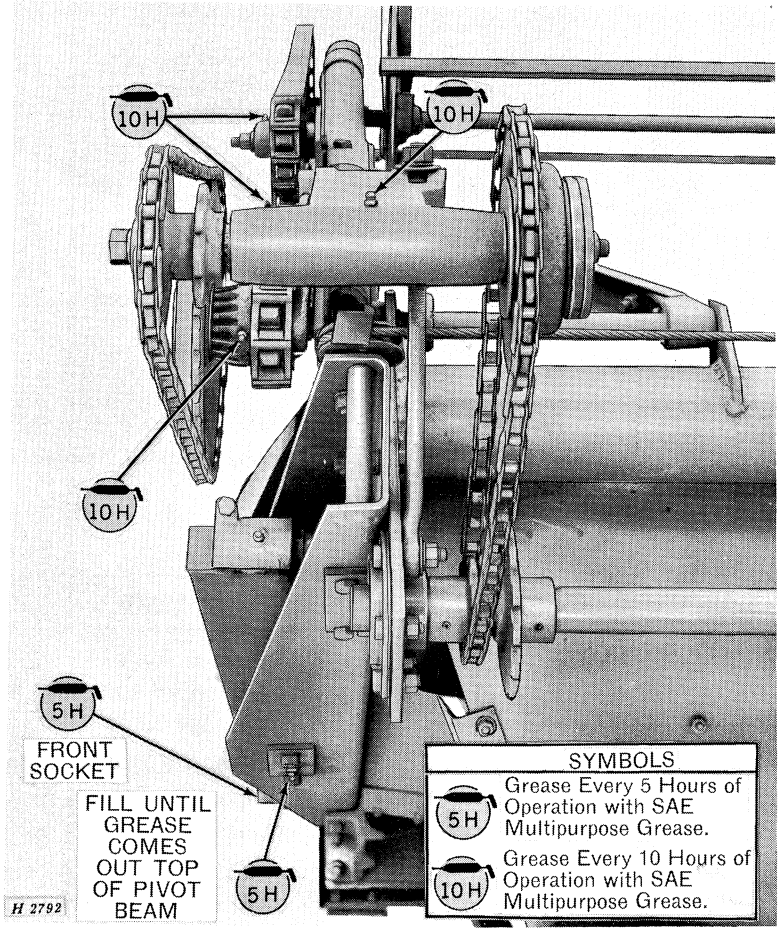
Chains should be lubricated at frequent intervals. A good grade of SAE 10 engine oil should be used. A paint brush is a good instrument for applying oil to chains. **CAUTION: Do not oil chains when operating in sandy or dusty conditions. Sand will stick to the oiled chain and act as an abrasive.**

KNIFE LUBRICATION

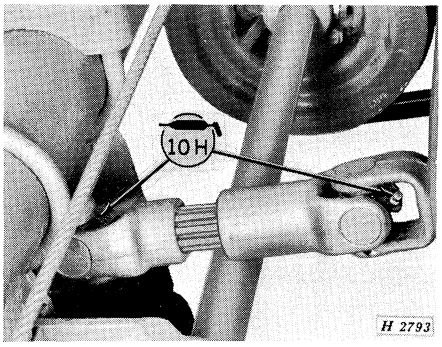
The amount of lubricant to use on a knife depends on the conditions in which the work is being done. When the grain is being topped and the cutter bar is carried some distance from the ground, liberal lubrication with SAE 10 engine oil is permissible. In many conditions where the cutter bar must operate close to the ground, it is better not to use oil except for a small amount on the knife holders.



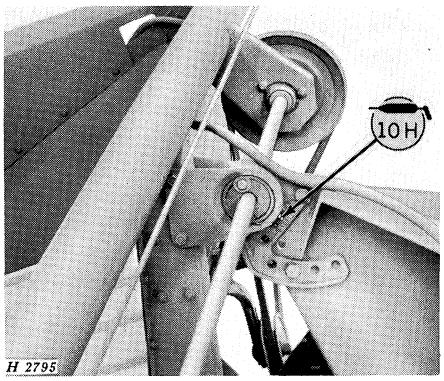
Reel Pipe Support Hangers



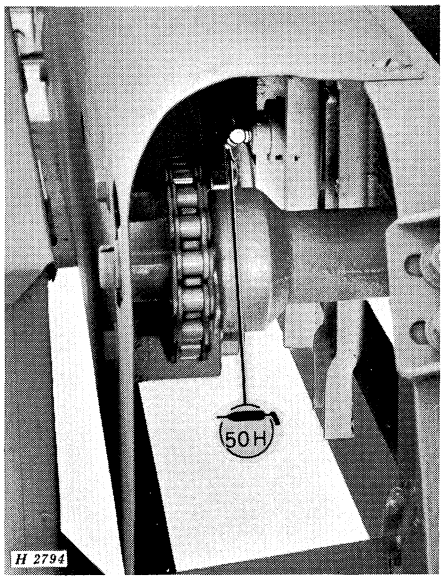
Knife and Reel Drive



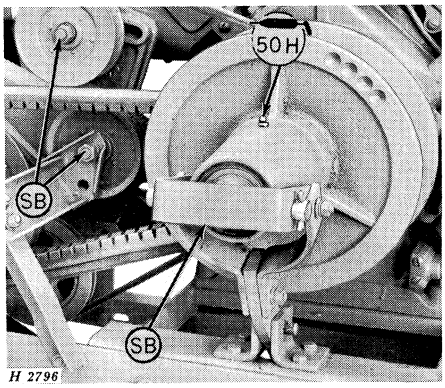
Platform Drive Universal Joint



Cutting Platform Pivot Bearings



Variable Driven Sheave

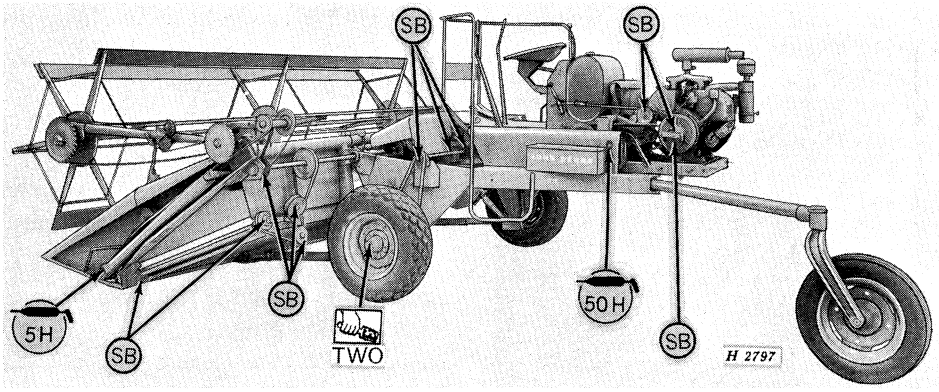


Variable Drive Sheave

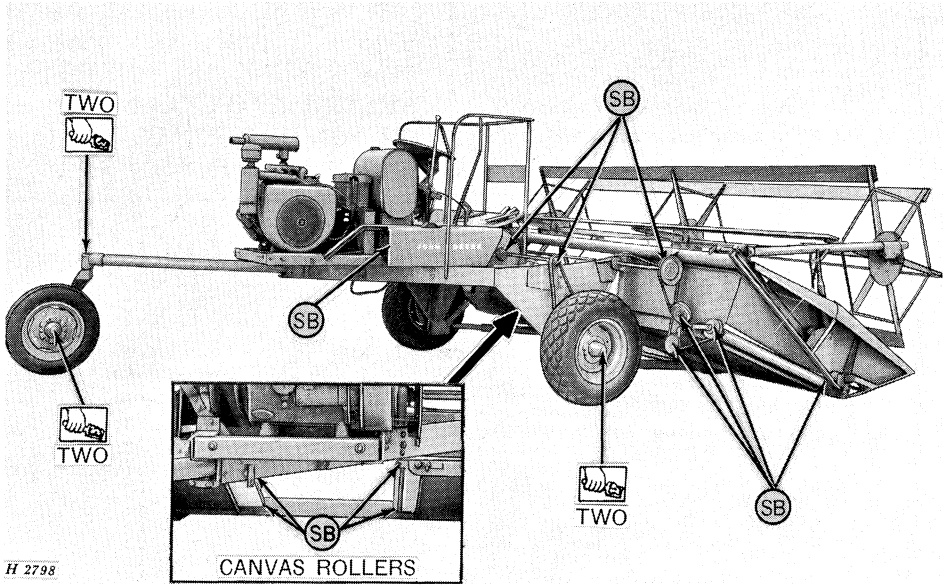
Do not handicap your equipment by using inferior or incorrect oil and grease. Use only quality lubricants at intervals specified in Operator's Manual.

SYMBOLS	
10H	Grease Every 10 Hours of Operation with SAE Multi-purpose Grease
50H	Grease Every 50 Hours of Operation with SAE Multi-purpose Grease
SB	Sealed-for-Life Bearings—No Lubrication Required

SYMBOLS	
	Hand Pack Bearing Every 250 Hours of Operation with SAE Multipurpose Grease
SB	Sealed-for-Life Bearing, No Lubrication Required



Left-Hand Rear View of Windrower with Platform



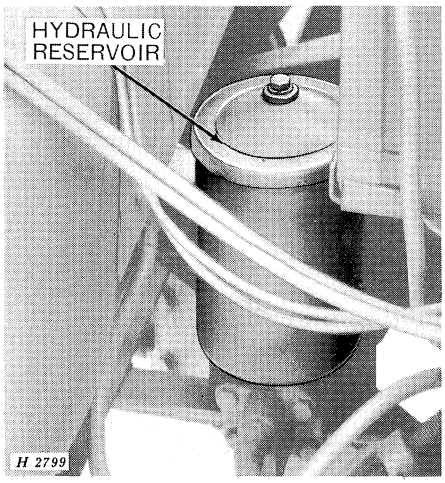
Right-Hand Rear View of Windrower with Platform

HYDRAULIC UNIT

Use a premium grade of engine oil in the hydraulic unit.

Keep oil level up to "Full" mark, indicated by a line on the inside of the hydraulic oil reservoir, approximately one inch from the top.

Check hydraulic unit oil level daily. Every 250 hours of operation, drain and refill with new oil. The hydraulic unit oil capacity (including oil line and cylinders) is approximately 3 U.S. quarts.



Hydraulic Unit Oil Reservoir

Use oil of the proper viscosity as recommended in the chart below:

Temperature	Weight of Oil
Above 32°F.	SAE 20 or SAE 10W-30
Below 32°F.	SAE 10-10W or SAE 5W-20

See page 38 for additional information on the hydraulic unit.

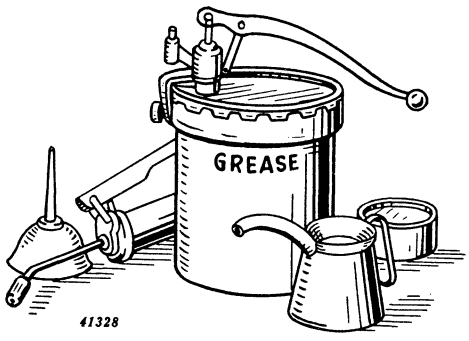
CAUTION: Add only clean oil of the proper viscosity to the hydraulic unit oil reservoir. Never use drainings of any type.

If oil is to be strained when added, never strain through cloth, as lint is harmful to the hydraulic system.

NOTE: When checking oil level or adding oil, be certain the platform is lowered to the ground.

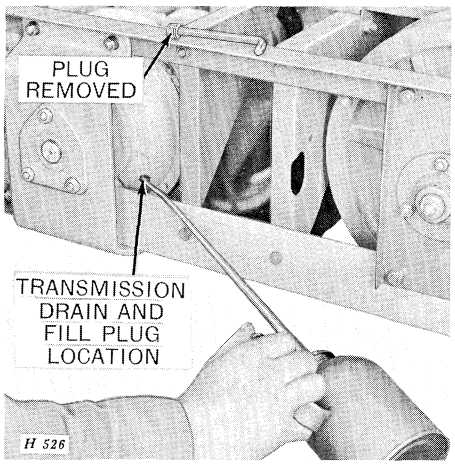
THE COMPLETE OBSERVANCE of one simple rule would prevent many serious injuries each year. THAT RULE IS: "NEVER ATTEMPT TO CLEAN, OIL, OR ADJUST A MACHINE WHILE IT IS IN MOTION."

KEEP LUBRICANTS CLEAN!



Use *only* high-grade lubricants which have been stored in clean containers. Wipe away all grease and dirt before removing filler caps or plugs.

TRANSMISSION



Transmission Drain and Fill Plug

The windrower is shipped from the factory with a break-in oil in each of the two transmission cases. It should not be necessary to drain the oil until after approximately 250 hours of operation; however, it may be necessary to add oil. Use SAE 90 Extreme Pressure Gear Lubricant.

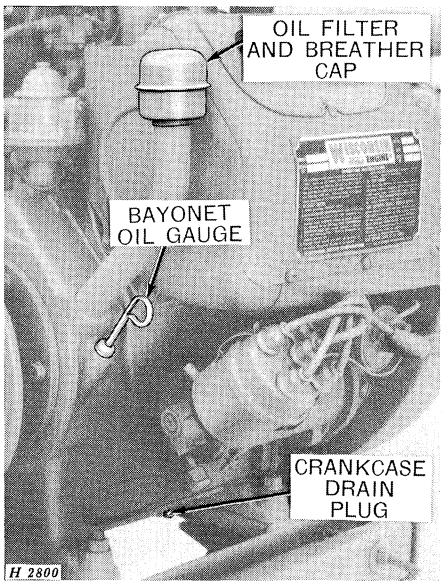
Each transmission case has an oil capacity of approximately 1/4 U.S. pint.

To drain oil, rotate each transmission case until drain and fill plug is level with lower power unit angle.

NOTE: It will be necessary to siphon the oil.

Changing seasons and temperatures, together with heating and cooling of the transmission case, cause condensation and eventually an accumulation of sludge in the transmission case. This breaks down the lubricating qualities of the oil; therefore, each spring the transmission should be drained and the transmission case cleaned out with a safe solvent, even if the windrower has not been operated for 250 hours.

ENGINE LUBRICATION



Engine Oil Filler and Drain Plug

Check oil level every 10 hours of operation.

Drain old oil and add fresh oil after every 50 hours of operation.

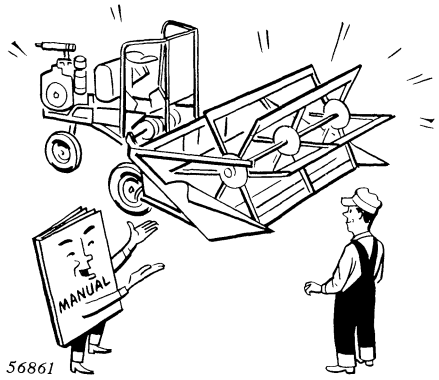
Check air cleaner daily. Replace oil in bowl when oil becomes dirty. This may be necessary twice a day in dusty conditions.

See engine manual for viscosity chart.

