

105 HI LOW COMBINE



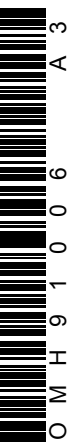
OPERATORS MANUAL

**105 HI LOW
COMBINE**

OMH91006 A3 English

**JOHN DEERE
OMH91006 A3**

LITHO IN THE U.S.A.
ENGLISH



To the purchaser

The self-propelled combine you have just purchased was designed and manufactured to the traditionally high quality standards of all John Deere Farm Equipment. Your combine has been thoroughly inspected and tested, not only at the factory, but at your dealer's by a trained John Deere Serviceman. With proper care, it will give years of dependable, economical service.

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 service of the combine. He has trained mechanics who are kept informed on the best methods of John Deere Combine servicing, and can give you prompt know-how service in the field or in his shop.

Keep your combine a John Deere combine

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

Special equipment

In addition to the equipment furnished with your combine, there is special equipment available to help you do a better job of combining in a special crop or condition. This special equipment, which is illustrated and described throughout this manual, is available from your John Deere dealer.

Location reference

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

Timing gear end of the engine is referred to as the "front;" flywheel end as the "rear."

Serial numbers

Your combine, cutting platform, axle, and engine have serial numbers.

When ordering parts, always bring with you 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 combine serial number is on a plate located on the support bracket at the rear end of the fuel tank.

The engine serial number is on a plate located on top of the flywheel housing.

The axle serial number is on the top, left-hand end of the axle tube.

The cutting platform serial number is on a plate located on the outside of the right-hand platform divider.

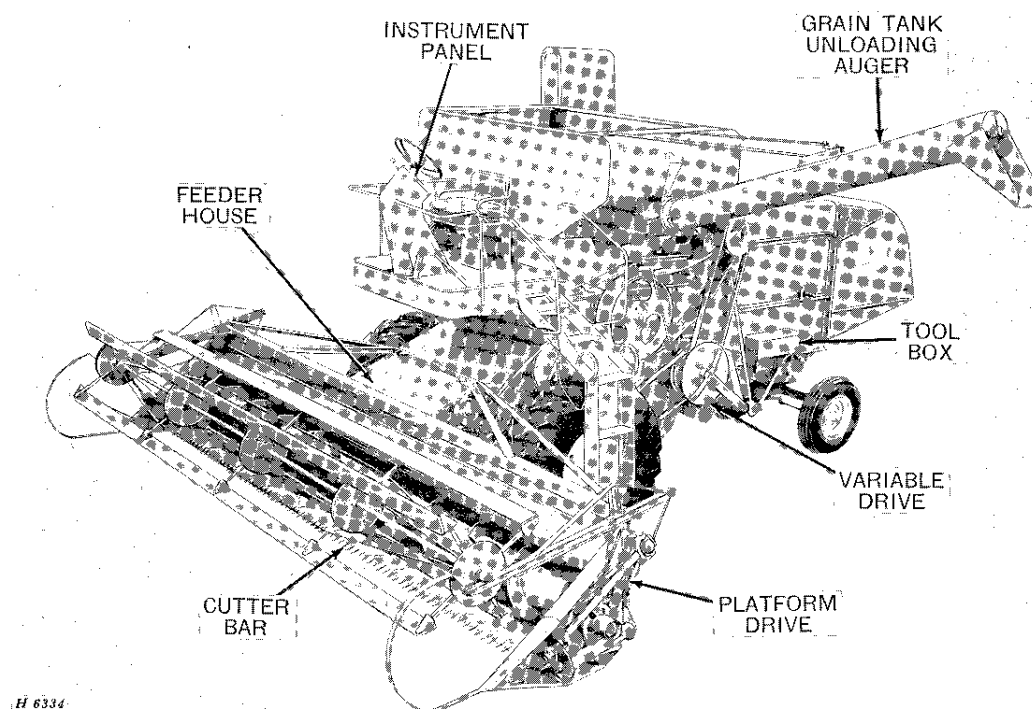
Combine serial no. _____
Engine serial no. _____
Axle serial no. _____
Cutting platform serial no. _____
Date purchased _____

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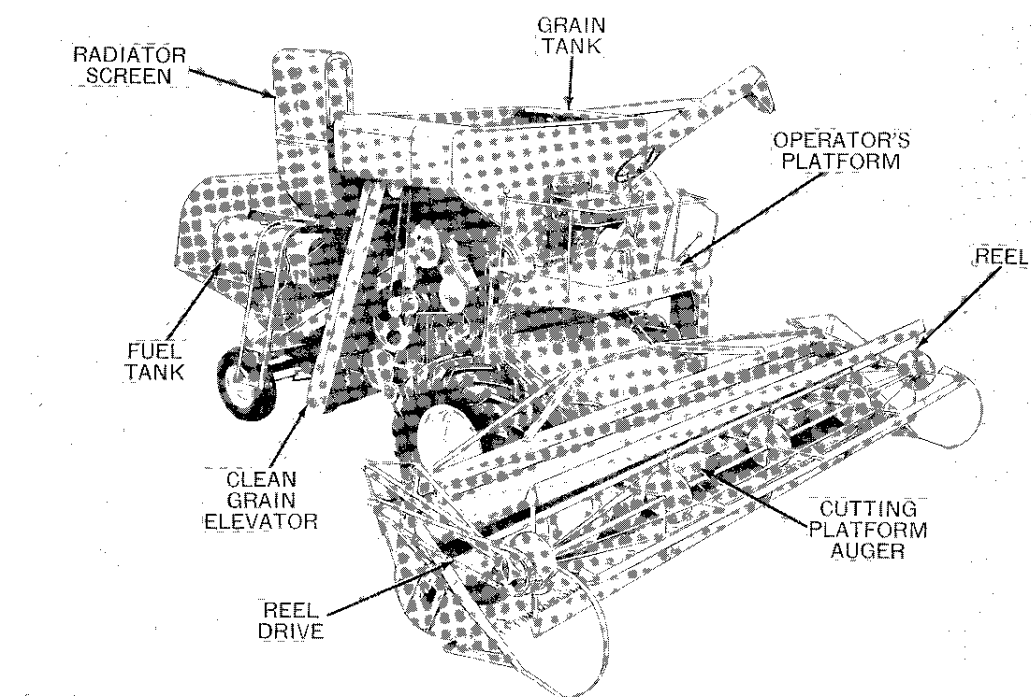
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Study this manual carefully, keep it handy, in a safe place, for future reference.

Operator's Manual Price \$3.30



Left-hand front view—John Deere 105 Combine



Right-hand front view—John Deere 105 Combine

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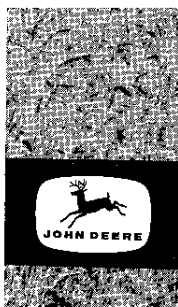
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specifications

CUTTER BAR

Width of cut . . . 14-ft., or 16-ft. (rice) 14-ft., 16-ft., 18-ft., 20-ft., or 22-ft. (grain)

Length of cutter

bar 13-ft., 6-in. or 15-ft., 6-in. (rice) 13-ft. 6-in., 15-ft. 6-in., 17-ft. 6-in., 19-ft. 6-in., or 21-ft. 6-in. (grain)

Type of knife sections Heavy-duty overserrated

REEL

Drive Chain

Number of slats 4 regular; 3, 6, or 8 special

Diameter of reel 32-in. or 40-in.

