

# 215 Self-Propelled Windrower



## OPERATORS MANUAL

215 Self-Propelled  
Windrower

OMH90998 (01DEC62) English

John Deere Ottumwa Works  
OMH90998 (01DEC62)

LITHO IN U.S.A.  
ENGLISH



# To the purchaser

Your self-propelled windrower was designed and manufactured to the traditionally high quality standards of all John Deere Farm Equipment. It has been thoroughly inspected and tested, not only at the factory, but at your dealer's by a trained John Deere Serviceman.

Within this manual references are made to "right-hand" and "left-hand" sides. These locations are determined by facing in the direction the windrower will travel when in use.

## Engines

Your windrower may be equipped with either a John Deere HB-115-G engine, a John Deere HD-145-G engine or a Wisconsin VH-4-D engine.

If your windrower is equipped with a John Deere engine, all specifications operation, lubrication, and service information will be found in this operator's manual.

If your windrower is equipped with a Wisconsin engine, all specifications operation, lubrication, and service information will be found in the separate publication furnished with the Wisconsin engine.

Should your windrower require replacement parts, go to your John Deere dealer where you can obtain Genuine John Deere Parts—accept no substitutes. 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.

## Serial numbers

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

The windrower serial number plate is located on the left-hand main frame of the power unit.

The cutting platform serial number plate is located on the rear windshield near the reel drive multiple sheave.

The engine serial number is located on the engine block between the generator and the oil filter.

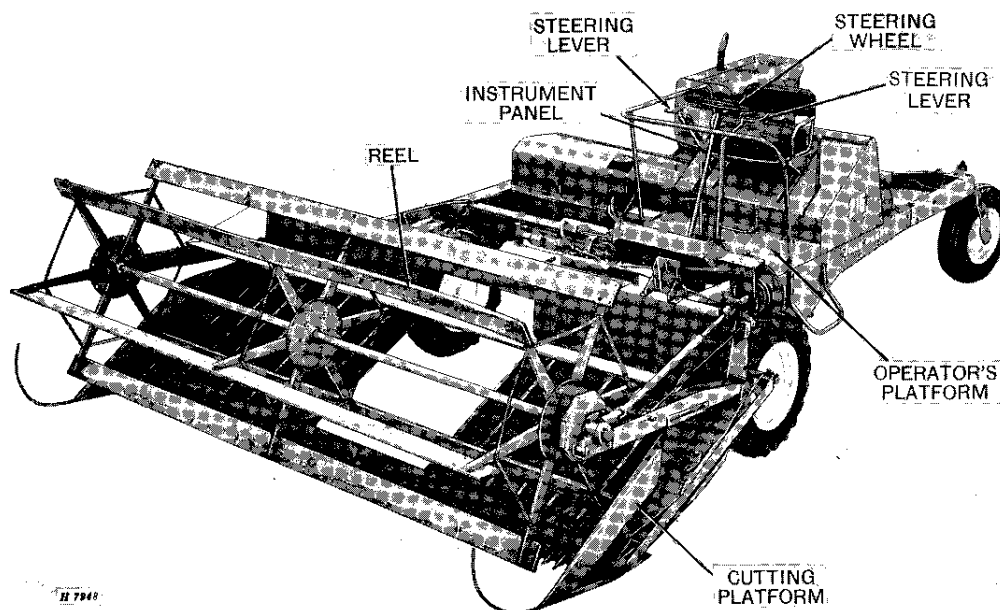
Windrower serial number \_\_\_\_\_

Platform serial number \_\_\_\_\_

Engine serial number \_\_\_\_\_

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Operator's Manual Price \$1.80



# specifications

## CUTTER BAR

Knife guards . . . . . forged steel  
Width of cut . . 10-ft. 4-1/2-in., 12-ft. 4-1/2-in., 14-ft. 4-1/2-in., or 16-ft. 4-1/2-in.  
Length of cutter bar . . 10-ft. 2-in., 12-ft. 2-in., 14-ft. 2-in., or 16-ft. 2-in.  
Type of knife sections . . Overserrated (Flax overserrated, smooth, or underserrated available as special equipment)

## REEL

Drive . . . . . Bevel gear  
Speed range . . . . . 35 or 45 or 55 rpm  
Numbers of slats . . 6 regular; 2, 3, 4, or 8 Optional  
Diameter of reel . . . . . 54-in.