OPERATION

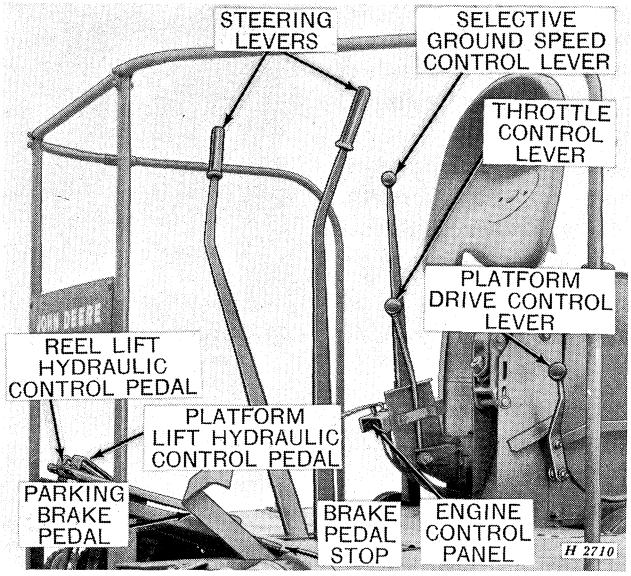
KNOW YOUR WINDROWER

Before starting to windrow, read and study this manual. It has been prepared to acquaint you with the function of all the working units of the John Deere Self-Propelled Windrower.



Know Your Windrower

CONTROLS



The windrower controls are located on the operator's platform within easy reach of the operator. The engine control panel and throttle lever are located at the right-hand side of the operator's seat.

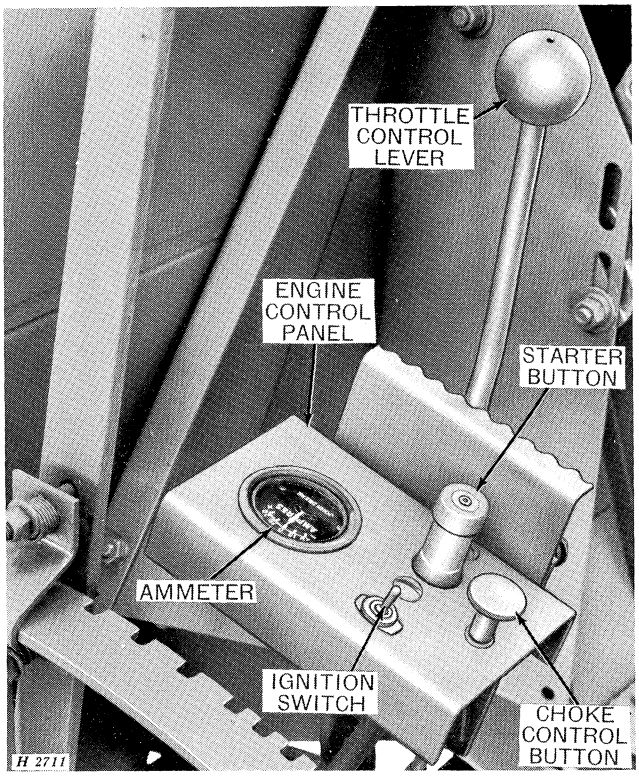
PLATFORM DRIVE CONTROL LEVER.

This lever is disengaged when resting against notch on support bracket. To engage drive, move lever forward.

PARKING BRAKE PEDAL

To engage, push parking brake pedal forward and move pedal stop out. To release, move pedal stop in.

NOTE: Never dismount from windrower or leave the windrower parked without pushing the parking brake pedal forward and moving brake pedal stop out. Place selective ground speed control lever in the top notch of ratchet.



STEERING LEVERS

Push levers forward to engage forward travel, or pull levers rearward for reverse travel. Turning is accomplished through the steering levers. A normal turn is made by placing one lever in neutral position and the other lever in forward position. A sharp turn is made by placing one lever in reverse position and the other lever in forward travel position. For neutral position, put levers in notches.

PLATFORM AND REEL LIFT HYDRAULIC CONTROL PEDALS

These pedals control the height of the platform and reel through a hydraulic mechanism. Press top of pedals down with front of foot to lower, push rear of pedals down with heel of foot to raise. When released, pedals automatically return to neutral position, and platform and reel remain at selected position.

SELECTIVE GROUND SPEED CONTROL LEVER

To increase ground speed travel, push lever forward; to decrease speed, pull lever rearward.

THROTTLE CONTROL LEVER

To increase the speed of the engine, push the throttle control lever forward. Pull lever rearward to decrease engine speed.

AMMETER

This gauge indicates the rate of charge or discharge of the battery. If ammeter shows discharge for an extended period during normal operation, check for a ground, short-circuit, or faulty regulator. If ammeter shows high charge continually, inspect for low battery, faulty connections, low battery water, or bad regulator.

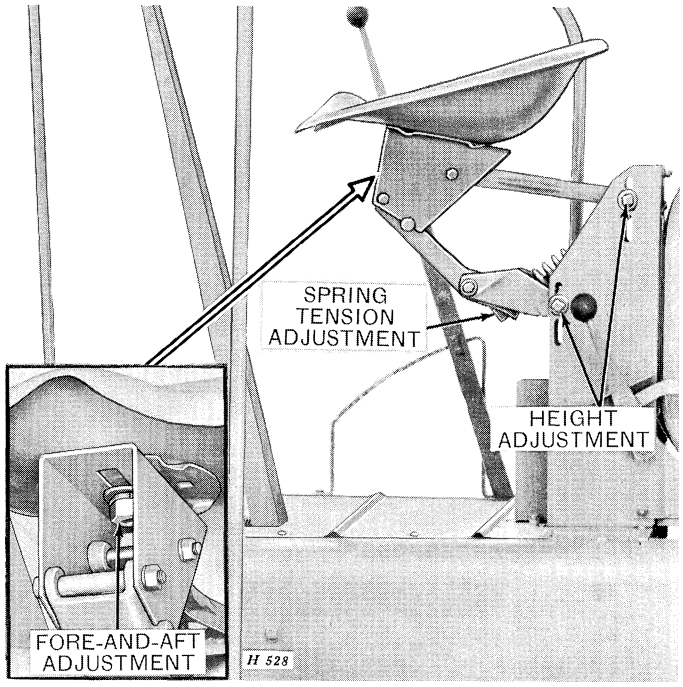
IGNITION SWITCH

Flip ignition switch to "ON" before starting engine. To shut engine off, flip ignition switch to "OFF."

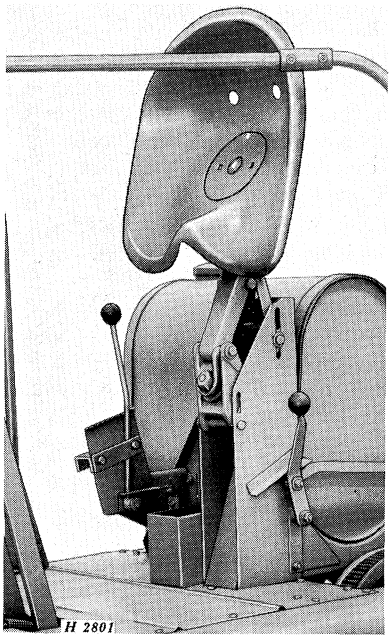
CHOKE CONTROL BUTTON

Pull choke control button all the way out to start engine. After engine is started, and for normal operation, push button all the way in.

OPERATOR'S SEAT



Seat in Normal Position



Seat in Folded Position

The operator's seat may be moved up and down, forward and backward, and also may be folded back into a vertical position, should the operator desire to work in a standing position. Spring tension on the seat may be increased or decreased to suit the requirements of the individual operator.

Seat Height Adjustment: Loosen the two nuts in the seat mounting bracket, move seat up or down as desired and secure nuts.

Fore-and-Aft Adjustment: Loosen nut under seat and move seat forward or backward as desired and retighten nut.

Spring Tension Adjustment: Increase or decrease tension of spring by threading adjusting nut in or out.

Folded Position of Seat: Lift seat up and back at same time. To lower seat, push out and down.

BREAKING IN THE NEW WINDROWER

POWER UNIT AND CUTTING PLATFORM

Check all V-Belt and chain drives carefully for proper alignment and tension. Keep belts tight enough to prevent slippage. Belts can be ruined very quickly if allowed to slip in the grooves of a sheave for any length of time. Excessive heating of a sheave is a sign of belt sippage. New belts will stretch slightly after the first runoff. Check tension frequently.

Chain tension should be adjusted so the chains are just tight enough to run without climbing or jumping the sprockets.

Check the tension on the transmission bands frequently. (See page 40.)

Check operation of hydraulic controls for platform and reel.

Listen for any unusual sounds and watch for any faulty operation or heated bearings.

Be certain all shafts turn freely.

Follow the lubrication instructions and charts closely.

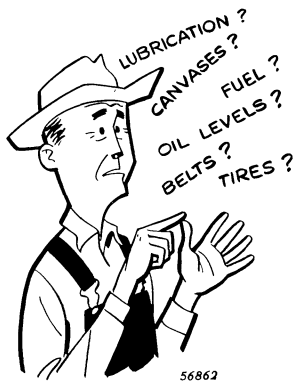
ENGINE

Be sure engine is filled to proper level with a good engine oil (see "Grade of Oil" chart in engine manual).

Operate engine at low speeds (1000 to 1200 rpm) for an hour without load. Then increase speed gradually for two hours until the engine is up to governor speed, which is 2550 rpm at fast idle—no load.

BEFORE OPERATION CHECKS AND ADJUSTMENTS

Careful inspection and service of the windrower before starting work each day, will prevent needless delays and possible breakdowns in the field. Make the following checks and adjustments:



Before Operation Checks

1. Lubricate windrower according to lubrication charts (pages 6 through 11.)

2. Fill gasoline tank with a good grade of gasoline (capacity of tank is 17 U.S. gallons).

CAUTION: Do not fill tank while engine is running, or when near an open flame.

3. Check tire inflation. See tire inflation chart on page 46.

4. Check hydraulic unit oil level.

5. Check belts and chains for proper tension and alignment. See that there are no loose bolts or missing cotter pins.

6. Check tension of platform canvases.

7. Inspect cutter bar for damaged knife sections and alignment of guards.

8. Check engine crankcase and air cleaner.

Haste can cause an accident. Take your time when working around machines.

STARTING AND STOPPING THE ENGINE

TO START

1. Flip ignition switch to "ON."
2. Pull choke cable button all the way out. After engine is started, push choke all the way in.
3. Push starter button.
4. Adjust throttle control lever.

TO STOP

1. Move throttle lever back to slow idle.
2. Flip ignition switch to "OFF."

OPERATING THE WINDROWER

For forward travel, push both steering levers forward. For reverse, pull steering levers rearward.

To turn windrower, move one steering lever forward and place other steering lever in neutral position. For a sharp turn, place one steering lever in reverse and the other in forward travel position.

For neutral position put levers in notches.

To increase ground speed, push selective ground speed lever forward. To decrease, pull lever rearward.

To lower cutting platform and reel, press top of pedals down with front of foot. Press rear of pedals down with heel of foot to raise. When released, pedals automatically return to neutral position, while platform and reel remain at selected position.

Use brake pedal during operation or when parking or dismounting from windrower. To lock parking brake, push brake pedal forward and move pedal stop out. Steering levers must be in neutral position.

CAUTION: Never dismount from windrower or leave it parked without pushing parking brake pedal forward and moving brake pedal stop out. Place ground speed control lever in top notch of ratchet.

To increase engine speed, push throttle lever forward. To decrease, pull lever rearward. It is usually unnecessary to throttle engine during operation.

OPERATING SUGGESTIONS

Correct operation results in saving more grain and doing more work. Length of life of windrower depends upon thorough lubrication; proper adjustment of belts, chains, slip clutch, and canvases; and use of correct operating adjustments to meet varying crop conditions.

WHEN TO WINDROW

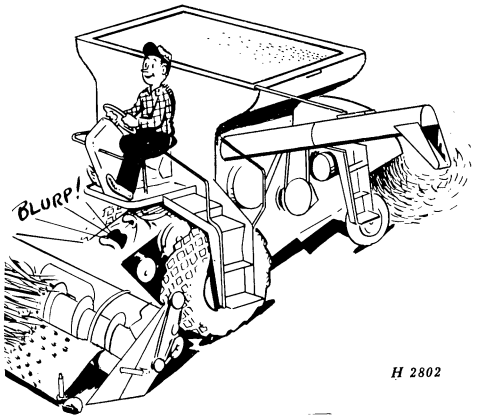
Grain is ready to windrow when it passes from the "milky" stage into the "doughy" stage. It must be windrowed before it reaches the "shattering" stage.

To make the best windrow in all conditions, cut a straight swath. Inside divider should not run into the standing grain.

WIDTH OF CUT

Cut a swath within the capacity of your combine. If a full swath will overload your combine, a narrower swath must be cut. Overloading means wasted grain, high fuel consumption, and possible repair bills. Be certain the grain is cured and ready to pick up. Don't guess—test the moisture content.

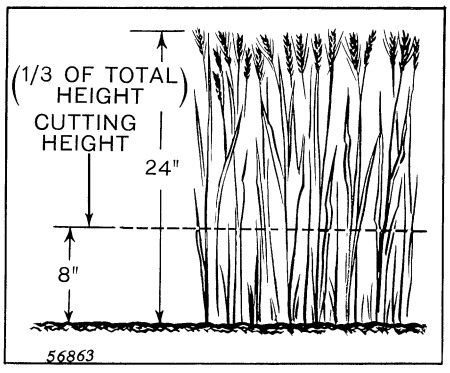
> Keeping your equipment in proper adjustment will help to keep it operating efficiently and economically.



Don't Cut a Windrow That Will Overload the Combine

HEIGHT OF CUT

Grain should be cut with 1/3 of the total height left standing. This will provide a proper bed for the cut grain and will allow it to dry properly. Grain should not be lost in the stubble by cutting too short. It should not be laid on the ground, making it difficult to pick up. If stubble is too long, it will not support the windrow.



Cut at Proper Height

ADJUSTMENTS

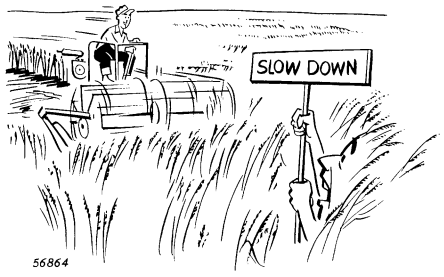
Adjust the height of platform and reel to meet crop conditions. See page 13.

Adjust speed of reel to correspond with ground travel speed. See page 32.

Adjust speed of platform canvases to meet crop conditions. See page 37.

Keep belts and chains adjusted to proper tension. See page 45.

Use special equipment, such as lifting guards, reel end shields, and loop dividers, when necessary. See page 35.



Avoid Excessive Ground Speed

GROUND TRAVEL SPEED

Under most conditions, a speed of 4 to 5 miles per hour will produce a good windrow, and not cause undue wear on the windrower.

Low travel speeds are advisable when operating in down and tangled crops.

High travel speeds are sometimes used when operating in a light, scattered crop. Avoid bursts of excessive speed. Steady speed accomplishes more.

PREPARATION OF THE FIELD

Proper preparation of field for windrowing will mean less trouble and easier, more profitable combining.

In fields where small grain follows corn in the rotation of crops, special

Prepare the Field

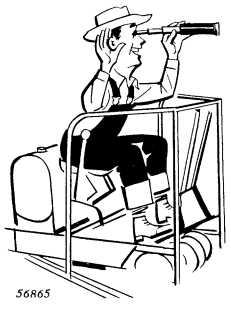
care should be taken before seeding to clean up or cover cornstalks and large corn roots. They can be very troublesome should the crop go down.

When a cornstalk or root hooks onto the point of a guard, a great deal of grain is pushed ahead and run down. It is then usually necessary to stop, back up, and clean off the cutter bar before going ahead. If the cutter bar is raised to avoid stalks and roots, loss of some grain results.