Speed range 18.5 rpm to 51.5 rpm

Height control Manual

CUTTING PLATFORM

Type of feed Auger

Cutting height

range (18.4-26 tires) 2-1/2-in. below wheel level to 35-in. above

Cutting height

range (23.1-26 tires) 2-1/2-in. below wheel level to 38-in. above

Height Control Hydraulic (2 cylinders)

CUTTING PLATFORM AUGER

Diameter 18-in.

Diameter of auger tube 10-in.

Type of auger fingers Round retracting

BELT PICKUP PLATFORM

Width 12-ft., or 22-ft.

CYLINDER

Type Rasp-bar or spike-tooth

Width 49-1/2-in.

Diameter 22-in.

Number of bars 8 rasp-bars or 10 spike tooth bars with 14 teeth)

Drive Roller Chain

Speed range 227 rpm to 1190 rpm

CONCAVE

Type 12-bar open type or spike-tooth type

Width 49-1/2-in.

BEATER (Behind the cylinder)

Type Drum

Width 49-1/2-in.

Diameter 12-in.

Speed 680 rpm

SEPARATOR

Type Grain conveyor, straw walker

Width 50-in.

Length of separating

surface 140-in. (Straw walker pans extended)

Total separating area 6,930 sq. in.

GRAIN CONVEYOR

Type Channel slat

Drive Chain

CLEANING FAN

Type 5-bladed undershot

Drive V-belt

Speed range 550 rpm to 1050 rpm

CHAFFER

Type Adjustable

Width 48-in.

Length with extension 60-3/4-in.

Area 2,915 sq. in.

SIEVE

Type Adjustable

Width 48-in.

Length 45-in.

Area 2163 sq. in.

CHAFFER EXTENSION

Type Adjustable

Width 48-in.

Length 12-5/16-in.

Area 591 sq. in.

TOTAL CLEANING AREA OF CHAFFER, SIEVE, AND CHAFFER EXTENSION

. 5,078 sq. in.

STRAW WALKERS

Number Five

Width 9-1/2-in.

Length with pans extended 123-in.

Area 6,089 sq. in.

Number of steps Five

Drive V-belt

Bearings Oil-soaked maple

Extension pans One on each walker

GRAIN TANK

Capacity 75 Bushel, approx. (Type and condition of crop will determine actual volume)

Type of unloading Hinged auger

BRAKES

Type Individual, mechanical disk-type

TRANSMISSION

Automotive type—4 speeds forward, 1 reverse

WEIGHT

Combine with 16-ft. cutting

platform 12,200 lbs. (Approx.)

DIMENSIONS See page 4

Tire sizes and wheel tread dimensions

Combine	Tire sizes	Center-to-center wheel tread
Grain	18.4-26 (10-ply) cleat or low profile with spacers	97 in.
	23.1-26 (8-ply) cleat or low profile	104 in.
	23.1-26 (8-ply) cleat or low profile	101 in.
	7.50-16 (4-ply) rib implement	48 in.
	7.50-20 (4-ply) rib implement	45-5/8 in.
Rice	9.00-16 (4-ply) low profile	50 in.
	23.1-26 (8-ply) rice	108 in.
	7.50-20 (4-ply) rib implement	45-1/2 in.
	7.50-20 (6-ply) skid ring	45-1/2 in.

Capacities (approx.)

Fuel tank	60 U.S. gals.
Cooling system (radiator)	6 U.S. qts.
Engine crankcase (including oil filter)	7 U.S. qts.
Air cleaner (oil bath)	3 U.S. pts.
Reduction gear	2 U.S. qts.
Transmission	14 U.S. pts.
Final drives (2)	4-1/2 U.S. pts. (in each)
Cutting platform lift, variable speed hydraulic unit, and power steering (including hydraulic oil lines and cylinders)	13 U.S. qts.

Selective ground speed control range

18.4-26 Tires - grain drive			
	(Min.)		(Max.)
1st Gear	.6	to	1.4 mph
2nd Gear	1.2	to	2.8 mph
3rd Gear	2.5	to	5.6 mph
4th Gear	5.0	to	11.1 mph
Reverse	1.7	to	3.8 mph
23.1-26 Tires - rice drive			
	(Min.)		(Max.)
1st Gear	.7	to	1.5 mph
2nd Gear	1.3	to	2.9 mph
3rd Gear	2.6	to	5.9 mph
4th Gear	5.2	to	11.8 mph
Reverse	1.8	to	5.0 mph

23.1-26 Tires - grain drive			
	(Min.)		(Max.)
1st Gear	.7	to	1.6 mph
2nd Gear	1.4	to	3.2 mph
3rd Gear	2.8	to	6.3 mph
4th Gear	5.6	to	12.7 mph
Reverse	1.9	to	4.4 mph
Tracks - rice crawler			
	(Min.)		(Max.)
1st Gear	.3	to	.7 mph
2nd Gear	.6	to	1.4 mph
3rd Gear	1.2	to	2.8 mph
4th Gear	2.5	to	5.6 mph
Reverse	.9	to	1.9 mph

Engine

Make of engine	John Deere HA-248-G
Bore	3-7/8-in.
Stroke	3-1/2-in.
Brake horsepower	105*
Number of cylinders	6
Piston displacement	247.67 cu. in.
Maximum load speed	3000 rpm
Firing order	1-5-3-6-2-4
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.

