

**215
SELF-PROPELLED
WINDROWER
(PRIOR TO SERIAL
NO. 2215-801)**



**OPERATORS MANUAL
215 SELF-PROPELLED WINDROWER
(PRIOR TO SERIAL NO. 2215-801)**

OMH90727 C2 English

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LITHO IN THE 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-GH engine or a Wisconsin VH-4 engine.

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

If your windrower is equipped with a Wisconsin engine, all 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.

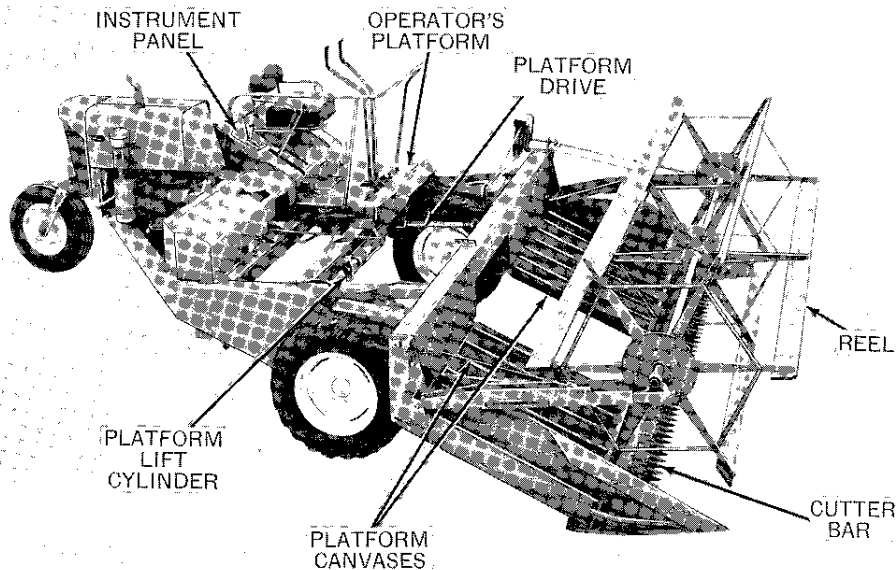
The engine serial number is located on the engine block between the generator and the oil filter.

Windrower serial number _____

Platform serial number _____

Engine serial number _____

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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
 No. 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 10-ft. cutting platform . 4480 Lbs. (Approximate)
 Power unit with 12-ft. cutting platform . 4600 Lbs. (Approximate)
 Power unit with 14-ft. cutting platform . 4705 Lbs. (Approximate)

Power unit with 16-ft. cutting platform . 4870 Lbs. (Approximate)

SPEED OF VARIOUS UNITS

Reel 35-45-55 rpm
 Canvas drive rollers 607 to 720 rpm
 Variable speed sheaves 718 to 2105 rpm
 Engine 2200 rpm
 Platform drive 555 rpm

TIRE INFLATION CHART

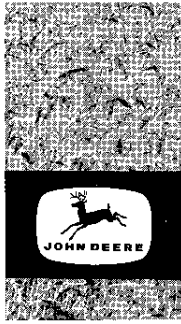
Tire Size	Ply Rating	Pressure
7.50 x 18	4	20 lbs.
7.60 x 15	4	22 lbs.

ENGINE (JOHN DEERE)

Make of engine John Deere-HB-115-GH
 Bore 3-1/2-In.
 Stroke 3-In.
 Brake horsepower* 36
 Number of cylinders 4
 Piston displacement 115.45 Cu. In.
 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:
 Intake012-In. (When cold)
 Exhaust018-In. (When cold)
 Make of governor Pierce
 Make of carburetor Marvel-Schebler
 Spark plug Champion H-8 or Equivalent
 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.

