

106 COMBINE



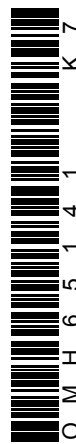
OPERATORS MANUAL

106
COMBINE

OMH65141 K7 English

OMH65141 K7

LITHO IN THE U.S.A.
ENGLISH



TO THE PURCHASER

The combine you have purchased has been carefully designed and manufactured to provide years of dependable, economical service.

To further insure trouble-free service, we recommend that you follow closely all instructions concerning operation, lubrication, adjustments and service. Preventive maintenance has proven to be much more economical than corrective maintenance. Should you require information not covered in this manual, consult your John Deere dealer.

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 material 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.

ATTACHMENTS

In addition to the equipment furnished with your combine, attachments are available to help you do a better job in a special crop or condition. These attachments, illustrated and described in the attachment section, are 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.

SERIAL NUMBERS

Your combine and platform have serial numbers.

When ordering parts, always bring with you the model and complete serial numbers 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 grain tank unloading auger drive support bracket on the right-hand side of combine.

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

Record these Serial Numbers in the space provided below.

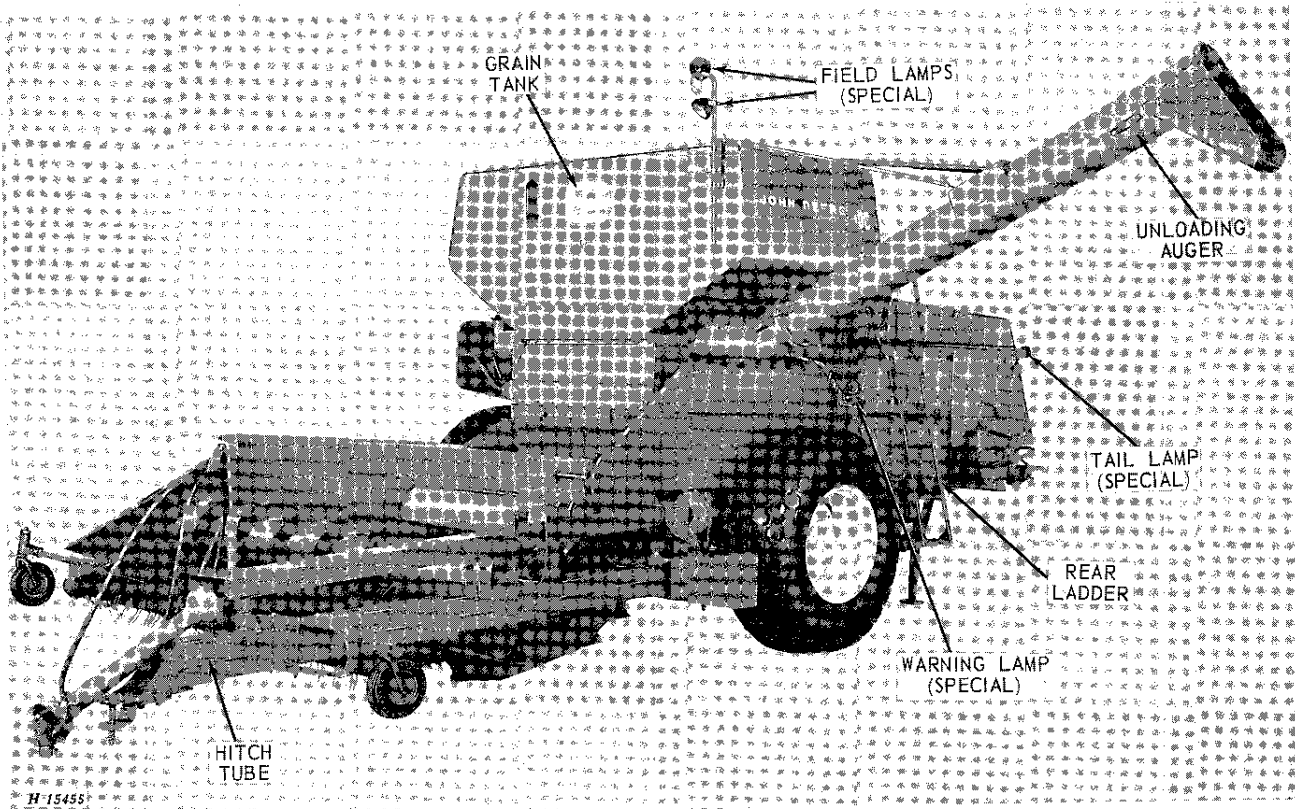
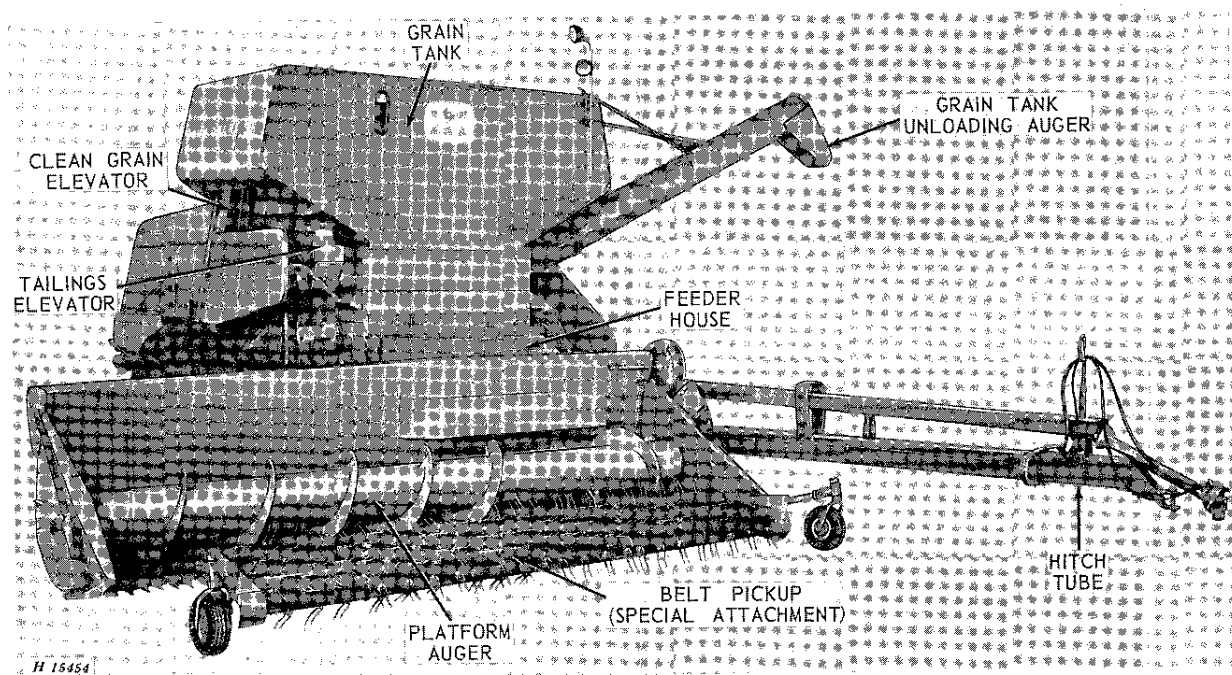
Combine Serial No. _____