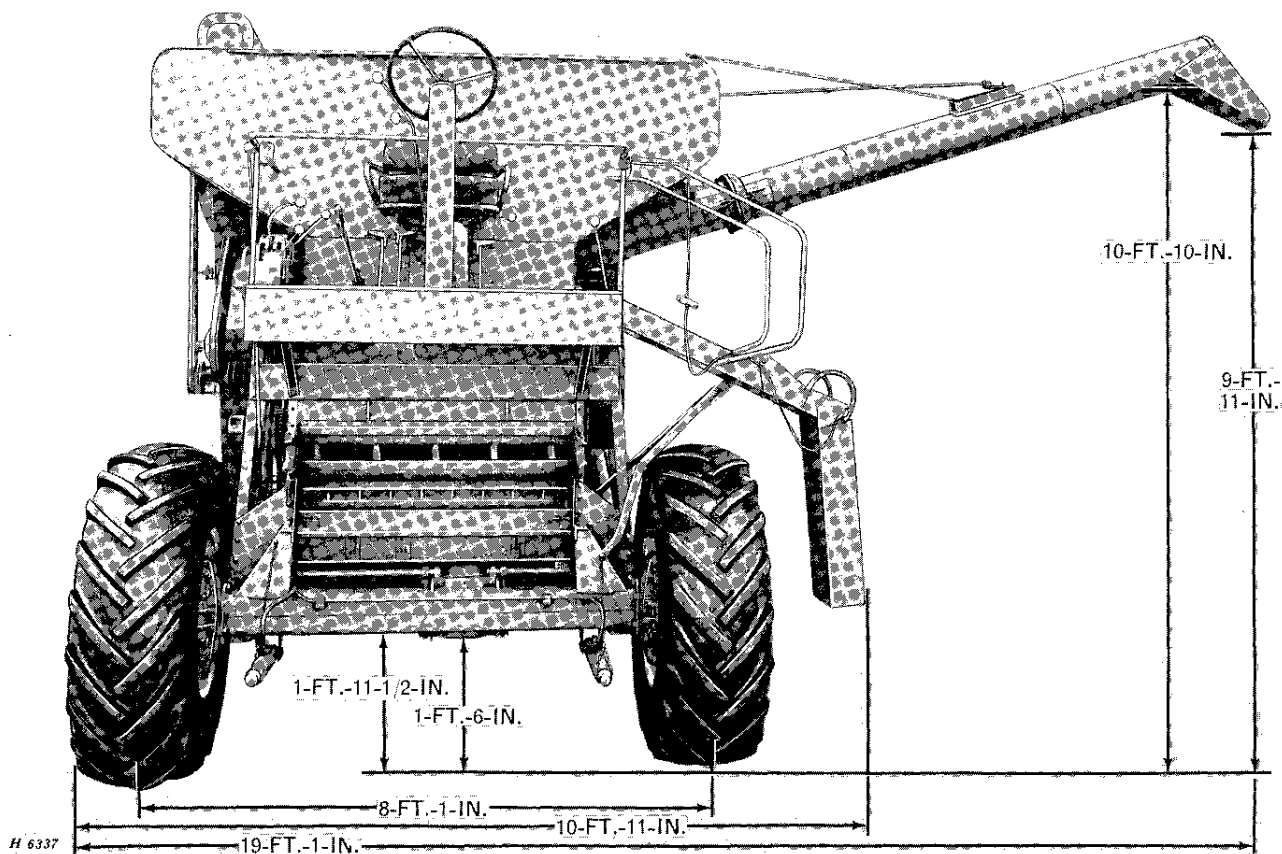
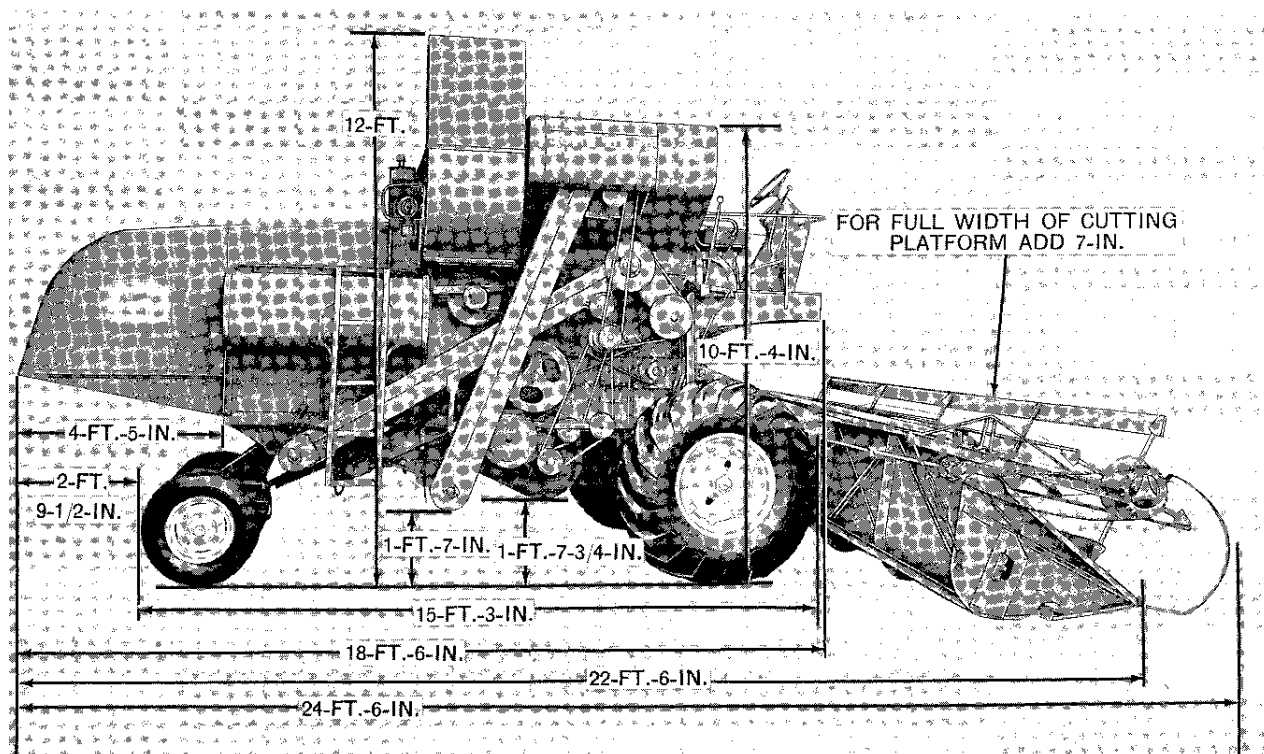
Valve arrangement	Valve-in-Head (rotators on exhaust valves)
Valve clearance	
Intake	.012-in. (When cold)
Exhaust	.018-in. (When cold)
Make of governor	Pierce
Make of carburetor	Zenith (Dual down draft type)
Air cleaner: Oil bath	(-105-1800)
	Dry type (105-1801-)
Spark plug	Size - 14mm Gap .025 in.
Electrical system	12-volt (Two 6-volt batteries)
Cooling system	Water pressure type
Type of fuel	Gasoline (Regular grade)

*Calculated at 60°F. and 29.92 inches hg. at sea level.

(Specifications and design subject to change without notice.)

4 specifications

NOTE: Combine equipped with 18.4-26 main wheel tires and 7.50-16 guide wheel tires for dimensions.

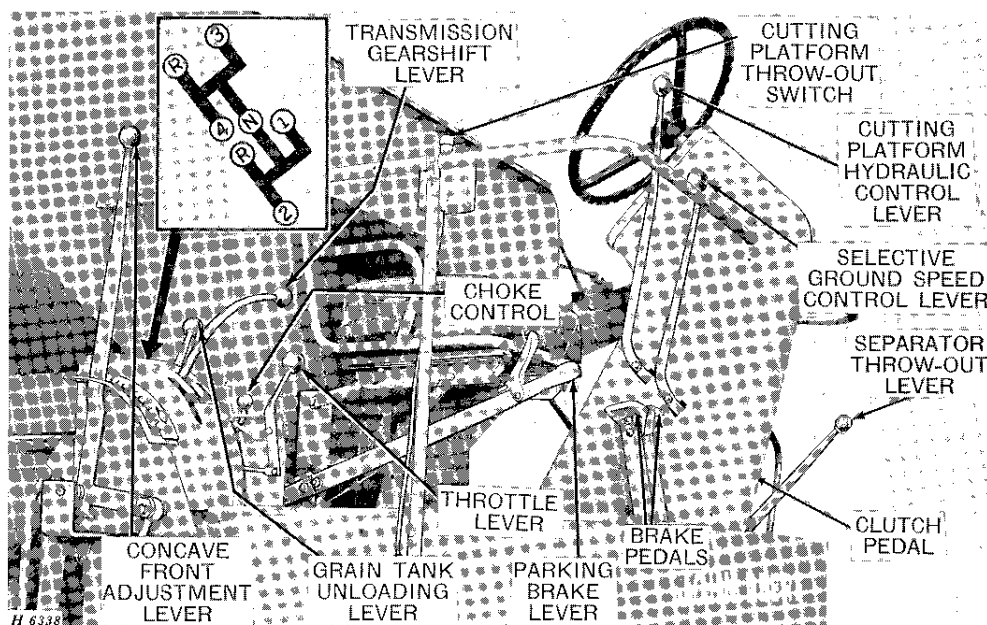




controls and instruments

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

Controls



The combine controls are located on the operator's platform within easy reach of the operator. Those controls whose purpose and function are obvious are not explained.