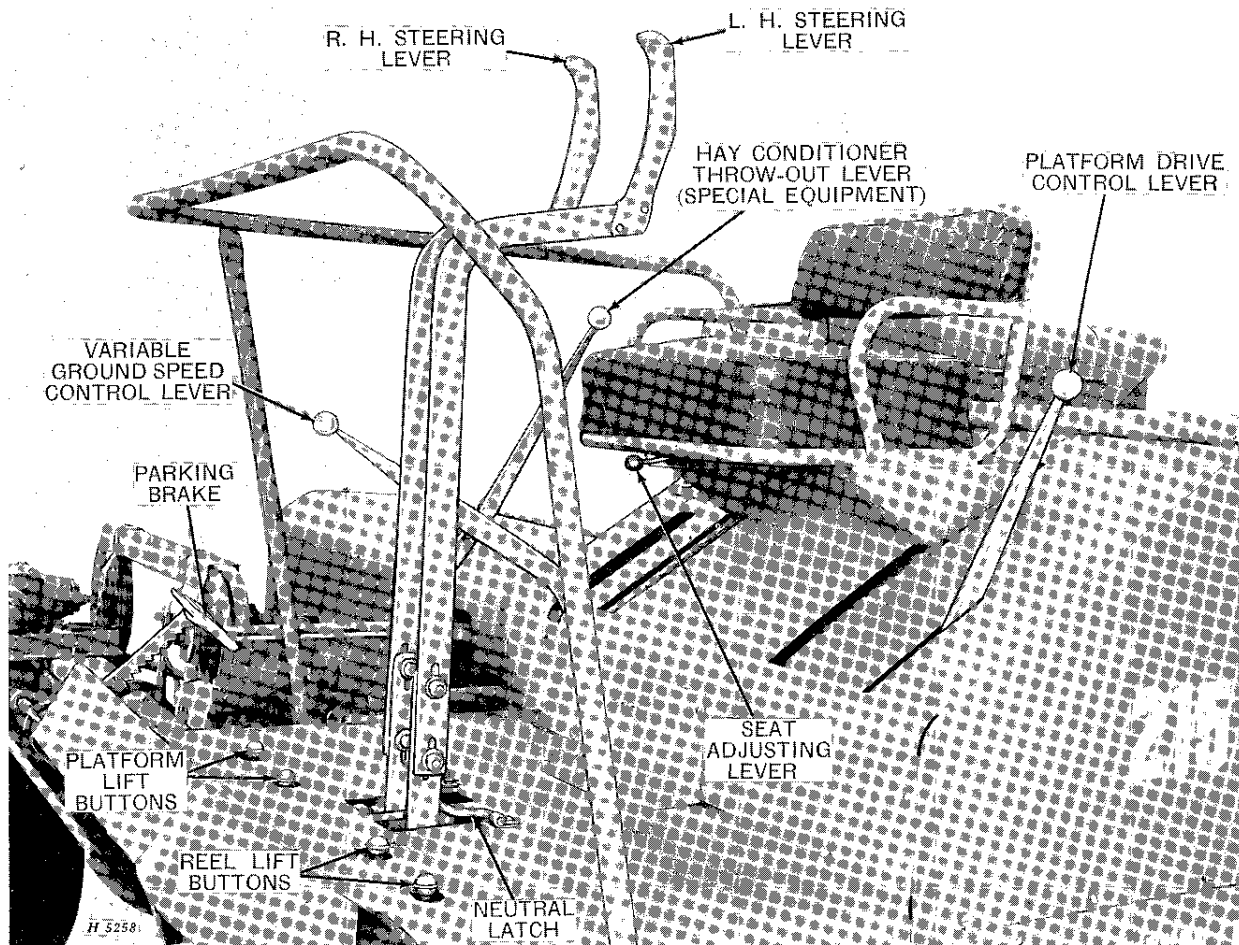
(Specifications and design subject to change without notice)



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

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

Trim steering is accomplished by moving the right-hand steering lever sideways. Moving the lever sideways to the right will make a gradual turn to the right; moving the lever sideways to the left will make a gradual turn to the left.

Normal turning is accomplished by placing one lever in neutral and the other lever in for-

ward 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.

NOTE: 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 forward 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.