Platform Serial No. _____

Date Purchased _____

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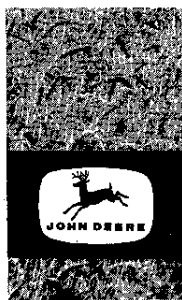
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SPECIFICATIONS

NOTE: The 106 Combine platform is available as a pickup platform, with additional parts available to convert to a cutting platform when desired.

PLATFORM

Type of feed. Auger
Height range. 2 In. above ground to 36 In. above ground
Height control. 2 hydraulic cylinders
Belt pickup platform width. 14 Ft.

PLATFORM AUGER

Diameter. 20 In.
Diameter of auger tube. 12 In.
Type of auger fingers. Round retracting

CYLINDER

Type. Rasp-bar only
Width. 49-1/2 In.
Diameter. 22 In.
Number of bars. 8
Drive. Roller chain
Speed range. 277-1190 rpm

CONCAVE

Type. 12 bar open type
Width. 49-1/2 In.

BEATER (Behind the Cylinder)

Type. Drum
Width. 50 In.
Speed. 680-715 rpm

SEPARATOR

Type. Grain conveyor-straw walker
Width. 50 In.
Length of separating surface. 140 In. with walker pans extended
Area of separating surface. 6,930 Sq. In.

GRAIN CONVEYOR

Type. Channel slat
Drive. Chain (CA-550 Roller)

CLEANING FAN

Type. Five-bladed undershot
Drive, variable. V-belt
Speed range. 400-1000 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.	2,163 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.
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STRAW WALKERS

Number.	5
Width.	9-1/2 In.
Length with pans extended.	117 In.
Area.	6,089 Sq. In.
Number of steps.	5
Drive.	V-belt
Bearings.	Oil soaked maple
Extension pans.	One on each walker

GRAIN TANK

Capacity.	100 Bushel (approx.)
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WEIGHTS

Combine with 14-ft. pickup platform (with 132 In. belt pickup).	9817 Lbs.
(without 132 In. belt pickup).	9057 Lbs.