A little extra work done when preparing the field for the small grain crop will pay big dividends when harvest time rolls around.

BE ALERT!

While operating, listen for any unusual sounds. Watch for faulty operation, loose bolts, heated bearings and obstructions in the field. **The successful operator is also safety conscious.**

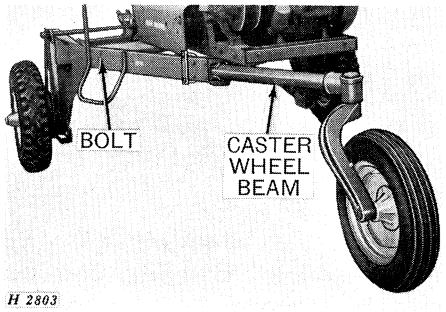


A Good Operator Is Alert

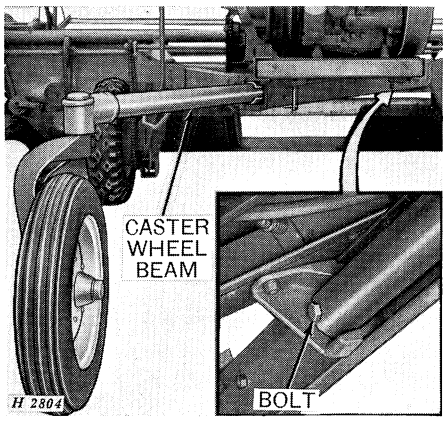
TRANSPORTING

If possible, the windrower should be transported under its own power or on a truck.

If windrower is to be towed, the parking brake control lever must be disengaged, and the main wheel drive chains should be removed.



Caster Wheel in Transporting Position

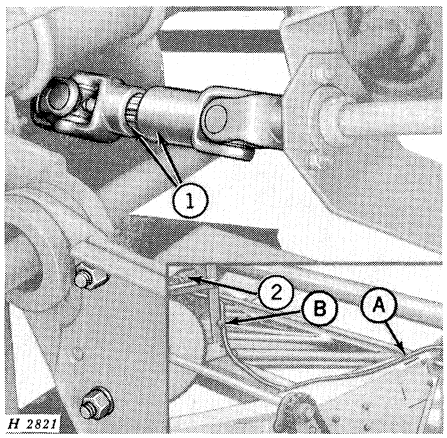


Caster Wheel in Operating Position

MOVING WINDROWER WITH PLATFORM REMOVED

Whenever the windrower is to be moved with the platform removed, the caster wheel unit should be set in transport position. This is easily accomplished by removing the bolt and clamp securing the caster wheel beam to the main frame, pivoting the beam over to the opposite side of the main frame, and securing with the bolt and clamp.

ATTACHING CUTTING PLATFORM

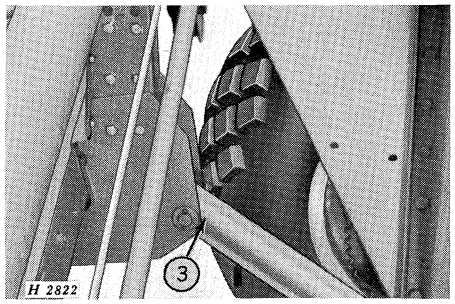


1. Jack up the rear of platform until pivot bearing brackets are in line with mounting brackets on power unit. Push or drive power unit up to platform. The front yoke of the rear universal joint should bottom against the rear yoke of the front universal joint. If these two parts do not meet, loosen the set screws on the locking collars and tap on hex. nut at end of drive shaft with a lead hammer until the two yokes touch. Tighten set screws on locking collars.

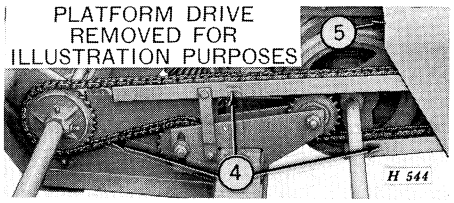
NOTE: At same time, secure oil pressure hose to mounting bracket, using loop-type clip at "A."

2. Remove plug from hydraulic valve mechanism and install oil pressure hose, using the right-angle adapter union.

Secure oil pressure hose to power unit, using the loop-type clip at "B."

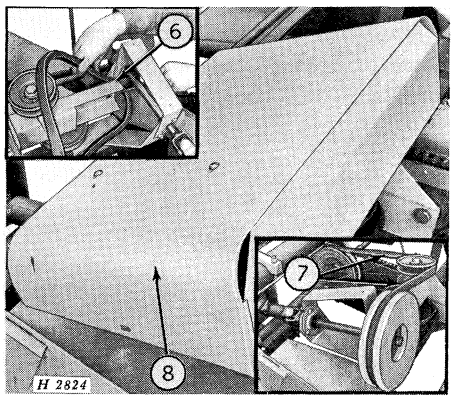


3. Jack up front of platform and attach platform hydraulic cylinders to platform brackets. Install a cotter pin in each end of both link pins. *NOTE: Level platform by adjusting platform pivot brackets.*



4. Attach platform drive chain and adjust chain tension and position of wooden chain guides.

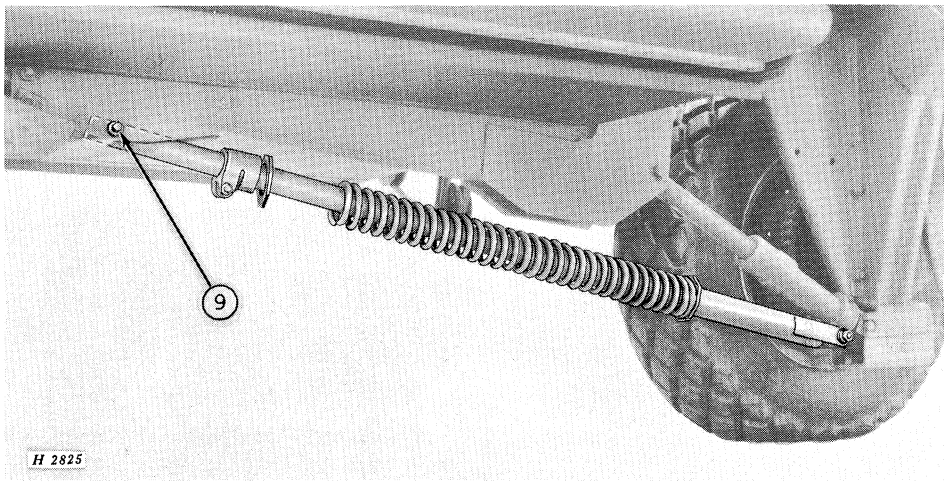
5. Install platform drive chain shield.



6. Remove two bolts holding sheave bracket to drive shaft mounting bracket and slip belt between brackets. Reinstall bolts.

7. Install platform drive belt around sheaves.

8. Install drive belt shield.



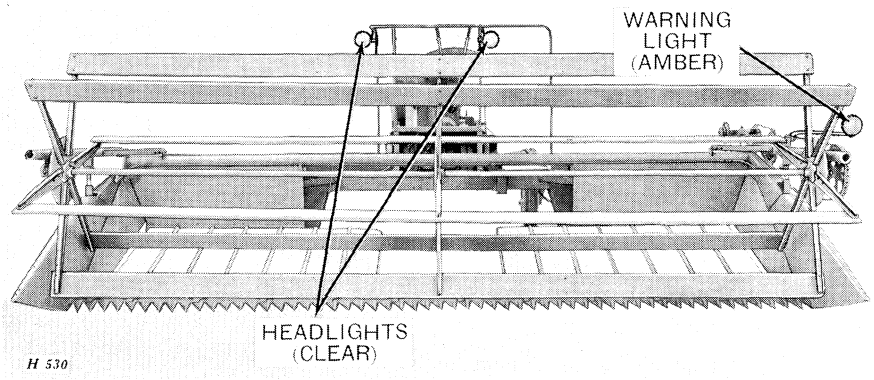
9. Attach float spring to windrower as illustrated. *NOTE: When disconnecting cutting platform, float spring may be disconnected at either place or both places, whichever is desirable.*

DETACHING CUTTING PLATFORM

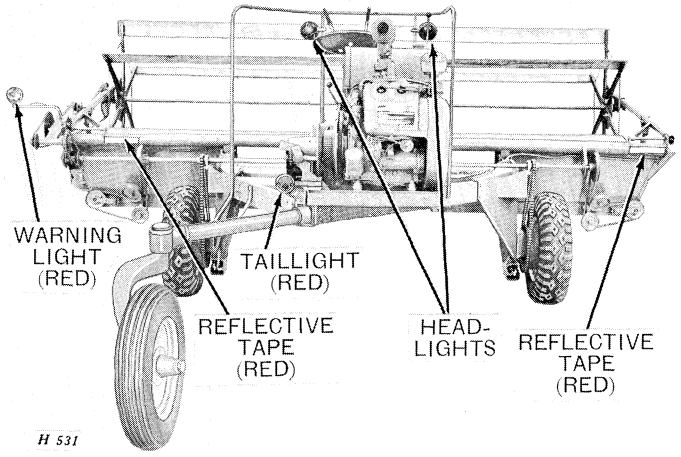
Reverse the attaching procedure. *NOTE: Be certain the platform and reel are in "down" position before detaching hydraulic oil lines. Plug end of hydraulic oil pressure hose and opening in hydraulic valve, using 1/4-inch pipe plug and pipe cap (not provided).*

CAUTION: Be certain to place the caster wheel in transport position before cutting platform is removed.

FIELD AND HIGHWAY SAFETY LIGHTING ATTACHMENTS—Special Equipment



Front View of Self-Propelled Windrower Equipped with Field and Highway Safety Lighting



Rear View of Self-Propelled Windrower Equipped with Field and Highway Safety Lighting

FIELD LIGHTING ATTACHMENT

A set of two headlights, which attach to the operator's platform front upright, is available to equip the windrower for night operation.

Order the following from your John Deere dealer:

BH 10240 H Field Lighting Attachment

HIGHWAY SAFETY LIGHTING ATTACHMENT

This attachment is used in addition to the field lighting attachment for transporting on public roads after dusk, or during periods of poor visibility.

This attachment consists of a taillight, a warning light and two reflective tapes.

Order the following from your John Deere dealer:

BH 10241 H Highway Safety Lighting Attachment

COLD WEATHER OPERATION

Operating a windrower in cold weather requires special preparation. If proper precautions are taken, the windrower will give just as good service in cold weather as it will under warmer conditions.

HYDRAULIC UNIT

Use the grade of oil recommended in the lubrication chart (page 10). Lubricants of the right viscosity are necessary for proper protection.

TRANSMISSION

Use SAE 20 transmission oil. If too heavy, thin with light oil.

Preparing for Cold Weather

FUEL SYSTEM

Use winter-grade gasoline. Fill the fuel tank at the end of each day's run to prevent moisture from condensing in the fuel tank.

BATTERY

When the temperature drops below freezing, precautions should be taken to avoid damage to the battery cells from freezing. A badly discharged battery freezes more quickly than one that is well charged. For example, a battery with a specific gravity reading of 1.175 (discharged) will freeze at +4°F., and a battery with a specific gravity reading of 1.300 (fully charged) will not freeze until the temperature reaches –65°F.

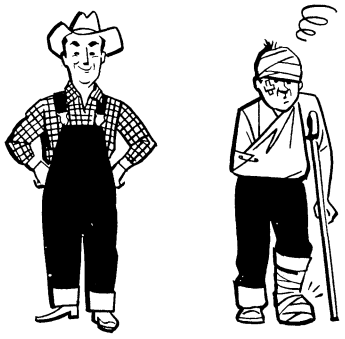
In freezing weather, do not add water to battery unless engine is going to be operated. Water will readily freeze as it will not mix with the electrolyte until the generator passes a charging current through the battery.

ENGINE

For correct viscosity of oil in cold weather, see "Grade of Oil" in engine manual.

An ounce of care can prevent a pound of cure—service your equipment at recommended intervals, using correct lubricant.

SAFETY SUGGESTIONS



Mr. Careful 56871 Mr. Careless

It Pays to Be Careful

The safety of the operator was one of the prime considerations in the minds of John Deere engineers when this windrower was designed. Shielding, simple adjustments, and other safety features were built into the windrower wherever possible.

However, investigation of thousands of farm accidents show that careless use of farm machinery causes nearly 1/3 of all farm accidents. You can make your farm a safer place to live and work if you observe the safety suggestions given. Study these suggestions carefully and insist that they be followed by those working with you and for you.

Only the operator should be allowed on the operator's platform when the windrower is in operation.

All machinery should be operated **only** by responsible persons who have been delegated to do so.

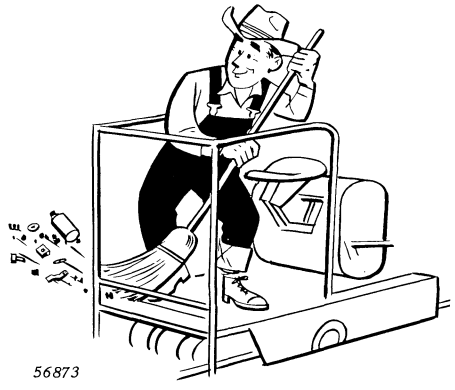
Use the handrail when mounting the windrower.

Keep the engine clean of chaff and straw to prevent the possibility of fires.

Have a fire extinguisher handy. It's a good idea to mount one on the operator's platform.

Flame and Fuel Don't Mix

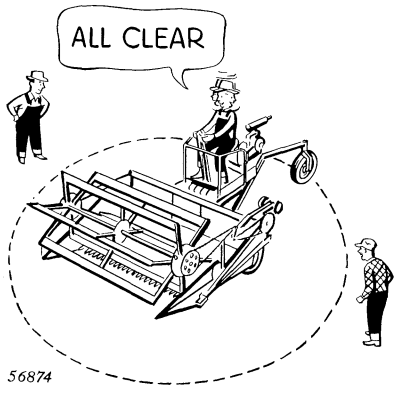
Refuel your windrower **only** when the engine has been shut off. **Do not** smoke or use an oil lantern when refueling.



Keep the Operator's Platform Clean

Keep the operator's platform clean. Do not use it as a place to carry loose tools, lunch boxes, etc.

SAFETY SUGGESTIONS—Continued



Check Before Starting

Before starting, make sure bystanders are clear of the windrower so they cannot be struck by moving parts or caught in a drive belt or chain.

Be especially careful when operating on hillsides because the windrower may tip sideways if it strikes a hole, ditch, or other irregularity.

Provide a first-aid kit at the house or, if possible, on the windrower, for use in case of accident. Use proper antiseptics on scratches and cuts without delay.

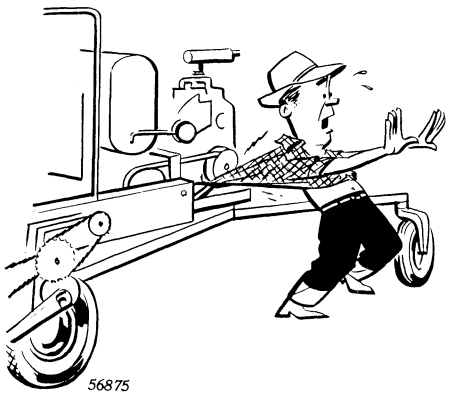
Adjust transmission brake bands properly.

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

Before dismounting from windrower, **always** place the selective ground speed control lever in the top notch of ratchet and engage the parking brake pedal.