Transmission gearshift lever

There are four speed ranges forward and one reverse range (with two positions). Positions of the gearshift lever for different transmission speed ranges are shown by diagram.

Grain tank unloading lever

This lever engages auger when pulled rearward. To disengage, move lever forward. Grain tank unloading drive and separator drive are independent. If engine is running, separator can be stopped without affecting unloading of grain tank.

Separator throw-out lever

This lever is disengaged when in forward position. To engage, pull lever rearward.

Concave front adjustment lever

Move lever forward to open concave; move lever rearward to close concave.

NOTE: Make certain lever is locked in ratchet so concave will not move when combining.

Cutting platform throw-out switch

Push switch down to disengage drive. When trouble has been taken care of, push switch down again to engage drive.

Selective ground speed control lever

To increase ground travel speed within a selected transmission range, move lever forward. It will automatically return to neutral position when released and speed will remain as selected.

Cutting platform height control lever

Move lever forward to lower platform; pull lever rearward to raise platform. When released, lever automatically returns to neutral position and cutting platform remains at selected position. As a safety measure, cutting platform height cannot be changed unless engine is running.

Throttle lever

Pull lever one-quarter forward from rear to start engine. Pull lever all the way forward for normal operation.

Choke control

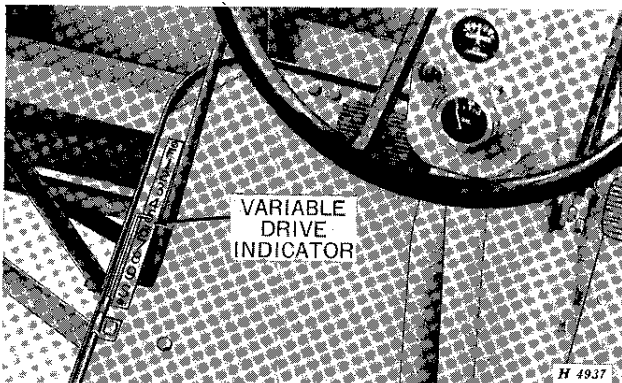
Pull choke control all the way forward to start engine. After engine runs a few revolutions, push choke control all the way rearward.

Parking brake lever

To engage, pull lever rearward. To disengage, move lever forward.

When the parking brake is engaged, a warning light on the instrument panel will flash on and off the instant the ignition switch is turned on. This is a warning not to move the combine with parking brake engaged.

Variable drive relative speed indicator

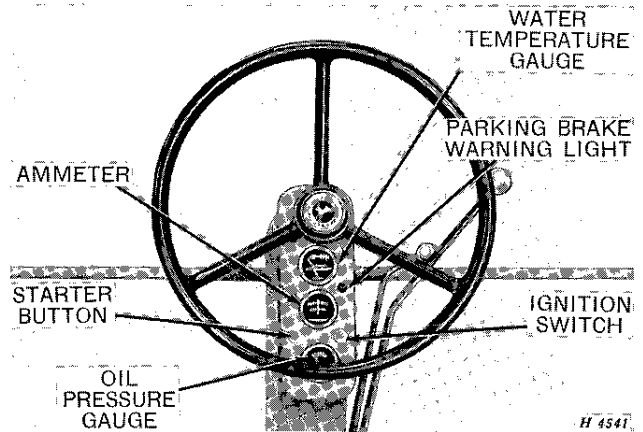


This indicator shows the variable drive sheave setting. If it is necessary to stop or change speed for turning corners, the operator can easily return to the previous ground speed provided he also uses the previous transmission gear.

IMPORTANT: This indicator is not to be confused with a speedometer. The numerals DO NOT indicate the ground travel speed in miles per hour.

Instruments

All instruments are conveniently grouped on the instrument panel where they may be observed easily by the operator.



Water temperature gauge

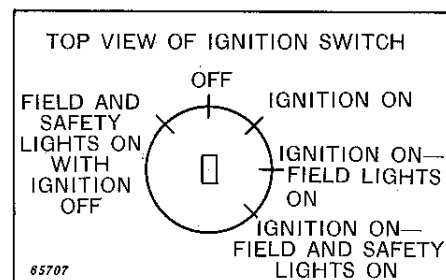
This gauge indicates the water temperature in the cooling system—not the quantity. Normal operating temperature is 160° to 200° F. (indicated by green band on dial). If 200° F. or above, (indicated by red band on dial) stop engine and determine cause.

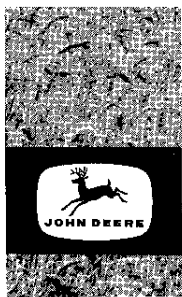
Ammeter

This gauge indicates the rate of charge or discharge of the batteries. 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 batteries, faulty connections, low battery water, or bad regulator.

Oil pressure gauge

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 immediately and determine cause.





operation

Fundamentals of combine harvesting

The one most important factor in harvesting, is for the operator to have a thorough understanding of the fundamentals of combine operation.

These fundamentals in brief are:

Be sure crop is in condition to thresh—moisture content not too high—straw not too green, etc.

In making the first round of the field, keep the combine forward speed as slow as possible to reduce the volume of material entering the combine. Always run the engine at full throttle to keep the combine mechanism up to full speed, thus guarding against slugging and clogging. Use the selective ground speed drive to obtain slower speed or shift to a lower gear if necessary—but do not throttle down the engine.

Select a ground speed that will not overload the combine.

Engine should be in good condition—governor should be properly set and responsive enough to accelerate quickly if an overload occurs.

Keep the cylinder speed as low as possible and concave clearance as high as possible to remove the maximum amount of grain from head without breaking up the straw excessively. Maintain correct beater speed to guard against wrapping of straw on beater.

Cut the crop as high as possible without excessive loss of low grain heads. If the straw is down and tangled, it may be desirable to use lifting guards. Slow travel speed is imperative.

Adjust the reel position and speed for even feeding.

Regulate adjustable chaffer openings to pass the grain or seed to the lower sieve before it has passed over two-thirds the length of chaffer without admitting too much coarse material.

Close adjustable sieve as far as possible without carrying clean grain into the tailings auger.

If material loads up on front of chaffer, adjust upper windboard to throw blast to front of shoe.

Use as much air as possible without blowing over clean seed. If the grain or seed is unusually light, it may be necessary to reduce the volume of air. In heavy seeds, increase the volume of air.

Keep amount of tailings as low as possible.

Operating suggestions

Don't start combining until the crop is ripe.

Unless crop drying equipment is available, a crop should not be combined until it is dead ripe. If the threshed grain feels damp or is easily dented with the fingernail, the moisture content is usually too high for safe storage.

Grain crops containing 14% moisture or less are usually considered dry enough for safe storage. A John Deere Moisture Meter for checking moisture content of grain and a portable Grain Dryer can be purchased from your John Deere dealer, or arrangements can usually be made at the local grain elevator for necessary moisture tests and drying if necessary.

Operation in weedy conditions

Combining in fields where weeds are numerous is particularly troublesome as they tend to gum up the sieves. Also, the moisture in the seeds is imparted to the grain.