COMBINE DIMENSIONS

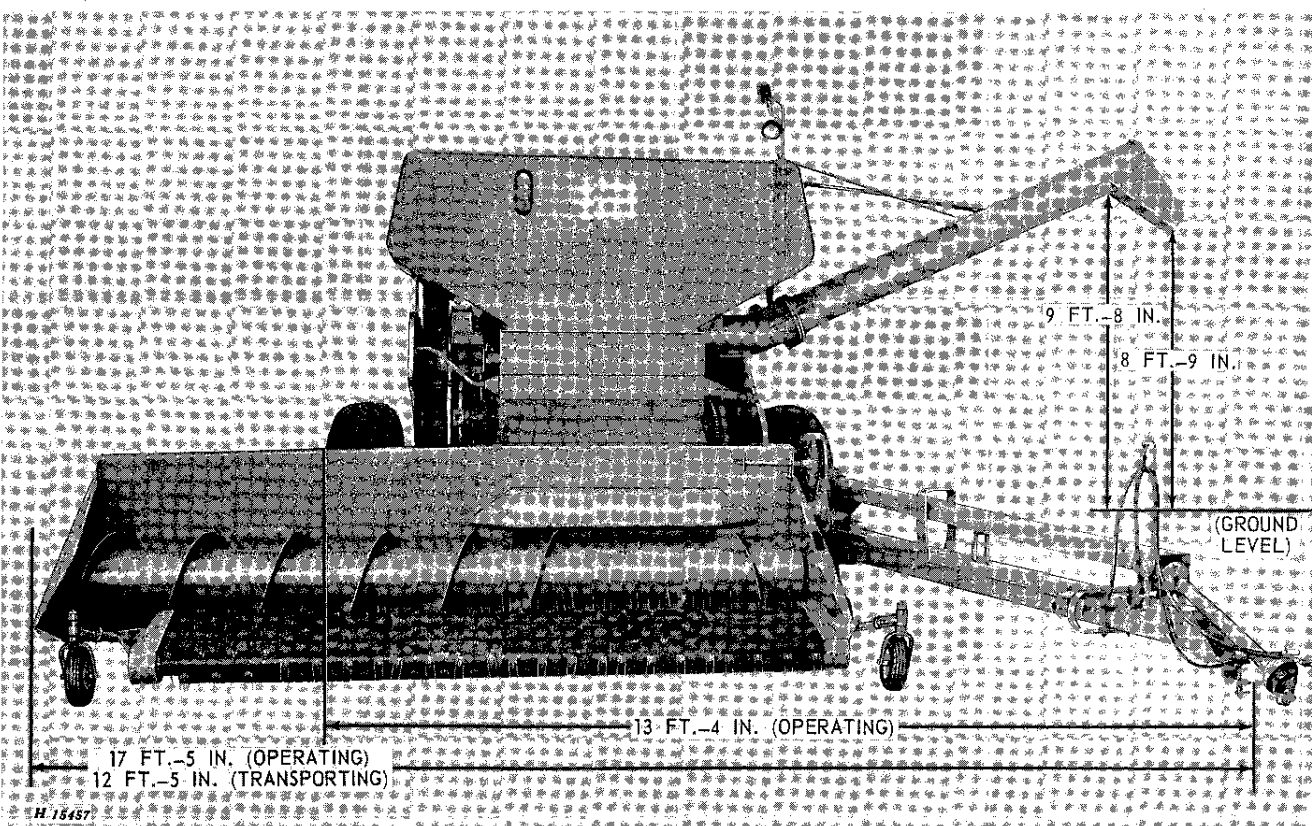
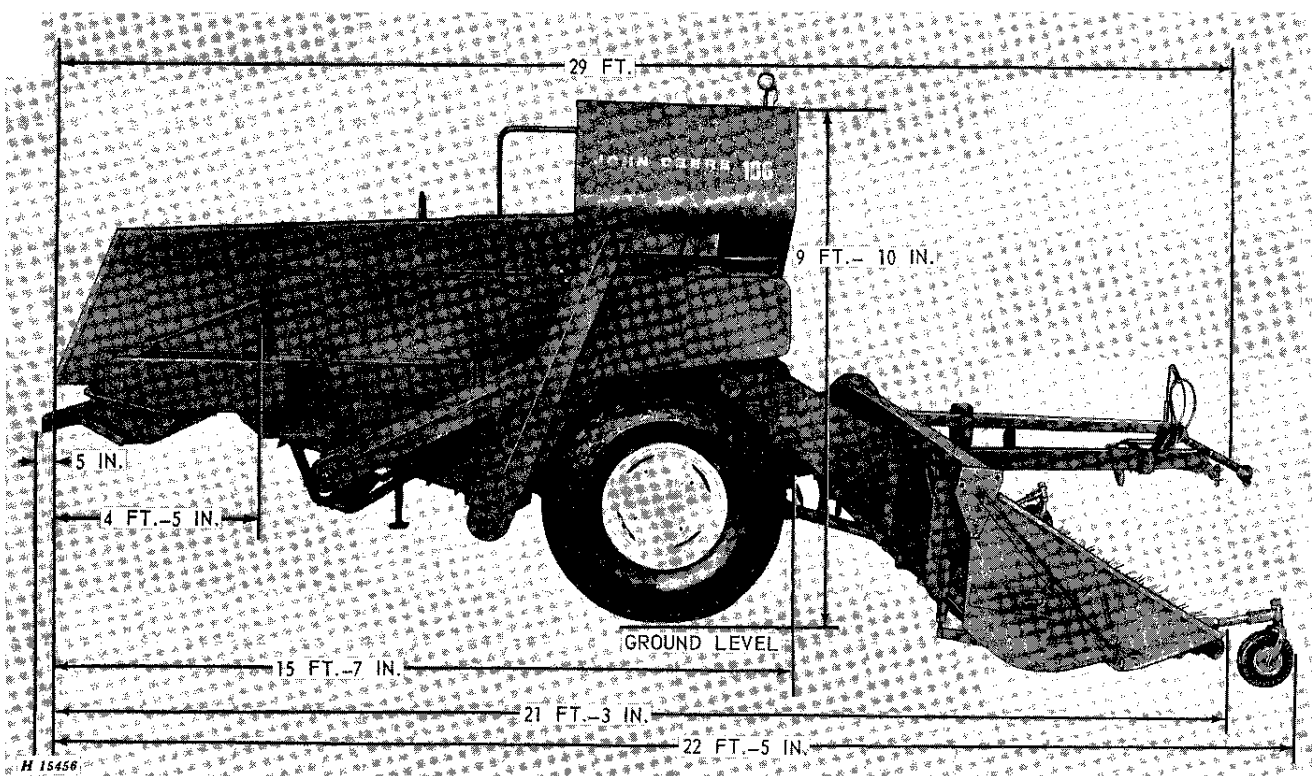
Shipping length.	24 Ft.-10 In.
Shipping width.	11 Ft.
For other dimensions.	Page 4