## CUTTING PLATFORM

Type . . Two canvases (rubber impregnated)  
Depth of canvases . . . . . 42-in.  
Distance between canvases . . . . . 36-in.  
Degree of slope . . . . . 15° to 24°  
Width of windshield opening . . 36-in., 46-in., or 56-in.  
Height control . . . . . Hydraulic-foot control  
Range of cutting height . . 6-in. below wheel level to 30-in. above  
Ground speed range . . . . . 2.6 to 7.6 mph

## TIRE SIZES

Main wheels . . 7.50 x 18-4 ply traction grip  
Caster wheel . 7.60 x 15-4 ply-rib implement

## WHEEL TREAD

Main wheel . . 113-5/8 in. (center-to-center)

## CAPACITIES

Fuel tank . . . . . 25 U.S. gallons  
Hydraulic systems . . . . . 3 U.S. quarts

## WEIGHTS

Power unit with 14-ft. cutting platform . . . . . 4705 lbs. approx.)

## SPEED OF VARIOUS UNITS

Reel . . . . . 35-45-55 rpm  
Canvas drive rollers  
23 tooth sprocket (regular) . . . 607 rpm  
27 tooth sprocket (special) . . . 715 rpm

Variable speed sheaves . . 718 to 2105 rpm  
Engine . . . . . 2200 rpm  
Platform drive . . . . . 555 rpm  
ENGINE (JOHN DEERE)  
Model . . . . . HB-115-G or HD-145-G  
Bore  
HB-115-G . . . . . 3-1/2-in.  
HD-145-G . . . . . 3-5/8-in.  
Stroke  
HB-115-G . . . . . 3-in.  
HD-145-G . . . . . 3-1/2-in.  
Brake horsepower\*  
HB-115-G . . . . . 36  
HD-145-G . . . . . 46  
Piston displacement  
HB-115-G . . . . . 115.45 cu. in.  
HD-145-G . . . . . 144.48 cu. in.  
Number of cylinders . . . . . 4  
Max. load speed . . . . . 2200 rpm  
Firing order . . . . . 1-3-4-2  
Crankcase . . . . . Cast integral with block  
Type of lubrication . . Force feed by gear pump to all connecting rods, main bearings, governor, and oil pump drive. Oil strainer in bottom of pan.  
Valve arrangement . . . . . Valve-in-head  
Valve clearance:  
Intake . . . . . .012-in. (When cold)  
Exhaust . . . . . .018-in. (When cold)  
Make of governor . . . . . Pierce  
Make of carburetor . . . . . Marvel-Schebler  
Spark plug  
Size . . . . . 14 mm  
Gap . . . . . .025 in.  
Electrical system . . . . . 12-volt  
Cooling system . . . . . Water pressure type  
Type of fuel . . . . . Gasoline (Regular grade)

\*Calculated at 60° F. and 29.92 inches of Hg. at sea level.