Weeds should be disposed of quickly and not be broken up any more than necessary.

The following suggestions will help while operating in weedy conditions.

Cut the grain as high as possible to avoid weeds and undergrowth.

Check to see that the cylinder is operating at proper speed.

Use as much air blast on the shoe as possible without blowing over grain

Lower rear end of chaffer.

Height and width of cut

The cutting platform has a cutting height range from 2-1/2 inches below wheel level to 35 inches above wheel level on grain combines, and from 2-1/2 inches below wheel level to 38 inches above wheel level on rice combines. Cut just low enough to get all grain heads. Watch the height and condition of grain and continually raise and lower the cutting platform to meet conditions. If the crop is extremely heavy and badly down, it may be necessary to cut less than a full swath or reduce travel speed.

Hold down the ground speed

Excessive travel speed is one of the greatest causes of trouble in combining. Traveling at too high a ground speed causes overloading, resulting in a loss of grain.

Also, traveling at an excessively high speed over rough ground also causes extra wear and damage to parts, not incurred when the combine is operated at a more reasonable speed.

Keep steady, smooth engine speed

Any fluctuation in engine speed is reflected in the speed of the separator. Uneven speed results in loss of grain, inferior threshing and, in extreme cases, complete plugging of the combine. Take every precaution to maintain the correct uniform speed.

By rounding the corners in the field, you can maintain more uniform speed when turning.

When stopping, wait until material in the combine is cleaned out before disengaging separator throw-out lever.

Before-operation checks and adjustments

Careful inspection and service of the combine before starting work each day will prevent needless delays and breakdown in the field. Make the following checks and adjustments:

Fill gasoline tank with a good regular grade of gasoline.

Check water level in radiator. Fill with rain water, if available. Do not use water containing alkali. *If combine is being operated at temperatures below 32° F., refer to "Cold weather operation," page 15.*

Add water or antifreeze slowly until the water level is approximately 1-1/2 inches below the bottom of the filler neck.

Lubricate the combine completely, service air cleaner, and check oil level of hydraulic units, transmission, final drives, and gear reduction unit. See Lubrication section, page 18.

Check tension drag adjustment for choke and throttle controls. See page 87.

Open the doors at bottom of elevators and leave them open until combine is started.

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

Combine and engine break-in

Check all V-belt 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 after the first run-off. Check tension frequently.

Open the clean-out doors in the bottom of the clean grain and tailings elevators and check tension of elevator chains—see page 60 for adjustments. It is a good plan to check the chain tension every day of operation.

Be certain all shafts turn freely.

After 50 hours of operation, drain the oil from the transmission and final drives. Fill with oil as specified in the lubrication section of this manual.

Follow the lubrication instructions and charts closely.

Your new engine and hydraulic system was shipped from the factory with a special "break-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.

After the 20-hour break-in period, drain the special "breaking-in" oil from the crankcase and hydraulic system. Replace the engine oil filter and clean the hydraulic reservoir oil filter. Fill with the proper viscosity of oil as specified in the Lubrication section of this manual.

Starting the engine

1. Make certain the separator, cutting platform, and grain tank unloading auger throw-out levers are disengaged and transmission is in neutral.

2. If engine has not been operated for a period of time, or the gasoline tank has run dry, prime fuel pump lever up and down to force gasoline into carburetor.

NOTE: After priming fuel pump, be sure the priming lever is in the "down" position. If the priming lever is left in the "up" position, the fuel pump is inoperative.

3. Turn ignition switch on. Move throttle lever one-quarter forward from rear. Move choke lever all the way forward; then press starter button. After engine operates a few revolutions, push choke control rearward. Set engine at slow idle speed by moving throttle lever all the way rearward.

4. Make certain oil pressure gauge is registering pressure.

5. Do not place engine under load until it is properly warmed up.

Starting the combine

1. Make certain no one is standing near enough to the combine to touch any moving parts. Warn everyone to stand clear.

2. When engine is properly warmed up, pull separator throw-out lever rearward to engage the separator. Pull throttle lever all the way forward.

3. Check the speed of beater behind the cylinder with a speed indicator. Beater should operate at 680 to 685 rpm with separator empty and not under load. If beater speed is not correct, adjust governor setting (see page 86).

4. Test operation of hydraulic control for adjusting cutting platform height.

5. Test operation of grain tank unloading auger.

6. Test operation of hydraulic selective ground speed control.

7. Check brakes to see if they are in proper working order.

8. Inspect entire combine again, making certain all units are working properly.

9. Disengage separator, then close doors at bottom of elevators.

Selecting proper ground speed

The ground speed of the combine can be very closely controlled by using the selective ground speed drive in conjunction with different transmission speeds. The chart on page 3 shows the range of speeds that can be obtained in each transmission range by means of selective ground speed control. Select the best transmission speed range; then, with the selective ground speed control lever, adjust the ground speed to meet field conditions exactly.

Speed of various units

(Fast idle—no load)

Auger, platform	217 rpm
Beater behind cylinder	680 to 685 rpm
Beater, front of feeder house	134 rpm
Cylinder:	
Regular	1,057 rpm
Rice (rasp-bar)	952 rpm
Rice (spike-tooth)	793 rpm
Soybean	604 rpm
Cylinder (extreme low)	277 rpm
Cylinder (extreme high)	1,190 rpm
Elevators	313 rpm
Fan (normal operating speed)	750 rpm
Fan (extreme low)	550 rpm
Fan (extreme high)	1,050 rpm
Feeder house conveyor drive shaft	231 rpm
Grain conveyor under cylinder:	
(With regular 15-tooth sprocket)	170 rpm
(With special 10-tooth sprocket)	255 rpm
Ground travel speeds	(See page 3.)
Reel	18.5 to 51.5 rpm
Shoe crank	286 rpm
Straw walker	213 rpm

Suggested settings for combining various crops

(These suggested settings are for average conditions. Different field conditions may make it necessary to change these settings.)