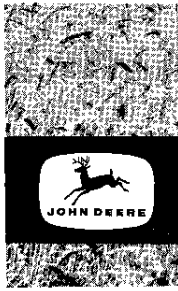
TIRE

Size.	18.4-26, R3
Ply.	6
Pressure.	16 psi

(Specifications and design subject to change without notice.)

4 Specifications

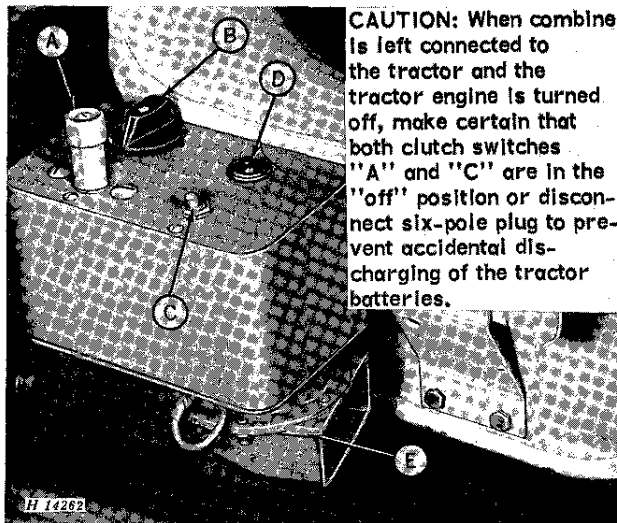




CONTROLS AND INSTRUMENTS

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

SWITCH BOX



CAUTION: When combine is left connected to the tractor and the tractor engine is turned off, make certain that both clutch switches "A" and "C" are in the "off" position or disconnect six-pole plug to prevent accidental discharging of the tractor batteries.

- A - Platform Throw-Out Switch
- B - Light Switch
- C - Grain Tank Unloading Auger Switch
- D - Warning Light
- E - Straw Walker Plugging Warning Horn

PLATFORM THROW-OUT SWITCH

This switch operates the electromagnetic throw-out clutch which permits stopping the platform and feeder while the separator continues to run.

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

LIGHT SWITCH (Special Attachment)

The three positions on the light switch are:

- Vertical* - All lamps off
- First Stop* - Headlamps on
- Second Stop* - Taillamp and warning lamp on

GRAIN TANK UNLOADING AUGER SWITCH

This switch operates the electromagnetic clutch on the unloading auger drive. By turning the switch to the "ON" position, the grain tank can be unloaded while the operator remains on the tractor seat.

WARNING LIGHT

When the grain tank unloading auger switch is in operating position, the warning light flashes red.

STRAW WALKER PLUGGING WARNING HORN (Special Attachment)

A sensing unit located in the separator sounds the warning horn when the straw walkers are plugged.

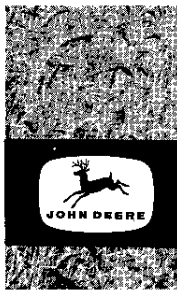
PLATFORM HEIGHT CONTROL

Raise and lower the cutting platform with the remote cylinder operating lever on the tractor. When lever is pushed forward, platform will raise.

PTO LEVER

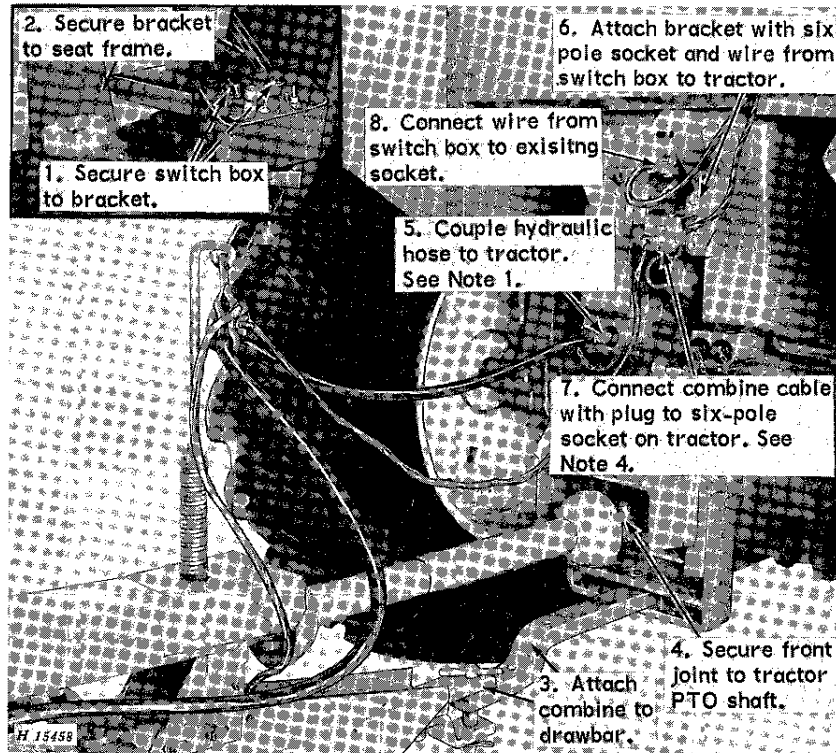
The power take-off is controlled by the PTO lever on the tractor. Moving the lever all the way forward engages the PTO. Moving the lever all the way rearward disengages the PTO.