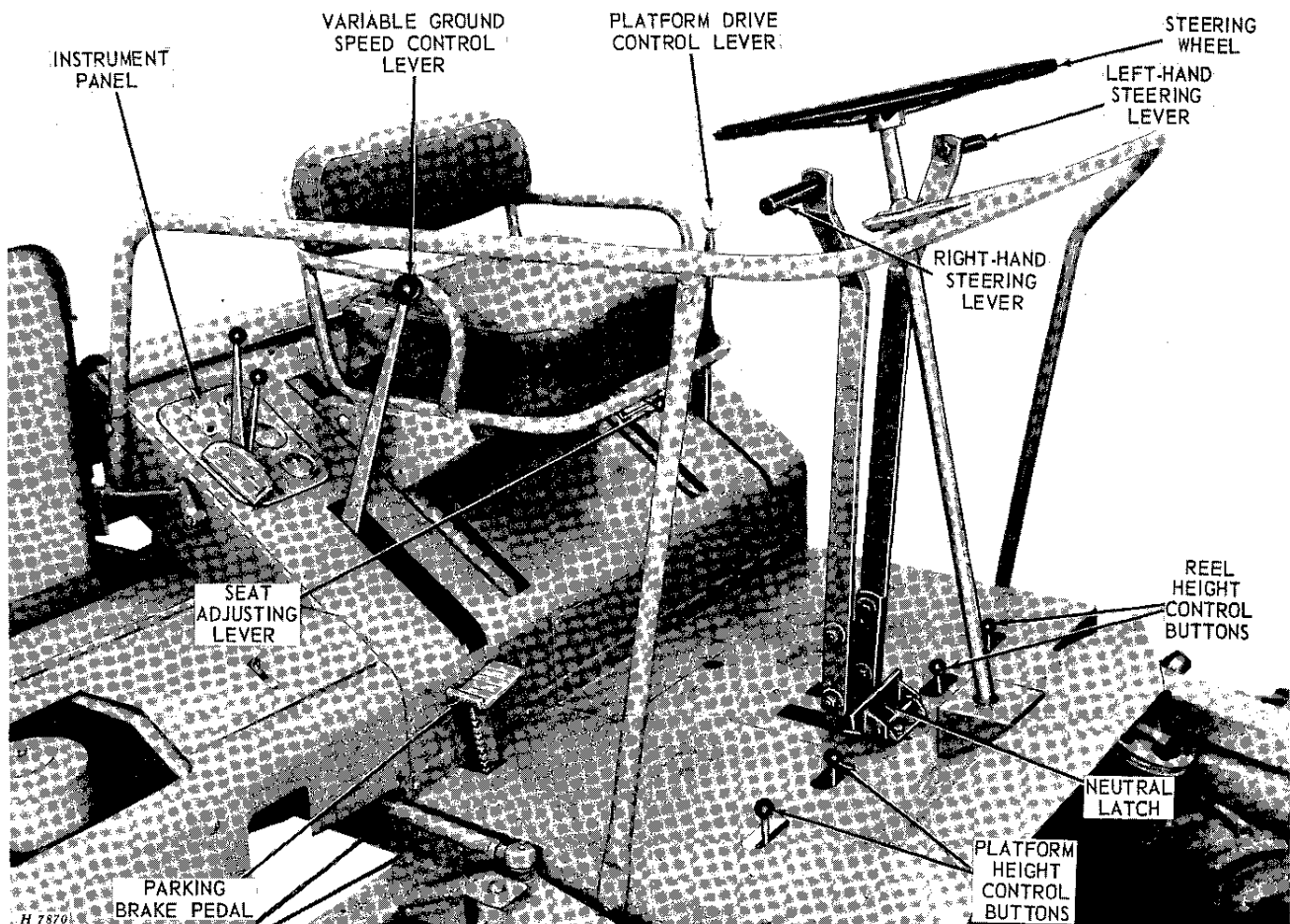
*(Specifications and design subject to change without notice)*



# controls and instruments

Before attempting to operate your new windrower, become familiar with the location and purpose of its controls and instruments. Study these pages carefully, regardless of your previous windrower experience.

## Controls



### Steering levers and steering wheel

Move levers forward to engage forward travel. Move levers rearward for reverse travel.

Trim steering is accomplished by turning the steering wheel right or left. Turning the steering wheel to the right will make a gradual turn to the right; turning the steering wheel to the left will make a gradual turn to the left.

The inside turning diameter of the windrower, using the steering wheel, is nine feet.

**IMPORTANT:** Turn steering wheel only when engine is running.

Sharp turning is accomplished by placing one lever in neutral and the other lever in forward position. This allows the driving wheel to pivot the windrower around the stopped wheel.