Crop	Cylinder rpm	Cylinder to concave clearance		Type of cleaning sieve	Setting of adjustable cleaning sieve	Setting of adjustable chaffer	Setting of adjustable cleaning fan sheave	Fan side shutter opening	Grain conveyor inserts (special equipment)
		Front	Rear						
Alfalfa	1057	3/16"	1/8"	Adjustable or 1/10" round hole	Slightly open	1/8 open	Closed	Closed	.050" round holes
Barley—Feed and Malting	1057 or 952	1/2"	1/4"	Adjustable	1/3 to 1/2 open	1/2 to 1/3 open	Halfway open	1/2 open	.165" triangle holes
Beans—Baby Lima	277 or 413	3/4"	1/2"	Adjustable	Slightly over 1/2 open	2/3 to nearly wide open	Open	Open	3/32" x 3/4" slotted
Beans—Black-Eye	277 or 413	1/2"	3/8"	Adjustable (preferred) or 3/8" round hole	Slightly over 1/2 open	Nearly wide open	Halfway open	Open	3/32" to 3/4" slotted
Beans—Great Northern	277 or 413	5/8"	1/2"	Adjustable (preferred) or 3/8" round hole	1/2 open	Nearly wide open	Open	Open	3/32" x 3/4" slotted
Beans—Kidney	277 or 413	5/8"	1/2"	Adjustable (preferred) or 3/8" round hole	1/2 open	Nearly wide open	Open	Open	3/32" x 3/4" slotted
Beans—Navy	277 or 413	5/8"	1/4"	Adjustable (preferred)	1/2 open	Nearly wide open	1/2 to 3/4 open	Open	3/32" x 3/4" slotted
Beans—Pinto	277 or 413	5/8"	1/4"	Adjustable	1/2 open	Nearly wide open	1/2 to 3/4 open	Open	3/32" x 3/4" slotted
Beans—Soy	593	1/2"	1/4"	Adjustable or 3/8" round hole	1/2 open	2/3 open	1/2 to 3/4 open	Open	5/32" round holes
Beans—WhitePea	466 or 525	1/2"	1/4"	Adjustable	1/2 open	2/3 open	1/2 to 3/4 open	Open	5/32" round holes
Buck Wheat	765	1/2"	3/16"	Adjustable	1/4 to 1/3 open	2/3 open	1/4 open	2/3 open	.125" triangle
Clover—Alsike	1057	3/16"	1/8"	Adjustable or 1/10" round hole	Slightly open	1/4 open	Closed	Closed	.050" round holes
Clover—Big English and Dutch	1057	3/16"	1/8"	Adjustable or 1/10" round hole	Slightly open	1/4 open	Closed	Closed	.050" round holes
Clover—Crimson	1057	3/16"	1/8"	Adjustable (preferred) or 1/10" round hole	Slightly open	1/4 open	Closed	Closed	.050" round holes

Suggested settings for combining various crops—continued

Crop	Cylinder rpm	Cylinder to concave clearance		Type of cleaning sieve	Setting of adjustable cleaning sieve	Setting of adjustable chaffer	Setting of adjustable cleaning fan sheave	Fan side shutter opening	Grain conveyor inserts (special equipment)
		Front	Rear						
Clover—Fenu-greek	1057	5/32"	1/16"	Adjustable	Slightly open	3/8 open	Closed	Closed	3/32" x 3/4" slotted
Clover—Hop	1057	5/32"	1/16"	Adjustable or 1/10"	Slightly open	1/4 open	Closed	Closed	.050" round holes
Clover—Red	1057	5/32"	1/16"	Adjustable or 1/10"	Slightly open	1/4 open open	Closed	Closed	.050" round holes
Clover—Sweet	1057 or 881	5/32"	1/16"	Adjustable or 1/10" round hole	Slightly open	1/4 open	Closed	Closed	.050" round holes
Clover—Yellow Blossom	1057	5/32"	1/16"	Adjustable or 1/10" round hole	Slightly open	1/2 to 2/3 open	Closed	Closed	.050" round holes
Corn—Field Shelled*	†476 or 544 or †385	1"	5/8"	Adjustable or 3/8" round hole	1/2 open	2/3 open	Open with small drive sheave	Open	3/32" to 3/4" slots*
Crotalaria	1057 or 881	5/32"	1/16"	Adjustable or 5/32" round hole	1/3 open	2/3 open	Closed	1/3 open	.070" round holes
Flax	1057 or 881	1/4"	1/8"	Adjustable or 5/32" round hole	1/3 open	1/3 to 1/2 open	Closed	1/3 open	.070" round holes
Grass—Blue	1057	3/16"	1/8"	Adjustable or 5/32" round hole	1/4 to 1/3 open	1/2 to 2/3 open	Closed	Closed	.050" round holes
Grass—Brome	1057	3/16"	1/8"	Adjustable	1/4 to 1/3 open	1/2 to 2/3 open	Closed	Closed	.070" round holes
Grass—Canary	1057 or 881	3/16"	1/8"	Adjustable	Slightly open	1/2 open	Closed	Closed	.050" round holes
Grass—Carpet	1057 or 881	3/16"	1/8"	Adjustable or 1/10" round hole	1/4 to 1/3 open	1/2 to 2/3 open	Closed	Closed	.050" round holes
Grass—Crested Wheat	1057 or 881	3/16"	1/8"	Adjustable	1/4 to 1/3 open	1/2 to 2/3 open	Closed	Closed	.070" round holes
Grass—Fescue	1057 or 881	3/16"	1/8"	Adjustable or 1/10" round hole	1/4 to 1/3 open	1/2 to 2/3 open	Closed	Closed	.050" round holes
Grass—Johnson	1057 or 881	3/16"	1/8"	Adjustable	1/4 to 1/3 open	1/2 to 2/3 open	Closed	Closed	.070" round holes
Grass—Millet	1057 or 881	3/16"	1/8"	Adjustable or 5/32" round hole	Slightly open	1/2 open	Closed	1/3 open	.050" round holes
Grass—Orchard	1057 or 881	3/16"	1/8"	Adjustable or 1/10" round hole	Slightly open	1/2 open	Closed	Closed	.050" round holes
Grass—Red-Top	1057	3/16"	1/8"	Adjustable	Slightly open	1/4 open	Closed	Closed	.050" round holes
Grass—Rhodes	1057 or 881	3/16"	1/8"	Adjustable or 5/32" round hole	1/4 open	1/2 open	Closed	Closed	.165" triangle holes
Grass—Rye	1057	3/16"	1/8"	Adjustable	1/4 open	1/2 open	Closed	1/3 open	.050" round holes

† See your corn attachment Operator's Manual for information on obtaining these speeds.

*Use 5/32 x 3/4 lower slotted door with corn of 25% moisture and higher.

12 operation

Crop	Cylinder rpm	Cylinder to concave clearance		Type of cleaning sieve	Setting of adjustable cleaning sieve	Setting of adjustable chaffer	Setting of adjustable cleaning fan sheave	Fan side shutter opening	Grain conveyor inserts (special equipment)
		Front	Rear						
Lespedeza	765	3/16"	1/8"	Adjustable or 5/32" round hole	1/3 open	1/2 to 2/3 open	Slightly open	1/3 open	.070" round holes
Lupine	525	3/8"	1/4"	Adjustable	1/2 open	2/3 open	1/3 to 1/2 open	1/2 open	3/32" x 3/4" slots
Maize	765	5/16"	3/16"	Adjustable	1/4 to 1/2 open	2/3 open	1/2 open	1/2 open	.070" round holes
Mustard	1057 or 765	3/8"	1/4"	Adjustable	1/4 to 1/3 open	2/3 open	1/3 to 1/2 open	Closed	.070" round holes
Oats	1057	5/16"	3/16"	Adjustable	1/3 to 1/2 open	3/4 open	1/3 to 1/2 open	1/2 open	.125" triangle holes
Peas—Field	453	1"	3/4"	Adjustable	1/3 open	2/3 open	1/2 to 3/4 open	Open	3/32" x 3/4" slotted
Peas—Scotch Green	453	1"	3/4"	Adjustable	1/3 open	2/3 open	3/4 to wide open	Open	3/32" x 3/4" slotted
Peas—Willeys Wonder	453	1"	3/4"	Adjustable (preferred) or 3/8" round hole	1/3 open	2/3 open	1/2 to 3/4 open	Open	3/32" x 3/4" slotted
Proso or Hog Millet	793 or 850	3/16"	1/8"	Adjustable or 5/32" round hole	Slightly open	1/2 open	1/3 to 1/2 open	1/3 open	.050" round holes
Radish Seed	705 or 765	3/16"	1/8"	Adjustable or 5/32" round hole	Closed to 1/4 open	1/3 to 1/2 open	Closed	Closed	.070" round holes
Rice	Rasp Bar 952 Spike Tooth 793	7/16"	1/4"	Adjustable or 7/16" or 1/2" round hole	Open	3/4 open	Halfway open	2/3 open	.165" triangle holes
Rye	1057	5/16"	1/4"	Adjustable	1/3 open	2/3 open	Closed to 1/3 open	1/2 open	.165" triangle holes
Safflower	544	1/2"	3/16"	Adjustable	1/2 open	3/4 open	1/2 open	3/4 open	.165" triangle holes
Sorghums	793	1/2"	1/8"	Adjustable	1/4 to 1/2 open	2/3 to 3/4 open	Closed to 1/2 open	1/2 open	.070" round holes
Timothy	1057	5/32"	1/16"	Adjustable or 1/10" round hole	Slightly open	1/2 open	Closed	Closed	.050" round holes
Trefoil, Bird's-Foot	1057	5/32"	1/16"	Adjustable or 1/10" round hole	Slightly open	1/4 open	Closed	Closed	.050" round holes
Wheat	1057	5/16"	3/16"	Adjustable	1/3 to 1/2 open	2/3 open	Closed to 1/3 open	2/3 open	.165" triangle holes