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

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



Do Not Wear Loose Clothing

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

Don't Travel After Dark on the Highway Without Proper Lights

When moving on a highway, keep as far to the right as possible. Hang a red flag prominently on the rear of the windrower when transporting during the day. **Never** transport during periods of poor visibility or after dusk, unless the windrower is equipped with lights in good working condition.

WHEN THE SEASON IS OVER

When the windrowing season is completed, the windrower should be stored until the next season. Follow the suggestions listed below to be certain your windrower will be ready to go when the next season begins:

1. If possible, shelter the windrower in a dry place, or cover with a tarpaulin.
2. Clean the windrower thoroughly. Chaff and dirt will draw moisture, rot wood parts and rust the steel.
3. Remove and clean off the canvases. Hang the canvases in a dry place where they will not be subjected to damage by rodents.
4. Remove and clean the belts. Wrap belts in burlap and store in a cool dark place.
5. Remove chains and clean off thoroughly. Brush fairly heavy oil on chains to prevent corrosion.
6. Lubricate the windrower completely. Grease the threads on adjusting bolts.
7. Release tension from reel slip clutch.
8. Release tension from brake bands.
9. Paint all parts from which paint has worn.
10. Support the platform with blocks to level it.
11. Block up the windrower, taking load off tires. Do not deflate tires. If windrower is stored outside, remove wheels and tires, and store in a cool, dark, dry place.
12. Service the engine as instructed in your Engine Manual.
13. Wash the outside of engine carefully. Use a safe solvent and a stiff brush.
14. Drain and refill hydraulic system with clean oil. Do not leave hydraulic system dry while windrower is stored.
15. Drain out all gasoline and leave drain valve open. If gasoline is allowed to stand in fuel tank, fuel pump and carburetor, a gummy substance will form in carburetor jets and passages. This gum is difficult to remove and will cause future trouble.
16. If windrower is stored in the open, remove battery and store it in a cool, dry place where the temperature will stay above freezing. Do not place battery on a concrete floor, as cold tends to draw strength from the battery. Check and recharge the battery every 30 days to prevent damage to the plates.
17. List and order the repair parts that will be needed before the next season. Your John Deere dealer can give better service during the off season, and parts can be installed in spare time, avoiding delay at harvest time.

BEGINNING OF THE NEXT SEASON

The windrower must be taken out of storage and carefully checked before starting the next season. By making certain your windrower is in tip-top shape, you can avoid costly breakdowns during the season.

1. Clean the windrower thoroughly.
2. Service the engine as instructed in your Engine Manual.
3. Reinstall the battery. Check electrolyte level and recharge.
4. Clean all fuel lines and fuel strainers.
5. Fill fuel tank. Capacity is 17 U. S. gallons.
6. Install belts, making certain they have the proper tension.
7. Install and adjust chains to proper tension. Readjust platform drive chain wooden guides.
8. Install and adjust platform canvases.
9. Adjust tension on reel slip clutch.
10. Adjust tension of brake bands.
11. Reinstall tires and wheels if removed for storage. Check tire inflation.
12. Lubricate windrower completely, then run windrower at half speed for about an hour. Check bearings for overheating or excessive looseness. Be certain reel slip clutch operates freely.
13. Inspect windrower and see that all bolts are tight and cotters are in place.
14. Review your Windrower Operator's Manual and your Engine Manual.

ADJUSTMENTS AND SERVICE

CUTTER BAR

The cutter bar is basically a multiple series of shears. To cut properly, the knife must run smoothly in the cutter bar and every knife section must rest on the guard in position to make a shear cut. This means the guards, wearing plates, and knife clips must be in good condition and correctly set. If these parts become loose or worn, the knife will chew and tear the crop instead of cutting it.

Do not run cutter bar closer to the ground than necessary to get all the crop.

GUARD ALIGNMENT

Set each guard up or down as necessary to obtain a shear cut between the knife section and the guard. Retighten the bolt as each guard is aligned.

NOTE: Guard lip must be parallel with shear edge of guard.

If it is necessary to replace guards, be certain to align new guards to insure a shear cut.

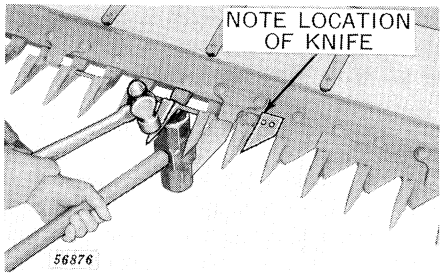
KNIFE CLIPS

Knife clips must keep sections from lifting off guards and permit knife to slide without binding. Set knife clips after guards are aligned. Never bend down a knife clip when the knife is under it. Tap the knife clips up or down until the knife will slide under them without binding.

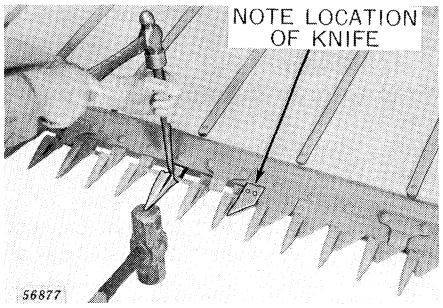
If knife clip is too tight, strike it between the bolts. After setting the knife clips, oil, and make certain the knife works freely.

CARE OF THE KNIFE

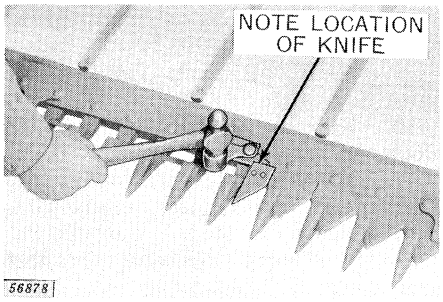
Keep the knife sections firmly riveted to the knife back. Replace worn or broken sections; shear off the rivets rather than punching them out, as a punch will enlarge the holes in the knife back.



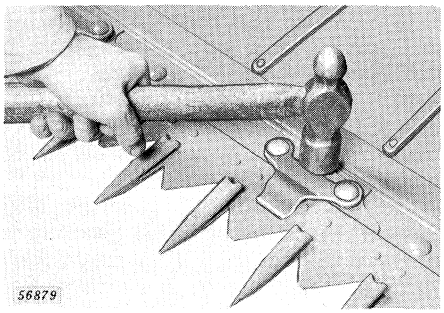
Setting Guard Down



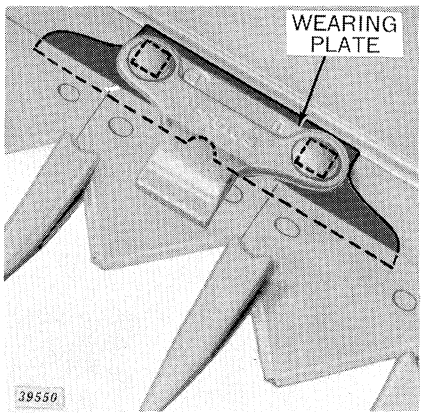
Setting Guard Up



Setting Knife Clip Down



Setting Knife Clip Up



Wearing Plate Adjustment

WEARING PLATES

Wearing plates are located along the entire length of the knife back and are adjustable to compensate for wear on the knife back. Turned-down edges of the wearing plates must line up with each other to give the knife back a straight bearing along its entire length.

Hold knife forward with fingers and adjust wearing plates finger tight against knife back. Do not drive with a hammer or pry up with a screw driver. After moving wearing plates forward, or after replacing them, be sure to tighten the guard bolts securely.

GUMMY TRASH ON CUTTER BAR

Use water to remove gummy trash that packs on the wearing plates and guards. Operate cutter bar slowly and pour water on bar. **Do not allow gummy trash to harden.**

KNIFE SPEED

The knife on the self-propelled windrower operates at 1000 strokes per minute.

CUTTER BAR SPECIAL EQUIPMENT

SMOOTH, UNDERSERRATED AND OVERSERRATED SHORT SECTION CUTTER BARS

GRAIN BAR KNIVES

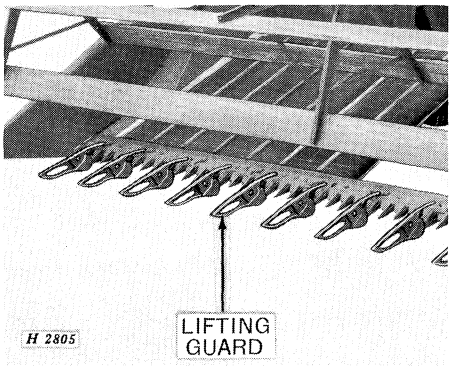
AH12766H	10-Foot	Smooth Section Knife
AH12703H	10-Foot	Underserrated Section Knife
AH14916H	10-Foot	Overserrated Short Section Knife
AH14835H	12-Foot	Smooth Section Knife
AH14836H	12-Foot	Underserrated Section Knife
AH14917H	12-Foot	Overserrated Short Section Knife
AH12767H	14-Foot	Smooth Section Knife
AH12704H	14-Foot	Underserrated Section Knife
AH14918H	14-Foot	Overserrated Short Section Knife
AH12768H	16-Foot	Smooth Section Knife
AH12705H	16-Foot	Underserrated Section Knife
AH14919H	16-Foot	Overserrated Short Section Knife

HAY BAR KNIVES

AH14355H	10-Foot	Smooth Section Knife
AH14837H	12-Foot	Smooth Section Knife
AH14359H	14-Foot	Smooth Section Knife
AH14363H	16-Foot	Smooth Section Knife

CUTTING PLATFORM SPECIAL EQUIPMENT—Continued

LIFTING GUARDS



Cutting Platform Equipped with Lifting Guards

When windrowing a crop that is badly down or tangled, such as edible beans, peas, or other viny crops, the lifting guards help to lift the crop into the cutter bar and onto the platform canvases.

Order the following from your John Deere dealer:

AH14244H Lifting Guard (10 recommended for 10-foot platform, 12 recommended for 12-foot platform, 14 for 14-foot, and 16 for 16-foot.)

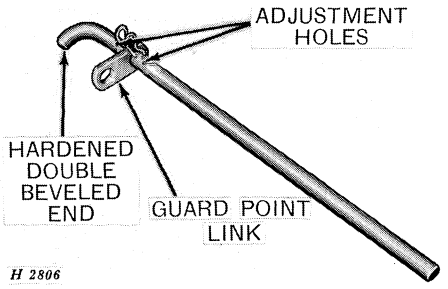
HAY CUTTER BAR

The hay bar is a heavy-duty type cutter bar equipped with mower guards for cutting hay and grass crops.

This bar comes in all platform lengths as optional equipment and may be obtained by ordering one of the following from your John Deere dealer.

BH10526H 10-Foot Hay Cutter Bar
BH10737H 12-Foot Hay Cutter Bar
BH10527H 14-Foot Hay Cutter Bar
BH10528H 16-Foot Hay Cutter Bar

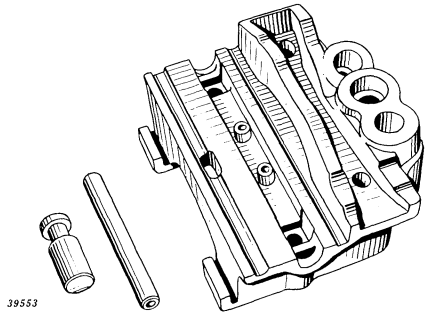
CUTTER BAR GUARD STRAIGHTENER



This straightener provides a fast, easy, and simple method of aligning the guard with the knife. It consists of a leverage bar equipped with an adjustable link to fit over the guard points.

Order BH10454H from your John Deere dealer.

GUARD AND KNIFE REPAIR BLOCK

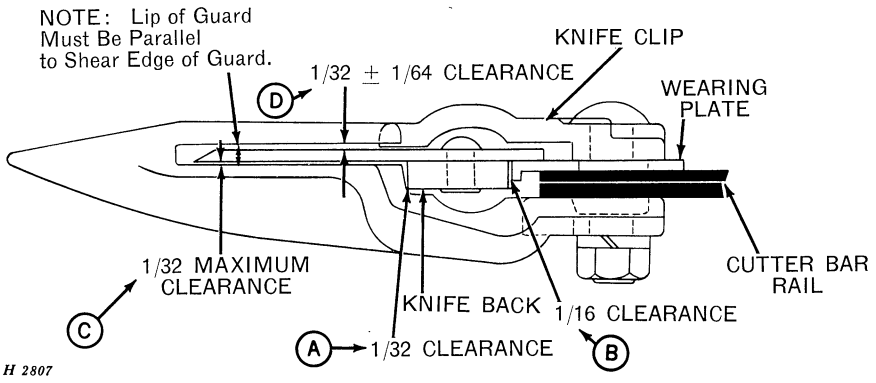


Guard and Knife Repair Block

This convenient block, which fits any guard or knife, makes a quick easy job of replating guards, replacing sections, and straightening knives on mowers, windrowers and combines.

Order AP17210H from your John Deere dealer.

KNIFE DRIVE AND ADJUSTMENTS

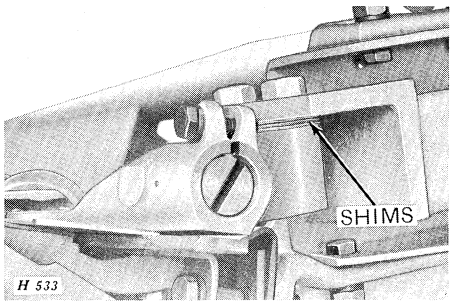


KNIFE CLEARANCE

With knife sections dead-center between guard tines, there must be, at least, 1/32-inch clearance at "A," left-hand end of knife (drive end) between front of knife back and guard, and 1/16-inch clearance at "B," between rear of knife back and front of wearing plate.

To obtain this clearance, loosen four nuts on knife beam pivot brackets. Also loosen castellated nut and the set screw on beam pivot shaft. Move beam forward or backward as necessary to obtain clearance.

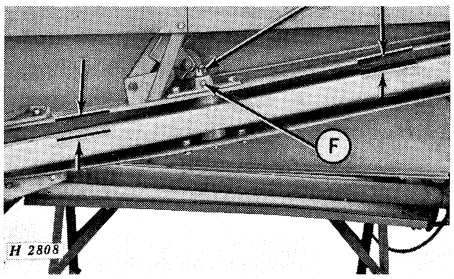
Before retightening nuts, make certain that there is 1/32-inch maximum clearance at "C," between knife section and guard on left-hand end of cutter bar.



Use shims as necessary to obtain clearance "C."

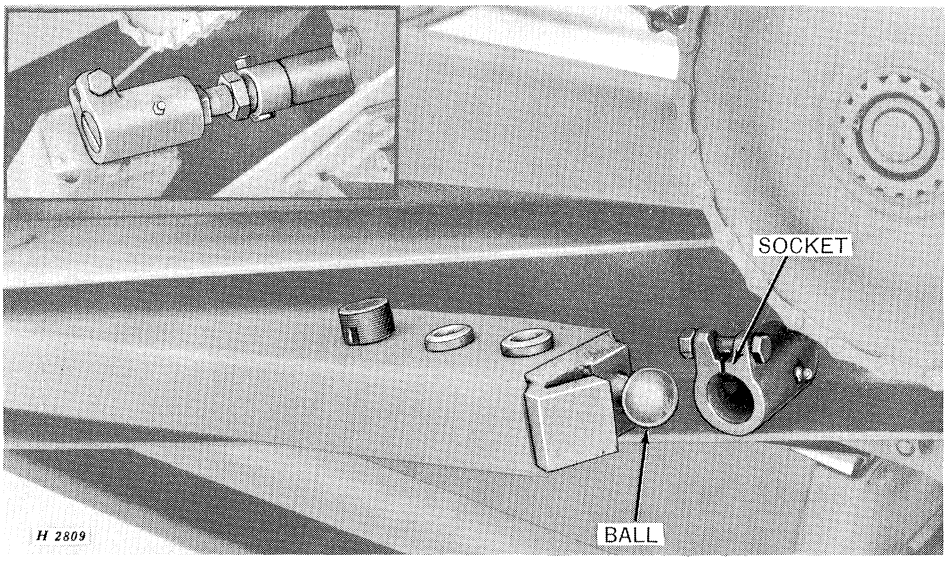
If necessary, also tip knife drive beam slightly to obtain clearance "C," being careful not to lose previous clearances between knife back, guard, and wearing plate. Retighten four nuts on pivot beam brackets.