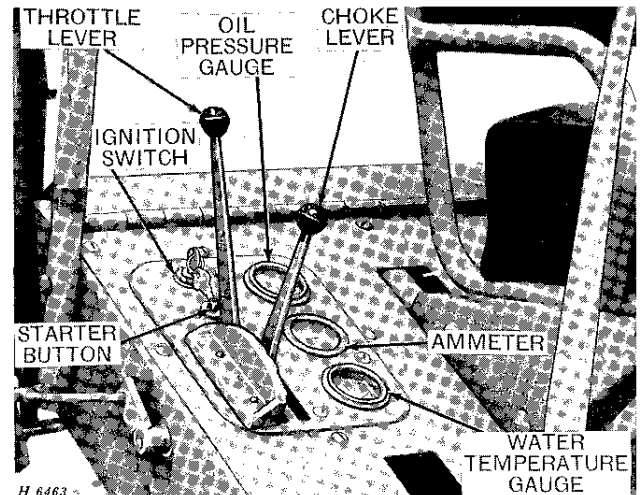
Instruments

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)

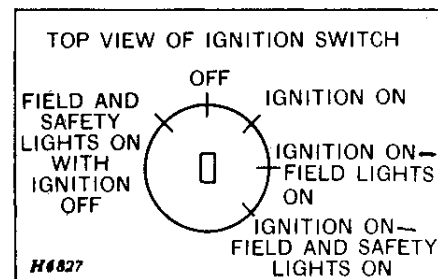
This gauge indicates the pressure of engine lubricating oil. Oil pressure will vary slightly; but with recommended oil, it should read NORMAL at full governed speed. If oil pressure drops, stop engine immediately and determine cause.

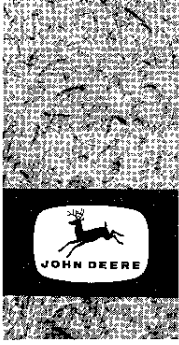
Ammeter

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. If the temperature exceeds 200° F., 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

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.

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 any faulty operation or heated bearings.

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 "breaking-in" oil in the crankcase.

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 moving the right-hand steering lever sideways. Moving the lever sideways to the right will make a gradual turn to the right; moving the lever sideways to the left will make a gradual turn to the left.

Normal 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.


NOTE: Always put steering levers in neutral and engage neutral latch before dismounting from the windrower.

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.

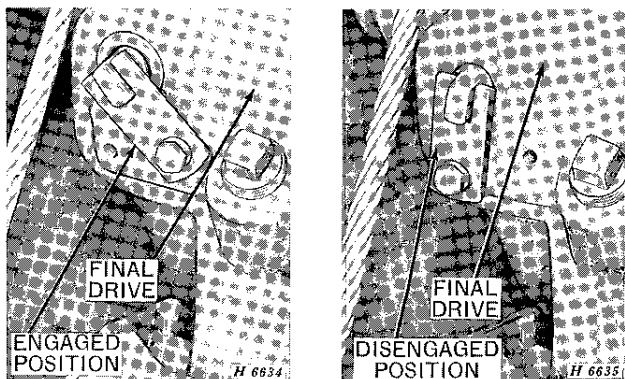
Use brake pedal when parking or dismounting from the windrower.

 **CAUTION: Never dismount from the windrower or leave it parked without using parking brake. Lock steering levers in neutral.**

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.

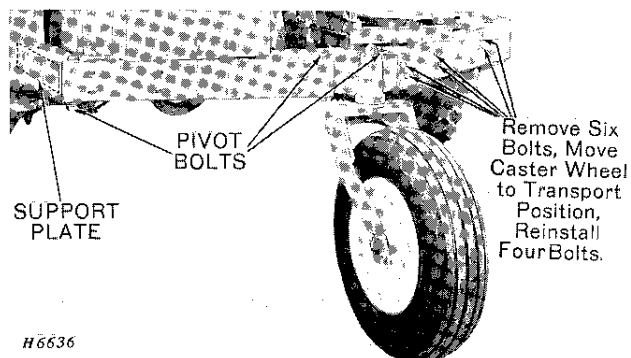


Main wheel drive in engaged and disengaged positions

To disengage front 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.

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



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.

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.

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.

Battery

When the temperature drops below freezing, precautions should be taken to avoid damage to the battery cells. 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 the battery unless the engine is going to be operated immediately. Water will readily freeze because it will not mix with the electrolyte until the generator passes a charging current through the battery.

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.

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 safe solvent 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. Fill cup to proper level with new oil.

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.

Drain water from radiator and engine block. Leave out drain plugs so water that might condense in cooling system can drain out.

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.

8 operation

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.

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.

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