Spin turning is accomplished by placing one steering lever in reverse position and the other lever in forward position, causing the windrower to turn at a point about midway between the wheels.

**CAUTION:** Always put steering levers in neutral and engage neutral latch before dismounting windrower.

### Neutral lever latch

When dismounting from the windrower, put the steering levers in neutral. Engage the neutral latch by flipping latch rearward so that it engages notched brackets on steering levers.

### Platform and reel height control buttons

These buttons control the height of the platform and reel through a hydraulic mechanism. The right-hand set of buttons is for the platform; the left-hand set is for the reel. Press the right-hand button on each set to raise the reel or the platform; press the left-hand button on each set to lower the reel or platform.

### Variable ground speed control lever

To increase ground speed travel, move lever forward. To decrease ground speed, move lever rearward.

### Platform drive control lever

Move lever forward to engage platform drive; move lever rearward to disengage drive.

### Parking brake pedal

To engage, push parking brake pedal down and engage notches on pedal arm. To release, push pedal down.



**CAUTION:** Never dismount from the windrower or leave the windrower parked without engaging the parking brake pedal.

Move steering levers to neutral, and engage neutral latch.

### Seat adjusting lever

The operator's seat may be raised or lowered by moving the lever under the front of the seat.

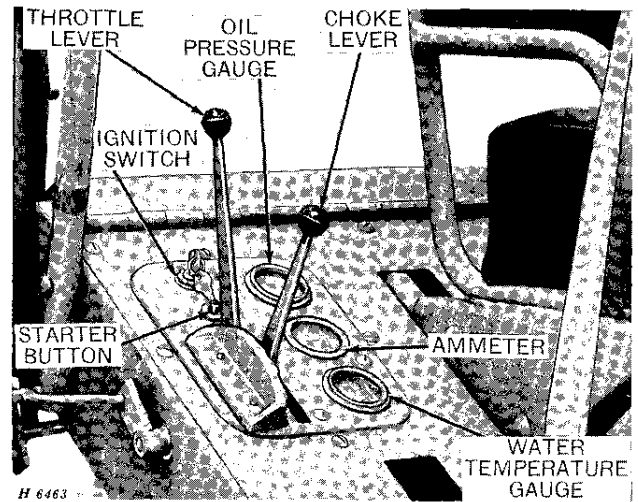
## Instruments

### Throttle control lever

To increase the speed of the engine, move the throttle control lever forward. Move lever rearward to decrease engine speed. Put throttle lever in middle notch before starting engine.

### Choke control lever

Move lever all the way forward to start engine. After engine runs a few revolutions, move lever all the way rearward.



### Oil pressure gauge (John Deere engine only)

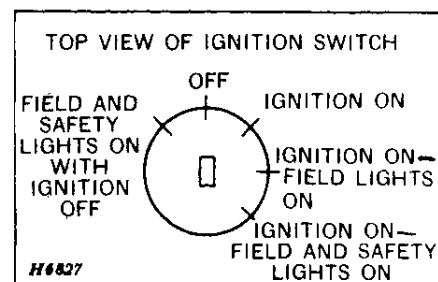
This gauge indicates the pressure of engine lubricating oil. Oil pressure will vary slightly; but with recommended oil, it should read normal (indicated by green band on dial) at full governed speed. If oil pressure drops (indicated by red band on dial), stop engine immediately and determine cause.

### 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 short circuit or faulty regulator. If ammeter shows high charge continually, inspect for low battery, faulty connections, low electrolyte level in battery, or bad regulator.

### Water temperature gauge (John Deere engine only)

This gauge indicates the water temperature in the cooling system—not the quantity. Normal operating temperature is 160° to 200°F. (indicated by green band on dial). If the temperature exceeds 200°F. (indicated by red band on dial), stop engine and determine cause.





# operation

Correct operation results in saving more grain or hay and doing more work. The length of service you receive from your 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.

## 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 when combining. Be certain the grain is cured and ready to pick up. Don't guess—test the moisture content.