Also maintain 1/32-inch clearance at "D," between knife section and knife clips. Adjust knife clips if necessary.



Make certain knife drive pivot beam is approximately parallel in the knife drive pivot beam support.

Tighten castellated nut "E" on knife drive pivot beam to 40 foot-pounds torque, and back off one castellation. Install cotter pin. Tighten set screw "F."



KNIFE REGISTER

An important adjustment of the knife is its register. The knife is in proper register when the sections pass an equal distance through adjacent guards at each end of the pitman stroke. If such is not the case, the cut is incomplete on one stroke and excessive on the other, resulting in a poor job of cutting and frequent clogging of the knife.

TO ADJUST

Adjust knife register by disconnecting ball and socket at upper end of knife drive beam. Screw socket in or out to align knife with guards. *NOTE: One complete turn of socket is equal to approximately 1/8-inch movement of knife. Be certain to retighten nut. Also make certain clamp is in the position shown at all times of operation.*

be careful.....
avoid accidents

65173

REEL

The reel slats gather in the crop, hold it until it has been cut by the knife, and then move it into the platform canvases. The reel must be square, level, and at the proper height to feed the grain uniformly and steadily to the platform canvases.

REEL ADJUSTMENTS

Ordinarily, the reel should be set so the slats, when in their lowest position, will strike the crop 8 to 10 inches above and slightly ahead of the knife.

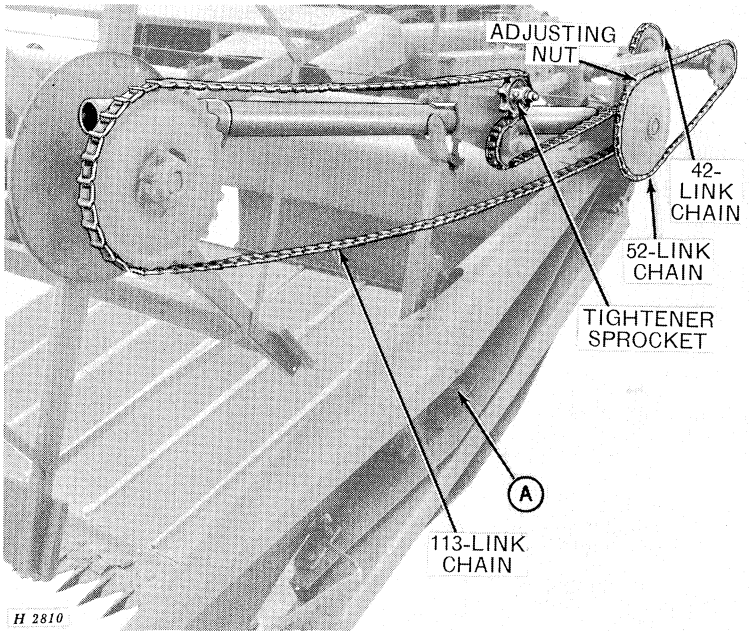
In grain that is down and badly tangled, the reel should be set low and back so it will just clear the knife and platform canvases. In this position, the reel sweeps material back onto the platform canvases. Setting the reel too far back on the platform and too low can interfere with uniform feeding of material and will sometimes cause the straw to be carried around by the reel.

NOTE: An additional reel height range can be obtained by attaching the right-hand reel lift hydraulic cylinder and the left-hand reel arm support to the hole "A" in the support bracket. This setting is necessary if platform is to be equipped with a pickup-type reel.

REEL DRIVE CHAIN TENSION

Adjust the 113-link reel drive chain by moving the tightener sprocket forward or backward as necessary. It may be necessary to remove chain links to obtain proper tension.

The 42-link reel drive chain and 52-link drive chain must be adjusted simultaneously by means of the adjusting rod which moves the reel variable drive arm up or down, and the adjusting nut which allows the arm to be moved forward or backward.



Reel Speeds

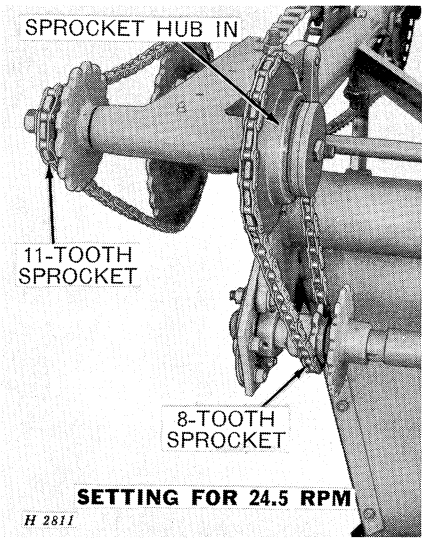
Reel speeds of 24.5 rpm, 31.2 rpm, 43 rpm and 54.6 rpm are obtainable by using various sprocket combinations as illustrated below.

Your dealer probably set the reel to operate at 31.2 rpm. This is an average reel speed for most crops and is usually employed in conjunction with a ground speed of 4 to 5 mph.

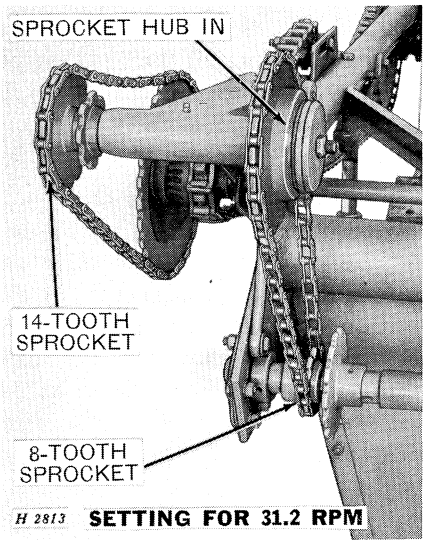
A low reel speed of 24.5 rpm is sometimes advisable for use in down and tangled crops.

A high reel speed of 54.6 rpm is advisable only in a light crop where the operator desires to operate his windrower at a high rate of ground speed.

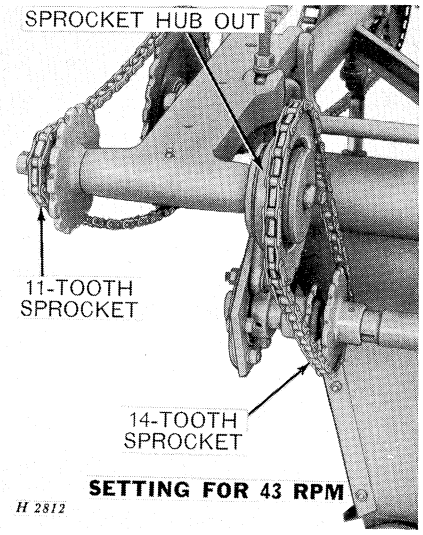
A good rule to remember is, "The speed of the reel should be as fast as possible, without shattering the grain or carrying straw over the top of the reel."



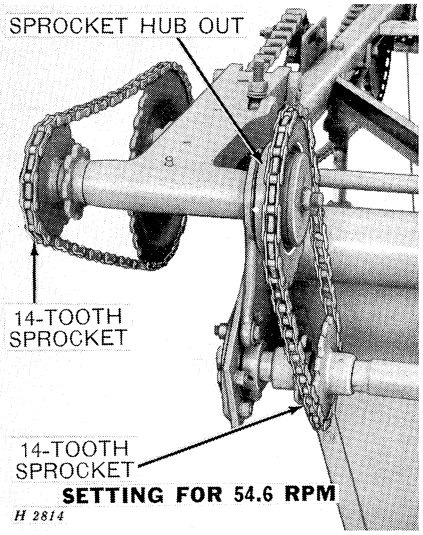
H 2811 **SETTING FOR 24.5 RPM**



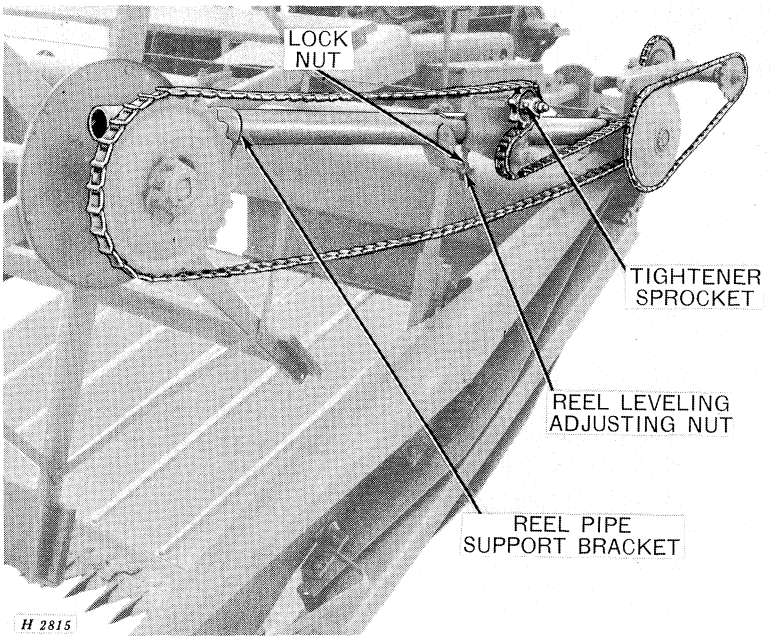
H 2813 **SETTING FOR 31.2 RPM**



H 2812 **SETTING FOR 43 RPM**



H 2814 **SETTING FOR 54.6 RPM**



Reel Forward, Backward and Leveling Adjustments

Forward and Backward Adjustments

Crop conditions will determine the best position for the reel. Under normal conditions, the reel should be set so the slats, when in their lowest position, will strike the crop 6 to 10 inches above and slightly ahead of the knife. If the cut material has a tendency to "slobber" over, or to fall onto the cutter bar, then move the reel back.

To Adjust: Loosen the two bolts in the reel pipe support brackets on each end of the reel pipe. Slide the reel forward or backward to obtain desired position, and retighten bolts. **Be certain the reel is parallel to the cutter bar.**

If reel is to be moved forward, it will first be necessary to loosen the driven chain tightener sprocket.

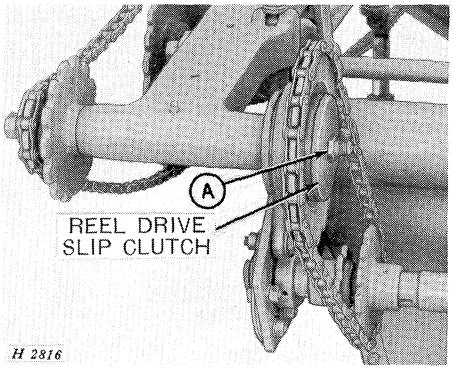
After reel has been secured in desired position, adjust the tightener sprocket to obtain proper tension on driven chain. If reel is moved backward, it may be necessary to detach a few chain links to obtain proper tension.

Reel Leveling Adjustment

To insure efficient operation, the reel must be kept level and parallel with the cutter bar.

There is a reel leveling adjusting bolt on each of the two reel pipe support arms. However, except in extreme cases, it will be necessary to adjust only one side.

To Adjust: Loosen the lock nut and thread the adjusting nut up or down as necessary to level the reel. Be certain to retighten lock nut.



Reel Slip Clutch

The reel drive is protected by a disk-type slip clutch. When the clutch slips, stop immediately, determine cause and correct. Do not increase tension of slip clutch unless it is determined by careful examination that lack of tension is the cause of slippage.

To Adjust:

Loosen or tighten the adjusting nut "A" as necessary to obtain proper tension.

REEL OPERATING SUGGESTIONS

Replace any broken slats promptly. A missing slat will cause uneven delivery to the cutter bar, resulting in an uneven windrow.

Short Crop Conditions.

Lower the reel.
Move the reel back.
Increase reel speed.

Extremely Tall Crops.

Move the reel forward.

The use of only three slats when operating in extremely tall crops prevents the grain from being pushed down in front of the cutter bar.

Additional Reel Slats.

The reel is shipped with a standard 6-slat reel. The operator can change to a 2, 3, 4, or 8-slat reel. Additional reel slats and arms to convert from a six-slat reel to an eight-slat reel are available by ordering the following:

P 49945 H	Reel Arm (Order Six for 10-Foot, 12-Foot, and 14-Foot Cutting Platforms; Order Eight for 16-Foot Cutting Platforms)
15459 HH	Reel Slats, 10-Foot (Bundle of Two)
H 26674 H	Reel Slat, 12-Foot (Order Two)
P 50343 H	Reel Slat, 14-Foot (Order (Two)
H 21631 H	Reel Slat, 16-Foot (Order Two)

Short Section Knife (Special Equipment)

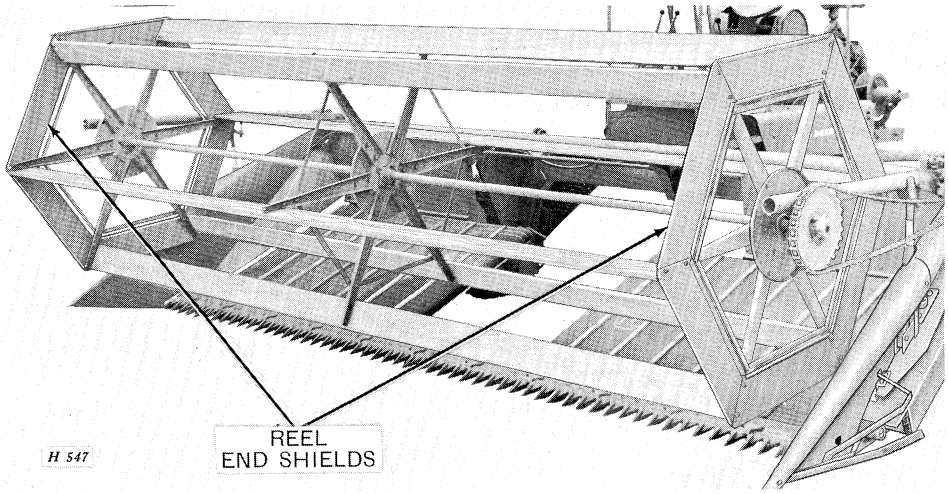
The short section knife is available primarily for cutting flax.

The overserrated sections make cutting flax a much easier job than before, because of the way the knife is designed. The short section is now held closer to the cutter bar with the knife hold-down clip coming closer to the end of the knife, eliminating the possibility of flax getting under the knife and limiting cutting efficiency.

Order one of the following from your John Deere dealer:

AH 14916 H	10-Foot Knife	Overserrated
AH 14917 H	12-Foot Knife	Overserrated
AH 14918 H	14-Foot Knife	Overserrated
AH 14919 H	16-Foot Knife	Overserrated

CUTTING PLATFORM SPECIAL EQUIPMENT



Reel Equipped with End Shields (Six-Slat Reel only)

REEL END SHIELDS

Reel end shields are available for use on the six-slat reel. The reel end shields reduce the possiblity of material wrapping and being carried around the reel.