CAUTION: Always idle the tractor engine to reduce the PTO speed before engaging or disengaging the PTO lever.



TRACTOR HOOKUP

Diesel Tractor without Lighting Attachment and Gasoline Tractor

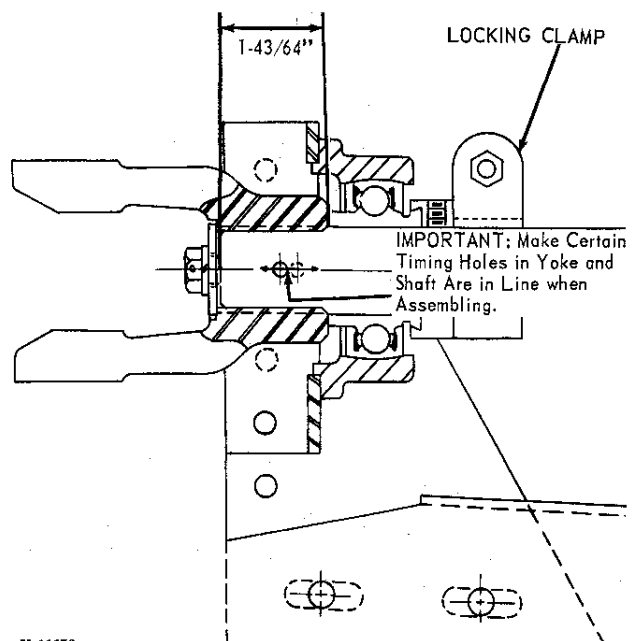


CAUTION: Protect against the risk of personal injury and machine damage by operating implement only on rpm PTO speed for which it is designed or converted. Operate the 106 Combine at 1000 rpm only.

1000 RPM YOKE ASSEMBLY

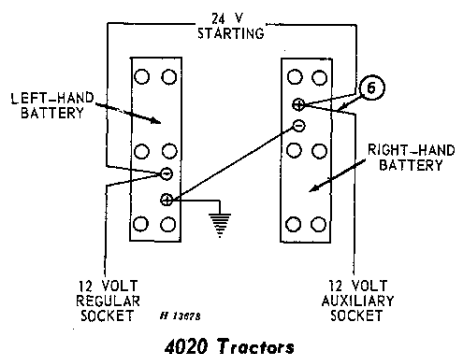
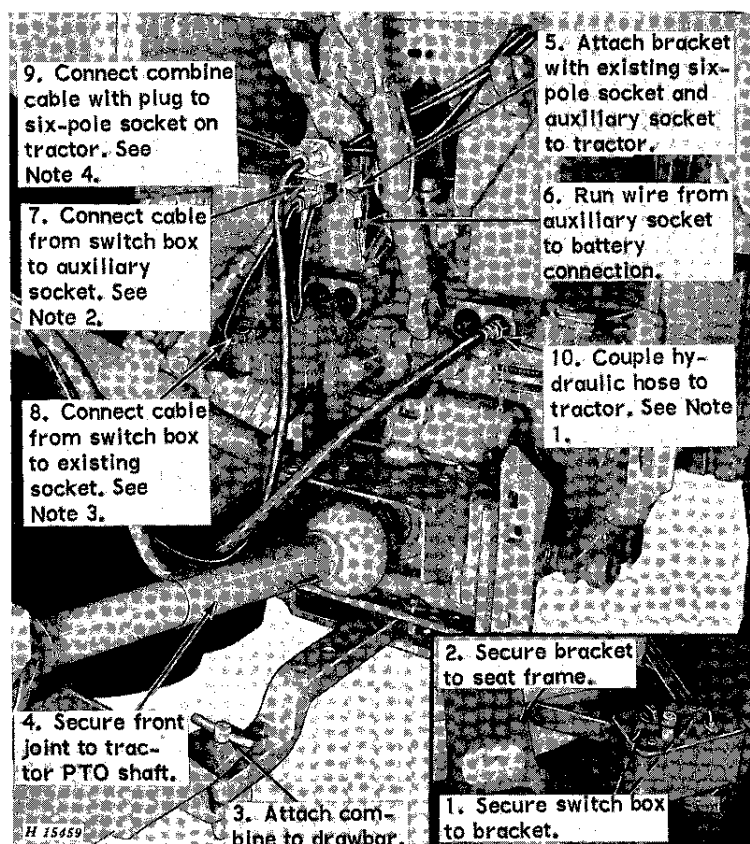
Should it become necessary to disturb locking clamp on hitch tube powershaft, make certain bearing and yoke assemblies are assembled on the shaft, using dimensions given in the illustration at the right for proper position. Failure to do so will cause misalignment of hookup parts.