The swath opening can be changed from a minimum of 36 inches to a maximum of 56 inches by removing any one or all of the 5-inch panels in the platform back sheet.

## Height of cut

The windrow should be laid on a stubble from 6 inches to 8 inches high. A stubble of this height will allow free circulation of air under the windrow and the straw is usually stiff enough to support the windrow without bending and allowing heads to come in contact with the ground. Heads that touch the ground are difficult to pick up and will sprout in damp weather.

## Adjustments

Adjust the height of platform and reel to meet crop conditions. Adjust speed of reel to correspond with ground travel speed.

Adjust speed of platform canvases to meet crop conditions.

Keep belts and chains adjusted to proper tension.

## 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 excessive speed. A steady speed accomplishes more.

## 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 slippage. New belts will stretch slightly during the run-in period. Check tension frequently.

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

Check operation of hydraulic controls for platform and reel.

Listen for any unusual sounds and watch for slipping belts, heated bearings, or any faulty operation. Be alert at all times.

Be certain all shafts turn freely.

Follow the lubrication instructions and charts closely.

## Engine

Your new engine was shipped from the factory with a special "break-in" oil in the crankcase. After the first 20 hours of operation change oil as instructed on page 9.

Do not allow the engine to operate at slow idle for any prolonged period as part of a break-in procedure, as doing so does not permit good piston ring seating which may promote oil consumption in the future.

### 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.

1. Lubricate windrower according to lubrication charts.

2. Fill gasoline tank with a good grade of gasoline (capacity of tank is 25 U.S. gallons).



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

3. Check hydraulic unit oil level.

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

5. Check tension of platform canvases.

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

7. Check engine crankcase and air cleaner.

### Starting the engine

1. Turn ignition switch ON.

2. Move throttle to middle notch.

3. Move choke lever all the way forward. After engine has started, move choke lever all the way back.

4. Push starter button.

5. Adjust throttle control lever.

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

### Operating the windrower

For forward travel, move both steering levers forward. For reverse, move both steering levers rearward.

Trim steering is accomplished by turning the steering wheel right or left. Turning the steering wheel to the right will make a gradual turn to the right; turning the steering wheel to the left will make a gradual turn to the left.

**IMPORTANT: Turn steering wheel only when engine is running.**

Sharp turning is accomplished by placing one lever in neutral and the other lever in forward position. This allows the driving wheel to pivot the windrower around the stopped wheel.

Spin turning is accomplished by placing one steering lever in reverse position and the other lever in forward position, causing the windrower to turn at a point about midway between the wheels.

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

To lower cutting platform, push down on left-hand platform lift button. To raise platform, push down on right-hand platform lift button.

To lower reel, push down on left-hand reel lift button. To raise reel, push down on right-hand reel lift button.

Use brake pedal when parking or dismounting from the windrower.

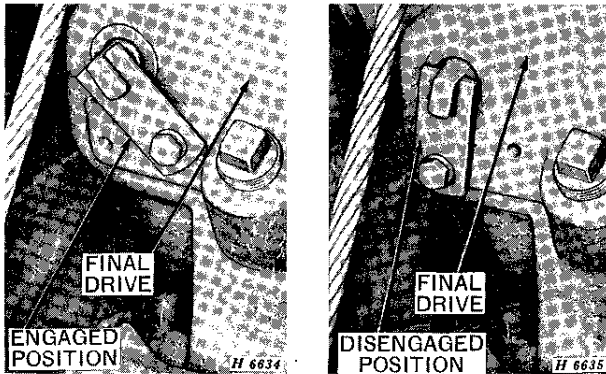


**CAUTION: Never dismount from the windrower or leave it parked without using parking brake. Place steering levers in neutral position and engage neutral latch.**

## 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 pedal must be disengaged, and the main wheel drive should be disengaged.