Transporting

When transporting, drive combine under its own power or load it on a truck. Combine may be towed with caution. If combine is to be towed, remove the drive shafts between final drives and differential. If mired down in soft conditions, pull the combine out backwards by running chains under the rear axle and attaching to the front axle.

This combine is designed for easy and safe transporting. The width of the combine can be reduced by folding the hinged unloading auger back along the separator and removing the cutting platform. The width can be further reduced by folding the hinged-type operator's platform ladder up. The radiator screen can be hinged down to reduce the height.

Over-all dimensions are given on page 4.

If the cutting platform is removed, the hydraulic cylinders must be wired or supported by support chains (special equipment) no closer to separator support channel than 14 inches, as damage may result to hoses if carried too close.

When transporting long distances, remove separator drive belt (flat belt), to prevent burning of belt, due to slippage on drive and driven pulleys.

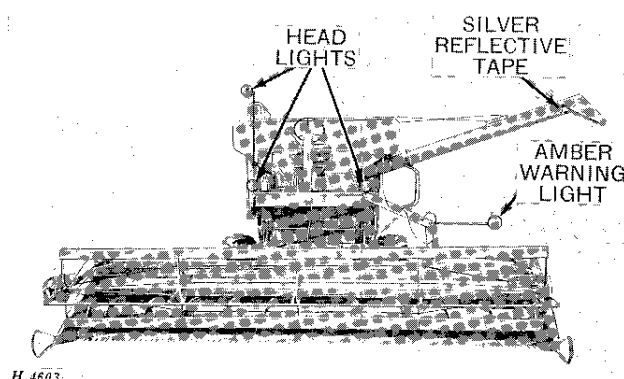
Clean out combine thoroughly before leaving one field and going to the next in order to reduce the spread of noxious weed seeds.

When through cutting in a field, sweep trash and straw from outside of combine, open doors at bottom of elevators and run combine until all straw, trash, and grain are removed from inside of combine before moving to the next field.

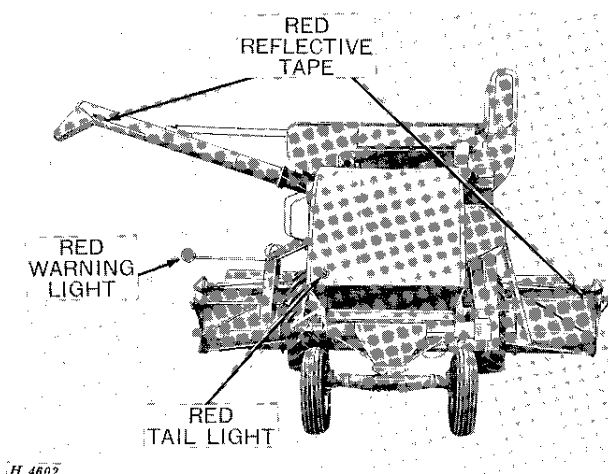
SAFETY PRECAUTION:

When driving the combine 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 such as those illustrated on this page may be obtained from your John Deere dealer.

Field lighting attachment and highway safety lighting attachment (special equipment)



Front view of combine equipped with field lighting attachment and highway safety lighting



Rear view of combine equipped with highway safety lighting

Field lighting attachment

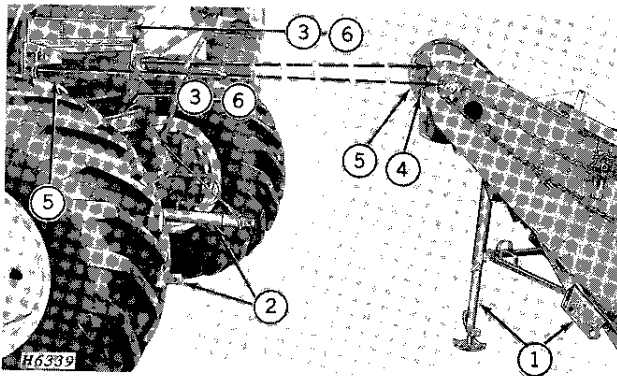
A set of three headlights is available to equip the combine for night operation, either in the field or on the highway.

Highway safety lighting attachment

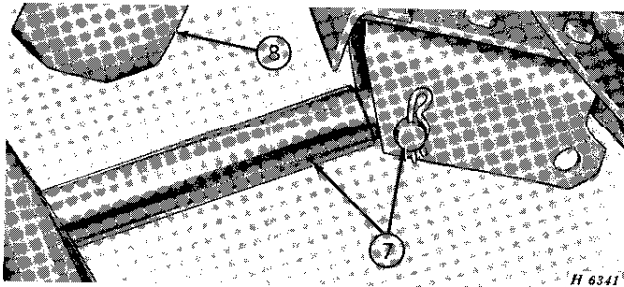
This attachment consists of warning lights, taillight, brackets, wire, reflective tape, etc.

NOTE: Highway safety lighting must be used with field lighting.

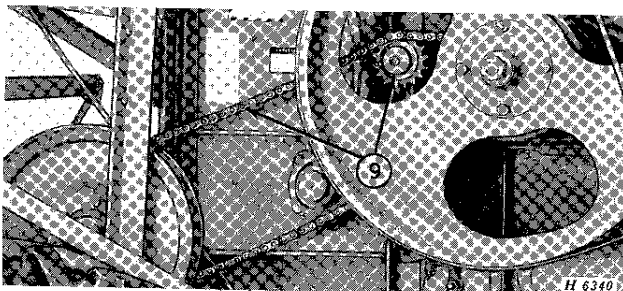
Attaching cutting platform to separator



1. Block up platform under hinge brackets or install support stand (special equipment).
2. Wire up hydraulic cylinders or install support chains (special equipment).
3. Remove cylinder front door and lower grain conveyor front door.
4. Raise feeder house hinged plate.
5. Drive separator forward and secure feeder house in pivot brackets on separator, with retainers, pins, and cap screws.
6. Install cylinder front door and raise grain conveyor front door.