IMPORTANT: Under normal circumstances, locking clamp should not be moved unless it becomes necessary to replace parts.



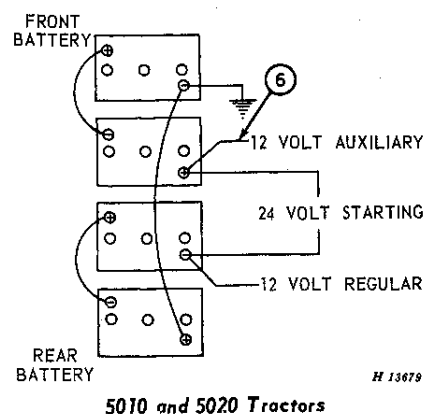
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TRACTOR HOOKUP

Diesel Tractor (Split Electrical System) with Lighting Attachment

NOTE 1: Adapt the tractor remote hydraulic cylinder valve housing for single-action cylinder operation. See tractor operator's manual. Couple hydraulic hose to tractor No. 1 hydraulic circuit breakaway coupler.

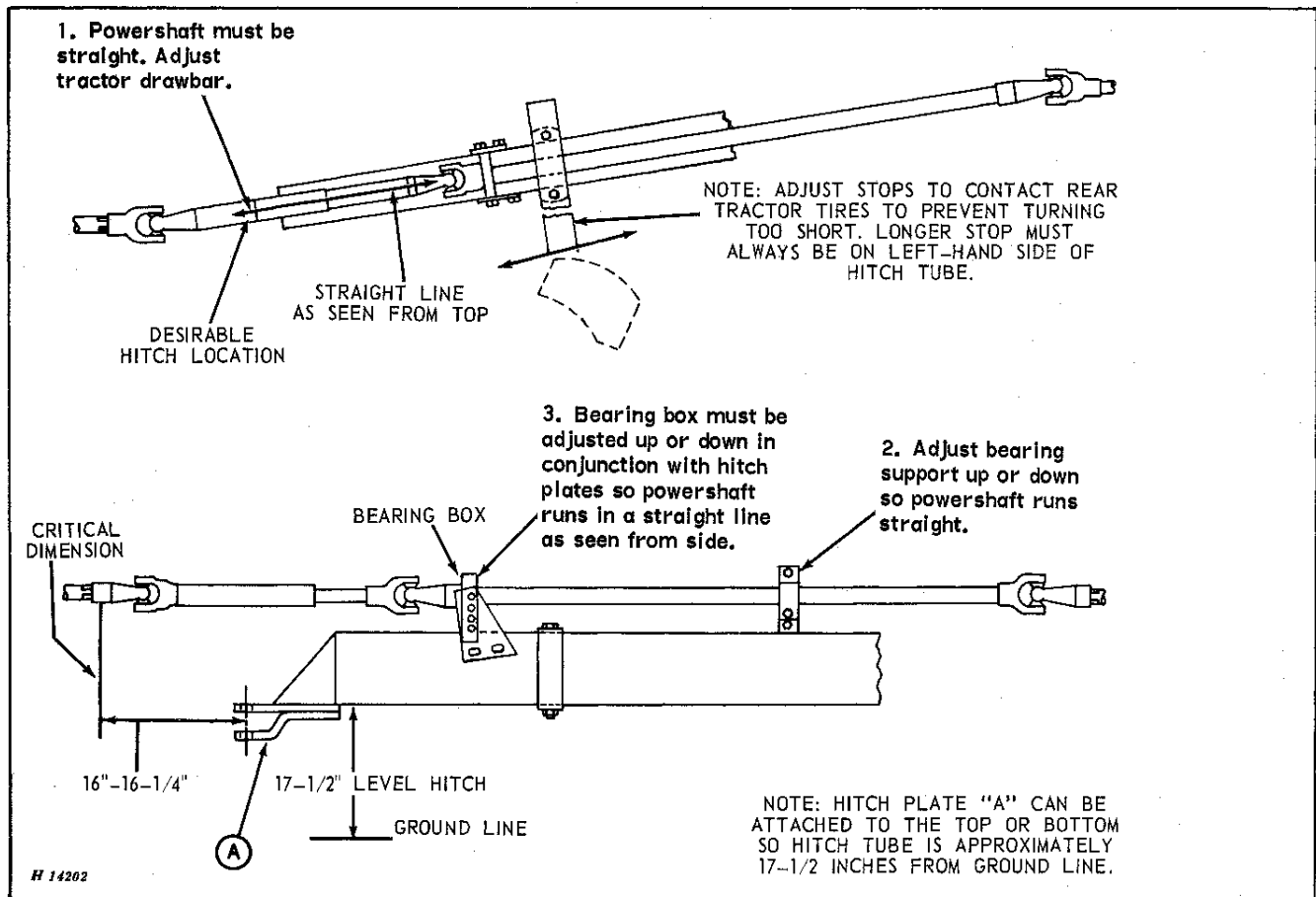
NOTE 2: Connect cable that supplies current to the electromagnetic clutches to the auxiliary outlet.