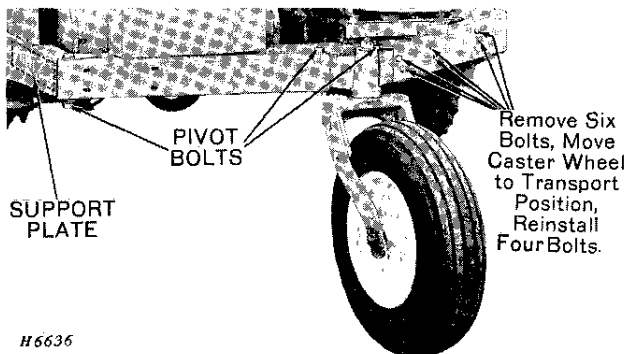


Main wheel drive in engaged and disengaged positions

To disengage drive wheels for towing purposes, remove lock plate on front of final drive housing, turn throw-out shaft so that flats on shaft line up with other tapped hole in housing, and install lock plate in new position. Be certain to change both final drive housings.

**CAUTION:** Always install lock plate to make certain the gears are fully engaged or disengaged. Damage will result if gears are not fully meshed.

### Moving windrower with platform removed



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Whenever the windrower is to be moved with the platform removed, the caster wheel unit should be set in transport position. This is accomplished by removing the six bolts on the right-hand side, removing the eight bolts and support plate on the left-hand side, and loosening the three pivot bolts. Then move caster wheel to transport position and reinstall four bolts on right-hand side.

**NOTE:** The support plate may be moved forward and four bolts installed to hold it in place.

**IMPORTANT:** Be certain to move the support plate to the proper position when moving the caster wheel to operating position.



**CAUTION:** When driving the windrower on a road or highway at night or during the day, use accessory lights and devices for adequate warning to operators of other vehicles. In this regard check local governmental regulations. Lights and devices may be obtained from your John Deere dealer.

## 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, crankcase, air cleaner

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

### 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.

### Cooling system

When the temperature is likely to be 32° F. or lower, there is danger of the water freezing in the cooling system. To prevent this, either drain the cooling system at the end of each day's run, or use an antifreeze solution. The use of antifreeze is recommended.

**CAUTION:** Never use calcium chloride solution in the radiator. It is harmful to metal.

Add water or antifreeze slowly until the water level is approximately 1 inch below the bottom of the filler neck.

Quarts of Antifreeze to be Used			
Lowest Expected Temperature	Denatured Alcohol	Methanol	Ethylene Glycol
20° F.	4-1/2	3	4
10° F.	6-1/2	5	6
0° F.	8	6-1/2	8
10° F.	9-1/2	8	9-1/2
20° F.	11	9	10-1/2



## Batteries

When the temperature drops below freezing, take precautions 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 1.300 (fully charged) will not freeze until the temperature reaches -65° F.

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

## Beginning of the season service

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.

Replace wheels if they were removed and remove blocking. Check tire inflation.

Clean the windrower thoroughly.

Clean and adjust spark plugs. Replace worn or oil soaked wiring.

Install the battery. Check electrolyte level and recharge.

Flush cooling system, install drain plugs, and fill with clean water—rain water if obtainable. Do not use water containing alkali. Pour water in slowly until the water level is approximately 1-inch below the bottom of the filler neck.

On a John Deere HD-145-G engine, clean the inside of the dry-type air cleaner and install a new filter element.

Remove sealing tape from all engine openings.

Clean all fuel lines and fuel strainers. Blow out carburetor jets with air. Never use a wire.

Fill fuel tank.

Install belts, making certain they have the proper tension.

Install and adjust chains to proper tension.

Install and adjust platform canvases.

Lubricate windrower completely, then run windrower at half speed for about an hour. Check bearings for overheating or excessive looseness.

Inspect windrower and see that all bolts are tight and cotter pins are in place.

Review your Windrower Operator's Manual.

## End of the season service

When the windrowing season is completed, follow these suggestions to be certain your windrower will be ready to go when the next season begins.

## Engine

Wash the outside of the engine thoroughly. Use a diesel fuel and a stiff brush.