Order the following from your John Deere dealer:

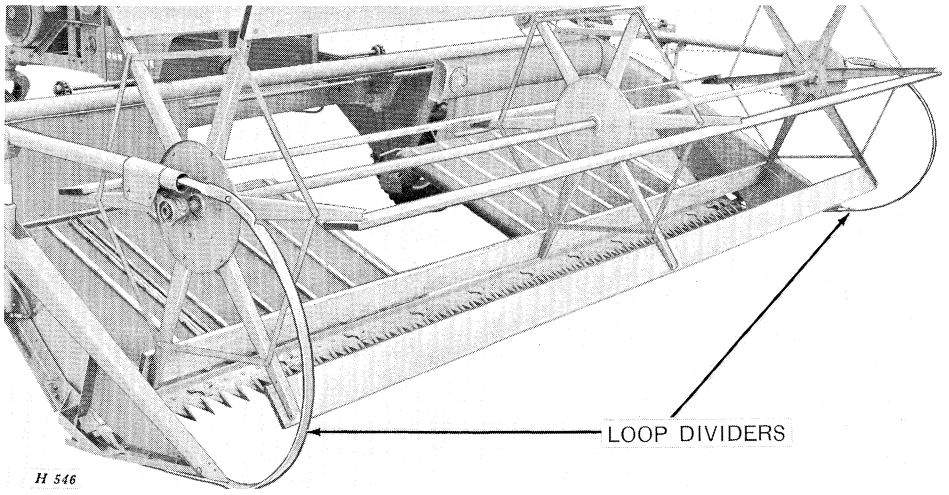
14954 HH	Reel End Shields (Bundle of Six Shields)
15083 HH	Hardware for Reel End Shields

LOOP DIVIDERS

Loop dividers are extremely useful when operating in high, tangled crops, or when you desire to cut low in high crops. The loop dividers separate the crop far enough ahead of the platform so the grain does not bunch up on the inside edges of the platform end sheets.

Order the following from your John Deere dealer:

15968 HH Loop Divider (2 used)



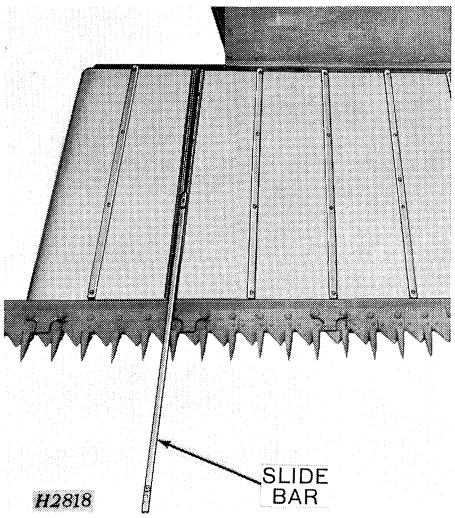
Cutting Platform Equipped with Loop Dividers

PLATFORM CANVASES

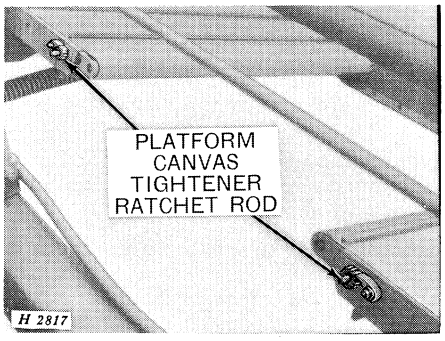
The platform canvases are 42 inches wide, each equipped with hardwood slats. There are two types of canvases available—the regular type and the rubberized type. The width of the opening between the canvases will vary from 30 to 36 inches, depending upon the amount of tension required.

When the windrower is standing idle for a length of time, it is a good idea to release the tension on the canvases.

In rainy or damp weather, remove the canvases when windrower is to stand idle.



Installation of Platform Canvas



Platform Canvas Tightener

PLATFORM CANVAS TENSION

The tension of the canvases should be checked periodically during each day of operation and adjusted so canvases run smoothly without slippage. Adjust tension by means of the ratchet rod provided at the rear of idler rollers.

CANVAS INSTALLATION

To install a new canvas or reinstall a canvas previously removed, adjust the ratchet to position the idler roller in as far as possible. Remove the two bolts from the canvas zipper. Pull slide bar free of zipper. Position canvas over drive and idler rollers. Join the ends of the canvas together and reinstall the slide bar and the two bolts. Adjust canvas tension.

TO INSURE LONG LIFE FOR CANVASES

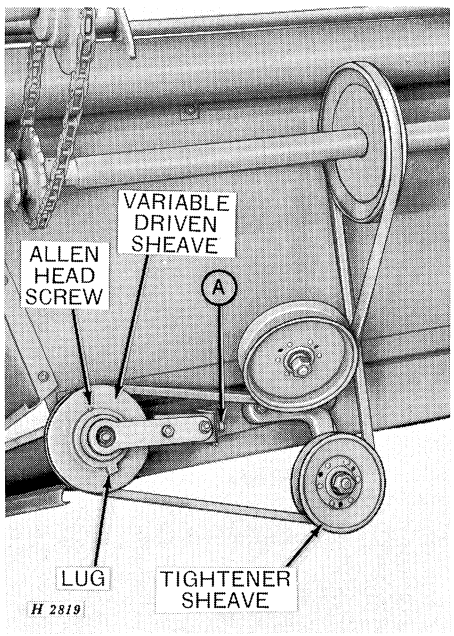
Keep at proper tension when operating.

Release tension when windrower is to stand idle for a period of time.

Keep canvases clean and as dry as possible.

Operate canvases at reasonable speed.

At end of season, remove the canvases and hang them up in a dry place where they will not be subject to damage from rodents.



Platform Canvas Drive
14-Foot and 16-Foot Platforms

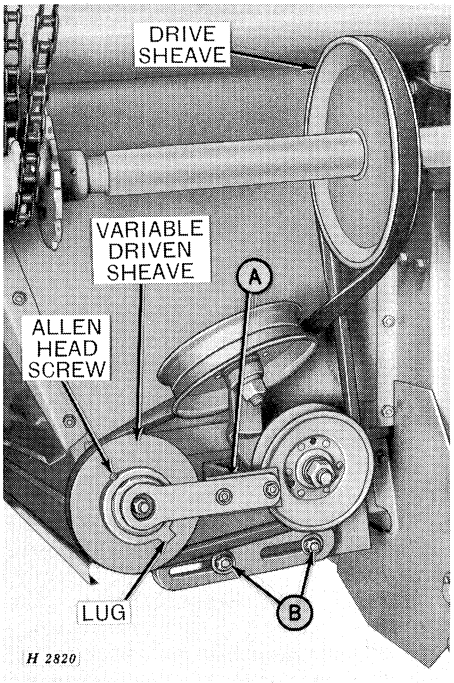
PLATFORM CANVAS DRIVE ROLLER

The drive rollers should be inspected periodically to be certain they provide ample clearance for the canvases.

The drive rollers can be adjusted by loosening the nuts "A" and moving driven sheave bracket up or down as necessary.

PLATFORM CANVAS SPEED

The speed of the canvases can be changed by means of the variable driven sheave at the rear end of both drive rollers. Loosen the Allen head screw in the sheave hub and thread outer sheave half back to increase speed, or thread forward to decrease speed. *NOTE: Lug is provided on sheave hub so sheave can be tapped with lead hammer or wooden mallet to assist in turning sheave.*



Platform Canvas Drive
10-Foot and 12-Foot Platform

IMPORTANT: Both canvases must operate at approximately the same speed to produce an even windrow.

To Tighten Drive Belts:

(For 14-foot and 16-foot cutting platforms.)

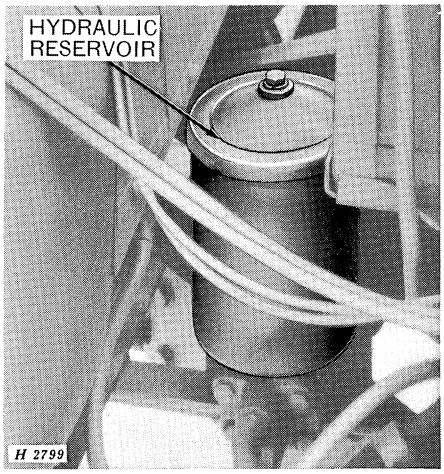
Loosen the nut on the tightener sheave; move tightener sheave up or down as necessary and retighten nut.

(For 10-foot and 12-foot cutting platforms.)

Loosen nuts "B," move driven sheave unit to the right or left as necessary and retighten nuts "B."

Move drive sheave accordingly to maintain drive belt alignment.

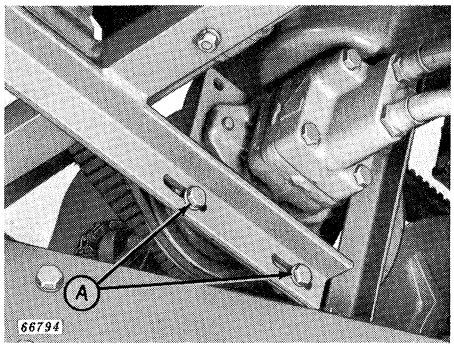
HYDRAULIC SYSTEM



The hydraulic unit is precision-built to very close tolerances, and is properly adjusted at the factory. Under no circumstances should the operator attempt to service this unit, except for maintaining proper oil level or changing oil according to instructions on page 10. **CAUTION: When checking oil level or adding oil to oil reservoir, be certain the platform is lowered all the way down to the ground. This is important.**

Daily, check the oil level in the hydraulic oil reservoir. The "FULL" mark is located approximately one inch from the top. Check all hydraulic connections and fittings periodically, to be certain they are tight.

HYDRAULIC PUMP DRIVE BELT TENSION



Adjust belt tension by loosening the two nuts "A" at the bottom of the hydraulic pump mounting bracket and moving bracket forward or backward as necessary. Be certain to retighten nuts.

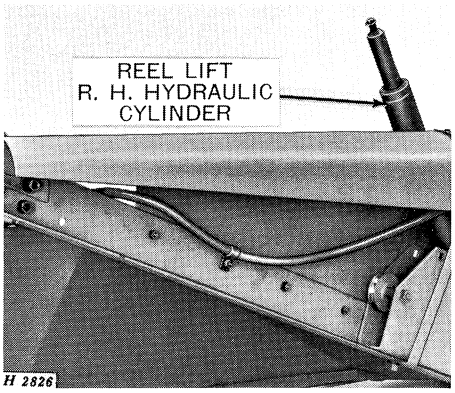
PLATFORM AND REEL HYDRAULIC CONTROLS

The height of the platform and reel is controlled through independent hydraulic control pedals. See page 13.

PLATFORM LEVELING

It may sometimes be necessary to compress one float spring more than the other in order to keep the platform level.

Reel Hydraulic Cylinder

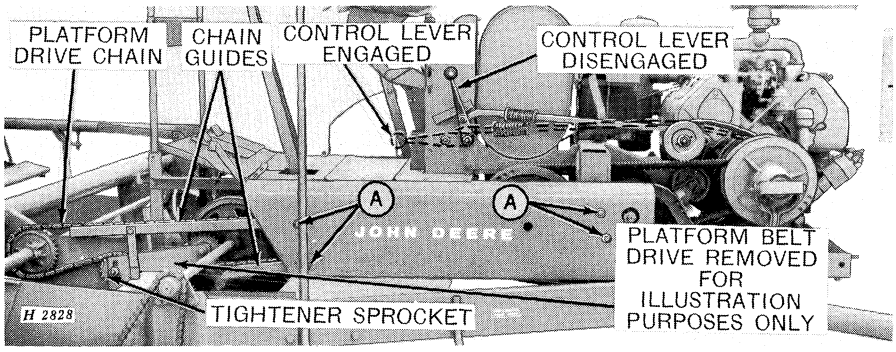


After the reel lift cylinder and lines have been filled, recheck oil level in reservoir. Fill only to "FULL" mark, making certain both the platform and reel are in the "down" position. One-half to one pint of oil will be required.

If reel is not level when fully raised, it should be leveled by means of the adjusting bolt provided in the reel arm bracket.

The leveling bolts can also be used to increase or decrease the maximum up or down position of the reel. Reel must be kept level.

PLATFORM DRIVE



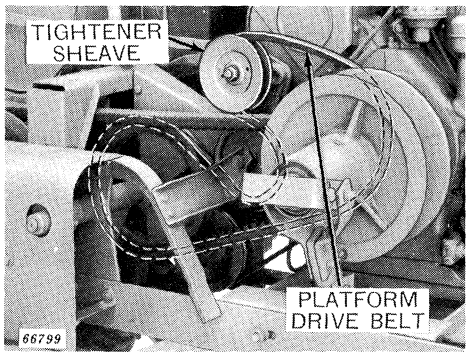
Platform Drive Engaged and Disengaged

PLATFORM DRIVE CHAIN

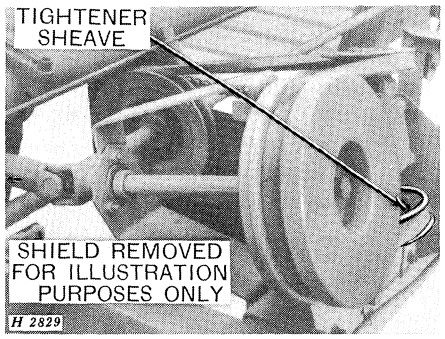
Adjust tension of drive chain by loosening nut and moving tightener sprocket up or down as necessary. Be certain to retighten nut. *NOTE: Three flat washers are provided on each side of tightener sprocket to keep sprocket in proper position.*

PLATFORM DRIVE CHAIN GUIDES

The two wooden chain guides must be kept in position directly under the drive chain. Adjust by loosening the four bolts "A" and moving chain guides up or down as necessary. Be certain to retighten bolts.



Platform Rear Drive Belt



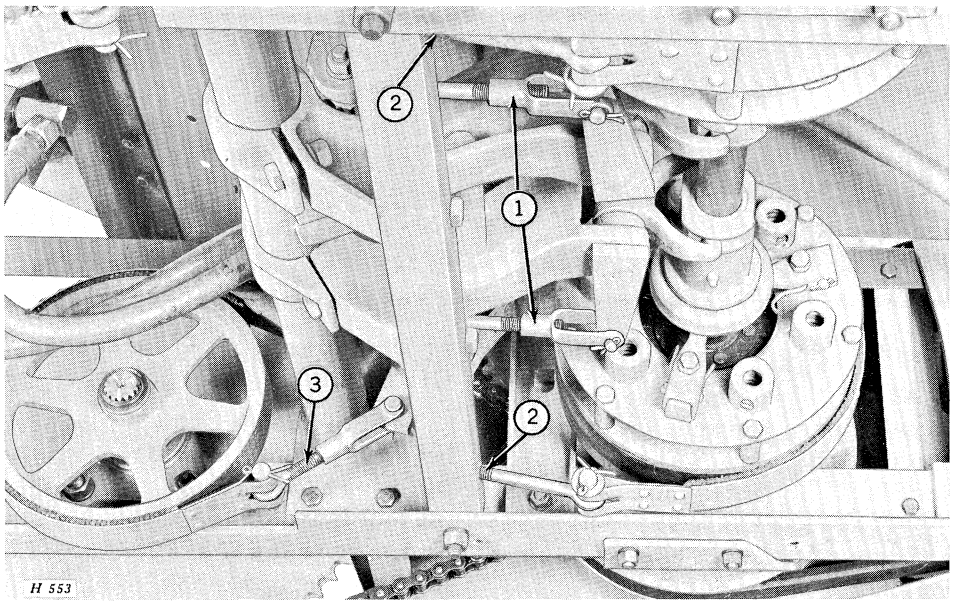
Platform Front Drive Belt

PLATFORM DRIVE BELTS

Adjust tension of drive belts by loosening nut and moving tightener sheaves forward or backward as necessary. Be certain to retighten nut.