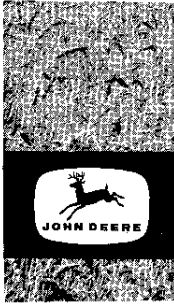


NOTE 3: Connect cable that supplies current to the lights to the existing outlet.

NOTE 4: To prevent accidental discharging of tractor batteries when tractor-combine hookup is left unattended, disconnect six-pole plug from tractor.

TRACTOR HOOKUP—Continued





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. The following pages contain information about speeds, settings and special equipment that will enable the operator to place these fundamentals into practice.

These fundamentals in brief are:

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

When combining with a belt pickup, operate the pickup just fast enough to elevate the windrow onto the platform without tearing the windrow apart as the combine moves forward. If the crop is pushed ahead of the belt pickup or does not release from pickup stripper, the speed of the pickup is too slow.

Always operate the belt pickup as level as possible when operating under normal ground conditions. Increase the pitch only when operating in rocky ground conditions to prevent rocks from being carried into the platform auger.

In making the first round of the field when using a cutting platform, keep the tractor forward speed as slow as possible to reduce the volume of material entering the combine. Always run the tractor at rated PTO speed to keep the combine mechanism up to full speed, thus guarding against slugging and clogging. Shift to a lower gear if necessary, but do not throttle down the engine.

Select a tractor ground speed that will not overload the combine.

Keep the cylinder speed as low as possible and concave clearance as high as possible to remove the maximum amount of grain from grain heads 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 when using a cutting platform.

Adjust the reel position and speed for even feed.

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 air blast to front of shoe.

Use as much air blast 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 per cent 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.

The following suggestions will help while operating in weedy conditions.

Cut the crop as high as possible to avoid weeds and undergrowth when using a cutting platform.

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.

10 Operation

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 causes extra wear and damage to parts, not incurred when the combine is operated at a more reasonable 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 tractor PTO lever.

KEEP STEADY, SMOOTH TRACTOR ENGINE SPEED

Any fluctuation in tractor 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.

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:

Lubricate the combine completely. See lubrication section, page 17.

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 48 for adjustments. A good plan is to check the chain tension every day of operation.

Be certain all shafts turn freely.

COMBINE BREAK-IN

Follow the lubrication instructions and charts closely.

AFTER 5 HOURS

Lubricate the straw walker bearing blocks with SAE multipurpose grease every 5 hours of operation for the first three days, then every 150 hours of operation thereafter.

STARTING THE COMBINE

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

When tractor is properly warmed, idle engine and engage PTO slowly to engage the separator. Then run tractor at rated PTO speed.

Check the speed of beater behind the cylinder with a speed indicator. Beater should operate at 680 to 715 rpm with separator empty and not under load. If beater speed is not correct, check tractor PTO for correct rpm rated speed. If PTO is not operating at proper rpm rated speed, see your John Deere dealer.

Test operation of hydraulic control for adjusting platform height.

Test operation of grain tank unloading auger.

Test operation of the platform throw-out switch.

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

Idle tractor engine and disengage separator; then close doors at bottom of elevators.

TRANSPORTING

This combine is designed for easy and safe transporting. The width of the combine can be reduced by folding unloading auger back along separator, removing platform, and moving the hitch.

To fold unloading auger back along separator, unfasten over-center lock and swing outer auger back. Secure outer end of auger against separator with transport lock. (See page 49.)

IMPORTANT: Always fold unloading auger back along separator and disconnect powershaft when transporting the combine.

Three locking positions are provided for the swinging hitch. The inside locking position is for field operation. The center locking position is for loading and transporting the combine on a flat car. Under no circumstances will the operator need to use this center position once the combine has been removed from the railroad flat car.

The outer position locks the hitch for highway or field transporting. To secure hitch tube in transporting position, raise platform to its high-