Drain the crankcase, fill with fresh oil and run the engine at idling speed for 15 to 20 minutes. Leave oil in crankcase.

Drain and fill the hydraulic system with clean oil. Do not leave hydraulic system dry.

Clean air cleaner. On the John Deere HB-115-G engine, fill cup to proper level with new oil. On the John Deere HD-145-G engine, clean the inside of the air cleaner and the rubber unloader. Clean old filter element to remove all loose dirt and reinstall old element.

Operate engine another 10 to 15 minutes using WHITE (non-leaded) gasoline.

Drain out all gasoline and leave drain valve open.

**CAUTION:** If gasoline is allowed to stand in tank, fuel lines, 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.

Either drain water from radiator and engine block leaving out drain plugs so water that might condense in cooling system can drain out or use an antifreeze solution to protect the cooling system for the lowest temperature expected.

## 8 operation

### End of the season service—continued

Use an oil, produced by a reputable refinery, to condition the combustion chambers of the engine for storage. Either flood the engine with this oil or introduce the oil through spark plug openings, depending upon the oil manufacturer's recommendations.

*NOTE: Only regular oil is required in crankcase.*

Seal exhaust opening, crankcase breather, and hydraulic oil reservoir breather with sealing tape to prevent entrance of moisture or foreign material.

Remove battery and store in a cool, dry place where 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.

Remove radiator screen and shield and clean out any dust or dirt accumulated in the radiator core. Use air or water, under pressure, for this purpose.

### Windrower

If possible, shelter the windrower in a dry place, or cover with a tarpaulin.

Clean the windrower thoroughly. Chaff and dirt will draw moisture, rot wood parts and rust the steel.

Remove and clean off the canvases. Hang the canvases in a dry place where they will not be subjected to damage by rodents.

Remove and clean the belts. Wrap belts in burlap and store in a cool dark place.

Remove chains and clean thoroughly. Brush heavy oil on chains to prevent corrosion.

Lubricate the windrower completely. Grease the threads on adjusting bolts and the sliding surfaces of the variable sheave assemblies.

Paint all parts from which paint has worn.

Support the platform with blocks to level it.

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.

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.



### Safety suggestions



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 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.

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. Do not use it as a place to carry loose tools, lunch boxes, etc.

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 hill-sides because the windrower may tip sideways if it strikes a hole, ditch, or other irregularity.

Provide a first-aid kit for use in case of accident. Use proper antiseptics on scratches and cuts without delay.

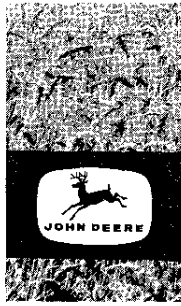
Replace badly frayed or worn belts before they break.

Before dismounting from the windrower, always engage the parking brake pedal and lock steering levers in neutral position.

Never attempt to clear obstructions off the cutting platform unless the windrower is stopped, the engine shut off, and steering levers are placed in neutral, and neutral latch engaged.

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

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.



# lubrication and periodic service

Effective use of lubricating oils and greases is perhaps the most important step towards low upkeep cost, long machine life, and satisfactory service. Without oil and grease, the important working parts of your windrower can be ruined in a very few minutes.

## Bearings

Two types of sealed bearings are used on this windrower. One type is a sealed bearing which requires no lubrication; the other type is pre-packed at the factory and will require yearly lubrication.

Where no end cap or pipe plug is provided in the bearing housing, it will be necessary to pull bearing housing from shaft to repack bearing with new grease. Clean bearing with a safe solvent and pack with new grease. Replace bearing housing.

## Greases

SAE multipurpose grease is recommended for all grease fittings and handpacking points on your windrower and its optional equipment.

Greases differ from oils in that they consist of oils and thickening agents usually a special type of soap. SAE multipurpose grease, made from lithium soap for extreme resistance to both heat and water has a broad range of uses.

## Lubricating oils

The engine on this windrower has one of the finest lubricating systems it is possible to design. Do not handicap it by using an oil of doubtful quality. It pays to buy only nationally known brands of oil.