7. Attach hydraulic cylinders to hinge brackets.
8. Remove blocking or place support stand in transport position.



9. Install platform drive chain and adjust chain tension.

Cutting platform leveling adjustment

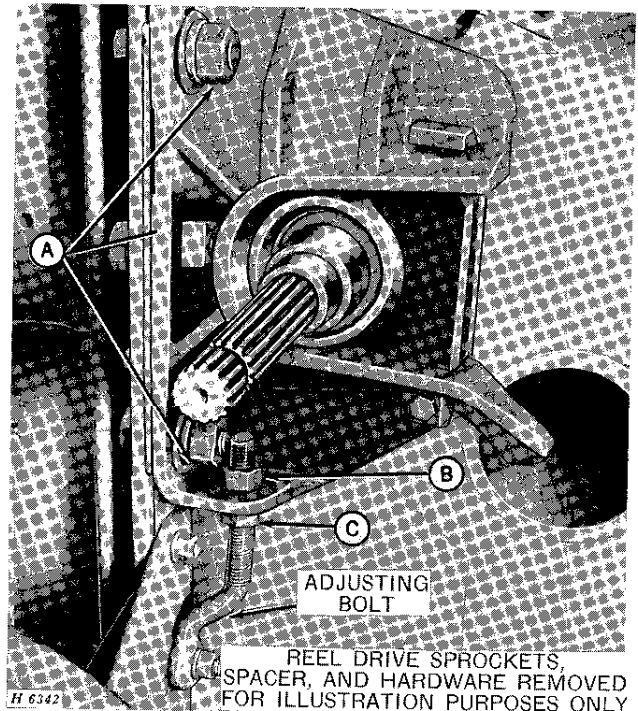
To insure satisfactory performance, the cutting platform must be parallel with the front axle tube. Check periodically as follows:

Raise the cutting platform to maximum height.

Take a position approximately 15 feet directly in front of the cutting platform.

Compare the bottom of the cutting platform with the front axle tube to see if they are parallel.

IMPORTANT: Main wheel tires must be inflated to equal tire pressure, otherwise an accurate platform leveling adjustment cannot be made. See inflation chart on page 76.



To adjust:

Loosen the three nuts "A" securing right-hand pivot bracket to separator.

Loosen lock nut "B" on adjusting bolt.

Thread adjusting nut "C" up to raise right-hand side of cutting platform or down to lower right-hand side of platform.

When bottom of cutting platform is parallel with front axle tube, thread lock nut "B" down against pivot bracket and tighten the three nuts "A."

Cold weather operation

Hydraulic unit, crankcase, and oil bath-type air cleaner

Use the grade of oil recommended in the lubrication chart, page 18. Lubricants of the right viscosity are necessary for proper protection.

Transmission and final drives

SCL Multipurpose type SAE 90 gear oil is recommended for year-round use, however, if oil is too heavy, thin with SAE 10W oil.

Fuel system

Use winter-grade gasoline. Fill the fuel tank at the end of the 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.

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. 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 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

Before the next harvest season, make the following checks and adjustments to avoid costly breakdowns during the harvest season.

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

Clean the combine thoroughly inside and out.

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

Clean inside of air cleaner (dry-type) and install new filter element.

Install the batteries. Check electrolyte level and recharge.

Flush radiator, install drain plugs, and fill with clean water, rain water if obtainable. Do not use water containing alkali.

Remove sealing tape from all engine openings.

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

Check friction drag adjustment on choke and throttle controls.

Install belts, making sure they have the proper tension.

Adjust chains to proper tension. Be sure to check chains in clean grain and tailings elevators.

Clean slip clutches. Be sure to put grease in bore of slip clutches after cleaning.

Adjust spring tension on slip clutches.

Close elevator doors and replace grain tank drain plug.

Fill fuel tank.

Lubricate combine completely, then run combine at half-speed for about an hour. Check bearings for overheating or excessive looseness. Be sure slip clutches operate freely.

Go over complete combine and see that all bolts are tight and cotter pins are in place.

Review your operator's manual.

End of the season service

When the combining season is finished, the combine should be stored until the next season. Follow the suggestions on these pages to be sure your combine is ready to go when the next season starts.

Engine

Wash the outside of the engine thoroughly. Use 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. Be sure to leave oil in crankcase while combine is stored.

Drain and fill both of the hydraulic systems with clean oil. Do not leave hydraulic system dry while combine is stored.

Clean inside of air cleaner (dry-type), remove loose dirt from filter and reinstall filter in air cleaner.

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

Drain out all gasoline and leave drain valve open.

Drain water by removing drain plugs from radiator 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.

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

If combine is stored in the open, remove batteries and store them in a cool, dry place where temperature will stay above freezing. Do not place batteries on a concrete floor as cold tends to draw strength from the batteries. Check and recharge the batteries every 30 days to prevent damage to the plates.

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

Combine

If possible, shelter the combine in a dry place.

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

Remove belts. Clean belts, wrap them on burlap, and store in a cool, dark place. Clean chains thoroughly and brush fairly heavy oil on chains to prevent corrosion.

Clean out augers and elevators. Leave doors open at bottom end of elevators.

Clean out bottom of grain tank and unloading auger. Remove drain plug from grain tank.

Clean the chaffer and sieve.

Grease feeder house conveyor bottom so it will not rust.

Lubricate combine completely. See Lubrication Charts. Grease the threads on bolts used for adjustments. Apply a coating of grease to slip clutch jaws.

Paint all parts from which paint has worn

Support cutting platform with blocks to level it.

Block up combine, taking load off tires. Do not deflate tires. If combine is stored outside, remove wheels and tires and store in a cool, dark, dry place.

Block clutch pedal in disengaged position to prevent damage to clutch plates during storage.

Release spring tension on slip clutches.

On the electromagnetic throw-out clutch for the cutting platform, place a few drops of SAE 10W oil on the four studs for the face plate.

List the repairs that will be needed before the next season and order them early. Your John Deere dealer can give better service during the off season, and when parts are received, they can be installed in your spare time—no delay at harvest time.

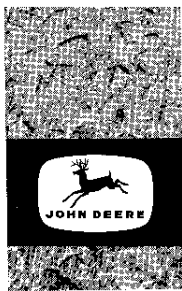


Suggest:

If the above button click is invalid.

Please download this document first, and then click the above link to download the complete manual.

Thank you so much for reading



safety suggestions

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

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.

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

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

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

Refill the radiator only when the engine is stopped or idling slowly. This combine has a pressure cooling system. To avoid being scalded when radiator cap is removed, first turn cap slightly to the stop which allows steam to escape through the overflow pipe. After all pressure is relieved, remove cap.

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

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

Be sure the gearshift lever of your combine is in neutral before starting the engine.

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

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

Combine brakes should be properly adjusted.

Always keep the combine in gear when going down hills.

Provide a first-aid kit for use in case of accidents, and use proper antiseptics on scratches, cuts, etc., without delay, to prevent the possibility of infection.

Use the handrail when mounting the combine.

Be especially careful when operating on hill-sides because the combine may tip sideways if it strikes a hole, ditch, or other irregularity.

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

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

Fold the unloading auger when transporting. When moving on a highway, keep as far to the right as possible. Hang a red flag prominently on the rear of the combine when transporting during the day. Never transport during periods of poor visibility or after sundown unless the combine is equipped with lights, warning light, and taillight in good working condition.

Check your local governmental regulations regarding adequate warning devices.

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

Replace badly frayed or worn belts before they break.

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

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