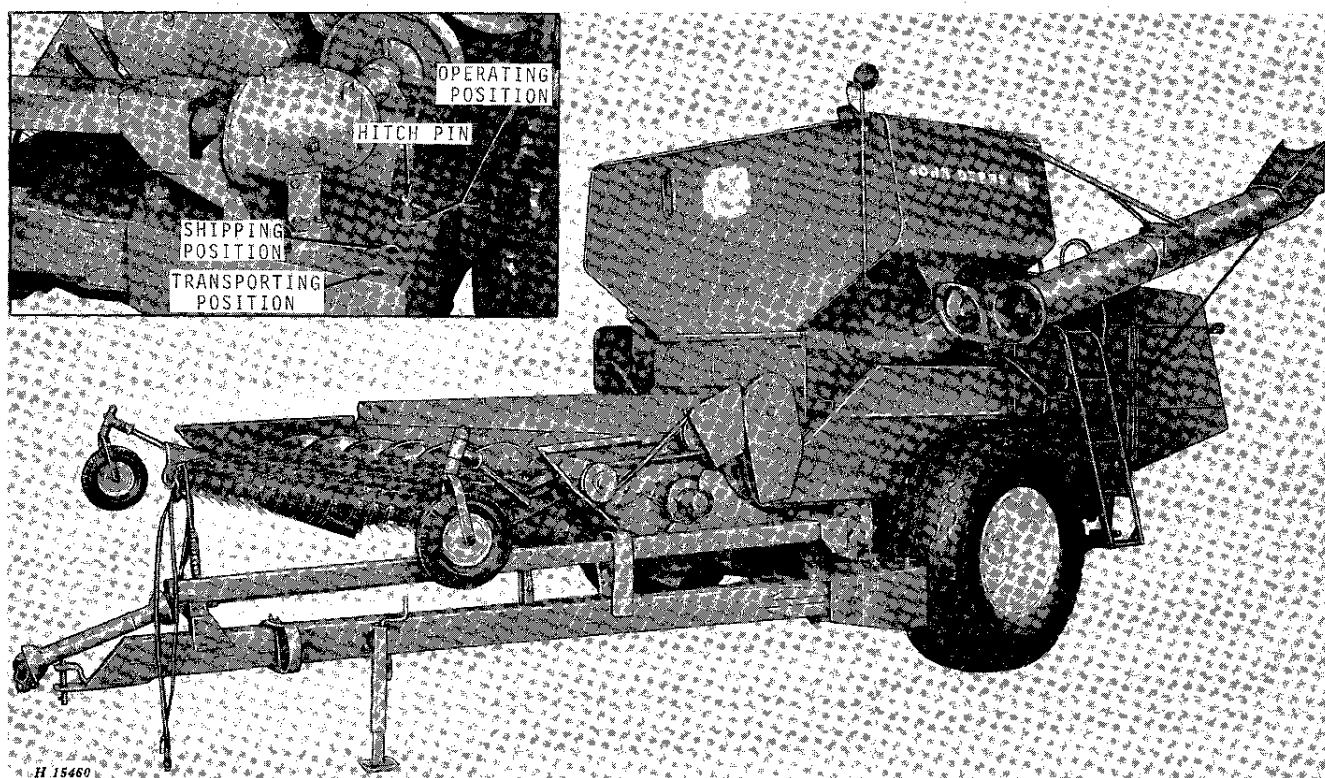
est position. Remove hitch pin from operating position and swing hitch tube inward as far as possible. Install hitch pin in transporting position.

IMPORTANT: Always use the hydraulic cylinder safety stop when transporting the combine.

The combine is equipped with a slow moving vehicle emblem (page 54) on the rear hood and red reflective tape on the unloading auger housing and on the backside of the right-hand outer end of the platform for transporting protection.

The combine is also equipped with a warning lamp mast on the left-hand side of the separator. This mast will accommodate the warning lamp which the operator may have on his tractor or on other equipment.

CAUTION: When transporting the combine on a road or highway at night or during the day, use accessory lights and devices for adequate warning to the operators of other vehicles. In this regard, check your local governmental regulations. Various safety lights and devices are available at your John Deere dealer.



Combine in Transport Position

END OF THE SEASON SERVICE

If possible, store combine in a dry place.

Clean combine thoroughly inside and out. Chaff and dirt will draw moisture and rust the steel.

Remove and clean belts. Wrap them in burlap, and store in a cool, dark place. Clean chains and brush with heavy oil to prevent corrosion.

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

Clean out bottom of grain tank and unloading auger. Open clean-out door.

Clean the chaffer and sieve.

Grease feeder house conveyor bottom to prevent rust.

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

Paint all parts from which paint was worn.

Use blocks to keep cutting platform level.

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.

Release spring tension on all slip clutches.

Place a few drops of SAE 10W oil on the four studs for the face plate of the platform throw-out clutch and the unloading auger clutch.

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

BEGINNING OF THE SEASON SERVICE

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

Replace wheels if they were removed and remove blocking.

Clean the combine thoroughly inside and out.

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 close grain tank unloading auger clean-out door.

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.

Check tire inflation (see page 53).

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

Review your operator's manual.





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OPERATING SPEEDS AND SETTINGS

13

POWERSHAFT

Description	Speed	Page
Powershaft	1000 rpm	8

PLATFORM AND FEEDER HOUSE

Platform Auger:		29
Regular 42-tooth sprocket	194 rpm*	
Special 56-tooth sprocket	145 rpm*	
Platform Auger Drive Countershaft	407 rpm*	--
Feeder House Conveyor Drive Shaft	255 rpm*	30
Feeder House Conveyor Chain	352 feet per min.*	30

**All platform speeds listed are speeds for combine shipped from the factory with a regular 45-tooth sprocket on the left-hand end of feeder house drive shaft.*

SEPARATOR

Cylinder:		33
Regular	1057 rpm	
Extreme Low	277 rpm	
Extreme High	1190 rpm	
Beater (behind cylinder)	680-715 rpm	38
Grain Conveyor Shaft:		39
Regular 15-tooth sprocket	170 rpm	
Special 10-tooth sprocket	255 rpm	
Fan:		40
Factory Setting	800 rpm	
Extreme Low	400 rpm	
Extreme High	1000 rpm	
Elevators	313 rpm	47
Shoe Crank	286 rpm	--
Straw Walkers	213 rpm	46

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