Lubricating oils are available in single and multi-viscosity, in various grades or weights, and for various types of engine service.

The viscosity (or fluid quality) of an oil is expressed by a viscosity number which identifies its relative weight. This viscosity number has been assigned in a system developed by the

Society of Automotive Engineers (SAE). As viscosity numbers increase, the weight of the oils they identify becomes progressively heavier. A multi-viscosity oil may be chosen instead of a single-viscosity oil, because it has a range of viscosities. Such an oil is light-bodied for easy starting at low temperatures, with additives which, at high temperatures, give it a heavier body for maximum protection.

The widespread use of additives to improve quality brought about the need for defining lubricating oils other than in viscosity alone. The result is the American Petroleum Institute API classification of oils according to the type of engine service to be encountered.

It is recommended that oil used for this windrower be suitable for Service MS.

Depending upon the prevailing air temperature, use the following viscosity of oil in the engine crankcase, air cleaner, and hydraulic unit:

Air temperature	Single viscosity oil	Multi-viscosity oil
Above 90° F.	SAE 30	SAE 20W-40
32° F. to 90° F.	SAE 20	SAE 10W-30
-10° F. to 32° F.	SAE 10W	SAE 10W-30
Below -10° F.	SAE 5W*	SAE 5W-20

*\* Use of SAE 5W oil may cause some increase in oil consumption. Check oil level more often when using this oil.*

## Engine break-in

The engine on your new windrower is shipped from the factory with a special break-in oil in the crankcase. After 20 hours of operation, drain this oil from the crankcase, replace the crankcase oil filter, and refill the crankcase with 7 U.S. quarts of service MS engine oil of the proper viscosity in accordance with the temperature-oil viscosity chart above.

Thereafter, drain and replace crankcase oil and oil filter element every 200 hours of operation, or every season (whichever comes first) using the correct oil as specified above, depending on the temperature.

**Service chart**

The lubrication and service periods for this windrower are: 10 hours, 50 hours, 150 hours, 200 hours, and 250 hours. These intervals are based on operating time under normal conditions. When the windrower is operated under unusual conditions such as excessive heat, cold, or dust, check and service the windrower at

more frequent intervals.

The following chart is a condensed list of the windrower components to be serviced at each interval and the service to be performed. Instructions for performing each service are given on the pages which follow the chart.

Component	Description of service	Unit capacity	Description of lubricant	Page Reference
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**LUBRICATE AS REQUIRED**

Clevises, linkages and other moving parts	Apply oil	Several drops	SAE 10W oil	14
Chains	Apply oil	. . . . .	SAE 10W oil	14
Knife	Apply oil (except in sandy conditions)	. . . . .	SAE 10W oil	14

**EVERY 10 HOURS**

Engine crankcase	Check oil level	"FULL" mark on dipstick	Service MS engine oil. See chart on page 9 for correct viscosity to use.	14
Engine air cleaner, oil-bath (John Deere HB-115-G engine)	Drain, clean and fill	Level line on cup	Service MS engine oil. See chart on page 9 for correct viscosity to use.	14
Engine air cleaner, dry-type (John Deere HD-145-G engine)	Clean rubber unloader and breather	. . . . .	. . . . .	15
Hydraulic unit reservoir	Check oil level	"FULL" mark on dipstick	Service MS engine oil. See chart on page 9 for correct viscosity to use.	15
Reel pipe (Both ends)	Lubricate 1 fitting on each end	Several shots of grease	SAE multipurpose grease	15
Reel drive shaft universal joints	Lubricate 1 fitting on each end	Several shots of grease	SAE multipurpose grease	15
Reel drive shaft (telescoping section)	Apply grease where shaft telescopes	2 or 3 shots of grease	SAE multipurpose grease	15
Knife drive beam	Lubricate 3 fittings	Several shots of grease	SAE multipurpose grease	15
Canvas drive sheave	Lubricate 1 fitting	Several shots of grease	SAE multipurpose grease	15

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