NOTE: On platform front drive belt, adjust only the lower tightener sheave. This can be done without removing shield.

ADJUSTMENT OF CLUTCH THROW-OUT BEARINGS, REVERSE BANDS, AND BRAKE BANDS



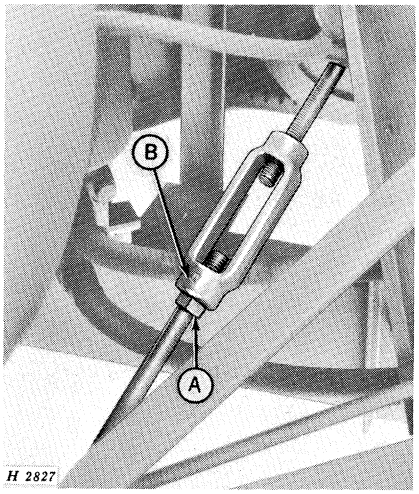
Clutch Throw-Out Bearings, Reverse Bands and Brake Bands

1. To adjust clutch throw-out bearings, put steering levers in forward position, and adjust yoke so that throw-out bearing is 1/16-inch to 1/8-inch away from clutch fingers.

2. To adjust reverse bands, put steering levers in neutral position and adjust eyebolts until there is 1/16-inch clearance between bands and drums.

3. To adjust brake bands, adjust eyebolt so that brake lever can be put in lock position and bands will keep brake drums from rotating.

POWER UNIT REAR LEVELING ADJUSTMENT



The power unit should be checked to make certain it is level.

To do this, place a carpenter's level on the rear cross angle of the power unit.

If it is necessary to level the power unit, loosen the lock nut "A" on the turnbuckle, located just in front of the engine, and thread turnbuckle "B" as necessary to obtain proper level. Be certain to retighten lock nut "A."

SELECTIVE GROUND SPEED CONTROL

SELECTIVE GROUND SPEED CONTROL LEVER

The control lever must fit firmly in notches of ratchet. Tighten or loosen adjusting spring at bottom of lever as necessary. **CAUTION: Whenever windrower is stopped, always move the lever to top notch of ratchet.**

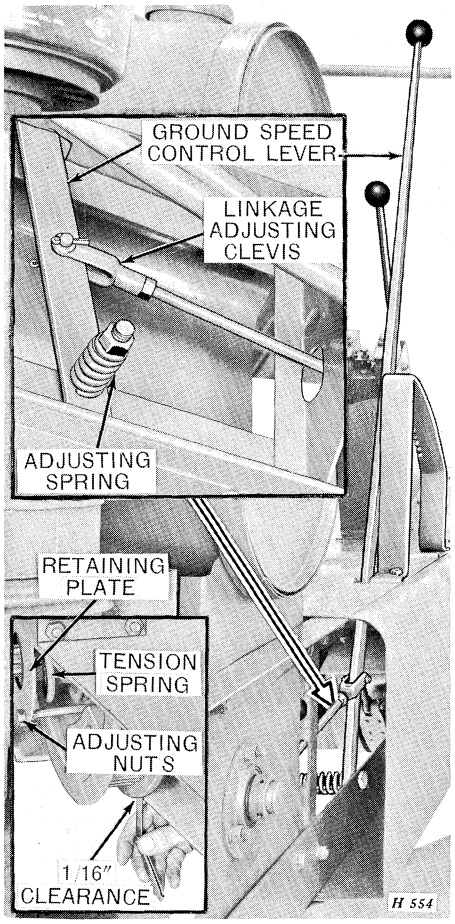
CONNECTING LINKAGE

The connecting linkage from the control lever to the rear variable drive sheave yoke link can be lengthened or shortened by threading clevis on or off the front end of the linkage rod. Adjust rear compressor rod to center bell crank linkage. All slack should be removed from the connecting linkage so the variable speed will respond immediately to the control lever.

FRONT VARIABLE DRIVEN SHEAVE

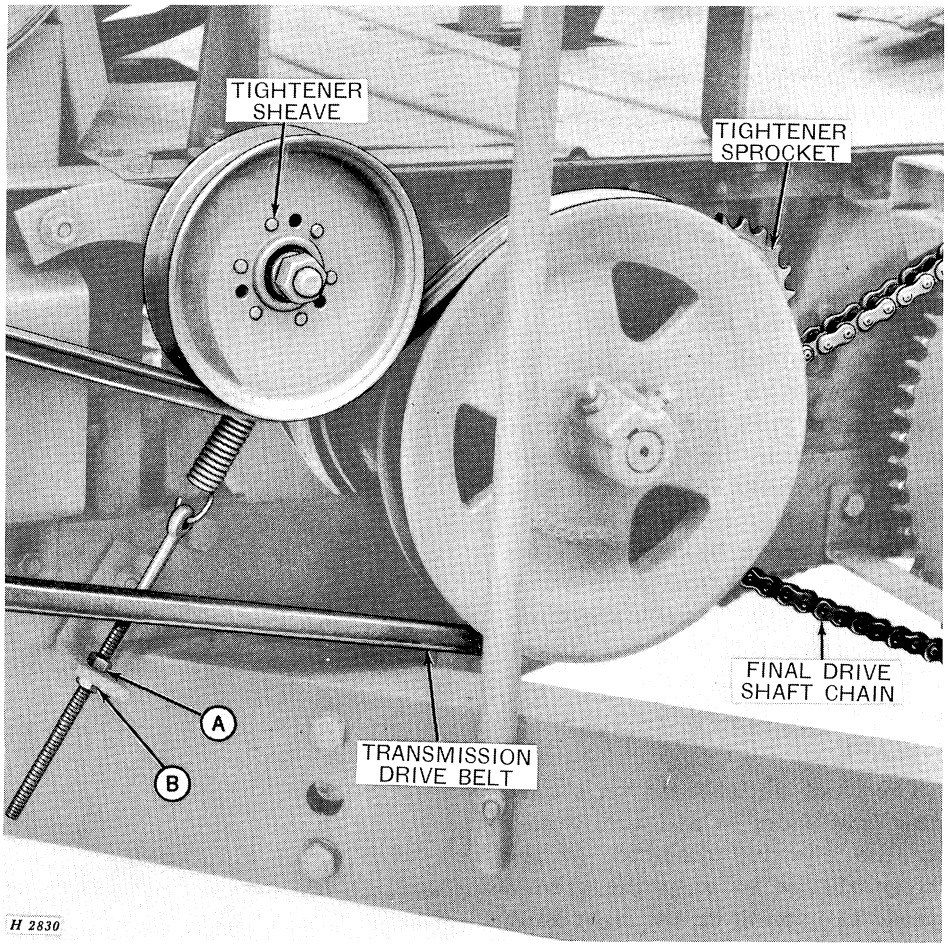
The front variable driven sheave inner half slides in and out, changing the effective diameter of the driven sheave to vary the ground speed. The spring on the right-hand side should be depressed so there is approximately one inch of bolt extending through the spring retaining plate. As the drive belt and tension spring become worn, it may be necessary to increase the tension by tightening the three adjusting nuts.

Maintain 1/16-inch clearance between outer sheave half and lower power unit angle.



Selective Ground Speed Control Lever

SELECTIVE GROUND SPEED CONTROL—Continued



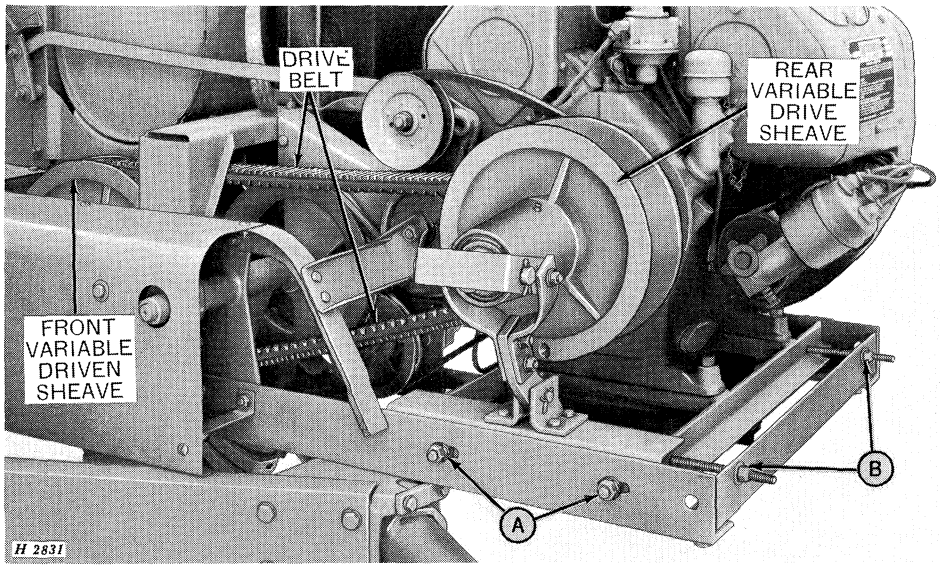
Front Variable Driven Sheave

TRANSMISSION DRIVE BELT

Adjust transmission drive belt tension by loosening nut "A" on eyebolt and tightening nut "B" until spring flexes one inch. Be certain to retighten nut "A."

FINAL DRIVE SHAFT CHAIN

Adjust final drive chain tension by loosening nut on tightener sprocket and moving sprocket up or down as necessary. Be certain to retighten nut.

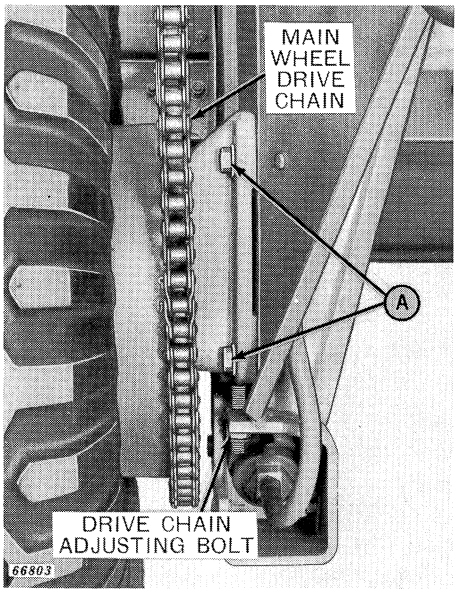


VARIABLE DRIVE BELT TENSION

The variable drive belt should be adjusted so that with the engine shut off and the ground speed control lever set in the top notch of the ratchet, the drive belt is riding on the hub of the rear variable drive sheave and is approximately 1/8-inch from the top of the front variable driven sheave.

To Adjust Tension: Release tension on the platform drive belt. Loosen the four bolts "A" (two on each side) at sides of engine mounting bracket, and adjust the two bolts "B" at rear of engine mounting bracket to move mounting frame forward or backward as necessary. Retighten the four bolts "A" at sides of engine mounting frame and readjust tension of the platform drive belt. See page 41 for instructions.

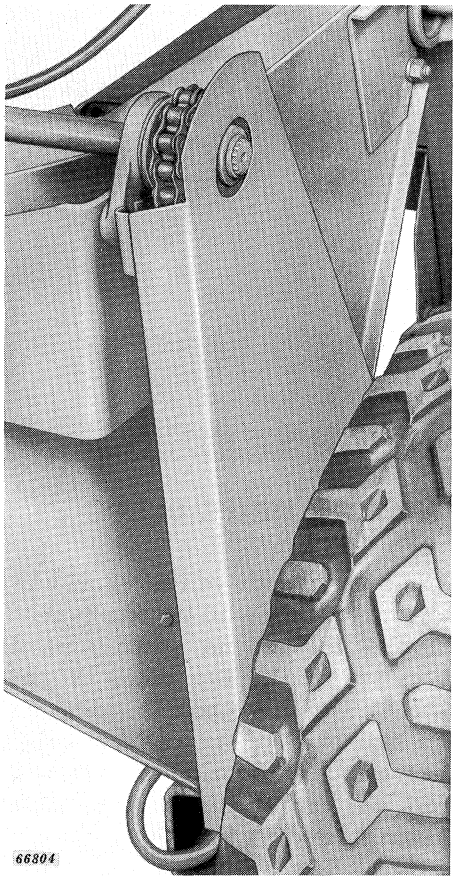
MAIN WHEEL DRIVE CHAIN



Main Wheel Drive Chain

To Adjust Main Wheel Drive Chain: Loosen the four nuts "A" (two illustrated) securing main wheel hub to main frame. Thread adjusting bolt as necessary to increase or decrease chain tension. Be certain to retighten bolts "A."

MAIN WHEEL DRIVE CHAIN MUD PROTECTION SHIELDS (Special Equipment)



Drive Chain Mud Protection Shield

These shields protect the drive chains from mud and foreign material carried up by the drive wheels.

Order the following from your John Deere dealer:

BH 10231 H Right-Hand and Left-Hand Drive Chain Mud Protection Shields

CARE OF CHAINS

All chain drives have chain tighteners. Chain tension should be adjusted so the chains are just tight enough to run without climbing or jumping sprockets.

Do not run chains too tight, but not so loose that they will slap. Extra offset links are furnished in each chain to permit shortening the chain as it wears or stretches.

SPROCKET ALIGNMENT

Be certain that all sprockets composing each drive are properly aligned. Drive or driven sprockets may be moved in or out on shafts for proper alignment, and tightener sprockets may be aligned by increasing or decreasing the number of flat washers behind sprocket hub. A sprocket out of alignment will cause the chain to pull to one side, causing rapid wear of chain and sprockets. Inspect sprockets frequently to make sure teeth are not worn enough to cause damage to chain.

LUBRICATION

Chains should be lubricated at frequent intervals with SAE 10 engine oil. **CAUTION: Do not oil chains when operating in dry, sandy, or dusty conditions as sand or dirt will stick to the oiled chain and act as an abrasive, causing undue wear to chain and sprockets.**

CLEANING

Exposed chain drives should be cleaned regularly. Remove chain and clean by soaking or dipping in a safe solvent. Dry, then oil chain thoroughly after reinstalling. Before storing windrower, clean chains and lubricate them with a heavy oil or grease. When removing windrower from storage, reclean the chains and lubricate with SAE 10 engine oil.

CARE OF V-BELTS

When installing V-belts, loosen tighteners or remove a sheave to get the belt into place. Never pry a belt over the edge of a sheave as this will rupture one or more cords and weaken the belt to such an extent that it will fail prematurely.

V-belts stretch when new. Check tension frequently for the first few days and promptly take up the initial stretch so belt does not slip. More belts are ruined by lack of tension than by excessive tension. If slippage occurs, excessive heating will shorten the life of the belt.

Occasionally a belt is found to have been turned or rolled in the sheave. Operation in this condition, even for a short time, will be detrimental. A rolled belt passes around the sheave on edge and is not to be confused with a crossed belt. Rolling of the belt is caused by lack of sufficient tension or improper installation.

Do not allow grease to remain on a belt. Remove the grease with a rag moistened with a safe solvent. **Do not dip belt into a solvent to clean.**

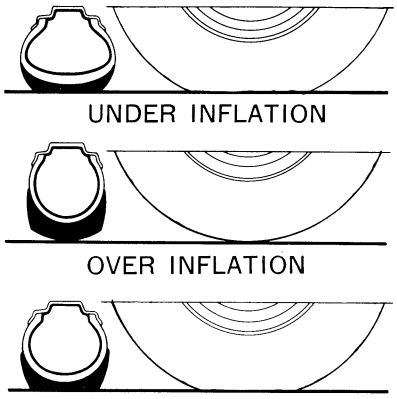
The condition of the sheave flanges has a definite bearing on belt life. If they are worn or mutilated, the belts cannot give satisfaction.

A slight peeling of cover at splice does not indicate premature failure. The peeled cover should be trimmed.

At the end of the season, remove the belts and store in a cool, dry place to prevent damage from the elements.

CAUTION: Never attempt to check or adjust V-belts or chains while the windrower is running.

CARE OF RUBBER TIRES



29348 PROPER INFLATION

TIRE INFLATION

Proper inflation is essential to the long life of a tire. Lack of pressure allows the tire to slip on the rim, and buckles the side walls, resulting in torn valve stems and uneven tread wear. Too much pressure causes undue strain on tire fabrics and excessive tread wear, and allows the tire to cut in more on wet ground.

Check tire pressures frequently and inflate or deflate tires to obtain proper tire pressures as given below.

TIRE INFLATION CHART

Tire Size	Ply Rating	Pressure
7.50-16	4	20 lbs.
9-16	4	18 lbs.
5.50-16	4	20 lbs.

NOTE: Calcium chloride is recommended for use in the 5.50-16 tire to provide additional weight.

Keep valve caps screwed finger-tight onto valve stems. This will prevent dust, fine gravel, mud, and other foreign material from accumulating in the valve core and permitting the compressed air to escape.

GREASE AND OIL SHORTEN RUBBER TIRE LIFE

Tires should not stand on oil-soaked floors and should not come into contact with fuel or oil. Oil softens and deteriorates rubber, shortening life of tires.

SUNLIGHT SHORTENS RUBBER TIRE LIFE

Bright sunlight causes surfaces of tires to check and harden. When not in use, keep windrower out of sun if possible.

STORAGE

When the windrower is stored, the weight of the machine will make a permanent flat spot on the tire if the machine sits over 60 days without being moved. Jack up the windrower to take the load off the tires.

INSPECT TIRES

Inspect the tires at regular intervals for possible injuries. The sidewalls or tread rubber may be cut through, exposing fabric so that moisture can get in and cause rotting of fabric. There are rubber compounds on the market for filling these cracks and cuts. If break is more than two inches long, have it vulcanized for permanency. Your John Deere dealer may be able to do this for you or he will recommend a reliable establishment to do the work.

THE STORAGE BATTERY

The battery is used for storing chemical energy which is converted into electrical energy whenever you demand the use of the starting motor. For the battery to perform this function, it is necessary that current withdrawals be replaced by current from the generator.

When purchasing the battery, buy a 6-volt battery with the following over-all dimensions which are maximum: 9-1/16 inches long, 7-1/16 inches wide, 8-7/8 inches high over terminals. Use a group I (one) battery. Insist on a battery with a rubber case and "anti-leak" battery caps.

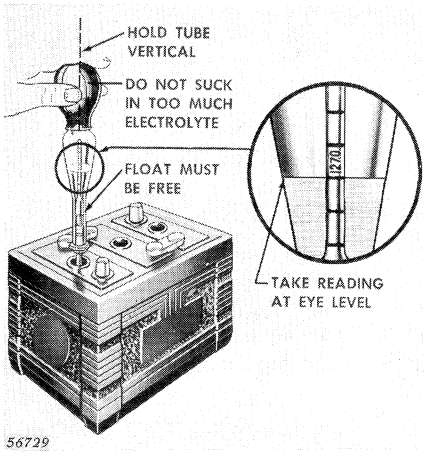
Battery life will depend upon how conscientiously you adhere to the following suggestions.

CLEANING BATTERY

At least once a week wipe off the top of the battery with a cloth dampened with water. If there is corrosion around the terminal connections, loosen it with a stiff bristle brush and then apply a solution consisting of 1/4-pound of soda, added to one quart of water; then flush the battery with clear water. After cleaning, examine the vent holes in each cap, making sure they are open. Battery connections must be clean as well as tight. A thorough coating of vaseline on each terminal connection will aid greatly in retarding the accumulation of corrosion.

CHECKING WATER LEVEL

Check the electrolyte (acid and water solution) in the battery for proper level. If the electrolyte level is low, add distilled water or rain water until the recommended level is reached. As this level varies in batteries made by different manufacturers, consult the dealer from whom you purchased the battery. The electrolyte level, however, should never be permitted to go lower than the top of the cell plates. In freezing weather, do not add water to battery unless engine is going to be operated Water will readily freeze as it will not mix with the electrolyte until the generator passes a charging current into the battery.



Using a Hydrometer

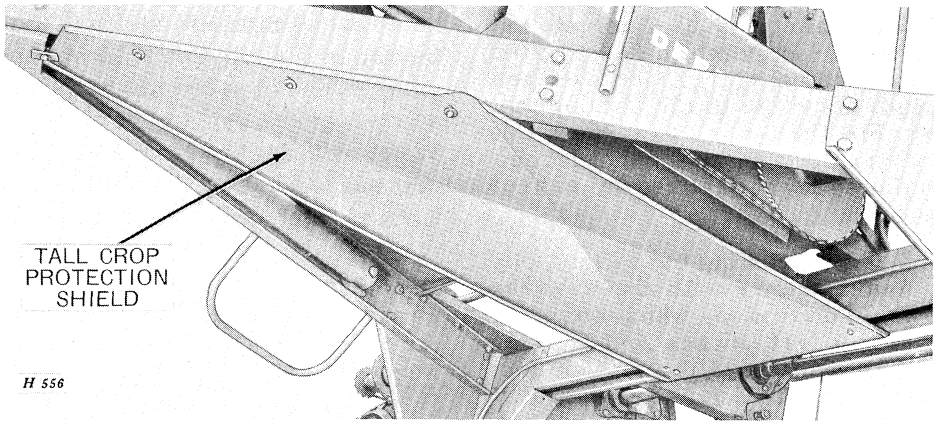
CHECKING SPECIFIC GRAVITY

The specific gravity of the electrolyte should be checked with an accurate hydrometer before adding water. If liquid level is too low to check, add water, run the engine for a few minutes, permitting the water and electrolyte to mix, then check. Specific gravity should not go below recommended charge stamped on battery case.

SAFETY FIRST

All sparks or open flames must be kept away from the battery as the gas given off by the electrolyte is highly inflammable.

ADDITIONAL SPECIAL EQUIPMENT



Self-Propelled Windrower Equipped with Tall Crop Protection Shield

TALL CROP PROTECTION SHIELD

This shield encloses the underside of the main frame to prevent material from wrapping in the transmission and cutting platform drive belts.

Order the following from your John Deere dealer:

BH 10273 H Tall Crop Protection Shield

CASTER WHEEL BEAM WEIGHT

In some areas and conditions, additional weight on the rear of the windrower is desirable. This new attachment, which weighs approximately 50 pounds, attaches onto the caster wheel beam.

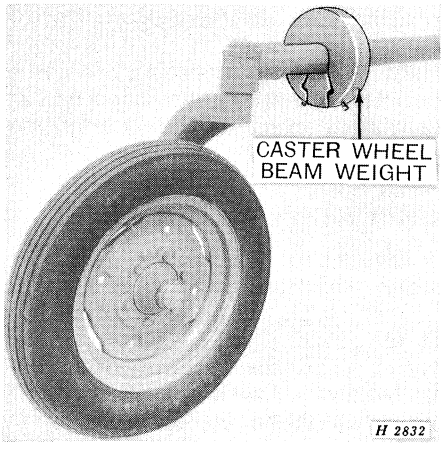
See the quantities recommended for use with the various cutting platforms in chart.

Order the following from your John Deere dealer:

BH 10744 H Caster Wheel Beam Weight

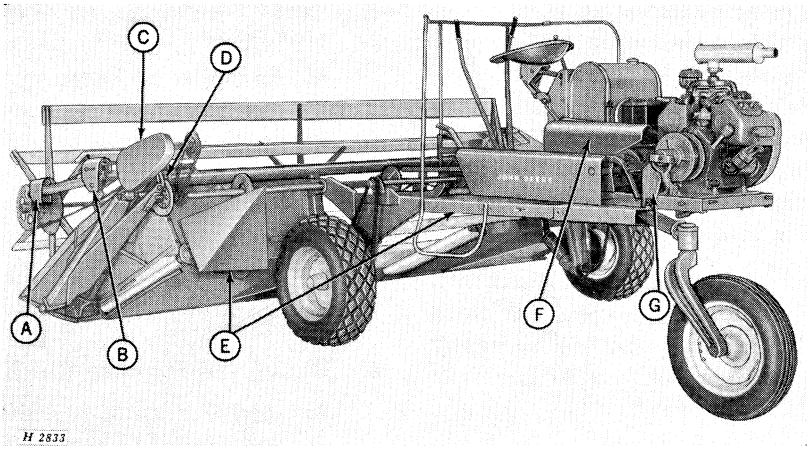
Quantity Recommended

2—12-Foot	Grain Bar
3—14-Foot	Grain Bar and 10-Foot Hay Bar
4—16-Foot	Grain Bar, 12-Foot Hay Bar with Pick-up Reel
5—14-Foot	Hay Bar and 14-Foot Hay Bar with Pick-up Reel
6—16-Foot	Hay Bar and 14-Foot Hay Bar with Pick-up Reel
7—16-Foot	Hay Bar with Pickup Reel



Caster Wheel with Beam Weight

ADDITIONAL SPECIAL EQUIPMENT—Continued



Self-Propelled Windrower with Set of Drive Belt and Chain Shields

DRIVE BELT AND CHAIN SHIELDS

A set of shields as listed below is available to enclose all exposed drive belts and chains:

A —Reel Front Driven Sprocket Shield

B —Reel Drive Tightener Sprocket Shield

C —Reel Drive Jackshaft Hinged Shield

D —Reel Drive Sprocket Front and Rear Shields

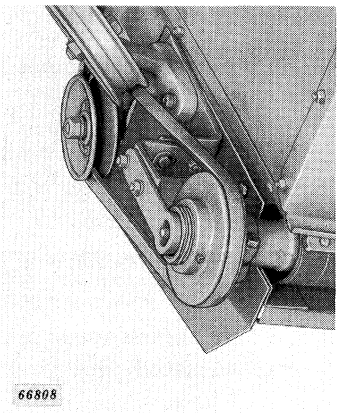
E —Platform Canvas Drive Belt Hinged Right-Hand and Left-Hand Shields (14- and 16-Foot Platforms only).

F —Variable Drive Hinged Shield

G —Lower Variable Drive Shield

Order the following from your John Deere dealer:

BH 10441 H Set of Drive Belt and Chain Shields, with Hardware



Grain Deflector Shield

GRAIN DEFLECTOR SHIELDS

These shields protect the platform canvas drive belts from grain wrapping in the belts when cutting across windrows. They also protect the belts from stubble.

Order the following from your John Deere dealer:

BH 10274 H Right-Hand and Left-Hand Grain Deflector Shields

SERVICE CHART

Suggested remedies to meet varying conditions should be applied with caution. Make a sincere effort to understand your machine and know why you are making an adjustment. In many instances, one of the remedies mentioned, properly applied, will take care of your troubles.

If, after making an adjustment, the trouble still persists, see your John Deere dealer. He will be happy to advise or assist you in any way possible.

CUTTING TROUBLES

1. Improper Setting Up.

A. Be sure windrower has been set up properly.

B. Remove all paint from bearings, connections, etc., that may be binding.

C. Be sure cutting parts operate freely.

D. Be sure engine speed is properly adjusted. See your Engine Manual.

2. Improper Lubrication.

A. Knife should be oiled except when working in dry, sandy conditions. See Knife Lubrication on page 6.

B. Grease all fittings and oil all connections regularly. See Lubrication Charts on pages 7 and 8.

C. Wipe all dirt from fittings before greasing and replace all missing fittings at once.

3. Reel Wrapping in Tangled and Weedy Crops.

A. Improper reel setting. Place reel well ahead and down. In badly down grain, reel must be operated close to cutter bar, but do not run any lower than necessary. See page 33.

B. Reel speed too high. Reduce speed of reel. See page 32.

4. Reel Carrying Around Straw.

A. Reel operating too fast. Reduce speed of reel. See page 32. Reel should turn just enough faster than ground travel so that grain is laid well back on platform canvases.

5. Grain "Slobbering" Over Front of Cutter Bar.

A. Reel too far forward and too high. Move reel back so it is directly over knife. Lower the reel. See page 33.

B. Cut as low as possible.

C. Increase reel speed. See page 32. Add more reel arms and slats. A total of eight slats can be used if necessary. See page 34.

6. Heavy Cutter Bar Losses.

A. Cutting platform too high. Lower to cut low growing or down crops.

B. Improper reel adjustment. Move reel back and lower to sweep crop farther back onto platform canvases. See page 33.

C. Increase number of reel arms and slats. A total of eight slats can be used if necessary. See page 34.

D. Reel shattering heads of grain. Lower reel. Slow down reel speed. See page 32.

E. Cutter bar needs repairing. Replace damaged or worn guard plates, knife sections, guards, and wearing plates. Align guards and tighten loose guard bolts. See pages 26 and 27.

F. Straighten knife. A bent or twisted knife will not cut.

G. Adjust knife clips so knife works freely, yet provides a shear cut without binding or lost motion. See page 26.

H. Adjust wearing plates at rear of sections, so there is no looseness between knife back and guard. Slotted holes in wearing plate permit adjustment. See page 27.

I. If lips of guards are bent up or down, bend lips back to proper position. There should be approximately 3/8-inch clearance between underside of lip and top of guard plate. See page 26.

7. Down and Tangled Crops.

A. Reduce travel speed.

B. Cut as high as possible.

C. Crop lodged or down in one direction. Cut in one direction only if badly down.

D. Adjust reel so it does not press down on uncut grain extending over the platform and retarding uncut grain. See page 33.

E. Use lifting guards in extreme down conditions. See page 28.

F. A narrower cut and higher travel speed is often helpful.

Because the first thing **everyday, I**

√ Lubricated the windrower properly.

√ Checked the oil and fuel for the windrower engine.

√ Made the proper adjustments for the crop and field conditions.

√ Observed and followed all safety rules.

THESE DAILY PRECAUTIONS WILL INSURE GOOD PERFORMANCE AND LONG SERVICE

ALPHABETICAL INDEX

ALPHABETICAL INDEX—Continued

ALPHABETICAL INDEX—Continued

IMPORTANT

Make this manual your guide and adviser and do what it recommends, regardless of what may have been your practice with other makes of windrowers, or the suggestions that may be made to you by well-meaning friends or neighbors.

When using this windrower with other equipment, special servicing of the equipment may be required. This information will be given to you in the instruction book accompanying the other equipment.

MEMORANDA

nobody can fill them like you can!

That's what the owner of this pair of work shoes is finding out—the hard way. Through a careless action, he has become the victim of an accident. It's a mighty tough way to find out that nobody else can wear your shoes or practice safety for you. And a needless, costly lesson to learn that safety is an everyday need.

Put safety into each of your workdays; read the operator's manual thoroughly; know how to operate each machine properly and safely; take the safety precautions specified; think before you act.

Make sure you wear your "shoes" everyday. Outfit yourself with a safety program now.